



Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 09:17 AM EST

PDB ID : 3IYF
EMDB ID : EMD-5140
Title : Atomic Model of the Lidless Mm-cpn in the Open State
Authors : Zhang, J.; Baker, M.L.; Schroeder, G.; Douglas, N.R.; Reissmann, S.; Jakana, J.; Dougherty, M.; Fu, C.J.; Levitt, M.; Ludtke, S.J.; Frydman, J.; Chiu, W.
Deposited on : 2009-10-23
Resolution : 8.00 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

EMDB validation analysis : 0.0.1.dev43
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.31.3

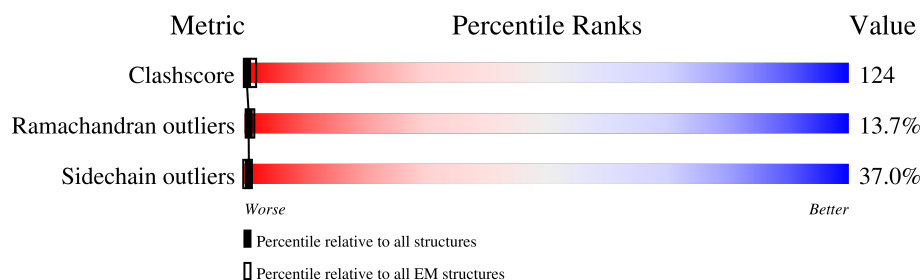
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 8.00 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.







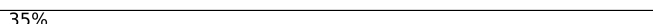



| Metric | Whole archive (#Entries) | EM structures (#Entries) |
|-----------------------|-----------------------------|-----------------------------|
| Clashscore | 158937 | 4297 |
| Ramachandran outliers | 154571 | 4023 |
| Sidechain outliers | 154315 | 3826 |

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|---|
| 1 | A | 521 | <div> <div>34%</div> <div>18% 35% 38% 6%</div> </div> |
| 1 | B | 521 | <div> <div>34%</div> <div>19% 32% 39% 6%</div> </div> |
| 1 | C | 521 | <div> <div>34%</div> <div>19% 32% 40% 6%</div> </div> |
| 1 | D | 521 | <div> <div>35%</div> <div>19% 32% 41% 6%</div> </div> |
| 1 | E | 521 | <div> <div>35%</div> <div>20% 33% 39% 6%</div> </div> |
| 1 | F | 521 | <div> <div>34%</div> <div>18% 32% 41% 6%</div> </div> |
| 1 | G | 521 | <div> <div>34%</div> <div>22% 31% 39% 6%</div> </div> |
| 1 | H | 521 | <div> <div>34%</div> <div>18% 30% 43% 6%</div> </div> |

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| Mol | Chain | Length | Quality of chain |
|-----|-------|--------|--|
| 1 | I | 521 |  <p>35% 20% 32% 39% 6%</p> |
| 1 | J | 521 |  <p>34% 18% 32% 40% 6%</p> |
| 1 | K | 521 |  <p>34% 20% 31% 39% 6%</p> |
| 1 | L | 521 |  <p>35% 16% 36% 40% 6%</p> |
| 1 | M | 521 |  <p>35% 17% 33% 42% 6%</p> |
| 1 | N | 521 |  <p>34% 17% 35% 39% 6%</p> |
| 1 | O | 521 |  <p>36% 19% 29% 44% 6%</p> |
| 1 | P | 521 |  <p>35% 17% 31% 43% 6%</p> |

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 58624 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called Chaperonin.

| Mol | Chain | Residues | Atoms | | | | | AltConf | Trace |
|-----|-------|----------|-------|------|-----|-----|----|---------|-------|
| 1 | A | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | B | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | C | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | D | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | E | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | F | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | G | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | H | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | I | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | J | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | K | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | L | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | M | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | N | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | O | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |
| 1 | P | 491 | Total | C | N | O | S | 0 | 0 |
| | | | 3664 | 2272 | 635 | 733 | 24 | | |

There are 80 discrepancies between the modelled and reference sequences:

| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|------------|
| A | 241 | GLU | - | LINKER | UNP Q877G8 |
| A | 242 | THR | - | LINKER | UNP Q877G8 |
| A | 243 | ALA | - | LINKER | UNP Q877G8 |
| A | 244 | SER | - | LINKER | UNP Q877G8 |
| A | 245 | GLU | - | LINKER | UNP Q877G8 |
| B | 241 | GLU | - | LINKER | UNP Q877G8 |
| B | 242 | THR | - | LINKER | UNP Q877G8 |
| B | 243 | ALA | - | LINKER | UNP Q877G8 |
| B | 244 | SER | - | LINKER | UNP Q877G8 |
| B | 245 | GLU | - | LINKER | UNP Q877G8 |
| C | 241 | GLU | - | LINKER | UNP Q877G8 |
| C | 242 | THR | - | LINKER | UNP Q877G8 |
| C | 243 | ALA | - | LINKER | UNP Q877G8 |
| C | 244 | SER | - | LINKER | UNP Q877G8 |
| C | 245 | GLU | - | LINKER | UNP Q877G8 |
| D | 241 | GLU | - | LINKER | UNP Q877G8 |
| D | 242 | THR | - | LINKER | UNP Q877G8 |
| D | 243 | ALA | - | LINKER | UNP Q877G8 |
| D | 244 | SER | - | LINKER | UNP Q877G8 |
| D | 245 | GLU | - | LINKER | UNP Q877G8 |
| E | 241 | GLU | - | LINKER | UNP Q877G8 |
| E | 242 | THR | - | LINKER | UNP Q877G8 |
| E | 243 | ALA | - | LINKER | UNP Q877G8 |
| E | 244 | SER | - | LINKER | UNP Q877G8 |
| E | 245 | GLU | - | LINKER | UNP Q877G8 |
| F | 241 | GLU | - | LINKER | UNP Q877G8 |
| F | 242 | THR | - | LINKER | UNP Q877G8 |
| F | 243 | ALA | - | LINKER | UNP Q877G8 |
| F | 244 | SER | - | LINKER | UNP Q877G8 |
| F | 245 | GLU | - | LINKER | UNP Q877G8 |
| G | 241 | GLU | - | LINKER | UNP Q877G8 |
| G | 242 | THR | - | LINKER | UNP Q877G8 |
| G | 243 | ALA | - | LINKER | UNP Q877G8 |
| G | 244 | SER | - | LINKER | UNP Q877G8 |
| G | 245 | GLU | - | LINKER | UNP Q877G8 |
| H | 241 | GLU | - | LINKER | UNP Q877G8 |
| H | 242 | THR | - | LINKER | UNP Q877G8 |
| H | 243 | ALA | - | LINKER | UNP Q877G8 |
| H | 244 | SER | - | LINKER | UNP Q877G8 |
| H | 245 | GLU | - | LINKER | UNP Q877G8 |
| I | 241 | GLU | - | LINKER | UNP Q877G8 |
| I | 242 | THR | - | LINKER | UNP Q877G8 |
| I | 243 | ALA | - | LINKER | UNP Q877G8 |

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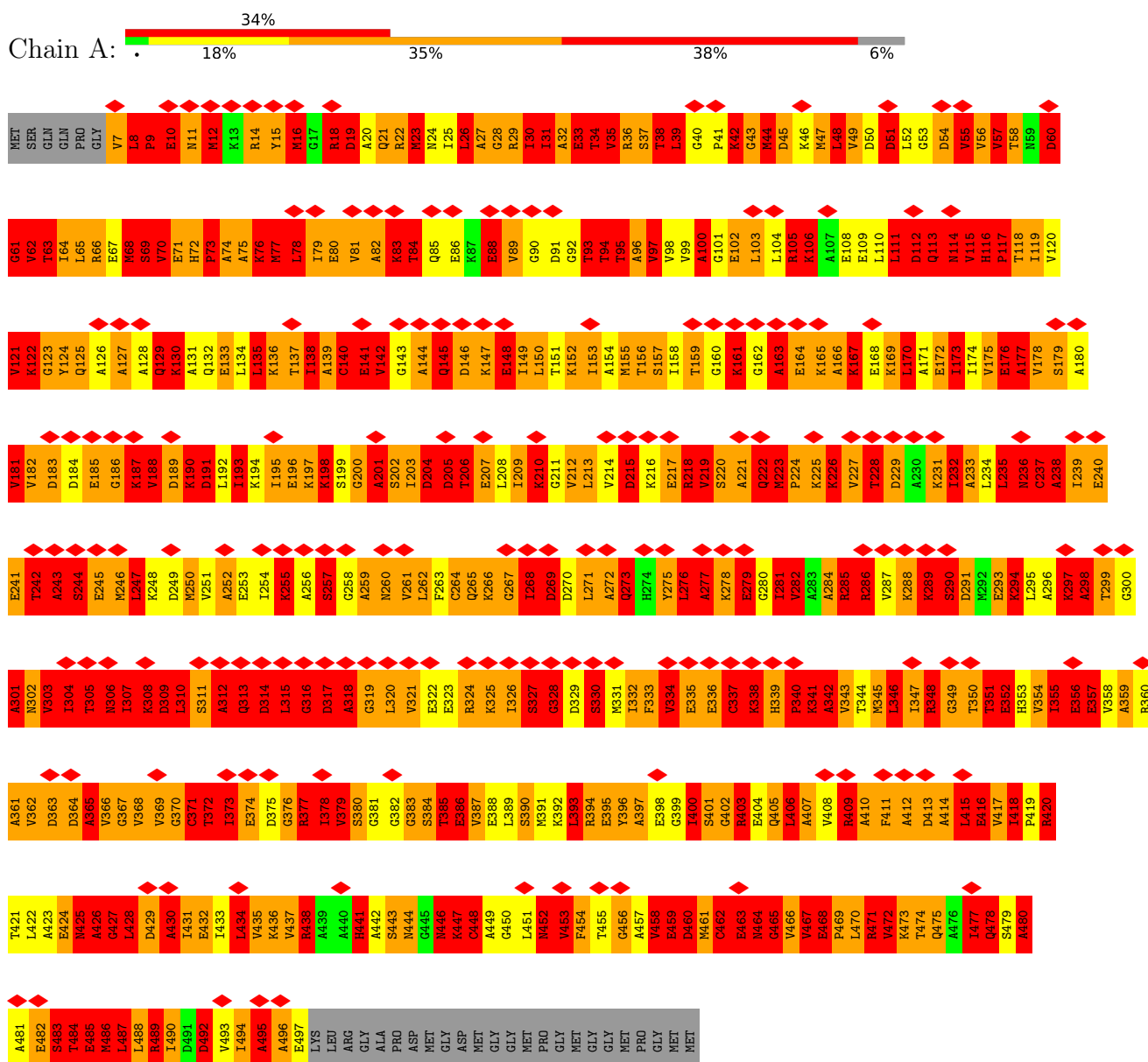
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| Chain | Residue | Modelled | Actual | Comment | Reference |
|-------|---------|----------|--------|---------|------------|
| I | 244 | SER | - | LINKER | UNP Q877G8 |
| I | 245 | GLU | - | LINKER | UNP Q877G8 |
| J | 241 | GLU | - | LINKER | UNP Q877G8 |
| J | 242 | THR | - | LINKER | UNP Q877G8 |
| J | 243 | ALA | - | LINKER | UNP Q877G8 |
| J | 244 | SER | - | LINKER | UNP Q877G8 |
| J | 245 | GLU | - | LINKER | UNP Q877G8 |
| K | 241 | GLU | - | LINKER | UNP Q877G8 |
| K | 242 | THR | - | LINKER | UNP Q877G8 |
| K | 243 | ALA | - | LINKER | UNP Q877G8 |
| K | 244 | SER | - | LINKER | UNP Q877G8 |
| K | 245 | GLU | - | LINKER | UNP Q877G8 |
| L | 241 | GLU | - | LINKER | UNP Q877G8 |
| L | 242 | THR | - | LINKER | UNP Q877G8 |
| L | 243 | ALA | - | LINKER | UNP Q877G8 |
| L | 244 | SER | - | LINKER | UNP Q877G8 |
| L | 245 | GLU | - | LINKER | UNP Q877G8 |
| M | 241 | GLU | - | LINKER | UNP Q877G8 |
| M | 242 | THR | - | LINKER | UNP Q877G8 |
| M | 243 | ALA | - | LINKER | UNP Q877G8 |
| M | 244 | SER | - | LINKER | UNP Q877G8 |
| M | 245 | GLU | - | LINKER | UNP Q877G8 |
| N | 241 | GLU | - | LINKER | UNP Q877G8 |
| N | 242 | THR | - | LINKER | UNP Q877G8 |
| N | 243 | ALA | - | LINKER | UNP Q877G8 |
| N | 244 | SER | - | LINKER | UNP Q877G8 |
| N | 245 | GLU | - | LINKER | UNP Q877G8 |
| O | 241 | GLU | - | LINKER | UNP Q877G8 |
| O | 242 | THR | - | LINKER | UNP Q877G8 |
| O | 243 | ALA | - | LINKER | UNP Q877G8 |
| O | 244 | SER | - | LINKER | UNP Q877G8 |
| O | 245 | GLU | - | LINKER | UNP Q877G8 |
| P | 241 | GLU | - | LINKER | UNP Q877G8 |
| P | 242 | THR | - | LINKER | UNP Q877G8 |
| P | 243 | ALA | - | LINKER | UNP Q877G8 |
| P | 244 | SER | - | LINKER | UNP Q877G8 |
| P | 245 | GLU | - | LINKER | UNP Q877G8 |

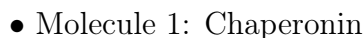
3 Residue-property plots

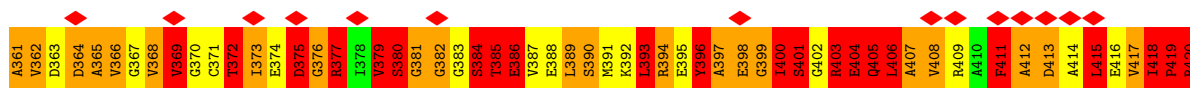
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

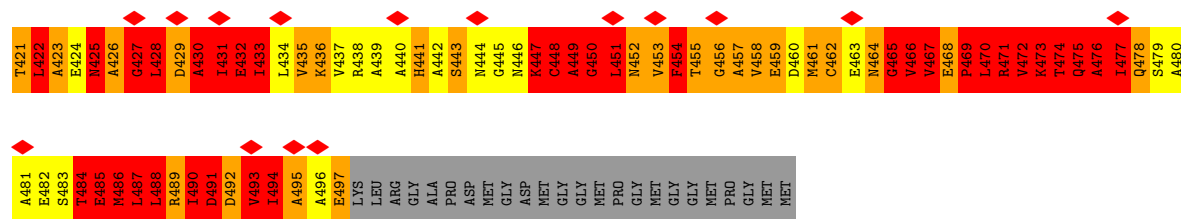
• Molecule 1: Chaperonin



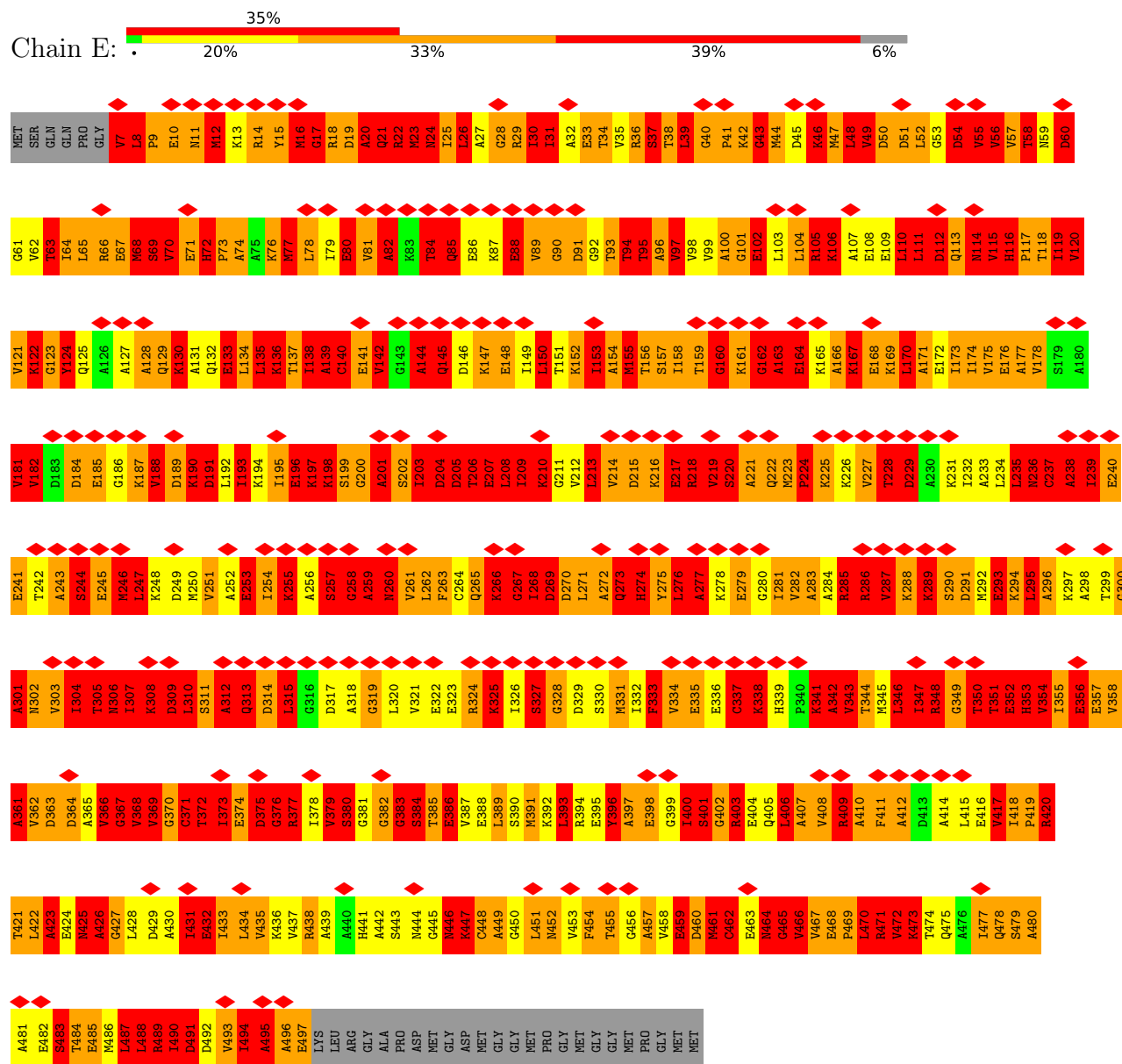
• Molecule 1: Chaperonin



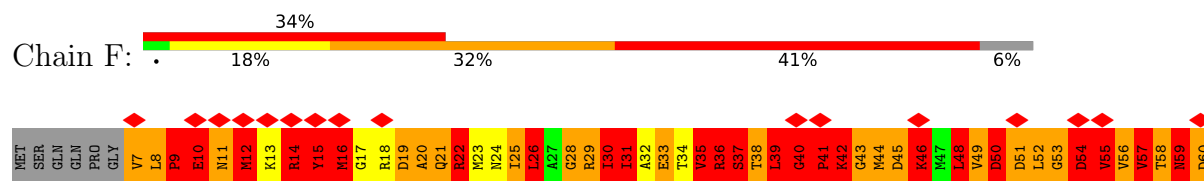


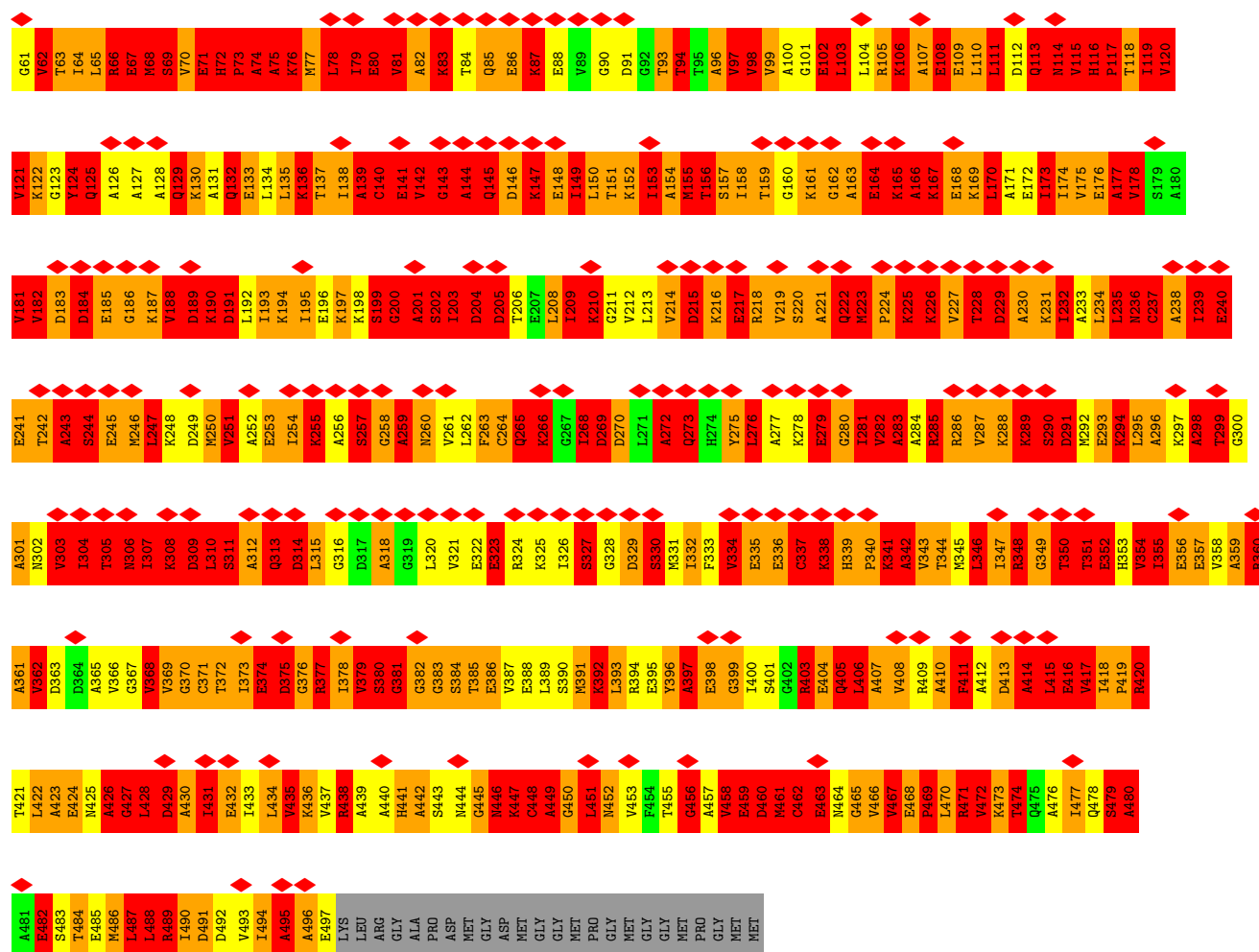


• Molecule 1: Chaperonin

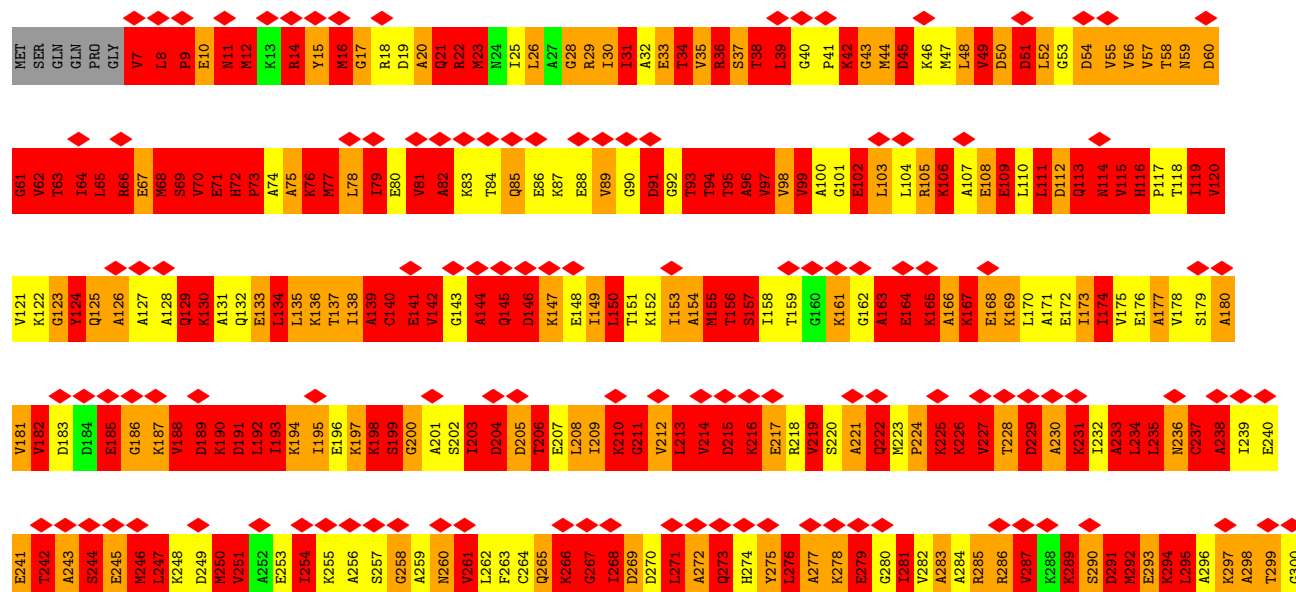
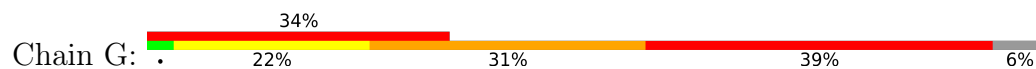


• Molecule 1: Chaperonin

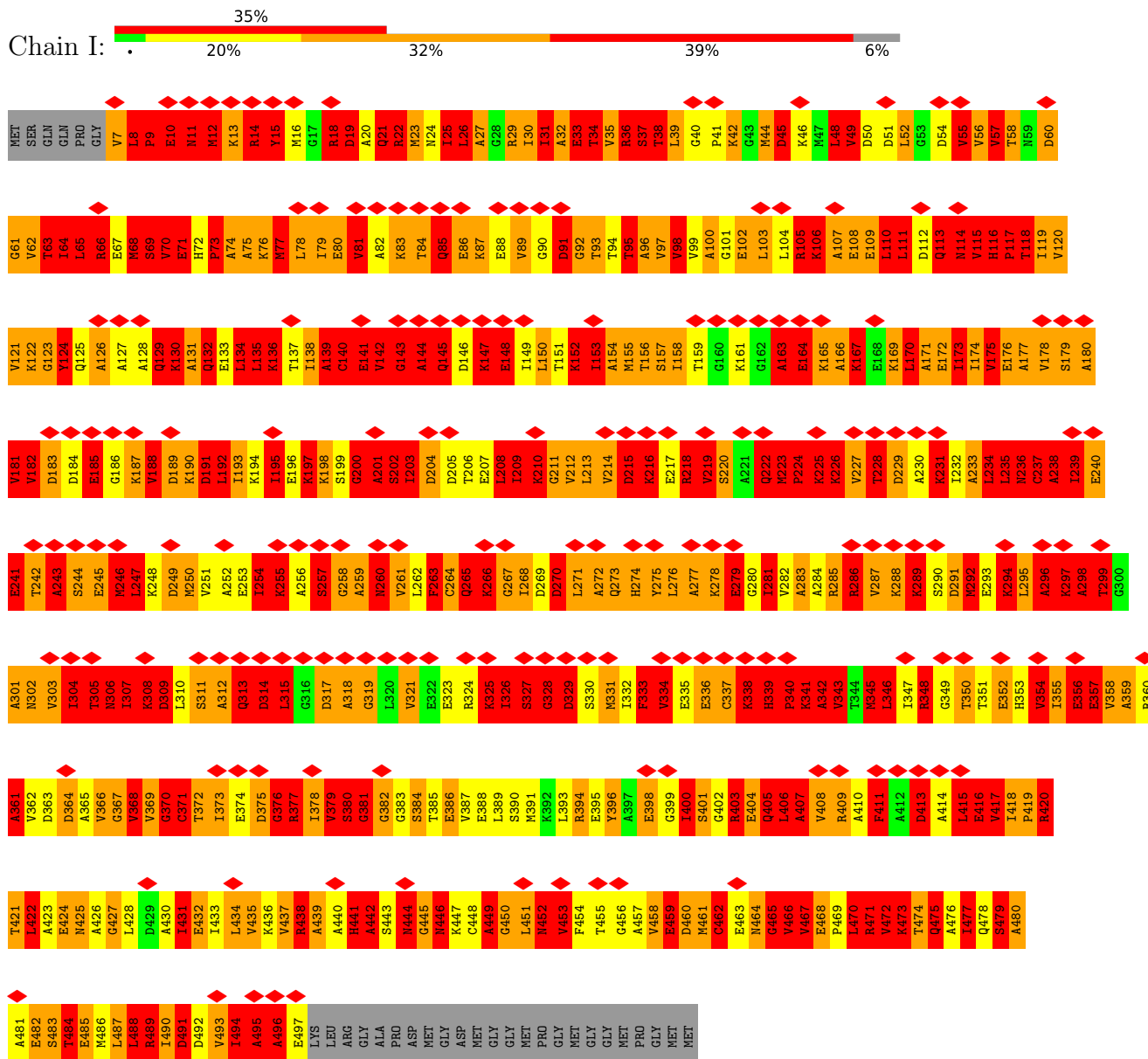




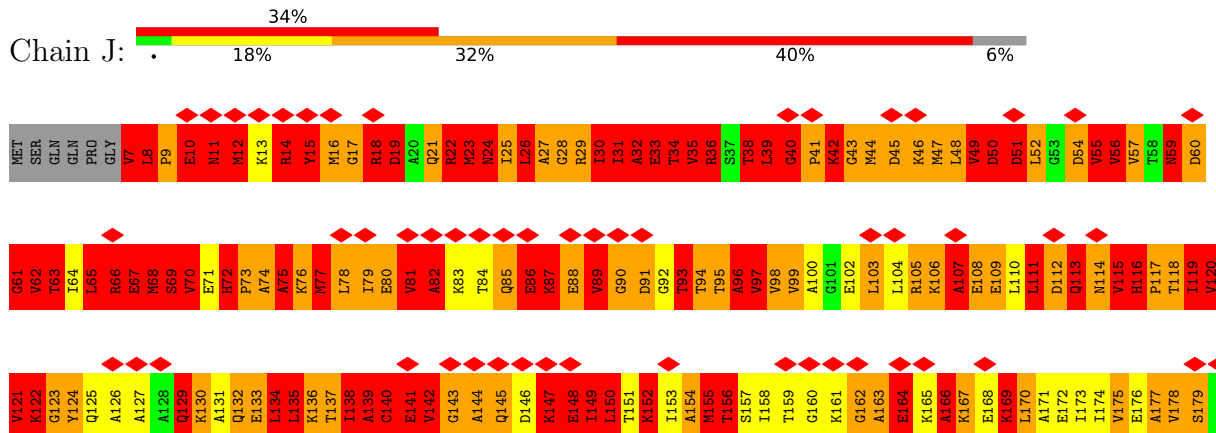
• Molecule 1: Chaperonin

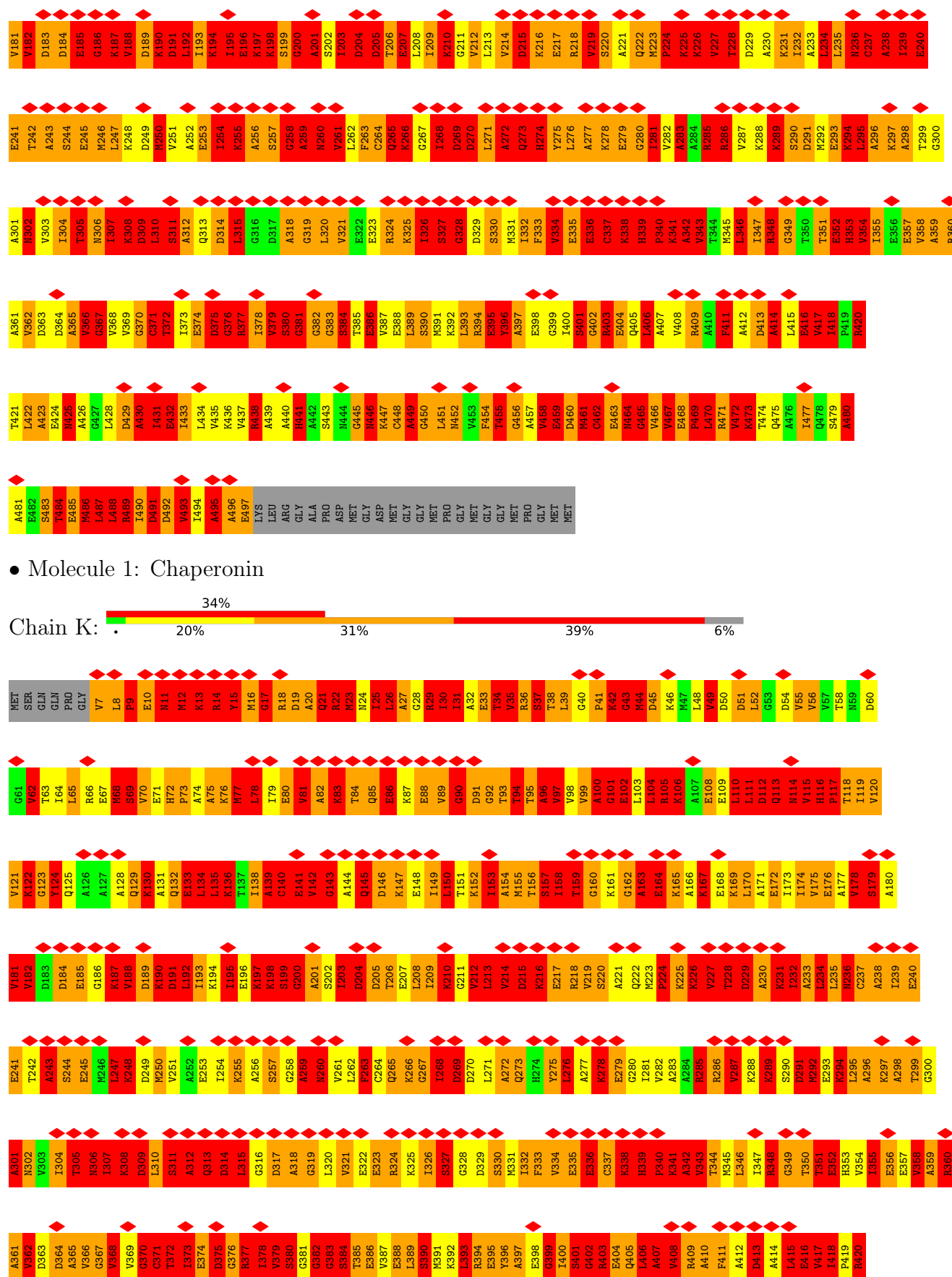


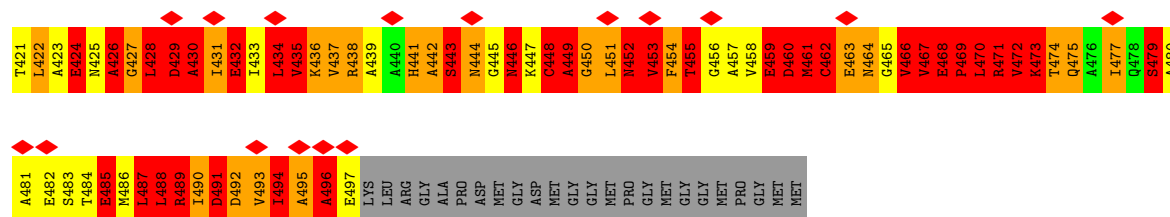
Chain I:



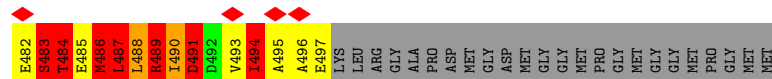
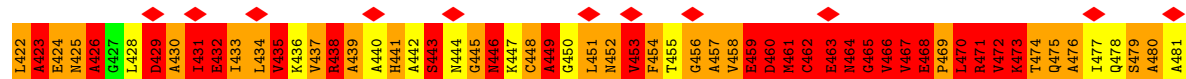
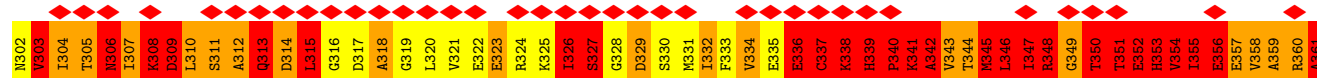
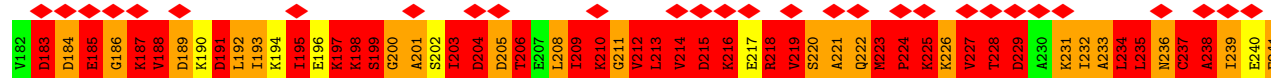
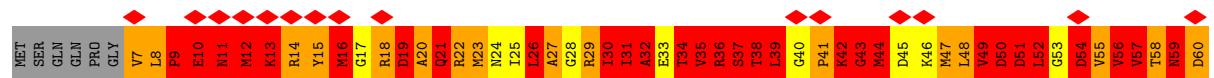
Chain J:



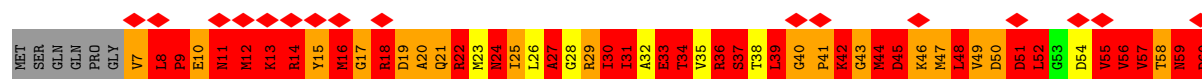


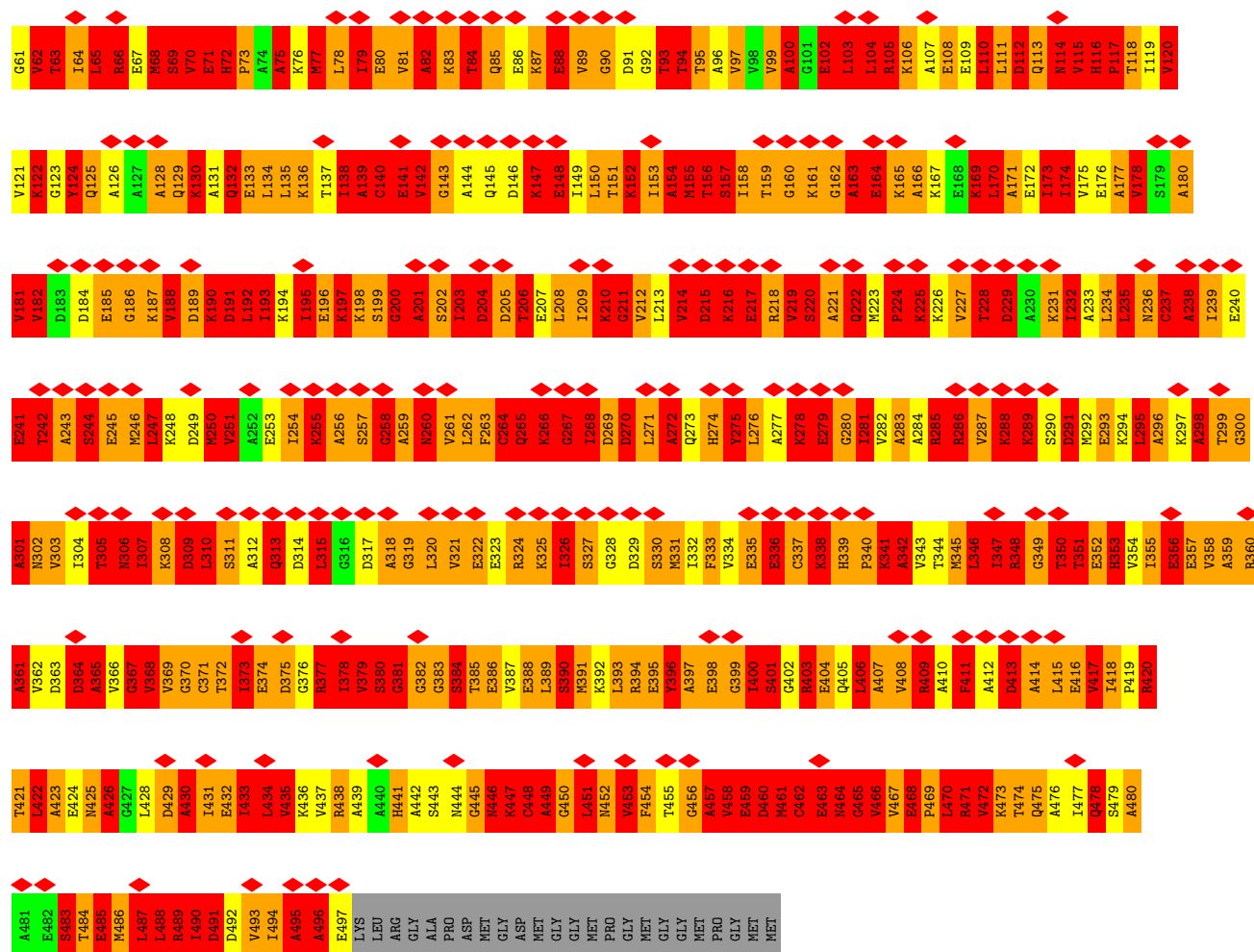


• Molecule 1: Chaperonin

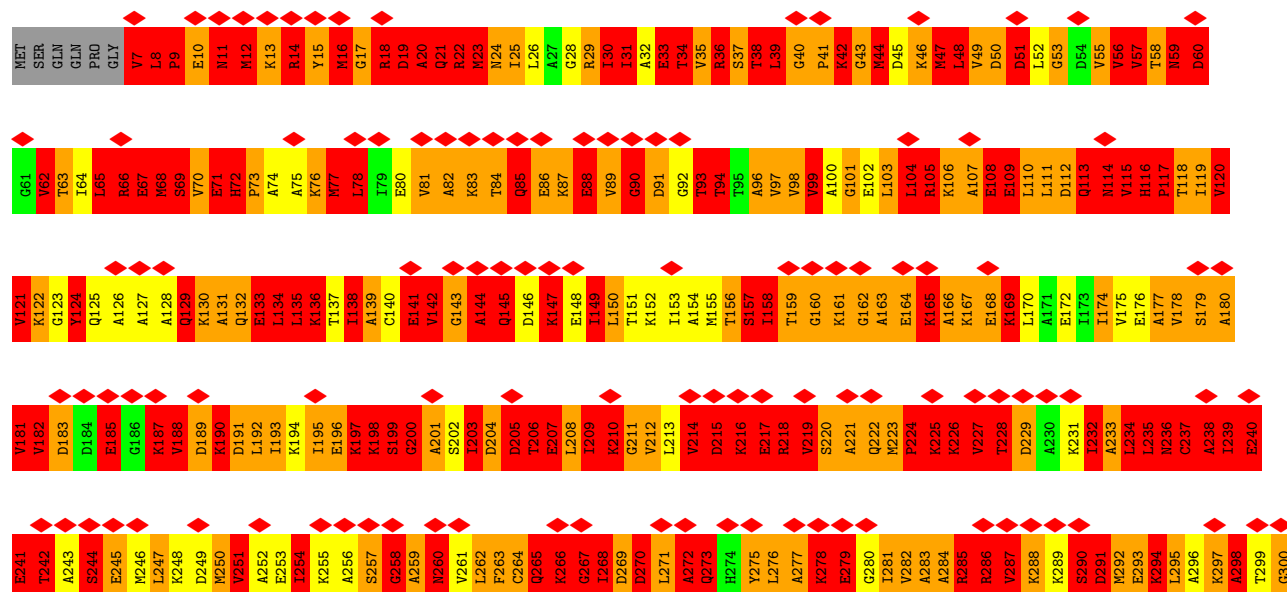
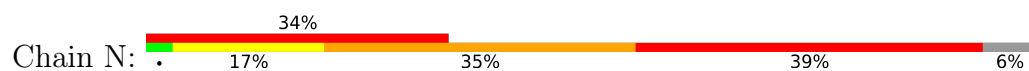


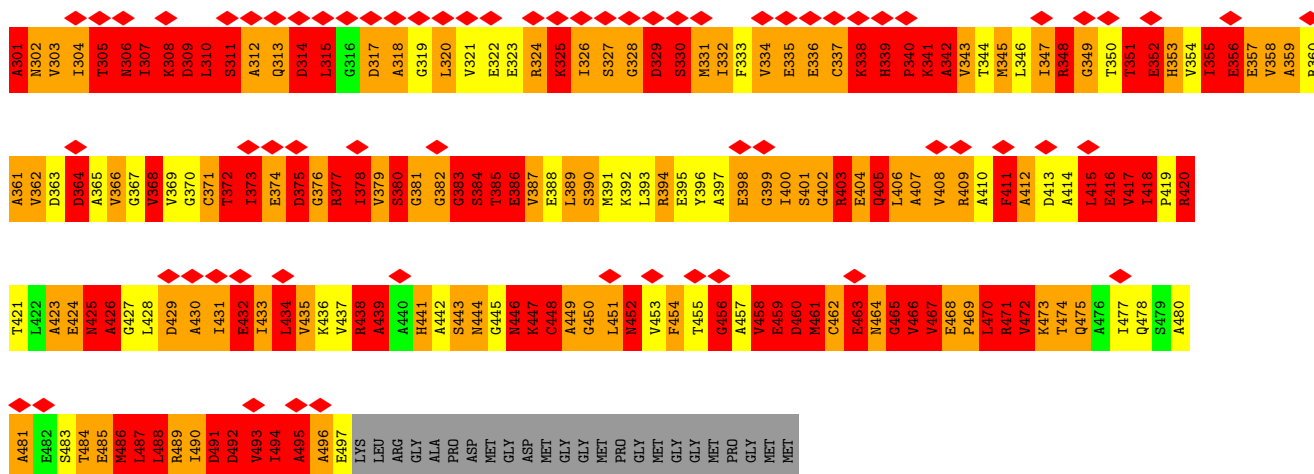
• Molecule 1: Chaperonin





• Molecule 1: Chaperonin





Chain P:



4 Experimental information

| Property | Value | Source |
|--------------------------------------|--------------------------------|-----------|
| EM reconstruction method | SINGLE PARTICLE | Depositor |
| Imposed symmetry | POINT, D8 | Depositor |
| Number of particles used | Not provided | |
| Resolution determination method | FSC 0.5 CUT-OFF | Depositor |
| CTF correction method | Each micrograph | Depositor |
| Microscope | JEOL 3200FSC | Depositor |
| Voltage (kV) | 300 | Depositor |
| Electron dose ($e^-/\text{\AA}^2$) | 20 | Depositor |
| Minimum defocus (nm) | 1000 | Depositor |
| Maximum defocus (nm) | 3000 | Depositor |
| Magnification | 112000 | Depositor |
| Image detector | GATAN ULTRASCAN 4000 (4k x 4k) | Depositor |
| Maximum map value | 2.477 | Depositor |
| Minimum map value | -1.784 | Depositor |
| Average map value | 0.034 | Depositor |
| Map value standard deviation | 0.191 | Depositor |
| Recommended contour level | 0.95 | Depositor |
| Map size (\AA) | 319.2, 319.2, 319.2 | wwPDB |
| Map dimensions | 240, 240, 240 | wwPDB |
| Map angles ($^\circ$) | 90, 90, 90 | wwPDB |
| Pixel spacing (\AA) | 1.33, 1.33, 1.33 | Depositor |

5 Model quality

5.1 Standard geometry

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

| Mol | Chain | Bond lengths | | Bond angles | |
|-----|-------|--------------|-------------------|-------------|---------------------|
| | | RMSZ | $\# Z > 5$ | RMSZ | $\# Z > 5$ |
| 1 | A | 2.13 | 73/3685 (2.0%) | 3.56 | 638/4961 (12.9%) |
| 1 | B | 2.15 | 80/3685 (2.2%) | 3.61 | 635/4961 (12.8%) |
| 1 | C | 2.12 | 79/3685 (2.1%) | 3.69 | 614/4961 (12.4%) |
| 1 | D | 2.07 | 58/3685 (1.6%) | 3.59 | 632/4961 (12.7%) |
| 1 | E | 2.10 | 73/3685 (2.0%) | 3.47 | 599/4961 (12.1%) |
| 1 | F | 2.15 | 89/3685 (2.4%) | 3.59 | 631/4961 (12.7%) |
| 1 | G | 2.10 | 70/3685 (1.9%) | 3.62 | 649/4961 (13.1%) |
| 1 | H | 2.11 | 70/3685 (1.9%) | 3.63 | 603/4961 (12.2%) |
| 1 | I | 2.10 | 62/3685 (1.7%) | 3.55 | 644/4961 (13.0%) |
| 1 | J | 2.14 | 86/3685 (2.3%) | 3.54 | 640/4961 (12.9%) |
| 1 | K | 2.12 | 80/3685 (2.2%) | 3.55 | 641/4961 (12.9%) |
| 1 | L | 2.11 | 75/3685 (2.0%) | 3.53 | 632/4961 (12.7%) |
| 1 | M | 2.15 | 75/3685 (2.0%) | 3.58 | 624/4961 (12.6%) |
| 1 | N | 2.12 | 65/3685 (1.8%) | 3.62 | 603/4961 (12.2%) |
| 1 | O | 2.10 | 73/3685 (2.0%) | 3.69 | 649/4961 (13.1%) |
| 1 | P | 2.15 | 89/3685 (2.4%) | 3.64 | 639/4961 (12.9%) |
| All | All | 2.12 | 1197/58960 (2.0%) | 3.59 | 10073/79376 (12.7%) |

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1 | A | 71 | 243 |
| 1 | B | 55 | 257 |
| 1 | C | 57 | 264 |
| 1 | D | 60 | 284 |
| 1 | E | 51 | 259 |
| 1 | F | 58 | 270 |
| 1 | G | 63 | 258 |
| 1 | H | 61 | 282 |
| 1 | I | 60 | 252 |

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| Mol | Chain | #Chirality outliers | #Planarity outliers |
|-----|-------|---------------------|---------------------|
| 1 | J | 53 | 260 |
| 1 | K | 57 | 267 |
| 1 | L | 44 | 284 |
| 1 | M | 54 | 279 |
| 1 | N | 50 | 292 |
| 1 | O | 63 | 275 |
| 1 | P | 67 | 288 |
| All | All | 924 | 4314 |

All (1197) bond length outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | N | 245 | GLU | CD-OE1 | 10.06 | 1.36 | 1.25 |
| 1 | H | 86 | GLU | CD-OE1 | -9.98 | 1.14 | 1.25 |
| 1 | B | 336 | GLU | CD-OE2 | 9.94 | 1.36 | 1.25 |
| 1 | I | 164 | GLU | CD-OE1 | 9.93 | 1.36 | 1.25 |
| 1 | A | 88 | GLU | CD-OE1 | 9.88 | 1.36 | 1.25 |
| 1 | J | 416 | GLU | CD-OE1 | -9.79 | 1.14 | 1.25 |
| 1 | O | 398 | GLU | CD-OE2 | 9.74 | 1.36 | 1.25 |
| 1 | A | 168 | GLU | CD-OE1 | 9.72 | 1.36 | 1.25 |
| 1 | N | 148 | GLU | CD-OE2 | 9.71 | 1.36 | 1.25 |
| 1 | P | 404 | GLU | CD-OE2 | 9.56 | 1.36 | 1.25 |
| 1 | H | 148 | GLU | CD-OE1 | 9.55 | 1.36 | 1.25 |
| 1 | G | 141 | GLU | CD-OE2 | -9.51 | 1.15 | 1.25 |
| 1 | L | 459 | GLU | CD-OE1 | -9.48 | 1.15 | 1.25 |
| 1 | N | 207 | GLU | CD-OE2 | 9.47 | 1.36 | 1.25 |
| 1 | P | 356 | GLU | CD-OE2 | 9.39 | 1.35 | 1.25 |
| 1 | A | 217 | GLU | CD-OE1 | 9.35 | 1.35 | 1.25 |
| 1 | L | 88 | GLU | CD-OE1 | 9.29 | 1.35 | 1.25 |
| 1 | J | 168 | GLU | CD-OE1 | 9.24 | 1.35 | 1.25 |
| 1 | M | 293 | GLU | CD-OE2 | -9.21 | 1.15 | 1.25 |
| 1 | N | 485 | GLU | CD-OE1 | -9.15 | 1.15 | 1.25 |
| 1 | D | 67 | GLU | CD-OE2 | -9.14 | 1.15 | 1.25 |
| 1 | H | 164 | GLU | CD-OE1 | 9.12 | 1.35 | 1.25 |
| 1 | M | 336 | GLU | CD-OE1 | 9.12 | 1.35 | 1.25 |
| 1 | F | 196 | GLU | CD-OE2 | -8.99 | 1.15 | 1.25 |
| 1 | D | 356 | GLU | CD-OE2 | -8.97 | 1.15 | 1.25 |
| 1 | D | 241 | GLU | CD-OE2 | 8.94 | 1.35 | 1.25 |
| 1 | B | 482 | GLU | CD-OE1 | -8.92 | 1.15 | 1.25 |
| 1 | O | 71 | GLU | CD-OE1 | 8.88 | 1.35 | 1.25 |
| 1 | O | 336 | GLU | CD-OE2 | 8.86 | 1.35 | 1.25 |
| 1 | F | 253 | GLU | CD-OE2 | 8.84 | 1.35 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | M | 185 | GLU | CD-OE2 | 8.83 | 1.35 | 1.25 |
| 1 | C | 80 | GLU | CD-OE1 | -8.77 | 1.16 | 1.25 |
| 1 | G | 71 | GLU | CD-OE1 | 8.77 | 1.35 | 1.25 |
| 1 | O | 357 | GLU | CD-OE2 | 8.73 | 1.35 | 1.25 |
| 1 | H | 374 | GLU | CD-OE2 | 8.73 | 1.35 | 1.25 |
| 1 | N | 67 | GLU | CD-OE1 | 8.72 | 1.35 | 1.25 |
| 1 | E | 463 | GLU | CD-OE2 | -8.70 | 1.16 | 1.25 |
| 1 | B | 253 | GLU | CD-OE2 | -8.69 | 1.16 | 1.25 |
| 1 | H | 356 | GLU | CD-OE2 | -8.66 | 1.16 | 1.25 |
| 1 | J | 133 | GLU | CD-OE2 | 8.65 | 1.35 | 1.25 |
| 1 | N | 356 | GLU | CD-OE2 | -8.63 | 1.16 | 1.25 |
| 1 | G | 335 | GLU | CD-OE1 | -8.61 | 1.16 | 1.25 |
| 1 | M | 29 | ARG | CZ-NH1 | -8.60 | 1.21 | 1.33 |
| 1 | B | 293 | GLU | CD-OE1 | 8.59 | 1.35 | 1.25 |
| 1 | O | 240 | GLU | CD-OE2 | -8.57 | 1.16 | 1.25 |
| 1 | K | 185 | GLU | CD-OE1 | -8.55 | 1.16 | 1.25 |
| 1 | L | 88 | GLU | CD-OE2 | -8.54 | 1.16 | 1.25 |
| 1 | G | 459 | GLU | CD-OE1 | 8.52 | 1.35 | 1.25 |
| 1 | J | 18 | ARG | NE-CZ | 8.50 | 1.44 | 1.33 |
| 1 | G | 133 | GLU | CD-OE2 | -8.49 | 1.16 | 1.25 |
| 1 | K | 207 | GLU | CD-OE2 | 8.46 | 1.34 | 1.25 |
| 1 | F | 196 | GLU | CD-OE1 | -8.42 | 1.16 | 1.25 |
| 1 | E | 164 | GLU | CD-OE2 | 8.41 | 1.34 | 1.25 |
| 1 | O | 416 | GLU | CD-OE1 | 8.41 | 1.34 | 1.25 |
| 1 | O | 148 | GLU | CD-OE1 | 8.40 | 1.34 | 1.25 |
| 1 | K | 463 | GLU | CD-OE1 | -8.39 | 1.16 | 1.25 |
| 1 | H | 102 | GLU | CD-OE2 | 8.38 | 1.34 | 1.25 |
| 1 | O | 86 | GLU | CD-OE2 | 8.38 | 1.34 | 1.25 |
| 1 | G | 105 | ARG | NE-CZ | 8.37 | 1.44 | 1.33 |
| 1 | M | 36 | ARG | CZ-NH1 | -8.36 | 1.22 | 1.33 |
| 1 | C | 386 | GLU | CD-OE2 | 8.33 | 1.34 | 1.25 |
| 1 | E | 22 | ARG | NE-CZ | 8.32 | 1.43 | 1.33 |
| 1 | O | 416 | GLU | CD-OE2 | -8.32 | 1.16 | 1.25 |
| 1 | E | 253 | GLU | CD-OE1 | -8.31 | 1.16 | 1.25 |
| 1 | J | 420 | ARG | CZ-NH1 | 8.25 | 1.43 | 1.33 |
| 1 | P | 207 | GLU | CD-OE1 | 8.21 | 1.34 | 1.25 |
| 1 | B | 245 | GLU | CD-OE2 | 8.17 | 1.34 | 1.25 |
| 1 | F | 388 | GLU | CD-OE1 | 8.16 | 1.34 | 1.25 |
| 1 | A | 279 | GLU | CD-OE2 | 8.15 | 1.34 | 1.25 |
| 1 | J | 459 | GLU | CD-OE2 | -8.14 | 1.16 | 1.25 |
| 1 | B | 386 | GLU | CD-OE2 | -8.09 | 1.16 | 1.25 |
| 1 | C | 164 | GLU | CD-OE2 | 8.05 | 1.34 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | D | 357 | GLU | CD-OE2 | 8.04 | 1.34 | 1.25 |
| 1 | C | 336 | GLU | CG-CD | 7.97 | 1.63 | 1.51 |
| 1 | M | 489 | ARG | NE-CZ | 7.93 | 1.43 | 1.33 |
| 1 | P | 293 | GLU | CD-OE2 | 7.88 | 1.34 | 1.25 |
| 1 | M | 285 | ARG | CZ-NH2 | 7.84 | 1.43 | 1.33 |
| 1 | A | 141 | GLU | CD-OE1 | -7.83 | 1.17 | 1.25 |
| 1 | P | 124 | TYR | CG-CD1 | 7.83 | 1.49 | 1.39 |
| 1 | C | 390 | SER | CB-OG | 7.81 | 1.52 | 1.42 |
| 1 | E | 409 | ARG | NE-CZ | 7.80 | 1.43 | 1.33 |
| 1 | G | 245 | GLU | CD-OE2 | 7.80 | 1.34 | 1.25 |
| 1 | A | 482 | GLU | CD-OE2 | 7.77 | 1.34 | 1.25 |
| 1 | B | 157 | SER | CB-OG | 7.77 | 1.52 | 1.42 |
| 1 | M | 330 | SER | CB-OG | -7.77 | 1.32 | 1.42 |
| 1 | E | 18 | ARG | NE-CZ | 7.76 | 1.43 | 1.33 |
| 1 | A | 36 | ARG | CZ-NH1 | -7.74 | 1.23 | 1.33 |
| 1 | J | 335 | GLU | CD-OE1 | -7.73 | 1.17 | 1.25 |
| 1 | A | 14 | ARG | NE-CZ | 7.72 | 1.43 | 1.33 |
| 1 | B | 240 | GLU | CD-OE2 | -7.72 | 1.17 | 1.25 |
| 1 | E | 164 | GLU | CD-OE1 | 7.69 | 1.34 | 1.25 |
| 1 | P | 196 | GLU | CD-OE1 | 7.69 | 1.34 | 1.25 |
| 1 | G | 148 | GLU | CG-CD | 7.68 | 1.63 | 1.51 |
| 1 | M | 398 | GLU | CD-OE2 | 7.68 | 1.34 | 1.25 |
| 1 | D | 420 | ARG | CZ-NH2 | 7.67 | 1.43 | 1.33 |
| 1 | J | 293 | GLU | CD-OE2 | 7.65 | 1.34 | 1.25 |
| 1 | C | 432 | GLU | CD-OE2 | 7.65 | 1.34 | 1.25 |
| 1 | O | 18 | ARG | CZ-NH1 | 7.62 | 1.43 | 1.33 |
| 1 | G | 377 | ARG | CZ-NH1 | -7.62 | 1.23 | 1.33 |
| 1 | I | 279 | GLU | CD-OE1 | -7.61 | 1.17 | 1.25 |
| 1 | E | 424 | GLU | CD-OE2 | 7.60 | 1.34 | 1.25 |
| 1 | C | 133 | GLU | CD-OE1 | -7.59 | 1.17 | 1.25 |
| 1 | E | 360 | ARG | CZ-NH1 | 7.58 | 1.43 | 1.33 |
| 1 | A | 402 | GLY | N-CA | 7.58 | 1.57 | 1.46 |
| 1 | F | 485 | GLU | CG-CD | 7.57 | 1.63 | 1.51 |
| 1 | O | 293 | GLU | CD-OE1 | 7.57 | 1.33 | 1.25 |
| 1 | M | 374 | GLU | CD-OE2 | 7.55 | 1.33 | 1.25 |
| 1 | G | 244 | SER | CB-OG | -7.53 | 1.32 | 1.42 |
| 1 | K | 10 | GLU | CD-OE2 | 7.51 | 1.33 | 1.25 |
| 1 | O | 424 | GLU | CG-CD | 7.51 | 1.63 | 1.51 |
| 1 | G | 164 | GLU | CD-OE2 | -7.50 | 1.17 | 1.25 |
| 1 | D | 69 | SER | CB-OG | -7.46 | 1.32 | 1.42 |
| 1 | P | 267 | GLY | N-CA | -7.46 | 1.34 | 1.46 |
| 1 | C | 22 | ARG | CZ-NH1 | -7.45 | 1.23 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | C | 80 | GLU | CD-OE2 | 7.44 | 1.33 | 1.25 |
| 1 | A | 327 | SER | CB-OG | 7.44 | 1.51 | 1.42 |
| 1 | I | 324 | ARG | CZ-NH2 | -7.42 | 1.23 | 1.33 |
| 1 | O | 196 | GLU | CD-OE2 | -7.39 | 1.17 | 1.25 |
| 1 | B | 377 | ARG | CZ-NH1 | 7.39 | 1.42 | 1.33 |
| 1 | P | 285 | ARG | CZ-NH2 | 7.39 | 1.42 | 1.33 |
| 1 | M | 401 | SER | CB-OG | 7.38 | 1.51 | 1.42 |
| 1 | M | 497 | GLU | CD-OE1 | 7.37 | 1.33 | 1.25 |
| 1 | N | 157 | SER | CB-OG | 7.36 | 1.51 | 1.42 |
| 1 | A | 18 | ARG | NE-CZ | 7.35 | 1.42 | 1.33 |
| 1 | A | 322 | GLU | CD-OE2 | 7.35 | 1.33 | 1.25 |
| 1 | K | 133 | GLU | CD-OE1 | 7.35 | 1.33 | 1.25 |
| 1 | H | 10 | GLU | CD-OE1 | 7.34 | 1.33 | 1.25 |
| 1 | H | 404 | GLU | CD-OE2 | 7.33 | 1.33 | 1.25 |
| 1 | A | 67 | GLU | CD-OE1 | -7.33 | 1.17 | 1.25 |
| 1 | N | 109 | GLU | CD-OE1 | -7.32 | 1.17 | 1.25 |
| 1 | M | 489 | ARG | CZ-NH2 | 7.31 | 1.42 | 1.33 |
| 1 | C | 468 | GLU | CD-OE2 | 7.30 | 1.33 | 1.25 |
| 1 | E | 245 | GLU | CD-OE1 | 7.30 | 1.33 | 1.25 |
| 1 | F | 285 | ARG | CZ-NH2 | 7.27 | 1.42 | 1.33 |
| 1 | K | 241 | GLU | CD-OE2 | 7.27 | 1.33 | 1.25 |
| 1 | F | 43 | GLY | C-O | 7.26 | 1.35 | 1.23 |
| 1 | H | 386 | GLU | CD-OE2 | 7.25 | 1.33 | 1.25 |
| 1 | G | 356 | GLU | CD-OE2 | -7.25 | 1.17 | 1.25 |
| 1 | I | 479 | SER | CB-OG | -7.25 | 1.32 | 1.42 |
| 1 | N | 275 | TYR | CE2-CZ | -7.24 | 1.29 | 1.38 |
| 1 | D | 15 | TYR | CE1-CZ | 7.23 | 1.48 | 1.38 |
| 1 | E | 240 | GLU | CD-OE2 | 7.22 | 1.33 | 1.25 |
| 1 | K | 356 | GLU | CD-OE1 | -7.22 | 1.17 | 1.25 |
| 1 | B | 240 | GLU | CD-OE1 | 7.21 | 1.33 | 1.25 |
| 1 | I | 187 | LYS | CD-CE | 7.21 | 1.69 | 1.51 |
| 1 | J | 471 | ARG | CZ-NH2 | -7.20 | 1.23 | 1.33 |
| 1 | F | 80 | GLU | CD-OE2 | 7.19 | 1.33 | 1.25 |
| 1 | K | 199 | SER | CB-OG | 7.18 | 1.51 | 1.42 |
| 1 | P | 148 | GLU | CD-OE1 | 7.18 | 1.33 | 1.25 |
| 1 | A | 164 | GLU | CG-CD | 7.18 | 1.62 | 1.51 |
| 1 | B | 293 | GLU | CD-OE2 | -7.17 | 1.17 | 1.25 |
| 1 | H | 88 | GLU | CD-OE1 | 7.17 | 1.33 | 1.25 |
| 1 | D | 15 | TYR | CE2-CZ | 7.16 | 1.47 | 1.38 |
| 1 | P | 404 | GLU | CD-OE1 | -7.16 | 1.17 | 1.25 |
| 1 | C | 10 | GLU | CD-OE1 | -7.16 | 1.17 | 1.25 |
| 1 | E | 18 | ARG | CZ-NH2 | 7.16 | 1.42 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | K | 101 | GLY | N-CA | -7.15 | 1.35 | 1.46 |
| 1 | O | 275 | TYR | CE1-CZ | 7.15 | 1.47 | 1.38 |
| 1 | C | 148 | GLU | CD-OE1 | 7.15 | 1.33 | 1.25 |
| 1 | C | 463 | GLU | CD-OE2 | -7.14 | 1.17 | 1.25 |
| 1 | P | 386 | GLU | CD-OE2 | 7.14 | 1.33 | 1.25 |
| 1 | A | 18 | ARG | CZ-NH2 | -7.14 | 1.23 | 1.33 |
| 1 | G | 322 | GLU | CD-OE1 | 7.13 | 1.33 | 1.25 |
| 1 | J | 124 | TYR | CD2-CE2 | 7.12 | 1.50 | 1.39 |
| 1 | B | 66 | ARG | CZ-NH2 | 7.11 | 1.42 | 1.33 |
| 1 | E | 168 | GLU | CD-OE1 | -7.11 | 1.17 | 1.25 |
| 1 | K | 179 | SER | CB-OG | -7.08 | 1.33 | 1.42 |
| 1 | L | 29 | ARG | NE-CZ | 7.08 | 1.42 | 1.33 |
| 1 | O | 220 | SER | CB-OG | 7.08 | 1.51 | 1.42 |
| 1 | K | 424 | GLU | CD-OE2 | 7.08 | 1.33 | 1.25 |
| 1 | E | 244 | SER | CA-CB | -7.07 | 1.42 | 1.52 |
| 1 | J | 328 | GLY | C-O | 7.07 | 1.34 | 1.23 |
| 1 | C | 172 | GLU | CG-CD | 7.07 | 1.62 | 1.51 |
| 1 | K | 357 | GLU | CD-OE2 | -7.07 | 1.17 | 1.25 |
| 1 | J | 275 | TYR | CD2-CE2 | 7.06 | 1.50 | 1.39 |
| 1 | L | 404 | GLU | CG-CD | -7.06 | 1.41 | 1.51 |
| 1 | L | 377 | ARG | NE-CZ | -7.05 | 1.23 | 1.33 |
| 1 | O | 286 | ARG | CZ-NH2 | 7.05 | 1.42 | 1.33 |
| 1 | E | 335 | GLU | CD-OE1 | -7.04 | 1.18 | 1.25 |
| 1 | E | 185 | GLU | CD-OE2 | 7.03 | 1.33 | 1.25 |
| 1 | P | 465 | GLY | N-CA | -7.02 | 1.35 | 1.46 |
| 1 | O | 394 | ARG | CZ-NH2 | 7.02 | 1.42 | 1.33 |
| 1 | I | 352 | GLU | CD-OE2 | 7.02 | 1.33 | 1.25 |
| 1 | F | 377 | ARG | CZ-NH2 | -7.02 | 1.24 | 1.33 |
| 1 | C | 324 | ARG | NE-CZ | 7.01 | 1.42 | 1.33 |
| 1 | H | 459 | GLU | CG-CD | 7.00 | 1.62 | 1.51 |
| 1 | D | 398 | GLU | CD-OE2 | 7.00 | 1.33 | 1.25 |
| 1 | E | 497 | GLU | CD-OE1 | -7.00 | 1.18 | 1.25 |
| 1 | K | 388 | GLU | CD-OE2 | 7.00 | 1.33 | 1.25 |
| 1 | C | 105 | ARG | CZ-NH1 | -6.99 | 1.24 | 1.33 |
| 1 | M | 285 | ARG | CZ-NH1 | -6.99 | 1.24 | 1.33 |
| 1 | P | 427 | GLY | N-CA | -6.98 | 1.35 | 1.46 |
| 1 | F | 185 | GLU | CD-OE1 | -6.97 | 1.18 | 1.25 |
| 1 | O | 432 | GLU | CD-OE2 | -6.96 | 1.18 | 1.25 |
| 1 | H | 463 | GLU | CD-OE1 | -6.96 | 1.18 | 1.25 |
| 1 | O | 471 | ARG | CZ-NH1 | 6.96 | 1.42 | 1.33 |
| 1 | I | 29 | ARG | NE-CZ | -6.95 | 1.24 | 1.33 |
| 1 | A | 356 | GLU | CG-CD | 6.95 | 1.62 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | M | 322 | GLU | CD-OE1 | 6.95 | 1.33 | 1.25 |
| 1 | J | 133 | GLU | CD-OE1 | 6.94 | 1.33 | 1.25 |
| 1 | I | 69 | SER | CB-OG | 6.93 | 1.51 | 1.42 |
| 1 | K | 374 | GLU | CD-OE1 | 6.89 | 1.33 | 1.25 |
| 1 | G | 240 | GLU | CD-OE1 | 6.89 | 1.33 | 1.25 |
| 1 | N | 336 | GLU | CD-OE1 | -6.89 | 1.18 | 1.25 |
| 1 | P | 66 | ARG | CZ-NH1 | 6.89 | 1.42 | 1.33 |
| 1 | H | 357 | GLU | CG-CD | 6.89 | 1.62 | 1.51 |
| 1 | I | 328 | GLY | N-CA | 6.88 | 1.56 | 1.46 |
| 1 | K | 196 | GLU | CD-OE1 | 6.88 | 1.33 | 1.25 |
| 1 | P | 348 | ARG | CZ-NH1 | 6.88 | 1.42 | 1.33 |
| 1 | F | 217 | GLU | CD-OE2 | 6.87 | 1.33 | 1.25 |
| 1 | B | 196 | GLU | CD-OE2 | 6.87 | 1.33 | 1.25 |
| 1 | D | 395 | GLU | CB-CG | 6.87 | 1.65 | 1.52 |
| 1 | F | 33 | GLU | CG-CD | -6.86 | 1.41 | 1.51 |
| 1 | I | 37 | SER | CB-OG | 6.85 | 1.51 | 1.42 |
| 1 | K | 322 | GLU | CD-OE2 | 6.84 | 1.33 | 1.25 |
| 1 | N | 185 | GLU | CD-OE2 | 6.82 | 1.33 | 1.25 |
| 1 | I | 148 | GLU | CD-OE2 | -6.81 | 1.18 | 1.25 |
| 1 | F | 450 | GLY | N-CA | 6.81 | 1.56 | 1.46 |
| 1 | A | 459 | GLU | CD-OE1 | 6.80 | 1.33 | 1.25 |
| 1 | L | 245 | GLU | CD-OE2 | 6.80 | 1.33 | 1.25 |
| 1 | L | 141 | GLU | CD-OE2 | 6.79 | 1.33 | 1.25 |
| 1 | J | 497 | GLU | CD-OE2 | 6.79 | 1.33 | 1.25 |
| 1 | O | 398 | GLU | CD-OE1 | -6.79 | 1.18 | 1.25 |
| 1 | A | 217 | GLU | CD-OE2 | -6.78 | 1.18 | 1.25 |
| 1 | M | 217 | GLU | CD-OE1 | -6.77 | 1.18 | 1.25 |
| 1 | M | 348 | ARG | NE-CZ | -6.77 | 1.24 | 1.33 |
| 1 | E | 80 | GLU | CD-OE1 | -6.77 | 1.18 | 1.25 |
| 1 | L | 290 | SER | CB-OG | -6.76 | 1.33 | 1.42 |
| 1 | P | 459 | GLU | CD-OE2 | -6.76 | 1.18 | 1.25 |
| 1 | O | 185 | GLU | CD-OE1 | 6.75 | 1.33 | 1.25 |
| 1 | O | 459 | GLU | CD-OE1 | -6.75 | 1.18 | 1.25 |
| 1 | I | 330 | SER | CB-OG | -6.73 | 1.33 | 1.42 |
| 1 | J | 489 | ARG | CD-NE | -6.73 | 1.35 | 1.46 |
| 1 | L | 176 | GLU | CG-CD | 6.72 | 1.62 | 1.51 |
| 1 | H | 176 | GLU | CD-OE2 | -6.71 | 1.18 | 1.25 |
| 1 | P | 324 | ARG | CZ-NH2 | -6.71 | 1.24 | 1.33 |
| 1 | O | 420 | ARG | CZ-NH2 | -6.71 | 1.24 | 1.33 |
| 1 | M | 416 | GLU | CD-OE2 | 6.70 | 1.33 | 1.25 |
| 1 | C | 497 | GLU | CD-OE1 | -6.69 | 1.18 | 1.25 |
| 1 | B | 207 | GLU | CD-OE1 | 6.68 | 1.32 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | J | 352 | GLU | CD-OE1 | 6.67 | 1.32 | 1.25 |
| 1 | P | 108 | GLU | CD-OE2 | -6.66 | 1.18 | 1.25 |
| 1 | D | 172 | GLU | CD-OE2 | 6.66 | 1.32 | 1.25 |
| 1 | B | 336 | GLU | CD-OE1 | 6.65 | 1.32 | 1.25 |
| 1 | N | 18 | ARG | CZ-NH2 | 6.64 | 1.41 | 1.33 |
| 1 | F | 420 | ARG | CZ-NH2 | -6.63 | 1.24 | 1.33 |
| 1 | F | 133 | GLU | CD-OE1 | 6.62 | 1.32 | 1.25 |
| 1 | N | 352 | GLU | CD-OE1 | -6.62 | 1.18 | 1.25 |
| 1 | B | 241 | GLU | CB-CG | 6.61 | 1.64 | 1.52 |
| 1 | I | 218 | ARG | NE-CZ | -6.61 | 1.24 | 1.33 |
| 1 | M | 241 | GLU | CG-CD | 6.61 | 1.61 | 1.51 |
| 1 | A | 471 | ARG | CD-NE | -6.60 | 1.35 | 1.46 |
| 1 | A | 88 | GLU | CD-OE2 | 6.59 | 1.32 | 1.25 |
| 1 | L | 352 | GLU | CD-OE1 | -6.59 | 1.18 | 1.25 |
| 1 | C | 142 | VAL | C-N | 6.58 | 1.44 | 1.33 |
| 1 | B | 482 | GLU | CD-OE2 | 6.58 | 1.32 | 1.25 |
| 1 | B | 335 | GLU | CD-OE2 | -6.58 | 1.18 | 1.25 |
| 1 | M | 160 | GLY | C-O | -6.58 | 1.13 | 1.23 |
| 1 | J | 382 | GLY | N-CA | 6.58 | 1.55 | 1.46 |
| 1 | A | 14 | ARG | CZ-NH1 | 6.57 | 1.41 | 1.33 |
| 1 | F | 424 | GLU | CD-OE2 | 6.57 | 1.32 | 1.25 |
| 1 | G | 324 | ARG | CZ-NH1 | -6.57 | 1.24 | 1.33 |
| 1 | I | 172 | GLU | CD-OE1 | 6.57 | 1.32 | 1.25 |
| 1 | H | 424 | GLU | CD-OE2 | -6.56 | 1.18 | 1.25 |
| 1 | I | 14 | ARG | NE-CZ | -6.56 | 1.24 | 1.33 |
| 1 | E | 388 | GLU | CD-OE1 | -6.56 | 1.18 | 1.25 |
| 1 | G | 280 | GLY | N-CA | -6.55 | 1.36 | 1.46 |
| 1 | H | 377 | ARG | NE-CZ | 6.55 | 1.41 | 1.33 |
| 1 | D | 141 | GLU | CD-OE1 | 6.54 | 1.32 | 1.25 |
| 1 | K | 286 | ARG | CZ-NH1 | 6.54 | 1.41 | 1.33 |
| 1 | I | 10 | GLU | CD-OE2 | 6.53 | 1.32 | 1.25 |
| 1 | P | 200 | GLY | N-CA | 6.53 | 1.55 | 1.46 |
| 1 | D | 172 | GLU | CG-CD | 6.53 | 1.61 | 1.51 |
| 1 | A | 438 | ARG | CZ-NH1 | 6.52 | 1.41 | 1.33 |
| 1 | L | 404 | GLU | CD-OE2 | 6.52 | 1.32 | 1.25 |
| 1 | B | 164 | GLU | CD-OE1 | 6.52 | 1.32 | 1.25 |
| 1 | G | 485 | GLU | CD-OE1 | 6.51 | 1.32 | 1.25 |
| 1 | N | 280 | GLY | C-O | 6.51 | 1.34 | 1.23 |
| 1 | O | 409 | ARG | CZ-NH2 | 6.51 | 1.41 | 1.33 |
| 1 | I | 41 | PRO | N-CD | 6.51 | 1.56 | 1.47 |
| 1 | N | 141 | GLU | CD-OE1 | 6.50 | 1.32 | 1.25 |
| 1 | A | 217 | GLU | CG-CD | 6.49 | 1.61 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | A | 141 | GLU | CD-OE2 | 6.49 | 1.32 | 1.25 |
| 1 | B | 172 | GLU | CD-OE2 | -6.49 | 1.18 | 1.25 |
| 1 | G | 471 | ARG | CZ-NH2 | -6.49 | 1.24 | 1.33 |
| 1 | P | 196 | GLU | CD-OE2 | -6.49 | 1.18 | 1.25 |
| 1 | G | 322 | GLU | CG-CD | -6.49 | 1.42 | 1.51 |
| 1 | J | 18 | ARG | CZ-NH2 | -6.48 | 1.24 | 1.33 |
| 1 | G | 43 | GLY | N-CA | 6.48 | 1.55 | 1.46 |
| 1 | O | 245 | GLU | CD-OE2 | 6.48 | 1.32 | 1.25 |
| 1 | D | 176 | GLU | CD-OE2 | -6.47 | 1.18 | 1.25 |
| 1 | O | 207 | GLU | CD-OE1 | 6.47 | 1.32 | 1.25 |
| 1 | F | 168 | GLU | CD-OE2 | -6.47 | 1.18 | 1.25 |
| 1 | C | 323 | GLU | CD-OE2 | 6.46 | 1.32 | 1.25 |
| 1 | P | 141 | GLU | CD-OE2 | -6.46 | 1.18 | 1.25 |
| 1 | J | 43 | GLY | C-O | -6.45 | 1.13 | 1.23 |
| 1 | I | 328 | GLY | CA-C | 6.44 | 1.62 | 1.51 |
| 1 | I | 330 | SER | CA-CB | -6.43 | 1.43 | 1.52 |
| 1 | K | 33 | GLU | CD-OE1 | -6.43 | 1.18 | 1.25 |
| 1 | H | 479 | SER | CA-CB | -6.43 | 1.43 | 1.52 |
| 1 | K | 395 | GLU | CG-CD | 6.42 | 1.61 | 1.51 |
| 1 | L | 240 | GLU | CD-OE2 | 6.42 | 1.32 | 1.25 |
| 1 | J | 424 | GLU | CD-OE1 | 6.42 | 1.32 | 1.25 |
| 1 | H | 196 | GLU | CG-CD | -6.42 | 1.42 | 1.51 |
| 1 | M | 258 | GLY | CA-C | 6.41 | 1.62 | 1.51 |
| 1 | B | 16 | MET | C-N | 6.41 | 1.44 | 1.33 |
| 1 | K | 108 | GLU | CD-OE2 | 6.40 | 1.32 | 1.25 |
| 1 | P | 133 | GLU | CD-OE2 | 6.40 | 1.32 | 1.25 |
| 1 | A | 360 | ARG | CZ-NH1 | -6.40 | 1.24 | 1.33 |
| 1 | M | 419 | PRO | N-CA | 6.40 | 1.58 | 1.47 |
| 1 | F | 497 | GLU | CG-CD | 6.39 | 1.61 | 1.51 |
| 1 | O | 22 | ARG | CZ-NH2 | 6.39 | 1.41 | 1.33 |
| 1 | B | 172 | GLU | CG-CD | 6.38 | 1.61 | 1.51 |
| 1 | K | 448 | CYS | CB-SG | -6.38 | 1.71 | 1.82 |
| 1 | K | 29 | ARG | CZ-NH2 | -6.37 | 1.24 | 1.33 |
| 1 | L | 371 | CYS | CB-SG | -6.36 | 1.71 | 1.82 |
| 1 | A | 257 | SER | CB-OG | 6.36 | 1.50 | 1.42 |
| 1 | M | 105 | ARG | CZ-NH2 | -6.35 | 1.24 | 1.33 |
| 1 | K | 404 | GLU | CD-OE1 | -6.35 | 1.18 | 1.25 |
| 1 | H | 164 | GLU | CD-OE2 | 6.34 | 1.32 | 1.25 |
| 1 | C | 41 | PRO | N-CD | -6.34 | 1.39 | 1.47 |
| 1 | P | 468 | GLU | CD-OE1 | -6.34 | 1.18 | 1.25 |
| 1 | K | 427 | GLY | CA-C | -6.33 | 1.41 | 1.51 |
| 1 | N | 323 | GLU | CD-OE1 | 6.33 | 1.32 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | K | 293 | GLU | CD-OE1 | 6.32 | 1.32 | 1.25 |
| 1 | J | 404 | GLU | CD-OE2 | 6.32 | 1.32 | 1.25 |
| 1 | G | 395 | GLU | CG-CD | -6.32 | 1.42 | 1.51 |
| 1 | L | 395 | GLU | CD-OE2 | 6.31 | 1.32 | 1.25 |
| 1 | F | 357 | GLU | CD-OE1 | -6.31 | 1.18 | 1.25 |
| 1 | F | 459 | GLU | CD-OE2 | 6.31 | 1.32 | 1.25 |
| 1 | C | 10 | GLU | CD-OE2 | 6.31 | 1.32 | 1.25 |
| 1 | J | 207 | GLU | CD-OE1 | -6.31 | 1.18 | 1.25 |
| 1 | P | 22 | ARG | CD-NE | 6.30 | 1.57 | 1.46 |
| 1 | A | 246 | MET | C-O | 6.29 | 1.35 | 1.23 |
| 1 | F | 323 | GLU | CG-CD | -6.29 | 1.42 | 1.51 |
| 1 | N | 322 | GLU | CG-CD | -6.29 | 1.42 | 1.51 |
| 1 | A | 279 | GLU | CD-OE1 | 6.29 | 1.32 | 1.25 |
| 1 | H | 403 | ARG | CZ-NH2 | 6.29 | 1.41 | 1.33 |
| 1 | G | 22 | ARG | CZ-NH1 | 6.28 | 1.41 | 1.33 |
| 1 | B | 275 | TYR | CZ-OH | 6.28 | 1.48 | 1.37 |
| 1 | C | 497 | GLU | C-O | 6.28 | 1.35 | 1.23 |
| 1 | L | 164 | GLU | CG-CD | 6.28 | 1.61 | 1.51 |
| 1 | A | 468 | GLU | CD-OE2 | -6.27 | 1.18 | 1.25 |
| 1 | G | 61 | GLY | C-O | 6.27 | 1.33 | 1.23 |
| 1 | E | 419 | PRO | N-CD | -6.26 | 1.39 | 1.47 |
| 1 | P | 279 | GLU | CD-OE1 | -6.26 | 1.18 | 1.25 |
| 1 | F | 380 | SER | CA-CB | 6.25 | 1.62 | 1.52 |
| 1 | I | 485 | GLU | CD-OE1 | -6.25 | 1.18 | 1.25 |
| 1 | K | 43 | GLY | N-CA | 6.25 | 1.55 | 1.46 |
| 1 | C | 420 | ARG | NE-CZ | 6.25 | 1.41 | 1.33 |
| 1 | C | 108 | GLU | CD-OE2 | 6.24 | 1.32 | 1.25 |
| 1 | B | 383 | GLY | N-CA | -6.24 | 1.36 | 1.46 |
| 1 | M | 468 | GLU | CG-CD | -6.24 | 1.42 | 1.51 |
| 1 | J | 18 | ARG | CZ-NH1 | 6.24 | 1.41 | 1.33 |
| 1 | P | 37 | SER | CB-OG | 6.23 | 1.50 | 1.42 |
| 1 | B | 109 | GLU | CB-CG | 6.23 | 1.64 | 1.52 |
| 1 | E | 241 | GLU | CD-OE2 | 6.23 | 1.32 | 1.25 |
| 1 | J | 348 | ARG | NE-CZ | 6.23 | 1.41 | 1.33 |
| 1 | H | 468 | GLU | CD-OE1 | -6.23 | 1.18 | 1.25 |
| 1 | L | 394 | ARG | CZ-NH2 | 6.23 | 1.41 | 1.33 |
| 1 | E | 67 | GLU | CD-OE1 | 6.22 | 1.32 | 1.25 |
| 1 | K | 376 | GLY | N-CA | -6.22 | 1.36 | 1.46 |
| 1 | O | 356 | GLU | CG-CD | -6.22 | 1.42 | 1.51 |
| 1 | M | 29 | ARG | CZ-NH2 | 6.21 | 1.41 | 1.33 |
| 1 | M | 432 | GLU | CD-OE2 | 6.21 | 1.32 | 1.25 |
| 1 | E | 370 | GLY | CA-C | 6.21 | 1.61 | 1.51 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | A | 367 | GLY | CA-C | -6.20 | 1.42 | 1.51 |
| 1 | O | 22 | ARG | CZ-NH1 | 6.20 | 1.41 | 1.33 |
| 1 | H | 290 | SER | CB-OG | 6.20 | 1.50 | 1.42 |
| 1 | E | 483 | SER | CB-OG | 6.20 | 1.50 | 1.42 |
| 1 | B | 401 | SER | CB-OG | 6.20 | 1.50 | 1.42 |
| 1 | J | 394 | ARG | CZ-NH2 | 6.19 | 1.41 | 1.33 |
| 1 | G | 63 | THR | CB-OG1 | 6.19 | 1.55 | 1.43 |
| 1 | L | 456 | GLY | N-CA | -6.19 | 1.36 | 1.46 |
| 1 | N | 258 | GLY | C-O | 6.19 | 1.33 | 1.23 |
| 1 | F | 33 | GLU | CD-OE1 | 6.18 | 1.32 | 1.25 |
| 1 | J | 253 | GLU | CD-OE2 | -6.18 | 1.18 | 1.25 |
| 1 | A | 241 | GLU | CD-OE1 | -6.18 | 1.18 | 1.25 |
| 1 | C | 188 | VAL | CB-CG1 | 6.18 | 1.65 | 1.52 |
| 1 | F | 172 | GLU | CD-OE1 | 6.18 | 1.32 | 1.25 |
| 1 | L | 196 | GLU | CG-CD | 6.17 | 1.61 | 1.51 |
| 1 | B | 176 | GLU | CD-OE1 | 6.17 | 1.32 | 1.25 |
| 1 | J | 108 | GLU | CD-OE1 | -6.16 | 1.18 | 1.25 |
| 1 | F | 241 | GLU | CD-OE2 | 6.16 | 1.32 | 1.25 |
| 1 | P | 279 | GLU | CG-CD | -6.16 | 1.42 | 1.51 |
| 1 | B | 200 | GLY | C-O | 6.15 | 1.33 | 1.23 |
| 1 | H | 327 | SER | C-O | 6.14 | 1.35 | 1.23 |
| 1 | J | 92 | GLY | CA-C | -6.14 | 1.42 | 1.51 |
| 1 | B | 148 | GLU | CG-CD | 6.14 | 1.61 | 1.51 |
| 1 | F | 290 | SER | CB-OG | -6.14 | 1.34 | 1.42 |
| 1 | L | 286 | ARG | NE-CZ | 6.14 | 1.41 | 1.33 |
| 1 | K | 10 | GLU | CD-OE1 | -6.13 | 1.19 | 1.25 |
| 1 | N | 360 | ARG | CZ-NH2 | 6.13 | 1.41 | 1.33 |
| 1 | A | 330 | SER | CB-OG | -6.12 | 1.34 | 1.42 |
| 1 | J | 116 | HIS | CG-CD2 | 6.12 | 1.46 | 1.35 |
| 1 | B | 285 | ARG | CZ-NH2 | 6.12 | 1.41 | 1.33 |
| 1 | M | 352 | GLU | CD-OE1 | 6.12 | 1.32 | 1.25 |
| 1 | C | 185 | GLU | CG-CD | -6.12 | 1.42 | 1.51 |
| 1 | D | 280 | GLY | N-CA | -6.11 | 1.36 | 1.46 |
| 1 | L | 257 | SER | CB-OG | -6.11 | 1.34 | 1.42 |
| 1 | B | 285 | ARG | CZ-NH1 | -6.11 | 1.25 | 1.33 |
| 1 | G | 370 | GLY | N-CA | 6.11 | 1.55 | 1.46 |
| 1 | P | 244 | SER | CA-CB | -6.10 | 1.43 | 1.52 |
| 1 | F | 403 | ARG | NE-CZ | 6.10 | 1.41 | 1.33 |
| 1 | A | 370 | GLY | N-CA | -6.09 | 1.36 | 1.46 |
| 1 | L | 396 | TYR | CD2-CE2 | 6.09 | 1.48 | 1.39 |
| 1 | L | 101 | GLY | N-CA | 6.08 | 1.55 | 1.46 |
| 1 | A | 40 | GLY | N-CA | -6.08 | 1.36 | 1.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | H | 468 | GLU | N-CA | 6.08 | 1.58 | 1.46 |
| 1 | O | 299 | THR | C-N | 6.08 | 1.44 | 1.33 |
| 1 | O | 360 | ARG | CZ-NH1 | 6.08 | 1.41 | 1.33 |
| 1 | O | 455 | THR | C-N | 6.08 | 1.44 | 1.33 |
| 1 | B | 253 | GLU | CB-CG | 6.07 | 1.63 | 1.52 |
| 1 | A | 390 | SER | CA-CB | 6.06 | 1.62 | 1.52 |
| 1 | C | 327 | SER | CA-CB | 6.06 | 1.62 | 1.52 |
| 1 | E | 352 | GLU | CG-CD | 6.06 | 1.61 | 1.51 |
| 1 | F | 189 | ASP | N-CA | 6.05 | 1.58 | 1.46 |
| 1 | E | 383 | GLY | N-CA | 6.04 | 1.55 | 1.46 |
| 1 | L | 370 | GLY | CA-C | 6.04 | 1.61 | 1.51 |
| 1 | I | 438 | ARG | CZ-NH1 | -6.04 | 1.25 | 1.33 |
| 1 | A | 200 | GLY | C-O | 6.04 | 1.33 | 1.23 |
| 1 | P | 384 | SER | CB-OG | -6.03 | 1.34 | 1.42 |
| 1 | P | 376 | GLY | N-CA | 6.03 | 1.55 | 1.46 |
| 1 | D | 33 | GLU | CD-OE1 | 6.02 | 1.32 | 1.25 |
| 1 | E | 290 | SER | CA-CB | 6.02 | 1.61 | 1.52 |
| 1 | G | 424 | GLU | CG-CD | 6.02 | 1.60 | 1.51 |
| 1 | C | 411 | PHE | CG-CD2 | 6.01 | 1.47 | 1.38 |
| 1 | B | 280 | GLY | N-CA | -6.01 | 1.37 | 1.46 |
| 1 | N | 88 | GLU | CD-OE1 | 6.01 | 1.32 | 1.25 |
| 1 | B | 323 | GLU | CG-CD | 6.01 | 1.60 | 1.51 |
| 1 | J | 218 | ARG | CZ-NH1 | -6.01 | 1.25 | 1.33 |
| 1 | K | 7 | VAL | N-CA | 6.01 | 1.58 | 1.46 |
| 1 | K | 487 | LEU | C-O | 6.01 | 1.34 | 1.23 |
| 1 | N | 456 | GLY | CA-C | 6.01 | 1.61 | 1.51 |
| 1 | A | 15 | TYR | CE1-CZ | -6.00 | 1.30 | 1.38 |
| 1 | L | 124 | TYR | CG-CD2 | -6.00 | 1.31 | 1.39 |
| 1 | C | 360 | ARG | CD-NE | -6.00 | 1.36 | 1.46 |
| 1 | F | 86 | GLU | CD-OE2 | -6.00 | 1.19 | 1.25 |
| 1 | G | 15 | TYR | CB-CG | 6.00 | 1.60 | 1.51 |
| 1 | O | 401 | SER | CA-CB | 6.00 | 1.61 | 1.52 |
| 1 | H | 411 | PHE | CG-CD2 | -6.00 | 1.29 | 1.38 |
| 1 | H | 80 | GLU | CG-CD | 5.99 | 1.60 | 1.51 |
| 1 | H | 324 | ARG | CZ-NH1 | 5.99 | 1.40 | 1.33 |
| 1 | K | 489 | ARG | CZ-NH1 | -5.99 | 1.25 | 1.33 |
| 1 | F | 328 | GLY | N-CA | 5.98 | 1.55 | 1.46 |
| 1 | B | 66 | ARG | NE-CZ | -5.98 | 1.25 | 1.33 |
| 1 | C | 240 | GLU | CD-OE1 | 5.98 | 1.32 | 1.25 |
| 1 | O | 445 | GLY | CA-C | -5.97 | 1.42 | 1.51 |
| 1 | P | 67 | GLU | CD-OE2 | -5.97 | 1.19 | 1.25 |
| 1 | A | 482 | GLU | CD-OE1 | -5.97 | 1.19 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | H | 324 | ARG | NE-CZ | 5.97 | 1.40 | 1.33 |
| 1 | P | 395 | GLU | CD-OE1 | -5.97 | 1.19 | 1.25 |
| 1 | L | 123 | GLY | N-CA | -5.96 | 1.37 | 1.46 |
| 1 | C | 339 | HIS | C-O | 5.96 | 1.34 | 1.23 |
| 1 | P | 489 | ARG | CZ-NH2 | 5.96 | 1.40 | 1.33 |
| 1 | D | 33 | GLU | CG-CD | -5.96 | 1.43 | 1.51 |
| 1 | F | 269 | ASP | C-O | 5.96 | 1.34 | 1.23 |
| 1 | L | 168 | GLU | CD-OE2 | 5.96 | 1.32 | 1.25 |
| 1 | G | 29 | ARG | CD-NE | -5.95 | 1.36 | 1.46 |
| 1 | J | 471 | ARG | NE-CZ | 5.95 | 1.40 | 1.33 |
| 1 | O | 241 | GLU | CD-OE2 | 5.94 | 1.32 | 1.25 |
| 1 | E | 105 | ARG | CZ-NH2 | 5.94 | 1.40 | 1.33 |
| 1 | G | 102 | GLU | CB-CG | 5.94 | 1.63 | 1.52 |
| 1 | M | 356 | GLU | CD-OE2 | -5.94 | 1.19 | 1.25 |
| 1 | H | 275 | TYR | CE1-CZ | 5.93 | 1.46 | 1.38 |
| 1 | I | 108 | GLU | CD-OE2 | 5.93 | 1.32 | 1.25 |
| 1 | K | 352 | GLU | CB-CG | 5.92 | 1.63 | 1.52 |
| 1 | L | 86 | GLU | CD-OE2 | 5.92 | 1.32 | 1.25 |
| 1 | O | 456 | GLY | N-CA | -5.92 | 1.37 | 1.46 |
| 1 | G | 285 | ARG | CZ-NH2 | -5.92 | 1.25 | 1.33 |
| 1 | P | 164 | GLU | CD-OE2 | -5.92 | 1.19 | 1.25 |
| 1 | L | 374 | GLU | CD-OE2 | 5.92 | 1.32 | 1.25 |
| 1 | P | 123 | GLY | C-O | 5.92 | 1.33 | 1.23 |
| 1 | K | 463 | GLU | CD-OE2 | -5.92 | 1.19 | 1.25 |
| 1 | H | 438 | ARG | CZ-NH2 | 5.91 | 1.40 | 1.33 |
| 1 | J | 63 | THR | CB-OG1 | 5.91 | 1.55 | 1.43 |
| 1 | M | 360 | ARG | CZ-NH1 | 5.91 | 1.40 | 1.33 |
| 1 | F | 53 | GLY | C-O | 5.91 | 1.33 | 1.23 |
| 1 | E | 33 | GLU | CG-CD | 5.91 | 1.60 | 1.51 |
| 1 | C | 463 | GLU | CG-CD | 5.90 | 1.60 | 1.51 |
| 1 | N | 217 | GLU | CG-CD | 5.90 | 1.60 | 1.51 |
| 1 | A | 102 | GLU | CD-OE2 | 5.89 | 1.32 | 1.25 |
| 1 | O | 123 | GLY | N-CA | -5.89 | 1.37 | 1.46 |
| 1 | J | 109 | GLU | CG-CD | 5.89 | 1.60 | 1.51 |
| 1 | M | 202 | SER | CB-OG | 5.89 | 1.50 | 1.42 |
| 1 | G | 330 | SER | CA-CB | 5.89 | 1.61 | 1.52 |
| 1 | B | 426 | ALA | C-N | -5.89 | 1.22 | 1.33 |
| 1 | P | 9 | PRO | N-CA | 5.89 | 1.57 | 1.47 |
| 1 | P | 116 | HIS | CG-CD2 | -5.89 | 1.25 | 1.35 |
| 1 | G | 438 | ARG | CZ-NH2 | 5.89 | 1.40 | 1.33 |
| 1 | J | 290 | SER | CA-CB | 5.89 | 1.61 | 1.52 |
| 1 | O | 348 | ARG | CZ-NH2 | 5.88 | 1.40 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | I | 388 | GLU | CD-OE2 | -5.88 | 1.19 | 1.25 |
| 1 | K | 67 | GLU | CD-OE2 | -5.88 | 1.19 | 1.25 |
| 1 | L | 432 | GLU | CD-OE2 | -5.88 | 1.19 | 1.25 |
| 1 | F | 224 | PRO | N-CD | 5.88 | 1.56 | 1.47 |
| 1 | K | 81 | VAL | N-CA | -5.88 | 1.34 | 1.46 |
| 1 | E | 333 | PHE | CG-CD2 | -5.87 | 1.29 | 1.38 |
| 1 | A | 394 | ARG | NE-CZ | -5.87 | 1.25 | 1.33 |
| 1 | F | 286 | ARG | NE-CZ | 5.87 | 1.40 | 1.33 |
| 1 | I | 18 | ARG | CZ-NH1 | -5.87 | 1.25 | 1.33 |
| 1 | K | 110 | LEU | C-O | 5.87 | 1.34 | 1.23 |
| 1 | D | 286 | ARG | CZ-NH2 | 5.87 | 1.40 | 1.33 |
| 1 | G | 172 | GLU | CG-CD | 5.87 | 1.60 | 1.51 |
| 1 | N | 143 | GLY | CA-C | 5.87 | 1.61 | 1.51 |
| 1 | D | 471 | ARG | CZ-NH2 | -5.86 | 1.25 | 1.33 |
| 1 | N | 401 | SER | CB-OG | -5.86 | 1.34 | 1.42 |
| 1 | D | 470 | LEU | N-CA | -5.86 | 1.34 | 1.46 |
| 1 | J | 244 | SER | CB-OG | -5.86 | 1.34 | 1.42 |
| 1 | D | 497 | GLU | CD-OE2 | -5.86 | 1.19 | 1.25 |
| 1 | L | 497 | GLU | CG-CD | 5.85 | 1.60 | 1.51 |
| 1 | K | 157 | SER | CB-OG | -5.84 | 1.34 | 1.42 |
| 1 | F | 162 | GLY | C-O | 5.84 | 1.32 | 1.23 |
| 1 | J | 438 | ARG | NE-CZ | 5.84 | 1.40 | 1.33 |
| 1 | M | 386 | GLU | CD-OE2 | 5.84 | 1.32 | 1.25 |
| 1 | G | 267 | GLY | N-CA | 5.84 | 1.54 | 1.46 |
| 1 | M | 497 | GLU | C-O | 5.83 | 1.34 | 1.23 |
| 1 | I | 15 | TYR | CG-CD2 | 5.82 | 1.46 | 1.39 |
| 1 | E | 53 | GLY | CA-C | 5.82 | 1.61 | 1.51 |
| 1 | J | 67 | GLU | CD-OE1 | 5.82 | 1.32 | 1.25 |
| 1 | J | 483 | SER | CB-OG | 5.82 | 1.49 | 1.42 |
| 1 | N | 202 | SER | CA-CB | 5.82 | 1.61 | 1.52 |
| 1 | F | 124 | TYR | CB-CG | 5.82 | 1.60 | 1.51 |
| 1 | F | 357 | GLU | CD-OE2 | -5.81 | 1.19 | 1.25 |
| 1 | K | 420 | ARG | CZ-NH2 | 5.81 | 1.40 | 1.33 |
| 1 | F | 468 | GLU | CD-OE1 | 5.81 | 1.32 | 1.25 |
| 1 | N | 349 | GLY | N-CA | 5.81 | 1.54 | 1.46 |
| 1 | G | 86 | GLU | CD-OE1 | -5.81 | 1.19 | 1.25 |
| 1 | K | 286 | ARG | CZ-NH2 | -5.81 | 1.25 | 1.33 |
| 1 | K | 357 | GLU | CD-OE1 | -5.81 | 1.19 | 1.25 |
| 1 | H | 14 | ARG | CZ-NH2 | 5.80 | 1.40 | 1.33 |
| 1 | O | 377 | ARG | CD-NE | 5.80 | 1.56 | 1.46 |
| 1 | G | 424 | GLU | C-O | 5.80 | 1.34 | 1.23 |
| 1 | C | 324 | ARG | CZ-NH2 | -5.80 | 1.25 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | F | 10 | GLU | CD-OE2 | 5.80 | 1.32 | 1.25 |
| 1 | M | 377 | ARG | CZ-NH1 | 5.80 | 1.40 | 1.33 |
| 1 | J | 279 | GLU | CD-OE1 | 5.80 | 1.32 | 1.25 |
| 1 | B | 36 | ARG | CZ-NH1 | 5.79 | 1.40 | 1.33 |
| 1 | C | 52 | LEU | C-O | 5.79 | 1.34 | 1.23 |
| 1 | B | 220 | SER | CA-CB | 5.79 | 1.61 | 1.52 |
| 1 | O | 380 | SER | CB-OG | -5.79 | 1.34 | 1.42 |
| 1 | A | 415 | LEU | C-O | 5.79 | 1.34 | 1.23 |
| 1 | I | 432 | GLU | CG-CD | 5.79 | 1.60 | 1.51 |
| 1 | O | 485 | GLU | CD-OE1 | -5.79 | 1.19 | 1.25 |
| 1 | K | 124 | TYR | CD2-CE2 | -5.79 | 1.30 | 1.39 |
| 1 | C | 142 | VAL | C-O | 5.78 | 1.34 | 1.23 |
| 1 | K | 349 | GLY | N-CA | 5.78 | 1.54 | 1.46 |
| 1 | P | 15 | TYR | CG-CD1 | -5.78 | 1.31 | 1.39 |
| 1 | G | 207 | GLU | CD-OE2 | -5.78 | 1.19 | 1.25 |
| 1 | C | 90 | GLY | CA-C | 5.77 | 1.61 | 1.51 |
| 1 | A | 23 | MET | C-O | 5.77 | 1.34 | 1.23 |
| 1 | A | 432 | GLU | CD-OE1 | -5.77 | 1.19 | 1.25 |
| 1 | G | 409 | ARG | NE-CZ | -5.77 | 1.25 | 1.33 |
| 1 | F | 172 | GLU | CB-CG | 5.77 | 1.63 | 1.52 |
| 1 | P | 101 | GLY | N-CA | -5.77 | 1.37 | 1.46 |
| 1 | I | 370 | GLY | C-O | -5.76 | 1.14 | 1.23 |
| 1 | O | 479 | SER | CB-OG | -5.76 | 1.34 | 1.42 |
| 1 | N | 200 | GLY | CA-C | 5.76 | 1.61 | 1.51 |
| 1 | O | 133 | GLU | CG-CD | 5.76 | 1.60 | 1.51 |
| 1 | F | 485 | GLU | CD-OE1 | 5.76 | 1.31 | 1.25 |
| 1 | H | 123 | GLY | N-CA | -5.76 | 1.37 | 1.46 |
| 1 | N | 53 | GLY | CA-C | 5.75 | 1.61 | 1.51 |
| 1 | N | 382 | GLY | N-CA | -5.75 | 1.37 | 1.46 |
| 1 | F | 463 | GLU | CG-CD | 5.75 | 1.60 | 1.51 |
| 1 | P | 285 | ARG | CD-NE | -5.75 | 1.36 | 1.46 |
| 1 | N | 71 | GLU | CD-OE2 | 5.75 | 1.31 | 1.25 |
| 1 | N | 109 | GLU | CB-CG | 5.75 | 1.63 | 1.52 |
| 1 | E | 285 | ARG | CD-NE | -5.75 | 1.36 | 1.46 |
| 1 | D | 497 | GLU | CB-CG | 5.74 | 1.63 | 1.52 |
| 1 | J | 280 | GLY | N-CA | -5.74 | 1.37 | 1.46 |
| 1 | P | 41 | PRO | N-CD | -5.74 | 1.39 | 1.47 |
| 1 | J | 445 | GLY | N-CA | -5.73 | 1.37 | 1.46 |
| 1 | O | 376 | GLY | N-CA | -5.73 | 1.37 | 1.46 |
| 1 | M | 360 | ARG | CZ-NH2 | -5.73 | 1.25 | 1.33 |
| 1 | D | 36 | ARG | C-O | 5.73 | 1.34 | 1.23 |
| 1 | E | 185 | GLU | CD-OE1 | 5.73 | 1.31 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | F | 124 | TYR | CE1-CZ | 5.72 | 1.46 | 1.38 |
| 1 | J | 327 | SER | CA-CB | 5.72 | 1.61 | 1.52 |
| 1 | O | 335 | GLU | CD-OE1 | 5.72 | 1.31 | 1.25 |
| 1 | P | 168 | GLU | CD-OE1 | 5.72 | 1.31 | 1.25 |
| 1 | C | 86 | GLU | CD-OE1 | -5.72 | 1.19 | 1.25 |
| 1 | A | 9 | PRO | N-CA | 5.72 | 1.56 | 1.47 |
| 1 | K | 482 | GLU | CG-CD | -5.72 | 1.43 | 1.51 |
| 1 | I | 66 | ARG | C-O | 5.71 | 1.34 | 1.23 |
| 1 | H | 386 | GLU | CG-CD | -5.71 | 1.43 | 1.51 |
| 1 | P | 471 | ARG | NE-CZ | 5.71 | 1.40 | 1.33 |
| 1 | A | 463 | GLU | CG-CD | 5.70 | 1.60 | 1.51 |
| 1 | K | 275 | TYR | C-O | -5.70 | 1.12 | 1.23 |
| 1 | A | 497 | GLU | CD-OE2 | 5.70 | 1.31 | 1.25 |
| 1 | C | 109 | GLU | CG-CD | 5.70 | 1.60 | 1.51 |
| 1 | N | 293 | GLU | CD-OE1 | -5.70 | 1.19 | 1.25 |
| 1 | K | 285 | ARG | NE-CZ | 5.70 | 1.40 | 1.33 |
| 1 | O | 328 | GLY | CA-C | 5.70 | 1.60 | 1.51 |
| 1 | E | 427 | GLY | C-O | -5.69 | 1.14 | 1.23 |
| 1 | H | 279 | GLU | CD-OE2 | -5.69 | 1.19 | 1.25 |
| 1 | K | 168 | GLU | CD-OE1 | 5.69 | 1.31 | 1.25 |
| 1 | B | 445 | GLY | N-CA | 5.68 | 1.54 | 1.46 |
| 1 | J | 456 | GLY | CA-C | 5.68 | 1.60 | 1.51 |
| 1 | C | 322 | GLU | CD-OE1 | 5.68 | 1.31 | 1.25 |
| 1 | M | 272 | ALA | C-O | 5.68 | 1.34 | 1.23 |
| 1 | C | 141 | GLU | C-O | 5.68 | 1.34 | 1.23 |
| 1 | E | 421 | THR | CB-OG1 | 5.68 | 1.54 | 1.43 |
| 1 | B | 286 | ARG | CZ-NH1 | 5.67 | 1.40 | 1.33 |
| 1 | C | 176 | GLU | CD-OE1 | -5.67 | 1.19 | 1.25 |
| 1 | A | 335 | GLU | CD-OE1 | -5.67 | 1.19 | 1.25 |
| 1 | B | 396 | TYR | CE1-CZ | -5.67 | 1.31 | 1.38 |
| 1 | F | 285 | ARG | CZ-NH1 | -5.66 | 1.25 | 1.33 |
| 1 | J | 86 | GLU | C-O | 5.66 | 1.34 | 1.23 |
| 1 | J | 333 | PHE | CG-CD1 | 5.66 | 1.47 | 1.38 |
| 1 | J | 459 | GLU | CD-OE1 | 5.66 | 1.31 | 1.25 |
| 1 | M | 232 | ILE | N-CA | 5.66 | 1.57 | 1.46 |
| 1 | I | 376 | GLY | C-O | 5.66 | 1.32 | 1.23 |
| 1 | F | 29 | ARG | CZ-NH1 | -5.65 | 1.25 | 1.33 |
| 1 | M | 257 | SER | C-O | 5.65 | 1.34 | 1.23 |
| 1 | B | 394 | ARG | CZ-NH1 | -5.65 | 1.25 | 1.33 |
| 1 | F | 9 | PRO | N-CD | 5.64 | 1.55 | 1.47 |
| 1 | I | 432 | GLU | CD-OE2 | -5.64 | 1.19 | 1.25 |
| 1 | P | 420 | ARG | C-O | 5.64 | 1.34 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | L | 18 | ARG | CZ-NH1 | 5.64 | 1.40 | 1.33 |
| 1 | K | 240 | GLU | CD-OE2 | 5.64 | 1.31 | 1.25 |
| 1 | C | 31 | ILE | C-O | 5.63 | 1.34 | 1.23 |
| 1 | E | 162 | GLY | N-CA | -5.63 | 1.37 | 1.46 |
| 1 | E | 247 | LEU | C-O | 5.63 | 1.34 | 1.23 |
| 1 | H | 395 | GLU | CB-CG | 5.63 | 1.62 | 1.52 |
| 1 | M | 357 | GLU | CD-OE1 | 5.63 | 1.31 | 1.25 |
| 1 | E | 311 | SER | CA-CB | 5.63 | 1.61 | 1.52 |
| 1 | L | 327 | SER | CB-OG | -5.62 | 1.34 | 1.42 |
| 1 | M | 438 | ARG | NE-CZ | -5.62 | 1.25 | 1.33 |
| 1 | P | 108 | GLU | CG-CD | 5.62 | 1.60 | 1.51 |
| 1 | J | 374 | GLU | CD-OE2 | 5.62 | 1.31 | 1.25 |
| 1 | B | 420 | ARG | NE-CZ | 5.62 | 1.40 | 1.33 |
| 1 | J | 324 | ARG | CZ-NH2 | 5.62 | 1.40 | 1.33 |
| 1 | F | 145 | GLN | CG-CD | 5.62 | 1.64 | 1.51 |
| 1 | A | 55 | VAL | C-O | 5.61 | 1.34 | 1.23 |
| 1 | L | 291 | ASP | C-O | 5.61 | 1.34 | 1.23 |
| 1 | O | 213 | LEU | N-CA | 5.61 | 1.57 | 1.46 |
| 1 | O | 402 | GLY | CA-C | 5.61 | 1.60 | 1.51 |
| 1 | K | 253 | GLU | CD-OE2 | -5.61 | 1.19 | 1.25 |
| 1 | L | 244 | SER | CB-OG | -5.61 | 1.34 | 1.42 |
| 1 | J | 402 | GLY | C-O | -5.61 | 1.14 | 1.23 |
| 1 | P | 450 | GLY | CA-C | 5.61 | 1.60 | 1.51 |
| 1 | B | 124 | TYR | CB-CG | 5.61 | 1.60 | 1.51 |
| 1 | B | 463 | GLU | CD-OE1 | 5.61 | 1.31 | 1.25 |
| 1 | C | 384 | SER | C-O | 5.61 | 1.34 | 1.23 |
| 1 | K | 289 | LYS | C-O | 5.61 | 1.33 | 1.23 |
| 1 | P | 469 | PRO | N-CA | 5.61 | 1.56 | 1.47 |
| 1 | A | 328 | GLY | N-CA | 5.60 | 1.54 | 1.46 |
| 1 | B | 238 | ALA | C-O | 5.60 | 1.33 | 1.23 |
| 1 | E | 471 | ARG | CD-NE | -5.60 | 1.36 | 1.46 |
| 1 | J | 460 | ASP | CB-CG | 5.60 | 1.63 | 1.51 |
| 1 | E | 348 | ARG | CZ-NH2 | 5.60 | 1.40 | 1.33 |
| 1 | G | 207 | GLU | CB-CG | 5.60 | 1.62 | 1.52 |
| 1 | F | 36 | ARG | CZ-NH2 | 5.60 | 1.40 | 1.33 |
| 1 | N | 148 | GLU | C-O | 5.60 | 1.33 | 1.23 |
| 1 | M | 176 | GLU | CD-OE2 | -5.59 | 1.19 | 1.25 |
| 1 | P | 497 | GLU | CD-OE1 | -5.59 | 1.19 | 1.25 |
| 1 | B | 352 | GLU | CD-OE2 | -5.59 | 1.19 | 1.25 |
| 1 | G | 254 | ILE | C-O | 5.58 | 1.33 | 1.23 |
| 1 | P | 275 | TYR | CZ-OH | 5.58 | 1.47 | 1.37 |
| 1 | F | 464 | ASN | C-O | 5.58 | 1.33 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | I | 29 | ARG | CZ-NH1 | -5.58 | 1.25 | 1.33 |
| 1 | B | 380 | SER | CB-OG | 5.57 | 1.49 | 1.42 |
| 1 | E | 376 | GLY | N-CA | -5.57 | 1.37 | 1.46 |
| 1 | P | 395 | GLU | CB-CG | 5.57 | 1.62 | 1.52 |
| 1 | A | 176 | GLU | CD-OE1 | -5.57 | 1.19 | 1.25 |
| 1 | D | 394 | ARG | CD-NE | 5.57 | 1.55 | 1.46 |
| 1 | F | 9 | PRO | CA-C | 5.57 | 1.64 | 1.52 |
| 1 | H | 128 | ALA | C-O | 5.57 | 1.33 | 1.23 |
| 1 | H | 380 | SER | CB-OG | -5.57 | 1.35 | 1.42 |
| 1 | H | 427 | GLY | N-CA | -5.57 | 1.37 | 1.46 |
| 1 | K | 472 | VAL | CB-CG2 | -5.57 | 1.41 | 1.52 |
| 1 | M | 22 | ARG | NE-CZ | 5.56 | 1.40 | 1.33 |
| 1 | P | 140 | CYS | CB-SG | -5.56 | 1.72 | 1.81 |
| 1 | G | 214 | VAL | C-O | 5.56 | 1.33 | 1.23 |
| 1 | F | 22 | ARG | NE-CZ | 5.56 | 1.40 | 1.33 |
| 1 | E | 90 | GLY | CA-C | 5.55 | 1.60 | 1.51 |
| 1 | B | 200 | GLY | CA-C | 5.55 | 1.60 | 1.51 |
| 1 | O | 311 | SER | CB-OG | 5.55 | 1.49 | 1.42 |
| 1 | C | 327 | SER | C-O | 5.55 | 1.33 | 1.23 |
| 1 | C | 247 | LEU | N-CA | -5.55 | 1.35 | 1.46 |
| 1 | I | 36 | ARG | NE-CZ | -5.55 | 1.25 | 1.33 |
| 1 | I | 191 | ASP | C-O | 5.55 | 1.33 | 1.23 |
| 1 | B | 157 | SER | N-CA | -5.54 | 1.35 | 1.46 |
| 1 | B | 185 | GLU | CD-OE2 | 5.54 | 1.31 | 1.25 |
| 1 | N | 263 | PHE | CE2-CZ | 5.54 | 1.47 | 1.37 |
| 1 | F | 75 | ALA | C-O | 5.54 | 1.33 | 1.23 |
| 1 | G | 368 | VAL | CB-CG2 | -5.54 | 1.41 | 1.52 |
| 1 | F | 15 | TYR | CB-CG | 5.54 | 1.59 | 1.51 |
| 1 | B | 214 | VAL | C-O | 5.54 | 1.33 | 1.23 |
| 1 | B | 370 | GLY | N-CA | -5.54 | 1.37 | 1.46 |
| 1 | D | 348 | ARG | NE-CZ | -5.54 | 1.25 | 1.33 |
| 1 | L | 468 | GLU | CD-OE1 | -5.54 | 1.19 | 1.25 |
| 1 | L | 497 | GLU | CD-OE2 | -5.53 | 1.19 | 1.25 |
| 1 | D | 196 | GLU | CG-CD | 5.53 | 1.60 | 1.51 |
| 1 | G | 323 | GLU | CG-CD | -5.53 | 1.43 | 1.51 |
| 1 | K | 335 | GLU | CD-OE1 | -5.53 | 1.19 | 1.25 |
| 1 | A | 88 | GLU | CG-CD | -5.53 | 1.43 | 1.51 |
| 1 | A | 466 | VAL | C-O | -5.53 | 1.12 | 1.23 |
| 1 | M | 260 | ASN | C-O | 5.53 | 1.33 | 1.23 |
| 1 | M | 317 | ASP | C-O | 5.52 | 1.33 | 1.23 |
| 1 | I | 479 | SER | CA-CB | 5.52 | 1.61 | 1.52 |
| 1 | O | 139 | ALA | C-O | 5.52 | 1.33 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | L | 66 | ARG | NE-CZ | -5.52 | 1.25 | 1.33 |
| 1 | G | 482 | GLU | CD-OE2 | -5.52 | 1.19 | 1.25 |
| 1 | M | 14 | ARG | CZ-NH2 | 5.52 | 1.40 | 1.33 |
| 1 | F | 121 | VAL | N-CA | 5.51 | 1.57 | 1.46 |
| 1 | M | 471 | ARG | CZ-NH2 | 5.51 | 1.40 | 1.33 |
| 1 | H | 374 | GLU | C-O | 5.51 | 1.33 | 1.23 |
| 1 | D | 109 | GLU | CD-OE2 | 5.51 | 1.31 | 1.25 |
| 1 | G | 22 | ARG | CZ-NH2 | 5.51 | 1.40 | 1.33 |
| 1 | H | 75 | ALA | C-O | 5.51 | 1.33 | 1.23 |
| 1 | A | 185 | GLU | CD-OE2 | 5.50 | 1.31 | 1.25 |
| 1 | O | 324 | ARG | C-O | 5.50 | 1.33 | 1.23 |
| 1 | O | 14 | ARG | CZ-NH2 | -5.50 | 1.25 | 1.33 |
| 1 | G | 371 | CYS | CB-SG | -5.50 | 1.72 | 1.81 |
| 1 | N | 105 | ARG | CZ-NH1 | 5.49 | 1.40 | 1.33 |
| 1 | I | 109 | GLU | CD-OE2 | 5.49 | 1.31 | 1.25 |
| 1 | F | 53 | GLY | N-CA | -5.48 | 1.37 | 1.46 |
| 1 | L | 352 | GLU | CD-OE2 | 5.48 | 1.31 | 1.25 |
| 1 | P | 443 | SER | CB-OG | -5.48 | 1.35 | 1.42 |
| 1 | L | 133 | GLU | CD-OE2 | -5.48 | 1.19 | 1.25 |
| 1 | P | 386 | GLU | CD-OE1 | -5.48 | 1.19 | 1.25 |
| 1 | O | 66 | ARG | CZ-NH1 | 5.47 | 1.40 | 1.33 |
| 1 | J | 386 | GLU | CD-OE1 | 5.47 | 1.31 | 1.25 |
| 1 | P | 72 | HIS | C-N | 5.47 | 1.44 | 1.34 |
| 1 | K | 388 | GLU | CG-CD | -5.47 | 1.43 | 1.51 |
| 1 | G | 324 | ARG | CD-NE | 5.47 | 1.55 | 1.46 |
| 1 | J | 109 | GLU | CD-OE2 | -5.47 | 1.19 | 1.25 |
| 1 | C | 312 | ALA | C-O | 5.46 | 1.33 | 1.23 |
| 1 | L | 67 | GLU | CG-CD | 5.46 | 1.60 | 1.51 |
| 1 | D | 459 | GLU | CD-OE1 | -5.46 | 1.19 | 1.25 |
| 1 | J | 172 | GLU | CD-OE1 | 5.46 | 1.31 | 1.25 |
| 1 | B | 177 | ALA | C-O | 5.46 | 1.33 | 1.23 |
| 1 | H | 426 | ALA | C-O | 5.46 | 1.33 | 1.23 |
| 1 | P | 170 | LEU | C-O | 5.46 | 1.33 | 1.23 |
| 1 | D | 66 | ARG | C-O | 5.46 | 1.33 | 1.23 |
| 1 | N | 82 | ALA | C-O | 5.46 | 1.33 | 1.23 |
| 1 | A | 297 | LYS | C-O | 5.46 | 1.33 | 1.23 |
| 1 | C | 67 | GLU | CG-CD | -5.46 | 1.43 | 1.51 |
| 1 | F | 70 | VAL | N-CA | -5.45 | 1.35 | 1.46 |
| 1 | F | 191 | ASP | C-O | 5.45 | 1.33 | 1.23 |
| 1 | J | 398 | GLU | CD-OE2 | 5.45 | 1.31 | 1.25 |
| 1 | P | 282 | VAL | CB-CG2 | -5.45 | 1.41 | 1.52 |
| 1 | F | 336 | GLU | CD-OE2 | 5.45 | 1.31 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | H | 237 | CYS | C-O | -5.45 | 1.12 | 1.23 |
| 1 | I | 116 | HIS | N-CA | -5.45 | 1.35 | 1.46 |
| 1 | J | 333 | PHE | CB-CG | -5.44 | 1.42 | 1.51 |
| 1 | M | 367 | GLY | N-CA | -5.44 | 1.37 | 1.46 |
| 1 | C | 360 | ARG | NE-CZ | -5.44 | 1.25 | 1.33 |
| 1 | J | 291 | ASP | C-O | 5.44 | 1.33 | 1.23 |
| 1 | O | 217 | GLU | CG-CD | 5.44 | 1.60 | 1.51 |
| 1 | M | 377 | ARG | NE-CZ | -5.44 | 1.25 | 1.33 |
| 1 | D | 76 | LYS | C-O | 5.44 | 1.33 | 1.23 |
| 1 | H | 18 | ARG | NE-CZ | -5.44 | 1.25 | 1.33 |
| 1 | I | 58 | THR | N-CA | 5.43 | 1.57 | 1.46 |
| 1 | C | 468 | GLU | C-O | 5.43 | 1.33 | 1.23 |
| 1 | H | 463 | GLU | C-O | 5.43 | 1.33 | 1.23 |
| 1 | I | 494 | ILE | C-O | 5.43 | 1.33 | 1.23 |
| 1 | M | 336 | GLU | CG-CD | -5.43 | 1.43 | 1.51 |
| 1 | N | 172 | GLU | CD-OE1 | -5.43 | 1.19 | 1.25 |
| 1 | N | 353 | HIS | CB-CG | -5.42 | 1.40 | 1.50 |
| 1 | B | 348 | ARG | C-O | 5.42 | 1.33 | 1.23 |
| 1 | F | 286 | ARG | N-CA | -5.42 | 1.35 | 1.46 |
| 1 | I | 241 | GLU | CG-CD | 5.42 | 1.60 | 1.51 |
| 1 | O | 275 | TYR | CE2-CZ | 5.42 | 1.45 | 1.38 |
| 1 | A | 228 | THR | CB-OG1 | 5.42 | 1.54 | 1.43 |
| 1 | B | 255 | LYS | C-O | 5.42 | 1.33 | 1.23 |
| 1 | G | 18 | ARG | CZ-NH2 | 5.42 | 1.40 | 1.33 |
| 1 | B | 322 | GLU | CG-CD | 5.41 | 1.60 | 1.51 |
| 1 | B | 464 | ASN | C-N | 5.41 | 1.42 | 1.33 |
| 1 | E | 22 | ARG | C-O | 5.41 | 1.33 | 1.23 |
| 1 | M | 342 | ALA | CA-CB | -5.41 | 1.41 | 1.52 |
| 1 | D | 312 | ALA | C-O | 5.41 | 1.33 | 1.23 |
| 1 | M | 279 | GLU | CD-OE1 | -5.41 | 1.19 | 1.25 |
| 1 | C | 333 | PHE | CG-CD1 | 5.41 | 1.46 | 1.38 |
| 1 | H | 363 | ASP | C-O | 5.41 | 1.33 | 1.23 |
| 1 | A | 15 | TYR | CE2-CZ | 5.40 | 1.45 | 1.38 |
| 1 | L | 10 | GLU | CG-CD | 5.40 | 1.60 | 1.51 |
| 1 | N | 384 | SER | CB-OG | -5.40 | 1.35 | 1.42 |
| 1 | D | 47 | MET | N-CA | 5.40 | 1.57 | 1.46 |
| 1 | J | 323 | GLU | CD-OE1 | -5.40 | 1.19 | 1.25 |
| 1 | J | 166 | ALA | CA-CB | 5.40 | 1.63 | 1.52 |
| 1 | O | 319 | GLY | N-CA | -5.40 | 1.38 | 1.46 |
| 1 | E | 218 | ARG | CZ-NH1 | 5.40 | 1.40 | 1.33 |
| 1 | M | 411 | PHE | CB-CG | -5.40 | 1.42 | 1.51 |
| 1 | O | 33 | GLU | CD-OE2 | 5.39 | 1.31 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | D | 157 | SER | CA-CB | -5.39 | 1.44 | 1.52 |
| 1 | F | 424 | GLU | C-O | 5.39 | 1.33 | 1.23 |
| 1 | E | 135 | LEU | N-CA | 5.39 | 1.57 | 1.46 |
| 1 | K | 200 | GLY | C-O | 5.39 | 1.32 | 1.23 |
| 1 | M | 55 | VAL | C-O | 5.39 | 1.33 | 1.23 |
| 1 | I | 404 | GLU | CD-OE2 | 5.38 | 1.31 | 1.25 |
| 1 | K | 217 | GLU | CD-OE1 | -5.38 | 1.19 | 1.25 |
| 1 | O | 176 | GLU | CG-CD | -5.38 | 1.43 | 1.51 |
| 1 | D | 172 | GLU | CD-OE1 | -5.37 | 1.19 | 1.25 |
| 1 | E | 105 | ARG | NE-CZ | 5.37 | 1.40 | 1.33 |
| 1 | P | 224 | PRO | N-CD | 5.37 | 1.55 | 1.47 |
| 1 | L | 150 | LEU | C-O | 5.37 | 1.33 | 1.23 |
| 1 | H | 204 | ASP | C-O | 5.37 | 1.33 | 1.23 |
| 1 | K | 49 | VAL | C-O | 5.37 | 1.33 | 1.23 |
| 1 | P | 322 | GLU | CD-OE2 | 5.37 | 1.31 | 1.25 |
| 1 | A | 424 | GLU | CD-OE2 | 5.37 | 1.31 | 1.25 |
| 1 | K | 375 | ASP | C-O | 5.37 | 1.33 | 1.23 |
| 1 | P | 225 | LYS | N-CA | 5.37 | 1.57 | 1.46 |
| 1 | B | 352 | GLU | CG-CD | 5.36 | 1.59 | 1.51 |
| 1 | C | 479 | SER | C-O | 5.36 | 1.33 | 1.23 |
| 1 | I | 442 | ALA | CA-CB | 5.36 | 1.63 | 1.52 |
| 1 | P | 398 | GLU | CD-OE1 | -5.36 | 1.19 | 1.25 |
| 1 | B | 88 | GLU | CD-OE1 | 5.36 | 1.31 | 1.25 |
| 1 | L | 85 | GLN | C-O | 5.36 | 1.33 | 1.23 |
| 1 | O | 275 | TYR | CG-CD1 | 5.36 | 1.46 | 1.39 |
| 1 | F | 443 | SER | CA-CB | 5.36 | 1.60 | 1.52 |
| 1 | J | 261 | VAL | CA-CB | 5.36 | 1.66 | 1.54 |
| 1 | O | 206 | THR | CB-OG1 | 5.36 | 1.53 | 1.43 |
| 1 | P | 278 | LYS | C-O | 5.36 | 1.33 | 1.23 |
| 1 | C | 116 | HIS | N-CA | -5.35 | 1.35 | 1.46 |
| 1 | G | 335 | GLU | CD-OE2 | -5.35 | 1.19 | 1.25 |
| 1 | H | 156 | THR | CB-OG1 | -5.35 | 1.32 | 1.43 |
| 1 | E | 398 | GLU | C-O | 5.35 | 1.33 | 1.23 |
| 1 | D | 41 | PRO | CA-C | 5.35 | 1.63 | 1.52 |
| 1 | E | 396 | TYR | CG-CD2 | -5.35 | 1.32 | 1.39 |
| 1 | I | 179 | SER | CB-OG | -5.35 | 1.35 | 1.42 |
| 1 | L | 275 | TYR | CB-CG | 5.35 | 1.59 | 1.51 |
| 1 | N | 41 | PRO | CA-CB | 5.35 | 1.64 | 1.53 |
| 1 | P | 201 | ALA | CA-CB | 5.35 | 1.63 | 1.52 |
| 1 | M | 92 | GLY | CA-C | 5.35 | 1.60 | 1.51 |
| 1 | L | 346 | LEU | C-O | -5.35 | 1.13 | 1.23 |
| 1 | I | 271 | LEU | C-O | 5.34 | 1.33 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | K | 55 | VAL | C-O | 5.34 | 1.33 | 1.23 |
| 1 | F | 102 | GLU | CD-OE2 | -5.34 | 1.19 | 1.25 |
| 1 | O | 367 | GLY | C-O | 5.34 | 1.32 | 1.23 |
| 1 | A | 417 | VAL | C-O | -5.34 | 1.13 | 1.23 |
| 1 | H | 365 | ALA | C-O | 5.33 | 1.33 | 1.23 |
| 1 | G | 217 | GLU | CA-CB | 5.33 | 1.65 | 1.53 |
| 1 | O | 399 | GLY | N-CA | -5.33 | 1.38 | 1.46 |
| 1 | F | 36 | ARG | CD-NE | 5.33 | 1.55 | 1.46 |
| 1 | P | 462 | CYS | CB-SG | -5.32 | 1.73 | 1.81 |
| 1 | F | 404 | GLU | CD-OE1 | 5.32 | 1.31 | 1.25 |
| 1 | C | 323 | GLU | CD-OE1 | -5.32 | 1.19 | 1.25 |
| 1 | M | 275 | TYR | CD2-CE2 | 5.32 | 1.47 | 1.39 |
| 1 | H | 473 | LYS | N-CA | -5.32 | 1.35 | 1.46 |
| 1 | O | 340 | PRO | N-CD | 5.32 | 1.55 | 1.47 |
| 1 | P | 274 | HIS | CA-CB | -5.32 | 1.42 | 1.53 |
| 1 | C | 211 | GLY | C-O | 5.32 | 1.32 | 1.23 |
| 1 | K | 106 | LYS | C-O | 5.32 | 1.33 | 1.23 |
| 1 | E | 147 | LYS | C-O | 5.31 | 1.33 | 1.23 |
| 1 | F | 419 | PRO | N-CA | 5.31 | 1.56 | 1.47 |
| 1 | C | 29 | ARG | NE-CZ | 5.31 | 1.40 | 1.33 |
| 1 | L | 151 | THR | N-CA | -5.31 | 1.35 | 1.46 |
| 1 | K | 245 | GLU | CD-OE2 | 5.31 | 1.31 | 1.25 |
| 1 | A | 354 | VAL | C-O | -5.30 | 1.13 | 1.23 |
| 1 | J | 202 | SER | CB-OG | 5.30 | 1.49 | 1.42 |
| 1 | H | 312 | ALA | C-O | 5.30 | 1.33 | 1.23 |
| 1 | B | 381 | GLY | C-N | 5.30 | 1.42 | 1.33 |
| 1 | E | 55 | VAL | N-CA | 5.30 | 1.56 | 1.46 |
| 1 | I | 317 | ASP | N-CA | 5.30 | 1.56 | 1.46 |
| 1 | J | 377 | ARG | CZ-NH1 | -5.30 | 1.26 | 1.33 |
| 1 | M | 37 | SER | N-CA | 5.30 | 1.56 | 1.46 |
| 1 | I | 7 | VAL | N-CA | 5.30 | 1.56 | 1.46 |
| 1 | G | 421 | THR | C-O | -5.30 | 1.13 | 1.23 |
| 1 | K | 366 | VAL | C-O | 5.30 | 1.33 | 1.23 |
| 1 | L | 115 | VAL | C-O | 5.30 | 1.33 | 1.23 |
| 1 | M | 163 | ALA | C-O | 5.29 | 1.33 | 1.23 |
| 1 | F | 90 | GLY | C-O | -5.29 | 1.15 | 1.23 |
| 1 | C | 335 | GLU | CB-CG | 5.29 | 1.62 | 1.52 |
| 1 | H | 485 | GLU | CD-OE2 | -5.29 | 1.19 | 1.25 |
| 1 | D | 424 | GLU | CD-OE1 | 5.29 | 1.31 | 1.25 |
| 1 | F | 374 | GLU | CD-OE1 | 5.29 | 1.31 | 1.25 |
| 1 | G | 33 | GLU | CD-OE1 | -5.29 | 1.19 | 1.25 |
| 1 | H | 216 | LYS | C-O | 5.29 | 1.33 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | M | 261 | VAL | CB-CG1 | 5.28 | 1.64 | 1.52 |
| 1 | N | 14 | ARG | CZ-NH2 | 5.28 | 1.40 | 1.33 |
| 1 | B | 343 | VAL | N-CA | 5.28 | 1.56 | 1.46 |
| 1 | F | 258 | GLY | CA-C | 5.28 | 1.60 | 1.51 |
| 1 | P | 117 | PRO | N-CD | 5.28 | 1.55 | 1.47 |
| 1 | E | 160 | GLY | N-CA | 5.28 | 1.53 | 1.46 |
| 1 | E | 263 | PHE | CG-CD1 | 5.28 | 1.46 | 1.38 |
| 1 | J | 252 | ALA | CA-CB | 5.28 | 1.63 | 1.52 |
| 1 | E | 424 | GLU | CB-CG | 5.27 | 1.62 | 1.52 |
| 1 | G | 395 | GLU | CD-OE2 | -5.27 | 1.19 | 1.25 |
| 1 | K | 143 | GLY | CA-C | 5.27 | 1.60 | 1.51 |
| 1 | N | 50 | ASP | N-CA | 5.27 | 1.56 | 1.46 |
| 1 | D | 456 | GLY | C-O | -5.27 | 1.15 | 1.23 |
| 1 | E | 377 | ARG | CZ-NH2 | 5.27 | 1.39 | 1.33 |
| 1 | I | 403 | ARG | CZ-NH2 | 5.27 | 1.39 | 1.33 |
| 1 | L | 462 | CYS | CB-SG | 5.27 | 1.91 | 1.82 |
| 1 | L | 218 | ARG | NE-CZ | -5.26 | 1.26 | 1.33 |
| 1 | N | 245 | GLU | CG-CD | 5.26 | 1.59 | 1.51 |
| 1 | G | 388 | GLU | CG-CD | -5.26 | 1.44 | 1.51 |
| 1 | J | 485 | GLU | CD-OE2 | -5.26 | 1.19 | 1.25 |
| 1 | P | 318 | ALA | C-N | 5.26 | 1.42 | 1.33 |
| 1 | C | 395 | GLU | CD-OE2 | 5.26 | 1.31 | 1.25 |
| 1 | P | 245 | GLU | C-O | -5.26 | 1.13 | 1.23 |
| 1 | C | 448 | CYS | N-CA | -5.25 | 1.35 | 1.46 |
| 1 | M | 225 | LYS | C-O | 5.25 | 1.33 | 1.23 |
| 1 | J | 143 | GLY | C-O | -5.25 | 1.15 | 1.23 |
| 1 | C | 333 | PHE | CG-CD2 | -5.25 | 1.30 | 1.38 |
| 1 | H | 166 | ALA | C-O | 5.25 | 1.33 | 1.23 |
| 1 | P | 86 | GLU | CD-OE1 | 5.25 | 1.31 | 1.25 |
| 1 | I | 356 | GLU | CD-OE1 | 5.25 | 1.31 | 1.25 |
| 1 | B | 395 | GLU | CD-OE1 | 5.25 | 1.31 | 1.25 |
| 1 | J | 215 | ASP | N-CA | -5.25 | 1.35 | 1.46 |
| 1 | D | 482 | GLU | CD-OE1 | 5.25 | 1.31 | 1.25 |
| 1 | N | 468 | GLU | CG-CD | 5.25 | 1.59 | 1.51 |
| 1 | A | 246 | MET | N-CA | 5.24 | 1.56 | 1.46 |
| 1 | C | 226 | LYS | N-CA | 5.24 | 1.56 | 1.46 |
| 1 | N | 266 | LYS | C-O | 5.24 | 1.33 | 1.23 |
| 1 | E | 315 | LEU | C-O | 5.24 | 1.33 | 1.23 |
| 1 | E | 352 | GLU | CD-OE2 | -5.24 | 1.19 | 1.25 |
| 1 | I | 452 | ASN | C-O | 5.24 | 1.33 | 1.23 |
| 1 | F | 147 | LYS | C-O | 5.24 | 1.33 | 1.23 |
| 1 | J | 465 | GLY | N-CA | 5.24 | 1.53 | 1.46 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | P | 56 | VAL | CB-CG1 | -5.24 | 1.41 | 1.52 |
| 1 | N | 371 | CYS | CB-SG | -5.24 | 1.73 | 1.81 |
| 1 | P | 176 | GLU | CD-OE2 | 5.24 | 1.31 | 1.25 |
| 1 | C | 491 | ASP | CA-CB | 5.24 | 1.65 | 1.53 |
| 1 | F | 438 | ARG | CZ-NH2 | 5.24 | 1.39 | 1.33 |
| 1 | K | 351 | THR | N-CA | -5.24 | 1.35 | 1.46 |
| 1 | K | 384 | SER | CB-OG | -5.24 | 1.35 | 1.42 |
| 1 | D | 124 | TYR | CE1-CZ | -5.23 | 1.31 | 1.38 |
| 1 | G | 18 | ARG | CZ-NH1 | 5.23 | 1.39 | 1.33 |
| 1 | L | 335 | GLU | CD-OE2 | -5.23 | 1.19 | 1.25 |
| 1 | C | 357 | GLU | CD-OE1 | 5.23 | 1.31 | 1.25 |
| 1 | H | 80 | GLU | CD-OE2 | 5.23 | 1.31 | 1.25 |
| 1 | K | 445 | GLY | N-CA | -5.23 | 1.38 | 1.46 |
| 1 | I | 150 | LEU | C-O | -5.23 | 1.13 | 1.23 |
| 1 | L | 403 | ARG | CZ-NH2 | 5.23 | 1.39 | 1.33 |
| 1 | D | 443 | SER | CA-CB | -5.22 | 1.45 | 1.52 |
| 1 | G | 357 | GLU | CD-OE2 | 5.22 | 1.31 | 1.25 |
| 1 | G | 491 | ASP | C-O | 5.22 | 1.33 | 1.23 |
| 1 | P | 234 | LEU | N-CA | 5.22 | 1.56 | 1.46 |
| 1 | L | 424 | GLU | CD-OE2 | 5.22 | 1.31 | 1.25 |
| 1 | N | 135 | LEU | C-N | -5.22 | 1.22 | 1.34 |
| 1 | O | 374 | GLU | CD-OE1 | 5.22 | 1.31 | 1.25 |
| 1 | P | 497 | GLU | CD-OE2 | -5.22 | 1.20 | 1.25 |
| 1 | C | 360 | ARG | CZ-NH2 | 5.22 | 1.39 | 1.33 |
| 1 | G | 136 | LYS | C-O | 5.22 | 1.33 | 1.23 |
| 1 | H | 60 | ASP | N-CA | 5.22 | 1.56 | 1.46 |
| 1 | J | 241 | GLU | CB-CG | -5.22 | 1.42 | 1.52 |
| 1 | N | 10 | GLU | CD-OE2 | 5.22 | 1.31 | 1.25 |
| 1 | D | 67 | GLU | CD-OE1 | 5.22 | 1.31 | 1.25 |
| 1 | A | 122 | LYS | C-N | 5.22 | 1.42 | 1.33 |
| 1 | A | 252 | ALA | C-O | 5.22 | 1.33 | 1.23 |
| 1 | I | 267 | GLY | CA-C | 5.22 | 1.60 | 1.51 |
| 1 | F | 181 | VAL | N-CA | 5.21 | 1.56 | 1.46 |
| 1 | F | 279 | GLU | CD-OE2 | -5.21 | 1.20 | 1.25 |
| 1 | F | 443 | SER | CB-OG | -5.21 | 1.35 | 1.42 |
| 1 | K | 353 | HIS | C-O | 5.21 | 1.33 | 1.23 |
| 1 | N | 435 | VAL | CB-CG2 | -5.21 | 1.42 | 1.52 |
| 1 | E | 90 | GLY | N-CA | -5.21 | 1.38 | 1.46 |
| 1 | E | 98 | VAL | CA-CB | 5.21 | 1.65 | 1.54 |
| 1 | B | 38 | THR | C-N | -5.21 | 1.22 | 1.34 |
| 1 | F | 421 | THR | CB-OG1 | 5.21 | 1.53 | 1.43 |
| 1 | J | 108 | GLU | CD-OE2 | -5.21 | 1.20 | 1.25 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | J | 200 | GLY | N-CA | 5.21 | 1.53 | 1.46 |
| 1 | K | 29 | ARG | CZ-NH1 | 5.21 | 1.39 | 1.33 |
| 1 | K | 255 | LYS | N-CA | 5.21 | 1.56 | 1.46 |
| 1 | M | 360 | ARG | NE-CZ | -5.21 | 1.26 | 1.33 |
| 1 | N | 460 | ASP | CB-CG | 5.21 | 1.62 | 1.51 |
| 1 | D | 240 | GLU | CD-OE1 | -5.20 | 1.20 | 1.25 |
| 1 | L | 456 | GLY | C-O | -5.20 | 1.15 | 1.23 |
| 1 | M | 465 | GLY | CA-C | 5.20 | 1.60 | 1.51 |
| 1 | H | 390 | SER | CB-OG | -5.20 | 1.35 | 1.42 |
| 1 | I | 226 | LYS | C-O | 5.20 | 1.33 | 1.23 |
| 1 | A | 327 | SER | C-O | 5.19 | 1.33 | 1.23 |
| 1 | D | 34 | THR | N-CA | -5.19 | 1.35 | 1.46 |
| 1 | D | 352 | GLU | C-O | 5.19 | 1.33 | 1.23 |
| 1 | I | 342 | ALA | CA-CB | -5.19 | 1.41 | 1.52 |
| 1 | L | 316 | GLY | CA-C | 5.19 | 1.60 | 1.51 |
| 1 | P | 69 | SER | CA-CB | -5.19 | 1.45 | 1.52 |
| 1 | H | 136 | LYS | CA-CB | -5.18 | 1.42 | 1.53 |
| 1 | K | 100 | ALA | N-CA | -5.18 | 1.35 | 1.46 |
| 1 | B | 314 | ASP | C-O | 5.18 | 1.33 | 1.23 |
| 1 | G | 249 | ASP | C-O | 5.18 | 1.33 | 1.23 |
| 1 | E | 286 | ARG | CZ-NH2 | 5.17 | 1.39 | 1.33 |
| 1 | D | 246 | MET | C-O | 5.17 | 1.33 | 1.23 |
| 1 | B | 379 | VAL | CA-CB | 5.17 | 1.65 | 1.54 |
| 1 | D | 108 | GLU | C-O | 5.17 | 1.33 | 1.23 |
| 1 | O | 394 | ARG | CZ-NH1 | -5.17 | 1.26 | 1.33 |
| 1 | C | 217 | GLU | C-O | 5.17 | 1.33 | 1.23 |
| 1 | J | 10 | GLU | CG-CD | 5.17 | 1.59 | 1.51 |
| 1 | F | 202 | SER | CA-CB | 5.17 | 1.60 | 1.52 |
| 1 | C | 176 | GLU | CD-OE2 | 5.17 | 1.31 | 1.25 |
| 1 | B | 322 | GLU | CD-OE2 | 5.16 | 1.31 | 1.25 |
| 1 | D | 52 | LEU | C-N | 5.16 | 1.42 | 1.33 |
| 1 | E | 324 | ARG | N-CA | 5.16 | 1.56 | 1.46 |
| 1 | E | 372 | THR | C-O | -5.16 | 1.13 | 1.23 |
| 1 | K | 290 | SER | CB-OG | -5.16 | 1.35 | 1.42 |
| 1 | P | 294 | LYS | CA-CB | -5.16 | 1.42 | 1.53 |
| 1 | H | 61 | GLY | N-CA | -5.16 | 1.38 | 1.46 |
| 1 | J | 484 | THR | N-CA | -5.16 | 1.36 | 1.46 |
| 1 | M | 250 | MET | N-CA | -5.16 | 1.36 | 1.46 |
| 1 | A | 484 | THR | CB-OG1 | 5.16 | 1.53 | 1.43 |
| 1 | B | 117 | PRO | N-CA | -5.16 | 1.38 | 1.47 |
| 1 | C | 113 | GLN | CG-CD | 5.16 | 1.62 | 1.51 |
| 1 | N | 161 | LYS | C-O | -5.16 | 1.13 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | M | 33 | GLU | CD-OE2 | 5.15 | 1.31 | 1.25 |
| 1 | C | 482 | GLU | CB-CG | -5.15 | 1.42 | 1.52 |
| 1 | I | 323 | GLU | CD-OE1 | 5.15 | 1.31 | 1.25 |
| 1 | D | 476 | ALA | CA-CB | -5.15 | 1.41 | 1.52 |
| 1 | H | 438 | ARG | NE-CZ | -5.15 | 1.26 | 1.33 |
| 1 | L | 399 | GLY | CA-C | 5.15 | 1.60 | 1.51 |
| 1 | E | 349 | GLY | N-CA | -5.15 | 1.38 | 1.46 |
| 1 | K | 429 | ASP | CA-CB | -5.15 | 1.42 | 1.53 |
| 1 | P | 90 | GLY | N-CA | -5.15 | 1.38 | 1.46 |
| 1 | M | 70 | VAL | CB-CG1 | -5.15 | 1.42 | 1.52 |
| 1 | F | 406 | LEU | C-O | 5.14 | 1.33 | 1.23 |
| 1 | M | 61 | GLY | CA-C | 5.14 | 1.60 | 1.51 |
| 1 | J | 26 | LEU | C-O | 5.14 | 1.33 | 1.23 |
| 1 | B | 341 | LYS | N-CA | 5.14 | 1.56 | 1.46 |
| 1 | E | 49 | VAL | CA-CB | 5.14 | 1.65 | 1.54 |
| 1 | L | 244 | SER | CA-CB | -5.14 | 1.45 | 1.52 |
| 1 | B | 182 | VAL | CB-CG1 | 5.14 | 1.63 | 1.52 |
| 1 | F | 143 | GLY | N-CA | -5.14 | 1.38 | 1.46 |
| 1 | E | 91 | ASP | C-O | -5.13 | 1.13 | 1.23 |
| 1 | L | 56 | VAL | N-CA | 5.13 | 1.56 | 1.46 |
| 1 | K | 276 | LEU | C-O | 5.13 | 1.33 | 1.23 |
| 1 | N | 127 | ALA | C-O | 5.13 | 1.33 | 1.23 |
| 1 | E | 278 | LYS | N-CA | -5.13 | 1.36 | 1.46 |
| 1 | B | 123 | GLY | N-CA | -5.13 | 1.38 | 1.46 |
| 1 | I | 438 | ARG | C-O | 5.13 | 1.33 | 1.23 |
| 1 | K | 388 | GLU | CD-OE1 | 5.13 | 1.31 | 1.25 |
| 1 | E | 13 | LYS | N-CA | 5.13 | 1.56 | 1.46 |
| 1 | J | 463 | GLU | CG-CD | 5.13 | 1.59 | 1.51 |
| 1 | B | 438 | ARG | CZ-NH2 | 5.12 | 1.39 | 1.33 |
| 1 | K | 312 | ALA | C-O | 5.12 | 1.33 | 1.23 |
| 1 | B | 348 | ARG | CD-NE | 5.12 | 1.55 | 1.46 |
| 1 | J | 179 | SER | C-O | 5.12 | 1.33 | 1.23 |
| 1 | C | 134 | LEU | CA-CB | -5.12 | 1.42 | 1.53 |
| 1 | K | 368 | VAL | CA-CB | 5.12 | 1.65 | 1.54 |
| 1 | K | 390 | SER | CA-CB | 5.12 | 1.60 | 1.52 |
| 1 | M | 14 | ARG | C-O | 5.12 | 1.33 | 1.23 |
| 1 | F | 251 | VAL | CB-CG1 | 5.12 | 1.63 | 1.52 |
| 1 | H | 413 | ASP | CB-CG | 5.12 | 1.62 | 1.51 |
| 1 | K | 462 | CYS | N-CA | -5.12 | 1.36 | 1.46 |
| 1 | M | 257 | SER | C-N | 5.12 | 1.42 | 1.33 |
| 1 | N | 464 | ASN | C-N | 5.12 | 1.42 | 1.33 |
| 1 | L | 419 | PRO | N-CD | -5.11 | 1.40 | 1.47 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | P | 471 | ARG | CZ-NH2 | 5.11 | 1.39 | 1.33 |
| 1 | F | 348 | ARG | CZ-NH1 | -5.11 | 1.26 | 1.33 |
| 1 | D | 356 | GLU | CG-CD | 5.11 | 1.59 | 1.51 |
| 1 | K | 271 | LEU | C-O | 5.11 | 1.33 | 1.23 |
| 1 | J | 307 | ILE | C-O | 5.11 | 1.33 | 1.23 |
| 1 | L | 454 | PHE | CD2-CE2 | 5.11 | 1.49 | 1.39 |
| 1 | N | 104 | LEU | N-CA | 5.11 | 1.56 | 1.46 |
| 1 | N | 469 | PRO | N-CD | -5.11 | 1.40 | 1.47 |
| 1 | A | 485 | GLU | CD-OE1 | -5.11 | 1.20 | 1.25 |
| 1 | E | 443 | SER | CB-OG | 5.11 | 1.48 | 1.42 |
| 1 | F | 382 | GLY | CA-C | 5.11 | 1.60 | 1.51 |
| 1 | J | 481 | ALA | N-CA | 5.11 | 1.56 | 1.46 |
| 1 | L | 128 | ALA | N-CA | -5.11 | 1.36 | 1.46 |
| 1 | N | 426 | ALA | N-CA | -5.10 | 1.36 | 1.46 |
| 1 | G | 370 | GLY | C-O | -5.10 | 1.15 | 1.23 |
| 1 | J | 176 | GLU | CD-OE2 | -5.10 | 1.20 | 1.25 |
| 1 | D | 116 | HIS | CG-ND1 | -5.10 | 1.27 | 1.38 |
| 1 | D | 356 | GLU | C-O | 5.10 | 1.33 | 1.23 |
| 1 | E | 454 | PHE | CG-CD1 | 5.10 | 1.46 | 1.38 |
| 1 | G | 315 | LEU | C-O | 5.10 | 1.33 | 1.23 |
| 1 | H | 471 | ARG | C-O | -5.10 | 1.13 | 1.23 |
| 1 | P | 111 | LEU | N-CA | -5.10 | 1.36 | 1.46 |
| 1 | A | 178 | VAL | CB-CG2 | 5.10 | 1.63 | 1.52 |
| 1 | E | 374 | GLU | CA-CB | 5.10 | 1.65 | 1.53 |
| 1 | H | 33 | GLU | CG-CD | -5.10 | 1.44 | 1.51 |
| 1 | P | 362 | VAL | N-CA | 5.10 | 1.56 | 1.46 |
| 1 | A | 166 | ALA | CA-CB | 5.10 | 1.63 | 1.52 |
| 1 | L | 384 | SER | CB-OG | 5.10 | 1.48 | 1.42 |
| 1 | G | 186 | GLY | N-CA | -5.09 | 1.38 | 1.46 |
| 1 | J | 54 | ASP | C-O | 5.09 | 1.33 | 1.23 |
| 1 | N | 472 | VAL | CA-CB | 5.09 | 1.65 | 1.54 |
| 1 | D | 340 | PRO | C-O | 5.09 | 1.33 | 1.23 |
| 1 | N | 335 | GLU | CB-CG | 5.09 | 1.61 | 1.52 |
| 1 | B | 398 | GLU | CD-OE2 | -5.09 | 1.20 | 1.25 |
| 1 | H | 43 | GLY | N-CA | 5.09 | 1.53 | 1.46 |
| 1 | I | 465 | GLY | C-O | 5.09 | 1.31 | 1.23 |
| 1 | N | 118 | THR | N-CA | 5.09 | 1.56 | 1.46 |
| 1 | N | 177 | ALA | C-N | -5.09 | 1.22 | 1.34 |
| 1 | F | 293 | GLU | C-O | 5.09 | 1.33 | 1.23 |
| 1 | L | 293 | GLU | CA-CB | -5.09 | 1.42 | 1.53 |
| 1 | C | 14 | ARG | NE-CZ | 5.09 | 1.39 | 1.33 |
| 1 | C | 403 | ARG | NE-CZ | 5.09 | 1.39 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|---------|-------|-------------|----------|
| 1 | G | 424 | GLU | CB-CG | 5.09 | 1.61 | 1.52 |
| 1 | K | 294 | LYS | C-O | 5.09 | 1.33 | 1.23 |
| 1 | E | 360 | ARG | NE-CZ | -5.08 | 1.26 | 1.33 |
| 1 | I | 297 | LYS | N-CA | -5.08 | 1.36 | 1.46 |
| 1 | N | 297 | LYS | CD-CE | 5.08 | 1.64 | 1.51 |
| 1 | O | 171 | ALA | C-O | 5.08 | 1.33 | 1.23 |
| 1 | J | 333 | PHE | CG-CD2 | 5.08 | 1.46 | 1.38 |
| 1 | K | 395 | GLU | CD-OE1 | -5.08 | 1.20 | 1.25 |
| 1 | O | 386 | GLU | CD-OE1 | -5.08 | 1.20 | 1.25 |
| 1 | G | 381 | GLY | CA-C | 5.08 | 1.59 | 1.51 |
| 1 | C | 58 | THR | CA-CB | 5.08 | 1.66 | 1.53 |
| 1 | H | 482 | GLU | CG-CD | -5.08 | 1.44 | 1.51 |
| 1 | I | 482 | GLU | CD-OE1 | 5.08 | 1.31 | 1.25 |
| 1 | C | 25 | ILE | N-CA | 5.07 | 1.56 | 1.46 |
| 1 | M | 10 | GLU | CB-CG | 5.07 | 1.61 | 1.52 |
| 1 | I | 30 | ILE | N-CA | 5.07 | 1.56 | 1.46 |
| 1 | B | 161 | LYS | C-O | 5.07 | 1.32 | 1.23 |
| 1 | D | 313 | GLN | N-CA | -5.07 | 1.36 | 1.46 |
| 1 | H | 259 | ALA | CA-CB | 5.07 | 1.63 | 1.52 |
| 1 | L | 233 | ALA | C-O | 5.07 | 1.32 | 1.23 |
| 1 | M | 409 | ARG | CZ-NH1 | 5.07 | 1.39 | 1.33 |
| 1 | B | 396 | TYR | CD2-CE2 | 5.07 | 1.47 | 1.39 |
| 1 | D | 14 | ARG | CZ-NH1 | -5.07 | 1.26 | 1.33 |
| 1 | C | 396 | TYR | CD1-CE1 | -5.07 | 1.31 | 1.39 |
| 1 | P | 324 | ARG | CD-NE | -5.06 | 1.37 | 1.46 |
| 1 | F | 273 | GLN | CG-CD | 5.06 | 1.62 | 1.51 |
| 1 | G | 22 | ARG | NE-CZ | -5.06 | 1.26 | 1.33 |
| 1 | C | 179 | SER | CB-OG | -5.06 | 1.35 | 1.42 |
| 1 | F | 396 | TYR | CE2-CZ | -5.06 | 1.31 | 1.38 |
| 1 | M | 322 | GLU | CG-CD | 5.06 | 1.59 | 1.51 |
| 1 | N | 474 | THR | CB-OG1 | -5.06 | 1.33 | 1.43 |
| 1 | D | 113 | GLN | N-CA | -5.06 | 1.36 | 1.46 |
| 1 | E | 181 | VAL | CA-CB | 5.06 | 1.65 | 1.54 |
| 1 | G | 398 | GLU | CD-OE1 | -5.06 | 1.20 | 1.25 |
| 1 | I | 176 | GLU | CD-OE2 | 5.06 | 1.31 | 1.25 |
| 1 | L | 108 | GLU | CG-CD | 5.06 | 1.59 | 1.51 |
| 1 | M | 380 | SER | CA-CB | 5.06 | 1.60 | 1.52 |
| 1 | J | 394 | ARG | C-N | -5.06 | 1.22 | 1.34 |
| 1 | L | 460 | ASP | C-O | 5.06 | 1.32 | 1.23 |
| 1 | G | 468 | GLU | C-N | 5.06 | 1.43 | 1.34 |
| 1 | H | 285 | ARG | CA-CB | -5.06 | 1.42 | 1.53 |
| 1 | L | 18 | ARG | NE-CZ | 5.05 | 1.39 | 1.33 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | P | 160 | GLY | N-CA | -5.05 | 1.38 | 1.46 |
| 1 | C | 395 | GLU | CB-CG | 5.05 | 1.61 | 1.52 |
| 1 | J | 362 | VAL | CB-CG2 | -5.05 | 1.42 | 1.52 |
| 1 | N | 279 | GLU | C-N | -5.05 | 1.24 | 1.33 |
| 1 | O | 456 | GLY | CA-C | -5.05 | 1.43 | 1.51 |
| 1 | D | 116 | HIS | CB-CG | 5.05 | 1.59 | 1.50 |
| 1 | F | 360 | ARG | C-O | 5.05 | 1.32 | 1.23 |
| 1 | M | 291 | ASP | N-CA | -5.05 | 1.36 | 1.46 |
| 1 | O | 11 | ASN | C-O | 5.05 | 1.32 | 1.23 |
| 1 | C | 431 | ILE | CA-CB | 5.05 | 1.66 | 1.54 |
| 1 | J | 247 | LEU | N-CA | -5.05 | 1.36 | 1.46 |
| 1 | A | 432 | GLU | CD-OE2 | 5.04 | 1.31 | 1.25 |
| 1 | J | 224 | PRO | N-CD | 5.04 | 1.54 | 1.47 |
| 1 | P | 136 | LYS | CD-CE | 5.04 | 1.63 | 1.51 |
| 1 | B | 386 | GLU | CG-CD | 5.04 | 1.59 | 1.51 |
| 1 | B | 441 | HIS | CB-CG | 5.04 | 1.59 | 1.50 |
| 1 | D | 491 | ASP | C-O | 5.04 | 1.32 | 1.23 |
| 1 | L | 275 | TYR | C-O | 5.04 | 1.32 | 1.23 |
| 1 | C | 250 | MET | C-O | 5.04 | 1.32 | 1.23 |
| 1 | E | 493 | VAL | CB-CG2 | -5.04 | 1.42 | 1.52 |
| 1 | F | 333 | PHE | CG-CD1 | 5.04 | 1.46 | 1.38 |
| 1 | F | 348 | ARG | CZ-NH2 | 5.04 | 1.39 | 1.33 |
| 1 | G | 142 | VAL | C-O | 5.04 | 1.32 | 1.23 |
| 1 | J | 8 | LEU | C-N | 5.04 | 1.43 | 1.34 |
| 1 | F | 7 | VAL | N-CA | 5.03 | 1.56 | 1.46 |
| 1 | B | 29 | ARG | C-O | 5.03 | 1.32 | 1.23 |
| 1 | F | 424 | GLU | CD-OE1 | 5.03 | 1.31 | 1.25 |
| 1 | P | 457 | ALA | C-O | 5.03 | 1.32 | 1.23 |
| 1 | A | 164 | GLU | CD-OE2 | -5.03 | 1.20 | 1.25 |
| 1 | D | 213 | LEU | N-CA | 5.03 | 1.56 | 1.46 |
| 1 | L | 66 | ARG | CD-NE | -5.03 | 1.38 | 1.46 |
| 1 | L | 356 | GLU | N-CA | -5.03 | 1.36 | 1.46 |
| 1 | O | 7 | VAL | C-O | -5.03 | 1.13 | 1.23 |
| 1 | I | 18 | ARG | NE-CZ | 5.03 | 1.39 | 1.33 |
| 1 | K | 420 | ARG | CA-CB | -5.03 | 1.42 | 1.53 |
| 1 | L | 93 | THR | C-N | -5.03 | 1.22 | 1.34 |
| 1 | P | 313 | GLN | C-O | 5.03 | 1.32 | 1.23 |
| 1 | A | 39 | LEU | CA-CB | -5.03 | 1.42 | 1.53 |
| 1 | H | 108 | GLU | CD-OE2 | -5.02 | 1.20 | 1.25 |
| 1 | M | 60 | ASP | CA-CB | -5.02 | 1.42 | 1.53 |
| 1 | P | 290 | SER | CB-OG | 5.02 | 1.48 | 1.42 |
| 1 | N | 364 | ASP | C-O | 5.02 | 1.32 | 1.23 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(Å) | Ideal(Å) |
|-----|-------|-----|------|--------|-------|-------------|----------|
| 1 | B | 466 | VAL | CA-CB | 5.02 | 1.65 | 1.54 |
| 1 | G | 339 | HIS | C-O | 5.02 | 1.32 | 1.23 |
| 1 | M | 157 | SER | CA-CB | -5.02 | 1.45 | 1.52 |
| 1 | A | 253 | GLU | CG-CD | -5.02 | 1.44 | 1.51 |
| 1 | J | 377 | ARG | NE-CZ | 5.02 | 1.39 | 1.33 |
| 1 | P | 381 | GLY | N-CA | 5.02 | 1.53 | 1.46 |
| 1 | H | 110 | LEU | N-CA | -5.02 | 1.36 | 1.46 |
| 1 | J | 192 | LEU | N-CA | -5.02 | 1.36 | 1.46 |
| 1 | N | 241 | GLU | CD-OE2 | -5.02 | 1.20 | 1.25 |
| 1 | A | 74 | ALA | C-O | 5.01 | 1.32 | 1.23 |
| 1 | F | 9 | PRO | N-CA | 5.01 | 1.55 | 1.47 |
| 1 | I | 22 | ARG | CZ-NH2 | 5.01 | 1.39 | 1.33 |
| 1 | P | 306 | ASN | C-O | 5.01 | 1.32 | 1.23 |
| 1 | P | 494 | ILE | CA-CB | 5.01 | 1.66 | 1.54 |
| 1 | O | 207 | GLU | CD-OE2 | 5.01 | 1.31 | 1.25 |
| 1 | C | 148 | GLU | C-O | 5.01 | 1.32 | 1.23 |
| 1 | C | 428 | LEU | C-O | 5.01 | 1.32 | 1.23 |
| 1 | M | 148 | GLU | CD-OE1 | 5.01 | 1.31 | 1.25 |
| 1 | L | 138 | ILE | N-CA | 5.01 | 1.56 | 1.46 |
| 1 | O | 375 | ASP | N-CA | -5.01 | 1.36 | 1.46 |
| 1 | E | 470 | LEU | C-N | -5.01 | 1.22 | 1.34 |
| 1 | H | 384 | SER | C-O | 5.01 | 1.32 | 1.23 |
| 1 | P | 229 | ASP | CB-CG | 5.01 | 1.62 | 1.51 |
| 1 | I | 90 | GLY | N-CA | -5.01 | 1.38 | 1.46 |
| 1 | L | 83 | LYS | C-O | 5.01 | 1.32 | 1.23 |
| 1 | A | 356 | GLU | CD-OE1 | -5.00 | 1.20 | 1.25 |
| 1 | L | 234 | LEU | N-CA | -5.00 | 1.36 | 1.46 |
| 1 | O | 232 | ILE | N-CA | -5.00 | 1.36 | 1.46 |
| 1 | G | 179 | SER | CA-CB | 5.00 | 1.60 | 1.52 |
| 1 | H | 60 | ASP | C-O | 5.00 | 1.32 | 1.23 |
| 1 | L | 420 | ARG | NE-CZ | -5.00 | 1.26 | 1.33 |
| 1 | M | 151 | THR | N-CA | -5.00 | 1.36 | 1.46 |
| 1 | P | 83 | LYS | C-O | 5.00 | 1.32 | 1.23 |

All (10073) bond angle outliers are listed below:

| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | O | 286 | ARG | NE-CZ-NH1 | 42.76 | 141.68 | 120.30 |
| 1 | N | 285 | ARG | NE-CZ-NH1 | 38.96 | 139.78 | 120.30 |
| 1 | H | 14 | ARG | CD-NE-CZ | 38.07 | 176.90 | 123.60 |
| 1 | O | 377 | ARG | NE-CZ-NH2 | -37.58 | 101.51 | 120.30 |
| 1 | D | 15 | TYR | CB-CG-CD2 | 37.41 | 143.44 | 121.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | C | 471 | ARG | NE-CZ-NH1 | 36.75 | 138.67 | 120.30 |
| 1 | C | 66 | ARG | NE-CZ-NH1 | -35.23 | 102.69 | 120.30 |
| 1 | I | 324 | ARG | NE-CZ-NH1 | -35.07 | 102.77 | 120.30 |
| 1 | H | 285 | ARG | NE-CZ-NH1 | 34.68 | 137.64 | 120.30 |
| 1 | P | 409 | ARG | NE-CZ-NH1 | 34.58 | 137.59 | 120.30 |
| 1 | A | 285 | ARG | NE-CZ-NH1 | 33.68 | 137.14 | 120.30 |
| 1 | C | 394 | ARG | NE-CZ-NH1 | 33.68 | 137.14 | 120.30 |
| 1 | O | 348 | ARG | NE-CZ-NH1 | -33.65 | 103.47 | 120.30 |
| 1 | E | 66 | ARG | NE-CZ-NH2 | -33.63 | 103.49 | 120.30 |
| 1 | H | 14 | ARG | NE-CZ-NH1 | 33.53 | 137.07 | 120.30 |
| 1 | P | 348 | ARG | NE-CZ-NH2 | 32.55 | 136.57 | 120.30 |
| 1 | M | 29 | ARG | NE-CZ-NH1 | 32.53 | 136.57 | 120.30 |
| 1 | L | 105 | ARG | NE-CZ-NH1 | -31.96 | 104.32 | 120.30 |
| 1 | C | 29 | ARG | NE-CZ-NH1 | -30.97 | 104.81 | 120.30 |
| 1 | O | 18 | ARG | CD-NE-CZ | 30.71 | 166.59 | 123.60 |
| 1 | H | 394 | ARG | NE-CZ-NH1 | 29.37 | 134.99 | 120.30 |
| 1 | H | 438 | ARG | NE-CZ-NH1 | 29.30 | 134.95 | 120.30 |
| 1 | I | 218 | ARG | CD-NE-CZ | 29.05 | 164.27 | 123.60 |
| 1 | F | 14 | ARG | NE-CZ-NH2 | -28.96 | 105.82 | 120.30 |
| 1 | I | 36 | ARG | NE-CZ-NH2 | 28.68 | 134.64 | 120.30 |
| 1 | L | 66 | ARG | NE-CZ-NH1 | 28.57 | 134.59 | 120.30 |
| 1 | N | 66 | ARG | NE-CZ-NH1 | 28.23 | 134.41 | 120.30 |
| 1 | N | 489 | ARG | NE-CZ-NH1 | 28.20 | 134.40 | 120.30 |
| 1 | P | 471 | ARG | NE-CZ-NH2 | -28.19 | 106.21 | 120.30 |
| 1 | N | 360 | ARG | NE-CZ-NH2 | 27.55 | 134.07 | 120.30 |
| 1 | K | 286 | ARG | NE-CZ-NH1 | -27.24 | 106.68 | 120.30 |
| 1 | K | 348 | ARG | NE-CZ-NH2 | 26.94 | 133.77 | 120.30 |
| 1 | K | 403 | ARG | NE-CZ-NH2 | -26.79 | 106.90 | 120.30 |
| 1 | D | 324 | ARG | NE-CZ-NH1 | -26.68 | 106.96 | 120.30 |
| 1 | K | 218 | ARG | NE-CZ-NH1 | 26.67 | 133.64 | 120.30 |
| 1 | D | 285 | ARG | NE-CZ-NH1 | 26.62 | 133.61 | 120.30 |
| 1 | F | 420 | ARG | NE-CZ-NH1 | -26.58 | 107.01 | 120.30 |
| 1 | M | 105 | ARG | NE-CZ-NH2 | 26.36 | 133.48 | 120.30 |
| 1 | A | 394 | ARG | NE-CZ-NH1 | 26.32 | 133.46 | 120.30 |
| 1 | G | 66 | ARG | NE-CZ-NH1 | -26.15 | 107.22 | 120.30 |
| 1 | B | 438 | ARG | NE-CZ-NH2 | -25.83 | 107.39 | 120.30 |
| 1 | P | 105 | ARG | NE-CZ-NH2 | 25.78 | 133.19 | 120.30 |
| 1 | B | 491 | ASP | CB-CG-OD2 | 25.67 | 141.40 | 118.30 |
| 1 | G | 438 | ARG | NE-CZ-NH1 | 25.58 | 133.09 | 120.30 |
| 1 | C | 420 | ARG | NE-CZ-NH1 | -25.44 | 107.58 | 120.30 |
| 1 | H | 36 | ARG | NE-CZ-NH2 | -25.31 | 107.64 | 120.30 |
| 1 | G | 471 | ARG | NE-CZ-NH1 | -25.09 | 107.75 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | C | 360 | ARG | NE-CZ-NH1 | 25.05 | 132.83 | 120.30 |
| 1 | C | 377 | ARG | NE-CZ-NH1 | 24.86 | 132.73 | 120.30 |
| 1 | F | 105 | ARG | NE-CZ-NH1 | -24.80 | 107.90 | 120.30 |
| 1 | G | 420 | ARG | NE-CZ-NH1 | -24.77 | 107.92 | 120.30 |
| 1 | H | 409 | ARG | NE-CZ-NH2 | -24.77 | 107.92 | 120.30 |
| 1 | B | 360 | ARG | NE-CZ-NH2 | -24.26 | 108.17 | 120.30 |
| 1 | N | 420 | ARG | NE-CZ-NH1 | -24.18 | 108.21 | 120.30 |
| 1 | F | 183 | ASP | CB-CG-OD1 | 24.16 | 140.04 | 118.30 |
| 1 | B | 60 | ASP | CB-CG-OD1 | 24.12 | 140.01 | 118.30 |
| 1 | B | 14 | ARG | CD-NE-CZ | 24.05 | 157.26 | 123.60 |
| 1 | O | 420 | ARG | NE-CZ-NH1 | -23.88 | 108.36 | 120.30 |
| 1 | G | 394 | ARG | NE-CZ-NH1 | 23.83 | 132.22 | 120.30 |
| 1 | J | 377 | ARG | NE-CZ-NH2 | -23.78 | 108.41 | 120.30 |
| 1 | O | 348 | ARG | NE-CZ-NH2 | 23.71 | 132.16 | 120.30 |
| 1 | G | 18 | ARG | NE-CZ-NH2 | 23.71 | 132.15 | 120.30 |
| 1 | A | 438 | ARG | NE-CZ-NH1 | 23.45 | 132.03 | 120.30 |
| 1 | B | 286 | ARG | NE-CZ-NH2 | 23.39 | 132.00 | 120.30 |
| 1 | J | 184 | ASP | CB-CG-OD2 | 23.38 | 139.34 | 118.30 |
| 1 | N | 317 | ASP | CB-CG-OD1 | 23.37 | 139.33 | 118.30 |
| 1 | O | 377 | ARG | NE-CZ-NH1 | 23.35 | 131.97 | 120.30 |
| 1 | E | 66 | ARG | NE-CZ-NH1 | 23.32 | 131.96 | 120.30 |
| 1 | G | 420 | ARG | NE-CZ-NH2 | 23.23 | 131.91 | 120.30 |
| 1 | A | 471 | ARG | NE-CZ-NH2 | 23.23 | 131.91 | 120.30 |
| 1 | P | 66 | ARG | NE-CZ-NH1 | 23.22 | 131.91 | 120.30 |
| 1 | O | 286 | ARG | NE-CZ-NH2 | -22.96 | 108.82 | 120.30 |
| 1 | D | 15 | TYR | CG-CD1-CE1 | 22.84 | 139.57 | 121.30 |
| 1 | L | 377 | ARG | NE-CZ-NH1 | 22.84 | 131.72 | 120.30 |
| 1 | B | 360 | ARG | NE-CZ-NH1 | 22.71 | 131.66 | 120.30 |
| 1 | N | 105 | ARG | NE-CZ-NH1 | -22.59 | 109.00 | 120.30 |
| 1 | E | 394 | ARG | CD-NE-CZ | 22.50 | 155.11 | 123.60 |
| 1 | O | 133 | GLU | OE1-CD-OE2 | 22.27 | 150.03 | 123.30 |
| 1 | L | 105 | ARG | NE-CZ-NH2 | 22.18 | 131.39 | 120.30 |
| 1 | F | 471 | ARG | NE-CZ-NH2 | 22.10 | 131.35 | 120.30 |
| 1 | P | 348 | ARG | NE-CZ-NH1 | -22.10 | 109.25 | 120.30 |
| 1 | G | 54 | ASP | CB-CG-OD2 | 22.02 | 138.11 | 118.30 |
| 1 | F | 54 | ASP | CB-CG-OD1 | 21.97 | 138.07 | 118.30 |
| 1 | M | 471 | ARG | NE-CZ-NH1 | -21.93 | 109.34 | 120.30 |
| 1 | I | 409 | ARG | NE-CZ-NH1 | 21.88 | 131.24 | 120.30 |
| 1 | G | 29 | ARG | NE-CZ-NH2 | 21.72 | 131.16 | 120.30 |
| 1 | A | 105 | ARG | NE-CZ-NH2 | 21.61 | 131.10 | 120.30 |
| 1 | K | 184 | ASP | CB-CG-OD2 | 21.48 | 137.63 | 118.30 |
| 1 | D | 29 | ARG | NE-CZ-NH1 | 21.37 | 130.99 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|--------|-------------|----------|
| 1 | J | 411 | PHE | CB-CG-CD1 | 21.37 | 135.76 | 120.80 |
| 1 | M | 29 | ARG | NE-CZ-NH2 | -21.32 | 109.64 | 120.30 |
| 1 | H | 218 | ARG | NE-CZ-NH1 | 21.30 | 130.95 | 120.30 |
| 1 | N | 409 | ARG | NE-CZ-NH1 | 21.29 | 130.94 | 120.30 |
| 1 | G | 489 | ARG | NE-CZ-NH2 | 21.18 | 130.89 | 120.30 |
| 1 | H | 409 | ARG | NE-CZ-NH1 | 21.18 | 130.89 | 120.30 |
| 1 | O | 105 | ARG | NE-CZ-NH1 | -21.16 | 109.72 | 120.30 |
| 1 | N | 18 | ARG | NE-CZ-NH1 | 21.15 | 130.87 | 120.30 |
| 1 | A | 204 | ASP | CB-CG-OD2 | 21.09 | 137.28 | 118.30 |
| 1 | O | 60 | ASP | CB-CG-OD1 | 21.09 | 137.28 | 118.30 |
| 1 | L | 314 | ASP | CB-CG-OD1 | 20.91 | 137.11 | 118.30 |
| 1 | F | 348 | ARG | NE-CZ-NH2 | -20.84 | 109.88 | 120.30 |
| 1 | F | 403 | ARG | NE-CZ-NH1 | -20.79 | 109.91 | 120.30 |
| 1 | O | 285 | ARG | NE-CZ-NH1 | 20.68 | 130.64 | 120.30 |
| 1 | C | 218 | ARG | NE-CZ-NH2 | 20.60 | 130.60 | 120.30 |
| 1 | J | 409 | ARG | NE-CZ-NH1 | 20.56 | 130.58 | 120.30 |
| 1 | P | 489 | ARG | NE-CZ-NH2 | -20.54 | 110.03 | 120.30 |
| 1 | F | 45 | ASP | CB-CG-OD2 | 20.54 | 136.78 | 118.30 |
| 1 | F | 309 | ASP | CB-CG-OD2 | -20.51 | 99.84 | 118.30 |
| 1 | I | 50 | ASP | CB-CG-OD1 | 20.44 | 136.70 | 118.30 |
| 1 | O | 471 | ARG | NE-CZ-NH1 | 20.37 | 130.49 | 120.30 |
| 1 | O | 438 | ARG | NE-CZ-NH2 | -20.23 | 110.18 | 120.30 |
| 1 | M | 66 | ARG | NE-CZ-NH1 | -20.22 | 110.19 | 120.30 |
| 1 | N | 360 | ARG | NE-CZ-NH1 | -20.20 | 110.20 | 120.30 |
| 1 | E | 36 | ARG | NE-CZ-NH1 | -20.05 | 110.27 | 120.30 |
| 1 | D | 105 | ARG | NE-CZ-NH2 | 19.99 | 130.30 | 120.30 |
| 1 | N | 286 | ARG | NE-CZ-NH1 | -19.98 | 110.31 | 120.30 |
| 1 | A | 460 | ASP | CB-CG-OD2 | 19.95 | 136.26 | 118.30 |
| 1 | O | 14 | ARG | NE-CZ-NH1 | -19.93 | 110.33 | 120.30 |
| 1 | M | 471 | ARG | NE-CZ-NH2 | 19.93 | 130.26 | 120.30 |
| 1 | F | 29 | ARG | NE-CZ-NH1 | 19.92 | 130.26 | 120.30 |
| 1 | A | 309 | ASP | CB-CG-OD1 | 19.91 | 136.22 | 118.30 |
| 1 | H | 18 | ARG | NE-CZ-NH1 | 19.84 | 130.22 | 120.30 |
| 1 | H | 403 | ARG | NE-CZ-NH1 | -19.59 | 110.50 | 120.30 |
| 1 | C | 105 | ARG | NE-CZ-NH2 | 19.59 | 130.09 | 120.30 |
| 1 | O | 413 | ASP | CB-CG-OD2 | 19.56 | 135.90 | 118.30 |
| 1 | L | 60 | ASP | CB-CG-OD1 | 19.52 | 135.87 | 118.30 |
| 1 | O | 22 | ARG | NE-CZ-NH2 | 19.52 | 130.06 | 120.30 |
| 1 | B | 105 | ARG | NE-CZ-NH1 | -19.51 | 110.55 | 120.30 |
| 1 | C | 348 | ARG | NE-CZ-NH1 | -19.50 | 110.55 | 120.30 |
| 1 | J | 454 | PHE | CB-CG-CD2 | -19.49 | 107.16 | 120.80 |
| 1 | I | 286 | ARG | NE-CZ-NH1 | 19.43 | 130.02 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | J | 420 | ARG | NE-CZ-NH2 | 19.27 | 129.94 | 120.30 |
| 1 | K | 105 | ARG | NE-CZ-NH2 | 19.16 | 129.88 | 120.30 |
| 1 | O | 429 | ASP | CB-CG-OD1 | 19.14 | 135.53 | 118.30 |
| 1 | I | 14 | ARG | CD-NE-CZ | 19.09 | 150.33 | 123.60 |
| 1 | J | 403 | ARG | NE-CZ-NH2 | -19.07 | 110.76 | 120.30 |
| 1 | F | 29 | ARG | NE-CZ-NH2 | -19.07 | 110.77 | 120.30 |
| 1 | K | 403 | ARG | NE-CZ-NH1 | 19.02 | 129.81 | 120.30 |
| 1 | C | 29 | ARG | NE-CZ-NH2 | 19.02 | 129.81 | 120.30 |
| 1 | P | 438 | ARG | NE-CZ-NH2 | 19.00 | 129.80 | 120.30 |
| 1 | D | 377 | ARG | NE-CZ-NH2 | -18.99 | 110.81 | 120.30 |
| 1 | H | 22 | ARG | NE-CZ-NH2 | 18.94 | 129.77 | 120.30 |
| 1 | L | 50 | ASP | CB-CG-OD1 | 18.92 | 135.33 | 118.30 |
| 1 | C | 215 | ASP | CB-CG-OD1 | 18.78 | 135.20 | 118.30 |
| 1 | B | 438 | ARG | NE-CZ-NH1 | 18.76 | 129.68 | 120.30 |
| 1 | A | 286 | ARG | NE-CZ-NH1 | -18.76 | 110.92 | 120.30 |
| 1 | N | 324 | ARG | NE-CZ-NH1 | -18.73 | 110.94 | 120.30 |
| 1 | C | 333 | PHE | CB-CG-CD2 | 18.70 | 133.89 | 120.80 |
| 1 | P | 403 | ARG | NE-CZ-NH2 | -18.65 | 110.97 | 120.30 |
| 1 | L | 215 | ASP | CB-CG-OD1 | 18.62 | 135.06 | 118.30 |
| 1 | B | 471 | ARG | NE-CZ-NH1 | 18.61 | 129.60 | 120.30 |
| 1 | C | 18 | ARG | NE-CZ-NH2 | 18.60 | 129.60 | 120.30 |
| 1 | D | 218 | ARG | NE-CZ-NH2 | 18.56 | 129.58 | 120.30 |
| 1 | E | 491 | ASP | CB-CG-OD2 | 18.42 | 134.88 | 118.30 |
| 1 | J | 60 | ASP | CB-CG-OD1 | 18.30 | 134.77 | 118.30 |
| 1 | N | 454 | PHE | CB-CG-CD1 | -18.26 | 108.02 | 120.80 |
| 1 | B | 471 | ARG | CD-NE-CZ | 18.22 | 149.10 | 123.60 |
| 1 | O | 18 | ARG | NE-CZ-NH1 | -18.19 | 111.20 | 120.30 |
| 1 | B | 324 | ARG | NE-CZ-NH2 | 18.16 | 129.38 | 120.30 |
| 1 | B | 66 | ARG | CD-NE-CZ | 18.03 | 148.85 | 123.60 |
| 1 | K | 396 | TYR | CG-CD1-CE1 | -18.01 | 106.89 | 121.30 |
| 1 | N | 33 | GLU | OE1-CD-OE2 | -17.96 | 101.75 | 123.30 |
| 1 | D | 184 | ASP | CB-CG-OD1 | 17.95 | 134.46 | 118.30 |
| 1 | P | 489 | ARG | NE-CZ-NH1 | 17.94 | 129.27 | 120.30 |
| 1 | C | 403 | ARG | NE-CZ-NH1 | -17.88 | 111.36 | 120.30 |
| 1 | C | 333 | PHE | CB-CG-CD1 | -17.88 | 108.29 | 120.80 |
| 1 | C | 71 | GLU | OE1-CD-OE2 | 17.87 | 144.74 | 123.30 |
| 1 | D | 324 | ARG | NE-CZ-NH2 | 17.85 | 129.23 | 120.30 |
| 1 | A | 363 | ASP | CB-CG-OD1 | 17.85 | 134.36 | 118.30 |
| 1 | H | 394 | ARG | NE-CZ-NH2 | -17.80 | 111.40 | 120.30 |
| 1 | K | 189 | ASP | CB-CG-OD1 | -17.78 | 102.30 | 118.30 |
| 1 | F | 205 | ASP | CB-CG-OD2 | 17.78 | 134.30 | 118.30 |
| 1 | K | 471 | ARG | NE-CZ-NH2 | -17.71 | 111.45 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | M | 184 | ASP | CB-CG-OD1 | 17.69 | 134.22 | 118.30 |
| 1 | H | 348 | ARG | NE-CZ-NH1 | 17.69 | 129.15 | 120.30 |
| 1 | J | 396 | TYR | CB-CG-CD2 | 17.66 | 131.60 | 121.00 |
| 1 | K | 471 | ARG | NE-CZ-NH1 | 17.61 | 129.11 | 120.30 |
| 1 | D | 15 | TYR | CB-CG-CD1 | -17.58 | 110.45 | 121.00 |
| 1 | D | 249 | ASP | CB-CG-OD1 | 17.56 | 134.10 | 118.30 |
| 1 | E | 15 | TYR | CB-CG-CD2 | 17.54 | 131.52 | 121.00 |
| 1 | C | 377 | ARG | NE-CZ-NH2 | -17.52 | 111.54 | 120.30 |
| 1 | M | 489 | ARG | NE-CZ-NH2 | -17.46 | 111.57 | 120.30 |
| 1 | F | 18 | ARG | NE-CZ-NH1 | 17.36 | 128.98 | 120.30 |
| 1 | B | 377 | ARG | NE-CZ-NH2 | 17.33 | 128.97 | 120.30 |
| 1 | E | 285 | ARG | NE-CZ-NH1 | 17.33 | 128.96 | 120.30 |
| 1 | J | 396 | TYR | CB-CG-CD1 | -17.29 | 110.63 | 121.00 |
| 1 | G | 324 | ARG | NE-CZ-NH2 | -17.22 | 111.69 | 120.30 |
| 1 | P | 12 | MET | CA-CB-CG | 17.18 | 142.51 | 113.30 |
| 1 | M | 348 | ARG | NE-CZ-NH2 | 17.18 | 128.89 | 120.30 |
| 1 | K | 18 | ARG | CD-NE-CZ | 17.13 | 147.59 | 123.60 |
| 1 | H | 184 | ASP | CB-CG-OD2 | 17.09 | 133.68 | 118.30 |
| 1 | N | 60 | ASP | CB-CG-OD1 | 17.07 | 133.66 | 118.30 |
| 1 | A | 183 | ASP | CB-CG-OD1 | 17.06 | 133.66 | 118.30 |
| 1 | K | 15 | TYR | CB-CG-CD2 | -17.06 | 110.76 | 121.00 |
| 1 | P | 29 | ARG | CD-NE-CZ | 17.03 | 147.44 | 123.60 |
| 1 | I | 66 | ARG | CD-NE-CZ | 17.00 | 147.39 | 123.60 |
| 1 | F | 22 | ARG | NE-CZ-NH2 | -16.97 | 111.81 | 120.30 |
| 1 | M | 205 | ASP | CB-CG-OD1 | 16.96 | 133.56 | 118.30 |
| 1 | D | 14 | ARG | NE-CZ-NH1 | 16.91 | 128.76 | 120.30 |
| 1 | D | 18 | ARG | CD-NE-CZ | 16.90 | 147.26 | 123.60 |
| 1 | I | 438 | ARG | NE-CZ-NH1 | -16.86 | 111.87 | 120.30 |
| 1 | P | 275 | TYR | CG-CD1-CE1 | 16.76 | 134.71 | 121.30 |
| 1 | E | 36 | ARG | NE-CZ-NH2 | 16.74 | 128.67 | 120.30 |
| 1 | D | 22 | ARG | NE-CZ-NH1 | 16.71 | 128.65 | 120.30 |
| 1 | C | 60 | ASP | CB-CG-OD1 | 16.70 | 133.33 | 118.30 |
| 1 | C | 36 | ARG | NE-CZ-NH1 | -16.69 | 111.95 | 120.30 |
| 1 | L | 14 | ARG | NE-CZ-NH1 | -16.69 | 111.96 | 120.30 |
| 1 | N | 14 | ARG | CD-NE-CZ | 16.68 | 146.94 | 123.60 |
| 1 | K | 409 | ARG | NE-CZ-NH1 | 16.65 | 128.62 | 120.30 |
| 1 | A | 36 | ARG | NE-CZ-NH1 | 16.64 | 128.62 | 120.30 |
| 1 | N | 285 | ARG | NE-CZ-NH2 | -16.63 | 111.99 | 120.30 |
| 1 | E | 18 | ARG | NE-CZ-NH1 | 16.55 | 128.57 | 120.30 |
| 1 | B | 15 | TYR | CB-CG-CD2 | 16.50 | 130.90 | 121.00 |
| 1 | N | 189 | ASP | CB-CG-OD2 | 16.48 | 133.14 | 118.30 |
| 1 | G | 454 | PHE | CB-CG-CD2 | -16.48 | 109.26 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | L | 438 | ARG | NE-CZ-NH1 | -16.48 | 112.06 | 120.30 |
| 1 | I | 489 | ARG | NE-CZ-NH1 | -16.43 | 112.09 | 120.30 |
| 1 | J | 394 | ARG | NE-CZ-NH2 | -16.40 | 112.10 | 120.30 |
| 1 | I | 348 | ARG | NE-CZ-NH2 | -16.38 | 112.11 | 120.30 |
| 1 | C | 491 | ASP | CB-CG-OD2 | 16.34 | 133.00 | 118.30 |
| 1 | O | 438 | ARG | NE-CZ-NH1 | 16.33 | 128.46 | 120.30 |
| 1 | M | 309 | ASP | CB-CG-OD2 | 16.32 | 132.99 | 118.30 |
| 1 | L | 54 | ASP | CB-CG-OD1 | 16.30 | 132.97 | 118.30 |
| 1 | J | 377 | ARG | NH1-CZ-NH2 | 16.30 | 137.32 | 119.40 |
| 1 | K | 489 | ARG | NE-CZ-NH1 | -16.29 | 112.16 | 120.30 |
| 1 | P | 471 | ARG | NE-CZ-NH1 | 16.28 | 128.44 | 120.30 |
| 1 | L | 379 | VAL | CA-CB-CG1 | 16.27 | 135.31 | 110.90 |
| 1 | P | 105 | ARG | NE-CZ-NH1 | -16.24 | 112.18 | 120.30 |
| 1 | I | 15 | TYR | CB-CG-CD1 | 16.23 | 130.74 | 121.00 |
| 1 | J | 36 | ARG | NE-CZ-NH2 | 16.22 | 128.41 | 120.30 |
| 1 | G | 459 | GLU | OE1-CD-OE2 | -16.15 | 103.92 | 123.30 |
| 1 | L | 497 | GLU | OE1-CD-OE2 | 16.14 | 142.66 | 123.30 |
| 1 | C | 215 | ASP | CB-CG-OD2 | -16.12 | 103.79 | 118.30 |
| 1 | D | 54 | ASP | CB-CG-OD1 | 16.12 | 132.81 | 118.30 |
| 1 | M | 105 | ARG | NE-CZ-NH1 | -16.11 | 112.25 | 120.30 |
| 1 | F | 438 | ARG | NE-CZ-NH2 | -16.11 | 112.25 | 120.30 |
| 1 | M | 317 | ASP | CB-CG-OD1 | 16.05 | 132.75 | 118.30 |
| 1 | I | 285 | ARG | CD-NE-CZ | 16.02 | 146.03 | 123.60 |
| 1 | P | 112 | ASP | CB-CG-OD2 | 16.02 | 132.72 | 118.30 |
| 1 | F | 218 | ARG | NE-CZ-NH1 | -16.00 | 112.30 | 120.30 |
| 1 | H | 18 | ARG | CD-NE-CZ | 16.00 | 146.00 | 123.60 |
| 1 | F | 348 | ARG | NE-CZ-NH1 | 15.99 | 128.29 | 120.30 |
| 1 | B | 396 | TYR | CB-CG-CD1 | -15.95 | 111.43 | 121.00 |
| 1 | M | 438 | ARG | NE-CZ-NH1 | 15.93 | 128.26 | 120.30 |
| 1 | D | 205 | ASP | CB-CG-OD1 | 15.92 | 132.63 | 118.30 |
| 1 | G | 471 | ARG | NE-CZ-NH2 | 15.91 | 128.26 | 120.30 |
| 1 | I | 66 | ARG | NE-CZ-NH2 | 15.91 | 128.25 | 120.30 |
| 1 | G | 394 | ARG | NE-CZ-NH2 | -15.90 | 112.35 | 120.30 |
| 1 | I | 460 | ASP | CB-CG-OD2 | 15.88 | 132.59 | 118.30 |
| 1 | B | 36 | ARG | NE-CZ-NH1 | -15.87 | 112.36 | 120.30 |
| 1 | G | 36 | ARG | NE-CZ-NH1 | -15.87 | 112.36 | 120.30 |
| 1 | M | 112 | ASP | CB-CG-OD2 | 15.78 | 132.50 | 118.30 |
| 1 | C | 191 | ASP | CB-CG-OD1 | -15.73 | 104.14 | 118.30 |
| 1 | B | 285 | ARG | NE-CZ-NH1 | 15.69 | 128.14 | 120.30 |
| 1 | C | 460 | ASP | CB-CG-OD1 | 15.67 | 132.41 | 118.30 |
| 1 | B | 350 | THR | CA-CB-CG2 | 15.65 | 134.31 | 112.40 |
| 1 | G | 411 | PHE | CB-CG-CD2 | 15.63 | 131.74 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | L | 489 | ARG | NE-CZ-NH1 | 15.60 | 128.10 | 120.30 |
| 1 | D | 51 | ASP | CB-CG-OD1 | -15.60 | 104.26 | 118.30 |
| 1 | L | 291 | ASP | CB-CG-OD2 | 15.59 | 132.33 | 118.30 |
| 1 | G | 438 | ARG | NE-CZ-NH2 | -15.58 | 112.51 | 120.30 |
| 1 | C | 317 | ASP | CB-CG-OD1 | 15.57 | 132.31 | 118.30 |
| 1 | N | 205 | ASP | CB-CG-OD2 | 15.53 | 132.28 | 118.30 |
| 1 | H | 45 | ASP | CB-CG-OD2 | -15.51 | 104.34 | 118.30 |
| 1 | L | 394 | ARG | NE-CZ-NH1 | 15.47 | 128.03 | 120.30 |
| 1 | E | 51 | ASP | CB-CG-OD2 | 15.45 | 132.21 | 118.30 |
| 1 | I | 491 | ASP | CB-CG-OD2 | 15.42 | 132.18 | 118.30 |
| 1 | D | 60 | ASP | CB-CG-OD1 | 15.39 | 132.16 | 118.30 |
| 1 | B | 186 | GLY | C-N-CA | 15.38 | 160.14 | 121.70 |
| 1 | J | 438 | ARG | NE-CZ-NH2 | -15.38 | 112.61 | 120.30 |
| 1 | D | 191 | ASP | CB-CG-OD2 | -15.35 | 104.49 | 118.30 |
| 1 | G | 91 | ASP | CB-CG-OD1 | 15.34 | 132.10 | 118.30 |
| 1 | C | 285 | ARG | CD-NE-CZ | 15.33 | 145.07 | 123.60 |
| 1 | I | 105 | ARG | NE-CZ-NH2 | 15.32 | 127.96 | 120.30 |
| 1 | J | 14 | ARG | NE-CZ-NH1 | 15.32 | 127.96 | 120.30 |
| 1 | N | 29 | ARG | CD-NE-CZ | 15.29 | 145.01 | 123.60 |
| 1 | O | 291 | ASP | CB-CG-OD2 | 15.29 | 132.06 | 118.30 |
| 1 | I | 489 | ARG | NE-CZ-NH2 | 15.24 | 127.92 | 120.30 |
| 1 | M | 270 | ASP | CB-CG-OD2 | 15.24 | 132.01 | 118.30 |
| 1 | O | 324 | ARG | NE-CZ-NH1 | 15.19 | 127.89 | 120.30 |
| 1 | K | 189 | ASP | CB-CG-OD2 | 15.18 | 131.97 | 118.30 |
| 1 | M | 285 | ARG | NE-CZ-NH2 | -15.18 | 112.71 | 120.30 |
| 1 | K | 218 | ARG | NE-CZ-NH2 | -15.17 | 112.72 | 120.30 |
| 1 | A | 396 | TYR | CB-CG-CD1 | -15.16 | 111.90 | 121.00 |
| 1 | P | 360 | ARG | NE-CZ-NH2 | -15.16 | 112.72 | 120.30 |
| 1 | D | 396 | TYR | CB-CG-CD1 | -15.13 | 111.92 | 121.00 |
| 1 | K | 18 | ARG | NE-CZ-NH1 | 15.13 | 127.86 | 120.30 |
| 1 | K | 420 | ARG | NE-CZ-NH2 | -15.12 | 112.74 | 120.30 |
| 1 | L | 18 | ARG | NE-CZ-NH1 | 15.08 | 127.84 | 120.30 |
| 1 | E | 14 | ARG | NE-CZ-NH1 | -15.06 | 112.77 | 120.30 |
| 1 | F | 270 | ASP | CB-CG-OD1 | -15.04 | 104.76 | 118.30 |
| 1 | C | 240 | GLU | OE1-CD-OE2 | -15.04 | 105.26 | 123.30 |
| 1 | C | 205 | ASP | CB-CG-OD2 | 15.03 | 131.82 | 118.30 |
| 1 | I | 409 | ARG | NE-CZ-NH2 | -15.01 | 112.80 | 120.30 |
| 1 | M | 133 | GLU | OE1-CD-OE2 | 14.93 | 141.21 | 123.30 |
| 1 | N | 66 | ARG | NH1-CZ-NH2 | -14.92 | 102.99 | 119.40 |
| 1 | P | 109 | GLU | OE1-CD-OE2 | 14.92 | 141.21 | 123.30 |
| 1 | D | 429 | ASP | CB-CG-OD1 | 14.87 | 131.68 | 118.30 |
| 1 | J | 471 | ARG | NE-CZ-NH1 | -14.85 | 112.88 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | J | 459 | GLU | OE1-CD-OE2 | 14.84 | 141.11 | 123.30 |
| 1 | G | 489 | ARG | NE-CZ-NH1 | -14.83 | 112.88 | 120.30 |
| 1 | P | 432 | GLU | OE1-CD-OE2 | 14.82 | 141.09 | 123.30 |
| 1 | A | 185 | GLU | OE1-CD-OE2 | 14.82 | 141.08 | 123.30 |
| 1 | C | 468 | GLU | OE1-CD-OE2 | -14.79 | 105.55 | 123.30 |
| 1 | H | 357 | GLU | OE1-CD-OE2 | 14.77 | 141.02 | 123.30 |
| 1 | J | 411 | PHE | CB-CG-CD2 | -14.73 | 110.49 | 120.80 |
| 1 | C | 249 | ASP | CB-CG-OD1 | 14.71 | 131.54 | 118.30 |
| 1 | O | 112 | ASP | CB-CG-OD1 | 14.71 | 131.53 | 118.30 |
| 1 | M | 394 | ARG | NE-CZ-NH2 | 14.69 | 127.64 | 120.30 |
| 1 | B | 88 | GLU | OE1-CD-OE2 | -14.68 | 105.68 | 123.30 |
| 1 | H | 374 | GLU | OE1-CD-OE2 | -14.68 | 105.69 | 123.30 |
| 1 | B | 459 | GLU | OE1-CD-OE2 | 14.66 | 140.89 | 123.30 |
| 1 | P | 333 | PHE | CB-CG-CD2 | -14.65 | 110.54 | 120.80 |
| 1 | A | 409 | ARG | NE-CZ-NH2 | -14.65 | 112.97 | 120.30 |
| 1 | C | 314 | ASP | CB-CG-OD2 | 14.61 | 131.45 | 118.30 |
| 1 | F | 432 | GLU | OE1-CD-OE2 | -14.58 | 105.80 | 123.30 |
| 1 | B | 411 | PHE | CB-CG-CD2 | 14.56 | 130.99 | 120.80 |
| 1 | E | 471 | ARG | NE-CZ-NH2 | 14.55 | 127.58 | 120.30 |
| 1 | O | 403 | ARG | NE-CZ-NH2 | -14.54 | 113.03 | 120.30 |
| 1 | J | 124 | TYR | CG-CD1-CE1 | 14.52 | 132.91 | 121.30 |
| 1 | H | 324 | ARG | NE-CZ-NH1 | -14.49 | 113.06 | 120.30 |
| 1 | F | 420 | ARG | NE-CZ-NH2 | 14.49 | 127.54 | 120.30 |
| 1 | N | 403 | ARG | NE-CZ-NH1 | -14.48 | 113.06 | 120.30 |
| 1 | I | 188 | VAL | CA-CB-CG2 | 14.45 | 132.58 | 110.90 |
| 1 | C | 66 | ARG | NH1-CZ-NH2 | 14.45 | 135.29 | 119.40 |
| 1 | I | 471 | ARG | NE-CZ-NH1 | 14.44 | 127.52 | 120.30 |
| 1 | B | 241 | GLU | OE1-CD-OE2 | -14.41 | 106.01 | 123.30 |
| 1 | D | 205 | ASP | CB-CG-OD2 | -14.41 | 105.33 | 118.30 |
| 1 | N | 252 | ALA | C-N-CA | 14.41 | 157.72 | 121.70 |
| 1 | J | 112 | ASP | CB-CG-OD1 | 14.40 | 131.26 | 118.30 |
| 1 | M | 395 | GLU | OE1-CD-OE2 | -14.39 | 106.03 | 123.30 |
| 1 | A | 403 | ARG | NE-CZ-NH2 | -14.38 | 113.11 | 120.30 |
| 1 | C | 438 | ARG | NE-CZ-NH1 | 14.38 | 127.49 | 120.30 |
| 1 | A | 270 | ASP | CB-CG-OD1 | 14.38 | 131.24 | 118.30 |
| 1 | K | 29 | ARG | NE-CZ-NH1 | -14.37 | 113.11 | 120.30 |
| 1 | B | 29 | ARG | NE-CZ-NH1 | 14.37 | 127.48 | 120.30 |
| 1 | H | 377 | ARG | NE-CZ-NH1 | -14.36 | 113.12 | 120.30 |
| 1 | D | 286 | ARG | CD-NE-CZ | 14.36 | 143.70 | 123.60 |
| 1 | D | 317 | ASP | CB-CG-OD1 | 14.35 | 131.22 | 118.30 |
| 1 | I | 329 | ASP | CB-CG-OD2 | -14.35 | 105.39 | 118.30 |
| 1 | G | 286 | ARG | NE-CZ-NH2 | 14.34 | 127.47 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | N | 29 | ARG | NE-CZ-NH2 | 14.31 | 127.46 | 120.30 |
| 1 | O | 218 | ARG | NE-CZ-NH2 | 14.30 | 127.45 | 120.30 |
| 1 | D | 218 | ARG | CD-NE-CZ | 14.29 | 143.61 | 123.60 |
| 1 | M | 377 | ARG | NE-CZ-NH1 | 14.29 | 127.44 | 120.30 |
| 1 | D | 333 | PHE | CB-CG-CD1 | -14.26 | 110.82 | 120.80 |
| 1 | N | 309 | ASP | CB-CG-OD2 | 14.26 | 131.13 | 118.30 |
| 1 | M | 218 | ARG | NE-CZ-NH1 | 14.26 | 127.43 | 120.30 |
| 1 | L | 375 | ASP | CB-CG-OD1 | 14.25 | 131.12 | 118.30 |
| 1 | G | 191 | ASP | CB-CG-OD2 | 14.25 | 131.12 | 118.30 |
| 1 | H | 314 | ASP | CB-CG-OD1 | 14.23 | 131.10 | 118.30 |
| 1 | I | 359 | ALA | N-CA-CB | 14.22 | 130.01 | 110.10 |
| 1 | E | 60 | ASP | CB-CG-OD1 | 14.20 | 131.08 | 118.30 |
| 1 | L | 50 | ASP | CB-CG-OD2 | -14.16 | 105.55 | 118.30 |
| 1 | N | 218 | ARG | NE-CZ-NH2 | 14.16 | 127.38 | 120.30 |
| 1 | G | 245 | GLU | OE1-CD-OE2 | -14.09 | 106.39 | 123.30 |
| 1 | C | 14 | ARG | NE-CZ-NH1 | -14.09 | 113.25 | 120.30 |
| 1 | H | 285 | ARG | NE-CZ-NH2 | -14.08 | 113.26 | 120.30 |
| 1 | F | 215 | ASP | CB-CG-OD1 | 14.07 | 130.97 | 118.30 |
| 1 | I | 374 | GLU | OE1-CD-OE2 | -14.07 | 106.42 | 123.30 |
| 1 | B | 14 | ARG | NE-CZ-NH1 | 14.06 | 127.33 | 120.30 |
| 1 | B | 66 | ARG | NE-CZ-NH1 | 14.06 | 127.33 | 120.30 |
| 1 | P | 10 | GLU | OE1-CD-OE2 | -14.05 | 106.44 | 123.30 |
| 1 | P | 275 | TYR | CD1-CE1-CZ | -14.04 | 107.16 | 119.80 |
| 1 | O | 285 | ARG | CD-NE-CZ | 14.02 | 143.23 | 123.60 |
| 1 | D | 22 | ARG | NE-CZ-NH2 | -14.00 | 113.30 | 120.30 |
| 1 | M | 18 | ARG | NE-CZ-NH1 | 13.99 | 127.29 | 120.30 |
| 1 | L | 324 | ARG | NE-CZ-NH2 | 13.96 | 127.28 | 120.30 |
| 1 | F | 411 | PHE | CB-CG-CD1 | 13.95 | 130.56 | 120.80 |
| 1 | G | 22 | ARG | NE-CZ-NH1 | 13.93 | 127.27 | 120.30 |
| 1 | M | 15 | TYR | CG-CD2-CE2 | -13.92 | 110.16 | 121.30 |
| 1 | A | 7 | VAL | C-N-CA | 13.90 | 156.46 | 121.70 |
| 1 | B | 105 | ARG | NE-CZ-NH2 | 13.89 | 127.25 | 120.30 |
| 1 | J | 54 | ASP | CB-CG-OD1 | 13.85 | 130.76 | 118.30 |
| 1 | B | 286 | ARG | CD-NE-CZ | 13.85 | 142.99 | 123.60 |
| 1 | B | 309 | ASP | CB-CG-OD2 | -13.83 | 105.85 | 118.30 |
| 1 | J | 394 | ARG | NE-CZ-NH1 | 13.82 | 127.21 | 120.30 |
| 1 | B | 263 | PHE | CB-CG-CD2 | 13.80 | 130.46 | 120.80 |
| 1 | E | 285 | ARG | CD-NE-CZ | 13.78 | 142.90 | 123.60 |
| 1 | N | 348 | ARG | NE-CZ-NH2 | -13.78 | 113.41 | 120.30 |
| 1 | C | 243 | ALA | CB-CA-C | 13.77 | 130.75 | 110.10 |
| 1 | C | 172 | GLU | OE1-CD-OE2 | 13.76 | 139.81 | 123.30 |
| 1 | K | 66 | ARG | NE-CZ-NH2 | -13.74 | 113.43 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | B | 263 | PHE | CB-CG-CD1 | -13.72 | 111.19 | 120.80 |
| 1 | L | 403 | ARG | NE-CZ-NH2 | -13.72 | 113.44 | 120.30 |
| 1 | P | 309 | ASP | CB-CG-OD1 | 13.70 | 130.63 | 118.30 |
| 1 | I | 29 | ARG | CD-NE-CZ | 13.69 | 142.77 | 123.60 |
| 1 | P | 18 | ARG | NE-CZ-NH2 | -13.69 | 113.45 | 120.30 |
| 1 | P | 242 | THR | CA-CB-CG2 | 13.69 | 131.57 | 112.40 |
| 1 | E | 360 | ARG | CD-NE-CZ | 13.68 | 142.75 | 123.60 |
| 1 | P | 285 | ARG | NE-CZ-NH1 | 13.67 | 127.14 | 120.30 |
| 1 | F | 112 | ASP | CB-CG-OD1 | 13.64 | 130.58 | 118.30 |
| 1 | M | 269 | ASP | CB-CG-OD1 | 13.63 | 130.57 | 118.30 |
| 1 | E | 218 | ARG | NE-CZ-NH1 | 13.63 | 127.11 | 120.30 |
| 1 | A | 14 | ARG | NE-CZ-NH1 | -13.61 | 113.50 | 120.30 |
| 1 | D | 218 | ARG | NE-CZ-NH1 | -13.61 | 113.50 | 120.30 |
| 1 | P | 14 | ARG | CD-NE-CZ | 13.60 | 142.64 | 123.60 |
| 1 | N | 229 | ASP | CB-CG-OD2 | 13.59 | 130.53 | 118.30 |
| 1 | C | 411 | PHE | CB-CG-CD1 | 13.57 | 130.30 | 120.80 |
| 1 | N | 324 | ARG | NE-CZ-NH2 | 13.56 | 127.08 | 120.30 |
| 1 | E | 342 | ALA | N-CA-CB | 13.55 | 129.07 | 110.10 |
| 1 | I | 324 | ARG | NH1-CZ-NH2 | 13.54 | 134.30 | 119.40 |
| 1 | D | 36 | ARG | NE-CZ-NH1 | -13.54 | 113.53 | 120.30 |
| 1 | C | 394 | ARG | NE-CZ-NH2 | -13.54 | 113.53 | 120.30 |
| 1 | K | 388 | GLU | OE1-CD-OE2 | -13.53 | 107.06 | 123.30 |
| 1 | H | 348 | ARG | NE-CZ-NH2 | -13.52 | 113.54 | 120.30 |
| 1 | E | 291 | ASP | N-CA-CB | 13.52 | 134.93 | 110.60 |
| 1 | N | 429 | ASP | CB-CG-OD2 | 13.51 | 130.46 | 118.30 |
| 1 | J | 374 | GLU | OE1-CD-OE2 | -13.49 | 107.11 | 123.30 |
| 1 | F | 285 | ARG | NE-CZ-NH1 | 13.49 | 127.05 | 120.30 |
| 1 | G | 66 | ARG | NE-CZ-NH2 | 13.47 | 127.03 | 120.30 |
| 1 | N | 105 | ARG | NE-CZ-NH2 | 13.47 | 127.03 | 120.30 |
| 1 | P | 249 | ASP | CA-CB-CG | 13.46 | 143.02 | 113.40 |
| 1 | C | 409 | ARG | NE-CZ-NH2 | 13.44 | 127.02 | 120.30 |
| 1 | O | 218 | ARG | CD-NE-CZ | 13.44 | 142.41 | 123.60 |
| 1 | B | 485 | GLU | OE1-CD-OE2 | 13.43 | 139.42 | 123.30 |
| 1 | P | 86 | GLU | OE1-CD-OE2 | -13.42 | 107.19 | 123.30 |
| 1 | K | 14 | ARG | CD-NE-CZ | 13.42 | 142.39 | 123.60 |
| 1 | N | 14 | ARG | NE-CZ-NH1 | 13.42 | 127.01 | 120.30 |
| 1 | I | 164 | GLU | OE1-CD-OE2 | -13.41 | 107.21 | 123.30 |
| 1 | N | 18 | ARG | NH1-CZ-NH2 | -13.40 | 104.66 | 119.40 |
| 1 | A | 454 | PHE | CB-CG-CD2 | -13.37 | 111.44 | 120.80 |
| 1 | M | 36 | ARG | NE-CZ-NH1 | -13.36 | 113.62 | 120.30 |
| 1 | B | 50 | ASP | CB-CG-OD1 | 13.36 | 130.32 | 118.30 |
| 1 | A | 409 | ARG | NE-CZ-NH1 | 13.36 | 126.98 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | M | 438 | ARG | NE-CZ-NH2 | -13.36 | 113.62 | 120.30 |
| 1 | L | 275 | TYR | CB-CG-CD1 | -13.34 | 113.00 | 121.00 |
| 1 | J | 124 | TYR | CB-CG-CD1 | 13.27 | 128.96 | 121.00 |
| 1 | D | 363 | ASP | CB-CG-OD1 | 13.26 | 130.23 | 118.30 |
| 1 | E | 10 | GLU | OE1-CD-OE2 | -13.25 | 107.40 | 123.30 |
| 1 | L | 460 | ASP | CB-CG-OD2 | 13.24 | 130.22 | 118.30 |
| 1 | H | 45 | ASP | CB-CG-OD1 | 13.24 | 130.21 | 118.30 |
| 1 | N | 60 | ASP | CB-CG-OD2 | -13.24 | 106.39 | 118.30 |
| 1 | D | 67 | GLU | OE1-CD-OE2 | 13.22 | 139.16 | 123.30 |
| 1 | O | 207 | GLU | OE1-CD-OE2 | -13.20 | 107.45 | 123.30 |
| 1 | D | 66 | ARG | NE-CZ-NH1 | -13.20 | 113.70 | 120.30 |
| 1 | F | 403 | ARG | NH1-CZ-NH2 | 13.18 | 133.90 | 119.40 |
| 1 | O | 18 | ARG | NE-CZ-NH2 | 13.17 | 126.89 | 120.30 |
| 1 | E | 374 | GLU | OE1-CD-OE2 | -13.17 | 107.50 | 123.30 |
| 1 | G | 88 | GLU | OE1-CD-OE2 | -13.15 | 107.51 | 123.30 |
| 1 | D | 360 | ARG | NE-CZ-NH2 | -13.15 | 113.72 | 120.30 |
| 1 | B | 22 | ARG | NE-CZ-NH1 | -13.14 | 113.73 | 120.30 |
| 1 | A | 183 | ASP | CB-CG-OD2 | -13.14 | 106.47 | 118.30 |
| 1 | F | 159 | THR | CA-CB-CG2 | 13.13 | 130.78 | 112.40 |
| 1 | G | 314 | ASP | CB-CG-OD2 | 13.13 | 130.12 | 118.30 |
| 1 | P | 378 | ILE | C-N-CA | 13.12 | 154.51 | 121.70 |
| 1 | M | 324 | ARG | NE-CZ-NH2 | 13.12 | 126.86 | 120.30 |
| 1 | G | 29 | ARG | CD-NE-CZ | 13.10 | 141.95 | 123.60 |
| 1 | A | 218 | ARG | CD-NE-CZ | 13.10 | 141.94 | 123.60 |
| 1 | N | 124 | TYR | CB-CG-CD1 | 13.10 | 128.86 | 121.00 |
| 1 | B | 45 | ASP | CB-CG-OD2 | -13.10 | 106.51 | 118.30 |
| 1 | B | 217 | GLU | OE1-CD-OE2 | -13.08 | 107.61 | 123.30 |
| 1 | B | 275 | TYR | CD1-CE1-CZ | -13.07 | 108.04 | 119.80 |
| 1 | K | 286 | ARG | NE-CZ-NH2 | 13.04 | 126.82 | 120.30 |
| 1 | L | 66 | ARG | NE-CZ-NH2 | -13.05 | 113.78 | 120.30 |
| 1 | K | 124 | TYR | CG-CD1-CE1 | 13.04 | 131.73 | 121.30 |
| 1 | L | 18 | ARG | NE-CZ-NH2 | -13.04 | 113.78 | 120.30 |
| 1 | B | 394 | ARG | NE-CZ-NH2 | 13.02 | 126.81 | 120.30 |
| 1 | A | 275 | TYR | CB-CG-CD2 | -13.00 | 113.20 | 121.00 |
| 1 | O | 14 | ARG | NH1-CZ-NH2 | 13.00 | 133.70 | 119.40 |
| 1 | D | 124 | TYR | CG-CD1-CE1 | 12.98 | 131.69 | 121.30 |
| 1 | P | 324 | ARG | NE-CZ-NH2 | 12.98 | 126.79 | 120.30 |
| 1 | D | 454 | PHE | CG-CD1-CE1 | 12.95 | 135.05 | 120.80 |
| 1 | D | 375 | ASP | CB-CG-OD2 | 12.94 | 129.94 | 118.30 |
| 1 | A | 285 | ARG | NH1-CZ-NH2 | -12.93 | 105.18 | 119.40 |
| 1 | A | 286 | ARG | NE-CZ-NH2 | 12.91 | 126.76 | 120.30 |
| 1 | J | 375 | ASP | CB-CG-OD1 | 12.91 | 129.92 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | E | 403 | ARG | NE-CZ-NH1 | -12.90 | 113.85 | 120.30 |
| 1 | B | 70 | VAL | CG1-CB-CG2 | 12.88 | 131.51 | 110.90 |
| 1 | B | 293 | GLU | OE1-CD-OE2 | 12.86 | 138.73 | 123.30 |
| 1 | C | 471 | ARG | NH1-CZ-NH2 | -12.85 | 105.27 | 119.40 |
| 1 | O | 184 | ASP | CB-CG-OD1 | -12.84 | 106.74 | 118.30 |
| 1 | L | 285 | ARG | CD-NE-CZ | 12.84 | 141.57 | 123.60 |
| 1 | O | 275 | TYR | CB-CG-CD2 | 12.81 | 128.69 | 121.00 |
| 1 | G | 411 | PHE | CG-CD1-CE1 | 12.79 | 134.87 | 120.80 |
| 1 | N | 275 | TYR | CZ-CE2-CD2 | 12.79 | 131.31 | 119.80 |
| 1 | L | 333 | PHE | CG-CD1-CE1 | 12.78 | 134.86 | 120.80 |
| 1 | A | 105 | ARG | NE-CZ-NH1 | -12.77 | 113.91 | 120.30 |
| 1 | A | 314 | ASP | CB-CG-OD1 | 12.77 | 129.79 | 118.30 |
| 1 | F | 56 | VAL | CA-CB-CG1 | 12.75 | 130.03 | 110.90 |
| 1 | A | 413 | ASP | CB-CG-OD2 | -12.74 | 106.83 | 118.30 |
| 1 | E | 438 | ARG | NE-CZ-NH1 | 12.73 | 126.67 | 120.30 |
| 1 | L | 420 | ARG | NE-CZ-NH2 | -12.73 | 113.94 | 120.30 |
| 1 | J | 22 | ARG | NE-CZ-NH1 | 12.73 | 126.66 | 120.30 |
| 1 | O | 118 | THR | CA-CB-CG2 | 12.72 | 130.21 | 112.40 |
| 1 | H | 105 | ARG | NE-CZ-NH2 | 12.72 | 126.66 | 120.30 |
| 1 | G | 29 | ARG | NE-CZ-NH1 | -12.70 | 113.95 | 120.30 |
| 1 | H | 482 | GLU | OE1-CD-OE2 | -12.69 | 108.08 | 123.30 |
| 1 | E | 207 | GLU | OE1-CD-OE2 | 12.68 | 138.51 | 123.30 |
| 1 | D | 409 | ARG | NE-CZ-NH2 | -12.66 | 113.97 | 120.30 |
| 1 | E | 112 | ASP | CB-CG-OD2 | -12.66 | 106.91 | 118.30 |
| 1 | E | 54 | ASP | CB-CG-OD1 | 12.65 | 129.69 | 118.30 |
| 1 | E | 105 | ARG | NE-CZ-NH2 | 12.64 | 126.62 | 120.30 |
| 1 | N | 22 | ARG | CD-NE-CZ | 12.64 | 141.30 | 123.60 |
| 1 | C | 454 | PHE | CB-CG-CD1 | 12.64 | 129.65 | 120.80 |
| 1 | H | 275 | TYR | CG-CD1-CE1 | 12.64 | 131.41 | 121.30 |
| 1 | M | 411 | PHE | CB-CG-CD1 | 12.63 | 129.64 | 120.80 |
| 1 | C | 124 | TYR | CB-CG-CD2 | 12.63 | 128.58 | 121.00 |
| 1 | G | 275 | TYR | CB-CG-CD2 | -12.62 | 113.43 | 121.00 |
| 1 | M | 364 | ASP | CB-CG-OD1 | 12.61 | 129.65 | 118.30 |
| 1 | B | 246 | MET | CA-CB-CG | 12.61 | 134.73 | 113.30 |
| 1 | O | 285 | ARG | NH1-CZ-NH2 | -12.61 | 105.53 | 119.40 |
| 1 | G | 131 | ALA | N-CA-CB | 12.60 | 127.75 | 110.10 |
| 1 | I | 19 | ASP | CB-CG-OD1 | 12.60 | 129.64 | 118.30 |
| 1 | F | 360 | ARG | CD-NE-CZ | 12.59 | 141.23 | 123.60 |
| 1 | I | 54 | ASP | CB-CG-OD2 | 12.59 | 129.63 | 118.30 |
| 1 | M | 66 | ARG | NH1-CZ-NH2 | 12.57 | 133.23 | 119.40 |
| 1 | G | 148 | GLU | OE1-CD-OE2 | 12.57 | 138.39 | 123.30 |
| 1 | O | 333 | PHE | CB-CG-CD1 | -12.57 | 112.00 | 120.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | F | 377 | ARG | NE-CZ-NH2 | -12.54 | 114.03 | 120.30 |
| 1 | A | 397 | ALA | CB-CA-C | 12.54 | 128.90 | 110.10 |
| 1 | J | 305 | THR | CA-CB-CG2 | 12.53 | 129.94 | 112.40 |
| 1 | C | 411 | PHE | CB-CG-CD2 | -12.52 | 112.04 | 120.80 |
| 1 | H | 360 | ARG | NE-CZ-NH1 | -12.52 | 114.04 | 120.30 |
| 1 | J | 492 | ASP | CB-CG-OD1 | -12.51 | 107.04 | 118.30 |
| 1 | M | 245 | GLU | OE1-CD-OE2 | -12.51 | 108.28 | 123.30 |
| 1 | P | 330 | SER | N-CA-CB | 12.50 | 129.26 | 110.50 |
| 1 | K | 29 | ARG | NE-CZ-NH2 | 12.50 | 126.55 | 120.30 |
| 1 | K | 474 | THR | CA-CB-CG2 | 12.50 | 129.90 | 112.40 |
| 1 | P | 491 | ASP | CB-CG-OD2 | -12.49 | 107.06 | 118.30 |
| 1 | H | 218 | ARG | NE-CZ-NH2 | -12.49 | 114.06 | 120.30 |
| 1 | B | 66 | ARG | NE-CZ-NH2 | -12.48 | 114.06 | 120.30 |
| 1 | D | 348 | ARG | NE-CZ-NH2 | -12.48 | 114.06 | 120.30 |
| 1 | F | 363 | ASP | CB-CG-OD1 | 12.46 | 129.51 | 118.30 |
| 1 | A | 88 | GLU | OE1-CD-OE2 | -12.46 | 108.35 | 123.30 |
| 1 | J | 275 | TYR | CG-CD2-CE2 | -12.46 | 111.33 | 121.30 |
| 1 | B | 249 | ASP | CB-CG-OD1 | 12.45 | 129.51 | 118.30 |
| 1 | K | 396 | TYR | CD1-CE1-CZ | 12.44 | 130.99 | 119.80 |
| 1 | E | 51 | ASP | OD1-CG-OD2 | -12.43 | 99.68 | 123.30 |
| 1 | D | 482 | GLU | OE1-CD-OE2 | -12.43 | 108.39 | 123.30 |
| 1 | H | 369 | VAL | CA-CB-CG2 | 12.43 | 129.54 | 110.90 |
| 1 | O | 324 | ARG | NE-CZ-NH2 | -12.41 | 114.09 | 120.30 |
| 1 | J | 374 | GLU | O-C-N | -12.39 | 102.87 | 122.70 |
| 1 | P | 45 | ASP | CB-CG-OD2 | -12.38 | 107.15 | 118.30 |
| 1 | E | 489 | ARG | NE-CZ-NH1 | 12.37 | 126.48 | 120.30 |
| 1 | L | 115 | VAL | O-C-N | -12.36 | 102.92 | 122.70 |
| 1 | O | 66 | ARG | NE-CZ-NH2 | 12.36 | 126.48 | 120.30 |
| 1 | J | 360 | ARG | NE-CZ-NH2 | -12.35 | 114.12 | 120.30 |
| 1 | K | 432 | GLU | OE1-CD-OE2 | 12.35 | 138.12 | 123.30 |
| 1 | I | 363 | ASP | CB-CG-OD1 | 12.35 | 129.41 | 118.30 |
| 1 | I | 377 | ARG | NE-CZ-NH1 | -12.34 | 114.13 | 120.30 |
| 1 | M | 70 | VAL | CA-CB-CG1 | 12.34 | 129.41 | 110.90 |
| 1 | P | 375 | ASP | CB-CG-OD2 | 12.31 | 129.38 | 118.30 |
| 1 | E | 105 | ARG | NE-CZ-NH1 | 12.30 | 126.45 | 120.30 |
| 1 | H | 133 | GLU | OE1-CD-OE2 | 12.28 | 138.04 | 123.30 |
| 1 | A | 50 | ASP | CB-CG-OD2 | 12.28 | 129.35 | 118.30 |
| 1 | K | 11 | ASN | CB-CG-OD1 | 12.27 | 146.15 | 121.60 |
| 1 | F | 374 | GLU | CG-CD-OE2 | 12.26 | 142.81 | 118.30 |
| 1 | I | 19 | ASP | CB-CG-OD2 | -12.25 | 107.28 | 118.30 |
| 1 | O | 187 | LYS | O-C-N | -12.24 | 103.12 | 122.70 |
| 1 | L | 438 | ARG | NH1-CZ-NH2 | 12.24 | 132.86 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | E | 14 | ARG | NE-CZ-NH2 | 12.21 | 126.41 | 120.30 |
| 1 | E | 360 | ARG | NE-CZ-NH2 | 12.21 | 126.41 | 120.30 |
| 1 | M | 489 | ARG | CD-NE-CZ | -12.21 | 106.51 | 123.60 |
| 1 | K | 66 | ARG | NE-CZ-NH1 | 12.20 | 126.40 | 120.30 |
| 1 | G | 51 | ASP | CB-CG-OD1 | 12.19 | 129.27 | 118.30 |
| 1 | F | 186 | GLY | C-N-CA | 12.18 | 152.16 | 121.70 |
| 1 | H | 270 | ASP | CB-CG-OD2 | 12.18 | 129.26 | 118.30 |
| 1 | N | 275 | TYR | CG-CD2-CE2 | -12.18 | 111.56 | 121.30 |
| 1 | P | 291 | ASP | CB-CG-OD2 | 12.17 | 129.25 | 118.30 |
| 1 | A | 437 | VAL | O-C-N | 12.17 | 142.17 | 122.70 |
| 1 | B | 109 | GLU | OE1-CD-OE2 | 12.16 | 137.90 | 123.30 |
| 1 | L | 394 | ARG | NE-CZ-NH2 | -12.16 | 114.22 | 120.30 |
| 1 | E | 491 | ASP | CB-CG-OD1 | -12.15 | 107.36 | 118.30 |
| 1 | O | 420 | ARG | NH1-CZ-NH2 | 12.15 | 132.76 | 119.40 |
| 1 | J | 454 | PHE | CG-CD2-CE2 | -12.15 | 107.44 | 120.80 |
| 1 | D | 15 | TYR | CZ-CE2-CD2 | 12.15 | 130.73 | 119.80 |
| 1 | L | 348 | ARG | NE-CZ-NH2 | -12.12 | 114.24 | 120.30 |
| 1 | L | 112 | ASP | CB-CG-OD1 | 12.11 | 129.20 | 118.30 |
| 1 | J | 395 | GLU | O-C-N | -12.10 | 103.34 | 122.70 |
| 1 | F | 33 | GLU | OE1-CD-OE2 | -12.08 | 108.80 | 123.30 |
| 1 | J | 377 | ARG | NE-CZ-NH1 | -12.07 | 114.26 | 120.30 |
| 1 | E | 307 | ILE | O-C-N | -12.07 | 103.39 | 122.70 |
| 1 | I | 218 | ARG | NE-CZ-NH1 | 12.06 | 126.33 | 120.30 |
| 1 | N | 435 | VAL | CG1-CB-CG2 | 12.06 | 130.19 | 110.90 |
| 1 | G | 22 | ARG | NE-CZ-NH2 | -12.04 | 114.28 | 120.30 |
| 1 | L | 454 | PHE | CG-CD2-CE2 | -12.04 | 107.55 | 120.80 |
| 1 | P | 464 | ASN | C-N-CA | 12.04 | 147.58 | 122.30 |
| 1 | H | 471 | ARG | NE-CZ-NH1 | 12.01 | 126.30 | 120.30 |
| 1 | N | 360 | ARG | CD-NE-CZ | 12.01 | 140.41 | 123.60 |
| 1 | H | 459 | GLU | OE1-CD-OE2 | 11.99 | 137.69 | 123.30 |
| 1 | E | 60 | ASP | CB-CG-OD2 | -11.99 | 107.51 | 118.30 |
| 1 | B | 86 | GLU | N-CA-CB | 11.99 | 132.18 | 110.60 |
| 1 | F | 395 | GLU | OE1-CD-OE2 | 11.98 | 137.67 | 123.30 |
| 1 | F | 459 | GLU | OE1-CD-OE2 | -11.97 | 108.93 | 123.30 |
| 1 | K | 50 | ASP | CB-CG-OD2 | 11.96 | 129.07 | 118.30 |
| 1 | H | 60 | ASP | CB-CG-OD1 | 11.96 | 129.06 | 118.30 |
| 1 | E | 360 | ARG | NE-CZ-NH1 | 11.95 | 126.28 | 120.30 |
| 1 | C | 191 | ASP | OD1-CG-OD2 | 11.93 | 145.97 | 123.30 |
| 1 | A | 19 | ASP | CB-CG-OD2 | -11.92 | 107.58 | 118.30 |
| 1 | F | 360 | ARG | NE-CZ-NH1 | 11.91 | 126.26 | 120.30 |
| 1 | P | 413 | ASP | CB-CG-OD2 | -11.90 | 107.59 | 118.30 |
| 1 | E | 374 | GLU | O-C-N | -11.89 | 103.67 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | P | 492 | ASP | CB-CG-OD2 | 11.89 | 129.00 | 118.30 |
| 1 | C | 116 | HIS | N-CA-CB | 11.88 | 131.99 | 110.60 |
| 1 | E | 87 | LYS | O-C-N | 11.88 | 141.70 | 122.70 |
| 1 | P | 314 | ASP | CB-CG-OD1 | 11.88 | 128.99 | 118.30 |
| 1 | J | 245 | GLU | OE1-CD-OE2 | -11.86 | 109.06 | 123.30 |
| 1 | L | 14 | ARG | NH1-CZ-NH2 | 11.86 | 132.45 | 119.40 |
| 1 | P | 469 | PRO | O-C-N | -11.86 | 103.73 | 122.70 |
| 1 | A | 66 | ARG | CD-NE-CZ | 11.85 | 140.18 | 123.60 |
| 1 | H | 497 | GLU | OE1-CD-OE2 | 11.84 | 137.50 | 123.30 |
| 1 | O | 50 | ASP | O-C-N | -11.84 | 103.76 | 122.70 |
| 1 | M | 249 | ASP | CB-CG-OD2 | 11.84 | 128.95 | 118.30 |
| 1 | N | 329 | ASP | CB-CG-OD2 | -11.83 | 107.65 | 118.30 |
| 1 | M | 329 | ASP | CB-CG-OD2 | 11.82 | 128.94 | 118.30 |
| 1 | F | 51 | ASP | CB-CG-OD1 | 11.82 | 128.94 | 118.30 |
| 1 | B | 36 | ARG | NE-CZ-NH2 | 11.82 | 126.21 | 120.30 |
| 1 | D | 10 | GLU | CA-CB-CG | 11.81 | 139.38 | 113.40 |
| 1 | A | 19 | ASP | CB-CG-OD1 | 11.80 | 128.92 | 118.30 |
| 1 | D | 246 | MET | O-C-N | -11.80 | 103.82 | 122.70 |
| 1 | F | 60 | ASP | CB-CG-OD1 | 11.80 | 128.92 | 118.30 |
| 1 | B | 245 | GLU | OE1-CD-OE2 | -11.77 | 109.17 | 123.30 |
| 1 | B | 411 | PHE | CG-CD2-CE2 | 11.76 | 133.74 | 120.80 |
| 1 | B | 420 | ARG | NE-CZ-NH2 | -11.76 | 114.42 | 120.30 |
| 1 | A | 54 | ASP | CB-CG-OD2 | -11.76 | 107.72 | 118.30 |
| 1 | J | 372 | THR | C-N-CA | 11.75 | 151.07 | 121.70 |
| 1 | M | 413 | ASP | CB-CG-OD2 | 11.73 | 128.86 | 118.30 |
| 1 | I | 205 | ASP | CB-CG-OD2 | 11.73 | 128.85 | 118.30 |
| 1 | C | 403 | ARG | NH1-CZ-NH2 | 11.72 | 132.29 | 119.40 |
| 1 | N | 19 | ASP | CB-CG-OD2 | -11.72 | 107.75 | 118.30 |
| 1 | G | 409 | ARG | NE-CZ-NH1 | 11.71 | 126.16 | 120.30 |
| 1 | B | 375 | ASP | CB-CG-OD1 | -11.71 | 107.77 | 118.30 |
| 1 | G | 124 | TYR | CG-CD2-CE2 | 11.68 | 130.64 | 121.30 |
| 1 | H | 14 | ARG | NH1-CZ-NH2 | -11.68 | 106.55 | 119.40 |
| 1 | G | 333 | PHE | CD1-CE1-CZ | 11.67 | 134.11 | 120.10 |
| 1 | N | 34 | THR | CA-CB-OG1 | 11.67 | 133.51 | 109.00 |
| 1 | F | 471 | ARG | NH1-CZ-NH2 | -11.67 | 106.56 | 119.40 |
| 1 | L | 88 | GLU | OE1-CD-OE2 | -11.67 | 109.30 | 123.30 |
| 1 | P | 285 | ARG | CD-NE-CZ | 11.67 | 139.93 | 123.60 |
| 1 | A | 454 | PHE | CD1-CE1-CZ | -11.66 | 106.11 | 120.10 |
| 1 | A | 229 | ASP | CB-CG-OD2 | 11.66 | 128.79 | 118.30 |
| 1 | N | 22 | ARG | NE-CZ-NH2 | 11.65 | 126.13 | 120.30 |
| 1 | N | 124 | TYR | CB-CG-CD2 | -11.65 | 114.01 | 121.00 |
| 1 | H | 33 | GLU | OE1-CD-OE2 | -11.64 | 109.33 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | P | 139 | ALA | N-CA-CB | -11.63 | 93.81 | 110.10 |
| 1 | G | 18 | ARG | NH1-CZ-NH2 | -11.61 | 106.63 | 119.40 |
| 1 | O | 34 | THR | N-CA-CB | 11.60 | 132.34 | 110.30 |
| 1 | A | 396 | TYR | CG-CD1-CE1 | -11.59 | 112.03 | 121.30 |
| 1 | N | 66 | ARG | CD-NE-CZ | 11.58 | 139.82 | 123.60 |
| 1 | M | 107 | ALA | N-CA-CB | 11.57 | 126.29 | 110.10 |
| 1 | J | 253 | GLU | OE1-CD-OE2 | 11.55 | 137.16 | 123.30 |
| 1 | E | 124 | TYR | CB-CG-CD1 | -11.53 | 114.08 | 121.00 |
| 1 | G | 205 | ASP | CB-CG-OD1 | 11.53 | 128.68 | 118.30 |
| 1 | G | 213 | LEU | CB-CG-CD1 | 11.53 | 130.59 | 111.00 |
| 1 | G | 348 | ARG | NE-CZ-NH2 | -11.53 | 114.54 | 120.30 |
| 1 | B | 10 | GLU | CA-CB-CG | 11.51 | 138.73 | 113.40 |
| 1 | P | 148 | GLU | OE1-CD-OE2 | -11.50 | 109.50 | 123.30 |
| 1 | M | 425 | ASN | O-C-N | 11.50 | 141.09 | 122.70 |
| 1 | F | 374 | GLU | OE1-CD-OE2 | -11.49 | 109.51 | 123.30 |
| 1 | P | 245 | GLU | OE1-CD-OE2 | -11.49 | 109.51 | 123.30 |
| 1 | L | 454 | PHE | CB-CG-CD1 | -11.49 | 112.76 | 120.80 |
| 1 | G | 105 | ARG | NE-CZ-NH1 | -11.48 | 114.56 | 120.30 |
| 1 | B | 256 | ALA | N-CA-CB | 11.48 | 126.17 | 110.10 |
| 1 | E | 489 | ARG | NE-CZ-NH2 | 11.47 | 126.03 | 120.30 |
| 1 | H | 36 | ARG | NH1-CZ-NH2 | 11.47 | 132.01 | 119.40 |
| 1 | K | 201 | ALA | N-CA-CB | 11.47 | 126.15 | 110.10 |
| 1 | I | 185 | GLU | OE1-CD-OE2 | -11.46 | 109.55 | 123.30 |
| 1 | G | 15 | TYR | CG-CD2-CE2 | 11.45 | 130.46 | 121.30 |
| 1 | O | 271 | LEU | CA-CB-CG | 11.44 | 141.62 | 115.30 |
| 1 | J | 55 | VAL | CG1-CB-CG2 | -11.43 | 92.61 | 110.90 |
| 1 | J | 268 | ILE | O-C-N | -11.43 | 104.41 | 122.70 |
| 1 | F | 205 | ASP | CB-CG-OD1 | -11.43 | 108.01 | 118.30 |
| 1 | N | 291 | ASP | CB-CG-OD1 | 11.43 | 128.58 | 118.30 |
| 1 | K | 408 | VAL | CA-CB-CG2 | 11.41 | 128.02 | 110.90 |
| 1 | E | 396 | TYR | CB-CG-CD1 | 11.41 | 127.84 | 121.00 |
| 1 | N | 270 | ASP | CB-CG-OD2 | 11.40 | 128.56 | 118.30 |
| 1 | M | 91 | ASP | CB-CG-OD2 | 11.40 | 128.56 | 118.30 |
| 1 | J | 218 | ARG | CD-NE-CZ | 11.39 | 139.54 | 123.60 |
| 1 | J | 133 | GLU | O-C-N | -11.39 | 104.48 | 122.70 |
| 1 | N | 11 | ASN | N-CA-CB | 11.38 | 131.08 | 110.60 |
| 1 | L | 205 | ASP | CB-CG-OD2 | 11.37 | 128.53 | 118.30 |
| 1 | F | 394 | ARG | CD-NE-CZ | 11.37 | 139.51 | 123.60 |
| 1 | H | 60 | ASP | CB-CG-OD2 | -11.37 | 108.07 | 118.30 |
| 1 | M | 275 | TYR | CG-CD1-CE1 | 11.36 | 130.39 | 121.30 |
| 1 | F | 39 | LEU | CB-CG-CD2 | 11.36 | 130.31 | 111.00 |
| 1 | F | 102 | GLU | OE1-CD-OE2 | 11.35 | 136.92 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | J | 429 | ASP | CB-CG-OD1 | 11.35 | 128.51 | 118.30 |
| 1 | A | 305 | THR | CA-CB-CG2 | 11.35 | 128.28 | 112.40 |
| 1 | P | 426 | ALA | CB-CA-C | 11.35 | 127.12 | 110.10 |
| 1 | E | 275 | TYR | CG-CD1-CE1 | 11.34 | 130.38 | 121.30 |
| 1 | M | 395 | GLU | O-C-N | -11.34 | 104.56 | 122.70 |
| 1 | E | 105 | ARG | NH1-CZ-NH2 | -11.34 | 106.93 | 119.40 |
| 1 | C | 245 | GLU | OE1-CD-OE2 | -11.33 | 109.71 | 123.30 |
| 1 | L | 105 | ARG | CD-NE-CZ | 11.32 | 139.45 | 123.60 |
| 1 | K | 475 | GLN | CG-CD-OE1 | 11.32 | 144.23 | 121.60 |
| 1 | M | 333 | PHE | CD1-CE1-CZ | -11.31 | 106.53 | 120.10 |
| 1 | H | 18 | ARG | NH1-CZ-NH2 | -11.31 | 106.96 | 119.40 |
| 1 | E | 249 | ASP | CB-CG-OD1 | 11.29 | 128.46 | 118.30 |
| 1 | F | 50 | ASP | O-C-N | -11.29 | 104.64 | 122.70 |
| 1 | H | 394 | ARG | CG-CD-NE | 11.28 | 135.49 | 111.80 |
| 1 | N | 241 | GLU | OE1-CD-OE2 | -11.28 | 109.76 | 123.30 |
| 1 | G | 133 | GLU | OE1-CD-OE2 | 11.28 | 136.83 | 123.30 |
| 1 | B | 80 | GLU | OE1-CD-OE2 | 11.28 | 136.83 | 123.30 |
| 1 | P | 14 | ARG | NE-CZ-NH1 | 11.27 | 125.94 | 120.30 |
| 1 | E | 411 | PHE | CB-CG-CD1 | 11.26 | 128.68 | 120.80 |
| 1 | C | 163 | ALA | N-CA-CB | 11.26 | 125.86 | 110.10 |
| 1 | O | 29 | ARG | NE-CZ-NH2 | -11.26 | 114.67 | 120.30 |
| 1 | M | 485 | GLU | OE1-CD-OE2 | -11.25 | 109.80 | 123.30 |
| 1 | F | 463 | GLU | O-C-N | 11.25 | 140.69 | 122.70 |
| 1 | A | 489 | ARG | NE-CZ-NH1 | -11.23 | 114.69 | 120.30 |
| 1 | D | 176 | GLU | OE1-CD-OE2 | 11.22 | 136.77 | 123.30 |
| 1 | B | 409 | ARG | NE-CZ-NH1 | 11.22 | 125.91 | 120.30 |
| 1 | E | 113 | GLN | C-N-CA | 11.22 | 149.75 | 121.70 |
| 1 | H | 66 | ARG | CD-NE-CZ | 11.22 | 139.31 | 123.60 |
| 1 | M | 11 | ASN | O-C-N | -11.22 | 104.75 | 122.70 |
| 1 | C | 327 | SER | C-N-CA | 11.21 | 145.84 | 122.30 |
| 1 | O | 249 | ASP | CB-CG-OD1 | 11.21 | 128.39 | 118.30 |
| 1 | I | 245 | GLU | OE1-CD-OE2 | -11.20 | 109.86 | 123.30 |
| 1 | B | 375 | ASP | CB-CG-OD2 | -11.20 | 108.22 | 118.30 |
| 1 | F | 411 | PHE | CB-CG-CD2 | -11.20 | 112.96 | 120.80 |
| 1 | I | 60 | ASP | CB-CG-OD1 | 11.20 | 128.38 | 118.30 |
| 1 | M | 177 | ALA | CB-CA-C | 11.20 | 126.90 | 110.10 |
| 1 | O | 146 | ASP | CB-CG-OD1 | 11.19 | 128.37 | 118.30 |
| 1 | K | 86 | GLU | OE1-CD-OE2 | 11.19 | 136.72 | 123.30 |
| 1 | N | 201 | ALA | CB-CA-C | 11.18 | 126.87 | 110.10 |
| 1 | F | 19 | ASP | CB-CG-OD2 | 11.17 | 128.35 | 118.30 |
| 1 | I | 435 | VAL | CA-CB-CG1 | 11.17 | 127.65 | 110.90 |
| 1 | J | 118 | THR | CA-CB-CG2 | 11.16 | 128.02 | 112.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | J | 191 | ASP | CB-CG-OD2 | -11.16 | 108.26 | 118.30 |
| 1 | D | 401 | SER | C-N-CA | 11.16 | 145.73 | 122.30 |
| 1 | M | 293 | GLU | OE1-CD-OE2 | 11.15 | 136.68 | 123.30 |
| 1 | D | 360 | ARG | NE-CZ-NH1 | 11.14 | 125.87 | 120.30 |
| 1 | D | 380 | SER | N-CA-CB | -11.13 | 93.81 | 110.50 |
| 1 | K | 420 | ARG | NE-CZ-NH1 | 11.12 | 125.86 | 120.30 |
| 1 | K | 198 | LYS | O-C-N | -11.12 | 104.91 | 122.70 |
| 1 | H | 492 | ASP | CB-CG-OD2 | -11.12 | 108.29 | 118.30 |
| 1 | J | 420 | ARG | CD-NE-CZ | -11.10 | 108.06 | 123.60 |
| 1 | K | 275 | TYR | CB-CG-CD1 | -11.08 | 114.35 | 121.00 |
| 1 | F | 36 | ARG | NE-CZ-NH2 | 11.08 | 125.84 | 120.30 |
| 1 | K | 379 | VAL | CA-CB-CG2 | 11.08 | 127.52 | 110.90 |
| 1 | P | 184 | ASP | CB-CG-OD2 | -11.08 | 108.33 | 118.30 |
| 1 | F | 409 | ARG | NE-CZ-NH2 | -11.07 | 114.76 | 120.30 |
| 1 | I | 36 | ARG | NE-CZ-NH1 | -11.07 | 114.76 | 120.30 |
| 1 | C | 228 | THR | O-C-N | -11.05 | 105.01 | 122.70 |
| 1 | H | 215 | ASP | CB-CG-OD2 | -11.04 | 108.36 | 118.30 |
| 1 | L | 113 | GLN | C-N-CA | 11.04 | 149.29 | 121.70 |
| 1 | B | 16 | MET | CA-C-O | 11.03 | 143.27 | 120.10 |
| 1 | L | 176 | GLU | OE1-CD-OE2 | 11.03 | 136.54 | 123.30 |
| 1 | C | 242 | THR | CA-CB-CG2 | 11.02 | 127.83 | 112.40 |
| 1 | D | 270 | ASP | CB-CG-OD2 | 11.02 | 128.22 | 118.30 |
| 1 | L | 49 | VAL | CA-CB-CG1 | 11.02 | 127.43 | 110.90 |
| 1 | P | 270 | ASP | CB-CG-OD2 | 11.02 | 128.22 | 118.30 |
| 1 | O | 361 | ALA | O-C-N | -11.01 | 105.08 | 122.70 |
| 1 | D | 184 | ASP | OD1-CG-OD2 | -11.01 | 102.38 | 123.30 |
| 1 | J | 187 | LYS | O-C-N | -11.01 | 105.09 | 122.70 |
| 1 | M | 400 | ILE | C-N-CA | 11.01 | 149.22 | 121.70 |
| 1 | A | 219 | VAL | CA-CB-CG2 | 10.99 | 127.39 | 110.90 |
| 1 | G | 112 | ASP | CB-CG-OD2 | 10.99 | 128.19 | 118.30 |
| 1 | E | 360 | ARG | NH1-CZ-NH2 | -10.98 | 107.32 | 119.40 |
| 1 | F | 423 | ALA | O-C-N | -10.98 | 105.12 | 122.70 |
| 1 | P | 240 | GLU | OE1-CD-OE2 | -10.98 | 110.12 | 123.30 |
| 1 | P | 275 | TYR | CB-CG-CD1 | 10.97 | 127.58 | 121.00 |
| 1 | N | 286 | ARG | NE-CZ-NH2 | 10.97 | 125.78 | 120.30 |
| 1 | P | 409 | ARG | NE-CZ-NH2 | -10.96 | 114.82 | 120.30 |
| 1 | P | 36 | ARG | NE-CZ-NH2 | 10.96 | 125.78 | 120.30 |
| 1 | I | 297 | LYS | O-C-N | -10.95 | 105.18 | 122.70 |
| 1 | M | 165 | LYS | CB-CA-C | 10.95 | 132.30 | 110.40 |
| 1 | K | 360 | ARG | NE-CZ-NH1 | 10.93 | 125.76 | 120.30 |
| 1 | N | 297 | LYS | N-CA-CB | 10.93 | 130.27 | 110.60 |
| 1 | N | 375 | ASP | CB-CG-OD2 | 10.92 | 128.13 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | I | 70 | VAL | CG1-CB-CG2 | 10.92 | 128.38 | 110.90 |
| 1 | N | 492 | ASP | CB-CG-OD2 | -10.92 | 108.47 | 118.30 |
| 1 | P | 86 | GLU | CG-CD-OE2 | 10.92 | 140.13 | 118.30 |
| 1 | E | 51 | ASP | CB-CG-OD1 | 10.90 | 128.11 | 118.30 |
| 1 | B | 375 | ASP | OD1-CG-OD2 | 10.90 | 144.01 | 123.30 |
| 1 | F | 438 | ARG | NE-CZ-NH1 | 10.90 | 125.75 | 120.30 |
| 1 | L | 204 | ASP | CB-CG-OD1 | 10.90 | 128.11 | 118.30 |
| 1 | F | 144 | ALA | N-CA-CB | 10.89 | 125.35 | 110.10 |
| 1 | C | 495 | ALA | C-N-CA | 10.89 | 148.92 | 121.70 |
| 1 | M | 80 | GLU | OE1-CD-OE2 | -10.88 | 110.24 | 123.30 |
| 1 | E | 460 | ASP | CB-CG-OD2 | 10.88 | 128.09 | 118.30 |
| 1 | D | 20 | ALA | O-C-N | 10.88 | 140.10 | 122.70 |
| 1 | D | 191 | ASP | OD1-CG-OD2 | 10.87 | 143.96 | 123.30 |
| 1 | A | 454 | PHE | CG-CD2-CE2 | -10.87 | 108.84 | 120.80 |
| 1 | P | 189 | ASP | CB-CG-OD2 | 10.87 | 128.08 | 118.30 |
| 1 | B | 322 | GLU | OE1-CD-OE2 | 10.87 | 136.34 | 123.30 |
| 1 | B | 275 | TYR | CG-CD1-CE1 | 10.86 | 129.99 | 121.30 |
| 1 | M | 36 | ARG | NH1-CZ-NH2 | 10.86 | 131.34 | 119.40 |
| 1 | M | 15 | TYR | N-CA-CB | 10.85 | 130.14 | 110.60 |
| 1 | H | 471 | ARG | NE-CZ-NH2 | -10.85 | 114.88 | 120.30 |
| 1 | E | 489 | ARG | NH1-CZ-NH2 | -10.84 | 107.48 | 119.40 |
| 1 | I | 421 | THR | N-CA-CB | 10.84 | 130.89 | 110.30 |
| 1 | F | 11 | ASN | N-CA-CB | 10.83 | 130.09 | 110.60 |
| 1 | M | 229 | ASP | CB-CG-OD2 | 10.83 | 128.05 | 118.30 |
| 1 | L | 91 | ASP | CB-CG-OD2 | 10.83 | 128.04 | 118.30 |
| 1 | F | 54 | ASP | CB-CG-OD2 | -10.82 | 108.56 | 118.30 |
| 1 | H | 377 | ARG | NH1-CZ-NH2 | 10.82 | 131.30 | 119.40 |
| 1 | E | 29 | ARG | NE-CZ-NH1 | 10.82 | 125.71 | 120.30 |
| 1 | P | 10 | GLU | CA-CB-CG | 10.82 | 137.20 | 113.40 |
| 1 | M | 270 | ASP | OD1-CG-OD2 | -10.81 | 102.76 | 123.30 |
| 1 | O | 205 | ASP | CB-CG-OD1 | 10.81 | 128.03 | 118.30 |
| 1 | F | 52 | LEU | C-N-CA | 10.81 | 144.99 | 122.30 |
| 1 | E | 140 | CYS | O-C-N | -10.81 | 105.41 | 122.70 |
| 1 | I | 15 | TYR | C-N-CA | 10.80 | 148.71 | 121.70 |
| 1 | I | 459 | GLU | OE1-CD-OE2 | -10.80 | 110.34 | 123.30 |
| 1 | P | 330 | SER | O-C-N | -10.80 | 105.42 | 122.70 |
| 1 | E | 394 | ARG | NE-CZ-NH1 | -10.79 | 114.90 | 120.30 |
| 1 | C | 270 | ASP | CB-CG-OD2 | 10.79 | 128.01 | 118.30 |
| 1 | N | 36 | ARG | NE-CZ-NH1 | -10.79 | 114.91 | 120.30 |
| 1 | C | 329 | ASP | CB-CG-OD2 | -10.78 | 108.60 | 118.30 |
| 1 | C | 229 | ASP | O-C-N | -10.78 | 105.46 | 122.70 |
| 1 | B | 189 | ASP | O-C-N | -10.77 | 105.47 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | O | 204 | ASP | CB-CG-OD1 | -10.77 | 108.61 | 118.30 |
| 1 | P | 66 | ARG | NH1-CZ-NH2 | -10.77 | 107.55 | 119.40 |
| 1 | N | 19 | ASP | O-C-N | -10.77 | 105.47 | 122.70 |
| 1 | K | 44 | MET | O-C-N | 10.76 | 139.92 | 122.70 |
| 1 | N | 10 | GLU | OE1-CD-OE2 | -10.75 | 110.40 | 123.30 |
| 1 | D | 183 | ASP | CB-CG-OD2 | 10.75 | 127.97 | 118.30 |
| 1 | J | 363 | ASP | CB-CG-OD1 | 10.74 | 127.97 | 118.30 |
| 1 | P | 312 | ALA | C-N-CA | 10.74 | 148.55 | 121.70 |
| 1 | J | 172 | GLU | OE1-CD-OE2 | 10.74 | 136.18 | 123.30 |
| 1 | P | 409 | ARG | NH1-CZ-NH2 | -10.74 | 107.59 | 119.40 |
| 1 | N | 413 | ASP | CB-CG-OD2 | 10.73 | 127.96 | 118.30 |
| 1 | C | 360 | ARG | CD-NE-CZ | 10.73 | 138.62 | 123.60 |
| 1 | O | 91 | ASP | CB-CG-OD2 | 10.73 | 127.95 | 118.30 |
| 1 | D | 15 | TYR | CD1-CG-CD2 | -10.73 | 106.10 | 117.90 |
| 1 | I | 338 | LYS | O-C-N | -10.72 | 105.54 | 122.70 |
| 1 | G | 411 | PHE | CD1-CG-CD2 | -10.71 | 104.38 | 118.30 |
| 1 | A | 15 | TYR | CG-CD1-CE1 | 10.71 | 129.87 | 121.30 |
| 1 | M | 360 | ARG | NE-CZ-NH2 | -10.71 | 114.95 | 120.30 |
| 1 | J | 186 | GLY | C-N-CA | 10.70 | 148.46 | 121.70 |
| 1 | I | 246 | MET | CA-CB-CG | 10.69 | 131.47 | 113.30 |
| 1 | B | 18 | ARG | CD-NE-CZ | 10.68 | 138.55 | 123.60 |
| 1 | M | 22 | ARG | NE-CZ-NH1 | 10.68 | 125.64 | 120.30 |
| 1 | M | 66 | ARG | CD-NE-CZ | 10.67 | 138.54 | 123.60 |
| 1 | B | 158 | ILE | CA-CB-CG2 | 10.66 | 132.23 | 110.90 |
| 1 | A | 377 | ARG | CD-NE-CZ | 10.65 | 138.51 | 123.60 |
| 1 | N | 12 | MET | O-C-N | -10.64 | 105.68 | 122.70 |
| 1 | G | 276 | LEU | CA-CB-CG | 10.64 | 139.77 | 115.30 |
| 1 | H | 263 | PHE | CB-CG-CD1 | -10.64 | 113.35 | 120.80 |
| 1 | A | 29 | ARG | NE-CZ-NH2 | 10.63 | 125.62 | 120.30 |
| 1 | D | 33 | GLU | OE1-CD-OE2 | -10.63 | 110.54 | 123.30 |
| 1 | O | 496 | ALA | N-CA-CB | 10.63 | 124.98 | 110.10 |
| 1 | J | 107 | ALA | CB-CA-C | -10.62 | 94.17 | 110.10 |
| 1 | G | 309 | ASP | CB-CG-OD1 | 10.62 | 127.85 | 118.30 |
| 1 | A | 172 | GLU | OE1-CD-OE2 | -10.61 | 110.56 | 123.30 |
| 1 | B | 249 | ASP | CB-CG-OD2 | -10.62 | 108.75 | 118.30 |
| 1 | L | 375 | ASP | O-C-N | -10.61 | 105.16 | 123.20 |
| 1 | C | 482 | GLU | OE1-CD-OE2 | -10.61 | 110.57 | 123.30 |
| 1 | K | 342 | ALA | N-CA-CB | 10.60 | 124.94 | 110.10 |
| 1 | L | 306 | ASN | CB-CG-OD1 | 10.59 | 142.78 | 121.60 |
| 1 | F | 218 | ARG | NE-CZ-NH2 | 10.59 | 125.59 | 120.30 |
| 1 | I | 275 | TYR | CD1-CE1-CZ | -10.58 | 110.28 | 119.80 |
| 1 | K | 363 | ASP | CB-CG-OD1 | 10.58 | 127.83 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | G | 55 | VAL | O-C-N | -10.58 | 105.78 | 122.70 |
| 1 | C | 86 | GLU | OE1-CD-OE2 | -10.57 | 110.61 | 123.30 |
| 1 | G | 236 | ASN | N-CA-CB | 10.57 | 129.64 | 110.60 |
| 1 | H | 496 | ALA | CB-CA-C | 10.57 | 125.96 | 110.10 |
| 1 | N | 489 | ARG | N-CA-CB | 10.57 | 129.63 | 110.60 |
| 1 | H | 15 | TYR | CG-CD2-CE2 | -10.57 | 112.85 | 121.30 |
| 1 | I | 97 | VAL | CG1-CB-CG2 | 10.57 | 127.81 | 110.90 |
| 1 | K | 439 | ALA | CB-CA-C | 10.57 | 125.95 | 110.10 |
| 1 | F | 305 | THR | O-C-N | -10.56 | 105.80 | 122.70 |
| 1 | A | 321 | VAL | CA-CB-CG2 | 10.56 | 126.74 | 110.90 |
| 1 | J | 333 | PHE | CG-CD1-CE1 | 10.56 | 132.41 | 120.80 |
| 1 | A | 458 | VAL | CA-CB-CG1 | 10.54 | 126.72 | 110.90 |
| 1 | C | 455 | THR | O-C-N | -10.54 | 105.27 | 123.20 |
| 1 | O | 131 | ALA | N-CA-CB | 10.54 | 124.86 | 110.10 |
| 1 | K | 15 | TYR | CB-CG-CD1 | 10.54 | 127.33 | 121.00 |
| 1 | H | 57 | VAL | CA-CB-CG2 | -10.53 | 95.11 | 110.90 |
| 1 | M | 36 | ARG | NE-CZ-NH2 | -10.53 | 115.04 | 120.30 |
| 1 | D | 291 | ASP | CB-CG-OD1 | 10.52 | 127.77 | 118.30 |
| 1 | D | 360 | ARG | CD-NE-CZ | 10.52 | 138.33 | 123.60 |
| 1 | E | 366 | VAL | CA-CB-CG1 | 10.52 | 126.68 | 110.90 |
| 1 | E | 309 | ASP | CB-CG-OD2 | -10.52 | 108.84 | 118.30 |
| 1 | M | 275 | TYR | CB-CG-CD2 | 10.51 | 127.31 | 121.00 |
| 1 | A | 471 | ARG | NE-CZ-NH1 | -10.50 | 115.05 | 120.30 |
| 1 | C | 204 | ASP | CB-CG-OD2 | 10.50 | 127.75 | 118.30 |
| 1 | E | 249 | ASP | CB-CG-OD2 | -10.50 | 108.85 | 118.30 |
| 1 | O | 77 | MET | CA-CB-CG | 10.50 | 131.14 | 113.30 |
| 1 | K | 333 | PHE | CB-CG-CD1 | -10.49 | 113.46 | 120.80 |
| 1 | D | 485 | GLU | N-CA-CB | 10.48 | 129.47 | 110.60 |
| 1 | E | 215 | ASP | CB-CG-OD1 | 10.48 | 127.73 | 118.30 |
| 1 | P | 185 | GLU | OE1-CD-OE2 | -10.47 | 110.73 | 123.30 |
| 1 | H | 10 | GLU | OE1-CD-OE2 | -10.46 | 110.75 | 123.30 |
| 1 | C | 292 | MET | CA-CB-CG | 10.44 | 131.05 | 113.30 |
| 1 | C | 89 | VAL | CA-CB-CG1 | 10.44 | 126.56 | 110.90 |
| 1 | G | 331 | MET | N-CA-CB | 10.44 | 129.39 | 110.60 |
| 1 | J | 314 | ASP | CB-CG-OD1 | 10.44 | 127.69 | 118.30 |
| 1 | L | 438 | ARG | NE-CZ-NH2 | -10.44 | 115.08 | 120.30 |
| 1 | L | 413 | ASP | CB-CG-OD2 | 10.44 | 127.69 | 118.30 |
| 1 | C | 68 | MET | CG-SD-CE | 10.43 | 116.89 | 100.20 |
| 1 | B | 489 | ARG | CD-NE-CZ | 10.43 | 138.20 | 123.60 |
| 1 | F | 410 | ALA | CB-CA-C | 10.43 | 125.74 | 110.10 |
| 1 | F | 275 | TYR | CG-CD2-CE2 | -10.42 | 112.97 | 121.30 |
| 1 | E | 255 | LYS | O-C-N | -10.41 | 106.04 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | H | 309 | ASP | CB-CG-OD2 | -10.40 | 108.94 | 118.30 |
| 1 | M | 191 | ASP | CB-CG-OD1 | -10.40 | 108.94 | 118.30 |
| 1 | M | 454 | PHE | CD1-CE1-CZ | -10.39 | 107.63 | 120.10 |
| 1 | F | 249 | ASP | CB-CG-OD2 | 10.39 | 127.65 | 118.30 |
| 1 | C | 147 | LYS | N-CA-C | 10.39 | 139.05 | 111.00 |
| 1 | F | 249 | ASP | CB-CG-OD1 | -10.38 | 108.96 | 118.30 |
| 1 | K | 395 | GLU | OE1-CD-OE2 | 10.38 | 135.76 | 123.30 |
| 1 | L | 269 | ASP | CB-CG-OD2 | 10.38 | 127.64 | 118.30 |
| 1 | O | 396 | TYR | CB-CG-CD2 | 10.38 | 127.23 | 121.00 |
| 1 | A | 403 | ARG | NH1-CZ-NH2 | 10.37 | 130.81 | 119.40 |
| 1 | N | 161 | LYS | CB-CA-C | 10.36 | 131.13 | 110.40 |
| 1 | B | 10 | GLU | OE1-CD-OE2 | -10.36 | 110.86 | 123.30 |
| 1 | A | 45 | ASP | CB-CG-OD1 | 10.36 | 127.62 | 118.30 |
| 1 | H | 246 | MET | CA-CB-CG | 10.35 | 130.89 | 113.30 |
| 1 | J | 29 | ARG | NE-CZ-NH2 | 10.35 | 125.47 | 120.30 |
| 1 | N | 237 | CYS | CB-CA-C | 10.35 | 131.09 | 110.40 |
| 1 | A | 204 | ASP | CB-CG-OD1 | -10.34 | 108.99 | 118.30 |
| 1 | E | 229 | ASP | CB-CG-OD1 | 10.34 | 127.61 | 118.30 |
| 1 | I | 54 | ASP | CB-CG-OD1 | -10.33 | 109.00 | 118.30 |
| 1 | M | 394 | ARG | CD-NE-CZ | 10.33 | 138.06 | 123.60 |
| 1 | O | 486 | MET | O-C-N | -10.32 | 106.18 | 122.70 |
| 1 | P | 155 | MET | N-CA-CB | 10.32 | 129.17 | 110.60 |
| 1 | A | 394 | ARG | CD-NE-CZ | 10.31 | 138.04 | 123.60 |
| 1 | I | 356 | GLU | N-CA-CB | 10.30 | 129.14 | 110.60 |
| 1 | A | 141 | GLU | OE1-CD-OE2 | -10.30 | 110.94 | 123.30 |
| 1 | G | 218 | ARG | NE-CZ-NH1 | 10.29 | 125.45 | 120.30 |
| 1 | F | 71 | GLU | OE1-CD-OE2 | -10.29 | 110.95 | 123.30 |
| 1 | H | 386 | GLU | OE1-CD-OE2 | -10.29 | 110.95 | 123.30 |
| 1 | J | 348 | ARG | NE-CZ-NH2 | 10.29 | 125.44 | 120.30 |
| 1 | P | 263 | PHE | CB-CG-CD1 | -10.28 | 113.61 | 120.80 |
| 1 | D | 485 | GLU | OE1-CD-OE2 | -10.27 | 110.97 | 123.30 |
| 1 | I | 377 | ARG | NH1-CZ-NH2 | 10.27 | 130.70 | 119.40 |
| 1 | L | 351 | THR | CA-CB-CG2 | 10.27 | 126.78 | 112.40 |
| 1 | M | 317 | ASP | CB-CG-OD2 | -10.27 | 109.06 | 118.30 |
| 1 | A | 121 | VAL | CA-CB-CG1 | -10.27 | 95.50 | 110.90 |
| 1 | G | 124 | TYR | CB-CG-CD1 | 10.27 | 127.16 | 121.00 |
| 1 | B | 396 | TYR | CG-CD1-CE1 | -10.26 | 113.09 | 121.30 |
| 1 | E | 202 | SER | O-C-N | -10.26 | 106.28 | 122.70 |
| 1 | I | 377 | ARG | NE-CZ-NH2 | -10.26 | 115.17 | 120.30 |
| 1 | K | 301 | ALA | CB-CA-C | 10.26 | 125.49 | 110.10 |
| 1 | E | 396 | TYR | CG-CD2-CE2 | 10.26 | 129.51 | 121.30 |
| 1 | P | 388 | GLU | OE1-CD-OE2 | -10.25 | 111.00 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | I | 330 | SER | N-CA-CB | 10.25 | 125.87 | 110.50 |
| 1 | B | 10 | GLU | CG-CD-OE1 | 10.24 | 138.78 | 118.30 |
| 1 | H | 496 | ALA | O-C-N | -10.24 | 106.31 | 122.70 |
| 1 | B | 403 | ARG | NE-CZ-NH1 | -10.24 | 115.18 | 120.30 |
| 1 | H | 19 | ASP | CB-CG-OD1 | 10.24 | 127.51 | 118.30 |
| 1 | H | 286 | ARG | CD-NE-CZ | 10.24 | 137.93 | 123.60 |
| 1 | G | 335 | GLU | OE1-CD-OE2 | 10.23 | 135.58 | 123.30 |
| 1 | K | 348 | ARG | NE-CZ-NH1 | -10.23 | 115.19 | 120.30 |
| 1 | N | 37 | SER | CB-CA-C | 10.23 | 129.53 | 110.10 |
| 1 | O | 341 | LYS | O-C-N | -10.22 | 106.34 | 122.70 |
| 1 | M | 324 | ARG | NH1-CZ-NH2 | -10.22 | 108.16 | 119.40 |
| 1 | F | 423 | ALA | N-CA-CB | 10.22 | 124.40 | 110.10 |
| 1 | L | 112 | ASP | CB-CG-OD2 | -10.21 | 109.11 | 118.30 |
| 1 | N | 245 | GLU | CA-CB-CG | 10.21 | 135.86 | 113.40 |
| 1 | I | 140 | CYS | O-C-N | -10.20 | 106.38 | 122.70 |
| 1 | I | 319 | GLY | O-C-N | -10.20 | 106.38 | 122.70 |
| 1 | M | 256 | ALA | N-CA-CB | 10.20 | 124.38 | 110.10 |
| 1 | F | 229 | ASP | N-CA-CB | 10.20 | 128.95 | 110.60 |
| 1 | L | 333 | PHE | CZ-CE2-CD2 | 10.20 | 132.34 | 120.10 |
| 1 | M | 22 | ARG | NE-CZ-NH2 | -10.20 | 115.20 | 120.30 |
| 1 | N | 58 | THR | CA-CB-CG2 | -10.20 | 98.12 | 112.40 |
| 1 | P | 396 | TYR | CB-CG-CD1 | -10.19 | 114.88 | 121.00 |
| 1 | C | 350 | THR | C-N-CA | 10.19 | 147.17 | 121.70 |
| 1 | C | 263 | PHE | CB-CG-CD1 | 10.18 | 127.93 | 120.80 |
| 1 | E | 196 | GLU | OE1-CD-OE2 | 10.18 | 135.52 | 123.30 |
| 1 | N | 12 | MET | C-N-CA | 10.18 | 147.15 | 121.70 |
| 1 | A | 335 | GLU | O-C-N | -10.18 | 106.42 | 122.70 |
| 1 | F | 409 | ARG | NE-CZ-NH1 | 10.18 | 125.39 | 120.30 |
| 1 | N | 69 | SER | O-C-N | -10.18 | 106.42 | 122.70 |
| 1 | M | 164 | GLU | OE1-CD-OE2 | -10.17 | 111.09 | 123.30 |
| 1 | B | 12 | MET | CA-C-N | 10.17 | 139.57 | 117.20 |
| 1 | H | 112 | ASP | CB-CG-OD1 | 10.17 | 127.45 | 118.30 |
| 1 | L | 439 | ALA | N-CA-CB | 10.17 | 124.33 | 110.10 |
| 1 | O | 12 | MET | C-N-CA | 10.16 | 147.11 | 121.70 |
| 1 | N | 285 | ARG | NH1-CZ-NH2 | -10.15 | 108.23 | 119.40 |
| 1 | D | 424 | GLU | OE1-CD-OE2 | -10.14 | 111.13 | 123.30 |
| 1 | L | 324 | ARG | NH1-CZ-NH2 | -10.13 | 108.25 | 119.40 |
| 1 | J | 457 | ALA | CB-CA-C | -10.13 | 94.91 | 110.10 |
| 1 | D | 105 | ARG | NH1-CZ-NH2 | -10.13 | 108.26 | 119.40 |
| 1 | G | 467 | VAL | O-C-N | -10.12 | 106.50 | 122.70 |
| 1 | K | 227 | VAL | O-C-N | -10.12 | 106.50 | 122.70 |
| 1 | K | 443 | SER | N-CA-CB | 10.12 | 125.69 | 110.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|--------|-------------|----------|
| 1 | B | 479 | SER | N-CA-CB | 10.12 | 125.68 | 110.50 |
| 1 | C | 33 | GLU | OE1-CD-OE2 | -10.12 | 111.16 | 123.30 |
| 1 | O | 441 | HIS | CB-CA-C | 10.12 | 130.64 | 110.40 |
| 1 | O | 329 | ASP | CB-CG-OD2 | 10.12 | 127.41 | 118.30 |
| 1 | J | 14 | ARG | NE-CZ-NH2 | -10.12 | 115.24 | 120.30 |
| 1 | J | 479 | SER | N-CA-CB | 10.12 | 125.67 | 110.50 |
| 1 | N | 71 | GLU | O-C-N | -10.11 | 106.52 | 122.70 |
| 1 | N | 492 | ASP | CB-CG-OD1 | 10.11 | 127.40 | 118.30 |
| 1 | L | 170 | LEU | CB-CG-CD2 | 10.11 | 128.18 | 111.00 |
| 1 | A | 255 | LYS | O-C-N | -10.10 | 106.54 | 122.70 |
| 1 | D | 403 | ARG | NE-CZ-NH1 | -10.10 | 115.25 | 120.30 |
| 1 | E | 54 | ASP | OD1-CG-OD2 | -10.10 | 104.11 | 123.30 |
| 1 | I | 249 | ASP | CB-CG-OD1 | 10.10 | 127.39 | 118.30 |
| 1 | B | 312 | ALA | C-N-CA | 10.08 | 146.91 | 121.70 |
| 1 | H | 222 | GLN | CA-CB-CG | 10.08 | 135.58 | 113.40 |
| 1 | K | 429 | ASP | CB-CA-C | 10.08 | 130.56 | 110.40 |
| 1 | D | 158 | ILE | CA-C-O | -10.07 | 98.95 | 120.10 |
| 1 | P | 141 | GLU | OE1-CD-OE2 | -10.07 | 111.22 | 123.30 |
| 1 | B | 187 | LYS | O-C-N | -10.07 | 106.59 | 122.70 |
| 1 | J | 360 | ARG | NE-CZ-NH1 | 10.06 | 125.33 | 120.30 |
| 1 | B | 359 | ALA | O-C-N | -10.06 | 106.60 | 122.70 |
| 1 | P | 386 | GLU | CG-CD-OE1 | 10.06 | 138.42 | 118.30 |
| 1 | B | 168 | GLU | OE1-CD-OE2 | -10.05 | 111.24 | 123.30 |
| 1 | G | 322 | GLU | OE1-CD-OE2 | -10.05 | 111.23 | 123.30 |
| 1 | B | 326 | ILE | O-C-N | -10.05 | 106.62 | 122.70 |
| 1 | J | 34 | THR | CA-CB-OG1 | 10.05 | 130.10 | 109.00 |
| 1 | G | 438 | ARG | CD-NE-CZ | 10.04 | 137.66 | 123.60 |
| 1 | P | 187 | LYS | CA-CB-CG | 10.04 | 135.49 | 113.40 |
| 1 | P | 88 | GLU | OE1-CD-OE2 | 10.04 | 135.35 | 123.30 |
| 1 | J | 364 | ASP | CB-CG-OD2 | 10.03 | 127.32 | 118.30 |
| 1 | A | 293 | GLU | N-CA-CB | 10.02 | 128.64 | 110.60 |
| 1 | H | 66 | ARG | NE-CZ-NH1 | 10.01 | 125.31 | 120.30 |
| 1 | L | 246 | MET | CA-CB-CG | 10.01 | 130.32 | 113.30 |
| 1 | O | 245 | GLU | OE1-CD-OE2 | -10.01 | 111.28 | 123.30 |
| 1 | D | 18 | ARG | NE-CZ-NH2 | 10.00 | 125.30 | 120.30 |
| 1 | E | 148 | GLU | OE1-CD-OE2 | -10.00 | 111.30 | 123.30 |
| 1 | O | 460 | ASP | CB-CG-OD2 | 10.00 | 127.30 | 118.30 |
| 1 | O | 355 | ILE | O-C-N | -10.00 | 106.70 | 122.70 |
| 1 | F | 109 | GLU | OE1-CD-OE2 | 10.00 | 135.30 | 123.30 |
| 1 | N | 409 | ARG | NE-CZ-NH2 | -10.00 | 115.30 | 120.30 |
| 1 | C | 229 | ASP | CB-CG-OD2 | 9.99 | 127.30 | 118.30 |
| 1 | M | 80 | GLU | CG-CD-OE1 | 9.99 | 138.28 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 317 | ASP | CB-CG-OD2 | -9.99 | 109.31 | 118.30 |
| 1 | B | 124 | TYR | CD1-CE1-CZ | 9.98 | 128.79 | 119.80 |
| 1 | M | 18 | ARG | NE-CZ-NH2 | -9.98 | 115.31 | 120.30 |
| 1 | C | 186 | GLY | C-N-CA | 9.97 | 146.63 | 121.70 |
| 1 | E | 484 | THR | CA-CB-CG2 | -9.97 | 98.44 | 112.40 |
| 1 | G | 36 | ARG | NE-CZ-NH2 | 9.96 | 125.28 | 120.30 |
| 1 | K | 323 | GLU | OE1-CD-OE2 | -9.96 | 111.35 | 123.30 |
| 1 | L | 459 | GLU | OE1-CD-OE2 | 9.96 | 135.25 | 123.30 |
| 1 | F | 86 | GLU | OE1-CD-OE2 | -9.95 | 111.36 | 123.30 |
| 1 | K | 351 | THR | O-C-N | -9.95 | 106.78 | 122.70 |
| 1 | K | 312 | ALA | C-N-CA | 9.95 | 146.57 | 121.70 |
| 1 | M | 269 | ASP | CB-CG-OD2 | -9.94 | 109.35 | 118.30 |
| 1 | G | 12 | MET | CA-C-N | 9.94 | 139.07 | 117.20 |
| 1 | H | 150 | LEU | O-C-N | -9.94 | 106.79 | 122.70 |
| 1 | K | 467 | VAL | O-C-N | -9.94 | 106.79 | 122.70 |
| 1 | I | 342 | ALA | N-CA-CB | 9.94 | 124.02 | 110.10 |
| 1 | D | 263 | PHE | CB-CG-CD1 | 9.94 | 127.76 | 120.80 |
| 1 | H | 309 | ASP | CB-CG-OD1 | 9.94 | 127.24 | 118.30 |
| 1 | F | 460 | ASP | CB-CG-OD2 | -9.93 | 109.36 | 118.30 |
| 1 | G | 191 | ASP | CB-CG-OD1 | -9.93 | 109.36 | 118.30 |
| 1 | A | 168 | GLU | OE1-CD-OE2 | 9.93 | 135.21 | 123.30 |
| 1 | B | 270 | ASP | CB-CG-OD1 | 9.93 | 127.23 | 118.30 |
| 1 | G | 413 | ASP | CB-CG-OD1 | 9.92 | 127.23 | 118.30 |
| 1 | F | 14 | ARG | NH1-CZ-NH2 | 9.92 | 130.31 | 119.40 |
| 1 | I | 152 | LYS | CB-CA-C | 9.91 | 130.23 | 110.40 |
| 1 | N | 458 | VAL | CA-CB-CG2 | 9.91 | 125.77 | 110.90 |
| 1 | G | 350 | THR | O-C-N | -9.91 | 106.85 | 122.70 |
| 1 | M | 249 | ASP | N-CA-CB | 9.91 | 128.43 | 110.60 |
| 1 | B | 16 | MET | O-C-N | -9.90 | 106.36 | 123.20 |
| 1 | E | 164 | GLU | OE1-CD-OE2 | -9.90 | 111.42 | 123.30 |
| 1 | H | 360 | ARG | NH1-CZ-NH2 | 9.89 | 130.28 | 119.40 |
| 1 | G | 397 | ALA | CB-CA-C | 9.88 | 124.92 | 110.10 |
| 1 | H | 402 | GLY | O-C-N | -9.88 | 106.89 | 122.70 |
| 1 | B | 19 | ASP | CB-CG-OD1 | 9.88 | 127.19 | 118.30 |
| 1 | H | 15 | TYR | CB-CG-CD1 | -9.88 | 115.07 | 121.00 |
| 1 | N | 426 | ALA | N-CA-CB | 9.88 | 123.93 | 110.10 |
| 1 | K | 438 | ARG | CD-NE-CZ | 9.88 | 137.43 | 123.60 |
| 1 | D | 396 | TYR | CG-CD1-CE1 | -9.87 | 113.40 | 121.30 |
| 1 | G | 33 | GLU | OE1-CD-OE2 | -9.87 | 111.45 | 123.30 |
| 1 | C | 239 | ILE | C-N-CA | 9.87 | 146.38 | 121.70 |
| 1 | J | 31 | ILE | CB-CA-C | 9.87 | 131.34 | 111.60 |
| 1 | K | 54 | ASP | CB-CG-OD1 | 9.87 | 127.18 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 209 | ILE | O-C-N | -9.87 | 106.91 | 122.70 |
| 1 | P | 364 | ASP | CB-CG-OD1 | 9.87 | 127.18 | 118.30 |
| 1 | I | 68 | MET | CA-CB-CG | 9.87 | 130.07 | 113.30 |
| 1 | H | 35 | VAL | CG1-CB-CG2 | 9.86 | 126.68 | 110.90 |
| 1 | J | 187 | LYS | CA-CB-CG | 9.87 | 135.10 | 113.40 |
| 1 | B | 219 | VAL | O-C-N | 9.86 | 138.48 | 122.70 |
| 1 | N | 164 | GLU | O-C-N | 9.86 | 138.48 | 122.70 |
| 1 | D | 244 | SER | CA-C-N | 9.86 | 138.89 | 117.20 |
| 1 | E | 218 | ARG | NH1-CZ-NH2 | -9.86 | 108.56 | 119.40 |
| 1 | F | 229 | ASP | CB-CG-OD2 | 9.86 | 127.17 | 118.30 |
| 1 | A | 205 | ASP | CB-CG-OD2 | 9.85 | 127.17 | 118.30 |
| 1 | K | 411 | PHE | CZ-CE2-CD2 | 9.85 | 131.92 | 120.10 |
| 1 | D | 429 | ASP | CB-CG-OD2 | -9.85 | 109.44 | 118.30 |
| 1 | O | 404 | GLU | N-CA-CB | 9.85 | 128.32 | 110.60 |
| 1 | J | 109 | GLU | OE1-CD-OE2 | 9.84 | 135.11 | 123.30 |
| 1 | K | 360 | ARG | NE-CZ-NH2 | -9.84 | 115.38 | 120.30 |
| 1 | H | 317 | ASP | CB-CG-OD1 | 9.83 | 127.15 | 118.30 |
| 1 | L | 189 | ASP | CB-CG-OD1 | -9.83 | 109.45 | 118.30 |
| 1 | C | 80 | GLU | C-N-CA | 9.83 | 146.27 | 121.70 |
| 1 | E | 111 | LEU | O-C-N | -9.83 | 106.97 | 122.70 |
| 1 | L | 396 | TYR | CG-CD1-CE1 | -9.83 | 113.44 | 121.30 |
| 1 | N | 225 | LYS | C-N-CA | 9.83 | 146.26 | 121.70 |
| 1 | M | 214 | VAL | O-C-N | -9.82 | 106.98 | 122.70 |
| 1 | F | 293 | GLU | OE1-CD-OE2 | 9.82 | 135.08 | 123.30 |
| 1 | N | 489 | ARG | NH1-CZ-NH2 | -9.81 | 108.60 | 119.40 |
| 1 | C | 396 | TYR | CB-CG-CD2 | 9.81 | 126.89 | 121.00 |
| 1 | G | 374 | GLU | OE1-CD-OE2 | -9.81 | 111.53 | 123.30 |
| 1 | J | 430 | ALA | N-CA-C | 9.81 | 137.48 | 111.00 |
| 1 | P | 493 | VAL | N-CA-CB | 9.81 | 133.07 | 111.50 |
| 1 | L | 495 | ALA | C-N-CA | 9.80 | 146.19 | 121.70 |
| 1 | J | 264 | CYS | C-N-CA | 9.79 | 146.19 | 121.70 |
| 1 | M | 403 | ARG | NE-CZ-NH2 | -9.79 | 115.40 | 120.30 |
| 1 | D | 279 | GLU | O-C-N | -9.79 | 106.55 | 123.20 |
| 1 | G | 372 | THR | C-N-CA | 9.79 | 146.18 | 121.70 |
| 1 | J | 201 | ALA | O-C-N | -9.79 | 107.03 | 122.70 |
| 1 | M | 108 | GLU | OE1-CD-OE2 | -9.79 | 111.55 | 123.30 |
| 1 | M | 34 | THR | CA-CB-CG2 | 9.79 | 126.11 | 112.40 |
| 1 | F | 19 | ASP | OD1-CG-OD2 | -9.77 | 104.74 | 123.30 |
| 1 | F | 377 | ARG | NH1-CZ-NH2 | 9.77 | 130.14 | 119.40 |
| 1 | I | 228 | THR | CA-CB-CG2 | 9.77 | 126.07 | 112.40 |
| 1 | L | 225 | LYS | O-C-N | -9.76 | 107.09 | 122.70 |
| 1 | H | 361 | ALA | C-N-CA | 9.75 | 146.07 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 334 | VAL | CA-CB-CG2 | 9.75 | 125.52 | 110.90 |
| 1 | H | 438 | ARG | NH1-CZ-NH2 | -9.75 | 108.68 | 119.40 |
| 1 | L | 10 | GLU | O-C-N | -9.75 | 107.11 | 122.70 |
| 1 | L | 360 | ARG | NE-CZ-NH2 | -9.75 | 115.43 | 120.30 |
| 1 | O | 217 | GLU | N-CA-CB | -9.75 | 93.05 | 110.60 |
| 1 | E | 270 | ASP | CB-CG-OD1 | 9.74 | 127.07 | 118.30 |
| 1 | M | 377 | ARG | CD-NE-CZ | 9.74 | 137.23 | 123.60 |
| 1 | P | 438 | ARG | NH1-CZ-NH2 | -9.74 | 108.69 | 119.40 |
| 1 | C | 16 | MET | CA-CB-CG | 9.74 | 129.85 | 113.30 |
| 1 | K | 492 | ASP | CB-CG-OD2 | 9.74 | 127.06 | 118.30 |
| 1 | K | 369 | VAL | CA-CB-CG1 | 9.73 | 125.50 | 110.90 |
| 1 | G | 7 | VAL | CA-CB-CG1 | -9.73 | 96.31 | 110.90 |
| 1 | G | 54 | ASP | OD1-CG-OD2 | -9.73 | 104.81 | 123.30 |
| 1 | F | 11 | ASN | O-C-N | -9.73 | 107.14 | 122.70 |
| 1 | A | 167 | LYS | CA-CB-CG | 9.72 | 134.78 | 113.40 |
| 1 | L | 7 | VAL | CG1-CB-CG2 | -9.72 | 95.35 | 110.90 |
| 1 | E | 80 | GLU | OE1-CD-OE2 | 9.71 | 134.96 | 123.30 |
| 1 | G | 225 | LYS | N-CA-CB | 9.71 | 128.08 | 110.60 |
| 1 | K | 112 | ASP | CA-CB-CG | 9.71 | 134.76 | 113.40 |
| 1 | P | 129 | GLN | CG-CD-OE1 | 9.71 | 141.02 | 121.60 |
| 1 | E | 91 | ASP | CB-CG-OD1 | 9.70 | 127.03 | 118.30 |
| 1 | E | 285 | ARG | CG-CD-NE | 9.70 | 132.16 | 111.80 |
| 1 | P | 68 | MET | C-N-CA | 9.69 | 145.93 | 121.70 |
| 1 | A | 36 | ARG | NE-CZ-NH2 | -9.69 | 115.45 | 120.30 |
| 1 | C | 348 | ARG | CG-CD-NE | 9.69 | 132.15 | 111.80 |
| 1 | C | 286 | ARG | NE-CZ-NH2 | 9.69 | 125.14 | 120.30 |
| 1 | M | 285 | ARG | NE-CZ-NH1 | 9.68 | 125.14 | 120.30 |
| 1 | H | 176 | GLU | OE1-CD-OE2 | 9.68 | 134.92 | 123.30 |
| 1 | P | 14 | ARG | NE-CZ-NH2 | 9.68 | 125.14 | 120.30 |
| 1 | H | 276 | LEU | O-C-N | -9.68 | 107.22 | 122.70 |
| 1 | F | 374 | GLU | CA-CB-CG | 9.68 | 134.69 | 113.40 |
| 1 | F | 395 | GLU | CB-CA-C | 9.68 | 129.75 | 110.40 |
| 1 | J | 130 | LYS | O-C-N | 9.67 | 138.18 | 122.70 |
| 1 | A | 142 | VAL | O-C-N | -9.67 | 106.76 | 123.20 |
| 1 | H | 22 | ARG | NH1-CZ-NH2 | -9.67 | 108.77 | 119.40 |
| 1 | E | 333 | PHE | CB-CG-CD1 | -9.66 | 114.03 | 120.80 |
| 1 | I | 164 | GLU | O-C-N | -9.66 | 107.24 | 122.70 |
| 1 | N | 180 | ALA | O-C-N | -9.66 | 107.25 | 122.70 |
| 1 | N | 454 | PHE | CB-CG-CD2 | 9.66 | 127.56 | 120.80 |
| 1 | D | 454 | PHE | CD1-CE1-CZ | -9.66 | 108.51 | 120.10 |
| 1 | J | 63 | THR | CA-CB-CG2 | 9.66 | 125.92 | 112.40 |
| 1 | C | 124 | TYR | CZ-CE2-CD2 | 9.65 | 128.49 | 119.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 60 | ASP | O-C-N | -9.65 | 106.79 | 123.20 |
| 1 | M | 182 | VAL | C-N-CA | 9.65 | 145.82 | 121.70 |
| 1 | A | 372 | THR | N-CA-CB | 9.65 | 128.63 | 110.30 |
| 1 | M | 244 | SER | N-CA-CB | 9.64 | 124.97 | 110.50 |
| 1 | C | 18 | ARG | NH1-CZ-NH2 | -9.64 | 108.80 | 119.40 |
| 1 | M | 306 | ASN | OD1-CG-ND2 | -9.64 | 99.73 | 121.90 |
| 1 | C | 189 | ASP | CB-CG-OD1 | -9.63 | 109.63 | 118.30 |
| 1 | C | 360 | ARG | NH1-CZ-NH2 | -9.63 | 108.81 | 119.40 |
| 1 | H | 36 | ARG | CD-NE-CZ | -9.63 | 110.11 | 123.60 |
| 1 | F | 18 | ARG | NE-CZ-NH2 | -9.63 | 115.49 | 120.30 |
| 1 | E | 238 | ALA | C-N-CA | 9.61 | 145.73 | 121.70 |
| 1 | A | 18 | ARG | NE-CZ-NH2 | 9.61 | 125.11 | 120.30 |
| 1 | I | 148 | GLU | OE1-CD-OE2 | 9.61 | 134.83 | 123.30 |
| 1 | F | 126 | ALA | CB-CA-C | 9.61 | 124.51 | 110.10 |
| 1 | M | 15 | TYR | CZ-CE2-CD2 | 9.59 | 128.43 | 119.80 |
| 1 | N | 487 | LEU | CB-CA-C | 9.59 | 128.42 | 110.20 |
| 1 | K | 23 | MET | CG-SD-CE | 9.59 | 115.54 | 100.20 |
| 1 | K | 452 | ASN | O-C-N | -9.59 | 107.36 | 122.70 |
| 1 | G | 339 | HIS | CA-CB-CG | 9.58 | 129.89 | 113.60 |
| 1 | N | 180 | ALA | C-N-CA | 9.58 | 145.66 | 121.70 |
| 1 | P | 24 | ASN | O-C-N | 9.58 | 138.03 | 122.70 |
| 1 | D | 15 | TYR | C-N-CA | 9.57 | 145.64 | 121.70 |
| 1 | O | 369 | VAL | O-C-N | -9.57 | 106.92 | 123.20 |
| 1 | A | 176 | GLU | OE1-CD-OE2 | 9.57 | 134.78 | 123.30 |
| 1 | F | 221 | ALA | N-CA-CB | -9.57 | 96.70 | 110.10 |
| 1 | M | 401 | SER | C-N-CA | 9.57 | 142.39 | 122.30 |
| 1 | N | 115 | VAL | O-C-N | -9.57 | 107.39 | 122.70 |
| 1 | F | 19 | ASP | CB-CG-OD1 | 9.56 | 126.91 | 118.30 |
| 1 | D | 314 | ASP | CB-CG-OD1 | 9.56 | 126.90 | 118.30 |
| 1 | I | 70 | VAL | O-C-N | -9.56 | 107.40 | 122.70 |
| 1 | J | 183 | ASP | CB-CG-OD2 | -9.56 | 109.69 | 118.30 |
| 1 | L | 364 | ASP | CB-CG-OD1 | 9.56 | 126.91 | 118.30 |
| 1 | A | 229 | ASP | N-CA-CB | 9.56 | 127.80 | 110.60 |
| 1 | G | 429 | ASP | CA-CB-CG | 9.56 | 134.43 | 113.40 |
| 1 | B | 50 | ASP | CB-CG-OD2 | -9.55 | 109.70 | 118.30 |
| 1 | M | 63 | THR | CA-CB-CG2 | 9.55 | 125.77 | 112.40 |
| 1 | E | 236 | ASN | N-CA-CB | 9.55 | 127.79 | 110.60 |
| 1 | L | 148 | GLU | N-CA-CB | 9.55 | 127.79 | 110.60 |
| 1 | L | 350 | THR | N-CA-C | 9.55 | 136.79 | 111.00 |
| 1 | N | 341 | LYS | N-CA-CB | 9.54 | 127.78 | 110.60 |
| 1 | N | 246 | MET | CA-CB-CG | 9.54 | 129.52 | 113.30 |
| 1 | F | 398 | GLU | OE1-CD-OE2 | -9.54 | 111.86 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 163 | ALA | O-C-N | 9.54 | 137.96 | 122.70 |
| 1 | K | 312 | ALA | N-CA-CB | 9.54 | 123.45 | 110.10 |
| 1 | M | 204 | ASP | CB-CG-OD1 | 9.54 | 126.88 | 118.30 |
| 1 | M | 65 | LEU | O-C-N | 9.53 | 137.95 | 122.70 |
| 1 | M | 466 | VAL | O-C-N | -9.53 | 107.46 | 122.70 |
| 1 | P | 10 | GLU | N-CA-CB | 9.52 | 127.74 | 110.60 |
| 1 | P | 14 | ARG | NH1-CZ-NH2 | -9.52 | 108.92 | 119.40 |
| 1 | O | 493 | VAL | CG1-CB-CG2 | 9.52 | 126.13 | 110.90 |
| 1 | C | 427 | GLY | O-C-N | -9.51 | 107.48 | 122.70 |
| 1 | A | 496 | ALA | C-N-CA | 9.51 | 145.47 | 121.70 |
| 1 | I | 66 | ARG | CG-CD-NE | 9.51 | 131.77 | 111.80 |
| 1 | J | 484 | THR | N-CA-CB | 9.51 | 128.37 | 110.30 |
| 1 | K | 340 | PRO | CA-N-CD | -9.51 | 98.19 | 111.50 |
| 1 | B | 285 | ARG | NE-CZ-NH2 | -9.51 | 115.55 | 120.30 |
| 1 | H | 324 | ARG | NH1-CZ-NH2 | 9.51 | 129.86 | 119.40 |
| 1 | M | 33 | GLU | O-C-N | 9.51 | 137.91 | 122.70 |
| 1 | F | 108 | GLU | OE1-CD-OE2 | -9.51 | 111.89 | 123.30 |
| 1 | H | 187 | LYS | O-C-N | -9.50 | 107.50 | 122.70 |
| 1 | K | 375 | ASP | O-C-N | -9.50 | 107.04 | 123.20 |
| 1 | P | 111 | LEU | N-CA-CB | 9.50 | 129.41 | 110.40 |
| 1 | F | 91 | ASP | CB-CG-OD1 | 9.50 | 126.85 | 118.30 |
| 1 | K | 468 | GLU | OE1-CD-OE2 | -9.50 | 111.90 | 123.30 |
| 1 | D | 279 | GLU | OE1-CD-OE2 | 9.50 | 134.69 | 123.30 |
| 1 | E | 66 | ARG | O-C-N | 9.49 | 137.89 | 122.70 |
| 1 | K | 286 | ARG | CA-CB-CG | 9.49 | 134.29 | 113.40 |
| 1 | J | 22 | ARG | NE-CZ-NH2 | -9.49 | 115.55 | 120.30 |
| 1 | D | 293 | GLU | OE1-CD-OE2 | 9.48 | 134.68 | 123.30 |
| 1 | G | 268 | ILE | O-C-N | -9.48 | 107.54 | 122.70 |
| 1 | B | 313 | GLN | CA-CB-CG | 9.47 | 134.25 | 113.40 |
| 1 | O | 55 | VAL | CG1-CB-CG2 | -9.47 | 95.74 | 110.90 |
| 1 | B | 317 | ASP | CB-CG-OD1 | 9.47 | 126.82 | 118.30 |
| 1 | L | 411 | PHE | CB-CG-CD2 | 9.47 | 127.43 | 120.80 |
| 1 | O | 187 | LYS | CA-CB-CG | 9.47 | 134.24 | 113.40 |
| 1 | K | 375 | ASP | CB-CG-OD2 | 9.46 | 126.82 | 118.30 |
| 1 | L | 124 | TYR | CB-CG-CD2 | 9.46 | 126.68 | 121.00 |
| 1 | M | 388 | GLU | OE1-CD-OE2 | -9.46 | 111.94 | 123.30 |
| 1 | G | 271 | LEU | CB-CA-C | 9.46 | 128.17 | 110.20 |
| 1 | M | 313 | GLN | CB-CG-CD | 9.46 | 136.19 | 111.60 |
| 1 | N | 454 | PHE | CG-CD1-CE1 | -9.45 | 110.40 | 120.80 |
| 1 | I | 183 | ASP | CB-CG-OD2 | -9.45 | 109.80 | 118.30 |
| 1 | J | 229 | ASP | CB-CG-OD1 | 9.45 | 126.80 | 118.30 |
| 1 | M | 296 | ALA | N-CA-CB | 9.45 | 123.33 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 377 | ARG | NE-CZ-NH2 | -9.45 | 115.58 | 120.30 |
| 1 | J | 184 | ASP | OD1-CG-OD2 | -9.45 | 105.35 | 123.30 |
| 1 | I | 141 | GLU | OE1-CD-OE2 | -9.44 | 111.97 | 123.30 |
| 1 | K | 319 | GLY | CA-C-O | -9.44 | 103.61 | 120.60 |
| 1 | N | 215 | ASP | CA-CB-CG | 9.44 | 134.17 | 113.40 |
| 1 | F | 45 | ASP | CB-CG-OD1 | -9.44 | 109.81 | 118.30 |
| 1 | P | 109 | GLU | O-C-N | 9.44 | 137.79 | 122.70 |
| 1 | H | 342 | ALA | O-C-N | -9.43 | 107.61 | 122.70 |
| 1 | E | 346 | LEU | CA-CB-CG | 9.43 | 136.99 | 115.30 |
| 1 | N | 189 | ASP | OD1-CG-OD2 | -9.43 | 105.39 | 123.30 |
| 1 | A | 63 | THR | N-CA-CB | 9.43 | 128.21 | 110.30 |
| 1 | F | 228 | THR | O-C-N | -9.43 | 107.62 | 122.70 |
| 1 | J | 377 | ARG | CD-NE-CZ | 9.43 | 136.79 | 123.60 |
| 1 | D | 303 | VAL | CA-CB-CG2 | 9.42 | 125.03 | 110.90 |
| 1 | A | 359 | ALA | CB-CA-C | 9.41 | 124.22 | 110.10 |
| 1 | J | 141 | GLU | OE1-CD-OE2 | -9.41 | 112.00 | 123.30 |
| 1 | H | 482 | GLU | CG-CD-OE1 | 9.41 | 137.13 | 118.30 |
| 1 | H | 291 | ASP | CB-CG-OD2 | -9.41 | 109.83 | 118.30 |
| 1 | L | 14 | ARG | NE-CZ-NH2 | -9.41 | 115.60 | 120.30 |
| 1 | O | 15 | TYR | CD1-CE1-CZ | 9.41 | 128.27 | 119.80 |
| 1 | C | 8 | LEU | CB-CG-CD2 | 9.41 | 126.99 | 111.00 |
| 1 | E | 28 | GLY | O-C-N | -9.41 | 107.65 | 122.70 |
| 1 | P | 403 | ARG | N-CA-CB | 9.41 | 127.53 | 110.60 |
| 1 | E | 306 | ASN | CB-CG-OD1 | 9.41 | 140.41 | 121.60 |
| 1 | D | 411 | PHE | CB-CG-CD1 | 9.40 | 127.38 | 120.80 |
| 1 | C | 232 | ILE | O-C-N | -9.40 | 107.66 | 122.70 |
| 1 | P | 359 | ALA | CB-CA-C | 9.40 | 124.21 | 110.10 |
| 1 | A | 48 | LEU | CB-CG-CD2 | -9.40 | 95.02 | 111.00 |
| 1 | I | 394 | ARG | NE-CZ-NH1 | 9.40 | 125.00 | 120.30 |
| 1 | B | 381 | GLY | O-C-N | -9.40 | 107.22 | 123.20 |
| 1 | K | 394 | ARG | CD-NE-CZ | 9.40 | 136.76 | 123.60 |
| 1 | H | 356 | GLU | OE1-CD-OE2 | 9.40 | 134.58 | 123.30 |
| 1 | O | 204 | ASP | CB-CG-OD2 | 9.39 | 126.75 | 118.30 |
| 1 | P | 81 | VAL | O-C-N | -9.39 | 107.67 | 122.70 |
| 1 | D | 88 | GLU | C-N-CA | 9.39 | 145.17 | 121.70 |
| 1 | K | 259 | ALA | C-N-CA | 9.39 | 145.17 | 121.70 |
| 1 | P | 474 | THR | CA-CB-CG2 | 9.39 | 125.54 | 112.40 |
| 1 | K | 105 | ARG | NH1-CZ-NH2 | -9.39 | 109.07 | 119.40 |
| 1 | M | 400 | ILE | CA-CB-CG1 | 9.38 | 128.83 | 111.00 |
| 1 | L | 454 | PHE | CD1-CG-CD2 | 9.38 | 130.50 | 118.30 |
| 1 | B | 140 | CYS | CB-CA-C | 9.38 | 129.16 | 110.40 |
| 1 | B | 414 | ALA | N-CA-CB | 9.38 | 123.23 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 303 | VAL | CA-CB-CG1 | 9.38 | 124.97 | 110.90 |
| 1 | K | 54 | ASP | CB-CG-OD2 | -9.38 | 109.86 | 118.30 |
| 1 | N | 376 | GLY | O-C-N | -9.38 | 107.70 | 122.70 |
| 1 | A | 228 | THR | O-C-N | -9.38 | 107.70 | 122.70 |
| 1 | J | 403 | ARG | NH1-CZ-NH2 | 9.37 | 129.71 | 119.40 |
| 1 | P | 438 | ARG | CD-NE-CZ | -9.37 | 110.48 | 123.60 |
| 1 | J | 416 | GLU | OE1-CD-OE2 | 9.37 | 134.54 | 123.30 |
| 1 | F | 50 | ASP | CB-CG-OD2 | 9.37 | 126.73 | 118.30 |
| 1 | M | 94 | THR | N-CA-CB | 9.37 | 128.10 | 110.30 |
| 1 | M | 448 | CYS | O-C-N | -9.37 | 107.71 | 122.70 |
| 1 | D | 256 | ALA | N-CA-CB | 9.37 | 123.21 | 110.10 |
| 1 | G | 12 | MET | C-N-CA | 9.37 | 145.11 | 121.70 |
| 1 | L | 348 | ARG | NH1-CZ-NH2 | 9.37 | 129.70 | 119.40 |
| 1 | H | 285 | ARG | NH1-CZ-NH2 | -9.36 | 109.10 | 119.40 |
| 1 | C | 435 | VAL | CA-CB-CG1 | -9.36 | 96.86 | 110.90 |
| 1 | A | 459 | GLU | OE1-CD-OE2 | 9.36 | 134.53 | 123.30 |
| 1 | M | 324 | ARG | NE-CZ-NH1 | 9.36 | 124.98 | 120.30 |
| 1 | I | 15 | TYR | CB-CG-CD2 | -9.35 | 115.39 | 121.00 |
| 1 | G | 241 | GLU | OE1-CD-OE2 | -9.35 | 112.08 | 123.30 |
| 1 | D | 396 | TYR | CG-CD2-CE2 | -9.35 | 113.82 | 121.30 |
| 1 | E | 51 | ASP | N-CA-CB | 9.35 | 127.43 | 110.60 |
| 1 | C | 191 | ASP | CB-CG-OD2 | -9.34 | 109.89 | 118.30 |
| 1 | K | 317 | ASP | CB-CG-OD2 | -9.34 | 109.89 | 118.30 |
| 1 | N | 60 | ASP | CB-CA-C | 9.34 | 129.07 | 110.40 |
| 1 | H | 112 | ASP | CB-CG-OD2 | -9.34 | 109.90 | 118.30 |
| 1 | D | 312 | ALA | C-N-CA | 9.33 | 145.03 | 121.70 |
| 1 | G | 359 | ALA | N-CA-CB | 9.33 | 123.17 | 110.10 |
| 1 | L | 120 | VAL | CA-CB-CG2 | -9.33 | 96.91 | 110.90 |
| 1 | O | 341 | LYS | C-N-CA | 9.32 | 145.01 | 121.70 |
| 1 | C | 107 | ALA | N-CA-CB | 9.32 | 123.15 | 110.10 |
| 1 | E | 363 | ASP | O-C-N | -9.32 | 107.79 | 122.70 |
| 1 | P | 386 | GLU | OE1-CD-OE2 | -9.32 | 112.12 | 123.30 |
| 1 | H | 454 | PHE | CG-CD1-CE1 | 9.31 | 131.04 | 120.80 |
| 1 | A | 40 | GLY | N-CA-C | 9.31 | 136.37 | 113.10 |
| 1 | A | 398 | GLU | OE1-CD-OE2 | -9.31 | 112.13 | 123.30 |
| 1 | B | 377 | ARG | NE-CZ-NH1 | -9.31 | 115.65 | 120.30 |
| 1 | J | 105 | ARG | NE-CZ-NH2 | 9.31 | 124.95 | 120.30 |
| 1 | E | 275 | TYR | CD1-CE1-CZ | -9.30 | 111.43 | 119.80 |
| 1 | J | 386 | GLU | OE1-CD-OE2 | -9.30 | 112.14 | 123.30 |
| 1 | M | 438 | ARG | CD-NE-CZ | 9.30 | 136.62 | 123.60 |
| 1 | L | 292 | MET | CA-CB-CG | 9.29 | 129.09 | 113.30 |
| 1 | O | 470 | LEU | N-CA-CB | 9.29 | 128.98 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 299 | THR | CA-CB-CG2 | 9.29 | 125.40 | 112.40 |
| 1 | H | 489 | ARG | NE-CZ-NH2 | -9.28 | 115.66 | 120.30 |
| 1 | F | 240 | GLU | OE1-CD-OE2 | -9.28 | 112.16 | 123.30 |
| 1 | K | 70 | VAL | CG1-CB-CG2 | 9.28 | 125.75 | 110.90 |
| 1 | J | 40 | GLY | CA-C-O | -9.28 | 103.89 | 120.60 |
| 1 | O | 117 | PRO | N-CD-CG | -9.28 | 89.29 | 103.20 |
| 1 | P | 244 | SER | CB-CA-C | 9.28 | 127.72 | 110.10 |
| 1 | L | 285 | ARG | C-N-CA | 9.27 | 144.88 | 121.70 |
| 1 | B | 204 | ASP | O-C-N | -9.27 | 107.87 | 122.70 |
| 1 | E | 488 | LEU | N-CA-C | 9.27 | 136.02 | 111.00 |
| 1 | H | 130 | LYS | N-CA-CB | 9.26 | 127.27 | 110.60 |
| 1 | K | 94 | THR | CA-CB-CG2 | 9.26 | 125.36 | 112.40 |
| 1 | K | 404 | GLU | OE1-CD-OE2 | -9.26 | 112.19 | 123.30 |
| 1 | P | 118 | THR | C-N-CA | 9.25 | 144.83 | 121.70 |
| 1 | P | 396 | TYR | CB-CG-CD2 | 9.25 | 126.55 | 121.00 |
| 1 | C | 404 | GLU | OE1-CD-OE2 | 9.25 | 134.40 | 123.30 |
| 1 | H | 360 | ARG | NE-CZ-NH2 | -9.25 | 115.68 | 120.30 |
| 1 | K | 184 | ASP | OD1-CG-OD2 | -9.25 | 105.72 | 123.30 |
| 1 | E | 289 | LYS | N-CA-CB | 9.25 | 127.24 | 110.60 |
| 1 | F | 36 | ARG | CD-NE-CZ | -9.25 | 110.65 | 123.60 |
| 1 | L | 396 | TYR | CB-CG-CD1 | -9.25 | 115.45 | 121.00 |
| 1 | M | 483 | SER | N-CA-CB | 9.25 | 124.37 | 110.50 |
| 1 | L | 396 | TYR | CD1-CE1-CZ | 9.24 | 128.12 | 119.80 |
| 1 | F | 184 | ASP | CB-CG-OD2 | -9.24 | 109.98 | 118.30 |
| 1 | I | 291 | ASP | CB-CG-OD1 | 9.24 | 126.62 | 118.30 |
| 1 | L | 187 | LYS | O-C-N | -9.24 | 107.91 | 122.70 |
| 1 | A | 177 | ALA | O-C-N | -9.24 | 107.91 | 122.70 |
| 1 | K | 191 | ASP | O-C-N | -9.24 | 107.91 | 122.70 |
| 1 | L | 298 | ALA | N-CA-CB | 9.24 | 123.03 | 110.10 |
| 1 | O | 471 | ARG | NE-CZ-NH2 | -9.23 | 115.68 | 120.30 |
| 1 | N | 348 | ARG | NH1-CZ-NH2 | 9.23 | 129.55 | 119.40 |
| 1 | G | 63 | THR | CA-CB-CG2 | 9.22 | 125.31 | 112.40 |
| 1 | G | 463 | GLU | OE1-CD-OE2 | 9.22 | 134.37 | 123.30 |
| 1 | N | 94 | THR | N-CA-CB | 9.22 | 127.83 | 110.30 |
| 1 | E | 356 | GLU | OE1-CD-OE2 | 9.21 | 134.36 | 123.30 |
| 1 | I | 438 | ARG | NH1-CZ-NH2 | 9.21 | 129.53 | 119.40 |
| 1 | D | 461 | MET | O-C-N | 9.21 | 137.43 | 122.70 |
| 1 | P | 215 | ASP | O-C-N | -9.21 | 107.97 | 122.70 |
| 1 | E | 356 | GLU | N-CA-CB | 9.21 | 127.17 | 110.60 |
| 1 | H | 363 | ASP | O-C-N | -9.21 | 107.97 | 122.70 |
| 1 | H | 321 | VAL | O-C-N | 9.20 | 137.43 | 122.70 |
| 1 | L | 398 | GLU | OE1-CD-OE2 | 9.20 | 134.34 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 93 | THR | CA-CB-CG2 | 9.20 | 125.28 | 112.40 |
| 1 | A | 370 | GLY | O-C-N | -9.20 | 107.98 | 122.70 |
| 1 | I | 164 | GLU | CG-CD-OE2 | 9.20 | 136.70 | 118.30 |
| 1 | A | 460 | ASP | OD1-CG-OD2 | -9.20 | 105.83 | 123.30 |
| 1 | D | 364 | ASP | CB-CG-OD2 | -9.19 | 110.03 | 118.30 |
| 1 | I | 360 | ARG | NE-CZ-NH1 | 9.19 | 124.89 | 120.30 |
| 1 | C | 377 | ARG | O-C-N | -9.18 | 108.01 | 122.70 |
| 1 | F | 10 | GLU | O-C-N | -9.18 | 108.00 | 122.70 |
| 1 | N | 19 | ASP | CA-CB-CG | 9.18 | 133.59 | 113.40 |
| 1 | G | 348 | ARG | NH1-CZ-NH2 | 9.18 | 129.49 | 119.40 |
| 1 | O | 177 | ALA | O-C-N | -9.18 | 108.02 | 122.70 |
| 1 | A | 396 | TYR | CD1-CG-CD2 | 9.17 | 127.99 | 117.90 |
| 1 | D | 55 | VAL | CG1-CB-CG2 | -9.17 | 96.22 | 110.90 |
| 1 | D | 124 | TYR | CB-CG-CD1 | 9.17 | 126.50 | 121.00 |
| 1 | M | 275 | TYR | CG-CD2-CE2 | -9.17 | 113.96 | 121.30 |
| 1 | N | 325 | LYS | N-CA-CB | 9.17 | 127.11 | 110.60 |
| 1 | K | 15 | TYR | N-CA-CB | 9.17 | 127.11 | 110.60 |
| 1 | L | 348 | ARG | O-C-N | -9.17 | 107.61 | 123.20 |
| 1 | N | 439 | ALA | CB-CA-C | 9.17 | 123.86 | 110.10 |
| 1 | D | 12 | MET | C-N-CA | 9.17 | 144.62 | 121.70 |
| 1 | A | 360 | ARG | CD-NE-CZ | 9.16 | 136.43 | 123.60 |
| 1 | C | 361 | ALA | C-N-CA | 9.16 | 144.61 | 121.70 |
| 1 | F | 372 | THR | C-N-CA | 9.16 | 144.61 | 121.70 |
| 1 | H | 374 | GLU | CG-CD-OE1 | 9.16 | 136.63 | 118.30 |
| 1 | J | 336 | GLU | OE1-CD-OE2 | -9.16 | 112.31 | 123.30 |
| 1 | D | 243 | ALA | N-CA-C | 9.16 | 135.73 | 111.00 |
| 1 | M | 49 | VAL | CA-CB-CG2 | 9.16 | 124.64 | 110.90 |
| 1 | C | 394 | ARG | NH1-CZ-NH2 | -9.16 | 109.33 | 119.40 |
| 1 | J | 377 | ARG | CG-CD-NE | 9.15 | 131.02 | 111.80 |
| 1 | C | 393 | LEU | CB-CA-C | 9.15 | 127.58 | 110.20 |
| 1 | N | 205 | ASP | O-C-N | -9.15 | 108.06 | 122.70 |
| 1 | I | 140 | CYS | C-N-CA | 9.15 | 144.57 | 121.70 |
| 1 | P | 98 | VAL | O-C-N | 9.14 | 137.33 | 122.70 |
| 1 | B | 403 | ARG | CD-NE-CZ | -9.14 | 110.81 | 123.60 |
| 1 | K | 243 | ALA | O-C-N | -9.13 | 108.09 | 122.70 |
| 1 | M | 439 | ALA | N-CA-CB | 9.13 | 122.88 | 110.10 |
| 1 | O | 55 | VAL | O-C-N | -9.12 | 108.10 | 122.70 |
| 1 | A | 67 | GLU | OE1-CD-OE2 | 9.12 | 134.24 | 123.30 |
| 1 | F | 375 | ASP | CB-CG-OD2 | -9.12 | 110.09 | 118.30 |
| 1 | L | 8 | LEU | O-C-N | 9.11 | 138.42 | 121.10 |
| 1 | D | 238 | ALA | O-C-N | 9.11 | 137.28 | 122.70 |
| 1 | L | 22 | ARG | CD-NE-CZ | 9.11 | 136.36 | 123.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 298 | ALA | C-N-CA | 9.11 | 144.48 | 121.70 |
| 1 | P | 257 | SER | O-C-N | -9.11 | 107.71 | 123.20 |
| 1 | A | 11 | ASN | CA-CB-CG | 9.11 | 133.43 | 113.40 |
| 1 | A | 471 | ARG | CG-CD-NE | 9.10 | 130.92 | 111.80 |
| 1 | M | 454 | PHE | CE1-CZ-CE2 | 9.10 | 136.38 | 120.00 |
| 1 | E | 276 | LEU | CA-CB-CG | 9.10 | 136.23 | 115.30 |
| 1 | B | 164 | GLU | OE1-CD-OE2 | -9.10 | 112.38 | 123.30 |
| 1 | N | 47 | MET | CA-CB-CG | 9.10 | 128.76 | 113.30 |
| 1 | F | 28 | GLY | O-C-N | -9.09 | 108.15 | 122.70 |
| 1 | P | 240 | GLU | CG-CD-OE1 | 9.09 | 136.49 | 118.30 |
| 1 | B | 293 | GLU | N-CA-CB | 9.09 | 126.96 | 110.60 |
| 1 | P | 50 | ASP | CB-CG-OD2 | -9.09 | 110.12 | 118.30 |
| 1 | L | 44 | MET | O-C-N | 9.09 | 137.24 | 122.70 |
| 1 | F | 467 | VAL | CG1-CB-CG2 | 9.09 | 125.44 | 110.90 |
| 1 | M | 20 | ALA | O-C-N | 9.09 | 137.24 | 122.70 |
| 1 | B | 240 | GLU | O-C-N | 9.08 | 137.23 | 122.70 |
| 1 | E | 482 | GLU | C-N-CA | 9.08 | 144.40 | 121.70 |
| 1 | F | 188 | VAL | O-C-N | -9.08 | 108.17 | 122.70 |
| 1 | P | 13 | LYS | O-C-N | -9.08 | 108.17 | 122.70 |
| 1 | A | 7 | VAL | CG1-CB-CG2 | -9.08 | 96.38 | 110.90 |
| 1 | G | 425 | ASN | N-CA-CB | 9.08 | 126.94 | 110.60 |
| 1 | F | 229 | ASP | CA-CB-CG | 9.08 | 133.37 | 113.40 |
| 1 | D | 309 | ASP | CB-CG-OD1 | 9.07 | 126.47 | 118.30 |
| 1 | I | 22 | ARG | NE-CZ-NH1 | -9.07 | 115.77 | 120.30 |
| 1 | K | 351 | THR | N-CA-CB | 9.07 | 127.53 | 110.30 |
| 1 | I | 56 | VAL | CG1-CB-CG2 | -9.06 | 96.40 | 110.90 |
| 1 | K | 312 | ALA | O-C-N | -9.06 | 108.20 | 122.70 |
| 1 | O | 411 | PHE | CB-CG-CD2 | 9.06 | 127.14 | 120.80 |
| 1 | K | 438 | ARG | NE-CZ-NH1 | 9.04 | 124.82 | 120.30 |
| 1 | L | 448 | CYS | O-C-N | -9.04 | 108.23 | 122.70 |
| 1 | L | 276 | LEU | N-CA-CB | 9.04 | 128.49 | 110.40 |
| 1 | N | 68 | MET | O-C-N | -9.04 | 108.23 | 122.70 |
| 1 | O | 209 | ILE | O-C-N | -9.04 | 108.23 | 122.70 |
| 1 | G | 271 | LEU | O-C-N | -9.04 | 108.23 | 122.70 |
| 1 | J | 285 | ARG | CD-NE-CZ | 9.04 | 136.25 | 123.60 |
| 1 | D | 147 | LYS | O-C-N | -9.04 | 108.24 | 122.70 |
| 1 | K | 359 | ALA | N-CA-CB | 9.03 | 122.74 | 110.10 |
| 1 | D | 112 | ASP | CB-CG-OD2 | 9.03 | 126.42 | 118.30 |
| 1 | N | 7 | VAL | CG1-CB-CG2 | -9.03 | 96.46 | 110.90 |
| 1 | P | 374 | GLU | OE1-CD-OE2 | -9.03 | 112.47 | 123.30 |
| 1 | B | 329 | ASP | CB-CG-OD2 | 9.02 | 126.42 | 118.30 |
| 1 | M | 155 | MET | CA-CB-CG | 9.02 | 128.63 | 113.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 176 | GLU | OE1-CD-OE2 | 9.02 | 134.12 | 123.30 |
| 1 | P | 91 | ASP | CB-CG-OD1 | 9.02 | 126.42 | 118.30 |
| 1 | P | 298 | ALA | O-C-N | -9.02 | 108.27 | 122.70 |
| 1 | F | 329 | ASP | CB-CG-OD1 | 9.02 | 126.41 | 118.30 |
| 1 | J | 291 | ASP | CB-CG-OD2 | -9.01 | 110.19 | 118.30 |
| 1 | C | 484 | THR | CA-CB-CG2 | -9.01 | 99.78 | 112.40 |
| 1 | J | 394 | ARG | CD-NE-CZ | 9.01 | 136.21 | 123.60 |
| 1 | L | 124 | TYR | CB-CG-CD1 | -9.01 | 115.59 | 121.00 |
| 1 | B | 364 | ASP | C-N-CA | 9.00 | 144.21 | 121.70 |
| 1 | D | 388 | GLU | OE1-CD-OE2 | -9.00 | 112.50 | 123.30 |
| 1 | G | 285 | ARG | O-C-N | 9.00 | 137.10 | 122.70 |
| 1 | O | 286 | ARG | NH1-CZ-NH2 | -9.00 | 109.50 | 119.40 |
| 1 | L | 409 | ARG | CD-NE-CZ | 8.99 | 136.19 | 123.60 |
| 1 | B | 204 | ASP | CB-CG-OD1 | 8.99 | 126.39 | 118.30 |
| 1 | G | 177 | ALA | O-C-N | -8.99 | 108.32 | 122.70 |
| 1 | J | 112 | ASP | CB-CA-C | 8.99 | 128.37 | 110.40 |
| 1 | O | 409 | ARG | CD-NE-CZ | -8.99 | 111.02 | 123.60 |
| 1 | C | 52 | LEU | CB-CG-CD2 | 8.98 | 126.27 | 111.00 |
| 1 | E | 396 | TYR | CD1-CG-CD2 | -8.98 | 108.02 | 117.90 |
| 1 | O | 475 | GLN | O-C-N | -8.98 | 108.33 | 122.70 |
| 1 | H | 380 | SER | N-CA-CB | -8.98 | 97.03 | 110.50 |
| 1 | M | 320 | LEU | CB-CG-CD1 | 8.98 | 126.27 | 111.00 |
| 1 | O | 229 | ASP | CB-CG-OD2 | 8.98 | 126.38 | 118.30 |
| 1 | P | 260 | ASN | N-CA-CB | 8.98 | 126.76 | 110.60 |
| 1 | J | 178 | VAL | O-C-N | 8.98 | 137.06 | 122.70 |
| 1 | O | 454 | PHE | CG-CD1-CE1 | 8.97 | 130.67 | 120.80 |
| 1 | B | 139 | ALA | CB-CA-C | 8.97 | 123.56 | 110.10 |
| 1 | D | 454 | PHE | CB-CG-CD2 | 8.97 | 127.08 | 120.80 |
| 1 | E | 181 | VAL | CG1-CB-CG2 | 8.97 | 125.25 | 110.90 |
| 1 | P | 489 | ARG | CD-NE-CZ | 8.97 | 136.15 | 123.60 |
| 1 | A | 395 | GLU | OE1-CD-OE2 | -8.97 | 112.54 | 123.30 |
| 1 | G | 142 | VAL | O-C-N | -8.96 | 107.96 | 123.20 |
| 1 | P | 135 | LEU | O-C-N | -8.96 | 108.36 | 122.70 |
| 1 | D | 489 | ARG | N-CA-CB | 8.96 | 126.73 | 110.60 |
| 1 | H | 159 | THR | CA-CB-CG2 | 8.96 | 124.95 | 112.40 |
| 1 | I | 189 | ASP | O-C-N | -8.96 | 108.36 | 122.70 |
| 1 | C | 141 | GLU | O-C-N | -8.96 | 108.37 | 122.70 |
| 1 | H | 168 | GLU | OE1-CD-OE2 | 8.95 | 134.04 | 123.30 |
| 1 | G | 285 | ARG | CD-NE-CZ | 8.94 | 136.12 | 123.60 |
| 1 | E | 492 | ASP | CB-CG-OD2 | 8.94 | 126.35 | 118.30 |
| 1 | F | 377 | ARG | NE-CZ-NH1 | -8.94 | 115.83 | 120.30 |
| 1 | B | 340 | PRO | N-CA-CB | -8.94 | 92.57 | 103.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 342 | ALA | N-CA-CB | 8.94 | 122.61 | 110.10 |
| 1 | M | 275 | TYR | CB-CG-CD1 | -8.94 | 115.64 | 121.00 |
| 1 | P | 204 | ASP | CB-CG-OD2 | 8.94 | 126.34 | 118.30 |
| 1 | J | 185 | GLU | CA-CB-CG | 8.93 | 133.04 | 113.40 |
| 1 | E | 242 | THR | CA-CB-CG2 | 8.93 | 124.90 | 112.40 |
| 1 | N | 43 | GLY | O-C-N | 8.93 | 136.98 | 122.70 |
| 1 | F | 188 | VAL | CB-CA-C | -8.93 | 94.44 | 111.40 |
| 1 | E | 394 | ARG | NE-CZ-NH2 | 8.92 | 124.76 | 120.30 |
| 1 | C | 350 | THR | O-C-N | -8.92 | 108.43 | 122.70 |
| 1 | J | 67 | GLU | O-C-N | -8.92 | 108.43 | 122.70 |
| 1 | J | 472 | VAL | O-C-N | 8.92 | 136.97 | 122.70 |
| 1 | L | 121 | VAL | C-N-CA | 8.92 | 144.00 | 121.70 |
| 1 | N | 434 | LEU | CB-CG-CD1 | -8.92 | 95.84 | 111.00 |
| 1 | I | 147 | LYS | N-CA-C | 8.92 | 135.07 | 111.00 |
| 1 | N | 305 | THR | N-CA-CB | 8.92 | 127.24 | 110.30 |
| 1 | D | 158 | ILE | O-C-N | 8.91 | 136.96 | 122.70 |
| 1 | E | 341 | LYS | C-N-CA | 8.91 | 143.98 | 121.70 |
| 1 | F | 278 | LYS | O-C-N | -8.91 | 108.44 | 122.70 |
| 1 | K | 220 | SER | O-C-N | 8.90 | 136.95 | 122.70 |
| 1 | B | 172 | GLU | CG-CD-OE2 | 8.90 | 136.10 | 118.30 |
| 1 | B | 492 | ASP | CB-CG-OD2 | -8.89 | 110.30 | 118.30 |
| 1 | K | 279 | GLU | OE1-CD-OE2 | 8.89 | 133.97 | 123.30 |
| 1 | M | 140 | CYS | O-C-N | -8.89 | 108.47 | 122.70 |
| 1 | O | 342 | ALA | CB-CA-C | -8.89 | 96.76 | 110.10 |
| 1 | A | 386 | GLU | OE1-CD-OE2 | -8.89 | 112.64 | 123.30 |
| 1 | H | 305 | THR | CA-CB-CG2 | 8.89 | 124.84 | 112.40 |
| 1 | B | 335 | GLU | OE1-CD-OE2 | -8.88 | 112.64 | 123.30 |
| 1 | O | 275 | TYR | CG-CD2-CE2 | 8.88 | 128.41 | 121.30 |
| 1 | M | 275 | TYR | CZ-CE2-CD2 | 8.88 | 127.80 | 119.80 |
| 1 | G | 427 | GLY | CA-C-O | -8.88 | 104.62 | 120.60 |
| 1 | O | 210 | LYS | C-N-CA | 8.88 | 140.94 | 122.30 |
| 1 | O | 454 | PHE | CD1-CE1-CZ | -8.88 | 109.44 | 120.10 |
| 1 | A | 207 | GLU | O-C-N | -8.87 | 108.50 | 122.70 |
| 1 | E | 322 | GLU | OE1-CD-OE2 | -8.88 | 112.65 | 123.30 |
| 1 | O | 357 | GLU | OE1-CD-OE2 | -8.87 | 112.65 | 123.30 |
| 1 | C | 279 | GLU | O-C-N | -8.87 | 108.12 | 123.20 |
| 1 | F | 333 | PHE | CD1-CG-CD2 | 8.87 | 129.83 | 118.30 |
| 1 | J | 471 | ARG | NE-CZ-NH2 | 8.87 | 124.74 | 120.30 |
| 1 | N | 183 | ASP | CB-CG-OD1 | 8.87 | 126.28 | 118.30 |
| 1 | A | 316 | GLY | O-C-N | -8.87 | 108.51 | 122.70 |
| 1 | O | 235 | LEU | CB-CA-C | 8.87 | 127.05 | 110.20 |
| 1 | M | 265 | GLN | O-C-N | -8.86 | 108.52 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 7 | VAL | CA-CB-CG2 | -8.86 | 97.61 | 110.90 |
| 1 | L | 242 | THR | N-CA-C | 8.86 | 134.93 | 111.00 |
| 1 | M | 492 | ASP | O-C-N | -8.86 | 108.52 | 122.70 |
| 1 | L | 7 | VAL | CA-CB-CG2 | -8.86 | 97.61 | 110.90 |
| 1 | L | 474 | THR | CA-CB-CG2 | 8.86 | 124.80 | 112.40 |
| 1 | D | 377 | ARG | CD-NE-CZ | 8.86 | 136.00 | 123.60 |
| 1 | L | 297 | LYS | C-N-CA | 8.86 | 143.84 | 121.70 |
| 1 | M | 221 | ALA | C-N-CA | 8.85 | 143.83 | 121.70 |
| 1 | P | 204 | ASP | CB-CG-OD1 | -8.85 | 110.33 | 118.30 |
| 1 | N | 293 | GLU | OE1-CD-OE2 | 8.85 | 133.92 | 123.30 |
| 1 | D | 51 | ASP | CB-CG-OD2 | 8.85 | 126.26 | 118.30 |
| 1 | I | 471 | ARG | NH1-CZ-NH2 | -8.85 | 109.67 | 119.40 |
| 1 | J | 216 | LYS | CA-CB-CG | 8.85 | 132.86 | 113.40 |
| 1 | J | 409 | ARG | NE-CZ-NH2 | -8.85 | 115.88 | 120.30 |
| 1 | O | 474 | THR | CA-CB-OG1 | 8.85 | 127.58 | 109.00 |
| 1 | C | 453 | VAL | O-C-N | -8.84 | 108.55 | 122.70 |
| 1 | G | 56 | VAL | O-C-N | -8.84 | 108.55 | 122.70 |
| 1 | H | 319 | GLY | CA-C-O | -8.84 | 104.68 | 120.60 |
| 1 | P | 327 | SER | C-N-CA | 8.84 | 140.87 | 122.30 |
| 1 | J | 283 | ALA | O-C-N | -8.84 | 108.55 | 122.70 |
| 1 | F | 460 | ASP | CB-CG-OD1 | 8.84 | 126.25 | 118.30 |
| 1 | H | 219 | VAL | CA-CB-CG1 | 8.84 | 124.15 | 110.90 |
| 1 | B | 15 | TYR | CB-CG-CD1 | -8.83 | 115.70 | 121.00 |
| 1 | C | 323 | GLU | CG-CD-OE1 | 8.83 | 135.96 | 118.30 |
| 1 | E | 361 | ALA | O-C-N | -8.83 | 108.58 | 122.70 |
| 1 | J | 337 | CYS | O-C-N | -8.83 | 108.58 | 122.70 |
| 1 | P | 74 | ALA | O-C-N | -8.83 | 108.58 | 122.70 |
| 1 | P | 143 | GLY | CA-C-O | -8.82 | 104.72 | 120.60 |
| 1 | B | 319 | GLY | O-C-N | -8.82 | 108.59 | 122.70 |
| 1 | J | 11 | ASN | CA-CB-CG | 8.82 | 132.81 | 113.40 |
| 1 | E | 60 | ASP | O-C-N | -8.82 | 108.21 | 123.20 |
| 1 | M | 421 | THR | CA-CB-CG2 | 8.82 | 124.75 | 112.40 |
| 1 | I | 241 | GLU | OE1-CD-OE2 | 8.82 | 133.88 | 123.30 |
| 1 | K | 429 | ASP | CB-CG-OD1 | 8.82 | 126.23 | 118.30 |
| 1 | L | 66 | ARG | CD-NE-CZ | 8.82 | 135.94 | 123.60 |
| 1 | D | 476 | ALA | N-CA-CB | 8.81 | 122.44 | 110.10 |
| 1 | H | 187 | LYS | CA-CB-CG | 8.81 | 132.79 | 113.40 |
| 1 | B | 147 | LYS | N-CA-C | 8.81 | 134.79 | 111.00 |
| 1 | H | 71 | GLU | O-C-N | -8.81 | 108.60 | 122.70 |
| 1 | O | 117 | PRO | CA-N-CD | 8.81 | 124.03 | 111.70 |
| 1 | B | 180 | ALA | CB-CA-C | 8.80 | 123.31 | 110.10 |
| 1 | G | 270 | ASP | CB-CG-OD2 | 8.80 | 126.22 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 422 | LEU | N-CA-CB | 8.80 | 128.00 | 110.40 |
| 1 | I | 488 | LEU | CB-CG-CD1 | -8.80 | 96.04 | 111.00 |
| 1 | J | 285 | ARG | NE-CZ-NH2 | -8.80 | 115.90 | 120.30 |
| 1 | B | 469 | PRO | CA-N-CD | -8.79 | 99.19 | 111.50 |
| 1 | K | 36 | ARG | NE-CZ-NH1 | 8.79 | 124.70 | 120.30 |
| 1 | A | 161 | LYS | N-CA-CB | 8.79 | 126.42 | 110.60 |
| 1 | G | 487 | LEU | O-C-N | -8.79 | 108.64 | 122.70 |
| 1 | E | 54 | ASP | CB-CG-OD2 | 8.79 | 126.21 | 118.30 |
| 1 | H | 483 | SER | C-N-CA | 8.79 | 143.67 | 121.70 |
| 1 | F | 40 | GLY | N-CA-C | 8.79 | 135.06 | 113.10 |
| 1 | L | 15 | TYR | CD1-CE1-CZ | 8.78 | 127.70 | 119.80 |
| 1 | D | 221 | ALA | N-CA-CB | -8.78 | 97.81 | 110.10 |
| 1 | J | 146 | ASP | CB-CG-OD2 | 8.78 | 126.20 | 118.30 |
| 1 | P | 420 | ARG | NE-CZ-NH1 | -8.78 | 115.91 | 120.30 |
| 1 | D | 124 | TYR | CD1-CG-CD2 | -8.78 | 108.24 | 117.90 |
| 1 | L | 22 | ARG | NE-CZ-NH1 | 8.78 | 124.69 | 120.30 |
| 1 | F | 183 | ASP | OD1-CG-OD2 | -8.78 | 106.62 | 123.30 |
| 1 | J | 420 | ARG | NH1-CZ-NH2 | -8.78 | 109.74 | 119.40 |
| 1 | M | 333 | PHE | CG-CD2-CE2 | -8.78 | 111.14 | 120.80 |
| 1 | K | 270 | ASP | CB-CG-OD2 | 8.77 | 126.20 | 118.30 |
| 1 | A | 275 | TYR | CD1-CE1-CZ | -8.77 | 111.91 | 119.80 |
| 1 | N | 66 | ARG | O-C-N | -8.77 | 108.67 | 122.70 |
| 1 | N | 91 | ASP | CB-CG-OD1 | 8.77 | 126.19 | 118.30 |
| 1 | N | 137 | THR | CA-CB-OG1 | 8.77 | 127.41 | 109.00 |
| 1 | E | 29 | ARG | CB-CA-C | 8.77 | 127.93 | 110.40 |
| 1 | C | 275 | TYR | CG-CD1-CE1 | -8.76 | 114.29 | 121.30 |
| 1 | M | 386 | GLU | OE1-CD-OE2 | -8.76 | 112.78 | 123.30 |
| 1 | C | 210 | LYS | N-CA-CB | 8.76 | 126.37 | 110.60 |
| 1 | K | 221 | ALA | C-N-CA | 8.76 | 143.60 | 121.70 |
| 1 | O | 351 | THR | O-C-N | -8.76 | 108.68 | 122.70 |
| 1 | B | 191 | ASP | CB-CG-OD2 | 8.76 | 126.18 | 118.30 |
| 1 | D | 352 | GLU | CA-C-O | -8.75 | 101.72 | 120.10 |
| 1 | G | 454 | PHE | CD1-CG-CD2 | 8.75 | 129.68 | 118.30 |
| 1 | K | 130 | LYS | O-C-N | -8.75 | 108.70 | 122.70 |
| 1 | H | 116 | HIS | CB-CA-C | 8.75 | 127.90 | 110.40 |
| 1 | P | 359 | ALA | N-CA-CB | 8.75 | 122.35 | 110.10 |
| 1 | C | 461 | MET | O-C-N | -8.75 | 108.70 | 122.70 |
| 1 | G | 139 | ALA | CB-CA-C | 8.75 | 123.22 | 110.10 |
| 1 | M | 113 | GLN | O-C-N | 8.75 | 136.69 | 122.70 |
| 1 | N | 121 | VAL | CB-CA-C | -8.75 | 94.78 | 111.40 |
| 1 | H | 60 | ASP | C-N-CA | 8.74 | 140.66 | 122.30 |
| 1 | O | 66 | ARG | NE-CZ-NH1 | -8.74 | 115.93 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 374 | GLU | CG-CD-OE1 | 8.74 | 135.78 | 118.30 |
| 1 | I | 240 | GLU | OE1-CD-OE2 | -8.74 | 112.81 | 123.30 |
| 1 | J | 309 | ASP | CB-CG-OD2 | -8.74 | 110.44 | 118.30 |
| 1 | L | 146 | ASP | CB-CG-OD2 | -8.74 | 110.44 | 118.30 |
| 1 | I | 256 | ALA | C-N-CA | 8.73 | 143.54 | 121.70 |
| 1 | A | 91 | ASP | CB-CG-OD1 | 8.73 | 126.16 | 118.30 |
| 1 | P | 12 | MET | CA-C-N | 8.73 | 136.41 | 117.20 |
| 1 | N | 108 | GLU | OE1-CD-OE2 | -8.73 | 112.82 | 123.30 |
| 1 | G | 52 | LEU | O-C-N | -8.73 | 108.36 | 123.20 |
| 1 | E | 240 | GLU | OE1-CD-OE2 | -8.73 | 112.83 | 123.30 |
| 1 | K | 453 | VAL | C-N-CA | 8.73 | 143.51 | 121.70 |
| 1 | D | 340 | PRO | C-N-CA | 8.72 | 143.51 | 121.70 |
| 1 | G | 466 | VAL | CG1-CB-CG2 | -8.72 | 96.94 | 110.90 |
| 1 | B | 401 | SER | N-CA-CB | 8.72 | 123.58 | 110.50 |
| 1 | E | 327 | SER | O-C-N | -8.72 | 108.38 | 123.20 |
| 1 | B | 411 | PHE | CD1-CG-CD2 | -8.72 | 106.97 | 118.30 |
| 1 | B | 218 | ARG | NE-CZ-NH1 | 8.71 | 124.66 | 120.30 |
| 1 | C | 415 | LEU | O-C-N | -8.71 | 108.76 | 122.70 |
| 1 | G | 256 | ALA | CB-CA-C | 8.71 | 123.17 | 110.10 |
| 1 | N | 141 | GLU | CA-CB-CG | 8.71 | 132.57 | 113.40 |
| 1 | O | 375 | ASP | CB-CG-OD1 | -8.71 | 110.46 | 118.30 |
| 1 | M | 131 | ALA | N-CA-CB | 8.71 | 122.29 | 110.10 |
| 1 | O | 69 | SER | O-C-N | -8.71 | 108.77 | 122.70 |
| 1 | N | 76 | LYS | CD-CE-NZ | 8.71 | 131.72 | 111.70 |
| 1 | P | 97 | VAL | CA-CB-CG2 | 8.70 | 123.95 | 110.90 |
| 1 | E | 364 | ASP | CB-CG-OD1 | -8.70 | 110.47 | 118.30 |
| 1 | L | 15 | TYR | CB-CG-CD2 | 8.70 | 126.22 | 121.00 |
| 1 | B | 155 | MET | N-CA-CB | 8.70 | 126.26 | 110.60 |
| 1 | F | 189 | ASP | CB-CG-OD2 | 8.70 | 126.13 | 118.30 |
| 1 | B | 164 | GLU | CG-CD-OE2 | 8.70 | 135.69 | 118.30 |
| 1 | I | 371 | CYS | O-C-N | -8.70 | 108.78 | 122.70 |
| 1 | A | 495 | ALA | C-N-CA | 8.70 | 143.44 | 121.70 |
| 1 | O | 371 | CYS | O-C-N | -8.70 | 108.79 | 122.70 |
| 1 | G | 245 | GLU | C-N-CA | 8.69 | 143.43 | 121.70 |
| 1 | K | 239 | ILE | C-N-CA | 8.69 | 143.43 | 121.70 |
| 1 | P | 290 | SER | N-CA-CB | 8.69 | 123.54 | 110.50 |
| 1 | F | 397 | ALA | CB-CA-C | 8.69 | 123.13 | 110.10 |
| 1 | G | 353 | HIS | N-CA-CB | 8.69 | 126.23 | 110.60 |
| 1 | J | 256 | ALA | N-CA-CB | 8.69 | 122.26 | 110.10 |
| 1 | K | 139 | ALA | O-C-N | -8.69 | 108.80 | 122.70 |
| 1 | M | 36 | ARG | N-CA-CB | 8.69 | 126.23 | 110.60 |
| 1 | A | 297 | LYS | O-C-N | -8.68 | 108.81 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 134 | LEU | CB-CA-C | 8.68 | 126.69 | 110.20 |
| 1 | J | 205 | ASP | CB-CG-OD1 | 8.68 | 126.11 | 118.30 |
| 1 | D | 385 | THR | CA-CB-CG2 | 8.68 | 124.55 | 112.40 |
| 1 | H | 355 | ILE | CA-CB-CG1 | 8.68 | 127.49 | 111.00 |
| 1 | L | 276 | LEU | C-N-CA | 8.68 | 143.40 | 121.70 |
| 1 | L | 21 | GLN | CA-CB-CG | 8.68 | 132.49 | 113.40 |
| 1 | F | 385 | THR | CA-CB-CG2 | 8.68 | 124.55 | 112.40 |
| 1 | F | 448 | CYS | N-CA-CB | 8.68 | 126.22 | 110.60 |
| 1 | L | 8 | LEU | CA-C-O | -8.67 | 101.89 | 120.10 |
| 1 | P | 19 | ASP | CB-CG-OD2 | -8.67 | 110.50 | 118.30 |
| 1 | H | 325 | LYS | CA-CB-CG | 8.66 | 132.46 | 113.40 |
| 1 | H | 29 | ARG | NE-CZ-NH2 | 8.66 | 124.63 | 120.30 |
| 1 | P | 188 | VAL | CG1-CB-CG2 | -8.66 | 97.04 | 110.90 |
| 1 | G | 348 | ARG | NE-CZ-NH1 | -8.66 | 115.97 | 120.30 |
| 1 | O | 14 | ARG | NE-CZ-NH2 | -8.66 | 115.97 | 120.30 |
| 1 | B | 495 | ALA | CB-CA-C | 8.66 | 123.08 | 110.10 |
| 1 | C | 257 | SER | O-C-N | -8.66 | 108.49 | 123.20 |
| 1 | N | 462 | CYS | O-C-N | -8.66 | 108.85 | 122.70 |
| 1 | K | 155 | MET | CA-CB-CG | 8.65 | 128.01 | 113.30 |
| 1 | L | 430 | ALA | CB-CA-C | 8.65 | 123.08 | 110.10 |
| 1 | P | 475 | GLN | N-CA-CB | -8.65 | 95.03 | 110.60 |
| 1 | G | 333 | PHE | N-CA-CB | 8.65 | 126.17 | 110.60 |
| 1 | F | 15 | TYR | CB-CG-CD1 | 8.65 | 126.19 | 121.00 |
| 1 | O | 207 | GLU | CG-CD-OE1 | 8.65 | 135.59 | 118.30 |
| 1 | M | 43 | GLY | CA-C-O | 8.64 | 136.16 | 120.60 |
| 1 | C | 134 | LEU | CB-CA-C | 8.64 | 126.61 | 110.20 |
| 1 | K | 142 | VAL | C-N-CA | 8.64 | 140.44 | 122.30 |
| 1 | D | 229 | ASP | O-C-N | -8.64 | 108.88 | 122.70 |
| 1 | L | 249 | ASP | CB-CG-OD1 | 8.64 | 126.07 | 118.30 |
| 1 | P | 133 | GLU | C-N-CA | 8.64 | 143.29 | 121.70 |
| 1 | C | 59 | ASN | CB-CA-C | 8.63 | 127.67 | 110.40 |
| 1 | D | 285 | ARG | NH1-CZ-NH2 | -8.63 | 109.90 | 119.40 |
| 1 | P | 317 | ASP | CA-CB-CG | 8.64 | 132.40 | 113.40 |
| 1 | E | 89 | VAL | CA-CB-CG1 | 8.63 | 123.85 | 110.90 |
| 1 | I | 286 | ARG | NH1-CZ-NH2 | -8.63 | 109.91 | 119.40 |
| 1 | L | 34 | THR | CA-CB-OG1 | 8.63 | 127.13 | 109.00 |
| 1 | M | 356 | GLU | OE1-CD-OE2 | -8.63 | 112.94 | 123.30 |
| 1 | I | 337 | CYS | O-C-N | -8.63 | 108.90 | 122.70 |
| 1 | O | 360 | ARG | NE-CZ-NH2 | 8.63 | 124.61 | 120.30 |
| 1 | F | 70 | VAL | O-C-N | 8.62 | 136.50 | 122.70 |
| 1 | A | 468 | GLU | N-CA-CB | 8.62 | 126.12 | 110.60 |
| 1 | L | 252 | ALA | N-CA-CB | 8.62 | 122.17 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 68 | MET | N-CA-CB | -8.62 | 95.09 | 110.60 |
| 1 | G | 275 | TYR | CZ-CE2-CD2 | -8.62 | 112.04 | 119.80 |
| 1 | N | 16 | MET | O-C-N | -8.62 | 108.55 | 123.20 |
| 1 | N | 420 | ARG | NE-CZ-NH2 | 8.62 | 124.61 | 120.30 |
| 1 | C | 492 | ASP | CB-CG-OD2 | 8.61 | 126.05 | 118.30 |
| 1 | M | 142 | VAL | O-C-N | -8.61 | 108.56 | 123.20 |
| 1 | C | 317 | ASP | OD1-CG-OD2 | -8.61 | 106.95 | 123.30 |
| 1 | D | 403 | ARG | NE-CZ-NH2 | 8.61 | 124.60 | 120.30 |
| 1 | P | 336 | GLU | CG-CD-OE2 | 8.61 | 135.51 | 118.30 |
| 1 | B | 309 | ASP | OD1-CG-OD2 | 8.60 | 139.65 | 123.30 |
| 1 | N | 333 | PHE | CD1-CE1-CZ | -8.60 | 109.78 | 120.10 |
| 1 | O | 30 | ILE | O-C-N | -8.60 | 108.93 | 122.70 |
| 1 | G | 88 | GLU | CG-CD-OE1 | 8.60 | 135.50 | 118.30 |
| 1 | I | 133 | GLU | OE1-CD-OE2 | 8.60 | 133.62 | 123.30 |
| 1 | D | 467 | VAL | CA-CB-CG1 | 8.60 | 123.80 | 110.90 |
| 1 | I | 242 | THR | CA-CB-CG2 | 8.60 | 124.44 | 112.40 |
| 1 | F | 124 | TYR | CZ-CE2-CD2 | 8.59 | 127.53 | 119.80 |
| 1 | F | 474 | THR | CA-CB-CG2 | 8.59 | 124.43 | 112.40 |
| 1 | B | 214 | VAL | O-C-N | -8.59 | 108.96 | 122.70 |
| 1 | K | 360 | ARG | CA-CB-CG | 8.59 | 132.30 | 113.40 |
| 1 | C | 69 | SER | N-CA-CB | 8.59 | 123.38 | 110.50 |
| 1 | G | 396 | TYR | CB-CG-CD1 | -8.59 | 115.85 | 121.00 |
| 1 | A | 374 | GLU | OE1-CD-OE2 | -8.59 | 113.00 | 123.30 |
| 1 | I | 491 | ASP | CB-CG-OD1 | -8.59 | 110.57 | 118.30 |
| 1 | O | 257 | SER | O-C-N | -8.58 | 108.61 | 123.20 |
| 1 | I | 364 | ASP | CB-CG-OD1 | 8.58 | 126.02 | 118.30 |
| 1 | D | 299 | THR | CA-CB-OG1 | 8.58 | 127.01 | 109.00 |
| 1 | F | 286 | ARG | NE-CZ-NH1 | -8.58 | 116.01 | 120.30 |
| 1 | H | 403 | ARG | NH1-CZ-NH2 | 8.58 | 128.84 | 119.40 |
| 1 | E | 49 | VAL | CA-CB-CG2 | -8.57 | 98.04 | 110.90 |
| 1 | J | 222 | GLN | C-N-CA | 8.57 | 143.13 | 121.70 |
| 1 | G | 449 | ALA | N-CA-CB | 8.57 | 122.10 | 110.10 |
| 1 | H | 354 | VAL | CA-CB-CG1 | 8.57 | 123.76 | 110.90 |
| 1 | F | 145 | GLN | OE1-CD-NE2 | 8.57 | 141.61 | 121.90 |
| 1 | C | 142 | VAL | CA-CB-CG2 | 8.56 | 123.75 | 110.90 |
| 1 | E | 7 | VAL | CA-CB-CG2 | -8.56 | 98.05 | 110.90 |
| 1 | G | 466 | VAL | C-N-CA | 8.56 | 143.11 | 121.70 |
| 1 | H | 386 | GLU | CG-CD-OE1 | 8.56 | 135.43 | 118.30 |
| 1 | I | 394 | ARG | NE-CZ-NH2 | -8.56 | 116.02 | 120.30 |
| 1 | J | 50 | ASP | CB-CG-OD1 | 8.56 | 126.01 | 118.30 |
| 1 | H | 363 | ASP | CB-CG-OD1 | 8.56 | 126.01 | 118.30 |
| 1 | E | 473 | LYS | CA-CB-CG | 8.56 | 132.23 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 22 | ARG | NE-CZ-NH2 | -8.56 | 116.02 | 120.30 |
| 1 | O | 482 | GLU | OE1-CD-OE2 | -8.56 | 113.03 | 123.30 |
| 1 | O | 107 | ALA | N-CA-CB | 8.56 | 122.08 | 110.10 |
| 1 | E | 343 | VAL | CA-CB-CG2 | 8.55 | 123.73 | 110.90 |
| 1 | F | 338 | LYS | C-N-CA | 8.55 | 143.09 | 121.70 |
| 1 | B | 88 | GLU | CG-CD-OE2 | 8.55 | 135.40 | 118.30 |
| 1 | D | 114 | ASN | CB-CG-OD1 | 8.55 | 138.70 | 121.60 |
| 1 | G | 182 | VAL | CA-CB-CG1 | -8.55 | 98.07 | 110.90 |
| 1 | A | 54 | ASP | CB-CG-OD1 | 8.55 | 125.99 | 118.30 |
| 1 | D | 317 | ASP | O-C-N | -8.55 | 109.02 | 122.70 |
| 1 | O | 187 | LYS | CB-CG-CD | 8.55 | 133.82 | 111.60 |
| 1 | A | 388 | GLU | OE1-CD-OE2 | -8.55 | 113.05 | 123.30 |
| 1 | K | 68 | MET | CA-C-N | 8.55 | 136.00 | 117.20 |
| 1 | P | 245 | GLU | CG-CD-OE1 | 8.54 | 135.39 | 118.30 |
| 1 | C | 302 | ASN | CB-CG-OD1 | 8.54 | 138.69 | 121.60 |
| 1 | P | 421 | THR | O-C-N | 8.54 | 136.37 | 122.70 |
| 1 | C | 420 | ARG | NH1-CZ-NH2 | 8.54 | 128.79 | 119.40 |
| 1 | H | 469 | PRO | CA-N-CD | -8.54 | 99.55 | 111.50 |
| 1 | N | 196 | GLU | OE1-CD-OE2 | 8.54 | 133.55 | 123.30 |
| 1 | E | 364 | ASP | CB-CG-OD2 | 8.54 | 125.98 | 118.30 |
| 1 | L | 370 | GLY | CA-C-O | -8.54 | 105.23 | 120.60 |
| 1 | E | 18 | ARG | N-CA-C | 8.53 | 134.04 | 111.00 |
| 1 | D | 326 | ILE | CA-CB-CG1 | 8.53 | 127.21 | 111.00 |
| 1 | D | 27 | ALA | C-N-CA | 8.53 | 140.21 | 122.30 |
| 1 | G | 350 | THR | C-N-CA | 8.53 | 143.03 | 121.70 |
| 1 | G | 454 | PHE | CG-CD2-CE2 | -8.53 | 111.42 | 120.80 |
| 1 | J | 295 | LEU | O-C-N | -8.53 | 109.05 | 122.70 |
| 1 | N | 29 | ARG | NE-CZ-NH1 | -8.53 | 116.04 | 120.30 |
| 1 | O | 315 | LEU | N-CA-CB | 8.53 | 127.46 | 110.40 |
| 1 | P | 124 | TYR | CD1-CE1-CZ | 8.53 | 127.47 | 119.80 |
| 1 | F | 22 | ARG | NH1-CZ-NH2 | 8.53 | 128.78 | 119.40 |
| 1 | H | 249 | ASP | N-CA-CB | 8.53 | 125.95 | 110.60 |
| 1 | B | 184 | ASP | CA-CB-CG | 8.53 | 132.15 | 113.40 |
| 1 | D | 91 | ASP | CB-CG-OD2 | 8.52 | 125.97 | 118.30 |
| 1 | P | 335 | GLU | C-N-CA | 8.52 | 143.01 | 121.70 |
| 1 | E | 191 | ASP | CB-CG-OD2 | 8.52 | 125.97 | 118.30 |
| 1 | J | 227 | VAL | O-C-N | -8.52 | 109.06 | 122.70 |
| 1 | P | 110 | LEU | C-N-CA | 8.52 | 143.00 | 121.70 |
| 1 | P | 459 | GLU | N-CA-CB | -8.52 | 95.26 | 110.60 |
| 1 | K | 124 | TYR | CZ-CE2-CD2 | 8.52 | 127.47 | 119.80 |
| 1 | K | 143 | GLY | CA-C-O | -8.52 | 105.27 | 120.60 |
| 1 | B | 36 | ARG | CD-NE-CZ | 8.51 | 135.52 | 123.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 229 | ASP | OD1-CG-OD2 | -8.51 | 107.12 | 123.30 |
| 1 | L | 183 | ASP | CB-CG-OD2 | 8.51 | 125.96 | 118.30 |
| 1 | M | 396 | TYR | CB-CG-CD2 | 8.51 | 126.11 | 121.00 |
| 1 | D | 204 | ASP | CB-CG-OD1 | 8.51 | 125.96 | 118.30 |
| 1 | F | 217 | GLU | O-C-N | -8.51 | 109.08 | 122.70 |
| 1 | G | 368 | VAL | CB-CA-C | 8.51 | 127.57 | 111.40 |
| 1 | M | 485 | GLU | N-CA-CB | 8.51 | 125.92 | 110.60 |
| 1 | P | 317 | ASP | N-CA-CB | 8.51 | 125.92 | 110.60 |
| 1 | I | 92 | GLY | O-C-N | 8.51 | 136.31 | 122.70 |
| 1 | J | 124 | TYR | CD1-CG-CD2 | -8.51 | 108.54 | 117.90 |
| 1 | O | 459 | GLU | OE1-CD-OE2 | 8.51 | 133.51 | 123.30 |
| 1 | N | 15 | TYR | CB-CG-CD1 | 8.50 | 126.10 | 121.00 |
| 1 | F | 495 | ALA | N-CA-CB | 8.50 | 122.00 | 110.10 |
| 1 | D | 396 | TYR | CD1-CE1-CZ | 8.50 | 127.45 | 119.80 |
| 1 | G | 146 | ASP | CB-CG-OD1 | 8.50 | 125.95 | 118.30 |
| 1 | G | 395 | GLU | CB-CA-C | 8.50 | 127.39 | 110.40 |
| 1 | M | 14 | ARG | C-N-CA | 8.50 | 142.94 | 121.70 |
| 1 | F | 72 | HIS | CB-CG-ND1 | 8.49 | 144.44 | 123.20 |
| 1 | C | 201 | ALA | CB-CA-C | 8.49 | 122.84 | 110.10 |
| 1 | F | 72 | HIS | CG-ND1-CE1 | 8.49 | 120.09 | 108.20 |
| 1 | A | 394 | ARG | NH1-CZ-NH2 | -8.49 | 110.06 | 119.40 |
| 1 | A | 116 | HIS | CA-CB-CG | 8.49 | 128.03 | 113.60 |
| 1 | C | 369 | VAL | CA-CB-CG2 | 8.49 | 123.63 | 110.90 |
| 1 | G | 189 | ASP | C-N-CA | 8.49 | 142.92 | 121.70 |
| 1 | L | 348 | ARG | NE-CZ-NH1 | -8.49 | 116.06 | 120.30 |
| 1 | C | 471 | ARG | NE-CZ-NH2 | -8.49 | 116.06 | 120.30 |
| 1 | I | 52 | LEU | C-N-CA | 8.49 | 140.12 | 122.30 |
| 1 | F | 276 | LEU | O-C-N | 8.48 | 136.27 | 122.70 |
| 1 | H | 134 | LEU | CB-CA-C | 8.48 | 126.32 | 110.20 |
| 1 | I | 64 | ILE | CA-CB-CG2 | 8.48 | 127.87 | 110.90 |
| 1 | J | 188 | VAL | O-C-N | -8.48 | 109.13 | 122.70 |
| 1 | K | 229 | ASP | CA-CB-CG | 8.48 | 132.06 | 113.40 |
| 1 | G | 293 | GLU | N-CA-CB | 8.48 | 125.87 | 110.60 |
| 1 | I | 189 | ASP | CB-CG-OD2 | 8.48 | 125.93 | 118.30 |
| 1 | I | 455 | THR | O-C-N | 8.48 | 137.61 | 123.20 |
| 1 | G | 482 | GLU | OE1-CD-OE2 | 8.47 | 133.47 | 123.30 |
| 1 | I | 495 | ALA | O-C-N | -8.47 | 109.14 | 122.70 |
| 1 | J | 311 | SER | CB-CA-C | 8.47 | 126.20 | 110.10 |
| 1 | N | 85 | GLN | CA-CB-CG | 8.47 | 132.04 | 113.40 |
| 1 | L | 490 | ILE | CB-CA-C | -8.47 | 94.66 | 111.60 |
| 1 | P | 270 | ASP | CB-CG-OD1 | -8.47 | 110.67 | 118.30 |
| 1 | C | 87 | LYS | CA-CB-CG | 8.47 | 132.03 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 343 | VAL | O-C-N | -8.47 | 109.15 | 122.70 |
| 1 | L | 11 | ASN | CB-CG-OD1 | 8.46 | 138.53 | 121.60 |
| 1 | L | 276 | LEU | CA-CB-CG | 8.46 | 134.77 | 115.30 |
| 1 | L | 439 | ALA | CB-CA-C | 8.46 | 122.79 | 110.10 |
| 1 | A | 400 | ILE | C-N-CA | 8.46 | 142.84 | 121.70 |
| 1 | N | 137 | THR | CA-CB-CG2 | -8.46 | 100.56 | 112.40 |
| 1 | J | 265 | GLN | N-CA-CB | 8.46 | 125.82 | 110.60 |
| 1 | O | 244 | SER | O-C-N | -8.46 | 109.17 | 122.70 |
| 1 | B | 60 | ASP | CB-CG-OD2 | -8.45 | 110.69 | 118.30 |
| 1 | K | 22 | ARG | O-C-N | -8.45 | 109.18 | 122.70 |
| 1 | P | 134 | LEU | CA-CB-CG | 8.45 | 134.73 | 115.30 |
| 1 | K | 10 | GLU | CB-CA-C | 8.45 | 127.29 | 110.40 |
| 1 | N | 219 | VAL | O-C-N | -8.45 | 109.18 | 122.70 |
| 1 | A | 276 | LEU | CA-CB-CG | 8.44 | 134.72 | 115.30 |
| 1 | L | 374 | GLU | CG-CD-OE1 | 8.44 | 135.18 | 118.30 |
| 1 | J | 335 | GLU | OE1-CD-OE2 | 8.44 | 133.43 | 123.30 |
| 1 | A | 403 | ARG | NE-CZ-NH1 | -8.44 | 116.08 | 120.30 |
| 1 | I | 340 | PRO | CA-N-CD | -8.44 | 99.69 | 111.50 |
| 1 | J | 63 | THR | O-C-N | -8.44 | 109.20 | 122.70 |
| 1 | E | 350 | THR | N-CA-CB | 8.44 | 126.33 | 110.30 |
| 1 | A | 305 | THR | N-CA-CB | 8.43 | 126.32 | 110.30 |
| 1 | G | 363 | ASP | CB-CG-OD1 | 8.43 | 125.89 | 118.30 |
| 1 | A | 420 | ARG | NE-CZ-NH2 | -8.43 | 116.08 | 120.30 |
| 1 | H | 247 | LEU | O-C-N | -8.43 | 109.21 | 122.70 |
| 1 | E | 470 | LEU | CB-CA-C | 8.43 | 126.21 | 110.20 |
| 1 | F | 11 | ASN | CA-CB-CG | 8.43 | 131.94 | 113.40 |
| 1 | H | 217 | GLU | OE1-CD-OE2 | -8.43 | 113.19 | 123.30 |
| 1 | O | 280 | GLY | CA-C-O | -8.43 | 105.43 | 120.60 |
| 1 | P | 275 | TYR | CD1-CG-CD2 | -8.43 | 108.63 | 117.90 |
| 1 | A | 487 | LEU | N-CA-CB | 8.42 | 127.24 | 110.40 |
| 1 | C | 342 | ALA | N-CA-CB | 8.42 | 121.89 | 110.10 |
| 1 | I | 343 | VAL | CG1-CB-CG2 | 8.42 | 124.37 | 110.90 |
| 1 | O | 351 | THR | CA-CB-CG2 | 8.42 | 124.19 | 112.40 |
| 1 | A | 342 | ALA | N-CA-CB | 8.42 | 121.88 | 110.10 |
| 1 | B | 71 | GLU | O-C-N | -8.41 | 109.24 | 122.70 |
| 1 | I | 126 | ALA | O-C-N | -8.41 | 109.24 | 122.70 |
| 1 | J | 221 | ALA | N-CA-CB | -8.41 | 98.32 | 110.10 |
| 1 | K | 372 | THR | CA-C-O | -8.41 | 102.44 | 120.10 |
| 1 | B | 246 | MET | N-CA-CB | 8.41 | 125.73 | 110.60 |
| 1 | I | 354 | VAL | CA-CB-CG2 | 8.41 | 123.51 | 110.90 |
| 1 | A | 205 | ASP | O-C-N | -8.40 | 109.25 | 122.70 |
| 1 | L | 52 | LEU | N-CA-CB | 8.40 | 127.21 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 491 | ASP | OD1-CG-OD2 | -8.40 | 107.33 | 123.30 |
| 1 | B | 196 | GLU | OE1-CD-OE2 | 8.40 | 133.38 | 123.30 |
| 1 | D | 69 | SER | C-N-CA | 8.40 | 142.70 | 121.70 |
| 1 | I | 314 | ASP | C-N-CA | 8.40 | 142.71 | 121.70 |
| 1 | D | 112 | ASP | C-N-CA | 8.40 | 142.70 | 121.70 |
| 1 | O | 11 | ASN | CA-C-O | -8.40 | 102.46 | 120.10 |
| 1 | I | 329 | ASP | OD1-CG-OD2 | 8.40 | 139.25 | 123.30 |
| 1 | F | 362 | VAL | CA-CB-CG1 | 8.39 | 123.49 | 110.90 |
| 1 | L | 45 | ASP | CB-CG-OD2 | -8.39 | 110.75 | 118.30 |
| 1 | O | 56 | VAL | CA-CB-CG1 | 8.39 | 123.49 | 110.90 |
| 1 | K | 113 | GLN | C-N-CA | 8.39 | 142.68 | 121.70 |
| 1 | P | 342 | ALA | O-C-N | -8.39 | 109.27 | 122.70 |
| 1 | H | 364 | ASP | N-CA-CB | 8.39 | 125.70 | 110.60 |
| 1 | O | 275 | TYR | N-CA-CB | 8.39 | 125.70 | 110.60 |
| 1 | H | 439 | ALA | N-CA-CB | 8.39 | 121.84 | 110.10 |
| 1 | B | 229 | ASP | CB-CA-C | 8.39 | 127.17 | 110.40 |
| 1 | D | 240 | GLU | OE1-CD-OE2 | 8.39 | 133.37 | 123.30 |
| 1 | F | 157 | SER | O-C-N | 8.39 | 136.12 | 122.70 |
| 1 | F | 241 | GLU | OE1-CD-OE2 | -8.39 | 113.23 | 123.30 |
| 1 | G | 245 | GLU | CA-CB-CG | 8.39 | 131.85 | 113.40 |
| 1 | A | 52 | LEU | CB-CG-CD1 | -8.38 | 96.75 | 111.00 |
| 1 | K | 416 | GLU | OE1-CD-OE2 | 8.38 | 133.36 | 123.30 |
| 1 | L | 377 | ARG | O-C-N | -8.38 | 109.29 | 122.70 |
| 1 | E | 272 | ALA | N-CA-CB | 8.38 | 121.83 | 110.10 |
| 1 | B | 22 | ARG | NH1-CZ-NH2 | 8.37 | 128.61 | 119.40 |
| 1 | B | 189 | ASP | CB-CG-OD2 | 8.37 | 125.84 | 118.30 |
| 1 | E | 438 | ARG | N-CA-CB | 8.37 | 125.67 | 110.60 |
| 1 | H | 109 | GLU | O-C-N | -8.37 | 109.30 | 122.70 |
| 1 | E | 188 | VAL | O-C-N | -8.37 | 109.31 | 122.70 |
| 1 | G | 87 | LYS | CD-CE-NZ | 8.37 | 130.95 | 111.70 |
| 1 | H | 249 | ASP | CA-CB-CG | 8.37 | 131.81 | 113.40 |
| 1 | A | 58 | THR | O-C-N | -8.37 | 109.32 | 122.70 |
| 1 | B | 453 | VAL | CA-CB-CG1 | -8.36 | 98.36 | 110.90 |
| 1 | N | 227 | VAL | CA-CB-CG1 | 8.36 | 123.44 | 110.90 |
| 1 | B | 374 | GLU | O-C-N | -8.36 | 109.32 | 122.70 |
| 1 | K | 95 | THR | O-C-N | 8.36 | 136.08 | 122.70 |
| 1 | P | 249 | ASP | CB-CG-OD2 | 8.36 | 125.82 | 118.30 |
| 1 | P | 348 | ARG | CG-CD-NE | 8.36 | 129.35 | 111.80 |
| 1 | L | 320 | LEU | CB-CG-CD2 | 8.36 | 125.21 | 111.00 |
| 1 | N | 51 | ASP | CB-CG-OD2 | 8.36 | 125.82 | 118.30 |
| 1 | D | 488 | LEU | O-C-N | -8.36 | 109.33 | 122.70 |
| 1 | A | 279 | GLU | O-C-N | -8.35 | 109.00 | 123.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 462 | CYS | N-CA-CB | 8.35 | 125.64 | 110.60 |
| 1 | H | 183 | ASP | CB-CG-OD2 | 8.35 | 125.82 | 118.30 |
| 1 | K | 221 | ALA | N-CA-CB | -8.35 | 98.40 | 110.10 |
| 1 | L | 404 | GLU | N-CA-CB | 8.35 | 125.64 | 110.60 |
| 1 | M | 13 | LYS | CA-CB-CG | 8.35 | 131.76 | 113.40 |
| 1 | D | 175 | VAL | O-C-N | 8.35 | 136.05 | 122.70 |
| 1 | P | 218 | ARG | NE-CZ-NH2 | 8.35 | 124.47 | 120.30 |
| 1 | L | 289 | LYS | N-CA-CB | 8.34 | 125.62 | 110.60 |
| 1 | L | 483 | SER | O-C-N | -8.34 | 109.35 | 122.70 |
| 1 | M | 207 | GLU | OE1-CD-OE2 | -8.34 | 113.29 | 123.30 |
| 1 | B | 102 | GLU | OE1-CD-OE2 | 8.34 | 133.31 | 123.30 |
| 1 | D | 141 | GLU | OE1-CD-OE2 | -8.34 | 113.29 | 123.30 |
| 1 | H | 66 | ARG | NH1-CZ-NH2 | -8.34 | 110.23 | 119.40 |
| 1 | K | 448 | CYS | O-C-N | -8.34 | 109.36 | 122.70 |
| 1 | L | 205 | ASP | O-C-N | -8.34 | 109.36 | 122.70 |
| 1 | M | 298 | ALA | N-CA-CB | 8.34 | 121.77 | 110.10 |
| 1 | G | 65 | LEU | O-C-N | 8.34 | 136.04 | 122.70 |
| 1 | K | 49 | VAL | CG1-CB-CG2 | 8.34 | 124.24 | 110.90 |
| 1 | H | 66 | ARG | NE-CZ-NH2 | 8.34 | 124.47 | 120.30 |
| 1 | M | 215 | ASP | CB-CG-OD1 | 8.34 | 125.80 | 118.30 |
| 1 | J | 249 | ASP | CB-CG-OD2 | 8.33 | 125.80 | 118.30 |
| 1 | J | 94 | THR | N-CA-CB | 8.33 | 126.13 | 110.30 |
| 1 | L | 324 | ARG | NE-CZ-NH1 | 8.33 | 124.47 | 120.30 |
| 1 | L | 374 | GLU | O-C-N | -8.33 | 109.37 | 122.70 |
| 1 | N | 333 | PHE | CG-CD1-CE1 | 8.33 | 129.96 | 120.80 |
| 1 | M | 159 | THR | CA-CB-CG2 | 8.33 | 124.06 | 112.40 |
| 1 | N | 18 | ARG | NE-CZ-NH2 | 8.33 | 124.46 | 120.30 |
| 1 | P | 18 | ARG | NH1-CZ-NH2 | 8.33 | 128.56 | 119.40 |
| 1 | B | 365 | ALA | N-CA-CB | 8.33 | 121.76 | 110.10 |
| 1 | G | 383 | GLY | O-C-N | 8.33 | 136.02 | 122.70 |
| 1 | N | 160 | GLY | O-C-N | -8.33 | 109.38 | 122.70 |
| 1 | K | 13 | LYS | CA-CB-CG | 8.32 | 131.71 | 113.40 |
| 1 | H | 353 | HIS | CA-CB-CG | 8.32 | 127.74 | 113.60 |
| 1 | B | 116 | HIS | CA-CB-CG | 8.32 | 127.74 | 113.60 |
| 1 | D | 489 | ARG | CD-NE-CZ | 8.32 | 135.25 | 123.60 |
| 1 | P | 297 | LYS | O-C-N | -8.32 | 109.39 | 122.70 |
| 1 | G | 495 | ALA | O-C-N | -8.32 | 109.39 | 122.70 |
| 1 | I | 276 | LEU | CA-CB-CG | 8.31 | 134.42 | 115.30 |
| 1 | J | 246 | MET | N-CA-CB | 8.31 | 125.57 | 110.60 |
| 1 | A | 39 | LEU | CB-CA-C | 8.31 | 125.99 | 110.20 |
| 1 | H | 221 | ALA | O-C-N | 8.31 | 136.00 | 122.70 |
| 1 | C | 221 | ALA | C-N-CA | 8.31 | 142.47 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 293 | GLU | N-CA-CB | 8.31 | 125.56 | 110.60 |
| 1 | I | 314 | ASP | CB-CG-OD2 | 8.31 | 125.78 | 118.30 |
| 1 | B | 188 | VAL | C-N-CA | 8.31 | 142.47 | 121.70 |
| 1 | J | 425 | ASN | O-C-N | 8.30 | 135.99 | 122.70 |
| 1 | K | 83 | LYS | O-C-N | 8.30 | 135.99 | 122.70 |
| 1 | L | 128 | ALA | CB-CA-C | 8.30 | 122.55 | 110.10 |
| 1 | F | 333 | PHE | CB-CG-CD2 | -8.30 | 114.99 | 120.80 |
| 1 | J | 36 | ARG | O-C-N | -8.30 | 109.42 | 122.70 |
| 1 | A | 329 | ASP | CB-CG-OD2 | -8.30 | 110.83 | 118.30 |
| 1 | A | 454 | PHE | CG-CD1-CE1 | 8.30 | 129.93 | 120.80 |
| 1 | K | 81 | VAL | CA-CB-CG1 | 8.30 | 123.35 | 110.90 |
| 1 | M | 243 | ALA | O-C-N | -8.30 | 109.42 | 122.70 |
| 1 | L | 15 | TYR | CB-CG-CD1 | -8.30 | 116.02 | 121.00 |
| 1 | I | 452 | ASN | N-CA-CB | 8.29 | 125.52 | 110.60 |
| 1 | J | 166 | ALA | CB-CA-C | -8.29 | 97.66 | 110.10 |
| 1 | N | 378 | ILE | O-C-N | -8.29 | 109.43 | 122.70 |
| 1 | A | 11 | ASN | CB-CG-OD1 | 8.29 | 138.18 | 121.60 |
| 1 | B | 396 | TYR | CG-CD2-CE2 | -8.29 | 114.67 | 121.30 |
| 1 | D | 140 | CYS | O-C-N | 8.29 | 135.96 | 122.70 |
| 1 | J | 75 | ALA | CB-CA-C | 8.29 | 122.53 | 110.10 |
| 1 | M | 322 | GLU | OE1-CD-OE2 | -8.29 | 113.36 | 123.30 |
| 1 | N | 443 | SER | CB-CA-C | 8.29 | 125.85 | 110.10 |
| 1 | I | 375 | ASP | CB-CG-OD1 | 8.29 | 125.76 | 118.30 |
| 1 | E | 69 | SER | C-N-CA | 8.28 | 142.40 | 121.70 |
| 1 | E | 184 | ASP | CB-CG-OD2 | -8.28 | 110.85 | 118.30 |
| 1 | N | 235 | LEU | O-C-N | -8.28 | 109.45 | 122.70 |
| 1 | N | 496 | ALA | N-CA-CB | 8.28 | 121.69 | 110.10 |
| 1 | C | 491 | ASP | OD1-CG-OD2 | -8.28 | 107.57 | 123.30 |
| 1 | O | 485 | GLU | OE1-CD-OE2 | 8.28 | 133.24 | 123.30 |
| 1 | J | 79 | ILE | CA-C-O | -8.28 | 102.72 | 120.10 |
| 1 | D | 134 | LEU | CB-CA-C | 8.28 | 125.92 | 110.20 |
| 1 | A | 333 | PHE | CG-CD2-CE2 | 8.27 | 129.90 | 120.80 |
| 1 | P | 134 | LEU | CB-CA-C | 8.27 | 125.92 | 110.20 |
| 1 | E | 291 | ASP | CB-CG-OD2 | 8.27 | 125.74 | 118.30 |
| 1 | H | 266 | LYS | N-CA-CB | 8.27 | 125.49 | 110.60 |
| 1 | N | 59 | ASN | N-CA-CB | 8.27 | 125.49 | 110.60 |
| 1 | G | 246 | MET | N-CA-CB | 8.27 | 125.48 | 110.60 |
| 1 | E | 493 | VAL | CG1-CB-CG2 | 8.27 | 124.13 | 110.90 |
| 1 | N | 471 | ARG | NE-CZ-NH1 | 8.27 | 124.43 | 120.30 |
| 1 | P | 7 | VAL | CA-CB-CG2 | -8.27 | 98.50 | 110.90 |
| 1 | L | 386 | GLU | OE1-CD-OE2 | -8.26 | 113.38 | 123.30 |
| 1 | N | 85 | GLN | N-CA-CB | 8.26 | 125.48 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 140 | CYS | CA-CB-SG | 8.26 | 128.87 | 114.00 |
| 1 | B | 165 | LYS | CA-C-O | 8.26 | 137.45 | 120.10 |
| 1 | M | 88 | GLU | N-CA-C | 8.26 | 133.30 | 111.00 |
| 1 | A | 410 | ALA | O-C-N | -8.26 | 109.49 | 122.70 |
| 1 | O | 443 | SER | CB-CA-C | 8.26 | 125.79 | 110.10 |
| 1 | E | 358 | VAL | CA-CB-CG1 | 8.26 | 123.29 | 110.90 |
| 1 | G | 9 | PRO | CA-C-N | 8.26 | 135.36 | 117.20 |
| 1 | J | 286 | ARG | CD-NE-CZ | -8.26 | 112.04 | 123.60 |
| 1 | B | 434 | LEU | CB-CG-CD2 | -8.25 | 96.97 | 111.00 |
| 1 | L | 12 | MET | O-C-N | -8.25 | 109.49 | 122.70 |
| 1 | N | 10 | GLU | CA-CB-CG | 8.25 | 131.56 | 113.40 |
| 1 | E | 124 | TYR | CG-CD1-CE1 | -8.25 | 114.70 | 121.30 |
| 1 | L | 463 | GLU | OE1-CD-OE2 | 8.25 | 133.20 | 123.30 |
| 1 | N | 412 | ALA | O-C-N | 8.25 | 135.90 | 122.70 |
| 1 | H | 27 | ALA | N-CA-CB | 8.25 | 121.64 | 110.10 |
| 1 | K | 12 | MET | CA-C-O | -8.25 | 102.78 | 120.10 |
| 1 | K | 164 | GLU | O-C-N | -8.24 | 109.51 | 122.70 |
| 1 | N | 345 | MET | N-CA-CB | -8.24 | 95.76 | 110.60 |
| 1 | L | 268 | ILE | O-C-N | -8.24 | 109.51 | 122.70 |
| 1 | D | 306 | ASN | O-C-N | -8.24 | 109.52 | 122.70 |
| 1 | J | 218 | ARG | C-N-CA | 8.24 | 142.30 | 121.70 |
| 1 | G | 127 | ALA | O-C-N | 8.24 | 135.88 | 122.70 |
| 1 | I | 26 | LEU | O-C-N | 8.24 | 135.88 | 122.70 |
| 1 | P | 336 | GLU | CG-CD-OE1 | -8.24 | 101.82 | 118.30 |
| 1 | A | 273 | GLN | N-CA-CB | 8.24 | 125.42 | 110.60 |
| 1 | L | 18 | ARG | CD-NE-CZ | 8.24 | 135.13 | 123.60 |
| 1 | J | 8 | LEU | CB-CG-CD1 | 8.23 | 125.00 | 111.00 |
| 1 | J | 112 | ASP | OD1-CG-OD2 | -8.23 | 107.66 | 123.30 |
| 1 | N | 447 | LYS | O-C-N | -8.23 | 109.52 | 122.70 |
| 1 | N | 131 | ALA | N-CA-CB | 8.23 | 121.62 | 110.10 |
| 1 | C | 396 | TYR | CG-CD1-CE1 | 8.23 | 127.88 | 121.30 |
| 1 | G | 333 | PHE | CG-CD1-CE1 | -8.23 | 111.75 | 120.80 |
| 1 | O | 341 | LYS | N-CA-CB | 8.23 | 125.41 | 110.60 |
| 1 | C | 72 | HIS | CB-CA-C | 8.23 | 126.86 | 110.40 |
| 1 | E | 320 | LEU | CB-CG-CD2 | 8.22 | 124.98 | 111.00 |
| 1 | E | 352 | GLU | CB-CA-C | 8.22 | 126.85 | 110.40 |
| 1 | G | 137 | THR | O-C-N | -8.22 | 109.54 | 122.70 |
| 1 | I | 352 | GLU | CB-CA-C | 8.22 | 126.85 | 110.40 |
| 1 | J | 185 | GLU | OE1-CD-OE2 | -8.22 | 113.43 | 123.30 |
| 1 | I | 398 | GLU | OE1-CD-OE2 | -8.22 | 113.44 | 123.30 |
| 1 | F | 151 | THR | O-C-N | -8.22 | 109.55 | 122.70 |
| 1 | G | 89 | VAL | N-CA-C | 8.22 | 133.19 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 118 | THR | OG1-CB-CG2 | 8.22 | 128.90 | 110.00 |
| 1 | K | 473 | LYS | O-C-N | 8.22 | 135.85 | 122.70 |
| 1 | O | 273 | GLN | N-CA-CB | 8.22 | 125.39 | 110.60 |
| 1 | H | 131 | ALA | CB-CA-C | 8.22 | 122.42 | 110.10 |
| 1 | A | 153 | ILE | CA-C-O | 8.21 | 137.35 | 120.10 |
| 1 | D | 216 | LYS | CB-CA-C | 8.21 | 126.83 | 110.40 |
| 1 | I | 10 | GLU | O-C-N | -8.21 | 109.56 | 122.70 |
| 1 | O | 375 | ASP | O-C-N | -8.21 | 109.24 | 123.20 |
| 1 | P | 286 | ARG | NE-CZ-NH1 | -8.21 | 116.19 | 120.30 |
| 1 | P | 379 | VAL | O-C-N | -8.21 | 109.56 | 122.70 |
| 1 | B | 54 | ASP | CB-CG-OD1 | 8.21 | 125.69 | 118.30 |
| 1 | B | 349 | GLY | CA-C-O | -8.21 | 105.82 | 120.60 |
| 1 | H | 54 | ASP | CB-CG-OD2 | -8.21 | 110.91 | 118.30 |
| 1 | K | 272 | ALA | CB-CA-C | 8.21 | 122.42 | 110.10 |
| 1 | D | 15 | TYR | CD1-CE1-CZ | -8.21 | 112.41 | 119.80 |
| 1 | F | 403 | ARG | NE-CZ-NH2 | -8.21 | 116.20 | 120.30 |
| 1 | J | 12 | MET | O-C-N | 8.21 | 135.83 | 122.70 |
| 1 | E | 497 | GLU | N-CA-CB | 8.21 | 125.37 | 110.60 |
| 1 | N | 251 | VAL | CG1-CB-CG2 | -8.21 | 97.77 | 110.90 |
| 1 | N | 403 | ARG | NH1-CZ-NH2 | 8.21 | 128.43 | 119.40 |
| 1 | O | 296 | ALA | N-CA-CB | 8.21 | 121.59 | 110.10 |
| 1 | I | 77 | MET | N-CA-CB | 8.20 | 125.37 | 110.60 |
| 1 | M | 285 | ARG | N-CA-CB | 8.20 | 125.37 | 110.60 |
| 1 | D | 244 | SER | O-C-N | -8.20 | 109.58 | 122.70 |
| 1 | M | 306 | ASN | CB-CG-OD1 | 8.20 | 138.00 | 121.60 |
| 1 | E | 145 | GLN | CB-CA-C | 8.20 | 126.80 | 110.40 |
| 1 | I | 400 | ILE | O-C-N | -8.20 | 109.58 | 122.70 |
| 1 | N | 381 | GLY | C-N-CA | 8.20 | 139.52 | 122.30 |
| 1 | D | 57 | VAL | CA-CB-CG1 | 8.20 | 123.19 | 110.90 |
| 1 | C | 422 | LEU | CA-C-O | -8.20 | 102.89 | 120.10 |
| 1 | L | 322 | GLU | OE1-CD-OE2 | 8.20 | 133.13 | 123.30 |
| 1 | M | 129 | GLN | CA-CB-CG | 8.20 | 131.43 | 113.40 |
| 1 | N | 179 | SER | O-C-N | 8.20 | 135.81 | 122.70 |
| 1 | N | 229 | ASP | O-C-N | -8.20 | 109.58 | 122.70 |
| 1 | A | 215 | ASP | CB-CG-OD2 | 8.19 | 125.67 | 118.30 |
| 1 | K | 200 | GLY | CA-C-O | -8.19 | 105.85 | 120.60 |
| 1 | C | 469 | PRO | CA-C-N | -8.19 | 99.18 | 117.20 |
| 1 | D | 7 | VAL | O-C-N | -8.19 | 109.59 | 122.70 |
| 1 | G | 124 | TYR | CD1-CG-CD2 | -8.19 | 108.89 | 117.90 |
| 1 | G | 253 | GLU | OE1-CD-OE2 | 8.19 | 133.13 | 123.30 |
| 1 | B | 290 | SER | N-CA-CB | 8.19 | 122.79 | 110.50 |
| 1 | C | 185 | GLU | OE1-CD-OE2 | -8.19 | 113.47 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 457 | ALA | O-C-N | 8.19 | 135.80 | 122.70 |
| 1 | D | 284 | ALA | N-CA-CB | 8.18 | 121.56 | 110.10 |
| 1 | O | 181 | VAL | O-C-N | 8.18 | 135.79 | 122.70 |
| 1 | F | 105 | ARG | NH1-CZ-NH2 | 8.18 | 128.40 | 119.40 |
| 1 | G | 455 | THR | O-C-N | -8.18 | 109.29 | 123.20 |
| 1 | H | 279 | GLU | N-CA-CB | 8.18 | 125.32 | 110.60 |
| 1 | J | 333 | PHE | CB-CG-CD2 | 8.18 | 126.52 | 120.80 |
| 1 | L | 200 | GLY | CA-C-O | -8.18 | 105.88 | 120.60 |
| 1 | A | 490 | ILE | CG1-CB-CG2 | 8.17 | 129.38 | 111.40 |
| 1 | E | 286 | ARG | CD-NE-CZ | 8.17 | 135.04 | 123.60 |
| 1 | I | 297 | LYS | N-CA-C | 8.17 | 133.07 | 111.00 |
| 1 | K | 91 | ASP | CB-CG-OD1 | 8.17 | 125.66 | 118.30 |
| 1 | H | 207 | GLU | OE1-CD-OE2 | -8.17 | 113.49 | 123.30 |
| 1 | O | 184 | ASP | CB-CG-OD2 | 8.17 | 125.66 | 118.30 |
| 1 | N | 288 | LYS | O-C-N | -8.17 | 109.63 | 122.70 |
| 1 | A | 200 | GLY | O-C-N | -8.17 | 109.63 | 122.70 |
| 1 | I | 468 | GLU | OE1-CD-OE2 | 8.17 | 133.10 | 123.30 |
| 1 | L | 60 | ASP | CB-CG-OD2 | -8.17 | 110.95 | 118.30 |
| 1 | G | 377 | ARG | NE-CZ-NH2 | -8.17 | 116.22 | 120.30 |
| 1 | H | 277 | ALA | CB-CA-C | 8.16 | 122.34 | 110.10 |
| 1 | I | 314 | ASP | CA-CB-CG | 8.16 | 131.36 | 113.40 |
| 1 | L | 452 | ASN | OD1-CG-ND2 | 8.16 | 140.68 | 121.90 |
| 1 | P | 40 | GLY | CA-C-O | -8.16 | 105.91 | 120.60 |
| 1 | P | 289 | LYS | CB-CA-C | 8.16 | 126.73 | 110.40 |
| 1 | I | 105 | ARG | NH1-CZ-NH2 | -8.16 | 110.42 | 119.40 |
| 1 | K | 438 | ARG | NE-CZ-NH2 | 8.16 | 124.38 | 120.30 |
| 1 | C | 17 | GLY | O-C-N | -8.15 | 109.65 | 122.70 |
| 1 | D | 377 | ARG | CA-C-O | -8.15 | 102.97 | 120.10 |
| 1 | L | 146 | ASP | O-C-N | -8.15 | 109.66 | 122.70 |
| 1 | G | 494 | ILE | O-C-N | -8.15 | 109.66 | 122.70 |
| 1 | G | 71 | GLU | CG-CD-OE2 | 8.15 | 134.60 | 118.30 |
| 1 | M | 218 | ARG | NH1-CZ-NH2 | -8.15 | 110.44 | 119.40 |
| 1 | M | 411 | PHE | CD1-CG-CD2 | -8.15 | 107.71 | 118.30 |
| 1 | G | 246 | MET | O-C-N | -8.14 | 109.67 | 122.70 |
| 1 | H | 443 | SER | N-CA-CB | -8.14 | 98.28 | 110.50 |
| 1 | A | 148 | GLU | OE1-CD-OE2 | -8.14 | 113.53 | 123.30 |
| 1 | K | 90 | GLY | C-N-CA | 8.14 | 142.05 | 121.70 |
| 1 | J | 342 | ALA | CB-CA-C | -8.14 | 97.89 | 110.10 |
| 1 | L | 314 | ASP | OD1-CG-OD2 | -8.14 | 107.83 | 123.30 |
| 1 | H | 240 | GLU | CA-CB-CG | 8.13 | 131.29 | 113.40 |
| 1 | C | 336 | GLU | CB-CA-C | 8.13 | 126.66 | 110.40 |
| 1 | H | 478 | GLN | CG-CD-OE1 | 8.13 | 137.86 | 121.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 309 | ASP | CB-CG-OD1 | 8.13 | 125.62 | 118.30 |
| 1 | B | 56 | VAL | O-C-N | -8.13 | 109.69 | 122.70 |
| 1 | H | 221 | ALA | N-CA-CB | -8.13 | 98.72 | 110.10 |
| 1 | M | 218 | ARG | O-C-N | 8.13 | 135.71 | 122.70 |
| 1 | H | 169 | LYS | CA-CB-CG | 8.13 | 131.28 | 113.40 |
| 1 | E | 457 | ALA | CB-CA-C | -8.12 | 97.92 | 110.10 |
| 1 | B | 16 | MET | N-CA-C | 8.12 | 132.93 | 111.00 |
| 1 | E | 15 | TYR | C-N-CA | 8.12 | 142.00 | 121.70 |
| 1 | B | 63 | THR | N-CA-CB | 8.12 | 125.72 | 110.30 |
| 1 | E | 218 | ARG | O-C-N | 8.12 | 135.69 | 122.70 |
| 1 | I | 470 | LEU | CA-CB-CG | 8.12 | 133.98 | 115.30 |
| 1 | M | 205 | ASP | OD1-CG-OD2 | -8.12 | 107.88 | 123.30 |
| 1 | N | 133 | GLU | OE1-CD-OE2 | 8.12 | 133.04 | 123.30 |
| 1 | F | 324 | ARG | NE-CZ-NH2 | 8.12 | 124.36 | 120.30 |
| 1 | N | 182 | VAL | O-C-N | -8.11 | 109.72 | 122.70 |
| 1 | F | 98 | VAL | CA-CB-CG1 | 8.11 | 123.07 | 110.90 |
| 1 | B | 353 | HIS | O-C-N | 8.11 | 135.67 | 122.70 |
| 1 | O | 291 | ASP | O-C-N | 8.11 | 135.68 | 122.70 |
| 1 | P | 9 | PRO | N-CA-CB | -8.11 | 93.57 | 103.30 |
| 1 | M | 11 | ASN | CB-CG-OD1 | 8.11 | 137.81 | 121.60 |
| 1 | C | 257 | SER | CA-C-N | 8.10 | 132.41 | 116.20 |
| 1 | D | 69 | SER | N-CA-CB | 8.10 | 122.66 | 110.50 |
| 1 | I | 431 | ILE | N-CA-CB | 8.10 | 129.44 | 110.80 |
| 1 | P | 324 | ARG | CD-NE-CZ | 8.10 | 134.94 | 123.60 |
| 1 | P | 363 | ASP | N-CA-CB | 8.10 | 125.18 | 110.60 |
| 1 | D | 236 | ASN | C-N-CA | 8.10 | 141.94 | 121.70 |
| 1 | E | 58 | THR | CA-CB-OG1 | 8.10 | 126.01 | 109.00 |
| 1 | K | 379 | VAL | O-C-N | -8.10 | 109.75 | 122.70 |
| 1 | M | 89 | VAL | CA-CB-CG2 | 8.10 | 123.05 | 110.90 |
| 1 | D | 284 | ALA | C-N-CA | 8.09 | 141.93 | 121.70 |
| 1 | H | 354 | VAL | O-C-N | -8.09 | 109.75 | 122.70 |
| 1 | C | 375 | ASP | CB-CG-OD1 | 8.09 | 125.58 | 118.30 |
| 1 | G | 260 | ASN | N-CA-CB | 8.09 | 125.16 | 110.60 |
| 1 | I | 177 | ALA | CB-CA-C | 8.09 | 122.23 | 110.10 |
| 1 | O | 12 | MET | CB-CA-C | -8.09 | 94.22 | 110.40 |
| 1 | A | 31 | ILE | CB-CA-C | 8.09 | 127.77 | 111.60 |
| 1 | I | 369 | VAL | CA-CB-CG2 | 8.08 | 123.03 | 110.90 |
| 1 | N | 490 | ILE | CG1-CB-CG2 | 8.08 | 129.19 | 111.40 |
| 1 | O | 29 | ARG | N-CA-CB | 8.08 | 125.15 | 110.60 |
| 1 | J | 10 | GLU | C-N-CA | 8.08 | 141.90 | 121.70 |
| 1 | K | 98 | VAL | CA-CB-CG2 | 8.08 | 123.02 | 110.90 |
| 1 | M | 244 | SER | CB-CA-C | 8.08 | 125.45 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 169 | LYS | O-C-N | 8.08 | 135.62 | 122.70 |
| 1 | M | 51 | ASP | CB-CG-OD2 | -8.08 | 111.03 | 118.30 |
| 1 | M | 251 | VAL | CA-CB-CG2 | 8.08 | 123.02 | 110.90 |
| 1 | O | 333 | PHE | CD1-CE1-CZ | -8.08 | 110.41 | 120.10 |
| 1 | L | 32 | ALA | CB-CA-C | -8.08 | 97.99 | 110.10 |
| 1 | J | 14 | ARG | CA-CB-CG | 8.07 | 131.17 | 113.40 |
| 1 | J | 326 | ILE | CA-CB-CG1 | 8.07 | 126.34 | 111.00 |
| 1 | M | 342 | ALA | N-CA-CB | 8.07 | 121.40 | 110.10 |
| 1 | G | 128 | ALA | N-CA-CB | 8.07 | 121.40 | 110.10 |
| 1 | L | 89 | VAL | CG1-CB-CG2 | -8.07 | 97.99 | 110.90 |
| 1 | F | 203 | ILE | C-N-CA | 8.07 | 141.87 | 121.70 |
| 1 | G | 358 | VAL | CA-CB-CG1 | 8.07 | 123.00 | 110.90 |
| 1 | A | 187 | LYS | N-CA-CB | 8.07 | 125.12 | 110.60 |
| 1 | O | 202 | SER | O-C-N | -8.07 | 109.79 | 122.70 |
| 1 | E | 175 | VAL | CG1-CB-CG2 | -8.07 | 97.99 | 110.90 |
| 1 | G | 15 | TYR | O-C-N | 8.07 | 135.61 | 122.70 |
| 1 | E | 429 | ASP | CB-CA-C | 8.06 | 126.53 | 110.40 |
| 1 | F | 59 | ASN | N-CA-CB | 8.06 | 125.11 | 110.60 |
| 1 | H | 438 | ARG | CD-NE-CZ | 8.06 | 134.89 | 123.60 |
| 1 | M | 116 | HIS | CA-CB-CG | 8.06 | 127.31 | 113.60 |
| 1 | D | 373 | ILE | O-C-N | 8.06 | 135.60 | 122.70 |
| 1 | G | 124 | TYR | CG-CD1-CE1 | 8.06 | 127.75 | 121.30 |
| 1 | I | 240 | GLU | CG-CD-OE1 | 8.06 | 134.42 | 118.30 |
| 1 | J | 243 | ALA | O-C-N | -8.06 | 109.81 | 122.70 |
| 1 | N | 7 | VAL | CA-CB-CG2 | -8.06 | 98.81 | 110.90 |
| 1 | C | 462 | CYS | O-C-N | -8.06 | 109.81 | 122.70 |
| 1 | D | 203 | ILE | O-C-N | -8.06 | 109.81 | 122.70 |
| 1 | I | 57 | VAL | CB-CA-C | -8.05 | 96.10 | 111.40 |
| 1 | E | 218 | ARG | NE-CZ-NH2 | 8.05 | 124.33 | 120.30 |
| 1 | H | 275 | TYR | CD1-CE1-CZ | -8.05 | 112.55 | 119.80 |
| 1 | B | 29 | ARG | NE-CZ-NH2 | -8.05 | 116.28 | 120.30 |
| 1 | C | 218 | ARG | C-N-CA | 8.05 | 141.82 | 121.70 |
| 1 | O | 147 | LYS | N-CA-C | 8.05 | 132.74 | 111.00 |
| 1 | C | 373 | ILE | CA-CB-CG1 | 8.05 | 126.29 | 111.00 |
| 1 | I | 317 | ASP | CB-CG-OD1 | 8.05 | 125.54 | 118.30 |
| 1 | I | 115 | VAL | CA-CB-CG2 | 8.05 | 122.97 | 110.90 |
| 1 | P | 396 | TYR | CZ-CE2-CD2 | -8.05 | 112.56 | 119.80 |
| 1 | E | 99 | VAL | C-N-CA | 8.04 | 141.81 | 121.70 |
| 1 | I | 326 | ILE | O-C-N | -8.04 | 109.83 | 122.70 |
| 1 | N | 416 | GLU | OE1-CD-OE2 | 8.04 | 132.95 | 123.30 |
| 1 | O | 248 | LYS | O-C-N | -8.04 | 109.83 | 122.70 |
| 1 | A | 416 | GLU | O-C-N | -8.04 | 109.83 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 253 | GLU | O-C-N | -8.04 | 109.83 | 122.70 |
| 1 | G | 50 | ASP | O-C-N | -8.04 | 109.83 | 122.70 |
| 1 | G | 75 | ALA | O-C-N | 8.04 | 135.56 | 122.70 |
| 1 | G | 464 | ASN | C-N-CA | 8.04 | 139.19 | 122.30 |
| 1 | M | 442 | ALA | O-C-N | 8.04 | 135.57 | 122.70 |
| 1 | F | 323 | GLU | OE1-CD-OE2 | -8.04 | 113.65 | 123.30 |
| 1 | H | 305 | THR | C-N-CA | 8.04 | 141.80 | 121.70 |
| 1 | J | 263 | PHE | CB-CG-CD2 | 8.04 | 126.43 | 120.80 |
| 1 | P | 184 | ASP | N-CA-CB | 8.04 | 125.07 | 110.60 |
| 1 | C | 64 | ILE | CA-CB-CG2 | 8.03 | 126.97 | 110.90 |
| 1 | C | 86 | GLU | CG-CD-OE2 | 8.04 | 134.37 | 118.30 |
| 1 | A | 290 | SER | N-CA-CB | 8.03 | 122.55 | 110.50 |
| 1 | B | 313 | GLN | N-CA-CB | 8.03 | 125.06 | 110.60 |
| 1 | C | 470 | LEU | CA-CB-CG | 8.03 | 133.77 | 115.30 |
| 1 | F | 333 | PHE | CB-CG-CD1 | -8.03 | 115.18 | 120.80 |
| 1 | K | 329 | ASP | CB-CG-OD2 | 8.03 | 125.53 | 118.30 |
| 1 | M | 373 | ILE | O-C-N | 8.03 | 135.54 | 122.70 |
| 1 | F | 143 | GLY | O-C-N | 8.03 | 135.54 | 122.70 |
| 1 | E | 81 | VAL | CA-CB-CG1 | 8.03 | 122.94 | 110.90 |
| 1 | I | 239 | ILE | O-C-N | -8.03 | 109.86 | 122.70 |
| 1 | D | 293 | GLU | O-C-N | -8.02 | 109.86 | 122.70 |
| 1 | H | 286 | ARG | CA-CB-CG | 8.02 | 131.05 | 113.40 |
| 1 | O | 237 | CYS | O-C-N | -8.02 | 109.86 | 122.70 |
| 1 | B | 313 | GLN | CG-CD-OE1 | 8.02 | 137.64 | 121.60 |
| 1 | B | 69 | SER | O-C-N | -8.02 | 109.87 | 122.70 |
| 1 | C | 49 | VAL | O-C-N | -8.02 | 109.87 | 122.70 |
| 1 | O | 71 | GLU | O-C-N | -8.02 | 109.87 | 122.70 |
| 1 | O | 159 | THR | CA-CB-CG2 | 8.01 | 123.62 | 112.40 |
| 1 | P | 41 | PRO | N-CD-CG | 8.01 | 115.22 | 103.20 |
| 1 | C | 204 | ASP | C-N-CA | 8.01 | 141.73 | 121.70 |
| 1 | O | 124 | TYR | CB-CG-CD1 | 8.01 | 125.81 | 121.00 |
| 1 | A | 364 | ASP | CB-CG-OD1 | 8.01 | 125.51 | 118.30 |
| 1 | B | 14 | ARG | NH1-CZ-NH2 | -8.01 | 110.59 | 119.40 |
| 1 | P | 221 | ALA | O-C-N | 8.01 | 135.51 | 122.70 |
| 1 | D | 147 | LYS | CA-C-N | 8.01 | 134.81 | 117.20 |
| 1 | I | 379 | VAL | CB-CA-C | 8.01 | 126.61 | 111.40 |
| 1 | P | 452 | ASN | N-CA-CB | 8.01 | 125.01 | 110.60 |
| 1 | C | 346 | LEU | CA-CB-CG | 8.00 | 133.70 | 115.30 |
| 1 | G | 156 | THR | OG1-CB-CG2 | 8.00 | 128.40 | 110.00 |
| 1 | I | 36 | ARG | NH1-CZ-NH2 | -8.00 | 110.60 | 119.40 |
| 1 | P | 172 | GLU | N-CA-CB | 8.00 | 125.00 | 110.60 |
| 1 | G | 451 | LEU | CB-CG-CD1 | 8.00 | 124.60 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 57 | VAL | CB-CA-C | -7.99 | 96.21 | 111.40 |
| 1 | B | 229 | ASP | CB-CG-OD2 | 7.99 | 125.49 | 118.30 |
| 1 | D | 312 | ALA | N-CA-CB | 7.99 | 121.29 | 110.10 |
| 1 | G | 301 | ALA | CB-CA-C | -7.99 | 98.11 | 110.10 |
| 1 | C | 454 | PHE | CA-C-O | -7.99 | 103.33 | 120.10 |
| 1 | I | 417 | VAL | O-C-N | 7.99 | 135.48 | 122.70 |
| 1 | P | 70 | VAL | O-C-N | -7.99 | 109.92 | 122.70 |
| 1 | B | 15 | TYR | CG-CD1-CE1 | 7.98 | 127.69 | 121.30 |
| 1 | C | 458 | VAL | CA-CB-CG2 | 7.98 | 122.87 | 110.90 |
| 1 | G | 317 | ASP | CB-CG-OD2 | 7.98 | 125.48 | 118.30 |
| 1 | H | 469 | PRO | N-CA-CB | 7.98 | 112.88 | 103.30 |
| 1 | J | 380 | SER | O-C-N | -7.98 | 109.64 | 123.20 |
| 1 | N | 421 | THR | CA-CB-CG2 | 7.98 | 123.57 | 112.40 |
| 1 | C | 403 | ARG | CD-NE-CZ | -7.98 | 112.43 | 123.60 |
| 1 | E | 333 | PHE | CB-CG-CD2 | 7.97 | 126.38 | 120.80 |
| 1 | L | 367 | GLY | O-C-N | -7.97 | 109.94 | 122.70 |
| 1 | I | 65 | LEU | O-C-N | -7.97 | 109.94 | 122.70 |
| 1 | K | 27 | ALA | O-C-N | -7.97 | 109.65 | 123.20 |
| 1 | M | 77 | MET | CB-CA-C | 7.97 | 126.34 | 110.40 |
| 1 | N | 329 | ASP | CB-CG-OD1 | 7.97 | 125.47 | 118.30 |
| 1 | P | 398 | GLU | CA-C-N | -7.97 | 100.26 | 116.20 |
| 1 | L | 159 | THR | O-C-N | -7.97 | 109.66 | 123.20 |
| 1 | A | 66 | ARG | NE-CZ-NH1 | 7.96 | 124.28 | 120.30 |
| 1 | D | 19 | ASP | N-CA-CB | 7.96 | 124.94 | 110.60 |
| 1 | D | 120 | VAL | CA-CB-CG2 | 7.96 | 122.85 | 110.90 |
| 1 | G | 76 | LYS | N-CA-CB | 7.96 | 124.94 | 110.60 |
| 1 | I | 496 | ALA | CB-CA-C | -7.96 | 98.15 | 110.10 |
| 1 | D | 291 | ASP | C-N-CA | 7.96 | 141.60 | 121.70 |
| 1 | M | 461 | MET | O-C-N | -7.96 | 109.96 | 122.70 |
| 1 | H | 333 | PHE | CG-CD2-CE2 | 7.96 | 129.56 | 120.80 |
| 1 | A | 42 | LYS | N-CA-CB | 7.96 | 124.92 | 110.60 |
| 1 | I | 181 | VAL | O-C-N | -7.96 | 109.97 | 122.70 |
| 1 | I | 255 | LYS | O-C-N | -7.96 | 109.97 | 122.70 |
| 1 | G | 130 | LYS | O-C-N | -7.96 | 109.97 | 122.70 |
| 1 | I | 107 | ALA | N-CA-CB | 7.96 | 121.24 | 110.10 |
| 1 | B | 482 | GLU | CG-CD-OE1 | 7.95 | 134.21 | 118.30 |
| 1 | E | 167 | LYS | CG-CD-CE | 7.95 | 135.76 | 111.90 |
| 1 | F | 221 | ALA | C-N-CA | 7.95 | 141.58 | 121.70 |
| 1 | I | 403 | ARG | NE-CZ-NH2 | 7.95 | 124.28 | 120.30 |
| 1 | M | 454 | PHE | CB-CG-CD1 | -7.95 | 115.23 | 120.80 |
| 1 | B | 40 | GLY | O-C-N | 7.95 | 136.21 | 121.10 |
| 1 | G | 460 | ASP | O-C-N | 7.95 | 135.42 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 360 | ARG | NE-CZ-NH2 | -7.95 | 116.33 | 120.30 |
| 1 | N | 88 | GLU | O-C-N | -7.95 | 109.98 | 122.70 |
| 1 | L | 377 | ARG | CD-NE-CZ | 7.95 | 134.73 | 123.60 |
| 1 | I | 370 | GLY | CA-C-O | 7.95 | 134.90 | 120.60 |
| 1 | E | 269 | ASP | O-C-N | -7.94 | 109.99 | 122.70 |
| 1 | B | 56 | VAL | CA-C-N | 7.94 | 134.67 | 117.20 |
| 1 | M | 63 | THR | N-CA-CB | 7.94 | 125.39 | 110.30 |
| 1 | F | 253 | GLU | CG-CD-OE1 | 7.94 | 134.18 | 118.30 |
| 1 | F | 318 | ALA | CB-CA-C | -7.94 | 98.19 | 110.10 |
| 1 | O | 314 | ASP | CB-CG-OD1 | 7.94 | 125.44 | 118.30 |
| 1 | K | 322 | GLU | OE1-CD-OE2 | -7.94 | 113.78 | 123.30 |
| 1 | B | 242 | THR | OG1-CB-CG2 | 7.93 | 128.25 | 110.00 |
| 1 | D | 172 | GLU | O-C-N | -7.93 | 110.00 | 122.70 |
| 1 | H | 107 | ALA | CB-CA-C | 7.93 | 122.00 | 110.10 |
| 1 | H | 242 | THR | C-N-CA | 7.93 | 141.54 | 121.70 |
| 1 | J | 312 | ALA | C-N-CA | 7.93 | 141.54 | 121.70 |
| 1 | O | 205 | ASP | CB-CG-OD2 | -7.93 | 111.16 | 118.30 |
| 1 | H | 187 | LYS | CB-CG-CD | 7.93 | 132.22 | 111.60 |
| 1 | J | 449 | ALA | O-C-N | -7.93 | 109.71 | 123.20 |
| 1 | D | 427 | GLY | C-N-CA | 7.93 | 141.53 | 121.70 |
| 1 | K | 34 | THR | CA-CB-CG2 | -7.93 | 101.30 | 112.40 |
| 1 | L | 36 | ARG | NE-CZ-NH1 | 7.93 | 124.27 | 120.30 |
| 1 | B | 120 | VAL | CG1-CB-CG2 | 7.93 | 123.59 | 110.90 |
| 1 | G | 275 | TYR | CG-CD1-CE1 | -7.93 | 114.96 | 121.30 |
| 1 | M | 395 | GLU | CG-CD-OE2 | 7.93 | 134.16 | 118.30 |
| 1 | C | 270 | ASP | C-N-CA | 7.93 | 141.51 | 121.70 |
| 1 | F | 360 | ARG | N-CA-CB | 7.93 | 124.87 | 110.60 |
| 1 | J | 335 | GLU | C-N-CA | 7.92 | 141.51 | 121.70 |
| 1 | J | 448 | CYS | N-CA-CB | 7.92 | 124.87 | 110.60 |
| 1 | L | 37 | SER | O-C-N | -7.92 | 110.02 | 122.70 |
| 1 | N | 430 | ALA | N-CA-C | 7.92 | 132.40 | 111.00 |
| 1 | B | 138 | ILE | O-C-N | -7.92 | 110.02 | 122.70 |
| 1 | F | 296 | ALA | O-C-N | -7.92 | 110.02 | 122.70 |
| 1 | G | 89 | VAL | CG1-CB-CG2 | -7.92 | 98.22 | 110.90 |
| 1 | G | 217 | GLU | CB-CA-C | -7.92 | 94.56 | 110.40 |
| 1 | H | 236 | ASN | CA-CB-CG | 7.92 | 130.83 | 113.40 |
| 1 | A | 169 | LYS | O-C-N | 7.92 | 135.37 | 122.70 |
| 1 | C | 21 | GLN | CG-CD-OE1 | 7.92 | 137.44 | 121.60 |
| 1 | K | 275 | TYR | CB-CG-CD2 | 7.92 | 125.75 | 121.00 |
| 1 | O | 84 | THR | CA-CB-CG2 | 7.92 | 123.49 | 112.40 |
| 1 | I | 285 | ARG | CG-CD-NE | 7.92 | 128.43 | 111.80 |
| 1 | L | 444 | ASN | C-N-CA | -7.92 | 105.68 | 122.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 306 | ASN | CB-CG-OD1 | 7.92 | 137.43 | 121.60 |
| 1 | B | 255 | LYS | O-C-N | -7.92 | 110.04 | 122.70 |
| 1 | D | 61 | GLY | CA-C-O | -7.92 | 106.35 | 120.60 |
| 1 | L | 336 | GLU | C-N-CA | 7.91 | 141.48 | 121.70 |
| 1 | N | 340 | PRO | O-C-N | 7.91 | 135.36 | 122.70 |
| 1 | N | 229 | ASP | OD1-CG-OD2 | -7.91 | 108.27 | 123.30 |
| 1 | B | 396 | TYR | CD1-CE1-CZ | 7.91 | 126.92 | 119.80 |
| 1 | E | 309 | ASP | OD1-CG-OD2 | 7.91 | 138.33 | 123.30 |
| 1 | E | 406 | LEU | CB-CG-CD2 | 7.91 | 124.44 | 111.00 |
| 1 | N | 301 | ALA | O-C-N | -7.91 | 110.05 | 122.70 |
| 1 | J | 489 | ARG | NE-CZ-NH1 | 7.91 | 124.25 | 120.30 |
| 1 | F | 81 | VAL | CB-CA-C | 7.91 | 126.42 | 111.40 |
| 1 | P | 156 | THR | N-CA-CB | 7.91 | 125.32 | 110.30 |
| 1 | I | 369 | VAL | CA-C-O | -7.90 | 103.50 | 120.10 |
| 1 | K | 226 | LYS | O-C-N | -7.90 | 110.05 | 122.70 |
| 1 | G | 495 | ALA | N-CA-CB | 7.90 | 121.16 | 110.10 |
| 1 | B | 148 | GLU | OE1-CD-OE2 | 7.90 | 132.78 | 123.30 |
| 1 | I | 222 | GLN | CA-C-O | -7.90 | 103.51 | 120.10 |
| 1 | K | 256 | ALA | N-CA-CB | 7.90 | 121.16 | 110.10 |
| 1 | L | 168 | GLU | O-C-N | 7.90 | 135.34 | 122.70 |
| 1 | P | 158 | ILE | N-CA-C | 7.90 | 132.33 | 111.00 |
| 1 | C | 403 | ARG | NE-CZ-NH2 | -7.90 | 116.35 | 120.30 |
| 1 | H | 137 | THR | O-C-N | 7.90 | 135.34 | 122.70 |
| 1 | M | 493 | VAL | O-C-N | -7.90 | 110.06 | 122.70 |
| 1 | I | 228 | THR | O-C-N | 7.90 | 135.33 | 122.70 |
| 1 | A | 336 | GLU | CB-CA-C | 7.89 | 126.19 | 110.40 |
| 1 | N | 300 | GLY | O-C-N | -7.89 | 110.07 | 122.70 |
| 1 | E | 12 | MET | CG-SD-CE | 7.89 | 112.83 | 100.20 |
| 1 | E | 236 | ASN | C-N-CA | 7.89 | 141.43 | 121.70 |
| 1 | P | 48 | LEU | N-CA-CB | 7.89 | 126.17 | 110.40 |
| 1 | E | 383 | GLY | CA-C-O | -7.88 | 106.41 | 120.60 |
| 1 | I | 222 | GLN | CA-CB-CG | 7.88 | 130.74 | 113.40 |
| 1 | M | 14 | ARG | CA-CB-CG | 7.88 | 130.75 | 113.40 |
| 1 | N | 187 | LYS | O-C-N | -7.88 | 110.08 | 122.70 |
| 1 | O | 33 | GLU | O-C-N | 7.88 | 135.32 | 122.70 |
| 1 | O | 155 | MET | CB-CA-C | 7.88 | 126.16 | 110.40 |
| 1 | B | 69 | SER | C-N-CA | 7.88 | 141.39 | 121.70 |
| 1 | C | 166 | ALA | N-CA-CB | -7.88 | 99.07 | 110.10 |
| 1 | P | 432 | GLU | N-CA-CB | 7.88 | 124.78 | 110.60 |
| 1 | H | 134 | LEU | CB-CG-CD1 | 7.87 | 124.38 | 111.00 |
| 1 | I | 172 | GLU | CB-CA-C | 7.87 | 126.15 | 110.40 |
| 1 | M | 85 | GLN | O-C-N | -7.87 | 110.10 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 246 | MET | CA-CB-CG | 7.87 | 126.68 | 113.30 |
| 1 | E | 70 | VAL | CA-CB-CG1 | 7.87 | 122.71 | 110.90 |
| 1 | B | 202 | SER | N-CA-CB | 7.87 | 122.31 | 110.50 |
| 1 | G | 312 | ALA | O-C-N | -7.87 | 110.11 | 122.70 |
| 1 | P | 381 | GLY | C-N-CA | 7.87 | 138.82 | 122.30 |
| 1 | J | 333 | PHE | CD1-CG-CD2 | -7.87 | 108.08 | 118.30 |
| 1 | D | 68 | MET | CG-SD-CE | 7.86 | 112.78 | 100.20 |
| 1 | J | 210 | LYS | CB-CG-CD | 7.86 | 132.04 | 111.60 |
| 1 | N | 38 | THR | CA-CB-CG2 | -7.86 | 101.39 | 112.40 |
| 1 | O | 185 | GLU | N-CA-C | 7.86 | 132.23 | 111.00 |
| 1 | D | 40 | GLY | CA-C-O | -7.86 | 106.45 | 120.60 |
| 1 | D | 45 | ASP | CB-CG-OD1 | 7.86 | 125.38 | 118.30 |
| 1 | J | 15 | TYR | CD1-CE1-CZ | 7.86 | 126.87 | 119.80 |
| 1 | L | 472 | VAL | CA-CB-CG1 | 7.86 | 122.69 | 110.90 |
| 1 | O | 440 | ALA | N-CA-CB | 7.86 | 121.11 | 110.10 |
| 1 | B | 9 | PRO | CA-N-CD | -7.86 | 100.50 | 111.50 |
| 1 | F | 333 | PHE | CG-CD1-CE1 | -7.86 | 112.16 | 120.80 |
| 1 | M | 219 | VAL | CG1-CB-CG2 | 7.86 | 123.47 | 110.90 |
| 1 | A | 71 | GLU | CG-CD-OE1 | 7.86 | 134.02 | 118.30 |
| 1 | A | 179 | SER | N-CA-CB | 7.86 | 122.28 | 110.50 |
| 1 | A | 348 | ARG | CD-NE-CZ | -7.86 | 112.60 | 123.60 |
| 1 | G | 273 | GLN | CA-CB-CG | 7.86 | 130.68 | 113.40 |
| 1 | H | 438 | ARG | NE-CZ-NH2 | -7.86 | 116.37 | 120.30 |
| 1 | D | 221 | ALA | O-C-N | 7.85 | 135.27 | 122.70 |
| 1 | B | 380 | SER | O-C-N | -7.85 | 109.85 | 123.20 |
| 1 | C | 302 | ASN | CB-CA-C | 7.85 | 126.10 | 110.40 |
| 1 | J | 240 | GLU | CA-CB-CG | 7.85 | 130.67 | 113.40 |
| 1 | N | 161 | LYS | CA-CB-CG | 7.85 | 130.67 | 113.40 |
| 1 | B | 232 | ILE | O-C-N | -7.85 | 110.14 | 122.70 |
| 1 | C | 154 | ALA | N-CA-CB | -7.85 | 99.11 | 110.10 |
| 1 | H | 116 | HIS | CA-CB-CG | 7.85 | 126.94 | 113.60 |
| 1 | K | 489 | ARG | NE-CZ-NH2 | 7.85 | 124.22 | 120.30 |
| 1 | J | 131 | ALA | CB-CA-C | 7.84 | 121.87 | 110.10 |
| 1 | N | 456 | GLY | O-C-N | 7.84 | 135.25 | 122.70 |
| 1 | F | 495 | ALA | C-N-CA | 7.84 | 141.30 | 121.70 |
| 1 | G | 142 | VAL | CA-CB-CG1 | -7.84 | 99.14 | 110.90 |
| 1 | N | 98 | VAL | CA-CB-CG1 | 7.84 | 122.66 | 110.90 |
| 1 | A | 312 | ALA | CB-CA-C | -7.84 | 98.34 | 110.10 |
| 1 | L | 63 | THR | CA-CB-CG2 | 7.84 | 123.37 | 112.40 |
| 1 | L | 189 | ASP | CB-CG-OD2 | 7.84 | 125.36 | 118.30 |
| 1 | C | 463 | GLU | N-CA-CB | 7.84 | 124.71 | 110.60 |
| 1 | G | 396 | TYR | CG-CD1-CE1 | -7.84 | 115.03 | 121.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 353 | HIS | CA-CB-CG | 7.84 | 126.92 | 113.60 |
| 1 | L | 43 | GLY | C-N-CA | 7.84 | 141.29 | 121.70 |
| 1 | N | 470 | LEU | CA-CB-CG | 7.84 | 133.32 | 115.30 |
| 1 | E | 22 | ARG | NE-CZ-NH2 | 7.83 | 124.22 | 120.30 |
| 1 | H | 14 | ARG | NE-CZ-NH2 | -7.83 | 116.38 | 120.30 |
| 1 | H | 395 | GLU | O-C-N | -7.83 | 110.16 | 122.70 |
| 1 | G | 410 | ALA | CB-CA-C | 7.83 | 121.85 | 110.10 |
| 1 | J | 269 | ASP | O-C-N | -7.83 | 110.17 | 122.70 |
| 1 | J | 65 | LEU | O-C-N | -7.83 | 110.17 | 122.70 |
| 1 | O | 112 | ASP | C-N-CA | 7.83 | 141.28 | 121.70 |
| 1 | J | 293 | GLU | N-CA-CB | 7.83 | 124.69 | 110.60 |
| 1 | O | 359 | ALA | CB-CA-C | 7.83 | 121.84 | 110.10 |
| 1 | H | 416 | GLU | O-C-N | -7.83 | 110.18 | 122.70 |
| 1 | K | 114 | ASN | N-CA-C | 7.83 | 132.13 | 111.00 |
| 1 | A | 453 | VAL | CG1-CB-CG2 | -7.83 | 98.38 | 110.90 |
| 1 | B | 438 | ARG | CD-NE-CZ | -7.83 | 112.64 | 123.60 |
| 1 | A | 74 | ALA | O-C-N | -7.82 | 110.18 | 122.70 |
| 1 | H | 235 | LEU | O-C-N | -7.82 | 110.18 | 122.70 |
| 1 | H | 413 | ASP | CB-CG-OD1 | -7.82 | 111.26 | 118.30 |
| 1 | B | 491 | ASP | CB-CG-OD1 | -7.82 | 111.26 | 118.30 |
| 1 | E | 206 | THR | C-N-CA | 7.82 | 141.25 | 121.70 |
| 1 | H | 20 | ALA | CA-C-O | -7.82 | 103.67 | 120.10 |
| 1 | K | 438 | ARG | NH1-CZ-NH2 | -7.82 | 110.80 | 119.40 |
| 1 | M | 489 | ARG | NE-CZ-NH1 | 7.82 | 124.21 | 120.30 |
| 1 | P | 187 | LYS | CA-C-O | -7.82 | 103.68 | 120.10 |
| 1 | F | 469 | PRO | N-CA-CB | -7.82 | 93.92 | 103.30 |
| 1 | C | 14 | ARG | NH1-CZ-NH2 | 7.82 | 128.00 | 119.40 |
| 1 | E | 15 | TYR | CG-CD1-CE1 | 7.82 | 127.55 | 121.30 |
| 1 | E | 191 | ASP | CB-CG-OD1 | -7.81 | 111.27 | 118.30 |
| 1 | G | 33 | GLU | CG-CD-OE1 | 7.81 | 133.93 | 118.30 |
| 1 | H | 289 | LYS | O-C-N | 7.81 | 135.20 | 122.70 |
| 1 | L | 290 | SER | O-C-N | 7.81 | 135.20 | 122.70 |
| 1 | A | 405 | GLN | CB-CG-CD | 7.81 | 131.91 | 111.60 |
| 1 | B | 286 | ARG | NE-CZ-NH1 | -7.81 | 116.39 | 120.30 |
| 1 | G | 174 | ILE | CA-CB-CG1 | 7.81 | 125.84 | 111.00 |
| 1 | F | 187 | LYS | CA-CB-CG | 7.81 | 130.58 | 113.40 |
| 1 | J | 446 | ASN | OD1-CG-ND2 | 7.81 | 139.86 | 121.90 |
| 1 | B | 428 | LEU | CB-CG-CD1 | 7.81 | 124.27 | 111.00 |
| 1 | M | 357 | GLU | OE1-CD-OE2 | -7.81 | 113.93 | 123.30 |
| 1 | L | 329 | ASP | O-C-N | -7.80 | 110.21 | 122.70 |
| 1 | D | 431 | ILE | N-CA-CB | 7.80 | 128.75 | 110.80 |
| 1 | P | 328 | GLY | O-C-N | -7.80 | 110.22 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 451 | LEU | N-CA-CB | 7.80 | 126.00 | 110.40 |
| 1 | H | 385 | THR | CA-CB-CG2 | 7.80 | 123.32 | 112.40 |
| 1 | A | 51 | ASP | C-N-CA | 7.80 | 141.19 | 121.70 |
| 1 | G | 186 | GLY | CA-C-O | -7.80 | 106.57 | 120.60 |
| 1 | H | 447 | LYS | CA-CB-CG | 7.80 | 130.55 | 113.40 |
| 1 | I | 403 | ARG | CA-CB-CG | 7.80 | 130.55 | 113.40 |
| 1 | P | 76 | LYS | N-CA-CB | 7.79 | 124.63 | 110.60 |
| 1 | A | 58 | THR | C-N-CA | 7.79 | 141.18 | 121.70 |
| 1 | F | 480 | ALA | O-C-N | -7.79 | 110.23 | 122.70 |
| 1 | E | 104 | LEU | CB-CG-CD2 | 7.79 | 124.24 | 111.00 |
| 1 | G | 333 | PHE | CE1-CZ-CE2 | -7.79 | 105.98 | 120.00 |
| 1 | J | 7 | VAL | CA-CB-CG1 | -7.79 | 99.22 | 110.90 |
| 1 | M | 315 | LEU | O-C-N | 7.79 | 136.44 | 123.20 |
| 1 | D | 172 | GLU | CB-CA-C | 7.79 | 125.97 | 110.40 |
| 1 | H | 56 | VAL | CA-CB-CG1 | 7.79 | 122.58 | 110.90 |
| 1 | J | 497 | GLU | CG-CD-OE1 | 7.79 | 133.87 | 118.30 |
| 1 | H | 294 | LYS | N-CA-CB | 7.78 | 124.61 | 110.60 |
| 1 | B | 220 | SER | CA-C-O | 7.78 | 136.44 | 120.10 |
| 1 | L | 140 | CYS | CA-CB-SG | 7.78 | 128.00 | 114.00 |
| 1 | M | 69 | SER | CA-C-O | -7.78 | 103.76 | 120.10 |
| 1 | N | 158 | ILE | O-C-N | -7.78 | 110.25 | 122.70 |
| 1 | P | 305 | THR | N-CA-CB | 7.78 | 125.08 | 110.30 |
| 1 | G | 373 | ILE | O-C-N | 7.78 | 135.15 | 122.70 |
| 1 | C | 495 | ALA | CA-C-N | -7.78 | 100.09 | 117.20 |
| 1 | M | 164 | GLU | CG-CD-OE2 | 7.78 | 133.85 | 118.30 |
| 1 | M | 381 | GLY | C-N-CA | 7.78 | 138.63 | 122.30 |
| 1 | B | 353 | HIS | N-CA-CB | 7.78 | 124.60 | 110.60 |
| 1 | G | 249 | ASP | CA-CB-CG | 7.78 | 130.51 | 113.40 |
| 1 | K | 463 | GLU | CB-CA-C | 7.78 | 125.95 | 110.40 |
| 1 | F | 291 | ASP | O-C-N | -7.77 | 110.27 | 122.70 |
| 1 | F | 310 | LEU | CB-CG-CD1 | 7.77 | 124.21 | 111.00 |
| 1 | P | 118 | THR | N-CA-CB | 7.77 | 125.07 | 110.30 |
| 1 | B | 85 | GLN | CA-CB-CG | 7.77 | 130.50 | 113.40 |
| 1 | F | 496 | ALA | C-N-CA | 7.77 | 141.12 | 121.70 |
| 1 | G | 265 | GLN | C-N-CA | 7.77 | 141.12 | 121.70 |
| 1 | K | 263 | PHE | CZ-CE2-CD2 | -7.77 | 110.78 | 120.10 |
| 1 | D | 153 | ILE | O-C-N | -7.77 | 110.27 | 122.70 |
| 1 | D | 474 | THR | CA-CB-OG1 | 7.77 | 125.31 | 109.00 |
| 1 | F | 185 | GLU | OE1-CD-OE2 | -7.77 | 113.98 | 123.30 |
| 1 | K | 243 | ALA | CA-C-O | 7.76 | 136.40 | 120.10 |
| 1 | A | 307 | ILE | CA-CB-CG2 | 7.76 | 126.42 | 110.90 |
| 1 | M | 88 | GLU | C-N-CA | 7.76 | 141.10 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 471 | ARG | CG-CD-NE | 7.76 | 128.09 | 111.80 |
| 1 | E | 145 | GLN | C-N-CA | 7.76 | 141.09 | 121.70 |
| 1 | B | 471 | ARG | NE-CZ-NH2 | -7.76 | 116.42 | 120.30 |
| 1 | D | 271 | LEU | CB-CG-CD1 | 7.76 | 124.19 | 111.00 |
| 1 | O | 375 | ASP | CB-CG-OD2 | 7.76 | 125.28 | 118.30 |
| 1 | G | 245 | GLU | CB-CG-CD | 7.75 | 135.14 | 114.20 |
| 1 | P | 47 | MET | N-CA-CB | 7.75 | 124.56 | 110.60 |
| 1 | P | 100 | ALA | CB-CA-C | 7.75 | 121.73 | 110.10 |
| 1 | N | 188 | VAL | CA-CB-CG2 | 7.75 | 122.53 | 110.90 |
| 1 | P | 312 | ALA | N-CA-CB | 7.75 | 120.95 | 110.10 |
| 1 | G | 204 | ASP | CB-CG-OD2 | 7.75 | 125.27 | 118.30 |
| 1 | L | 7 | VAL | CB-CA-C | -7.75 | 96.68 | 111.40 |
| 1 | N | 159 | THR | CA-CB-CG2 | 7.75 | 123.25 | 112.40 |
| 1 | J | 349 | GLY | C-N-CA | 7.75 | 141.06 | 121.70 |
| 1 | E | 229 | ASP | CB-CG-OD2 | 7.74 | 125.27 | 118.30 |
| 1 | J | 164 | GLU | CA-C-O | -7.74 | 103.84 | 120.10 |
| 1 | M | 491 | ASP | CB-CG-OD2 | -7.74 | 111.33 | 118.30 |
| 1 | F | 72 | HIS | N-CA-CB | 7.74 | 124.53 | 110.60 |
| 1 | C | 469 | PRO | O-C-N | -7.74 | 110.32 | 122.70 |
| 1 | G | 283 | ALA | N-CA-CB | 7.74 | 120.93 | 110.10 |
| 1 | B | 301 | ALA | O-C-N | -7.74 | 110.32 | 122.70 |
| 1 | B | 19 | ASP | CA-CB-CG | 7.74 | 130.42 | 113.40 |
| 1 | G | 10 | GLU | OE1-CD-OE2 | -7.74 | 114.02 | 123.30 |
| 1 | L | 489 | ARG | NH1-CZ-NH2 | -7.74 | 110.89 | 119.40 |
| 1 | N | 438 | ARG | NE-CZ-NH2 | 7.74 | 124.17 | 120.30 |
| 1 | M | 215 | ASP | N-CA-CB | 7.73 | 124.52 | 110.60 |
| 1 | A | 187 | LYS | CB-CA-C | 7.73 | 125.86 | 110.40 |
| 1 | D | 428 | LEU | N-CA-CB | 7.73 | 125.86 | 110.40 |
| 1 | M | 241 | GLU | N-CA-CB | -7.73 | 96.69 | 110.60 |
| 1 | A | 125 | GLN | O-C-N | 7.73 | 135.06 | 122.70 |
| 1 | M | 419 | PRO | O-C-N | -7.73 | 110.33 | 122.70 |
| 1 | O | 352 | GLU | OE1-CD-OE2 | 7.73 | 132.57 | 123.30 |
| 1 | L | 69 | SER | C-N-CA | 7.72 | 141.01 | 121.70 |
| 1 | L | 201 | ALA | CB-CA-C | 7.72 | 121.69 | 110.10 |
| 1 | P | 79 | ILE | O-C-N | -7.72 | 110.34 | 122.70 |
| 1 | P | 356 | GLU | CG-CD-OE2 | -7.72 | 102.85 | 118.30 |
| 1 | D | 29 | ARG | CB-CA-C | 7.72 | 125.85 | 110.40 |
| 1 | C | 152 | LYS | CA-CB-CG | 7.72 | 130.38 | 113.40 |
| 1 | O | 14 | ARG | CD-NE-CZ | 7.72 | 134.41 | 123.60 |
| 1 | M | 11 | ASN | C-N-CA | 7.72 | 140.99 | 121.70 |
| 1 | K | 228 | THR | O-C-N | -7.72 | 110.35 | 122.70 |
| 1 | B | 265 | GLN | O-C-N | -7.71 | 110.36 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 285 | ARG | CA-CB-CG | 7.71 | 130.37 | 113.40 |
| 1 | H | 114 | ASN | CA-C-O | -7.71 | 103.90 | 120.10 |
| 1 | K | 65 | LEU | O-C-N | 7.71 | 135.04 | 122.70 |
| 1 | K | 75 | ALA | O-C-N | -7.71 | 110.36 | 122.70 |
| 1 | L | 347 | ILE | O-C-N | -7.71 | 110.36 | 122.70 |
| 1 | O | 257 | SER | CA-C-O | 7.71 | 136.30 | 120.10 |
| 1 | J | 255 | LYS | O-C-N | -7.71 | 110.36 | 122.70 |
| 1 | L | 44 | MET | CB-CG-SD | 7.71 | 135.54 | 112.40 |
| 1 | P | 348 | ARG | CB-CA-C | 7.71 | 125.82 | 110.40 |
| 1 | F | 393 | LEU | CB-CA-C | 7.71 | 124.85 | 110.20 |
| 1 | J | 302 | ASN | CB-CA-C | 7.71 | 125.82 | 110.40 |
| 1 | P | 152 | LYS | O-C-N | -7.71 | 110.36 | 122.70 |
| 1 | C | 45 | ASP | CB-CG-OD2 | -7.71 | 111.36 | 118.30 |
| 1 | E | 77 | MET | CB-CA-C | 7.71 | 125.81 | 110.40 |
| 1 | L | 16 | MET | CA-CB-CG | -7.71 | 100.20 | 113.30 |
| 1 | O | 299 | THR | N-CA-CB | 7.71 | 124.94 | 110.30 |
| 1 | P | 308 | LYS | C-N-CA | 7.71 | 140.97 | 121.70 |
| 1 | C | 287 | VAL | CA-CB-CG1 | 7.71 | 122.46 | 110.90 |
| 1 | I | 50 | ASP | OD1-CG-OD2 | -7.71 | 108.66 | 123.30 |
| 1 | K | 460 | ASP | CB-CG-OD1 | -7.71 | 111.37 | 118.30 |
| 1 | A | 10 | GLU | N-CA-C | 7.70 | 131.79 | 111.00 |
| 1 | M | 270 | ASP | CB-CG-OD1 | 7.70 | 125.23 | 118.30 |
| 1 | P | 34 | THR | N-CA-CB | 7.70 | 124.93 | 110.30 |
| 1 | H | 229 | ASP | CB-CG-OD1 | 7.70 | 125.23 | 118.30 |
| 1 | K | 12 | MET | C-N-CA | 7.70 | 140.94 | 121.70 |
| 1 | L | 375 | ASP | OD1-CG-OD2 | -7.70 | 108.67 | 123.30 |
| 1 | J | 49 | VAL | CA-C-N | 7.70 | 134.13 | 117.20 |
| 1 | B | 87 | LYS | C-N-CA | 7.69 | 140.93 | 121.70 |
| 1 | K | 474 | THR | N-CA-CB | 7.69 | 124.92 | 110.30 |
| 1 | H | 106 | LYS | O-C-N | 7.69 | 135.01 | 122.70 |
| 1 | N | 69 | SER | CA-C-N | 7.69 | 134.12 | 117.20 |
| 1 | D | 278 | LYS | O-C-N | -7.69 | 110.39 | 122.70 |
| 1 | F | 124 | TYR | CG-CD1-CE1 | 7.69 | 127.45 | 121.30 |
| 1 | H | 51 | ASP | CB-CG-OD2 | -7.69 | 111.38 | 118.30 |
| 1 | H | 264 | CYS | O-C-N | 7.69 | 135.01 | 122.70 |
| 1 | N | 39 | LEU | CB-CG-CD1 | 7.69 | 124.07 | 111.00 |
| 1 | M | 348 | ARG | NE-CZ-NH1 | -7.69 | 116.46 | 120.30 |
| 1 | C | 123 | GLY | O-C-N | -7.69 | 110.40 | 122.70 |
| 1 | F | 294 | LYS | N-CA-CB | 7.69 | 124.44 | 110.60 |
| 1 | A | 333 | PHE | CB-CG-CD2 | 7.68 | 126.18 | 120.80 |
| 1 | G | 10 | GLU | CA-CB-CG | 7.68 | 130.31 | 113.40 |
| 1 | G | 88 | GLU | CA-C-N | 7.68 | 134.11 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 339 | HIS | CA-CB-CG | 7.68 | 126.66 | 113.60 |
| 1 | N | 302 | ASN | OD1-CG-ND2 | -7.68 | 104.23 | 121.90 |
| 1 | A | 10 | GLU | O-C-N | -7.68 | 110.41 | 122.70 |
| 1 | A | 137 | THR | CA-CB-CG2 | -7.68 | 101.65 | 112.40 |
| 1 | F | 216 | LYS | O-C-N | -7.68 | 110.41 | 122.70 |
| 1 | I | 178 | VAL | CA-CB-CG1 | -7.68 | 99.38 | 110.90 |
| 1 | M | 243 | ALA | N-CA-C | 7.68 | 131.73 | 111.00 |
| 1 | P | 466 | VAL | CG1-CB-CG2 | -7.68 | 98.62 | 110.90 |
| 1 | F | 178 | VAL | CA-CB-CG1 | 7.68 | 122.41 | 110.90 |
| 1 | F | 185 | GLU | CG-CD-OE1 | 7.68 | 133.65 | 118.30 |
| 1 | I | 223 | MET | CA-C-N | 7.68 | 138.59 | 117.10 |
| 1 | B | 330 | SER | N-CA-CB | 7.67 | 122.01 | 110.50 |
| 1 | C | 145 | GLN | N-CA-CB | 7.67 | 124.42 | 110.60 |
| 1 | F | 64 | ILE | O-C-N | -7.67 | 110.42 | 122.70 |
| 1 | K | 362 | VAL | O-C-N | -7.67 | 110.42 | 122.70 |
| 1 | M | 180 | ALA | CB-CA-C | 7.67 | 121.61 | 110.10 |
| 1 | F | 356 | GLU | O-C-N | 7.67 | 134.98 | 122.70 |
| 1 | J | 470 | LEU | O-C-N | -7.67 | 110.43 | 122.70 |
| 1 | A | 275 | TYR | CG-CD2-CE2 | -7.67 | 115.17 | 121.30 |
| 1 | J | 15 | TYR | CG-CD1-CE1 | -7.67 | 115.17 | 121.30 |
| 1 | J | 98 | VAL | N-CA-CB | 7.67 | 128.37 | 111.50 |
| 1 | H | 398 | GLU | C-N-CA | 7.66 | 138.39 | 122.30 |
| 1 | J | 66 | ARG | NE-CZ-NH2 | -7.66 | 116.47 | 120.30 |
| 1 | B | 424 | GLU | O-C-N | 7.66 | 134.96 | 122.70 |
| 1 | E | 49 | VAL | CA-CB-CG1 | -7.66 | 99.41 | 110.90 |
| 1 | H | 410 | ALA | N-CA-CB | 7.66 | 120.83 | 110.10 |
| 1 | O | 272 | ALA | C-N-CA | 7.66 | 140.85 | 121.70 |
| 1 | F | 183 | ASP | CA-CB-CG | 7.66 | 130.25 | 113.40 |
| 1 | O | 219 | VAL | CG1-CB-CG2 | 7.66 | 123.16 | 110.90 |
| 1 | G | 211 | GLY | CA-C-O | -7.66 | 106.82 | 120.60 |
| 1 | G | 329 | ASP | O-C-N | -7.66 | 110.45 | 122.70 |
| 1 | J | 135 | LEU | CB-CG-CD2 | 7.66 | 124.02 | 111.00 |
| 1 | G | 221 | ALA | CA-C-O | -7.66 | 104.03 | 120.10 |
| 1 | H | 179 | SER | O-C-N | -7.66 | 110.45 | 122.70 |
| 1 | J | 359 | ALA | CA-C-O | -7.66 | 104.02 | 120.10 |
| 1 | K | 489 | ARG | N-CA-CB | 7.66 | 124.38 | 110.60 |
| 1 | P | 282 | VAL | CA-CB-CG2 | 7.66 | 122.38 | 110.90 |
| 1 | N | 45 | ASP | CB-CG-OD2 | -7.65 | 111.41 | 118.30 |
| 1 | D | 445 | GLY | C-N-CA | 7.65 | 140.83 | 121.70 |
| 1 | K | 489 | ARG | O-C-N | -7.65 | 110.46 | 122.70 |
| 1 | P | 425 | ASN | O-C-N | -7.65 | 110.46 | 122.70 |
| 1 | B | 41 | PRO | O-C-N | 7.65 | 134.94 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 8 | LEU | CA-CB-CG | 7.65 | 132.89 | 115.30 |
| 1 | C | 360 | ARG | N-CA-CB | 7.65 | 124.37 | 110.60 |
| 1 | J | 307 | ILE | CA-CB-CG1 | 7.65 | 125.53 | 111.00 |
| 1 | K | 426 | ALA | CA-C-O | -7.65 | 104.04 | 120.10 |
| 1 | L | 483 | SER | N-CA-CB | 7.65 | 121.97 | 110.50 |
| 1 | M | 150 | LEU | CA-CB-CG | 7.65 | 132.89 | 115.30 |
| 1 | P | 403 | ARG | NH1-CZ-NH2 | 7.65 | 127.81 | 119.40 |
| 1 | M | 497 | GLU | OE1-CD-OE2 | -7.64 | 114.13 | 123.30 |
| 1 | P | 187 | LYS | N-CA-CB | 7.64 | 124.36 | 110.60 |
| 1 | G | 14 | ARG | O-C-N | -7.64 | 110.47 | 122.70 |
| 1 | I | 131 | ALA | N-CA-CB | 7.64 | 120.80 | 110.10 |
| 1 | J | 77 | MET | CA-CB-CG | 7.64 | 126.29 | 113.30 |
| 1 | P | 42 | LYS | CB-CA-C | 7.64 | 125.68 | 110.40 |
| 1 | A | 10 | GLU | CA-C-O | -7.64 | 104.06 | 120.10 |
| 1 | A | 394 | ARG | NE-CZ-NH2 | -7.64 | 116.48 | 120.30 |
| 1 | G | 286 | ARG | CD-NE-CZ | 7.64 | 134.29 | 123.60 |
| 1 | H | 148 | GLU | N-CA-CB | 7.64 | 124.35 | 110.60 |
| 1 | J | 491 | ASP | CB-CG-OD1 | 7.64 | 125.17 | 118.30 |
| 1 | K | 10 | GLU | CG-CD-OE2 | -7.64 | 103.02 | 118.30 |
| 1 | B | 307 | ILE | O-C-N | -7.64 | 110.48 | 122.70 |
| 1 | M | 425 | ASN | C-N-CA | 7.63 | 140.78 | 121.70 |
| 1 | B | 136 | LYS | CB-CG-CD | 7.63 | 131.45 | 111.60 |
| 1 | I | 63 | THR | O-C-N | 7.63 | 134.91 | 122.70 |
| 1 | L | 290 | SER | CA-C-O | -7.63 | 104.07 | 120.10 |
| 1 | P | 421 | THR | N-CA-CB | 7.63 | 124.80 | 110.30 |
| 1 | C | 276 | LEU | CA-CB-CG | 7.63 | 132.85 | 115.30 |
| 1 | P | 487 | LEU | C-N-CA | 7.63 | 140.78 | 121.70 |
| 1 | A | 353 | HIS | O-C-N | 7.63 | 134.91 | 122.70 |
| 1 | H | 224 | PRO | N-CA-C | 7.63 | 131.94 | 112.10 |
| 1 | M | 21 | GLN | CG-CD-OE1 | 7.63 | 136.86 | 121.60 |
| 1 | G | 253 | GLU | CA-CB-CG | 7.63 | 130.18 | 113.40 |
| 1 | L | 8 | LEU | CA-CB-CG | 7.63 | 132.85 | 115.30 |
| 1 | E | 141 | GLU | O-C-N | 7.63 | 134.90 | 122.70 |
| 1 | O | 254 | ILE | CA-CB-CG1 | 7.63 | 125.49 | 111.00 |
| 1 | K | 401 | SER | N-CA-CB | 7.62 | 121.94 | 110.50 |
| 1 | C | 166 | ALA | CB-CA-C | 7.62 | 121.53 | 110.10 |
| 1 | M | 94 | THR | CA-CB-CG2 | 7.62 | 123.07 | 112.40 |
| 1 | A | 497 | GLU | N-CA-CB | 7.62 | 124.32 | 110.60 |
| 1 | C | 279 | GLU | C-N-CA | 7.62 | 138.31 | 122.30 |
| 1 | D | 285 | ARG | NE-CZ-NH2 | -7.62 | 116.49 | 120.30 |
| 1 | E | 258 | GLY | C-N-CA | 7.62 | 140.75 | 121.70 |
| 1 | L | 19 | ASP | CA-CB-CG | 7.62 | 130.17 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 428 | LEU | CA-C-O | -7.62 | 104.10 | 120.10 |
| 1 | B | 429 | ASP | CB-CA-C | 7.62 | 125.64 | 110.40 |
| 1 | F | 429 | ASP | N-CA-CB | 7.62 | 124.31 | 110.60 |
| 1 | J | 337 | CYS | N-CA-CB | 7.62 | 124.31 | 110.60 |
| 1 | K | 180 | ALA | CB-CA-C | 7.62 | 121.53 | 110.10 |
| 1 | P | 51 | ASP | CB-CG-OD2 | 7.62 | 125.16 | 118.30 |
| 1 | J | 364 | ASP | O-C-N | -7.62 | 110.52 | 122.70 |
| 1 | B | 354 | VAL | CA-CB-CG1 | 7.61 | 122.32 | 110.90 |
| 1 | D | 205 | ASP | O-C-N | -7.61 | 110.52 | 122.70 |
| 1 | J | 379 | VAL | N-CA-CB | 7.61 | 128.25 | 111.50 |
| 1 | K | 79 | ILE | CA-CB-CG2 | 7.61 | 126.13 | 110.90 |
| 1 | O | 315 | LEU | CB-CG-CD1 | 7.61 | 123.94 | 111.00 |
| 1 | I | 366 | VAL | O-C-N | -7.61 | 110.26 | 123.20 |
| 1 | J | 305 | THR | C-N-CA | 7.61 | 140.73 | 121.70 |
| 1 | L | 302 | ASN | CB-CA-C | 7.61 | 125.62 | 110.40 |
| 1 | O | 128 | ALA | N-CA-CB | 7.61 | 120.76 | 110.10 |
| 1 | P | 126 | ALA | O-C-N | -7.61 | 110.52 | 122.70 |
| 1 | A | 444 | ASN | CB-CG-OD1 | 7.61 | 136.82 | 121.60 |
| 1 | G | 50 | ASP | CB-CG-OD1 | -7.61 | 111.45 | 118.30 |
| 1 | H | 205 | ASP | N-CA-CB | 7.61 | 124.30 | 110.60 |
| 1 | C | 388 | GLU | OE1-CD-OE2 | -7.61 | 114.17 | 123.30 |
| 1 | I | 127 | ALA | O-C-N | 7.61 | 134.87 | 122.70 |
| 1 | A | 129 | GLN | N-CA-CB | 7.61 | 124.29 | 110.60 |
| 1 | D | 71 | GLU | OE1-CD-OE2 | 7.61 | 132.43 | 123.30 |
| 1 | F | 354 | VAL | CA-CB-CG2 | 7.61 | 122.31 | 110.90 |
| 1 | N | 453 | VAL | CG1-CB-CG2 | 7.61 | 123.07 | 110.90 |
| 1 | A | 148 | GLU | CG-CD-OE2 | 7.61 | 133.51 | 118.30 |
| 1 | B | 46 | LYS | N-CA-CB | 7.61 | 124.29 | 110.60 |
| 1 | B | 494 | ILE | CA-CB-CG1 | 7.61 | 125.45 | 111.00 |
| 1 | L | 39 | LEU | CB-CG-CD2 | 7.61 | 123.93 | 111.00 |
| 1 | E | 267 | GLY | CA-C-O | -7.60 | 106.91 | 120.60 |
| 1 | F | 301 | ALA | CB-CA-C | -7.60 | 98.69 | 110.10 |
| 1 | G | 70 | VAL | O-C-N | -7.60 | 110.53 | 122.70 |
| 1 | K | 311 | SER | O-C-N | -7.60 | 110.53 | 122.70 |
| 1 | D | 454 | PHE | CD1-CG-CD2 | -7.60 | 108.42 | 118.30 |
| 1 | M | 63 | THR | C-N-CA | 7.60 | 140.71 | 121.70 |
| 1 | G | 245 | GLU | CG-CD-OE2 | 7.60 | 133.50 | 118.30 |
| 1 | I | 116 | HIS | CA-CB-CG | -7.60 | 100.68 | 113.60 |
| 1 | J | 91 | ASP | CA-CB-CG | 7.60 | 130.12 | 113.40 |
| 1 | J | 277 | ALA | N-CA-CB | -7.60 | 99.46 | 110.10 |
| 1 | L | 377 | ARG | NH1-CZ-NH2 | -7.60 | 111.04 | 119.40 |
| 1 | C | 240 | GLU | N-CA-CB | 7.60 | 124.28 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 308 | LYS | CA-C-O | -7.60 | 104.15 | 120.10 |
| 1 | I | 424 | GLU | OE1-CD-OE2 | -7.60 | 114.18 | 123.30 |
| 1 | K | 229 | ASP | N-CA-CB | 7.60 | 124.28 | 110.60 |
| 1 | L | 254 | ILE | CA-C-O | -7.60 | 104.15 | 120.10 |
| 1 | K | 348 | ARG | NH1-CZ-NH2 | -7.60 | 111.04 | 119.40 |
| 1 | I | 249 | ASP | O-C-N | 7.59 | 134.85 | 122.70 |
| 1 | J | 140 | CYS | CB-CA-C | 7.59 | 125.59 | 110.40 |
| 1 | J | 224 | PRO | O-C-N | 7.59 | 134.85 | 122.70 |
| 1 | L | 453 | VAL | CA-CB-CG1 | -7.59 | 99.51 | 110.90 |
| 1 | M | 31 | ILE | CB-CA-C | 7.59 | 126.79 | 111.60 |
| 1 | P | 263 | PHE | CG-CD1-CE1 | -7.59 | 112.45 | 120.80 |
| 1 | M | 190 | LYS | N-CA-C | 7.59 | 131.50 | 111.00 |
| 1 | G | 330 | SER | CB-CA-C | -7.59 | 95.67 | 110.10 |
| 1 | D | 201 | ALA | O-C-N | -7.59 | 110.56 | 122.70 |
| 1 | E | 73 | PRO | N-CA-CB | 7.59 | 112.41 | 103.30 |
| 1 | F | 116 | HIS | CA-CB-CG | 7.59 | 126.50 | 113.60 |
| 1 | I | 356 | GLU | CB-CA-C | 7.59 | 125.58 | 110.40 |
| 1 | I | 415 | LEU | N-CA-CB | 7.59 | 125.58 | 110.40 |
| 1 | K | 243 | ALA | N-CA-C | 7.59 | 131.49 | 111.00 |
| 1 | O | 270 | ASP | CB-CG-OD2 | 7.59 | 125.13 | 118.30 |
| 1 | J | 187 | LYS | CB-CA-C | 7.59 | 125.57 | 110.40 |
| 1 | O | 416 | GLU | CG-CD-OE1 | -7.58 | 103.14 | 118.30 |
| 1 | P | 7 | VAL | N-CA-CB | 7.58 | 128.18 | 111.50 |
| 1 | A | 69 | SER | C-N-CA | 7.58 | 140.65 | 121.70 |
| 1 | B | 168 | GLU | CG-CD-OE1 | 7.58 | 133.46 | 118.30 |
| 1 | L | 377 | ARG | CA-C-O | 7.58 | 136.02 | 120.10 |
| 1 | A | 48 | LEU | N-CA-CB | 7.58 | 125.56 | 110.40 |
| 1 | B | 10 | GLU | CB-CG-CD | 7.58 | 134.66 | 114.20 |
| 1 | B | 95 | THR | O-C-N | -7.58 | 110.58 | 122.70 |
| 1 | L | 377 | ARG | CG-CD-NE | 7.58 | 127.71 | 111.80 |
| 1 | O | 441 | HIS | CA-CB-CG | 7.58 | 126.48 | 113.60 |
| 1 | C | 24 | ASN | OD1-CG-ND2 | 7.57 | 139.32 | 121.90 |
| 1 | L | 94 | THR | O-C-N | -7.57 | 110.58 | 122.70 |
| 1 | O | 80 | GLU | OE1-CD-OE2 | -7.57 | 114.21 | 123.30 |
| 1 | P | 420 | ARG | NE-CZ-NH2 | 7.57 | 124.09 | 120.30 |
| 1 | A | 163 | ALA | CB-CA-C | -7.57 | 98.74 | 110.10 |
| 1 | A | 167 | LYS | CB-CG-CD | 7.57 | 131.29 | 111.60 |
| 1 | E | 114 | ASN | CB-CG-ND2 | 7.57 | 134.87 | 116.70 |
| 1 | I | 41 | PRO | CA-N-CD | -7.57 | 100.90 | 111.50 |
| 1 | J | 454 | PHE | CD1-CG-CD2 | 7.57 | 128.14 | 118.30 |
| 1 | C | 18 | ARG | O-C-N | -7.57 | 110.59 | 122.70 |
| 1 | L | 340 | PRO | N-CA-CB | -7.57 | 94.22 | 103.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 324 | ARG | CA-C-O | -7.57 | 104.20 | 120.10 |
| 1 | A | 268 | ILE | N-CA-CB | 7.57 | 128.21 | 110.80 |
| 1 | C | 331 | MET | CA-CB-CG | 7.57 | 126.17 | 113.30 |
| 1 | D | 67 | GLU | CG-CD-OE1 | -7.57 | 103.16 | 118.30 |
| 1 | D | 290 | SER | N-CA-CB | 7.57 | 121.85 | 110.50 |
| 1 | O | 139 | ALA | N-CA-CB | 7.57 | 120.69 | 110.10 |
| 1 | P | 345 | MET | N-CA-CB | -7.57 | 96.98 | 110.60 |
| 1 | C | 455 | THR | CA-C-O | -7.56 | 104.22 | 120.10 |
| 1 | G | 22 | ARG | CD-NE-CZ | 7.56 | 134.19 | 123.60 |
| 1 | O | 242 | THR | N-CA-CB | 7.56 | 124.67 | 110.30 |
| 1 | F | 309 | ASP | CB-CG-OD1 | 7.56 | 125.11 | 118.30 |
| 1 | G | 349 | GLY | O-C-N | 7.56 | 134.80 | 122.70 |
| 1 | I | 399 | GLY | CA-C-O | -7.56 | 106.99 | 120.60 |
| 1 | K | 406 | LEU | O-C-N | -7.56 | 110.60 | 122.70 |
| 1 | L | 245 | GLU | OE1-CD-OE2 | -7.56 | 114.23 | 123.30 |
| 1 | E | 31 | ILE | CB-CA-C | 7.56 | 126.72 | 111.60 |
| 1 | G | 431 | ILE | CA-C-O | 7.56 | 135.98 | 120.10 |
| 1 | A | 272 | ALA | O-C-N | -7.56 | 110.61 | 122.70 |
| 1 | P | 298 | ALA | C-N-CA | 7.56 | 140.60 | 121.70 |
| 1 | B | 361 | ALA | N-CA-CB | 7.56 | 120.68 | 110.10 |
| 1 | G | 191 | ASP | N-CA-C | 7.56 | 131.41 | 111.00 |
| 1 | H | 454 | PHE | CD1-CE1-CZ | -7.56 | 111.03 | 120.10 |
| 1 | I | 18 | ARG | CB-CA-C | 7.56 | 125.52 | 110.40 |
| 1 | L | 58 | THR | CA-CB-CG2 | -7.56 | 101.82 | 112.40 |
| 1 | O | 146 | ASP | OD1-CG-OD2 | -7.56 | 108.94 | 123.30 |
| 1 | C | 304 | ILE | C-N-CA | 7.56 | 140.59 | 121.70 |
| 1 | N | 495 | ALA | CA-C-N | -7.56 | 100.58 | 117.20 |
| 1 | B | 420 | ARG | CD-NE-CZ | -7.55 | 113.03 | 123.60 |
| 1 | D | 31 | ILE | CA-CB-CG1 | 7.55 | 125.35 | 111.00 |
| 1 | K | 124 | TYR | CB-CG-CD2 | 7.55 | 125.53 | 121.00 |
| 1 | D | 219 | VAL | CG1-CB-CG2 | 7.55 | 122.98 | 110.90 |
| 1 | M | 430 | ALA | N-CA-CB | 7.55 | 120.67 | 110.10 |
| 1 | P | 129 | GLN | N-CA-CB | 7.55 | 124.19 | 110.60 |
| 1 | N | 50 | ASP | CA-C-N | -7.55 | 100.58 | 117.20 |
| 1 | B | 224 | PRO | N-CA-CB | 7.55 | 112.36 | 103.30 |
| 1 | D | 29 | ARG | NE-CZ-NH2 | -7.55 | 116.53 | 120.30 |
| 1 | F | 474 | THR | O-C-N | -7.55 | 110.62 | 122.70 |
| 1 | M | 363 | ASP | CB-CG-OD1 | 7.55 | 125.09 | 118.30 |
| 1 | O | 105 | ARG | NE-CZ-NH2 | 7.55 | 124.07 | 120.30 |
| 1 | J | 188 | VAL | N-CA-C | 7.55 | 131.37 | 111.00 |
| 1 | K | 216 | LYS | O-C-N | -7.54 | 110.63 | 122.70 |
| 1 | K | 240 | GLU | N-CA-CB | 7.54 | 124.18 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 38 | THR | CA-CB-CG2 | -7.54 | 101.84 | 112.40 |
| 1 | C | 338 | LYS | O-C-N | 7.54 | 134.77 | 122.70 |
| 1 | D | 102 | GLU | OE1-CD-OE2 | 7.54 | 132.35 | 123.30 |
| 1 | A | 432 | GLU | OE1-CD-OE2 | 7.54 | 132.35 | 123.30 |
| 1 | I | 131 | ALA | CB-CA-C | 7.54 | 121.41 | 110.10 |
| 1 | K | 360 | ARG | N-CA-CB | 7.54 | 124.17 | 110.60 |
| 1 | D | 169 | LYS | CA-CB-CG | 7.54 | 129.99 | 113.40 |
| 1 | F | 178 | VAL | N-CA-C | 7.54 | 131.35 | 111.00 |
| 1 | M | 353 | HIS | O-C-N | -7.54 | 110.64 | 122.70 |
| 1 | O | 295 | LEU | CA-CB-CG | 7.54 | 132.63 | 115.30 |
| 1 | H | 470 | LEU | CB-CG-CD1 | 7.54 | 123.81 | 111.00 |
| 1 | J | 10 | GLU | OE1-CD-OE2 | -7.54 | 114.26 | 123.30 |
| 1 | O | 218 | ARG | NH1-CZ-NH2 | -7.54 | 111.11 | 119.40 |
| 1 | H | 374 | GLU | C-N-CA | 7.53 | 140.53 | 121.70 |
| 1 | B | 359 | ALA | N-CA-CB | 7.53 | 120.64 | 110.10 |
| 1 | F | 117 | PRO | N-CA-CB | -7.53 | 94.26 | 103.30 |
| 1 | M | 446 | ASN | C-N-CA | 7.53 | 140.53 | 121.70 |
| 1 | N | 205 | ASP | OD1-CG-OD2 | -7.53 | 108.99 | 123.30 |
| 1 | P | 225 | LYS | O-C-N | -7.53 | 110.65 | 122.70 |
| 1 | P | 479 | SER | N-CA-CB | -7.53 | 99.21 | 110.50 |
| 1 | B | 404 | GLU | CA-CB-CG | 7.53 | 129.96 | 113.40 |
| 1 | G | 154 | ALA | N-CA-CB | -7.53 | 99.56 | 110.10 |
| 1 | K | 470 | LEU | CB-CG-CD2 | 7.53 | 123.79 | 111.00 |
| 1 | N | 48 | LEU | O-C-N | 7.53 | 134.74 | 122.70 |
| 1 | G | 165 | LYS | CD-CE-NZ | 7.52 | 129.00 | 111.70 |
| 1 | N | 89 | VAL | O-C-N | -7.52 | 110.41 | 123.20 |
| 1 | O | 222 | GLN | CG-CD-OE1 | 7.52 | 136.65 | 121.60 |
| 1 | E | 474 | THR | CA-CB-OG1 | 7.52 | 124.80 | 109.00 |
| 1 | A | 414 | ALA | N-CA-CB | 7.52 | 120.63 | 110.10 |
| 1 | B | 15 | TYR | N-CA-CB | 7.52 | 124.14 | 110.60 |
| 1 | E | 101 | GLY | O-C-N | -7.52 | 110.67 | 122.70 |
| 1 | A | 22 | ARG | NE-CZ-NH2 | -7.52 | 116.54 | 120.30 |
| 1 | A | 78 | LEU | CB-CA-C | 7.52 | 124.49 | 110.20 |
| 1 | I | 458 | VAL | CA-CB-CG2 | 7.52 | 122.18 | 110.90 |
| 1 | F | 456 | GLY | N-CA-C | 7.52 | 131.89 | 113.10 |
| 1 | N | 16 | MET | CA-C-N | 7.52 | 131.24 | 116.20 |
| 1 | G | 9 | PRO | CA-C-O | -7.52 | 102.16 | 120.20 |
| 1 | A | 185 | GLU | CG-CD-OE1 | -7.51 | 103.27 | 118.30 |
| 1 | C | 323 | GLU | CG-CD-OE2 | -7.51 | 103.27 | 118.30 |
| 1 | H | 87 | LYS | CD-CE-NZ | 7.51 | 128.99 | 111.70 |
| 1 | J | 39 | LEU | CB-CG-CD1 | 7.51 | 123.77 | 111.00 |
| 1 | J | 146 | ASP | CB-CG-OD1 | -7.51 | 111.54 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 10 | GLU | CG-CD-OE1 | 7.51 | 133.32 | 118.30 |
| 1 | N | 42 | LYS | CD-CE-NZ | 7.51 | 128.97 | 111.70 |
| 1 | O | 453 | VAL | CG1-CB-CG2 | -7.51 | 98.88 | 110.90 |
| 1 | H | 484 | THR | CA-CB-CG2 | -7.51 | 101.89 | 112.40 |
| 1 | K | 69 | SER | C-N-CA | 7.51 | 140.47 | 121.70 |
| 1 | M | 128 | ALA | N-CA-CB | 7.51 | 120.61 | 110.10 |
| 1 | O | 43 | GLY | O-C-N | 7.51 | 134.72 | 122.70 |
| 1 | I | 215 | ASP | CB-CG-OD1 | 7.51 | 125.06 | 118.30 |
| 1 | N | 352 | GLU | CB-CA-C | 7.51 | 125.42 | 110.40 |
| 1 | A | 413 | ASP | CB-CG-OD1 | 7.51 | 125.06 | 118.30 |
| 1 | D | 233 | ALA | CB-CA-C | -7.51 | 98.84 | 110.10 |
| 1 | I | 69 | SER | O-C-N | -7.51 | 110.69 | 122.70 |
| 1 | H | 338 | LYS | C-N-CA | 7.50 | 140.46 | 121.70 |
| 1 | J | 129 | GLN | N-CA-CB | 7.50 | 124.11 | 110.60 |
| 1 | P | 33 | GLU | OE1-CD-OE2 | -7.50 | 114.29 | 123.30 |
| 1 | A | 72 | HIS | N-CA-CB | 7.50 | 124.11 | 110.60 |
| 1 | A | 12 | MET | C-N-CA | 7.50 | 140.45 | 121.70 |
| 1 | F | 333 | PHE | CG-CD2-CE2 | -7.50 | 112.55 | 120.80 |
| 1 | K | 210 | LYS | N-CA-CB | 7.50 | 124.10 | 110.60 |
| 1 | L | 128 | ALA | N-CA-CB | 7.50 | 120.60 | 110.10 |
| 1 | J | 221 | ALA | O-C-N | 7.50 | 134.70 | 122.70 |
| 1 | K | 60 | ASP | CB-CG-OD1 | 7.50 | 125.05 | 118.30 |
| 1 | D | 191 | ASP | CB-CG-OD1 | -7.49 | 111.56 | 118.30 |
| 1 | H | 141 | GLU | N-CA-CB | -7.49 | 97.11 | 110.60 |
| 1 | C | 246 | MET | N-CA-CB | 7.49 | 124.08 | 110.60 |
| 1 | H | 425 | ASN | N-CA-CB | 7.49 | 124.08 | 110.60 |
| 1 | G | 140 | CYS | N-CA-CB | 7.49 | 124.08 | 110.60 |
| 1 | J | 146 | ASP | CA-CB-CG | 7.49 | 129.87 | 113.40 |
| 1 | M | 16 | MET | CA-C-O | -7.49 | 104.38 | 120.10 |
| 1 | O | 364 | ASP | CB-CG-OD2 | 7.49 | 125.04 | 118.30 |
| 1 | G | 180 | ALA | O-C-N | -7.49 | 110.72 | 122.70 |
| 1 | K | 493 | VAL | CG1-CB-CG2 | 7.49 | 122.88 | 110.90 |
| 1 | O | 352 | GLU | CB-CA-C | 7.49 | 125.37 | 110.40 |
| 1 | A | 279 | GLU | N-CA-CB | 7.48 | 124.07 | 110.60 |
| 1 | D | 309 | ASP | CB-CG-OD2 | -7.48 | 111.57 | 118.30 |
| 1 | I | 52 | LEU | O-C-N | -7.48 | 110.48 | 123.20 |
| 1 | J | 115 | VAL | O-C-N | -7.48 | 110.73 | 122.70 |
| 1 | K | 52 | LEU | CA-CB-CG | 7.48 | 132.51 | 115.30 |
| 1 | F | 251 | VAL | CA-CB-CG1 | -7.48 | 99.68 | 110.90 |
| 1 | L | 243 | ALA | O-C-N | -7.48 | 110.73 | 122.70 |
| 1 | E | 178 | VAL | CA-CB-CG1 | 7.48 | 122.12 | 110.90 |
| 1 | I | 215 | ASP | O-C-N | -7.48 | 110.73 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 394 | ARG | NE-CZ-NH1 | 7.48 | 124.04 | 120.30 |
| 1 | B | 377 | ARG | CD-NE-CZ | 7.48 | 134.07 | 123.60 |
| 1 | J | 40 | GLY | O-C-N | 7.48 | 135.31 | 121.10 |
| 1 | P | 38 | THR | CA-CB-CG2 | -7.48 | 101.93 | 112.40 |
| 1 | F | 280 | GLY | C-N-CA | 7.48 | 140.39 | 121.70 |
| 1 | G | 327 | SER | O-C-N | -7.48 | 110.49 | 123.20 |
| 1 | A | 438 | ARG | NH1-CZ-NH2 | -7.47 | 111.18 | 119.40 |
| 1 | G | 322 | GLU | CA-CB-CG | 7.47 | 129.84 | 113.40 |
| 1 | A | 61 | GLY | O-C-N | -7.47 | 110.75 | 122.70 |
| 1 | A | 452 | ASN | CB-CG-OD1 | -7.47 | 106.66 | 121.60 |
| 1 | G | 57 | VAL | CA-C-O | -7.47 | 104.41 | 120.10 |
| 1 | H | 382 | GLY | CA-C-O | -7.47 | 107.16 | 120.60 |
| 1 | J | 13 | LYS | N-CA-CB | -7.47 | 97.16 | 110.60 |
| 1 | J | 348 | ARG | CD-NE-CZ | -7.47 | 113.14 | 123.60 |
| 1 | A | 49 | VAL | CG1-CB-CG2 | 7.47 | 122.85 | 110.90 |
| 1 | N | 24 | ASN | O-C-N | 7.47 | 134.65 | 122.70 |
| 1 | F | 66 | ARG | CG-CD-NE | -7.46 | 96.12 | 111.80 |
| 1 | J | 203 | ILE | O-C-N | 7.46 | 134.64 | 122.70 |
| 1 | B | 395 | GLU | C-N-CA | 7.46 | 140.36 | 121.70 |
| 1 | D | 419 | PRO | N-CA-CB | -7.46 | 94.34 | 103.30 |
| 1 | H | 417 | VAL | CA-CB-CG1 | -7.46 | 99.70 | 110.90 |
| 1 | H | 166 | ALA | O-C-N | -7.46 | 110.76 | 122.70 |
| 1 | L | 229 | ASP | N-CA-CB | 7.46 | 124.03 | 110.60 |
| 1 | P | 458 | VAL | CA-CB-CG2 | 7.46 | 122.09 | 110.90 |
| 1 | A | 168 | GLU | O-C-N | 7.46 | 134.64 | 122.70 |
| 1 | H | 27 | ALA | O-C-N | 7.46 | 135.88 | 123.20 |
| 1 | D | 10 | GLU | N-CA-CB | 7.46 | 124.03 | 110.60 |
| 1 | D | 479 | SER | N-CA-CB | 7.46 | 121.69 | 110.50 |
| 1 | G | 42 | LYS | CD-CE-NZ | 7.46 | 128.85 | 111.70 |
| 1 | H | 129 | GLN | CB-CA-C | 7.46 | 125.32 | 110.40 |
| 1 | B | 51 | ASP | O-C-N | 7.46 | 134.63 | 122.70 |
| 1 | N | 493 | VAL | CA-CB-CG1 | 7.46 | 122.09 | 110.90 |
| 1 | P | 229 | ASP | O-C-N | -7.46 | 110.77 | 122.70 |
| 1 | B | 119 | ILE | O-C-N | -7.46 | 110.77 | 122.70 |
| 1 | J | 315 | LEU | O-C-N | -7.46 | 110.53 | 123.20 |
| 1 | L | 484 | THR | CA-CB-CG2 | -7.46 | 101.96 | 112.40 |
| 1 | E | 346 | LEU | CB-CG-CD2 | 7.45 | 123.67 | 111.00 |
| 1 | G | 229 | ASP | CB-CG-OD2 | 7.45 | 125.01 | 118.30 |
| 1 | L | 495 | ALA | N-CA-CB | 7.45 | 120.53 | 110.10 |
| 1 | N | 492 | ASP | CB-CA-C | 7.45 | 125.31 | 110.40 |
| 1 | P | 189 | ASP | O-C-N | -7.45 | 110.77 | 122.70 |
| 1 | I | 49 | VAL | O-C-N | -7.45 | 110.78 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 237 | CYS | CB-CA-C | 7.45 | 125.30 | 110.40 |
| 1 | G | 69 | SER | N-CA-CB | 7.45 | 121.67 | 110.50 |
| 1 | I | 192 | LEU | O-C-N | -7.45 | 110.78 | 122.70 |
| 1 | K | 409 | ARG | CD-NE-CZ | 7.45 | 134.03 | 123.60 |
| 1 | M | 409 | ARG | NE-CZ-NH1 | -7.45 | 116.58 | 120.30 |
| 1 | O | 129 | GLN | CB-CA-C | 7.45 | 125.30 | 110.40 |
| 1 | I | 288 | LYS | C-N-CA | 7.45 | 140.32 | 121.70 |
| 1 | B | 467 | VAL | O-C-N | -7.44 | 110.79 | 122.70 |
| 1 | G | 45 | ASP | CB-CG-OD2 | -7.44 | 111.60 | 118.30 |
| 1 | G | 491 | ASP | CB-CG-OD1 | 7.44 | 125.00 | 118.30 |
| 1 | M | 190 | LYS | N-CA-CB | -7.44 | 97.20 | 110.60 |
| 1 | D | 41 | PRO | CA-N-CD | -7.44 | 101.08 | 111.50 |
| 1 | M | 363 | ASP | CB-CG-OD2 | -7.44 | 111.60 | 118.30 |
| 1 | D | 112 | ASP | CA-CB-CG | 7.44 | 129.77 | 113.40 |
| 1 | B | 404 | GLU | O-C-N | 7.44 | 134.60 | 122.70 |
| 1 | I | 88 | GLU | N-CA-CB | 7.44 | 123.99 | 110.60 |
| 1 | K | 279 | GLU | O-C-N | 7.44 | 135.84 | 123.20 |
| 1 | M | 66 | ARG | NE-CZ-NH2 | -7.44 | 116.58 | 120.30 |
| 1 | O | 84 | THR | N-CA-CB | 7.44 | 124.43 | 110.30 |
| 1 | G | 115 | VAL | CA-CB-CG2 | 7.44 | 122.06 | 110.90 |
| 1 | A | 309 | ASP | CA-C-O | -7.43 | 104.49 | 120.10 |
| 1 | D | 189 | ASP | CB-CG-OD1 | -7.43 | 111.61 | 118.30 |
| 1 | F | 429 | ASP | O-C-N | -7.43 | 110.80 | 122.70 |
| 1 | I | 312 | ALA | C-N-CA | 7.43 | 140.29 | 121.70 |
| 1 | N | 466 | VAL | CG1-CB-CG2 | -7.43 | 99.01 | 110.90 |
| 1 | P | 466 | VAL | O-C-N | -7.43 | 110.81 | 122.70 |
| 1 | C | 493 | VAL | CA-CB-CG1 | 7.43 | 122.05 | 110.90 |
| 1 | F | 177 | ALA | N-CA-CB | 7.43 | 120.50 | 110.10 |
| 1 | K | 495 | ALA | C-N-CA | 7.43 | 140.28 | 121.70 |
| 1 | M | 51 | ASP | CA-C-O | -7.43 | 104.49 | 120.10 |
| 1 | K | 448 | CYS | CA-C-O | 7.43 | 135.71 | 120.10 |
| 1 | C | 313 | GLN | CA-C-O | -7.43 | 104.50 | 120.10 |
| 1 | C | 323 | GLU | O-C-N | 7.43 | 134.59 | 122.70 |
| 1 | C | 496 | ALA | O-C-N | -7.43 | 110.81 | 122.70 |
| 1 | L | 263 | PHE | CB-CG-CD2 | 7.43 | 126.00 | 120.80 |
| 1 | C | 285 | ARG | CG-CD-NE | 7.43 | 127.40 | 111.80 |
| 1 | N | 74 | ALA | N-CA-CB | -7.43 | 99.70 | 110.10 |
| 1 | D | 70 | VAL | CA-CB-CG1 | 7.43 | 122.04 | 110.90 |
| 1 | D | 496 | ALA | O-C-N | 7.42 | 134.58 | 122.70 |
| 1 | H | 19 | ASP | O-C-N | 7.42 | 134.58 | 122.70 |
| 1 | P | 65 | LEU | O-C-N | -7.42 | 110.82 | 122.70 |
| 1 | F | 28 | GLY | C-N-CA | 7.42 | 140.26 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 376 | GLY | N-CA-C | 7.42 | 131.66 | 113.10 |
| 1 | C | 289 | LYS | O-C-N | -7.42 | 110.83 | 122.70 |
| 1 | H | 429 | ASP | O-C-N | -7.42 | 110.83 | 122.70 |
| 1 | N | 376 | GLY | C-N-CA | 7.42 | 140.25 | 121.70 |
| 1 | P | 10 | GLU | CG-CD-OE1 | 7.42 | 133.14 | 118.30 |
| 1 | I | 157 | SER | N-CA-CB | 7.42 | 121.62 | 110.50 |
| 1 | J | 55 | VAL | O-C-N | -7.42 | 110.83 | 122.70 |
| 1 | J | 483 | SER | N-CA-CB | 7.42 | 121.62 | 110.50 |
| 1 | F | 219 | VAL | C-N-CA | 7.42 | 140.24 | 121.70 |
| 1 | F | 374 | GLU | CB-CG-CD | 7.42 | 134.22 | 114.20 |
| 1 | E | 160 | GLY | CA-C-O | -7.41 | 107.26 | 120.60 |
| 1 | K | 236 | ASN | O-C-N | -7.41 | 110.84 | 122.70 |
| 1 | I | 413 | ASP | CB-CG-OD1 | 7.41 | 124.97 | 118.30 |
| 1 | O | 137 | THR | CA-CB-OG1 | 7.41 | 124.57 | 109.00 |
| 1 | O | 356 | GLU | CB-CA-C | 7.41 | 125.22 | 110.40 |
| 1 | P | 478 | GLN | CA-CB-CG | 7.41 | 129.71 | 113.40 |
| 1 | L | 88 | GLU | CG-CD-OE2 | 7.41 | 133.12 | 118.30 |
| 1 | C | 142 | VAL | O-C-N | -7.41 | 110.61 | 123.20 |
| 1 | K | 150 | LEU | CB-CG-CD2 | 7.41 | 123.59 | 111.00 |
| 1 | N | 294 | LYS | N-CA-CB | 7.41 | 123.93 | 110.60 |
| 1 | B | 12 | MET | O-C-N | -7.41 | 110.85 | 122.70 |
| 1 | E | 49 | VAL | CB-CA-C | -7.41 | 97.33 | 111.40 |
| 1 | J | 352 | GLU | CG-CD-OE1 | -7.41 | 103.48 | 118.30 |
| 1 | P | 465 | GLY | N-CA-C | 7.41 | 131.62 | 113.10 |
| 1 | B | 183 | ASP | CB-CG-OD1 | 7.41 | 124.97 | 118.30 |
| 1 | F | 14 | ARG | CD-NE-CZ | 7.41 | 133.97 | 123.60 |
| 1 | I | 174 | ILE | O-C-N | 7.41 | 134.55 | 122.70 |
| 1 | C | 403 | ARG | CG-CD-NE | 7.40 | 127.35 | 111.80 |
| 1 | I | 7 | VAL | CG1-CB-CG2 | 7.40 | 122.75 | 110.90 |
| 1 | I | 494 | ILE | O-C-N | -7.40 | 110.85 | 122.70 |
| 1 | G | 180 | ALA | CB-CA-C | 7.40 | 121.20 | 110.10 |
| 1 | P | 56 | VAL | CA-CB-CG1 | 7.40 | 122.00 | 110.90 |
| 1 | O | 148 | GLU | OE1-CD-OE2 | -7.40 | 114.42 | 123.30 |
| 1 | H | 117 | PRO | N-CD-CG | -7.40 | 92.10 | 103.20 |
| 1 | I | 124 | TYR | CZ-CE2-CD2 | 7.40 | 126.46 | 119.80 |
| 1 | D | 495 | ALA | CA-C-O | -7.40 | 104.56 | 120.10 |
| 1 | J | 52 | LEU | CB-CG-CD2 | -7.40 | 98.43 | 111.00 |
| 1 | C | 487 | LEU | CB-CG-CD1 | 7.39 | 123.57 | 111.00 |
| 1 | F | 438 | ARG | CD-NE-CZ | 7.39 | 133.95 | 123.60 |
| 1 | I | 446 | ASN | O-C-N | 7.39 | 134.53 | 122.70 |
| 1 | P | 61 | GLY | N-CA-C | 7.39 | 131.59 | 113.10 |
| 1 | G | 50 | ASP | N-CA-C | 7.39 | 130.96 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 48 | LEU | CB-CG-CD2 | 7.39 | 123.57 | 111.00 |
| 1 | M | 420 | ARG | CD-NE-CZ | -7.39 | 113.25 | 123.60 |
| 1 | H | 200 | GLY | CA-C-O | -7.39 | 107.30 | 120.60 |
| 1 | P | 186 | GLY | C-N-CA | 7.39 | 140.17 | 121.70 |
| 1 | B | 277 | ALA | N-CA-CB | -7.39 | 99.76 | 110.10 |
| 1 | C | 189 | ASP | CB-CG-OD2 | 7.39 | 124.95 | 118.30 |
| 1 | C | 289 | LYS | CB-CA-C | 7.39 | 125.17 | 110.40 |
| 1 | A | 486 | MET | CA-CB-CG | 7.38 | 125.85 | 113.30 |
| 1 | L | 243 | ALA | CA-C-N | 7.38 | 133.44 | 117.20 |
| 1 | F | 12 | MET | C-N-CA | 7.38 | 140.15 | 121.70 |
| 1 | F | 42 | LYS | CD-CE-NZ | 7.38 | 128.68 | 111.70 |
| 1 | F | 137 | THR | O-C-N | -7.38 | 110.89 | 122.70 |
| 1 | C | 120 | VAL | CG1-CB-CG2 | -7.38 | 99.09 | 110.90 |
| 1 | D | 183 | ASP | OD1-CG-OD2 | -7.38 | 109.28 | 123.30 |
| 1 | H | 448 | CYS | O-C-N | -7.38 | 110.90 | 122.70 |
| 1 | J | 225 | LYS | O-C-N | -7.38 | 110.90 | 122.70 |
| 1 | K | 11 | ASN | N-CA-CB | 7.38 | 123.88 | 110.60 |
| 1 | B | 26 | LEU | O-C-N | 7.37 | 134.50 | 122.70 |
| 1 | H | 387 | VAL | CA-CB-CG1 | 7.37 | 121.96 | 110.90 |
| 1 | B | 60 | ASP | OD1-CG-OD2 | -7.37 | 109.29 | 123.30 |
| 1 | H | 400 | ILE | N-CA-C | 7.37 | 130.91 | 111.00 |
| 1 | I | 309 | ASP | CB-CG-OD1 | -7.37 | 111.67 | 118.30 |
| 1 | L | 487 | LEU | N-CA-CB | 7.37 | 125.14 | 110.40 |
| 1 | M | 245 | GLU | CG-CD-OE2 | 7.37 | 133.04 | 118.30 |
| 1 | P | 176 | GLU | OE1-CD-OE2 | -7.37 | 114.45 | 123.30 |
| 1 | E | 284 | ALA | N-CA-CB | 7.37 | 120.42 | 110.10 |
| 1 | A | 7 | VAL | CB-CA-C | -7.37 | 97.40 | 111.40 |
| 1 | G | 422 | LEU | CB-CG-CD2 | -7.37 | 98.47 | 111.00 |
| 1 | D | 373 | ILE | C-N-CA | 7.37 | 140.12 | 121.70 |
| 1 | H | 348 | ARG | O-C-N | -7.37 | 110.68 | 123.20 |
| 1 | A | 237 | CYS | O-C-N | -7.37 | 110.92 | 122.70 |
| 1 | B | 408 | VAL | CA-CB-CG2 | 7.37 | 121.95 | 110.90 |
| 1 | C | 461 | MET | N-CA-CB | 7.37 | 123.86 | 110.60 |
| 1 | N | 108 | GLU | CA-CB-CG | 7.37 | 129.60 | 113.40 |
| 1 | N | 297 | LYS | CA-CB-CG | 7.37 | 129.60 | 113.40 |
| 1 | A | 286 | ARG | CA-CB-CG | 7.36 | 129.60 | 113.40 |
| 1 | C | 329 | ASP | CB-CA-C | 7.36 | 125.13 | 110.40 |
| 1 | O | 439 | ALA | C-N-CA | 7.36 | 140.11 | 121.70 |
| 1 | B | 425 | ASN | CB-CA-C | 7.36 | 125.12 | 110.40 |
| 1 | E | 425 | ASN | CA-CB-CG | 7.36 | 129.59 | 113.40 |
| 1 | H | 238 | ALA | O-C-N | -7.36 | 110.92 | 122.70 |
| 1 | K | 219 | VAL | CA-CB-CG1 | 7.36 | 121.94 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 141 | GLU | OE1-CD-OE2 | -7.36 | 114.47 | 123.30 |
| 1 | I | 243 | ALA | N-CA-C | 7.36 | 130.86 | 111.00 |
| 1 | K | 66 | ARG | CD-NE-CZ | 7.36 | 133.90 | 123.60 |
| 1 | D | 493 | VAL | O-C-N | -7.36 | 110.93 | 122.70 |
| 1 | L | 393 | LEU | CB-CA-C | 7.36 | 124.17 | 110.20 |
| 1 | O | 172 | GLU | CB-CA-C | 7.36 | 125.11 | 110.40 |
| 1 | A | 471 | ARG | CA-CB-CG | 7.35 | 129.58 | 113.40 |
| 1 | B | 124 | TYR | CG-CD1-CE1 | -7.35 | 115.42 | 121.30 |
| 1 | D | 29 | ARG | CA-C-O | -7.35 | 104.66 | 120.10 |
| 1 | B | 335 | GLU | CG-CD-OE2 | 7.35 | 133.00 | 118.30 |
| 1 | D | 118 | THR | N-CA-CB | 7.35 | 124.27 | 110.30 |
| 1 | I | 200 | GLY | O-C-N | -7.35 | 110.94 | 122.70 |
| 1 | J | 160 | GLY | CA-C-O | -7.35 | 107.36 | 120.60 |
| 1 | B | 418 | ILE | CA-C-O | -7.35 | 104.66 | 120.10 |
| 1 | K | 153 | ILE | O-C-N | -7.35 | 110.94 | 122.70 |
| 1 | L | 374 | GLU | CA-C-N | -7.35 | 101.04 | 117.20 |
| 1 | M | 115 | VAL | CA-CB-CG2 | 7.35 | 121.92 | 110.90 |
| 1 | M | 321 | VAL | CG1-CB-CG2 | -7.35 | 99.14 | 110.90 |
| 1 | B | 69 | SER | CB-CA-C | 7.34 | 124.05 | 110.10 |
| 1 | C | 387 | VAL | CG1-CB-CG2 | -7.34 | 99.15 | 110.90 |
| 1 | F | 111 | LEU | CA-CB-CG | 7.34 | 132.19 | 115.30 |
| 1 | M | 367 | GLY | C-N-CA | 7.34 | 140.06 | 121.70 |
| 1 | B | 457 | ALA | N-CA-CB | -7.34 | 99.82 | 110.10 |
| 1 | E | 131 | ALA | N-CA-CB | 7.34 | 120.38 | 110.10 |
| 1 | I | 68 | MET | O-C-N | -7.34 | 110.95 | 122.70 |
| 1 | J | 70 | VAL | O-C-N | -7.34 | 110.95 | 122.70 |
| 1 | J | 467 | VAL | CA-CB-CG1 | 7.34 | 121.91 | 110.90 |
| 1 | K | 436 | LYS | CD-CE-NZ | 7.34 | 128.59 | 111.70 |
| 1 | O | 321 | VAL | CG1-CB-CG2 | -7.34 | 99.15 | 110.90 |
| 1 | A | 354 | VAL | N-CA-CB | 7.34 | 127.65 | 111.50 |
| 1 | H | 15 | TYR | N-CA-CB | 7.34 | 123.81 | 110.60 |
| 1 | H | 86 | GLU | OE1-CD-OE2 | -7.34 | 114.49 | 123.30 |
| 1 | N | 246 | MET | N-CA-CB | 7.34 | 123.81 | 110.60 |
| 1 | O | 16 | MET | O-C-N | -7.34 | 110.72 | 123.20 |
| 1 | E | 239 | ILE | N-CA-CB | 7.34 | 127.68 | 110.80 |
| 1 | B | 341 | LYS | CA-CB-CG | 7.34 | 129.54 | 113.40 |
| 1 | D | 173 | ILE | O-C-N | 7.34 | 134.44 | 122.70 |
| 1 | F | 432 | GLU | CB-CG-CD | 7.34 | 134.01 | 114.20 |
| 1 | L | 461 | MET | O-C-N | -7.34 | 110.96 | 122.70 |
| 1 | O | 246 | MET | CA-CB-CG | 7.34 | 125.77 | 113.30 |
| 1 | I | 57 | VAL | CG1-CB-CG2 | 7.33 | 122.64 | 110.90 |
| 1 | P | 65 | LEU | CA-C-O | 7.33 | 135.50 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 309 | ASP | CB-CG-OD2 | -7.33 | 111.70 | 118.30 |
| 1 | E | 236 | ASN | O-C-N | -7.33 | 110.97 | 122.70 |
| 1 | O | 323 | GLU | O-C-N | 7.33 | 134.43 | 122.70 |
| 1 | O | 333 | PHE | CB-CG-CD2 | 7.33 | 125.93 | 120.80 |
| 1 | J | 210 | LYS | CA-CB-CG | 7.33 | 129.53 | 113.40 |
| 1 | M | 466 | VAL | CA-C-N | 7.33 | 133.33 | 117.20 |
| 1 | G | 474 | THR | C-N-CA | 7.33 | 140.02 | 121.70 |
| 1 | J | 204 | ASP | CB-CG-OD2 | 7.33 | 124.89 | 118.30 |
| 1 | K | 497 | GLU | N-CA-CB | 7.33 | 123.79 | 110.60 |
| 1 | L | 116 | HIS | N-CA-CB | 7.33 | 123.79 | 110.60 |
| 1 | L | 313 | GLN | N-CA-CB | 7.33 | 123.79 | 110.60 |
| 1 | A | 229 | ASP | OD1-CG-OD2 | -7.33 | 109.38 | 123.30 |
| 1 | M | 295 | LEU | C-N-CA | 7.33 | 140.02 | 121.70 |
| 1 | G | 91 | ASP | O-C-N | -7.33 | 110.75 | 123.20 |
| 1 | H | 484 | THR | N-CA-CB | 7.33 | 124.22 | 110.30 |
| 1 | J | 25 | ILE | CA-C-O | 7.33 | 135.48 | 120.10 |
| 1 | M | 15 | TYR | CD1-CE1-CZ | -7.33 | 113.21 | 119.80 |
| 1 | M | 200 | GLY | O-C-N | -7.33 | 110.98 | 122.70 |
| 1 | N | 394 | ARG | NE-CZ-NH1 | 7.32 | 123.96 | 120.30 |
| 1 | B | 203 | ILE | O-C-N | -7.32 | 110.98 | 122.70 |
| 1 | A | 16 | MET | N-CA-C | 7.32 | 130.76 | 111.00 |
| 1 | A | 430 | ALA | N-CA-CB | 7.32 | 120.35 | 110.10 |
| 1 | D | 245 | GLU | CB-CG-CD | 7.32 | 133.96 | 114.20 |
| 1 | K | 329 | ASP | CB-CG-OD1 | 7.32 | 124.89 | 118.30 |
| 1 | O | 426 | ALA | N-CA-CB | -7.32 | 99.85 | 110.10 |
| 1 | B | 395 | GLU | CB-CA-C | 7.32 | 125.03 | 110.40 |
| 1 | C | 10 | GLU | OE1-CD-OE2 | 7.32 | 132.08 | 123.30 |
| 1 | D | 327 | SER | C-N-CA | 7.32 | 137.66 | 122.30 |
| 1 | M | 111 | LEU | CB-CG-CD2 | 7.32 | 123.44 | 111.00 |
| 1 | F | 260 | ASN | N-CA-CB | 7.32 | 123.77 | 110.60 |
| 1 | H | 439 | ALA | O-C-N | 7.32 | 134.41 | 122.70 |
| 1 | L | 82 | ALA | N-CA-CB | 7.32 | 120.34 | 110.10 |
| 1 | E | 368 | VAL | C-N-CA | 7.31 | 139.99 | 121.70 |
| 1 | G | 173 | ILE | CB-CG1-CD1 | 7.31 | 134.38 | 113.90 |
| 1 | P | 377 | ARG | NE-CZ-NH1 | -7.31 | 116.64 | 120.30 |
| 1 | E | 271 | LEU | CB-CG-CD1 | 7.31 | 123.43 | 111.00 |
| 1 | L | 360 | ARG | CD-NE-CZ | 7.31 | 133.84 | 123.60 |
| 1 | N | 204 | ASP | N-CA-CB | 7.31 | 123.76 | 110.60 |
| 1 | F | 242 | THR | CA-CB-OG1 | 7.31 | 124.35 | 109.00 |
| 1 | B | 27 | ALA | CB-CA-C | -7.31 | 99.14 | 110.10 |
| 1 | C | 256 | ALA | O-C-N | 7.31 | 134.40 | 122.70 |
| 1 | N | 358 | VAL | CG1-CB-CG2 | -7.31 | 99.20 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 35 | VAL | CA-C-O | -7.31 | 104.75 | 120.10 |
| 1 | P | 161 | LYS | O-C-N | -7.31 | 110.78 | 123.20 |
| 1 | C | 333 | PHE | CD1-CE1-CZ | -7.31 | 111.33 | 120.10 |
| 1 | D | 224 | PRO | N-CD-CG | -7.31 | 92.24 | 103.20 |
| 1 | F | 9 | PRO | CB-CA-C | -7.31 | 93.73 | 112.00 |
| 1 | F | 147 | LYS | N-CA-C | 7.31 | 130.73 | 111.00 |
| 1 | P | 42 | LYS | N-CA-CB | 7.31 | 123.75 | 110.60 |
| 1 | O | 51 | ASP | CB-CG-OD2 | 7.31 | 124.88 | 118.30 |
| 1 | I | 114 | ASN | CB-CG-OD1 | 7.30 | 136.21 | 121.60 |
| 1 | O | 134 | LEU | O-C-N | -7.30 | 111.01 | 122.70 |
| 1 | C | 240 | GLU | CG-CD-OE1 | 7.30 | 132.91 | 118.30 |
| 1 | I | 474 | THR | O-C-N | -7.30 | 111.02 | 122.70 |
| 1 | J | 454 | PHE | CZ-CE2-CD2 | 7.30 | 128.86 | 120.10 |
| 1 | K | 293 | GLU | OE1-CD-OE2 | 7.30 | 132.06 | 123.30 |
| 1 | C | 291 | ASP | CB-CG-OD1 | 7.30 | 124.87 | 118.30 |
| 1 | D | 454 | PHE | CG-CD2-CE2 | 7.30 | 128.83 | 120.80 |
| 1 | B | 94 | THR | CA-CB-CG2 | 7.30 | 122.62 | 112.40 |
| 1 | I | 63 | THR | OG1-CB-CG2 | -7.30 | 93.21 | 110.00 |
| 1 | O | 324 | ARG | CA-CB-CG | 7.30 | 129.46 | 113.40 |
| 1 | B | 436 | LYS | O-C-N | 7.30 | 134.38 | 122.70 |
| 1 | F | 200 | GLY | O-C-N | -7.30 | 111.02 | 122.70 |
| 1 | I | 235 | LEU | CB-CG-CD2 | 7.30 | 123.41 | 111.00 |
| 1 | L | 180 | ALA | CB-CA-C | 7.30 | 121.04 | 110.10 |
| 1 | C | 77 | MET | CA-CB-CG | 7.29 | 125.70 | 113.30 |
| 1 | D | 275 | TYR | CD1-CE1-CZ | -7.29 | 113.23 | 119.80 |
| 1 | N | 82 | ALA | N-CA-CB | 7.29 | 120.31 | 110.10 |
| 1 | B | 489 | ARG | O-C-N | -7.29 | 111.03 | 122.70 |
| 1 | G | 65 | LEU | CA-C-O | -7.29 | 104.78 | 120.10 |
| 1 | J | 493 | VAL | CA-C-O | -7.29 | 104.78 | 120.10 |
| 1 | P | 298 | ALA | N-CA-CB | 7.29 | 120.31 | 110.10 |
| 1 | K | 417 | VAL | CB-CA-C | 7.29 | 125.25 | 111.40 |
| 1 | L | 93 | THR | O-C-N | 7.29 | 134.37 | 122.70 |
| 1 | L | 184 | ASP | C-N-CA | 7.29 | 139.93 | 121.70 |
| 1 | B | 156 | THR | N-CA-CB | 7.29 | 124.15 | 110.30 |
| 1 | G | 18 | ARG | CB-CA-C | 7.29 | 124.98 | 110.40 |
| 1 | B | 325 | LYS | CB-CA-C | 7.29 | 124.97 | 110.40 |
| 1 | J | 389 | LEU | CB-CG-CD1 | 7.29 | 123.39 | 111.00 |
| 1 | O | 229 | ASP | OD1-CG-OD2 | -7.29 | 109.45 | 123.30 |
| 1 | E | 169 | LYS | O-C-N | -7.29 | 111.04 | 122.70 |
| 1 | E | 344 | THR | CA-CB-CG2 | 7.29 | 122.60 | 112.40 |
| 1 | F | 253 | GLU | CG-CD-OE2 | -7.29 | 103.73 | 118.30 |
| 1 | I | 346 | LEU | O-C-N | -7.29 | 111.04 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 403 | ARG | NE-CZ-NH1 | 7.29 | 123.94 | 120.30 |
| 1 | O | 470 | LEU | CB-CG-CD2 | 7.29 | 123.38 | 111.00 |
| 1 | B | 135 | LEU | CB-CG-CD1 | -7.28 | 98.62 | 111.00 |
| 1 | D | 249 | ASP | CB-CG-OD2 | -7.28 | 111.75 | 118.30 |
| 1 | P | 321 | VAL | CG1-CB-CG2 | -7.28 | 99.25 | 110.90 |
| 1 | B | 132 | GLN | O-C-N | -7.28 | 111.05 | 122.70 |
| 1 | J | 72 | HIS | CA-CB-CG | -7.28 | 101.22 | 113.60 |
| 1 | P | 425 | ASN | CA-C-O | 7.28 | 135.39 | 120.10 |
| 1 | A | 111 | LEU | CA-CB-CG | 7.28 | 132.04 | 115.30 |
| 1 | O | 291 | ASP | N-CA-CB | 7.28 | 123.70 | 110.60 |
| 1 | A | 47 | MET | CG-SD-CE | 7.28 | 111.85 | 100.20 |
| 1 | F | 263 | PHE | CB-CG-CD1 | -7.28 | 115.70 | 120.80 |
| 1 | K | 376 | GLY | O-C-N | -7.28 | 111.05 | 122.70 |
| 1 | O | 336 | GLU | OE1-CD-OE2 | -7.28 | 114.56 | 123.30 |
| 1 | P | 114 | ASN | O-C-N | -7.28 | 111.05 | 122.70 |
| 1 | P | 58 | THR | OG1-CB-CG2 | 7.28 | 126.74 | 110.00 |
| 1 | P | 297 | LYS | CB-CA-C | 7.28 | 124.95 | 110.40 |
| 1 | B | 463 | GLU | O-C-N | -7.28 | 111.06 | 122.70 |
| 1 | G | 52 | LEU | CB-CA-C | 7.28 | 124.02 | 110.20 |
| 1 | N | 240 | GLU | OE1-CD-OE2 | -7.28 | 114.57 | 123.30 |
| 1 | I | 495 | ALA | C-N-CA | 7.27 | 139.88 | 121.70 |
| 1 | G | 383 | GLY | CA-C-O | -7.27 | 107.51 | 120.60 |
| 1 | F | 458 | VAL | CA-CB-CG2 | 7.27 | 121.81 | 110.90 |
| 1 | J | 348 | ARG | N-CA-CB | 7.27 | 123.69 | 110.60 |
| 1 | M | 484 | THR | CA-CB-CG2 | -7.27 | 102.22 | 112.40 |
| 1 | A | 30 | ILE | CB-CA-C | -7.27 | 97.06 | 111.60 |
| 1 | J | 156 | THR | OG1-CB-CG2 | 7.27 | 126.72 | 110.00 |
| 1 | B | 16 | MET | CA-C-N | -7.27 | 101.66 | 116.20 |
| 1 | A | 489 | ARG | NH1-CZ-NH2 | 7.27 | 127.39 | 119.40 |
| 1 | D | 268 | ILE | CG1-CB-CG2 | -7.26 | 95.42 | 111.40 |
| 1 | G | 463 | GLU | N-CA-CB | 7.26 | 123.68 | 110.60 |
| 1 | H | 49 | VAL | CA-CB-CG1 | -7.26 | 100.00 | 110.90 |
| 1 | I | 201 | ALA | C-N-CA | 7.26 | 139.86 | 121.70 |
| 1 | P | 110 | LEU | CB-CG-CD1 | 7.26 | 123.35 | 111.00 |
| 1 | M | 375 | ASP | CB-CG-OD1 | 7.26 | 124.84 | 118.30 |
| 1 | A | 49 | VAL | CA-CB-CG1 | -7.26 | 100.01 | 110.90 |
| 1 | K | 403 | ARG | N-CA-CB | 7.26 | 123.67 | 110.60 |
| 1 | K | 411 | PHE | CD1-CE1-CZ | 7.26 | 128.81 | 120.10 |
| 1 | F | 293 | GLU | N-CA-CB | 7.26 | 123.67 | 110.60 |
| 1 | O | 43 | GLY | CA-C-N | -7.26 | 101.23 | 117.20 |
| 1 | C | 337 | CYS | O-C-N | -7.26 | 111.09 | 122.70 |
| 1 | D | 449 | ALA | N-CA-CB | 7.26 | 120.26 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 84 | THR | CA-CB-CG2 | 7.26 | 122.56 | 112.40 |
| 1 | C | 237 | CYS | N-CA-CB | 7.26 | 123.66 | 110.60 |
| 1 | G | 187 | LYS | CA-CB-CG | 7.25 | 129.36 | 113.40 |
| 1 | G | 330 | SER | CA-C-O | -7.25 | 104.87 | 120.10 |
| 1 | L | 151 | THR | N-CA-C | 7.25 | 130.59 | 111.00 |
| 1 | E | 218 | ARG | CD-NE-CZ | 7.25 | 133.75 | 123.60 |
| 1 | H | 245 | GLU | CA-CB-CG | 7.25 | 129.35 | 113.40 |
| 1 | J | 16 | MET | CA-CB-CG | 7.25 | 125.63 | 113.30 |
| 1 | J | 182 | VAL | CB-CA-C | -7.25 | 97.62 | 111.40 |
| 1 | J | 285 | ARG | NE-CZ-NH1 | 7.25 | 123.93 | 120.30 |
| 1 | N | 69 | SER | C-N-CA | 7.25 | 139.83 | 121.70 |
| 1 | P | 116 | HIS | CA-CB-CG | -7.25 | 101.27 | 113.60 |
| 1 | P | 215 | ASP | N-CA-CB | 7.25 | 123.65 | 110.60 |
| 1 | G | 119 | ILE | CA-CB-CG1 | 7.25 | 124.77 | 111.00 |
| 1 | N | 463 | GLU | OE1-CD-OE2 | 7.25 | 132.00 | 123.30 |
| 1 | O | 449 | ALA | N-CA-C | 7.25 | 130.57 | 111.00 |
| 1 | J | 169 | LYS | O-C-N | -7.25 | 111.10 | 122.70 |
| 1 | N | 411 | PHE | CB-CG-CD1 | 7.25 | 125.87 | 120.80 |
| 1 | O | 497 | GLU | CA-CB-CG | 7.25 | 129.35 | 113.40 |
| 1 | E | 110 | LEU | O-C-N | -7.25 | 111.11 | 122.70 |
| 1 | P | 291 | ASP | CB-CG-OD1 | -7.25 | 111.78 | 118.30 |
| 1 | I | 38 | THR | CA-CB-OG1 | 7.25 | 124.22 | 109.00 |
| 1 | L | 42 | LYS | O-C-N | -7.24 | 110.89 | 123.20 |
| 1 | A | 16 | MET | CA-C-N | 7.24 | 130.69 | 116.20 |
| 1 | I | 153 | ILE | CA-CB-CG2 | 7.24 | 125.39 | 110.90 |
| 1 | C | 260 | ASN | N-CA-CB | 7.24 | 123.63 | 110.60 |
| 1 | D | 7 | VAL | CA-C-O | -7.24 | 104.90 | 120.10 |
| 1 | G | 329 | ASP | CB-CA-C | 7.24 | 124.88 | 110.40 |
| 1 | G | 363 | ASP | O-C-N | -7.24 | 111.11 | 122.70 |
| 1 | H | 127 | ALA | N-CA-CB | 7.24 | 120.24 | 110.10 |
| 1 | C | 242 | THR | N-CA-CB | 7.24 | 124.05 | 110.30 |
| 1 | C | 409 | ARG | NE-CZ-NH1 | -7.24 | 116.68 | 120.30 |
| 1 | E | 84 | THR | N-CA-CB | 7.24 | 124.05 | 110.30 |
| 1 | E | 492 | ASP | OD1-CG-OD2 | -7.24 | 109.55 | 123.30 |
| 1 | L | 142 | VAL | O-C-N | -7.24 | 110.90 | 123.20 |
| 1 | G | 350 | THR | CA-C-N | 7.24 | 133.12 | 117.20 |
| 1 | K | 136 | LYS | CB-CA-C | 7.23 | 124.87 | 110.40 |
| 1 | E | 342 | ALA | O-C-N | -7.23 | 111.13 | 122.70 |
| 1 | E | 432 | GLU | CA-CB-CG | 7.23 | 129.31 | 113.40 |
| 1 | L | 192 | LEU | CB-CG-CD2 | -7.23 | 98.71 | 111.00 |
| 1 | N | 374 | GLU | CG-CD-OE2 | 7.23 | 132.76 | 118.30 |
| 1 | I | 306 | ASN | O-C-N | -7.23 | 111.14 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 191 | ASP | O-C-N | -7.23 | 111.14 | 122.70 |
| 1 | L | 147 | LYS | O-C-N | -7.23 | 111.14 | 122.70 |
| 1 | O | 133 | GLU | CG-CD-OE2 | -7.23 | 103.85 | 118.30 |
| 1 | A | 348 | ARG | NE-CZ-NH1 | -7.22 | 116.69 | 120.30 |
| 1 | C | 130 | LYS | CD-CE-NZ | 7.22 | 128.32 | 111.70 |
| 1 | E | 439 | ALA | CB-CA-C | 7.22 | 120.94 | 110.10 |
| 1 | F | 479 | SER | N-CA-CB | 7.22 | 121.34 | 110.50 |
| 1 | L | 426 | ALA | O-C-N | -7.22 | 110.92 | 123.20 |
| 1 | P | 50 | ASP | OD1-CG-OD2 | 7.22 | 137.02 | 123.30 |
| 1 | P | 52 | LEU | CA-C-N | 7.22 | 130.64 | 116.20 |
| 1 | A | 38 | THR | N-CA-C | 7.22 | 130.50 | 111.00 |
| 1 | I | 225 | LYS | CA-C-N | 7.22 | 133.09 | 117.20 |
| 1 | E | 88 | GLU | CA-CB-CG | 7.22 | 129.28 | 113.40 |
| 1 | D | 424 | GLU | O-C-N | 7.22 | 134.25 | 122.70 |
| 1 | G | 247 | LEU | N-CA-CB | 7.22 | 124.83 | 110.40 |
| 1 | K | 329 | ASP | OD1-CG-OD2 | -7.22 | 109.58 | 123.30 |
| 1 | L | 97 | VAL | CA-CB-CG1 | 7.22 | 121.73 | 110.90 |
| 1 | F | 7 | VAL | CA-CB-CG2 | -7.22 | 100.07 | 110.90 |
| 1 | M | 348 | ARG | N-CA-CB | 7.22 | 123.59 | 110.60 |
| 1 | I | 400 | ILE | CA-C-N | 7.21 | 133.07 | 117.20 |
| 1 | E | 403 | ARG | NH1-CZ-NH2 | 7.21 | 127.33 | 119.40 |
| 1 | P | 270 | ASP | CB-CA-C | 7.21 | 124.82 | 110.40 |
| 1 | C | 135 | LEU | O-C-N | -7.21 | 111.16 | 122.70 |
| 1 | M | 361 | ALA | N-CA-CB | 7.21 | 120.19 | 110.10 |
| 1 | M | 462 | CYS | N-CA-CB | 7.21 | 123.58 | 110.60 |
| 1 | E | 461 | MET | CB-CA-C | 7.21 | 124.82 | 110.40 |
| 1 | G | 268 | ILE | N-CA-CB | 7.21 | 127.38 | 110.80 |
| 1 | H | 220 | SER | CA-C-O | -7.21 | 104.96 | 120.10 |
| 1 | C | 54 | ASP | CB-CG-OD2 | 7.21 | 124.79 | 118.30 |
| 1 | C | 290 | SER | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | M | 311 | SER | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | N | 254 | ILE | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | C | 493 | VAL | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | G | 317 | ASP | O-C-N | -7.21 | 111.17 | 122.70 |
| 1 | D | 430 | ALA | O-C-N | -7.20 | 111.17 | 122.70 |
| 1 | G | 222 | GLN | CG-CD-NE2 | 7.20 | 133.99 | 116.70 |
| 1 | O | 466 | VAL | O-C-N | -7.20 | 111.17 | 122.70 |
| 1 | L | 377 | ARG | C-N-CA | 7.20 | 139.70 | 121.70 |
| 1 | M | 192 | LEU | CA-CB-CG | 7.20 | 131.87 | 115.30 |
| 1 | G | 336 | GLU | OE1-CD-OE2 | -7.20 | 114.66 | 123.30 |
| 1 | H | 477 | ILE | N-CA-CB | 7.20 | 127.36 | 110.80 |
| 1 | J | 57 | VAL | CA-CB-CG2 | 7.20 | 121.70 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 88 | GLU | CA-C-O | -7.20 | 104.98 | 120.10 |
| 1 | A | 35 | VAL | CA-C-O | -7.20 | 104.98 | 120.10 |
| 1 | D | 219 | VAL | CA-CB-CG1 | 7.20 | 121.70 | 110.90 |
| 1 | K | 84 | THR | N-CA-CB | 7.20 | 123.98 | 110.30 |
| 1 | L | 303 | VAL | CA-CB-CG2 | 7.20 | 121.70 | 110.90 |
| 1 | O | 57 | VAL | CA-CB-CG2 | -7.20 | 100.10 | 110.90 |
| 1 | L | 23 | MET | CA-CB-CG | 7.20 | 125.53 | 113.30 |
| 1 | O | 383 | GLY | CA-C-O | -7.20 | 107.64 | 120.60 |
| 1 | B | 429 | ASP | CA-C-O | 7.20 | 135.21 | 120.10 |
| 1 | F | 243 | ALA | N-CA-C | 7.20 | 130.43 | 111.00 |
| 1 | I | 14 | ARG | O-C-N | -7.20 | 111.19 | 122.70 |
| 1 | N | 442 | ALA | CB-CA-C | -7.19 | 99.31 | 110.10 |
| 1 | C | 307 | ILE | CG1-CB-CG2 | -7.19 | 95.58 | 111.40 |
| 1 | F | 237 | CYS | O-C-N | 7.19 | 134.21 | 122.70 |
| 1 | J | 182 | VAL | CG1-CB-CG2 | -7.19 | 99.39 | 110.90 |
| 1 | J | 245 | GLU | CA-CB-CG | 7.19 | 129.22 | 113.40 |
| 1 | N | 23 | MET | O-C-N | -7.19 | 111.19 | 122.70 |
| 1 | D | 81 | VAL | O-C-N | -7.19 | 111.20 | 122.70 |
| 1 | D | 469 | PRO | O-C-N | -7.19 | 111.20 | 122.70 |
| 1 | H | 217 | GLU | CG-CD-OE2 | 7.19 | 132.68 | 118.30 |
| 1 | K | 8 | LEU | CB-CG-CD2 | -7.19 | 98.78 | 111.00 |
| 1 | C | 63 | THR | N-CA-CB | 7.19 | 123.95 | 110.30 |
| 1 | B | 431 | ILE | N-CA-CB | 7.18 | 127.32 | 110.80 |
| 1 | C | 39 | LEU | CB-CG-CD1 | 7.18 | 123.21 | 111.00 |
| 1 | C | 266 | LYS | C-N-CA | 7.18 | 137.39 | 122.30 |
| 1 | E | 122 | LYS | C-N-CA | 7.18 | 137.39 | 122.30 |
| 1 | E | 221 | ALA | C-N-CA | 7.18 | 139.66 | 121.70 |
| 1 | J | 224 | PRO | CB-CA-C | 7.18 | 129.96 | 112.00 |
| 1 | M | 364 | ASP | OD1-CG-OD2 | -7.18 | 109.65 | 123.30 |
| 1 | G | 105 | ARG | CG-CD-NE | 7.18 | 126.88 | 111.80 |
| 1 | M | 170 | LEU | CB-CG-CD2 | 7.18 | 123.21 | 111.00 |
| 1 | D | 272 | ALA | N-CA-CB | 7.18 | 120.15 | 110.10 |
| 1 | J | 275 | TYR | CB-CG-CD1 | -7.18 | 116.69 | 121.00 |
| 1 | M | 288 | LYS | CB-CA-C | 7.18 | 124.76 | 110.40 |
| 1 | P | 365 | ALA | N-CA-CB | 7.18 | 120.15 | 110.10 |
| 1 | I | 371 | CYS | CA-C-N | 7.18 | 132.99 | 117.20 |
| 1 | L | 358 | VAL | CA-CB-CG1 | 7.18 | 121.66 | 110.90 |
| 1 | F | 147 | LYS | CA-C-O | -7.17 | 105.03 | 120.10 |
| 1 | I | 234 | LEU | CB-CG-CD1 | 7.17 | 123.20 | 111.00 |
| 1 | J | 50 | ASP | CB-CG-OD2 | -7.17 | 111.84 | 118.30 |
| 1 | O | 31 | ILE | O-C-N | -7.17 | 111.22 | 122.70 |
| 1 | O | 212 | VAL | CB-CA-C | -7.17 | 97.77 | 111.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 364 | ASP | N-CA-CB | 7.17 | 123.51 | 110.60 |
| 1 | F | 245 | GLU | OE1-CD-OE2 | -7.17 | 114.69 | 123.30 |
| 1 | L | 111 | LEU | N-CA-CB | 7.17 | 124.74 | 110.40 |
| 1 | M | 493 | VAL | CA-CB-CG1 | 7.17 | 121.66 | 110.90 |
| 1 | P | 243 | ALA | CB-CA-C | 7.17 | 120.86 | 110.10 |
| 1 | O | 285 | ARG | O-C-N | 7.17 | 134.17 | 122.70 |
| 1 | G | 58 | THR | CA-CB-CG2 | -7.17 | 102.36 | 112.40 |
| 1 | I | 65 | LEU | CB-CG-CD2 | -7.17 | 98.81 | 111.00 |
| 1 | J | 54 | ASP | OD1-CG-OD2 | -7.17 | 109.68 | 123.30 |
| 1 | C | 309 | ASP | CB-CG-OD1 | 7.17 | 124.75 | 118.30 |
| 1 | P | 169 | LYS | CB-CA-C | 7.17 | 124.73 | 110.40 |
| 1 | A | 212 | VAL | O-C-N | -7.16 | 111.24 | 122.70 |
| 1 | C | 7 | VAL | N-CA-CB | 7.16 | 127.26 | 111.50 |
| 1 | I | 61 | GLY | O-C-N | -7.16 | 111.24 | 122.70 |
| 1 | D | 50 | ASP | N-CA-CB | 7.16 | 123.49 | 110.60 |
| 1 | D | 424 | GLU | CG-CD-OE2 | 7.16 | 132.62 | 118.30 |
| 1 | H | 136 | LYS | CA-C-O | -7.16 | 105.07 | 120.10 |
| 1 | D | 104 | LEU | CB-CG-CD1 | 7.16 | 123.16 | 111.00 |
| 1 | L | 460 | ASP | CB-CG-OD1 | -7.16 | 111.86 | 118.30 |
| 1 | M | 411 | PHE | CG-CD2-CE2 | 7.16 | 128.67 | 120.80 |
| 1 | J | 84 | THR | CA-CB-OG1 | 7.15 | 124.02 | 109.00 |
| 1 | A | 339 | HIS | CG-ND1-CE1 | 7.15 | 118.21 | 108.20 |
| 1 | J | 339 | HIS | CA-C-O | -7.15 | 105.08 | 120.10 |
| 1 | M | 400 | ILE | CB-CA-C | 7.15 | 125.90 | 111.60 |
| 1 | O | 413 | ASP | OD1-CG-OD2 | -7.15 | 109.71 | 123.30 |
| 1 | A | 51 | ASP | CB-CG-OD1 | 7.15 | 124.73 | 118.30 |
| 1 | D | 97 | VAL | CA-CB-CG2 | -7.15 | 100.17 | 110.90 |
| 1 | G | 299 | THR | CA-C-N | 7.15 | 130.50 | 116.20 |
| 1 | K | 270 | ASP | CA-C-O | 7.15 | 135.11 | 120.10 |
| 1 | G | 398 | GLU | OE1-CD-OE2 | -7.15 | 114.72 | 123.30 |
| 1 | F | 136 | LYS | O-C-N | -7.15 | 111.27 | 122.70 |
| 1 | J | 375 | ASP | OD1-CG-OD2 | -7.15 | 109.72 | 123.30 |
| 1 | K | 120 | VAL | CA-C-O | 7.15 | 135.11 | 120.10 |
| 1 | M | 87 | LYS | CB-CA-C | -7.15 | 96.11 | 110.40 |
| 1 | I | 478 | GLN | CA-CB-CG | -7.14 | 97.68 | 113.40 |
| 1 | K | 176 | GLU | N-CA-CB | 7.14 | 123.46 | 110.60 |
| 1 | F | 14 | ARG | NE-CZ-NH1 | 7.14 | 123.87 | 120.30 |
| 1 | G | 73 | PRO | N-CA-CB | -7.14 | 94.73 | 103.30 |
| 1 | P | 140 | CYS | CA-CB-SG | 7.14 | 126.86 | 114.00 |
| 1 | K | 411 | PHE | CE1-CZ-CE2 | -7.14 | 107.15 | 120.00 |
| 1 | E | 204 | ASP | CB-CG-OD2 | 7.14 | 124.72 | 118.30 |
| 1 | H | 329 | ASP | CB-CG-OD1 | -7.14 | 111.88 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 495 | ALA | O-C-N | -7.14 | 111.28 | 122.70 |
| 1 | I | 223 | MET | O-C-N | -7.14 | 107.54 | 121.10 |
| 1 | L | 189 | ASP | CA-C-O | 7.14 | 135.09 | 120.10 |
| 1 | N | 187 | LYS | CA-CB-CG | 7.14 | 129.10 | 113.40 |
| 1 | A | 221 | ALA | N-CA-CB | -7.14 | 100.11 | 110.10 |
| 1 | G | 28 | GLY | O-C-N | -7.14 | 111.28 | 122.70 |
| 1 | P | 148 | GLU | N-CA-CB | 7.14 | 123.45 | 110.60 |
| 1 | C | 221 | ALA | CA-C-O | -7.13 | 105.12 | 120.10 |
| 1 | D | 295 | LEU | CA-C-O | -7.13 | 105.12 | 120.10 |
| 1 | M | 228 | THR | CA-CB-CG2 | -7.13 | 102.41 | 112.40 |
| 1 | M | 398 | GLU | N-CA-CB | 7.13 | 123.44 | 110.60 |
| 1 | C | 10 | GLU | CG-CD-OE2 | -7.13 | 104.04 | 118.30 |
| 1 | J | 126 | ALA | CB-CA-C | 7.13 | 120.80 | 110.10 |
| 1 | O | 331 | MET | N-CA-CB | 7.13 | 123.44 | 110.60 |
| 1 | P | 266 | LYS | O-C-N | -7.13 | 111.08 | 123.20 |
| 1 | E | 15 | TYR | CD1-CG-CD2 | -7.13 | 110.06 | 117.90 |
| 1 | J | 60 | ASP | CB-CG-OD2 | -7.13 | 111.88 | 118.30 |
| 1 | F | 229 | ASP | OD1-CG-OD2 | -7.13 | 109.76 | 123.30 |
| 1 | F | 244 | SER | CB-CA-C | 7.13 | 123.64 | 110.10 |
| 1 | F | 445 | GLY | C-N-CA | 7.13 | 139.52 | 121.70 |
| 1 | H | 368 | VAL | N-CA-C | 7.13 | 130.24 | 111.00 |
| 1 | H | 220 | SER | N-CA-CB | 7.12 | 121.19 | 110.50 |
| 1 | B | 161 | LYS | CA-CB-CG | 7.12 | 129.07 | 113.40 |
| 1 | G | 361 | ALA | N-CA-CB | 7.12 | 120.07 | 110.10 |
| 1 | P | 42 | LYS | O-C-N | -7.12 | 111.09 | 123.20 |
| 1 | A | 437 | VAL | CA-C-O | -7.12 | 105.15 | 120.10 |
| 1 | F | 223 | MET | O-C-N | -7.12 | 107.57 | 121.10 |
| 1 | G | 14 | ARG | N-CA-CB | 7.12 | 123.42 | 110.60 |
| 1 | I | 355 | ILE | CA-CB-CG1 | 7.12 | 124.52 | 111.00 |
| 1 | J | 188 | VAL | CG1-CB-CG2 | -7.12 | 99.51 | 110.90 |
| 1 | J | 495 | ALA | C-N-CA | 7.12 | 139.50 | 121.70 |
| 1 | L | 234 | LEU | N-CA-CB | 7.12 | 124.64 | 110.40 |
| 1 | M | 188 | VAL | CA-CB-CG2 | 7.12 | 121.58 | 110.90 |
| 1 | P | 423 | ALA | O-C-N | -7.12 | 111.31 | 122.70 |
| 1 | L | 487 | LEU | CB-CG-CD2 | -7.12 | 98.90 | 111.00 |
| 1 | B | 131 | ALA | N-CA-CB | 7.12 | 120.06 | 110.10 |
| 1 | C | 313 | GLN | CA-CB-CG | 7.12 | 129.06 | 113.40 |
| 1 | C | 183 | ASP | CB-CG-OD1 | 7.11 | 124.70 | 118.30 |
| 1 | H | 126 | ALA | O-C-N | -7.11 | 111.32 | 122.70 |
| 1 | L | 269 | ASP | CA-C-O | -7.11 | 105.16 | 120.10 |
| 1 | B | 269 | ASP | CB-CG-OD2 | -7.11 | 111.90 | 118.30 |
| 1 | D | 136 | LYS | CB-CG-CD | 7.11 | 130.09 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 308 | LYS | CA-CB-CG | 7.11 | 129.05 | 113.40 |
| 1 | I | 184 | ASP | CB-CG-OD2 | 7.11 | 124.70 | 118.30 |
| 1 | N | 249 | ASP | N-CA-CB | 7.11 | 123.40 | 110.60 |
| 1 | O | 329 | ASP | O-C-N | 7.11 | 134.08 | 122.70 |
| 1 | C | 50 | ASP | CB-CG-OD2 | 7.11 | 124.70 | 118.30 |
| 1 | L | 183 | ASP | O-C-N | -7.11 | 111.33 | 122.70 |
| 1 | O | 363 | ASP | CB-CG-OD1 | 7.11 | 124.70 | 118.30 |
| 1 | J | 115 | VAL | CA-CB-CG2 | 7.11 | 121.56 | 110.90 |
| 1 | N | 147 | LYS | O-C-N | -7.11 | 111.33 | 122.70 |
| 1 | B | 85 | GLN | C-N-CA | 7.11 | 139.46 | 121.70 |
| 1 | B | 377 | ARG | C-N-CA | 7.11 | 139.47 | 121.70 |
| 1 | H | 287 | VAL | CA-CB-CG2 | 7.11 | 121.56 | 110.90 |
| 1 | N | 309 | ASP | CB-CG-OD1 | -7.11 | 111.91 | 118.30 |
| 1 | C | 181 | VAL | CA-CB-CG1 | -7.10 | 100.24 | 110.90 |
| 1 | L | 296 | ALA | N-CA-CB | 7.10 | 120.05 | 110.10 |
| 1 | D | 175 | VAL | CA-C-N | -7.10 | 101.58 | 117.20 |
| 1 | F | 435 | VAL | CA-CB-CG1 | 7.10 | 121.55 | 110.90 |
| 1 | M | 466 | VAL | C-N-CA | 7.10 | 139.46 | 121.70 |
| 1 | J | 354 | VAL | N-CA-CB | 7.10 | 127.12 | 111.50 |
| 1 | C | 395 | GLU | OE1-CD-OE2 | -7.10 | 114.78 | 123.30 |
| 1 | I | 257 | SER | N-CA-CB | 7.10 | 121.15 | 110.50 |
| 1 | J | 131 | ALA | N-CA-CB | 7.10 | 120.04 | 110.10 |
| 1 | E | 47 | MET | CA-CB-CG | 7.10 | 125.37 | 113.30 |
| 1 | K | 384 | SER | CB-CA-C | 7.10 | 123.58 | 110.10 |
| 1 | M | 177 | ALA | O-C-N | -7.10 | 111.34 | 122.70 |
| 1 | M | 243 | ALA | CB-CA-C | 7.10 | 120.75 | 110.10 |
| 1 | M | 399 | GLY | O-C-N | -7.10 | 111.34 | 122.70 |
| 1 | N | 210 | LYS | CA-C-O | -7.10 | 105.20 | 120.10 |
| 1 | A | 67 | GLU | O-C-N | 7.09 | 134.05 | 122.70 |
| 1 | G | 125 | GLN | CB-CG-CD | 7.09 | 130.05 | 111.60 |
| 1 | H | 141 | GLU | CG-CD-OE1 | 7.09 | 132.49 | 118.30 |
| 1 | I | 34 | THR | C-N-CA | 7.09 | 139.44 | 121.70 |
| 1 | K | 204 | ASP | CB-CG-OD1 | -7.09 | 111.92 | 118.30 |
| 1 | P | 302 | ASN | CB-CA-C | 7.09 | 124.59 | 110.40 |
| 1 | A | 365 | ALA | CB-CA-C | 7.09 | 120.74 | 110.10 |
| 1 | D | 124 | TYR | CB-CG-CD2 | 7.09 | 125.25 | 121.00 |
| 1 | G | 192 | LEU | O-C-N | -7.09 | 111.36 | 122.70 |
| 1 | K | 97 | VAL | CG1-CB-CG2 | -7.09 | 99.55 | 110.90 |
| 1 | K | 399 | GLY | CA-C-O | -7.09 | 107.84 | 120.60 |
| 1 | O | 399 | GLY | O-C-N | 7.09 | 134.05 | 122.70 |
| 1 | O | 65 | LEU | CB-CG-CD2 | 7.09 | 123.05 | 111.00 |
| 1 | O | 164 | GLU | CG-CD-OE1 | 7.09 | 132.48 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 205 | ASP | O-C-N | -7.09 | 111.36 | 122.70 |
| 1 | E | 349 | GLY | C-N-CA | 7.09 | 139.42 | 121.70 |
| 1 | I | 259 | ALA | CB-CA-C | -7.09 | 99.47 | 110.10 |
| 1 | N | 244 | SER | O-C-N | -7.09 | 111.36 | 122.70 |
| 1 | O | 366 | VAL | O-C-N | -7.09 | 111.15 | 123.20 |
| 1 | B | 322 | GLU | CG-CD-OE2 | -7.09 | 104.13 | 118.30 |
| 1 | O | 375 | ASP | CB-CA-C | -7.09 | 96.23 | 110.40 |
| 1 | H | 111 | LEU | N-CA-CB | 7.08 | 124.57 | 110.40 |
| 1 | L | 80 | GLU | OE1-CD-OE2 | 7.08 | 131.80 | 123.30 |
| 1 | L | 429 | ASP | CB-CG-OD2 | 7.08 | 124.68 | 118.30 |
| 1 | P | 350 | THR | C-N-CA | 7.08 | 139.41 | 121.70 |
| 1 | A | 15 | TYR | N-CA-C | 7.08 | 130.13 | 111.00 |
| 1 | C | 485 | GLU | CB-CA-C | 7.08 | 124.57 | 110.40 |
| 1 | E | 134 | LEU | O-C-N | -7.08 | 111.37 | 122.70 |
| 1 | M | 34 | THR | N-CA-CB | 7.08 | 123.76 | 110.30 |
| 1 | N | 182 | VAL | CB-CA-C | -7.08 | 97.94 | 111.40 |
| 1 | A | 164 | GLU | OE1-CD-OE2 | 7.08 | 131.80 | 123.30 |
| 1 | B | 286 | ARG | NH1-CZ-NH2 | -7.08 | 111.61 | 119.40 |
| 1 | G | 435 | VAL | O-C-N | 7.08 | 134.03 | 122.70 |
| 1 | K | 10 | GLU | OE1-CD-OE2 | 7.08 | 131.80 | 123.30 |
| 1 | P | 32 | ALA | CB-CA-C | -7.08 | 99.48 | 110.10 |
| 1 | G | 307 | ILE | CG1-CB-CG2 | 7.08 | 126.98 | 111.40 |
| 1 | L | 141 | GLU | CG-CD-OE1 | 7.08 | 132.46 | 118.30 |
| 1 | H | 211 | GLY | O-C-N | -7.08 | 111.38 | 122.70 |
| 1 | N | 400 | ILE | CA-CB-CG1 | 7.08 | 124.45 | 111.00 |
| 1 | J | 32 | ALA | O-C-N | -7.08 | 111.38 | 122.70 |
| 1 | N | 420 | ARG | NH1-CZ-NH2 | 7.08 | 127.18 | 119.40 |
| 1 | A | 483 | SER | N-CA-CB | 7.08 | 121.11 | 110.50 |
| 1 | B | 352 | GLU | CB-CA-C | 7.08 | 124.55 | 110.40 |
| 1 | D | 142 | VAL | C-N-CA | 7.07 | 137.15 | 122.30 |
| 1 | D | 277 | ALA | N-CA-CB | -7.07 | 100.20 | 110.10 |
| 1 | F | 466 | VAL | CG1-CB-CG2 | -7.07 | 99.58 | 110.90 |
| 1 | F | 363 | ASP | CB-CG-OD2 | -7.07 | 111.94 | 118.30 |
| 1 | H | 302 | ASN | CB-CA-C | 7.07 | 124.54 | 110.40 |
| 1 | M | 162 | GLY | O-C-N | -7.07 | 111.38 | 122.70 |
| 1 | A | 229 | ASP | CA-CB-CG | 7.07 | 128.96 | 113.40 |
| 1 | G | 15 | TYR | CZ-CE2-CD2 | -7.07 | 113.44 | 119.80 |
| 1 | G | 111 | LEU | O-C-N | -7.07 | 111.39 | 122.70 |
| 1 | P | 256 | ALA | CA-C-O | -7.07 | 105.25 | 120.10 |
| 1 | D | 360 | ARG | O-C-N | 7.07 | 134.01 | 122.70 |
| 1 | E | 241 | GLU | OE1-CD-OE2 | -7.07 | 114.82 | 123.30 |
| 1 | M | 82 | ALA | N-CA-CB | 7.07 | 120.00 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 79 | ILE | CA-CB-CG2 | 7.07 | 125.04 | 110.90 |
| 1 | G | 287 | VAL | CA-CB-CG1 | 7.07 | 121.50 | 110.90 |
| 1 | G | 315 | LEU | O-C-N | -7.07 | 111.19 | 123.20 |
| 1 | O | 245 | GLU | N-CA-C | 7.07 | 130.08 | 111.00 |
| 1 | A | 55 | VAL | CA-CB-CG1 | -7.07 | 100.30 | 110.90 |
| 1 | E | 288 | LYS | O-C-N | -7.07 | 111.40 | 122.70 |
| 1 | L | 269 | ASP | CB-CG-OD1 | -7.07 | 111.94 | 118.30 |
| 1 | M | 261 | VAL | CG1-CB-CG2 | -7.07 | 99.59 | 110.90 |
| 1 | K | 55 | VAL | C-N-CA | 7.06 | 139.36 | 121.70 |
| 1 | K | 68 | MET | O-C-N | -7.06 | 111.40 | 122.70 |
| 1 | K | 371 | CYS | N-CA-CB | 7.06 | 123.31 | 110.60 |
| 1 | B | 497 | GLU | OE1-CD-OE2 | -7.06 | 114.82 | 123.30 |
| 1 | D | 22 | ARG | C-N-CA | -7.06 | 104.04 | 121.70 |
| 1 | E | 76 | LYS | C-N-CA | 7.06 | 139.36 | 121.70 |
| 1 | H | 487 | LEU | O-C-N | 7.06 | 134.00 | 122.70 |
| 1 | L | 487 | LEU | CA-CB-CG | 7.06 | 131.54 | 115.30 |
| 1 | F | 299 | THR | CA-C-N | 7.06 | 130.32 | 116.20 |
| 1 | H | 293 | GLU | CA-CB-CG | 7.06 | 128.93 | 113.40 |
| 1 | H | 306 | ASN | N-CA-CB | 7.06 | 123.31 | 110.60 |
| 1 | A | 256 | ALA | CB-CA-C | 7.06 | 120.69 | 110.10 |
| 1 | F | 238 | ALA | N-CA-CB | -7.06 | 100.22 | 110.10 |
| 1 | J | 357 | GLU | OE1-CD-OE2 | -7.06 | 114.83 | 123.30 |
| 1 | L | 298 | ALA | CB-CA-C | 7.06 | 120.69 | 110.10 |
| 1 | O | 358 | VAL | O-C-N | -7.06 | 111.40 | 122.70 |
| 1 | D | 124 | TYR | CZ-CE2-CD2 | 7.06 | 126.15 | 119.80 |
| 1 | E | 153 | ILE | CA-CB-CG1 | 7.06 | 124.41 | 111.00 |
| 1 | H | 394 | ARG | CD-NE-CZ | 7.06 | 133.48 | 123.60 |
| 1 | L | 66 | ARG | NH1-CZ-NH2 | -7.06 | 111.64 | 119.40 |
| 1 | P | 352 | GLU | CA-C-O | -7.06 | 105.28 | 120.10 |
| 1 | F | 229 | ASP | C-N-CA | 7.05 | 139.34 | 121.70 |
| 1 | G | 12 | MET | O-C-N | -7.05 | 111.41 | 122.70 |
| 1 | M | 486 | MET | O-C-N | 7.05 | 133.99 | 122.70 |
| 1 | A | 353 | HIS | CG-ND1-CE1 | 7.05 | 118.07 | 108.20 |
| 1 | P | 77 | MET | CB-CA-C | 7.05 | 124.51 | 110.40 |
| 1 | P | 456 | GLY | CA-C-O | -7.05 | 107.91 | 120.60 |
| 1 | A | 349 | GLY | C-N-CA | 7.05 | 139.32 | 121.70 |
| 1 | B | 364 | ASP | O-C-N | -7.05 | 111.42 | 122.70 |
| 1 | C | 414 | ALA | N-CA-CB | 7.05 | 119.97 | 110.10 |
| 1 | H | 323 | GLU | C-N-CA | 7.05 | 139.32 | 121.70 |
| 1 | I | 91 | ASP | CB-CG-OD2 | 7.05 | 124.64 | 118.30 |
| 1 | I | 245 | GLU | CA-CB-CG | 7.05 | 128.91 | 113.40 |
| 1 | N | 259 | ALA | CB-CA-C | -7.05 | 99.52 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 315 | LEU | CB-CG-CD2 | 7.05 | 122.98 | 111.00 |
| 1 | O | 285 | ARG | NE-CZ-NH2 | 7.05 | 123.82 | 120.30 |
| 1 | B | 371 | CYS | CA-C-O | -7.05 | 105.30 | 120.10 |
| 1 | E | 251 | VAL | CA-CB-CG1 | 7.05 | 121.47 | 110.90 |
| 1 | G | 86 | GLU | O-C-N | -7.05 | 111.42 | 122.70 |
| 1 | L | 468 | GLU | OE1-CD-OE2 | -7.05 | 114.84 | 123.30 |
| 1 | P | 357 | GLU | O-C-N | -7.05 | 111.43 | 122.70 |
| 1 | J | 207 | GLU | OE1-CD-OE2 | 7.04 | 131.75 | 123.30 |
| 1 | F | 70 | VAL | CA-C-O | -7.04 | 105.31 | 120.10 |
| 1 | I | 184 | ASP | CB-CG-OD1 | 7.04 | 124.64 | 118.30 |
| 1 | K | 287 | VAL | CG1-CB-CG2 | -7.04 | 99.63 | 110.90 |
| 1 | N | 257 | SER | N-CA-CB | 7.04 | 121.06 | 110.50 |
| 1 | G | 295 | LEU | CB-CG-CD1 | 7.04 | 122.97 | 111.00 |
| 1 | J | 492 | ASP | CA-C-O | 7.04 | 134.89 | 120.10 |
| 1 | M | 376 | GLY | CA-C-N | -7.04 | 101.71 | 117.20 |
| 1 | N | 355 | ILE | CA-CB-CG1 | 7.04 | 124.38 | 111.00 |
| 1 | O | 151 | THR | O-C-N | -7.04 | 111.43 | 122.70 |
| 1 | K | 321 | VAL | CA-CB-CG2 | 7.04 | 121.46 | 110.90 |
| 1 | M | 286 | ARG | NE-CZ-NH2 | 7.04 | 123.82 | 120.30 |
| 1 | I | 182 | VAL | N-CA-C | 7.04 | 130.01 | 111.00 |
| 1 | K | 304 | ILE | O-C-N | -7.04 | 111.44 | 122.70 |
| 1 | L | 253 | GLU | O-C-N | -7.04 | 111.44 | 122.70 |
| 1 | B | 313 | GLN | O-C-N | -7.04 | 111.44 | 122.70 |
| 1 | E | 251 | VAL | CA-CB-CG2 | 7.04 | 121.46 | 110.90 |
| 1 | D | 7 | VAL | CB-CA-C | -7.04 | 98.03 | 111.40 |
| 1 | H | 341 | LYS | CB-CA-C | 7.04 | 124.47 | 110.40 |
| 1 | M | 397 | ALA | O-C-N | -7.04 | 111.44 | 122.70 |
| 1 | M | 457 | ALA | O-C-N | 7.04 | 133.96 | 122.70 |
| 1 | P | 48 | LEU | CB-CG-CD1 | 7.04 | 122.96 | 111.00 |
| 1 | I | 411 | PHE | CA-CB-CG | 7.03 | 130.78 | 113.90 |
| 1 | G | 298 | ALA | CA-C-N | 7.03 | 132.67 | 117.20 |
| 1 | K | 324 | ARG | NE-CZ-NH2 | 7.03 | 123.82 | 120.30 |
| 1 | M | 263 | PHE | CB-CG-CD1 | -7.03 | 115.88 | 120.80 |
| 1 | C | 443 | SER | CA-C-O | -7.03 | 105.34 | 120.10 |
| 1 | A | 326 | ILE | CG1-CB-CG2 | 7.03 | 126.86 | 111.40 |
| 1 | H | 94 | THR | CA-CB-CG2 | 7.03 | 122.24 | 112.40 |
| 1 | J | 223 | MET | N-CA-CB | 7.03 | 123.25 | 110.60 |
| 1 | N | 497 | GLU | CA-CB-CG | 7.03 | 128.86 | 113.40 |
| 1 | F | 57 | VAL | CA-C-O | -7.03 | 105.34 | 120.10 |
| 1 | F | 60 | ASP | CA-CB-CG | 7.03 | 128.86 | 113.40 |
| 1 | B | 373 | ILE | CA-CB-CG1 | 7.03 | 124.35 | 111.00 |
| 1 | B | 472 | VAL | O-C-N | -7.03 | 111.46 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 276 | LEU | CB-CG-CD1 | 7.03 | 122.94 | 111.00 |
| 1 | H | 474 | THR | N-CA-CB | 7.03 | 123.65 | 110.30 |
| 1 | I | 274 | HIS | C-N-CA | 7.03 | 139.26 | 121.70 |
| 1 | M | 356 | GLU | CG-CD-OE2 | 7.02 | 132.35 | 118.30 |
| 1 | N | 429 | ASP | OD1-CG-OD2 | -7.02 | 109.95 | 123.30 |
| 1 | B | 487 | LEU | O-C-N | -7.02 | 111.46 | 122.70 |
| 1 | E | 208 | LEU | CB-CG-CD2 | 7.02 | 122.94 | 111.00 |
| 1 | M | 112 | ASP | OD1-CG-OD2 | -7.02 | 109.96 | 123.30 |
| 1 | P | 98 | VAL | CG1-CB-CG2 | -7.02 | 99.66 | 110.90 |
| 1 | C | 265 | GLN | N-CA-CB | 7.02 | 123.24 | 110.60 |
| 1 | P | 115 | VAL | N-CA-CB | 7.02 | 126.94 | 111.50 |
| 1 | B | 56 | VAL | C-N-CA | 7.02 | 139.25 | 121.70 |
| 1 | A | 169 | LYS | CD-CE-NZ | 7.02 | 127.84 | 111.70 |
| 1 | B | 146 | ASP | CB-CG-OD2 | 7.02 | 124.62 | 118.30 |
| 1 | C | 159 | THR | N-CA-CB | 7.02 | 123.63 | 110.30 |
| 1 | D | 168 | GLU | O-C-N | 7.02 | 133.93 | 122.70 |
| 1 | J | 178 | VAL | CA-CB-CG1 | 7.02 | 121.43 | 110.90 |
| 1 | L | 127 | ALA | C-N-CA | 7.02 | 139.25 | 121.70 |
| 1 | C | 419 | PRO | O-C-N | -7.02 | 111.47 | 122.70 |
| 1 | C | 454 | PHE | CD1-CG-CD2 | -7.02 | 109.18 | 118.30 |
| 1 | E | 426 | ALA | O-C-N | -7.02 | 111.27 | 123.20 |
| 1 | I | 495 | ALA | CA-C-O | -7.02 | 105.37 | 120.10 |
| 1 | G | 15 | TYR | CD1-CE1-CZ | 7.01 | 126.11 | 119.80 |
| 1 | I | 129 | GLN | CG-CD-OE1 | 7.01 | 135.63 | 121.60 |
| 1 | N | 273 | GLN | CA-CB-CG | 7.01 | 128.83 | 113.40 |
| 1 | E | 293 | GLU | N-CA-CB | 7.01 | 123.22 | 110.60 |
| 1 | I | 312 | ALA | N-CA-CB | 7.01 | 119.92 | 110.10 |
| 1 | K | 9 | PRO | O-C-N | -7.01 | 111.48 | 122.70 |
| 1 | A | 222 | GLN | CA-CB-CG | 7.01 | 128.83 | 113.40 |
| 1 | C | 389 | LEU | O-C-N | -7.01 | 111.48 | 122.70 |
| 1 | L | 312 | ALA | O-C-N | -7.01 | 111.48 | 122.70 |
| 1 | A | 11 | ASN | O-C-N | -7.01 | 111.48 | 122.70 |
| 1 | G | 60 | ASP | CB-CG-OD1 | 7.01 | 124.61 | 118.30 |
| 1 | G | 250 | MET | CA-CB-CG | 7.01 | 125.22 | 113.30 |
| 1 | L | 176 | GLU | CG-CD-OE2 | -7.01 | 104.28 | 118.30 |
| 1 | M | 246 | MET | CG-SD-CE | -7.01 | 88.99 | 100.20 |
| 1 | A | 438 | ARG | NE-CZ-NH2 | -7.01 | 116.80 | 120.30 |
| 1 | G | 68 | MET | CA-C-N | -7.01 | 101.78 | 117.20 |
| 1 | H | 360 | ARG | CD-NE-CZ | -7.01 | 113.79 | 123.60 |
| 1 | I | 115 | VAL | CA-C-O | -7.01 | 105.38 | 120.10 |
| 1 | J | 286 | ARG | NE-CZ-NH1 | 7.01 | 123.80 | 120.30 |
| 1 | M | 60 | ASP | CA-CB-CG | 7.00 | 128.81 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 494 | ILE | CA-CB-CG2 | 7.00 | 124.91 | 110.90 |
| 1 | G | 64 | ILE | CA-CB-CG1 | 7.00 | 124.31 | 111.00 |
| 1 | I | 275 | TYR | CG-CD1-CE1 | 7.00 | 126.90 | 121.30 |
| 1 | M | 8 | LEU | CA-CB-CG | 7.00 | 131.40 | 115.30 |
| 1 | O | 182 | VAL | N-CA-C | 7.00 | 129.90 | 111.00 |
| 1 | P | 60 | ASP | CB-CG-OD1 | 7.00 | 124.60 | 118.30 |
| 1 | H | 460 | ASP | CB-CG-OD2 | 7.00 | 124.60 | 118.30 |
| 1 | B | 348 | ARG | NE-CZ-NH1 | -7.00 | 116.80 | 120.30 |
| 1 | D | 189 | ASP | C-N-CA | 7.00 | 139.20 | 121.70 |
| 1 | E | 253 | GLU | N-CA-CB | 7.00 | 123.20 | 110.60 |
| 1 | F | 272 | ALA | N-CA-CB | 7.00 | 119.90 | 110.10 |
| 1 | K | 38 | THR | N-CA-CB | 7.00 | 123.60 | 110.30 |
| 1 | K | 352 | GLU | CB-CA-C | 7.00 | 124.40 | 110.40 |
| 1 | C | 294 | LYS | N-CA-CB | 7.00 | 123.19 | 110.60 |
| 1 | O | 241 | GLU | O-C-N | -7.00 | 111.51 | 122.70 |
| 1 | P | 97 | VAL | CB-CA-C | 7.00 | 124.69 | 111.40 |
| 1 | C | 204 | ASP | CA-CB-CG | 6.99 | 128.78 | 113.40 |
| 1 | H | 91 | ASP | CB-CG-OD2 | 6.99 | 124.59 | 118.30 |
| 1 | J | 358 | VAL | CA-C-O | 6.99 | 134.79 | 120.10 |
| 1 | M | 13 | LYS | CB-CG-CD | 6.99 | 129.79 | 111.60 |
| 1 | N | 425 | ASN | CB-CG-OD1 | 6.99 | 135.58 | 121.60 |
| 1 | A | 238 | ALA | CB-CA-C | -6.99 | 99.61 | 110.10 |
| 1 | B | 314 | ASP | CB-CG-OD1 | 6.99 | 124.59 | 118.30 |
| 1 | E | 245 | GLU | OE1-CD-OE2 | -6.99 | 114.91 | 123.30 |
| 1 | F | 190 | LYS | O-C-N | -6.99 | 111.52 | 122.70 |
| 1 | B | 30 | ILE | CB-CG1-CD1 | 6.99 | 133.46 | 113.90 |
| 1 | B | 477 | ILE | O-C-N | -6.99 | 111.52 | 122.70 |
| 1 | H | 432 | GLU | N-CA-C | 6.99 | 129.87 | 111.00 |
| 1 | B | 44 | MET | N-CA-CB | 6.99 | 123.17 | 110.60 |
| 1 | B | 273 | GLN | CA-C-O | 6.99 | 134.77 | 120.10 |
| 1 | E | 341 | LYS | CB-CA-C | 6.99 | 124.37 | 110.40 |
| 1 | I | 459 | GLU | CG-CD-OE1 | 6.99 | 132.27 | 118.30 |
| 1 | M | 490 | ILE | CB-CA-C | -6.99 | 97.63 | 111.60 |
| 1 | O | 217 | GLU | CB-CA-C | -6.99 | 96.43 | 110.40 |
| 1 | L | 12 | MET | CA-C-O | -6.98 | 105.43 | 120.10 |
| 1 | L | 19 | ASP | O-C-N | 6.98 | 133.88 | 122.70 |
| 1 | C | 227 | VAL | CA-CB-CG2 | -6.98 | 100.42 | 110.90 |
| 1 | D | 67 | GLU | N-CA-CB | 6.98 | 123.17 | 110.60 |
| 1 | E | 119 | ILE | N-CA-CB | 6.98 | 126.86 | 110.80 |
| 1 | F | 86 | GLU | N-CA-CB | 6.98 | 123.17 | 110.60 |
| 1 | M | 461 | MET | CA-C-N | 6.98 | 132.56 | 117.20 |
| 1 | N | 55 | VAL | CA-C-N | 6.98 | 132.56 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 72 | HIS | N-CA-C | 6.98 | 129.85 | 111.00 |
| 1 | M | 30 | ILE | CA-C-O | 6.98 | 134.75 | 120.10 |
| 1 | K | 113 | GLN | N-CA-C | 6.98 | 129.84 | 111.00 |
| 1 | L | 170 | LEU | CB-CA-C | -6.98 | 96.94 | 110.20 |
| 1 | N | 374 | GLU | OE1-CD-OE2 | -6.98 | 114.93 | 123.30 |
| 1 | P | 93 | THR | O-C-N | 6.98 | 133.86 | 122.70 |
| 1 | G | 251 | VAL | CA-CB-CG2 | 6.98 | 121.36 | 110.90 |
| 1 | N | 253 | GLU | N-CA-CB | 6.98 | 123.16 | 110.60 |
| 1 | H | 399 | GLY | C-N-CA | 6.97 | 139.14 | 121.70 |
| 1 | C | 460 | ASP | OD1-CG-OD2 | -6.97 | 110.05 | 123.30 |
| 1 | E | 229 | ASP | CA-CB-CG | 6.97 | 128.74 | 113.40 |
| 1 | G | 396 | TYR | CD1-CE1-CZ | 6.97 | 126.08 | 119.80 |
| 1 | H | 225 | LYS | C-N-CA | 6.97 | 139.13 | 121.70 |
| 1 | J | 16 | MET | O-C-N | -6.97 | 111.35 | 123.20 |
| 1 | J | 170 | LEU | CB-CA-C | -6.97 | 96.95 | 110.20 |
| 1 | D | 443 | SER | N-CA-CB | 6.97 | 120.95 | 110.50 |
| 1 | K | 34 | THR | N-CA-CB | 6.97 | 123.54 | 110.30 |
| 1 | H | 473 | LYS | N-CA-CB | 6.97 | 123.14 | 110.60 |
| 1 | L | 150 | LEU | CB-CG-CD2 | 6.97 | 122.85 | 111.00 |
| 1 | I | 176 | GLU | OE1-CD-OE2 | 6.97 | 131.66 | 123.30 |
| 1 | J | 59 | ASN | OD1-CG-ND2 | 6.97 | 137.92 | 121.90 |
| 1 | J | 245 | GLU | N-CA-C | 6.97 | 129.81 | 111.00 |
| 1 | K | 147 | LYS | N-CA-C | 6.97 | 129.81 | 111.00 |
| 1 | K | 286 | ARG | O-C-N | 6.97 | 133.85 | 122.70 |
| 1 | D | 411 | PHE | CB-CA-C | 6.96 | 124.33 | 110.40 |
| 1 | H | 354 | VAL | N-CA-CB | 6.96 | 126.82 | 111.50 |
| 1 | J | 137 | THR | CA-CB-CG2 | 6.96 | 122.15 | 112.40 |
| 1 | L | 146 | ASP | CA-C-O | -6.96 | 105.47 | 120.10 |
| 1 | A | 20 | ALA | O-C-N | 6.96 | 133.84 | 122.70 |
| 1 | D | 138 | ILE | CB-CA-C | -6.96 | 97.67 | 111.60 |
| 1 | F | 43 | GLY | O-C-N | 6.96 | 133.84 | 122.70 |
| 1 | F | 205 | ASP | O-C-N | -6.96 | 111.56 | 122.70 |
| 1 | L | 27 | ALA | CA-C-O | -6.96 | 105.48 | 120.10 |
| 1 | C | 245 | GLU | CB-CG-CD | 6.96 | 133.00 | 114.20 |
| 1 | D | 404 | GLU | CG-CD-OE1 | 6.96 | 132.22 | 118.30 |
| 1 | E | 354 | VAL | O-C-N | -6.96 | 111.56 | 122.70 |
| 1 | I | 304 | ILE | O-C-N | -6.96 | 111.56 | 122.70 |
| 1 | M | 452 | ASN | C-N-CA | 6.96 | 139.11 | 121.70 |
| 1 | N | 432 | GLU | N-CA-CB | 6.96 | 123.13 | 110.60 |
| 1 | D | 208 | LEU | CA-CB-CG | 6.96 | 131.31 | 115.30 |
| 1 | F | 57 | VAL | O-C-N | 6.96 | 133.84 | 122.70 |
| 1 | H | 231 | LYS | CA-CB-CG | 6.96 | 128.71 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 248 | LYS | N-CA-C | 6.96 | 129.79 | 111.00 |
| 1 | N | 403 | ARG | CD-NE-CZ | -6.96 | 113.86 | 123.60 |
| 1 | C | 189 | ASP | CA-C-N | -6.96 | 101.89 | 117.20 |
| 1 | C | 320 | LEU | CB-CG-CD2 | 6.96 | 122.83 | 111.00 |
| 1 | G | 426 | ALA | CA-C-N | -6.96 | 102.28 | 116.20 |
| 1 | M | 157 | SER | N-CA-CB | 6.96 | 120.94 | 110.50 |
| 1 | O | 34 | THR | CA-CB-OG1 | 6.96 | 123.61 | 109.00 |
| 1 | B | 191 | ASP | OD1-CG-OD2 | -6.96 | 110.08 | 123.30 |
| 1 | D | 454 | PHE | CZ-CE2-CD2 | -6.96 | 111.75 | 120.10 |
| 1 | H | 212 | VAL | CA-CB-CG1 | 6.96 | 121.33 | 110.90 |
| 1 | N | 18 | ARG | N-CA-CB | 6.96 | 123.12 | 110.60 |
| 1 | O | 497 | GLU | N-CA-CB | 6.96 | 123.12 | 110.60 |
| 1 | P | 55 | VAL | CA-CB-CG1 | 6.96 | 121.33 | 110.90 |
| 1 | P | 170 | LEU | CB-CG-CD2 | 6.96 | 122.82 | 111.00 |
| 1 | B | 13 | LYS | O-C-N | -6.95 | 111.58 | 122.70 |
| 1 | C | 181 | VAL | CB-CA-C | -6.95 | 98.19 | 111.40 |
| 1 | I | 216 | LYS | N-CA-CB | 6.95 | 123.12 | 110.60 |
| 1 | K | 355 | ILE | CA-CB-CG1 | 6.95 | 124.21 | 111.00 |
| 1 | H | 495 | ALA | CA-C-N | -6.95 | 101.91 | 117.20 |
| 1 | O | 7 | VAL | CA-CB-CG1 | -6.95 | 100.47 | 110.90 |
| 1 | P | 212 | VAL | O-C-N | -6.95 | 111.58 | 122.70 |
| 1 | A | 317 | ASP | CA-CB-CG | 6.95 | 128.69 | 113.40 |
| 1 | F | 413 | ASP | CB-CG-OD1 | -6.95 | 112.05 | 118.30 |
| 1 | K | 306 | ASN | O-C-N | -6.95 | 111.58 | 122.70 |
| 1 | O | 22 | ARG | NE-CZ-NH1 | -6.95 | 116.83 | 120.30 |
| 1 | D | 302 | ASN | CB-CG-OD1 | 6.95 | 135.50 | 121.60 |
| 1 | G | 489 | ARG | CD-NE-CZ | 6.95 | 133.33 | 123.60 |
| 1 | H | 26 | LEU | CB-CG-CD1 | -6.95 | 99.19 | 111.00 |
| 1 | E | 116 | HIS | CB-CA-C | 6.95 | 124.29 | 110.40 |
| 1 | K | 165 | LYS | CD-CE-NZ | 6.95 | 127.68 | 111.70 |
| 1 | C | 135 | LEU | CB-CG-CD2 | -6.94 | 99.20 | 111.00 |
| 1 | P | 53 | GLY | O-C-N | 6.94 | 133.81 | 122.70 |
| 1 | A | 385 | THR | C-N-CA | 6.94 | 139.05 | 121.70 |
| 1 | F | 305 | THR | CA-CB-OG1 | 6.94 | 123.58 | 109.00 |
| 1 | L | 168 | GLU | CA-C-O | -6.94 | 105.52 | 120.10 |
| 1 | M | 187 | LYS | CA-C-O | -6.94 | 105.52 | 120.10 |
| 1 | P | 322 | GLU | OE1-CD-OE2 | -6.94 | 114.97 | 123.30 |
| 1 | A | 164 | GLU | N-CA-CB | 6.94 | 123.09 | 110.60 |
| 1 | B | 54 | ASP | OD1-CG-OD2 | -6.94 | 110.11 | 123.30 |
| 1 | D | 325 | LYS | CA-CB-CG | 6.94 | 128.67 | 113.40 |
| 1 | H | 134 | LEU | O-C-N | -6.94 | 111.60 | 122.70 |
| 1 | K | 370 | GLY | C-N-CA | 6.94 | 139.05 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 418 | ILE | O-C-N | 6.94 | 134.28 | 121.10 |
| 1 | O | 317 | ASP | CB-CG-OD2 | -6.94 | 112.06 | 118.30 |
| 1 | K | 454 | PHE | CG-CD1-CE1 | -6.94 | 113.17 | 120.80 |
| 1 | K | 453 | VAL | CG1-CB-CG2 | -6.94 | 99.80 | 110.90 |
| 1 | L | 489 | ARG | CB-CA-C | 6.94 | 124.27 | 110.40 |
| 1 | G | 190 | LYS | CB-CA-C | 6.93 | 124.27 | 110.40 |
| 1 | G | 329 | ASP | CB-CG-OD2 | -6.93 | 112.06 | 118.30 |
| 1 | H | 81 | VAL | CA-CB-CG2 | 6.93 | 121.30 | 110.90 |
| 1 | N | 244 | SER | CA-C-O | -6.93 | 105.54 | 120.10 |
| 1 | B | 24 | ASN | N-CA-CB | -6.93 | 98.12 | 110.60 |
| 1 | D | 299 | THR | O-C-N | -6.93 | 111.42 | 123.20 |
| 1 | K | 326 | ILE | CG1-CB-CG2 | 6.93 | 126.65 | 111.40 |
| 1 | G | 148 | GLU | N-CA-CB | 6.93 | 123.07 | 110.60 |
| 1 | J | 215 | ASP | CB-CA-C | 6.93 | 124.26 | 110.40 |
| 1 | H | 471 | ARG | N-CA-CB | 6.93 | 123.07 | 110.60 |
| 1 | J | 206 | THR | CA-C-N | 6.93 | 132.44 | 117.20 |
| 1 | J | 365 | ALA | N-CA-CB | 6.93 | 119.80 | 110.10 |
| 1 | P | 221 | ALA | CB-CA-C | 6.93 | 120.49 | 110.10 |
| 1 | A | 378 | ILE | CA-C-O | -6.93 | 105.55 | 120.10 |
| 1 | E | 302 | ASN | CB-CA-C | 6.93 | 124.25 | 110.40 |
| 1 | G | 395 | GLU | OE1-CD-OE2 | -6.93 | 114.99 | 123.30 |
| 1 | I | 113 | GLN | OE1-CD-NE2 | 6.93 | 137.83 | 121.90 |
| 1 | O | 114 | ASN | N-CA-C | 6.93 | 129.70 | 111.00 |
| 1 | P | 335 | GLU | CG-CD-OE1 | -6.93 | 104.45 | 118.30 |
| 1 | H | 147 | LYS | CA-CB-CG | 6.92 | 128.64 | 113.40 |
| 1 | I | 372 | THR | O-C-N | 6.92 | 133.78 | 122.70 |
| 1 | N | 187 | LYS | C-N-CA | 6.92 | 139.01 | 121.70 |
| 1 | B | 239 | ILE | CA-CB-CG2 | 6.92 | 124.74 | 110.90 |
| 1 | G | 246 | MET | CA-C-N | 6.92 | 132.43 | 117.20 |
| 1 | I | 278 | LYS | O-C-N | -6.92 | 111.63 | 122.70 |
| 1 | J | 352 | GLU | CB-CG-CD | 6.92 | 132.89 | 114.20 |
| 1 | E | 127 | ALA | N-CA-C | 6.92 | 129.68 | 111.00 |
| 1 | M | 206 | THR | O-C-N | -6.92 | 111.63 | 122.70 |
| 1 | D | 220 | SER | O-C-N | -6.92 | 111.63 | 122.70 |
| 1 | A | 337 | CYS | O-C-N | -6.92 | 111.63 | 122.70 |
| 1 | E | 22 | ARG | CD-NE-CZ | -6.92 | 113.92 | 123.60 |
| 1 | E | 85 | GLN | CB-CA-C | 6.92 | 124.23 | 110.40 |
| 1 | G | 309 | ASP | OD1-CG-OD2 | -6.92 | 110.16 | 123.30 |
| 1 | P | 33 | GLU | O-C-N | 6.92 | 133.76 | 122.70 |
| 1 | B | 387 | VAL | O-C-N | 6.91 | 133.76 | 122.70 |
| 1 | G | 55 | VAL | CG1-CB-CG2 | -6.91 | 99.84 | 110.90 |
| 1 | I | 182 | VAL | O-C-N | -6.91 | 111.64 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 149 | ILE | N-CA-C | 6.91 | 129.66 | 111.00 |
| 1 | N | 283 | ALA | N-CA-CB | -6.91 | 100.42 | 110.10 |
| 1 | B | 132 | GLN | CA-CB-CG | 6.91 | 128.60 | 113.40 |
| 1 | K | 289 | LYS | CD-CE-NZ | -6.91 | 95.80 | 111.70 |
| 1 | N | 332 | ILE | O-C-N | -6.91 | 111.64 | 122.70 |
| 1 | A | 357 | GLU | OE1-CD-OE2 | 6.91 | 131.59 | 123.30 |
| 1 | E | 397 | ALA | N-CA-CB | 6.91 | 119.77 | 110.10 |
| 1 | H | 15 | TYR | CD1-CG-CD2 | 6.91 | 125.50 | 117.90 |
| 1 | M | 479 | SER | CA-CB-OG | 6.91 | 129.85 | 111.20 |
| 1 | N | 136 | LYS | N-CA-C | 6.91 | 129.65 | 111.00 |
| 1 | G | 48 | LEU | O-C-N | 6.91 | 133.75 | 122.70 |
| 1 | I | 135 | LEU | CB-CA-C | -6.91 | 97.08 | 110.20 |
| 1 | L | 493 | VAL | N-CA-CB | 6.91 | 126.70 | 111.50 |
| 1 | B | 310 | LEU | O-C-N | 6.91 | 133.75 | 122.70 |
| 1 | E | 219 | VAL | C-N-CA | 6.91 | 138.97 | 121.70 |
| 1 | J | 116 | HIS | CA-CB-CG | 6.91 | 125.34 | 113.60 |
| 1 | F | 94 | THR | N-CA-CB | 6.90 | 123.42 | 110.30 |
| 1 | M | 300 | GLY | C-N-CA | 6.90 | 138.96 | 121.70 |
| 1 | E | 220 | SER | N-CA-CB | 6.90 | 120.85 | 110.50 |
| 1 | H | 319 | GLY | O-C-N | 6.90 | 133.75 | 122.70 |
| 1 | L | 38 | THR | CA-CB-OG1 | 6.90 | 123.50 | 109.00 |
| 1 | K | 458 | VAL | CA-CB-CG1 | 6.90 | 121.25 | 110.90 |
| 1 | D | 289 | LYS | N-CA-CB | 6.90 | 123.02 | 110.60 |
| 1 | E | 61 | GLY | CA-C-O | -6.90 | 108.18 | 120.60 |
| 1 | E | 77 | MET | N-CA-CB | 6.90 | 123.02 | 110.60 |
| 1 | F | 379 | VAL | N-CA-CB | 6.90 | 126.67 | 111.50 |
| 1 | M | 89 | VAL | N-CA-C | 6.90 | 129.62 | 111.00 |
| 1 | C | 219 | VAL | CG1-CB-CG2 | 6.90 | 121.93 | 110.90 |
| 1 | D | 330 | SER | N-CA-C | 6.90 | 129.62 | 111.00 |
| 1 | F | 215 | ASP | OD1-CG-OD2 | -6.90 | 110.20 | 123.30 |
| 1 | G | 336 | GLU | CG-CD-OE1 | 6.90 | 132.09 | 118.30 |
| 1 | I | 152 | LYS | O-C-N | -6.90 | 111.67 | 122.70 |
| 1 | B | 452 | ASN | O-C-N | 6.89 | 133.73 | 122.70 |
| 1 | G | 67 | GLU | O-C-N | -6.89 | 111.67 | 122.70 |
| 1 | L | 11 | ASN | CA-CB-CG | 6.89 | 128.57 | 113.40 |
| 1 | L | 371 | CYS | CB-CA-C | -6.89 | 96.61 | 110.40 |
| 1 | N | 244 | SER | C-N-CA | 6.89 | 138.94 | 121.70 |
| 1 | O | 279 | GLU | CA-C-N | -6.89 | 102.41 | 116.20 |
| 1 | G | 276 | LEU | N-CA-CB | 6.89 | 124.19 | 110.40 |
| 1 | H | 32 | ALA | CA-C-N | -6.89 | 102.03 | 117.20 |
| 1 | J | 439 | ALA | CB-CA-C | 6.89 | 120.44 | 110.10 |
| 1 | K | 94 | THR | N-CA-CB | 6.89 | 123.39 | 110.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 33 | GLU | CA-C-N | -6.89 | 102.04 | 117.20 |
| 1 | N | 56 | VAL | CG1-CB-CG2 | 6.89 | 121.93 | 110.90 |
| 1 | P | 309 | ASP | N-CA-CB | 6.89 | 123.01 | 110.60 |
| 1 | P | 486 | MET | N-CA-CB | 6.89 | 123.01 | 110.60 |
| 1 | E | 79 | ILE | CA-CB-CG1 | 6.89 | 124.09 | 111.00 |
| 1 | F | 488 | LEU | CA-C-O | -6.89 | 105.63 | 120.10 |
| 1 | G | 245 | GLU | O-C-N | -6.89 | 111.68 | 122.70 |
| 1 | D | 59 | ASN | CB-CG-ND2 | 6.89 | 133.23 | 116.70 |
| 1 | J | 196 | GLU | O-C-N | -6.89 | 111.68 | 122.70 |
| 1 | G | 349 | GLY | C-N-CA | 6.89 | 138.91 | 121.70 |
| 1 | K | 485 | GLU | OE1-CD-OE2 | -6.89 | 115.03 | 123.30 |
| 1 | P | 216 | LYS | CA-C-O | -6.89 | 105.64 | 120.10 |
| 1 | D | 321 | VAL | CG1-CB-CG2 | -6.88 | 99.89 | 110.90 |
| 1 | D | 368 | VAL | O-C-N | 6.88 | 133.72 | 122.70 |
| 1 | E | 43 | GLY | CA-C-O | -6.88 | 108.21 | 120.60 |
| 1 | H | 306 | ASN | CA-CB-CG | 6.88 | 128.55 | 113.40 |
| 1 | H | 372 | THR | O-C-N | -6.88 | 111.68 | 122.70 |
| 1 | I | 137 | THR | CA-CB-OG1 | 6.88 | 123.46 | 109.00 |
| 1 | K | 129 | GLN | OE1-CD-NE2 | 6.88 | 137.73 | 121.90 |
| 1 | A | 226 | LYS | CB-CA-C | -6.88 | 96.64 | 110.40 |
| 1 | D | 346 | LEU | CB-CG-CD2 | 6.88 | 122.70 | 111.00 |
| 1 | G | 421 | THR | CA-CB-CG2 | 6.88 | 122.03 | 112.40 |
| 1 | I | 73 | PRO | O-C-N | -6.88 | 111.69 | 122.70 |
| 1 | M | 237 | CYS | CA-CB-SG | 6.88 | 126.39 | 114.00 |
| 1 | M | 442 | ALA | CA-C-O | -6.88 | 105.65 | 120.10 |
| 1 | N | 210 | LYS | CB-CG-CD | 6.88 | 129.49 | 111.60 |
| 1 | C | 454 | PHE | CG-CD2-CE2 | 6.88 | 128.37 | 120.80 |
| 1 | D | 12 | MET | CA-C-O | -6.88 | 105.66 | 120.10 |
| 1 | D | 73 | PRO | N-CA-CB | -6.88 | 95.03 | 102.60 |
| 1 | L | 115 | VAL | N-CA-CB | 6.88 | 126.63 | 111.50 |
| 1 | H | 142 | VAL | CG1-CB-CG2 | -6.88 | 99.90 | 110.90 |
| 1 | M | 79 | ILE | CB-CA-C | 6.88 | 125.35 | 111.60 |
| 1 | F | 275 | TYR | CZ-CE2-CD2 | 6.88 | 125.99 | 119.80 |
| 1 | C | 463 | GLU | O-C-N | -6.87 | 111.70 | 122.70 |
| 1 | H | 470 | LEU | CB-CA-C | 6.87 | 123.26 | 110.20 |
| 1 | I | 102 | GLU | OE1-CD-OE2 | 6.87 | 131.55 | 123.30 |
| 1 | K | 292 | MET | N-CA-CB | 6.87 | 122.97 | 110.60 |
| 1 | N | 234 | LEU | CB-CG-CD1 | -6.87 | 99.31 | 111.00 |
| 1 | I | 373 | ILE | CA-CB-CG1 | 6.87 | 124.06 | 111.00 |
| 1 | L | 333 | PHE | CB-CG-CD2 | 6.87 | 125.61 | 120.80 |
| 1 | N | 242 | THR | CA-CB-CG2 | 6.87 | 122.02 | 112.40 |
| 1 | P | 294 | LYS | CB-CA-C | 6.87 | 124.14 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 470 | LEU | CA-CB-CG | 6.87 | 131.10 | 115.30 |
| 1 | K | 443 | SER | CA-C-N | -6.87 | 102.09 | 117.20 |
| 1 | G | 388 | GLU | OE1-CD-OE2 | -6.87 | 115.06 | 123.30 |
| 1 | H | 115 | VAL | N-CA-CB | 6.87 | 126.61 | 111.50 |
| 1 | I | 111 | LEU | CA-CB-CG | 6.87 | 131.10 | 115.30 |
| 1 | L | 105 | ARG | CG-CD-NE | 6.87 | 126.22 | 111.80 |
| 1 | L | 218 | ARG | CD-NE-CZ | 6.87 | 133.22 | 123.60 |
| 1 | I | 247 | LEU | O-C-N | -6.87 | 111.71 | 122.70 |
| 1 | P | 55 | VAL | CA-CB-CG2 | -6.87 | 100.60 | 110.90 |
| 1 | P | 178 | VAL | CA-CB-CG1 | 6.87 | 121.20 | 110.90 |
| 1 | P | 285 | ARG | CG-CD-NE | 6.87 | 126.22 | 111.80 |
| 1 | A | 129 | GLN | CG-CD-OE1 | 6.86 | 135.33 | 121.60 |
| 1 | A | 243 | ALA | N-CA-CB | 6.86 | 119.71 | 110.10 |
| 1 | P | 494 | ILE | O-C-N | 6.86 | 133.68 | 122.70 |
| 1 | F | 115 | VAL | CG1-CB-CG2 | 6.86 | 121.88 | 110.90 |
| 1 | G | 276 | LEU | CB-CA-C | 6.86 | 123.23 | 110.20 |
| 1 | I | 227 | VAL | N-CA-CB | 6.86 | 126.59 | 111.50 |
| 1 | K | 115 | VAL | CB-CA-C | 6.86 | 124.43 | 111.40 |
| 1 | M | 379 | VAL | CA-CB-CG1 | 6.86 | 121.19 | 110.90 |
| 1 | M | 461 | MET | C-N-CA | 6.86 | 138.85 | 121.70 |
| 1 | O | 360 | ARG | NH1-CZ-NH2 | -6.86 | 111.85 | 119.40 |
| 1 | P | 166 | ALA | O-C-N | -6.86 | 111.72 | 122.70 |
| 1 | A | 350 | THR | N-CA-C | 6.86 | 129.52 | 111.00 |
| 1 | B | 62 | VAL | CA-CB-CG2 | -6.86 | 100.61 | 110.90 |
| 1 | B | 138 | ILE | CA-CB-CG2 | 6.86 | 124.61 | 110.90 |
| 1 | J | 370 | GLY | C-N-CA | 6.86 | 138.84 | 121.70 |
| 1 | F | 451 | LEU | CB-CG-CD1 | 6.86 | 122.65 | 111.00 |
| 1 | G | 333 | PHE | CB-CG-CD2 | -6.86 | 116.00 | 120.80 |
| 1 | P | 408 | VAL | CA-CB-CG2 | 6.86 | 121.18 | 110.90 |
| 1 | J | 96 | ALA | N-CA-CB | -6.85 | 100.50 | 110.10 |
| 1 | L | 396 | TYR | O-C-N | 6.85 | 133.67 | 122.70 |
| 1 | C | 31 | ILE | CG1-CB-CG2 | -6.85 | 96.33 | 111.40 |
| 1 | D | 54 | ASP | OD1-CG-OD2 | -6.85 | 110.28 | 123.30 |
| 1 | D | 190 | LYS | O-C-N | -6.85 | 111.74 | 122.70 |
| 1 | F | 275 | TYR | CD1-CE1-CZ | -6.85 | 113.63 | 119.80 |
| 1 | F | 356 | GLU | N-CA-CB | 6.85 | 122.94 | 110.60 |
| 1 | M | 37 | SER | N-CA-CB | -6.85 | 100.22 | 110.50 |
| 1 | F | 293 | GLU | CG-CD-OE1 | -6.85 | 104.60 | 118.30 |
| 1 | J | 134 | LEU | CB-CA-C | 6.85 | 123.21 | 110.20 |
| 1 | C | 221 | ALA | N-CA-CB | -6.85 | 100.51 | 110.10 |
| 1 | O | 402 | GLY | CA-C-N | -6.85 | 102.14 | 117.20 |
| 1 | O | 415 | LEU | N-CA-CB | 6.85 | 124.10 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 237 | CYS | CA-CB-SG | 6.85 | 126.32 | 114.00 |
| 1 | H | 323 | GLU | O-C-N | -6.85 | 111.75 | 122.70 |
| 1 | C | 192 | LEU | CA-CB-CG | 6.84 | 131.04 | 115.30 |
| 1 | E | 409 | ARG | NE-CZ-NH1 | -6.84 | 116.88 | 120.30 |
| 1 | H | 273 | GLN | CA-CB-CG | 6.84 | 128.46 | 113.40 |
| 1 | J | 343 | VAL | CG1-CB-CG2 | 6.84 | 121.85 | 110.90 |
| 1 | L | 216 | LYS | CB-CG-CD | 6.84 | 129.40 | 111.60 |
| 1 | A | 133 | GLU | OE1-CD-OE2 | -6.84 | 115.09 | 123.30 |
| 1 | C | 31 | ILE | O-C-N | -6.84 | 111.75 | 122.70 |
| 1 | H | 124 | TYR | CB-CA-C | 6.84 | 124.09 | 110.40 |
| 1 | N | 291 | ASP | OD1-CG-OD2 | -6.84 | 110.30 | 123.30 |
| 1 | C | 24 | ASN | CB-CG-OD1 | -6.84 | 107.92 | 121.60 |
| 1 | D | 351 | THR | N-CA-CB | 6.84 | 123.30 | 110.30 |
| 1 | A | 284 | ALA | O-C-N | 6.84 | 133.64 | 122.70 |
| 1 | E | 371 | CYS | CB-CA-C | -6.84 | 96.72 | 110.40 |
| 1 | F | 359 | ALA | N-CA-CB | 6.84 | 119.68 | 110.10 |
| 1 | H | 317 | ASP | N-CA-CB | 6.84 | 122.91 | 110.60 |
| 1 | I | 252 | ALA | CB-CA-C | 6.84 | 120.36 | 110.10 |
| 1 | J | 52 | LEU | C-N-CA | 6.84 | 136.66 | 122.30 |
| 1 | O | 477 | ILE | CA-CB-CG1 | 6.84 | 123.99 | 111.00 |
| 1 | P | 239 | ILE | CA-CB-CG1 | 6.84 | 124.00 | 111.00 |
| 1 | C | 199 | SER | O-C-N | -6.84 | 111.58 | 123.20 |
| 1 | C | 350 | THR | CA-C-N | 6.84 | 132.24 | 117.20 |
| 1 | I | 453 | VAL | CG1-CB-CG2 | 6.84 | 121.84 | 110.90 |
| 1 | K | 91 | ASP | OD1-CG-OD2 | -6.84 | 110.31 | 123.30 |
| 1 | G | 403 | ARG | N-CA-CB | 6.83 | 122.90 | 110.60 |
| 1 | P | 295 | LEU | O-C-N | -6.83 | 111.77 | 122.70 |
| 1 | D | 122 | LYS | CA-CB-CG | 6.83 | 128.43 | 113.40 |
| 1 | J | 47 | MET | O-C-N | -6.83 | 111.77 | 122.70 |
| 1 | J | 491 | ASP | O-C-N | 6.83 | 133.63 | 122.70 |
| 1 | K | 178 | VAL | CA-CB-CG2 | 6.83 | 121.15 | 110.90 |
| 1 | K | 205 | ASP | CA-CB-CG | 6.83 | 128.43 | 113.40 |
| 1 | K | 249 | ASP | CB-CG-OD1 | 6.83 | 124.45 | 118.30 |
| 1 | L | 339 | HIS | CG-ND1-CE1 | 6.83 | 117.76 | 108.20 |
| 1 | B | 423 | ALA | CB-CA-C | -6.83 | 99.85 | 110.10 |
| 1 | O | 326 | ILE | CA-CB-CG1 | 6.83 | 123.98 | 111.00 |
| 1 | E | 22 | ARG | NE-CZ-NH1 | -6.83 | 116.89 | 120.30 |
| 1 | F | 58 | THR | C-N-CA | 6.83 | 138.77 | 121.70 |
| 1 | F | 304 | ILE | CA-CB-CG1 | 6.83 | 123.97 | 111.00 |
| 1 | J | 274 | HIS | O-C-N | -6.83 | 111.77 | 122.70 |
| 1 | K | 263 | PHE | CG-CD2-CE2 | 6.83 | 128.31 | 120.80 |
| 1 | N | 399 | GLY | CA-C-O | -6.83 | 108.31 | 120.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 255 | LYS | O-C-N | -6.83 | 111.78 | 122.70 |
| 1 | A | 10 | GLU | CA-C-N | 6.83 | 132.22 | 117.20 |
| 1 | F | 423 | ALA | CB-CA-C | -6.83 | 99.86 | 110.10 |
| 1 | N | 180 | ALA | CA-C-N | 6.83 | 132.22 | 117.20 |
| 1 | C | 56 | VAL | N-CA-CB | -6.83 | 96.48 | 111.50 |
| 1 | J | 348 | ARG | CB-CA-C | 6.83 | 124.05 | 110.40 |
| 1 | P | 286 | ARG | NE-CZ-NH2 | 6.83 | 123.71 | 120.30 |
| 1 | B | 181 | VAL | CA-C-O | 6.82 | 134.43 | 120.10 |
| 1 | P | 146 | ASP | CB-CG-OD1 | -6.82 | 112.16 | 118.30 |
| 1 | P | 350 | THR | O-C-N | -6.82 | 111.78 | 122.70 |
| 1 | G | 313 | GLN | CB-CG-CD | 6.82 | 129.34 | 111.60 |
| 1 | D | 313 | GLN | N-CA-C | 6.82 | 129.42 | 111.00 |
| 1 | I | 296 | ALA | O-C-N | -6.82 | 111.79 | 122.70 |
| 1 | O | 380 | SER | CB-CA-C | 6.82 | 123.06 | 110.10 |
| 1 | C | 71 | GLU | CG-CD-OE1 | -6.82 | 104.66 | 118.30 |
| 1 | G | 146 | ASP | CA-C-N | 6.82 | 132.20 | 117.20 |
| 1 | D | 307 | ILE | CA-C-O | -6.82 | 105.78 | 120.10 |
| 1 | E | 63 | THR | N-CA-CB | 6.82 | 123.25 | 110.30 |
| 1 | F | 245 | GLU | C-N-CA | 6.82 | 138.74 | 121.70 |
| 1 | H | 7 | VAL | CA-C-O | -6.82 | 105.78 | 120.10 |
| 1 | K | 491 | ASP | CB-CG-OD1 | 6.82 | 124.44 | 118.30 |
| 1 | L | 420 | ARG | NE-CZ-NH1 | 6.82 | 123.71 | 120.30 |
| 1 | N | 411 | PHE | CD1-CG-CD2 | -6.82 | 109.44 | 118.30 |
| 1 | B | 216 | LYS | O-C-N | -6.82 | 111.80 | 122.70 |
| 1 | D | 29 | ARG | N-CA-CB | -6.82 | 98.33 | 110.60 |
| 1 | K | 114 | ASN | CA-CB-CG | 6.82 | 128.40 | 113.40 |
| 1 | P | 455 | THR | N-CA-CB | 6.82 | 123.25 | 110.30 |
| 1 | J | 45 | ASP | CB-CG-OD1 | 6.81 | 124.43 | 118.30 |
| 1 | C | 103 | LEU | N-CA-CB | 6.81 | 124.03 | 110.40 |
| 1 | K | 80 | GLU | CB-CA-C | -6.81 | 96.78 | 110.40 |
| 1 | M | 389 | LEU | O-C-N | 6.81 | 133.60 | 122.70 |
| 1 | N | 111 | LEU | O-C-N | -6.81 | 111.80 | 122.70 |
| 1 | D | 182 | VAL | CA-C-O | 6.81 | 134.40 | 120.10 |
| 1 | E | 355 | ILE | CA-C-O | 6.81 | 134.40 | 120.10 |
| 1 | P | 433 | ILE | CB-CA-C | -6.81 | 97.98 | 111.60 |
| 1 | D | 431 | ILE | O-C-N | -6.81 | 111.81 | 122.70 |
| 1 | F | 426 | ALA | N-CA-CB | -6.81 | 100.57 | 110.10 |
| 1 | C | 66 | ARG | CG-CD-NE | 6.81 | 126.10 | 111.80 |
| 1 | E | 496 | ALA | N-CA-CB | 6.81 | 119.63 | 110.10 |
| 1 | F | 105 | ARG | NE-CZ-NH2 | 6.81 | 123.70 | 120.30 |
| 1 | G | 292 | MET | CA-C-N | 6.81 | 132.18 | 117.20 |
| 1 | P | 326 | ILE | CA-CB-CG1 | 6.81 | 123.93 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 242 | THR | C-N-CA | 6.81 | 138.72 | 121.70 |
| 1 | L | 314 | ASP | C-N-CA | 6.80 | 138.71 | 121.70 |
| 1 | G | 400 | ILE | C-N-CA | 6.80 | 138.70 | 121.70 |
| 1 | J | 497 | GLU | N-CA-C | 6.80 | 129.37 | 111.00 |
| 1 | K | 118 | THR | O-C-N | 6.80 | 133.58 | 122.70 |
| 1 | K | 124 | TYR | CD1-CG-CD2 | -6.80 | 110.42 | 117.90 |
| 1 | P | 83 | LYS | CD-CE-NZ | 6.80 | 127.34 | 111.70 |
| 1 | A | 18 | ARG | CG-CD-NE | -6.80 | 97.53 | 111.80 |
| 1 | C | 116 | HIS | CA-CB-CG | 6.80 | 125.15 | 113.60 |
| 1 | C | 249 | ASP | OD1-CG-OD2 | -6.80 | 110.39 | 123.30 |
| 1 | D | 379 | VAL | CA-CB-CG2 | -6.80 | 100.70 | 110.90 |
| 1 | G | 409 | ARG | NH1-CZ-NH2 | -6.80 | 111.92 | 119.40 |
| 1 | K | 357 | GLU | N-CA-CB | 6.80 | 122.83 | 110.60 |
| 1 | O | 261 | VAL | CA-CB-CG2 | 6.80 | 121.09 | 110.90 |
| 1 | E | 463 | GLU | CG-CD-OE1 | -6.79 | 104.71 | 118.30 |
| 1 | E | 45 | ASP | O-C-N | 6.79 | 133.57 | 122.70 |
| 1 | J | 150 | LEU | O-C-N | 6.79 | 133.57 | 122.70 |
| 1 | L | 446 | ASN | OD1-CG-ND2 | -6.79 | 106.28 | 121.90 |
| 1 | M | 335 | GLU | O-C-N | -6.79 | 111.83 | 122.70 |
| 1 | O | 306 | ASN | N-CA-CB | -6.79 | 98.37 | 110.60 |
| 1 | C | 297 | LYS | N-CA-CB | 6.79 | 122.83 | 110.60 |
| 1 | D | 188 | VAL | N-CA-C | 6.79 | 129.34 | 111.00 |
| 1 | F | 68 | MET | N-CA-CB | -6.79 | 98.38 | 110.60 |
| 1 | F | 420 | ARG | CA-C-O | -6.79 | 105.84 | 120.10 |
| 1 | L | 278 | LYS | CA-CB-CG | 6.79 | 128.34 | 113.40 |
| 1 | O | 437 | VAL | CA-CB-CG2 | 6.79 | 121.09 | 110.90 |
| 1 | P | 293 | GLU | OE1-CD-OE2 | 6.79 | 131.45 | 123.30 |
| 1 | A | 218 | ARG | NE-CZ-NH1 | 6.79 | 123.69 | 120.30 |
| 1 | E | 239 | ILE | CA-CB-CG1 | 6.79 | 123.90 | 111.00 |
| 1 | G | 113 | GLN | CB-CA-C | -6.79 | 96.82 | 110.40 |
| 1 | G | 258 | GLY | C-N-CA | 6.79 | 138.67 | 121.70 |
| 1 | M | 257 | SER | C-N-CA | -6.79 | 108.04 | 122.30 |
| 1 | B | 86 | GLU | CA-CB-CG | 6.79 | 128.33 | 113.40 |
| 1 | D | 181 | VAL | CA-CB-CG1 | 6.79 | 121.08 | 110.90 |
| 1 | N | 142 | VAL | CA-CB-CG1 | 6.79 | 121.08 | 110.90 |
| 1 | N | 458 | VAL | CA-CB-CG1 | 6.79 | 121.08 | 110.90 |
| 1 | B | 124 | TYR | O-C-N | -6.79 | 111.84 | 122.70 |
| 1 | C | 291 | ASP | CB-CA-C | -6.79 | 96.83 | 110.40 |
| 1 | E | 434 | LEU | CB-CG-CD1 | 6.79 | 122.54 | 111.00 |
| 1 | E | 483 | SER | CB-CA-C | 6.79 | 122.99 | 110.10 |
| 1 | P | 172 | GLU | CA-C-O | 6.79 | 134.35 | 120.10 |
| 1 | E | 204 | ASP | CB-CG-OD1 | -6.78 | 112.19 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 295 | LEU | N-CA-CB | 6.78 | 123.97 | 110.40 |
| 1 | O | 60 | ASP | OD1-CG-OD2 | -6.78 | 110.41 | 123.30 |
| 1 | P | 263 | PHE | O-C-N | -6.78 | 111.85 | 122.70 |
| 1 | J | 33 | GLU | CA-C-N | -6.78 | 102.28 | 117.20 |
| 1 | L | 277 | ALA | O-C-N | -6.78 | 111.85 | 122.70 |
| 1 | O | 210 | LYS | CB-CA-C | 6.78 | 123.96 | 110.40 |
| 1 | A | 398 | GLU | N-CA-CB | 6.78 | 122.80 | 110.60 |
| 1 | G | 496 | ALA | O-C-N | -6.78 | 111.85 | 122.70 |
| 1 | F | 219 | VAL | CA-CB-CG1 | 6.78 | 121.07 | 110.90 |
| 1 | F | 36 | ARG | NH1-CZ-NH2 | -6.78 | 111.94 | 119.40 |
| 1 | K | 229 | ASP | CB-CG-OD1 | 6.78 | 124.40 | 118.30 |
| 1 | O | 271 | LEU | N-CA-C | 6.78 | 129.30 | 111.00 |
| 1 | A | 351 | THR | CA-CB-CG2 | 6.78 | 121.89 | 112.40 |
| 1 | E | 285 | ARG | NH1-CZ-NH2 | -6.78 | 111.95 | 119.40 |
| 1 | H | 403 | ARG | CD-NE-CZ | -6.78 | 114.11 | 123.60 |
| 1 | I | 494 | ILE | CA-C-O | -6.78 | 105.87 | 120.10 |
| 1 | H | 384 | SER | O-C-N | -6.77 | 111.86 | 122.70 |
| 1 | P | 154 | ALA | CB-CA-C | 6.77 | 120.26 | 110.10 |
| 1 | B | 279 | GLU | CA-C-N | -6.77 | 102.66 | 116.20 |
| 1 | F | 269 | ASP | CB-CA-C | 6.77 | 123.94 | 110.40 |
| 1 | L | 467 | VAL | O-C-N | -6.77 | 111.87 | 122.70 |
| 1 | E | 315 | LEU | CB-CG-CD2 | 6.77 | 122.51 | 111.00 |
| 1 | P | 309 | ASP | CA-CB-CG | 6.77 | 128.29 | 113.40 |
| 1 | B | 12 | MET | N-CA-C | 6.77 | 129.27 | 111.00 |
| 1 | C | 305 | THR | N-CA-CB | 6.77 | 123.16 | 110.30 |
| 1 | P | 133 | GLU | N-CA-CB | 6.77 | 122.78 | 110.60 |
| 1 | P | 356 | GLU | OE1-CD-OE2 | 6.77 | 131.42 | 123.30 |
| 1 | P | 454 | PHE | CB-CG-CD1 | -6.77 | 116.06 | 120.80 |
| 1 | B | 144 | ALA | N-CA-CB | -6.77 | 100.63 | 110.10 |
| 1 | E | 229 | ASP | CB-CA-C | 6.77 | 123.93 | 110.40 |
| 1 | N | 150 | LEU | O-C-N | -6.77 | 111.87 | 122.70 |
| 1 | B | 13 | LYS | N-CA-CB | 6.76 | 122.78 | 110.60 |
| 1 | F | 10 | GLU | OE1-CD-OE2 | -6.76 | 115.18 | 123.30 |
| 1 | G | 177 | ALA | CA-C-O | 6.76 | 134.31 | 120.10 |
| 1 | J | 455 | THR | CA-CB-CG2 | -6.76 | 102.93 | 112.40 |
| 1 | N | 48 | LEU | CB-CG-CD2 | -6.76 | 99.50 | 111.00 |
| 1 | N | 338 | LYS | C-N-CA | 6.76 | 138.61 | 121.70 |
| 1 | H | 226 | LYS | O-C-N | -6.76 | 111.88 | 122.70 |
| 1 | O | 373 | ILE | N-CA-CB | 6.76 | 126.35 | 110.80 |
| 1 | B | 393 | LEU | O-C-N | -6.76 | 111.89 | 122.70 |
| 1 | B | 411 | PHE | CA-CB-CG | 6.76 | 130.12 | 113.90 |
| 1 | G | 146 | ASP | C-N-CA | 6.76 | 138.60 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 336 | GLU | O-C-N | -6.76 | 111.89 | 122.70 |
| 1 | I | 493 | VAL | N-CA-CB | 6.76 | 126.37 | 111.50 |
| 1 | M | 83 | LYS | CA-CB-CG | 6.76 | 128.27 | 113.40 |
| 1 | K | 327 | SER | N-CA-CB | 6.76 | 120.64 | 110.50 |
| 1 | G | 459 | GLU | O-C-N | -6.76 | 111.89 | 122.70 |
| 1 | H | 372 | THR | N-CA-CB | 6.76 | 123.14 | 110.30 |
| 1 | I | 274 | HIS | O-C-N | -6.76 | 111.89 | 122.70 |
| 1 | K | 405 | GLN | CB-CG-CD | 6.76 | 129.17 | 111.60 |
| 1 | C | 486 | MET | N-CA-CB | 6.75 | 122.76 | 110.60 |
| 1 | A | 236 | ASN | CB-CG-OD1 | 6.75 | 135.11 | 121.60 |
| 1 | B | 317 | ASP | CA-CB-CG | 6.75 | 128.26 | 113.40 |
| 1 | L | 14 | ARG | CD-NE-CZ | 6.75 | 133.06 | 123.60 |
| 1 | N | 358 | VAL | CA-CB-CG2 | 6.75 | 121.03 | 110.90 |
| 1 | E | 243 | ALA | N-CA-C | 6.75 | 129.23 | 111.00 |
| 1 | F | 36 | ARG | CG-CD-NE | -6.75 | 97.62 | 111.80 |
| 1 | P | 274 | HIS | N-CA-CB | 6.75 | 122.75 | 110.60 |
| 1 | B | 52 | LEU | C-N-CA | 6.75 | 136.47 | 122.30 |
| 1 | N | 9 | PRO | O-C-N | -6.75 | 111.90 | 122.70 |
| 1 | P | 267 | GLY | CA-C-O | -6.75 | 108.45 | 120.60 |
| 1 | N | 242 | THR | CA-C-O | -6.75 | 105.93 | 120.10 |
| 1 | O | 217 | GLU | OE1-CD-OE2 | 6.75 | 131.40 | 123.30 |
| 1 | G | 385 | THR | CA-CB-CG2 | 6.75 | 121.84 | 112.40 |
| 1 | J | 374 | GLU | CG-CD-OE1 | 6.75 | 131.79 | 118.30 |
| 1 | B | 114 | ASN | CB-CG-ND2 | 6.74 | 132.89 | 116.70 |
| 1 | I | 102 | GLU | CG-CD-OE1 | -6.74 | 104.81 | 118.30 |
| 1 | L | 354 | VAL | CG1-CB-CG2 | -6.74 | 100.11 | 110.90 |
| 1 | M | 206 | THR | CA-CB-CG2 | 6.74 | 121.84 | 112.40 |
| 1 | I | 113 | GLN | CG-CD-OE1 | -6.74 | 108.12 | 121.60 |
| 1 | K | 294 | LYS | N-CA-CB | 6.74 | 122.73 | 110.60 |
| 1 | L | 391 | MET | CB-CA-C | 6.74 | 123.88 | 110.40 |
| 1 | N | 496 | ALA | O-C-N | -6.74 | 111.92 | 122.70 |
| 1 | B | 324 | ARG | NE-CZ-NH1 | -6.74 | 116.93 | 120.30 |
| 1 | B | 425 | ASN | CA-CB-CG | 6.74 | 128.22 | 113.40 |
| 1 | F | 166 | ALA | CB-CA-C | -6.74 | 100.00 | 110.10 |
| 1 | H | 179 | SER | C-N-CA | 6.74 | 138.54 | 121.70 |
| 1 | L | 42 | LYS | CD-CE-NZ | 6.74 | 127.19 | 111.70 |
| 1 | C | 377 | ARG | C-N-CA | 6.73 | 138.53 | 121.70 |
| 1 | E | 385 | THR | N-CA-CB | 6.73 | 123.09 | 110.30 |
| 1 | J | 60 | ASP | C-N-CA | 6.73 | 136.44 | 122.30 |
| 1 | M | 64 | ILE | N-CA-CB | 6.73 | 126.29 | 110.80 |
| 1 | H | 351 | THR | N-CA-CB | 6.73 | 123.09 | 110.30 |
| 1 | K | 189 | ASP | O-C-N | -6.73 | 111.93 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 489 | ARG | O-C-N | -6.73 | 111.93 | 122.70 |
| 1 | M | 337 | CYS | CA-CB-SG | -6.73 | 101.88 | 114.00 |
| 1 | M | 342 | ALA | CB-CA-C | 6.73 | 120.20 | 110.10 |
| 1 | B | 355 | ILE | O-C-N | -6.73 | 111.93 | 122.70 |
| 1 | C | 405 | GLN | CG-CD-OE1 | -6.73 | 108.14 | 121.60 |
| 1 | F | 269 | ASP | O-C-N | -6.73 | 111.93 | 122.70 |
| 1 | J | 416 | GLU | O-C-N | -6.73 | 111.93 | 122.70 |
| 1 | O | 416 | GLU | CA-CB-CG | 6.73 | 128.21 | 113.40 |
| 1 | O | 448 | CYS | C-N-CA | 6.73 | 138.52 | 121.70 |
| 1 | P | 13 | LYS | CA-C-N | 6.73 | 132.01 | 117.20 |
| 1 | A | 193 | ILE | CG1-CB-CG2 | -6.73 | 96.60 | 111.40 |
| 1 | G | 112 | ASP | CB-CG-OD1 | -6.73 | 112.25 | 118.30 |
| 1 | G | 294 | LYS | CA-C-O | -6.73 | 105.97 | 120.10 |
| 1 | K | 181 | VAL | CG1-CB-CG2 | 6.73 | 121.67 | 110.90 |
| 1 | L | 100 | ALA | CA-C-N | -6.73 | 102.75 | 116.20 |
| 1 | L | 214 | VAL | CA-CB-CG2 | 6.73 | 120.99 | 110.90 |
| 1 | B | 447 | LYS | C-N-CA | 6.72 | 138.51 | 121.70 |
| 1 | G | 275 | TYR | CD1-CG-CD2 | 6.72 | 125.30 | 117.90 |
| 1 | G | 444 | ASN | C-N-CA | -6.72 | 108.18 | 122.30 |
| 1 | N | 11 | ASN | O-C-N | -6.72 | 111.94 | 122.70 |
| 1 | B | 26 | LEU | CA-CB-CG | 6.72 | 130.76 | 115.30 |
| 1 | C | 105 | ARG | NE-CZ-NH1 | -6.72 | 116.94 | 120.30 |
| 1 | D | 272 | ALA | CB-CA-C | 6.72 | 120.19 | 110.10 |
| 1 | J | 338 | LYS | CA-C-O | -6.72 | 105.98 | 120.10 |
| 1 | K | 314 | ASP | CA-CB-CG | 6.72 | 128.19 | 113.40 |
| 1 | L | 212 | VAL | CA-CB-CG1 | 6.72 | 120.98 | 110.90 |
| 1 | B | 462 | CYS | O-C-N | -6.72 | 111.95 | 122.70 |
| 1 | J | 136 | LYS | N-CA-C | 6.72 | 129.15 | 111.00 |
| 1 | K | 496 | ALA | O-C-N | -6.72 | 111.95 | 122.70 |
| 1 | O | 282 | VAL | O-C-N | 6.72 | 133.45 | 122.70 |
| 1 | O | 319 | GLY | CA-C-N | 6.72 | 131.98 | 117.20 |
| 1 | A | 114 | ASN | CA-CB-CG | 6.72 | 128.18 | 113.40 |
| 1 | N | 356 | GLU | CA-C-N | -6.72 | 102.42 | 117.20 |
| 1 | D | 372 | THR | CA-C-O | -6.72 | 105.99 | 120.10 |
| 1 | K | 11 | ASN | O-C-N | -6.72 | 111.95 | 122.70 |
| 1 | K | 113 | GLN | O-C-N | -6.72 | 111.95 | 122.70 |
| 1 | L | 379 | VAL | C-N-CA | 6.72 | 138.49 | 121.70 |
| 1 | F | 107 | ALA | N-CA-CB | 6.71 | 119.50 | 110.10 |
| 1 | M | 280 | GLY | CA-C-O | -6.71 | 108.52 | 120.60 |
| 1 | P | 124 | TYR | N-CA-CB | -6.71 | 98.52 | 110.60 |
| 1 | I | 112 | ASP | CB-CA-C | 6.71 | 123.81 | 110.40 |
| 1 | K | 263 | PHE | O-C-N | -6.71 | 111.97 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 242 | THR | CA-CB-CG2 | -6.71 | 103.01 | 112.40 |
| 1 | B | 201 | ALA | N-CA-CB | 6.71 | 119.49 | 110.10 |
| 1 | C | 248 | LYS | N-CA-CB | 6.71 | 122.67 | 110.60 |
| 1 | C | 489 | ARG | NE-CZ-NH1 | 6.71 | 123.65 | 120.30 |
| 1 | D | 66 | ARG | CB-CA-C | -6.71 | 96.99 | 110.40 |
| 1 | L | 144 | ALA | O-C-N | -6.71 | 111.97 | 122.70 |
| 1 | M | 139 | ALA | O-C-N | -6.71 | 111.97 | 122.70 |
| 1 | O | 33 | GLU | OE1-CD-OE2 | -6.71 | 115.25 | 123.30 |
| 1 | A | 281 | ILE | CB-CA-C | -6.71 | 98.19 | 111.60 |
| 1 | A | 314 | ASP | OD1-CG-OD2 | -6.71 | 110.56 | 123.30 |
| 1 | E | 188 | VAL | C-N-CA | 6.71 | 138.46 | 121.70 |
| 1 | M | 85 | GLN | CA-CB-CG | 6.71 | 128.15 | 113.40 |
| 1 | M | 222 | GLN | CA-C-N | -6.71 | 102.45 | 117.20 |
| 1 | A | 302 | ASN | CB-CA-C | 6.70 | 123.81 | 110.40 |
| 1 | A | 368 | VAL | N-CA-C | 6.70 | 129.10 | 111.00 |
| 1 | E | 393 | LEU | O-C-N | -6.70 | 111.98 | 122.70 |
| 1 | H | 137 | THR | N-CA-C | 6.70 | 129.10 | 111.00 |
| 1 | L | 235 | LEU | CB-CG-CD2 | -6.70 | 99.60 | 111.00 |
| 1 | P | 327 | SER | N-CA-CB | 6.70 | 120.56 | 110.50 |
| 1 | P | 399 | GLY | N-CA-C | 6.70 | 129.85 | 113.10 |
| 1 | C | 228 | THR | CA-CB-CG2 | -6.70 | 103.02 | 112.40 |
| 1 | D | 134 | LEU | O-C-N | -6.70 | 111.98 | 122.70 |
| 1 | B | 333 | PHE | CB-CG-CD2 | -6.70 | 116.11 | 120.80 |
| 1 | D | 372 | THR | O-C-N | 6.70 | 133.42 | 122.70 |
| 1 | F | 52 | LEU | O-C-N | 6.70 | 134.59 | 123.20 |
| 1 | H | 145 | GLN | N-CA-CB | 6.70 | 122.66 | 110.60 |
| 1 | B | 96 | ALA | N-CA-CB | 6.70 | 119.48 | 110.10 |
| 1 | L | 275 | TYR | CB-CG-CD2 | 6.70 | 125.02 | 121.00 |
| 1 | N | 361 | ALA | CB-CA-C | 6.70 | 120.14 | 110.10 |
| 1 | A | 15 | TYR | CB-CG-CD2 | 6.70 | 125.02 | 121.00 |
| 1 | M | 99 | VAL | O-C-N | -6.70 | 111.99 | 122.70 |
| 1 | O | 221 | ALA | CA-C-O | -6.70 | 106.04 | 120.10 |
| 1 | D | 448 | CYS | CA-CB-SG | 6.69 | 126.05 | 114.00 |
| 1 | B | 45 | ASP | OD1-CG-OD2 | 6.69 | 136.02 | 123.30 |
| 1 | F | 296 | ALA | N-CA-CB | 6.69 | 119.47 | 110.10 |
| 1 | K | 132 | GLN | CG-CD-OE1 | 6.69 | 134.99 | 121.60 |
| 1 | K | 291 | ASP | CB-CG-OD1 | -6.69 | 112.28 | 118.30 |
| 1 | M | 305 | THR | CA-CB-OG1 | 6.69 | 123.05 | 109.00 |
| 1 | L | 27 | ALA | CB-CA-C | 6.69 | 120.14 | 110.10 |
| 1 | O | 92 | GLY | CA-C-N | 6.69 | 131.92 | 117.20 |
| 1 | O | 452 | ASN | OD1-CG-ND2 | 6.69 | 137.29 | 121.90 |
| 1 | A | 159 | THR | CA-CB-CG2 | 6.69 | 121.76 | 112.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 305 | THR | CA-CB-OG1 | 6.69 | 123.05 | 109.00 |
| 1 | M | 340 | PRO | CA-N-CD | -6.69 | 102.14 | 111.50 |
| 1 | C | 137 | THR | O-C-N | -6.69 | 112.00 | 122.70 |
| 1 | J | 164 | GLU | CA-CB-CG | 6.69 | 128.12 | 113.40 |
| 1 | L | 45 | ASP | N-CA-CB | -6.69 | 98.56 | 110.60 |
| 1 | G | 493 | VAL | CA-CB-CG1 | -6.69 | 100.87 | 110.90 |
| 1 | I | 213 | LEU | CA-CB-CG | 6.69 | 130.68 | 115.30 |
| 1 | O | 29 | ARG | CD-NE-CZ | 6.69 | 132.96 | 123.60 |
| 1 | D | 465 | GLY | C-N-CA | 6.68 | 138.41 | 121.70 |
| 1 | E | 186 | GLY | C-N-CA | 6.68 | 138.41 | 121.70 |
| 1 | E | 277 | ALA | O-C-N | -6.68 | 112.00 | 122.70 |
| 1 | I | 374 | GLU | CG-CD-OE2 | 6.68 | 131.67 | 118.30 |
| 1 | G | 9 | PRO | N-CD-CG | -6.68 | 93.18 | 103.20 |
| 1 | G | 11 | ASN | CA-CB-CG | 6.68 | 128.10 | 113.40 |
| 1 | G | 166 | ALA | N-CA-CB | 6.68 | 119.46 | 110.10 |
| 1 | H | 11 | ASN | CB-CA-C | 6.68 | 123.76 | 110.40 |
| 1 | I | 165 | LYS | CA-CB-CG | 6.68 | 128.10 | 113.40 |
| 1 | J | 243 | ALA | N-CA-C | 6.68 | 129.04 | 111.00 |
| 1 | L | 464 | ASN | CA-C-O | -6.68 | 106.06 | 120.10 |
| 1 | M | 350 | THR | CA-CB-OG1 | 6.68 | 123.03 | 109.00 |
| 1 | N | 262 | LEU | CB-CG-CD1 | -6.68 | 99.64 | 111.00 |
| 1 | O | 65 | LEU | C-N-CA | 6.68 | 138.41 | 121.70 |
| 1 | D | 50 | ASP | CB-CG-OD2 | 6.68 | 124.31 | 118.30 |
| 1 | E | 63 | THR | CA-CB-CG2 | 6.68 | 121.75 | 112.40 |
| 1 | A | 168 | GLU | CG-CD-OE1 | -6.68 | 104.94 | 118.30 |
| 1 | G | 205 | ASP | CB-CG-OD2 | -6.68 | 112.29 | 118.30 |
| 1 | I | 57 | VAL | CA-CB-CG2 | 6.68 | 120.92 | 110.90 |
| 1 | N | 363 | ASP | CB-CG-OD1 | 6.68 | 124.31 | 118.30 |
| 1 | P | 138 | ILE | CB-CA-C | -6.68 | 98.24 | 111.60 |
| 1 | I | 259 | ALA | C-N-CA | 6.68 | 138.40 | 121.70 |
| 1 | L | 306 | ASN | CA-CB-CG | 6.68 | 128.09 | 113.40 |
| 1 | M | 401 | SER | N-CA-CB | 6.67 | 120.51 | 110.50 |
| 1 | D | 286 | ARG | NE-CZ-NH2 | -6.67 | 116.96 | 120.30 |
| 1 | E | 74 | ALA | O-C-N | -6.67 | 112.03 | 122.70 |
| 1 | I | 7 | VAL | CA-CB-CG2 | 6.67 | 120.91 | 110.90 |
| 1 | K | 11 | ASN | OD1-CG-ND2 | -6.67 | 106.55 | 121.90 |
| 1 | N | 220 | SER | O-C-N | 6.67 | 133.38 | 122.70 |
| 1 | D | 16 | MET | N-CA-CB | 6.67 | 122.61 | 110.60 |
| 1 | A | 435 | VAL | CB-CA-C | -6.67 | 98.73 | 111.40 |
| 1 | D | 336 | GLU | O-C-N | -6.67 | 112.03 | 122.70 |
| 1 | E | 358 | VAL | O-C-N | 6.67 | 133.37 | 122.70 |
| 1 | G | 289 | LYS | CB-CA-C | 6.67 | 123.74 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 270 | ASP | N-CA-C | 6.67 | 129.00 | 111.00 |
| 1 | N | 224 | PRO | CA-C-N | 6.67 | 131.87 | 117.20 |
| 1 | E | 444 | ASN | CB-CG-OD1 | -6.67 | 108.27 | 121.60 |
| 1 | F | 388 | GLU | OE1-CD-OE2 | -6.67 | 115.30 | 123.30 |
| 1 | H | 243 | ALA | N-CA-C | 6.67 | 129.00 | 111.00 |
| 1 | J | 13 | LYS | C-N-CA | 6.67 | 138.37 | 121.70 |
| 1 | K | 456 | GLY | O-C-N | -6.67 | 112.03 | 122.70 |
| 1 | M | 493 | VAL | CA-C-O | 6.67 | 134.10 | 120.10 |
| 1 | D | 12 | MET | N-CA-CB | -6.67 | 98.60 | 110.60 |
| 1 | E | 80 | GLU | CA-CB-CG | 6.67 | 128.06 | 113.40 |
| 1 | K | 129 | GLN | O-C-N | -6.67 | 112.04 | 122.70 |
| 1 | A | 324 | ARG | CA-C-O | -6.66 | 106.11 | 120.10 |
| 1 | F | 218 | ARG | CB-CA-C | 6.66 | 123.73 | 110.40 |
| 1 | G | 404 | GLU | CB-CA-C | 6.66 | 123.73 | 110.40 |
| 1 | O | 391 | MET | CA-CB-CG | 6.66 | 124.63 | 113.30 |
| 1 | H | 42 | LYS | O-C-N | 6.66 | 134.53 | 123.20 |
| 1 | M | 266 | LYS | O-C-N | -6.66 | 111.87 | 123.20 |
| 1 | M | 368 | VAL | O-C-N | -6.66 | 112.04 | 122.70 |
| 1 | D | 169 | LYS | CA-C-N | -6.66 | 102.55 | 117.20 |
| 1 | G | 10 | GLU | CG-CD-OE2 | 6.66 | 131.62 | 118.30 |
| 1 | F | 375 | ASP | O-C-N | -6.66 | 111.88 | 123.20 |
| 1 | K | 14 | ARG | C-N-CA | 6.66 | 138.34 | 121.70 |
| 1 | O | 60 | ASP | CB-CG-OD2 | -6.66 | 112.31 | 118.30 |
| 1 | D | 287 | VAL | O-C-N | -6.66 | 112.05 | 122.70 |
| 1 | A | 156 | THR | CA-CB-CG2 | 6.66 | 121.72 | 112.40 |
| 1 | A | 189 | ASP | CA-C-O | -6.66 | 106.12 | 120.10 |
| 1 | C | 402 | GLY | C-N-CA | 6.66 | 138.34 | 121.70 |
| 1 | C | 420 | ARG | NE-CZ-NH2 | 6.66 | 123.63 | 120.30 |
| 1 | E | 104 | LEU | CB-CA-C | -6.66 | 97.55 | 110.20 |
| 1 | F | 97 | VAL | CG1-CB-CG2 | -6.66 | 100.25 | 110.90 |
| 1 | G | 66 | ARG | N-CA-CB | -6.66 | 98.62 | 110.60 |
| 1 | I | 207 | GLU | OE1-CD-OE2 | -6.66 | 115.31 | 123.30 |
| 1 | I | 315 | LEU | CA-C-N | 6.65 | 129.51 | 116.20 |
| 1 | G | 417 | VAL | O-C-N | 6.65 | 133.34 | 122.70 |
| 1 | I | 184 | ASP | OD1-CG-OD2 | -6.65 | 110.66 | 123.30 |
| 1 | I | 339 | HIS | CA-CB-CG | 6.65 | 124.91 | 113.60 |
| 1 | J | 489 | ARG | CD-NE-CZ | 6.65 | 132.91 | 123.60 |
| 1 | M | 46 | LYS | CD-CE-NZ | 6.65 | 127.00 | 111.70 |
| 1 | M | 84 | THR | O-C-N | 6.65 | 133.34 | 122.70 |
| 1 | O | 239 | ILE | C-N-CA | 6.65 | 138.33 | 121.70 |
| 1 | B | 160 | GLY | CA-C-O | -6.65 | 108.63 | 120.60 |
| 1 | E | 15 | TYR | CZ-CE2-CD2 | 6.65 | 125.79 | 119.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 193 | ILE | O-C-N | -6.65 | 112.06 | 122.70 |
| 1 | A | 8 | LEU | CA-C-O | -6.65 | 106.14 | 120.10 |
| 1 | G | 429 | ASP | CB-CG-OD2 | -6.65 | 112.32 | 118.30 |
| 1 | L | 348 | ARG | CA-CB-CG | 6.65 | 128.02 | 113.40 |
| 1 | B | 275 | TYR | CZ-CE2-CD2 | -6.65 | 113.82 | 119.80 |
| 1 | C | 314 | ASP | CA-CB-CG | 6.65 | 128.02 | 113.40 |
| 1 | F | 237 | CYS | N-CA-CB | 6.65 | 122.56 | 110.60 |
| 1 | G | 362 | VAL | CG1-CB-CG2 | 6.65 | 121.53 | 110.90 |
| 1 | J | 278 | LYS | C-N-CA | 6.65 | 138.31 | 121.70 |
| 1 | C | 335 | GLU | OE1-CD-OE2 | -6.64 | 115.33 | 123.30 |
| 1 | N | 105 | ARG | CG-CD-NE | 6.64 | 125.75 | 111.80 |
| 1 | P | 10 | GLU | CA-C-O | -6.64 | 106.15 | 120.10 |
| 1 | B | 18 | ARG | O-C-N | -6.64 | 112.07 | 122.70 |
| 1 | C | 388 | GLU | CB-CA-C | 6.64 | 123.69 | 110.40 |
| 1 | E | 296 | ALA | C-N-CA | 6.64 | 138.31 | 121.70 |
| 1 | I | 483 | SER | C-N-CA | -6.64 | 105.09 | 121.70 |
| 1 | K | 208 | LEU | CB-CG-CD1 | 6.64 | 122.29 | 111.00 |
| 1 | O | 478 | GLN | CG-CD-OE1 | 6.64 | 134.89 | 121.60 |
| 1 | A | 360 | ARG | N-CA-CB | 6.64 | 122.55 | 110.60 |
| 1 | C | 408 | VAL | CG1-CB-CG2 | -6.64 | 100.28 | 110.90 |
| 1 | I | 112 | ASP | CB-CG-OD2 | 6.64 | 124.28 | 118.30 |
| 1 | P | 66 | ARG | CD-NE-CZ | 6.64 | 132.89 | 123.60 |
| 1 | P | 303 | VAL | CA-CB-CG1 | 6.64 | 120.86 | 110.90 |
| 1 | C | 88 | GLU | OE1-CD-OE2 | -6.64 | 115.33 | 123.30 |
| 1 | O | 206 | THR | C-N-CA | 6.64 | 138.30 | 121.70 |
| 1 | G | 53 | GLY | C-N-CA | 6.64 | 138.29 | 121.70 |
| 1 | K | 142 | VAL | O-C-N | -6.63 | 111.92 | 123.20 |
| 1 | K | 414 | ALA | CB-CA-C | 6.63 | 120.05 | 110.10 |
| 1 | M | 135 | LEU | CB-CG-CD2 | -6.63 | 99.72 | 111.00 |
| 1 | A | 217 | GLU | N-CA-CB | -6.63 | 98.66 | 110.60 |
| 1 | C | 356 | GLU | OE1-CD-OE2 | 6.63 | 131.26 | 123.30 |
| 1 | K | 475 | GLN | CB-CG-CD | 6.63 | 128.85 | 111.60 |
| 1 | B | 328 | GLY | CA-C-O | -6.63 | 108.66 | 120.60 |
| 1 | G | 84 | THR | O-C-N | -6.63 | 112.09 | 122.70 |
| 1 | I | 395 | GLU | CB-CA-C | 6.63 | 123.67 | 110.40 |
| 1 | J | 164 | GLU | CA-C-N | 6.63 | 131.79 | 117.20 |
| 1 | K | 65 | LEU | CB-CG-CD2 | 6.63 | 122.27 | 111.00 |
| 1 | L | 373 | ILE | CA-CB-CG1 | 6.63 | 123.60 | 111.00 |
| 1 | F | 412 | ALA | CA-C-N | -6.63 | 102.61 | 117.20 |
| 1 | O | 252 | ALA | O-C-N | -6.63 | 112.09 | 122.70 |
| 1 | A | 128 | ALA | N-CA-CB | 6.63 | 119.38 | 110.10 |
| 1 | A | 359 | ALA | O-C-N | -6.63 | 112.10 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 124 | TYR | CB-CG-CD2 | 6.63 | 124.98 | 121.00 |
| 1 | F | 190 | LYS | N-CA-C | 6.63 | 128.89 | 111.00 |
| 1 | F | 235 | LEU | CA-CB-CG | 6.63 | 130.54 | 115.30 |
| 1 | I | 129 | GLN | OE1-CD-NE2 | -6.63 | 106.66 | 121.90 |
| 1 | K | 247 | LEU | CB-CG-CD2 | -6.63 | 99.73 | 111.00 |
| 1 | H | 380 | SER | O-C-N | 6.62 | 134.46 | 123.20 |
| 1 | J | 461 | MET | CG-SD-CE | 6.62 | 110.80 | 100.20 |
| 1 | L | 438 | ARG | CD-NE-CZ | -6.62 | 114.32 | 123.60 |
| 1 | M | 100 | ALA | N-CA-CB | 6.62 | 119.38 | 110.10 |
| 1 | M | 309 | ASP | CA-C-O | -6.62 | 106.19 | 120.10 |
| 1 | N | 377 | ARG | C-N-CA | 6.62 | 138.26 | 121.70 |
| 1 | G | 451 | LEU | N-CA-CB | 6.62 | 123.64 | 110.40 |
| 1 | J | 68 | MET | O-C-N | -6.62 | 112.10 | 122.70 |
| 1 | J | 319 | GLY | O-C-N | -6.62 | 112.10 | 122.70 |
| 1 | J | 321 | VAL | CA-CB-CG2 | 6.62 | 120.83 | 110.90 |
| 1 | M | 464 | ASN | C-N-CA | 6.62 | 136.20 | 122.30 |
| 1 | P | 380 | SER | N-CA-CB | -6.62 | 100.57 | 110.50 |
| 1 | B | 331 | MET | O-C-N | -6.62 | 112.11 | 122.70 |
| 1 | K | 307 | ILE | CA-CB-CG2 | 6.62 | 124.14 | 110.90 |
| 1 | O | 381 | GLY | CA-C-O | -6.62 | 108.68 | 120.60 |
| 1 | A | 161 | LYS | CA-CB-CG | 6.62 | 127.96 | 113.40 |
| 1 | G | 16 | MET | C-N-CA | -6.62 | 108.40 | 122.30 |
| 1 | J | 105 | ARG | NH1-CZ-NH2 | -6.62 | 112.12 | 119.40 |
| 1 | K | 163 | ALA | CA-C-O | 6.62 | 134.00 | 120.10 |
| 1 | N | 490 | ILE | C-N-CA | 6.62 | 138.25 | 121.70 |
| 1 | N | 244 | SER | CA-C-N | 6.62 | 131.76 | 117.20 |
| 1 | A | 152 | LYS | CA-CB-CG | 6.62 | 127.96 | 113.40 |
| 1 | E | 59 | ASN | C-N-CA | 6.61 | 138.24 | 121.70 |
| 1 | K | 325 | LYS | CB-CA-C | 6.61 | 123.63 | 110.40 |
| 1 | N | 33 | GLU | CA-C-O | -6.61 | 106.21 | 120.10 |
| 1 | G | 304 | ILE | CG1-CB-CG2 | 6.61 | 125.95 | 111.40 |
| 1 | H | 114 | ASN | N-CA-CB | 6.61 | 122.50 | 110.60 |
| 1 | K | 18 | ARG | NE-CZ-NH2 | -6.61 | 116.99 | 120.30 |
| 1 | A | 265 | GLN | CG-CD-OE1 | 6.61 | 134.82 | 121.60 |
| 1 | C | 34 | THR | CA-CB-OG1 | 6.61 | 122.88 | 109.00 |
| 1 | D | 132 | GLN | CG-CD-OE1 | -6.61 | 108.38 | 121.60 |
| 1 | G | 299 | THR | C-N-CA | 6.61 | 136.18 | 122.30 |
| 1 | L | 277 | ALA | C-N-CA | 6.61 | 138.23 | 121.70 |
| 1 | O | 65 | LEU | CA-CB-CG | 6.61 | 130.50 | 115.30 |
| 1 | O | 112 | ASP | OD1-CG-OD2 | -6.61 | 110.74 | 123.30 |
| 1 | H | 317 | ASP | CA-CB-CG | 6.61 | 127.94 | 113.40 |
| 1 | K | 338 | LYS | CD-CE-NZ | 6.61 | 126.90 | 111.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 463 | GLU | O-C-N | -6.61 | 112.13 | 122.70 |
| 1 | N | 489 | ARG | NE-CZ-NH2 | -6.61 | 117.00 | 120.30 |
| 1 | A | 93 | THR | CA-C-N | -6.61 | 102.67 | 117.20 |
| 1 | F | 41 | PRO | O-C-N | 6.61 | 133.27 | 122.70 |
| 1 | C | 494 | ILE | CA-C-N | 6.61 | 131.73 | 117.20 |
| 1 | F | 489 | ARG | O-C-N | -6.61 | 112.13 | 122.70 |
| 1 | I | 106 | LYS | O-C-N | -6.61 | 112.13 | 122.70 |
| 1 | J | 429 | ASP | O-C-N | -6.61 | 112.13 | 122.70 |
| 1 | L | 137 | THR | CA-CB-CG2 | 6.61 | 121.65 | 112.40 |
| 1 | P | 249 | ASP | OD1-CG-OD2 | -6.61 | 110.75 | 123.30 |
| 1 | C | 218 | ARG | NH1-CZ-NH2 | -6.60 | 112.14 | 119.40 |
| 1 | E | 422 | LEU | CB-CA-C | 6.60 | 122.75 | 110.20 |
| 1 | F | 359 | ALA | C-N-CA | 6.60 | 138.21 | 121.70 |
| 1 | A | 340 | PRO | N-CD-CG | 6.60 | 113.10 | 103.20 |
| 1 | B | 273 | GLN | N-CA-CB | 6.60 | 122.48 | 110.60 |
| 1 | D | 369 | VAL | CB-CA-C | 6.60 | 123.94 | 111.40 |
| 1 | D | 449 | ALA | CB-CA-C | 6.60 | 120.00 | 110.10 |
| 1 | A | 10 | GLU | OE1-CD-OE2 | -6.60 | 115.38 | 123.30 |
| 1 | A | 140 | CYS | CB-CA-C | 6.60 | 123.60 | 110.40 |
| 1 | D | 315 | LEU | CB-CG-CD2 | 6.60 | 122.22 | 111.00 |
| 1 | H | 187 | LYS | CA-C-O | -6.60 | 106.24 | 120.10 |
| 1 | K | 373 | ILE | CA-CB-CG2 | 6.60 | 124.10 | 110.90 |
| 1 | A | 356 | GLU | OE1-CD-OE2 | 6.60 | 131.22 | 123.30 |
| 1 | I | 463 | GLU | N-CA-CB | 6.60 | 122.48 | 110.60 |
| 1 | J | 457 | ALA | N-CA-CB | -6.60 | 100.86 | 110.10 |
| 1 | M | 259 | ALA | C-N-CA | 6.60 | 138.19 | 121.70 |
| 1 | M | 359 | ALA | N-CA-CB | 6.60 | 119.33 | 110.10 |
| 1 | J | 239 | ILE | CB-CA-C | 6.60 | 124.79 | 111.60 |
| 1 | M | 224 | PRO | CA-N-CD | -6.60 | 102.27 | 111.50 |
| 1 | C | 241 | GLU | CB-CA-C | 6.59 | 123.59 | 110.40 |
| 1 | O | 30 | ILE | CA-CB-CG1 | 6.59 | 123.53 | 111.00 |
| 1 | B | 181 | VAL | N-CA-CB | 6.59 | 126.00 | 111.50 |
| 1 | A | 43 | GLY | O-C-N | -6.59 | 112.15 | 122.70 |
| 1 | A | 93 | THR | O-C-N | 6.59 | 133.25 | 122.70 |
| 1 | H | 33 | GLU | CG-CD-OE2 | 6.59 | 131.48 | 118.30 |
| 1 | M | 246 | MET | N-CA-CB | 6.59 | 122.46 | 110.60 |
| 1 | N | 459 | GLU | OE1-CD-OE2 | -6.59 | 115.39 | 123.30 |
| 1 | P | 316 | GLY | O-C-N | 6.59 | 133.25 | 122.70 |
| 1 | A | 213 | LEU | O-C-N | -6.59 | 112.16 | 122.70 |
| 1 | G | 286 | ARG | CA-CB-CG | 6.59 | 127.90 | 113.40 |
| 1 | H | 89 | VAL | N-CA-C | 6.59 | 128.79 | 111.00 |
| 1 | I | 165 | LYS | N-CA-CB | 6.59 | 122.46 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 91 | ASP | CB-CG-OD1 | 6.59 | 124.23 | 118.30 |
| 1 | J | 336 | GLU | CG-CD-OE1 | 6.59 | 131.48 | 118.30 |
| 1 | L | 293 | GLU | CG-CD-OE1 | -6.59 | 105.12 | 118.30 |
| 1 | L | 409 | ARG | NE-CZ-NH2 | -6.59 | 117.00 | 120.30 |
| 1 | M | 146 | ASP | CB-CG-OD2 | 6.59 | 124.23 | 118.30 |
| 1 | F | 493 | VAL | CA-CB-CG2 | 6.59 | 120.78 | 110.90 |
| 1 | C | 37 | SER | O-C-N | -6.59 | 112.16 | 122.70 |
| 1 | H | 320 | LEU | CA-CB-CG | 6.59 | 130.45 | 115.30 |
| 1 | M | 448 | CYS | CA-C-N | 6.59 | 131.69 | 117.20 |
| 1 | K | 245 | GLU | CB-CG-CD | 6.58 | 131.98 | 114.20 |
| 1 | M | 268 | ILE | CA-CB-CG2 | 6.58 | 124.07 | 110.90 |
| 1 | M | 495 | ALA | CB-CA-C | 6.58 | 119.97 | 110.10 |
| 1 | I | 42 | LYS | C-N-CA | -6.58 | 108.48 | 122.30 |
| 1 | J | 190 | LYS | C-N-CA | 6.58 | 138.15 | 121.70 |
| 1 | K | 115 | VAL | N-CA-CB | 6.58 | 125.98 | 111.50 |
| 1 | L | 355 | ILE | O-C-N | -6.58 | 112.17 | 122.70 |
| 1 | F | 342 | ALA | N-CA-CB | 6.58 | 119.31 | 110.10 |
| 1 | J | 493 | VAL | CG1-CB-CG2 | 6.58 | 121.43 | 110.90 |
| 1 | B | 478 | GLN | C-N-CA | 6.58 | 138.15 | 121.70 |
| 1 | E | 282 | VAL | CA-CB-CG2 | 6.58 | 120.77 | 110.90 |
| 1 | J | 93 | THR | CA-C-N | -6.58 | 102.73 | 117.20 |
| 1 | K | 18 | ARG | O-C-N | -6.58 | 112.17 | 122.70 |
| 1 | P | 395 | GLU | CB-CA-C | 6.58 | 123.56 | 110.40 |
| 1 | P | 426 | ALA | C-N-CA | 6.58 | 136.11 | 122.30 |
| 1 | O | 57 | VAL | O-C-N | -6.58 | 112.18 | 122.70 |
| 1 | J | 333 | PHE | CB-CG-CD1 | 6.58 | 125.40 | 120.80 |
| 1 | O | 429 | ASP | CB-CA-C | 6.58 | 123.55 | 110.40 |
| 1 | O | 463 | GLU | N-CA-CB | 6.58 | 122.44 | 110.60 |
| 1 | E | 451 | LEU | N-CA-CB | 6.57 | 123.55 | 110.40 |
| 1 | F | 353 | HIS | CA-CB-CG | 6.57 | 124.78 | 113.60 |
| 1 | I | 305 | THR | N-CA-CB | 6.57 | 122.79 | 110.30 |
| 1 | I | 340 | PRO | N-CD-CG | 6.57 | 113.06 | 103.20 |
| 1 | P | 495 | ALA | CA-C-O | -6.57 | 106.30 | 120.10 |
| 1 | E | 285 | ARG | O-C-N | 6.57 | 133.21 | 122.70 |
| 1 | F | 372 | THR | O-C-N | 6.57 | 133.21 | 122.70 |
| 1 | F | 486 | MET | CA-C-O | -6.57 | 106.30 | 120.10 |
| 1 | I | 55 | VAL | CA-C-O | -6.57 | 106.30 | 120.10 |
| 1 | N | 478 | GLN | CB-CG-CD | 6.57 | 128.68 | 111.60 |
| 1 | O | 477 | ILE | O-C-N | -6.57 | 112.19 | 122.70 |
| 1 | K | 296 | ALA | CB-CA-C | 6.57 | 119.95 | 110.10 |
| 1 | N | 412 | ALA | CB-CA-C | -6.57 | 100.25 | 110.10 |
| 1 | B | 261 | VAL | CA-CB-CG1 | 6.57 | 120.75 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 324 | ARG | NE-CZ-NH1 | -6.57 | 117.02 | 120.30 |
| 1 | N | 375 | ASP | N-CA-CB | 6.57 | 122.42 | 110.60 |
| 1 | P | 22 | ARG | CB-CG-CD | 6.57 | 128.68 | 111.60 |
| 1 | P | 109 | GLU | CG-CD-OE2 | -6.57 | 105.17 | 118.30 |
| 1 | A | 39 | LEU | O-C-N | -6.57 | 112.04 | 123.20 |
| 1 | B | 330 | SER | C-N-CA | 6.57 | 138.11 | 121.70 |
| 1 | C | 29 | ARG | CA-C-O | -6.57 | 106.31 | 120.10 |
| 1 | H | 86 | GLU | CG-CD-OE1 | 6.56 | 131.43 | 118.30 |
| 1 | J | 61 | GLY | C-N-CA | 6.56 | 138.10 | 121.70 |
| 1 | P | 47 | MET | CA-CB-CG | 6.56 | 124.46 | 113.30 |
| 1 | P | 145 | GLN | CB-CA-C | -6.56 | 97.27 | 110.40 |
| 1 | A | 414 | ALA | O-C-N | 6.56 | 133.20 | 122.70 |
| 1 | E | 285 | ARG | C-N-CA | 6.56 | 138.10 | 121.70 |
| 1 | I | 169 | LYS | CB-CA-C | 6.56 | 123.52 | 110.40 |
| 1 | L | 60 | ASP | N-CA-CB | 6.56 | 122.41 | 110.60 |
| 1 | P | 338 | LYS | CD-CE-NZ | -6.56 | 96.61 | 111.70 |
| 1 | P | 375 | ASP | OD1-CG-OD2 | -6.56 | 110.83 | 123.30 |
| 1 | C | 130 | LYS | O-C-N | 6.56 | 133.20 | 122.70 |
| 1 | M | 134 | LEU | CB-CA-C | 6.56 | 122.66 | 110.20 |
| 1 | C | 36 | ARG | NE-CZ-NH2 | 6.56 | 123.58 | 120.30 |
| 1 | E | 356 | GLU | CG-CD-OE1 | -6.56 | 105.19 | 118.30 |
| 1 | B | 245 | GLU | CB-CG-CD | 6.56 | 131.90 | 114.20 |
| 1 | G | 338 | LYS | CD-CE-NZ | 6.56 | 126.78 | 111.70 |
| 1 | O | 338 | LYS | O-C-N | -6.56 | 112.21 | 122.70 |
| 1 | B | 54 | ASP | CB-CG-OD2 | 6.55 | 124.20 | 118.30 |
| 1 | J | 346 | LEU | CB-CA-C | 6.55 | 122.65 | 110.20 |
| 1 | I | 472 | VAL | CA-CB-CG2 | 6.55 | 120.73 | 110.90 |
| 1 | N | 257 | SER | O-C-N | -6.55 | 112.06 | 123.20 |
| 1 | P | 45 | ASP | CA-CB-CG | -6.55 | 98.99 | 113.40 |
| 1 | B | 299 | THR | CA-C-N | 6.55 | 129.30 | 116.20 |
| 1 | B | 394 | ARG | NH1-CZ-NH2 | -6.55 | 112.20 | 119.40 |
| 1 | C | 172 | GLU | CB-CA-C | 6.55 | 123.50 | 110.40 |
| 1 | G | 426 | ALA | N-CA-CB | 6.55 | 119.27 | 110.10 |
| 1 | H | 414 | ALA | CB-CA-C | 6.55 | 119.92 | 110.10 |
| 1 | J | 404 | GLU | N-CA-CB | 6.55 | 122.39 | 110.60 |
| 1 | L | 493 | VAL | CA-CB-CG1 | 6.55 | 120.72 | 110.90 |
| 1 | M | 152 | LYS | CD-CE-NZ | 6.55 | 126.76 | 111.70 |
| 1 | A | 233 | ALA | N-CA-CB | 6.55 | 119.27 | 110.10 |
| 1 | F | 108 | GLU | O-C-N | 6.55 | 133.18 | 122.70 |
| 1 | G | 376 | GLY | N-CA-C | 6.55 | 129.47 | 113.10 |
| 1 | H | 357 | GLU | CG-CD-OE1 | -6.55 | 105.20 | 118.30 |
| 1 | N | 448 | CYS | N-CA-CB | 6.55 | 122.38 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 60 | ASP | CB-CG-OD2 | 6.54 | 124.19 | 118.30 |
| 1 | D | 359 | ALA | N-CA-CB | 6.54 | 119.26 | 110.10 |
| 1 | D | 495 | ALA | C-N-CA | 6.54 | 138.06 | 121.70 |
| 1 | L | 394 | ARG | CD-NE-CZ | 6.54 | 132.76 | 123.60 |
| 1 | M | 116 | HIS | N-CA-CB | 6.54 | 122.38 | 110.60 |
| 1 | A | 26 | LEU | CB-CG-CD2 | -6.54 | 99.88 | 111.00 |
| 1 | A | 297 | LYS | CA-CB-CG | 6.54 | 127.80 | 113.40 |
| 1 | A | 415 | LEU | CB-CG-CD1 | 6.54 | 122.12 | 111.00 |
| 1 | B | 62 | VAL | CB-CA-C | -6.54 | 98.97 | 111.40 |
| 1 | H | 18 | ARG | O-C-N | -6.54 | 112.23 | 122.70 |
| 1 | L | 15 | TYR | N-CA-CB | 6.54 | 122.38 | 110.60 |
| 1 | M | 475 | GLN | N-CA-CB | -6.54 | 98.82 | 110.60 |
| 1 | O | 320 | LEU | C-N-CA | 6.54 | 138.06 | 121.70 |
| 1 | A | 141 | GLU | CB-CA-C | 6.54 | 123.48 | 110.40 |
| 1 | A | 309 | ASP | O-C-N | 6.54 | 133.17 | 122.70 |
| 1 | E | 217 | GLU | OE1-CD-OE2 | -6.54 | 115.45 | 123.30 |
| 1 | E | 471 | ARG | O-C-N | 6.54 | 133.17 | 122.70 |
| 1 | F | 414 | ALA | N-CA-CB | 6.54 | 119.26 | 110.10 |
| 1 | O | 54 | ASP | N-CA-CB | -6.54 | 98.83 | 110.60 |
| 1 | A | 324 | ARG | NE-CZ-NH2 | 6.54 | 123.57 | 120.30 |
| 1 | B | 47 | MET | CA-CB-CG | 6.54 | 124.42 | 113.30 |
| 1 | B | 409 | ARG | O-C-N | -6.54 | 112.24 | 122.70 |
| 1 | I | 171 | ALA | CB-CA-C | -6.54 | 100.29 | 110.10 |
| 1 | J | 467 | VAL | O-C-N | -6.54 | 112.24 | 122.70 |
| 1 | J | 202 | SER | O-C-N | -6.54 | 112.24 | 122.70 |
| 1 | K | 184 | ASP | N-CA-CB | -6.54 | 98.83 | 110.60 |
| 1 | C | 208 | LEU | CA-C-O | -6.54 | 106.38 | 120.10 |
| 1 | D | 230 | ALA | CB-CA-C | -6.54 | 100.30 | 110.10 |
| 1 | G | 213 | LEU | CA-CB-CG | 6.54 | 130.33 | 115.30 |
| 1 | J | 96 | ALA | O-C-N | -6.54 | 112.24 | 122.70 |
| 1 | L | 104 | LEU | CB-CG-CD2 | 6.54 | 122.11 | 111.00 |
| 1 | M | 27 | ALA | CB-CA-C | 6.54 | 119.90 | 110.10 |
| 1 | A | 203 | ILE | CA-CB-CG1 | 6.53 | 123.42 | 111.00 |
| 1 | C | 354 | VAL | O-C-N | -6.53 | 112.25 | 122.70 |
| 1 | C | 425 | ASN | CA-C-N | -6.53 | 102.82 | 117.20 |
| 1 | E | 198 | LYS | N-CA-CB | -6.53 | 98.84 | 110.60 |
| 1 | G | 486 | MET | O-C-N | -6.53 | 112.25 | 122.70 |
| 1 | K | 396 | TYR | CB-CG-CD1 | -6.53 | 117.08 | 121.00 |
| 1 | G | 94 | THR | N-CA-CB | 6.53 | 122.71 | 110.30 |
| 1 | G | 207 | GLU | OE1-CD-OE2 | -6.53 | 115.46 | 123.30 |
| 1 | J | 134 | LEU | N-CA-C | 6.53 | 128.63 | 111.00 |
| 1 | J | 220 | SER | O-C-N | -6.53 | 112.25 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 313 | GLN | OE1-CD-NE2 | -6.53 | 106.88 | 121.90 |
| 1 | B | 409 | ARG | NH1-CZ-NH2 | -6.53 | 112.22 | 119.40 |
| 1 | E | 12 | MET | N-CA-CB | 6.53 | 122.35 | 110.60 |
| 1 | H | 89 | VAL | O-C-N | -6.53 | 112.10 | 123.20 |
| 1 | L | 389 | LEU | O-C-N | 6.53 | 133.14 | 122.70 |
| 1 | N | 224 | PRO | CB-CA-C | 6.53 | 128.32 | 112.00 |
| 1 | P | 470 | LEU | O-C-N | -6.53 | 112.25 | 122.70 |
| 1 | P | 156 | THR | OG1-CB-CG2 | 6.52 | 125.00 | 110.00 |
| 1 | G | 176 | GLU | OE1-CD-OE2 | 6.52 | 131.13 | 123.30 |
| 1 | H | 10 | GLU | CG-CD-OE2 | 6.52 | 131.35 | 118.30 |
| 1 | N | 121 | VAL | CA-CB-CG1 | -6.52 | 101.12 | 110.90 |
| 1 | K | 358 | VAL | O-C-N | -6.52 | 112.27 | 122.70 |
| 1 | C | 235 | LEU | O-C-N | -6.52 | 112.27 | 122.70 |
| 1 | I | 291 | ASP | OD1-CG-OD2 | -6.52 | 110.91 | 123.30 |
| 1 | J | 112 | ASP | CA-CB-CG | 6.52 | 127.74 | 113.40 |
| 1 | K | 402 | GLY | C-N-CA | 6.52 | 137.99 | 121.70 |
| 1 | N | 348 | ARG | NE-CZ-NH1 | -6.52 | 117.04 | 120.30 |
| 1 | O | 111 | LEU | CA-CB-CG | 6.52 | 130.29 | 115.30 |
| 1 | O | 229 | ASP | CB-CG-OD1 | 6.52 | 124.17 | 118.30 |
| 1 | A | 340 | PRO | N-CA-CB | -6.52 | 95.43 | 102.60 |
| 1 | C | 288 | LYS | O-C-N | -6.52 | 112.27 | 122.70 |
| 1 | F | 265 | GLN | C-N-CA | 6.52 | 137.99 | 121.70 |
| 1 | K | 329 | ASP | N-CA-CB | -6.52 | 98.87 | 110.60 |
| 1 | F | 163 | ALA | C-N-CA | -6.51 | 105.42 | 121.70 |
| 1 | H | 352 | GLU | OE1-CD-OE2 | -6.51 | 115.48 | 123.30 |
| 1 | L | 273 | GLN | CA-CB-CG | 6.51 | 127.73 | 113.40 |
| 1 | O | 471 | ARG | CA-C-O | -6.51 | 106.42 | 120.10 |
| 1 | H | 316 | GLY | C-N-CA | 6.51 | 137.98 | 121.70 |
| 1 | I | 271 | LEU | CA-CB-CG | 6.51 | 130.28 | 115.30 |
| 1 | I | 464 | ASN | C-N-CA | -6.51 | 108.62 | 122.30 |
| 1 | J | 237 | CYS | N-CA-CB | 6.51 | 122.32 | 110.60 |
| 1 | M | 206 | THR | CA-CB-OG1 | 6.51 | 122.68 | 109.00 |
| 1 | O | 253 | GLU | OE1-CD-OE2 | 6.51 | 131.12 | 123.30 |
| 1 | C | 466 | VAL | O-C-N | 6.51 | 133.12 | 122.70 |
| 1 | D | 397 | ALA | CB-CA-C | 6.51 | 119.87 | 110.10 |
| 1 | F | 50 | ASP | OD1-CG-OD2 | -6.51 | 110.93 | 123.30 |
| 1 | F | 236 | ASN | C-N-CA | 6.51 | 137.98 | 121.70 |
| 1 | L | 462 | CYS | N-CA-C | 6.51 | 128.58 | 111.00 |
| 1 | O | 478 | GLN | CA-CB-CG | 6.51 | 127.72 | 113.40 |
| 1 | A | 428 | LEU | O-C-N | -6.51 | 112.29 | 122.70 |
| 1 | D | 492 | ASP | CB-CG-OD2 | -6.51 | 112.44 | 118.30 |
| 1 | H | 493 | VAL | O-C-N | -6.51 | 112.29 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 116 | HIS | O-C-N | -6.51 | 108.73 | 121.10 |
| 1 | M | 86 | GLU | N-CA-CB | 6.51 | 122.32 | 110.60 |
| 1 | N | 138 | ILE | CA-CB-CG2 | -6.51 | 97.88 | 110.90 |
| 1 | A | 320 | LEU | CB-CG-CD2 | 6.51 | 122.06 | 111.00 |
| 1 | L | 215 | ASP | OD1-CG-OD2 | -6.51 | 110.93 | 123.30 |
| 1 | P | 243 | ALA | N-CA-C | 6.51 | 128.57 | 111.00 |
| 1 | E | 331 | MET | O-C-N | 6.51 | 133.11 | 122.70 |
| 1 | I | 212 | VAL | CG1-CB-CG2 | -6.51 | 100.49 | 110.90 |
| 1 | J | 218 | ARG | NE-CZ-NH2 | 6.51 | 123.55 | 120.30 |
| 1 | L | 279 | GLU | O-C-N | -6.51 | 112.14 | 123.20 |
| 1 | M | 195 | ILE | O-C-N | 6.51 | 133.11 | 122.70 |
| 1 | N | 122 | LYS | O-C-N | -6.51 | 112.14 | 123.20 |
| 1 | N | 126 | ALA | N-CA-CB | 6.51 | 119.21 | 110.10 |
| 1 | D | 98 | VAL | CA-CB-CG2 | 6.50 | 120.65 | 110.90 |
| 1 | I | 338 | LYS | CB-CA-C | -6.50 | 97.40 | 110.40 |
| 1 | K | 287 | VAL | CA-CB-CG1 | 6.50 | 120.65 | 110.90 |
| 1 | M | 208 | LEU | CA-CB-CG | 6.50 | 130.25 | 115.30 |
| 1 | N | 305 | THR | O-C-N | -6.50 | 112.30 | 122.70 |
| 1 | O | 460 | ASP | OD1-CG-OD2 | -6.50 | 110.95 | 123.30 |
| 1 | C | 348 | ARG | NH1-CZ-NH2 | 6.50 | 126.55 | 119.40 |
| 1 | F | 430 | ALA | N-CA-CB | 6.50 | 119.20 | 110.10 |
| 1 | H | 218 | ARG | CD-NE-CZ | 6.50 | 132.70 | 123.60 |
| 1 | N | 364 | ASP | O-C-N | -6.50 | 112.30 | 122.70 |
| 1 | P | 99 | VAL | CA-C-O | 6.50 | 133.75 | 120.10 |
| 1 | A | 379 | VAL | CA-CB-CG1 | -6.50 | 101.15 | 110.90 |
| 1 | C | 27 | ALA | N-CA-CB | -6.50 | 101.00 | 110.10 |
| 1 | E | 306 | ASN | N-CA-CB | -6.50 | 98.91 | 110.60 |
| 1 | I | 157 | SER | C-N-CA | 6.50 | 137.94 | 121.70 |
| 1 | I | 247 | LEU | CB-CG-CD2 | -6.50 | 99.95 | 111.00 |
| 1 | B | 373 | ILE | CA-C-O | -6.50 | 106.46 | 120.10 |
| 1 | P | 461 | MET | CA-C-N | -6.50 | 102.91 | 117.20 |
| 1 | P | 484 | THR | CA-CB-CG2 | -6.50 | 103.31 | 112.40 |
| 1 | C | 362 | VAL | N-CA-C | 6.49 | 128.53 | 111.00 |
| 1 | H | 51 | ASP | C-N-CA | 6.49 | 137.94 | 121.70 |
| 1 | M | 305 | THR | CA-CB-CG2 | 6.49 | 121.49 | 112.40 |
| 1 | N | 13 | LYS | O-C-N | -6.49 | 112.31 | 122.70 |
| 1 | O | 172 | GLU | OE1-CD-OE2 | -6.49 | 115.51 | 123.30 |
| 1 | P | 117 | PRO | O-C-N | 6.49 | 133.09 | 122.70 |
| 1 | A | 180 | ALA | CB-CA-C | 6.49 | 119.84 | 110.10 |
| 1 | A | 410 | ALA | N-CA-CB | -6.49 | 101.01 | 110.10 |
| 1 | O | 276 | LEU | CA-CB-CG | 6.49 | 130.23 | 115.30 |
| 1 | D | 52 | LEU | CB-CA-C | 6.49 | 122.53 | 110.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 236 | ASN | N-CA-CB | 6.49 | 122.28 | 110.60 |
| 1 | L | 253 | GLU | CA-C-O | 6.49 | 133.73 | 120.10 |
| 1 | O | 224 | PRO | CA-N-CD | -6.49 | 102.41 | 111.50 |
| 1 | O | 372 | THR | CA-C-O | -6.49 | 106.47 | 120.10 |
| 1 | G | 38 | THR | CA-CB-OG1 | 6.49 | 122.62 | 109.00 |
| 1 | J | 148 | GLU | N-CA-CB | 6.49 | 122.28 | 110.60 |
| 1 | E | 408 | VAL | O-C-N | 6.49 | 133.08 | 122.70 |
| 1 | A | 273 | GLN | CB-CA-C | 6.49 | 123.37 | 110.40 |
| 1 | B | 304 | ILE | C-N-CA | 6.49 | 137.91 | 121.70 |
| 1 | E | 333 | PHE | CZ-CE2-CD2 | 6.49 | 127.88 | 120.10 |
| 1 | I | 363 | ASP | CB-CG-OD2 | -6.49 | 112.46 | 118.30 |
| 1 | A | 167 | LYS | C-N-CA | 6.48 | 137.91 | 121.70 |
| 1 | B | 251 | VAL | CA-CB-CG2 | 6.48 | 120.62 | 110.90 |
| 1 | C | 273 | GLN | CB-CA-C | 6.48 | 123.37 | 110.40 |
| 1 | J | 33 | GLU | O-C-N | 6.48 | 133.07 | 122.70 |
| 1 | E | 398 | GLU | CA-C-O | -6.48 | 106.49 | 120.10 |
| 1 | I | 274 | HIS | CA-C-N | 6.48 | 131.46 | 117.20 |
| 1 | C | 52 | LEU | CA-C-O | -6.48 | 106.49 | 120.10 |
| 1 | I | 444 | ASN | OD1-CG-ND2 | 6.48 | 136.81 | 121.90 |
| 1 | J | 308 | LYS | CA-C-O | -6.48 | 106.49 | 120.10 |
| 1 | K | 90 | GLY | CA-C-O | -6.48 | 108.94 | 120.60 |
| 1 | N | 465 | GLY | O-C-N | 6.48 | 133.07 | 122.70 |
| 1 | K | 62 | VAL | CA-CB-CG2 | -6.48 | 101.18 | 110.90 |
| 1 | E | 181 | VAL | O-C-N | -6.48 | 112.33 | 122.70 |
| 1 | G | 63 | THR | N-CA-CB | 6.48 | 122.61 | 110.30 |
| 1 | J | 61 | GLY | CA-C-N | 6.48 | 131.45 | 117.20 |
| 1 | N | 234 | LEU | CA-C-N | -6.48 | 102.95 | 117.20 |
| 1 | P | 180 | ALA | N-CA-CB | 6.48 | 119.17 | 110.10 |
| 1 | P | 369 | VAL | CA-CB-CG2 | 6.48 | 120.61 | 110.90 |
| 1 | N | 298 | ALA | N-CA-CB | 6.48 | 119.17 | 110.10 |
| 1 | N | 377 | ARG | O-C-N | -6.48 | 112.34 | 122.70 |
| 1 | O | 54 | ASP | CB-CG-OD2 | 6.48 | 124.13 | 118.30 |
| 1 | O | 451 | LEU | N-CA-CB | 6.48 | 123.35 | 110.40 |
| 1 | P | 226 | LYS | CD-CE-NZ | 6.47 | 126.59 | 111.70 |
| 1 | C | 161 | LYS | CA-CB-CG | 6.47 | 127.64 | 113.40 |
| 1 | F | 175 | VAL | O-C-N | 6.47 | 133.06 | 122.70 |
| 1 | K | 305 | THR | CA-CB-CG2 | 6.47 | 121.46 | 112.40 |
| 1 | K | 358 | VAL | C-N-CA | 6.47 | 137.88 | 121.70 |
| 1 | L | 172 | GLU | CB-CA-C | 6.47 | 123.34 | 110.40 |
| 1 | O | 421 | THR | CA-CB-CG2 | 6.47 | 121.46 | 112.40 |
| 1 | P | 142 | VAL | O-C-N | -6.47 | 112.20 | 123.20 |
| 1 | C | 8 | LEU | CA-CB-CG | 6.47 | 130.18 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 172 | GLU | CB-CA-C | 6.47 | 123.34 | 110.40 |
| 1 | P | 237 | CYS | CB-CA-C | 6.47 | 123.34 | 110.40 |
| 1 | C | 271 | LEU | N-CA-CB | 6.47 | 123.34 | 110.40 |
| 1 | D | 334 | VAL | CA-C-N | -6.47 | 102.97 | 117.20 |
| 1 | N | 59 | ASN | CA-CB-CG | 6.47 | 127.64 | 113.40 |
| 1 | O | 161 | LYS | CB-CA-C | 6.47 | 123.34 | 110.40 |
| 1 | D | 62 | VAL | CB-CA-C | -6.47 | 99.11 | 111.40 |
| 1 | D | 154 | ALA | N-CA-C | 6.47 | 128.46 | 111.00 |
| 1 | G | 395 | GLU | CG-CD-OE2 | 6.47 | 131.24 | 118.30 |
| 1 | M | 63 | THR | O-C-N | -6.47 | 112.35 | 122.70 |
| 1 | M | 257 | SER | CB-CA-C | 6.47 | 122.39 | 110.10 |
| 1 | O | 360 | ARG | NE-CZ-NH1 | 6.47 | 123.53 | 120.30 |
| 1 | O | 395 | GLU | O-C-N | -6.47 | 112.35 | 122.70 |
| 1 | A | 291 | ASP | C-N-CA | 6.47 | 137.86 | 121.70 |
| 1 | D | 348 | ARG | O-C-N | -6.47 | 112.21 | 123.20 |
| 1 | D | 421 | THR | N-CA-CB | 6.47 | 122.58 | 110.30 |
| 1 | G | 80 | GLU | CA-CB-CG | 6.47 | 127.62 | 113.40 |
| 1 | G | 286 | ARG | O-C-N | 6.47 | 133.05 | 122.70 |
| 1 | H | 9 | PRO | N-CA-CB | 6.47 | 111.06 | 103.30 |
| 1 | I | 342 | ALA | O-C-N | -6.47 | 112.36 | 122.70 |
| 1 | K | 215 | ASP | CB-CG-OD2 | -6.47 | 112.48 | 118.30 |
| 1 | M | 244 | SER | CA-C-O | -6.47 | 106.52 | 120.10 |
| 1 | O | 377 | ARG | NH1-CZ-NH2 | 6.47 | 126.51 | 119.40 |
| 1 | A | 332 | ILE | CA-CB-CG1 | 6.46 | 123.28 | 111.00 |
| 1 | C | 35 | VAL | CB-CA-C | 6.46 | 123.68 | 111.40 |
| 1 | J | 229 | ASP | CB-CG-OD2 | -6.46 | 112.48 | 118.30 |
| 1 | K | 404 | GLU | CA-CB-CG | 6.46 | 127.62 | 113.40 |
| 1 | M | 462 | CYS | O-C-N | 6.46 | 133.04 | 122.70 |
| 1 | N | 368 | VAL | CG1-CB-CG2 | -6.46 | 100.56 | 110.90 |
| 1 | O | 459 | GLU | CA-C-O | -6.46 | 106.53 | 120.10 |
| 1 | J | 62 | VAL | O-C-N | -6.46 | 112.36 | 122.70 |
| 1 | J | 429 | ASP | CB-CA-C | 6.46 | 123.32 | 110.40 |
| 1 | K | 123 | GLY | O-C-N | 6.46 | 133.04 | 122.70 |
| 1 | K | 343 | VAL | CA-CB-CG2 | 6.46 | 120.59 | 110.90 |
| 1 | L | 36 | ARG | CD-NE-CZ | 6.46 | 132.65 | 123.60 |
| 1 | O | 188 | VAL | CG1-CB-CG2 | -6.46 | 100.56 | 110.90 |
| 1 | O | 487 | LEU | CB-CA-C | 6.46 | 122.47 | 110.20 |
| 1 | O | 300 | GLY | C-N-CA | 6.46 | 137.85 | 121.70 |
| 1 | E | 7 | VAL | CA-C-O | -6.46 | 106.54 | 120.10 |
| 1 | E | 45 | ASP | C-N-CA | 6.46 | 137.85 | 121.70 |
| 1 | H | 243 | ALA | C-N-CA | 6.46 | 137.84 | 121.70 |
| 1 | D | 351 | THR | O-C-N | -6.46 | 112.37 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 351 | THR | CA-CB-CG2 | -6.46 | 103.36 | 112.40 |
| 1 | E | 283 | ALA | O-C-N | 6.46 | 133.03 | 122.70 |
| 1 | F | 231 | LYS | CB-CA-C | 6.46 | 123.31 | 110.40 |
| 1 | H | 325 | LYS | N-CA-CB | 6.46 | 122.22 | 110.60 |
| 1 | J | 264 | CYS | O-C-N | -6.46 | 112.37 | 122.70 |
| 1 | L | 243 | ALA | N-CA-CB | 6.46 | 119.14 | 110.10 |
| 1 | D | 129 | GLN | O-C-N | 6.46 | 133.03 | 122.70 |
| 1 | L | 349 | GLY | C-N-CA | 6.46 | 137.84 | 121.70 |
| 1 | C | 467 | VAL | CA-CB-CG2 | -6.45 | 101.22 | 110.90 |
| 1 | D | 116 | HIS | CG-ND1-CE1 | 6.45 | 117.23 | 108.20 |
| 1 | D | 286 | ARG | NE-CZ-NH1 | 6.45 | 123.53 | 120.30 |
| 1 | F | 239 | ILE | CA-CB-CG2 | 6.45 | 123.81 | 110.90 |
| 1 | H | 333 | PHE | CZ-CE2-CD2 | -6.45 | 112.36 | 120.10 |
| 1 | I | 353 | HIS | CA-C-N | 6.45 | 131.40 | 117.20 |
| 1 | K | 286 | ARG | NH1-CZ-NH2 | 6.45 | 126.50 | 119.40 |
| 1 | L | 463 | GLU | CG-CD-OE1 | -6.45 | 105.39 | 118.30 |
| 1 | O | 393 | LEU | CB-CA-C | 6.45 | 122.46 | 110.20 |
| 1 | F | 495 | ALA | CA-C-O | -6.45 | 106.55 | 120.10 |
| 1 | B | 140 | CYS | O-C-N | -6.45 | 112.38 | 122.70 |
| 1 | F | 73 | PRO | CA-CB-CG | -6.45 | 91.75 | 104.00 |
| 1 | M | 286 | ARG | CB-CA-C | 6.45 | 123.30 | 110.40 |
| 1 | D | 363 | ASP | O-C-N | 6.45 | 133.01 | 122.70 |
| 1 | B | 347 | ILE | CA-C-N | -6.45 | 103.02 | 117.20 |
| 1 | E | 492 | ASP | CB-CG-OD1 | 6.45 | 124.10 | 118.30 |
| 1 | F | 209 | ILE | O-C-N | -6.45 | 112.39 | 122.70 |
| 1 | I | 373 | ILE | O-C-N | 6.45 | 133.01 | 122.70 |
| 1 | O | 112 | ASP | CA-C-O | 6.45 | 133.64 | 120.10 |
| 1 | D | 159 | THR | C-N-CA | 6.44 | 135.83 | 122.30 |
| 1 | A | 118 | THR | CA-C-O | -6.44 | 106.57 | 120.10 |
| 1 | D | 308 | LYS | CA-CB-CG | 6.44 | 127.58 | 113.40 |
| 1 | G | 206 | THR | CA-CB-CG2 | 6.44 | 121.42 | 112.40 |
| 1 | L | 205 | ASP | OD1-CG-OD2 | -6.44 | 111.06 | 123.30 |
| 1 | A | 213 | LEU | CB-CG-CD2 | 6.44 | 121.95 | 111.00 |
| 1 | D | 99 | VAL | O-C-N | -6.44 | 112.40 | 122.70 |
| 1 | E | 311 | SER | N-CA-CB | -6.44 | 100.84 | 110.50 |
| 1 | F | 237 | CYS | CA-CB-SG | 6.44 | 125.59 | 114.00 |
| 1 | G | 324 | ARG | NH1-CZ-NH2 | 6.44 | 126.48 | 119.40 |
| 1 | L | 202 | SER | N-CA-CB | 6.44 | 120.16 | 110.50 |
| 1 | N | 320 | LEU | N-CA-CB | 6.44 | 123.28 | 110.40 |
| 1 | N | 356 | GLU | N-CA-CB | 6.44 | 122.19 | 110.60 |
| 1 | O | 249 | ASP | OD1-CG-OD2 | -6.44 | 111.06 | 123.30 |
| 1 | K | 323 | GLU | CB-CA-C | -6.44 | 97.52 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 216 | LYS | C-N-CA | 6.44 | 137.79 | 121.70 |
| 1 | F | 299 | THR | CA-CB-OG1 | 6.44 | 122.52 | 109.00 |
| 1 | G | 277 | ALA | N-CA-CB | -6.44 | 101.09 | 110.10 |
| 1 | I | 233 | ALA | CB-CA-C | -6.44 | 100.44 | 110.10 |
| 1 | O | 324 | ARG | CA-C-O | -6.44 | 106.58 | 120.10 |
| 1 | H | 458 | VAL | CA-CB-CG2 | 6.44 | 120.56 | 110.90 |
| 1 | J | 181 | VAL | CB-CA-C | -6.44 | 99.17 | 111.40 |
| 1 | A | 318 | ALA | N-CA-CB | 6.43 | 119.11 | 110.10 |
| 1 | B | 396 | TYR | CD1-CG-CD2 | 6.43 | 124.98 | 117.90 |
| 1 | C | 374 | GLU | C-N-CA | 6.43 | 137.79 | 121.70 |
| 1 | L | 170 | LEU | CA-C-O | 6.43 | 133.61 | 120.10 |
| 1 | M | 204 | ASP | OD1-CG-OD2 | -6.43 | 111.08 | 123.30 |
| 1 | M | 435 | VAL | CB-CA-C | -6.43 | 99.17 | 111.40 |
| 1 | A | 294 | LYS | CB-CA-C | 6.43 | 123.27 | 110.40 |
| 1 | D | 138 | ILE | O-C-N | 6.43 | 132.99 | 122.70 |
| 1 | G | 234 | LEU | CB-CG-CD2 | 6.43 | 121.94 | 111.00 |
| 1 | J | 438 | ARG | CB-CA-C | -6.43 | 97.53 | 110.40 |
| 1 | O | 429 | ASP | CB-CG-OD2 | -6.43 | 112.51 | 118.30 |
| 1 | E | 205 | ASP | CB-CG-OD2 | 6.43 | 124.09 | 118.30 |
| 1 | H | 8 | LEU | CA-C-O | -6.43 | 106.59 | 120.10 |
| 1 | O | 265 | GLN | OE1-CD-NE2 | -6.43 | 107.11 | 121.90 |
| 1 | E | 135 | LEU | O-C-N | -6.43 | 112.41 | 122.70 |
| 1 | I | 303 | VAL | CB-CA-C | 6.43 | 123.61 | 111.40 |
| 1 | N | 263 | PHE | CB-CG-CD1 | -6.43 | 116.30 | 120.80 |
| 1 | O | 71 | GLU | N-CA-CB | 6.43 | 122.17 | 110.60 |
| 1 | O | 238 | ALA | N-CA-C | 6.43 | 128.36 | 111.00 |
| 1 | O | 491 | ASP | CB-CG-OD2 | -6.43 | 112.51 | 118.30 |
| 1 | B | 129 | GLN | CG-CD-OE1 | 6.43 | 134.46 | 121.60 |
| 1 | B | 341 | LYS | CB-CA-C | 6.43 | 123.26 | 110.40 |
| 1 | D | 466 | VAL | CA-C-N | 6.43 | 131.34 | 117.20 |
| 1 | H | 297 | LYS | CB-CA-C | 6.43 | 123.25 | 110.40 |
| 1 | D | 33 | GLU | N-CA-CB | 6.43 | 122.17 | 110.60 |
| 1 | F | 482 | GLU | OE1-CD-OE2 | 6.43 | 131.01 | 123.30 |
| 1 | H | 7 | VAL | CA-CB-CG1 | 6.43 | 120.54 | 110.90 |
| 1 | H | 376 | GLY | N-CA-C | 6.43 | 129.17 | 113.10 |
| 1 | O | 118 | THR | O-C-N | 6.43 | 132.98 | 122.70 |
| 1 | C | 204 | ASP | OD1-CG-OD2 | -6.42 | 111.09 | 123.30 |
| 1 | E | 470 | LEU | CB-CG-CD2 | 6.42 | 121.92 | 111.00 |
| 1 | H | 324 | ARG | NE-CZ-NH2 | -6.42 | 117.09 | 120.30 |
| 1 | I | 68 | MET | CG-SD-CE | 6.42 | 110.48 | 100.20 |
| 1 | I | 403 | ARG | O-C-N | -6.42 | 112.42 | 122.70 |
| 1 | N | 270 | ASP | OD1-CG-OD2 | -6.42 | 111.09 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 146 | ASP | CB-CA-C | 6.42 | 123.25 | 110.40 |
| 1 | H | 321 | VAL | CA-CB-CG2 | 6.42 | 120.53 | 110.90 |
| 1 | K | 383 | GLY | O-C-N | -6.42 | 112.42 | 122.70 |
| 1 | C | 144 | ALA | CB-CA-C | -6.42 | 100.47 | 110.10 |
| 1 | D | 411 | PHE | O-C-N | -6.42 | 112.43 | 122.70 |
| 1 | E | 24 | ASN | N-CA-CB | -6.42 | 99.04 | 110.60 |
| 1 | E | 58 | THR | N-CA-C | 6.42 | 128.34 | 111.00 |
| 1 | E | 213 | LEU | CA-CB-CG | 6.42 | 130.07 | 115.30 |
| 1 | G | 60 | ASP | O-C-N | -6.42 | 112.28 | 123.20 |
| 1 | K | 462 | CYS | CA-C-O | -6.42 | 106.61 | 120.10 |
| 1 | M | 84 | THR | N-CA-CB | 6.42 | 122.50 | 110.30 |
| 1 | H | 63 | THR | N-CA-CB | 6.42 | 122.50 | 110.30 |
| 1 | I | 73 | PRO | C-N-CA | 6.42 | 137.75 | 121.70 |
| 1 | K | 317 | ASP | O-C-N | -6.42 | 112.43 | 122.70 |
| 1 | P | 50 | ASP | C-N-CA | 6.42 | 137.75 | 121.70 |
| 1 | B | 493 | VAL | CB-CA-C | -6.42 | 99.20 | 111.40 |
| 1 | C | 296 | ALA | N-CA-C | 6.42 | 128.33 | 111.00 |
| 1 | I | 472 | VAL | O-C-N | 6.42 | 132.97 | 122.70 |
| 1 | K | 81 | VAL | N-CA-CB | 6.42 | 125.62 | 111.50 |
| 1 | K | 92 | GLY | O-C-N | -6.42 | 112.44 | 122.70 |
| 1 | O | 38 | THR | N-CA-C | 6.42 | 128.33 | 111.00 |
| 1 | O | 221 | ALA | O-C-N | 6.42 | 132.97 | 122.70 |
| 1 | B | 190 | LYS | C-N-CA | 6.42 | 137.74 | 121.70 |
| 1 | J | 265 | GLN | O-C-N | -6.42 | 112.44 | 122.70 |
| 1 | C | 439 | ALA | CA-C-O | -6.41 | 106.63 | 120.10 |
| 1 | G | 192 | LEU | CA-CB-CG | 6.41 | 130.05 | 115.30 |
| 1 | I | 463 | GLU | OE1-CD-OE2 | -6.41 | 115.60 | 123.30 |
| 1 | J | 289 | LYS | CB-CA-C | 6.41 | 123.22 | 110.40 |
| 1 | O | 229 | ASP | N-CA-CB | 6.41 | 122.14 | 110.60 |
| 1 | I | 42 | LYS | O-C-N | 6.41 | 134.10 | 123.20 |
| 1 | L | 409 | ARG | N-CA-CB | 6.41 | 122.14 | 110.60 |
| 1 | D | 112 | ASP | N-CA-C | 6.41 | 128.30 | 111.00 |
| 1 | D | 302 | ASN | CA-C-O | 6.41 | 133.56 | 120.10 |
| 1 | F | 281 | ILE | N-CA-CB | 6.41 | 125.54 | 110.80 |
| 1 | G | 8 | LEU | CA-C-O | -6.41 | 106.64 | 120.10 |
| 1 | K | 83 | LYS | N-CA-C | 6.41 | 128.31 | 111.00 |
| 1 | N | 451 | LEU | O-C-N | -6.41 | 112.45 | 122.70 |
| 1 | C | 38 | THR | O-C-N | -6.41 | 112.45 | 122.70 |
| 1 | C | 362 | VAL | CA-CB-CG1 | -6.41 | 101.29 | 110.90 |
| 1 | H | 316 | GLY | O-C-N | -6.41 | 112.45 | 122.70 |
| 1 | J | 97 | VAL | N-CA-C | 6.41 | 128.30 | 111.00 |
| 1 | P | 492 | ASP | OD1-CG-OD2 | -6.41 | 111.13 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 55 | VAL | O-C-N | -6.41 | 112.45 | 122.70 |
| 1 | C | 146 | ASP | CB-CG-OD2 | 6.41 | 124.06 | 118.30 |
| 1 | M | 319 | GLY | O-C-N | -6.41 | 112.45 | 122.70 |
| 1 | P | 253 | GLU | CB-CA-C | 6.41 | 123.21 | 110.40 |
| 1 | P | 426 | ALA | CA-C-O | -6.41 | 106.65 | 120.10 |
| 1 | M | 306 | ASN | CA-CB-CG | 6.40 | 127.49 | 113.40 |
| 1 | B | 451 | LEU | O-C-N | -6.40 | 112.45 | 122.70 |
| 1 | C | 377 | ARG | CG-CD-NE | 6.40 | 125.25 | 111.80 |
| 1 | F | 186 | GLY | CA-C-O | -6.40 | 109.08 | 120.60 |
| 1 | H | 494 | ILE | CA-CB-CG2 | 6.40 | 123.71 | 110.90 |
| 1 | L | 271 | LEU | C-N-CA | 6.40 | 137.70 | 121.70 |
| 1 | D | 413 | ASP | CB-CG-OD1 | 6.40 | 124.06 | 118.30 |
| 1 | F | 59 | ASN | C-N-CA | 6.40 | 137.70 | 121.70 |
| 1 | O | 315 | LEU | CB-CG-CD2 | 6.40 | 121.88 | 111.00 |
| 1 | C | 497 | GLU | CA-C-O | -6.40 | 106.67 | 120.10 |
| 1 | I | 431 | ILE | CA-CB-CG2 | 6.40 | 123.70 | 110.90 |
| 1 | J | 431 | ILE | O-C-N | 6.40 | 132.94 | 122.70 |
| 1 | M | 309 | ASP | OD1-CG-OD2 | -6.40 | 111.15 | 123.30 |
| 1 | M | 420 | ARG | CG-CD-NE | -6.40 | 98.36 | 111.80 |
| 1 | C | 205 | ASP | OD1-CG-OD2 | -6.40 | 111.15 | 123.30 |
| 1 | N | 330 | SER | N-CA-CB | 6.40 | 120.09 | 110.50 |
| 1 | O | 38 | THR | CA-CB-OG1 | 6.40 | 122.43 | 109.00 |
| 1 | P | 56 | VAL | CA-C-O | -6.40 | 106.67 | 120.10 |
| 1 | H | 185 | GLU | N-CA-C | 6.39 | 128.26 | 111.00 |
| 1 | K | 70 | VAL | CA-CB-CG2 | 6.39 | 120.49 | 110.90 |
| 1 | P | 70 | VAL | CA-CB-CG2 | -6.39 | 101.31 | 110.90 |
| 1 | F | 208 | LEU | CA-CB-CG | 6.39 | 130.00 | 115.30 |
| 1 | M | 311 | SER | N-CA-CB | -6.39 | 100.91 | 110.50 |
| 1 | P | 388 | GLU | CG-CD-OE1 | 6.39 | 131.09 | 118.30 |
| 1 | B | 33 | GLU | O-C-N | 6.39 | 132.93 | 122.70 |
| 1 | O | 495 | ALA | CB-CA-C | 6.39 | 119.69 | 110.10 |
| 1 | A | 18 | ARG | N-CA-C | 6.39 | 128.25 | 111.00 |
| 1 | I | 381 | GLY | O-C-N | -6.39 | 112.34 | 123.20 |
| 1 | K | 228 | THR | CA-CB-CG2 | 6.39 | 121.35 | 112.40 |
| 1 | H | 16 | MET | O-C-N | -6.39 | 112.34 | 123.20 |
| 1 | J | 61 | GLY | N-CA-C | 6.39 | 129.06 | 113.10 |
| 1 | K | 346 | LEU | O-C-N | 6.39 | 132.92 | 122.70 |
| 1 | L | 274 | HIS | O-C-N | -6.39 | 112.48 | 122.70 |
| 1 | P | 33 | GLU | CG-CD-OE1 | 6.39 | 131.07 | 118.30 |
| 1 | A | 94 | THR | CA-C-O | -6.38 | 106.69 | 120.10 |
| 1 | F | 182 | VAL | CG1-CB-CG2 | -6.38 | 100.69 | 110.90 |
| 1 | G | 323 | GLU | OE1-CD-OE2 | -6.38 | 115.64 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 451 | LEU | CB-CA-C | 6.38 | 122.33 | 110.20 |
| 1 | A | 178 | VAL | C-N-CA | 6.38 | 137.66 | 121.70 |
| 1 | A | 464 | ASN | CA-C-O | -6.38 | 106.70 | 120.10 |
| 1 | A | 497 | GLU | CG-CD-OE1 | -6.38 | 105.53 | 118.30 |
| 1 | L | 219 | VAL | CB-CA-C | 6.38 | 123.53 | 111.40 |
| 1 | M | 114 | ASN | CA-C-N | 6.38 | 131.24 | 117.20 |
| 1 | O | 236 | ASN | CB-CG-OD1 | 6.38 | 134.37 | 121.60 |
| 1 | A | 270 | ASP | OD1-CG-OD2 | -6.38 | 111.17 | 123.30 |
| 1 | A | 429 | ASP | CA-CB-CG | 6.38 | 127.44 | 113.40 |
| 1 | B | 51 | ASP | CB-CG-OD2 | 6.38 | 124.04 | 118.30 |
| 1 | J | 338 | LYS | O-C-N | 6.38 | 132.91 | 122.70 |
| 1 | K | 14 | ARG | NE-CZ-NH2 | 6.38 | 123.49 | 120.30 |
| 1 | M | 22 | ARG | CG-CD-NE | 6.38 | 125.20 | 111.80 |
| 1 | M | 463 | GLU | N-CA-CB | 6.38 | 122.09 | 110.60 |
| 1 | N | 361 | ALA | N-CA-CB | 6.38 | 119.03 | 110.10 |
| 1 | P | 285 | ARG | CB-CA-C | -6.38 | 97.64 | 110.40 |
| 1 | C | 58 | THR | N-CA-C | 6.38 | 128.23 | 111.00 |
| 1 | H | 75 | ALA | CB-CA-C | 6.38 | 119.67 | 110.10 |
| 1 | A | 152 | LYS | C-N-CA | 6.38 | 137.65 | 121.70 |
| 1 | M | 283 | ALA | O-C-N | -6.38 | 112.50 | 122.70 |
| 1 | G | 446 | ASN | C-N-CA | 6.38 | 137.64 | 121.70 |
| 1 | M | 216 | LYS | CD-CE-NZ | 6.38 | 126.37 | 111.70 |
| 1 | O | 284 | ALA | O-C-N | 6.38 | 132.90 | 122.70 |
| 1 | P | 49 | VAL | O-C-N | -6.38 | 112.50 | 122.70 |
| 1 | G | 336 | GLU | N-CA-C | 6.38 | 128.21 | 111.00 |
| 1 | K | 322 | GLU | CG-CD-OE1 | 6.38 | 131.05 | 118.30 |
| 1 | E | 151 | THR | C-N-CA | 6.37 | 137.64 | 121.70 |
| 1 | G | 448 | CYS | N-CA-C | 6.37 | 128.21 | 111.00 |
| 1 | N | 62 | VAL | CB-CA-C | -6.37 | 99.29 | 111.40 |
| 1 | O | 481 | ALA | N-CA-CB | 6.37 | 119.02 | 110.10 |
| 1 | H | 165 | LYS | O-C-N | 6.37 | 132.90 | 122.70 |
| 1 | I | 172 | GLU | O-C-N | -6.37 | 112.50 | 122.70 |
| 1 | K | 75 | ALA | CA-C-O | 6.37 | 133.48 | 120.10 |
| 1 | K | 91 | ASP | CB-CG-OD2 | 6.37 | 124.03 | 118.30 |
| 1 | P | 488 | LEU | O-C-N | 6.37 | 132.90 | 122.70 |
| 1 | B | 112 | ASP | O-C-N | -6.37 | 112.51 | 122.70 |
| 1 | D | 380 | SER | O-C-N | -6.37 | 112.37 | 123.20 |
| 1 | H | 283 | ALA | N-CA-CB | 6.37 | 119.02 | 110.10 |
| 1 | O | 79 | ILE | N-CA-CB | 6.37 | 125.45 | 110.80 |
| 1 | A | 29 | ARG | CD-NE-CZ | 6.37 | 132.52 | 123.60 |
| 1 | B | 182 | VAL | O-C-N | 6.37 | 132.89 | 122.70 |
| 1 | H | 333 | PHE | CD1-CE1-CZ | -6.37 | 112.46 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 159 | THR | C-N-CA | 6.37 | 135.67 | 122.30 |
| 1 | M | 463 | GLU | OE1-CD-OE2 | 6.37 | 130.94 | 123.30 |
| 1 | N | 375 | ASP | CB-CG-OD1 | -6.37 | 112.57 | 118.30 |
| 1 | P | 219 | VAL | CA-CB-CG2 | -6.37 | 101.35 | 110.90 |
| 1 | J | 11 | ASN | CA-C-O | -6.37 | 106.73 | 120.10 |
| 1 | J | 458 | VAL | CG1-CB-CG2 | 6.37 | 121.08 | 110.90 |
| 1 | M | 122 | LYS | N-CA-CB | 6.37 | 122.06 | 110.60 |
| 1 | M | 438 | ARG | O-C-N | 6.37 | 132.88 | 122.70 |
| 1 | E | 399 | GLY | O-C-N | 6.36 | 132.88 | 122.70 |
| 1 | G | 320 | LEU | CA-C-O | -6.36 | 106.74 | 120.10 |
| 1 | L | 12 | MET | C-N-CA | 6.36 | 137.61 | 121.70 |
| 1 | C | 134 | LEU | CB-CG-CD1 | 6.36 | 121.81 | 111.00 |
| 1 | O | 478 | GLN | N-CA-CB | 6.36 | 122.05 | 110.60 |
| 1 | P | 192 | LEU | CB-CA-C | 6.36 | 122.29 | 110.20 |
| 1 | J | 56 | VAL | O-C-N | -6.36 | 112.52 | 122.70 |
| 1 | K | 369 | VAL | CA-CB-CG2 | 6.36 | 120.44 | 110.90 |
| 1 | P | 429 | ASP | CB-CA-C | 6.36 | 123.12 | 110.40 |
| 1 | G | 479 | SER | O-C-N | 6.36 | 132.87 | 122.70 |
| 1 | A | 7 | VAL | CA-C-O | -6.36 | 106.75 | 120.10 |
| 1 | F | 489 | ARG | N-CA-CB | 6.36 | 122.04 | 110.60 |
| 1 | F | 491 | ASP | CB-CG-OD2 | 6.36 | 124.02 | 118.30 |
| 1 | H | 167 | LYS | CA-C-O | -6.36 | 106.75 | 120.10 |
| 1 | N | 85 | GLN | CB-CG-CD | 6.36 | 128.13 | 111.60 |
| 1 | N | 241 | GLU | CG-CD-OE2 | 6.36 | 131.01 | 118.30 |
| 1 | J | 278 | LYS | O-C-N | -6.35 | 112.53 | 122.70 |
| 1 | O | 55 | VAL | N-CA-C | 6.35 | 128.15 | 111.00 |
| 1 | C | 244 | SER | CB-CA-C | 6.35 | 122.17 | 110.10 |
| 1 | H | 151 | THR | O-C-N | 6.35 | 132.86 | 122.70 |
| 1 | P | 218 | ARG | C-N-CA | 6.35 | 137.58 | 121.70 |
| 1 | E | 78 | LEU | CB-CG-CD2 | -6.35 | 100.20 | 111.00 |
| 1 | O | 291 | ASP | CB-CG-OD1 | -6.35 | 112.58 | 118.30 |
| 1 | F | 422 | LEU | C-N-CA | 6.35 | 137.58 | 121.70 |
| 1 | L | 270 | ASP | CA-C-O | -6.35 | 106.77 | 120.10 |
| 1 | M | 264 | CYS | CA-CB-SG | 6.35 | 125.43 | 114.00 |
| 1 | B | 397 | ALA | CB-CA-C | 6.35 | 119.62 | 110.10 |
| 1 | F | 199 | SER | O-C-N | -6.35 | 112.41 | 123.20 |
| 1 | K | 214 | VAL | CA-C-N | 6.35 | 131.16 | 117.20 |
| 1 | P | 87 | LYS | C-N-CA | 6.35 | 137.57 | 121.70 |
| 1 | D | 178 | VAL | O-C-N | -6.35 | 112.55 | 122.70 |
| 1 | I | 71 | GLU | O-C-N | -6.35 | 112.55 | 122.70 |
| 1 | K | 192 | LEU | CB-CG-CD1 | 6.35 | 121.79 | 111.00 |
| 1 | B | 299 | THR | O-C-N | -6.34 | 112.41 | 123.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 18 | ARG | CA-C-O | 6.34 | 133.42 | 120.10 |
| 1 | D | 365 | ALA | C-N-CA | 6.34 | 137.56 | 121.70 |
| 1 | F | 43 | GLY | CA-C-O | -6.34 | 109.18 | 120.60 |
| 1 | F | 255 | LYS | CB-CA-C | 6.34 | 123.09 | 110.40 |
| 1 | F | 276 | LEU | CA-CB-CG | 6.34 | 129.89 | 115.30 |
| 1 | J | 146 | ASP | O-C-N | 6.34 | 132.85 | 122.70 |
| 1 | M | 152 | LYS | N-CA-CB | -6.34 | 99.18 | 110.60 |
| 1 | N | 245 | GLU | CB-CG-CD | 6.34 | 131.33 | 114.20 |
| 1 | N | 270 | ASP | CA-CB-CG | -6.34 | 99.44 | 113.40 |
| 1 | O | 7 | VAL | O-C-N | -6.34 | 112.55 | 122.70 |
| 1 | P | 446 | ASN | CB-CA-C | -6.34 | 97.71 | 110.40 |
| 1 | B | 271 | LEU | CB-CA-C | 6.34 | 122.25 | 110.20 |
| 1 | F | 422 | LEU | CB-CA-C | 6.34 | 122.25 | 110.20 |
| 1 | I | 302 | ASN | O-C-N | -6.34 | 112.55 | 122.70 |
| 1 | J | 241 | GLU | OE1-CD-OE2 | -6.34 | 115.69 | 123.30 |
| 1 | L | 68 | MET | C-N-CA | 6.34 | 137.56 | 121.70 |
| 1 | F | 63 | THR | C-N-CA | 6.34 | 137.56 | 121.70 |
| 1 | H | 344 | THR | OG1-CB-CG2 | 6.34 | 124.59 | 110.00 |
| 1 | I | 184 | ASP | N-CA-CB | -6.34 | 99.18 | 110.60 |
| 1 | I | 281 | ILE | CG1-CB-CG2 | -6.34 | 97.45 | 111.40 |
| 1 | J | 114 | ASN | N-CA-CB | 6.34 | 122.01 | 110.60 |
| 1 | N | 470 | LEU | CB-CG-CD2 | 6.34 | 121.78 | 111.00 |
| 1 | P | 323 | GLU | OE1-CD-OE2 | -6.34 | 115.69 | 123.30 |
| 1 | D | 374 | GLU | N-CA-CB | 6.34 | 122.01 | 110.60 |
| 1 | E | 257 | SER | O-C-N | -6.34 | 112.42 | 123.20 |
| 1 | H | 319 | GLY | N-CA-C | 6.34 | 128.95 | 113.10 |
| 1 | O | 288 | LYS | C-N-CA | 6.34 | 137.55 | 121.70 |
| 1 | H | 105 | ARG | NH1-CZ-NH2 | -6.34 | 112.43 | 119.40 |
| 1 | J | 253 | GLU | CG-CD-OE1 | -6.34 | 105.62 | 118.30 |
| 1 | L | 48 | LEU | CB-CG-CD1 | -6.34 | 100.23 | 111.00 |
| 1 | E | 279 | GLU | OE1-CD-OE2 | 6.34 | 130.90 | 123.30 |
| 1 | G | 191 | ASP | O-C-N | -6.34 | 112.56 | 122.70 |
| 1 | G | 194 | LYS | CD-CE-NZ | 6.34 | 126.27 | 111.70 |
| 1 | M | 420 | ARG | NE-CZ-NH2 | 6.34 | 123.47 | 120.30 |
| 1 | A | 432 | GLU | CB-CA-C | 6.33 | 123.07 | 110.40 |
| 1 | H | 233 | ALA | N-CA-CB | 6.33 | 118.97 | 110.10 |
| 1 | J | 352 | GLU | CG-CD-OE2 | 6.33 | 130.97 | 118.30 |
| 1 | N | 215 | ASP | CB-CG-OD1 | 6.33 | 124.00 | 118.30 |
| 1 | N | 451 | LEU | CA-CB-CG | 6.33 | 129.87 | 115.30 |
| 1 | O | 372 | THR | C-N-CA | 6.33 | 137.54 | 121.70 |
| 1 | N | 36 | ARG | NH1-CZ-NH2 | 6.33 | 126.37 | 119.40 |
| 1 | C | 459 | GLU | O-C-N | 6.33 | 132.83 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 282 | VAL | CG1-CB-CG2 | 6.33 | 121.03 | 110.90 |
| 1 | F | 255 | LYS | CD-CE-NZ | 6.33 | 126.26 | 111.70 |
| 1 | G | 275 | TYR | CB-CA-C | 6.33 | 123.06 | 110.40 |
| 1 | D | 490 | ILE | CA-C-N | -6.33 | 103.28 | 117.20 |
| 1 | F | 200 | GLY | C-N-CA | 6.33 | 137.52 | 121.70 |
| 1 | G | 30 | ILE | CA-CB-CG1 | 6.33 | 123.02 | 111.00 |
| 1 | A | 414 | ALA | CB-CA-C | 6.33 | 119.59 | 110.10 |
| 1 | F | 486 | MET | O-C-N | 6.33 | 132.82 | 122.70 |
| 1 | A | 136 | LYS | CB-CA-C | 6.33 | 123.05 | 110.40 |
| 1 | B | 350 | THR | N-CA-C | 6.33 | 128.08 | 111.00 |
| 1 | E | 136 | LYS | CA-C-O | -6.33 | 106.82 | 120.10 |
| 1 | E | 386 | GLU | O-C-N | 6.33 | 132.82 | 122.70 |
| 1 | F | 10 | GLU | CA-C-N | 6.33 | 131.11 | 117.20 |
| 1 | H | 346 | LEU | O-C-N | -6.33 | 112.58 | 122.70 |
| 1 | F | 321 | VAL | CG1-CB-CG2 | -6.32 | 100.78 | 110.90 |
| 1 | I | 116 | HIS | N-CA-CB | 6.32 | 121.98 | 110.60 |
| 1 | M | 125 | GLN | CG-CD-OE1 | 6.32 | 134.25 | 121.60 |
| 1 | L | 183 | ASP | OD1-CG-OD2 | -6.32 | 111.29 | 123.30 |
| 1 | B | 226 | LYS | CA-C-N | 6.32 | 131.10 | 117.20 |
| 1 | E | 294 | LYS | C-N-CA | 6.32 | 137.50 | 121.70 |
| 1 | E | 466 | VAL | O-C-N | -6.32 | 112.59 | 122.70 |
| 1 | I | 452 | ASN | C-N-CA | 6.32 | 137.50 | 121.70 |
| 1 | L | 191 | ASP | CB-CG-OD2 | -6.32 | 112.61 | 118.30 |
| 1 | M | 181 | VAL | CG1-CB-CG2 | -6.32 | 100.79 | 110.90 |
| 1 | M | 276 | LEU | N-CA-CB | 6.32 | 123.04 | 110.40 |
| 1 | N | 494 | ILE | CA-CB-CG2 | 6.32 | 123.54 | 110.90 |
| 1 | A | 272 | ALA | C-N-CA | 6.32 | 137.50 | 121.70 |
| 1 | C | 301 | ALA | N-CA-C | 6.32 | 128.06 | 111.00 |
| 1 | I | 155 | MET | CB-CA-C | 6.32 | 123.04 | 110.40 |
| 1 | I | 212 | VAL | CA-CB-CG1 | 6.32 | 120.38 | 110.90 |
| 1 | O | 294 | LYS | N-CA-CB | 6.32 | 121.97 | 110.60 |
| 1 | A | 15 | TYR | CZ-CE2-CD2 | 6.32 | 125.48 | 119.80 |
| 1 | I | 95 | THR | CA-CB-CG2 | -6.32 | 103.56 | 112.40 |
| 1 | I | 424 | GLU | C-N-CA | 6.32 | 137.49 | 121.70 |
| 1 | J | 305 | THR | N-CA-CB | 6.32 | 122.30 | 110.30 |
| 1 | O | 425 | ASN | N-CA-CB | 6.32 | 121.97 | 110.60 |
| 1 | E | 142 | VAL | CG1-CB-CG2 | 6.32 | 121.00 | 110.90 |
| 1 | E | 198 | LYS | O-C-N | 6.32 | 132.81 | 122.70 |
| 1 | E | 295 | LEU | C-N-CA | 6.32 | 137.49 | 121.70 |
| 1 | E | 98 | VAL | CA-CB-CG1 | -6.31 | 101.43 | 110.90 |
| 1 | K | 219 | VAL | CA-CB-CG2 | 6.31 | 120.37 | 110.90 |
| 1 | L | 372 | THR | CA-C-O | -6.31 | 106.84 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 281 | ILE | CB-CA-C | -6.31 | 98.97 | 111.60 |
| 1 | N | 225 | LYS | O-C-N | -6.31 | 112.60 | 122.70 |
| 1 | H | 78 | LEU | CB-CA-C | 6.31 | 122.19 | 110.20 |
| 1 | J | 122 | LYS | O-C-N | 6.31 | 133.93 | 123.20 |
| 1 | M | 424 | GLU | CG-CD-OE2 | -6.31 | 105.67 | 118.30 |
| 1 | P | 477 | ILE | O-C-N | -6.31 | 112.60 | 122.70 |
| 1 | A | 117 | PRO | N-CA-CB | 6.31 | 110.87 | 103.30 |
| 1 | A | 388 | GLU | CG-CD-OE1 | 6.31 | 130.92 | 118.30 |
| 1 | C | 235 | LEU | CB-CG-CD2 | -6.31 | 100.27 | 111.00 |
| 1 | G | 496 | ALA | N-CA-CB | 6.31 | 118.94 | 110.10 |
| 1 | N | 356 | GLU | CA-CB-CG | 6.31 | 127.28 | 113.40 |
| 1 | D | 129 | GLN | CA-CB-CG | 6.31 | 127.28 | 113.40 |
| 1 | G | 309 | ASP | CA-C-O | -6.31 | 106.85 | 120.10 |
| 1 | H | 99 | VAL | CA-CB-CG2 | -6.31 | 101.44 | 110.90 |
| 1 | I | 80 | GLU | CG-CD-OE2 | 6.31 | 130.92 | 118.30 |
| 1 | K | 81 | VAL | CA-CB-CG2 | -6.31 | 101.44 | 110.90 |
| 1 | K | 111 | LEU | N-CA-CB | 6.31 | 123.02 | 110.40 |
| 1 | C | 44 | MET | CA-C-N | -6.31 | 103.32 | 117.20 |
| 1 | D | 185 | GLU | OE1-CD-OE2 | 6.31 | 130.87 | 123.30 |
| 1 | N | 388 | GLU | OE1-CD-OE2 | -6.31 | 115.73 | 123.30 |
| 1 | P | 128 | ALA | N-CA-CB | 6.31 | 118.93 | 110.10 |
| 1 | D | 15 | TYR | CE1-CZ-CE2 | -6.31 | 109.71 | 119.80 |
| 1 | D | 217 | GLU | N-CA-CB | 6.31 | 121.95 | 110.60 |
| 1 | J | 353 | HIS | CA-CB-CG | 6.31 | 124.32 | 113.60 |
| 1 | M | 289 | LYS | CA-CB-CG | 6.31 | 127.27 | 113.40 |
| 1 | H | 307 | ILE | CA-CB-CG2 | 6.30 | 123.51 | 110.90 |
| 1 | I | 388 | GLU | CA-CB-CG | 6.30 | 127.27 | 113.40 |
| 1 | L | 16 | MET | CA-C-N | -6.30 | 103.59 | 116.20 |
| 1 | M | 355 | ILE | CB-CA-C | -6.30 | 98.99 | 111.60 |
| 1 | G | 204 | ASP | N-CA-CB | 6.30 | 121.94 | 110.60 |
| 1 | I | 288 | LYS | CB-CG-CD | 6.30 | 127.99 | 111.60 |
| 1 | L | 314 | ASP | N-CA-CB | 6.30 | 121.95 | 110.60 |
| 1 | P | 31 | ILE | CB-CA-C | 6.30 | 124.21 | 111.60 |
| 1 | P | 264 | CYS | CA-CB-SG | 6.30 | 125.35 | 114.00 |
| 1 | B | 380 | SER | N-CA-C | 6.30 | 128.02 | 111.00 |
| 1 | D | 359 | ALA | O-C-N | 6.30 | 132.78 | 122.70 |
| 1 | F | 463 | GLU | CA-C-O | -6.30 | 106.86 | 120.10 |
| 1 | H | 366 | VAL | O-C-N | -6.30 | 112.49 | 123.20 |
| 1 | I | 441 | HIS | CA-C-O | 6.30 | 133.33 | 120.10 |
| 1 | J | 65 | LEU | N-CA-CB | 6.30 | 123.00 | 110.40 |
| 1 | O | 215 | ASP | N-CA-CB | 6.30 | 121.94 | 110.60 |
| 1 | P | 126 | ALA | CA-C-O | 6.30 | 133.33 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 148 | GLU | CG-CD-OE2 | 6.30 | 130.90 | 118.30 |
| 1 | P | 315 | LEU | N-CA-CB | 6.30 | 123.00 | 110.40 |
| 1 | C | 423 | ALA | N-CA-CB | -6.30 | 101.28 | 110.10 |
| 1 | D | 496 | ALA | CB-CA-C | -6.30 | 100.65 | 110.10 |
| 1 | J | 273 | GLN | CA-C-O | -6.30 | 106.87 | 120.10 |
| 1 | J | 464 | ASN | CA-C-O | -6.30 | 106.87 | 120.10 |
| 1 | K | 49 | VAL | CA-CB-CG2 | 6.30 | 120.35 | 110.90 |
| 1 | D | 147 | LYS | CD-CE-NZ | 6.30 | 126.18 | 111.70 |
| 1 | E | 242 | THR | CA-CB-OG1 | 6.30 | 122.22 | 109.00 |
| 1 | E | 466 | VAL | CG1-CB-CG2 | -6.30 | 100.83 | 110.90 |
| 1 | G | 400 | ILE | N-CA-C | 6.30 | 128.00 | 111.00 |
| 1 | L | 303 | VAL | O-C-N | -6.30 | 112.62 | 122.70 |
| 1 | M | 209 | ILE | O-C-N | -6.30 | 112.62 | 122.70 |
| 1 | M | 465 | GLY | CA-C-O | -6.30 | 109.27 | 120.60 |
| 1 | O | 93 | THR | CA-C-N | -6.30 | 103.35 | 117.20 |
| 1 | A | 137 | THR | N-CA-CB | 6.29 | 122.26 | 110.30 |
| 1 | C | 378 | ILE | N-CA-CB | 6.29 | 125.28 | 110.80 |
| 1 | D | 94 | THR | N-CA-CB | 6.29 | 122.26 | 110.30 |
| 1 | E | 59 | ASN | CA-CB-CG | 6.29 | 127.25 | 113.40 |
| 1 | J | 373 | ILE | N-CA-CB | 6.29 | 125.28 | 110.80 |
| 1 | K | 447 | LYS | CA-C-N | -6.29 | 103.35 | 117.20 |
| 1 | M | 377 | ARG | NH1-CZ-NH2 | -6.29 | 112.48 | 119.40 |
| 1 | B | 184 | ASP | CB-CG-OD1 | 6.29 | 123.97 | 118.30 |
| 1 | C | 408 | VAL | CA-CB-CG2 | 6.29 | 120.34 | 110.90 |
| 1 | D | 216 | LYS | O-C-N | -6.29 | 112.63 | 122.70 |
| 1 | O | 323 | GLU | CA-C-O | -6.29 | 106.88 | 120.10 |
| 1 | E | 106 | LYS | N-CA-CB | -6.29 | 99.28 | 110.60 |
| 1 | M | 174 | ILE | O-C-N | -6.29 | 112.63 | 122.70 |
| 1 | M | 291 | ASP | CB-CG-OD2 | -6.29 | 112.64 | 118.30 |
| 1 | D | 394 | ARG | NE-CZ-NH2 | 6.29 | 123.44 | 120.30 |
| 1 | P | 183 | ASP | CA-C-N | -6.29 | 103.36 | 117.20 |
| 1 | P | 296 | ALA | O-C-N | -6.29 | 112.64 | 122.70 |
| 1 | B | 62 | VAL | C-N-CA | 6.29 | 137.42 | 121.70 |
| 1 | B | 159 | THR | CA-CB-CG2 | 6.29 | 121.20 | 112.40 |
| 1 | E | 487 | LEU | N-CA-CB | 6.29 | 122.98 | 110.40 |
| 1 | G | 291 | ASP | CB-CG-OD1 | -6.29 | 112.64 | 118.30 |
| 1 | I | 157 | SER | CB-CA-C | 6.29 | 122.05 | 110.10 |
| 1 | I | 444 | ASN | CB-CG-ND2 | -6.29 | 101.61 | 116.70 |
| 1 | J | 138 | ILE | C-N-CA | 6.29 | 137.42 | 121.70 |
| 1 | J | 207 | GLU | N-CA-C | 6.29 | 127.98 | 111.00 |
| 1 | A | 396 | TYR | O-C-N | 6.29 | 132.76 | 122.70 |
| 1 | B | 100 | ALA | CB-CA-C | 6.29 | 119.53 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | K | 349 | GLY | CA-C-N | -6.29 | 103.37 | 117.20 |
| 1 | O | 116 | HIS | ND1-CE1-NE2 | -6.29 | 96.07 | 109.90 |
| 1 | B | 37 | SER | O-C-N | -6.29 | 112.64 | 122.70 |
| 1 | D | 184 | ASP | C-N-CA | 6.29 | 137.42 | 121.70 |
| 1 | J | 275 | TYR | CD1-CE1-CZ | -6.29 | 114.14 | 119.80 |
| 1 | N | 209 | ILE | CA-CB-CG1 | 6.29 | 122.94 | 111.00 |
| 1 | N | 317 | ASP | OD1-CG-OD2 | -6.29 | 111.36 | 123.30 |
| 1 | P | 201 | ALA | CA-C-O | -6.29 | 106.90 | 120.10 |
| 1 | B | 310 | LEU | CA-C-O | -6.28 | 106.91 | 120.10 |
| 1 | D | 29 | ARG | NH1-CZ-NH2 | -6.28 | 112.49 | 119.40 |
| 1 | H | 242 | THR | CA-C-N | 6.28 | 131.02 | 117.20 |
| 1 | K | 233 | ALA | N-CA-CB | -6.28 | 101.30 | 110.10 |
| 1 | M | 141 | GLU | N-CA-CB | 6.28 | 121.91 | 110.60 |
| 1 | M | 397 | ALA | CB-CA-C | 6.28 | 119.53 | 110.10 |
| 1 | O | 256 | ALA | C-N-CA | 6.28 | 137.41 | 121.70 |
| 1 | B | 80 | GLU | CA-C-O | -6.28 | 106.91 | 120.10 |
| 1 | M | 110 | LEU | CA-C-N | -6.28 | 103.38 | 117.20 |
| 1 | D | 320 | LEU | O-C-N | -6.28 | 112.65 | 122.70 |
| 1 | H | 363 | ASP | C-N-CA | 6.28 | 137.40 | 121.70 |
| 1 | K | 454 | PHE | CZ-CE2-CD2 | -6.28 | 112.56 | 120.10 |
| 1 | C | 361 | ALA | N-CA-CB | 6.28 | 118.89 | 110.10 |
| 1 | J | 187 | LYS | CA-C-N | 6.28 | 131.01 | 117.20 |
| 1 | N | 46 | LYS | N-CA-CB | 6.28 | 121.90 | 110.60 |
| 1 | O | 364 | ASP | N-CA-CB | 6.28 | 121.90 | 110.60 |
| 1 | C | 217 | GLU | C-N-CA | -6.28 | 106.01 | 121.70 |
| 1 | H | 19 | ASP | CB-CG-OD2 | -6.28 | 112.65 | 118.30 |
| 1 | I | 329 | ASP | CA-C-N | -6.28 | 103.39 | 117.20 |
| 1 | I | 337 | CYS | CA-C-O | 6.28 | 133.28 | 120.10 |
| 1 | J | 446 | ASN | O-C-N | 6.28 | 132.74 | 122.70 |
| 1 | M | 333 | PHE | CG-CD1-CE1 | 6.28 | 127.71 | 120.80 |
| 1 | A | 111 | LEU | C-N-CA | 6.28 | 137.39 | 121.70 |
| 1 | D | 179 | SER | O-C-N | 6.28 | 132.74 | 122.70 |
| 1 | D | 465 | GLY | CA-C-O | -6.28 | 109.31 | 120.60 |
| 1 | P | 106 | LYS | CB-CA-C | -6.28 | 97.85 | 110.40 |
| 1 | C | 232 | ILE | CB-CA-C | -6.27 | 99.05 | 111.60 |
| 1 | D | 343 | VAL | CA-CB-CG2 | 6.27 | 120.31 | 110.90 |
| 1 | E | 470 | LEU | CA-CB-CG | 6.27 | 129.73 | 115.30 |
| 1 | G | 281 | ILE | CB-CA-C | -6.27 | 99.05 | 111.60 |
| 1 | C | 178 | VAL | C-N-CA | 6.27 | 137.38 | 121.70 |
| 1 | D | 412 | ALA | O-C-N | -6.27 | 112.66 | 122.70 |
| 1 | I | 465 | GLY | CA-C-O | -6.27 | 109.31 | 120.60 |
| 1 | L | 400 | ILE | N-CA-CB | 6.27 | 125.22 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 22 | ARG | CG-CD-NE | -6.27 | 98.64 | 111.80 |
| 1 | H | 12 | MET | N-CA-C | 6.27 | 127.93 | 111.00 |
| 1 | H | 225 | LYS | CA-CB-CG | 6.27 | 127.19 | 113.40 |
| 1 | H | 439 | ALA | CA-C-O | -6.27 | 106.93 | 120.10 |
| 1 | I | 156 | THR | N-CA-C | 6.27 | 127.93 | 111.00 |
| 1 | P | 487 | LEU | CB-CA-C | 6.27 | 122.11 | 110.20 |
| 1 | I | 106 | LYS | N-CA-CB | -6.27 | 99.32 | 110.60 |
| 1 | B | 39 | LEU | CB-CG-CD1 | 6.27 | 121.65 | 111.00 |
| 1 | B | 332 | ILE | O-C-N | 6.27 | 132.72 | 122.70 |
| 1 | K | 111 | LEU | CA-CB-CG | 6.27 | 129.71 | 115.30 |
| 1 | N | 18 | ARG | CB-CA-C | 6.27 | 122.93 | 110.40 |
| 1 | O | 62 | VAL | N-CA-CB | 6.27 | 125.29 | 111.50 |
| 1 | P | 114 | ASN | N-CA-C | 6.27 | 127.92 | 111.00 |
| 1 | B | 113 | GLN | CB-CA-C | -6.26 | 97.87 | 110.40 |
| 1 | C | 432 | GLU | CB-CA-C | 6.26 | 122.93 | 110.40 |
| 1 | F | 26 | LEU | CA-CB-CG | 6.26 | 129.71 | 115.30 |
| 1 | F | 349 | GLY | C-N-CA | 6.26 | 137.36 | 121.70 |
| 1 | P | 115 | VAL | O-C-N | -6.26 | 112.68 | 122.70 |
| 1 | J | 111 | LEU | CB-CG-CD2 | -6.26 | 100.35 | 111.00 |
| 1 | C | 12 | MET | C-N-CA | 6.26 | 137.35 | 121.70 |
| 1 | C | 411 | PHE | O-C-N | -6.26 | 112.68 | 122.70 |
| 1 | E | 351 | THR | CA-C-O | 6.26 | 133.25 | 120.10 |
| 1 | J | 295 | LEU | CA-C-O | -6.26 | 106.95 | 120.10 |
| 1 | N | 65 | LEU | CD1-CG-CD2 | 6.26 | 129.28 | 110.50 |
| 1 | P | 63 | THR | CA-CB-CG2 | 6.26 | 121.17 | 112.40 |
| 1 | B | 73 | PRO | O-C-N | -6.26 | 112.68 | 122.70 |
| 1 | C | 240 | GLU | CA-CB-CG | 6.26 | 127.17 | 113.40 |
| 1 | G | 425 | ASN | CB-CG-OD1 | 6.26 | 134.12 | 121.60 |
| 1 | G | 466 | VAL | CA-C-N | 6.26 | 130.97 | 117.20 |
| 1 | J | 440 | ALA | O-C-N | 6.26 | 132.72 | 122.70 |
| 1 | N | 7 | VAL | CB-CA-C | -6.26 | 99.50 | 111.40 |
| 1 | F | 307 | ILE | CA-C-O | -6.26 | 106.96 | 120.10 |
| 1 | K | 487 | LEU | CB-CA-C | 6.26 | 122.09 | 110.20 |
| 1 | C | 127 | ALA | N-CA-CB | 6.26 | 118.86 | 110.10 |
| 1 | C | 489 | ARG | NE-CZ-NH2 | -6.26 | 117.17 | 120.30 |
| 1 | H | 88 | GLU | CG-CD-OE2 | 6.26 | 130.81 | 118.30 |
| 1 | K | 389 | LEU | CA-CB-CG | 6.26 | 129.69 | 115.30 |
| 1 | K | 414 | ALA | N-CA-CB | 6.26 | 118.86 | 110.10 |
| 1 | M | 97 | VAL | CA-CB-CG2 | -6.26 | 101.52 | 110.90 |
| 1 | M | 319 | GLY | C-N-CA | 6.26 | 137.34 | 121.70 |
| 1 | L | 249 | ASP | O-C-N | -6.25 | 112.69 | 122.70 |
| 1 | A | 31 | ILE | C-N-CA | 6.25 | 137.33 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 354 | VAL | CA-CB-CG1 | 6.25 | 120.28 | 110.90 |
| 1 | D | 129 | GLN | CB-CA-C | 6.25 | 122.91 | 110.40 |
| 1 | G | 285 | ARG | NE-CZ-NH1 | 6.25 | 123.43 | 120.30 |
| 1 | G | 360 | ARG | CD-NE-CZ | 6.25 | 132.36 | 123.60 |
| 1 | I | 328 | GLY | CA-C-O | -6.25 | 109.34 | 120.60 |
| 1 | I | 416 | GLU | O-C-N | -6.25 | 112.69 | 122.70 |
| 1 | N | 279 | GLU | C-N-CA | 6.25 | 135.43 | 122.30 |
| 1 | E | 324 | ARG | CB-CA-C | 6.25 | 122.91 | 110.40 |
| 1 | F | 190 | LYS | CG-CD-CE | 6.25 | 130.66 | 111.90 |
| 1 | F | 224 | PRO | CA-N-CD | -6.25 | 102.75 | 111.50 |
| 1 | H | 267 | GLY | O-C-N | -6.25 | 112.70 | 122.70 |
| 1 | K | 153 | ILE | C-N-CA | 6.25 | 137.33 | 121.70 |
| 1 | L | 294 | LYS | C-N-CA | 6.25 | 137.33 | 121.70 |
| 1 | L | 359 | ALA | N-CA-CB | -6.25 | 101.35 | 110.10 |
| 1 | M | 229 | ASP | CA-CB-CG | 6.25 | 127.15 | 113.40 |
| 1 | M | 354 | VAL | CG1-CB-CG2 | -6.25 | 100.90 | 110.90 |
| 1 | A | 35 | VAL | O-C-N | 6.25 | 132.70 | 122.70 |
| 1 | B | 259 | ALA | CB-CA-C | -6.25 | 100.72 | 110.10 |
| 1 | J | 114 | ASN | CA-CB-CG | 6.25 | 127.15 | 113.40 |
| 1 | L | 54 | ASP | CB-CG-OD2 | -6.25 | 112.67 | 118.30 |
| 1 | A | 217 | GLU | CA-C-O | -6.25 | 106.98 | 120.10 |
| 1 | A | 315 | LEU | CB-CA-C | 6.25 | 122.07 | 110.20 |
| 1 | D | 210 | LYS | CB-CA-C | 6.25 | 122.90 | 110.40 |
| 1 | M | 39 | LEU | CB-CA-C | 6.25 | 122.07 | 110.20 |
| 1 | G | 70 | VAL | N-CA-C | 6.25 | 127.87 | 111.00 |
| 1 | H | 158 | ILE | N-CA-C | 6.25 | 127.87 | 111.00 |
| 1 | F | 252 | ALA | C-N-CA | 6.25 | 137.31 | 121.70 |
| 1 | G | 8 | LEU | N-CA-CB | 6.25 | 122.89 | 110.40 |
| 1 | G | 229 | ASP | CA-CB-CG | 6.25 | 127.14 | 113.40 |
| 1 | K | 56 | VAL | CA-CB-CG2 | 6.25 | 120.27 | 110.90 |
| 1 | E | 314 | ASP | CB-CG-OD1 | 6.24 | 123.92 | 118.30 |
| 1 | E | 372 | THR | CA-CB-OG1 | 6.24 | 122.11 | 109.00 |
| 1 | G | 253 | GLU | C-N-CA | 6.24 | 137.31 | 121.70 |
| 1 | I | 452 | ASN | CB-CA-C | -6.24 | 97.91 | 110.40 |
| 1 | I | 462 | CYS | O-C-N | -6.24 | 112.71 | 122.70 |
| 1 | L | 68 | MET | O-C-N | -6.24 | 112.71 | 122.70 |
| 1 | M | 240 | GLU | CB-CG-CD | 6.24 | 131.06 | 114.20 |
| 1 | D | 393 | LEU | CB-CG-CD1 | 6.24 | 121.61 | 111.00 |
| 1 | I | 257 | SER | CB-CA-C | 6.24 | 121.96 | 110.10 |
| 1 | A | 121 | VAL | CG1-CB-CG2 | 6.24 | 120.88 | 110.90 |
| 1 | F | 341 | LYS | N-CA-CB | 6.24 | 121.83 | 110.60 |
| 1 | J | 495 | ALA | CA-C-N | -6.24 | 103.47 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 66 | ARG | CG-CD-NE | 6.24 | 124.90 | 111.80 |
| 1 | N | 425 | ASN | C-N-CA | 6.24 | 137.30 | 121.70 |
| 1 | C | 180 | ALA | C-N-CA | 6.24 | 137.30 | 121.70 |
| 1 | C | 324 | ARG | NE-CZ-NH2 | -6.24 | 117.18 | 120.30 |
| 1 | E | 72 | HIS | N-CA-CB | 6.24 | 121.83 | 110.60 |
| 1 | G | 45 | ASP | CA-CB-CG | -6.24 | 99.68 | 113.40 |
| 1 | H | 263 | PHE | CZ-CE2-CD2 | -6.24 | 112.61 | 120.10 |
| 1 | K | 442 | ALA | CB-CA-C | -6.24 | 100.74 | 110.10 |
| 1 | L | 465 | GLY | CA-C-O | -6.24 | 109.37 | 120.60 |
| 1 | K | 24 | ASN | OD1-CG-ND2 | 6.24 | 136.24 | 121.90 |
| 1 | N | 495 | ALA | C-N-CA | 6.24 | 137.29 | 121.70 |
| 1 | B | 138 | ILE | CA-C-N | -6.24 | 103.48 | 117.20 |
| 1 | F | 293 | GLU | CA-CB-CG | 6.24 | 127.12 | 113.40 |
| 1 | F | 302 | ASN | CB-CA-C | 6.24 | 122.87 | 110.40 |
| 1 | K | 380 | SER | N-CA-CB | 6.24 | 119.85 | 110.50 |
| 1 | D | 356 | GLU | CA-C-O | -6.23 | 107.01 | 120.10 |
| 1 | N | 22 | ARG | O-C-N | -6.23 | 112.73 | 122.70 |
| 1 | A | 56 | VAL | CA-CB-CG1 | 6.23 | 120.25 | 110.90 |
| 1 | F | 142 | VAL | CG1-CB-CG2 | 6.23 | 120.87 | 110.90 |
| 1 | H | 109 | GLU | CG-CD-OE1 | 6.23 | 130.77 | 118.30 |
| 1 | H | 422 | LEU | CB-CG-CD1 | 6.23 | 121.60 | 111.00 |
| 1 | F | 418 | ILE | N-CA-CB | 6.23 | 125.13 | 110.80 |
| 1 | G | 144 | ALA | N-CA-C | 6.23 | 127.82 | 111.00 |
| 1 | J | 377 | ARG | CA-CB-CG | 6.23 | 127.11 | 113.40 |
| 1 | M | 291 | ASP | N-CA-C | 6.23 | 127.82 | 111.00 |
| 1 | O | 91 | ASP | OD1-CG-OD2 | -6.23 | 111.46 | 123.30 |
| 1 | O | 92 | GLY | O-C-N | -6.23 | 112.73 | 122.70 |
| 1 | N | 203 | ILE | O-C-N | -6.23 | 112.73 | 122.70 |
| 1 | J | 27 | ALA | CB-CA-C | 6.23 | 119.44 | 110.10 |
| 1 | K | 11 | ASN | CA-CB-CG | 6.23 | 127.10 | 113.40 |
| 1 | K | 479 | SER | O-C-N | 6.23 | 132.66 | 122.70 |
| 1 | L | 54 | ASP | CA-CB-CG | 6.23 | 127.10 | 113.40 |
| 1 | M | 275 | TYR | CD1-CE1-CZ | -6.23 | 114.19 | 119.80 |
| 1 | O | 327 | SER | O-C-N | 6.23 | 133.79 | 123.20 |
| 1 | I | 451 | LEU | N-CA-CB | 6.23 | 122.85 | 110.40 |
| 1 | K | 204 | ASP | CA-CB-CG | 6.23 | 127.10 | 113.40 |
| 1 | B | 150 | LEU | CB-CG-CD1 | 6.22 | 121.58 | 111.00 |
| 1 | E | 136 | LYS | CD-CE-NZ | 6.22 | 126.02 | 111.70 |
| 1 | H | 474 | THR | O-C-N | -6.22 | 112.74 | 122.70 |
| 1 | I | 192 | LEU | N-CA-CB | 6.22 | 122.85 | 110.40 |
| 1 | A | 396 | TYR | CD1-CE1-CZ | 6.22 | 125.40 | 119.80 |
| 1 | B | 305 | THR | O-C-N | -6.22 | 112.74 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 254 | ILE | CA-C-O | -6.22 | 107.03 | 120.10 |
| 1 | I | 64 | ILE | CA-CB-CG1 | 6.22 | 122.82 | 111.00 |
| 1 | J | 138 | ILE | CB-CA-C | -6.22 | 99.16 | 111.60 |
| 1 | K | 268 | ILE | CG1-CB-CG2 | -6.22 | 97.71 | 111.40 |
| 1 | K | 342 | ALA | O-C-N | -6.22 | 112.75 | 122.70 |
| 1 | L | 84 | THR | N-CA-CB | 6.22 | 122.12 | 110.30 |
| 1 | E | 169 | LYS | CD-CE-NZ | 6.22 | 126.01 | 111.70 |
| 1 | B | 97 | VAL | CA-CB-CG2 | -6.22 | 101.57 | 110.90 |
| 1 | B | 330 | SER | O-C-N | -6.22 | 112.75 | 122.70 |
| 1 | C | 183 | ASP | OD1-CG-OD2 | -6.22 | 111.48 | 123.30 |
| 1 | H | 14 | ARG | CA-CB-CG | 6.22 | 127.08 | 113.40 |
| 1 | H | 209 | ILE | O-C-N | -6.22 | 112.75 | 122.70 |
| 1 | J | 369 | VAL | CA-CB-CG1 | 6.22 | 120.23 | 110.90 |
| 1 | L | 471 | ARG | CD-NE-CZ | -6.22 | 114.89 | 123.60 |
| 1 | A | 403 | ARG | N-CA-CB | 6.22 | 121.79 | 110.60 |
| 1 | G | 477 | ILE | CA-CB-CG1 | 6.22 | 122.81 | 111.00 |
| 1 | H | 349 | GLY | O-C-N | 6.22 | 132.65 | 122.70 |
| 1 | L | 285 | ARG | CA-CB-CG | 6.22 | 127.08 | 113.40 |
| 1 | P | 35 | VAL | CA-CB-CG2 | 6.22 | 120.22 | 110.90 |
| 1 | P | 357 | GLU | CA-C-O | 6.22 | 133.15 | 120.10 |
| 1 | E | 255 | LYS | CD-CE-NZ | 6.21 | 125.99 | 111.70 |
| 1 | J | 304 | ILE | C-N-CA | 6.21 | 137.24 | 121.70 |
| 1 | K | 41 | PRO | C-N-CA | 6.21 | 137.24 | 121.70 |
| 1 | N | 12 | MET | CG-SD-CE | 6.21 | 110.14 | 100.20 |
| 1 | O | 68 | MET | CG-SD-CE | 6.21 | 110.14 | 100.20 |
| 1 | B | 15 | TYR | C-N-CA | 6.21 | 137.23 | 121.70 |
| 1 | P | 305 | THR | O-C-N | -6.21 | 112.76 | 122.70 |
| 1 | C | 203 | ILE | C-N-CA | 6.21 | 137.23 | 121.70 |
| 1 | D | 260 | ASN | N-CA-C | 6.21 | 127.77 | 111.00 |
| 1 | D | 406 | LEU | CB-CG-CD1 | 6.21 | 121.56 | 111.00 |
| 1 | E | 266 | LYS | O-C-N | -6.21 | 112.64 | 123.20 |
| 1 | M | 403 | ARG | NE-CZ-NH1 | 6.21 | 123.41 | 120.30 |
| 1 | A | 33 | GLU | OE1-CD-OE2 | -6.21 | 115.85 | 123.30 |
| 1 | K | 455 | THR | N-CA-CB | 6.21 | 122.10 | 110.30 |
| 1 | P | 305 | THR | OG1-CB-CG2 | 6.21 | 124.28 | 110.00 |
| 1 | C | 247 | LEU | CB-CA-C | 6.21 | 122.00 | 110.20 |
| 1 | D | 398 | GLU | CB-CA-C | 6.21 | 122.82 | 110.40 |
| 1 | G | 99 | VAL | N-CA-CB | 6.21 | 125.16 | 111.50 |
| 1 | G | 275 | TYR | CE1-CZ-CE2 | 6.21 | 129.73 | 119.80 |
| 1 | H | 84 | THR | N-CA-CB | 6.21 | 122.09 | 110.30 |
| 1 | N | 15 | TYR | CB-CG-CD2 | -6.21 | 117.28 | 121.00 |
| 1 | O | 12 | MET | N-CA-CB | -6.21 | 99.43 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 39 | LEU | CB-CA-C | 6.21 | 121.99 | 110.20 |
| 1 | E | 245 | GLU | CB-CA-C | 6.21 | 122.81 | 110.40 |
| 1 | G | 393 | LEU | CB-CA-C | 6.21 | 121.99 | 110.20 |
| 1 | I | 214 | VAL | C-N-CA | -6.21 | 106.19 | 121.70 |
| 1 | P | 103 | LEU | CA-CB-CG | 6.21 | 129.57 | 115.30 |
| 1 | A | 249 | ASP | CB-CG-OD1 | 6.21 | 123.89 | 118.30 |
| 1 | O | 152 | LYS | O-C-N | -6.21 | 112.77 | 122.70 |
| 1 | F | 314 | ASP | CB-CG-OD1 | 6.20 | 123.88 | 118.30 |
| 1 | O | 154 | ALA | C-N-CA | 6.20 | 137.21 | 121.70 |
| 1 | E | 363 | ASP | C-N-CA | 6.20 | 137.21 | 121.70 |
| 1 | L | 121 | VAL | CG1-CB-CG2 | 6.20 | 120.82 | 110.90 |
| 1 | O | 156 | THR | CA-CB-OG1 | 6.20 | 122.03 | 109.00 |
| 1 | P | 285 | ARG | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | E | 145 | GLN | CG-CD-OE1 | -6.20 | 109.20 | 121.60 |
| 1 | F | 174 | ILE | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | G | 177 | ALA | CB-CA-C | 6.20 | 119.40 | 110.10 |
| 1 | G | 430 | ALA | CA-C-N | 6.20 | 130.84 | 117.20 |
| 1 | J | 24 | ASN | C-N-CA | 6.20 | 137.20 | 121.70 |
| 1 | J | 404 | GLU | CA-CB-CG | 6.20 | 127.04 | 113.40 |
| 1 | K | 36 | ARG | NE-CZ-NH2 | -6.20 | 117.20 | 120.30 |
| 1 | N | 425 | ASN | N-CA-CB | 6.20 | 121.76 | 110.60 |
| 1 | O | 312 | ALA | CB-CA-C | -6.20 | 100.80 | 110.10 |
| 1 | P | 85 | GLN | CB-CG-CD | 6.20 | 127.72 | 111.60 |
| 1 | L | 403 | ARG | N-CA-CB | 6.20 | 121.76 | 110.60 |
| 1 | O | 87 | LYS | O-C-N | 6.20 | 132.62 | 122.70 |
| 1 | A | 261 | VAL | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | F | 252 | ALA | CA-C-O | -6.20 | 107.09 | 120.10 |
| 1 | I | 106 | LYS | CA-C-O | 6.20 | 133.11 | 120.10 |
| 1 | M | 247 | LEU | O-C-N | -6.20 | 112.78 | 122.70 |
| 1 | H | 447 | LYS | O-C-N | -6.20 | 112.79 | 122.70 |
| 1 | M | 124 | TYR | CZ-CE2-CD2 | 6.20 | 125.38 | 119.80 |
| 1 | M | 457 | ALA | CA-C-O | -6.20 | 107.09 | 120.10 |
| 1 | O | 31 | ILE | CA-C-O | 6.20 | 133.11 | 120.10 |
| 1 | P | 371 | CYS | N-CA-CB | 6.20 | 121.75 | 110.60 |
| 1 | P | 404 | GLU | N-CA-CB | 6.20 | 121.75 | 110.60 |
| 1 | A | 444 | ASN | N-CA-CB | 6.19 | 121.75 | 110.60 |
| 1 | B | 240 | GLU | OE1-CD-OE2 | -6.19 | 115.87 | 123.30 |
| 1 | D | 9 | PRO | C-N-CA | 6.19 | 137.19 | 121.70 |
| 1 | M | 229 | ASP | OD1-CG-OD2 | -6.19 | 111.53 | 123.30 |
| 1 | N | 119 | ILE | CA-CB-CG1 | 6.19 | 122.77 | 111.00 |
| 1 | P | 112 | ASP | CB-CA-C | 6.19 | 122.79 | 110.40 |
| 1 | G | 338 | LYS | C-N-CA | 6.19 | 137.18 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 181 | VAL | O-C-N | 6.19 | 132.61 | 122.70 |
| 1 | L | 496 | ALA | CB-CA-C | 6.19 | 119.39 | 110.10 |
| 1 | A | 65 | LEU | CD1-CG-CD2 | 6.19 | 129.07 | 110.50 |
| 1 | C | 52 | LEU | O-C-N | -6.19 | 112.68 | 123.20 |
| 1 | K | 69 | SER | CA-C-O | -6.19 | 107.10 | 120.10 |
| 1 | N | 118 | THR | CA-CB-CG2 | 6.19 | 121.07 | 112.40 |
| 1 | A | 189 | ASP | N-CA-CB | -6.19 | 99.46 | 110.60 |
| 1 | B | 468 | GLU | OE1-CD-OE2 | -6.19 | 115.87 | 123.30 |
| 1 | O | 105 | ARG | NH1-CZ-NH2 | 6.19 | 126.21 | 119.40 |
| 1 | D | 347 | ILE | CA-CB-CG1 | 6.19 | 122.76 | 111.00 |
| 1 | L | 202 | SER | O-C-N | -6.19 | 112.80 | 122.70 |
| 1 | M | 278 | LYS | CB-CA-C | 6.19 | 122.78 | 110.40 |
| 1 | E | 318 | ALA | CB-CA-C | -6.19 | 100.82 | 110.10 |
| 1 | F | 316 | GLY | O-C-N | -6.19 | 112.80 | 122.70 |
| 1 | L | 69 | SER | CA-C-N | 6.19 | 130.81 | 117.20 |
| 1 | L | 257 | SER | N-CA-CB | 6.19 | 119.78 | 110.50 |
| 1 | A | 412 | ALA | CB-CA-C | -6.18 | 100.82 | 110.10 |
| 1 | D | 325 | LYS | N-CA-CB | 6.18 | 121.73 | 110.60 |
| 1 | E | 414 | ALA | CB-CA-C | 6.18 | 119.38 | 110.10 |
| 1 | F | 309 | ASP | OD1-CG-OD2 | 6.18 | 135.05 | 123.30 |
| 1 | K | 466 | VAL | CG1-CB-CG2 | -6.18 | 101.01 | 110.90 |
| 1 | N | 7 | VAL | CA-C-N | -6.18 | 103.59 | 117.20 |
| 1 | D | 215 | ASP | CB-CA-C | 6.18 | 122.77 | 110.40 |
| 1 | D | 259 | ALA | CB-CA-C | -6.18 | 100.83 | 110.10 |
| 1 | E | 314 | ASP | CB-CG-OD2 | 6.18 | 123.86 | 118.30 |
| 1 | G | 12 | MET | CB-CG-SD | 6.18 | 130.95 | 112.40 |
| 1 | J | 141 | GLU | N-CA-CB | 6.18 | 121.73 | 110.60 |
| 1 | L | 456 | GLY | CA-C-N | -6.18 | 103.60 | 117.20 |
| 1 | O | 188 | VAL | N-CA-C | 6.18 | 127.69 | 111.00 |
| 1 | A | 157 | SER | CB-CA-C | 6.18 | 121.84 | 110.10 |
| 1 | B | 275 | TYR | CB-CG-CD2 | 6.18 | 124.71 | 121.00 |
| 1 | G | 372 | THR | CA-CB-OG1 | 6.18 | 121.98 | 109.00 |
| 1 | H | 39 | LEU | CA-CB-CG | 6.18 | 129.51 | 115.30 |
| 1 | J | 114 | ASN | O-C-N | 6.18 | 132.59 | 122.70 |
| 1 | O | 202 | SER | N-CA-CB | 6.18 | 119.77 | 110.50 |
| 1 | D | 141 | GLU | CG-CD-OE2 | 6.18 | 130.65 | 118.30 |
| 1 | I | 118 | THR | CA-CB-OG1 | 6.18 | 121.97 | 109.00 |
| 1 | I | 441 | HIS | O-C-N | -6.18 | 112.82 | 122.70 |
| 1 | J | 237 | CYS | CA-CB-SG | 6.18 | 125.12 | 114.00 |
| 1 | J | 367 | GLY | O-C-N | -6.18 | 112.82 | 122.70 |
| 1 | A | 256 | ALA | N-CA-CB | 6.17 | 118.74 | 110.10 |
| 1 | B | 184 | ASP | CB-CG-OD2 | -6.17 | 112.74 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 479 | SER | CA-CB-OG | 6.17 | 127.87 | 111.20 |
| 1 | K | 214 | VAL | CG1-CB-CG2 | 6.17 | 120.78 | 110.90 |
| 1 | K | 292 | MET | O-C-N | -6.17 | 112.82 | 122.70 |
| 1 | L | 136 | LYS | CA-CB-CG | 6.17 | 126.98 | 113.40 |
| 1 | O | 278 | LYS | O-C-N | -6.17 | 112.82 | 122.70 |
| 1 | O | 425 | ASN | CB-CG-OD1 | 6.17 | 133.95 | 121.60 |
| 1 | B | 7 | VAL | C-N-CA | 6.17 | 137.13 | 121.70 |
| 1 | L | 144 | ALA | CB-CA-C | 6.17 | 119.36 | 110.10 |
| 1 | D | 86 | GLU | N-CA-CB | 6.17 | 121.71 | 110.60 |
| 1 | E | 313 | GLN | O-C-N | -6.17 | 112.82 | 122.70 |
| 1 | F | 187 | LYS | CB-CA-C | 6.17 | 122.75 | 110.40 |
| 1 | J | 72 | HIS | CA-C-O | -6.17 | 107.14 | 120.10 |
| 1 | C | 214 | VAL | CA-CB-CG1 | 6.17 | 120.16 | 110.90 |
| 1 | E | 404 | GLU | N-CA-CB | 6.17 | 121.71 | 110.60 |
| 1 | I | 55 | VAL | CA-CB-CG2 | -6.17 | 101.64 | 110.90 |
| 1 | J | 176 | GLU | CG-CD-OE2 | 6.17 | 130.64 | 118.30 |
| 1 | K | 336 | GLU | N-CA-CB | 6.17 | 121.71 | 110.60 |
| 1 | O | 390 | SER | O-C-N | 6.17 | 132.57 | 122.70 |
| 1 | A | 117 | PRO | CA-N-CD | -6.17 | 102.86 | 111.50 |
| 1 | C | 477 | ILE | CA-CB-CG1 | 6.17 | 122.72 | 111.00 |
| 1 | G | 145 | GLN | O-C-N | -6.17 | 112.83 | 122.70 |
| 1 | N | 370 | GLY | C-N-CA | 6.17 | 137.12 | 121.70 |
| 1 | C | 108 | GLU | CA-C-N | -6.17 | 103.63 | 117.20 |
| 1 | H | 210 | LYS | O-C-N | -6.17 | 112.72 | 123.20 |
| 1 | L | 497 | GLU | CG-CD-OE1 | -6.17 | 105.97 | 118.30 |
| 1 | F | 247 | LEU | O-C-N | -6.17 | 112.84 | 122.70 |
| 1 | G | 19 | ASP | CB-CG-OD1 | 6.16 | 123.85 | 118.30 |
| 1 | I | 113 | GLN | O-C-N | -6.16 | 112.84 | 122.70 |
| 1 | I | 254 | ILE | O-C-N | -6.16 | 112.84 | 122.70 |
| 1 | J | 304 | ILE | CB-CG1-CD1 | 6.16 | 131.16 | 113.90 |
| 1 | M | 253 | GLU | CA-CB-CG | 6.16 | 126.96 | 113.40 |
| 1 | A | 298 | ALA | N-CA-CB | 6.16 | 118.73 | 110.10 |
| 1 | C | 438 | ARG | NH1-CZ-NH2 | -6.16 | 112.62 | 119.40 |
| 1 | A | 320 | LEU | O-C-N | 6.16 | 132.56 | 122.70 |
| 1 | A | 401 | SER | N-CA-CB | 6.16 | 119.74 | 110.50 |
| 1 | B | 108 | GLU | O-C-N | 6.16 | 132.56 | 122.70 |
| 1 | H | 225 | LYS | N-CA-CB | 6.16 | 121.69 | 110.60 |
| 1 | J | 283 | ALA | N-CA-CB | 6.16 | 118.72 | 110.10 |
| 1 | L | 210 | LYS | CA-CB-CG | 6.16 | 126.95 | 113.40 |
| 1 | N | 124 | TYR | CG-CD1-CE1 | 6.16 | 126.23 | 121.30 |
| 1 | C | 111 | LEU | CB-CA-C | 6.16 | 121.90 | 110.20 |
| 1 | I | 23 | MET | CG-SD-CE | 6.16 | 110.05 | 100.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 357 | GLU | CG-CD-OE1 | 6.16 | 130.62 | 118.30 |
| 1 | J | 83 | LYS | O-C-N | 6.16 | 132.55 | 122.70 |
| 1 | J | 469 | PRO | O-C-N | 6.16 | 132.55 | 122.70 |
| 1 | O | 341 | LYS | CA-CB-CG | 6.16 | 126.95 | 113.40 |
| 1 | A | 72 | HIS | CG-CD2-NE2 | -6.16 | 97.50 | 109.20 |
| 1 | C | 102 | GLU | C-N-CA | 6.16 | 137.09 | 121.70 |
| 1 | C | 229 | ASP | OD1-CG-OD2 | -6.16 | 111.60 | 123.30 |
| 1 | F | 148 | GLU | CG-CD-OE1 | -6.16 | 105.99 | 118.30 |
| 1 | I | 237 | CYS | O-C-N | -6.16 | 112.85 | 122.70 |
| 1 | J | 111 | LEU | N-CA-CB | 6.16 | 122.71 | 110.40 |
| 1 | L | 244 | SER | CB-CA-C | 6.16 | 121.80 | 110.10 |
| 1 | L | 495 | ALA | N-CA-C | 6.16 | 127.62 | 111.00 |
| 1 | E | 45 | ASP | CA-C-O | -6.16 | 107.17 | 120.10 |
| 1 | E | 159 | THR | CA-CB-OG1 | 6.16 | 121.92 | 109.00 |
| 1 | G | 189 | ASP | CA-C-N | -6.16 | 103.66 | 117.20 |
| 1 | H | 11 | ASN | C-N-CA | 6.16 | 137.09 | 121.70 |
| 1 | O | 197 | LYS | N-CA-CB | 6.16 | 121.68 | 110.60 |
| 1 | E | 41 | PRO | C-N-CA | 6.15 | 137.09 | 121.70 |
| 1 | F | 166 | ALA | N-CA-CB | -6.15 | 101.48 | 110.10 |
| 1 | E | 114 | ASN | O-C-N | 6.15 | 132.54 | 122.70 |
| 1 | F | 469 | PRO | C-N-CA | -6.15 | 106.32 | 121.70 |
| 1 | G | 365 | ALA | N-CA-CB | 6.15 | 118.71 | 110.10 |
| 1 | J | 137 | THR | CA-CB-OG1 | 6.15 | 121.92 | 109.00 |
| 1 | N | 228 | THR | O-C-N | -6.15 | 112.86 | 122.70 |
| 1 | O | 50 | ASP | CB-CG-OD2 | -6.15 | 112.76 | 118.30 |
| 1 | O | 462 | CYS | O-C-N | -6.15 | 112.86 | 122.70 |
| 1 | B | 44 | MET | CG-SD-CE | 6.15 | 110.04 | 100.20 |
| 1 | E | 254 | ILE | CA-CB-CG2 | 6.15 | 123.20 | 110.90 |
| 1 | E | 307 | ILE | CA-CB-CG2 | 6.15 | 123.20 | 110.90 |
| 1 | F | 313 | GLN | O-C-N | -6.15 | 112.86 | 122.70 |
| 1 | J | 417 | VAL | CG1-CB-CG2 | 6.15 | 120.74 | 110.90 |
| 1 | N | 284 | ALA | N-CA-CB | -6.15 | 101.49 | 110.10 |
| 1 | N | 442 | ALA | O-C-N | 6.15 | 132.54 | 122.70 |
| 1 | O | 375 | ASP | N-CA-CB | 6.15 | 121.67 | 110.60 |
| 1 | B | 362 | VAL | CG1-CB-CG2 | -6.15 | 101.06 | 110.90 |
| 1 | L | 304 | ILE | C-N-CA | 6.15 | 137.07 | 121.70 |
| 1 | F | 76 | LYS | CD-CE-NZ | 6.15 | 125.84 | 111.70 |
| 1 | L | 27 | ALA | N-CA-CB | 6.15 | 118.71 | 110.10 |
| 1 | M | 169 | LYS | O-C-N | -6.15 | 112.86 | 122.70 |
| 1 | M | 188 | VAL | CG1-CB-CG2 | 6.15 | 120.74 | 110.90 |
| 1 | B | 385 | THR | C-N-CA | 6.15 | 137.06 | 121.70 |
| 1 | B | 341 | LYS | CB-CG-CD | 6.14 | 127.58 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 476 | ALA | O-C-N | 6.14 | 132.53 | 122.70 |
| 1 | J | 190 | LYS | CD-CE-NZ | 6.14 | 125.83 | 111.70 |
| 1 | P | 21 | GLN | OE1-CD-NE2 | 6.14 | 136.03 | 121.90 |
| 1 | E | 137 | THR | CA-C-N | -6.14 | 103.69 | 117.20 |
| 1 | F | 218 | ARG | O-C-N | -6.14 | 112.87 | 122.70 |
| 1 | G | 194 | LYS | N-CA-CB | 6.14 | 121.66 | 110.60 |
| 1 | G | 198 | LYS | C-N-CA | 6.14 | 137.06 | 121.70 |
| 1 | M | 191 | ASP | CB-CG-OD2 | 6.14 | 123.83 | 118.30 |
| 1 | P | 91 | ASP | CA-CB-CG | 6.14 | 126.91 | 113.40 |
| 1 | D | 214 | VAL | CG1-CB-CG2 | 6.14 | 120.72 | 110.90 |
| 1 | E | 190 | LYS | N-CA-C | 6.14 | 127.58 | 111.00 |
| 1 | G | 15 | TYR | N-CA-CB | 6.14 | 121.66 | 110.60 |
| 1 | J | 362 | VAL | CA-CB-CG2 | 6.14 | 120.11 | 110.90 |
| 1 | O | 131 | ALA | CB-CA-C | 6.14 | 119.31 | 110.10 |
| 1 | O | 432 | GLU | N-CA-CB | 6.14 | 121.65 | 110.60 |
| 1 | E | 319 | GLY | CA-C-O | -6.14 | 109.55 | 120.60 |
| 1 | L | 88 | GLU | C-N-CA | 6.14 | 137.05 | 121.70 |
| 1 | L | 452 | ASN | O-C-N | 6.14 | 132.53 | 122.70 |
| 1 | P | 357 | GLU | CB-CA-C | 6.14 | 122.68 | 110.40 |
| 1 | C | 185 | GLU | CG-CD-OE2 | 6.14 | 130.58 | 118.30 |
| 1 | C | 375 | ASP | CA-C-O | 6.14 | 132.99 | 120.10 |
| 1 | I | 32 | ALA | CA-C-O | 6.14 | 132.99 | 120.10 |
| 1 | O | 203 | ILE | O-C-N | -6.14 | 112.88 | 122.70 |
| 1 | A | 70 | VAL | CA-CB-CG2 | -6.14 | 101.69 | 110.90 |
| 1 | C | 50 | ASP | CB-CG-OD1 | -6.14 | 112.78 | 118.30 |
| 1 | C | 416 | GLU | O-C-N | -6.14 | 112.88 | 122.70 |
| 1 | E | 76 | LYS | O-C-N | 6.14 | 132.52 | 122.70 |
| 1 | F | 52 | LEU | CB-CG-CD2 | -6.14 | 100.57 | 111.00 |
| 1 | I | 376 | GLY | C-N-CA | 6.14 | 137.04 | 121.70 |
| 1 | C | 198 | LYS | CD-CE-NZ | 6.13 | 125.81 | 111.70 |
| 1 | H | 215 | ASP | CB-CG-OD1 | 6.13 | 123.82 | 118.30 |
| 1 | H | 217 | GLU | CA-C-O | -6.13 | 107.22 | 120.10 |
| 1 | K | 184 | ASP | CA-CB-CG | 6.13 | 126.90 | 113.40 |
| 1 | L | 220 | SER | N-CA-CB | 6.13 | 119.70 | 110.50 |
| 1 | N | 20 | ALA | CA-C-O | -6.13 | 107.22 | 120.10 |
| 1 | P | 65 | LEU | CB-CA-C | 6.13 | 121.86 | 110.20 |
| 1 | B | 240 | GLU | CA-CB-CG | 6.13 | 126.89 | 113.40 |
| 1 | D | 181 | VAL | CA-C-N | -6.13 | 103.71 | 117.20 |
| 1 | O | 208 | LEU | CA-CB-CG | 6.13 | 129.41 | 115.30 |
| 1 | F | 222 | GLN | CG-CD-OE1 | 6.13 | 133.86 | 121.60 |
| 1 | M | 64 | ILE | O-C-N | -6.13 | 112.89 | 122.70 |
| 1 | O | 363 | ASP | OD1-CG-OD2 | -6.13 | 111.65 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 374 | GLU | OE1-CD-OE2 | -6.13 | 115.94 | 123.30 |
| 1 | O | 412 | ALA | CB-CA-C | -6.13 | 100.90 | 110.10 |
| 1 | B | 278 | LYS | C-N-CA | 6.13 | 137.02 | 121.70 |
| 1 | C | 183 | ASP | CB-CG-OD2 | 6.13 | 123.81 | 118.30 |
| 1 | D | 175 | VAL | CA-CB-CG1 | 6.13 | 120.09 | 110.90 |
| 1 | D | 242 | THR | C-N-CA | 6.13 | 137.02 | 121.70 |
| 1 | E | 187 | LYS | CG-CD-CE | 6.13 | 130.28 | 111.90 |
| 1 | E | 354 | VAL | CA-CB-CG2 | -6.13 | 101.71 | 110.90 |
| 1 | O | 370 | GLY | N-CA-C | 6.13 | 128.42 | 113.10 |
| 1 | C | 89 | VAL | N-CA-C | 6.13 | 127.54 | 111.00 |
| 1 | D | 8 | LEU | CB-CG-CD2 | -6.13 | 100.58 | 111.00 |
| 1 | E | 176 | GLU | OE1-CD-OE2 | 6.13 | 130.65 | 123.30 |
| 1 | E | 243 | ALA | O-C-N | -6.13 | 112.90 | 122.70 |
| 1 | I | 45 | ASP | O-C-N | 6.13 | 132.50 | 122.70 |
| 1 | I | 477 | ILE | CA-CB-CG1 | 6.13 | 122.64 | 111.00 |
| 1 | O | 54 | ASP | CB-CG-OD1 | 6.13 | 123.81 | 118.30 |
| 1 | D | 450 | GLY | O-C-N | -6.12 | 112.90 | 122.70 |
| 1 | L | 283 | ALA | O-C-N | -6.12 | 112.90 | 122.70 |
| 1 | L | 352 | GLU | OE1-CD-OE2 | -6.12 | 115.95 | 123.30 |
| 1 | L | 393 | LEU | C-N-CA | 6.12 | 137.01 | 121.70 |
| 1 | O | 245 | GLU | CG-CD-OE1 | 6.12 | 130.55 | 118.30 |
| 1 | B | 354 | VAL | CB-CA-C | 6.12 | 123.03 | 111.40 |
| 1 | K | 235 | LEU | CB-CA-C | -6.12 | 98.56 | 110.20 |
| 1 | K | 279 | GLU | N-CA-CB | 6.12 | 121.62 | 110.60 |
| 1 | L | 377 | ARG | NE-CZ-NH2 | -6.12 | 117.24 | 120.30 |
| 1 | M | 416 | GLU | CG-CD-OE1 | 6.12 | 130.55 | 118.30 |
| 1 | P | 494 | ILE | CB-CA-C | -6.12 | 99.35 | 111.60 |
| 1 | A | 363 | ASP | OD1-CG-OD2 | -6.12 | 111.67 | 123.30 |
| 1 | C | 304 | ILE | CA-CB-CG2 | 6.12 | 123.14 | 110.90 |
| 1 | J | 378 | ILE | O-C-N | -6.12 | 112.91 | 122.70 |
| 1 | N | 256 | ALA | CB-CA-C | 6.12 | 119.28 | 110.10 |
| 1 | N | 279 | GLU | OE1-CD-OE2 | 6.12 | 130.65 | 123.30 |
| 1 | P | 49 | VAL | CA-C-O | -6.12 | 107.25 | 120.10 |
| 1 | P | 129 | GLN | OE1-CD-NE2 | -6.12 | 107.82 | 121.90 |
| 1 | A | 42 | LYS | CA-C-O | -6.12 | 107.25 | 120.10 |
| 1 | B | 210 | LYS | N-CA-CB | 6.12 | 121.61 | 110.60 |
| 1 | E | 471 | ARG | N-CA-CB | 6.12 | 121.62 | 110.60 |
| 1 | F | 405 | GLN | O-C-N | 6.12 | 132.49 | 122.70 |
| 1 | J | 469 | PRO | CA-C-O | -6.12 | 105.51 | 120.20 |
| 1 | M | 46 | LYS | C-N-CA | -6.12 | 106.40 | 121.70 |
| 1 | B | 64 | ILE | O-C-N | -6.12 | 112.91 | 122.70 |
| 1 | J | 195 | ILE | O-C-N | 6.12 | 132.49 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 330 | SER | N-CA-CB | 6.12 | 119.68 | 110.50 |
| 1 | K | 475 | GLN | CG-CD-NE2 | -6.12 | 102.01 | 116.70 |
| 1 | N | 356 | GLU | OE1-CD-OE2 | -6.12 | 115.96 | 123.30 |
| 1 | O | 421 | THR | O-C-N | -6.12 | 112.91 | 122.70 |
| 1 | P | 352 | GLU | OE1-CD-OE2 | 6.12 | 130.64 | 123.30 |
| 1 | P | 376 | GLY | C-N-CA | 6.12 | 137.00 | 121.70 |
| 1 | B | 89 | VAL | N-CA-C | 6.12 | 127.52 | 111.00 |
| 1 | B | 245 | GLU | CA-CB-CG | 6.12 | 126.86 | 113.40 |
| 1 | D | 86 | GLU | OE1-CD-OE2 | -6.12 | 115.96 | 123.30 |
| 1 | E | 97 | VAL | CA-CB-CG1 | -6.12 | 101.72 | 110.90 |
| 1 | F | 157 | SER | N-CA-CB | 6.12 | 119.68 | 110.50 |
| 1 | G | 91 | ASP | N-CA-CB | 6.12 | 121.61 | 110.60 |
| 1 | H | 476 | ALA | C-N-CA | 6.12 | 136.99 | 121.70 |
| 1 | C | 113 | GLN | CA-C-O | 6.12 | 132.94 | 120.10 |
| 1 | E | 419 | PRO | N-CA-CB | 6.12 | 110.64 | 103.30 |
| 1 | F | 72 | HIS | CA-C-O | -6.12 | 107.26 | 120.10 |
| 1 | F | 263 | PHE | O-C-N | -6.12 | 112.92 | 122.70 |
| 1 | G | 133 | GLU | CA-CB-CG | 6.12 | 126.86 | 113.40 |
| 1 | N | 42 | LYS | O-C-N | -6.12 | 112.80 | 123.20 |
| 1 | P | 471 | ARG | N-CA-CB | 6.12 | 121.61 | 110.60 |
| 1 | A | 44 | MET | CB-CA-C | -6.11 | 98.17 | 110.40 |
| 1 | A | 195 | ILE | CG1-CB-CG2 | -6.11 | 97.95 | 111.40 |
| 1 | D | 396 | TYR | CD1-CG-CD2 | 6.11 | 124.63 | 117.90 |
| 1 | F | 323 | GLU | CG-CD-OE1 | 6.11 | 130.53 | 118.30 |
| 1 | G | 7 | VAL | CG1-CB-CG2 | -6.11 | 101.12 | 110.90 |
| 1 | J | 18 | ARG | CD-NE-CZ | -6.11 | 115.04 | 123.60 |
| 1 | J | 489 | ARG | O-C-N | 6.11 | 132.48 | 122.70 |
| 1 | L | 48 | LEU | O-C-N | 6.11 | 132.48 | 122.70 |
| 1 | L | 154 | ALA | CB-CA-C | 6.11 | 119.27 | 110.10 |
| 1 | M | 104 | LEU | O-C-N | -6.11 | 112.92 | 122.70 |
| 1 | N | 344 | THR | O-C-N | -6.11 | 112.92 | 122.70 |
| 1 | B | 314 | ASP | CB-CG-OD2 | -6.11 | 112.80 | 118.30 |
| 1 | F | 48 | LEU | CB-CG-CD1 | -6.11 | 100.61 | 111.00 |
| 1 | J | 341 | LYS | O-C-N | -6.11 | 112.92 | 122.70 |
| 1 | K | 415 | LEU | N-CA-CB | 6.11 | 122.62 | 110.40 |
| 1 | N | 169 | LYS | CB-CA-C | 6.11 | 122.62 | 110.40 |
| 1 | O | 152 | LYS | CD-CE-NZ | 6.11 | 125.75 | 111.70 |
| 1 | O | 217 | GLU | N-CA-C | -6.11 | 94.50 | 111.00 |
| 1 | C | 222 | GLN | CB-CA-C | 6.11 | 122.62 | 110.40 |
| 1 | F | 406 | LEU | O-C-N | -6.11 | 112.92 | 122.70 |
| 1 | H | 305 | THR | O-C-N | -6.11 | 112.92 | 122.70 |
| 1 | F | 257 | SER | O-C-N | -6.11 | 112.82 | 123.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 70 | VAL | CB-CA-C | -6.11 | 99.80 | 111.40 |
| 1 | K | 140 | CYS | C-N-CA | 6.11 | 136.97 | 121.70 |
| 1 | M | 306 | ASN | CB-CA-C | 6.11 | 122.62 | 110.40 |
| 1 | M | 359 | ALA | CB-CA-C | 6.11 | 119.26 | 110.10 |
| 1 | N | 286 | ARG | CD-NE-CZ | -6.11 | 115.05 | 123.60 |
| 1 | O | 173 | ILE | O-C-N | -6.11 | 112.93 | 122.70 |
| 1 | C | 270 | ASP | O-C-N | -6.11 | 112.93 | 122.70 |
| 1 | I | 480 | ALA | CB-CA-C | -6.11 | 100.94 | 110.10 |
| 1 | J | 315 | LEU | CB-CG-CD1 | 6.11 | 121.38 | 111.00 |
| 1 | M | 154 | ALA | O-C-N | -6.11 | 112.93 | 122.70 |
| 1 | N | 77 | MET | CB-CA-C | -6.11 | 98.19 | 110.40 |
| 1 | O | 455 | THR | CA-C-O | 6.11 | 132.92 | 120.10 |
| 1 | J | 395 | GLU | N-CA-CB | 6.10 | 121.59 | 110.60 |
| 1 | L | 416 | GLU | OE1-CD-OE2 | 6.10 | 130.62 | 123.30 |
| 1 | M | 305 | THR | N-CA-CB | 6.10 | 121.90 | 110.30 |
| 1 | O | 187 | LYS | N-CA-CB | 6.10 | 121.59 | 110.60 |
| 1 | A | 29 | ARG | N-CA-CB | 6.10 | 121.58 | 110.60 |
| 1 | G | 130 | LYS | CA-C-O | 6.10 | 132.91 | 120.10 |
| 1 | G | 441 | HIS | CA-CB-CG | 6.10 | 123.97 | 113.60 |
| 1 | N | 329 | ASP | O-C-N | -6.10 | 112.94 | 122.70 |
| 1 | P | 29 | ARG | NE-CZ-NH1 | -6.10 | 117.25 | 120.30 |
| 1 | C | 454 | PHE | CB-CA-C | -6.10 | 98.20 | 110.40 |
| 1 | E | 116 | HIS | N-CA-CB | 6.10 | 121.58 | 110.60 |
| 1 | E | 148 | GLU | CG-CD-OE2 | 6.10 | 130.50 | 118.30 |
| 1 | E | 368 | VAL | CG1-CB-CG2 | -6.10 | 101.14 | 110.90 |
| 1 | I | 307 | ILE | CA-C-O | -6.10 | 107.29 | 120.10 |
| 1 | I | 317 | ASP | O-C-N | -6.10 | 112.94 | 122.70 |
| 1 | J | 169 | LYS | N-CA-CB | -6.10 | 99.62 | 110.60 |
| 1 | K | 41 | PRO | O-C-N | 6.10 | 132.46 | 122.70 |
| 1 | B | 403 | ARG | CA-C-O | 6.10 | 132.91 | 120.10 |
| 1 | C | 13 | LYS | CA-C-O | -6.10 | 107.29 | 120.10 |
| 1 | C | 251 | VAL | CA-CB-CG2 | 6.10 | 120.05 | 110.90 |
| 1 | C | 271 | LEU | O-C-N | -6.10 | 112.94 | 122.70 |
| 1 | H | 76 | LYS | N-CA-CB | 6.10 | 121.58 | 110.60 |
| 1 | M | 357 | GLU | CG-CD-OE1 | 6.10 | 130.50 | 118.30 |
| 1 | N | 180 | ALA | CB-CA-C | 6.10 | 119.25 | 110.10 |
| 1 | P | 235 | LEU | CA-C-O | -6.10 | 107.29 | 120.10 |
| 1 | A | 117 | PRO | N-CD-CG | 6.10 | 112.35 | 103.20 |
| 1 | B | 136 | LYS | N-CA-C | 6.10 | 127.46 | 111.00 |
| 1 | C | 386 | GLU | CG-CD-OE1 | 6.10 | 130.50 | 118.30 |
| 1 | N | 88 | GLU | OE1-CD-OE2 | -6.10 | 115.98 | 123.30 |
| 1 | N | 401 | SER | CB-CA-C | 6.10 | 121.69 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 480 | ALA | O-C-N | 6.10 | 132.46 | 122.70 |
| 1 | A | 62 | VAL | O-C-N | -6.09 | 112.95 | 122.70 |
| 1 | D | 52 | LEU | CA-CB-CG | 6.09 | 129.32 | 115.30 |
| 1 | E | 384 | SER | C-N-CA | 6.09 | 136.94 | 121.70 |
| 1 | F | 113 | GLN | C-N-CA | 6.09 | 136.93 | 121.70 |
| 1 | G | 246 | MET | C-N-CA | 6.09 | 136.93 | 121.70 |
| 1 | L | 479 | SER | N-CA-CB | 6.09 | 119.64 | 110.50 |
| 1 | M | 390 | SER | CA-C-N | -6.09 | 103.79 | 117.20 |
| 1 | P | 276 | LEU | CA-CB-CG | 6.09 | 129.32 | 115.30 |
| 1 | P | 476 | ALA | N-CA-CB | 6.09 | 118.63 | 110.10 |
| 1 | F | 269 | ASP | CB-CG-OD1 | 6.09 | 123.78 | 118.30 |
| 1 | B | 26 | LEU | CB-CG-CD1 | 6.09 | 121.36 | 111.00 |
| 1 | G | 431 | ILE | CA-CB-CG1 | 6.09 | 122.57 | 111.00 |
| 1 | J | 289 | LYS | CA-CB-CG | 6.09 | 126.80 | 113.40 |
| 1 | O | 63 | THR | CA-C-O | -6.09 | 107.31 | 120.10 |
| 1 | O | 88 | GLU | OE1-CD-OE2 | -6.09 | 115.99 | 123.30 |
| 1 | P | 400 | ILE | N-CA-CB | 6.09 | 124.81 | 110.80 |
| 1 | A | 244 | SER | CB-CA-C | 6.09 | 121.67 | 110.10 |
| 1 | F | 120 | VAL | CA-CB-CG1 | 6.09 | 120.03 | 110.90 |
| 1 | J | 348 | ARG | O-C-N | -6.09 | 112.85 | 123.20 |
| 1 | K | 239 | ILE | CB-CA-C | 6.09 | 123.78 | 111.60 |
| 1 | P | 16 | MET | CA-C-O | -6.09 | 107.31 | 120.10 |
| 1 | P | 244 | SER | CA-CB-OG | 6.09 | 127.64 | 111.20 |
| 1 | A | 113 | GLN | O-C-N | -6.09 | 112.96 | 122.70 |
| 1 | G | 323 | GLU | CA-C-O | -6.09 | 107.31 | 120.10 |
| 1 | G | 463 | GLU | CG-CD-OE1 | -6.09 | 106.12 | 118.30 |
| 1 | H | 204 | ASP | CB-CG-OD1 | -6.09 | 112.82 | 118.30 |
| 1 | M | 120 | VAL | O-C-N | -6.09 | 112.96 | 122.70 |
| 1 | C | 114 | ASN | CB-CG-OD1 | 6.09 | 133.77 | 121.60 |
| 1 | D | 470 | LEU | CB-CG-CD2 | 6.09 | 121.35 | 111.00 |
| 1 | E | 112 | ASP | C-N-CA | 6.09 | 136.91 | 121.70 |
| 1 | I | 270 | ASP | N-CA-CB | 6.09 | 121.56 | 110.60 |
| 1 | K | 43 | GLY | O-C-N | -6.09 | 112.96 | 122.70 |
| 1 | O | 133 | GLU | CG-CD-OE1 | -6.09 | 106.13 | 118.30 |
| 1 | D | 132 | GLN | O-C-N | -6.08 | 112.96 | 122.70 |
| 1 | N | 277 | ALA | CB-CA-C | 6.08 | 119.23 | 110.10 |
| 1 | A | 73 | PRO | N-CA-CB | -6.08 | 95.91 | 102.60 |
| 1 | D | 403 | ARG | CA-CB-CG | 6.08 | 126.78 | 113.40 |
| 1 | E | 131 | ALA | O-C-N | 6.08 | 132.43 | 122.70 |
| 1 | G | 342 | ALA | CA-C-O | 6.08 | 132.87 | 120.10 |
| 1 | H | 291 | ASP | OD1-CG-OD2 | 6.08 | 134.86 | 123.30 |
| 1 | H | 472 | VAL | N-CA-C | 6.08 | 127.43 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 138 | ILE | CA-CB-CG1 | -6.08 | 99.44 | 111.00 |
| 1 | L | 8 | LEU | CB-CG-CD2 | 6.08 | 121.34 | 111.00 |
| 1 | N | 263 | PHE | CA-CB-CG | 6.08 | 128.50 | 113.90 |
| 1 | O | 183 | ASP | N-CA-CB | 6.08 | 121.55 | 110.60 |
| 1 | A | 15 | TYR | CA-C-N | 6.08 | 130.58 | 117.20 |
| 1 | D | 314 | ASP | O-C-N | -6.08 | 112.97 | 122.70 |
| 1 | K | 232 | ILE | O-C-N | -6.08 | 112.97 | 122.70 |
| 1 | L | 180 | ALA | O-C-N | -6.08 | 112.97 | 122.70 |
| 1 | A | 63 | THR | CA-CB-CG2 | 6.08 | 120.91 | 112.40 |
| 1 | I | 193 | ILE | O-C-N | -6.08 | 112.97 | 122.70 |
| 1 | L | 435 | VAL | CB-CA-C | -6.08 | 99.85 | 111.40 |
| 1 | D | 310 | LEU | CB-CA-C | 6.08 | 121.75 | 110.20 |
| 1 | E | 102 | GLU | OE1-CD-OE2 | 6.08 | 130.59 | 123.30 |
| 1 | E | 369 | VAL | N-CA-CB | 6.08 | 124.87 | 111.50 |
| 1 | J | 185 | GLU | N-CA-C | 6.08 | 127.41 | 111.00 |
| 1 | O | 318 | ALA | C-N-CA | 6.08 | 135.07 | 122.30 |
| 1 | C | 218 | ARG | NE-CZ-NH1 | -6.08 | 117.26 | 120.30 |
| 1 | M | 492 | ASP | CB-CG-OD2 | 6.08 | 123.77 | 118.30 |
| 1 | O | 390 | SER | CB-CA-C | -6.08 | 98.56 | 110.10 |
| 1 | A | 135 | LEU | N-CA-CB | 6.08 | 122.55 | 110.40 |
| 1 | D | 294 | LYS | N-CA-CB | 6.08 | 121.54 | 110.60 |
| 1 | L | 127 | ALA | CB-CA-C | 6.08 | 119.21 | 110.10 |
| 1 | M | 30 | ILE | CB-CA-C | 6.08 | 123.75 | 111.60 |
| 1 | N | 134 | LEU | CB-CA-C | 6.08 | 121.74 | 110.20 |
| 1 | B | 120 | VAL | O-C-N | 6.07 | 132.42 | 122.70 |
| 1 | D | 84 | THR | O-C-N | 6.07 | 132.42 | 122.70 |
| 1 | H | 389 | LEU | CA-CB-CG | 6.07 | 129.27 | 115.30 |
| 1 | N | 486 | MET | CA-CB-CG | 6.07 | 123.62 | 113.30 |
| 1 | A | 298 | ALA | O-C-N | -6.07 | 112.98 | 122.70 |
| 1 | E | 493 | VAL | N-CA-CB | 6.07 | 124.86 | 111.50 |
| 1 | G | 115 | VAL | CB-CA-C | 6.07 | 122.94 | 111.40 |
| 1 | I | 219 | VAL | CA-C-O | -6.07 | 107.35 | 120.10 |
| 1 | J | 409 | ARG | CB-CA-C | -6.07 | 98.26 | 110.40 |
| 1 | K | 477 | ILE | N-CA-CB | 6.07 | 124.77 | 110.80 |
| 1 | B | 336 | GLU | CB-CA-C | 6.07 | 122.54 | 110.40 |
| 1 | E | 67 | GLU | OE1-CD-OE2 | 6.07 | 130.58 | 123.30 |
| 1 | J | 155 | MET | N-CA-C | 6.07 | 127.39 | 111.00 |
| 1 | O | 288 | LYS | CB-CA-C | 6.07 | 122.54 | 110.40 |
| 1 | O | 319 | GLY | CA-C-O | -6.07 | 109.67 | 120.60 |
| 1 | P | 342 | ALA | CB-CA-C | -6.07 | 101.00 | 110.10 |
| 1 | D | 333 | PHE | CB-CG-CD2 | 6.07 | 125.05 | 120.80 |
| 1 | E | 309 | ASP | CB-CG-OD1 | -6.07 | 112.84 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 47 | MET | CG-SD-CE | 6.07 | 109.91 | 100.20 |
| 1 | O | 265 | GLN | C-N-CA | 6.07 | 136.87 | 121.70 |
| 1 | D | 322 | GLU | OE1-CD-OE2 | 6.07 | 130.58 | 123.30 |
| 1 | E | 347 | ILE | N-CA-CB | 6.07 | 124.75 | 110.80 |
| 1 | H | 256 | ALA | CB-CA-C | 6.07 | 119.20 | 110.10 |
| 1 | D | 461 | MET | CA-C-O | -6.07 | 107.36 | 120.10 |
| 1 | F | 348 | ARG | CD-NE-CZ | -6.07 | 115.11 | 123.60 |
| 1 | N | 239 | ILE | CA-CB-CG2 | 6.07 | 123.03 | 110.90 |
| 1 | O | 379 | VAL | CA-CB-CG1 | -6.07 | 101.80 | 110.90 |
| 1 | D | 117 | PRO | CA-C-O | 6.06 | 134.75 | 120.20 |
| 1 | D | 189 | ASP | CB-CG-OD2 | 6.06 | 123.76 | 118.30 |
| 1 | F | 13 | LYS | CB-CA-C | -6.06 | 98.27 | 110.40 |
| 1 | A | 177 | ALA | N-CA-CB | -6.06 | 101.61 | 110.10 |
| 1 | C | 216 | LYS | C-N-CA | 6.06 | 136.86 | 121.70 |
| 1 | C | 338 | LYS | CB-CG-CD | 6.06 | 127.36 | 111.60 |
| 1 | C | 496 | ALA | N-CA-CB | 6.06 | 118.59 | 110.10 |
| 1 | F | 181 | VAL | CG1-CB-CG2 | 6.06 | 120.60 | 110.90 |
| 1 | K | 292 | MET | CB-CG-SD | 6.06 | 130.59 | 112.40 |
| 1 | N | 338 | LYS | O-C-N | -6.06 | 113.00 | 122.70 |
| 1 | H | 341 | LYS | O-C-N | -6.06 | 113.00 | 122.70 |
| 1 | B | 68 | MET | O-C-N | -6.06 | 113.00 | 122.70 |
| 1 | B | 429 | ASP | O-C-N | -6.06 | 113.00 | 122.70 |
| 1 | C | 326 | ILE | CA-CB-CG1 | 6.06 | 122.51 | 111.00 |
| 1 | E | 112 | ASP | CB-CG-OD1 | 6.06 | 123.75 | 118.30 |
| 1 | H | 88 | GLU | CB-CA-C | 6.06 | 122.52 | 110.40 |
| 1 | J | 60 | ASP | N-CA-CB | 6.06 | 121.51 | 110.60 |
| 1 | K | 62 | VAL | CG1-CB-CG2 | -6.06 | 101.21 | 110.90 |
| 1 | K | 288 | LYS | CB-CA-C | 6.06 | 122.52 | 110.40 |
| 1 | K | 364 | ASP | O-C-N | -6.06 | 113.01 | 122.70 |
| 1 | E | 301 | ALA | CB-CA-C | -6.06 | 101.02 | 110.10 |
| 1 | H | 198 | LYS | CD-CE-NZ | -6.06 | 97.77 | 111.70 |
| 1 | I | 484 | THR | OG1-CB-CG2 | -6.06 | 96.07 | 110.00 |
| 1 | K | 9 | PRO | CA-C-N | -6.06 | 103.87 | 117.20 |
| 1 | K | 25 | ILE | CB-CG1-CD1 | 6.06 | 130.86 | 113.90 |
| 1 | L | 213 | LEU | C-N-CA | 6.06 | 136.84 | 121.70 |
| 1 | L | 293 | GLU | N-CA-CB | 6.06 | 121.50 | 110.60 |
| 1 | G | 219 | VAL | CA-CB-CG1 | 6.06 | 119.98 | 110.90 |
| 1 | J | 257 | SER | O-C-N | -6.06 | 112.91 | 123.20 |
| 1 | M | 44 | MET | CB-CG-SD | 6.06 | 130.57 | 112.40 |
| 1 | N | 225 | LYS | CA-C-N | 6.06 | 130.52 | 117.20 |
| 1 | C | 409 | ARG | N-CA-CB | -6.05 | 99.70 | 110.60 |
| 1 | D | 373 | ILE | CA-CB-CG1 | 6.05 | 122.50 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 63 | THR | CA-CB-OG1 | 6.05 | 121.71 | 109.00 |
| 1 | M | 93 | THR | CA-CB-CG2 | 6.05 | 120.88 | 112.40 |
| 1 | N | 335 | GLU | OE1-CD-OE2 | -6.05 | 116.03 | 123.30 |
| 1 | O | 150 | LEU | CA-CB-CG | 6.05 | 129.22 | 115.30 |
| 1 | P | 302 | ASN | CB-CG-OD1 | 6.05 | 133.71 | 121.60 |
| 1 | D | 11 | ASN | O-C-N | -6.05 | 113.02 | 122.70 |
| 1 | F | 214 | VAL | CA-CB-CG2 | -6.05 | 101.82 | 110.90 |
| 1 | M | 487 | LEU | CA-CB-CG | 6.05 | 129.22 | 115.30 |
| 1 | B | 287 | VAL | CG1-CB-CG2 | 6.05 | 120.58 | 110.90 |
| 1 | D | 14 | ARG | NH1-CZ-NH2 | -6.05 | 112.74 | 119.40 |
| 1 | D | 36 | ARG | CD-NE-CZ | -6.05 | 115.13 | 123.60 |
| 1 | E | 417 | VAL | CB-CA-C | 6.05 | 122.90 | 111.40 |
| 1 | L | 444 | ASN | CB-CG-ND2 | -6.05 | 102.18 | 116.70 |
| 1 | M | 270 | ASP | CA-CB-CG | 6.05 | 126.71 | 113.40 |
| 1 | N | 15 | TYR | CA-CB-CG | 6.05 | 124.90 | 113.40 |
| 1 | O | 14 | ARG | CA-CB-CG | 6.05 | 126.71 | 113.40 |
| 1 | O | 94 | THR | N-CA-CB | 6.05 | 121.80 | 110.30 |
| 1 | P | 80 | GLU | CA-CB-CG | 6.05 | 126.71 | 113.40 |
| 1 | E | 273 | GLN | CB-CA-C | 6.05 | 122.50 | 110.40 |
| 1 | F | 368 | VAL | CB-CA-C | 6.05 | 122.89 | 111.40 |
| 1 | I | 71 | GLU | CA-C-O | 6.05 | 132.81 | 120.10 |
| 1 | K | 95 | THR | CA-CB-CG2 | 6.05 | 120.87 | 112.40 |
| 1 | O | 51 | ASP | N-CA-C | 6.05 | 127.34 | 111.00 |
| 1 | P | 312 | ALA | N-CA-C | 6.05 | 127.33 | 111.00 |
| 1 | A | 147 | LYS | N-CA-C | 6.05 | 127.33 | 111.00 |
| 1 | C | 496 | ALA | N-CA-C | 6.05 | 127.33 | 111.00 |
| 1 | K | 356 | GLU | N-CA-CB | 6.05 | 121.49 | 110.60 |
| 1 | C | 257 | SER | N-CA-CB | 6.05 | 119.57 | 110.50 |
| 1 | J | 200 | GLY | CA-C-O | -6.05 | 109.72 | 120.60 |
| 1 | K | 42 | LYS | CB-CA-C | -6.05 | 98.31 | 110.40 |
| 1 | N | 110 | LEU | O-C-N | 6.05 | 132.38 | 122.70 |
| 1 | P | 50 | ASP | CB-CG-OD1 | -6.05 | 112.86 | 118.30 |
| 1 | P | 215 | ASP | CB-CG-OD2 | -6.05 | 112.86 | 118.30 |
| 1 | D | 59 | ASN | CB-CG-OD1 | -6.04 | 109.51 | 121.60 |
| 1 | G | 88 | GLU | O-C-N | -6.04 | 113.03 | 122.70 |
| 1 | G | 292 | MET | CA-CB-CG | 6.04 | 123.58 | 113.30 |
| 1 | K | 116 | HIS | CB-CA-C | 6.04 | 122.49 | 110.40 |
| 1 | B | 191 | ASP | CB-CG-OD1 | 6.04 | 123.74 | 118.30 |
| 1 | J | 41 | PRO | N-CA-C | 6.04 | 127.81 | 112.10 |
| 1 | J | 50 | ASP | CA-C-O | -6.04 | 107.41 | 120.10 |
| 1 | M | 146 | ASP | CA-CB-CG | 6.04 | 126.69 | 113.40 |
| 1 | N | 249 | ASP | CB-CG-OD2 | -6.04 | 112.86 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 371 | CYS | CB-CA-C | 6.04 | 122.49 | 110.40 |
| 1 | B | 405 | GLN | CG-CD-OE1 | 6.04 | 133.68 | 121.60 |
| 1 | F | 25 | ILE | CB-CG1-CD1 | 6.04 | 130.82 | 113.90 |
| 1 | F | 129 | GLN | O-C-N | -6.04 | 113.03 | 122.70 |
| 1 | G | 400 | ILE | CA-CB-CG2 | 6.04 | 122.98 | 110.90 |
| 1 | G | 496 | ALA | C-N-CA | 6.04 | 136.81 | 121.70 |
| 1 | I | 292 | MET | N-CA-CB | 6.04 | 121.47 | 110.60 |
| 1 | K | 10 | GLU | CA-CB-CG | 6.04 | 126.69 | 113.40 |
| 1 | K | 158 | ILE | CB-CA-C | -6.04 | 99.52 | 111.60 |
| 1 | L | 400 | ILE | CG1-CB-CG2 | -6.04 | 98.11 | 111.40 |
| 1 | P | 60 | ASP | CA-CB-CG | 6.04 | 126.69 | 113.40 |
| 1 | E | 128 | ALA | N-CA-CB | 6.04 | 118.56 | 110.10 |
| 1 | I | 276 | LEU | CB-CG-CD2 | 6.04 | 121.27 | 111.00 |
| 1 | D | 149 | ILE | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | F | 222 | GLN | N-CA-CB | 6.04 | 121.47 | 110.60 |
| 1 | H | 474 | THR | C-N-CA | 6.04 | 136.79 | 121.70 |
| 1 | I | 490 | ILE | CA-CB-CG2 | 6.04 | 122.98 | 110.90 |
| 1 | L | 486 | MET | CB-CA-C | -6.04 | 98.32 | 110.40 |
| 1 | M | 444 | ASN | C-N-CA | 6.04 | 134.98 | 122.30 |
| 1 | B | 10 | GLU | N-CA-CB | 6.04 | 121.47 | 110.60 |
| 1 | B | 85 | GLN | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | D | 296 | ALA | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | K | 360 | ARG | CD-NE-CZ | 6.04 | 132.05 | 123.60 |
| 1 | M | 451 | LEU | CA-CB-CG | 6.04 | 129.19 | 115.30 |
| 1 | A | 28 | GLY | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | A | 418 | ILE | CG1-CB-CG2 | -6.04 | 98.12 | 111.40 |
| 1 | E | 203 | ILE | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | O | 44 | MET | CA-C-O | -6.04 | 107.43 | 120.10 |
| 1 | O | 242 | THR | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | O | 268 | ILE | O-C-N | -6.04 | 113.04 | 122.70 |
| 1 | B | 348 | ARG | N-CA-C | 6.03 | 127.29 | 111.00 |
| 1 | F | 53 | GLY | C-N-CA | 6.03 | 136.78 | 121.70 |
| 1 | G | 168 | GLU | OE1-CD-OE2 | -6.03 | 116.06 | 123.30 |
| 1 | H | 21 | GLN | N-CA-CB | -6.03 | 99.74 | 110.60 |
| 1 | H | 306 | ASN | CB-CG-ND2 | 6.03 | 131.18 | 116.70 |
| 1 | I | 369 | VAL | O-C-N | 6.03 | 133.46 | 123.20 |
| 1 | J | 72 | HIS | CB-CG-ND1 | 6.03 | 138.28 | 123.20 |
| 1 | C | 197 | LYS | CD-CE-NZ | 6.03 | 125.57 | 111.70 |
| 1 | M | 129 | GLN | CB-CA-C | 6.03 | 122.46 | 110.40 |
| 1 | M | 184 | ASP | OD1-CG-OD2 | -6.03 | 111.84 | 123.30 |
| 1 | A | 477 | ILE | N-CA-CB | 6.03 | 124.67 | 110.80 |
| 1 | C | 67 | GLU | N-CA-CB | 6.03 | 121.45 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 146 | ASP | CB-CG-OD1 | -6.03 | 112.87 | 118.30 |
| 1 | D | 112 | ASP | CB-CG-OD1 | -6.03 | 112.87 | 118.30 |
| 1 | N | 320 | LEU | CA-CB-CG | 6.03 | 129.17 | 115.30 |
| 1 | P | 467 | VAL | O-C-N | -6.03 | 113.05 | 122.70 |
| 1 | B | 343 | VAL | CG1-CB-CG2 | 6.03 | 120.55 | 110.90 |
| 1 | I | 475 | GLN | CB-CA-C | -6.03 | 98.34 | 110.40 |
| 1 | A | 495 | ALA | O-C-N | -6.03 | 113.06 | 122.70 |
| 1 | C | 487 | LEU | CA-C-O | -6.03 | 107.44 | 120.10 |
| 1 | E | 466 | VAL | CA-C-N | 6.03 | 130.46 | 117.20 |
| 1 | K | 487 | LEU | CA-CB-CG | 6.03 | 129.16 | 115.30 |
| 1 | N | 145 | GLN | C-N-CA | 6.03 | 136.77 | 121.70 |
| 1 | E | 63 | THR | C-N-CA | 6.03 | 136.76 | 121.70 |
| 1 | E | 147 | LYS | N-CA-C | 6.03 | 127.27 | 111.00 |
| 1 | H | 230 | ALA | N-CA-CB | 6.03 | 118.54 | 110.10 |
| 1 | M | 37 | SER | O-C-N | -6.03 | 113.06 | 122.70 |
| 1 | A | 406 | LEU | N-CA-CB | 6.02 | 122.45 | 110.40 |
| 1 | G | 102 | GLU | OE1-CD-OE2 | 6.02 | 130.53 | 123.30 |
| 1 | C | 278 | LYS | O-C-N | -6.02 | 113.06 | 122.70 |
| 1 | D | 89 | VAL | N-CA-CB | 6.02 | 124.75 | 111.50 |
| 1 | E | 59 | ASN | N-CA-CB | 6.02 | 121.44 | 110.60 |
| 1 | E | 471 | ARG | NH1-CZ-NH2 | -6.02 | 112.78 | 119.40 |
| 1 | F | 7 | VAL | CB-CA-C | -6.02 | 99.96 | 111.40 |
| 1 | L | 273 | GLN | CB-CA-C | 6.02 | 122.44 | 110.40 |
| 1 | N | 81 | VAL | CA-CB-CG1 | 6.02 | 119.94 | 110.90 |
| 1 | A | 291 | ASP | N-CA-CB | 6.02 | 121.44 | 110.60 |
| 1 | I | 212 | VAL | CA-C-O | 6.02 | 132.75 | 120.10 |
| 1 | C | 148 | GLU | N-CA-CB | 6.02 | 121.44 | 110.60 |
| 1 | J | 266 | LYS | CA-C-O | -6.02 | 107.46 | 120.10 |
| 1 | J | 376 | GLY | O-C-N | -6.02 | 113.07 | 122.70 |
| 1 | K | 191 | ASP | CB-CG-OD2 | 6.02 | 123.72 | 118.30 |
| 1 | L | 229 | ASP | CA-CB-CG | 6.02 | 126.64 | 113.40 |
| 1 | L | 470 | LEU | O-C-N | -6.02 | 113.07 | 122.70 |
| 1 | C | 455 | THR | C-N-CA | -6.02 | 109.66 | 122.30 |
| 1 | G | 165 | LYS | CA-C-O | 6.02 | 132.74 | 120.10 |
| 1 | H | 254 | ILE | O-C-N | -6.02 | 113.07 | 122.70 |
| 1 | K | 461 | MET | C-N-CA | 6.02 | 136.75 | 121.70 |
| 1 | O | 45 | ASP | CB-CG-OD1 | 6.02 | 123.72 | 118.30 |
| 1 | O | 132 | GLN | CA-C-N | -6.02 | 103.96 | 117.20 |
| 1 | J | 468 | GLU | OE1-CD-OE2 | -6.02 | 116.08 | 123.30 |
| 1 | C | 286 | ARG | CA-C-O | -6.01 | 107.47 | 120.10 |
| 1 | G | 16 | MET | CA-C-O | -6.01 | 107.47 | 120.10 |
| 1 | J | 152 | LYS | O-C-N | -6.01 | 113.08 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 280 | GLY | O-C-N | 6.01 | 132.32 | 122.70 |
| 1 | M | 15 | TYR | CG-CD1-CE1 | 6.01 | 126.11 | 121.30 |
| 1 | O | 88 | GLU | O-C-N | -6.01 | 113.08 | 122.70 |
| 1 | O | 160 | GLY | C-N-CA | 6.01 | 136.74 | 121.70 |
| 1 | B | 74 | ALA | N-CA-CB | -6.01 | 101.68 | 110.10 |
| 1 | D | 360 | ARG | N-CA-CB | 6.01 | 121.42 | 110.60 |
| 1 | E | 439 | ALA | O-C-N | 6.01 | 132.32 | 122.70 |
| 1 | F | 161 | LYS | CA-C-O | 6.01 | 132.73 | 120.10 |
| 1 | A | 55 | VAL | C-N-CA | 6.01 | 136.73 | 121.70 |
| 1 | B | 32 | ALA | O-C-N | -6.01 | 113.08 | 122.70 |
| 1 | D | 289 | LYS | CB-CG-CD | 6.01 | 127.23 | 111.60 |
| 1 | E | 269 | ASP | CA-C-N | 6.01 | 130.43 | 117.20 |
| 1 | H | 10 | GLU | N-CA-CB | 6.01 | 121.42 | 110.60 |
| 1 | J | 216 | LYS | CA-C-N | 6.01 | 130.43 | 117.20 |
| 1 | L | 191 | ASP | N-CA-CB | 6.01 | 121.42 | 110.60 |
| 1 | N | 33 | GLU | CG-CD-OE1 | 6.01 | 130.32 | 118.30 |
| 1 | C | 130 | LYS | CA-C-O | -6.01 | 107.48 | 120.10 |
| 1 | D | 116 | HIS | CB-CA-C | 6.01 | 122.42 | 110.40 |
| 1 | D | 189 | ASP | CA-CB-CG | 6.01 | 126.62 | 113.40 |
| 1 | D | 333 | PHE | CG-CD2-CE2 | -6.01 | 114.19 | 120.80 |
| 1 | E | 11 | ASN | CB-CA-C | 6.01 | 122.42 | 110.40 |
| 1 | E | 115 | VAL | CG1-CB-CG2 | 6.01 | 120.52 | 110.90 |
| 1 | E | 239 | ILE | C-N-CA | 6.01 | 136.72 | 121.70 |
| 1 | E | 277 | ALA | C-N-CA | 6.01 | 136.72 | 121.70 |
| 1 | I | 9 | PRO | N-CA-CB | 6.01 | 110.51 | 103.30 |
| 1 | I | 398 | GLU | CG-CD-OE1 | 6.01 | 130.32 | 118.30 |
| 1 | K | 336 | GLU | C-N-CA | 6.01 | 136.72 | 121.70 |
| 1 | C | 163 | ALA | CB-CA-C | -6.01 | 101.09 | 110.10 |
| 1 | F | 108 | GLU | CA-C-O | -6.01 | 107.48 | 120.10 |
| 1 | G | 424 | GLU | O-C-N | -6.01 | 113.09 | 122.70 |
| 1 | I | 212 | VAL | O-C-N | -6.01 | 113.09 | 122.70 |
| 1 | O | 132 | GLN | O-C-N | 6.01 | 132.31 | 122.70 |
| 1 | A | 61 | GLY | N-CA-C | 6.01 | 128.12 | 113.10 |
| 1 | B | 172 | GLU | CG-CD-OE1 | -6.01 | 106.28 | 118.30 |
| 1 | D | 103 | LEU | O-C-N | 6.01 | 132.31 | 122.70 |
| 1 | D | 222 | GLN | CG-CD-OE1 | 6.01 | 133.61 | 121.60 |
| 1 | D | 225 | LYS | O-C-N | -6.01 | 113.09 | 122.70 |
| 1 | G | 157 | SER | CB-CA-C | 6.01 | 121.51 | 110.10 |
| 1 | L | 12 | MET | CA-CB-CG | 6.01 | 123.51 | 113.30 |
| 1 | M | 152 | LYS | CA-C-O | -6.01 | 107.48 | 120.10 |
| 1 | M | 394 | ARG | NH1-CZ-NH2 | -6.01 | 112.79 | 119.40 |
| 1 | O | 82 | ALA | N-CA-CB | 6.01 | 118.51 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 388 | GLU | CG-CD-OE1 | 6.01 | 130.31 | 118.30 |
| 1 | D | 72 | HIS | CA-CB-CG | -6.00 | 103.39 | 113.60 |
| 1 | D | 317 | ASP | CB-CG-OD2 | -6.00 | 112.89 | 118.30 |
| 1 | G | 365 | ALA | CB-CA-C | 6.00 | 119.11 | 110.10 |
| 1 | G | 373 | ILE | N-CA-CB | 6.00 | 124.61 | 110.80 |
| 1 | J | 377 | ARG | N-CA-CB | -6.00 | 99.79 | 110.60 |
| 1 | K | 178 | VAL | N-CA-C | 6.00 | 127.21 | 111.00 |
| 1 | N | 112 | ASP | CB-CG-OD1 | 6.00 | 123.70 | 118.30 |
| 1 | P | 420 | ARG | CA-C-O | -6.00 | 107.49 | 120.10 |
| 1 | D | 288 | LYS | O-C-N | 6.00 | 132.31 | 122.70 |
| 1 | D | 289 | LYS | CB-CA-C | 6.00 | 122.41 | 110.40 |
| 1 | D | 413 | ASP | CB-CG-OD2 | -6.00 | 112.90 | 118.30 |
| 1 | G | 74 | ALA | C-N-CA | 6.00 | 136.71 | 121.70 |
| 1 | I | 11 | ASN | CB-CA-C | 6.00 | 122.41 | 110.40 |
| 1 | I | 12 | MET | CB-CA-C | -6.00 | 98.39 | 110.40 |
| 1 | K | 323 | GLU | CG-CD-OE1 | 6.00 | 130.31 | 118.30 |
| 1 | K | 487 | LEU | CB-CG-CD1 | 6.00 | 121.21 | 111.00 |
| 1 | M | 250 | MET | CB-CA-C | 6.00 | 122.41 | 110.40 |
| 1 | M | 313 | GLN | CG-CD-OE1 | 6.00 | 133.61 | 121.60 |
| 1 | M | 318 | ALA | CA-C-N | -6.00 | 104.19 | 116.20 |
| 1 | P | 170 | LEU | O-C-N | -6.00 | 113.09 | 122.70 |
| 1 | C | 358 | VAL | CA-CB-CG1 | 6.00 | 119.90 | 110.90 |
| 1 | E | 335 | GLU | CG-CD-OE1 | 6.00 | 130.30 | 118.30 |
| 1 | F | 298 | ALA | CB-CA-C | 6.00 | 119.10 | 110.10 |
| 1 | J | 411 | PHE | CD1-CE1-CZ | 6.00 | 127.30 | 120.10 |
| 1 | M | 208 | LEU | CB-CG-CD2 | 6.00 | 121.20 | 111.00 |
| 1 | N | 168 | GLU | OE1-CD-OE2 | 6.00 | 130.50 | 123.30 |
| 1 | A | 173 | ILE | CA-CB-CG1 | -6.00 | 99.60 | 111.00 |
| 1 | D | 396 | TYR | CZ-CE2-CD2 | 6.00 | 125.20 | 119.80 |
| 1 | M | 422 | LEU | CB-CG-CD2 | -6.00 | 100.80 | 111.00 |
| 1 | P | 242 | THR | CA-CB-OG1 | 6.00 | 121.60 | 109.00 |
| 1 | G | 91 | ASP | OD1-CG-OD2 | -6.00 | 111.90 | 123.30 |
| 1 | J | 215 | ASP | CB-CG-OD1 | 6.00 | 123.70 | 118.30 |
| 1 | L | 250 | MET | N-CA-CB | 6.00 | 121.40 | 110.60 |
| 1 | P | 59 | ASN | CB-CG-ND2 | 6.00 | 131.10 | 116.70 |
| 1 | F | 268 | ILE | CA-CB-CG1 | 6.00 | 122.39 | 111.00 |
| 1 | G | 31 | ILE | CB-CA-C | 6.00 | 123.59 | 111.60 |
| 1 | K | 459 | GLU | CA-CB-CG | 6.00 | 126.59 | 113.40 |
| 1 | K | 270 | ASP | CA-CB-CG | 6.00 | 126.59 | 113.40 |
| 1 | A | 236 | ASN | C-N-CA | 5.99 | 136.68 | 121.70 |
| 1 | D | 298 | ALA | CA-C-N | 5.99 | 130.38 | 117.20 |
| 1 | E | 257 | SER | CB-CA-C | 5.99 | 121.49 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | E | 420 | ARG | NE-CZ-NH1 | -5.99 | 117.30 | 120.30 |
| 1 | O | 89 | VAL | O-C-N | -5.99 | 113.01 | 123.20 |
| 1 | D | 278 | LYS | CA-CB-CG | 5.99 | 126.58 | 113.40 |
| 1 | J | 83 | LYS | N-CA-CB | 5.99 | 121.39 | 110.60 |
| 1 | N | 93 | THR | C-N-CA | 5.99 | 136.68 | 121.70 |
| 1 | C | 136 | LYS | N-CA-C | 5.99 | 127.18 | 111.00 |
| 1 | E | 95 | THR | O-C-N | -5.99 | 113.12 | 122.70 |
| 1 | F | 68 | MET | CA-C-O | -5.99 | 107.52 | 120.10 |
| 1 | G | 350 | THR | N-CA-CB | 5.99 | 121.68 | 110.30 |
| 1 | I | 38 | THR | N-CA-C | 5.99 | 127.18 | 111.00 |
| 1 | N | 454 | PHE | CD1-CE1-CZ | 5.99 | 127.29 | 120.10 |
| 1 | P | 103 | LEU | CB-CG-CD2 | 5.99 | 121.19 | 111.00 |
| 1 | A | 203 | ILE | C-N-CA | 5.99 | 136.67 | 121.70 |
| 1 | L | 336 | GLU | CB-CG-CD | 5.99 | 130.37 | 114.20 |
| 1 | L | 432 | GLU | CA-CB-CG | 5.99 | 126.58 | 113.40 |
| 1 | P | 137 | THR | CB-CA-C | -5.99 | 95.43 | 111.60 |
| 1 | N | 14 | ARG | NH1-CZ-NH2 | -5.99 | 112.81 | 119.40 |
| 1 | A | 14 | ARG | NH1-CZ-NH2 | 5.99 | 125.98 | 119.40 |
| 1 | D | 29 | ARG | CD-NE-CZ | 5.99 | 131.98 | 123.60 |
| 1 | D | 117 | PRO | O-C-N | -5.99 | 113.12 | 122.70 |
| 1 | H | 493 | VAL | CA-C-O | 5.99 | 132.67 | 120.10 |
| 1 | N | 218 | ARG | CD-NE-CZ | 5.99 | 131.98 | 123.60 |
| 1 | N | 353 | HIS | CA-CB-CG | 5.99 | 123.78 | 113.60 |
| 1 | P | 216 | LYS | O-C-N | -5.99 | 113.12 | 122.70 |
| 1 | G | 85 | GLN | CB-CA-C | 5.98 | 122.37 | 110.40 |
| 1 | K | 37 | SER | N-CA-C | 5.98 | 127.16 | 111.00 |
| 1 | P | 313 | GLN | O-C-N | -5.98 | 113.13 | 122.70 |
| 1 | B | 27 | ALA | N-CA-CB | -5.98 | 101.72 | 110.10 |
| 1 | F | 44 | MET | C-N-CA | 5.98 | 136.66 | 121.70 |
| 1 | H | 193 | ILE | CA-CB-CG2 | 5.98 | 122.86 | 110.90 |
| 1 | I | 60 | ASP | CA-CB-CG | 5.98 | 126.56 | 113.40 |
| 1 | J | 302 | ASN | N-CA-C | 5.98 | 127.15 | 111.00 |
| 1 | P | 415 | LEU | N-CA-CB | 5.98 | 122.36 | 110.40 |
| 1 | A | 298 | ALA | C-N-CA | 5.98 | 136.65 | 121.70 |
| 1 | A | 396 | TYR | CG-CD2-CE2 | -5.98 | 116.52 | 121.30 |
| 1 | A | 461 | MET | N-CA-C | 5.98 | 127.14 | 111.00 |
| 1 | C | 41 | PRO | N-CD-CG | 5.98 | 112.17 | 103.20 |
| 1 | E | 202 | SER | CA-CB-OG | 5.98 | 127.35 | 111.20 |
| 1 | F | 83 | LYS | O-C-N | -5.98 | 113.13 | 122.70 |
| 1 | I | 114 | ASN | CA-C-O | 5.98 | 132.66 | 120.10 |
| 1 | J | 19 | ASP | O-C-N | -5.98 | 113.13 | 122.70 |
| 1 | O | 105 | ARG | CD-NE-CZ | 5.98 | 131.97 | 123.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 443 | SER | CB-CA-C | 5.98 | 121.46 | 110.10 |
| 1 | C | 54 | ASP | CB-CG-OD1 | -5.98 | 112.92 | 118.30 |
| 1 | G | 429 | ASP | CB-CG-OD1 | 5.98 | 123.68 | 118.30 |
| 1 | H | 472 | VAL | CA-CB-CG1 | 5.98 | 119.87 | 110.90 |
| 1 | K | 437 | VAL | CG1-CB-CG2 | -5.98 | 101.33 | 110.90 |
| 1 | L | 192 | LEU | CB-CA-C | 5.98 | 121.56 | 110.20 |
| 1 | O | 434 | LEU | N-CA-C | 5.98 | 127.14 | 111.00 |
| 1 | P | 88 | GLU | CB-CA-C | 5.98 | 122.36 | 110.40 |
| 1 | P | 290 | SER | C-N-CA | 5.98 | 136.65 | 121.70 |
| 1 | B | 285 | ARG | CD-NE-CZ | 5.98 | 131.97 | 123.60 |
| 1 | C | 50 | ASP | CB-CA-C | 5.98 | 122.36 | 110.40 |
| 1 | E | 87 | LYS | CA-C-O | -5.98 | 107.55 | 120.10 |
| 1 | N | 94 | THR | O-C-N | -5.98 | 113.14 | 122.70 |
| 1 | D | 165 | LYS | CA-C-N | -5.98 | 104.05 | 117.20 |
| 1 | E | 290 | SER | C-N-CA | 5.98 | 136.64 | 121.70 |
| 1 | G | 216 | LYS | N-CA-C | 5.98 | 127.14 | 111.00 |
| 1 | P | 145 | GLN | O-C-N | -5.98 | 113.14 | 122.70 |
| 1 | A | 403 | ARG | CG-CD-NE | 5.97 | 124.35 | 111.80 |
| 1 | I | 493 | VAL | CA-CB-CG2 | 5.97 | 119.86 | 110.90 |
| 1 | J | 117 | PRO | O-C-N | 5.97 | 132.26 | 122.70 |
| 1 | K | 147 | LYS | O-C-N | 5.97 | 132.26 | 122.70 |
| 1 | O | 102 | GLU | N-CA-CB | -5.97 | 99.84 | 110.60 |
| 1 | G | 43 | GLY | O-C-N | 5.97 | 132.26 | 122.70 |
| 1 | J | 396 | TYR | CG-CD1-CE1 | -5.97 | 116.52 | 121.30 |
| 1 | O | 36 | ARG | NE-CZ-NH2 | 5.97 | 123.29 | 120.30 |
| 1 | L | 124 | TYR | O-C-N | -5.97 | 113.15 | 122.70 |
| 1 | N | 405 | GLN | C-N-CA | -5.97 | 106.77 | 121.70 |
| 1 | C | 324 | ARG | CA-C-O | -5.97 | 107.56 | 120.10 |
| 1 | D | 129 | GLN | CG-CD-OE1 | -5.97 | 109.66 | 121.60 |
| 1 | D | 455 | THR | CA-CB-CG2 | -5.97 | 104.04 | 112.40 |
| 1 | I | 175 | VAL | CA-CB-CG1 | 5.97 | 119.85 | 110.90 |
| 1 | K | 31 | ILE | CG1-CB-CG2 | -5.97 | 98.27 | 111.40 |
| 1 | L | 90 | GLY | O-C-N | 5.97 | 132.25 | 122.70 |
| 1 | M | 21 | GLN | CB-CA-C | -5.97 | 98.46 | 110.40 |
| 1 | M | 59 | ASN | CA-CB-CG | 5.97 | 126.53 | 113.40 |
| 1 | O | 142 | VAL | CA-CB-CG2 | 5.97 | 119.85 | 110.90 |
| 1 | C | 331 | MET | N-CA-CB | 5.97 | 121.34 | 110.60 |
| 1 | H | 12 | MET | CA-C-O | -5.97 | 107.57 | 120.10 |
| 1 | I | 11 | ASN | CA-CB-CG | 5.97 | 126.53 | 113.40 |
| 1 | O | 429 | ASP | OD1-CG-OD2 | -5.97 | 111.96 | 123.30 |
| 1 | E | 360 | ARG | CG-CD-NE | 5.97 | 124.33 | 111.80 |
| 1 | F | 466 | VAL | CA-C-O | -5.97 | 107.57 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 302 | ASN | CA-C-O | -5.96 | 107.57 | 120.10 |
| 1 | C | 474 | THR | CA-CB-OG1 | 5.96 | 121.53 | 109.00 |
| 1 | F | 191 | ASP | CB-CG-OD1 | -5.96 | 112.93 | 118.30 |
| 1 | H | 296 | ALA | O-C-N | -5.96 | 113.16 | 122.70 |
| 1 | N | 354 | VAL | CG1-CB-CG2 | -5.96 | 101.36 | 110.90 |
| 1 | J | 183 | ASP | CB-CA-C | -5.96 | 98.47 | 110.40 |
| 1 | O | 69 | SER | CA-C-O | -5.96 | 107.58 | 120.10 |
| 1 | A | 77 | MET | N-CA-CB | 5.96 | 121.33 | 110.60 |
| 1 | C | 294 | LYS | O-C-N | -5.96 | 113.16 | 122.70 |
| 1 | F | 468 | GLU | OE1-CD-OE2 | -5.96 | 116.15 | 123.30 |
| 1 | G | 418 | ILE | N-CA-CB | 5.96 | 124.51 | 110.80 |
| 1 | H | 147 | LYS | N-CA-CB | 5.96 | 121.33 | 110.60 |
| 1 | I | 417 | VAL | N-CA-C | 5.96 | 127.10 | 111.00 |
| 1 | M | 310 | LEU | CB-CG-CD2 | -5.96 | 100.87 | 111.00 |
| 1 | P | 12 | MET | CA-C-O | -5.96 | 107.58 | 120.10 |
| 1 | P | 299 | THR | N-CA-CB | 5.96 | 121.63 | 110.30 |
| 1 | I | 229 | ASP | CB-CG-OD2 | 5.96 | 123.66 | 118.30 |
| 1 | M | 131 | ALA | CB-CA-C | 5.96 | 119.04 | 110.10 |
| 1 | B | 129 | GLN | CA-CB-CG | 5.96 | 126.51 | 113.40 |
| 1 | F | 357 | GLU | CA-CB-CG | 5.96 | 126.51 | 113.40 |
| 1 | H | 437 | VAL | O-C-N | 5.96 | 132.24 | 122.70 |
| 1 | K | 146 | ASP | CB-CG-OD2 | -5.96 | 112.94 | 118.30 |
| 1 | N | 253 | GLU | C-N-CA | 5.96 | 136.60 | 121.70 |
| 1 | O | 184 | ASP | O-C-N | 5.96 | 132.23 | 122.70 |
| 1 | P | 9 | PRO | N-CA-C | -5.96 | 96.61 | 112.10 |
| 1 | B | 411 | PHE | CZ-CE2-CD2 | -5.96 | 112.95 | 120.10 |
| 1 | C | 372 | THR | CA-CB-OG1 | -5.96 | 96.49 | 109.00 |
| 1 | D | 377 | ARG | NH1-CZ-NH2 | 5.96 | 125.95 | 119.40 |
| 1 | D | 414 | ALA | N-CA-CB | 5.96 | 118.44 | 110.10 |
| 1 | E | 140 | CYS | CA-CB-SG | 5.96 | 124.72 | 114.00 |
| 1 | J | 236 | ASN | N-CA-CB | -5.96 | 99.88 | 110.60 |
| 1 | O | 484 | THR | N-CA-C | 5.96 | 127.08 | 111.00 |
| 1 | P | 52 | LEU | C-N-CA | 5.96 | 134.81 | 122.30 |
| 1 | F | 21 | GLN | CG-CD-OE1 | -5.96 | 109.69 | 121.60 |
| 1 | F | 324 | ARG | NH1-CZ-NH2 | -5.96 | 112.85 | 119.40 |
| 1 | O | 304 | ILE | C-N-CA | 5.96 | 136.59 | 121.70 |
| 1 | H | 444 | ASN | C-N-CA | -5.95 | 109.80 | 122.30 |
| 1 | I | 74 | ALA | CA-C-O | 5.95 | 132.60 | 120.10 |
| 1 | I | 219 | VAL | O-C-N | 5.95 | 132.22 | 122.70 |
| 1 | L | 403 | ARG | NH1-CZ-NH2 | 5.95 | 125.95 | 119.40 |
| 1 | O | 116 | HIS | CG-ND1-CE1 | 5.95 | 116.54 | 108.20 |
| 1 | K | 323 | GLU | N-CA-CB | 5.95 | 121.31 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 55 | VAL | O-C-N | 5.95 | 132.22 | 122.70 |
| 1 | B | 162 | GLY | O-C-N | -5.95 | 113.18 | 122.70 |
| 1 | C | 13 | LYS | CA-C-N | 5.95 | 130.29 | 117.20 |
| 1 | G | 454 | PHE | CG-CD1-CE1 | -5.95 | 114.25 | 120.80 |
| 1 | H | 459 | GLU | CG-CD-OE1 | -5.95 | 106.40 | 118.30 |
| 1 | L | 173 | ILE | O-C-N | -5.95 | 113.18 | 122.70 |
| 1 | N | 150 | LEU | CA-C-O | 5.95 | 132.59 | 120.10 |
| 1 | A | 184 | ASP | N-CA-CB | -5.95 | 99.89 | 110.60 |
| 1 | C | 355 | ILE | CB-CA-C | -5.95 | 99.70 | 111.60 |
| 1 | D | 244 | SER | C-N-CA | 5.95 | 136.57 | 121.70 |
| 1 | D | 308 | LYS | O-C-N | -5.95 | 113.18 | 122.70 |
| 1 | L | 146 | ASP | CB-CG-OD1 | 5.95 | 123.65 | 118.30 |
| 1 | D | 464 | ASN | CB-CG-OD1 | -5.95 | 109.71 | 121.60 |
| 1 | E | 312 | ALA | N-CA-CB | 5.95 | 118.43 | 110.10 |
| 1 | G | 260 | ASN | CA-CB-CG | 5.95 | 126.48 | 113.40 |
| 1 | I | 495 | ALA | N-CA-C | 5.95 | 127.06 | 111.00 |
| 1 | L | 333 | PHE | CD1-CG-CD2 | -5.95 | 110.57 | 118.30 |
| 1 | P | 379 | VAL | CA-CB-CG2 | 5.95 | 119.82 | 110.90 |
| 1 | D | 497 | GLU | OE1-CD-OE2 | 5.95 | 130.43 | 123.30 |
| 1 | O | 363 | ASP | CB-CG-OD2 | 5.95 | 123.65 | 118.30 |
| 1 | F | 119 | ILE | CA-CB-CG2 | -5.94 | 99.01 | 110.90 |
| 1 | I | 80 | GLU | OE1-CD-OE2 | -5.94 | 116.17 | 123.30 |
| 1 | J | 15 | TYR | C-N-CA | 5.94 | 136.56 | 121.70 |
| 1 | J | 206 | THR | CA-CB-CG2 | 5.94 | 120.72 | 112.40 |
| 1 | A | 489 | ARG | N-CA-CB | 5.94 | 121.30 | 110.60 |
| 1 | C | 71 | GLU | O-C-N | -5.94 | 113.19 | 122.70 |
| 1 | D | 373 | ILE | CA-C-O | -5.94 | 107.62 | 120.10 |
| 1 | I | 13 | LYS | CA-C-N | 5.94 | 130.27 | 117.20 |
| 1 | J | 263 | PHE | CG-CD2-CE2 | 5.94 | 127.34 | 120.80 |
| 1 | K | 163 | ALA | N-CA-CB | 5.94 | 118.42 | 110.10 |
| 1 | M | 313 | GLN | OE1-CD-NE2 | -5.94 | 108.23 | 121.90 |
| 1 | P | 103 | LEU | CB-CG-CD1 | 5.94 | 121.10 | 111.00 |
| 1 | C | 371 | CYS | O-C-N | -5.94 | 113.20 | 122.70 |
| 1 | H | 164 | GLU | N-CA-C | 5.94 | 127.04 | 111.00 |
| 1 | N | 129 | GLN | N-CA-CB | 5.94 | 121.30 | 110.60 |
| 1 | O | 490 | ILE | CG1-CB-CG2 | -5.94 | 98.33 | 111.40 |
| 1 | F | 150 | LEU | CB-CG-CD2 | 5.94 | 121.10 | 111.00 |
| 1 | O | 11 | ASN | CB-CA-C | 5.94 | 122.28 | 110.40 |
| 1 | H | 358 | VAL | O-C-N | 5.94 | 132.20 | 122.70 |
| 1 | I | 11 | ASN | CB-CG-ND2 | 5.94 | 130.95 | 116.70 |
| 1 | I | 214 | VAL | CA-C-N | -5.94 | 104.14 | 117.20 |
| 1 | J | 389 | LEU | N-CA-CB | 5.94 | 122.27 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 322 | GLU | CG-CD-OE1 | -5.94 | 106.42 | 118.30 |
| 1 | N | 12 | MET | N-CA-C | 5.94 | 127.03 | 111.00 |
| 1 | O | 298 | ALA | CB-CA-C | 5.94 | 119.01 | 110.10 |
| 1 | D | 248 | LYS | CD-CE-NZ | -5.94 | 98.05 | 111.70 |
| 1 | H | 350 | THR | CB-CA-C | -5.94 | 95.57 | 111.60 |
| 1 | I | 77 | MET | CG-SD-CE | 5.94 | 109.70 | 100.20 |
| 1 | K | 364 | ASP | C-N-CA | 5.94 | 136.54 | 121.70 |
| 1 | L | 9 | PRO | CA-N-CD | -5.94 | 103.19 | 111.50 |
| 1 | A | 52 | LEU | C-N-CA | 5.93 | 134.76 | 122.30 |
| 1 | B | 292 | MET | N-CA-CB | 5.93 | 121.28 | 110.60 |
| 1 | J | 62 | VAL | CA-CB-CG1 | -5.93 | 102.00 | 110.90 |
| 1 | L | 11 | ASN | N-CA-CB | 5.93 | 121.28 | 110.60 |
| 1 | L | 381 | GLY | O-C-N | -5.93 | 113.11 | 123.20 |
| 1 | O | 302 | ASN | CB-CA-C | 5.93 | 122.27 | 110.40 |
| 1 | O | 308 | LYS | CG-CD-CE | 5.93 | 129.71 | 111.90 |
| 1 | P | 237 | CYS | CA-C-N | -5.93 | 104.14 | 117.20 |
| 1 | B | 359 | ALA | CA-C-O | 5.93 | 132.56 | 120.10 |
| 1 | E | 49 | VAL | O-C-N | -5.93 | 113.21 | 122.70 |
| 1 | I | 260 | ASN | O-C-N | 5.93 | 132.19 | 122.70 |
| 1 | I | 260 | ASN | CB-CA-C | 5.93 | 122.27 | 110.40 |
| 1 | P | 224 | PRO | CA-N-CD | -5.93 | 103.20 | 111.50 |
| 1 | B | 15 | TYR | CZ-CE2-CD2 | 5.93 | 125.14 | 119.80 |
| 1 | C | 469 | PRO | CA-C-O | -5.93 | 105.97 | 120.20 |
| 1 | M | 178 | VAL | N-CA-C | 5.93 | 127.01 | 111.00 |
| 1 | B | 29 | ARG | CD-NE-CZ | 5.93 | 131.90 | 123.60 |
| 1 | H | 253 | GLU | O-C-N | -5.93 | 113.21 | 122.70 |
| 1 | I | 69 | SER | CA-C-O | -5.93 | 107.65 | 120.10 |
| 1 | L | 93 | THR | CA-CB-OG1 | 5.93 | 121.45 | 109.00 |
| 1 | M | 445 | GLY | CA-C-N | -5.93 | 104.16 | 117.20 |
| 1 | P | 122 | LYS | O-C-N | -5.93 | 113.12 | 123.20 |
| 1 | G | 317 | ASP | CA-CB-CG | 5.93 | 126.44 | 113.40 |
| 1 | O | 351 | THR | N-CA-C | 5.93 | 127.01 | 111.00 |
| 1 | O | 479 | SER | N-CA-CB | 5.93 | 119.39 | 110.50 |
| 1 | C | 339 | HIS | CA-C-O | -5.93 | 107.65 | 120.10 |
| 1 | C | 379 | VAL | N-CA-C | 5.93 | 127.00 | 111.00 |
| 1 | D | 151 | THR | CA-C-O | -5.93 | 107.66 | 120.10 |
| 1 | A | 271 | LEU | O-C-N | 5.92 | 132.18 | 122.70 |
| 1 | C | 161 | LYS | O-C-N | -5.92 | 113.13 | 123.20 |
| 1 | D | 484 | THR | CA-CB-CG2 | -5.92 | 104.11 | 112.40 |
| 1 | J | 212 | VAL | O-C-N | -5.92 | 113.22 | 122.70 |
| 1 | J | 396 | TYR | CG-CD2-CE2 | 5.92 | 126.04 | 121.30 |
| 1 | J | 438 | ARG | NH1-CZ-NH2 | 5.92 | 125.92 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 107 | ALA | O-C-N | -5.92 | 113.22 | 122.70 |
| 1 | M | 318 | ALA | N-CA-CB | 5.92 | 118.39 | 110.10 |
| 1 | O | 216 | LYS | N-CA-CB | 5.92 | 121.27 | 110.60 |
| 1 | G | 12 | MET | N-CA-CB | -5.92 | 99.94 | 110.60 |
| 1 | A | 98 | VAL | O-C-N | 5.92 | 132.18 | 122.70 |
| 1 | A | 166 | ALA | CB-CA-C | -5.92 | 101.22 | 110.10 |
| 1 | G | 484 | THR | N-CA-C | 5.92 | 126.99 | 111.00 |
| 1 | G | 491 | ASP | OD1-CG-OD2 | -5.92 | 112.05 | 123.30 |
| 1 | K | 182 | VAL | CG1-CB-CG2 | -5.92 | 101.43 | 110.90 |
| 1 | N | 138 | ILE | CA-C-O | -5.92 | 107.67 | 120.10 |
| 1 | O | 340 | PRO | O-C-N | -5.92 | 113.23 | 122.70 |
| 1 | E | 94 | THR | N-CA-CB | 5.92 | 121.55 | 110.30 |
| 1 | E | 487 | LEU | O-C-N | -5.92 | 113.23 | 122.70 |
| 1 | F | 315 | LEU | N-CA-CB | 5.92 | 122.24 | 110.40 |
| 1 | G | 30 | ILE | N-CA-C | 5.92 | 126.98 | 111.00 |
| 1 | J | 319 | GLY | CA-C-O | -5.92 | 109.94 | 120.60 |
| 1 | M | 187 | LYS | CD-CE-NZ | 5.92 | 125.31 | 111.70 |
| 1 | G | 436 | LYS | O-C-N | -5.92 | 113.23 | 122.70 |
| 1 | K | 248 | LYS | O-C-N | 5.92 | 132.17 | 122.70 |
| 1 | K | 286 | ARG | CA-C-N | -5.92 | 104.18 | 117.20 |
| 1 | K | 409 | ARG | CA-CB-CG | 5.92 | 126.42 | 113.40 |
| 1 | O | 54 | ASP | OD1-CG-OD2 | -5.92 | 112.06 | 123.30 |
| 1 | O | 349 | GLY | CA-C-O | -5.92 | 109.95 | 120.60 |
| 1 | E | 200 | GLY | CA-C-O | -5.92 | 109.95 | 120.60 |
| 1 | E | 489 | ARG | CB-CA-C | 5.92 | 122.23 | 110.40 |
| 1 | L | 31 | ILE | CB-CA-C | 5.92 | 123.43 | 111.60 |
| 1 | B | 275 | TYR | CE1-CZ-CE2 | 5.91 | 129.26 | 119.80 |
| 1 | F | 191 | ASP | CB-CG-OD2 | 5.91 | 123.62 | 118.30 |
| 1 | J | 320 | LEU | CA-CB-CG | 5.91 | 128.90 | 115.30 |
| 1 | P | 361 | ALA | N-CA-CB | 5.91 | 118.38 | 110.10 |
| 1 | P | 381 | GLY | CA-C-O | -5.91 | 109.95 | 120.60 |
| 1 | E | 483 | SER | N-CA-CB | 5.91 | 119.37 | 110.50 |
| 1 | F | 114 | ASN | CB-CG-ND2 | 5.91 | 130.89 | 116.70 |
| 1 | K | 363 | ASP | C-N-CA | 5.91 | 136.48 | 121.70 |
| 1 | C | 91 | ASP | O-C-N | -5.91 | 113.15 | 123.20 |
| 1 | I | 424 | GLU | CG-CD-OE1 | 5.91 | 130.12 | 118.30 |
| 1 | J | 183 | ASP | CA-CB-CG | 5.91 | 126.41 | 113.40 |
| 1 | M | 462 | CYS | CA-C-O | -5.91 | 107.69 | 120.10 |
| 1 | P | 229 | ASP | C-N-CA | 5.91 | 136.48 | 121.70 |
| 1 | B | 188 | VAL | CA-CB-CG2 | -5.91 | 102.04 | 110.90 |
| 1 | C | 126 | ALA | N-CA-CB | 5.91 | 118.37 | 110.10 |
| 1 | I | 353 | HIS | CA-C-O | -5.91 | 107.69 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 336 | GLU | CA-C-O | -5.91 | 107.69 | 120.10 |
| 1 | O | 136 | LYS | O-C-N | -5.91 | 113.25 | 122.70 |
| 1 | O | 276 | LEU | CB-CG-CD1 | -5.91 | 100.96 | 111.00 |
| 1 | F | 120 | VAL | CG1-CB-CG2 | 5.91 | 120.35 | 110.90 |
| 1 | H | 26 | LEU | CB-CA-C | 5.91 | 121.42 | 110.20 |
| 1 | J | 203 | ILE | CA-C-O | -5.91 | 107.69 | 120.10 |
| 1 | L | 309 | ASP | CA-C-O | -5.91 | 107.69 | 120.10 |
| 1 | M | 220 | SER | O-C-N | 5.91 | 132.15 | 122.70 |
| 1 | A | 309 | ASP | OD1-CG-OD2 | -5.91 | 112.08 | 123.30 |
| 1 | B | 265 | GLN | CB-CG-CD | 5.91 | 126.95 | 111.60 |
| 1 | H | 136 | LYS | CB-CG-CD | 5.91 | 126.95 | 111.60 |
| 1 | L | 91 | ASP | CA-CB-CG | 5.91 | 126.39 | 113.40 |
| 1 | O | 167 | LYS | O-C-N | 5.91 | 132.15 | 122.70 |
| 1 | H | 88 | GLU | CA-C-N | 5.90 | 130.19 | 117.20 |
| 1 | J | 23 | MET | CG-SD-CE | 5.90 | 109.65 | 100.20 |
| 1 | N | 57 | VAL | CA-CB-CG2 | -5.90 | 102.04 | 110.90 |
| 1 | H | 140 | CYS | N-CA-C | 5.90 | 126.94 | 111.00 |
| 1 | I | 449 | ALA | CB-CA-C | 5.90 | 118.95 | 110.10 |
| 1 | J | 42 | LYS | N-CA-CB | -5.90 | 99.98 | 110.60 |
| 1 | J | 195 | ILE | N-CA-CB | -5.90 | 97.22 | 110.80 |
| 1 | P | 236 | ASN | C-N-CA | 5.90 | 136.45 | 121.70 |
| 1 | A | 245 | GLU | CB-CA-C | 5.90 | 122.20 | 110.40 |
| 1 | D | 78 | LEU | CB-CA-C | 5.90 | 121.41 | 110.20 |
| 1 | D | 398 | GLU | N-CA-CB | 5.90 | 121.22 | 110.60 |
| 1 | F | 325 | LYS | N-CA-CB | 5.90 | 121.22 | 110.60 |
| 1 | M | 86 | GLU | O-C-N | -5.90 | 113.26 | 122.70 |
| 1 | P | 264 | CYS | CA-C-N | -5.90 | 104.22 | 117.20 |
| 1 | C | 14 | ARG | CB-CG-CD | 5.90 | 126.94 | 111.60 |
| 1 | C | 56 | VAL | CG1-CB-CG2 | 5.90 | 120.34 | 110.90 |
| 1 | D | 277 | ALA | O-C-N | -5.90 | 113.26 | 122.70 |
| 1 | K | 141 | GLU | OE1-CD-OE2 | -5.90 | 116.22 | 123.30 |
| 1 | A | 411 | PHE | CB-CG-CD2 | 5.90 | 124.93 | 120.80 |
| 1 | B | 169 | LYS | O-C-N | 5.90 | 132.14 | 122.70 |
| 1 | B | 279 | GLU | OE1-CD-OE2 | 5.90 | 130.38 | 123.30 |
| 1 | E | 54 | ASP | O-C-N | -5.90 | 113.26 | 122.70 |
| 1 | F | 37 | SER | N-CA-C | 5.90 | 126.92 | 111.00 |
| 1 | F | 375 | ASP | CB-CG-OD1 | 5.90 | 123.61 | 118.30 |
| 1 | G | 432 | GLU | N-CA-CB | 5.90 | 121.21 | 110.60 |
| 1 | M | 413 | ASP | OD1-CG-OD2 | -5.90 | 112.10 | 123.30 |
| 1 | B | 330 | SER | CA-C-N | 5.89 | 130.17 | 117.20 |
| 1 | J | 51 | ASP | N-CA-C | 5.89 | 126.92 | 111.00 |
| 1 | J | 156 | THR | CA-CB-CG2 | -5.89 | 104.15 | 112.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 29 | ARG | N-CA-CB | 5.89 | 121.21 | 110.60 |
| 1 | M | 204 | ASP | N-CA-CB | 5.89 | 121.21 | 110.60 |
| 1 | M | 454 | PHE | CD1-CG-CD2 | 5.89 | 125.96 | 118.30 |
| 1 | N | 308 | LYS | CD-CE-NZ | 5.89 | 125.26 | 111.70 |
| 1 | O | 109 | GLU | OE1-CD-OE2 | 5.89 | 130.37 | 123.30 |
| 1 | B | 163 | ALA | O-C-N | 5.89 | 132.13 | 122.70 |
| 1 | G | 42 | LYS | O-C-N | -5.89 | 113.18 | 123.20 |
| 1 | G | 329 | ASP | CA-C-O | -5.89 | 107.73 | 120.10 |
| 1 | H | 52 | LEU | N-CA-CB | 5.89 | 122.19 | 110.40 |
| 1 | H | 280 | GLY | CA-C-O | -5.89 | 109.99 | 120.60 |
| 1 | K | 437 | VAL | CA-CB-CG2 | -5.89 | 102.06 | 110.90 |
| 1 | N | 78 | LEU | CB-CA-C | 5.89 | 121.40 | 110.20 |
| 1 | N | 183 | ASP | OD1-CG-OD2 | -5.89 | 112.10 | 123.30 |
| 1 | N | 486 | MET | N-CA-C | -5.89 | 95.09 | 111.00 |
| 1 | O | 293 | GLU | N-CA-CB | 5.89 | 121.21 | 110.60 |
| 1 | O | 439 | ALA | N-CA-CB | 5.89 | 118.35 | 110.10 |
| 1 | P | 36 | ARG | CG-CD-NE | -5.89 | 99.43 | 111.80 |
| 1 | I | 231 | LYS | CB-CA-C | 5.89 | 122.18 | 110.40 |
| 1 | C | 278 | LYS | C-N-CA | 5.89 | 136.42 | 121.70 |
| 1 | C | 370 | GLY | CA-C-O | -5.89 | 110.00 | 120.60 |
| 1 | H | 142 | VAL | CA-CB-CG1 | 5.89 | 119.73 | 110.90 |
| 1 | I | 217 | GLU | CA-CB-CG | 5.89 | 126.36 | 113.40 |
| 1 | M | 276 | LEU | CB-CG-CD1 | 5.89 | 121.01 | 111.00 |
| 1 | P | 427 | GLY | CA-C-O | -5.89 | 110.00 | 120.60 |
| 1 | B | 204 | ASP | CA-C-N | 5.89 | 130.15 | 117.20 |
| 1 | A | 83 | LYS | CA-CB-CG | 5.89 | 126.35 | 113.40 |
| 1 | A | 475 | GLN | CB-CG-CD | 5.89 | 126.91 | 111.60 |
| 1 | E | 317 | ASP | CA-CB-CG | 5.89 | 126.35 | 113.40 |
| 1 | G | 190 | LYS | CA-C-N | -5.89 | 104.25 | 117.20 |
| 1 | O | 225 | LYS | CA-CB-CG | 5.89 | 126.35 | 113.40 |
| 1 | B | 482 | GLU | CA-CB-CG | 5.88 | 126.34 | 113.40 |
| 1 | D | 61 | GLY | CA-C-N | 5.88 | 130.15 | 117.20 |
| 1 | D | 377 | ARG | NE-CZ-NH1 | 5.88 | 123.24 | 120.30 |
| 1 | E | 312 | ALA | N-CA-C | 5.88 | 126.89 | 111.00 |
| 1 | I | 91 | ASP | OD1-CG-OD2 | -5.88 | 112.12 | 123.30 |
| 1 | L | 279 | GLU | CA-CB-CG | -5.88 | 100.45 | 113.40 |
| 1 | N | 66 | ARG | N-CA-CB | -5.88 | 100.01 | 110.60 |
| 1 | O | 51 | ASP | N-CA-CB | 5.88 | 121.19 | 110.60 |
| 1 | P | 284 | ALA | N-CA-CB | 5.88 | 118.34 | 110.10 |
| 1 | C | 263 | PHE | CB-CG-CD2 | -5.88 | 116.68 | 120.80 |
| 1 | I | 309 | ASP | N-CA-CB | 5.88 | 121.19 | 110.60 |
| 1 | E | 351 | THR | CA-CB-CG2 | 5.88 | 120.64 | 112.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 95 | THR | O-C-N | -5.88 | 113.29 | 122.70 |
| 1 | H | 285 | ARG | CD-NE-CZ | 5.88 | 131.83 | 123.60 |
| 1 | K | 136 | LYS | N-CA-C | 5.88 | 126.88 | 111.00 |
| 1 | O | 91 | ASP | O-C-N | -5.88 | 113.20 | 123.20 |
| 1 | E | 156 | THR | O-C-N | 5.88 | 132.11 | 122.70 |
| 1 | G | 71 | GLU | CG-CD-OE1 | -5.88 | 106.54 | 118.30 |
| 1 | H | 234 | LEU | CB-CG-CD2 | 5.88 | 121.00 | 111.00 |
| 1 | M | 253 | GLU | CG-CD-OE1 | 5.88 | 130.06 | 118.30 |
| 1 | A | 465 | GLY | O-C-N | -5.88 | 113.29 | 122.70 |
| 1 | E | 324 | ARG | CA-CB-CG | 5.88 | 126.33 | 113.40 |
| 1 | E | 431 | ILE | O-C-N | -5.88 | 113.29 | 122.70 |
| 1 | F | 139 | ALA | CB-CA-C | 5.88 | 118.92 | 110.10 |
| 1 | H | 477 | ILE | O-C-N | -5.88 | 113.29 | 122.70 |
| 1 | I | 34 | THR | N-CA-CB | 5.88 | 121.47 | 110.30 |
| 1 | L | 35 | VAL | CA-CB-CG1 | -5.88 | 102.08 | 110.90 |
| 1 | N | 72 | HIS | CA-CB-CG | -5.88 | 103.61 | 113.60 |
| 1 | D | 339 | HIS | CG-ND1-CE1 | 5.88 | 116.43 | 108.20 |
| 1 | E | 151 | THR | CA-CB-OG1 | 5.88 | 121.34 | 109.00 |
| 1 | H | 293 | GLU | N-CA-C | 5.88 | 126.87 | 111.00 |
| 1 | J | 422 | LEU | CB-CG-CD2 | -5.88 | 101.01 | 111.00 |
| 1 | K | 17 | GLY | CA-C-O | -5.88 | 110.02 | 120.60 |
| 1 | L | 412 | ALA | CB-CA-C | -5.88 | 101.29 | 110.10 |
| 1 | E | 312 | ALA | CA-C-N | -5.88 | 104.28 | 117.20 |
| 1 | H | 12 | MET | CA-C-N | 5.88 | 130.12 | 117.20 |
| 1 | L | 432 | GLU | N-CA-CB | 5.88 | 121.17 | 110.60 |
| 1 | C | 380 | SER | O-C-N | -5.87 | 113.22 | 123.20 |
| 1 | E | 153 | ILE | CB-CA-C | 5.87 | 123.35 | 111.60 |
| 1 | G | 215 | ASP | C-N-CA | 5.87 | 136.38 | 121.70 |
| 1 | H | 150 | LEU | CB-CG-CD1 | 5.87 | 120.98 | 111.00 |
| 1 | J | 120 | VAL | CG1-CB-CG2 | 5.87 | 120.30 | 110.90 |
| 1 | K | 467 | VAL | CA-CB-CG1 | -5.87 | 102.09 | 110.90 |
| 1 | L | 55 | VAL | CA-C-O | -5.87 | 107.77 | 120.10 |
| 1 | A | 165 | LYS | CA-CB-CG | -5.87 | 100.48 | 113.40 |
| 1 | D | 384 | SER | N-CA-CB | 5.87 | 119.31 | 110.50 |
| 1 | G | 270 | ASP | CA-C-O | 5.87 | 132.43 | 120.10 |
| 1 | G | 476 | ALA | CA-C-O | -5.87 | 107.77 | 120.10 |
| 1 | H | 422 | LEU | CB-CG-CD2 | 5.87 | 120.98 | 111.00 |
| 1 | H | 442 | ALA | CB-CA-C | -5.87 | 101.29 | 110.10 |
| 1 | K | 67 | GLU | N-CA-CB | 5.87 | 121.17 | 110.60 |
| 1 | M | 240 | GLU | CA-CB-CG | 5.87 | 126.32 | 113.40 |
| 1 | M | 484 | THR | OG1-CB-CG2 | -5.87 | 96.49 | 110.00 |
| 1 | A | 342 | ALA | CB-CA-C | 5.87 | 118.91 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 36 | ARG | O-C-N | -5.87 | 113.31 | 122.70 |
| 1 | J | 91 | ASP | N-CA-CB | 5.87 | 121.17 | 110.60 |
| 1 | J | 347 | ILE | CA-CB-CG2 | 5.87 | 122.64 | 110.90 |
| 1 | K | 88 | GLU | OE1-CD-OE2 | 5.87 | 130.34 | 123.30 |
| 1 | A | 343 | VAL | CA-CB-CG2 | -5.87 | 102.10 | 110.90 |
| 1 | F | 208 | LEU | O-C-N | 5.87 | 132.09 | 122.70 |
| 1 | G | 136 | LYS | CA-C-O | -5.87 | 107.78 | 120.10 |
| 1 | G | 279 | GLU | N-CA-CB | 5.87 | 121.16 | 110.60 |
| 1 | J | 242 | THR | CA-CB-CG2 | 5.87 | 120.62 | 112.40 |
| 1 | L | 174 | ILE | CA-C-N | 5.87 | 130.11 | 117.20 |
| 1 | L | 353 | HIS | N-CA-CB | 5.87 | 121.16 | 110.60 |
| 1 | P | 220 | SER | C-N-CA | 5.87 | 136.37 | 121.70 |
| 1 | O | 452 | ASN | CB-CG-OD1 | -5.87 | 109.87 | 121.60 |
| 1 | D | 396 | TYR | O-C-N | -5.87 | 113.31 | 122.70 |
| 1 | E | 133 | GLU | CA-CB-CG | 5.87 | 126.30 | 113.40 |
| 1 | H | 118 | THR | O-C-N | 5.87 | 132.08 | 122.70 |
| 1 | I | 480 | ALA | N-CA-CB | -5.87 | 101.89 | 110.10 |
| 1 | M | 59 | ASN | CB-CG-OD1 | 5.87 | 133.33 | 121.60 |
| 1 | M | 457 | ALA | N-CA-CB | -5.87 | 101.89 | 110.10 |
| 1 | O | 7 | VAL | CG1-CB-CG2 | -5.87 | 101.52 | 110.90 |
| 1 | D | 226 | LYS | CD-CE-NZ | 5.86 | 125.18 | 111.70 |
| 1 | H | 315 | LEU | CD1-CG-CD2 | 5.86 | 128.09 | 110.50 |
| 1 | I | 241 | GLU | CG-CD-OE2 | -5.86 | 106.57 | 118.30 |
| 1 | J | 82 | ALA | N-CA-CB | 5.86 | 118.31 | 110.10 |
| 1 | N | 181 | VAL | N-CA-C | 5.86 | 126.83 | 111.00 |
| 1 | N | 234 | LEU | C-N-CA | -5.86 | 107.04 | 121.70 |
| 1 | O | 12 | MET | CA-C-O | -5.86 | 107.79 | 120.10 |
| 1 | A | 412 | ALA | N-CA-CB | -5.86 | 101.89 | 110.10 |
| 1 | A | 434 | LEU | O-C-N | -5.86 | 113.32 | 122.70 |
| 1 | P | 30 | ILE | CA-CB-CG2 | 5.86 | 122.62 | 110.90 |
| 1 | A | 202 | SER | O-C-N | -5.86 | 113.32 | 122.70 |
| 1 | K | 280 | GLY | C-N-CA | 5.86 | 136.35 | 121.70 |
| 1 | K | 359 | ALA | C-N-CA | 5.86 | 136.35 | 121.70 |
| 1 | M | 338 | LYS | CD-CE-NZ | 5.86 | 125.18 | 111.70 |
| 1 | O | 411 | PHE | CB-CA-C | 5.86 | 122.12 | 110.40 |
| 1 | P | 245 | GLU | CB-CA-C | 5.86 | 122.12 | 110.40 |
| 1 | A | 112 | ASP | N-CA-CB | 5.86 | 121.15 | 110.60 |
| 1 | E | 315 | LEU | O-C-N | -5.86 | 113.24 | 123.20 |
| 1 | I | 95 | THR | O-C-N | 5.86 | 132.07 | 122.70 |
| 1 | B | 57 | VAL | O-C-N | 5.86 | 132.07 | 122.70 |
| 1 | B | 453 | VAL | CG1-CB-CG2 | -5.86 | 101.53 | 110.90 |
| 1 | D | 451 | LEU | CB-CA-C | 5.86 | 121.33 | 110.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 325 | LYS | CA-C-O | -5.86 | 107.80 | 120.10 |
| 1 | G | 98 | VAL | CB-CA-C | -5.86 | 100.27 | 111.40 |
| 1 | K | 350 | THR | C-N-CA | 5.86 | 136.34 | 121.70 |
| 1 | K | 380 | SER | C-N-CA | -5.86 | 110.00 | 122.30 |
| 1 | P | 433 | ILE | CA-CB-CG1 | -5.86 | 99.87 | 111.00 |
| 1 | A | 14 | ARG | O-C-N | 5.86 | 132.07 | 122.70 |
| 1 | A | 487 | LEU | CB-CG-CD1 | -5.86 | 101.05 | 111.00 |
| 1 | B | 334 | VAL | CA-CB-CG1 | -5.86 | 102.12 | 110.90 |
| 1 | C | 217 | GLU | OE1-CD-OE2 | 5.86 | 130.33 | 123.30 |
| 1 | K | 472 | VAL | O-C-N | -5.86 | 113.33 | 122.70 |
| 1 | D | 470 | LEU | N-CA-CB | 5.85 | 122.11 | 110.40 |
| 1 | E | 129 | GLN | CB-CA-C | 5.85 | 122.11 | 110.40 |
| 1 | E | 310 | LEU | CA-CB-CG | 5.85 | 128.76 | 115.30 |
| 1 | G | 404 | GLU | CA-C-O | -5.85 | 107.81 | 120.10 |
| 1 | K | 368 | VAL | N-CA-C | 5.85 | 126.80 | 111.00 |
| 1 | O | 453 | VAL | N-CA-CB | -5.85 | 98.62 | 111.50 |
| 1 | P | 131 | ALA | CB-CA-C | -5.85 | 101.32 | 110.10 |
| 1 | D | 435 | VAL | CA-C-O | 5.85 | 132.39 | 120.10 |
| 1 | G | 60 | ASP | CA-CB-CG | 5.85 | 126.27 | 113.40 |
| 1 | G | 93 | THR | CA-CB-OG1 | 5.85 | 121.29 | 109.00 |
| 1 | N | 287 | VAL | O-C-N | -5.85 | 113.34 | 122.70 |
| 1 | D | 406 | LEU | CA-CB-CG | 5.85 | 128.75 | 115.30 |
| 1 | D | 479 | SER | CB-CA-C | 5.85 | 121.21 | 110.10 |
| 1 | L | 237 | CYS | O-C-N | -5.85 | 113.34 | 122.70 |
| 1 | L | 422 | LEU | O-C-N | 5.85 | 132.06 | 122.70 |
| 1 | M | 486 | MET | CB-CG-SD | 5.85 | 129.95 | 112.40 |
| 1 | C | 105 | ARG | NH1-CZ-NH2 | -5.85 | 112.97 | 119.40 |
| 1 | G | 270 | ASP | O-C-N | -5.85 | 113.34 | 122.70 |
| 1 | G | 420 | ARG | CG-CD-NE | -5.85 | 99.52 | 111.80 |
| 1 | H | 165 | LYS | CA-C-N | -5.85 | 104.34 | 117.20 |
| 1 | H | 391 | MET | CG-SD-CE | 5.85 | 109.56 | 100.20 |
| 1 | J | 21 | GLN | O-C-N | -5.85 | 113.34 | 122.70 |
| 1 | K | 116 | HIS | CA-C-O | -5.85 | 107.82 | 120.10 |
| 1 | M | 274 | HIS | CA-CB-CG | -5.85 | 103.66 | 113.60 |
| 1 | B | 489 | ARG | NE-CZ-NH2 | 5.85 | 123.22 | 120.30 |
| 1 | D | 35 | VAL | CA-CB-CG2 | -5.85 | 102.13 | 110.90 |
| 1 | G | 484 | THR | CA-CB-CG2 | -5.85 | 104.22 | 112.40 |
| 1 | I | 333 | PHE | CG-CD2-CE2 | 5.85 | 127.23 | 120.80 |
| 1 | K | 363 | ASP | OD1-CG-OD2 | -5.85 | 112.19 | 123.30 |
| 1 | J | 147 | LYS | O-C-N | -5.84 | 113.35 | 122.70 |
| 1 | J | 352 | GLU | CB-CA-C | 5.84 | 122.09 | 110.40 |
| 1 | L | 90 | GLY | CA-C-O | -5.84 | 110.08 | 120.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 187 | LYS | CB-CA-C | 5.84 | 122.09 | 110.40 |
| 1 | L | 281 | ILE | CB-CA-C | -5.84 | 99.91 | 111.60 |
| 1 | L | 313 | GLN | CB-CG-CD | 5.84 | 126.80 | 111.60 |
| 1 | L | 360 | ARG | CG-CD-NE | 5.84 | 124.08 | 111.80 |
| 1 | M | 229 | ASP | N-CA-CB | 5.84 | 121.12 | 110.60 |
| 1 | O | 154 | ALA | N-CA-CB | -5.84 | 101.92 | 110.10 |
| 1 | O | 244 | SER | CB-CA-C | 5.84 | 121.20 | 110.10 |
| 1 | O | 262 | LEU | CA-CB-CG | 5.84 | 128.74 | 115.30 |
| 1 | C | 152 | LYS | CB-CG-CD | 5.84 | 126.79 | 111.60 |
| 1 | L | 124 | TYR | CD1-CE1-CZ | -5.84 | 114.54 | 119.80 |
| 1 | M | 182 | VAL | CB-CA-C | -5.84 | 100.30 | 111.40 |
| 1 | B | 431 | ILE | C-N-CA | -5.84 | 107.10 | 121.70 |
| 1 | D | 27 | ALA | N-CA-CB | 5.84 | 118.28 | 110.10 |
| 1 | E | 18 | ARG | NH1-CZ-NH2 | -5.84 | 112.97 | 119.40 |
| 1 | E | 236 | ASN | OD1-CG-ND2 | -5.84 | 108.46 | 121.90 |
| 1 | H | 495 | ALA | N-CA-C | 5.84 | 126.77 | 111.00 |
| 1 | J | 204 | ASP | O-C-N | -5.84 | 113.36 | 122.70 |
| 1 | L | 320 | LEU | N-CA-CB | 5.84 | 122.08 | 110.40 |
| 1 | N | 404 | GLU | O-C-N | 5.84 | 132.05 | 122.70 |
| 1 | C | 336 | GLU | OE1-CD-OE2 | 5.84 | 130.31 | 123.30 |
| 1 | D | 348 | ARG | CD-NE-CZ | -5.84 | 115.42 | 123.60 |
| 1 | D | 350 | THR | C-N-CA | 5.84 | 136.30 | 121.70 |
| 1 | F | 227 | VAL | CA-C-N | -5.84 | 104.35 | 117.20 |
| 1 | K | 212 | VAL | CG1-CB-CG2 | -5.84 | 101.56 | 110.90 |
| 1 | M | 288 | LYS | CA-C-N | 5.84 | 130.05 | 117.20 |
| 1 | N | 114 | ASN | CA-C-N | 5.84 | 130.05 | 117.20 |
| 1 | I | 214 | VAL | CB-CA-C | -5.84 | 100.31 | 111.40 |
| 1 | I | 273 | GLN | N-CA-C | 5.84 | 126.76 | 111.00 |
| 1 | P | 429 | ASP | CA-C-O | 5.84 | 132.36 | 120.10 |
| 1 | I | 227 | VAL | CG1-CB-CG2 | 5.84 | 120.24 | 110.90 |
| 1 | L | 282 | VAL | CA-CB-CG1 | 5.84 | 119.66 | 110.90 |
| 1 | O | 161 | LYS | CA-CB-CG | 5.84 | 126.24 | 113.40 |
| 1 | P | 250 | MET | CA-CB-CG | 5.84 | 123.22 | 113.30 |
| 1 | D | 309 | ASP | CA-CB-CG | 5.83 | 126.24 | 113.40 |
| 1 | G | 270 | ASP | N-CA-CB | 5.83 | 121.10 | 110.60 |
| 1 | L | 348 | ARG | CD-NE-CZ | -5.83 | 115.43 | 123.60 |
| 1 | O | 474 | THR | O-C-N | 5.83 | 132.04 | 122.70 |
| 1 | P | 259 | ALA | C-N-CA | 5.83 | 136.29 | 121.70 |
| 1 | A | 435 | VAL | O-C-N | 5.83 | 132.03 | 122.70 |
| 1 | E | 314 | ASP | OD1-CG-OD2 | -5.83 | 112.22 | 123.30 |
| 1 | F | 41 | PRO | CA-C-N | -5.83 | 104.37 | 117.20 |
| 1 | F | 468 | GLU | O-C-N | 5.83 | 132.18 | 121.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 248 | LYS | CB-CA-C | 5.83 | 122.06 | 110.40 |
| 1 | L | 395 | GLU | CA-CB-CG | -5.83 | 100.57 | 113.40 |
| 1 | O | 432 | GLU | OE1-CD-OE2 | 5.83 | 130.30 | 123.30 |
| 1 | B | 376 | GLY | N-CA-C | 5.83 | 127.68 | 113.10 |
| 1 | G | 67 | GLU | OE1-CD-OE2 | 5.83 | 130.30 | 123.30 |
| 1 | I | 170 | LEU | O-C-N | 5.83 | 132.03 | 122.70 |
| 1 | L | 130 | LYS | CA-CB-CG | 5.83 | 126.23 | 113.40 |
| 1 | M | 488 | LEU | CB-CG-CD2 | -5.83 | 101.09 | 111.00 |
| 1 | N | 115 | VAL | CB-CA-C | 5.83 | 122.48 | 111.40 |
| 1 | O | 320 | LEU | O-C-N | -5.83 | 113.37 | 122.70 |
| 1 | P | 374 | GLU | O-C-N | -5.83 | 113.37 | 122.70 |
| 1 | C | 156 | THR | OG1-CB-CG2 | 5.83 | 123.41 | 110.00 |
| 1 | H | 288 | LYS | CA-C-O | -5.83 | 107.86 | 120.10 |
| 1 | J | 186 | GLY | CA-C-O | -5.83 | 110.11 | 120.60 |
| 1 | L | 316 | GLY | C-N-CA | 5.83 | 136.28 | 121.70 |
| 1 | L | 420 | ARG | CA-C-O | -5.83 | 107.86 | 120.10 |
| 1 | P | 478 | GLN | N-CA-CB | 5.83 | 121.09 | 110.60 |
| 1 | B | 81 | VAL | O-C-N | -5.83 | 113.37 | 122.70 |
| 1 | D | 62 | VAL | N-CA-C | 5.83 | 126.74 | 111.00 |
| 1 | E | 317 | ASP | N-CA-CB | 5.83 | 121.09 | 110.60 |
| 1 | F | 55 | VAL | O-C-N | -5.83 | 113.37 | 122.70 |
| 1 | G | 204 | ASP | CB-CG-OD1 | -5.83 | 113.05 | 118.30 |
| 1 | G | 307 | ILE | O-C-N | -5.83 | 113.37 | 122.70 |
| 1 | I | 114 | ASN | N-CA-C | 5.83 | 126.74 | 111.00 |
| 1 | L | 56 | VAL | CA-CB-CG2 | -5.83 | 102.16 | 110.90 |
| 1 | C | 372 | THR | CA-C-O | -5.83 | 107.86 | 120.10 |
| 1 | D | 360 | ARG | CA-C-O | -5.83 | 107.86 | 120.10 |
| 1 | B | 70 | VAL | CB-CA-C | -5.83 | 100.33 | 111.40 |
| 1 | B | 165 | LYS | CD-CE-NZ | 5.83 | 125.10 | 111.70 |
| 1 | C | 149 | ILE | O-C-N | 5.83 | 132.02 | 122.70 |
| 1 | O | 384 | SER | C-N-CA | 5.83 | 136.26 | 121.70 |
| 1 | C | 313 | GLN | CG-CD-OE1 | -5.82 | 109.95 | 121.60 |
| 1 | G | 212 | VAL | O-C-N | 5.82 | 132.02 | 122.70 |
| 1 | G | 308 | LYS | O-C-N | 5.82 | 132.02 | 122.70 |
| 1 | L | 245 | GLU | CB-CA-C | 5.82 | 122.05 | 110.40 |
| 1 | N | 271 | LEU | CB-CA-C | 5.82 | 121.26 | 110.20 |
| 1 | G | 308 | LYS | CB-CG-CD | -5.82 | 96.46 | 111.60 |
| 1 | H | 321 | VAL | CA-C-O | -5.82 | 107.88 | 120.10 |
| 1 | I | 408 | VAL | CA-CB-CG2 | 5.82 | 119.63 | 110.90 |
| 1 | A | 172 | GLU | C-N-CA | -5.82 | 107.15 | 121.70 |
| 1 | A | 259 | ALA | O-C-N | 5.82 | 132.01 | 122.70 |
| 1 | B | 218 | ARG | CD-NE-CZ | 5.82 | 131.75 | 123.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 439 | ALA | N-CA-CB | -5.82 | 101.95 | 110.10 |
| 1 | D | 274 | HIS | CG-ND1-CE1 | -5.82 | 98.13 | 105.70 |
| 1 | F | 29 | ARG | CA-CB-CG | 5.82 | 126.20 | 113.40 |
| 1 | F | 203 | ILE | CA-CB-CG2 | 5.82 | 122.54 | 110.90 |
| 1 | G | 208 | LEU | O-C-N | 5.82 | 132.01 | 122.70 |
| 1 | G | 221 | ALA | O-C-N | 5.82 | 132.01 | 122.70 |
| 1 | H | 13 | LYS | O-C-N | -5.82 | 113.39 | 122.70 |
| 1 | J | 420 | ARG | C-N-CA | -5.82 | 107.15 | 121.70 |
| 1 | L | 155 | MET | CB-CA-C | 5.82 | 122.04 | 110.40 |
| 1 | N | 104 | LEU | CA-C-O | -5.82 | 107.88 | 120.10 |
| 1 | N | 218 | ARG | C-N-CA | 5.82 | 136.25 | 121.70 |
| 1 | P | 270 | ASP | N-CA-CB | 5.82 | 121.08 | 110.60 |
| 1 | G | 321 | VAL | CG1-CB-CG2 | -5.82 | 101.59 | 110.90 |
| 1 | L | 140 | CYS | CA-C-O | -5.82 | 107.88 | 120.10 |
| 1 | L | 161 | LYS | C-N-CA | 5.82 | 134.52 | 122.30 |
| 1 | A | 333 | PHE | O-C-N | -5.82 | 113.39 | 122.70 |
| 1 | B | 188 | VAL | N-CA-CB | 5.82 | 124.30 | 111.50 |
| 1 | E | 156 | THR | OG1-CB-CG2 | 5.82 | 123.38 | 110.00 |
| 1 | J | 115 | VAL | N-CA-CB | 5.82 | 124.30 | 111.50 |
| 1 | K | 198 | LYS | C-N-CA | 5.82 | 136.25 | 121.70 |
| 1 | A | 72 | HIS | CB-CG-CD2 | -5.82 | 112.77 | 130.80 |
| 1 | A | 221 | ALA | CA-C-O | -5.82 | 107.89 | 120.10 |
| 1 | F | 265 | GLN | CB-CG-CD | 5.82 | 126.72 | 111.60 |
| 1 | M | 447 | LYS | CA-C-N | -5.82 | 104.41 | 117.20 |
| 1 | N | 201 | ALA | CA-C-O | -5.82 | 107.89 | 120.10 |
| 1 | O | 59 | ASN | CA-C-N | 5.82 | 130.00 | 117.20 |
| 1 | G | 405 | GLN | O-C-N | -5.81 | 113.40 | 122.70 |
| 1 | B | 195 | ILE | CA-CB-CG2 | -5.81 | 99.27 | 110.90 |
| 1 | C | 61 | GLY | CA-C-O | -5.81 | 110.14 | 120.60 |
| 1 | J | 88 | GLU | CA-C-O | -5.81 | 107.90 | 120.10 |
| 1 | J | 277 | ALA | O-C-N | -5.81 | 113.40 | 122.70 |
| 1 | N | 228 | THR | CA-CB-CG2 | -5.81 | 104.26 | 112.40 |
| 1 | B | 433 | ILE | CB-CA-C | -5.81 | 99.98 | 111.60 |
| 1 | F | 103 | LEU | CA-C-N | -5.81 | 104.42 | 117.20 |
| 1 | G | 322 | GLU | CB-CA-C | 5.81 | 122.02 | 110.40 |
| 1 | J | 224 | PRO | CA-N-CD | -5.81 | 103.36 | 111.50 |
| 1 | L | 14 | ARG | CA-C-O | -5.81 | 107.90 | 120.10 |
| 1 | B | 372 | THR | CA-C-O | -5.81 | 107.90 | 120.10 |
| 1 | D | 164 | GLU | C-N-CA | 5.81 | 136.22 | 121.70 |
| 1 | N | 55 | VAL | CA-CB-CG1 | 5.81 | 119.61 | 110.90 |
| 1 | O | 350 | THR | CA-CB-CG2 | 5.81 | 120.53 | 112.40 |
| 1 | C | 314 | ASP | CB-CG-OD1 | -5.81 | 113.07 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 109 | GLU | OE1-CD-OE2 | 5.81 | 130.27 | 123.30 |
| 1 | H | 355 | ILE | N-CA-C | 5.81 | 126.68 | 111.00 |
| 1 | I | 441 | HIS | CA-CB-CG | 5.81 | 123.47 | 113.60 |
| 1 | O | 46 | LYS | CA-C-O | -5.81 | 107.91 | 120.10 |
| 1 | O | 406 | LEU | CB-CG-CD2 | -5.81 | 101.13 | 111.00 |
| 1 | F | 20 | ALA | N-CA-CB | 5.81 | 118.23 | 110.10 |
| 1 | F | 159 | THR | CA-C-O | 5.81 | 132.29 | 120.10 |
| 1 | I | 71 | GLU | OE1-CD-OE2 | -5.81 | 116.33 | 123.30 |
| 1 | L | 291 | ASP | OD1-CG-OD2 | -5.81 | 112.27 | 123.30 |
| 1 | O | 266 | LYS | CA-C-O | -5.81 | 107.91 | 120.10 |
| 1 | C | 352 | GLU | OE1-CD-OE2 | 5.80 | 130.26 | 123.30 |
| 1 | H | 227 | VAL | CG1-CB-CG2 | -5.80 | 101.61 | 110.90 |
| 1 | H | 493 | VAL | N-CA-CB | 5.80 | 124.27 | 111.50 |
| 1 | N | 265 | GLN | CA-CB-CG | 5.80 | 126.17 | 113.40 |
| 1 | O | 412 | ALA | O-C-N | 5.80 | 131.99 | 122.70 |
| 1 | P | 172 | GLU | CG-CD-OE2 | -5.80 | 106.69 | 118.30 |
| 1 | B | 165 | LYS | CA-C-N | -5.80 | 104.43 | 117.20 |
| 1 | M | 21 | GLN | O-C-N | 5.80 | 131.98 | 122.70 |
| 1 | P | 108 | GLU | OE1-CD-OE2 | -5.80 | 116.34 | 123.30 |
| 1 | A | 243 | ALA | N-CA-C | 5.80 | 126.66 | 111.00 |
| 1 | C | 404 | GLU | CG-CD-OE2 | -5.80 | 106.70 | 118.30 |
| 1 | G | 7 | VAL | CB-CA-C | -5.80 | 100.38 | 111.40 |
| 1 | K | 388 | GLU | N-CA-CB | 5.80 | 121.04 | 110.60 |
| 1 | B | 348 | ARG | NE-CZ-NH2 | 5.80 | 123.20 | 120.30 |
| 1 | B | 477 | ILE | CA-CB-CG1 | 5.80 | 122.02 | 111.00 |
| 1 | C | 340 | PRO | CA-N-CD | -5.80 | 103.38 | 111.50 |
| 1 | G | 444 | ASN | O-C-N | -5.80 | 113.34 | 123.20 |
| 1 | J | 291 | ASP | OD1-CG-OD2 | 5.80 | 134.32 | 123.30 |
| 1 | D | 68 | MET | CB-CA-C | -5.80 | 98.80 | 110.40 |
| 1 | E | 128 | ALA | CA-C-N | -5.80 | 104.45 | 117.20 |
| 1 | H | 202 | SER | O-C-N | -5.80 | 113.42 | 122.70 |
| 1 | J | 182 | VAL | C-N-CA | 5.80 | 136.19 | 121.70 |
| 1 | K | 341 | LYS | N-CA-CB | 5.80 | 121.03 | 110.60 |
| 1 | L | 288 | LYS | O-C-N | -5.80 | 113.43 | 122.70 |
| 1 | O | 280 | GLY | CA-C-N | 5.80 | 129.95 | 117.20 |
| 1 | P | 378 | ILE | CB-CG1-CD1 | 5.80 | 130.13 | 113.90 |
| 1 | D | 210 | LYS | CA-CB-CG | 5.79 | 126.15 | 113.40 |
| 1 | G | 311 | SER | N-CA-CB | 5.79 | 119.19 | 110.50 |
| 1 | P | 269 | ASP | CB-CG-OD2 | 5.79 | 123.52 | 118.30 |
| 1 | A | 84 | THR | N-CA-CB | 5.79 | 121.31 | 110.30 |
| 1 | A | 482 | GLU | O-C-N | -5.79 | 113.43 | 122.70 |
| 1 | C | 72 | HIS | CA-C-N | 5.79 | 133.32 | 117.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 124 | TYR | O-C-N | 5.79 | 131.97 | 122.70 |
| 1 | I | 260 | ASN | CA-CB-CG | 5.79 | 126.15 | 113.40 |
| 1 | L | 454 | PHE | CB-CG-CD2 | -5.79 | 116.75 | 120.80 |
| 1 | P | 233 | ALA | O-C-N | 5.79 | 131.97 | 122.70 |
| 1 | A | 9 | PRO | O-C-N | -5.79 | 113.43 | 122.70 |
| 1 | C | 57 | VAL | CG1-CB-CG2 | 5.79 | 120.17 | 110.90 |
| 1 | C | 422 | LEU | O-C-N | 5.79 | 131.97 | 122.70 |
| 1 | I | 132 | GLN | O-C-N | 5.79 | 131.97 | 122.70 |
| 1 | N | 415 | LEU | N-CA-CB | 5.79 | 121.98 | 110.40 |
| 1 | N | 432 | GLU | OE1-CD-OE2 | 5.79 | 130.25 | 123.30 |
| 1 | E | 138 | ILE | N-CA-CB | 5.79 | 124.12 | 110.80 |
| 1 | F | 91 | ASP | OD1-CG-OD2 | -5.79 | 112.30 | 123.30 |
| 1 | G | 285 | ARG | CG-CD-NE | 5.79 | 123.96 | 111.80 |
| 1 | B | 50 | ASP | CA-CB-CG | 5.79 | 126.13 | 113.40 |
| 1 | B | 111 | LEU | C-N-CA | 5.79 | 136.17 | 121.70 |
| 1 | E | 294 | LYS | N-CA-CB | 5.79 | 121.02 | 110.60 |
| 1 | N | 400 | ILE | CA-C-N | 5.79 | 129.94 | 117.20 |
| 1 | O | 74 | ALA | C-N-CA | 5.79 | 136.17 | 121.70 |
| 1 | O | 435 | VAL | CA-C-N | -5.79 | 104.47 | 117.20 |
| 1 | F | 323 | GLU | C-N-CA | 5.79 | 136.17 | 121.70 |
| 1 | G | 305 | THR | CA-CB-OG1 | 5.79 | 121.15 | 109.00 |
| 1 | N | 110 | LEU | CD1-CG-CD2 | 5.79 | 127.86 | 110.50 |
| 1 | O | 296 | ALA | O-C-N | 5.79 | 131.96 | 122.70 |
| 1 | P | 437 | VAL | CA-CB-CG2 | -5.79 | 102.22 | 110.90 |
| 1 | A | 242 | THR | CA-CB-CG2 | -5.79 | 104.30 | 112.40 |
| 1 | A | 471 | ARG | NH1-CZ-NH2 | -5.79 | 113.04 | 119.40 |
| 1 | C | 338 | LYS | CA-CB-CG | 5.79 | 126.13 | 113.40 |
| 1 | C | 394 | ARG | CD-NE-CZ | 5.79 | 131.70 | 123.60 |
| 1 | C | 443 | SER | N-CA-CB | -5.79 | 101.82 | 110.50 |
| 1 | L | 444 | ASN | O-C-N | 5.79 | 133.03 | 123.20 |
| 1 | P | 26 | LEU | CB-CG-CD1 | 5.79 | 120.83 | 111.00 |
| 1 | D | 231 | LYS | CB-CG-CD | 5.78 | 126.64 | 111.60 |
| 1 | J | 149 | ILE | N-CA-CB | 5.78 | 124.10 | 110.80 |
| 1 | J | 310 | LEU | O-C-N | 5.78 | 131.95 | 122.70 |
| 1 | D | 452 | ASN | CA-CB-CG | -5.78 | 100.68 | 113.40 |
| 1 | I | 451 | LEU | O-C-N | -5.78 | 113.45 | 122.70 |
| 1 | K | 120 | VAL | O-C-N | -5.78 | 113.45 | 122.70 |
| 1 | N | 90 | GLY | O-C-N | 5.78 | 131.95 | 122.70 |
| 1 | B | 38 | THR | CA-CB-OG1 | 5.78 | 121.14 | 109.00 |
| 1 | G | 82 | ALA | O-C-N | -5.78 | 113.45 | 122.70 |
| 1 | G | 495 | ALA | CA-C-O | -5.78 | 107.96 | 120.10 |
| 1 | I | 129 | GLN | CA-CB-CG | 5.78 | 126.12 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 314 | ASP | CA-C-N | 5.78 | 129.92 | 117.20 |
| 1 | I | 452 | ASN | CA-C-O | -5.78 | 107.96 | 120.10 |
| 1 | O | 313 | GLN | N-CA-CB | 5.78 | 121.01 | 110.60 |
| 1 | O | 474 | THR | CA-C-O | -5.78 | 107.96 | 120.10 |
| 1 | P | 360 | ARG | NE-CZ-NH1 | 5.78 | 123.19 | 120.30 |
| 1 | B | 38 | THR | N-CA-C | 5.78 | 126.60 | 111.00 |
| 1 | B | 303 | VAL | CA-CB-CG1 | 5.78 | 119.57 | 110.90 |
| 1 | I | 49 | VAL | CG1-CB-CG2 | 5.78 | 120.15 | 110.90 |
| 1 | P | 203 | ILE | CA-C-N | -5.78 | 104.49 | 117.20 |
| 1 | C | 359 | ALA | C-N-CA | 5.78 | 136.14 | 121.70 |
| 1 | F | 190 | LYS | C-N-CA | 5.78 | 136.15 | 121.70 |
| 1 | G | 464 | ASN | OD1-CG-ND2 | 5.78 | 135.19 | 121.90 |
| 1 | O | 11 | ASN | CA-CB-CG | 5.78 | 126.11 | 113.40 |
| 1 | P | 265 | GLN | N-CA-C | 5.78 | 126.60 | 111.00 |
| 1 | A | 299 | THR | O-C-N | -5.78 | 113.38 | 123.20 |
| 1 | A | 399 | GLY | O-C-N | -5.78 | 113.46 | 122.70 |
| 1 | C | 133 | GLU | O-C-N | -5.78 | 113.46 | 122.70 |
| 1 | C | 374 | GLU | CA-CB-CG | 5.78 | 126.11 | 113.40 |
| 1 | F | 306 | ASN | CA-CB-CG | 5.78 | 126.11 | 113.40 |
| 1 | I | 84 | THR | O-C-N | 5.78 | 131.94 | 122.70 |
| 1 | J | 309 | ASP | CB-CA-C | -5.78 | 98.85 | 110.40 |
| 1 | L | 202 | SER | CA-C-O | 5.78 | 132.23 | 120.10 |
| 1 | M | 42 | LYS | C-N-CA | -5.78 | 110.17 | 122.30 |
| 1 | M | 103 | LEU | CB-CA-C | 5.78 | 121.17 | 110.20 |
| 1 | P | 34 | THR | CA-C-N | -5.78 | 104.49 | 117.20 |
| 1 | C | 458 | VAL | CG1-CB-CG2 | 5.77 | 120.14 | 110.90 |
| 1 | M | 301 | ALA | O-C-N | 5.77 | 131.94 | 122.70 |
| 1 | A | 66 | ARG | NE-CZ-NH2 | -5.77 | 117.41 | 120.30 |
| 1 | A | 76 | LYS | N-CA-CB | 5.77 | 120.99 | 110.60 |
| 1 | A | 469 | PRO | CA-CB-CG | 5.77 | 115.77 | 104.80 |
| 1 | B | 151 | THR | C-N-CA | 5.77 | 136.13 | 121.70 |
| 1 | C | 264 | CYS | CB-CA-C | 5.77 | 121.95 | 110.40 |
| 1 | I | 34 | THR | O-C-N | -5.77 | 113.47 | 122.70 |
| 1 | K | 249 | ASP | N-CA-CB | 5.77 | 120.99 | 110.60 |
| 1 | L | 429 | ASP | N-CA-CB | 5.77 | 120.99 | 110.60 |
| 1 | M | 317 | ASP | O-C-N | -5.77 | 113.46 | 122.70 |
| 1 | A | 405 | GLN | CB-CA-C | -5.77 | 98.86 | 110.40 |
| 1 | D | 56 | VAL | O-C-N | -5.77 | 113.47 | 122.70 |
| 1 | H | 195 | ILE | CB-CA-C | 5.77 | 123.14 | 111.60 |
| 1 | K | 278 | LYS | O-C-N | -5.77 | 113.47 | 122.70 |
| 1 | E | 29 | ARG | CA-CB-CG | 5.77 | 126.09 | 113.40 |
| 1 | E | 185 | GLU | OE1-CD-OE2 | -5.77 | 116.38 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 303 | VAL | CA-CB-CG2 | 5.77 | 119.55 | 110.90 |
| 1 | K | 291 | ASP | OD1-CG-OD2 | 5.77 | 134.26 | 123.30 |
| 1 | K | 375 | ASP | CB-CG-OD1 | -5.77 | 113.11 | 118.30 |
| 1 | A | 81 | VAL | CA-CB-CG1 | 5.77 | 119.55 | 110.90 |
| 1 | D | 66 | ARG | NH1-CZ-NH2 | 5.77 | 125.74 | 119.40 |
| 1 | I | 66 | ARG | N-CA-CB | 5.77 | 120.98 | 110.60 |
| 1 | L | 184 | ASP | CB-CA-C | 5.77 | 121.93 | 110.40 |
| 1 | C | 488 | LEU | CB-CA-C | -5.76 | 99.25 | 110.20 |
| 1 | G | 66 | ARG | NH1-CZ-NH2 | 5.76 | 125.74 | 119.40 |
| 1 | H | 247 | LEU | N-CA-CB | 5.76 | 121.93 | 110.40 |
| 1 | I | 208 | LEU | CA-CB-CG | 5.76 | 128.56 | 115.30 |
| 1 | M | 430 | ALA | CB-CA-C | 5.76 | 118.75 | 110.10 |
| 1 | N | 384 | SER | CB-CA-C | 5.76 | 121.05 | 110.10 |
| 1 | H | 94 | THR | N-CA-CB | 5.76 | 121.25 | 110.30 |
| 1 | J | 428 | LEU | N-CA-C | 5.76 | 126.56 | 111.00 |
| 1 | O | 89 | VAL | CG1-CB-CG2 | -5.76 | 101.68 | 110.90 |
| 1 | A | 88 | GLU | O-C-N | -5.76 | 113.48 | 122.70 |
| 1 | B | 87 | LYS | O-C-N | -5.76 | 113.48 | 122.70 |
| 1 | F | 102 | GLU | O-C-N | -5.76 | 113.48 | 122.70 |
| 1 | F | 270 | ASP | CA-C-N | 5.76 | 129.88 | 117.20 |
| 1 | K | 174 | ILE | CA-CB-CG1 | 5.76 | 121.95 | 111.00 |
| 1 | M | 12 | MET | CB-CA-C | -5.76 | 98.88 | 110.40 |
| 1 | A | 306 | ASN | O-C-N | -5.76 | 113.48 | 122.70 |
| 1 | B | 385 | THR | CA-CB-CG2 | 5.76 | 120.46 | 112.40 |
| 1 | D | 359 | ALA | CA-C-O | -5.76 | 108.00 | 120.10 |
| 1 | E | 55 | VAL | CG1-CB-CG2 | -5.76 | 101.69 | 110.90 |
| 1 | E | 396 | TYR | CG-CD1-CE1 | 5.76 | 125.91 | 121.30 |
| 1 | G | 451 | LEU | CB-CA-C | 5.76 | 121.14 | 110.20 |
| 1 | G | 463 | GLU | CB-CG-CD | -5.76 | 98.65 | 114.20 |
| 1 | H | 48 | LEU | CB-CG-CD2 | 5.76 | 120.79 | 111.00 |
| 1 | M | 266 | LYS | CD-CE-NZ | 5.76 | 124.94 | 111.70 |
| 1 | N | 200 | GLY | C-N-CA | 5.76 | 136.10 | 121.70 |
| 1 | A | 427 | GLY | C-N-CA | 5.76 | 136.09 | 121.70 |
| 1 | L | 341 | LYS | N-CA-CB | 5.76 | 120.97 | 110.60 |
| 1 | O | 71 | GLU | CG-CD-OE2 | 5.76 | 129.81 | 118.30 |
| 1 | E | 268 | ILE | O-C-N | -5.76 | 113.49 | 122.70 |
| 1 | K | 464 | ASN | CA-C-O | -5.76 | 108.01 | 120.10 |
| 1 | N | 490 | ILE | CA-CB-CG1 | 5.76 | 121.94 | 111.00 |
| 1 | O | 39 | LEU | N-CA-C | 5.76 | 126.54 | 111.00 |
| 1 | O | 429 | ASP | N-CA-CB | 5.76 | 120.96 | 110.60 |
| 1 | D | 234 | LEU | O-C-N | -5.75 | 113.49 | 122.70 |
| 1 | F | 109 | GLU | CG-CD-OE2 | -5.75 | 106.79 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 190 | LYS | CB-CG-CD | 5.75 | 126.56 | 111.60 |
| 1 | G | 59 | ASN | CB-CA-C | -5.75 | 98.89 | 110.40 |
| 1 | I | 14 | ARG | CB-CG-CD | 5.75 | 126.56 | 111.60 |
| 1 | L | 379 | VAL | CA-C-O | 5.75 | 132.19 | 120.10 |
| 1 | O | 75 | ALA | N-CA-CB | 5.75 | 118.16 | 110.10 |
| 1 | D | 23 | MET | CB-CA-C | -5.75 | 98.89 | 110.40 |
| 1 | D | 181 | VAL | CA-C-O | 5.75 | 132.18 | 120.10 |
| 1 | E | 296 | ALA | N-CA-CB | 5.75 | 118.15 | 110.10 |
| 1 | E | 306 | ASN | OD1-CG-ND2 | -5.75 | 108.67 | 121.90 |
| 1 | G | 373 | ILE | CA-C-O | -5.75 | 108.02 | 120.10 |
| 1 | I | 58 | THR | N-CA-CB | -5.75 | 99.37 | 110.30 |
| 1 | M | 11 | ASN | OD1-CG-ND2 | -5.75 | 108.67 | 121.90 |
| 1 | A | 374 | GLU | O-C-N | -5.75 | 113.50 | 122.70 |
| 1 | C | 90 | GLY | CA-C-N | -5.75 | 104.55 | 117.20 |
| 1 | F | 65 | LEU | CA-C-N | -5.75 | 104.55 | 117.20 |
| 1 | F | 202 | SER | CB-CA-C | -5.75 | 99.17 | 110.10 |
| 1 | K | 30 | ILE | CA-CB-CG1 | -5.75 | 100.07 | 111.00 |
| 1 | P | 310 | LEU | CA-C-O | -5.75 | 108.02 | 120.10 |
| 1 | I | 112 | ASP | CA-CB-CG | 5.75 | 126.05 | 113.40 |
| 1 | O | 294 | LYS | C-N-CA | 5.75 | 136.07 | 121.70 |
| 1 | C | 30 | ILE | CA-C-O | -5.75 | 108.03 | 120.10 |
| 1 | D | 152 | LYS | CD-CE-NZ | -5.75 | 98.48 | 111.70 |
| 1 | F | 392 | LYS | CD-CE-NZ | -5.75 | 98.48 | 111.70 |
| 1 | F | 395 | GLU | CG-CD-OE1 | -5.75 | 106.81 | 118.30 |
| 1 | K | 336 | GLU | CB-CG-CD | 5.75 | 129.72 | 114.20 |
| 1 | L | 298 | ALA | C-N-CA | 5.75 | 136.07 | 121.70 |
| 1 | B | 179 | SER | CB-CA-C | -5.75 | 99.18 | 110.10 |
| 1 | F | 112 | ASP | CB-CG-OD2 | -5.75 | 113.13 | 118.30 |
| 1 | G | 191 | ASP | C-N-CA | 5.75 | 136.06 | 121.70 |
| 1 | G | 285 | ARG | CA-C-N | -5.75 | 104.56 | 117.20 |
| 1 | H | 396 | TYR | CB-CG-CD1 | -5.75 | 117.55 | 121.00 |
| 1 | M | 357 | GLU | CA-CB-CG | 5.75 | 126.04 | 113.40 |
| 1 | N | 312 | ALA | O-C-N | -5.75 | 113.50 | 122.70 |
| 1 | P | 216 | LYS | CB-CG-CD | 5.75 | 126.54 | 111.60 |
| 1 | A | 215 | ASP | CB-CG-OD1 | -5.75 | 113.13 | 118.30 |
| 1 | A | 353 | HIS | N-CA-CB | 5.75 | 120.94 | 110.60 |
| 1 | A | 378 | ILE | O-C-N | -5.75 | 113.51 | 122.70 |
| 1 | B | 252 | ALA | O-C-N | -5.75 | 113.51 | 122.70 |
| 1 | O | 409 | ARG | CB-CA-C | -5.75 | 98.91 | 110.40 |
| 1 | D | 48 | LEU | CA-C-O | -5.74 | 108.04 | 120.10 |
| 1 | M | 267 | GLY | N-CA-C | 5.74 | 127.46 | 113.10 |
| 1 | A | 399 | GLY | C-N-CA | 5.74 | 136.05 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 58 | THR | OG1-CB-CG2 | 5.74 | 123.21 | 110.00 |
| 1 | B | 307 | ILE | N-CA-CB | 5.74 | 124.01 | 110.80 |
| 1 | B | 420 | ARG | NE-CZ-NH1 | 5.74 | 123.17 | 120.30 |
| 1 | C | 111 | LEU | CA-C-O | 5.74 | 132.16 | 120.10 |
| 1 | D | 311 | SER | CB-CA-C | 5.74 | 121.01 | 110.10 |
| 1 | H | 256 | ALA | CA-C-O | -5.74 | 108.04 | 120.10 |
| 1 | I | 266 | LYS | N-CA-CB | 5.74 | 120.94 | 110.60 |
| 1 | I | 348 | ARG | CB-CG-CD | 5.74 | 126.53 | 111.60 |
| 1 | K | 495 | ALA | CA-C-O | -5.74 | 108.04 | 120.10 |
| 1 | L | 145 | GLN | O-C-N | -5.74 | 113.51 | 122.70 |
| 1 | D | 403 | ARG | CD-NE-CZ | -5.74 | 115.56 | 123.60 |
| 1 | F | 177 | ALA | O-C-N | -5.74 | 113.52 | 122.70 |
| 1 | G | 346 | LEU | C-N-CA | 5.74 | 136.05 | 121.70 |
| 1 | H | 182 | VAL | CG1-CB-CG2 | -5.74 | 101.71 | 110.90 |
| 1 | I | 242 | THR | CA-C-N | 5.74 | 129.83 | 117.20 |
| 1 | A | 304 | ILE | O-C-N | -5.74 | 113.52 | 122.70 |
| 1 | C | 302 | ASN | OD1-CG-ND2 | -5.74 | 108.70 | 121.90 |
| 1 | F | 37 | SER | CB-CA-C | 5.74 | 121.00 | 110.10 |
| 1 | H | 201 | ALA | N-CA-C | 5.74 | 126.50 | 111.00 |
| 1 | K | 26 | LEU | O-C-N | -5.74 | 113.52 | 122.70 |
| 1 | K | 488 | LEU | CB-CG-CD2 | -5.74 | 101.24 | 111.00 |
| 1 | N | 471 | ARG | CD-NE-CZ | -5.74 | 115.57 | 123.60 |
| 1 | P | 405 | GLN | CB-CG-CD | 5.74 | 126.52 | 111.60 |
| 1 | D | 491 | ASP | N-CA-CB | 5.74 | 120.93 | 110.60 |
| 1 | E | 146 | ASP | CB-CG-OD1 | -5.74 | 113.14 | 118.30 |
| 1 | I | 185 | GLU | N-CA-CB | 5.74 | 120.93 | 110.60 |
| 1 | L | 29 | ARG | NE-CZ-NH1 | -5.74 | 117.43 | 120.30 |
| 1 | O | 131 | ALA | C-N-CA | 5.74 | 136.04 | 121.70 |
| 1 | P | 39 | LEU | N-CA-CB | 5.74 | 121.87 | 110.40 |
| 1 | D | 354 | VAL | N-CA-CB | 5.74 | 124.12 | 111.50 |
| 1 | E | 161 | LYS | CB-CA-C | 5.74 | 121.87 | 110.40 |
| 1 | E | 344 | THR | OG1-CB-CG2 | 5.74 | 123.19 | 110.00 |
| 1 | G | 45 | ASP | N-CA-CB | -5.74 | 100.28 | 110.60 |
| 1 | L | 420 | ARG | O-C-N | 5.74 | 131.88 | 122.70 |
| 1 | M | 138 | ILE | CG1-CB-CG2 | 5.74 | 124.02 | 111.40 |
| 1 | O | 482 | GLU | O-C-N | -5.74 | 113.52 | 122.70 |
| 1 | A | 279 | GLU | C-N-CA | 5.73 | 134.34 | 122.30 |
| 1 | D | 113 | GLN | N-CA-CB | 5.73 | 120.92 | 110.60 |
| 1 | D | 358 | VAL | CA-C-O | 5.73 | 132.14 | 120.10 |
| 1 | E | 86 | GLU | CA-CB-CG | 5.73 | 126.01 | 113.40 |
| 1 | O | 142 | VAL | CB-CA-C | 5.73 | 122.30 | 111.40 |
| 1 | P | 64 | ILE | N-CA-CB | 5.73 | 123.99 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 495 | ALA | CA-C-N | -5.73 | 104.59 | 117.20 |
| 1 | L | 19 | ASP | CB-CG-OD1 | 5.73 | 123.46 | 118.30 |
| 1 | B | 130 | LYS | O-C-N | 5.73 | 131.87 | 122.70 |
| 1 | B | 248 | LYS | N-CA-CB | 5.73 | 120.92 | 110.60 |
| 1 | B | 425 | ASN | CA-C-N | -5.73 | 104.59 | 117.20 |
| 1 | B | 453 | VAL | CA-C-O | 5.73 | 132.13 | 120.10 |
| 1 | G | 244 | SER | CB-CA-C | 5.73 | 120.99 | 110.10 |
| 1 | H | 482 | GLU | CA-CB-CG | 5.73 | 126.01 | 113.40 |
| 1 | I | 81 | VAL | O-C-N | -5.73 | 113.53 | 122.70 |
| 1 | I | 318 | ALA | N-CA-CB | -5.73 | 102.08 | 110.10 |
| 1 | K | 403 | ARG | CG-CD-NE | -5.73 | 99.77 | 111.80 |
| 1 | L | 198 | LYS | N-CA-CB | -5.73 | 100.29 | 110.60 |
| 1 | L | 270 | ASP | O-C-N | -5.73 | 113.53 | 122.70 |
| 1 | L | 494 | ILE | CA-C-O | -5.73 | 108.07 | 120.10 |
| 1 | M | 497 | GLU | N-CA-CB | -5.73 | 100.28 | 110.60 |
| 1 | I | 342 | ALA | CB-CA-C | -5.73 | 101.51 | 110.10 |
| 1 | J | 82 | ALA | C-N-CA | 5.73 | 136.02 | 121.70 |
| 1 | I | 477 | ILE | O-C-N | -5.73 | 113.54 | 122.70 |
| 1 | J | 336 | GLU | C-N-CA | 5.73 | 136.02 | 121.70 |
| 1 | N | 286 | ARG | O-C-N | 5.73 | 131.86 | 122.70 |
| 1 | P | 187 | LYS | CB-CG-CD | 5.73 | 126.49 | 111.60 |
| 1 | L | 496 | ALA | N-CA-C | 5.73 | 126.46 | 111.00 |
| 1 | D | 356 | GLU | N-CA-CB | 5.72 | 120.91 | 110.60 |
| 1 | E | 201 | ALA | CA-C-O | -5.72 | 108.08 | 120.10 |
| 1 | E | 363 | ASP | CB-CG-OD1 | 5.72 | 123.45 | 118.30 |
| 1 | F | 327 | SER | C-N-CA | -5.72 | 110.28 | 122.30 |
| 1 | G | 286 | ARG | NH1-CZ-NH2 | -5.72 | 113.10 | 119.40 |
| 1 | H | 109 | GLU | C-N-CA | 5.72 | 136.01 | 121.70 |
| 1 | H | 295 | LEU | CA-CB-CG | 5.72 | 128.47 | 115.30 |
| 1 | H | 371 | CYS | CA-C-O | -5.72 | 108.08 | 120.10 |
| 1 | L | 414 | ALA | CB-CA-C | 5.72 | 118.69 | 110.10 |
| 1 | P | 339 | HIS | CG-ND1-CE1 | 5.72 | 116.21 | 108.20 |
| 1 | E | 245 | GLU | N-CA-C | 5.72 | 126.45 | 111.00 |
| 1 | F | 214 | VAL | CG1-CB-CG2 | 5.72 | 120.06 | 110.90 |
| 1 | F | 250 | MET | O-C-N | -5.72 | 113.54 | 122.70 |
| 1 | G | 97 | VAL | O-C-N | -5.72 | 113.55 | 122.70 |
| 1 | H | 231 | LYS | CB-CG-CD | 5.72 | 126.48 | 111.60 |
| 1 | J | 450 | GLY | CA-C-O | 5.72 | 130.90 | 120.60 |
| 1 | O | 405 | GLN | CB-CG-CD | 5.72 | 126.48 | 111.60 |
| 1 | A | 127 | ALA | O-C-N | -5.72 | 113.55 | 122.70 |
| 1 | B | 432 | GLU | O-C-N | -5.72 | 113.55 | 122.70 |
| 1 | I | 74 | ALA | O-C-N | -5.72 | 113.55 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 401 | SER | N-CA-CB | 5.72 | 119.08 | 110.50 |
| 1 | A | 285 | ARG | CA-CB-CG | 5.72 | 125.98 | 113.40 |
| 1 | D | 20 | ALA | CA-C-O | -5.72 | 108.09 | 120.10 |
| 1 | D | 26 | LEU | CB-CG-CD2 | -5.72 | 101.28 | 111.00 |
| 1 | F | 69 | SER | C-N-CA | 5.72 | 136.00 | 121.70 |
| 1 | J | 395 | GLU | CB-CA-C | 5.72 | 121.84 | 110.40 |
| 1 | L | 421 | THR | N-CA-CB | 5.72 | 121.17 | 110.30 |
| 1 | P | 138 | ILE | CA-CB-CG2 | -5.72 | 99.46 | 110.90 |
| 1 | C | 291 | ASP | O-C-N | 5.72 | 131.85 | 122.70 |
| 1 | E | 235 | LEU | CB-CG-CD2 | 5.72 | 120.72 | 111.00 |
| 1 | G | 197 | LYS | N-CA-CB | -5.72 | 100.31 | 110.60 |
| 1 | M | 329 | ASP | OD1-CG-OD2 | -5.72 | 112.44 | 123.30 |
| 1 | M | 474 | THR | N-CA-CB | 5.72 | 121.16 | 110.30 |
| 1 | O | 260 | ASN | N-CA-CB | 5.72 | 120.89 | 110.60 |
| 1 | O | 365 | ALA | N-CA-C | 5.72 | 126.44 | 111.00 |
| 1 | A | 7 | VAL | O-C-N | 5.72 | 131.85 | 122.70 |
| 1 | C | 180 | ALA | CB-CA-C | 5.72 | 118.67 | 110.10 |
| 1 | C | 267 | GLY | CA-C-N | -5.72 | 104.62 | 117.20 |
| 1 | F | 436 | LYS | O-C-N | 5.72 | 131.84 | 122.70 |
| 1 | G | 190 | LYS | CA-CB-CG | 5.72 | 125.98 | 113.40 |
| 1 | H | 139 | ALA | N-CA-CB | 5.72 | 118.10 | 110.10 |
| 1 | J | 376 | GLY | CA-C-N | 5.72 | 129.78 | 117.20 |
| 1 | J | 420 | ARG | O-C-N | 5.72 | 131.85 | 122.70 |
| 1 | K | 299 | THR | CA-CB-CG2 | 5.72 | 120.40 | 112.40 |
| 1 | N | 411 | PHE | CG-CD1-CE1 | 5.72 | 127.09 | 120.80 |
| 1 | P | 342 | ALA | N-CA-C | -5.72 | 95.56 | 111.00 |
| 1 | H | 199 | SER | O-C-N | -5.71 | 113.48 | 123.20 |
| 1 | H | 349 | GLY | CA-C-O | -5.71 | 110.31 | 120.60 |
| 1 | I | 14 | ARG | NE-CZ-NH1 | 5.71 | 123.16 | 120.30 |
| 1 | L | 446 | ASN | CB-CG-OD1 | 5.71 | 133.03 | 121.60 |
| 1 | O | 22 | ARG | NH1-CZ-NH2 | -5.71 | 113.11 | 119.40 |
| 1 | F | 478 | GLN | C-N-CA | 5.71 | 135.98 | 121.70 |
| 1 | I | 109 | GLU | OE1-CD-OE2 | 5.71 | 130.15 | 123.30 |
| 1 | K | 346 | LEU | CA-C-O | -5.71 | 108.11 | 120.10 |
| 1 | L | 208 | LEU | CB-CG-CD1 | 5.71 | 120.71 | 111.00 |
| 1 | M | 403 | ARG | N-CA-C | 5.71 | 126.42 | 111.00 |
| 1 | O | 245 | GLU | CA-CB-CG | 5.71 | 125.97 | 113.40 |
| 1 | B | 84 | THR | OG1-CB-CG2 | -5.71 | 96.87 | 110.00 |
| 1 | D | 181 | VAL | N-CA-C | 5.71 | 126.42 | 111.00 |
| 1 | G | 64 | ILE | CA-CB-CG2 | 5.71 | 122.32 | 110.90 |
| 1 | N | 314 | ASP | N-CA-CB | 5.71 | 120.88 | 110.60 |
| 1 | B | 30 | ILE | CB-CA-C | -5.71 | 100.18 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | B | 245 | GLU | CG-CD-OE2 | 5.71 | 129.72 | 118.30 |
| 1 | D | 157 | SER | O-C-N | 5.71 | 131.83 | 122.70 |
| 1 | G | 494 | ILE | CA-CB-CG1 | 5.71 | 121.85 | 111.00 |
| 1 | K | 214 | VAL | O-C-N | -5.71 | 113.56 | 122.70 |
| 1 | K | 269 | ASP | CA-C-O | -5.71 | 108.11 | 120.10 |
| 1 | K | 485 | GLU | CG-CD-OE2 | 5.71 | 129.72 | 118.30 |
| 1 | M | 136 | LYS | N-CA-CB | 5.71 | 120.88 | 110.60 |
| 1 | M | 360 | ARG | CD-NE-CZ | 5.71 | 131.59 | 123.60 |
| 1 | O | 169 | LYS | CB-CA-C | 5.71 | 121.82 | 110.40 |
| 1 | A | 196 | GLU | CB-CG-CD | -5.71 | 98.79 | 114.20 |
| 1 | B | 138 | ILE | CB-CA-C | -5.71 | 100.19 | 111.60 |
| 1 | B | 298 | ALA | O-C-N | -5.71 | 113.57 | 122.70 |
| 1 | G | 82 | ALA | CB-CA-C | 5.71 | 118.66 | 110.10 |
| 1 | G | 445 | GLY | CA-C-N | -5.71 | 104.64 | 117.20 |
| 1 | H | 482 | GLU | CB-CG-CD | 5.71 | 129.61 | 114.20 |
| 1 | N | 206 | THR | CA-CB-CG2 | -5.71 | 104.41 | 112.40 |
| 1 | N | 158 | ILE | C-N-CA | 5.71 | 135.96 | 121.70 |
| 1 | B | 215 | ASP | N-CA-CB | 5.70 | 120.87 | 110.60 |
| 1 | F | 299 | THR | O-C-N | -5.70 | 113.50 | 123.20 |
| 1 | G | 108 | GLU | O-C-N | 5.70 | 131.83 | 122.70 |
| 1 | H | 302 | ASN | N-CA-CB | 5.70 | 120.87 | 110.60 |
| 1 | I | 203 | ILE | C-N-CA | 5.70 | 135.96 | 121.70 |
| 1 | N | 165 | LYS | CB-CA-C | 5.70 | 121.81 | 110.40 |
| 1 | P | 158 | ILE | CA-CB-CG1 | 5.70 | 121.84 | 111.00 |
| 1 | B | 220 | SER | O-C-N | -5.70 | 113.58 | 122.70 |
| 1 | I | 361 | ALA | C-N-CA | 5.70 | 135.95 | 121.70 |
| 1 | E | 66 | ARG | CA-C-O | -5.70 | 108.13 | 120.10 |
| 1 | I | 31 | ILE | C-N-CA | 5.70 | 135.95 | 121.70 |
| 1 | O | 414 | ALA | N-CA-CB | 5.70 | 118.08 | 110.10 |
| 1 | D | 68 | MET | O-C-N | -5.70 | 113.58 | 122.70 |
| 1 | F | 76 | LYS | CB-CA-C | 5.70 | 121.80 | 110.40 |
| 1 | F | 416 | GLU | CB-CA-C | -5.70 | 99.01 | 110.40 |
| 1 | H | 480 | ALA | C-N-CA | 5.70 | 135.94 | 121.70 |
| 1 | M | 379 | VAL | CA-CB-CG2 | 5.70 | 119.44 | 110.90 |
| 1 | P | 249 | ASP | CB-CG-OD1 | 5.70 | 123.43 | 118.30 |
| 1 | E | 259 | ALA | N-CA-CB | 5.70 | 118.07 | 110.10 |
| 1 | E | 88 | GLU | C-N-CA | 5.69 | 135.94 | 121.70 |
| 1 | J | 63 | THR | CA-C-N | 5.69 | 129.73 | 117.20 |
| 1 | J | 206 | THR | CA-C-O | -5.69 | 108.14 | 120.10 |
| 1 | J | 377 | ARG | O-C-N | 5.69 | 131.81 | 122.70 |
| 1 | M | 197 | LYS | CB-CA-C | -5.69 | 99.01 | 110.40 |
| 1 | N | 380 | SER | O-C-N | -5.69 | 113.52 | 123.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 489 | ARG | CD-NE-CZ | 5.69 | 131.57 | 123.60 |
| 1 | P | 32 | ALA | O-C-N | 5.69 | 131.81 | 122.70 |
| 1 | B | 453 | VAL | CB-CA-C | -5.69 | 100.58 | 111.40 |
| 1 | D | 277 | ALA | CB-CA-C | 5.69 | 118.64 | 110.10 |
| 1 | F | 131 | ALA | CA-C-O | -5.69 | 108.15 | 120.10 |
| 1 | F | 429 | ASP | CA-C-O | 5.69 | 132.05 | 120.10 |
| 1 | K | 356 | GLU | O-C-N | -5.69 | 113.59 | 122.70 |
| 1 | O | 489 | ARG | N-CA-CB | 5.69 | 120.85 | 110.60 |
| 1 | B | 51 | ASP | CB-CA-C | 5.69 | 121.78 | 110.40 |
| 1 | D | 294 | LYS | CD-CE-NZ | 5.69 | 124.79 | 111.70 |
| 1 | F | 111 | LEU | CB-CA-C | 5.69 | 121.01 | 110.20 |
| 1 | F | 156 | THR | CA-CB-OG1 | 5.69 | 120.95 | 109.00 |
| 1 | F | 336 | GLU | CA-C-N | -5.69 | 104.68 | 117.20 |
| 1 | G | 231 | LYS | CD-CE-NZ | 5.69 | 124.79 | 111.70 |
| 1 | G | 266 | LYS | CB-CA-C | 5.69 | 121.78 | 110.40 |
| 1 | H | 431 | ILE | CA-CB-CG2 | 5.69 | 122.28 | 110.90 |
| 1 | I | 373 | ILE | CB-CA-C | 5.69 | 122.98 | 111.60 |
| 1 | J | 360 | ARG | O-C-N | -5.69 | 113.59 | 122.70 |
| 1 | N | 273 | GLN | N-CA-CB | 5.69 | 120.84 | 110.60 |
| 1 | F | 382 | GLY | CA-C-O | -5.69 | 110.36 | 120.60 |
| 1 | K | 203 | ILE | CB-CA-C | 5.69 | 122.98 | 111.60 |
| 1 | K | 325 | LYS | N-CA-CB | 5.69 | 120.84 | 110.60 |
| 1 | M | 111 | LEU | CA-CB-CG | 5.69 | 128.38 | 115.30 |
| 1 | A | 161 | LYS | O-C-N | -5.69 | 113.53 | 123.20 |
| 1 | D | 487 | LEU | N-CA-CB | 5.69 | 121.77 | 110.40 |
| 1 | H | 401 | SER | CA-CB-OG | 5.69 | 126.56 | 111.20 |
| 1 | L | 237 | CYS | CA-C-N | 5.69 | 129.71 | 117.20 |
| 1 | G | 278 | LYS | CB-CA-C | 5.69 | 121.77 | 110.40 |
| 1 | A | 277 | ALA | N-CA-CB | -5.68 | 102.14 | 110.10 |
| 1 | B | 219 | VAL | CG1-CB-CG2 | 5.68 | 119.99 | 110.90 |
| 1 | C | 18 | ARG | CB-CA-C | 5.68 | 121.77 | 110.40 |
| 1 | C | 241 | GLU | CA-C-O | -5.68 | 108.16 | 120.10 |
| 1 | C | 414 | ALA | CB-CA-C | 5.68 | 118.63 | 110.10 |
| 1 | D | 386 | GLU | OE1-CD-OE2 | 5.68 | 130.12 | 123.30 |
| 1 | G | 350 | THR | CA-CB-OG1 | 5.68 | 120.94 | 109.00 |
| 1 | H | 326 | ILE | CG1-CB-CG2 | -5.68 | 98.89 | 111.40 |
| 1 | M | 242 | THR | O-C-N | -5.68 | 113.60 | 122.70 |
| 1 | O | 116 | HIS | CB-CA-C | 5.68 | 121.77 | 110.40 |
| 1 | E | 338 | LYS | O-C-N | -5.68 | 113.61 | 122.70 |
| 1 | G | 431 | ILE | N-CA-CB | 5.68 | 123.87 | 110.80 |
| 1 | H | 286 | ARG | N-CA-C | 5.68 | 126.34 | 111.00 |
| 1 | H | 411 | PHE | CB-CA-C | 5.68 | 121.76 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | K | 216 | LYS | N-CA-C | 5.68 | 126.34 | 111.00 |
| 1 | K | 338 | LYS | C-N-CA | 5.68 | 135.91 | 121.70 |
| 1 | M | 197 | LYS | N-CA-CB | -5.68 | 100.37 | 110.60 |
| 1 | O | 364 | ASP | C-N-CA | 5.68 | 135.91 | 121.70 |
| 1 | G | 23 | MET | CA-C-N | -5.68 | 104.70 | 117.20 |
| 1 | G | 226 | LYS | CA-CB-CG | 5.68 | 125.90 | 113.40 |
| 1 | L | 374 | GLU | OE1-CD-OE2 | -5.68 | 116.48 | 123.30 |
| 1 | L | 439 | ALA | CA-C-O | -5.68 | 108.17 | 120.10 |
| 1 | C | 487 | LEU | O-C-N | -5.68 | 113.61 | 122.70 |
| 1 | E | 443 | SER | CB-CA-C | 5.68 | 120.89 | 110.10 |
| 1 | G | 228 | THR | N-CA-CB | 5.68 | 121.09 | 110.30 |
| 1 | H | 117 | PRO | N-CA-CB | -5.68 | 96.35 | 102.60 |
| 1 | P | 217 | GLU | CA-C-N | -5.68 | 104.70 | 117.20 |
| 1 | E | 270 | ASP | OD1-CG-OD2 | -5.68 | 112.51 | 123.30 |
| 1 | P | 124 | TYR | CZ-CE2-CD2 | 5.68 | 124.91 | 119.80 |
| 1 | A | 351 | THR | CA-CB-OG1 | 5.68 | 120.92 | 109.00 |
| 1 | C | 444 | ASN | N-CA-C | 5.68 | 126.33 | 111.00 |
| 1 | G | 183 | ASP | N-CA-CB | 5.68 | 120.82 | 110.60 |
| 1 | J | 66 | ARG | NH1-CZ-NH2 | 5.68 | 125.64 | 119.40 |
| 1 | J | 465 | GLY | CA-C-O | -5.68 | 110.38 | 120.60 |
| 1 | K | 494 | ILE | CA-C-O | -5.68 | 108.18 | 120.10 |
| 1 | N | 338 | LYS | CA-CB-CG | 5.68 | 125.89 | 113.40 |
| 1 | N | 408 | VAL | CA-CB-CG2 | 5.68 | 119.42 | 110.90 |
| 1 | P | 248 | LYS | N-CA-CB | 5.68 | 120.82 | 110.60 |
| 1 | A | 322 | GLU | CA-CB-CG | 5.67 | 125.88 | 113.40 |
| 1 | D | 280 | GLY | CA-C-O | -5.67 | 110.38 | 120.60 |
| 1 | F | 116 | HIS | ND1-CE1-NE2 | 5.67 | 122.38 | 109.90 |
| 1 | G | 236 | ASN | CB-CG-OD1 | 5.67 | 132.95 | 121.60 |
| 1 | I | 293 | GLU | CB-CG-CD | -5.67 | 98.88 | 114.20 |
| 1 | K | 124 | TYR | O-C-N | 5.67 | 131.78 | 122.70 |
| 1 | K | 260 | ASN | N-CA-CB | 5.67 | 120.81 | 110.60 |
| 1 | A | 443 | SER | CB-CA-C | 5.67 | 120.88 | 110.10 |
| 1 | M | 381 | GLY | CA-C-O | -5.67 | 110.39 | 120.60 |
| 1 | M | 487 | LEU | C-N-CA | 5.67 | 135.88 | 121.70 |
| 1 | B | 51 | ASP | N-CA-CB | 5.67 | 120.81 | 110.60 |
| 1 | B | 155 | MET | O-C-N | -5.67 | 113.63 | 122.70 |
| 1 | E | 359 | ALA | CB-CA-C | 5.67 | 118.61 | 110.10 |
| 1 | H | 247 | LEU | C-N-CA | 5.67 | 135.88 | 121.70 |
| 1 | I | 81 | VAL | CG1-CB-CG2 | -5.67 | 101.82 | 110.90 |
| 1 | K | 444 | ASN | CB-CG-OD1 | 5.67 | 132.94 | 121.60 |
| 1 | N | 398 | GLU | O-C-N | 5.67 | 132.84 | 123.20 |
| 1 | O | 338 | LYS | CG-CD-CE | 5.67 | 128.91 | 111.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 216 | LYS | N-CA-C | 5.67 | 126.31 | 111.00 |
| 1 | B | 409 | ARG | CA-C-N | -5.67 | 104.73 | 117.20 |
| 1 | D | 403 | ARG | O-C-N | -5.67 | 113.63 | 122.70 |
| 1 | F | 72 | HIS | CA-C-N | 5.67 | 132.98 | 117.10 |
| 1 | O | 408 | VAL | CA-CB-CG1 | -5.67 | 102.39 | 110.90 |
| 1 | D | 131 | ALA | N-CA-CB | 5.67 | 118.04 | 110.10 |
| 1 | E | 274 | HIS | N-CA-CB | 5.67 | 120.80 | 110.60 |
| 1 | E | 282 | VAL | CA-CB-CG1 | 5.67 | 119.40 | 110.90 |
| 1 | E | 445 | GLY | CA-C-O | 5.67 | 130.81 | 120.60 |
| 1 | I | 41 | PRO | N-CA-CB | 5.67 | 110.10 | 103.30 |
| 1 | J | 216 | LYS | N-CA-C | 5.67 | 126.31 | 111.00 |
| 1 | J | 250 | MET | CA-CB-CG | 5.67 | 122.94 | 113.30 |
| 1 | K | 152 | LYS | CA-CB-CG | 5.67 | 125.87 | 113.40 |
| 1 | K | 288 | LYS | CD-CE-NZ | 5.67 | 124.73 | 111.70 |
| 1 | N | 272 | ALA | CB-CA-C | 5.67 | 118.60 | 110.10 |
| 1 | P | 26 | LEU | CA-CB-CG | 5.67 | 128.34 | 115.30 |
| 1 | H | 30 | ILE | CA-CB-CG2 | -5.67 | 99.57 | 110.90 |
| 1 | I | 30 | ILE | CB-CA-C | -5.67 | 100.27 | 111.60 |
| 1 | K | 358 | VAL | CG1-CB-CG2 | -5.67 | 101.83 | 110.90 |
| 1 | M | 195 | ILE | CA-C-O | -5.67 | 108.20 | 120.10 |
| 1 | P | 151 | THR | CA-CB-CG2 | -5.67 | 104.47 | 112.40 |
| 1 | F | 420 | ARG | CD-NE-CZ | -5.67 | 115.67 | 123.60 |
| 1 | I | 197 | LYS | O-C-N | -5.67 | 113.64 | 122.70 |
| 1 | I | 449 | ALA | N-CA-CB | 5.67 | 118.03 | 110.10 |
| 1 | B | 289 | LYS | C-N-CA | 5.66 | 135.86 | 121.70 |
| 1 | B | 325 | LYS | N-CA-CB | 5.66 | 120.80 | 110.60 |
| 1 | D | 291 | ASP | CA-C-O | -5.66 | 108.21 | 120.10 |
| 1 | D | 466 | VAL | O-C-N | -5.66 | 113.64 | 122.70 |
| 1 | F | 63 | THR | CA-CB-OG1 | 5.66 | 120.89 | 109.00 |
| 1 | G | 106 | LYS | N-CA-CB | -5.66 | 100.41 | 110.60 |
| 1 | N | 46 | LYS | CD-CE-NZ | 5.66 | 124.73 | 111.70 |
| 1 | A | 60 | ASP | O-C-N | -5.66 | 113.57 | 123.20 |
| 1 | F | 244 | SER | N-CA-CB | 5.66 | 118.99 | 110.50 |
| 1 | G | 116 | HIS | CA-CB-CG | 5.66 | 123.23 | 113.60 |
| 1 | A | 377 | ARG | NE-CZ-NH1 | 5.66 | 123.13 | 120.30 |
| 1 | C | 244 | SER | N-CA-CB | 5.66 | 118.99 | 110.50 |
| 1 | D | 348 | ARG | NE-CZ-NH1 | 5.66 | 123.13 | 120.30 |
| 1 | E | 20 | ALA | O-C-N | -5.66 | 113.64 | 122.70 |
| 1 | E | 353 | HIS | CA-CB-CG | 5.66 | 123.22 | 113.60 |
| 1 | G | 99 | VAL | CG1-CB-CG2 | -5.66 | 101.84 | 110.90 |
| 1 | I | 188 | VAL | N-CA-CB | 5.66 | 123.95 | 111.50 |
| 1 | K | 72 | HIS | CA-CB-CG | -5.66 | 103.98 | 113.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 473 | LYS | CA-CB-CG | 5.66 | 125.85 | 113.40 |
| 1 | L | 428 | LEU | CD1-CG-CD2 | 5.66 | 127.48 | 110.50 |
| 1 | M | 10 | GLU | O-C-N | -5.66 | 113.64 | 122.70 |
| 1 | N | 487 | LEU | CA-CB-CG | 5.66 | 128.32 | 115.30 |
| 1 | O | 430 | ALA | N-CA-C | 5.66 | 126.28 | 111.00 |
| 1 | B | 293 | GLU | O-C-N | 5.66 | 131.75 | 122.70 |
| 1 | B | 420 | ARG | O-C-N | -5.66 | 113.65 | 122.70 |
| 1 | H | 430 | ALA | N-CA-CB | 5.66 | 118.02 | 110.10 |
| 1 | I | 371 | CYS | CA-CB-SG | 5.66 | 124.18 | 114.00 |
| 1 | K | 475 | GLN | CB-CA-C | -5.66 | 99.08 | 110.40 |
| 1 | M | 360 | ARG | O-C-N | -5.66 | 113.65 | 122.70 |
| 1 | O | 336 | GLU | CG-CD-OE1 | 5.66 | 129.62 | 118.30 |
| 1 | A | 346 | LEU | CB-CG-CD2 | 5.66 | 120.62 | 111.00 |
| 1 | G | 165 | LYS | N-CA-CB | 5.66 | 120.78 | 110.60 |
| 1 | K | 158 | ILE | CA-C-O | -5.66 | 108.22 | 120.10 |
| 1 | M | 62 | VAL | CA-CB-CG2 | -5.66 | 102.41 | 110.90 |
| 1 | B | 52 | LEU | CA-C-O | -5.66 | 108.22 | 120.10 |
| 1 | B | 479 | SER | O-C-N | 5.66 | 131.75 | 122.70 |
| 1 | C | 185 | GLU | N-CA-C | 5.66 | 126.27 | 111.00 |
| 1 | D | 85 | GLN | CB-CA-C | 5.66 | 121.71 | 110.40 |
| 1 | D | 249 | ASP | CA-CB-CG | 5.66 | 125.84 | 113.40 |
| 1 | E | 465 | GLY | CA-C-O | -5.66 | 110.42 | 120.60 |
| 1 | F | 341 | LYS | CB-CA-C | 5.66 | 121.71 | 110.40 |
| 1 | A | 259 | ALA | C-N-CA | 5.65 | 135.84 | 121.70 |
| 1 | C | 68 | MET | N-CA-CB | -5.65 | 100.42 | 110.60 |
| 1 | C | 72 | HIS | N-CA-C | 5.65 | 126.27 | 111.00 |
| 1 | C | 215 | ASP | N-CA-CB | 5.65 | 120.78 | 110.60 |
| 1 | C | 387 | VAL | CA-CB-CG1 | -5.65 | 102.42 | 110.90 |
| 1 | L | 270 | ASP | N-CA-C | 5.65 | 126.27 | 111.00 |
| 1 | O | 148 | GLU | CG-CD-OE2 | 5.65 | 129.61 | 118.30 |
| 1 | B | 406 | LEU | CB-CA-C | 5.65 | 120.94 | 110.20 |
| 1 | J | 49 | VAL | CA-C-O | -5.65 | 108.23 | 120.10 |
| 1 | K | 156 | THR | CA-C-O | 5.65 | 131.97 | 120.10 |
| 1 | B | 360 | ARG | CD-NE-CZ | 5.65 | 131.51 | 123.60 |
| 1 | D | 236 | ASN | O-C-N | 5.65 | 131.74 | 122.70 |
| 1 | F | 132 | GLN | OE1-CD-NE2 | 5.65 | 134.90 | 121.90 |
| 1 | F | 182 | VAL | N-CA-C | 5.65 | 126.26 | 111.00 |
| 1 | J | 268 | ILE | CA-CB-CG2 | 5.65 | 122.20 | 110.90 |
| 1 | H | 38 | THR | OG1-CB-CG2 | 5.65 | 122.99 | 110.00 |
| 1 | M | 36 | ARG | CD-NE-CZ | -5.65 | 115.69 | 123.60 |
| 1 | B | 426 | ALA | N-CA-CB | -5.65 | 102.19 | 110.10 |
| 1 | D | 240 | GLU | CA-CB-CG | 5.65 | 125.82 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 203 | ILE | C-N-CA | 5.65 | 135.82 | 121.70 |
| 1 | G | 242 | THR | CA-CB-CG2 | -5.65 | 104.49 | 112.40 |
| 1 | H | 203 | ILE | CA-C-N | 5.65 | 129.62 | 117.20 |
| 1 | K | 407 | ALA | CA-C-O | -5.65 | 108.24 | 120.10 |
| 1 | B | 228 | THR | CA-C-O | -5.65 | 108.24 | 120.10 |
| 1 | D | 214 | VAL | CA-C-N | -5.64 | 104.78 | 117.20 |
| 1 | D | 228 | THR | O-C-N | -5.64 | 113.67 | 122.70 |
| 1 | E | 33 | GLU | O-C-N | 5.64 | 131.73 | 122.70 |
| 1 | F | 33 | GLU | CG-CD-OE1 | 5.64 | 129.59 | 118.30 |
| 1 | L | 196 | GLU | C-N-CA | 5.64 | 135.81 | 121.70 |
| 1 | L | 415 | LEU | CB-CA-C | 5.64 | 120.92 | 110.20 |
| 1 | O | 64 | ILE | N-CA-CB | -5.64 | 97.82 | 110.80 |
| 1 | O | 241 | GLU | CA-C-N | 5.64 | 129.62 | 117.20 |
| 1 | A | 125 | GLN | OE1-CD-NE2 | 5.64 | 134.88 | 121.90 |
| 1 | E | 260 | ASN | CB-CA-C | 5.64 | 121.68 | 110.40 |
| 1 | E | 377 | ARG | CB-CA-C | -5.64 | 99.11 | 110.40 |
| 1 | H | 310 | LEU | C-N-CA | 5.64 | 135.81 | 121.70 |
| 1 | I | 225 | LYS | CD-CE-NZ | -5.64 | 98.72 | 111.70 |
| 1 | K | 134 | LEU | CB-CA-C | 5.64 | 120.92 | 110.20 |
| 1 | L | 70 | VAL | O-C-N | -5.64 | 113.67 | 122.70 |
| 1 | M | 249 | ASP | OD1-CG-OD2 | -5.64 | 112.58 | 123.30 |
| 1 | O | 270 | ASP | OD1-CG-OD2 | -5.64 | 112.58 | 123.30 |
| 1 | A | 438 | ARG | O-C-N | -5.64 | 113.67 | 122.70 |
| 1 | F | 86 | GLU | CG-CD-OE2 | 5.64 | 129.58 | 118.30 |
| 1 | J | 88 | GLU | N-CA-CB | 5.64 | 120.75 | 110.60 |
| 1 | N | 179 | SER | CA-CB-OG | 5.64 | 126.43 | 111.20 |
| 1 | A | 289 | LYS | CB-CA-C | 5.64 | 121.68 | 110.40 |
| 1 | A | 479 | SER | CB-CA-C | 5.64 | 120.81 | 110.10 |
| 1 | D | 428 | LEU | CA-CB-CG | 5.64 | 128.27 | 115.30 |
| 1 | I | 400 | ILE | N-CA-C | 5.64 | 126.23 | 111.00 |
| 1 | L | 130 | LYS | CA-C-N | -5.64 | 104.79 | 117.20 |
| 1 | P | 266 | LYS | C-N-CA | 5.64 | 134.14 | 122.30 |
| 1 | E | 242 | THR | CB-CA-C | 5.64 | 126.82 | 111.60 |
| 1 | H | 12 | MET | C-N-CA | 5.64 | 135.79 | 121.70 |
| 1 | I | 380 | SER | CA-C-N | -5.64 | 104.92 | 116.20 |
| 1 | C | 432 | GLU | O-C-N | 5.64 | 131.72 | 122.70 |
| 1 | F | 247 | LEU | CB-CA-C | 5.64 | 120.91 | 110.20 |
| 1 | G | 164 | GLU | N-CA-CB | 5.64 | 120.75 | 110.60 |
| 1 | I | 207 | GLU | CB-CA-C | -5.64 | 99.12 | 110.40 |
| 1 | J | 373 | ILE | CA-C-O | -5.64 | 108.27 | 120.10 |
| 1 | L | 149 | ILE | CA-CB-CG2 | -5.64 | 99.63 | 110.90 |
| 1 | M | 15 | TYR | C-N-CA | 5.64 | 135.79 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 163 | ALA | CB-CA-C | -5.64 | 101.65 | 110.10 |
| 1 | N | 138 | ILE | O-C-N | -5.64 | 113.68 | 122.70 |
| 1 | P | 236 | ASN | O-C-N | -5.64 | 113.68 | 122.70 |
| 1 | P | 346 | LEU | O-C-N | 5.64 | 131.72 | 122.70 |
| 1 | B | 166 | ALA | O-C-N | 5.63 | 131.72 | 122.70 |
| 1 | C | 481 | ALA | C-N-CA | 5.63 | 135.79 | 121.70 |
| 1 | I | 20 | ALA | O-C-N | 5.63 | 131.71 | 122.70 |
| 1 | C | 276 | LEU | N-CA-CB | 5.63 | 121.67 | 110.40 |
| 1 | G | 32 | ALA | CB-CA-C | -5.63 | 101.65 | 110.10 |
| 1 | I | 439 | ALA | CA-C-O | -5.63 | 108.27 | 120.10 |
| 1 | J | 348 | ARG | NH1-CZ-NH2 | -5.63 | 113.20 | 119.40 |
| 1 | L | 339 | HIS | ND1-CG-CD2 | -5.63 | 98.11 | 106.00 |
| 1 | N | 389 | LEU | CA-C-O | -5.63 | 108.27 | 120.10 |
| 1 | P | 189 | ASP | C-N-CA | 5.63 | 135.78 | 121.70 |
| 1 | P | 394 | ARG | O-C-N | -5.63 | 113.69 | 122.70 |
| 1 | C | 311 | SER | CA-C-O | -5.63 | 108.27 | 120.10 |
| 1 | H | 82 | ALA | N-CA-CB | 5.63 | 117.98 | 110.10 |
| 1 | C | 400 | ILE | O-C-N | -5.63 | 113.69 | 122.70 |
| 1 | I | 249 | ASP | OD1-CG-OD2 | -5.63 | 112.60 | 123.30 |
| 1 | J | 142 | VAL | N-CA-CB | -5.63 | 99.11 | 111.50 |
| 1 | L | 343 | VAL | N-CA-CB | -5.63 | 99.11 | 111.50 |
| 1 | M | 491 | ASP | CB-CG-OD1 | 5.63 | 123.37 | 118.30 |
| 1 | D | 267 | GLY | CA-C-N | -5.63 | 104.82 | 117.20 |
| 1 | F | 21 | GLN | OE1-CD-NE2 | 5.63 | 134.84 | 121.90 |
| 1 | F | 87 | LYS | O-C-N | -5.63 | 113.69 | 122.70 |
| 1 | J | 69 | SER | CA-C-O | -5.63 | 108.28 | 120.10 |
| 1 | L | 440 | ALA | CB-CA-C | -5.63 | 101.66 | 110.10 |
| 1 | L | 496 | ALA | CA-C-O | 5.63 | 131.92 | 120.10 |
| 1 | N | 158 | ILE | CA-C-N | 5.63 | 129.58 | 117.20 |
| 1 | N | 221 | ALA | CA-C-N | 5.63 | 129.58 | 117.20 |
| 1 | A | 235 | LEU | C-N-CA | 5.63 | 135.76 | 121.70 |
| 1 | O | 361 | ALA | C-N-CA | 5.63 | 135.77 | 121.70 |
| 1 | B | 404 | GLU | OE1-CD-OE2 | 5.62 | 130.05 | 123.30 |
| 1 | D | 170 | LEU | CB-CA-C | 5.62 | 120.89 | 110.20 |
| 1 | E | 432 | GLU | CB-CA-C | 5.62 | 121.65 | 110.40 |
| 1 | H | 295 | LEU | N-CA-CB | 5.62 | 121.65 | 110.40 |
| 1 | I | 165 | LYS | CA-C-N | -5.62 | 104.83 | 117.20 |
| 1 | J | 343 | VAL | CA-CB-CG1 | -5.62 | 102.46 | 110.90 |
| 1 | M | 48 | LEU | CB-CG-CD1 | -5.62 | 101.44 | 111.00 |
| 1 | N | 169 | LYS | CA-CB-CG | 5.62 | 125.77 | 113.40 |
| 1 | O | 460 | ASP | N-CA-CB | 5.62 | 120.73 | 110.60 |
| 1 | O | 465 | GLY | N-CA-C | 5.62 | 127.16 | 113.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 75 | ALA | CB-CA-C | -5.62 | 101.66 | 110.10 |
| 1 | D | 52 | LEU | CB-CG-CD1 | 5.62 | 120.56 | 111.00 |
| 1 | E | 164 | GLU | CA-CB-CG | 5.62 | 125.77 | 113.40 |
| 1 | I | 76 | LYS | C-N-CA | 5.62 | 135.76 | 121.70 |
| 1 | J | 253 | GLU | N-CA-CB | 5.62 | 120.72 | 110.60 |
| 1 | P | 371 | CYS | N-CA-C | 5.62 | 126.18 | 111.00 |
| 1 | P | 478 | GLN | O-C-N | -5.62 | 113.70 | 122.70 |
| 1 | B | 486 | MET | CA-CB-CG | 5.62 | 122.86 | 113.30 |
| 1 | F | 205 | ASP | N-CA-C | 5.62 | 126.18 | 111.00 |
| 1 | F | 246 | MET | O-C-N | -5.62 | 113.71 | 122.70 |
| 1 | I | 307 | ILE | N-CA-CB | 5.62 | 123.73 | 110.80 |
| 1 | K | 332 | ILE | CG1-CB-CG2 | -5.62 | 99.03 | 111.40 |
| 1 | L | 215 | ASP | O-C-N | 5.62 | 131.69 | 122.70 |
| 1 | N | 31 | ILE | CG1-CB-CG2 | -5.62 | 99.04 | 111.40 |
| 1 | I | 253 | GLU | O-C-N | -5.62 | 113.71 | 122.70 |
| 1 | O | 356 | GLU | CA-CB-CG | 5.62 | 125.76 | 113.40 |
| 1 | B | 357 | GLU | OE1-CD-OE2 | -5.62 | 116.56 | 123.30 |
| 1 | F | 330 | SER | N-CA-CB | 5.62 | 118.93 | 110.50 |
| 1 | H | 384 | SER | CA-C-O | -5.62 | 108.31 | 120.10 |
| 1 | L | 320 | LEU | O-C-N | -5.62 | 113.71 | 122.70 |
| 1 | P | 91 | ASP | OD1-CG-OD2 | -5.62 | 112.63 | 123.30 |
| 1 | B | 237 | CYS | N-CA-CB | 5.62 | 120.71 | 110.60 |
| 1 | C | 49 | VAL | CG1-CB-CG2 | 5.62 | 119.89 | 110.90 |
| 1 | I | 111 | LEU | O-C-N | -5.62 | 113.72 | 122.70 |
| 1 | I | 334 | VAL | CA-CB-CG2 | 5.62 | 119.32 | 110.90 |
| 1 | K | 76 | LYS | CA-CB-CG | -5.62 | 101.05 | 113.40 |
| 1 | N | 88 | GLU | CA-C-N | 5.62 | 129.56 | 117.20 |
| 1 | N | 453 | VAL | CA-CB-CG2 | 5.62 | 119.33 | 110.90 |
| 1 | F | 237 | CYS | CA-C-N | -5.61 | 104.85 | 117.20 |
| 1 | G | 39 | LEU | CA-C-O | -5.61 | 108.31 | 120.10 |
| 1 | I | 343 | VAL | CA-CB-CG2 | -5.61 | 102.48 | 110.90 |
| 1 | K | 186 | GLY | C-N-CA | 5.61 | 135.73 | 121.70 |
| 1 | L | 147 | LYS | CA-C-N | 5.61 | 129.55 | 117.20 |
| 1 | L | 462 | CYS | CA-C-O | -5.61 | 108.31 | 120.10 |
| 1 | O | 33 | GLU | CG-CD-OE1 | 5.61 | 129.53 | 118.30 |
| 1 | B | 76 | LYS | CD-CE-NZ | -5.61 | 98.79 | 111.70 |
| 1 | B | 111 | LEU | CA-C-O | -5.61 | 108.31 | 120.10 |
| 1 | D | 342 | ALA | N-CA-CB | 5.61 | 117.96 | 110.10 |
| 1 | E | 73 | PRO | CA-N-CD | -5.61 | 103.64 | 111.50 |
| 1 | G | 235 | LEU | CA-C-O | -5.61 | 108.31 | 120.10 |
| 1 | G | 337 | CYS | C-N-CA | 5.61 | 135.73 | 121.70 |
| 1 | O | 55 | VAL | C-N-CA | 5.61 | 135.73 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 130 | LYS | O-C-N | -5.61 | 113.72 | 122.70 |
| 1 | O | 246 | MET | CB-CG-SD | 5.61 | 129.24 | 112.40 |
| 1 | P | 18 | ARG | CG-CD-NE | -5.61 | 100.02 | 111.80 |
| 1 | B | 355 | ILE | CB-CA-C | -5.61 | 100.38 | 111.60 |
| 1 | B | 379 | VAL | C-N-CA | 5.61 | 135.72 | 121.70 |
| 1 | D | 34 | THR | N-CA-CB | 5.61 | 120.96 | 110.30 |
| 1 | D | 205 | ASP | N-CA-CB | 5.61 | 120.70 | 110.60 |
| 1 | H | 371 | CYS | N-CA-CB | -5.61 | 100.50 | 110.60 |
| 1 | J | 458 | VAL | O-C-N | -5.61 | 113.72 | 122.70 |
| 1 | O | 399 | GLY | N-CA-C | 5.61 | 127.13 | 113.10 |
| 1 | P | 470 | LEU | N-CA-CB | 5.61 | 121.62 | 110.40 |
| 1 | P | 480 | ALA | O-C-N | -5.61 | 113.72 | 122.70 |
| 1 | L | 108 | GLU | CG-CD-OE1 | -5.61 | 107.08 | 118.30 |
| 1 | L | 177 | ALA | O-C-N | -5.61 | 113.72 | 122.70 |
| 1 | A | 201 | ALA | CA-C-O | -5.61 | 108.32 | 120.10 |
| 1 | B | 209 | ILE | O-C-N | -5.61 | 113.73 | 122.70 |
| 1 | E | 305 | THR | O-C-N | -5.61 | 113.73 | 122.70 |
| 1 | G | 459 | GLU | CG-CD-OE2 | 5.61 | 129.51 | 118.30 |
| 1 | H | 238 | ALA | N-CA-CB | -5.61 | 102.25 | 110.10 |
| 1 | I | 10 | GLU | CB-CA-C | 5.61 | 121.61 | 110.40 |
| 1 | L | 98 | VAL | CB-CA-C | -5.61 | 100.75 | 111.40 |
| 1 | M | 480 | ALA | N-CA-CB | 5.61 | 117.95 | 110.10 |
| 1 | D | 477 | ILE | CB-CA-C | 5.61 | 122.81 | 111.60 |
| 1 | E | 185 | GLU | N-CA-CB | 5.61 | 120.69 | 110.60 |
| 1 | F | 68 | MET | CB-CG-SD | 5.61 | 129.22 | 112.40 |
| 1 | F | 270 | ASP | OD1-CG-OD2 | 5.61 | 133.95 | 123.30 |
| 1 | H | 351 | THR | O-C-N | -5.61 | 113.73 | 122.70 |
| 1 | K | 140 | CYS | CB-CA-C | 5.61 | 121.61 | 110.40 |
| 1 | P | 245 | GLU | CA-CB-CG | 5.61 | 125.73 | 113.40 |
| 1 | B | 218 | ARG | CB-CA-C | 5.60 | 121.61 | 110.40 |
| 1 | E | 304 | ILE | O-C-N | -5.60 | 113.73 | 122.70 |
| 1 | F | 196 | GLU | C-N-CA | 5.60 | 135.71 | 121.70 |
| 1 | K | 374 | GLU | CG-CD-OE2 | 5.60 | 129.51 | 118.30 |
| 1 | F | 258 | GLY | CA-C-O | -5.60 | 110.52 | 120.60 |
| 1 | I | 56 | VAL | CA-CB-CG2 | -5.60 | 102.50 | 110.90 |
| 1 | O | 36 | ARG | CG-CD-NE | -5.60 | 100.03 | 111.80 |
| 1 | A | 474 | THR | N-CA-CB | 5.60 | 120.94 | 110.30 |
| 1 | C | 35 | VAL | CA-CB-CG2 | -5.60 | 102.50 | 110.90 |
| 1 | C | 193 | ILE | CA-C-O | 5.60 | 131.86 | 120.10 |
| 1 | C | 383 | GLY | CA-C-O | -5.60 | 110.52 | 120.60 |
| 1 | D | 357 | GLU | CG-CD-OE1 | 5.60 | 129.50 | 118.30 |
| 1 | E | 375 | ASP | CB-CG-OD2 | -5.60 | 113.26 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 31 | ILE | O-C-N | -5.60 | 113.74 | 122.70 |
| 1 | A | 57 | VAL | CA-CB-CG2 | -5.60 | 102.50 | 110.90 |
| 1 | C | 199 | SER | N-CA-C | 5.60 | 126.12 | 111.00 |
| 1 | K | 419 | PRO | N-CD-CG | 5.60 | 111.60 | 103.20 |
| 1 | L | 254 | ILE | C-N-CA | 5.60 | 135.70 | 121.70 |
| 1 | P | 8 | LEU | CB-CG-CD1 | 5.60 | 120.52 | 111.00 |
| 1 | P | 260 | ASN | CA-CB-CG | 5.60 | 125.72 | 113.40 |
| 1 | E | 252 | ALA | C-N-CA | 5.60 | 135.69 | 121.70 |
| 1 | H | 490 | ILE | CG1-CB-CG2 | 5.60 | 123.72 | 111.40 |
| 1 | I | 69 | SER | N-CA-CB | 5.60 | 118.90 | 110.50 |
| 1 | L | 244 | SER | O-C-N | -5.60 | 113.74 | 122.70 |
| 1 | O | 183 | ASP | O-C-N | -5.60 | 113.74 | 122.70 |
| 1 | D | 350 | THR | CA-CB-OG1 | 5.60 | 120.75 | 109.00 |
| 1 | I | 117 | PRO | O-C-N | -5.60 | 113.75 | 122.70 |
| 1 | M | 270 | ASP | CB-CA-C | 5.60 | 121.59 | 110.40 |
| 1 | O | 357 | GLU | CB-CA-C | 5.60 | 121.59 | 110.40 |
| 1 | D | 227 | VAL | N-CA-CB | 5.59 | 123.81 | 111.50 |
| 1 | D | 317 | ASP | CA-CB-CG | 5.59 | 125.71 | 113.40 |
| 1 | K | 413 | ASP | O-C-N | -5.59 | 113.75 | 122.70 |
| 1 | L | 309 | ASP | CB-CG-OD2 | -5.59 | 113.27 | 118.30 |
| 1 | M | 306 | ASN | O-C-N | -5.59 | 113.75 | 122.70 |
| 1 | P | 368 | VAL | CB-CA-C | 5.59 | 122.03 | 111.40 |
| 1 | E | 169 | LYS | N-CA-CB | -5.59 | 100.53 | 110.60 |
| 1 | E | 273 | GLN | C-N-CA | 5.59 | 135.68 | 121.70 |
| 1 | C | 312 | ALA | CB-CA-C | 5.59 | 118.49 | 110.10 |
| 1 | D | 79 | ILE | CB-CG1-CD1 | 5.59 | 129.56 | 113.90 |
| 1 | E | 348 | ARG | CB-CA-C | 5.59 | 121.58 | 110.40 |
| 1 | G | 70 | VAL | CA-CB-CG1 | 5.59 | 119.29 | 110.90 |
| 1 | I | 455 | THR | C-N-CA | -5.59 | 110.56 | 122.30 |
| 1 | J | 480 | ALA | N-CA-CB | -5.59 | 102.27 | 110.10 |
| 1 | K | 286 | ARG | CA-C-O | -5.59 | 108.36 | 120.10 |
| 1 | M | 88 | GLU | OE1-CD-OE2 | -5.59 | 116.59 | 123.30 |
| 1 | M | 285 | ARG | CD-NE-CZ | 5.59 | 131.43 | 123.60 |
| 1 | M | 496 | ALA | N-CA-C | 5.59 | 126.10 | 111.00 |
| 1 | N | 489 | ARG | C-N-CA | -5.59 | 107.72 | 121.70 |
| 1 | O | 361 | ALA | CA-C-N | 5.59 | 129.50 | 117.20 |
| 1 | P | 293 | GLU | CG-CD-OE1 | -5.59 | 107.12 | 118.30 |
| 1 | D | 237 | CYS | N-CA-CB | 5.59 | 120.66 | 110.60 |
| 1 | D | 436 | LYS | O-C-N | -5.59 | 113.76 | 122.70 |
| 1 | F | 299 | THR | OG1-CB-CG2 | -5.59 | 97.15 | 110.00 |
| 1 | H | 112 | ASP | N-CA-C | 5.59 | 126.09 | 111.00 |
| 1 | I | 460 | ASP | OD1-CG-OD2 | -5.59 | 112.68 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 45 | ASP | N-CA-CB | -5.59 | 100.54 | 110.60 |
| 1 | K | 168 | GLU | CB-CA-C | 5.59 | 121.58 | 110.40 |
| 1 | B | 251 | VAL | O-C-N | -5.59 | 113.76 | 122.70 |
| 1 | G | 482 | GLU | CA-C-O | -5.59 | 108.36 | 120.10 |
| 1 | H | 350 | THR | OG1-CB-CG2 | -5.59 | 97.15 | 110.00 |
| 1 | K | 340 | PRO | O-C-N | -5.59 | 113.76 | 122.70 |
| 1 | O | 285 | ARG | CA-C-O | -5.59 | 108.36 | 120.10 |
| 1 | D | 91 | ASP | OD1-CG-OD2 | -5.59 | 112.68 | 123.30 |
| 1 | H | 66 | ARG | CG-CD-NE | 5.59 | 123.53 | 111.80 |
| 1 | M | 36 | ARG | CA-C-N | -5.59 | 104.91 | 117.20 |
| 1 | O | 420 | ARG | O-C-N | 5.59 | 131.64 | 122.70 |
| 1 | H | 76 | LYS | C-N-CA | 5.58 | 135.66 | 121.70 |
| 1 | L | 78 | LEU | N-CA-C | 5.58 | 126.08 | 111.00 |
| 1 | C | 12 | MET | CB-CA-C | -5.58 | 99.23 | 110.40 |
| 1 | C | 492 | ASP | N-CA-CB | -5.58 | 100.55 | 110.60 |
| 1 | G | 413 | ASP | N-CA-CB | -5.58 | 100.55 | 110.60 |
| 1 | M | 103 | LEU | O-C-N | 5.58 | 131.63 | 122.70 |
| 1 | M | 189 | ASP | CB-CG-OD2 | 5.58 | 123.33 | 118.30 |
| 1 | N | 302 | ASN | O-C-N | -5.58 | 113.77 | 122.70 |
| 1 | N | 493 | VAL | CA-CB-CG2 | 5.58 | 119.28 | 110.90 |
| 1 | P | 113 | GLN | CG-CD-OE1 | 5.58 | 132.77 | 121.60 |
| 1 | D | 399 | GLY | CA-C-O | -5.58 | 110.55 | 120.60 |
| 1 | E | 480 | ALA | CB-CA-C | 5.58 | 118.47 | 110.10 |
| 1 | H | 469 | PRO | N-CD-CG | 5.58 | 111.57 | 103.20 |
| 1 | K | 43 | GLY | N-CA-C | -5.58 | 99.15 | 113.10 |
| 1 | K | 359 | ALA | O-C-N | 5.58 | 131.63 | 122.70 |
| 1 | L | 136 | LYS | CB-CA-C | 5.58 | 121.56 | 110.40 |
| 1 | L | 399 | GLY | CA-C-O | -5.58 | 110.55 | 120.60 |
| 1 | L | 493 | VAL | CG1-CB-CG2 | 5.58 | 119.83 | 110.90 |
| 1 | M | 265 | GLN | C-N-CA | 5.58 | 135.66 | 121.70 |
| 1 | M | 289 | LYS | N-CA-CB | 5.58 | 120.64 | 110.60 |
| 1 | M | 338 | LYS | CB-CA-C | 5.58 | 121.56 | 110.40 |
| 1 | O | 302 | ASN | CA-C-N | 5.58 | 129.48 | 117.20 |
| 1 | G | 146 | ASP | O-C-N | -5.58 | 113.77 | 122.70 |
| 1 | I | 23 | MET | CB-CG-SD | 5.58 | 129.14 | 112.40 |
| 1 | M | 458 | VAL | CG1-CB-CG2 | 5.58 | 119.83 | 110.90 |
| 1 | N | 185 | GLU | OE1-CD-OE2 | -5.58 | 116.60 | 123.30 |
| 1 | O | 328 | GLY | CA-C-N | -5.58 | 104.92 | 117.20 |
| 1 | A | 224 | PRO | CB-CA-C | 5.58 | 125.95 | 112.00 |
| 1 | C | 364 | ASP | CB-CG-OD2 | 5.58 | 123.32 | 118.30 |
| 1 | F | 349 | GLY | CA-C-O | -5.58 | 110.56 | 120.60 |
| 1 | J | 141 | GLU | O-C-N | -5.58 | 113.78 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 284 | ALA | N-CA-CB | 5.58 | 117.91 | 110.10 |
| 1 | N | 338 | LYS | CA-C-O | -5.58 | 108.39 | 120.10 |
| 1 | N | 401 | SER | N-CA-CB | 5.58 | 118.87 | 110.50 |
| 1 | D | 76 | LYS | O-C-N | 5.58 | 131.62 | 122.70 |
| 1 | F | 204 | ASP | CB-CG-OD2 | 5.58 | 123.32 | 118.30 |
| 1 | H | 8 | LEU | CB-CA-C | -5.58 | 99.60 | 110.20 |
| 1 | L | 195 | ILE | O-C-N | -5.58 | 113.78 | 122.70 |
| 1 | C | 60 | ASP | OD1-CG-OD2 | -5.58 | 112.70 | 123.30 |
| 1 | D | 382 | GLY | CA-C-O | -5.58 | 110.56 | 120.60 |
| 1 | E | 495 | ALA | CA-C-O | -5.58 | 108.39 | 120.10 |
| 1 | I | 224 | PRO | N-CD-CG | -5.58 | 94.84 | 103.20 |
| 1 | J | 148 | GLU | CA-C-N | -5.58 | 104.93 | 117.20 |
| 1 | K | 141 | GLU | CG-CD-OE2 | 5.58 | 129.45 | 118.30 |
| 1 | L | 461 | MET | CA-CB-CG | 5.58 | 122.78 | 113.30 |
| 1 | M | 351 | THR | OG1-CB-CG2 | -5.58 | 97.18 | 110.00 |
| 1 | N | 302 | ASN | CB-CG-OD1 | 5.58 | 132.75 | 121.60 |
| 1 | N | 348 | ARG | CD-NE-CZ | -5.58 | 115.79 | 123.60 |
| 1 | O | 206 | THR | CA-CB-OG1 | -5.58 | 97.29 | 109.00 |
| 1 | A | 49 | VAL | CA-C-N | 5.57 | 129.46 | 117.20 |
| 1 | E | 12 | MET | CA-C-O | -5.57 | 108.40 | 120.10 |
| 1 | E | 484 | THR | CA-CB-OG1 | -5.57 | 97.29 | 109.00 |
| 1 | F | 338 | LYS | CD-CE-NZ | 5.57 | 124.52 | 111.70 |
| 1 | J | 454 | PHE | CB-CG-CD1 | 5.57 | 124.70 | 120.80 |
| 1 | K | 227 | VAL | CA-CB-CG1 | 5.57 | 119.26 | 110.90 |
| 1 | N | 13 | LYS | CB-CA-C | -5.57 | 99.25 | 110.40 |
| 1 | N | 30 | ILE | CA-CB-CG2 | 5.57 | 122.05 | 110.90 |
| 1 | F | 164 | GLU | C-N-CA | 5.57 | 135.63 | 121.70 |
| 1 | M | 203 | ILE | CA-CB-CG2 | 5.57 | 122.04 | 110.90 |
| 1 | O | 208 | LEU | CA-C-O | -5.57 | 108.40 | 120.10 |
| 1 | C | 381 | GLY | CA-C-O | -5.57 | 110.57 | 120.60 |
| 1 | E | 52 | LEU | O-C-N | -5.57 | 113.73 | 123.20 |
| 1 | F | 141 | GLU | CG-CD-OE1 | 5.57 | 129.44 | 118.30 |
| 1 | F | 469 | PRO | N-CD-CG | -5.57 | 94.84 | 103.20 |
| 1 | H | 124 | TYR | CB-CG-CD1 | 5.57 | 124.34 | 121.00 |
| 1 | H | 443 | SER | O-C-N | -5.57 | 113.79 | 122.70 |
| 1 | J | 89 | VAL | CB-CA-C | -5.57 | 100.81 | 111.40 |
| 1 | P | 311 | SER | N-CA-CB | -5.57 | 102.15 | 110.50 |
| 1 | N | 258 | GLY | O-C-N | -5.57 | 113.79 | 122.70 |
| 1 | O | 168 | GLU | CG-CD-OE1 | 5.57 | 129.44 | 118.30 |
| 1 | F | 284 | ALA | C-N-CA | 5.57 | 135.62 | 121.70 |
| 1 | K | 469 | PRO | N-CA-CB | -5.57 | 96.47 | 102.60 |
| 1 | L | 67 | GLU | CB-CA-C | 5.57 | 121.54 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | L | 250 | MET | CA-CB-CG | 5.57 | 122.77 | 113.30 |
| 1 | L | 448 | CYS | CB-CA-C | 5.57 | 121.53 | 110.40 |
| 1 | M | 71 | GLU | CB-CA-C | -5.57 | 99.26 | 110.40 |
| 1 | A | 332 | ILE | CG1-CB-CG2 | -5.57 | 99.16 | 111.40 |
| 1 | C | 79 | ILE | C-N-CA | 5.57 | 135.61 | 121.70 |
| 1 | H | 143 | GLY | CA-C-O | -5.57 | 110.58 | 120.60 |
| 1 | J | 353 | HIS | N-CA-CB | 5.57 | 120.62 | 110.60 |
| 1 | J | 493 | VAL | C-N-CA | 5.57 | 135.62 | 121.70 |
| 1 | N | 113 | GLN | CG-CD-OE1 | 5.57 | 132.73 | 121.60 |
| 1 | N | 259 | ALA | C-N-CA | 5.57 | 135.61 | 121.70 |
| 1 | N | 286 | ARG | CA-C-O | -5.57 | 108.41 | 120.10 |
| 1 | D | 244 | SER | CA-C-O | -5.56 | 108.42 | 120.10 |
| 1 | F | 336 | GLU | OE1-CD-OE2 | -5.56 | 116.62 | 123.30 |
| 1 | N | 404 | GLU | N-CA-CB | 5.56 | 120.62 | 110.60 |
| 1 | B | 374 | GLU | CA-C-O | -5.56 | 108.42 | 120.10 |
| 1 | G | 362 | VAL | CA-CB-CG2 | 5.56 | 119.24 | 110.90 |
| 1 | G | 440 | ALA | N-CA-CB | 5.56 | 117.89 | 110.10 |
| 1 | H | 193 | ILE | O-C-N | -5.56 | 113.80 | 122.70 |
| 1 | J | 132 | GLN | CB-CA-C | -5.56 | 99.28 | 110.40 |
| 1 | K | 124 | TYR | CD1-CE1-CZ | -5.56 | 114.79 | 119.80 |
| 1 | K | 366 | VAL | O-C-N | -5.56 | 113.74 | 123.20 |
| 1 | M | 129 | GLN | O-C-N | -5.56 | 113.80 | 122.70 |
| 1 | P | 130 | LYS | CD-CE-NZ | -5.56 | 98.91 | 111.70 |
| 1 | C | 446 | ASN | CA-CB-CG | 5.56 | 125.63 | 113.40 |
| 1 | O | 277 | ALA | N-CA-CB | -5.56 | 102.31 | 110.10 |
| 1 | A | 93 | THR | CA-CB-OG1 | 5.56 | 120.67 | 109.00 |
| 1 | B | 144 | ALA | CB-CA-C | -5.56 | 101.76 | 110.10 |
| 1 | C | 119 | ILE | CB-CA-C | -5.56 | 100.48 | 111.60 |
| 1 | C | 140 | CYS | O-C-N | -5.56 | 113.80 | 122.70 |
| 1 | D | 199 | SER | N-CA-CB | -5.56 | 102.16 | 110.50 |
| 1 | D | 330 | SER | CA-CB-OG | 5.56 | 126.21 | 111.20 |
| 1 | D | 361 | ALA | N-CA-CB | 5.56 | 117.88 | 110.10 |
| 1 | E | 40 | GLY | N-CA-C | 5.56 | 127.00 | 113.10 |
| 1 | E | 433 | ILE | CB-CA-C | -5.56 | 100.48 | 111.60 |
| 1 | F | 10 | GLU | CB-CG-CD | 5.56 | 129.21 | 114.20 |
| 1 | I | 483 | SER | N-CA-CB | 5.56 | 118.84 | 110.50 |
| 1 | L | 186 | GLY | O-C-N | -5.56 | 113.81 | 122.70 |
| 1 | L | 466 | VAL | CG1-CB-CG2 | -5.56 | 102.01 | 110.90 |
| 1 | M | 219 | VAL | CA-C-N | -5.56 | 104.97 | 117.20 |
| 1 | M | 260 | ASN | N-CA-C | 5.56 | 126.01 | 111.00 |
| 1 | M | 425 | ASN | CA-C-O | -5.56 | 108.42 | 120.10 |
| 1 | A | 72 | HIS | ND1-CG-CD2 | 5.56 | 116.58 | 108.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 167 | LYS | CB-CA-C | -5.56 | 99.28 | 110.40 |
| 1 | A | 472 | VAL | O-C-N | -5.56 | 113.81 | 122.70 |
| 1 | B | 251 | VAL | CA-CB-CG1 | -5.56 | 102.56 | 110.90 |
| 1 | E | 86 | GLU | N-CA-CB | 5.56 | 120.60 | 110.60 |
| 1 | E | 207 | GLU | CG-CD-OE2 | -5.56 | 107.19 | 118.30 |
| 1 | G | 303 | VAL | O-C-N | -5.56 | 113.81 | 122.70 |
| 1 | H | 420 | ARG | CA-C-N | 5.56 | 129.43 | 117.20 |
| 1 | K | 307 | ILE | CA-CB-CG1 | 5.56 | 121.56 | 111.00 |
| 1 | K | 315 | LEU | CB-CG-CD1 | 5.56 | 120.45 | 111.00 |
| 1 | B | 276 | LEU | CA-CB-CG | 5.56 | 128.08 | 115.30 |
| 1 | C | 260 | ASN | CB-CG-OD1 | 5.56 | 132.71 | 121.60 |
| 1 | J | 311 | SER | C-N-CA | 5.56 | 135.59 | 121.70 |
| 1 | J | 347 | ILE | O-C-N | -5.56 | 113.81 | 122.70 |
| 1 | K | 115 | VAL | CA-CB-CG2 | 5.56 | 119.23 | 110.90 |
| 1 | N | 411 | PHE | CB-CG-CD2 | 5.56 | 124.69 | 120.80 |
| 1 | O | 327 | SER | CA-C-N | -5.56 | 105.09 | 116.20 |
| 1 | B | 34 | THR | OG1-CB-CG2 | -5.55 | 97.22 | 110.00 |
| 1 | D | 167 | LYS | CB-CG-CD | 5.55 | 126.04 | 111.60 |
| 1 | D | 470 | LEU | CB-CG-CD1 | -5.55 | 101.56 | 111.00 |
| 1 | E | 219 | VAL | N-CA-CB | 5.55 | 123.72 | 111.50 |
| 1 | E | 379 | VAL | N-CA-C | 5.55 | 126.00 | 111.00 |
| 1 | G | 51 | ASP | OD1-CG-OD2 | -5.55 | 112.75 | 123.30 |
| 1 | I | 414 | ALA | CB-CA-C | 5.55 | 118.43 | 110.10 |
| 1 | J | 340 | PRO | O-C-N | -5.55 | 113.81 | 122.70 |
| 1 | O | 75 | ALA | CA-C-O | 5.55 | 131.76 | 120.10 |
| 1 | O | 289 | LYS | N-CA-CB | 5.55 | 120.60 | 110.60 |
| 1 | B | 294 | LYS | N-CA-CB | 5.55 | 120.60 | 110.60 |
| 1 | C | 259 | ALA | CA-C-O | -5.55 | 108.44 | 120.10 |
| 1 | C | 347 | ILE | O-C-N | -5.55 | 113.82 | 122.70 |
| 1 | D | 320 | LEU | CB-CG-CD1 | 5.55 | 120.44 | 111.00 |
| 1 | H | 169 | LYS | O-C-N | 5.55 | 131.59 | 122.70 |
| 1 | I | 143 | GLY | O-C-N | -5.55 | 113.82 | 122.70 |
| 1 | L | 179 | SER | N-CA-CB | 5.55 | 118.83 | 110.50 |
| 1 | M | 15 | TYR | CB-CG-CD2 | -5.55 | 117.67 | 121.00 |
| 1 | N | 55 | VAL | N-CA-C | 5.55 | 125.99 | 111.00 |
| 1 | C | 173 | ILE | N-CA-CB | 5.55 | 123.57 | 110.80 |
| 1 | J | 11 | ASN | CB-CG-OD1 | -5.55 | 110.50 | 121.60 |
| 1 | K | 83 | LYS | CB-CA-C | 5.55 | 121.50 | 110.40 |
| 1 | O | 298 | ALA | C-N-CA | 5.55 | 135.58 | 121.70 |
| 1 | O | 7 | VAL | CA-CB-CG2 | -5.55 | 102.58 | 110.90 |
| 1 | O | 325 | LYS | N-CA-CB | 5.55 | 120.59 | 110.60 |
| 1 | P | 216 | LYS | CA-CB-CG | 5.55 | 125.61 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 257 | SER | N-CA-CB | 5.55 | 118.82 | 110.50 |
| 1 | N | 177 | ALA | CB-CA-C | 5.55 | 118.42 | 110.10 |
| 1 | E | 356 | GLU | CB-CA-C | 5.55 | 121.49 | 110.40 |
| 1 | F | 172 | GLU | CB-CG-CD | -5.55 | 99.22 | 114.20 |
| 1 | H | 454 | PHE | N-CA-CB | -5.55 | 100.61 | 110.60 |
| 1 | J | 414 | ALA | CA-C-O | -5.55 | 108.45 | 120.10 |
| 1 | K | 68 | MET | CB-CG-SD | 5.55 | 129.04 | 112.40 |
| 1 | L | 84 | THR | O-C-N | 5.55 | 131.57 | 122.70 |
| 1 | L | 170 | LEU | CA-C-N | -5.55 | 105.00 | 117.20 |
| 1 | N | 345 | MET | CA-CB-CG | -5.55 | 103.87 | 113.30 |
| 1 | C | 49 | VAL | CA-C-N | -5.54 | 105.00 | 117.20 |
| 1 | C | 80 | GLU | CG-CD-OE1 | 5.54 | 129.39 | 118.30 |
| 1 | E | 346 | LEU | CB-CA-C | 5.54 | 120.73 | 110.20 |
| 1 | F | 303 | VAL | CA-CB-CG1 | 5.54 | 119.22 | 110.90 |
| 1 | G | 62 | VAL | CA-CB-CG1 | 5.54 | 119.22 | 110.90 |
| 1 | G | 190 | LYS | CA-C-O | 5.54 | 131.75 | 120.10 |
| 1 | H | 57 | VAL | O-C-N | -5.54 | 113.83 | 122.70 |
| 1 | M | 275 | TYR | CA-C-O | -5.54 | 108.45 | 120.10 |
| 1 | E | 289 | LYS | CA-CB-CG | 5.54 | 125.59 | 113.40 |
| 1 | J | 169 | LYS | CB-CG-CD | 5.54 | 126.01 | 111.60 |
| 1 | J | 273 | GLN | CA-CB-CG | 5.54 | 125.60 | 113.40 |
| 1 | K | 362 | VAL | CG1-CB-CG2 | -5.54 | 102.03 | 110.90 |
| 1 | K | 365 | ALA | CB-CA-C | 5.54 | 118.41 | 110.10 |
| 1 | M | 132 | GLN | CA-CB-CG | 5.54 | 125.60 | 113.40 |
| 1 | M | 393 | LEU | CB-CG-CD2 | -5.54 | 101.58 | 111.00 |
| 1 | I | 225 | LYS | CA-C-O | -5.54 | 108.46 | 120.10 |
| 1 | L | 189 | ASP | CA-C-N | -5.54 | 105.01 | 117.20 |
| 1 | O | 115 | VAL | N-CA-CB | 5.54 | 123.69 | 111.50 |
| 1 | O | 196 | GLU | CG-CD-OE1 | 5.54 | 129.38 | 118.30 |
| 1 | O | 295 | LEU | N-CA-CB | 5.54 | 121.48 | 110.40 |
| 1 | B | 482 | GLU | OE1-CD-OE2 | -5.54 | 116.65 | 123.30 |
| 1 | C | 157 | SER | CB-CA-C | 5.54 | 120.62 | 110.10 |
| 1 | E | 114 | ASN | CA-C-N | -5.54 | 105.01 | 117.20 |
| 1 | E | 337 | CYS | C-N-CA | 5.54 | 135.54 | 121.70 |
| 1 | F | 386 | GLU | N-CA-CB | -5.54 | 100.63 | 110.60 |
| 1 | I | 240 | GLU | N-CA-CB | 5.54 | 120.57 | 110.60 |
| 1 | L | 115 | VAL | C-N-CA | 5.54 | 135.55 | 121.70 |
| 1 | L | 425 | ASN | CA-CB-CG | 5.54 | 125.58 | 113.40 |
| 1 | D | 118 | THR | CA-CB-CG2 | 5.54 | 120.15 | 112.40 |
| 1 | D | 122 | LYS | CB-CA-C | 5.54 | 121.47 | 110.40 |
| 1 | G | 72 | HIS | CA-CB-CG | -5.54 | 104.19 | 113.60 |
| 1 | A | 126 | ALA | CB-CA-C | 5.54 | 118.40 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 141 | GLU | CG-CD-OE1 | 5.54 | 129.37 | 118.30 |
| 1 | B | 18 | ARG | CB-CG-CD | -5.54 | 97.21 | 111.60 |
| 1 | B | 347 | ILE | CA-CB-CG2 | -5.54 | 99.83 | 110.90 |
| 1 | E | 308 | LYS | CB-CA-C | 5.54 | 121.47 | 110.40 |
| 1 | E | 313 | GLN | C-N-CA | 5.54 | 135.54 | 121.70 |
| 1 | E | 461 | MET | CA-C-O | -5.54 | 108.47 | 120.10 |
| 1 | F | 7 | VAL | O-C-N | -5.54 | 113.84 | 122.70 |
| 1 | G | 299 | THR | CA-CB-OG1 | 5.54 | 120.62 | 109.00 |
| 1 | I | 284 | ALA | O-C-N | 5.54 | 131.56 | 122.70 |
| 1 | L | 221 | ALA | CA-C-O | -5.54 | 108.48 | 120.10 |
| 1 | N | 197 | LYS | O-C-N | -5.54 | 113.84 | 122.70 |
| 1 | P | 215 | ASP | C-N-CA | 5.54 | 135.54 | 121.70 |
| 1 | D | 229 | ASP | CA-C-O | 5.53 | 131.72 | 120.10 |
| 1 | J | 52 | LEU | CB-CG-CD1 | 5.53 | 120.41 | 111.00 |
| 1 | K | 84 | THR | CA-CB-OG1 | 5.53 | 120.62 | 109.00 |
| 1 | M | 432 | GLU | OE1-CD-OE2 | -5.53 | 116.66 | 123.30 |
| 1 | J | 403 | ARG | CG-CD-NE | 5.53 | 123.42 | 111.80 |
| 1 | B | 57 | VAL | CA-CB-CG1 | -5.53 | 102.60 | 110.90 |
| 1 | E | 460 | ASP | OD1-CG-OD2 | -5.53 | 112.79 | 123.30 |
| 1 | J | 7 | VAL | CA-CB-CG2 | -5.53 | 102.60 | 110.90 |
| 1 | J | 270 | ASP | N-CA-CB | -5.53 | 100.65 | 110.60 |
| 1 | K | 72 | HIS | CB-CA-C | 5.53 | 121.46 | 110.40 |
| 1 | M | 317 | ASP | CA-C-N | 5.53 | 129.37 | 117.20 |
| 1 | P | 112 | ASP | OD1-CG-OD2 | -5.53 | 112.79 | 123.30 |
| 1 | E | 465 | GLY | O-C-N | -5.53 | 113.85 | 122.70 |
| 1 | F | 110 | LEU | CB-CG-CD1 | -5.53 | 101.60 | 111.00 |
| 1 | N | 57 | VAL | CA-C-O | -5.53 | 108.49 | 120.10 |
| 1 | P | 486 | MET | CA-C-N | -5.53 | 105.04 | 117.20 |
| 1 | A | 145 | GLN | CG-CD-OE1 | -5.53 | 110.54 | 121.60 |
| 1 | A | 255 | LYS | CA-CB-CG | 5.53 | 125.56 | 113.40 |
| 1 | D | 209 | ILE | O-C-N | -5.53 | 113.86 | 122.70 |
| 1 | H | 472 | VAL | CG1-CB-CG2 | 5.53 | 119.74 | 110.90 |
| 1 | J | 86 | GLU | N-CA-C | 5.53 | 125.93 | 111.00 |
| 1 | J | 238 | ALA | CA-C-O | -5.53 | 108.49 | 120.10 |
| 1 | N | 302 | ASN | CB-CA-C | 5.53 | 121.46 | 110.40 |
| 1 | N | 373 | ILE | CA-C-O | -5.53 | 108.49 | 120.10 |
| 1 | A | 462 | CYS | C-N-CA | -5.53 | 107.89 | 121.70 |
| 1 | C | 489 | ARG | N-CA-CB | 5.53 | 120.55 | 110.60 |
| 1 | D | 91 | ASP | O-C-N | -5.53 | 113.81 | 123.20 |
| 1 | F | 240 | GLU | CA-CB-CG | 5.53 | 125.56 | 113.40 |
| 1 | F | 426 | ALA | C-N-CA | 5.53 | 133.91 | 122.30 |
| 1 | I | 189 | ASP | CB-CG-OD1 | -5.53 | 113.33 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 319 | GLY | CA-C-N | 5.53 | 129.36 | 117.20 |
| 1 | J | 370 | GLY | O-C-N | -5.53 | 113.86 | 122.70 |
| 1 | K | 145 | GLN | CB-CG-CD | -5.53 | 97.24 | 111.60 |
| 1 | O | 127 | ALA | CB-CA-C | 5.53 | 118.39 | 110.10 |
| 1 | A | 181 | VAL | N-CA-C | 5.52 | 125.91 | 111.00 |
| 1 | B | 327 | SER | N-CA-CB | 5.52 | 118.79 | 110.50 |
| 1 | C | 203 | ILE | O-C-N | 5.52 | 131.54 | 122.70 |
| 1 | J | 206 | THR | C-N-CA | 5.52 | 135.51 | 121.70 |
| 1 | K | 335 | GLU | CA-CB-CG | 5.52 | 125.55 | 113.40 |
| 1 | C | 60 | ASP | N-CA-CB | -5.52 | 100.66 | 110.60 |
| 1 | E | 353 | HIS | CB-CA-C | 5.52 | 121.44 | 110.40 |
| 1 | I | 67 | GLU | OE1-CD-OE2 | 5.52 | 129.93 | 123.30 |
| 1 | I | 204 | ASP | N-CA-CB | 5.52 | 120.54 | 110.60 |
| 1 | I | 285 | ARG | O-C-N | 5.52 | 131.54 | 122.70 |
| 1 | L | 143 | GLY | C-N-CA | -5.52 | 107.89 | 121.70 |
| 1 | L | 481 | ALA | N-CA-CB | -5.52 | 102.37 | 110.10 |
| 1 | H | 199 | SER | N-CA-CB | -5.52 | 102.22 | 110.50 |
| 1 | O | 269 | ASP | CA-C-O | -5.52 | 108.51 | 120.10 |
| 1 | H | 333 | PHE | CB-CG-CD2 | 5.52 | 124.66 | 120.80 |
| 1 | I | 11 | ASN | O-C-N | -5.52 | 113.87 | 122.70 |
| 1 | K | 217 | GLU | N-CA-CB | -5.52 | 100.66 | 110.60 |
| 1 | L | 382 | GLY | C-N-CA | 5.52 | 133.89 | 122.30 |
| 1 | O | 170 | LEU | CA-CB-CG | 5.52 | 127.99 | 115.30 |
| 1 | B | 193 | ILE | O-C-N | -5.52 | 113.87 | 122.70 |
| 1 | D | 400 | ILE | N-CA-C | 5.52 | 125.89 | 111.00 |
| 1 | E | 144 | ALA | CB-CA-C | -5.52 | 101.83 | 110.10 |
| 1 | E | 321 | VAL | CA-CB-CG1 | 5.52 | 119.17 | 110.90 |
| 1 | G | 68 | MET | CG-SD-CE | 5.52 | 109.03 | 100.20 |
| 1 | N | 471 | ARG | NH1-CZ-NH2 | -5.52 | 113.33 | 119.40 |
| 1 | O | 336 | GLU | CB-CA-C | 5.52 | 121.44 | 110.40 |
| 1 | P | 111 | LEU | CB-CG-CD2 | -5.52 | 101.62 | 111.00 |
| 1 | P | 171 | ALA | O-C-N | -5.52 | 113.87 | 122.70 |
| 1 | A | 113 | GLN | N-CA-C | 5.52 | 125.89 | 111.00 |
| 1 | I | 286 | ARG | CA-CB-CG | 5.52 | 125.54 | 113.40 |
| 1 | L | 285 | ARG | O-C-N | -5.52 | 113.87 | 122.70 |
| 1 | A | 150 | LEU | O-C-N | 5.51 | 131.52 | 122.70 |
| 1 | A | 494 | ILE | CA-CB-CG2 | 5.51 | 121.93 | 110.90 |
| 1 | B | 112 | ASP | N-CA-C | 5.51 | 125.89 | 111.00 |
| 1 | H | 118 | THR | CA-CB-CG2 | 5.51 | 120.12 | 112.40 |
| 1 | I | 203 | ILE | CB-CA-C | 5.51 | 122.63 | 111.60 |
| 1 | K | 167 | LYS | N-CA-CB | -5.51 | 100.67 | 110.60 |
| 1 | M | 305 | THR | O-C-N | -5.51 | 113.88 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 446 | ASN | CB-CG-OD1 | -5.51 | 110.57 | 121.60 |
| 1 | A | 305 | THR | O-C-N | -5.51 | 113.88 | 122.70 |
| 1 | C | 138 | ILE | CB-CA-C | -5.51 | 100.57 | 111.60 |
| 1 | F | 183 | ASP | CB-CG-OD2 | -5.51 | 113.34 | 118.30 |
| 1 | P | 368 | VAL | N-CA-CB | 5.51 | 123.63 | 111.50 |
| 1 | E | 228 | THR | O-C-N | -5.51 | 113.88 | 122.70 |
| 1 | E | 244 | SER | CB-CA-C | 5.51 | 120.57 | 110.10 |
| 1 | F | 494 | ILE | CG1-CB-CG2 | -5.51 | 99.27 | 111.40 |
| 1 | I | 211 | GLY | O-C-N | -5.51 | 113.88 | 122.70 |
| 1 | N | 7 | VAL | CA-CB-CG1 | -5.51 | 102.63 | 110.90 |
| 1 | N | 314 | ASP | N-CA-C | 5.51 | 125.88 | 111.00 |
| 1 | N | 339 | HIS | ND1-CG-CD2 | -5.51 | 98.28 | 106.00 |
| 1 | E | 463 | GLU | CG-CD-OE2 | 5.51 | 129.32 | 118.30 |
| 1 | I | 471 | ARG | CB-CA-C | 5.51 | 121.42 | 110.40 |
| 1 | K | 172 | GLU | OE1-CD-OE2 | -5.51 | 116.69 | 123.30 |
| 1 | L | 485 | GLU | CG-CD-OE1 | -5.51 | 107.28 | 118.30 |
| 1 | D | 280 | GLY | C-N-CA | 5.51 | 135.47 | 121.70 |
| 1 | I | 159 | THR | N-CA-CB | 5.51 | 120.77 | 110.30 |
| 1 | I | 249 | ASP | CA-C-O | -5.51 | 108.53 | 120.10 |
| 1 | P | 80 | GLU | N-CA-CB | 5.51 | 120.52 | 110.60 |
| 1 | P | 380 | SER | O-C-N | -5.51 | 113.84 | 123.20 |
| 1 | E | 185 | GLU | CG-CD-OE2 | 5.51 | 129.31 | 118.30 |
| 1 | F | 124 | TYR | OH-CZ-CE2 | 5.51 | 134.97 | 120.10 |
| 1 | G | 74 | ALA | N-CA-CB | -5.51 | 102.39 | 110.10 |
| 1 | H | 330 | SER | C-N-CA | 5.51 | 135.47 | 121.70 |
| 1 | L | 351 | THR | N-CA-CB | 5.51 | 120.76 | 110.30 |
| 1 | M | 155 | MET | N-CA-CB | 5.51 | 120.51 | 110.60 |
| 1 | N | 41 | PRO | O-C-N | -5.51 | 113.89 | 122.70 |
| 1 | N | 158 | ILE | N-CA-C | 5.51 | 125.87 | 111.00 |
| 1 | F | 122 | LYS | O-C-N | 5.50 | 132.56 | 123.20 |
| 1 | F | 124 | TYR | O-C-N | -5.50 | 113.89 | 122.70 |
| 1 | H | 331 | MET | N-CA-CB | 5.50 | 120.51 | 110.60 |
| 1 | J | 19 | ASP | CA-C-O | 5.50 | 131.66 | 120.10 |
| 1 | M | 407 | ALA | CB-CA-C | 5.50 | 118.36 | 110.10 |
| 1 | C | 189 | ASP | O-C-N | -5.50 | 113.89 | 122.70 |
| 1 | I | 124 | TYR | CB-CG-CD2 | -5.50 | 117.70 | 121.00 |
| 1 | M | 120 | VAL | CA-C-O | -5.50 | 108.54 | 120.10 |
| 1 | O | 106 | LYS | O-C-N | -5.50 | 113.90 | 122.70 |
| 1 | A | 18 | ARG | NE-CZ-NH1 | -5.50 | 117.55 | 120.30 |
| 1 | D | 472 | VAL | O-C-N | -5.50 | 113.90 | 122.70 |
| 1 | F | 396 | TYR | CB-CG-CD2 | -5.50 | 117.70 | 121.00 |
| 1 | G | 84 | THR | N-CA-CB | 5.50 | 120.75 | 110.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 457 | ALA | N-CA-CB | -5.50 | 102.40 | 110.10 |
| 1 | M | 90 | GLY | O-C-N | 5.50 | 131.50 | 122.70 |
| 1 | N | 310 | LEU | CB-CG-CD1 | 5.50 | 120.35 | 111.00 |
| 1 | O | 385 | THR | CB-CA-C | 5.50 | 126.46 | 111.60 |
| 1 | P | 24 | ASN | CA-C-O | -5.50 | 108.55 | 120.10 |
| 1 | E | 86 | GLU | CA-C-O | -5.50 | 108.55 | 120.10 |
| 1 | L | 9 | PRO | N-CA-CB | -5.50 | 96.55 | 102.60 |
| 1 | C | 482 | GLU | CG-CD-OE2 | 5.50 | 129.30 | 118.30 |
| 1 | D | 64 | ILE | CA-C-O | 5.50 | 131.65 | 120.10 |
| 1 | F | 165 | LYS | CD-CE-NZ | 5.50 | 124.35 | 111.70 |
| 1 | F | 420 | ARG | NH1-CZ-NH2 | 5.50 | 125.45 | 119.40 |
| 1 | G | 414 | ALA | CB-CA-C | 5.50 | 118.35 | 110.10 |
| 1 | H | 460 | ASP | CA-CB-CG | -5.50 | 101.31 | 113.40 |
| 1 | J | 458 | VAL | CA-CB-CG2 | 5.50 | 119.15 | 110.90 |
| 1 | M | 448 | CYS | CB-CA-C | 5.50 | 121.40 | 110.40 |
| 1 | N | 203 | ILE | CB-CA-C | -5.50 | 100.60 | 111.60 |
| 1 | G | 322 | GLU | CG-CD-OE2 | 5.50 | 129.29 | 118.30 |
| 1 | G | 465 | GLY | N-CA-C | 5.50 | 126.84 | 113.10 |
| 1 | I | 411 | PHE | CD1-CE1-CZ | 5.50 | 126.69 | 120.10 |
| 1 | K | 135 | LEU | CB-CG-CD2 | -5.50 | 101.66 | 111.00 |
| 1 | L | 100 | ALA | C-N-CA | -5.50 | 110.76 | 122.30 |
| 1 | M | 171 | ALA | CB-CA-C | -5.50 | 101.85 | 110.10 |
| 1 | N | 411 | PHE | CA-CB-CG | 5.50 | 127.09 | 113.90 |
| 1 | C | 368 | VAL | CG1-CB-CG2 | -5.50 | 102.11 | 110.90 |
| 1 | A | 357 | GLU | N-CA-CB | 5.49 | 120.49 | 110.60 |
| 1 | C | 245 | GLU | CG-CD-OE1 | 5.49 | 129.29 | 118.30 |
| 1 | F | 66 | ARG | N-CA-C | 5.49 | 125.83 | 111.00 |
| 1 | I | 85 | GLN | CB-CA-C | 5.49 | 121.39 | 110.40 |
| 1 | L | 260 | ASN | O-C-N | -5.49 | 113.91 | 122.70 |
| 1 | L | 275 | TYR | N-CA-CB | 5.49 | 120.49 | 110.60 |
| 1 | N | 338 | LYS | N-CA-CB | 5.49 | 120.49 | 110.60 |
| 1 | O | 351 | THR | CA-CB-OG1 | 5.49 | 120.54 | 109.00 |
| 1 | A | 58 | THR | CA-CB-CG2 | -5.49 | 104.71 | 112.40 |
| 1 | H | 133 | GLU | CG-CD-OE1 | -5.49 | 107.32 | 118.30 |
| 1 | K | 164 | GLU | CG-CD-OE2 | 5.49 | 129.28 | 118.30 |
| 1 | N | 254 | ILE | CG1-CB-CG2 | 5.49 | 123.48 | 111.40 |
| 1 | O | 124 | TYR | N-CA-CB | -5.49 | 100.72 | 110.60 |
| 1 | P | 51 | ASP | C-N-CA | 5.49 | 135.43 | 121.70 |
| 1 | A | 116 | HIS | O-C-N | -5.49 | 110.67 | 121.10 |
| 1 | B | 463 | GLU | N-CA-CB | 5.49 | 120.48 | 110.60 |
| 1 | F | 83 | LYS | CA-C-N | 5.49 | 129.28 | 117.20 |
| 1 | O | 35 | VAL | O-C-N | -5.49 | 113.92 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | A | 308 | LYS | C-N-CA | 5.49 | 135.42 | 121.70 |
| 1 | A | 343 | VAL | CA-C-O | -5.49 | 108.57 | 120.10 |
| 1 | B | 382 | GLY | C-N-CA | 5.49 | 133.82 | 122.30 |
| 1 | I | 228 | THR | CA-C-O | -5.49 | 108.57 | 120.10 |
| 1 | J | 325 | LYS | O-C-N | 5.49 | 131.48 | 122.70 |
| 1 | L | 445 | GLY | C-N-CA | 5.49 | 135.42 | 121.70 |
| 1 | M | 353 | HIS | CE1-NE2-CD2 | 5.49 | 120.32 | 106.60 |
| 1 | P | 308 | LYS | CA-CB-CG | 5.49 | 125.47 | 113.40 |
| 1 | P | 485 | GLU | N-CA-CB | 5.49 | 120.48 | 110.60 |
| 1 | F | 497 | GLU | N-CA-CB | 5.49 | 120.48 | 110.60 |
| 1 | G | 72 | HIS | O-C-N | -5.49 | 110.67 | 121.10 |
| 1 | H | 287 | VAL | CB-CA-C | 5.49 | 121.82 | 111.40 |
| 1 | D | 455 | THR | CB-CA-C | 5.49 | 126.41 | 111.60 |
| 1 | E | 48 | LEU | CB-CA-C | -5.49 | 99.78 | 110.20 |
| 1 | E | 224 | PRO | CB-CA-C | 5.49 | 125.72 | 112.00 |
| 1 | G | 257 | SER | N-CA-C | 5.49 | 125.81 | 111.00 |
| 1 | H | 391 | MET | O-C-N | -5.49 | 113.92 | 122.70 |
| 1 | I | 84 | THR | N-CA-CB | 5.49 | 120.72 | 110.30 |
| 1 | L | 147 | LYS | N-CA-CB | 5.49 | 120.47 | 110.60 |
| 1 | L | 475 | GLN | N-CA-CB | -5.49 | 100.72 | 110.60 |
| 1 | A | 396 | TYR | CA-CB-CG | -5.48 | 102.98 | 113.40 |
| 1 | D | 148 | GLU | N-CA-CB | 5.48 | 120.47 | 110.60 |
| 1 | E | 12 | MET | O-C-N | -5.48 | 113.93 | 122.70 |
| 1 | G | 452 | ASN | O-C-N | 5.48 | 131.47 | 122.70 |
| 1 | J | 81 | VAL | N-CA-CB | 5.48 | 123.56 | 111.50 |
| 1 | B | 192 | LEU | CB-CG-CD1 | -5.48 | 101.68 | 111.00 |
| 1 | D | 389 | LEU | O-C-N | 5.48 | 131.47 | 122.70 |
| 1 | G | 347 | ILE | N-CA-CB | 5.48 | 123.41 | 110.80 |
| 1 | I | 91 | ASP | CB-CG-OD1 | 5.48 | 123.23 | 118.30 |
| 1 | J | 332 | ILE | O-C-N | 5.48 | 131.47 | 122.70 |
| 1 | L | 254 | ILE | O-C-N | 5.48 | 131.47 | 122.70 |
| 1 | N | 105 | ARG | CD-NE-CZ | 5.48 | 131.28 | 123.60 |
| 1 | O | 75 | ALA | CA-C-N | -5.48 | 105.14 | 117.20 |
| 1 | A | 282 | VAL | N-CA-CB | 5.48 | 123.56 | 111.50 |
| 1 | C | 187 | LYS | CB-CA-C | 5.48 | 121.36 | 110.40 |
| 1 | D | 412 | ALA | CB-CA-C | -5.48 | 101.88 | 110.10 |
| 1 | G | 363 | ASP | OD1-CG-OD2 | -5.48 | 112.89 | 123.30 |
| 1 | H | 462 | CYS | O-C-N | 5.48 | 131.47 | 122.70 |
| 1 | J | 348 | ARG | CA-C-N | 5.48 | 127.16 | 116.20 |
| 1 | K | 160 | GLY | CA-C-O | -5.48 | 110.73 | 120.60 |
| 1 | L | 89 | VAL | N-CA-C | 5.48 | 125.80 | 111.00 |
| 1 | L | 120 | VAL | C-N-CA | 5.48 | 135.40 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 145 | GLN | CG-CD-NE2 | 5.48 | 129.85 | 116.70 |
| 1 | O | 354 | VAL | N-CA-CB | 5.48 | 123.56 | 111.50 |
| 1 | B | 474 | THR | O-C-N | -5.48 | 113.93 | 122.70 |
| 1 | E | 181 | VAL | CB-CA-C | -5.48 | 100.99 | 111.40 |
| 1 | H | 184 | ASP | CB-CG-OD1 | -5.48 | 113.37 | 118.30 |
| 1 | O | 99 | VAL | CA-CB-CG2 | -5.48 | 102.68 | 110.90 |
| 1 | C | 360 | ARG | CA-CB-CG | 5.48 | 125.45 | 113.40 |
| 1 | M | 449 | ALA | CB-CA-C | 5.48 | 118.31 | 110.10 |
| 1 | O | 164 | GLU | OE1-CD-OE2 | -5.48 | 116.73 | 123.30 |
| 1 | O | 256 | ALA | CB-CA-C | 5.48 | 118.31 | 110.10 |
| 1 | O | 462 | CYS | CA-C-O | 5.48 | 131.60 | 120.10 |
| 1 | C | 470 | LEU | N-CA-CB | 5.48 | 121.35 | 110.40 |
| 1 | H | 203 | ILE | C-N-CA | 5.48 | 135.39 | 121.70 |
| 1 | J | 34 | THR | N-CA-C | 5.48 | 125.79 | 111.00 |
| 1 | M | 46 | LYS | O-C-N | 5.48 | 131.46 | 122.70 |
| 1 | M | 193 | ILE | CB-CG1-CD1 | 5.48 | 129.23 | 113.90 |
| 1 | P | 23 | MET | CB-CG-SD | 5.48 | 128.83 | 112.40 |
| 1 | A | 456 | GLY | CA-C-O | -5.47 | 110.75 | 120.60 |
| 1 | C | 131 | ALA | N-CA-CB | 5.47 | 117.76 | 110.10 |
| 1 | C | 273 | GLN | CG-CD-OE1 | -5.47 | 110.65 | 121.60 |
| 1 | E | 110 | LEU | CA-C-O | 5.47 | 131.60 | 120.10 |
| 1 | F | 403 | ARG | CB-CA-C | 5.47 | 121.35 | 110.40 |
| 1 | G | 69 | SER | CA-C-N | 5.47 | 129.25 | 117.20 |
| 1 | I | 492 | ASP | N-CA-CB | -5.47 | 100.75 | 110.60 |
| 1 | J | 259 | ALA | CB-CA-C | -5.47 | 101.89 | 110.10 |
| 1 | J | 451 | LEU | CA-CB-CG | 5.47 | 127.89 | 115.30 |
| 1 | O | 124 | TYR | CG-CD2-CE2 | 5.47 | 125.68 | 121.30 |
| 1 | P | 255 | LYS | N-CA-C | 5.47 | 125.78 | 111.00 |
| 1 | C | 48 | LEU | CB-CG-CD2 | -5.47 | 101.70 | 111.00 |
| 1 | E | 243 | ALA | N-CA-CB | -5.47 | 102.44 | 110.10 |
| 1 | E | 376 | GLY | N-CA-C | 5.47 | 126.78 | 113.10 |
| 1 | G | 299 | THR | O-C-N | -5.47 | 113.90 | 123.20 |
| 1 | H | 393 | LEU | CB-CA-C | 5.47 | 120.60 | 110.20 |
| 1 | K | 203 | ILE | CA-CB-CG2 | 5.47 | 121.84 | 110.90 |
| 1 | K | 309 | ASP | CB-CG-OD2 | -5.47 | 113.37 | 118.30 |
| 1 | M | 478 | GLN | CA-CB-CG | 5.47 | 125.44 | 113.40 |
| 1 | M | 489 | ARG | O-C-N | -5.47 | 113.94 | 122.70 |
| 1 | G | 127 | ALA | CA-C-O | -5.47 | 108.61 | 120.10 |
| 1 | H | 318 | ALA | CB-CA-C | -5.47 | 101.89 | 110.10 |
| 1 | J | 81 | VAL | CG1-CB-CG2 | -5.47 | 102.15 | 110.90 |
| 1 | A | 67 | GLU | CB-CA-C | -5.47 | 99.46 | 110.40 |
| 1 | C | 42 | LYS | CB-CA-C | 5.47 | 121.34 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 404 | GLU | N-CA-CB | 5.47 | 120.44 | 110.60 |
| 1 | F | 449 | ALA | CA-C-N | -5.47 | 105.26 | 116.20 |
| 1 | G | 11 | ASN | O-C-N | -5.47 | 113.95 | 122.70 |
| 1 | H | 229 | ASP | CA-CB-CG | 5.47 | 125.44 | 113.40 |
| 1 | I | 30 | ILE | CG1-CB-CG2 | 5.47 | 123.44 | 111.40 |
| 1 | J | 11 | ASN | N-CA-CB | 5.47 | 120.44 | 110.60 |
| 1 | L | 191 | ASP | OD1-CG-OD2 | 5.47 | 133.69 | 123.30 |
| 1 | L | 275 | TYR | CG-CD1-CE1 | -5.47 | 116.92 | 121.30 |
| 1 | I | 341 | LYS | CD-CE-NZ | -5.47 | 99.12 | 111.70 |
| 1 | J | 339 | HIS | CG-ND1-CE1 | 5.47 | 115.86 | 108.20 |
| 1 | K | 156 | THR | O-C-N | -5.47 | 113.95 | 122.70 |
| 1 | O | 7 | VAL | N-CA-C | 5.47 | 125.76 | 111.00 |
| 1 | F | 105 | ARG | O-C-N | -5.47 | 113.95 | 122.70 |
| 1 | F | 204 | ASP | CB-CA-C | 5.47 | 121.33 | 110.40 |
| 1 | F | 259 | ALA | C-N-CA | 5.47 | 135.37 | 121.70 |
| 1 | F | 447 | LYS | N-CA-C | 5.47 | 125.76 | 111.00 |
| 1 | F | 496 | ALA | CA-C-O | -5.47 | 108.62 | 120.10 |
| 1 | I | 91 | ASP | CA-CB-CG | 5.47 | 125.43 | 113.40 |
| 1 | I | 326 | ILE | CB-CA-C | 5.47 | 122.53 | 111.60 |
| 1 | I | 373 | ILE | CA-C-O | -5.47 | 108.62 | 120.10 |
| 1 | J | 257 | SER | CA-C-N | 5.47 | 127.13 | 116.20 |
| 1 | K | 305 | THR | OG1-CB-CG2 | -5.47 | 97.43 | 110.00 |
| 1 | M | 428 | LEU | CB-CA-C | 5.47 | 120.59 | 110.20 |
| 1 | N | 11 | ASN | OD1-CG-ND2 | 5.47 | 134.47 | 121.90 |
| 1 | O | 426 | ALA | N-CA-C | 5.47 | 125.76 | 111.00 |
| 1 | P | 416 | GLU | CA-C-N | -5.47 | 105.17 | 117.20 |
| 1 | A | 116 | HIS | CA-C-O | 5.46 | 131.57 | 120.10 |
| 1 | B | 326 | ILE | CA-C-N | 5.46 | 129.22 | 117.20 |
| 1 | G | 49 | VAL | C-N-CA | 5.46 | 135.36 | 121.70 |
| 1 | G | 124 | TYR | CZ-CE2-CD2 | -5.46 | 114.88 | 119.80 |
| 1 | G | 212 | VAL | CA-C-N | -5.46 | 105.18 | 117.20 |
| 1 | K | 78 | LEU | CB-CG-CD1 | 5.46 | 120.29 | 111.00 |
| 1 | K | 446 | ASN | CA-C-O | 5.46 | 131.58 | 120.10 |
| 1 | M | 235 | LEU | CB-CG-CD1 | 5.46 | 120.29 | 111.00 |
| 1 | N | 55 | VAL | CA-C-O | -5.46 | 108.63 | 120.10 |
| 1 | O | 204 | ASP | N-CA-CB | 5.46 | 120.44 | 110.60 |
| 1 | E | 189 | ASP | O-C-N | -5.46 | 113.96 | 122.70 |
| 1 | F | 173 | ILE | CA-CB-CG1 | -5.46 | 100.62 | 111.00 |
| 1 | H | 303 | VAL | N-CA-CB | -5.46 | 99.48 | 111.50 |
| 1 | M | 235 | LEU | O-C-N | -5.46 | 113.96 | 122.70 |
| 1 | N | 32 | ALA | O-C-N | -5.46 | 113.96 | 122.70 |
| 1 | N | 290 | SER | N-CA-CB | 5.46 | 118.69 | 110.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 33 | GLU | CG-CD-OE1 | 5.46 | 129.22 | 118.30 |
| 1 | E | 214 | VAL | N-CA-CB | -5.46 | 99.48 | 111.50 |
| 1 | H | 314 | ASP | CB-CG-OD2 | -5.46 | 113.38 | 118.30 |
| 1 | I | 197 | LYS | CB-CA-C | -5.46 | 99.48 | 110.40 |
| 1 | J | 239 | ILE | CA-CB-CG1 | 5.46 | 121.38 | 111.00 |
| 1 | K | 340 | PRO | C-N-CA | 5.46 | 135.36 | 121.70 |
| 1 | L | 468 | GLU | CG-CD-OE1 | 5.46 | 129.22 | 118.30 |
| 1 | N | 21 | GLN | CB-CA-C | 5.46 | 121.32 | 110.40 |
| 1 | O | 72 | HIS | O-C-N | -5.46 | 110.72 | 121.10 |
| 1 | P | 133 | GLU | OE1-CD-OE2 | 5.46 | 129.85 | 123.30 |
| 1 | P | 492 | ASP | CB-CA-C | 5.46 | 121.32 | 110.40 |
| 1 | C | 144 | ALA | N-CA-C | 5.46 | 125.74 | 111.00 |
| 1 | D | 87 | LYS | CA-C-O | -5.46 | 108.63 | 120.10 |
| 1 | E | 240 | GLU | N-CA-CB | 5.46 | 120.43 | 110.60 |
| 1 | G | 292 | MET | O-C-N | -5.46 | 113.96 | 122.70 |
| 1 | H | 123 | GLY | O-C-N | 5.46 | 131.44 | 122.70 |
| 1 | P | 302 | ASN | O-C-N | -5.46 | 113.97 | 122.70 |
| 1 | P | 475 | GLN | CB-CA-C | -5.46 | 99.48 | 110.40 |
| 1 | A | 454 | PHE | CD1-CG-CD2 | 5.46 | 125.40 | 118.30 |
| 1 | D | 328 | GLY | CA-C-N | -5.46 | 105.19 | 117.20 |
| 1 | F | 176 | GLU | CA-CB-CG | -5.46 | 101.39 | 113.40 |
| 1 | F | 210 | LYS | CB-CG-CD | 5.46 | 125.79 | 111.60 |
| 1 | G | 222 | GLN | CA-CB-CG | 5.46 | 125.41 | 113.40 |
| 1 | H | 368 | VAL | CB-CA-C | 5.46 | 121.77 | 111.40 |
| 1 | K | 51 | ASP | N-CA-CB | -5.46 | 100.78 | 110.60 |
| 1 | K | 152 | LYS | CB-CA-C | 5.46 | 121.32 | 110.40 |
| 1 | M | 415 | LEU | C-N-CA | 5.46 | 135.35 | 121.70 |
| 1 | B | 497 | GLU | CG-CD-OE1 | 5.46 | 129.21 | 118.30 |
| 1 | D | 452 | ASN | C-N-CA | 5.46 | 135.34 | 121.70 |
| 1 | J | 363 | ASP | OD1-CG-OD2 | -5.46 | 112.93 | 123.30 |
| 1 | L | 54 | ASP | N-CA-CB | 5.46 | 120.42 | 110.60 |
| 1 | M | 341 | LYS | N-CA-CB | 5.46 | 120.42 | 110.60 |
| 1 | N | 366 | VAL | CA-CB-CG2 | 5.46 | 119.08 | 110.90 |
| 1 | O | 222 | GLN | O-C-N | 5.46 | 131.43 | 122.70 |
| 1 | P | 404 | GLU | C-N-CA | 5.46 | 135.34 | 121.70 |
| 1 | P | 470 | LEU | CB-CG-CD2 | 5.46 | 120.28 | 111.00 |
| 1 | E | 59 | ASN | O-C-N | -5.46 | 113.97 | 122.70 |
| 1 | E | 114 | ASN | N-CA-CB | 5.46 | 120.42 | 110.60 |
| 1 | G | 413 | ASP | OD1-CG-OD2 | -5.46 | 112.94 | 123.30 |
| 1 | A | 210 | LYS | CA-CB-CG | 5.45 | 125.40 | 113.40 |
| 1 | B | 371 | CYS | N-CA-CB | 5.45 | 120.42 | 110.60 |
| 1 | F | 268 | ILE | CA-C-O | -5.45 | 108.65 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 206 | THR | CA-C-O | -5.45 | 108.65 | 120.10 |
| 1 | J | 90 | GLY | CA-C-O | -5.45 | 110.78 | 120.60 |
| 1 | K | 430 | ALA | N-CA-C | 5.45 | 125.73 | 111.00 |
| 1 | M | 70 | VAL | CA-C-O | -5.45 | 108.65 | 120.10 |
| 1 | M | 88 | GLU | CA-C-N | 5.45 | 129.20 | 117.20 |
| 1 | N | 105 | ARG | O-C-N | -5.45 | 113.97 | 122.70 |
| 1 | N | 291 | ASP | CA-C-O | -5.45 | 108.65 | 120.10 |
| 1 | O | 336 | GLU | CA-CB-CG | 5.45 | 125.40 | 113.40 |
| 1 | A | 471 | ARG | CD-NE-CZ | 5.45 | 131.23 | 123.60 |
| 1 | C | 247 | LEU | C-N-CA | 5.45 | 135.33 | 121.70 |
| 1 | J | 371 | CYS | N-CA-CB | 5.45 | 120.41 | 110.60 |
| 1 | L | 459 | GLU | CG-CD-OE2 | -5.45 | 107.39 | 118.30 |
| 1 | M | 186 | GLY | CA-C-O | -5.45 | 110.79 | 120.60 |
| 1 | N | 148 | GLU | N-CA-CB | 5.45 | 120.41 | 110.60 |
| 1 | O | 416 | GLU | O-C-N | -5.45 | 113.98 | 122.70 |
| 1 | A | 455 | THR | OG1-CB-CG2 | 5.45 | 122.54 | 110.00 |
| 1 | D | 225 | LYS | C-N-CA | 5.45 | 135.32 | 121.70 |
| 1 | D | 485 | GLU | CA-CB-CG | 5.45 | 125.39 | 113.40 |
| 1 | G | 342 | ALA | C-N-CA | 5.45 | 135.33 | 121.70 |
| 1 | I | 226 | LYS | CD-CE-NZ | 5.45 | 124.24 | 111.70 |
| 1 | I | 376 | GLY | O-C-N | -5.45 | 113.98 | 122.70 |
| 1 | K | 481 | ALA | N-CA-CB | -5.45 | 102.47 | 110.10 |
| 1 | A | 376 | GLY | CA-C-N | -5.45 | 105.22 | 117.20 |
| 1 | B | 26 | LEU | CB-CA-C | 5.45 | 120.55 | 110.20 |
| 1 | D | 108 | GLU | CG-CD-OE1 | 5.45 | 129.20 | 118.30 |
| 1 | D | 184 | ASP | O-C-N | -5.45 | 113.98 | 122.70 |
| 1 | E | 314 | ASP | N-CA-CB | 5.45 | 120.41 | 110.60 |
| 1 | F | 152 | LYS | CA-CB-CG | 5.45 | 125.39 | 113.40 |
| 1 | F | 359 | ALA | CB-CA-C | 5.45 | 118.27 | 110.10 |
| 1 | F | 369 | VAL | O-C-N | -5.45 | 113.94 | 123.20 |
| 1 | H | 363 | ASP | OD1-CG-OD2 | -5.45 | 112.95 | 123.30 |
| 1 | J | 247 | LEU | CA-CB-CG | 5.45 | 127.83 | 115.30 |
| 1 | K | 234 | LEU | CB-CG-CD2 | 5.45 | 120.26 | 111.00 |
| 1 | M | 15 | TYR | OH-CZ-CE2 | 5.45 | 134.81 | 120.10 |
| 1 | N | 144 | ALA | O-C-N | -5.45 | 113.98 | 122.70 |
| 1 | A | 336 | GLU | O-C-N | 5.45 | 131.41 | 122.70 |
| 1 | O | 37 | SER | O-C-N | -5.45 | 113.98 | 122.70 |
| 1 | O | 92 | GLY | C-N-CA | 5.45 | 135.32 | 121.70 |
| 1 | A | 297 | LYS | C-N-CA | 5.45 | 135.31 | 121.70 |
| 1 | B | 313 | GLN | OE1-CD-NE2 | -5.45 | 109.37 | 121.90 |
| 1 | D | 7 | VAL | N-CA-CB | -5.45 | 99.52 | 111.50 |
| 1 | H | 184 | ASP | OD1-CG-OD2 | -5.45 | 112.95 | 123.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 416 | GLU | CG-CD-OE1 | 5.45 | 129.19 | 118.30 |
| 1 | N | 39 | LEU | N-CA-C | 5.45 | 125.70 | 111.00 |
| 1 | A | 421 | THR | CA-CB-OG1 | 5.44 | 120.43 | 109.00 |
| 1 | B | 296 | ALA | N-CA-C | 5.44 | 125.70 | 111.00 |
| 1 | D | 432 | GLU | CB-CA-C | 5.44 | 121.28 | 110.40 |
| 1 | E | 221 | ALA | N-CA-CB | -5.44 | 102.48 | 110.10 |
| 1 | F | 478 | GLN | CG-CD-OE1 | 5.44 | 132.48 | 121.60 |
| 1 | G | 318 | ALA | N-CA-CB | 5.44 | 117.72 | 110.10 |
| 1 | I | 220 | SER | N-CA-CB | 5.44 | 118.66 | 110.50 |
| 1 | I | 445 | GLY | CA-C-N | -5.44 | 105.23 | 117.20 |
| 1 | L | 443 | SER | CB-CA-C | 5.44 | 120.44 | 110.10 |
| 1 | M | 157 | SER | CB-CA-C | 5.44 | 120.44 | 110.10 |
| 1 | N | 22 | ARG | NH1-CZ-NH2 | -5.44 | 113.41 | 119.40 |
| 1 | P | 84 | THR | CB-CA-C | -5.44 | 96.90 | 111.60 |
| 1 | P | 409 | ARG | CD-NE-CZ | 5.44 | 131.22 | 123.60 |
| 1 | D | 172 | GLU | N-CA-CB | 5.44 | 120.39 | 110.60 |
| 1 | E | 337 | CYS | CA-CB-SG | 5.44 | 123.79 | 114.00 |
| 1 | F | 275 | TYR | CB-CG-CD2 | -5.44 | 117.74 | 121.00 |
| 1 | F | 327 | SER | CB-CA-C | -5.44 | 99.76 | 110.10 |
| 1 | G | 141 | GLU | CB-CG-CD | 5.44 | 128.89 | 114.20 |
| 1 | G | 229 | ASP | C-N-CA | 5.44 | 135.30 | 121.70 |
| 1 | K | 172 | GLU | O-C-N | -5.44 | 113.99 | 122.70 |
| 1 | N | 176 | GLU | OE1-CD-OE2 | 5.44 | 129.83 | 123.30 |
| 1 | P | 491 | ASP | CB-CG-OD1 | 5.44 | 123.20 | 118.30 |
| 1 | O | 387 | VAL | CB-CA-C | 5.44 | 121.73 | 111.40 |
| 1 | B | 372 | THR | CA-CB-CG2 | -5.44 | 104.79 | 112.40 |
| 1 | G | 379 | VAL | N-CA-C | 5.44 | 125.68 | 111.00 |
| 1 | L | 131 | ALA | N-CA-CB | 5.44 | 117.71 | 110.10 |
| 1 | N | 117 | PRO | CA-C-O | -5.44 | 107.15 | 120.20 |
| 1 | O | 458 | VAL | N-CA-C | -5.44 | 96.32 | 111.00 |
| 1 | A | 33 | GLU | CA-C-O | -5.43 | 108.69 | 120.10 |
| 1 | B | 219 | VAL | CA-C-O | -5.43 | 108.69 | 120.10 |
| 1 | C | 29 | ARG | NH1-CZ-NH2 | 5.43 | 125.38 | 119.40 |
| 1 | C | 77 | MET | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | C | 266 | LYS | CB-CA-C | 5.43 | 121.27 | 110.40 |
| 1 | C | 411 | PHE | CA-CB-CG | 5.43 | 126.94 | 113.90 |
| 1 | D | 132 | GLN | CG-CD-NE2 | 5.43 | 129.74 | 116.70 |
| 1 | E | 219 | VAL | CG1-CB-CG2 | 5.43 | 119.60 | 110.90 |
| 1 | H | 361 | ALA | N-CA-CB | 5.43 | 117.71 | 110.10 |
| 1 | I | 141 | GLU | N-CA-CB | 5.43 | 120.38 | 110.60 |
| 1 | I | 263 | PHE | CD1-CE1-CZ | 5.43 | 126.62 | 120.10 |
| 1 | J | 7 | VAL | N-CA-C | 5.43 | 125.67 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | M | 339 | HIS | CE1-NE2-CD2 | 5.43 | 120.19 | 106.60 |
| 1 | N | 306 | ASN | OD1-CG-ND2 | -5.43 | 109.40 | 121.90 |
| 1 | B | 147 | LYS | CD-CE-NZ | 5.43 | 124.20 | 111.70 |
| 1 | B | 474 | THR | CA-CB-OG1 | 5.43 | 120.41 | 109.00 |
| 1 | B | 495 | ALA | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | I | 270 | ASP | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | I | 276 | LEU | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | J | 263 | PHE | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | J | 462 | CYS | N-CA-C | 5.43 | 125.67 | 111.00 |
| 1 | K | 369 | VAL | CG1-CB-CG2 | -5.43 | 102.21 | 110.90 |
| 1 | L | 111 | LEU | CB-CG-CD1 | -5.43 | 101.77 | 111.00 |
| 1 | L | 375 | ASP | CA-C-O | 5.43 | 131.51 | 120.10 |
| 1 | M | 479 | SER | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | O | 240 | GLU | OE1-CD-OE2 | -5.43 | 116.78 | 123.30 |
| 1 | O | 297 | LYS | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | I | 275 | TYR | CE1-CZ-CE2 | 5.43 | 128.49 | 119.80 |
| 1 | I | 467 | VAL | C-N-CA | 5.43 | 135.28 | 121.70 |
| 1 | B | 148 | GLU | CG-CD-OE2 | -5.43 | 107.44 | 118.30 |
| 1 | C | 95 | THR | CA-CB-CG2 | -5.43 | 104.80 | 112.40 |
| 1 | C | 284 | ALA | CA-C-N | -5.43 | 105.25 | 117.20 |
| 1 | G | 203 | ILE | CG1-CB-CG2 | -5.43 | 99.45 | 111.40 |
| 1 | I | 292 | MET | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | J | 146 | ASP | N-CA-CB | -5.43 | 100.83 | 110.60 |
| 1 | L | 69 | SER | CB-CA-C | 5.43 | 120.42 | 110.10 |
| 1 | M | 105 | ARG | CA-C-O | -5.43 | 108.70 | 120.10 |
| 1 | N | 423 | ALA | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | P | 388 | GLU | O-C-N | -5.43 | 114.01 | 122.70 |
| 1 | A | 377 | ARG | NE-CZ-NH2 | 5.43 | 123.01 | 120.30 |
| 1 | A | 60 | ASP | CB-CA-C | 5.43 | 121.25 | 110.40 |
| 1 | A | 488 | LEU | C-N-CA | 5.43 | 135.27 | 121.70 |
| 1 | F | 116 | HIS | CB-CA-C | 5.43 | 121.25 | 110.40 |
| 1 | F | 316 | GLY | CA-C-O | 5.43 | 130.37 | 120.60 |
| 1 | G | 77 | MET | CA-CB-CG | 5.43 | 122.53 | 113.30 |
| 1 | G | 97 | VAL | CA-CB-CG1 | -5.43 | 102.76 | 110.90 |
| 1 | I | 484 | THR | N-CA-CB | -5.43 | 99.99 | 110.30 |
| 1 | A | 352 | GLU | CB-CA-C | 5.42 | 121.25 | 110.40 |
| 1 | G | 421 | THR | CA-CB-OG1 | 5.42 | 120.39 | 109.00 |
| 1 | J | 68 | MET | CA-C-N | 5.42 | 129.14 | 117.20 |
| 1 | L | 324 | ARG | CD-NE-CZ | -5.42 | 116.01 | 123.60 |
| 1 | M | 259 | ALA | CB-CA-C | -5.42 | 101.96 | 110.10 |
| 1 | N | 87 | LYS | C-N-CA | 5.42 | 135.26 | 121.70 |
| 1 | A | 456 | GLY | O-C-N | -5.42 | 114.02 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | I | 36 | ARG | CA-C-O | -5.42 | 108.71 | 120.10 |
| 1 | K | 58 | THR | N-CA-C | 5.42 | 125.64 | 111.00 |
| 1 | A | 257 | SER | N-CA-CB | -5.42 | 102.37 | 110.50 |
| 1 | E | 204 | ASP | N-CA-CB | 5.42 | 120.36 | 110.60 |
| 1 | F | 149 | ILE | O-C-N | -5.42 | 114.03 | 122.70 |
| 1 | G | 65 | LEU | CA-CB-CG | 5.42 | 127.77 | 115.30 |
| 1 | G | 317 | ASP | N-CA-CB | 5.42 | 120.36 | 110.60 |
| 1 | H | 152 | LYS | CB-CA-C | 5.42 | 121.24 | 110.40 |
| 1 | I | 70 | VAL | CA-C-O | -5.42 | 108.71 | 120.10 |
| 1 | J | 121 | VAL | O-C-N | 5.42 | 131.38 | 122.70 |
| 1 | D | 358 | VAL | O-C-N | -5.42 | 114.03 | 122.70 |
| 1 | E | 358 | VAL | CA-CB-CG2 | 5.42 | 119.03 | 110.90 |
| 1 | F | 416 | GLU | CG-CD-OE1 | 5.42 | 129.14 | 118.30 |
| 1 | F | 474 | THR | CA-CB-OG1 | 5.42 | 120.38 | 109.00 |
| 1 | A | 113 | GLN | C-N-CA | 5.42 | 135.25 | 121.70 |
| 1 | G | 229 | ASP | OD1-CG-OD2 | -5.42 | 113.00 | 123.30 |
| 1 | H | 178 | VAL | N-CA-CB | 5.42 | 123.42 | 111.50 |
| 1 | H | 305 | THR | N-CA-CB | 5.42 | 120.59 | 110.30 |
| 1 | K | 176 | GLU | CB-CG-CD | -5.42 | 99.57 | 114.20 |
| 1 | K | 406 | LEU | N-CA-CB | -5.42 | 99.56 | 110.40 |
| 1 | M | 454 | PHE | CZ-CE2-CD2 | -5.42 | 113.60 | 120.10 |
| 1 | D | 369 | VAL | CA-CB-CG1 | 5.42 | 119.02 | 110.90 |
| 1 | G | 278 | LYS | N-CA-C | 5.42 | 125.62 | 111.00 |
| 1 | H | 446 | ASN | CB-CA-C | -5.42 | 99.56 | 110.40 |
| 1 | N | 333 | PHE | CG-CD2-CE2 | -5.42 | 114.84 | 120.80 |
| 1 | N | 342 | ALA | N-CA-CB | 5.42 | 117.68 | 110.10 |
| 1 | P | 401 | SER | C-N-CA | 5.42 | 133.68 | 122.30 |
| 1 | P | 57 | VAL | O-C-N | -5.42 | 114.04 | 122.70 |
| 1 | A | 259 | ALA | N-CA-CB | -5.41 | 102.52 | 110.10 |
| 1 | B | 51 | ASP | CA-C-N | -5.41 | 105.29 | 117.20 |
| 1 | D | 53 | GLY | C-N-CA | 5.41 | 135.23 | 121.70 |
| 1 | I | 242 | THR | CB-CA-C | 5.41 | 126.22 | 111.60 |
| 1 | K | 188 | VAL | CA-CB-CG2 | 5.41 | 119.02 | 110.90 |
| 1 | N | 142 | VAL | C-N-CA | 5.41 | 133.67 | 122.30 |
| 1 | P | 110 | LEU | N-CA-C | 5.41 | 125.61 | 111.00 |
| 1 | P | 488 | LEU | CB-CG-CD1 | -5.41 | 101.80 | 111.00 |
| 1 | A | 436 | LYS | N-CA-CB | -5.41 | 100.86 | 110.60 |
| 1 | E | 159 | THR | CA-C-O | -5.41 | 108.73 | 120.10 |
| 1 | G | 144 | ALA | N-CA-CB | 5.41 | 117.68 | 110.10 |
| 1 | A | 34 | THR | C-N-CA | -5.41 | 108.17 | 121.70 |
| 1 | A | 301 | ALA | CB-CA-C | -5.41 | 101.98 | 110.10 |
| 1 | B | 43 | GLY | O-C-N | 5.41 | 131.36 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | D | 477 | ILE | O-C-N | -5.41 | 114.05 | 122.70 |
| 1 | E | 190 | LYS | CB-CG-CD | 5.41 | 125.67 | 111.60 |
| 1 | G | 237 | CYS | CA-CB-SG | 5.41 | 123.74 | 114.00 |
| 1 | H | 80 | GLU | OE1-CD-OE2 | -5.41 | 116.81 | 123.30 |
| 1 | H | 475 | GLN | C-N-CA | -5.41 | 108.17 | 121.70 |
| 1 | N | 232 | ILE | CA-CB-CG1 | 5.41 | 121.28 | 111.00 |
| 1 | P | 471 | ARG | NH1-CZ-NH2 | 5.41 | 125.35 | 119.40 |
| 1 | A | 141 | GLU | CA-C-N | 5.41 | 129.10 | 117.20 |
| 1 | B | 465 | GLY | CA-C-O | -5.41 | 110.86 | 120.60 |
| 1 | D | 60 | ASP | CB-CG-OD2 | -5.41 | 113.43 | 118.30 |
| 1 | D | 68 | MET | CA-CB-CG | -5.41 | 104.10 | 113.30 |
| 1 | G | 198 | LYS | O-C-N | -5.41 | 114.05 | 122.70 |
| 1 | I | 164 | GLU | CA-CB-CG | 5.41 | 125.30 | 113.40 |
| 1 | I | 215 | ASP | C-N-CA | 5.41 | 135.22 | 121.70 |
| 1 | K | 62 | VAL | CA-CB-CG1 | 5.41 | 119.01 | 110.90 |
| 1 | P | 120 | VAL | O-C-N | 5.41 | 131.35 | 122.70 |
| 1 | D | 11 | ASN | N-CA-CB | 5.41 | 120.33 | 110.60 |
| 1 | F | 39 | LEU | CA-CB-CG | 5.41 | 127.74 | 115.30 |
| 1 | G | 363 | ASP | CA-CB-CG | 5.41 | 125.30 | 113.40 |
| 1 | C | 119 | ILE | CA-C-O | -5.41 | 108.75 | 120.10 |
| 1 | E | 244 | SER | O-C-N | 5.41 | 131.35 | 122.70 |
| 1 | F | 306 | ASN | O-C-N | -5.41 | 114.05 | 122.70 |
| 1 | L | 404 | GLU | CG-CD-OE1 | 5.41 | 129.11 | 118.30 |
| 1 | M | 404 | GLU | O-C-N | 5.41 | 131.35 | 122.70 |
| 1 | P | 286 | ARG | CA-C-O | -5.41 | 108.75 | 120.10 |
| 1 | A | 21 | GLN | CG-CD-OE1 | -5.40 | 110.79 | 121.60 |
| 1 | B | 482 | GLU | O-C-N | -5.40 | 114.05 | 122.70 |
| 1 | C | 101 | GLY | O-C-N | -5.40 | 114.05 | 122.70 |
| 1 | J | 93 | THR | CA-CB-CG2 | 5.40 | 119.97 | 112.40 |
| 1 | J | 357 | GLU | CG-CD-OE1 | 5.40 | 129.11 | 118.30 |
| 1 | M | 464 | ASN | OD1-CG-ND2 | 5.40 | 134.33 | 121.90 |
| 1 | C | 106 | LYS | O-C-N | -5.40 | 114.06 | 122.70 |
| 1 | D | 287 | VAL | CA-CB-CG1 | 5.40 | 119.00 | 110.90 |
| 1 | F | 348 | ARG | CA-CB-CG | 5.40 | 125.29 | 113.40 |
| 1 | K | 80 | GLU | CG-CD-OE2 | 5.40 | 129.11 | 118.30 |
| 1 | K | 393 | LEU | O-C-N | -5.40 | 114.06 | 122.70 |
| 1 | M | 59 | ASN | O-C-N | -5.40 | 114.06 | 122.70 |
| 1 | O | 478 | GLN | CA-C-O | -5.40 | 108.76 | 120.10 |
| 1 | P | 124 | TYR | O-C-N | -5.40 | 114.06 | 122.70 |
| 1 | A | 242 | THR | CA-CB-OG1 | 5.40 | 120.34 | 109.00 |
| 1 | D | 184 | ASP | CB-CG-OD2 | 5.40 | 123.16 | 118.30 |
| 1 | I | 346 | LEU | CB-CG-CD1 | -5.40 | 101.82 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | J | 238 | ALA | O-C-N | 5.40 | 131.34 | 122.70 |
| 1 | M | 339 | HIS | ND1-CE1-NE2 | -5.40 | 98.02 | 109.90 |
| 1 | N | 164 | GLU | OE1-CD-OE2 | -5.40 | 116.82 | 123.30 |
| 1 | O | 169 | LYS | CA-CB-CG | 5.40 | 125.28 | 113.40 |
| 1 | C | 475 | GLN | CB-CA-C | -5.40 | 99.60 | 110.40 |
| 1 | E | 225 | LYS | CA-CB-CG | 5.40 | 125.28 | 113.40 |
| 1 | I | 33 | GLU | O-C-N | 5.40 | 131.34 | 122.70 |
| 1 | K | 234 | LEU | O-C-N | -5.40 | 114.06 | 122.70 |
| 1 | B | 436 | LYS | CA-C-O | -5.40 | 108.77 | 120.10 |
| 1 | C | 259 | ALA | C-N-CA | 5.40 | 135.19 | 121.70 |
| 1 | F | 88 | GLU | N-CA-CB | 5.40 | 120.31 | 110.60 |
| 1 | F | 469 | PRO | CA-C-O | -5.40 | 107.25 | 120.20 |
| 1 | I | 144 | ALA | N-CA-C | 5.40 | 125.58 | 111.00 |
| 1 | I | 280 | GLY | C-N-CA | 5.40 | 135.19 | 121.70 |
| 1 | J | 80 | GLU | O-C-N | 5.40 | 131.34 | 122.70 |
| 1 | L | 397 | ALA | N-CA-CB | -5.40 | 102.55 | 110.10 |
| 1 | M | 421 | THR | N-CA-CB | 5.40 | 120.56 | 110.30 |
| 1 | P | 8 | LEU | CA-CB-CG | 5.40 | 127.72 | 115.30 |
| 1 | P | 47 | MET | CA-C-O | -5.40 | 108.77 | 120.10 |
| 1 | P | 307 | ILE | N-CA-CB | 5.40 | 123.21 | 110.80 |
| 1 | G | 105 | ARG | CD-NE-CZ | -5.40 | 116.05 | 123.60 |
| 1 | I | 156 | THR | CA-C-O | 5.40 | 131.43 | 120.10 |
| 1 | I | 425 | ASN | CB-CG-OD1 | 5.40 | 132.39 | 121.60 |
| 1 | M | 43 | GLY | O-C-N | -5.40 | 114.07 | 122.70 |
| 1 | A | 317 | ASP | CB-CG-OD1 | 5.39 | 123.16 | 118.30 |
| 1 | D | 285 | ARG | C-N-CA | 5.39 | 135.19 | 121.70 |
| 1 | D | 326 | ILE | O-C-N | -5.39 | 114.07 | 122.70 |
| 1 | E | 412 | ALA | CB-CA-C | -5.39 | 102.01 | 110.10 |
| 1 | M | 271 | LEU | O-C-N | 5.39 | 131.33 | 122.70 |
| 1 | N | 208 | LEU | O-C-N | -5.39 | 114.07 | 122.70 |
| 1 | N | 348 | ARG | CG-CD-NE | 5.39 | 123.13 | 111.80 |
| 1 | B | 148 | GLU | N-CA-C | 5.39 | 125.56 | 111.00 |
| 1 | B | 305 | THR | N-CA-CB | 5.39 | 120.55 | 110.30 |
| 1 | C | 40 | GLY | N-CA-C | 5.39 | 126.58 | 113.10 |
| 1 | E | 290 | SER | CB-CA-C | -5.39 | 99.85 | 110.10 |
| 1 | F | 478 | GLN | OE1-CD-NE2 | -5.39 | 109.50 | 121.90 |
| 1 | G | 393 | LEU | CB-CG-CD1 | 5.39 | 120.17 | 111.00 |
| 1 | H | 362 | VAL | O-C-N | -5.39 | 114.07 | 122.70 |
| 1 | J | 34 | THR | N-CA-CB | 5.39 | 120.55 | 110.30 |
| 1 | M | 298 | ALA | C-N-CA | 5.39 | 135.18 | 121.70 |
| 1 | E | 193 | ILE | CG1-CB-CG2 | -5.39 | 99.54 | 111.40 |
| 1 | N | 114 | ASN | N-CA-C | 5.39 | 125.55 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 29 | ARG | NH1-CZ-NH2 | -5.39 | 113.47 | 119.40 |
| 1 | C | 102 | GLU | OE1-CD-OE2 | 5.39 | 129.77 | 123.30 |
| 1 | F | 339 | HIS | N-CA-CB | 5.39 | 120.30 | 110.60 |
| 1 | F | 415 | LEU | N-CA-CB | 5.39 | 121.18 | 110.40 |
| 1 | G | 34 | THR | CA-CB-CG2 | 5.39 | 119.95 | 112.40 |
| 1 | I | 103 | LEU | CA-CB-CG | 5.39 | 127.70 | 115.30 |
| 1 | I | 330 | SER | CB-CA-C | 5.39 | 120.34 | 110.10 |
| 1 | K | 20 | ALA | N-CA-CB | 5.39 | 117.64 | 110.10 |
| 1 | O | 467 | VAL | CB-CA-C | -5.39 | 101.16 | 111.40 |
| 1 | P | 115 | VAL | CA-C-O | 5.39 | 131.42 | 120.10 |
| 1 | A | 336 | GLU | CA-C-N | -5.39 | 105.34 | 117.20 |
| 1 | E | 131 | ALA | N-CA-C | 5.39 | 125.55 | 111.00 |
| 1 | F | 73 | PRO | C-N-CA | 5.39 | 135.17 | 121.70 |
| 1 | F | 201 | ALA | CA-C-O | -5.39 | 108.79 | 120.10 |
| 1 | K | 112 | ASP | O-C-N | -5.39 | 114.08 | 122.70 |
| 1 | K | 268 | ILE | O-C-N | -5.39 | 114.08 | 122.70 |
| 1 | O | 215 | ASP | CB-CG-OD1 | -5.39 | 113.45 | 118.30 |
| 1 | P | 113 | GLN | N-CA-CB | 5.39 | 120.30 | 110.60 |
| 1 | C | 396 | TYR | CD1-CG-CD2 | -5.39 | 111.97 | 117.90 |
| 1 | I | 94 | THR | OG1-CB-CG2 | -5.39 | 97.61 | 110.00 |
| 1 | J | 455 | THR | CA-C-O | 5.39 | 131.41 | 120.10 |
| 1 | L | 166 | ALA | N-CA-CB | -5.39 | 102.56 | 110.10 |
| 1 | N | 351 | THR | N-CA-CB | 5.39 | 120.53 | 110.30 |
| 1 | D | 188 | VAL | N-CA-CB | 5.38 | 123.35 | 111.50 |
| 1 | G | 79 | ILE | CB-CA-C | 5.38 | 122.37 | 111.60 |
| 1 | G | 424 | GLU | CB-CG-CD | -5.38 | 99.67 | 114.20 |
| 1 | H | 336 | GLU | N-CA-CB | 5.38 | 120.29 | 110.60 |
| 1 | J | 258 | GLY | C-N-CA | 5.38 | 135.16 | 121.70 |
| 1 | K | 409 | ARG | NH1-CZ-NH2 | -5.38 | 113.48 | 119.40 |
| 1 | K | 490 | ILE | O-C-N | -5.38 | 114.09 | 122.70 |
| 1 | N | 395 | GLU | CG-CD-OE1 | 5.38 | 129.07 | 118.30 |
| 1 | A | 268 | ILE | CG1-CB-CG2 | -5.38 | 99.56 | 111.40 |
| 1 | D | 425 | ASN | OD1-CG-ND2 | -5.38 | 109.52 | 121.90 |
| 1 | J | 32 | ALA | N-CA-CB | 5.38 | 117.63 | 110.10 |
| 1 | O | 79 | ILE | CA-CB-CG1 | 5.38 | 121.22 | 111.00 |
| 1 | E | 401 | SER | C-N-CA | 5.38 | 133.60 | 122.30 |
| 1 | I | 348 | ARG | CG-CD-NE | 5.38 | 123.10 | 111.80 |
| 1 | J | 220 | SER | N-CA-CB | 5.38 | 118.57 | 110.50 |
| 1 | L | 47 | MET | N-CA-C | 5.38 | 125.53 | 111.00 |
| 1 | C | 50 | ASP | N-CA-CB | 5.38 | 120.28 | 110.60 |
| 1 | C | 210 | LYS | CA-CB-CG | 5.38 | 125.23 | 113.40 |
| 1 | C | 286 | ARG | NH1-CZ-NH2 | -5.38 | 113.48 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 279 | GLU | N-CA-C | 5.38 | 125.52 | 111.00 |
| 1 | K | 351 | THR | CA-C-O | 5.38 | 131.40 | 120.10 |
| 1 | C | 140 | CYS | C-N-CA | 5.38 | 135.14 | 121.70 |
| 1 | D | 37 | SER | N-CA-C | 5.38 | 125.51 | 111.00 |
| 1 | F | 46 | LYS | N-CA-CB | -5.38 | 100.92 | 110.60 |
| 1 | G | 307 | ILE | N-CA-C | 5.38 | 125.52 | 111.00 |
| 1 | G | 341 | LYS | C-N-CA | 5.38 | 135.14 | 121.70 |
| 1 | J | 411 | PHE | CA-CB-CG | 5.38 | 126.80 | 113.90 |
| 1 | M | 380 | SER | CA-C-O | -5.38 | 108.81 | 120.10 |
| 1 | N | 423 | ALA | N-CA-CB | 5.38 | 117.63 | 110.10 |
| 1 | D | 275 | TYR | CB-CG-CD1 | -5.38 | 117.78 | 121.00 |
| 1 | F | 282 | VAL | CA-CB-CG2 | 5.38 | 118.96 | 110.90 |
| 1 | A | 426 | ALA | C-N-CA | 5.37 | 133.58 | 122.30 |
| 1 | B | 314 | ASP | O-C-N | -5.37 | 114.10 | 122.70 |
| 1 | E | 105 | ARG | CG-CD-NE | 5.37 | 123.08 | 111.80 |
| 1 | I | 105 | ARG | CD-NE-CZ | -5.37 | 116.08 | 123.60 |
| 1 | J | 479 | SER | O-C-N | 5.37 | 131.30 | 122.70 |
| 1 | K | 291 | ASP | CB-CG-OD2 | -5.37 | 113.46 | 118.30 |
| 1 | N | 115 | VAL | C-N-CA | 5.37 | 135.13 | 121.70 |
| 1 | N | 272 | ALA | O-C-N | -5.37 | 114.10 | 122.70 |
| 1 | B | 176 | GLU | OE1-CD-OE2 | 5.37 | 129.75 | 123.30 |
| 1 | B | 451 | LEU | CA-CB-CG | 5.37 | 127.65 | 115.30 |
| 1 | D | 329 | ASP | CB-CG-OD2 | -5.37 | 113.47 | 118.30 |
| 1 | G | 392 | LYS | CG-CD-CE | 5.37 | 128.01 | 111.90 |
| 1 | K | 133 | GLU | CB-CG-CD | 5.37 | 128.71 | 114.20 |
| 1 | L | 164 | GLU | O-C-N | -5.37 | 114.11 | 122.70 |
| 1 | L | 198 | LYS | CA-C-N | -5.37 | 105.38 | 117.20 |
| 1 | N | 98 | VAL | CA-CB-CG2 | 5.37 | 118.96 | 110.90 |
| 1 | N | 324 | ARG | CA-CB-CG | 5.37 | 125.22 | 113.40 |
| 1 | N | 344 | THR | CA-C-O | 5.37 | 131.38 | 120.10 |
| 1 | O | 171 | ALA | O-C-N | 5.37 | 131.29 | 122.70 |
| 1 | P | 431 | ILE | CA-CB-CG1 | 5.37 | 121.21 | 111.00 |
| 1 | A | 236 | ASN | OD1-CG-ND2 | -5.37 | 109.55 | 121.90 |
| 1 | A | 338 | LYS | C-N-CA | 5.37 | 135.12 | 121.70 |
| 1 | B | 395 | GLU | N-CA-CB | 5.37 | 120.27 | 110.60 |
| 1 | K | 270 | ASP | CA-C-N | -5.37 | 105.39 | 117.20 |
| 1 | K | 372 | THR | O-C-N | 5.37 | 131.29 | 122.70 |
| 1 | M | 289 | LYS | CD-CE-NZ | 5.37 | 124.05 | 111.70 |
| 1 | O | 24 | ASN | C-N-CA | 5.37 | 135.13 | 121.70 |
| 1 | A | 23 | MET | CA-CB-CG | -5.37 | 104.17 | 113.30 |
| 1 | C | 302 | ASN | CA-C-N | 5.37 | 129.01 | 117.20 |
| 1 | D | 60 | ASP | CA-CB-CG | 5.37 | 125.21 | 113.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 155 | MET | CB-CG-SD | 5.37 | 128.50 | 112.40 |
| 1 | H | 176 | GLU | CG-CD-OE1 | -5.37 | 107.56 | 118.30 |
| 1 | J | 155 | MET | CA-CB-CG | 5.37 | 122.43 | 113.30 |
| 1 | J | 328 | GLY | CA-C-O | -5.37 | 110.94 | 120.60 |
| 1 | L | 122 | LYS | N-CA-CB | 5.37 | 120.27 | 110.60 |
| 1 | L | 249 | ASP | OD1-CG-OD2 | -5.37 | 113.10 | 123.30 |
| 1 | M | 358 | VAL | CG1-CB-CG2 | -5.37 | 102.31 | 110.90 |
| 1 | N | 247 | LEU | N-CA-CB | 5.37 | 121.14 | 110.40 |
| 1 | B | 49 | VAL | CA-CB-CG2 | 5.37 | 118.95 | 110.90 |
| 1 | F | 210 | LYS | N-CA-CB | 5.37 | 120.26 | 110.60 |
| 1 | F | 332 | ILE | O-C-N | 5.37 | 131.29 | 122.70 |
| 1 | M | 305 | THR | C-N-CA | 5.37 | 135.12 | 121.70 |
| 1 | A | 232 | ILE | CG1-CB-CG2 | -5.37 | 99.60 | 111.40 |
| 1 | A | 488 | LEU | CB-CA-C | -5.37 | 100.00 | 110.20 |
| 1 | C | 81 | VAL | O-C-N | -5.37 | 114.12 | 122.70 |
| 1 | D | 151 | THR | N-CA-CB | 5.37 | 120.50 | 110.30 |
| 1 | E | 251 | VAL | N-CA-C | 5.37 | 125.49 | 111.00 |
| 1 | F | 410 | ALA | O-C-N | -5.37 | 114.11 | 122.70 |
| 1 | G | 217 | GLU | CA-C-O | 5.37 | 131.37 | 120.10 |
| 1 | H | 85 | GLN | CG-CD-NE2 | 5.37 | 129.58 | 116.70 |
| 1 | I | 305 | THR | OG1-CB-CG2 | 5.37 | 122.34 | 110.00 |
| 1 | J | 88 | GLU | CA-C-N | 5.37 | 129.01 | 117.20 |
| 1 | J | 275 | TYR | CD1-CG-CD2 | 5.37 | 123.80 | 117.90 |
| 1 | O | 423 | ALA | CB-CA-C | -5.37 | 102.05 | 110.10 |
| 1 | P | 490 | ILE | O-C-N | 5.37 | 131.28 | 122.70 |
| 1 | A | 169 | LYS | CB-CA-C | 5.36 | 121.13 | 110.40 |
| 1 | B | 353 | HIS | CA-CB-CG | -5.36 | 104.48 | 113.60 |
| 1 | D | 246 | MET | CA-C-O | 5.36 | 131.36 | 120.10 |
| 1 | D | 433 | ILE | N-CA-CB | 5.36 | 123.14 | 110.80 |
| 1 | E | 459 | GLU | CG-CD-OE1 | -5.36 | 107.58 | 118.30 |
| 1 | E | 462 | CYS | CA-C-N | 5.36 | 129.00 | 117.20 |
| 1 | E | 492 | ASP | CB-CA-C | 5.36 | 121.13 | 110.40 |
| 1 | G | 75 | ALA | CA-C-N | -5.36 | 105.40 | 117.20 |
| 1 | G | 389 | LEU | CB-CG-CD2 | 5.36 | 120.12 | 111.00 |
| 1 | H | 22 | ARG | CD-NE-CZ | -5.36 | 116.09 | 123.60 |
| 1 | H | 65 | LEU | CB-CA-C | 5.36 | 120.39 | 110.20 |
| 1 | K | 460 | ASP | O-C-N | -5.36 | 114.12 | 122.70 |
| 1 | L | 118 | THR | CA-CB-CG2 | -5.36 | 104.89 | 112.40 |
| 1 | M | 460 | ASP | CB-CG-OD1 | 5.36 | 123.13 | 118.30 |
| 1 | N | 458 | VAL | CA-C-O | -5.36 | 108.84 | 120.10 |
| 1 | N | 481 | ALA | CA-C-N | -5.36 | 105.40 | 117.20 |
| 1 | P | 21 | GLN | CB-CA-C | -5.36 | 99.67 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | P | 79 | ILE | CA-CB-CG2 | 5.36 | 121.63 | 110.90 |
| 1 | A | 206 | THR | C-N-CA | 5.36 | 135.11 | 121.70 |
| 1 | K | 259 | ALA | CB-CA-C | -5.36 | 102.06 | 110.10 |
| 1 | A | 416 | GLU | CB-CA-C | -5.36 | 99.68 | 110.40 |
| 1 | C | 10 | GLU | N-CA-CB | 5.36 | 120.25 | 110.60 |
| 1 | C | 279 | GLU | OE1-CD-OE2 | -5.36 | 116.87 | 123.30 |
| 1 | H | 296 | ALA | CA-C-O | 5.36 | 131.35 | 120.10 |
| 1 | I | 285 | ARG | CB-CA-C | 5.36 | 121.12 | 110.40 |
| 1 | J | 489 | ARG | CA-C-N | -5.36 | 105.41 | 117.20 |
| 1 | M | 221 | ALA | N-CA-CB | -5.36 | 102.59 | 110.10 |
| 1 | M | 406 | LEU | CA-CB-CG | 5.36 | 127.63 | 115.30 |
| 1 | H | 106 | LYS | N-CA-CB | -5.36 | 100.95 | 110.60 |
| 1 | L | 218 | ARG | C-N-CA | 5.36 | 135.10 | 121.70 |
| 1 | N | 342 | ALA | CB-CA-C | -5.36 | 102.06 | 110.10 |
| 1 | P | 421 | THR | CA-CB-CG2 | 5.36 | 119.90 | 112.40 |
| 1 | D | 368 | VAL | C-N-CA | 5.36 | 135.09 | 121.70 |
| 1 | E | 408 | VAL | CA-CB-CG1 | 5.36 | 118.94 | 110.90 |
| 1 | G | 76 | LYS | CA-CB-CG | 5.36 | 125.19 | 113.40 |
| 1 | G | 431 | ILE | CA-C-N | -5.36 | 105.41 | 117.20 |
| 1 | K | 49 | VAL | O-C-N | -5.36 | 114.13 | 122.70 |
| 1 | K | 466 | VAL | O-C-N | -5.36 | 114.13 | 122.70 |
| 1 | M | 444 | ASN | CA-C-N | 5.36 | 126.92 | 116.20 |
| 1 | O | 113 | GLN | N-CA-CB | 5.36 | 120.24 | 110.60 |
| 1 | A | 187 | LYS | CG-CD-CE | 5.36 | 127.97 | 111.90 |
| 1 | E | 144 | ALA | O-C-N | -5.36 | 114.13 | 122.70 |
| 1 | F | 204 | ASP | CB-CG-OD1 | 5.36 | 123.12 | 118.30 |
| 1 | G | 94 | THR | CA-CB-OG1 | 5.36 | 120.25 | 109.00 |
| 1 | G | 327 | SER | CA-C-O | -5.36 | 108.85 | 120.10 |
| 1 | J | 388 | GLU | CB-CA-C | 5.36 | 121.11 | 110.40 |
| 1 | K | 135 | LEU | N-CA-CB | 5.36 | 121.11 | 110.40 |
| 1 | K | 213 | LEU | O-C-N | -5.36 | 114.13 | 122.70 |
| 1 | N | 475 | GLN | CA-CB-CG | 5.36 | 125.18 | 113.40 |
| 1 | B | 130 | LYS | N-CA-CB | 5.35 | 120.24 | 110.60 |
| 1 | B | 428 | LEU | N-CA-CB | 5.35 | 121.11 | 110.40 |
| 1 | E | 438 | ARG | NH1-CZ-NH2 | -5.35 | 113.51 | 119.40 |
| 1 | F | 60 | ASP | OD1-CG-OD2 | -5.35 | 113.13 | 123.30 |
| 1 | F | 480 | ALA | N-CA-CB | -5.35 | 102.60 | 110.10 |
| 1 | N | 196 | GLU | CG-CD-OE1 | -5.35 | 107.59 | 118.30 |
| 1 | D | 363 | ASP | N-CA-CB | 5.35 | 120.23 | 110.60 |
| 1 | D | 497 | GLU | CB-CG-CD | -5.35 | 99.75 | 114.20 |
| 1 | F | 113 | GLN | N-CA-CB | 5.35 | 120.23 | 110.60 |
| 1 | F | 428 | LEU | CA-CB-CG | -5.35 | 102.99 | 115.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 218 | ARG | C-N-CA | 5.35 | 135.08 | 121.70 |
| 1 | J | 238 | ALA | N-CA-CB | 5.35 | 117.59 | 110.10 |
| 1 | N | 131 | ALA | O-C-N | -5.35 | 114.14 | 122.70 |
| 1 | N | 416 | GLU | CA-C-O | -5.35 | 108.86 | 120.10 |
| 1 | N | 417 | VAL | CG1-CB-CG2 | 5.35 | 119.46 | 110.90 |
| 1 | F | 202 | SER | O-C-N | -5.35 | 114.14 | 122.70 |
| 1 | F | 346 | LEU | CA-CB-CG | 5.35 | 127.61 | 115.30 |
| 1 | G | 185 | GLU | CB-CA-C | 5.35 | 121.10 | 110.40 |
| 1 | G | 218 | ARG | CB-CA-C | 5.35 | 121.10 | 110.40 |
| 1 | O | 458 | VAL | CA-C-N | -5.35 | 105.43 | 117.20 |
| 1 | P | 248 | LYS | CA-CB-CG | 5.35 | 125.17 | 113.40 |
| 1 | D | 497 | GLU | CB-CA-C | -5.35 | 99.70 | 110.40 |
| 1 | F | 199 | SER | CA-C-N | 5.35 | 126.90 | 116.20 |
| 1 | H | 388 | GLU | CG-CD-OE2 | 5.35 | 129.00 | 118.30 |
| 1 | H | 454 | PHE | CB-CG-CD2 | 5.35 | 124.55 | 120.80 |
| 1 | J | 334 | VAL | CA-CB-CG1 | 5.35 | 118.93 | 110.90 |
| 1 | J | 432 | GLU | OE1-CD-OE2 | 5.35 | 129.72 | 123.30 |
| 1 | K | 158 | ILE | C-N-CA | 5.35 | 135.07 | 121.70 |
| 1 | K | 221 | ALA | O-C-N | 5.35 | 131.26 | 122.70 |
| 1 | P | 191 | ASP | CA-C-N | -5.35 | 105.43 | 117.20 |
| 1 | B | 428 | LEU | O-C-N | 5.35 | 131.25 | 122.70 |
| 1 | C | 47 | MET | N-CA-C | 5.35 | 125.44 | 111.00 |
| 1 | D | 63 | THR | N-CA-C | 5.35 | 125.44 | 111.00 |
| 1 | E | 341 | LYS | CB-CG-CD | 5.35 | 125.50 | 111.60 |
| 1 | F | 96 | ALA | O-C-N | 5.35 | 131.25 | 122.70 |
| 1 | G | 289 | LYS | CA-C-O | 5.35 | 131.33 | 120.10 |
| 1 | I | 261 | VAL | CA-CB-CG2 | 5.35 | 118.92 | 110.90 |
| 1 | P | 416 | GLU | CA-CB-CG | 5.35 | 125.17 | 113.40 |
| 1 | A | 236 | ASN | N-CA-CB | 5.35 | 120.22 | 110.60 |
| 1 | A | 269 | ASP | CB-CG-OD1 | -5.35 | 113.49 | 118.30 |
| 1 | B | 129 | GLN | CB-CA-C | 5.35 | 121.09 | 110.40 |
| 1 | C | 243 | ALA | N-CA-CB | 5.35 | 117.58 | 110.10 |
| 1 | F | 314 | ASP | OD1-CG-OD2 | -5.35 | 113.14 | 123.30 |
| 1 | I | 13 | LYS | O-C-N | -5.35 | 114.15 | 122.70 |
| 1 | K | 228 | THR | CB-CA-C | 5.35 | 126.03 | 111.60 |
| 1 | N | 217 | GLU | CB-CA-C | 5.35 | 121.09 | 110.40 |
| 1 | B | 222 | GLN | C-N-CA | 5.34 | 135.06 | 121.70 |
| 1 | B | 274 | HIS | N-CA-CB | 5.34 | 120.22 | 110.60 |
| 1 | C | 428 | LEU | CB-CA-C | -5.34 | 100.05 | 110.20 |
| 1 | F | 487 | LEU | CB-CG-CD2 | 5.34 | 120.08 | 111.00 |
| 1 | K | 182 | VAL | CA-CB-CG1 | -5.34 | 102.88 | 110.90 |
| 1 | N | 444 | ASN | OD1-CG-ND2 | 5.34 | 134.19 | 121.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 370 | GLY | C-N-CA | 5.34 | 135.06 | 121.70 |
| 1 | I | 348 | ARG | NH1-CZ-NH2 | 5.34 | 125.28 | 119.40 |
| 1 | I | 449 | ALA | O-C-N | -5.34 | 114.12 | 123.20 |
| 1 | K | 256 | ALA | C-N-CA | 5.34 | 135.06 | 121.70 |
| 1 | C | 132 | GLN | CA-C-O | 5.34 | 131.31 | 120.10 |
| 1 | D | 255 | LYS | CD-CE-NZ | 5.34 | 123.99 | 111.70 |
| 1 | E | 461 | MET | CA-CB-CG | 5.34 | 122.38 | 113.30 |
| 1 | F | 260 | ASN | CA-CB-CG | 5.34 | 125.15 | 113.40 |
| 1 | J | 139 | ALA | CB-CA-C | 5.34 | 118.11 | 110.10 |
| 1 | K | 487 | LEU | O-C-N | -5.34 | 114.15 | 122.70 |
| 1 | L | 15 | TYR | CZ-CE2-CD2 | 5.34 | 124.61 | 119.80 |
| 1 | L | 41 | PRO | CA-N-CD | -5.34 | 104.02 | 111.50 |
| 1 | O | 102 | GLU | CG-CD-OE1 | -5.34 | 107.62 | 118.30 |
| 1 | O | 373 | ILE | CA-CB-CG1 | 5.34 | 121.15 | 111.00 |
| 1 | D | 340 | PRO | CA-C-N | 5.34 | 128.95 | 117.20 |
| 1 | D | 376 | GLY | C-N-CA | -5.34 | 108.35 | 121.70 |
| 1 | D | 475 | GLN | CA-C-O | -5.34 | 108.89 | 120.10 |
| 1 | F | 482 | GLU | CB-CA-C | 5.34 | 121.08 | 110.40 |
| 1 | K | 359 | ALA | CB-CA-C | 5.34 | 118.11 | 110.10 |
| 1 | L | 326 | ILE | O-C-N | -5.34 | 114.16 | 122.70 |
| 1 | L | 454 | PHE | CD1-CE1-CZ | -5.34 | 113.69 | 120.10 |
| 1 | O | 86 | GLU | OE1-CD-OE2 | 5.34 | 129.71 | 123.30 |
| 1 | P | 269 | ASP | CB-CG-OD1 | -5.34 | 113.50 | 118.30 |
| 1 | I | 185 | GLU | O-C-N | -5.34 | 114.12 | 123.20 |
| 1 | J | 51 | ASP | CB-CG-OD1 | -5.34 | 113.50 | 118.30 |
| 1 | L | 130 | LYS | O-C-N | 5.34 | 131.24 | 122.70 |
| 1 | N | 343 | VAL | O-C-N | 5.34 | 131.24 | 122.70 |
| 1 | P | 271 | LEU | CB-CG-CD2 | 5.34 | 120.08 | 111.00 |
| 1 | A | 11 | ASN | OD1-CG-ND2 | -5.34 | 109.63 | 121.90 |
| 1 | A | 259 | ALA | CA-C-O | -5.34 | 108.89 | 120.10 |
| 1 | B | 422 | LEU | CA-C-O | -5.34 | 108.89 | 120.10 |
| 1 | C | 61 | GLY | CA-C-N | 5.34 | 128.94 | 117.20 |
| 1 | G | 155 | MET | N-CA-C | 5.34 | 125.41 | 111.00 |
| 1 | I | 325 | LYS | CA-CB-CG | 5.34 | 125.14 | 113.40 |
| 1 | J | 193 | ILE | CA-CB-CG2 | 5.34 | 121.57 | 110.90 |
| 1 | A | 252 | ALA | CB-CA-C | 5.33 | 118.10 | 110.10 |
| 1 | B | 303 | VAL | N-CA-CB | -5.33 | 99.76 | 111.50 |
| 1 | D | 473 | LYS | CB-CA-C | -5.33 | 99.73 | 110.40 |
| 1 | G | 114 | ASN | CB-CA-C | 5.33 | 121.07 | 110.40 |
| 1 | I | 398 | GLU | CA-C-N | -5.33 | 105.53 | 116.20 |
| 1 | L | 61 | GLY | O-C-N | -5.33 | 114.17 | 122.70 |
| 1 | L | 227 | VAL | O-C-N | 5.33 | 131.24 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 31 | ILE | CB-CA-C | 5.33 | 122.27 | 111.60 |
| 1 | A | 228 | THR | N-CA-C | 5.33 | 125.40 | 111.00 |
| 1 | C | 224 | PRO | O-C-N | -5.33 | 114.17 | 122.70 |
| 1 | G | 209 | ILE | O-C-N | -5.33 | 114.17 | 122.70 |
| 1 | I | 466 | VAL | C-N-CA | 5.33 | 135.03 | 121.70 |
| 1 | M | 410 | ALA | O-C-N | -5.33 | 114.17 | 122.70 |
| 1 | N | 39 | LEU | CA-CB-CG | 5.33 | 127.57 | 115.30 |
| 1 | P | 25 | ILE | CG1-CB-CG2 | 5.33 | 123.13 | 111.40 |
| 1 | A | 228 | THR | CA-C-O | 5.33 | 131.30 | 120.10 |
| 1 | A | 356 | GLU | N-CA-CB | 5.33 | 120.20 | 110.60 |
| 1 | C | 65 | LEU | N-CA-CB | 5.33 | 121.06 | 110.40 |
| 1 | C | 295 | LEU | CA-CB-CG | 5.33 | 127.56 | 115.30 |
| 1 | F | 291 | ASP | N-CA-C | 5.33 | 125.40 | 111.00 |
| 1 | A | 373 | ILE | CA-CB-CG2 | 5.33 | 121.56 | 110.90 |
| 1 | H | 154 | ALA | CB-CA-C | 5.33 | 118.09 | 110.10 |
| 1 | K | 148 | GLU | CG-CD-OE1 | 5.33 | 128.96 | 118.30 |
| 1 | P | 379 | VAL | CA-CB-CG1 | -5.33 | 102.91 | 110.90 |
| 1 | B | 186 | GLY | O-C-N | -5.33 | 114.17 | 122.70 |
| 1 | D | 340 | PRO | O-C-N | -5.33 | 114.18 | 122.70 |
| 1 | E | 377 | ARG | NE-CZ-NH2 | -5.33 | 117.64 | 120.30 |
| 1 | F | 16 | MET | CA-C-O | -5.33 | 108.91 | 120.10 |
| 1 | J | 82 | ALA | CB-CA-C | -5.33 | 102.11 | 110.10 |
| 1 | M | 336 | GLU | N-CA-C | 5.33 | 125.39 | 111.00 |
| 1 | O | 42 | LYS | CA-C-O | 5.33 | 131.29 | 120.10 |
| 1 | O | 228 | THR | OG1-CB-CG2 | -5.33 | 97.75 | 110.00 |
| 1 | O | 462 | CYS | N-CA-CB | 5.33 | 120.19 | 110.60 |
| 1 | P | 385 | THR | N-CA-CB | 5.33 | 120.42 | 110.30 |
| 1 | C | 132 | GLN | O-C-N | -5.33 | 114.18 | 122.70 |
| 1 | I | 427 | GLY | CA-C-O | -5.33 | 111.01 | 120.60 |
| 1 | J | 74 | ALA | N-CA-CB | -5.33 | 102.64 | 110.10 |
| 1 | J | 297 | LYS | CB-CA-C | 5.33 | 121.05 | 110.40 |
| 1 | J | 409 | ARG | NH1-CZ-NH2 | -5.33 | 113.54 | 119.40 |
| 1 | L | 60 | ASP | OD1-CG-OD2 | -5.33 | 113.18 | 123.30 |
| 1 | M | 291 | ASP | CB-CG-OD1 | 5.33 | 123.09 | 118.30 |
| 1 | N | 273 | GLN | CB-CA-C | 5.33 | 121.05 | 110.40 |
| 1 | A | 314 | ASP | CA-C-N | -5.32 | 105.49 | 117.20 |
| 1 | E | 221 | ALA | O-C-N | -5.32 | 114.18 | 122.70 |
| 1 | F | 187 | LYS | CD-CE-NZ | 5.32 | 123.94 | 111.70 |
| 1 | I | 173 | ILE | CA-CB-CG2 | 5.32 | 121.55 | 110.90 |
| 1 | J | 91 | ASP | OD1-CG-OD2 | -5.32 | 113.18 | 123.30 |
| 1 | L | 44 | MET | CA-CB-CG | -5.32 | 104.25 | 113.30 |
| 1 | N | 103 | LEU | O-C-N | 5.32 | 131.22 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 339 | HIS | CG-CD2-NE2 | -5.32 | 99.08 | 109.20 |
| 1 | B | 452 | ASN | N-CA-CB | 5.32 | 120.18 | 110.60 |
| 1 | F | 449 | ALA | N-CA-CB | 5.32 | 117.55 | 110.10 |
| 1 | G | 120 | VAL | N-CA-CB | 5.32 | 123.21 | 111.50 |
| 1 | I | 313 | GLN | O-C-N | -5.32 | 114.18 | 122.70 |
| 1 | N | 271 | LEU | CB-CG-CD1 | 5.32 | 120.05 | 111.00 |
| 1 | A | 307 | ILE | CA-C-O | -5.32 | 108.93 | 120.10 |
| 1 | C | 212 | VAL | CA-CB-CG1 | 5.32 | 118.88 | 110.90 |
| 1 | D | 339 | HIS | CB-CG-ND1 | 5.32 | 136.50 | 123.20 |
| 1 | H | 231 | LYS | CB-CA-C | 5.32 | 121.04 | 110.40 |
| 1 | I | 120 | VAL | O-C-N | 5.32 | 131.21 | 122.70 |
| 1 | I | 181 | VAL | CA-CB-CG1 | 5.32 | 118.88 | 110.90 |
| 1 | L | 9 | PRO | CA-CB-CG | 5.32 | 114.91 | 104.80 |
| 1 | O | 438 | ARG | CA-CB-CG | 5.32 | 125.10 | 113.40 |
| 1 | C | 72 | HIS | CA-C-O | -5.32 | 108.93 | 120.10 |
| 1 | D | 417 | VAL | CB-CA-C | 5.32 | 121.50 | 111.40 |
| 1 | H | 94 | THR | OG1-CB-CG2 | 5.32 | 122.23 | 110.00 |
| 1 | J | 57 | VAL | CA-C-O | -5.32 | 108.93 | 120.10 |
| 1 | E | 137 | THR | CA-CB-OG1 | 5.32 | 120.17 | 109.00 |
| 1 | E | 328 | GLY | N-CA-C | -5.32 | 99.81 | 113.10 |
| 1 | H | 369 | VAL | O-C-N | 5.32 | 132.24 | 123.20 |
| 1 | H | 412 | ALA | CA-C-N | -5.32 | 105.50 | 117.20 |
| 1 | J | 15 | TYR | CB-CG-CD2 | 5.32 | 124.19 | 121.00 |
| 1 | J | 28 | GLY | O-C-N | -5.32 | 114.19 | 122.70 |
| 1 | J | 242 | THR | CA-CB-OG1 | 5.32 | 120.17 | 109.00 |
| 1 | J | 258 | GLY | CA-C-O | -5.32 | 111.03 | 120.60 |
| 1 | J | 424 | GLU | CG-CD-OE2 | 5.32 | 128.93 | 118.30 |
| 1 | K | 377 | ARG | NE-CZ-NH1 | 5.32 | 122.96 | 120.30 |
| 1 | L | 414 | ALA | N-CA-CB | 5.32 | 117.54 | 110.10 |
| 1 | M | 113 | GLN | C-N-CA | 5.32 | 135.00 | 121.70 |
| 1 | N | 463 | GLU | CG-CD-OE2 | -5.32 | 107.66 | 118.30 |
| 1 | B | 177 | ALA | N-CA-C | 5.32 | 125.35 | 111.00 |
| 1 | B | 278 | LYS | CD-CE-NZ | 5.32 | 123.92 | 111.70 |
| 1 | H | 71 | GLU | C-N-CA | 5.32 | 134.99 | 121.70 |
| 1 | J | 272 | ALA | N-CA-CB | 5.32 | 117.54 | 110.10 |
| 1 | M | 36 | ARG | CB-CA-C | -5.32 | 99.77 | 110.40 |
| 1 | N | 457 | ALA | O-C-N | 5.32 | 131.20 | 122.70 |
| 1 | A | 49 | VAL | O-C-N | -5.31 | 114.20 | 122.70 |
| 1 | C | 129 | GLN | N-CA-CB | 5.31 | 120.17 | 110.60 |
| 1 | F | 269 | ASP | CA-C-O | -5.31 | 108.94 | 120.10 |
| 1 | B | 128 | ALA | CB-CA-C | 5.31 | 118.07 | 110.10 |
| 1 | B | 240 | GLU | CG-CD-OE2 | 5.31 | 128.93 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 224 | PRO | CA-N-CD | -5.31 | 104.06 | 111.50 |
| 1 | I | 488 | LEU | C-N-CA | 5.31 | 134.98 | 121.70 |
| 1 | J | 429 | ASP | N-CA-CB | 5.31 | 120.16 | 110.60 |
| 1 | P | 491 | ASP | CA-C-O | 5.31 | 131.26 | 120.10 |
| 1 | A | 441 | HIS | CB-CA-C | 5.31 | 121.02 | 110.40 |
| 1 | I | 170 | LEU | N-CA-C | 5.31 | 125.34 | 111.00 |
| 1 | J | 39 | LEU | CB-CA-C | 5.31 | 120.29 | 110.20 |
| 1 | K | 221 | ALA | CA-C-O | -5.31 | 108.95 | 120.10 |
| 1 | L | 94 | THR | N-CA-CB | 5.31 | 120.39 | 110.30 |
| 1 | A | 393 | LEU | O-C-N | -5.31 | 114.20 | 122.70 |
| 1 | E | 368 | VAL | N-CA-C | 5.31 | 125.33 | 111.00 |
| 1 | F | 66 | ARG | CB-CA-C | 5.31 | 121.02 | 110.40 |
| 1 | F | 220 | SER | O-C-N | 5.31 | 131.20 | 122.70 |
| 1 | F | 374 | GLU | CG-CD-OE1 | -5.31 | 107.68 | 118.30 |
| 1 | I | 275 | TYR | N-CA-CB | 5.31 | 120.16 | 110.60 |
| 1 | L | 120 | VAL | O-C-N | -5.31 | 114.20 | 122.70 |
| 1 | L | 234 | LEU | CA-CB-CG | 5.31 | 127.51 | 115.30 |
| 1 | C | 193 | ILE | O-C-N | -5.31 | 114.21 | 122.70 |
| 1 | C | 351 | THR | CA-C-O | -5.31 | 108.96 | 120.10 |
| 1 | C | 428 | LEU | CB-CG-CD1 | 5.31 | 120.02 | 111.00 |
| 1 | E | 173 | ILE | CA-CB-CG2 | 5.31 | 121.52 | 110.90 |
| 1 | G | 352 | GLU | OE1-CD-OE2 | 5.31 | 129.67 | 123.30 |
| 1 | G | 396 | TYR | CB-CA-C | 5.31 | 121.02 | 110.40 |
| 1 | H | 292 | MET | N-CA-CB | 5.31 | 120.15 | 110.60 |
| 1 | K | 229 | ASP | OD1-CG-OD2 | -5.31 | 113.22 | 123.30 |
| 1 | K | 446 | ASN | O-C-N | -5.31 | 114.21 | 122.70 |
| 1 | P | 401 | SER | CB-CA-C | 5.31 | 120.18 | 110.10 |
| 1 | I | 231 | LYS | CA-CB-CG | 5.31 | 125.07 | 113.40 |
| 1 | J | 36 | ARG | N-CA-CB | -5.31 | 101.05 | 110.60 |
| 1 | J | 439 | ALA | N-CA-CB | -5.31 | 102.67 | 110.10 |
| 1 | K | 169 | LYS | CB-CG-CD | 5.31 | 125.39 | 111.60 |
| 1 | O | 186 | GLY | CA-C-O | -5.31 | 111.05 | 120.60 |
| 1 | A | 100 | ALA | O-C-N | -5.30 | 114.18 | 123.20 |
| 1 | A | 245 | GLU | N-CA-C | 5.30 | 125.32 | 111.00 |
| 1 | E | 388 | GLU | N-CA-CB | 5.30 | 120.15 | 110.60 |
| 1 | I | 352 | GLU | C-N-CA | 5.30 | 134.96 | 121.70 |
| 1 | M | 239 | ILE | O-C-N | -5.30 | 114.21 | 122.70 |
| 1 | F | 229 | ASP | CB-CG-OD1 | 5.30 | 123.07 | 118.30 |
| 1 | H | 263 | PHE | CB-CG-CD2 | 5.30 | 124.51 | 120.80 |
| 1 | I | 434 | LEU | O-C-N | -5.30 | 114.22 | 122.70 |
| 1 | J | 197 | LYS | N-CA-CB | -5.30 | 101.05 | 110.60 |
| 1 | K | 400 | ILE | C-N-CA | 5.30 | 134.96 | 121.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 67 | GLU | N-CA-CB | 5.30 | 120.14 | 110.60 |
| 1 | P | 446 | ASN | N-CA-CB | -5.30 | 101.05 | 110.60 |
| 1 | A | 403 | ARG | CD-NE-CZ | -5.30 | 116.18 | 123.60 |
| 1 | B | 357 | GLU | O-C-N | -5.30 | 114.22 | 122.70 |
| 1 | E | 307 | ILE | C-N-CA | 5.30 | 134.96 | 121.70 |
| 1 | F | 290 | SER | N-CA-CB | 5.30 | 118.45 | 110.50 |
| 1 | G | 48 | LEU | CB-CG-CD2 | 5.30 | 120.01 | 111.00 |
| 1 | I | 272 | ALA | O-C-N | 5.30 | 131.18 | 122.70 |
| 1 | K | 191 | ASP | N-CA-C | 5.30 | 125.32 | 111.00 |
| 1 | K | 447 | LYS | O-C-N | 5.30 | 131.18 | 122.70 |
| 1 | P | 366 | VAL | CG1-CB-CG2 | -5.30 | 102.42 | 110.90 |
| 1 | P | 494 | ILE | CA-C-O | -5.30 | 108.97 | 120.10 |
| 1 | A | 237 | CYS | N-CA-CB | 5.30 | 120.14 | 110.60 |
| 1 | B | 399 | GLY | CA-C-O | -5.30 | 111.06 | 120.60 |
| 1 | B | 421 | THR | CA-C-N | -5.30 | 105.54 | 117.20 |
| 1 | C | 184 | ASP | CB-CG-OD2 | -5.30 | 113.53 | 118.30 |
| 1 | H | 152 | LYS | CA-CB-CG | 5.30 | 125.06 | 113.40 |
| 1 | J | 35 | VAL | N-CA-C | 5.30 | 125.31 | 111.00 |
| 1 | M | 122 | LYS | CB-CG-CD | 5.30 | 125.38 | 111.60 |
| 1 | P | 274 | HIS | C-N-CA | 5.30 | 134.95 | 121.70 |
| 1 | B | 172 | GLU | CB-CG-CD | -5.30 | 99.90 | 114.20 |
| 1 | C | 293 | GLU | C-N-CA | 5.30 | 134.94 | 121.70 |
| 1 | D | 253 | GLU | OE1-CD-OE2 | 5.30 | 129.66 | 123.30 |
| 1 | D | 415 | LEU | CA-CB-CG | 5.30 | 127.49 | 115.30 |
| 1 | J | 119 | ILE | CB-CA-C | -5.30 | 101.00 | 111.60 |
| 1 | K | 18 | ARG | C-N-CA | 5.30 | 134.95 | 121.70 |
| 1 | K | 29 | ARG | CB-CA-C | -5.30 | 99.81 | 110.40 |
| 1 | K | 244 | SER | O-C-N | 5.30 | 131.18 | 122.70 |
| 1 | N | 321 | VAL | CG1-CB-CG2 | -5.30 | 102.42 | 110.90 |
| 1 | E | 310 | LEU | O-C-N | -5.30 | 114.23 | 122.70 |
| 1 | G | 11 | ASN | N-CA-CB | 5.30 | 120.13 | 110.60 |
| 1 | K | 419 | PRO | CA-N-CD | -5.30 | 104.08 | 111.50 |
| 1 | L | 60 | ASP | CA-CB-CG | 5.30 | 125.05 | 113.40 |
| 1 | N | 115 | VAL | CA-C-N | 5.30 | 128.85 | 117.20 |
| 1 | P | 88 | GLU | C-N-CA | 5.30 | 134.94 | 121.70 |
| 1 | H | 72 | HIS | CG-CD2-NE2 | -5.29 | 99.14 | 109.20 |
| 1 | L | 38 | THR | CA-CB-CG2 | 5.29 | 119.81 | 112.40 |
| 1 | O | 432 | GLU | CG-CD-OE1 | -5.29 | 107.71 | 118.30 |
| 1 | C | 190 | LYS | CA-C-O | -5.29 | 108.98 | 120.10 |
| 1 | E | 20 | ALA | CA-C-O | -5.29 | 108.98 | 120.10 |
| 1 | E | 33 | GLU | N-CA-CB | -5.29 | 101.07 | 110.60 |
| 1 | I | 110 | LEU | CB-CA-C | 5.29 | 120.26 | 110.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 9 | PRO | CA-N-CD | -5.29 | 104.09 | 111.50 |
| 1 | L | 411 | PHE | CG-CD1-CE1 | 5.29 | 126.62 | 120.80 |
| 1 | O | 385 | THR | CA-CB-OG1 | 5.29 | 120.11 | 109.00 |
| 1 | A | 224 | PRO | N-CD-CG | 5.29 | 111.14 | 103.20 |
| 1 | A | 432 | GLU | N-CA-CB | 5.29 | 120.12 | 110.60 |
| 1 | B | 465 | GLY | O-C-N | -5.29 | 114.23 | 122.70 |
| 1 | C | 78 | LEU | CB-CG-CD2 | -5.29 | 102.00 | 111.00 |
| 1 | F | 171 | ALA | N-CA-CB | 5.29 | 117.51 | 110.10 |
| 1 | H | 88 | GLU | CB-CG-CD | 5.29 | 128.49 | 114.20 |
| 1 | I | 416 | GLU | OE1-CD-OE2 | -5.29 | 116.95 | 123.30 |
| 1 | J | 497 | GLU | CG-CD-OE2 | -5.29 | 107.72 | 118.30 |
| 1 | M | 114 | ASN | CA-C-O | -5.29 | 108.99 | 120.10 |
| 1 | M | 135 | LEU | CB-CA-C | 5.29 | 120.26 | 110.20 |
| 1 | M | 222 | GLN | N-CA-C | 5.29 | 125.28 | 111.00 |
| 1 | N | 41 | PRO | N-CD-CG | 5.29 | 111.14 | 103.20 |
| 1 | O | 181 | VAL | CG1-CB-CG2 | -5.29 | 102.43 | 110.90 |
| 1 | O | 384 | SER | CB-CA-C | -5.29 | 100.05 | 110.10 |
| 1 | P | 141 | GLU | CB-CA-C | 5.29 | 120.98 | 110.40 |
| 1 | D | 454 | PHE | CB-CG-CD1 | 5.29 | 124.50 | 120.80 |
| 1 | E | 122 | LYS | CA-C-O | -5.29 | 108.99 | 120.10 |
| 1 | I | 127 | ALA | CA-C-O | -5.29 | 108.99 | 120.10 |
| 1 | L | 132 | GLN | O-C-N | 5.29 | 131.16 | 122.70 |
| 1 | N | 249 | ASP | CA-CB-CG | 5.29 | 125.04 | 113.40 |
| 1 | C | 169 | LYS | CB-CG-CD | 5.29 | 125.35 | 111.60 |
| 1 | H | 49 | VAL | CB-CA-C | -5.29 | 101.35 | 111.40 |
| 1 | H | 419 | PRO | CA-C-O | 5.29 | 132.89 | 120.20 |
| 1 | I | 225 | LYS | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | M | 24 | ASN | CB-CG-OD1 | -5.29 | 111.02 | 121.60 |
| 1 | O | 247 | LEU | CA-C-N | 5.29 | 128.84 | 117.20 |
| 1 | O | 336 | GLU | C-N-CA | 5.29 | 134.92 | 121.70 |
| 1 | P | 419 | PRO | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | E | 16 | MET | CA-C-O | -5.29 | 109.00 | 120.10 |
| 1 | F | 484 | THR | CA-CB-CG2 | -5.29 | 105.00 | 112.40 |
| 1 | I | 205 | ASP | OD1-CG-OD2 | -5.29 | 113.25 | 123.30 |
| 1 | N | 67 | GLU | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | N | 210 | LYS | C-N-CA | 5.29 | 133.40 | 122.30 |
| 1 | B | 257 | SER | O-C-N | -5.29 | 114.22 | 123.20 |
| 1 | B | 459 | GLU | CG-CD-OE2 | -5.29 | 107.73 | 118.30 |
| 1 | C | 482 | GLU | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | D | 94 | THR | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | D | 405 | GLN | CB-CG-CD | 5.29 | 125.34 | 111.60 |
| 1 | F | 447 | LYS | CA-C-O | 5.29 | 131.20 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-----------|-------|-------------|----------|
| 1 | I | 42 | LYS | CB-CA-C | -5.29 | 99.83 | 110.40 |
| 1 | K | 314 | ASP | CB-CG-OD2 | 5.29 | 123.06 | 118.30 |
| 1 | O | 59 | ASN | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | O | 128 | ALA | O-C-N | -5.29 | 114.24 | 122.70 |
| 1 | O | 385 | THR | CA-CB-CG2 | -5.29 | 105.00 | 112.40 |
| 1 | O | 396 | TYR | CB-CG-CD1 | -5.29 | 117.83 | 121.00 |
| 1 | O | 450 | GLY | CA-C-O | 5.29 | 130.11 | 120.60 |
| 1 | C | 149 | ILE | CA-C-O | -5.28 | 109.00 | 120.10 |
| 1 | C | 224 | PRO | N-CA-C | 5.28 | 125.84 | 112.10 |
| 1 | D | 137 | THR | O-C-N | -5.28 | 114.25 | 122.70 |
| 1 | F | 147 | LYS | CB-CA-C | 5.28 | 120.97 | 110.40 |
| 1 | G | 174 | ILE | CA-C-O | -5.28 | 109.00 | 120.10 |
| 1 | G | 272 | ALA | N-CA-CB | 5.28 | 117.50 | 110.10 |
| 1 | H | 270 | ASP | N-CA-CB | -5.28 | 101.09 | 110.60 |
| 1 | K | 349 | GLY | C-N-CA | 5.28 | 134.91 | 121.70 |
| 1 | K | 416 | GLU | CG-CD-OE2 | -5.28 | 107.73 | 118.30 |
| 1 | L | 386 | GLU | N-CA-CB | -5.28 | 101.09 | 110.60 |
| 1 | M | 10 | GLU | CA-C-O | -5.28 | 109.00 | 120.10 |
| 1 | M | 286 | ARG | NE-CZ-NH1 | -5.28 | 117.66 | 120.30 |
| 1 | O | 168 | GLU | CG-CD-OE2 | -5.28 | 107.73 | 118.30 |
| 1 | O | 408 | VAL | C-N-CA | 5.28 | 134.91 | 121.70 |
| 1 | I | 121 | VAL | O-C-N | 5.28 | 131.15 | 122.70 |
| 1 | K | 377 | ARG | NE-CZ-NH2 | -5.28 | 117.66 | 120.30 |
| 1 | P | 377 | ARG | CA-C-O | -5.28 | 109.01 | 120.10 |
| 1 | J | 105 | ARG | CG-CD-NE | 5.28 | 122.89 | 111.80 |
| 1 | L | 189 | ASP | N-CA-CB | 5.28 | 120.10 | 110.60 |
| 1 | L | 402 | GLY | C-N-CA | 5.28 | 134.90 | 121.70 |
| 1 | P | 174 | ILE | CA-CB-CG2 | 5.28 | 121.46 | 110.90 |
| 1 | P | 241 | GLU | CA-C-N | 5.28 | 128.82 | 117.20 |
| 1 | C | 310 | LEU | CA-CB-CG | 5.28 | 127.44 | 115.30 |
| 1 | H | 203 | ILE | N-CA-CB | 5.28 | 122.94 | 110.80 |
| 1 | J | 291 | ASP | CB-CA-C | 5.28 | 120.96 | 110.40 |
| 1 | J | 358 | VAL | O-C-N | -5.28 | 114.25 | 122.70 |
| 1 | L | 47 | MET | CA-C-N | -5.28 | 105.59 | 117.20 |
| 1 | O | 325 | LYS | CA-C-O | -5.28 | 109.02 | 120.10 |
| 1 | A | 18 | ARG | O-C-N | 5.28 | 131.15 | 122.70 |
| 1 | A | 364 | ASP | CB-CG-OD2 | -5.28 | 113.55 | 118.30 |
| 1 | B | 22 | ARG | NE-CZ-NH2 | -5.28 | 117.66 | 120.30 |
| 1 | C | 277 | ALA | CA-C-O | -5.28 | 109.02 | 120.10 |
| 1 | H | 487 | LEU | N-CA-CB | 5.28 | 120.96 | 110.40 |
| 1 | I | 324 | ARG | NE-CZ-NH2 | 5.28 | 122.94 | 120.30 |
| 1 | L | 431 | ILE | N-CA-C | 5.28 | 125.25 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 84 | THR | N-CA-CB | 5.28 | 120.33 | 110.30 |
| 1 | O | 422 | LEU | N-CA-CB | 5.28 | 120.96 | 110.40 |
| 1 | P | 41 | PRO | O-C-N | 5.28 | 131.15 | 122.70 |
| 1 | P | 324 | ARG | NE-CZ-NH1 | -5.28 | 117.66 | 120.30 |
| 1 | B | 223 | MET | N-CA-CB | 5.28 | 120.10 | 110.60 |
| 1 | B | 395 | GLU | CB-CG-CD | -5.28 | 99.96 | 114.20 |
| 1 | C | 416 | GLU | N-CA-CB | 5.28 | 120.10 | 110.60 |
| 1 | E | 435 | VAL | CA-CB-CG1 | -5.28 | 102.99 | 110.90 |
| 1 | G | 181 | VAL | CB-CA-C | -5.28 | 101.38 | 111.40 |
| 1 | J | 133 | GLU | CA-C-N | 5.28 | 128.81 | 117.20 |
| 1 | K | 77 | MET | N-CA-CB | 5.28 | 120.09 | 110.60 |
| 1 | L | 338 | LYS | CA-CB-CG | 5.28 | 125.01 | 113.40 |
| 1 | L | 357 | GLU | CG-CD-OE2 | -5.28 | 107.75 | 118.30 |
| 1 | N | 402 | GLY | O-C-N | -5.28 | 114.26 | 122.70 |
| 1 | O | 363 | ASP | N-CA-CB | 5.28 | 120.10 | 110.60 |
| 1 | J | 194 | LYS | CB-CA-C | 5.27 | 120.95 | 110.40 |
| 1 | K | 461 | MET | O-C-N | -5.27 | 114.26 | 122.70 |
| 1 | N | 474 | THR | CA-C-O | -5.27 | 109.03 | 120.10 |
| 1 | B | 378 | ILE | CB-CA-C | 5.27 | 122.15 | 111.60 |
| 1 | C | 32 | ALA | CB-CA-C | -5.27 | 102.19 | 110.10 |
| 1 | E | 115 | VAL | N-CA-CB | 5.27 | 123.10 | 111.50 |
| 1 | E | 152 | LYS | CB-CA-C | 5.27 | 120.95 | 110.40 |
| 1 | G | 153 | ILE | CG1-CB-CG2 | -5.27 | 99.80 | 111.40 |
| 1 | J | 199 | SER | N-CA-CB | -5.27 | 102.59 | 110.50 |
| 1 | J | 486 | MET | CA-CB-CG | 5.27 | 122.26 | 113.30 |
| 1 | K | 182 | VAL | N-CA-C | 5.27 | 125.23 | 111.00 |
| 1 | N | 208 | LEU | CA-CB-CG | 5.27 | 127.42 | 115.30 |
| 1 | N | 364 | ASP | N-CA-CB | 5.27 | 120.09 | 110.60 |
| 1 | O | 470 | LEU | CA-CB-CG | 5.27 | 127.43 | 115.30 |
| 1 | A | 320 | LEU | CA-CB-CG | 5.27 | 127.42 | 115.30 |
| 1 | F | 290 | SER | O-C-N | -5.27 | 114.27 | 122.70 |
| 1 | G | 141 | GLU | CB-CA-C | 5.27 | 120.94 | 110.40 |
| 1 | I | 90 | GLY | O-C-N | -5.27 | 114.27 | 122.70 |
| 1 | J | 334 | VAL | CG1-CB-CG2 | 5.27 | 119.33 | 110.90 |
| 1 | N | 158 | ILE | CA-CB-CG1 | 5.27 | 121.02 | 111.00 |
| 1 | B | 34 | THR | CA-CB-OG1 | 5.27 | 120.06 | 109.00 |
| 1 | F | 348 | ARG | CB-CA-C | 5.27 | 120.94 | 110.40 |
| 1 | F | 487 | LEU | O-C-N | -5.27 | 114.27 | 122.70 |
| 1 | G | 317 | ASP | CB-CA-C | 5.27 | 120.94 | 110.40 |
| 1 | H | 172 | GLU | CA-C-N | -5.27 | 105.61 | 117.20 |
| 1 | M | 156 | THR | CA-C-N | -5.27 | 105.61 | 117.20 |
| 1 | N | 246 | MET | CG-SD-CE | 5.27 | 108.63 | 100.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 434 | LEU | CB-CG-CD1 | -5.27 | 102.04 | 111.00 |
| 1 | A | 113 | GLN | OE1-CD-NE2 | 5.27 | 134.02 | 121.90 |
| 1 | B | 300 | GLY | CA-C-O | 5.27 | 130.08 | 120.60 |
| 1 | D | 51 | ASP | C-N-CA | 5.27 | 134.87 | 121.70 |
| 1 | D | 110 | LEU | CB-CG-CD2 | -5.27 | 102.04 | 111.00 |
| 1 | D | 385 | THR | C-N-CA | 5.27 | 134.87 | 121.70 |
| 1 | E | 317 | ASP | CB-CA-C | 5.27 | 120.94 | 110.40 |
| 1 | H | 339 | HIS | CB-CA-C | -5.27 | 99.87 | 110.40 |
| 1 | J | 79 | ILE | CA-CB-CG1 | 5.27 | 121.01 | 111.00 |
| 1 | J | 220 | SER | CA-C-O | 5.27 | 131.16 | 120.10 |
| 1 | K | 146 | ASP | CB-CA-C | -5.27 | 99.87 | 110.40 |
| 1 | L | 218 | ARG | NE-CZ-NH1 | 5.27 | 122.93 | 120.30 |
| 1 | M | 350 | THR | C-N-CA | 5.27 | 134.87 | 121.70 |
| 1 | N | 411 | PHE | CZ-CE2-CD2 | 5.27 | 126.42 | 120.10 |
| 1 | O | 207 | GLU | N-CA-CB | 5.27 | 120.08 | 110.60 |
| 1 | C | 466 | VAL | CA-C-O | -5.27 | 109.04 | 120.10 |
| 1 | G | 425 | ASN | CA-C-O | -5.27 | 109.04 | 120.10 |
| 1 | I | 486 | MET | C-N-CA | 5.27 | 134.87 | 121.70 |
| 1 | A | 261 | VAL | CA-CB-CG2 | 5.26 | 118.80 | 110.90 |
| 1 | B | 60 | ASP | C-N-CA | 5.26 | 133.35 | 122.30 |
| 1 | C | 69 | SER | C-N-CA | 5.26 | 134.86 | 121.70 |
| 1 | G | 70 | VAL | C-N-CA | 5.26 | 134.86 | 121.70 |
| 1 | I | 124 | TYR | CB-CG-CD1 | 5.26 | 124.16 | 121.00 |
| 1 | I | 360 | ARG | N-CA-CB | 5.26 | 120.08 | 110.60 |
| 1 | J | 273 | GLN | CG-CD-OE1 | 5.26 | 132.13 | 121.60 |
| 1 | O | 219 | VAL | CA-CB-CG1 | 5.26 | 118.80 | 110.90 |
| 1 | C | 109 | GLU | CA-C-O | 5.26 | 131.15 | 120.10 |
| 1 | C | 299 | THR | O-C-N | -5.26 | 114.25 | 123.20 |
| 1 | E | 271 | LEU | CB-CG-CD2 | -5.26 | 102.05 | 111.00 |
| 1 | K | 418 | ILE | CA-CB-CG2 | 5.26 | 121.43 | 110.90 |
| 1 | M | 426 | ALA | CA-C-O | -5.26 | 109.05 | 120.10 |
| 1 | N | 224 | PRO | C-N-CA | 5.26 | 134.86 | 121.70 |
| 1 | A | 314 | ASP | CA-CB-CG | 5.26 | 124.98 | 113.40 |
| 1 | D | 262 | LEU | CA-CB-CG | 5.26 | 127.40 | 115.30 |
| 1 | H | 12 | MET | O-C-N | -5.26 | 114.28 | 122.70 |
| 1 | H | 70 | VAL | O-C-N | -5.26 | 114.28 | 122.70 |
| 1 | H | 149 | ILE | CA-CB-CG2 | 5.26 | 121.42 | 110.90 |
| 1 | H | 342 | ALA | N-CA-CB | 5.26 | 117.47 | 110.10 |
| 1 | K | 205 | ASP | CA-C-O | -5.26 | 109.05 | 120.10 |
| 1 | K | 397 | ALA | CA-C-N | -5.26 | 105.62 | 117.20 |
| 1 | M | 409 | ARG | CA-C-N | -5.26 | 105.62 | 117.20 |
| 1 | N | 145 | GLN | CB-CA-C | -5.26 | 99.88 | 110.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 26 | LEU | CB-CA-C | 5.26 | 120.20 | 110.20 |
| 1 | P | 52 | LEU | O-C-N | -5.26 | 114.26 | 123.20 |
| 1 | A | 111 | LEU | N-CA-C | 5.26 | 125.20 | 111.00 |
| 1 | C | 360 | ARG | CA-C-N | -5.26 | 105.63 | 117.20 |
| 1 | G | 107 | ALA | O-C-N | 5.26 | 131.12 | 122.70 |
| 1 | H | 48 | LEU | N-CA-CB | 5.26 | 120.92 | 110.40 |
| 1 | H | 314 | ASP | CA-CB-CG | 5.26 | 124.97 | 113.40 |
| 1 | H | 394 | ARG | NH1-CZ-NH2 | -5.26 | 113.61 | 119.40 |
| 1 | L | 451 | LEU | CA-CB-CG | 5.26 | 127.40 | 115.30 |
| 1 | M | 13 | LYS | CG-CD-CE | 5.26 | 127.68 | 111.90 |
| 1 | M | 116 | HIS | CA-C-O | -5.26 | 109.06 | 120.10 |
| 1 | M | 272 | ALA | N-CA-C | 5.26 | 125.20 | 111.00 |
| 1 | M | 416 | GLU | CG-CD-OE2 | -5.26 | 107.78 | 118.30 |
| 1 | A | 42 | LYS | CD-CE-NZ | 5.26 | 123.79 | 111.70 |
| 1 | F | 482 | GLU | CG-CD-OE2 | -5.26 | 107.78 | 118.30 |
| 1 | L | 15 | TYR | CE1-CZ-CE2 | -5.26 | 111.39 | 119.80 |
| 1 | L | 115 | VAL | CA-C-O | 5.26 | 131.14 | 120.10 |
| 1 | L | 134 | LEU | CA-CB-CG | -5.26 | 103.21 | 115.30 |
| 1 | N | 485 | GLU | OE1-CD-OE2 | 5.26 | 129.61 | 123.30 |
| 1 | O | 431 | ILE | CG1-CB-CG2 | 5.26 | 122.97 | 111.40 |
| 1 | P | 11 | ASN | CA-C-O | -5.26 | 109.06 | 120.10 |
| 1 | B | 196 | GLU | CG-CD-OE2 | -5.26 | 107.79 | 118.30 |
| 1 | B | 484 | THR | CA-CB-CG2 | -5.26 | 105.04 | 112.40 |
| 1 | D | 121 | VAL | CB-CA-C | -5.26 | 101.41 | 111.40 |
| 1 | G | 226 | LYS | N-CA-CB | -5.26 | 101.14 | 110.60 |
| 1 | J | 10 | GLU | O-C-N | -5.26 | 114.29 | 122.70 |
| 1 | D | 285 | ARG | CD-NE-CZ | 5.25 | 130.96 | 123.60 |
| 1 | I | 273 | GLN | CA-C-O | 5.25 | 131.13 | 120.10 |
| 1 | N | 309 | ASP | CA-CB-CG | 5.25 | 124.96 | 113.40 |
| 1 | P | 335 | GLU | OE1-CD-OE2 | 5.25 | 129.61 | 123.30 |
| 1 | B | 290 | SER | C-N-CA | 5.25 | 134.83 | 121.70 |
| 1 | C | 165 | LYS | CG-CD-CE | 5.25 | 127.66 | 111.90 |
| 1 | I | 424 | GLU | CB-CA-C | -5.25 | 99.89 | 110.40 |
| 1 | J | 56 | VAL | N-CA-C | -5.25 | 96.82 | 111.00 |
| 1 | K | 285 | ARG | CD-NE-CZ | 5.25 | 130.96 | 123.60 |
| 1 | N | 50 | ASP | N-CA-CB | -5.25 | 101.14 | 110.60 |
| 1 | N | 190 | LYS | CA-C-O | -5.25 | 109.07 | 120.10 |
| 1 | N | 214 | VAL | CA-CB-CG1 | 5.25 | 118.78 | 110.90 |
| 1 | O | 111 | LEU | CB-CA-C | 5.25 | 120.18 | 110.20 |
| 1 | A | 472 | VAL | CG1-CB-CG2 | -5.25 | 102.50 | 110.90 |
| 1 | A | 478 | GLN | CB-CG-CD | 5.25 | 125.25 | 111.60 |
| 1 | B | 56 | VAL | CA-CB-CG2 | 5.25 | 118.78 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 90 | GLY | CA-C-O | -5.25 | 111.15 | 120.60 |
| 1 | D | 476 | ALA | CB-CA-C | 5.25 | 117.98 | 110.10 |
| 1 | E | 155 | MET | N-CA-C | 5.25 | 125.18 | 111.00 |
| 1 | J | 105 | ARG | NE-CZ-NH1 | 5.25 | 122.93 | 120.30 |
| 1 | L | 59 | ASN | C-N-CA | 5.25 | 134.83 | 121.70 |
| 1 | M | 219 | VAL | CA-CB-CG1 | 5.25 | 118.78 | 110.90 |
| 1 | N | 387 | VAL | CG1-CB-CG2 | -5.25 | 102.50 | 110.90 |
| 1 | O | 315 | LEU | CA-C-N | 5.25 | 126.70 | 116.20 |
| 1 | O | 416 | GLU | CG-CD-OE2 | 5.25 | 128.80 | 118.30 |
| 1 | P | 118 | THR | CA-CB-OG1 | 5.25 | 120.03 | 109.00 |
| 1 | P | 271 | LEU | N-CA-C | 5.25 | 125.18 | 111.00 |
| 1 | A | 424 | GLU | N-CA-CB | 5.25 | 120.05 | 110.60 |
| 1 | C | 237 | CYS | CA-C-N | -5.25 | 105.65 | 117.20 |
| 1 | G | 227 | VAL | CG1-CB-CG2 | -5.25 | 102.50 | 110.90 |
| 1 | H | 348 | ARG | CA-C-N | 5.25 | 126.70 | 116.20 |
| 1 | B | 111 | LEU | N-CA-CB | 5.25 | 120.90 | 110.40 |
| 1 | B | 170 | LEU | O-C-N | -5.25 | 114.30 | 122.70 |
| 1 | C | 56 | VAL | CA-CB-CG2 | 5.25 | 118.77 | 110.90 |
| 1 | E | 205 | ASP | OD1-CG-OD2 | -5.25 | 113.33 | 123.30 |
| 1 | K | 424 | GLU | C-N-CA | 5.25 | 134.82 | 121.70 |
| 1 | L | 274 | HIS | CG-CD2-NE2 | -5.25 | 99.23 | 109.20 |
| 1 | L | 346 | LEU | CA-CB-CG | 5.25 | 127.37 | 115.30 |
| 1 | N | 304 | ILE | O-C-N | -5.25 | 114.30 | 122.70 |
| 1 | O | 154 | ALA | N-CA-C | 5.25 | 125.17 | 111.00 |
| 1 | A | 359 | ALA | N-CA-CB | 5.25 | 117.44 | 110.10 |
| 1 | B | 260 | ASN | N-CA-CB | 5.25 | 120.05 | 110.60 |
| 1 | B | 425 | ASN | O-C-N | -5.25 | 114.31 | 122.70 |
| 1 | D | 176 | GLU | N-CA-CB | 5.25 | 120.04 | 110.60 |
| 1 | H | 132 | GLN | C-N-CA | 5.25 | 134.82 | 121.70 |
| 1 | I | 115 | VAL | CA-CB-CG1 | 5.25 | 118.77 | 110.90 |
| 1 | I | 214 | VAL | CA-CB-CG2 | 5.25 | 118.77 | 110.90 |
| 1 | I | 229 | ASP | N-CA-CB | 5.25 | 120.04 | 110.60 |
| 1 | I | 304 | ILE | CB-CA-C | -5.25 | 101.11 | 111.60 |
| 1 | J | 85 | GLN | CB-CA-C | 5.25 | 120.89 | 110.40 |
| 1 | J | 119 | ILE | CA-C-O | -5.25 | 109.08 | 120.10 |
| 1 | N | 337 | CYS | CB-CA-C | 5.25 | 120.89 | 110.40 |
| 1 | O | 398 | GLU | CB-CG-CD | 5.25 | 128.37 | 114.20 |
| 1 | P | 431 | ILE | N-CA-CB | 5.25 | 122.87 | 110.80 |
| 1 | N | 497 | GLU | CG-CD-OE1 | -5.25 | 107.81 | 118.30 |
| 1 | A | 198 | LYS | CB-CA-C | 5.24 | 120.89 | 110.40 |
| 1 | D | 10 | GLU | CG-CD-OE1 | 5.24 | 128.78 | 118.30 |
| 1 | D | 180 | ALA | CB-CA-C | 5.24 | 117.96 | 110.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 320 | LEU | CD1-CG-CD2 | 5.24 | 126.23 | 110.50 |
| 1 | K | 335 | GLU | O-C-N | 5.24 | 131.09 | 122.70 |
| 1 | L | 95 | THR | CA-C-N | -5.24 | 105.66 | 117.20 |
| 1 | A | 359 | ALA | CA-C-O | 5.24 | 131.11 | 120.10 |
| 1 | B | 224 | PRO | O-C-N | -5.24 | 114.31 | 122.70 |
| 1 | C | 420 | ARG | CB-CA-C | 5.24 | 120.88 | 110.40 |
| 1 | F | 194 | LYS | O-C-N | 5.24 | 131.09 | 122.70 |
| 1 | F | 404 | GLU | OE1-CD-OE2 | -5.24 | 117.01 | 123.30 |
| 1 | G | 371 | CYS | O-C-N | -5.24 | 114.31 | 122.70 |
| 1 | I | 451 | LEU | CB-CG-CD1 | -5.24 | 102.09 | 111.00 |
| 1 | O | 57 | VAL | CA-C-N | 5.24 | 128.73 | 117.20 |
| 1 | P | 329 | ASP | CB-CG-OD2 | 5.24 | 123.02 | 118.30 |
| 1 | A | 147 | LYS | O-C-N | -5.24 | 114.31 | 122.70 |
| 1 | A | 148 | GLU | N-CA-C | 5.24 | 125.15 | 111.00 |
| 1 | A | 462 | CYS | CA-CB-SG | 5.24 | 123.43 | 114.00 |
| 1 | B | 278 | LYS | CB-CA-C | 5.24 | 120.88 | 110.40 |
| 1 | C | 62 | VAL | C-N-CA | 5.24 | 134.80 | 121.70 |
| 1 | C | 309 | ASP | N-CA-CB | 5.24 | 120.03 | 110.60 |
| 1 | D | 221 | ALA | CA-C-O | -5.24 | 109.10 | 120.10 |
| 1 | D | 331 | MET | N-CA-CB | 5.24 | 120.03 | 110.60 |
| 1 | E | 494 | ILE | O-C-N | -5.24 | 114.32 | 122.70 |
| 1 | F | 188 | VAL | CA-CB-CG2 | 5.24 | 118.76 | 110.90 |
| 1 | G | 375 | ASP | O-C-N | -5.24 | 114.29 | 123.20 |
| 1 | H | 294 | LYS | C-N-CA | 5.24 | 134.80 | 121.70 |
| 1 | J | 60 | ASP | OD1-CG-OD2 | -5.24 | 113.34 | 123.30 |
| 1 | K | 378 | ILE | CA-C-O | -5.24 | 109.10 | 120.10 |
| 1 | L | 361 | ALA | CA-C-N | 5.24 | 128.73 | 117.20 |
| 1 | P | 14 | ARG | CA-CB-CG | 5.24 | 124.93 | 113.40 |
| 1 | A | 315 | LEU | CA-C-N | 5.24 | 126.68 | 116.20 |
| 1 | B | 237 | CYS | C-N-CA | 5.24 | 134.80 | 121.70 |
| 1 | C | 270 | ASP | N-CA-CB | 5.24 | 120.03 | 110.60 |
| 1 | E | 403 | ARG | CA-C-N | -5.24 | 105.68 | 117.20 |
| 1 | E | 491 | ASP | CA-CB-CG | -5.24 | 101.87 | 113.40 |
| 1 | F | 337 | CYS | C-N-CA | 5.24 | 134.80 | 121.70 |
| 1 | I | 140 | CYS | CA-C-O | 5.24 | 131.10 | 120.10 |
| 1 | I | 235 | LEU | O-C-N | -5.24 | 114.32 | 122.70 |
| 1 | I | 263 | PHE | CZ-CE2-CD2 | -5.24 | 113.81 | 120.10 |
| 1 | K | 207 | GLU | OE1-CD-OE2 | -5.24 | 117.01 | 123.30 |
| 1 | L | 315 | LEU | N-CA-CB | 5.24 | 120.88 | 110.40 |
| 1 | M | 89 | VAL | O-C-N | 5.24 | 132.10 | 123.20 |
| 1 | M | 450 | GLY | CA-C-O | -5.24 | 111.17 | 120.60 |
| 1 | A | 285 | ARG | NE-CZ-NH2 | -5.24 | 117.68 | 120.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 247 | LEU | CA-CB-CG | 5.24 | 127.35 | 115.30 |
| 1 | D | 66 | ARG | CB-CG-CD | -5.24 | 97.98 | 111.60 |
| 1 | I | 66 | ARG | NE-CZ-NH1 | -5.24 | 117.68 | 120.30 |
| 1 | M | 30 | ILE | O-C-N | -5.24 | 114.32 | 122.70 |
| 1 | B | 391 | MET | O-C-N | 5.24 | 131.08 | 122.70 |
| 1 | C | 299 | THR | CA-C-N | 5.24 | 126.67 | 116.20 |
| 1 | E | 167 | LYS | CB-CG-CD | 5.24 | 125.21 | 111.60 |
| 1 | E | 422 | LEU | CB-CG-CD2 | -5.24 | 102.10 | 111.00 |
| 1 | G | 48 | LEU | CB-CG-CD1 | -5.24 | 102.10 | 111.00 |
| 1 | K | 210 | LYS | CA-CB-CG | 5.24 | 124.92 | 113.40 |
| 1 | K | 297 | LYS | CA-CB-CG | 5.24 | 124.92 | 113.40 |
| 1 | P | 333 | PHE | CD1-CG-CD2 | 5.24 | 125.11 | 118.30 |
| 1 | P | 340 | PRO | C-N-CA | 5.24 | 134.79 | 121.70 |
| 1 | P | 420 | ARG | O-C-N | 5.24 | 131.08 | 122.70 |
| 1 | B | 272 | ALA | N-CA-CB | 5.23 | 117.43 | 110.10 |
| 1 | B | 310 | LEU | CB-CG-CD1 | 5.23 | 119.90 | 111.00 |
| 1 | M | 414 | ALA | CA-C-O | -5.23 | 109.11 | 120.10 |
| 1 | N | 30 | ILE | CA-CB-CG1 | -5.23 | 101.06 | 111.00 |
| 1 | A | 480 | ALA | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | C | 11 | ASN | CB-CG-OD1 | 5.23 | 132.06 | 121.60 |
| 1 | D | 87 | LYS | CD-CE-NZ | 5.23 | 123.74 | 111.70 |
| 1 | D | 87 | LYS | N-CA-CB | 5.23 | 120.02 | 110.60 |
| 1 | D | 299 | THR | CA-C-O | 5.23 | 131.09 | 120.10 |
| 1 | E | 271 | LEU | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | H | 395 | GLU | CB-CA-C | 5.23 | 120.86 | 110.40 |
| 1 | H | 421 | THR | N-CA-CB | 5.23 | 120.24 | 110.30 |
| 1 | H | 487 | LEU | CB-CA-C | 5.23 | 120.14 | 110.20 |
| 1 | K | 122 | LYS | CB-CA-C | 5.23 | 120.86 | 110.40 |
| 1 | L | 310 | LEU | O-C-N | 5.23 | 131.07 | 122.70 |
| 1 | P | 261 | VAL | N-CA-CB | 5.23 | 123.01 | 111.50 |
| 1 | P | 310 | LEU | CB-CG-CD1 | -5.23 | 102.11 | 111.00 |
| 1 | A | 67 | GLU | N-CA-CB | 5.23 | 120.02 | 110.60 |
| 1 | D | 288 | LYS | CD-CE-NZ | 5.23 | 123.73 | 111.70 |
| 1 | E | 93 | THR | C-N-CA | 5.23 | 134.78 | 121.70 |
| 1 | E | 352 | GLU | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | F | 71 | GLU | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | I | 38 | THR | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | I | 156 | THR | CA-CB-CG2 | -5.23 | 105.08 | 112.40 |
| 1 | I | 171 | ALA | O-C-N | -5.23 | 114.33 | 122.70 |
| 1 | M | 99 | VAL | CA-CB-CG1 | -5.23 | 103.05 | 110.90 |
| 1 | M | 235 | LEU | CB-CG-CD2 | 5.23 | 119.89 | 111.00 |
| 1 | M | 264 | CYS | CA-C-N | -5.23 | 105.69 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 448 | CYS | CB-CA-C | 5.23 | 120.86 | 110.40 |
| 1 | B | 421 | THR | CA-CB-CG2 | 5.23 | 119.72 | 112.40 |
| 1 | D | 352 | GLU | O-C-N | 5.23 | 131.07 | 122.70 |
| 1 | E | 89 | VAL | N-CA-C | 5.23 | 125.12 | 111.00 |
| 1 | F | 66 | ARG | NE-CZ-NH2 | 5.23 | 122.91 | 120.30 |
| 1 | H | 352 | GLU | CB-CA-C | 5.23 | 120.86 | 110.40 |
| 1 | K | 218 | ARG | NH1-CZ-NH2 | -5.23 | 113.65 | 119.40 |
| 1 | M | 259 | ALA | O-C-N | 5.23 | 131.07 | 122.70 |
| 1 | A | 133 | GLU | N-CA-CB | 5.23 | 120.01 | 110.60 |
| 1 | E | 396 | TYR | CB-CG-CD2 | 5.23 | 124.14 | 121.00 |
| 1 | I | 294 | LYS | N-CA-CB | 5.23 | 120.01 | 110.60 |
| 1 | J | 12 | MET | CB-CA-C | -5.23 | 99.94 | 110.40 |
| 1 | L | 403 | ARG | CA-C-O | 5.23 | 131.08 | 120.10 |
| 1 | P | 98 | VAL | N-CA-CB | 5.23 | 123.00 | 111.50 |
| 1 | F | 399 | GLY | O-C-N | -5.23 | 114.34 | 122.70 |
| 1 | I | 483 | SER | CA-C-N | -5.23 | 105.70 | 117.20 |
| 1 | K | 461 | MET | CA-C-O | -5.23 | 109.13 | 120.10 |
| 1 | L | 449 | ALA | O-C-N | 5.23 | 132.09 | 123.20 |
| 1 | M | 189 | ASP | O-C-N | -5.23 | 114.34 | 122.70 |
| 1 | A | 240 | GLU | N-CA-C | 5.22 | 125.11 | 111.00 |
| 1 | C | 450 | GLY | CA-C-O | -5.22 | 111.20 | 120.60 |
| 1 | F | 54 | ASP | OD1-CG-OD2 | -5.22 | 113.37 | 123.30 |
| 1 | G | 91 | ASP | CA-CB-CG | 5.22 | 124.89 | 113.40 |
| 1 | G | 321 | VAL | CA-CB-CG2 | 5.22 | 118.74 | 110.90 |
| 1 | H | 24 | ASN | CB-CG-ND2 | -5.22 | 104.16 | 116.70 |
| 1 | K | 289 | LYS | CB-CG-CD | -5.22 | 98.02 | 111.60 |
| 1 | M | 289 | LYS | CG-CD-CE | 5.22 | 127.57 | 111.90 |
| 1 | O | 226 | LYS | CA-CB-CG | 5.22 | 124.89 | 113.40 |
| 1 | O | 368 | VAL | CA-CB-CG1 | 5.22 | 118.74 | 110.90 |
| 1 | J | 294 | LYS | CD-CE-NZ | 5.22 | 123.71 | 111.70 |
| 1 | J | 371 | CYS | C-N-CA | 5.22 | 134.76 | 121.70 |
| 1 | K | 9 | PRO | CB-CA-C | 5.22 | 125.06 | 112.00 |
| 1 | K | 435 | VAL | CA-C-O | -5.22 | 109.13 | 120.10 |
| 1 | M | 151 | THR | N-CA-CB | 5.22 | 120.22 | 110.30 |
| 1 | M | 435 | VAL | CA-CB-CG1 | 5.22 | 118.73 | 110.90 |
| 1 | C | 304 | ILE | CA-C-O | -5.22 | 109.14 | 120.10 |
| 1 | H | 414 | ALA | N-CA-CB | 5.22 | 117.41 | 110.10 |
| 1 | I | 289 | LYS | N-CA-CB | 5.22 | 120.00 | 110.60 |
| 1 | B | 88 | GLU | N-CA-CB | 5.22 | 120.00 | 110.60 |
| 1 | E | 472 | VAL | N-CA-C | 5.22 | 125.09 | 111.00 |
| 1 | I | 15 | TYR | CD1-CE1-CZ | 5.22 | 124.50 | 119.80 |
| 1 | J | 229 | ASP | N-CA-CB | 5.22 | 120.00 | 110.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | K | 338 | LYS | O-C-N | 5.22 | 131.05 | 122.70 |
| 1 | M | 420 | ARG | NH1-CZ-NH2 | -5.22 | 113.66 | 119.40 |
| 1 | N | 275 | TYR | O-C-N | 5.22 | 131.05 | 122.70 |
| 1 | O | 31 | ILE | CA-CB-CG2 | 5.22 | 121.34 | 110.90 |
| 1 | O | 112 | ASP | O-C-N | -5.22 | 114.35 | 122.70 |
| 1 | B | 139 | ALA | N-CA-CB | 5.22 | 117.41 | 110.10 |
| 1 | D | 36 | ARG | NE-CZ-NH2 | 5.22 | 122.91 | 120.30 |
| 1 | G | 274 | HIS | O-C-N | -5.22 | 114.35 | 122.70 |
| 1 | N | 229 | ASP | CA-CB-CG | 5.22 | 124.88 | 113.40 |
| 1 | O | 49 | VAL | CG1-CB-CG2 | 5.22 | 119.25 | 110.90 |
| 1 | P | 185 | GLU | CG-CD-OE1 | 5.22 | 128.74 | 118.30 |
| 1 | A | 58 | THR | CA-CB-OG1 | 5.22 | 119.95 | 109.00 |
| 1 | A | 290 | SER | O-C-N | 5.22 | 131.05 | 122.70 |
| 1 | B | 384 | SER | O-C-N | -5.22 | 114.35 | 122.70 |
| 1 | D | 336 | GLU | CB-CA-C | 5.22 | 120.83 | 110.40 |
| 1 | F | 80 | GLU | N-CA-CB | 5.22 | 119.99 | 110.60 |
| 1 | H | 411 | PHE | CA-CB-CG | 5.22 | 126.42 | 113.90 |
| 1 | J | 239 | ILE | C-N-CA | 5.22 | 134.74 | 121.70 |
| 1 | L | 438 | ARG | CA-CB-CG | 5.22 | 124.88 | 113.40 |
| 1 | O | 368 | VAL | CA-C-O | -5.22 | 109.15 | 120.10 |
| 1 | C | 178 | VAL | N-CA-C | 5.21 | 125.08 | 111.00 |
| 1 | E | 409 | ARG | CD-NE-CZ | -5.21 | 116.30 | 123.60 |
| 1 | E | 489 | ARG | O-C-N | -5.21 | 114.36 | 122.70 |
| 1 | L | 371 | CYS | CA-CB-SG | 5.21 | 123.39 | 114.00 |
| 1 | N | 198 | LYS | O-C-N | -5.21 | 114.36 | 122.70 |
| 1 | O | 139 | ALA | O-C-N | -5.21 | 114.36 | 122.70 |
| 1 | O | 429 | ASP | CA-C-N | -5.21 | 105.73 | 117.20 |
| 1 | P | 325 | LYS | CA-CB-CG | 5.21 | 124.87 | 113.40 |
| 1 | P | 487 | LEU | CA-CB-CG | 5.21 | 127.29 | 115.30 |
| 1 | C | 128 | ALA | CA-C-O | 5.21 | 131.05 | 120.10 |
| 1 | F | 394 | ARG | NE-CZ-NH2 | 5.21 | 122.91 | 120.30 |
| 1 | H | 362 | VAL | CA-CB-CG2 | 5.21 | 118.72 | 110.90 |
| 1 | L | 96 | ALA | CA-C-N | -5.21 | 105.73 | 117.20 |
| 1 | L | 336 | GLU | OE1-CD-OE2 | -5.21 | 117.05 | 123.30 |
| 1 | M | 185 | GLU | CB-CG-CD | 5.21 | 128.28 | 114.20 |
| 1 | A | 130 | LYS | CG-CD-CE | 5.21 | 127.53 | 111.90 |
| 1 | B | 389 | LEU | O-C-N | 5.21 | 131.04 | 122.70 |
| 1 | B | 389 | LEU | CA-CB-CG | 5.21 | 127.29 | 115.30 |
| 1 | C | 150 | LEU | CA-CB-CG | 5.21 | 127.29 | 115.30 |
| 1 | K | 357 | GLU | OE1-CD-OE2 | -5.21 | 117.05 | 123.30 |
| 1 | K | 397 | ALA | N-CA-CB | -5.21 | 102.81 | 110.10 |
| 1 | O | 116 | HIS | CE1-NE2-CD2 | 5.21 | 119.63 | 106.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 389 | LEU | CB-CG-CD2 | 5.21 | 119.86 | 111.00 |
| 1 | P | 257 | SER | CB-CA-C | 5.21 | 120.00 | 110.10 |
| 1 | A | 81 | VAL | N-CA-CB | 5.21 | 122.96 | 111.50 |
| 1 | A | 264 | CYS | N-CA-CB | 5.21 | 119.98 | 110.60 |
| 1 | E | 260 | ASN | CA-CB-CG | 5.21 | 124.86 | 113.40 |
| 1 | K | 195 | ILE | CA-CB-CG2 | -5.21 | 100.48 | 110.90 |
| 1 | N | 84 | THR | CA-CB-CG2 | 5.21 | 119.69 | 112.40 |
| 1 | N | 382 | GLY | O-C-N | -5.21 | 114.34 | 123.20 |
| 1 | A | 169 | LYS | CA-C-O | -5.21 | 109.16 | 120.10 |
| 1 | C | 107 | ALA | CA-C-O | -5.21 | 109.16 | 120.10 |
| 1 | E | 355 | ILE | CA-C-N | -5.21 | 105.74 | 117.20 |
| 1 | F | 283 | ALA | N-CA-CB | 5.21 | 117.39 | 110.10 |
| 1 | H | 92 | GLY | N-CA-C | 5.21 | 126.12 | 113.10 |
| 1 | H | 332 | ILE | CA-CB-CG1 | -5.21 | 101.11 | 111.00 |
| 1 | J | 441 | HIS | CB-CG-ND1 | -5.21 | 110.18 | 123.20 |
| 1 | L | 79 | ILE | CB-CG1-CD1 | 5.21 | 128.49 | 113.90 |
| 1 | M | 421 | THR | CA-C-O | -5.21 | 109.16 | 120.10 |
| 1 | N | 66 | ARG | CA-CB-CG | -5.21 | 101.94 | 113.40 |
| 1 | O | 495 | ALA | N-CA-C | 5.21 | 125.06 | 111.00 |
| 1 | B | 303 | VAL | CB-CA-C | 5.21 | 121.29 | 111.40 |
| 1 | F | 45 | ASP | OD1-CG-OD2 | -5.21 | 113.41 | 123.30 |
| 1 | G | 409 | ARG | CA-C-N | -5.21 | 105.75 | 117.20 |
| 1 | O | 15 | TYR | CB-CG-CD2 | 5.21 | 124.12 | 121.00 |
| 1 | P | 224 | PRO | O-C-N | 5.21 | 131.03 | 122.70 |
| 1 | A | 170 | LEU | CB-CG-CD2 | -5.21 | 102.15 | 111.00 |
| 1 | A | 495 | ALA | CA-C-O | -5.21 | 109.17 | 120.10 |
| 1 | C | 348 | ARG | NE-CZ-NH2 | 5.21 | 122.90 | 120.30 |
| 1 | F | 252 | ALA | N-CA-CB | -5.21 | 102.81 | 110.10 |
| 1 | F | 353 | HIS | O-C-N | 5.21 | 131.03 | 122.70 |
| 1 | J | 432 | GLU | O-C-N | -5.21 | 114.37 | 122.70 |
| 1 | L | 202 | SER | CA-CB-OG | 5.21 | 125.25 | 111.20 |
| 1 | M | 222 | GLN | CB-CG-CD | 5.21 | 125.13 | 111.60 |
| 1 | B | 451 | LEU | CB-CA-C | 5.20 | 120.09 | 110.20 |
| 1 | H | 428 | LEU | CB-CG-CD2 | -5.20 | 102.15 | 111.00 |
| 1 | I | 306 | ASN | C-N-CA | 5.20 | 134.71 | 121.70 |
| 1 | J | 187 | LYS | CB-CG-CD | 5.20 | 125.13 | 111.60 |
| 1 | M | 17 | GLY | O-C-N | -5.20 | 114.37 | 122.70 |
| 1 | C | 493 | VAL | N-CA-CB | 5.20 | 122.94 | 111.50 |
| 1 | J | 326 | ILE | O-C-N | -5.20 | 114.38 | 122.70 |
| 1 | L | 216 | LYS | N-CA-C | 5.20 | 125.05 | 111.00 |
| 1 | O | 76 | LYS | N-CA-CB | 5.20 | 119.96 | 110.60 |
| 1 | P | 25 | ILE | CB-CG1-CD1 | 5.20 | 128.47 | 113.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 153 | ILE | O-C-N | -5.20 | 114.38 | 122.70 |
| 1 | D | 95 | THR | C-N-CA | 5.20 | 134.70 | 121.70 |
| 1 | D | 363 | ASP | OD1-CG-OD2 | -5.20 | 113.42 | 123.30 |
| 1 | E | 261 | VAL | CB-CA-C | -5.20 | 101.52 | 111.40 |
| 1 | G | 233 | ALA | O-C-N | 5.20 | 131.02 | 122.70 |
| 1 | J | 274 | HIS | N-CA-CB | 5.20 | 119.96 | 110.60 |
| 1 | L | 388 | GLU | OE1-CD-OE2 | -5.20 | 117.06 | 123.30 |
| 1 | P | 19 | ASP | CB-CG-OD1 | 5.20 | 122.98 | 118.30 |
| 1 | P | 269 | ASP | C-N-CA | 5.20 | 134.70 | 121.70 |
| 1 | P | 314 | ASP | CA-CB-CG | 5.20 | 124.84 | 113.40 |
| 1 | A | 65 | LEU | N-CA-CB | 5.20 | 120.80 | 110.40 |
| 1 | C | 113 | GLN | CG-CD-OE1 | -5.20 | 111.20 | 121.60 |
| 1 | C | 124 | TYR | CB-CG-CD1 | -5.20 | 117.88 | 121.00 |
| 1 | F | 411 | PHE | CD1-CE1-CZ | 5.20 | 126.34 | 120.10 |
| 1 | H | 146 | ASP | CB-CG-OD1 | -5.20 | 113.62 | 118.30 |
| 1 | H | 316 | GLY | CA-C-O | 5.20 | 129.96 | 120.60 |
| 1 | H | 368 | VAL | CG1-CB-CG2 | -5.20 | 102.58 | 110.90 |
| 1 | H | 434 | LEU | CB-CG-CD1 | -5.20 | 102.16 | 111.00 |
| 1 | I | 73 | PRO | CA-C-O | 5.20 | 132.68 | 120.20 |
| 1 | I | 366 | VAL | C-N-CA | 5.20 | 133.22 | 122.30 |
| 1 | L | 56 | VAL | CB-CA-C | -5.20 | 101.52 | 111.40 |
| 1 | N | 8 | LEU | CB-CG-CD1 | 5.20 | 119.84 | 111.00 |
| 1 | O | 239 | ILE | CA-CB-CG1 | 5.20 | 120.88 | 111.00 |
| 1 | P | 240 | GLU | CA-CB-CG | 5.20 | 124.84 | 113.40 |
| 1 | P | 374 | GLU | CG-CD-OE1 | 5.20 | 128.70 | 118.30 |
| 1 | B | 460 | ASP | O-C-N | 5.20 | 131.02 | 122.70 |
| 1 | J | 212 | VAL | CA-CB-CG1 | 5.20 | 118.70 | 110.90 |
| 1 | K | 215 | ASP | CB-CA-C | 5.20 | 120.79 | 110.40 |
| 1 | L | 353 | HIS | CG-CD2-NE2 | -5.20 | 99.33 | 109.20 |
| 1 | O | 242 | THR | CA-C-O | -5.20 | 109.19 | 120.10 |
| 1 | B | 342 | ALA | N-CA-CB | 5.20 | 117.37 | 110.10 |
| 1 | D | 350 | THR | N-CA-CB | 5.20 | 120.17 | 110.30 |
| 1 | E | 59 | ASN | CB-CG-OD1 | 5.20 | 131.99 | 121.60 |
| 1 | G | 439 | ALA | N-CA-CB | 5.20 | 117.37 | 110.10 |
| 1 | H | 214 | VAL | O-C-N | -5.20 | 114.39 | 122.70 |
| 1 | K | 35 | VAL | N-CA-C | 5.20 | 125.03 | 111.00 |
| 1 | L | 169 | LYS | CG-CD-CE | 5.20 | 127.49 | 111.90 |
| 1 | M | 152 | LYS | C-N-CA | 5.20 | 134.69 | 121.70 |
| 1 | M | 215 | ASP | CA-CB-CG | 5.20 | 124.83 | 113.40 |
| 1 | M | 458 | VAL | CB-CA-C | -5.20 | 101.53 | 111.40 |
| 1 | P | 247 | LEU | CA-CB-CG | 5.20 | 127.25 | 115.30 |
| 1 | A | 458 | VAL | N-CA-CB | 5.19 | 122.93 | 111.50 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | F | 68 | MET | CA-C-N | 5.19 | 128.63 | 117.20 |
| 1 | G | 261 | VAL | CA-CB-CG2 | 5.19 | 118.69 | 110.90 |
| 1 | H | 119 | ILE | CB-CA-C | -5.19 | 101.21 | 111.60 |
| 1 | I | 33 | GLU | CG-CD-OE1 | 5.19 | 128.69 | 118.30 |
| 1 | K | 407 | ALA | O-C-N | 5.19 | 131.01 | 122.70 |
| 1 | M | 176 | GLU | OE1-CD-OE2 | 5.19 | 129.53 | 123.30 |
| 1 | C | 466 | VAL | CA-CB-CG1 | 5.19 | 118.69 | 110.90 |
| 1 | C | 492 | ASP | C-N-CA | 5.19 | 134.68 | 121.70 |
| 1 | D | 430 | ALA | CA-C-N | 5.19 | 128.62 | 117.20 |
| 1 | E | 372 | THR | CA-C-N | -5.19 | 105.78 | 117.20 |
| 1 | E | 429 | ASP | CA-CB-CG | -5.19 | 101.98 | 113.40 |
| 1 | F | 36 | ARG | CA-CB-CG | 5.19 | 124.83 | 113.40 |
| 1 | F | 76 | LYS | C-N-CA | 5.19 | 134.68 | 121.70 |
| 1 | F | 314 | ASP | CB-CG-OD2 | 5.19 | 122.97 | 118.30 |
| 1 | G | 59 | ASN | CA-C-N | -5.19 | 105.78 | 117.20 |
| 1 | G | 96 | ALA | N-CA-CB | 5.19 | 117.37 | 110.10 |
| 1 | G | 189 | ASP | CB-CG-OD2 | 5.19 | 122.97 | 118.30 |
| 1 | G | 363 | ASP | C-N-CA | 5.19 | 134.68 | 121.70 |
| 1 | H | 67 | GLU | OE1-CD-OE2 | 5.19 | 129.53 | 123.30 |
| 1 | H | 430 | ALA | CB-CA-C | 5.19 | 117.89 | 110.10 |
| 1 | K | 14 | ARG | CA-C-N | 5.19 | 128.62 | 117.20 |
| 1 | K | 83 | LYS | CA-C-O | -5.19 | 109.19 | 120.10 |
| 1 | K | 417 | VAL | O-C-N | 5.19 | 131.01 | 122.70 |
| 1 | L | 319 | GLY | C-N-CA | 5.19 | 134.68 | 121.70 |
| 1 | B | 324 | ARG | NH1-CZ-NH2 | -5.19 | 113.69 | 119.40 |
| 1 | D | 57 | VAL | N-CA-C | -5.19 | 96.98 | 111.00 |
| 1 | D | 363 | ASP | CA-C-O | -5.19 | 109.20 | 120.10 |
| 1 | I | 8 | LEU | N-CA-C | 5.19 | 125.01 | 111.00 |
| 1 | L | 379 | VAL | CA-C-N | -5.19 | 105.78 | 117.20 |
| 1 | O | 48 | LEU | CB-CG-CD1 | -5.19 | 102.18 | 111.00 |
| 1 | O | 90 | GLY | C-N-CA | 5.19 | 134.67 | 121.70 |
| 1 | P | 123 | GLY | O-C-N | -5.19 | 114.39 | 122.70 |
| 1 | B | 241 | GLU | O-C-N | -5.19 | 114.40 | 122.70 |
| 1 | C | 208 | LEU | CB-CG-CD1 | 5.19 | 119.82 | 111.00 |
| 1 | C | 388 | GLU | CA-CB-CG | 5.19 | 124.81 | 113.40 |
| 1 | D | 90 | GLY | O-C-N | -5.19 | 114.40 | 122.70 |
| 1 | D | 447 | LYS | CA-CB-CG | 5.19 | 124.81 | 113.40 |
| 1 | G | 124 | TYR | CA-C-O | 5.19 | 130.99 | 120.10 |
| 1 | G | 153 | ILE | CA-CB-CG1 | -5.19 | 101.14 | 111.00 |
| 1 | I | 33 | GLU | CA-CB-CG | 5.19 | 124.81 | 113.40 |
| 1 | K | 242 | THR | C-N-CA | 5.19 | 134.67 | 121.70 |
| 1 | L | 176 | GLU | CB-CG-CD | -5.19 | 100.19 | 114.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 11 | ASN | CA-CB-CG | 5.19 | 124.81 | 113.40 |
| 1 | N | 83 | LYS | CD-CE-NZ | -5.19 | 99.77 | 111.70 |
| 1 | P | 21 | GLN | CG-CD-OE1 | -5.19 | 111.23 | 121.60 |
| 1 | P | 242 | THR | CA-C-O | -5.19 | 109.20 | 120.10 |
| 1 | H | 241 | GLU | C-N-CA | 5.19 | 134.66 | 121.70 |
| 1 | J | 154 | ALA | C-N-CA | 5.19 | 134.66 | 121.70 |
| 1 | N | 464 | ASN | C-N-CA | -5.19 | 111.41 | 122.30 |
| 1 | O | 251 | VAL | CB-CA-C | 5.19 | 121.25 | 111.40 |
| 1 | C | 142 | VAL | N-CA-C | 5.18 | 125.00 | 111.00 |
| 1 | D | 239 | ILE | C-N-CA | 5.18 | 134.66 | 121.70 |
| 1 | G | 84 | THR | CA-C-N | 5.18 | 128.60 | 117.20 |
| 1 | G | 136 | LYS | O-C-N | 5.18 | 131.00 | 122.70 |
| 1 | H | 190 | LYS | CB-CG-CD | 5.18 | 125.08 | 111.60 |
| 1 | I | 321 | VAL | CA-CB-CG2 | 5.18 | 118.68 | 110.90 |
| 1 | L | 45 | ASP | C-N-CA | 5.18 | 134.66 | 121.70 |
| 1 | M | 56 | VAL | CA-CB-CG2 | 5.18 | 118.68 | 110.90 |
| 1 | M | 301 | ALA | N-CA-CB | 5.18 | 117.36 | 110.10 |
| 1 | M | 349 | GLY | CA-C-O | -5.18 | 111.27 | 120.60 |
| 1 | N | 122 | LYS | CD-CE-NZ | -5.18 | 99.78 | 111.70 |
| 1 | O | 330 | SER | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | P | 238 | ALA | CA-C-O | -5.18 | 109.21 | 120.10 |
| 1 | A | 249 | ASP | N-CA-CB | 5.18 | 119.93 | 110.60 |
| 1 | A | 425 | ASN | C-N-CA | 5.18 | 134.65 | 121.70 |
| 1 | F | 361 | ALA | CB-CA-C | 5.18 | 117.87 | 110.10 |
| 1 | H | 124 | TYR | CB-CG-CD2 | -5.18 | 117.89 | 121.00 |
| 1 | J | 333 | PHE | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | J | 467 | VAL | CA-C-O | -5.18 | 109.22 | 120.10 |
| 1 | J | 496 | ALA | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | L | 478 | GLN | N-CA-CB | 5.18 | 119.93 | 110.60 |
| 1 | N | 267 | GLY | N-CA-C | 5.18 | 126.06 | 113.10 |
| 1 | P | 231 | LYS | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | P | 272 | ALA | CB-CA-C | 5.18 | 117.87 | 110.10 |
| 1 | P | 369 | VAL | CA-CB-CG1 | 5.18 | 118.67 | 110.90 |
| 1 | F | 429 | ASP | CA-C-N | -5.18 | 105.80 | 117.20 |
| 1 | P | 117 | PRO | CA-C-O | -5.18 | 107.77 | 120.20 |
| 1 | P | 228 | THR | N-CA-CB | 5.18 | 120.14 | 110.30 |
| 1 | P | 377 | ARG | N-CA-CB | -5.18 | 101.28 | 110.60 |
| 1 | B | 47 | MET | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | C | 208 | LEU | O-C-N | 5.18 | 130.99 | 122.70 |
| 1 | H | 253 | GLU | OE1-CD-OE2 | 5.18 | 129.52 | 123.30 |
| 1 | I | 287 | VAL | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | J | 156 | THR | O-C-N | 5.18 | 130.99 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 411 | PHE | CE1-CZ-CE2 | -5.18 | 110.68 | 120.00 |
| 1 | K | 244 | SER | N-CA-CB | 5.18 | 118.27 | 110.50 |
| 1 | L | 473 | LYS | CA-C-O | -5.18 | 109.22 | 120.10 |
| 1 | M | 423 | ALA | N-CA-CB | 5.18 | 117.35 | 110.10 |
| 1 | M | 424 | GLU | CG-CD-OE1 | 5.18 | 128.66 | 118.30 |
| 1 | M | 458 | VAL | O-C-N | -5.18 | 114.41 | 122.70 |
| 1 | O | 227 | VAL | CA-CB-CG1 | -5.18 | 103.13 | 110.90 |
| 1 | P | 106 | LYS | CA-CB-CG | -5.18 | 102.01 | 113.40 |
| 1 | B | 314 | ASP | N-CA-CB | 5.18 | 119.92 | 110.60 |
| 1 | C | 12 | MET | N-CA-CB | -5.18 | 101.28 | 110.60 |
| 1 | C | 135 | LEU | N-CA-CB | 5.18 | 120.75 | 110.40 |
| 1 | E | 170 | LEU | CB-CG-CD2 | 5.18 | 119.80 | 111.00 |
| 1 | N | 357 | GLU | N-CA-CB | 5.18 | 119.92 | 110.60 |
| 1 | B | 181 | VAL | O-C-N | -5.18 | 114.42 | 122.70 |
| 1 | D | 185 | GLU | CG-CD-OE1 | -5.18 | 107.95 | 118.30 |
| 1 | F | 125 | GLN | CG-CD-NE2 | -5.18 | 104.28 | 116.70 |
| 1 | H | 222 | GLN | N-CA-CB | -5.18 | 101.28 | 110.60 |
| 1 | H | 403 | ARG | CA-C-O | -5.18 | 109.23 | 120.10 |
| 1 | K | 62 | VAL | N-CA-CB | 5.18 | 122.89 | 111.50 |
| 1 | P | 261 | VAL | CA-CB-CG1 | 5.18 | 118.67 | 110.90 |
| 1 | B | 452 | ASN | CA-C-O | -5.17 | 109.23 | 120.10 |
| 1 | E | 187 | LYS | CB-CA-C | 5.17 | 120.75 | 110.40 |
| 1 | E | 255 | LYS | CA-C-N | 5.17 | 128.59 | 117.20 |
| 1 | E | 274 | HIS | CA-C-N | -5.17 | 105.81 | 117.20 |
| 1 | F | 145 | GLN | CG-CD-NE2 | -5.17 | 104.28 | 116.70 |
| 1 | H | 11 | ASN | N-CA-C | 5.17 | 124.97 | 111.00 |
| 1 | I | 323 | GLU | CA-CB-CG | 5.17 | 124.78 | 113.40 |
| 1 | J | 145 | GLN | CG-CD-OE1 | -5.17 | 111.25 | 121.60 |
| 1 | J | 214 | VAL | CG1-CB-CG2 | -5.17 | 102.62 | 110.90 |
| 1 | K | 187 | LYS | CG-CD-CE | 5.17 | 127.42 | 111.90 |
| 1 | L | 294 | LYS | O-C-N | -5.17 | 114.42 | 122.70 |
| 1 | L | 494 | ILE | N-CA-CB | -5.17 | 98.90 | 110.80 |
| 1 | M | 150 | LEU | CB-CG-CD2 | 5.17 | 119.80 | 111.00 |
| 1 | N | 260 | ASN | N-CA-CB | 5.17 | 119.91 | 110.60 |
| 1 | B | 338 | LYS | CA-CB-CG | 5.17 | 124.78 | 113.40 |
| 1 | D | 420 | ARG | CG-CD-NE | -5.17 | 100.94 | 111.80 |
| 1 | F | 230 | ALA | CA-C-O | -5.17 | 109.24 | 120.10 |
| 1 | M | 117 | PRO | CA-N-CD | -5.17 | 104.26 | 111.50 |
| 1 | B | 306 | ASN | CA-CB-CG | 5.17 | 124.78 | 113.40 |
| 1 | B | 336 | GLU | C-N-CA | 5.17 | 134.63 | 121.70 |
| 1 | F | 383 | GLY | O-C-N | 5.17 | 130.97 | 122.70 |
| 1 | I | 457 | ALA | CA-C-N | -5.17 | 105.83 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | O | 360 | ARG | CB-CG-CD | 5.17 | 125.04 | 111.60 |
| 1 | A | 88 | GLU | CB-CG-CD | 5.17 | 128.15 | 114.20 |
| 1 | A | 250 | MET | CA-CB-CG | 5.17 | 122.08 | 113.30 |
| 1 | A | 425 | ASN | CB-CA-C | 5.17 | 120.74 | 110.40 |
| 1 | E | 366 | VAL | CB-CA-C | 5.17 | 121.22 | 111.40 |
| 1 | F | 266 | LYS | CB-CA-C | 5.17 | 120.74 | 110.40 |
| 1 | F | 335 | GLU | O-C-N | 5.17 | 130.97 | 122.70 |
| 1 | G | 491 | ASP | CB-CG-OD2 | 5.17 | 122.95 | 118.30 |
| 1 | H | 109 | GLU | OE1-CD-OE2 | -5.17 | 117.10 | 123.30 |
| 1 | H | 225 | LYS | CB-CG-CD | 5.17 | 125.04 | 111.60 |
| 1 | I | 394 | ARG | N-CA-CB | -5.17 | 101.30 | 110.60 |
| 1 | J | 276 | LEU | CB-CG-CD2 | 5.17 | 119.79 | 111.00 |
| 1 | K | 236 | ASN | C-N-CA | 5.17 | 134.62 | 121.70 |
| 1 | K | 361 | ALA | N-CA-CB | 5.17 | 117.34 | 110.10 |
| 1 | A | 185 | GLU | O-C-N | -5.17 | 114.42 | 123.20 |
| 1 | B | 368 | VAL | C-N-CA | 5.17 | 134.62 | 121.70 |
| 1 | C | 266 | LYS | CB-CG-CD | 5.17 | 125.03 | 111.60 |
| 1 | H | 118 | THR | CB-CA-C | -5.17 | 97.65 | 111.60 |
| 1 | I | 21 | GLN | CG-CD-OE1 | -5.17 | 111.27 | 121.60 |
| 1 | I | 226 | LYS | O-C-N | -5.17 | 114.43 | 122.70 |
| 1 | J | 314 | ASP | OD1-CG-OD2 | -5.17 | 113.48 | 123.30 |
| 1 | B | 446 | ASN | O-C-N | 5.17 | 130.96 | 122.70 |
| 1 | E | 273 | GLN | CA-CB-CG | 5.17 | 124.76 | 113.40 |
| 1 | G | 193 | ILE | CB-CA-C | 5.17 | 121.93 | 111.60 |
| 1 | G | 272 | ALA | CB-CA-C | 5.17 | 117.85 | 110.10 |
| 1 | I | 374 | GLU | CB-CG-CD | 5.17 | 128.15 | 114.20 |
| 1 | I | 466 | VAL | CA-C-N | 5.17 | 128.56 | 117.20 |
| 1 | L | 210 | LYS | N-CA-CB | 5.17 | 119.90 | 110.60 |
| 1 | P | 16 | MET | CB-CA-C | -5.17 | 100.07 | 110.40 |
| 1 | P | 50 | ASP | CA-CB-CG | 5.17 | 124.76 | 113.40 |
| 1 | B | 222 | GLN | O-C-N | -5.16 | 114.44 | 122.70 |
| 1 | D | 152 | LYS | CB-CG-CD | -5.16 | 98.17 | 111.60 |
| 1 | D | 433 | ILE | CA-CB-CG2 | 5.16 | 121.23 | 110.90 |
| 1 | E | 82 | ALA | N-CA-CB | 5.16 | 117.33 | 110.10 |
| 1 | E | 384 | SER | N-CA-CB | -5.16 | 102.75 | 110.50 |
| 1 | F | 313 | GLN | C-N-CA | 5.16 | 134.61 | 121.70 |
| 1 | F | 468 | GLU | CA-C-O | -5.16 | 109.26 | 120.10 |
| 1 | I | 405 | GLN | CB-CG-CD | 5.16 | 125.02 | 111.60 |
| 1 | K | 98 | VAL | CA-CB-CG1 | 5.16 | 118.64 | 110.90 |
| 1 | L | 395 | GLU | OE1-CD-OE2 | 5.16 | 129.50 | 123.30 |
| 1 | M | 313 | GLN | C-N-CA | 5.16 | 134.61 | 121.70 |
| 1 | P | 228 | THR | CA-CB-CG2 | -5.16 | 105.17 | 112.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 223 | MET | O-C-N | -5.16 | 111.29 | 121.10 |
| 1 | L | 423 | ALA | O-C-N | -5.16 | 114.44 | 122.70 |
| 1 | P | 129 | GLN | CB-CA-C | 5.16 | 120.72 | 110.40 |
| 1 | A | 300 | GLY | C-N-CA | 5.16 | 134.60 | 121.70 |
| 1 | C | 337 | CYS | CA-CB-SG | -5.16 | 104.71 | 114.00 |
| 1 | L | 467 | VAL | CG1-CB-CG2 | 5.16 | 119.16 | 110.90 |
| 1 | M | 11 | ASN | CA-C-N | 5.16 | 128.55 | 117.20 |
| 1 | N | 163 | ALA | CB-CA-C | -5.16 | 102.36 | 110.10 |
| 1 | A | 81 | VAL | CG1-CB-CG2 | -5.16 | 102.65 | 110.90 |
| 1 | A | 280 | GLY | CA-C-O | -5.16 | 111.31 | 120.60 |
| 1 | A | 463 | GLU | CG-CD-OE2 | -5.16 | 107.98 | 118.30 |
| 1 | B | 196 | GLU | CA-C-O | 5.16 | 130.93 | 120.10 |
| 1 | E | 8 | LEU | CA-C-O | -5.16 | 109.27 | 120.10 |
| 1 | E | 485 | GLU | CG-CD-OE2 | 5.16 | 128.62 | 118.30 |
| 1 | I | 136 | LYS | N-CA-C | 5.16 | 124.93 | 111.00 |
| 1 | N | 10 | GLU | O-C-N | -5.16 | 114.44 | 122.70 |
| 1 | N | 383 | GLY | N-CA-C | 5.16 | 126.00 | 113.10 |
| 1 | N | 429 | ASP | CA-CB-CG | 5.16 | 124.75 | 113.40 |
| 1 | N | 461 | MET | N-CA-C | 5.16 | 124.92 | 111.00 |
| 1 | P | 208 | LEU | CB-CG-CD2 | 5.16 | 119.77 | 111.00 |
| 1 | P | 432 | GLU | CG-CD-OE2 | -5.16 | 107.98 | 118.30 |
| 1 | M | 132 | GLN | CG-CD-OE1 | -5.16 | 111.29 | 121.60 |
| 1 | O | 121 | VAL | CG1-CB-CG2 | -5.16 | 102.65 | 110.90 |
| 1 | P | 29 | ARG | CA-C-O | -5.16 | 109.27 | 120.10 |
| 1 | P | 65 | LEU | C-N-CA | 5.16 | 134.59 | 121.70 |
| 1 | A | 212 | VAL | CG1-CB-CG2 | -5.16 | 102.65 | 110.90 |
| 1 | A | 461 | MET | CA-C-N | -5.16 | 105.86 | 117.20 |
| 1 | C | 136 | LYS | CA-C-O | -5.16 | 109.27 | 120.10 |
| 1 | I | 87 | LYS | O-C-N | -5.16 | 114.45 | 122.70 |
| 1 | K | 315 | LEU | CB-CA-C | 5.16 | 120.00 | 110.20 |
| 1 | M | 301 | ALA | CA-C-O | -5.16 | 109.27 | 120.10 |
| 1 | N | 349 | GLY | O-C-N | -5.16 | 114.45 | 122.70 |
| 1 | B | 247 | LEU | CB-CG-CD2 | 5.15 | 119.76 | 111.00 |
| 1 | D | 151 | THR | CA-CB-CG2 | -5.15 | 105.18 | 112.40 |
| 1 | F | 259 | ALA | CB-CA-C | -5.15 | 102.37 | 110.10 |
| 1 | G | 394 | ARG | CD-NE-CZ | 5.15 | 130.82 | 123.60 |
| 1 | H | 468 | GLU | N-CA-CB | -5.15 | 101.32 | 110.60 |
| 1 | J | 239 | ILE | CB-CG1-CD1 | 5.15 | 128.33 | 113.90 |
| 1 | A | 116 | HIS | CB-CA-C | 5.15 | 120.71 | 110.40 |
| 1 | C | 15 | TYR | CB-CG-CD2 | 5.15 | 124.09 | 121.00 |
| 1 | F | 431 | ILE | CA-CB-CG1 | -5.15 | 101.21 | 111.00 |
| 1 | G | 336 | GLU | CA-C-N | -5.15 | 105.86 | 117.20 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 312 | ALA | O-C-N | -5.15 | 114.45 | 122.70 |
| 1 | I | 145 | GLN | N-CA-CB | 5.15 | 119.88 | 110.60 |
| 1 | K | 159 | THR | OG1-CB-CG2 | 5.15 | 121.85 | 110.00 |
| 1 | N | 88 | GLU | N-CA-CB | 5.15 | 119.87 | 110.60 |
| 1 | E | 209 | ILE | CA-C-O | -5.15 | 109.28 | 120.10 |
| 1 | F | 288 | LYS | CB-CA-C | 5.15 | 120.70 | 110.40 |
| 1 | F | 322 | GLU | O-C-N | -5.15 | 114.46 | 122.70 |
| 1 | G | 483 | SER | CB-CA-C | 5.15 | 119.89 | 110.10 |
| 1 | H | 126 | ALA | CA-C-O | 5.15 | 130.91 | 120.10 |
| 1 | H | 182 | VAL | O-C-N | -5.15 | 114.46 | 122.70 |
| 1 | J | 232 | ILE | O-C-N | 5.15 | 130.94 | 122.70 |
| 1 | J | 249 | ASP | N-CA-CB | 5.15 | 119.87 | 110.60 |
| 1 | K | 449 | ALA | N-CA-CB | 5.15 | 117.31 | 110.10 |
| 1 | O | 260 | ASN | CA-CB-CG | 5.15 | 124.73 | 113.40 |
| 1 | P | 291 | ASP | N-CA-CB | 5.15 | 119.87 | 110.60 |
| 1 | B | 24 | ASN | CB-CG-ND2 | -5.15 | 104.34 | 116.70 |
| 1 | C | 408 | VAL | CA-CB-CG1 | 5.15 | 118.62 | 110.90 |
| 1 | F | 10 | GLU | CA-CB-CG | 5.15 | 124.73 | 113.40 |
| 1 | N | 301 | ALA | N-CA-CB | 5.15 | 117.31 | 110.10 |
| 1 | O | 251 | VAL | CA-CB-CG2 | 5.15 | 118.62 | 110.90 |
| 1 | A | 315 | LEU | CA-C-O | -5.15 | 109.29 | 120.10 |
| 1 | D | 97 | VAL | CB-CA-C | -5.15 | 101.62 | 111.40 |
| 1 | G | 126 | ALA | N-CA-CB | 5.15 | 117.31 | 110.10 |
| 1 | H | 441 | HIS | O-C-N | -5.15 | 114.46 | 122.70 |
| 1 | K | 13 | LYS | CD-CE-NZ | 5.15 | 123.54 | 111.70 |
| 1 | L | 161 | LYS | O-C-N | -5.15 | 114.45 | 123.20 |
| 1 | L | 271 | LEU | CA-C-N | 5.15 | 128.52 | 117.20 |
| 1 | M | 368 | VAL | CA-C-N | 5.15 | 128.53 | 117.20 |
| 1 | M | 420 | ARG | NE-CZ-NH1 | 5.15 | 122.87 | 120.30 |
| 1 | O | 163 | ALA | CA-C-O | -5.15 | 109.29 | 120.10 |
| 1 | D | 157 | SER | N-CA-CB | 5.15 | 118.22 | 110.50 |
| 1 | K | 334 | VAL | CA-CB-CG2 | 5.15 | 118.62 | 110.90 |
| 1 | M | 370 | GLY | CA-C-O | -5.15 | 111.34 | 120.60 |
| 1 | O | 285 | ARG | CG-CD-NE | 5.15 | 122.61 | 111.80 |
| 1 | P | 64 | ILE | CA-CB-CG1 | 5.15 | 120.78 | 111.00 |
| 1 | A | 411 | PHE | CD1-CG-CD2 | -5.14 | 111.61 | 118.30 |
| 1 | A | 489 | ARG | O-C-N | -5.14 | 114.47 | 122.70 |
| 1 | B | 430 | ALA | N-CA-CB | 5.14 | 117.30 | 110.10 |
| 1 | C | 349 | GLY | O-C-N | -5.14 | 114.47 | 122.70 |
| 1 | D | 18 | ARG | NH1-CZ-NH2 | -5.14 | 113.74 | 119.40 |
| 1 | H | 124 | TYR | CA-C-N | -5.14 | 105.88 | 117.20 |
| 1 | K | 450 | GLY | CA-C-O | 5.14 | 129.86 | 120.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 42 | LYS | CB-CA-C | -5.14 | 100.11 | 110.40 |
| 1 | N | 99 | VAL | CG1-CB-CG2 | -5.14 | 102.67 | 110.90 |
| 1 | N | 421 | THR | CA-CB-OG1 | 5.14 | 119.80 | 109.00 |
| 1 | O | 402 | GLY | CA-C-O | -5.14 | 111.34 | 120.60 |
| 1 | P | 129 | GLN | CB-CG-CD | 5.14 | 124.98 | 111.60 |
| 1 | P | 191 | ASP | CB-CG-OD1 | 5.14 | 122.93 | 118.30 |
| 1 | P | 281 | ILE | CB-CA-C | -5.14 | 101.31 | 111.60 |
| 1 | E | 246 | MET | CG-SD-CE | -5.14 | 91.97 | 100.20 |
| 1 | G | 171 | ALA | CB-CA-C | -5.14 | 102.39 | 110.10 |
| 1 | I | 315 | LEU | CD1-CG-CD2 | 5.14 | 125.93 | 110.50 |
| 1 | I | 329 | ASP | CB-CA-C | 5.14 | 120.69 | 110.40 |
| 1 | L | 206 | THR | O-C-N | -5.14 | 114.47 | 122.70 |
| 1 | M | 103 | LEU | CA-C-O | -5.14 | 109.30 | 120.10 |
| 1 | P | 118 | THR | O-C-N | -5.14 | 114.47 | 122.70 |
| 1 | C | 448 | CYS | N-CA-CB | 5.14 | 119.85 | 110.60 |
| 1 | F | 205 | ASP | CB-CA-C | 5.14 | 120.68 | 110.40 |
| 1 | I | 10 | GLU | CA-C-O | 5.14 | 130.90 | 120.10 |
| 1 | K | 496 | ALA | CA-C-O | -5.14 | 109.30 | 120.10 |
| 1 | A | 284 | ALA | N-CA-CB | 5.14 | 117.30 | 110.10 |
| 1 | B | 36 | ARG | CA-CB-CG | 5.14 | 124.71 | 113.40 |
| 1 | C | 62 | VAL | O-C-N | -5.14 | 114.48 | 122.70 |
| 1 | C | 86 | GLU | CA-C-O | -5.14 | 109.31 | 120.10 |
| 1 | D | 84 | THR | CA-C-O | -5.14 | 109.31 | 120.10 |
| 1 | E | 153 | ILE | CA-C-N | -5.14 | 105.89 | 117.20 |
| 1 | I | 117 | PRO | CA-C-O | 5.14 | 132.53 | 120.20 |
| 1 | I | 345 | MET | N-CA-CB | -5.14 | 101.35 | 110.60 |
| 1 | J | 406 | LEU | CB-CG-CD1 | -5.14 | 102.26 | 111.00 |
| 1 | K | 203 | ILE | CG1-CB-CG2 | -5.14 | 100.09 | 111.40 |
| 1 | O | 385 | THR | O-C-N | -5.14 | 114.48 | 122.70 |
| 1 | A | 60 | ASP | OD1-CG-OD2 | -5.14 | 113.54 | 123.30 |
| 1 | B | 98 | VAL | CA-C-N | -5.14 | 105.90 | 117.20 |
| 1 | B | 399 | GLY | O-C-N | 5.14 | 130.92 | 122.70 |
| 1 | C | 213 | LEU | CB-CG-CD1 | -5.14 | 102.27 | 111.00 |
| 1 | D | 277 | ALA | CA-C-O | 5.14 | 130.89 | 120.10 |
| 1 | F | 334 | VAL | CA-CB-CG2 | 5.14 | 118.61 | 110.90 |
| 1 | G | 215 | ASP | CB-CG-OD1 | 5.14 | 122.92 | 118.30 |
| 1 | K | 245 | GLU | CA-CB-CG | 5.14 | 124.70 | 113.40 |
| 1 | O | 250 | MET | CA-CB-CG | -5.14 | 104.57 | 113.30 |
| 1 | O | 428 | LEU | N-CA-CB | 5.14 | 120.68 | 110.40 |
| 1 | B | 433 | ILE | N-CA-C | 5.14 | 124.87 | 111.00 |
| 1 | G | 207 | GLU | N-CA-C | 5.14 | 124.87 | 111.00 |
| 1 | H | 271 | LEU | CB-CG-CD2 | 5.14 | 119.73 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 330 | SER | CA-C-O | -5.14 | 109.31 | 120.10 |
| 1 | I | 202 | SER | N-CA-C | 5.14 | 124.87 | 111.00 |
| 1 | I | 333 | PHE | CB-CG-CD1 | 5.14 | 124.40 | 120.80 |
| 1 | K | 145 | GLN | O-C-N | -5.14 | 114.48 | 122.70 |
| 1 | M | 256 | ALA | CB-CA-C | 5.14 | 117.80 | 110.10 |
| 1 | N | 352 | GLU | O-C-N | -5.14 | 114.48 | 122.70 |
| 1 | O | 466 | VAL | CG1-CB-CG2 | -5.14 | 102.68 | 110.90 |
| 1 | P | 283 | ALA | C-N-CA | 5.14 | 134.54 | 121.70 |
| 1 | A | 182 | VAL | N-CA-C | 5.13 | 124.87 | 111.00 |
| 1 | B | 249 | ASP | O-C-N | -5.13 | 114.48 | 122.70 |
| 1 | F | 460 | ASP | O-C-N | 5.13 | 130.92 | 122.70 |
| 1 | G | 64 | ILE | O-C-N | -5.13 | 114.49 | 122.70 |
| 1 | G | 218 | ARG | NH1-CZ-NH2 | -5.13 | 113.75 | 119.40 |
| 1 | I | 455 | THR | OG1-CB-CG2 | 5.13 | 121.81 | 110.00 |
| 1 | J | 60 | ASP | CA-CB-CG | 5.13 | 124.70 | 113.40 |
| 1 | K | 333 | PHE | CD1-CG-CD2 | 5.13 | 124.97 | 118.30 |
| 1 | K | 352 | GLU | N-CA-CB | 5.13 | 119.84 | 110.60 |
| 1 | L | 168 | GLU | CB-CA-C | 5.13 | 120.67 | 110.40 |
| 1 | B | 240 | GLU | CA-C-O | -5.13 | 109.32 | 120.10 |
| 1 | B | 451 | LEU | CB-CG-CD2 | -5.13 | 102.28 | 111.00 |
| 1 | C | 358 | VAL | N-CA-CB | 5.13 | 122.79 | 111.50 |
| 1 | D | 238 | ALA | CA-C-O | -5.13 | 109.32 | 120.10 |
| 1 | K | 213 | LEU | CB-CG-CD1 | -5.13 | 102.27 | 111.00 |
| 1 | M | 419 | PRO | CA-N-CD | -5.13 | 104.31 | 111.50 |
| 1 | N | 336 | GLU | N-CA-CB | 5.13 | 119.84 | 110.60 |
| 1 | B | 368 | VAL | CA-CB-CG2 | -5.13 | 103.20 | 110.90 |
| 1 | C | 76 | LYS | CD-CE-NZ | 5.13 | 123.50 | 111.70 |
| 1 | G | 210 | LYS | N-CA-C | 5.13 | 124.86 | 111.00 |
| 1 | H | 8 | LEU | O-C-N | 5.13 | 130.85 | 121.10 |
| 1 | K | 290 | SER | CA-CB-OG | 5.13 | 125.06 | 111.20 |
| 1 | M | 12 | MET | CA-CB-CG | -5.13 | 104.58 | 113.30 |
| 1 | N | 162 | GLY | CA-C-O | -5.13 | 111.36 | 120.60 |
| 1 | N | 409 | ARG | NH1-CZ-NH2 | -5.13 | 113.75 | 119.40 |
| 1 | O | 149 | ILE | C-N-CA | 5.13 | 134.53 | 121.70 |
| 1 | B | 197 | LYS | N-CA-CB | -5.13 | 101.37 | 110.60 |
| 1 | C | 85 | GLN | CB-CA-C | 5.13 | 120.66 | 110.40 |
| 1 | F | 215 | ASP | CB-CA-C | 5.13 | 120.66 | 110.40 |
| 1 | M | 433 | ILE | CB-CA-C | -5.13 | 101.34 | 111.60 |
| 1 | P | 299 | THR | CA-CB-CG2 | 5.13 | 119.58 | 112.40 |
| 1 | A | 56 | VAL | CG1-CB-CG2 | 5.13 | 119.11 | 110.90 |
| 1 | A | 56 | VAL | N-CA-CB | 5.13 | 122.78 | 111.50 |
| 1 | B | 10 | GLU | O-C-N | -5.13 | 114.49 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 485 | GLU | CG-CD-OE1 | -5.13 | 108.04 | 118.30 |
| 1 | E | 129 | GLN | CA-CB-CG | 5.13 | 124.68 | 113.40 |
| 1 | E | 256 | ALA | CA-C-O | -5.13 | 109.33 | 120.10 |
| 1 | F | 90 | GLY | C-N-CA | 5.13 | 134.52 | 121.70 |
| 1 | F | 352 | GLU | CA-CB-CG | -5.13 | 102.12 | 113.40 |
| 1 | G | 15 | TYR | CB-CG-CD1 | 5.13 | 124.08 | 121.00 |
| 1 | G | 48 | LEU | CA-C-N | -5.13 | 105.92 | 117.20 |
| 1 | K | 364 | ASP | N-CA-CB | 5.13 | 119.83 | 110.60 |
| 1 | M | 13 | LYS | O-C-N | -5.13 | 114.49 | 122.70 |
| 1 | M | 237 | CYS | C-N-CA | 5.13 | 134.52 | 121.70 |
| 1 | N | 486 | MET | CA-C-O | -5.13 | 109.33 | 120.10 |
| 1 | O | 420 | ARG | CA-C-O | -5.13 | 109.33 | 120.10 |
| 1 | P | 273 | GLN | N-CA-C | 5.13 | 124.85 | 111.00 |
| 1 | A | 60 | ASP | CA-CB-CG | 5.13 | 124.68 | 113.40 |
| 1 | A | 79 | ILE | CA-CB-CG1 | 5.13 | 120.74 | 111.00 |
| 1 | A | 131 | ALA | O-C-N | 5.13 | 130.90 | 122.70 |
| 1 | A | 135 | LEU | CB-CG-CD1 | 5.13 | 119.72 | 111.00 |
| 1 | C | 402 | GLY | O-C-N | -5.13 | 114.50 | 122.70 |
| 1 | D | 114 | ASN | CB-CG-ND2 | -5.13 | 104.39 | 116.70 |
| 1 | D | 204 | ASP | CA-CB-CG | 5.13 | 124.68 | 113.40 |
| 1 | E | 209 | ILE | CA-CB-CG1 | 5.13 | 120.74 | 111.00 |
| 1 | F | 204 | ASP | OD1-CG-OD2 | -5.13 | 113.56 | 123.30 |
| 1 | F | 228 | THR | CA-C-N | 5.13 | 128.48 | 117.20 |
| 1 | G | 34 | THR | OG1-CB-CG2 | 5.13 | 121.79 | 110.00 |
| 1 | G | 360 | ARG | NE-CZ-NH1 | 5.13 | 122.86 | 120.30 |
| 1 | G | 429 | ASP | CB-CA-C | 5.13 | 120.65 | 110.40 |
| 1 | I | 156 | THR | C-N-CA | 5.13 | 134.52 | 121.70 |
| 1 | N | 203 | ILE | CA-CB-CG1 | 5.13 | 120.74 | 111.00 |
| 1 | N | 464 | ASN | CA-C-N | -5.13 | 105.95 | 116.20 |
| 1 | O | 215 | ASP | O-C-N | 5.13 | 130.90 | 122.70 |
| 1 | P | 229 | ASP | CA-C-O | 5.13 | 130.87 | 120.10 |
| 1 | P | 335 | GLU | N-CA-C | 5.13 | 124.84 | 111.00 |
| 1 | D | 21 | GLN | CB-CA-C | -5.12 | 100.15 | 110.40 |
| 1 | G | 12 | MET | CA-C-O | -5.12 | 109.34 | 120.10 |
| 1 | B | 66 | ARG | CB-CA-C | 5.12 | 120.65 | 110.40 |
| 1 | B | 296 | ALA | CB-CA-C | -5.12 | 102.41 | 110.10 |
| 1 | C | 51 | ASP | N-CA-CB | -5.12 | 101.38 | 110.60 |
| 1 | C | 115 | VAL | CA-CB-CG1 | -5.12 | 103.22 | 110.90 |
| 1 | D | 140 | CYS | CA-C-N | -5.12 | 105.93 | 117.20 |
| 1 | F | 148 | GLU | CG-CD-OE2 | 5.12 | 128.55 | 118.30 |
| 1 | H | 90 | GLY | C-N-CA | 5.12 | 134.51 | 121.70 |
| 1 | H | 476 | ALA | CA-C-O | -5.12 | 109.34 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 330 | SER | CB-CA-C | -5.12 | 100.36 | 110.10 |
| 1 | P | 76 | LYS | CA-CB-CG | -5.12 | 102.13 | 113.40 |
| 1 | C | 415 | LEU | N-CA-CB | 5.12 | 120.64 | 110.40 |
| 1 | D | 56 | VAL | CA-C-N | 5.12 | 128.47 | 117.20 |
| 1 | E | 423 | ALA | O-C-N | -5.12 | 114.51 | 122.70 |
| 1 | F | 493 | VAL | CG1-CB-CG2 | 5.12 | 119.10 | 110.90 |
| 1 | G | 38 | THR | N-CA-C | 5.12 | 124.83 | 111.00 |
| 1 | I | 395 | GLU | O-C-N | -5.12 | 114.50 | 122.70 |
| 1 | J | 126 | ALA | N-CA-CB | 5.12 | 117.27 | 110.10 |
| 1 | L | 452 | ASN | CB-CG-ND2 | -5.12 | 104.41 | 116.70 |
| 1 | M | 336 | GLU | CB-CA-C | 5.12 | 120.64 | 110.40 |
| 1 | M | 352 | GLU | CA-C-O | -5.12 | 109.34 | 120.10 |
| 1 | B | 433 | ILE | CA-CB-CG1 | -5.12 | 101.27 | 111.00 |
| 1 | I | 118 | THR | N-CA-CB | 5.12 | 120.03 | 110.30 |
| 1 | I | 293 | GLU | CG-CD-OE2 | 5.12 | 128.54 | 118.30 |
| 1 | K | 294 | LYS | CB-CA-C | 5.12 | 120.64 | 110.40 |
| 1 | M | 234 | LEU | CB-CG-CD2 | 5.12 | 119.70 | 111.00 |
| 1 | B | 307 | ILE | CA-CB-CG2 | 5.12 | 121.14 | 110.90 |
| 1 | F | 249 | ASP | N-CA-CB | 5.12 | 119.81 | 110.60 |
| 1 | H | 62 | VAL | CA-CB-CG1 | 5.12 | 118.58 | 110.90 |
| 1 | I | 477 | ILE | N-CA-CB | 5.12 | 122.58 | 110.80 |
| 1 | J | 36 | ARG | NH1-CZ-NH2 | -5.12 | 113.77 | 119.40 |
| 1 | J | 487 | LEU | CA-C-O | -5.12 | 109.35 | 120.10 |
| 1 | M | 105 | ARG | O-C-N | 5.12 | 130.89 | 122.70 |
| 1 | N | 366 | VAL | O-C-N | -5.12 | 114.50 | 123.20 |
| 1 | O | 50 | ASP | OD1-CG-OD2 | 5.12 | 133.02 | 123.30 |
| 1 | C | 20 | ALA | CA-C-N | -5.12 | 105.94 | 117.20 |
| 1 | C | 356 | GLU | CG-CD-OE2 | -5.12 | 108.06 | 118.30 |
| 1 | I | 398 | GLU | N-CA-CB | 5.12 | 119.81 | 110.60 |
| 1 | L | 496 | ALA | O-C-N | -5.12 | 114.51 | 122.70 |
| 1 | M | 212 | VAL | CB-CA-C | 5.12 | 121.12 | 111.40 |
| 1 | A | 288 | LYS | CD-CE-NZ | 5.12 | 123.47 | 111.70 |
| 1 | A | 458 | VAL | CA-CB-CG2 | 5.12 | 118.57 | 110.90 |
| 1 | B | 166 | ALA | N-CA-CB | -5.12 | 102.94 | 110.10 |
| 1 | B | 320 | LEU | O-C-N | -5.12 | 114.52 | 122.70 |
| 1 | B | 459 | GLU | CA-C-O | -5.12 | 109.36 | 120.10 |
| 1 | L | 43 | GLY | CA-C-O | -5.12 | 111.39 | 120.60 |
| 1 | A | 15 | TYR | C-N-CA | 5.11 | 134.48 | 121.70 |
| 1 | D | 365 | ALA | CA-C-N | 5.11 | 128.45 | 117.20 |
| 1 | E | 320 | LEU | CA-CB-CG | 5.11 | 127.06 | 115.30 |
| 1 | G | 245 | GLU | N-CA-C | 5.11 | 124.81 | 111.00 |
| 1 | H | 77 | MET | N-CA-C | 5.11 | 124.81 | 111.00 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | H | 483 | SER | N-CA-C | -5.11 | 97.19 | 111.00 |
| 1 | J | 336 | GLU | CA-C-O | -5.11 | 109.36 | 120.10 |
| 1 | L | 191 | ASP | CB-CG-OD1 | -5.11 | 113.70 | 118.30 |
| 1 | M | 222 | GLN | N-CA-CB | 5.11 | 119.80 | 110.60 |
| 1 | N | 464 | ASN | CA-C-O | -5.11 | 109.36 | 120.10 |
| 1 | O | 243 | ALA | CA-C-O | -5.11 | 109.36 | 120.10 |
| 1 | O | 319 | GLY | C-N-CA | 5.11 | 134.48 | 121.70 |
| 1 | P | 159 | THR | CA-CB-CG2 | 5.11 | 119.56 | 112.40 |
| 1 | A | 297 | LYS | N-CA-CB | 5.11 | 119.80 | 110.60 |
| 1 | G | 72 | HIS | CA-C-N | 5.11 | 131.41 | 117.10 |
| 1 | P | 294 | LYS | CA-CB-CG | 5.11 | 124.65 | 113.40 |
| 1 | B | 83 | LYS | CA-C-O | -5.11 | 109.37 | 120.10 |
| 1 | C | 65 | LEU | C-N-CA | 5.11 | 134.47 | 121.70 |
| 1 | D | 245 | GLU | CA-CB-CG | 5.11 | 124.64 | 113.40 |
| 1 | F | 236 | ASN | N-CA-CB | 5.11 | 119.80 | 110.60 |
| 1 | H | 146 | ASP | CA-C-O | -5.11 | 109.37 | 120.10 |
| 1 | L | 41 | PRO | N-CD-CG | 5.11 | 110.87 | 103.20 |
| 1 | L | 88 | GLU | CA-CB-CG | 5.11 | 124.64 | 113.40 |
| 1 | M | 211 | GLY | CA-C-O | -5.11 | 111.40 | 120.60 |
| 1 | N | 22 | ARG | CB-CG-CD | -5.11 | 98.31 | 111.60 |
| 1 | O | 10 | GLU | CA-C-O | -5.11 | 109.37 | 120.10 |
| 1 | D | 108 | GLU | OE1-CD-OE2 | -5.11 | 117.17 | 123.30 |
| 1 | F | 87 | LYS | C-N-CA | 5.11 | 134.47 | 121.70 |
| 1 | N | 474 | THR | N-CA-CB | 5.11 | 120.01 | 110.30 |
| 1 | B | 141 | GLU | CA-C-N | -5.11 | 105.96 | 117.20 |
| 1 | C | 470 | LEU | CB-CG-CD2 | 5.11 | 119.68 | 111.00 |
| 1 | E | 163 | ALA | N-CA-CB | 5.11 | 117.25 | 110.10 |
| 1 | F | 230 | ALA | C-N-CA | 5.11 | 134.47 | 121.70 |
| 1 | G | 298 | ALA | CA-C-O | -5.11 | 109.38 | 120.10 |
| 1 | G | 403 | ARG | CB-CA-C | 5.11 | 120.61 | 110.40 |
| 1 | I | 270 | ASP | N-CA-C | 5.11 | 124.79 | 111.00 |
| 1 | J | 247 | LEU | CB-CG-CD1 | -5.11 | 102.32 | 111.00 |
| 1 | M | 28 | GLY | O-C-N | -5.11 | 114.53 | 122.70 |
| 1 | N | 116 | HIS | N-CA-C | -5.11 | 97.21 | 111.00 |
| 1 | D | 99 | VAL | CA-CB-CG2 | 5.11 | 118.56 | 110.90 |
| 1 | D | 265 | GLN | CA-C-N | -5.11 | 105.97 | 117.20 |
| 1 | I | 189 | ASP | CB-CA-C | 5.11 | 120.61 | 110.40 |
| 1 | J | 86 | GLU | CA-C-O | -5.11 | 109.38 | 120.10 |
| 1 | J | 260 | ASN | CB-CG-OD1 | 5.11 | 131.81 | 121.60 |
| 1 | J | 289 | LYS | N-CA-CB | 5.11 | 119.79 | 110.60 |
| 1 | K | 299 | THR | N-CA-CB | 5.11 | 120.00 | 110.30 |
| 1 | M | 41 | PRO | O-C-N | -5.11 | 114.53 | 122.70 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 119 | ILE | O-C-N | 5.11 | 130.87 | 122.70 |
| 1 | P | 332 | ILE | CA-CB-CG2 | -5.11 | 100.69 | 110.90 |
| 1 | P | 478 | GLN | CG-CD-NE2 | 5.11 | 128.95 | 116.70 |
| 1 | A | 492 | ASP | CB-CG-OD2 | 5.10 | 122.89 | 118.30 |
| 1 | C | 374 | GLU | CA-C-O | -5.10 | 109.38 | 120.10 |
| 1 | C | 433 | ILE | O-C-N | -5.10 | 114.53 | 122.70 |
| 1 | H | 377 | ARG | N-CA-CB | 5.10 | 119.79 | 110.60 |
| 1 | L | 185 | GLU | CA-C-N | -5.10 | 105.99 | 116.20 |
| 1 | L | 280 | GLY | CA-C-O | -5.10 | 111.41 | 120.60 |
| 1 | O | 19 | ASP | CB-CG-OD1 | 5.10 | 122.89 | 118.30 |
| 1 | P | 189 | ASP | CB-CA-C | 5.10 | 120.61 | 110.40 |
| 1 | B | 424 | GLU | CA-C-O | -5.10 | 109.39 | 120.10 |
| 1 | D | 67 | GLU | CB-CA-C | -5.10 | 100.19 | 110.40 |
| 1 | E | 257 | SER | CA-C-O | 5.10 | 130.82 | 120.10 |
| 1 | I | 458 | VAL | CG1-CB-CG2 | 5.10 | 119.06 | 110.90 |
| 1 | K | 497 | GLU | OE1-CD-OE2 | -5.10 | 117.18 | 123.30 |
| 1 | L | 133 | GLU | CB-CA-C | 5.10 | 120.61 | 110.40 |
| 1 | N | 374 | GLU | CB-CG-CD | 5.10 | 127.98 | 114.20 |
| 1 | O | 404 | GLU | CG-CD-OE2 | -5.10 | 108.10 | 118.30 |
| 1 | P | 149 | ILE | CA-C-O | -5.10 | 109.38 | 120.10 |
| 1 | P | 309 | ASP | OD1-CG-OD2 | -5.10 | 113.61 | 123.30 |
| 1 | P | 497 | GLU | N-CA-C | 5.10 | 124.78 | 111.00 |
| 1 | G | 111 | LEU | CB-CG-CD1 | 5.10 | 119.67 | 111.00 |
| 1 | G | 447 | LYS | O-C-N | -5.10 | 114.54 | 122.70 |
| 1 | J | 296 | ALA | N-CA-C | 5.10 | 124.77 | 111.00 |
| 1 | K | 42 | LYS | CA-C-O | -5.10 | 109.39 | 120.10 |
| 1 | L | 314 | ASP | CA-C-O | 5.10 | 130.81 | 120.10 |
| 1 | M | 29 | ARG | NH1-CZ-NH2 | -5.10 | 113.79 | 119.40 |
| 1 | M | 201 | ALA | CB-CA-C | 5.10 | 117.75 | 110.10 |
| 1 | P | 111 | LEU | CA-C-O | -5.10 | 109.39 | 120.10 |
| 1 | P | 364 | ASP | C-N-CA | 5.10 | 134.45 | 121.70 |
| 1 | A | 188 | VAL | N-CA-C | 5.10 | 124.76 | 111.00 |
| 1 | A | 497 | GLU | OE1-CD-OE2 | 5.10 | 129.42 | 123.30 |
| 1 | E | 74 | ALA | CA-C-O | 5.10 | 130.80 | 120.10 |
| 1 | F | 117 | PRO | O-C-N | 5.10 | 130.86 | 122.70 |
| 1 | L | 185 | GLU | N-CA-C | 5.10 | 124.76 | 111.00 |
| 1 | N | 9 | PRO | N-CD-CG | -5.10 | 95.56 | 103.20 |
| 1 | N | 242 | THR | CA-CB-OG1 | 5.10 | 119.71 | 109.00 |
| 1 | A | 351 | THR | O-C-N | -5.10 | 114.55 | 122.70 |
| 1 | C | 128 | ALA | CB-CA-C | 5.10 | 117.74 | 110.10 |
| 1 | E | 150 | LEU | CB-CG-CD1 | 5.10 | 119.66 | 111.00 |
| 1 | F | 362 | VAL | CA-C-O | -5.10 | 109.40 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | G | 312 | ALA | C-N-CA | 5.10 | 134.44 | 121.70 |
| 1 | I | 286 | ARG | CG-CD-NE | 5.10 | 122.50 | 111.80 |
| 1 | M | 333 | PHE | CE1-CZ-CE2 | 5.10 | 129.17 | 120.00 |
| 1 | B | 460 | ASP | CB-CG-OD2 | 5.09 | 122.89 | 118.30 |
| 1 | E | 77 | MET | CG-SD-CE | -5.09 | 92.05 | 100.20 |
| 1 | E | 190 | LYS | N-CA-CB | -5.09 | 101.43 | 110.60 |
| 1 | I | 69 | SER | CA-C-N | 5.09 | 128.41 | 117.20 |
| 1 | J | 281 | ILE | CA-C-O | -5.09 | 109.40 | 120.10 |
| 1 | J | 432 | GLU | N-CA-C | 5.09 | 124.75 | 111.00 |
| 1 | L | 373 | ILE | C-N-CA | 5.09 | 134.44 | 121.70 |
| 1 | O | 379 | VAL | CA-C-N | -5.09 | 105.99 | 117.20 |
| 1 | C | 187 | LYS | O-C-N | -5.09 | 114.55 | 122.70 |
| 1 | E | 389 | LEU | CA-CB-CG | 5.09 | 127.01 | 115.30 |
| 1 | I | 463 | GLU | CG-CD-OE2 | 5.09 | 128.49 | 118.30 |
| 1 | J | 351 | THR | O-C-N | -5.09 | 114.55 | 122.70 |
| 1 | K | 309 | ASP | N-CA-CB | 5.09 | 119.77 | 110.60 |
| 1 | L | 432 | GLU | CG-CD-OE2 | 5.09 | 128.49 | 118.30 |
| 1 | M | 478 | GLN | N-CA-CB | 5.09 | 119.77 | 110.60 |
| 1 | P | 51 | ASP | O-C-N | -5.09 | 114.55 | 122.70 |
| 1 | D | 22 | ARG | N-CA-C | 5.09 | 124.75 | 111.00 |
| 1 | D | 357 | GLU | CG-CD-OE2 | -5.09 | 108.12 | 118.30 |
| 1 | G | 399 | GLY | C-N-CA | 5.09 | 134.43 | 121.70 |
| 1 | J | 96 | ALA | CB-CA-C | -5.09 | 102.46 | 110.10 |
| 1 | O | 51 | ASP | OD1-CG-OD2 | -5.09 | 113.63 | 123.30 |
| 1 | O | 469 | PRO | O-C-N | -5.09 | 114.55 | 122.70 |
| 1 | D | 7 | VAL | CA-CB-CG1 | -5.09 | 103.27 | 110.90 |
| 1 | E | 46 | LYS | CD-CE-NZ | 5.09 | 123.41 | 111.70 |
| 1 | E | 459 | GLU | O-C-N | -5.09 | 114.56 | 122.70 |
| 1 | H | 436 | LYS | CA-C-N | -5.09 | 106.00 | 117.20 |
| 1 | I | 263 | PHE | CG-CD1-CE1 | -5.09 | 115.20 | 120.80 |
| 1 | J | 375 | ASP | O-C-N | -5.09 | 114.55 | 123.20 |
| 1 | K | 168 | GLU | N-CA-CB | 5.09 | 119.76 | 110.60 |
| 1 | K | 268 | ILE | N-CA-CB | 5.09 | 122.50 | 110.80 |
| 1 | L | 187 | LYS | CB-CG-CD | 5.09 | 124.83 | 111.60 |
| 1 | P | 182 | VAL | CA-C-O | -5.09 | 109.41 | 120.10 |
| 1 | F | 330 | SER | CA-CB-OG | 5.09 | 124.94 | 111.20 |
| 1 | G | 270 | ASP | N-CA-C | 5.09 | 124.74 | 111.00 |
| 1 | I | 79 | ILE | CA-CB-CG2 | 5.09 | 121.08 | 110.90 |
| 1 | L | 15 | TYR | CA-CB-CG | 5.09 | 123.07 | 113.40 |
| 1 | N | 452 | ASN | CA-C-N | -5.09 | 106.01 | 117.20 |
| 1 | O | 389 | LEU | CA-CB-CG | 5.09 | 127.00 | 115.30 |
| 1 | B | 94 | THR | CA-C-O | -5.09 | 109.42 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | C | 397 | ALA | CB-CA-C | 5.09 | 117.73 | 110.10 |
| 1 | D | 179 | SER | N-CA-CB | 5.09 | 118.13 | 110.50 |
| 1 | D | 252 | ALA | O-C-N | -5.09 | 114.56 | 122.70 |
| 1 | F | 88 | GLU | OE1-CD-OE2 | 5.09 | 129.40 | 123.30 |
| 1 | F | 263 | PHE | CA-C-N | 5.09 | 128.39 | 117.20 |
| 1 | K | 20 | ALA | CB-CA-C | -5.09 | 102.47 | 110.10 |
| 1 | K | 104 | LEU | CA-C-N | -5.09 | 106.01 | 117.20 |
| 1 | K | 382 | GLY | CA-C-O | -5.09 | 111.44 | 120.60 |
| 1 | L | 179 | SER | O-C-N | 5.09 | 130.84 | 122.70 |
| 1 | L | 352 | GLU | CA-C-N | -5.09 | 106.01 | 117.20 |
| 1 | L | 487 | LEU | CB-CA-C | 5.09 | 119.87 | 110.20 |
| 1 | M | 225 | LYS | O-C-N | -5.09 | 114.56 | 122.70 |
| 1 | O | 30 | ILE | N-CA-C | 5.09 | 124.73 | 111.00 |
| 1 | O | 343 | VAL | N-CA-CB | -5.09 | 100.31 | 111.50 |
| 1 | B | 388 | GLU | OE1-CD-OE2 | -5.08 | 117.20 | 123.30 |
| 1 | C | 10 | GLU | CA-CB-CG | 5.08 | 124.59 | 113.40 |
| 1 | F | 225 | LYS | CA-C-O | -5.08 | 109.42 | 120.10 |
| 1 | I | 464 | ASN | CB-CG-OD1 | 5.08 | 131.77 | 121.60 |
| 1 | J | 49 | VAL | O-C-N | -5.08 | 114.56 | 122.70 |
| 1 | O | 57 | VAL | CG1-CB-CG2 | -5.08 | 102.76 | 110.90 |
| 1 | P | 179 | SER | CB-CA-C | -5.08 | 100.44 | 110.10 |
| 1 | A | 181 | VAL | CB-CA-C | -5.08 | 101.74 | 111.40 |
| 1 | B | 154 | ALA | C-N-CA | 5.08 | 134.41 | 121.70 |
| 1 | C | 11 | ASN | OD1-CG-ND2 | -5.08 | 110.21 | 121.90 |
| 1 | F | 372 | THR | CA-C-O | -5.08 | 109.43 | 120.10 |
| 1 | H | 327 | SER | CA-C-O | -5.08 | 109.42 | 120.10 |
| 1 | H | 345 | MET | CA-CB-CG | 5.08 | 121.94 | 113.30 |
| 1 | L | 228 | THR | O-C-N | -5.08 | 114.57 | 122.70 |
| 1 | N | 407 | ALA | CB-CA-C | -5.08 | 102.48 | 110.10 |
| 1 | O | 403 | ARG | O-C-N | -5.08 | 114.57 | 122.70 |
| 1 | A | 277 | ALA | CB-CA-C | -5.08 | 102.48 | 110.10 |
| 1 | A | 285 | ARG | CD-NE-CZ | 5.08 | 130.72 | 123.60 |
| 1 | C | 164 | GLU | O-C-N | 5.08 | 130.83 | 122.70 |
| 1 | C | 465 | GLY | CA-C-O | -5.08 | 111.45 | 120.60 |
| 1 | E | 315 | LEU | CB-CG-CD1 | 5.08 | 119.64 | 111.00 |
| 1 | F | 371 | CYS | CB-CA-C | 5.08 | 120.56 | 110.40 |
| 1 | F | 418 | ILE | CA-CB-CG2 | 5.08 | 121.06 | 110.90 |
| 1 | H | 286 | ARG | NE-CZ-NH1 | 5.08 | 122.84 | 120.30 |
| 1 | I | 93 | THR | C-N-CA | 5.08 | 134.40 | 121.70 |
| 1 | I | 131 | ALA | CA-C-O | -5.08 | 109.43 | 120.10 |
| 1 | J | 490 | ILE | O-C-N | -5.08 | 114.57 | 122.70 |
| 1 | K | 85 | GLN | CB-CG-CD | 5.08 | 124.81 | 111.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | N | 18 | ARG | CG-CD-NE | 5.08 | 122.47 | 111.80 |
| 1 | N | 424 | GLU | CA-C-O | -5.08 | 109.43 | 120.10 |
| 1 | P | 323 | GLU | CG-CD-OE2 | 5.08 | 128.46 | 118.30 |
| 1 | B | 247 | LEU | C-N-CA | 5.08 | 134.40 | 121.70 |
| 1 | D | 180 | ALA | N-CA-C | 5.08 | 124.72 | 111.00 |
| 1 | L | 270 | ASP | N-CA-CB | 5.08 | 119.74 | 110.60 |
| 1 | A | 486 | MET | C-N-CA | 5.08 | 134.40 | 121.70 |
| 1 | E | 145 | GLN | CA-CB-CG | -5.08 | 102.23 | 113.40 |
| 1 | H | 16 | MET | CA-CB-CG | 5.08 | 121.94 | 113.30 |
| 1 | K | 124 | TYR | CB-CG-CD1 | 5.08 | 124.05 | 121.00 |
| 1 | M | 173 | ILE | N-CA-CB | -5.08 | 99.12 | 110.80 |
| 1 | O | 274 | HIS | O-C-N | -5.08 | 114.57 | 122.70 |
| 1 | O | 398 | GLU | OE1-CD-OE2 | -5.08 | 117.20 | 123.30 |
| 1 | C | 424 | GLU | N-CA-CB | 5.08 | 119.74 | 110.60 |
| 1 | D | 494 | ILE | CA-C-O | -5.08 | 109.44 | 120.10 |
| 1 | E | 400 | ILE | N-CA-CB | 5.08 | 122.48 | 110.80 |
| 1 | H | 313 | GLN | CG-CD-OE1 | 5.08 | 131.75 | 121.60 |
| 1 | I | 10 | GLU | CB-CG-CD | 5.08 | 127.91 | 114.20 |
| 1 | I | 224 | PRO | C-N-CA | 5.08 | 134.39 | 121.70 |
| 1 | I | 278 | LYS | CA-C-O | 5.08 | 130.76 | 120.10 |
| 1 | I | 283 | ALA | CB-CA-C | -5.08 | 102.48 | 110.10 |
| 1 | I | 451 | LEU | CA-C-O | 5.08 | 130.76 | 120.10 |
| 1 | L | 375 | ASP | CB-CA-C | -5.08 | 100.25 | 110.40 |
| 1 | M | 49 | VAL | CG1-CB-CG2 | 5.08 | 119.02 | 110.90 |
| 1 | M | 79 | ILE | CA-C-O | -5.08 | 109.44 | 120.10 |
| 1 | M | 185 | GLU | CA-CB-CG | 5.08 | 124.57 | 113.40 |
| 1 | D | 110 | LEU | CB-CA-C | 5.08 | 119.84 | 110.20 |
| 1 | G | 472 | VAL | C-N-CA | 5.08 | 134.39 | 121.70 |
| 1 | O | 58 | THR | N-CA-C | 5.08 | 124.70 | 111.00 |
| 1 | A | 71 | GLU | CG-CD-OE2 | -5.07 | 108.16 | 118.30 |
| 1 | I | 33 | GLU | CB-CA-C | 5.07 | 120.55 | 110.40 |
| 1 | I | 358 | VAL | CA-CB-CG1 | 5.07 | 118.51 | 110.90 |
| 1 | K | 432 | GLU | CB-CG-CD | -5.07 | 100.50 | 114.20 |
| 1 | L | 15 | TYR | C-N-CA | 5.07 | 134.38 | 121.70 |
| 1 | O | 300 | GLY | O-C-N | 5.07 | 130.82 | 122.70 |
| 1 | P | 333 | PHE | CB-CG-CD1 | 5.07 | 124.35 | 120.80 |
| 1 | C | 105 | ARG | CD-NE-CZ | 5.07 | 130.70 | 123.60 |
| 1 | C | 406 | LEU | CB-CG-CD1 | 5.07 | 119.62 | 111.00 |
| 1 | D | 261 | VAL | CA-CB-CG2 | 5.07 | 118.51 | 110.90 |
| 1 | G | 460 | ASP | CA-C-N | -5.07 | 106.04 | 117.20 |
| 1 | K | 285 | ARG | NE-CZ-NH1 | 5.07 | 122.84 | 120.30 |
| 1 | L | 142 | VAL | C-N-CA | 5.07 | 132.95 | 122.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | M | 417 | VAL | N-CA-CB | 5.07 | 122.66 | 111.50 |
| 1 | N | 266 | LYS | N-CA-CB | -5.07 | 101.47 | 110.60 |
| 1 | B | 95 | THR | CA-CB-CG2 | -5.07 | 105.30 | 112.40 |
| 1 | B | 241 | GLU | CA-C-N | 5.07 | 128.35 | 117.20 |
| 1 | F | 411 | PHE | CB-CA-C | 5.07 | 120.54 | 110.40 |
| 1 | J | 236 | ASN | C-N-CA | 5.07 | 134.38 | 121.70 |
| 1 | J | 366 | VAL | CG1-CB-CG2 | -5.07 | 102.79 | 110.90 |
| 1 | N | 44 | MET | CA-C-O | -5.07 | 109.45 | 120.10 |
| 1 | O | 120 | VAL | CA-CB-CG1 | 5.07 | 118.50 | 110.90 |
| 1 | F | 182 | VAL | CA-CB-CG2 | -5.07 | 103.30 | 110.90 |
| 1 | G | 7 | VAL | CA-C-O | -5.07 | 109.46 | 120.10 |
| 1 | H | 183 | ASP | OD1-CG-OD2 | -5.07 | 113.67 | 123.30 |
| 1 | J | 329 | ASP | CB-CG-OD1 | 5.07 | 122.86 | 118.30 |
| 1 | L | 309 | ASP | OD1-CG-OD2 | 5.07 | 132.93 | 123.30 |
| 1 | M | 479 | SER | CB-CA-C | 5.07 | 119.73 | 110.10 |
| 1 | P | 394 | ARG | CD-NE-CZ | 5.07 | 130.70 | 123.60 |
| 1 | P | 489 | ARG | N-CA-CB | 5.07 | 119.72 | 110.60 |
| 1 | A | 36 | ARG | CD-NE-CZ | 5.07 | 130.70 | 123.60 |
| 1 | B | 112 | ASP | CB-CG-OD1 | 5.07 | 122.86 | 118.30 |
| 1 | B | 448 | CYS | CB-CA-C | 5.07 | 120.53 | 110.40 |
| 1 | D | 301 | ALA | O-C-N | -5.07 | 114.59 | 122.70 |
| 1 | E | 214 | VAL | CA-CB-CG2 | 5.07 | 118.50 | 110.90 |
| 1 | H | 268 | ILE | O-C-N | -5.07 | 114.59 | 122.70 |
| 1 | H | 347 | ILE | CG1-CB-CG2 | 5.07 | 122.55 | 111.40 |
| 1 | H | 369 | VAL | CA-C-O | -5.07 | 109.46 | 120.10 |
| 1 | K | 339 | HIS | CA-C-O | -5.07 | 109.46 | 120.10 |
| 1 | K | 451 | LEU | O-C-N | 5.07 | 130.81 | 122.70 |
| 1 | L | 394 | ARG | CB-CG-CD | 5.07 | 124.78 | 111.60 |
| 1 | O | 191 | ASP | N-CA-C | 5.07 | 124.68 | 111.00 |
| 1 | E | 276 | LEU | N-CA-CB | 5.07 | 120.53 | 110.40 |
| 1 | I | 279 | GLU | O-C-N | -5.07 | 114.59 | 123.20 |
| 1 | J | 11 | ASN | CA-C-N | 5.07 | 128.34 | 117.20 |
| 1 | M | 497 | GLU | CB-CA-C | -5.07 | 100.27 | 110.40 |
| 1 | O | 72 | HIS | CG-ND1-CE1 | 5.07 | 115.29 | 108.20 |
| 1 | O | 275 | TYR | CB-CG-CD1 | -5.07 | 117.96 | 121.00 |
| 1 | O | 340 | PRO | C-N-CA | 5.07 | 134.37 | 121.70 |
| 1 | B | 134 | LEU | CB-CA-C | 5.06 | 119.82 | 110.20 |
| 1 | B | 232 | ILE | CA-CB-CG2 | 5.06 | 121.03 | 110.90 |
| 1 | D | 138 | ILE | CG1-CB-CG2 | 5.06 | 122.54 | 111.40 |
| 1 | F | 72 | HIS | CB-CG-CD2 | -5.06 | 115.10 | 130.80 |
| 1 | H | 242 | THR | CA-C-O | -5.06 | 109.47 | 120.10 |
| 1 | O | 471 | ARG | NH1-CZ-NH2 | -5.06 | 113.83 | 119.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 12 | MET | N-CA-CB | -5.06 | 101.49 | 110.60 |
| 1 | A | 35 | VAL | CA-CB-CG2 | -5.06 | 103.31 | 110.90 |
| 1 | A | 45 | ASP | CA-CB-CG | -5.06 | 102.26 | 113.40 |
| 1 | A | 325 | LYS | CA-CB-CG | -5.06 | 102.26 | 113.40 |
| 1 | B | 46 | LYS | CB-CG-CD | 5.06 | 124.76 | 111.60 |
| 1 | B | 119 | ILE | CA-CB-CG2 | 5.06 | 121.02 | 110.90 |
| 1 | D | 299 | THR | CA-CB-CG2 | 5.06 | 119.49 | 112.40 |
| 1 | G | 269 | ASP | CA-C-N | 5.06 | 128.34 | 117.20 |
| 1 | H | 407 | ALA | O-C-N | 5.06 | 130.80 | 122.70 |
| 1 | I | 193 | ILE | C-N-CA | 5.06 | 134.36 | 121.70 |
| 1 | I | 195 | ILE | CB-CA-C | -5.06 | 101.47 | 111.60 |
| 1 | J | 148 | GLU | N-CA-C | 5.06 | 124.67 | 111.00 |
| 1 | N | 220 | SER | C-N-CA | 5.06 | 134.36 | 121.70 |
| 1 | N | 350 | THR | C-N-CA | 5.06 | 134.36 | 121.70 |
| 1 | G | 269 | ASP | O-C-N | -5.06 | 114.60 | 122.70 |
| 1 | I | 187 | LYS | CD-CE-NZ | -5.06 | 100.06 | 111.70 |
| 1 | K | 201 | ALA | CA-C-O | -5.06 | 109.47 | 120.10 |
| 1 | N | 380 | SER | N-CA-CB | -5.06 | 102.91 | 110.50 |
| 1 | B | 364 | ASP | CB-CG-OD1 | 5.06 | 122.85 | 118.30 |
| 1 | H | 15 | TYR | CD1-CE1-CZ | -5.06 | 115.25 | 119.80 |
| 1 | I | 317 | ASP | OD1-CG-OD2 | -5.06 | 113.69 | 123.30 |
| 1 | O | 452 | ASN | CA-C-O | 5.06 | 130.73 | 120.10 |
| 1 | P | 275 | TYR | N-CA-C | 5.06 | 124.66 | 111.00 |
| 1 | P | 358 | VAL | CA-C-N | -5.06 | 106.07 | 117.20 |
| 1 | A | 324 | ARG | CD-NE-CZ | 5.06 | 130.68 | 123.60 |
| 1 | B | 62 | VAL | CA-C-O | -5.06 | 109.48 | 120.10 |
| 1 | E | 490 | ILE | O-C-N | 5.06 | 130.79 | 122.70 |
| 1 | G | 411 | PHE | CD1-CE1-CZ | -5.06 | 114.03 | 120.10 |
| 1 | H | 154 | ALA | O-C-N | 5.06 | 130.79 | 122.70 |
| 1 | H | 462 | CYS | CB-CA-C | 5.06 | 120.52 | 110.40 |
| 1 | K | 33 | GLU | CG-CD-OE1 | 5.06 | 128.41 | 118.30 |
| 1 | K | 325 | LYS | CD-CE-NZ | 5.06 | 123.33 | 111.70 |
| 1 | L | 240 | GLU | CA-C-N | 5.06 | 128.33 | 117.20 |
| 1 | P | 275 | TYR | CE1-CZ-CE2 | 5.06 | 127.89 | 119.80 |
| 1 | B | 390 | SER | N-CA-CB | -5.06 | 102.92 | 110.50 |
| 1 | D | 344 | THR | O-C-N | -5.06 | 114.61 | 122.70 |
| 1 | D | 490 | ILE | CA-C-O | 5.06 | 130.72 | 120.10 |
| 1 | J | 354 | VAL | CA-CB-CG1 | 5.06 | 118.48 | 110.90 |
| 1 | J | 457 | ALA | O-C-N | 5.06 | 130.79 | 122.70 |
| 1 | L | 377 | ARG | CA-CB-CG | -5.06 | 102.28 | 113.40 |
| 1 | A | 218 | ARG | NH1-CZ-NH2 | -5.05 | 113.84 | 119.40 |
| 1 | B | 265 | GLN | CA-C-O | 5.05 | 130.71 | 120.10 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | D | 30 | ILE | CB-CA-C | -5.05 | 101.49 | 111.60 |
| 1 | D | 334 | VAL | CG1-CB-CG2 | -5.05 | 102.81 | 110.90 |
| 1 | F | 67 | GLU | N-CA-C | 5.05 | 124.65 | 111.00 |
| 1 | F | 86 | GLU | O-C-N | -5.05 | 114.61 | 122.70 |
| 1 | F | 239 | ILE | CB-CA-C | 5.05 | 121.71 | 111.60 |
| 1 | F | 399 | GLY | N-CA-C | 5.05 | 125.74 | 113.10 |
| 1 | H | 357 | GLU | CA-C-O | -5.05 | 109.48 | 120.10 |
| 1 | I | 207 | GLU | N-CA-C | 5.05 | 124.65 | 111.00 |
| 1 | L | 16 | MET | CB-CA-C | -5.05 | 100.29 | 110.40 |
| 1 | M | 365 | ALA | O-C-N | -5.05 | 114.61 | 122.70 |
| 1 | A | 247 | LEU | O-C-N | -5.05 | 114.61 | 122.70 |
| 1 | F | 223 | MET | CA-CB-CG | 5.05 | 121.89 | 113.30 |
| 1 | G | 36 | ARG | CB-CA-C | 5.05 | 120.51 | 110.40 |
| 1 | I | 180 | ALA | O-C-N | -5.05 | 114.61 | 122.70 |
| 1 | I | 265 | GLN | C-N-CA | 5.05 | 134.33 | 121.70 |
| 1 | A | 51 | ASP | CA-C-O | -5.05 | 109.49 | 120.10 |
| 1 | A | 159 | THR | O-C-N | 5.05 | 131.79 | 123.20 |
| 1 | A | 210 | LYS | O-C-N | -5.05 | 114.61 | 123.20 |
| 1 | C | 25 | ILE | O-C-N | 5.05 | 130.78 | 122.70 |
| 1 | C | 312 | ALA | O-C-N | -5.05 | 114.62 | 122.70 |
| 1 | C | 321 | VAL | CG1-CB-CG2 | -5.05 | 102.82 | 110.90 |
| 1 | F | 471 | ARG | C-N-CA | 5.05 | 134.33 | 121.70 |
| 1 | N | 13 | LYS | N-CA-CB | -5.05 | 101.51 | 110.60 |
| 1 | N | 459 | GLU | CA-C-N | -5.05 | 106.08 | 117.20 |
| 1 | A | 153 | ILE | CA-CB-CG1 | 5.05 | 120.60 | 111.00 |
| 1 | A | 191 | ASP | CB-CA-C | -5.05 | 100.30 | 110.40 |
| 1 | B | 222 | GLN | CG-CD-OE1 | 5.05 | 131.70 | 121.60 |
| 1 | D | 244 | SER | N-CA-C | 5.05 | 124.64 | 111.00 |
| 1 | H | 465 | GLY | CA-C-O | -5.05 | 111.51 | 120.60 |
| 1 | J | 133 | GLU | CB-CG-CD | 5.05 | 127.83 | 114.20 |
| 1 | N | 348 | ARG | O-C-N | -5.05 | 114.62 | 123.20 |
| 1 | O | 174 | ILE | CA-CB-CG1 | 5.05 | 120.59 | 111.00 |
| 1 | P | 249 | ASP | CB-CA-C | 5.05 | 120.50 | 110.40 |
| 1 | A | 313 | GLN | CB-CG-CD | -5.05 | 98.47 | 111.60 |
| 1 | A | 329 | ASP | CB-CG-OD1 | 5.05 | 122.84 | 118.30 |
| 1 | H | 488 | LEU | CB-CG-CD1 | -5.05 | 102.42 | 111.00 |
| 1 | A | 223 | MET | CG-SD-CE | 5.05 | 108.28 | 100.20 |
| 1 | D | 353 | HIS | CB-CG-ND1 | -5.05 | 110.58 | 123.20 |
| 1 | E | 141 | GLU | OE1-CD-OE2 | 5.05 | 129.36 | 123.30 |
| 1 | J | 210 | LYS | N-CA-C | 5.05 | 124.62 | 111.00 |
| 1 | J | 359 | ALA | O-C-N | 5.05 | 130.77 | 122.70 |
| 1 | J | 441 | HIS | ND1-CE1-NE2 | 5.05 | 121.00 | 109.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | K | 226 | LYS | N-CA-C | 5.05 | 124.63 | 111.00 |
| 1 | K | 230 | ALA | CB-CA-C | 5.05 | 117.67 | 110.10 |
| 1 | N | 91 | ASP | CB-CA-C | -5.05 | 100.31 | 110.40 |
| 1 | P | 94 | THR | CA-C-O | -5.05 | 109.50 | 120.10 |
| 1 | P | 236 | ASN | N-CA-CB | 5.05 | 119.68 | 110.60 |
| 1 | G | 287 | VAL | N-CA-CB | 5.04 | 122.60 | 111.50 |
| 1 | H | 266 | LYS | CB-CA-C | 5.04 | 120.49 | 110.40 |
| 1 | K | 96 | ALA | O-C-N | -5.04 | 114.63 | 122.70 |
| 1 | O | 216 | LYS | CB-CA-C | 5.04 | 120.49 | 110.40 |
| 1 | A | 366 | VAL | CG1-CB-CG2 | -5.04 | 102.83 | 110.90 |
| 1 | B | 351 | THR | CA-C-N | -5.04 | 106.10 | 117.20 |
| 1 | C | 411 | PHE | N-CA-CB | 5.04 | 119.68 | 110.60 |
| 1 | E | 178 | VAL | N-CA-C | 5.04 | 124.62 | 111.00 |
| 1 | F | 56 | VAL | CB-CA-C | -5.04 | 101.82 | 111.40 |
| 1 | G | 69 | SER | CA-C-O | -5.04 | 109.51 | 120.10 |
| 1 | M | 15 | TYR | CE1-CZ-OH | -5.04 | 106.48 | 120.10 |
| 1 | P | 67 | GLU | CB-CA-C | 5.04 | 120.49 | 110.40 |
| 1 | P | 193 | ILE | CA-C-O | 5.04 | 130.69 | 120.10 |
| 1 | A | 204 | ASP | OD1-CG-OD2 | -5.04 | 113.72 | 123.30 |
| 1 | A | 290 | SER | CA-CB-OG | 5.04 | 124.81 | 111.20 |
| 1 | B | 285 | ARG | CG-CD-NE | 5.04 | 122.39 | 111.80 |
| 1 | G | 129 | GLN | O-C-N | -5.04 | 114.63 | 122.70 |
| 1 | H | 170 | LEU | CA-C-N | -5.04 | 106.11 | 117.20 |
| 1 | I | 323 | GLU | OE1-CD-OE2 | -5.04 | 117.25 | 123.30 |
| 1 | J | 228 | THR | N-CA-CB | 5.04 | 119.88 | 110.30 |
| 1 | L | 482 | GLU | CB-CG-CD | 5.04 | 127.81 | 114.20 |
| 1 | N | 96 | ALA | CA-C-N | -5.04 | 106.11 | 117.20 |
| 1 | O | 33 | GLU | CA-C-O | -5.04 | 109.51 | 120.10 |
| 1 | A | 377 | ARG | NH1-CZ-NH2 | -5.04 | 113.86 | 119.40 |
| 1 | D | 394 | ARG | CA-C-N | -5.04 | 106.11 | 117.20 |
| 1 | E | 372 | THR | N-CA-C | 5.04 | 124.61 | 111.00 |
| 1 | A | 72 | HIS | N-CA-C | 5.04 | 124.60 | 111.00 |
| 1 | A | 275 | TYR | CD1-CG-CD2 | 5.04 | 123.44 | 117.90 |
| 1 | B | 97 | VAL | N-CA-C | 5.04 | 124.60 | 111.00 |
| 1 | B | 234 | LEU | CB-CG-CD2 | 5.04 | 119.56 | 111.00 |
| 1 | B | 311 | SER | N-CA-CB | -5.04 | 102.94 | 110.50 |
| 1 | D | 199 | SER | O-C-N | -5.04 | 114.64 | 123.20 |
| 1 | H | 463 | GLU | CB-CA-C | 5.04 | 120.48 | 110.40 |
| 1 | J | 43 | GLY | C-N-CA | 5.04 | 134.30 | 121.70 |
| 1 | K | 388 | GLU | CB-CG-CD | 5.04 | 127.80 | 114.20 |
| 1 | M | 71 | GLU | OE1-CD-OE2 | 5.04 | 129.35 | 123.30 |
| 1 | P | 119 | ILE | N-CA-CB | 5.04 | 122.39 | 110.80 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | B | 459 | GLU | CB-CA-C | -5.04 | 100.33 | 110.40 |
| 1 | C | 216 | LYS | CD-CE-NZ | 5.04 | 123.28 | 111.70 |
| 1 | H | 18 | ARG | NE-CZ-NH2 | 5.04 | 122.82 | 120.30 |
| 1 | J | 21 | GLN | CA-C-O | 5.04 | 130.68 | 120.10 |
| 1 | N | 491 | ASP | CB-CG-OD1 | 5.04 | 122.83 | 118.30 |
| 1 | O | 453 | VAL | CA-CB-CG2 | 5.04 | 118.45 | 110.90 |
| 1 | E | 11 | ASN | CA-CB-CG | 5.04 | 124.48 | 113.40 |
| 1 | E | 116 | HIS | CG-ND1-CE1 | 5.04 | 115.25 | 108.20 |
| 1 | F | 189 | ASP | OD1-CG-OD2 | -5.04 | 113.73 | 123.30 |
| 1 | H | 172 | GLU | CG-CD-OE1 | -5.04 | 108.23 | 118.30 |
| 1 | K | 362 | VAL | CB-CA-C | 5.04 | 120.97 | 111.40 |
| 1 | K | 419 | PRO | CA-C-N | 5.04 | 128.28 | 117.20 |
| 1 | M | 102 | GLU | O-C-N | -5.04 | 114.64 | 122.70 |
| 1 | M | 495 | ALA | O-C-N | -5.04 | 114.64 | 122.70 |
| 1 | P | 315 | LEU | CB-CG-CD2 | 5.04 | 119.56 | 111.00 |
| 1 | F | 191 | ASP | C-N-CA | 5.03 | 134.28 | 121.70 |
| 1 | I | 228 | THR | N-CA-CB | 5.03 | 119.86 | 110.30 |
| 1 | I | 419 | PRO | O-C-N | -5.03 | 114.65 | 122.70 |
| 1 | L | 333 | PHE | CE1-CZ-CE2 | -5.03 | 110.94 | 120.00 |
| 1 | O | 15 | TYR | C-N-CA | 5.03 | 134.28 | 121.70 |
| 1 | O | 115 | VAL | CA-C-O | -5.03 | 109.53 | 120.10 |
| 1 | P | 289 | LYS | C-N-CA | 5.03 | 134.29 | 121.70 |
| 1 | P | 319 | GLY | C-N-CA | 5.03 | 134.29 | 121.70 |
| 1 | A | 265 | GLN | OE1-CD-NE2 | -5.03 | 110.33 | 121.90 |
| 1 | C | 135 | LEU | CB-CG-CD1 | -5.03 | 102.45 | 111.00 |
| 1 | G | 270 | ASP | OD1-CG-OD2 | -5.03 | 113.74 | 123.30 |
| 1 | I | 334 | VAL | CG1-CB-CG2 | -5.03 | 102.85 | 110.90 |
| 1 | K | 190 | LYS | N-CA-CB | -5.03 | 101.54 | 110.60 |
| 1 | O | 200 | GLY | O-C-N | -5.03 | 114.65 | 122.70 |
| 1 | P | 474 | THR | CA-C-O | -5.03 | 109.53 | 120.10 |
| 1 | D | 65 | LEU | N-CA-CB | 5.03 | 120.46 | 110.40 |
| 1 | E | 50 | ASP | CB-CG-OD2 | -5.03 | 113.77 | 118.30 |
| 1 | E | 130 | LYS | CA-C-O | 5.03 | 130.66 | 120.10 |
| 1 | F | 432 | GLU | N-CA-CB | 5.03 | 119.66 | 110.60 |
| 1 | K | 361 | ALA | O-C-N | -5.03 | 114.65 | 122.70 |
| 1 | L | 81 | VAL | CA-CB-CG1 | 5.03 | 118.44 | 110.90 |
| 1 | N | 249 | ASP | CA-C-O | 5.03 | 130.66 | 120.10 |
| 1 | O | 489 | ARG | C-N-CA | 5.03 | 134.27 | 121.70 |
| 1 | P | 175 | VAL | CA-C-N | -5.03 | 106.13 | 117.20 |
| 1 | P | 315 | LEU | CA-CB-CG | 5.03 | 126.87 | 115.30 |
| 1 | P | 416 | GLU | N-CA-CB | 5.03 | 119.66 | 110.60 |
| 1 | H | 99 | VAL | CA-CB-CG1 | -5.03 | 103.36 | 110.90 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | J | 430 | ALA | CA-C-O | -5.03 | 109.54 | 120.10 |
| 1 | K | 396 | TYR | CD1-CG-CD2 | 5.03 | 123.43 | 117.90 |
| 1 | L | 58 | THR | C-N-CA | 5.03 | 134.27 | 121.70 |
| 1 | L | 286 | ARG | CA-CB-CG | 5.03 | 124.46 | 113.40 |
| 1 | B | 380 | SER | CB-CA-C | 5.03 | 119.65 | 110.10 |
| 1 | H | 463 | GLU | OE1-CD-OE2 | 5.03 | 129.33 | 123.30 |
| 1 | K | 429 | ASP | O-C-N | -5.03 | 114.66 | 122.70 |
| 1 | L | 272 | ALA | N-CA-CB | 5.03 | 117.14 | 110.10 |
| 1 | N | 129 | GLN | CA-C-O | 5.03 | 130.66 | 120.10 |
| 1 | O | 15 | TYR | CG-CD2-CE2 | 5.03 | 125.32 | 121.30 |
| 1 | P | 404 | GLU | OE1-CD-OE2 | -5.03 | 117.27 | 123.30 |
| 1 | A | 308 | LYS | CB-CA-C | 5.03 | 120.45 | 110.40 |
| 1 | B | 12 | MET | CA-C-O | -5.03 | 109.55 | 120.10 |
| 1 | D | 93 | THR | CA-CB-CG2 | 5.03 | 119.43 | 112.40 |
| 1 | G | 72 | HIS | CB-CG-ND1 | 5.03 | 135.76 | 123.20 |
| 1 | G | 306 | ASN | OD1-CG-ND2 | -5.03 | 110.34 | 121.90 |
| 1 | I | 291 | ASP | C-N-CA | 5.03 | 134.26 | 121.70 |
| 1 | I | 415 | LEU | CA-CB-CG | 5.03 | 126.86 | 115.30 |
| 1 | I | 471 | ARG | NE-CZ-NH2 | 5.03 | 122.81 | 120.30 |
| 1 | K | 76 | LYS | CG-CD-CE | -5.03 | 96.82 | 111.90 |
| 1 | L | 361 | ALA | C-N-CA | 5.03 | 134.27 | 121.70 |
| 1 | O | 30 | ILE | CA-C-N | 5.03 | 128.25 | 117.20 |
| 1 | A | 299 | THR | N-CA-CB | 5.02 | 119.85 | 110.30 |
| 1 | A | 371 | CYS | O-C-N | -5.02 | 114.66 | 122.70 |
| 1 | D | 475 | GLN | CG-CD-OE1 | -5.02 | 111.55 | 121.60 |
| 1 | F | 79 | ILE | CA-CB-CG1 | 5.02 | 120.55 | 111.00 |
| 1 | L | 467 | VAL | CB-CA-C | -5.02 | 101.85 | 111.40 |
| 1 | N | 120 | VAL | CA-CB-CG1 | 5.02 | 118.44 | 110.90 |
| 1 | A | 148 | GLU | N-CA-CB | 5.02 | 119.64 | 110.60 |
| 1 | A | 282 | VAL | CG1-CB-CG2 | 5.02 | 118.94 | 110.90 |
| 1 | C | 15 | TYR | CB-CG-CD1 | -5.02 | 117.99 | 121.00 |
| 1 | F | 41 | PRO | N-CA-C | 5.02 | 125.16 | 112.10 |
| 1 | F | 254 | ILE | O-C-N | 5.02 | 130.74 | 122.70 |
| 1 | F | 353 | HIS | CG-CD2-NE2 | -5.02 | 99.66 | 109.20 |
| 1 | G | 461 | MET | CG-SD-CE | -5.02 | 92.16 | 100.20 |
| 1 | J | 122 | LYS | N-CA-CB | -5.02 | 101.56 | 110.60 |
| 1 | J | 371 | CYS | N-CA-C | 5.02 | 124.56 | 111.00 |
| 1 | K | 231 | LYS | CD-CE-NZ | -5.02 | 100.15 | 111.70 |
| 1 | K | 353 | HIS | CB-CG-ND1 | -5.02 | 110.64 | 123.20 |
| 1 | P | 191 | ASP | N-CA-CB | 5.02 | 119.64 | 110.60 |
| 1 | G | 423 | ALA | CB-CA-C | -5.02 | 102.57 | 110.10 |
| 1 | K | 86 | GLU | CG-CD-OE2 | -5.02 | 108.26 | 118.30 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|------------|-------|-------------|----------|
| 1 | A | 302 | ASN | O-C-N | -5.02 | 114.67 | 122.70 |
| 1 | B | 378 | ILE | O-C-N | -5.02 | 114.67 | 122.70 |
| 1 | D | 347 | ILE | CB-CA-C | 5.02 | 121.64 | 111.60 |
| 1 | D | 390 | SER | O-C-N | 5.02 | 130.73 | 122.70 |
| 1 | E | 354 | VAL | N-CA-CB | 5.02 | 122.54 | 111.50 |
| 1 | H | 488 | LEU | CA-C-O | -5.02 | 109.56 | 120.10 |
| 1 | I | 60 | ASP | OD1-CG-OD2 | -5.02 | 113.77 | 123.30 |
| 1 | K | 265 | GLN | CB-CA-C | -5.02 | 100.36 | 110.40 |
| 1 | P | 141 | GLU | C-N-CA | 5.02 | 134.25 | 121.70 |
| 1 | B | 23 | MET | CA-C-N | -5.02 | 106.16 | 117.20 |
| 1 | C | 473 | LYS | CA-CB-CG | 5.02 | 124.44 | 113.40 |
| 1 | E | 364 | ASP | CA-CB-CG | 5.02 | 124.44 | 113.40 |
| 1 | G | 453 | VAL | CA-CB-CG1 | 5.02 | 118.42 | 110.90 |
| 1 | G | 476 | ALA | CB-CA-C | 5.02 | 117.63 | 110.10 |
| 1 | I | 70 | VAL | CA-CB-CG2 | 5.02 | 118.43 | 110.90 |
| 1 | I | 372 | THR | N-CA-C | 5.02 | 124.55 | 111.00 |
| 1 | J | 8 | LEU | N-CA-CB | 5.02 | 120.44 | 110.40 |
| 1 | J | 271 | LEU | N-CA-CB | 5.02 | 120.44 | 110.40 |
| 1 | M | 435 | VAL | N-CA-CB | -5.02 | 100.46 | 111.50 |
| 1 | M | 487 | LEU | CB-CG-CD1 | 5.02 | 119.53 | 111.00 |
| 1 | N | 312 | ALA | N-CA-C | 5.02 | 124.55 | 111.00 |
| 1 | P | 378 | ILE | O-C-N | -5.02 | 114.67 | 122.70 |
| 1 | A | 112 | ASP | CB-CG-OD1 | 5.02 | 122.81 | 118.30 |
| 1 | D | 477 | ILE | N-CA-CB | 5.02 | 122.34 | 110.80 |
| 1 | F | 195 | ILE | O-C-N | 5.02 | 130.72 | 122.70 |
| 1 | F | 288 | LYS | C-N-CA | 5.02 | 134.24 | 121.70 |
| 1 | K | 141 | GLU | N-CA-CB | 5.02 | 119.63 | 110.60 |
| 1 | L | 176 | GLU | O-C-N | -5.02 | 114.67 | 122.70 |
| 1 | A | 343 | VAL | CG1-CB-CG2 | 5.01 | 118.92 | 110.90 |
| 1 | D | 238 | ALA | CB-CA-C | -5.01 | 102.58 | 110.10 |
| 1 | E | 34 | THR | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | E | 359 | ALA | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | G | 221 | ALA | C-N-CA | 5.01 | 134.23 | 121.70 |
| 1 | G | 466 | VAL | CB-CA-C | 5.01 | 120.93 | 111.40 |
| 1 | I | 195 | ILE | O-C-N | -5.01 | 114.68 | 122.70 |
| 1 | J | 182 | VAL | CA-C-O | -5.01 | 109.57 | 120.10 |
| 1 | J | 334 | VAL | CA-C-N | -5.01 | 106.17 | 117.20 |
| 1 | M | 493 | VAL | N-CA-CB | 5.01 | 122.53 | 111.50 |
| 1 | K | 33 | GLU | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | K | 364 | ASP | CB-CG-OD1 | 5.01 | 122.81 | 118.30 |
| 1 | L | 364 | ASP | OD1-CG-OD2 | -5.01 | 113.78 | 123.30 |
| 1 | L | 378 | ILE | CG1-CB-CG2 | -5.01 | 100.37 | 111.40 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | M | 143 | GLY | N-CA-C | -5.01 | 100.57 | 113.10 |
| 1 | O | 352 | GLU | CA-C-O | -5.01 | 109.57 | 120.10 |
| 1 | B | 121 | VAL | CA-CB-CG1 | -5.01 | 103.38 | 110.90 |
| 1 | B | 274 | HIS | CA-C-O | -5.01 | 109.58 | 120.10 |
| 1 | C | 155 | MET | O-C-N | 5.01 | 130.72 | 122.70 |
| 1 | E | 237 | CYS | C-N-CA | 5.01 | 134.23 | 121.70 |
| 1 | F | 218 | ARG | CD-NE-CZ | 5.01 | 130.62 | 123.60 |
| 1 | F | 440 | ALA | N-CA-CB | -5.01 | 103.08 | 110.10 |
| 1 | G | 113 | GLN | C-N-CA | 5.01 | 134.23 | 121.70 |
| 1 | G | 172 | GLU | OE1-CD-OE2 | 5.01 | 129.31 | 123.30 |
| 1 | L | 51 | ASP | N-CA-CB | 5.01 | 119.62 | 110.60 |
| 1 | N | 42 | LYS | CG-CD-CE | 5.01 | 126.94 | 111.90 |
| 1 | P | 247 | LEU | N-CA-CB | 5.01 | 120.42 | 110.40 |
| 1 | F | 21 | GLN | CB-CG-CD | 5.01 | 124.63 | 111.60 |
| 1 | F | 279 | GLU | OE1-CD-OE2 | 5.01 | 129.31 | 123.30 |
| 1 | F | 443 | SER | CB-CA-C | 5.01 | 119.62 | 110.10 |
| 1 | H | 137 | THR | CA-CB-CG2 | 5.01 | 119.41 | 112.40 |
| 1 | H | 152 | LYS | CD-CE-NZ | -5.01 | 100.18 | 111.70 |
| 1 | I | 457 | ALA | CB-CA-C | -5.01 | 102.59 | 110.10 |
| 1 | J | 89 | VAL | N-CA-CB | 5.01 | 122.52 | 111.50 |
| 1 | J | 418 | ILE | CG1-CB-CG2 | -5.01 | 100.38 | 111.40 |
| 1 | K | 36 | ARG | CA-CB-CG | 5.01 | 124.42 | 113.40 |
| 1 | K | 165 | LYS | CB-CA-C | -5.01 | 100.38 | 110.40 |
| 1 | L | 65 | LEU | N-CA-CB | 5.01 | 120.42 | 110.40 |
| 1 | L | 193 | ILE | O-C-N | -5.01 | 114.69 | 122.70 |
| 1 | L | 242 | THR | OG1-CB-CG2 | -5.01 | 98.48 | 110.00 |
| 1 | L | 353 | HIS | ND1-CE1-NE2 | -5.01 | 98.88 | 109.90 |
| 1 | G | 78 | LEU | CB-CG-CD1 | 5.01 | 119.51 | 111.00 |
| 1 | H | 236 | ASN | O-C-N | -5.01 | 114.69 | 122.70 |
| 1 | J | 416 | GLU | CG-CD-OE2 | -5.01 | 108.28 | 118.30 |
| 1 | L | 51 | ASP | CB-CG-OD1 | -5.01 | 113.79 | 118.30 |
| 1 | F | 354 | VAL | CA-C-N | -5.01 | 106.19 | 117.20 |
| 1 | G | 324 | ARG | CD-NE-CZ | -5.01 | 116.59 | 123.60 |
| 1 | G | 430 | ALA | O-C-N | -5.01 | 114.69 | 122.70 |
| 1 | H | 113 | GLN | CG-CD-OE1 | 5.01 | 131.61 | 121.60 |
| 1 | H | 215 | ASP | CA-CB-CG | -5.01 | 102.38 | 113.40 |
| 1 | I | 14 | ARG | CA-CB-CG | 5.01 | 124.41 | 113.40 |
| 1 | I | 446 | ASN | CA-C-O | -5.01 | 109.58 | 120.10 |
| 1 | K | 148 | GLU | N-CA-CB | 5.01 | 119.61 | 110.60 |
| 1 | L | 76 | LYS | CB-CA-C | 5.01 | 120.42 | 110.40 |
| 1 | L | 246 | MET | N-CA-CB | 5.01 | 119.61 | 110.60 |
| 1 | M | 260 | ASN | CB-CG-OD1 | 5.01 | 131.61 | 121.60 |

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| Mol | Chain | Res | Type | Atoms | Z | Observed(°) | Ideal(°) |
|-----|-------|-----|------|-------------|-------|-------------|----------|
| 1 | M | 388 | GLU | CB-CA-C | 5.01 | 120.41 | 110.40 |
| 1 | P | 235 | LEU | CB-CG-CD1 | -5.01 | 102.49 | 111.00 |
| 1 | P | 297 | LYS | C-N-CA | 5.01 | 134.22 | 121.70 |
| 1 | F | 170 | LEU | CB-CA-C | -5.00 | 100.69 | 110.20 |
| 1 | F | 452 | ASN | CB-CA-C | -5.00 | 100.39 | 110.40 |
| 1 | H | 44 | MET | CB-CA-C | -5.00 | 100.39 | 110.40 |
| 1 | H | 161 | LYS | O-C-N | 5.00 | 131.71 | 123.20 |
| 1 | J | 210 | LYS | CG-CD-CE | 5.00 | 126.91 | 111.90 |
| 1 | M | 82 | ALA | O-C-N | -5.00 | 114.69 | 122.70 |
| 1 | N | 81 | VAL | CB-CA-C | 5.00 | 120.91 | 111.40 |
| 1 | A | 362 | VAL | CA-CB-CG1 | 5.00 | 118.41 | 110.90 |
| 1 | B | 221 | ALA | N-CA-CB | -5.00 | 103.10 | 110.10 |
| 1 | D | 113 | GLN | O-C-N | -5.00 | 114.69 | 122.70 |
| 1 | D | 265 | GLN | O-C-N | -5.00 | 114.69 | 122.70 |
| 1 | F | 189 | ASP | C-N-CA | 5.00 | 134.21 | 121.70 |
| 1 | H | 380 | SER | CA-C-N | -5.00 | 106.19 | 116.20 |
| 1 | I | 357 | GLU | N-CA-CB | 5.00 | 119.61 | 110.60 |
| 1 | J | 85 | GLN | C-N-CA | 5.00 | 134.21 | 121.70 |
| 1 | L | 228 | THR | OG1-CB-CG2 | -5.00 | 98.49 | 110.00 |
| 1 | L | 353 | HIS | CE1-NE2-CD2 | 5.00 | 119.11 | 106.60 |
| 1 | O | 134 | LEU | CB-CA-C | 5.00 | 119.71 | 110.20 |
| 1 | P | 136 | LYS | CA-C-N | 5.00 | 128.21 | 117.20 |
| 1 | P | 235 | LEU | N-CA-CB | -5.00 | 100.39 | 110.40 |
| 1 | A | 349 | GLY | CA-C-O | -5.00 | 111.60 | 120.60 |
| 1 | C | 8 | LEU | N-CA-CB | 5.00 | 120.40 | 110.40 |
| 1 | E | 11 | ASN | C-N-CA | 5.00 | 134.21 | 121.70 |
| 1 | E | 300 | GLY | CA-C-O | 5.00 | 129.60 | 120.60 |
| 1 | F | 464 | ASN | CA-CB-CG | -5.00 | 102.39 | 113.40 |
| 1 | H | 472 | VAL | C-N-CA | 5.00 | 134.20 | 121.70 |
| 1 | J | 438 | ARG | N-CA-CB | 5.00 | 119.60 | 110.60 |

All (924) chirality outliers are listed below:

| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1 | A | 7 | VAL | CA |
| 1 | A | 8 | LEU | CA |
| 1 | A | 10 | GLU | CA |
| 1 | A | 15 | TYR | CA |
| 1 | A | 30 | ILE | CB |
| 1 | A | 39 | LEU | CA |
| 1 | A | 42 | LYS | CA |
| 1 | A | 63 | THR | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | A | 72 | HIS | CA |
| 1 | A | 79 | ILE | CB |
| 1 | A | 84 | THR | CA,CB |
| 1 | A | 93 | THR | CB |
| 1 | A | 111 | LEU | CA |
| 1 | A | 112 | ASP | CA |
| 1 | A | 113 | GLN | CA |
| 1 | A | 115 | VAL | CA |
| 1 | A | 116 | HIS | CA |
| 1 | A | 129 | GLN | CA |
| 1 | A | 135 | LEU | CA |
| 1 | A | 138 | ILE | CB |
| 1 | A | 139 | ALA | CA |
| 1 | A | 141 | GLU | CA |
| 1 | A | 145 | GLN | CA |
| 1 | A | 153 | ILE | CA |
| 1 | A | 159 | THR | CB |
| 1 | A | 187 | LYS | CA |
| 1 | A | 201 | ALA | CA |
| 1 | A | 203 | ILE | CB |
| 1 | A | 210 | LYS | CA |
| 1 | A | 212 | VAL | CA |
| 1 | A | 215 | ASP | CA |
| 1 | A | 216 | LYS | CA |
| 1 | A | 228 | THR | CA |
| 1 | A | 229 | ASP | CA |
| 1 | A | 237 | CYS | CA |
| 1 | A | 242 | THR | CB,CA |
| 1 | A | 243 | ALA | CA |
| 1 | A | 256 | ALA | CA |
| 1 | A | 260 | ASN | CA |
| 1 | A | 289 | LYS | CA |
| 1 | A | 293 | GLU | CA |
| 1 | A | 294 | LYS | CA |
| 1 | A | 297 | LYS | CA |
| 1 | A | 305 | THR | CA,CB |
| 1 | A | 307 | ILE | CB |
| 1 | A | 308 | LYS | CA |
| 1 | A | 313 | GLN | CA |
| 1 | A | 315 | LEU | CA |
| 1 | A | 326 | ILE | CB |
| 1 | A | 336 | GLU | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | A | 352 | GLU | CA |
| 1 | A | 354 | VAL | CA |
| 1 | A | 356 | GLU | CA |
| 1 | A | 359 | ALA | CA |
| 1 | A | 372 | THR | CA |
| 1 | A | 403 | ARG | CA |
| 1 | A | 414 | ALA | CA |
| 1 | A | 421 | THR | CB |
| 1 | A | 428 | LEU | CA |
| 1 | A | 429 | ASP | CA |
| 1 | A | 431 | ILE | CA |
| 1 | A | 444 | ASN | CA |
| 1 | A | 448 | CYS | CA |
| 1 | A | 471 | ARG | CA |
| 1 | A | 477 | ILE | CB,CA |
| 1 | A | 479 | SER | CA |
| 1 | A | 496 | ALA | CA |
| 1 | B | 16 | MET | CA |
| 1 | B | 19 | ASP | CA |
| 1 | B | 39 | LEU | CA |
| 1 | B | 51 | ASP | CA |
| 1 | B | 63 | THR | CA |
| 1 | B | 79 | ILE | CB |
| 1 | B | 86 | GLU | CA |
| 1 | B | 88 | GLU | CA |
| 1 | B | 93 | THR | CB |
| 1 | B | 94 | THR | CB |
| 1 | B | 113 | GLN | CA |
| 1 | B | 116 | HIS | CA |
| 1 | B | 136 | LYS | CA |
| 1 | B | 139 | ALA | CA |
| 1 | B | 155 | MET | CA |
| 1 | B | 158 | ILE | CB |
| 1 | B | 159 | THR | CB |
| 1 | B | 180 | ALA | CA |
| 1 | B | 188 | VAL | CA |
| 1 | B | 192 | LEU | CA |
| 1 | B | 201 | ALA | CA |
| 1 | B | 210 | LYS | CA |
| 1 | B | 239 | ILE | CB |
| 1 | B | 242 | THR | CB |
| 1 | B | 244 | SER | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | B | 246 | MET | CA |
| 1 | B | 260 | ASN | CA |
| 1 | B | 273 | GLN | CA |
| 1 | B | 289 | LYS | CA |
| 1 | B | 302 | ASN | CA |
| 1 | B | 305 | THR | CA,CB |
| 1 | B | 307 | ILE | CA,CB |
| 1 | B | 313 | GLN | CA |
| 1 | B | 314 | ASP | CA |
| 1 | B | 325 | LYS | CA |
| 1 | B | 348 | ARG | CA |
| 1 | B | 350 | THR | CA |
| 1 | B | 356 | GLU | CA |
| 1 | B | 365 | ALA | CA |
| 1 | B | 395 | GLU | CA |
| 1 | B | 401 | SER | CA |
| 1 | B | 403 | ARG | CA |
| 1 | B | 414 | ALA | CA |
| 1 | B | 415 | LEU | CA |
| 1 | B | 417 | VAL | CA |
| 1 | B | 421 | THR | CB |
| 1 | B | 430 | ALA | CA |
| 1 | B | 449 | ALA | CA |
| 1 | B | 461 | MET | CA |
| 1 | B | 463 | GLU | CA |
| 1 | B | 479 | SER | CA |
| 1 | B | 494 | ILE | CB |
| 1 | B | 495 | ALA | CA |
| 1 | C | 10 | GLU | CA |
| 1 | C | 12 | MET | CA |
| 1 | C | 39 | LEU | CA |
| 1 | C | 42 | LYS | CA |
| 1 | C | 64 | ILE | CB |
| 1 | C | 81 | VAL | CA |
| 1 | C | 87 | LYS | CA |
| 1 | C | 93 | THR | CB |
| 1 | C | 111 | LEU | CA |
| 1 | C | 114 | ASN | CA |
| 1 | C | 115 | VAL | CA |
| 1 | C | 116 | HIS | CA |
| 1 | C | 118 | THR | CA,CB |
| 1 | C | 133 | GLU | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | C | 141 | GLU | CA |
| 1 | C | 142 | VAL | CA |
| 1 | C | 145 | GLN | CA |
| 1 | C | 147 | LYS | CA |
| 1 | C | 148 | GLU | CA |
| 1 | C | 156 | THR | CB |
| 1 | C | 158 | ILE | CB |
| 1 | C | 201 | ALA | CA |
| 1 | C | 205 | ASP | CA |
| 1 | C | 210 | LYS | CA |
| 1 | C | 215 | ASP | CA |
| 1 | C | 216 | LYS | CA |
| 1 | C | 237 | CYS | CA |
| 1 | C | 239 | ILE | CB |
| 1 | C | 242 | THR | CB |
| 1 | C | 243 | ALA | CA |
| 1 | C | 247 | LEU | CA |
| 1 | C | 270 | ASP | CA |
| 1 | C | 271 | LEU | CA |
| 1 | C | 273 | GLN | CA |
| 1 | C | 302 | ASN | CA |
| 1 | C | 304 | ILE | CB |
| 1 | C | 305 | THR | CA,CB |
| 1 | C | 315 | LEU | CA |
| 1 | C | 330 | SER | CA |
| 1 | C | 351 | THR | CA |
| 1 | C | 368 | VAL | CA |
| 1 | C | 373 | ILE | CB |
| 1 | C | 379 | VAL | CA |
| 1 | C | 400 | ILE | CA |
| 1 | C | 401 | SER | CA |
| 1 | C | 403 | ARG | CA |
| 1 | C | 414 | ALA | CA |
| 1 | C | 421 | THR | CB |
| 1 | C | 448 | CYS | CA |
| 1 | C | 455 | THR | CB |
| 1 | C | 461 | MET | CA |
| 1 | C | 477 | ILE | CB |
| 1 | C | 485 | GLU | CA |
| 1 | C | 489 | ARG | CA |
| 1 | C | 497 | GLU | CA |
| 1 | D | 7 | VAL | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | D | 8 | LEU | CA |
| 1 | D | 11 | ASN | CA |
| 1 | D | 27 | ALA | CA |
| 1 | D | 31 | ILE | CA,CB |
| 1 | D | 34 | THR | CB |
| 1 | D | 39 | LEU | CA |
| 1 | D | 88 | GLU | CA |
| 1 | D | 89 | VAL | CA |
| 1 | D | 93 | THR | CB |
| 1 | D | 94 | THR | CA |
| 1 | D | 110 | LEU | CA |
| 1 | D | 112 | ASP | CA |
| 1 | D | 113 | GLN | CA |
| 1 | D | 116 | HIS | CA |
| 1 | D | 118 | THR | CB |
| 1 | D | 136 | LYS | CA |
| 1 | D | 141 | GLU | CA |
| 1 | D | 144 | ALA | CA |
| 1 | D | 158 | ILE | CB |
| 1 | D | 159 | THR | CB |
| 1 | D | 172 | GLU | CA |
| 1 | D | 188 | VAL | CA |
| 1 | D | 201 | ALA | CA |
| 1 | D | 210 | LYS | CA |
| 1 | D | 216 | LYS | CA |
| 1 | D | 224 | PRO | CA |
| 1 | D | 237 | CYS | CA |
| 1 | D | 239 | ILE | CA |
| 1 | D | 243 | ALA | CA |
| 1 | D | 260 | ASN | CA |
| 1 | D | 289 | LYS | CA |
| 1 | D | 290 | SER | CA |
| 1 | D | 294 | LYS | CA |
| 1 | D | 305 | THR | CA,CB |
| 1 | D | 307 | ILE | CB |
| 1 | D | 309 | ASP | CA |
| 1 | D | 313 | GLN | CA |
| 1 | D | 330 | SER | CA |
| 1 | D | 347 | ILE | CB,CA |
| 1 | D | 351 | THR | CB |
| 1 | D | 355 | ILE | CB |
| 1 | D | 369 | VAL | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | D | 372 | THR | CB |
| 1 | D | 401 | SER | CA |
| 1 | D | 403 | ARG | CA |
| 1 | D | 414 | ALA | CA |
| 1 | D | 422 | LEU | CA |
| 1 | D | 428 | LEU | CA |
| 1 | D | 432 | GLU | CA |
| 1 | D | 433 | ILE | CB |
| 1 | D | 451 | LEU | CA |
| 1 | D | 476 | ALA | CA |
| 1 | D | 477 | ILE | CA |
| 1 | D | 479 | SER | CA |
| 1 | D | 485 | GLU | CA |
| 1 | D | 489 | ARG | CA |
| 1 | E | 37 | SER | CA |
| 1 | E | 39 | LEU | CA |
| 1 | E | 51 | ASP | CA |
| 1 | E | 88 | GLU | CA |
| 1 | E | 94 | THR | CB,CA |
| 1 | E | 113 | GLN | CA |
| 1 | E | 115 | VAL | CA |
| 1 | E | 116 | HIS | CA |
| 1 | E | 131 | ALA | CA |
| 1 | E | 147 | LYS | CA |
| 1 | E | 153 | ILE | CA |
| 1 | E | 155 | MET | CA |
| 1 | E | 158 | ILE | CB |
| 1 | E | 178 | VAL | CA |
| 1 | E | 201 | ALA | CA |
| 1 | E | 229 | ASP | CA |
| 1 | E | 237 | CYS | CA |
| 1 | E | 243 | ALA | CA |
| 1 | E | 245 | GLU | CA |
| 1 | E | 257 | SER | CA |
| 1 | E | 260 | ASN | CA |
| 1 | E | 273 | GLN | CA |
| 1 | E | 274 | HIS | CA |
| 1 | E | 289 | LYS | CA |
| 1 | E | 291 | ASP | CA |
| 1 | E | 304 | ILE | CB |
| 1 | E | 305 | THR | CA,CB |
| 1 | E | 307 | ILE | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | E | 313 | GLN | CA |
| 1 | E | 315 | LEU | CA |
| 1 | E | 347 | ILE | CA |
| 1 | E | 350 | THR | CA |
| 1 | E | 355 | ILE | CB |
| 1 | E | 356 | GLU | CA |
| 1 | E | 368 | VAL | CA |
| 1 | E | 369 | VAL | CA |
| 1 | E | 400 | ILE | CA |
| 1 | E | 401 | SER | CA |
| 1 | E | 403 | ARG | CA |
| 1 | E | 417 | VAL | CA |
| 1 | E | 421 | THR | CB |
| 1 | E | 432 | GLU | CA |
| 1 | E | 447 | LYS | CA |
| 1 | E | 449 | ALA | CA |
| 1 | E | 461 | MET | CA |
| 1 | E | 488 | LEU | CA |
| 1 | E | 489 | ARG | CA |
| 1 | E | 496 | ALA | CA |
| 1 | E | 497 | GLU | CA |
| 1 | F | 7 | VAL | CA |
| 1 | F | 31 | ILE | CA |
| 1 | F | 37 | SER | CA |
| 1 | F | 39 | LEU | CA |
| 1 | F | 59 | ASN | CA |
| 1 | F | 66 | ARG | CA |
| 1 | F | 72 | HIS | CA |
| 1 | F | 111 | LEU | CA |
| 1 | F | 113 | GLN | CA |
| 1 | F | 115 | VAL | CA |
| 1 | F | 116 | HIS | CA |
| 1 | F | 144 | ALA | CA |
| 1 | F | 147 | LYS | CA |
| 1 | F | 148 | GLU | CA |
| 1 | F | 153 | ILE | CB |
| 1 | F | 155 | MET | CA |
| 1 | F | 156 | THR | CA,CB |
| 1 | F | 159 | THR | CB |
| 1 | F | 178 | VAL | CA |
| 1 | F | 203 | ILE | CB |
| 1 | F | 204 | ASP | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | F | 205 | ASP | CA |
| 1 | F | 210 | LYS | CA |
| 1 | F | 222 | GLN | CA |
| 1 | F | 237 | CYS | CA |
| 1 | F | 239 | ILE | CB |
| 1 | F | 242 | THR | CB,CA |
| 1 | F | 243 | ALA | CA |
| 1 | F | 244 | SER | CA |
| 1 | F | 260 | ASN | CA |
| 1 | F | 276 | LEU | CA |
| 1 | F | 281 | ILE | CB,CA |
| 1 | F | 291 | ASP | CA |
| 1 | F | 293 | GLU | CA |
| 1 | F | 294 | LYS | CA |
| 1 | F | 304 | ILE | CB |
| 1 | F | 307 | ILE | CB |
| 1 | F | 313 | GLN | CA |
| 1 | F | 315 | LEU | CA |
| 1 | F | 330 | SER | CA |
| 1 | F | 352 | GLU | CA |
| 1 | F | 354 | VAL | CA |
| 1 | F | 360 | ARG | CA |
| 1 | F | 379 | VAL | CA |
| 1 | F | 400 | ILE | CB |
| 1 | F | 414 | ALA | CA |
| 1 | F | 415 | LEU | CA |
| 1 | F | 430 | ALA | CA |
| 1 | F | 442 | ALA | CA |
| 1 | F | 448 | CYS | CA |
| 1 | F | 451 | LEU | CA |
| 1 | F | 463 | GLU | CA |
| 1 | F | 474 | THR | CB |
| 1 | F | 489 | ARG | CA |
| 1 | F | 496 | ALA | CA |
| 1 | G | 8 | LEU | CA |
| 1 | G | 11 | ASN | CA |
| 1 | G | 30 | ILE | CB |
| 1 | G | 31 | ILE | CA,CB |
| 1 | G | 39 | LEU | CA |
| 1 | G | 42 | LYS | CA |
| 1 | G | 63 | THR | CA |
| 1 | G | 69 | SER | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | G | 71 | GLU | CA |
| 1 | G | 72 | HIS | CA |
| 1 | G | 94 | THR | CA |
| 1 | G | 99 | VAL | CA |
| 1 | G | 111 | LEU | CA |
| 1 | G | 115 | VAL | CA |
| 1 | G | 116 | HIS | CA |
| 1 | G | 118 | THR | CB |
| 1 | G | 139 | ALA | CA |
| 1 | G | 141 | GLU | CA |
| 1 | G | 144 | ALA | CA |
| 1 | G | 155 | MET | CA |
| 1 | G | 156 | THR | CB |
| 1 | G | 190 | LYS | CA |
| 1 | G | 191 | ASP | CA |
| 1 | G | 192 | LEU | CA |
| 1 | G | 201 | ALA | CA |
| 1 | G | 210 | LYS | CA |
| 1 | G | 216 | LYS | CA |
| 1 | G | 236 | ASN | CA |
| 1 | G | 237 | CYS | CA |
| 1 | G | 239 | ILE | CB |
| 1 | G | 245 | GLU | CA |
| 1 | G | 246 | MET | CA |
| 1 | G | 247 | LEU | CA |
| 1 | G | 257 | SER | CA |
| 1 | G | 266 | LYS | CA |
| 1 | G | 271 | LEU | CA |
| 1 | G | 276 | LEU | CA |
| 1 | G | 278 | LYS | CA |
| 1 | G | 289 | LYS | CA |
| 1 | G | 291 | ASP | CA |
| 1 | G | 293 | GLU | CA |
| 1 | G | 302 | ASN | CA |
| 1 | G | 304 | ILE | CB |
| 1 | G | 305 | THR | CA,CB |
| 1 | G | 307 | ILE | CB |
| 1 | G | 313 | GLN | CA |
| 1 | G | 317 | ASP | CA |
| 1 | G | 352 | GLU | CA |
| 1 | G | 359 | ALA | CA |
| 1 | G | 385 | THR | CB |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1 | G | 403 | ARG | CA |
| 1 | G | 421 | THR | CB |
| 1 | G | 426 | ALA | CA |
| 1 | G | 429 | ASP | CA |
| 1 | G | 431 | ILE | CA |
| 1 | G | 432 | GLU | CA |
| 1 | G | 449 | ALA | CA |
| 1 | G | 451 | LEU | CA |
| 1 | G | 466 | VAL | CA |
| 1 | G | 484 | THR | CA |
| 1 | G | 497 | GLU | CA |
| 1 | H | 7 | VAL | CA |
| 1 | H | 11 | ASN | CA |
| 1 | H | 12 | MET | CA |
| 1 | H | 25 | ILE | CB |
| 1 | H | 31 | ILE | CA |
| 1 | H | 38 | THR | CB |
| 1 | H | 39 | LEU | CA |
| 1 | H | 76 | LYS | CA |
| 1 | H | 81 | VAL | CA |
| 1 | H | 89 | VAL | CA |
| 1 | H | 93 | THR | CB |
| 1 | H | 94 | THR | CB |
| 1 | H | 112 | ASP | CA |
| 1 | H | 113 | GLN | CA |
| 1 | H | 116 | HIS | CA |
| 1 | H | 118 | THR | CB |
| 1 | H | 124 | TYR | CA |
| 1 | H | 142 | VAL | CA |
| 1 | H | 147 | LYS | CA |
| 1 | H | 148 | GLU | CA |
| 1 | H | 158 | ILE | CB |
| 1 | H | 166 | ALA | CA |
| 1 | H | 172 | GLU | CA |
| 1 | H | 188 | VAL | CA |
| 1 | H | 201 | ALA | CA |
| 1 | H | 204 | ASP | CA |
| 1 | H | 205 | ASP | CA |
| 1 | H | 210 | LYS | CA |
| 1 | H | 215 | ASP | CA |
| 1 | H | 224 | PRO | CA |
| 1 | H | 228 | THR | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | H | 237 | CYS | CA |
| 1 | H | 247 | LEU | CA |
| 1 | H | 248 | LYS | CA |
| 1 | H | 266 | LYS | CA |
| 1 | H | 286 | ARG | CA |
| 1 | H | 293 | GLU | CA |
| 1 | H | 294 | LYS | CA |
| 1 | H | 302 | ASN | CA |
| 1 | H | 304 | ILE | CB |
| 1 | H | 305 | THR | CA,CB |
| 1 | H | 306 | ASN | CA |
| 1 | H | 307 | ILE | CB |
| 1 | H | 341 | LYS | CA |
| 1 | H | 354 | VAL | CA |
| 1 | H | 362 | VAL | CA |
| 1 | H | 368 | VAL | CA |
| 1 | H | 401 | SER | CA |
| 1 | H | 414 | ALA | CA |
| 1 | H | 415 | LEU | CA |
| 1 | H | 421 | THR | CA |
| 1 | H | 430 | ALA | CA |
| 1 | H | 431 | ILE | CB |
| 1 | H | 432 | GLU | CA |
| 1 | H | 449 | ALA | CA |
| 1 | H | 472 | VAL | CA |
| 1 | H | 478 | GLN | CA |
| 1 | H | 484 | THR | CA |
| 1 | H | 489 | ARG | CA |
| 1 | H | 494 | ILE | CB |
| 1 | I | 7 | VAL | CA |
| 1 | I | 18 | ARG | CA |
| 1 | I | 30 | ILE | CB |
| 1 | I | 31 | ILE | CA,CB |
| 1 | I | 35 | VAL | CA |
| 1 | I | 38 | THR | CB |
| 1 | I | 64 | ILE | CB |
| 1 | I | 88 | GLU | CA |
| 1 | I | 93 | THR | CB |
| 1 | I | 116 | HIS | CA |
| 1 | I | 118 | THR | CB |
| 1 | I | 129 | GLN | CA |
| 1 | I | 134 | LEU | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | I | 145 | GLN | CA |
| 1 | I | 147 | LYS | CA |
| 1 | I | 152 | LYS | CA |
| 1 | I | 153 | ILE | CB,CA |
| 1 | I | 155 | MET | CA |
| 1 | I | 165 | LYS | CA |
| 1 | I | 172 | GLU | CA |
| 1 | I | 188 | VAL | CA |
| 1 | I | 201 | ALA | CA |
| 1 | I | 203 | ILE | CA |
| 1 | I | 210 | LYS | CA |
| 1 | I | 228 | THR | CA |
| 1 | I | 237 | CYS | CA |
| 1 | I | 239 | ILE | CB |
| 1 | I | 243 | ALA | CA |
| 1 | I | 257 | SER | CA |
| 1 | I | 260 | ASN | CA |
| 1 | I | 266 | LYS | CA |
| 1 | I | 270 | ASP | CA |
| 1 | I | 273 | GLN | CA |
| 1 | I | 294 | LYS | CA |
| 1 | I | 299 | THR | CA |
| 1 | I | 305 | THR | CB |
| 1 | I | 307 | ILE | CB |
| 1 | I | 313 | GLN | CA |
| 1 | I | 314 | ASP | CA |
| 1 | I | 315 | LEU | CA |
| 1 | I | 330 | SER | CA |
| 1 | I | 336 | GLU | CA |
| 1 | I | 352 | GLU | CA |
| 1 | I | 354 | VAL | CA |
| 1 | I | 356 | GLU | CA |
| 1 | I | 357 | GLU | CA |
| 1 | I | 359 | ALA | CA |
| 1 | I | 379 | VAL | CA |
| 1 | I | 380 | SER | CA |
| 1 | I | 401 | SER | CA |
| 1 | I | 417 | VAL | CA |
| 1 | I | 421 | THR | CA |
| 1 | I | 422 | LEU | CA |
| 1 | I | 449 | ALA | CA |
| 1 | I | 471 | ARG | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | I | 489 | ARG | CA |
| 1 | I | 493 | VAL | CA |
| 1 | I | 496 | ALA | CA |
| 1 | J | 7 | VAL | CA |
| 1 | J | 18 | ARG | CA |
| 1 | J | 31 | ILE | CA |
| 1 | J | 34 | THR | CB |
| 1 | J | 35 | VAL | CA |
| 1 | J | 37 | SER | CA |
| 1 | J | 39 | LEU | CA |
| 1 | J | 65 | LEU | CA |
| 1 | J | 77 | MET | CA |
| 1 | J | 86 | GLU | CA |
| 1 | J | 87 | LYS | CA |
| 1 | J | 93 | THR | CB |
| 1 | J | 97 | VAL | CA |
| 1 | J | 111 | LEU | CA |
| 1 | J | 115 | VAL | CA |
| 1 | J | 116 | HIS | CA |
| 1 | J | 118 | THR | CB |
| 1 | J | 134 | LEU | CA |
| 1 | J | 156 | THR | CA,CB |
| 1 | J | 168 | GLU | CA |
| 1 | J | 185 | GLU | CA |
| 1 | J | 187 | LYS | CA |
| 1 | J | 192 | LEU | CA |
| 1 | J | 201 | ALA | CA |
| 1 | J | 210 | LYS | CA |
| 1 | J | 216 | LYS | CA |
| 1 | J | 229 | ASP | CA |
| 1 | J | 237 | CYS | CA |
| 1 | J | 245 | GLU | CA |
| 1 | J | 247 | LEU | CA |
| 1 | J | 260 | ASN | CA |
| 1 | J | 266 | LYS | CA |
| 1 | J | 271 | LEU | CA |
| 1 | J | 293 | GLU | CA |
| 1 | J | 297 | LYS | CA |
| 1 | J | 302 | ASN | CA |
| 1 | J | 305 | THR | CA |
| 1 | J | 307 | ILE | CA,CB |
| 1 | J | 311 | SER | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | J | 315 | LEU | CA |
| 1 | J | 337 | CYS | CA |
| 1 | J | 347 | ILE | CB |
| 1 | J | 351 | THR | CB |
| 1 | J | 354 | VAL | CA |
| 1 | J | 371 | CYS | CA |
| 1 | J | 372 | THR | CB |
| 1 | J | 395 | GLU | CA |
| 1 | J | 401 | SER | CA |
| 1 | J | 448 | CYS | CA |
| 1 | J | 489 | ARG | CA |
| 1 | J | 497 | GLU | CA |
| 1 | K | 10 | GLU | CA |
| 1 | K | 12 | MET | CA |
| 1 | K | 15 | TYR | CA |
| 1 | K | 31 | ILE | CA,CB |
| 1 | K | 38 | THR | CA |
| 1 | K | 81 | VAL | CA |
| 1 | K | 83 | LYS | CA |
| 1 | K | 86 | GLU | CA |
| 1 | K | 93 | THR | CB |
| 1 | K | 94 | THR | CB,CA |
| 1 | K | 95 | THR | CB |
| 1 | K | 97 | VAL | CA |
| 1 | K | 115 | VAL | CA |
| 1 | K | 116 | HIS | CA |
| 1 | K | 118 | THR | CB |
| 1 | K | 136 | LYS | CA |
| 1 | K | 139 | ALA | CA |
| 1 | K | 141 | GLU | CA |
| 1 | K | 159 | THR | CB |
| 1 | K | 201 | ALA | CA |
| 1 | K | 210 | LYS | CA |
| 1 | K | 237 | CYS | CA |
| 1 | K | 243 | ALA | CA |
| 1 | K | 257 | SER | CA |
| 1 | K | 260 | ASN | CA |
| 1 | K | 286 | ARG | CA |
| 1 | K | 289 | LYS | CA |
| 1 | K | 294 | LYS | CA |
| 1 | K | 301 | ALA | CA |
| 1 | K | 302 | ASN | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | K | 305 | THR | CA,CB |
| 1 | K | 307 | ILE | CB |
| 1 | K | 308 | LYS | CA |
| 1 | K | 313 | GLN | CA |
| 1 | K | 314 | ASP | CA |
| 1 | K | 337 | CYS | CA |
| 1 | K | 351 | THR | CA |
| 1 | K | 352 | GLU | CA |
| 1 | K | 355 | ILE | CB |
| 1 | K | 356 | GLU | CA |
| 1 | K | 359 | ALA | CA |
| 1 | K | 360 | ARG | CA |
| 1 | K | 371 | CYS | CA |
| 1 | K | 384 | SER | CA |
| 1 | K | 401 | SER | CA |
| 1 | K | 403 | ARG | CA |
| 1 | K | 414 | ALA | CA |
| 1 | K | 417 | VAL | CA |
| 1 | K | 429 | ASP | CA |
| 1 | K | 430 | ALA | CA |
| 1 | K | 432 | GLU | CA |
| 1 | K | 439 | ALA | CA |
| 1 | K | 477 | ILE | CB |
| 1 | K | 489 | ARG | CA |
| 1 | L | 10 | GLU | CA |
| 1 | L | 12 | MET | CA |
| 1 | L | 18 | ARG | CA |
| 1 | L | 31 | ILE | CA |
| 1 | L | 39 | LEU | CA |
| 1 | L | 63 | THR | CB |
| 1 | L | 67 | GLU | CA |
| 1 | L | 93 | THR | CB |
| 1 | L | 94 | THR | CB |
| 1 | L | 113 | GLN | CA |
| 1 | L | 116 | HIS | CA |
| 1 | L | 148 | GLU | CA |
| 1 | L | 172 | GLU | CA |
| 1 | L | 188 | VAL | CA |
| 1 | L | 201 | ALA | CA |
| 1 | L | 210 | LYS | CA |
| 1 | L | 237 | CYS | CA |
| 1 | L | 239 | ILE | CB |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | L | 242 | THR | CA |
| 1 | L | 243 | ALA | CA |
| 1 | L | 260 | ASN | CA |
| 1 | L | 270 | ASP | CA |
| 1 | L | 276 | LEU | CA |
| 1 | L | 293 | GLU | CA |
| 1 | L | 298 | ALA | CA |
| 1 | L | 305 | THR | CA |
| 1 | L | 313 | GLN | CA |
| 1 | L | 315 | LEU | CA |
| 1 | L | 336 | GLU | CA |
| 1 | L | 350 | THR | CA |
| 1 | L | 352 | GLU | CA |
| 1 | L | 374 | GLU | CA |
| 1 | L | 401 | SER | CA |
| 1 | L | 403 | ARG | CA |
| 1 | L | 414 | ALA | CA |
| 1 | L | 417 | VAL | CA |
| 1 | L | 429 | ASP | CA |
| 1 | L | 430 | ALA | CA |
| 1 | L | 443 | SER | CA |
| 1 | L | 462 | CYS | CA |
| 1 | L | 471 | ARG | CA |
| 1 | L | 479 | SER | CA |
| 1 | L | 487 | LEU | CA |
| 1 | L | 489 | ARG | CA |
| 1 | M | 7 | VAL | CA |
| 1 | M | 9 | PRO | CA |
| 1 | M | 11 | ASN | CA |
| 1 | M | 30 | ILE | CA |
| 1 | M | 35 | VAL | CA |
| 1 | M | 39 | LEU | CA |
| 1 | M | 51 | ASP | CA |
| 1 | M | 88 | GLU | CA |
| 1 | M | 89 | VAL | CA |
| 1 | M | 93 | THR | CB |
| 1 | M | 94 | THR | CB,CA |
| 1 | M | 112 | ASP | CA |
| 1 | M | 113 | GLN | CA |
| 1 | M | 115 | VAL | CA |
| 1 | M | 116 | HIS | CA |
| 1 | M | 129 | GLN | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | M | 148 | GLU | CA |
| 1 | M | 166 | ALA | CA |
| 1 | M | 188 | VAL | CA |
| 1 | M | 192 | LEU | CA |
| 1 | M | 201 | ALA | CA |
| 1 | M | 210 | LYS | CA |
| 1 | M | 215 | ASP | CA |
| 1 | M | 216 | LYS | CA |
| 1 | M | 222 | GLN | CA |
| 1 | M | 242 | THR | CB |
| 1 | M | 243 | ALA | CA |
| 1 | M | 244 | SER | CA |
| 1 | M | 256 | ALA | CA |
| 1 | M | 260 | ASN | CA |
| 1 | M | 270 | ASP | CA |
| 1 | M | 288 | LYS | CA |
| 1 | M | 291 | ASP | CA |
| 1 | M | 302 | ASN | CA |
| 1 | M | 305 | THR | CA,CB |
| 1 | M | 306 | ASN | CA |
| 1 | M | 307 | ILE | CB |
| 1 | M | 313 | GLN | CA |
| 1 | M | 336 | GLU | CA |
| 1 | M | 341 | LYS | CA |
| 1 | M | 350 | THR | CA |
| 1 | M | 380 | SER | CA |
| 1 | M | 384 | SER | CA |
| 1 | M | 417 | VAL | CA |
| 1 | M | 429 | ASP | CA |
| 1 | M | 434 | LEU | CA |
| 1 | M | 448 | CYS | CA |
| 1 | M | 449 | ALA | CA |
| 1 | M | 451 | LEU | CA |
| 1 | M | 455 | THR | CB |
| 1 | M | 480 | ALA | CA |
| 1 | M | 494 | ILE | CB |
| 1 | N | 11 | ASN | CA |
| 1 | N | 18 | ARG | CA |
| 1 | N | 31 | ILE | CA |
| 1 | N | 37 | SER | CA |
| 1 | N | 39 | LEU | CA |
| 1 | N | 55 | VAL | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1 | N | 59 | ASN | CA |
| 1 | N | 88 | GLU | CA |
| 1 | N | 99 | VAL | CA |
| 1 | N | 118 | THR | CB |
| 1 | N | 129 | GLN | CA |
| 1 | N | 136 | LYS | CA |
| 1 | N | 138 | ILE | CB |
| 1 | N | 142 | VAL | CA |
| 1 | N | 158 | ILE | CB |
| 1 | N | 159 | THR | CB |
| 1 | N | 161 | LYS | CA |
| 1 | N | 181 | VAL | CA |
| 1 | N | 188 | VAL | CA |
| 1 | N | 201 | ALA | CA |
| 1 | N | 203 | ILE | CB |
| 1 | N | 205 | ASP | CA |
| 1 | N | 210 | LYS | CA |
| 1 | N | 215 | ASP | CA |
| 1 | N | 224 | PRO | CA |
| 1 | N | 237 | CYS | CA |
| 1 | N | 239 | ILE | CB |
| 1 | N | 244 | SER | CA |
| 1 | N | 254 | ILE | CB |
| 1 | N | 260 | ASN | CA |
| 1 | N | 271 | LEU | CA |
| 1 | N | 273 | GLN | CA |
| 1 | N | 297 | LYS | CA |
| 1 | N | 302 | ASN | CA |
| 1 | N | 314 | ASP | CA |
| 1 | N | 351 | THR | CA |
| 1 | N | 356 | GLU | CA |
| 1 | N | 372 | THR | CB |
| 1 | N | 385 | THR | CB |
| 1 | N | 401 | SER | CA |
| 1 | N | 421 | THR | CB |
| 1 | N | 430 | ALA | CA |
| 1 | N | 432 | GLU | CA |
| 1 | N | 447 | LYS | CA |
| 1 | N | 448 | CYS | CA |
| 1 | N | 449 | ALA | CA |
| 1 | N | 471 | ARG | CA |
| 1 | N | 487 | LEU | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | N | 490 | ILE | CB |
| 1 | N | 496 | ALA | CA |
| 1 | O | 30 | ILE | CB |
| 1 | O | 31 | ILE | CA |
| 1 | O | 34 | THR | CB |
| 1 | O | 35 | VAL | CA |
| 1 | O | 39 | LEU | CA |
| 1 | O | 51 | ASP | CA |
| 1 | O | 65 | LEU | CA |
| 1 | O | 71 | GLU | CA |
| 1 | O | 84 | THR | CB |
| 1 | O | 113 | GLN | CA |
| 1 | O | 114 | ASN | CA |
| 1 | O | 116 | HIS | CA |
| 1 | O | 118 | THR | CB |
| 1 | O | 129 | GLN | CA |
| 1 | O | 131 | ALA | CA |
| 1 | O | 134 | LEU | CA |
| 1 | O | 147 | LYS | CA |
| 1 | O | 155 | MET | CA |
| 1 | O | 159 | THR | CB |
| 1 | O | 165 | LYS | CA |
| 1 | O | 185 | GLU | CA |
| 1 | O | 192 | LEU | CA |
| 1 | O | 201 | ALA | CA |
| 1 | O | 210 | LYS | CA |
| 1 | O | 216 | LYS | CA |
| 1 | O | 235 | LEU | CA |
| 1 | O | 239 | ILE | CB |
| 1 | O | 242 | THR | CB |
| 1 | O | 254 | ILE | CB |
| 1 | O | 260 | ASN | CA |
| 1 | O | 271 | LEU | CA |
| 1 | O | 276 | LEU | CA |
| 1 | O | 281 | ILE | CB |
| 1 | O | 294 | LYS | CA |
| 1 | O | 298 | ALA | CA |
| 1 | O | 299 | THR | CA |
| 1 | O | 302 | ASN | CA |
| 1 | O | 304 | ILE | CB |
| 1 | O | 305 | THR | CA,CB |
| 1 | O | 308 | LYS | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | O | 315 | LEU | CA |
| 1 | O | 350 | THR | CA |
| 1 | O | 351 | THR | CB |
| 1 | O | 352 | GLU | CA |
| 1 | O | 354 | VAL | CA |
| 1 | O | 357 | GLU | CA |
| 1 | O | 369 | VAL | CA |
| 1 | O | 372 | THR | CB |
| 1 | O | 380 | SER | CA |
| 1 | O | 401 | SER | CA |
| 1 | O | 403 | ARG | CA |
| 1 | O | 404 | GLU | CA |
| 1 | O | 414 | ALA | CA |
| 1 | O | 421 | THR | CB |
| 1 | O | 429 | ASP | CA |
| 1 | O | 463 | GLU | CA |
| 1 | O | 470 | LEU | CA |
| 1 | O | 478 | GLN | CA |
| 1 | O | 487 | LEU | CA |
| 1 | O | 489 | ARG | CA |
| 1 | O | 495 | ALA | CA |
| 1 | O | 496 | ALA | CA |
| 1 | P | 7 | VAL | CA |
| 1 | P | 12 | MET | CA |
| 1 | P | 30 | ILE | CB |
| 1 | P | 31 | ILE | CA,CB |
| 1 | P | 34 | THR | CB |
| 1 | P | 39 | LEU | CA |
| 1 | P | 42 | LYS | CA |
| 1 | P | 64 | ILE | CB |
| 1 | P | 65 | LEU | CA |
| 1 | P | 99 | VAL | CA |
| 1 | P | 110 | LEU | CA |
| 1 | P | 111 | LEU | CA |
| 1 | P | 113 | GLN | CA |
| 1 | P | 116 | HIS | CA |
| 1 | P | 129 | GLN | CA |
| 1 | P | 134 | LEU | CA |
| 1 | P | 153 | ILE | CB |
| 1 | P | 156 | THR | CB,CA |
| 1 | P | 158 | ILE | CB |
| 1 | P | 159 | THR | CB |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|-------|
| 1 | P | 163 | ALA | CA |
| 1 | P | 172 | GLU | CA |
| 1 | P | 187 | LYS | CA |
| 1 | P | 188 | VAL | CA |
| 1 | P | 201 | ALA | CA |
| 1 | P | 203 | ILE | CA,CB |
| 1 | P | 210 | LYS | CA |
| 1 | P | 216 | LYS | CA |
| 1 | P | 239 | ILE | CB |
| 1 | P | 242 | THR | CB,CA |
| 1 | P | 243 | ALA | CA |
| 1 | P | 244 | SER | CA |
| 1 | P | 247 | LEU | CA |
| 1 | P | 249 | ASP | CA |
| 1 | P | 260 | ASN | CA |
| 1 | P | 271 | LEU | CA |
| 1 | P | 273 | GLN | CA |
| 1 | P | 290 | SER | CA |
| 1 | P | 294 | LYS | CA |
| 1 | P | 299 | THR | CA |
| 1 | P | 302 | ASN | CA |
| 1 | P | 304 | ILE | CB |
| 1 | P | 305 | THR | CA |
| 1 | P | 307 | ILE | CB |
| 1 | P | 309 | ASP | CA |
| 1 | P | 313 | GLN | CA |
| 1 | P | 315 | LEU | CA |
| 1 | P | 341 | LYS | CA |
| 1 | P | 348 | ARG | CA |
| 1 | P | 351 | THR | CA |
| 1 | P | 368 | VAL | CA |
| 1 | P | 379 | VAL | CA |
| 1 | P | 385 | THR | CB |
| 1 | P | 401 | SER | CA |
| 1 | P | 426 | ALA | CA |
| 1 | P | 430 | ALA | CA |
| 1 | P | 448 | CYS | CA |
| 1 | P | 449 | ALA | CA |
| 1 | P | 455 | THR | CB |
| 1 | P | 471 | ARG | CA |
| 1 | P | 489 | ARG | CA |
| 1 | P | 493 | VAL | CA |

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| Mol | Chain | Res | Type | Atom |
|-----|-------|-----|------|------|
| 1 | P | 496 | ALA | CA |

All (4314) planarity outliers are listed below:

| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 10 | GLU | Mainchain |
| 1 | A | 100 | ALA | Mainchain |
| 1 | A | 103 | LEU | Mainchain |
| 1 | A | 106 | LYS | Mainchain |
| 1 | A | 109 | GLU | Mainchain |
| 1 | A | 11 | ASN | Mainchain |
| 1 | A | 110 | LEU | Mainchain |
| 1 | A | 111 | LEU | Mainchain |
| 1 | A | 112 | ASP | Peptide,Mainchain |
| 1 | A | 113 | GLN | Mainchain |
| 1 | A | 114 | ASN | Mainchain |
| 1 | A | 115 | VAL | Mainchain |
| 1 | A | 116 | HIS | Mainchain |
| 1 | A | 117 | PRO | Peptide |
| 1 | A | 12 | MET | Peptide |
| 1 | A | 123 | GLY | Mainchain |
| 1 | A | 124 | TYR | Mainchain |
| 1 | A | 129 | GLN | Mainchain |
| 1 | A | 135 | LEU | Mainchain |
| 1 | A | 138 | ILE | Peptide |
| 1 | A | 142 | VAL | Mainchain |
| 1 | A | 144 | ALA | Mainchain |
| 1 | A | 145 | GLN | Mainchain |
| 1 | A | 146 | ASP | Mainchain |
| 1 | A | 149 | ILE | Mainchain |
| 1 | A | 151 | THR | Mainchain |
| 1 | A | 155 | MET | Mainchain |
| 1 | A | 160 | GLY | Mainchain |
| 1 | A | 162 | GLY | Mainchain |
| 1 | A | 163 | ALA | Peptide,Mainchain |
| 1 | A | 172 | GLU | Mainchain |
| 1 | A | 175 | VAL | Mainchain |
| 1 | A | 176 | GLU | Mainchain |
| 1 | A | 177 | ALA | Mainchain |
| 1 | A | 179 | SER | Mainchain |
| 1 | A | 181 | VAL | Mainchain |
| 1 | A | 186 | GLY | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 188 | VAL | Mainchain |
| 1 | A | 189 | ASP | Mainchain |
| 1 | A | 190 | LYS | Mainchain |
| 1 | A | 193 | ILE | Mainchain |
| 1 | A | 198 | LYS | Mainchain |
| 1 | A | 200 | GLY | Peptide,Mainchain |
| 1 | A | 201 | ALA | Peptide |
| 1 | A | 202 | SER | Mainchain |
| 1 | A | 204 | ASP | Mainchain |
| 1 | A | 205 | ASP | Mainchain |
| 1 | A | 206 | THR | Mainchain |
| 1 | A | 207 | GLU | Mainchain |
| 1 | A | 209 | ILE | Mainchain |
| 1 | A | 210 | LYS | Mainchain |
| 1 | A | 215 | ASP | Mainchain |
| 1 | A | 217 | GLU | Mainchain |
| 1 | A | 218 | ARG | Mainchain |
| 1 | A | 220 | SER | Mainchain |
| 1 | A | 221 | ALA | Mainchain |
| 1 | A | 222 | GLN | Mainchain |
| 1 | A | 223 | MET | Mainchain |
| 1 | A | 225 | LYS | Mainchain |
| 1 | A | 227 | VAL | Mainchain |
| 1 | A | 228 | THR | Mainchain |
| 1 | A | 229 | ASP | Mainchain |
| 1 | A | 23 | MET | Mainchain |
| 1 | A | 232 | ILE | Mainchain |
| 1 | A | 236 | ASN | Peptide |
| 1 | A | 237 | CYS | Peptide,Mainchain |
| 1 | A | 238 | ALA | Mainchain |
| 1 | A | 243 | ALA | Mainchain |
| 1 | A | 244 | SER | Mainchain |
| 1 | A | 247 | LEU | Mainchain |
| 1 | A | 252 | ALA | Mainchain |
| 1 | A | 255 | LYS | Mainchain |
| 1 | A | 257 | SER | Mainchain |
| 1 | A | 258 | GLY | Mainchain |
| 1 | A | 266 | LYS | Mainchain |
| 1 | A | 267 | GLY | Mainchain |
| 1 | A | 268 | ILE | Mainchain |
| 1 | A | 269 | ASP | Mainchain |
| 1 | A | 27 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 276 | LEU | Mainchain |
| 1 | A | 277 | ALA | Mainchain |
| 1 | A | 278 | LYS | Mainchain |
| 1 | A | 279 | GLU | Peptide,Mainchain |
| 1 | A | 28 | GLY | Mainchain |
| 1 | A | 281 | ILE | Mainchain |
| 1 | A | 284 | ALA | Mainchain |
| 1 | A | 285 | ARG | Peptide |
| 1 | A | 286 | ARG | Mainchain |
| 1 | A | 288 | LYS | Mainchain |
| 1 | A | 289 | LYS | Mainchain |
| 1 | A | 290 | SER | Mainchain |
| 1 | A | 294 | LYS | Mainchain |
| 1 | A | 297 | LYS | Mainchain |
| 1 | A | 298 | ALA | Mainchain |
| 1 | A | 301 | ALA | Mainchain |
| 1 | A | 302 | ASN | Mainchain |
| 1 | A | 304 | ILE | Mainchain |
| 1 | A | 305 | THR | Mainchain |
| 1 | A | 306 | ASN | Mainchain |
| 1 | A | 307 | ILE | Peptide,Mainchain |
| 1 | A | 309 | ASP | Mainchain |
| 1 | A | 310 | LEU | Peptide |
| 1 | A | 312 | ALA | Mainchain |
| 1 | A | 313 | GLN | Peptide |
| 1 | A | 314 | ASP | Peptide,Mainchain |
| 1 | A | 315 | LEU | Peptide |
| 1 | A | 316 | GLY | Mainchain |
| 1 | A | 317 | ASP | Mainchain |
| 1 | A | 318 | ALA | Peptide |
| 1 | A | 319 | GLY | Mainchain |
| 1 | A | 32 | ALA | Mainchain |
| 1 | A | 324 | ARG | Mainchain |
| 1 | A | 327 | SER | Mainchain |
| 1 | A | 328 | GLY | Peptide |
| 1 | A | 33 | GLU | Mainchain |
| 1 | A | 330 | SER | Mainchain |
| 1 | A | 335 | GLU | Mainchain |
| 1 | A | 337 | CYS | Mainchain |
| 1 | A | 338 | LYS | Mainchain |
| 1 | A | 340 | PRO | Peptide,Mainchain |
| 1 | A | 341 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 342 | ALA | Mainchain |
| 1 | A | 345 | MET | Mainchain |
| 1 | A | 346 | LEU | Mainchain |
| 1 | A | 349 | GLY | Peptide |
| 1 | A | 351 | THR | Peptide |
| 1 | A | 354 | VAL | Mainchain |
| 1 | A | 355 | ILE | Peptide,Mainchain |
| 1 | A | 356 | GLU | Mainchain |
| 1 | A | 357 | GLU | Mainchain |
| 1 | A | 361 | ALA | Mainchain |
| 1 | A | 363 | ASP | Mainchain |
| 1 | A | 364 | ASP | Peptide |
| 1 | A | 365 | ALA | Mainchain |
| 1 | A | 369 | VAL | Mainchain |
| 1 | A | 370 | GLY | Mainchain |
| 1 | A | 371 | CYS | Mainchain |
| 1 | A | 372 | THR | Mainchain |
| 1 | A | 373 | ILE | Peptide,Mainchain |
| 1 | A | 374 | GLU | Mainchain |
| 1 | A | 376 | GLY | Mainchain |
| 1 | A | 377 | ARG | Mainchain |
| 1 | A | 378 | ILE | Mainchain |
| 1 | A | 38 | THR | Mainchain |
| 1 | A | 380 | SER | Mainchain |
| 1 | A | 382 | GLY | Peptide,Mainchain |
| 1 | A | 383 | GLY | Mainchain |
| 1 | A | 384 | SER | Mainchain |
| 1 | A | 387 | VAL | Mainchain |
| 1 | A | 39 | LEU | Mainchain |
| 1 | A | 393 | LEU | Mainchain |
| 1 | A | 395 | GLU | Mainchain |
| 1 | A | 400 | ILE | Peptide |
| 1 | A | 406 | LEU | Mainchain |
| 1 | A | 407 | ALA | Mainchain |
| 1 | A | 409 | ARG | Mainchain |
| 1 | A | 412 | ALA | Mainchain |
| 1 | A | 415 | LEU | Mainchain |
| 1 | A | 416 | GLU | Mainchain |
| 1 | A | 42 | LYS | Peptide,Mainchain |
| 1 | A | 425 | ASN | Mainchain |
| 1 | A | 426 | ALA | Mainchain |
| 1 | A | 427 | GLY | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 428 | LEU | Peptide,Mainchain |
| 1 | A | 43 | GLY | Peptide,Mainchain |
| 1 | A | 430 | ALA | Mainchain |
| 1 | A | 434 | LEU | Mainchain |
| 1 | A | 438 | ARG | Mainchain |
| 1 | A | 44 | MET | Mainchain |
| 1 | A | 442 | ALA | Mainchain |
| 1 | A | 443 | SER | Mainchain |
| 1 | A | 444 | ASN | Mainchain |
| 1 | A | 447 | LYS | Mainchain |
| 1 | A | 448 | CYS | Peptide |
| 1 | A | 450 | GLY | Mainchain |
| 1 | A | 452 | ASN | Mainchain |
| 1 | A | 453 | VAL | Mainchain |
| 1 | A | 456 | GLY | Mainchain |
| 1 | A | 459 | GLU | Mainchain |
| 1 | A | 462 | CYS | Mainchain |
| 1 | A | 463 | GLU | Mainchain |
| 1 | A | 464 | ASN | Mainchain |
| 1 | A | 465 | GLY | Mainchain |
| 1 | A | 467 | VAL | Mainchain |
| 1 | A | 468 | GLU | Mainchain |
| 1 | A | 471 | ARG | Peptide,Mainchain |
| 1 | A | 472 | VAL | Mainchain |
| 1 | A | 478 | GLN | Mainchain |
| 1 | A | 480 | ALA | Mainchain |
| 1 | A | 482 | GLU | Mainchain |
| 1 | A | 484 | THR | Mainchain |
| 1 | A | 485 | GLU | Peptide |
| 1 | A | 486 | MET | Mainchain |
| 1 | A | 487 | LEU | Mainchain |
| 1 | A | 489 | ARG | Mainchain |
| 1 | A | 495 | ALA | Peptide,Mainchain |
| 1 | A | 51 | ASP | Mainchain |
| 1 | A | 53 | GLY | Mainchain |
| 1 | A | 55 | VAL | Peptide,Mainchain |
| 1 | A | 56 | VAL | Mainchain |
| 1 | A | 57 | VAL | Mainchain |
| 1 | A | 60 | ASP | Mainchain |
| 1 | A | 62 | VAL | Mainchain |
| 1 | A | 63 | THR | Mainchain |
| 1 | A | 68 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | A | 69 | SER | Mainchain |
| 1 | A | 70 | VAL | Mainchain |
| 1 | A | 71 | GLU | Mainchain |
| 1 | A | 74 | ALA | Mainchain |
| 1 | A | 75 | ALA | Mainchain |
| 1 | A | 77 | MET | Mainchain |
| 1 | A | 78 | LEU | Mainchain |
| 1 | A | 8 | LEU | Peptide |
| 1 | A | 82 | ALA | Mainchain |
| 1 | A | 83 | LYS | Peptide,Mainchain |
| 1 | A | 86 | GLU | Mainchain |
| 1 | A | 9 | PRO | Peptide |
| 1 | A | 90 | GLY | Mainchain |
| 1 | A | 93 | THR | Mainchain |
| 1 | A | 94 | THR | Mainchain |
| 1 | A | 95 | THR | Peptide,Mainchain |
| 1 | A | 97 | VAL | Mainchain |
| 1 | B | 10 | GLU | Mainchain |
| 1 | B | 100 | ALA | Mainchain |
| 1 | B | 101 | GLY | Mainchain |
| 1 | B | 102 | GLU | Mainchain |
| 1 | B | 104 | LEU | Mainchain |
| 1 | B | 105 | ARG | Mainchain |
| 1 | B | 106 | LYS | Mainchain |
| 1 | B | 108 | GLU | Mainchain |
| 1 | B | 11 | ASN | Mainchain |
| 1 | B | 111 | LEU | Mainchain |
| 1 | B | 112 | ASP | Peptide,Mainchain |
| 1 | B | 113 | GLN | Peptide,Mainchain |
| 1 | B | 115 | VAL | Peptide,Mainchain |
| 1 | B | 116 | HIS | Mainchain |
| 1 | B | 117 | PRO | Mainchain |
| 1 | B | 119 | ILE | Mainchain |
| 1 | B | 125 | GLN | Mainchain |
| 1 | B | 128 | ALA | Mainchain |
| 1 | B | 13 | LYS | Mainchain |
| 1 | B | 131 | ALA | Mainchain |
| 1 | B | 132 | GLN | Mainchain |
| 1 | B | 135 | LEU | Mainchain |
| 1 | B | 136 | LYS | Mainchain |
| 1 | B | 138 | ILE | Peptide,Mainchain |
| 1 | B | 139 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | B | 14 | ARG | Mainchain |
| 1 | B | 140 | CYS | Mainchain |
| 1 | B | 141 | GLU | Mainchain |
| 1 | B | 144 | ALA | Mainchain |
| 1 | B | 146 | ASP | Mainchain |
| 1 | B | 150 | LEU | Mainchain |
| 1 | B | 152 | LYS | Mainchain |
| 1 | B | 153 | ILE | Mainchain |
| 1 | B | 154 | ALA | Peptide,Mainchain |
| 1 | B | 155 | MET | Mainchain |
| 1 | B | 159 | THR | Mainchain |
| 1 | B | 16 | MET | Peptide,Mainchain |
| 1 | B | 160 | GLY | Mainchain |
| 1 | B | 161 | LYS | Mainchain |
| 1 | B | 162 | GLY | Mainchain |
| 1 | B | 17 | GLY | Peptide,Mainchain |
| 1 | B | 170 | LEU | Mainchain |
| 1 | B | 172 | GLU | Mainchain |
| 1 | B | 173 | ILE | Mainchain |
| 1 | B | 175 | VAL | Mainchain |
| 1 | B | 176 | GLU | Mainchain |
| 1 | B | 177 | ALA | Mainchain |
| 1 | B | 18 | ARG | Mainchain |
| 1 | B | 181 | VAL | Mainchain |
| 1 | B | 182 | VAL | Mainchain |
| 1 | B | 187 | LYS | Peptide,Mainchain |
| 1 | B | 188 | VAL | Mainchain |
| 1 | B | 19 | ASP | Mainchain |
| 1 | B | 190 | LYS | Mainchain |
| 1 | B | 191 | ASP | Peptide,Mainchain |
| 1 | B | 192 | LEU | Mainchain |
| 1 | B | 197 | LYS | Mainchain |
| 1 | B | 199 | SER | Mainchain |
| 1 | B | 20 | ALA | Mainchain |
| 1 | B | 201 | ALA | Mainchain |
| 1 | B | 203 | ILE | Mainchain |
| 1 | B | 205 | ASP | Mainchain |
| 1 | B | 207 | GLU | Mainchain |
| 1 | B | 209 | ILE | Mainchain |
| 1 | B | 210 | LYS | Peptide,Mainchain |
| 1 | B | 215 | ASP | Mainchain |
| 1 | B | 216 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | B | 218 | ARG | Mainchain |
| 1 | B | 219 | VAL | Mainchain |
| 1 | B | 221 | ALA | Mainchain |
| 1 | B | 222 | GLN | Mainchain |
| 1 | B | 224 | PRO | Mainchain |
| 1 | B | 228 | THR | Mainchain |
| 1 | B | 23 | MET | Mainchain |
| 1 | B | 232 | ILE | Mainchain |
| 1 | B | 234 | LEU | Peptide |
| 1 | B | 237 | CYS | Mainchain |
| 1 | B | 238 | ALA | Mainchain |
| 1 | B | 240 | GLU | Mainchain |
| 1 | B | 241 | GLU | Mainchain |
| 1 | B | 244 | SER | Mainchain |
| 1 | B | 25 | ILE | Mainchain |
| 1 | B | 252 | ALA | Mainchain |
| 1 | B | 255 | LYS | Mainchain |
| 1 | B | 259 | ALA | Peptide |
| 1 | B | 260 | ASN | Mainchain |
| 1 | B | 265 | GLN | Mainchain |
| 1 | B | 266 | LYS | Mainchain |
| 1 | B | 274 | HIS | Mainchain |
| 1 | B | 276 | LEU | Mainchain |
| 1 | B | 279 | GLU | Mainchain |
| 1 | B | 281 | ILE | Mainchain |
| 1 | B | 283 | ALA | Mainchain |
| 1 | B | 285 | ARG | Peptide,Mainchain |
| 1 | B | 288 | LYS | Peptide,Mainchain |
| 1 | B | 289 | LYS | Peptide,Mainchain |
| 1 | B | 290 | SER | Mainchain |
| 1 | B | 295 | LEU | Mainchain |
| 1 | B | 299 | THR | Mainchain |
| 1 | B | 30 | ILE | Mainchain |
| 1 | B | 301 | ALA | Peptide,Mainchain |
| 1 | B | 302 | ASN | Peptide,Mainchain |
| 1 | B | 303 | VAL | Mainchain |
| 1 | B | 304 | ILE | Mainchain |
| 1 | B | 305 | THR | Mainchain |
| 1 | B | 306 | ASN | Peptide,Mainchain |
| 1 | B | 307 | ILE | Mainchain |
| 1 | B | 31 | ILE | Mainchain |
| 1 | B | 310 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | B | 311 | SER | Mainchain |
| 1 | B | 312 | ALA | Peptide,Mainchain |
| 1 | B | 313 | GLN | Peptide,Mainchain |
| 1 | B | 314 | ASP | Mainchain |
| 1 | B | 318 | ALA | Mainchain |
| 1 | B | 319 | GLY | Mainchain |
| 1 | B | 320 | LEU | Mainchain |
| 1 | B | 327 | SER | Peptide,Mainchain |
| 1 | B | 328 | GLY | Mainchain |
| 1 | B | 329 | ASP | Mainchain |
| 1 | B | 331 | MET | Mainchain |
| 1 | B | 338 | LYS | Mainchain |
| 1 | B | 340 | PRO | Mainchain |
| 1 | B | 342 | ALA | Mainchain |
| 1 | B | 343 | VAL | Mainchain |
| 1 | B | 346 | LEU | Mainchain |
| 1 | B | 347 | ILE | Mainchain |
| 1 | B | 349 | GLY | Peptide,Mainchain |
| 1 | B | 35 | VAL | Mainchain |
| 1 | B | 350 | THR | Peptide |
| 1 | B | 351 | THR | Mainchain |
| 1 | B | 352 | GLU | Mainchain |
| 1 | B | 355 | ILE | Peptide,Mainchain |
| 1 | B | 358 | VAL | Mainchain |
| 1 | B | 359 | ALA | Mainchain |
| 1 | B | 36 | ARG | Mainchain |
| 1 | B | 360 | ARG | Mainchain |
| 1 | B | 363 | ASP | Mainchain |
| 1 | B | 364 | ASP | Peptide,Mainchain |
| 1 | B | 37 | SER | Mainchain |
| 1 | B | 371 | CYS | Mainchain |
| 1 | B | 372 | THR | Peptide,Mainchain |
| 1 | B | 373 | ILE | Mainchain |
| 1 | B | 374 | GLU | Mainchain |
| 1 | B | 375 | ASP | Mainchain |
| 1 | B | 376 | GLY | Mainchain |
| 1 | B | 377 | ARG | Mainchain |
| 1 | B | 378 | ILE | Mainchain |
| 1 | B | 379 | VAL | Peptide |
| 1 | B | 380 | SER | Peptide,Mainchain |
| 1 | B | 381 | GLY | Peptide,Mainchain |
| 1 | B | 384 | SER | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | B | 385 | THR | Mainchain |
| 1 | B | 388 | GLU | Mainchain |
| 1 | B | 389 | LEU | Mainchain |
| 1 | B | 393 | LEU | Mainchain |
| 1 | B | 396 | TYR | Mainchain |
| 1 | B | 398 | GLU | Mainchain |
| 1 | B | 406 | LEU | Mainchain |
| 1 | B | 409 | ARG | Mainchain |
| 1 | B | 41 | PRO | Peptide |
| 1 | B | 411 | PHE | Mainchain |
| 1 | B | 412 | ALA | Mainchain |
| 1 | B | 416 | GLU | Mainchain |
| 1 | B | 419 | PRO | Mainchain |
| 1 | B | 420 | ARG | Mainchain |
| 1 | B | 421 | THR | Mainchain |
| 1 | B | 425 | ASN | Mainchain |
| 1 | B | 43 | GLY | Mainchain |
| 1 | B | 430 | ALA | Mainchain |
| 1 | B | 431 | ILE | Mainchain |
| 1 | B | 434 | LEU | Mainchain |
| 1 | B | 44 | MET | Mainchain |
| 1 | B | 440 | ALA | Mainchain |
| 1 | B | 443 | SER | Mainchain |
| 1 | B | 445 | GLY | Peptide |
| 1 | B | 447 | LYS | Mainchain |
| 1 | B | 448 | CYS | Peptide,Mainchain |
| 1 | B | 452 | ASN | Mainchain |
| 1 | B | 459 | GLU | Peptide,Mainchain |
| 1 | B | 460 | ASP | Mainchain |
| 1 | B | 461 | MET | Mainchain |
| 1 | B | 463 | GLU | Mainchain |
| 1 | B | 465 | GLY | Mainchain |
| 1 | B | 466 | VAL | Mainchain |
| 1 | B | 467 | VAL | Mainchain |
| 1 | B | 469 | PRO | Mainchain |
| 1 | B | 470 | LEU | Mainchain |
| 1 | B | 471 | ARG | Peptide,Mainchain |
| 1 | B | 472 | VAL | Mainchain |
| 1 | B | 473 | LYS | Mainchain |
| 1 | B | 474 | THR | Mainchain |
| 1 | B | 475 | GLN | Mainchain |
| 1 | B | 477 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | B | 481 | ALA | Mainchain |
| 1 | B | 482 | GLU | Mainchain |
| 1 | B | 485 | GLU | Mainchain |
| 1 | B | 486 | MET | Mainchain |
| 1 | B | 487 | LEU | Mainchain |
| 1 | B | 488 | LEU | Mainchain |
| 1 | B | 491 | ASP | Mainchain |
| 1 | B | 494 | ILE | Mainchain |
| 1 | B | 495 | ALA | Mainchain |
| 1 | B | 496 | ALA | Mainchain |
| 1 | B | 50 | ASP | Peptide |
| 1 | B | 52 | LEU | Mainchain |
| 1 | B | 54 | ASP | Mainchain |
| 1 | B | 55 | VAL | Peptide |
| 1 | B | 56 | VAL | Mainchain |
| 1 | B | 58 | THR | Mainchain |
| 1 | B | 60 | ASP | Mainchain |
| 1 | B | 62 | VAL | Mainchain |
| 1 | B | 68 | MET | Mainchain |
| 1 | B | 69 | SER | Peptide |
| 1 | B | 71 | GLU | Mainchain |
| 1 | B | 72 | HIS | Mainchain |
| 1 | B | 76 | LYS | Mainchain |
| 1 | B | 8 | LEU | Mainchain |
| 1 | B | 82 | ALA | Mainchain |
| 1 | B | 83 | LYS | Mainchain |
| 1 | B | 87 | LYS | Peptide,Mainchain |
| 1 | B | 89 | VAL | Mainchain |
| 1 | B | 90 | GLY | Mainchain |
| 1 | B | 91 | ASP | Mainchain |
| 1 | B | 92 | GLY | Mainchain |
| 1 | B | 93 | THR | Mainchain |
| 1 | B | 94 | THR | Mainchain |
| 1 | B | 95 | THR | Mainchain |
| 1 | B | 96 | ALA | Peptide |
| 1 | C | 101 | GLY | Mainchain |
| 1 | C | 102 | GLU | Mainchain |
| 1 | C | 103 | LEU | Mainchain |
| 1 | C | 104 | LEU | Mainchain |
| 1 | C | 106 | LYS | Mainchain |
| 1 | C | 107 | ALA | Mainchain |
| 1 | C | 108 | GLU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 109 | GLU | Mainchain |
| 1 | C | 11 | ASN | Peptide,Mainchain |
| 1 | C | 112 | ASP | Peptide |
| 1 | C | 113 | GLN | Peptide |
| 1 | C | 115 | VAL | Peptide |
| 1 | C | 117 | PRO | Peptide |
| 1 | C | 119 | ILE | Mainchain |
| 1 | C | 12 | MET | Peptide |
| 1 | C | 121 | VAL | Mainchain |
| 1 | C | 123 | GLY | Mainchain |
| 1 | C | 133 | GLU | Mainchain |
| 1 | C | 135 | LEU | Mainchain |
| 1 | C | 136 | LYS | Mainchain |
| 1 | C | 137 | THR | Mainchain |
| 1 | C | 138 | ILE | Mainchain |
| 1 | C | 139 | ALA | Mainchain |
| 1 | C | 14 | ARG | Mainchain |
| 1 | C | 141 | GLU | Peptide,Mainchain |
| 1 | C | 143 | GLY | Mainchain |
| 1 | C | 145 | GLN | Mainchain |
| 1 | C | 146 | ASP | Peptide |
| 1 | C | 147 | LYS | Mainchain |
| 1 | C | 151 | THR | Mainchain |
| 1 | C | 156 | THR | Mainchain |
| 1 | C | 157 | SER | Mainchain |
| 1 | C | 159 | THR | Mainchain |
| 1 | C | 160 | GLY | Mainchain |
| 1 | C | 162 | GLY | Mainchain |
| 1 | C | 163 | ALA | Peptide |
| 1 | C | 165 | LYS | Mainchain |
| 1 | C | 167 | LYS | Mainchain |
| 1 | C | 168 | GLU | Mainchain |
| 1 | C | 17 | GLY | Mainchain |
| 1 | C | 170 | LEU | Mainchain |
| 1 | C | 171 | ALA | Mainchain |
| 1 | C | 172 | GLU | Mainchain |
| 1 | C | 176 | GLU | Mainchain |
| 1 | C | 178 | VAL | Peptide,Mainchain |
| 1 | C | 179 | SER | Mainchain |
| 1 | C | 182 | VAL | Mainchain |
| 1 | C | 183 | ASP | Mainchain |
| 1 | C | 187 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 188 | VAL | Peptide,Mainchain |
| 1 | C | 189 | ASP | Mainchain |
| 1 | C | 190 | LYS | Mainchain |
| 1 | C | 196 | GLU | Mainchain |
| 1 | C | 197 | LYS | Mainchain |
| 1 | C | 198 | LYS | Peptide |
| 1 | C | 199 | SER | Mainchain |
| 1 | C | 201 | ALA | Peptide |
| 1 | C | 204 | ASP | Mainchain |
| 1 | C | 205 | ASP | Mainchain |
| 1 | C | 206 | THR | Mainchain |
| 1 | C | 209 | ILE | Mainchain |
| 1 | C | 21 | GLN | Mainchain |
| 1 | C | 211 | GLY | Mainchain |
| 1 | C | 217 | GLU | Mainchain |
| 1 | C | 22 | ARG | Mainchain |
| 1 | C | 221 | ALA | Peptide,Mainchain |
| 1 | C | 225 | LYS | Mainchain |
| 1 | C | 226 | LYS | Mainchain |
| 1 | C | 228 | THR | Mainchain |
| 1 | C | 229 | ASP | Mainchain |
| 1 | C | 23 | MET | Mainchain |
| 1 | C | 232 | ILE | Mainchain |
| 1 | C | 233 | ALA | Mainchain |
| 1 | C | 235 | LEU | Peptide,Mainchain |
| 1 | C | 236 | ASN | Mainchain |
| 1 | C | 237 | CYS | Mainchain |
| 1 | C | 238 | ALA | Mainchain |
| 1 | C | 239 | ILE | Mainchain |
| 1 | C | 240 | GLU | Mainchain |
| 1 | C | 241 | GLU | Mainchain |
| 1 | C | 242 | THR | Mainchain |
| 1 | C | 245 | GLU | Mainchain |
| 1 | C | 249 | ASP | Mainchain |
| 1 | C | 255 | LYS | Mainchain |
| 1 | C | 257 | SER | Mainchain |
| 1 | C | 258 | GLY | Mainchain |
| 1 | C | 259 | ALA | Mainchain |
| 1 | C | 26 | LEU | Mainchain |
| 1 | C | 262 | LEU | Mainchain |
| 1 | C | 265 | GLN | Mainchain |
| 1 | C | 266 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 267 | GLY | Mainchain |
| 1 | C | 269 | ASP | Mainchain |
| 1 | C | 27 | ALA | Mainchain |
| 1 | C | 270 | ASP | Peptide,Mainchain |
| 1 | C | 277 | ALA | Mainchain |
| 1 | C | 279 | GLU | Mainchain |
| 1 | C | 28 | GLY | Mainchain |
| 1 | C | 280 | GLY | Peptide |
| 1 | C | 281 | ILE | Mainchain |
| 1 | C | 284 | ALA | Mainchain |
| 1 | C | 285 | ARG | Mainchain |
| 1 | C | 286 | ARG | Mainchain |
| 1 | C | 288 | LYS | Mainchain |
| 1 | C | 289 | LYS | Mainchain |
| 1 | C | 290 | SER | Mainchain |
| 1 | C | 291 | ASP | Peptide,Mainchain |
| 1 | C | 292 | MET | Mainchain |
| 1 | C | 296 | ALA | Mainchain |
| 1 | C | 297 | LYS | Mainchain |
| 1 | C | 30 | ILE | Mainchain |
| 1 | C | 300 | GLY | Mainchain |
| 1 | C | 301 | ALA | Mainchain |
| 1 | C | 302 | ASN | Mainchain |
| 1 | C | 303 | VAL | Mainchain |
| 1 | C | 304 | ILE | Mainchain |
| 1 | C | 306 | ASN | Mainchain |
| 1 | C | 307 | ILE | Mainchain |
| 1 | C | 308 | LYS | Mainchain |
| 1 | C | 310 | LEU | Peptide |
| 1 | C | 311 | SER | Peptide |
| 1 | C | 312 | ALA | Mainchain |
| 1 | C | 313 | GLN | Mainchain |
| 1 | C | 314 | ASP | Mainchain |
| 1 | C | 317 | ASP | Mainchain |
| 1 | C | 322 | GLU | Mainchain |
| 1 | C | 326 | ILE | Mainchain |
| 1 | C | 328 | GLY | Mainchain |
| 1 | C | 33 | GLU | Mainchain |
| 1 | C | 335 | GLU | Peptide |
| 1 | C | 336 | GLU | Mainchain |
| 1 | C | 339 | HIS | Mainchain |
| 1 | C | 341 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 343 | VAL | Mainchain |
| 1 | C | 346 | LEU | Mainchain |
| 1 | C | 347 | ILE | Mainchain |
| 1 | C | 348 | ARG | Mainchain |
| 1 | C | 349 | GLY | Mainchain |
| 1 | C | 350 | THR | Peptide,Mainchain |
| 1 | C | 351 | THR | Mainchain |
| 1 | C | 352 | GLU | Mainchain |
| 1 | C | 353 | HIS | Mainchain |
| 1 | C | 354 | VAL | Mainchain |
| 1 | C | 356 | GLU | Mainchain |
| 1 | C | 357 | GLU | Mainchain |
| 1 | C | 361 | ALA | Peptide |
| 1 | C | 366 | VAL | Mainchain |
| 1 | C | 367 | GLY | Peptide |
| 1 | C | 37 | SER | Mainchain |
| 1 | C | 370 | GLY | Mainchain |
| 1 | C | 371 | CYS | Mainchain |
| 1 | C | 372 | THR | Mainchain |
| 1 | C | 373 | ILE | Mainchain |
| 1 | C | 374 | GLU | Mainchain |
| 1 | C | 376 | GLY | Peptide,Mainchain |
| 1 | C | 377 | ARG | Peptide,Mainchain |
| 1 | C | 378 | ILE | Mainchain |
| 1 | C | 379 | VAL | Mainchain |
| 1 | C | 38 | THR | Mainchain |
| 1 | C | 380 | SER | Peptide,Mainchain |
| 1 | C | 381 | GLY | Mainchain |
| 1 | C | 384 | SER | Mainchain |
| 1 | C | 389 | LEU | Mainchain |
| 1 | C | 394 | ARG | Mainchain |
| 1 | C | 396 | TYR | Mainchain |
| 1 | C | 398 | GLU | Peptide |
| 1 | C | 399 | GLY | Mainchain |
| 1 | C | 40 | GLY | Mainchain |
| 1 | C | 400 | ILE | Mainchain |
| 1 | C | 401 | SER | Mainchain |
| 1 | C | 402 | GLY | Peptide |
| 1 | C | 403 | ARG | Mainchain |
| 1 | C | 405 | GLN | Peptide,Mainchain |
| 1 | C | 406 | LEU | Mainchain |
| 1 | C | 41 | PRO | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 410 | ALA | Mainchain |
| 1 | C | 411 | PHE | Mainchain |
| 1 | C | 412 | ALA | Mainchain |
| 1 | C | 415 | LEU | Mainchain |
| 1 | C | 416 | GLU | Mainchain |
| 1 | C | 418 | ILE | Mainchain |
| 1 | C | 42 | LYS | Mainchain |
| 1 | C | 420 | ARG | Mainchain |
| 1 | C | 422 | LEU | Mainchain |
| 1 | C | 425 | ASN | Mainchain |
| 1 | C | 427 | GLY | Peptide,Mainchain |
| 1 | C | 428 | LEU | Mainchain |
| 1 | C | 429 | ASP | Peptide |
| 1 | C | 437 | VAL | Mainchain |
| 1 | C | 439 | ALA | Mainchain |
| 1 | C | 44 | MET | Mainchain |
| 1 | C | 443 | SER | Mainchain |
| 1 | C | 446 | ASN | Mainchain |
| 1 | C | 447 | LYS | Mainchain |
| 1 | C | 448 | CYS | Mainchain |
| 1 | C | 450 | GLY | Peptide,Mainchain |
| 1 | C | 452 | ASN | Mainchain |
| 1 | C | 453 | VAL | Mainchain |
| 1 | C | 454 | PHE | Mainchain |
| 1 | C | 455 | THR | Mainchain |
| 1 | C | 456 | GLY | Mainchain |
| 1 | C | 458 | VAL | Mainchain |
| 1 | C | 460 | ASP | Mainchain |
| 1 | C | 461 | MET | Mainchain |
| 1 | C | 462 | CYS | Mainchain |
| 1 | C | 463 | GLU | Mainchain |
| 1 | C | 467 | VAL | Mainchain |
| 1 | C | 469 | PRO | Mainchain |
| 1 | C | 478 | GLN | Mainchain |
| 1 | C | 486 | MET | Mainchain |
| 1 | C | 487 | LEU | Mainchain |
| 1 | C | 489 | ARG | Mainchain |
| 1 | C | 49 | VAL | Mainchain |
| 1 | C | 491 | ASP | Mainchain |
| 1 | C | 495 | ALA | Peptide,Mainchain |
| 1 | C | 496 | ALA | Peptide |
| 1 | C | 50 | ASP | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | C | 51 | ASP | Mainchain |
| 1 | C | 52 | LEU | Mainchain |
| 1 | C | 55 | VAL | Mainchain |
| 1 | C | 56 | VAL | Mainchain |
| 1 | C | 57 | VAL | Mainchain |
| 1 | C | 60 | ASP | Mainchain |
| 1 | C | 62 | VAL | Mainchain |
| 1 | C | 63 | THR | Mainchain |
| 1 | C | 68 | MET | Mainchain |
| 1 | C | 70 | VAL | Mainchain |
| 1 | C | 71 | GLU | Peptide,Mainchain |
| 1 | C | 76 | LYS | Mainchain |
| 1 | C | 77 | MET | Mainchain |
| 1 | C | 79 | ILE | Mainchain |
| 1 | C | 8 | LEU | Mainchain |
| 1 | C | 80 | GLU | Mainchain |
| 1 | C | 81 | VAL | Mainchain |
| 1 | C | 85 | GLN | Mainchain |
| 1 | C | 86 | GLU | Mainchain |
| 1 | C | 87 | LYS | Mainchain |
| 1 | C | 89 | VAL | Mainchain |
| 1 | C | 9 | PRO | Peptide,Mainchain |
| 1 | C | 90 | GLY | Mainchain |
| 1 | C | 91 | ASP | Mainchain |
| 1 | C | 92 | GLY | Mainchain |
| 1 | C | 93 | THR | Mainchain |
| 1 | C | 95 | THR | Mainchain |
| 1 | C | 99 | VAL | Mainchain |
| 1 | D | 10 | GLU | Mainchain |
| 1 | D | 105 | ARG | Mainchain |
| 1 | D | 106 | LYS | Mainchain |
| 1 | D | 107 | ALA | Mainchain |
| 1 | D | 108 | GLU | Mainchain |
| 1 | D | 109 | GLU | Mainchain |
| 1 | D | 11 | ASN | Mainchain |
| 1 | D | 112 | ASP | Peptide,Mainchain |
| 1 | D | 113 | GLN | Peptide,Mainchain |
| 1 | D | 115 | VAL | Peptide |
| 1 | D | 119 | ILE | Mainchain |
| 1 | D | 12 | MET | Peptide,Mainchain |
| 1 | D | 120 | VAL | Mainchain |
| 1 | D | 122 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 123 | GLY | Mainchain |
| 1 | D | 124 | TYR | Mainchain |
| 1 | D | 125 | GLN | Mainchain |
| 1 | D | 128 | ALA | Mainchain |
| 1 | D | 129 | GLN | Mainchain |
| 1 | D | 13 | LYS | Mainchain |
| 1 | D | 130 | LYS | Mainchain |
| 1 | D | 135 | LEU | Mainchain |
| 1 | D | 136 | LYS | Mainchain |
| 1 | D | 137 | THR | Mainchain |
| 1 | D | 138 | ILE | Peptide |
| 1 | D | 14 | ARG | Mainchain |
| 1 | D | 141 | GLU | Peptide |
| 1 | D | 148 | GLU | Mainchain |
| 1 | D | 149 | ILE | Mainchain |
| 1 | D | 15 | TYR | Peptide |
| 1 | D | 150 | LEU | Mainchain |
| 1 | D | 151 | THR | Mainchain |
| 1 | D | 155 | MET | Mainchain |
| 1 | D | 156 | THR | Mainchain |
| 1 | D | 158 | ILE | Mainchain |
| 1 | D | 16 | MET | Mainchain |
| 1 | D | 161 | LYS | Mainchain |
| 1 | D | 162 | GLY | Peptide |
| 1 | D | 163 | ALA | Peptide,Mainchain |
| 1 | D | 165 | LYS | Mainchain |
| 1 | D | 169 | LYS | Mainchain |
| 1 | D | 17 | GLY | Mainchain |
| 1 | D | 171 | ALA | Mainchain |
| 1 | D | 184 | ASP | Mainchain |
| 1 | D | 185 | GLU | Mainchain |
| 1 | D | 187 | LYS | Mainchain |
| 1 | D | 189 | ASP | Peptide |
| 1 | D | 190 | LYS | Mainchain |
| 1 | D | 193 | ILE | Mainchain |
| 1 | D | 194 | LYS | Mainchain |
| 1 | D | 197 | LYS | Mainchain |
| 1 | D | 198 | LYS | Mainchain |
| 1 | D | 199 | SER | Mainchain |
| 1 | D | 200 | GLY | Peptide,Mainchain |
| 1 | D | 201 | ALA | Peptide,Mainchain |
| 1 | D | 205 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 206 | THR | Mainchain |
| 1 | D | 209 | ILE | Mainchain |
| 1 | D | 21 | GLN | Peptide |
| 1 | D | 212 | VAL | Mainchain |
| 1 | D | 214 | VAL | Mainchain |
| 1 | D | 217 | GLU | Mainchain |
| 1 | D | 218 | ARG | Mainchain |
| 1 | D | 220 | SER | Mainchain |
| 1 | D | 223 | MET | Peptide |
| 1 | D | 225 | LYS | Mainchain |
| 1 | D | 226 | LYS | Mainchain |
| 1 | D | 227 | VAL | Mainchain |
| 1 | D | 228 | THR | Mainchain |
| 1 | D | 229 | ASP | Mainchain |
| 1 | D | 23 | MET | Mainchain |
| 1 | D | 233 | ALA | Mainchain |
| 1 | D | 234 | LEU | Mainchain |
| 1 | D | 235 | LEU | Mainchain |
| 1 | D | 237 | CYS | Mainchain |
| 1 | D | 239 | ILE | Mainchain |
| 1 | D | 24 | ASN | Mainchain |
| 1 | D | 244 | SER | Mainchain |
| 1 | D | 246 | MET | Mainchain |
| 1 | D | 252 | ALA | Mainchain |
| 1 | D | 253 | GLU | Mainchain |
| 1 | D | 256 | ALA | Mainchain |
| 1 | D | 257 | SER | Mainchain |
| 1 | D | 258 | GLY | Mainchain |
| 1 | D | 259 | ALA | Peptide |
| 1 | D | 26 | LEU | Mainchain |
| 1 | D | 260 | ASN | Mainchain |
| 1 | D | 263 | PHE | Mainchain |
| 1 | D | 265 | GLN | Mainchain |
| 1 | D | 266 | LYS | Mainchain |
| 1 | D | 267 | GLY | Mainchain |
| 1 | D | 268 | ILE | Mainchain |
| 1 | D | 269 | ASP | Peptide,Mainchain |
| 1 | D | 27 | ALA | Peptide,Mainchain |
| 1 | D | 273 | GLN | Mainchain |
| 1 | D | 279 | GLU | Mainchain |
| 1 | D | 28 | GLY | Mainchain |
| 1 | D | 284 | ALA | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 285 | ARG | Mainchain |
| 1 | D | 286 | ARG | Mainchain |
| 1 | D | 287 | VAL | Mainchain |
| 1 | D | 289 | LYS | Mainchain |
| 1 | D | 29 | ARG | Mainchain |
| 1 | D | 290 | SER | Mainchain |
| 1 | D | 291 | ASP | Peptide |
| 1 | D | 292 | MET | Mainchain |
| 1 | D | 293 | GLU | Peptide,Mainchain |
| 1 | D | 294 | LYS | Mainchain |
| 1 | D | 295 | LEU | Mainchain |
| 1 | D | 296 | ALA | Mainchain |
| 1 | D | 300 | GLY | Mainchain |
| 1 | D | 301 | ALA | Mainchain |
| 1 | D | 305 | THR | Mainchain |
| 1 | D | 306 | ASN | Peptide,Mainchain |
| 1 | D | 307 | ILE | Mainchain |
| 1 | D | 308 | LYS | Peptide,Mainchain |
| 1 | D | 31 | ILE | Mainchain |
| 1 | D | 310 | LEU | Mainchain |
| 1 | D | 311 | SER | Mainchain |
| 1 | D | 312 | ALA | Peptide,Mainchain |
| 1 | D | 313 | GLN | Peptide |
| 1 | D | 314 | ASP | Mainchain |
| 1 | D | 317 | ASP | Mainchain |
| 1 | D | 318 | ALA | Mainchain |
| 1 | D | 326 | ILE | Mainchain |
| 1 | D | 327 | SER | Mainchain |
| 1 | D | 328 | GLY | Mainchain |
| 1 | D | 329 | ASP | Mainchain |
| 1 | D | 334 | VAL | Mainchain |
| 1 | D | 336 | GLU | Mainchain |
| 1 | D | 337 | CYS | Mainchain |
| 1 | D | 338 | LYS | Mainchain |
| 1 | D | 340 | PRO | Peptide,Mainchain |
| 1 | D | 341 | LYS | Mainchain |
| 1 | D | 342 | ALA | Peptide |
| 1 | D | 347 | ILE | Mainchain |
| 1 | D | 348 | ARG | Mainchain |
| 1 | D | 349 | GLY | Peptide |
| 1 | D | 35 | VAL | Mainchain |
| 1 | D | 350 | THR | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 351 | THR | Mainchain |
| 1 | D | 352 | GLU | Mainchain |
| 1 | D | 353 | HIS | Mainchain |
| 1 | D | 354 | VAL | Mainchain |
| 1 | D | 36 | ARG | Mainchain |
| 1 | D | 362 | VAL | Mainchain |
| 1 | D | 366 | VAL | Mainchain |
| 1 | D | 367 | GLY | Mainchain |
| 1 | D | 369 | VAL | Mainchain |
| 1 | D | 37 | SER | Mainchain |
| 1 | D | 370 | GLY | Mainchain |
| 1 | D | 375 | ASP | Mainchain |
| 1 | D | 376 | GLY | Mainchain |
| 1 | D | 377 | ARG | Mainchain |
| 1 | D | 379 | VAL | Mainchain |
| 1 | D | 380 | SER | Peptide |
| 1 | D | 381 | GLY | Peptide,Mainchain |
| 1 | D | 382 | GLY | Mainchain |
| 1 | D | 384 | SER | Mainchain |
| 1 | D | 385 | THR | Mainchain |
| 1 | D | 386 | GLU | Mainchain |
| 1 | D | 393 | LEU | Mainchain |
| 1 | D | 396 | TYR | Mainchain |
| 1 | D | 398 | GLU | Mainchain |
| 1 | D | 40 | GLY | Mainchain |
| 1 | D | 400 | ILE | Mainchain |
| 1 | D | 401 | SER | Mainchain |
| 1 | D | 403 | ARG | Mainchain |
| 1 | D | 404 | GLU | Mainchain |
| 1 | D | 405 | GLN | Mainchain |
| 1 | D | 406 | LEU | Mainchain |
| 1 | D | 407 | ALA | Mainchain |
| 1 | D | 408 | VAL | Mainchain |
| 1 | D | 41 | PRO | Peptide,Mainchain |
| 1 | D | 412 | ALA | Peptide |
| 1 | D | 416 | GLU | Mainchain |
| 1 | D | 418 | ILE | Mainchain |
| 1 | D | 419 | PRO | Mainchain |
| 1 | D | 420 | ARG | Mainchain |
| 1 | D | 421 | THR | Peptide,Mainchain |
| 1 | D | 423 | ALA | Mainchain |
| 1 | D | 425 | ASN | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 427 | GLY | Peptide |
| 1 | D | 428 | LEU | Mainchain |
| 1 | D | 429 | ASP | Mainchain |
| 1 | D | 43 | GLY | Mainchain |
| 1 | D | 430 | ALA | Mainchain |
| 1 | D | 431 | ILE | Mainchain |
| 1 | D | 432 | GLU | Mainchain |
| 1 | D | 439 | ALA | Mainchain |
| 1 | D | 44 | MET | Mainchain |
| 1 | D | 440 | ALA | Mainchain |
| 1 | D | 443 | SER | Mainchain |
| 1 | D | 444 | ASN | Mainchain |
| 1 | D | 447 | LYS | Mainchain |
| 1 | D | 448 | CYS | Mainchain |
| 1 | D | 449 | ALA | Mainchain |
| 1 | D | 450 | GLY | Mainchain |
| 1 | D | 453 | VAL | Mainchain |
| 1 | D | 454 | PHE | Mainchain |
| 1 | D | 455 | THR | Peptide |
| 1 | D | 456 | GLY | Mainchain |
| 1 | D | 457 | ALA | Mainchain |
| 1 | D | 458 | VAL | Mainchain |
| 1 | D | 462 | CYS | Mainchain |
| 1 | D | 464 | ASN | Mainchain |
| 1 | D | 465 | GLY | Mainchain |
| 1 | D | 466 | VAL | Mainchain |
| 1 | D | 468 | GLU | Mainchain |
| 1 | D | 469 | PRO | Mainchain |
| 1 | D | 47 | MET | Mainchain |
| 1 | D | 470 | LEU | Mainchain |
| 1 | D | 471 | ARG | Mainchain |
| 1 | D | 473 | LYS | Mainchain |
| 1 | D | 474 | THR | Mainchain |
| 1 | D | 475 | GLN | Mainchain |
| 1 | D | 476 | ALA | Peptide,Mainchain |
| 1 | D | 477 | ILE | Mainchain |
| 1 | D | 481 | ALA | Mainchain |
| 1 | D | 484 | THR | Mainchain |
| 1 | D | 485 | GLU | Mainchain |
| 1 | D | 486 | MET | Mainchain |
| 1 | D | 487 | LEU | Mainchain |
| 1 | D | 488 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | D | 49 | VAL | Mainchain |
| 1 | D | 490 | ILE | Peptide,Mainchain |
| 1 | D | 491 | ASP | Mainchain |
| 1 | D | 493 | VAL | Mainchain |
| 1 | D | 494 | ILE | Mainchain |
| 1 | D | 495 | ALA | Peptide,Mainchain |
| 1 | D | 50 | ASP | Mainchain |
| 1 | D | 52 | LEU | Mainchain |
| 1 | D | 55 | VAL | Peptide |
| 1 | D | 56 | VAL | Mainchain |
| 1 | D | 57 | VAL | Mainchain |
| 1 | D | 58 | THR | Mainchain |
| 1 | D | 59 | ASN | Mainchain |
| 1 | D | 62 | VAL | Mainchain |
| 1 | D | 63 | THR | Mainchain |
| 1 | D | 68 | MET | Peptide,Mainchain |
| 1 | D | 7 | VAL | Peptide,Mainchain |
| 1 | D | 72 | HIS | Mainchain |
| 1 | D | 73 | PRO | Mainchain |
| 1 | D | 77 | MET | Mainchain |
| 1 | D | 78 | LEU | Mainchain |
| 1 | D | 79 | ILE | Mainchain |
| 1 | D | 8 | LEU | Peptide,Mainchain |
| 1 | D | 82 | ALA | Mainchain |
| 1 | D | 83 | LYS | Mainchain |
| 1 | D | 89 | VAL | Mainchain |
| 1 | D | 9 | PRO | Peptide,Mainchain |
| 1 | D | 90 | GLY | Mainchain |
| 1 | D | 91 | ASP | Mainchain |
| 1 | D | 92 | GLY | Mainchain |
| 1 | D | 93 | THR | Peptide,Mainchain |
| 1 | D | 94 | THR | Mainchain |
| 1 | D | 96 | ALA | Mainchain |
| 1 | D | 99 | VAL | Peptide |
| 1 | E | 10 | GLU | Mainchain |
| 1 | E | 100 | ALA | Mainchain |
| 1 | E | 102 | GLU | Mainchain |
| 1 | E | 103 | LEU | Mainchain |
| 1 | E | 107 | ALA | Mainchain |
| 1 | E | 110 | LEU | Mainchain |
| 1 | E | 111 | LEU | Mainchain |
| 1 | E | 112 | ASP | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 114 | ASN | Mainchain |
| 1 | E | 115 | VAL | Mainchain |
| 1 | E | 116 | HIS | Mainchain |
| 1 | E | 117 | PRO | Mainchain |
| 1 | E | 118 | THR | Mainchain |
| 1 | E | 119 | ILE | Mainchain |
| 1 | E | 12 | MET | Mainchain |
| 1 | E | 120 | VAL | Mainchain |
| 1 | E | 121 | VAL | Mainchain |
| 1 | E | 123 | GLY | Mainchain |
| 1 | E | 124 | TYR | Mainchain |
| 1 | E | 128 | ALA | Mainchain |
| 1 | E | 133 | GLU | Mainchain |
| 1 | E | 136 | LYS | Mainchain |
| 1 | E | 137 | THR | Mainchain |
| 1 | E | 138 | ILE | Peptide |
| 1 | E | 139 | ALA | Peptide,Mainchain |
| 1 | E | 140 | CYS | Mainchain |
| 1 | E | 144 | ALA | Mainchain |
| 1 | E | 145 | GLN | Mainchain |
| 1 | E | 150 | LEU | Mainchain |
| 1 | E | 154 | ALA | Peptide,Mainchain |
| 1 | E | 155 | MET | Mainchain |
| 1 | E | 157 | SER | Mainchain |
| 1 | E | 159 | THR | Peptide,Mainchain |
| 1 | E | 16 | MET | Mainchain |
| 1 | E | 160 | GLY | Mainchain |
| 1 | E | 162 | GLY | Mainchain |
| 1 | E | 163 | ALA | Peptide |
| 1 | E | 167 | LYS | Mainchain |
| 1 | E | 17 | GLY | Mainchain |
| 1 | E | 170 | LEU | Mainchain |
| 1 | E | 171 | ALA | Mainchain |
| 1 | E | 172 | GLU | Mainchain |
| 1 | E | 174 | ILE | Mainchain |
| 1 | E | 176 | GLU | Mainchain |
| 1 | E | 177 | ALA | Mainchain |
| 1 | E | 181 | VAL | Mainchain |
| 1 | E | 182 | VAL | Mainchain |
| 1 | E | 184 | ASP | Mainchain |
| 1 | E | 188 | VAL | Peptide,Mainchain |
| 1 | E | 189 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 19 | ASP | Mainchain |
| 1 | E | 190 | LYS | Mainchain |
| 1 | E | 191 | ASP | Mainchain |
| 1 | E | 195 | ILE | Mainchain |
| 1 | E | 196 | GLU | Mainchain |
| 1 | E | 197 | LYS | Mainchain |
| 1 | E | 20 | ALA | Mainchain |
| 1 | E | 200 | GLY | Mainchain |
| 1 | E | 201 | ALA | Peptide,Mainchain |
| 1 | E | 203 | ILE | Mainchain |
| 1 | E | 204 | ASP | Mainchain |
| 1 | E | 205 | ASP | Mainchain |
| 1 | E | 206 | THR | Mainchain |
| 1 | E | 207 | GLU | Mainchain |
| 1 | E | 209 | ILE | Mainchain |
| 1 | E | 21 | GLN | Mainchain |
| 1 | E | 210 | LYS | Mainchain |
| 1 | E | 217 | GLU | Mainchain |
| 1 | E | 22 | ARG | Mainchain |
| 1 | E | 220 | SER | Peptide |
| 1 | E | 221 | ALA | Peptide,Mainchain |
| 1 | E | 223 | MET | Mainchain |
| 1 | E | 225 | LYS | Mainchain |
| 1 | E | 228 | THR | Mainchain |
| 1 | E | 23 | MET | Mainchain |
| 1 | E | 236 | ASN | Mainchain |
| 1 | E | 237 | CYS | Peptide,Mainchain |
| 1 | E | 246 | MET | Mainchain |
| 1 | E | 25 | ILE | Mainchain |
| 1 | E | 253 | GLU | Mainchain |
| 1 | E | 255 | LYS | Mainchain |
| 1 | E | 257 | SER | Peptide |
| 1 | E | 258 | GLY | Mainchain |
| 1 | E | 259 | ALA | Mainchain |
| 1 | E | 26 | LEU | Mainchain |
| 1 | E | 263 | PHE | Mainchain |
| 1 | E | 265 | GLN | Mainchain |
| 1 | E | 266 | LYS | Mainchain |
| 1 | E | 267 | GLY | Mainchain |
| 1 | E | 268 | ILE | Mainchain |
| 1 | E | 269 | ASP | Mainchain |
| 1 | E | 270 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 273 | GLN | Peptide |
| 1 | E | 276 | LEU | Mainchain |
| 1 | E | 277 | ALA | Peptide |
| 1 | E | 28 | GLY | Mainchain |
| 1 | E | 280 | GLY | Peptide |
| 1 | E | 285 | ARG | Peptide |
| 1 | E | 286 | ARG | Mainchain |
| 1 | E | 287 | VAL | Mainchain |
| 1 | E | 288 | LYS | Mainchain |
| 1 | E | 289 | LYS | Mainchain |
| 1 | E | 293 | GLU | Mainchain |
| 1 | E | 295 | LEU | Mainchain |
| 1 | E | 30 | ILE | Mainchain |
| 1 | E | 300 | GLY | Mainchain |
| 1 | E | 301 | ALA | Mainchain |
| 1 | E | 305 | THR | Mainchain |
| 1 | E | 306 | ASN | Peptide,Mainchain |
| 1 | E | 307 | ILE | Mainchain |
| 1 | E | 308 | LYS | Mainchain |
| 1 | E | 309 | ASP | Peptide |
| 1 | E | 31 | ILE | Mainchain |
| 1 | E | 310 | LEU | Peptide,Mainchain |
| 1 | E | 312 | ALA | Mainchain |
| 1 | E | 313 | GLN | Peptide,Mainchain |
| 1 | E | 315 | LEU | Mainchain |
| 1 | E | 319 | GLY | Mainchain |
| 1 | E | 324 | ARG | Mainchain |
| 1 | E | 325 | LYS | Mainchain |
| 1 | E | 327 | SER | Mainchain |
| 1 | E | 328 | GLY | Mainchain |
| 1 | E | 333 | PHE | Mainchain |
| 1 | E | 334 | VAL | Mainchain |
| 1 | E | 335 | GLU | Mainchain |
| 1 | E | 336 | GLU | Mainchain |
| 1 | E | 338 | LYS | Mainchain |
| 1 | E | 341 | LYS | Peptide,Mainchain |
| 1 | E | 342 | ALA | Mainchain |
| 1 | E | 343 | VAL | Mainchain |
| 1 | E | 346 | LEU | Mainchain |
| 1 | E | 347 | ILE | Mainchain |
| 1 | E | 348 | ARG | Mainchain |
| 1 | E | 349 | GLY | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 350 | THR | Peptide |
| 1 | E | 352 | GLU | Mainchain |
| 1 | E | 353 | HIS | Mainchain |
| 1 | E | 354 | VAL | Mainchain |
| 1 | E | 356 | GLU | Mainchain |
| 1 | E | 357 | GLU | Mainchain |
| 1 | E | 361 | ALA | Mainchain |
| 1 | E | 362 | VAL | Mainchain |
| 1 | E | 363 | ASP | Mainchain |
| 1 | E | 366 | VAL | Mainchain |
| 1 | E | 367 | GLY | Peptide |
| 1 | E | 368 | VAL | Peptide |
| 1 | E | 369 | VAL | Mainchain |
| 1 | E | 37 | SER | Mainchain |
| 1 | E | 370 | GLY | Mainchain |
| 1 | E | 371 | CYS | Mainchain |
| 1 | E | 372 | THR | Mainchain |
| 1 | E | 373 | ILE | Mainchain |
| 1 | E | 374 | GLU | Mainchain |
| 1 | E | 375 | ASP | Mainchain |
| 1 | E | 376 | GLY | Mainchain |
| 1 | E | 377 | ARG | Mainchain |
| 1 | E | 379 | VAL | Peptide |
| 1 | E | 380 | SER | Peptide,Mainchain |
| 1 | E | 382 | GLY | Peptide |
| 1 | E | 383 | GLY | Mainchain |
| 1 | E | 39 | LEU | Mainchain |
| 1 | E | 393 | LEU | Mainchain |
| 1 | E | 395 | GLU | Mainchain |
| 1 | E | 396 | TYR | Mainchain |
| 1 | E | 398 | GLU | Mainchain |
| 1 | E | 400 | ILE | Mainchain |
| 1 | E | 401 | SER | Mainchain |
| 1 | E | 402 | GLY | Mainchain |
| 1 | E | 403 | ARG | Mainchain |
| 1 | E | 406 | LEU | Mainchain |
| 1 | E | 407 | ALA | Mainchain |
| 1 | E | 409 | ARG | Peptide,Mainchain |
| 1 | E | 410 | ALA | Mainchain |
| 1 | E | 412 | ALA | Mainchain |
| 1 | E | 416 | GLU | Mainchain |
| 1 | E | 420 | ARG | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 423 | ALA | Mainchain |
| 1 | E | 425 | ASN | Mainchain |
| 1 | E | 426 | ALA | Mainchain |
| 1 | E | 427 | GLY | Peptide |
| 1 | E | 428 | LEU | Mainchain |
| 1 | E | 43 | GLY | Mainchain |
| 1 | E | 432 | GLU | Mainchain |
| 1 | E | 44 | MET | Mainchain |
| 1 | E | 442 | ALA | Mainchain |
| 1 | E | 446 | ASN | Mainchain |
| 1 | E | 447 | LYS | Peptide |
| 1 | E | 448 | CYS | Mainchain |
| 1 | E | 450 | GLY | Mainchain |
| 1 | E | 452 | ASN | Mainchain |
| 1 | E | 455 | THR | Mainchain |
| 1 | E | 456 | GLY | Mainchain |
| 1 | E | 457 | ALA | Mainchain |
| 1 | E | 459 | GLU | Mainchain |
| 1 | E | 46 | LYS | Mainchain |
| 1 | E | 461 | MET | Mainchain |
| 1 | E | 462 | CYS | Mainchain |
| 1 | E | 464 | ASN | Mainchain |
| 1 | E | 465 | GLY | Mainchain |
| 1 | E | 467 | VAL | Mainchain |
| 1 | E | 468 | GLU | Mainchain |
| 1 | E | 469 | PRO | Mainchain |
| 1 | E | 471 | ARG | Peptide |
| 1 | E | 478 | GLN | Mainchain |
| 1 | E | 48 | LEU | Mainchain |
| 1 | E | 483 | SER | Mainchain |
| 1 | E | 485 | GLU | Mainchain |
| 1 | E | 487 | LEU | Peptide,Mainchain |
| 1 | E | 488 | LEU | Mainchain |
| 1 | E | 489 | ARG | Peptide |
| 1 | E | 49 | VAL | Mainchain |
| 1 | E | 491 | ASP | Mainchain |
| 1 | E | 494 | ILE | Mainchain |
| 1 | E | 495 | ALA | Peptide,Mainchain |
| 1 | E | 496 | ALA | Mainchain |
| 1 | E | 50 | ASP | Peptide,Mainchain |
| 1 | E | 52 | LEU | Mainchain |
| 1 | E | 54 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | E | 55 | VAL | Peptide,Mainchain |
| 1 | E | 56 | VAL | Mainchain |
| 1 | E | 57 | VAL | Mainchain |
| 1 | E | 58 | THR | Mainchain |
| 1 | E | 60 | ASP | Mainchain |
| 1 | E | 63 | THR | Mainchain |
| 1 | E | 67 | GLU | Mainchain |
| 1 | E | 68 | MET | Mainchain |
| 1 | E | 69 | SER | Mainchain |
| 1 | E | 7 | VAL | Mainchain |
| 1 | E | 72 | HIS | Mainchain |
| 1 | E | 8 | LEU | Mainchain |
| 1 | E | 82 | ALA | Mainchain |
| 1 | E | 84 | THR | Mainchain |
| 1 | E | 88 | GLU | Mainchain |
| 1 | E | 9 | PRO | Mainchain |
| 1 | E | 90 | GLY | Mainchain |
| 1 | E | 92 | GLY | Mainchain |
| 1 | E | 94 | THR | Mainchain |
| 1 | E | 95 | THR | Mainchain |
| 1 | E | 96 | ALA | Mainchain |
| 1 | E | 97 | VAL | Mainchain |
| 1 | F | 10 | GLU | Mainchain |
| 1 | F | 102 | GLU | Mainchain |
| 1 | F | 103 | LEU | Mainchain |
| 1 | F | 106 | LYS | Mainchain |
| 1 | F | 108 | GLU | Mainchain |
| 1 | F | 109 | GLU | Mainchain |
| 1 | F | 11 | ASN | Mainchain |
| 1 | F | 110 | LEU | Mainchain |
| 1 | F | 111 | LEU | Mainchain |
| 1 | F | 113 | GLN | Mainchain |
| 1 | F | 116 | HIS | Mainchain |
| 1 | F | 119 | ILE | Mainchain |
| 1 | F | 12 | MET | Mainchain |
| 1 | F | 121 | VAL | Mainchain |
| 1 | F | 124 | TYR | Mainchain |
| 1 | F | 125 | GLN | Mainchain |
| 1 | F | 128 | ALA | Mainchain |
| 1 | F | 129 | GLN | Mainchain |
| 1 | F | 132 | GLN | Mainchain |
| 1 | F | 133 | GLU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 135 | LEU | Mainchain |
| 1 | F | 136 | LYS | Mainchain |
| 1 | F | 137 | THR | Mainchain |
| 1 | F | 138 | ILE | Mainchain |
| 1 | F | 139 | ALA | Mainchain |
| 1 | F | 14 | ARG | Mainchain |
| 1 | F | 140 | CYS | Peptide |
| 1 | F | 141 | GLU | Mainchain |
| 1 | F | 142 | VAL | Peptide |
| 1 | F | 143 | GLY | Peptide |
| 1 | F | 144 | ALA | Mainchain |
| 1 | F | 145 | GLN | Mainchain |
| 1 | F | 146 | ASP | Mainchain |
| 1 | F | 147 | LYS | Mainchain |
| 1 | F | 149 | ILE | Mainchain |
| 1 | F | 15 | TYR | Mainchain |
| 1 | F | 151 | THR | Mainchain |
| 1 | F | 153 | ILE | Peptide,Mainchain |
| 1 | F | 154 | ALA | Peptide |
| 1 | F | 155 | MET | Mainchain |
| 1 | F | 16 | MET | Mainchain |
| 1 | F | 160 | GLY | Mainchain |
| 1 | F | 166 | ALA | Mainchain |
| 1 | F | 169 | LYS | Mainchain |
| 1 | F | 177 | ALA | Mainchain |
| 1 | F | 181 | VAL | Mainchain |
| 1 | F | 182 | VAL | Mainchain |
| 1 | F | 183 | ASP | Mainchain |
| 1 | F | 184 | ASP | Mainchain |
| 1 | F | 186 | GLY | Peptide,Mainchain |
| 1 | F | 187 | LYS | Mainchain |
| 1 | F | 188 | VAL | Peptide,Mainchain |
| 1 | F | 189 | ASP | Peptide |
| 1 | F | 191 | ASP | Mainchain |
| 1 | F | 198 | LYS | Peptide,Mainchain |
| 1 | F | 199 | SER | Mainchain |
| 1 | F | 200 | GLY | Mainchain |
| 1 | F | 201 | ALA | Mainchain |
| 1 | F | 202 | SER | Peptide |
| 1 | F | 203 | ILE | Peptide,Mainchain |
| 1 | F | 204 | ASP | Peptide,Mainchain |
| 1 | F | 205 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 209 | ILE | Mainchain |
| 1 | F | 210 | LYS | Peptide |
| 1 | F | 215 | ASP | Mainchain |
| 1 | F | 217 | GLU | Mainchain |
| 1 | F | 221 | ALA | Peptide |
| 1 | F | 222 | GLN | Peptide |
| 1 | F | 223 | MET | Mainchain |
| 1 | F | 226 | LYS | Mainchain |
| 1 | F | 228 | THR | Mainchain |
| 1 | F | 229 | ASP | Mainchain |
| 1 | F | 230 | ALA | Mainchain |
| 1 | F | 232 | ILE | Mainchain |
| 1 | F | 234 | LEU | Mainchain |
| 1 | F | 236 | ASN | Mainchain |
| 1 | F | 237 | CYS | Peptide,Mainchain |
| 1 | F | 24 | ASN | Mainchain |
| 1 | F | 240 | GLU | Peptide,Mainchain |
| 1 | F | 243 | ALA | Mainchain |
| 1 | F | 246 | MET | Mainchain |
| 1 | F | 247 | LEU | Mainchain |
| 1 | F | 251 | VAL | Mainchain |
| 1 | F | 253 | GLU | Mainchain |
| 1 | F | 255 | LYS | Mainchain |
| 1 | F | 256 | ALA | Mainchain |
| 1 | F | 257 | SER | Mainchain |
| 1 | F | 258 | GLY | Mainchain |
| 1 | F | 259 | ALA | Peptide |
| 1 | F | 26 | LEU | Mainchain |
| 1 | F | 264 | CYS | Mainchain |
| 1 | F | 265 | GLN | Peptide,Mainchain |
| 1 | F | 266 | LYS | Peptide |
| 1 | F | 268 | ILE | Mainchain |
| 1 | F | 269 | ASP | Mainchain |
| 1 | F | 272 | ALA | Mainchain |
| 1 | F | 279 | GLU | Mainchain |
| 1 | F | 28 | GLY | Mainchain |
| 1 | F | 280 | GLY | Peptide,Mainchain |
| 1 | F | 283 | ALA | Mainchain |
| 1 | F | 287 | VAL | Mainchain |
| 1 | F | 288 | LYS | Mainchain |
| 1 | F | 289 | LYS | Mainchain |
| 1 | F | 290 | SER | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 291 | ASP | Mainchain |
| 1 | F | 294 | LYS | Mainchain |
| 1 | F | 297 | LYS | Peptide,Mainchain |
| 1 | F | 299 | THR | Mainchain |
| 1 | F | 30 | ILE | Mainchain |
| 1 | F | 300 | GLY | Mainchain |
| 1 | F | 303 | VAL | Mainchain |
| 1 | F | 304 | ILE | Mainchain |
| 1 | F | 305 | THR | Mainchain |
| 1 | F | 306 | ASN | Mainchain |
| 1 | F | 307 | ILE | Mainchain |
| 1 | F | 309 | ASP | Mainchain |
| 1 | F | 31 | ILE | Mainchain |
| 1 | F | 310 | LEU | Peptide,Mainchain |
| 1 | F | 312 | ALA | Mainchain |
| 1 | F | 313 | GLN | Peptide |
| 1 | F | 323 | GLU | Mainchain |
| 1 | F | 33 | GLU | Mainchain |
| 1 | F | 335 | GLU | Mainchain |
| 1 | F | 336 | GLU | Mainchain |
| 1 | F | 337 | CYS | Mainchain |
| 1 | F | 338 | LYS | Peptide,Mainchain |
| 1 | F | 340 | PRO | Mainchain |
| 1 | F | 341 | LYS | Peptide,Mainchain |
| 1 | F | 342 | ALA | Mainchain |
| 1 | F | 343 | VAL | Mainchain |
| 1 | F | 344 | THR | Mainchain |
| 1 | F | 349 | GLY | Peptide,Mainchain |
| 1 | F | 35 | VAL | Mainchain |
| 1 | F | 350 | THR | Mainchain |
| 1 | F | 351 | THR | Mainchain |
| 1 | F | 352 | GLU | Mainchain |
| 1 | F | 355 | ILE | Mainchain |
| 1 | F | 36 | ARG | Peptide,Mainchain |
| 1 | F | 360 | ARG | Mainchain |
| 1 | F | 37 | SER | Mainchain |
| 1 | F | 370 | GLY | Mainchain |
| 1 | F | 372 | THR | Peptide |
| 1 | F | 374 | GLU | Peptide,Mainchain |
| 1 | F | 375 | ASP | Peptide,Mainchain |
| 1 | F | 376 | GLY | Peptide |
| 1 | F | 377 | ARG | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 378 | ILE | Mainchain |
| 1 | F | 379 | VAL | Peptide,Mainchain |
| 1 | F | 380 | SER | Peptide |
| 1 | F | 381 | GLY | Peptide |
| 1 | F | 382 | GLY | Peptide,Mainchain |
| 1 | F | 384 | SER | Mainchain |
| 1 | F | 392 | LYS | Mainchain |
| 1 | F | 397 | ALA | Mainchain |
| 1 | F | 398 | GLU | Peptide,Mainchain |
| 1 | F | 399 | GLY | Mainchain |
| 1 | F | 40 | GLY | Mainchain |
| 1 | F | 400 | ILE | Mainchain |
| 1 | F | 403 | ARG | Mainchain |
| 1 | F | 405 | GLN | Mainchain |
| 1 | F | 406 | LEU | Mainchain |
| 1 | F | 407 | ALA | Mainchain |
| 1 | F | 408 | VAL | Mainchain |
| 1 | F | 41 | PRO | Peptide |
| 1 | F | 410 | ALA | Mainchain |
| 1 | F | 413 | ASP | Mainchain |
| 1 | F | 414 | ALA | Peptide,Mainchain |
| 1 | F | 416 | GLU | Mainchain |
| 1 | F | 417 | VAL | Mainchain |
| 1 | F | 420 | ARG | Mainchain |
| 1 | F | 423 | ALA | Mainchain |
| 1 | F | 424 | GLU | Mainchain |
| 1 | F | 426 | ALA | Mainchain |
| 1 | F | 427 | GLY | Mainchain |
| 1 | F | 428 | LEU | Mainchain |
| 1 | F | 429 | ASP | Mainchain |
| 1 | F | 43 | GLY | Mainchain |
| 1 | F | 431 | ILE | Mainchain |
| 1 | F | 432 | GLU | Mainchain |
| 1 | F | 434 | LEU | Mainchain |
| 1 | F | 438 | ARG | Mainchain |
| 1 | F | 439 | ALA | Mainchain |
| 1 | F | 442 | ALA | Mainchain |
| 1 | F | 444 | ASN | Mainchain |
| 1 | F | 445 | GLY | Mainchain |
| 1 | F | 446 | ASN | Mainchain |
| 1 | F | 448 | CYS | Mainchain |
| 1 | F | 449 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 452 | ASN | Mainchain |
| 1 | F | 456 | GLY | Mainchain |
| 1 | F | 458 | VAL | Peptide |
| 1 | F | 459 | GLU | Mainchain |
| 1 | F | 460 | ASP | Mainchain |
| 1 | F | 461 | MET | Mainchain |
| 1 | F | 462 | CYS | Mainchain |
| 1 | F | 465 | GLY | Mainchain |
| 1 | F | 469 | PRO | Mainchain |
| 1 | F | 471 | ARG | Peptide |
| 1 | F | 472 | VAL | Mainchain |
| 1 | F | 474 | THR | Mainchain |
| 1 | F | 476 | ALA | Mainchain |
| 1 | F | 479 | SER | Mainchain |
| 1 | F | 48 | LEU | Mainchain |
| 1 | F | 480 | ALA | Mainchain |
| 1 | F | 482 | GLU | Mainchain |
| 1 | F | 486 | MET | Mainchain |
| 1 | F | 487 | LEU | Mainchain |
| 1 | F | 488 | LEU | Mainchain |
| 1 | F | 489 | ARG | Peptide |
| 1 | F | 49 | VAL | Mainchain |
| 1 | F | 490 | ILE | Mainchain |
| 1 | F | 491 | ASP | Mainchain |
| 1 | F | 495 | ALA | Peptide,Mainchain |
| 1 | F | 50 | ASP | Mainchain |
| 1 | F | 51 | ASP | Mainchain |
| 1 | F | 52 | LEU | Peptide |
| 1 | F | 53 | GLY | Peptide |
| 1 | F | 55 | VAL | Peptide,Mainchain |
| 1 | F | 57 | VAL | Mainchain |
| 1 | F | 58 | THR | Mainchain |
| 1 | F | 59 | ASN | Mainchain |
| 1 | F | 61 | GLY | Mainchain |
| 1 | F | 62 | VAL | Mainchain |
| 1 | F | 64 | ILE | Mainchain |
| 1 | F | 66 | ARG | Mainchain |
| 1 | F | 67 | GLU | Mainchain |
| 1 | F | 68 | MET | Peptide |
| 1 | F | 69 | SER | Mainchain |
| 1 | F | 7 | VAL | Peptide,Mainchain |
| 1 | F | 71 | GLU | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | F | 73 | PRO | Peptide |
| 1 | F | 74 | ALA | Peptide |
| 1 | F | 78 | LEU | Mainchain |
| 1 | F | 79 | ILE | Mainchain |
| 1 | F | 82 | ALA | Mainchain |
| 1 | F | 84 | THR | Mainchain |
| 1 | F | 85 | GLN | Mainchain |
| 1 | F | 86 | GLU | Mainchain |
| 1 | F | 87 | LYS | Mainchain |
| 1 | F | 9 | PRO | Mainchain |
| 1 | F | 93 | THR | Mainchain |
| 1 | F | 97 | VAL | Mainchain |
| 1 | F | 98 | VAL | Mainchain |
| 1 | G | 101 | GLY | Mainchain |
| 1 | G | 102 | GLU | Mainchain |
| 1 | G | 106 | LYS | Mainchain |
| 1 | G | 109 | GLU | Mainchain |
| 1 | G | 110 | LEU | Peptide |
| 1 | G | 111 | LEU | Mainchain |
| 1 | G | 112 | ASP | Peptide,Mainchain |
| 1 | G | 113 | GLN | Peptide |
| 1 | G | 114 | ASN | Peptide,Mainchain |
| 1 | G | 115 | VAL | Peptide |
| 1 | G | 119 | ILE | Mainchain |
| 1 | G | 12 | MET | Peptide |
| 1 | G | 120 | VAL | Mainchain |
| 1 | G | 123 | GLY | Mainchain |
| 1 | G | 126 | ALA | Mainchain |
| 1 | G | 129 | GLN | Mainchain |
| 1 | G | 130 | LYS | Mainchain |
| 1 | G | 133 | GLU | Mainchain |
| 1 | G | 137 | THR | Mainchain |
| 1 | G | 138 | ILE | Peptide |
| 1 | G | 139 | ALA | Mainchain |
| 1 | G | 14 | ARG | Mainchain |
| 1 | G | 140 | CYS | Mainchain |
| 1 | G | 141 | GLU | Mainchain |
| 1 | G | 142 | VAL | Mainchain |
| 1 | G | 144 | ALA | Mainchain |
| 1 | G | 145 | GLN | Mainchain |
| 1 | G | 146 | ASP | Mainchain |
| 1 | G | 149 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-----------|
| 1 | G | 150 | LEU | Mainchain |
| 1 | G | 155 | MET | Mainchain |
| 1 | G | 156 | THR | Mainchain |
| 1 | G | 157 | SER | Mainchain |
| 1 | G | 16 | MET | Mainchain |
| 1 | G | 161 | LYS | Mainchain |
| 1 | G | 162 | GLY | Mainchain |
| 1 | G | 163 | ALA | Peptide |
| 1 | G | 167 | LYS | Mainchain |
| 1 | G | 169 | LYS | Mainchain |
| 1 | G | 17 | GLY | Mainchain |
| 1 | G | 174 | ILE | Mainchain |
| 1 | G | 182 | VAL | Mainchain |
| 1 | G | 186 | GLY | Mainchain |
| 1 | G | 188 | VAL | Peptide |
| 1 | G | 189 | ASP | Mainchain |
| 1 | G | 190 | LYS | Mainchain |
| 1 | G | 191 | ASP | Peptide |
| 1 | G | 192 | LEU | Mainchain |
| 1 | G | 198 | LYS | Mainchain |
| 1 | G | 199 | SER | Mainchain |
| 1 | G | 20 | ALA | Mainchain |
| 1 | G | 200 | GLY | Mainchain |
| 1 | G | 202 | SER | Mainchain |
| 1 | G | 205 | ASP | Mainchain |
| 1 | G | 206 | THR | Mainchain |
| 1 | G | 209 | ILE | Mainchain |
| 1 | G | 21 | GLN | Mainchain |
| 1 | G | 210 | LYS | Mainchain |
| 1 | G | 211 | GLY | Mainchain |
| 1 | G | 214 | VAL | Mainchain |
| 1 | G | 216 | LYS | Mainchain |
| 1 | G | 221 | ALA | Mainchain |
| 1 | G | 222 | GLN | Mainchain |
| 1 | G | 225 | LYS | Mainchain |
| 1 | G | 227 | VAL | Mainchain |
| 1 | G | 229 | ASP | Mainchain |
| 1 | G | 23 | MET | Mainchain |
| 1 | G | 230 | ALA | Mainchain |
| 1 | G | 231 | LYS | Mainchain |
| 1 | G | 233 | ALA | Mainchain |
| 1 | G | 234 | LEU | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | G | 235 | LEU | Mainchain |
| 1 | G | 237 | CYS | Peptide |
| 1 | G | 238 | ALA | Peptide,Mainchain |
| 1 | G | 242 | THR | Peptide |
| 1 | G | 243 | ALA | Peptide |
| 1 | G | 244 | SER | Mainchain |
| 1 | G | 246 | MET | Peptide,Mainchain |
| 1 | G | 251 | VAL | Mainchain |
| 1 | G | 258 | GLY | Peptide |
| 1 | G | 26 | LEU | Mainchain |
| 1 | G | 261 | VAL | Mainchain |
| 1 | G | 267 | GLY | Mainchain |
| 1 | G | 268 | ILE | Mainchain |
| 1 | G | 271 | LEU | Mainchain |
| 1 | G | 273 | GLN | Mainchain |
| 1 | G | 276 | LEU | Mainchain |
| 1 | G | 28 | GLY | Mainchain |
| 1 | G | 281 | ILE | Mainchain |
| 1 | G | 284 | ALA | Mainchain |
| 1 | G | 287 | VAL | Mainchain |
| 1 | G | 290 | SER | Peptide,Mainchain |
| 1 | G | 291 | ASP | Mainchain |
| 1 | G | 294 | LYS | Mainchain |
| 1 | G | 297 | LYS | Mainchain |
| 1 | G | 301 | ALA | Mainchain |
| 1 | G | 303 | VAL | Mainchain |
| 1 | G | 305 | THR | Mainchain |
| 1 | G | 306 | ASN | Peptide |
| 1 | G | 307 | ILE | Peptide,Mainchain |
| 1 | G | 309 | ASP | Mainchain |
| 1 | G | 31 | ILE | Mainchain |
| 1 | G | 311 | SER | Peptide |
| 1 | G | 312 | ALA | Peptide,Mainchain |
| 1 | G | 313 | GLN | Peptide,Mainchain |
| 1 | G | 315 | LEU | Peptide,Mainchain |
| 1 | G | 317 | ASP | Mainchain |
| 1 | G | 325 | LYS | Mainchain |
| 1 | G | 327 | SER | Mainchain |
| 1 | G | 328 | GLY | Mainchain |
| 1 | G | 329 | ASP | Mainchain |
| 1 | G | 330 | SER | Mainchain |
| 1 | G | 331 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | G | 332 | ILE | Mainchain |
| 1 | G | 333 | PHE | Mainchain |
| 1 | G | 335 | GLU | Peptide,Mainchain |
| 1 | G | 336 | GLU | Mainchain |
| 1 | G | 338 | LYS | Mainchain |
| 1 | G | 339 | HIS | Mainchain |
| 1 | G | 340 | PRO | Mainchain |
| 1 | G | 342 | ALA | Peptide |
| 1 | G | 345 | MET | Mainchain |
| 1 | G | 348 | ARG | Mainchain |
| 1 | G | 350 | THR | Peptide |
| 1 | G | 357 | GLU | Mainchain |
| 1 | G | 359 | ALA | Mainchain |
| 1 | G | 36 | ARG | Peptide,Mainchain |
| 1 | G | 360 | ARG | Mainchain |
| 1 | G | 361 | ALA | Mainchain |
| 1 | G | 366 | VAL | Mainchain |
| 1 | G | 367 | GLY | Mainchain |
| 1 | G | 37 | SER | Mainchain |
| 1 | G | 370 | GLY | Mainchain |
| 1 | G | 371 | CYS | Mainchain |
| 1 | G | 374 | GLU | Peptide |
| 1 | G | 375 | ASP | Peptide,Mainchain |
| 1 | G | 376 | GLY | Peptide,Mainchain |
| 1 | G | 38 | THR | Mainchain |
| 1 | G | 380 | SER | Mainchain |
| 1 | G | 381 | GLY | Mainchain |
| 1 | G | 39 | LEU | Mainchain |
| 1 | G | 395 | GLU | Mainchain |
| 1 | G | 396 | TYR | Mainchain |
| 1 | G | 398 | GLU | Mainchain |
| 1 | G | 399 | GLY | Mainchain |
| 1 | G | 400 | ILE | Peptide |
| 1 | G | 401 | SER | Mainchain |
| 1 | G | 406 | LEU | Mainchain |
| 1 | G | 409 | ARG | Mainchain |
| 1 | G | 412 | ALA | Mainchain |
| 1 | G | 414 | ALA | Peptide,Mainchain |
| 1 | G | 415 | LEU | Mainchain |
| 1 | G | 416 | GLU | Mainchain |
| 1 | G | 42 | LYS | Peptide,Mainchain |
| 1 | G | 422 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | G | 423 | ALA | Mainchain |
| 1 | G | 424 | GLU | Mainchain |
| 1 | G | 425 | ASN | Peptide,Mainchain |
| 1 | G | 426 | ALA | Mainchain |
| 1 | G | 427 | GLY | Mainchain |
| 1 | G | 428 | LEU | Mainchain |
| 1 | G | 429 | ASP | Peptide,Mainchain |
| 1 | G | 436 | LYS | Mainchain |
| 1 | G | 438 | ARG | Mainchain |
| 1 | G | 439 | ALA | Mainchain |
| 1 | G | 443 | SER | Mainchain |
| 1 | G | 444 | ASN | Mainchain |
| 1 | G | 445 | GLY | Mainchain |
| 1 | G | 446 | ASN | Peptide,Mainchain |
| 1 | G | 447 | LYS | Peptide,Mainchain |
| 1 | G | 45 | ASP | Mainchain |
| 1 | G | 450 | GLY | Peptide,Mainchain |
| 1 | G | 451 | LEU | Mainchain |
| 1 | G | 454 | PHE | Mainchain |
| 1 | G | 455 | THR | Mainchain |
| 1 | G | 459 | GLU | Mainchain |
| 1 | G | 462 | CYS | Mainchain |
| 1 | G | 464 | ASN | Peptide,Mainchain |
| 1 | G | 465 | GLY | Peptide |
| 1 | G | 467 | VAL | Mainchain |
| 1 | G | 468 | GLU | Mainchain |
| 1 | G | 469 | PRO | Mainchain |
| 1 | G | 470 | LEU | Mainchain |
| 1 | G | 471 | ARG | Mainchain |
| 1 | G | 472 | VAL | Mainchain |
| 1 | G | 475 | GLN | Mainchain |
| 1 | G | 478 | GLN | Mainchain |
| 1 | G | 481 | ALA | Mainchain |
| 1 | G | 482 | GLU | Mainchain |
| 1 | G | 483 | SER | Peptide,Mainchain |
| 1 | G | 486 | MET | Mainchain |
| 1 | G | 487 | LEU | Mainchain |
| 1 | G | 488 | LEU | Mainchain |
| 1 | G | 49 | VAL | Mainchain |
| 1 | G | 491 | ASP | Mainchain |
| 1 | G | 494 | ILE | Mainchain |
| 1 | G | 495 | ALA | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | G | 496 | ALA | Peptide,Mainchain |
| 1 | G | 50 | ASP | Peptide,Mainchain |
| 1 | G | 52 | LEU | Mainchain |
| 1 | G | 55 | VAL | Peptide,Mainchain |
| 1 | G | 57 | VAL | Mainchain |
| 1 | G | 59 | ASN | Mainchain |
| 1 | G | 61 | GLY | Mainchain |
| 1 | G | 62 | VAL | Mainchain |
| 1 | G | 63 | THR | Mainchain |
| 1 | G | 64 | ILE | Mainchain |
| 1 | G | 65 | LEU | Mainchain |
| 1 | G | 66 | ARG | Mainchain |
| 1 | G | 68 | MET | Mainchain |
| 1 | G | 7 | VAL | Peptide,Mainchain |
| 1 | G | 70 | VAL | Mainchain |
| 1 | G | 71 | GLU | Peptide,Mainchain |
| 1 | G | 72 | HIS | Peptide,Mainchain |
| 1 | G | 73 | PRO | Mainchain |
| 1 | G | 76 | LYS | Mainchain |
| 1 | G | 79 | ILE | Mainchain |
| 1 | G | 8 | LEU | Mainchain |
| 1 | G | 81 | VAL | Mainchain |
| 1 | G | 82 | ALA | Mainchain |
| 1 | G | 9 | PRO | Peptide,Mainchain |
| 1 | G | 90 | GLY | Mainchain |
| 1 | G | 91 | ASP | Mainchain |
| 1 | G | 93 | THR | Peptide,Mainchain |
| 1 | G | 95 | THR | Peptide |
| 1 | G | 96 | ALA | Peptide |
| 1 | G | 97 | VAL | Mainchain |
| 1 | H | 10 | GLU | Mainchain |
| 1 | H | 11 | ASN | Peptide |
| 1 | H | 110 | LEU | Mainchain |
| 1 | H | 111 | LEU | Mainchain |
| 1 | H | 112 | ASP | Peptide |
| 1 | H | 114 | ASN | Peptide,Mainchain |
| 1 | H | 115 | VAL | Peptide,Mainchain |
| 1 | H | 12 | MET | Mainchain |
| 1 | H | 120 | VAL | Mainchain |
| 1 | H | 121 | VAL | Mainchain |
| 1 | H | 128 | ALA | Mainchain |
| 1 | H | 13 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 136 | LYS | Mainchain |
| 1 | H | 138 | ILE | Peptide,Mainchain |
| 1 | H | 139 | ALA | Peptide,Mainchain |
| 1 | H | 14 | ARG | Mainchain |
| 1 | H | 140 | CYS | Mainchain |
| 1 | H | 141 | GLU | Peptide |
| 1 | H | 142 | VAL | Mainchain |
| 1 | H | 143 | GLY | Mainchain |
| 1 | H | 145 | GLN | Mainchain |
| 1 | H | 146 | ASP | Mainchain |
| 1 | H | 149 | ILE | Mainchain |
| 1 | H | 15 | TYR | Mainchain |
| 1 | H | 157 | SER | Mainchain |
| 1 | H | 158 | ILE | Mainchain |
| 1 | H | 159 | THR | Mainchain |
| 1 | H | 16 | MET | Peptide,Mainchain |
| 1 | H | 160 | GLY | Mainchain |
| 1 | H | 162 | GLY | Mainchain |
| 1 | H | 163 | ALA | Peptide |
| 1 | H | 167 | LYS | Mainchain |
| 1 | H | 17 | GLY | Mainchain |
| 1 | H | 172 | GLU | Mainchain |
| 1 | H | 174 | ILE | Mainchain |
| 1 | H | 177 | ALA | Mainchain |
| 1 | H | 179 | SER | Mainchain |
| 1 | H | 18 | ARG | Mainchain |
| 1 | H | 180 | ALA | Mainchain |
| 1 | H | 182 | VAL | Mainchain |
| 1 | H | 185 | GLU | Mainchain |
| 1 | H | 187 | LYS | Peptide,Mainchain |
| 1 | H | 188 | VAL | Peptide,Mainchain |
| 1 | H | 191 | ASP | Mainchain |
| 1 | H | 193 | ILE | Mainchain |
| 1 | H | 196 | GLU | Mainchain |
| 1 | H | 198 | LYS | Peptide,Mainchain |
| 1 | H | 199 | SER | Mainchain |
| 1 | H | 20 | ALA | Mainchain |
| 1 | H | 200 | GLY | Mainchain |
| 1 | H | 201 | ALA | Peptide |
| 1 | H | 202 | SER | Peptide,Mainchain |
| 1 | H | 204 | ASP | Mainchain |
| 1 | H | 206 | THR | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 207 | GLU | Mainchain |
| 1 | H | 209 | ILE | Mainchain |
| 1 | H | 210 | LYS | Peptide,Mainchain |
| 1 | H | 213 | LEU | Mainchain |
| 1 | H | 214 | VAL | Mainchain |
| 1 | H | 215 | ASP | Mainchain |
| 1 | H | 216 | LYS | Peptide,Mainchain |
| 1 | H | 217 | GLU | Peptide,Mainchain |
| 1 | H | 219 | VAL | Mainchain |
| 1 | H | 220 | SER | Mainchain |
| 1 | H | 223 | MET | Peptide,Mainchain |
| 1 | H | 226 | LYS | Mainchain |
| 1 | H | 227 | VAL | Mainchain |
| 1 | H | 228 | THR | Peptide |
| 1 | H | 23 | MET | Mainchain |
| 1 | H | 232 | ILE | Mainchain |
| 1 | H | 235 | LEU | Mainchain |
| 1 | H | 236 | ASN | Mainchain |
| 1 | H | 237 | CYS | Peptide,Mainchain |
| 1 | H | 238 | ALA | Mainchain |
| 1 | H | 24 | ASN | Mainchain |
| 1 | H | 240 | GLU | Mainchain |
| 1 | H | 241 | GLU | Mainchain |
| 1 | H | 242 | THR | Peptide,Mainchain |
| 1 | H | 243 | ALA | Mainchain |
| 1 | H | 244 | SER | Mainchain |
| 1 | H | 247 | LEU | Peptide |
| 1 | H | 248 | LYS | Mainchain |
| 1 | H | 250 | MET | Mainchain |
| 1 | H | 253 | GLU | Peptide,Mainchain |
| 1 | H | 255 | LYS | Peptide,Mainchain |
| 1 | H | 256 | ALA | Mainchain |
| 1 | H | 258 | GLY | Mainchain |
| 1 | H | 259 | ALA | Mainchain |
| 1 | H | 263 | PHE | Mainchain |
| 1 | H | 266 | LYS | Mainchain |
| 1 | H | 267 | GLY | Peptide,Mainchain |
| 1 | H | 268 | ILE | Mainchain |
| 1 | H | 270 | ASP | Mainchain |
| 1 | H | 275 | TYR | Mainchain |
| 1 | H | 276 | LEU | Mainchain |
| 1 | H | 277 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 28 | GLY | Mainchain |
| 1 | H | 286 | ARG | Mainchain |
| 1 | H | 287 | VAL | Mainchain |
| 1 | H | 289 | LYS | Peptide |
| 1 | H | 29 | ARG | Mainchain |
| 1 | H | 291 | ASP | Mainchain |
| 1 | H | 293 | GLU | Mainchain |
| 1 | H | 297 | LYS | Mainchain |
| 1 | H | 30 | ILE | Mainchain |
| 1 | H | 300 | GLY | Mainchain |
| 1 | H | 301 | ALA | Mainchain |
| 1 | H | 302 | ASN | Mainchain |
| 1 | H | 305 | THR | Peptide,Mainchain |
| 1 | H | 306 | ASN | Peptide |
| 1 | H | 307 | ILE | Mainchain |
| 1 | H | 309 | ASP | Peptide,Mainchain |
| 1 | H | 310 | LEU | Peptide,Mainchain |
| 1 | H | 311 | SER | Mainchain |
| 1 | H | 312 | ALA | Peptide,Mainchain |
| 1 | H | 314 | ASP | Peptide,Mainchain |
| 1 | H | 315 | LEU | Peptide |
| 1 | H | 317 | ASP | Mainchain |
| 1 | H | 318 | ALA | Mainchain |
| 1 | H | 319 | GLY | Mainchain |
| 1 | H | 32 | ALA | Mainchain |
| 1 | H | 320 | LEU | Mainchain |
| 1 | H | 323 | GLU | Mainchain |
| 1 | H | 327 | SER | Mainchain |
| 1 | H | 328 | GLY | Peptide,Mainchain |
| 1 | H | 330 | SER | Mainchain |
| 1 | H | 331 | MET | Mainchain |
| 1 | H | 335 | GLU | Mainchain |
| 1 | H | 337 | CYS | Mainchain |
| 1 | H | 34 | THR | Mainchain |
| 1 | H | 341 | LYS | Peptide,Mainchain |
| 1 | H | 342 | ALA | Peptide,Mainchain |
| 1 | H | 344 | THR | Mainchain |
| 1 | H | 346 | LEU | Mainchain |
| 1 | H | 348 | ARG | Mainchain |
| 1 | H | 349 | GLY | Peptide |
| 1 | H | 35 | VAL | Mainchain |
| 1 | H | 350 | THR | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 351 | THR | Mainchain |
| 1 | H | 352 | GLU | Mainchain |
| 1 | H | 353 | HIS | Mainchain |
| 1 | H | 357 | GLU | Mainchain |
| 1 | H | 36 | ARG | Mainchain |
| 1 | H | 361 | ALA | Mainchain |
| 1 | H | 362 | VAL | Mainchain |
| 1 | H | 363 | ASP | Peptide,Mainchain |
| 1 | H | 366 | VAL | Mainchain |
| 1 | H | 37 | SER | Mainchain |
| 1 | H | 371 | CYS | Mainchain |
| 1 | H | 372 | THR | Mainchain |
| 1 | H | 373 | ILE | Mainchain |
| 1 | H | 374 | GLU | Mainchain |
| 1 | H | 375 | ASP | Mainchain |
| 1 | H | 376 | GLY | Peptide,Mainchain |
| 1 | H | 377 | ARG | Mainchain |
| 1 | H | 378 | ILE | Mainchain |
| 1 | H | 38 | THR | Mainchain |
| 1 | H | 380 | SER | Peptide |
| 1 | H | 382 | GLY | Mainchain |
| 1 | H | 383 | GLY | Mainchain |
| 1 | H | 384 | SER | Mainchain |
| 1 | H | 385 | THR | Mainchain |
| 1 | H | 39 | LEU | Mainchain |
| 1 | H | 390 | SER | Mainchain |
| 1 | H | 392 | LYS | Mainchain |
| 1 | H | 394 | ARG | Mainchain |
| 1 | H | 395 | GLU | Mainchain |
| 1 | H | 398 | GLU | Peptide |
| 1 | H | 399 | GLY | Mainchain |
| 1 | H | 402 | GLY | Mainchain |
| 1 | H | 408 | VAL | Mainchain |
| 1 | H | 41 | PRO | Mainchain |
| 1 | H | 411 | PHE | Mainchain |
| 1 | H | 414 | ALA | Peptide,Mainchain |
| 1 | H | 416 | GLU | Mainchain |
| 1 | H | 420 | ARG | Peptide |
| 1 | H | 421 | THR | Mainchain |
| 1 | H | 422 | LEU | Mainchain |
| 1 | H | 423 | ALA | Mainchain |
| 1 | H | 426 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 427 | GLY | Mainchain |
| 1 | H | 429 | ASP | Peptide,Mainchain |
| 1 | H | 431 | ILE | Peptide,Mainchain |
| 1 | H | 436 | LYS | Mainchain |
| 1 | H | 438 | ARG | Mainchain |
| 1 | H | 442 | ALA | Mainchain |
| 1 | H | 443 | SER | Mainchain |
| 1 | H | 444 | ASN | Mainchain |
| 1 | H | 446 | ASN | Mainchain |
| 1 | H | 447 | LYS | Mainchain |
| 1 | H | 448 | CYS | Peptide |
| 1 | H | 449 | ALA | Mainchain |
| 1 | H | 451 | LEU | Mainchain |
| 1 | H | 453 | VAL | Peptide |
| 1 | H | 454 | PHE | Mainchain |
| 1 | H | 455 | THR | Mainchain |
| 1 | H | 458 | VAL | Mainchain |
| 1 | H | 459 | GLU | Mainchain |
| 1 | H | 460 | ASP | Mainchain |
| 1 | H | 464 | ASN | Mainchain |
| 1 | H | 465 | GLY | Mainchain |
| 1 | H | 467 | VAL | Mainchain |
| 1 | H | 469 | PRO | Mainchain |
| 1 | H | 47 | MET | Mainchain |
| 1 | H | 471 | ARG | Peptide,Mainchain |
| 1 | H | 474 | THR | Mainchain |
| 1 | H | 475 | GLN | Mainchain |
| 1 | H | 477 | ILE | Mainchain |
| 1 | H | 481 | ALA | Mainchain |
| 1 | H | 482 | GLU | Mainchain |
| 1 | H | 483 | SER | Mainchain |
| 1 | H | 488 | LEU | Mainchain |
| 1 | H | 49 | VAL | Mainchain |
| 1 | H | 491 | ASP | Mainchain |
| 1 | H | 492 | ASP | Mainchain |
| 1 | H | 493 | VAL | Mainchain |
| 1 | H | 494 | ILE | Mainchain |
| 1 | H | 495 | ALA | Mainchain |
| 1 | H | 496 | ALA | Peptide,Mainchain |
| 1 | H | 50 | ASP | Mainchain |
| 1 | H | 51 | ASP | Mainchain |
| 1 | H | 52 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | H | 55 | VAL | Mainchain |
| 1 | H | 57 | VAL | Mainchain |
| 1 | H | 59 | ASN | Mainchain |
| 1 | H | 60 | ASP | Mainchain |
| 1 | H | 64 | ILE | Mainchain |
| 1 | H | 68 | MET | Peptide,Mainchain |
| 1 | H | 69 | SER | Mainchain |
| 1 | H | 7 | VAL | Peptide,Mainchain |
| 1 | H | 70 | VAL | Mainchain |
| 1 | H | 71 | GLU | Mainchain |
| 1 | H | 75 | ALA | Mainchain |
| 1 | H | 85 | GLN | Mainchain |
| 1 | H | 86 | GLU | Mainchain |
| 1 | H | 87 | LYS | Mainchain |
| 1 | H | 88 | GLU | Peptide,Mainchain |
| 1 | H | 89 | VAL | Mainchain |
| 1 | H | 9 | PRO | Mainchain |
| 1 | H | 90 | GLY | Peptide,Mainchain |
| 1 | H | 91 | ASP | Mainchain |
| 1 | H | 93 | THR | Mainchain |
| 1 | H | 97 | VAL | Mainchain |
| 1 | I | 10 | GLU | Mainchain |
| 1 | I | 100 | ALA | Mainchain |
| 1 | I | 105 | ARG | Mainchain |
| 1 | I | 11 | ASN | Mainchain |
| 1 | I | 110 | LEU | Mainchain |
| 1 | I | 111 | LEU | Mainchain |
| 1 | I | 113 | GLN | Peptide,Mainchain |
| 1 | I | 114 | ASN | Peptide |
| 1 | I | 115 | VAL | Peptide,Mainchain |
| 1 | I | 116 | HIS | Mainchain |
| 1 | I | 118 | THR | Mainchain |
| 1 | I | 119 | ILE | Mainchain |
| 1 | I | 12 | MET | Peptide |
| 1 | I | 123 | GLY | Mainchain |
| 1 | I | 126 | ALA | Mainchain |
| 1 | I | 128 | ALA | Mainchain |
| 1 | I | 129 | GLN | Peptide,Mainchain |
| 1 | I | 130 | LYS | Mainchain |
| 1 | I | 131 | ALA | Mainchain |
| 1 | I | 134 | LEU | Mainchain |
| 1 | I | 136 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 138 | ILE | Peptide,Mainchain |
| 1 | I | 139 | ALA | Mainchain |
| 1 | I | 14 | ARG | Mainchain |
| 1 | I | 140 | CYS | Mainchain |
| 1 | I | 141 | GLU | Mainchain |
| 1 | I | 142 | VAL | Mainchain |
| 1 | I | 143 | GLY | Peptide,Mainchain |
| 1 | I | 145 | GLN | Mainchain |
| 1 | I | 146 | ASP | Mainchain |
| 1 | I | 147 | LYS | Mainchain |
| 1 | I | 148 | GLU | Mainchain |
| 1 | I | 15 | TYR | Mainchain |
| 1 | I | 151 | THR | Mainchain |
| 1 | I | 152 | LYS | Mainchain |
| 1 | I | 154 | ALA | Mainchain |
| 1 | I | 16 | MET | Mainchain |
| 1 | I | 163 | ALA | Peptide,Mainchain |
| 1 | I | 164 | GLU | Mainchain |
| 1 | I | 166 | ALA | Mainchain |
| 1 | I | 170 | LEU | Mainchain |
| 1 | I | 175 | VAL | Mainchain |
| 1 | I | 176 | GLU | Mainchain |
| 1 | I | 18 | ARG | Mainchain |
| 1 | I | 180 | ALA | Mainchain |
| 1 | I | 181 | VAL | Mainchain |
| 1 | I | 182 | VAL | Mainchain |
| 1 | I | 183 | ASP | Mainchain |
| 1 | I | 185 | GLU | Mainchain |
| 1 | I | 186 | GLY | Mainchain |
| 1 | I | 187 | LYS | Mainchain |
| 1 | I | 188 | VAL | Mainchain |
| 1 | I | 189 | ASP | Mainchain |
| 1 | I | 19 | ASP | Mainchain |
| 1 | I | 191 | ASP | Mainchain |
| 1 | I | 192 | LEU | Mainchain |
| 1 | I | 195 | ILE | Mainchain |
| 1 | I | 197 | LYS | Mainchain |
| 1 | I | 198 | LYS | Mainchain |
| 1 | I | 199 | SER | Mainchain |
| 1 | I | 200 | GLY | Mainchain |
| 1 | I | 201 | ALA | Peptide |
| 1 | I | 202 | SER | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 203 | ILE | Mainchain |
| 1 | I | 208 | LEU | Mainchain |
| 1 | I | 209 | ILE | Mainchain |
| 1 | I | 21 | GLN | Mainchain |
| 1 | I | 215 | ASP | Mainchain |
| 1 | I | 216 | LYS | Mainchain |
| 1 | I | 22 | ARG | Mainchain |
| 1 | I | 222 | GLN | Mainchain |
| 1 | I | 223 | MET | Mainchain |
| 1 | I | 224 | PRO | Peptide |
| 1 | I | 225 | LYS | Mainchain |
| 1 | I | 226 | LYS | Mainchain |
| 1 | I | 228 | THR | Mainchain |
| 1 | I | 229 | ASP | Mainchain |
| 1 | I | 235 | LEU | Mainchain |
| 1 | I | 236 | ASN | Mainchain |
| 1 | I | 237 | CYS | Peptide,Mainchain |
| 1 | I | 238 | ALA | Peptide,Mainchain |
| 1 | I | 239 | ILE | Mainchain |
| 1 | I | 241 | GLU | Mainchain |
| 1 | I | 242 | THR | Mainchain |
| 1 | I | 247 | LEU | Mainchain |
| 1 | I | 249 | ASP | Mainchain |
| 1 | I | 25 | ILE | Mainchain |
| 1 | I | 250 | MET | Mainchain |
| 1 | I | 254 | ILE | Mainchain |
| 1 | I | 255 | LYS | Mainchain |
| 1 | I | 257 | SER | Mainchain |
| 1 | I | 258 | GLY | Peptide |
| 1 | I | 263 | PHE | Mainchain |
| 1 | I | 264 | CYS | Mainchain |
| 1 | I | 265 | GLN | Mainchain |
| 1 | I | 266 | LYS | Mainchain |
| 1 | I | 268 | ILE | Mainchain |
| 1 | I | 27 | ALA | Mainchain |
| 1 | I | 274 | HIS | Mainchain |
| 1 | I | 277 | ALA | Mainchain |
| 1 | I | 279 | GLU | Peptide,Mainchain |
| 1 | I | 287 | VAL | Mainchain |
| 1 | I | 289 | LYS | Mainchain |
| 1 | I | 292 | MET | Mainchain |
| 1 | I | 294 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 296 | ALA | Peptide,Mainchain |
| 1 | I | 297 | LYS | Mainchain |
| 1 | I | 298 | ALA | Peptide |
| 1 | I | 301 | ALA | Mainchain |
| 1 | I | 302 | ASN | Mainchain |
| 1 | I | 304 | ILE | Mainchain |
| 1 | I | 305 | THR | Mainchain |
| 1 | I | 306 | ASN | Peptide |
| 1 | I | 307 | ILE | Mainchain |
| 1 | I | 309 | ASP | Mainchain |
| 1 | I | 31 | ILE | Mainchain |
| 1 | I | 311 | SER | Peptide |
| 1 | I | 312 | ALA | Mainchain |
| 1 | I | 313 | GLN | Peptide,Mainchain |
| 1 | I | 314 | ASP | Peptide,Mainchain |
| 1 | I | 319 | GLY | Mainchain |
| 1 | I | 326 | ILE | Mainchain |
| 1 | I | 327 | SER | Peptide |
| 1 | I | 328 | GLY | Mainchain |
| 1 | I | 329 | ASP | Mainchain |
| 1 | I | 331 | MET | Mainchain |
| 1 | I | 333 | PHE | Mainchain |
| 1 | I | 335 | GLU | Mainchain |
| 1 | I | 336 | GLU | Mainchain |
| 1 | I | 338 | LYS | Mainchain |
| 1 | I | 339 | HIS | Mainchain |
| 1 | I | 34 | THR | Mainchain |
| 1 | I | 340 | PRO | Mainchain |
| 1 | I | 341 | LYS | Mainchain |
| 1 | I | 342 | ALA | Mainchain |
| 1 | I | 343 | VAL | Mainchain |
| 1 | I | 345 | MET | Mainchain |
| 1 | I | 348 | ARG | Peptide |
| 1 | I | 349 | GLY | Mainchain |
| 1 | I | 35 | VAL | Peptide,Mainchain |
| 1 | I | 350 | THR | Peptide |
| 1 | I | 352 | GLU | Mainchain |
| 1 | I | 356 | GLU | Mainchain |
| 1 | I | 357 | GLU | Mainchain |
| 1 | I | 36 | ARG | Mainchain |
| 1 | I | 361 | ALA | Mainchain |
| 1 | I | 364 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 367 | GLY | Mainchain |
| 1 | I | 368 | VAL | Mainchain |
| 1 | I | 37 | SER | Mainchain |
| 1 | I | 371 | CYS | Peptide |
| 1 | I | 376 | GLY | Peptide,Mainchain |
| 1 | I | 377 | ARG | Mainchain |
| 1 | I | 378 | ILE | Mainchain |
| 1 | I | 379 | VAL | Peptide |
| 1 | I | 38 | THR | Mainchain |
| 1 | I | 380 | SER | Mainchain |
| 1 | I | 381 | GLY | Mainchain |
| 1 | I | 382 | GLY | Peptide,Mainchain |
| 1 | I | 384 | SER | Mainchain |
| 1 | I | 39 | LEU | Mainchain |
| 1 | I | 396 | TYR | Mainchain |
| 1 | I | 398 | GLU | Mainchain |
| 1 | I | 400 | ILE | Mainchain |
| 1 | I | 405 | GLN | Peptide |
| 1 | I | 407 | ALA | Mainchain |
| 1 | I | 409 | ARG | Mainchain |
| 1 | I | 410 | ALA | Mainchain |
| 1 | I | 411 | PHE | Mainchain |
| 1 | I | 413 | ASP | Mainchain |
| 1 | I | 415 | LEU | Mainchain |
| 1 | I | 416 | GLU | Peptide,Mainchain |
| 1 | I | 418 | ILE | Mainchain |
| 1 | I | 420 | ARG | Mainchain |
| 1 | I | 423 | ALA | Mainchain |
| 1 | I | 427 | GLY | Mainchain |
| 1 | I | 437 | VAL | Mainchain |
| 1 | I | 438 | ARG | Mainchain |
| 1 | I | 439 | ALA | Mainchain |
| 1 | I | 442 | ALA | Mainchain |
| 1 | I | 443 | SER | Mainchain |
| 1 | I | 444 | ASN | Mainchain |
| 1 | I | 445 | GLY | Mainchain |
| 1 | I | 449 | ALA | Mainchain |
| 1 | I | 45 | ASP | Mainchain |
| 1 | I | 450 | GLY | Mainchain |
| 1 | I | 452 | ASN | Peptide,Mainchain |
| 1 | I | 454 | PHE | Mainchain |
| 1 | I | 456 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 459 | GLU | Mainchain |
| 1 | I | 462 | CYS | Mainchain |
| 1 | I | 465 | GLY | Mainchain |
| 1 | I | 467 | VAL | Mainchain |
| 1 | I | 473 | LYS | Mainchain |
| 1 | I | 474 | THR | Mainchain |
| 1 | I | 475 | GLN | Mainchain |
| 1 | I | 477 | ILE | Mainchain |
| 1 | I | 479 | SER | Mainchain |
| 1 | I | 481 | ALA | Mainchain |
| 1 | I | 482 | GLU | Mainchain |
| 1 | I | 483 | SER | Mainchain |
| 1 | I | 488 | LEU | Mainchain |
| 1 | I | 489 | ARG | Mainchain |
| 1 | I | 49 | VAL | Mainchain |
| 1 | I | 491 | ASP | Mainchain |
| 1 | I | 494 | ILE | Mainchain |
| 1 | I | 495 | ALA | Peptide,Mainchain |
| 1 | I | 496 | ALA | Mainchain |
| 1 | I | 52 | LEU | Mainchain |
| 1 | I | 55 | VAL | Mainchain |
| 1 | I | 60 | ASP | Mainchain |
| 1 | I | 61 | GLY | Mainchain |
| 1 | I | 62 | VAL | Mainchain |
| 1 | I | 64 | ILE | Mainchain |
| 1 | I | 65 | LEU | Peptide,Mainchain |
| 1 | I | 66 | ARG | Mainchain |
| 1 | I | 68 | MET | Mainchain |
| 1 | I | 69 | SER | Mainchain |
| 1 | I | 7 | VAL | Peptide,Mainchain |
| 1 | I | 70 | VAL | Mainchain |
| 1 | I | 71 | GLU | Mainchain |
| 1 | I | 73 | PRO | Mainchain |
| 1 | I | 74 | ALA | Peptide |
| 1 | I | 78 | LEU | Mainchain |
| 1 | I | 81 | VAL | Mainchain |
| 1 | I | 83 | LYS | Mainchain |
| 1 | I | 84 | THR | Mainchain |
| 1 | I | 86 | GLU | Mainchain |
| 1 | I | 87 | LYS | Mainchain |
| 1 | I | 89 | VAL | Mainchain |
| 1 | I | 91 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | I | 98 | VAL | Mainchain |
| 1 | J | 10 | GLU | Peptide,Mainchain |
| 1 | J | 103 | LEU | Mainchain |
| 1 | J | 107 | ALA | Mainchain |
| 1 | J | 11 | ASN | Peptide,Mainchain |
| 1 | J | 110 | LEU | Mainchain |
| 1 | J | 111 | LEU | Mainchain |
| 1 | J | 112 | ASP | Mainchain |
| 1 | J | 113 | GLN | Mainchain |
| 1 | J | 115 | VAL | Peptide |
| 1 | J | 116 | HIS | Mainchain |
| 1 | J | 119 | ILE | Mainchain |
| 1 | J | 123 | GLY | Mainchain |
| 1 | J | 133 | GLU | Peptide,Mainchain |
| 1 | J | 137 | THR | Mainchain |
| 1 | J | 138 | ILE | Peptide,Mainchain |
| 1 | J | 139 | ALA | Mainchain |
| 1 | J | 140 | CYS | Mainchain |
| 1 | J | 141 | GLU | Mainchain |
| 1 | J | 143 | GLY | Peptide,Mainchain |
| 1 | J | 144 | ALA | Mainchain |
| 1 | J | 145 | GLN | Mainchain |
| 1 | J | 147 | LYS | Mainchain |
| 1 | J | 149 | ILE | Mainchain |
| 1 | J | 15 | TYR | Mainchain |
| 1 | J | 152 | LYS | Mainchain |
| 1 | J | 16 | MET | Mainchain |
| 1 | J | 162 | GLY | Peptide |
| 1 | J | 166 | ALA | Mainchain |
| 1 | J | 169 | LYS | Mainchain |
| 1 | J | 17 | GLY | Peptide |
| 1 | J | 175 | VAL | Mainchain |
| 1 | J | 177 | ALA | Mainchain |
| 1 | J | 179 | SER | Mainchain |
| 1 | J | 182 | VAL | Mainchain |
| 1 | J | 184 | ASP | Mainchain |
| 1 | J | 185 | GLU | Mainchain |
| 1 | J | 186 | GLY | Peptide |
| 1 | J | 187 | LYS | Mainchain |
| 1 | J | 188 | VAL | Peptide,Mainchain |
| 1 | J | 189 | ASP | Peptide |
| 1 | J | 191 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | J | 192 | LEU | Mainchain |
| 1 | J | 196 | GLU | Mainchain |
| 1 | J | 198 | LYS | Mainchain |
| 1 | J | 200 | GLY | Mainchain |
| 1 | J | 201 | ALA | Peptide,Mainchain |
| 1 | J | 203 | ILE | Mainchain |
| 1 | J | 204 | ASP | Mainchain |
| 1 | J | 205 | ASP | Mainchain |
| 1 | J | 207 | GLU | Mainchain |
| 1 | J | 209 | ILE | Mainchain |
| 1 | J | 210 | LYS | Mainchain |
| 1 | J | 217 | GLU | Mainchain |
| 1 | J | 219 | VAL | Mainchain |
| 1 | J | 225 | LYS | Mainchain |
| 1 | J | 227 | VAL | Mainchain |
| 1 | J | 228 | THR | Mainchain |
| 1 | J | 23 | MET | Mainchain |
| 1 | J | 234 | LEU | Mainchain |
| 1 | J | 235 | LEU | Mainchain |
| 1 | J | 236 | ASN | Mainchain |
| 1 | J | 237 | CYS | Peptide,Mainchain |
| 1 | J | 238 | ALA | Peptide |
| 1 | J | 24 | ASN | Mainchain |
| 1 | J | 240 | GLU | Mainchain |
| 1 | J | 244 | SER | Mainchain |
| 1 | J | 246 | MET | Mainchain |
| 1 | J | 250 | MET | Mainchain |
| 1 | J | 253 | GLU | Mainchain |
| 1 | J | 255 | LYS | Mainchain |
| 1 | J | 256 | ALA | Mainchain |
| 1 | J | 258 | GLY | Mainchain |
| 1 | J | 259 | ALA | Peptide,Mainchain |
| 1 | J | 26 | LEU | Mainchain |
| 1 | J | 261 | VAL | Mainchain |
| 1 | J | 265 | GLN | Mainchain |
| 1 | J | 266 | LYS | Mainchain |
| 1 | J | 268 | ILE | Mainchain |
| 1 | J | 269 | ASP | Mainchain |
| 1 | J | 27 | ALA | Mainchain |
| 1 | J | 270 | ASP | Mainchain |
| 1 | J | 272 | ALA | Mainchain |
| 1 | J | 274 | HIS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | J | 278 | LYS | Mainchain |
| 1 | J | 28 | GLY | Mainchain |
| 1 | J | 280 | GLY | Mainchain |
| 1 | J | 283 | ALA | Mainchain |
| 1 | J | 285 | ARG | Mainchain |
| 1 | J | 287 | VAL | Mainchain |
| 1 | J | 288 | LYS | Mainchain |
| 1 | J | 290 | SER | Mainchain |
| 1 | J | 294 | LYS | Mainchain |
| 1 | J | 295 | LEU | Mainchain |
| 1 | J | 30 | ILE | Mainchain |
| 1 | J | 300 | GLY | Mainchain |
| 1 | J | 302 | ASN | Mainchain |
| 1 | J | 305 | THR | Mainchain |
| 1 | J | 306 | ASN | Peptide,Mainchain |
| 1 | J | 307 | ILE | Peptide,Mainchain |
| 1 | J | 308 | LYS | Mainchain |
| 1 | J | 309 | ASP | Mainchain |
| 1 | J | 31 | ILE | Mainchain |
| 1 | J | 311 | SER | Mainchain |
| 1 | J | 315 | LEU | Peptide,Mainchain |
| 1 | J | 318 | ALA | Mainchain |
| 1 | J | 319 | GLY | Mainchain |
| 1 | J | 32 | ALA | Mainchain |
| 1 | J | 324 | ARG | Mainchain |
| 1 | J | 326 | ILE | Mainchain |
| 1 | J | 327 | SER | Mainchain |
| 1 | J | 328 | GLY | Mainchain |
| 1 | J | 33 | GLU | Peptide,Mainchain |
| 1 | J | 335 | GLU | Mainchain |
| 1 | J | 336 | GLU | Peptide,Mainchain |
| 1 | J | 337 | CYS | Mainchain |
| 1 | J | 338 | LYS | Mainchain |
| 1 | J | 339 | HIS | Mainchain |
| 1 | J | 34 | THR | Mainchain |
| 1 | J | 340 | PRO | Mainchain |
| 1 | J | 341 | LYS | Mainchain |
| 1 | J | 342 | ALA | Peptide,Mainchain |
| 1 | J | 343 | VAL | Peptide,Mainchain |
| 1 | J | 349 | GLY | Mainchain |
| 1 | J | 35 | VAL | Mainchain |
| 1 | J | 351 | THR | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | J | 352 | GLU | Mainchain |
| 1 | J | 353 | HIS | Mainchain |
| 1 | J | 355 | ILE | Mainchain |
| 1 | J | 36 | ARG | Mainchain |
| 1 | J | 360 | ARG | Mainchain |
| 1 | J | 366 | VAL | Mainchain |
| 1 | J | 367 | GLY | Mainchain |
| 1 | J | 370 | GLY | Peptide,Mainchain |
| 1 | J | 371 | CYS | Mainchain |
| 1 | J | 372 | THR | Mainchain |
| 1 | J | 374 | GLU | Mainchain |
| 1 | J | 375 | ASP | Mainchain |
| 1 | J | 376 | GLY | Peptide,Mainchain |
| 1 | J | 38 | THR | Mainchain |
| 1 | J | 380 | SER | Mainchain |
| 1 | J | 381 | GLY | Peptide |
| 1 | J | 382 | GLY | Peptide,Mainchain |
| 1 | J | 383 | GLY | Peptide,Mainchain |
| 1 | J | 384 | SER | Mainchain |
| 1 | J | 39 | LEU | Mainchain |
| 1 | J | 390 | SER | Mainchain |
| 1 | J | 393 | LEU | Mainchain |
| 1 | J | 395 | GLU | Mainchain |
| 1 | J | 396 | TYR | Mainchain |
| 1 | J | 397 | ALA | Mainchain |
| 1 | J | 40 | GLY | Mainchain |
| 1 | J | 401 | SER | Mainchain |
| 1 | J | 403 | ARG | Mainchain |
| 1 | J | 406 | LEU | Mainchain |
| 1 | J | 41 | PRO | Mainchain |
| 1 | J | 411 | PHE | Mainchain |
| 1 | J | 412 | ALA | Mainchain |
| 1 | J | 414 | ALA | Mainchain |
| 1 | J | 416 | GLU | Mainchain |
| 1 | J | 420 | ARG | Mainchain |
| 1 | J | 421 | THR | Mainchain |
| 1 | J | 423 | ALA | Mainchain |
| 1 | J | 425 | ASN | Mainchain |
| 1 | J | 429 | ASP | Peptide,Mainchain |
| 1 | J | 43 | GLY | Mainchain |
| 1 | J | 430 | ALA | Mainchain |
| 1 | J | 432 | GLU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | J | 433 | ILE | Mainchain |
| 1 | J | 438 | ARG | Mainchain |
| 1 | J | 441 | HIS | Mainchain |
| 1 | J | 443 | SER | Mainchain |
| 1 | J | 445 | GLY | Mainchain |
| 1 | J | 447 | LYS | Mainchain |
| 1 | J | 449 | ALA | Mainchain |
| 1 | J | 452 | ASN | Mainchain |
| 1 | J | 455 | THR | Mainchain |
| 1 | J | 456 | GLY | Mainchain |
| 1 | J | 458 | VAL | Peptide,Mainchain |
| 1 | J | 46 | LYS | Mainchain |
| 1 | J | 461 | MET | Mainchain |
| 1 | J | 462 | CYS | Mainchain |
| 1 | J | 463 | GLU | Mainchain |
| 1 | J | 464 | ASN | Mainchain |
| 1 | J | 465 | GLY | Mainchain |
| 1 | J | 467 | VAL | Mainchain |
| 1 | J | 469 | PRO | Mainchain |
| 1 | J | 470 | LEU | Mainchain |
| 1 | J | 473 | LYS | Mainchain |
| 1 | J | 48 | LEU | Mainchain |
| 1 | J | 480 | ALA | Mainchain |
| 1 | J | 484 | THR | Mainchain |
| 1 | J | 486 | MET | Mainchain |
| 1 | J | 488 | LEU | Peptide,Mainchain |
| 1 | J | 49 | VAL | Mainchain |
| 1 | J | 490 | ILE | Mainchain |
| 1 | J | 491 | ASP | Mainchain |
| 1 | J | 493 | VAL | Mainchain |
| 1 | J | 495 | ALA | Peptide,Mainchain |
| 1 | J | 496 | ALA | Peptide |
| 1 | J | 50 | ASP | Mainchain |
| 1 | J | 51 | ASP | Mainchain |
| 1 | J | 55 | VAL | Peptide,Mainchain |
| 1 | J | 56 | VAL | Mainchain |
| 1 | J | 57 | VAL | Mainchain |
| 1 | J | 59 | ASN | Mainchain |
| 1 | J | 61 | GLY | Mainchain |
| 1 | J | 63 | THR | Mainchain |
| 1 | J | 65 | LEU | Mainchain |
| 1 | J | 67 | GLU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | J | 68 | MET | Peptide |
| 1 | J | 69 | SER | Mainchain |
| 1 | J | 7 | VAL | Mainchain |
| 1 | J | 72 | HIS | Mainchain |
| 1 | J | 73 | PRO | Mainchain |
| 1 | J | 74 | ALA | Mainchain |
| 1 | J | 75 | ALA | Mainchain |
| 1 | J | 76 | LYS | Mainchain |
| 1 | J | 78 | LEU | Mainchain |
| 1 | J | 79 | ILE | Mainchain |
| 1 | J | 8 | LEU | Mainchain |
| 1 | J | 81 | VAL | Mainchain |
| 1 | J | 82 | ALA | Mainchain |
| 1 | J | 86 | GLU | Peptide,Mainchain |
| 1 | J | 87 | LYS | Mainchain |
| 1 | J | 88 | GLU | Mainchain |
| 1 | J | 89 | VAL | Mainchain |
| 1 | J | 90 | GLY | Mainchain |
| 1 | J | 93 | THR | Mainchain |
| 1 | J | 94 | THR | Mainchain |
| 1 | J | 95 | THR | Mainchain |
| 1 | J | 96 | ALA | Mainchain |
| 1 | J | 97 | VAL | Mainchain |
| 1 | J | 99 | VAL | Mainchain |
| 1 | K | 100 | ALA | Mainchain |
| 1 | K | 101 | GLY | Mainchain |
| 1 | K | 102 | GLU | Mainchain |
| 1 | K | 104 | LEU | Mainchain |
| 1 | K | 105 | ARG | Mainchain |
| 1 | K | 106 | LYS | Mainchain |
| 1 | K | 109 | GLU | Mainchain |
| 1 | K | 11 | ASN | Peptide,Mainchain |
| 1 | K | 110 | LEU | Mainchain |
| 1 | K | 111 | LEU | Mainchain |
| 1 | K | 112 | ASP | Peptide,Mainchain |
| 1 | K | 113 | GLN | Peptide |
| 1 | K | 115 | VAL | Peptide |
| 1 | K | 116 | HIS | Mainchain |
| 1 | K | 117 | PRO | Mainchain |
| 1 | K | 119 | ILE | Mainchain |
| 1 | K | 12 | MET | Mainchain |
| 1 | K | 121 | VAL | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 124 | TYR | Mainchain |
| 1 | K | 128 | ALA | Mainchain |
| 1 | K | 130 | LYS | Mainchain |
| 1 | K | 131 | ALA | Mainchain |
| 1 | K | 133 | GLU | Mainchain |
| 1 | K | 135 | LEU | Peptide |
| 1 | K | 136 | LYS | Mainchain |
| 1 | K | 138 | ILE | Peptide |
| 1 | K | 139 | ALA | Mainchain |
| 1 | K | 141 | GLU | Mainchain |
| 1 | K | 142 | VAL | Peptide,Mainchain |
| 1 | K | 143 | GLY | Peptide,Mainchain |
| 1 | K | 145 | GLN | Peptide,Mainchain |
| 1 | K | 146 | ASP | Mainchain |
| 1 | K | 154 | ALA | Mainchain |
| 1 | K | 155 | MET | Mainchain |
| 1 | K | 158 | ILE | Mainchain |
| 1 | K | 160 | GLY | Mainchain |
| 1 | K | 161 | LYS | Mainchain |
| 1 | K | 162 | GLY | Peptide,Mainchain |
| 1 | K | 163 | ALA | Peptide |
| 1 | K | 165 | LYS | Mainchain |
| 1 | K | 167 | LYS | Mainchain |
| 1 | K | 17 | GLY | Mainchain |
| 1 | K | 170 | LEU | Mainchain |
| 1 | K | 172 | GLU | Mainchain |
| 1 | K | 175 | VAL | Mainchain |
| 1 | K | 176 | GLU | Mainchain |
| 1 | K | 178 | VAL | Mainchain |
| 1 | K | 181 | VAL | Mainchain |
| 1 | K | 182 | VAL | Mainchain |
| 1 | K | 184 | ASP | Mainchain |
| 1 | K | 187 | LYS | Mainchain |
| 1 | K | 188 | VAL | Peptide,Mainchain |
| 1 | K | 190 | LYS | Mainchain |
| 1 | K | 191 | ASP | Mainchain |
| 1 | K | 192 | LEU | Peptide,Mainchain |
| 1 | K | 193 | ILE | Mainchain |
| 1 | K | 194 | LYS | Mainchain |
| 1 | K | 197 | LYS | Mainchain |
| 1 | K | 198 | LYS | Mainchain |
| 1 | K | 200 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 202 | SER | Mainchain |
| 1 | K | 204 | ASP | Mainchain |
| 1 | K | 206 | THR | Mainchain |
| 1 | K | 209 | ILE | Mainchain |
| 1 | K | 212 | VAL | Mainchain |
| 1 | K | 213 | LEU | Mainchain |
| 1 | K | 214 | VAL | Mainchain |
| 1 | K | 216 | LYS | Peptide,Mainchain |
| 1 | K | 22 | ARG | Mainchain |
| 1 | K | 224 | PRO | Mainchain |
| 1 | K | 225 | LYS | Mainchain |
| 1 | K | 227 | VAL | Mainchain |
| 1 | K | 228 | THR | Mainchain |
| 1 | K | 229 | ASP | Mainchain |
| 1 | K | 234 | LEU | Mainchain |
| 1 | K | 236 | ASN | Mainchain |
| 1 | K | 237 | CYS | Mainchain |
| 1 | K | 238 | ALA | Mainchain |
| 1 | K | 243 | ALA | Mainchain |
| 1 | K | 247 | LEU | Mainchain |
| 1 | K | 248 | LYS | Mainchain |
| 1 | K | 25 | ILE | Mainchain |
| 1 | K | 250 | MET | Mainchain |
| 1 | K | 257 | SER | Peptide |
| 1 | K | 259 | ALA | Mainchain |
| 1 | K | 26 | LEU | Mainchain |
| 1 | K | 263 | PHE | Mainchain |
| 1 | K | 266 | LYS | Peptide |
| 1 | K | 267 | GLY | Mainchain |
| 1 | K | 268 | ILE | Mainchain |
| 1 | K | 269 | ASP | Mainchain |
| 1 | K | 27 | ALA | Mainchain |
| 1 | K | 273 | GLN | Mainchain |
| 1 | K | 276 | LEU | Mainchain |
| 1 | K | 278 | LYS | Mainchain |
| 1 | K | 28 | GLY | Mainchain |
| 1 | K | 283 | ALA | Mainchain |
| 1 | K | 286 | ARG | Mainchain |
| 1 | K | 287 | VAL | Mainchain |
| 1 | K | 29 | ARG | Mainchain |
| 1 | K | 291 | ASP | Mainchain |
| 1 | K | 297 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 298 | ALA | Mainchain |
| 1 | K | 30 | ILE | Mainchain |
| 1 | K | 300 | GLY | Peptide,Mainchain |
| 1 | K | 301 | ALA | Mainchain |
| 1 | K | 302 | ASN | Mainchain |
| 1 | K | 305 | THR | Mainchain |
| 1 | K | 306 | ASN | Mainchain |
| 1 | K | 307 | ILE | Peptide,Mainchain |
| 1 | K | 309 | ASP | Mainchain |
| 1 | K | 311 | SER | Mainchain |
| 1 | K | 312 | ALA | Peptide,Mainchain |
| 1 | K | 313 | GLN | Peptide |
| 1 | K | 314 | ASP | Mainchain |
| 1 | K | 315 | LEU | Peptide |
| 1 | K | 316 | GLY | Mainchain |
| 1 | K | 317 | ASP | Mainchain |
| 1 | K | 318 | ALA | Mainchain |
| 1 | K | 319 | GLY | Mainchain |
| 1 | K | 324 | ARG | Mainchain |
| 1 | K | 327 | SER | Peptide,Mainchain |
| 1 | K | 328 | GLY | Peptide |
| 1 | K | 33 | GLU | Mainchain |
| 1 | K | 335 | GLU | Mainchain |
| 1 | K | 336 | GLU | Peptide,Mainchain |
| 1 | K | 339 | HIS | Mainchain |
| 1 | K | 34 | THR | Mainchain |
| 1 | K | 340 | PRO | Mainchain |
| 1 | K | 341 | LYS | Peptide |
| 1 | K | 342 | ALA | Mainchain |
| 1 | K | 343 | VAL | Mainchain |
| 1 | K | 344 | THR | Mainchain |
| 1 | K | 348 | ARG | Peptide |
| 1 | K | 349 | GLY | Mainchain |
| 1 | K | 350 | THR | Peptide |
| 1 | K | 351 | THR | Peptide,Mainchain |
| 1 | K | 354 | VAL | Mainchain |
| 1 | K | 355 | ILE | Peptide,Mainchain |
| 1 | K | 358 | VAL | Peptide |
| 1 | K | 360 | ARG | Mainchain |
| 1 | K | 362 | VAL | Mainchain |
| 1 | K | 364 | ASP | Mainchain |
| 1 | K | 367 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 368 | VAL | Peptide |
| 1 | K | 370 | GLY | Peptide,Mainchain |
| 1 | K | 372 | THR | Mainchain |
| 1 | K | 373 | ILE | Mainchain |
| 1 | K | 375 | ASP | Mainchain |
| 1 | K | 376 | GLY | Peptide,Mainchain |
| 1 | K | 378 | ILE | Mainchain |
| 1 | K | 379 | VAL | Peptide,Mainchain |
| 1 | K | 380 | SER | Peptide |
| 1 | K | 381 | GLY | Peptide,Mainchain |
| 1 | K | 382 | GLY | Mainchain |
| 1 | K | 383 | GLY | Peptide,Mainchain |
| 1 | K | 384 | SER | Mainchain |
| 1 | K | 385 | THR | Mainchain |
| 1 | K | 388 | GLU | Mainchain |
| 1 | K | 39 | LEU | Mainchain |
| 1 | K | 390 | SER | Mainchain |
| 1 | K | 393 | LEU | Mainchain |
| 1 | K | 394 | ARG | Mainchain |
| 1 | K | 395 | GLU | Mainchain |
| 1 | K | 399 | GLY | Mainchain |
| 1 | K | 401 | SER | Mainchain |
| 1 | K | 402 | GLY | Mainchain |
| 1 | K | 406 | LEU | Mainchain |
| 1 | K | 407 | ALA | Mainchain |
| 1 | K | 408 | VAL | Mainchain |
| 1 | K | 409 | ARG | Mainchain |
| 1 | K | 410 | ALA | Mainchain |
| 1 | K | 412 | ALA | Mainchain |
| 1 | K | 413 | ASP | Mainchain |
| 1 | K | 415 | LEU | Mainchain |
| 1 | K | 417 | VAL | Mainchain |
| 1 | K | 418 | ILE | Mainchain |
| 1 | K | 42 | LYS | Mainchain |
| 1 | K | 422 | LEU | Mainchain |
| 1 | K | 424 | GLU | Mainchain |
| 1 | K | 426 | ALA | Peptide,Mainchain |
| 1 | K | 427 | GLY | Mainchain |
| 1 | K | 428 | LEU | Mainchain |
| 1 | K | 429 | ASP | Peptide,Mainchain |
| 1 | K | 43 | GLY | Mainchain |
| 1 | K | 434 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 435 | VAL | Mainchain |
| 1 | K | 442 | ALA | Mainchain |
| 1 | K | 443 | SER | Mainchain |
| 1 | K | 444 | ASN | Mainchain |
| 1 | K | 449 | ALA | Mainchain |
| 1 | K | 450 | GLY | Mainchain |
| 1 | K | 452 | ASN | Mainchain |
| 1 | K | 455 | THR | Mainchain |
| 1 | K | 457 | ALA | Mainchain |
| 1 | K | 459 | GLU | Mainchain |
| 1 | K | 460 | ASP | Mainchain |
| 1 | K | 461 | MET | Mainchain |
| 1 | K | 462 | CYS | Mainchain |
| 1 | K | 463 | GLU | Mainchain |
| 1 | K | 464 | ASN | Mainchain |
| 1 | K | 467 | VAL | Mainchain |
| 1 | K | 469 | PRO | Mainchain |
| 1 | K | 470 | LEU | Mainchain |
| 1 | K | 471 | ARG | Peptide,Mainchain |
| 1 | K | 472 | VAL | Mainchain |
| 1 | K | 474 | THR | Mainchain |
| 1 | K | 487 | LEU | Mainchain |
| 1 | K | 488 | LEU | Mainchain |
| 1 | K | 489 | ARG | Mainchain |
| 1 | K | 49 | VAL | Mainchain |
| 1 | K | 491 | ASP | Mainchain |
| 1 | K | 494 | ILE | Mainchain |
| 1 | K | 495 | ALA | Peptide,Mainchain |
| 1 | K | 496 | ALA | Peptide,Mainchain |
| 1 | K | 51 | ASP | Mainchain |
| 1 | K | 52 | LEU | Mainchain |
| 1 | K | 56 | VAL | Mainchain |
| 1 | K | 62 | VAL | Mainchain |
| 1 | K | 64 | ILE | Mainchain |
| 1 | K | 68 | MET | Peptide |
| 1 | K | 69 | SER | Mainchain |
| 1 | K | 7 | VAL | Mainchain |
| 1 | K | 72 | HIS | Mainchain |
| 1 | K | 73 | PRO | Mainchain |
| 1 | K | 74 | ALA | Mainchain |
| 1 | K | 78 | LEU | Mainchain |
| 1 | K | 82 | ALA | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | K | 86 | GLU | Mainchain |
| 1 | K | 87 | LYS | Mainchain |
| 1 | K | 88 | GLU | Mainchain |
| 1 | K | 89 | VAL | Mainchain |
| 1 | K | 9 | PRO | Peptide,Mainchain |
| 1 | K | 90 | GLY | Peptide,Mainchain |
| 1 | K | 92 | GLY | Mainchain |
| 1 | K | 93 | THR | Peptide |
| 1 | K | 96 | ALA | Mainchain |
| 1 | K | 97 | VAL | Mainchain |
| 1 | K | 99 | VAL | Mainchain |
| 1 | L | 102 | GLU | Mainchain |
| 1 | L | 103 | LEU | Mainchain |
| 1 | L | 104 | LEU | Mainchain |
| 1 | L | 11 | ASN | Mainchain |
| 1 | L | 111 | LEU | Mainchain |
| 1 | L | 112 | ASP | Mainchain |
| 1 | L | 113 | GLN | Peptide |
| 1 | L | 114 | ASN | Peptide,Mainchain |
| 1 | L | 115 | VAL | Peptide,Mainchain |
| 1 | L | 116 | HIS | Mainchain |
| 1 | L | 117 | PRO | Mainchain |
| 1 | L | 119 | ILE | Mainchain |
| 1 | L | 12 | MET | Mainchain |
| 1 | L | 128 | ALA | Mainchain |
| 1 | L | 129 | GLN | Mainchain |
| 1 | L | 13 | LYS | Mainchain |
| 1 | L | 135 | LEU | Mainchain |
| 1 | L | 137 | THR | Mainchain |
| 1 | L | 138 | ILE | Peptide |
| 1 | L | 140 | CYS | Mainchain |
| 1 | L | 141 | GLU | Mainchain |
| 1 | L | 142 | VAL | Mainchain |
| 1 | L | 145 | GLN | Mainchain |
| 1 | L | 146 | ASP | Mainchain |
| 1 | L | 147 | LYS | Mainchain |
| 1 | L | 148 | GLU | Mainchain |
| 1 | L | 149 | ILE | Mainchain |
| 1 | L | 153 | ILE | Mainchain |
| 1 | L | 156 | THR | Mainchain |
| 1 | L | 159 | THR | Mainchain |
| 1 | L | 16 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 162 | GLY | Peptide,Mainchain |
| 1 | L | 163 | ALA | Peptide,Mainchain |
| 1 | L | 164 | GLU | Mainchain |
| 1 | L | 168 | GLU | Mainchain |
| 1 | L | 169 | LYS | Mainchain |
| 1 | L | 171 | ALA | Mainchain |
| 1 | L | 180 | ALA | Mainchain |
| 1 | L | 181 | VAL | Mainchain |
| 1 | L | 183 | ASP | Mainchain |
| 1 | L | 184 | ASP | Peptide |
| 1 | L | 185 | GLU | Mainchain |
| 1 | L | 186 | GLY | Peptide,Mainchain |
| 1 | L | 187 | LYS | Mainchain |
| 1 | L | 188 | VAL | Mainchain |
| 1 | L | 191 | ASP | Mainchain |
| 1 | L | 195 | ILE | Mainchain |
| 1 | L | 197 | LYS | Mainchain |
| 1 | L | 198 | LYS | Mainchain |
| 1 | L | 199 | SER | Mainchain |
| 1 | L | 20 | ALA | Mainchain |
| 1 | L | 200 | GLY | Mainchain |
| 1 | L | 203 | ILE | Peptide,Mainchain |
| 1 | L | 204 | ASP | Mainchain |
| 1 | L | 205 | ASP | Mainchain |
| 1 | L | 206 | THR | Mainchain |
| 1 | L | 209 | ILE | Mainchain |
| 1 | L | 21 | GLN | Mainchain |
| 1 | L | 210 | LYS | Mainchain |
| 1 | L | 211 | GLY | Mainchain |
| 1 | L | 212 | VAL | Mainchain |
| 1 | L | 213 | LEU | Mainchain |
| 1 | L | 214 | VAL | Mainchain |
| 1 | L | 216 | LYS | Mainchain |
| 1 | L | 218 | ARG | Mainchain |
| 1 | L | 221 | ALA | Mainchain |
| 1 | L | 222 | GLN | Mainchain |
| 1 | L | 223 | MET | Mainchain |
| 1 | L | 224 | PRO | Mainchain |
| 1 | L | 225 | LYS | Mainchain |
| 1 | L | 229 | ASP | Mainchain |
| 1 | L | 231 | LYS | Mainchain |
| 1 | L | 232 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 234 | LEU | Mainchain |
| 1 | L | 235 | LEU | Mainchain |
| 1 | L | 236 | ASN | Mainchain |
| 1 | L | 237 | CYS | Peptide |
| 1 | L | 238 | ALA | Peptide |
| 1 | L | 239 | ILE | Mainchain |
| 1 | L | 24 | ASN | Mainchain |
| 1 | L | 241 | GLU | Mainchain |
| 1 | L | 242 | THR | Mainchain |
| 1 | L | 244 | SER | Mainchain |
| 1 | L | 248 | LYS | Mainchain |
| 1 | L | 255 | LYS | Mainchain |
| 1 | L | 259 | ALA | Peptide |
| 1 | L | 26 | LEU | Mainchain |
| 1 | L | 260 | ASN | Peptide,Mainchain |
| 1 | L | 265 | GLN | Mainchain |
| 1 | L | 266 | LYS | Peptide,Mainchain |
| 1 | L | 267 | GLY | Mainchain |
| 1 | L | 268 | ILE | Mainchain |
| 1 | L | 269 | ASP | Peptide,Mainchain |
| 1 | L | 27 | ALA | Mainchain |
| 1 | L | 270 | ASP | Peptide,Mainchain |
| 1 | L | 274 | HIS | Mainchain |
| 1 | L | 277 | ALA | Mainchain |
| 1 | L | 279 | GLU | Mainchain |
| 1 | L | 28 | GLY | Mainchain |
| 1 | L | 281 | ILE | Mainchain |
| 1 | L | 283 | ALA | Mainchain |
| 1 | L | 284 | ALA | Mainchain |
| 1 | L | 286 | ARG | Mainchain |
| 1 | L | 287 | VAL | Mainchain |
| 1 | L | 291 | ASP | Mainchain |
| 1 | L | 292 | MET | Mainchain |
| 1 | L | 293 | GLU | Mainchain |
| 1 | L | 295 | LEU | Mainchain |
| 1 | L | 297 | LYS | Peptide,Mainchain |
| 1 | L | 30 | ILE | Peptide,Mainchain |
| 1 | L | 301 | ALA | Mainchain |
| 1 | L | 303 | VAL | Mainchain |
| 1 | L | 305 | THR | Mainchain |
| 1 | L | 306 | ASN | Peptide |
| 1 | L | 307 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 308 | LYS | Mainchain |
| 1 | L | 309 | ASP | Mainchain |
| 1 | L | 311 | SER | Mainchain |
| 1 | L | 313 | GLN | Mainchain |
| 1 | L | 317 | ASP | Mainchain |
| 1 | L | 318 | ALA | Mainchain |
| 1 | L | 32 | ALA | Mainchain |
| 1 | L | 326 | ILE | Mainchain |
| 1 | L | 327 | SER | Mainchain |
| 1 | L | 328 | GLY | Mainchain |
| 1 | L | 329 | ASP | Mainchain |
| 1 | L | 332 | ILE | Mainchain |
| 1 | L | 336 | GLU | Peptide,Mainchain |
| 1 | L | 338 | LYS | Mainchain |
| 1 | L | 339 | HIS | Mainchain |
| 1 | L | 341 | LYS | Peptide,Mainchain |
| 1 | L | 342 | ALA | Mainchain |
| 1 | L | 344 | THR | Mainchain |
| 1 | L | 345 | MET | Mainchain |
| 1 | L | 346 | LEU | Mainchain |
| 1 | L | 347 | ILE | Mainchain |
| 1 | L | 348 | ARG | Mainchain |
| 1 | L | 349 | GLY | Peptide,Mainchain |
| 1 | L | 350 | THR | Peptide |
| 1 | L | 352 | GLU | Peptide,Mainchain |
| 1 | L | 353 | HIS | Mainchain |
| 1 | L | 354 | VAL | Mainchain |
| 1 | L | 355 | ILE | Mainchain |
| 1 | L | 357 | GLU | Mainchain |
| 1 | L | 36 | ARG | Mainchain |
| 1 | L | 360 | ARG | Mainchain |
| 1 | L | 361 | ALA | Mainchain |
| 1 | L | 362 | VAL | Mainchain |
| 1 | L | 365 | ALA | Mainchain |
| 1 | L | 366 | VAL | Mainchain |
| 1 | L | 367 | GLY | Mainchain |
| 1 | L | 37 | SER | Mainchain |
| 1 | L | 371 | CYS | Peptide,Mainchain |
| 1 | L | 372 | THR | Mainchain |
| 1 | L | 373 | ILE | Peptide |
| 1 | L | 374 | GLU | Mainchain |
| 1 | L | 375 | ASP | Peptide,Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 376 | GLY | Peptide,Mainchain |
| 1 | L | 377 | ARG | Mainchain |
| 1 | L | 378 | ILE | Mainchain |
| 1 | L | 379 | VAL | Mainchain |
| 1 | L | 38 | THR | Mainchain |
| 1 | L | 380 | SER | Mainchain |
| 1 | L | 381 | GLY | Peptide,Mainchain |
| 1 | L | 382 | GLY | Mainchain |
| 1 | L | 383 | GLY | Peptide |
| 1 | L | 384 | SER | Mainchain |
| 1 | L | 386 | GLU | Mainchain |
| 1 | L | 39 | LEU | Mainchain |
| 1 | L | 395 | GLU | Mainchain |
| 1 | L | 396 | TYR | Mainchain |
| 1 | L | 397 | ALA | Mainchain |
| 1 | L | 398 | GLU | Mainchain |
| 1 | L | 399 | GLY | Mainchain |
| 1 | L | 404 | GLU | Mainchain |
| 1 | L | 405 | GLN | Peptide,Mainchain |
| 1 | L | 407 | ALA | Mainchain |
| 1 | L | 409 | ARG | Mainchain |
| 1 | L | 410 | ALA | Mainchain |
| 1 | L | 412 | ALA | Mainchain |
| 1 | L | 415 | LEU | Mainchain |
| 1 | L | 416 | GLU | Peptide,Mainchain |
| 1 | L | 418 | ILE | Mainchain |
| 1 | L | 419 | PRO | Mainchain |
| 1 | L | 42 | LYS | Mainchain |
| 1 | L | 422 | LEU | Peptide |
| 1 | L | 423 | ALA | Mainchain |
| 1 | L | 424 | GLU | Mainchain |
| 1 | L | 426 | ALA | Mainchain |
| 1 | L | 429 | ASP | Mainchain |
| 1 | L | 43 | GLY | Mainchain |
| 1 | L | 432 | GLU | Mainchain |
| 1 | L | 433 | ILE | Mainchain |
| 1 | L | 434 | LEU | Mainchain |
| 1 | L | 435 | VAL | Mainchain |
| 1 | L | 437 | VAL | Mainchain |
| 1 | L | 439 | ALA | Mainchain |
| 1 | L | 442 | ALA | Mainchain |
| 1 | L | 443 | SER | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 445 | GLY | Mainchain |
| 1 | L | 446 | ASN | Mainchain |
| 1 | L | 449 | ALA | Peptide |
| 1 | L | 453 | VAL | Mainchain |
| 1 | L | 456 | GLY | Mainchain |
| 1 | L | 457 | ALA | Mainchain |
| 1 | L | 458 | VAL | Peptide |
| 1 | L | 459 | GLU | Mainchain |
| 1 | L | 461 | MET | Peptide,Mainchain |
| 1 | L | 462 | CYS | Mainchain |
| 1 | L | 463 | GLU | Mainchain |
| 1 | L | 464 | ASN | Mainchain |
| 1 | L | 465 | GLY | Mainchain |
| 1 | L | 466 | VAL | Mainchain |
| 1 | L | 467 | VAL | Mainchain |
| 1 | L | 469 | PRO | Mainchain |
| 1 | L | 471 | ARG | Peptide,Mainchain |
| 1 | L | 473 | LYS | Mainchain |
| 1 | L | 474 | THR | Mainchain |
| 1 | L | 476 | ALA | Mainchain |
| 1 | L | 480 | ALA | Mainchain |
| 1 | L | 483 | SER | Mainchain |
| 1 | L | 484 | THR | Peptide,Mainchain |
| 1 | L | 486 | MET | Mainchain |
| 1 | L | 488 | LEU | Mainchain |
| 1 | L | 489 | ARG | Mainchain |
| 1 | L | 490 | ILE | Mainchain |
| 1 | L | 491 | ASP | Mainchain |
| 1 | L | 494 | ILE | Mainchain |
| 1 | L | 50 | ASP | Mainchain |
| 1 | L | 51 | ASP | Mainchain |
| 1 | L | 52 | LEU | Mainchain |
| 1 | L | 53 | GLY | Mainchain |
| 1 | L | 54 | ASP | Mainchain |
| 1 | L | 55 | VAL | Mainchain |
| 1 | L | 56 | VAL | Mainchain |
| 1 | L | 57 | VAL | Mainchain |
| 1 | L | 60 | ASP | Mainchain |
| 1 | L | 61 | GLY | Mainchain |
| 1 | L | 62 | VAL | Mainchain |
| 1 | L | 63 | THR | Mainchain |
| 1 | L | 68 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | L | 69 | SER | Peptide |
| 1 | L | 7 | VAL | Mainchain |
| 1 | L | 71 | GLU | Mainchain |
| 1 | L | 72 | HIS | Mainchain |
| 1 | L | 73 | PRO | Mainchain |
| 1 | L | 75 | ALA | Mainchain |
| 1 | L | 78 | LEU | Mainchain |
| 1 | L | 81 | VAL | Mainchain |
| 1 | L | 85 | GLN | Mainchain |
| 1 | L | 89 | VAL | Mainchain |
| 1 | L | 9 | PRO | Peptide,Mainchain |
| 1 | L | 90 | GLY | Peptide |
| 1 | L | 91 | ASP | Mainchain |
| 1 | L | 92 | GLY | Mainchain |
| 1 | L | 94 | THR | Mainchain |
| 1 | L | 95 | THR | Mainchain |
| 1 | L | 97 | VAL | Mainchain |
| 1 | M | 10 | GLU | Mainchain |
| 1 | M | 100 | ALA | Mainchain |
| 1 | M | 102 | GLU | Mainchain |
| 1 | M | 103 | LEU | Mainchain |
| 1 | M | 104 | LEU | Mainchain |
| 1 | M | 105 | ARG | Mainchain |
| 1 | M | 11 | ASN | Peptide,Mainchain |
| 1 | M | 110 | LEU | Mainchain |
| 1 | M | 111 | LEU | Mainchain |
| 1 | M | 112 | ASP | Mainchain |
| 1 | M | 114 | ASN | Peptide,Mainchain |
| 1 | M | 115 | VAL | Peptide,Mainchain |
| 1 | M | 116 | HIS | Mainchain |
| 1 | M | 117 | PRO | Peptide |
| 1 | M | 12 | MET | Peptide,Mainchain |
| 1 | M | 120 | VAL | Mainchain |
| 1 | M | 124 | TYR | Mainchain |
| 1 | M | 126 | ALA | Mainchain |
| 1 | M | 128 | ALA | Mainchain |
| 1 | M | 13 | LYS | Mainchain |
| 1 | M | 130 | LYS | Mainchain |
| 1 | M | 137 | THR | Mainchain |
| 1 | M | 138 | ILE | Peptide |
| 1 | M | 139 | ALA | Mainchain |
| 1 | M | 14 | ARG | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 140 | CYS | Mainchain |
| 1 | M | 141 | GLU | Mainchain |
| 1 | M | 142 | VAL | Peptide,Mainchain |
| 1 | M | 143 | GLY | Peptide,Mainchain |
| 1 | M | 144 | ALA | Mainchain |
| 1 | M | 145 | GLN | Mainchain |
| 1 | M | 147 | LYS | Mainchain |
| 1 | M | 148 | GLU | Mainchain |
| 1 | M | 152 | LYS | Mainchain |
| 1 | M | 153 | ILE | Mainchain |
| 1 | M | 154 | ALA | Mainchain |
| 1 | M | 155 | MET | Mainchain |
| 1 | M | 157 | SER | Mainchain |
| 1 | M | 16 | MET | Mainchain |
| 1 | M | 160 | GLY | Peptide,Mainchain |
| 1 | M | 161 | LYS | Mainchain |
| 1 | M | 162 | GLY | Peptide |
| 1 | M | 163 | ALA | Peptide |
| 1 | M | 166 | ALA | Mainchain |
| 1 | M | 169 | LYS | Mainchain |
| 1 | M | 172 | GLU | Mainchain |
| 1 | M | 174 | ILE | Mainchain |
| 1 | M | 18 | ARG | Mainchain |
| 1 | M | 181 | VAL | Mainchain |
| 1 | M | 182 | VAL | Mainchain |
| 1 | M | 186 | GLY | Peptide |
| 1 | M | 187 | LYS | Peptide,Mainchain |
| 1 | M | 188 | VAL | Peptide |
| 1 | M | 189 | ASP | Mainchain |
| 1 | M | 190 | LYS | Mainchain |
| 1 | M | 192 | LEU | Mainchain |
| 1 | M | 193 | ILE | Mainchain |
| 1 | M | 196 | GLU | Mainchain |
| 1 | M | 197 | LYS | Mainchain |
| 1 | M | 200 | GLY | Peptide,Mainchain |
| 1 | M | 201 | ALA | Peptide |
| 1 | M | 203 | ILE | Mainchain |
| 1 | M | 205 | ASP | Peptide |
| 1 | M | 206 | THR | Mainchain |
| 1 | M | 210 | LYS | Mainchain |
| 1 | M | 211 | GLY | Mainchain |
| 1 | M | 214 | VAL | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 215 | ASP | Peptide |
| 1 | M | 216 | LYS | Mainchain |
| 1 | M | 217 | GLU | Mainchain |
| 1 | M | 219 | VAL | Mainchain |
| 1 | M | 22 | ARG | Mainchain |
| 1 | M | 220 | SER | Mainchain |
| 1 | M | 221 | ALA | Mainchain |
| 1 | M | 222 | GLN | Mainchain |
| 1 | M | 224 | PRO | Mainchain |
| 1 | M | 225 | LYS | Mainchain |
| 1 | M | 229 | ASP | Mainchain |
| 1 | M | 235 | LEU | Mainchain |
| 1 | M | 237 | CYS | Mainchain |
| 1 | M | 238 | ALA | Peptide |
| 1 | M | 241 | GLU | Mainchain |
| 1 | M | 242 | THR | Mainchain |
| 1 | M | 244 | SER | Mainchain |
| 1 | M | 246 | MET | Mainchain |
| 1 | M | 25 | ILE | Mainchain |
| 1 | M | 251 | VAL | Mainchain |
| 1 | M | 254 | ILE | Mainchain |
| 1 | M | 255 | LYS | Mainchain |
| 1 | M | 256 | ALA | Mainchain |
| 1 | M | 257 | SER | Mainchain |
| 1 | M | 258 | GLY | Mainchain |
| 1 | M | 259 | ALA | Peptide,Mainchain |
| 1 | M | 265 | GLN | Mainchain |
| 1 | M | 266 | LYS | Mainchain |
| 1 | M | 267 | GLY | Mainchain |
| 1 | M | 27 | ALA | Mainchain |
| 1 | M | 270 | ASP | Mainchain |
| 1 | M | 272 | ALA | Mainchain |
| 1 | M | 275 | TYR | Mainchain |
| 1 | M | 279 | GLU | Mainchain |
| 1 | M | 280 | GLY | Mainchain |
| 1 | M | 285 | ARG | Mainchain |
| 1 | M | 286 | ARG | Mainchain |
| 1 | M | 287 | VAL | Mainchain |
| 1 | M | 288 | LYS | Mainchain |
| 1 | M | 289 | LYS | Mainchain |
| 1 | M | 293 | GLU | Mainchain |
| 1 | M | 295 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 299 | THR | Mainchain |
| 1 | M | 300 | GLY | Mainchain |
| 1 | M | 301 | ALA | Peptide,Mainchain |
| 1 | M | 302 | ASN | Mainchain |
| 1 | M | 305 | THR | Mainchain |
| 1 | M | 306 | ASN | Mainchain |
| 1 | M | 307 | ILE | Mainchain |
| 1 | M | 309 | ASP | Mainchain |
| 1 | M | 31 | ILE | Mainchain |
| 1 | M | 310 | LEU | Peptide,Mainchain |
| 1 | M | 311 | SER | Mainchain |
| 1 | M | 312 | ALA | Mainchain |
| 1 | M | 313 | GLN | Peptide |
| 1 | M | 315 | LEU | Peptide |
| 1 | M | 318 | ALA | Mainchain |
| 1 | M | 319 | GLY | Mainchain |
| 1 | M | 32 | ALA | Mainchain |
| 1 | M | 322 | GLU | Mainchain |
| 1 | M | 325 | LYS | Mainchain |
| 1 | M | 326 | ILE | Mainchain |
| 1 | M | 328 | GLY | Mainchain |
| 1 | M | 33 | GLU | Mainchain |
| 1 | M | 331 | MET | Mainchain |
| 1 | M | 335 | GLU | Peptide,Mainchain |
| 1 | M | 336 | GLU | Mainchain |
| 1 | M | 338 | LYS | Mainchain |
| 1 | M | 341 | LYS | Peptide |
| 1 | M | 342 | ALA | Mainchain |
| 1 | M | 345 | MET | Mainchain |
| 1 | M | 346 | LEU | Mainchain |
| 1 | M | 347 | ILE | Mainchain |
| 1 | M | 348 | ARG | Peptide,Mainchain |
| 1 | M | 349 | GLY | Peptide,Mainchain |
| 1 | M | 350 | THR | Peptide |
| 1 | M | 351 | THR | Mainchain |
| 1 | M | 353 | HIS | Mainchain |
| 1 | M | 356 | GLU | Mainchain |
| 1 | M | 36 | ARG | Mainchain |
| 1 | M | 360 | ARG | Mainchain |
| 1 | M | 361 | ALA | Mainchain |
| 1 | M | 364 | ASP | Peptide,Mainchain |
| 1 | M | 365 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 367 | GLY | Peptide |
| 1 | M | 369 | VAL | Mainchain |
| 1 | M | 37 | SER | Mainchain |
| 1 | M | 370 | GLY | Mainchain |
| 1 | M | 371 | CYS | Mainchain |
| 1 | M | 372 | THR | Mainchain |
| 1 | M | 374 | GLU | Mainchain |
| 1 | M | 377 | ARG | Mainchain |
| 1 | M | 378 | ILE | Mainchain |
| 1 | M | 379 | VAL | Peptide,Mainchain |
| 1 | M | 380 | SER | Peptide,Mainchain |
| 1 | M | 381 | GLY | Peptide |
| 1 | M | 382 | GLY | Mainchain |
| 1 | M | 383 | GLY | Peptide |
| 1 | M | 384 | SER | Mainchain |
| 1 | M | 385 | THR | Mainchain |
| 1 | M | 39 | LEU | Mainchain |
| 1 | M | 390 | SER | Mainchain |
| 1 | M | 391 | MET | Mainchain |
| 1 | M | 392 | LYS | Mainchain |
| 1 | M | 395 | GLU | Mainchain |
| 1 | M | 396 | TYR | Mainchain |
| 1 | M | 398 | GLU | Mainchain |
| 1 | M | 399 | GLY | Mainchain |
| 1 | M | 40 | GLY | Mainchain |
| 1 | M | 408 | VAL | Mainchain |
| 1 | M | 409 | ARG | Mainchain |
| 1 | M | 41 | PRO | Mainchain |
| 1 | M | 411 | PHE | Mainchain |
| 1 | M | 412 | ALA | Mainchain |
| 1 | M | 413 | ASP | Mainchain |
| 1 | M | 417 | VAL | Mainchain |
| 1 | M | 421 | THR | Mainchain |
| 1 | M | 422 | LEU | Mainchain |
| 1 | M | 423 | ALA | Mainchain |
| 1 | M | 426 | ALA | Mainchain |
| 1 | M | 43 | GLY | Peptide |
| 1 | M | 430 | ALA | Mainchain |
| 1 | M | 434 | LEU | Mainchain |
| 1 | M | 435 | VAL | Mainchain |
| 1 | M | 44 | MET | Mainchain |
| 1 | M | 443 | SER | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 446 | ASN | Peptide,Mainchain |
| 1 | M | 448 | CYS | Mainchain |
| 1 | M | 449 | ALA | Mainchain |
| 1 | M | 45 | ASP | Mainchain |
| 1 | M | 453 | VAL | Peptide |
| 1 | M | 456 | GLY | Mainchain |
| 1 | M | 457 | ALA | Mainchain |
| 1 | M | 458 | VAL | Mainchain |
| 1 | M | 459 | GLU | Mainchain |
| 1 | M | 460 | ASP | Mainchain |
| 1 | M | 461 | MET | Mainchain |
| 1 | M | 463 | GLU | Peptide |
| 1 | M | 464 | ASN | Peptide,Mainchain |
| 1 | M | 465 | GLY | Peptide,Mainchain |
| 1 | M | 467 | VAL | Mainchain |
| 1 | M | 468 | GLU | Mainchain |
| 1 | M | 469 | PRO | Mainchain |
| 1 | M | 470 | LEU | Mainchain |
| 1 | M | 471 | ARG | Peptide |
| 1 | M | 476 | ALA | Mainchain |
| 1 | M | 48 | LEU | Mainchain |
| 1 | M | 485 | GLU | Peptide |
| 1 | M | 487 | LEU | Mainchain |
| 1 | M | 488 | LEU | Mainchain |
| 1 | M | 489 | ARG | Mainchain |
| 1 | M | 490 | ILE | Mainchain |
| 1 | M | 491 | ASP | Mainchain |
| 1 | M | 495 | ALA | Peptide,Mainchain |
| 1 | M | 496 | ALA | Mainchain |
| 1 | M | 50 | ASP | Peptide |
| 1 | M | 51 | ASP | Mainchain |
| 1 | M | 52 | LEU | Mainchain |
| 1 | M | 54 | ASP | Mainchain |
| 1 | M | 55 | VAL | Peptide,Mainchain |
| 1 | M | 57 | VAL | Mainchain |
| 1 | M | 58 | THR | Mainchain |
| 1 | M | 59 | ASN | Mainchain |
| 1 | M | 60 | ASP | Mainchain |
| 1 | M | 62 | VAL | Mainchain |
| 1 | M | 63 | THR | Mainchain |
| 1 | M | 66 | ARG | Mainchain |
| 1 | M | 68 | MET | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | M | 69 | SER | Peptide |
| 1 | M | 7 | VAL | Mainchain |
| 1 | M | 70 | VAL | Mainchain |
| 1 | M | 71 | GLU | Mainchain |
| 1 | M | 73 | PRO | Mainchain |
| 1 | M | 75 | ALA | Mainchain |
| 1 | M | 77 | MET | Mainchain |
| 1 | M | 78 | LEU | Mainchain |
| 1 | M | 79 | ILE | Mainchain |
| 1 | M | 8 | LEU | Peptide,Mainchain |
| 1 | M | 81 | VAL | Mainchain |
| 1 | M | 82 | ALA | Mainchain |
| 1 | M | 84 | THR | Mainchain |
| 1 | M | 85 | GLN | Mainchain |
| 1 | M | 88 | GLU | Peptide |
| 1 | M | 9 | PRO | Peptide |
| 1 | M | 90 | GLY | Mainchain |
| 1 | M | 93 | THR | Peptide,Mainchain |
| 1 | M | 94 | THR | Mainchain |
| 1 | N | 101 | GLY | Mainchain |
| 1 | N | 104 | LEU | Mainchain |
| 1 | N | 105 | ARG | Mainchain |
| 1 | N | 107 | ALA | Mainchain |
| 1 | N | 108 | GLU | Peptide,Mainchain |
| 1 | N | 11 | ASN | Mainchain |
| 1 | N | 112 | ASP | Peptide,Mainchain |
| 1 | N | 113 | GLN | Peptide,Mainchain |
| 1 | N | 114 | ASN | Peptide |
| 1 | N | 115 | VAL | Mainchain |
| 1 | N | 116 | HIS | Mainchain |
| 1 | N | 117 | PRO | Peptide,Mainchain |
| 1 | N | 12 | MET | Mainchain |
| 1 | N | 121 | VAL | Mainchain |
| 1 | N | 124 | TYR | Mainchain |
| 1 | N | 128 | ALA | Mainchain |
| 1 | N | 13 | LYS | Mainchain |
| 1 | N | 130 | LYS | Mainchain |
| 1 | N | 131 | ALA | Mainchain |
| 1 | N | 132 | GLN | Peptide,Mainchain |
| 1 | N | 134 | LEU | Mainchain |
| 1 | N | 135 | LEU | Peptide |
| 1 | N | 136 | LYS | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 138 | ILE | Mainchain |
| 1 | N | 14 | ARG | Mainchain |
| 1 | N | 141 | GLU | Peptide |
| 1 | N | 143 | GLY | Peptide,Mainchain |
| 1 | N | 144 | ALA | Mainchain |
| 1 | N | 147 | LYS | Mainchain |
| 1 | N | 149 | ILE | Mainchain |
| 1 | N | 15 | TYR | Mainchain |
| 1 | N | 151 | THR | Peptide |
| 1 | N | 156 | THR | Peptide |
| 1 | N | 157 | SER | Mainchain |
| 1 | N | 16 | MET | Peptide,Mainchain |
| 1 | N | 160 | GLY | Mainchain |
| 1 | N | 162 | GLY | Mainchain |
| 1 | N | 166 | ALA | Mainchain |
| 1 | N | 169 | LYS | Mainchain |
| 1 | N | 17 | GLY | Mainchain |
| 1 | N | 174 | ILE | Mainchain |
| 1 | N | 178 | VAL | Mainchain |
| 1 | N | 180 | ALA | Peptide |
| 1 | N | 182 | VAL | Mainchain |
| 1 | N | 183 | ASP | Mainchain |
| 1 | N | 185 | GLU | Mainchain |
| 1 | N | 187 | LYS | Peptide,Mainchain |
| 1 | N | 188 | VAL | Mainchain |
| 1 | N | 189 | ASP | Mainchain |
| 1 | N | 19 | ASP | Peptide,Mainchain |
| 1 | N | 190 | LYS | Mainchain |
| 1 | N | 191 | ASP | Mainchain |
| 1 | N | 192 | LEU | Peptide |
| 1 | N | 193 | ILE | Mainchain |
| 1 | N | 196 | GLU | Mainchain |
| 1 | N | 197 | LYS | Mainchain |
| 1 | N | 198 | LYS | Mainchain |
| 1 | N | 199 | SER | Mainchain |
| 1 | N | 20 | ALA | Peptide,Mainchain |
| 1 | N | 200 | GLY | Mainchain |
| 1 | N | 203 | ILE | Mainchain |
| 1 | N | 205 | ASP | Mainchain |
| 1 | N | 206 | THR | Mainchain |
| 1 | N | 207 | GLU | Mainchain |
| 1 | N | 209 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 210 | LYS | Peptide,Mainchain |
| 1 | N | 211 | GLY | Peptide,Mainchain |
| 1 | N | 212 | VAL | Mainchain |
| 1 | N | 214 | VAL | Mainchain |
| 1 | N | 215 | ASP | Mainchain |
| 1 | N | 216 | LYS | Mainchain |
| 1 | N | 217 | GLU | Peptide |
| 1 | N | 219 | VAL | Mainchain |
| 1 | N | 22 | ARG | Mainchain |
| 1 | N | 222 | GLN | Mainchain |
| 1 | N | 223 | MET | Mainchain |
| 1 | N | 226 | LYS | Mainchain |
| 1 | N | 227 | VAL | Mainchain |
| 1 | N | 228 | THR | Mainchain |
| 1 | N | 229 | ASP | Peptide,Mainchain |
| 1 | N | 23 | MET | Mainchain |
| 1 | N | 233 | ALA | Mainchain |
| 1 | N | 235 | LEU | Mainchain |
| 1 | N | 236 | ASN | Mainchain |
| 1 | N | 237 | CYS | Peptide,Mainchain |
| 1 | N | 238 | ALA | Peptide,Mainchain |
| 1 | N | 240 | GLU | Mainchain |
| 1 | N | 241 | GLU | Mainchain |
| 1 | N | 242 | THR | Mainchain |
| 1 | N | 244 | SER | Mainchain |
| 1 | N | 25 | ILE | Mainchain |
| 1 | N | 250 | MET | Mainchain |
| 1 | N | 254 | ILE | Mainchain |
| 1 | N | 258 | GLY | Mainchain |
| 1 | N | 264 | CYS | Mainchain |
| 1 | N | 265 | GLN | Mainchain |
| 1 | N | 266 | LYS | Mainchain |
| 1 | N | 267 | GLY | Mainchain |
| 1 | N | 268 | ILE | Mainchain |
| 1 | N | 269 | ASP | Mainchain |
| 1 | N | 270 | ASP | Mainchain |
| 1 | N | 272 | ALA | Mainchain |
| 1 | N | 278 | LYS | Mainchain |
| 1 | N | 279 | GLU | Mainchain |
| 1 | N | 28 | GLY | Mainchain |
| 1 | N | 281 | ILE | Mainchain |
| 1 | N | 284 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 285 | ARG | Mainchain |
| 1 | N | 287 | VAL | Mainchain |
| 1 | N | 288 | LYS | Mainchain |
| 1 | N | 289 | LYS | Mainchain |
| 1 | N | 29 | ARG | Mainchain |
| 1 | N | 290 | SER | Mainchain |
| 1 | N | 291 | ASP | Mainchain |
| 1 | N | 292 | MET | Mainchain |
| 1 | N | 293 | GLU | Mainchain |
| 1 | N | 294 | LYS | Mainchain |
| 1 | N | 295 | LEU | Mainchain |
| 1 | N | 298 | ALA | Mainchain |
| 1 | N | 30 | ILE | Peptide |
| 1 | N | 300 | GLY | Mainchain |
| 1 | N | 301 | ALA | Mainchain |
| 1 | N | 303 | VAL | Mainchain |
| 1 | N | 305 | THR | Mainchain |
| 1 | N | 306 | ASN | Peptide |
| 1 | N | 307 | ILE | Mainchain |
| 1 | N | 309 | ASP | Mainchain |
| 1 | N | 31 | ILE | Mainchain |
| 1 | N | 310 | LEU | Mainchain |
| 1 | N | 311 | SER | Peptide,Mainchain |
| 1 | N | 312 | ALA | Mainchain |
| 1 | N | 313 | GLN | Peptide |
| 1 | N | 315 | LEU | Mainchain |
| 1 | N | 318 | ALA | Mainchain |
| 1 | N | 319 | GLY | Mainchain |
| 1 | N | 324 | ARG | Mainchain |
| 1 | N | 325 | LYS | Mainchain |
| 1 | N | 326 | ILE | Mainchain |
| 1 | N | 327 | SER | Mainchain |
| 1 | N | 329 | ASP | Mainchain |
| 1 | N | 33 | GLU | Mainchain |
| 1 | N | 330 | SER | Mainchain |
| 1 | N | 331 | MET | Mainchain |
| 1 | N | 335 | GLU | Mainchain |
| 1 | N | 338 | LYS | Peptide,Mainchain |
| 1 | N | 339 | HIS | Mainchain |
| 1 | N | 342 | ALA | Mainchain |
| 1 | N | 347 | ILE | Mainchain |
| 1 | N | 348 | ARG | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 349 | GLY | Peptide,Mainchain |
| 1 | N | 351 | THR | Peptide |
| 1 | N | 352 | GLU | Mainchain |
| 1 | N | 353 | HIS | Mainchain |
| 1 | N | 356 | GLU | Mainchain |
| 1 | N | 359 | ALA | Mainchain |
| 1 | N | 362 | VAL | Mainchain |
| 1 | N | 364 | ASP | Mainchain |
| 1 | N | 372 | THR | Mainchain |
| 1 | N | 373 | ILE | Mainchain |
| 1 | N | 374 | GLU | Mainchain |
| 1 | N | 375 | ASP | Mainchain |
| 1 | N | 376 | GLY | Mainchain |
| 1 | N | 377 | ARG | Mainchain |
| 1 | N | 378 | ILE | Mainchain |
| 1 | N | 38 | THR | Mainchain |
| 1 | N | 380 | SER | Mainchain |
| 1 | N | 381 | GLY | Peptide,Mainchain |
| 1 | N | 382 | GLY | Peptide |
| 1 | N | 383 | GLY | Peptide,Mainchain |
| 1 | N | 384 | SER | Mainchain |
| 1 | N | 385 | THR | Mainchain |
| 1 | N | 386 | GLU | Mainchain |
| 1 | N | 390 | SER | Mainchain |
| 1 | N | 398 | GLU | Mainchain |
| 1 | N | 399 | GLY | Mainchain |
| 1 | N | 40 | GLY | Mainchain |
| 1 | N | 403 | ARG | Mainchain |
| 1 | N | 405 | GLN | Mainchain |
| 1 | N | 406 | LEU | Mainchain |
| 1 | N | 409 | ARG | Mainchain |
| 1 | N | 41 | PRO | Mainchain |
| 1 | N | 410 | ALA | Mainchain |
| 1 | N | 411 | PHE | Mainchain |
| 1 | N | 412 | ALA | Mainchain |
| 1 | N | 415 | LEU | Mainchain |
| 1 | N | 416 | GLU | Mainchain |
| 1 | N | 417 | VAL | Mainchain |
| 1 | N | 42 | LYS | Mainchain |
| 1 | N | 423 | ALA | Mainchain |
| 1 | N | 424 | GLU | Mainchain |
| 1 | N | 425 | ASN | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 427 | GLY | Peptide |
| 1 | N | 429 | ASP | Peptide,Mainchain |
| 1 | N | 432 | GLU | Mainchain |
| 1 | N | 433 | ILE | Mainchain |
| 1 | N | 438 | ARG | Mainchain |
| 1 | N | 439 | ALA | Mainchain |
| 1 | N | 44 | MET | Mainchain |
| 1 | N | 443 | SER | Mainchain |
| 1 | N | 444 | ASN | Mainchain |
| 1 | N | 445 | GLY | Peptide |
| 1 | N | 446 | ASN | Peptide |
| 1 | N | 447 | LYS | Peptide,Mainchain |
| 1 | N | 448 | CYS | Peptide,Mainchain |
| 1 | N | 450 | GLY | Mainchain |
| 1 | N | 452 | ASN | Mainchain |
| 1 | N | 455 | THR | Mainchain |
| 1 | N | 458 | VAL | Mainchain |
| 1 | N | 459 | GLU | Mainchain |
| 1 | N | 460 | ASP | Mainchain |
| 1 | N | 462 | CYS | Mainchain |
| 1 | N | 463 | GLU | Mainchain |
| 1 | N | 464 | ASN | Mainchain |
| 1 | N | 465 | GLY | Mainchain |
| 1 | N | 467 | VAL | Mainchain |
| 1 | N | 47 | MET | Mainchain |
| 1 | N | 470 | LEU | Mainchain |
| 1 | N | 471 | ARG | Mainchain |
| 1 | N | 474 | THR | Mainchain |
| 1 | N | 477 | ILE | Mainchain |
| 1 | N | 48 | LEU | Mainchain |
| 1 | N | 481 | ALA | Mainchain |
| 1 | N | 484 | THR | Mainchain |
| 1 | N | 485 | GLU | Mainchain |
| 1 | N | 486 | MET | Mainchain |
| 1 | N | 487 | LEU | Mainchain |
| 1 | N | 488 | LEU | Peptide,Mainchain |
| 1 | N | 49 | VAL | Mainchain |
| 1 | N | 491 | ASP | Mainchain |
| 1 | N | 492 | ASP | Mainchain |
| 1 | N | 493 | VAL | Mainchain |
| 1 | N | 495 | ALA | Peptide,Mainchain |
| 1 | N | 496 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | N | 50 | ASP | Mainchain |
| 1 | N | 51 | ASP | Mainchain |
| 1 | N | 52 | LEU | Mainchain |
| 1 | N | 53 | GLY | Mainchain |
| 1 | N | 56 | VAL | Mainchain |
| 1 | N | 57 | VAL | Mainchain |
| 1 | N | 59 | ASN | Mainchain |
| 1 | N | 62 | VAL | Mainchain |
| 1 | N | 63 | THR | Mainchain |
| 1 | N | 65 | LEU | Mainchain |
| 1 | N | 66 | ARG | Mainchain |
| 1 | N | 67 | GLU | Mainchain |
| 1 | N | 68 | MET | Peptide,Mainchain |
| 1 | N | 69 | SER | Mainchain |
| 1 | N | 7 | VAL | Mainchain |
| 1 | N | 71 | GLU | Mainchain |
| 1 | N | 72 | HIS | Mainchain |
| 1 | N | 73 | PRO | Mainchain |
| 1 | N | 77 | MET | Mainchain |
| 1 | N | 78 | LEU | Mainchain |
| 1 | N | 83 | LYS | Mainchain |
| 1 | N | 84 | THR | Peptide |
| 1 | N | 86 | GLU | Mainchain |
| 1 | N | 87 | LYS | Mainchain |
| 1 | N | 88 | GLU | Mainchain |
| 1 | N | 89 | VAL | Mainchain |
| 1 | N | 9 | PRO | Peptide |
| 1 | N | 90 | GLY | Mainchain |
| 1 | N | 91 | ASP | Mainchain |
| 1 | N | 92 | GLY | Mainchain |
| 1 | N | 93 | THR | Mainchain |
| 1 | N | 94 | THR | Mainchain |
| 1 | N | 97 | VAL | Mainchain |
| 1 | O | 101 | GLY | Mainchain |
| 1 | O | 105 | ARG | Mainchain |
| 1 | O | 106 | LYS | Mainchain |
| 1 | O | 107 | ALA | Mainchain |
| 1 | O | 108 | GLU | Mainchain |
| 1 | O | 109 | GLU | Mainchain |
| 1 | O | 11 | ASN | Mainchain |
| 1 | O | 110 | LEU | Mainchain |
| 1 | O | 111 | LEU | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 113 | GLN | Peptide,Mainchain |
| 1 | O | 115 | VAL | Peptide,Mainchain |
| 1 | O | 116 | HIS | Mainchain |
| 1 | O | 117 | PRO | Mainchain |
| 1 | O | 12 | MET | Peptide |
| 1 | O | 122 | LYS | Mainchain |
| 1 | O | 123 | GLY | Mainchain |
| 1 | O | 124 | TYR | Mainchain |
| 1 | O | 126 | ALA | Mainchain |
| 1 | O | 128 | ALA | Mainchain |
| 1 | O | 130 | LYS | Mainchain |
| 1 | O | 131 | ALA | Mainchain |
| 1 | O | 132 | GLN | Mainchain |
| 1 | O | 133 | GLU | Mainchain |
| 1 | O | 134 | LEU | Mainchain |
| 1 | O | 136 | LYS | Mainchain |
| 1 | O | 138 | ILE | Mainchain |
| 1 | O | 139 | ALA | Mainchain |
| 1 | O | 140 | CYS | Peptide |
| 1 | O | 141 | GLU | Mainchain |
| 1 | O | 142 | VAL | Peptide |
| 1 | O | 143 | GLY | Mainchain |
| 1 | O | 145 | GLN | Peptide |
| 1 | O | 148 | GLU | Mainchain |
| 1 | O | 15 | TYR | Mainchain |
| 1 | O | 150 | LEU | Mainchain |
| 1 | O | 151 | THR | Mainchain |
| 1 | O | 152 | LYS | Mainchain |
| 1 | O | 155 | MET | Mainchain |
| 1 | O | 159 | THR | Mainchain |
| 1 | O | 16 | MET | Peptide,Mainchain |
| 1 | O | 168 | GLU | Mainchain |
| 1 | O | 169 | LYS | Mainchain |
| 1 | O | 172 | GLU | Mainchain |
| 1 | O | 173 | ILE | Mainchain |
| 1 | O | 175 | VAL | Mainchain |
| 1 | O | 177 | ALA | Mainchain |
| 1 | O | 18 | ARG | Mainchain |
| 1 | O | 183 | ASP | Mainchain |
| 1 | O | 187 | LYS | Mainchain |
| 1 | O | 188 | VAL | Peptide,Mainchain |
| 1 | O | 191 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 193 | ILE | Mainchain |
| 1 | O | 197 | LYS | Mainchain |
| 1 | O | 198 | LYS | Mainchain |
| 1 | O | 20 | ALA | Peptide |
| 1 | O | 201 | ALA | Mainchain |
| 1 | O | 203 | ILE | Peptide,Mainchain |
| 1 | O | 208 | LEU | Mainchain |
| 1 | O | 209 | ILE | Mainchain |
| 1 | O | 21 | GLN | Mainchain |
| 1 | O | 210 | LYS | Peptide |
| 1 | O | 212 | VAL | Mainchain |
| 1 | O | 217 | GLU | Mainchain |
| 1 | O | 223 | MET | Mainchain |
| 1 | O | 224 | PRO | Mainchain |
| 1 | O | 226 | LYS | Mainchain |
| 1 | O | 228 | THR | Mainchain |
| 1 | O | 23 | MET | Mainchain |
| 1 | O | 230 | ALA | Mainchain |
| 1 | O | 233 | ALA | Mainchain |
| 1 | O | 236 | ASN | Mainchain |
| 1 | O | 237 | CYS | Peptide,Mainchain |
| 1 | O | 238 | ALA | Peptide,Mainchain |
| 1 | O | 24 | ASN | Mainchain |
| 1 | O | 240 | GLU | Mainchain |
| 1 | O | 242 | THR | Mainchain |
| 1 | O | 243 | ALA | Mainchain |
| 1 | O | 244 | SER | Mainchain |
| 1 | O | 246 | MET | Mainchain |
| 1 | O | 248 | LYS | Mainchain |
| 1 | O | 250 | MET | Mainchain |
| 1 | O | 252 | ALA | Mainchain |
| 1 | O | 254 | ILE | Mainchain |
| 1 | O | 255 | LYS | Mainchain |
| 1 | O | 258 | GLY | Peptide |
| 1 | O | 259 | ALA | Peptide,Mainchain |
| 1 | O | 266 | LYS | Peptide,Mainchain |
| 1 | O | 267 | GLY | Mainchain |
| 1 | O | 268 | ILE | Mainchain |
| 1 | O | 269 | ASP | Mainchain |
| 1 | O | 27 | ALA | Mainchain |
| 1 | O | 270 | ASP | Mainchain |
| 1 | O | 272 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 275 | TYR | Peptide,Mainchain |
| 1 | O | 278 | LYS | Mainchain |
| 1 | O | 279 | GLU | Mainchain |
| 1 | O | 281 | ILE | Mainchain |
| 1 | O | 285 | ARG | Peptide |
| 1 | O | 287 | VAL | Mainchain |
| 1 | O | 289 | LYS | Mainchain |
| 1 | O | 292 | MET | Mainchain |
| 1 | O | 295 | LEU | Mainchain |
| 1 | O | 298 | ALA | Peptide |
| 1 | O | 299 | THR | Mainchain |
| 1 | O | 30 | ILE | Peptide,Mainchain |
| 1 | O | 304 | ILE | Mainchain |
| 1 | O | 305 | THR | Mainchain |
| 1 | O | 306 | ASN | Peptide,Mainchain |
| 1 | O | 307 | ILE | Mainchain |
| 1 | O | 308 | LYS | Mainchain |
| 1 | O | 310 | LEU | Mainchain |
| 1 | O | 311 | SER | Mainchain |
| 1 | O | 313 | GLN | Mainchain |
| 1 | O | 314 | ASP | Peptide,Mainchain |
| 1 | O | 315 | LEU | Peptide |
| 1 | O | 318 | ALA | Mainchain |
| 1 | O | 319 | GLY | Mainchain |
| 1 | O | 32 | ALA | Mainchain |
| 1 | O | 324 | ARG | Mainchain |
| 1 | O | 325 | LYS | Mainchain |
| 1 | O | 328 | GLY | Mainchain |
| 1 | O | 33 | GLU | Mainchain |
| 1 | O | 330 | SER | Mainchain |
| 1 | O | 336 | GLU | Mainchain |
| 1 | O | 338 | LYS | Mainchain |
| 1 | O | 340 | PRO | Mainchain |
| 1 | O | 341 | LYS | Mainchain |
| 1 | O | 342 | ALA | Mainchain |
| 1 | O | 344 | THR | Mainchain |
| 1 | O | 345 | MET | Mainchain |
| 1 | O | 346 | LEU | Mainchain |
| 1 | O | 348 | ARG | Mainchain |
| 1 | O | 349 | GLY | Peptide |
| 1 | O | 35 | VAL | Mainchain |
| 1 | O | 350 | THR | Peptide |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 351 | THR | Peptide,Mainchain |
| 1 | O | 352 | GLU | Mainchain |
| 1 | O | 353 | HIS | Mainchain |
| 1 | O | 355 | ILE | Mainchain |
| 1 | O | 356 | GLU | Peptide |
| 1 | O | 358 | VAL | Mainchain |
| 1 | O | 359 | ALA | Mainchain |
| 1 | O | 361 | ALA | Mainchain |
| 1 | O | 363 | ASP | Mainchain |
| 1 | O | 364 | ASP | Peptide |
| 1 | O | 366 | VAL | Mainchain |
| 1 | O | 368 | VAL | Mainchain |
| 1 | O | 369 | VAL | Peptide,Mainchain |
| 1 | O | 37 | SER | Mainchain |
| 1 | O | 372 | THR | Mainchain |
| 1 | O | 375 | ASP | Peptide,Mainchain |
| 1 | O | 376 | GLY | Peptide,Mainchain |
| 1 | O | 377 | ARG | Mainchain |
| 1 | O | 378 | ILE | Mainchain |
| 1 | O | 38 | THR | Mainchain |
| 1 | O | 380 | SER | Peptide,Mainchain |
| 1 | O | 381 | GLY | Mainchain |
| 1 | O | 382 | GLY | Mainchain |
| 1 | O | 383 | GLY | Mainchain |
| 1 | O | 387 | VAL | Mainchain |
| 1 | O | 389 | LEU | Mainchain |
| 1 | O | 393 | LEU | Mainchain |
| 1 | O | 396 | TYR | Mainchain |
| 1 | O | 40 | GLY | Mainchain |
| 1 | O | 400 | ILE | Mainchain |
| 1 | O | 401 | SER | Mainchain |
| 1 | O | 402 | GLY | Mainchain |
| 1 | O | 403 | ARG | Peptide,Mainchain |
| 1 | O | 406 | LEU | Mainchain |
| 1 | O | 407 | ALA | Mainchain |
| 1 | O | 409 | ARG | Mainchain |
| 1 | O | 41 | PRO | Mainchain |
| 1 | O | 416 | GLU | Mainchain |
| 1 | O | 417 | VAL | Mainchain |
| 1 | O | 421 | THR | Mainchain |
| 1 | O | 422 | LEU | Mainchain |
| 1 | O | 423 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 424 | GLU | Mainchain |
| 1 | O | 425 | ASN | Peptide |
| 1 | O | 427 | GLY | Mainchain |
| 1 | O | 428 | LEU | Peptide |
| 1 | O | 433 | ILE | Mainchain |
| 1 | O | 434 | LEU | Mainchain |
| 1 | O | 436 | LYS | Mainchain |
| 1 | O | 437 | VAL | Mainchain |
| 1 | O | 439 | ALA | Mainchain |
| 1 | O | 44 | MET | Mainchain |
| 1 | O | 441 | HIS | Mainchain |
| 1 | O | 442 | ALA | Mainchain |
| 1 | O | 444 | ASN | Mainchain |
| 1 | O | 447 | LYS | Mainchain |
| 1 | O | 448 | CYS | Mainchain |
| 1 | O | 451 | LEU | Mainchain |
| 1 | O | 453 | VAL | Mainchain |
| 1 | O | 457 | ALA | Mainchain |
| 1 | O | 458 | VAL | Mainchain |
| 1 | O | 459 | GLU | Mainchain |
| 1 | O | 46 | LYS | Mainchain |
| 1 | O | 464 | ASN | Peptide |
| 1 | O | 465 | GLY | Peptide,Mainchain |
| 1 | O | 466 | VAL | Mainchain |
| 1 | O | 467 | VAL | Mainchain |
| 1 | O | 469 | PRO | Mainchain |
| 1 | O | 470 | LEU | Mainchain |
| 1 | O | 471 | ARG | Mainchain |
| 1 | O | 472 | VAL | Mainchain |
| 1 | O | 473 | LYS | Mainchain |
| 1 | O | 474 | THR | Mainchain |
| 1 | O | 475 | GLN | Mainchain |
| 1 | O | 477 | ILE | Peptide,Mainchain |
| 1 | O | 478 | GLN | Mainchain |
| 1 | O | 479 | SER | Mainchain |
| 1 | O | 481 | ALA | Mainchain |
| 1 | O | 483 | SER | Mainchain |
| 1 | O | 484 | THR | Mainchain |
| 1 | O | 486 | MET | Mainchain |
| 1 | O | 488 | LEU | Mainchain |
| 1 | O | 49 | VAL | Mainchain |
| 1 | O | 490 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | O | 491 | ASP | Mainchain |
| 1 | O | 493 | VAL | Mainchain |
| 1 | O | 495 | ALA | Peptide,Mainchain |
| 1 | O | 496 | ALA | Peptide |
| 1 | O | 50 | ASP | Mainchain |
| 1 | O | 51 | ASP | Mainchain |
| 1 | O | 52 | LEU | Mainchain |
| 1 | O | 53 | GLY | Mainchain |
| 1 | O | 54 | ASP | Mainchain |
| 1 | O | 55 | VAL | Mainchain |
| 1 | O | 56 | VAL | Mainchain |
| 1 | O | 57 | VAL | Mainchain |
| 1 | O | 58 | THR | Mainchain |
| 1 | O | 60 | ASP | Mainchain |
| 1 | O | 62 | VAL | Mainchain |
| 1 | O | 63 | THR | Mainchain |
| 1 | O | 66 | ARG | Mainchain |
| 1 | O | 67 | GLU | Mainchain |
| 1 | O | 68 | MET | Mainchain |
| 1 | O | 69 | SER | Mainchain |
| 1 | O | 7 | VAL | Mainchain |
| 1 | O | 70 | VAL | Mainchain |
| 1 | O | 71 | GLU | Mainchain |
| 1 | O | 72 | HIS | Mainchain |
| 1 | O | 82 | ALA | Mainchain |
| 1 | O | 83 | LYS | Mainchain |
| 1 | O | 85 | GLN | Mainchain |
| 1 | O | 89 | VAL | Mainchain |
| 1 | O | 9 | PRO | Mainchain |
| 1 | O | 91 | ASP | Mainchain |
| 1 | O | 93 | THR | Mainchain |
| 1 | O | 95 | THR | Mainchain |
| 1 | O | 97 | VAL | Mainchain |
| 1 | O | 99 | VAL | Mainchain |
| 1 | P | 10 | GLU | Mainchain |
| 1 | P | 102 | GLU | Mainchain |
| 1 | P | 105 | ARG | Mainchain |
| 1 | P | 106 | LYS | Mainchain |
| 1 | P | 11 | ASN | Mainchain |
| 1 | P | 110 | LEU | Peptide |
| 1 | P | 111 | LEU | Mainchain |
| 1 | P | 112 | ASP | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 113 | GLN | Mainchain |
| 1 | P | 114 | ASN | Mainchain |
| 1 | P | 115 | VAL | Peptide,Mainchain |
| 1 | P | 116 | HIS | Mainchain |
| 1 | P | 118 | THR | Mainchain |
| 1 | P | 12 | MET | Peptide |
| 1 | P | 121 | VAL | Mainchain |
| 1 | P | 122 | LYS | Peptide |
| 1 | P | 123 | GLY | Mainchain |
| 1 | P | 124 | TYR | Mainchain |
| 1 | P | 125 | GLN | Mainchain |
| 1 | P | 126 | ALA | Mainchain |
| 1 | P | 128 | ALA | Peptide,Mainchain |
| 1 | P | 129 | GLN | Mainchain |
| 1 | P | 132 | GLN | Mainchain |
| 1 | P | 133 | GLU | Mainchain |
| 1 | P | 135 | LEU | Mainchain |
| 1 | P | 138 | ILE | Peptide,Mainchain |
| 1 | P | 14 | ARG | Mainchain |
| 1 | P | 140 | CYS | Mainchain |
| 1 | P | 141 | GLU | Mainchain |
| 1 | P | 142 | VAL | Mainchain |
| 1 | P | 143 | GLY | Mainchain |
| 1 | P | 144 | ALA | Mainchain |
| 1 | P | 145 | GLN | Peptide,Mainchain |
| 1 | P | 147 | LYS | Mainchain |
| 1 | P | 148 | GLU | Mainchain |
| 1 | P | 150 | LEU | Mainchain |
| 1 | P | 152 | LYS | Mainchain |
| 1 | P | 156 | THR | Mainchain |
| 1 | P | 157 | SER | Mainchain |
| 1 | P | 16 | MET | Mainchain |
| 1 | P | 160 | GLY | Mainchain |
| 1 | P | 161 | LYS | Mainchain |
| 1 | P | 162 | GLY | Mainchain |
| 1 | P | 166 | ALA | Mainchain |
| 1 | P | 169 | LYS | Mainchain |
| 1 | P | 170 | LEU | Mainchain |
| 1 | P | 171 | ALA | Mainchain |
| 1 | P | 174 | ILE | Mainchain |
| 1 | P | 175 | VAL | Mainchain |
| 1 | P | 177 | ALA | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 179 | SER | Mainchain |
| 1 | P | 180 | ALA | Mainchain |
| 1 | P | 186 | GLY | Peptide |
| 1 | P | 187 | LYS | Mainchain |
| 1 | P | 188 | VAL | Mainchain |
| 1 | P | 189 | ASP | Peptide |
| 1 | P | 190 | LYS | Mainchain |
| 1 | P | 191 | ASP | Mainchain |
| 1 | P | 197 | LYS | Mainchain |
| 1 | P | 198 | LYS | Peptide |
| 1 | P | 199 | SER | Mainchain |
| 1 | P | 200 | GLY | Peptide,Mainchain |
| 1 | P | 201 | ALA | Peptide,Mainchain |
| 1 | P | 202 | SER | Peptide,Mainchain |
| 1 | P | 203 | ILE | Peptide,Mainchain |
| 1 | P | 206 | THR | Mainchain |
| 1 | P | 209 | ILE | Mainchain |
| 1 | P | 210 | LYS | Peptide,Mainchain |
| 1 | P | 215 | ASP | Mainchain |
| 1 | P | 216 | LYS | Mainchain |
| 1 | P | 217 | GLU | Mainchain |
| 1 | P | 220 | SER | Peptide,Mainchain |
| 1 | P | 222 | GLN | Mainchain |
| 1 | P | 225 | LYS | Mainchain |
| 1 | P | 228 | THR | Mainchain |
| 1 | P | 229 | ASP | Peptide,Mainchain |
| 1 | P | 23 | MET | Mainchain |
| 1 | P | 230 | ALA | Mainchain |
| 1 | P | 231 | LYS | Mainchain |
| 1 | P | 234 | LEU | Mainchain |
| 1 | P | 237 | CYS | Peptide,Mainchain |
| 1 | P | 244 | SER | Mainchain |
| 1 | P | 248 | LYS | Mainchain |
| 1 | P | 250 | MET | Mainchain |
| 1 | P | 256 | ALA | Mainchain |
| 1 | P | 257 | SER | Mainchain |
| 1 | P | 26 | LEU | Mainchain |
| 1 | P | 262 | LEU | Mainchain |
| 1 | P | 264 | CYS | Mainchain |
| 1 | P | 265 | GLN | Mainchain |
| 1 | P | 266 | LYS | Mainchain |
| 1 | P | 267 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 269 | ASP | Mainchain |
| 1 | P | 27 | ALA | Mainchain |
| 1 | P | 270 | ASP | Mainchain |
| 1 | P | 272 | ALA | Mainchain |
| 1 | P | 276 | LEU | Mainchain |
| 1 | P | 279 | GLU | Mainchain |
| 1 | P | 28 | GLY | Mainchain |
| 1 | P | 284 | ALA | Mainchain |
| 1 | P | 285 | ARG | Peptide,Mainchain |
| 1 | P | 286 | ARG | Mainchain |
| 1 | P | 287 | VAL | Mainchain |
| 1 | P | 289 | LYS | Peptide,Mainchain |
| 1 | P | 29 | ARG | Mainchain |
| 1 | P | 292 | MET | Mainchain |
| 1 | P | 294 | LYS | Mainchain |
| 1 | P | 295 | LEU | Mainchain |
| 1 | P | 298 | ALA | Peptide,Mainchain |
| 1 | P | 30 | ILE | Mainchain |
| 1 | P | 301 | ALA | Mainchain |
| 1 | P | 306 | ASN | Mainchain |
| 1 | P | 307 | ILE | Peptide,Mainchain |
| 1 | P | 308 | LYS | Peptide,Mainchain |
| 1 | P | 309 | ASP | Peptide,Mainchain |
| 1 | P | 31 | ILE | Mainchain |
| 1 | P | 310 | LEU | Mainchain |
| 1 | P | 311 | SER | Peptide,Mainchain |
| 1 | P | 312 | ALA | Peptide |
| 1 | P | 313 | GLN | Peptide,Mainchain |
| 1 | P | 314 | ASP | Mainchain |
| 1 | P | 317 | ASP | Mainchain |
| 1 | P | 318 | ALA | Mainchain |
| 1 | P | 32 | ALA | Mainchain |
| 1 | P | 326 | ILE | Mainchain |
| 1 | P | 327 | SER | Peptide |
| 1 | P | 328 | GLY | Peptide,Mainchain |
| 1 | P | 330 | SER | Mainchain |
| 1 | P | 333 | PHE | Mainchain |
| 1 | P | 335 | GLU | Mainchain |
| 1 | P | 336 | GLU | Mainchain |
| 1 | P | 338 | LYS | Mainchain |
| 1 | P | 339 | HIS | Mainchain |
| 1 | P | 34 | THR | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 340 | PRO | Peptide |
| 1 | P | 342 | ALA | Mainchain |
| 1 | P | 345 | MET | Mainchain |
| 1 | P | 347 | ILE | Mainchain |
| 1 | P | 348 | ARG | Peptide |
| 1 | P | 349 | GLY | Peptide,Mainchain |
| 1 | P | 35 | VAL | Mainchain |
| 1 | P | 350 | THR | Peptide |
| 1 | P | 352 | GLU | Mainchain |
| 1 | P | 354 | VAL | Mainchain |
| 1 | P | 355 | ILE | Mainchain |
| 1 | P | 356 | GLU | Mainchain |
| 1 | P | 357 | GLU | Mainchain |
| 1 | P | 36 | ARG | Mainchain |
| 1 | P | 361 | ALA | Mainchain |
| 1 | P | 365 | ALA | Mainchain |
| 1 | P | 368 | VAL | Mainchain |
| 1 | P | 369 | VAL | Mainchain |
| 1 | P | 371 | CYS | Mainchain |
| 1 | P | 373 | ILE | Mainchain |
| 1 | P | 374 | GLU | Mainchain |
| 1 | P | 375 | ASP | Mainchain |
| 1 | P | 376 | GLY | Mainchain |
| 1 | P | 377 | ARG | Mainchain |
| 1 | P | 378 | ILE | Peptide,Mainchain |
| 1 | P | 379 | VAL | Mainchain |
| 1 | P | 38 | THR | Mainchain |
| 1 | P | 380 | SER | Mainchain |
| 1 | P | 381 | GLY | Mainchain |
| 1 | P | 382 | GLY | Mainchain |
| 1 | P | 383 | GLY | Peptide |
| 1 | P | 386 | GLU | Mainchain |
| 1 | P | 39 | LEU | Mainchain |
| 1 | P | 391 | MET | Mainchain |
| 1 | P | 392 | LYS | Mainchain |
| 1 | P | 393 | LEU | Mainchain |
| 1 | P | 396 | TYR | Mainchain |
| 1 | P | 397 | ALA | Mainchain |
| 1 | P | 398 | GLU | Mainchain |
| 1 | P | 40 | GLY | Peptide,Mainchain |
| 1 | P | 400 | ILE | Mainchain |
| 1 | P | 402 | GLY | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 403 | ARG | Mainchain |
| 1 | P | 405 | GLN | Peptide |
| 1 | P | 408 | VAL | Mainchain |
| 1 | P | 410 | ALA | Mainchain |
| 1 | P | 411 | PHE | Mainchain |
| 1 | P | 412 | ALA | Mainchain |
| 1 | P | 415 | LEU | Mainchain |
| 1 | P | 416 | GLU | Mainchain |
| 1 | P | 417 | VAL | Mainchain |
| 1 | P | 42 | LYS | Mainchain |
| 1 | P | 423 | ALA | Mainchain |
| 1 | P | 424 | GLU | Mainchain |
| 1 | P | 425 | ASN | Mainchain |
| 1 | P | 426 | ALA | Mainchain |
| 1 | P | 427 | GLY | Mainchain |
| 1 | P | 430 | ALA | Mainchain |
| 1 | P | 432 | GLU | Mainchain |
| 1 | P | 438 | ARG | Mainchain |
| 1 | P | 439 | ALA | Mainchain |
| 1 | P | 44 | MET | Mainchain |
| 1 | P | 442 | ALA | Mainchain |
| 1 | P | 443 | SER | Mainchain |
| 1 | P | 446 | ASN | Mainchain |
| 1 | P | 449 | ALA | Mainchain |
| 1 | P | 45 | ASP | Mainchain |
| 1 | P | 455 | THR | Mainchain |
| 1 | P | 456 | GLY | Mainchain |
| 1 | P | 457 | ALA | Mainchain |
| 1 | P | 458 | VAL | Mainchain |
| 1 | P | 459 | GLU | Mainchain |
| 1 | P | 46 | LYS | Mainchain |
| 1 | P | 461 | MET | Mainchain |
| 1 | P | 463 | GLU | Mainchain |
| 1 | P | 464 | ASN | Peptide,Mainchain |
| 1 | P | 467 | VAL | Mainchain |
| 1 | P | 469 | PRO | Mainchain |
| 1 | P | 47 | MET | Mainchain |
| 1 | P | 470 | LEU | Mainchain |
| 1 | P | 471 | ARG | Peptide |
| 1 | P | 472 | VAL | Mainchain |
| 1 | P | 474 | THR | Mainchain |
| 1 | P | 477 | ILE | Mainchain |

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| Mol | Chain | Res | Type | Group |
|-----|-------|-----|------|-------------------|
| 1 | P | 48 | LEU | Mainchain |
| 1 | P | 480 | ALA | Mainchain |
| 1 | P | 482 | GLU | Mainchain |
| 1 | P | 483 | SER | Mainchain |
| 1 | P | 484 | THR | Mainchain |
| 1 | P | 486 | MET | Mainchain |
| 1 | P | 487 | LEU | Mainchain |
| 1 | P | 489 | ARG | Mainchain |
| 1 | P | 49 | VAL | Mainchain |
| 1 | P | 492 | ASP | Mainchain |
| 1 | P | 495 | ALA | Mainchain |
| 1 | P | 496 | ALA | Mainchain |
| 1 | P | 50 | ASP | Peptide,Mainchain |
| 1 | P | 56 | VAL | Mainchain |
| 1 | P | 57 | VAL | Mainchain |
| 1 | P | 58 | THR | Mainchain |
| 1 | P | 62 | VAL | Mainchain |
| 1 | P | 63 | THR | Mainchain |
| 1 | P | 66 | ARG | Mainchain |
| 1 | P | 68 | MET | Mainchain |
| 1 | P | 69 | SER | Peptide |
| 1 | P | 7 | VAL | Mainchain |
| 1 | P | 70 | VAL | Mainchain |
| 1 | P | 72 | HIS | Mainchain |
| 1 | P | 74 | ALA | Peptide,Mainchain |
| 1 | P | 75 | ALA | Mainchain |
| 1 | P | 77 | MET | Mainchain |
| 1 | P | 78 | LEU | Mainchain |
| 1 | P | 79 | ILE | Mainchain |
| 1 | P | 8 | LEU | Mainchain |
| 1 | P | 81 | VAL | Mainchain |
| 1 | P | 82 | ALA | Mainchain |
| 1 | P | 83 | LYS | Mainchain |
| 1 | P | 84 | THR | Mainchain |
| 1 | P | 87 | LYS | Peptide,Mainchain |
| 1 | P | 9 | PRO | Peptide |
| 1 | P | 91 | ASP | Mainchain |
| 1 | P | 92 | GLY | Mainchain |
| 1 | P | 94 | THR | Mainchain |
| 1 | P | 95 | THR | Mainchain |
| 1 | P | 96 | ALA | Peptide |
| 1 | P | 97 | VAL | Mainchain |

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

| Mol | Chain | Non-H | H(model) | H(added) | Clashes | Symm-Clashes |
|-----|-------|-------|----------|----------|---------|--------------|
| 1 | A | 3664 | 0 | 3787 | 1077 | 0 |
| 1 | B | 3664 | 0 | 3782 | 945 | 0 |
| 1 | C | 3664 | 0 | 3787 | 975 | 0 |
| 1 | D | 3664 | 0 | 3790 | 980 | 0 |
| 1 | E | 3664 | 0 | 3785 | 964 | 0 |
| 1 | F | 3664 | 0 | 3789 | 872 | 0 |
| 1 | G | 3664 | 0 | 3789 | 910 | 0 |
| 1 | H | 3664 | 0 | 3790 | 965 | 0 |
| 1 | I | 3664 | 0 | 3786 | 928 | 0 |
| 1 | J | 3664 | 0 | 3788 | 945 | 0 |
| 1 | K | 3664 | 0 | 3791 | 949 | 0 |
| 1 | L | 3664 | 0 | 3788 | 955 | 0 |
| 1 | M | 3664 | 0 | 3793 | 1021 | 0 |
| 1 | N | 3664 | 0 | 3791 | 970 | 0 |
| 1 | O | 3664 | 0 | 3793 | 952 | 0 |
| 1 | P | 3664 | 0 | 3786 | 980 | 0 |
| All | All | 58624 | 0 | 60615 | 14494 | 0 |

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 124.

All (14494) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|-----------------|--------------------------|-------------------|
| 1:F:461:MET:HA | 1:F:461:MET:CE | 1.29 | 1.55 |
| 1:H:165:LYS:HA | 1:H:165:LYS:NZ | 1.30 | 1.45 |
| 1:N:403:ARG:HH11 | 1:N:403:ARG:CG | 1.06 | 1.44 |
| 1:M:420:ARG:HH11 | 1:M:420:ARG:CB | 1.31 | 1.41 |
| 1:B:488:LEU:O | 1:B:488:LEU:CD2 | 1.68 | 1.40 |
| 1:D:313:GLN:H | 1:D:313:GLN:NE2 | 1.12 | 1.39 |
| 1:N:341:LYS:HZ2 | 1:N:341:LYS:CB | 1.35 | 1.38 |
| 1:N:341:LYS:HB3 | 1:N:341:LYS:NZ | 1.12 | 1.35 |
| 1:P:113:GLN:HE21 | 1:P:113:GLN:CA | 1.15 | 1.35 |
| 1:I:461:MET:HA | 1:I:461:MET:CE | 1.60 | 1.31 |
| 1:J:307:ILE:CD1 | 1:J:307:ILE:O | 1.76 | 1.31 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:158:ILE:CG2 | 1:D:158:ILE:O | 1.72 | 1.31 |
| 1:K:461:MET:HA | 1:K:461:MET:CE | 1.63 | 1.29 |
| 1:E:488:LEU:HD12 | 1:E:488:LEU:O | 1.11 | 1.29 |
| 1:O:239:ILE:HD12 | 1:O:307:ILE:CG2 | 1.65 | 1.27 |
| 1:D:44:MET:HA | 1:D:44:MET:CE | 1.64 | 1.27 |
| 1:E:391:MET:CE | 1:E:438:ARG:HB3 | 1.65 | 1.26 |
| 1:J:488:LEU:HD22 | 1:J:488:LEU:O | 1.11 | 1.26 |
| 1:F:461:MET:CE | 1:F:461:MET:CA | 1.96 | 1.25 |
| 1:K:403:ARG:HH11 | 1:K:403:ARG:CG | 1.47 | 1.25 |
| 1:M:42:LYS:HE2 | 1:M:426:ALA:CB | 1.67 | 1.25 |
| 1:E:9:PRO:CD | 1:F:68:MET:HA | 1.65 | 1.25 |
| 1:F:307:ILE:O | 1:F:307:ILE:HD12 | 1.10 | 1.25 |
| 1:J:307:ILE:O | 1:J:307:ILE:HD12 | 1.07 | 1.25 |
| 1:K:461:MET:CE | 1:K:461:MET:CA | 2.16 | 1.24 |
| 1:O:114:ASN:O | 1:O:114:ASN:OD1 | 1.52 | 1.24 |
| 1:M:488:LEU:HD12 | 1:M:488:LEU:O | 1.10 | 1.23 |
| 1:B:237:CYS:CB | 1:B:306:ASN:HA | 1.69 | 1.22 |
| 1:K:158:ILE:O | 1:K:158:ILE:CG2 | 1.76 | 1.22 |
| 1:N:100:ALA:CB | 1:N:484:THR:HG21 | 1.69 | 1.22 |
| 1:N:235:LEU:CD2 | 1:N:307:ILE:HA | 1.70 | 1.22 |
| 1:C:44:MET:CE | 1:C:44:MET:HA | 1.70 | 1.22 |
| 1:J:276:LEU:CD1 | 1:J:281:ILE:HD12 | 1.69 | 1.22 |
| 1:L:166:ALA:HB2 | 1:L:203:ILE:CG2 | 1.70 | 1.21 |
| 1:P:174:ILE:HG22 | 1:P:362:VAL:CG2 | 1.70 | 1.21 |
| 1:K:113:GLN:CA | 1:K:113:GLN:NE2 | 1.99 | 1.21 |
| 1:O:174:ILE:HG22 | 1:O:362:VAL:CG2 | 1.68 | 1.21 |
| 1:E:9:PRO:HD3 | 1:F:68:MET:CA | 1.70 | 1.21 |
| 1:P:113:GLN:HA | 1:P:113:GLN:NE2 | 1.24 | 1.21 |
| 1:I:222:GLN:HB3 | 1:I:277:ALA:CB | 1.71 | 1.21 |
| 1:O:174:ILE:CG2 | 1:O:362:VAL:HG23 | 1.70 | 1.20 |
| 1:P:44:MET:HA | 1:P:44:MET:CE | 1.69 | 1.20 |
| 1:M:100:ALA:HB1 | 1:M:484:THR:CG2 | 1.71 | 1.20 |
| 1:D:12:MET:HE3 | 1:D:494:ILE:HB | 1.20 | 1.20 |
| 1:F:307:ILE:O | 1:F:307:ILE:CD1 | 1.90 | 1.20 |
| 1:L:48:LEU:CD2 | 1:L:68:MET:HG2 | 1.72 | 1.20 |
| 1:O:116:HIS:CG | 1:O:117:PRO:HD2 | 1.76 | 1.20 |
| 1:H:237:CYS:CB | 1:H:306:ASN:HB2 | 1.72 | 1.20 |
| 1:M:206:THR:CG2 | 1:M:347:ILE:HG23 | 1.71 | 1.20 |
| 1:I:48:LEU:HB2 | 1:I:56:VAL:CG2 | 1.72 | 1.19 |
| 1:P:154:ALA:HB1 | 1:P:174:ILE:HD11 | 1.21 | 1.19 |
| 1:F:461:MET:CA | 1:F:461:MET:HE2 | 1.65 | 1.19 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:235:LEU:HD21 | 1:P:307:ILE:HA | 1.24 | 1.19 |
| 1:E:130:LYS:HD2 | 1:E:393:LEU:CD2 | 1.70 | 1.19 |
| 1:K:233:ALA:HA | 1:K:315:LEU:CD1 | 1.71 | 1.19 |
| 1:M:420:ARG:HH11 | 1:M:420:ARG:CG | 1.49 | 1.19 |
| 1:P:12:MET:CG | 1:P:494:ILE:HG22 | 1.73 | 1.19 |
| 1:A:174:ILE:HG22 | 1:A:362:VAL:HG23 | 1.23 | 1.19 |
| 1:E:307:ILE:HD12 | 1:E:307:ILE:O | 1.39 | 1.19 |
| 1:O:239:ILE:CD1 | 1:O:307:ILE:HG21 | 1.72 | 1.19 |
| 1:I:124:TYR:CE1 | 1:I:407:ALA:HA | 1.77 | 1.18 |
| 1:N:100:ALA:HB1 | 1:N:484:THR:CG2 | 1.71 | 1.18 |
| 1:D:12:MET:HG3 | 1:D:494:ILE:CG2 | 1.73 | 1.18 |
| 1:F:177:ALA:HB2 | 1:F:208:LEU:HD11 | 1.19 | 1.18 |
| 1:C:118:THR:HG22 | 1:C:118:THR:O | 1.41 | 1.18 |
| 1:D:170:LEU:HD22 | 1:D:358:VAL:HG13 | 1.25 | 1.18 |
| 1:E:150:LEU:HD23 | 1:E:175:VAL:HG13 | 1.22 | 1.18 |
| 1:F:178:VAL:HG11 | 1:F:366:VAL:HG13 | 1.24 | 1.18 |
| 1:H:235:LEU:HD12 | 1:H:307:ILE:HD13 | 1.21 | 1.18 |
| 1:M:119:ILE:HG13 | 1:M:403:ARG:HD3 | 1.20 | 1.18 |
| 1:F:206:THR:HG22 | 1:F:348:ARG:H | 1.03 | 1.18 |
| 1:H:42:LYS:HE2 | 1:H:426:ALA:HA | 1.24 | 1.18 |
| 1:K:78:LEU:HD12 | 1:K:487:LEU:HD22 | 1.20 | 1.18 |
| 1:K:192:LEU:HB2 | 1:K:342:ALA:HB2 | 1.23 | 1.18 |
| 1:L:138:ILE:CD1 | 1:L:385:THR:HG23 | 1.72 | 1.18 |
| 1:D:174:ILE:HG22 | 1:D:362:VAL:HG23 | 1.26 | 1.17 |
| 1:F:235:LEU:HD11 | 1:F:310:LEU:HB2 | 1.26 | 1.17 |
| 1:M:197:LYS:CA | 1:M:355:ILE:HG21 | 1.74 | 1.17 |
| 1:F:222:GLN:HB2 | 1:F:277:ALA:HB1 | 1.25 | 1.17 |
| 1:J:347:ILE:CG2 | 1:J:355:ILE:HG23 | 1.73 | 1.17 |
| 1:K:235:LEU:HD22 | 1:K:307:ILE:HA | 1.18 | 1.17 |
| 1:P:84:THR:CG2 | 1:P:84:THR:O | 1.86 | 1.17 |
| 1:P:233:ALA:HB1 | 1:P:310:LEU:HD11 | 1.26 | 1.17 |
| 1:I:42:LYS:HE2 | 1:I:426:ALA:HB2 | 1.26 | 1.17 |
| 1:P:166:ALA:HB2 | 1:P:203:ILE:HG12 | 1.21 | 1.17 |
| 1:D:250:MET:HE2 | 1:D:308:LYS:HG2 | 1.23 | 1.17 |
| 1:E:9:PRO:CD | 1:F:68:MET:HE2 | 1.75 | 1.17 |
| 1:G:448:CYS:HB2 | 1:G:460:ASP:HA | 1.19 | 1.17 |
| 1:J:69:SER:HB3 | 1:K:9:PRO:CB | 1.74 | 1.17 |
| 1:J:116:HIS:CG | 1:J:117:PRO:HD2 | 1.78 | 1.17 |
| 1:J:276:LEU:HD12 | 1:J:281:ILE:CG2 | 1.74 | 1.17 |
| 1:N:154:ALA:HB1 | 1:N:174:ILE:HD11 | 1.27 | 1.17 |
| 1:O:44:MET:HA | 1:O:44:MET:CE | 1.75 | 1.17 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:34:THR:CG2 | 1:A:35:VAL:HG13 | 1.74 | 1.17 |
| 1:F:233:ALA:HA | 1:F:315:LEU:HD13 | 1.26 | 1.17 |
| 1:G:103:LEU:HD21 | 1:G:411:PHE:CD2 | 1.80 | 1.17 |
| 1:O:341:LYS:HZ3 | 1:O:341:LYS:CB | 1.54 | 1.17 |
| 1:D:62:VAL:HG13 | 1:D:63:THR:H | 1.07 | 1.16 |
| 1:H:233:ALA:HA | 1:H:315:LEU:HG | 1.17 | 1.16 |
| 1:J:276:LEU:CD1 | 1:J:281:ILE:HG21 | 1.75 | 1.16 |
| 1:L:166:ALA:CB | 1:L:203:ILE:HG22 | 1.75 | 1.16 |
| 1:M:448:CYS:HB2 | 1:M:460:ASP:HA | 1.17 | 1.16 |
| 1:N:68:MET:HE2 | 1:N:68:MET:HA | 1.27 | 1.16 |
| 1:P:182:VAL:HB | 1:P:188:VAL:CG2 | 1.73 | 1.16 |
| 1:A:42:LYS:HB3 | 1:A:425:ASN:HB2 | 1.24 | 1.16 |
| 1:L:437:VAL:HG21 | 1:L:451:LEU:CD1 | 1.75 | 1.16 |
| 1:P:391:MET:HE1 | 1:P:438:ARG:HB3 | 1.19 | 1.16 |
| 1:A:30:ILE:HG22 | 1:A:31:ILE:HG12 | 1.25 | 1.16 |
| 1:D:235:LEU:CD2 | 1:D:310:LEU:HG | 1.76 | 1.16 |
| 1:F:119:ILE:HG13 | 1:F:403:ARG:CD | 1.76 | 1.16 |
| 1:P:174:ILE:CG2 | 1:P:362:VAL:HG23 | 1.74 | 1.16 |
| 1:A:158:ILE:HG12 | 1:A:361:ALA:HB1 | 1.25 | 1.16 |
| 1:B:134:LEU:HB3 | 1:B:392:LYS:HZ1 | 1.00 | 1.16 |
| 1:B:142:VAL:HG21 | 1:B:149:ILE:HG12 | 1.23 | 1.16 |
| 1:C:192:LEU:HB3 | 1:C:342:ALA:HB2 | 1.23 | 1.16 |
| 1:C:239:ILE:HD12 | 1:C:307:ILE:HD13 | 1.28 | 1.16 |
| 1:E:195:ILE:O | 1:E:195:ILE:HD12 | 1.46 | 1.16 |
| 1:H:219:VAL:HG22 | 1:H:273:GLN:HG2 | 1.21 | 1.16 |
| 1:I:12:MET:HG2 | 1:I:494:ILE:HG22 | 1.18 | 1.16 |
| 1:M:452:ASN:HD21 | 1:M:454:PHE:HB2 | 1.04 | 1.16 |
| 1:A:154:ALA:CB | 1:A:174:ILE:HD11 | 1.76 | 1.16 |
| 1:C:12:MET:O | 1:C:12:MET:CG | 1.87 | 1.16 |
| 1:F:461:MET:CA | 1:F:461:MET:HE3 | 1.73 | 1.16 |
| 1:D:169:LYS:HG3 | 1:D:204:ASP:HB3 | 1.27 | 1.15 |
| 1:K:219:VAL:HG13 | 1:K:273:GLN:HB3 | 1.28 | 1.15 |
| 1:K:237:CYS:HA | 1:K:306:ASN:HA | 1.21 | 1.15 |
| 1:A:142:VAL:HG21 | 1:A:149:ILE:HG21 | 1.18 | 1.15 |
| 1:C:235:LEU:HD11 | 1:C:307:ILE:HA | 1.26 | 1.15 |
| 1:G:222:GLN:HB3 | 1:G:277:ALA:HB1 | 1.16 | 1.15 |
| 1:G:376:GLY:HA3 | 1:G:377:ARG:HB2 | 1.15 | 1.15 |
| 1:L:174:ILE:HG22 | 1:L:362:VAL:HG23 | 1.22 | 1.15 |
| 1:D:154:ALA:HB1 | 1:D:174:ILE:HD11 | 1.28 | 1.15 |
| 1:L:235:LEU:HG | 1:L:307:ILE:HA | 1.24 | 1.15 |
| 1:M:420:ARG:HG2 | 1:M:420:ARG:NH1 | 1.58 | 1.15 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:88:GLU:HG3 | 1:A:475:GLN:HG2 | 1.22 | 1.15 |
| 1:D:192:LEU:HG | 1:D:342:ALA:HB2 | 1.29 | 1.15 |
| 1:C:9:PRO:HD3 | 1:D:68:MET:HA | 1.28 | 1.14 |
| 1:F:251:VAL:CG1 | 1:F:276:LEU:HD22 | 1.75 | 1.14 |
| 1:I:8:LEU:HD23 | 1:I:8:LEU:H | 1.05 | 1.14 |
| 1:L:276:LEU:HD12 | 1:L:281:ILE:CG2 | 1.76 | 1.14 |
| 1:M:8:LEU:HD22 | 1:M:12:MET:CE | 1.77 | 1.14 |
| 1:P:276:LEU:HD23 | 1:P:281:ILE:HD12 | 1.22 | 1.14 |
| 1:A:239:ILE:CG2 | 1:A:268:ILE:HG23 | 1.78 | 1.14 |
| 1:D:158:ILE:HD13 | 1:D:170:LEU:CG | 1.76 | 1.14 |
| 1:E:42:LYS:HE3 | 1:E:426:ALA:CB | 1.76 | 1.14 |
| 1:H:12:MET:HE3 | 1:H:494:ILE:HG23 | 1.19 | 1.14 |
| 1:H:420:ARG:HH11 | 1:H:420:ARG:HG2 | 1.08 | 1.14 |
| 1:J:44:MET:HE2 | 1:J:44:MET:HA | 1.14 | 1.14 |
| 1:J:82:ALA:HB1 | 1:J:93:THR:HG22 | 1.24 | 1.14 |
| 1:D:165:LYS:HE2 | 1:D:165:LYS:HA | 1.27 | 1.14 |
| 1:I:142:VAL:HG11 | 1:I:149:ILE:HG21 | 1.24 | 1.14 |
| 1:P:50:ASP:HB2 | 1:P:51:ASP:HB2 | 1.16 | 1.14 |
| 1:B:255:LYS:HE3 | 1:B:279:GLU:HG2 | 1.19 | 1.14 |
| 1:C:178:VAL:HG22 | 1:C:193:ILE:CD1 | 1.78 | 1.14 |
| 1:H:239:ILE:HB | 1:H:307:ILE:HG21 | 1.28 | 1.14 |
| 1:I:461:MET:CE | 1:I:461:MET:CA | 2.25 | 1.14 |
| 1:M:420:ARG:CG | 1:M:420:ARG:NH1 | 2.06 | 1.14 |
| 1:M:488:LEU:O | 1:M:488:LEU:CD1 | 1.96 | 1.14 |
| 1:A:248:LYS:HD2 | 1:A:275:TYR:CZ | 1.82 | 1.14 |
| 1:C:276:LEU:CD1 | 1:C:281:ILE:HD12 | 1.77 | 1.14 |
| 1:H:113:GLN:HE21 | 1:H:113:GLN:N | 1.42 | 1.14 |
| 1:M:150:LEU:HD23 | 1:M:175:VAL:HG13 | 1.15 | 1.14 |
| 1:A:68:MET:HA | 1:H:9:PRO:HD3 | 1.21 | 1.13 |
| 1:A:152:LYS:HE2 | 1:A:462:CYS:HA | 1.14 | 1.13 |
| 1:E:403:ARG:HH11 | 1:E:403:ARG:HG3 | 1.10 | 1.13 |
| 1:G:238:ALA:H | 1:G:266:LYS:HB2 | 1.10 | 1.13 |
| 1:H:42:LYS:HE2 | 1:H:426:ALA:CA | 1.78 | 1.13 |
| 1:M:182:VAL:O | 1:M:182:VAL:HG13 | 1.39 | 1.13 |
| 1:D:100:ALA:HB1 | 1:D:484:THR:HG21 | 1.17 | 1.13 |
| 1:D:163:ALA:HA | 1:D:165:LYS:HG2 | 1.15 | 1.13 |
| 1:D:235:LEU:HD13 | 1:D:307:ILE:HA | 1.18 | 1.13 |
| 1:D:313:GLN:NE2 | 1:D:313:GLN:N | 1.94 | 1.13 |
| 1:H:165:LYS:HZ2 | 1:H:165:LYS:CA | 1.62 | 1.13 |
| 1:L:100:ALA:CB | 1:L:484:THR:HG21 | 1.78 | 1.13 |
| 1:M:192:LEU:CD2 | 1:M:342:ALA:HB2 | 1.76 | 1.13 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:96:ALA:HA | 1:O:480:ALA:HB2 | 1.19 | 1.13 |
| 1:O:239:ILE:CD1 | 1:O:307:ILE:HD13 | 1.77 | 1.13 |
| 1:O:434:LEU:N | 1:O:434:LEU:HD13 | 1.61 | 1.13 |
| 1:B:262:LEU:HD11 | 1:B:310:LEU:CD1 | 1.77 | 1.13 |
| 1:C:39:LEU:HG | 1:C:40:GLY:H | 1.08 | 1.13 |
| 1:D:158:ILE:CD1 | 1:D:170:LEU:HG | 1.78 | 1.13 |
| 1:H:113:GLN:HE21 | 1:H:113:GLN:CA | 1.46 | 1.13 |
| 1:H:119:ILE:CG2 | 1:H:403:ARG:HB2 | 1.77 | 1.13 |
| 1:J:403:ARG:HG3 | 1:J:403:ARG:HH11 | 1.03 | 1.13 |
| 1:K:134:LEU:HD22 | 1:K:392:LYS:HD2 | 1.23 | 1.13 |
| 1:N:69:SER:HB3 | 1:O:9:PRO:CB | 1.78 | 1.13 |
| 1:A:276:LEU:HD12 | 1:A:281:ILE:HG21 | 1.30 | 1.13 |
| 1:B:437:VAL:HG21 | 1:B:451:LEU:HG | 1.14 | 1.13 |
| 1:C:431:ILE:HG12 | 1:C:431:ILE:O | 1.46 | 1.13 |
| 1:G:12:MET:HB2 | 1:G:494:ILE:HG22 | 1.28 | 1.13 |
| 1:M:248:LYS:HD2 | 1:M:275:TYR:CZ | 1.82 | 1.13 |
| 1:P:100:ALA:HB1 | 1:P:484:THR:CG2 | 1.78 | 1.13 |
| 1:P:215:ASP:O | 1:P:215:ASP:OD1 | 1.67 | 1.13 |
| 1:P:276:LEU:HD22 | 1:P:281:ILE:HG21 | 1.15 | 1.13 |
| 1:A:215:ASP:O | 1:A:215:ASP:OD1 | 1.66 | 1.13 |
| 1:B:8:LEU:HD22 | 1:C:68:MET:CG | 1.79 | 1.13 |
| 1:A:100:ALA:HB1 | 1:A:484:THR:HG21 | 1.28 | 1.12 |
| 1:B:119:ILE:HG13 | 1:B:403:ARG:HD2 | 1.21 | 1.12 |
| 1:I:239:ILE:HD12 | 1:I:307:ILE:HG12 | 1.26 | 1.12 |
| 1:J:255:LYS:HE3 | 1:J:279:GLU:HG2 | 1.18 | 1.12 |
| 1:K:142:VAL:HG13 | 1:K:149:ILE:HD13 | 1.29 | 1.13 |
| 1:L:377:ARG:CB | 1:L:470:LEU:HD23 | 1.79 | 1.13 |
| 1:F:222:GLN:CB | 1:F:277:ALA:HB1 | 1.76 | 1.12 |
| 1:N:68:MET:CB | 1:O:8:LEU:HD22 | 1.79 | 1.12 |
| 1:J:217:GLU:HG2 | 1:J:330:SER:HB2 | 1.27 | 1.12 |
| 1:O:154:ALA:HB1 | 1:O:174:ILE:CD1 | 1.78 | 1.12 |
| 1:A:345:MET:CE | 1:A:362:VAL:HG11 | 1.79 | 1.12 |
| 1:C:130:LYS:HE2 | 1:C:134:LEU:HD11 | 1.26 | 1.12 |
| 1:C:233:ALA:HA | 1:C:315:LEU:HD22 | 1.20 | 1.12 |
| 1:E:135:LEU:HD21 | 1:E:385:THR:HG21 | 1.26 | 1.12 |
| 1:F:437:VAL:HG21 | 1:F:451:LEU:CD1 | 1.79 | 1.12 |
| 1:I:100:ALA:HB1 | 1:I:484:THR:CG2 | 1.78 | 1.12 |
| 1:I:237:CYS:HA | 1:I:306:ASN:HA | 1.20 | 1.12 |
| 1:B:239:ILE:HG13 | 1:B:307:ILE:HD13 | 1.15 | 1.12 |
| 1:C:116:HIS:CG | 1:C:117:PRO:HD2 | 1.83 | 1.12 |
| 1:C:197:LYS:CA | 1:C:355:ILE:HG21 | 1.78 | 1.12 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:488:LEU:O | 1:E:488:LEU:CD1 | 1.95 | 1.12 |
| 1:F:233:ALA:HB1 | 1:F:310:LEU:HD11 | 1.14 | 1.12 |
| 1:G:14:ARG:HH12 | 1:H:34:THR:HG23 | 1.08 | 1.12 |
| 1:J:153:ILE:HD11 | 1:J:378:ILE:HG22 | 1.23 | 1.12 |
| 1:M:42:LYS:HE2 | 1:M:426:ALA:HB2 | 1.28 | 1.12 |
| 1:E:100:ALA:HB1 | 1:E:484:THR:HG21 | 1.25 | 1.12 |
| 1:I:48:LEU:HB2 | 1:I:56:VAL:HG21 | 1.22 | 1.12 |
| 1:I:113:GLN:O | 1:I:113:GLN:HG3 | 1.32 | 1.12 |
| 1:J:12:MET:CE | 1:J:494:ILE:HG22 | 1.79 | 1.12 |
| 1:J:130:LYS:HZ3 | 1:J:393:LEU:HD23 | 0.95 | 1.12 |
| 1:K:42:LYS:HE2 | 1:K:426:ALA:CA | 1.79 | 1.12 |
| 1:B:420:ARG:HG2 | 1:B:420:ARG:HH11 | 1.15 | 1.11 |
| 1:C:138:ILE:HD13 | 1:C:379:VAL:HG21 | 1.15 | 1.11 |
| 1:C:448:CYS:HB2 | 1:C:460:ASP:HA | 1.13 | 1.11 |
| 1:E:235:LEU:HD21 | 1:E:307:ILE:HD13 | 1.29 | 1.11 |
| 1:F:188:VAL:HG21 | 1:F:373:ILE:HD12 | 1.32 | 1.11 |
| 1:F:420:ARG:HH21 | 1:F:430:ALA:HB3 | 1.04 | 1.11 |
| 1:G:100:ALA:HB1 | 1:G:484:THR:HG21 | 1.22 | 1.11 |
| 1:H:114:ASN:O | 1:H:114:ASN:ND2 | 1.81 | 1.11 |
| 1:J:488:LEU:O | 1:J:488:LEU:CD2 | 1.96 | 1.11 |
| 1:M:192:LEU:HB2 | 1:M:342:ALA:HB1 | 1.25 | 1.11 |
| 1:N:233:ALA:HA | 1:N:315:LEU:HD22 | 1.17 | 1.11 |
| 1:O:379:VAL:HG11 | 1:O:473:LYS:HG3 | 1.31 | 1.11 |
| 1:B:380:SER:HB3 | 1:B:384:SER:HB2 | 1.31 | 1.11 |
| 1:C:42:LYS:HB2 | 1:C:425:ASN:CB | 1.80 | 1.11 |
| 1:C:237:CYS:HA | 1:C:306:ASN:HA | 1.29 | 1.11 |
| 1:G:142:VAL:HG21 | 1:G:149:ILE:HG21 | 1.29 | 1.11 |
| 1:G:153:ILE:HD11 | 1:G:378:ILE:HG22 | 1.21 | 1.11 |
| 1:G:219:VAL:HG22 | 1:G:273:GLN:CD | 1.71 | 1.11 |
| 1:H:174:ILE:HG22 | 1:H:362:VAL:CG2 | 1.78 | 1.11 |
| 1:H:182:VAL:HB | 1:H:188:VAL:HG21 | 1.27 | 1.11 |
| 1:L:105:ARG:CD | 1:L:106:LYS:HG2 | 1.81 | 1.11 |
| 1:L:251:VAL:HG13 | 1:L:276:LEU:HD22 | 1.24 | 1.11 |
| 1:N:138:ILE:HG22 | 1:N:138:ILE:O | 1.35 | 1.11 |
| 1:N:235:LEU:HD21 | 1:N:307:ILE:CA | 1.79 | 1.11 |
| 1:B:38:THR:HG23 | 1:B:46:LYS:HE2 | 1.29 | 1.11 |
| 1:B:165:LYS:HE3 | 1:B:165:LYS:HA | 1.19 | 1.11 |
| 1:B:276:LEU:HD23 | 1:B:281:ILE:HD12 | 1.28 | 1.11 |
| 1:C:233:ALA:HB1 | 1:C:310:LEU:HD11 | 1.19 | 1.11 |
| 1:D:339:HIS:CE1 | 1:D:341:LYS:HD2 | 1.85 | 1.11 |
| 1:F:113:GLN:HA | 1:F:113:GLN:NE2 | 1.53 | 1.11 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:152:LYS:HG2 | 1:G:465:GLY:HA3 | 1.21 | 1.11 |
| 1:H:154:ALA:HB1 | 1:H:174:ILE:CD1 | 1.79 | 1.11 |
| 1:H:192:LEU:CD1 | 1:H:342:ALA:HB2 | 1.80 | 1.11 |
| 1:L:38:THR:HG21 | 1:L:46:LYS:HE2 | 1.29 | 1.11 |
| 1:O:223:MET:HG3 | 1:O:277:ALA:HB2 | 1.31 | 1.11 |
| 1:O:235:LEU:HG | 1:O:307:ILE:CB | 1.81 | 1.11 |
| 1:O:307:ILE:O | 1:O:307:ILE:HG13 | 1.49 | 1.11 |
| 1:A:403:ARG:HH11 | 1:A:403:ARG:CG | 1.51 | 1.11 |
| 1:A:437:VAL:HG22 | 1:A:458:VAL:HG13 | 1.33 | 1.11 |
| 1:H:174:ILE:HG22 | 1:H:362:VAL:HG23 | 1.25 | 1.11 |
| 1:H:255:LYS:O | 1:H:255:LYS:HG3 | 1.32 | 1.11 |
| 1:N:68:MET:CG | 1:O:8:LEU:HD22 | 1.81 | 1.11 |
| 1:O:341:LYS:CB | 1:O:341:LYS:NZ | 1.93 | 1.11 |
| 1:A:14:ARG:HH22 | 1:B:34:THR:HA | 0.96 | 1.11 |
| 1:A:237:CYS:HA | 1:A:306:ASN:HA | 1.23 | 1.11 |
| 1:F:341:LYS:NZ | 1:F:341:LYS:HB3 | 1.64 | 1.11 |
| 1:G:379:VAL:HB | 1:G:470:LEU:CD2 | 1.81 | 1.11 |
| 1:J:437:VAL:HG22 | 1:J:458:VAL:HG23 | 1.18 | 1.11 |
| 1:K:233:ALA:HA | 1:K:315:LEU:HG | 1.27 | 1.11 |
| 1:K:276:LEU:HD12 | 1:K:281:ILE:CG2 | 1.79 | 1.11 |
| 1:L:25:ILE:HD13 | 1:L:108:GLU:HG3 | 1.23 | 1.11 |
| 1:L:158:ILE:HG12 | 1:L:361:ALA:HB1 | 1.18 | 1.11 |
| 1:M:216:LYS:HG3 | 1:M:287:VAL:HG22 | 1.32 | 1.11 |
| 1:M:405:GLN:HB3 | 1:M:406:LEU:HD22 | 1.16 | 1.11 |
| 1:O:304:ILE:CD1 | 1:O:309:ASP:HB3 | 1.80 | 1.11 |
| 1:A:100:ALA:HB1 | 1:A:484:THR:CG2 | 1.79 | 1.10 |
| 1:D:14:ARG:HH22 | 1:E:34:THR:HA | 1.15 | 1.10 |
| 1:E:154:ALA:HB1 | 1:E:174:ILE:HD11 | 1.15 | 1.10 |
| 1:F:251:VAL:HG11 | 1:F:276:LEU:HD22 | 1.24 | 1.10 |
| 1:H:219:VAL:HG21 | 1:H:268:ILE:HD12 | 1.16 | 1.10 |
| 1:K:14:ARG:HD2 | 1:K:494:ILE:HG12 | 1.30 | 1.10 |
| 1:I:368:VAL:HB | 1:I:469:PRO:HB3 | 1.11 | 1.10 |
| 1:L:248:LYS:HD2 | 1:L:275:TYR:CZ | 1.85 | 1.10 |
| 1:M:235:LEU:HD21 | 1:M:310:LEU:HB2 | 1.22 | 1.10 |
| 1:O:304:ILE:HD12 | 1:O:309:ASP:HB3 | 1.10 | 1.10 |
| 1:A:195:ILE:HB | 1:A:359:ALA:HB1 | 1.22 | 1.10 |
| 1:A:433:ILE:CG2 | 1:A:451:LEU:HD23 | 1.80 | 1.10 |
| 1:D:12:MET:HG3 | 1:D:494:ILE:HG22 | 1.13 | 1.10 |
| 1:F:154:ALA:HB1 | 1:F:174:ILE:HD11 | 1.24 | 1.10 |
| 1:G:42:LYS:HG3 | 1:G:425:ASN:C | 1.69 | 1.10 |
| 1:H:27:ALA:HB2 | 1:H:72:HIS:HD2 | 1.17 | 1.10 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:170:LEU:HD21 | 1:I:358:VAL:HG22 | 1.22 | 1.10 |
| 1:I:384:SER:HB3 | 1:I:441:HIS:HE1 | 0.98 | 1.10 |
| 1:I:469:PRO:HG2 | 1:I:472:VAL:HG11 | 1.32 | 1.10 |
| 1:J:339:HIS:CE1 | 1:J:341:LYS:HD2 | 1.87 | 1.10 |
| 1:K:42:LYS:HE2 | 1:K:426:ALA:HA | 1.11 | 1.10 |
| 1:K:70:VAL:HG11 | 1:K:76:LYS:HG3 | 1.20 | 1.10 |
| 1:N:235:LEU:HG | 1:N:310:LEU:HD22 | 1.15 | 1.10 |
| 1:P:84:THR:O | 1:P:84:THR:HG22 | 1.32 | 1.10 |
| 1:A:42:LYS:CE | 1:A:426:ALA:HA | 1.80 | 1.10 |
| 1:C:119:ILE:HG23 | 1:C:403:ARG:HB3 | 1.30 | 1.10 |
| 1:C:403:ARG:HG3 | 1:C:403:ARG:HH11 | 1.15 | 1.10 |
| 1:D:154:ALA:CB | 1:D:174:ILE:HD11 | 1.81 | 1.10 |
| 1:F:232:ILE:HG12 | 1:F:299:THR:HG21 | 1.31 | 1.10 |
| 1:G:391:MET:HE1 | 1:G:438:ARG:CA | 1.81 | 1.10 |
| 1:J:119:ILE:HG21 | 1:J:403:ARG:HB2 | 1.32 | 1.10 |
| 1:J:391:MET:CE | 1:J:438:ARG:HB3 | 1.80 | 1.10 |
| 1:L:68:MET:HB3 | 1:M:8:LEU:CB | 1.81 | 1.10 |
| 1:N:119:ILE:HD12 | 1:N:403:ARG:HB2 | 1.10 | 1.10 |
| 1:N:251:VAL:CG1 | 1:N:276:LEU:HG | 1.79 | 1.10 |
| 1:O:341:LYS:NZ | 1:O:341:LYS:HB3 | 1.23 | 1.10 |
| 1:P:420:ARG:HH11 | 1:P:420:ARG:CG | 1.64 | 1.10 |
| 1:B:237:CYS:HB3 | 1:B:306:ASN:CA | 1.81 | 1.10 |
| 1:C:276:LEU:HD12 | 1:C:281:ILE:HG21 | 1.16 | 1.10 |
| 1:D:12:MET:CE | 1:D:494:ILE:HB | 1.79 | 1.10 |
| 1:H:248:LYS:HD2 | 1:H:275:TYR:CZ | 1.86 | 1.10 |
| 1:H:276:LEU:HD23 | 1:H:281:ILE:HD12 | 1.17 | 1.10 |
| 1:I:235:LEU:CD2 | 1:I:310:LEU:HD13 | 1.81 | 1.10 |
| 1:J:116:HIS:ND1 | 1:J:117:PRO:HD2 | 1.66 | 1.10 |
| 1:K:130:LYS:HZ3 | 1:K:134:LEU:HD11 | 0.93 | 1.10 |
| 1:L:134:LEU:HD13 | 1:L:392:LYS:HD2 | 1.16 | 1.10 |
| 1:N:142:VAL:HG11 | 1:N:149:ILE:CD1 | 1.82 | 1.10 |
| 1:A:239:ILE:HG13 | 1:A:307:ILE:CG1 | 1.82 | 1.09 |
| 1:B:166:ALA:HB2 | 1:B:203:ILE:HG22 | 1.14 | 1.09 |
| 1:C:255:LYS:HE3 | 1:C:279:GLU:HG2 | 1.13 | 1.09 |
| 1:F:368:VAL:HB | 1:F:469:PRO:HG2 | 1.21 | 1.09 |
| 1:H:42:LYS:HB3 | 1:H:425:ASN:HB2 | 1.18 | 1.09 |
| 1:H:113:GLN:HA | 1:H:113:GLN:NE2 | 1.63 | 1.09 |
| 1:K:265:GLN:NE2 | 1:K:289:LYS:HD2 | 1.67 | 1.09 |
| 1:N:235:LEU:HD11 | 1:N:307:ILE:CB | 1.82 | 1.09 |
| 1:A:405:GLN:HB3 | 1:A:406:LEU:HD12 | 1.12 | 1.09 |
| 1:K:239:ILE:HB | 1:K:307:ILE:CG1 | 1.81 | 1.09 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:433:ILE:CG2 | 1:M:451:LEU:HD23 | 1.81 | 1.09 |
| 1:P:448:CYS:HB2 | 1:P:460:ASP:HA | 1.29 | 1.09 |
| 1:B:488:LEU:O | 1:B:488:LEU:HD23 | 1.43 | 1.09 |
| 1:B:488:LEU:HD22 | 1:B:488:LEU:C | 1.73 | 1.09 |
| 1:C:235:LEU:HD11 | 1:C:307:ILE:CB | 1.82 | 1.09 |
| 1:D:89:VAL:HG22 | 1:D:89:VAL:O | 1.50 | 1.09 |
| 1:K:113:GLN:NE2 | 1:K:113:GLN:HA | 1.24 | 1.09 |
| 1:K:461:MET:HA | 1:K:461:MET:HE2 | 1.19 | 1.09 |
| 1:L:251:VAL:CG1 | 1:L:276:LEU:HD22 | 1.83 | 1.09 |
| 1:M:276:LEU:CD1 | 1:M:281:ILE:HG21 | 1.83 | 1.09 |
| 1:N:150:LEU:HD23 | 1:N:175:VAL:HG13 | 1.32 | 1.09 |
| 1:P:48:LEU:HG | 1:P:68:MET:HE3 | 1.18 | 1.09 |
| 1:P:304:ILE:HD12 | 1:P:309:ASP:HB3 | 1.26 | 1.09 |
| 1:C:34:THR:HG22 | 1:C:35:VAL:HG13 | 1.27 | 1.09 |
| 1:C:340:PRO:HG2 | 1:C:340:PRO:O | 1.46 | 1.09 |
| 1:G:150:LEU:HD23 | 1:G:175:VAL:HG13 | 1.11 | 1.09 |
| 1:H:152:LYS:HG2 | 1:H:465:GLY:HA2 | 1.10 | 1.09 |
| 1:H:235:LEU:CD1 | 1:H:307:ILE:HD13 | 1.81 | 1.09 |
| 1:H:239:ILE:HD12 | 1:H:307:ILE:HG12 | 1.31 | 1.09 |
| 1:I:222:GLN:CB | 1:I:277:ALA:HB1 | 1.81 | 1.09 |
| 1:I:235:LEU:HD13 | 1:I:307:ILE:HG22 | 1.12 | 1.09 |
| 1:J:100:ALA:HB1 | 1:J:484:THR:HG21 | 1.30 | 1.09 |
| 1:J:134:LEU:HD22 | 1:J:392:LYS:CD | 1.81 | 1.09 |
| 1:L:142:VAL:CG2 | 1:L:149:ILE:HD13 | 1.83 | 1.09 |
| 1:M:130:LYS:CE | 1:M:134:LEU:HD11 | 1.82 | 1.09 |
| 1:P:368:VAL:HB | 1:P:469:PRO:HG2 | 1.26 | 1.09 |
| 1:C:42:LYS:HB2 | 1:C:425:ASN:HB3 | 1.10 | 1.09 |
| 1:D:158:ILE:HD12 | 1:D:167:LYS:HA | 1.20 | 1.09 |
| 1:E:12:MET:HG2 | 1:E:494:ILE:HG22 | 1.32 | 1.09 |
| 1:E:130:LYS:HD2 | 1:E:393:LEU:HD21 | 1.27 | 1.09 |
| 1:E:156:THR:HG21 | 1:E:468:GLU:HB3 | 1.33 | 1.09 |
| 1:E:235:LEU:HG | 1:E:307:ILE:HB | 1.20 | 1.09 |
| 1:G:68:MET:HA | 1:G:68:MET:HE2 | 1.35 | 1.09 |
| 1:G:166:ALA:HB2 | 1:G:203:ILE:CG2 | 1.83 | 1.09 |
| 1:J:420:ARG:HH11 | 1:J:420:ARG:HG2 | 1.08 | 1.09 |
| 1:K:69:SER:HB3 | 1:L:9:PRO:HB3 | 1.18 | 1.09 |
| 1:K:469:PRO:HD2 | 1:K:472:VAL:HG21 | 1.34 | 1.09 |
| 1:L:391:MET:HE1 | 1:L:438:ARG:CA | 1.83 | 1.09 |
| 1:N:345:MET:CE | 1:N:362:VAL:HG21 | 1.83 | 1.09 |
| 1:A:235:LEU:CD1 | 1:A:307:ILE:HD13 | 1.82 | 1.08 |
| 1:F:100:ALA:HB1 | 1:F:484:THR:HG21 | 1.14 | 1.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:119:ILE:CG1 | 1:F:403:ARG:HD3 | 1.82 | 1.08 |
| 1:H:73:PRO:HA | 1:H:76:LYS:HD2 | 1.33 | 1.08 |
| 1:I:42:LYS:HB3 | 1:I:425:ASN:HB3 | 1.11 | 1.08 |
| 1:J:154:ALA:HB1 | 1:J:174:ILE:HD11 | 1.32 | 1.08 |
| 1:J:235:LEU:HD11 | 1:J:310:LEU:HD22 | 1.29 | 1.08 |
| 1:K:174:ILE:HG22 | 1:K:362:VAL:CG2 | 1.83 | 1.08 |
| 1:K:239:ILE:CB | 1:K:307:ILE:HG12 | 1.82 | 1.08 |
| 1:K:384:SER:HB2 | 1:K:441:HIS:CE1 | 1.88 | 1.08 |
| 1:B:14:ARG:HH12 | 1:C:34:THR:HA | 1.16 | 1.08 |
| 1:D:142:VAL:HG13 | 1:D:149:ILE:HD13 | 1.31 | 1.08 |
| 1:F:130:LYS:HE3 | 1:F:134:LEU:HD11 | 1.17 | 1.08 |
| 1:F:381:GLY:HA3 | 1:F:461:MET:HG2 | 1.12 | 1.08 |
| 1:G:232:ILE:HG12 | 1:G:299:THR:HG21 | 1.19 | 1.08 |
| 1:H:119:ILE:HG21 | 1:H:403:ARG:CB | 1.83 | 1.08 |
| 1:H:134:LEU:HD22 | 1:H:392:LYS:HD2 | 1.19 | 1.08 |
| 1:H:165:LYS:NZ | 1:H:165:LYS:CA | 2.14 | 1.08 |
| 1:I:139:ALA:HB2 | 1:I:377:ARG:HD3 | 1.34 | 1.08 |
| 1:I:158:ILE:HD13 | 1:I:170:LEU:HB3 | 1.34 | 1.08 |
| 1:J:158:ILE:HG12 | 1:J:361:ALA:HB1 | 1.26 | 1.08 |
| 1:J:197:LYS:HB3 | 1:J:355:ILE:HG21 | 1.31 | 1.08 |
| 1:M:368:VAL:HB | 1:M:469:PRO:CG | 1.82 | 1.08 |
| 1:N:49:VAL:HG22 | 1:N:55:VAL:HG12 | 1.33 | 1.08 |
| 1:N:135:LEU:HD23 | 1:N:138:ILE:CD1 | 1.82 | 1.08 |
| 1:P:48:LEU:HG | 1:P:68:MET:CE | 1.81 | 1.08 |
| 1:B:78:LEU:HD12 | 1:B:487:LEU:HD21 | 1.28 | 1.08 |
| 1:C:235:LEU:HD11 | 1:C:307:ILE:CA | 1.83 | 1.08 |
| 1:D:142:VAL:HG11 | 1:D:149:ILE:HG21 | 1.33 | 1.08 |
| 1:G:39:LEU:HD22 | 1:G:40:GLY:H | 1.09 | 1.08 |
| 1:I:461:MET:HA | 1:I:461:MET:HE1 | 1.23 | 1.08 |
| 1:J:235:LEU:HD13 | 1:J:307:ILE:CG2 | 1.82 | 1.08 |
| 1:J:347:ILE:HG23 | 1:J:355:ILE:HG23 | 1.26 | 1.08 |
| 1:L:38:THR:CG2 | 1:L:46:LYS:HE2 | 1.83 | 1.08 |
| 1:L:68:MET:HB3 | 1:M:8:LEU:HB3 | 1.09 | 1.08 |
| 1:M:34:THR:HG22 | 1:M:35:VAL:HG22 | 1.16 | 1.08 |
| 1:N:174:ILE:CG2 | 1:N:362:VAL:HG23 | 1.81 | 1.08 |
| 1:A:14:ARG:NH2 | 1:B:34:THR:HA | 1.66 | 1.08 |
| 1:B:119:ILE:HG13 | 1:B:403:ARG:CD | 1.84 | 1.08 |
| 1:C:145:GLN:HG2 | 1:C:145:GLN:O | 1.41 | 1.08 |
| 1:F:9:PRO:HD3 | 1:G:68:MET:HA | 1.34 | 1.08 |
| 1:H:142:VAL:HG11 | 1:H:149:ILE:HG21 | 1.32 | 1.08 |
| 1:H:469:PRO:HG2 | 1:H:472:VAL:CG2 | 1.82 | 1.08 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:14:ARG:HD2 | 1:I:494:ILE:HG12 | 1.09 | 1.08 |
| 1:I:276:LEU:HD12 | 1:I:281:ILE:HG21 | 1.17 | 1.08 |
| 1:J:34:THR:HG22 | 1:J:35:VAL:HG12 | 1.10 | 1.08 |
| 1:J:276:LEU:HD12 | 1:J:281:ILE:HD12 | 1.29 | 1.08 |
| 1:K:119:ILE:HG21 | 1:K:403:ARG:HB2 | 1.15 | 1.08 |
| 1:L:406:LEU:H | 1:L:406:LEU:HD12 | 1.14 | 1.08 |
| 1:M:8:LEU:HB2 | 1:M:12:MET:HE2 | 1.33 | 1.08 |
| 1:M:255:LYS:HD3 | 1:M:279:GLU:CG | 1.81 | 1.08 |
| 1:P:134:LEU:HD22 | 1:P:392:LYS:HE3 | 1.34 | 1.08 |
| 1:C:44:MET:HA | 1:C:44:MET:HE3 | 1.25 | 1.08 |
| 1:C:239:ILE:HD12 | 1:C:307:ILE:CD1 | 1.82 | 1.08 |
| 1:G:193:ILE:HG23 | 1:G:343:VAL:CG1 | 1.81 | 1.08 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:HB2 | 1.30 | 1.08 |
| 1:H:265:GLN:HG2 | 1:H:266:LYS:HZ2 | 1.19 | 1.08 |
| 1:I:150:LEU:HD23 | 1:I:175:VAL:HG13 | 1.35 | 1.08 |
| 1:I:235:LEU:HD21 | 1:I:310:LEU:CB | 1.84 | 1.08 |
| 1:K:132:GLN:HE21 | 1:K:132:GLN:HA | 1.12 | 1.08 |
| 1:C:233:ALA:HB1 | 1:C:310:LEU:CD1 | 1.82 | 1.07 |
| 1:C:339:HIS:CE1 | 1:C:341:LYS:HD2 | 1.88 | 1.07 |
| 1:D:99:VAL:CG1 | 1:D:418:ILE:HD11 | 1.83 | 1.07 |
| 1:D:276:LEU:HD12 | 1:D:281:ILE:HG21 | 1.30 | 1.07 |
| 1:G:153:ILE:HD11 | 1:G:378:ILE:CG2 | 1.83 | 1.07 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:HG13 | 1.32 | 1.07 |
| 1:J:134:LEU:HD22 | 1:J:392:LYS:HD2 | 1.16 | 1.07 |
| 1:K:100:ALA:CB | 1:K:484:THR:HG21 | 1.83 | 1.07 |
| 1:K:216:LYS:HG3 | 1:K:287:VAL:HG22 | 1.13 | 1.07 |
| 1:K:233:ALA:HB1 | 1:K:310:LEU:HD21 | 1.19 | 1.07 |
| 1:L:233:ALA:HB1 | 1:L:310:LEU:HD11 | 1.14 | 1.07 |
| 1:M:173:ILE:HD13 | 1:M:206:THR:HG22 | 1.29 | 1.07 |
| 1:M:195:ILE:HD13 | 1:M:195:ILE:H | 1.14 | 1.07 |
| 1:M:223:MET:HE3 | 1:M:276:LEU:CB | 1.84 | 1.07 |
| 1:N:174:ILE:HG22 | 1:N:362:VAL:CG2 | 1.82 | 1.07 |
| 1:O:34:THR:HG22 | 1:O:35:VAL:HG13 | 1.34 | 1.07 |
| 1:O:135:LEU:HD23 | 1:O:138:ILE:HD11 | 1.30 | 1.07 |
| 1:A:195:ILE:HB | 1:A:359:ALA:CB | 1.84 | 1.07 |
| 1:B:100:ALA:HB1 | 1:B:484:THR:HG21 | 1.28 | 1.07 |
| 1:E:380:SER:HB2 | 1:E:384:SER:HB2 | 1.22 | 1.07 |
| 1:I:234:LEU:HB3 | 1:I:292:MET:CE | 1.83 | 1.07 |
| 1:J:248:LYS:HD2 | 1:J:275:TYR:CE2 | 1.89 | 1.07 |
| 1:M:130:LYS:HE2 | 1:M:134:LEU:CD1 | 1.84 | 1.07 |
| 1:N:68:MET:HG3 | 1:O:8:LEU:HD22 | 1.27 | 1.07 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:39:LEU:HG | 1:O:40:GLY:H | 1.10 | 1.07 |
| 1:O:42:LYS:HB3 | 1:O:425:ASN:HB2 | 1.14 | 1.07 |
| 1:A:96:ALA:HA | 1:A:480:ALA:CB | 1.83 | 1.07 |
| 1:E:391:MET:HE3 | 1:E:438:ARG:CB | 1.85 | 1.07 |
| 1:H:237:CYS:HB2 | 1:H:306:ASN:HB2 | 1.32 | 1.07 |
| 1:I:34:THR:HG22 | 1:I:35:VAL:HG12 | 1.10 | 1.07 |
| 1:I:235:LEU:CD2 | 1:I:310:LEU:HB2 | 1.82 | 1.07 |
| 1:M:368:VAL:HB | 1:M:469:PRO:HG3 | 1.33 | 1.07 |
| 1:O:219:VAL:CG2 | 1:O:268:ILE:HD12 | 1.82 | 1.07 |
| 1:O:276:LEU:HD12 | 1:O:281:ILE:HD12 | 1.34 | 1.07 |
| 1:A:89:VAL:HG21 | 1:A:368:VAL:CG1 | 1.85 | 1.07 |
| 1:B:38:THR:CG2 | 1:B:46:LYS:HE2 | 1.84 | 1.07 |
| 1:D:77:MET:HB2 | 1:D:487:LEU:HD21 | 1.34 | 1.07 |
| 1:D:235:LEU:HD21 | 1:D:310:LEU:CG | 1.83 | 1.07 |
| 1:D:254:ILE:HG12 | 1:D:310:LEU:HD12 | 1.36 | 1.07 |
| 1:D:448:CYS:HB2 | 1:D:460:ASP:HA | 1.26 | 1.07 |
| 1:E:237:CYS:CA | 1:E:306:ASN:HA | 1.83 | 1.07 |
| 1:E:473:LYS:HZ2 | 1:E:473:LYS:HB2 | 1.19 | 1.07 |
| 1:F:158:ILE:HG22 | 1:F:158:ILE:O | 1.54 | 1.07 |
| 1:F:345:MET:CE | 1:F:362:VAL:HG11 | 1.83 | 1.07 |
| 1:K:237:CYS:HA | 1:K:306:ASN:CA | 1.85 | 1.07 |
| 1:A:239:ILE:HG21 | 1:A:268:ILE:HG23 | 1.35 | 1.07 |
| 1:A:420:ARG:HH11 | 1:A:420:ARG:HG2 | 1.08 | 1.07 |
| 1:C:154:ALA:HB1 | 1:C:174:ILE:HD11 | 1.18 | 1.07 |
| 1:F:113:GLN:HA | 1:F:113:GLN:HE21 | 1.02 | 1.07 |
| 1:G:174:ILE:HG22 | 1:G:362:VAL:HB | 1.37 | 1.07 |
| 1:G:247:LEU:HD22 | 1:G:272:ALA:HB2 | 1.26 | 1.07 |
| 1:I:123:GLY:HA3 | 1:I:407:ALA:CB | 1.84 | 1.07 |
| 1:I:239:ILE:CD1 | 1:I:307:ILE:HG12 | 1.83 | 1.07 |
| 1:I:379:VAL:HG22 | 1:I:380:SER:HA | 1.37 | 1.07 |
| 1:I:384:SER:HB3 | 1:I:441:HIS:CE1 | 1.89 | 1.07 |
| 1:J:178:VAL:CG2 | 1:J:366:VAL:HG13 | 1.82 | 1.07 |
| 1:J:391:MET:HE1 | 1:J:438:ARG:HB3 | 1.11 | 1.07 |
| 1:K:236:ASN:HA | 1:K:265:GLN:HB2 | 1.33 | 1.07 |
| 1:L:222:GLN:HB2 | 1:L:277:ALA:HB1 | 1.33 | 1.07 |
| 1:M:197:LYS:HA | 1:M:355:ILE:HG21 | 1.29 | 1.07 |
| 1:A:88:GLU:CG | 1:A:475:GLN:HG2 | 1.85 | 1.06 |
| 1:B:174:ILE:HG22 | 1:B:362:VAL:CG1 | 1.85 | 1.06 |
| 1:C:377:ARG:HD3 | 1:C:377:ARG:H | 1.16 | 1.06 |
| 1:E:403:ARG:HB3 | 1:E:406:LEU:CD1 | 1.85 | 1.06 |
| 1:F:48:LEU:HG | 1:F:68:MET:HE1 | 1.35 | 1.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:235:LEU:HG | 1:F:307:ILE:HA | 1.34 | 1.06 |
| 1:F:237:CYS:HA | 1:F:306:ASN:HA | 1.07 | 1.06 |
| 1:G:158:ILE:HG12 | 1:G:361:ALA:HB1 | 1.33 | 1.06 |
| 1:H:368:VAL:HB | 1:H:469:PRO:HG3 | 1.33 | 1.06 |
| 1:I:34:THR:CG2 | 1:I:35:VAL:HG12 | 1.84 | 1.06 |
| 1:I:235:LEU:HD23 | 1:I:310:LEU:HD13 | 1.11 | 1.06 |
| 1:P:420:ARG:HH11 | 1:P:420:ARG:HG2 | 0.92 | 1.06 |
| 1:C:276:LEU:HD12 | 1:C:281:ILE:HD12 | 1.24 | 1.06 |
| 1:E:42:LYS:HG3 | 1:E:425:ASN:HB2 | 1.31 | 1.06 |
| 1:G:150:LEU:HD23 | 1:G:175:VAL:CG1 | 1.86 | 1.06 |
| 1:K:232:ILE:HD13 | 1:K:299:THR:HG21 | 1.32 | 1.06 |
| 1:L:103:LEU:HD21 | 1:L:411:PHE:CE2 | 1.88 | 1.06 |
| 1:M:123:GLY:HA3 | 1:M:407:ALA:CB | 1.85 | 1.06 |
| 1:M:255:LYS:HD3 | 1:M:279:GLU:HG2 | 1.30 | 1.06 |
| 1:P:121:VAL:HG11 | 1:P:489:ARG:HD2 | 1.32 | 1.06 |
| 1:A:235:LEU:HD12 | 1:A:307:ILE:HD13 | 1.32 | 1.06 |
| 1:B:488:LEU:O | 1:B:488:LEU:HD22 | 1.32 | 1.06 |
| 1:F:9:PRO:HD3 | 1:G:68:MET:CA | 1.85 | 1.06 |
| 1:I:124:TYR:HE1 | 1:I:407:ALA:HA | 0.99 | 1.06 |
| 1:I:195:ILE:HB | 1:I:359:ALA:CB | 1.85 | 1.06 |
| 1:I:339:HIS:CE1 | 1:I:341:LYS:HD2 | 1.90 | 1.06 |
| 1:I:368:VAL:HB | 1:I:469:PRO:CB | 1.85 | 1.06 |
| 1:K:42:LYS:HB3 | 1:K:425:ASN:HB3 | 1.35 | 1.06 |
| 1:K:174:ILE:HG22 | 1:K:362:VAL:HG23 | 1.07 | 1.06 |
| 1:N:276:LEU:HD23 | 1:N:281:ILE:HD12 | 1.15 | 1.06 |
| 1:A:448:CYS:HB2 | 1:A:460:ASP:HA | 1.12 | 1.06 |
| 1:C:134:LEU:HB3 | 1:C:392:LYS:HZ2 | 1.19 | 1.06 |
| 1:D:235:LEU:HD21 | 1:D:310:LEU:HG | 1.10 | 1.06 |
| 1:E:237:CYS:HA | 1:E:306:ASN:CA | 1.85 | 1.06 |
| 1:K:473:LYS:HB2 | 1:K:473:LYS:HZ2 | 1.18 | 1.06 |
| 1:L:437:VAL:HG21 | 1:L:451:LEU:HD11 | 1.14 | 1.06 |
| 1:M:239:ILE:HB | 1:M:307:ILE:HG12 | 1.33 | 1.06 |
| 1:P:208:LEU:CD1 | 1:P:210:LYS:HE3 | 1.85 | 1.06 |
| 1:A:150:LEU:HD23 | 1:A:175:VAL:CG1 | 1.83 | 1.06 |
| 1:A:197:LYS:H | 1:A:197:LYS:HD2 | 0.91 | 1.06 |
| 1:A:238:ALA:H | 1:A:266:LYS:HB2 | 1.15 | 1.06 |
| 1:A:239:ILE:HG13 | 1:A:307:ILE:HG12 | 1.06 | 1.06 |
| 1:B:8:LEU:HD22 | 1:C:68:MET:HG3 | 1.36 | 1.06 |
| 1:D:44:MET:HE2 | 1:D:44:MET:CA | 1.86 | 1.06 |
| 1:I:232:ILE:HG13 | 1:I:261:VAL:HG11 | 1.38 | 1.06 |
| 1:I:236:ASN:OD1 | 1:I:236:ASN:O | 1.74 | 1.06 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:237:CYS:HA | 1:J:306:ASN:HA | 1.32 | 1.06 |
| 1:J:433:ILE:HG21 | 1:J:451:LEU:HD23 | 1.31 | 1.06 |
| 1:M:8:LEU:HD22 | 1:M:12:MET:HE1 | 1.13 | 1.06 |
| 1:M:377:ARG:HH11 | 1:M:470:LEU:HD12 | 1.19 | 1.06 |
| 1:O:469:PRO:HD2 | 1:O:472:VAL:HG11 | 1.08 | 1.06 |
| 1:P:345:MET:HE2 | 1:P:362:VAL:HG11 | 1.36 | 1.06 |
| 1:H:119:ILE:HG13 | 1:H:403:ARG:HD3 | 1.29 | 1.05 |
| 1:H:169:LYS:HG2 | 1:H:204:ASP:HB3 | 1.36 | 1.05 |
| 1:I:142:VAL:HG13 | 1:I:149:ILE:HD13 | 1.34 | 1.05 |
| 1:I:237:CYS:HA | 1:I:306:ASN:CA | 1.86 | 1.05 |
| 1:K:235:LEU:HD23 | 1:K:304:ILE:HD11 | 1.34 | 1.05 |
| 1:L:158:ILE:HG22 | 1:L:158:ILE:O | 1.55 | 1.05 |
| 1:C:219:VAL:HG23 | 1:C:285:ARG:CB | 1.86 | 1.05 |
| 1:C:233:ALA:HA | 1:C:315:LEU:CD2 | 1.86 | 1.05 |
| 1:E:234:LEU:H | 1:E:315:LEU:HD22 | 1.19 | 1.05 |
| 1:H:233:ALA:HA | 1:H:315:LEU:CG | 1.87 | 1.05 |
| 1:H:469:PRO:HG2 | 1:H:472:VAL:HG21 | 1.37 | 1.05 |
| 1:N:68:MET:HB3 | 1:O:8:LEU:HA | 1.07 | 1.05 |
| 1:N:138:ILE:O | 1:N:138:ILE:CG2 | 2.04 | 1.05 |
| 1:D:403:ARG:HD2 | 1:M:431:ILE:HD13 | 1.08 | 1.05 |
| 1:E:345:MET:HE1 | 1:E:362:VAL:HG11 | 1.33 | 1.05 |
| 1:E:403:ARG:HH11 | 1:E:403:ARG:CG | 1.64 | 1.05 |
| 1:H:192:LEU:CD2 | 1:H:297:LYS:HE3 | 1.86 | 1.05 |
| 1:H:368:VAL:CB | 1:H:469:PRO:HG3 | 1.87 | 1.05 |
| 1:J:39:LEU:HG | 1:J:40:GLY:H | 1.14 | 1.05 |
| 1:K:461:MET:CA | 1:K:461:MET:HE2 | 1.80 | 1.05 |
| 1:M:173:ILE:CD1 | 1:M:206:THR:HG22 | 1.84 | 1.05 |
| 1:M:276:LEU:HD12 | 1:M:281:ILE:CG2 | 1.86 | 1.05 |
| 1:N:469:PRO:HG2 | 1:N:472:VAL:HG11 | 1.06 | 1.05 |
| 1:P:44:MET:HA | 1:P:44:MET:HE2 | 1.07 | 1.05 |
| 1:B:89:VAL:CG2 | 1:B:89:VAL:O | 2.03 | 1.05 |
| 1:E:268:ILE:HG21 | 1:E:273:GLN:HG3 | 1.34 | 1.05 |
| 1:F:345:MET:HE1 | 1:F:362:VAL:CG1 | 1.86 | 1.05 |
| 1:G:72:HIS:HA | 1:G:75:ALA:HB3 | 1.37 | 1.05 |
| 1:G:233:ALA:HA | 1:G:315:LEU:CD1 | 1.85 | 1.05 |
| 1:G:368:VAL:HB | 1:G:469:PRO:HG2 | 1.35 | 1.05 |
| 1:H:142:VAL:HG13 | 1:H:149:ILE:CD1 | 1.87 | 1.05 |
| 1:H:377:ARG:HG2 | 1:H:470:LEU:HD23 | 1.36 | 1.05 |
| 1:K:166:ALA:HB2 | 1:K:203:ILE:HG22 | 1.37 | 1.05 |
| 1:N:469:PRO:CG | 1:N:472:VAL:HG11 | 1.87 | 1.05 |
| 1:O:219:VAL:HG21 | 1:O:268:ILE:CD1 | 1.87 | 1.05 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:268:ILE:HB | 1:P:273:GLN:HE21 | 1.08 | 1.05 |
| 1:C:206:THR:HG21 | 1:C:347:ILE:HG22 | 1.39 | 1.05 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:HG13 | 1.34 | 1.05 |
| 1:F:433:ILE:HG22 | 1:F:434:LEU:HD22 | 1.32 | 1.05 |
| 1:G:12:MET:HE1 | 1:H:68:MET:HA | 1.06 | 1.05 |
| 1:I:345:MET:HE1 | 1:I:362:VAL:HG11 | 1.33 | 1.05 |
| 1:J:234:LEU:H | 1:J:315:LEU:HD21 | 1.16 | 1.05 |
| 1:L:235:LEU:HG | 1:L:307:ILE:CA | 1.85 | 1.05 |
| 1:M:420:ARG:CB | 1:M:420:ARG:NH1 | 2.17 | 1.05 |
| 1:N:222:GLN:CB | 1:N:277:ALA:HB1 | 1.87 | 1.05 |
| 1:N:276:LEU:CD2 | 1:N:281:ILE:HG21 | 1.85 | 1.05 |
| 1:D:78:LEU:HD12 | 1:D:487:LEU:CD1 | 1.88 | 1.04 |
| 1:E:433:ILE:CG2 | 1:E:451:LEU:HD23 | 1.86 | 1.04 |
| 1:E:433:ILE:HG21 | 1:E:451:LEU:HD23 | 1.37 | 1.04 |
| 1:F:237:CYS:HA | 1:F:306:ASN:CA | 1.85 | 1.04 |
| 1:H:154:ALA:CB | 1:H:174:ILE:HD11 | 1.87 | 1.04 |
| 1:H:178:VAL:HG11 | 1:H:366:VAL:HG13 | 1.37 | 1.04 |
| 1:J:433:ILE:CG2 | 1:J:451:LEU:HD23 | 1.87 | 1.04 |
| 1:M:150:LEU:HD23 | 1:M:175:VAL:CG1 | 1.86 | 1.04 |
| 1:B:197:LYS:HA | 1:B:355:ILE:HG21 | 1.36 | 1.04 |
| 1:E:235:LEU:CG | 1:E:307:ILE:HB | 1.86 | 1.04 |
| 1:F:142:VAL:HG11 | 1:F:378:ILE:HD13 | 1.39 | 1.04 |
| 1:H:134:LEU:HD22 | 1:H:392:LYS:CD | 1.87 | 1.04 |
| 1:L:276:LEU:HD12 | 1:L:281:ILE:HG21 | 1.06 | 1.04 |
| 1:A:34:THR:HA | 1:H:14:ARG:HH12 | 1.18 | 1.04 |
| 1:B:437:VAL:HG21 | 1:B:451:LEU:CG | 1.87 | 1.04 |
| 1:C:235:LEU:HG | 1:C:310:LEU:HD22 | 1.08 | 1.04 |
| 1:D:400:ILE:HD11 | 1:D:408:VAL:HG21 | 1.31 | 1.04 |
| 1:E:174:ILE:HG22 | 1:E:362:VAL:CG2 | 1.87 | 1.04 |
| 1:I:42:LYS:HE2 | 1:I:426:ALA:CB | 1.87 | 1.04 |
| 1:I:100:ALA:CB | 1:I:484:THR:HG21 | 1.86 | 1.04 |
| 1:M:192:LEU:HD23 | 1:M:342:ALA:HB2 | 1.05 | 1.04 |
| 1:M:235:LEU:HD21 | 1:M:310:LEU:CB | 1.87 | 1.04 |
| 1:O:68:MET:HA | 1:O:68:MET:HE2 | 1.39 | 1.04 |
| 1:O:239:ILE:HD11 | 1:O:307:ILE:HD13 | 1.06 | 1.04 |
| 1:P:199:SER:HB2 | 1:P:327:SER:HB3 | 1.34 | 1.04 |
| 1:A:169:LYS:HG2 | 1:A:204:ASP:HA | 1.38 | 1.04 |
| 1:B:276:LEU:HB3 | 1:B:281:ILE:CG2 | 1.88 | 1.04 |
| 1:H:192:LEU:HD13 | 1:H:342:ALA:CB | 1.85 | 1.04 |
| 1:H:206:THR:HG22 | 1:H:348:ARG:H | 0.91 | 1.04 |
| 1:J:248:LYS:HD2 | 1:J:275:TYR:CZ | 1.92 | 1.04 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:461:MET:CE | 1:K:461:MET:N | 2.19 | 1.04 |
| 1:M:235:LEU:HD12 | 1:M:262:LEU:HD11 | 1.38 | 1.04 |
| 1:P:234:LEU:HB3 | 1:P:292:MET:CE | 1.87 | 1.04 |
| 1:A:62:VAL:HG13 | 1:A:63:THR:H | 1.19 | 1.04 |
| 1:D:197:LYS:HA | 1:D:355:ILE:CG2 | 1.87 | 1.04 |
| 1:G:48:LEU:HB2 | 1:G:56:VAL:HG22 | 1.32 | 1.04 |
| 1:I:234:LEU:HB3 | 1:I:292:MET:HE3 | 1.39 | 1.04 |
| 1:J:158:ILE:HG22 | 1:J:158:ILE:O | 1.53 | 1.04 |
| 1:J:235:LEU:HD21 | 1:J:310:LEU:CB | 1.86 | 1.04 |
| 1:K:100:ALA:HB1 | 1:K:484:THR:CG2 | 1.88 | 1.04 |
| 1:M:52:LEU:HD23 | 1:M:52:LEU:N | 1.71 | 1.04 |
| 1:O:42:LYS:HE3 | 1:P:118:THR:HG21 | 1.39 | 1.04 |
| 1:O:250:MET:HE3 | 1:O:308:LYS:HG2 | 1.37 | 1.04 |
| 1:P:192:LEU:HG | 1:P:342:ALA:HB2 | 1.37 | 1.04 |
| 1:B:9:PRO:O | 1:B:9:PRO:HD2 | 1.55 | 1.03 |
| 1:C:34:THR:CG2 | 1:C:35:VAL:HG13 | 1.86 | 1.03 |
| 1:C:123:GLY:HA3 | 1:C:407:ALA:CB | 1.88 | 1.03 |
| 1:C:130:LYS:HD2 | 1:C:396:TYR:CD1 | 1.93 | 1.03 |
| 1:C:192:LEU:HB3 | 1:C:342:ALA:CB | 1.88 | 1.03 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:HA | 1.87 | 1.03 |
| 1:H:206:THR:HG22 | 1:H:348:ARG:N | 1.71 | 1.03 |
| 1:J:34:THR:CG2 | 1:J:35:VAL:HG12 | 1.88 | 1.03 |
| 1:J:197:LYS:HB3 | 1:J:355:ILE:CG2 | 1.87 | 1.03 |
| 1:J:339:HIS:O | 1:J:339:HIS:CG | 2.03 | 1.03 |
| 1:L:197:LYS:HA | 1:L:355:ILE:HG21 | 1.38 | 1.03 |
| 1:M:220:SER:HB2 | 1:M:273:GLN:HB3 | 1.40 | 1.03 |
| 1:M:239:ILE:HB | 1:M:307:ILE:CG1 | 1.87 | 1.03 |
| 1:N:153:ILE:HD11 | 1:N:378:ILE:HG22 | 1.07 | 1.03 |
| 1:N:403:ARG:HG3 | 1:N:403:ARG:NH1 | 1.01 | 1.03 |
| 1:O:8:LEU:HD13 | 1:O:494:ILE:HG21 | 1.39 | 1.03 |
| 1:O:100:ALA:CB | 1:O:484:THR:HG21 | 1.89 | 1.03 |
| 1:P:85:GLN:HE22 | 1:P:475:GLN:HB3 | 1.17 | 1.03 |
| 1:A:9:PRO:HA | 1:B:69:SER:CA | 1.87 | 1.03 |
| 1:C:262:LEU:HD11 | 1:C:310:LEU:HD21 | 1.04 | 1.03 |
| 1:D:235:LEU:HD13 | 1:D:307:ILE:CA | 1.86 | 1.03 |
| 1:D:469:PRO:HD2 | 1:D:472:VAL:HG21 | 1.39 | 1.03 |
| 1:E:12:MET:CG | 1:E:494:ILE:HG22 | 1.88 | 1.03 |
| 1:I:119:ILE:CG2 | 1:I:403:ARG:HB3 | 1.87 | 1.03 |
| 1:I:158:ILE:HG22 | 1:I:158:ILE:O | 1.59 | 1.03 |
| 1:J:193:ILE:HD12 | 1:J:366:VAL:HG11 | 1.39 | 1.03 |
| 1:N:178:VAL:CG2 | 1:N:366:VAL:HG22 | 1.89 | 1.03 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:276:LEU:HD23 | 1:N:281:ILE:CD1 | 1.88 | 1.03 |
| 1:A:197:LYS:H | 1:A:197:LYS:CD | 1.66 | 1.03 |
| 1:B:119:ILE:HG21 | 1:B:403:ARG:HB2 | 1.38 | 1.03 |
| 1:D:9:PRO:HG2 | 1:E:71:GLU:HB3 | 1.36 | 1.03 |
| 1:F:304:ILE:HD12 | 1:F:309:ASP:HB3 | 1.38 | 1.03 |
| 1:K:308:LYS:HB2 | 1:K:308:LYS:NZ | 1.70 | 1.03 |
| 1:L:12:MET:HE2 | 1:L:494:ILE:HG22 | 1.34 | 1.03 |
| 1:L:48:LEU:HD22 | 1:L:68:MET:HG2 | 1.05 | 1.03 |
| 1:L:48:LEU:HB2 | 1:L:56:VAL:HG21 | 1.38 | 1.03 |
| 1:L:105:ARG:HD3 | 1:L:106:LYS:HG2 | 1.03 | 1.03 |
| 1:L:115:VAL:HG21 | 1:L:403:ARG:HD3 | 1.34 | 1.03 |
| 1:N:30:ILE:HG22 | 1:N:31:ILE:H | 1.21 | 1.03 |
| 1:D:368:VAL:HB | 1:D:469:PRO:CG | 1.89 | 1.03 |
| 1:E:188:VAL:HG21 | 1:E:373:ILE:HD12 | 1.33 | 1.03 |
| 1:E:210:LYS:HG3 | 1:E:343:VAL:HG23 | 1.40 | 1.03 |
| 1:F:233:ALA:CA | 1:F:315:LEU:HD13 | 1.87 | 1.03 |
| 1:F:341:LYS:HB3 | 1:F:341:LYS:HZ3 | 1.16 | 1.03 |
| 1:G:437:VAL:HG21 | 1:G:451:LEU:CD2 | 1.89 | 1.03 |
| 1:H:222:GLN:HB3 | 1:H:277:ALA:HB1 | 1.40 | 1.03 |
| 1:I:166:ALA:HB2 | 1:I:203:ILE:HB | 1.08 | 1.03 |
| 1:J:177:ALA:HB1 | 1:J:343:VAL:HG21 | 1.39 | 1.03 |
| 1:N:276:LEU:HD22 | 1:N:281:ILE:HG21 | 1.39 | 1.03 |
| 1:P:368:VAL:CB | 1:P:469:PRO:HG2 | 1.88 | 1.03 |
| 1:C:262:LEU:CD1 | 1:C:310:LEU:HD21 | 1.88 | 1.03 |
| 1:E:469:PRO:CG | 1:E:472:VAL:HG11 | 1.88 | 1.03 |
| 1:J:106:LYS:HA | 1:J:106:LYS:CE | 1.89 | 1.03 |
| 1:J:235:LEU:HG | 1:J:310:LEU:HD13 | 1.36 | 1.03 |
| 1:K:134:LEU:HB3 | 1:K:392:LYS:HZ1 | 1.19 | 1.03 |
| 1:K:239:ILE:HB | 1:K:307:ILE:HG12 | 1.04 | 1.03 |
| 1:L:100:ALA:HB1 | 1:L:484:THR:HG21 | 1.07 | 1.03 |
| 1:L:119:ILE:HG21 | 1:L:403:ARG:HB2 | 1.41 | 1.03 |
| 1:M:433:ILE:HG21 | 1:M:451:LEU:HD23 | 1.38 | 1.03 |
| 1:O:150:LEU:HD23 | 1:O:175:VAL:CG1 | 1.88 | 1.03 |
| 1:P:276:LEU:CD2 | 1:P:281:ILE:HG21 | 1.89 | 1.03 |
| 1:A:254:ILE:HD11 | 1:A:307:ILE:HD11 | 1.38 | 1.02 |
| 1:C:197:LYS:HB3 | 1:C:355:ILE:CG2 | 1.88 | 1.02 |
| 1:E:42:LYS:CE | 1:E:426:ALA:HB2 | 1.89 | 1.02 |
| 1:E:188:VAL:CG2 | 1:E:373:ILE:HD12 | 1.89 | 1.02 |
| 1:E:223:MET:HE1 | 1:E:283:ALA:HB3 | 1.40 | 1.02 |
| 1:F:42:LYS:HB3 | 1:F:425:ASN:HB3 | 1.39 | 1.02 |
| 1:G:192:LEU:HG | 1:G:342:ALA:HB2 | 1.36 | 1.02 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:234:LEU:CD1 | 1:G:296:ALA:HB2 | 1.89 | 1.02 |
| 1:G:406:LEU:HD11 | 1:P:431:ILE:HD11 | 1.39 | 1.02 |
| 1:H:220:SER:HB3 | 1:H:277:ALA:HB2 | 1.38 | 1.02 |
| 1:H:237:CYS:HB3 | 1:H:238:ALA:HB3 | 1.36 | 1.02 |
| 1:J:119:ILE:CG2 | 1:J:403:ARG:HB2 | 1.87 | 1.02 |
| 1:J:197:LYS:HA | 1:J:347:ILE:HG22 | 1.38 | 1.02 |
| 1:L:235:LEU:HB2 | 1:L:310:LEU:HD22 | 1.42 | 1.02 |
| 1:L:486:MET:CE | 1:L:487:LEU:HD23 | 1.89 | 1.02 |
| 1:M:68:MET:HB3 | 1:N:8:LEU:CB | 1.89 | 1.02 |
| 1:O:44:MET:HA | 1:O:44:MET:HE2 | 1.03 | 1.02 |
| 1:O:235:LEU:HG | 1:O:307:ILE:HB | 1.04 | 1.02 |
| 1:O:469:PRO:HD2 | 1:O:472:VAL:CG1 | 1.88 | 1.02 |
| 1:P:100:ALA:CB | 1:P:484:THR:HG21 | 1.89 | 1.02 |
| 1:A:9:PRO:HD3 | 1:B:68:MET:HG3 | 1.04 | 1.02 |
| 1:F:299:THR:HG23 | 1:F:334:VAL:CG1 | 1.88 | 1.02 |
| 1:F:405:GLN:HB3 | 1:F:406:LEU:HD12 | 1.40 | 1.02 |
| 1:G:42:LYS:CG | 1:G:425:ASN:HB2 | 1.88 | 1.02 |
| 1:G:158:ILE:CG1 | 1:G:361:ALA:HB1 | 1.89 | 1.02 |
| 1:H:35:VAL:HA | 1:H:46:LYS:NZ | 1.75 | 1.02 |
| 1:I:8:LEU:HD23 | 1:I:8:LEU:N | 1.65 | 1.02 |
| 1:J:217:GLU:CG | 1:J:330:SER:HB2 | 1.89 | 1.02 |
| 1:A:30:ILE:CG2 | 1:A:31:ILE:HG12 | 1.88 | 1.02 |
| 1:A:42:LYS:HE2 | 1:A:426:ALA:HA | 1.04 | 1.02 |
| 1:B:70:VAL:HG21 | 1:B:76:LYS:HG2 | 1.37 | 1.02 |
| 1:B:100:ALA:HB1 | 1:B:484:THR:CG2 | 1.89 | 1.02 |
| 1:B:255:LYS:CE | 1:B:279:GLU:HG2 | 1.89 | 1.02 |
| 1:F:165:LYS:HE2 | 1:F:165:LYS:HA | 1.05 | 1.02 |
| 1:I:119:ILE:HG21 | 1:I:403:ARG:HB3 | 1.40 | 1.02 |
| 1:I:377:ARG:HD2 | 1:I:470:LEU:HD11 | 1.38 | 1.02 |
| 1:L:12:MET:HE2 | 1:L:494:ILE:CG2 | 1.90 | 1.02 |
| 1:N:42:LYS:HE3 | 1:N:426:ALA:HA | 1.40 | 1.02 |
| 1:A:219:VAL:HG13 | 1:A:273:GLN:HB3 | 1.40 | 1.02 |
| 1:D:265:GLN:HG2 | 1:D:266:LYS:HZ3 | 1.22 | 1.02 |
| 1:E:469:PRO:HG2 | 1:E:472:VAL:CG1 | 1.88 | 1.02 |
| 1:G:158:ILE:HG22 | 1:G:158:ILE:O | 1.52 | 1.02 |
| 1:J:82:ALA:HB1 | 1:J:93:THR:CG2 | 1.90 | 1.02 |
| 1:L:12:MET:CE | 1:L:494:ILE:HG22 | 1.88 | 1.02 |
| 1:O:42:LYS:HB3 | 1:O:425:ASN:CB | 1.89 | 1.02 |
| 1:P:223:MET:CE | 1:P:273:GLN:HB3 | 1.89 | 1.02 |
| 1:A:197:LYS:HD2 | 1:A:197:LYS:N | 1.63 | 1.02 |
| 1:E:9:PRO:HA | 1:F:69:SER:CB | 1.89 | 1.02 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:391:MET:HE1 | 1:G:438:ARG:HA | 1.37 | 1.02 |
| 1:I:437:VAL:HG21 | 1:I:451:LEU:CD1 | 1.89 | 1.02 |
| 1:K:461:MET:N | 1:K:461:MET:HE3 | 1.75 | 1.02 |
| 1:L:42:LYS:HE3 | 1:L:426:ALA:HB2 | 1.40 | 1.02 |
| 1:O:31:ILE:HD13 | 1:O:31:ILE:H | 1.20 | 1.02 |
| 1:O:237:CYS:CB | 1:O:306:ASN:HA | 1.87 | 1.02 |
| 1:B:122:LYS:HG2 | 1:B:125:GLN:HE22 | 1.22 | 1.01 |
| 1:B:262:LEU:HD11 | 1:B:310:LEU:HD13 | 1.42 | 1.01 |
| 1:C:130:LYS:CE | 1:C:134:LEU:HD11 | 1.88 | 1.01 |
| 1:E:233:ALA:HA | 1:E:315:LEU:CG | 1.89 | 1.01 |
| 1:G:452:ASN:HB3 | 1:G:459:GLU:CD | 1.80 | 1.01 |
| 1:I:44:MET:HE2 | 1:I:44:MET:CA | 1.89 | 1.01 |
| 1:A:178:VAL:CG1 | 1:A:188:VAL:HG11 | 1.89 | 1.01 |
| 1:D:103:LEU:HD21 | 1:D:411:PHE:CD2 | 1.96 | 1.01 |
| 1:D:237:CYS:HA | 1:D:306:ASN:HA | 1.39 | 1.01 |
| 1:F:152:LYS:HD3 | 1:F:465:GLY:HA2 | 1.42 | 1.01 |
| 1:F:433:ILE:HG21 | 1:F:451:LEU:HD23 | 1.42 | 1.01 |
| 1:G:44:MET:HA | 1:G:44:MET:HE2 | 1.40 | 1.01 |
| 1:H:130:LYS:HG2 | 1:H:393:LEU:HD11 | 1.39 | 1.01 |
| 1:I:197:LYS:CA | 1:I:355:ILE:HG21 | 1.90 | 1.01 |
| 1:J:391:MET:HE1 | 1:J:438:ARG:CB | 1.89 | 1.01 |
| 1:K:42:LYS:HB3 | 1:K:425:ASN:CB | 1.89 | 1.01 |
| 1:K:431:ILE:HD12 | 1:K:431:ILE:O | 1.59 | 1.01 |
| 1:A:34:THR:HG22 | 1:A:35:VAL:CG1 | 1.90 | 1.01 |
| 1:C:96:ALA:CB | 1:C:480:ALA:HB2 | 1.90 | 1.01 |
| 1:C:431:ILE:HD12 | 1:L:406:LEU:CD2 | 1.91 | 1.01 |
| 1:G:12:MET:CE | 1:H:68:MET:HA | 1.89 | 1.01 |
| 1:G:48:LEU:HB2 | 1:G:56:VAL:CG2 | 1.90 | 1.01 |
| 1:G:89:VAL:HG22 | 1:G:89:VAL:O | 1.57 | 1.01 |
| 1:I:44:MET:HA | 1:I:44:MET:CE | 1.89 | 1.01 |
| 1:J:42:LYS:HD2 | 1:J:425:ASN:C | 1.80 | 1.01 |
| 1:J:235:LEU:HD21 | 1:J:310:LEU:HB2 | 1.40 | 1.01 |
| 1:J:255:LYS:HG3 | 1:J:255:LYS:O | 1.59 | 1.01 |
| 1:L:206:THR:HG22 | 1:L:348:ARG:H | 1.19 | 1.01 |
| 1:M:178:VAL:CG1 | 1:M:366:VAL:HG22 | 1.88 | 1.01 |
| 1:M:420:ARG:HH11 | 1:M:420:ARG:HB3 | 1.25 | 1.01 |
| 1:A:42:LYS:HE2 | 1:A:426:ALA:CA | 1.90 | 1.01 |
| 1:A:89:VAL:HG22 | 1:A:89:VAL:O | 1.58 | 1.01 |
| 1:B:464:ASN:O | 1:B:464:ASN:ND2 | 1.93 | 1.01 |
| 1:E:235:LEU:CG | 1:E:310:LEU:HD13 | 1.91 | 1.01 |
| 1:F:233:ALA:HB1 | 1:F:310:LEU:CD1 | 1.90 | 1.01 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:42:LYS:CB | 1:G:425:ASN:HB2 | 1.90 | 1.01 |
| 1:G:235:LEU:CD2 | 1:G:307:ILE:HA | 1.91 | 1.01 |
| 1:H:233:ALA:HB1 | 1:H:310:LEU:CD2 | 1.89 | 1.01 |
| 1:I:14:ARG:HH22 | 1:P:34:THR:HA | 1.22 | 1.01 |
| 1:M:42:LYS:HB3 | 1:M:425:ASN:CB | 1.89 | 1.01 |
| 1:M:268:ILE:HB | 1:M:273:GLN:HE21 | 1.21 | 1.01 |
| 1:O:299:THR:HG23 | 1:O:334:VAL:CG1 | 1.91 | 1.01 |
| 1:A:154:ALA:HB1 | 1:A:174:ILE:CD1 | 1.90 | 1.01 |
| 1:C:152:LYS:CD | 1:C:465:GLY:HA2 | 1.91 | 1.01 |
| 1:C:437:VAL:HG21 | 1:C:451:LEU:HG | 1.42 | 1.01 |
| 1:D:103:LEU:HD21 | 1:D:411:PHE:CE2 | 1.95 | 1.01 |
| 1:F:12:MET:HE3 | 1:F:494:ILE:HG22 | 1.40 | 1.01 |
| 1:F:222:GLN:HB2 | 1:F:277:ALA:CB | 1.91 | 1.01 |
| 1:G:12:MET:CB | 1:G:494:ILE:HG22 | 1.88 | 1.01 |
| 1:H:142:VAL:HG13 | 1:H:149:ILE:HD13 | 1.05 | 1.01 |
| 1:H:233:ALA:HB1 | 1:H:310:LEU:HD21 | 1.42 | 1.01 |
| 1:K:42:LYS:CE | 1:K:426:ALA:HA | 1.90 | 1.01 |
| 1:P:296:ALA:HA | 1:P:301:ALA:HB3 | 1.41 | 1.01 |
| 1:B:206:THR:HB | 1:B:347:ILE:HG23 | 1.41 | 1.00 |
| 1:D:452:ASN:HD21 | 1:D:454:PHE:HB2 | 1.21 | 1.00 |
| 1:F:192:LEU:HG | 1:F:342:ALA:HB2 | 1.42 | 1.00 |
| 1:F:420:ARG:NH2 | 1:F:430:ALA:HB3 | 1.74 | 1.00 |
| 1:G:237:CYS:HA | 1:G:306:ASN:HA | 1.38 | 1.00 |
| 1:K:239:ILE:HG22 | 1:K:307:ILE:HG21 | 1.42 | 1.00 |
| 1:K:276:LEU:CD1 | 1:K:281:ILE:HG21 | 1.90 | 1.00 |
| 1:N:206:THR:HG22 | 1:N:348:ARG:H | 1.25 | 1.00 |
| 1:O:235:LEU:CD1 | 1:O:262:LEU:HD21 | 1.91 | 1.00 |
| 1:P:134:LEU:HD12 | 1:P:393:LEU:HD11 | 1.39 | 1.00 |
| 1:P:223:MET:HE3 | 1:P:273:GLN:HB3 | 1.02 | 1.00 |
| 1:A:433:ILE:HG22 | 1:A:451:LEU:HD23 | 1.37 | 1.00 |
| 1:C:219:VAL:CG2 | 1:C:285:ARG:HB2 | 1.91 | 1.00 |
| 1:C:223:MET:HE3 | 1:C:276:LEU:HB2 | 1.41 | 1.00 |
| 1:F:459:GLU:HG2 | 1:F:461:MET:HE1 | 1.38 | 1.00 |
| 1:G:327:SER:OG | 1:G:327:SER:O | 1.57 | 1.00 |
| 1:H:42:LYS:HE2 | 1:H:426:ALA:CB | 1.91 | 1.00 |
| 1:H:113:GLN:CA | 1:H:113:GLN:NE2 | 2.14 | 1.00 |
| 1:L:100:ALA:HB1 | 1:L:484:THR:CG2 | 1.91 | 1.00 |
| 1:N:14:ARG:HD2 | 1:N:494:ILE:HD13 | 1.41 | 1.00 |
| 1:P:12:MET:HG2 | 1:P:494:ILE:HG22 | 1.40 | 1.00 |
| 1:P:142:VAL:HG13 | 1:P:149:ILE:HD13 | 1.43 | 1.00 |
| 1:P:193:ILE:HD12 | 1:P:366:VAL:HG11 | 1.43 | 1.00 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:39:LEU:HD13 | 1:B:40:GLY:H | 1.22 | 1.00 |
| 1:B:142:VAL:CG2 | 1:B:149:ILE:HG12 | 1.90 | 1.00 |
| 1:C:96:ALA:HB1 | 1:C:480:ALA:HB2 | 1.40 | 1.00 |
| 1:D:233:ALA:CB | 1:D:315:LEU:HD11 | 1.91 | 1.00 |
| 1:E:123:GLY:HA3 | 1:E:407:ALA:CB | 1.91 | 1.00 |
| 1:F:12:MET:CE | 1:F:494:ILE:HG22 | 1.91 | 1.00 |
| 1:F:377:ARG:HH21 | 1:F:377:ARG:HG3 | 1.25 | 1.00 |
| 1:G:299:THR:HG23 | 1:G:334:VAL:HG11 | 1.40 | 1.00 |
| 1:L:119:ILE:HG13 | 1:L:403:ARG:HD2 | 1.39 | 1.00 |
| 1:O:130:LYS:HZ2 | 1:O:393:LEU:HD23 | 1.26 | 1.00 |
| 1:O:254:ILE:HD12 | 1:O:276:LEU:HD11 | 1.42 | 1.00 |
| 1:D:165:LYS:HA | 1:D:165:LYS:CE | 1.86 | 1.00 |
| 1:E:206:THR:HG22 | 1:E:348:ARG:H | 1.24 | 1.00 |
| 1:G:235:LEU:CD2 | 1:G:310:LEU:HB2 | 1.91 | 1.00 |
| 1:H:219:VAL:HG21 | 1:H:268:ILE:CD1 | 1.92 | 1.00 |
| 1:I:154:ALA:CB | 1:I:174:ILE:HD11 | 1.91 | 1.00 |
| 1:M:234:LEU:HB3 | 1:M:292:MET:CE | 1.91 | 1.00 |
| 1:O:235:LEU:HD11 | 1:O:262:LEU:HD21 | 1.41 | 1.00 |
| 1:B:96:ALA:HB3 | 1:B:97:VAL:HG23 | 1.39 | 1.00 |
| 1:B:174:ILE:HG22 | 1:B:362:VAL:HG13 | 1.02 | 1.00 |
| 1:C:12:MET:O | 1:C:12:MET:HG3 | 1.20 | 1.00 |
| 1:K:403:ARG:HH11 | 1:K:403:ARG:HG3 | 0.86 | 1.00 |
| 1:L:68:MET:CB | 1:M:8:LEU:HB3 | 1.92 | 1.00 |
| 1:C:150:LEU:HB3 | 1:C:175:VAL:HG11 | 1.44 | 1.00 |
| 1:C:169:LYS:HG2 | 1:C:204:ASP:HA | 1.42 | 1.00 |
| 1:D:384:SER:CB | 1:D:441:HIS:HE1 | 1.75 | 1.00 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:HA | 1.41 | 1.00 |
| 1:O:124:TYR:CD1 | 1:O:407:ALA:HB1 | 1.97 | 1.00 |
| 1:D:422:LEU:H | 1:D:422:LEU:HD13 | 1.26 | 1.00 |
| 1:F:233:ALA:HA | 1:F:315:LEU:CD1 | 1.92 | 1.00 |
| 1:G:42:LYS:HB2 | 1:G:425:ASN:HB2 | 1.44 | 1.00 |
| 1:J:178:VAL:HG22 | 1:J:366:VAL:HG13 | 1.44 | 1.00 |
| 1:J:420:ARG:HG2 | 1:J:420:ARG:NH1 | 1.73 | 1.00 |
| 1:K:178:VAL:HG11 | 1:K:366:VAL:HG13 | 1.43 | 1.00 |
| 1:K:233:ALA:HA | 1:K:315:LEU:HD11 | 1.37 | 1.00 |
| 1:L:154:ALA:HB1 | 1:L:174:ILE:HD11 | 1.43 | 1.00 |
| 1:M:34:THR:CG2 | 1:M:35:VAL:HG22 | 1.90 | 1.00 |
| 1:M:38:THR:HG23 | 1:M:46:LYS:HE2 | 1.44 | 1.00 |
| 1:M:100:ALA:CB | 1:M:484:THR:HG21 | 1.91 | 1.00 |
| 1:F:165:LYS:HE2 | 1:F:165:LYS:CA | 1.91 | 0.99 |
| 1:G:193:ILE:HD12 | 1:G:366:VAL:HG21 | 1.42 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:233:ALA:HA | 1:I:315:LEU:CD2 | 1.91 | 0.99 |
| 1:J:69:SER:HB3 | 1:K:9:PRO:HB3 | 1.37 | 0.99 |
| 1:J:327:SER:OG | 1:J:327:SER:O | 1.72 | 0.99 |
| 1:L:437:VAL:CG2 | 1:L:451:LEU:HD11 | 1.91 | 0.99 |
| 1:P:234:LEU:CB | 1:P:292:MET:HE1 | 1.92 | 0.99 |
| 1:A:69:SER:N | 1:H:9:PRO:HD3 | 1.75 | 0.99 |
| 1:A:233:ALA:HA | 1:A:315:LEU:HG | 1.43 | 0.99 |
| 1:A:452:ASN:HD21 | 1:A:454:PHE:HB2 | 1.25 | 0.99 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:CB | 1.91 | 0.99 |
| 1:C:197:LYS:HA | 1:C:355:ILE:HG21 | 1.38 | 0.99 |
| 1:D:403:ARG:HH11 | 1:D:403:ARG:HG2 | 1.24 | 0.99 |
| 1:E:469:PRO:HG2 | 1:E:472:VAL:HG11 | 1.00 | 0.99 |
| 1:M:236:ASN:HA | 1:M:265:GLN:HB3 | 1.42 | 0.99 |
| 1:N:437:VAL:HG21 | 1:N:451:LEU:HG | 1.40 | 0.99 |
| 1:O:182:VAL:HB | 1:O:188:VAL:HG22 | 1.43 | 0.99 |
| 1:P:158:ILE:HG22 | 1:P:158:ILE:O | 1.62 | 0.99 |
| 1:C:174:ILE:HG22 | 1:C:362:VAL:HG23 | 1.44 | 0.99 |
| 1:E:420:ARG:HH11 | 1:E:420:ARG:HG2 | 1.24 | 0.99 |
| 1:F:235:LEU:CD1 | 1:F:307:ILE:HA | 1.92 | 0.99 |
| 1:I:154:ALA:HB1 | 1:I:174:ILE:CD1 | 1.92 | 0.99 |
| 1:I:178:VAL:CG2 | 1:I:366:VAL:HG22 | 1.93 | 0.99 |
| 1:K:14:ARG:HD2 | 1:K:494:ILE:CG1 | 1.93 | 0.99 |
| 1:M:276:LEU:CD1 | 1:M:281:ILE:HD12 | 1.90 | 0.99 |
| 1:A:255:LYS:HD3 | 1:A:279:GLU:CG | 1.91 | 0.99 |
| 1:F:165:LYS:HA | 1:F:165:LYS:CE | 1.86 | 0.99 |
| 1:F:170:LEU:HD21 | 1:F:358:VAL:HG22 | 1.43 | 0.99 |
| 1:H:130:LYS:HG2 | 1:H:393:LEU:CD1 | 1.91 | 0.99 |
| 1:K:192:LEU:CB | 1:K:342:ALA:HB2 | 1.92 | 0.99 |
| 1:K:247:LEU:HG | 1:K:272:ALA:HB2 | 1.42 | 0.99 |
| 1:L:486:MET:HE1 | 1:L:487:LEU:HD23 | 1.41 | 0.99 |
| 1:N:139:ALA:HB2 | 1:N:377:ARG:HD3 | 1.41 | 0.99 |
| 1:O:100:ALA:HB1 | 1:O:484:THR:CG2 | 1.92 | 0.99 |
| 1:E:34:THR:HG22 | 1:E:35:VAL:HG12 | 1.44 | 0.99 |
| 1:F:459:GLU:CG | 1:F:461:MET:HE1 | 1.92 | 0.99 |
| 1:I:437:VAL:HG21 | 1:I:451:LEU:HD11 | 1.44 | 0.99 |
| 1:L:89:VAL:CG2 | 1:L:89:VAL:O | 2.10 | 0.99 |
| 1:M:192:LEU:HD23 | 1:M:342:ALA:CB | 1.90 | 0.99 |
| 1:C:235:LEU:HD23 | 1:C:304:ILE:HD11 | 1.43 | 0.99 |
| 1:N:69:SER:HB3 | 1:O:9:PRO:HB3 | 1.01 | 0.99 |
| 1:N:255:LYS:HE3 | 1:N:279:GLU:HG2 | 1.44 | 0.99 |
| 1:O:235:LEU:CG | 1:O:307:ILE:HB | 1.93 | 0.99 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:251:VAL:HG13 | 1:O:276:LEU:HD13 | 1.40 | 0.99 |
| 1:B:195:ILE:HB | 1:B:359:ALA:HB1 | 1.41 | 0.99 |
| 1:B:435:VAL:HG11 | 1:K:401:SER:CB | 1.92 | 0.99 |
| 1:E:174:ILE:HG22 | 1:E:362:VAL:HG23 | 1.00 | 0.99 |
| 1:E:235:LEU:HD13 | 1:E:310:LEU:HD13 | 1.42 | 0.99 |
| 1:G:222:GLN:HB3 | 1:G:277:ALA:CB | 1.92 | 0.99 |
| 1:I:210:LYS:HB3 | 1:I:343:VAL:HG23 | 1.44 | 0.99 |
| 1:L:197:LYS:CA | 1:L:355:ILE:HG21 | 1.91 | 0.99 |
| 1:M:464:ASN:CB | 1:M:466:VAL:HG22 | 1.92 | 0.99 |
| 1:N:138:ILE:HD12 | 1:N:385:THR:HB | 1.44 | 0.99 |
| 1:C:327:SER:OG | 1:C:327:SER:O | 1.75 | 0.99 |
| 1:D:78:LEU:HD12 | 1:D:487:LEU:HD11 | 1.38 | 0.99 |
| 1:E:177:ALA:HB1 | 1:E:193:ILE:CD1 | 1.92 | 0.99 |
| 1:F:448:CYS:HB2 | 1:F:460:ASP:HA | 1.45 | 0.99 |
| 1:G:379:VAL:HB | 1:G:470:LEU:HD21 | 1.41 | 0.99 |
| 1:I:437:VAL:HG21 | 1:I:451:LEU:CG | 1.92 | 0.99 |
| 1:J:42:LYS:CG | 1:J:425:ASN:HB3 | 1.93 | 0.99 |
| 1:L:223:MET:HG3 | 1:L:277:ALA:HB2 | 1.45 | 0.99 |
| 1:N:85:GLN:HE22 | 1:N:475:GLN:HG3 | 1.27 | 0.99 |
| 1:P:197:LYS:CA | 1:P:355:ILE:HG21 | 1.93 | 0.99 |
| 1:B:89:VAL:O | 1:B:89:VAL:HG22 | 1.62 | 0.99 |
| 1:F:182:VAL:HB | 1:F:188:VAL:HG22 | 1.41 | 0.99 |
| 1:G:276:LEU:HD12 | 1:G:281:ILE:HG21 | 1.02 | 0.99 |
| 1:H:39:LEU:HG | 1:H:40:GLY:H | 1.27 | 0.99 |
| 1:C:235:LEU:CD1 | 1:C:307:ILE:HA | 1.93 | 0.99 |
| 1:E:217:GLU:HG2 | 1:E:330:SER:O | 1.63 | 0.99 |
| 1:F:136:LYS:HA | 1:F:377:ARG:NH1 | 1.78 | 0.99 |
| 1:G:30:ILE:HG23 | 1:G:31:ILE:HD13 | 1.44 | 0.99 |
| 1:I:494:ILE:HD12 | 1:P:48:LEU:HD12 | 1.40 | 0.99 |
| 1:M:452:ASN:ND2 | 1:M:454:PHE:HB2 | 1.76 | 0.99 |
| 1:O:119:ILE:HG13 | 1:O:403:ARG:HD2 | 1.45 | 0.99 |
| 1:A:345:MET:HE3 | 1:A:362:VAL:HG11 | 1.44 | 0.98 |
| 1:D:188:VAL:CG2 | 1:D:373:ILE:HG13 | 1.93 | 0.98 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:HG13 | 1.45 | 0.98 |
| 1:G:281:ILE:HG22 | 1:G:281:ILE:O | 1.57 | 0.98 |
| 1:I:56:VAL:HG23 | 1:I:56:VAL:O | 1.62 | 0.98 |
| 1:I:247:LEU:HG | 1:I:272:ALA:HB2 | 1.44 | 0.98 |
| 1:J:106:LYS:HA | 1:J:106:LYS:HE3 | 1.43 | 0.98 |
| 1:L:391:MET:HE1 | 1:L:438:ARG:HA | 1.42 | 0.98 |
| 1:N:68:MET:HB3 | 1:O:8:LEU:CA | 1.92 | 0.98 |
| 1:P:234:LEU:HB3 | 1:P:292:MET:HE1 | 1.00 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:347:ILE:HG21 | 1:P:358:VAL:HG12 | 1.45 | 0.98 |
| 1:B:62:VAL:HG13 | 1:B:63:THR:H | 1.24 | 0.98 |
| 1:E:235:LEU:CD1 | 1:E:310:LEU:HD13 | 1.93 | 0.98 |
| 1:F:381:GLY:CA | 1:F:461:MET:HG2 | 1.93 | 0.98 |
| 1:G:459:GLU:HB2 | 1:G:461:MET:CE | 1.92 | 0.98 |
| 1:A:9:PRO:CD | 1:B:68:MET:HG3 | 1.91 | 0.98 |
| 1:H:8:LEU:HB3 | 1:H:12:MET:HG2 | 1.45 | 0.98 |
| 1:J:368:VAL:HG11 | 1:J:469:PRO:HG2 | 1.44 | 0.98 |
| 1:K:403:ARG:HG3 | 1:K:403:ARG:NH1 | 1.46 | 0.98 |
| 1:M:182:VAL:HG21 | 1:M:188:VAL:HG12 | 1.43 | 0.98 |
| 1:M:235:LEU:HD22 | 1:M:307:ILE:HA | 1.45 | 0.98 |
| 1:N:235:LEU:HD11 | 1:N:307:ILE:HB | 1.42 | 0.98 |
| 1:B:239:ILE:CG1 | 1:B:307:ILE:HD13 | 1.93 | 0.98 |
| 1:O:154:ALA:HB1 | 1:O:174:ILE:HD11 | 0.99 | 0.98 |
| 1:L:69:SER:CA | 1:M:9:PRO:HA | 1.92 | 0.98 |
| 1:L:163:ALA:HB1 | 1:L:165:LYS:HB2 | 1.46 | 0.98 |
| 1:M:8:LEU:CD2 | 1:M:12:MET:HE1 | 1.93 | 0.98 |
| 1:C:118:THR:O | 1:C:118:THR:CG2 | 2.10 | 0.98 |
| 1:C:406:LEU:HD21 | 1:L:431:ILE:CD1 | 1.93 | 0.98 |
| 1:D:158:ILE:O | 1:D:158:ILE:HG22 | 1.17 | 0.98 |
| 1:E:35:VAL:CG2 | 1:E:94:THR:HG23 | 1.94 | 0.98 |
| 1:H:70:VAL:HG23 | 1:H:76:LYS:HG3 | 1.42 | 0.98 |
| 1:H:248:LYS:HD2 | 1:H:275:TYR:CE2 | 1.97 | 0.98 |
| 1:L:34:THR:HA | 1:M:14:ARG:HH22 | 1.23 | 0.98 |
| 1:L:276:LEU:CD1 | 1:L:281:ILE:HG21 | 1.94 | 0.98 |
| 1:M:178:VAL:HG12 | 1:M:366:VAL:HG22 | 1.42 | 0.98 |
| 1:M:235:LEU:CD1 | 1:M:307:ILE:HD13 | 1.94 | 0.98 |
| 1:N:166:ALA:HB2 | 1:N:203:ILE:HG12 | 1.41 | 0.98 |
| 1:O:44:MET:HE2 | 1:O:44:MET:CA | 1.88 | 0.98 |
| 1:O:377:ARG:HB3 | 1:O:470:LEU:HD12 | 1.41 | 0.98 |
| 1:P:77:MET:HE2 | 1:P:487:LEU:HD11 | 1.43 | 0.98 |
| 1:A:142:VAL:CG1 | 1:A:149:ILE:HD13 | 1.94 | 0.98 |
| 1:G:192:LEU:HD23 | 1:G:341:LYS:C | 1.84 | 0.98 |
| 1:M:233:ALA:HA | 1:M:315:LEU:HD22 | 1.44 | 0.98 |
| 1:N:233:ALA:HA | 1:N:315:LEU:CD2 | 1.92 | 0.98 |
| 1:N:384:SER:CB | 1:N:441:HIS:HE1 | 1.76 | 0.98 |
| 1:E:9:PRO:HA | 1:F:69:SER:HB3 | 1.43 | 0.98 |
| 1:F:368:VAL:CB | 1:F:469:PRO:HG2 | 1.93 | 0.98 |
| 1:G:236:ASN:O | 1:G:236:ASN:OD1 | 1.82 | 0.98 |
| 1:J:39:LEU:HG | 1:J:40:GLY:N | 1.74 | 0.98 |
| 1:N:81:VAL:HG11 | 1:N:483:SER:CB | 1.92 | 0.98 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:68:MET:C | 1:P:9:PRO:HD3 | 1.84 | 0.98 |
| 1:D:120:VAL:HG21 | 1:D:488:LEU:HD11 | 1.46 | 0.98 |
| 1:D:403:ARG:HD2 | 1:M:431:ILE:CD1 | 1.93 | 0.98 |
| 1:E:96:ALA:HB1 | 1:E:480:ALA:HB2 | 1.40 | 0.98 |
| 1:F:42:LYS:HB3 | 1:F:425:ASN:CB | 1.94 | 0.98 |
| 1:G:197:LYS:HA | 1:G:355:ILE:HG21 | 1.45 | 0.98 |
| 1:J:130:LYS:HZ3 | 1:J:393:LEU:CD2 | 1.76 | 0.98 |
| 1:N:130:LYS:O | 1:N:130:LYS:HG3 | 1.63 | 0.98 |
| 1:O:100:ALA:HB1 | 1:O:484:THR:HG21 | 0.98 | 0.98 |
| 1:O:170:LEU:HD22 | 1:O:358:VAL:CG1 | 1.92 | 0.98 |
| 1:O:307:ILE:O | 1:O:307:ILE:CG1 | 2.11 | 0.98 |
| 1:P:134:LEU:HD22 | 1:P:392:LYS:CE | 1.94 | 0.98 |
| 1:B:174:ILE:CG2 | 1:B:362:VAL:HG13 | 1.93 | 0.98 |
| 1:K:48:LEU:HD13 | 1:K:68:MET:HE3 | 1.44 | 0.98 |
| 1:K:188:VAL:HG12 | 1:K:188:VAL:O | 1.62 | 0.98 |
| 1:P:100:ALA:HB1 | 1:P:484:THR:HG21 | 0.98 | 0.98 |
| 1:G:276:LEU:HD12 | 1:G:281:ILE:CG2 | 1.94 | 0.97 |
| 1:H:233:ALA:CA | 1:H:315:LEU:HG | 1.94 | 0.97 |
| 1:J:12:MET:HG2 | 1:J:494:ILE:CG2 | 1.94 | 0.97 |
| 1:E:106:LYS:HE2 | 1:E:106:LYS:HA | 1.46 | 0.97 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:HB1 | 1.99 | 0.97 |
| 1:G:197:LYS:CA | 1:G:355:ILE:HG21 | 1.92 | 0.97 |
| 1:K:44:MET:HA | 1:K:44:MET:CE | 1.95 | 0.97 |
| 1:N:248:LYS:HD2 | 1:N:275:TYR:CZ | 1.98 | 0.97 |
| 1:O:130:LYS:NZ | 1:O:393:LEU:HD23 | 1.79 | 0.97 |
| 1:O:219:VAL:HG21 | 1:O:268:ILE:HD12 | 0.98 | 0.97 |
| 1:O:304:ILE:HD12 | 1:O:309:ASP:CB | 1.92 | 0.97 |
| 1:D:119:ILE:HD12 | 1:D:403:ARG:HG2 | 1.43 | 0.97 |
| 1:D:418:ILE:HB | 1:D:419:PRO:HD3 | 1.46 | 0.97 |
| 1:F:469:PRO:HD2 | 1:F:472:VAL:HG21 | 1.44 | 0.97 |
| 1:G:154:ALA:HB1 | 1:G:174:ILE:HD11 | 1.44 | 0.97 |
| 1:J:235:LEU:HD13 | 1:J:307:ILE:HG22 | 1.43 | 0.97 |
| 1:K:235:LEU:HD22 | 1:K:307:ILE:CA | 1.94 | 0.97 |
| 1:L:233:ALA:HA | 1:L:315:LEU:CD2 | 1.94 | 0.97 |
| 1:M:208:LEU:HD11 | 1:M:343:VAL:HG21 | 1.45 | 0.97 |
| 1:N:135:LEU:HD23 | 1:N:138:ILE:HD11 | 1.45 | 0.97 |
| 1:N:142:VAL:HG11 | 1:N:149:ILE:HD11 | 1.45 | 0.97 |
| 1:P:103:LEU:HD21 | 1:P:411:PHE:CE2 | 1.99 | 0.97 |
| 1:A:34:THR:HG22 | 1:A:35:VAL:HG13 | 0.98 | 0.97 |
| 1:D:339:HIS:ND1 | 1:D:339:HIS:O | 1.95 | 0.97 |
| 1:G:170:LEU:CD2 | 1:G:358:VAL:HG13 | 1.94 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:222:GLN:CB | 1:G:277:ALA:HB1 | 1.93 | 0.97 |
| 1:G:464:ASN:HB2 | 1:G:466:VAL:HG22 | 1.47 | 0.97 |
| 1:I:235:LEU:CD1 | 1:I:307:ILE:HG22 | 1.94 | 0.97 |
| 1:J:222:GLN:CB | 1:J:277:ALA:HB1 | 1.94 | 0.97 |
| 1:M:223:MET:HE3 | 1:M:276:LEU:HB3 | 1.44 | 0.97 |
| 1:N:174:ILE:HD12 | 1:N:365:ALA:HB1 | 1.46 | 0.97 |
| 1:A:233:ALA:HB1 | 1:A:310:LEU:HD11 | 1.43 | 0.97 |
| 1:D:166:ALA:HB2 | 1:D:203:ILE:CG2 | 1.95 | 0.97 |
| 1:E:42:LYS:CG | 1:E:425:ASN:HB2 | 1.92 | 0.97 |
| 1:K:132:GLN:HA | 1:K:132:GLN:NE2 | 1.79 | 0.97 |
| 1:K:276:LEU:HD12 | 1:K:281:ILE:HG21 | 0.99 | 0.97 |
| 1:L:25:ILE:CD1 | 1:L:108:GLU:HG3 | 1.95 | 0.97 |
| 1:L:235:LEU:CD2 | 1:L:235:LEU:C | 2.33 | 0.97 |
| 1:M:192:LEU:HB2 | 1:M:342:ALA:CB | 1.94 | 0.97 |
| 1:N:34:THR:HG23 | 1:O:14:ARG:NH2 | 1.78 | 0.97 |
| 1:P:197:LYS:HA | 1:P:355:ILE:HG21 | 1.45 | 0.97 |
| 1:P:403:ARG:HH11 | 1:P:403:ARG:HG3 | 1.26 | 0.97 |
| 1:B:235:LEU:HG | 1:B:310:LEU:CD1 | 1.94 | 0.97 |
| 1:C:448:CYS:CB | 1:C:460:ASP:HA | 1.95 | 0.97 |
| 1:G:182:VAL:HB | 1:G:188:VAL:CG1 | 1.95 | 0.97 |
| 1:I:477:ILE:HG22 | 1:I:477:ILE:O | 1.64 | 0.97 |
| 1:K:119:ILE:CG2 | 1:K:403:ARG:HB2 | 1.93 | 0.97 |
| 1:L:48:LEU:HD22 | 1:L:68:MET:CG | 1.93 | 0.97 |
| 1:P:158:ILE:O | 1:P:158:ILE:CG2 | 2.10 | 0.97 |
| 1:B:233:ALA:HB1 | 1:B:310:LEU:HD22 | 1.46 | 0.97 |
| 1:L:377:ARG:HB3 | 1:L:470:LEU:HD23 | 1.00 | 0.97 |
| 1:M:276:LEU:HD12 | 1:M:281:ILE:HD12 | 1.47 | 0.97 |
| 1:A:170:LEU:HD11 | 1:A:358:VAL:CG2 | 1.95 | 0.97 |
| 1:B:251:VAL:CG1 | 1:B:276:LEU:HG | 1.95 | 0.97 |
| 1:D:14:ARG:HH22 | 1:E:34:THR:CA | 1.76 | 0.97 |
| 1:D:163:ALA:CA | 1:D:165:LYS:HG2 | 1.95 | 0.97 |
| 1:J:420:ARG:HH11 | 1:J:420:ARG:CG | 1.70 | 0.97 |
| 1:K:420:ARG:HH11 | 1:K:420:ARG:HG2 | 1.29 | 0.97 |
| 1:L:450:GLY:C | 1:L:451:LEU:HD12 | 1.85 | 0.97 |
| 1:N:241:GLU:HA | 1:N:241:GLU:OE1 | 1.63 | 0.97 |
| 1:C:380:SER:HB3 | 1:C:384:SER:HB2 | 1.45 | 0.97 |
| 1:F:136:LYS:HA | 1:F:377:ARG:HH11 | 1.24 | 0.97 |
| 1:F:164:GLU:O | 1:F:164:GLU:HG3 | 1.65 | 0.97 |
| 1:J:345:MET:CE | 1:J:362:VAL:HG11 | 1.95 | 0.97 |
| 1:J:420:ARG:NH1 | 1:J:420:ARG:CG | 2.20 | 0.97 |
| 1:A:178:VAL:CG2 | 1:A:366:VAL:HG22 | 1.95 | 0.97 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:233:ALA:HA | 1:A:315:LEU:CG | 1.94 | 0.97 |
| 1:B:105:ARG:CG | 1:B:105:ARG:HH11 | 1.78 | 0.97 |
| 1:B:235:LEU:HG | 1:B:310:LEU:HD11 | 1.45 | 0.97 |
| 1:D:220:SER:HB2 | 1:D:273:GLN:HB2 | 1.46 | 0.97 |
| 1:E:431:ILE:HD12 | 1:N:406:LEU:CD1 | 1.94 | 0.97 |
| 1:F:30:ILE:HG22 | 1:F:31:ILE:HD13 | 1.46 | 0.97 |
| 1:F:248:LYS:HD2 | 1:F:275:TYR:CZ | 1.99 | 0.97 |
| 1:G:11:ASN:ND2 | 1:H:51:ASP:HA | 1.80 | 0.97 |
| 1:G:232:ILE:CG1 | 1:G:299:THR:HG21 | 1.95 | 0.97 |
| 1:N:158:ILE:HG12 | 1:N:361:ALA:HB1 | 1.43 | 0.97 |
| 1:D:235:LEU:HD11 | 1:D:307:ILE:HG12 | 1.47 | 0.96 |
| 1:D:384:SER:HB3 | 1:D:441:HIS:CE1 | 2.00 | 0.96 |
| 1:G:182:VAL:HB | 1:G:188:VAL:HG12 | 1.44 | 0.96 |
| 1:O:291:ASP:O | 1:O:295:LEU:HD12 | 1.65 | 0.96 |
| 1:O:299:THR:HG22 | 1:O:318:ALA:HB2 | 1.47 | 0.96 |
| 1:A:9:PRO:HB3 | 1:B:69:SER:HB3 | 1.47 | 0.96 |
| 1:F:347:ILE:HG21 | 1:F:358:VAL:HG12 | 1.43 | 0.96 |
| 1:I:206:THR:HG22 | 1:I:348:ARG:H | 1.27 | 0.96 |
| 1:L:130:LYS:NZ | 1:L:134:LEU:HD11 | 1.79 | 0.96 |
| 1:A:233:ALA:HB1 | 1:A:310:LEU:CD1 | 1.94 | 0.96 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:CG | 1.94 | 0.96 |
| 1:C:70:VAL:HG21 | 1:C:76:LYS:HG3 | 1.44 | 0.96 |
| 1:E:178:VAL:CG1 | 1:E:188:VAL:HG11 | 1.95 | 0.96 |
| 1:E:223:MET:CE | 1:E:283:ALA:HB3 | 1.94 | 0.96 |
| 1:F:103:LEU:HD21 | 1:F:411:PHE:CE2 | 2.00 | 0.96 |
| 1:I:237:CYS:CA | 1:I:306:ASN:HA | 1.95 | 0.96 |
| 1:L:89:VAL:O | 1:L:89:VAL:HG22 | 1.63 | 0.96 |
| 1:P:276:LEU:HD23 | 1:P:281:ILE:CD1 | 1.94 | 0.96 |
| 1:A:89:VAL:HG21 | 1:A:368:VAL:HG13 | 1.46 | 0.96 |
| 1:F:158:ILE:HG13 | 1:F:361:ALA:HB1 | 1.45 | 0.96 |
| 1:I:14:ARG:HD2 | 1:I:494:ILE:CG1 | 1.94 | 0.96 |
| 1:I:152:LYS:HE3 | 1:I:462:CYS:HA | 1.48 | 0.96 |
| 1:M:473:LYS:HZ1 | 1:M:473:LYS:HB2 | 1.23 | 0.96 |
| 1:N:218:ARG:HH11 | 1:N:218:ARG:HG2 | 1.23 | 0.96 |
| 1:G:14:ARG:NH1 | 1:H:34:THR:HG23 | 1.79 | 0.96 |
| 1:I:148:GLU:O | 1:I:148:GLU:HG3 | 1.65 | 0.96 |
| 1:I:154:ALA:HB1 | 1:I:174:ILE:HD11 | 0.99 | 0.96 |
| 1:I:235:LEU:HD21 | 1:I:310:LEU:HB2 | 0.97 | 0.96 |
| 1:J:254:ILE:HD13 | 1:J:262:LEU:HD13 | 1.47 | 0.96 |
| 1:P:233:ALA:HB1 | 1:P:310:LEU:CD1 | 1.95 | 0.96 |
| 1:A:142:VAL:HG13 | 1:A:149:ILE:HD13 | 1.46 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:428:LEU:N | 1:A:428:LEU:CD1 | 2.28 | 0.96 |
| 1:C:339:HIS:ND1 | 1:C:339:HIS:O | 1.98 | 0.96 |
| 1:D:254:ILE:HG12 | 1:D:310:LEU:CD1 | 1.96 | 0.96 |
| 1:F:327:SER:OG | 1:F:327:SER:O | 1.74 | 0.96 |
| 1:H:276:LEU:HD22 | 1:H:281:ILE:HG21 | 1.46 | 0.96 |
| 1:K:68:MET:CB | 1:L:8:LEU:HA | 1.95 | 0.96 |
| 1:K:130:LYS:NZ | 1:K:134:LEU:HD11 | 1.80 | 0.96 |
| 1:K:134:LEU:HB3 | 1:K:392:LYS:NZ | 1.80 | 0.96 |
| 1:P:339:HIS:HE1 | 1:P:341:LYS:HG3 | 1.30 | 0.96 |
| 1:A:8:LEU:N | 1:B:68:MET:HB3 | 1.80 | 0.96 |
| 1:D:235:LEU:HD11 | 1:D:307:ILE:CG1 | 1.96 | 0.96 |
| 1:H:45:ASP:N | 1:H:45:ASP:OD2 | 1.97 | 0.96 |
| 1:I:368:VAL:HG21 | 1:I:469:PRO:HG3 | 1.46 | 0.96 |
| 1:J:48:LEU:HB2 | 1:J:56:VAL:CG1 | 1.93 | 0.96 |
| 1:J:130:LYS:HG3 | 1:J:393:LEU:HD21 | 1.47 | 0.96 |
| 1:N:124:TYR:HE1 | 1:N:407:ALA:CA | 1.79 | 0.96 |
| 1:C:174:ILE:HG22 | 1:C:362:VAL:CG2 | 1.96 | 0.96 |
| 1:E:101:GLY:HA2 | 1:E:104:LEU:HD12 | 1.48 | 0.96 |
| 1:E:473:LYS:HB2 | 1:E:473:LYS:NZ | 1.80 | 0.96 |
| 1:G:448:CYS:HB2 | 1:G:460:ASP:CA | 1.94 | 0.96 |
| 1:H:158:ILE:O | 1:H:158:ILE:CG2 | 2.14 | 0.96 |
| 1:K:78:LEU:HD12 | 1:K:487:LEU:CD2 | 1.95 | 0.96 |
| 1:K:384:SER:HB2 | 1:K:441:HIS:HE1 | 1.21 | 0.96 |
| 1:L:222:GLN:CB | 1:L:277:ALA:HB1 | 1.95 | 0.96 |
| 1:O:124:TYR:HE1 | 1:O:407:ALA:HA | 1.30 | 0.96 |
| 1:P:119:ILE:CG2 | 1:P:403:ARG:HB2 | 1.96 | 0.96 |
| 1:P:235:LEU:HD21 | 1:P:307:ILE:CA | 1.95 | 0.96 |
| 1:P:248:LYS:HD2 | 1:P:275:TYR:CZ | 2.00 | 0.96 |
| 1:B:262:LEU:HD11 | 1:B:310:LEU:HD11 | 1.47 | 0.96 |
| 1:E:150:LEU:HD23 | 1:E:175:VAL:CG1 | 1.96 | 0.96 |
| 1:H:255:LYS:O | 1:H:255:LYS:CG | 2.10 | 0.96 |
| 1:I:197:LYS:HA | 1:I:355:ILE:HG21 | 1.48 | 0.96 |
| 1:L:188:VAL:CG1 | 1:L:373:ILE:HG13 | 1.95 | 0.96 |
| 1:N:192:LEU:HB3 | 1:N:342:ALA:HA | 1.48 | 0.96 |
| 1:A:233:ALA:HA | 1:A:315:LEU:CD1 | 1.95 | 0.96 |
| 1:C:35:VAL:HG11 | 1:C:64:ILE:HG21 | 1.46 | 0.96 |
| 1:D:250:MET:CE | 1:D:308:LYS:HG2 | 1.95 | 0.96 |
| 1:E:178:VAL:HG13 | 1:E:188:VAL:HG11 | 1.48 | 0.96 |
| 1:G:376:GLY:HA3 | 1:G:377:ARG:CB | 1.91 | 0.96 |
| 1:H:235:LEU:HB2 | 1:H:310:LEU:HG | 1.45 | 0.96 |
| 1:J:233:ALA:HA | 1:J:315:LEU:HD22 | 1.48 | 0.96 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:262:LEU:HD12 | 1:J:310:LEU:HD21 | 1.44 | 0.96 |
| 1:K:44:MET:HA | 1:K:44:MET:HE3 | 1.46 | 0.96 |
| 1:M:47:MET:CG | 1:M:47:MET:O | 2.13 | 0.96 |
| 1:N:218:ARG:NH2 | 1:N:282:VAL:HG21 | 1.81 | 0.96 |
| 1:L:119:ILE:HG21 | 1:L:403:ARG:CD | 1.96 | 0.95 |
| 1:D:73:PRO:HB2 | 1:E:47:MET:HE1 | 1.45 | 0.95 |
| 1:D:119:ILE:HG21 | 1:D:403:ARG:HB2 | 1.47 | 0.95 |
| 1:D:262:LEU:CD1 | 1:D:310:LEU:HD11 | 1.94 | 0.95 |
| 1:E:379:VAL:HG12 | 1:E:470:LEU:HD23 | 1.48 | 0.95 |
| 1:H:192:LEU:HD22 | 1:H:297:LYS:HE3 | 1.48 | 0.95 |
| 1:L:218:ARG:HG3 | 1:L:323:GLU:HG3 | 1.48 | 0.95 |
| 1:M:8:LEU:HB2 | 1:M:12:MET:CE | 1.96 | 0.95 |
| 1:M:17:GLY:O | 1:M:21:GLN:HG3 | 1.66 | 0.95 |
| 1:P:105:ARG:NH1 | 1:P:106:LYS:HD2 | 1.81 | 0.95 |
| 1:B:116:HIS:ND1 | 1:B:117:PRO:HD2 | 1.81 | 0.95 |
| 1:B:178:VAL:CG2 | 1:B:366:VAL:HG22 | 1.96 | 0.95 |
| 1:J:135:LEU:HD22 | 1:J:389:LEU:HD21 | 1.46 | 0.95 |
| 1:K:121:VAL:HG23 | 1:K:122:LYS:H | 1.32 | 0.95 |
| 1:L:31:ILE:HG21 | 1:L:65:LEU:HD11 | 1.47 | 0.95 |
| 1:B:153:ILE:HD11 | 1:B:378:ILE:HG22 | 1.46 | 0.95 |
| 1:E:174:ILE:CG2 | 1:E:362:VAL:HG23 | 1.95 | 0.95 |
| 1:E:406:LEU:HD11 | 1:N:431:ILE:HD11 | 1.48 | 0.95 |
| 1:F:235:LEU:CG | 1:F:307:ILE:HA | 1.96 | 0.95 |
| 1:I:276:LEU:HB3 | 1:I:281:ILE:HB | 1.48 | 0.95 |
| 1:K:233:ALA:HA | 1:K:315:LEU:CG | 1.96 | 0.95 |
| 1:N:71:GLU:HG3 | 1:N:72:HIS:H | 1.29 | 0.95 |
| 1:A:155:MET:HB2 | 1:A:167:LYS:HG3 | 1.46 | 0.95 |
| 1:D:341:LYS:NZ | 1:D:341:LYS:HB3 | 1.82 | 0.95 |
| 1:D:383:GLY:HA2 | 1:D:386:GLU:HG2 | 1.46 | 0.95 |
| 1:G:192:LEU:HD23 | 1:G:341:LYS:O | 1.67 | 0.95 |
| 1:K:222:GLN:HB3 | 1:K:277:ALA:HB1 | 1.46 | 0.95 |
| 1:M:130:LYS:HE2 | 1:M:393:LEU:HD21 | 1.48 | 0.95 |
| 1:O:119:ILE:CG1 | 1:O:403:ARG:HD2 | 1.96 | 0.95 |
| 1:O:166:ALA:HB2 | 1:O:203:ILE:HB | 1.46 | 0.95 |
| 1:P:50:ASP:HB2 | 1:P:51:ASP:CB | 1.96 | 0.95 |
| 1:P:233:ALA:HA | 1:P:315:LEU:CD2 | 1.95 | 0.95 |
| 1:D:150:LEU:HD23 | 1:D:175:VAL:HG13 | 1.48 | 0.95 |
| 1:G:234:LEU:H | 1:G:315:LEU:HD11 | 1.29 | 0.95 |
| 1:J:34:THR:HG22 | 1:J:35:VAL:CG1 | 1.96 | 0.95 |
| 1:J:437:VAL:HG21 | 1:J:451:LEU:CG | 1.97 | 0.95 |
| 1:L:383:GLY:HA2 | 1:L:386:GLU:CG | 1.96 | 0.95 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:68:MET:CB | 1:O:8:LEU:HA | 1.97 | 0.95 |
| 1:G:170:LEU:HD21 | 1:G:358:VAL:HG13 | 1.46 | 0.95 |
| 1:G:389:LEU:HD23 | 1:G:415:LEU:HD13 | 1.45 | 0.95 |
| 1:P:420:ARG:HG2 | 1:P:420:ARG:NH1 | 1.71 | 0.95 |
| 1:D:89:VAL:O | 1:D:89:VAL:CG2 | 2.09 | 0.95 |
| 1:F:381:GLY:HA3 | 1:F:461:MET:CG | 1.96 | 0.95 |
| 1:G:103:LEU:HD21 | 1:G:411:PHE:CE2 | 2.01 | 0.95 |
| 1:G:106:LYS:CA | 1:G:106:LYS:HE3 | 1.94 | 0.95 |
| 1:G:233:ALA:HA | 1:G:315:LEU:HG | 1.48 | 0.95 |
| 1:I:30:ILE:HG22 | 1:I:31:ILE:HD13 | 1.45 | 0.95 |
| 1:J:106:LYS:CE | 1:J:106:LYS:CA | 2.44 | 0.95 |
| 1:J:130:LYS:NZ | 1:J:393:LEU:HD23 | 1.80 | 0.95 |
| 1:J:154:ALA:HB1 | 1:J:174:ILE:CD1 | 1.97 | 0.95 |
| 1:M:123:GLY:HA3 | 1:M:407:ALA:HB3 | 1.44 | 0.95 |
| 1:N:34:THR:HA | 1:O:14:ARG:HH22 | 1.28 | 0.95 |
| 1:I:345:MET:CE | 1:I:362:VAL:HG11 | 1.97 | 0.95 |
| 1:K:70:VAL:HG12 | 1:K:76:LYS:HD2 | 1.44 | 0.95 |
| 1:L:119:ILE:CG2 | 1:L:403:ARG:HB2 | 1.97 | 0.95 |
| 1:M:130:LYS:HE2 | 1:M:134:LEU:HD11 | 0.95 | 0.95 |
| 1:O:42:LYS:CB | 1:O:425:ASN:HB2 | 1.97 | 0.95 |
| 1:P:195:ILE:HB | 1:P:359:ALA:HB1 | 1.48 | 0.95 |
| 1:D:130:LYS:HD3 | 1:D:393:LEU:HD22 | 1.48 | 0.95 |
| 1:E:431:ILE:HD11 | 1:N:403:ARG:HG2 | 1.49 | 0.95 |
| 1:H:134:LEU:CD2 | 1:H:392:LYS:HD2 | 1.96 | 0.95 |
| 1:I:34:THR:HG22 | 1:I:35:VAL:CG1 | 1.97 | 0.95 |
| 1:J:403:ARG:HH11 | 1:J:403:ARG:CG | 1.73 | 0.95 |
| 1:P:154:ALA:CB | 1:P:174:ILE:HD11 | 1.97 | 0.95 |
| 1:P:378:ILE:O | 1:P:378:ILE:HG13 | 1.65 | 0.95 |
| 1:C:42:LYS:NZ | 1:C:453:VAL:HB | 1.82 | 0.94 |
| 1:C:235:LEU:HG | 1:C:310:LEU:CD2 | 1.94 | 0.94 |
| 1:G:178:VAL:CG2 | 1:G:366:VAL:HG22 | 1.97 | 0.94 |
| 1:J:42:LYS:HG3 | 1:J:425:ASN:HB3 | 1.45 | 0.94 |
| 1:K:96:ALA:HB1 | 1:K:480:ALA:HB2 | 1.49 | 0.94 |
| 1:M:235:LEU:HD13 | 1:M:307:ILE:HD13 | 1.48 | 0.94 |
| 1:O:12:MET:SD | 1:O:494:ILE:HG22 | 2.07 | 0.94 |
| 1:A:307:ILE:HD12 | 1:A:307:ILE:O | 1.66 | 0.94 |
| 1:B:235:LEU:HB2 | 1:B:310:LEU:HD21 | 1.49 | 0.94 |
| 1:C:8:LEU:HD13 | 1:C:494:ILE:CG2 | 1.97 | 0.94 |
| 1:C:303:VAL:HG22 | 1:C:303:VAL:O | 1.62 | 0.94 |
| 1:D:174:ILE:HG22 | 1:D:362:VAL:CG2 | 1.97 | 0.94 |
| 1:E:216:LYS:O | 1:E:332:ILE:HG13 | 1.67 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:113:GLN:HE21 | 1:F:113:GLN:CA | 1.76 | 0.94 |
| 1:I:42:LYS:HB3 | 1:I:425:ASN:CB | 1.97 | 0.94 |
| 1:I:208:LEU:HD22 | 1:I:343:VAL:HG21 | 1.48 | 0.94 |
| 1:I:304:ILE:O | 1:I:304:ILE:HG13 | 1.65 | 0.94 |
| 1:J:233:ALA:HB1 | 1:J:310:LEU:CD1 | 1.97 | 0.94 |
| 1:L:310:LEU:HD12 | 1:L:315:LEU:HD11 | 1.49 | 0.94 |
| 1:E:158:ILE:HG22 | 1:E:158:ILE:O | 1.67 | 0.94 |
| 1:E:197:LYS:HB2 | 1:E:355:ILE:CG2 | 1.96 | 0.94 |
| 1:G:368:VAL:CG2 | 1:G:469:PRO:HG2 | 1.97 | 0.94 |
| 1:M:158:ILE:HG21 | 1:M:170:LEU:HD12 | 1.44 | 0.94 |
| 1:I:44:MET:HE2 | 1:I:44:MET:HA | 0.96 | 0.94 |
| 1:K:134:LEU:HD22 | 1:K:392:LYS:CD | 1.96 | 0.94 |
| 1:M:154:ALA:HB1 | 1:M:174:ILE:HD11 | 1.46 | 0.94 |
| 1:M:391:MET:HE1 | 1:M:438:ARG:HB3 | 1.47 | 0.94 |
| 1:P:124:TYR:HE1 | 1:P:407:ALA:CA | 1.81 | 0.94 |
| 1:P:391:MET:CE | 1:P:438:ARG:HB3 | 1.96 | 0.94 |
| 1:B:437:VAL:CG2 | 1:B:451:LEU:HG | 1.96 | 0.94 |
| 1:C:403:ARG:CA | 1:C:406:LEU:HD22 | 1.98 | 0.94 |
| 1:C:441:HIS:ND1 | 1:C:449:ALA:HB3 | 1.81 | 0.94 |
| 1:E:377:ARG:HB3 | 1:E:470:LEU:HG | 1.49 | 0.94 |
| 1:G:368:VAL:HB | 1:G:469:PRO:CG | 1.97 | 0.94 |
| 1:L:486:MET:HG2 | 1:L:487:LEU:N | 1.80 | 0.94 |
| 1:M:47:MET:O | 1:M:47:MET:HG2 | 1.68 | 0.94 |
| 1:O:39:LEU:HG | 1:O:40:GLY:N | 1.79 | 0.94 |
| 1:O:214:VAL:HG12 | 1:O:291:ASP:HB3 | 1.50 | 0.94 |
| 1:C:218:ARG:HH11 | 1:C:218:ARG:HG2 | 1.31 | 0.94 |
| 1:F:100:ALA:HB1 | 1:F:484:THR:CG2 | 1.98 | 0.94 |
| 1:J:166:ALA:HB2 | 1:J:203:ILE:CG2 | 1.96 | 0.94 |
| 1:M:42:LYS:HB3 | 1:M:425:ASN:HB2 | 1.48 | 0.94 |
| 1:N:30:ILE:HG22 | 1:N:31:ILE:HD13 | 1.46 | 0.94 |
| 1:O:68:MET:HA | 1:O:68:MET:CE | 1.98 | 0.94 |
| 1:B:217:GLU:HG2 | 1:B:330:SER:HB2 | 1.48 | 0.94 |
| 1:E:42:LYS:HE3 | 1:E:426:ALA:HB2 | 0.95 | 0.94 |
| 1:F:262:LEU:HD11 | 1:F:310:LEU:CD2 | 1.96 | 0.94 |
| 1:H:235:LEU:HD11 | 1:H:307:ILE:CG2 | 1.96 | 0.94 |
| 1:H:403:ARG:HA | 1:H:406:LEU:CD1 | 1.97 | 0.94 |
| 1:O:18:ARG:HG2 | 1:O:19:ASP:N | 1.82 | 0.94 |
| 1:P:119:ILE:HG13 | 1:P:403:ARG:HG3 | 1.47 | 0.94 |
| 1:P:235:LEU:CD2 | 1:P:307:ILE:HA | 1.98 | 0.94 |
| 1:B:153:ILE:HD11 | 1:B:378:ILE:CG2 | 1.97 | 0.94 |
| 1:B:235:LEU:HD21 | 1:B:307:ILE:CA | 1.97 | 0.94 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:311:SER:O | 1:B:315:LEU:HD22 | 1.67 | 0.94 |
| 1:C:197:LYS:CB | 1:C:355:ILE:HG21 | 1.95 | 0.94 |
| 1:C:254:ILE:HD11 | 1:C:307:ILE:HD11 | 1.50 | 0.94 |
| 1:D:268:ILE:HB | 1:D:273:GLN:HE21 | 1.31 | 0.94 |
| 1:E:254:ILE:HG22 | 1:E:281:ILE:CD1 | 1.97 | 0.94 |
| 1:G:174:ILE:CG2 | 1:G:362:VAL:HB | 1.98 | 0.94 |
| 1:H:223:MET:HG3 | 1:H:277:ALA:HB2 | 1.50 | 0.94 |
| 1:J:119:ILE:HD12 | 1:J:403:ARG:HB2 | 1.48 | 0.94 |
| 1:J:239:ILE:HD12 | 1:J:307:ILE:HG13 | 1.49 | 0.94 |
| 1:K:236:ASN:HA | 1:K:265:GLN:CB | 1.97 | 0.94 |
| 1:L:150:LEU:HD23 | 1:L:175:VAL:HG13 | 1.49 | 0.94 |
| 1:L:233:ALA:HB1 | 1:L:310:LEU:CD1 | 1.97 | 0.94 |
| 1:L:377:ARG:HB3 | 1:L:470:LEU:CD2 | 1.95 | 0.94 |
| 1:M:100:ALA:HB1 | 1:M:484:THR:HG21 | 0.96 | 0.94 |
| 1:M:182:VAL:O | 1:M:182:VAL:CG1 | 2.15 | 0.94 |
| 1:M:473:LYS:HB2 | 1:M:473:LYS:NZ | 1.75 | 0.94 |
| 1:O:113:GLN:CD | 1:O:113:GLN:C | 2.25 | 0.94 |
| 1:O:235:LEU:HD23 | 1:O:307:ILE:H | 1.30 | 0.94 |
| 1:O:341:LYS:CB | 1:O:341:LYS:HZ2 | 1.77 | 0.94 |
| 1:P:182:VAL:HB | 1:P:188:VAL:HG21 | 1.46 | 0.94 |
| 1:C:368:VAL:HG11 | 1:C:472:VAL:HG11 | 1.48 | 0.94 |
| 1:D:192:LEU:CG | 1:D:342:ALA:HB2 | 1.97 | 0.94 |
| 1:D:198:LYS:N | 1:D:355:ILE:HD12 | 1.81 | 0.94 |
| 1:E:217:GLU:HB3 | 1:E:330:SER:HB2 | 1.48 | 0.94 |
| 1:F:119:ILE:HG21 | 1:F:403:ARG:HB2 | 1.49 | 0.94 |
| 1:J:42:LYS:HE2 | 1:J:426:ALA:HA | 1.49 | 0.94 |
| 1:M:437:VAL:HG22 | 1:M:458:VAL:HG13 | 1.47 | 0.94 |
| 1:O:235:LEU:HB2 | 1:O:307:ILE:HA | 1.50 | 0.94 |
| 1:A:345:MET:HE1 | 1:A:362:VAL:HG11 | 1.48 | 0.94 |
| 1:B:174:ILE:CG2 | 1:B:362:VAL:HG22 | 1.98 | 0.94 |
| 1:E:39:LEU:HG | 1:E:40:GLY:N | 1.83 | 0.94 |
| 1:I:155:MET:SD | 1:I:167:LYS:HD2 | 2.08 | 0.94 |
| 1:J:153:ILE:CD1 | 1:J:378:ILE:HG22 | 1.97 | 0.94 |
| 1:J:345:MET:HE1 | 1:J:362:VAL:HG11 | 1.47 | 0.94 |
| 1:K:48:LEU:HD13 | 1:K:68:MET:CE | 1.98 | 0.94 |
| 1:K:473:LYS:HB2 | 1:K:473:LYS:NZ | 1.77 | 0.94 |
| 1:L:237:CYS:CB | 1:L:306:ASN:HA | 1.98 | 0.94 |
| 1:M:177:ALA:HB2 | 1:M:208:LEU:CD1 | 1.98 | 0.94 |
| 1:M:391:MET:HE1 | 1:M:438:ARG:CB | 1.98 | 0.94 |
| 1:O:214:VAL:CG1 | 1:O:291:ASP:HB3 | 1.98 | 0.94 |
| 1:C:383:GLY:HA2 | 1:C:386:GLU:CG | 1.97 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:142:VAL:HG22 | 1:G:149:ILE:HD13 | 1.50 | 0.93 |
| 1:H:22:ARG:HA | 1:H:25:ILE:HD12 | 1.49 | 0.93 |
| 1:M:69:SER:OG | 1:N:9:PRO:HA | 1.67 | 0.93 |
| 1:M:247:LEU:HD22 | 1:M:272:ALA:HB2 | 1.50 | 0.93 |
| 1:A:174:ILE:HD12 | 1:A:365:ALA:HB1 | 1.48 | 0.93 |
| 1:B:250:MET:CE | 1:B:308:LYS:HG2 | 1.98 | 0.93 |
| 1:D:99:VAL:HG11 | 1:D:418:ILE:HD11 | 1.50 | 0.93 |
| 1:D:220:SER:HB2 | 1:D:273:GLN:CB | 1.97 | 0.93 |
| 1:D:364:ASP:O | 1:D:368:VAL:HG22 | 1.67 | 0.93 |
| 1:F:14:ARG:HH12 | 1:G:34:THR:HA | 1.33 | 0.93 |
| 1:F:387:VAL:HG21 | 1:F:437:VAL:HG12 | 1.51 | 0.93 |
| 1:G:34:THR:CG2 | 1:G:35:VAL:HG13 | 1.97 | 0.93 |
| 1:H:327:SER:O | 1:H:327:SER:OG | 1.66 | 0.93 |
| 1:J:42:LYS:CB | 1:J:425:ASN:HB3 | 1.97 | 0.93 |
| 1:J:233:ALA:CB | 1:J:310:LEU:HD11 | 1.99 | 0.93 |
| 1:K:391:MET:HE1 | 1:K:438:ARG:HB3 | 1.49 | 0.93 |
| 1:A:14:ARG:HG3 | 1:A:494:ILE:HG12 | 1.50 | 0.93 |
| 1:B:248:LYS:HD2 | 1:B:275:TYR:CZ | 2.03 | 0.93 |
| 1:D:197:LYS:HA | 1:D:355:ILE:HG22 | 1.48 | 0.93 |
| 1:E:234:LEU:N | 1:E:315:LEU:HD22 | 1.83 | 0.93 |
| 1:F:437:VAL:HG21 | 1:F:451:LEU:CG | 1.97 | 0.93 |
| 1:J:48:LEU:HB2 | 1:J:56:VAL:HG12 | 1.49 | 0.93 |
| 1:K:122:LYS:HA | 1:K:125:GLN:CD | 1.88 | 0.93 |
| 1:K:170:LEU:HD22 | 1:K:358:VAL:CG1 | 1.97 | 0.93 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:CB | 1.98 | 0.93 |
| 1:O:236:ASN:ND2 | 1:O:305:THR:HG23 | 1.82 | 0.93 |
| 1:P:238:ALA:H | 1:P:266:LYS:HB2 | 1.32 | 0.93 |
| 1:A:9:PRO:HD3 | 1:B:68:MET:CG | 1.97 | 0.93 |
| 1:A:135:LEU:HD11 | 1:A:385:THR:CG2 | 1.98 | 0.93 |
| 1:C:158:ILE:HD13 | 1:C:170:LEU:HB2 | 1.49 | 0.93 |
| 1:C:391:MET:CE | 1:C:438:ARG:HG2 | 1.98 | 0.93 |
| 1:E:276:LEU:HD12 | 1:E:281:ILE:HD12 | 1.50 | 0.93 |
| 1:N:235:LEU:HG | 1:N:310:LEU:CD2 | 1.98 | 0.93 |
| 1:O:235:LEU:HB3 | 1:O:310:LEU:HD21 | 1.50 | 0.93 |
| 1:P:42:LYS:HD3 | 1:P:426:ALA:HB2 | 1.49 | 0.93 |
| 1:P:208:LEU:HD13 | 1:P:210:LYS:HE3 | 1.47 | 0.93 |
| 1:B:222:GLN:HB2 | 1:B:277:ALA:HB1 | 1.51 | 0.93 |
| 1:E:195:ILE:O | 1:E:195:ILE:CD1 | 2.16 | 0.93 |
| 1:E:368:VAL:HB | 1:E:469:PRO:CB | 1.99 | 0.93 |
| 1:F:235:LEU:CD1 | 1:F:310:LEU:HB2 | 1.99 | 0.93 |
| 1:G:158:ILE:HD13 | 1:G:170:LEU:HB3 | 1.49 | 0.93 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:262:LEU:HD11 | 1:G:310:LEU:CD2 | 1.97 | 0.93 |
| 1:I:178:VAL:CG1 | 1:I:188:VAL:HG11 | 1.98 | 0.93 |
| 1:J:234:LEU:HG | 1:J:315:LEU:HD21 | 1.51 | 0.93 |
| 1:M:68:MET:HB3 | 1:N:8:LEU:HB3 | 1.49 | 0.93 |
| 1:M:134:LEU:CD1 | 1:M:393:LEU:HD21 | 1.98 | 0.93 |
| 1:M:206:THR:HG23 | 1:M:347:ILE:HG23 | 1.49 | 0.93 |
| 1:M:384:SER:HB2 | 1:M:441:HIS:CE1 | 2.02 | 0.93 |
| 1:F:237:CYS:CA | 1:F:306:ASN:HA | 1.98 | 0.93 |
| 1:K:428:LEU:HD22 | 1:K:429:ASP:H | 1.34 | 0.93 |
| 1:L:36:ARG:HG3 | 1:L:37:SER:H | 1.33 | 0.93 |
| 1:M:119:ILE:HG13 | 1:M:403:ARG:CD | 1.98 | 0.93 |
| 1:M:235:LEU:CD2 | 1:M:307:ILE:HA | 1.98 | 0.93 |
| 1:H:177:ALA:HB2 | 1:H:208:LEU:CD1 | 1.99 | 0.93 |
| 1:I:103:LEU:HD21 | 1:I:411:PHE:CE2 | 2.04 | 0.93 |
| 1:J:174:ILE:HG22 | 1:J:362:VAL:HG23 | 1.50 | 0.93 |
| 1:J:276:LEU:HD12 | 1:J:281:ILE:CD1 | 1.97 | 0.93 |
| 1:L:192:LEU:CG | 1:L:342:ALA:HB2 | 1.99 | 0.93 |
| 1:A:69:SER:O | 1:A:69:SER:OG | 1.77 | 0.93 |
| 1:A:150:LEU:HD23 | 1:A:175:VAL:HG13 | 1.49 | 0.93 |
| 1:C:222:GLN:HB3 | 1:C:277:ALA:HB1 | 1.48 | 0.93 |
| 1:F:233:ALA:HA | 1:F:315:LEU:HD22 | 1.48 | 0.93 |
| 1:A:134:LEU:HB3 | 1:A:392:LYS:HZ1 | 1.34 | 0.93 |
| 1:A:142:VAL:HG21 | 1:A:149:ILE:CG2 | 1.99 | 0.93 |
| 1:A:158:ILE:CD1 | 1:A:170:LEU:HB3 | 1.98 | 0.93 |
| 1:B:166:ALA:HB2 | 1:B:203:ILE:CG2 | 1.98 | 0.93 |
| 1:C:158:ILE:HD13 | 1:C:170:LEU:CB | 1.98 | 0.93 |
| 1:C:406:LEU:HD21 | 1:L:431:ILE:HD12 | 1.50 | 0.93 |
| 1:C:431:ILE:HD12 | 1:L:406:LEU:HD22 | 1.49 | 0.93 |
| 1:G:368:VAL:CB | 1:G:469:PRO:HG2 | 1.99 | 0.93 |
| 1:I:156:THR:HG21 | 1:I:468:GLU:HB3 | 1.48 | 0.93 |
| 1:I:170:LEU:HD21 | 1:I:358:VAL:CG2 | 1.98 | 0.93 |
| 1:K:100:ALA:HB1 | 1:K:484:THR:HG21 | 0.95 | 0.93 |
| 1:N:192:LEU:HB3 | 1:N:342:ALA:CA | 1.99 | 0.93 |
| 1:E:35:VAL:HG23 | 1:E:94:THR:HG23 | 1.51 | 0.93 |
| 1:E:42:LYS:HG3 | 1:E:425:ASN:CB | 1.99 | 0.93 |
| 1:G:219:VAL:CG1 | 1:G:273:GLN:HG2 | 1.99 | 0.93 |
| 1:H:154:ALA:HB1 | 1:H:174:ILE:HD11 | 0.95 | 0.93 |
| 1:K:222:GLN:CB | 1:K:277:ALA:HB1 | 1.98 | 0.93 |
| 1:L:158:ILE:CD1 | 1:L:170:LEU:HB3 | 1.99 | 0.93 |
| 1:A:206:THR:HG22 | 1:A:348:ARG:H | 1.33 | 0.92 |
| 1:C:130:LYS:HE2 | 1:C:134:LEU:CD1 | 1.98 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:9:PRO:HD3 | 1:F:68:MET:HE2 | 1.51 | 0.92 |
| 1:M:68:MET:HB3 | 1:N:8:LEU:CA | 1.99 | 0.92 |
| 1:M:197:LYS:HA | 1:M:355:ILE:CG2 | 1.98 | 0.92 |
| 1:P:437:VAL:HG22 | 1:P:458:VAL:HB | 1.51 | 0.92 |
| 1:A:403:ARG:HH11 | 1:A:403:ARG:HG3 | 1.34 | 0.92 |
| 1:C:391:MET:HE3 | 1:C:438:ARG:HG2 | 1.51 | 0.92 |
| 1:F:142:VAL:HG21 | 1:F:149:ILE:HG21 | 1.50 | 0.92 |
| 1:F:206:THR:HG22 | 1:F:348:ARG:N | 1.83 | 0.92 |
| 1:F:233:ALA:CB | 1:F:310:LEU:HD11 | 1.99 | 0.92 |
| 1:H:77:MET:CE | 1:H:487:LEU:HD21 | 2.00 | 0.92 |
| 1:I:461:MET:N | 1:I:461:MET:HE2 | 1.84 | 0.92 |
| 1:J:25:ILE:HD13 | 1:J:108:GLU:OE2 | 1.69 | 0.92 |
| 1:J:234:LEU:HD11 | 1:J:301:ALA:HB3 | 1.52 | 0.92 |
| 1:K:116:HIS:CG | 1:K:117:PRO:HD2 | 2.05 | 0.92 |
| 1:K:156:THR:HG21 | 1:K:468:GLU:HB3 | 1.51 | 0.92 |
| 1:K:289:LYS:HB2 | 1:K:292:MET:HB2 | 1.50 | 0.92 |
| 1:L:174:ILE:HD12 | 1:L:365:ALA:HB1 | 1.50 | 0.92 |
| 1:A:30:ILE:HG22 | 1:A:31:ILE:CG1 | 2.00 | 0.92 |
| 1:E:234:LEU:HD11 | 1:E:301:ALA:CB | 2.00 | 0.92 |
| 1:F:9:PRO:HD2 | 1:F:12:MET:HG2 | 1.51 | 0.92 |
| 1:I:235:LEU:HD23 | 1:I:310:LEU:CD1 | 1.97 | 0.92 |
| 1:J:142:VAL:HG11 | 1:J:149:ILE:HG21 | 1.51 | 0.92 |
| 1:L:174:ILE:HG22 | 1:L:362:VAL:CG2 | 1.98 | 0.92 |
| 1:C:9:PRO:HD3 | 1:D:68:MET:CA | 1.99 | 0.92 |
| 1:F:154:ALA:CB | 1:F:174:ILE:HD11 | 1.99 | 0.92 |
| 1:F:235:LEU:HG | 1:F:307:ILE:CA | 1.99 | 0.92 |
| 1:L:96:ALA:HA | 1:L:480:ALA:CB | 1.98 | 0.92 |
| 1:N:103:LEU:HD21 | 1:N:411:PHE:CE2 | 2.05 | 0.92 |
| 1:P:223:MET:HE3 | 1:P:273:GLN:CB | 1.96 | 0.92 |
| 1:P:237:CYS:HB3 | 1:P:306:ASN:HA | 1.51 | 0.92 |
| 1:E:116:HIS:CG | 1:E:117:PRO:HD2 | 2.05 | 0.92 |
| 1:E:268:ILE:CG2 | 1:E:273:GLN:HG3 | 1.98 | 0.92 |
| 1:H:265:GLN:HE22 | 1:H:289:LYS:HD2 | 1.31 | 0.92 |
| 1:L:154:ALA:CB | 1:L:174:ILE:HD11 | 1.99 | 0.92 |
| 1:L:405:GLN:HG2 | 1:L:406:LEU:H | 1.34 | 0.92 |
| 1:M:68:MET:HA | 1:N:9:PRO:HG3 | 1.50 | 0.92 |
| 1:N:379:VAL:HG11 | 1:N:473:LYS:HG3 | 1.51 | 0.92 |
| 1:O:42:LYS:HE2 | 1:O:426:ALA:HA | 1.51 | 0.92 |
| 1:O:68:MET:HG3 | 1:P:8:LEU:HD12 | 1.49 | 0.92 |
| 1:B:42:LYS:HE3 | 1:B:453:VAL:HB | 1.48 | 0.92 |
| 1:C:383:GLY:HA2 | 1:C:386:GLU:HG2 | 1.51 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:431:ILE:HD11 | 1:M:403:ARG:N | 1.84 | 0.92 |
| 1:H:379:VAL:O | 1:H:467:VAL:HG12 | 1.69 | 0.92 |
| 1:H:437:VAL:HG21 | 1:H:451:LEU:HG | 1.51 | 0.92 |
| 1:K:70:VAL:HG11 | 1:K:76:LYS:CG | 1.99 | 0.92 |
| 1:M:232:ILE:HD13 | 1:M:261:VAL:HG11 | 1.49 | 0.92 |
| 1:M:239:ILE:HG22 | 1:M:307:ILE:HG21 | 1.50 | 0.92 |
| 1:A:88:GLU:CD | 1:A:475:GLN:HG2 | 1.89 | 0.92 |
| 1:B:18:ARG:C | 1:B:21:GLN:HG3 | 1.88 | 0.92 |
| 1:C:219:VAL:HG23 | 1:C:285:ARG:HB2 | 1.46 | 0.92 |
| 1:C:233:ALA:CA | 1:C:315:LEU:HD22 | 1.98 | 0.92 |
| 1:H:345:MET:CE | 1:H:362:VAL:HG11 | 1.99 | 0.92 |
| 1:K:116:HIS:CD2 | 1:K:117:PRO:HD2 | 2.03 | 0.92 |
| 1:N:68:MET:HG3 | 1:O:8:LEU:CD2 | 1.99 | 0.92 |
| 1:N:220:SER:HB3 | 1:N:223:MET:SD | 2.08 | 0.92 |
| 1:P:138:ILE:HD13 | 1:P:385:THR:HB | 1.49 | 0.92 |
| 1:B:488:LEU:CD2 | 1:B:488:LEU:C | 2.21 | 0.92 |
| 1:C:437:VAL:HG21 | 1:C:451:LEU:CG | 1.99 | 0.92 |
| 1:D:81:VAL:HG11 | 1:D:483:SER:CB | 1.99 | 0.92 |
| 1:E:397:ALA:HB2 | 1:E:408:VAL:HG23 | 1.48 | 0.92 |
| 1:I:48:LEU:O | 1:I:56:VAL:HG22 | 1.68 | 0.92 |
| 1:J:34:THR:HA | 1:K:14:ARG:HH22 | 1.31 | 0.92 |
| 1:J:233:ALA:CA | 1:J:315:LEU:HD22 | 2.00 | 0.92 |
| 1:K:235:LEU:CD2 | 1:K:307:ILE:HA | 2.00 | 0.92 |
| 1:M:304:ILE:HD12 | 1:M:309:ASP:HB2 | 1.49 | 0.92 |
| 1:M:448:CYS:CB | 1:M:460:ASP:HA | 2.00 | 0.92 |
| 1:P:235:LEU:HG | 1:P:307:ILE:HD12 | 1.50 | 0.92 |
| 1:P:339:HIS:CG | 1:P:339:HIS:O | 2.19 | 0.92 |
| 1:A:218:ARG:CZ | 1:A:282:VAL:HG21 | 1.99 | 0.92 |
| 1:B:181:VAL:HG12 | 1:B:341:LYS:O | 1.70 | 0.92 |
| 1:D:42:LYS:HG3 | 1:D:425:ASN:HB2 | 1.51 | 0.92 |
| 1:F:158:ILE:O | 1:F:158:ILE:CG2 | 2.18 | 0.92 |
| 1:H:420:ARG:HG2 | 1:H:420:ARG:NH1 | 1.71 | 0.92 |
| 1:J:197:LYS:CB | 1:J:355:ILE:HG21 | 1.99 | 0.92 |
| 1:J:233:ALA:HB1 | 1:J:310:LEU:HD11 | 1.51 | 0.92 |
| 1:L:165:LYS:HA | 1:L:165:LYS:CE | 1.96 | 0.92 |
| 1:L:206:THR:HG22 | 1:L:347:ILE:HA | 1.51 | 0.92 |
| 1:O:193:ILE:HD12 | 1:O:366:VAL:HG21 | 1.52 | 0.92 |
| 1:O:235:LEU:HD23 | 1:O:307:ILE:N | 1.83 | 0.92 |
| 1:A:68:MET:HA | 1:H:9:PRO:CD | 1.98 | 0.92 |
| 1:B:8:LEU:CD2 | 1:C:68:MET:HG3 | 2.00 | 0.92 |
| 1:C:89:VAL:CG2 | 1:C:89:VAL:O | 2.18 | 0.92 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:106:LYS:HE3 | 1:E:109:GLU:OE2 | 1.70 | 0.92 |
| 1:G:276:LEU:CD1 | 1:G:281:ILE:HG21 | 1.97 | 0.92 |
| 1:K:69:SER:HB3 | 1:L:9:PRO:CB | 2.00 | 0.92 |
| 1:L:156:THR:CG2 | 1:L:468:GLU:HA | 2.00 | 0.92 |
| 1:L:235:LEU:C | 1:L:235:LEU:HD23 | 1.89 | 0.92 |
| 1:C:218:ARG:HH11 | 1:C:218:ARG:CG | 1.82 | 0.91 |
| 1:D:119:ILE:CG2 | 1:D:403:ARG:HB2 | 1.99 | 0.91 |
| 1:E:9:PRO:HD2 | 1:E:12:MET:SD | 2.10 | 0.91 |
| 1:F:9:PRO:CA | 1:G:69:SER:HA | 1.99 | 0.91 |
| 1:G:85:GLN:HE22 | 1:G:476:ALA:HA | 1.34 | 0.91 |
| 1:H:17:GLY:O | 1:H:21:GLN:HB2 | 1.69 | 0.91 |
| 1:J:135:LEU:CD2 | 1:J:389:LEU:HD21 | 1.99 | 0.91 |
| 1:A:9:PRO:HA | 1:B:69:SER:CB | 1.99 | 0.91 |
| 1:D:237:CYS:HA | 1:D:306:ASN:CA | 1.99 | 0.91 |
| 1:E:178:VAL:HG13 | 1:E:188:VAL:CG1 | 2.00 | 0.91 |
| 1:F:100:ALA:CB | 1:F:484:THR:HG21 | 2.00 | 0.91 |
| 1:F:459:GLU:CD | 1:F:461:MET:HE1 | 1.89 | 0.91 |
| 1:I:124:TYR:HE1 | 1:I:407:ALA:CA | 1.82 | 0.91 |
| 1:J:403:ARG:HG3 | 1:J:403:ARG:NH1 | 1.78 | 0.91 |
| 1:B:312:ALA:CB | 1:B:315:LEU:HB2 | 2.00 | 0.91 |
| 1:C:100:ALA:HB1 | 1:C:484:THR:HG21 | 1.52 | 0.91 |
| 1:C:124:TYR:N | 1:C:124:TYR:HD1 | 1.64 | 0.91 |
| 1:C:145:GLN:O | 1:C:145:GLN:CG | 2.18 | 0.91 |
| 1:F:188:VAL:CG2 | 1:F:373:ILE:HD12 | 2.01 | 0.91 |
| 1:F:212:VAL:HG23 | 1:F:298:ALA:HB2 | 1.50 | 0.91 |
| 1:F:254:ILE:HD13 | 1:F:262:LEU:CD1 | 2.00 | 0.91 |
| 1:G:89:VAL:O | 1:G:89:VAL:CG2 | 2.18 | 0.91 |
| 1:J:235:LEU:O | 1:J:264:CYS:HA | 1.71 | 0.91 |
| 1:K:130:LYS:HZ2 | 1:K:393:LEU:HD23 | 1.33 | 0.91 |
| 1:K:460:ASP:OD1 | 1:K:460:ASP:C | 2.05 | 0.91 |
| 1:N:237:CYS:HB3 | 1:N:306:ASN:HA | 1.52 | 0.91 |
| 1:O:27:ALA:HA | 1:O:30:ILE:CD1 | 2.00 | 0.91 |
| 1:P:339:HIS:CE1 | 1:P:341:LYS:HG3 | 2.05 | 0.91 |
| 1:B:127:ALA:HB2 | 1:B:408:VAL:HG12 | 1.52 | 0.91 |
| 1:B:134:LEU:HB3 | 1:B:392:LYS:NZ | 1.85 | 0.91 |
| 1:I:406:LEU:HD23 | 1:I:406:LEU:H | 1.33 | 0.91 |
| 1:L:217:GLU:HG2 | 1:L:330:SER:HB2 | 1.51 | 0.91 |
| 1:N:77:MET:HA | 1:N:80:GLU:OE1 | 1.70 | 0.91 |
| 1:A:358:VAL:O | 1:A:362:VAL:HG12 | 1.69 | 0.91 |
| 1:C:403:ARG:C | 1:C:406:LEU:HD22 | 1.91 | 0.91 |
| 1:D:339:HIS:HE1 | 1:D:341:LYS:HD2 | 1.32 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:113:GLN:NE2 | 1:F:113:GLN:CA | 2.31 | 0.91 |
| 1:F:304:ILE:HD12 | 1:F:309:ASP:CB | 2.01 | 0.91 |
| 1:G:397:ALA:HB2 | 1:G:408:VAL:HG23 | 1.52 | 0.91 |
| 1:I:153:ILE:HD11 | 1:I:378:ILE:CG2 | 2.00 | 0.91 |
| 1:L:12:MET:CG | 1:L:494:ILE:HG22 | 1.99 | 0.91 |
| 1:L:105:ARG:HD3 | 1:L:106:LYS:CG | 1.97 | 0.91 |
| 1:L:211:GLY:HA2 | 1:L:298:ALA:HB2 | 1.52 | 0.91 |
| 1:M:38:THR:CG2 | 1:M:46:LYS:HE2 | 2.00 | 0.91 |
| 1:O:192:LEU:HB2 | 1:O:342:ALA:HB2 | 1.52 | 0.91 |
| 1:P:437:VAL:HG21 | 1:P:451:LEU:HG | 1.51 | 0.91 |
| 1:A:174:ILE:HG22 | 1:A:362:VAL:CG2 | 2.00 | 0.91 |
| 1:B:14:ARG:NH1 | 1:C:34:THR:HA | 1.84 | 0.91 |
| 1:C:64:ILE:HG23 | 1:C:65:LEU:HD22 | 1.53 | 0.91 |
| 1:C:170:LEU:HD22 | 1:C:358:VAL:HG13 | 1.51 | 0.91 |
| 1:C:435:VAL:HG11 | 1:L:401:SER:CB | 2.00 | 0.91 |
| 1:D:215:ASP:OD1 | 1:D:331:MET:HG2 | 1.70 | 0.91 |
| 1:E:389:LEU:HD13 | 1:E:415:LEU:HD13 | 1.51 | 0.91 |
| 1:E:391:MET:HE3 | 1:E:438:ARG:HB3 | 0.92 | 0.91 |
| 1:H:182:VAL:HB | 1:H:188:VAL:CG2 | 1.99 | 0.91 |
| 1:A:379:VAL:HG11 | 1:A:473:LYS:HG3 | 1.51 | 0.91 |
| 1:E:154:ALA:CB | 1:E:174:ILE:HD11 | 2.01 | 0.91 |
| 1:E:380:SER:HB2 | 1:E:384:SER:CB | 2.00 | 0.91 |
| 1:G:216:LYS:HG3 | 1:G:287:VAL:HG22 | 1.52 | 0.91 |
| 1:J:237:CYS:HA | 1:J:306:ASN:CA | 1.99 | 0.91 |
| 1:K:237:CYS:CA | 1:K:306:ASN:HA | 2.00 | 0.91 |
| 1:K:239:ILE:CG2 | 1:K:307:ILE:HG21 | 1.99 | 0.91 |
| 1:L:174:ILE:CG2 | 1:L:362:VAL:HG23 | 2.00 | 0.91 |
| 1:F:437:VAL:HG21 | 1:F:451:LEU:HG | 1.53 | 0.91 |
| 1:G:121:VAL:O | 1:G:125:GLN:HG2 | 1.69 | 0.91 |
| 1:H:177:ALA:HB2 | 1:H:208:LEU:HD11 | 1.52 | 0.91 |
| 1:H:237:CYS:HB2 | 1:H:306:ASN:CB | 2.01 | 0.91 |
| 1:H:368:VAL:CG2 | 1:H:469:PRO:HG3 | 2.01 | 0.91 |
| 1:K:403:ARG:CG | 1:K:403:ARG:NH1 | 2.12 | 0.91 |
| 1:L:34:THR:HA | 1:M:14:ARG:NH2 | 1.85 | 0.91 |
| 1:L:127:ALA:HB2 | 1:L:408:VAL:HG12 | 1.51 | 0.91 |
| 1:L:308:LYS:NZ | 1:L:308:LYS:HB2 | 1.83 | 0.91 |
| 1:N:119:ILE:HD12 | 1:N:403:ARG:CB | 1.98 | 0.91 |
| 1:N:212:VAL:HG21 | 1:N:294:LYS:C | 1.91 | 0.91 |
| 1:O:254:ILE:HG21 | 1:O:262:LEU:HD13 | 1.53 | 0.91 |
| 1:P:237:CYS:CB | 1:P:306:ASN:HA | 2.00 | 0.91 |
| 1:P:327:SER:O | 1:P:327:SER:OG | 1.85 | 0.91 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:158:ILE:CG2 | 1:C:158:ILE:O | 2.16 | 0.91 |
| 1:C:182:VAL:HB | 1:C:188:VAL:HG13 | 1.49 | 0.91 |
| 1:E:89:VAL:HG22 | 1:E:89:VAL:O | 1.69 | 0.91 |
| 1:E:177:ALA:HB1 | 1:E:193:ILE:HD13 | 1.50 | 0.91 |
| 1:F:124:TYR:CE1 | 1:F:407:ALA:HB1 | 2.05 | 0.91 |
| 1:K:12:MET:SD | 1:K:494:ILE:HG22 | 2.10 | 0.91 |
| 1:P:44:MET:CE | 1:P:44:MET:CA | 2.49 | 0.91 |
| 1:A:72:HIS:HD2 | 1:A:73:PRO:CD | 1.84 | 0.91 |
| 1:B:71:GLU:HG3 | 1:B:72:HIS:H | 1.33 | 0.91 |
| 1:D:8:LEU:N | 1:E:70:VAL:HA | 1.84 | 0.91 |
| 1:D:188:VAL:HG21 | 1:D:373:ILE:HG13 | 1.51 | 0.91 |
| 1:E:452:ASN:HD21 | 1:E:454:PHE:HB2 | 1.36 | 0.91 |
| 1:H:234:LEU:H | 1:H:315:LEU:HD11 | 1.34 | 0.91 |
| 1:L:178:VAL:HG22 | 1:L:366:VAL:HG13 | 1.53 | 0.91 |
| 1:L:235:LEU:CB | 1:L:310:LEU:HD22 | 2.01 | 0.91 |
| 1:M:68:MET:HA | 1:N:9:PRO:CG | 2.01 | 0.91 |
| 1:A:195:ILE:CB | 1:A:359:ALA:HB1 | 2.01 | 0.90 |
| 1:B:250:MET:HE2 | 1:B:308:LYS:HG2 | 1.50 | 0.90 |
| 1:D:223:MET:HE1 | 1:D:283:ALA:HB3 | 1.54 | 0.90 |
| 1:D:459:GLU:HG2 | 1:D:461:MET:HE1 | 1.53 | 0.90 |
| 1:G:158:ILE:CD1 | 1:G:170:LEU:HB3 | 2.01 | 0.90 |
| 1:I:195:ILE:HB | 1:I:359:ALA:HB2 | 1.51 | 0.90 |
| 1:I:238:ALA:O | 1:I:307:ILE:HB | 1.70 | 0.90 |
| 1:K:233:ALA:CA | 1:K:315:LEU:HG | 2.01 | 0.90 |
| 1:L:166:ALA:HB2 | 1:L:203:ILE:HG22 | 0.92 | 0.90 |
| 1:L:420:ARG:HH11 | 1:L:420:ARG:HG2 | 1.36 | 0.90 |
| 1:M:120:VAL:HG22 | 1:M:120:VAL:O | 1.71 | 0.90 |
| 1:M:233:ALA:HB1 | 1:M:310:LEU:HD21 | 1.52 | 0.90 |
| 1:N:78:LEU:HD12 | 1:N:487:LEU:HD11 | 1.53 | 0.90 |
| 1:N:233:ALA:CA | 1:N:315:LEU:HD22 | 2.01 | 0.90 |
| 1:O:96:ALA:CA | 1:O:480:ALA:HB2 | 2.01 | 0.90 |
| 1:C:140:CYS:SG | 1:C:447:LYS:HB3 | 2.11 | 0.90 |
| 1:D:313:GLN:H | 1:D:313:GLN:HE21 | 0.97 | 0.90 |
| 1:N:123:GLY:HA3 | 1:N:407:ALA:CB | 2.00 | 0.90 |
| 1:P:347:ILE:HG21 | 1:P:358:VAL:CG1 | 2.01 | 0.90 |
| 1:A:135:LEU:HD11 | 1:A:385:THR:HG23 | 1.53 | 0.90 |
| 1:A:405:GLN:HB3 | 1:A:406:LEU:CD1 | 2.00 | 0.90 |
| 1:H:130:LYS:HE3 | 1:H:393:LEU:HD13 | 1.53 | 0.90 |
| 1:I:223:MET:HB3 | 1:I:282:VAL:HA | 1.50 | 0.90 |
| 1:L:206:THR:HG21 | 1:L:347:ILE:HG23 | 1.52 | 0.90 |
| 1:O:113:GLN:C | 1:O:113:GLN:NE2 | 2.24 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:124:TYR:HE1 | 1:B:407:ALA:CA | 1.83 | 0.90 |
| 1:B:152:LYS:HG2 | 1:B:465:GLY:O | 1.70 | 0.90 |
| 1:C:150:LEU:HD23 | 1:C:175:VAL:CG1 | 2.00 | 0.90 |
| 1:D:142:VAL:CG1 | 1:D:149:ILE:HD13 | 2.01 | 0.90 |
| 1:E:368:VAL:CB | 1:E:469:PRO:HG3 | 2.01 | 0.90 |
| 1:E:431:ILE:HD12 | 1:N:406:LEU:HD11 | 1.50 | 0.90 |
| 1:F:234:LEU:HG | 1:F:315:LEU:HD21 | 1.52 | 0.90 |
| 1:G:166:ALA:HB2 | 1:G:203:ILE:CB | 2.00 | 0.90 |
| 1:G:431:ILE:HG13 | 1:P:406:LEU:HD11 | 1.51 | 0.90 |
| 1:H:12:MET:CE | 1:H:494:ILE:HG23 | 2.01 | 0.90 |
| 1:J:8:LEU:HD22 | 1:J:494:ILE:HD13 | 1.51 | 0.90 |
| 1:N:254:ILE:HG12 | 1:N:310:LEU:HD23 | 1.53 | 0.90 |
| 1:P:251:VAL:CG1 | 1:P:276:LEU:HG | 2.01 | 0.90 |
| 1:D:299:THR:HG22 | 1:D:318:ALA:HB2 | 1.52 | 0.90 |
| 1:F:233:ALA:CA | 1:F:315:LEU:HD22 | 2.01 | 0.90 |
| 1:H:116:HIS:CG | 1:H:117:PRO:HD2 | 2.06 | 0.90 |
| 1:J:437:VAL:HG21 | 1:J:451:LEU:HG | 1.53 | 0.90 |
| 1:K:214:VAL:HG11 | 1:K:295:LEU:HD11 | 1.53 | 0.90 |
| 1:L:437:VAL:HG21 | 1:L:451:LEU:CG | 2.01 | 0.90 |
| 1:N:233:ALA:HB1 | 1:N:310:LEU:HD11 | 1.51 | 0.90 |
| 1:C:158:ILE:HG21 | 1:C:170:LEU:HD12 | 1.52 | 0.90 |
| 1:D:326:ILE:HG23 | 1:D:326:ILE:O | 1.70 | 0.90 |
| 1:E:9:PRO:HD2 | 1:F:68:MET:HE2 | 1.53 | 0.90 |
| 1:G:233:ALA:HA | 1:G:315:LEU:CG | 2.01 | 0.90 |
| 1:H:27:ALA:HB1 | 1:H:75:ALA:HB2 | 1.54 | 0.90 |
| 1:H:152:LYS:HG2 | 1:H:465:GLY:CA | 2.00 | 0.90 |
| 1:L:217:GLU:CD | 1:L:330:SER:HB2 | 1.91 | 0.90 |
| 1:M:105:ARG:NE | 1:M:106:LYS:HG2 | 1.87 | 0.90 |
| 1:N:113:GLN:HA | 1:N:113:GLN:NE2 | 1.83 | 0.90 |
| 1:O:469:PRO:CD | 1:O:472:VAL:HG11 | 2.00 | 0.90 |
| 1:P:124:TYR:CE1 | 1:P:407:ALA:HB1 | 2.07 | 0.90 |
| 1:A:105:ARG:HD3 | 1:A:106:LYS:HG2 | 1.52 | 0.90 |
| 1:B:105:ARG:HH11 | 1:B:105:ARG:HG2 | 1.35 | 0.90 |
| 1:B:233:ALA:CB | 1:B:315:LEU:HD21 | 2.02 | 0.90 |
| 1:F:248:LYS:HE2 | 1:F:275:TYR:CE1 | 2.07 | 0.90 |
| 1:H:215:ASP:OD2 | 1:H:331:MET:HG2 | 1.72 | 0.90 |
| 1:I:77:MET:HB3 | 1:I:487:LEU:HD21 | 1.52 | 0.90 |
| 1:K:154:ALA:HB1 | 1:K:174:ILE:HD11 | 1.54 | 0.90 |
| 1:E:210:LYS:HG3 | 1:E:343:VAL:CG2 | 2.01 | 0.90 |
| 1:F:257:SER:OG | 1:F:311:SER:HA | 1.71 | 0.90 |
| 1:G:233:ALA:HB1 | 1:G:310:LEU:HD11 | 1.54 | 0.90 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:124:TYR:N | 1:H:124:TYR:HD1 | 1.70 | 0.90 |
| 1:J:178:VAL:HG21 | 1:J:366:VAL:HG13 | 1.54 | 0.90 |
| 1:J:299:THR:HG22 | 1:J:318:ALA:HB2 | 1.53 | 0.90 |
| 1:L:68:MET:CB | 1:M:8:LEU:HD23 | 2.02 | 0.90 |
| 1:L:69:SER:C | 1:M:9:PRO:HA | 1.92 | 0.90 |
| 1:L:77:MET:CE | 1:L:486:MET:HE3 | 2.02 | 0.90 |
| 1:N:268:ILE:CG2 | 1:N:273:GLN:HG3 | 2.02 | 0.90 |
| 1:P:12:MET:SD | 1:P:494:ILE:HG22 | 2.12 | 0.90 |
| 1:P:276:LEU:HB3 | 1:P:281:ILE:HB | 1.53 | 0.90 |
| 1:E:235:LEU:CD1 | 1:E:307:ILE:HB | 2.00 | 0.90 |
| 1:G:220:SER:HB3 | 1:G:277:ALA:HB2 | 1.54 | 0.90 |
| 1:I:12:MET:HE2 | 1:P:68:MET:SD | 2.11 | 0.90 |
| 1:M:247:LEU:HD22 | 1:M:272:ALA:CB | 2.02 | 0.90 |
| 1:M:296:ALA:HA | 1:M:301:ALA:HB3 | 1.54 | 0.90 |
| 1:C:89:VAL:O | 1:C:89:VAL:HG22 | 1.72 | 0.90 |
| 1:C:158:ILE:O | 1:C:158:ILE:HG22 | 1.71 | 0.90 |
| 1:C:403:ARG:HH11 | 1:C:403:ARG:CG | 1.67 | 0.90 |
| 1:D:14:ARG:NH2 | 1:E:34:THR:HA | 1.86 | 0.90 |
| 1:H:119:ILE:CG1 | 1:H:403:ARG:HD3 | 2.01 | 0.90 |
| 1:I:12:MET:HG2 | 1:I:494:ILE:CG2 | 2.01 | 0.90 |
| 1:J:170:LEU:HD22 | 1:J:358:VAL:HG13 | 1.52 | 0.90 |
| 1:L:70:VAL:C | 1:M:9:PRO:HD2 | 1.91 | 0.90 |
| 1:L:193:ILE:HD12 | 1:L:366:VAL:HG11 | 1.50 | 0.90 |
| 1:M:134:LEU:HD11 | 1:M:393:LEU:HD21 | 1.52 | 0.90 |
| 1:M:142:VAL:HB | 1:M:149:ILE:HD13 | 1.53 | 0.90 |
| 1:A:134:LEU:HB3 | 1:A:392:LYS:NZ | 1.86 | 0.89 |
| 1:A:154:ALA:HB1 | 1:A:174:ILE:HD11 | 0.94 | 0.89 |
| 1:D:62:VAL:HG13 | 1:D:63:THR:N | 1.84 | 0.89 |
| 1:G:464:ASN:CB | 1:G:466:VAL:HG22 | 2.02 | 0.89 |
| 1:K:223:MET:HE3 | 1:K:276:LEU:HB3 | 1.54 | 0.89 |
| 1:N:49:VAL:O | 1:O:12:MET:HE3 | 1.73 | 0.89 |
| 1:P:239:ILE:HD12 | 1:P:307:ILE:HG12 | 1.54 | 0.89 |
| 1:P:254:ILE:HD13 | 1:P:262:LEU:HD13 | 1.52 | 0.89 |
| 1:P:345:MET:CE | 1:P:362:VAL:HG11 | 2.02 | 0.89 |
| 1:B:254:ILE:HD13 | 1:B:262:LEU:HD13 | 1.54 | 0.89 |
| 1:D:42:LYS:HD2 | 1:D:425:ASN:O | 1.72 | 0.89 |
| 1:D:222:GLN:CB | 1:D:277:ALA:HB1 | 2.02 | 0.89 |
| 1:F:130:LYS:HE3 | 1:F:134:LEU:CD1 | 2.02 | 0.89 |
| 1:I:461:MET:CE | 1:I:461:MET:N | 2.36 | 0.89 |
| 1:L:248:LYS:HD2 | 1:L:275:TYR:CE2 | 2.06 | 0.89 |
| 1:L:405:GLN:HG2 | 1:L:406:LEU:N | 1.86 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:119:ILE:HG21 | 1:N:403:ARG:HB2 | 1.54 | 0.89 |
| 1:A:255:LYS:HD3 | 1:A:279:GLU:HG2 | 1.52 | 0.89 |
| 1:D:433:ILE:CG2 | 1:D:451:LEU:HD23 | 2.01 | 0.89 |
| 1:E:166:ALA:HB2 | 1:E:203:ILE:HB | 1.54 | 0.89 |
| 1:E:178:VAL:HG21 | 1:E:366:VAL:CB | 2.02 | 0.89 |
| 1:G:262:LEU:CD1 | 1:G:310:LEU:HD21 | 2.00 | 0.89 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:CB | 2.02 | 0.89 |
| 1:N:156:THR:HG21 | 1:N:468:GLU:CA | 2.02 | 0.89 |
| 1:B:233:ALA:HB2 | 1:B:315:LEU:HD21 | 1.52 | 0.89 |
| 1:C:100:ALA:HB1 | 1:C:484:THR:CG2 | 2.01 | 0.89 |
| 1:I:100:ALA:HB1 | 1:I:484:THR:HG21 | 0.94 | 0.89 |
| 1:I:222:GLN:HB3 | 1:I:277:ALA:HB1 | 0.92 | 0.89 |
| 1:K:14:ARG:HD2 | 1:K:494:ILE:CD1 | 2.01 | 0.89 |
| 1:L:96:ALA:HA | 1:L:480:ALA:HB2 | 1.54 | 0.89 |
| 1:O:338:LYS:CE | 1:O:339:HIS:HB2 | 2.02 | 0.89 |
| 1:G:152:LYS:CG | 1:G:465:GLY:HA3 | 2.02 | 0.89 |
| 1:G:238:ALA:N | 1:G:266:LYS:HB2 | 1.87 | 0.89 |
| 1:G:433:ILE:CG2 | 1:G:451:LEU:HD23 | 2.01 | 0.89 |
| 1:I:152:LYS:HD2 | 1:I:465:GLY:HA2 | 1.54 | 0.89 |
| 1:J:68:MET:CG | 1:K:8:LEU:HD22 | 2.01 | 0.89 |
| 1:K:129:GLN:O | 1:K:132:GLN:HB2 | 1.73 | 0.89 |
| 1:O:214:VAL:HG12 | 1:O:291:ASP:CB | 2.03 | 0.89 |
| 1:B:420:ARG:HG2 | 1:B:420:ARG:NH1 | 1.73 | 0.89 |
| 1:F:9:PRO:HD2 | 1:G:68:MET:HG3 | 1.52 | 0.89 |
| 1:G:134:LEU:HD11 | 1:G:393:LEU:HD21 | 1.55 | 0.89 |
| 1:G:247:LEU:HD22 | 1:G:272:ALA:CB | 2.01 | 0.89 |
| 1:J:216:LYS:O | 1:J:332:ILE:HG13 | 1.72 | 0.89 |
| 1:L:448:CYS:HB2 | 1:L:460:ASP:OD1 | 1.73 | 0.89 |
| 1:O:77:MET:HE1 | 1:O:486:MET:CE | 2.03 | 0.89 |
| 1:O:124:TYR:HE1 | 1:O:407:ALA:CA | 1.85 | 0.89 |
| 1:O:197:LYS:HB3 | 1:O:355:ILE:CG2 | 2.03 | 0.89 |
| 1:O:215:ASP:OD1 | 1:O:215:ASP:O | 1.91 | 0.89 |
| 1:P:235:LEU:HD11 | 1:P:307:ILE:HG22 | 1.51 | 0.89 |
| 1:B:431:ILE:HD12 | 1:K:406:LEU:CD1 | 2.03 | 0.89 |
| 1:C:166:ALA:HB2 | 1:C:203:ILE:HB | 1.54 | 0.89 |
| 1:C:453:VAL:HG23 | 1:C:454:PHE:CD1 | 2.08 | 0.89 |
| 1:D:166:ALA:HB2 | 1:D:203:ILE:HG22 | 1.50 | 0.89 |
| 1:D:239:ILE:HB | 1:D:307:ILE:HG21 | 1.52 | 0.89 |
| 1:F:62:VAL:HG13 | 1:F:63:THR:H | 1.34 | 0.89 |
| 1:G:152:LYS:HE3 | 1:G:462:CYS:HA | 1.55 | 0.89 |
| 1:G:193:ILE:HG23 | 1:G:343:VAL:HG13 | 1.55 | 0.89 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:473:LYS:HB2 | 1:G:473:LYS:NZ | 1.87 | 0.89 |
| 1:K:142:VAL:CG1 | 1:K:149:ILE:HD13 | 2.03 | 0.89 |
| 1:K:156:THR:HG21 | 1:K:468:GLU:CB | 2.03 | 0.89 |
| 1:L:235:LEU:HD11 | 1:L:239:ILE:CG2 | 2.02 | 0.89 |
| 1:M:387:VAL:HG21 | 1:M:437:VAL:HG12 | 1.55 | 0.89 |
| 1:J:12:MET:CG | 1:J:494:ILE:HG22 | 2.03 | 0.89 |
| 1:L:138:ILE:HD13 | 1:L:385:THR:HG23 | 1.54 | 0.89 |
| 1:A:115:VAL:HG11 | 1:A:119:ILE:HG21 | 1.54 | 0.89 |
| 1:D:156:THR:HG21 | 1:D:468:GLU:CA | 2.03 | 0.89 |
| 1:H:77:MET:HG3 | 1:H:487:LEU:HD22 | 1.55 | 0.89 |
| 1:K:113:GLN:CA | 1:K:113:GLN:HE21 | 1.80 | 0.89 |
| 1:L:12:MET:O | 1:L:12:MET:HG3 | 1.72 | 0.89 |
| 1:L:233:ALA:CB | 1:L:310:LEU:HD11 | 2.03 | 0.89 |
| 1:O:154:ALA:CB | 1:O:174:ILE:HD11 | 1.96 | 0.89 |
| 1:O:233:ALA:HB1 | 1:O:310:LEU:HD13 | 1.54 | 0.89 |
| 1:P:247:LEU:HD11 | 1:P:272:ALA:HB3 | 1.55 | 0.89 |
| 1:P:490:ILE:H | 1:P:490:ILE:HD12 | 1.34 | 0.89 |
| 1:E:48:LEU:HD22 | 1:E:68:MET:HE1 | 1.54 | 0.89 |
| 1:F:461:MET:HE3 | 1:F:461:MET:N | 1.86 | 0.89 |
| 1:L:188:VAL:HG12 | 1:L:373:ILE:HG13 | 1.53 | 0.89 |
| 1:M:34:THR:HG22 | 1:M:35:VAL:CG2 | 1.99 | 0.89 |
| 1:O:96:ALA:HA | 1:O:480:ALA:CB | 2.03 | 0.89 |
| 1:O:389:LEU:HD13 | 1:O:415:LEU:HD13 | 1.53 | 0.89 |
| 1:B:153:ILE:CD1 | 1:B:378:ILE:HG22 | 2.03 | 0.88 |
| 1:C:42:LYS:HD2 | 1:C:426:ALA:HB2 | 1.52 | 0.88 |
| 1:D:42:LYS:NZ | 1:D:426:ALA:HA | 1.87 | 0.88 |
| 1:D:380:SER:HB2 | 1:D:384:SER:HB2 | 1.55 | 0.88 |
| 1:F:220:SER:HB3 | 1:F:223:MET:SD | 2.13 | 0.88 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:CB | 2.04 | 0.88 |
| 1:G:473:LYS:HB2 | 1:G:473:LYS:HZ1 | 1.37 | 0.88 |
| 1:K:234:LEU:HB3 | 1:K:292:MET:CE | 2.03 | 0.88 |
| 1:L:403:ARG:HH11 | 1:L:403:ARG:CG | 1.85 | 0.88 |
| 1:M:142:VAL:CG1 | 1:M:149:ILE:HD13 | 2.02 | 0.88 |
| 1:M:195:ILE:HD13 | 1:M:195:ILE:N | 1.87 | 0.88 |
| 1:M:235:LEU:CD1 | 1:M:262:LEU:HD11 | 2.03 | 0.88 |
| 1:P:477:ILE:HG22 | 1:P:477:ILE:O | 1.72 | 0.88 |
| 1:A:420:ARG:HH11 | 1:A:420:ARG:CG | 1.86 | 0.88 |
| 1:A:433:ILE:HG22 | 1:A:451:LEU:CD2 | 2.04 | 0.88 |
| 1:B:307:ILE:HG13 | 1:B:310:LEU:HD12 | 1.55 | 0.88 |
| 1:C:239:ILE:CD1 | 1:C:307:ILE:HD13 | 2.02 | 0.88 |
| 1:D:130:LYS:HD3 | 1:D:393:LEU:CD2 | 2.03 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:106:LYS:HE2 | 1:E:106:LYS:CA | 1.99 | 0.88 |
| 1:F:130:LYS:CE | 1:F:134:LEU:HD11 | 2.03 | 0.88 |
| 1:G:119:ILE:HG13 | 1:G:403:ARG:HD2 | 1.54 | 0.88 |
| 1:K:379:VAL:HB | 1:K:380:SER:CA | 2.03 | 0.88 |
| 1:L:158:ILE:O | 1:L:158:ILE:CG2 | 2.19 | 0.88 |
| 1:L:237:CYS:HA | 1:L:306:ASN:HA | 1.53 | 0.88 |
| 1:P:12:MET:HG2 | 1:P:494:ILE:CG2 | 2.02 | 0.88 |
| 1:A:403:ARG:HH11 | 1:A:403:ARG:HG2 | 1.36 | 0.88 |
| 1:E:192:LEU:HG | 1:E:342:ALA:HB2 | 1.53 | 0.88 |
| 1:E:235:LEU:HD12 | 1:E:307:ILE:N | 1.87 | 0.88 |
| 1:H:219:VAL:HG13 | 1:H:273:GLN:HB3 | 1.54 | 0.88 |
| 1:H:339:HIS:O | 1:H:339:HIS:CG | 2.22 | 0.88 |
| 1:I:12:MET:CG | 1:I:494:ILE:HG22 | 2.01 | 0.88 |
| 1:I:214:VAL:HG12 | 1:I:291:ASP:CG | 1.92 | 0.88 |
| 1:P:210:LYS:O | 1:P:337:CYS:HB2 | 1.73 | 0.88 |
| 1:A:158:ILE:HD13 | 1:A:170:LEU:HB3 | 1.53 | 0.88 |
| 1:A:197:LYS:HB3 | 1:A:355:ILE:HB | 1.56 | 0.88 |
| 1:B:122:LYS:HG2 | 1:B:125:GLN:NE2 | 1.87 | 0.88 |
| 1:B:195:ILE:HB | 1:B:359:ALA:CB | 2.03 | 0.88 |
| 1:E:379:VAL:HG12 | 1:E:470:LEU:CD2 | 2.03 | 0.88 |
| 1:F:314:ASP:O | 1:F:315:LEU:HG | 1.73 | 0.88 |
| 1:G:152:LYS:HG2 | 1:G:465:GLY:CA | 2.02 | 0.88 |
| 1:G:192:LEU:CG | 1:G:342:ALA:HB2 | 2.02 | 0.88 |
| 1:H:152:LYS:CG | 1:H:465:GLY:HA2 | 2.01 | 0.88 |
| 1:I:105:ARG:HH11 | 1:I:106:LYS:HG2 | 1.39 | 0.88 |
| 1:K:215:ASP:OD1 | 1:K:331:MET:HG2 | 1.74 | 0.88 |
| 1:O:8:LEU:HD13 | 1:O:494:ILE:CG2 | 2.04 | 0.88 |
| 1:P:235:LEU:O | 1:P:264:CYS:HA | 1.73 | 0.88 |
| 1:A:152:LYS:HE2 | 1:A:462:CYS:CA | 2.00 | 0.88 |
| 1:A:235:LEU:CG | 1:A:307:ILE:HA | 2.03 | 0.88 |
| 1:E:156:THR:CG2 | 1:E:468:GLU:HB3 | 2.04 | 0.88 |
| 1:E:464:ASN:HB3 | 1:E:466:VAL:HG22 | 1.56 | 0.88 |
| 1:F:188:VAL:HG21 | 1:F:373:ILE:CD1 | 2.01 | 0.88 |
| 1:G:44:MET:HA | 1:G:44:MET:CE | 2.02 | 0.88 |
| 1:G:431:ILE:HD11 | 1:P:402:GLY:O | 1.73 | 0.88 |
| 1:J:49:VAL:HG22 | 1:J:55:VAL:HG12 | 1.55 | 0.88 |
| 1:J:217:GLU:HG2 | 1:J:330:SER:CB | 2.03 | 0.88 |
| 1:N:218:ARG:CZ | 1:N:282:VAL:HG21 | 2.02 | 0.88 |
| 1:O:34:THR:CB | 1:P:14:ARG:HH22 | 1.85 | 0.88 |
| 1:O:276:LEU:CD1 | 1:O:281:ILE:HD12 | 2.03 | 0.88 |
| 1:D:44:MET:HA | 1:D:44:MET:HE2 | 0.92 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:44:MET:CE | 1:D:44:MET:CA | 2.38 | 0.88 |
| 1:E:197:LYS:HB2 | 1:E:355:ILE:HG21 | 1.55 | 0.88 |
| 1:E:276:LEU:HB3 | 1:E:281:ILE:HB | 1.56 | 0.88 |
| 1:H:27:ALA:HB2 | 1:H:72:HIS:CD2 | 2.08 | 0.88 |
| 1:O:434:LEU:N | 1:O:434:LEU:CD1 | 2.35 | 0.88 |
| 1:A:96:ALA:HA | 1:A:480:ALA:HB2 | 1.51 | 0.88 |
| 1:A:276:LEU:HD12 | 1:A:281:ILE:CG2 | 2.04 | 0.88 |
| 1:C:103:LEU:HD21 | 1:C:411:PHE:CD2 | 2.08 | 0.88 |
| 1:C:134:LEU:HD12 | 1:C:393:LEU:HD21 | 1.55 | 0.88 |
| 1:D:158:ILE:CD1 | 1:D:167:LYS:HA | 2.03 | 0.88 |
| 1:G:124:TYR:HE1 | 1:G:407:ALA:HA | 1.39 | 0.88 |
| 1:H:254:ILE:HD13 | 1:H:262:LEU:CD1 | 2.03 | 0.88 |
| 1:J:14:ARG:HG3 | 1:J:494:ILE:HG12 | 1.55 | 0.88 |
| 1:J:134:LEU:CD2 | 1:J:392:LYS:HD2 | 2.03 | 0.88 |
| 1:K:308:LYS:HB2 | 1:K:308:LYS:HZ1 | 1.38 | 0.88 |
| 1:M:119:ILE:CG2 | 1:M:403:ARG:HB2 | 2.03 | 0.88 |
| 1:P:276:LEU:HD22 | 1:P:281:ILE:CG2 | 2.01 | 0.88 |
| 1:A:448:CYS:HB2 | 1:A:460:ASP:CA | 2.02 | 0.88 |
| 1:C:215:ASP:OD1 | 1:C:331:MET:HB3 | 1.74 | 0.88 |
| 1:D:406:LEU:HD23 | 1:D:406:LEU:H | 1.38 | 0.88 |
| 1:I:158:ILE:CG1 | 1:I:361:ALA:HB1 | 2.04 | 0.88 |
| 1:K:188:VAL:HG23 | 1:K:373:ILE:HD12 | 1.52 | 0.88 |
| 1:K:469:PRO:HB2 | 1:K:472:VAL:HG23 | 1.54 | 0.88 |
| 1:M:222:GLN:HB3 | 1:M:277:ALA:CB | 2.03 | 0.88 |
| 1:N:437:VAL:HG21 | 1:N:451:LEU:CG | 2.04 | 0.88 |
| 1:C:115:VAL:HG11 | 1:C:403:ARG:HE | 1.39 | 0.88 |
| 1:C:339:HIS:O | 1:C:339:HIS:CG | 2.25 | 0.88 |
| 1:G:124:TYR:HE1 | 1:G:407:ALA:CA | 1.85 | 0.88 |
| 1:H:174:ILE:CG2 | 1:H:362:VAL:HG23 | 2.04 | 0.88 |
| 1:H:239:ILE:CD1 | 1:H:307:ILE:HG12 | 2.02 | 0.88 |
| 1:J:120:VAL:HG22 | 1:J:124:TYR:CE2 | 2.09 | 0.88 |
| 1:N:418:ILE:HG22 | 1:N:419:PRO:N | 1.89 | 0.88 |
| 1:O:220:SER:HB3 | 1:O:277:ALA:HB2 | 1.52 | 0.88 |
| 1:C:69:SER:OG | 1:C:69:SER:O | 1.90 | 0.88 |
| 1:C:124:TYR:HE1 | 1:C:407:ALA:CA | 1.86 | 0.88 |
| 1:D:420:ARG:HG2 | 1:D:420:ARG:NH1 | 1.88 | 0.88 |
| 1:E:135:LEU:CD2 | 1:E:385:THR:HG21 | 2.02 | 0.88 |
| 1:F:77:MET:HA | 1:F:80:GLU:OE1 | 1.74 | 0.88 |
| 1:F:178:VAL:CG1 | 1:F:366:VAL:HG13 | 2.04 | 0.88 |
| 1:G:8:LEU:H | 1:G:9:PRO:HD3 | 1.39 | 0.88 |
| 1:H:182:VAL:CB | 1:H:188:VAL:HG21 | 2.03 | 0.88 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:36:ARG:HG3 | 1:I:37:SER:H | 1.39 | 0.88 |
| 1:I:69:SER:OG | 1:J:9:PRO:HA | 1.74 | 0.88 |
| 1:I:115:VAL:HG22 | 1:I:403:ARG:NE | 1.88 | 0.88 |
| 1:I:142:VAL:HG13 | 1:I:142:VAL:O | 1.70 | 0.88 |
| 1:L:42:LYS:HG3 | 1:L:425:ASN:HB2 | 1.55 | 0.88 |
| 1:N:178:VAL:HG22 | 1:N:193:ILE:CD1 | 2.03 | 0.88 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:CA | 2.04 | 0.87 |
| 1:D:8:LEU:H | 1:E:70:VAL:HA | 1.37 | 0.87 |
| 1:D:223:MET:HG3 | 1:D:277:ALA:HB2 | 1.55 | 0.87 |
| 1:F:42:LYS:NZ | 1:F:453:VAL:HB | 1.88 | 0.87 |
| 1:F:48:LEU:HD23 | 1:F:67:GLU:HB2 | 1.57 | 0.87 |
| 1:H:117:PRO:O | 1:H:120:VAL:HG12 | 1.74 | 0.87 |
| 1:K:68:MET:HG3 | 1:L:8:LEU:HA | 1.55 | 0.87 |
| 1:P:9:PRO:HD2 | 1:P:12:MET:HE1 | 1.54 | 0.87 |
| 1:P:391:MET:HE3 | 1:P:438:ARG:HD2 | 1.55 | 0.87 |
| 1:B:8:LEU:HD22 | 1:C:68:MET:HG2 | 1.53 | 0.87 |
| 1:C:377:ARG:H | 1:C:377:ARG:CD | 1.88 | 0.87 |
| 1:D:100:ALA:HB1 | 1:D:484:THR:CG2 | 2.02 | 0.87 |
| 1:F:345:MET:HE1 | 1:F:362:VAL:HG11 | 0.92 | 0.87 |
| 1:H:42:LYS:CB | 1:H:425:ASN:HB2 | 2.04 | 0.87 |
| 1:J:26:LEU:O | 1:J:30:ILE:HD12 | 1.72 | 0.87 |
| 1:J:153:ILE:HD11 | 1:J:378:ILE:CG2 | 2.02 | 0.87 |
| 1:J:171:ALA:HA | 1:J:174:ILE:HD11 | 1.54 | 0.87 |
| 1:K:124:TYR:HE1 | 1:K:407:ALA:CA | 1.86 | 0.87 |
| 1:M:377:ARG:HH11 | 1:M:470:LEU:CD1 | 1.85 | 0.87 |
| 1:O:156:THR:HG21 | 1:O:468:GLU:HB3 | 1.56 | 0.87 |
| 1:A:81:VAL:HG11 | 1:A:483:SER:CB | 2.05 | 0.87 |
| 1:C:39:LEU:HG | 1:C:40:GLY:N | 1.78 | 0.87 |
| 1:F:178:VAL:CG1 | 1:F:366:VAL:HG22 | 2.04 | 0.87 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:CA | 2.03 | 0.87 |
| 1:I:276:LEU:HD12 | 1:I:281:ILE:CG2 | 2.03 | 0.87 |
| 1:J:34:THR:CA | 1:K:14:ARG:HH22 | 1.87 | 0.87 |
| 1:K:223:MET:CE | 1:K:276:LEU:HB3 | 2.03 | 0.87 |
| 1:M:38:THR:HG23 | 1:M:46:LYS:CE | 2.04 | 0.87 |
| 1:M:251:VAL:HG11 | 1:M:276:LEU:HD22 | 1.56 | 0.87 |
| 1:O:377:ARG:CB | 1:O:470:LEU:HD12 | 2.04 | 0.87 |
| 1:A:235:LEU:HD11 | 1:A:307:ILE:CB | 2.03 | 0.87 |
| 1:A:368:VAL:HA | 1:A:371:CYS:SG | 2.15 | 0.87 |
| 1:C:154:ALA:CB | 1:C:174:ILE:HD11 | 2.03 | 0.87 |
| 1:D:219:VAL:CG2 | 1:D:285:ARG:HB2 | 2.03 | 0.87 |
| 1:I:142:VAL:CG1 | 1:I:149:ILE:HD13 | 2.04 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:69:SER:HB3 | 1:K:9:PRO:CA | 2.04 | 0.87 |
| 1:J:174:ILE:CG2 | 1:J:362:VAL:HG23 | 2.05 | 0.87 |
| 1:J:233:ALA:HA | 1:J:315:LEU:HD13 | 1.56 | 0.87 |
| 1:K:124:TYR:HE1 | 1:K:407:ALA:HA | 1.38 | 0.87 |
| 1:K:461:MET:CA | 1:K:461:MET:HE3 | 2.01 | 0.87 |
| 1:M:197:LYS:CB | 1:M:355:ILE:HG21 | 2.04 | 0.87 |
| 1:O:34:THR:HB | 1:P:14:ARG:HH22 | 1.38 | 0.87 |
| 1:O:214:VAL:HG12 | 1:O:291:ASP:CG | 1.95 | 0.87 |
| 1:P:437:VAL:HG11 | 1:P:451:LEU:HD11 | 1.55 | 0.87 |
| 1:F:158:ILE:CD1 | 1:F:170:LEU:HB3 | 2.04 | 0.87 |
| 1:G:142:VAL:CG2 | 1:G:149:ILE:HD13 | 2.05 | 0.87 |
| 1:H:134:LEU:HD12 | 1:H:393:LEU:HD11 | 1.55 | 0.87 |
| 1:H:233:ALA:HB1 | 1:H:315:LEU:HD23 | 1.54 | 0.87 |
| 1:I:166:ALA:CB | 1:I:203:ILE:HB | 2.00 | 0.87 |
| 1:J:44:MET:HA | 1:J:44:MET:CE | 2.02 | 0.87 |
| 1:J:181:VAL:HG12 | 1:J:341:LYS:O | 1.73 | 0.87 |
| 1:L:234:LEU:HD22 | 1:L:301:ALA:CB | 2.04 | 0.87 |
| 1:O:418:ILE:HG22 | 1:O:419:PRO:HD3 | 1.56 | 0.87 |
| 1:A:397:ALA:HB2 | 1:A:408:VAL:HG23 | 1.54 | 0.87 |
| 1:G:39:LEU:CD2 | 1:G:40:GLY:H | 1.88 | 0.87 |
| 1:I:30:ILE:CG2 | 1:I:31:ILE:HD13 | 2.04 | 0.87 |
| 1:K:14:ARG:CD | 1:K:494:ILE:HG12 | 2.05 | 0.87 |
| 1:K:158:ILE:HD13 | 1:K:170:LEU:HB2 | 1.55 | 0.87 |
| 1:A:383:GLY:HA2 | 1:A:386:GLU:HG3 | 1.56 | 0.87 |
| 1:B:42:LYS:HB3 | 1:B:425:ASN:CB | 2.05 | 0.87 |
| 1:C:142:VAL:HG22 | 1:C:149:ILE:CD1 | 2.05 | 0.87 |
| 1:E:217:GLU:CG | 1:E:330:SER:HB2 | 2.04 | 0.87 |
| 1:G:239:ILE:HG22 | 1:G:307:ILE:HD13 | 1.56 | 0.87 |
| 1:H:219:VAL:HG12 | 1:H:223:MET:CE | 2.04 | 0.87 |
| 1:H:494:ILE:CG2 | 1:H:494:ILE:O | 2.20 | 0.87 |
| 1:K:232:ILE:HD13 | 1:K:299:THR:CG2 | 2.04 | 0.87 |
| 1:N:34:THR:HG23 | 1:O:14:ARG:HH22 | 1.37 | 0.87 |
| 1:N:139:ALA:CB | 1:N:377:ARG:HD3 | 2.03 | 0.87 |
| 1:P:85:GLN:NE2 | 1:P:475:GLN:HB3 | 1.89 | 0.87 |
| 1:C:134:LEU:HB3 | 1:C:392:LYS:NZ | 1.90 | 0.87 |
| 1:C:152:LYS:HG2 | 1:C:465:GLY:HA2 | 1.56 | 0.87 |
| 1:J:174:ILE:HG22 | 1:J:362:VAL:CG2 | 2.05 | 0.87 |
| 1:M:42:LYS:CE | 1:M:426:ALA:HB2 | 2.04 | 0.87 |
| 1:M:65:LEU:HB2 | 1:M:79:ILE:HD13 | 1.56 | 0.87 |
| 1:O:338:LYS:HE3 | 1:O:339:HIS:HB2 | 1.56 | 0.87 |
| 1:A:377:ARG:O | 1:A:470:LEU:HB2 | 1.74 | 0.87 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:423:ALA:O | 1:A:428:LEU:HA | 1.74 | 0.87 |
| 1:C:307:ILE:HG13 | 1:C:310:LEU:HD22 | 1.57 | 0.87 |
| 1:E:35:VAL:HG23 | 1:E:94:THR:CG2 | 2.03 | 0.87 |
| 1:E:152:LYS:HZ3 | 1:E:462:CYS:HB3 | 1.39 | 0.87 |
| 1:G:254:ILE:HD13 | 1:G:262:LEU:HD13 | 1.54 | 0.87 |
| 1:H:77:MET:HG3 | 1:H:487:LEU:CD2 | 2.05 | 0.87 |
| 1:H:115:VAL:HB | 1:H:403:ARG:HE | 1.40 | 0.87 |
| 1:H:142:VAL:CG1 | 1:H:149:ILE:HG21 | 2.04 | 0.87 |
| 1:I:233:ALA:HA | 1:I:315:LEU:CG | 2.04 | 0.87 |
| 1:L:299:THR:HG22 | 1:L:318:ALA:HB2 | 1.54 | 0.87 |
| 1:M:34:THR:HA | 1:N:14:ARG:NH2 | 1.89 | 0.87 |
| 1:M:138:ILE:HG21 | 1:M:388:GLU:HG2 | 1.57 | 0.87 |
| 1:N:232:ILE:O | 1:N:315:LEU:HB3 | 1.75 | 0.87 |
| 1:P:142:VAL:CG1 | 1:P:149:ILE:HD13 | 2.05 | 0.87 |
| 1:P:235:LEU:HG | 1:P:310:LEU:HD22 | 1.55 | 0.87 |
| 1:P:238:ALA:O | 1:P:307:ILE:HG23 | 1.74 | 0.87 |
| 1:A:139:ALA:CB | 1:A:377:ARG:HG3 | 2.05 | 0.86 |
| 1:C:8:LEU:HD13 | 1:C:494:ILE:HG21 | 1.54 | 0.86 |
| 1:C:61:GLY:O | 1:C:64:ILE:HG22 | 1.73 | 0.86 |
| 1:C:299:THR:HG22 | 1:C:318:ALA:HB2 | 1.55 | 0.86 |
| 1:D:313:GLN:HE21 | 1:D:313:GLN:CA | 1.83 | 0.86 |
| 1:G:199:SER:HB2 | 1:G:327:SER:HB2 | 1.55 | 0.86 |
| 1:H:113:GLN:HE21 | 1:H:113:GLN:H | 1.22 | 0.86 |
| 1:H:192:LEU:HD13 | 1:H:342:ALA:HB2 | 0.91 | 0.86 |
| 1:I:248:LYS:HE2 | 1:I:275:TYR:CE1 | 2.09 | 0.86 |
| 1:L:42:LYS:HE3 | 1:L:426:ALA:CB | 2.04 | 0.86 |
| 1:M:153:ILE:HD13 | 1:M:372:THR:HG21 | 1.57 | 0.86 |
| 1:O:235:LEU:HB3 | 1:O:310:LEU:CD2 | 2.05 | 0.86 |
| 1:O:237:CYS:CA | 1:O:306:ASN:HA | 2.05 | 0.86 |
| 1:O:239:ILE:HD11 | 1:O:307:ILE:CD1 | 2.01 | 0.86 |
| 1:C:339:HIS:HE1 | 1:C:341:LYS:HD2 | 1.38 | 0.86 |
| 1:D:234:LEU:HD11 | 1:D:296:ALA:HB2 | 1.56 | 0.86 |
| 1:H:276:LEU:CD2 | 1:H:281:ILE:HD12 | 2.04 | 0.86 |
| 1:I:233:ALA:HA | 1:I:315:LEU:HD22 | 1.56 | 0.86 |
| 1:L:217:GLU:CG | 1:L:330:SER:HB2 | 2.04 | 0.86 |
| 1:M:233:ALA:CB | 1:M:310:LEU:HD11 | 2.05 | 0.86 |
| 1:O:339:HIS:CE1 | 1:O:341:LYS:HD2 | 2.10 | 0.86 |
| 1:P:142:VAL:HG21 | 1:P:149:ILE:HG21 | 1.57 | 0.86 |
| 1:B:130:LYS:HD3 | 1:B:393:LEU:CD2 | 2.05 | 0.86 |
| 1:B:307:ILE:CG1 | 1:B:307:ILE:O | 2.19 | 0.86 |
| 1:C:119:ILE:HG21 | 1:C:403:ARG:HD3 | 1.55 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:138:ILE:CD1 | 1:C:379:VAL:HG21 | 2.05 | 0.86 |
| 1:C:192:LEU:CB | 1:C:342:ALA:HB2 | 2.05 | 0.86 |
| 1:C:210:LYS:O | 1:C:337:CYS:HB2 | 1.73 | 0.86 |
| 1:D:180:ALA:HB2 | 1:D:210:LYS:HZ2 | 1.40 | 0.86 |
| 1:E:39:LEU:HG | 1:E:40:GLY:H | 1.40 | 0.86 |
| 1:F:197:LYS:HA | 1:F:355:ILE:HG21 | 1.56 | 0.86 |
| 1:F:232:ILE:O | 1:F:315:LEU:HB3 | 1.74 | 0.86 |
| 1:F:341:LYS:NZ | 1:F:341:LYS:CB | 2.35 | 0.86 |
| 1:I:178:VAL:CG2 | 1:I:366:VAL:HG13 | 2.05 | 0.86 |
| 1:J:192:LEU:HD13 | 1:J:192:LEU:H | 1.40 | 0.86 |
| 1:M:235:LEU:CG | 1:M:307:ILE:HA | 2.05 | 0.86 |
| 1:O:155:MET:HB2 | 1:O:167:LYS:HD2 | 1.57 | 0.86 |
| 1:P:268:ILE:HG21 | 1:P:273:GLN:HG3 | 1.56 | 0.86 |
| 1:A:103:LEU:HD21 | 1:A:411:PHE:CE2 | 2.09 | 0.86 |
| 1:B:281:ILE:HG22 | 1:B:281:ILE:O | 1.72 | 0.86 |
| 1:C:89:VAL:HG21 | 1:C:472:VAL:HG12 | 1.55 | 0.86 |
| 1:D:82:ALA:HB1 | 1:D:93:THR:HG22 | 1.56 | 0.86 |
| 1:D:218:ARG:HH11 | 1:D:218:ARG:HG2 | 1.38 | 0.86 |
| 1:G:77:MET:HE2 | 1:G:487:LEU:HD21 | 1.53 | 0.86 |
| 1:I:93:THR:O | 1:I:97:VAL:HG23 | 1.73 | 0.86 |
| 1:K:68:MET:HG3 | 1:L:8:LEU:CA | 2.03 | 0.86 |
| 1:L:105:ARG:NH1 | 1:L:106:LYS:HD2 | 1.90 | 0.86 |
| 1:L:247:LEU:HG | 1:L:272:ALA:HB2 | 1.55 | 0.86 |
| 1:M:70:VAL:O | 1:M:76:LYS:HE3 | 1.75 | 0.86 |
| 1:N:377:ARG:HD2 | 1:N:470:LEU:HD11 | 1.58 | 0.86 |
| 1:O:299:THR:HG23 | 1:O:334:VAL:HG11 | 1.55 | 0.86 |
| 1:O:459:GLU:HB3 | 1:O:461:MET:CE | 2.05 | 0.86 |
| 1:A:69:SER:H | 1:H:9:PRO:HD3 | 1.39 | 0.86 |
| 1:A:89:VAL:HG11 | 1:A:472:VAL:HG22 | 1.57 | 0.86 |
| 1:B:237:CYS:HB3 | 1:B:306:ASN:HA | 0.88 | 0.86 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:HD21 | 1.57 | 0.86 |
| 1:G:379:VAL:HB | 1:G:470:LEU:HD23 | 1.55 | 0.86 |
| 1:I:123:GLY:HA3 | 1:I:407:ALA:HB1 | 1.55 | 0.86 |
| 1:I:461:MET:CA | 1:I:461:MET:HE2 | 2.03 | 0.86 |
| 1:J:12:MET:HG2 | 1:J:494:ILE:HG22 | 1.55 | 0.86 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:HA | 1.57 | 0.86 |
| 1:K:156:THR:HG21 | 1:K:468:GLU:CA | 2.05 | 0.86 |
| 1:M:233:ALA:HA | 1:M:315:LEU:CD2 | 2.06 | 0.86 |
| 1:N:124:TYR:CD1 | 1:N:407:ALA:HB1 | 2.09 | 0.86 |
| 1:N:239:ILE:HG13 | 1:N:307:ILE:HG21 | 1.55 | 0.86 |
| 1:A:235:LEU:HD21 | 1:A:306:ASN:C | 1.96 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:235:LEU:HD22 | 1:A:235:LEU:C | 1.95 | 0.86 |
| 1:B:96:ALA:HB1 | 1:B:480:ALA:HB2 | 1.56 | 0.86 |
| 1:B:152:LYS:HG2 | 1:B:465:GLY:C | 1.96 | 0.86 |
| 1:B:223:MET:HG3 | 1:B:277:ALA:HB2 | 1.55 | 0.86 |
| 1:B:377:ARG:CD | 1:B:470:LEU:HD12 | 2.05 | 0.86 |
| 1:C:233:ALA:CB | 1:C:310:LEU:HD11 | 2.04 | 0.86 |
| 1:D:233:ALA:HA | 1:D:315:LEU:CD1 | 2.06 | 0.86 |
| 1:H:199:SER:HB2 | 1:H:327:SER:CB | 2.05 | 0.86 |
| 1:I:235:LEU:HD11 | 1:I:310:LEU:HD22 | 1.56 | 0.86 |
| 1:I:420:ARG:CG | 1:I:420:ARG:HH11 | 1.89 | 0.86 |
| 1:J:254:ILE:HG12 | 1:J:310:LEU:HD23 | 1.58 | 0.86 |
| 1:K:219:VAL:HG23 | 1:K:285:ARG:HB3 | 1.57 | 0.86 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:HB3 | 1.56 | 0.86 |
| 1:N:124:TYR:HE1 | 1:N:407:ALA:HA | 1.39 | 0.86 |
| 1:N:142:VAL:HG11 | 1:N:149:ILE:HD12 | 1.55 | 0.86 |
| 1:N:233:ALA:HB1 | 1:N:310:LEU:CD1 | 2.05 | 0.86 |
| 1:O:119:ILE:HG21 | 1:O:403:ARG:CD | 2.06 | 0.86 |
| 1:O:155:MET:HB2 | 1:O:167:LYS:CD | 2.06 | 0.86 |
| 1:P:262:LEU:HD11 | 1:P:310:LEU:HD23 | 1.57 | 0.86 |
| 1:I:77:MET:HE3 | 1:I:487:LEU:CD2 | 2.06 | 0.86 |
| 1:I:268:ILE:HB | 1:I:273:GLN:HE21 | 1.37 | 0.86 |
| 1:I:469:PRO:HG2 | 1:I:472:VAL:CG1 | 2.05 | 0.86 |
| 1:L:103:LEU:HD21 | 1:L:411:PHE:CD2 | 2.10 | 0.86 |
| 1:L:338:LYS:HD2 | 1:L:339:HIS:HB2 | 1.57 | 0.86 |
| 1:N:345:MET:HE1 | 1:N:362:VAL:HG21 | 1.55 | 0.86 |
| 1:B:178:VAL:CG1 | 1:B:188:VAL:HG11 | 2.06 | 0.86 |
| 1:C:44:MET:HA | 1:C:44:MET:HE2 | 1.55 | 0.86 |
| 1:C:130:LYS:HD3 | 1:C:393:LEU:CD2 | 2.04 | 0.86 |
| 1:F:130:LYS:HD2 | 1:F:396:TYR:CD1 | 2.10 | 0.86 |
| 1:H:124:TYR:N | 1:H:124:TYR:CD1 | 2.39 | 0.86 |
| 1:I:158:ILE:CD1 | 1:I:170:LEU:HB3 | 2.05 | 0.86 |
| 1:M:18:ARG:HA | 1:M:21:GLN:CD | 1.96 | 0.86 |
| 1:N:298:ALA:O | 1:N:337:CYS:HB3 | 1.76 | 0.86 |
| 1:A:30:ILE:HG22 | 1:A:31:ILE:N | 1.90 | 0.86 |
| 1:A:134:LEU:CD1 | 1:A:393:LEU:HD21 | 2.06 | 0.86 |
| 1:A:178:VAL:HG21 | 1:A:366:VAL:HG22 | 1.56 | 0.86 |
| 1:A:276:LEU:CD1 | 1:A:281:ILE:HD12 | 2.06 | 0.86 |
| 1:B:380:SER:CB | 1:B:384:SER:HB2 | 2.06 | 0.86 |
| 1:D:341:LYS:HB3 | 1:D:341:LYS:HZ3 | 1.37 | 0.86 |
| 1:E:153:ILE:CG2 | 1:E:469:PRO:HD3 | 2.06 | 0.86 |
| 1:F:34:THR:CG2 | 1:F:35:VAL:HG22 | 2.06 | 0.86 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:437:VAL:HG21 | 1:I:451:LEU:HG | 1.56 | 0.86 |
| 1:J:119:ILE:HG21 | 1:J:403:ARG:CB | 2.06 | 0.86 |
| 1:L:77:MET:HE2 | 1:L:486:MET:HE3 | 1.56 | 0.86 |
| 1:M:24:ASN:N | 1:M:24:ASN:HD22 | 1.74 | 0.86 |
| 1:M:82:ALA:HB1 | 1:M:93:THR:HG22 | 1.58 | 0.86 |
| 1:M:377:ARG:NH1 | 1:M:470:LEU:HD12 | 1.89 | 0.86 |
| 1:N:31:ILE:HG21 | 1:N:65:LEU:CD2 | 2.05 | 0.86 |
| 1:O:381:GLY:CA | 1:O:461:MET:HG3 | 2.06 | 0.86 |
| 1:B:23:MET:HE3 | 1:B:72:HIS:HE1 | 1.39 | 0.86 |
| 1:B:42:LYS:HB3 | 1:B:425:ASN:HB3 | 1.58 | 0.86 |
| 1:B:192:LEU:HB2 | 1:B:342:ALA:CB | 2.06 | 0.86 |
| 1:D:9:PRO:HD2 | 1:E:70:VAL:C | 1.96 | 0.86 |
| 1:D:223:MET:CE | 1:D:283:ALA:HB3 | 2.06 | 0.86 |
| 1:F:96:ALA:HB1 | 1:F:480:ALA:HB2 | 1.58 | 0.86 |
| 1:I:494:ILE:HD12 | 1:P:48:LEU:CD1 | 2.05 | 0.86 |
| 1:A:391:MET:HE3 | 1:A:438:ARG:HG2 | 1.58 | 0.85 |
| 1:C:116:HIS:ND1 | 1:C:117:PRO:HD2 | 1.91 | 0.85 |
| 1:D:123:GLY:HA3 | 1:D:407:ALA:CB | 2.06 | 0.85 |
| 1:E:178:VAL:HG21 | 1:E:366:VAL:CG2 | 2.05 | 0.85 |
| 1:F:42:LYS:HZ2 | 1:F:453:VAL:HB | 1.37 | 0.85 |
| 1:G:48:LEU:CB | 1:G:56:VAL:HG22 | 2.06 | 0.85 |
| 1:G:225:LYS:O | 1:G:226:LYS:HB3 | 1.76 | 0.85 |
| 1:G:379:VAL:HG13 | 1:G:380:SER:O | 1.76 | 0.85 |
| 1:H:85:GLN:NE2 | 1:H:475:GLN:HG3 | 1.90 | 0.85 |
| 1:M:223:MET:HE3 | 1:M:276:LEU:HB2 | 1.54 | 0.85 |
| 1:M:237:CYS:O | 1:M:307:ILE:HG23 | 1.75 | 0.85 |
| 1:O:237:CYS:HB3 | 1:O:306:ASN:HA | 1.58 | 0.85 |
| 1:P:178:VAL:CG1 | 1:P:188:VAL:HG11 | 2.05 | 0.85 |
| 1:A:124:TYR:HE1 | 1:A:407:ALA:CA | 1.90 | 0.85 |
| 1:A:405:GLN:CB | 1:A:406:LEU:HD12 | 2.04 | 0.85 |
| 1:B:70:VAL:CG2 | 1:B:76:LYS:HG2 | 2.06 | 0.85 |
| 1:B:72:HIS:O | 1:B:75:ALA:HB3 | 1.75 | 0.85 |
| 1:C:124:TYR:N | 1:C:124:TYR:CD1 | 2.43 | 0.85 |
| 1:C:124:TYR:CE1 | 1:C:407:ALA:HB1 | 2.10 | 0.85 |
| 1:C:138:ILE:HD13 | 1:C:379:VAL:CG2 | 2.03 | 0.85 |
| 1:D:77:MET:CB | 1:D:487:LEU:HD21 | 2.06 | 0.85 |
| 1:D:368:VAL:HB | 1:D:469:PRO:HG2 | 1.56 | 0.85 |
| 1:E:81:VAL:HG11 | 1:E:483:SER:HB3 | 1.56 | 0.85 |
| 1:E:134:LEU:HD13 | 1:E:392:LYS:HE3 | 1.57 | 0.85 |
| 1:F:239:ILE:HD11 | 1:F:254:ILE:HD11 | 1.57 | 0.85 |
| 1:G:169:LYS:HE3 | 1:G:204:ASP:O | 1.75 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:235:LEU:HG | 1:G:310:LEU:HD22 | 1.58 | 0.85 |
| 1:G:437:VAL:HG21 | 1:G:451:LEU:HD21 | 1.57 | 0.85 |
| 1:O:250:MET:CE | 1:O:308:LYS:HG2 | 2.06 | 0.85 |
| 1:E:181:VAL:HG12 | 1:E:341:LYS:O | 1.77 | 0.85 |
| 1:F:233:ALA:HA | 1:F:315:LEU:CD2 | 2.07 | 0.85 |
| 1:F:377:ARG:NH2 | 1:F:470:LEU:HD12 | 1.91 | 0.85 |
| 1:H:113:GLN:N | 1:H:113:GLN:NE2 | 2.24 | 0.85 |
| 1:I:77:MET:HE3 | 1:I:487:LEU:HD21 | 1.58 | 0.85 |
| 1:L:206:THR:HG22 | 1:L:348:ARG:N | 1.91 | 0.85 |
| 1:M:383:GLY:HA2 | 1:M:386:GLU:HG2 | 1.57 | 0.85 |
| 1:O:216:LYS:HA | 1:O:332:ILE:HD12 | 1.58 | 0.85 |
| 1:O:391:MET:HE1 | 1:O:438:ARG:O | 1.76 | 0.85 |
| 1:A:235:LEU:HG | 1:A:310:LEU:HD22 | 1.58 | 0.85 |
| 1:D:174:ILE:CG2 | 1:D:362:VAL:HG23 | 2.05 | 0.85 |
| 1:I:198:LYS:N | 1:I:355:ILE:HD13 | 1.91 | 0.85 |
| 1:I:380:SER:CB | 1:I:384:SER:HB2 | 2.06 | 0.85 |
| 1:J:237:CYS:CA | 1:J:306:ASN:HA | 2.07 | 0.85 |
| 1:L:115:VAL:HB | 1:L:403:ARG:HE | 1.42 | 0.85 |
| 1:M:182:VAL:CG2 | 1:M:188:VAL:HG12 | 2.06 | 0.85 |
| 1:M:219:VAL:HB | 1:M:273:GLN:CD | 1.95 | 0.85 |
| 1:A:433:ILE:HG21 | 1:A:451:LEU:HD23 | 1.58 | 0.85 |
| 1:B:380:SER:HB3 | 1:B:384:SER:CB | 2.06 | 0.85 |
| 1:B:387:VAL:HG21 | 1:B:437:VAL:HG12 | 1.58 | 0.85 |
| 1:D:119:ILE:HD12 | 1:D:403:ARG:CG | 2.05 | 0.85 |
| 1:D:178:VAL:HG22 | 1:D:193:ILE:HD12 | 1.58 | 0.85 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:HG22 | 1.58 | 0.85 |
| 1:L:235:LEU:O | 1:L:264:CYS:HA | 1.77 | 0.85 |
| 1:O:195:ILE:HB | 1:O:359:ALA:HB1 | 1.56 | 0.85 |
| 1:B:435:VAL:HG11 | 1:K:401:SER:HB2 | 1.57 | 0.85 |
| 1:C:199:SER:HB2 | 1:C:327:SER:CB | 2.06 | 0.85 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:CG | 2.07 | 0.85 |
| 1:G:14:ARG:HH12 | 1:H:34:THR:CG2 | 1.90 | 0.85 |
| 1:G:142:VAL:CG1 | 1:G:149:ILE:HD13 | 2.06 | 0.85 |
| 1:H:247:LEU:HD11 | 1:H:272:ALA:CB | 2.06 | 0.85 |
| 1:I:227:VAL:HG11 | 1:I:260:ASN:OD1 | 1.76 | 0.85 |
| 1:I:450:GLY:C | 1:I:451:LEU:HD12 | 1.96 | 0.85 |
| 1:J:119:ILE:HD12 | 1:J:403:ARG:HG3 | 1.58 | 0.85 |
| 1:K:174:ILE:CG2 | 1:K:362:VAL:HG23 | 2.02 | 0.85 |
| 1:L:403:ARG:HH11 | 1:L:403:ARG:HG3 | 1.38 | 0.85 |
| 1:M:152:LYS:HD2 | 1:M:465:GLY:HA3 | 1.56 | 0.85 |
| 1:N:101:GLY:O | 1:N:104:LEU:HB2 | 1.74 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:368:VAL:HB | 1:P:469:PRO:CG | 2.04 | 0.85 |
| 1:A:123:GLY:HA3 | 1:A:407:ALA:CB | 2.07 | 0.85 |
| 1:B:158:ILE:HD12 | 1:B:170:LEU:HB2 | 1.57 | 0.85 |
| 1:F:9:PRO:CB | 1:G:69:SER:HA | 2.07 | 0.85 |
| 1:F:122:LYS:HA | 1:F:125:GLN:CD | 1.97 | 0.85 |
| 1:G:130:LYS:HG2 | 1:G:393:LEU:CD2 | 2.07 | 0.85 |
| 1:G:219:VAL:HG22 | 1:G:273:GLN:CG | 2.06 | 0.85 |
| 1:H:119:ILE:HG21 | 1:H:403:ARG:HB2 | 0.92 | 0.85 |
| 1:I:9:PRO:HD3 | 1:P:69:SER:N | 1.92 | 0.85 |
| 1:I:235:LEU:CG | 1:I:307:ILE:HA | 2.06 | 0.85 |
| 1:K:235:LEU:HD21 | 1:K:310:LEU:HB2 | 1.58 | 0.85 |
| 1:M:68:MET:HA | 1:N:9:PRO:CD | 2.06 | 0.85 |
| 1:N:135:LEU:HD23 | 1:N:138:ILE:HD13 | 1.56 | 0.85 |
| 1:B:158:ILE:HD12 | 1:B:170:LEU:CB | 2.07 | 0.85 |
| 1:B:235:LEU:HD11 | 1:B:307:ILE:CG2 | 2.07 | 0.85 |
| 1:D:313:GLN:N | 1:D:313:GLN:HE21 | 1.64 | 0.85 |
| 1:H:219:VAL:CG2 | 1:H:273:GLN:HG2 | 2.04 | 0.85 |
| 1:I:89:VAL:HG11 | 1:I:472:VAL:HA | 1.57 | 0.85 |
| 1:I:142:VAL:HG11 | 1:I:149:ILE:CG2 | 2.06 | 0.85 |
| 1:I:437:VAL:HG22 | 1:I:458:VAL:HG23 | 1.57 | 0.85 |
| 1:J:100:ALA:HB1 | 1:J:484:THR:CG2 | 2.06 | 0.85 |
| 1:L:105:ARG:CZ | 1:L:106:LYS:HD2 | 2.07 | 0.85 |
| 1:M:23:MET:CE | 1:M:72:HIS:HE1 | 1.90 | 0.85 |
| 1:O:31:ILE:HD13 | 1:O:31:ILE:N | 1.91 | 0.85 |
| 1:O:35:VAL:HG12 | 1:O:46:LYS:HE3 | 1.57 | 0.85 |
| 1:O:437:VAL:HG21 | 1:O:451:LEU:CG | 2.05 | 0.85 |
| 1:E:82:ALA:HB2 | 1:E:97:VAL:HG21 | 1.55 | 0.85 |
| 1:F:235:LEU:HD13 | 1:F:310:LEU:CG | 2.07 | 0.85 |
| 1:G:219:VAL:CG2 | 1:G:273:GLN:HG2 | 2.07 | 0.85 |
| 1:H:102:GLU:HG2 | 1:H:417:VAL:HG21 | 1.59 | 0.85 |
| 1:J:182:VAL:O | 1:J:182:VAL:HG13 | 1.77 | 0.85 |
| 1:N:170:LEU:HD22 | 1:N:358:VAL:HG13 | 1.56 | 0.85 |
| 1:O:170:LEU:HD22 | 1:O:358:VAL:HG13 | 1.58 | 0.85 |
| 1:P:339:HIS:O | 1:P:339:HIS:ND1 | 2.10 | 0.85 |
| 1:A:34:THR:HA | 1:H:14:ARG:NH1 | 1.92 | 0.85 |
| 1:B:437:VAL:HG11 | 1:B:451:LEU:HD11 | 1.59 | 0.85 |
| 1:D:233:ALA:HB1 | 1:D:310:LEU:HD21 | 1.56 | 0.85 |
| 1:E:124:TYR:HE1 | 1:E:407:ALA:C | 1.79 | 0.85 |
| 1:F:208:LEU:CD2 | 1:F:210:LYS:HD3 | 2.06 | 0.85 |
| 1:H:233:ALA:CB | 1:H:315:LEU:HD23 | 2.06 | 0.85 |
| 1:I:235:LEU:HD13 | 1:I:307:ILE:CG2 | 2.03 | 0.85 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:222:GLN:HB2 | 1:L:277:ALA:CB | 2.07 | 0.85 |
| 1:M:25:ILE:HD13 | 1:M:108:GLU:OE2 | 1.75 | 0.85 |
| 1:N:49:VAL:HG22 | 1:N:55:VAL:CG1 | 2.07 | 0.85 |
| 1:O:178:VAL:CG2 | 1:O:366:VAL:HG22 | 2.07 | 0.85 |
| 1:P:340:PRO:HG2 | 1:P:340:PRO:O | 1.76 | 0.85 |
| 1:P:448:CYS:HB2 | 1:P:460:ASP:CA | 2.05 | 0.85 |
| 1:C:70:VAL:CG2 | 1:C:76:LYS:HG3 | 2.05 | 0.84 |
| 1:C:178:VAL:HG21 | 1:C:366:VAL:HG22 | 1.59 | 0.84 |
| 1:D:31:ILE:HG23 | 1:D:65:LEU:HD21 | 1.57 | 0.84 |
| 1:D:195:ILE:HD13 | 1:D:195:ILE:H | 1.41 | 0.84 |
| 1:M:68:MET:C | 1:N:8:LEU:HA | 1.96 | 0.84 |
| 1:M:235:LEU:CD1 | 1:M:310:LEU:HG | 2.07 | 0.84 |
| 1:N:69:SER:CB | 1:O:9:PRO:HB3 | 1.97 | 0.84 |
| 1:O:124:TYR:HD1 | 1:O:407:ALA:HB1 | 1.41 | 0.84 |
| 1:C:130:LYS:HD3 | 1:C:393:LEU:HD23 | 1.56 | 0.84 |
| 1:D:405:GLN:HB3 | 1:D:406:LEU:HD23 | 1.59 | 0.84 |
| 1:D:406:LEU:H | 1:D:406:LEU:CD2 | 1.90 | 0.84 |
| 1:F:296:ALA:HB1 | 1:F:301:ALA:O | 1.77 | 0.84 |
| 1:F:441:HIS:ND1 | 1:F:449:ALA:HB3 | 1.91 | 0.84 |
| 1:F:459:GLU:HG2 | 1:F:461:MET:CE | 2.06 | 0.84 |
| 1:J:237:CYS:O | 1:J:307:ILE:HG23 | 1.75 | 0.84 |
| 1:K:152:LYS:HZ3 | 1:K:462:CYS:C | 1.80 | 0.84 |
| 1:K:156:THR:CG2 | 1:K:468:GLU:HB3 | 2.07 | 0.84 |
| 1:K:368:VAL:HB | 1:K:469:PRO:HG2 | 1.59 | 0.84 |
| 1:L:214:VAL:CG1 | 1:L:291:ASP:HB3 | 2.06 | 0.84 |
| 1:M:34:THR:HG23 | 1:M:35:VAL:HG13 | 1.58 | 0.84 |
| 1:M:461:MET:O | 1:M:465:GLY:HA2 | 1.78 | 0.84 |
| 1:O:296:ALA:HA | 1:O:301:ALA:HB3 | 1.59 | 0.84 |
| 1:C:42:LYS:HZ2 | 1:C:453:VAL:HB | 1.43 | 0.84 |
| 1:C:174:ILE:CG2 | 1:C:362:VAL:HG23 | 2.07 | 0.84 |
| 1:C:452:ASN:HD21 | 1:C:454:PHE:HB2 | 1.40 | 0.84 |
| 1:D:192:LEU:HG | 1:D:342:ALA:CB | 2.06 | 0.84 |
| 1:E:227:VAL:HG11 | 1:E:260:ASN:ND2 | 1.92 | 0.84 |
| 1:F:234:LEU:H | 1:F:315:LEU:HD21 | 1.43 | 0.84 |
| 1:H:39:LEU:HG | 1:H:40:GLY:N | 1.92 | 0.84 |
| 1:L:237:CYS:CA | 1:L:306:ASN:HA | 2.06 | 0.84 |
| 1:N:174:ILE:HG22 | 1:N:362:VAL:HG23 | 0.90 | 0.84 |
| 1:O:368:VAL:HB | 1:O:469:PRO:HG2 | 1.56 | 0.84 |
| 1:P:192:LEU:HG | 1:P:342:ALA:CB | 2.06 | 0.84 |
| 1:A:130:LYS:HD3 | 1:A:393:LEU:HD23 | 1.57 | 0.84 |
| 1:A:193:ILE:HD12 | 1:A:366:VAL:HG11 | 1.58 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:276:LEU:CD2 | 1:B:281:ILE:HG21 | 2.06 | 0.84 |
| 1:C:255:LYS:HE3 | 1:C:279:GLU:CG | 2.03 | 0.84 |
| 1:F:433:ILE:CG2 | 1:F:451:LEU:HD23 | 2.07 | 0.84 |
| 1:I:68:MET:HA | 1:J:9:PRO:HG3 | 1.58 | 0.84 |
| 1:I:100:ALA:O | 1:I:104:LEU:HG | 1.75 | 0.84 |
| 1:I:215:ASP:OD1 | 1:I:331:MET:HG2 | 1.77 | 0.84 |
| 1:K:210:LYS:O | 1:K:337:CYS:HB2 | 1.78 | 0.84 |
| 1:M:39:LEU:HG | 1:M:40:GLY:N | 1.92 | 0.84 |
| 1:O:251:VAL:HG11 | 1:O:276:LEU:HD22 | 1.56 | 0.84 |
| 1:A:178:VAL:HG22 | 1:A:193:ILE:CD1 | 2.06 | 0.84 |
| 1:A:420:ARG:HG2 | 1:A:420:ARG:NH1 | 1.88 | 0.84 |
| 1:B:122:LYS:HA | 1:B:125:GLN:NE2 | 1.93 | 0.84 |
| 1:B:192:LEU:HB2 | 1:B:342:ALA:HB2 | 1.59 | 0.84 |
| 1:B:197:LYS:CA | 1:B:355:ILE:HG21 | 2.08 | 0.84 |
| 1:B:494:ILE:O | 1:B:494:ILE:HG23 | 1.77 | 0.84 |
| 1:C:119:ILE:HD12 | 1:C:403:ARG:CB | 2.08 | 0.84 |
| 1:D:400:ILE:HD11 | 1:D:408:VAL:CG2 | 2.07 | 0.84 |
| 1:F:177:ALA:HB2 | 1:F:208:LEU:CD1 | 2.05 | 0.84 |
| 1:F:235:LEU:CD2 | 1:F:310:LEU:HD22 | 2.07 | 0.84 |
| 1:H:276:LEU:CD2 | 1:H:281:ILE:HG21 | 2.06 | 0.84 |
| 1:I:89:VAL:HG21 | 1:I:472:VAL:HG12 | 1.58 | 0.84 |
| 1:I:315:LEU:HD23 | 1:I:315:LEU:N | 1.93 | 0.84 |
| 1:K:158:ILE:O | 1:K:158:ILE:HG22 | 1.05 | 0.84 |
| 1:K:461:MET:HE2 | 1:K:461:MET:N | 1.88 | 0.84 |
| 1:L:115:VAL:HG21 | 1:L:403:ARG:CD | 2.07 | 0.84 |
| 1:M:48:LEU:HD13 | 1:M:68:MET:CE | 2.07 | 0.84 |
| 1:M:206:THR:CB | 1:M:347:ILE:HG23 | 2.07 | 0.84 |
| 1:O:437:VAL:HG21 | 1:O:451:LEU:CD1 | 2.07 | 0.84 |
| 1:P:124:TYR:CD1 | 1:P:407:ALA:HB1 | 2.13 | 0.84 |
| 1:P:469:PRO:HD2 | 1:P:472:VAL:HG21 | 1.59 | 0.84 |
| 1:A:219:VAL:HG11 | 1:A:273:GLN:HG2 | 1.60 | 0.84 |
| 1:E:420:ARG:HG2 | 1:E:420:ARG:NH1 | 1.84 | 0.84 |
| 1:F:57:VAL:O | 1:F:57:VAL:HG23 | 1.76 | 0.84 |
| 1:H:35:VAL:HA | 1:H:46:LYS:HZ3 | 1.42 | 0.84 |
| 1:K:170:LEU:HD22 | 1:K:358:VAL:HG11 | 1.57 | 0.84 |
| 1:M:68:MET:HB3 | 1:N:8:LEU:HA | 1.57 | 0.84 |
| 1:M:384:SER:HB2 | 1:M:441:HIS:HE1 | 1.43 | 0.84 |
| 1:N:237:CYS:HB3 | 1:N:305:THR:O | 1.77 | 0.84 |
| 1:B:78:LEU:HD12 | 1:B:487:LEU:CD2 | 2.06 | 0.84 |
| 1:B:225:LYS:O | 1:B:226:LYS:HB2 | 1.75 | 0.84 |
| 1:C:276:LEU:HD12 | 1:C:281:ILE:CD1 | 2.08 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:113:GLN:O | 1:D:113:GLN:CG | 2.22 | 0.84 |
| 1:E:25:ILE:CD1 | 1:E:108:GLU:HG3 | 2.06 | 0.84 |
| 1:F:9:PRO:HB3 | 1:G:69:SER:HA | 1.59 | 0.84 |
| 1:F:178:VAL:HG11 | 1:F:366:VAL:CG1 | 2.07 | 0.84 |
| 1:G:134:LEU:HB3 | 1:G:392:LYS:HE3 | 1.59 | 0.84 |
| 1:H:156:THR:HG21 | 1:H:468:GLU:HG2 | 1.59 | 0.84 |
| 1:H:235:LEU:HD21 | 1:H:307:ILE:HG22 | 1.59 | 0.84 |
| 1:J:235:LEU:CD2 | 1:J:310:LEU:HB2 | 2.07 | 0.84 |
| 1:M:464:ASN:HB3 | 1:M:466:VAL:HG22 | 1.59 | 0.84 |
| 1:A:130:LYS:HD3 | 1:A:393:LEU:CD2 | 2.07 | 0.84 |
| 1:B:36:ARG:HG3 | 1:B:37:SER:H | 1.42 | 0.84 |
| 1:C:156:THR:HG22 | 1:C:468:GLU:HA | 1.59 | 0.84 |
| 1:G:39:LEU:HD22 | 1:G:40:GLY:N | 1.92 | 0.84 |
| 1:H:368:VAL:HB | 1:H:469:PRO:CG | 2.08 | 0.84 |
| 1:I:122:LYS:HB3 | 1:I:404:GLU:OE2 | 1.76 | 0.84 |
| 1:K:235:LEU:O | 1:K:264:CYS:HA | 1.77 | 0.84 |
| 1:L:105:ARG:HD3 | 1:L:106:LYS:H | 1.42 | 0.84 |
| 1:O:193:ILE:HD12 | 1:O:366:VAL:HG11 | 1.59 | 0.84 |
| 1:O:254:ILE:HG23 | 1:O:259:ALA:HB3 | 1.60 | 0.84 |
| 1:A:142:VAL:CG2 | 1:A:149:ILE:HG21 | 2.05 | 0.84 |
| 1:B:276:LEU:HB3 | 1:B:281:ILE:HG21 | 1.57 | 0.84 |
| 1:C:81:VAL:HG21 | 1:C:483:SER:CB | 2.08 | 0.84 |
| 1:C:223:MET:HE3 | 1:C:276:LEU:CB | 2.08 | 0.84 |
| 1:F:124:TYR:HE1 | 1:F:407:ALA:CA | 1.90 | 0.84 |
| 1:H:232:ILE:HG13 | 1:H:261:VAL:HG11 | 1.59 | 0.84 |
| 1:I:14:ARG:CD | 1:I:494:ILE:HG12 | 2.03 | 0.84 |
| 1:K:452:ASN:OD1 | 1:K:454:PHE:HB2 | 1.78 | 0.84 |
| 1:L:156:THR:HG22 | 1:L:468:GLU:HA | 1.58 | 0.84 |
| 1:M:156:THR:HG21 | 1:M:468:GLU:HB3 | 1.58 | 0.84 |
| 1:M:219:VAL:HG23 | 1:M:220:SER:H | 1.41 | 0.84 |
| 1:N:156:THR:HG21 | 1:N:468:GLU:HB3 | 1.60 | 0.84 |
| 1:N:448:CYS:HB3 | 1:N:460:ASP:HA | 1.60 | 0.84 |
| 1:A:170:LEU:HD11 | 1:A:358:VAL:HG21 | 1.58 | 0.84 |
| 1:A:222:GLN:CB | 1:A:277:ALA:HB1 | 2.08 | 0.84 |
| 1:A:428:LEU:N | 1:A:428:LEU:HD12 | 1.93 | 0.84 |
| 1:C:44:MET:HE3 | 1:C:44:MET:CA | 2.08 | 0.84 |
| 1:C:130:LYS:HE2 | 1:C:393:LEU:HD21 | 1.59 | 0.84 |
| 1:D:138:ILE:CD1 | 1:D:385:THR:HG23 | 2.08 | 0.84 |
| 1:G:12:MET:HB2 | 1:G:494:ILE:CG2 | 2.06 | 0.84 |
| 1:H:33:GLU:HA | 1:H:36:ARG:HE | 1.43 | 0.84 |
| 1:H:96:ALA:HB1 | 1:H:480:ALA:HB2 | 1.58 | 0.84 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:276:LEU:HD23 | 1:H:281:ILE:CD1 | 2.05 | 0.84 |
| 1:I:9:PRO:N | 1:P:69:SER:HB3 | 1.92 | 0.84 |
| 1:J:265:GLN:HG2 | 1:J:265:GLN:O | 1.77 | 0.84 |
| 1:L:130:LYS:HZ3 | 1:L:134:LEU:HD11 | 1.39 | 0.84 |
| 1:M:156:THR:CG2 | 1:M:468:GLU:HB3 | 2.08 | 0.84 |
| 1:P:139:ALA:HB1 | 1:P:377:ARG:CG | 2.07 | 0.84 |
| 1:D:134:LEU:HB3 | 1:D:392:LYS:HE3 | 1.59 | 0.83 |
| 1:G:219:VAL:CG1 | 1:G:283:ALA:HB3 | 2.09 | 0.83 |
| 1:G:341:LYS:HB3 | 1:G:341:LYS:HZ3 | 1.38 | 0.83 |
| 1:H:85:GLN:HE22 | 1:H:475:GLN:HG3 | 1.43 | 0.83 |
| 1:H:130:LYS:NZ | 1:H:134:LEU:HD11 | 1.93 | 0.83 |
| 1:J:89:VAL:CG2 | 1:J:89:VAL:O | 2.21 | 0.83 |
| 1:J:262:LEU:CD1 | 1:J:310:LEU:HD21 | 2.08 | 0.83 |
| 1:L:134:LEU:CD1 | 1:L:392:LYS:HD2 | 2.06 | 0.83 |
| 1:O:106:LYS:HA | 1:O:106:LYS:HE3 | 1.58 | 0.83 |
| 1:P:42:LYS:HG3 | 1:P:425:ASN:HB2 | 1.60 | 0.83 |
| 1:P:140:CYS:SG | 1:P:447:LYS:HB3 | 2.17 | 0.83 |
| 1:D:113:GLN:O | 1:D:113:GLN:HG3 | 1.77 | 0.83 |
| 1:G:106:LYS:HE3 | 1:G:106:LYS:HA | 1.58 | 0.83 |
| 1:H:9:PRO:O | 1:H:12:MET:HB2 | 1.79 | 0.83 |
| 1:H:42:LYS:HD2 | 1:H:425:ASN:C | 1.98 | 0.83 |
| 1:H:77:MET:HA | 1:H:80:GLU:OE1 | 1.77 | 0.83 |
| 1:H:237:CYS:HB3 | 1:H:306:ASN:HB2 | 1.59 | 0.83 |
| 1:L:174:ILE:CD1 | 1:L:365:ALA:HB1 | 2.07 | 0.83 |
| 1:L:197:LYS:CB | 1:L:355:ILE:HG21 | 2.08 | 0.83 |
| 1:L:227:VAL:HG11 | 1:L:260:ASN:OD1 | 1.77 | 0.83 |
| 1:O:170:LEU:HD22 | 1:O:358:VAL:HG11 | 1.59 | 0.83 |
| 1:P:236:ASN:CG | 1:P:305:THR:HG22 | 1.98 | 0.83 |
| 1:C:12:MET:CE | 1:C:494:ILE:HG22 | 2.08 | 0.83 |
| 1:D:138:ILE:HD11 | 1:D:385:THR:HG23 | 1.60 | 0.83 |
| 1:E:152:LYS:HG2 | 1:E:465:GLY:HA2 | 1.61 | 0.83 |
| 1:E:268:ILE:HB | 1:E:273:GLN:HE21 | 1.43 | 0.83 |
| 1:F:461:MET:HA | 1:F:461:MET:HE2 | 0.84 | 0.83 |
| 1:H:469:PRO:CG | 1:H:472:VAL:HG21 | 2.08 | 0.83 |
| 1:I:9:PRO:HD3 | 1:P:68:MET:C | 1.98 | 0.83 |
| 1:J:232:ILE:HG13 | 1:J:261:VAL:CG1 | 2.07 | 0.83 |
| 1:K:233:ALA:HB1 | 1:K:310:LEU:CD2 | 2.03 | 0.83 |
| 1:L:165:LYS:HA | 1:L:165:LYS:HE3 | 1.60 | 0.83 |
| 1:L:233:ALA:HA | 1:L:315:LEU:HD22 | 1.58 | 0.83 |
| 1:M:15:TYR:CD2 | 1:M:19:ASP:HB3 | 2.13 | 0.83 |
| 1:M:222:GLN:HB3 | 1:M:277:ALA:HB1 | 1.59 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:30:ILE:HG22 | 1:N:31:ILE:CD1 | 2.08 | 0.83 |
| 1:N:239:ILE:CG1 | 1:N:307:ILE:HD13 | 2.07 | 0.83 |
| 1:O:12:MET:HG3 | 1:O:494:ILE:CG2 | 2.08 | 0.83 |
| 1:O:250:MET:HE3 | 1:O:308:LYS:CG | 2.08 | 0.83 |
| 1:P:420:ARG:CG | 1:P:420:ARG:NH1 | 2.30 | 0.83 |
| 1:A:237:CYS:CA | 1:A:306:ASN:HA | 2.06 | 0.83 |
| 1:B:9:PRO:O | 1:B:9:PRO:CD | 2.26 | 0.83 |
| 1:C:153:ILE:HD11 | 1:C:378:ILE:CG2 | 2.08 | 0.83 |
| 1:D:122:LYS:HA | 1:D:125:GLN:NE2 | 1.92 | 0.83 |
| 1:D:469:PRO:CD | 1:D:472:VAL:HG21 | 2.09 | 0.83 |
| 1:F:255:LYS:HD3 | 1:F:279:GLU:CG | 2.08 | 0.83 |
| 1:G:169:LYS:HG2 | 1:G:204:ASP:HA | 1.60 | 0.83 |
| 1:H:73:PRO:HA | 1:H:76:LYS:CD | 2.08 | 0.83 |
| 1:I:8:LEU:N | 1:I:8:LEU:CD2 | 2.39 | 0.83 |
| 1:N:134:LEU:HB3 | 1:N:392:LYS:NZ | 1.91 | 0.83 |
| 1:N:177:ALA:HB2 | 1:N:208:LEU:HD13 | 1.61 | 0.83 |
| 1:P:138:ILE:CD1 | 1:P:385:THR:HB | 2.07 | 0.83 |
| 1:C:34:THR:HG22 | 1:C:35:VAL:CG1 | 2.08 | 0.83 |
| 1:C:70:VAL:HG22 | 1:C:76:LYS:HD2 | 1.60 | 0.83 |
| 1:G:219:VAL:HG12 | 1:G:283:ALA:HB3 | 1.61 | 0.83 |
| 1:I:113:GLN:O | 1:I:113:GLN:CG | 2.22 | 0.83 |
| 1:J:68:MET:CB | 1:K:8:LEU:HD22 | 2.08 | 0.83 |
| 1:J:130:LYS:HG3 | 1:J:393:LEU:CD2 | 2.07 | 0.83 |
| 1:K:223:MET:HE3 | 1:K:276:LEU:CB | 2.07 | 0.83 |
| 1:N:8:LEU:HB3 | 1:N:9:PRO:HD3 | 1.59 | 0.83 |
| 1:P:251:VAL:HG11 | 1:P:276:LEU:HG | 1.61 | 0.83 |
| 1:B:387:VAL:HG21 | 1:B:437:VAL:CG1 | 2.09 | 0.83 |
| 1:D:384:SER:CB | 1:D:441:HIS:CE1 | 2.61 | 0.83 |
| 1:H:174:ILE:HD12 | 1:H:365:ALA:HB1 | 1.59 | 0.83 |
| 1:K:96:ALA:CB | 1:K:480:ALA:HB2 | 2.08 | 0.83 |
| 1:K:199:SER:HB2 | 1:K:327:SER:HB2 | 1.60 | 0.83 |
| 1:N:169:LYS:HG2 | 1:N:204:ASP:HA | 1.59 | 0.83 |
| 1:N:222:GLN:HB2 | 1:N:277:ALA:HB1 | 1.59 | 0.83 |
| 1:N:237:CYS:CB | 1:N:306:ASN:HA | 2.08 | 0.83 |
| 1:P:134:LEU:CD2 | 1:P:392:LYS:HE3 | 2.07 | 0.83 |
| 1:P:239:ILE:CD1 | 1:P:307:ILE:HG12 | 2.09 | 0.83 |
| 1:A:263:PHE:CG | 1:A:295:LEU:HD13 | 2.14 | 0.83 |
| 1:C:219:VAL:HG23 | 1:C:285:ARG:HB3 | 1.58 | 0.83 |
| 1:G:12:MET:HE1 | 1:H:68:MET:CA | 2.02 | 0.83 |
| 1:G:448:CYS:CB | 1:G:460:ASP:HA | 2.05 | 0.83 |
| 1:I:115:VAL:HG22 | 1:I:403:ARG:HE | 1.44 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:403:ARG:HA | 1:I:406:LEU:HD11 | 1.60 | 0.83 |
| 1:J:437:VAL:CG2 | 1:J:458:VAL:HG23 | 2.07 | 0.83 |
| 1:K:123:GLY:HA3 | 1:K:407:ALA:CB | 2.09 | 0.83 |
| 1:K:389:LEU:HD12 | 1:K:415:LEU:HD13 | 1.59 | 0.83 |
| 1:N:371:CYS:CB | 1:N:471:ARG:HD2 | 2.09 | 0.83 |
| 1:P:368:VAL:CG2 | 1:P:469:PRO:HG2 | 2.09 | 0.83 |
| 1:A:192:LEU:HG | 1:A:342:ALA:HB2 | 1.61 | 0.83 |
| 1:B:23:MET:CE | 1:B:72:HIS:HE1 | 1.92 | 0.83 |
| 1:C:142:VAL:HG22 | 1:C:149:ILE:HG12 | 1.61 | 0.83 |
| 1:C:223:MET:HG2 | 1:C:281:ILE:O | 1.78 | 0.83 |
| 1:D:387:VAL:HG21 | 1:D:437:VAL:HG12 | 1.61 | 0.83 |
| 1:K:178:VAL:CG1 | 1:K:366:VAL:HG22 | 2.09 | 0.83 |
| 1:K:197:LYS:C | 1:K:355:ILE:HD12 | 1.99 | 0.83 |
| 1:K:469:PRO:CD | 1:K:472:VAL:HG21 | 2.09 | 0.83 |
| 1:L:49:VAL:HG13 | 1:M:495:ALA:HA | 1.58 | 0.83 |
| 1:M:434:LEU:HD22 | 1:M:451:LEU:CD2 | 2.09 | 0.83 |
| 1:N:82:ALA:HB2 | 1:N:97:VAL:HG21 | 1.57 | 0.83 |
| 1:A:68:MET:CA | 1:H:9:PRO:HD3 | 2.06 | 0.83 |
| 1:B:255:LYS:CD | 1:B:279:GLU:HG2 | 2.09 | 0.83 |
| 1:C:9:PRO:CD | 1:D:68:MET:HA | 2.07 | 0.83 |
| 1:D:42:LYS:HD2 | 1:D:425:ASN:C | 1.98 | 0.83 |
| 1:D:156:THR:HB | 1:D:467:VAL:O | 1.78 | 0.83 |
| 1:D:262:LEU:HD11 | 1:D:310:LEU:HD11 | 1.58 | 0.83 |
| 1:D:431:ILE:HD13 | 1:M:403:ARG:HG2 | 1.61 | 0.83 |
| 1:E:217:GLU:CB | 1:E:330:SER:HB2 | 2.08 | 0.83 |
| 1:F:469:PRO:HB2 | 1:F:472:VAL:CG2 | 2.09 | 0.83 |
| 1:H:158:ILE:O | 1:H:158:ILE:HG23 | 1.77 | 0.83 |
| 1:I:239:ILE:HD11 | 1:I:254:ILE:HD11 | 1.59 | 0.83 |
| 1:J:62:VAL:HG13 | 1:J:63:THR:H | 1.43 | 0.83 |
| 1:K:216:LYS:CG | 1:K:287:VAL:HG22 | 2.04 | 0.83 |
| 1:K:368:VAL:CB | 1:K:469:PRO:HG2 | 2.09 | 0.83 |
| 1:L:384:SER:CB | 1:L:441:HIS:HE1 | 1.92 | 0.83 |
| 1:M:142:VAL:CB | 1:M:149:ILE:HD13 | 2.08 | 0.83 |
| 1:M:219:VAL:HG21 | 1:M:273:GLN:HG2 | 1.60 | 0.83 |
| 1:N:178:VAL:HG21 | 1:N:366:VAL:HG22 | 1.61 | 0.83 |
| 1:N:233:ALA:HB2 | 1:N:315:LEU:HD13 | 1.61 | 0.83 |
| 1:D:368:VAL:HB | 1:D:469:PRO:HG3 | 1.61 | 0.83 |
| 1:J:177:ALA:CB | 1:J:343:VAL:HG21 | 2.08 | 0.83 |
| 1:J:473:LYS:HA | 1:J:473:LYS:HE3 | 1.59 | 0.83 |
| 1:K:48:LEU:HD22 | 1:K:68:MET:SD | 2.19 | 0.83 |
| 1:K:115:VAL:HG23 | 1:K:119:ILE:HB | 1.61 | 0.83 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:192:LEU:HB2 | 1:K:342:ALA:CB | 2.07 | 0.83 |
| 1:L:25:ILE:HD13 | 1:L:108:GLU:CG | 2.08 | 0.83 |
| 1:L:44:MET:HB3 | 1:M:491:ASP:OD1 | 1.78 | 0.83 |
| 1:L:235:LEU:HD12 | 1:L:307:ILE:HD13 | 1.58 | 0.83 |
| 1:M:227:VAL:HG11 | 1:M:260:ASN:ND2 | 1.94 | 0.83 |
| 1:O:42:LYS:HE2 | 1:O:426:ALA:CA | 2.09 | 0.83 |
| 1:P:105:ARG:HD3 | 1:P:106:LYS:HG2 | 1.61 | 0.83 |
| 1:P:115:VAL:HG11 | 1:P:403:ARG:NE | 1.94 | 0.83 |
| 1:P:233:ALA:HA | 1:P:315:LEU:HD21 | 1.58 | 0.83 |
| 1:P:345:MET:SD | 1:P:362:VAL:HG21 | 2.19 | 0.83 |
| 1:A:69:SER:HB3 | 1:H:9:PRO:HG3 | 1.60 | 0.82 |
| 1:B:31:ILE:HG21 | 1:B:65:LEU:HD22 | 1.61 | 0.82 |
| 1:D:34:THR:HG22 | 1:D:35:VAL:HG22 | 1.61 | 0.82 |
| 1:G:235:LEU:CD2 | 1:G:307:ILE:HG13 | 2.07 | 0.82 |
| 1:J:95:THR:O | 1:J:99:VAL:HG22 | 1.79 | 0.82 |
| 1:K:68:MET:HG3 | 1:L:8:LEU:CB | 2.09 | 0.82 |
| 1:N:192:LEU:HB3 | 1:N:342:ALA:CB | 2.08 | 0.82 |
| 1:O:377:ARG:CZ | 1:O:470:LEU:HD13 | 2.08 | 0.82 |
| 1:P:130:LYS:HE2 | 1:P:393:LEU:HD23 | 1.58 | 0.82 |
| 1:A:100:ALA:CB | 1:A:484:THR:HG21 | 2.07 | 0.82 |
| 1:D:233:ALA:HB2 | 1:D:315:LEU:HD11 | 1.59 | 0.82 |
| 1:D:379:VAL:O | 1:D:467:VAL:HG12 | 1.78 | 0.82 |
| 1:G:237:CYS:CA | 1:G:306:ASN:HA | 2.09 | 0.82 |
| 1:H:49:VAL:HG12 | 1:H:50:ASP:N | 1.93 | 0.82 |
| 1:J:379:VAL:HG22 | 1:J:380:SER:H | 1.43 | 0.82 |
| 1:K:25:ILE:HG22 | 1:K:26:LEU:N | 1.93 | 0.82 |
| 1:K:250:MET:HE3 | 1:K:308:LYS:HG2 | 1.58 | 0.82 |
| 1:L:247:LEU:HD21 | 1:L:269:ASP:HB3 | 1.60 | 0.82 |
| 1:L:267:GLY:C | 1:L:268:ILE:HG12 | 1.96 | 0.82 |
| 1:M:433:ILE:HB | 1:M:434:LEU:HD23 | 1.61 | 0.82 |
| 1:P:199:SER:CB | 1:P:327:SER:HB3 | 2.09 | 0.82 |
| 1:A:44:MET:HE2 | 1:H:489:ARG:HH21 | 1.43 | 0.82 |
| 1:D:255:LYS:CE | 1:D:279:GLU:HG2 | 2.09 | 0.82 |
| 1:H:379:VAL:HG13 | 1:H:380:SER:O | 1.79 | 0.82 |
| 1:I:42:LYS:CB | 1:I:425:ASN:HB3 | 2.04 | 0.82 |
| 1:M:27:ALA:HB1 | 1:M:75:ALA:HB2 | 1.61 | 0.82 |
| 1:O:97:VAL:O | 1:O:100:ALA:HB3 | 1.77 | 0.82 |
| 1:P:268:ILE:HB | 1:P:273:GLN:NE2 | 1.94 | 0.82 |
| 1:C:119:ILE:HD12 | 1:C:403:ARG:CG | 2.10 | 0.82 |
| 1:D:68:MET:HA | 1:D:68:MET:HE2 | 1.61 | 0.82 |
| 1:G:232:ILE:HG13 | 1:G:261:VAL:HG11 | 1.61 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:403:ARG:HH11 | 1:G:403:ARG:HG3 | 1.41 | 0.82 |
| 1:I:250:MET:CE | 1:I:308:LYS:HB3 | 2.08 | 0.82 |
| 1:J:12:MET:HE3 | 1:J:494:ILE:HG22 | 1.60 | 0.82 |
| 1:J:73:PRO:HA | 1:J:76:LYS:HG3 | 1.59 | 0.82 |
| 1:J:134:LEU:HD12 | 1:J:393:LEU:HD21 | 1.61 | 0.82 |
| 1:K:234:LEU:CD1 | 1:K:296:ALA:HB2 | 2.09 | 0.82 |
| 1:K:327:SER:O | 1:K:327:SER:OG | 1.91 | 0.82 |
| 1:L:238:ALA:O | 1:L:307:ILE:HG22 | 1.78 | 0.82 |
| 1:M:248:LYS:HE2 | 1:M:275:TYR:CE1 | 2.15 | 0.82 |
| 1:M:248:LYS:CD | 1:M:275:TYR:CZ | 2.62 | 0.82 |
| 1:N:150:LEU:HD23 | 1:N:175:VAL:CG1 | 2.08 | 0.82 |
| 1:N:178:VAL:HG22 | 1:N:193:ILE:HD12 | 1.61 | 0.82 |
| 1:N:469:PRO:HG2 | 1:N:472:VAL:CG1 | 2.02 | 0.82 |
| 1:O:251:VAL:CG1 | 1:O:276:LEU:HD22 | 2.09 | 0.82 |
| 1:P:50:ASP:CB | 1:P:51:ASP:HB2 | 2.05 | 0.82 |
| 1:P:134:LEU:HD22 | 1:P:392:LYS:CD | 2.09 | 0.82 |
| 1:P:222:GLN:C | 1:P:277:ALA:HB1 | 1.98 | 0.82 |
| 1:A:387:VAL:HG21 | 1:A:437:VAL:HG12 | 1.61 | 0.82 |
| 1:A:435:VAL:HG11 | 1:J:401:SER:CB | 2.08 | 0.82 |
| 1:B:9:PRO:HA | 1:C:69:SER:OG | 1.80 | 0.82 |
| 1:C:122:LYS:HA | 1:C:125:GLN:NE2 | 1.95 | 0.82 |
| 1:D:77:MET:HE1 | 1:D:486:MET:HE1 | 1.60 | 0.82 |
| 1:D:418:ILE:HB | 1:D:419:PRO:CD | 2.09 | 0.82 |
| 1:E:42:LYS:HB3 | 1:E:425:ASN:CB | 2.09 | 0.82 |
| 1:F:223:MET:HG2 | 1:F:281:ILE:O | 1.79 | 0.82 |
| 1:G:100:ALA:HB1 | 1:G:484:THR:CG2 | 2.07 | 0.82 |
| 1:H:188:VAL:CG2 | 1:H:373:ILE:HD12 | 2.09 | 0.82 |
| 1:L:262:LEU:HD11 | 1:L:310:LEU:HD23 | 1.61 | 0.82 |
| 1:O:371:CYS:HA | 1:O:471:ARG:HH21 | 1.43 | 0.82 |
| 1:P:223:MET:HG3 | 1:P:277:ALA:HB2 | 1.60 | 0.82 |
| 1:P:448:CYS:CB | 1:P:460:ASP:HA | 2.09 | 0.82 |
| 1:H:103:LEU:HD21 | 1:H:411:PHE:CE2 | 2.14 | 0.82 |
| 1:J:116:HIS:CG | 1:J:117:PRO:CD | 2.61 | 0.82 |
| 1:L:239:ILE:HG22 | 1:L:307:ILE:CB | 2.10 | 0.82 |
| 1:L:383:GLY:HA2 | 1:L:386:GLU:HG2 | 1.59 | 0.82 |
| 1:P:372:THR:HA | 1:P:375:ASP:O | 1.79 | 0.82 |
| 1:D:233:ALA:HB1 | 1:D:310:LEU:CD2 | 2.09 | 0.82 |
| 1:D:234:LEU:HB3 | 1:D:292:MET:CE | 2.09 | 0.82 |
| 1:D:235:LEU:O | 1:D:264:CYS:HA | 1.79 | 0.82 |
| 1:D:255:LYS:HE3 | 1:D:279:GLU:HG2 | 1.62 | 0.82 |
| 1:G:251:VAL:CG1 | 1:G:276:LEU:HD22 | 2.10 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:433:ILE:HG22 | 1:G:451:LEU:HD23 | 1.60 | 0.82 |
| 1:J:68:MET:HA | 1:K:9:PRO:HD3 | 1.61 | 0.82 |
| 1:K:169:LYS:HG2 | 1:K:204:ASP:O | 1.79 | 0.82 |
| 1:K:193:ILE:HD12 | 1:K:366:VAL:HG11 | 1.62 | 0.82 |
| 1:N:276:LEU:HD22 | 1:N:281:ILE:CG2 | 2.09 | 0.82 |
| 1:O:98:VAL:HG12 | 1:O:99:VAL:N | 1.94 | 0.82 |
| 1:P:387:VAL:O | 1:P:390:SER:HB3 | 1.78 | 0.82 |
| 1:A:62:VAL:HG13 | 1:A:63:THR:N | 1.94 | 0.82 |
| 1:A:166:ALA:O | 1:A:170:LEU:HD22 | 1.80 | 0.82 |
| 1:A:248:LYS:HD2 | 1:A:275:TYR:CE2 | 2.14 | 0.82 |
| 1:D:130:LYS:HE3 | 1:D:134:LEU:HD11 | 1.60 | 0.82 |
| 1:D:130:LYS:HE2 | 1:D:396:TYR:HB2 | 1.62 | 0.82 |
| 1:D:163:ALA:HA | 1:D:165:LYS:CG | 2.04 | 0.82 |
| 1:D:494:ILE:HD12 | 1:E:68:MET:SD | 2.20 | 0.82 |
| 1:F:48:LEU:CD2 | 1:F:67:GLU:HB2 | 2.09 | 0.82 |
| 1:F:347:ILE:HG21 | 1:F:358:VAL:CG1 | 2.09 | 0.82 |
| 1:G:219:VAL:HG13 | 1:G:273:GLN:HG2 | 1.58 | 0.82 |
| 1:G:401:SER:CB | 1:P:435:VAL:HG11 | 2.09 | 0.82 |
| 1:J:158:ILE:O | 1:J:158:ILE:CG2 | 2.24 | 0.82 |
| 1:O:70:VAL:O | 1:O:76:LYS:HE2 | 1.79 | 0.82 |
| 1:P:116:HIS:CE1 | 1:P:117:PRO:HG2 | 2.15 | 0.82 |
| 1:P:449:ALA:HB2 | 1:P:458:VAL:CG2 | 2.08 | 0.82 |
| 1:B:70:VAL:HG21 | 1:B:76:LYS:CG | 2.10 | 0.82 |
| 1:C:96:ALA:HA | 1:C:480:ALA:CB | 2.10 | 0.82 |
| 1:D:197:LYS:HA | 1:D:355:ILE:HG21 | 1.59 | 0.82 |
| 1:D:403:ARG:CD | 1:M:431:ILE:HD13 | 2.03 | 0.82 |
| 1:E:152:LYS:NZ | 1:E:462:CYS:HB3 | 1.94 | 0.82 |
| 1:E:433:ILE:HA | 1:E:436:LYS:HG3 | 1.62 | 0.82 |
| 1:G:235:LEU:HG | 1:G:307:ILE:HD12 | 1.62 | 0.82 |
| 1:I:124:TYR:CE1 | 1:I:407:ALA:CA | 2.58 | 0.82 |
| 1:I:166:ALA:HB2 | 1:I:203:ILE:CB | 2.04 | 0.82 |
| 1:J:158:ILE:HD13 | 1:J:170:LEU:CB | 2.09 | 0.82 |
| 1:M:459:GLU:HB3 | 1:M:461:MET:CE | 2.10 | 0.82 |
| 1:P:206:THR:HB | 1:P:347:ILE:HG23 | 1.60 | 0.82 |
| 1:A:30:ILE:HD12 | 1:A:31:ILE:HG12 | 1.62 | 0.82 |
| 1:B:377:ARG:HD2 | 1:B:470:LEU:CD1 | 2.10 | 0.82 |
| 1:E:248:LYS:HD2 | 1:E:275:TYR:CE2 | 2.15 | 0.82 |
| 1:F:235:LEU:HD11 | 1:F:307:ILE:HD13 | 1.61 | 0.82 |
| 1:G:233:ALA:HA | 1:G:315:LEU:HD11 | 1.62 | 0.82 |
| 1:H:42:LYS:HB3 | 1:H:425:ASN:CB | 2.08 | 0.82 |
| 1:J:198:LYS:HA | 1:J:198:LYS:HE3 | 1.61 | 0.82 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:220:SER:HB2 | 1:L:273:GLN:HB3 | 1.62 | 0.82 |
| 1:M:130:LYS:NZ | 1:M:396:TYR:HB2 | 1.94 | 0.82 |
| 1:N:170:LEU:HD21 | 1:N:358:VAL:CG2 | 2.09 | 0.82 |
| 1:O:15:TYR:HD2 | 1:O:19:ASP:HB3 | 1.44 | 0.82 |
| 1:P:170:LEU:HD11 | 1:P:358:VAL:CG1 | 2.10 | 0.82 |
| 1:B:233:ALA:HA | 1:B:315:LEU:HD11 | 1.60 | 0.81 |
| 1:D:150:LEU:HD23 | 1:D:175:VAL:CG1 | 2.10 | 0.81 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:CA | 2.63 | 0.81 |
| 1:E:235:LEU:HD13 | 1:E:310:LEU:CD1 | 2.09 | 0.81 |
| 1:G:391:MET:HE1 | 1:G:438:ARG:CB | 2.09 | 0.81 |
| 1:G:435:VAL:HG11 | 1:P:401:SER:HB2 | 1.62 | 0.81 |
| 1:I:223:MET:HE1 | 1:I:283:ALA:HB3 | 1.61 | 0.81 |
| 1:J:233:ALA:HA | 1:J:315:LEU:CD2 | 2.09 | 0.81 |
| 1:M:68:MET:HA | 1:N:9:PRO:HD3 | 1.59 | 0.81 |
| 1:N:139:ALA:HB2 | 1:N:377:ARG:CD | 2.09 | 0.81 |
| 1:O:452:ASN:HD21 | 1:O:454:PHE:HB2 | 1.45 | 0.81 |
| 1:P:197:LYS:CB | 1:P:355:ILE:HG21 | 2.10 | 0.81 |
| 1:A:130:LYS:HG2 | 1:A:393:LEU:HD21 | 1.59 | 0.81 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:CD2 | 2.09 | 0.81 |
| 1:B:103:LEU:HD21 | 1:B:411:PHE:CE2 | 2.16 | 0.81 |
| 1:E:48:LEU:HD22 | 1:E:68:MET:CE | 2.08 | 0.81 |
| 1:F:42:LYS:HE3 | 1:F:453:VAL:HG21 | 1.60 | 0.81 |
| 1:G:105:ARG:HH11 | 1:G:106:LYS:HG2 | 1.45 | 0.81 |
| 1:J:197:LYS:HA | 1:J:347:ILE:CG2 | 2.10 | 0.81 |
| 1:J:459:GLU:O | 1:J:459:GLU:HG3 | 1.77 | 0.81 |
| 1:K:368:VAL:HB | 1:K:469:PRO:CG | 2.10 | 0.81 |
| 1:M:223:MET:HG3 | 1:M:277:ALA:HB2 | 1.61 | 0.81 |
| 1:N:197:LYS:HB3 | 1:N:355:ILE:HB | 1.62 | 0.81 |
| 1:N:387:VAL:O | 1:N:390:SER:HB3 | 1.80 | 0.81 |
| 1:O:116:HIS:CG | 1:O:117:PRO:CD | 2.62 | 0.81 |
| 1:O:158:ILE:HD13 | 1:O:167:LYS:HA | 1.63 | 0.81 |
| 1:O:173:ILE:HG13 | 1:O:345:MET:SD | 2.20 | 0.81 |
| 1:P:296:ALA:HB1 | 1:P:301:ALA:O | 1.80 | 0.81 |
| 1:A:178:VAL:HG12 | 1:A:188:VAL:HG11 | 1.60 | 0.81 |
| 1:B:81:VAL:HG11 | 1:B:483:SER:HB3 | 1.62 | 0.81 |
| 1:B:255:LYS:HE3 | 1:B:279:GLU:CG | 2.06 | 0.81 |
| 1:C:178:VAL:HG22 | 1:C:193:ILE:HD11 | 1.59 | 0.81 |
| 1:C:248:LYS:HD2 | 1:C:275:TYR:CZ | 2.15 | 0.81 |
| 1:C:254:ILE:HG12 | 1:C:310:LEU:HD23 | 1.61 | 0.81 |
| 1:D:254:ILE:HD13 | 1:D:262:LEU:CD1 | 2.11 | 0.81 |
| 1:E:124:TYR:HE1 | 1:E:407:ALA:CA | 1.92 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:208:LEU:HD13 | 1:E:210:LYS:HD2 | 1.63 | 0.81 |
| 1:G:72:HIS:CA | 1:G:75:ALA:HB3 | 2.10 | 0.81 |
| 1:G:118:THR:HG21 | 1:H:42:LYS:HE3 | 1.60 | 0.81 |
| 1:G:123:GLY:HA3 | 1:G:407:ALA:HB1 | 1.62 | 0.81 |
| 1:G:130:LYS:NZ | 1:G:134:LEU:HD21 | 1.95 | 0.81 |
| 1:G:220:SER:CB | 1:G:277:ALA:HB2 | 2.10 | 0.81 |
| 1:H:42:LYS:CE | 1:H:426:ALA:HA | 2.08 | 0.81 |
| 1:I:103:LEU:HD21 | 1:I:411:PHE:CD2 | 2.15 | 0.81 |
| 1:I:174:ILE:HG22 | 1:I:362:VAL:CG2 | 2.10 | 0.81 |
| 1:I:368:VAL:CB | 1:I:469:PRO:HB3 | 2.03 | 0.81 |
| 1:J:231:LYS:HD3 | 1:J:231:LYS:N | 1.96 | 0.81 |
| 1:K:197:LYS:HA | 1:K:355:ILE:HG21 | 1.60 | 0.81 |
| 1:L:441:HIS:ND1 | 1:L:449:ALA:HB3 | 1.94 | 0.81 |
| 1:M:339:HIS:CE1 | 1:M:341:LYS:HD2 | 2.15 | 0.81 |
| 1:M:433:ILE:HG22 | 1:M:451:LEU:HD23 | 1.61 | 0.81 |
| 1:N:153:ILE:HD11 | 1:N:378:ILE:CG2 | 2.01 | 0.81 |
| 1:N:154:ALA:CB | 1:N:174:ILE:HD11 | 2.08 | 0.81 |
| 1:N:178:VAL:CG1 | 1:N:188:VAL:HG11 | 2.10 | 0.81 |
| 1:O:156:THR:HG21 | 1:O:468:GLU:CB | 2.09 | 0.81 |
| 1:O:347:ILE:HG21 | 1:O:358:VAL:HB | 1.62 | 0.81 |
| 1:P:62:VAL:HG13 | 1:P:63:THR:H | 1.45 | 0.81 |
| 1:D:130:LYS:HE3 | 1:D:393:LEU:HD23 | 1.60 | 0.81 |
| 1:D:403:ARG:HG2 | 1:D:403:ARG:NH1 | 1.95 | 0.81 |
| 1:D:420:ARG:HG2 | 1:D:420:ARG:HH11 | 1.43 | 0.81 |
| 1:J:255:LYS:O | 1:J:255:LYS:CG | 2.27 | 0.81 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:CB | 2.10 | 0.81 |
| 1:L:326:ILE:HG13 | 1:L:348:ARG:HH12 | 1.43 | 0.81 |
| 1:M:233:ALA:HA | 1:M:315:LEU:HD13 | 1.61 | 0.81 |
| 1:O:178:VAL:HG22 | 1:O:366:VAL:HG13 | 1.60 | 0.81 |
| 1:O:254:ILE:HD12 | 1:O:276:LEU:CD1 | 2.11 | 0.81 |
| 1:P:29:ARG:O | 1:P:33:GLU:HG3 | 1.79 | 0.81 |
| 1:A:448:CYS:CB | 1:A:460:ASP:HA | 2.05 | 0.81 |
| 1:C:250:MET:CE | 1:C:307:ILE:HG22 | 2.11 | 0.81 |
| 1:C:377:ARG:HB2 | 1:C:470:LEU:CD1 | 2.10 | 0.81 |
| 1:E:12:MET:HG2 | 1:E:494:ILE:CG2 | 2.11 | 0.81 |
| 1:E:134:LEU:CD1 | 1:E:393:LEU:HD21 | 2.09 | 0.81 |
| 1:E:152:LYS:HD3 | 1:E:465:GLY:HA2 | 1.62 | 0.81 |
| 1:E:326:ILE:HG13 | 1:E:348:ARG:HH12 | 1.45 | 0.81 |
| 1:F:158:ILE:HD13 | 1:F:170:LEU:HB3 | 1.62 | 0.81 |
| 1:G:276:LEU:HB2 | 1:G:281:ILE:HB | 1.63 | 0.81 |
| 1:I:235:LEU:CD1 | 1:I:310:LEU:HD22 | 2.10 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:68:MET:CB | 1:N:8:LEU:HA | 2.09 | 0.81 |
| 1:N:210:LYS:HG3 | 1:N:343:VAL:HG23 | 1.63 | 0.81 |
| 1:N:437:VAL:HG11 | 1:N:451:LEU:HD11 | 1.60 | 0.81 |
| 1:O:368:VAL:CB | 1:O:469:PRO:HG2 | 2.09 | 0.81 |
| 1:O:435:VAL:HG13 | 1:O:438:ARG:NH2 | 1.96 | 0.81 |
| 1:P:214:VAL:HG12 | 1:P:291:ASP:CG | 2.00 | 0.81 |
| 1:A:174:ILE:HD12 | 1:A:365:ALA:CB | 2.10 | 0.81 |
| 1:C:247:LEU:HD11 | 1:C:272:ALA:CB | 2.11 | 0.81 |
| 1:D:89:VAL:HG21 | 1:D:368:VAL:CG1 | 2.11 | 0.81 |
| 1:I:461:MET:CA | 1:I:461:MET:HE1 | 2.00 | 0.81 |
| 1:K:299:THR:HG23 | 1:K:334:VAL:HG11 | 1.62 | 0.81 |
| 1:L:134:LEU:HD13 | 1:L:392:LYS:CD | 2.07 | 0.81 |
| 1:L:140:CYS:SG | 1:L:447:LYS:HB3 | 2.21 | 0.81 |
| 1:M:39:LEU:HG | 1:M:40:GLY:H | 1.45 | 0.81 |
| 1:M:50:ASP:OD1 | 1:M:52:LEU:HG | 1.81 | 0.81 |
| 1:N:71:GLU:HG3 | 1:N:72:HIS:N | 1.89 | 0.81 |
| 1:N:145:GLN:O | 1:N:145:GLN:HG3 | 1.78 | 0.81 |
| 1:O:437:VAL:HG21 | 1:O:451:LEU:HD11 | 1.62 | 0.81 |
| 1:P:310:LEU:HD12 | 1:P:311:SER:H | 1.45 | 0.81 |
| 1:A:29:ARG:O | 1:A:33:GLU:HG3 | 1.80 | 0.81 |
| 1:A:34:THR:HA | 1:H:14:ARG:HH22 | 1.43 | 0.81 |
| 1:B:422:LEU:HA | 1:B:425:ASN:HD22 | 1.44 | 0.81 |
| 1:D:235:LEU:HD11 | 1:D:307:ILE:CD1 | 2.11 | 0.81 |
| 1:E:38:THR:HG21 | 1:E:46:LYS:HE2 | 1.61 | 0.81 |
| 1:E:233:ALA:HA | 1:E:315:LEU:CD1 | 2.10 | 0.81 |
| 1:K:134:LEU:CD2 | 1:K:392:LYS:HD2 | 2.08 | 0.81 |
| 1:L:119:ILE:HG21 | 1:L:403:ARG:HD3 | 1.61 | 0.81 |
| 1:L:123:GLY:HA3 | 1:L:407:ALA:HB3 | 1.61 | 0.81 |
| 1:L:469:PRO:CG | 1:L:472:VAL:HG21 | 2.10 | 0.81 |
| 1:P:227:VAL:HG11 | 1:P:260:ASN:ND2 | 1.96 | 0.81 |
| 1:A:88:GLU:HG3 | 1:A:475:GLN:CG | 2.08 | 0.81 |
| 1:A:89:VAL:O | 1:A:89:VAL:CG2 | 2.29 | 0.81 |
| 1:A:93:THR:O | 1:A:97:VAL:HG13 | 1.80 | 0.81 |
| 1:B:130:LYS:HD3 | 1:B:393:LEU:HD23 | 1.63 | 0.81 |
| 1:B:272:ALA:O | 1:B:276:LEU:HD12 | 1.79 | 0.81 |
| 1:D:265:GLN:OE1 | 1:D:289:LYS:HE2 | 1.81 | 0.81 |
| 1:F:232:ILE:CG1 | 1:F:299:THR:HG21 | 2.10 | 0.81 |
| 1:H:165:LYS:HA | 1:H:165:LYS:CE | 2.10 | 0.81 |
| 1:I:195:ILE:HB | 1:I:359:ALA:HB1 | 1.60 | 0.81 |
| 1:J:34:THR:HG22 | 1:J:35:VAL:N | 1.93 | 0.81 |
| 1:J:232:ILE:HG13 | 1:J:261:VAL:HG11 | 1.63 | 0.81 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:227:VAL:HG11 | 1:L:260:ASN:CG | 2.01 | 0.81 |
| 1:M:220:SER:HB2 | 1:M:273:GLN:CB | 2.10 | 0.81 |
| 1:M:235:LEU:HD11 | 1:M:310:LEU:HG | 1.62 | 0.81 |
| 1:O:433:ILE:HG21 | 1:O:451:LEU:HD23 | 1.61 | 0.81 |
| 1:P:68:MET:CE | 1:P:68:MET:HA | 2.09 | 0.81 |
| 1:P:193:ILE:HD12 | 1:P:366:VAL:CG1 | 2.09 | 0.81 |
| 1:D:110:LEU:O | 1:D:113:GLN:HA | 1.80 | 0.81 |
| 1:D:178:VAL:HG22 | 1:D:193:ILE:CD1 | 2.11 | 0.81 |
| 1:E:268:ILE:HG21 | 1:E:273:GLN:CG | 2.11 | 0.81 |
| 1:F:57:VAL:O | 1:F:57:VAL:CG2 | 2.29 | 0.81 |
| 1:I:197:LYS:CB | 1:I:355:ILE:HG21 | 2.10 | 0.81 |
| 1:K:106:LYS:HA | 1:K:106:LYS:HE3 | 1.61 | 0.81 |
| 1:L:116:HIS:HD2 | 1:L:118:THR:HG23 | 1.46 | 0.81 |
| 1:L:156:THR:HG21 | 1:L:468:GLU:CA | 2.10 | 0.81 |
| 1:M:70:VAL:HG21 | 1:M:76:LYS:HG3 | 1.63 | 0.81 |
| 1:N:311:SER:C | 1:N:315:LEU:HD12 | 2.01 | 0.81 |
| 1:B:113:GLN:CD | 1:B:113:GLN:N | 2.30 | 0.81 |
| 1:C:78:LEU:HD12 | 1:C:487:LEU:CD1 | 2.10 | 0.81 |
| 1:D:72:HIS:O | 1:D:75:ALA:HB3 | 1.79 | 0.81 |
| 1:E:210:LYS:CG | 1:E:343:VAL:HG23 | 2.10 | 0.81 |
| 1:E:236:ASN:C | 1:E:265:GLN:HB3 | 2.02 | 0.81 |
| 1:G:48:LEU:HD22 | 1:G:68:MET:SD | 2.21 | 0.81 |
| 1:K:235:LEU:CD2 | 1:K:304:ILE:HD11 | 2.11 | 0.81 |
| 1:K:237:CYS:HA | 1:K:306:ASN:C | 2.00 | 0.81 |
| 1:K:428:LEU:HD12 | 1:K:433:ILE:HD11 | 1.63 | 0.81 |
| 1:L:214:VAL:HG12 | 1:L:291:ASP:HB3 | 1.63 | 0.81 |
| 1:L:218:ARG:HD3 | 1:L:282:VAL:HG12 | 1.63 | 0.81 |
| 1:M:119:ILE:HG21 | 1:M:403:ARG:HB2 | 1.61 | 0.81 |
| 1:N:223:MET:HG3 | 1:N:277:ALA:HB2 | 1.60 | 0.81 |
| 1:O:51:ASP:HB3 | 1:P:11:ASN:OD1 | 1.81 | 0.81 |
| 1:O:216:LYS:O | 1:O:332:ILE:HG13 | 1.81 | 0.81 |
| 1:C:64:ILE:CG2 | 1:C:65:LEU:HD22 | 2.11 | 0.80 |
| 1:E:239:ILE:HB | 1:E:307:ILE:HG21 | 1.63 | 0.80 |
| 1:E:307:ILE:O | 1:E:307:ILE:CD1 | 2.27 | 0.80 |
| 1:F:48:LEU:CG | 1:F:68:MET:HE1 | 2.10 | 0.80 |
| 1:H:192:LEU:HD21 | 1:H:297:LYS:HE3 | 1.63 | 0.80 |
| 1:H:247:LEU:HD11 | 1:H:272:ALA:HB2 | 1.62 | 0.80 |
| 1:J:307:ILE:HD12 | 1:J:307:ILE:C | 2.01 | 0.80 |
| 1:K:307:ILE:O | 1:K:307:ILE:HD12 | 1.80 | 0.80 |
| 1:M:339:HIS:O | 1:M:339:HIS:ND1 | 2.13 | 0.80 |
| 1:M:391:MET:HE3 | 1:M:438:ARG:HA | 1.62 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:156:THR:CG2 | 1:N:468:GLU:HB3 | 2.10 | 0.80 |
| 1:P:123:GLY:N | 1:P:404:GLU:HG3 | 1.94 | 0.80 |
| 1:A:41:PRO:CG | 1:A:453:VAL:HG11 | 2.11 | 0.80 |
| 1:A:130:LYS:HG2 | 1:A:393:LEU:CD2 | 2.11 | 0.80 |
| 1:A:140:CYS:HB3 | 1:A:446:ASN:HB2 | 1.63 | 0.80 |
| 1:A:182:VAL:HB | 1:A:188:VAL:HG22 | 1.63 | 0.80 |
| 1:B:39:LEU:HD13 | 1:B:40:GLY:N | 1.95 | 0.80 |
| 1:J:12:MET:CE | 1:J:494:ILE:CG2 | 2.59 | 0.80 |
| 1:J:103:LEU:HD21 | 1:J:411:PHE:CE2 | 2.16 | 0.80 |
| 1:N:42:LYS:HB3 | 1:N:425:ASN:CB | 2.11 | 0.80 |
| 1:O:223:MET:HG3 | 1:O:277:ALA:CB | 2.09 | 0.80 |
| 1:B:70:VAL:HG11 | 1:B:76:LYS:HD3 | 1.63 | 0.80 |
| 1:B:122:LYS:HA | 1:B:125:GLN:CD | 2.02 | 0.80 |
| 1:C:152:LYS:HG2 | 1:C:465:GLY:CA | 2.10 | 0.80 |
| 1:D:12:MET:CE | 1:E:68:MET:HE1 | 2.12 | 0.80 |
| 1:D:170:LEU:HD13 | 1:D:358:VAL:HG13 | 1.62 | 0.80 |
| 1:H:403:ARG:HA | 1:H:406:LEU:HD13 | 1.61 | 0.80 |
| 1:L:78:LEU:CD1 | 1:L:487:LEU:HD11 | 2.11 | 0.80 |
| 1:M:103:LEU:HD21 | 1:M:411:PHE:CE2 | 2.15 | 0.80 |
| 1:N:119:ILE:CG2 | 1:N:403:ARG:HB2 | 2.11 | 0.80 |
| 1:O:15:TYR:CD2 | 1:O:19:ASP:HB3 | 2.16 | 0.80 |
| 1:A:95:THR:O | 1:A:99:VAL:HG22 | 1.82 | 0.80 |
| 1:A:135:LEU:HG | 1:A:138:ILE:CD1 | 2.12 | 0.80 |
| 1:B:169:LYS:HE3 | 1:B:204:ASP:O | 1.79 | 0.80 |
| 1:C:431:ILE:HD12 | 1:L:406:LEU:HD21 | 1.64 | 0.80 |
| 1:D:313:GLN:H | 1:D:313:GLN:CD | 1.85 | 0.80 |
| 1:G:100:ALA:O | 1:G:104:LEU:HG | 1.80 | 0.80 |
| 1:I:347:ILE:HG21 | 1:I:358:VAL:CG1 | 2.10 | 0.80 |
| 1:I:380:SER:HB3 | 1:I:384:SER:HB2 | 1.64 | 0.80 |
| 1:J:119:ILE:HD12 | 1:J:403:ARG:CB | 2.11 | 0.80 |
| 1:J:130:LYS:HE2 | 1:J:134:LEU:HD11 | 1.61 | 0.80 |
| 1:J:158:ILE:CG1 | 1:J:361:ALA:HB1 | 2.09 | 0.80 |
| 1:K:391:MET:HE3 | 1:K:438:ARG:HG2 | 1.61 | 0.80 |
| 1:L:130:LYS:HG3 | 1:L:393:LEU:CD2 | 2.09 | 0.80 |
| 1:L:197:LYS:HB3 | 1:L:355:ILE:CG2 | 2.11 | 0.80 |
| 1:M:36:ARG:HG2 | 1:M:37:SER:OG | 1.80 | 0.80 |
| 1:N:222:GLN:HB2 | 1:N:277:ALA:CB | 2.11 | 0.80 |
| 1:P:153:ILE:CG2 | 1:P:469:PRO:HG3 | 2.10 | 0.80 |
| 1:C:214:VAL:HG12 | 1:C:291:ASP:HB3 | 1.63 | 0.80 |
| 1:D:235:LEU:HD13 | 1:D:307:ILE:CB | 2.12 | 0.80 |
| 1:E:406:LEU:HD11 | 1:N:431:ILE:CD1 | 2.12 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:406:LEU:HD21 | 1:N:431:ILE:HG13 | 1.62 | 0.80 |
| 1:J:368:VAL:CB | 1:J:469:PRO:CG | 2.59 | 0.80 |
| 1:P:77:MET:HE2 | 1:P:487:LEU:CD1 | 2.10 | 0.80 |
| 1:A:134:LEU:HD12 | 1:A:393:LEU:HD21 | 1.64 | 0.80 |
| 1:A:219:VAL:CG1 | 1:A:273:GLN:HG2 | 2.11 | 0.80 |
| 1:A:285:ARG:HG3 | 1:A:286:ARG:H | 1.47 | 0.80 |
| 1:B:148:GLU:O | 1:B:148:GLU:HG3 | 1.82 | 0.80 |
| 1:C:31:ILE:CG2 | 1:C:65:LEU:HD11 | 2.12 | 0.80 |
| 1:C:197:LYS:HB3 | 1:C:355:ILE:HG21 | 1.51 | 0.80 |
| 1:D:169:LYS:HE3 | 1:D:204:ASP:O | 1.82 | 0.80 |
| 1:D:339:HIS:O | 1:D:339:HIS:CG | 2.29 | 0.80 |
| 1:H:347:ILE:HG21 | 1:H:358:VAL:HB | 1.63 | 0.80 |
| 1:I:56:VAL:CG2 | 1:I:56:VAL:O | 2.30 | 0.80 |
| 1:M:177:ALA:HB1 | 1:M:343:VAL:HG11 | 1.64 | 0.80 |
| 1:N:34:THR:HG23 | 1:O:14:ARG:CZ | 2.12 | 0.80 |
| 1:N:113:GLN:NE2 | 1:N:113:GLN:CA | 2.38 | 0.80 |
| 1:O:239:ILE:HD12 | 1:O:307:ILE:HG21 | 0.85 | 0.80 |
| 1:O:239:ILE:CD1 | 1:O:307:ILE:CD1 | 2.57 | 0.80 |
| 1:A:158:ILE:HD13 | 1:A:170:LEU:CB | 2.11 | 0.80 |
| 1:C:142:VAL:HG22 | 1:C:149:ILE:CG1 | 2.12 | 0.80 |
| 1:C:418:ILE:O | 1:C:422:LEU:HG | 1.82 | 0.80 |
| 1:D:158:ILE:HD12 | 1:D:167:LYS:CA | 2.10 | 0.80 |
| 1:D:219:VAL:HG23 | 1:D:285:ARG:HB2 | 1.64 | 0.80 |
| 1:D:234:LEU:CD1 | 1:D:296:ALA:HB2 | 2.11 | 0.80 |
| 1:D:403:ARG:CG | 1:D:403:ARG:NH1 | 2.40 | 0.80 |
| 1:F:461:MET:CE | 1:F:461:MET:N | 2.41 | 0.80 |
| 1:G:489:ARG:HH21 | 1:H:44:MET:HE2 | 1.47 | 0.80 |
| 1:H:234:LEU:HB3 | 1:H:292:MET:HE3 | 1.63 | 0.80 |
| 1:J:235:LEU:HD23 | 1:J:304:ILE:HD11 | 1.63 | 0.80 |
| 1:K:154:ALA:CB | 1:K:174:ILE:HD11 | 2.12 | 0.80 |
| 1:K:371:CYS:SG | 1:K:471:ARG:HB3 | 2.21 | 0.80 |
| 1:L:30:ILE:HG22 | 1:L:31:ILE:H | 1.47 | 0.80 |
| 1:M:82:ALA:HB2 | 1:M:97:VAL:HG21 | 1.64 | 0.80 |
| 1:N:158:ILE:HD13 | 1:N:170:LEU:HB2 | 1.63 | 0.80 |
| 1:A:431:ILE:CD1 | 1:J:403:ARG:HD3 | 2.12 | 0.80 |
| 1:B:206:THR:CB | 1:B:347:ILE:HG23 | 2.12 | 0.80 |
| 1:C:391:MET:HE1 | 1:C:438:ARG:CA | 2.11 | 0.80 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:CD2 | 2.10 | 0.80 |
| 1:I:234:LEU:HB3 | 1:I:292:MET:HE1 | 1.60 | 0.80 |
| 1:L:158:ILE:CG1 | 1:L:361:ALA:HB1 | 2.06 | 0.80 |
| 1:L:232:ILE:O | 1:L:315:LEU:HD22 | 1.81 | 0.80 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:235:LEU:CG | 1:L:307:ILE:HA | 2.08 | 0.80 |
| 1:M:124:TYR:CE1 | 1:M:407:ALA:HA | 2.16 | 0.80 |
| 1:O:34:THR:HA | 1:P:14:ARG:HH12 | 1.47 | 0.80 |
| 1:P:490:ILE:H | 1:P:490:ILE:CD1 | 1.94 | 0.80 |
| 1:B:156:THR:HG22 | 1:B:156:THR:O | 1.80 | 0.80 |
| 1:D:169:LYS:HG3 | 1:D:204:ASP:CB | 2.10 | 0.80 |
| 1:D:296:ALA:HB1 | 1:D:301:ALA:O | 1.80 | 0.80 |
| 1:G:234:LEU:HD12 | 1:G:296:ALA:HB2 | 1.63 | 0.80 |
| 1:H:153:ILE:HD11 | 1:H:378:ILE:HB | 1.63 | 0.80 |
| 1:K:78:LEU:CD1 | 1:K:487:LEU:HD22 | 2.07 | 0.80 |
| 1:K:469:PRO:O | 1:K:472:VAL:HB | 1.82 | 0.80 |
| 1:P:134:LEU:HD22 | 1:P:392:LYS:HD2 | 1.64 | 0.80 |
| 1:P:377:ARG:HD2 | 1:P:470:LEU:CD1 | 2.12 | 0.80 |
| 1:A:12:MET:CE | 1:A:494:ILE:HG22 | 2.12 | 0.80 |
| 1:A:391:MET:HE3 | 1:A:438:ARG:CG | 2.12 | 0.80 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:HG | 1.62 | 0.80 |
| 1:E:387:VAL:O | 1:E:390:SER:HB3 | 1.81 | 0.80 |
| 1:H:178:VAL:O | 1:H:178:VAL:HG23 | 1.79 | 0.80 |
| 1:I:152:LYS:CG | 1:I:465:GLY:HA2 | 2.12 | 0.80 |
| 1:J:134:LEU:HB3 | 1:J:392:LYS:HE3 | 1.64 | 0.80 |
| 1:J:437:VAL:HA | 1:J:458:VAL:CG2 | 2.10 | 0.80 |
| 1:K:68:MET:HG2 | 1:L:8:LEU:HD23 | 1.63 | 0.80 |
| 1:M:177:ALA:HB2 | 1:M:208:LEU:HD11 | 1.65 | 0.80 |
| 1:M:227:VAL:HG11 | 1:M:260:ASN:HD21 | 1.47 | 0.80 |
| 1:N:368:VAL:HB | 1:N:469:PRO:HB3 | 1.63 | 0.80 |
| 1:P:130:LYS:O | 1:P:130:LYS:HD2 | 1.81 | 0.80 |
| 1:A:68:MET:HG3 | 1:H:8:LEU:CD2 | 2.10 | 0.79 |
| 1:A:206:THR:HG21 | 1:A:347:ILE:CG2 | 2.12 | 0.79 |
| 1:C:420:ARG:O | 1:C:423:ALA:HB3 | 1.82 | 0.79 |
| 1:E:12:MET:SD | 1:E:494:ILE:HG22 | 2.21 | 0.79 |
| 1:E:403:ARG:CG | 1:E:403:ARG:NH1 | 2.33 | 0.79 |
| 1:F:8:LEU:HD12 | 1:G:68:MET:CG | 2.12 | 0.79 |
| 1:G:85:GLN:NE2 | 1:G:476:ALA:HA | 1.96 | 0.79 |
| 1:G:119:ILE:HG21 | 1:G:403:ARG:HB2 | 1.64 | 0.79 |
| 1:H:132:GLN:HA | 1:H:132:GLN:HE21 | 1.47 | 0.79 |
| 1:H:235:LEU:HD21 | 1:H:307:ILE:N | 1.98 | 0.79 |
| 1:J:234:LEU:H | 1:J:315:LEU:CD2 | 1.94 | 0.79 |
| 1:L:254:ILE:HD13 | 1:L:262:LEU:HD13 | 1.62 | 0.79 |
| 1:M:216:LYS:O | 1:M:332:ILE:HG13 | 1.83 | 0.79 |
| 1:M:276:LEU:HD12 | 1:M:281:ILE:HG21 | 0.89 | 0.79 |
| 1:N:85:GLN:NE2 | 1:N:475:GLN:HG3 | 1.96 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:251:VAL:HG13 | 1:N:276:LEU:HG | 1.64 | 0.79 |
| 1:N:383:GLY:HA3 | 1:N:386:GLU:CG | 2.12 | 0.79 |
| 1:O:233:ALA:HB1 | 1:O:310:LEU:CD1 | 2.11 | 0.79 |
| 1:P:42:LYS:CD | 1:P:426:ALA:HB2 | 2.11 | 0.79 |
| 1:P:134:LEU:HD11 | 1:P:393:LEU:CD2 | 2.13 | 0.79 |
| 1:A:235:LEU:HD11 | 1:A:307:ILE:HB | 1.64 | 0.79 |
| 1:A:431:ILE:HD13 | 1:J:403:ARG:HD3 | 1.64 | 0.79 |
| 1:E:233:ALA:HA | 1:E:315:LEU:CD2 | 2.11 | 0.79 |
| 1:G:166:ALA:HB2 | 1:G:203:ILE:HB | 1.62 | 0.79 |
| 1:G:431:ILE:HG13 | 1:P:406:LEU:CD1 | 2.12 | 0.79 |
| 1:H:236:ASN:ND2 | 1:H:305:THR:HG23 | 1.96 | 0.79 |
| 1:I:170:LEU:CD2 | 1:I:358:VAL:HG22 | 2.10 | 0.79 |
| 1:L:379:VAL:HG22 | 1:L:380:SER:H | 1.46 | 0.79 |
| 1:M:234:LEU:HB3 | 1:M:292:MET:HE2 | 1.62 | 0.79 |
| 1:N:49:VAL:CG2 | 1:N:55:VAL:HG12 | 2.12 | 0.79 |
| 1:N:198:LYS:N | 1:N:355:ILE:HD13 | 1.96 | 0.79 |
| 1:C:78:LEU:HD12 | 1:C:487:LEU:CD2 | 2.12 | 0.79 |
| 1:C:123:GLY:HA3 | 1:C:407:ALA:HB3 | 1.64 | 0.79 |
| 1:C:166:ALA:HB2 | 1:C:203:ILE:CG2 | 2.13 | 0.79 |
| 1:D:431:ILE:HD12 | 1:M:406:LEU:HD23 | 1.64 | 0.79 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:CB | 2.64 | 0.79 |
| 1:F:235:LEU:HD13 | 1:F:310:LEU:HD13 | 1.63 | 0.79 |
| 1:J:138:ILE:C | 1:J:138:ILE:HD12 | 2.01 | 0.79 |
| 1:K:235:LEU:HD21 | 1:K:310:LEU:CB | 2.13 | 0.79 |
| 1:L:308:LYS:HB2 | 1:L:308:LYS:HZ2 | 1.45 | 0.79 |
| 1:M:42:LYS:HB3 | 1:M:425:ASN:HB3 | 1.62 | 0.79 |
| 1:N:223:MET:HB3 | 1:N:282:VAL:HA | 1.62 | 0.79 |
| 1:A:130:LYS:O | 1:A:130:LYS:HG3 | 1.79 | 0.79 |
| 1:A:403:ARG:CG | 1:A:403:ARG:NH1 | 2.30 | 0.79 |
| 1:C:152:LYS:CG | 1:C:465:GLY:HA2 | 2.11 | 0.79 |
| 1:D:380:SER:HA | 1:D:467:VAL:HG13 | 1.64 | 0.79 |
| 1:E:9:PRO:HD3 | 1:F:68:MET:CE | 2.11 | 0.79 |
| 1:E:227:VAL:HG11 | 1:E:260:ASN:CG | 2.03 | 0.79 |
| 1:F:9:PRO:CD | 1:G:68:MET:HG3 | 2.12 | 0.79 |
| 1:F:34:THR:CG2 | 1:F:35:VAL:HG13 | 2.12 | 0.79 |
| 1:F:192:LEU:CG | 1:F:342:ALA:HB2 | 2.11 | 0.79 |
| 1:G:158:ILE:HG12 | 1:G:361:ALA:CB | 2.11 | 0.79 |
| 1:H:42:LYS:HE2 | 1:H:426:ALA:HB2 | 1.65 | 0.79 |
| 1:H:138:ILE:HD12 | 1:H:379:VAL:HG21 | 1.63 | 0.79 |
| 1:H:158:ILE:HG12 | 1:H:361:ALA:HB1 | 1.64 | 0.79 |
| 1:H:459:GLU:HG2 | 1:H:461:MET:HE1 | 1.65 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:234:LEU:HB3 | 1:J:292:MET:HE3 | 1.64 | 0.79 |
| 1:L:30:ILE:HG22 | 1:L:31:ILE:N | 1.97 | 0.79 |
| 1:M:234:LEU:HB3 | 1:M:292:MET:HE3 | 1.62 | 0.79 |
| 1:N:117:PRO:O | 1:N:120:VAL:HG12 | 1.83 | 0.79 |
| 1:N:121:VAL:HG23 | 1:N:122:LYS:N | 1.98 | 0.79 |
| 1:P:119:ILE:HD12 | 1:P:403:ARG:HB2 | 1.64 | 0.79 |
| 1:P:134:LEU:HD13 | 1:P:392:LYS:HE3 | 1.64 | 0.79 |
| 1:P:391:MET:HE3 | 1:P:438:ARG:CD | 2.12 | 0.79 |
| 1:D:459:GLU:HG2 | 1:D:461:MET:CE | 2.11 | 0.79 |
| 1:F:235:LEU:HD22 | 1:F:262:LEU:HD21 | 1.65 | 0.79 |
| 1:H:130:LYS:CE | 1:H:134:LEU:HD11 | 2.13 | 0.79 |
| 1:H:178:VAL:CG1 | 1:H:366:VAL:HG13 | 2.12 | 0.79 |
| 1:H:431:ILE:CD1 | 1:I:403:ARG:HG2 | 2.12 | 0.79 |
| 1:I:8:LEU:HD22 | 1:P:68:MET:SD | 2.23 | 0.79 |
| 1:I:142:VAL:CG1 | 1:I:149:ILE:HG21 | 2.11 | 0.79 |
| 1:K:212:VAL:HG23 | 1:K:298:ALA:HB2 | 1.63 | 0.79 |
| 1:L:70:VAL:CA | 1:M:9:PRO:HD2 | 2.13 | 0.79 |
| 1:L:406:LEU:H | 1:L:406:LEU:CD1 | 1.92 | 0.79 |
| 1:M:235:LEU:HD23 | 1:M:304:ILE:HD11 | 1.63 | 0.79 |
| 1:N:18:ARG:HB2 | 1:N:21:GLN:OE1 | 1.81 | 0.79 |
| 1:O:387:VAL:O | 1:O:390:SER:HB3 | 1.82 | 0.79 |
| 1:A:9:PRO:CB | 1:B:69:SER:HB3 | 2.12 | 0.79 |
| 1:B:339:HIS:O | 1:B:339:HIS:CG | 2.32 | 0.79 |
| 1:C:130:LYS:HE2 | 1:C:393:LEU:CD2 | 2.11 | 0.79 |
| 1:F:251:VAL:HG13 | 1:F:276:LEU:HD22 | 1.64 | 0.79 |
| 1:F:358:VAL:O | 1:F:362:VAL:HG12 | 1.82 | 0.79 |
| 1:G:158:ILE:O | 1:G:158:ILE:CG2 | 2.30 | 0.79 |
| 1:I:377:ARG:HD2 | 1:I:470:LEU:CD1 | 2.11 | 0.79 |
| 1:K:130:LYS:HG2 | 1:K:393:LEU:HD21 | 1.64 | 0.79 |
| 1:L:77:MET:HE2 | 1:L:486:MET:CE | 2.12 | 0.79 |
| 1:L:351:THR:O | 1:L:355:ILE:HG13 | 1.82 | 0.79 |
| 1:N:153:ILE:CD1 | 1:N:378:ILE:HG22 | 2.03 | 0.79 |
| 1:N:263:PHE:CD2 | 1:N:295:LEU:HD13 | 2.18 | 0.79 |
| 1:O:95:THR:O | 1:O:99:VAL:HG22 | 1.83 | 0.79 |
| 1:O:377:ARG:CG | 1:O:470:LEU:HD12 | 2.13 | 0.79 |
| 1:P:119:ILE:HG21 | 1:P:403:ARG:HB2 | 1.63 | 0.79 |
| 1:A:42:LYS:HG3 | 1:A:426:ALA:HB2 | 1.65 | 0.79 |
| 1:C:377:ARG:HB2 | 1:C:470:LEU:HD12 | 1.64 | 0.79 |
| 1:F:276:LEU:CD1 | 1:F:281:ILE:HD12 | 2.13 | 0.79 |
| 1:G:368:VAL:HA | 1:G:371:CYS:SG | 2.22 | 0.79 |
| 1:H:113:GLN:NE2 | 1:H:113:GLN:H | 1.80 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:124:TYR:N | 1:I:124:TYR:HD1 | 1.79 | 0.79 |
| 1:J:106:LYS:CA | 1:J:106:LYS:HE2 | 1.96 | 0.79 |
| 1:J:138:ILE:CD1 | 1:J:379:VAL:HG21 | 2.13 | 0.79 |
| 1:K:115:VAL:CG2 | 1:K:119:ILE:HB | 2.13 | 0.79 |
| 1:K:177:ALA:HB2 | 1:K:208:LEU:HD11 | 1.65 | 0.79 |
| 1:K:400:ILE:HD11 | 1:K:408:VAL:HG21 | 1.65 | 0.79 |
| 1:K:437:VAL:HG11 | 1:K:451:LEU:HD11 | 1.64 | 0.79 |
| 1:M:156:THR:HG21 | 1:M:468:GLU:CB | 2.13 | 0.79 |
| 1:M:177:ALA:HB2 | 1:M:208:LEU:HD13 | 1.63 | 0.79 |
| 1:M:198:LYS:HB2 | 1:M:326:ILE:HD11 | 1.64 | 0.79 |
| 1:B:170:LEU:HD22 | 1:B:358:VAL:HG13 | 1.65 | 0.79 |
| 1:C:178:VAL:HG22 | 1:C:193:ILE:HD12 | 1.62 | 0.79 |
| 1:C:362:VAL:O | 1:C:366:VAL:HG23 | 1.81 | 0.79 |
| 1:D:448:CYS:HB2 | 1:D:460:ASP:CA | 2.10 | 0.79 |
| 1:E:9:PRO:CA | 1:F:69:SER:HB3 | 2.13 | 0.79 |
| 1:E:142:VAL:HB | 1:E:149:ILE:HD13 | 1.63 | 0.79 |
| 1:H:199:SER:HB2 | 1:H:327:SER:HB2 | 1.65 | 0.79 |
| 1:J:127:ALA:HB2 | 1:J:408:VAL:HG12 | 1.62 | 0.79 |
| 1:K:68:MET:CG | 1:L:8:LEU:HA | 2.11 | 0.79 |
| 1:K:69:SER:CB | 1:L:9:PRO:HA | 2.12 | 0.79 |
| 1:K:214:VAL:HG11 | 1:K:295:LEU:CD1 | 2.13 | 0.79 |
| 1:K:247:LEU:HD21 | 1:K:269:ASP:HB3 | 1.64 | 0.79 |
| 1:K:387:VAL:O | 1:K:390:SER:HB3 | 1.82 | 0.79 |
| 1:L:307:ILE:HD12 | 1:L:310:LEU:CB | 2.13 | 0.79 |
| 1:L:310:LEU:CD1 | 1:L:315:LEU:HD11 | 2.12 | 0.79 |
| 1:N:134:LEU:HB3 | 1:N:392:LYS:HZ1 | 1.46 | 0.79 |
| 1:O:281:ILE:HG22 | 1:O:281:ILE:O | 1.80 | 0.79 |
| 1:A:400:ILE:HD11 | 1:A:408:VAL:HG21 | 1.65 | 0.79 |
| 1:C:222:GLN:HB3 | 1:C:277:ALA:CB | 2.12 | 0.79 |
| 1:C:223:MET:HG3 | 1:C:277:ALA:HB2 | 1.63 | 0.79 |
| 1:C:345:MET:SD | 1:C:362:VAL:HG21 | 2.23 | 0.79 |
| 1:C:396:TYR:O | 1:C:396:TYR:CG | 2.33 | 0.79 |
| 1:D:41:PRO:CB | 1:D:453:VAL:HG11 | 2.13 | 0.79 |
| 1:D:105:ARG:NH1 | 1:D:106:LYS:HD2 | 1.97 | 0.79 |
| 1:D:215:ASP:O | 1:D:216:LYS:HG2 | 1.82 | 0.79 |
| 1:E:235:LEU:HG | 1:E:307:ILE:CB | 2.07 | 0.79 |
| 1:E:368:VAL:CG2 | 1:E:469:PRO:HG3 | 2.12 | 0.79 |
| 1:F:9:PRO:HB3 | 1:G:69:SER:H | 1.47 | 0.79 |
| 1:F:371:CYS:CB | 1:F:471:ARG:HE | 1.96 | 0.79 |
| 1:H:437:VAL:HG22 | 1:H:458:VAL:HG23 | 1.64 | 0.79 |
| 1:L:148:GLU:HG3 | 1:L:148:GLU:O | 1.80 | 0.79 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:115:VAL:HG22 | 1:N:119:ILE:HG13 | 1.63 | 0.79 |
| 1:N:119:ILE:HG21 | 1:N:403:ARG:CB | 2.13 | 0.79 |
| 1:N:380:SER:CB | 1:N:384:SER:HB2 | 2.13 | 0.79 |
| 1:O:27:ALA:HA | 1:O:30:ILE:HD11 | 1.63 | 0.79 |
| 1:P:119:ILE:HG23 | 1:P:403:ARG:HB2 | 1.65 | 0.79 |
| 1:A:104:LEU:HD23 | 1:A:488:LEU:CD1 | 2.11 | 0.79 |
| 1:A:219:VAL:HG22 | 1:A:273:GLN:CD | 2.03 | 0.79 |
| 1:D:276:LEU:HD12 | 1:D:281:ILE:CG2 | 2.10 | 0.79 |
| 1:D:372:THR:HA | 1:D:375:ASP:O | 1.83 | 0.79 |
| 1:E:119:ILE:HG13 | 1:E:403:ARG:HD2 | 1.64 | 0.79 |
| 1:E:152:LYS:CG | 1:E:465:GLY:HA2 | 2.13 | 0.79 |
| 1:E:420:ARG:HH11 | 1:E:420:ARG:CG | 1.95 | 0.79 |
| 1:F:433:ILE:CG2 | 1:F:434:LEU:HD22 | 2.10 | 0.79 |
| 1:F:437:VAL:HG21 | 1:F:451:LEU:HD11 | 1.62 | 0.79 |
| 1:F:469:PRO:HB2 | 1:F:472:VAL:HG23 | 1.63 | 0.79 |
| 1:G:401:SER:HB2 | 1:P:435:VAL:HG11 | 1.62 | 0.79 |
| 1:H:21:GLN:O | 1:H:25:ILE:HG13 | 1.82 | 0.79 |
| 1:H:138:ILE:HA | 1:H:446:ASN:HB3 | 1.63 | 0.79 |
| 1:J:12:MET:HA | 1:J:495:ALA:O | 1.82 | 0.79 |
| 1:J:178:VAL:HG22 | 1:J:193:ILE:CD1 | 2.13 | 0.79 |
| 1:K:130:LYS:O | 1:K:130:LYS:HG3 | 1.81 | 0.79 |
| 1:K:237:CYS:O | 1:K:307:ILE:HG23 | 1.83 | 0.79 |
| 1:L:233:ALA:HA | 1:L:315:LEU:CD1 | 2.12 | 0.79 |
| 1:N:44:MET:CE | 1:N:44:MET:HA | 2.12 | 0.79 |
| 1:N:145:GLN:O | 1:N:145:GLN:CG | 2.28 | 0.79 |
| 1:O:122:LYS:HA | 1:O:125:GLN:CD | 2.03 | 0.79 |
| 1:A:235:LEU:HD21 | 1:A:307:ILE:HA | 1.64 | 0.78 |
| 1:B:130:LYS:HE2 | 1:B:134:LEU:HD11 | 1.64 | 0.78 |
| 1:B:170:LEU:HD11 | 1:B:358:VAL:HG22 | 1.64 | 0.78 |
| 1:B:339:HIS:CE1 | 1:B:341:LYS:HD2 | 2.18 | 0.78 |
| 1:C:31:ILE:HG21 | 1:C:65:LEU:HD11 | 1.65 | 0.78 |
| 1:C:150:LEU:HB3 | 1:C:175:VAL:CG1 | 2.13 | 0.78 |
| 1:D:213:LEU:HD22 | 1:D:331:MET:HE1 | 1.63 | 0.78 |
| 1:D:262:LEU:HD11 | 1:D:310:LEU:CD1 | 2.12 | 0.78 |
| 1:D:403:ARG:HH11 | 1:D:403:ARG:CG | 1.86 | 0.78 |
| 1:E:120:VAL:HG23 | 1:E:124:TYR:CE2 | 2.18 | 0.78 |
| 1:F:368:VAL:HB | 1:F:469:PRO:CG | 2.10 | 0.78 |
| 1:G:31:ILE:HG21 | 1:G:65:LEU:HG | 1.64 | 0.78 |
| 1:H:299:THR:HG23 | 1:H:334:VAL:HG11 | 1.65 | 0.78 |
| 1:I:358:VAL:O | 1:I:362:VAL:HG12 | 1.83 | 0.78 |
| 1:L:239:ILE:HG22 | 1:L:307:ILE:HB | 1.64 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:387:VAL:HG21 | 1:L:437:VAL:HG12 | 1.63 | 0.78 |
| 1:N:81:VAL:HG11 | 1:N:483:SER:HB2 | 1.65 | 0.78 |
| 1:A:15:TYR:O | 1:A:19:ASP:HB2 | 1.83 | 0.78 |
| 1:A:193:ILE:HD13 | 1:A:366:VAL:HG21 | 1.65 | 0.78 |
| 1:D:142:VAL:CG1 | 1:D:149:ILE:HG21 | 2.10 | 0.78 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:CG1 | 2.61 | 0.78 |
| 1:D:494:ILE:HG13 | 1:E:48:LEU:HD23 | 1.65 | 0.78 |
| 1:E:234:LEU:CD1 | 1:E:301:ALA:CB | 2.61 | 0.78 |
| 1:G:235:LEU:CG | 1:G:310:LEU:HD22 | 2.13 | 0.78 |
| 1:H:234:LEU:HB3 | 1:H:292:MET:CE | 2.13 | 0.78 |
| 1:H:437:VAL:HG21 | 1:H:451:LEU:CG | 2.12 | 0.78 |
| 1:J:34:THR:HB | 1:K:14:ARG:HH22 | 1.48 | 0.78 |
| 1:J:69:SER:CB | 1:K:9:PRO:HB3 | 2.12 | 0.78 |
| 1:J:219:VAL:HG21 | 1:J:268:ILE:HD12 | 1.64 | 0.78 |
| 1:K:223:MET:CE | 1:K:276:LEU:CB | 2.61 | 0.78 |
| 1:K:391:MET:CE | 1:K:438:ARG:HB3 | 2.12 | 0.78 |
| 1:L:234:LEU:HD22 | 1:L:301:ALA:HB3 | 1.64 | 0.78 |
| 1:M:69:SER:CB | 1:N:9:PRO:HA | 2.13 | 0.78 |
| 1:M:262:LEU:HD12 | 1:M:310:LEU:HD11 | 1.64 | 0.78 |
| 1:M:296:ALA:CB | 1:M:301:ALA:HB3 | 2.13 | 0.78 |
| 1:N:12:MET:SD | 1:N:494:ILE:HG22 | 2.23 | 0.78 |
| 1:O:143:GLY:O | 1:O:149:ILE:HD11 | 1.83 | 0.78 |
| 1:P:42:LYS:HD3 | 1:P:426:ALA:CB | 2.12 | 0.78 |
| 1:P:268:ILE:CG2 | 1:P:273:GLN:HG3 | 2.13 | 0.78 |
| 1:A:428:LEU:HD13 | 1:A:428:LEU:H | 1.48 | 0.78 |
| 1:B:48:LEU:HB3 | 1:B:68:MET:SD | 2.22 | 0.78 |
| 1:B:197:LYS:HB3 | 1:B:355:ILE:HD12 | 1.63 | 0.78 |
| 1:C:134:LEU:HD22 | 1:C:392:LYS:HD2 | 1.66 | 0.78 |
| 1:C:170:LEU:HD22 | 1:C:358:VAL:CG1 | 2.12 | 0.78 |
| 1:C:377:ARG:HD3 | 1:C:377:ARG:N | 1.93 | 0.78 |
| 1:E:35:VAL:HG23 | 1:E:35:VAL:O | 1.80 | 0.78 |
| 1:F:377:ARG:HH21 | 1:F:377:ARG:CG | 1.96 | 0.78 |
| 1:G:227:VAL:HG11 | 1:G:260:ASN:ND2 | 1.99 | 0.78 |
| 1:H:307:ILE:O | 1:H:310:LEU:HB2 | 1.84 | 0.78 |
| 1:I:197:LYS:CB | 1:I:355:ILE:CG2 | 2.61 | 0.78 |
| 1:K:214:VAL:HB | 1:K:291:ASP:OD2 | 1.82 | 0.78 |
| 1:K:469:PRO:HB2 | 1:K:472:VAL:CG2 | 2.13 | 0.78 |
| 1:L:105:ARG:HD3 | 1:L:106:LYS:N | 1.97 | 0.78 |
| 1:L:192:LEU:HG | 1:L:342:ALA:HB2 | 1.64 | 0.78 |
| 1:L:211:GLY:HA2 | 1:L:298:ALA:CB | 2.13 | 0.78 |
| 1:M:161:LYS:HB3 | 1:M:357:GLU:OE2 | 1.82 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:130:LYS:NZ | 1:N:134:LEU:HD11 | 1.98 | 0.78 |
| 1:O:254:ILE:CD1 | 1:O:276:LEU:HD11 | 2.13 | 0.78 |
| 1:P:450:GLY:C | 1:P:451:LEU:HD12 | 2.04 | 0.78 |
| 1:A:12:MET:HE2 | 1:B:68:MET:CG | 2.12 | 0.78 |
| 1:A:96:ALA:CA | 1:A:480:ALA:HB2 | 2.14 | 0.78 |
| 1:C:17:GLY:HA2 | 1:C:21:GLN:NE2 | 1.98 | 0.78 |
| 1:C:169:LYS:HG2 | 1:C:204:ASP:CA | 2.12 | 0.78 |
| 1:C:218:ARG:HG2 | 1:C:218:ARG:NH1 | 1.97 | 0.78 |
| 1:D:158:ILE:O | 1:D:158:ILE:HG23 | 1.80 | 0.78 |
| 1:E:437:VAL:HG21 | 1:E:451:LEU:HG | 1.62 | 0.78 |
| 1:F:70:VAL:HG11 | 1:F:76:LYS:HG3 | 1.65 | 0.78 |
| 1:F:460:ASP:OD2 | 1:F:463:GLU:HG3 | 1.84 | 0.78 |
| 1:G:12:MET:HB3 | 1:H:68:MET:HE2 | 1.65 | 0.78 |
| 1:G:138:ILE:HD12 | 1:G:385:THR:CB | 2.13 | 0.78 |
| 1:I:197:LYS:HA | 1:I:355:ILE:CG2 | 2.13 | 0.78 |
| 1:J:48:LEU:HD22 | 1:J:68:MET:SD | 2.22 | 0.78 |
| 1:J:234:LEU:HB3 | 1:J:292:MET:CE | 2.13 | 0.78 |
| 1:J:368:VAL:CG1 | 1:J:469:PRO:HG2 | 2.14 | 0.78 |
| 1:K:233:ALA:CB | 1:K:315:LEU:HD21 | 2.13 | 0.78 |
| 1:L:82:ALA:HB2 | 1:L:97:VAL:HG21 | 1.66 | 0.78 |
| 1:M:124:TYR:CD1 | 1:M:407:ALA:HB1 | 2.17 | 0.78 |
| 1:N:233:ALA:HB2 | 1:N:315:LEU:CD1 | 2.13 | 0.78 |
| 1:P:182:VAL:HB | 1:P:188:VAL:HG22 | 1.65 | 0.78 |
| 1:P:255:LYS:HD3 | 1:P:279:GLU:CG | 2.13 | 0.78 |
| 1:B:114:ASN:O | 1:B:114:ASN:ND2 | 2.16 | 0.78 |
| 1:B:156:THR:O | 1:B:156:THR:CG2 | 2.31 | 0.78 |
| 1:B:169:LYS:HG2 | 1:B:204:ASP:HA | 1.64 | 0.78 |
| 1:B:262:LEU:CD1 | 1:B:310:LEU:HD13 | 2.13 | 0.78 |
| 1:B:307:ILE:CG1 | 1:B:310:LEU:HD12 | 2.14 | 0.78 |
| 1:E:368:VAL:O | 1:E:371:CYS:HB2 | 1.82 | 0.78 |
| 1:F:153:ILE:HG21 | 1:F:469:PRO:HG3 | 1.65 | 0.78 |
| 1:F:263:PHE:CD2 | 1:F:295:LEU:HD22 | 2.18 | 0.78 |
| 1:I:403:ARG:HH11 | 1:I:403:ARG:HG3 | 1.49 | 0.78 |
| 1:J:152:LYS:HG2 | 1:J:465:GLY:HA2 | 1.66 | 0.78 |
| 1:J:235:LEU:CD1 | 1:J:307:ILE:HG22 | 2.14 | 0.78 |
| 1:L:130:LYS:HE3 | 1:L:396:TYR:CD1 | 2.19 | 0.78 |
| 1:M:384:SER:CB | 1:M:441:HIS:CE1 | 2.67 | 0.78 |
| 1:N:68:MET:HE2 | 1:N:68:MET:CA | 2.12 | 0.78 |
| 1:P:115:VAL:HG11 | 1:P:403:ARG:HD2 | 1.65 | 0.78 |
| 1:P:174:ILE:HD12 | 1:P:365:ALA:HB1 | 1.65 | 0.78 |
| 1:A:239:ILE:CG1 | 1:A:307:ILE:HG12 | 2.02 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:311:SER:C | 1:B:315:LEU:HD22 | 2.04 | 0.78 |
| 1:C:437:VAL:CG2 | 1:C:451:LEU:HG | 2.14 | 0.78 |
| 1:D:130:LYS:CE | 1:D:393:LEU:HD23 | 2.13 | 0.78 |
| 1:D:158:ILE:HD13 | 1:D:170:LEU:HG | 0.86 | 0.78 |
| 1:J:68:MET:HB3 | 1:K:8:LEU:HD22 | 1.64 | 0.78 |
| 1:J:198:LYS:HG3 | 1:J:326:ILE:HD13 | 1.64 | 0.78 |
| 1:J:234:LEU:N | 1:J:315:LEU:HD21 | 1.98 | 0.78 |
| 1:K:391:MET:CE | 1:K:438:ARG:CB | 2.61 | 0.78 |
| 1:L:418:ILE:HB | 1:L:419:PRO:HD3 | 1.64 | 0.78 |
| 1:N:254:ILE:HD13 | 1:N:262:LEU:HD11 | 1.64 | 0.78 |
| 1:P:307:ILE:O | 1:P:307:ILE:CG1 | 2.32 | 0.78 |
| 1:B:233:ALA:HA | 1:B:315:LEU:CD1 | 2.14 | 0.78 |
| 1:B:235:LEU:HD11 | 1:B:307:ILE:CB | 2.13 | 0.78 |
| 1:B:255:LYS:HD3 | 1:B:279:GLU:CG | 2.13 | 0.78 |
| 1:C:152:LYS:HD3 | 1:C:465:GLY:HA2 | 1.66 | 0.78 |
| 1:E:206:THR:HB | 1:E:347:ILE:HG23 | 1.65 | 0.78 |
| 1:F:130:LYS:HD3 | 1:F:393:LEU:HD23 | 1.66 | 0.78 |
| 1:G:234:LEU:HD11 | 1:G:296:ALA:HB2 | 1.66 | 0.78 |
| 1:G:391:MET:HE2 | 1:G:438:ARG:HG2 | 1.65 | 0.78 |
| 1:I:212:VAL:HG21 | 1:I:294:LYS:O | 1.82 | 0.78 |
| 1:K:30:ILE:HG22 | 1:K:31:ILE:HD13 | 1.63 | 0.78 |
| 1:M:223:MET:HG2 | 1:M:281:ILE:O | 1.83 | 0.78 |
| 1:N:384:SER:HB3 | 1:N:441:HIS:HE1 | 1.49 | 0.78 |
| 1:O:116:HIS:CB | 1:O:117:PRO:HD2 | 2.12 | 0.78 |
| 1:O:124:TYR:CE1 | 1:O:407:ALA:HB1 | 2.19 | 0.78 |
| 1:P:150:LEU:HB3 | 1:P:175:VAL:HG21 | 1.65 | 0.78 |
| 1:P:235:LEU:HG | 1:P:307:ILE:CD1 | 2.12 | 0.78 |
| 1:A:297:LYS:HZ1 | 1:A:341:LYS:HE3 | 1.49 | 0.78 |
| 1:C:206:THR:CG2 | 1:C:347:ILE:HG22 | 2.14 | 0.78 |
| 1:D:14:ARG:NH2 | 1:E:34:THR:HG23 | 1.98 | 0.78 |
| 1:D:25:ILE:HG22 | 1:D:26:LEU:N | 1.99 | 0.78 |
| 1:D:248:LYS:HG3 | 1:D:275:TYR:CE2 | 2.19 | 0.78 |
| 1:E:239:ILE:HG13 | 1:E:307:ILE:HG12 | 1.65 | 0.78 |
| 1:E:494:ILE:HG21 | 1:F:68:MET:SD | 2.24 | 0.78 |
| 1:F:248:LYS:HD2 | 1:F:275:TYR:CE2 | 2.19 | 0.78 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:CG1 | 2.12 | 0.78 |
| 1:H:235:LEU:HD11 | 1:H:307:ILE:HG22 | 1.65 | 0.78 |
| 1:H:420:ARG:HH11 | 1:H:420:ARG:CG | 1.90 | 0.78 |
| 1:I:73:PRO:HA | 1:I:76:LYS:CG | 2.13 | 0.78 |
| 1:I:73:PRO:HA | 1:I:76:LYS:HG3 | 1.65 | 0.78 |
| 1:J:307:ILE:O | 1:J:307:ILE:HD13 | 1.84 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:124:TYR:CE1 | 1:K:407:ALA:HB1 | 2.19 | 0.78 |
| 1:M:39:LEU:CG | 1:M:40:GLY:H | 1.97 | 0.78 |
| 1:M:197:LYS:HB3 | 1:M:355:ILE:HG21 | 1.66 | 0.78 |
| 1:O:77:MET:HE1 | 1:O:486:MET:HE2 | 1.65 | 0.78 |
| 1:B:42:LYS:CE | 1:B:453:VAL:HB | 2.13 | 0.78 |
| 1:B:192:LEU:HD23 | 1:B:341:LYS:O | 1.82 | 0.78 |
| 1:D:396:TYR:O | 1:D:396:TYR:CG | 2.36 | 0.78 |
| 1:E:89:VAL:O | 1:E:89:VAL:CG2 | 2.32 | 0.78 |
| 1:F:48:LEU:HG | 1:F:68:MET:CE | 2.13 | 0.78 |
| 1:F:82:ALA:HB2 | 1:F:97:VAL:HG21 | 1.64 | 0.78 |
| 1:G:212:VAL:HG21 | 1:G:294:LYS:C | 2.04 | 0.78 |
| 1:H:351:THR:HG23 | 1:H:352:GLU:H | 1.48 | 0.78 |
| 1:J:232:ILE:O | 1:J:315:LEU:HB3 | 1.84 | 0.78 |
| 1:K:130:LYS:NZ | 1:K:393:LEU:HD23 | 1.99 | 0.78 |
| 1:L:192:LEU:CB | 1:L:342:ALA:HB2 | 2.14 | 0.78 |
| 1:L:209:ILE:HD11 | 1:L:213:LEU:HB2 | 1.65 | 0.78 |
| 1:L:235:LEU:HG | 1:L:307:ILE:CB | 2.13 | 0.78 |
| 1:M:119:ILE:CG1 | 1:M:403:ARG:HD3 | 2.09 | 0.78 |
| 1:M:158:ILE:HG22 | 1:M:158:ILE:O | 1.83 | 0.78 |
| 1:M:420:ARG:HH11 | 1:M:420:ARG:CA | 1.97 | 0.78 |
| 1:N:351:THR:O | 1:N:355:ILE:HG13 | 1.84 | 0.78 |
| 1:N:380:SER:HB2 | 1:N:384:SER:HB2 | 1.66 | 0.78 |
| 1:A:124:TYR:CD1 | 1:A:407:ALA:HB1 | 2.19 | 0.78 |
| 1:B:240:GLU:O | 1:B:240:GLU:HG3 | 1.84 | 0.78 |
| 1:C:119:ILE:HG13 | 1:C:403:ARG:HD2 | 1.66 | 0.78 |
| 1:D:233:ALA:CA | 1:D:315:LEU:CD1 | 2.61 | 0.78 |
| 1:E:197:LYS:C | 1:E:355:ILE:HD13 | 2.04 | 0.78 |
| 1:E:368:VAL:HB | 1:E:469:PRO:HB3 | 1.65 | 0.78 |
| 1:F:103:LEU:HD21 | 1:F:411:PHE:CD2 | 2.18 | 0.78 |
| 1:F:130:LYS:HD3 | 1:F:393:LEU:CD2 | 2.14 | 0.78 |
| 1:F:223:MET:HE1 | 1:F:283:ALA:HB3 | 1.66 | 0.78 |
| 1:F:299:THR:HG23 | 1:F:334:VAL:HG11 | 1.63 | 0.78 |
| 1:H:42:LYS:CE | 1:H:426:ALA:HB2 | 2.12 | 0.78 |
| 1:J:391:MET:HE3 | 1:J:438:ARG:HD2 | 1.65 | 0.78 |
| 1:K:130:LYS:HZ3 | 1:K:134:LEU:CD1 | 1.87 | 0.78 |
| 1:L:124:TYR:CD1 | 1:L:407:ALA:HB1 | 2.19 | 0.78 |
| 1:M:155:MET:HE3 | 1:M:167:LYS:HE3 | 1.66 | 0.78 |
| 1:M:178:VAL:HG11 | 1:M:366:VAL:HG22 | 1.66 | 0.78 |
| 1:M:307:ILE:C | 1:M:307:ILE:HD12 | 2.03 | 0.78 |
| 1:M:368:VAL:HB | 1:M:469:PRO:HG2 | 1.65 | 0.78 |
| 1:N:138:ILE:CD1 | 1:N:385:THR:HB | 2.12 | 0.78 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:418:ILE:HG22 | 1:O:419:PRO:CD | 2.14 | 0.78 |
| 1:P:64:ILE:HG23 | 1:P:65:LEU:HD13 | 1.65 | 0.78 |
| 1:D:73:PRO:HB2 | 1:E:47:MET:CE | 2.15 | 0.77 |
| 1:D:170:LEU:HD11 | 1:D:361:ALA:CB | 2.14 | 0.77 |
| 1:D:383:GLY:HA2 | 1:D:386:GLU:CG | 2.14 | 0.77 |
| 1:E:237:CYS:O | 1:E:307:ILE:HG22 | 1.84 | 0.77 |
| 1:F:235:LEU:HD11 | 1:F:307:ILE:CD1 | 2.14 | 0.77 |
| 1:F:345:MET:CE | 1:F:362:VAL:HG21 | 2.14 | 0.77 |
| 1:H:237:CYS:HB3 | 1:H:238:ALA:CB | 2.14 | 0.77 |
| 1:H:351:THR:HG23 | 1:H:352:GLU:N | 1.98 | 0.77 |
| 1:I:267:GLY:HA3 | 1:I:286:ARG:HH11 | 1.49 | 0.77 |
| 1:J:368:VAL:HB | 1:J:469:PRO:CG | 2.14 | 0.77 |
| 1:K:182:VAL:HB | 1:K:188:VAL:HG22 | 1.63 | 0.77 |
| 1:K:437:VAL:HG21 | 1:K:451:LEU:HG | 1.65 | 0.77 |
| 1:L:307:ILE:CD1 | 1:L:310:LEU:HD23 | 2.14 | 0.77 |
| 1:N:115:VAL:HG23 | 1:N:403:ARG:NE | 1.99 | 0.77 |
| 1:P:14:ARG:HD2 | 1:P:494:ILE:HD13 | 1.63 | 0.77 |
| 1:A:115:VAL:HG21 | 1:A:403:ARG:NE | 1.99 | 0.77 |
| 1:B:158:ILE:CD1 | 1:B:170:LEU:HB3 | 2.14 | 0.77 |
| 1:C:119:ILE:CG1 | 1:C:403:ARG:HD2 | 2.14 | 0.77 |
| 1:D:42:LYS:CG | 1:D:425:ASN:HB2 | 2.13 | 0.77 |
| 1:F:42:LYS:CE | 1:F:453:VAL:HB | 2.13 | 0.77 |
| 1:G:291:ASP:O | 1:G:295:LEU:HD12 | 1.84 | 0.77 |
| 1:J:198:LYS:HD2 | 1:J:331:MET:SD | 2.24 | 0.77 |
| 1:K:188:VAL:O | 1:K:188:VAL:CG1 | 2.31 | 0.77 |
| 1:K:227:VAL:HG11 | 1:K:260:ASN:OD1 | 1.83 | 0.77 |
| 1:L:48:LEU:HD23 | 1:M:494:ILE:HD12 | 1.65 | 0.77 |
| 1:M:42:LYS:CB | 1:M:425:ASN:HB2 | 2.15 | 0.77 |
| 1:N:14:ARG:HD2 | 1:N:494:ILE:CD1 | 2.12 | 0.77 |
| 1:N:62:VAL:HG13 | 1:N:63:THR:H | 1.48 | 0.77 |
| 1:A:118:THR:HG21 | 1:B:425:ASN:O | 1.84 | 0.77 |
| 1:A:254:ILE:CD1 | 1:A:307:ILE:HD11 | 2.13 | 0.77 |
| 1:D:31:ILE:CG2 | 1:D:65:LEU:HD21 | 2.14 | 0.77 |
| 1:D:174:ILE:HD12 | 1:D:365:ALA:HB1 | 1.67 | 0.77 |
| 1:D:233:ALA:HA | 1:D:315:LEU:CG | 2.14 | 0.77 |
| 1:F:14:ARG:NH1 | 1:G:34:THR:HA | 1.98 | 0.77 |
| 1:G:234:LEU:N | 1:G:315:LEU:HD11 | 1.99 | 0.77 |
| 1:G:449:ALA:HB2 | 1:G:458:VAL:CG2 | 2.15 | 0.77 |
| 1:I:477:ILE:O | 1:I:477:ILE:CG2 | 2.33 | 0.77 |
| 1:L:235:LEU:HD13 | 1:L:264:CYS:HB3 | 1.64 | 0.77 |
| 1:M:255:LYS:CD | 1:M:279:GLU:HG2 | 2.13 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:31:ILE:HG21 | 1:N:65:LEU:HD21 | 1.65 | 0.77 |
| 1:O:166:ALA:HB2 | 1:O:203:ILE:CB | 2.14 | 0.77 |
| 1:P:25:ILE:HG22 | 1:P:26:LEU:N | 2.00 | 0.77 |
| 1:P:153:ILE:HG21 | 1:P:469:PRO:HG3 | 1.66 | 0.77 |
| 1:A:8:LEU:HA | 1:B:69:SER:C | 2.04 | 0.77 |
| 1:A:26:LEU:O | 1:A:30:ILE:HG13 | 1.84 | 0.77 |
| 1:C:380:SER:HB3 | 1:C:384:SER:CB | 2.14 | 0.77 |
| 1:C:401:SER:OG | 1:L:435:VAL:HG11 | 1.85 | 0.77 |
| 1:C:403:ARG:CG | 1:C:403:ARG:NH1 | 2.42 | 0.77 |
| 1:F:222:GLN:CA | 1:F:277:ALA:HB1 | 2.14 | 0.77 |
| 1:F:248:LYS:CD | 1:F:275:TYR:CZ | 2.67 | 0.77 |
| 1:G:130:LYS:HZ3 | 1:G:134:LEU:HD21 | 1.49 | 0.77 |
| 1:J:150:LEU:HD23 | 1:J:175:VAL:HG13 | 1.64 | 0.77 |
| 1:K:452:ASN:HB2 | 1:K:459:GLU:OE1 | 1.83 | 0.77 |
| 1:M:130:LYS:HE2 | 1:M:393:LEU:CD2 | 2.15 | 0.77 |
| 1:M:377:ARG:CZ | 1:M:377:ARG:HB2 | 2.10 | 0.77 |
| 1:N:276:LEU:HD23 | 1:N:281:ILE:HG21 | 1.64 | 0.77 |
| 1:A:297:LYS:NZ | 1:A:341:LYS:HE3 | 2.00 | 0.77 |
| 1:A:431:ILE:HD13 | 1:J:403:ARG:HG2 | 1.64 | 0.77 |
| 1:B:62:VAL:HG13 | 1:B:63:THR:N | 1.98 | 0.77 |
| 1:B:70:VAL:CG1 | 1:B:76:LYS:HD3 | 2.15 | 0.77 |
| 1:C:494:ILE:HD12 | 1:D:48:LEU:HD11 | 1.65 | 0.77 |
| 1:D:379:VAL:HG11 | 1:D:473:LYS:HG3 | 1.65 | 0.77 |
| 1:E:262:LEU:CD1 | 1:E:310:LEU:HD21 | 2.13 | 0.77 |
| 1:F:9:PRO:O | 1:F:9:PRO:HG2 | 1.83 | 0.77 |
| 1:F:254:ILE:HD13 | 1:F:262:LEU:HD11 | 1.66 | 0.77 |
| 1:G:401:SER:OG | 1:P:435:VAL:HG11 | 1.84 | 0.77 |
| 1:H:138:ILE:HD13 | 1:H:385:THR:CG2 | 2.14 | 0.77 |
| 1:H:307:ILE:O | 1:H:307:ILE:HD12 | 1.85 | 0.77 |
| 1:I:36:ARG:HG3 | 1:I:37:SER:N | 1.99 | 0.77 |
| 1:J:174:ILE:HD12 | 1:J:365:ALA:HB1 | 1.66 | 0.77 |
| 1:J:215:ASP:OD1 | 1:J:331:MET:HG2 | 1.83 | 0.77 |
| 1:L:248:LYS:CD | 1:L:275:TYR:CZ | 2.67 | 0.77 |
| 1:L:450:GLY:O | 1:L:451:LEU:HD12 | 1.84 | 0.77 |
| 1:M:195:ILE:HB | 1:M:359:ALA:CB | 2.14 | 0.77 |
| 1:N:232:ILE:HG13 | 1:N:261:VAL:HG11 | 1.65 | 0.77 |
| 1:O:26:LEU:O | 1:O:30:ILE:HG13 | 1.84 | 0.77 |
| 1:P:41:PRO:HG2 | 1:P:453:VAL:HG11 | 1.66 | 0.77 |
| 1:A:69:SER:HB3 | 1:H:9:PRO:CG | 2.14 | 0.77 |
| 1:A:238:ALA:H | 1:A:266:LYS:CB | 1.96 | 0.77 |
| 1:A:437:VAL:HA | 1:A:458:VAL:HG11 | 1.67 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:437:VAL:CG2 | 1:A:458:VAL:HG13 | 2.13 | 0.77 |
| 1:B:217:GLU:CG | 1:B:330:SER:HB2 | 2.14 | 0.77 |
| 1:B:345:MET:HE3 | 1:B:347:ILE:HD11 | 1.66 | 0.77 |
| 1:B:403:ARG:CG | 1:B:403:ARG:HH11 | 1.94 | 0.77 |
| 1:D:222:GLN:C | 1:D:277:ALA:HB1 | 2.05 | 0.77 |
| 1:E:211:GLY:HA2 | 1:E:337:CYS:SG | 2.23 | 0.77 |
| 1:F:235:LEU:HG | 1:F:307:ILE:CB | 2.15 | 0.77 |
| 1:G:85:GLN:OE1 | 1:G:476:ALA:HB2 | 1.85 | 0.77 |
| 1:H:235:LEU:CD2 | 1:H:307:ILE:HA | 2.14 | 0.77 |
| 1:L:362:VAL:O | 1:L:366:VAL:HG23 | 1.84 | 0.77 |
| 1:M:135:LEU:HD11 | 1:M:389:LEU:HD11 | 1.66 | 0.77 |
| 1:N:469:PRO:HB2 | 1:N:472:VAL:CG1 | 2.14 | 0.77 |
| 1:O:113:GLN:CD | 1:O:113:GLN:O | 2.23 | 0.77 |
| 1:O:276:LEU:HD12 | 1:O:281:ILE:CD1 | 2.12 | 0.77 |
| 1:A:307:ILE:O | 1:A:310:LEU:HB2 | 1.83 | 0.77 |
| 1:E:400:ILE:HD11 | 1:E:408:VAL:HG11 | 1.67 | 0.77 |
| 1:F:217:GLU:HG2 | 1:F:330:SER:CB | 2.15 | 0.77 |
| 1:G:9:PRO:HD2 | 1:H:69:SER:C | 2.03 | 0.77 |
| 1:G:368:VAL:HB | 1:G:469:PRO:CB | 2.14 | 0.77 |
| 1:J:134:LEU:CD1 | 1:J:393:LEU:HD21 | 2.13 | 0.77 |
| 1:J:368:VAL:HB | 1:J:469:PRO:HG3 | 1.65 | 0.77 |
| 1:M:68:MET:CA | 1:N:9:PRO:HD3 | 2.15 | 0.77 |
| 1:N:459:GLU:OE1 | 1:N:461:MET:HE1 | 1.84 | 0.77 |
| 1:B:115:VAL:CG1 | 1:B:403:ARG:HE | 1.97 | 0.77 |
| 1:B:431:ILE:CD1 | 1:K:406:LEU:HD11 | 2.15 | 0.77 |
| 1:C:72:HIS:O | 1:C:75:ALA:HB3 | 1.84 | 0.77 |
| 1:D:170:LEU:HD22 | 1:D:358:VAL:CG1 | 2.11 | 0.77 |
| 1:E:235:LEU:HD21 | 1:E:307:ILE:CD1 | 2.14 | 0.77 |
| 1:E:368:VAL:HG21 | 1:E:469:PRO:HG3 | 1.65 | 0.77 |
| 1:F:235:LEU:CD2 | 1:F:262:LEU:HD21 | 2.15 | 0.77 |
| 1:G:174:ILE:HD12 | 1:G:365:ALA:HB1 | 1.66 | 0.77 |
| 1:G:194:LYS:HG2 | 1:G:195:ILE:H | 1.50 | 0.77 |
| 1:H:35:VAL:HG12 | 1:H:38:THR:OG1 | 1.84 | 0.77 |
| 1:H:103:LEU:HD21 | 1:H:411:PHE:CD2 | 2.20 | 0.77 |
| 1:I:255:LYS:HD3 | 1:I:279:GLU:HB3 | 1.66 | 0.77 |
| 1:M:299:THR:CG2 | 1:M:334:VAL:HG11 | 2.13 | 0.77 |
| 1:N:146:ASP:OD2 | 1:N:149:ILE:HD11 | 1.84 | 0.77 |
| 1:N:254:ILE:HD13 | 1:N:262:LEU:CD1 | 2.15 | 0.77 |
| 1:O:12:MET:CG | 1:O:494:ILE:HG22 | 2.15 | 0.77 |
| 1:O:68:MET:SD | 1:P:12:MET:HE3 | 2.25 | 0.77 |
| 1:A:251:VAL:HG11 | 1:A:276:LEU:HD22 | 1.66 | 0.77 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:135:LEU:HA | 1:B:138:ILE:HD13 | 1.67 | 0.77 |
| 1:C:119:ILE:CD1 | 1:C:403:ARG:HD2 | 2.14 | 0.77 |
| 1:E:9:PRO:CD | 1:F:68:MET:CE | 2.62 | 0.77 |
| 1:E:403:ARG:HB3 | 1:E:406:LEU:HD12 | 1.64 | 0.77 |
| 1:H:178:VAL:CG2 | 1:H:188:VAL:HG11 | 2.14 | 0.77 |
| 1:I:148:GLU:O | 1:I:148:GLU:CG | 2.32 | 0.77 |
| 1:J:437:VAL:HG11 | 1:J:451:LEU:HD11 | 1.65 | 0.77 |
| 1:K:234:LEU:H | 1:K:315:LEU:HD11 | 1.48 | 0.77 |
| 1:K:311:SER:O | 1:K:315:LEU:HD22 | 1.85 | 0.77 |
| 1:L:48:LEU:CB | 1:L:56:VAL:HG21 | 2.12 | 0.77 |
| 1:M:166:ALA:HB3 | 1:M:203:ILE:HB | 1.67 | 0.77 |
| 1:M:170:LEU:HD22 | 1:M:358:VAL:CG1 | 2.15 | 0.77 |
| 1:N:39:LEU:HG | 1:N:40:GLY:H | 1.50 | 0.77 |
| 1:N:255:LYS:HE3 | 1:N:279:GLU:CG | 2.15 | 0.77 |
| 1:A:236:ASN:OD1 | 1:A:305:THR:HG23 | 1.85 | 0.77 |
| 1:B:14:ARG:HH12 | 1:C:34:THR:CA | 1.98 | 0.77 |
| 1:C:124:TYR:HE1 | 1:C:407:ALA:CB | 1.97 | 0.77 |
| 1:C:325:LYS:HG3 | 1:C:330:SER:OG | 1.85 | 0.77 |
| 1:E:431:ILE:HD13 | 1:N:403:ARG:HD3 | 1.66 | 0.77 |
| 1:F:70:VAL:CG1 | 1:F:76:LYS:HG3 | 2.15 | 0.77 |
| 1:F:114:ASN:O | 1:F:114:ASN:ND2 | 2.17 | 0.77 |
| 1:F:234:LEU:CD1 | 1:F:296:ALA:HB2 | 2.14 | 0.77 |
| 1:G:177:ALA:HB2 | 1:G:208:LEU:HD11 | 1.67 | 0.77 |
| 1:J:437:VAL:HA | 1:J:458:VAL:HG21 | 1.67 | 0.77 |
| 1:K:68:MET:HG3 | 1:L:8:LEU:HB3 | 1.67 | 0.77 |
| 1:L:237:CYS:HB3 | 1:L:306:ASN:HA | 1.67 | 0.77 |
| 1:M:375:ASP:CG | 1:M:377:ARG:HH22 | 1.88 | 0.77 |
| 1:N:124:TYR:HD1 | 1:N:407:ALA:HB1 | 1.50 | 0.77 |
| 1:O:234:LEU:H | 1:O:315:LEU:HD21 | 1.50 | 0.77 |
| 1:A:44:MET:HE2 | 1:A:44:MET:HA | 1.65 | 0.76 |
| 1:E:42:LYS:CB | 1:E:425:ASN:HB2 | 2.15 | 0.76 |
| 1:E:368:VAL:HB | 1:E:469:PRO:CG | 2.14 | 0.76 |
| 1:E:396:TYR:O | 1:E:396:TYR:CD2 | 2.39 | 0.76 |
| 1:F:150:LEU:HD23 | 1:F:175:VAL:HG13 | 1.66 | 0.76 |
| 1:F:217:GLU:HG2 | 1:F:330:SER:CA | 2.15 | 0.76 |
| 1:F:255:LYS:HD3 | 1:F:279:GLU:HG2 | 1.66 | 0.76 |
| 1:G:116:HIS:ND1 | 1:G:117:PRO:HD2 | 1.99 | 0.76 |
| 1:H:188:VAL:HB | 1:H:373:ILE:HD12 | 1.66 | 0.76 |
| 1:I:102:GLU:OE2 | 1:I:417:VAL:HG11 | 1.85 | 0.76 |
| 1:M:368:VAL:CB | 1:M:469:PRO:HG3 | 2.14 | 0.76 |
| 1:N:170:LEU:HD11 | 1:N:358:VAL:HG22 | 1.65 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:27:ALA:HA | 1:O:30:ILE:HD12 | 1.65 | 0.76 |
| 1:O:30:ILE:HG22 | 1:O:31:ILE:HD13 | 1.67 | 0.76 |
| 1:O:69:SER:N | 1:P:9:PRO:HD3 | 1.99 | 0.76 |
| 1:O:81:VAL:HG11 | 1:O:483:SER:HB3 | 1.66 | 0.76 |
| 1:O:129:GLN:O | 1:O:132:GLN:HB2 | 1.84 | 0.76 |
| 1:O:150:LEU:HD23 | 1:O:175:VAL:HG13 | 1.67 | 0.76 |
| 1:O:156:THR:CG2 | 1:O:156:THR:O | 2.33 | 0.76 |
| 1:P:437:VAL:HG21 | 1:P:451:LEU:CD1 | 2.15 | 0.76 |
| 1:A:369:VAL:HG12 | 1:A:369:VAL:O | 1.85 | 0.76 |
| 1:C:119:ILE:CG2 | 1:C:403:ARG:HB3 | 2.11 | 0.76 |
| 1:D:262:LEU:CD1 | 1:D:310:LEU:CD1 | 2.63 | 0.76 |
| 1:E:206:THR:HG22 | 1:E:348:ARG:N | 1.97 | 0.76 |
| 1:G:123:GLY:HA3 | 1:G:407:ALA:CB | 2.15 | 0.76 |
| 1:I:33:GLU:O | 1:I:36:ARG:HG2 | 1.84 | 0.76 |
| 1:I:123:GLY:HA3 | 1:I:407:ALA:HB2 | 1.66 | 0.76 |
| 1:J:89:VAL:O | 1:J:89:VAL:HG23 | 1.85 | 0.76 |
| 1:K:81:VAL:HG11 | 1:K:483:SER:HB3 | 1.66 | 0.76 |
| 1:L:198:LYS:HG3 | 1:L:326:ILE:HD13 | 1.67 | 0.76 |
| 1:A:38:THR:HG23 | 1:A:46:LYS:NZ | 2.01 | 0.76 |
| 1:A:206:THR:HG22 | 1:A:348:ARG:N | 2.00 | 0.76 |
| 1:A:235:LEU:CD1 | 1:A:307:ILE:CD1 | 2.62 | 0.76 |
| 1:A:235:LEU:CD2 | 1:A:307:ILE:HA | 2.15 | 0.76 |
| 1:B:255:LYS:HD3 | 1:B:279:GLU:HG2 | 1.65 | 0.76 |
| 1:B:391:MET:CE | 1:B:438:ARG:HB3 | 2.16 | 0.76 |
| 1:C:235:LEU:HD11 | 1:C:307:ILE:HB | 1.65 | 0.76 |
| 1:G:169:LYS:HG2 | 1:G:204:ASP:CA | 2.15 | 0.76 |
| 1:G:406:LEU:HD11 | 1:P:431:ILE:CD1 | 2.16 | 0.76 |
| 1:H:138:ILE:HD13 | 1:H:385:THR:HG23 | 1.65 | 0.76 |
| 1:H:233:ALA:HA | 1:H:315:LEU:CD2 | 2.14 | 0.76 |
| 1:H:235:LEU:C | 1:H:235:LEU:HD22 | 2.05 | 0.76 |
| 1:I:12:MET:HA | 1:I:495:ALA:O | 1.85 | 0.76 |
| 1:I:82:ALA:HB2 | 1:I:97:VAL:HG21 | 1.67 | 0.76 |
| 1:I:178:VAL:HG22 | 1:I:366:VAL:HG13 | 1.67 | 0.76 |
| 1:J:193:ILE:HD12 | 1:J:366:VAL:CG1 | 2.15 | 0.76 |
| 1:J:314:ASP:C | 1:J:315:LEU:HG | 2.04 | 0.76 |
| 1:K:461:MET:HE3 | 1:K:461:MET:H | 1.47 | 0.76 |
| 1:L:68:MET:O | 1:L:70:VAL:HG12 | 1.85 | 0.76 |
| 1:L:124:TYR:HE1 | 1:L:407:ALA:CA | 1.98 | 0.76 |
| 1:L:234:LEU:HB3 | 1:L:292:MET:HE3 | 1.67 | 0.76 |
| 1:N:206:THR:HG22 | 1:N:348:ARG:N | 2.00 | 0.76 |
| 1:O:377:ARG:HG2 | 1:O:470:LEU:HD12 | 1.66 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:434:LEU:HD13 | 1:O:434:LEU:H | 1.51 | 0.76 |
| 1:P:121:VAL:HG23 | 1:P:122:LYS:N | 2.00 | 0.76 |
| 1:A:166:ALA:HB3 | 1:A:170:LEU:CD2 | 2.16 | 0.76 |
| 1:B:124:TYR:CD1 | 1:B:407:ALA:HB1 | 2.21 | 0.76 |
| 1:B:248:LYS:HD2 | 1:B:275:TYR:CE2 | 2.20 | 0.76 |
| 1:C:96:ALA:CA | 1:C:480:ALA:HB2 | 2.15 | 0.76 |
| 1:D:146:ASP:HB3 | 1:D:149:ILE:HG12 | 1.67 | 0.76 |
| 1:G:72:HIS:CD2 | 1:G:72:HIS:N | 2.49 | 0.76 |
| 1:G:402:GLY:O | 1:P:431:ILE:HD11 | 1.85 | 0.76 |
| 1:H:235:LEU:HD23 | 1:H:306:ASN:O | 1.85 | 0.76 |
| 1:H:236:ASN:HD21 | 1:H:305:THR:HG23 | 1.49 | 0.76 |
| 1:I:8:LEU:HA | 1:P:68:MET:C | 2.06 | 0.76 |
| 1:K:400:ILE:HD11 | 1:K:408:VAL:CG2 | 2.15 | 0.76 |
| 1:L:134:LEU:HB3 | 1:L:392:LYS:HE3 | 1.68 | 0.76 |
| 1:N:100:ALA:HB1 | 1:N:484:THR:HG21 | 0.82 | 0.76 |
| 1:N:156:THR:HG21 | 1:N:468:GLU:CB | 2.15 | 0.76 |
| 1:N:268:ILE:HG21 | 1:N:273:GLN:HG3 | 1.68 | 0.76 |
| 1:O:132:GLN:HE22 | 1:O:478:GLN:NE2 | 1.83 | 0.76 |
| 1:O:214:VAL:CG1 | 1:O:291:ASP:CB | 2.63 | 0.76 |
| 1:P:170:LEU:HD11 | 1:P:358:VAL:HG11 | 1.65 | 0.76 |
| 1:A:197:LYS:HA | 1:A:355:ILE:HG21 | 1.66 | 0.76 |
| 1:A:216:LYS:O | 1:A:332:ILE:HG13 | 1.85 | 0.76 |
| 1:D:42:LYS:HB3 | 1:D:425:ASN:CB | 2.15 | 0.76 |
| 1:D:127:ALA:HB2 | 1:D:408:VAL:HG12 | 1.66 | 0.76 |
| 1:E:33:GLU:HA | 1:E:36:ARG:HE | 1.50 | 0.76 |
| 1:G:62:VAL:HG13 | 1:G:63:THR:H | 1.50 | 0.76 |
| 1:G:234:LEU:H | 1:G:315:LEU:CD1 | 1.99 | 0.76 |
| 1:H:142:VAL:CG1 | 1:H:149:ILE:HD13 | 2.02 | 0.76 |
| 1:I:368:VAL:CG2 | 1:I:469:PRO:HG3 | 2.15 | 0.76 |
| 1:M:36:ARG:HG2 | 1:M:37:SER:N | 1.99 | 0.76 |
| 1:N:188:VAL:HG23 | 1:N:373:ILE:HD12 | 1.66 | 0.76 |
| 1:O:192:LEU:HB2 | 1:O:342:ALA:CB | 2.14 | 0.76 |
| 1:O:238:ALA:HB3 | 1:O:306:ASN:OD1 | 1.86 | 0.76 |
| 1:O:379:VAL:CG1 | 1:O:473:LYS:HG3 | 2.14 | 0.76 |
| 1:B:34:THR:HB | 1:B:35:VAL:HG22 | 1.67 | 0.76 |
| 1:B:351:THR:HG23 | 1:B:352:GLU:N | 2.01 | 0.76 |
| 1:C:50:ASP:OD1 | 1:C:52:LEU:HB2 | 1.85 | 0.76 |
| 1:C:158:ILE:CD1 | 1:C:170:LEU:HB2 | 2.16 | 0.76 |
| 1:C:199:SER:HB3 | 1:C:327:SER:HB2 | 1.68 | 0.76 |
| 1:D:431:ILE:HD12 | 1:M:406:LEU:CD2 | 2.15 | 0.76 |
| 1:F:235:LEU:HD13 | 1:F:310:LEU:CD1 | 2.16 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:17:GLY:O | 1:G:21:GLN:HG3 | 1.85 | 0.76 |
| 1:K:158:ILE:HG13 | 1:K:361:ALA:HB1 | 1.65 | 0.76 |
| 1:K:276:LEU:HD13 | 1:K:281:ILE:HD12 | 1.68 | 0.76 |
| 1:K:384:SER:CB | 1:K:441:HIS:HE1 | 1.99 | 0.76 |
| 1:M:208:LEU:HD21 | 1:M:210:LYS:HE2 | 1.67 | 0.76 |
| 1:N:193:ILE:HD12 | 1:N:366:VAL:HG21 | 1.67 | 0.76 |
| 1:O:35:VAL:CG1 | 1:O:46:LYS:HE3 | 2.15 | 0.76 |
| 1:O:69:SER:CB | 1:P:9:PRO:HB3 | 2.16 | 0.76 |
| 1:P:115:VAL:HG11 | 1:P:403:ARG:CD | 2.16 | 0.76 |
| 1:P:276:LEU:CD2 | 1:P:281:ILE:HD12 | 2.10 | 0.76 |
| 1:A:127:ALA:HB2 | 1:A:408:VAL:HG12 | 1.67 | 0.76 |
| 1:B:233:ALA:HB2 | 1:B:315:LEU:CD2 | 2.16 | 0.76 |
| 1:G:435:VAL:HG11 | 1:P:401:SER:CB | 2.15 | 0.76 |
| 1:G:452:ASN:HD21 | 1:G:454:PHE:HB2 | 1.51 | 0.76 |
| 1:H:433:ILE:HG21 | 1:H:451:LEU:HD23 | 1.66 | 0.76 |
| 1:I:130:LYS:HD3 | 1:I:396:TYR:CD1 | 2.20 | 0.76 |
| 1:I:158:ILE:HG12 | 1:I:361:ALA:HB1 | 1.65 | 0.76 |
| 1:J:12:MET:HE2 | 1:J:494:ILE:HG22 | 1.66 | 0.76 |
| 1:K:247:LEU:HG | 1:K:272:ALA:CB | 2.16 | 0.76 |
| 1:L:68:MET:HB3 | 1:M:8:LEU:CD2 | 2.16 | 0.76 |
| 1:L:113:GLN:O | 1:L:113:GLN:NE2 | 2.19 | 0.76 |
| 1:M:405:GLN:O | 1:M:409:ARG:HG3 | 1.85 | 0.76 |
| 1:M:448:CYS:HB2 | 1:M:460:ASP:CA | 2.09 | 0.76 |
| 1:N:368:VAL:HA | 1:N:371:CYS:SG | 2.26 | 0.76 |
| 1:A:113:GLN:HA | 1:A:113:GLN:NE2 | 2.00 | 0.76 |
| 1:A:233:ALA:CA | 1:A:315:LEU:HG | 2.15 | 0.76 |
| 1:A:251:VAL:CG1 | 1:A:276:LEU:HD22 | 2.16 | 0.76 |
| 1:A:267:GLY:O | 1:A:268:ILE:HG12 | 1.85 | 0.76 |
| 1:B:124:TYR:HE1 | 1:B:407:ALA:HA | 1.50 | 0.76 |
| 1:B:212:VAL:HG21 | 1:B:294:LYS:HB3 | 1.68 | 0.76 |
| 1:C:235:LEU:HD23 | 1:C:304:ILE:CD1 | 2.16 | 0.76 |
| 1:E:473:LYS:NZ | 1:E:473:LYS:CB | 2.44 | 0.76 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:CG1 | 2.14 | 0.76 |
| 1:F:181:VAL:HG12 | 1:F:341:LYS:O | 1.86 | 0.76 |
| 1:F:433:ILE:HA | 1:F:436:LYS:HD3 | 1.68 | 0.76 |
| 1:G:138:ILE:HD12 | 1:G:385:THR:HB | 1.66 | 0.76 |
| 1:G:299:THR:HG23 | 1:G:334:VAL:CG1 | 2.14 | 0.76 |
| 1:I:235:LEU:O | 1:I:264:CYS:HA | 1.85 | 0.76 |
| 1:J:276:LEU:HD12 | 1:J:281:ILE:HG21 | 0.85 | 0.76 |
| 1:J:339:HIS:CE1 | 1:J:341:LYS:CD | 2.68 | 0.76 |
| 1:K:391:MET:HE3 | 1:K:438:ARG:CG | 2.15 | 0.76 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:31:ILE:H | 1:O:31:ILE:CD1 | 1.99 | 0.76 |
| 1:A:304:ILE:HD12 | 1:A:309:ASP:HB3 | 1.66 | 0.76 |
| 1:B:236:ASN:OD1 | 1:B:236:ASN:C | 2.25 | 0.76 |
| 1:C:12:MET:O | 1:C:12:MET:SD | 2.43 | 0.76 |
| 1:C:12:MET:HE2 | 1:D:68:MET:SD | 2.26 | 0.76 |
| 1:D:100:ALA:CB | 1:D:484:THR:HG21 | 2.08 | 0.76 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:HG12 | 2.14 | 0.76 |
| 1:E:397:ALA:HB2 | 1:E:408:VAL:CG2 | 2.15 | 0.76 |
| 1:F:161:LYS:HB3 | 1:F:357:GLU:OE2 | 1.86 | 0.76 |
| 1:F:227:VAL:HG11 | 1:F:260:ASN:OD1 | 1.86 | 0.76 |
| 1:H:77:MET:HB3 | 1:H:487:LEU:HD13 | 1.68 | 0.76 |
| 1:I:210:LYS:CB | 1:I:343:VAL:HG23 | 2.14 | 0.76 |
| 1:I:232:ILE:HG13 | 1:I:261:VAL:CG1 | 2.16 | 0.76 |
| 1:J:437:VAL:HG21 | 1:J:451:LEU:CD1 | 2.16 | 0.76 |
| 1:K:188:VAL:CG2 | 1:K:373:ILE:HD12 | 2.15 | 0.76 |
| 1:L:206:THR:CG2 | 1:L:347:ILE:HA | 2.16 | 0.76 |
| 1:L:469:PRO:HB2 | 1:L:472:VAL:CG2 | 2.16 | 0.76 |
| 1:A:14:ARG:HH22 | 1:B:34:THR:CA | 1.88 | 0.76 |
| 1:A:223:MET:HE3 | 1:A:276:LEU:CB | 2.15 | 0.76 |
| 1:A:235:LEU:O | 1:A:264:CYS:HA | 1.86 | 0.76 |
| 1:A:237:CYS:HA | 1:A:306:ASN:CA | 2.10 | 0.76 |
| 1:B:234:LEU:HD11 | 1:B:301:ALA:HB3 | 1.68 | 0.76 |
| 1:B:377:ARG:NE | 1:B:470:LEU:HD12 | 2.01 | 0.76 |
| 1:C:48:LEU:HD22 | 1:C:68:MET:SD | 2.26 | 0.76 |
| 1:C:178:VAL:CG2 | 1:C:366:VAL:HG22 | 2.15 | 0.76 |
| 1:C:197:LYS:CB | 1:C:355:ILE:CG2 | 2.61 | 0.76 |
| 1:E:347:ILE:HG21 | 1:E:358:VAL:CG1 | 2.16 | 0.76 |
| 1:G:30:ILE:CG2 | 1:G:31:ILE:HD13 | 2.16 | 0.76 |
| 1:G:239:ILE:HG22 | 1:G:307:ILE:CD1 | 2.16 | 0.76 |
| 1:H:64:ILE:HG22 | 1:H:65:LEU:HG | 1.68 | 0.76 |
| 1:J:135:LEU:CD2 | 1:J:389:LEU:HD11 | 2.15 | 0.76 |
| 1:J:235:LEU:HB2 | 1:J:264:CYS:HB3 | 1.66 | 0.76 |
| 1:J:368:VAL:HG11 | 1:J:469:PRO:CG | 2.15 | 0.76 |
| 1:M:223:MET:CE | 1:M:283:ALA:HB3 | 2.15 | 0.76 |
| 1:O:29:ARG:O | 1:O:33:GLU:HG3 | 1.85 | 0.76 |
| 1:O:171:ALA:HA | 1:O:174:ILE:CD1 | 2.15 | 0.76 |
| 1:A:431:ILE:CD1 | 1:J:403:ARG:CG | 2.63 | 0.75 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:CD1 | 2.15 | 0.75 |
| 1:A:452:ASN:ND2 | 1:A:454:PHE:HB2 | 1.99 | 0.75 |
| 1:B:235:LEU:HD11 | 1:B:307:ILE:HG22 | 1.67 | 0.75 |
| 1:B:368:VAL:HB | 1:B:469:PRO:HG2 | 1.68 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:391:MET:HE1 | 1:C:438:ARG:CB | 2.14 | 0.75 |
| 1:D:9:PRO:HD2 | 1:E:70:VAL:CA | 2.16 | 0.75 |
| 1:D:180:ALA:HB2 | 1:D:210:LYS:NZ | 2.01 | 0.75 |
| 1:D:257:SER:OG | 1:D:311:SER:HA | 1.85 | 0.75 |
| 1:E:232:ILE:HG13 | 1:E:261:VAL:HG11 | 1.68 | 0.75 |
| 1:F:115:VAL:HG11 | 1:F:403:ARG:HE | 1.51 | 0.75 |
| 1:H:265:GLN:HG2 | 1:H:266:LYS:NZ | 2.00 | 0.75 |
| 1:L:234:LEU:H | 1:L:315:LEU:HD21 | 1.50 | 0.75 |
| 1:L:254:ILE:HG21 | 1:L:262:LEU:CD1 | 2.16 | 0.75 |
| 1:M:48:LEU:HD23 | 1:M:48:LEU:N | 2.00 | 0.75 |
| 1:M:106:LYS:HE3 | 1:M:109:GLU:CD | 2.06 | 0.75 |
| 1:M:208:LEU:CD1 | 1:M:343:VAL:HG21 | 2.15 | 0.75 |
| 1:M:219:VAL:HG11 | 1:M:268:ILE:HD12 | 1.68 | 0.75 |
| 1:M:248:LYS:HD2 | 1:M:275:TYR:OH | 1.85 | 0.75 |
| 1:M:437:VAL:HG21 | 1:M:451:LEU:HG | 1.67 | 0.75 |
| 1:M:447:LYS:HB2 | 1:M:462:CYS:HB2 | 1.69 | 0.75 |
| 1:N:235:LEU:HD21 | 1:N:307:ILE:HA | 0.84 | 0.75 |
| 1:P:235:LEU:HD11 | 1:P:307:ILE:CG2 | 2.16 | 0.75 |
| 1:C:115:VAL:HG21 | 1:C:403:ARG:CD | 2.16 | 0.75 |
| 1:C:431:ILE:O | 1:C:431:ILE:CG1 | 2.32 | 0.75 |
| 1:D:433:ILE:HG22 | 1:D:451:LEU:HD23 | 1.68 | 0.75 |
| 1:E:223:MET:HE3 | 1:E:273:GLN:HB3 | 1.68 | 0.75 |
| 1:E:255:LYS:HE3 | 1:E:279:GLU:HG2 | 1.66 | 0.75 |
| 1:F:391:MET:HE3 | 1:F:438:ARG:HG2 | 1.68 | 0.75 |
| 1:G:134:LEU:HD22 | 1:G:392:LYS:HE3 | 1.66 | 0.75 |
| 1:H:276:LEU:HD22 | 1:H:281:ILE:CG2 | 2.15 | 0.75 |
| 1:I:129:GLN:O | 1:I:132:GLN:HB2 | 1.86 | 0.75 |
| 1:I:391:MET:HE3 | 1:I:438:ARG:CB | 2.16 | 0.75 |
| 1:K:263:PHE:CD2 | 1:K:295:LEU:HD22 | 2.21 | 0.75 |
| 1:L:234:LEU:HB3 | 1:L:292:MET:CE | 2.16 | 0.75 |
| 1:N:299:THR:CG2 | 1:N:334:VAL:HG11 | 2.16 | 0.75 |
| 1:N:437:VAL:HG11 | 1:N:451:LEU:CD1 | 2.16 | 0.75 |
| 1:O:369:VAL:O | 1:O:373:ILE:HG12 | 1.86 | 0.75 |
| 1:A:234:LEU:HD22 | 1:A:301:ALA:CB | 2.16 | 0.75 |
| 1:B:124:TYR:CE1 | 1:B:407:ALA:HB1 | 2.21 | 0.75 |
| 1:B:219:VAL:CG1 | 1:B:220:SER:H | 1.98 | 0.75 |
| 1:C:14:ARG:NH2 | 1:D:34:THR:HB | 2.01 | 0.75 |
| 1:C:21:GLN:O | 1:C:25:ILE:HG13 | 1.85 | 0.75 |
| 1:D:38:THR:HG22 | 1:D:59:ASN:HD22 | 1.51 | 0.75 |
| 1:D:178:VAL:CG1 | 1:D:188:VAL:HG11 | 2.16 | 0.75 |
| 1:E:435:VAL:HG12 | 1:E:435:VAL:O | 1.87 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:254:ILE:HG21 | 1:F:262:LEU:HD12 | 1.69 | 0.75 |
| 1:H:182:VAL:CB | 1:H:188:VAL:CG2 | 2.63 | 0.75 |
| 1:H:263:PHE:CE1 | 1:H:332:ILE:HG21 | 2.21 | 0.75 |
| 1:H:265:GLN:CG | 1:H:266:LYS:HZ2 | 1.98 | 0.75 |
| 1:J:42:LYS:HD2 | 1:J:426:ALA:N | 2.01 | 0.75 |
| 1:J:368:VAL:HG21 | 1:J:469:PRO:HG2 | 1.66 | 0.75 |
| 1:L:119:ILE:CG1 | 1:L:403:ARG:HD2 | 2.16 | 0.75 |
| 1:L:206:THR:CG2 | 1:L:348:ARG:H | 1.96 | 0.75 |
| 1:M:142:VAL:HB | 1:M:149:ILE:CD1 | 2.16 | 0.75 |
| 1:M:233:ALA:HB1 | 1:M:310:LEU:CD2 | 2.15 | 0.75 |
| 1:O:140:CYS:HB3 | 1:O:446:ASN:HB2 | 1.68 | 0.75 |
| 1:P:235:LEU:CD1 | 1:P:307:ILE:HD13 | 2.16 | 0.75 |
| 1:D:170:LEU:HD11 | 1:D:361:ALA:HB3 | 1.69 | 0.75 |
| 1:E:124:TYR:CD1 | 1:E:407:ALA:HB1 | 2.20 | 0.75 |
| 1:F:119:ILE:HG13 | 1:F:403:ARG:HD3 | 0.86 | 0.75 |
| 1:F:276:LEU:HD13 | 1:F:281:ILE:HD12 | 1.69 | 0.75 |
| 1:H:163:ALA:HA | 1:H:165:LYS:HG2 | 1.68 | 0.75 |
| 1:J:30:ILE:C | 1:J:32:ALA:H | 1.90 | 0.75 |
| 1:J:235:LEU:HD21 | 1:J:310:LEU:HB3 | 1.68 | 0.75 |
| 1:K:134:LEU:HD12 | 1:K:393:LEU:HD11 | 1.68 | 0.75 |
| 1:K:368:VAL:CG2 | 1:K:469:PRO:HG2 | 2.17 | 0.75 |
| 1:L:50:ASP:OD2 | 1:L:52:LEU:HD12 | 1.85 | 0.75 |
| 1:L:115:VAL:CB | 1:L:403:ARG:HE | 1.99 | 0.75 |
| 1:M:206:THR:HG21 | 1:M:347:ILE:HG23 | 1.69 | 0.75 |
| 1:N:130:LYS:HD3 | 1:N:396:TYR:CD1 | 2.21 | 0.75 |
| 1:N:197:LYS:HA | 1:N:355:ILE:HG21 | 1.67 | 0.75 |
| 1:P:42:LYS:HE2 | 1:P:426:ALA:HA | 1.66 | 0.75 |
| 1:P:117:PRO:O | 1:P:120:VAL:HG12 | 1.85 | 0.75 |
| 1:A:68:MET:CG | 1:H:8:LEU:HD23 | 2.17 | 0.75 |
| 1:B:138:ILE:CD1 | 1:B:385:THR:HG23 | 2.16 | 0.75 |
| 1:D:130:LYS:HD2 | 1:D:396:TYR:CG | 2.22 | 0.75 |
| 1:D:152:LYS:NZ | 1:D:462:CYS:HB3 | 2.01 | 0.75 |
| 1:E:122:LYS:HG3 | 1:E:125:GLN:HE22 | 1.50 | 0.75 |
| 1:E:218:ARG:NE | 1:E:282:VAL:HG21 | 2.01 | 0.75 |
| 1:F:129:GLN:O | 1:F:132:GLN:HB2 | 1.87 | 0.75 |
| 1:F:307:ILE:O | 1:F:310:LEU:HB2 | 1.86 | 0.75 |
| 1:G:199:SER:CB | 1:G:327:SER:HB2 | 2.16 | 0.75 |
| 1:I:124:TYR:N | 1:I:124:TYR:CD1 | 2.50 | 0.75 |
| 1:I:237:CYS:CB | 1:I:306:ASN:HA | 2.15 | 0.75 |
| 1:K:70:VAL:CG1 | 1:K:76:LYS:HD2 | 2.16 | 0.75 |
| 1:K:276:LEU:CD1 | 1:K:281:ILE:HD12 | 2.17 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:105:ARG:HD2 | 1:M:106:LYS:N | 2.02 | 0.75 |
| 1:M:222:GLN:C | 1:M:277:ALA:HB1 | 2.06 | 0.75 |
| 1:M:387:VAL:HG21 | 1:M:437:VAL:CG1 | 2.17 | 0.75 |
| 1:N:371:CYS:HB2 | 1:N:471:ARG:HD2 | 1.67 | 0.75 |
| 1:N:437:VAL:HG13 | 1:N:449:ALA:O | 1.87 | 0.75 |
| 1:O:152:LYS:HG2 | 1:O:467:VAL:HG23 | 1.66 | 0.75 |
| 1:P:197:LYS:HA | 1:P:355:ILE:CG2 | 2.16 | 0.75 |
| 1:P:218:ARG:HG3 | 1:P:323:GLU:HB2 | 1.68 | 0.75 |
| 1:P:377:ARG:HD2 | 1:P:470:LEU:HD11 | 1.68 | 0.75 |
| 1:A:438:ARG:HH22 | 1:J:405:GLN:HE22 | 1.33 | 0.75 |
| 1:B:134:LEU:CB | 1:B:392:LYS:HZ1 | 1.91 | 0.75 |
| 1:B:178:VAL:HG12 | 1:B:188:VAL:HG11 | 1.68 | 0.75 |
| 1:B:235:LEU:O | 1:B:264:CYS:HA | 1.86 | 0.75 |
| 1:E:100:ALA:HB1 | 1:E:484:THR:CG2 | 2.11 | 0.75 |
| 1:E:234:LEU:HD11 | 1:E:301:ALA:HB3 | 1.68 | 0.75 |
| 1:E:431:ILE:HD11 | 1:N:403:ARG:CG | 2.15 | 0.75 |
| 1:F:38:THR:HG22 | 1:F:59:ASN:HB2 | 1.69 | 0.75 |
| 1:F:215:ASP:C | 1:F:216:LYS:HG2 | 2.07 | 0.75 |
| 1:F:223:MET:CE | 1:F:283:ALA:HB3 | 2.17 | 0.75 |
| 1:H:42:LYS:HZ3 | 1:H:426:ALA:HB2 | 1.52 | 0.75 |
| 1:K:326:ILE:HD11 | 1:K:348:ARG:NH1 | 2.02 | 0.75 |
| 1:L:142:VAL:HG23 | 1:L:149:ILE:HD13 | 1.65 | 0.75 |
| 1:L:197:LYS:HA | 1:L:355:ILE:CG2 | 2.15 | 0.75 |
| 1:M:81:VAL:HG11 | 1:M:483:SER:HB3 | 1.68 | 0.75 |
| 1:M:197:LYS:HB3 | 1:M:355:ILE:CG2 | 2.17 | 0.75 |
| 1:O:195:ILE:HB | 1:O:359:ALA:CB | 2.17 | 0.75 |
| 1:O:239:ILE:HD12 | 1:O:307:ILE:CB | 2.17 | 0.75 |
| 1:O:254:ILE:HG23 | 1:O:259:ALA:CB | 2.16 | 0.75 |
| 1:P:42:LYS:HG3 | 1:P:426:ALA:N | 2.02 | 0.75 |
| 1:A:178:VAL:HG22 | 1:A:193:ILE:HD11 | 1.67 | 0.75 |
| 1:A:276:LEU:HD12 | 1:A:281:ILE:CD1 | 2.16 | 0.75 |
| 1:D:452:ASN:ND2 | 1:D:454:PHE:HB2 | 1.99 | 0.75 |
| 1:G:182:VAL:CB | 1:G:188:VAL:HG12 | 2.17 | 0.75 |
| 1:G:237:CYS:HA | 1:G:306:ASN:CA | 2.14 | 0.75 |
| 1:G:262:LEU:CD1 | 1:G:310:LEU:CD2 | 2.61 | 0.75 |
| 1:I:119:ILE:HG13 | 1:I:403:ARG:HD2 | 1.69 | 0.75 |
| 1:I:130:LYS:HZ3 | 1:I:393:LEU:HD23 | 1.52 | 0.75 |
| 1:K:124:TYR:CE1 | 1:K:407:ALA:HA | 2.21 | 0.75 |
| 1:L:72:HIS:O | 1:L:75:ALA:HB3 | 1.86 | 0.75 |
| 1:L:383:GLY:HA2 | 1:L:386:GLU:HG3 | 1.67 | 0.75 |
| 1:M:156:THR:HG21 | 1:M:468:GLU:CA | 2.16 | 0.75 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:452:ASN:HB2 | 1:N:459:GLU:OE1 | 1.87 | 0.75 |
| 1:C:368:VAL:HB | 1:C:469:PRO:HB3 | 1.68 | 0.75 |
| 1:D:120:VAL:HG21 | 1:D:488:LEU:CD1 | 2.17 | 0.75 |
| 1:D:152:LYS:HZ3 | 1:D:462:CYS:HB3 | 1.50 | 0.75 |
| 1:D:473:LYS:HA | 1:D:473:LYS:HE3 | 1.68 | 0.75 |
| 1:E:117:PRO:O | 1:E:120:VAL:HG13 | 1.87 | 0.75 |
| 1:G:134:LEU:CD2 | 1:G:392:LYS:HE3 | 2.17 | 0.75 |
| 1:H:156:THR:HB | 1:H:467:VAL:O | 1.86 | 0.75 |
| 1:H:448:CYS:HB2 | 1:H:460:ASP:CG | 2.07 | 0.75 |
| 1:K:81:VAL:HG11 | 1:K:483:SER:CB | 2.16 | 0.75 |
| 1:K:170:LEU:CD2 | 1:K:358:VAL:HG11 | 2.16 | 0.75 |
| 1:L:68:MET:HB3 | 1:M:8:LEU:HD23 | 1.68 | 0.75 |
| 1:L:197:LYS:HB3 | 1:L:355:ILE:HG21 | 1.66 | 0.75 |
| 1:M:69:SER:H | 1:N:9:PRO:HG3 | 1.51 | 0.75 |
| 1:N:391:MET:CE | 1:N:438:ARG:HB2 | 2.17 | 0.75 |
| 1:O:78:LEU:HD12 | 1:O:487:LEU:HD11 | 1.69 | 0.75 |
| 1:P:44:MET:HE2 | 1:P:44:MET:CA | 2.02 | 0.75 |
| 1:P:104:LEU:HD23 | 1:P:488:LEU:HD12 | 1.68 | 0.75 |
| 1:P:237:CYS:HB3 | 1:P:306:ASN:CA | 2.17 | 0.75 |
| 1:A:25:ILE:HD13 | 1:A:108:GLU:HG3 | 1.67 | 0.75 |
| 1:A:464:ASN:HB3 | 1:A:466:VAL:HG22 | 1.68 | 0.75 |
| 1:B:130:LYS:HZ2 | 1:B:393:LEU:HD23 | 1.51 | 0.75 |
| 1:C:158:ILE:CD1 | 1:C:167:LYS:HA | 2.16 | 0.75 |
| 1:C:403:ARG:N | 1:L:431:ILE:HD11 | 2.01 | 0.75 |
| 1:E:119:ILE:HG21 | 1:E:403:ARG:HB2 | 1.68 | 0.75 |
| 1:I:158:ILE:HG13 | 1:I:361:ALA:HB1 | 1.69 | 0.75 |
| 1:I:241:GLU:HG3 | 1:I:250:MET:SD | 2.27 | 0.75 |
| 1:J:125:GLN:O | 1:J:129:GLN:HG3 | 1.86 | 0.75 |
| 1:J:233:ALA:CA | 1:J:315:LEU:HD13 | 2.16 | 0.75 |
| 1:J:368:VAL:HA | 1:J:371:CYS:SG | 2.27 | 0.75 |
| 1:L:307:ILE:HD12 | 1:L:310:LEU:HB2 | 1.69 | 0.75 |
| 1:M:210:LYS:HB3 | 1:M:343:VAL:HG23 | 1.67 | 0.75 |
| 1:M:212:VAL:HG23 | 1:M:298:ALA:HB2 | 1.69 | 0.75 |
| 1:M:369:VAL:O | 1:M:369:VAL:HG12 | 1.85 | 0.75 |
| 1:N:182:VAL:CG2 | 1:N:188:VAL:HG22 | 2.17 | 0.75 |
| 1:N:254:ILE:HD11 | 1:N:307:ILE:HD11 | 1.69 | 0.75 |
| 1:O:387:VAL:HG21 | 1:O:437:VAL:HG12 | 1.68 | 0.75 |
| 1:A:44:MET:HE2 | 1:H:489:ARG:NH2 | 2.01 | 0.74 |
| 1:A:400:ILE:HD11 | 1:A:408:VAL:CG2 | 2.17 | 0.74 |
| 1:B:219:VAL:HG13 | 1:B:273:GLN:OE1 | 1.86 | 0.74 |
| 1:C:197:LYS:HA | 1:C:355:ILE:CG2 | 2.17 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:326:ILE:HG13 | 1:E:348:ARG:NH1 | 2.02 | 0.74 |
| 1:E:389:LEU:HD13 | 1:E:415:LEU:CD1 | 2.16 | 0.74 |
| 1:E:396:TYR:O | 1:E:396:TYR:CG | 2.39 | 0.74 |
| 1:F:72:HIS:O | 1:F:75:ALA:HB3 | 1.87 | 0.74 |
| 1:F:215:ASP:O | 1:F:216:LYS:HG2 | 1.87 | 0.74 |
| 1:F:437:VAL:CG2 | 1:F:451:LEU:HG | 2.17 | 0.74 |
| 1:G:347:ILE:HG21 | 1:G:358:VAL:HB | 1.67 | 0.74 |
| 1:H:247:LEU:CD1 | 1:H:272:ALA:HB2 | 2.17 | 0.74 |
| 1:I:68:MET:SD | 1:J:12:MET:HE2 | 2.26 | 0.74 |
| 1:I:152:LYS:CD | 1:I:465:GLY:HA2 | 2.16 | 0.74 |
| 1:J:34:THR:HB | 1:K:14:ARG:NH2 | 2.01 | 0.74 |
| 1:J:138:ILE:HD13 | 1:J:385:THR:OG1 | 1.86 | 0.74 |
| 1:J:218:ARG:CZ | 1:J:282:VAL:HG21 | 2.17 | 0.74 |
| 1:J:248:LYS:HG3 | 1:J:275:TYR:CD2 | 2.22 | 0.74 |
| 1:K:206:THR:HG22 | 1:K:348:ARG:H | 1.50 | 0.74 |
| 1:K:262:LEU:HD12 | 1:K:310:LEU:CD1 | 2.17 | 0.74 |
| 1:L:12:MET:SD | 1:L:494:ILE:HG22 | 2.27 | 0.74 |
| 1:L:63:THR:HA | 1:L:66:ARG:HB2 | 1.69 | 0.74 |
| 1:L:307:ILE:HD12 | 1:L:307:ILE:O | 1.86 | 0.74 |
| 1:N:129:GLN:O | 1:N:132:GLN:HB2 | 1.87 | 0.74 |
| 1:O:124:TYR:CE1 | 1:O:407:ALA:CA | 2.70 | 0.74 |
| 1:O:212:VAL:HG21 | 1:O:294:LYS:C | 2.08 | 0.74 |
| 1:P:119:ILE:HG13 | 1:P:403:ARG:HH11 | 1.51 | 0.74 |
| 1:P:124:TYR:CD1 | 1:P:124:TYR:N | 2.52 | 0.74 |
| 1:B:8:LEU:CB | 1:C:68:MET:HG3 | 2.17 | 0.74 |
| 1:C:276:LEU:HD12 | 1:C:281:ILE:CG2 | 2.07 | 0.74 |
| 1:E:265:GLN:HE22 | 1:E:289:LYS:HD3 | 1.52 | 0.74 |
| 1:H:18:ARG:HA | 1:H:21:GLN:CD | 2.08 | 0.74 |
| 1:I:431:ILE:O | 1:I:431:ILE:HG12 | 1.84 | 0.74 |
| 1:K:234:LEU:HB3 | 1:K:292:MET:HE2 | 1.69 | 0.74 |
| 1:O:251:VAL:CG1 | 1:O:276:LEU:HD13 | 2.18 | 0.74 |
| 1:P:102:GLU:HG2 | 1:P:417:VAL:HG11 | 1.68 | 0.74 |
| 1:P:158:ILE:CD1 | 1:P:167:LYS:HA | 2.16 | 0.74 |
| 1:A:34:THR:CA | 1:H:14:ARG:HH22 | 2.00 | 0.74 |
| 1:C:19:ASP:O | 1:C:23:MET:HG3 | 1.86 | 0.74 |
| 1:D:222:GLN:HB3 | 1:D:277:ALA:HB1 | 1.67 | 0.74 |
| 1:D:391:MET:HE3 | 1:D:438:ARG:CB | 2.18 | 0.74 |
| 1:E:197:LYS:CB | 1:E:355:ILE:CG2 | 2.65 | 0.74 |
| 1:G:42:LYS:HG3 | 1:G:425:ASN:HB2 | 1.67 | 0.74 |
| 1:G:89:VAL:HG11 | 1:G:472:VAL:HG12 | 1.69 | 0.74 |
| 1:H:235:LEU:HD11 | 1:H:307:ILE:CB | 2.17 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:254:ILE:HD13 | 1:H:262:LEU:HD13 | 1.69 | 0.74 |
| 1:I:116:HIS:CE1 | 1:I:117:PRO:HG2 | 2.23 | 0.74 |
| 1:I:158:ILE:O | 1:I:158:ILE:CG2 | 2.34 | 0.74 |
| 1:K:235:LEU:HD23 | 1:K:304:ILE:CD1 | 2.15 | 0.74 |
| 1:K:420:ARG:CD | 1:K:430:ALA:HB3 | 2.17 | 0.74 |
| 1:L:96:ALA:CA | 1:L:480:ALA:HB2 | 2.17 | 0.74 |
| 1:M:134:LEU:HD11 | 1:M:393:LEU:CD2 | 2.17 | 0.74 |
| 1:O:12:MET:HG3 | 1:O:494:ILE:HG22 | 1.69 | 0.74 |
| 1:P:150:LEU:HD23 | 1:P:175:VAL:HG13 | 1.68 | 0.74 |
| 1:A:42:LYS:HB2 | 1:A:425:ASN:HD22 | 1.53 | 0.74 |
| 1:A:68:MET:HG3 | 1:H:8:LEU:HD23 | 1.68 | 0.74 |
| 1:A:111:LEU:CD2 | 1:A:117:PRO:HB3 | 2.18 | 0.74 |
| 1:C:384:SER:CB | 1:C:441:HIS:HE1 | 1.99 | 0.74 |
| 1:D:31:ILE:HG21 | 1:D:65:LEU:HD11 | 1.67 | 0.74 |
| 1:D:237:CYS:HA | 1:D:306:ASN:C | 2.07 | 0.74 |
| 1:F:8:LEU:CD1 | 1:G:68:MET:HG2 | 2.18 | 0.74 |
| 1:F:12:MET:HE2 | 1:G:68:MET:SD | 2.27 | 0.74 |
| 1:H:152:LYS:HB3 | 1:H:467:VAL:HG23 | 1.69 | 0.74 |
| 1:H:299:THR:HG22 | 1:H:318:ALA:HB2 | 1.70 | 0.74 |
| 1:I:210:LYS:HB3 | 1:I:343:VAL:CG2 | 2.16 | 0.74 |
| 1:I:223:MET:CE | 1:I:283:ALA:HB3 | 2.17 | 0.74 |
| 1:I:461:MET:SD | 1:I:466:VAL:HG23 | 2.28 | 0.74 |
| 1:J:119:ILE:HD12 | 1:J:403:ARG:CG | 2.16 | 0.74 |
| 1:J:239:ILE:HD12 | 1:J:307:ILE:CG1 | 2.17 | 0.74 |
| 1:K:223:MET:HG3 | 1:K:277:ALA:HB2 | 1.67 | 0.74 |
| 1:L:211:GLY:HA3 | 1:L:337:CYS:SG | 2.28 | 0.74 |
| 1:M:195:ILE:H | 1:M:195:ILE:CD1 | 1.92 | 0.74 |
| 1:N:134:LEU:HD12 | 1:N:393:LEU:CD2 | 2.17 | 0.74 |
| 1:P:69:SER:O | 1:P:69:SER:OG | 2.03 | 0.74 |
| 1:P:134:LEU:HD11 | 1:P:393:LEU:HD21 | 1.67 | 0.74 |
| 1:P:198:LYS:N | 1:P:355:ILE:HD13 | 2.02 | 0.74 |
| 1:P:286:ARG:HH11 | 1:P:286:ARG:HG2 | 1.51 | 0.74 |
| 1:A:12:MET:HE2 | 1:B:68:MET:HG3 | 1.69 | 0.74 |
| 1:A:124:TYR:HE1 | 1:A:407:ALA:HA | 1.51 | 0.74 |
| 1:A:276:LEU:HD12 | 1:A:281:ILE:HD12 | 1.69 | 0.74 |
| 1:A:431:ILE:CD1 | 1:J:403:ARG:HG2 | 2.18 | 0.74 |
| 1:C:34:THR:HG22 | 1:C:35:VAL:N | 2.01 | 0.74 |
| 1:C:235:LEU:CD2 | 1:C:304:ILE:HD11 | 2.18 | 0.74 |
| 1:E:220:SER:HB3 | 1:E:223:MET:SD | 2.28 | 0.74 |
| 1:F:299:THR:HG23 | 1:F:334:VAL:HG13 | 1.67 | 0.74 |
| 1:H:182:VAL:HG22 | 1:H:182:VAL:O | 1.87 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:235:LEU:HG | 1:H:307:ILE:HA | 1.68 | 0.74 |
| 1:I:232:ILE:O | 1:I:315:LEU:HB3 | 1.88 | 0.74 |
| 1:J:23:MET:HE2 | 1:J:72:HIS:CE1 | 2.23 | 0.74 |
| 1:J:265:GLN:N | 1:J:266:LYS:HA | 2.02 | 0.74 |
| 1:L:216:LYS:O | 1:L:332:ILE:HG13 | 1.87 | 0.74 |
| 1:L:262:LEU:HG | 1:L:310:LEU:HD21 | 1.70 | 0.74 |
| 1:L:469:PRO:HB2 | 1:L:472:VAL:HG23 | 1.69 | 0.74 |
| 1:M:170:LEU:HD22 | 1:M:358:VAL:HG13 | 1.67 | 0.74 |
| 1:N:34:THR:HA | 1:O:14:ARG:NH2 | 2.00 | 0.74 |
| 1:N:235:LEU:HD11 | 1:N:307:ILE:CA | 2.16 | 0.74 |
| 1:O:34:THR:CG2 | 1:P:14:ARG:HH22 | 1.99 | 0.74 |
| 1:O:341:LYS:HZ2 | 1:O:341:LYS:HB2 | 1.52 | 0.74 |
| 1:P:38:THR:HB | 1:P:59:ASN:HD22 | 1.52 | 0.74 |
| 1:A:48:LEU:CD2 | 1:H:494:ILE:HD12 | 2.18 | 0.74 |
| 1:A:146:ASP:HB3 | 1:A:149:ILE:HG12 | 1.69 | 0.74 |
| 1:A:435:VAL:HG11 | 1:J:401:SER:OG | 1.88 | 0.74 |
| 1:C:237:CYS:HA | 1:C:306:ASN:CA | 2.16 | 0.74 |
| 1:D:387:VAL:O | 1:D:390:SER:HB3 | 1.87 | 0.74 |
| 1:J:166:ALA:HB2 | 1:J:203:ILE:HG21 | 1.68 | 0.74 |
| 1:J:441:HIS:ND1 | 1:J:449:ALA:HB3 | 2.03 | 0.74 |
| 1:K:141:GLU:O | 1:K:142:VAL:HB | 1.85 | 0.74 |
| 1:K:391:MET:HE3 | 1:K:438:ARG:CB | 2.16 | 0.74 |
| 1:L:486:MET:HE2 | 1:L:487:LEU:HD23 | 1.70 | 0.74 |
| 1:N:68:MET:HB3 | 1:O:8:LEU:HD22 | 1.66 | 0.74 |
| 1:N:208:LEU:HD11 | 1:N:343:VAL:HG21 | 1.69 | 0.74 |
| 1:O:77:MET:HA | 1:O:80:GLU:OE1 | 1.87 | 0.74 |
| 1:O:158:ILE:HG12 | 1:O:361:ALA:HB1 | 1.68 | 0.74 |
| 1:A:234:LEU:HD22 | 1:A:301:ALA:HB3 | 1.69 | 0.74 |
| 1:E:46:LYS:HB2 | 1:E:58:THR:O | 1.88 | 0.74 |
| 1:F:212:VAL:HB | 1:F:298:ALA:HB3 | 1.70 | 0.74 |
| 1:G:130:LYS:HG2 | 1:G:393:LEU:HD21 | 1.68 | 0.74 |
| 1:G:341:LYS:HB3 | 1:G:341:LYS:NZ | 1.87 | 0.74 |
| 1:G:450:GLY:C | 1:G:451:LEU:HG | 2.07 | 0.74 |
| 1:H:35:VAL:HA | 1:H:46:LYS:HZ1 | 1.52 | 0.74 |
| 1:I:85:GLN:NE2 | 1:I:476:ALA:HA | 2.02 | 0.74 |
| 1:I:218:ARG:NH1 | 1:I:282:VAL:HG21 | 2.03 | 0.74 |
| 1:J:339:HIS:O | 1:J:339:HIS:ND1 | 2.20 | 0.74 |
| 1:K:113:GLN:HA | 1:K:113:GLN:HE21 | 1.35 | 0.74 |
| 1:K:237:CYS:C | 1:K:307:ILE:H | 1.90 | 0.74 |
| 1:L:235:LEU:CD1 | 1:L:307:ILE:HD13 | 2.16 | 0.74 |
| 1:N:210:LYS:O | 1:N:340:PRO:HB3 | 1.87 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:420:ARG:HH11 | 1:N:420:ARG:HG2 | 1.51 | 0.74 |
| 1:O:34:THR:HB | 1:P:14:ARG:NH2 | 2.02 | 0.74 |
| 1:O:42:LYS:HG3 | 1:O:426:ALA:H | 1.52 | 0.74 |
| 1:O:188:VAL:HG21 | 1:O:373:ILE:CD1 | 2.16 | 0.74 |
| 1:P:113:GLN:CA | 1:P:113:GLN:NE2 | 1.97 | 0.74 |
| 1:P:158:ILE:HB | 1:P:361:ALA:HB1 | 1.70 | 0.74 |
| 1:P:188:VAL:HG13 | 1:P:189:ASP:H | 1.51 | 0.74 |
| 1:A:153:ILE:HD11 | 1:A:372:THR:OG1 | 1.87 | 0.74 |
| 1:B:39:LEU:CD1 | 1:B:40:GLY:H | 1.98 | 0.74 |
| 1:D:38:THR:HG21 | 1:D:46:LYS:HD2 | 1.70 | 0.74 |
| 1:D:60:ASP:O | 1:D:64:ILE:HG13 | 1.88 | 0.74 |
| 1:D:339:HIS:HE1 | 1:D:341:LYS:CD | 2.00 | 0.74 |
| 1:E:234:LEU:CD1 | 1:E:301:ALA:HB1 | 2.18 | 0.74 |
| 1:F:9:PRO:O | 1:F:12:MET:HB2 | 1.88 | 0.74 |
| 1:F:262:LEU:CD1 | 1:F:310:LEU:HD21 | 2.18 | 0.74 |
| 1:G:21:GLN:C | 1:G:25:ILE:HG12 | 2.08 | 0.74 |
| 1:G:42:LYS:HZ2 | 1:G:426:ALA:CA | 2.00 | 0.74 |
| 1:H:130:LYS:CG | 1:H:393:LEU:CD1 | 2.64 | 0.74 |
| 1:H:139:ALA:HB2 | 1:H:470:LEU:HD21 | 1.68 | 0.74 |
| 1:I:156:THR:CG2 | 1:I:468:GLU:HB3 | 2.16 | 0.74 |
| 1:J:233:ALA:HA | 1:J:315:LEU:CD1 | 2.16 | 0.74 |
| 1:L:62:VAL:HG13 | 1:L:63:THR:H | 1.53 | 0.74 |
| 1:L:486:MET:HE1 | 1:L:487:LEU:CD2 | 2.16 | 0.74 |
| 1:M:8:LEU:CB | 1:M:12:MET:HE2 | 2.14 | 0.74 |
| 1:M:233:ALA:HB1 | 1:M:310:LEU:HD11 | 1.70 | 0.74 |
| 1:N:239:ILE:HG13 | 1:N:307:ILE:HD13 | 1.69 | 0.74 |
| 1:P:178:VAL:HG12 | 1:P:188:VAL:HG11 | 1.67 | 0.74 |
| 1:A:232:ILE:HG13 | 1:A:261:VAL:HG11 | 1.70 | 0.74 |
| 1:D:227:VAL:HG11 | 1:D:260:ASN:OD1 | 1.88 | 0.74 |
| 1:D:276:LEU:HD12 | 1:D:281:ILE:HD12 | 1.70 | 0.74 |
| 1:E:122:LYS:HG3 | 1:E:125:GLN:NE2 | 2.02 | 0.74 |
| 1:E:405:GLN:HE22 | 1:N:438:ARG:HH22 | 1.33 | 0.74 |
| 1:G:339:HIS:O | 1:G:339:HIS:CG | 2.39 | 0.74 |
| 1:G:450:GLY:O | 1:G:451:LEU:HG | 1.86 | 0.74 |
| 1:I:174:ILE:HD12 | 1:I:365:ALA:HB1 | 1.69 | 0.74 |
| 1:I:236:ASN:HA | 1:I:265:GLN:HB3 | 1.69 | 0.74 |
| 1:J:51:ASP:HA | 1:K:11:ASN:OD1 | 1.88 | 0.74 |
| 1:J:138:ILE:HD13 | 1:J:379:VAL:HG21 | 1.69 | 0.74 |
| 1:J:171:ALA:HA | 1:J:174:ILE:CD1 | 2.16 | 0.74 |
| 1:K:219:VAL:HG13 | 1:K:273:GLN:CB | 2.14 | 0.74 |
| 1:K:387:VAL:HG21 | 1:K:437:VAL:HG12 | 1.70 | 0.74 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:77:MET:CE | 1:L:486:MET:CE | 2.65 | 0.74 |
| 1:L:82:ALA:HB1 | 1:L:93:THR:HG22 | 1.68 | 0.74 |
| 1:L:233:ALA:CA | 1:L:315:LEU:HD22 | 2.18 | 0.74 |
| 1:L:380:SER:HB2 | 1:L:384:SER:HB2 | 1.70 | 0.74 |
| 1:M:134:LEU:CD1 | 1:M:393:LEU:CD2 | 2.66 | 0.74 |
| 1:O:156:THR:O | 1:O:156:THR:HG23 | 1.88 | 0.74 |
| 1:D:9:PRO:HD2 | 1:E:71:GLU:N | 2.03 | 0.74 |
| 1:D:120:VAL:CG2 | 1:D:488:LEU:HD11 | 2.18 | 0.74 |
| 1:D:170:LEU:CD2 | 1:D:358:VAL:HG13 | 2.14 | 0.74 |
| 1:D:418:ILE:N | 1:D:418:ILE:CD1 | 2.51 | 0.74 |
| 1:F:152:LYS:CD | 1:F:465:GLY:HA2 | 2.18 | 0.74 |
| 1:F:235:LEU:HD21 | 1:F:307:ILE:HD13 | 1.68 | 0.74 |
| 1:G:12:MET:HB3 | 1:H:68:MET:CE | 2.18 | 0.74 |
| 1:G:70:VAL:HG22 | 1:G:76:LYS:HG2 | 1.69 | 0.74 |
| 1:H:134:LEU:CD1 | 1:H:393:LEU:CD1 | 2.65 | 0.74 |
| 1:I:130:LYS:NZ | 1:I:134:LEU:HD11 | 2.03 | 0.74 |
| 1:J:142:VAL:HG21 | 1:J:378:ILE:HD13 | 1.70 | 0.74 |
| 1:K:437:VAL:HG21 | 1:K:451:LEU:CG | 2.18 | 0.74 |
| 1:N:42:LYS:HB3 | 1:N:425:ASN:HB3 | 1.70 | 0.74 |
| 1:N:235:LEU:CD1 | 1:N:307:ILE:HD12 | 2.17 | 0.74 |
| 1:O:389:LEU:HD13 | 1:O:415:LEU:CD1 | 2.18 | 0.74 |
| 1:P:178:VAL:CG2 | 1:P:366:VAL:HG22 | 2.17 | 0.74 |
| 1:B:89:VAL:O | 1:B:89:VAL:HG23 | 1.88 | 0.73 |
| 1:B:174:ILE:HD12 | 1:B:365:ALA:HB1 | 1.68 | 0.73 |
| 1:B:262:LEU:CD1 | 1:B:310:LEU:CD1 | 2.64 | 0.73 |
| 1:D:42:LYS:HZ1 | 1:D:426:ALA:HA | 1.52 | 0.73 |
| 1:D:77:MET:CE | 1:D:486:MET:CE | 2.66 | 0.73 |
| 1:D:236:ASN:HA | 1:D:265:GLN:HB2 | 1.68 | 0.73 |
| 1:G:235:LEU:HG | 1:G:307:ILE:CD1 | 2.18 | 0.73 |
| 1:H:403:ARG:N | 1:I:431:ILE:HD11 | 2.03 | 0.73 |
| 1:K:70:VAL:CG1 | 1:K:76:LYS:HG3 | 2.11 | 0.73 |
| 1:K:159:THR:HG22 | 1:K:164:GLU:OE2 | 1.88 | 0.73 |
| 1:L:237:CYS:HA | 1:L:306:ASN:CA | 2.18 | 0.73 |
| 1:N:38:THR:HG22 | 1:N:59:ASN:HB2 | 1.70 | 0.73 |
| 1:N:42:LYS:HD2 | 1:N:426:ALA:N | 2.03 | 0.73 |
| 1:O:69:SER:C | 1:P:9:PRO:HB3 | 2.09 | 0.73 |
| 1:O:190:LYS:NZ | 1:O:367:GLY:HA2 | 2.02 | 0.73 |
| 1:A:239:ILE:CD1 | 1:A:251:VAL:HG22 | 2.17 | 0.73 |
| 1:C:119:ILE:HG21 | 1:C:403:ARG:CD | 2.17 | 0.73 |
| 1:C:169:LYS:HE3 | 1:C:204:ASP:O | 1.88 | 0.73 |
| 1:D:12:MET:HE3 | 1:D:494:ILE:O | 1.86 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:307:ILE:CD1 | 1:D:310:LEU:HB2 | 2.17 | 0.73 |
| 1:D:486:MET:HG2 | 1:D:487:LEU:N | 2.01 | 0.73 |
| 1:F:431:ILE:HD13 | 1:O:406:LEU:HD11 | 1.69 | 0.73 |
| 1:G:248:LYS:HE2 | 1:G:275:TYR:CZ | 2.23 | 0.73 |
| 1:H:129:GLN:O | 1:H:132:GLN:HB2 | 1.87 | 0.73 |
| 1:I:163:ALA:HB2 | 1:I:354:VAL:HG21 | 1.70 | 0.73 |
| 1:I:178:VAL:O | 1:I:178:VAL:HG12 | 1.88 | 0.73 |
| 1:I:219:VAL:HG13 | 1:I:220:SER:H | 1.53 | 0.73 |
| 1:K:97:VAL:O | 1:K:100:ALA:HB3 | 1.87 | 0.73 |
| 1:L:437:VAL:HG11 | 1:L:451:LEU:HD11 | 1.70 | 0.73 |
| 1:N:135:LEU:HD21 | 1:N:385:THR:CG2 | 2.18 | 0.73 |
| 1:N:391:MET:HE1 | 1:N:438:ARG:HG3 | 1.69 | 0.73 |
| 1:P:113:GLN:HG2 | 1:P:113:GLN:O | 1.88 | 0.73 |
| 1:P:124:TYR:CE1 | 1:P:407:ALA:CA | 2.69 | 0.73 |
| 1:A:70:VAL:HG22 | 1:A:70:VAL:O | 1.87 | 0.73 |
| 1:B:227:VAL:HG11 | 1:B:260:ASN:OD1 | 1.87 | 0.73 |
| 1:C:30:ILE:HG22 | 1:C:31:ILE:HD13 | 1.69 | 0.73 |
| 1:D:82:ALA:HB2 | 1:D:97:VAL:HG21 | 1.69 | 0.73 |
| 1:D:403:ARG:HB3 | 1:M:431:ILE:CD1 | 2.17 | 0.73 |
| 1:E:237:CYS:HA | 1:E:306:ASN:HA | 0.89 | 0.73 |
| 1:F:170:LEU:HD21 | 1:F:358:VAL:CG2 | 2.16 | 0.73 |
| 1:F:233:ALA:CB | 1:F:315:LEU:HD13 | 2.19 | 0.73 |
| 1:G:134:LEU:HD11 | 1:G:393:LEU:CD2 | 2.18 | 0.73 |
| 1:G:195:ILE:HB | 1:G:359:ALA:CB | 2.17 | 0.73 |
| 1:H:304:ILE:HD13 | 1:H:310:LEU:HA | 1.70 | 0.73 |
| 1:I:192:LEU:HG | 1:I:342:ALA:HB2 | 1.71 | 0.73 |
| 1:I:208:LEU:HD22 | 1:I:343:VAL:CG2 | 2.18 | 0.73 |
| 1:I:447:LYS:HB2 | 1:I:462:CYS:SG | 2.28 | 0.73 |
| 1:K:124:TYR:HE1 | 1:K:407:ALA:CB | 2.00 | 0.73 |
| 1:K:391:MET:CE | 1:K:438:ARG:CG | 2.66 | 0.73 |
| 1:L:138:ILE:HD11 | 1:L:385:THR:HG23 | 1.69 | 0.73 |
| 1:M:158:ILE:HG12 | 1:M:361:ALA:HB1 | 1.70 | 0.73 |
| 1:M:233:ALA:CA | 1:M:315:LEU:HD22 | 2.18 | 0.73 |
| 1:N:68:MET:HA | 1:O:9:PRO:HD3 | 1.69 | 0.73 |
| 1:N:121:VAL:HG23 | 1:N:122:LYS:H | 1.54 | 0.73 |
| 1:P:26:LEU:O | 1:P:30:ILE:HG12 | 1.88 | 0.73 |
| 1:P:197:LYS:HB3 | 1:P:355:ILE:CG2 | 2.19 | 0.73 |
| 1:C:164:GLU:O | 1:C:167:LYS:HB3 | 1.88 | 0.73 |
| 1:D:195:ILE:HB | 1:D:359:ALA:CB | 2.19 | 0.73 |
| 1:E:152:LYS:HG2 | 1:E:465:GLY:CA | 2.18 | 0.73 |
| 1:E:156:THR:HG21 | 1:E:468:GLU:CB | 2.15 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:371:CYS:HB2 | 1:F:471:ARG:HE | 1.54 | 0.73 |
| 1:G:251:VAL:HG13 | 1:G:276:LEU:HD13 | 1.70 | 0.73 |
| 1:H:220:SER:CB | 1:H:277:ALA:HB2 | 2.15 | 0.73 |
| 1:J:35:VAL:O | 1:J:35:VAL:HG23 | 1.87 | 0.73 |
| 1:K:223:MET:HG2 | 1:K:281:ILE:O | 1.88 | 0.73 |
| 1:K:235:LEU:CD1 | 1:K:307:ILE:HD13 | 2.19 | 0.73 |
| 1:K:377:ARG:HB3 | 1:K:470:LEU:HG | 1.70 | 0.73 |
| 1:L:31:ILE:HG21 | 1:L:65:LEU:CD1 | 2.17 | 0.73 |
| 1:L:178:VAL:CG2 | 1:L:366:VAL:HG13 | 2.18 | 0.73 |
| 1:M:235:LEU:CD2 | 1:M:304:ILE:HD11 | 2.18 | 0.73 |
| 1:N:82:ALA:HB2 | 1:N:97:VAL:CG2 | 2.18 | 0.73 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:CA | 2.69 | 0.73 |
| 1:P:178:VAL:CG2 | 1:P:366:VAL:HG13 | 2.17 | 0.73 |
| 1:P:304:ILE:HD12 | 1:P:309:ASP:CB | 2.11 | 0.73 |
| 1:P:414:ALA:O | 1:P:417:VAL:HG12 | 1.89 | 0.73 |
| 1:A:12:MET:CG | 1:A:494:ILE:HG22 | 2.19 | 0.73 |
| 1:A:251:VAL:HG13 | 1:A:276:LEU:CD1 | 2.19 | 0.73 |
| 1:A:369:VAL:O | 1:A:373:ILE:HG12 | 1.88 | 0.73 |
| 1:B:254:ILE:HG22 | 1:B:259:ALA:HB3 | 1.70 | 0.73 |
| 1:C:262:LEU:HD11 | 1:C:310:LEU:CD2 | 2.01 | 0.73 |
| 1:D:12:MET:CG | 1:D:494:ILE:CG2 | 2.61 | 0.73 |
| 1:D:321:VAL:HG22 | 1:D:334:VAL:HG13 | 1.70 | 0.73 |
| 1:G:247:LEU:HD11 | 1:G:269:ASP:HB3 | 1.70 | 0.73 |
| 1:I:235:LEU:CD2 | 1:I:307:ILE:HD13 | 2.19 | 0.73 |
| 1:K:326:ILE:HG12 | 1:K:348:ARG:HH12 | 1.52 | 0.73 |
| 1:L:327:SER:O | 1:L:327:SER:OG | 2.01 | 0.73 |
| 1:M:195:ILE:N | 1:M:195:ILE:CD1 | 2.50 | 0.73 |
| 1:M:223:MET:CE | 1:M:276:LEU:CB | 2.64 | 0.73 |
| 1:N:384:SER:CB | 1:N:441:HIS:CE1 | 2.67 | 0.73 |
| 1:P:84:THR:O | 1:P:84:THR:HG23 | 1.87 | 0.73 |
| 1:A:34:THR:HB | 1:A:35:VAL:HG22 | 1.71 | 0.73 |
| 1:A:166:ALA:C | 1:A:170:LEU:HD22 | 2.08 | 0.73 |
| 1:B:119:ILE:CG1 | 1:B:403:ARG:HD2 | 2.11 | 0.73 |
| 1:B:123:GLY:HA3 | 1:B:407:ALA:CB | 2.19 | 0.73 |
| 1:B:170:LEU:HD22 | 1:B:358:VAL:CG1 | 2.19 | 0.73 |
| 1:B:218:ARG:HG3 | 1:B:323:GLU:OE1 | 1.88 | 0.73 |
| 1:C:387:VAL:HG21 | 1:C:437:VAL:HG12 | 1.70 | 0.73 |
| 1:E:25:ILE:HD11 | 1:E:108:GLU:HG3 | 1.69 | 0.73 |
| 1:F:216:LYS:O | 1:F:332:ILE:HG13 | 1.88 | 0.73 |
| 1:F:251:VAL:HG11 | 1:F:276:LEU:CD2 | 2.11 | 0.73 |
| 1:G:251:VAL:HG11 | 1:G:276:LEU:HD22 | 1.68 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:105:ARG:HD3 | 1:H:106:LYS:HG2 | 1.70 | 0.73 |
| 1:J:161:LYS:HB3 | 1:J:357:GLU:OE2 | 1.89 | 0.73 |
| 1:J:236:ASN:HA | 1:J:265:GLN:HB2 | 1.71 | 0.73 |
| 1:K:77:MET:HB3 | 1:K:80:GLU:OE1 | 1.89 | 0.73 |
| 1:K:219:VAL:CG2 | 1:K:285:ARG:HB3 | 2.18 | 0.73 |
| 1:L:396:TYR:O | 1:L:396:TYR:CG | 2.40 | 0.73 |
| 1:M:48:LEU:HD13 | 1:M:68:MET:HE3 | 1.69 | 0.73 |
| 1:M:248:LYS:HD2 | 1:M:275:TYR:CE2 | 2.23 | 0.73 |
| 1:N:31:ILE:CG2 | 1:N:65:LEU:HD21 | 2.19 | 0.73 |
| 1:N:420:ARG:HG2 | 1:N:420:ARG:NH1 | 2.04 | 0.73 |
| 1:A:30:ILE:HD12 | 1:A:31:ILE:CG1 | 2.19 | 0.73 |
| 1:A:152:LYS:HG2 | 1:A:465:GLY:HA2 | 1.68 | 0.73 |
| 1:A:214:VAL:HG12 | 1:A:291:ASP:CG | 2.08 | 0.73 |
| 1:D:34:THR:CG2 | 1:D:35:VAL:HG13 | 2.18 | 0.73 |
| 1:D:81:VAL:HG11 | 1:D:483:SER:HB2 | 1.70 | 0.73 |
| 1:D:165:LYS:N | 1:D:165:LYS:HD2 | 2.02 | 0.73 |
| 1:F:235:LEU:HG | 1:F:307:ILE:HG22 | 1.70 | 0.73 |
| 1:I:38:THR:HG21 | 1:I:46:LYS:HE2 | 1.70 | 0.73 |
| 1:I:250:MET:HE3 | 1:I:308:LYS:HB3 | 1.70 | 0.73 |
| 1:I:254:ILE:HG22 | 1:I:281:ILE:CD1 | 2.18 | 0.73 |
| 1:M:321:VAL:HG22 | 1:M:334:VAL:HG13 | 1.70 | 0.73 |
| 1:M:453:VAL:HG22 | 1:M:454:PHE:CD2 | 2.24 | 0.73 |
| 1:N:106:LYS:HA | 1:N:106:LYS:CE | 2.18 | 0.73 |
| 1:O:103:LEU:HD21 | 1:O:411:PHE:CE2 | 2.24 | 0.73 |
| 1:P:119:ILE:HG13 | 1:P:403:ARG:CG | 2.19 | 0.73 |
| 1:A:9:PRO:HD3 | 1:B:68:MET:HE2 | 1.70 | 0.73 |
| 1:C:432:GLU:O | 1:C:436:LYS:HG3 | 1.87 | 0.73 |
| 1:C:435:VAL:HG11 | 1:L:401:SER:HB3 | 1.70 | 0.73 |
| 1:D:389:LEU:HD13 | 1:D:415:LEU:HD21 | 1.69 | 0.73 |
| 1:E:153:ILE:CD1 | 1:E:372:THR:HG21 | 2.19 | 0.73 |
| 1:E:197:LYS:CB | 1:E:355:ILE:HG21 | 2.19 | 0.73 |
| 1:E:236:ASN:OD1 | 1:E:236:ASN:O | 2.06 | 0.73 |
| 1:E:403:ARG:O | 1:E:406:LEU:HD12 | 1.89 | 0.73 |
| 1:G:21:GLN:O | 1:G:25:ILE:HG12 | 1.88 | 0.73 |
| 1:J:170:LEU:HD22 | 1:J:358:VAL:CG1 | 2.19 | 0.73 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:CG | 2.19 | 0.73 |
| 1:L:82:ALA:HB2 | 1:L:97:VAL:CG2 | 2.18 | 0.73 |
| 1:L:218:ARG:CG | 1:L:323:GLU:HG3 | 2.19 | 0.73 |
| 1:L:254:ILE:HG22 | 1:L:259:ALA:HB3 | 1.70 | 0.73 |
| 1:L:374:GLU:HB2 | 1:L:471:ARG:NH2 | 2.04 | 0.73 |
| 1:M:383:GLY:HA2 | 1:M:386:GLU:CG | 2.19 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:34:THR:CG2 | 1:O:14:ARG:HH22 | 2.01 | 0.73 |
| 1:N:197:LYS:HB3 | 1:N:355:ILE:CB | 2.19 | 0.73 |
| 1:N:459:GLU:CD | 1:N:461:MET:HE1 | 2.09 | 0.73 |
| 1:P:62:VAL:O | 1:P:66:ARG:HG3 | 1.89 | 0.73 |
| 1:P:124:TYR:CE1 | 1:P:407:ALA:CB | 2.71 | 0.73 |
| 1:P:218:ARG:HG3 | 1:P:323:GLU:CB | 2.19 | 0.73 |
| 1:B:30:ILE:HG22 | 1:B:31:ILE:HG12 | 1.70 | 0.73 |
| 1:B:188:VAL:O | 1:B:188:VAL:HG12 | 1.89 | 0.73 |
| 1:E:206:THR:CB | 1:E:347:ILE:HG23 | 2.17 | 0.73 |
| 1:F:235:LEU:HD12 | 1:F:307:ILE:HA | 1.71 | 0.73 |
| 1:G:193:ILE:HG23 | 1:G:343:VAL:HG12 | 1.67 | 0.73 |
| 1:I:8:LEU:H | 1:I:8:LEU:CD2 | 1.93 | 0.73 |
| 1:I:9:PRO:HD3 | 1:P:68:MET:HA | 1.70 | 0.73 |
| 1:I:89:VAL:HG22 | 1:I:89:VAL:O | 1.89 | 0.73 |
| 1:I:152:LYS:HE3 | 1:I:462:CYS:CA | 2.19 | 0.73 |
| 1:J:69:SER:HB3 | 1:K:9:PRO:CG | 2.19 | 0.73 |
| 1:J:274:HIS:ND1 | 1:J:274:HIS:O | 2.21 | 0.73 |
| 1:K:403:ARG:HH11 | 1:K:403:ARG:HG2 | 1.52 | 0.73 |
| 1:L:16:MET:O | 1:L:16:MET:HG3 | 1.88 | 0.73 |
| 1:L:214:VAL:HG12 | 1:L:291:ASP:CB | 2.18 | 0.73 |
| 1:M:147:LYS:HG2 | 1:M:147:LYS:O | 1.87 | 0.73 |
| 1:M:262:LEU:HD12 | 1:M:310:LEU:CD1 | 2.19 | 0.73 |
| 1:N:34:THR:CA | 1:O:14:ARG:HH22 | 1.99 | 0.73 |
| 1:N:251:VAL:HG11 | 1:N:276:LEU:HG | 1.68 | 0.73 |
| 1:P:251:VAL:HG21 | 1:P:272:ALA:HB1 | 1.68 | 0.73 |
| 1:P:299:THR:HG22 | 1:P:318:ALA:HB2 | 1.71 | 0.73 |
| 1:C:255:LYS:HG2 | 1:C:279:GLU:OE2 | 1.88 | 0.73 |
| 1:C:368:VAL:HB | 1:C:469:PRO:CB | 2.19 | 0.73 |
| 1:D:156:THR:CG2 | 1:D:468:GLU:HB3 | 2.19 | 0.73 |
| 1:D:199:SER:HB2 | 1:D:327:SER:HB2 | 1.70 | 0.73 |
| 1:E:178:VAL:HG21 | 1:E:366:VAL:HB | 1.70 | 0.73 |
| 1:E:389:LEU:CD1 | 1:E:415:LEU:HD13 | 2.18 | 0.73 |
| 1:F:248:LYS:CE | 1:F:275:TYR:CZ | 2.71 | 0.73 |
| 1:H:135:LEU:HD21 | 1:H:385:THR:CG2 | 2.19 | 0.73 |
| 1:H:158:ILE:HD13 | 1:H:170:LEU:HB2 | 1.71 | 0.73 |
| 1:H:239:ILE:HD12 | 1:H:307:ILE:CG1 | 2.14 | 0.73 |
| 1:J:192:LEU:HD13 | 1:J:192:LEU:N | 2.04 | 0.73 |
| 1:J:469:PRO:HB2 | 1:J:472:VAL:HG23 | 1.69 | 0.73 |
| 1:K:219:VAL:CG1 | 1:K:273:GLN:HB3 | 2.14 | 0.73 |
| 1:L:82:ALA:HB1 | 1:L:93:THR:CG2 | 2.19 | 0.73 |
| 1:L:469:PRO:HG2 | 1:L:472:VAL:HG21 | 1.70 | 0.73 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:296:ALA:HB1 | 1:M:301:ALA:O | 1.88 | 0.73 |
| 1:O:152:LYS:HG3 | 1:O:465:GLY:HA3 | 1.70 | 0.73 |
| 1:P:139:ALA:HB1 | 1:P:377:ARG:HG2 | 1.71 | 0.73 |
| 1:P:371:CYS:SG | 1:P:471:ARG:HD2 | 2.29 | 0.73 |
| 1:A:9:PRO:CA | 1:B:69:SER:CA | 2.67 | 0.72 |
| 1:B:215:ASP:OD1 | 1:B:331:MET:HG2 | 1.89 | 0.72 |
| 1:C:103:LEU:HD21 | 1:C:411:PHE:CE2 | 2.24 | 0.72 |
| 1:D:119:ILE:CD1 | 1:D:403:ARG:HG2 | 2.19 | 0.72 |
| 1:D:173:ILE:HD11 | 1:D:206:THR:OG1 | 1.87 | 0.72 |
| 1:E:9:PRO:HA | 1:F:69:SER:OG | 1.88 | 0.72 |
| 1:F:159:THR:HG22 | 1:F:164:GLU:OE1 | 1.89 | 0.72 |
| 1:H:130:LYS:HZ2 | 1:H:134:LEU:HD11 | 1.51 | 0.72 |
| 1:H:210:LYS:HB3 | 1:H:343:VAL:HG23 | 1.70 | 0.72 |
| 1:I:62:VAL:O | 1:I:66:ARG:HB2 | 1.89 | 0.72 |
| 1:J:8:LEU:HD22 | 1:J:494:ILE:CD1 | 2.19 | 0.72 |
| 1:J:248:LYS:CD | 1:J:275:TYR:CE2 | 2.71 | 0.72 |
| 1:J:460:ASP:OD1 | 1:J:460:ASP:C | 2.28 | 0.72 |
| 1:K:195:ILE:HB | 1:K:359:ALA:HB2 | 1.71 | 0.72 |
| 1:L:138:ILE:CD1 | 1:L:385:THR:CG2 | 2.62 | 0.72 |
| 1:M:129:GLN:O | 1:M:132:GLN:HB2 | 1.89 | 0.72 |
| 1:P:212:VAL:HG21 | 1:P:294:LYS:HB3 | 1.71 | 0.72 |
| 1:P:233:ALA:CB | 1:P:310:LEU:HD11 | 2.12 | 0.72 |
| 1:B:134:LEU:HD12 | 1:B:393:LEU:HD11 | 1.71 | 0.72 |
| 1:C:70:VAL:HG22 | 1:C:76:LYS:CD | 2.19 | 0.72 |
| 1:C:119:ILE:HD12 | 1:C:403:ARG:HD2 | 1.69 | 0.72 |
| 1:C:142:VAL:HG11 | 1:C:149:ILE:HG21 | 1.70 | 0.72 |
| 1:C:396:TYR:O | 1:C:396:TYR:CD2 | 2.42 | 0.72 |
| 1:D:441:HIS:ND1 | 1:D:449:ALA:HB3 | 2.04 | 0.72 |
| 1:E:122:LYS:HA | 1:E:125:GLN:CD | 2.09 | 0.72 |
| 1:E:152:LYS:CD | 1:E:465:GLY:HA2 | 2.18 | 0.72 |
| 1:E:276:LEU:CD1 | 1:E:281:ILE:HD12 | 2.18 | 0.72 |
| 1:G:36:ARG:HG3 | 1:G:37:SER:N | 2.03 | 0.72 |
| 1:G:494:ILE:HG13 | 1:H:48:LEU:HD22 | 1.69 | 0.72 |
| 1:H:188:VAL:CB | 1:H:373:ILE:HD12 | 2.18 | 0.72 |
| 1:H:339:HIS:O | 1:H:339:HIS:ND1 | 2.22 | 0.72 |
| 1:I:119:ILE:CG2 | 1:I:403:ARG:CB | 2.65 | 0.72 |
| 1:J:23:MET:HE2 | 1:J:72:HIS:NE2 | 2.03 | 0.72 |
| 1:J:222:GLN:HB3 | 1:J:277:ALA:HB1 | 1.69 | 0.72 |
| 1:K:124:TYR:N | 1:K:124:TYR:HD1 | 1.86 | 0.72 |
| 1:K:237:CYS:SG | 1:K:306:ASN:HA | 2.29 | 0.72 |
| 1:K:428:LEU:CD1 | 1:K:433:ILE:HD11 | 2.19 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:12:MET:HG3 | 1:L:494:ILE:HG22 | 1.71 | 0.72 |
| 1:L:48:LEU:CD2 | 1:M:494:ILE:HD12 | 2.19 | 0.72 |
| 1:L:380:SER:HB2 | 1:L:384:SER:CB | 2.19 | 0.72 |
| 1:L:435:VAL:HG12 | 1:L:435:VAL:O | 1.89 | 0.72 |
| 1:A:403:ARG:HB3 | 1:J:431:ILE:CD1 | 2.19 | 0.72 |
| 1:A:464:ASN:CB | 1:A:466:VAL:HG22 | 2.19 | 0.72 |
| 1:D:12:MET:CE | 1:D:494:ILE:CB | 2.64 | 0.72 |
| 1:D:156:THR:HG21 | 1:D:468:GLU:CB | 2.18 | 0.72 |
| 1:D:233:ALA:CA | 1:D:315:LEU:HD11 | 2.19 | 0.72 |
| 1:D:239:ILE:HB | 1:D:307:ILE:CG2 | 2.19 | 0.72 |
| 1:G:188:VAL:HA | 1:G:189:ASP:HB2 | 1.70 | 0.72 |
| 1:G:197:LYS:CB | 1:G:355:ILE:HG21 | 2.19 | 0.72 |
| 1:I:77:MET:CB | 1:I:487:LEU:HD21 | 2.19 | 0.72 |
| 1:K:125:GLN:O | 1:K:129:GLN:HG3 | 1.89 | 0.72 |
| 1:K:235:LEU:HD11 | 1:K:310:LEU:HB2 | 1.69 | 0.72 |
| 1:L:102:GLU:HA | 1:L:102:GLU:OE1 | 1.89 | 0.72 |
| 1:M:31:ILE:O | 1:M:34:THR:HB | 1.88 | 0.72 |
| 1:M:124:TYR:HE1 | 1:M:407:ALA:HA | 1.54 | 0.72 |
| 1:P:235:LEU:CG | 1:P:310:LEU:HD22 | 2.19 | 0.72 |
| 1:A:42:LYS:HB3 | 1:A:425:ASN:CB | 2.12 | 0.72 |
| 1:A:276:LEU:CD1 | 1:A:281:ILE:HG21 | 2.15 | 0.72 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:HD21 | 1.70 | 0.72 |
| 1:B:401:SER:OG | 1:K:435:VAL:HG11 | 1.87 | 0.72 |
| 1:C:18:ARG:HG2 | 1:C:22:ARG:HH22 | 1.53 | 0.72 |
| 1:C:42:LYS:HD2 | 1:C:426:ALA:CB | 2.19 | 0.72 |
| 1:E:96:ALA:CB | 1:E:480:ALA:HB2 | 2.18 | 0.72 |
| 1:F:66:ARG:HB3 | 1:F:79:ILE:HD11 | 1.71 | 0.72 |
| 1:F:123:GLY:HA3 | 1:F:407:ALA:CB | 2.20 | 0.72 |
| 1:F:192:LEU:HG | 1:F:342:ALA:CB | 2.17 | 0.72 |
| 1:H:89:VAL:HG22 | 1:H:91:ASP:HB2 | 1.72 | 0.72 |
| 1:H:289:LYS:O | 1:H:292:MET:HB2 | 1.89 | 0.72 |
| 1:I:68:MET:SD | 1:J:494:ILE:HD12 | 2.29 | 0.72 |
| 1:J:219:VAL:HG12 | 1:J:223:MET:SD | 2.30 | 0.72 |
| 1:L:38:THR:HG21 | 1:L:46:LYS:CE | 2.15 | 0.72 |
| 1:L:218:ARG:CZ | 1:L:282:VAL:HG11 | 2.19 | 0.72 |
| 1:L:235:LEU:C | 1:L:235:LEU:HD22 | 2.08 | 0.72 |
| 1:L:254:ILE:HG12 | 1:L:307:ILE:HD11 | 1.72 | 0.72 |
| 1:N:170:LEU:HD21 | 1:N:358:VAL:HG21 | 1.70 | 0.72 |
| 1:P:103:LEU:HD21 | 1:P:411:PHE:CD2 | 2.23 | 0.72 |
| 1:A:68:MET:HB3 | 1:H:8:LEU:HD23 | 1.70 | 0.72 |
| 1:B:403:ARG:HH11 | 1:B:403:ARG:HG3 | 1.54 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:158:ILE:O | 1:E:158:ILE:CG2 | 2.35 | 0.72 |
| 1:E:486:MET:HG3 | 1:E:487:LEU:N | 2.04 | 0.72 |
| 1:F:158:ILE:HG12 | 1:F:170:LEU:HD23 | 1.71 | 0.72 |
| 1:F:235:LEU:HD11 | 1:F:307:ILE:O | 1.88 | 0.72 |
| 1:H:124:TYR:HE1 | 1:H:407:ALA:CA | 2.02 | 0.72 |
| 1:H:130:LYS:CD | 1:H:393:LEU:CD1 | 2.68 | 0.72 |
| 1:H:158:ILE:CD1 | 1:H:170:LEU:HB2 | 2.19 | 0.72 |
| 1:H:211:GLY:O | 1:H:298:ALA:HB2 | 1.89 | 0.72 |
| 1:J:391:MET:HE3 | 1:J:438:ARG:CD | 2.18 | 0.72 |
| 1:M:95:THR:O | 1:M:99:VAL:HG22 | 1.88 | 0.72 |
| 1:M:384:SER:HB3 | 1:M:449:ALA:O | 1.88 | 0.72 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:HB1 | 2.25 | 0.72 |
| 1:N:222:GLN:CB | 1:N:277:ALA:CB | 2.67 | 0.72 |
| 1:N:306:ASN:ND2 | 1:N:308:LYS:HG3 | 2.04 | 0.72 |
| 1:P:213:LEU:CD1 | 1:P:346:LEU:HD12 | 2.20 | 0.72 |
| 1:P:307:ILE:HD12 | 1:P:307:ILE:O | 1.90 | 0.72 |
| 1:B:339:HIS:O | 1:B:339:HIS:ND1 | 2.22 | 0.72 |
| 1:C:166:ALA:HB1 | 1:C:203:ILE:O | 1.89 | 0.72 |
| 1:C:188:VAL:CG2 | 1:C:370:GLY:HA2 | 2.19 | 0.72 |
| 1:C:199:SER:CB | 1:C:327:SER:HB2 | 2.20 | 0.72 |
| 1:C:234:LEU:HD11 | 1:C:301:ALA:HB3 | 1.70 | 0.72 |
| 1:D:129:GLN:O | 1:D:132:GLN:HB2 | 1.89 | 0.72 |
| 1:D:418:ILE:N | 1:D:418:ILE:HD13 | 2.04 | 0.72 |
| 1:E:71:GLU:HG3 | 1:E:72:HIS:H | 1.53 | 0.72 |
| 1:F:152:LYS:HE2 | 1:F:462:CYS:O | 1.88 | 0.72 |
| 1:K:42:LYS:O | 1:K:425:ASN:HB3 | 1.89 | 0.72 |
| 1:L:232:ILE:HG13 | 1:L:261:VAL:HG11 | 1.70 | 0.72 |
| 1:M:307:ILE:HD12 | 1:M:307:ILE:O | 1.88 | 0.72 |
| 1:N:225:LYS:O | 1:N:226:LYS:HB2 | 1.89 | 0.72 |
| 1:N:341:LYS:CB | 1:N:341:LYS:NZ | 2.09 | 0.72 |
| 1:P:234:LEU:CD1 | 1:P:296:ALA:HB2 | 2.19 | 0.72 |
| 1:A:193:ILE:CD1 | 1:A:366:VAL:HG21 | 2.20 | 0.72 |
| 1:B:158:ILE:CD1 | 1:B:170:LEU:CB | 2.67 | 0.72 |
| 1:E:384:SER:CB | 1:E:441:HIS:HE1 | 2.02 | 0.72 |
| 1:F:124:TYR:CE1 | 1:F:407:ALA:CB | 2.73 | 0.72 |
| 1:F:136:LYS:HG2 | 1:F:377:ARG:HH12 | 1.55 | 0.72 |
| 1:F:142:VAL:HG11 | 1:F:378:ILE:CD1 | 2.19 | 0.72 |
| 1:G:102:GLU:OE2 | 1:G:417:VAL:HG21 | 1.89 | 0.72 |
| 1:K:326:ILE:CG1 | 1:K:348:ARG:HH12 | 2.03 | 0.72 |
| 1:K:377:ARG:HE | 1:K:470:LEU:HD12 | 1.55 | 0.72 |
| 1:M:195:ILE:HB | 1:M:359:ALA:HB1 | 1.70 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:235:LEU:HD11 | 1:M:307:ILE:HD13 | 1.72 | 0.72 |
| 1:O:391:MET:HE2 | 1:O:438:ARG:HA | 1.71 | 0.72 |
| 1:P:236:ASN:OD1 | 1:P:305:THR:HG22 | 1.90 | 0.72 |
| 1:P:254:ILE:HD13 | 1:P:262:LEU:CD1 | 2.19 | 0.72 |
| 1:C:42:LYS:CB | 1:C:425:ASN:CB | 2.65 | 0.72 |
| 1:C:82:ALA:HB2 | 1:C:97:VAL:HG21 | 1.70 | 0.72 |
| 1:D:255:LYS:HE3 | 1:D:279:GLU:CG | 2.20 | 0.72 |
| 1:D:405:GLN:HE22 | 1:M:438:ARG:HH12 | 1.37 | 0.72 |
| 1:E:42:LYS:HG3 | 1:E:425:ASN:C | 2.10 | 0.72 |
| 1:F:12:MET:HA | 1:F:495:ALA:O | 1.90 | 0.72 |
| 1:G:197:LYS:HD2 | 1:G:356:GLU:HG2 | 1.72 | 0.72 |
| 1:H:459:GLU:HG2 | 1:H:461:MET:CE | 2.18 | 0.72 |
| 1:I:152:LYS:HD2 | 1:I:465:GLY:CA | 2.20 | 0.72 |
| 1:I:153:ILE:HD11 | 1:I:378:ILE:CB | 2.20 | 0.72 |
| 1:I:387:VAL:O | 1:I:390:SER:HB3 | 1.90 | 0.72 |
| 1:J:158:ILE:HD13 | 1:J:170:LEU:HB2 | 1.70 | 0.72 |
| 1:K:178:VAL:CG1 | 1:K:366:VAL:HG13 | 2.19 | 0.72 |
| 1:K:233:ALA:CB | 1:K:315:LEU:CD2 | 2.67 | 0.72 |
| 1:L:192:LEU:HB3 | 1:L:342:ALA:HB2 | 1.70 | 0.72 |
| 1:M:130:LYS:HZ3 | 1:M:396:TYR:HB2 | 1.54 | 0.72 |
| 1:O:102:GLU:OE2 | 1:O:417:VAL:HG21 | 1.90 | 0.72 |
| 1:P:166:ALA:HB2 | 1:P:203:ILE:CG1 | 2.12 | 0.72 |
| 1:P:437:VAL:HG21 | 1:P:451:LEU:CG | 2.18 | 0.72 |
| 1:B:147:LYS:HG2 | 1:B:147:LYS:O | 1.90 | 0.72 |
| 1:C:96:ALA:O | 1:C:480:ALA:HB1 | 1.88 | 0.72 |
| 1:C:166:ALA:HB2 | 1:C:203:ILE:CB | 2.20 | 0.72 |
| 1:D:8:LEU:HG | 1:E:68:MET:HG3 | 1.72 | 0.72 |
| 1:D:156:THR:HG21 | 1:D:468:GLU:N | 2.04 | 0.72 |
| 1:D:156:THR:CG2 | 1:D:468:GLU:HA | 2.20 | 0.72 |
| 1:E:380:SER:CB | 1:E:384:SER:HB2 | 2.10 | 0.72 |
| 1:E:400:ILE:HD11 | 1:E:408:VAL:CG1 | 2.19 | 0.72 |
| 1:G:177:ALA:HB2 | 1:G:208:LEU:CD1 | 2.19 | 0.72 |
| 1:G:223:MET:HE1 | 1:G:276:LEU:HG | 1.70 | 0.72 |
| 1:H:162:GLY:O | 1:H:163:ALA:HB2 | 1.90 | 0.72 |
| 1:H:167:LYS:HG3 | 1:H:168:GLU:N | 2.04 | 0.72 |
| 1:J:191:ASP:HB3 | 1:J:192:LEU:HD13 | 1.70 | 0.72 |
| 1:J:307:ILE:HD13 | 1:J:310:LEU:HD22 | 1.71 | 0.72 |
| 1:K:233:ALA:HB1 | 1:K:315:LEU:HD21 | 1.70 | 0.72 |
| 1:K:237:CYS:HA | 1:K:307:ILE:N | 2.05 | 0.72 |
| 1:K:299:THR:CG2 | 1:K:334:VAL:HG11 | 2.19 | 0.72 |
| 1:L:42:LYS:CG | 1:L:425:ASN:HB2 | 2.19 | 0.72 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:129:GLN:O | 1:L:132:GLN:HB2 | 1.89 | 0.72 |
| 1:M:58:THR:O | 1:M:64:ILE:HD11 | 1.90 | 0.72 |
| 1:M:119:ILE:HG21 | 1:M:403:ARG:CB | 2.18 | 0.72 |
| 1:O:377:ARG:HG2 | 1:O:470:LEU:CD1 | 2.19 | 0.72 |
| 1:P:119:ILE:HG21 | 1:P:403:ARG:CB | 2.19 | 0.72 |
| 1:P:170:LEU:CD1 | 1:P:358:VAL:CG1 | 2.67 | 0.72 |
| 1:P:195:ILE:HB | 1:P:359:ALA:CB | 2.19 | 0.72 |
| 1:P:219:VAL:HG13 | 1:P:273:GLN:OE1 | 1.90 | 0.72 |
| 1:A:235:LEU:CG | 1:A:307:ILE:HD13 | 2.20 | 0.72 |
| 1:C:222:GLN:CB | 1:C:277:ALA:HB1 | 2.19 | 0.72 |
| 1:D:227:VAL:HG11 | 1:D:260:ASN:CG | 2.10 | 0.72 |
| 1:E:254:ILE:HG21 | 1:E:262:LEU:HD13 | 1.72 | 0.72 |
| 1:G:241:GLU:HG3 | 1:G:246:MET:HB3 | 1.70 | 0.72 |
| 1:G:341:LYS:NZ | 1:G:341:LYS:CB | 2.52 | 0.72 |
| 1:H:22:ARG:O | 1:H:26:LEU:HB2 | 1.90 | 0.72 |
| 1:H:89:VAL:CG2 | 1:H:89:VAL:O | 2.37 | 0.72 |
| 1:H:193:ILE:HD12 | 1:H:366:VAL:HG21 | 1.71 | 0.72 |
| 1:I:379:VAL:HG22 | 1:I:380:SER:CA | 2.17 | 0.72 |
| 1:I:464:ASN:HB2 | 1:I:466:VAL:HG22 | 1.72 | 0.72 |
| 1:J:42:LYS:CE | 1:J:426:ALA:HA | 2.19 | 0.72 |
| 1:L:12:MET:CG | 1:L:12:MET:O | 2.25 | 0.72 |
| 1:M:14:ARG:HD2 | 1:M:494:ILE:HD13 | 1.71 | 0.72 |
| 1:M:130:LYS:NZ | 1:M:393:LEU:HD23 | 2.05 | 0.72 |
| 1:M:219:VAL:HG23 | 1:M:220:SER:N | 2.04 | 0.72 |
| 1:N:68:MET:CA | 1:O:9:PRO:HD3 | 2.20 | 0.72 |
| 1:O:232:ILE:HD13 | 1:O:299:THR:CG2 | 2.19 | 0.72 |
| 1:P:121:VAL:CG1 | 1:P:489:ARG:HD2 | 2.16 | 0.72 |
| 1:P:174:ILE:HG22 | 1:P:362:VAL:HG23 | 0.82 | 0.72 |
| 1:P:239:ILE:O | 1:P:247:LEU:HD13 | 1.90 | 0.72 |
| 1:B:377:ARG:CB | 1:B:470:LEU:HD12 | 2.20 | 0.71 |
| 1:C:134:LEU:HD12 | 1:C:393:LEU:CD2 | 2.19 | 0.71 |
| 1:C:150:LEU:CB | 1:C:175:VAL:HG11 | 2.18 | 0.71 |
| 1:D:113:GLN:H | 1:D:113:GLN:NE2 | 1.88 | 0.71 |
| 1:D:423:ALA:O | 1:D:426:ALA:HB3 | 1.90 | 0.71 |
| 1:E:304:ILE:CD1 | 1:E:310:LEU:HB2 | 2.20 | 0.71 |
| 1:H:12:MET:HE3 | 1:H:494:ILE:CG2 | 2.11 | 0.71 |
| 1:J:124:TYR:HE1 | 1:J:407:ALA:O | 1.72 | 0.71 |
| 1:J:158:ILE:CD1 | 1:J:170:LEU:HB3 | 2.19 | 0.71 |
| 1:K:48:LEU:HB3 | 1:K:68:MET:HE1 | 1.72 | 0.71 |
| 1:K:130:LYS:HG2 | 1:K:393:LEU:CD2 | 2.20 | 0.71 |
| 1:L:227:VAL:HG11 | 1:L:260:ASN:ND2 | 2.05 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:49:VAL:O | 1:N:12:MET:HE1 | 1.89 | 0.71 |
| 1:O:216:LYS:HA | 1:O:332:ILE:CD1 | 2.19 | 0.71 |
| 1:A:68:MET:HE1 | 1:H:9:PRO:HD2 | 1.72 | 0.71 |
| 1:B:372:THR:HA | 1:B:375:ASP:O | 1.89 | 0.71 |
| 1:D:166:ALA:HB2 | 1:D:203:ILE:CB | 2.20 | 0.71 |
| 1:E:14:ARG:NH2 | 1:F:34:THR:HG23 | 2.05 | 0.71 |
| 1:F:235:LEU:HD22 | 1:F:310:LEU:HD22 | 1.72 | 0.71 |
| 1:G:391:MET:CE | 1:G:438:ARG:HA | 2.18 | 0.71 |
| 1:H:95:THR:O | 1:H:99:VAL:HG22 | 1.89 | 0.71 |
| 1:I:12:MET:HA | 1:I:495:ALA:C | 2.10 | 0.71 |
| 1:I:343:VAL:O | 1:I:343:VAL:HG13 | 1.90 | 0.71 |
| 1:L:142:VAL:HG21 | 1:L:149:ILE:HD13 | 1.71 | 0.71 |
| 1:M:239:ILE:HD12 | 1:M:307:ILE:HD11 | 1.71 | 0.71 |
| 1:N:254:ILE:HG22 | 1:N:281:ILE:HD13 | 1.72 | 0.71 |
| 1:O:414:ALA:O | 1:O:417:VAL:HG12 | 1.90 | 0.71 |
| 1:A:21:GLN:O | 1:A:25:ILE:HG13 | 1.89 | 0.71 |
| 1:A:173:ILE:HG13 | 1:A:345:MET:SD | 2.30 | 0.71 |
| 1:B:134:LEU:CD1 | 1:B:393:LEU:HD21 | 2.19 | 0.71 |
| 1:C:81:VAL:HG21 | 1:C:483:SER:HB3 | 1.72 | 0.71 |
| 1:C:197:LYS:HB3 | 1:C:355:ILE:CB | 2.20 | 0.71 |
| 1:C:372:THR:HA | 1:C:375:ASP:O | 1.90 | 0.71 |
| 1:D:96:ALA:HA | 1:D:480:ALA:CB | 2.20 | 0.71 |
| 1:E:235:LEU:HD11 | 1:E:307:ILE:O | 1.91 | 0.71 |
| 1:E:236:ASN:O | 1:E:265:GLN:HB3 | 1.90 | 0.71 |
| 1:H:38:THR:HG22 | 1:H:59:ASN:OD1 | 1.90 | 0.71 |
| 1:H:389:LEU:HD12 | 1:H:415:LEU:HD13 | 1.72 | 0.71 |
| 1:I:48:LEU:CB | 1:I:56:VAL:CG2 | 2.61 | 0.71 |
| 1:I:150:LEU:HD23 | 1:I:175:VAL:CG1 | 2.18 | 0.71 |
| 1:J:130:LYS:CG | 1:J:393:LEU:CD2 | 2.68 | 0.71 |
| 1:K:254:ILE:HD13 | 1:K:262:LEU:HD13 | 1.69 | 0.71 |
| 1:L:116:HIS:CD2 | 1:L:118:THR:HG23 | 2.25 | 0.71 |
| 1:L:130:LYS:HG3 | 1:L:393:LEU:HD22 | 1.70 | 0.71 |
| 1:M:213:LEU:HD11 | 1:M:333:PHE:CE2 | 2.25 | 0.71 |
| 1:M:214:VAL:HG12 | 1:M:291:ASP:CB | 2.21 | 0.71 |
| 1:N:158:ILE:HD13 | 1:N:170:LEU:CB | 2.20 | 0.71 |
| 1:N:241:GLU:HG2 | 1:N:250:MET:SD | 2.30 | 0.71 |
| 1:P:77:MET:CE | 1:P:487:LEU:HG | 2.20 | 0.71 |
| 1:P:124:TYR:HE1 | 1:P:407:ALA:HA | 1.55 | 0.71 |
| 1:P:490:ILE:HD12 | 1:P:490:ILE:N | 2.01 | 0.71 |
| 1:G:220:SER:HB2 | 1:G:273:GLN:O | 1.90 | 0.71 |
| 1:H:14:ARG:HD3 | 1:H:494:ILE:HG12 | 1.71 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:235:LEU:CD1 | 1:H:307:ILE:CD1 | 2.64 | 0.71 |
| 1:J:135:LEU:HD21 | 1:J:389:LEU:HD11 | 1.72 | 0.71 |
| 1:M:124:TYR:CD1 | 1:M:124:TYR:N | 2.58 | 0.71 |
| 1:N:68:MET:CB | 1:O:8:LEU:CD2 | 2.65 | 0.71 |
| 1:O:155:MET:CB | 1:O:167:LYS:HD2 | 2.21 | 0.71 |
| 1:O:195:ILE:CD1 | 1:O:359:ALA:HB1 | 2.21 | 0.71 |
| 1:P:119:ILE:CG1 | 1:P:403:ARG:HG3 | 2.20 | 0.71 |
| 1:P:153:ILE:CD1 | 1:P:378:ILE:HG22 | 2.20 | 0.71 |
| 1:P:206:THR:HG21 | 1:P:347:ILE:HG22 | 1.72 | 0.71 |
| 1:A:103:LEU:HD21 | 1:A:411:PHE:CD2 | 2.26 | 0.71 |
| 1:B:124:TYR:HE1 | 1:B:407:ALA:CB | 2.03 | 0.71 |
| 1:B:403:ARG:CG | 1:B:403:ARG:NH1 | 2.51 | 0.71 |
| 1:D:327:SER:O | 1:D:327:SER:OG | 1.97 | 0.71 |
| 1:E:232:ILE:O | 1:E:315:LEU:HD13 | 1.89 | 0.71 |
| 1:H:62:VAL:HG13 | 1:H:63:THR:N | 2.04 | 0.71 |
| 1:H:158:ILE:HD13 | 1:H:170:LEU:CB | 2.20 | 0.71 |
| 1:H:220:SER:HB3 | 1:H:223:MET:HG3 | 1.72 | 0.71 |
| 1:H:471:ARG:O | 1:H:475:GLN:HB2 | 1.91 | 0.71 |
| 1:J:34:THR:HB | 1:K:14:ARG:NH1 | 2.06 | 0.71 |
| 1:K:68:MET:HB3 | 1:L:8:LEU:HA | 1.70 | 0.71 |
| 1:K:239:ILE:CG1 | 1:K:307:ILE:HG12 | 2.20 | 0.71 |
| 1:L:307:ILE:CD1 | 1:L:310:LEU:CD2 | 2.68 | 0.71 |
| 1:M:124:TYR:CE1 | 1:M:407:ALA:HB1 | 2.25 | 0.71 |
| 1:M:219:VAL:CG2 | 1:M:220:SER:H | 2.02 | 0.71 |
| 1:M:235:LEU:HD13 | 1:M:307:ILE:CD1 | 2.20 | 0.71 |
| 1:N:130:LYS:CE | 1:N:134:LEU:HD11 | 2.19 | 0.71 |
| 1:N:158:ILE:CG2 | 1:N:158:ILE:O | 2.38 | 0.71 |
| 1:O:25:ILE:HG22 | 1:O:26:LEU:N | 2.05 | 0.71 |
| 1:P:235:LEU:HD11 | 1:P:307:ILE:CB | 2.21 | 0.71 |
| 1:A:34:THR:O | 1:A:46:LYS:HE3 | 1.89 | 0.71 |
| 1:A:130:LYS:O | 1:A:130:LYS:CG | 2.39 | 0.71 |
| 1:A:313:GLN:NE2 | 1:A:313:GLN:HA | 2.01 | 0.71 |
| 1:B:178:VAL:HA | 1:B:181:VAL:HG22 | 1.71 | 0.71 |
| 1:B:206:THR:HG22 | 1:B:348:ARG:HA | 1.71 | 0.71 |
| 1:B:308:LYS:HB2 | 1:B:308:LYS:NZ | 2.05 | 0.71 |
| 1:D:235:LEU:HD21 | 1:D:307:ILE:HD13 | 1.73 | 0.71 |
| 1:D:469:PRO:HD2 | 1:D:472:VAL:CG2 | 2.20 | 0.71 |
| 1:E:130:LYS:CD | 1:E:393:LEU:HD21 | 2.14 | 0.71 |
| 1:E:142:VAL:HB | 1:E:149:ILE:CD1 | 2.20 | 0.71 |
| 1:F:193:ILE:HG23 | 1:F:343:VAL:HG13 | 1.73 | 0.71 |
| 1:F:391:MET:HE3 | 1:F:438:ARG:CB | 2.20 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:42:LYS:HG3 | 1:G:426:ALA:N | 2.05 | 0.71 |
| 1:G:134:LEU:CD1 | 1:G:393:LEU:HD11 | 2.19 | 0.71 |
| 1:H:219:VAL:HG12 | 1:H:223:MET:SD | 2.31 | 0.71 |
| 1:I:72:HIS:O | 1:I:75:ALA:HB3 | 1.91 | 0.71 |
| 1:I:236:ASN:CA | 1:I:265:GLN:HB3 | 2.21 | 0.71 |
| 1:I:254:ILE:HD13 | 1:I:276:LEU:HD11 | 1.73 | 0.71 |
| 1:K:135:LEU:HD23 | 1:K:385:THR:HG21 | 1.71 | 0.71 |
| 1:K:195:ILE:HB | 1:K:359:ALA:CB | 2.21 | 0.71 |
| 1:K:197:LYS:HA | 1:K:355:ILE:CG2 | 2.21 | 0.71 |
| 1:K:250:MET:CE | 1:K:308:LYS:HG2 | 2.21 | 0.71 |
| 1:L:13:LYS:HE2 | 1:L:15:TYR:OH | 1.91 | 0.71 |
| 1:L:124:TYR:CE1 | 1:L:407:ALA:HB1 | 2.25 | 0.71 |
| 1:L:153:ILE:CD1 | 1:L:372:THR:HG21 | 2.21 | 0.71 |
| 1:L:435:VAL:HG13 | 1:L:438:ARG:NH2 | 2.06 | 0.71 |
| 1:M:8:LEU:CD2 | 1:M:12:MET:CE | 2.59 | 0.71 |
| 1:M:42:LYS:HE2 | 1:M:426:ALA:HB1 | 1.69 | 0.71 |
| 1:N:254:ILE:HG21 | 1:N:262:LEU:CD1 | 2.19 | 0.71 |
| 1:O:119:ILE:HG21 | 1:O:403:ARG:HD3 | 1.71 | 0.71 |
| 1:O:235:LEU:CD1 | 1:O:262:LEU:CD2 | 2.66 | 0.71 |
| 1:B:124:TYR:CD1 | 1:B:124:TYR:N | 2.58 | 0.71 |
| 1:C:142:VAL:CG2 | 1:C:149:ILE:HG12 | 2.21 | 0.71 |
| 1:C:199:SER:CB | 1:C:327:SER:CB | 2.69 | 0.71 |
| 1:C:236:ASN:O | 1:C:236:ASN:OD1 | 2.08 | 0.71 |
| 1:D:239:ILE:CB | 1:D:307:ILE:HG21 | 2.18 | 0.71 |
| 1:E:177:ALA:HB2 | 1:E:208:LEU:HD21 | 1.71 | 0.71 |
| 1:F:153:ILE:CG2 | 1:F:469:PRO:HG3 | 2.21 | 0.71 |
| 1:F:262:LEU:CD1 | 1:F:310:LEU:CD2 | 2.68 | 0.71 |
| 1:F:405:GLN:HB3 | 1:F:406:LEU:CD1 | 2.19 | 0.71 |
| 1:G:85:GLN:CD | 1:G:476:ALA:HB2 | 2.11 | 0.71 |
| 1:G:377:ARG:HD2 | 1:G:470:LEU:HD12 | 1.73 | 0.71 |
| 1:H:377:ARG:CG | 1:H:470:LEU:HD23 | 2.17 | 0.71 |
| 1:I:403:ARG:HA | 1:I:406:LEU:CD1 | 2.19 | 0.71 |
| 1:J:9:PRO:O | 1:J:9:PRO:HD2 | 1.90 | 0.71 |
| 1:J:31:ILE:HG21 | 1:J:65:LEU:HD22 | 1.72 | 0.71 |
| 1:J:147:LYS:HG2 | 1:J:147:LYS:O | 1.89 | 0.71 |
| 1:J:169:LYS:HE3 | 1:J:204:ASP:O | 1.91 | 0.71 |
| 1:K:232:ILE:O | 1:K:315:LEU:HG | 1.90 | 0.71 |
| 1:L:12:MET:HG3 | 1:L:494:ILE:CG2 | 2.21 | 0.71 |
| 1:L:394:ARG:HH22 | 1:L:413:ASP:CG | 1.93 | 0.71 |
| 1:M:403:ARG:HG2 | 1:M:403:ARG:NH1 | 2.03 | 0.71 |
| 1:N:156:THR:HG21 | 1:N:468:GLU:HA | 1.71 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:235:LEU:HD12 | 1:N:307:ILE:HD12 | 1.73 | 0.71 |
| 1:N:391:MET:HE1 | 1:N:438:ARG:CB | 2.20 | 0.71 |
| 1:A:127:ALA:CB | 1:A:408:VAL:HG12 | 2.21 | 0.71 |
| 1:A:431:ILE:HG13 | 1:J:406:LEU:HD11 | 1.72 | 0.71 |
| 1:B:182:VAL:HB | 1:B:188:VAL:HG21 | 1.72 | 0.71 |
| 1:B:494:ILE:O | 1:B:494:ILE:CG2 | 2.39 | 0.71 |
| 1:D:119:ILE:HG21 | 1:D:403:ARG:CB | 2.18 | 0.71 |
| 1:E:193:ILE:HD13 | 1:E:343:VAL:CG1 | 2.21 | 0.71 |
| 1:F:169:LYS:HG2 | 1:F:204:ASP:O | 1.91 | 0.71 |
| 1:G:135:LEU:HD23 | 1:G:138:ILE:HD11 | 1.73 | 0.71 |
| 1:G:152:LYS:HE3 | 1:G:465:GLY:HA2 | 1.72 | 0.71 |
| 1:I:299:THR:CG2 | 1:I:334:VAL:HG11 | 2.20 | 0.71 |
| 1:J:178:VAL:HG22 | 1:J:366:VAL:CG1 | 2.20 | 0.71 |
| 1:J:448:CYS:HB2 | 1:J:460:ASP:HA | 1.72 | 0.71 |
| 1:K:197:LYS:CA | 1:K:355:ILE:HG21 | 2.21 | 0.71 |
| 1:M:124:TYR:HD1 | 1:M:124:TYR:H | 1.39 | 0.71 |
| 1:M:251:VAL:CG1 | 1:M:276:LEU:HD22 | 2.20 | 0.71 |
| 1:N:12:MET:HA | 1:N:495:ALA:O | 1.91 | 0.71 |
| 1:N:170:LEU:HD22 | 1:N:358:VAL:CG1 | 2.21 | 0.71 |
| 1:O:68:MET:CG | 1:P:12:MET:HE3 | 2.20 | 0.71 |
| 1:O:433:ILE:CG2 | 1:O:451:LEU:HD23 | 2.19 | 0.71 |
| 1:A:9:PRO:CA | 1:B:69:SER:HB3 | 2.20 | 0.71 |
| 1:A:42:LYS:HE3 | 1:H:118:THR:HG21 | 1.72 | 0.71 |
| 1:A:81:VAL:HG21 | 1:A:483:SER:HB2 | 1.73 | 0.71 |
| 1:A:116:HIS:CB | 1:A:117:PRO:HD2 | 2.20 | 0.71 |
| 1:C:12:MET:SD | 1:C:494:ILE:HG22 | 2.30 | 0.71 |
| 1:D:219:VAL:HG21 | 1:D:285:ARG:HB2 | 1.71 | 0.71 |
| 1:E:150:LEU:CD2 | 1:E:175:VAL:HG13 | 2.13 | 0.71 |
| 1:E:177:ALA:HB1 | 1:E:193:ILE:HD12 | 1.71 | 0.71 |
| 1:F:123:GLY:HA3 | 1:F:407:ALA:HB3 | 1.72 | 0.71 |
| 1:F:140:CYS:SG | 1:F:447:LYS:HB3 | 2.31 | 0.71 |
| 1:G:116:HIS:CG | 1:G:117:PRO:HD2 | 2.26 | 0.71 |
| 1:G:449:ALA:HB2 | 1:G:458:VAL:HG23 | 1.72 | 0.71 |
| 1:H:459:GLU:HB3 | 1:H:461:MET:CE | 2.20 | 0.71 |
| 1:K:158:ILE:HD13 | 1:K:170:LEU:CB | 2.21 | 0.71 |
| 1:K:420:ARG:HD3 | 1:K:430:ALA:CB | 2.20 | 0.71 |
| 1:L:156:THR:CG2 | 1:L:468:GLU:CA | 2.69 | 0.71 |
| 1:M:123:GLY:HA3 | 1:M:407:ALA:HB1 | 1.67 | 0.71 |
| 1:N:68:MET:SD | 1:O:494:ILE:HG21 | 2.31 | 0.71 |
| 1:N:158:ILE:O | 1:N:158:ILE:HG22 | 1.91 | 0.71 |
| 1:A:236:ASN:CG | 1:A:305:THR:HG23 | 2.10 | 0.71 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:254:ILE:HD11 | 1:A:307:ILE:CD1 | 2.16 | 0.71 |
| 1:D:437:VAL:HG21 | 1:D:451:LEU:CD2 | 2.21 | 0.71 |
| 1:F:178:VAL:HG12 | 1:F:366:VAL:HG22 | 1.73 | 0.71 |
| 1:G:124:TYR:CE1 | 1:G:407:ALA:HA | 2.22 | 0.71 |
| 1:G:345:MET:HE1 | 1:G:362:VAL:HG21 | 1.72 | 0.71 |
| 1:H:235:LEU:HD21 | 1:H:307:ILE:CG2 | 2.21 | 0.71 |
| 1:H:235:LEU:CD2 | 1:H:235:LEU:C | 2.59 | 0.71 |
| 1:I:173:ILE:HG13 | 1:I:345:MET:CG | 2.20 | 0.71 |
| 1:J:12:MET:HG2 | 1:J:494:ILE:HG23 | 1.71 | 0.71 |
| 1:K:428:LEU:HD22 | 1:K:429:ASP:N | 2.04 | 0.71 |
| 1:L:163:ALA:CB | 1:L:165:LYS:HB2 | 2.19 | 0.71 |
| 1:L:339:HIS:CE1 | 1:L:341:LYS:CD | 2.74 | 0.71 |
| 1:N:452:ASN:O | 1:N:456:GLY:HA2 | 1.91 | 0.71 |
| 1:O:437:VAL:HG21 | 1:O:451:LEU:HG | 1.71 | 0.71 |
| 1:B:136:LYS:HB3 | 1:B:377:ARG:NH1 | 2.06 | 0.70 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:HB3 | 1.73 | 0.70 |
| 1:B:432:GLU:O | 1:B:436:LYS:HG3 | 1.91 | 0.70 |
| 1:D:159:THR:HA | 1:D:164:GLU:OE1 | 1.91 | 0.70 |
| 1:H:233:ALA:HB1 | 1:H:310:LEU:HD22 | 1.73 | 0.70 |
| 1:M:69:SER:OG | 1:M:69:SER:O | 2.02 | 0.70 |
| 1:M:441:HIS:CD2 | 1:M:449:ALA:HA | 2.26 | 0.70 |
| 1:N:268:ILE:HG22 | 1:N:273:GLN:HG3 | 1.71 | 0.70 |
| 1:P:227:VAL:HG11 | 1:P:260:ASN:HD21 | 1.56 | 0.70 |
| 1:A:153:ILE:HD13 | 1:A:372:THR:HG21 | 1.72 | 0.70 |
| 1:A:299:THR:HG22 | 1:A:318:ALA:HB2 | 1.73 | 0.70 |
| 1:A:431:ILE:CD1 | 1:J:403:ARG:CD | 2.69 | 0.70 |
| 1:A:437:VAL:HA | 1:A:458:VAL:CG1 | 2.21 | 0.70 |
| 1:A:474:THR:O | 1:A:478:GLN:HG2 | 1.91 | 0.70 |
| 1:B:138:ILE:HD12 | 1:B:385:THR:HG23 | 1.72 | 0.70 |
| 1:B:177:ALA:HB2 | 1:B:208:LEU:HD11 | 1.73 | 0.70 |
| 1:B:178:VAL:CG2 | 1:B:366:VAL:HG13 | 2.21 | 0.70 |
| 1:B:396:TYR:CE2 | 1:B:400:ILE:HD13 | 2.26 | 0.70 |
| 1:C:169:LYS:CG | 1:C:204:ASP:HA | 2.21 | 0.70 |
| 1:C:177:ALA:HB2 | 1:C:208:LEU:CD1 | 2.21 | 0.70 |
| 1:C:368:VAL:HG11 | 1:C:472:VAL:CG1 | 2.21 | 0.70 |
| 1:E:254:ILE:HD13 | 1:E:262:LEU:HD13 | 1.73 | 0.70 |
| 1:F:218:ARG:HG3 | 1:F:323:GLU:OE2 | 1.90 | 0.70 |
| 1:G:115:VAL:HG11 | 1:G:403:ARG:CD | 2.20 | 0.70 |
| 1:G:262:LEU:HD12 | 1:G:310:LEU:HD21 | 1.72 | 0.70 |
| 1:H:18:ARG:O | 1:H:21:GLN:HB3 | 1.90 | 0.70 |
| 1:H:42:LYS:NZ | 1:H:426:ALA:HB2 | 2.07 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:232:ILE:HG13 | 1:H:261:VAL:CG1 | 2.20 | 0.70 |
| 1:H:248:LYS:CD | 1:H:275:TYR:CE2 | 2.73 | 0.70 |
| 1:I:420:ARG:HH11 | 1:I:420:ARG:HG2 | 1.56 | 0.70 |
| 1:J:68:MET:HG3 | 1:K:8:LEU:HB3 | 1.73 | 0.70 |
| 1:J:368:VAL:CG1 | 1:J:469:PRO:CG | 2.69 | 0.70 |
| 1:L:155:MET:HE1 | 1:L:465:GLY:HA3 | 1.74 | 0.70 |
| 1:N:39:LEU:HG | 1:N:40:GLY:N | 2.06 | 0.70 |
| 1:N:158:ILE:CG1 | 1:N:361:ALA:HB1 | 2.20 | 0.70 |
| 1:P:103:LEU:HD11 | 1:P:411:PHE:CD2 | 2.27 | 0.70 |
| 1:A:72:HIS:HD2 | 1:A:73:PRO:HD3 | 1.56 | 0.70 |
| 1:A:235:LEU:C | 1:A:235:LEU:CD2 | 2.59 | 0.70 |
| 1:A:337:CYS:O | 1:A:340:PRO:HD3 | 1.90 | 0.70 |
| 1:A:428:LEU:N | 1:A:428:LEU:HD13 | 2.01 | 0.70 |
| 1:B:62:VAL:HG22 | 1:B:62:VAL:O | 1.87 | 0.70 |
| 1:B:434:LEU:N | 1:B:434:LEU:HD22 | 2.04 | 0.70 |
| 1:C:130:LYS:CE | 1:C:393:LEU:HD23 | 2.22 | 0.70 |
| 1:C:401:SER:CB | 1:L:435:VAL:HG11 | 2.21 | 0.70 |
| 1:D:276:LEU:CD1 | 1:D:281:ILE:HG21 | 2.18 | 0.70 |
| 1:E:182:VAL:HB | 1:E:188:VAL:HG22 | 1.72 | 0.70 |
| 1:F:420:ARG:CZ | 1:F:430:ALA:HB3 | 2.22 | 0.70 |
| 1:G:142:VAL:HG13 | 1:G:149:ILE:HD13 | 1.72 | 0.70 |
| 1:G:211:GLY:HA3 | 1:G:337:CYS:SG | 2.32 | 0.70 |
| 1:H:265:GLN:HG3 | 1:H:266:LYS:HE3 | 1.73 | 0.70 |
| 1:I:68:MET:HG3 | 1:J:9:PRO:HD3 | 1.72 | 0.70 |
| 1:I:117:PRO:O | 1:I:121:VAL:HG22 | 1.91 | 0.70 |
| 1:J:144:ALA:O | 1:J:150:LEU:HD11 | 1.90 | 0.70 |
| 1:J:156:THR:HG22 | 1:J:467:VAL:C | 2.12 | 0.70 |
| 1:L:142:VAL:CB | 1:L:149:ILE:HD13 | 2.19 | 0.70 |
| 1:L:142:VAL:HB | 1:L:149:ILE:CD1 | 2.20 | 0.70 |
| 1:L:212:VAL:HG21 | 1:L:294:LYS:O | 1.91 | 0.70 |
| 1:M:219:VAL:HB | 1:M:273:GLN:OE1 | 1.90 | 0.70 |
| 1:M:469:PRO:HG2 | 1:M:472:VAL:CG1 | 2.21 | 0.70 |
| 1:N:170:LEU:CD1 | 1:N:358:VAL:HG22 | 2.21 | 0.70 |
| 1:N:235:LEU:CG | 1:N:310:LEU:HD22 | 2.07 | 0.70 |
| 1:P:178:VAL:HG22 | 1:P:366:VAL:HG22 | 1.73 | 0.70 |
| 1:A:197:LYS:CB | 1:A:355:ILE:HB | 2.22 | 0.70 |
| 1:B:63:THR:OG1 | 1:B:66:ARG:HD2 | 1.91 | 0.70 |
| 1:B:71:GLU:HG3 | 1:B:72:HIS:N | 2.06 | 0.70 |
| 1:B:493:VAL:HG13 | 1:C:47:MET:CE | 2.22 | 0.70 |
| 1:C:220:SER:HB2 | 1:C:273:GLN:CB | 2.21 | 0.70 |
| 1:C:254:ILE:HG12 | 1:C:310:LEU:CD2 | 2.20 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:406:LEU:HD21 | 1:L:431:ILE:HD11 | 1.73 | 0.70 |
| 1:C:448:CYS:HB2 | 1:C:460:ASP:CA | 2.07 | 0.70 |
| 1:C:452:ASN:ND2 | 1:C:454:PHE:H | 1.90 | 0.70 |
| 1:D:219:VAL:HG23 | 1:D:285:ARG:CB | 2.22 | 0.70 |
| 1:E:134:LEU:CD1 | 1:E:393:LEU:CD2 | 2.68 | 0.70 |
| 1:E:239:ILE:HB | 1:E:307:ILE:CG2 | 2.22 | 0.70 |
| 1:F:217:GLU:HG2 | 1:F:330:SER:HB2 | 1.72 | 0.70 |
| 1:G:61:GLY:O | 1:G:64:ILE:HG22 | 1.92 | 0.70 |
| 1:H:14:ARG:CD | 1:H:494:ILE:HG12 | 2.21 | 0.70 |
| 1:H:105:ARG:HH11 | 1:H:106:LYS:HG2 | 1.56 | 0.70 |
| 1:H:279:GLU:OE1 | 1:H:281:ILE:HG13 | 1.92 | 0.70 |
| 1:I:174:ILE:HG22 | 1:I:362:VAL:HG23 | 1.74 | 0.70 |
| 1:K:459:GLU:HG2 | 1:K:461:MET:HE1 | 1.72 | 0.70 |
| 1:N:169:LYS:HE3 | 1:N:204:ASP:O | 1.91 | 0.70 |
| 1:O:48:LEU:HB3 | 1:O:68:MET:SD | 2.31 | 0.70 |
| 1:O:368:VAL:O | 1:O:371:CYS:HB2 | 1.90 | 0.70 |
| 1:B:431:ILE:HD12 | 1:K:406:LEU:HD13 | 1.73 | 0.70 |
| 1:C:93:THR:O | 1:C:97:VAL:HG23 | 1.91 | 0.70 |
| 1:C:166:ALA:CB | 1:C:203:ILE:HB | 2.21 | 0.70 |
| 1:D:29:ARG:O | 1:D:32:ALA:HB3 | 1.90 | 0.70 |
| 1:D:42:LYS:CE | 1:D:426:ALA:HA | 2.22 | 0.70 |
| 1:E:31:ILE:O | 1:E:34:THR:HB | 1.90 | 0.70 |
| 1:E:235:LEU:HD12 | 1:E:307:ILE:CA | 2.21 | 0.70 |
| 1:F:72:HIS:HD2 | 1:F:73:PRO:HD2 | 1.57 | 0.70 |
| 1:F:190:LYS:HE2 | 1:F:367:GLY:HA2 | 1.73 | 0.70 |
| 1:F:233:ALA:HA | 1:F:315:LEU:CG | 2.20 | 0.70 |
| 1:G:406:LEU:CD1 | 1:P:431:ILE:HD11 | 2.19 | 0.70 |
| 1:I:68:MET:HA | 1:J:9:PRO:CG | 2.20 | 0.70 |
| 1:J:12:MET:HE2 | 1:J:494:ILE:CG2 | 2.20 | 0.70 |
| 1:J:68:MET:CA | 1:K:9:PRO:HD3 | 2.22 | 0.70 |
| 1:K:86:GLU:HB2 | 1:K:90:GLY:HA2 | 1.73 | 0.70 |
| 1:K:212:VAL:HG21 | 1:K:294:LYS:O | 1.92 | 0.70 |
| 1:L:236:ASN:HA | 1:L:265:GLN:HB3 | 1.72 | 0.70 |
| 1:N:234:LEU:CB | 1:N:292:MET:HE1 | 2.22 | 0.70 |
| 1:A:117:PRO:O | 1:A:121:VAL:HG22 | 1.91 | 0.70 |
| 1:A:197:LYS:CA | 1:A:355:ILE:HG21 | 2.20 | 0.70 |
| 1:B:62:VAL:O | 1:B:62:VAL:CG2 | 2.38 | 0.70 |
| 1:D:156:THR:CG2 | 1:D:468:GLU:CA | 2.69 | 0.70 |
| 1:F:347:ILE:CD1 | 1:F:359:ALA:HB2 | 2.21 | 0.70 |
| 1:G:134:LEU:CD1 | 1:G:393:LEU:HD21 | 2.21 | 0.70 |
| 1:H:435:VAL:HG11 | 1:I:401:SER:CB | 2.21 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:494:ILE:O | 1:H:494:ILE:HG22 | 1.91 | 0.70 |
| 1:J:222:GLN:HB2 | 1:J:277:ALA:HB1 | 1.72 | 0.70 |
| 1:J:255:LYS:HE3 | 1:J:279:GLU:CG | 2.10 | 0.70 |
| 1:K:34:THR:HA | 1:L:14:ARG:HH22 | 1.55 | 0.70 |
| 1:K:34:THR:HA | 1:L:14:ARG:NH2 | 2.07 | 0.70 |
| 1:L:206:THR:HG22 | 1:L:347:ILE:CA | 2.21 | 0.70 |
| 1:L:235:LEU:HD11 | 1:L:307:ILE:HB | 1.72 | 0.70 |
| 1:N:169:LYS:HG2 | 1:N:204:ASP:CA | 2.21 | 0.70 |
| 1:P:206:THR:CG2 | 1:P:347:ILE:HG22 | 2.21 | 0.70 |
| 1:P:452:ASN:HB3 | 1:P:459:GLU:CD | 2.11 | 0.70 |
| 1:A:81:VAL:HG11 | 1:A:483:SER:HB3 | 1.72 | 0.70 |
| 1:A:124:TYR:CE1 | 1:A:407:ALA:HB1 | 2.26 | 0.70 |
| 1:A:170:LEU:HD11 | 1:A:358:VAL:HG22 | 1.73 | 0.70 |
| 1:B:103:LEU:HD21 | 1:B:411:PHE:CD2 | 2.27 | 0.70 |
| 1:B:174:ILE:HG21 | 1:B:362:VAL:HG22 | 1.73 | 0.70 |
| 1:C:130:LYS:CD | 1:C:393:LEU:HD23 | 2.21 | 0.70 |
| 1:C:177:ALA:HB2 | 1:C:208:LEU:HD13 | 1.73 | 0.70 |
| 1:D:255:LYS:HE3 | 1:D:279:GLU:OE2 | 1.91 | 0.70 |
| 1:D:379:VAL:HG22 | 1:D:380:SER:H | 1.56 | 0.70 |
| 1:E:491:ASP:OD1 | 1:F:44:MET:HB3 | 1.92 | 0.70 |
| 1:F:254:ILE:HD13 | 1:F:262:LEU:HD13 | 1.71 | 0.70 |
| 1:F:254:ILE:HG21 | 1:F:262:LEU:CD1 | 2.21 | 0.70 |
| 1:G:31:ILE:HG21 | 1:G:65:LEU:CD1 | 2.21 | 0.70 |
| 1:H:437:VAL:HG11 | 1:H:451:LEU:HD11 | 1.73 | 0.70 |
| 1:I:178:VAL:HG21 | 1:I:366:VAL:HG13 | 1.73 | 0.70 |
| 1:J:30:ILE:HG22 | 1:J:31:ILE:N | 2.06 | 0.70 |
| 1:J:34:THR:HB | 1:K:14:ARG:HH12 | 1.56 | 0.70 |
| 1:J:115:VAL:HG11 | 1:J:403:ARG:NE | 2.06 | 0.70 |
| 1:J:192:LEU:HB2 | 1:J:342:ALA:CB | 2.21 | 0.70 |
| 1:J:377:ARG:CD | 1:J:470:LEU:HD12 | 2.22 | 0.70 |
| 1:K:29:ARG:O | 1:K:32:ALA:HB3 | 1.92 | 0.70 |
| 1:K:170:LEU:CD2 | 1:K:358:VAL:CG1 | 2.70 | 0.70 |
| 1:K:232:ILE:HG13 | 1:K:261:VAL:CG1 | 2.21 | 0.70 |
| 1:L:77:MET:HB2 | 1:L:487:LEU:HD21 | 1.73 | 0.70 |
| 1:L:211:GLY:CA | 1:L:298:ALA:HB2 | 2.21 | 0.70 |
| 1:L:218:ARG:HH22 | 1:L:321:VAL:HG12 | 1.55 | 0.70 |
| 1:M:35:VAL:HG12 | 1:M:46:LYS:HE3 | 1.74 | 0.70 |
| 1:N:8:LEU:CB | 1:N:9:PRO:CD | 2.69 | 0.70 |
| 1:N:233:ALA:CB | 1:N:310:LEU:HD11 | 2.22 | 0.70 |
| 1:O:235:LEU:CD2 | 1:O:307:ILE:HB | 2.20 | 0.70 |
| 1:B:307:ILE:O | 1:B:307:ILE:HG12 | 1.90 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:235:LEU:HD13 | 1:C:235:LEU:C | 2.12 | 0.70 |
| 1:E:14:ARG:HH22 | 1:F:34:THR:HG23 | 1.56 | 0.70 |
| 1:E:188:VAL:HG21 | 1:E:373:ILE:CD1 | 2.16 | 0.70 |
| 1:E:211:GLY:O | 1:E:212:VAL:HG23 | 1.92 | 0.70 |
| 1:F:214:VAL:HG12 | 1:F:291:ASP:CB | 2.22 | 0.70 |
| 1:G:72:HIS:O | 1:G:76:LYS:HG3 | 1.91 | 0.70 |
| 1:J:214:VAL:HG12 | 1:J:291:ASP:OD1 | 1.92 | 0.70 |
| 1:J:219:VAL:CG1 | 1:J:223:MET:HE1 | 2.21 | 0.70 |
| 1:J:377:ARG:O | 1:J:470:LEU:HB2 | 1.92 | 0.70 |
| 1:K:420:ARG:HD3 | 1:K:430:ALA:HB3 | 1.72 | 0.70 |
| 1:L:372:THR:HA | 1:L:375:ASP:O | 1.92 | 0.70 |
| 1:M:34:THR:HA | 1:N:14:ARG:HH22 | 1.56 | 0.70 |
| 1:M:62:VAL:HG13 | 1:M:63:THR:H | 1.57 | 0.70 |
| 1:M:142:VAL:HG12 | 1:M:149:ILE:HD13 | 1.74 | 0.70 |
| 1:M:235:LEU:HD11 | 1:M:310:LEU:CG | 2.21 | 0.70 |
| 1:M:358:VAL:O | 1:M:362:VAL:HG12 | 1.92 | 0.70 |
| 1:P:123:GLY:H | 1:P:404:GLU:HG3 | 1.56 | 0.70 |
| 1:P:150:LEU:HB3 | 1:P:175:VAL:CG2 | 2.22 | 0.70 |
| 1:P:383:GLY:HA2 | 1:P:386:GLU:OE2 | 1.92 | 0.70 |
| 1:C:125:GLN:O | 1:C:129:GLN:HG3 | 1.91 | 0.70 |
| 1:C:142:VAL:CG1 | 1:C:149:ILE:HG21 | 2.21 | 0.70 |
| 1:F:21:GLN:O | 1:F:25:ILE:HD12 | 1.92 | 0.70 |
| 1:H:124:TYR:HD1 | 1:H:124:TYR:H | 1.37 | 0.70 |
| 1:I:27:ALA:HB2 | 1:I:72:HIS:CD2 | 2.27 | 0.70 |
| 1:I:68:MET:HE2 | 1:J:9:PRO:CG | 2.21 | 0.70 |
| 1:I:119:ILE:HG21 | 1:I:403:ARG:HD2 | 1.73 | 0.70 |
| 1:I:192:LEU:HD23 | 1:I:341:LYS:O | 1.92 | 0.70 |
| 1:I:339:HIS:O | 1:I:339:HIS:CG | 2.44 | 0.70 |
| 1:J:198:LYS:CG | 1:J:326:ILE:HD13 | 2.21 | 0.70 |
| 1:K:69:SER:OG | 1:L:9:PRO:HA | 1.92 | 0.70 |
| 1:K:215:ASP:O | 1:K:216:LYS:HG2 | 1.91 | 0.70 |
| 1:L:199:SER:HB2 | 1:L:327:SER:HB2 | 1.72 | 0.70 |
| 1:M:69:SER:O | 1:N:9:PRO:HA | 1.92 | 0.70 |
| 1:M:391:MET:CE | 1:M:438:ARG:HG2 | 2.21 | 0.70 |
| 1:N:57:VAL:O | 1:N:57:VAL:HG12 | 1.91 | 0.70 |
| 1:N:106:LYS:HA | 1:N:106:LYS:HE3 | 1.72 | 0.70 |
| 1:O:156:THR:HG21 | 1:O:468:GLU:CA | 2.21 | 0.70 |
| 1:A:105:ARG:CD | 1:A:106:LYS:HG2 | 2.22 | 0.70 |
| 1:A:238:ALA:N | 1:A:266:LYS:HB2 | 2.00 | 0.70 |
| 1:B:115:VAL:HB | 1:B:403:ARG:NE | 2.06 | 0.70 |
| 1:C:263:PHE:CE1 | 1:C:332:ILE:HG21 | 2.26 | 0.70 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:45:ASP:C | 1:D:46:LYS:HG3 | 2.11 | 0.70 |
| 1:E:234:LEU:HD12 | 1:E:301:ALA:HB1 | 1.74 | 0.70 |
| 1:E:287:VAL:HG13 | 1:E:291:ASP:OD2 | 1.90 | 0.70 |
| 1:F:235:LEU:HD11 | 1:F:310:LEU:CB | 2.14 | 0.70 |
| 1:F:299:THR:HG22 | 1:F:318:ALA:HB2 | 1.72 | 0.70 |
| 1:G:433:ILE:HG22 | 1:G:451:LEU:CD2 | 2.21 | 0.70 |
| 1:I:223:MET:HG2 | 1:I:281:ILE:O | 1.92 | 0.70 |
| 1:K:358:VAL:O | 1:K:362:VAL:HG12 | 1.91 | 0.70 |
| 1:K:377:ARG:HB3 | 1:K:470:LEU:CG | 2.21 | 0.70 |
| 1:L:113:GLN:O | 1:L:113:GLN:CG | 2.40 | 0.70 |
| 1:M:52:LEU:CD2 | 1:M:52:LEU:H | 1.89 | 0.70 |
| 1:M:208:LEU:CD1 | 1:M:343:VAL:CG2 | 2.69 | 0.70 |
| 1:M:460:ASP:CG | 1:M:463:GLU:H | 1.95 | 0.70 |
| 1:N:42:LYS:CD | 1:N:426:ALA:H | 2.05 | 0.70 |
| 1:N:212:VAL:HG21 | 1:N:294:LYS:O | 1.91 | 0.70 |
| 1:N:377:ARG:HD2 | 1:N:470:LEU:CD1 | 2.21 | 0.70 |
| 1:O:396:TYR:CG | 1:O:396:TYR:O | 2.45 | 0.70 |
| 1:O:437:VAL:CG2 | 1:O:451:LEU:HG | 2.20 | 0.70 |
| 1:P:38:THR:HB | 1:P:59:ASN:ND2 | 2.06 | 0.70 |
| 1:A:220:SER:HB3 | 1:A:277:ALA:HB2 | 1.73 | 0.69 |
| 1:A:494:ILE:HD12 | 1:B:48:LEU:CD2 | 2.22 | 0.69 |
| 1:B:25:ILE:HD13 | 1:B:108:GLU:OE2 | 1.91 | 0.69 |
| 1:B:119:ILE:CG2 | 1:B:403:ARG:HB2 | 2.18 | 0.69 |
| 1:C:29:ARG:O | 1:C:32:ALA:HB3 | 1.92 | 0.69 |
| 1:C:124:TYR:CD1 | 1:C:407:ALA:HB1 | 2.27 | 0.69 |
| 1:C:250:MET:HE1 | 1:C:307:ILE:HG22 | 1.74 | 0.69 |
| 1:C:391:MET:CE | 1:C:438:ARG:CG | 2.68 | 0.69 |
| 1:D:99:VAL:HG11 | 1:D:418:ILE:CD1 | 2.22 | 0.69 |
| 1:D:255:LYS:CE | 1:D:279:GLU:CG | 2.70 | 0.69 |
| 1:F:8:LEU:HD12 | 1:G:68:MET:HG2 | 1.73 | 0.69 |
| 1:F:36:ARG:HG3 | 1:F:37:SER:H | 1.56 | 0.69 |
| 1:F:96:ALA:HB3 | 1:F:97:VAL:HG23 | 1.74 | 0.69 |
| 1:F:339:HIS:O | 1:F:339:HIS:CG | 2.39 | 0.69 |
| 1:G:105:ARG:NH1 | 1:G:106:LYS:HG2 | 2.07 | 0.69 |
| 1:G:153:ILE:CD1 | 1:G:378:ILE:HG22 | 2.12 | 0.69 |
| 1:G:235:LEU:O | 1:G:264:CYS:HA | 1.92 | 0.69 |
| 1:G:431:ILE:CG1 | 1:P:406:LEU:HD11 | 2.20 | 0.69 |
| 1:H:15:TYR:O | 1:H:20:ALA:HB2 | 1.91 | 0.69 |
| 1:H:178:VAL:HG21 | 1:H:188:VAL:HG11 | 1.74 | 0.69 |
| 1:I:214:VAL:HG12 | 1:I:291:ASP:OD2 | 1.91 | 0.69 |
| 1:J:134:LEU:CD1 | 1:J:393:LEU:CD2 | 2.70 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:433:ILE:CG2 | 1:J:451:LEU:CD2 | 2.68 | 0.69 |
| 1:K:178:VAL:HG12 | 1:K:366:VAL:HG22 | 1.74 | 0.69 |
| 1:K:233:ALA:CA | 1:K:315:LEU:HD11 | 2.20 | 0.69 |
| 1:K:234:LEU:N | 1:K:315:LEU:HD11 | 2.05 | 0.69 |
| 1:K:265:GLN:HE22 | 1:K:289:LYS:HD2 | 1.53 | 0.69 |
| 1:L:38:THR:CG2 | 1:L:46:LYS:CE | 2.68 | 0.69 |
| 1:L:234:LEU:N | 1:L:315:LEU:HD21 | 2.06 | 0.69 |
| 1:M:124:TYR:CD2 | 1:M:411:PHE:HD2 | 2.10 | 0.69 |
| 1:N:152:LYS:HG2 | 1:N:465:GLY:O | 1.92 | 0.69 |
| 1:N:234:LEU:HB2 | 1:N:292:MET:HE1 | 1.74 | 0.69 |
| 1:O:134:LEU:CD1 | 1:O:393:LEU:HG | 2.21 | 0.69 |
| 1:P:45:ASP:OD1 | 1:P:45:ASP:N | 2.23 | 0.69 |
| 1:P:193:ILE:HD12 | 1:P:366:VAL:HG21 | 1.73 | 0.69 |
| 1:A:299:THR:CG2 | 1:A:334:VAL:CG1 | 2.69 | 0.69 |
| 1:A:383:GLY:CA | 1:A:386:GLU:HG3 | 2.20 | 0.69 |
| 1:B:158:ILE:CG2 | 1:B:158:ILE:O | 2.39 | 0.69 |
| 1:B:276:LEU:HD22 | 1:B:281:ILE:HG21 | 1.74 | 0.69 |
| 1:E:105:ARG:NH1 | 1:E:106:LYS:CG | 2.55 | 0.69 |
| 1:F:341:LYS:CB | 1:F:341:LYS:HZ2 | 2.04 | 0.69 |
| 1:I:69:SER:CA | 1:J:9:PRO:HA | 2.21 | 0.69 |
| 1:I:130:LYS:HZ1 | 1:I:134:LEU:HD11 | 1.57 | 0.69 |
| 1:I:174:ILE:HG22 | 1:I:362:VAL:CB | 2.22 | 0.69 |
| 1:I:178:VAL:HG23 | 1:I:366:VAL:HG22 | 1.73 | 0.69 |
| 1:M:130:LYS:HE3 | 1:M:134:LEU:HD21 | 1.73 | 0.69 |
| 1:M:173:ILE:HD11 | 1:M:206:THR:HG22 | 1.74 | 0.69 |
| 1:M:234:LEU:H | 1:M:315:LEU:HD21 | 1.56 | 0.69 |
| 1:M:236:ASN:OD1 | 1:M:305:THR:HG23 | 1.92 | 0.69 |
| 1:M:265:GLN:OE1 | 1:M:289:LYS:HB2 | 1.92 | 0.69 |
| 1:N:130:LYS:HE3 | 1:N:134:LEU:HD11 | 1.73 | 0.69 |
| 1:N:134:LEU:HD12 | 1:N:393:LEU:HD21 | 1.74 | 0.69 |
| 1:N:384:SER:HB3 | 1:N:441:HIS:CE1 | 2.27 | 0.69 |
| 1:P:70:VAL:HB | 1:P:76:LYS:HE3 | 1.73 | 0.69 |
| 1:B:70:VAL:HG22 | 1:B:76:LYS:HZ2 | 1.56 | 0.69 |
| 1:B:130:LYS:CE | 1:B:134:LEU:HD11 | 2.21 | 0.69 |
| 1:B:182:VAL:HB | 1:B:188:VAL:CG2 | 2.22 | 0.69 |
| 1:D:68:MET:HA | 1:D:68:MET:CE | 2.21 | 0.69 |
| 1:D:313:GLN:N | 1:D:313:GLN:CD | 2.40 | 0.69 |
| 1:D:405:GLN:HE22 | 1:M:438:ARG:NH1 | 1.90 | 0.69 |
| 1:D:490:ILE:CD1 | 1:D:490:ILE:H | 2.04 | 0.69 |
| 1:E:123:GLY:HA3 | 1:E:407:ALA:HB1 | 1.74 | 0.69 |
| 1:F:428:LEU:HD12 | 1:F:429:ASP:H | 1.55 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:248:LYS:CE | 1:G:275:TYR:CZ | 2.74 | 0.69 |
| 1:H:130:LYS:HD3 | 1:H:393:LEU:HD12 | 1.74 | 0.69 |
| 1:J:44:MET:HE2 | 1:J:44:MET:CA | 2.09 | 0.69 |
| 1:J:265:GLN:HB3 | 1:J:266:LYS:HG2 | 1.74 | 0.69 |
| 1:K:299:THR:HG22 | 1:K:318:ALA:HB2 | 1.72 | 0.69 |
| 1:L:12:MET:CG | 1:L:494:ILE:CG2 | 2.70 | 0.69 |
| 1:L:12:MET:HE3 | 1:L:494:ILE:C | 2.11 | 0.69 |
| 1:L:101:GLY:HA2 | 1:L:104:LEU:HD12 | 1.75 | 0.69 |
| 1:N:391:MET:CE | 1:N:438:ARG:CB | 2.70 | 0.69 |
| 1:O:338:LYS:HE2 | 1:O:339:HIS:HB2 | 1.74 | 0.69 |
| 1:O:434:LEU:CD1 | 1:O:451:LEU:HD21 | 2.22 | 0.69 |
| 1:P:39:LEU:HG | 1:P:40:GLY:N | 2.07 | 0.69 |
| 1:P:265:GLN:OE1 | 1:P:289:LYS:HB2 | 1.93 | 0.69 |
| 1:A:197:LYS:HB3 | 1:A:355:ILE:CB | 2.22 | 0.69 |
| 1:A:235:LEU:HD11 | 1:A:307:ILE:CG1 | 2.22 | 0.69 |
| 1:C:9:PRO:O | 1:C:12:MET:HB2 | 1.92 | 0.69 |
| 1:C:142:VAL:HG22 | 1:C:149:ILE:HD13 | 1.73 | 0.69 |
| 1:C:405:GLN:HB3 | 1:C:406:LEU:HD13 | 1.73 | 0.69 |
| 1:F:235:LEU:HG | 1:F:307:ILE:CG2 | 2.22 | 0.69 |
| 1:F:255:LYS:HG2 | 1:F:279:GLU:OE2 | 1.92 | 0.69 |
| 1:G:166:ALA:HB2 | 1:G:203:ILE:HG22 | 1.71 | 0.69 |
| 1:H:70:VAL:HG23 | 1:H:76:LYS:CG | 2.21 | 0.69 |
| 1:H:165:LYS:HZ3 | 1:H:165:LYS:N | 1.89 | 0.69 |
| 1:H:182:VAL:CG2 | 1:H:188:VAL:HG23 | 2.23 | 0.69 |
| 1:H:469:PRO:HG2 | 1:H:472:VAL:HG23 | 1.71 | 0.69 |
| 1:I:49:VAL:HG22 | 1:I:55:VAL:HG12 | 1.75 | 0.69 |
| 1:J:23:MET:CE | 1:J:72:HIS:CE1 | 2.75 | 0.69 |
| 1:J:47:MET:HE2 | 1:K:493:VAL:HG13 | 1.73 | 0.69 |
| 1:J:255:LYS:CE | 1:J:279:GLU:HG2 | 2.10 | 0.69 |
| 1:L:29:ARG:O | 1:L:33:GLU:HG3 | 1.91 | 0.69 |
| 1:L:255:LYS:NZ | 1:L:279:GLU:HG2 | 2.07 | 0.69 |
| 1:M:420:ARG:NH1 | 1:M:420:ARG:CA | 2.55 | 0.69 |
| 1:N:192:LEU:HB3 | 1:N:342:ALA:HB2 | 1.74 | 0.69 |
| 1:N:268:ILE:HG21 | 1:N:273:GLN:CG | 2.22 | 0.69 |
| 1:N:432:GLU:O | 1:N:436:LYS:HG3 | 1.92 | 0.69 |
| 1:N:469:PRO:HB2 | 1:N:472:VAL:HG13 | 1.74 | 0.69 |
| 1:O:193:ILE:CD1 | 1:O:366:VAL:HG21 | 2.22 | 0.69 |
| 1:O:254:ILE:HD13 | 1:O:307:ILE:HD12 | 1.74 | 0.69 |
| 1:P:235:LEU:HG | 1:P:310:LEU:CD2 | 2.22 | 0.69 |
| 1:A:30:ILE:CD1 | 1:A:31:ILE:HG12 | 2.22 | 0.69 |
| 1:A:42:LYS:CB | 1:A:425:ASN:HB2 | 2.15 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:227:VAL:HG11 | 1:A:260:ASN:OD1 | 1.92 | 0.69 |
| 1:B:86:GLU:CD | 1:B:86:GLU:O | 2.30 | 0.69 |
| 1:B:312:ALA:CA | 1:B:315:LEU:HB2 | 2.23 | 0.69 |
| 1:C:153:ILE:HD11 | 1:C:378:ILE:HG21 | 1.72 | 0.69 |
| 1:C:403:ARG:HG3 | 1:C:403:ARG:NH1 | 2.00 | 0.69 |
| 1:C:420:ARG:HH11 | 1:C:420:ARG:CG | 2.04 | 0.69 |
| 1:D:12:MET:HE1 | 1:E:68:MET:HE1 | 1.75 | 0.69 |
| 1:F:234:LEU:HD11 | 1:F:301:ALA:HB3 | 1.75 | 0.69 |
| 1:F:397:ALA:HB2 | 1:F:408:VAL:HG23 | 1.74 | 0.69 |
| 1:G:103:LEU:CD2 | 1:G:411:PHE:CE2 | 2.75 | 0.69 |
| 1:G:389:LEU:HD23 | 1:G:415:LEU:CD1 | 2.21 | 0.69 |
| 1:G:431:ILE:HD11 | 1:P:403:ARG:HA | 1.74 | 0.69 |
| 1:H:116:HIS:CB | 1:H:117:PRO:HD2 | 2.19 | 0.69 |
| 1:H:134:LEU:CD1 | 1:H:393:LEU:HD11 | 2.22 | 0.69 |
| 1:H:182:VAL:CG2 | 1:H:188:VAL:CG2 | 2.70 | 0.69 |
| 1:H:248:LYS:CD | 1:H:275:TYR:CZ | 2.71 | 0.69 |
| 1:I:42:LYS:HD2 | 1:I:426:ALA:HA | 1.74 | 0.69 |
| 1:L:344:THR:HG22 | 1:L:345:MET:N | 2.06 | 0.69 |
| 1:M:155:MET:SD | 1:M:167:LYS:HD2 | 2.32 | 0.69 |
| 1:M:381:GLY:HA3 | 1:M:461:MET:HG3 | 1.74 | 0.69 |
| 1:O:34:THR:HA | 1:P:14:ARG:NH1 | 2.06 | 0.69 |
| 1:P:178:VAL:HG22 | 1:P:366:VAL:HG13 | 1.74 | 0.69 |
| 1:C:235:LEU:CD2 | 1:C:304:ILE:CD1 | 2.70 | 0.69 |
| 1:D:268:ILE:HB | 1:D:273:GLN:NE2 | 2.04 | 0.69 |
| 1:D:354:VAL:O | 1:D:358:VAL:HG23 | 1.92 | 0.69 |
| 1:E:223:MET:HG3 | 1:E:277:ALA:HB2 | 1.75 | 0.69 |
| 1:F:377:ARG:HG3 | 1:F:377:ARG:NH2 | 1.99 | 0.69 |
| 1:G:142:VAL:HG22 | 1:G:149:ILE:CD1 | 2.22 | 0.69 |
| 1:G:156:THR:CG2 | 1:G:467:VAL:C | 2.61 | 0.69 |
| 1:H:119:ILE:HG13 | 1:H:403:ARG:CD | 2.16 | 0.69 |
| 1:I:138:ILE:CD1 | 1:I:385:THR:HG23 | 2.21 | 0.69 |
| 1:I:391:MET:HE3 | 1:I:438:ARG:HG2 | 1.73 | 0.69 |
| 1:J:105:ARG:NH1 | 1:J:106:LYS:CD | 2.56 | 0.69 |
| 1:J:314:ASP:O | 1:J:315:LEU:HG | 1.91 | 0.69 |
| 1:L:98:VAL:HG12 | 1:L:99:VAL:N | 2.08 | 0.69 |
| 1:L:254:ILE:CG2 | 1:L:262:LEU:HD12 | 2.21 | 0.69 |
| 1:M:173:ILE:CD1 | 1:M:206:THR:CG2 | 2.68 | 0.69 |
| 1:N:8:LEU:CB | 1:N:9:PRO:HD3 | 2.18 | 0.69 |
| 1:N:391:MET:HE1 | 1:N:438:ARG:CG | 2.22 | 0.69 |
| 1:P:307:ILE:O | 1:P:307:ILE:HG13 | 1.92 | 0.69 |
| 1:P:375:ASP:HB3 | 1:P:377:ARG:HH12 | 1.56 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:377:ARG:CD | 1:P:470:LEU:HD12 | 2.23 | 0.69 |
| 1:A:208:LEU:CD2 | 1:A:210:LYS:HE3 | 2.22 | 0.69 |
| 1:A:389:LEU:CD1 | 1:A:415:LEU:HD21 | 2.23 | 0.69 |
| 1:B:105:ARG:HG2 | 1:B:106:LYS:N | 2.08 | 0.69 |
| 1:B:312:ALA:HB2 | 1:B:315:LEU:HB2 | 1.74 | 0.69 |
| 1:B:431:ILE:HG12 | 1:B:431:ILE:O | 1.92 | 0.69 |
| 1:C:78:LEU:HD12 | 1:C:487:LEU:HD13 | 1.73 | 0.69 |
| 1:D:379:VAL:HG22 | 1:D:380:SER:N | 2.07 | 0.69 |
| 1:E:222:GLN:C | 1:E:277:ALA:HB1 | 2.13 | 0.69 |
| 1:E:468:GLU:HB2 | 1:E:469:PRO:HD2 | 1.73 | 0.69 |
| 1:G:170:LEU:HD23 | 1:G:358:VAL:HG13 | 1.73 | 0.69 |
| 1:H:8:LEU:HD13 | 1:H:12:MET:HG3 | 1.74 | 0.69 |
| 1:I:437:VAL:CG2 | 1:I:451:LEU:HG | 2.21 | 0.69 |
| 1:J:12:MET:HE3 | 1:J:494:ILE:C | 2.12 | 0.69 |
| 1:J:197:LYS:CA | 1:J:347:ILE:HG22 | 2.21 | 0.69 |
| 1:J:208:LEU:HD11 | 1:J:343:VAL:HG11 | 1.73 | 0.69 |
| 1:J:345:MET:HE1 | 1:J:362:VAL:CG1 | 2.19 | 0.69 |
| 1:J:486:MET:O | 1:J:489:ARG:HA | 1.92 | 0.69 |
| 1:L:223:MET:CG | 1:L:277:ALA:HB2 | 2.21 | 0.69 |
| 1:A:34:THR:HA | 1:H:14:ARG:NH2 | 2.07 | 0.69 |
| 1:A:62:VAL:CG1 | 1:A:63:THR:H | 2.00 | 0.69 |
| 1:A:158:ILE:HD11 | 1:A:170:LEU:HB3 | 1.74 | 0.69 |
| 1:B:156:THR:CG2 | 1:B:468:GLU:HB3 | 2.22 | 0.69 |
| 1:B:212:VAL:HG21 | 1:B:294:LYS:CB | 2.23 | 0.69 |
| 1:B:236:ASN:O | 1:B:265:GLN:HB3 | 1.92 | 0.69 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:CG | 2.22 | 0.69 |
| 1:B:435:VAL:HG11 | 1:K:401:SER:OG | 1.92 | 0.69 |
| 1:D:89:VAL:HG21 | 1:D:368:VAL:HG12 | 1.74 | 0.69 |
| 1:D:220:SER:HB2 | 1:D:273:GLN:HB3 | 1.73 | 0.69 |
| 1:D:248:LYS:CG | 1:D:275:TYR:CE2 | 2.76 | 0.69 |
| 1:E:223:MET:CE | 1:E:273:GLN:HB3 | 2.23 | 0.69 |
| 1:E:403:ARG:HB3 | 1:N:431:ILE:HD11 | 1.73 | 0.69 |
| 1:E:403:ARG:CB | 1:E:406:LEU:HD12 | 2.22 | 0.69 |
| 1:F:130:LYS:HD2 | 1:F:396:TYR:CG | 2.28 | 0.69 |
| 1:F:235:LEU:CD1 | 1:F:310:LEU:CB | 2.71 | 0.69 |
| 1:F:368:VAL:HA | 1:F:371:CYS:SG | 2.32 | 0.69 |
| 1:F:403:ARG:HG2 | 1:O:431:ILE:HD11 | 1.75 | 0.69 |
| 1:G:31:ILE:CG2 | 1:G:65:LEU:HG | 2.23 | 0.69 |
| 1:G:42:LYS:HB2 | 1:G:425:ASN:CB | 2.21 | 0.69 |
| 1:G:196:GLU:HG2 | 1:G:331:MET:HE1 | 1.75 | 0.69 |
| 1:G:215:ASP:CG | 1:G:331:MET:HG2 | 2.13 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:219:VAL:CG2 | 1:G:273:GLN:CG | 2.68 | 0.69 |
| 1:H:8:LEU:HB3 | 1:H:12:MET:CG | 2.22 | 0.69 |
| 1:H:120:VAL:HG22 | 1:H:120:VAL:O | 1.93 | 0.69 |
| 1:H:234:LEU:H | 1:H:315:LEU:CD1 | 2.05 | 0.69 |
| 1:H:236:ASN:O | 1:H:265:GLN:HB3 | 1.92 | 0.69 |
| 1:H:416:GLU:O | 1:H:420:ARG:HB2 | 1.92 | 0.69 |
| 1:J:448:CYS:SG | 1:J:460:ASP:HB2 | 2.32 | 0.69 |
| 1:K:236:ASN:CA | 1:K:265:GLN:HB2 | 2.20 | 0.69 |
| 1:K:237:CYS:CB | 1:K:306:ASN:HA | 2.21 | 0.69 |
| 1:K:250:MET:HE2 | 1:K:308:LYS:HB3 | 1.75 | 0.69 |
| 1:L:212:VAL:HG21 | 1:L:294:LYS:C | 2.14 | 0.69 |
| 1:L:420:ARG:HG2 | 1:L:420:ARG:NH1 | 2.06 | 0.69 |
| 1:M:23:MET:CE | 1:M:72:HIS:CE1 | 2.75 | 0.69 |
| 1:M:206:THR:CG2 | 1:M:347:ILE:CG2 | 2.63 | 0.69 |
| 1:M:391:MET:CE | 1:M:438:ARG:CB | 2.71 | 0.69 |
| 1:N:135:LEU:HD21 | 1:N:385:THR:HG23 | 1.74 | 0.69 |
| 1:O:34:THR:HG23 | 1:P:14:ARG:HH12 | 1.57 | 0.69 |
| 1:O:68:MET:HE2 | 1:P:9:PRO:HD2 | 1.74 | 0.69 |
| 1:O:77:MET:CE | 1:O:486:MET:CE | 2.71 | 0.69 |
| 1:O:307:ILE:HG13 | 1:O:310:LEU:HB2 | 1.74 | 0.69 |
| 1:O:381:GLY:HA2 | 1:O:461:MET:HG3 | 1.74 | 0.69 |
| 1:O:448:CYS:HB2 | 1:O:460:ASP:CG | 2.13 | 0.69 |
| 1:P:138:ILE:CD1 | 1:P:385:THR:CB | 2.71 | 0.69 |
| 1:P:276:LEU:HB3 | 1:P:281:ILE:CB | 2.21 | 0.69 |
| 1:A:25:ILE:CD1 | 1:A:108:GLU:HG3 | 2.23 | 0.69 |
| 1:A:222:GLN:HB3 | 1:A:277:ALA:HB1 | 1.74 | 0.69 |
| 1:B:377:ARG:HD2 | 1:B:470:LEU:HD12 | 1.72 | 0.69 |
| 1:B:461:MET:CE | 1:B:466:VAL:HG21 | 2.22 | 0.69 |
| 1:D:103:LEU:CD2 | 1:D:411:PHE:CE2 | 2.73 | 0.69 |
| 1:E:122:LYS:HA | 1:E:125:GLN:NE2 | 2.07 | 0.69 |
| 1:E:218:ARG:CZ | 1:E:282:VAL:HG21 | 2.23 | 0.69 |
| 1:F:143:GLY:O | 1:F:149:ILE:HD11 | 1.93 | 0.69 |
| 1:F:211:GLY:HA2 | 1:F:337:CYS:SG | 2.33 | 0.69 |
| 1:G:14:ARG:HD2 | 1:G:494:ILE:HD13 | 1.74 | 0.69 |
| 1:G:89:VAL:HG11 | 1:G:472:VAL:CB | 2.23 | 0.69 |
| 1:G:393:LEU:HA | 1:G:396:TYR:HB3 | 1.74 | 0.69 |
| 1:H:235:LEU:CD2 | 1:H:307:ILE:N | 2.56 | 0.69 |
| 1:I:178:VAL:HG21 | 1:I:366:VAL:HG22 | 1.73 | 0.69 |
| 1:I:384:SER:CB | 1:I:441:HIS:HE1 | 1.91 | 0.69 |
| 1:I:404:GLU:O | 1:I:408:VAL:HG13 | 1.93 | 0.69 |
| 1:K:42:LYS:HB3 | 1:K:425:ASN:HB2 | 1.73 | 0.69 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:95:THR:O | 1:L:99:VAL:HG22 | 1.93 | 0.69 |
| 1:O:70:VAL:HG21 | 1:O:76:LYS:HG2 | 1.75 | 0.69 |
| 1:P:169:LYS:HG2 | 1:P:204:ASP:HA | 1.75 | 0.69 |
| 1:P:214:VAL:HG12 | 1:P:291:ASP:OD2 | 1.91 | 0.69 |
| 1:P:379:VAL:HG12 | 1:P:470:LEU:HD23 | 1.75 | 0.69 |
| 1:B:197:LYS:HB3 | 1:B:355:ILE:CD1 | 2.22 | 0.69 |
| 1:C:384:SER:HA | 1:C:441:HIS:CE1 | 2.28 | 0.69 |
| 1:D:49:VAL:HG22 | 1:D:55:VAL:HG12 | 1.75 | 0.69 |
| 1:D:422:LEU:HD13 | 1:D:422:LEU:N | 1.98 | 0.69 |
| 1:E:241:GLU:CB | 1:E:246:MET:HB3 | 2.22 | 0.69 |
| 1:E:433:ILE:CG2 | 1:E:451:LEU:CD2 | 2.70 | 0.69 |
| 1:G:42:LYS:NZ | 1:G:426:ALA:HB2 | 2.08 | 0.69 |
| 1:I:235:LEU:HD21 | 1:I:307:ILE:HD13 | 1.75 | 0.69 |
| 1:J:182:VAL:HB | 1:J:188:VAL:HG22 | 1.75 | 0.69 |
| 1:L:122:LYS:C | 1:L:404:GLU:HG3 | 2.13 | 0.69 |
| 1:L:192:LEU:HB3 | 1:L:342:ALA:CB | 2.23 | 0.69 |
| 1:M:115:VAL:CG1 | 1:M:403:ARG:CZ | 2.71 | 0.69 |
| 1:M:255:LYS:O | 1:M:255:LYS:HG3 | 1.93 | 0.69 |
| 1:N:69:SER:HB3 | 1:O:9:PRO:CA | 2.21 | 0.69 |
| 1:O:116:HIS:ND1 | 1:O:117:PRO:HD2 | 2.07 | 0.69 |
| 1:O:134:LEU:HD11 | 1:O:393:LEU:CD2 | 2.23 | 0.69 |
| 1:O:139:ALA:HB1 | 1:O:377:ARG:HG2 | 1.73 | 0.69 |
| 1:O:237:CYS:CB | 1:O:306:ASN:CA | 2.69 | 0.69 |
| 1:P:234:LEU:HD11 | 1:P:301:ALA:HB3 | 1.74 | 0.69 |
| 1:A:134:LEU:CD1 | 1:A:393:LEU:CD2 | 2.71 | 0.68 |
| 1:C:178:VAL:HG21 | 1:C:366:VAL:HG13 | 1.73 | 0.68 |
| 1:C:233:ALA:HA | 1:C:315:LEU:CG | 2.23 | 0.68 |
| 1:C:250:MET:HE2 | 1:C:307:ILE:HG22 | 1.73 | 0.68 |
| 1:C:274:HIS:ND1 | 1:C:274:HIS:O | 2.26 | 0.68 |
| 1:C:276:LEU:O | 1:C:281:ILE:HB | 1.93 | 0.68 |
| 1:D:220:SER:HB3 | 1:D:223:MET:SD | 2.32 | 0.68 |
| 1:D:341:LYS:NZ | 1:D:341:LYS:CB | 2.56 | 0.68 |
| 1:D:453:VAL:HG23 | 1:D:454:PHE:CG | 2.28 | 0.68 |
| 1:E:380:SER:CB | 1:E:384:SER:CB | 2.71 | 0.68 |
| 1:F:166:ALA:HB2 | 1:F:203:ILE:HG13 | 1.73 | 0.68 |
| 1:F:173:ILE:HG13 | 1:F:345:MET:SD | 2.33 | 0.68 |
| 1:F:428:LEU:HD12 | 1:F:429:ASP:N | 2.08 | 0.68 |
| 1:H:122:LYS:HG3 | 1:H:125:GLN:NE2 | 2.08 | 0.68 |
| 1:I:9:PRO:HD3 | 1:P:68:MET:CA | 2.23 | 0.68 |
| 1:J:230:ALA:C | 1:J:231:LYS:HD3 | 2.13 | 0.68 |
| 1:L:206:THR:HG21 | 1:L:347:ILE:CG2 | 2.21 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:84:THR:CG2 | 1:M:84:THR:O | 2.41 | 0.68 |
| 1:M:84:THR:O | 1:M:84:THR:HG22 | 1.91 | 0.68 |
| 1:M:158:ILE:CD1 | 1:M:170:LEU:HB2 | 2.22 | 0.68 |
| 1:M:233:ALA:HA | 1:M:315:LEU:CD1 | 2.22 | 0.68 |
| 1:M:296:ALA:CA | 1:M:301:ALA:HB3 | 2.23 | 0.68 |
| 1:M:403:ARG:HH11 | 1:M:403:ARG:CG | 2.06 | 0.68 |
| 1:N:296:ALA:HB1 | 1:N:301:ALA:O | 1.92 | 0.68 |
| 1:O:327:SER:O | 1:O:327:SER:OG | 2.10 | 0.68 |
| 1:O:402:GLY:O | 1:O:405:GLN:HB3 | 1.93 | 0.68 |
| 1:A:362:VAL:O | 1:A:366:VAL:HG23 | 1.93 | 0.68 |
| 1:C:134:LEU:CD1 | 1:C:393:LEU:HD21 | 2.22 | 0.68 |
| 1:C:494:ILE:HB | 1:D:48:LEU:HD12 | 1.75 | 0.68 |
| 1:D:42:LYS:HB3 | 1:D:425:ASN:HB2 | 1.75 | 0.68 |
| 1:D:68:MET:CA | 1:D:68:MET:HE2 | 2.23 | 0.68 |
| 1:E:119:ILE:HD12 | 1:E:403:ARG:HG3 | 1.74 | 0.68 |
| 1:F:197:LYS:HA | 1:F:355:ILE:CG2 | 2.22 | 0.68 |
| 1:G:158:ILE:HG13 | 1:G:361:ALA:HB1 | 1.73 | 0.68 |
| 1:G:235:LEU:CD1 | 1:G:307:ILE:HD12 | 2.24 | 0.68 |
| 1:I:139:ALA:CB | 1:I:377:ARG:HD3 | 2.17 | 0.68 |
| 1:I:158:ILE:HD13 | 1:I:170:LEU:CB | 2.19 | 0.68 |
| 1:J:31:ILE:HG22 | 1:J:65:LEU:HD21 | 1.75 | 0.68 |
| 1:J:234:LEU:HD11 | 1:J:301:ALA:CB | 2.23 | 0.68 |
| 1:J:391:MET:CE | 1:J:438:ARG:CD | 2.72 | 0.68 |
| 1:J:414:ALA:O | 1:J:417:VAL:HG12 | 1.93 | 0.68 |
| 1:K:31:ILE:HG21 | 1:K:65:LEU:CD1 | 2.23 | 0.68 |
| 1:L:31:ILE:CG2 | 1:L:65:LEU:HD21 | 2.23 | 0.68 |
| 1:L:123:GLY:HA3 | 1:L:407:ALA:CB | 2.23 | 0.68 |
| 1:L:210:LYS:HB3 | 1:L:343:VAL:HG23 | 1.74 | 0.68 |
| 1:L:406:LEU:HD12 | 1:L:406:LEU:N | 1.96 | 0.68 |
| 1:M:96:ALA:HB1 | 1:M:480:ALA:HB3 | 1.75 | 0.68 |
| 1:N:368:VAL:HG21 | 1:N:469:PRO:HG3 | 1.75 | 0.68 |
| 1:P:34:THR:HG22 | 1:P:35:VAL:HG13 | 1.74 | 0.68 |
| 1:P:64:ILE:CG2 | 1:P:65:LEU:HD22 | 2.23 | 0.68 |
| 1:P:124:TYR:HE1 | 1:P:407:ALA:C | 1.95 | 0.68 |
| 1:B:345:MET:CE | 1:B:347:ILE:HD11 | 2.22 | 0.68 |
| 1:C:247:LEU:HD11 | 1:C:272:ALA:HB2 | 1.75 | 0.68 |
| 1:C:384:SER:CA | 1:C:441:HIS:HE1 | 2.07 | 0.68 |
| 1:D:182:VAL:HB | 1:D:188:VAL:HG13 | 1.75 | 0.68 |
| 1:D:437:VAL:HG21 | 1:D:451:LEU:CG | 2.23 | 0.68 |
| 1:E:255:LYS:O | 1:E:255:LYS:HG3 | 1.93 | 0.68 |
| 1:F:307:ILE:CD1 | 1:F:310:LEU:HB2 | 2.23 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:339:HIS:CE1 | 1:I:341:LYS:CD | 2.75 | 0.68 |
| 1:J:105:ARG:NH1 | 1:J:106:LYS:CG | 2.56 | 0.68 |
| 1:J:122:LYS:HA | 1:J:125:GLN:CD | 2.14 | 0.68 |
| 1:J:192:LEU:HB2 | 1:J:342:ALA:HB2 | 1.75 | 0.68 |
| 1:J:227:VAL:HG11 | 1:J:260:ASN:ND2 | 2.08 | 0.68 |
| 1:J:276:LEU:HD13 | 1:J:281:ILE:HD12 | 1.74 | 0.68 |
| 1:K:308:LYS:NZ | 1:K:308:LYS:CB | 2.55 | 0.68 |
| 1:O:250:MET:CE | 1:O:308:LYS:CG | 2.69 | 0.68 |
| 1:P:130:LYS:CE | 1:P:393:LEU:HD23 | 2.24 | 0.68 |
| 1:A:134:LEU:CD1 | 1:A:393:LEU:HG | 2.24 | 0.68 |
| 1:A:223:MET:HG2 | 1:A:281:ILE:O | 1.93 | 0.68 |
| 1:B:250:MET:HE3 | 1:B:308:LYS:HG2 | 1.74 | 0.68 |
| 1:D:232:ILE:O | 1:D:315:LEU:HD13 | 1.93 | 0.68 |
| 1:D:255:LYS:HD3 | 1:D:279:GLU:CD | 2.13 | 0.68 |
| 1:D:371:CYS:SG | 1:D:471:ARG:HD2 | 2.34 | 0.68 |
| 1:D:437:VAL:HG21 | 1:D:451:LEU:HG | 1.74 | 0.68 |
| 1:E:304:ILE:HD11 | 1:E:310:LEU:HB2 | 1.74 | 0.68 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:CG1 | 2.21 | 0.68 |
| 1:G:206:THR:HG22 | 1:G:348:ARG:H | 1.56 | 0.68 |
| 1:I:123:GLY:CA | 1:I:407:ALA:HB1 | 2.24 | 0.68 |
| 1:I:200:GLY:O | 1:I:348:ARG:HB3 | 1.94 | 0.68 |
| 1:I:247:LEU:HD21 | 1:I:269:ASP:HB3 | 1.74 | 0.68 |
| 1:K:265:GLN:HE22 | 1:K:289:LYS:NZ | 1.90 | 0.68 |
| 1:L:77:MET:HE1 | 1:L:486:MET:HE3 | 1.76 | 0.68 |
| 1:M:24:ASN:N | 1:M:24:ASN:ND2 | 2.42 | 0.68 |
| 1:M:212:VAL:HG21 | 1:M:294:LYS:O | 1.93 | 0.68 |
| 1:N:30:ILE:HG22 | 1:N:31:ILE:N | 1.98 | 0.68 |
| 1:N:68:MET:HB3 | 1:O:8:LEU:CD2 | 2.23 | 0.68 |
| 1:P:81:VAL:HG11 | 1:P:483:SER:HB3 | 1.75 | 0.68 |
| 1:B:41:PRO:HB2 | 1:B:42:LYS:HE2 | 1.76 | 0.68 |
| 1:C:433:ILE:HG21 | 1:C:451:LEU:HD23 | 1.74 | 0.68 |
| 1:D:235:LEU:HD13 | 1:D:307:ILE:HG22 | 1.75 | 0.68 |
| 1:D:248:LYS:HD2 | 1:D:275:TYR:CE2 | 2.27 | 0.68 |
| 1:F:307:ILE:HD13 | 1:F:310:LEU:HD22 | 1.74 | 0.68 |
| 1:G:29:ARG:O | 1:G:33:GLU:HG3 | 1.93 | 0.68 |
| 1:G:98:VAL:HG12 | 1:G:99:VAL:HG12 | 1.73 | 0.68 |
| 1:J:119:ILE:HG23 | 1:J:403:ARG:HB2 | 1.75 | 0.68 |
| 1:J:254:ILE:HD13 | 1:J:262:LEU:CD1 | 2.20 | 0.68 |
| 1:K:115:VAL:HG11 | 1:K:403:ARG:HD2 | 1.75 | 0.68 |
| 1:L:211:GLY:CA | 1:L:298:ALA:CB | 2.71 | 0.68 |
| 1:M:418:ILE:O | 1:M:422:LEU:HG | 1.93 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:239:ILE:CD1 | 1:N:307:ILE:HD13 | 2.23 | 0.68 |
| 1:N:389:LEU:HD12 | 1:N:415:LEU:HD13 | 1.75 | 0.68 |
| 1:P:234:LEU:H | 1:P:315:LEU:HD21 | 1.59 | 0.68 |
| 1:A:493:VAL:HG13 | 1:B:47:MET:CE | 2.24 | 0.68 |
| 1:B:40:GLY:HA3 | 1:B:422:LEU:HD21 | 1.75 | 0.68 |
| 1:B:263:PHE:CE1 | 1:B:332:ILE:HG21 | 2.28 | 0.68 |
| 1:C:250:MET:HE2 | 1:C:308:LYS:HG2 | 1.76 | 0.68 |
| 1:D:130:LYS:HD2 | 1:D:396:TYR:CD1 | 2.28 | 0.68 |
| 1:E:129:GLN:O | 1:E:132:GLN:HB2 | 1.94 | 0.68 |
| 1:E:262:LEU:HD11 | 1:E:310:LEU:HD21 | 1.74 | 0.68 |
| 1:G:161:LYS:HD3 | 1:G:357:GLU:OE2 | 1.94 | 0.68 |
| 1:G:459:GLU:HB2 | 1:G:461:MET:HE2 | 1.72 | 0.68 |
| 1:H:48:LEU:HB3 | 1:H:68:MET:SD | 2.34 | 0.68 |
| 1:H:158:ILE:HD12 | 1:H:167:LYS:HA | 1.76 | 0.68 |
| 1:I:64:ILE:CG2 | 1:I:65:LEU:HD22 | 2.24 | 0.68 |
| 1:I:197:LYS:CA | 1:I:355:ILE:CG2 | 2.67 | 0.68 |
| 1:I:235:LEU:CD1 | 1:I:307:ILE:HD13 | 2.23 | 0.68 |
| 1:I:391:MET:HE3 | 1:I:438:ARG:CG | 2.23 | 0.68 |
| 1:K:130:LYS:CG | 1:K:393:LEU:HD21 | 2.24 | 0.68 |
| 1:L:41:PRO:HG2 | 1:L:453:VAL:HG11 | 1.75 | 0.68 |
| 1:L:233:ALA:CA | 1:L:315:LEU:CD2 | 2.72 | 0.68 |
| 1:L:254:ILE:HG21 | 1:L:262:LEU:HD12 | 1.76 | 0.68 |
| 1:L:368:VAL:HA | 1:L:371:CYS:SG | 2.34 | 0.68 |
| 1:L:405:GLN:HG2 | 1:L:406:LEU:HD12 | 1.75 | 0.68 |
| 1:M:117:PRO:O | 1:M:121:VAL:HG13 | 1.93 | 0.68 |
| 1:M:437:VAL:HG11 | 1:M:451:LEU:HD11 | 1.74 | 0.68 |
| 1:P:236:ASN:HA | 1:P:265:GLN:CB | 2.23 | 0.68 |
| 1:A:72:HIS:HD2 | 1:A:73:PRO:HD2 | 1.57 | 0.68 |
| 1:A:233:ALA:HA | 1:A:315:LEU:HD11 | 1.75 | 0.68 |
| 1:D:12:MET:CG | 1:D:494:ILE:HG22 | 2.08 | 0.68 |
| 1:D:163:ALA:HB1 | 1:D:165:LYS:HB2 | 1.75 | 0.68 |
| 1:E:153:ILE:HG22 | 1:E:469:PRO:HD3 | 1.75 | 0.68 |
| 1:E:437:VAL:HG21 | 1:E:451:LEU:CG | 2.23 | 0.68 |
| 1:F:96:ALA:HB1 | 1:F:480:ALA:CB | 2.24 | 0.68 |
| 1:G:197:LYS:HA | 1:G:355:ILE:CG2 | 2.22 | 0.68 |
| 1:H:134:LEU:HD12 | 1:H:393:LEU:CD1 | 2.23 | 0.68 |
| 1:H:223:MET:HE2 | 1:H:276:LEU:HB3 | 1.75 | 0.68 |
| 1:I:70:VAL:HG11 | 1:I:76:LYS:HD3 | 1.76 | 0.68 |
| 1:J:62:VAL:HG13 | 1:J:63:THR:N | 2.09 | 0.68 |
| 1:J:368:VAL:CG1 | 1:J:469:PRO:CB | 2.71 | 0.68 |
| 1:K:113:GLN:CD | 1:K:113:GLN:C | 2.47 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:174:ILE:CG2 | 1:K:362:VAL:CG2 | 2.69 | 0.68 |
| 1:L:36:ARG:CG | 1:L:37:SER:H | 2.07 | 0.68 |
| 1:M:437:VAL:HG21 | 1:M:451:LEU:CG | 2.24 | 0.68 |
| 1:O:254:ILE:HG21 | 1:O:262:LEU:CD1 | 2.23 | 0.68 |
| 1:O:435:VAL:HG13 | 1:O:438:ARG:HH21 | 1.58 | 0.68 |
| 1:P:42:LYS:CG | 1:P:425:ASN:HB2 | 2.23 | 0.68 |
| 1:P:251:VAL:HG13 | 1:P:276:LEU:HG | 1.74 | 0.68 |
| 1:B:38:THR:HG21 | 1:B:46:LYS:HE2 | 1.74 | 0.68 |
| 1:B:150:LEU:HD23 | 1:B:175:VAL:HG13 | 1.75 | 0.68 |
| 1:F:23:MET:CE | 1:F:72:HIS:HE1 | 2.06 | 0.68 |
| 1:F:119:ILE:CG2 | 1:F:403:ARG:HB2 | 2.22 | 0.68 |
| 1:H:36:ARG:HG3 | 1:H:37:SER:N | 2.09 | 0.68 |
| 1:H:132:GLN:HA | 1:H:132:GLN:NE2 | 2.09 | 0.68 |
| 1:I:12:MET:HE3 | 1:I:494:ILE:O | 1.93 | 0.68 |
| 1:I:304:ILE:O | 1:I:304:ILE:CG1 | 2.33 | 0.68 |
| 1:J:68:MET:HB3 | 1:K:8:LEU:CD2 | 2.24 | 0.68 |
| 1:J:379:VAL:HG22 | 1:J:380:SER:N | 2.07 | 0.68 |
| 1:L:142:VAL:HB | 1:L:149:ILE:HD13 | 1.75 | 0.68 |
| 1:O:113:GLN:O | 1:O:113:GLN:OE1 | 2.11 | 0.68 |
| 1:O:119:ILE:HD12 | 1:O:403:ARG:HG3 | 1.76 | 0.68 |
| 1:P:59:ASN:O | 1:P:64:ILE:HD11 | 1.94 | 0.68 |
| 1:P:310:LEU:HD12 | 1:P:311:SER:N | 2.08 | 0.68 |
| 1:A:158:ILE:HG22 | 1:A:158:ILE:O | 1.94 | 0.68 |
| 1:A:222:GLN:HB2 | 1:A:277:ALA:HB1 | 1.76 | 0.68 |
| 1:F:197:LYS:CA | 1:F:355:ILE:HG21 | 2.23 | 0.68 |
| 1:G:8:LEU:H | 1:H:71:GLU:H | 1.41 | 0.68 |
| 1:G:96:ALA:O | 1:G:480:ALA:HB1 | 1.93 | 0.68 |
| 1:H:93:THR:O | 1:H:97:VAL:HG13 | 1.93 | 0.68 |
| 1:I:194:LYS:HG2 | 1:I:195:ILE:H | 1.58 | 0.68 |
| 1:J:154:ALA:CB | 1:J:174:ILE:HD11 | 2.17 | 0.68 |
| 1:K:134:LEU:CD1 | 1:K:393:LEU:HG | 2.23 | 0.68 |
| 1:K:152:LYS:HG2 | 1:K:465:GLY:HA2 | 1.75 | 0.68 |
| 1:L:403:ARG:HB3 | 1:L:406:LEU:HD22 | 1.74 | 0.68 |
| 1:M:124:TYR:CE1 | 1:M:407:ALA:CB | 2.77 | 0.68 |
| 1:N:222:GLN:CA | 1:N:277:ALA:HB1 | 2.23 | 0.68 |
| 1:O:27:ALA:HB1 | 1:O:75:ALA:HB2 | 1.76 | 0.68 |
| 1:P:142:VAL:HG21 | 1:P:149:ILE:CG2 | 2.23 | 0.68 |
| 1:A:41:PRO:HG3 | 1:A:453:VAL:HG11 | 1.74 | 0.68 |
| 1:A:134:LEU:HD11 | 1:A:393:LEU:HD21 | 1.76 | 0.68 |
| 1:D:9:PRO:CD | 1:E:71:GLU:N | 2.57 | 0.68 |
| 1:D:195:ILE:HD13 | 1:D:195:ILE:N | 2.09 | 0.68 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:68:MET:HA | 1:G:68:MET:CE | 2.20 | 0.68 |
| 1:G:219:VAL:CB | 1:G:273:GLN:HG2 | 2.23 | 0.68 |
| 1:H:97:VAL:O | 1:H:100:ALA:HB3 | 1.94 | 0.68 |
| 1:K:30:ILE:CG2 | 1:K:31:ILE:HD13 | 2.23 | 0.68 |
| 1:L:68:MET:C | 1:M:8:LEU:HB3 | 2.13 | 0.68 |
| 1:L:69:SER:O | 1:M:9:PRO:HA | 1.94 | 0.68 |
| 1:L:70:VAL:HG22 | 1:L:76:LYS:HD3 | 1.74 | 0.68 |
| 1:L:223:MET:H | 1:L:277:ALA:CB | 2.07 | 0.68 |
| 1:L:239:ILE:HG22 | 1:L:307:ILE:CG2 | 2.24 | 0.68 |
| 1:M:437:VAL:HA | 1:M:458:VAL:HG13 | 1.76 | 0.68 |
| 1:P:139:ALA:CB | 1:P:377:ARG:CD | 2.72 | 0.68 |
| 1:P:218:ARG:H | 1:P:323:GLU:CD | 1.97 | 0.68 |
| 1:A:12:MET:HE1 | 1:B:68:MET:CE | 2.24 | 0.67 |
| 1:A:31:ILE:CG2 | 1:A:65:LEU:HD21 | 2.23 | 0.67 |
| 1:C:130:LYS:NZ | 1:C:134:LEU:HD11 | 2.08 | 0.67 |
| 1:C:236:ASN:O | 1:C:265:GLN:HB3 | 1.94 | 0.67 |
| 1:D:38:THR:CG2 | 1:D:46:LYS:HD2 | 2.24 | 0.67 |
| 1:D:118:THR:HG22 | 1:D:118:THR:O | 1.94 | 0.67 |
| 1:D:248:LYS:HG3 | 1:D:275:TYR:CD2 | 2.28 | 0.67 |
| 1:E:123:GLY:HA3 | 1:E:407:ALA:HB3 | 1.72 | 0.67 |
| 1:E:262:LEU:HD11 | 1:E:310:LEU:CD2 | 2.23 | 0.67 |
| 1:F:124:TYR:CE1 | 1:F:407:ALA:CA | 2.75 | 0.67 |
| 1:F:276:LEU:HD12 | 1:F:281:ILE:HG22 | 1.76 | 0.67 |
| 1:F:384:SER:CB | 1:F:441:HIS:HE1 | 2.07 | 0.67 |
| 1:G:115:VAL:HG11 | 1:G:403:ARG:NE | 2.08 | 0.67 |
| 1:H:135:LEU:HD23 | 1:H:138:ILE:HD11 | 1.76 | 0.67 |
| 1:I:418:ILE:O | 1:I:422:LEU:HG | 1.94 | 0.67 |
| 1:J:44:MET:HB3 | 1:K:491:ASP:OD1 | 1.94 | 0.67 |
| 1:J:130:LYS:CE | 1:J:134:LEU:HD11 | 2.23 | 0.67 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:HG3 | 1.75 | 0.67 |
| 1:K:130:LYS:HD3 | 1:K:393:LEU:HD23 | 1.75 | 0.67 |
| 1:K:298:ALA:O | 1:K:337:CYS:HB3 | 1.94 | 0.67 |
| 1:L:119:ILE:HG21 | 1:L:403:ARG:CB | 2.20 | 0.67 |
| 1:L:254:ILE:HD13 | 1:L:262:LEU:CD1 | 2.24 | 0.67 |
| 1:N:384:SER:HA | 1:N:441:HIS:CE1 | 2.29 | 0.67 |
| 1:O:182:VAL:CB | 1:O:188:VAL:HG22 | 2.21 | 0.67 |
| 1:O:233:ALA:CB | 1:O:310:LEU:CD1 | 2.72 | 0.67 |
| 1:O:236:ASN:CG | 1:O:305:THR:HG23 | 2.14 | 0.67 |
| 1:O:312:ALA:HA | 1:O:315:LEU:HB2 | 1.75 | 0.67 |
| 1:P:262:LEU:CD1 | 1:P:310:LEU:HD23 | 2.23 | 0.67 |
| 1:A:44:MET:HG2 | 1:H:491:ASP:OD1 | 1.94 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:383:GLY:HA2 | 1:A:386:GLU:CG | 2.22 | 0.67 |
| 1:B:42:LYS:HB3 | 1:B:425:ASN:HB2 | 1.76 | 0.67 |
| 1:C:276:LEU:HD13 | 1:C:281:ILE:HD12 | 1.74 | 0.67 |
| 1:D:123:GLY:HA3 | 1:D:407:ALA:HB3 | 1.75 | 0.67 |
| 1:D:178:VAL:HG21 | 1:D:366:VAL:HG13 | 1.74 | 0.67 |
| 1:D:239:ILE:CG2 | 1:D:268:ILE:HG23 | 2.23 | 0.67 |
| 1:E:431:ILE:CD1 | 1:N:403:ARG:HD3 | 2.24 | 0.67 |
| 1:F:42:LYS:HB3 | 1:F:425:ASN:HB2 | 1.75 | 0.67 |
| 1:F:134:LEU:HD22 | 1:F:392:LYS:CE | 2.25 | 0.67 |
| 1:G:223:MET:CG | 1:G:282:VAL:HA | 2.24 | 0.67 |
| 1:G:351:THR:O | 1:G:355:ILE:HG13 | 1.94 | 0.67 |
| 1:I:212:VAL:HG23 | 1:I:298:ALA:HB2 | 1.76 | 0.67 |
| 1:K:34:THR:HB | 1:K:35:VAL:HG22 | 1.77 | 0.67 |
| 1:L:39:LEU:HD13 | 1:L:40:GLY:N | 2.08 | 0.67 |
| 1:M:31:ILE:CG2 | 1:M:65:LEU:HD22 | 2.24 | 0.67 |
| 1:M:193:ILE:HD12 | 1:M:366:VAL:HG11 | 1.75 | 0.67 |
| 1:N:130:LYS:NZ | 1:N:134:LEU:HD21 | 2.08 | 0.67 |
| 1:N:138:ILE:HG13 | 1:N:139:ALA:N | 2.09 | 0.67 |
| 1:N:233:ALA:CA | 1:N:315:LEU:CD2 | 2.66 | 0.67 |
| 1:O:139:ALA:HB2 | 1:O:470:LEU:HD11 | 1.76 | 0.67 |
| 1:O:190:LYS:HZ1 | 1:O:367:GLY:HA2 | 1.58 | 0.67 |
| 1:A:223:MET:HE3 | 1:A:276:LEU:HB3 | 1.75 | 0.67 |
| 1:A:448:CYS:O | 1:A:449:ALA:HB2 | 1.94 | 0.67 |
| 1:C:70:VAL:HG22 | 1:C:70:VAL:O | 1.94 | 0.67 |
| 1:D:154:ALA:HB2 | 1:D:174:ILE:HD11 | 1.74 | 0.67 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:HG | 1.75 | 0.67 |
| 1:F:420:ARG:HH21 | 1:F:430:ALA:CB | 1.95 | 0.67 |
| 1:G:42:LYS:HG3 | 1:G:425:ASN:CA | 2.23 | 0.67 |
| 1:G:124:TYR:CE1 | 1:G:407:ALA:CA | 2.74 | 0.67 |
| 1:J:347:ILE:CG2 | 1:J:355:ILE:CG2 | 2.65 | 0.67 |
| 1:L:339:HIS:CE1 | 1:L:341:LYS:HE2 | 2.29 | 0.67 |
| 1:M:223:MET:CE | 1:M:283:ALA:CB | 2.73 | 0.67 |
| 1:M:232:ILE:HD13 | 1:M:261:VAL:CG1 | 2.24 | 0.67 |
| 1:N:219:VAL:HG13 | 1:N:220:SER:N | 2.08 | 0.67 |
| 1:N:233:ALA:CB | 1:N:315:LEU:CD1 | 2.71 | 0.67 |
| 1:O:247:LEU:HD21 | 1:O:269:ASP:HB3 | 1.76 | 0.67 |
| 1:P:351:THR:O | 1:P:355:ILE:HG13 | 1.95 | 0.67 |
| 1:A:156:THR:CG2 | 1:A:468:GLU:HA | 2.24 | 0.67 |
| 1:A:251:VAL:CG1 | 1:A:276:LEU:HD13 | 2.24 | 0.67 |
| 1:A:307:ILE:HD12 | 1:A:310:LEU:HD23 | 1.77 | 0.67 |
| 1:B:117:PRO:O | 1:B:121:VAL:HG13 | 1.93 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:307:ILE:HG13 | 1:B:307:ILE:O | 1.92 | 0.67 |
| 1:B:387:VAL:O | 1:B:390:SER:HB3 | 1.93 | 0.67 |
| 1:C:223:MET:HE1 | 1:C:283:ALA:HB3 | 1.77 | 0.67 |
| 1:C:303:VAL:O | 1:C:303:VAL:CG2 | 2.34 | 0.67 |
| 1:D:12:MET:HE2 | 1:D:494:ILE:HB | 1.74 | 0.67 |
| 1:F:118:THR:HG21 | 1:G:42:LYS:NZ | 2.10 | 0.67 |
| 1:I:208:LEU:CD2 | 1:I:343:VAL:HG21 | 2.24 | 0.67 |
| 1:I:347:ILE:CG2 | 1:I:358:VAL:CG1 | 2.72 | 0.67 |
| 1:K:96:ALA:HA | 1:K:480:ALA:CB | 2.25 | 0.67 |
| 1:K:124:TYR:CE1 | 1:K:407:ALA:CA | 2.73 | 0.67 |
| 1:K:178:VAL:HG11 | 1:K:366:VAL:CG1 | 2.23 | 0.67 |
| 1:L:103:LEU:CD2 | 1:L:411:PHE:CE2 | 2.74 | 0.67 |
| 1:L:193:ILE:HD12 | 1:L:366:VAL:CG1 | 2.25 | 0.67 |
| 1:L:225:LYS:O | 1:L:226:LYS:HB2 | 1.94 | 0.67 |
| 1:N:100:ALA:O | 1:N:104:LEU:HG | 1.95 | 0.67 |
| 1:N:123:GLY:HA3 | 1:N:407:ALA:HB3 | 1.73 | 0.67 |
| 1:O:450:GLY:O | 1:O:458:VAL:HA | 1.93 | 0.67 |
| 1:P:215:ASP:O | 1:P:215:ASP:CG | 2.32 | 0.67 |
| 1:P:268:ILE:HG21 | 1:P:273:GLN:CG | 2.23 | 0.67 |
| 1:A:65:LEU:C | 1:A:79:ILE:HD13 | 2.15 | 0.67 |
| 1:A:255:LYS:HD3 | 1:A:279:GLU:CD | 2.15 | 0.67 |
| 1:A:316:GLY:O | 1:A:317:ASP:HB2 | 1.94 | 0.67 |
| 1:C:96:ALA:HA | 1:C:480:ALA:HB2 | 1.76 | 0.67 |
| 1:D:99:VAL:HG13 | 1:D:418:ILE:HD11 | 1.74 | 0.67 |
| 1:D:232:ILE:HG13 | 1:D:261:VAL:HG11 | 1.77 | 0.67 |
| 1:D:326:ILE:O | 1:D:327:SER:HB3 | 1.95 | 0.67 |
| 1:F:387:VAL:O | 1:F:390:SER:HB3 | 1.94 | 0.67 |
| 1:I:26:LEU:O | 1:I:30:ILE:HG13 | 1.94 | 0.67 |
| 1:I:138:ILE:HD11 | 1:I:385:THR:HG23 | 1.73 | 0.67 |
| 1:J:197:LYS:CB | 1:J:355:ILE:CG2 | 2.67 | 0.67 |
| 1:K:117:PRO:O | 1:K:120:VAL:HG12 | 1.94 | 0.67 |
| 1:L:130:LYS:HZ2 | 1:L:134:LEU:HD11 | 1.56 | 0.67 |
| 1:L:339:HIS:O | 1:L:339:HIS:CG | 2.44 | 0.67 |
| 1:M:149:ILE:O | 1:M:153:ILE:HG13 | 1.94 | 0.67 |
| 1:M:174:ILE:HD12 | 1:M:365:ALA:HB1 | 1.75 | 0.67 |
| 1:M:222:GLN:CB | 1:M:277:ALA:HB1 | 2.24 | 0.67 |
| 1:M:403:ARG:HG2 | 1:M:403:ARG:HH11 | 1.59 | 0.67 |
| 1:O:22:ARG:HA | 1:O:25:ILE:HD12 | 1.76 | 0.67 |
| 1:O:232:ILE:HD13 | 1:O:299:THR:HG21 | 1.74 | 0.67 |
| 1:O:389:LEU:CD1 | 1:O:415:LEU:HD13 | 2.23 | 0.67 |
| 1:P:121:VAL:HG23 | 1:P:122:LYS:H | 1.60 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:237:CYS:SG | 1:P:306:ASN:HA | 2.35 | 0.67 |
| 1:A:219:VAL:CG1 | 1:A:273:GLN:HB3 | 2.22 | 0.67 |
| 1:A:251:VAL:HG13 | 1:A:276:LEU:CD2 | 2.24 | 0.67 |
| 1:B:377:ARG:CD | 1:B:470:LEU:CD1 | 2.70 | 0.67 |
| 1:B:452:ASN:HD21 | 1:B:454:PHE:HB2 | 1.60 | 0.67 |
| 1:F:124:TYR:CD1 | 1:F:407:ALA:HB1 | 2.29 | 0.67 |
| 1:F:235:LEU:CD2 | 1:F:307:ILE:HG22 | 2.24 | 0.67 |
| 1:F:391:MET:HE3 | 1:F:438:ARG:CG | 2.23 | 0.67 |
| 1:I:174:ILE:HG22 | 1:I:362:VAL:HB | 1.77 | 0.67 |
| 1:J:68:MET:HG2 | 1:K:8:LEU:HD22 | 1.75 | 0.67 |
| 1:K:368:VAL:HB | 1:K:469:PRO:CB | 2.25 | 0.67 |
| 1:L:130:LYS:HZ2 | 1:L:393:LEU:HD23 | 1.58 | 0.67 |
| 1:L:233:ALA:HA | 1:L:315:LEU:CG | 2.24 | 0.67 |
| 1:L:234:LEU:CD2 | 1:L:296:ALA:HB2 | 2.25 | 0.67 |
| 1:L:339:HIS:CE1 | 1:L:341:LYS:HD2 | 2.30 | 0.67 |
| 1:N:103:LEU:HD21 | 1:N:411:PHE:CD2 | 2.30 | 0.67 |
| 1:N:156:THR:CG2 | 1:N:468:GLU:HA | 2.24 | 0.67 |
| 1:N:389:LEU:CD1 | 1:N:415:LEU:HD13 | 2.25 | 0.67 |
| 1:N:433:ILE:CG2 | 1:N:451:LEU:HD23 | 2.25 | 0.67 |
| 1:O:434:LEU:HD11 | 1:O:451:LEU:HD21 | 1.76 | 0.67 |
| 1:P:220:SER:HB2 | 1:P:273:GLN:HB2 | 1.76 | 0.67 |
| 1:A:169:LYS:HG2 | 1:A:204:ASP:CA | 2.21 | 0.67 |
| 1:A:206:THR:HG21 | 1:A:347:ILE:HG22 | 1.75 | 0.67 |
| 1:B:281:ILE:CG2 | 1:B:281:ILE:O | 2.43 | 0.67 |
| 1:C:223:MET:CE | 1:C:276:LEU:HB2 | 2.24 | 0.67 |
| 1:D:198:LYS:H | 1:D:355:ILE:HG21 | 1.58 | 0.67 |
| 1:F:368:VAL:CG2 | 1:F:469:PRO:HG2 | 2.24 | 0.67 |
| 1:I:48:LEU:HG | 1:I:68:MET:SD | 2.34 | 0.67 |
| 1:J:196:GLU:O | 1:J:347:ILE:HG22 | 1.95 | 0.67 |
| 1:K:119:ILE:CD1 | 1:K:403:ARG:HA | 2.25 | 0.67 |
| 1:K:248:LYS:HB2 | 1:K:275:TYR:CE2 | 2.30 | 0.67 |
| 1:K:251:VAL:CG1 | 1:K:276:LEU:HD22 | 2.24 | 0.67 |
| 1:L:124:TYR:HE1 | 1:L:407:ALA:HA | 1.60 | 0.67 |
| 1:M:42:LYS:CE | 1:M:426:ALA:CB | 2.60 | 0.67 |
| 1:M:134:LEU:HD12 | 1:M:393:LEU:HD21 | 1.73 | 0.67 |
| 1:M:222:GLN:HB3 | 1:M:277:ALA:HB3 | 1.76 | 0.67 |
| 1:M:223:MET:HE2 | 1:M:283:ALA:CB | 2.24 | 0.67 |
| 1:O:254:ILE:HG22 | 1:O:281:ILE:HD13 | 1.77 | 0.67 |
| 1:O:369:VAL:O | 1:O:369:VAL:CG2 | 2.41 | 0.67 |
| 1:P:276:LEU:CD2 | 1:P:281:ILE:CD1 | 2.70 | 0.67 |
| 1:A:39:LEU:HB3 | 1:A:94:THR:HG21 | 1.77 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:134:LEU:HD11 | 1:B:393:LEU:HD21 | 1.75 | 0.67 |
| 1:B:377:ARG:CZ | 1:B:470:LEU:HD13 | 2.25 | 0.67 |
| 1:B:494:ILE:CG2 | 1:C:48:LEU:HA | 2.25 | 0.67 |
| 1:C:219:VAL:HG21 | 1:C:285:ARG:HB2 | 1.76 | 0.67 |
| 1:D:96:ALA:HA | 1:D:480:ALA:HB2 | 1.77 | 0.67 |
| 1:D:235:LEU:HD11 | 1:D:307:ILE:HD13 | 1.75 | 0.67 |
| 1:D:238:ALA:C | 1:D:307:ILE:HG23 | 2.15 | 0.67 |
| 1:E:33:GLU:O | 1:E:36:ARG:HG2 | 1.95 | 0.67 |
| 1:E:459:GLU:HG2 | 1:E:461:MET:CE | 2.24 | 0.67 |
| 1:F:212:VAL:HG23 | 1:F:298:ALA:CB | 2.22 | 0.67 |
| 1:G:106:LYS:HA | 1:G:109:GLU:HG3 | 1.77 | 0.67 |
| 1:G:174:ILE:HG22 | 1:G:362:VAL:CG2 | 2.23 | 0.67 |
| 1:H:116:HIS:CG | 1:H:117:PRO:CD | 2.77 | 0.67 |
| 1:I:105:ARG:NH1 | 1:I:106:LYS:HG2 | 2.09 | 0.67 |
| 1:I:130:LYS:HG2 | 1:I:393:LEU:CD2 | 2.24 | 0.67 |
| 1:I:391:MET:CE | 1:I:438:ARG:HB3 | 2.25 | 0.67 |
| 1:J:69:SER:CB | 1:K:9:PRO:HA | 2.25 | 0.67 |
| 1:J:265:GLN:O | 1:J:265:GLN:CG | 2.40 | 0.67 |
| 1:J:339:HIS:HE1 | 1:J:341:LYS:CE | 2.08 | 0.67 |
| 1:J:368:VAL:HG11 | 1:J:472:VAL:CG2 | 2.24 | 0.67 |
| 1:M:222:GLN:CA | 1:M:277:ALA:HB1 | 2.24 | 0.67 |
| 1:O:132:GLN:HE22 | 1:O:478:GLN:HE21 | 1.40 | 0.67 |
| 1:B:31:ILE:HG22 | 1:B:65:LEU:HD21 | 1.77 | 0.67 |
| 1:B:165:LYS:HA | 1:B:165:LYS:CE | 2.00 | 0.67 |
| 1:B:377:ARG:HD2 | 1:B:470:LEU:HD11 | 1.77 | 0.67 |
| 1:E:418:ILE:O | 1:E:422:LEU:HG | 1.95 | 0.67 |
| 1:G:233:ALA:CA | 1:G:315:LEU:HG | 2.23 | 0.67 |
| 1:G:341:LYS:HZ3 | 1:G:341:LYS:CB | 2.07 | 0.67 |
| 1:H:431:ILE:HG13 | 1:I:406:LEU:HD21 | 1.77 | 0.67 |
| 1:I:142:VAL:HG13 | 1:I:149:ILE:CD1 | 2.20 | 0.67 |
| 1:I:239:ILE:CD1 | 1:I:254:ILE:HD11 | 2.25 | 0.67 |
| 1:I:239:ILE:HG22 | 1:I:307:ILE:HG21 | 1.75 | 0.67 |
| 1:J:34:THR:CB | 1:K:14:ARG:HH22 | 2.06 | 0.67 |
| 1:J:69:SER:OG | 1:K:9:PRO:HA | 1.93 | 0.67 |
| 1:J:233:ALA:HA | 1:J:315:LEU:CG | 2.25 | 0.67 |
| 1:K:232:ILE:HG13 | 1:K:261:VAL:HG11 | 1.76 | 0.67 |
| 1:L:16:MET:O | 1:L:16:MET:CG | 2.43 | 0.67 |
| 1:L:158:ILE:HG12 | 1:L:361:ALA:CB | 2.10 | 0.67 |
| 1:L:248:LYS:HD2 | 1:L:275:TYR:OH | 1.95 | 0.67 |
| 1:M:198:LYS:CB | 1:M:326:ILE:CD1 | 2.72 | 0.67 |
| 1:M:223:MET:HE1 | 1:M:283:ALA:HB3 | 1.75 | 0.67 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:134:LEU:HD22 | 1:N:392:LYS:HZ2 | 1.60 | 0.67 |
| 1:O:237:CYS:HB3 | 1:O:306:ASN:CA | 2.24 | 0.67 |
| 1:P:42:LYS:CE | 1:P:426:ALA:HB2 | 2.25 | 0.67 |
| 1:P:236:ASN:C | 1:P:265:GLN:HB3 | 2.14 | 0.67 |
| 1:A:31:ILE:HG21 | 1:A:65:LEU:HD21 | 1.77 | 0.67 |
| 1:A:431:ILE:HD13 | 1:J:403:ARG:CG | 2.23 | 0.67 |
| 1:C:403:ARG:O | 1:C:406:LEU:HD22 | 1.94 | 0.67 |
| 1:D:178:VAL:HG12 | 1:D:188:VAL:HG11 | 1.76 | 0.67 |
| 1:D:188:VAL:HG23 | 1:D:373:ILE:HG13 | 1.73 | 0.67 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:HG22 | 2.25 | 0.67 |
| 1:E:116:HIS:ND1 | 1:E:117:PRO:HD2 | 2.10 | 0.67 |
| 1:F:9:PRO:HB3 | 1:G:69:SER:N | 2.10 | 0.67 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:N | 2.09 | 0.67 |
| 1:G:89:VAL:HG11 | 1:G:472:VAL:HA | 1.77 | 0.67 |
| 1:G:89:VAL:HG21 | 1:G:368:VAL:HG12 | 1.76 | 0.67 |
| 1:H:73:PRO:CA | 1:H:76:LYS:HD2 | 2.19 | 0.67 |
| 1:H:233:ALA:CA | 1:H:315:LEU:CD2 | 2.73 | 0.67 |
| 1:I:38:THR:CG2 | 1:I:46:LYS:HE2 | 2.25 | 0.67 |
| 1:I:232:ILE:HG12 | 1:I:299:THR:HG21 | 1.77 | 0.67 |
| 1:K:198:LYS:N | 1:K:355:ILE:HD12 | 2.09 | 0.67 |
| 1:L:191:ASP:O | 1:L:294:LYS:HE3 | 1.93 | 0.67 |
| 1:M:158:ILE:HD13 | 1:M:170:LEU:HD12 | 1.77 | 0.67 |
| 1:M:195:ILE:HG12 | 1:M:195:ILE:O | 1.93 | 0.67 |
| 1:M:276:LEU:HD13 | 1:M:281:ILE:HD12 | 1.77 | 0.67 |
| 1:O:101:GLY:O | 1:O:104:LEU:HB2 | 1.95 | 0.67 |
| 1:O:420:ARG:HH11 | 1:O:420:ARG:HG2 | 1.59 | 0.67 |
| 1:P:255:LYS:O | 1:P:255:LYS:HG3 | 1.94 | 0.67 |
| 1:A:223:MET:HE3 | 1:A:276:LEU:HB2 | 1.77 | 0.66 |
| 1:C:52:LEU:N | 1:C:52:LEU:CD1 | 2.58 | 0.66 |
| 1:C:70:VAL:CG2 | 1:C:76:LYS:CG | 2.73 | 0.66 |
| 1:D:156:THR:HG21 | 1:D:468:GLU:HB3 | 1.77 | 0.66 |
| 1:E:116:HIS:CG | 1:E:117:PRO:CD | 2.79 | 0.66 |
| 1:E:379:VAL:CG1 | 1:E:470:LEU:CD2 | 2.71 | 0.66 |
| 1:E:384:SER:HB3 | 1:E:441:HIS:HE1 | 1.60 | 0.66 |
| 1:F:448:CYS:HB2 | 1:F:460:ASP:CA | 2.23 | 0.66 |
| 1:G:31:ILE:HG21 | 1:G:65:LEU:CG | 2.24 | 0.66 |
| 1:G:142:VAL:HG11 | 1:G:378:ILE:HD13 | 1.77 | 0.66 |
| 1:G:377:ARG:CD | 1:G:470:LEU:HD12 | 2.25 | 0.66 |
| 1:H:96:ALA:O | 1:H:480:ALA:HB1 | 1.94 | 0.66 |
| 1:I:12:MET:CE | 1:P:68:MET:CE | 2.73 | 0.66 |
| 1:I:235:LEU:HD12 | 1:I:262:LEU:HD21 | 1.77 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:235:LEU:CG | 1:J:310:LEU:HD13 | 2.19 | 0.66 |
| 1:M:400:ILE:HD11 | 1:M:404:GLU:O | 1.95 | 0.66 |
| 1:N:217:GLU:HG2 | 1:N:330:SER:O | 1.96 | 0.66 |
| 1:N:364:ASP:O | 1:N:368:VAL:HG22 | 1.95 | 0.66 |
| 1:O:39:LEU:CG | 1:O:40:GLY:H | 2.00 | 0.66 |
| 1:O:78:LEU:CD1 | 1:O:487:LEU:HD11 | 2.25 | 0.66 |
| 1:O:119:ILE:HG21 | 1:O:403:ARG:HD2 | 1.75 | 0.66 |
| 1:P:233:ALA:HB1 | 1:P:310:LEU:CG | 2.24 | 0.66 |
| 1:A:38:THR:HG23 | 1:A:46:LYS:HZ3 | 1.59 | 0.66 |
| 1:A:116:HIS:CE1 | 1:A:118:THR:HG23 | 2.30 | 0.66 |
| 1:A:134:LEU:HD12 | 1:A:393:LEU:HD11 | 1.77 | 0.66 |
| 1:A:139:ALA:CB | 1:A:377:ARG:CG | 2.72 | 0.66 |
| 1:A:155:MET:CB | 1:A:167:LYS:HG3 | 2.25 | 0.66 |
| 1:A:368:VAL:CG2 | 1:A:469:PRO:HG3 | 2.25 | 0.66 |
| 1:B:124:TYR:N | 1:B:124:TYR:HD1 | 1.91 | 0.66 |
| 1:B:178:VAL:HG22 | 1:B:366:VAL:HG22 | 1.77 | 0.66 |
| 1:B:233:ALA:CB | 1:B:310:LEU:HD22 | 2.24 | 0.66 |
| 1:B:251:VAL:HG13 | 1:B:276:LEU:HG | 1.73 | 0.66 |
| 1:C:77:MET:HE1 | 1:C:486:MET:CE | 2.26 | 0.66 |
| 1:C:152:LYS:HD2 | 1:C:465:GLY:HA2 | 1.76 | 0.66 |
| 1:C:379:VAL:CG1 | 1:C:473:LYS:HG3 | 2.25 | 0.66 |
| 1:D:120:VAL:CG2 | 1:D:488:LEU:CD1 | 2.73 | 0.66 |
| 1:D:178:VAL:CG2 | 1:D:366:VAL:HG13 | 2.24 | 0.66 |
| 1:E:235:LEU:CD2 | 1:E:262:LEU:HD21 | 2.25 | 0.66 |
| 1:F:341:LYS:HB3 | 1:F:341:LYS:HZ2 | 1.55 | 0.66 |
| 1:F:347:ILE:CG2 | 1:F:358:VAL:HG12 | 2.21 | 0.66 |
| 1:I:368:VAL:CB | 1:I:469:PRO:CB | 2.68 | 0.66 |
| 1:K:199:SER:CB | 1:K:327:SER:HB2 | 2.24 | 0.66 |
| 1:L:22:ARG:O | 1:L:26:LEU:HB2 | 1.96 | 0.66 |
| 1:L:214:VAL:HG12 | 1:L:291:ASP:CG | 2.15 | 0.66 |
| 1:L:369:VAL:HG12 | 1:L:369:VAL:O | 1.94 | 0.66 |
| 1:O:119:ILE:HD12 | 1:O:403:ARG:CG | 2.25 | 0.66 |
| 1:O:434:LEU:HD11 | 1:O:451:LEU:CD2 | 2.25 | 0.66 |
| 1:P:236:ASN:CA | 1:P:265:GLN:HB3 | 2.26 | 0.66 |
| 1:A:81:VAL:HG21 | 1:A:483:SER:CB | 2.25 | 0.66 |
| 1:B:9:PRO:O | 1:B:12:MET:HB2 | 1.96 | 0.66 |
| 1:B:222:GLN:O | 1:B:224:PRO:HD3 | 1.95 | 0.66 |
| 1:B:431:ILE:HD11 | 1:K:402:GLY:O | 1.95 | 0.66 |
| 1:C:12:MET:CG | 1:C:494:ILE:HG22 | 2.25 | 0.66 |
| 1:D:254:ILE:HG21 | 1:D:262:LEU:HD12 | 1.77 | 0.66 |
| 1:D:307:ILE:O | 1:D:310:LEU:HB2 | 1.96 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:464:ASN:CB | 1:E:466:VAL:HG22 | 2.24 | 0.66 |
| 1:E:495:ALA:HB2 | 1:F:49:VAL:HG21 | 1.76 | 0.66 |
| 1:F:9:PRO:CA | 1:G:69:SER:CA | 2.73 | 0.66 |
| 1:H:299:THR:CG2 | 1:H:334:VAL:HG11 | 2.25 | 0.66 |
| 1:K:138:ILE:HD13 | 1:K:385:THR:OG1 | 1.94 | 0.66 |
| 1:K:264:CYS:HB2 | 1:K:266:LYS:O | 1.94 | 0.66 |
| 1:L:42:LYS:HB3 | 1:L:425:ASN:CB | 2.26 | 0.66 |
| 1:L:170:LEU:CD1 | 1:L:358:VAL:HG13 | 2.25 | 0.66 |
| 1:L:281:ILE:HG22 | 1:L:281:ILE:O | 1.96 | 0.66 |
| 1:M:188:VAL:HG11 | 1:M:373:ILE:HD12 | 1.76 | 0.66 |
| 1:M:219:VAL:CG2 | 1:M:273:GLN:HG2 | 2.26 | 0.66 |
| 1:N:177:ALA:HB2 | 1:N:208:LEU:CD1 | 2.25 | 0.66 |
| 1:O:215:ASP:O | 1:O:216:LYS:HG2 | 1.95 | 0.66 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:HD21 | 2.25 | 0.66 |
| 1:A:453:VAL:HG23 | 1:A:454:PHE:N | 2.09 | 0.66 |
| 1:B:134:LEU:HD22 | 1:B:392:LYS:NZ | 2.11 | 0.66 |
| 1:B:199:SER:HB2 | 1:B:327:SER:HB2 | 1.78 | 0.66 |
| 1:C:12:MET:HE1 | 1:D:68:MET:CE | 2.25 | 0.66 |
| 1:C:494:ILE:O | 1:D:49:VAL:HG23 | 1.95 | 0.66 |
| 1:D:121:VAL:HG23 | 1:D:122:LYS:N | 2.10 | 0.66 |
| 1:D:130:LYS:CD | 1:D:393:LEU:CD2 | 2.74 | 0.66 |
| 1:F:36:ARG:HG3 | 1:F:37:SER:N | 2.09 | 0.66 |
| 1:F:212:VAL:HG21 | 1:F:294:LYS:C | 2.15 | 0.66 |
| 1:G:134:LEU:HD22 | 1:G:392:LYS:CE | 2.24 | 0.66 |
| 1:J:387:VAL:HG21 | 1:J:437:VAL:HG12 | 1.77 | 0.66 |
| 1:K:138:ILE:HG12 | 1:K:385:THR:HG23 | 1.76 | 0.66 |
| 1:L:77:MET:HB2 | 1:L:487:LEU:CD2 | 2.26 | 0.66 |
| 1:L:307:ILE:HD13 | 1:L:310:LEU:CD2 | 2.25 | 0.66 |
| 1:L:387:VAL:O | 1:L:390:SER:HB3 | 1.94 | 0.66 |
| 1:M:8:LEU:HD22 | 1:M:494:ILE:HD13 | 1.77 | 0.66 |
| 1:P:142:VAL:HG11 | 1:P:149:ILE:HG21 | 1.76 | 0.66 |
| 1:B:8:LEU:HD12 | 1:B:12:MET:HG3 | 1.76 | 0.66 |
| 1:B:153:ILE:CD1 | 1:B:372:THR:HG21 | 2.26 | 0.66 |
| 1:B:298:ALA:O | 1:B:337:CYS:HB3 | 1.94 | 0.66 |
| 1:B:389:LEU:O | 1:B:393:LEU:HD12 | 1.95 | 0.66 |
| 1:C:464:ASN:N | 1:C:464:ASN:ND2 | 2.43 | 0.66 |
| 1:D:220:SER:CB | 1:D:273:GLN:HB3 | 2.25 | 0.66 |
| 1:E:234:LEU:HB3 | 1:E:292:MET:HE3 | 1.78 | 0.66 |
| 1:E:338:LYS:O | 1:E:338:LYS:HD2 | 1.96 | 0.66 |
| 1:E:403:ARG:CB | 1:E:406:LEU:CD1 | 2.69 | 0.66 |
| 1:F:214:VAL:HG12 | 1:F:291:ASP:CG | 2.16 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:433:ILE:CG2 | 1:H:451:LEU:HD23 | 2.24 | 0.66 |
| 1:I:248:LYS:HE2 | 1:I:275:TYR:CZ | 2.30 | 0.66 |
| 1:I:368:VAL:CB | 1:I:469:PRO:HG3 | 2.26 | 0.66 |
| 1:J:68:MET:HE2 | 1:K:9:PRO:HD2 | 1.77 | 0.66 |
| 1:K:391:MET:CE | 1:K:438:ARG:HG2 | 2.24 | 0.66 |
| 1:L:51:ASP:HA | 1:M:11:ASN:OD1 | 1.95 | 0.66 |
| 1:L:78:LEU:HD13 | 1:L:487:LEU:HD11 | 1.78 | 0.66 |
| 1:L:169:LYS:HG3 | 1:L:204:ASP:CA | 2.25 | 0.66 |
| 1:L:210:LYS:O | 1:L:340:PRO:HB3 | 1.96 | 0.66 |
| 1:L:307:ILE:O | 1:L:307:ILE:CG1 | 2.43 | 0.66 |
| 1:N:42:LYS:HG3 | 1:N:426:ALA:H | 1.61 | 0.66 |
| 1:N:68:MET:HA | 1:O:9:PRO:HG3 | 1.78 | 0.66 |
| 1:N:122:LYS:HA | 1:N:125:GLN:CD | 2.16 | 0.66 |
| 1:N:343:VAL:O | 1:N:343:VAL:HG13 | 1.95 | 0.66 |
| 1:O:178:VAL:HG22 | 1:O:366:VAL:CG1 | 2.25 | 0.66 |
| 1:A:147:LYS:HG2 | 1:A:147:LYS:O | 1.95 | 0.66 |
| 1:B:178:VAL:HG22 | 1:B:366:VAL:HG13 | 1.78 | 0.66 |
| 1:B:234:LEU:CD1 | 1:B:301:ALA:CB | 2.73 | 0.66 |
| 1:B:377:ARG:CZ | 1:B:470:LEU:CD1 | 2.74 | 0.66 |
| 1:B:431:ILE:HD12 | 1:K:406:LEU:HD11 | 1.71 | 0.66 |
| 1:C:153:ILE:HD11 | 1:C:378:ILE:HG22 | 1.76 | 0.66 |
| 1:D:222:GLN:CB | 1:D:277:ALA:CB | 2.74 | 0.66 |
| 1:F:139:ALA:HB3 | 1:F:377:ARG:HE | 1.61 | 0.66 |
| 1:F:276:LEU:HD12 | 1:F:281:ILE:CG2 | 2.25 | 0.66 |
| 1:G:134:LEU:HD12 | 1:G:393:LEU:HD11 | 1.75 | 0.66 |
| 1:G:219:VAL:HG22 | 1:G:273:GLN:NE2 | 2.10 | 0.66 |
| 1:G:448:CYS:SG | 1:G:460:ASP:HB2 | 2.36 | 0.66 |
| 1:H:29:ARG:O | 1:H:33:GLU:HG3 | 1.95 | 0.66 |
| 1:I:70:VAL:HG22 | 1:I:76:LYS:HE2 | 1.77 | 0.66 |
| 1:J:347:ILE:HG21 | 1:J:355:ILE:HG23 | 1.70 | 0.66 |
| 1:K:68:MET:HA | 1:L:9:PRO:CD | 2.25 | 0.66 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:CG2 | 2.25 | 0.66 |
| 1:N:188:VAL:CG2 | 1:N:373:ILE:HD12 | 2.25 | 0.66 |
| 1:O:369:VAL:O | 1:O:369:VAL:HG23 | 1.94 | 0.66 |
| 1:P:48:LEU:CG | 1:P:68:MET:HE3 | 2.11 | 0.66 |
| 1:P:134:LEU:HD12 | 1:P:393:LEU:CD1 | 2.20 | 0.66 |
| 1:P:248:LYS:HD2 | 1:P:275:TYR:CE2 | 2.31 | 0.66 |
| 1:A:60:ASP:O | 1:A:64:ILE:HG13 | 1.96 | 0.66 |
| 1:A:92:GLY:HA2 | 1:A:95:THR:HB | 1.76 | 0.66 |
| 1:B:223:MET:CE | 1:B:273:GLN:HB3 | 2.25 | 0.66 |
| 1:C:14:ARG:CZ | 1:C:494:ILE:HD11 | 2.25 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:239:ILE:O | 1:C:247:LEU:HD13 | 1.94 | 0.66 |
| 1:D:42:LYS:HG3 | 1:D:426:ALA:H | 1.59 | 0.66 |
| 1:D:248:LYS:CD | 1:D:275:TYR:CE2 | 2.79 | 0.66 |
| 1:E:115:VAL:CG1 | 1:E:403:ARG:HE | 2.08 | 0.66 |
| 1:F:9:PRO:O | 1:F:9:PRO:CG | 2.43 | 0.66 |
| 1:H:130:LYS:HE3 | 1:H:134:LEU:HD11 | 1.77 | 0.66 |
| 1:J:217:GLU:CD | 1:J:330:SER:HB2 | 2.16 | 0.66 |
| 1:K:124:TYR:CE1 | 1:K:407:ALA:CB | 2.78 | 0.66 |
| 1:L:233:ALA:HA | 1:L:315:LEU:HD13 | 1.77 | 0.66 |
| 1:M:42:LYS:CG | 1:M:426:ALA:HB2 | 2.25 | 0.66 |
| 1:M:223:MET:CE | 1:M:276:LEU:HB2 | 2.24 | 0.66 |
| 1:M:453:VAL:CG2 | 1:M:454:PHE:CG | 2.78 | 0.66 |
| 1:N:138:ILE:HG13 | 1:N:139:ALA:H | 1.59 | 0.66 |
| 1:O:68:MET:CG | 1:P:8:LEU:HD12 | 2.25 | 0.66 |
| 1:O:188:VAL:HG21 | 1:O:373:ILE:HD12 | 1.76 | 0.66 |
| 1:O:364:ASP:O | 1:O:368:VAL:HG22 | 1.94 | 0.66 |
| 1:P:170:LEU:CD1 | 1:P:358:VAL:HG11 | 2.24 | 0.66 |
| 1:P:191:ASP:O | 1:P:294:LYS:HE3 | 1.95 | 0.66 |
| 1:P:233:ALA:HA | 1:P:315:LEU:CD1 | 2.25 | 0.66 |
| 1:A:14:ARG:CZ | 1:B:34:THR:HG23 | 2.26 | 0.66 |
| 1:A:143:GLY:O | 1:A:149:ILE:HD11 | 1.96 | 0.66 |
| 1:B:36:ARG:CG | 1:B:37:SER:H | 2.09 | 0.66 |
| 1:B:138:ILE:HG22 | 1:B:388:GLU:HG2 | 1.78 | 0.66 |
| 1:C:435:VAL:HG12 | 1:C:435:VAL:O | 1.95 | 0.66 |
| 1:D:156:THR:HG22 | 1:D:468:GLU:HA | 1.78 | 0.66 |
| 1:E:130:LYS:HD2 | 1:E:393:LEU:HD23 | 1.74 | 0.66 |
| 1:E:235:LEU:CD2 | 1:E:307:ILE:HB | 2.25 | 0.66 |
| 1:E:386:GLU:HG3 | 1:E:419:PRO:HG3 | 1.77 | 0.66 |
| 1:E:406:LEU:CD2 | 1:N:431:ILE:HG13 | 2.25 | 0.66 |
| 1:F:42:LYS:HE3 | 1:F:453:VAL:CG2 | 2.24 | 0.66 |
| 1:F:235:LEU:O | 1:F:264:CYS:HA | 1.95 | 0.66 |
| 1:G:156:THR:HG22 | 1:G:467:VAL:C | 2.15 | 0.66 |
| 1:I:119:ILE:HG21 | 1:I:403:ARG:CD | 2.26 | 0.66 |
| 1:I:156:THR:HG21 | 1:I:468:GLU:CB | 2.24 | 0.66 |
| 1:I:182:VAL:HB | 1:I:188:VAL:HG22 | 1.77 | 0.66 |
| 1:J:30:ILE:HG22 | 1:J:31:ILE:HD13 | 1.78 | 0.66 |
| 1:J:345:MET:CE | 1:J:362:VAL:HG21 | 2.26 | 0.66 |
| 1:J:368:VAL:HG21 | 1:J:469:PRO:CG | 2.26 | 0.66 |
| 1:K:138:ILE:HD13 | 1:K:385:THR:CG2 | 2.26 | 0.66 |
| 1:K:232:ILE:CG1 | 1:K:261:VAL:HG11 | 2.26 | 0.66 |
| 1:M:263:PHE:CE1 | 1:M:332:ILE:HG21 | 2.31 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:115:VAL:CG1 | 1:N:119:ILE:HB | 2.26 | 0.66 |
| 1:N:239:ILE:HD12 | 1:N:307:ILE:HD13 | 1.77 | 0.66 |
| 1:O:152:LYS:HE3 | 1:O:462:CYS:O | 1.95 | 0.66 |
| 1:O:215:ASP:C | 1:O:216:LYS:HG2 | 2.15 | 0.66 |
| 1:O:254:ILE:CG2 | 1:O:259:ALA:HB3 | 2.25 | 0.66 |
| 1:P:115:VAL:HG11 | 1:P:403:ARG:CZ | 2.25 | 0.66 |
| 1:P:130:LYS:HG3 | 1:P:393:LEU:CD2 | 2.26 | 0.66 |
| 1:P:142:VAL:HG13 | 1:P:149:ILE:CD1 | 2.21 | 0.66 |
| 1:P:307:ILE:O | 1:P:310:LEU:HB2 | 1.94 | 0.66 |
| 1:B:134:LEU:HD11 | 1:B:393:LEU:CD2 | 2.25 | 0.66 |
| 1:B:156:THR:HG21 | 1:B:468:GLU:CB | 2.26 | 0.66 |
| 1:B:254:ILE:HD13 | 1:B:262:LEU:CD1 | 2.25 | 0.66 |
| 1:B:391:MET:CE | 1:B:438:ARG:CB | 2.66 | 0.66 |
| 1:B:434:LEU:N | 1:B:434:LEU:CD2 | 2.59 | 0.66 |
| 1:C:170:LEU:O | 1:C:174:ILE:HG23 | 1.95 | 0.66 |
| 1:D:235:LEU:CG | 1:D:310:LEU:HG | 2.25 | 0.66 |
| 1:E:62:VAL:HG13 | 1:E:63:THR:N | 2.11 | 0.66 |
| 1:E:206:THR:HG21 | 1:E:347:ILE:CG2 | 2.26 | 0.66 |
| 1:E:207:GLU:OE2 | 1:E:346:LEU:HD13 | 1.96 | 0.66 |
| 1:F:237:CYS:HA | 1:F:306:ASN:C | 2.16 | 0.66 |
| 1:F:437:VAL:CG2 | 1:F:451:LEU:CD1 | 2.68 | 0.66 |
| 1:G:45:ASP:OD1 | 1:G:45:ASP:N | 2.25 | 0.66 |
| 1:H:178:VAL:HG21 | 1:H:188:VAL:CG1 | 2.26 | 0.66 |
| 1:H:215:ASP:O | 1:H:216:LYS:HG3 | 1.96 | 0.66 |
| 1:I:153:ILE:HG23 | 1:I:469:PRO:HD3 | 1.77 | 0.66 |
| 1:I:232:ILE:HG22 | 1:I:233:ALA:N | 2.11 | 0.66 |
| 1:J:15:TYR:CD2 | 1:J:19:ASP:HB2 | 2.31 | 0.66 |
| 1:J:311:SER:O | 1:J:315:LEU:HB2 | 1.96 | 0.66 |
| 1:J:433:ILE:HG22 | 1:J:451:LEU:CD2 | 2.26 | 0.66 |
| 1:K:119:ILE:CD1 | 1:K:403:ARG:HG3 | 2.26 | 0.66 |
| 1:L:234:LEU:CD2 | 1:L:301:ALA:HB3 | 2.25 | 0.66 |
| 1:M:232:ILE:CD1 | 1:M:261:VAL:HG11 | 2.23 | 0.66 |
| 1:N:106:LYS:O | 1:N:109:GLU:HB2 | 1.96 | 0.66 |
| 1:N:235:LEU:O | 1:N:264:CYS:HA | 1.96 | 0.66 |
| 1:O:178:VAL:HG21 | 1:O:366:VAL:HG22 | 1.77 | 0.66 |
| 1:O:197:LYS:HB3 | 1:O:355:ILE:HB | 1.76 | 0.66 |
| 1:O:255:LYS:HD3 | 1:O:279:GLU:HB3 | 1.76 | 0.66 |
| 1:P:170:LEU:HD21 | 1:P:358:VAL:HG22 | 1.77 | 0.66 |
| 1:P:254:ILE:HD11 | 1:P:307:ILE:HD11 | 1.78 | 0.66 |
| 1:B:211:GLY:O | 1:B:212:VAL:HG23 | 1.96 | 0.66 |
| 1:C:239:ILE:HG22 | 1:C:307:ILE:CD1 | 2.26 | 0.66 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:96:ALA:CA | 1:D:480:ALA:HB2 | 2.26 | 0.66 |
| 1:E:42:LYS:HB3 | 1:E:425:ASN:HB3 | 1.78 | 0.66 |
| 1:E:106:LYS:HA | 1:E:106:LYS:CE | 2.22 | 0.66 |
| 1:E:139:ALA:HA | 1:E:377:ARG:HG2 | 1.78 | 0.66 |
| 1:E:220:SER:HB2 | 1:E:273:GLN:HB2 | 1.76 | 0.66 |
| 1:G:150:LEU:CD2 | 1:G:175:VAL:HG13 | 2.06 | 0.66 |
| 1:L:113:GLN:O | 1:L:113:GLN:HG2 | 1.94 | 0.66 |
| 1:L:235:LEU:CG | 1:L:307:ILE:HB | 2.25 | 0.66 |
| 1:L:265:GLN:HG2 | 1:L:266:LYS:HE3 | 1.78 | 0.66 |
| 1:L:347:ILE:HG21 | 1:L:358:VAL:HB | 1.78 | 0.66 |
| 1:L:405:GLN:CG | 1:L:406:LEU:HD12 | 2.25 | 0.66 |
| 1:M:57:VAL:C | 1:M:58:THR:HG23 | 2.16 | 0.66 |
| 1:N:119:ILE:HD11 | 1:N:403:ARG:HH12 | 1.61 | 0.66 |
| 1:N:223:MET:CE | 1:N:283:ALA:HB3 | 2.26 | 0.66 |
| 1:N:247:LEU:HG | 1:N:272:ALA:HB2 | 1.78 | 0.66 |
| 1:O:141:GLU:O | 1:O:142:VAL:HB | 1.94 | 0.66 |
| 1:O:177:ALA:O | 1:O:181:VAL:HG13 | 1.96 | 0.66 |
| 1:P:234:LEU:HD11 | 1:P:301:ALA:CB | 2.26 | 0.66 |
| 1:A:166:ALA:HB3 | 1:A:170:LEU:HD21 | 1.78 | 0.65 |
| 1:E:198:LYS:N | 1:E:355:ILE:HD13 | 2.11 | 0.65 |
| 1:E:430:ALA:O | 1:E:434:LEU:HD23 | 1.96 | 0.65 |
| 1:F:158:ILE:HD11 | 1:F:170:LEU:HB3 | 1.77 | 0.65 |
| 1:F:181:VAL:HG23 | 1:F:182:VAL:N | 2.11 | 0.65 |
| 1:G:9:PRO:HB2 | 1:H:69:SER:OG | 1.97 | 0.65 |
| 1:I:197:LYS:O | 1:I:197:LYS:CG | 2.41 | 0.65 |
| 1:J:42:LYS:HG3 | 1:J:425:ASN:CB | 2.24 | 0.65 |
| 1:J:68:MET:HA | 1:K:9:PRO:CD | 2.26 | 0.65 |
| 1:J:170:LEU:CD2 | 1:J:358:VAL:CG1 | 2.73 | 0.65 |
| 1:K:44:MET:HA | 1:K:44:MET:HE2 | 1.76 | 0.65 |
| 1:K:170:LEU:HD13 | 1:K:358:VAL:HG13 | 1.77 | 0.65 |
| 1:K:255:LYS:HD3 | 1:K:279:GLU:HB3 | 1.78 | 0.65 |
| 1:L:70:VAL:HA | 1:M:9:PRO:HD2 | 1.77 | 0.65 |
| 1:L:326:ILE:HG13 | 1:L:348:ARG:NH1 | 2.10 | 0.65 |
| 1:O:69:SER:HB3 | 1:P:9:PRO:CB | 2.25 | 0.65 |
| 1:P:391:MET:HE1 | 1:P:438:ARG:HE | 1.60 | 0.65 |
| 1:A:82:ALA:HB2 | 1:A:97:VAL:HG11 | 1.78 | 0.65 |
| 1:A:96:ALA:HA | 1:A:480:ALA:HB3 | 1.78 | 0.65 |
| 1:A:235:LEU:HD21 | 1:A:307:ILE:N | 2.11 | 0.65 |
| 1:C:119:ILE:HD12 | 1:C:403:ARG:CD | 2.26 | 0.65 |
| 1:C:248:LYS:HG3 | 1:C:275:TYR:CE2 | 2.30 | 0.65 |
| 1:F:100:ALA:O | 1:F:104:LEU:HG | 1.95 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:239:ILE:HA | 1:G:307:ILE:HG21 | 1.78 | 0.65 |
| 1:J:42:LYS:HE3 | 1:K:118:THR:HG21 | 1.76 | 0.65 |
| 1:K:222:GLN:CB | 1:K:277:ALA:CB | 2.74 | 0.65 |
| 1:K:435:VAL:HG12 | 1:K:435:VAL:O | 1.96 | 0.65 |
| 1:M:208:LEU:HD11 | 1:M:343:VAL:CG2 | 2.22 | 0.65 |
| 1:N:247:LEU:CG | 1:N:272:ALA:HB2 | 2.26 | 0.65 |
| 1:N:346:LEU:HD22 | 1:N:348:ARG:HG2 | 1.78 | 0.65 |
| 1:P:340:PRO:O | 1:P:340:PRO:CG | 2.44 | 0.65 |
| 1:A:420:ARG:CG | 1:A:420:ARG:NH1 | 2.50 | 0.65 |
| 1:A:469:PRO:HG2 | 1:A:472:VAL:HG21 | 1.78 | 0.65 |
| 1:B:198:LYS:HG3 | 1:B:326:ILE:CG2 | 2.26 | 0.65 |
| 1:B:198:LYS:HG3 | 1:B:326:ILE:HG23 | 1.77 | 0.65 |
| 1:C:197:LYS:CA | 1:C:355:ILE:CG2 | 2.69 | 0.65 |
| 1:D:307:ILE:HD11 | 1:D:310:LEU:HB2 | 1.77 | 0.65 |
| 1:E:383:GLY:HA2 | 1:E:386:GLU:CG | 2.26 | 0.65 |
| 1:F:115:VAL:HG11 | 1:F:403:ARG:NE | 2.10 | 0.65 |
| 1:F:127:ALA:HB2 | 1:F:408:VAL:HG12 | 1.77 | 0.65 |
| 1:G:237:CYS:SG | 1:G:238:ALA:HB3 | 2.37 | 0.65 |
| 1:H:166:ALA:C | 1:H:170:LEU:HD22 | 2.16 | 0.65 |
| 1:H:235:LEU:HD21 | 1:H:307:ILE:CA | 2.25 | 0.65 |
| 1:H:391:MET:HE2 | 1:H:438:ARG:CB | 2.26 | 0.65 |
| 1:J:158:ILE:CD1 | 1:J:170:LEU:CB | 2.74 | 0.65 |
| 1:N:42:LYS:NZ | 1:O:118:THR:HG22 | 2.10 | 0.65 |
| 1:N:68:MET:HE2 | 1:O:9:PRO:CG | 2.27 | 0.65 |
| 1:N:222:GLN:C | 1:N:277:ALA:HB1 | 2.17 | 0.65 |
| 1:N:268:ILE:HB | 1:N:273:GLN:NE2 | 2.12 | 0.65 |
| 1:N:414:ALA:O | 1:N:417:VAL:HG12 | 1.96 | 0.65 |
| 1:P:218:ARG:HB2 | 1:P:323:GLU:OE2 | 1.97 | 0.65 |
| 1:B:70:VAL:CG2 | 1:B:76:LYS:CD | 2.74 | 0.65 |
| 1:B:339:HIS:ND1 | 1:B:341:LYS:HD2 | 2.11 | 0.65 |
| 1:B:379:VAL:HG12 | 1:B:470:LEU:HD23 | 1.78 | 0.65 |
| 1:C:220:SER:HB2 | 1:C:273:GLN:HB2 | 1.78 | 0.65 |
| 1:C:232:ILE:HG22 | 1:C:232:ILE:O | 1.96 | 0.65 |
| 1:C:250:MET:CE | 1:C:308:LYS:HG2 | 2.27 | 0.65 |
| 1:D:164:GLU:O | 1:D:164:GLU:HG3 | 1.95 | 0.65 |
| 1:D:368:VAL:CB | 1:D:469:PRO:HG2 | 2.24 | 0.65 |
| 1:E:72:HIS:HB2 | 1:E:73:PRO:HD2 | 1.77 | 0.65 |
| 1:E:247:LEU:O | 1:E:251:VAL:HG23 | 1.95 | 0.65 |
| 1:F:406:LEU:HD12 | 1:F:406:LEU:N | 2.11 | 0.65 |
| 1:G:383:GLY:HA2 | 1:G:386:GLU:CG | 2.26 | 0.65 |
| 1:H:166:ALA:HB3 | 1:H:203:ILE:HB | 1.78 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:9:PRO:HD2 | 1:I:12:MET:SD | 2.36 | 0.65 |
| 1:I:347:ILE:HG21 | 1:I:358:VAL:HG12 | 1.78 | 0.65 |
| 1:I:347:ILE:HG21 | 1:I:358:VAL:HB | 1.79 | 0.65 |
| 1:J:321:VAL:HG22 | 1:J:334:VAL:HG13 | 1.77 | 0.65 |
| 1:K:197:LYS:HB3 | 1:K:355:ILE:HG22 | 1.78 | 0.65 |
| 1:K:452:ASN:HB2 | 1:K:459:GLU:CD | 2.15 | 0.65 |
| 1:L:262:LEU:HD11 | 1:L:310:LEU:CD2 | 2.27 | 0.65 |
| 1:M:416:GLU:O | 1:M:420:ARG:HB2 | 1.97 | 0.65 |
| 1:N:236:ASN:O | 1:N:236:ASN:OD1 | 2.14 | 0.65 |
| 1:N:377:ARG:CZ | 1:N:377:ARG:HB2 | 2.25 | 0.65 |
| 1:P:450:GLY:O | 1:P:451:LEU:HD12 | 1.97 | 0.65 |
| 1:A:30:ILE:HG22 | 1:A:31:ILE:CA | 2.26 | 0.65 |
| 1:A:130:LYS:CD | 1:A:393:LEU:CD2 | 2.75 | 0.65 |
| 1:A:142:VAL:HG11 | 1:A:378:ILE:HD13 | 1.77 | 0.65 |
| 1:B:130:LYS:NZ | 1:B:396:TYR:HB2 | 2.11 | 0.65 |
| 1:C:9:PRO:HB3 | 1:D:69:SER:HB3 | 1.79 | 0.65 |
| 1:C:9:PRO:HD2 | 1:D:68:MET:HE1 | 1.79 | 0.65 |
| 1:D:233:ALA:HA | 1:D:315:LEU:CD2 | 2.26 | 0.65 |
| 1:E:459:GLU:CG | 1:E:461:MET:HE2 | 2.25 | 0.65 |
| 1:F:234:LEU:H | 1:F:315:LEU:CD2 | 2.10 | 0.65 |
| 1:F:345:MET:HE2 | 1:F:362:VAL:HG21 | 1.79 | 0.65 |
| 1:G:235:LEU:CD2 | 1:G:310:LEU:HD22 | 2.27 | 0.65 |
| 1:G:345:MET:HE1 | 1:G:362:VAL:CG2 | 2.27 | 0.65 |
| 1:I:64:ILE:HG22 | 1:I:65:LEU:HD22 | 1.76 | 0.65 |
| 1:I:321:VAL:HG22 | 1:I:334:VAL:HG13 | 1.78 | 0.65 |
| 1:I:467:VAL:HG22 | 1:I:467:VAL:O | 1.96 | 0.65 |
| 1:L:68:MET:HB3 | 1:M:8:LEU:CG | 2.25 | 0.65 |
| 1:L:116:HIS:HB3 | 1:L:118:THR:OG1 | 1.97 | 0.65 |
| 1:L:215:ASP:OD1 | 1:L:331:MET:HG2 | 1.95 | 0.65 |
| 1:M:433:ILE:HG22 | 1:M:451:LEU:CD2 | 2.26 | 0.65 |
| 1:M:494:ILE:CG2 | 1:M:494:ILE:O | 2.45 | 0.65 |
| 1:N:115:VAL:CG2 | 1:N:119:ILE:HG13 | 2.26 | 0.65 |
| 1:N:403:ARG:CG | 1:N:403:ARG:NH1 | 1.88 | 0.65 |
| 1:O:178:VAL:CG2 | 1:O:366:VAL:HG13 | 2.25 | 0.65 |
| 1:P:214:VAL:CG1 | 1:P:291:ASP:HB3 | 2.26 | 0.65 |
| 1:A:116:HIS:CG | 1:A:117:PRO:HD2 | 2.31 | 0.65 |
| 1:A:326:ILE:O | 1:A:327:SER:HB3 | 1.96 | 0.65 |
| 1:B:124:TYR:CE1 | 1:B:407:ALA:CB | 2.79 | 0.65 |
| 1:B:158:ILE:O | 1:B:158:ILE:HG22 | 1.97 | 0.65 |
| 1:B:206:THR:HB | 1:B:347:ILE:CG2 | 2.24 | 0.65 |
| 1:B:313:GLN:C | 1:B:315:LEU:H | 2.00 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:195:ILE:CG1 | 1:D:359:ALA:HB1 | 2.26 | 0.65 |
| 1:E:31:ILE:HG21 | 1:E:65:LEU:HD22 | 1.78 | 0.65 |
| 1:E:220:SER:CB | 1:E:273:GLN:HB2 | 2.27 | 0.65 |
| 1:E:420:ARG:NH1 | 1:E:420:ARG:CG | 2.53 | 0.65 |
| 1:E:459:GLU:HG2 | 1:E:461:MET:HE1 | 1.79 | 0.65 |
| 1:G:31:ILE:HG23 | 1:G:65:LEU:HD21 | 1.78 | 0.65 |
| 1:G:494:ILE:CG2 | 1:H:68:MET:HE2 | 2.27 | 0.65 |
| 1:H:377:ARG:HG2 | 1:H:470:LEU:CD2 | 2.21 | 0.65 |
| 1:H:469:PRO:HD2 | 1:H:472:VAL:HG21 | 1.79 | 0.65 |
| 1:I:96:ALA:O | 1:I:480:ALA:HB1 | 1.97 | 0.65 |
| 1:I:178:VAL:CG1 | 1:I:188:VAL:CG1 | 2.73 | 0.65 |
| 1:I:437:VAL:CG2 | 1:I:451:LEU:HD11 | 2.23 | 0.65 |
| 1:J:117:PRO:O | 1:J:120:VAL:HG12 | 1.96 | 0.65 |
| 1:J:122:LYS:HB3 | 1:J:404:GLU:OE2 | 1.96 | 0.65 |
| 1:J:377:ARG:HE | 1:J:470:LEU:HD13 | 1.62 | 0.65 |
| 1:K:44:MET:HE3 | 1:K:44:MET:CA | 2.21 | 0.65 |
| 1:K:115:VAL:HG11 | 1:K:403:ARG:CD | 2.27 | 0.65 |
| 1:K:368:VAL:HG21 | 1:K:469:PRO:HG2 | 1.77 | 0.65 |
| 1:L:116:HIS:HD2 | 1:L:118:THR:CG2 | 2.10 | 0.65 |
| 1:L:144:ALA:O | 1:L:150:LEU:HD11 | 1.96 | 0.65 |
| 1:L:255:LYS:HZ1 | 1:L:279:GLU:HG2 | 1.60 | 0.65 |
| 1:L:469:PRO:HG2 | 1:L:472:VAL:CG2 | 2.26 | 0.65 |
| 1:M:198:LYS:CB | 1:M:326:ILE:HD11 | 2.26 | 0.65 |
| 1:N:432:GLU:HB2 | 1:N:436:LYS:NZ | 2.11 | 0.65 |
| 1:O:124:TYR:CE1 | 1:O:407:ALA:CB | 2.79 | 0.65 |
| 1:O:237:CYS:HB3 | 1:O:306:ASN:CG | 2.17 | 0.65 |
| 1:P:307:ILE:O | 1:P:307:ILE:CD1 | 2.44 | 0.65 |
| 1:A:78:LEU:HD12 | 1:A:487:LEU:HD11 | 1.78 | 0.65 |
| 1:A:117:PRO:O | 1:A:120:VAL:HG12 | 1.96 | 0.65 |
| 1:A:130:LYS:CG | 1:A:393:LEU:HD21 | 2.27 | 0.65 |
| 1:B:276:LEU:CD2 | 1:B:281:ILE:HD12 | 2.16 | 0.65 |
| 1:C:130:LYS:CD | 1:C:393:LEU:CD2 | 2.75 | 0.65 |
| 1:C:158:ILE:HD13 | 1:C:167:LYS:HA | 1.78 | 0.65 |
| 1:C:212:VAL:HG23 | 1:C:298:ALA:HB2 | 1.79 | 0.65 |
| 1:D:89:VAL:CG1 | 1:D:472:VAL:HA | 2.27 | 0.65 |
| 1:D:254:ILE:HD13 | 1:D:262:LEU:HD11 | 1.78 | 0.65 |
| 1:D:268:ILE:CB | 1:D:273:GLN:HE21 | 2.09 | 0.65 |
| 1:D:339:HIS:CE1 | 1:D:341:LYS:CD | 2.72 | 0.65 |
| 1:D:391:MET:HE3 | 1:D:438:ARG:CA | 2.26 | 0.65 |
| 1:F:158:ILE:CG1 | 1:F:361:ALA:HB1 | 2.24 | 0.65 |
| 1:F:276:LEU:HB3 | 1:F:281:ILE:HG13 | 1.78 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:9:PRO:HD2 | 1:H:69:SER:CB | 2.27 | 0.65 |
| 1:G:105:ARG:HH12 | 1:G:106:LYS:HD2 | 1.61 | 0.65 |
| 1:G:170:LEU:HD21 | 1:G:358:VAL:CG1 | 2.23 | 0.65 |
| 1:G:248:LYS:HB2 | 1:G:275:TYR:CE2 | 2.31 | 0.65 |
| 1:G:383:GLY:HA2 | 1:G:386:GLU:HG2 | 1.78 | 0.65 |
| 1:G:473:LYS:HE3 | 1:G:473:LYS:HA | 1.79 | 0.65 |
| 1:H:77:MET:HE2 | 1:H:487:LEU:HD21 | 1.76 | 0.65 |
| 1:H:220:SER:HB2 | 1:H:273:GLN:O | 1.97 | 0.65 |
| 1:H:254:ILE:HG21 | 1:H:262:LEU:HD12 | 1.78 | 0.65 |
| 1:I:174:ILE:CG2 | 1:I:362:VAL:HB | 2.27 | 0.65 |
| 1:J:485:GLU:HG2 | 1:J:485:GLU:O | 1.96 | 0.65 |
| 1:L:296:ALA:HB1 | 1:L:301:ALA:O | 1.96 | 0.65 |
| 1:L:297:LYS:HG2 | 1:L:341:LYS:HG2 | 1.78 | 0.65 |
| 1:M:34:THR:HG21 | 1:M:65:LEU:HD21 | 1.78 | 0.65 |
| 1:M:52:LEU:N | 1:M:52:LEU:CD2 | 2.38 | 0.65 |
| 1:M:68:MET:CG | 1:N:8:LEU:HD23 | 2.27 | 0.65 |
| 1:M:459:GLU:HB3 | 1:M:461:MET:HE2 | 1.78 | 0.65 |
| 1:O:177:ALA:HB2 | 1:O:208:LEU:HD11 | 1.79 | 0.65 |
| 1:O:299:THR:CG2 | 1:O:318:ALA:HB2 | 2.24 | 0.65 |
| 1:P:34:THR:HG22 | 1:P:35:VAL:HG22 | 1.79 | 0.65 |
| 1:P:206:THR:HB | 1:P:347:ILE:CG2 | 2.27 | 0.65 |
| 1:A:9:PRO:HA | 1:B:69:SER:HB3 | 1.76 | 0.65 |
| 1:A:175:VAL:HG12 | 1:A:175:VAL:O | 1.96 | 0.65 |
| 1:A:235:LEU:HD12 | 1:A:307:ILE:CD1 | 2.17 | 0.65 |
| 1:C:178:VAL:HG12 | 1:C:178:VAL:O | 1.96 | 0.65 |
| 1:C:250:MET:HE2 | 1:C:308:LYS:CG | 2.27 | 0.65 |
| 1:C:325:LYS:HG3 | 1:C:330:SER:CB | 2.26 | 0.65 |
| 1:E:235:LEU:CD1 | 1:E:307:ILE:CA | 2.75 | 0.65 |
| 1:F:94:THR:O | 1:F:98:VAL:HG23 | 1.96 | 0.65 |
| 1:H:135:LEU:CD2 | 1:H:385:THR:CG2 | 2.75 | 0.65 |
| 1:H:178:VAL:HB | 1:H:193:ILE:HD11 | 1.78 | 0.65 |
| 1:H:400:ILE:HD11 | 1:H:408:VAL:HG21 | 1.79 | 0.65 |
| 1:I:42:LYS:HD2 | 1:I:426:ALA:CA | 2.27 | 0.65 |
| 1:I:235:LEU:CD2 | 1:I:310:LEU:CD1 | 2.64 | 0.65 |
| 1:I:265:GLN:HE22 | 1:I:289:LYS:HD2 | 1.62 | 0.65 |
| 1:I:405:GLN:HG2 | 1:I:406:LEU:N | 2.11 | 0.65 |
| 1:J:81:VAL:HG11 | 1:J:483:SER:HB3 | 1.78 | 0.65 |
| 1:J:190:LYS:NZ | 1:J:367:GLY:HA2 | 2.12 | 0.65 |
| 1:J:433:ILE:HG22 | 1:J:451:LEU:HD23 | 1.76 | 0.65 |
| 1:K:9:PRO:HD2 | 1:K:12:MET:HE3 | 1.79 | 0.65 |
| 1:K:173:ILE:HG13 | 1:K:345:MET:SD | 2.36 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:235:LEU:HD13 | 1:K:307:ILE:CD1 | 2.27 | 0.65 |
| 1:L:211:GLY:C | 1:L:298:ALA:CB | 2.65 | 0.65 |
| 1:L:391:MET:CE | 1:L:438:ARG:HA | 2.23 | 0.65 |
| 1:L:469:PRO:CD | 1:L:472:VAL:HG21 | 2.26 | 0.65 |
| 1:M:18:ARG:O | 1:M:21:GLN:HB2 | 1.97 | 0.65 |
| 1:M:52:LEU:HD23 | 1:M:52:LEU:H | 1.44 | 0.65 |
| 1:M:99:VAL:HG12 | 1:M:418:ILE:HD11 | 1.78 | 0.65 |
| 1:M:182:VAL:HG21 | 1:M:188:VAL:CG1 | 2.25 | 0.65 |
| 1:N:170:LEU:HD21 | 1:N:358:VAL:HG22 | 1.77 | 0.65 |
| 1:N:215:ASP:OD1 | 1:N:331:MET:HG2 | 1.97 | 0.65 |
| 1:O:77:MET:HE1 | 1:O:486:MET:HE1 | 1.78 | 0.65 |
| 1:O:152:LYS:HD2 | 1:O:465:GLY:HA3 | 1.78 | 0.65 |
| 1:O:211:GLY:HA2 | 1:O:298:ALA:HB1 | 1.79 | 0.65 |
| 1:P:158:ILE:HB | 1:P:361:ALA:CB | 2.26 | 0.65 |
| 1:P:347:ILE:CD1 | 1:P:359:ALA:HB2 | 2.27 | 0.65 |
| 1:A:69:SER:N | 1:H:9:PRO:CD | 2.56 | 0.65 |
| 1:A:212:VAL:HB | 1:A:298:ALA:CB | 2.26 | 0.65 |
| 1:B:96:ALA:CB | 1:B:480:ALA:HB2 | 2.25 | 0.65 |
| 1:B:254:ILE:HG12 | 1:B:310:LEU:HD13 | 1.79 | 0.65 |
| 1:C:12:MET:CE | 1:C:494:ILE:CG2 | 2.74 | 0.65 |
| 1:C:77:MET:CE | 1:C:486:MET:CE | 2.75 | 0.65 |
| 1:E:142:VAL:CB | 1:E:149:ILE:HD13 | 2.27 | 0.65 |
| 1:G:251:VAL:HG13 | 1:G:276:LEU:HD22 | 1.78 | 0.65 |
| 1:H:206:THR:CG2 | 1:H:348:ARG:H | 1.87 | 0.65 |
| 1:H:223:MET:HG3 | 1:H:277:ALA:CB | 2.27 | 0.65 |
| 1:H:339:HIS:HE1 | 1:H:341:LYS:CE | 2.09 | 0.65 |
| 1:I:255:LYS:O | 1:I:255:LYS:HG3 | 1.96 | 0.65 |
| 1:I:380:SER:HB3 | 1:I:384:SER:CB | 2.27 | 0.65 |
| 1:J:248:LYS:CD | 1:J:275:TYR:CZ | 2.77 | 0.65 |
| 1:J:262:LEU:CD1 | 1:J:310:LEU:CD2 | 2.75 | 0.65 |
| 1:K:68:MET:CA | 1:L:8:LEU:HA | 2.26 | 0.65 |
| 1:L:78:LEU:HD11 | 1:L:487:LEU:HD11 | 1.77 | 0.65 |
| 1:L:437:VAL:CG2 | 1:L:451:LEU:CD1 | 2.62 | 0.65 |
| 1:M:38:THR:CG2 | 1:M:46:LYS:CE | 2.69 | 0.65 |
| 1:M:130:LYS:HZ1 | 1:M:393:LEU:HD23 | 1.59 | 0.65 |
| 1:M:233:ALA:HB1 | 1:M:310:LEU:CD1 | 2.26 | 0.65 |
| 1:M:391:MET:HE3 | 1:M:438:ARG:CA | 2.26 | 0.65 |
| 1:O:46:LYS:HG2 | 1:P:492:ASP:OD2 | 1.96 | 0.65 |
| 1:O:156:THR:CG2 | 1:O:468:GLU:HB3 | 2.25 | 0.65 |
| 1:O:197:LYS:HB3 | 1:O:355:ILE:CB | 2.26 | 0.65 |
| 1:P:437:VAL:HG11 | 1:P:451:LEU:CD1 | 2.26 | 0.65 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:152:LYS:HD3 | 1:A:467:VAL:HG21 | 1.79 | 0.65 |
| 1:B:130:LYS:HD2 | 1:B:396:TYR:CD1 | 2.32 | 0.65 |
| 1:B:223:MET:HE1 | 1:B:273:GLN:HB3 | 1.78 | 0.65 |
| 1:B:430:ALA:O | 1:B:434:LEU:HD23 | 1.96 | 0.65 |
| 1:B:494:ILE:HG22 | 1:C:48:LEU:HA | 1.79 | 0.65 |
| 1:C:130:LYS:CE | 1:C:393:LEU:CD2 | 2.74 | 0.65 |
| 1:C:254:ILE:HG21 | 1:C:262:LEU:HD13 | 1.79 | 0.65 |
| 1:D:181:VAL:HG12 | 1:D:341:LYS:O | 1.96 | 0.65 |
| 1:D:254:ILE:CG1 | 1:D:310:LEU:HD12 | 2.22 | 0.65 |
| 1:E:42:LYS:HE3 | 1:E:426:ALA:CA | 2.27 | 0.65 |
| 1:F:72:HIS:HD2 | 1:F:73:PRO:CD | 2.10 | 0.65 |
| 1:H:358:VAL:O | 1:H:362:VAL:HG12 | 1.97 | 0.65 |
| 1:I:461:MET:HE1 | 1:I:461:MET:N | 2.10 | 0.65 |
| 1:J:120:VAL:HG22 | 1:J:124:TYR:HE2 | 1.58 | 0.65 |
| 1:J:254:ILE:HG12 | 1:J:310:LEU:CD2 | 2.27 | 0.65 |
| 1:M:208:LEU:HD12 | 1:M:343:VAL:HG22 | 1.79 | 0.65 |
| 1:M:237:CYS:SG | 1:M:306:ASN:HB2 | 2.37 | 0.65 |
| 1:N:182:VAL:HB | 1:N:188:VAL:HG22 | 1.77 | 0.65 |
| 1:O:198:LYS:N | 1:O:355:ILE:HD12 | 2.11 | 0.65 |
| 1:O:212:VAL:HG21 | 1:O:295:LEU:N | 2.11 | 0.65 |
| 1:A:69:SER:H | 1:H:9:PRO:CD | 2.09 | 0.64 |
| 1:A:219:VAL:HG13 | 1:A:273:GLN:CB | 2.22 | 0.64 |
| 1:C:149:ILE:O | 1:C:153:ILE:HG12 | 1.97 | 0.64 |
| 1:C:325:LYS:HA | 1:C:330:SER:HB3 | 1.78 | 0.64 |
| 1:F:254:ILE:HG22 | 1:F:259:ALA:HB3 | 1.77 | 0.64 |
| 1:G:464:ASN:HB2 | 1:G:466:VAL:CG2 | 2.26 | 0.64 |
| 1:H:232:ILE:HA | 1:H:261:VAL:HB | 1.77 | 0.64 |
| 1:I:233:ALA:HB1 | 1:I:310:LEU:HD11 | 1.78 | 0.64 |
| 1:J:197:LYS:CA | 1:J:355:ILE:HG21 | 2.27 | 0.64 |
| 1:K:121:VAL:CG2 | 1:K:122:LYS:H | 2.05 | 0.64 |
| 1:K:138:ILE:CD1 | 1:K:379:VAL:HG11 | 2.27 | 0.64 |
| 1:K:158:ILE:HG22 | 1:K:164:GLU:HA | 1.78 | 0.64 |
| 1:K:262:LEU:HD12 | 1:K:310:LEU:HD11 | 1.79 | 0.64 |
| 1:L:396:TYR:O | 1:L:396:TYR:CD2 | 2.50 | 0.64 |
| 1:M:69:SER:N | 1:N:9:PRO:HG3 | 2.12 | 0.64 |
| 1:M:70:VAL:CG2 | 1:M:76:LYS:HG3 | 2.26 | 0.64 |
| 1:M:181:VAL:HG12 | 1:M:341:LYS:O | 1.97 | 0.64 |
| 1:M:298:ALA:O | 1:M:337:CYS:HB3 | 1.96 | 0.64 |
| 1:N:124:TYR:CD1 | 1:N:124:TYR:N | 2.64 | 0.64 |
| 1:N:182:VAL:HB | 1:N:188:VAL:CG2 | 2.26 | 0.64 |
| 1:N:377:ARG:CB | 1:N:470:LEU:HD12 | 2.28 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:432:GLU:C | 1:N:436:LYS:HZ2 | 2.00 | 0.64 |
| 1:O:8:LEU:CD1 | 1:O:494:ILE:HD13 | 2.26 | 0.64 |
| 1:O:150:LEU:CD2 | 1:O:175:VAL:HG13 | 2.27 | 0.64 |
| 1:A:25:ILE:HD13 | 1:A:108:GLU:CG | 2.27 | 0.64 |
| 1:A:170:LEU:CD1 | 1:A:358:VAL:CG1 | 2.76 | 0.64 |
| 1:A:492:ASP:OD2 | 1:B:46:LYS:HG2 | 1.96 | 0.64 |
| 1:B:377:ARG:HB2 | 1:B:470:LEU:HD12 | 1.80 | 0.64 |
| 1:C:227:VAL:HG11 | 1:C:260:ASN:ND2 | 2.12 | 0.64 |
| 1:C:235:LEU:CG | 1:C:307:ILE:HA | 2.27 | 0.64 |
| 1:C:340:PRO:O | 1:C:340:PRO:CG | 2.20 | 0.64 |
| 1:E:8:LEU:HD23 | 1:F:68:MET:HG3 | 1.77 | 0.64 |
| 1:E:119:ILE:CG1 | 1:E:403:ARG:HD2 | 2.27 | 0.64 |
| 1:E:312:ALA:HA | 1:E:315:LEU:HD12 | 1.79 | 0.64 |
| 1:F:235:LEU:CD1 | 1:F:310:LEU:CG | 2.76 | 0.64 |
| 1:F:276:LEU:CB | 1:F:281:ILE:HG13 | 2.27 | 0.64 |
| 1:G:391:MET:CE | 1:G:438:ARG:CB | 2.75 | 0.64 |
| 1:H:142:VAL:HG12 | 1:H:378:ILE:CD1 | 2.27 | 0.64 |
| 1:J:396:TYR:O | 1:J:396:TYR:CG | 2.49 | 0.64 |
| 1:K:42:LYS:CB | 1:K:425:ASN:CB | 2.71 | 0.64 |
| 1:M:469:PRO:HG2 | 1:M:472:VAL:HG11 | 1.79 | 0.64 |
| 1:N:400:ILE:HD11 | 1:N:408:VAL:HG11 | 1.78 | 0.64 |
| 1:O:119:ILE:CD1 | 1:O:403:ARG:HD2 | 2.26 | 0.64 |
| 1:O:193:ILE:HD12 | 1:O:366:VAL:CG2 | 2.26 | 0.64 |
| 1:O:381:GLY:HA3 | 1:O:461:MET:HG3 | 1.78 | 0.64 |
| 1:P:89:VAL:HG22 | 1:P:89:VAL:O | 1.95 | 0.64 |
| 1:P:113:GLN:O | 1:P:113:GLN:CG | 2.45 | 0.64 |
| 1:P:143:GLY:O | 1:P:149:ILE:HD11 | 1.98 | 0.64 |
| 1:A:142:VAL:HG13 | 1:A:149:ILE:CD1 | 2.23 | 0.64 |
| 1:A:262:LEU:HD11 | 1:A:310:LEU:CD2 | 2.27 | 0.64 |
| 1:B:153:ILE:HD12 | 1:B:372:THR:HG21 | 1.78 | 0.64 |
| 1:D:130:LYS:HE3 | 1:D:393:LEU:CD2 | 2.26 | 0.64 |
| 1:E:134:LEU:CD1 | 1:E:392:LYS:HE3 | 2.25 | 0.64 |
| 1:E:177:ALA:CB | 1:E:343:VAL:HG11 | 2.27 | 0.64 |
| 1:E:449:ALA:HB2 | 1:E:458:VAL:HG22 | 1.79 | 0.64 |
| 1:E:464:ASN:HB3 | 1:E:466:VAL:H | 1.61 | 0.64 |
| 1:H:288:LYS:O | 1:H:291:ASP:HB2 | 1.97 | 0.64 |
| 1:H:459:GLU:HB3 | 1:H:461:MET:HE3 | 1.78 | 0.64 |
| 1:J:206:THR:HG22 | 1:J:348:ARG:H | 1.62 | 0.64 |
| 1:K:8:LEU:HD12 | 1:K:12:MET:HG2 | 1.77 | 0.64 |
| 1:K:95:THR:O | 1:K:99:VAL:HG13 | 1.96 | 0.64 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:HB2 | 1.80 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:234:LEU:HD11 | 1:K:296:ALA:HB2 | 1.78 | 0.64 |
| 1:L:235:LEU:HB2 | 1:L:310:LEU:CD2 | 2.23 | 0.64 |
| 1:N:111:LEU:HD11 | 1:N:488:LEU:HD21 | 1.79 | 0.64 |
| 1:O:124:TYR:CE1 | 1:O:407:ALA:HA | 2.22 | 0.64 |
| 1:O:247:LEU:HG | 1:O:272:ALA:HB2 | 1.79 | 0.64 |
| 1:O:251:VAL:HG13 | 1:O:276:LEU:CD1 | 2.22 | 0.64 |
| 1:P:122:LYS:HA | 1:P:125:GLN:CD | 2.17 | 0.64 |
| 1:A:81:VAL:HG21 | 1:A:483:SER:OG | 1.96 | 0.64 |
| 1:A:206:THR:HG21 | 1:A:347:ILE:HG23 | 1.79 | 0.64 |
| 1:B:441:HIS:CE1 | 1:B:449:ALA:HA | 2.32 | 0.64 |
| 1:C:35:VAL:HG12 | 1:C:64:ILE:HD13 | 1.79 | 0.64 |
| 1:C:42:LYS:HG3 | 1:C:425:ASN:C | 2.18 | 0.64 |
| 1:C:461:MET:CB | 1:C:466:VAL:HG23 | 2.28 | 0.64 |
| 1:D:73:PRO:CB | 1:E:47:MET:CE | 2.74 | 0.64 |
| 1:E:134:LEU:HB3 | 1:E:392:LYS:CE | 2.28 | 0.64 |
| 1:F:8:LEU:HD12 | 1:G:68:MET:HB3 | 1.78 | 0.64 |
| 1:F:147:LYS:O | 1:F:147:LYS:HG3 | 1.97 | 0.64 |
| 1:F:182:VAL:CB | 1:F:188:VAL:HG22 | 2.21 | 0.64 |
| 1:G:9:PRO:CD | 1:H:69:SER:C | 2.66 | 0.64 |
| 1:G:235:LEU:HD12 | 1:G:264:CYS:HB3 | 1.77 | 0.64 |
| 1:H:105:ARG:NH1 | 1:H:106:LYS:HG2 | 2.12 | 0.64 |
| 1:H:130:LYS:CG | 1:H:393:LEU:HD11 | 2.22 | 0.64 |
| 1:J:69:SER:HB3 | 1:K:9:PRO:HA | 1.78 | 0.64 |
| 1:J:197:LYS:HB3 | 1:J:355:ILE:HG22 | 1.76 | 0.64 |
| 1:K:41:PRO:HG3 | 1:K:453:VAL:HG11 | 1.79 | 0.64 |
| 1:L:68:MET:HG3 | 1:M:494:ILE:HG21 | 1.79 | 0.64 |
| 1:L:70:VAL:HA | 1:M:8:LEU:CA | 2.27 | 0.64 |
| 1:M:469:PRO:HD2 | 1:M:472:VAL:HG11 | 1.79 | 0.64 |
| 1:N:138:ILE:HD12 | 1:N:385:THR:CB | 2.26 | 0.64 |
| 1:P:9:PRO:HD2 | 1:P:12:MET:CE | 2.24 | 0.64 |
| 1:P:199:SER:HB2 | 1:P:327:SER:CB | 2.19 | 0.64 |
| 1:A:276:LEU:HD13 | 1:A:281:ILE:HD12 | 1.79 | 0.64 |
| 1:B:237:CYS:O | 1:B:307:ILE:HG22 | 1.98 | 0.64 |
| 1:C:124:TYR:HE1 | 1:C:407:ALA:HA | 1.63 | 0.64 |
| 1:D:89:VAL:HG13 | 1:D:472:VAL:HG13 | 1.79 | 0.64 |
| 1:D:166:ALA:HB2 | 1:D:203:ILE:HB | 1.79 | 0.64 |
| 1:D:195:ILE:HB | 1:D:359:ALA:HB1 | 1.79 | 0.64 |
| 1:D:358:VAL:O | 1:D:362:VAL:HG12 | 1.97 | 0.64 |
| 1:E:218:ARG:HD3 | 1:E:282:VAL:CG2 | 2.27 | 0.64 |
| 1:E:254:ILE:HD13 | 1:E:262:LEU:CD1 | 2.28 | 0.64 |
| 1:F:62:VAL:HG13 | 1:F:63:THR:N | 2.11 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:377:ARG:CZ | 1:F:470:LEU:CD1 | 2.75 | 0.64 |
| 1:G:166:ALA:CB | 1:G:203:ILE:HB | 2.28 | 0.64 |
| 1:G:239:ILE:HD12 | 1:G:307:ILE:HD13 | 1.79 | 0.64 |
| 1:G:431:ILE:CD1 | 1:P:406:LEU:HD13 | 2.28 | 0.64 |
| 1:H:177:ALA:HB2 | 1:H:208:LEU:HD13 | 1.76 | 0.64 |
| 1:I:30:ILE:HG22 | 1:I:31:ILE:CD1 | 2.24 | 0.64 |
| 1:I:368:VAL:HG11 | 1:I:469:PRO:HG3 | 1.78 | 0.64 |
| 1:J:448:CYS:SG | 1:J:460:ASP:HA | 2.37 | 0.64 |
| 1:M:130:LYS:HG3 | 1:M:393:LEU:HD21 | 1.79 | 0.64 |
| 1:M:192:LEU:CB | 1:M:342:ALA:CB | 2.74 | 0.64 |
| 1:N:22:ARG:HD2 | 1:N:23:MET:N | 2.13 | 0.64 |
| 1:N:134:LEU:HD13 | 1:N:392:LYS:HE3 | 1.79 | 0.64 |
| 1:N:235:LEU:HD21 | 1:N:307:ILE:C | 2.16 | 0.64 |
| 1:O:214:VAL:HG11 | 1:O:291:ASP:HB3 | 1.78 | 0.64 |
| 1:A:150:LEU:HB3 | 1:A:175:VAL:HG11 | 1.80 | 0.64 |
| 1:A:234:LEU:H | 1:A:315:LEU:HD21 | 1.62 | 0.64 |
| 1:A:368:VAL:HB | 1:A:469:PRO:CG | 2.27 | 0.64 |
| 1:B:97:VAL:O | 1:B:100:ALA:HB3 | 1.98 | 0.64 |
| 1:B:368:VAL:HB | 1:B:469:PRO:CG | 2.27 | 0.64 |
| 1:B:401:SER:CB | 1:K:435:VAL:HG11 | 2.28 | 0.64 |
| 1:C:222:GLN:C | 1:C:277:ALA:HB1 | 2.18 | 0.64 |
| 1:C:384:SER:HA | 1:C:441:HIS:HE1 | 1.62 | 0.64 |
| 1:D:77:MET:HB2 | 1:D:487:LEU:CD2 | 2.20 | 0.64 |
| 1:D:119:ILE:HG21 | 1:D:403:ARG:CG | 2.28 | 0.64 |
| 1:D:490:ILE:H | 1:D:490:ILE:HD13 | 1.63 | 0.64 |
| 1:E:81:VAL:CG1 | 1:E:483:SER:HB3 | 2.28 | 0.64 |
| 1:E:105:ARG:NH1 | 1:E:106:LYS:HG2 | 2.13 | 0.64 |
| 1:F:194:LYS:C | 1:F:195:ILE:HG23 | 2.17 | 0.64 |
| 1:F:403:ARG:HG2 | 1:O:431:ILE:CD1 | 2.27 | 0.64 |
| 1:H:227:VAL:HG12 | 1:H:228:THR:H | 1.62 | 0.64 |
| 1:I:89:VAL:O | 1:I:89:VAL:CG2 | 2.45 | 0.64 |
| 1:I:326:ILE:HG12 | 1:I:348:ARG:HH12 | 1.62 | 0.64 |
| 1:J:234:LEU:CD1 | 1:J:296:ALA:HB2 | 2.27 | 0.64 |
| 1:L:416:GLU:O | 1:L:420:ARG:HB2 | 1.96 | 0.64 |
| 1:N:44:MET:HA | 1:N:44:MET:HE2 | 1.79 | 0.64 |
| 1:N:153:ILE:HG23 | 1:N:469:PRO:HD3 | 1.79 | 0.64 |
| 1:O:111:LEU:CD2 | 1:O:117:PRO:HB3 | 2.28 | 0.64 |
| 1:O:235:LEU:HG | 1:O:307:ILE:CA | 2.27 | 0.64 |
| 1:O:396:TYR:O | 1:O:396:TYR:CD2 | 2.51 | 0.64 |
| 1:P:393:LEU:O | 1:P:396:TYR:HB3 | 1.96 | 0.64 |
| 1:P:435:VAL:HG13 | 1:P:438:ARG:NH2 | 2.13 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:347:ILE:HD11 | 1:A:359:ALA:HB2 | 1.80 | 0.64 |
| 1:A:431:ILE:HD12 | 1:J:403:ARG:CD | 2.28 | 0.64 |
| 1:B:8:LEU:HB2 | 1:B:12:MET:HG2 | 1.78 | 0.64 |
| 1:B:134:LEU:CD1 | 1:B:393:LEU:HG | 2.26 | 0.64 |
| 1:C:452:ASN:HB2 | 1:C:459:GLU:OE1 | 1.97 | 0.64 |
| 1:D:235:LEU:HD13 | 1:D:307:ILE:CG2 | 2.26 | 0.64 |
| 1:G:124:TYR:HE1 | 1:G:407:ALA:CB | 2.11 | 0.64 |
| 1:G:403:ARG:HH11 | 1:G:403:ARG:CG | 2.11 | 0.64 |
| 1:H:158:ILE:CD1 | 1:H:170:LEU:CB | 2.75 | 0.64 |
| 1:J:34:THR:CB | 1:K:14:ARG:NH2 | 2.61 | 0.64 |
| 1:J:63:THR:HA | 1:J:66:ARG:HB2 | 1.79 | 0.64 |
| 1:K:69:SER:CB | 1:L:9:PRO:HB3 | 2.10 | 0.64 |
| 1:K:232:ILE:CD1 | 1:K:299:THR:HG21 | 2.20 | 0.64 |
| 1:K:262:LEU:CD1 | 1:K:310:LEU:HD12 | 2.28 | 0.64 |
| 1:L:307:ILE:CD1 | 1:L:307:ILE:O | 2.46 | 0.64 |
| 1:M:234:LEU:CD1 | 1:M:296:ALA:HB2 | 2.27 | 0.64 |
| 1:N:223:MET:CE | 1:N:273:GLN:HB3 | 2.28 | 0.64 |
| 1:O:263:PHE:HE1 | 1:O:332:ILE:HD13 | 1.61 | 0.64 |
| 1:O:307:ILE:O | 1:O:310:LEU:HB2 | 1.97 | 0.64 |
| 1:P:233:ALA:CB | 1:P:315:LEU:HD11 | 2.28 | 0.64 |
| 1:A:132:GLN:O | 1:A:136:LYS:HD3 | 1.98 | 0.64 |
| 1:A:166:ALA:HB3 | 1:A:170:LEU:HD22 | 1.79 | 0.64 |
| 1:B:105:ARG:HH12 | 1:B:106:LYS:HD2 | 1.62 | 0.64 |
| 1:B:377:ARG:NH1 | 1:B:470:LEU:HD13 | 2.13 | 0.64 |
| 1:C:14:ARG:NH1 | 1:C:494:ILE:HD13 | 2.13 | 0.64 |
| 1:D:197:LYS:CA | 1:D:355:ILE:HG22 | 2.26 | 0.64 |
| 1:D:437:VAL:HG22 | 1:D:458:VAL:HG23 | 1.79 | 0.64 |
| 1:E:368:VAL:HB | 1:E:469:PRO:HG3 | 1.71 | 0.64 |
| 1:E:375:ASP:CG | 1:E:377:ARG:HH21 | 2.01 | 0.64 |
| 1:E:431:ILE:HD13 | 1:N:403:ARG:CD | 2.27 | 0.64 |
| 1:I:234:LEU:HD22 | 1:I:301:ALA:CB | 2.28 | 0.64 |
| 1:J:178:VAL:CG2 | 1:J:366:VAL:HG22 | 2.28 | 0.64 |
| 1:K:48:LEU:HD13 | 1:K:68:MET:SD | 2.37 | 0.64 |
| 1:K:130:LYS:HD3 | 1:K:393:LEU:CD2 | 2.27 | 0.64 |
| 1:K:138:ILE:HD13 | 1:K:379:VAL:HG11 | 1.79 | 0.64 |
| 1:L:308:LYS:NZ | 1:L:308:LYS:CB | 2.60 | 0.64 |
| 1:M:391:MET:CE | 1:M:438:ARG:CA | 2.76 | 0.64 |
| 1:O:42:LYS:HE3 | 1:P:118:THR:CG2 | 2.22 | 0.64 |
| 1:A:41:PRO:HG2 | 1:A:453:VAL:HG11 | 1.79 | 0.64 |
| 1:A:437:VAL:HG21 | 1:A:451:LEU:HD11 | 1.79 | 0.64 |
| 1:C:138:ILE:HD12 | 1:C:139:ALA:N | 2.13 | 0.64 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:234:LEU:H | 1:C:315:LEU:HD22 | 1.63 | 0.64 |
| 1:D:420:ARG:NH1 | 1:D:420:ARG:CG | 2.59 | 0.64 |
| 1:D:459:GLU:CG | 1:D:461:MET:HE2 | 2.28 | 0.64 |
| 1:E:296:ALA:HA | 1:E:301:ALA:HB3 | 1.79 | 0.64 |
| 1:G:119:ILE:CG2 | 1:G:403:ARG:HB2 | 2.27 | 0.64 |
| 1:G:452:ASN:HB3 | 1:G:459:GLU:CG | 2.28 | 0.64 |
| 1:H:296:ALA:HA | 1:H:301:ALA:HB3 | 1.80 | 0.64 |
| 1:H:299:THR:HG23 | 1:H:334:VAL:CG1 | 2.27 | 0.64 |
| 1:I:35:VAL:O | 1:I:38:THR:HB | 1.98 | 0.64 |
| 1:J:459:GLU:OE2 | 1:J:461:MET:HA | 1.98 | 0.64 |
| 1:K:42:LYS:CB | 1:K:425:ASN:HB2 | 2.28 | 0.64 |
| 1:L:119:ILE:HG21 | 1:L:403:ARG:HD2 | 1.77 | 0.64 |
| 1:L:339:HIS:HE1 | 1:L:341:LYS:HE2 | 1.61 | 0.64 |
| 1:L:405:GLN:HB3 | 1:L:406:LEU:HD13 | 1.80 | 0.64 |
| 1:M:235:LEU:HD22 | 1:M:307:ILE:CA | 2.24 | 0.64 |
| 1:M:236:ASN:CA | 1:M:265:GLN:HB3 | 2.25 | 0.64 |
| 1:N:182:VAL:HG23 | 1:N:188:VAL:HG22 | 1.79 | 0.64 |
| 1:O:89:VAL:HG22 | 1:O:89:VAL:O | 1.97 | 0.64 |
| 1:O:181:VAL:HG23 | 1:O:182:VAL:N | 2.11 | 0.64 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:HD11 | 2.20 | 0.64 |
| 1:P:197:LYS:HB3 | 1:P:355:ILE:HG21 | 1.79 | 0.64 |
| 1:A:123:GLY:HA3 | 1:A:407:ALA:HB3 | 1.79 | 0.64 |
| 1:B:8:LEU:CG | 1:C:68:MET:HG3 | 2.28 | 0.64 |
| 1:C:178:VAL:CG2 | 1:C:193:ILE:CD1 | 2.67 | 0.64 |
| 1:D:255:LYS:HD3 | 1:D:279:GLU:CB | 2.28 | 0.64 |
| 1:E:42:LYS:HB3 | 1:E:425:ASN:HB2 | 1.75 | 0.64 |
| 1:F:237:CYS:HB2 | 1:F:266:LYS:HG3 | 1.79 | 0.64 |
| 1:H:35:VAL:HG13 | 1:H:46:LYS:NZ | 2.13 | 0.64 |
| 1:H:345:MET:HE2 | 1:H:362:VAL:HG11 | 1.78 | 0.64 |
| 1:H:432:GLU:O | 1:H:436:LYS:HG3 | 1.97 | 0.64 |
| 1:I:206:THR:HG22 | 1:I:348:ARG:N | 2.08 | 0.64 |
| 1:I:391:MET:CE | 1:I:438:ARG:CB | 2.76 | 0.64 |
| 1:K:124:TYR:N | 1:K:124:TYR:CD1 | 2.62 | 0.64 |
| 1:K:227:VAL:HG11 | 1:K:260:ASN:ND2 | 2.13 | 0.64 |
| 1:L:51:ASP:OD1 | 1:M:11:ASN:HB3 | 1.98 | 0.64 |
| 1:M:138:ILE:HD11 | 1:M:385:THR:CG2 | 2.27 | 0.64 |
| 1:M:276:LEU:O | 1:M:281:ILE:HB | 1.98 | 0.64 |
| 1:N:69:SER:CB | 1:O:9:PRO:HA | 2.28 | 0.64 |
| 1:P:418:ILE:O | 1:P:422:LEU:HG | 1.98 | 0.64 |
| 1:A:100:ALA:HB1 | 1:A:484:THR:HG23 | 1.78 | 0.63 |
| 1:A:177:ALA:HB2 | 1:A:208:LEU:HD11 | 1.79 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:254:ILE:HG21 | 1:A:262:LEU:HD13 | 1.81 | 0.63 |
| 1:B:327:SER:O | 1:B:327:SER:OG | 2.13 | 0.63 |
| 1:C:214:VAL:HG12 | 1:C:291:ASP:CB | 2.29 | 0.63 |
| 1:C:216:LYS:O | 1:C:332:ILE:HG13 | 1.98 | 0.63 |
| 1:D:62:VAL:CG1 | 1:D:63:THR:H | 1.97 | 0.63 |
| 1:D:195:ILE:O | 1:D:195:ILE:HG12 | 1.99 | 0.63 |
| 1:E:241:GLU:HB3 | 1:E:246:MET:HB3 | 1.80 | 0.63 |
| 1:I:119:ILE:HG23 | 1:I:403:ARG:CB | 2.29 | 0.63 |
| 1:I:182:VAL:CB | 1:I:188:VAL:HG22 | 2.28 | 0.63 |
| 1:J:89:VAL:HG21 | 1:J:472:VAL:HG22 | 1.79 | 0.63 |
| 1:L:148:GLU:O | 1:L:148:GLU:CG | 2.40 | 0.63 |
| 1:L:313:GLN:C | 1:L:315:LEU:H | 2.02 | 0.63 |
| 1:L:339:HIS:CE1 | 1:L:341:LYS:CE | 2.81 | 0.63 |
| 1:M:39:LEU:HB3 | 1:M:94:THR:HG22 | 1.80 | 0.63 |
| 1:M:310:LEU:HD22 | 1:M:315:LEU:HD11 | 1.80 | 0.63 |
| 1:N:81:VAL:HG21 | 1:N:483:SER:OG | 1.96 | 0.63 |
| 1:N:299:THR:CG2 | 1:N:334:VAL:CG1 | 2.77 | 0.63 |
| 1:P:61:GLY:O | 1:P:64:ILE:HG22 | 1.98 | 0.63 |
| 1:P:460:ASP:OD1 | 1:P:460:ASP:C | 2.35 | 0.63 |
| 1:A:377:ARG:HG2 | 1:A:470:LEU:HG | 1.80 | 0.63 |
| 1:B:138:ILE:HG12 | 1:B:139:ALA:H | 1.62 | 0.63 |
| 1:C:281:ILE:HG22 | 1:C:282:VAL:O | 1.98 | 0.63 |
| 1:D:70:VAL:O | 1:D:76:LYS:HE2 | 1.98 | 0.63 |
| 1:D:459:GLU:CG | 1:D:461:MET:CE | 2.76 | 0.63 |
| 1:E:488:LEU:O | 1:E:488:LEU:CG | 2.45 | 0.63 |
| 1:F:418:ILE:HB | 1:F:419:PRO:HD3 | 1.80 | 0.63 |
| 1:G:216:LYS:O | 1:G:332:ILE:HG13 | 1.97 | 0.63 |
| 1:I:130:LYS:CE | 1:I:134:LEU:HD21 | 2.28 | 0.63 |
| 1:I:182:VAL:CG2 | 1:I:188:VAL:HG22 | 2.28 | 0.63 |
| 1:I:469:PRO:CG | 1:I:472:VAL:HG11 | 2.21 | 0.63 |
| 1:J:391:MET:CE | 1:J:438:ARG:CB | 2.60 | 0.63 |
| 1:K:233:ALA:CB | 1:K:310:LEU:HD21 | 2.13 | 0.63 |
| 1:L:469:PRO:HD2 | 1:L:472:VAL:HG21 | 1.81 | 0.63 |
| 1:M:99:VAL:CG1 | 1:M:418:ILE:HD11 | 2.27 | 0.63 |
| 1:M:158:ILE:HD11 | 1:M:170:LEU:HB2 | 1.78 | 0.63 |
| 1:M:247:LEU:HD11 | 1:M:269:ASP:HB3 | 1.78 | 0.63 |
| 1:M:255:LYS:HD3 | 1:M:279:GLU:CD | 2.18 | 0.63 |
| 1:P:30:ILE:HG22 | 1:P:31:ILE:HB | 1.79 | 0.63 |
| 1:P:134:LEU:CD1 | 1:P:392:LYS:HE3 | 2.28 | 0.63 |
| 1:A:9:PRO:HG3 | 1:B:68:MET:HA | 1.81 | 0.63 |
| 1:C:9:PRO:CB | 1:D:69:SER:HB3 | 2.28 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:102:GLU:O | 1:C:105:ARG:HB3 | 1.98 | 0.63 |
| 1:C:202:SER:OG | 1:C:203:ILE:HG12 | 1.98 | 0.63 |
| 1:C:254:ILE:HD13 | 1:C:262:LEU:HD13 | 1.81 | 0.63 |
| 1:D:251:VAL:CG1 | 1:D:276:LEU:HD13 | 2.28 | 0.63 |
| 1:D:494:ILE:HG13 | 1:E:48:LEU:CD2 | 2.28 | 0.63 |
| 1:E:197:LYS:O | 1:E:197:LYS:CG | 2.44 | 0.63 |
| 1:E:267:GLY:HA3 | 1:E:286:ARG:NH1 | 2.13 | 0.63 |
| 1:E:433:ILE:HG22 | 1:E:451:LEU:HD23 | 1.75 | 0.63 |
| 1:F:136:LYS:CA | 1:F:377:ARG:NH1 | 2.58 | 0.63 |
| 1:F:248:LYS:HD2 | 1:F:275:TYR:OH | 1.97 | 0.63 |
| 1:F:437:VAL:HG21 | 1:F:451:LEU:HD12 | 1.78 | 0.63 |
| 1:G:236:ASN:O | 1:G:236:ASN:CG | 2.36 | 0.63 |
| 1:G:303:VAL:CG2 | 1:G:303:VAL:O | 2.46 | 0.63 |
| 1:H:178:VAL:HG11 | 1:H:366:VAL:CG1 | 2.23 | 0.63 |
| 1:I:69:SER:O | 1:J:9:PRO:HA | 1.98 | 0.63 |
| 1:J:386:GLU:CD | 1:J:386:GLU:H | 1.91 | 0.63 |
| 1:K:166:ALA:HB2 | 1:K:203:ILE:CG2 | 2.23 | 0.63 |
| 1:L:170:LEU:HD11 | 1:L:358:VAL:CG1 | 2.28 | 0.63 |
| 1:L:239:ILE:HG22 | 1:L:307:ILE:HG21 | 1.80 | 0.63 |
| 1:M:276:LEU:HD12 | 1:M:281:ILE:CD1 | 2.26 | 0.63 |
| 1:N:262:LEU:HD11 | 1:N:310:LEU:HD21 | 1.81 | 0.63 |
| 1:O:219:VAL:HG12 | 1:O:223:MET:CE | 2.28 | 0.63 |
| 1:A:140:CYS:SG | 1:A:447:LYS:HB3 | 2.38 | 0.63 |
| 1:A:210:LYS:HG2 | 1:A:343:VAL:HG23 | 1.81 | 0.63 |
| 1:A:212:VAL:HG21 | 1:A:294:LYS:CB | 2.29 | 0.63 |
| 1:A:219:VAL:CG2 | 1:A:273:GLN:CD | 2.66 | 0.63 |
| 1:A:262:LEU:HD11 | 1:A:310:LEU:HD23 | 1.81 | 0.63 |
| 1:A:387:VAL:HG21 | 1:A:437:VAL:CG1 | 2.28 | 0.63 |
| 1:B:268:ILE:HG21 | 1:B:273:GLN:HG2 | 1.80 | 0.63 |
| 1:C:41:PRO:HB2 | 1:C:42:LYS:HE2 | 1.81 | 0.63 |
| 1:D:44:MET:CA | 1:D:44:MET:HE3 | 2.27 | 0.63 |
| 1:G:232:ILE:CD1 | 1:G:299:THR:HG21 | 2.28 | 0.63 |
| 1:G:303:VAL:O | 1:G:303:VAL:HG22 | 1.98 | 0.63 |
| 1:H:100:ALA:O | 1:H:104:LEU:HG | 1.97 | 0.63 |
| 1:J:15:TYR:CD2 | 1:J:19:ASP:CB | 2.82 | 0.63 |
| 1:J:265:GLN:OE1 | 1:J:289:LYS:HD2 | 1.99 | 0.63 |
| 1:K:154:ALA:HB1 | 1:K:171:ALA:CB | 2.29 | 0.63 |
| 1:K:158:ILE:HG13 | 1:K:361:ALA:CB | 2.28 | 0.63 |
| 1:L:177:ALA:HB2 | 1:L:208:LEU:HD13 | 1.79 | 0.63 |
| 1:M:68:MET:HG3 | 1:N:8:LEU:HD23 | 1.80 | 0.63 |
| 1:M:130:LYS:CG | 1:M:393:LEU:HD21 | 2.29 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:232:ILE:HD12 | 1:M:299:THR:HG21 | 1.78 | 0.63 |
| 1:M:420:ARG:NH1 | 1:M:420:ARG:HB3 | 1.96 | 0.63 |
| 1:O:8:LEU:HD11 | 1:O:494:ILE:HD13 | 1.79 | 0.63 |
| 1:A:431:ILE:HD11 | 1:J:403:ARG:HA | 1.80 | 0.63 |
| 1:B:36:ARG:HG3 | 1:B:37:SER:N | 2.12 | 0.63 |
| 1:B:234:LEU:HD11 | 1:B:301:ALA:CB | 2.28 | 0.63 |
| 1:B:420:ARG:NH1 | 1:B:420:ARG:CG | 2.49 | 0.63 |
| 1:C:42:LYS:HD2 | 1:C:426:ALA:CA | 2.29 | 0.63 |
| 1:C:383:GLY:HA2 | 1:C:386:GLU:HG3 | 1.80 | 0.63 |
| 1:C:391:MET:HE1 | 1:C:438:ARG:HG2 | 1.80 | 0.63 |
| 1:D:8:LEU:HG | 1:D:12:MET:HG2 | 1.80 | 0.63 |
| 1:F:211:GLY:O | 1:F:298:ALA:HB2 | 1.99 | 0.63 |
| 1:F:234:LEU:HD12 | 1:F:296:ALA:HB2 | 1.80 | 0.63 |
| 1:G:198:LYS:N | 1:G:355:ILE:HD13 | 2.13 | 0.63 |
| 1:I:239:ILE:HD12 | 1:I:307:ILE:CG1 | 2.16 | 0.63 |
| 1:I:372:THR:O | 1:I:376:GLY:HA2 | 1.97 | 0.63 |
| 1:J:82:ALA:CB | 1:J:93:THR:HG22 | 2.15 | 0.63 |
| 1:J:96:ALA:HB1 | 1:J:480:ALA:HB2 | 1.79 | 0.63 |
| 1:K:124:TYR:CD1 | 1:K:407:ALA:HB1 | 2.34 | 0.63 |
| 1:K:154:ALA:O | 1:K:158:ILE:HD12 | 1.98 | 0.63 |
| 1:L:391:MET:HE1 | 1:L:438:ARG:C | 2.19 | 0.63 |
| 1:L:403:ARG:CG | 1:L:403:ARG:NH1 | 2.48 | 0.63 |
| 1:M:8:LEU:O | 1:M:12:MET:HG2 | 1.97 | 0.63 |
| 1:M:103:LEU:HD21 | 1:M:411:PHE:CD2 | 2.33 | 0.63 |
| 1:M:158:ILE:HG21 | 1:M:170:LEU:CD1 | 2.23 | 0.63 |
| 1:N:122:LYS:HB3 | 1:N:404:GLU:OE2 | 1.98 | 0.63 |
| 1:O:368:VAL:HB | 1:O:469:PRO:CG | 2.28 | 0.63 |
| 1:A:263:PHE:CG | 1:A:295:LEU:CD1 | 2.82 | 0.63 |
| 1:B:170:LEU:CD2 | 1:B:358:VAL:CG1 | 2.76 | 0.63 |
| 1:C:206:THR:HG22 | 1:C:348:ARG:H | 1.64 | 0.63 |
| 1:D:42:LYS:CD | 1:D:426:ALA:N | 2.61 | 0.63 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:HA | 2.34 | 0.63 |
| 1:E:134:LEU:CD1 | 1:E:393:LEU:HG | 2.28 | 0.63 |
| 1:E:153:ILE:HG23 | 1:E:468:GLU:HA | 1.80 | 0.63 |
| 1:F:12:MET:HE2 | 1:F:494:ILE:HG22 | 1.80 | 0.63 |
| 1:F:248:LYS:HE2 | 1:F:275:TYR:CZ | 2.34 | 0.63 |
| 1:F:248:LYS:CE | 1:F:275:TYR:CE1 | 2.79 | 0.63 |
| 1:G:265:GLN:HG2 | 1:G:266:LYS:HZ3 | 1.63 | 0.63 |
| 1:G:404:GLU:O | 1:G:408:VAL:HG13 | 1.98 | 0.63 |
| 1:H:49:VAL:CG1 | 1:H:50:ASP:N | 2.61 | 0.63 |
| 1:H:116:HIS:ND1 | 1:H:117:PRO:HD2 | 2.13 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:130:LYS:HZ1 | 1:H:134:LEU:HD21 | 1.64 | 0.63 |
| 1:H:178:VAL:O | 1:H:178:VAL:CG2 | 2.45 | 0.63 |
| 1:H:233:ALA:CB | 1:H:310:LEU:HD21 | 2.23 | 0.63 |
| 1:I:276:LEU:CD1 | 1:I:281:ILE:HD12 | 2.29 | 0.63 |
| 1:I:315:LEU:CD2 | 1:I:315:LEU:N | 2.61 | 0.63 |
| 1:J:248:LYS:HG3 | 1:J:275:TYR:CE2 | 2.34 | 0.63 |
| 1:J:377:ARG:CD | 1:J:470:LEU:CD1 | 2.77 | 0.63 |
| 1:J:389:LEU:HD12 | 1:J:415:LEU:HD13 | 1.80 | 0.63 |
| 1:L:218:ARG:HG3 | 1:L:323:GLU:CG | 2.26 | 0.63 |
| 1:M:220:SER:CB | 1:M:273:GLN:HB3 | 2.24 | 0.63 |
| 1:M:235:LEU:HD22 | 1:M:306:ASN:O | 1.98 | 0.63 |
| 1:N:142:VAL:CG1 | 1:N:149:ILE:HD11 | 2.25 | 0.63 |
| 1:P:166:ALA:CB | 1:P:203:ILE:HG12 | 2.13 | 0.63 |
| 1:A:9:PRO:CA | 1:B:69:SER:CB | 2.74 | 0.63 |
| 1:A:68:MET:CB | 1:H:8:LEU:HD23 | 2.29 | 0.63 |
| 1:A:178:VAL:CG1 | 1:A:188:VAL:CG1 | 2.71 | 0.63 |
| 1:A:347:ILE:CD1 | 1:A:359:ALA:HB2 | 2.29 | 0.63 |
| 1:A:391:MET:HE3 | 1:A:438:ARG:CB | 2.28 | 0.63 |
| 1:A:432:GLU:O | 1:A:436:LYS:HG3 | 1.99 | 0.63 |
| 1:B:62:VAL:CG1 | 1:B:63:THR:H | 2.04 | 0.63 |
| 1:B:78:LEU:CD1 | 1:B:487:LEU:HD21 | 2.17 | 0.63 |
| 1:B:81:VAL:HG11 | 1:B:483:SER:CB | 2.28 | 0.63 |
| 1:B:276:LEU:HB3 | 1:B:281:ILE:HG22 | 1.76 | 0.63 |
| 1:D:77:MET:CE | 1:D:486:MET:HE1 | 2.25 | 0.63 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:CB | 2.76 | 0.63 |
| 1:E:119:ILE:HD12 | 1:E:403:ARG:CG | 2.28 | 0.63 |
| 1:G:70:VAL:CG2 | 1:G:76:LYS:HG2 | 2.28 | 0.63 |
| 1:G:239:ILE:CG2 | 1:G:307:ILE:HD13 | 2.29 | 0.63 |
| 1:G:276:LEU:HB2 | 1:G:281:ILE:CB | 2.29 | 0.63 |
| 1:H:265:GLN:NE2 | 1:H:289:LYS:HB2 | 2.13 | 0.63 |
| 1:I:42:LYS:CE | 1:I:426:ALA:HB2 | 2.16 | 0.63 |
| 1:L:77:MET:HA | 1:L:80:GLU:OE1 | 1.99 | 0.63 |
| 1:M:23:MET:C | 1:M:24:ASN:HD22 | 2.01 | 0.63 |
| 1:M:197:LYS:CA | 1:M:355:ILE:CG2 | 2.61 | 0.63 |
| 1:M:254:ILE:HG22 | 1:M:281:ILE:HD11 | 1.80 | 0.63 |
| 1:N:433:ILE:HG21 | 1:N:451:LEU:HD23 | 1.80 | 0.63 |
| 1:O:69:SER:O | 1:P:9:PRO:HB3 | 1.99 | 0.63 |
| 1:P:158:ILE:HD13 | 1:P:167:LYS:HA | 1.80 | 0.63 |
| 1:P:235:LEU:HD21 | 1:P:307:ILE:N | 2.13 | 0.63 |
| 1:P:325:LYS:HG2 | 1:P:328:GLY:O | 1.99 | 0.63 |
| 1:A:44:MET:CE | 1:H:489:ARG:NH2 | 2.62 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:130:LYS:NZ | 1:A:396:TYR:HB2 | 2.14 | 0.63 |
| 1:A:146:ASP:HB3 | 1:A:149:ILE:CG1 | 2.28 | 0.63 |
| 1:A:241:GLU:HG3 | 1:A:250:MET:SD | 2.39 | 0.63 |
| 1:C:307:ILE:HG13 | 1:C:310:LEU:CD2 | 2.28 | 0.63 |
| 1:D:152:LYS:HG2 | 1:D:465:GLY:HA2 | 1.80 | 0.63 |
| 1:D:254:ILE:HD13 | 1:D:262:LEU:HD13 | 1.80 | 0.63 |
| 1:E:42:LYS:HG3 | 1:E:426:ALA:N | 2.13 | 0.63 |
| 1:G:25:ILE:HG13 | 1:G:108:GLU:OE2 | 1.99 | 0.63 |
| 1:G:473:LYS:NZ | 1:G:473:LYS:CB | 2.56 | 0.63 |
| 1:H:223:MET:CE | 1:H:276:LEU:HB3 | 2.28 | 0.63 |
| 1:H:310:LEU:CD2 | 1:H:315:LEU:CD2 | 2.77 | 0.63 |
| 1:H:387:VAL:O | 1:H:390:SER:HB3 | 1.99 | 0.63 |
| 1:H:469:PRO:CD | 1:H:472:VAL:HG21 | 2.28 | 0.63 |
| 1:I:265:GLN:C | 1:I:266:LYS:HG2 | 2.19 | 0.63 |
| 1:J:198:LYS:N | 1:J:355:ILE:HD13 | 2.14 | 0.63 |
| 1:J:368:VAL:CB | 1:J:469:PRO:HG2 | 2.29 | 0.63 |
| 1:K:70:VAL:CG1 | 1:K:76:LYS:CG | 2.75 | 0.63 |
| 1:K:306:ASN:ND2 | 1:K:308:LYS:HG3 | 2.14 | 0.63 |
| 1:L:237:CYS:HA | 1:L:306:ASN:C | 2.18 | 0.63 |
| 1:M:42:LYS:HE2 | 1:M:426:ALA:CA | 2.28 | 0.63 |
| 1:M:232:ILE:HD13 | 1:M:263:PHE:HE2 | 1.64 | 0.63 |
| 1:N:105:ARG:NH1 | 1:N:106:LYS:HG2 | 2.14 | 0.63 |
| 1:N:166:ALA:HB2 | 1:N:203:ILE:CG1 | 2.23 | 0.63 |
| 1:O:146:ASP:HB3 | 1:O:149:ILE:HG12 | 1.79 | 0.63 |
| 1:P:124:TYR:CE1 | 1:P:407:ALA:HA | 2.32 | 0.63 |
| 1:A:263:PHE:CD2 | 1:A:295:LEU:HD13 | 2.34 | 0.63 |
| 1:A:403:ARG:HD3 | 1:J:431:ILE:CD1 | 2.29 | 0.63 |
| 1:B:18:ARG:CA | 1:B:21:GLN:HG3 | 2.27 | 0.63 |
| 1:B:70:VAL:HG21 | 1:B:76:LYS:CD | 2.28 | 0.63 |
| 1:B:493:VAL:HG13 | 1:C:47:MET:HE2 | 1.81 | 0.63 |
| 1:C:174:ILE:HD12 | 1:C:365:ALA:HB1 | 1.81 | 0.63 |
| 1:D:420:ARG:HH11 | 1:D:420:ARG:CG | 2.09 | 0.63 |
| 1:E:26:LEU:O | 1:E:30:ILE:HG13 | 1.98 | 0.63 |
| 1:E:178:VAL:HG21 | 1:E:366:VAL:HG21 | 1.81 | 0.63 |
| 1:E:449:ALA:HB2 | 1:E:458:VAL:CG2 | 2.29 | 0.63 |
| 1:G:70:VAL:CG2 | 1:G:76:LYS:CG | 2.76 | 0.63 |
| 1:H:239:ILE:O | 1:H:247:LEU:HD13 | 1.99 | 0.63 |
| 1:I:489:ARG:HH21 | 1:P:44:MET:HE1 | 1.64 | 0.63 |
| 1:J:68:MET:HB3 | 1:K:8:LEU:HA | 1.81 | 0.63 |
| 1:J:299:THR:HG21 | 1:J:334:VAL:HG11 | 1.81 | 0.63 |
| 1:L:71:GLU:HG3 | 1:L:72:HIS:N | 2.14 | 0.63 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:248:LYS:CE | 1:M:275:TYR:CE1 | 2.81 | 0.63 |
| 1:N:345:MET:HE2 | 1:N:362:VAL:HG21 | 1.75 | 0.63 |
| 1:O:69:SER:HB3 | 1:P:9:PRO:HG3 | 1.81 | 0.63 |
| 1:O:248:LYS:HG3 | 1:O:275:TYR:CD2 | 2.33 | 0.63 |
| 1:A:152:LYS:CE | 1:A:465:GLY:HA2 | 2.29 | 0.62 |
| 1:B:26:LEU:O | 1:B:30:ILE:HG12 | 1.99 | 0.62 |
| 1:B:235:LEU:HD21 | 1:B:307:ILE:N | 2.13 | 0.62 |
| 1:C:129:GLN:O | 1:C:132:GLN:HB2 | 1.99 | 0.62 |
| 1:D:236:ASN:O | 1:D:265:GLN:HB3 | 1.99 | 0.62 |
| 1:E:25:ILE:HD13 | 1:E:108:GLU:HG3 | 1.80 | 0.62 |
| 1:E:41:PRO:CG | 1:E:453:VAL:HG11 | 2.29 | 0.62 |
| 1:E:405:GLN:NE2 | 1:N:438:ARG:HH22 | 1.97 | 0.62 |
| 1:F:136:LYS:CA | 1:F:377:ARG:HH11 | 2.05 | 0.62 |
| 1:F:200:GLY:O | 1:F:348:ARG:HB3 | 1.98 | 0.62 |
| 1:G:198:LYS:CB | 1:G:326:ILE:HD13 | 2.29 | 0.62 |
| 1:G:346:LEU:HD23 | 1:G:347:ILE:H | 1.64 | 0.62 |
| 1:I:25:ILE:HG22 | 1:I:26:LEU:N | 2.13 | 0.62 |
| 1:I:232:ILE:CG2 | 1:I:233:ALA:N | 2.62 | 0.62 |
| 1:J:68:MET:SD | 1:J:68:MET:N | 2.71 | 0.62 |
| 1:K:77:MET:HA | 1:K:80:GLU:OE1 | 1.98 | 0.62 |
| 1:K:218:ARG:NH1 | 1:K:282:VAL:HG21 | 2.13 | 0.62 |
| 1:N:42:LYS:CE | 1:O:118:THR:HG21 | 2.28 | 0.62 |
| 1:O:23:MET:HE1 | 1:O:72:HIS:HE1 | 1.63 | 0.62 |
| 1:A:129:GLN:O | 1:A:132:GLN:HB2 | 1.98 | 0.62 |
| 1:B:31:ILE:CG2 | 1:B:65:LEU:CD2 | 2.77 | 0.62 |
| 1:B:238:ALA:O | 1:B:307:ILE:HG23 | 2.00 | 0.62 |
| 1:D:42:LYS:O | 1:D:425:ASN:HB3 | 1.99 | 0.62 |
| 1:D:77:MET:HA | 1:D:80:GLU:OE1 | 1.98 | 0.62 |
| 1:D:251:VAL:HG13 | 1:D:276:LEU:HD13 | 1.80 | 0.62 |
| 1:E:182:VAL:CB | 1:E:188:VAL:HG22 | 2.29 | 0.62 |
| 1:F:214:VAL:HG12 | 1:F:291:ASP:HB2 | 1.81 | 0.62 |
| 1:H:214:VAL:HG12 | 1:H:291:ASP:OD2 | 1.99 | 0.62 |
| 1:I:85:GLN:HE22 | 1:I:476:ALA:HA | 1.64 | 0.62 |
| 1:I:158:ILE:HG22 | 1:I:164:GLU:HA | 1.81 | 0.62 |
| 1:I:233:ALA:CA | 1:I:315:LEU:CD2 | 2.74 | 0.62 |
| 1:J:166:ALA:HB2 | 1:J:203:ILE:HG22 | 1.76 | 0.62 |
| 1:J:233:ALA:HB3 | 1:J:310:LEU:HD11 | 1.79 | 0.62 |
| 1:L:68:MET:HG3 | 1:M:12:MET:HE1 | 1.80 | 0.62 |
| 1:M:70:VAL:HG21 | 1:M:76:LYS:CG | 2.28 | 0.62 |
| 1:M:138:ILE:HD11 | 1:M:385:THR:HG21 | 1.81 | 0.62 |
| 1:N:102:GLU:HG2 | 1:N:417:VAL:HG11 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:124:TYR:HD1 | 1:N:124:TYR:N | 1.97 | 0.62 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:CB | 2.82 | 0.62 |
| 1:O:38:THR:HG23 | 1:O:46:LYS:HE2 | 1.81 | 0.62 |
| 1:O:223:MET:N | 1:O:277:ALA:HB1 | 2.14 | 0.62 |
| 1:P:235:LEU:CG | 1:P:307:ILE:CD1 | 2.77 | 0.62 |
| 1:P:307:ILE:CD1 | 1:P:310:LEU:HD23 | 2.29 | 0.62 |
| 1:C:96:ALA:CA | 1:C:480:ALA:CB | 2.74 | 0.62 |
| 1:C:176:GLU:HB2 | 1:C:208:LEU:HD22 | 1.80 | 0.62 |
| 1:D:21:GLN:O | 1:D:25:ILE:HD13 | 1.98 | 0.62 |
| 1:D:82:ALA:HB1 | 1:D:93:THR:CG2 | 2.28 | 0.62 |
| 1:E:38:THR:CG2 | 1:E:46:LYS:HE2 | 2.29 | 0.62 |
| 1:F:214:VAL:HB | 1:F:291:ASP:OD2 | 1.99 | 0.62 |
| 1:F:307:ILE:O | 1:F:307:ILE:CG1 | 2.47 | 0.62 |
| 1:G:124:TYR:N | 1:G:124:TYR:HD1 | 1.97 | 0.62 |
| 1:G:158:ILE:HD13 | 1:G:170:LEU:CB | 2.26 | 0.62 |
| 1:G:380:SER:HB2 | 1:G:384:SER:CB | 2.30 | 0.62 |
| 1:H:62:VAL:CG1 | 1:H:63:THR:N | 2.62 | 0.62 |
| 1:H:142:VAL:HG11 | 1:H:149:ILE:CG2 | 2.19 | 0.62 |
| 1:I:147:LYS:HG2 | 1:I:147:LYS:O | 2.00 | 0.62 |
| 1:J:161:LYS:HD3 | 1:J:357:GLU:OE2 | 1.99 | 0.62 |
| 1:J:234:LEU:HG | 1:J:315:LEU:CD2 | 2.28 | 0.62 |
| 1:L:251:VAL:HG11 | 1:L:276:LEU:HD22 | 1.75 | 0.62 |
| 1:M:235:LEU:O | 1:M:264:CYS:HA | 1.99 | 0.62 |
| 1:M:254:ILE:HG12 | 1:M:310:LEU:HD12 | 1.80 | 0.62 |
| 1:N:122:LYS:O | 1:N:404:GLU:HG3 | 1.99 | 0.62 |
| 1:N:268:ILE:HB | 1:N:273:GLN:HE21 | 1.64 | 0.62 |
| 1:N:368:VAL:HB | 1:N:469:PRO:CB | 2.28 | 0.62 |
| 1:O:123:GLY:HA3 | 1:O:407:ALA:HB3 | 1.82 | 0.62 |
| 1:O:391:MET:CE | 1:O:438:ARG:HA | 2.29 | 0.62 |
| 1:A:68:MET:CG | 1:H:8:LEU:CD2 | 2.76 | 0.62 |
| 1:A:81:VAL:HG11 | 1:A:483:SER:OG | 2.00 | 0.62 |
| 1:A:212:VAL:N | 1:A:298:ALA:CB | 2.63 | 0.62 |
| 1:C:124:TYR:CE1 | 1:C:407:ALA:CA | 2.76 | 0.62 |
| 1:D:197:LYS:CA | 1:D:355:ILE:CG2 | 2.72 | 0.62 |
| 1:D:387:VAL:HG21 | 1:D:437:VAL:CG1 | 2.29 | 0.62 |
| 1:E:41:PRO:HG2 | 1:E:453:VAL:HG11 | 1.80 | 0.62 |
| 1:E:120:VAL:HG22 | 1:E:121:VAL:N | 2.14 | 0.62 |
| 1:E:153:ILE:CG2 | 1:E:469:PRO:CD | 2.76 | 0.62 |
| 1:E:223:MET:HE2 | 1:E:283:ALA:HB3 | 1.82 | 0.62 |
| 1:F:235:LEU:HD23 | 1:F:307:ILE:HG22 | 1.81 | 0.62 |
| 1:G:182:VAL:CG2 | 1:G:188:VAL:HG12 | 2.29 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:130:LYS:HE2 | 1:H:396:TYR:HB2 | 1.80 | 0.62 |
| 1:H:171:ALA:O | 1:H:175:VAL:HG23 | 2.00 | 0.62 |
| 1:H:403:ARG:HH11 | 1:H:403:ARG:CG | 2.09 | 0.62 |
| 1:H:431:ILE:HD11 | 1:I:403:ARG:HG2 | 1.79 | 0.62 |
| 1:J:232:ILE:HD13 | 1:J:299:THR:HG21 | 1.81 | 0.62 |
| 1:J:389:LEU:HB3 | 1:J:393:LEU:HD12 | 1.81 | 0.62 |
| 1:J:450:GLY:O | 1:J:458:VAL:HA | 1.99 | 0.62 |
| 1:K:115:VAL:HG11 | 1:K:403:ARG:NE | 2.15 | 0.62 |
| 1:K:130:LYS:NZ | 1:K:393:LEU:CD2 | 2.62 | 0.62 |
| 1:M:120:VAL:O | 1:M:120:VAL:CG2 | 2.40 | 0.62 |
| 1:M:232:ILE:HA | 1:M:261:VAL:HB | 1.80 | 0.62 |
| 1:M:299:THR:HG22 | 1:M:334:VAL:CG1 | 2.30 | 0.62 |
| 1:N:208:LEU:CD1 | 1:N:343:VAL:HG21 | 2.29 | 0.62 |
| 1:N:347:ILE:HG22 | 1:N:355:ILE:HG23 | 1.80 | 0.62 |
| 1:O:341:LYS:NZ | 1:O:341:LYS:HB2 | 2.05 | 0.62 |
| 1:P:82:ALA:HB1 | 1:P:93:THR:HG22 | 1.81 | 0.62 |
| 1:A:12:MET:HG2 | 1:A:494:ILE:HG22 | 1.81 | 0.62 |
| 1:A:123:GLY:HA3 | 1:A:407:ALA:HB1 | 1.81 | 0.62 |
| 1:A:156:THR:CG2 | 1:A:156:THR:O | 2.47 | 0.62 |
| 1:A:214:VAL:HG12 | 1:A:291:ASP:HB3 | 1.80 | 0.62 |
| 1:A:234:LEU:CD2 | 1:A:296:ALA:HB2 | 2.29 | 0.62 |
| 1:C:8:LEU:HD13 | 1:C:494:ILE:HG23 | 1.79 | 0.62 |
| 1:C:29:ARG:O | 1:C:33:GLU:HG3 | 2.00 | 0.62 |
| 1:C:115:VAL:HG21 | 1:C:403:ARG:NE | 2.14 | 0.62 |
| 1:C:123:GLY:HA3 | 1:C:407:ALA:HB1 | 1.77 | 0.62 |
| 1:C:206:THR:HB | 1:C:347:ILE:HA | 1.81 | 0.62 |
| 1:C:248:LYS:HG3 | 1:C:275:TYR:CD2 | 2.35 | 0.62 |
| 1:C:368:VAL:HG21 | 1:C:469:PRO:HG3 | 1.82 | 0.62 |
| 1:D:8:LEU:HD12 | 1:E:68:MET:HG2 | 1.81 | 0.62 |
| 1:D:12:MET:CE | 1:E:68:MET:CE | 2.78 | 0.62 |
| 1:F:30:ILE:HG22 | 1:F:31:ILE:CD1 | 2.27 | 0.62 |
| 1:F:142:VAL:CG2 | 1:F:149:ILE:HG21 | 2.26 | 0.62 |
| 1:G:194:LYS:HG2 | 1:G:195:ILE:N | 2.14 | 0.62 |
| 1:G:437:VAL:HG21 | 1:G:451:LEU:HD23 | 1.77 | 0.62 |
| 1:H:222:GLN:HB3 | 1:H:277:ALA:CB | 2.23 | 0.62 |
| 1:H:235:LEU:HG | 1:H:307:ILE:CD1 | 2.29 | 0.62 |
| 1:H:477:ILE:HG22 | 1:H:477:ILE:O | 2.00 | 0.62 |
| 1:I:12:MET:HE2 | 1:P:68:MET:CE | 2.30 | 0.62 |
| 1:J:9:PRO:O | 1:J:9:PRO:CD | 2.48 | 0.62 |
| 1:K:110:LEU:C | 1:K:112:ASP:H | 2.02 | 0.62 |
| 1:M:351:THR:HG23 | 1:M:352:GLU:N | 2.14 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:69:SER:CB | 1:P:9:PRO:CB | 2.77 | 0.62 |
| 1:A:153:ILE:HD13 | 1:A:372:THR:CG2 | 2.29 | 0.62 |
| 1:B:8:LEU:HB3 | 1:B:9:PRO:HD3 | 1.81 | 0.62 |
| 1:B:130:LYS:HZ1 | 1:B:396:TYR:HB2 | 1.63 | 0.62 |
| 1:C:250:MET:CE | 1:C:307:ILE:CG2 | 2.77 | 0.62 |
| 1:C:314:ASP:O | 1:C:315:LEU:HD23 | 2.00 | 0.62 |
| 1:F:124:TYR:HE1 | 1:F:407:ALA:C | 2.02 | 0.62 |
| 1:F:158:ILE:HD13 | 1:F:170:LEU:CB | 2.29 | 0.62 |
| 1:G:89:VAL:HG11 | 1:G:472:VAL:CG1 | 2.29 | 0.62 |
| 1:G:234:LEU:HG | 1:G:301:ALA:CB | 2.29 | 0.62 |
| 1:I:12:MET:CE | 1:P:68:MET:HE3 | 2.28 | 0.62 |
| 1:I:14:ARG:NH2 | 1:P:34:THR:HA | 2.06 | 0.62 |
| 1:I:62:VAL:HG22 | 1:I:66:ARG:NH1 | 2.14 | 0.62 |
| 1:I:178:VAL:HG22 | 1:I:193:ILE:CD1 | 2.30 | 0.62 |
| 1:I:467:VAL:HG23 | 1:I:468:GLU:N | 2.14 | 0.62 |
| 1:K:313:GLN:C | 1:K:315:LEU:H | 2.03 | 0.62 |
| 1:L:62:VAL:HG13 | 1:L:63:THR:N | 2.13 | 0.62 |
| 1:L:74:ALA:O | 1:L:77:MET:HG3 | 1.99 | 0.62 |
| 1:L:219:VAL:HG23 | 1:L:285:ARG:HB3 | 1.80 | 0.62 |
| 1:M:239:ILE:HB | 1:M:307:ILE:HG13 | 1.78 | 0.62 |
| 1:N:106:LYS:HE3 | 1:N:109:GLU:CD | 2.18 | 0.62 |
| 1:P:235:LEU:HD11 | 1:P:307:ILE:HA | 1.82 | 0.62 |
| 1:A:345:MET:HE3 | 1:A:362:VAL:CG1 | 2.27 | 0.62 |
| 1:A:379:VAL:CG1 | 1:A:473:LYS:HG3 | 2.28 | 0.62 |
| 1:A:435:VAL:HG12 | 1:A:435:VAL:O | 1.99 | 0.62 |
| 1:B:113:GLN:N | 1:B:113:GLN:NE2 | 2.48 | 0.62 |
| 1:B:135:LEU:CD2 | 1:B:385:THR:HG21 | 2.29 | 0.62 |
| 1:B:219:VAL:HG23 | 1:B:285:ARG:HG2 | 1.82 | 0.62 |
| 1:C:30:ILE:HG22 | 1:C:31:ILE:N | 2.14 | 0.62 |
| 1:C:338:LYS:HD2 | 1:C:339:HIS:HB2 | 1.82 | 0.62 |
| 1:D:9:PRO:C | 1:E:69:SER:HB3 | 2.20 | 0.62 |
| 1:D:123:GLY:HA3 | 1:D:407:ALA:HB1 | 1.80 | 0.62 |
| 1:D:169:LYS:CG | 1:D:204:ASP:HB3 | 2.19 | 0.62 |
| 1:E:265:GLN:C | 1:E:266:LYS:HG2 | 2.19 | 0.62 |
| 1:G:163:ALA:HA | 1:G:165:LYS:H | 1.64 | 0.62 |
| 1:G:166:ALA:HB2 | 1:G:203:ILE:HG21 | 1.80 | 0.62 |
| 1:G:232:ILE:HA | 1:G:261:VAL:HB | 1.80 | 0.62 |
| 1:G:387:VAL:O | 1:G:390:SER:HB3 | 1.99 | 0.62 |
| 1:H:263:PHE:HE1 | 1:H:332:ILE:HG21 | 1.65 | 0.62 |
| 1:J:42:LYS:HD2 | 1:J:426:ALA:CA | 2.30 | 0.62 |
| 1:K:158:ILE:HD11 | 1:K:170:LEU:HB3 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:326:ILE:CG1 | 1:K:348:ARG:NH1 | 2.62 | 0.62 |
| 1:L:70:VAL:HA | 1:M:8:LEU:N | 2.15 | 0.62 |
| 1:L:96:ALA:CA | 1:L:480:ALA:CB | 2.73 | 0.62 |
| 1:M:106:LYS:HE3 | 1:M:109:GLU:OE2 | 1.99 | 0.62 |
| 1:M:233:ALA:CA | 1:M:315:LEU:HD13 | 2.28 | 0.62 |
| 1:N:119:ILE:HD11 | 1:N:403:ARG:NH1 | 2.15 | 0.62 |
| 1:N:178:VAL:CG2 | 1:N:366:VAL:HG13 | 2.29 | 0.62 |
| 1:N:192:LEU:CB | 1:N:342:ALA:HB2 | 2.29 | 0.62 |
| 1:N:222:GLN:HB3 | 1:N:277:ALA:HB1 | 1.79 | 0.62 |
| 1:O:34:THR:CB | 1:P:14:ARG:HH12 | 2.12 | 0.62 |
| 1:O:102:GLU:HG2 | 1:O:417:VAL:HG11 | 1.80 | 0.62 |
| 1:P:127:ALA:HB2 | 1:P:408:VAL:HG12 | 1.81 | 0.62 |
| 1:P:418:ILE:HB | 1:P:419:PRO:HD3 | 1.80 | 0.62 |
| 1:P:490:ILE:CD1 | 1:P:490:ILE:N | 2.61 | 0.62 |
| 1:A:68:MET:C | 1:H:9:PRO:HD3 | 2.18 | 0.62 |
| 1:A:235:LEU:HG | 1:A:307:ILE:HA | 1.78 | 0.62 |
| 1:A:437:VAL:CG2 | 1:A:451:LEU:HG | 2.30 | 0.62 |
| 1:B:351:THR:O | 1:B:355:ILE:HG13 | 1.99 | 0.62 |
| 1:B:469:PRO:O | 1:B:472:VAL:HB | 2.00 | 0.62 |
| 1:C:78:LEU:CD1 | 1:C:487:LEU:HD13 | 2.29 | 0.62 |
| 1:D:9:PRO:HG2 | 1:E:71:GLU:CB | 2.22 | 0.62 |
| 1:D:62:VAL:HG22 | 1:D:63:THR:N | 2.14 | 0.62 |
| 1:D:130:LYS:CE | 1:D:393:LEU:CD2 | 2.77 | 0.62 |
| 1:D:135:LEU:HD13 | 1:D:138:ILE:HD11 | 1.80 | 0.62 |
| 1:E:31:ILE:HG22 | 1:E:65:LEU:HD21 | 1.82 | 0.62 |
| 1:E:115:VAL:HG11 | 1:E:403:ARG:HD3 | 1.82 | 0.62 |
| 1:E:235:LEU:HD13 | 1:E:310:LEU:HB2 | 1.79 | 0.62 |
| 1:F:254:ILE:HG22 | 1:F:254:ILE:O | 1.98 | 0.62 |
| 1:H:152:LYS:HD3 | 1:H:462:CYS:O | 2.00 | 0.62 |
| 1:H:257:SER:OG | 1:H:311:SER:HA | 2.00 | 0.62 |
| 1:I:42:LYS:HD2 | 1:I:425:ASN:C | 2.20 | 0.62 |
| 1:J:82:ALA:O | 1:J:93:THR:HG23 | 2.00 | 0.62 |
| 1:J:247:LEU:HD21 | 1:J:269:ASP:HB3 | 1.82 | 0.62 |
| 1:K:115:VAL:CG2 | 1:K:119:ILE:CB | 2.78 | 0.62 |
| 1:K:130:LYS:CD | 1:K:393:LEU:CD2 | 2.78 | 0.62 |
| 1:K:459:GLU:HG2 | 1:K:461:MET:CE | 2.29 | 0.62 |
| 1:L:34:THR:HG22 | 1:L:35:VAL:HG22 | 1.79 | 0.62 |
| 1:L:70:VAL:HA | 1:M:9:PRO:CD | 2.29 | 0.62 |
| 1:L:138:ILE:O | 1:L:446:ASN:HB2 | 1.99 | 0.62 |
| 1:M:119:ILE:HG23 | 1:M:403:ARG:HB2 | 1.80 | 0.62 |
| 1:O:169:LYS:HG2 | 1:O:204:ASP:HB3 | 1.81 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:78:LEU:O | 1:P:78:LEU:HD23 | 2.00 | 0.62 |
| 1:P:298:ALA:O | 1:P:337:CYS:HB3 | 1.99 | 0.62 |
| 1:P:403:ARG:HH11 | 1:P:403:ARG:CG | 2.06 | 0.62 |
| 1:A:89:VAL:CG2 | 1:A:368:VAL:HG13 | 2.26 | 0.62 |
| 1:A:122:LYS:HG3 | 1:A:125:GLN:NE2 | 2.15 | 0.62 |
| 1:A:433:ILE:CG2 | 1:A:451:LEU:CD2 | 2.66 | 0.62 |
| 1:B:130:LYS:HE2 | 1:B:134:LEU:CD1 | 2.29 | 0.62 |
| 1:B:136:LYS:HB3 | 1:B:377:ARG:HH11 | 1.62 | 0.62 |
| 1:B:234:LEU:CD1 | 1:B:301:ALA:HB3 | 2.30 | 0.62 |
| 1:B:351:THR:HG23 | 1:B:352:GLU:H | 1.63 | 0.62 |
| 1:C:208:LEU:CD2 | 1:C:210:LYS:HE3 | 2.30 | 0.62 |
| 1:C:212:VAL:HG21 | 1:C:294:LYS:O | 2.00 | 0.62 |
| 1:D:104:LEU:HD11 | 1:D:484:THR:HB | 1.82 | 0.62 |
| 1:D:134:LEU:HD22 | 1:D:392:LYS:HD2 | 1.82 | 0.62 |
| 1:D:157:SER:OG | 1:D:368:VAL:HG21 | 1.99 | 0.62 |
| 1:E:17:GLY:O | 1:E:21:GLN:HB3 | 1.99 | 0.62 |
| 1:E:248:LYS:HD2 | 1:E:275:TYR:CZ | 2.34 | 0.62 |
| 1:E:262:LEU:HD12 | 1:E:310:LEU:HD21 | 1.82 | 0.62 |
| 1:F:431:ILE:HD11 | 1:O:402:GLY:C | 2.20 | 0.62 |
| 1:G:81:VAL:HG11 | 1:G:483:SER:HB3 | 1.80 | 0.62 |
| 1:G:345:MET:CE | 1:G:362:VAL:HG21 | 2.29 | 0.62 |
| 1:I:240:GLU:O | 1:I:241:GLU:HG2 | 1.99 | 0.62 |
| 1:J:437:VAL:HG21 | 1:J:451:LEU:HD11 | 1.82 | 0.62 |
| 1:K:22:ARG:O | 1:K:26:LEU:HB2 | 1.99 | 0.62 |
| 1:L:239:ILE:HD12 | 1:L:307:ILE:HG12 | 1.80 | 0.62 |
| 1:L:248:LYS:HE2 | 1:L:275:TYR:CE1 | 2.35 | 0.62 |
| 1:M:42:LYS:NZ | 1:M:453:VAL:HB | 2.14 | 0.62 |
| 1:M:155:MET:CE | 1:M:167:LYS:HE3 | 2.30 | 0.62 |
| 1:M:234:LEU:HD12 | 1:M:296:ALA:HB2 | 1.81 | 0.62 |
| 1:N:42:LYS:HD2 | 1:N:426:ALA:H | 1.64 | 0.62 |
| 1:N:119:ILE:CD1 | 1:N:403:ARG:NH1 | 2.63 | 0.62 |
| 1:N:345:MET:HE1 | 1:N:362:VAL:CG2 | 2.30 | 0.62 |
| 1:O:130:LYS:HZ3 | 1:O:134:LEU:HD11 | 1.64 | 0.62 |
| 1:P:42:LYS:HE2 | 1:P:426:ALA:HB2 | 1.82 | 0.62 |
| 1:A:236:ASN:HB3 | 1:A:304:ILE:O | 2.00 | 0.62 |
| 1:A:461:MET:HB3 | 1:A:466:VAL:HG23 | 1.82 | 0.62 |
| 1:B:96:ALA:C | 1:B:480:ALA:HB1 | 2.20 | 0.62 |
| 1:B:124:TYR:CE1 | 1:B:407:ALA:HA | 2.33 | 0.62 |
| 1:C:31:ILE:HG21 | 1:C:65:LEU:CD1 | 2.30 | 0.62 |
| 1:C:150:LEU:HD23 | 1:C:175:VAL:HG13 | 1.82 | 0.62 |
| 1:C:158:ILE:CG2 | 1:C:170:LEU:HD12 | 2.29 | 0.62 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:254:ILE:HG22 | 1:C:281:ILE:CD1 | 2.30 | 0.62 |
| 1:C:313:GLN:C | 1:C:315:LEU:H | 2.02 | 0.62 |
| 1:D:12:MET:HG3 | 1:D:494:ILE:HG21 | 1.76 | 0.62 |
| 1:E:346:LEU:HD22 | 1:E:348:ARG:HG2 | 1.81 | 0.62 |
| 1:G:70:VAL:HG22 | 1:G:70:VAL:O | 1.99 | 0.62 |
| 1:H:35:VAL:CG1 | 1:H:46:LYS:HZ2 | 2.13 | 0.62 |
| 1:H:234:LEU:HD12 | 1:H:301:ALA:CB | 2.29 | 0.62 |
| 1:H:413:ASP:O | 1:H:416:GLU:HB2 | 2.00 | 0.62 |
| 1:I:69:SER:OG | 1:I:69:SER:O | 2.17 | 0.62 |
| 1:I:403:ARG:HG3 | 1:I:403:ARG:NH1 | 2.13 | 0.62 |
| 1:K:70:VAL:HG12 | 1:K:76:LYS:CD | 2.26 | 0.62 |
| 1:K:178:VAL:HG11 | 1:K:366:VAL:HG22 | 1.81 | 0.62 |
| 1:L:218:ARG:HD3 | 1:L:282:VAL:CG1 | 2.30 | 0.62 |
| 1:M:339:HIS:O | 1:M:339:HIS:CG | 2.47 | 0.62 |
| 1:P:155:MET:HB3 | 1:P:167:LYS:HB2 | 1.81 | 0.62 |
| 1:P:192:LEU:O | 1:P:342:ALA:HB1 | 2.00 | 0.62 |
| 1:P:339:HIS:HE1 | 1:P:341:LYS:CG | 2.09 | 0.62 |
| 1:A:96:ALA:CA | 1:A:480:ALA:CB | 2.68 | 0.61 |
| 1:A:396:TYR:O | 1:A:396:TYR:CG | 2.54 | 0.61 |
| 1:A:459:GLU:HB3 | 1:A:461:MET:CE | 2.30 | 0.61 |
| 1:C:299:THR:CG2 | 1:C:318:ALA:HB2 | 2.30 | 0.61 |
| 1:D:255:LYS:HE2 | 1:D:279:GLU:HG2 | 1.81 | 0.61 |
| 1:E:435:VAL:HG22 | 1:E:438:ARG:HH22 | 1.65 | 0.61 |
| 1:F:210:LYS:O | 1:F:337:CYS:HB2 | 1.99 | 0.61 |
| 1:F:235:LEU:CD1 | 1:F:307:ILE:CA | 2.73 | 0.61 |
| 1:G:235:LEU:CG | 1:G:307:ILE:HD12 | 2.29 | 0.61 |
| 1:G:485:GLU:O | 1:G:488:LEU:HB3 | 1.99 | 0.61 |
| 1:J:148:GLU:O | 1:J:148:GLU:HG3 | 2.00 | 0.61 |
| 1:J:170:LEU:HD21 | 1:J:358:VAL:HG21 | 1.82 | 0.61 |
| 1:K:371:CYS:SG | 1:K:471:ARG:HD2 | 2.40 | 0.61 |
| 1:M:155:MET:HB2 | 1:M:167:LYS:HD2 | 1.81 | 0.61 |
| 1:M:263:PHE:CZ | 1:M:332:ILE:HG21 | 2.35 | 0.61 |
| 1:N:42:LYS:CE | 1:N:426:ALA:HA | 2.25 | 0.61 |
| 1:O:34:THR:HG23 | 1:P:14:ARG:NH1 | 2.15 | 0.61 |
| 1:O:166:ALA:HB2 | 1:O:203:ILE:CG2 | 2.30 | 0.61 |
| 1:O:387:VAL:HG21 | 1:O:437:VAL:CG1 | 2.30 | 0.61 |
| 1:P:377:ARG:HG2 | 1:P:470:LEU:HG | 1.82 | 0.61 |
| 1:A:391:MET:HE2 | 1:A:438:ARG:HD2 | 1.82 | 0.61 |
| 1:D:152:LYS:NZ | 1:D:462:CYS:CB | 2.63 | 0.61 |
| 1:F:41:PRO:HB2 | 1:F:42:LYS:HD2 | 1.81 | 0.61 |
| 1:F:379:VAL:HG22 | 1:F:380:SER:N | 2.14 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:459:GLU:CD | 1:F:461:MET:CE | 2.68 | 0.61 |
| 1:G:12:MET:HB3 | 1:G:494:ILE:HG22 | 1.82 | 0.61 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:HG22 | 1.82 | 0.61 |
| 1:G:89:VAL:HG11 | 1:G:472:VAL:CA | 2.30 | 0.61 |
| 1:G:124:TYR:CE1 | 1:G:407:ALA:HB1 | 2.35 | 0.61 |
| 1:G:178:VAL:CG1 | 1:G:188:VAL:HG21 | 2.30 | 0.61 |
| 1:I:142:VAL:O | 1:I:142:VAL:CG1 | 2.43 | 0.61 |
| 1:I:326:ILE:HD11 | 1:I:348:ARG:NH1 | 2.14 | 0.61 |
| 1:J:299:THR:CG2 | 1:J:334:VAL:CG1 | 2.78 | 0.61 |
| 1:K:119:ILE:HD12 | 1:K:403:ARG:CA | 2.28 | 0.61 |
| 1:K:232:ILE:HG13 | 1:K:261:VAL:HB | 1.81 | 0.61 |
| 1:N:68:MET:HA | 1:N:68:MET:CE | 2.18 | 0.61 |
| 1:O:70:VAL:O | 1:O:70:VAL:HG22 | 2.00 | 0.61 |
| 1:O:178:VAL:HG23 | 1:O:366:VAL:HG22 | 1.82 | 0.61 |
| 1:O:232:ILE:CD1 | 1:O:299:THR:HG21 | 2.30 | 0.61 |
| 1:P:41:PRO:CG | 1:P:453:VAL:HG11 | 2.30 | 0.61 |
| 1:P:82:ALA:HB2 | 1:P:97:VAL:HG21 | 1.82 | 0.61 |
| 1:P:403:ARG:HG3 | 1:P:403:ARG:NH1 | 2.03 | 0.61 |
| 1:A:9:PRO:CD | 1:B:68:MET:HE2 | 2.29 | 0.61 |
| 1:A:248:LYS:CD | 1:A:275:TYR:CZ | 2.74 | 0.61 |
| 1:A:251:VAL:CG1 | 1:A:276:LEU:CD2 | 2.77 | 0.61 |
| 1:A:431:ILE:HD13 | 1:J:403:ARG:CD | 2.28 | 0.61 |
| 1:B:82:ALA:HB2 | 1:B:97:VAL:HG21 | 1.82 | 0.61 |
| 1:B:115:VAL:HG21 | 1:B:403:ARG:HD3 | 1.80 | 0.61 |
| 1:B:433:ILE:HG21 | 1:B:451:LEU:HD23 | 1.82 | 0.61 |
| 1:C:196:GLU:HG2 | 1:C:331:MET:HE2 | 1.81 | 0.61 |
| 1:C:234:LEU:HB3 | 1:C:292:MET:CE | 2.30 | 0.61 |
| 1:E:153:ILE:HD11 | 1:E:372:THR:HG21 | 1.82 | 0.61 |
| 1:E:158:ILE:HD12 | 1:E:170:LEU:HB3 | 1.83 | 0.61 |
| 1:E:377:ARG:HB3 | 1:E:470:LEU:CG | 2.28 | 0.61 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:CG2 | 2.30 | 0.61 |
| 1:F:105:ARG:CZ | 1:F:106:LYS:HD2 | 2.30 | 0.61 |
| 1:F:208:LEU:HD23 | 1:F:210:LYS:HD3 | 1.81 | 0.61 |
| 1:G:42:LYS:HG3 | 1:G:425:ASN:CB | 2.30 | 0.61 |
| 1:G:89:VAL:HG21 | 1:G:368:VAL:CG1 | 2.30 | 0.61 |
| 1:G:281:ILE:O | 1:G:281:ILE:CG2 | 2.25 | 0.61 |
| 1:H:38:THR:HB | 1:H:46:LYS:NZ | 2.14 | 0.61 |
| 1:H:248:LYS:HG3 | 1:H:275:TYR:CD2 | 2.36 | 0.61 |
| 1:I:227:VAL:HG11 | 1:I:260:ASN:CG | 2.19 | 0.61 |
| 1:I:469:PRO:HB2 | 1:I:472:VAL:HG13 | 1.82 | 0.61 |
| 1:K:123:GLY:HA3 | 1:K:407:ALA:HB1 | 1.79 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:464:ASN:HB2 | 1:M:466:VAL:HG22 | 1.79 | 0.61 |
| 1:N:30:ILE:CG2 | 1:N:31:ILE:H | 1.97 | 0.61 |
| 1:N:459:GLU:CD | 1:N:461:MET:CE | 2.69 | 0.61 |
| 1:O:182:VAL:HB | 1:O:188:VAL:CG2 | 2.24 | 0.61 |
| 1:O:219:VAL:HG12 | 1:O:223:MET:HE1 | 1.82 | 0.61 |
| 1:P:43:GLY:O | 1:P:44:MET:HE3 | 2.01 | 0.61 |
| 1:P:134:LEU:CG | 1:P:392:LYS:HE3 | 2.30 | 0.61 |
| 1:P:236:ASN:OD1 | 1:P:236:ASN:C | 2.39 | 0.61 |
| 1:A:448:CYS:SG | 1:A:460:ASP:HB2 | 2.40 | 0.61 |
| 1:C:235:LEU:HD21 | 1:C:307:ILE:HA | 1.82 | 0.61 |
| 1:C:339:HIS:HE1 | 1:C:341:LYS:CD | 2.12 | 0.61 |
| 1:D:194:LYS:HB2 | 1:D:294:LYS:HD3 | 1.82 | 0.61 |
| 1:E:235:LEU:HD21 | 1:E:310:LEU:HD22 | 1.83 | 0.61 |
| 1:E:325:LYS:HG3 | 1:E:330:SER:OG | 1.99 | 0.61 |
| 1:F:254:ILE:O | 1:F:259:ALA:HB3 | 2.00 | 0.61 |
| 1:F:263:PHE:CZ | 1:F:332:ILE:HG21 | 2.36 | 0.61 |
| 1:F:371:CYS:HB3 | 1:F:471:ARG:HE | 1.65 | 0.61 |
| 1:H:263:PHE:CD2 | 1:H:295:LEU:HD22 | 2.35 | 0.61 |
| 1:H:389:LEU:CD1 | 1:H:415:LEU:HD13 | 2.30 | 0.61 |
| 1:H:400:ILE:HD11 | 1:H:408:VAL:HG11 | 1.80 | 0.61 |
| 1:I:417:VAL:O | 1:I:420:ARG:HB3 | 2.00 | 0.61 |
| 1:J:31:ILE:CG2 | 1:J:65:LEU:CD2 | 2.78 | 0.61 |
| 1:N:12:MET:CG | 1:N:494:ILE:HG22 | 2.31 | 0.61 |
| 1:N:234:LEU:HB3 | 1:N:292:MET:CE | 2.31 | 0.61 |
| 1:P:42:LYS:HG3 | 1:P:425:ASN:CB | 2.30 | 0.61 |
| 1:P:255:LYS:HD3 | 1:P:279:GLU:CD | 2.21 | 0.61 |
| 1:P:449:ALA:HB2 | 1:P:458:VAL:HG22 | 1.81 | 0.61 |
| 1:A:138:ILE:HG12 | 1:A:139:ALA:N | 2.04 | 0.61 |
| 1:A:307:ILE:CD1 | 1:A:310:LEU:HD23 | 2.31 | 0.61 |
| 1:C:119:ILE:HD12 | 1:C:403:ARG:HB3 | 1.82 | 0.61 |
| 1:C:379:VAL:HG12 | 1:C:473:LYS:HG3 | 1.83 | 0.61 |
| 1:C:406:LEU:H | 1:C:406:LEU:HD12 | 1.64 | 0.61 |
| 1:D:437:VAL:HG11 | 1:D:451:LEU:HD11 | 1.82 | 0.61 |
| 1:E:117:PRO:HA | 1:E:120:VAL:CG1 | 2.29 | 0.61 |
| 1:E:210:LYS:HA | 1:E:343:VAL:HG23 | 1.83 | 0.61 |
| 1:F:8:LEU:HD12 | 1:G:68:MET:CB | 2.29 | 0.61 |
| 1:F:39:LEU:CG | 1:F:40:GLY:H | 2.13 | 0.61 |
| 1:G:119:ILE:HD11 | 1:G:403:ARG:NH1 | 2.15 | 0.61 |
| 1:H:124:TYR:HE1 | 1:H:407:ALA:HA | 1.64 | 0.61 |
| 1:H:130:LYS:CE | 1:H:393:LEU:HD13 | 2.29 | 0.61 |
| 1:H:326:ILE:HG13 | 1:H:348:ARG:NH1 | 2.15 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:85:GLN:NE2 | 1:I:96:ALA:HB2 | 2.14 | 0.61 |
| 1:K:69:SER:CB | 1:L:9:PRO:CA | 2.78 | 0.61 |
| 1:K:77:MET:HE2 | 1:K:487:LEU:HG | 1.82 | 0.61 |
| 1:K:100:ALA:O | 1:K:104:LEU:HD12 | 2.00 | 0.61 |
| 1:L:219:VAL:CG2 | 1:L:285:ARG:HB3 | 2.29 | 0.61 |
| 1:L:234:LEU:HD23 | 1:L:296:ALA:HB2 | 1.81 | 0.61 |
| 1:M:124:TYR:CE1 | 1:M:407:ALA:CA | 2.83 | 0.61 |
| 1:N:174:ILE:HD12 | 1:N:365:ALA:CB | 2.25 | 0.61 |
| 1:N:232:ILE:HA | 1:N:261:VAL:HB | 1.82 | 0.61 |
| 1:O:82:ALA:HB2 | 1:O:97:VAL:HG11 | 1.81 | 0.61 |
| 1:O:326:ILE:HD11 | 1:O:348:ARG:NH1 | 2.16 | 0.61 |
| 1:C:35:VAL:CG1 | 1:C:64:ILE:HD13 | 2.31 | 0.61 |
| 1:C:42:LYS:CE | 1:C:453:VAL:HB | 2.30 | 0.61 |
| 1:C:263:PHE:CZ | 1:C:332:ILE:HG21 | 2.36 | 0.61 |
| 1:D:142:VAL:HG11 | 1:D:149:ILE:CG2 | 2.22 | 0.61 |
| 1:D:170:LEU:HD13 | 1:D:358:VAL:CG1 | 2.28 | 0.61 |
| 1:D:235:LEU:CD2 | 1:D:310:LEU:CG | 2.60 | 0.61 |
| 1:D:453:VAL:HG23 | 1:D:454:PHE:CD1 | 2.35 | 0.61 |
| 1:H:29:ARG:O | 1:H:32:ALA:HB3 | 2.00 | 0.61 |
| 1:H:135:LEU:CD2 | 1:H:385:THR:HG21 | 2.29 | 0.61 |
| 1:H:233:ALA:HB1 | 1:H:315:LEU:CD2 | 2.29 | 0.61 |
| 1:H:345:MET:HE1 | 1:H:362:VAL:HG11 | 1.82 | 0.61 |
| 1:J:263:PHE:CZ | 1:J:332:ILE:HG21 | 2.35 | 0.61 |
| 1:J:307:ILE:O | 1:J:310:LEU:HB3 | 2.00 | 0.61 |
| 1:J:377:ARG:CG | 1:J:470:LEU:HD12 | 2.31 | 0.61 |
| 1:K:68:MET:HA | 1:L:9:PRO:HG3 | 1.81 | 0.61 |
| 1:K:212:VAL:HB | 1:K:298:ALA:HB3 | 1.82 | 0.61 |
| 1:M:31:ILE:HG22 | 1:M:65:LEU:HD22 | 1.83 | 0.61 |
| 1:M:34:THR:HG22 | 1:M:35:VAL:N | 2.16 | 0.61 |
| 1:M:211:GLY:HA3 | 1:M:337:CYS:SG | 2.40 | 0.61 |
| 1:M:235:LEU:HD12 | 1:M:262:LEU:CD1 | 2.25 | 0.61 |
| 1:N:19:ASP:HA | 1:N:22:ARG:HH21 | 1.64 | 0.61 |
| 1:N:155:MET:HB2 | 1:N:167:LYS:HB2 | 1.82 | 0.61 |
| 1:O:197:LYS:HB3 | 1:O:355:ILE:HG22 | 1.83 | 0.61 |
| 1:P:71:GLU:HG3 | 1:P:72:HIS:H | 1.65 | 0.61 |
| 1:P:235:LEU:HB2 | 1:P:310:LEU:HD22 | 1.83 | 0.61 |
| 1:P:377:ARG:HD2 | 1:P:470:LEU:HD12 | 1.83 | 0.61 |
| 1:P:379:VAL:HG12 | 1:P:470:LEU:CD2 | 2.31 | 0.61 |
| 1:P:391:MET:CE | 1:P:438:ARG:HE | 2.12 | 0.61 |
| 1:A:12:MET:HE1 | 1:B:49:VAL:O | 2.00 | 0.61 |
| 1:A:441:HIS:ND1 | 1:A:449:ALA:HB3 | 2.16 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:153:ILE:CD1 | 1:C:378:ILE:HG22 | 2.30 | 0.61 |
| 1:C:234:LEU:N | 1:C:315:LEU:HD22 | 2.16 | 0.61 |
| 1:C:235:LEU:CD2 | 1:C:307:ILE:HA | 2.31 | 0.61 |
| 1:D:12:MET:HE2 | 1:D:494:ILE:CB | 2.31 | 0.61 |
| 1:D:23:MET:CE | 1:D:72:HIS:CE1 | 2.83 | 0.61 |
| 1:E:171:ALA:HA | 1:E:174:ILE:CD1 | 2.31 | 0.61 |
| 1:E:197:LYS:HB2 | 1:E:355:ILE:HG23 | 1.80 | 0.61 |
| 1:E:241:GLU:HG2 | 1:E:250:MET:SD | 2.39 | 0.61 |
| 1:E:276:LEU:HD12 | 1:E:281:ILE:HG21 | 1.81 | 0.61 |
| 1:G:297:LYS:O | 1:G:340:PRO:HA | 2.01 | 0.61 |
| 1:H:347:ILE:CG2 | 1:H:358:VAL:HB | 2.31 | 0.61 |
| 1:I:62:VAL:CG2 | 1:I:66:ARG:NH1 | 2.64 | 0.61 |
| 1:I:276:LEU:HD12 | 1:I:281:ILE:HD12 | 1.83 | 0.61 |
| 1:I:432:GLU:O | 1:I:436:LYS:HG3 | 2.01 | 0.61 |
| 1:J:358:VAL:O | 1:J:362:VAL:HG12 | 1.99 | 0.61 |
| 1:J:368:VAL:CG2 | 1:J:469:PRO:HG2 | 2.30 | 0.61 |
| 1:K:158:ILE:CD1 | 1:K:170:LEU:CB | 2.78 | 0.61 |
| 1:L:31:ILE:CG2 | 1:L:65:LEU:HD11 | 2.26 | 0.61 |
| 1:L:308:LYS:HB2 | 1:L:308:LYS:HZ3 | 1.64 | 0.61 |
| 1:M:68:MET:CA | 1:N:8:LEU:HA | 2.29 | 0.61 |
| 1:M:461:MET:HB3 | 1:M:466:VAL:HG23 | 1.81 | 0.61 |
| 1:N:265:GLN:HG2 | 1:N:266:LYS:HE3 | 1.82 | 0.61 |
| 1:N:437:VAL:HG21 | 1:N:451:LEU:CD1 | 2.30 | 0.61 |
| 1:N:460:ASP:OD2 | 1:N:463:GLU:HB2 | 2.00 | 0.61 |
| 1:O:38:THR:CG2 | 1:O:46:LYS:HE2 | 2.31 | 0.61 |
| 1:P:170:LEU:CD1 | 1:P:358:VAL:HG13 | 2.31 | 0.61 |
| 1:P:188:VAL:HG13 | 1:P:189:ASP:N | 2.15 | 0.61 |
| 1:P:219:VAL:HG22 | 1:P:219:VAL:O | 1.99 | 0.61 |
| 1:A:34:THR:CB | 1:H:14:ARG:HH22 | 2.13 | 0.61 |
| 1:A:77:MET:HE1 | 1:A:486:MET:HE2 | 1.83 | 0.61 |
| 1:A:111:LEU:HD21 | 1:A:117:PRO:HB3 | 1.82 | 0.61 |
| 1:B:420:ARG:HH11 | 1:B:420:ARG:CG | 1.95 | 0.61 |
| 1:C:71:GLU:HG3 | 1:C:72:HIS:H | 1.65 | 0.61 |
| 1:C:130:LYS:HD2 | 1:C:396:TYR:CG | 2.35 | 0.61 |
| 1:C:461:MET:CG | 1:C:466:VAL:HG23 | 2.31 | 0.61 |
| 1:D:119:ILE:HG21 | 1:D:403:ARG:HG3 | 1.82 | 0.61 |
| 1:D:219:VAL:HG11 | 1:D:273:GLN:HG2 | 1.82 | 0.61 |
| 1:D:418:ILE:HD13 | 1:D:418:ILE:H | 1.66 | 0.61 |
| 1:D:469:PRO:CG | 1:D:472:VAL:HG21 | 2.30 | 0.61 |
| 1:E:138:ILE:HD12 | 1:E:139:ALA:H | 1.65 | 0.61 |
| 1:E:196:GLU:HG2 | 1:E:331:MET:HE1 | 1.83 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:209:ILE:HD11 | 1:F:213:LEU:HB2 | 1.81 | 0.61 |
| 1:G:251:VAL:CG1 | 1:G:276:LEU:HD13 | 2.31 | 0.61 |
| 1:H:35:VAL:CG1 | 1:H:46:LYS:NZ | 2.64 | 0.61 |
| 1:H:89:VAL:HG11 | 1:H:472:VAL:H | 1.66 | 0.61 |
| 1:H:223:MET:HG2 | 1:H:277:ALA:HA | 1.83 | 0.61 |
| 1:H:234:LEU:O | 1:H:304:ILE:HG12 | 2.01 | 0.61 |
| 1:I:178:VAL:HG11 | 1:I:188:VAL:HG11 | 1.81 | 0.61 |
| 1:I:326:ILE:HG12 | 1:I:348:ARG:NH1 | 2.15 | 0.61 |
| 1:I:459:GLU:HG2 | 1:I:459:GLU:O | 2.01 | 0.61 |
| 1:J:223:MET:HG2 | 1:J:281:ILE:O | 2.00 | 0.61 |
| 1:J:340:PRO:HG2 | 1:J:340:PRO:O | 2.00 | 0.61 |
| 1:K:85:GLN:HE22 | 1:K:479:SER:HB2 | 1.65 | 0.61 |
| 1:L:224:PRO:HD2 | 1:L:280:GLY:O | 2.01 | 0.61 |
| 1:L:232:ILE:HG12 | 1:L:299:THR:HG21 | 1.83 | 0.61 |
| 1:M:105:ARG:CD | 1:M:106:LYS:HG2 | 2.31 | 0.61 |
| 1:M:254:ILE:HD11 | 1:M:307:ILE:HD11 | 1.83 | 0.61 |
| 1:N:452:ASN:HD21 | 1:N:454:PHE:HB2 | 1.65 | 0.61 |
| 1:O:240:GLU:O | 1:O:240:GLU:HG3 | 1.99 | 0.61 |
| 1:P:68:MET:HA | 1:P:68:MET:HE1 | 1.82 | 0.61 |
| 1:A:31:ILE:HG21 | 1:A:65:LEU:CD2 | 2.30 | 0.61 |
| 1:A:386:GLU:CD | 1:A:386:GLU:H | 2.03 | 0.61 |
| 1:B:134:LEU:CD1 | 1:B:393:LEU:CD2 | 2.79 | 0.61 |
| 1:B:219:VAL:CG1 | 1:B:220:SER:N | 2.64 | 0.61 |
| 1:B:254:ILE:HD11 | 1:B:307:ILE:HD11 | 1.83 | 0.61 |
| 1:B:418:ILE:CG2 | 1:B:422:LEU:HD12 | 2.31 | 0.61 |
| 1:D:142:VAL:HG13 | 1:D:149:ILE:CD1 | 2.21 | 0.61 |
| 1:D:326:ILE:O | 1:D:326:ILE:CG2 | 2.46 | 0.61 |
| 1:D:422:LEU:N | 1:D:422:LEU:CD1 | 2.64 | 0.61 |
| 1:D:435:VAL:HG13 | 1:M:401:SER:OG | 2.00 | 0.61 |
| 1:E:140:CYS:HB3 | 1:E:446:ASN:OD1 | 2.01 | 0.61 |
| 1:E:152:LYS:HD3 | 1:E:465:GLY:CA | 2.31 | 0.61 |
| 1:E:156:THR:O | 1:E:156:THR:HG23 | 2.01 | 0.61 |
| 1:E:173:ILE:HG13 | 1:E:345:MET:SD | 2.41 | 0.61 |
| 1:F:96:ALA:O | 1:F:480:ALA:HB1 | 2.00 | 0.61 |
| 1:G:124:TYR:N | 1:G:124:TYR:CD1 | 2.66 | 0.61 |
| 1:G:200:GLY:O | 1:G:348:ARG:HB3 | 2.00 | 0.61 |
| 1:G:372:THR:HG22 | 1:G:377:ARG:O | 2.01 | 0.61 |
| 1:H:150:LEU:HD23 | 1:H:175:VAL:HG13 | 1.83 | 0.61 |
| 1:H:235:LEU:CD2 | 1:H:307:ILE:HG22 | 2.30 | 0.61 |
| 1:H:339:HIS:CE1 | 1:H:341:LYS:NZ | 2.68 | 0.61 |
| 1:J:63:THR:HA | 1:J:66:ARG:CB | 2.31 | 0.61 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:235:LEU:HD13 | 1:K:307:ILE:HG22 | 1.82 | 0.61 |
| 1:M:433:ILE:O | 1:M:436:LYS:HB2 | 2.01 | 0.61 |
| 1:N:122:LYS:HA | 1:N:125:GLN:NE2 | 2.15 | 0.61 |
| 1:N:380:SER:HB3 | 1:N:384:SER:HB2 | 1.81 | 0.61 |
| 1:P:195:ILE:H | 1:P:195:ILE:HD12 | 1.65 | 0.61 |
| 1:P:276:LEU:HB3 | 1:P:281:ILE:CG2 | 2.31 | 0.61 |
| 1:P:391:MET:HE1 | 1:P:438:ARG:CB | 2.12 | 0.61 |
| 1:P:434:LEU:CD2 | 1:P:434:LEU:N | 2.64 | 0.61 |
| 1:A:239:ILE:CG1 | 1:A:307:ILE:HG21 | 2.30 | 0.61 |
| 1:B:23:MET:HE3 | 1:B:72:HIS:CE1 | 2.28 | 0.61 |
| 1:C:286:ARG:HH11 | 1:C:286:ARG:HG2 | 1.65 | 0.61 |
| 1:D:22:ARG:O | 1:D:26:LEU:HB2 | 2.01 | 0.61 |
| 1:D:491:ASP:OD1 | 1:E:44:MET:HB2 | 2.01 | 0.61 |
| 1:E:235:LEU:HD23 | 1:E:262:LEU:HD21 | 1.82 | 0.61 |
| 1:E:235:LEU:CB | 1:E:310:LEU:HD13 | 2.31 | 0.61 |
| 1:E:240:GLU:O | 1:E:240:GLU:HG3 | 2.00 | 0.61 |
| 1:H:304:ILE:HD12 | 1:H:309:ASP:HB3 | 1.82 | 0.61 |
| 1:J:299:THR:CG2 | 1:J:318:ALA:HB2 | 2.30 | 0.61 |
| 1:N:102:GLU:OE2 | 1:N:417:VAL:HG21 | 2.01 | 0.61 |
| 1:N:140:CYS:CB | 1:N:447:LYS:HG2 | 2.30 | 0.61 |
| 1:N:200:GLY:O | 1:N:348:ARG:HB3 | 2.01 | 0.61 |
| 1:N:219:VAL:CG1 | 1:N:220:SER:N | 2.64 | 0.61 |
| 1:A:63:THR:O | 1:A:66:ARG:HB2 | 2.01 | 0.60 |
| 1:B:307:ILE:CD1 | 1:B:310:LEU:HD12 | 2.31 | 0.60 |
| 1:C:150:LEU:CD2 | 1:C:175:VAL:CG1 | 2.78 | 0.60 |
| 1:C:178:VAL:O | 1:C:178:VAL:CG1 | 2.48 | 0.60 |
| 1:C:469:PRO:O | 1:C:469:PRO:HG2 | 2.01 | 0.60 |
| 1:D:254:ILE:HG21 | 1:D:262:LEU:CD1 | 2.31 | 0.60 |
| 1:D:435:VAL:HG11 | 1:M:401:SER:HB3 | 1.81 | 0.60 |
| 1:E:339:HIS:O | 1:E:339:HIS:CG | 2.53 | 0.60 |
| 1:F:146:ASP:HB3 | 1:F:149:ILE:HG13 | 1.83 | 0.60 |
| 1:F:219:VAL:HG21 | 1:F:285:ARG:HB3 | 1.83 | 0.60 |
| 1:G:8:LEU:N | 1:H:71:GLU:HG3 | 2.16 | 0.60 |
| 1:G:232:ILE:HG13 | 1:G:261:VAL:CG1 | 2.31 | 0.60 |
| 1:H:22:ARG:HA | 1:H:25:ILE:CD1 | 2.26 | 0.60 |
| 1:I:223:MET:CE | 1:I:283:ALA:CB | 2.79 | 0.60 |
| 1:I:235:LEU:HD11 | 1:I:307:ILE:HD13 | 1.80 | 0.60 |
| 1:J:152:LYS:CG | 1:J:465:GLY:HA2 | 2.30 | 0.60 |
| 1:J:247:LEU:HD11 | 1:J:272:ALA:HB2 | 1.82 | 0.60 |
| 1:K:77:MET:CE | 1:K:487:LEU:HG | 2.30 | 0.60 |
| 1:L:23:MET:CE | 1:L:72:HIS:NE2 | 2.64 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:64:ILE:HG22 | 1:L:65:LEU:HD22 | 1.82 | 0.60 |
| 1:L:153:ILE:HD12 | 1:L:372:THR:HG21 | 1.83 | 0.60 |
| 1:M:437:VAL:CG2 | 1:M:458:VAL:HG13 | 2.27 | 0.60 |
| 1:N:167:LYS:HG3 | 1:N:168:GLU:N | 2.16 | 0.60 |
| 1:N:170:LEU:CD2 | 1:N:358:VAL:HG22 | 2.31 | 0.60 |
| 1:N:178:VAL:CG2 | 1:N:366:VAL:CG2 | 2.73 | 0.60 |
| 1:O:155:MET:CG | 1:O:167:LYS:HD2 | 2.31 | 0.60 |
| 1:O:158:ILE:HD13 | 1:O:170:LEU:HB2 | 1.83 | 0.60 |
| 1:P:488:LEU:O | 1:P:488:LEU:HD23 | 2.01 | 0.60 |
| 1:A:130:LYS:HZ2 | 1:A:396:TYR:HB2 | 1.66 | 0.60 |
| 1:A:197:LYS:HA | 1:A:355:ILE:CG2 | 2.31 | 0.60 |
| 1:B:70:VAL:CG2 | 1:B:76:LYS:HD3 | 2.31 | 0.60 |
| 1:B:70:VAL:CG2 | 1:B:76:LYS:CG | 2.74 | 0.60 |
| 1:C:377:ARG:O | 1:C:470:LEU:HB2 | 2.00 | 0.60 |
| 1:D:418:ILE:O | 1:D:422:LEU:HD22 | 2.01 | 0.60 |
| 1:D:428:LEU:HD23 | 1:D:433:ILE:HD11 | 1.83 | 0.60 |
| 1:E:194:LYS:HB2 | 1:E:294:LYS:CD | 2.31 | 0.60 |
| 1:F:134:LEU:CD1 | 1:F:393:LEU:HG | 2.31 | 0.60 |
| 1:F:234:LEU:N | 1:F:315:LEU:HD21 | 2.15 | 0.60 |
| 1:G:464:ASN:HB3 | 1:G:466:VAL:HG22 | 1.83 | 0.60 |
| 1:K:82:ALA:HB1 | 1:K:93:THR:CG2 | 2.30 | 0.60 |
| 1:K:170:LEU:HD22 | 1:K:358:VAL:HG13 | 1.79 | 0.60 |
| 1:K:227:VAL:HG11 | 1:K:260:ASN:CG | 2.22 | 0.60 |
| 1:K:235:LEU:CD1 | 1:K:307:ILE:CD1 | 2.78 | 0.60 |
| 1:L:171:ALA:HA | 1:L:174:ILE:HG12 | 1.84 | 0.60 |
| 1:M:130:LYS:HG2 | 1:M:393:LEU:CD2 | 2.31 | 0.60 |
| 1:M:485:GLU:O | 1:M:489:ARG:HG2 | 2.01 | 0.60 |
| 1:O:222:GLN:CA | 1:O:277:ALA:HB1 | 2.31 | 0.60 |
| 1:P:8:LEU:HB3 | 1:P:12:MET:HE2 | 1.82 | 0.60 |
| 1:P:222:GLN:HB3 | 1:P:277:ALA:CB | 2.31 | 0.60 |
| 1:P:235:LEU:CD1 | 1:P:307:ILE:HG22 | 2.28 | 0.60 |
| 1:A:8:LEU:HA | 1:B:69:SER:O | 2.01 | 0.60 |
| 1:A:254:ILE:HD13 | 1:A:262:LEU:HD13 | 1.83 | 0.60 |
| 1:A:369:VAL:O | 1:A:369:VAL:CG1 | 2.49 | 0.60 |
| 1:A:389:LEU:CD1 | 1:A:415:LEU:CD2 | 2.79 | 0.60 |
| 1:A:437:VAL:CG2 | 1:A:451:LEU:HD21 | 2.30 | 0.60 |
| 1:B:112:ASP:O | 1:B:113:GLN:HG3 | 2.01 | 0.60 |
| 1:B:219:VAL:HG13 | 1:B:220:SER:H | 1.66 | 0.60 |
| 1:B:460:ASP:CG | 1:B:463:GLU:H | 2.05 | 0.60 |
| 1:C:150:LEU:CG | 1:C:175:VAL:HG13 | 2.32 | 0.60 |
| 1:C:379:VAL:HG21 | 1:C:385:THR:OG1 | 2.01 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:418:ILE:CB | 1:D:419:PRO:HD3 | 2.27 | 0.60 |
| 1:E:156:THR:CG2 | 1:E:156:THR:O | 2.49 | 0.60 |
| 1:F:68:MET:HE3 | 1:F:68:MET:N | 2.16 | 0.60 |
| 1:F:339:HIS:O | 1:F:339:HIS:ND1 | 2.34 | 0.60 |
| 1:G:237:CYS:CB | 1:G:306:ASN:HA | 2.31 | 0.60 |
| 1:H:235:LEU:CG | 1:H:307:ILE:HD13 | 2.31 | 0.60 |
| 1:I:12:MET:HE1 | 1:P:68:MET:HE3 | 1.83 | 0.60 |
| 1:I:130:LYS:HG2 | 1:I:393:LEU:HD22 | 1.83 | 0.60 |
| 1:I:212:VAL:HB | 1:I:298:ALA:CB | 2.31 | 0.60 |
| 1:K:38:THR:CG2 | 1:K:46:LYS:HE2 | 2.31 | 0.60 |
| 1:K:134:LEU:CD1 | 1:K:393:LEU:CG | 2.79 | 0.60 |
| 1:K:211:GLY:C | 1:K:298:ALA:HB1 | 2.21 | 0.60 |
| 1:K:340:PRO:O | 1:K:340:PRO:HD2 | 2.01 | 0.60 |
| 1:K:389:LEU:CD1 | 1:K:415:LEU:HD13 | 2.29 | 0.60 |
| 1:K:473:LYS:HD3 | 1:K:477:ILE:HD11 | 1.82 | 0.60 |
| 1:L:433:ILE:HG22 | 1:L:451:LEU:HD21 | 1.82 | 0.60 |
| 1:M:130:LYS:CE | 1:M:393:LEU:CD2 | 2.79 | 0.60 |
| 1:M:251:VAL:CG1 | 1:M:276:LEU:CD2 | 2.79 | 0.60 |
| 1:N:42:LYS:HB3 | 1:N:425:ASN:HB2 | 1.82 | 0.60 |
| 1:N:138:ILE:O | 1:N:446:ASN:HB2 | 2.01 | 0.60 |
| 1:O:70:VAL:CG2 | 1:O:76:LYS:HG2 | 2.30 | 0.60 |
| 1:P:171:ALA:HA | 1:P:174:ILE:CD1 | 2.31 | 0.60 |
| 1:B:166:ALA:CB | 1:B:203:ILE:HG22 | 2.09 | 0.60 |
| 1:B:437:VAL:HG21 | 1:B:451:LEU:CD1 | 2.32 | 0.60 |
| 1:C:70:VAL:HG22 | 1:C:76:LYS:CG | 2.31 | 0.60 |
| 1:C:178:VAL:CG2 | 1:C:366:VAL:HG13 | 2.31 | 0.60 |
| 1:C:347:ILE:HG21 | 1:C:358:VAL:CG1 | 2.31 | 0.60 |
| 1:D:212:VAL:N | 1:D:298:ALA:CB | 2.65 | 0.60 |
| 1:D:233:ALA:CB | 1:D:315:LEU:CD1 | 2.74 | 0.60 |
| 1:D:431:ILE:HD11 | 1:M:403:ARG:CA | 2.31 | 0.60 |
| 1:E:102:GLU:C | 1:E:104:LEU:H | 2.03 | 0.60 |
| 1:E:217:GLU:HG2 | 1:E:330:SER:C | 2.22 | 0.60 |
| 1:E:433:ILE:HG22 | 1:E:451:LEU:CD2 | 2.31 | 0.60 |
| 1:F:48:LEU:HD11 | 1:F:68:MET:SD | 2.41 | 0.60 |
| 1:F:164:GLU:O | 1:F:164:GLU:CG | 2.39 | 0.60 |
| 1:F:235:LEU:HD21 | 1:F:307:ILE:CD1 | 2.32 | 0.60 |
| 1:F:473:LYS:HA | 1:F:473:LYS:HE3 | 1.83 | 0.60 |
| 1:G:68:MET:HE2 | 1:G:68:MET:CA | 2.21 | 0.60 |
| 1:G:154:ALA:CB | 1:G:174:ILE:HD11 | 2.23 | 0.60 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:HD22 | 1.83 | 0.60 |
| 1:H:299:THR:CG2 | 1:H:334:VAL:CG1 | 2.79 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:250:MET:HE3 | 1:I:308:LYS:HD2 | 1.83 | 0.60 |
| 1:J:213:LEU:HD22 | 1:J:331:MET:HE1 | 1.83 | 0.60 |
| 1:J:237:CYS:SG | 1:J:306:ASN:HA | 2.41 | 0.60 |
| 1:J:299:THR:CG2 | 1:J:334:VAL:HG11 | 2.31 | 0.60 |
| 1:K:379:VAL:HB | 1:K:380:SER:CB | 2.31 | 0.60 |
| 1:K:441:HIS:ND1 | 1:K:449:ALA:HB3 | 2.16 | 0.60 |
| 1:M:68:MET:CB | 1:N:8:LEU:HD23 | 2.31 | 0.60 |
| 1:M:99:VAL:HG12 | 1:M:418:ILE:CD1 | 2.30 | 0.60 |
| 1:M:299:THR:HG21 | 1:M:334:VAL:HG11 | 1.81 | 0.60 |
| 1:M:494:ILE:O | 1:M:494:ILE:HG22 | 2.01 | 0.60 |
| 1:N:16:MET:N | 1:N:20:ALA:HB2 | 2.17 | 0.60 |
| 1:N:346:LEU:HD23 | 1:N:347:ILE:H | 1.67 | 0.60 |
| 1:N:391:MET:HE3 | 1:N:438:ARG:HA | 1.83 | 0.60 |
| 1:A:101:GLY:HA2 | 1:A:104:LEU:HD12 | 1.82 | 0.60 |
| 1:B:206:THR:HG21 | 1:B:347:ILE:HG22 | 1.84 | 0.60 |
| 1:C:208:LEU:HD21 | 1:C:210:LYS:HE3 | 1.82 | 0.60 |
| 1:C:223:MET:CE | 1:C:276:LEU:CB | 2.78 | 0.60 |
| 1:C:377:ARG:HG2 | 1:C:377:ARG:HH11 | 1.66 | 0.60 |
| 1:C:391:MET:HE1 | 1:C:438:ARG:CG | 2.31 | 0.60 |
| 1:D:77:MET:HE1 | 1:D:486:MET:CE | 2.26 | 0.60 |
| 1:D:473:LYS:HE3 | 1:D:473:LYS:CA | 2.32 | 0.60 |
| 1:E:130:LYS:NZ | 1:E:396:TYR:HB2 | 2.16 | 0.60 |
| 1:E:431:ILE:CD1 | 1:N:403:ARG:CG | 2.80 | 0.60 |
| 1:F:78:LEU:HD12 | 1:F:487:LEU:HD22 | 1.83 | 0.60 |
| 1:F:276:LEU:HD12 | 1:F:281:ILE:HD12 | 1.84 | 0.60 |
| 1:G:144:ALA:O | 1:G:150:LEU:HD11 | 2.02 | 0.60 |
| 1:G:167:LYS:HG3 | 1:G:168:GLU:H | 1.65 | 0.60 |
| 1:H:192:LEU:HD22 | 1:H:297:LYS:CE | 2.29 | 0.60 |
| 1:H:385:THR:O | 1:H:389:LEU:HG | 2.00 | 0.60 |
| 1:I:233:ALA:CA | 1:I:315:LEU:HD22 | 2.29 | 0.60 |
| 1:J:12:MET:SD | 1:J:494:ILE:HG22 | 2.41 | 0.60 |
| 1:J:394:ARG:O | 1:J:397:ALA:HB3 | 2.01 | 0.60 |
| 1:L:31:ILE:HG22 | 1:L:65:LEU:HD21 | 1.84 | 0.60 |
| 1:L:68:MET:C | 1:M:8:LEU:HA | 2.21 | 0.60 |
| 1:M:62:VAL:HG13 | 1:M:63:THR:N | 2.15 | 0.60 |
| 1:N:209:ILE:HD11 | 1:N:213:LEU:HB2 | 1.81 | 0.60 |
| 1:P:238:ALA:C | 1:P:307:ILE:HG23 | 2.22 | 0.60 |
| 1:P:299:THR:CG2 | 1:P:334:VAL:CG1 | 2.80 | 0.60 |
| 1:A:403:ARG:HG3 | 1:A:403:ARG:NH1 | 2.02 | 0.60 |
| 1:C:77:MET:CE | 1:C:486:MET:HE1 | 2.32 | 0.60 |
| 1:C:212:VAL:HG21 | 1:C:294:LYS:C | 2.21 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:166:ALA:CB | 1:D:203:ILE:HG22 | 2.29 | 0.60 |
| 1:D:362:VAL:O | 1:D:366:VAL:HG23 | 2.01 | 0.60 |
| 1:E:197:LYS:CB | 1:E:355:ILE:HG23 | 2.30 | 0.60 |
| 1:F:235:LEU:CG | 1:F:307:ILE:HG22 | 2.32 | 0.60 |
| 1:F:350:THR:OG1 | 1:F:354:VAL:HG13 | 2.02 | 0.60 |
| 1:G:380:SER:HB2 | 1:G:384:SER:HB3 | 1.83 | 0.60 |
| 1:H:239:ILE:CG2 | 1:H:268:ILE:HG23 | 2.32 | 0.60 |
| 1:H:403:ARG:HG2 | 1:H:403:ARG:NH1 | 2.17 | 0.60 |
| 1:I:92:GLY:HA2 | 1:I:95:THR:HB | 1.83 | 0.60 |
| 1:I:195:ILE:CB | 1:I:359:ALA:CB | 2.73 | 0.60 |
| 1:I:225:LYS:N | 1:I:225:LYS:HD3 | 2.12 | 0.60 |
| 1:I:255:LYS:HD3 | 1:I:279:GLU:CB | 2.32 | 0.60 |
| 1:K:263:PHE:CE2 | 1:K:295:LEU:CD2 | 2.84 | 0.60 |
| 1:L:16:MET:CA | 1:L:20:ALA:HB2 | 2.31 | 0.60 |
| 1:L:153:ILE:HD11 | 1:L:372:THR:HG21 | 1.82 | 0.60 |
| 1:L:307:ILE:HD13 | 1:L:310:LEU:HD23 | 1.84 | 0.60 |
| 1:M:30:ILE:HG22 | 1:M:31:ILE:HD13 | 1.82 | 0.60 |
| 1:M:389:LEU:HD13 | 1:M:415:LEU:CD1 | 2.32 | 0.60 |
| 1:M:453:VAL:CG2 | 1:M:454:PHE:CD2 | 2.84 | 0.60 |
| 1:M:461:MET:SD | 1:M:466:VAL:HG21 | 2.41 | 0.60 |
| 1:N:448:CYS:CB | 1:N:460:ASP:HA | 2.30 | 0.60 |
| 1:O:169:LYS:HE3 | 1:O:204:ASP:O | 2.02 | 0.60 |
| 1:O:220:SER:HB3 | 1:O:277:ALA:CB | 2.30 | 0.60 |
| 1:A:35:VAL:HG12 | 1:A:46:LYS:HE2 | 1.84 | 0.60 |
| 1:A:152:LYS:HE3 | 1:A:465:GLY:CA | 2.30 | 0.60 |
| 1:A:430:ALA:O | 1:A:434:LEU:HD23 | 2.01 | 0.60 |
| 1:B:70:VAL:HG21 | 1:B:76:LYS:HD3 | 1.83 | 0.60 |
| 1:B:383:GLY:HA2 | 1:B:386:GLU:OE2 | 2.01 | 0.60 |
| 1:C:420:ARG:NH1 | 1:C:420:ARG:HG3 | 2.17 | 0.60 |
| 1:D:134:LEU:HD11 | 1:D:393:LEU:HD23 | 1.83 | 0.60 |
| 1:E:222:GLN:HB3 | 1:E:277:ALA:CB | 2.32 | 0.60 |
| 1:F:255:LYS:HD3 | 1:F:279:GLU:CD | 2.21 | 0.60 |
| 1:H:177:ALA:CB | 1:H:208:LEU:HD11 | 2.27 | 0.60 |
| 1:I:153:ILE:CG2 | 1:I:469:PRO:HD3 | 2.32 | 0.60 |
| 1:I:362:VAL:CG2 | 1:I:362:VAL:O | 2.50 | 0.60 |
| 1:J:123:GLY:HA3 | 1:J:407:ALA:HB3 | 1.83 | 0.60 |
| 1:J:194:LYS:HG3 | 1:J:195:ILE:N | 2.17 | 0.60 |
| 1:M:68:MET:CA | 1:N:9:PRO:HG3 | 2.27 | 0.60 |
| 1:M:403:ARG:NH1 | 1:M:403:ARG:CG | 2.65 | 0.60 |
| 1:M:432:GLU:O | 1:M:435:VAL:HB | 2.02 | 0.60 |
| 1:M:461:MET:HB3 | 1:M:466:VAL:O | 2.02 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:8:LEU:HB3 | 1:N:9:PRO:CD | 2.31 | 0.60 |
| 1:N:307:ILE:HG13 | 1:N:310:LEU:HD22 | 1.83 | 0.60 |
| 1:P:96:ALA:HB1 | 1:P:480:ALA:HB2 | 1.84 | 0.60 |
| 1:P:113:GLN:HE21 | 1:P:113:GLN:HA | 0.44 | 0.60 |
| 1:C:158:ILE:CD1 | 1:C:170:LEU:CB | 2.77 | 0.60 |
| 1:D:154:ALA:HB1 | 1:D:174:ILE:CD1 | 2.19 | 0.60 |
| 1:D:313:GLN:C | 1:D:315:LEU:H | 2.05 | 0.60 |
| 1:F:385:THR:O | 1:F:389:LEU:HG | 2.01 | 0.60 |
| 1:G:152:LYS:HG2 | 1:G:465:GLY:O | 2.02 | 0.60 |
| 1:G:192:LEU:CB | 1:G:342:ALA:HB2 | 2.30 | 0.60 |
| 1:G:299:THR:CG2 | 1:G:334:VAL:HG11 | 2.23 | 0.60 |
| 1:G:446:ASN:OD1 | 1:G:447:LYS:HB3 | 2.02 | 0.60 |
| 1:H:138:ILE:HD12 | 1:H:379:VAL:CG2 | 2.31 | 0.60 |
| 1:H:156:THR:HB | 1:H:467:VAL:C | 2.22 | 0.60 |
| 1:H:234:LEU:HG | 1:H:315:LEU:HD11 | 1.84 | 0.60 |
| 1:H:339:HIS:HE1 | 1:H:341:LYS:NZ | 1.98 | 0.60 |
| 1:I:105:ARG:HH11 | 1:I:106:LYS:CG | 2.13 | 0.60 |
| 1:I:212:VAL:CB | 1:I:298:ALA:HB2 | 2.31 | 0.60 |
| 1:I:223:MET:HE3 | 1:I:276:LEU:HB2 | 1.82 | 0.60 |
| 1:J:44:MET:CE | 1:K:489:ARG:HH21 | 2.15 | 0.60 |
| 1:K:70:VAL:CG1 | 1:K:76:LYS:CD | 2.79 | 0.60 |
| 1:K:231:LYS:HD3 | 1:K:231:LYS:N | 2.17 | 0.60 |
| 1:N:42:LYS:CG | 1:N:426:ALA:H | 2.14 | 0.60 |
| 1:A:134:LEU:HD13 | 1:A:392:LYS:HE3 | 1.82 | 0.60 |
| 1:A:135:LEU:HD21 | 1:A:385:THR:HG21 | 1.84 | 0.60 |
| 1:B:170:LEU:CD2 | 1:B:358:VAL:HG13 | 2.32 | 0.60 |
| 1:B:191:ASP:O | 1:B:294:LYS:HE3 | 2.02 | 0.60 |
| 1:B:232:ILE:HG13 | 1:B:261:VAL:HG11 | 1.81 | 0.60 |
| 1:B:377:ARG:NE | 1:B:470:LEU:CD1 | 2.65 | 0.60 |
| 1:C:81:VAL:HG11 | 1:C:483:SER:OG | 2.02 | 0.60 |
| 1:C:235:LEU:HD11 | 1:C:307:ILE:CG1 | 2.31 | 0.60 |
| 1:C:250:MET:HE2 | 1:C:307:ILE:CG2 | 2.31 | 0.60 |
| 1:D:241:GLU:HG3 | 1:D:250:MET:SD | 2.42 | 0.60 |
| 1:H:165:LYS:NZ | 1:H:165:LYS:N | 2.49 | 0.60 |
| 1:H:219:VAL:CG1 | 1:H:223:MET:CE | 2.77 | 0.60 |
| 1:I:142:VAL:HG21 | 1:I:149:ILE:HG21 | 1.83 | 0.60 |
| 1:I:142:VAL:HG21 | 1:I:149:ILE:CG2 | 2.31 | 0.60 |
| 1:I:181:VAL:HG23 | 1:I:182:VAL:N | 2.15 | 0.60 |
| 1:I:380:SER:HB2 | 1:I:384:SER:HB2 | 1.82 | 0.60 |
| 1:K:77:MET:HE2 | 1:K:487:LEU:CG | 2.31 | 0.60 |
| 1:K:138:ILE:CD1 | 1:K:385:THR:CG2 | 2.79 | 0.60 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:29:ARG:O | 1:L:32:ALA:HB3 | 2.02 | 0.60 |
| 1:L:42:LYS:HD2 | 1:L:425:ASN:C | 2.21 | 0.60 |
| 1:L:42:LYS:CB | 1:L:425:ASN:HB2 | 2.32 | 0.60 |
| 1:L:48:LEU:O | 1:L:56:VAL:HG13 | 2.01 | 0.60 |
| 1:L:69:SER:CB | 1:M:9:PRO:HA | 2.32 | 0.60 |
| 1:L:69:SER:N | 1:M:9:PRO:HA | 2.16 | 0.60 |
| 1:L:81:VAL:HG11 | 1:L:483:SER:CB | 2.32 | 0.60 |
| 1:L:138:ILE:HD12 | 1:L:385:THR:HG23 | 1.79 | 0.60 |
| 1:M:154:ALA:CB | 1:M:174:ILE:HD11 | 2.26 | 0.60 |
| 1:M:198:LYS:HB2 | 1:M:326:ILE:CD1 | 2.29 | 0.60 |
| 1:M:391:MET:CE | 1:M:438:ARG:CG | 2.79 | 0.60 |
| 1:N:68:MET:HA | 1:O:9:PRO:CD | 2.31 | 0.60 |
| 1:N:115:VAL:HG13 | 1:N:119:ILE:HB | 1.84 | 0.60 |
| 1:N:469:PRO:CB | 1:N:472:VAL:CG1 | 2.79 | 0.60 |
| 1:P:241:GLU:HG2 | 1:P:250:MET:SD | 2.41 | 0.60 |
| 1:P:391:MET:CE | 1:P:438:ARG:NE | 2.65 | 0.60 |
| 1:A:216:LYS:HA | 1:A:332:ILE:HD12 | 1.84 | 0.60 |
| 1:A:227:VAL:HG11 | 1:A:260:ASN:CG | 2.22 | 0.60 |
| 1:B:238:ALA:C | 1:B:307:ILE:CG2 | 2.70 | 0.60 |
| 1:C:268:ILE:HB | 1:C:273:GLN:HE21 | 1.67 | 0.60 |
| 1:D:31:ILE:HG21 | 1:D:65:LEU:CD1 | 2.32 | 0.60 |
| 1:D:431:ILE:CD1 | 1:M:403:ARG:HA | 2.32 | 0.60 |
| 1:E:383:GLY:HA2 | 1:E:386:GLU:HG2 | 1.83 | 0.60 |
| 1:F:391:MET:CE | 1:F:438:ARG:HG2 | 2.32 | 0.60 |
| 1:G:142:VAL:HG13 | 1:G:149:ILE:CD1 | 2.32 | 0.60 |
| 1:G:143:GLY:O | 1:G:149:ILE:HD11 | 2.01 | 0.60 |
| 1:H:134:LEU:CD1 | 1:H:393:LEU:HD13 | 2.32 | 0.60 |
| 1:H:248:LYS:HD2 | 1:H:275:TYR:OH | 2.02 | 0.60 |
| 1:I:70:VAL:CG2 | 1:I:76:LYS:HE2 | 2.32 | 0.60 |
| 1:J:12:MET:HE3 | 1:J:494:ILE:O | 2.02 | 0.60 |
| 1:J:182:VAL:O | 1:J:182:VAL:CG1 | 2.47 | 0.60 |
| 1:L:405:GLN:HB3 | 1:L:406:LEU:CD1 | 2.32 | 0.60 |
| 1:L:420:ARG:O | 1:L:423:ALA:HB3 | 2.02 | 0.60 |
| 1:L:437:VAL:CG1 | 1:L:451:LEU:HD11 | 2.31 | 0.60 |
| 1:M:34:THR:CG2 | 1:M:35:VAL:HG13 | 2.30 | 0.60 |
| 1:M:198:LYS:HG3 | 1:M:326:ILE:HD13 | 1.84 | 0.60 |
| 1:M:251:VAL:HG13 | 1:M:276:LEU:CD1 | 2.31 | 0.60 |
| 1:O:220:SER:HB2 | 1:O:273:GLN:O | 2.02 | 0.60 |
| 1:P:62:VAL:HG13 | 1:P:63:THR:N | 2.16 | 0.60 |
| 1:A:105:ARG:NH1 | 1:A:106:LYS:CG | 2.65 | 0.59 |
| 1:B:123:GLY:HA3 | 1:B:407:ALA:HB1 | 1.84 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:393:LEU:HA | 1:C:396:TYR:HB3 | 1.84 | 0.59 |
| 1:D:119:ILE:CG2 | 1:D:403:ARG:CB | 2.76 | 0.59 |
| 1:E:134:LEU:HB3 | 1:E:392:LYS:HE3 | 1.82 | 0.59 |
| 1:E:403:ARG:C | 1:E:406:LEU:HD12 | 2.22 | 0.59 |
| 1:F:14:ARG:HE | 1:F:494:ILE:HD11 | 1.66 | 0.59 |
| 1:I:195:ILE:CB | 1:I:359:ALA:HB2 | 2.29 | 0.59 |
| 1:I:391:MET:CE | 1:I:438:ARG:CG | 2.80 | 0.59 |
| 1:J:130:LYS:HE2 | 1:J:134:LEU:HD21 | 1.84 | 0.59 |
| 1:K:17:GLY:O | 1:K:21:GLN:HB2 | 2.02 | 0.59 |
| 1:K:138:ILE:HA | 1:K:446:ASN:HB3 | 1.83 | 0.59 |
| 1:K:347:ILE:HG21 | 1:K:358:VAL:HB | 1.84 | 0.59 |
| 1:L:47:MET:HE2 | 1:M:493:VAL:HG13 | 1.83 | 0.59 |
| 1:M:25:ILE:HD13 | 1:M:108:GLU:CD | 2.21 | 0.59 |
| 1:N:31:ILE:HG21 | 1:N:65:LEU:HD22 | 1.83 | 0.59 |
| 1:N:68:MET:SD | 1:O:8:LEU:HB3 | 2.42 | 0.59 |
| 1:N:158:ILE:HB | 1:N:361:ALA:HB1 | 1.82 | 0.59 |
| 1:N:371:CYS:HB3 | 1:N:471:ARG:HD2 | 1.83 | 0.59 |
| 1:P:42:LYS:HG3 | 1:P:426:ALA:H | 1.65 | 0.59 |
| 1:P:105:ARG:HH12 | 1:P:106:LYS:HD2 | 1.65 | 0.59 |
| 1:P:192:LEU:HD23 | 1:P:341:LYS:O | 2.01 | 0.59 |
| 1:A:105:ARG:NH1 | 1:A:106:LYS:HG2 | 2.16 | 0.59 |
| 1:B:8:LEU:CD1 | 1:B:12:MET:HG3 | 2.31 | 0.59 |
| 1:B:223:MET:HG2 | 1:B:281:ILE:O | 2.02 | 0.59 |
| 1:C:241:GLU:HG3 | 1:C:250:MET:SD | 2.42 | 0.59 |
| 1:D:212:VAL:N | 1:D:298:ALA:HB1 | 2.17 | 0.59 |
| 1:E:39:LEU:HB3 | 1:E:94:THR:OG1 | 2.02 | 0.59 |
| 1:F:401:SER:OG | 1:O:435:VAL:HG11 | 2.02 | 0.59 |
| 1:G:167:LYS:HG3 | 1:G:168:GLU:N | 2.17 | 0.59 |
| 1:G:223:MET:HG2 | 1:G:282:VAL:HA | 1.84 | 0.59 |
| 1:G:431:ILE:CG1 | 1:P:406:LEU:CD1 | 2.80 | 0.59 |
| 1:H:18:ARG:HG3 | 1:H:21:GLN:OE1 | 2.02 | 0.59 |
| 1:H:77:MET:HG3 | 1:H:487:LEU:HD21 | 1.84 | 0.59 |
| 1:I:448:CYS:HB2 | 1:I:460:ASP:CG | 2.23 | 0.59 |
| 1:J:99:VAL:O | 1:J:103:LEU:HB2 | 2.02 | 0.59 |
| 1:J:222:GLN:CB | 1:J:277:ALA:CB | 2.75 | 0.59 |
| 1:J:437:VAL:HG11 | 1:J:451:LEU:CD1 | 2.33 | 0.59 |
| 1:L:135:LEU:HD13 | 1:L:138:ILE:HD11 | 1.85 | 0.59 |
| 1:L:235:LEU:CG | 1:L:307:ILE:CB | 2.80 | 0.59 |
| 1:L:235:LEU:CD1 | 1:L:307:ILE:HB | 2.31 | 0.59 |
| 1:L:414:ALA:O | 1:L:417:VAL:HG23 | 2.03 | 0.59 |
| 1:M:339:HIS:CE1 | 1:M:341:LYS:CD | 2.84 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:378:ILE:O | 1:M:378:ILE:HG13 | 2.02 | 0.59 |
| 1:N:68:MET:HE2 | 1:O:9:PRO:CD | 2.32 | 0.59 |
| 1:N:135:LEU:CD2 | 1:N:385:THR:HG21 | 2.32 | 0.59 |
| 1:O:44:MET:CE | 1:O:44:MET:CA | 2.62 | 0.59 |
| 1:O:89:VAL:O | 1:O:89:VAL:CG2 | 2.50 | 0.59 |
| 1:O:163:ALA:HB3 | 1:O:357:GLU:OE2 | 2.01 | 0.59 |
| 1:B:48:LEU:HD22 | 1:B:68:MET:SD | 2.42 | 0.59 |
| 1:C:176:GLU:CB | 1:C:208:LEU:HD22 | 2.32 | 0.59 |
| 1:D:195:ILE:HB | 1:D:359:ALA:HB2 | 1.84 | 0.59 |
| 1:D:255:LYS:HD3 | 1:D:279:GLU:HB3 | 1.84 | 0.59 |
| 1:F:135:LEU:HD21 | 1:F:385:THR:HG21 | 1.85 | 0.59 |
| 1:G:181:VAL:HG12 | 1:G:341:LYS:O | 2.02 | 0.59 |
| 1:G:215:ASP:O | 1:G:216:LYS:HD3 | 2.02 | 0.59 |
| 1:H:202:SER:OG | 1:H:203:ILE:HG12 | 2.03 | 0.59 |
| 1:I:198:LYS:HE2 | 1:I:331:MET:SD | 2.42 | 0.59 |
| 1:I:372:THR:HA | 1:I:375:ASP:O | 2.02 | 0.59 |
| 1:J:235:LEU:CB | 1:J:307:ILE:HG22 | 2.32 | 0.59 |
| 1:K:158:ILE:CD1 | 1:K:170:LEU:HB3 | 2.32 | 0.59 |
| 1:K:233:ALA:CB | 1:K:310:LEU:HD11 | 2.31 | 0.59 |
| 1:L:247:LEU:CD2 | 1:L:269:ASP:HB3 | 2.32 | 0.59 |
| 1:L:384:SER:HB3 | 1:L:441:HIS:HE1 | 1.66 | 0.59 |
| 1:M:134:LEU:HD12 | 1:M:393:LEU:HD11 | 1.83 | 0.59 |
| 1:N:155:MET:SD | 1:N:167:LYS:HD3 | 2.42 | 0.59 |
| 1:P:447:LYS:HB2 | 1:P:462:CYS:HB2 | 1.83 | 0.59 |
| 1:A:493:VAL:HG13 | 1:B:47:MET:HE1 | 1.84 | 0.59 |
| 1:B:31:ILE:CG2 | 1:B:65:LEU:HD22 | 2.30 | 0.59 |
| 1:C:144:ALA:HB1 | 1:C:373:ILE:HB | 1.84 | 0.59 |
| 1:C:166:ALA:O | 1:C:170:LEU:HG | 2.02 | 0.59 |
| 1:C:220:SER:HB3 | 1:C:223:MET:SD | 2.42 | 0.59 |
| 1:D:197:LYS:HB2 | 1:D:355:ILE:HG13 | 1.83 | 0.59 |
| 1:D:199:SER:CB | 1:D:327:SER:HB2 | 2.31 | 0.59 |
| 1:E:57:VAL:O | 1:E:58:THR:HG23 | 2.02 | 0.59 |
| 1:I:327:SER:O | 1:I:327:SER:OG | 2.19 | 0.59 |
| 1:J:177:ALA:HB2 | 1:J:208:LEU:HD11 | 1.85 | 0.59 |
| 1:K:25:ILE:CG2 | 1:K:26:LEU:N | 2.66 | 0.59 |
| 1:K:254:ILE:HG23 | 1:K:310:LEU:CD1 | 2.31 | 0.59 |
| 1:K:338:LYS:HD2 | 1:K:339:HIS:HB2 | 1.85 | 0.59 |
| 1:M:50:ASP:CG | 1:M:52:LEU:HG | 2.22 | 0.59 |
| 1:N:106:LYS:CE | 1:N:106:LYS:CA | 2.81 | 0.59 |
| 1:N:116:HIS:C | 1:N:116:HIS:ND1 | 2.55 | 0.59 |
| 1:N:461:MET:HE2 | 1:N:466:VAL:HG21 | 1.84 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:469:PRO:CG | 1:N:472:VAL:CG1 | 2.72 | 0.59 |
| 1:O:23:MET:CE | 1:O:72:HIS:CE1 | 2.85 | 0.59 |
| 1:O:154:ALA:CB | 1:O:174:ILE:CD1 | 2.70 | 0.59 |
| 1:A:44:MET:SD | 1:H:489:ARG:HB2 | 2.42 | 0.59 |
| 1:A:115:VAL:HG11 | 1:A:119:ILE:CG2 | 2.29 | 0.59 |
| 1:A:389:LEU:HD12 | 1:A:415:LEU:CD2 | 2.32 | 0.59 |
| 1:D:225:LYS:O | 1:D:226:LYS:HB2 | 2.02 | 0.59 |
| 1:D:262:LEU:HD12 | 1:D:310:LEU:HD11 | 1.85 | 0.59 |
| 1:D:431:ILE:CD1 | 1:M:403:ARG:HG2 | 2.32 | 0.59 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:C | 2.69 | 0.59 |
| 1:E:235:LEU:CD2 | 1:E:310:LEU:HD22 | 2.33 | 0.59 |
| 1:E:431:ILE:CD1 | 1:N:406:LEU:CD1 | 2.76 | 0.59 |
| 1:F:307:ILE:CD1 | 1:F:310:LEU:CB | 2.81 | 0.59 |
| 1:G:152:LYS:HE2 | 1:G:467:VAL:HG21 | 1.84 | 0.59 |
| 1:G:338:LYS:HD2 | 1:G:339:HIS:N | 2.18 | 0.59 |
| 1:H:84:THR:HG22 | 1:H:84:THR:O | 2.03 | 0.59 |
| 1:H:130:LYS:HG2 | 1:H:393:LEU:HD12 | 1.79 | 0.59 |
| 1:H:448:CYS:CB | 1:H:460:ASP:HA | 2.32 | 0.59 |
| 1:I:420:ARG:CG | 1:I:420:ARG:NH1 | 2.58 | 0.59 |
| 1:J:119:ILE:CD1 | 1:J:403:ARG:HG3 | 2.31 | 0.59 |
| 1:J:138:ILE:C | 1:J:138:ILE:CD1 | 2.68 | 0.59 |
| 1:J:162:GLY:O | 1:J:163:ALA:HB2 | 2.03 | 0.59 |
| 1:J:235:LEU:HD13 | 1:J:307:ILE:CB | 2.32 | 0.59 |
| 1:J:235:LEU:CG | 1:J:307:ILE:HG22 | 2.33 | 0.59 |
| 1:J:448:CYS:CB | 1:J:460:ASP:HA | 2.31 | 0.59 |
| 1:K:418:ILE:O | 1:K:422:LEU:HG | 2.03 | 0.59 |
| 1:L:262:LEU:CD1 | 1:L:310:LEU:HD23 | 2.31 | 0.59 |
| 1:L:441:HIS:CG | 1:L:449:ALA:HB3 | 2.37 | 0.59 |
| 1:M:223:MET:HE2 | 1:M:283:ALA:HB2 | 1.85 | 0.59 |
| 1:M:397:ALA:HB2 | 1:M:408:VAL:HG23 | 1.84 | 0.59 |
| 1:N:48:LEU:CD2 | 1:O:494:ILE:HD12 | 2.32 | 0.59 |
| 1:N:193:ILE:HD12 | 1:N:366:VAL:CG2 | 2.32 | 0.59 |
| 1:O:219:VAL:HG23 | 1:O:285:ARG:HB3 | 1.84 | 0.59 |
| 1:P:239:ILE:CB | 1:P:307:ILE:HG21 | 2.33 | 0.59 |
| 1:P:257:SER:OG | 1:P:311:SER:HA | 2.02 | 0.59 |
| 1:A:142:VAL:HG11 | 1:A:149:ILE:HD13 | 1.82 | 0.59 |
| 1:A:299:THR:HG23 | 1:A:334:VAL:CG1 | 2.32 | 0.59 |
| 1:A:393:LEU:HA | 1:A:396:TYR:HB3 | 1.84 | 0.59 |
| 1:A:473:LYS:HA | 1:A:473:LYS:HE3 | 1.84 | 0.59 |
| 1:B:100:ALA:CB | 1:B:484:THR:HG21 | 2.19 | 0.59 |
| 1:B:134:LEU:CD1 | 1:B:393:LEU:CG | 2.80 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:192:LEU:CB | 1:B:342:ALA:HB2 | 2.31 | 0.59 |
| 1:B:215:ASP:CG | 1:B:331:MET:HG2 | 2.23 | 0.59 |
| 1:B:232:ILE:H | 1:B:232:ILE:HD12 | 1.67 | 0.59 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:HG2 | 1.84 | 0.59 |
| 1:B:434:LEU:CD2 | 1:B:434:LEU:H | 2.15 | 0.59 |
| 1:C:134:LEU:HD12 | 1:C:393:LEU:CG | 2.32 | 0.59 |
| 1:C:141:GLU:OE1 | 1:C:376:GLY:HA3 | 2.03 | 0.59 |
| 1:C:377:ARG:NH1 | 1:C:470:LEU:CD1 | 2.66 | 0.59 |
| 1:C:435:VAL:HG22 | 1:C:438:ARG:HH22 | 1.66 | 0.59 |
| 1:D:113:GLN:NE2 | 1:D:113:GLN:N | 2.50 | 0.59 |
| 1:E:35:VAL:HG21 | 1:E:94:THR:HG23 | 1.81 | 0.59 |
| 1:E:116:HIS:CB | 1:E:117:PRO:HD2 | 2.32 | 0.59 |
| 1:E:235:LEU:HD13 | 1:E:310:LEU:CB | 2.33 | 0.59 |
| 1:E:406:LEU:CD1 | 1:N:431:ILE:HD11 | 2.25 | 0.59 |
| 1:F:77:MET:HE2 | 1:F:487:LEU:CD1 | 2.32 | 0.59 |
| 1:G:11:ASN:HD21 | 1:H:51:ASP:HA | 1.61 | 0.59 |
| 1:G:233:ALA:CA | 1:G:315:LEU:HD11 | 2.32 | 0.59 |
| 1:G:493:VAL:HG13 | 1:H:47:MET:HE2 | 1.85 | 0.59 |
| 1:H:270:ASP:OD1 | 1:H:270:ASP:N | 2.36 | 0.59 |
| 1:J:325:LYS:HG3 | 1:J:330:SER:OG | 2.03 | 0.59 |
| 1:K:158:ILE:HG12 | 1:K:170:LEU:HD12 | 1.85 | 0.59 |
| 1:K:198:LYS:C | 1:K:355:ILE:CD1 | 2.71 | 0.59 |
| 1:K:312:ALA:HA | 1:K:315:LEU:HB2 | 1.84 | 0.59 |
| 1:L:42:LYS:HB3 | 1:L:425:ASN:HB2 | 1.84 | 0.59 |
| 1:L:170:LEU:HD11 | 1:L:358:VAL:HG13 | 1.83 | 0.59 |
| 1:L:192:LEU:HB3 | 1:L:342:ALA:HA | 1.83 | 0.59 |
| 1:L:214:VAL:CG1 | 1:L:291:ASP:CB | 2.79 | 0.59 |
| 1:M:192:LEU:CG | 1:M:342:ALA:HB2 | 2.33 | 0.59 |
| 1:M:327:SER:O | 1:M:327:SER:OG | 2.17 | 0.59 |
| 1:N:299:THR:HG21 | 1:N:334:VAL:HG11 | 1.83 | 0.59 |
| 1:N:384:SER:OG | 1:N:441:HIS:HE1 | 1.84 | 0.59 |
| 1:O:150:LEU:HD23 | 1:O:175:VAL:HG11 | 1.79 | 0.59 |
| 1:P:34:THR:CG2 | 1:P:35:VAL:HG13 | 2.32 | 0.59 |
| 1:P:448:CYS:O | 1:P:449:ALA:HB3 | 2.03 | 0.59 |
| 1:A:116:HIS:HB2 | 1:A:117:PRO:HD2 | 1.83 | 0.59 |
| 1:B:196:GLU:HG2 | 1:B:331:MET:HE1 | 1.85 | 0.59 |
| 1:B:494:ILE:CG2 | 1:C:48:LEU:HD23 | 2.31 | 0.59 |
| 1:C:42:LYS:HG3 | 1:C:426:ALA:N | 2.18 | 0.59 |
| 1:C:192:LEU:HB3 | 1:C:342:ALA:CA | 2.33 | 0.59 |
| 1:C:384:SER:CA | 1:C:441:HIS:CE1 | 2.84 | 0.59 |
| 1:C:469:PRO:CG | 1:C:472:VAL:HG13 | 2.32 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:147:LYS:HG2 | 1:D:147:LYS:O | 2.03 | 0.59 |
| 1:D:198:LYS:CA | 1:D:355:ILE:HD12 | 2.32 | 0.59 |
| 1:D:232:ILE:HG12 | 1:D:299:THR:HG21 | 1.84 | 0.59 |
| 1:E:259:ALA:O | 1:E:281:ILE:HD13 | 2.03 | 0.59 |
| 1:F:68:MET:HA | 1:F:68:MET:CE | 2.33 | 0.59 |
| 1:G:31:ILE:CG2 | 1:G:65:LEU:CG | 2.79 | 0.59 |
| 1:G:117:PRO:O | 1:G:120:VAL:HG12 | 2.03 | 0.59 |
| 1:G:195:ILE:CB | 1:G:359:ALA:CB | 2.80 | 0.59 |
| 1:G:248:LYS:HE2 | 1:G:275:TYR:CE1 | 2.36 | 0.59 |
| 1:H:130:LYS:NZ | 1:H:134:LEU:HD21 | 2.16 | 0.59 |
| 1:I:73:PRO:HA | 1:I:76:LYS:HG2 | 1.83 | 0.59 |
| 1:J:34:THR:CG2 | 1:J:35:VAL:N | 2.60 | 0.59 |
| 1:K:235:LEU:CD1 | 1:K:307:ILE:HG22 | 2.33 | 0.59 |
| 1:K:254:ILE:HG23 | 1:K:310:LEU:HD12 | 1.84 | 0.59 |
| 1:L:235:LEU:CG | 1:L:307:ILE:CA | 2.71 | 0.59 |
| 1:M:45:ASP:O | 1:M:46:LYS:HG2 | 2.03 | 0.59 |
| 1:M:307:ILE:O | 1:M:310:LEU:HB2 | 2.03 | 0.59 |
| 1:N:469:PRO:CB | 1:N:472:VAL:HG11 | 2.32 | 0.59 |
| 1:O:140:CYS:HB3 | 1:O:446:ASN:CB | 2.33 | 0.59 |
| 1:P:42:LYS:HE2 | 1:P:426:ALA:CA | 2.32 | 0.59 |
| 1:P:102:GLU:OE2 | 1:P:417:VAL:HG21 | 2.03 | 0.59 |
| 1:P:232:ILE:HG13 | 1:P:261:VAL:HG11 | 1.84 | 0.59 |
| 1:A:77:MET:CE | 1:A:486:MET:HE1 | 2.33 | 0.59 |
| 1:A:84:THR:HG23 | 1:A:84:THR:O | 2.02 | 0.59 |
| 1:A:134:LEU:HD12 | 1:A:393:LEU:CD2 | 2.31 | 0.59 |
| 1:A:177:ALA:HB2 | 1:A:208:LEU:CD1 | 2.31 | 0.59 |
| 1:B:188:VAL:HB | 1:B:370:GLY:HA2 | 1.83 | 0.59 |
| 1:B:198:LYS:N | 1:B:355:ILE:HD13 | 2.18 | 0.59 |
| 1:D:460:ASP:OD2 | 1:D:463:GLU:HB2 | 2.03 | 0.59 |
| 1:D:461:MET:O | 1:D:466:VAL:HG23 | 2.02 | 0.59 |
| 1:H:99:VAL:O | 1:H:103:LEU:HB2 | 2.02 | 0.59 |
| 1:H:235:LEU:CG | 1:H:307:ILE:HA | 2.31 | 0.59 |
| 1:H:452:ASN:HD21 | 1:H:454:PHE:HB2 | 1.67 | 0.59 |
| 1:I:231:LYS:HD3 | 1:I:231:LYS:N | 2.17 | 0.59 |
| 1:I:433:ILE:CG2 | 1:I:451:LEU:HD23 | 2.32 | 0.59 |
| 1:J:29:ARG:O | 1:J:33:GLU:HG3 | 2.03 | 0.59 |
| 1:J:235:LEU:CD2 | 1:J:310:LEU:HD13 | 2.33 | 0.59 |
| 1:J:307:ILE:HD13 | 1:J:310:LEU:CD2 | 2.31 | 0.59 |
| 1:K:251:VAL:HG13 | 1:K:276:LEU:CD2 | 2.32 | 0.59 |
| 1:L:155:MET:CE | 1:L:465:GLY:HA3 | 2.32 | 0.59 |
| 1:L:178:VAL:CG2 | 1:L:366:VAL:HG22 | 2.33 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:391:MET:HE1 | 1:L:438:ARG:CB | 2.32 | 0.59 |
| 1:M:437:VAL:HA | 1:M:458:VAL:CG1 | 2.33 | 0.59 |
| 1:M:456:GLY:O | 1:M:457:ALA:HB2 | 2.03 | 0.59 |
| 1:O:150:LEU:HB3 | 1:O:175:VAL:HG11 | 1.84 | 0.59 |
| 1:O:152:LYS:HG2 | 1:O:467:VAL:CG2 | 2.32 | 0.59 |
| 1:P:134:LEU:HD11 | 1:P:393:LEU:CG | 2.32 | 0.59 |
| 1:P:239:ILE:HA | 1:P:307:ILE:HG21 | 1.85 | 0.59 |
| 1:A:208:LEU:HD21 | 1:A:210:LYS:HE3 | 1.83 | 0.59 |
| 1:A:233:ALA:CB | 1:A:315:LEU:HG | 2.32 | 0.59 |
| 1:B:384:SER:OG | 1:B:441:HIS:HE1 | 1.86 | 0.59 |
| 1:C:81:VAL:HG21 | 1:C:483:SER:OG | 2.02 | 0.59 |
| 1:C:155:MET:CE | 1:C:465:GLY:HA3 | 2.33 | 0.59 |
| 1:C:453:VAL:CG2 | 1:C:454:PHE:CE1 | 2.85 | 0.59 |
| 1:D:254:ILE:HG23 | 1:D:310:LEU:HD13 | 1.84 | 0.59 |
| 1:D:391:MET:CE | 1:D:438:ARG:CB | 2.81 | 0.59 |
| 1:D:391:MET:CE | 1:D:438:ARG:HB3 | 2.33 | 0.59 |
| 1:G:220:SER:HB2 | 1:G:273:GLN:C | 2.23 | 0.59 |
| 1:H:236:ASN:HB2 | 1:H:265:GLN:OE1 | 2.03 | 0.59 |
| 1:H:433:ILE:HG22 | 1:H:451:LEU:CD2 | 2.33 | 0.59 |
| 1:J:115:VAL:HG23 | 1:J:116:HIS:O | 2.02 | 0.59 |
| 1:J:200:GLY:O | 1:J:348:ARG:HB3 | 2.03 | 0.59 |
| 1:J:368:VAL:CG2 | 1:J:469:PRO:CG | 2.81 | 0.59 |
| 1:K:42:LYS:HE2 | 1:K:426:ALA:N | 2.17 | 0.59 |
| 1:K:134:LEU:HD12 | 1:K:393:LEU:HD21 | 1.83 | 0.59 |
| 1:K:248:LYS:CE | 1:K:275:TYR:CZ | 2.86 | 0.59 |
| 1:L:345:MET:HE2 | 1:L:362:VAL:HG11 | 1.85 | 0.59 |
| 1:M:8:LEU:CB | 1:M:12:MET:CE | 2.78 | 0.59 |
| 1:M:48:LEU:HB2 | 1:M:56:VAL:HG13 | 1.84 | 0.59 |
| 1:N:78:LEU:HD12 | 1:N:487:LEU:CD1 | 2.30 | 0.59 |
| 1:N:123:GLY:HA3 | 1:N:407:ALA:HB1 | 1.84 | 0.59 |
| 1:O:50:ASP:OD1 | 1:O:50:ASP:C | 2.37 | 0.59 |
| 1:O:178:VAL:CG2 | 1:O:366:VAL:CG2 | 2.80 | 0.59 |
| 1:P:177:ALA:HB2 | 1:P:208:LEU:HD21 | 1.85 | 0.59 |
| 1:P:469:PRO:CD | 1:P:472:VAL:HG21 | 2.32 | 0.59 |
| 1:B:232:ILE:HG13 | 1:B:261:VAL:CG1 | 2.32 | 0.59 |
| 1:B:491:ASP:O | 1:B:491:ASP:CG | 2.41 | 0.59 |
| 1:D:251:VAL:HG13 | 1:D:276:LEU:CD1 | 2.33 | 0.59 |
| 1:D:255:LYS:HE3 | 1:D:279:GLU:CD | 2.23 | 0.59 |
| 1:E:217:GLU:CD | 1:E:330:SER:HB2 | 2.23 | 0.59 |
| 1:F:220:SER:HB2 | 1:F:273:GLN:HB3 | 1.85 | 0.59 |
| 1:F:338:LYS:HD2 | 1:F:339:HIS:HB2 | 1.85 | 0.59 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:450:GLY:O | 1:F:451:LEU:HD12 | 2.03 | 0.59 |
| 1:G:97:VAL:O | 1:G:100:ALA:HB3 | 2.03 | 0.59 |
| 1:G:178:VAL:HG22 | 1:G:366:VAL:HG22 | 1.81 | 0.59 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:CG | 2.33 | 0.59 |
| 1:G:358:VAL:O | 1:G:362:VAL:HG13 | 2.01 | 0.59 |
| 1:J:42:LYS:HD2 | 1:J:426:ALA:HA | 1.85 | 0.59 |
| 1:J:130:LYS:HE2 | 1:J:134:LEU:CD1 | 2.33 | 0.59 |
| 1:J:178:VAL:CG2 | 1:J:366:VAL:CG1 | 2.71 | 0.59 |
| 1:J:235:LEU:HD11 | 1:J:307:ILE:HD13 | 1.84 | 0.59 |
| 1:J:235:LEU:CD2 | 1:J:304:ILE:HD11 | 2.33 | 0.59 |
| 1:K:69:SER:O | 1:L:9:PRO:HA | 2.03 | 0.59 |
| 1:M:100:ALA:O | 1:M:104:LEU:HG | 2.02 | 0.59 |
| 1:M:130:LYS:CE | 1:M:393:LEU:HD21 | 2.30 | 0.59 |
| 1:M:135:LEU:HD23 | 1:M:385:THR:HG21 | 1.84 | 0.59 |
| 1:M:158:ILE:CG2 | 1:M:170:LEU:HD12 | 2.24 | 0.59 |
| 1:N:178:VAL:HG22 | 1:N:366:VAL:HG22 | 1.83 | 0.59 |
| 1:N:182:VAL:CG2 | 1:N:188:VAL:CG2 | 2.81 | 0.59 |
| 1:N:380:SER:HB2 | 1:N:384:SER:CB | 2.33 | 0.59 |
| 1:O:17:GLY:O | 1:O:21:GLN:HB2 | 2.02 | 0.59 |
| 1:O:178:VAL:HG13 | 1:O:188:VAL:HG11 | 1.85 | 0.59 |
| 1:O:195:ILE:HD12 | 1:O:359:ALA:HB1 | 1.85 | 0.59 |
| 1:O:270:ASP:OD1 | 1:O:270:ASP:N | 2.29 | 0.59 |
| 1:A:30:ILE:HG22 | 1:A:31:ILE:CB | 2.32 | 0.58 |
| 1:A:73:PRO:HA | 1:A:76:LYS:HG2 | 1.84 | 0.58 |
| 1:A:158:ILE:CG1 | 1:A:361:ALA:HB1 | 2.17 | 0.58 |
| 1:A:234:LEU:N | 1:A:315:LEU:HD11 | 2.18 | 0.58 |
| 1:A:239:ILE:HD11 | 1:A:251:VAL:HG22 | 1.84 | 0.58 |
| 1:A:248:LYS:HD2 | 1:A:275:TYR:CE1 | 2.36 | 0.58 |
| 1:B:212:VAL:HG21 | 1:B:294:LYS:O | 2.03 | 0.58 |
| 1:B:384:SER:CB | 1:B:441:HIS:HE1 | 2.16 | 0.58 |
| 1:C:239:ILE:CG1 | 1:C:307:ILE:HD13 | 2.33 | 0.58 |
| 1:C:377:ARG:CD | 1:C:377:ARG:N | 2.58 | 0.58 |
| 1:D:338:LYS:HD2 | 1:D:339:HIS:CB | 2.33 | 0.58 |
| 1:E:147:LYS:HG2 | 1:E:147:LYS:O | 2.03 | 0.58 |
| 1:E:214:VAL:HG12 | 1:E:291:ASP:HB2 | 1.84 | 0.58 |
| 1:E:217:GLU:HB3 | 1:E:330:SER:CB | 2.28 | 0.58 |
| 1:E:339:HIS:CE1 | 1:E:341:LYS:CD | 2.86 | 0.58 |
| 1:F:68:MET:CA | 1:F:68:MET:HE3 | 2.33 | 0.58 |
| 1:F:194:LYS:HB2 | 1:F:294:LYS:HD3 | 1.85 | 0.58 |
| 1:F:307:ILE:HD12 | 1:F:310:LEU:HB2 | 1.82 | 0.58 |
| 1:I:169:LYS:HE3 | 1:I:204:ASP:O | 2.03 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:171:ALA:HA | 1:K:174:ILE:HG12 | 1.85 | 0.58 |
| 1:K:235:LEU:HG | 1:K:310:LEU:HG | 1.83 | 0.58 |
| 1:L:177:ALA:HB2 | 1:L:208:LEU:CD1 | 2.33 | 0.58 |
| 1:L:299:THR:HG23 | 1:L:334:VAL:HG11 | 1.84 | 0.58 |
| 1:L:389:LEU:CD1 | 1:L:415:LEU:HD13 | 2.33 | 0.58 |
| 1:L:469:PRO:CG | 1:L:472:VAL:CG2 | 2.81 | 0.58 |
| 1:P:155:MET:SD | 1:P:167:LYS:HD3 | 2.43 | 0.58 |
| 1:P:217:GLU:HB3 | 1:P:323:GLU:OE1 | 2.03 | 0.58 |
| 1:P:296:ALA:CA | 1:P:301:ALA:HB3 | 2.25 | 0.58 |
| 1:P:380:SER:HB3 | 1:P:384:SER:CB | 2.32 | 0.58 |
| 1:A:431:ILE:HD11 | 1:J:402:GLY:C | 2.24 | 0.58 |
| 1:B:38:THR:HG23 | 1:B:46:LYS:CE | 2.20 | 0.58 |
| 1:B:70:VAL:CB | 1:B:76:LYS:HD3 | 2.33 | 0.58 |
| 1:B:130:LYS:HE2 | 1:B:134:LEU:CG | 2.33 | 0.58 |
| 1:C:121:VAL:C | 1:C:123:GLY:H | 2.06 | 0.58 |
| 1:C:250:MET:CE | 1:C:308:LYS:CG | 2.81 | 0.58 |
| 1:D:365:ALA:O | 1:D:369:VAL:HG13 | 2.03 | 0.58 |
| 1:D:437:VAL:HA | 1:D:458:VAL:HG21 | 1.85 | 0.58 |
| 1:E:403:ARG:HG3 | 1:E:403:ARG:NH1 | 1.95 | 0.58 |
| 1:F:313:GLN:C | 1:F:315:LEU:H | 2.05 | 0.58 |
| 1:F:377:ARG:CZ | 1:F:470:LEU:HD11 | 2.33 | 0.58 |
| 1:F:377:ARG:CZ | 1:F:470:LEU:HD12 | 2.33 | 0.58 |
| 1:G:195:ILE:CG2 | 1:G:359:ALA:HB1 | 2.33 | 0.58 |
| 1:G:210:LYS:HG2 | 1:G:343:VAL:HG23 | 1.85 | 0.58 |
| 1:G:254:ILE:HG21 | 1:G:262:LEU:HD12 | 1.85 | 0.58 |
| 1:H:85:GLN:HE22 | 1:H:475:GLN:CG | 2.16 | 0.58 |
| 1:H:477:ILE:O | 1:H:477:ILE:CG2 | 2.51 | 0.58 |
| 1:I:174:ILE:HD12 | 1:I:365:ALA:CB | 2.33 | 0.58 |
| 1:I:177:ALA:O | 1:I:181:VAL:HG13 | 2.03 | 0.58 |
| 1:I:192:LEU:HB3 | 1:I:342:ALA:HA | 1.84 | 0.58 |
| 1:I:227:VAL:CG1 | 1:I:228:THR:H | 2.16 | 0.58 |
| 1:K:142:VAL:HG13 | 1:K:149:ILE:CD1 | 2.20 | 0.58 |
| 1:K:254:ILE:HG22 | 1:K:259:ALA:HB3 | 1.86 | 0.58 |
| 1:L:116:HIS:CD2 | 1:L:117:PRO:HG2 | 2.38 | 0.58 |
| 1:L:198:LYS:N | 1:L:355:ILE:HD13 | 2.18 | 0.58 |
| 1:M:223:MET:CE | 1:M:276:LEU:HB3 | 2.25 | 0.58 |
| 1:O:8:LEU:HB3 | 1:O:9:PRO:CD | 2.33 | 0.58 |
| 1:O:130:LYS:NZ | 1:O:396:TYR:HB2 | 2.18 | 0.58 |
| 1:O:142:VAL:HG21 | 1:O:149:ILE:HG21 | 1.85 | 0.58 |
| 1:O:233:ALA:HA | 1:O:315:LEU:CG | 2.32 | 0.58 |
| 1:O:341:LYS:HZ3 | 1:O:341:LYS:HB3 | 0.62 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:391:MET:CE | 1:P:438:ARG:CD | 2.81 | 0.58 |
| 1:A:152:LYS:HE2 | 1:A:462:CYS:C | 2.23 | 0.58 |
| 1:A:206:THR:CG2 | 1:A:347:ILE:CG2 | 2.82 | 0.58 |
| 1:C:193:ILE:HD12 | 1:C:366:VAL:HG21 | 1.84 | 0.58 |
| 1:D:404:GLU:CD | 1:D:404:GLU:H | 2.06 | 0.58 |
| 1:E:235:LEU:CD1 | 1:E:310:LEU:CD1 | 2.74 | 0.58 |
| 1:E:236:ASN:CA | 1:E:265:GLN:HB3 | 2.33 | 0.58 |
| 1:E:254:ILE:HG23 | 1:E:259:ALA:HB3 | 1.85 | 0.58 |
| 1:E:312:ALA:O | 1:E:313:GLN:HB3 | 2.02 | 0.58 |
| 1:E:400:ILE:CD1 | 1:E:408:VAL:HG11 | 2.33 | 0.58 |
| 1:F:124:TYR:HE1 | 1:F:407:ALA:HA | 1.68 | 0.58 |
| 1:G:130:LYS:HZ3 | 1:G:134:LEU:CD2 | 2.15 | 0.58 |
| 1:G:223:MET:CE | 1:G:276:LEU:HG | 2.32 | 0.58 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:HD13 | 1.84 | 0.58 |
| 1:H:42:LYS:CE | 1:H:426:ALA:CA | 2.67 | 0.58 |
| 1:H:197:LYS:HA | 1:H:355:ILE:HG21 | 1.85 | 0.58 |
| 1:I:44:MET:HB3 | 1:J:491:ASP:OD1 | 2.03 | 0.58 |
| 1:J:69:SER:N | 1:K:9:PRO:HG3 | 2.19 | 0.58 |
| 1:L:81:VAL:HG11 | 1:L:483:SER:HB3 | 1.84 | 0.58 |
| 1:L:265:GLN:HG2 | 1:L:266:LYS:CE | 2.32 | 0.58 |
| 1:M:213:LEU:HD11 | 1:M:333:PHE:CZ | 2.38 | 0.58 |
| 1:N:182:VAL:CB | 1:N:188:VAL:HG22 | 2.33 | 0.58 |
| 1:N:380:SER:CB | 1:N:384:SER:CB | 2.80 | 0.58 |
| 1:N:383:GLY:HA3 | 1:N:386:GLU:HG3 | 1.83 | 0.58 |
| 1:O:68:MET:HB3 | 1:P:8:LEU:HA | 1.84 | 0.58 |
| 1:P:236:ASN:HA | 1:P:265:GLN:HB3 | 1.82 | 0.58 |
| 1:A:105:ARG:CZ | 1:A:106:LYS:HG2 | 2.33 | 0.58 |
| 1:A:139:ALA:HB1 | 1:A:377:ARG:HG3 | 1.84 | 0.58 |
| 1:A:248:LYS:CD | 1:A:275:TYR:CE2 | 2.86 | 0.58 |
| 1:A:431:ILE:HD11 | 1:J:403:ARG:CA | 2.34 | 0.58 |
| 1:A:434:LEU:N | 1:A:434:LEU:HD22 | 2.17 | 0.58 |
| 1:B:206:THR:HB | 1:B:347:ILE:HA | 1.84 | 0.58 |
| 1:C:106:LYS:CA | 1:C:106:LYS:HE3 | 2.33 | 0.58 |
| 1:C:121:VAL:HG23 | 1:C:122:LYS:N | 2.18 | 0.58 |
| 1:C:158:ILE:HD12 | 1:C:167:LYS:HA | 1.83 | 0.58 |
| 1:C:194:LYS:HB2 | 1:C:294:LYS:HD3 | 1.85 | 0.58 |
| 1:C:197:LYS:HB3 | 1:C:355:ILE:HB | 1.84 | 0.58 |
| 1:C:469:PRO:HG2 | 1:C:472:VAL:HG22 | 1.85 | 0.58 |
| 1:D:232:ILE:C | 1:D:315:LEU:HD13 | 2.24 | 0.58 |
| 1:D:235:LEU:CD2 | 1:D:307:ILE:HD13 | 2.33 | 0.58 |
| 1:E:36:ARG:HG3 | 1:E:37:SER:N | 2.18 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:161:LYS:HB3 | 1:E:357:GLU:OE1 | 2.04 | 0.58 |
| 1:E:251:VAL:HG13 | 1:E:276:LEU:HD13 | 1.83 | 0.58 |
| 1:F:97:VAL:O | 1:F:100:ALA:HB3 | 2.03 | 0.58 |
| 1:F:431:ILE:O | 1:F:435:VAL:HG13 | 2.03 | 0.58 |
| 1:G:42:LYS:CG | 1:G:425:ASN:CB | 2.75 | 0.58 |
| 1:G:129:GLN:O | 1:G:132:GLN:HB2 | 2.04 | 0.58 |
| 1:G:265:GLN:CG | 1:G:266:LYS:HZ3 | 2.16 | 0.58 |
| 1:H:433:ILE:CG2 | 1:H:451:LEU:CD2 | 2.82 | 0.58 |
| 1:K:134:LEU:HD12 | 1:K:393:LEU:CD1 | 2.33 | 0.58 |
| 1:L:383:GLY:CA | 1:L:386:GLU:HG3 | 2.33 | 0.58 |
| 1:N:46:LYS:HB3 | 1:O:492:ASP:OD2 | 2.03 | 0.58 |
| 1:O:441:HIS:ND1 | 1:O:449:ALA:HB3 | 2.19 | 0.58 |
| 1:P:43:GLY:C | 1:P:44:MET:HE3 | 2.23 | 0.58 |
| 1:A:89:VAL:HG21 | 1:A:368:VAL:HG11 | 1.83 | 0.58 |
| 1:A:148:GLU:O | 1:A:148:GLU:HG2 | 2.01 | 0.58 |
| 1:A:197:LYS:CD | 1:A:197:LYS:N | 2.39 | 0.58 |
| 1:A:347:ILE:HB | 1:A:355:ILE:HG22 | 1.85 | 0.58 |
| 1:A:403:ARG:HB3 | 1:J:431:ILE:HD11 | 1.86 | 0.58 |
| 1:C:234:LEU:CD1 | 1:C:301:ALA:HB3 | 2.34 | 0.58 |
| 1:D:198:LYS:HE2 | 1:D:331:MET:SD | 2.43 | 0.58 |
| 1:D:211:GLY:C | 1:D:298:ALA:CB | 2.72 | 0.58 |
| 1:D:234:LEU:HB3 | 1:D:292:MET:HE2 | 1.84 | 0.58 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:CA | 2.63 | 0.58 |
| 1:E:232:ILE:HG13 | 1:E:261:VAL:CG1 | 2.32 | 0.58 |
| 1:E:431:ILE:CD1 | 1:N:403:ARG:HG2 | 2.30 | 0.58 |
| 1:F:405:GLN:CB | 1:F:406:LEU:HD12 | 2.23 | 0.58 |
| 1:G:135:LEU:HA | 1:G:138:ILE:CD1 | 2.34 | 0.58 |
| 1:H:122:LYS:HA | 1:H:125:GLN:CD | 2.24 | 0.58 |
| 1:H:130:LYS:CD | 1:H:393:LEU:HD12 | 2.32 | 0.58 |
| 1:I:73:PRO:O | 1:I:76:LYS:HB2 | 2.03 | 0.58 |
| 1:I:235:LEU:CD2 | 1:I:307:ILE:HA | 2.34 | 0.58 |
| 1:J:198:LYS:CB | 1:J:326:ILE:HD13 | 2.33 | 0.58 |
| 1:J:462:CYS:SG | 1:J:467:VAL:HG21 | 2.43 | 0.58 |
| 1:K:68:MET:HA | 1:L:9:PRO:HD3 | 1.85 | 0.58 |
| 1:L:117:PRO:O | 1:L:121:VAL:HG13 | 2.03 | 0.58 |
| 1:N:158:ILE:CD1 | 1:N:170:LEU:CB | 2.81 | 0.58 |
| 1:N:164:GLU:HG2 | 1:N:164:GLU:O | 2.03 | 0.58 |
| 1:O:152:LYS:CG | 1:O:465:GLY:HA3 | 2.33 | 0.58 |
| 1:P:115:VAL:CG1 | 1:P:403:ARG:NE | 2.65 | 0.58 |
| 1:P:307:ILE:HD12 | 1:P:310:LEU:HB2 | 1.85 | 0.58 |
| 1:A:9:PRO:HA | 1:B:69:SER:C | 2.23 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:255:LYS:HD3 | 1:A:279:GLU:CB | 2.34 | 0.58 |
| 1:B:95:THR:HG22 | 1:B:95:THR:O | 2.02 | 0.58 |
| 1:B:125:GLN:HG3 | 1:B:126:ALA:H | 1.68 | 0.58 |
| 1:B:156:THR:HG21 | 1:B:468:GLU:HB3 | 1.84 | 0.58 |
| 1:B:247:LEU:O | 1:B:251:VAL:HG23 | 2.04 | 0.58 |
| 1:D:30:ILE:HG22 | 1:D:31:ILE:N | 2.18 | 0.58 |
| 1:D:42:LYS:CB | 1:D:425:ASN:HB2 | 2.33 | 0.58 |
| 1:D:66:ARG:HA | 1:D:79:ILE:HD12 | 1.86 | 0.58 |
| 1:D:195:ILE:HG13 | 1:D:359:ALA:HB1 | 1.84 | 0.58 |
| 1:D:207:GLU:OE2 | 1:D:346:LEU:HD13 | 2.04 | 0.58 |
| 1:E:130:LYS:HZ3 | 1:E:134:LEU:HD11 | 1.69 | 0.58 |
| 1:E:170:LEU:HD12 | 1:E:358:VAL:HG13 | 1.86 | 0.58 |
| 1:H:235:LEU:CD2 | 1:H:307:ILE:CA | 2.79 | 0.58 |
| 1:I:30:ILE:HG22 | 1:I:31:ILE:N | 2.17 | 0.58 |
| 1:I:117:PRO:O | 1:I:120:VAL:HG12 | 2.03 | 0.58 |
| 1:I:178:VAL:CG2 | 1:I:366:VAL:CG2 | 2.76 | 0.58 |
| 1:I:232:ILE:CG1 | 1:I:261:VAL:HG11 | 2.25 | 0.58 |
| 1:J:48:LEU:HB2 | 1:J:56:VAL:HG11 | 1.79 | 0.58 |
| 1:J:89:VAL:O | 1:J:89:VAL:HG22 | 2.02 | 0.58 |
| 1:J:105:ARG:CZ | 1:J:106:LYS:HD2 | 2.33 | 0.58 |
| 1:J:152:LYS:HG2 | 1:J:465:GLY:CA | 2.32 | 0.58 |
| 1:J:441:HIS:HD1 | 1:J:449:ALA:HB3 | 1.68 | 0.58 |
| 1:K:157:SER:HB3 | 1:K:365:ALA:HB2 | 1.85 | 0.58 |
| 1:K:227:VAL:CG1 | 1:K:260:ASN:HD21 | 2.17 | 0.58 |
| 1:K:420:ARG:NE | 1:K:430:ALA:HB3 | 2.19 | 0.58 |
| 1:L:223:MET:H | 1:L:277:ALA:HB1 | 1.68 | 0.58 |
| 1:M:42:LYS:O | 1:M:425:ASN:HB3 | 2.02 | 0.58 |
| 1:M:235:LEU:HD21 | 1:M:310:LEU:CG | 2.33 | 0.58 |
| 1:M:441:HIS:NE2 | 1:M:449:ALA:HA | 2.19 | 0.58 |
| 1:N:72:HIS:O | 1:N:75:ALA:HB3 | 2.02 | 0.58 |
| 1:N:235:LEU:HD11 | 1:N:307:ILE:CG1 | 2.33 | 0.58 |
| 1:P:134:LEU:HD11 | 1:P:393:LEU:HG | 1.86 | 0.58 |
| 1:A:27:ALA:HA | 1:A:30:ILE:HD11 | 1.84 | 0.58 |
| 1:A:104:LEU:CD2 | 1:A:488:LEU:CD1 | 2.81 | 0.58 |
| 1:A:152:LYS:CE | 1:A:462:CYS:HA | 2.09 | 0.58 |
| 1:A:218:ARG:NH1 | 1:A:282:VAL:HG21 | 2.18 | 0.58 |
| 1:A:391:MET:CE | 1:A:438:ARG:HB3 | 2.34 | 0.58 |
| 1:B:8:LEU:N | 1:C:70:VAL:HA | 2.18 | 0.58 |
| 1:B:38:THR:CG2 | 1:B:46:LYS:CE | 2.73 | 0.58 |
| 1:B:119:ILE:HG22 | 1:B:120:VAL:N | 2.18 | 0.58 |
| 1:B:247:LEU:HD21 | 1:B:269:ASP:HB3 | 1.86 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:254:ILE:HD12 | 1:B:276:LEU:HD21 | 1.84 | 0.58 |
| 1:C:161:LYS:HB2 | 1:C:357:GLU:OE2 | 2.04 | 0.58 |
| 1:C:236:ASN:ND2 | 1:C:305:THR:HG23 | 2.18 | 0.58 |
| 1:C:464:ASN:N | 1:C:464:ASN:HD22 | 1.98 | 0.58 |
| 1:D:79:ILE:O | 1:D:83:LYS:HB2 | 2.04 | 0.58 |
| 1:D:105:ARG:O | 1:D:108:GLU:HB3 | 2.03 | 0.58 |
| 1:E:115:VAL:HG11 | 1:E:403:ARG:NE | 2.19 | 0.58 |
| 1:E:138:ILE:O | 1:E:446:ASN:HB2 | 2.04 | 0.58 |
| 1:E:139:ALA:HB2 | 1:E:377:ARG:HD2 | 1.85 | 0.58 |
| 1:E:178:VAL:O | 1:E:182:VAL:HG12 | 2.03 | 0.58 |
| 1:E:448:CYS:SG | 1:E:460:ASP:HB2 | 2.44 | 0.58 |
| 1:E:459:GLU:HB3 | 1:E:461:MET:HE2 | 1.84 | 0.58 |
| 1:F:384:SER:CB | 1:F:441:HIS:CE1 | 2.87 | 0.58 |
| 1:G:195:ILE:CG2 | 1:G:359:ALA:CB | 2.81 | 0.58 |
| 1:H:99:VAL:CG1 | 1:H:418:ILE:HD11 | 2.34 | 0.58 |
| 1:H:254:ILE:HG22 | 1:H:259:ALA:HB3 | 1.84 | 0.58 |
| 1:H:263:PHE:CZ | 1:H:332:ILE:HG21 | 2.39 | 0.58 |
| 1:H:307:ILE:HD12 | 1:H:310:LEU:HB2 | 1.85 | 0.58 |
| 1:I:48:LEU:C | 1:I:56:VAL:HG22 | 2.24 | 0.58 |
| 1:I:265:GLN:NE2 | 1:I:289:LYS:HD2 | 2.19 | 0.58 |
| 1:I:268:ILE:CG2 | 1:I:273:GLN:HG3 | 2.33 | 0.58 |
| 1:J:23:MET:HE2 | 1:J:72:HIS:HE2 | 1.67 | 0.58 |
| 1:K:405:GLN:HG2 | 1:K:406:LEU:HG | 1.86 | 0.58 |
| 1:L:232:ILE:O | 1:L:315:LEU:HB3 | 2.04 | 0.58 |
| 1:M:153:ILE:CD1 | 1:M:372:THR:HG21 | 2.29 | 0.58 |
| 1:N:102:GLU:HA | 1:N:102:GLU:OE1 | 2.02 | 0.58 |
| 1:O:237:CYS:N | 1:O:306:ASN:HA | 2.17 | 0.58 |
| 1:P:400:ILE:HD11 | 1:P:408:VAL:HG11 | 1.84 | 0.58 |
| 1:P:437:VAL:CG1 | 1:P:451:LEU:HD11 | 2.32 | 0.58 |
| 1:A:42:LYS:NZ | 1:A:426:ALA:HA | 2.18 | 0.58 |
| 1:A:99:VAL:O | 1:A:103:LEU:HB2 | 2.04 | 0.58 |
| 1:A:211:GLY:C | 1:A:298:ALA:CB | 2.72 | 0.58 |
| 1:A:307:ILE:HD12 | 1:A:310:LEU:CD2 | 2.34 | 0.58 |
| 1:A:391:MET:CE | 1:A:438:ARG:CB | 2.81 | 0.58 |
| 1:B:30:ILE:HG22 | 1:B:31:ILE:N | 2.17 | 0.58 |
| 1:B:223:MET:HB3 | 1:B:282:VAL:HA | 1.85 | 0.58 |
| 1:B:239:ILE:CD1 | 1:B:307:ILE:HD13 | 2.33 | 0.58 |
| 1:B:276:LEU:HD23 | 1:B:281:ILE:CD1 | 2.18 | 0.58 |
| 1:C:9:PRO:CD | 1:D:68:MET:HE1 | 2.34 | 0.58 |
| 1:D:134:LEU:HD11 | 1:D:393:LEU:CD2 | 2.33 | 0.58 |
| 1:D:138:ILE:HD12 | 1:D:385:THR:HG23 | 1.84 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:134:LEU:CD1 | 1:E:393:LEU:CG | 2.81 | 0.58 |
| 1:E:135:LEU:HD23 | 1:E:138:ILE:HD11 | 1.85 | 0.58 |
| 1:E:215:ASP:OD1 | 1:E:331:MET:HG2 | 2.03 | 0.58 |
| 1:F:218:ARG:H | 1:F:323:GLU:CD | 2.07 | 0.58 |
| 1:G:182:VAL:HB | 1:G:188:VAL:HG11 | 1.81 | 0.58 |
| 1:G:195:ILE:CB | 1:G:359:ALA:HB1 | 2.33 | 0.58 |
| 1:G:276:LEU:HD12 | 1:G:281:ILE:HD12 | 1.86 | 0.58 |
| 1:H:227:VAL:HG12 | 1:H:228:THR:N | 2.18 | 0.58 |
| 1:H:494:ILE:HG23 | 1:H:494:ILE:O | 2.03 | 0.58 |
| 1:I:9:PRO:CA | 1:P:69:SER:HB3 | 2.34 | 0.58 |
| 1:I:130:LYS:CG | 1:I:393:LEU:CD2 | 2.80 | 0.58 |
| 1:I:232:ILE:HA | 1:I:261:VAL:HB | 1.86 | 0.58 |
| 1:I:379:VAL:HG11 | 1:I:473:LYS:HG3 | 1.86 | 0.58 |
| 1:K:25:ILE:HG22 | 1:K:26:LEU:H | 1.67 | 0.58 |
| 1:K:103:LEU:HD21 | 1:K:411:PHE:CE2 | 2.39 | 0.58 |
| 1:L:34:THR:HG22 | 1:L:35:VAL:N | 2.19 | 0.58 |
| 1:L:169:LYS:HG3 | 1:L:204:ASP:HB3 | 1.85 | 0.58 |
| 1:L:218:ARG:NE | 1:L:282:VAL:HG11 | 2.18 | 0.58 |
| 1:L:418:ILE:HB | 1:L:419:PRO:CD | 2.33 | 0.58 |
| 1:N:49:VAL:CG2 | 1:O:495:ALA:HB2 | 2.33 | 0.58 |
| 1:N:174:ILE:CD1 | 1:N:365:ALA:HB1 | 2.29 | 0.58 |
| 1:N:212:VAL:CG2 | 1:N:294:LYS:HB3 | 2.34 | 0.58 |
| 1:N:307:ILE:O | 1:N:310:LEU:HB2 | 2.04 | 0.58 |
| 1:N:432:GLU:HB2 | 1:N:436:LYS:HZ1 | 1.68 | 0.58 |
| 1:O:123:GLY:HA3 | 1:O:407:ALA:CB | 2.34 | 0.58 |
| 1:O:158:ILE:HG22 | 1:O:158:ILE:O | 2.04 | 0.58 |
| 1:P:377:ARG:CD | 1:P:470:LEU:CD1 | 2.80 | 0.58 |
| 1:A:134:LEU:CD1 | 1:A:393:LEU:CG | 2.81 | 0.58 |
| 1:A:152:LYS:HE3 | 1:A:465:GLY:HA2 | 1.86 | 0.58 |
| 1:B:254:ILE:HG22 | 1:B:259:ALA:CB | 2.33 | 0.58 |
| 1:B:312:ALA:HB2 | 1:B:315:LEU:CB | 2.34 | 0.58 |
| 1:C:15:TYR:C | 1:C:20:ALA:HB2 | 2.24 | 0.58 |
| 1:C:77:MET:CE | 1:C:486:MET:HE2 | 2.34 | 0.58 |
| 1:C:420:ARG:CG | 1:C:420:ARG:NH1 | 2.59 | 0.58 |
| 1:D:251:VAL:CG1 | 1:D:276:LEU:HD22 | 2.33 | 0.58 |
| 1:E:96:ALA:CA | 1:E:480:ALA:CB | 2.81 | 0.58 |
| 1:E:254:ILE:HG12 | 1:E:310:LEU:CD2 | 2.34 | 0.58 |
| 1:F:105:ARG:NH1 | 1:F:106:LYS:HG2 | 2.18 | 0.58 |
| 1:F:194:LYS:HG2 | 1:F:195:ILE:H | 1.68 | 0.58 |
| 1:G:195:ILE:HB | 1:G:359:ALA:HB1 | 1.85 | 0.58 |
| 1:G:237:CYS:SG | 1:G:238:ALA:CB | 2.92 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:339:HIS:NE2 | 1:G:341:LYS:HD3 | 2.17 | 0.58 |
| 1:H:437:VAL:HG22 | 1:H:458:VAL:CG2 | 2.34 | 0.58 |
| 1:J:177:ALA:HB1 | 1:J:343:VAL:CG2 | 2.26 | 0.58 |
| 1:K:232:ILE:HG13 | 1:K:261:VAL:CB | 2.34 | 0.58 |
| 1:L:338:LYS:HD2 | 1:L:339:HIS:CB | 2.31 | 0.58 |
| 1:M:72:HIS:HB3 | 1:M:75:ALA:HB3 | 1.86 | 0.58 |
| 1:M:365:ALA:O | 1:M:369:VAL:HG23 | 2.04 | 0.58 |
| 1:N:70:VAL:HG22 | 1:N:76:LYS:HG3 | 1.85 | 0.58 |
| 1:N:107:ALA:O | 1:N:111:LEU:HG | 2.04 | 0.58 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:HA | 2.29 | 0.58 |
| 1:N:192:LEU:HD23 | 1:N:341:LYS:C | 2.25 | 0.58 |
| 1:N:220:SER:HB2 | 1:N:273:GLN:CB | 2.33 | 0.58 |
| 1:N:248:LYS:HD2 | 1:N:275:TYR:CE1 | 2.37 | 0.58 |
| 1:N:433:ILE:HG22 | 1:N:451:LEU:CD2 | 2.34 | 0.58 |
| 1:O:192:LEU:HD23 | 1:O:341:LYS:O | 2.03 | 0.58 |
| 1:P:68:MET:CE | 1:P:68:MET:CA | 2.81 | 0.58 |
| 1:P:214:VAL:HG12 | 1:P:291:ASP:CB | 2.34 | 0.58 |
| 1:P:233:ALA:HA | 1:P:315:LEU:CG | 2.34 | 0.58 |
| 1:A:42:LYS:CE | 1:H:118:THR:HG21 | 2.33 | 0.58 |
| 1:A:77:MET:HA | 1:A:80:GLU:OE1 | 2.04 | 0.58 |
| 1:A:214:VAL:HG12 | 1:A:291:ASP:CB | 2.33 | 0.58 |
| 1:A:219:VAL:CG1 | 1:A:273:GLN:CG | 2.80 | 0.58 |
| 1:A:313:GLN:NE2 | 1:A:313:GLN:CA | 2.65 | 0.58 |
| 1:A:313:GLN:C | 1:A:315:LEU:H | 2.07 | 0.58 |
| 1:B:8:LEU:HB2 | 1:B:12:MET:CG | 2.33 | 0.58 |
| 1:B:105:ARG:NH1 | 1:B:106:LYS:HD2 | 2.17 | 0.58 |
| 1:C:122:LYS:HA | 1:C:125:GLN:CD | 2.24 | 0.58 |
| 1:C:488:LEU:O | 1:C:488:LEU:HG | 2.03 | 0.58 |
| 1:D:135:LEU:HA | 1:D:138:ILE:HD13 | 1.86 | 0.58 |
| 1:D:180:ALA:CB | 1:D:210:LYS:NZ | 2.67 | 0.58 |
| 1:D:209:ILE:O | 1:D:209:ILE:HG13 | 2.04 | 0.58 |
| 1:E:12:MET:CE | 1:F:68:MET:HE1 | 2.34 | 0.58 |
| 1:E:31:ILE:CG2 | 1:E:65:LEU:HD22 | 2.33 | 0.58 |
| 1:E:235:LEU:HD12 | 1:E:306:ASN:C | 2.24 | 0.58 |
| 1:F:101:GLY:O | 1:F:104:LEU:HB2 | 2.03 | 0.58 |
| 1:F:124:TYR:CE1 | 1:F:407:ALA:HA | 2.38 | 0.58 |
| 1:F:174:ILE:HG22 | 1:F:362:VAL:HG23 | 1.85 | 0.58 |
| 1:F:227:VAL:HG11 | 1:F:260:ASN:CG | 2.24 | 0.58 |
| 1:G:115:VAL:HG11 | 1:G:403:ARG:HE | 1.68 | 0.58 |
| 1:G:138:ILE:O | 1:G:446:ASN:HB2 | 2.03 | 0.58 |
| 1:G:158:ILE:HD11 | 1:G:170:LEU:HB3 | 1.81 | 0.58 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:41:PRO:HG2 | 1:H:453:VAL:HG11 | 1.85 | 0.58 |
| 1:H:169:LYS:HG2 | 1:H:204:ASP:CB | 2.22 | 0.58 |
| 1:H:178:VAL:HG23 | 1:H:188:VAL:HG11 | 1.84 | 0.58 |
| 1:H:403:ARG:HA | 1:H:406:LEU:HD12 | 1.86 | 0.58 |
| 1:H:460:ASP:OD1 | 1:H:460:ASP:C | 2.41 | 0.58 |
| 1:I:68:MET:CG | 1:J:9:PRO:HD3 | 2.34 | 0.58 |
| 1:I:241:GLU:HB3 | 1:I:246:MET:HG3 | 1.86 | 0.58 |
| 1:I:406:LEU:H | 1:I:406:LEU:CD2 | 2.01 | 0.58 |
| 1:I:433:ILE:HG21 | 1:I:451:LEU:HD23 | 1.85 | 0.58 |
| 1:J:31:ILE:CG2 | 1:J:65:LEU:HD22 | 2.34 | 0.58 |
| 1:J:377:ARG:HD2 | 1:J:470:LEU:CD1 | 2.34 | 0.58 |
| 1:K:102:GLU:C | 1:K:104:LEU:H | 2.05 | 0.58 |
| 1:L:48:LEU:O | 1:L:56:VAL:HG22 | 2.03 | 0.58 |
| 1:L:448:CYS:SG | 1:L:460:ASP:HA | 2.43 | 0.58 |
| 1:M:117:PRO:O | 1:M:120:VAL:HG12 | 2.04 | 0.58 |
| 1:N:338:LYS:HD2 | 1:N:339:HIS:HB2 | 1.85 | 0.58 |
| 1:N:345:MET:SD | 1:N:362:VAL:HG21 | 2.44 | 0.58 |
| 1:O:219:VAL:CG1 | 1:O:223:MET:HE1 | 2.34 | 0.58 |
| 1:P:122:LYS:HA | 1:P:125:GLN:NE2 | 2.19 | 0.58 |
| 1:A:77:MET:HE1 | 1:A:486:MET:CE | 2.34 | 0.57 |
| 1:A:236:ASN:OD1 | 1:A:236:ASN:O | 2.20 | 0.57 |
| 1:A:255:LYS:HG2 | 1:A:279:GLU:OE2 | 2.04 | 0.57 |
| 1:A:437:VAL:CG2 | 1:A:451:LEU:CD2 | 2.80 | 0.57 |
| 1:A:437:VAL:HG11 | 1:A:451:LEU:HD11 | 1.86 | 0.57 |
| 1:B:174:ILE:CG2 | 1:B:362:VAL:CG2 | 2.78 | 0.57 |
| 1:B:216:LYS:O | 1:B:332:ILE:HG13 | 2.03 | 0.57 |
| 1:C:117:PRO:HA | 1:C:120:VAL:HG12 | 1.85 | 0.57 |
| 1:C:239:ILE:HG22 | 1:C:307:ILE:HD12 | 1.86 | 0.57 |
| 1:D:152:LYS:HG2 | 1:D:465:GLY:O | 2.04 | 0.57 |
| 1:D:198:LYS:N | 1:D:355:ILE:HG21 | 2.19 | 0.57 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:HD13 | 2.33 | 0.57 |
| 1:D:338:LYS:HD2 | 1:D:339:HIS:HB3 | 1.84 | 0.57 |
| 1:E:240:GLU:O | 1:E:240:GLU:CG | 2.51 | 0.57 |
| 1:F:15:TYR:CE1 | 1:F:23:MET:SD | 2.97 | 0.57 |
| 1:G:289:LYS:HA | 1:G:292:MET:HB2 | 1.86 | 0.57 |
| 1:G:326:ILE:O | 1:G:327:SER:HB3 | 2.02 | 0.57 |
| 1:I:27:ALA:CB | 1:I:72:HIS:HD2 | 2.16 | 0.57 |
| 1:I:42:LYS:HD2 | 1:I:426:ALA:N | 2.19 | 0.57 |
| 1:I:235:LEU:CG | 1:I:307:ILE:HD13 | 2.34 | 0.57 |
| 1:K:113:GLN:CD | 1:K:113:GLN:O | 2.41 | 0.57 |
| 1:K:351:THR:HG23 | 1:K:352:GLU:N | 2.20 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:371:CYS:CB | 1:K:471:ARG:HD2 | 2.34 | 0.57 |
| 1:L:34:THR:CG2 | 1:L:35:VAL:HG22 | 2.34 | 0.57 |
| 1:L:165:LYS:HE3 | 1:L:165:LYS:CA | 2.32 | 0.57 |
| 1:M:130:LYS:CG | 1:M:393:LEU:CD2 | 2.81 | 0.57 |
| 1:O:232:ILE:O | 1:O:315:LEU:HB3 | 2.04 | 0.57 |
| 1:P:169:LYS:HE3 | 1:P:204:ASP:O | 2.04 | 0.57 |
| 1:A:212:VAL:N | 1:A:298:ALA:HB1 | 2.19 | 0.57 |
| 1:D:23:MET:HE3 | 1:D:72:HIS:CE1 | 2.39 | 0.57 |
| 1:D:212:VAL:HG21 | 1:D:294:LYS:C | 2.25 | 0.57 |
| 1:D:222:GLN:HB2 | 1:D:277:ALA:CB | 2.35 | 0.57 |
| 1:E:115:VAL:HG11 | 1:E:403:ARG:HE | 1.69 | 0.57 |
| 1:E:134:LEU:CG | 1:E:392:LYS:HE3 | 2.34 | 0.57 |
| 1:E:135:LEU:CD2 | 1:E:385:THR:CG2 | 2.81 | 0.57 |
| 1:E:234:LEU:HB3 | 1:E:292:MET:CE | 2.34 | 0.57 |
| 1:F:119:ILE:HG22 | 1:F:120:VAL:N | 2.15 | 0.57 |
| 1:F:263:PHE:CD2 | 1:F:295:LEU:CD2 | 2.88 | 0.57 |
| 1:F:272:ALA:O | 1:F:276:LEU:HD23 | 2.04 | 0.57 |
| 1:H:174:ILE:HG13 | 1:H:175:VAL:H | 1.68 | 0.57 |
| 1:H:220:SER:HB3 | 1:H:277:ALA:CB | 2.25 | 0.57 |
| 1:I:21:GLN:O | 1:I:25:ILE:HD12 | 2.04 | 0.57 |
| 1:I:68:MET:SD | 1:J:494:ILE:HG21 | 2.44 | 0.57 |
| 1:I:489:ARG:HH21 | 1:P:44:MET:CE | 2.17 | 0.57 |
| 1:I:494:ILE:HG21 | 1:P:68:MET:SD | 2.44 | 0.57 |
| 1:J:34:THR:HB | 1:K:14:ARG:CZ | 2.33 | 0.57 |
| 1:J:198:LYS:C | 1:J:355:ILE:HD11 | 2.24 | 0.57 |
| 1:K:142:VAL:HG21 | 1:K:149:ILE:HG21 | 1.86 | 0.57 |
| 1:L:262:LEU:CD1 | 1:L:310:LEU:CD2 | 2.82 | 0.57 |
| 1:M:21:GLN:C | 1:M:25:ILE:HD12 | 2.25 | 0.57 |
| 1:M:268:ILE:HB | 1:M:273:GLN:NE2 | 2.06 | 0.57 |
| 1:N:124:TYR:HE1 | 1:N:407:ALA:CB | 2.17 | 0.57 |
| 1:O:152:LYS:HG3 | 1:O:465:GLY:CA | 2.32 | 0.57 |
| 1:O:208:LEU:HD21 | 1:O:210:LYS:HE3 | 1.85 | 0.57 |
| 1:O:233:ALA:CB | 1:O:310:LEU:HD11 | 2.35 | 0.57 |
| 1:P:222:GLN:HB3 | 1:P:277:ALA:HB1 | 1.86 | 0.57 |
| 1:A:220:SER:CB | 1:A:277:ALA:HB2 | 2.35 | 0.57 |
| 1:B:150:LEU:HD23 | 1:B:175:VAL:CG1 | 2.35 | 0.57 |
| 1:B:456:GLY:O | 1:B:457:ALA:HB2 | 2.04 | 0.57 |
| 1:C:78:LEU:CD1 | 1:C:487:LEU:HD22 | 2.34 | 0.57 |
| 1:C:192:LEU:HD22 | 1:C:342:ALA:HB2 | 1.87 | 0.57 |
| 1:D:34:THR:HG22 | 1:D:35:VAL:N | 2.19 | 0.57 |
| 1:D:77:MET:CE | 1:D:486:MET:HE2 | 2.34 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:206:THR:CG2 | 1:E:347:ILE:HG23 | 2.34 | 0.57 |
| 1:F:181:VAL:CG2 | 1:F:182:VAL:N | 2.67 | 0.57 |
| 1:F:255:LYS:HG2 | 1:F:279:GLU:CD | 2.24 | 0.57 |
| 1:G:8:LEU:N | 1:G:9:PRO:HD3 | 2.11 | 0.57 |
| 1:G:77:MET:CE | 1:G:487:LEU:HD21 | 2.30 | 0.57 |
| 1:G:180:ALA:CB | 1:G:210:LYS:HE2 | 2.35 | 0.57 |
| 1:G:431:ILE:HD11 | 1:P:406:LEU:CD1 | 2.34 | 0.57 |
| 1:H:42:LYS:CB | 1:H:425:ASN:HD22 | 2.18 | 0.57 |
| 1:H:74:ALA:O | 1:H:77:MET:HB2 | 2.05 | 0.57 |
| 1:H:234:LEU:N | 1:H:315:LEU:HD21 | 2.19 | 0.57 |
| 1:I:27:ALA:HB2 | 1:I:72:HIS:HD2 | 1.69 | 0.57 |
| 1:I:452:ASN:HB2 | 1:I:459:GLU:OE2 | 2.05 | 0.57 |
| 1:J:42:LYS:CD | 1:J:425:ASN:C | 2.64 | 0.57 |
| 1:J:62:VAL:O | 1:J:66:ARG:HB2 | 2.05 | 0.57 |
| 1:J:103:LEU:HD21 | 1:J:411:PHE:CD2 | 2.39 | 0.57 |
| 1:J:379:VAL:CG2 | 1:J:380:SER:H | 2.16 | 0.57 |
| 1:J:473:LYS:HA | 1:J:473:LYS:CE | 2.31 | 0.57 |
| 1:K:152:LYS:HZ3 | 1:K:462:CYS:CA | 2.17 | 0.57 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:CA | 2.34 | 0.57 |
| 1:L:21:GLN:O | 1:L:25:ILE:HG13 | 2.05 | 0.57 |
| 1:M:135:LEU:HG | 1:M:389:LEU:HD21 | 1.86 | 0.57 |
| 1:N:115:VAL:CG2 | 1:N:403:ARG:CZ | 2.82 | 0.57 |
| 1:N:134:LEU:CD1 | 1:N:393:LEU:HD22 | 2.34 | 0.57 |
| 1:O:18:ARG:HA | 1:O:21:GLN:OE1 | 2.04 | 0.57 |
| 1:O:34:THR:CG2 | 1:P:14:ARG:HH12 | 2.16 | 0.57 |
| 1:O:103:LEU:HD21 | 1:O:411:PHE:CD2 | 2.39 | 0.57 |
| 1:O:106:LYS:HA | 1:O:106:LYS:CE | 2.32 | 0.57 |
| 1:O:233:ALA:CB | 1:O:310:LEU:HD13 | 2.29 | 0.57 |
| 1:P:139:ALA:HB3 | 1:P:377:ARG:CD | 2.33 | 0.57 |
| 1:P:195:ILE:CB | 1:P:359:ALA:HB1 | 2.28 | 0.57 |
| 1:P:339:HIS:CE1 | 1:P:341:LYS:CG | 2.83 | 0.57 |
| 1:A:156:THR:HG21 | 1:A:468:GLU:HA | 1.85 | 0.57 |
| 1:A:231:LYS:HD3 | 1:A:231:LYS:N | 2.18 | 0.57 |
| 1:A:240:GLU:C | 1:A:241:GLU:HG2 | 2.25 | 0.57 |
| 1:A:262:LEU:CD1 | 1:A:310:LEU:HD21 | 2.35 | 0.57 |
| 1:A:285:ARG:HG3 | 1:A:286:ARG:N | 2.17 | 0.57 |
| 1:B:155:MET:HB2 | 1:B:167:LYS:HB2 | 1.85 | 0.57 |
| 1:C:147:LYS:HG2 | 1:C:147:LYS:O | 2.04 | 0.57 |
| 1:C:227:VAL:HG11 | 1:C:260:ASN:CG | 2.24 | 0.57 |
| 1:D:377:ARG:CZ | 1:D:377:ARG:HB2 | 2.27 | 0.57 |
| 1:E:27:ALA:HB2 | 1:E:72:HIS:NE2 | 2.20 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:134:LEU:HD22 | 1:E:392:LYS:CE | 2.34 | 0.57 |
| 1:E:138:ILE:HD12 | 1:E:139:ALA:N | 2.19 | 0.57 |
| 1:F:65:LEU:C | 1:F:79:ILE:HD13 | 2.25 | 0.57 |
| 1:G:9:PRO:C | 1:H:69:SER:HB3 | 2.25 | 0.57 |
| 1:G:416:GLU:O | 1:G:420:ARG:HB2 | 2.04 | 0.57 |
| 1:G:431:ILE:CD1 | 1:P:406:LEU:CD1 | 2.82 | 0.57 |
| 1:H:182:VAL:HG23 | 1:H:188:VAL:HG23 | 1.86 | 0.57 |
| 1:H:304:ILE:CD1 | 1:H:310:LEU:HA | 2.34 | 0.57 |
| 1:I:362:VAL:O | 1:I:366:VAL:HG23 | 2.03 | 0.57 |
| 1:J:31:ILE:HG21 | 1:J:65:LEU:CD2 | 2.34 | 0.57 |
| 1:J:235:LEU:HD11 | 1:J:262:LEU:HD11 | 1.86 | 0.57 |
| 1:K:223:MET:CE | 1:K:276:LEU:HB2 | 2.33 | 0.57 |
| 1:L:117:PRO:C | 1:L:119:ILE:H | 2.07 | 0.57 |
| 1:M:326:ILE:HG13 | 1:M:348:ARG:NH1 | 2.20 | 0.57 |
| 1:N:241:GLU:OE1 | 1:N:241:GLU:CA | 2.44 | 0.57 |
| 1:N:377:ARG:HB3 | 1:N:470:LEU:HG | 1.85 | 0.57 |
| 1:N:472:VAL:CG2 | 1:N:473:LYS:N | 2.67 | 0.57 |
| 1:O:98:VAL:HG12 | 1:O:99:VAL:CG1 | 2.33 | 0.57 |
| 1:P:262:LEU:CD1 | 1:P:310:LEU:CD2 | 2.82 | 0.57 |
| 1:P:299:THR:CG2 | 1:P:334:VAL:HG11 | 2.34 | 0.57 |
| 1:P:477:ILE:O | 1:P:477:ILE:CG2 | 2.46 | 0.57 |
| 1:A:262:LEU:CD1 | 1:A:310:LEU:CD2 | 2.82 | 0.57 |
| 1:A:389:LEU:HD13 | 1:A:415:LEU:HD21 | 1.85 | 0.57 |
| 1:B:9:PRO:HG3 | 1:C:68:MET:HA | 1.86 | 0.57 |
| 1:B:86:GLU:O | 1:B:86:GLU:OE2 | 2.21 | 0.57 |
| 1:B:210:LYS:HB3 | 1:B:343:VAL:HG13 | 1.85 | 0.57 |
| 1:B:391:MET:CE | 1:B:438:ARG:C | 2.72 | 0.57 |
| 1:C:62:VAL:HG13 | 1:C:63:THR:H | 1.69 | 0.57 |
| 1:D:111:LEU:HD11 | 1:D:488:LEU:HD21 | 1.87 | 0.57 |
| 1:E:110:LEU:C | 1:E:112:ASP:H | 2.07 | 0.57 |
| 1:E:124:TYR:HE1 | 1:E:407:ALA:O | 1.87 | 0.57 |
| 1:E:202:SER:OG | 1:E:203:ILE:HG12 | 2.04 | 0.57 |
| 1:F:235:LEU:CD1 | 1:F:307:ILE:HD13 | 2.33 | 0.57 |
| 1:F:469:PRO:HB2 | 1:F:472:VAL:HG21 | 1.85 | 0.57 |
| 1:H:174:ILE:HG13 | 1:H:175:VAL:N | 2.20 | 0.57 |
| 1:H:233:ALA:HA | 1:H:315:LEU:HD23 | 1.87 | 0.57 |
| 1:H:403:ARG:CG | 1:H:403:ARG:NH1 | 2.66 | 0.57 |
| 1:I:237:CYS:HA | 1:I:306:ASN:C | 2.24 | 0.57 |
| 1:J:38:THR:HG22 | 1:J:59:ASN:OD1 | 2.04 | 0.57 |
| 1:J:48:LEU:CD2 | 1:K:494:ILE:HD12 | 2.35 | 0.57 |
| 1:J:100:ALA:O | 1:J:104:LEU:HG | 2.04 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:182:VAL:O | 1:J:182:VAL:HG22 | 2.01 | 0.57 |
| 1:J:222:GLN:CA | 1:J:277:ALA:HB1 | 2.33 | 0.57 |
| 1:J:223:MET:HB3 | 1:J:282:VAL:HA | 1.87 | 0.57 |
| 1:K:241:GLU:HG3 | 1:K:250:MET:SD | 2.45 | 0.57 |
| 1:K:248:LYS:HB2 | 1:K:275:TYR:CD2 | 2.40 | 0.57 |
| 1:K:262:LEU:HD12 | 1:K:310:LEU:HD12 | 1.83 | 0.57 |
| 1:K:263:PHE:CE2 | 1:K:295:LEU:HD21 | 2.39 | 0.57 |
| 1:L:441:HIS:HD1 | 1:L:449:ALA:HB3 | 1.67 | 0.57 |
| 1:M:195:ILE:HB | 1:M:359:ALA:HB2 | 1.84 | 0.57 |
| 1:N:99:VAL:O | 1:N:103:LEU:HB2 | 2.04 | 0.57 |
| 1:N:152:LYS:HB3 | 1:N:467:VAL:HG13 | 1.85 | 0.57 |
| 1:N:262:LEU:HD11 | 1:N:310:LEU:CD2 | 2.35 | 0.57 |
| 1:N:418:ILE:HG22 | 1:N:419:PRO:CD | 2.35 | 0.57 |
| 1:O:233:ALA:HA | 1:O:315:LEU:CD2 | 2.34 | 0.57 |
| 1:P:132:GLN:HE22 | 1:P:478:GLN:HE21 | 1.53 | 0.57 |
| 1:A:115:VAL:HG21 | 1:A:403:ARG:CZ | 2.34 | 0.57 |
| 1:A:212:VAL:HG22 | 1:A:344:THR:OG1 | 2.05 | 0.57 |
| 1:A:235:LEU:CD1 | 1:A:307:ILE:CG1 | 2.82 | 0.57 |
| 1:B:218:ARG:HG3 | 1:B:323:GLU:CD | 2.25 | 0.57 |
| 1:C:461:MET:HG3 | 1:C:466:VAL:O | 2.04 | 0.57 |
| 1:D:433:ILE:HG22 | 1:D:451:LEU:CD2 | 2.33 | 0.57 |
| 1:E:136:LYS:HG2 | 1:E:377:ARG:HH12 | 1.68 | 0.57 |
| 1:E:223:MET:CE | 1:E:283:ALA:CB | 2.79 | 0.57 |
| 1:F:102:GLU:OE2 | 1:F:417:VAL:HG11 | 2.04 | 0.57 |
| 1:G:44:MET:CE | 1:G:44:MET:CA | 2.78 | 0.57 |
| 1:G:219:VAL:HG11 | 1:G:283:ALA:HB3 | 1.83 | 0.57 |
| 1:H:237:CYS:HA | 1:H:307:ILE:N | 2.18 | 0.57 |
| 1:H:237:CYS:HA | 1:H:307:ILE:H | 1.69 | 0.57 |
| 1:I:391:MET:CE | 1:I:438:ARG:HG2 | 2.34 | 0.57 |
| 1:J:166:ALA:CB | 1:J:203:ILE:HG22 | 2.34 | 0.57 |
| 1:J:262:LEU:HD11 | 1:J:310:LEU:CD2 | 2.35 | 0.57 |
| 1:J:377:ARG:HE | 1:J:470:LEU:CD1 | 2.18 | 0.57 |
| 1:J:387:VAL:O | 1:J:390:SER:HB3 | 2.05 | 0.57 |
| 1:K:31:ILE:CG2 | 1:K:65:LEU:HD11 | 2.35 | 0.57 |
| 1:L:12:MET:CE | 1:L:494:ILE:CG2 | 2.65 | 0.57 |
| 1:L:48:LEU:HD23 | 1:M:494:ILE:CD1 | 2.34 | 0.57 |
| 1:L:106:LYS:HA | 1:L:106:LYS:HE3 | 1.85 | 0.57 |
| 1:M:250:MET:HE3 | 1:M:308:LYS:HD2 | 1.86 | 0.57 |
| 1:N:24:ASN:HD22 | 1:N:24:ASN:N | 2.01 | 0.57 |
| 1:O:100:ALA:O | 1:O:104:LEU:HG | 2.04 | 0.57 |
| 1:O:153:ILE:HD11 | 1:O:378:ILE:HB | 1.86 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:166:ALA:CB | 1:O:203:ILE:HB | 2.25 | 0.57 |
| 1:O:343:VAL:O | 1:O:343:VAL:HG13 | 2.05 | 0.57 |
| 1:P:72:HIS:O | 1:P:75:ALA:HB3 | 2.04 | 0.57 |
| 1:P:433:ILE:O | 1:P:436:LYS:HB2 | 2.04 | 0.57 |
| 1:A:44:MET:CE | 1:H:489:ARG:HH21 | 2.15 | 0.57 |
| 1:A:134:LEU:HD22 | 1:A:392:LYS:CE | 2.34 | 0.57 |
| 1:A:235:LEU:HD22 | 1:A:237:CYS:H | 1.68 | 0.57 |
| 1:A:389:LEU:HD12 | 1:A:415:LEU:HD21 | 1.87 | 0.57 |
| 1:B:42:LYS:NZ | 1:B:453:VAL:HB | 2.19 | 0.57 |
| 1:B:138:ILE:O | 1:B:446:ASN:HB2 | 2.05 | 0.57 |
| 1:B:234:LEU:HB3 | 1:B:292:MET:HE1 | 1.87 | 0.57 |
| 1:B:380:SER:CB | 1:B:384:SER:CB | 2.75 | 0.57 |
| 1:C:12:MET:HE3 | 1:C:494:ILE:HB | 1.86 | 0.57 |
| 1:C:118:THR:HG23 | 1:C:121:VAL:HG21 | 1.87 | 0.57 |
| 1:D:96:ALA:CB | 1:D:480:ALA:HB2 | 2.34 | 0.57 |
| 1:E:85:GLN:OE1 | 1:E:475:GLN:HG3 | 2.04 | 0.57 |
| 1:E:214:VAL:HG12 | 1:E:291:ASP:CB | 2.35 | 0.57 |
| 1:F:178:VAL:HG12 | 1:F:193:ILE:HD12 | 1.86 | 0.57 |
| 1:F:178:VAL:HB | 1:F:193:ILE:HD11 | 1.86 | 0.57 |
| 1:G:155:MET:HB3 | 1:G:167:LYS:HB2 | 1.86 | 0.57 |
| 1:G:397:ALA:CB | 1:G:408:VAL:HG23 | 2.30 | 0.57 |
| 1:H:77:MET:SD | 1:H:487:LEU:HD11 | 2.45 | 0.57 |
| 1:I:248:LYS:CE | 1:I:275:TYR:CZ | 2.87 | 0.57 |
| 1:K:216:LYS:HG3 | 1:K:287:VAL:CG2 | 2.08 | 0.57 |
| 1:L:130:LYS:HE3 | 1:L:396:TYR:CG | 2.40 | 0.57 |
| 1:L:188:VAL:HG13 | 1:L:370:GLY:HA2 | 1.87 | 0.57 |
| 1:L:377:ARG:C | 1:L:470:LEU:CD2 | 2.73 | 0.57 |
| 1:N:68:MET:HA | 1:O:9:PRO:CG | 2.34 | 0.57 |
| 1:N:218:ARG:CZ | 1:N:282:VAL:CG2 | 2.80 | 0.57 |
| 1:N:239:ILE:HD12 | 1:N:307:ILE:CD1 | 2.35 | 0.57 |
| 1:N:268:ILE:CG2 | 1:N:273:GLN:CG | 2.79 | 0.57 |
| 1:O:158:ILE:HG21 | 1:O:170:LEU:HD12 | 1.87 | 0.57 |
| 1:O:235:LEU:CB | 1:O:307:ILE:HA | 2.30 | 0.57 |
| 1:O:338:LYS:HE2 | 1:O:339:HIS:CB | 2.35 | 0.57 |
| 1:P:119:ILE:CD1 | 1:P:403:ARG:HB2 | 2.33 | 0.57 |
| 1:P:142:VAL:CG2 | 1:P:149:ILE:HG21 | 2.30 | 0.57 |
| 1:A:153:ILE:CD1 | 1:A:372:THR:CG2 | 2.83 | 0.57 |
| 1:A:254:ILE:HG22 | 1:A:259:ALA:HB3 | 1.84 | 0.57 |
| 1:B:400:ILE:HD11 | 1:B:408:VAL:HG21 | 1.87 | 0.57 |
| 1:C:453:VAL:CG2 | 1:C:454:PHE:CD1 | 2.86 | 0.57 |
| 1:D:9:PRO:CG | 1:E:71:GLU:HB3 | 2.23 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:138:ILE:HD11 | 1:D:385:THR:CG2 | 2.33 | 0.57 |
| 1:E:38:THR:HG22 | 1:E:44:MET:O | 2.04 | 0.57 |
| 1:E:119:ILE:CD1 | 1:E:403:ARG:HG3 | 2.35 | 0.57 |
| 1:E:208:LEU:HD22 | 1:E:343:VAL:HG22 | 1.86 | 0.57 |
| 1:E:235:LEU:CA | 1:E:310:LEU:HD13 | 2.35 | 0.57 |
| 1:F:208:LEU:HD21 | 1:F:210:LYS:HD3 | 1.85 | 0.57 |
| 1:G:235:LEU:HD22 | 1:G:307:ILE:HA | 1.80 | 0.57 |
| 1:H:170:LEU:HG | 1:H:358:VAL:HG13 | 1.86 | 0.57 |
| 1:I:68:MET:HG3 | 1:J:8:LEU:HA | 1.86 | 0.57 |
| 1:K:15:TYR:CE1 | 1:K:23:MET:SD | 2.98 | 0.57 |
| 1:K:236:ASN:O | 1:K:265:GLN:HB3 | 2.04 | 0.57 |
| 1:L:36:ARG:HG3 | 1:L:37:SER:OG | 2.04 | 0.57 |
| 1:L:130:LYS:HZ2 | 1:L:393:LEU:CD2 | 2.18 | 0.57 |
| 1:M:208:LEU:HD12 | 1:M:343:VAL:CG2 | 2.35 | 0.57 |
| 1:N:130:LYS:HZ2 | 1:N:134:LEU:HD21 | 1.67 | 0.57 |
| 1:O:12:MET:CE | 1:O:12:MET:N | 2.68 | 0.57 |
| 1:O:158:ILE:CD1 | 1:O:170:LEU:HB2 | 2.34 | 0.57 |
| 1:O:241:GLU:HA | 1:O:241:GLU:OE1 | 2.04 | 0.57 |
| 1:O:248:LYS:HG3 | 1:O:275:TYR:CE2 | 2.39 | 0.57 |
| 1:A:72:HIS:CD2 | 1:A:73:PRO:CD | 2.76 | 0.57 |
| 1:A:299:THR:CG2 | 1:A:334:VAL:HG12 | 2.34 | 0.57 |
| 1:A:325:LYS:HE2 | 1:A:330:SER:OG | 2.04 | 0.57 |
| 1:B:345:MET:HE3 | 1:B:347:ILE:CD1 | 2.35 | 0.57 |
| 1:B:405:GLN:HB3 | 1:B:406:LEU:HG | 1.85 | 0.57 |
| 1:C:78:LEU:HD12 | 1:C:487:LEU:HD21 | 1.85 | 0.57 |
| 1:C:82:ALA:HB2 | 1:C:97:VAL:CG2 | 2.35 | 0.57 |
| 1:C:155:MET:HE2 | 1:C:465:GLY:HA3 | 1.86 | 0.57 |
| 1:D:195:ILE:N | 1:D:195:ILE:CD1 | 2.67 | 0.57 |
| 1:D:239:ILE:HD12 | 1:D:307:ILE:CG1 | 2.35 | 0.57 |
| 1:D:460:ASP:CG | 1:D:463:GLU:HB2 | 2.25 | 0.57 |
| 1:E:12:MET:CE | 1:F:68:MET:CE | 2.82 | 0.57 |
| 1:E:115:VAL:HG11 | 1:E:403:ARG:CD | 2.35 | 0.57 |
| 1:E:235:LEU:HD22 | 1:E:262:LEU:HD11 | 1.85 | 0.57 |
| 1:F:117:PRO:HA | 1:F:120:VAL:HG13 | 1.87 | 0.57 |
| 1:G:89:VAL:CG1 | 1:G:472:VAL:HA | 2.35 | 0.57 |
| 1:I:86:GLU:O | 1:I:86:GLU:CD | 2.43 | 0.57 |
| 1:I:212:VAL:CG2 | 1:I:298:ALA:HB2 | 2.35 | 0.57 |
| 1:I:236:ASN:HA | 1:I:265:GLN:CB | 2.34 | 0.57 |
| 1:I:347:ILE:CG2 | 1:I:358:VAL:HG11 | 2.35 | 0.57 |
| 1:L:122:LYS:HB3 | 1:L:404:GLU:OE2 | 2.04 | 0.57 |
| 1:L:235:LEU:HD23 | 1:L:237:CYS:H | 1.69 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:264:CYS:HB2 | 1:L:266:LYS:O | 2.05 | 0.57 |
| 1:M:389:LEU:HD13 | 1:M:415:LEU:HD11 | 1.87 | 0.57 |
| 1:N:140:CYS:SG | 1:N:378:ILE:HG13 | 2.44 | 0.57 |
| 1:N:199:SER:HB2 | 1:N:327:SER:HB2 | 1.85 | 0.57 |
| 1:O:34:THR:CA | 1:P:14:ARG:HH12 | 2.17 | 0.57 |
| 1:O:177:ALA:HB2 | 1:O:208:LEU:CD1 | 2.35 | 0.57 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:CG | 2.83 | 0.57 |
| 1:A:68:MET:SD | 1:H:9:PRO:HD2 | 2.45 | 0.57 |
| 1:A:178:VAL:CG2 | 1:A:366:VAL:CG2 | 2.77 | 0.57 |
| 1:A:251:VAL:HG21 | 1:A:272:ALA:HB1 | 1.87 | 0.57 |
| 1:A:276:LEU:HD12 | 1:A:281:ILE:CB | 2.35 | 0.57 |
| 1:B:124:TYR:CE1 | 1:B:407:ALA:CA | 2.76 | 0.57 |
| 1:B:220:SER:HB2 | 1:B:273:GLN:HB2 | 1.87 | 0.57 |
| 1:D:12:MET:HE2 | 1:E:68:MET:SD | 2.44 | 0.57 |
| 1:D:222:GLN:CA | 1:D:277:ALA:HB1 | 2.34 | 0.57 |
| 1:D:437:VAL:HG22 | 1:D:458:VAL:HB | 1.87 | 0.57 |
| 1:E:119:ILE:CG2 | 1:E:119:ILE:O | 2.53 | 0.57 |
| 1:E:206:THR:HG21 | 1:E:347:ILE:HG22 | 1.86 | 0.57 |
| 1:E:233:ALA:CA | 1:E:315:LEU:CD2 | 2.83 | 0.57 |
| 1:F:265:GLN:OE1 | 1:F:289:LYS:HG3 | 2.04 | 0.57 |
| 1:F:339:HIS:HE1 | 1:F:341:LYS:HE2 | 1.69 | 0.57 |
| 1:G:237:CYS:HA | 1:G:306:ASN:C | 2.25 | 0.57 |
| 1:G:239:ILE:HA | 1:G:307:ILE:CG2 | 2.35 | 0.57 |
| 1:G:384:SER:CB | 1:G:441:HIS:HE1 | 2.18 | 0.57 |
| 1:H:37:SER:O | 1:H:43:GLY:HA2 | 2.04 | 0.57 |
| 1:H:142:VAL:HG12 | 1:H:378:ILE:HD13 | 1.85 | 0.57 |
| 1:H:192:LEU:CD2 | 1:H:297:LYS:CE | 2.75 | 0.57 |
| 1:I:248:LYS:HG3 | 1:I:275:TYR:CE2 | 2.40 | 0.57 |
| 1:J:142:VAL:CG2 | 1:J:378:ILE:HD13 | 2.34 | 0.57 |
| 1:K:197:LYS:CA | 1:K:355:ILE:CG2 | 2.81 | 0.57 |
| 1:L:38:THR:HG23 | 1:L:46:LYS:HE2 | 1.85 | 0.57 |
| 1:L:223:MET:N | 1:L:277:ALA:HB1 | 2.20 | 0.57 |
| 1:L:377:ARG:C | 1:L:470:LEU:HD23 | 2.25 | 0.57 |
| 1:M:326:ILE:HG13 | 1:M:348:ARG:HH12 | 1.70 | 0.57 |
| 1:M:420:ARG:CZ | 1:M:430:ALA:CB | 2.83 | 0.57 |
| 1:M:488:LEU:CD1 | 1:M:488:LEU:C | 2.59 | 0.57 |
| 1:N:19:ASP:HA | 1:N:22:ARG:NH2 | 2.20 | 0.57 |
| 1:N:69:SER:N | 1:O:9:PRO:HG3 | 2.20 | 0.57 |
| 1:N:219:VAL:CG1 | 1:N:220:SER:H | 2.17 | 0.57 |
| 1:O:150:LEU:CD2 | 1:O:175:VAL:CG1 | 2.73 | 0.57 |
| 1:O:153:ILE:CG2 | 1:O:469:PRO:HB3 | 2.35 | 0.57 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:377:ARG:NH2 | 1:O:470:LEU:HD13 | 2.20 | 0.57 |
| 1:A:34:THR:CA | 1:H:14:ARG:HH12 | 2.04 | 0.56 |
| 1:A:214:VAL:CG1 | 1:A:291:ASP:HB3 | 2.35 | 0.56 |
| 1:A:453:VAL:CG2 | 1:A:454:PHE:N | 2.68 | 0.56 |
| 1:B:8:LEU:HB3 | 1:C:68:MET:HG3 | 1.86 | 0.56 |
| 1:B:207:GLU:OE2 | 1:B:346:LEU:HD13 | 2.04 | 0.56 |
| 1:C:435:VAL:HG22 | 1:C:438:ARG:NH2 | 2.20 | 0.56 |
| 1:D:170:LEU:HD11 | 1:D:361:ALA:HB1 | 1.86 | 0.56 |
| 1:E:223:MET:HG2 | 1:E:281:ILE:O | 2.05 | 0.56 |
| 1:E:247:LEU:HD11 | 1:E:269:ASP:HB3 | 1.86 | 0.56 |
| 1:F:48:LEU:HD23 | 1:F:67:GLU:CB | 2.30 | 0.56 |
| 1:F:113:GLN:O | 1:F:113:GLN:CG | 2.51 | 0.56 |
| 1:G:8:LEU:N | 1:H:70:VAL:HA | 2.20 | 0.56 |
| 1:G:12:MET:CB | 1:H:68:MET:HE2 | 2.35 | 0.56 |
| 1:H:156:THR:HG21 | 1:H:467:VAL:C | 2.26 | 0.56 |
| 1:H:219:VAL:HG11 | 1:H:283:ALA:HB3 | 1.86 | 0.56 |
| 1:H:233:ALA:CA | 1:H:315:LEU:HD23 | 2.33 | 0.56 |
| 1:I:39:LEU:HD12 | 1:I:40:GLY:H | 1.70 | 0.56 |
| 1:I:68:MET:HG3 | 1:J:8:LEU:HB3 | 1.87 | 0.56 |
| 1:I:110:LEU:HA | 1:I:113:GLN:HB3 | 1.87 | 0.56 |
| 1:J:14:ARG:CG | 1:J:494:ILE:HG12 | 2.32 | 0.56 |
| 1:J:116:HIS:CE1 | 1:J:117:PRO:HD2 | 2.39 | 0.56 |
| 1:K:105:ARG:NH1 | 1:K:106:LYS:HD2 | 2.19 | 0.56 |
| 1:K:142:VAL:HG11 | 1:K:149:ILE:HG21 | 1.87 | 0.56 |
| 1:K:222:GLN:HB3 | 1:K:277:ALA:CB | 2.27 | 0.56 |
| 1:L:406:LEU:N | 1:L:406:LEU:CD1 | 2.61 | 0.56 |
| 1:N:198:LYS:HE2 | 1:N:331:MET:SD | 2.45 | 0.56 |
| 1:N:383:GLY:HA3 | 1:N:386:GLU:HG2 | 1.84 | 0.56 |
| 1:O:31:ILE:HG21 | 1:O:65:LEU:HG | 1.86 | 0.56 |
| 1:O:69:SER:HB3 | 1:P:9:PRO:CG | 2.35 | 0.56 |
| 1:O:79:ILE:O | 1:O:83:LYS:HB2 | 2.04 | 0.56 |
| 1:O:188:VAL:HB | 1:O:373:ILE:HG13 | 1.86 | 0.56 |
| 1:O:345:MET:HE2 | 1:O:362:VAL:HG11 | 1.86 | 0.56 |
| 1:P:48:LEU:HD23 | 1:P:67:GLU:HB2 | 1.86 | 0.56 |
| 1:P:134:LEU:CB | 1:P:392:LYS:HE3 | 2.34 | 0.56 |
| 1:P:235:LEU:CD1 | 1:P:307:ILE:CD1 | 2.83 | 0.56 |
| 1:A:44:MET:HE2 | 1:A:44:MET:CA | 2.33 | 0.56 |
| 1:A:403:ARG:HB3 | 1:J:431:ILE:HD13 | 1.87 | 0.56 |
| 1:B:154:ALA:HB1 | 1:B:174:ILE:HD11 | 1.86 | 0.56 |
| 1:C:387:VAL:HG21 | 1:C:437:VAL:CG1 | 2.35 | 0.56 |
| 1:D:105:ARG:HH12 | 1:D:106:LYS:HD2 | 1.69 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:158:ILE:CG2 | 1:D:164:GLU:HA | 2.35 | 0.56 |
| 1:D:383:GLY:CA | 1:D:386:GLU:HG2 | 2.27 | 0.56 |
| 1:E:144:ALA:O | 1:E:150:LEU:HD11 | 2.04 | 0.56 |
| 1:E:459:GLU:CG | 1:E:461:MET:CE | 2.83 | 0.56 |
| 1:F:68:MET:CA | 1:F:68:MET:CE | 2.83 | 0.56 |
| 1:F:115:VAL:HG23 | 1:F:119:ILE:HB | 1.87 | 0.56 |
| 1:G:14:ARG:HH22 | 1:H:34:THR:HG23 | 1.70 | 0.56 |
| 1:G:437:VAL:HG11 | 1:G:451:LEU:HD11 | 1.87 | 0.56 |
| 1:H:326:ILE:HG13 | 1:H:348:ARG:HH12 | 1.68 | 0.56 |
| 1:I:9:PRO:HB2 | 1:P:50:ASP:HA | 1.85 | 0.56 |
| 1:I:227:VAL:HG11 | 1:I:260:ASN:ND2 | 2.20 | 0.56 |
| 1:I:403:ARG:O | 1:I:406:LEU:HG | 2.05 | 0.56 |
| 1:J:166:ALA:O | 1:J:170:LEU:HG | 2.05 | 0.56 |
| 1:J:212:VAL:HG23 | 1:J:298:ALA:HB2 | 1.87 | 0.56 |
| 1:J:247:LEU:HD21 | 1:J:269:ASP:CB | 2.36 | 0.56 |
| 1:J:313:GLN:C | 1:J:315:LEU:H | 2.06 | 0.56 |
| 1:J:452:ASN:OD1 | 1:J:454:PHE:HD2 | 1.88 | 0.56 |
| 1:K:326:ILE:CD1 | 1:K:348:ARG:NH1 | 2.66 | 0.56 |
| 1:L:156:THR:CG2 | 1:L:468:GLU:HB3 | 2.36 | 0.56 |
| 1:L:299:THR:HG23 | 1:L:334:VAL:CG1 | 2.35 | 0.56 |
| 1:L:384:SER:CB | 1:L:441:HIS:CE1 | 2.83 | 0.56 |
| 1:M:23:MET:HE2 | 1:M:72:HIS:CE1 | 2.40 | 0.56 |
| 1:M:194:LYS:HB2 | 1:M:294:LYS:CD | 2.36 | 0.56 |
| 1:N:130:LYS:O | 1:N:130:LYS:CG | 2.46 | 0.56 |
| 1:N:130:LYS:HG2 | 1:N:393:LEU:HD11 | 1.87 | 0.56 |
| 1:N:134:LEU:HD12 | 1:N:393:LEU:HD22 | 1.86 | 0.56 |
| 1:O:68:MET:CA | 1:P:9:PRO:HD3 | 2.34 | 0.56 |
| 1:O:358:VAL:O | 1:O:362:VAL:HG12 | 2.05 | 0.56 |
| 1:P:70:VAL:O | 1:P:76:LYS:HE3 | 2.05 | 0.56 |
| 1:P:138:ILE:HD12 | 1:P:385:THR:CB | 2.34 | 0.56 |
| 1:A:77:MET:CE | 1:A:486:MET:CE | 2.83 | 0.56 |
| 1:A:170:LEU:HD11 | 1:A:358:VAL:CG1 | 2.34 | 0.56 |
| 1:A:170:LEU:CD1 | 1:A:358:VAL:HG13 | 2.35 | 0.56 |
| 1:A:178:VAL:HG13 | 1:A:188:VAL:HG11 | 1.80 | 0.56 |
| 1:A:192:LEU:CG | 1:A:342:ALA:HB2 | 2.34 | 0.56 |
| 1:A:211:GLY:C | 1:A:298:ALA:HB2 | 2.25 | 0.56 |
| 1:A:235:LEU:CD1 | 1:A:307:ILE:HA | 2.35 | 0.56 |
| 1:A:239:ILE:HA | 1:A:307:ILE:HG21 | 1.87 | 0.56 |
| 1:B:173:ILE:HG13 | 1:B:345:MET:SD | 2.44 | 0.56 |
| 1:B:235:LEU:CD2 | 1:B:307:ILE:N | 2.68 | 0.56 |
| 1:B:263:PHE:HE1 | 1:B:332:ILE:HG21 | 1.68 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:312:ALA:CB | 1:B:315:LEU:CB | 2.79 | 0.56 |
| 1:C:77:MET:HB3 | 1:C:80:GLU:OE1 | 2.05 | 0.56 |
| 1:C:257:SER:HB2 | 1:C:312:ALA:HB2 | 1.87 | 0.56 |
| 1:D:25:ILE:CG2 | 1:D:26:LEU:N | 2.69 | 0.56 |
| 1:D:42:LYS:HE3 | 1:D:426:ALA:HA | 1.87 | 0.56 |
| 1:D:96:ALA:CA | 1:D:480:ALA:CB | 2.83 | 0.56 |
| 1:D:117:PRO:O | 1:D:120:VAL:HG13 | 2.06 | 0.56 |
| 1:E:42:LYS:HG3 | 1:E:425:ASN:CA | 2.35 | 0.56 |
| 1:E:134:LEU:HD22 | 1:E:392:LYS:HZ2 | 1.70 | 0.56 |
| 1:E:434:LEU:N | 1:E:434:LEU:HD22 | 2.20 | 0.56 |
| 1:F:138:ILE:HD12 | 1:F:385:THR:HA | 1.87 | 0.56 |
| 1:F:211:GLY:O | 1:F:212:VAL:HG23 | 2.04 | 0.56 |
| 1:F:212:VAL:HG21 | 1:F:294:LYS:CB | 2.35 | 0.56 |
| 1:F:214:VAL:CG1 | 1:F:291:ASP:CG | 2.74 | 0.56 |
| 1:G:14:ARG:CZ | 1:H:34:THR:HG23 | 2.35 | 0.56 |
| 1:G:42:LYS:HZ2 | 1:G:426:ALA:HB2 | 1.68 | 0.56 |
| 1:G:215:ASP:OD2 | 1:G:331:MET:HG2 | 2.05 | 0.56 |
| 1:H:89:VAL:O | 1:H:89:VAL:HG23 | 2.04 | 0.56 |
| 1:H:437:VAL:HG21 | 1:H:451:LEU:CD1 | 2.36 | 0.56 |
| 1:I:68:MET:HA | 1:J:9:PRO:CD | 2.36 | 0.56 |
| 1:I:119:ILE:HG21 | 1:I:403:ARG:CB | 2.24 | 0.56 |
| 1:I:173:ILE:HG13 | 1:I:345:MET:SD | 2.46 | 0.56 |
| 1:I:402:GLY:O | 1:I:405:GLN:HB3 | 2.04 | 0.56 |
| 1:J:158:ILE:HD11 | 1:J:170:LEU:HB3 | 1.87 | 0.56 |
| 1:J:170:LEU:HD21 | 1:J:358:VAL:CG2 | 2.35 | 0.56 |
| 1:J:239:ILE:O | 1:J:247:LEU:HD13 | 2.06 | 0.56 |
| 1:K:117:PRO:HA | 1:K:120:VAL:HG12 | 1.87 | 0.56 |
| 1:K:118:THR:HG22 | 1:K:118:THR:O | 2.05 | 0.56 |
| 1:K:154:ALA:CB | 1:K:171:ALA:HB1 | 2.35 | 0.56 |
| 1:K:181:VAL:HG12 | 1:K:341:LYS:O | 2.05 | 0.56 |
| 1:K:197:LYS:HB2 | 1:K:355:ILE:HG13 | 1.87 | 0.56 |
| 1:K:368:VAL:CG2 | 1:K:469:PRO:CG | 2.82 | 0.56 |
| 1:L:68:MET:HE3 | 1:M:12:MET:SD | 2.45 | 0.56 |
| 1:L:139:ALA:HB2 | 1:L:377:ARG:HH11 | 1.70 | 0.56 |
| 1:M:69:SER:HB3 | 1:N:9:PRO:HB3 | 1.87 | 0.56 |
| 1:M:195:ILE:CB | 1:M:359:ALA:HB1 | 2.33 | 0.56 |
| 1:M:239:ILE:CG2 | 1:M:307:ILE:HG21 | 2.28 | 0.56 |
| 1:N:38:THR:CG2 | 1:N:59:ASN:HB2 | 2.34 | 0.56 |
| 1:N:42:LYS:CD | 1:O:118:THR:HG21 | 2.35 | 0.56 |
| 1:N:115:VAL:HG13 | 1:N:116:HIS:O | 2.05 | 0.56 |
| 1:N:210:LYS:HG3 | 1:N:343:VAL:CG2 | 2.33 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:218:ARG:HG2 | 1:N:218:ARG:NH1 | 2.04 | 0.56 |
| 1:N:220:SER:HB2 | 1:N:273:GLN:HB2 | 1.86 | 0.56 |
| 1:N:387:VAL:C | 1:N:390:SER:HB3 | 2.26 | 0.56 |
| 1:N:434:LEU:N | 1:N:434:LEU:CD2 | 2.68 | 0.56 |
| 1:O:155:MET:SD | 1:O:167:LYS:HD2 | 2.45 | 0.56 |
| 1:O:223:MET:HE2 | 1:O:276:LEU:HA | 1.86 | 0.56 |
| 1:O:285:ARG:HG3 | 1:O:286:ARG:H | 1.69 | 0.56 |
| 1:P:139:ALA:HB3 | 1:P:377:ARG:HD3 | 1.86 | 0.56 |
| 1:P:193:ILE:HD12 | 1:P:366:VAL:CG2 | 2.36 | 0.56 |
| 1:P:235:LEU:CB | 1:P:310:LEU:HD22 | 2.35 | 0.56 |
| 1:P:389:LEU:CD1 | 1:P:415:LEU:HD13 | 2.35 | 0.56 |
| 1:A:12:MET:HE1 | 1:B:68:MET:HE1 | 1.87 | 0.56 |
| 1:A:94:THR:O | 1:A:97:VAL:HG22 | 2.04 | 0.56 |
| 1:B:135:LEU:HD21 | 1:B:385:THR:HG21 | 1.88 | 0.56 |
| 1:B:380:SER:N | 1:B:467:VAL:HG12 | 2.21 | 0.56 |
| 1:C:452:ASN:HD21 | 1:C:454:PHE:CB | 2.15 | 0.56 |
| 1:D:255:LYS:CD | 1:D:279:GLU:CD | 2.73 | 0.56 |
| 1:D:432:GLU:O | 1:D:436:LYS:HG3 | 2.05 | 0.56 |
| 1:D:469:PRO:HG2 | 1:D:472:VAL:HG21 | 1.87 | 0.56 |
| 1:E:152:LYS:HG2 | 1:E:465:GLY:O | 2.06 | 0.56 |
| 1:E:251:VAL:HG13 | 1:E:276:LEU:CD1 | 2.34 | 0.56 |
| 1:E:387:VAL:HG21 | 1:E:437:VAL:HG12 | 1.87 | 0.56 |
| 1:F:136:LYS:CG | 1:F:377:ARG:HH12 | 2.18 | 0.56 |
| 1:G:42:LYS:CE | 1:G:426:ALA:HB2 | 2.36 | 0.56 |
| 1:G:70:VAL:CG2 | 1:G:70:VAL:O | 2.53 | 0.56 |
| 1:H:70:VAL:CG2 | 1:H:76:LYS:HG3 | 2.27 | 0.56 |
| 1:H:420:ARG:NH1 | 1:H:430:ALA:HB3 | 2.20 | 0.56 |
| 1:I:235:LEU:CB | 1:I:307:ILE:HA | 2.36 | 0.56 |
| 1:I:420:ARG:HH11 | 1:I:420:ARG:HG3 | 1.68 | 0.56 |
| 1:J:15:TYR:HD2 | 1:J:19:ASP:HB2 | 1.71 | 0.56 |
| 1:J:70:VAL:O | 1:J:76:LYS:HD3 | 2.05 | 0.56 |
| 1:J:134:LEU:HD11 | 1:J:393:LEU:CD2 | 2.35 | 0.56 |
| 1:J:339:HIS:HE1 | 1:J:341:LYS:HD2 | 1.64 | 0.56 |
| 1:J:452:ASN:OD1 | 1:J:454:PHE:CD2 | 2.59 | 0.56 |
| 1:K:68:MET:HA | 1:L:9:PRO:CG | 2.35 | 0.56 |
| 1:K:156:THR:HB | 1:K:467:VAL:O | 2.06 | 0.56 |
| 1:L:23:MET:HE2 | 1:L:72:HIS:HE2 | 1.70 | 0.56 |
| 1:L:368:VAL:HB | 1:L:469:PRO:CG | 2.35 | 0.56 |
| 1:M:288:LYS:O | 1:M:291:ASP:HA | 2.06 | 0.56 |
| 1:N:30:ILE:CG2 | 1:N:31:ILE:N | 2.61 | 0.56 |
| 1:N:42:LYS:CB | 1:N:425:ASN:HB2 | 2.35 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:236:ASN:HA | 1:P:265:GLN:HB2 | 1.86 | 0.56 |
| 1:P:368:VAL:CG2 | 1:P:469:PRO:CG | 2.83 | 0.56 |
| 1:P:387:VAL:HG21 | 1:P:437:VAL:HG12 | 1.87 | 0.56 |
| 1:A:307:ILE:O | 1:A:307:ILE:CD1 | 2.47 | 0.56 |
| 1:B:222:GLN:HB2 | 1:B:277:ALA:CB | 2.29 | 0.56 |
| 1:B:406:LEU:HD11 | 1:K:431:ILE:CD1 | 2.35 | 0.56 |
| 1:C:134:LEU:HD13 | 1:C:392:LYS:HB3 | 1.86 | 0.56 |
| 1:C:166:ALA:CB | 1:C:203:ILE:CG2 | 2.83 | 0.56 |
| 1:C:254:ILE:CG1 | 1:C:310:LEU:HD23 | 2.32 | 0.56 |
| 1:C:492:ASP:OD2 | 1:D:46:LYS:HB3 | 2.04 | 0.56 |
| 1:D:42:LYS:HD2 | 1:D:426:ALA:N | 2.21 | 0.56 |
| 1:D:218:ARG:HG2 | 1:D:218:ARG:NH1 | 2.14 | 0.56 |
| 1:E:197:LYS:CA | 1:E:355:ILE:HG21 | 2.35 | 0.56 |
| 1:F:48:LEU:CD1 | 1:F:68:MET:HE1 | 2.35 | 0.56 |
| 1:F:111:LEU:HD11 | 1:F:488:LEU:HD11 | 1.87 | 0.56 |
| 1:F:232:ILE:C | 1:F:315:LEU:HD22 | 2.25 | 0.56 |
| 1:F:237:CYS:O | 1:F:307:ILE:HG23 | 2.06 | 0.56 |
| 1:G:92:GLY:HA2 | 1:G:95:THR:HB | 1.87 | 0.56 |
| 1:G:254:ILE:HG22 | 1:G:259:ALA:HB3 | 1.86 | 0.56 |
| 1:H:343:VAL:O | 1:H:343:VAL:HG13 | 2.05 | 0.56 |
| 1:H:391:MET:HE1 | 1:H:438:ARG:HA | 1.88 | 0.56 |
| 1:I:153:ILE:HG23 | 1:I:469:PRO:CD | 2.35 | 0.56 |
| 1:J:222:GLN:HB2 | 1:J:277:ALA:CB | 2.34 | 0.56 |
| 1:L:23:MET:HE2 | 1:L:72:HIS:NE2 | 2.20 | 0.56 |
| 1:L:223:MET:HE1 | 1:L:283:ALA:CB | 2.35 | 0.56 |
| 1:M:21:GLN:O | 1:M:25:ILE:HD12 | 2.05 | 0.56 |
| 1:M:325:LYS:HE3 | 1:M:330:SER:OG | 2.06 | 0.56 |
| 1:M:453:VAL:HG22 | 1:M:454:PHE:CG | 2.40 | 0.56 |
| 1:N:135:LEU:CD2 | 1:N:385:THR:CG2 | 2.84 | 0.56 |
| 1:N:152:LYS:HG2 | 1:N:465:GLY:HA2 | 1.86 | 0.56 |
| 1:N:326:ILE:HG22 | 1:N:331:MET:HG3 | 1.87 | 0.56 |
| 1:N:389:LEU:O | 1:N:393:LEU:HD23 | 2.05 | 0.56 |
| 1:O:193:ILE:HD12 | 1:O:366:VAL:CG1 | 2.33 | 0.56 |
| 1:P:21:GLN:O | 1:P:25:ILE:HG12 | 2.06 | 0.56 |
| 1:P:31:ILE:HG22 | 1:P:65:LEU:HG | 1.87 | 0.56 |
| 1:A:68:MET:CE | 1:H:9:PRO:HD2 | 2.35 | 0.56 |
| 1:A:178:VAL:HG13 | 1:A:188:VAL:CG1 | 2.34 | 0.56 |
| 1:A:182:VAL:CB | 1:A:188:VAL:HG22 | 2.36 | 0.56 |
| 1:B:96:ALA:HB1 | 1:B:480:ALA:CB | 2.31 | 0.56 |
| 1:C:12:MET:CE | 1:D:68:MET:CE | 2.83 | 0.56 |
| 1:D:239:ILE:HG22 | 1:D:268:ILE:HG12 | 1.87 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:48:LEU:O | 1:F:56:VAL:HG23 | 2.05 | 0.56 |
| 1:F:214:VAL:HB | 1:F:291:ASP:CG | 2.25 | 0.56 |
| 1:G:42:LYS:HZ2 | 1:G:426:ALA:CB | 2.19 | 0.56 |
| 1:G:174:ILE:HG22 | 1:G:362:VAL:CB | 2.25 | 0.56 |
| 1:G:241:GLU:HB2 | 1:G:247:LEU:H | 1.70 | 0.56 |
| 1:H:158:ILE:CG1 | 1:H:361:ALA:HB1 | 2.35 | 0.56 |
| 1:H:178:VAL:CG1 | 1:H:366:VAL:HG22 | 2.34 | 0.56 |
| 1:H:212:VAL:HG21 | 1:H:294:LYS:O | 2.06 | 0.56 |
| 1:I:85:GLN:CD | 1:I:476:ALA:HA | 2.26 | 0.56 |
| 1:J:152:LYS:HG2 | 1:J:465:GLY:O | 2.06 | 0.56 |
| 1:J:235:LEU:HD13 | 1:J:307:ILE:HG21 | 1.83 | 0.56 |
| 1:J:377:ARG:HB3 | 1:J:470:LEU:HD12 | 1.88 | 0.56 |
| 1:K:310:LEU:HD22 | 1:K:311:SER:H | 1.70 | 0.56 |
| 1:K:391:MET:HE3 | 1:K:438:ARG:CA | 2.35 | 0.56 |
| 1:L:14:ARG:HD2 | 1:L:494:ILE:HD13 | 1.86 | 0.56 |
| 1:L:254:ILE:HG21 | 1:L:262:LEU:HD13 | 1.87 | 0.56 |
| 1:N:42:LYS:NZ | 1:O:118:THR:CG2 | 2.68 | 0.56 |
| 1:N:235:LEU:HD13 | 1:N:235:LEU:C | 2.25 | 0.56 |
| 1:O:98:VAL:HG12 | 1:O:99:VAL:HG13 | 1.87 | 0.56 |
| 1:P:102:GLU:OE2 | 1:P:417:VAL:HG11 | 2.06 | 0.56 |
| 1:P:237:CYS:SG | 1:P:238:ALA:HB3 | 2.45 | 0.56 |
| 1:A:51:ASP:HA | 1:H:11:ASN:OD1 | 2.05 | 0.56 |
| 1:A:72:HIS:CD2 | 1:A:73:PRO:HD3 | 2.40 | 0.56 |
| 1:B:193:ILE:HG23 | 1:B:343:VAL:HG23 | 1.88 | 0.56 |
| 1:C:121:VAL:HG23 | 1:C:122:LYS:H | 1.70 | 0.56 |
| 1:C:130:LYS:HD2 | 1:C:396:TYR:CE1 | 2.36 | 0.56 |
| 1:D:127:ALA:HB2 | 1:D:408:VAL:CG1 | 2.34 | 0.56 |
| 1:E:77:MET:HA | 1:E:80:GLU:OE1 | 2.06 | 0.56 |
| 1:E:208:LEU:HD22 | 1:E:343:VAL:CG2 | 2.36 | 0.56 |
| 1:E:406:LEU:CD1 | 1:N:431:ILE:CD1 | 2.83 | 0.56 |
| 1:F:125:GLN:O | 1:F:129:GLN:HG3 | 2.05 | 0.56 |
| 1:I:195:ILE:CB | 1:I:359:ALA:HB1 | 2.34 | 0.56 |
| 1:I:235:LEU:CG | 1:I:307:ILE:HG22 | 2.36 | 0.56 |
| 1:I:418:ILE:HB | 1:I:419:PRO:HD3 | 1.88 | 0.56 |
| 1:J:155:MET:CE | 1:J:465:GLY:HA3 | 2.36 | 0.56 |
| 1:K:234:LEU:HB3 | 1:K:292:MET:HE1 | 1.85 | 0.56 |
| 1:L:48:LEU:N | 1:L:56:VAL:HG22 | 2.20 | 0.56 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:HG | 1.88 | 0.56 |
| 1:L:169:LYS:HG3 | 1:L:204:ASP:CB | 2.36 | 0.56 |
| 1:L:379:VAL:CG2 | 1:L:380:SER:H | 2.16 | 0.56 |
| 1:N:69:SER:CB | 1:O:9:PRO:CA | 2.84 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:199:SER:CB | 1:N:327:SER:HB2 | 2.35 | 0.56 |
| 1:N:389:LEU:HD13 | 1:N:415:LEU:CD1 | 2.36 | 0.56 |
| 1:O:281:ILE:O | 1:O:281:ILE:CG2 | 2.51 | 0.56 |
| 1:O:298:ALA:O | 1:O:337:CYS:HB3 | 2.06 | 0.56 |
| 1:O:305:THR:HG22 | 1:O:305:THR:O | 2.05 | 0.56 |
| 1:O:418:ILE:CG2 | 1:O:419:PRO:HD3 | 2.32 | 0.56 |
| 1:O:433:ILE:HA | 1:O:436:LYS:HG3 | 1.88 | 0.56 |
| 1:P:227:VAL:HG11 | 1:P:260:ASN:CG | 2.24 | 0.56 |
| 1:P:236:ASN:O | 1:P:265:GLN:HB3 | 2.06 | 0.56 |
| 1:A:115:VAL:CG2 | 1:A:403:ARG:NE | 2.68 | 0.56 |
| 1:A:178:VAL:CG2 | 1:A:366:VAL:HG13 | 2.35 | 0.56 |
| 1:C:116:HIS:CG | 1:C:117:PRO:CD | 2.74 | 0.56 |
| 1:C:223:MET:CE | 1:C:283:ALA:HB3 | 2.36 | 0.56 |
| 1:C:380:SER:CB | 1:C:384:SER:HB2 | 2.27 | 0.56 |
| 1:D:149:ILE:O | 1:D:153:ILE:HG13 | 2.06 | 0.56 |
| 1:E:233:ALA:HA | 1:E:315:LEU:HD13 | 1.87 | 0.56 |
| 1:I:196:GLU:HG2 | 1:I:331:MET:HE1 | 1.87 | 0.56 |
| 1:J:326:ILE:CG1 | 1:J:348:ARG:NH1 | 2.69 | 0.56 |
| 1:K:235:LEU:HD21 | 1:K:310:LEU:CA | 2.36 | 0.56 |
| 1:L:312:ALA:HB1 | 1:L:313:GLN:NE2 | 2.21 | 0.56 |
| 1:M:14:ARG:HD2 | 1:M:494:ILE:CD1 | 2.36 | 0.56 |
| 1:N:141:GLU:O | 1:N:142:VAL:HG22 | 2.05 | 0.56 |
| 1:N:158:ILE:CD1 | 1:N:170:LEU:HB2 | 2.34 | 0.56 |
| 1:O:85:GLN:HE22 | 1:O:479:SER:HB2 | 1.71 | 0.56 |
| 1:O:235:LEU:CD2 | 1:O:307:ILE:CB | 2.82 | 0.56 |
| 1:O:377:ARG:CZ | 1:O:470:LEU:CD1 | 2.81 | 0.56 |
| 1:P:42:LYS:HE2 | 1:P:426:ALA:CB | 2.35 | 0.56 |
| 1:P:214:VAL:HG11 | 1:P:291:ASP:HB3 | 1.87 | 0.56 |
| 1:P:247:LEU:CD1 | 1:P:272:ALA:HB3 | 2.34 | 0.56 |
| 1:A:31:ILE:HG23 | 1:A:34:THR:OG1 | 2.06 | 0.56 |
| 1:A:96:ALA:CB | 1:A:480:ALA:HB2 | 2.36 | 0.56 |
| 1:A:134:LEU:HD12 | 1:A:393:LEU:CG | 2.36 | 0.56 |
| 1:A:181:VAL:HG12 | 1:A:341:LYS:O | 2.06 | 0.56 |
| 1:A:212:VAL:HG21 | 1:A:294:LYS:HB2 | 1.87 | 0.56 |
| 1:A:232:ILE:HG13 | 1:A:261:VAL:CG1 | 2.34 | 0.56 |
| 1:A:232:ILE:HD11 | 1:A:318:ALA:HB3 | 1.88 | 0.56 |
| 1:B:236:ASN:OD1 | 1:B:236:ASN:O | 2.23 | 0.56 |
| 1:B:276:LEU:HD23 | 1:B:281:ILE:HG21 | 1.86 | 0.56 |
| 1:B:276:LEU:O | 1:B:281:ILE:HB | 2.06 | 0.56 |
| 1:C:235:LEU:HD13 | 1:C:235:LEU:O | 2.06 | 0.56 |
| 1:C:235:LEU:H | 1:C:292:MET:CE | 2.19 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:452:ASN:HB2 | 1:C:459:GLU:CD | 2.26 | 0.56 |
| 1:D:119:ILE:HD12 | 1:D:403:ARG:CB | 2.36 | 0.56 |
| 1:D:431:ILE:HD11 | 1:M:403:ARG:HA | 1.88 | 0.56 |
| 1:E:12:MET:HE1 | 1:F:68:MET:HE1 | 1.87 | 0.56 |
| 1:E:212:VAL:HB | 1:E:298:ALA:HB3 | 1.87 | 0.56 |
| 1:E:345:MET:CE | 1:E:362:VAL:HG11 | 2.21 | 0.56 |
| 1:F:77:MET:HE2 | 1:F:487:LEU:HD11 | 1.87 | 0.56 |
| 1:F:116:HIS:CE1 | 1:F:117:PRO:HG2 | 2.41 | 0.56 |
| 1:F:219:VAL:HG11 | 1:F:268:ILE:HD12 | 1.88 | 0.56 |
| 1:G:254:ILE:HG21 | 1:G:262:LEU:CD1 | 2.36 | 0.56 |
| 1:H:223:MET:CE | 1:H:276:LEU:CB | 2.84 | 0.56 |
| 1:H:291:ASP:O | 1:H:295:LEU:HD12 | 2.06 | 0.56 |
| 1:I:36:ARG:CG | 1:I:37:SER:H | 2.17 | 0.56 |
| 1:I:65:LEU:HD22 | 1:I:65:LEU:N | 2.21 | 0.56 |
| 1:I:68:MET:CE | 1:J:12:MET:HE2 | 2.35 | 0.56 |
| 1:I:140:CYS:HB3 | 1:I:446:ASN:HB2 | 1.87 | 0.56 |
| 1:I:393:LEU:HA | 1:I:396:TYR:HB3 | 1.88 | 0.56 |
| 1:J:46:LYS:HB3 | 1:K:492:ASP:OD2 | 2.06 | 0.56 |
| 1:J:153:ILE:CG1 | 1:J:378:ILE:HG22 | 2.36 | 0.56 |
| 1:J:254:ILE:HG22 | 1:J:259:ALA:HB3 | 1.86 | 0.56 |
| 1:K:134:LEU:CD1 | 1:K:393:LEU:HD21 | 2.35 | 0.56 |
| 1:K:134:LEU:HD12 | 1:K:393:LEU:CG | 2.35 | 0.56 |
| 1:K:473:LYS:O | 1:K:477:ILE:HG13 | 2.06 | 0.56 |
| 1:L:63:THR:HG23 | 1:L:63:THR:O | 2.05 | 0.56 |
| 1:L:297:LYS:HG2 | 1:L:341:LYS:CG | 2.35 | 0.56 |
| 1:L:448:CYS:O | 1:L:449:ALA:HB2 | 2.06 | 0.56 |
| 1:M:158:ILE:HG22 | 1:M:164:GLU:HA | 1.86 | 0.56 |
| 1:M:469:PRO:O | 1:M:472:VAL:HG13 | 2.06 | 0.56 |
| 1:N:391:MET:HE3 | 1:N:438:ARG:CA | 2.36 | 0.56 |
| 1:O:346:LEU:HD23 | 1:O:347:ILE:N | 2.19 | 0.56 |
| 1:P:64:ILE:HG23 | 1:P:65:LEU:HD22 | 1.87 | 0.56 |
| 1:P:124:TYR:N | 1:P:124:TYR:HD1 | 1.99 | 0.56 |
| 1:P:182:VAL:CB | 1:P:188:VAL:CG2 | 2.67 | 0.56 |
| 1:A:130:LYS:CG | 1:A:393:LEU:CD2 | 2.81 | 0.56 |
| 1:A:402:GLY:HA2 | 1:J:432:GLU:OE2 | 2.06 | 0.56 |
| 1:B:29:ARG:O | 1:B:33:GLU:HG3 | 2.06 | 0.56 |
| 1:B:178:VAL:CG2 | 1:B:366:VAL:CG2 | 2.80 | 0.56 |
| 1:C:158:ILE:HB | 1:C:361:ALA:HB1 | 1.87 | 0.56 |
| 1:C:234:LEU:HB3 | 1:C:292:MET:HE3 | 1.88 | 0.56 |
| 1:C:236:ASN:OD1 | 1:C:236:ASN:C | 2.44 | 0.56 |
| 1:C:446:ASN:OD1 | 1:C:447:LYS:HG2 | 2.05 | 0.56 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:341:LYS:HB3 | 1:D:341:LYS:HZ2 | 1.68 | 0.56 |
| 1:E:238:ALA:C | 1:E:307:ILE:HG23 | 2.26 | 0.56 |
| 1:F:234:LEU:HB3 | 1:F:292:MET:CE | 2.36 | 0.56 |
| 1:G:39:LEU:HB3 | 1:G:94:THR:OG1 | 2.06 | 0.56 |
| 1:G:197:LYS:HB3 | 1:G:355:ILE:HG21 | 1.87 | 0.56 |
| 1:G:232:ILE:CD1 | 1:G:299:THR:CG2 | 2.84 | 0.56 |
| 1:G:268:ILE:HB | 1:G:273:GLN:HE21 | 1.70 | 0.56 |
| 1:H:211:GLY:C | 1:H:298:ALA:HB2 | 2.26 | 0.56 |
| 1:H:216:LYS:HG2 | 1:H:217:GLU:HG3 | 1.88 | 0.56 |
| 1:H:304:ILE:HD12 | 1:H:309:ASP:CB | 2.36 | 0.56 |
| 1:H:307:ILE:HD12 | 1:H:310:LEU:CB | 2.36 | 0.56 |
| 1:H:464:ASN:HB2 | 1:H:466:VAL:HG22 | 1.88 | 0.56 |
| 1:M:39:LEU:HB3 | 1:M:94:THR:CG2 | 2.36 | 0.56 |
| 1:M:199:SER:HB3 | 1:M:327:SER:OG | 2.06 | 0.56 |
| 1:M:378:ILE:O | 1:M:378:ILE:CG1 | 2.53 | 0.56 |
| 1:M:434:LEU:HD22 | 1:M:451:LEU:HD22 | 1.88 | 0.56 |
| 1:M:437:VAL:HG21 | 1:M:451:LEU:CD1 | 2.35 | 0.56 |
| 1:N:96:ALA:CA | 1:N:480:ALA:HB2 | 2.36 | 0.56 |
| 1:N:140:CYS:HB3 | 1:N:446:ASN:OD1 | 2.06 | 0.56 |
| 1:O:197:LYS:CB | 1:O:355:ILE:CG2 | 2.82 | 0.56 |
| 1:O:235:LEU:O | 1:O:264:CYS:HA | 2.06 | 0.56 |
| 1:O:416:GLU:O | 1:O:416:GLU:CG | 2.53 | 0.56 |
| 1:P:26:LEU:HD22 | 1:P:30:ILE:HD11 | 1.88 | 0.56 |
| 1:P:121:VAL:CG2 | 1:P:122:LYS:N | 2.69 | 0.56 |
| 1:P:140:CYS:HB3 | 1:P:446:ASN:HB2 | 1.87 | 0.56 |
| 1:P:233:ALA:HA | 1:P:315:LEU:HD11 | 1.88 | 0.56 |
| 1:P:235:LEU:HD21 | 1:P:307:ILE:C | 2.26 | 0.56 |
| 1:P:299:THR:CG2 | 1:P:318:ALA:HB2 | 2.36 | 0.56 |
| 1:P:377:ARG:HG2 | 1:P:470:LEU:CG | 2.35 | 0.56 |
| 1:A:235:LEU:HD11 | 1:A:307:ILE:CA | 2.36 | 0.55 |
| 1:A:391:MET:HE1 | 1:A:438:ARG:HB3 | 1.88 | 0.55 |
| 1:B:230:ALA:HB1 | 1:B:261:VAL:HG23 | 1.87 | 0.55 |
| 1:D:62:VAL:CG1 | 1:D:63:THR:N | 2.60 | 0.55 |
| 1:D:212:VAL:HB | 1:D:298:ALA:CB | 2.35 | 0.55 |
| 1:D:437:VAL:HG22 | 1:D:458:VAL:CG2 | 2.36 | 0.55 |
| 1:F:14:ARG:HD2 | 1:F:494:ILE:HG12 | 1.88 | 0.55 |
| 1:H:182:VAL:HG21 | 1:H:373:ILE:HD13 | 1.88 | 0.55 |
| 1:H:265:GLN:CG | 1:H:266:LYS:HE3 | 2.36 | 0.55 |
| 1:I:181:VAL:CG2 | 1:I:182:VAL:N | 2.68 | 0.55 |
| 1:I:389:LEU:HD12 | 1:I:415:LEU:HD13 | 1.88 | 0.55 |
| 1:K:197:LYS:CB | 1:K:355:ILE:HG22 | 2.36 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:236:ASN:CA | 1:K:265:GLN:CB | 2.78 | 0.55 |
| 1:L:33:GLU:O | 1:L:36:ARG:HG2 | 2.06 | 0.55 |
| 1:L:188:VAL:HG12 | 1:L:373:ILE:CG1 | 2.33 | 0.55 |
| 1:M:200:GLY:O | 1:M:348:ARG:HB3 | 2.06 | 0.55 |
| 1:M:254:ILE:HG22 | 1:M:281:ILE:CD1 | 2.36 | 0.55 |
| 1:M:369:VAL:O | 1:M:369:VAL:CG1 | 2.54 | 0.55 |
| 1:N:130:LYS:HG2 | 1:N:393:LEU:CD1 | 2.36 | 0.55 |
| 1:O:23:MET:HE1 | 1:O:72:HIS:CE1 | 2.40 | 0.55 |
| 1:O:247:LEU:CD2 | 1:O:269:ASP:HB3 | 2.36 | 0.55 |
| 1:P:138:ILE:HD12 | 1:P:385:THR:OG1 | 2.06 | 0.55 |
| 1:P:268:ILE:HD12 | 1:P:273:GLN:HG2 | 1.87 | 0.55 |
| 1:A:134:LEU:HB3 | 1:A:392:LYS:CE | 2.36 | 0.55 |
| 1:A:166:ALA:CB | 1:A:170:LEU:HD22 | 2.36 | 0.55 |
| 1:A:403:ARG:HD3 | 1:J:431:ILE:HD13 | 1.88 | 0.55 |
| 1:B:192:LEU:N | 1:B:192:LEU:HD13 | 2.21 | 0.55 |
| 1:B:195:ILE:CB | 1:B:359:ALA:HB1 | 2.27 | 0.55 |
| 1:B:377:ARG:NH1 | 1:B:470:LEU:CD1 | 2.70 | 0.55 |
| 1:C:74:ALA:HA | 1:C:77:MET:SD | 2.47 | 0.55 |
| 1:C:100:ALA:HB1 | 1:C:484:THR:HG23 | 1.83 | 0.55 |
| 1:C:231:LYS:HD3 | 1:C:231:LYS:N | 2.21 | 0.55 |
| 1:D:212:VAL:HG23 | 1:D:298:ALA:HB2 | 1.89 | 0.55 |
| 1:E:130:LYS:HZ2 | 1:E:393:LEU:HD23 | 1.71 | 0.55 |
| 1:E:218:ARG:HB2 | 1:E:323:GLU:OE2 | 2.06 | 0.55 |
| 1:F:262:LEU:HD11 | 1:F:310:LEU:HD23 | 1.88 | 0.55 |
| 1:F:437:VAL:HG11 | 1:F:451:LEU:HD11 | 1.89 | 0.55 |
| 1:G:347:ILE:CG2 | 1:G:358:VAL:HB | 2.35 | 0.55 |
| 1:H:177:ALA:O | 1:H:181:VAL:HG13 | 2.06 | 0.55 |
| 1:I:64:ILE:HG22 | 1:I:65:LEU:CD2 | 2.36 | 0.55 |
| 1:I:153:ILE:HD11 | 1:I:378:ILE:HG22 | 1.83 | 0.55 |
| 1:I:369:VAL:CG1 | 1:I:369:VAL:O | 2.54 | 0.55 |
| 1:J:42:LYS:CD | 1:J:426:ALA:HA | 2.36 | 0.55 |
| 1:J:135:LEU:HD23 | 1:J:389:LEU:HD21 | 1.88 | 0.55 |
| 1:K:31:ILE:HG21 | 1:K:65:LEU:HD11 | 1.88 | 0.55 |
| 1:K:43:GLY:O | 1:K:44:MET:HE3 | 2.07 | 0.55 |
| 1:N:153:ILE:CG2 | 1:N:469:PRO:HD3 | 2.36 | 0.55 |
| 1:N:248:LYS:HD2 | 1:N:275:TYR:CE2 | 2.39 | 0.55 |
| 1:N:251:VAL:HG13 | 1:N:276:LEU:CG | 2.35 | 0.55 |
| 1:N:345:MET:CE | 1:N:362:VAL:HG11 | 2.36 | 0.55 |
| 1:O:234:LEU:HD22 | 1:O:301:ALA:CB | 2.36 | 0.55 |
| 1:O:237:CYS:HB3 | 1:O:306:ASN:OD1 | 2.06 | 0.55 |
| 1:A:77:MET:HB3 | 1:A:80:GLU:OE1 | 2.07 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:251:VAL:CG1 | 1:A:276:LEU:CD1 | 2.81 | 0.55 |
| 1:B:15:TYR:O | 1:B:20:ALA:HB2 | 2.05 | 0.55 |
| 1:B:219:VAL:HG13 | 1:B:220:SER:N | 2.21 | 0.55 |
| 1:B:431:ILE:O | 1:B:431:ILE:CG1 | 2.54 | 0.55 |
| 1:B:453:VAL:HG23 | 1:B:454:PHE:N | 2.21 | 0.55 |
| 1:C:247:LEU:CD1 | 1:C:272:ALA:HB2 | 2.35 | 0.55 |
| 1:C:435:VAL:HG11 | 1:L:401:SER:OG | 2.06 | 0.55 |
| 1:D:163:ALA:CB | 1:D:165:LYS:HG2 | 2.35 | 0.55 |
| 1:D:377:ARG:HB3 | 1:D:470:LEU:CG | 2.36 | 0.55 |
| 1:E:42:LYS:CE | 1:E:426:ALA:CB | 2.62 | 0.55 |
| 1:E:235:LEU:HG | 1:E:307:ILE:CG2 | 2.36 | 0.55 |
| 1:F:167:LYS:HG3 | 1:F:168:GLU:N | 2.22 | 0.55 |
| 1:F:233:ALA:N | 1:F:315:LEU:HD22 | 2.21 | 0.55 |
| 1:G:111:LEU:CD2 | 1:G:117:PRO:HB3 | 2.37 | 0.55 |
| 1:H:235:LEU:HD21 | 1:H:307:ILE:CB | 2.36 | 0.55 |
| 1:H:238:ALA:C | 1:H:307:ILE:HG23 | 2.27 | 0.55 |
| 1:H:247:LEU:O | 1:H:251:VAL:HG23 | 2.06 | 0.55 |
| 1:J:134:LEU:HD12 | 1:J:393:LEU:CD2 | 2.32 | 0.55 |
| 1:J:391:MET:HE3 | 1:J:438:ARG:CG | 2.36 | 0.55 |
| 1:J:469:PRO:HB2 | 1:J:472:VAL:CG2 | 2.36 | 0.55 |
| 1:L:215:ASP:OD2 | 1:L:331:MET:HE2 | 2.06 | 0.55 |
| 1:L:232:ILE:HG13 | 1:L:261:VAL:CG1 | 2.36 | 0.55 |
| 1:M:134:LEU:CD1 | 1:M:393:LEU:CG | 2.84 | 0.55 |
| 1:M:173:ILE:HD11 | 1:M:206:THR:CG2 | 2.34 | 0.55 |
| 1:M:178:VAL:CG2 | 1:M:188:VAL:HG21 | 2.36 | 0.55 |
| 1:O:120:VAL:O | 1:O:124:TYR:CD1 | 2.59 | 0.55 |
| 1:P:93:THR:O | 1:P:97:VAL:HG23 | 2.06 | 0.55 |
| 1:P:96:ALA:O | 1:P:480:ALA:HB1 | 2.06 | 0.55 |
| 1:P:115:VAL:HB | 1:P:116:HIS:HA | 1.86 | 0.55 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:HG | 2.36 | 0.55 |
| 1:A:218:ARG:HG3 | 1:A:323:GLU:OE2 | 2.06 | 0.55 |
| 1:A:493:VAL:HG13 | 1:B:47:MET:HE2 | 1.87 | 0.55 |
| 1:B:209:ILE:HD11 | 1:B:213:LEU:HB2 | 1.87 | 0.55 |
| 1:C:146:ASP:O | 1:C:150:LEU:HB2 | 2.06 | 0.55 |
| 1:D:389:LEU:HD13 | 1:D:415:LEU:CD2 | 2.37 | 0.55 |
| 1:E:170:LEU:HD12 | 1:E:358:VAL:CG1 | 2.37 | 0.55 |
| 1:E:218:ARG:HB2 | 1:E:323:GLU:CD | 2.27 | 0.55 |
| 1:F:23:MET:HE1 | 1:F:72:HIS:CE1 | 2.42 | 0.55 |
| 1:H:34:THR:HB | 1:H:35:VAL:HG22 | 1.87 | 0.55 |
| 1:H:99:VAL:CG1 | 1:H:418:ILE:CD1 | 2.85 | 0.55 |
| 1:H:138:ILE:HD13 | 1:H:385:THR:OG1 | 2.05 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:18:ARG:HB2 | 1:I:21:GLN:OE1 | 2.07 | 0.55 |
| 1:I:299:THR:CG2 | 1:I:334:VAL:CG1 | 2.84 | 0.55 |
| 1:J:105:ARG:HH11 | 1:J:106:LYS:HG2 | 1.71 | 0.55 |
| 1:J:130:LYS:NZ | 1:J:396:TYR:HB2 | 2.20 | 0.55 |
| 1:J:227:VAL:HG11 | 1:J:260:ASN:HD21 | 1.70 | 0.55 |
| 1:K:265:GLN:CD | 1:K:289:LYS:HD2 | 2.25 | 0.55 |
| 1:L:265:GLN:CG | 1:L:266:LYS:HE3 | 2.36 | 0.55 |
| 1:M:218:ARG:HH11 | 1:M:282:VAL:HB | 1.71 | 0.55 |
| 1:M:393:LEU:O | 1:M:396:TYR:HB3 | 2.07 | 0.55 |
| 1:M:403:ARG:HA | 1:M:406:LEU:HD23 | 1.88 | 0.55 |
| 1:N:138:ILE:HD12 | 1:N:379:VAL:HG21 | 1.89 | 0.55 |
| 1:N:156:THR:CG2 | 1:N:468:GLU:CA | 2.80 | 0.55 |
| 1:N:372:THR:HA | 1:N:375:ASP:O | 2.06 | 0.55 |
| 1:O:219:VAL:HG12 | 1:O:283:ALA:HB3 | 1.88 | 0.55 |
| 1:A:12:MET:HE2 | 1:B:68:MET:HG2 | 1.87 | 0.55 |
| 1:A:135:LEU:HG | 1:A:138:ILE:HD12 | 1.88 | 0.55 |
| 1:B:170:LEU:CD2 | 1:B:358:VAL:HG11 | 2.37 | 0.55 |
| 1:B:232:ILE:HD11 | 1:B:318:ALA:HB3 | 1.88 | 0.55 |
| 1:C:18:ARG:HD2 | 1:C:22:ARG:NH1 | 2.21 | 0.55 |
| 1:C:77:MET:HE1 | 1:C:486:MET:HE2 | 1.87 | 0.55 |
| 1:C:169:LYS:HG2 | 1:C:204:ASP:CB | 2.37 | 0.55 |
| 1:D:474:THR:O | 1:D:478:GLN:HG3 | 2.06 | 0.55 |
| 1:E:384:SER:O | 1:E:441:HIS:CE1 | 2.60 | 0.55 |
| 1:G:197:LYS:HD2 | 1:G:356:GLU:CG | 2.36 | 0.55 |
| 1:G:232:ILE:HD13 | 1:G:299:THR:HG22 | 1.88 | 0.55 |
| 1:G:489:ARG:HE | 1:H:44:MET:HE1 | 1.70 | 0.55 |
| 1:I:8:LEU:HD22 | 1:P:68:MET:CB | 2.37 | 0.55 |
| 1:I:197:LYS:HB3 | 1:I:355:ILE:HG22 | 1.87 | 0.55 |
| 1:I:222:GLN:C | 1:I:277:ALA:HB1 | 2.25 | 0.55 |
| 1:I:223:MET:HE1 | 1:I:283:ALA:CB | 2.32 | 0.55 |
| 1:J:15:TYR:HD2 | 1:J:19:ASP:CB | 2.19 | 0.55 |
| 1:K:233:ALA:HA | 1:K:315:LEU:CD2 | 2.35 | 0.55 |
| 1:K:400:ILE:HD11 | 1:K:408:VAL:HG11 | 1.87 | 0.55 |
| 1:L:130:LYS:CG | 1:L:393:LEU:CD2 | 2.83 | 0.55 |
| 1:L:234:LEU:HD22 | 1:L:301:ALA:HB1 | 1.87 | 0.55 |
| 1:M:174:ILE:CD1 | 1:M:365:ALA:HB1 | 2.35 | 0.55 |
| 1:N:140:CYS:HB2 | 1:N:447:LYS:HG2 | 1.87 | 0.55 |
| 1:N:170:LEU:CD2 | 1:N:358:VAL:CG2 | 2.83 | 0.55 |
| 1:N:214:VAL:HG12 | 1:N:291:ASP:HB3 | 1.88 | 0.55 |
| 1:N:371:CYS:HB3 | 1:N:471:ARG:HH11 | 1.71 | 0.55 |
| 1:O:181:VAL:CG2 | 1:O:182:VAL:N | 2.68 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:305:THR:O | 1:O:305:THR:CG2 | 2.54 | 0.55 |
| 1:A:169:LYS:HD3 | 1:A:204:ASP:HB3 | 1.88 | 0.55 |
| 1:A:206:THR:CG2 | 1:A:347:ILE:HG23 | 2.36 | 0.55 |
| 1:A:239:ILE:HG23 | 1:A:268:ILE:HG23 | 1.79 | 0.55 |
| 1:B:8:LEU:CB | 1:B:12:MET:HG2 | 2.36 | 0.55 |
| 1:B:219:VAL:HG12 | 1:B:223:MET:SD | 2.47 | 0.55 |
| 1:B:233:ALA:HB1 | 1:B:315:LEU:HD21 | 1.87 | 0.55 |
| 1:B:254:ILE:CD1 | 1:B:276:LEU:HD21 | 2.37 | 0.55 |
| 1:B:368:VAL:CB | 1:B:469:PRO:HG2 | 2.36 | 0.55 |
| 1:B:453:VAL:CG2 | 1:B:454:PHE:N | 2.69 | 0.55 |
| 1:C:380:SER:CB | 1:C:384:SER:CB | 2.84 | 0.55 |
| 1:C:383:GLY:CA | 1:C:386:GLU:HG2 | 2.32 | 0.55 |
| 1:C:418:ILE:HB | 1:C:419:PRO:HD3 | 1.88 | 0.55 |
| 1:D:116:HIS:CG | 1:D:117:PRO:HD2 | 2.41 | 0.55 |
| 1:E:31:ILE:CG2 | 1:E:65:LEU:CD2 | 2.85 | 0.55 |
| 1:E:267:GLY:HA3 | 1:E:286:ARG:HH12 | 1.70 | 0.55 |
| 1:G:254:ILE:HG12 | 1:G:310:LEU:HD23 | 1.89 | 0.55 |
| 1:G:276:LEU:HB2 | 1:G:281:ILE:CG2 | 2.36 | 0.55 |
| 1:H:116:HIS:CE1 | 1:H:117:PRO:HG2 | 2.41 | 0.55 |
| 1:H:123:GLY:HA3 | 1:H:407:ALA:HB1 | 1.88 | 0.55 |
| 1:H:174:ILE:CG2 | 1:H:362:VAL:CG2 | 2.69 | 0.55 |
| 1:H:178:VAL:HG12 | 1:H:366:VAL:HG22 | 1.89 | 0.55 |
| 1:H:233:ALA:CB | 1:H:315:LEU:CD2 | 2.84 | 0.55 |
| 1:H:234:LEU:N | 1:H:315:LEU:HD11 | 2.15 | 0.55 |
| 1:H:469:PRO:O | 1:H:472:VAL:HB | 2.06 | 0.55 |
| 1:I:116:HIS:CD2 | 1:I:117:PRO:HD2 | 2.42 | 0.55 |
| 1:I:239:ILE:HD12 | 1:I:307:ILE:HG21 | 1.88 | 0.55 |
| 1:K:212:VAL:HG21 | 1:K:294:LYS:C | 2.27 | 0.55 |
| 1:K:227:VAL:HG11 | 1:K:260:ASN:HD21 | 1.70 | 0.55 |
| 1:M:71:GLU:CG | 1:M:72:HIS:H | 2.20 | 0.55 |
| 1:M:115:VAL:HG11 | 1:M:403:ARG:CZ | 2.36 | 0.55 |
| 1:M:178:VAL:HG11 | 1:M:366:VAL:HG13 | 1.89 | 0.55 |
| 1:N:198:LYS:HG3 | 1:N:326:ILE:HG21 | 1.89 | 0.55 |
| 1:O:132:GLN:NE2 | 1:O:478:GLN:HE21 | 2.03 | 0.55 |
| 1:O:206:THR:HB | 1:O:347:ILE:HA | 1.87 | 0.55 |
| 1:O:227:VAL:HG11 | 1:O:260:ASN:OD1 | 2.07 | 0.55 |
| 1:P:469:PRO:HB2 | 1:P:472:VAL:CG2 | 2.36 | 0.55 |
| 1:A:299:THR:CG2 | 1:A:334:VAL:HG11 | 2.36 | 0.55 |
| 1:B:16:MET:O | 1:B:20:ALA:HB3 | 2.07 | 0.55 |
| 1:B:188:VAL:O | 1:B:188:VAL:CG1 | 2.54 | 0.55 |
| 1:D:41:PRO:CG | 1:D:453:VAL:HG11 | 2.37 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:211:GLY:C | 1:D:298:ALA:HB2 | 2.27 | 0.55 |
| 1:D:238:ALA:O | 1:D:307:ILE:HG23 | 2.07 | 0.55 |
| 1:D:254:ILE:HG12 | 1:D:310:LEU:HD13 | 1.86 | 0.55 |
| 1:D:369:VAL:O | 1:D:373:ILE:HG12 | 2.06 | 0.55 |
| 1:D:406:LEU:HD11 | 1:M:431:ILE:HD12 | 1.88 | 0.55 |
| 1:E:44:MET:HE2 | 1:E:44:MET:HA | 1.87 | 0.55 |
| 1:E:102:GLU:HG2 | 1:E:417:VAL:HG11 | 1.88 | 0.55 |
| 1:E:102:GLU:OE2 | 1:E:417:VAL:HG11 | 2.05 | 0.55 |
| 1:F:70:VAL:CG1 | 1:F:76:LYS:CG | 2.83 | 0.55 |
| 1:G:239:ILE:O | 1:G:247:LEU:HD21 | 2.06 | 0.55 |
| 1:I:182:VAL:HG21 | 1:I:188:VAL:HG22 | 1.89 | 0.55 |
| 1:I:267:GLY:HA3 | 1:I:286:ARG:NH1 | 2.18 | 0.55 |
| 1:J:30:ILE:C | 1:J:32:ALA:N | 2.60 | 0.55 |
| 1:K:230:ALA:C | 1:K:231:LYS:HD3 | 2.27 | 0.55 |
| 1:L:217:GLU:HG2 | 1:L:330:SER:CB | 2.32 | 0.55 |
| 1:M:351:THR:O | 1:M:355:ILE:HG13 | 2.06 | 0.55 |
| 1:N:96:ALA:HA | 1:N:480:ALA:HB2 | 1.87 | 0.55 |
| 1:P:117:PRO:HA | 1:P:120:VAL:HG12 | 1.89 | 0.55 |
| 1:P:268:ILE:HG13 | 1:P:285:ARG:HB3 | 1.89 | 0.55 |
| 1:P:420:ARG:O | 1:P:423:ALA:HB3 | 2.07 | 0.55 |
| 1:A:77:MET:HB2 | 1:A:486:MET:HE1 | 1.87 | 0.55 |
| 1:A:119:ILE:HD13 | 1:A:404:GLU:OE2 | 2.06 | 0.55 |
| 1:B:42:LYS:HG3 | 1:B:426:ALA:N | 2.22 | 0.55 |
| 1:C:117:PRO:O | 1:C:121:VAL:HG22 | 2.06 | 0.55 |
| 1:C:248:LYS:CD | 1:C:275:TYR:CZ | 2.90 | 0.55 |
| 1:D:210:LYS:O | 1:D:337:CYS:HB2 | 2.07 | 0.55 |
| 1:D:264:CYS:SG | 1:D:268:ILE:HD11 | 2.47 | 0.55 |
| 1:F:29:ARG:O | 1:F:32:ALA:HB3 | 2.07 | 0.55 |
| 1:F:66:ARG:CB | 1:F:79:ILE:HD11 | 2.35 | 0.55 |
| 1:G:339:HIS:CE1 | 1:G:341:LYS:HD3 | 2.42 | 0.55 |
| 1:H:123:GLY:HA3 | 1:H:407:ALA:CB | 2.37 | 0.55 |
| 1:I:235:LEU:HD22 | 1:I:307:ILE:HA | 1.88 | 0.55 |
| 1:I:255:LYS:CD | 1:I:279:GLU:HB3 | 2.36 | 0.55 |
| 1:J:35:VAL:O | 1:J:35:VAL:CG2 | 2.54 | 0.55 |
| 1:J:117:PRO:O | 1:J:121:VAL:HG22 | 2.07 | 0.55 |
| 1:K:8:LEU:CD1 | 1:K:494:ILE:HG23 | 2.37 | 0.55 |
| 1:K:138:ILE:CD1 | 1:K:385:THR:HG21 | 2.37 | 0.55 |
| 1:K:289:LYS:CB | 1:K:292:MET:HB2 | 2.30 | 0.55 |
| 1:K:397:ALA:C | 1:K:399:GLY:N | 2.60 | 0.55 |
| 1:L:152:LYS:NZ | 1:L:462:CYS:C | 2.61 | 0.55 |
| 1:L:263:PHE:CD2 | 1:L:295:LEU:HD22 | 2.41 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:346:LEU:HD23 | 1:L:347:ILE:H | 1.71 | 0.55 |
| 1:M:68:MET:CB | 1:N:8:LEU:HB3 | 2.31 | 0.55 |
| 1:M:130:LYS:HZ3 | 1:M:396:TYR:CB | 2.19 | 0.55 |
| 1:O:42:LYS:CE | 1:P:118:THR:HG21 | 2.26 | 0.55 |
| 1:O:391:MET:HE2 | 1:O:438:ARG:HG2 | 1.89 | 0.55 |
| 1:P:60:ASP:O | 1:P:64:ILE:HG13 | 2.07 | 0.55 |
| 1:P:255:LYS:HD3 | 1:P:279:GLU:CB | 2.37 | 0.55 |
| 1:A:12:MET:HG2 | 1:A:494:ILE:CG2 | 2.37 | 0.55 |
| 1:A:248:LYS:HG3 | 1:A:275:TYR:CD2 | 2.42 | 0.55 |
| 1:A:368:VAL:HG21 | 1:A:469:PRO:HG3 | 1.89 | 0.55 |
| 1:B:33:GLU:O | 1:B:36:ARG:HG2 | 2.07 | 0.55 |
| 1:C:212:VAL:HG21 | 1:C:294:LYS:HB3 | 1.89 | 0.55 |
| 1:C:469:PRO:O | 1:C:469:PRO:CG | 2.55 | 0.55 |
| 1:E:119:ILE:HG21 | 1:E:403:ARG:CB | 2.37 | 0.55 |
| 1:E:130:LYS:NZ | 1:E:393:LEU:HD23 | 2.21 | 0.55 |
| 1:E:235:LEU:CD1 | 1:E:310:LEU:CB | 2.85 | 0.55 |
| 1:E:299:THR:HG21 | 1:E:334:VAL:HG11 | 1.87 | 0.55 |
| 1:F:70:VAL:HG11 | 1:F:76:LYS:CG | 2.35 | 0.55 |
| 1:F:99:VAL:CG1 | 1:F:418:ILE:HD11 | 2.36 | 0.55 |
| 1:H:82:ALA:HB2 | 1:H:97:VAL:HG11 | 1.88 | 0.55 |
| 1:H:130:LYS:HD3 | 1:H:396:TYR:CG | 2.42 | 0.55 |
| 1:H:248:LYS:CG | 1:H:275:TYR:CE2 | 2.90 | 0.55 |
| 1:I:461:MET:SD | 1:I:466:VAL:CG2 | 2.95 | 0.55 |
| 1:J:384:SER:HB3 | 1:J:441:HIS:HE1 | 1.71 | 0.55 |
| 1:J:491:ASP:CG | 1:J:491:ASP:O | 2.42 | 0.55 |
| 1:K:31:ILE:HG21 | 1:K:65:LEU:HD12 | 1.89 | 0.55 |
| 1:L:48:LEU:CA | 1:L:56:VAL:HG22 | 2.36 | 0.55 |
| 1:L:351:THR:HG23 | 1:L:352:GLU:N | 2.22 | 0.55 |
| 1:M:281:ILE:O | 1:M:281:ILE:HG22 | 2.05 | 0.55 |
| 1:N:220:SER:HB3 | 1:N:223:MET:CE | 2.36 | 0.55 |
| 1:N:326:ILE:HG21 | 1:N:331:MET:SD | 2.47 | 0.55 |
| 1:O:166:ALA:CB | 1:O:203:ILE:CG2 | 2.85 | 0.55 |
| 1:O:216:LYS:C | 1:O:332:ILE:HD11 | 2.27 | 0.55 |
| 1:P:139:ALA:CB | 1:P:377:ARG:CG | 2.83 | 0.55 |
| 1:P:380:SER:HB3 | 1:P:384:SER:HB2 | 1.89 | 0.55 |
| 1:B:62:VAL:HG22 | 1:B:63:THR:N | 2.20 | 0.55 |
| 1:B:70:VAL:O | 1:B:76:LYS:HE3 | 2.06 | 0.55 |
| 1:B:493:VAL:HG13 | 1:C:47:MET:HE1 | 1.89 | 0.55 |
| 1:C:150:LEU:CD2 | 1:C:175:VAL:HG13 | 2.37 | 0.55 |
| 1:C:434:LEU:N | 1:C:434:LEU:CD2 | 2.70 | 0.55 |
| 1:C:494:ILE:HD12 | 1:D:48:LEU:CD1 | 2.35 | 0.55 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:77:MET:HB2 | 1:E:487:LEU:HD21 | 1.88 | 0.55 |
| 1:E:170:LEU:CD1 | 1:E:358:VAL:CG1 | 2.85 | 0.55 |
| 1:E:232:ILE:O | 1:E:315:LEU:HB2 | 2.07 | 0.55 |
| 1:E:405:GLN:HE22 | 1:N:438:ARG:NH2 | 2.05 | 0.55 |
| 1:F:212:VAL:N | 1:F:298:ALA:HB1 | 2.22 | 0.55 |
| 1:F:469:PRO:CD | 1:F:472:VAL:HG21 | 2.28 | 0.55 |
| 1:G:41:PRO:CG | 1:G:453:VAL:HG11 | 2.37 | 0.55 |
| 1:G:389:LEU:O | 1:G:393:LEU:HD12 | 2.07 | 0.55 |
| 1:H:84:THR:O | 1:H:84:THR:CG2 | 2.54 | 0.55 |
| 1:I:42:LYS:CE | 1:I:426:ALA:CB | 2.75 | 0.55 |
| 1:I:416:GLU:O | 1:I:420:ARG:HB2 | 2.07 | 0.55 |
| 1:J:333:PHE:O | 1:J:334:VAL:HG22 | 2.07 | 0.55 |
| 1:K:198:LYS:C | 1:K:355:ILE:HD13 | 2.27 | 0.55 |
| 1:L:117:PRO:O | 1:L:120:VAL:HG12 | 2.07 | 0.55 |
| 1:L:138:ILE:HD12 | 1:L:385:THR:OG1 | 2.07 | 0.55 |
| 1:N:276:LEU:HB3 | 1:N:281:ILE:HB | 1.89 | 0.55 |
| 1:N:299:THR:HG22 | 1:N:318:ALA:HB2 | 1.89 | 0.55 |
| 1:O:18:ARG:HG2 | 1:O:19:ASP:H | 1.65 | 0.55 |
| 1:P:216:LYS:O | 1:P:331:MET:HA | 2.07 | 0.55 |
| 1:A:25:ILE:HD13 | 1:A:108:GLU:OE2 | 2.07 | 0.54 |
| 1:A:197:LYS:HB3 | 1:A:355:ILE:CG2 | 2.37 | 0.54 |
| 1:A:210:LYS:HB3 | 1:A:340:PRO:CG | 2.37 | 0.54 |
| 1:A:239:ILE:HD13 | 1:A:251:VAL:HG22 | 1.86 | 0.54 |
| 1:A:484:THR:HG22 | 1:A:487:LEU:HD12 | 1.88 | 0.54 |
| 1:B:265:GLN:OE1 | 1:B:289:LYS:HE2 | 2.06 | 0.54 |
| 1:C:18:ARG:CB | 1:C:22:ARG:HH12 | 2.19 | 0.54 |
| 1:C:70:VAL:HG23 | 1:C:71:GLU:N | 2.21 | 0.54 |
| 1:C:155:MET:HE2 | 1:C:465:GLY:C | 2.28 | 0.54 |
| 1:C:235:LEU:H | 1:C:292:MET:HE1 | 1.73 | 0.54 |
| 1:C:235:LEU:N | 1:C:292:MET:CE | 2.70 | 0.54 |
| 1:D:121:VAL:HG23 | 1:D:122:LYS:H | 1.72 | 0.54 |
| 1:E:171:ALA:HA | 1:E:174:ILE:HD11 | 1.87 | 0.54 |
| 1:E:459:GLU:HA | 1:E:459:GLU:OE1 | 2.07 | 0.54 |
| 1:F:12:MET:HE3 | 1:F:494:ILE:CG2 | 2.26 | 0.54 |
| 1:F:384:SER:HB3 | 1:F:441:HIS:CE1 | 2.42 | 0.54 |
| 1:G:8:LEU:O | 1:H:71:GLU:HG2 | 2.07 | 0.54 |
| 1:G:15:TYR:CE1 | 1:G:23:MET:SD | 3.00 | 0.54 |
| 1:G:132:GLN:CD | 1:G:478:GLN:HE21 | 2.10 | 0.54 |
| 1:G:254:ILE:HD13 | 1:G:262:LEU:CD1 | 2.32 | 0.54 |
| 1:H:105:ARG:NH1 | 1:H:106:LYS:CG | 2.70 | 0.54 |
| 1:H:193:ILE:HD12 | 1:H:366:VAL:CG2 | 2.37 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:239:ILE:HG21 | 1:H:268:ILE:HG23 | 1.88 | 0.54 |
| 1:I:12:MET:HE1 | 1:P:68:MET:CE | 2.37 | 0.54 |
| 1:I:14:ARG:NH2 | 1:P:34:THR:HB | 2.21 | 0.54 |
| 1:I:143:GLY:O | 1:I:149:ILE:HD11 | 2.07 | 0.54 |
| 1:I:368:VAL:CG1 | 1:I:469:PRO:HG3 | 2.37 | 0.54 |
| 1:J:105:ARG:HH11 | 1:J:106:LYS:CG | 2.19 | 0.54 |
| 1:J:182:VAL:HB | 1:J:188:VAL:CG2 | 2.37 | 0.54 |
| 1:K:38:THR:HG23 | 1:K:46:LYS:HE2 | 1.90 | 0.54 |
| 1:K:251:VAL:HG13 | 1:K:276:LEU:HD22 | 1.88 | 0.54 |
| 1:K:308:LYS:HB2 | 1:K:308:LYS:HZ2 | 1.70 | 0.54 |
| 1:L:68:MET:HB2 | 1:M:8:LEU:HD23 | 1.87 | 0.54 |
| 1:L:96:ALA:O | 1:L:480:ALA:HB1 | 2.07 | 0.54 |
| 1:L:265:GLN:HG2 | 1:L:266:LYS:NZ | 2.22 | 0.54 |
| 1:L:437:VAL:CB | 1:L:451:LEU:HD11 | 2.36 | 0.54 |
| 1:M:51:ASP:HB3 | 1:N:11:ASN:OD1 | 2.06 | 0.54 |
| 1:M:150:LEU:CD2 | 1:M:175:VAL:CG1 | 2.73 | 0.54 |
| 1:M:164:GLU:O | 1:M:164:GLU:HG3 | 2.06 | 0.54 |
| 1:M:223:MET:N | 1:M:277:ALA:HB1 | 2.21 | 0.54 |
| 1:O:70:VAL:HA | 1:P:8:LEU:N | 2.21 | 0.54 |
| 1:O:152:LYS:CD | 1:O:465:GLY:HA3 | 2.36 | 0.54 |
| 1:P:37:SER:O | 1:P:43:GLY:HA2 | 2.06 | 0.54 |
| 1:P:178:VAL:CG1 | 1:P:188:VAL:CG1 | 2.83 | 0.54 |
| 1:A:69:SER:HB3 | 1:H:9:PRO:CA | 2.37 | 0.54 |
| 1:A:122:LYS:HA | 1:A:125:GLN:CD | 2.28 | 0.54 |
| 1:B:81:VAL:CG1 | 1:B:483:SER:CB | 2.85 | 0.54 |
| 1:B:116:HIS:CG | 1:B:117:PRO:HD2 | 2.42 | 0.54 |
| 1:B:222:GLN:CB | 1:B:277:ALA:HB1 | 2.32 | 0.54 |
| 1:D:34:THR:CG2 | 1:D:35:VAL:N | 2.68 | 0.54 |
| 1:D:232:ILE:HG13 | 1:D:261:VAL:CG1 | 2.37 | 0.54 |
| 1:F:195:ILE:HD12 | 1:F:359:ALA:HB1 | 1.89 | 0.54 |
| 1:H:174:ILE:HG22 | 1:H:362:VAL:HG21 | 1.83 | 0.54 |
| 1:H:237:CYS:CA | 1:H:306:ASN:HB2 | 2.36 | 0.54 |
| 1:I:36:ARG:HG3 | 1:I:37:SER:OG | 2.07 | 0.54 |
| 1:I:115:VAL:HG22 | 1:I:403:ARG:CD | 2.36 | 0.54 |
| 1:K:222:GLN:HB2 | 1:K:277:ALA:CB | 2.37 | 0.54 |
| 1:K:223:MET:HB3 | 1:K:282:VAL:HG12 | 1.89 | 0.54 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:CG1 | 2.37 | 0.54 |
| 1:K:371:CYS:HB3 | 1:K:471:ARG:NH1 | 2.22 | 0.54 |
| 1:L:291:ASP:O | 1:L:295:LEU:HD12 | 2.06 | 0.54 |
| 1:L:307:ILE:O | 1:L:307:ILE:HG13 | 2.07 | 0.54 |
| 1:M:57:VAL:O | 1:M:58:THR:HG23 | 2.07 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:102:GLU:OE1 | 1:M:102:GLU:HA | 2.07 | 0.54 |
| 1:M:239:ILE:CB | 1:M:307:ILE:HG12 | 2.23 | 0.54 |
| 1:M:372:THR:HA | 1:M:375:ASP:O | 2.06 | 0.54 |
| 1:O:138:ILE:CD1 | 1:O:385:THR:HG23 | 2.38 | 0.54 |
| 1:D:233:ALA:HB2 | 1:D:315:LEU:CD1 | 2.34 | 0.54 |
| 1:D:239:ILE:HD12 | 1:D:307:ILE:HG13 | 1.89 | 0.54 |
| 1:E:227:VAL:HG11 | 1:E:260:ASN:OD1 | 2.06 | 0.54 |
| 1:E:403:ARG:HG2 | 1:N:431:ILE:CD1 | 2.38 | 0.54 |
| 1:F:42:LYS:CB | 1:F:425:ASN:HB3 | 2.25 | 0.54 |
| 1:F:254:ILE:CG2 | 1:F:262:LEU:HD12 | 2.36 | 0.54 |
| 1:G:99:VAL:O | 1:G:103:LEU:HB2 | 2.06 | 0.54 |
| 1:G:397:ALA:HB2 | 1:G:408:VAL:CG2 | 2.30 | 0.54 |
| 1:H:96:ALA:CB | 1:H:480:ALA:HB2 | 2.34 | 0.54 |
| 1:H:100:ALA:HB1 | 1:H:484:THR:OG1 | 2.08 | 0.54 |
| 1:H:105:ARG:HH11 | 1:H:106:LYS:CG | 2.20 | 0.54 |
| 1:H:420:ARG:NH1 | 1:H:420:ARG:CG | 2.50 | 0.54 |
| 1:I:48:LEU:CB | 1:I:56:VAL:HG21 | 2.15 | 0.54 |
| 1:I:326:ILE:O | 1:I:327:SER:HB3 | 2.06 | 0.54 |
| 1:I:326:ILE:CD1 | 1:I:348:ARG:NH1 | 2.70 | 0.54 |
| 1:I:347:ILE:HB | 1:I:355:ILE:HG23 | 1.89 | 0.54 |
| 1:I:384:SER:CB | 1:I:441:HIS:CE1 | 2.76 | 0.54 |
| 1:J:31:ILE:HG22 | 1:J:65:LEU:CD2 | 2.37 | 0.54 |
| 1:J:236:ASN:OD1 | 1:J:236:ASN:C | 2.45 | 0.54 |
| 1:J:391:MET:HE1 | 1:J:438:ARG:HE | 1.71 | 0.54 |
| 1:K:68:MET:HE2 | 1:L:9:PRO:HD3 | 1.89 | 0.54 |
| 1:K:233:ALA:HB2 | 1:K:315:LEU:HD23 | 1.88 | 0.54 |
| 1:L:105:ARG:NE | 1:L:106:LYS:HG2 | 2.20 | 0.54 |
| 1:L:153:ILE:HD12 | 1:L:372:THR:CG2 | 2.37 | 0.54 |
| 1:L:276:LEU:HB2 | 1:L:281:ILE:HB | 1.89 | 0.54 |
| 1:M:188:VAL:HG13 | 1:M:373:ILE:HG21 | 1.89 | 0.54 |
| 1:M:233:ALA:CB | 1:M:315:LEU:HD13 | 2.37 | 0.54 |
| 1:M:235:LEU:HD13 | 1:M:307:ILE:CG1 | 2.37 | 0.54 |
| 1:M:235:LEU:CD2 | 1:M:310:LEU:HB2 | 2.16 | 0.54 |
| 1:M:420:ARG:NH2 | 1:M:430:ALA:CB | 2.71 | 0.54 |
| 1:M:450:GLY:C | 1:M:451:LEU:HD12 | 2.28 | 0.54 |
| 1:N:96:ALA:CB | 1:N:480:ALA:HB2 | 2.37 | 0.54 |
| 1:N:115:VAL:HG23 | 1:N:403:ARG:CZ | 2.37 | 0.54 |
| 1:N:223:MET:HG2 | 1:N:281:ILE:O | 2.07 | 0.54 |
| 1:O:77:MET:HE2 | 1:O:486:MET:SD | 2.47 | 0.54 |
| 1:O:153:ILE:HG21 | 1:O:469:PRO:HB3 | 1.88 | 0.54 |
| 1:O:269:ASP:O | 1:O:273:GLN:HG3 | 2.08 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:371:CYS:SG | 1:O:471:ARG:HB3 | 2.48 | 0.54 |
| 1:O:469:PRO:C | 1:O:472:VAL:HG13 | 2.27 | 0.54 |
| 1:P:64:ILE:HG23 | 1:P:65:LEU:CD1 | 2.36 | 0.54 |
| 1:P:119:ILE:HD13 | 1:P:404:GLU:OE2 | 2.08 | 0.54 |
| 1:P:138:ILE:HG13 | 1:P:139:ALA:N | 2.23 | 0.54 |
| 1:A:192:LEU:CB | 1:A:342:ALA:HB2 | 2.38 | 0.54 |
| 1:B:312:ALA:HA | 1:B:315:LEU:HB2 | 1.89 | 0.54 |
| 1:B:397:ALA:HB2 | 1:B:408:VAL:HG23 | 1.89 | 0.54 |
| 1:C:78:LEU:CD1 | 1:C:487:LEU:CD2 | 2.84 | 0.54 |
| 1:C:135:LEU:CD2 | 1:C:385:THR:HG21 | 2.38 | 0.54 |
| 1:C:403:ARG:CA | 1:C:406:LEU:CD2 | 2.82 | 0.54 |
| 1:C:437:VAL:HA | 1:C:458:VAL:CG1 | 2.37 | 0.54 |
| 1:D:254:ILE:CG2 | 1:D:262:LEU:HD12 | 2.37 | 0.54 |
| 1:D:345:MET:SD | 1:D:362:VAL:HG21 | 2.48 | 0.54 |
| 1:E:34:THR:CG2 | 1:E:35:VAL:HG12 | 2.28 | 0.54 |
| 1:E:130:LYS:HD3 | 1:E:130:LYS:O | 2.07 | 0.54 |
| 1:E:192:LEU:HG | 1:E:342:ALA:CB | 2.31 | 0.54 |
| 1:E:343:VAL:O | 1:E:343:VAL:HG13 | 2.07 | 0.54 |
| 1:F:22:ARG:O | 1:F:26:LEU:HB2 | 2.07 | 0.54 |
| 1:F:212:VAL:CB | 1:F:298:ALA:HB3 | 2.37 | 0.54 |
| 1:F:389:LEU:HD12 | 1:F:415:LEU:HD13 | 1.90 | 0.54 |
| 1:G:489:ARG:HE | 1:H:44:MET:CE | 2.20 | 0.54 |
| 1:H:384:SER:CB | 1:H:441:HIS:HE1 | 2.20 | 0.54 |
| 1:I:12:MET:CE | 1:I:494:ILE:HG22 | 2.37 | 0.54 |
| 1:I:12:MET:HG3 | 1:I:495:ALA:N | 2.22 | 0.54 |
| 1:I:45:ASP:OD1 | 1:I:45:ASP:N | 2.41 | 0.54 |
| 1:I:57:VAL:O | 1:I:58:THR:HG23 | 2.08 | 0.54 |
| 1:I:69:SER:CB | 1:J:9:PRO:HA | 2.36 | 0.54 |
| 1:I:232:ILE:HD12 | 1:I:232:ILE:N | 2.23 | 0.54 |
| 1:I:235:LEU:CD2 | 1:I:307:ILE:O | 2.56 | 0.54 |
| 1:J:207:GLU:HG3 | 1:J:346:LEU:HB3 | 1.89 | 0.54 |
| 1:J:212:VAL:HG21 | 1:J:294:LYS:C | 2.27 | 0.54 |
| 1:K:119:ILE:HD11 | 1:K:403:ARG:NH1 | 2.22 | 0.54 |
| 1:K:175:VAL:O | 1:K:179:SER:HB2 | 2.07 | 0.54 |
| 1:K:182:VAL:CB | 1:K:188:VAL:HG22 | 2.35 | 0.54 |
| 1:K:213:LEU:HB2 | 1:K:344:THR:HG21 | 1.88 | 0.54 |
| 1:M:47:MET:O | 1:M:47:MET:HG3 | 2.01 | 0.54 |
| 1:M:310:LEU:CD2 | 1:M:315:LEU:HD11 | 2.38 | 0.54 |
| 1:M:400:ILE:HD12 | 1:M:404:GLU:HB3 | 1.89 | 0.54 |
| 1:N:197:LYS:CA | 1:N:355:ILE:HG21 | 2.37 | 0.54 |
| 1:N:287:VAL:HG12 | 1:N:291:ASP:HB2 | 1.90 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:377:ARG:HB3 | 1:N:470:LEU:CG | 2.36 | 0.54 |
| 1:N:377:ARG:HH11 | 1:N:470:LEU:CD1 | 2.20 | 0.54 |
| 1:N:486:MET:SD | 1:N:487:LEU:HD23 | 2.47 | 0.54 |
| 1:O:68:MET:CB | 1:P:8:LEU:HD12 | 2.38 | 0.54 |
| 1:O:99:VAL:O | 1:O:103:LEU:HB2 | 2.07 | 0.54 |
| 1:P:135:LEU:CD2 | 1:P:389:LEU:HD21 | 2.37 | 0.54 |
| 1:A:235:LEU:CG | 1:A:310:LEU:HD22 | 2.34 | 0.54 |
| 1:A:406:LEU:HD12 | 1:A:406:LEU:N | 2.22 | 0.54 |
| 1:B:48:LEU:HB3 | 1:B:68:MET:CE | 2.38 | 0.54 |
| 1:B:235:LEU:HD21 | 1:B:307:ILE:C | 2.27 | 0.54 |
| 1:B:418:ILE:HG23 | 1:B:422:LEU:HD12 | 1.88 | 0.54 |
| 1:C:115:VAL:HG21 | 1:C:119:ILE:HG21 | 1.89 | 0.54 |
| 1:C:384:SER:CB | 1:C:441:HIS:CE1 | 2.88 | 0.54 |
| 1:D:235:LEU:CG | 1:D:307:ILE:HA | 2.37 | 0.54 |
| 1:D:251:VAL:HG13 | 1:D:276:LEU:HD22 | 1.88 | 0.54 |
| 1:E:153:ILE:HG21 | 1:E:469:PRO:CA | 2.37 | 0.54 |
| 1:E:181:VAL:HG23 | 1:E:182:VAL:N | 2.23 | 0.54 |
| 1:E:265:GLN:NE2 | 1:E:289:LYS:HD3 | 2.21 | 0.54 |
| 1:E:403:ARG:HB3 | 1:N:431:ILE:CD1 | 2.38 | 0.54 |
| 1:F:9:PRO:CD | 1:F:9:PRO:O | 2.56 | 0.54 |
| 1:G:239:ILE:HD11 | 1:G:251:VAL:HG22 | 1.89 | 0.54 |
| 1:H:158:ILE:O | 1:H:158:ILE:HG22 | 2.01 | 0.54 |
| 1:H:339:HIS:HE1 | 1:H:341:LYS:HE2 | 1.71 | 0.54 |
| 1:H:400:ILE:CD1 | 1:H:408:VAL:HG11 | 2.38 | 0.54 |
| 1:I:69:SER:CA | 1:J:9:PRO:CA | 2.84 | 0.54 |
| 1:I:70:VAL:HG21 | 1:I:76:LYS:HD3 | 1.88 | 0.54 |
| 1:I:227:VAL:HG12 | 1:I:228:THR:N | 2.22 | 0.54 |
| 1:I:255:LYS:O | 1:I:255:LYS:CG | 2.55 | 0.54 |
| 1:J:234:LEU:N | 1:J:315:LEU:CD2 | 2.64 | 0.54 |
| 1:K:164:GLU:O | 1:K:167:LYS:HB3 | 2.08 | 0.54 |
| 1:K:232:ILE:HA | 1:K:261:VAL:HB | 1.90 | 0.54 |
| 1:K:251:VAL:HG11 | 1:K:276:LEU:HD22 | 1.88 | 0.54 |
| 1:L:105:ARG:CD | 1:L:106:LYS:H | 2.17 | 0.54 |
| 1:L:169:LYS:HG3 | 1:L:204:ASP:O | 2.07 | 0.54 |
| 1:L:345:MET:CE | 1:L:362:VAL:HG11 | 2.37 | 0.54 |
| 1:L:347:ILE:HG21 | 1:L:358:VAL:CG1 | 2.37 | 0.54 |
| 1:N:42:LYS:CD | 1:N:426:ALA:N | 2.67 | 0.54 |
| 1:N:391:MET:CE | 1:N:438:ARG:CA | 2.85 | 0.54 |
| 1:N:441:HIS:CE1 | 1:N:449:ALA:HA | 2.42 | 0.54 |
| 1:O:211:GLY:CA | 1:O:298:ALA:HB1 | 2.36 | 0.54 |
| 1:O:418:ILE:HG22 | 1:O:419:PRO:N | 2.22 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:100:ALA:O | 1:P:104:LEU:HG | 2.07 | 0.54 |
| 1:P:255:LYS:CE | 1:P:279:GLU:HG2 | 2.37 | 0.54 |
| 1:A:235:LEU:HD11 | 1:A:307:ILE:HA | 1.89 | 0.54 |
| 1:B:102:GLU:HG2 | 1:B:414:ALA:HB1 | 1.90 | 0.54 |
| 1:B:156:THR:HG22 | 1:B:468:GLU:HB3 | 1.88 | 0.54 |
| 1:B:402:GLY:O | 1:K:431:ILE:HD11 | 2.08 | 0.54 |
| 1:D:311:SER:O | 1:D:315:LEU:HG | 2.08 | 0.54 |
| 1:D:437:VAL:HG21 | 1:D:451:LEU:HD21 | 1.88 | 0.54 |
| 1:D:493:VAL:O | 1:D:493:VAL:HG12 | 2.07 | 0.54 |
| 1:F:105:ARG:NH2 | 1:F:106:LYS:HD2 | 2.23 | 0.54 |
| 1:H:142:VAL:CG1 | 1:H:149:ILE:CD1 | 2.76 | 0.54 |
| 1:H:220:SER:CB | 1:H:277:ALA:CB | 2.86 | 0.54 |
| 1:I:42:LYS:NZ | 1:I:453:VAL:HB | 2.22 | 0.54 |
| 1:I:219:VAL:HG13 | 1:I:220:SER:N | 2.19 | 0.54 |
| 1:I:239:ILE:HD12 | 1:I:307:ILE:CG2 | 2.38 | 0.54 |
| 1:J:50:ASP:OD1 | 1:J:52:LEU:HB2 | 2.08 | 0.54 |
| 1:J:406:LEU:HD12 | 1:J:406:LEU:H | 1.72 | 0.54 |
| 1:K:130:LYS:O | 1:K:130:LYS:CG | 2.53 | 0.54 |
| 1:L:123:GLY:HA2 | 1:L:404:GLU:HB3 | 1.88 | 0.54 |
| 1:L:215:ASP:CG | 1:L:331:MET:HE2 | 2.28 | 0.54 |
| 1:L:265:GLN:C | 1:L:266:LYS:HE3 | 2.28 | 0.54 |
| 1:M:239:ILE:HD12 | 1:M:307:ILE:CD1 | 2.37 | 0.54 |
| 1:M:299:THR:CG2 | 1:M:334:VAL:CG1 | 2.86 | 0.54 |
| 1:M:375:ASP:HB3 | 1:M:377:ARG:NH2 | 2.22 | 0.54 |
| 1:N:347:ILE:HG21 | 1:N:358:VAL:HB | 1.88 | 0.54 |
| 1:O:222:GLN:HB3 | 1:O:277:ALA:HB1 | 1.88 | 0.54 |
| 1:P:12:MET:CG | 1:P:494:ILE:CG2 | 2.60 | 0.54 |
| 1:P:130:LYS:HE3 | 1:P:134:LEU:HD21 | 1.89 | 0.54 |
| 1:A:231:LYS:N | 1:A:231:LYS:CD | 2.71 | 0.54 |
| 1:B:235:LEU:HD11 | 1:B:307:ILE:CG1 | 2.38 | 0.54 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:C | 2.27 | 0.54 |
| 1:B:431:ILE:O | 1:B:435:VAL:HG23 | 2.07 | 0.54 |
| 1:B:453:VAL:HG23 | 1:B:454:PHE:CD1 | 2.43 | 0.54 |
| 1:C:52:LEU:N | 1:C:52:LEU:HD12 | 2.23 | 0.54 |
| 1:C:158:ILE:HD12 | 1:C:167:LYS:CA | 2.38 | 0.54 |
| 1:C:437:VAL:HA | 1:C:458:VAL:HG11 | 1.88 | 0.54 |
| 1:E:217:GLU:HG2 | 1:E:330:SER:HB2 | 1.89 | 0.54 |
| 1:E:254:ILE:HG23 | 1:E:259:ALA:CB | 2.37 | 0.54 |
| 1:F:9:PRO:HD3 | 1:G:68:MET:C | 2.28 | 0.54 |
| 1:F:23:MET:CE | 1:F:72:HIS:CE1 | 2.90 | 0.54 |
| 1:F:193:ILE:HG13 | 1:F:366:VAL:HG11 | 1.90 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:212:VAL:CG2 | 1:F:298:ALA:CB | 2.86 | 0.54 |
| 1:F:263:PHE:CE2 | 1:F:295:LEU:CD2 | 2.90 | 0.54 |
| 1:G:124:TYR:CE1 | 1:G:407:ALA:CB | 2.90 | 0.54 |
| 1:G:152:LYS:CE | 1:G:462:CYS:HA | 2.35 | 0.54 |
| 1:H:77:MET:HE3 | 1:H:487:LEU:HD21 | 1.84 | 0.54 |
| 1:H:219:VAL:CG1 | 1:H:223:MET:HE3 | 2.37 | 0.54 |
| 1:H:232:ILE:HD11 | 1:H:321:VAL:HG21 | 1.89 | 0.54 |
| 1:J:158:ILE:HG21 | 1:J:170:LEU:HD12 | 1.89 | 0.54 |
| 1:J:208:LEU:CD1 | 1:J:343:VAL:HG11 | 2.38 | 0.54 |
| 1:K:265:GLN:HE22 | 1:K:289:LYS:HZ3 | 1.55 | 0.54 |
| 1:K:351:THR:O | 1:K:355:ILE:HG12 | 2.07 | 0.54 |
| 1:K:435:VAL:O | 1:K:435:VAL:CG1 | 2.54 | 0.54 |
| 1:L:68:MET:CB | 1:M:8:LEU:CD2 | 2.77 | 0.54 |
| 1:L:96:ALA:CB | 1:L:480:ALA:HB2 | 2.38 | 0.54 |
| 1:L:164:GLU:O | 1:L:167:LYS:HG2 | 2.07 | 0.54 |
| 1:L:351:THR:HG23 | 1:L:352:GLU:H | 1.73 | 0.54 |
| 1:N:34:THR:HB | 1:N:35:VAL:HG22 | 1.90 | 0.54 |
| 1:N:223:MET:HE1 | 1:N:273:GLN:HB3 | 1.88 | 0.54 |
| 1:N:233:ALA:HA | 1:N:315:LEU:CG | 2.36 | 0.54 |
| 1:N:234:LEU:HB3 | 1:N:292:MET:HE1 | 1.89 | 0.54 |
| 1:N:236:ASN:HB3 | 1:N:304:ILE:O | 2.08 | 0.54 |
| 1:N:325:LYS:CE | 1:N:328:GLY:H | 2.20 | 0.54 |
| 1:N:383:GLY:C | 1:N:386:GLU:HG2 | 2.27 | 0.54 |
| 1:N:459:GLU:CG | 1:N:461:MET:CE | 2.85 | 0.54 |
| 1:O:8:LEU:HD23 | 1:O:8:LEU:N | 2.23 | 0.54 |
| 1:O:124:TYR:OH | 1:O:410:ALA:HB3 | 2.08 | 0.54 |
| 1:P:104:LEU:CD2 | 1:P:488:LEU:HD12 | 2.36 | 0.54 |
| 1:P:153:ILE:HG21 | 1:P:469:PRO:CG | 2.36 | 0.54 |
| 1:A:146:ASP:CB | 1:A:149:ILE:HG12 | 2.36 | 0.54 |
| 1:B:117:PRO:HA | 1:B:120:VAL:CG1 | 2.37 | 0.54 |
| 1:C:12:MET:CE | 1:D:68:MET:SD | 2.95 | 0.54 |
| 1:C:115:VAL:HG23 | 1:C:119:ILE:HB | 1.89 | 0.54 |
| 1:C:117:PRO:O | 1:C:120:VAL:HG12 | 2.07 | 0.54 |
| 1:C:307:ILE:O | 1:C:310:LEU:HB2 | 2.08 | 0.54 |
| 1:D:46:LYS:HD3 | 1:D:64:ILE:HD13 | 1.90 | 0.54 |
| 1:D:118:THR:O | 1:D:118:THR:CG2 | 2.55 | 0.54 |
| 1:D:181:VAL:HG23 | 1:D:182:VAL:N | 2.23 | 0.54 |
| 1:D:368:VAL:CB | 1:D:469:PRO:CG | 2.76 | 0.54 |
| 1:D:391:MET:CE | 1:D:438:ARG:CG | 2.85 | 0.54 |
| 1:E:130:LYS:HZ2 | 1:E:396:TYR:HB2 | 1.72 | 0.54 |
| 1:E:132:GLN:HA | 1:E:132:GLN:NE2 | 2.22 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:152:LYS:NZ | 1:E:462:CYS:CB | 2.70 | 0.54 |
| 1:E:233:ALA:CA | 1:E:315:LEU:CD1 | 2.84 | 0.54 |
| 1:E:338:LYS:O | 1:E:338:LYS:CD | 2.56 | 0.54 |
| 1:F:233:ALA:CA | 1:F:315:LEU:CD1 | 2.67 | 0.54 |
| 1:F:307:ILE:HD13 | 1:F:310:LEU:HB2 | 1.90 | 0.54 |
| 1:H:62:VAL:H | 1:H:93:THR:HG21 | 1.72 | 0.54 |
| 1:H:63:THR:CG2 | 1:H:63:THR:O | 2.56 | 0.54 |
| 1:I:222:GLN:CA | 1:I:277:ALA:HB1 | 2.37 | 0.54 |
| 1:I:357:GLU:O | 1:I:357:GLU:HG3 | 2.07 | 0.54 |
| 1:J:235:LEU:CD1 | 1:J:262:LEU:HD11 | 2.37 | 0.54 |
| 1:K:8:LEU:HD13 | 1:K:494:ILE:CG2 | 2.38 | 0.54 |
| 1:K:121:VAL:HG23 | 1:K:122:LYS:N | 2.12 | 0.54 |
| 1:L:57:VAL:O | 1:L:58:THR:HG23 | 2.08 | 0.54 |
| 1:L:153:ILE:HD11 | 1:L:378:ILE:HG22 | 1.89 | 0.54 |
| 1:M:36:ARG:CG | 1:M:37:SER:N | 2.69 | 0.54 |
| 1:M:235:LEU:CD2 | 1:M:310:LEU:HD23 | 2.37 | 0.54 |
| 1:N:452:ASN:OD1 | 1:N:454:PHE:HD2 | 1.90 | 0.54 |
| 1:O:238:ALA:C | 1:O:307:ILE:HG22 | 2.28 | 0.54 |
| 1:P:346:LEU:HD21 | 1:P:348:ARG:HD3 | 1.89 | 0.54 |
| 1:A:25:ILE:CD1 | 1:A:108:GLU:OE2 | 2.56 | 0.54 |
| 1:A:61:GLY:HA2 | 1:A:64:ILE:HD12 | 1.90 | 0.54 |
| 1:A:101:GLY:O | 1:A:104:LEU:HB2 | 2.08 | 0.54 |
| 1:A:124:TYR:CE1 | 1:A:407:ALA:CB | 2.90 | 0.54 |
| 1:A:391:MET:CE | 1:A:438:ARG:CG | 2.84 | 0.54 |
| 1:A:431:ILE:HG23 | 1:J:403:ARG:HD3 | 1.90 | 0.54 |
| 1:B:18:ARG:HA | 1:B:21:GLN:OE1 | 2.07 | 0.54 |
| 1:B:116:HIS:HB3 | 1:B:118:THR:OG1 | 2.08 | 0.54 |
| 1:B:134:LEU:HD12 | 1:B:393:LEU:HD21 | 1.89 | 0.54 |
| 1:C:299:THR:CG2 | 1:C:334:VAL:CG1 | 2.86 | 0.54 |
| 1:C:352:GLU:HA | 1:C:355:ILE:HG13 | 1.88 | 0.54 |
| 1:C:368:VAL:CB | 1:C:469:PRO:HG3 | 2.37 | 0.54 |
| 1:C:453:VAL:HG23 | 1:C:454:PHE:CE1 | 2.43 | 0.54 |
| 1:D:26:LEU:HD23 | 1:D:30:ILE:HD12 | 1.89 | 0.54 |
| 1:D:156:THR:HB | 1:D:467:VAL:C | 2.27 | 0.54 |
| 1:D:199:SER:HG | 1:D:327:SER:CB | 2.20 | 0.54 |
| 1:D:296:ALA:CB | 1:D:301:ALA:HB3 | 2.38 | 0.54 |
| 1:E:232:ILE:HA | 1:E:261:VAL:HB | 1.90 | 0.54 |
| 1:E:431:ILE:CD1 | 1:N:403:ARG:CD | 2.86 | 0.54 |
| 1:F:42:LYS:CE | 1:F:453:VAL:CB | 2.83 | 0.54 |
| 1:H:459:GLU:CG | 1:H:461:MET:CE | 2.86 | 0.54 |
| 1:I:152:LYS:HG2 | 1:I:465:GLY:HA2 | 1.89 | 0.54 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:72:HIS:HB3 | 1:J:75:ALA:HB3 | 1.89 | 0.54 |
| 1:J:188:VAL:O | 1:J:188:VAL:HG12 | 2.08 | 0.54 |
| 1:J:452:ASN:OD1 | 1:J:454:PHE:HB2 | 2.08 | 0.54 |
| 1:L:96:ALA:HA | 1:L:480:ALA:HB1 | 1.86 | 0.54 |
| 1:L:192:LEU:CB | 1:L:342:ALA:CB | 2.83 | 0.54 |
| 1:M:251:VAL:HA | 1:M:254:ILE:HD12 | 1.89 | 0.54 |
| 1:M:391:MET:HE1 | 1:M:438:ARG:CG | 2.36 | 0.54 |
| 1:M:461:MET:HA | 1:M:466:VAL:HG23 | 1.89 | 0.54 |
| 1:N:49:VAL:HG21 | 1:O:495:ALA:HB2 | 1.89 | 0.54 |
| 1:O:30:ILE:HG22 | 1:O:31:ILE:CD1 | 2.37 | 0.54 |
| 1:O:134:LEU:HD11 | 1:O:393:LEU:HD21 | 1.88 | 0.54 |
| 1:A:397:ALA:HB2 | 1:A:408:VAL:CG2 | 2.32 | 0.54 |
| 1:B:105:ARG:NH1 | 1:B:106:LYS:CD | 2.71 | 0.54 |
| 1:B:135:LEU:HD23 | 1:B:138:ILE:HD11 | 1.90 | 0.54 |
| 1:B:235:LEU:HD23 | 1:B:310:LEU:HG | 1.89 | 0.54 |
| 1:B:371:CYS:HB3 | 1:B:471:ARG:HD3 | 1.90 | 0.54 |
| 1:C:52:LEU:CD1 | 1:C:52:LEU:H | 2.21 | 0.54 |
| 1:D:26:LEU:HD23 | 1:D:30:ILE:CD1 | 2.37 | 0.54 |
| 1:E:173:ILE:HD12 | 1:E:345:MET:HG2 | 1.89 | 0.54 |
| 1:G:368:VAL:HG23 | 1:G:469:PRO:HG2 | 1.86 | 0.54 |
| 1:G:391:MET:HE1 | 1:G:438:ARG:HB3 | 1.90 | 0.54 |
| 1:I:123:GLY:CA | 1:I:407:ALA:CB | 2.73 | 0.54 |
| 1:I:211:GLY:HA3 | 1:I:337:CYS:SG | 2.48 | 0.54 |
| 1:J:30:ILE:HG22 | 1:J:31:ILE:CD1 | 2.38 | 0.54 |
| 1:J:339:HIS:HE1 | 1:J:341:LYS:CD | 2.18 | 0.54 |
| 1:J:437:VAL:CG2 | 1:J:451:LEU:HG | 2.32 | 0.54 |
| 1:K:230:ALA:HB1 | 1:K:261:VAL:HG23 | 1.90 | 0.54 |
| 1:K:233:ALA:HB2 | 1:K:315:LEU:CD2 | 2.38 | 0.54 |
| 1:K:347:ILE:HB | 1:K:355:ILE:HG23 | 1.88 | 0.54 |
| 1:L:95:THR:O | 1:L:95:THR:HG22 | 2.08 | 0.54 |
| 1:L:218:ARG:CD | 1:L:282:VAL:HG12 | 2.35 | 0.54 |
| 1:L:437:VAL:HA | 1:L:458:VAL:HG21 | 1.90 | 0.54 |
| 1:L:469:PRO:CB | 1:L:472:VAL:CG2 | 2.86 | 0.54 |
| 1:M:177:ALA:HB1 | 1:M:343:VAL:CG1 | 2.37 | 0.54 |
| 1:M:247:LEU:CD1 | 1:M:269:ASP:HB3 | 2.38 | 0.54 |
| 1:N:68:MET:CB | 1:O:9:PRO:HD3 | 2.38 | 0.54 |
| 1:O:48:LEU:O | 1:O:56:VAL:HG22 | 2.08 | 0.54 |
| 1:A:14:ARG:CG | 1:A:494:ILE:HG12 | 2.33 | 0.53 |
| 1:A:371:CYS:HA | 1:A:471:ARG:HH11 | 1.73 | 0.53 |
| 1:C:60:ASP:O | 1:C:64:ILE:HG13 | 2.09 | 0.53 |
| 1:C:239:ILE:HG22 | 1:C:307:ILE:HD13 | 1.90 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:152:LYS:HZ2 | 1:D:462:CYS:CB | 2.21 | 0.53 |
| 1:D:164:GLU:O | 1:D:167:LYS:HG2 | 2.08 | 0.53 |
| 1:D:197:LYS:CA | 1:D:355:ILE:HG21 | 2.34 | 0.53 |
| 1:E:233:ALA:HA | 1:E:315:LEU:HD22 | 1.90 | 0.53 |
| 1:E:241:GLU:HB3 | 1:E:246:MET:CB | 2.38 | 0.53 |
| 1:E:397:ALA:CB | 1:E:408:VAL:CG2 | 2.87 | 0.53 |
| 1:F:44:MET:HA | 1:F:44:MET:CE | 2.38 | 0.53 |
| 1:F:72:HIS:HA | 1:F:75:ALA:HB3 | 1.90 | 0.53 |
| 1:G:234:LEU:CD1 | 1:G:301:ALA:HB3 | 2.38 | 0.53 |
| 1:H:163:ALA:HA | 1:H:165:LYS:H | 1.73 | 0.53 |
| 1:I:42:LYS:CE | 1:I:426:ALA:HA | 2.38 | 0.53 |
| 1:I:178:VAL:CG1 | 1:I:178:VAL:O | 2.55 | 0.53 |
| 1:I:224:PRO:O | 1:I:282:VAL:CG1 | 2.56 | 0.53 |
| 1:I:234:LEU:CB | 1:I:292:MET:HE3 | 2.27 | 0.53 |
| 1:J:29:ARG:O | 1:J:32:ALA:HB3 | 2.08 | 0.53 |
| 1:J:121:VAL:O | 1:J:125:GLN:HG2 | 2.07 | 0.53 |
| 1:J:199:SER:HB2 | 1:J:327:SER:HB2 | 1.90 | 0.53 |
| 1:J:236:ASN:HA | 1:J:265:GLN:CB | 2.37 | 0.53 |
| 1:K:152:LYS:HD2 | 1:K:467:VAL:HG21 | 1.90 | 0.53 |
| 1:N:68:MET:CE | 1:O:9:PRO:CD | 2.86 | 0.53 |
| 1:O:60:ASP:O | 1:O:64:ILE:HD12 | 2.09 | 0.53 |
| 1:P:107:ALA:O | 1:P:111:LEU:HG | 2.08 | 0.53 |
| 1:P:391:MET:HE1 | 1:P:438:ARG:NE | 2.22 | 0.53 |
| 1:P:393:LEU:HA | 1:P:396:TYR:HB3 | 1.90 | 0.53 |
| 1:A:219:VAL:HG21 | 1:A:273:GLN:HG2 | 1.89 | 0.53 |
| 1:A:377:ARG:HG2 | 1:A:470:LEU:CG | 2.38 | 0.53 |
| 1:B:296:ALA:HA | 1:B:301:ALA:HB3 | 1.89 | 0.53 |
| 1:C:192:LEU:HB3 | 1:C:342:ALA:HA | 1.89 | 0.53 |
| 1:E:29:ARG:O | 1:E:32:ALA:HB3 | 2.08 | 0.53 |
| 1:F:222:GLN:HA | 1:F:277:ALA:HB1 | 1.88 | 0.53 |
| 1:G:42:LYS:HZ2 | 1:G:426:ALA:N | 2.05 | 0.53 |
| 1:G:232:ILE:HD13 | 1:G:299:THR:CG2 | 2.38 | 0.53 |
| 1:H:437:VAL:HG11 | 1:H:451:LEU:CD1 | 2.37 | 0.53 |
| 1:J:339:HIS:ND1 | 1:J:341:LYS:HD2 | 2.23 | 0.53 |
| 1:L:156:THR:HG21 | 1:L:467:VAL:C | 2.28 | 0.53 |
| 1:M:15:TYR:HB3 | 1:M:19:ASP:CB | 2.38 | 0.53 |
| 1:M:70:VAL:CG2 | 1:M:76:LYS:CG | 2.85 | 0.53 |
| 1:O:74:ALA:O | 1:O:77:MET:HG3 | 2.08 | 0.53 |
| 1:O:232:ILE:HD13 | 1:O:299:THR:HG22 | 1.90 | 0.53 |
| 1:P:96:ALA:HB3 | 1:P:97:VAL:HG23 | 1.90 | 0.53 |
| 1:P:105:ARG:HH11 | 1:P:106:LYS:HG2 | 1.73 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:345:MET:CE | 1:P:362:VAL:HG21 | 2.38 | 0.53 |
| 1:A:49:VAL:HB | 1:H:495:ALA:HA | 1.89 | 0.53 |
| 1:A:105:ARG:CZ | 1:A:106:LYS:CD | 2.86 | 0.53 |
| 1:A:124:TYR:HE1 | 1:A:407:ALA:CB | 2.21 | 0.53 |
| 1:A:420:ARG:O | 1:A:423:ALA:HB3 | 2.08 | 0.53 |
| 1:B:96:ALA:CB | 1:B:97:VAL:HG23 | 2.25 | 0.53 |
| 1:B:238:ALA:N | 1:B:266:LYS:HB2 | 2.23 | 0.53 |
| 1:B:307:ILE:HD11 | 1:B:310:LEU:HD12 | 1.90 | 0.53 |
| 1:D:8:LEU:CD2 | 1:D:12:MET:HB3 | 2.39 | 0.53 |
| 1:D:12:MET:CG | 1:D:494:ILE:HG21 | 2.37 | 0.53 |
| 1:D:34:THR:HG23 | 1:D:35:VAL:HG13 | 1.90 | 0.53 |
| 1:D:236:ASN:ND2 | 1:D:289:LYS:NZ | 2.56 | 0.53 |
| 1:D:431:ILE:HD11 | 1:M:402:GLY:C | 2.27 | 0.53 |
| 1:E:106:LYS:HE3 | 1:E:109:GLU:CD | 2.28 | 0.53 |
| 1:E:106:LYS:CA | 1:E:106:LYS:CE | 2.80 | 0.53 |
| 1:E:459:GLU:HB3 | 1:E:461:MET:CE | 2.39 | 0.53 |
| 1:F:384:SER:HB3 | 1:F:441:HIS:HE1 | 1.74 | 0.53 |
| 1:F:389:LEU:CD1 | 1:F:415:LEU:HD13 | 2.38 | 0.53 |
| 1:G:456:GLY:O | 1:G:457:ALA:HB2 | 2.09 | 0.53 |
| 1:I:101:GLY:O | 1:I:104:LEU:HB2 | 2.08 | 0.53 |
| 1:I:197:LYS:O | 1:I:197:LYS:HG2 | 2.09 | 0.53 |
| 1:I:250:MET:HE2 | 1:I:308:LYS:HB3 | 1.89 | 0.53 |
| 1:J:69:SER:CB | 1:K:9:PRO:CA | 2.79 | 0.53 |
| 1:J:218:ARG:HH11 | 1:J:218:ARG:HG2 | 1.73 | 0.53 |
| 1:J:248:LYS:CG | 1:J:275:TYR:CE2 | 2.91 | 0.53 |
| 1:J:391:MET:CE | 1:J:438:ARG:CG | 2.86 | 0.53 |
| 1:J:391:MET:CE | 1:J:438:ARG:HD2 | 2.34 | 0.53 |
| 1:K:193:ILE:HD12 | 1:K:366:VAL:CG1 | 2.36 | 0.53 |
| 1:L:42:LYS:HE3 | 1:L:426:ALA:CA | 2.37 | 0.53 |
| 1:L:150:LEU:HD23 | 1:L:175:VAL:CG1 | 2.29 | 0.53 |
| 1:L:235:LEU:HD11 | 1:L:239:ILE:HG21 | 1.90 | 0.53 |
| 1:L:448:CYS:HB2 | 1:L:460:ASP:CG | 2.29 | 0.53 |
| 1:M:299:THR:HG22 | 1:M:334:VAL:HG11 | 1.85 | 0.53 |
| 1:N:69:SER:CB | 1:O:9:PRO:CB | 2.71 | 0.53 |
| 1:N:81:VAL:HG11 | 1:N:483:SER:OG | 2.07 | 0.53 |
| 1:N:139:ALA:CB | 1:N:377:ARG:CD | 2.77 | 0.53 |
| 1:N:190:LYS:HZ3 | 1:N:367:GLY:HA2 | 1.72 | 0.53 |
| 1:N:254:ILE:HG21 | 1:N:262:LEU:HD13 | 1.89 | 0.53 |
| 1:O:36:ARG:HG3 | 1:O:37:SER:OG | 2.09 | 0.53 |
| 1:P:95:THR:O | 1:P:99:VAL:HG22 | 2.08 | 0.53 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:CD1 | 2.82 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:15:TYR:CE1 | 1:A:23:MET:SD | 3.02 | 0.53 |
| 1:A:212:VAL:HB | 1:A:298:ALA:HB3 | 1.90 | 0.53 |
| 1:A:338:LYS:HD2 | 1:A:339:HIS:HB3 | 1.91 | 0.53 |
| 1:B:234:LEU:CD1 | 1:B:296:ALA:HB2 | 2.38 | 0.53 |
| 1:B:235:LEU:H | 1:B:292:MET:HE1 | 1.74 | 0.53 |
| 1:C:122:LYS:HD2 | 1:C:125:GLN:HE22 | 1.73 | 0.53 |
| 1:D:450:GLY:O | 1:D:458:VAL:HA | 2.07 | 0.53 |
| 1:E:403:ARG:HB3 | 1:E:406:LEU:HD13 | 1.85 | 0.53 |
| 1:F:124:TYR:CD1 | 1:F:124:TYR:N | 2.70 | 0.53 |
| 1:F:170:LEU:HD11 | 1:F:358:VAL:HG11 | 1.90 | 0.53 |
| 1:F:234:LEU:HD11 | 1:F:296:ALA:HA | 1.90 | 0.53 |
| 1:F:379:VAL:CG2 | 1:F:380:SER:N | 2.72 | 0.53 |
| 1:G:116:HIS:CG | 1:H:425:ASN:O | 2.61 | 0.53 |
| 1:G:235:LEU:HD11 | 1:G:307:ILE:CB | 2.38 | 0.53 |
| 1:G:452:ASN:OD1 | 1:G:454:PHE:HD2 | 1.92 | 0.53 |
| 1:I:135:LEU:HD13 | 1:I:138:ILE:HD11 | 1.90 | 0.53 |
| 1:J:12:MET:HE3 | 1:J:494:ILE:CG2 | 2.32 | 0.53 |
| 1:J:173:ILE:HD12 | 1:J:345:MET:CG | 2.38 | 0.53 |
| 1:J:248:LYS:HD2 | 1:J:275:TYR:OH | 2.07 | 0.53 |
| 1:K:39:LEU:HG | 1:K:40:GLY:N | 2.24 | 0.53 |
| 1:K:130:LYS:CG | 1:K:393:LEU:CD2 | 2.85 | 0.53 |
| 1:K:296:ALA:HB1 | 1:K:301:ALA:O | 2.09 | 0.53 |
| 1:K:448:CYS:HB3 | 1:K:460:ASP:HA | 1.91 | 0.53 |
| 1:L:298:ALA:O | 1:L:337:CYS:HB3 | 2.08 | 0.53 |
| 1:L:379:VAL:HG22 | 1:L:380:SER:N | 2.18 | 0.53 |
| 1:L:393:LEU:HA | 1:L:396:TYR:HB3 | 1.89 | 0.53 |
| 1:M:115:VAL:HG11 | 1:M:403:ARG:NH1 | 2.23 | 0.53 |
| 1:M:177:ALA:CB | 1:M:208:LEU:CD1 | 2.81 | 0.53 |
| 1:M:239:ILE:N | 1:M:307:ILE:HG21 | 2.24 | 0.53 |
| 1:O:119:ILE:CD1 | 1:O:403:ARG:HG3 | 2.39 | 0.53 |
| 1:O:130:LYS:HE3 | 1:O:396:TYR:CD1 | 2.43 | 0.53 |
| 1:O:223:MET:HE2 | 1:O:276:LEU:CA | 2.39 | 0.53 |
| 1:O:234:LEU:H | 1:O:315:LEU:CD2 | 2.21 | 0.53 |
| 1:O:236:ASN:O | 1:O:266:LYS:HG2 | 2.08 | 0.53 |
| 1:P:103:LEU:CD2 | 1:P:411:PHE:CE2 | 2.84 | 0.53 |
| 1:P:130:LYS:CE | 1:P:393:LEU:CD2 | 2.86 | 0.53 |
| 1:P:214:VAL:HG12 | 1:P:291:ASP:HB3 | 1.88 | 0.53 |
| 1:A:119:ILE:CD1 | 1:A:403:ARG:HG3 | 2.39 | 0.53 |
| 1:A:196:GLU:OE2 | 1:A:197:LYS:HE3 | 2.08 | 0.53 |
| 1:B:235:LEU:HD21 | 1:B:307:ILE:HG13 | 1.91 | 0.53 |
| 1:C:42:LYS:CG | 1:C:425:ASN:HB2 | 2.39 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:469:PRO:CG | 1:C:472:VAL:CG1 | 2.86 | 0.53 |
| 1:D:8:LEU:HD21 | 1:D:12:MET:HB3 | 1.90 | 0.53 |
| 1:D:262:LEU:HD12 | 1:D:310:LEU:CD1 | 2.38 | 0.53 |
| 1:F:235:LEU:HD21 | 1:F:307:ILE:CG1 | 2.39 | 0.53 |
| 1:G:140:CYS:O | 1:G:140:CYS:SG | 2.66 | 0.53 |
| 1:H:134:LEU:HB3 | 1:H:392:LYS:NZ | 2.24 | 0.53 |
| 1:H:142:VAL:HG13 | 1:H:149:ILE:CG1 | 2.39 | 0.53 |
| 1:H:142:VAL:CG1 | 1:H:378:ILE:HD13 | 2.39 | 0.53 |
| 1:H:181:VAL:CG2 | 1:H:182:VAL:N | 2.71 | 0.53 |
| 1:I:190:LYS:NZ | 1:I:367:GLY:HA2 | 2.24 | 0.53 |
| 1:I:212:VAL:N | 1:I:298:ALA:HB2 | 2.24 | 0.53 |
| 1:I:227:VAL:CG1 | 1:I:228:THR:N | 2.71 | 0.53 |
| 1:I:391:MET:HE1 | 1:I:438:ARG:HB3 | 1.88 | 0.53 |
| 1:J:23:MET:HE3 | 1:J:72:HIS:CE1 | 2.43 | 0.53 |
| 1:J:42:LYS:CD | 1:J:426:ALA:N | 2.71 | 0.53 |
| 1:J:437:VAL:HA | 1:J:458:VAL:HG23 | 1.81 | 0.53 |
| 1:J:448:CYS:O | 1:J:449:ALA:HB2 | 2.08 | 0.53 |
| 1:L:31:ILE:HG21 | 1:L:65:LEU:CG | 2.38 | 0.53 |
| 1:L:115:VAL:HB | 1:L:403:ARG:NE | 2.17 | 0.53 |
| 1:L:181:VAL:HG12 | 1:L:342:ALA:N | 2.22 | 0.53 |
| 1:L:220:SER:HB2 | 1:L:273:GLN:CB | 2.35 | 0.53 |
| 1:M:177:ALA:CB | 1:M:208:LEU:HD11 | 2.37 | 0.53 |
| 1:M:234:LEU:CB | 1:M:292:MET:HE3 | 2.38 | 0.53 |
| 1:N:212:VAL:HG21 | 1:N:294:LYS:HB3 | 1.89 | 0.53 |
| 1:N:222:GLN:HB2 | 1:N:277:ALA:HB3 | 1.90 | 0.53 |
| 1:N:400:ILE:HD11 | 1:N:408:VAL:CG1 | 2.38 | 0.53 |
| 1:O:68:MET:CE | 1:P:12:MET:CE | 2.87 | 0.53 |
| 1:O:117:PRO:O | 1:O:121:VAL:HG22 | 2.09 | 0.53 |
| 1:O:146:ASP:O | 1:O:150:LEU:HD13 | 2.08 | 0.53 |
| 1:O:174:ILE:HG22 | 1:O:362:VAL:HG23 | 0.76 | 0.53 |
| 1:O:210:LYS:O | 1:O:340:PRO:HB3 | 2.08 | 0.53 |
| 1:P:121:VAL:HG11 | 1:P:489:ARG:CD | 2.23 | 0.53 |
| 1:P:262:LEU:HD11 | 1:P:310:LEU:CD2 | 2.36 | 0.53 |
| 1:P:265:GLN:OE1 | 1:P:289:LYS:HG3 | 2.09 | 0.53 |
| 1:P:299:THR:HG23 | 1:P:334:VAL:HG11 | 1.91 | 0.53 |
| 1:A:120:VAL:HG13 | 1:A:121:VAL:N | 2.23 | 0.53 |
| 1:A:197:LYS:HG2 | 1:A:356:GLU:HG2 | 1.91 | 0.53 |
| 1:A:431:ILE:HD12 | 1:J:403:ARG:HD3 | 1.86 | 0.53 |
| 1:C:52:LEU:H | 1:C:52:LEU:HD13 | 1.74 | 0.53 |
| 1:C:220:SER:HB2 | 1:C:273:GLN:HB3 | 1.89 | 0.53 |
| 1:D:127:ALA:CB | 1:D:408:VAL:HG12 | 2.38 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:170:LEU:CD1 | 1:D:361:ALA:HB3 | 2.38 | 0.53 |
| 1:D:234:LEU:HB3 | 1:D:292:MET:HE1 | 1.87 | 0.53 |
| 1:E:35:VAL:CG2 | 1:E:35:VAL:O | 2.54 | 0.53 |
| 1:E:158:ILE:HG21 | 1:E:170:LEU:HD23 | 1.91 | 0.53 |
| 1:E:219:VAL:HG13 | 1:E:220:SER:N | 2.23 | 0.53 |
| 1:E:431:ILE:CD1 | 1:N:403:ARG:HA | 2.37 | 0.53 |
| 1:F:42:LYS:NZ | 1:F:453:VAL:CB | 2.67 | 0.53 |
| 1:F:305:THR:HG22 | 1:F:305:THR:O | 2.09 | 0.53 |
| 1:F:326:ILE:CG1 | 1:F:348:ARG:NH1 | 2.72 | 0.53 |
| 1:F:494:ILE:O | 1:G:49:VAL:HG23 | 2.09 | 0.53 |
| 1:G:70:VAL:HG22 | 1:G:76:LYS:CG | 2.33 | 0.53 |
| 1:G:311:SER:O | 1:G:315:LEU:HD22 | 2.08 | 0.53 |
| 1:H:135:LEU:HD21 | 1:H:385:THR:HG21 | 1.87 | 0.53 |
| 1:H:188:VAL:HG21 | 1:H:373:ILE:HD12 | 1.89 | 0.53 |
| 1:H:235:LEU:CD1 | 1:H:307:ILE:HG22 | 2.37 | 0.53 |
| 1:I:123:GLY:C | 1:I:407:ALA:HB1 | 2.29 | 0.53 |
| 1:I:130:LYS:O | 1:I:130:LYS:HG3 | 2.08 | 0.53 |
| 1:I:267:GLY:CA | 1:I:286:ARG:HH11 | 2.20 | 0.53 |
| 1:I:289:LYS:HA | 1:I:292:MET:HB2 | 1.90 | 0.53 |
| 1:I:440:ALA:O | 1:I:444:ASN:HB2 | 2.08 | 0.53 |
| 1:J:72:HIS:O | 1:J:75:ALA:HB3 | 2.08 | 0.53 |
| 1:J:111:LEU:HD11 | 1:J:488:LEU:HD21 | 1.91 | 0.53 |
| 1:K:190:LYS:NZ | 1:K:367:GLY:HA2 | 2.24 | 0.53 |
| 1:K:383:GLY:HA3 | 1:K:386:GLU:CG | 2.38 | 0.53 |
| 1:L:17:GLY:O | 1:L:21:GLN:HB2 | 2.08 | 0.53 |
| 1:L:112:ASP:O | 1:L:113:GLN:HB2 | 2.08 | 0.53 |
| 1:L:234:LEU:HB3 | 1:L:292:MET:HE1 | 1.91 | 0.53 |
| 1:M:82:ALA:HB1 | 1:M:93:THR:CG2 | 2.36 | 0.53 |
| 1:N:68:MET:HE2 | 1:O:9:PRO:HD3 | 1.90 | 0.53 |
| 1:N:490:ILE:HG22 | 1:N:490:ILE:O | 2.07 | 0.53 |
| 1:O:222:GLN:C | 1:O:277:ALA:HB1 | 2.28 | 0.53 |
| 1:O:368:VAL:CG2 | 1:O:469:PRO:HG2 | 2.39 | 0.53 |
| 1:O:384:SER:O | 1:O:441:HIS:CE1 | 2.62 | 0.53 |
| 1:O:393:LEU:O | 1:O:396:TYR:HB3 | 2.07 | 0.53 |
| 1:P:116:HIS:CD2 | 1:P:117:PRO:HD2 | 2.44 | 0.53 |
| 1:P:170:LEU:HD12 | 1:P:358:VAL:HG13 | 1.91 | 0.53 |
| 1:A:124:TYR:CE1 | 1:A:407:ALA:CA | 2.81 | 0.53 |
| 1:B:358:VAL:O | 1:B:358:VAL:HG12 | 2.07 | 0.53 |
| 1:C:368:VAL:O | 1:C:371:CYS:HB2 | 2.08 | 0.53 |
| 1:D:165:LYS:HE2 | 1:D:165:LYS:CA | 2.00 | 0.53 |
| 1:E:239:ILE:N | 1:E:307:ILE:HG23 | 2.24 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:491:ASP:OD1 | 1:E:491:ASP:N | 2.42 | 0.53 |
| 1:F:194:LYS:HB2 | 1:F:294:LYS:CD | 2.39 | 0.53 |
| 1:F:376:GLY:N | 1:F:377:ARG:HB2 | 2.24 | 0.53 |
| 1:H:22:ARG:O | 1:H:25:ILE:HG22 | 2.09 | 0.53 |
| 1:H:31:ILE:HG22 | 1:H:34:THR:OG1 | 2.09 | 0.53 |
| 1:H:115:VAL:HG12 | 1:H:403:ARG:HH21 | 1.73 | 0.53 |
| 1:H:247:LEU:HD21 | 1:H:269:ASP:HB3 | 1.91 | 0.53 |
| 1:H:416:GLU:OE2 | 1:H:434:LEU:HD12 | 2.08 | 0.53 |
| 1:I:130:LYS:HE3 | 1:I:134:LEU:HD21 | 1.90 | 0.53 |
| 1:J:105:ARG:HG2 | 1:J:106:LYS:N | 2.19 | 0.53 |
| 1:K:96:ALA:CA | 1:K:480:ALA:CB | 2.87 | 0.53 |
| 1:K:100:ALA:CB | 1:K:484:THR:CG2 | 2.67 | 0.53 |
| 1:K:235:LEU:CG | 1:K:310:LEU:HG | 2.38 | 0.53 |
| 1:M:30:ILE:HG22 | 1:M:31:ILE:CD1 | 2.39 | 0.53 |
| 1:M:42:LYS:HZ3 | 1:M:453:VAL:HB | 1.72 | 0.53 |
| 1:M:57:VAL:O | 1:M:58:THR:CG2 | 2.57 | 0.53 |
| 1:M:142:VAL:HG11 | 1:M:149:ILE:HG21 | 1.90 | 0.53 |
| 1:N:383:GLY:CA | 1:N:386:GLU:HG2 | 2.38 | 0.53 |
| 1:O:405:GLN:HG2 | 1:O:406:LEU:HG | 1.90 | 0.53 |
| 1:P:178:VAL:HG22 | 1:P:193:ILE:CD1 | 2.38 | 0.53 |
| 1:P:211:GLY:HA2 | 1:P:337:CYS:SG | 2.49 | 0.53 |
| 1:A:219:VAL:CG2 | 1:A:273:GLN:HG2 | 2.39 | 0.53 |
| 1:A:276:LEU:CD1 | 1:A:281:ILE:CD1 | 2.79 | 0.53 |
| 1:A:299:THR:HG23 | 1:A:334:VAL:HG11 | 1.89 | 0.53 |
| 1:B:113:GLN:NE2 | 1:B:113:GLN:H | 2.07 | 0.53 |
| 1:B:139:ALA:CB | 1:B:377:ARG:HD2 | 2.39 | 0.53 |
| 1:B:235:LEU:CG | 1:B:307:ILE:HG13 | 2.38 | 0.53 |
| 1:B:364:ASP:O | 1:B:368:VAL:HG22 | 2.09 | 0.53 |
| 1:C:121:VAL:CG1 | 1:C:488:LEU:CD2 | 2.87 | 0.53 |
| 1:C:384:SER:OG | 1:C:441:HIS:HE1 | 1.91 | 0.53 |
| 1:D:197:LYS:CB | 1:D:355:ILE:HG13 | 2.39 | 0.53 |
| 1:E:124:TYR:OH | 1:E:407:ALA:HA | 2.08 | 0.53 |
| 1:F:79:ILE:O | 1:F:79:ILE:HG13 | 2.09 | 0.53 |
| 1:F:113:GLN:O | 1:F:113:GLN:HG2 | 2.08 | 0.53 |
| 1:F:461:MET:HE2 | 1:F:461:MET:N | 2.19 | 0.53 |
| 1:G:48:LEU:HB2 | 1:G:56:VAL:HG23 | 1.87 | 0.53 |
| 1:G:214:VAL:HG12 | 1:G:291:ASP:CG | 2.28 | 0.53 |
| 1:G:326:ILE:CG1 | 1:G:348:ARG:NH1 | 2.72 | 0.53 |
| 1:H:42:LYS:HB2 | 1:H:425:ASN:HD22 | 1.73 | 0.53 |
| 1:H:234:LEU:HB3 | 1:H:292:MET:HE1 | 1.91 | 0.53 |
| 1:H:389:LEU:O | 1:H:393:LEU:HD22 | 2.09 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:31:ILE:HB | 1:I:34:THR:OG1 | 2.08 | 0.53 |
| 1:I:115:VAL:HG21 | 1:I:403:ARG:HD3 | 1.91 | 0.53 |
| 1:I:138:ILE:O | 1:I:138:ILE:HG13 | 2.08 | 0.53 |
| 1:I:138:ILE:HD12 | 1:I:385:THR:HA | 1.90 | 0.53 |
| 1:I:368:VAL:HG21 | 1:I:469:PRO:CG | 2.28 | 0.53 |
| 1:I:368:VAL:CB | 1:I:469:PRO:CG | 2.87 | 0.53 |
| 1:L:124:TYR:CE1 | 1:L:407:ALA:CB | 2.91 | 0.53 |
| 1:L:307:ILE:HD12 | 1:L:310:LEU:HB3 | 1.91 | 0.53 |
| 1:L:420:ARG:NH1 | 1:L:420:ARG:CG | 2.71 | 0.53 |
| 1:L:464:ASN:HB2 | 1:L:466:VAL:HG22 | 1.91 | 0.53 |
| 1:M:234:LEU:O | 1:M:304:ILE:HG12 | 2.09 | 0.53 |
| 1:M:264:CYS:HB2 | 1:M:266:LYS:O | 2.08 | 0.53 |
| 1:M:307:ILE:C | 1:M:307:ILE:CD1 | 2.70 | 0.53 |
| 1:N:190:LYS:NZ | 1:N:367:GLY:CA | 2.72 | 0.53 |
| 1:N:418:ILE:CB | 1:N:419:PRO:HD3 | 2.39 | 0.53 |
| 1:O:117:PRO:O | 1:O:120:VAL:HG12 | 2.08 | 0.53 |
| 1:P:89:VAL:O | 1:P:89:VAL:CG2 | 2.57 | 0.53 |
| 1:P:119:ILE:HD12 | 1:P:403:ARG:CB | 2.35 | 0.53 |
| 1:P:239:ILE:CA | 1:P:307:ILE:HG21 | 2.39 | 0.53 |
| 1:A:150:LEU:CD2 | 1:A:175:VAL:HG13 | 2.32 | 0.53 |
| 1:A:152:LYS:NZ | 1:A:465:GLY:HA2 | 2.23 | 0.53 |
| 1:B:364:ASP:O | 1:B:368:VAL:HG13 | 2.09 | 0.53 |
| 1:C:223:MET:N | 1:C:277:ALA:HB1 | 2.24 | 0.53 |
| 1:C:383:GLY:O | 1:C:387:VAL:HG22 | 2.09 | 0.53 |
| 1:D:124:TYR:CE1 | 1:D:407:ALA:O | 2.61 | 0.53 |
| 1:D:156:THR:CG2 | 1:D:468:GLU:CB | 2.84 | 0.53 |
| 1:G:14:ARG:NH1 | 1:H:34:THR:HA | 2.24 | 0.53 |
| 1:G:214:VAL:HG11 | 1:G:295:LEU:HD11 | 1.90 | 0.53 |
| 1:G:391:MET:CE | 1:G:438:ARG:HG2 | 2.37 | 0.53 |
| 1:H:22:ARG:CA | 1:H:25:ILE:HD12 | 2.30 | 0.53 |
| 1:H:406:LEU:HD12 | 1:H:406:LEU:H | 1.74 | 0.53 |
| 1:I:13:LYS:HE2 | 1:I:15:TYR:OH | 2.09 | 0.53 |
| 1:I:42:LYS:CB | 1:I:425:ASN:CB | 2.76 | 0.53 |
| 1:I:64:ILE:CG2 | 1:I:65:LEU:CD2 | 2.87 | 0.53 |
| 1:I:82:ALA:HB1 | 1:I:93:THR:HG22 | 1.90 | 0.53 |
| 1:I:235:LEU:HD22 | 1:I:307:ILE:CA | 2.38 | 0.53 |
| 1:I:248:LYS:CD | 1:I:275:TYR:CZ | 2.92 | 0.53 |
| 1:J:31:ILE:CG2 | 1:J:65:LEU:HD21 | 2.39 | 0.53 |
| 1:J:437:VAL:HG21 | 1:J:451:LEU:CD2 | 2.39 | 0.53 |
| 1:K:82:ALA:HB1 | 1:K:93:THR:HG22 | 1.90 | 0.53 |
| 1:K:110:LEU:C | 1:K:112:ASP:N | 2.63 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:113:GLN:HE21 | 1:K:113:GLN:N | 2.06 | 0.53 |
| 1:K:139:ALA:HB1 | 1:K:141:GLU:OE2 | 2.09 | 0.53 |
| 1:K:340:PRO:O | 1:K:340:PRO:CD | 2.57 | 0.53 |
| 1:K:421:THR:HG22 | 1:K:424:GLU:OE1 | 2.09 | 0.53 |
| 1:M:381:GLY:HA3 | 1:M:461:MET:CB | 2.39 | 0.53 |
| 1:M:387:VAL:O | 1:M:390:SER:HB3 | 2.09 | 0.53 |
| 1:N:63:THR:CG2 | 1:N:63:THR:O | 2.56 | 0.53 |
| 1:P:77:MET:CE | 1:P:487:LEU:CD1 | 2.84 | 0.53 |
| 1:P:153:ILE:CG2 | 1:P:469:PRO:CG | 2.83 | 0.53 |
| 1:A:31:ILE:HA | 1:A:34:THR:OG1 | 2.09 | 0.53 |
| 1:A:62:VAL:CG1 | 1:A:63:THR:N | 2.65 | 0.53 |
| 1:A:135:LEU:HD11 | 1:A:385:THR:HG21 | 1.86 | 0.53 |
| 1:B:113:GLN:NE2 | 1:B:113:GLN:CA | 2.67 | 0.53 |
| 1:B:117:PRO:HA | 1:B:120:VAL:HG13 | 1.90 | 0.53 |
| 1:B:178:VAL:CG1 | 1:B:188:VAL:CG1 | 2.82 | 0.53 |
| 1:B:197:LYS:CA | 1:B:355:ILE:HD13 | 2.38 | 0.53 |
| 1:C:14:ARG:CZ | 1:C:494:ILE:CD1 | 2.88 | 0.53 |
| 1:C:158:ILE:O | 1:C:158:ILE:HG23 | 2.07 | 0.53 |
| 1:C:166:ALA:CB | 1:C:203:ILE:HG22 | 2.39 | 0.53 |
| 1:C:173:ILE:HD13 | 1:C:206:THR:O | 2.08 | 0.53 |
| 1:C:188:VAL:HG21 | 1:C:370:GLY:HA2 | 1.91 | 0.53 |
| 1:D:206:THR:HG22 | 1:D:348:ARG:H | 1.74 | 0.53 |
| 1:E:291:ASP:O | 1:E:295:LEU:HD12 | 2.09 | 0.53 |
| 1:F:122:LYS:C | 1:F:404:GLU:HG3 | 2.29 | 0.53 |
| 1:G:358:VAL:O | 1:G:362:VAL:CG1 | 2.56 | 0.53 |
| 1:H:18:ARG:HA | 1:H:21:GLN:OE1 | 2.09 | 0.53 |
| 1:H:122:LYS:HG3 | 1:H:125:GLN:HE22 | 1.74 | 0.53 |
| 1:H:219:VAL:CG1 | 1:H:283:ALA:HB3 | 2.38 | 0.53 |
| 1:I:122:LYS:HA | 1:I:125:GLN:CD | 2.29 | 0.53 |
| 1:K:397:ALA:C | 1:K:399:GLY:H | 2.12 | 0.53 |
| 1:K:400:ILE:CD1 | 1:K:408:VAL:HG11 | 2.39 | 0.53 |
| 1:L:166:ALA:HB2 | 1:L:203:ILE:CB | 2.38 | 0.53 |
| 1:L:211:GLY:CA | 1:L:337:CYS:SG | 2.97 | 0.53 |
| 1:M:182:VAL:O | 1:M:182:VAL:HG22 | 2.08 | 0.53 |
| 1:M:234:LEU:CB | 1:M:292:MET:CE | 2.77 | 0.53 |
| 1:N:263:PHE:CG | 1:N:295:LEU:HD13 | 2.42 | 0.53 |
| 1:O:31:ILE:HG22 | 1:O:65:LEU:HD21 | 1.91 | 0.53 |
| 1:O:420:ARG:HG2 | 1:O:420:ARG:NH1 | 2.24 | 0.53 |
| 1:O:420:ARG:O | 1:O:423:ALA:HB3 | 2.08 | 0.53 |
| 1:P:233:ALA:HB2 | 1:P:315:LEU:HD11 | 1.91 | 0.53 |
| 1:P:247:LEU:HD11 | 1:P:272:ALA:CB | 2.35 | 0.53 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:434:LEU:H | 1:P:434:LEU:HD23 | 1.74 | 0.53 |
| 1:A:121:VAL:HG23 | 1:A:122:LYS:H | 1.75 | 0.52 |
| 1:B:431:ILE:HD11 | 1:K:402:GLY:C | 2.29 | 0.52 |
| 1:C:235:LEU:HG | 1:C:307:ILE:HG13 | 1.90 | 0.52 |
| 1:C:286:ARG:HH11 | 1:C:286:ARG:CG | 2.21 | 0.52 |
| 1:D:296:ALA:HA | 1:D:301:ALA:HB3 | 1.90 | 0.52 |
| 1:E:71:GLU:HG3 | 1:E:72:HIS:N | 2.22 | 0.52 |
| 1:E:459:GLU:CB | 1:E:461:MET:HE2 | 2.39 | 0.52 |
| 1:F:194:LYS:C | 1:F:195:ILE:CG2 | 2.77 | 0.52 |
| 1:H:77:MET:HB3 | 1:H:487:LEU:CD1 | 2.39 | 0.52 |
| 1:H:104:LEU:HD22 | 1:H:488:LEU:HD12 | 1.90 | 0.52 |
| 1:I:115:VAL:CG2 | 1:I:403:ARG:HE | 2.18 | 0.52 |
| 1:I:140:CYS:HB2 | 1:I:447:LYS:HB3 | 1.91 | 0.52 |
| 1:J:158:ILE:HG22 | 1:J:164:GLU:HA | 1.92 | 0.52 |
| 1:J:304:ILE:HD11 | 1:J:310:LEU:HB2 | 1.91 | 0.52 |
| 1:J:368:VAL:HG11 | 1:J:469:PRO:CB | 2.37 | 0.52 |
| 1:J:368:VAL:CB | 1:J:469:PRO:HG3 | 2.29 | 0.52 |
| 1:K:123:GLY:O | 1:K:408:VAL:HG12 | 2.10 | 0.52 |
| 1:K:380:SER:HB3 | 1:K:384:SER:OG | 2.09 | 0.52 |
| 1:K:423:ALA:O | 1:K:426:ALA:HB3 | 2.08 | 0.52 |
| 1:L:211:GLY:CA | 1:L:298:ALA:HB1 | 2.39 | 0.52 |
| 1:N:116:HIS:HE1 | 1:N:118:THR:CB | 2.22 | 0.52 |
| 1:N:156:THR:HG21 | 1:N:468:GLU:N | 2.23 | 0.52 |
| 1:N:216:LYS:O | 1:N:332:ILE:HG13 | 2.09 | 0.52 |
| 1:O:119:ILE:HD12 | 1:O:403:ARG:CD | 2.39 | 0.52 |
| 1:O:381:GLY:HA3 | 1:O:461:MET:CG | 2.39 | 0.52 |
| 1:P:193:ILE:CD1 | 1:P:366:VAL:HG21 | 2.39 | 0.52 |
| 1:P:400:ILE:HD11 | 1:P:408:VAL:HG21 | 1.91 | 0.52 |
| 1:P:449:ALA:CB | 1:P:458:VAL:CG2 | 2.84 | 0.52 |
| 1:A:339:HIS:CG | 1:A:339:HIS:O | 2.63 | 0.52 |
| 1:A:494:ILE:HD12 | 1:B:48:LEU:HD23 | 1.90 | 0.52 |
| 1:B:202:SER:OG | 1:B:203:ILE:HG12 | 2.10 | 0.52 |
| 1:D:178:VAL:HG13 | 1:D:188:VAL:HG11 | 1.91 | 0.52 |
| 1:D:191:ASP:O | 1:D:294:LYS:HE3 | 2.09 | 0.52 |
| 1:D:394:ARG:O | 1:D:397:ALA:HB3 | 2.10 | 0.52 |
| 1:E:9:PRO:CA | 1:F:69:SER:CB | 2.75 | 0.52 |
| 1:E:12:MET:CE | 1:F:49:VAL:H | 2.22 | 0.52 |
| 1:E:169:LYS:HD3 | 1:E:204:ASP:HB3 | 1.91 | 0.52 |
| 1:E:196:GLU:OE2 | 1:E:197:LYS:HG2 | 2.09 | 0.52 |
| 1:E:206:THR:CG2 | 1:E:347:ILE:CG2 | 2.87 | 0.52 |
| 1:F:192:LEU:HB3 | 1:F:342:ALA:CB | 2.39 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:418:ILE:HB | 1:G:419:PRO:CD | 2.39 | 0.52 |
| 1:H:164:GLU:O | 1:H:164:GLU:HG3 | 2.07 | 0.52 |
| 1:H:376:GLY:O | 1:H:377:ARG:HB2 | 2.08 | 0.52 |
| 1:I:85:GLN:HE21 | 1:I:96:ALA:HB2 | 1.73 | 0.52 |
| 1:I:110:LEU:HD23 | 1:I:110:LEU:N | 2.24 | 0.52 |
| 1:I:153:ILE:CD1 | 1:I:378:ILE:HB | 2.39 | 0.52 |
| 1:J:234:LEU:HB3 | 1:J:292:MET:HE1 | 1.90 | 0.52 |
| 1:J:254:ILE:HD12 | 1:J:276:LEU:HD11 | 1.91 | 0.52 |
| 1:K:173:ILE:HG22 | 1:K:208:LEU:HB2 | 1.91 | 0.52 |
| 1:L:95:THR:O | 1:L:95:THR:CG2 | 2.56 | 0.52 |
| 1:L:237:CYS:HB3 | 1:L:305:THR:O | 2.09 | 0.52 |
| 1:L:307:ILE:HD13 | 1:L:310:LEU:HD22 | 1.91 | 0.52 |
| 1:M:39:LEU:CG | 1:M:40:GLY:N | 2.64 | 0.52 |
| 1:M:70:VAL:HG22 | 1:M:76:LYS:HE3 | 1.91 | 0.52 |
| 1:M:138:ILE:O | 1:M:446:ASN:HB3 | 2.09 | 0.52 |
| 1:M:215:ASP:OD2 | 1:M:331:MET:HE3 | 2.09 | 0.52 |
| 1:M:231:LYS:CD | 1:M:231:LYS:N | 2.72 | 0.52 |
| 1:M:435:VAL:HG12 | 1:M:436:LYS:N | 2.24 | 0.52 |
| 1:M:469:PRO:CG | 1:M:472:VAL:CG1 | 2.87 | 0.52 |
| 1:O:9:PRO:HD2 | 1:O:12:MET:HG2 | 1.90 | 0.52 |
| 1:P:446:ASN:OD1 | 1:P:446:ASN:N | 2.42 | 0.52 |
| 1:A:16:MET:O | 1:A:16:MET:HG3 | 2.09 | 0.52 |
| 1:A:22:ARG:O | 1:A:26:LEU:HB2 | 2.09 | 0.52 |
| 1:A:169:LYS:HG2 | 1:A:204:ASP:O | 2.10 | 0.52 |
| 1:A:232:ILE:HA | 1:A:261:VAL:HB | 1.91 | 0.52 |
| 1:A:235:LEU:HG | 1:A:307:ILE:HD13 | 1.89 | 0.52 |
| 1:A:247:LEU:HD21 | 1:A:269:ASP:HB3 | 1.91 | 0.52 |
| 1:A:368:VAL:HB | 1:A:469:PRO:CB | 2.40 | 0.52 |
| 1:A:389:LEU:HD22 | 1:A:393:LEU:HD11 | 1.92 | 0.52 |
| 1:B:379:VAL:HG22 | 1:B:380:SER:N | 2.24 | 0.52 |
| 1:B:433:ILE:CG2 | 1:B:451:LEU:HD23 | 2.39 | 0.52 |
| 1:C:486:MET:HG2 | 1:C:487:LEU:N | 2.25 | 0.52 |
| 1:D:469:PRO:HG2 | 1:D:472:VAL:CG2 | 2.38 | 0.52 |
| 1:E:119:ILE:HD12 | 1:E:403:ARG:HA | 1.91 | 0.52 |
| 1:E:166:ALA:HB2 | 1:E:203:ILE:CB | 2.32 | 0.52 |
| 1:F:406:LEU:HD12 | 1:F:406:LEU:H | 1.74 | 0.52 |
| 1:F:433:ILE:HG22 | 1:F:434:LEU:CD2 | 2.22 | 0.52 |
| 1:G:197:LYS:C | 1:G:355:ILE:HD13 | 2.30 | 0.52 |
| 1:G:403:ARG:HG3 | 1:G:403:ARG:NH1 | 2.20 | 0.52 |
| 1:G:491:ASP:CG | 1:H:44:MET:HG3 | 2.30 | 0.52 |
| 1:H:169:LYS:CG | 1:H:204:ASP:HB3 | 2.25 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:181:VAL:HG23 | 1:H:182:VAL:N | 2.23 | 0.52 |
| 1:H:237:CYS:CB | 1:H:306:ASN:CB | 2.63 | 0.52 |
| 1:H:473:LYS:HA | 1:H:473:LYS:HE3 | 1.91 | 0.52 |
| 1:J:213:LEU:HD11 | 1:J:333:PHE:CE2 | 2.43 | 0.52 |
| 1:K:49:VAL:H | 1:L:12:MET:HE1 | 1.73 | 0.52 |
| 1:K:237:CYS:CA | 1:K:307:ILE:N | 2.72 | 0.52 |
| 1:L:39:LEU:CG | 1:L:40:GLY:H | 2.22 | 0.52 |
| 1:L:68:MET:CG | 1:M:494:ILE:HD12 | 2.40 | 0.52 |
| 1:L:265:GLN:HG2 | 1:L:266:LYS:HZ2 | 1.74 | 0.52 |
| 1:M:174:ILE:HG13 | 1:M:175:VAL:N | 2.23 | 0.52 |
| 1:M:212:VAL:HB | 1:M:298:ALA:HB3 | 1.91 | 0.52 |
| 1:M:233:ALA:HB1 | 1:M:310:LEU:CG | 2.39 | 0.52 |
| 1:M:380:SER:HB3 | 1:M:384:SER:OG | 2.08 | 0.52 |
| 1:N:37:SER:O | 1:N:43:GLY:HA2 | 2.08 | 0.52 |
| 1:N:178:VAL:HG21 | 1:N:366:VAL:CG2 | 2.36 | 0.52 |
| 1:O:93:THR:O | 1:O:97:VAL:HG13 | 2.10 | 0.52 |
| 1:O:119:ILE:HD12 | 1:O:403:ARG:HD2 | 1.90 | 0.52 |
| 1:P:42:LYS:CG | 1:P:426:ALA:N | 2.71 | 0.52 |
| 1:P:156:THR:HG22 | 1:P:468:GLU:HA | 1.91 | 0.52 |
| 1:A:384:SER:HB3 | 1:A:441:HIS:CE1 | 2.44 | 0.52 |
| 1:B:402:GLY:O | 1:B:406:LEU:HD11 | 2.09 | 0.52 |
| 1:B:433:ILE:HA | 1:B:436:LYS:HD2 | 1.91 | 0.52 |
| 1:C:150:LEU:HG | 1:C:175:VAL:HG13 | 1.90 | 0.52 |
| 1:D:62:VAL:H | 1:D:93:THR:HG21 | 1.74 | 0.52 |
| 1:D:134:LEU:HD13 | 1:D:392:LYS:HE3 | 1.91 | 0.52 |
| 1:E:8:LEU:HA | 1:F:68:MET:CG | 2.40 | 0.52 |
| 1:E:177:ALA:C | 1:E:193:ILE:HD11 | 2.29 | 0.52 |
| 1:F:247:LEU:HG | 1:F:272:ALA:HB2 | 1.91 | 0.52 |
| 1:G:14:ARG:NH2 | 1:H:34:THR:HG23 | 2.23 | 0.52 |
| 1:G:219:VAL:HG11 | 1:G:268:ILE:HD12 | 1.91 | 0.52 |
| 1:H:77:MET:SD | 1:H:487:LEU:HD21 | 2.50 | 0.52 |
| 1:H:122:LYS:HA | 1:H:125:GLN:NE2 | 2.25 | 0.52 |
| 1:H:362:VAL:O | 1:H:366:VAL:HG23 | 2.09 | 0.52 |
| 1:I:194:LYS:HG2 | 1:I:195:ILE:N | 2.25 | 0.52 |
| 1:I:234:LEU:CD2 | 1:I:301:ALA:HB3 | 2.39 | 0.52 |
| 1:I:296:ALA:HB1 | 1:I:301:ALA:O | 2.09 | 0.52 |
| 1:J:15:TYR:CD2 | 1:J:19:ASP:HB3 | 2.43 | 0.52 |
| 1:J:159:THR:HG22 | 1:J:164:GLU:OE1 | 2.09 | 0.52 |
| 1:J:236:ASN:O | 1:J:266:LYS:HG3 | 2.09 | 0.52 |
| 1:J:262:LEU:HD11 | 1:J:310:LEU:HD22 | 1.91 | 0.52 |
| 1:K:73:PRO:HA | 1:K:76:LYS:HD3 | 1.90 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:158:ILE:CG2 | 1:K:164:GLU:HA | 2.38 | 0.52 |
| 1:K:212:VAL:HG23 | 1:K:298:ALA:CB | 2.37 | 0.52 |
| 1:L:389:LEU:HD13 | 1:L:415:LEU:HD13 | 1.91 | 0.52 |
| 1:L:460:ASP:CG | 1:L:463:GLU:HB2 | 2.29 | 0.52 |
| 1:M:251:VAL:HG13 | 1:M:276:LEU:CD2 | 2.40 | 0.52 |
| 1:N:158:ILE:CD1 | 1:N:170:LEU:HB3 | 2.39 | 0.52 |
| 1:N:400:ILE:CD1 | 1:N:408:VAL:HG11 | 2.40 | 0.52 |
| 1:N:405:GLN:HG2 | 1:N:406:LEU:HG | 1.92 | 0.52 |
| 1:N:441:HIS:ND1 | 1:N:449:ALA:CB | 2.73 | 0.52 |
| 1:N:448:CYS:HB3 | 1:N:460:ASP:CA | 2.36 | 0.52 |
| 1:O:237:CYS:H | 1:O:306:ASN:HA | 1.74 | 0.52 |
| 1:P:161:LYS:HB3 | 1:P:357:GLU:OE2 | 2.09 | 0.52 |
| 1:P:464:ASN:HB3 | 1:P:466:VAL:HG22 | 1.91 | 0.52 |
| 1:A:134:LEU:HD11 | 1:A:393:LEU:CD2 | 2.38 | 0.52 |
| 1:B:178:VAL:HG22 | 1:B:193:ILE:HD12 | 1.90 | 0.52 |
| 1:B:239:ILE:HG23 | 1:B:268:ILE:HG23 | 1.91 | 0.52 |
| 1:C:102:GLU:HG2 | 1:C:414:ALA:HB1 | 1.90 | 0.52 |
| 1:C:198:LYS:HB3 | 1:C:326:ILE:HG12 | 1.92 | 0.52 |
| 1:C:447:LYS:O | 1:C:448:CYS:HB3 | 2.09 | 0.52 |
| 1:D:150:LEU:HB3 | 1:D:175:VAL:HG21 | 1.90 | 0.52 |
| 1:E:68:MET:H | 1:E:68:MET:HE3 | 1.74 | 0.52 |
| 1:E:223:MET:HE2 | 1:E:283:ALA:CB | 2.39 | 0.52 |
| 1:E:235:LEU:HD22 | 1:E:262:LEU:HD21 | 1.91 | 0.52 |
| 1:E:261:VAL:HA | 1:E:282:VAL:HG12 | 1.90 | 0.52 |
| 1:E:351:THR:HG23 | 1:E:352:GLU:N | 2.25 | 0.52 |
| 1:F:251:VAL:CG1 | 1:F:276:LEU:CD2 | 2.69 | 0.52 |
| 1:F:387:VAL:HG21 | 1:F:437:VAL:CG1 | 2.33 | 0.52 |
| 1:G:156:THR:HG21 | 1:G:467:VAL:C | 2.29 | 0.52 |
| 1:G:247:LEU:CD2 | 1:G:272:ALA:HB2 | 2.18 | 0.52 |
| 1:G:262:LEU:HD11 | 1:G:310:LEU:HD23 | 1.89 | 0.52 |
| 1:H:178:VAL:O | 1:H:181:VAL:HG22 | 2.10 | 0.52 |
| 1:H:234:LEU:HD12 | 1:H:301:ALA:HB1 | 1.91 | 0.52 |
| 1:H:234:LEU:CD1 | 1:H:301:ALA:CB | 2.88 | 0.52 |
| 1:J:223:MET:HE3 | 1:J:276:LEU:HB2 | 1.91 | 0.52 |
| 1:K:105:ARG:HH12 | 1:K:106:LYS:HD2 | 1.74 | 0.52 |
| 1:K:248:LYS:HD2 | 1:K:275:TYR:CE2 | 2.45 | 0.52 |
| 1:L:48:LEU:CA | 1:L:56:VAL:CG2 | 2.87 | 0.52 |
| 1:L:368:VAL:CG2 | 1:L:469:PRO:HG3 | 2.40 | 0.52 |
| 1:M:178:VAL:O | 1:M:178:VAL:HG23 | 2.10 | 0.52 |
| 1:M:433:ILE:HA | 1:M:436:LYS:HZ3 | 1.74 | 0.52 |
| 1:N:42:LYS:HG3 | 1:N:425:ASN:HB2 | 1.92 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:223:MET:CB | 1:N:282:VAL:HA | 2.37 | 0.52 |
| 1:O:18:ARG:HB3 | 1:O:18:ARG:HH21 | 1.74 | 0.52 |
| 1:O:146:ASP:O | 1:O:150:LEU:HB2 | 2.08 | 0.52 |
| 1:O:251:VAL:HG13 | 1:O:276:LEU:HD22 | 1.92 | 0.52 |
| 1:P:115:VAL:CG1 | 1:P:403:ARG:CZ | 2.87 | 0.52 |
| 1:A:88:GLU:CD | 1:A:475:GLN:CG | 2.70 | 0.52 |
| 1:A:307:ILE:CD1 | 1:A:310:LEU:CD2 | 2.87 | 0.52 |
| 1:B:42:LYS:HZ2 | 1:B:453:VAL:HB | 1.75 | 0.52 |
| 1:B:494:ILE:HG22 | 1:C:48:LEU:HD23 | 1.91 | 0.52 |
| 1:C:14:ARG:NH1 | 1:C:494:ILE:CD1 | 2.73 | 0.52 |
| 1:C:50:ASP:OD2 | 1:C:52:LEU:HD22 | 2.09 | 0.52 |
| 1:C:77:MET:HE2 | 1:C:486:MET:CE | 2.40 | 0.52 |
| 1:C:461:MET:HB2 | 1:C:466:VAL:HG23 | 1.91 | 0.52 |
| 1:E:12:MET:HA | 1:E:495:ALA:C | 2.30 | 0.52 |
| 1:E:27:ALA:HA | 1:E:30:ILE:HD12 | 1.91 | 0.52 |
| 1:E:102:GLU:C | 1:E:104:LEU:N | 2.63 | 0.52 |
| 1:E:235:LEU:CG | 1:E:310:LEU:CD1 | 2.77 | 0.52 |
| 1:F:248:LYS:CD | 1:F:275:TYR:CE2 | 2.90 | 0.52 |
| 1:G:31:ILE:CG2 | 1:G:65:LEU:CD1 | 2.88 | 0.52 |
| 1:G:98:VAL:HG12 | 1:G:99:VAL:CG1 | 2.37 | 0.52 |
| 1:G:400:ILE:HD11 | 1:G:408:VAL:HG11 | 1.91 | 0.52 |
| 1:G:452:ASN:OD1 | 1:G:454:PHE:CD2 | 2.63 | 0.52 |
| 1:H:465:GLY:O | 1:H:466:VAL:HG13 | 2.10 | 0.52 |
| 1:I:48:LEU:HB2 | 1:I:56:VAL:HG23 | 1.82 | 0.52 |
| 1:I:433:ILE:HG22 | 1:I:451:LEU:CD2 | 2.40 | 0.52 |
| 1:J:39:LEU:CG | 1:J:40:GLY:H | 2.04 | 0.52 |
| 1:J:192:LEU:N | 1:J:192:LEU:CD1 | 2.71 | 0.52 |
| 1:J:420:ARG:O | 1:J:423:ALA:HB3 | 2.10 | 0.52 |
| 1:K:30:ILE:HG22 | 1:K:31:ILE:N | 2.24 | 0.52 |
| 1:K:219:VAL:HG12 | 1:K:223:MET:SD | 2.50 | 0.52 |
| 1:K:372:THR:HA | 1:K:375:ASP:O | 2.10 | 0.52 |
| 1:L:212:VAL:CG2 | 1:L:294:LYS:O | 2.57 | 0.52 |
| 1:M:196:GLU:CG | 1:M:331:MET:HE1 | 2.39 | 0.52 |
| 1:N:69:SER:OG | 1:O:9:PRO:HA | 2.10 | 0.52 |
| 1:N:139:ALA:HB1 | 1:N:377:ARG:HG3 | 1.92 | 0.52 |
| 1:N:233:ALA:CB | 1:N:315:LEU:CG | 2.88 | 0.52 |
| 1:O:188:VAL:HB | 1:O:370:GLY:HA2 | 1.92 | 0.52 |
| 1:O:230:ALA:HB1 | 1:O:261:VAL:HG23 | 1.91 | 0.52 |
| 1:P:347:ILE:HG21 | 1:P:358:VAL:HG11 | 1.89 | 0.52 |
| 1:P:418:ILE:CB | 1:P:419:PRO:HD3 | 2.38 | 0.52 |
| 1:A:12:MET:CE | 1:B:68:MET:CG | 2.86 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:118:THR:HG23 | 1:C:121:VAL:CG2 | 2.40 | 0.52 |
| 1:C:176:GLU:HB3 | 1:C:208:LEU:CD2 | 2.40 | 0.52 |
| 1:C:254:ILE:CG2 | 1:C:262:LEU:HD13 | 2.40 | 0.52 |
| 1:D:8:LEU:CG | 1:D:12:MET:HG2 | 2.40 | 0.52 |
| 1:D:251:VAL:HG13 | 1:D:276:LEU:CD2 | 2.39 | 0.52 |
| 1:E:152:LYS:HZ3 | 1:E:462:CYS:CB | 2.17 | 0.52 |
| 1:F:117:PRO:HA | 1:F:120:VAL:CG1 | 2.39 | 0.52 |
| 1:F:235:LEU:CD1 | 1:F:310:LEU:HD22 | 2.40 | 0.52 |
| 1:F:237:CYS:C | 1:F:266:LYS:HB2 | 2.31 | 0.52 |
| 1:F:254:ILE:O | 1:F:254:ILE:CG2 | 2.56 | 0.52 |
| 1:F:347:ILE:CG2 | 1:F:358:VAL:CG1 | 2.83 | 0.52 |
| 1:F:418:ILE:HB | 1:F:419:PRO:CD | 2.40 | 0.52 |
| 1:G:12:MET:CE | 1:H:68:MET:CA | 2.75 | 0.52 |
| 1:G:173:ILE:CD1 | 1:G:206:THR:OG1 | 2.58 | 0.52 |
| 1:G:174:ILE:HG22 | 1:G:362:VAL:HG23 | 1.91 | 0.52 |
| 1:H:35:VAL:HG13 | 1:H:46:LYS:HZ2 | 1.73 | 0.52 |
| 1:H:166:ALA:HB3 | 1:H:203:ILE:CB | 2.38 | 0.52 |
| 1:H:263:PHE:CD2 | 1:H:295:LEU:CD2 | 2.93 | 0.52 |
| 1:I:48:LEU:HG | 1:I:68:MET:CE | 2.39 | 0.52 |
| 1:J:115:VAL:HG23 | 1:J:119:ILE:HB | 1.90 | 0.52 |
| 1:J:158:ILE:HD13 | 1:J:170:LEU:HB3 | 1.81 | 0.52 |
| 1:K:15:TYR:HB3 | 1:K:19:ASP:HB3 | 1.92 | 0.52 |
| 1:K:85:GLN:HE22 | 1:K:479:SER:CB | 2.22 | 0.52 |
| 1:K:276:LEU:CD1 | 1:K:281:ILE:CD1 | 2.88 | 0.52 |
| 1:K:299:THR:CG2 | 1:K:334:VAL:CG1 | 2.87 | 0.52 |
| 1:K:431:ILE:O | 1:K:431:ILE:CD1 | 2.46 | 0.52 |
| 1:L:254:ILE:HG23 | 1:L:262:LEU:HD12 | 1.91 | 0.52 |
| 1:M:156:THR:HB | 1:M:467:VAL:O | 2.09 | 0.52 |
| 1:M:237:CYS:CB | 1:M:306:ASN:HB2 | 2.40 | 0.52 |
| 1:M:461:MET:CB | 1:M:466:VAL:HG23 | 2.40 | 0.52 |
| 1:N:267:GLY:O | 1:N:268:ILE:HG12 | 2.10 | 0.52 |
| 1:O:379:VAL:HG22 | 1:O:380:SER:H | 1.73 | 0.52 |
| 1:P:63:THR:HA | 1:P:66:ARG:CG | 2.39 | 0.52 |
| 1:P:134:LEU:CD1 | 1:P:393:LEU:CD2 | 2.86 | 0.52 |
| 1:P:220:SER:HB3 | 1:P:223:MET:SD | 2.50 | 0.52 |
| 1:A:14:ARG:CZ | 1:B:34:THR:HA | 2.36 | 0.52 |
| 1:A:416:GLU:O | 1:A:420:ARG:HB2 | 2.09 | 0.52 |
| 1:B:134:LEU:HD12 | 1:B:393:LEU:CD1 | 2.38 | 0.52 |
| 1:B:150:LEU:O | 1:B:175:VAL:HG21 | 2.08 | 0.52 |
| 1:B:206:THR:CB | 1:B:347:ILE:CG2 | 2.85 | 0.52 |
| 1:C:255:LYS:HG2 | 1:C:279:GLU:CD | 2.29 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:430:ALA:O | 1:C:434:LEU:HD23 | 2.10 | 0.52 |
| 1:D:96:ALA:O | 1:D:480:ALA:HB1 | 2.10 | 0.52 |
| 1:D:220:SER:CB | 1:D:273:GLN:CB | 2.77 | 0.52 |
| 1:E:178:VAL:HG21 | 1:E:366:VAL:CG1 | 2.38 | 0.52 |
| 1:E:326:ILE:HG21 | 1:E:331:MET:SD | 2.50 | 0.52 |
| 1:G:142:VAL:HG11 | 1:G:149:ILE:HD13 | 1.89 | 0.52 |
| 1:G:406:LEU:H | 1:G:406:LEU:HD12 | 1.75 | 0.52 |
| 1:H:106:LYS:HA | 1:H:106:LYS:CE | 2.40 | 0.52 |
| 1:H:237:CYS:SG | 1:H:238:ALA:HB2 | 2.49 | 0.52 |
| 1:I:68:MET:C | 1:J:9:PRO:N | 2.63 | 0.52 |
| 1:I:209:ILE:HD11 | 1:I:213:LEU:HB2 | 1.92 | 0.52 |
| 1:I:236:ASN:HB2 | 1:I:265:GLN:OE1 | 2.10 | 0.52 |
| 1:I:248:LYS:HD2 | 1:I:275:TYR:CZ | 2.44 | 0.52 |
| 1:J:247:LEU:CD1 | 1:J:272:ALA:HB2 | 2.39 | 0.52 |
| 1:J:448:CYS:SG | 1:J:460:ASP:CB | 2.98 | 0.52 |
| 1:K:15:TYR:O | 1:K:20:ALA:HB2 | 2.09 | 0.52 |
| 1:K:34:THR:HG22 | 1:K:34:THR:O | 2.08 | 0.52 |
| 1:K:138:ILE:CG1 | 1:K:385:THR:HG23 | 2.40 | 0.52 |
| 1:K:248:LYS:HE2 | 1:K:275:TYR:CZ | 2.45 | 0.52 |
| 1:K:276:LEU:O | 1:K:281:ILE:HB | 2.10 | 0.52 |
| 1:K:393:LEU:HA | 1:K:396:TYR:HB3 | 1.91 | 0.52 |
| 1:L:31:ILE:HD11 | 1:M:8:LEU:HD12 | 1.91 | 0.52 |
| 1:M:214:VAL:HG11 | 1:M:295:LEU:HD11 | 1.92 | 0.52 |
| 1:O:158:ILE:CD1 | 1:O:167:LYS:HA | 2.36 | 0.52 |
| 1:O:384:SER:CB | 1:O:441:HIS:HE1 | 2.23 | 0.52 |
| 1:O:418:ILE:O | 1:O:422:LEU:HG | 2.09 | 0.52 |
| 1:P:99:VAL:HG13 | 1:P:418:ILE:HD11 | 1.91 | 0.52 |
| 1:P:155:MET:HE3 | 1:P:465:GLY:O | 2.10 | 0.52 |
| 1:A:119:ILE:HD12 | 1:A:403:ARG:HA | 1.91 | 0.52 |
| 1:A:139:ALA:HB3 | 1:A:377:ARG:CG | 2.40 | 0.52 |
| 1:B:178:VAL:HG22 | 1:B:366:VAL:CG1 | 2.39 | 0.52 |
| 1:B:239:ILE:CG2 | 1:B:268:ILE:HG23 | 2.40 | 0.52 |
| 1:C:136:LYS:C | 1:C:139:ALA:HB3 | 2.29 | 0.52 |
| 1:C:157:SER:HB3 | 1:C:365:ALA:HB2 | 1.91 | 0.52 |
| 1:C:233:ALA:HB1 | 1:C:310:LEU:HD12 | 1.85 | 0.52 |
| 1:C:257:SER:CB | 1:C:312:ALA:HB2 | 2.40 | 0.52 |
| 1:C:347:ILE:HG21 | 1:C:358:VAL:HG12 | 1.91 | 0.52 |
| 1:D:9:PRO:HD2 | 1:E:69:SER:O | 2.10 | 0.52 |
| 1:D:117:PRO:HA | 1:D:120:VAL:CG1 | 2.40 | 0.52 |
| 1:D:150:LEU:CD2 | 1:D:175:VAL:HG13 | 2.29 | 0.52 |
| 1:D:178:VAL:HG22 | 1:D:193:ILE:HD11 | 1.91 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:461:MET:SD | 1:D:466:VAL:CG2 | 2.98 | 0.52 |
| 1:E:25:ILE:HD13 | 1:E:108:GLU:CG | 2.39 | 0.52 |
| 1:E:34:THR:HG22 | 1:E:35:VAL:CG1 | 2.29 | 0.52 |
| 1:E:339:HIS:CE1 | 1:E:341:LYS:HD2 | 2.44 | 0.52 |
| 1:E:459:GLU:OE1 | 1:E:459:GLU:CA | 2.57 | 0.52 |
| 1:F:347:ILE:HD12 | 1:F:359:ALA:HB2 | 1.91 | 0.52 |
| 1:G:31:ILE:CG2 | 1:G:65:LEU:HD11 | 2.40 | 0.52 |
| 1:G:178:VAL:O | 1:G:178:VAL:HG12 | 2.08 | 0.52 |
| 1:G:195:ILE:HG21 | 1:G:359:ALA:HB1 | 1.92 | 0.52 |
| 1:G:418:ILE:HB | 1:G:419:PRO:HD3 | 1.91 | 0.52 |
| 1:G:431:ILE:O | 1:G:435:VAL:HG23 | 2.09 | 0.52 |
| 1:G:448:CYS:HB2 | 1:G:460:ASP:CB | 2.40 | 0.52 |
| 1:G:459:GLU:HB2 | 1:G:461:MET:HE1 | 1.84 | 0.52 |
| 1:H:14:ARG:HD2 | 1:H:494:ILE:HG12 | 1.91 | 0.52 |
| 1:H:198:LYS:N | 1:H:355:ILE:HD13 | 2.25 | 0.52 |
| 1:H:310:LEU:CD2 | 1:H:315:LEU:HD21 | 2.40 | 0.52 |
| 1:H:448:CYS:HB2 | 1:H:460:ASP:OD1 | 2.09 | 0.52 |
| 1:I:70:VAL:HA | 1:J:8:LEU:N | 2.25 | 0.52 |
| 1:I:254:ILE:HG12 | 1:I:310:LEU:HD23 | 1.91 | 0.52 |
| 1:J:211:GLY:CA | 1:J:337:CYS:SG | 2.98 | 0.52 |
| 1:K:130:LYS:CD | 1:K:393:LEU:HD23 | 2.40 | 0.52 |
| 1:K:254:ILE:HD12 | 1:K:276:LEU:HD11 | 1.92 | 0.52 |
| 1:L:124:TYR:HD1 | 1:L:407:ALA:HB1 | 1.69 | 0.52 |
| 1:L:265:GLN:HE21 | 1:L:266:LYS:HZ1 | 1.58 | 0.52 |
| 1:M:15:TYR:HD2 | 1:M:19:ASP:HB3 | 1.70 | 0.52 |
| 1:M:93:THR:O | 1:M:97:VAL:HG23 | 2.09 | 0.52 |
| 1:M:158:ILE:HD13 | 1:M:170:LEU:HB2 | 1.91 | 0.52 |
| 1:N:178:VAL:HG21 | 1:N:366:VAL:HG13 | 1.92 | 0.52 |
| 1:O:263:PHE:CE2 | 1:O:295:LEU:HD21 | 2.44 | 0.52 |
| 1:P:139:ALA:CB | 1:P:377:ARG:HD2 | 2.40 | 0.52 |
| 1:P:167:LYS:HG3 | 1:P:168:GLU:N | 2.25 | 0.52 |
| 1:A:25:ILE:HD13 | 1:A:108:GLU:CD | 2.29 | 0.52 |
| 1:A:104:LEU:CD2 | 1:A:488:LEU:HD12 | 2.40 | 0.52 |
| 1:A:170:LEU:HD12 | 1:A:358:VAL:CG1 | 2.39 | 0.52 |
| 1:B:235:LEU:CD1 | 1:B:307:ILE:HD12 | 2.40 | 0.52 |
| 1:C:31:ILE:O | 1:C:35:VAL:HG22 | 2.10 | 0.52 |
| 1:C:51:ASP:HB2 | 1:C:52:LEU:CD1 | 2.39 | 0.52 |
| 1:C:150:LEU:HD23 | 1:C:175:VAL:HG12 | 1.90 | 0.52 |
| 1:D:117:PRO:HA | 1:D:120:VAL:HG11 | 1.91 | 0.52 |
| 1:D:134:LEU:CD1 | 1:D:393:LEU:CD2 | 2.88 | 0.52 |
| 1:D:406:LEU:CD2 | 1:D:406:LEU:N | 2.66 | 0.52 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:9:PRO:HD3 | 1:F:68:MET:HA | 0.73 | 0.52 |
| 1:E:9:PRO:CG | 1:F:68:MET:HE2 | 2.35 | 0.52 |
| 1:E:22:ARG:C | 1:E:24:ASN:H | 2.13 | 0.52 |
| 1:E:198:LYS:HG3 | 1:E:326:ILE:HD13 | 1.91 | 0.52 |
| 1:E:296:ALA:HB1 | 1:E:301:ALA:O | 2.10 | 0.52 |
| 1:F:9:PRO:CD | 1:G:68:MET:CG | 2.85 | 0.52 |
| 1:F:238:ALA:C | 1:F:307:ILE:HG23 | 2.31 | 0.52 |
| 1:F:239:ILE:CD1 | 1:F:254:ILE:HD11 | 2.33 | 0.52 |
| 1:G:31:ILE:O | 1:G:34:THR:HB | 2.10 | 0.52 |
| 1:G:210:LYS:CG | 1:G:343:VAL:HG23 | 2.39 | 0.52 |
| 1:G:235:LEU:HB2 | 1:G:310:LEU:HD13 | 1.92 | 0.52 |
| 1:H:135:LEU:HA | 1:H:138:ILE:HD11 | 1.91 | 0.52 |
| 1:I:29:ARG:O | 1:I:32:ALA:HB3 | 2.09 | 0.52 |
| 1:I:39:LEU:HD11 | 1:I:91:ASP:OD2 | 2.10 | 0.52 |
| 1:I:68:MET:HG2 | 1:J:8:LEU:HD22 | 1.92 | 0.52 |
| 1:I:70:VAL:HA | 1:J:8:LEU:H | 1.75 | 0.52 |
| 1:I:132:GLN:NE2 | 1:I:132:GLN:HA | 2.25 | 0.52 |
| 1:I:212:VAL:N | 1:I:298:ALA:CB | 2.73 | 0.52 |
| 1:K:262:LEU:CD1 | 1:K:310:LEU:CD1 | 2.85 | 0.52 |
| 1:L:42:LYS:HD2 | 1:L:426:ALA:N | 2.25 | 0.52 |
| 1:L:237:CYS:HB3 | 1:L:306:ASN:CA | 2.39 | 0.52 |
| 1:L:254:ILE:CG2 | 1:L:262:LEU:CD1 | 2.84 | 0.52 |
| 1:L:437:VAL:HG11 | 1:L:451:LEU:CD1 | 2.39 | 0.52 |
| 1:M:115:VAL:HG21 | 1:M:119:ILE:CG2 | 2.40 | 0.52 |
| 1:M:414:ALA:O | 1:M:417:VAL:HG23 | 2.10 | 0.52 |
| 1:N:235:LEU:CG | 1:N:307:ILE:HA | 2.38 | 0.52 |
| 1:N:325:LYS:NZ | 1:N:328:GLY:H | 2.08 | 0.52 |
| 1:N:343:VAL:O | 1:N:343:VAL:CG1 | 2.55 | 0.52 |
| 1:N:404:GLU:O | 1:N:408:VAL:HG13 | 2.09 | 0.52 |
| 1:O:216:LYS:HD2 | 1:O:285:ARG:O | 2.10 | 0.52 |
| 1:P:105:ARG:CG | 1:P:106:LYS:N | 2.73 | 0.52 |
| 1:P:158:ILE:HG12 | 1:P:361:ALA:HB1 | 1.91 | 0.52 |
| 1:P:222:GLN:CB | 1:P:277:ALA:HB1 | 2.40 | 0.52 |
| 1:A:77:MET:HE2 | 1:A:486:MET:HE1 | 1.90 | 0.51 |
| 1:A:140:CYS:HB3 | 1:A:446:ASN:CB | 2.37 | 0.51 |
| 1:A:235:LEU:HD21 | 1:A:307:ILE:CA | 2.38 | 0.51 |
| 1:A:339:HIS:NE2 | 1:A:341:LYS:HD2 | 2.25 | 0.51 |
| 1:A:403:ARG:CB | 1:J:431:ILE:HD11 | 2.39 | 0.51 |
| 1:B:78:LEU:CD1 | 1:B:487:LEU:CD2 | 2.83 | 0.51 |
| 1:B:178:VAL:HG22 | 1:B:366:VAL:CG2 | 2.39 | 0.51 |
| 1:C:77:MET:O | 1:C:487:LEU:HD11 | 2.10 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:77:MET:HE2 | 1:D:486:MET:CE | 2.39 | 0.51 |
| 1:D:345:MET:HE2 | 1:D:362:VAL:HG11 | 1.93 | 0.51 |
| 1:D:450:GLY:HA3 | 1:D:459:GLU:HB3 | 1.92 | 0.51 |
| 1:F:461:MET:HG3 | 1:F:466:VAL:O | 2.10 | 0.51 |
| 1:G:70:VAL:CG2 | 1:G:76:LYS:HG3 | 2.40 | 0.51 |
| 1:G:198:LYS:HB3 | 1:G:326:ILE:HD13 | 1.91 | 0.51 |
| 1:G:494:ILE:HG21 | 1:H:68:MET:HG3 | 1.92 | 0.51 |
| 1:H:199:SER:CB | 1:H:327:SER:CB | 2.85 | 0.51 |
| 1:H:235:LEU:HD23 | 1:H:306:ASN:C | 2.31 | 0.51 |
| 1:H:237:CYS:O | 1:H:307:ILE:HG22 | 2.10 | 0.51 |
| 1:H:461:MET:SD | 1:H:466:VAL:HG21 | 2.50 | 0.51 |
| 1:I:42:LYS:HE3 | 1:J:118:THR:HG21 | 1.92 | 0.51 |
| 1:J:12:MET:CG | 1:J:494:ILE:CG2 | 2.68 | 0.51 |
| 1:J:19:ASP:OD1 | 1:J:19:ASP:N | 2.44 | 0.51 |
| 1:J:30:ILE:CG2 | 1:J:31:ILE:HD13 | 2.38 | 0.51 |
| 1:J:77:MET:HB3 | 1:J:80:GLU:OE1 | 2.10 | 0.51 |
| 1:J:134:LEU:HB3 | 1:J:392:LYS:CE | 2.36 | 0.51 |
| 1:K:263:PHE:CD2 | 1:K:295:LEU:CD2 | 2.91 | 0.51 |
| 1:L:31:ILE:HG21 | 1:L:65:LEU:HD21 | 1.92 | 0.51 |
| 1:L:239:ILE:CG2 | 1:L:307:ILE:HB | 2.37 | 0.51 |
| 1:L:433:ILE:CG2 | 1:L:451:LEU:CD2 | 2.87 | 0.51 |
| 1:M:99:VAL:CG1 | 1:M:418:ILE:CD1 | 2.88 | 0.51 |
| 1:M:248:LYS:CE | 1:M:275:TYR:CZ | 2.93 | 0.51 |
| 1:N:115:VAL:CG2 | 1:N:403:ARG:NE | 2.71 | 0.51 |
| 1:N:158:ILE:HG12 | 1:N:361:ALA:CB | 2.30 | 0.51 |
| 1:N:223:MET:HE2 | 1:N:283:ALA:HB3 | 1.91 | 0.51 |
| 1:O:135:LEU:HD21 | 1:O:385:THR:CG2 | 2.40 | 0.51 |
| 1:P:77:MET:HE2 | 1:P:487:LEU:CG | 2.40 | 0.51 |
| 1:P:142:VAL:HG11 | 1:P:378:ILE:HD13 | 1.91 | 0.51 |
| 1:P:153:ILE:HD11 | 1:P:378:ILE:HG22 | 1.92 | 0.51 |
| 1:P:158:ILE:HD12 | 1:P:167:LYS:HA | 1.90 | 0.51 |
| 1:P:178:VAL:HG13 | 1:P:188:VAL:HG11 | 1.90 | 0.51 |
| 1:P:234:LEU:CD1 | 1:P:301:ALA:CB | 2.88 | 0.51 |
| 1:A:235:LEU:HD22 | 1:A:236:ASN:N | 2.24 | 0.51 |
| 1:A:459:GLU:HB3 | 1:A:461:MET:HE1 | 1.92 | 0.51 |
| 1:B:42:LYS:CB | 1:B:425:ASN:HB2 | 2.41 | 0.51 |
| 1:B:73:PRO:HB3 | 1:C:55:VAL:HG11 | 1.92 | 0.51 |
| 1:B:135:LEU:HA | 1:B:138:ILE:CD1 | 2.38 | 0.51 |
| 1:B:142:VAL:HG11 | 1:B:378:ILE:HD13 | 1.90 | 0.51 |
| 1:B:211:GLY:O | 1:B:298:ALA:HB2 | 2.09 | 0.51 |
| 1:B:214:VAL:HG12 | 1:B:291:ASP:HB3 | 1.92 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:486:MET:HG2 | 1:B:487:LEU:N | 2.25 | 0.51 |
| 1:C:239:ILE:HD12 | 1:C:307:ILE:HD11 | 1.85 | 0.51 |
| 1:C:469:PRO:HG2 | 1:C:472:VAL:CG2 | 2.39 | 0.51 |
| 1:D:223:MET:HE2 | 1:D:283:ALA:HB3 | 1.90 | 0.51 |
| 1:D:368:VAL:CG1 | 1:D:469:PRO:HG2 | 2.41 | 0.51 |
| 1:E:178:VAL:CG1 | 1:E:188:VAL:CG1 | 2.70 | 0.51 |
| 1:E:192:LEU:CG | 1:E:342:ALA:HB2 | 2.33 | 0.51 |
| 1:F:235:LEU:CD2 | 1:F:307:ILE:HD13 | 2.39 | 0.51 |
| 1:F:235:LEU:N | 1:F:292:MET:HE1 | 2.25 | 0.51 |
| 1:F:241:GLU:HG3 | 1:F:250:MET:SD | 2.50 | 0.51 |
| 1:H:38:THR:HB | 1:H:46:LYS:HZ2 | 1.74 | 0.51 |
| 1:H:57:VAL:O | 1:H:58:THR:HG23 | 2.09 | 0.51 |
| 1:H:135:LEU:HD23 | 1:H:138:ILE:CD1 | 2.39 | 0.51 |
| 1:I:8:LEU:HD13 | 1:I:494:ILE:CG2 | 2.40 | 0.51 |
| 1:I:177:ALA:HB2 | 1:I:208:LEU:HD21 | 1.92 | 0.51 |
| 1:I:178:VAL:HG22 | 1:I:366:VAL:CG1 | 2.40 | 0.51 |
| 1:J:48:LEU:HD11 | 1:J:64:ILE:HA | 1.93 | 0.51 |
| 1:J:134:LEU:CD1 | 1:J:393:LEU:HG | 2.40 | 0.51 |
| 1:J:211:GLY:HA3 | 1:J:337:CYS:SG | 2.51 | 0.51 |
| 1:K:135:LEU:HG | 1:K:389:LEU:HD21 | 1.91 | 0.51 |
| 1:K:233:ALA:CA | 1:K:315:LEU:CD2 | 2.87 | 0.51 |
| 1:K:235:LEU:CG | 1:K:307:ILE:HA | 2.40 | 0.51 |
| 1:L:165:LYS:N | 1:L:165:LYS:HD2 | 2.22 | 0.51 |
| 1:M:303:VAL:HG22 | 1:M:303:VAL:O | 2.11 | 0.51 |
| 1:N:192:LEU:O | 1:N:342:ALA:HA | 2.10 | 0.51 |
| 1:N:223:MET:HB3 | 1:N:282:VAL:CA | 2.37 | 0.51 |
| 1:N:240:GLU:CG | 1:N:240:GLU:O | 2.59 | 0.51 |
| 1:O:232:ILE:HG13 | 1:O:261:VAL:CG1 | 2.41 | 0.51 |
| 1:P:220:SER:HB2 | 1:P:273:GLN:CB | 2.40 | 0.51 |
| 1:P:255:LYS:HD3 | 1:P:279:GLU:HB3 | 1.92 | 0.51 |
| 1:P:375:ASP:HB3 | 1:P:377:ARG:NH1 | 2.23 | 0.51 |
| 1:A:84:THR:O | 1:A:84:THR:CG2 | 2.58 | 0.51 |
| 1:A:215:ASP:O | 1:A:216:LYS:HG3 | 2.11 | 0.51 |
| 1:A:394:ARG:NH2 | 1:A:413:ASP:CG | 2.64 | 0.51 |
| 1:C:206:THR:HB | 1:C:347:ILE:HG23 | 1.91 | 0.51 |
| 1:C:406:LEU:H | 1:C:406:LEU:CD1 | 2.23 | 0.51 |
| 1:D:223:MET:HG2 | 1:D:281:ILE:O | 2.10 | 0.51 |
| 1:D:233:ALA:HB1 | 1:D:310:LEU:HD22 | 1.90 | 0.51 |
| 1:E:25:ILE:CD1 | 1:E:108:GLU:CG | 2.85 | 0.51 |
| 1:E:48:LEU:C | 1:E:49:VAL:HG23 | 2.30 | 0.51 |
| 1:E:274:HIS:ND1 | 1:E:274:HIS:O | 2.44 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:403:ARG:HB3 | 1:E:406:LEU:HD11 | 1.84 | 0.51 |
| 1:F:9:PRO:HD3 | 1:G:68:MET:CG | 2.41 | 0.51 |
| 1:F:215:ASP:OD1 | 1:F:331:MET:HG2 | 2.10 | 0.51 |
| 1:G:130:LYS:HZ3 | 1:G:134:LEU:HD11 | 1.74 | 0.51 |
| 1:G:181:VAL:HG23 | 1:G:182:VAL:N | 2.26 | 0.51 |
| 1:G:198:LYS:HG3 | 1:G:331:MET:SD | 2.50 | 0.51 |
| 1:G:391:MET:CE | 1:G:438:ARG:HB3 | 2.40 | 0.51 |
| 1:G:452:ASN:ND2 | 1:G:454:PHE:HB2 | 2.23 | 0.51 |
| 1:H:132:GLN:O | 1:H:136:LYS:HD3 | 2.09 | 0.51 |
| 1:I:437:VAL:HA | 1:I:458:VAL:CG2 | 2.39 | 0.51 |
| 1:J:219:VAL:HB | 1:J:283:ALA:O | 2.10 | 0.51 |
| 1:K:69:SER:HB3 | 1:L:9:PRO:CA | 2.38 | 0.51 |
| 1:K:214:VAL:HB | 1:K:291:ASP:CG | 2.30 | 0.51 |
| 1:K:232:ILE:CG1 | 1:K:261:VAL:CG1 | 2.88 | 0.51 |
| 1:K:232:ILE:HD11 | 1:K:321:VAL:HG21 | 1.92 | 0.51 |
| 1:M:8:LEU:CG | 1:M:12:MET:CE | 2.88 | 0.51 |
| 1:M:68:MET:CB | 1:N:9:PRO:HD3 | 2.40 | 0.51 |
| 1:M:155:MET:SD | 1:M:167:LYS:HE3 | 2.50 | 0.51 |
| 1:M:381:GLY:HA3 | 1:M:461:MET:CG | 2.40 | 0.51 |
| 1:N:48:LEU:HD21 | 1:O:494:ILE:HD12 | 1.91 | 0.51 |
| 1:O:46:LYS:HG2 | 1:P:492:ASP:CG | 2.31 | 0.51 |
| 1:O:106:LYS:HA | 1:O:109:GLU:HG3 | 1.92 | 0.51 |
| 1:O:227:VAL:HG11 | 1:O:260:ASN:CG | 2.31 | 0.51 |
| 1:O:276:LEU:CB | 1:O:281:ILE:HD12 | 2.40 | 0.51 |
| 1:O:384:SER:OG | 1:O:441:HIS:HE1 | 1.93 | 0.51 |
| 1:A:141:GLU:O | 1:A:142:VAL:HB | 2.09 | 0.51 |
| 1:A:339:HIS:NE2 | 1:A:341:LYS:CD | 2.74 | 0.51 |
| 1:B:150:LEU:HB3 | 1:B:175:VAL:HG11 | 1.92 | 0.51 |
| 1:C:42:LYS:HG3 | 1:C:425:ASN:HB2 | 1.92 | 0.51 |
| 1:C:218:ARG:CG | 1:C:218:ARG:NH1 | 2.53 | 0.51 |
| 1:C:437:VAL:HG11 | 1:C:451:LEU:HD11 | 1.91 | 0.51 |
| 1:D:73:PRO:CB | 1:E:47:MET:HE3 | 2.40 | 0.51 |
| 1:D:431:ILE:HD12 | 1:M:406:LEU:HD21 | 1.93 | 0.51 |
| 1:F:34:THR:HB | 1:F:35:VAL:HG22 | 1.92 | 0.51 |
| 1:G:22:ARG:O | 1:G:26:LEU:HB2 | 2.10 | 0.51 |
| 1:I:79:ILE:O | 1:I:83:LYS:HB2 | 2.09 | 0.51 |
| 1:I:163:ALA:C | 1:I:165:LYS:N | 2.61 | 0.51 |
| 1:I:299:THR:HG21 | 1:I:334:VAL:HG11 | 1.93 | 0.51 |
| 1:I:437:VAL:HG11 | 1:I:451:LEU:HD11 | 1.93 | 0.51 |
| 1:J:42:LYS:HB3 | 1:J:425:ASN:HB3 | 1.91 | 0.51 |
| 1:J:134:LEU:HD22 | 1:J:392:LYS:CE | 2.40 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:215:ASP:C | 1:K:216:LYS:HG2 | 2.31 | 0.51 |
| 1:K:225:LYS:O | 1:K:226:LYS:HB2 | 2.10 | 0.51 |
| 1:L:158:ILE:O | 1:L:164:GLU:HA | 2.11 | 0.51 |
| 1:M:192:LEU:CD2 | 1:M:342:ALA:CB | 2.67 | 0.51 |
| 1:N:375:ASP:HB3 | 1:N:377:ARG:NH2 | 2.25 | 0.51 |
| 1:N:384:SER:CA | 1:N:441:HIS:CE1 | 2.93 | 0.51 |
| 1:N:418:ILE:HB | 1:N:419:PRO:HD3 | 1.92 | 0.51 |
| 1:O:211:GLY:C | 1:O:298:ALA:CB | 2.78 | 0.51 |
| 1:O:263:PHE:CE1 | 1:O:332:ILE:HD13 | 2.44 | 0.51 |
| 1:O:380:SER:HB3 | 1:O:467:VAL:HG13 | 1.91 | 0.51 |
| 1:P:170:LEU:HD11 | 1:P:358:VAL:CG2 | 2.40 | 0.51 |
| 1:P:188:VAL:CG1 | 1:P:189:ASP:N | 2.73 | 0.51 |
| 1:P:235:LEU:HD12 | 1:P:307:ILE:HD13 | 1.90 | 0.51 |
| 1:P:236:ASN:OD1 | 1:P:236:ASN:O | 2.28 | 0.51 |
| 1:A:77:MET:HA | 1:A:80:GLU:CD | 2.30 | 0.51 |
| 1:B:130:LYS:NZ | 1:B:393:LEU:HD23 | 2.23 | 0.51 |
| 1:E:114:ASN:O | 1:E:114:ASN:ND2 | 2.44 | 0.51 |
| 1:E:235:LEU:N | 1:E:310:LEU:CD1 | 2.74 | 0.51 |
| 1:E:241:GLU:CG | 1:E:250:MET:SD | 2.99 | 0.51 |
| 1:E:420:ARG:O | 1:E:423:ALA:HB3 | 2.11 | 0.51 |
| 1:I:173:ILE:HG13 | 1:I:345:MET:HG2 | 1.93 | 0.51 |
| 1:J:220:SER:HB3 | 1:J:223:MET:HG3 | 1.92 | 0.51 |
| 1:J:235:LEU:HB3 | 1:J:307:ILE:HG22 | 1.91 | 0.51 |
| 1:J:239:ILE:CD1 | 1:J:307:ILE:CG1 | 2.88 | 0.51 |
| 1:J:387:VAL:HG21 | 1:J:437:VAL:CG1 | 2.40 | 0.51 |
| 1:K:37:SER:O | 1:K:43:GLY:HA2 | 2.11 | 0.51 |
| 1:K:101:GLY:HA2 | 1:K:104:LEU:HD12 | 1.91 | 0.51 |
| 1:L:130:LYS:NZ | 1:L:393:LEU:HD23 | 2.25 | 0.51 |
| 1:L:433:ILE:O | 1:L:437:VAL:HG23 | 2.11 | 0.51 |
| 1:M:469:PRO:CD | 1:M:472:VAL:HG11 | 2.40 | 0.51 |
| 1:O:68:MET:CE | 1:O:68:MET:CA | 2.83 | 0.51 |
| 1:P:97:VAL:O | 1:P:100:ALA:HB3 | 2.11 | 0.51 |
| 1:P:236:ASN:ND2 | 1:P:305:THR:CG2 | 2.74 | 0.51 |
| 1:A:35:VAL:HA | 1:A:46:LYS:CE | 2.41 | 0.51 |
| 1:A:296:ALA:HB1 | 1:A:301:ALA:O | 2.10 | 0.51 |
| 1:A:428:LEU:HG | 1:A:429:ASP:H | 1.74 | 0.51 |
| 1:B:170:LEU:O | 1:B:174:ILE:HD13 | 2.11 | 0.51 |
| 1:B:223:MET:CE | 1:B:283:ALA:HB3 | 2.41 | 0.51 |
| 1:B:235:LEU:HD21 | 1:B:307:ILE:CB | 2.40 | 0.51 |
| 1:B:238:ALA:C | 1:B:307:ILE:HG23 | 2.30 | 0.51 |
| 1:C:155:MET:HE2 | 1:C:465:GLY:CA | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:42:LYS:CB | 1:D:425:ASN:CB | 2.86 | 0.51 |
| 1:D:124:TYR:CZ | 1:D:407:ALA:HA | 2.45 | 0.51 |
| 1:D:146:ASP:O | 1:D:150:LEU:HD13 | 2.10 | 0.51 |
| 1:D:232:ILE:CG1 | 1:D:299:THR:HG21 | 2.41 | 0.51 |
| 1:D:447:LYS:HB3 | 1:D:447:LYS:HZ2 | 1.75 | 0.51 |
| 1:E:211:GLY:C | 1:E:298:ALA:HB1 | 2.31 | 0.51 |
| 1:F:9:PRO:HA | 1:G:69:SER:HA | 1.89 | 0.51 |
| 1:F:93:THR:O | 1:F:97:VAL:HG23 | 2.10 | 0.51 |
| 1:F:307:ILE:HD13 | 1:F:310:LEU:CD2 | 2.40 | 0.51 |
| 1:F:461:MET:HG3 | 1:F:467:VAL:HG22 | 1.93 | 0.51 |
| 1:G:34:THR:CG2 | 1:G:35:VAL:N | 2.70 | 0.51 |
| 1:G:234:LEU:HD12 | 1:G:301:ALA:HB3 | 1.92 | 0.51 |
| 1:H:116:HIS:CD2 | 1:H:117:PRO:HG2 | 2.46 | 0.51 |
| 1:H:156:THR:CG2 | 1:H:467:VAL:C | 2.79 | 0.51 |
| 1:H:237:CYS:CB | 1:H:238:ALA:CB | 2.87 | 0.51 |
| 1:H:464:ASN:CB | 1:H:466:VAL:HG22 | 2.41 | 0.51 |
| 1:J:85:GLN:OE1 | 1:J:475:GLN:HB3 | 2.10 | 0.51 |
| 1:J:299:THR:CG2 | 1:J:334:VAL:HG12 | 2.41 | 0.51 |
| 1:J:383:GLY:HA2 | 1:J:386:GLU:HG2 | 1.93 | 0.51 |
| 1:K:387:VAL:HG21 | 1:K:437:VAL:CG1 | 2.41 | 0.51 |
| 1:L:344:THR:HG22 | 1:L:345:MET:H | 1.76 | 0.51 |
| 1:L:423:ALA:HB1 | 1:L:430:ALA:CB | 2.40 | 0.51 |
| 1:M:215:ASP:OD2 | 1:M:331:MET:HG2 | 2.11 | 0.51 |
| 1:N:433:ILE:CG2 | 1:N:451:LEU:CD2 | 2.89 | 0.51 |
| 1:O:190:LYS:NZ | 1:O:367:GLY:CA | 2.73 | 0.51 |
| 1:P:194:LYS:HG2 | 1:P:195:ILE:N | 2.26 | 0.51 |
| 1:P:314:ASP:O | 1:P:315:LEU:HD23 | 2.11 | 0.51 |
| 1:A:105:ARG:CZ | 1:A:106:LYS:CG | 2.89 | 0.51 |
| 1:A:156:THR:HG21 | 1:A:468:GLU:HG2 | 1.93 | 0.51 |
| 1:A:197:LYS:HB2 | 1:A:355:ILE:HD12 | 1.93 | 0.51 |
| 1:A:485:GLU:O | 1:A:489:ARG:HG3 | 2.10 | 0.51 |
| 1:B:170:LEU:HD21 | 1:B:358:VAL:HG11 | 1.92 | 0.51 |
| 1:C:100:ALA:CB | 1:C:484:THR:HG21 | 2.33 | 0.51 |
| 1:C:248:LYS:HD2 | 1:C:275:TYR:CE2 | 2.46 | 0.51 |
| 1:E:42:LYS:CE | 1:E:426:ALA:CA | 2.89 | 0.51 |
| 1:E:134:LEU:HD11 | 1:E:393:LEU:HD21 | 1.92 | 0.51 |
| 1:E:346:LEU:HD21 | 1:E:348:ARG:HD3 | 1.93 | 0.51 |
| 1:F:182:VAL:HB | 1:F:188:VAL:CG2 | 2.28 | 0.51 |
| 1:F:461:MET:SD | 1:F:466:VAL:HG23 | 2.51 | 0.51 |
| 1:G:163:ALA:CA | 1:G:165:LYS:H | 2.24 | 0.51 |
| 1:G:406:LEU:CD1 | 1:P:431:ILE:CD1 | 2.84 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:450:GLY:C | 1:G:451:LEU:HD12 | 2.30 | 0.51 |
| 1:H:339:HIS:CE1 | 1:H:341:LYS:CE | 2.93 | 0.51 |
| 1:I:152:LYS:NZ | 1:I:462:CYS:HB3 | 2.26 | 0.51 |
| 1:I:166:ALA:HB2 | 1:I:203:ILE:CG2 | 2.41 | 0.51 |
| 1:I:326:ILE:HG21 | 1:I:331:MET:SD | 2.51 | 0.51 |
| 1:K:115:VAL:HG23 | 1:K:119:ILE:CB | 2.35 | 0.51 |
| 1:K:134:LEU:HD22 | 1:K:392:LYS:HZ2 | 1.74 | 0.51 |
| 1:K:197:LYS:CA | 1:K:355:ILE:HD12 | 2.41 | 0.51 |
| 1:M:68:MET:CA | 1:N:9:PRO:CD | 2.79 | 0.51 |
| 1:M:105:ARG:O | 1:M:108:GLU:HB3 | 2.11 | 0.51 |
| 1:M:214:VAL:CG1 | 1:M:291:ASP:HB2 | 2.41 | 0.51 |
| 1:M:431:ILE:CG1 | 1:M:431:ILE:O | 2.57 | 0.51 |
| 1:N:156:THR:HG21 | 1:N:467:VAL:C | 2.31 | 0.51 |
| 1:N:219:VAL:HG11 | 1:N:273:GLN:NE2 | 2.25 | 0.51 |
| 1:N:389:LEU:CD1 | 1:N:415:LEU:CD1 | 2.89 | 0.51 |
| 1:O:23:MET:HE2 | 1:O:72:HIS:CE1 | 2.46 | 0.51 |
| 1:O:227:VAL:HG12 | 1:O:228:THR:N | 2.26 | 0.51 |
| 1:P:96:ALA:HB1 | 1:P:480:ALA:CB | 2.40 | 0.51 |
| 1:P:105:ARG:NH1 | 1:P:106:LYS:CD | 2.65 | 0.51 |
| 1:P:452:ASN:HB3 | 1:P:459:GLU:OE1 | 2.10 | 0.51 |
| 1:A:12:MET:CG | 1:A:494:ILE:CG2 | 2.87 | 0.51 |
| 1:A:124:TYR:HD1 | 1:A:407:ALA:HB1 | 1.70 | 0.51 |
| 1:A:379:VAL:HG22 | 1:A:380:SER:N | 2.26 | 0.51 |
| 1:B:120:VAL:HG21 | 1:B:488:LEU:HD11 | 1.92 | 0.51 |
| 1:B:135:LEU:HD23 | 1:B:385:THR:HG21 | 1.93 | 0.51 |
| 1:B:196:GLU:CG | 1:B:331:MET:HE1 | 2.40 | 0.51 |
| 1:B:235:LEU:HG | 1:B:307:ILE:HG13 | 1.92 | 0.51 |
| 1:D:42:LYS:CG | 1:D:425:ASN:CB | 2.86 | 0.51 |
| 1:D:122:LYS:HB3 | 1:D:404:GLU:OE2 | 2.11 | 0.51 |
| 1:E:204:ASP:OD1 | 1:E:204:ASP:N | 2.44 | 0.51 |
| 1:E:209:ILE:HD11 | 1:E:213:LEU:HB2 | 1.91 | 0.51 |
| 1:E:227:VAL:HG11 | 1:E:260:ASN:HD21 | 1.71 | 0.51 |
| 1:E:233:ALA:HB2 | 1:E:315:LEU:HD11 | 1.93 | 0.51 |
| 1:F:148:GLU:O | 1:F:148:GLU:HG3 | 2.10 | 0.51 |
| 1:F:356:GLU:O | 1:F:359:ALA:HB3 | 2.11 | 0.51 |
| 1:G:124:TYR:CD1 | 1:G:407:ALA:HB1 | 2.46 | 0.51 |
| 1:G:235:LEU:HD11 | 1:G:307:ILE:HD12 | 1.92 | 0.51 |
| 1:G:237:CYS:HA | 1:G:307:ILE:N | 2.25 | 0.51 |
| 1:G:418:ILE:CB | 1:G:419:PRO:HD3 | 2.41 | 0.51 |
| 1:I:85:GLN:OE1 | 1:I:475:GLN:HB3 | 2.10 | 0.51 |
| 1:I:98:VAL:HG12 | 1:I:99:VAL:N | 2.26 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:153:ILE:HD11 | 1:I:378:ILE:HB | 1.90 | 0.51 |
| 1:I:234:LEU:CB | 1:I:292:MET:CE | 2.74 | 0.51 |
| 1:I:236:ASN:OD1 | 1:I:236:ASN:C | 2.46 | 0.51 |
| 1:I:404:GLU:O | 1:I:407:ALA:HB3 | 2.11 | 0.51 |
| 1:K:437:VAL:HG11 | 1:K:451:LEU:CD1 | 2.37 | 0.51 |
| 1:L:156:THR:HG21 | 1:L:468:GLU:CB | 2.40 | 0.51 |
| 1:L:384:SER:HB3 | 1:L:441:HIS:CE1 | 2.45 | 0.51 |
| 1:N:42:LYS:HD2 | 1:O:118:THR:HG21 | 1.93 | 0.51 |
| 1:N:105:ARG:NH1 | 1:N:106:LYS:CD | 2.74 | 0.51 |
| 1:N:115:VAL:HG11 | 1:N:119:ILE:HB | 1.93 | 0.51 |
| 1:N:116:HIS:HE1 | 1:N:118:THR:OG1 | 1.94 | 0.51 |
| 1:N:212:VAL:CG2 | 1:N:294:LYS:O | 2.59 | 0.51 |
| 1:N:219:VAL:HG22 | 1:N:219:VAL:O | 2.11 | 0.51 |
| 1:N:223:MET:HE3 | 1:N:273:GLN:HB3 | 1.92 | 0.51 |
| 1:N:234:LEU:CB | 1:N:292:MET:CE | 2.89 | 0.51 |
| 1:N:434:LEU:N | 1:N:434:LEU:HD23 | 2.25 | 0.51 |
| 1:O:299:THR:CG2 | 1:O:334:VAL:CG1 | 2.78 | 0.51 |
| 1:O:403:ARG:CG | 1:O:403:ARG:NH1 | 2.74 | 0.51 |
| 1:O:437:VAL:HG11 | 1:O:451:LEU:HD11 | 1.93 | 0.51 |
| 1:P:153:ILE:HG22 | 1:P:469:PRO:HG3 | 1.88 | 0.51 |
| 1:P:218:ARG:CZ | 1:P:282:VAL:HG11 | 2.41 | 0.51 |
| 1:P:263:PHE:CG | 1:P:295:LEU:HD13 | 2.46 | 0.51 |
| 1:A:130:LYS:HZ2 | 1:A:393:LEU:HD23 | 1.76 | 0.51 |
| 1:A:181:VAL:HG23 | 1:A:182:VAL:N | 2.26 | 0.51 |
| 1:B:48:LEU:HD13 | 1:B:68:MET:SD | 2.50 | 0.51 |
| 1:C:150:LEU:CG | 1:C:175:VAL:CG1 | 2.89 | 0.51 |
| 1:C:158:ILE:HD12 | 1:C:167:LYS:HB2 | 1.92 | 0.51 |
| 1:C:479:SER:O | 1:C:483:SER:HB2 | 2.11 | 0.51 |
| 1:E:105:ARG:NH1 | 1:E:106:LYS:HG3 | 2.26 | 0.51 |
| 1:F:178:VAL:HG23 | 1:F:178:VAL:O | 2.11 | 0.51 |
| 1:F:234:LEU:HD11 | 1:F:301:ALA:CB | 2.39 | 0.51 |
| 1:F:384:SER:OG | 1:F:441:HIS:HE1 | 1.94 | 0.51 |
| 1:G:238:ALA:C | 1:G:307:ILE:HG22 | 2.31 | 0.51 |
| 1:G:267:GLY:C | 1:G:268:ILE:HG12 | 2.31 | 0.51 |
| 1:H:81:VAL:HG11 | 1:H:483:SER:OG | 2.11 | 0.51 |
| 1:H:235:LEU:O | 1:H:264:CYS:HA | 2.10 | 0.51 |
| 1:I:161:LYS:HD3 | 1:I:357:GLU:CD | 2.31 | 0.51 |
| 1:J:174:ILE:HG22 | 1:J:362:VAL:HG21 | 1.92 | 0.51 |
| 1:J:247:LEU:HD11 | 1:J:272:ALA:CB | 2.40 | 0.51 |
| 1:M:346:LEU:CD2 | 1:M:348:ARG:HD3 | 2.41 | 0.51 |
| 1:M:469:PRO:CG | 1:M:472:VAL:HG11 | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:68:MET:HG3 | 1:O:8:LEU:CG | 2.41 | 0.51 |
| 1:N:170:LEU:CD2 | 1:N:358:VAL:CG1 | 2.87 | 0.51 |
| 1:O:136:LYS:O | 1:O:139:ALA:HB3 | 2.10 | 0.51 |
| 1:O:241:GLU:HB3 | 1:O:246:MET:HG2 | 1.93 | 0.51 |
| 1:P:130:LYS:O | 1:P:130:LYS:CD | 2.57 | 0.51 |
| 1:A:23:MET:HE3 | 1:A:72:HIS:CE1 | 2.46 | 0.51 |
| 1:A:210:LYS:HG2 | 1:A:343:VAL:CG2 | 2.41 | 0.51 |
| 1:A:239:ILE:HG22 | 1:A:267:GLY:O | 2.11 | 0.51 |
| 1:B:30:ILE:HG22 | 1:B:31:ILE:CG1 | 2.41 | 0.51 |
| 1:B:105:ARG:CG | 1:B:105:ARG:NH1 | 2.57 | 0.51 |
| 1:B:134:LEU:HD22 | 1:B:392:LYS:HZ1 | 1.74 | 0.51 |
| 1:B:192:LEU:HG | 1:B:297:LYS:HD3 | 1.93 | 0.51 |
| 1:C:368:VAL:CG2 | 1:C:469:PRO:HG3 | 2.41 | 0.51 |
| 1:E:194:LYS:HB2 | 1:E:294:LYS:HD3 | 1.91 | 0.51 |
| 1:E:235:LEU:HD11 | 1:E:310:LEU:HB3 | 1.92 | 0.51 |
| 1:E:299:THR:HG21 | 1:E:334:VAL:CG1 | 2.41 | 0.51 |
| 1:F:158:ILE:HG22 | 1:F:164:GLU:HA | 1.93 | 0.51 |
| 1:F:178:VAL:HG12 | 1:F:193:ILE:CD1 | 2.41 | 0.51 |
| 1:F:212:VAL:CB | 1:F:298:ALA:CB | 2.89 | 0.51 |
| 1:F:326:ILE:HG21 | 1:F:331:MET:SD | 2.51 | 0.51 |
| 1:G:12:MET:HE3 | 1:H:69:SER:N | 2.26 | 0.51 |
| 1:G:132:GLN:CD | 1:G:478:GLN:NE2 | 2.64 | 0.51 |
| 1:H:48:LEU:N | 1:H:48:LEU:HD23 | 2.27 | 0.51 |
| 1:H:150:LEU:HD23 | 1:H:175:VAL:CG1 | 2.41 | 0.51 |
| 1:H:346:LEU:CD2 | 1:H:348:ARG:HD3 | 2.41 | 0.51 |
| 1:H:387:VAL:HG12 | 1:H:438:ARG:HG2 | 1.93 | 0.51 |
| 1:H:437:VAL:HA | 1:H:458:VAL:HG21 | 1.92 | 0.51 |
| 1:H:448:CYS:SG | 1:H:460:ASP:HA | 2.51 | 0.51 |
| 1:K:77:MET:HE2 | 1:K:487:LEU:CD1 | 2.40 | 0.51 |
| 1:K:96:ALA:CA | 1:K:480:ALA:HB2 | 2.40 | 0.51 |
| 1:K:211:GLY:C | 1:K:298:ALA:CB | 2.79 | 0.51 |
| 1:K:310:LEU:HD21 | 1:K:315:LEU:HD21 | 1.92 | 0.51 |
| 1:K:341:LYS:HB3 | 1:K:341:LYS:NZ | 2.26 | 0.51 |
| 1:L:188:VAL:CG1 | 1:L:373:ILE:CG1 | 2.82 | 0.51 |
| 1:M:42:LYS:HG3 | 1:M:426:ALA:HB2 | 1.93 | 0.51 |
| 1:M:190:LYS:NZ | 1:M:367:GLY:HA2 | 2.26 | 0.51 |
| 1:M:420:ARG:NH2 | 1:M:430:ALA:HB3 | 2.26 | 0.51 |
| 1:N:42:LYS:HZ2 | 1:O:118:THR:CG2 | 2.24 | 0.51 |
| 1:N:116:HIS:HB2 | 1:N:117:PRO:HD2 | 1.92 | 0.51 |
| 1:N:135:LEU:HD21 | 1:N:385:THR:HG21 | 1.91 | 0.51 |
| 1:N:138:ILE:CD1 | 1:N:379:VAL:HG21 | 2.41 | 0.51 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:369:VAL:O | 1:N:373:ILE:HG13 | 2.10 | 0.51 |
| 1:O:339:HIS:CE1 | 1:O:341:LYS:CD | 2.91 | 0.51 |
| 1:O:351:THR:O | 1:O:355:ILE:HG12 | 2.11 | 0.51 |
| 1:P:177:ALA:O | 1:P:181:VAL:HG13 | 2.11 | 0.51 |
| 1:B:77:MET:HA | 1:B:80:GLU:OE1 | 2.11 | 0.50 |
| 1:B:379:VAL:HG22 | 1:B:380:SER:CB | 2.41 | 0.50 |
| 1:B:387:VAL:O | 1:B:391:MET:HG2 | 2.11 | 0.50 |
| 1:C:218:ARG:HH11 | 1:C:218:ARG:HG3 | 1.72 | 0.50 |
| 1:C:368:VAL:CB | 1:C:469:PRO:HB3 | 2.39 | 0.50 |
| 1:C:434:LEU:N | 1:C:434:LEU:HD22 | 2.26 | 0.50 |
| 1:D:39:LEU:HD12 | 1:D:40:GLY:H | 1.76 | 0.50 |
| 1:D:291:ASP:O | 1:D:295:LEU:HD12 | 2.11 | 0.50 |
| 1:D:423:ALA:O | 1:D:428:LEU:HA | 2.11 | 0.50 |
| 1:G:115:VAL:HG21 | 1:G:403:ARG:HD2 | 1.93 | 0.50 |
| 1:G:235:LEU:HD13 | 1:G:235:LEU:C | 2.31 | 0.50 |
| 1:H:174:ILE:CG2 | 1:H:362:VAL:HB | 2.41 | 0.50 |
| 1:H:215:ASP:HB2 | 1:H:331:MET:CE | 2.42 | 0.50 |
| 1:H:230:ALA:HB1 | 1:H:261:VAL:HG23 | 1.93 | 0.50 |
| 1:I:77:MET:HE3 | 1:I:487:LEU:HD23 | 1.87 | 0.50 |
| 1:I:193:ILE:HD12 | 1:I:366:VAL:HG11 | 1.93 | 0.50 |
| 1:I:248:LYS:HG3 | 1:I:275:TYR:CD2 | 2.46 | 0.50 |
| 1:I:391:MET:HE3 | 1:I:438:ARG:CA | 2.41 | 0.50 |
| 1:J:47:MET:CE | 1:K:493:VAL:HG13 | 2.41 | 0.50 |
| 1:J:257:SER:OG | 1:J:312:ALA:HB2 | 2.11 | 0.50 |
| 1:J:263:PHE:CE2 | 1:J:295:LEU:HD21 | 2.47 | 0.50 |
| 1:J:263:PHE:HZ | 1:J:332:ILE:HG21 | 1.76 | 0.50 |
| 1:J:276:LEU:HD12 | 1:J:281:ILE:CB | 2.38 | 0.50 |
| 1:J:379:VAL:O | 1:J:468:GLU:HG2 | 2.11 | 0.50 |
| 1:K:15:TYR:CB | 1:K:19:ASP:HB3 | 2.40 | 0.50 |
| 1:K:123:GLY:HA3 | 1:K:407:ALA:HB3 | 1.91 | 0.50 |
| 1:K:379:VAL:C | 1:K:467:VAL:CG1 | 2.80 | 0.50 |
| 1:L:241:GLU:HG2 | 1:L:250:MET:SD | 2.52 | 0.50 |
| 1:N:96:ALA:HA | 1:N:480:ALA:CB | 2.41 | 0.50 |
| 1:N:326:ILE:HG13 | 1:N:348:ARG:HH12 | 1.74 | 0.50 |
| 1:N:368:VAL:CG2 | 1:N:469:PRO:HG3 | 2.40 | 0.50 |
| 1:N:441:HIS:ND1 | 1:N:449:ALA:HB1 | 2.25 | 0.50 |
| 1:N:447:LYS:HA | 1:N:448:CYS:SG | 2.51 | 0.50 |
| 1:O:234:LEU:HD22 | 1:O:301:ALA:HB1 | 1.93 | 0.50 |
| 1:P:31:ILE:HG23 | 1:P:34:THR:OG1 | 2.10 | 0.50 |
| 1:P:286:ARG:HH11 | 1:P:286:ARG:CG | 2.20 | 0.50 |
| 1:A:135:LEU:CD2 | 1:A:138:ILE:HD11 | 2.40 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:158:ILE:HG12 | 1:A:361:ALA:CB | 2.17 | 0.50 |
| 1:A:368:VAL:CG2 | 1:A:469:PRO:CG | 2.88 | 0.50 |
| 1:C:247:LEU:O | 1:C:251:VAL:HG23 | 2.10 | 0.50 |
| 1:E:196:GLU:CG | 1:E:331:MET:HE1 | 2.41 | 0.50 |
| 1:E:222:GLN:HB3 | 1:E:277:ALA:HB1 | 1.93 | 0.50 |
| 1:E:345:MET:HE1 | 1:E:362:VAL:CG1 | 2.24 | 0.50 |
| 1:E:435:VAL:O | 1:E:435:VAL:CG1 | 2.59 | 0.50 |
| 1:F:217:GLU:HG2 | 1:F:330:SER:C | 2.30 | 0.50 |
| 1:F:306:ASN:ND2 | 1:F:308:LYS:CG | 2.74 | 0.50 |
| 1:H:25:ILE:CG2 | 1:H:26:LEU:N | 2.74 | 0.50 |
| 1:H:49:VAL:HG22 | 1:H:55:VAL:HG12 | 1.93 | 0.50 |
| 1:H:110:LEU:C | 1:H:112:ASP:N | 2.64 | 0.50 |
| 1:H:161:LYS:HB3 | 1:H:357:GLU:OE2 | 2.11 | 0.50 |
| 1:I:219:VAL:CG1 | 1:I:220:SER:H | 2.23 | 0.50 |
| 1:J:68:MET:C | 1:K:9:PRO:HD3 | 2.32 | 0.50 |
| 1:J:170:LEU:CD2 | 1:J:358:VAL:HG11 | 2.41 | 0.50 |
| 1:J:232:ILE:CG1 | 1:J:261:VAL:HG11 | 2.38 | 0.50 |
| 1:J:379:VAL:CG1 | 1:J:473:LYS:HG3 | 2.41 | 0.50 |
| 1:J:448:CYS:SG | 1:J:460:ASP:CA | 2.99 | 0.50 |
| 1:K:135:LEU:CD2 | 1:K:385:THR:HG21 | 2.38 | 0.50 |
| 1:K:150:LEU:HB3 | 1:K:175:VAL:CG2 | 2.41 | 0.50 |
| 1:K:188:VAL:CG2 | 1:K:373:ILE:CD1 | 2.87 | 0.50 |
| 1:L:82:ALA:CB | 1:L:97:VAL:HG21 | 2.39 | 0.50 |
| 1:M:31:ILE:HG22 | 1:M:65:LEU:CD2 | 2.41 | 0.50 |
| 1:M:124:TYR:HE1 | 1:M:407:ALA:CB | 2.20 | 0.50 |
| 1:M:296:ALA:HB2 | 1:M:301:ALA:HB3 | 1.91 | 0.50 |
| 1:M:364:ASP:O | 1:M:368:VAL:HG22 | 2.12 | 0.50 |
| 1:N:346:LEU:HD23 | 1:N:347:ILE:N | 2.26 | 0.50 |
| 1:N:380:SER:HB3 | 1:N:384:SER:CB | 2.41 | 0.50 |
| 1:O:121:VAL:HG23 | 1:O:122:LYS:N | 2.26 | 0.50 |
| 1:O:220:SER:CB | 1:O:277:ALA:HB2 | 2.35 | 0.50 |
| 1:O:347:ILE:HD12 | 1:O:359:ALA:HB2 | 1.92 | 0.50 |
| 1:A:102:GLU:OE2 | 1:A:417:VAL:HB | 2.11 | 0.50 |
| 1:A:138:ILE:HG13 | 1:A:379:VAL:HG21 | 1.91 | 0.50 |
| 1:A:153:ILE:CG2 | 1:A:468:GLU:C | 2.80 | 0.50 |
| 1:A:232:ILE:O | 1:A:315:LEU:HD12 | 2.11 | 0.50 |
| 1:B:197:LYS:CB | 1:B:355:ILE:HD12 | 2.36 | 0.50 |
| 1:B:435:VAL:O | 1:B:435:VAL:HG12 | 2.10 | 0.50 |
| 1:C:9:PRO:HG3 | 1:D:69:SER:N | 2.26 | 0.50 |
| 1:C:144:ALA:O | 1:C:373:ILE:HD13 | 2.11 | 0.50 |
| 1:C:403:ARG:O | 1:C:406:LEU:CD2 | 2.59 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:68:MET:CA | 1:D:68:MET:CE | 2.87 | 0.50 |
| 1:D:461:MET:SD | 1:D:466:VAL:HG23 | 2.50 | 0.50 |
| 1:E:170:LEU:CD1 | 1:E:358:VAL:HG11 | 2.41 | 0.50 |
| 1:E:182:VAL:HG11 | 1:E:373:ILE:CD1 | 2.42 | 0.50 |
| 1:F:177:ALA:CB | 1:F:208:LEU:HD11 | 2.14 | 0.50 |
| 1:F:459:GLU:CG | 1:F:461:MET:CE | 2.73 | 0.50 |
| 1:G:414:ALA:O | 1:G:417:VAL:HG12 | 2.11 | 0.50 |
| 1:H:30:ILE:HG22 | 1:H:31:ILE:N | 2.24 | 0.50 |
| 1:H:134:LEU:HD11 | 1:H:393:LEU:HD13 | 1.94 | 0.50 |
| 1:H:212:VAL:N | 1:H:298:ALA:CB | 2.74 | 0.50 |
| 1:H:459:GLU:CB | 1:H:461:MET:CE | 2.89 | 0.50 |
| 1:J:93:THR:O | 1:J:97:VAL:HG13 | 2.12 | 0.50 |
| 1:J:234:LEU:HD13 | 1:J:296:ALA:HB2 | 1.94 | 0.50 |
| 1:K:8:LEU:CD1 | 1:K:12:MET:HG2 | 2.42 | 0.50 |
| 1:K:403:ARG:NH1 | 1:K:403:ARG:HG2 | 2.14 | 0.50 |
| 1:L:211:GLY:C | 1:L:298:ALA:HB2 | 2.30 | 0.50 |
| 1:L:433:ILE:HG21 | 1:L:451:LEU:HD23 | 1.92 | 0.50 |
| 1:M:247:LEU:CD2 | 1:M:272:ALA:CB | 2.85 | 0.50 |
| 1:N:197:LYS:HA | 1:N:355:ILE:CG2 | 2.39 | 0.50 |
| 1:N:198:LYS:HG3 | 1:N:326:ILE:CG2 | 2.42 | 0.50 |
| 1:N:377:ARG:CD | 1:N:470:LEU:CD1 | 2.89 | 0.50 |
| 1:O:461:MET:SD | 1:O:466:VAL:HG23 | 2.51 | 0.50 |
| 1:P:30:ILE:HG22 | 1:P:31:ILE:HD13 | 1.93 | 0.50 |
| 1:P:199:SER:CB | 1:P:327:SER:CB | 2.84 | 0.50 |
| 1:P:449:ALA:HB2 | 1:P:458:VAL:HG23 | 1.89 | 0.50 |
| 1:A:19:ASP:O | 1:A:23:MET:HG3 | 2.11 | 0.50 |
| 1:A:115:VAL:CG2 | 1:A:403:ARG:CZ | 2.90 | 0.50 |
| 1:A:223:MET:HG3 | 1:A:277:ALA:HB2 | 1.92 | 0.50 |
| 1:A:460:ASP:OD2 | 1:A:463:GLU:HG3 | 2.12 | 0.50 |
| 1:B:115:VAL:CB | 1:B:403:ARG:HE | 2.24 | 0.50 |
| 1:B:177:ALA:HB2 | 1:B:208:LEU:CD1 | 2.41 | 0.50 |
| 1:C:134:LEU:HD22 | 1:C:392:LYS:NZ | 2.26 | 0.50 |
| 1:C:164:GLU:O | 1:C:164:GLU:HG3 | 2.11 | 0.50 |
| 1:D:18:ARG:HA | 1:D:21:GLN:HB2 | 1.92 | 0.50 |
| 1:D:89:VAL:HG21 | 1:D:368:VAL:HG13 | 1.92 | 0.50 |
| 1:D:102:GLU:HA | 1:D:102:GLU:OE1 | 2.12 | 0.50 |
| 1:D:158:ILE:HB | 1:D:361:ALA:HB1 | 1.92 | 0.50 |
| 1:D:377:ARG:HB3 | 1:D:470:LEU:HG | 1.93 | 0.50 |
| 1:E:8:LEU:HA | 1:F:68:MET:CB | 2.41 | 0.50 |
| 1:E:123:GLY:CA | 1:E:407:ALA:HB3 | 2.41 | 0.50 |
| 1:E:177:ALA:C | 1:E:193:ILE:CD1 | 2.80 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:192:LEU:HD11 | 1:E:297:LYS:HD3 | 1.92 | 0.50 |
| 1:E:235:LEU:O | 1:E:264:CYS:HA | 2.11 | 0.50 |
| 1:E:307:ILE:HD13 | 1:E:310:LEU:HD22 | 1.93 | 0.50 |
| 1:F:9:PRO:CD | 1:G:69:SER:N | 2.75 | 0.50 |
| 1:F:122:LYS:HA | 1:F:125:GLN:NE2 | 2.25 | 0.50 |
| 1:F:254:ILE:HG12 | 1:F:310:LEU:HD23 | 1.93 | 0.50 |
| 1:H:30:ILE:O | 1:H:30:ILE:CG2 | 2.59 | 0.50 |
| 1:H:433:ILE:HG22 | 1:H:451:LEU:HD21 | 1.93 | 0.50 |
| 1:H:434:LEU:H | 1:H:434:LEU:HD23 | 1.77 | 0.50 |
| 1:H:448:CYS:HB2 | 1:H:460:ASP:HA | 1.93 | 0.50 |
| 1:I:153:ILE:HD11 | 1:I:378:ILE:HG21 | 1.91 | 0.50 |
| 1:I:197:LYS:HB2 | 1:I:355:ILE:CG2 | 2.42 | 0.50 |
| 1:I:297:LYS:HD3 | 1:I:342:ALA:HB2 | 1.94 | 0.50 |
| 1:I:326:ILE:HD11 | 1:I:348:ARG:CZ | 2.41 | 0.50 |
| 1:I:469:PRO:CG | 1:I:472:VAL:CG1 | 2.84 | 0.50 |
| 1:J:158:ILE:HG12 | 1:J:361:ALA:CB | 2.19 | 0.50 |
| 1:J:222:GLN:HB3 | 1:J:277:ALA:CB | 2.39 | 0.50 |
| 1:K:138:ILE:HD12 | 1:K:379:VAL:CG1 | 2.41 | 0.50 |
| 1:L:31:ILE:O | 1:L:35:VAL:HG23 | 2.11 | 0.50 |
| 1:L:233:ALA:CA | 1:L:315:LEU:HD13 | 2.41 | 0.50 |
| 1:L:448:CYS:CB | 1:L:460:ASP:HA | 2.41 | 0.50 |
| 1:M:42:LYS:CD | 1:M:426:ALA:HB2 | 2.41 | 0.50 |
| 1:M:105:ARG:HD2 | 1:M:105:ARG:C | 2.30 | 0.50 |
| 1:M:105:ARG:HD2 | 1:M:106:LYS:HG2 | 1.93 | 0.50 |
| 1:M:219:VAL:CG2 | 1:M:220:SER:N | 2.68 | 0.50 |
| 1:M:239:ILE:HD12 | 1:M:307:ILE:CG1 | 2.41 | 0.50 |
| 1:N:219:VAL:HG13 | 1:N:220:SER:H | 1.77 | 0.50 |
| 1:O:31:ILE:CG2 | 1:O:65:LEU:HD21 | 2.42 | 0.50 |
| 1:O:173:ILE:CD1 | 1:O:206:THR:OG1 | 2.59 | 0.50 |
| 1:P:23:MET:CE | 1:P:72:HIS:CE1 | 2.95 | 0.50 |
| 1:P:48:LEU:HG | 1:P:68:MET:HE2 | 1.87 | 0.50 |
| 1:P:255:LYS:HD3 | 1:P:279:GLU:HG2 | 1.91 | 0.50 |
| 1:A:214:VAL:O | 1:A:215:ASP:HB2 | 2.11 | 0.50 |
| 1:A:459:GLU:HB3 | 1:A:461:MET:HE2 | 1.94 | 0.50 |
| 1:B:130:LYS:NZ | 1:B:134:LEU:HD11 | 2.27 | 0.50 |
| 1:B:161:LYS:HD3 | 1:B:357:GLU:OE2 | 2.11 | 0.50 |
| 1:B:351:THR:CG2 | 1:B:352:GLU:N | 2.66 | 0.50 |
| 1:B:431:ILE:HG21 | 1:K:403:ARG:HD3 | 1.93 | 0.50 |
| 1:D:268:ILE:CG2 | 1:D:273:GLN:HG3 | 2.42 | 0.50 |
| 1:E:48:LEU:HD22 | 1:E:68:MET:SD | 2.51 | 0.50 |
| 1:E:102:GLU:HA | 1:E:102:GLU:OE1 | 2.12 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:9:PRO:HD3 | 1:G:68:MET:CB | 2.38 | 0.50 |
| 1:F:9:PRO:N | 1:G:69:SER:CA | 2.74 | 0.50 |
| 1:F:134:LEU:HD22 | 1:F:392:LYS:HE3 | 1.91 | 0.50 |
| 1:F:194:LYS:HG2 | 1:F:195:ILE:N | 2.26 | 0.50 |
| 1:F:232:ILE:H | 1:F:232:ILE:HD12 | 1.76 | 0.50 |
| 1:G:130:LYS:HZ1 | 1:G:134:LEU:HD21 | 1.74 | 0.50 |
| 1:G:138:ILE:HD12 | 1:G:385:THR:OG1 | 2.10 | 0.50 |
| 1:G:235:LEU:HD21 | 1:G:310:LEU:HB2 | 1.85 | 0.50 |
| 1:H:130:LYS:HZ2 | 1:H:134:LEU:CD1 | 2.21 | 0.50 |
| 1:I:190:LYS:HZ1 | 1:I:367:GLY:HA2 | 1.76 | 0.50 |
| 1:J:122:LYS:HG3 | 1:J:125:GLN:NE2 | 2.27 | 0.50 |
| 1:J:123:GLY:HA3 | 1:J:407:ALA:CB | 2.41 | 0.50 |
| 1:K:31:ILE:CG2 | 1:K:65:LEU:CD1 | 2.88 | 0.50 |
| 1:K:473:LYS:NZ | 1:K:473:LYS:CB | 2.59 | 0.50 |
| 1:L:135:LEU:HD21 | 1:L:477:ILE:HD12 | 1.93 | 0.50 |
| 1:M:219:VAL:HG22 | 1:M:223:MET:SD | 2.52 | 0.50 |
| 1:M:233:ALA:CB | 1:M:310:LEU:CD1 | 2.84 | 0.50 |
| 1:M:381:GLY:O | 1:M:461:MET:HG3 | 2.11 | 0.50 |
| 1:N:97:VAL:O | 1:N:100:ALA:HB3 | 2.10 | 0.50 |
| 1:O:152:LYS:HG3 | 1:O:465:GLY:O | 2.10 | 0.50 |
| 1:O:248:LYS:CE | 1:O:275:TYR:CZ | 2.94 | 0.50 |
| 1:P:119:ILE:CD1 | 1:P:403:ARG:HG3 | 2.41 | 0.50 |
| 1:P:383:GLY:CA | 1:P:386:GLU:HG2 | 2.41 | 0.50 |
| 1:A:111:LEU:HD22 | 1:A:117:PRO:HB3 | 1.93 | 0.50 |
| 1:A:134:LEU:HD12 | 1:A:393:LEU:CD1 | 2.40 | 0.50 |
| 1:A:212:VAL:HB | 1:A:298:ALA:HB2 | 1.94 | 0.50 |
| 1:A:251:VAL:HG13 | 1:A:276:LEU:HD13 | 1.90 | 0.50 |
| 1:B:102:GLU:OE1 | 1:B:102:GLU:HA | 2.11 | 0.50 |
| 1:B:192:LEU:HG | 1:B:297:LYS:CD | 2.41 | 0.50 |
| 1:B:263:PHE:CZ | 1:B:332:ILE:HG21 | 2.47 | 0.50 |
| 1:B:345:MET:CE | 1:B:347:ILE:CD1 | 2.90 | 0.50 |
| 1:B:434:LEU:HD23 | 1:B:434:LEU:H | 1.77 | 0.50 |
| 1:G:250:MET:CE | 1:G:308:LYS:HD2 | 2.41 | 0.50 |
| 1:G:250:MET:HE3 | 1:G:308:LYS:HD2 | 1.94 | 0.50 |
| 1:H:124:TYR:CE1 | 1:H:407:ALA:HB1 | 2.47 | 0.50 |
| 1:H:154:ALA:CB | 1:H:174:ILE:CD1 | 2.69 | 0.50 |
| 1:H:452:ASN:ND2 | 1:H:454:PHE:HB2 | 2.26 | 0.50 |
| 1:I:89:VAL:CG2 | 1:I:472:VAL:HG12 | 2.35 | 0.50 |
| 1:I:96:ALA:HA | 1:I:480:ALA:HB2 | 1.93 | 0.50 |
| 1:I:254:ILE:HG12 | 1:I:262:LEU:HD11 | 1.92 | 0.50 |
| 1:I:437:VAL:HA | 1:I:458:VAL:HG21 | 1.92 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:72:HIS:O | 1:L:76:LYS:HG3 | 2.11 | 0.50 |
| 1:L:106:LYS:CA | 1:L:106:LYS:CE | 2.86 | 0.50 |
| 1:L:170:LEU:CD1 | 1:L:358:VAL:CG1 | 2.88 | 0.50 |
| 1:L:248:LYS:CD | 1:L:275:TYR:CE2 | 2.89 | 0.50 |
| 1:M:34:THR:CG2 | 1:M:35:VAL:N | 2.72 | 0.50 |
| 1:M:69:SER:H | 1:N:9:PRO:CG | 2.22 | 0.50 |
| 1:M:178:VAL:HG23 | 1:M:188:VAL:HG21 | 1.93 | 0.50 |
| 1:M:254:ILE:HD13 | 1:M:276:LEU:HD11 | 1.93 | 0.50 |
| 1:N:34:THR:CB | 1:O:14:ARG:HH22 | 2.24 | 0.50 |
| 1:N:234:LEU:HB3 | 1:N:292:MET:SD | 2.52 | 0.50 |
| 1:N:437:VAL:CG2 | 1:N:451:LEU:HG | 2.27 | 0.50 |
| 1:O:219:VAL:CG1 | 1:O:223:MET:CE | 2.89 | 0.50 |
| 1:O:223:MET:CE | 1:O:276:LEU:HA | 2.42 | 0.50 |
| 1:O:262:LEU:HD12 | 1:O:310:LEU:HD11 | 1.93 | 0.50 |
| 1:O:403:ARG:CG | 1:O:403:ARG:HH11 | 2.25 | 0.50 |
| 1:P:70:VAL:HG12 | 1:P:71:GLU:N | 2.26 | 0.50 |
| 1:P:153:ILE:HD13 | 1:P:378:ILE:HG22 | 1.94 | 0.50 |
| 1:P:235:LEU:CD1 | 1:P:307:ILE:HA | 2.40 | 0.50 |
| 1:P:251:VAL:HG13 | 1:P:276:LEU:CG | 2.42 | 0.50 |
| 1:A:68:MET:HG3 | 1:H:8:LEU:HD22 | 1.92 | 0.50 |
| 1:A:68:MET:SD | 1:H:12:MET:HE3 | 2.51 | 0.50 |
| 1:A:134:LEU:HD13 | 1:A:393:LEU:HG | 1.93 | 0.50 |
| 1:A:153:ILE:CD1 | 1:A:372:THR:HG21 | 2.42 | 0.50 |
| 1:B:42:LYS:O | 1:B:425:ASN:HB3 | 2.11 | 0.50 |
| 1:B:59:ASN:O | 1:B:64:ILE:HD11 | 2.12 | 0.50 |
| 1:B:130:LYS:HG2 | 1:B:130:LYS:O | 2.12 | 0.50 |
| 1:B:134:LEU:HD12 | 1:B:393:LEU:CG | 2.42 | 0.50 |
| 1:B:134:LEU:CD2 | 1:B:392:LYS:HZ1 | 2.24 | 0.50 |
| 1:C:12:MET:HE2 | 1:C:494:ILE:CG2 | 2.42 | 0.50 |
| 1:C:274:HIS:O | 1:C:274:HIS:CG | 2.64 | 0.50 |
| 1:D:223:MET:HB3 | 1:D:282:VAL:HA | 1.94 | 0.50 |
| 1:D:377:ARG:HB3 | 1:D:470:LEU:HB2 | 1.94 | 0.50 |
| 1:E:219:VAL:HG13 | 1:E:273:GLN:OE1 | 2.12 | 0.50 |
| 1:E:254:ILE:HG22 | 1:E:281:ILE:HD11 | 1.89 | 0.50 |
| 1:E:473:LYS:CB | 1:E:473:LYS:HZ3 | 2.23 | 0.50 |
| 1:F:158:ILE:CG2 | 1:F:164:GLU:HA | 2.42 | 0.50 |
| 1:F:174:ILE:HG22 | 1:F:362:VAL:CG2 | 2.42 | 0.50 |
| 1:F:211:GLY:C | 1:F:298:ALA:CB | 2.80 | 0.50 |
| 1:F:235:LEU:HD21 | 1:F:310:LEU:HD22 | 1.90 | 0.50 |
| 1:F:450:GLY:C | 1:F:451:LEU:HD12 | 2.32 | 0.50 |
| 1:G:152:LYS:CD | 1:G:465:GLY:HA3 | 2.40 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:254:ILE:HD12 | 1:G:276:LEU:HD13 | 1.93 | 0.50 |
| 1:G:418:ILE:O | 1:G:422:LEU:HG | 2.12 | 0.50 |
| 1:G:434:LEU:HD22 | 1:G:434:LEU:N | 2.26 | 0.50 |
| 1:H:124:TYR:CD2 | 1:H:411:PHE:HD2 | 2.29 | 0.50 |
| 1:I:68:MET:CE | 1:J:12:MET:CE | 2.89 | 0.50 |
| 1:I:441:HIS:ND1 | 1:I:449:ALA:HA | 2.26 | 0.50 |
| 1:J:102:GLU:OE2 | 1:J:417:VAL:HG11 | 2.11 | 0.50 |
| 1:J:130:LYS:HZ1 | 1:J:396:TYR:HB2 | 1.77 | 0.50 |
| 1:J:212:VAL:HG21 | 1:J:294:LYS:HB3 | 1.93 | 0.50 |
| 1:J:223:MET:CE | 1:J:283:ALA:HB3 | 2.42 | 0.50 |
| 1:J:372:THR:HG22 | 1:J:377:ARG:N | 2.27 | 0.50 |
| 1:K:156:THR:HG21 | 1:K:468:GLU:HA | 1.89 | 0.50 |
| 1:M:198:LYS:HB3 | 1:M:326:ILE:HG12 | 1.93 | 0.50 |
| 1:M:255:LYS:HD3 | 1:M:279:GLU:CB | 2.41 | 0.50 |
| 1:N:169:LYS:HG2 | 1:N:204:ASP:O | 2.12 | 0.50 |
| 1:N:255:LYS:HE3 | 1:N:279:GLU:CD | 2.32 | 0.50 |
| 1:O:15:TYR:CD1 | 1:O:23:MET:SD | 3.04 | 0.50 |
| 1:O:31:ILE:CG2 | 1:O:65:LEU:HG | 2.42 | 0.50 |
| 1:P:238:ALA:N | 1:P:266:LYS:HB2 | 2.13 | 0.50 |
| 1:P:289:LYS:HA | 1:P:292:MET:HB2 | 1.92 | 0.50 |
| 1:A:68:MET:CA | 1:H:8:LEU:HA | 2.42 | 0.50 |
| 1:A:238:ALA:O | 1:A:307:ILE:HG22 | 2.11 | 0.50 |
| 1:A:377:ARG:HG2 | 1:A:470:LEU:CD1 | 2.42 | 0.50 |
| 1:B:235:LEU:HD11 | 1:B:307:ILE:HD12 | 1.94 | 0.50 |
| 1:C:452:ASN:ND2 | 1:C:454:PHE:N | 2.60 | 0.50 |
| 1:D:92:GLY:HA2 | 1:D:95:THR:HB | 1.93 | 0.50 |
| 1:D:219:VAL:HG13 | 1:D:220:SER:N | 2.27 | 0.50 |
| 1:D:386:GLU:CD | 1:D:386:GLU:H | 2.14 | 0.50 |
| 1:D:431:ILE:CD1 | 1:M:403:ARG:CG | 2.90 | 0.50 |
| 1:E:281:ILE:HG22 | 1:E:282:VAL:O | 2.12 | 0.50 |
| 1:E:377:ARG:CZ | 1:E:470:LEU:HD12 | 2.42 | 0.50 |
| 1:E:495:ALA:CB | 1:F:49:VAL:HG21 | 2.39 | 0.50 |
| 1:F:23:MET:HE2 | 1:F:72:HIS:HE1 | 1.77 | 0.50 |
| 1:F:119:ILE:CG1 | 1:F:403:ARG:CD | 2.64 | 0.50 |
| 1:F:232:ILE:HD12 | 1:F:232:ILE:N | 2.26 | 0.50 |
| 1:F:434:LEU:CD2 | 1:F:434:LEU:N | 2.75 | 0.50 |
| 1:G:96:ALA:CB | 1:G:97:VAL:HG13 | 2.41 | 0.50 |
| 1:H:85:GLN:HE22 | 1:H:475:GLN:C | 2.15 | 0.50 |
| 1:H:124:TYR:HE1 | 1:H:407:ALA:CB | 2.25 | 0.50 |
| 1:I:8:LEU:HD22 | 1:P:68:MET:CG | 2.42 | 0.50 |
| 1:I:12:MET:CE | 1:P:68:MET:SD | 2.93 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:154:ALA:O | 1:I:158:ILE:HD12 | 2.12 | 0.50 |
| 1:I:313:GLN:N | 1:I:313:GLN:OE1 | 2.45 | 0.50 |
| 1:J:129:GLN:O | 1:J:132:GLN:HB2 | 2.12 | 0.50 |
| 1:J:345:MET:HE2 | 1:J:362:VAL:HG11 | 1.90 | 0.50 |
| 1:K:99:VAL:O | 1:K:103:LEU:HB2 | 2.11 | 0.50 |
| 1:K:379:VAL:CG1 | 1:K:380:SER:HB2 | 2.42 | 0.50 |
| 1:K:416:GLU:CD | 1:K:434:LEU:HD12 | 2.32 | 0.50 |
| 1:N:192:LEU:CB | 1:N:342:ALA:CB | 2.85 | 0.50 |
| 1:N:276:LEU:CD2 | 1:N:281:ILE:CG2 | 2.71 | 0.50 |
| 1:N:362:VAL:O | 1:N:366:VAL:HG23 | 2.12 | 0.50 |
| 1:N:420:ARG:NH1 | 1:N:420:ARG:CG | 2.62 | 0.50 |
| 1:O:62:VAL:O | 1:O:66:ARG:HB2 | 2.11 | 0.50 |
| 1:O:69:SER:N | 1:P:9:PRO:CD | 2.74 | 0.50 |
| 1:O:219:VAL:HG12 | 1:O:223:MET:SD | 2.51 | 0.50 |
| 1:O:235:LEU:HD12 | 1:O:262:LEU:HD11 | 1.94 | 0.50 |
| 1:O:469:PRO:O | 1:O:472:VAL:HG13 | 2.12 | 0.50 |
| 1:P:208:LEU:HD22 | 1:P:343:VAL:CG2 | 2.41 | 0.50 |
| 1:P:236:ASN:ND2 | 1:P:305:THR:HG22 | 2.27 | 0.50 |
| 1:A:219:VAL:HG22 | 1:A:273:GLN:NE2 | 2.27 | 0.50 |
| 1:B:276:LEU:HB3 | 1:B:281:ILE:CB | 2.42 | 0.50 |
| 1:B:403:ARG:O | 1:B:406:LEU:HD12 | 2.12 | 0.50 |
| 1:D:66:ARG:HA | 1:D:79:ILE:CD1 | 2.41 | 0.50 |
| 1:D:81:VAL:HG21 | 1:D:483:SER:OG | 2.11 | 0.50 |
| 1:D:248:LYS:HD2 | 1:D:275:TYR:CZ | 2.47 | 0.50 |
| 1:E:438:ARG:HH22 | 1:N:405:GLN:HE22 | 1.60 | 0.50 |
| 1:F:161:LYS:HD3 | 1:F:357:GLU:OE2 | 2.12 | 0.50 |
| 1:F:234:LEU:HB3 | 1:F:292:MET:HE3 | 1.94 | 0.50 |
| 1:F:247:LEU:HD21 | 1:F:269:ASP:HB3 | 1.92 | 0.50 |
| 1:G:115:VAL:HG21 | 1:G:119:ILE:HG21 | 1.93 | 0.50 |
| 1:G:214:VAL:HG12 | 1:G:291:ASP:HB2 | 1.93 | 0.50 |
| 1:H:461:MET:SD | 1:H:466:VAL:CG2 | 3.00 | 0.50 |
| 1:I:106:LYS:HA | 1:I:109:GLU:HG3 | 1.93 | 0.50 |
| 1:I:254:ILE:HG12 | 1:I:262:LEU:CD1 | 2.42 | 0.50 |
| 1:K:21:GLN:O | 1:K:25:ILE:HD12 | 2.12 | 0.50 |
| 1:K:105:ARG:HG2 | 1:K:106:LYS:N | 2.26 | 0.50 |
| 1:K:130:LYS:HA | 1:K:133:GLU:HG3 | 1.94 | 0.50 |
| 1:K:377:ARG:NE | 1:K:470:LEU:HD12 | 2.26 | 0.50 |
| 1:L:215:ASP:O | 1:L:216:LYS:HD3 | 2.12 | 0.50 |
| 1:M:15:TYR:HB3 | 1:M:19:ASP:HB3 | 1.94 | 0.50 |
| 1:M:47:MET:CE | 1:N:493:VAL:HG13 | 2.42 | 0.50 |
| 1:M:233:ALA:C | 1:M:234:LEU:HD23 | 2.33 | 0.50 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:471:ARG:O | 1:M:475:GLN:HB2 | 2.12 | 0.50 |
| 1:N:338:LYS:HE3 | 1:N:339:HIS:HB2 | 1.93 | 0.50 |
| 1:O:235:LEU:HB2 | 1:O:307:ILE:CA | 2.34 | 0.50 |
| 1:P:432:GLU:O | 1:P:436:LYS:HG3 | 2.11 | 0.50 |
| 1:A:42:LYS:CB | 1:A:425:ASN:HD22 | 2.23 | 0.49 |
| 1:A:133:GLU:O | 1:A:137:THR:HG23 | 2.11 | 0.49 |
| 1:A:384:SER:CB | 1:A:441:HIS:HE1 | 2.24 | 0.49 |
| 1:B:119:ILE:HD12 | 1:B:403:ARG:HA | 1.94 | 0.49 |
| 1:B:206:THR:CG2 | 1:B:347:ILE:HG22 | 2.42 | 0.49 |
| 1:C:124:TYR:CE1 | 1:C:407:ALA:CB | 2.77 | 0.49 |
| 1:C:156:THR:CG2 | 1:C:468:GLU:HA | 2.37 | 0.49 |
| 1:C:191:ASP:O | 1:C:294:LYS:HE3 | 2.11 | 0.49 |
| 1:C:196:GLU:OE2 | 1:C:197:LYS:HE2 | 2.12 | 0.49 |
| 1:C:377:ARG:CZ | 1:C:470:LEU:CD1 | 2.90 | 0.49 |
| 1:D:9:PRO:CD | 1:E:70:VAL:CA | 2.90 | 0.49 |
| 1:D:41:PRO:HB3 | 1:D:453:VAL:HG11 | 1.92 | 0.49 |
| 1:D:135:LEU:HA | 1:D:138:ILE:CD1 | 2.42 | 0.49 |
| 1:D:488:LEU:HD22 | 1:D:488:LEU:O | 2.12 | 0.49 |
| 1:E:31:ILE:HG22 | 1:E:65:LEU:CD2 | 2.41 | 0.49 |
| 1:E:96:ALA:C | 1:E:480:ALA:HB1 | 2.33 | 0.49 |
| 1:E:104:LEU:HD21 | 1:E:484:THR:O | 2.12 | 0.49 |
| 1:E:165:LYS:HA | 1:E:165:LYS:CE | 2.41 | 0.49 |
| 1:F:9:PRO:HG3 | 1:G:68:MET:HE2 | 1.94 | 0.49 |
| 1:F:42:LYS:CE | 1:F:453:VAL:CG2 | 2.90 | 0.49 |
| 1:F:147:LYS:O | 1:F:147:LYS:CG | 2.60 | 0.49 |
| 1:F:232:ILE:HG12 | 1:F:299:THR:CG2 | 2.23 | 0.49 |
| 1:F:234:LEU:N | 1:F:315:LEU:HD11 | 2.25 | 0.49 |
| 1:F:380:SER:HB2 | 1:F:384:SER:HB2 | 1.94 | 0.49 |
| 1:G:72:HIS:CD2 | 1:G:72:HIS:H | 2.29 | 0.49 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:CD2 | 2.42 | 0.49 |
| 1:G:306:ASN:OD1 | 1:G:308:LYS:HG2 | 2.11 | 0.49 |
| 1:H:235:LEU:HD11 | 1:H:307:ILE:CG1 | 2.41 | 0.49 |
| 1:I:35:VAL:HG11 | 1:I:64:ILE:CG2 | 2.42 | 0.49 |
| 1:J:372:THR:HA | 1:J:375:ASP:O | 2.12 | 0.49 |
| 1:K:140:CYS:SG | 1:K:378:ILE:HD11 | 2.52 | 0.49 |
| 1:L:100:ALA:HB2 | 1:L:484:THR:HG21 | 1.87 | 0.49 |
| 1:L:124:TYR:CE1 | 1:L:407:ALA:CA | 2.89 | 0.49 |
| 1:L:227:VAL:CG1 | 1:L:260:ASN:ND2 | 2.74 | 0.49 |
| 1:L:358:VAL:O | 1:L:362:VAL:HG12 | 2.12 | 0.49 |
| 1:M:69:SER:HG | 1:N:9:PRO:HA | 1.70 | 0.49 |
| 1:M:174:ILE:HG22 | 1:M:362:VAL:HG23 | 1.93 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:235:LEU:HD23 | 1:M:310:LEU:HD23 | 1.93 | 0.49 |
| 1:M:274:HIS:HE1 | 1:M:278:LYS:HZ3 | 1.60 | 0.49 |
| 1:M:389:LEU:CD1 | 1:M:415:LEU:CD1 | 2.90 | 0.49 |
| 1:N:8:LEU:HD22 | 1:N:494:ILE:HG21 | 1.94 | 0.49 |
| 1:N:68:MET:SD | 1:O:12:MET:HG2 | 2.52 | 0.49 |
| 1:N:178:VAL:HG12 | 1:N:188:VAL:HG11 | 1.92 | 0.49 |
| 1:N:254:ILE:HG22 | 1:N:281:ILE:CD1 | 2.40 | 0.49 |
| 1:O:124:TYR:CE1 | 1:O:407:ALA:C | 2.86 | 0.49 |
| 1:O:255:LYS:CD | 1:O:279:GLU:HB3 | 2.41 | 0.49 |
| 1:O:420:ARG:NH1 | 1:O:420:ARG:CG | 2.75 | 0.49 |
| 1:B:214:VAL:CG1 | 1:B:291:ASP:HB3 | 2.42 | 0.49 |
| 1:C:144:ALA:CB | 1:C:373:ILE:HB | 2.41 | 0.49 |
| 1:C:214:VAL:CG1 | 1:C:291:ASP:HB3 | 2.40 | 0.49 |
| 1:D:384:SER:OG | 1:D:441:HIS:HE1 | 1.93 | 0.49 |
| 1:E:14:ARG:HH22 | 1:F:34:THR:CG2 | 2.21 | 0.49 |
| 1:E:134:LEU:CB | 1:E:392:LYS:HE3 | 2.42 | 0.49 |
| 1:E:153:ILE:HD13 | 1:E:372:THR:HG21 | 1.93 | 0.49 |
| 1:F:42:LYS:HZ1 | 1:F:453:VAL:HG23 | 1.76 | 0.49 |
| 1:F:212:VAL:N | 1:F:298:ALA:CB | 2.75 | 0.49 |
| 1:G:223:MET:SD | 1:G:282:VAL:HA | 2.52 | 0.49 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:O | 2.11 | 0.49 |
| 1:H:192:LEU:HD21 | 1:H:297:LYS:CE | 2.38 | 0.49 |
| 1:H:351:THR:O | 1:H:355:ILE:HG13 | 2.12 | 0.49 |
| 1:I:197:LYS:HB2 | 1:I:355:ILE:HG21 | 1.90 | 0.49 |
| 1:J:120:VAL:HG11 | 1:J:488:LEU:HD11 | 1.94 | 0.49 |
| 1:J:142:VAL:CG2 | 1:J:378:ILE:CD1 | 2.91 | 0.49 |
| 1:J:197:LYS:CA | 1:J:355:ILE:CG2 | 2.90 | 0.49 |
| 1:J:397:ALA:C | 1:J:399:GLY:N | 2.64 | 0.49 |
| 1:K:198:LYS:CB | 1:K:326:ILE:HD13 | 2.42 | 0.49 |
| 1:K:339:HIS:HE1 | 1:K:341:LYS:HE2 | 1.76 | 0.49 |
| 1:K:400:ILE:HD11 | 1:K:408:VAL:CG1 | 2.42 | 0.49 |
| 1:M:182:VAL:CB | 1:M:188:VAL:HG12 | 2.41 | 0.49 |
| 1:N:70:VAL:CG2 | 1:N:76:LYS:HG3 | 2.42 | 0.49 |
| 1:N:190:LYS:HZ3 | 1:N:367:GLY:CA | 2.25 | 0.49 |
| 1:N:397:ALA:HB2 | 1:N:408:VAL:HG23 | 1.93 | 0.49 |
| 1:O:218:ARG:HH11 | 1:O:218:ARG:HG2 | 1.76 | 0.49 |
| 1:P:213:LEU:HD11 | 1:P:346:LEU:HD12 | 1.94 | 0.49 |
| 1:A:257:SER:O | 1:A:312:ALA:HB2 | 2.13 | 0.49 |
| 1:A:351:THR:O | 1:A:355:ILE:HG13 | 2.13 | 0.49 |
| 1:B:31:ILE:CG2 | 1:B:65:LEU:HD21 | 2.40 | 0.49 |
| 1:B:197:LYS:HE2 | 1:B:197:LYS:H | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:287:VAL:CG1 | 1:B:291:ASP:HB2 | 2.42 | 0.49 |
| 1:B:379:VAL:C | 1:B:467:VAL:HG12 | 2.32 | 0.49 |
| 1:C:222:GLN:CA | 1:C:277:ALA:HB1 | 2.42 | 0.49 |
| 1:C:493:VAL:HG13 | 1:D:47:MET:CE | 2.43 | 0.49 |
| 1:E:247:LEU:O | 1:E:247:LEU:HD22 | 2.13 | 0.49 |
| 1:F:9:PRO:HD3 | 1:G:69:SER:N | 2.27 | 0.49 |
| 1:F:218:ARG:NH1 | 1:F:282:VAL:HG21 | 2.27 | 0.49 |
| 1:F:233:ALA:CA | 1:F:315:LEU:CD2 | 2.77 | 0.49 |
| 1:H:251:VAL:CG1 | 1:H:276:LEU:HG | 2.41 | 0.49 |
| 1:I:379:VAL:CG2 | 1:I:380:SER:HA | 2.26 | 0.49 |
| 1:J:173:ILE:HD12 | 1:J:345:MET:HG2 | 1.94 | 0.49 |
| 1:J:448:CYS:HB2 | 1:J:460:ASP:CA | 2.40 | 0.49 |
| 1:K:134:LEU:CD1 | 1:K:393:LEU:CD2 | 2.89 | 0.49 |
| 1:K:138:ILE:HD12 | 1:K:138:ILE:C | 2.32 | 0.49 |
| 1:K:197:LYS:CB | 1:K:355:ILE:CG2 | 2.90 | 0.49 |
| 1:M:81:VAL:HG11 | 1:M:483:SER:CB | 2.42 | 0.49 |
| 1:M:115:VAL:HG23 | 1:M:116:HIS:O | 2.12 | 0.49 |
| 1:M:212:VAL:HG21 | 1:M:294:LYS:HB3 | 1.93 | 0.49 |
| 1:O:8:LEU:CD1 | 1:O:494:ILE:CG2 | 2.84 | 0.49 |
| 1:O:68:MET:HE2 | 1:O:68:MET:CA | 2.26 | 0.49 |
| 1:O:85:GLN:OE1 | 1:O:476:ALA:HA | 2.12 | 0.49 |
| 1:O:197:LYS:CA | 1:O:355:ILE:HG21 | 2.42 | 0.49 |
| 1:O:306:ASN:ND2 | 1:O:308:LYS:HG3 | 2.27 | 0.49 |
| 1:P:34:THR:HG22 | 1:P:35:VAL:CG1 | 2.43 | 0.49 |
| 1:P:43:GLY:O | 1:P:44:MET:CE | 2.60 | 0.49 |
| 1:P:124:TYR:CE1 | 1:P:407:ALA:C | 2.81 | 0.49 |
| 1:P:169:LYS:HG2 | 1:P:204:ASP:CA | 2.40 | 0.49 |
| 1:A:12:MET:CE | 1:B:68:MET:HG3 | 2.41 | 0.49 |
| 1:A:77:MET:CB | 1:A:80:GLU:OE1 | 2.60 | 0.49 |
| 1:A:116:HIS:ND1 | 1:A:117:PRO:HD2 | 2.27 | 0.49 |
| 1:A:371:CYS:HA | 1:A:471:ARG:NH1 | 2.27 | 0.49 |
| 1:A:431:ILE:O | 1:A:431:ILE:HG12 | 2.11 | 0.49 |
| 1:B:135:LEU:CD2 | 1:B:385:THR:CG2 | 2.90 | 0.49 |
| 1:B:166:ALA:O | 1:B:170:LEU:HG | 2.13 | 0.49 |
| 1:B:233:ALA:HA | 1:B:315:LEU:CG | 2.42 | 0.49 |
| 1:B:379:VAL:HG22 | 1:B:380:SER:CA | 2.42 | 0.49 |
| 1:B:431:ILE:CD1 | 1:K:406:LEU:CD1 | 2.76 | 0.49 |
| 1:C:121:VAL:C | 1:C:123:GLY:N | 2.65 | 0.49 |
| 1:C:247:LEU:O | 1:C:247:LEU:HD12 | 2.12 | 0.49 |
| 1:D:254:ILE:CD1 | 1:D:262:LEU:HD11 | 2.41 | 0.49 |
| 1:E:158:ILE:CD1 | 1:E:361:ALA:HB1 | 2.42 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:173:ILE:HD12 | 1:E:345:MET:CG | 2.42 | 0.49 |
| 1:E:241:GLU:CG | 1:E:246:MET:HB3 | 2.43 | 0.49 |
| 1:F:81:VAL:HG11 | 1:F:483:SER:HB3 | 1.94 | 0.49 |
| 1:F:107:ALA:O | 1:F:111:LEU:HG | 2.11 | 0.49 |
| 1:F:116:HIS:C | 1:F:118:THR:N | 2.66 | 0.49 |
| 1:F:164:GLU:HG3 | 1:F:167:LYS:NZ | 2.27 | 0.49 |
| 1:F:351:THR:O | 1:F:355:ILE:HG13 | 2.12 | 0.49 |
| 1:G:195:ILE:HB | 1:G:359:ALA:HB3 | 1.94 | 0.49 |
| 1:G:372:THR:HA | 1:G:375:ASP:O | 2.12 | 0.49 |
| 1:G:403:ARG:CG | 1:G:403:ARG:NH1 | 2.72 | 0.49 |
| 1:G:437:VAL:HG21 | 1:G:451:LEU:CG | 2.39 | 0.49 |
| 1:H:156:THR:HG21 | 1:H:468:GLU:N | 2.27 | 0.49 |
| 1:H:452:ASN:OD1 | 1:H:454:PHE:HB2 | 2.11 | 0.49 |
| 1:I:233:ALA:HB1 | 1:I:310:LEU:HD21 | 1.94 | 0.49 |
| 1:J:223:MET:CE | 1:J:276:LEU:CB | 2.90 | 0.49 |
| 1:J:247:LEU:HG | 1:J:272:ALA:HB2 | 1.93 | 0.49 |
| 1:K:138:ILE:CD1 | 1:K:379:VAL:CG1 | 2.90 | 0.49 |
| 1:L:194:LYS:HG2 | 1:L:195:ILE:N | 2.27 | 0.49 |
| 1:L:223:MET:HE1 | 1:L:283:ALA:HB3 | 1.94 | 0.49 |
| 1:L:423:ALA:HB1 | 1:L:430:ALA:HB2 | 1.94 | 0.49 |
| 1:M:124:TYR:HD2 | 1:M:411:PHE:HD2 | 1.58 | 0.49 |
| 1:M:218:ARG:NH1 | 1:M:282:VAL:HB | 2.28 | 0.49 |
| 1:M:339:HIS:HE1 | 1:M:341:LYS:CD | 2.25 | 0.49 |
| 1:M:461:MET:CA | 1:M:466:VAL:HG23 | 2.43 | 0.49 |
| 1:N:190:LYS:NZ | 1:N:367:GLY:HA2 | 2.27 | 0.49 |
| 1:O:27:ALA:O | 1:O:30:ILE:HD12 | 2.12 | 0.49 |
| 1:O:197:LYS:HA | 1:O:355:ILE:HG21 | 1.95 | 0.49 |
| 1:O:251:VAL:HG21 | 1:O:272:ALA:HB1 | 1.93 | 0.49 |
| 1:P:85:GLN:NE2 | 1:P:475:GLN:CB | 2.69 | 0.49 |
| 1:P:170:LEU:HD12 | 1:P:358:VAL:CG1 | 2.42 | 0.49 |
| 1:P:389:LEU:HD12 | 1:P:415:LEU:HD13 | 1.93 | 0.49 |
| 1:A:170:LEU:CD1 | 1:A:358:VAL:HG11 | 2.42 | 0.49 |
| 1:A:218:ARG:HH22 | 1:A:321:VAL:HG12 | 1.78 | 0.49 |
| 1:B:22:ARG:O | 1:B:22:ARG:HG2 | 2.12 | 0.49 |
| 1:B:393:LEU:HA | 1:B:396:TYR:HB3 | 1.95 | 0.49 |
| 1:C:107:ALA:O | 1:C:111:LEU:HG | 2.12 | 0.49 |
| 1:C:181:VAL:HG12 | 1:C:341:LYS:O | 2.13 | 0.49 |
| 1:D:8:LEU:HG | 1:E:68:MET:CG | 2.41 | 0.49 |
| 1:D:345:MET:CE | 1:D:362:VAL:HG11 | 2.42 | 0.49 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:CD1 | 2.42 | 0.49 |
| 1:E:191:ASP:O | 1:E:294:LYS:HE3 | 2.12 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:212:VAL:HG22 | 1:E:344:THR:OG1 | 2.12 | 0.49 |
| 1:E:218:ARG:CD | 1:E:282:VAL:CG2 | 2.90 | 0.49 |
| 1:F:9:PRO:N | 1:G:69:SER:N | 2.60 | 0.49 |
| 1:F:38:THR:CG2 | 1:F:46:LYS:HD2 | 2.42 | 0.49 |
| 1:F:369:VAL:O | 1:F:369:VAL:HG12 | 2.12 | 0.49 |
| 1:G:102:GLU:HA | 1:G:102:GLU:OE1 | 2.12 | 0.49 |
| 1:H:219:VAL:HG12 | 1:H:223:MET:HE1 | 1.91 | 0.49 |
| 1:H:391:MET:HE2 | 1:H:438:ARG:HB3 | 1.92 | 0.49 |
| 1:I:234:LEU:HD22 | 1:I:301:ALA:HB3 | 1.93 | 0.49 |
| 1:I:461:MET:HE2 | 1:I:461:MET:H | 1.69 | 0.49 |
| 1:J:138:ILE:HD12 | 1:J:139:ALA:N | 2.27 | 0.49 |
| 1:J:178:VAL:HG22 | 1:J:193:ILE:HD11 | 1.94 | 0.49 |
| 1:J:247:LEU:O | 1:J:251:VAL:HG23 | 2.12 | 0.49 |
| 1:J:339:HIS:HE1 | 1:J:341:LYS:HE2 | 1.77 | 0.49 |
| 1:J:383:GLY:HA2 | 1:J:386:GLU:CG | 2.42 | 0.49 |
| 1:K:44:MET:CE | 1:K:44:MET:CA | 2.72 | 0.49 |
| 1:K:428:LEU:HD12 | 1:K:433:ILE:CD1 | 2.39 | 0.49 |
| 1:L:135:LEU:HD13 | 1:L:385:THR:CG2 | 2.43 | 0.49 |
| 1:L:209:ILE:CD1 | 1:L:213:LEU:HB2 | 2.39 | 0.49 |
| 1:M:404:GLU:O | 1:M:408:VAL:HG13 | 2.12 | 0.49 |
| 1:N:239:ILE:CG1 | 1:N:307:ILE:HG21 | 2.36 | 0.49 |
| 1:O:77:MET:HA | 1:O:80:GLU:CD | 2.31 | 0.49 |
| 1:O:130:LYS:HZ3 | 1:O:393:LEU:HD23 | 1.70 | 0.49 |
| 1:O:248:LYS:CG | 1:O:275:TYR:CE2 | 2.94 | 0.49 |
| 1:P:437:VAL:HG21 | 1:P:451:LEU:HD11 | 1.91 | 0.49 |
| 1:A:92:GLY:O | 1:A:96:ALA:CB | 2.61 | 0.49 |
| 1:A:124:TYR:CE1 | 1:A:407:ALA:HA | 2.40 | 0.49 |
| 1:A:211:GLY:HA3 | 1:A:334:VAL:O | 2.11 | 0.49 |
| 1:C:254:ILE:HG22 | 1:C:281:ILE:HD13 | 1.93 | 0.49 |
| 1:D:25:ILE:HG22 | 1:D:26:LEU:H | 1.75 | 0.49 |
| 1:E:251:VAL:CG1 | 1:E:276:LEU:HD22 | 2.42 | 0.49 |
| 1:E:377:ARG:NE | 1:E:470:LEU:HD12 | 2.28 | 0.49 |
| 1:F:296:ALA:HA | 1:F:301:ALA:HB3 | 1.95 | 0.49 |
| 1:G:42:LYS:HE3 | 1:G:426:ALA:HB2 | 1.95 | 0.49 |
| 1:G:146:ASP:HB3 | 1:G:149:ILE:HG12 | 1.95 | 0.49 |
| 1:H:130:LYS:HD2 | 1:H:396:TYR:CD1 | 2.48 | 0.49 |
| 1:I:35:VAL:HG11 | 1:I:64:ILE:HG21 | 1.93 | 0.49 |
| 1:I:105:ARG:NH1 | 1:I:106:LYS:CG | 2.73 | 0.49 |
| 1:I:105:ARG:HD3 | 1:I:106:LYS:HG2 | 1.95 | 0.49 |
| 1:I:130:LYS:HE2 | 1:I:134:LEU:HD11 | 1.95 | 0.49 |
| 1:J:71:GLU:HG3 | 1:J:72:HIS:H | 1.77 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:14:ARG:HD2 | 1:K:494:ILE:HD11 | 1.92 | 0.49 |
| 1:K:170:LEU:HD11 | 1:K:358:VAL:HG22 | 1.94 | 0.49 |
| 1:L:30:ILE:CG2 | 1:L:31:ILE:N | 2.66 | 0.49 |
| 1:L:156:THR:HG21 | 1:L:468:GLU:N | 2.28 | 0.49 |
| 1:M:29:ARG:O | 1:M:33:GLU:HG3 | 2.12 | 0.49 |
| 1:N:235:LEU:HG | 1:N:307:ILE:HG13 | 1.95 | 0.49 |
| 1:N:377:ARG:NH1 | 1:N:470:LEU:HD12 | 2.27 | 0.49 |
| 1:N:384:SER:CA | 1:N:441:HIS:HE1 | 2.25 | 0.49 |
| 1:O:188:VAL:CG2 | 1:O:373:ILE:HG13 | 2.42 | 0.49 |
| 1:O:236:ASN:O | 1:O:265:GLN:HB3 | 2.12 | 0.49 |
| 1:P:452:ASN:ND2 | 1:P:454:PHE:H | 2.10 | 0.49 |
| 1:A:30:ILE:HA | 1:A:33:GLU:OE1 | 2.12 | 0.49 |
| 1:A:135:LEU:CG | 1:A:138:ILE:CD1 | 2.89 | 0.49 |
| 1:A:414:ALA:O | 1:A:417:VAL:HG12 | 2.11 | 0.49 |
| 1:C:106:LYS:HE3 | 1:C:106:LYS:HA | 1.94 | 0.49 |
| 1:D:9:PRO:CD | 1:E:70:VAL:HA | 2.43 | 0.49 |
| 1:D:38:THR:CG2 | 1:D:59:ASN:HD22 | 2.24 | 0.49 |
| 1:D:193:ILE:HG13 | 1:D:366:VAL:HG11 | 1.94 | 0.49 |
| 1:D:223:MET:CG | 1:D:277:ALA:HB2 | 2.36 | 0.49 |
| 1:D:386:GLU:HG3 | 1:D:419:PRO:CG | 2.43 | 0.49 |
| 1:D:453:VAL:HG23 | 1:D:454:PHE:N | 2.28 | 0.49 |
| 1:G:141:GLU:HB3 | 1:G:377:ARG:HA | 1.94 | 0.49 |
| 1:H:276:LEU:CD2 | 1:H:281:ILE:CD1 | 2.79 | 0.49 |
| 1:H:391:MET:CE | 1:H:438:ARG:HG2 | 2.43 | 0.49 |
| 1:I:12:MET:HE2 | 1:I:494:ILE:CG2 | 2.42 | 0.49 |
| 1:J:97:VAL:O | 1:J:100:ALA:HB3 | 2.12 | 0.49 |
| 1:J:124:TYR:CE1 | 1:J:407:ALA:O | 2.61 | 0.49 |
| 1:J:233:ALA:CB | 1:J:315:LEU:HD13 | 2.42 | 0.49 |
| 1:K:235:LEU:HD11 | 1:K:310:LEU:CB | 2.39 | 0.49 |
| 1:L:124:TYR:CE1 | 1:L:407:ALA:O | 2.65 | 0.49 |
| 1:M:8:LEU:CG | 1:M:12:MET:HE2 | 2.41 | 0.49 |
| 1:M:23:MET:HE1 | 1:M:72:HIS:HE1 | 1.75 | 0.49 |
| 1:M:182:VAL:HB | 1:M:188:VAL:CG1 | 2.42 | 0.49 |
| 1:N:447:LYS:O | 1:N:448:CYS:CB | 2.58 | 0.49 |
| 1:O:220:SER:HB2 | 1:O:273:GLN:C | 2.33 | 0.49 |
| 1:O:339:HIS:HE1 | 1:O:341:LYS:HD2 | 1.67 | 0.49 |
| 1:O:430:ALA:O | 1:O:434:LEU:HD22 | 2.12 | 0.49 |
| 1:P:232:ILE:H | 1:P:232:ILE:CD1 | 2.25 | 0.49 |
| 1:P:238:ALA:C | 1:P:307:ILE:CG2 | 2.81 | 0.49 |
| 1:P:254:ILE:CD1 | 1:P:307:ILE:HD11 | 2.41 | 0.49 |
| 1:A:124:TYR:CE1 | 1:A:407:ALA:C | 2.86 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:285:ARG:CG | 1:A:286:ARG:H | 2.21 | 0.49 |
| 1:A:495:ALA:HA | 1:B:49:VAL:HB | 1.95 | 0.49 |
| 1:B:169:LYS:HG2 | 1:B:204:ASP:CA | 2.40 | 0.49 |
| 1:B:235:LEU:HB2 | 1:B:310:LEU:CD2 | 2.32 | 0.49 |
| 1:B:391:MET:CE | 1:B:438:ARG:CG | 2.90 | 0.49 |
| 1:C:97:VAL:O | 1:C:100:ALA:HB3 | 2.12 | 0.49 |
| 1:C:120:VAL:O | 1:C:124:TYR:CD1 | 2.65 | 0.49 |
| 1:C:124:TYR:CE1 | 1:C:407:ALA:HA | 2.44 | 0.49 |
| 1:C:140:CYS:HB2 | 1:C:446:ASN:OD1 | 2.13 | 0.49 |
| 1:C:235:LEU:CD2 | 1:C:304:ILE:HD12 | 2.43 | 0.49 |
| 1:C:377:ARG:CB | 1:C:470:LEU:HD12 | 2.40 | 0.49 |
| 1:D:195:ILE:CB | 1:D:359:ALA:HB1 | 2.43 | 0.49 |
| 1:D:212:VAL:HG21 | 1:D:294:LYS:HB3 | 1.95 | 0.49 |
| 1:F:263:PHE:HZ | 1:F:332:ILE:HG21 | 1.76 | 0.49 |
| 1:G:387:VAL:HA | 1:G:390:SER:HB3 | 1.95 | 0.49 |
| 1:G:431:ILE:CD1 | 1:P:403:ARG:HA | 2.42 | 0.49 |
| 1:G:433:ILE:CG2 | 1:G:451:LEU:CD2 | 2.80 | 0.49 |
| 1:H:65:LEU:C | 1:H:79:ILE:HD13 | 2.33 | 0.49 |
| 1:H:78:LEU:HD11 | 1:H:484:THR:HG21 | 1.95 | 0.49 |
| 1:H:104:LEU:HD21 | 1:H:484:THR:HB | 1.94 | 0.49 |
| 1:H:174:ILE:HD12 | 1:H:365:ALA:CB | 2.37 | 0.49 |
| 1:H:459:GLU:HB3 | 1:H:461:MET:HE2 | 1.94 | 0.49 |
| 1:I:95:THR:HG22 | 1:I:96:ALA:N | 2.27 | 0.49 |
| 1:I:120:VAL:HG13 | 1:I:121:VAL:N | 2.26 | 0.49 |
| 1:I:130:LYS:CE | 1:I:134:LEU:HD11 | 2.42 | 0.49 |
| 1:I:387:VAL:HG21 | 1:I:437:VAL:HG12 | 1.95 | 0.49 |
| 1:I:467:VAL:CG2 | 1:I:468:GLU:N | 2.74 | 0.49 |
| 1:K:25:ILE:CD1 | 1:K:108:GLU:HG3 | 2.42 | 0.49 |
| 1:K:38:THR:HG21 | 1:K:46:LYS:HD2 | 1.95 | 0.49 |
| 1:K:236:ASN:HB2 | 1:K:265:GLN:OE1 | 2.12 | 0.49 |
| 1:M:42:LYS:CE | 1:M:426:ALA:HA | 2.43 | 0.49 |
| 1:N:47:MET:HE2 | 1:O:493:VAL:HG13 | 1.94 | 0.49 |
| 1:N:130:LYS:HZ1 | 1:N:134:LEU:HD11 | 1.76 | 0.49 |
| 1:N:372:THR:HG23 | 1:N:377:ARG:O | 2.12 | 0.49 |
| 1:O:44:MET:HE1 | 1:P:489:ARG:NH1 | 2.28 | 0.49 |
| 1:O:393:LEU:HA | 1:O:396:TYR:HB3 | 1.95 | 0.49 |
| 1:P:15:TYR:CD2 | 1:P:19:ASP:HB3 | 2.46 | 0.49 |
| 1:P:96:ALA:HA | 1:P:480:ALA:HB1 | 1.95 | 0.49 |
| 1:A:431:ILE:CG2 | 1:J:403:ARG:HD3 | 2.43 | 0.49 |
| 1:B:178:VAL:HG23 | 1:B:366:VAL:HG22 | 1.89 | 0.49 |
| 1:B:192:LEU:HD23 | 1:B:341:LYS:C | 2.33 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:197:LYS:CB | 1:B:355:ILE:HG21 | 2.43 | 0.49 |
| 1:B:217:GLU:CD | 1:B:330:SER:HB2 | 2.32 | 0.49 |
| 1:B:238:ALA:HB1 | 1:B:240:GLU:HG2 | 1.95 | 0.49 |
| 1:B:303:VAL:HG22 | 1:B:303:VAL:O | 2.12 | 0.49 |
| 1:C:64:ILE:O | 1:C:68:MET:HB2 | 2.13 | 0.49 |
| 1:C:150:LEU:CB | 1:C:175:VAL:CG1 | 2.86 | 0.49 |
| 1:C:158:ILE:HD13 | 1:C:170:LEU:CG | 2.42 | 0.49 |
| 1:C:211:GLY:HA3 | 1:C:337:CYS:SG | 2.52 | 0.49 |
| 1:C:212:VAL:HA | 1:C:344:THR:OG1 | 2.13 | 0.49 |
| 1:C:441:HIS:CG | 1:C:449:ALA:HB3 | 2.47 | 0.49 |
| 1:D:36:ARG:HG3 | 1:D:37:SER:H | 1.78 | 0.49 |
| 1:D:117:PRO:C | 1:D:120:VAL:HG13 | 2.33 | 0.49 |
| 1:D:180:ALA:CB | 1:D:210:LYS:HZ2 | 2.17 | 0.49 |
| 1:D:254:ILE:HG22 | 1:D:259:ALA:HB3 | 1.95 | 0.49 |
| 1:D:276:LEU:CD1 | 1:D:281:ILE:HD12 | 2.41 | 0.49 |
| 1:E:158:ILE:HG22 | 1:E:164:GLU:HA | 1.95 | 0.49 |
| 1:G:491:ASP:OD1 | 1:H:44:MET:HB3 | 2.13 | 0.49 |
| 1:J:68:MET:HE2 | 1:K:9:PRO:CD | 2.43 | 0.49 |
| 1:J:247:LEU:CG | 1:J:272:ALA:HB2 | 2.43 | 0.49 |
| 1:K:223:MET:HE3 | 1:K:276:LEU:HB2 | 1.90 | 0.49 |
| 1:K:416:GLU:O | 1:K:417:VAL:HG13 | 2.12 | 0.49 |
| 1:L:69:SER:O | 1:M:9:PRO:CA | 2.60 | 0.49 |
| 1:L:235:LEU:HG | 1:L:307:ILE:CD1 | 2.43 | 0.49 |
| 1:L:235:LEU:HD23 | 1:L:237:CYS:N | 2.27 | 0.49 |
| 1:N:139:ALA:CB | 1:N:377:ARG:CG | 2.91 | 0.49 |
| 1:O:134:LEU:CD1 | 1:O:393:LEU:CG | 2.91 | 0.49 |
| 1:O:232:ILE:CG1 | 1:O:299:THR:HG21 | 2.43 | 0.49 |
| 1:O:299:THR:CG2 | 1:O:334:VAL:HG11 | 2.36 | 0.49 |
| 1:O:459:GLU:HB3 | 1:O:461:MET:HE3 | 1.91 | 0.49 |
| 1:P:44:MET:HE3 | 1:P:44:MET:N | 2.28 | 0.49 |
| 1:A:72:HIS:CD2 | 1:A:73:PRO:HD2 | 2.43 | 0.49 |
| 1:A:152:LYS:HZ2 | 1:A:465:GLY:HA2 | 1.78 | 0.49 |
| 1:A:214:VAL:O | 1:A:215:ASP:CB | 2.61 | 0.49 |
| 1:A:326:ILE:C | 1:A:328:GLY:H | 2.16 | 0.49 |
| 1:A:368:VAL:HB | 1:A:469:PRO:HG2 | 1.93 | 0.49 |
| 1:A:418:ILE:HB | 1:A:419:PRO:HD3 | 1.94 | 0.49 |
| 1:B:115:VAL:CB | 1:B:403:ARG:NE | 2.76 | 0.49 |
| 1:C:84:THR:O | 1:C:84:THR:HG22 | 2.12 | 0.49 |
| 1:C:119:ILE:CG2 | 1:C:403:ARG:CD | 2.89 | 0.49 |
| 1:D:14:ARG:HH22 | 1:E:34:THR:CG2 | 2.26 | 0.49 |
| 1:D:50:ASP:OD1 | 1:D:52:LEU:HB2 | 2.13 | 0.49 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:346:LEU:HD22 | 1:D:348:ARG:HD3 | 1.94 | 0.49 |
| 1:D:406:LEU:CD1 | 1:M:431:ILE:HD12 | 2.42 | 0.49 |
| 1:D:438:ARG:HH12 | 1:M:405:GLN:HE22 | 1.61 | 0.49 |
| 1:E:134:LEU:HD13 | 1:E:392:LYS:HB3 | 1.93 | 0.49 |
| 1:E:170:LEU:HD11 | 1:E:358:VAL:HG11 | 1.95 | 0.49 |
| 1:F:234:LEU:N | 1:F:315:LEU:CD2 | 2.76 | 0.49 |
| 1:G:135:LEU:HD11 | 1:G:389:LEU:HD21 | 1.95 | 0.49 |
| 1:G:230:ALA:HB1 | 1:G:261:VAL:HG23 | 1.94 | 0.49 |
| 1:H:66:ARG:N | 1:H:79:ILE:HD13 | 2.27 | 0.49 |
| 1:H:79:ILE:O | 1:H:83:LYS:HB2 | 2.13 | 0.49 |
| 1:I:68:MET:HG2 | 1:J:8:LEU:CD2 | 2.43 | 0.49 |
| 1:J:17:GLY:O | 1:J:21:GLN:HG3 | 2.13 | 0.49 |
| 1:J:130:LYS:HG2 | 1:J:393:LEU:CD2 | 2.43 | 0.49 |
| 1:J:379:VAL:HG11 | 1:J:473:LYS:HG3 | 1.94 | 0.49 |
| 1:J:393:LEU:O | 1:J:396:TYR:HB3 | 2.12 | 0.49 |
| 1:K:121:VAL:O | 1:K:125:GLN:HG2 | 2.13 | 0.49 |
| 1:K:153:ILE:CG2 | 1:K:469:PRO:HG3 | 2.43 | 0.49 |
| 1:L:124:TYR:HD1 | 1:L:124:TYR:N | 2.10 | 0.49 |
| 1:L:140:CYS:SG | 1:L:447:LYS:CB | 2.99 | 0.49 |
| 1:M:156:THR:HG21 | 1:M:467:VAL:C | 2.33 | 0.49 |
| 1:N:247:LEU:HD21 | 1:N:269:ASP:HB3 | 1.94 | 0.49 |
| 1:P:100:ALA:HB1 | 1:P:484:THR:CB | 2.41 | 0.49 |
| 1:A:68:MET:CB | 1:H:8:LEU:HA | 2.43 | 0.48 |
| 1:A:92:GLY:O | 1:A:96:ALA:HB3 | 2.13 | 0.48 |
| 1:A:144:ALA:O | 1:A:150:LEU:HD11 | 2.13 | 0.48 |
| 1:B:239:ILE:HG13 | 1:B:307:ILE:CD1 | 2.10 | 0.48 |
| 1:C:42:LYS:HG3 | 1:C:425:ASN:CB | 2.41 | 0.48 |
| 1:C:82:ALA:HB1 | 1:C:93:THR:CG2 | 2.43 | 0.48 |
| 1:C:142:VAL:CG2 | 1:C:149:ILE:HG21 | 2.44 | 0.48 |
| 1:C:450:GLY:HA3 | 1:C:461:MET:HE1 | 1.95 | 0.48 |
| 1:D:42:LYS:CE | 1:D:426:ALA:CA | 2.88 | 0.48 |
| 1:D:222:GLN:O | 1:D:224:PRO:HD2 | 2.12 | 0.48 |
| 1:D:232:ILE:H | 1:D:232:ILE:HD12 | 1.78 | 0.48 |
| 1:D:250:MET:CE | 1:D:308:LYS:CG | 2.83 | 0.48 |
| 1:E:12:MET:HE1 | 1:F:68:MET:CE | 2.41 | 0.48 |
| 1:E:68:MET:HE2 | 1:E:68:MET:CA | 2.42 | 0.48 |
| 1:E:206:THR:HG21 | 1:E:347:ILE:HG23 | 1.93 | 0.48 |
| 1:E:241:GLU:HG3 | 1:E:246:MET:HB3 | 1.95 | 0.48 |
| 1:F:234:LEU:CD1 | 1:F:301:ALA:HB3 | 2.43 | 0.48 |
| 1:F:365:ALA:O | 1:F:369:VAL:HG23 | 2.13 | 0.48 |
| 1:F:414:ALA:O | 1:F:417:VAL:HG23 | 2.13 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:211:GLY:O | 1:H:212:VAL:HG23 | 2.12 | 0.48 |
| 1:H:223:MET:CG | 1:H:277:ALA:HB2 | 2.31 | 0.48 |
| 1:H:420:ARG:O | 1:H:423:ALA:HB3 | 2.13 | 0.48 |
| 1:H:434:LEU:N | 1:H:434:LEU:CD2 | 2.76 | 0.48 |
| 1:I:467:VAL:O | 1:I:467:VAL:CG2 | 2.57 | 0.48 |
| 1:J:209:ILE:C | 1:J:211:GLY:H | 2.16 | 0.48 |
| 1:K:181:VAL:HG23 | 1:K:182:VAL:N | 2.28 | 0.48 |
| 1:K:233:ALA:CA | 1:K:315:LEU:HD21 | 2.43 | 0.48 |
| 1:K:448:CYS:HB3 | 1:K:460:ASP:CG | 2.33 | 0.48 |
| 1:L:31:ILE:CD1 | 1:M:8:LEU:CD1 | 2.91 | 0.48 |
| 1:L:130:LYS:CE | 1:L:396:TYR:CD1 | 2.95 | 0.48 |
| 1:L:263:PHE:CE2 | 1:L:295:LEU:CD2 | 2.96 | 0.48 |
| 1:M:196:GLU:HG2 | 1:M:331:MET:HE1 | 1.93 | 0.48 |
| 1:M:223:MET:HB3 | 1:M:282:VAL:HG12 | 1.95 | 0.48 |
| 1:M:237:CYS:CA | 1:M:306:ASN:HA | 2.43 | 0.48 |
| 1:M:238:ALA:O | 1:M:307:ILE:HB | 2.12 | 0.48 |
| 1:M:384:SER:HB3 | 1:M:441:HIS:CE1 | 2.47 | 0.48 |
| 1:N:77:MET:HB2 | 1:N:487:LEU:HD22 | 1.93 | 0.48 |
| 1:N:121:VAL:CG2 | 1:N:122:LYS:N | 2.70 | 0.48 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:O | 2.66 | 0.48 |
| 1:O:119:ILE:HG22 | 1:O:120:VAL:N | 2.27 | 0.48 |
| 1:O:196:GLU:CD | 1:O:331:MET:HE1 | 2.33 | 0.48 |
| 1:O:345:MET:CE | 1:O:362:VAL:HG11 | 2.42 | 0.48 |
| 1:O:391:MET:CE | 1:O:438:ARG:O | 2.57 | 0.48 |
| 1:P:211:GLY:O | 1:P:212:VAL:HG23 | 2.13 | 0.48 |
| 1:P:234:LEU:N | 1:P:315:LEU:HD21 | 2.27 | 0.48 |
| 1:P:235:LEU:CG | 1:P:307:ILE:HD13 | 2.41 | 0.48 |
| 1:P:239:ILE:HD13 | 1:P:307:ILE:HG12 | 1.91 | 0.48 |
| 1:P:251:VAL:HG13 | 1:P:276:LEU:CD2 | 2.44 | 0.48 |
| 1:A:57:VAL:C | 1:A:58:THR:HG23 | 2.34 | 0.48 |
| 1:A:218:ARG:HB2 | 1:A:225:LYS:NZ | 2.28 | 0.48 |
| 1:A:326:ILE:HG21 | 1:A:331:MET:SD | 2.53 | 0.48 |
| 1:B:38:THR:HG21 | 1:B:46:LYS:CE | 2.42 | 0.48 |
| 1:B:193:ILE:HD12 | 1:B:366:VAL:HG21 | 1.94 | 0.48 |
| 1:B:235:LEU:CD2 | 1:B:307:ILE:HG13 | 2.43 | 0.48 |
| 1:C:232:ILE:HG13 | 1:C:261:VAL:HG11 | 1.96 | 0.48 |
| 1:C:391:MET:HE1 | 1:C:438:ARG:HA | 1.91 | 0.48 |
| 1:D:12:MET:HE2 | 1:E:68:MET:CE | 2.43 | 0.48 |
| 1:D:77:MET:CB | 1:D:487:LEU:CD2 | 2.84 | 0.48 |
| 1:D:85:GLN:OE1 | 1:D:476:ALA:HA | 2.13 | 0.48 |
| 1:D:164:GLU:O | 1:D:164:GLU:CG | 2.61 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:165:LYS:CE | 1:E:165:LYS:CA | 2.90 | 0.48 |
| 1:E:195:ILE:HB | 1:E:359:ALA:CB | 2.43 | 0.48 |
| 1:E:347:ILE:HG21 | 1:E:358:VAL:HG12 | 1.94 | 0.48 |
| 1:F:155:MET:HB2 | 1:F:167:LYS:HD3 | 1.95 | 0.48 |
| 1:G:70:VAL:HG21 | 1:G:76:LYS:CG | 2.42 | 0.48 |
| 1:G:227:VAL:HG11 | 1:G:260:ASN:HD21 | 1.72 | 0.48 |
| 1:G:403:ARG:HB3 | 1:P:431:ILE:HD12 | 1.95 | 0.48 |
| 1:H:219:VAL:HG22 | 1:H:273:GLN:CG | 2.15 | 0.48 |
| 1:I:73:PRO:HB3 | 1:P:55:VAL:HG11 | 1.95 | 0.48 |
| 1:I:164:GLU:O | 1:I:167:LYS:HB3 | 2.13 | 0.48 |
| 1:J:135:LEU:HD11 | 1:J:385:THR:HG21 | 1.94 | 0.48 |
| 1:J:345:MET:HE2 | 1:J:362:VAL:HG21 | 1.94 | 0.48 |
| 1:K:55:VAL:HG23 | 1:K:55:VAL:O | 2.14 | 0.48 |
| 1:K:154:ALA:HB1 | 1:K:171:ALA:HB1 | 1.96 | 0.48 |
| 1:K:299:THR:HG23 | 1:K:334:VAL:CG1 | 2.36 | 0.48 |
| 1:K:448:CYS:CB | 1:K:460:ASP:HA | 2.43 | 0.48 |
| 1:L:63:THR:O | 1:L:63:THR:CG2 | 2.60 | 0.48 |
| 1:L:223:MET:HB3 | 1:L:282:VAL:HA | 1.95 | 0.48 |
| 1:L:257:SER:O | 1:L:312:ALA:HB2 | 2.13 | 0.48 |
| 1:M:210:LYS:CB | 1:M:343:VAL:HG23 | 2.40 | 0.48 |
| 1:M:235:LEU:HB3 | 1:M:307:ILE:HG22 | 1.95 | 0.48 |
| 1:M:341:LYS:HD3 | 1:M:341:LYS:N | 2.28 | 0.48 |
| 1:N:42:LYS:CE | 1:O:118:THR:CG2 | 2.91 | 0.48 |
| 1:N:124:TYR:CE1 | 1:N:407:ALA:C | 2.86 | 0.48 |
| 1:N:254:ILE:HD13 | 1:N:262:LEU:HD13 | 1.92 | 0.48 |
| 1:O:69:SER:CA | 1:P:9:PRO:HB3 | 2.42 | 0.48 |
| 1:O:339:HIS:ND1 | 1:O:341:LYS:HD2 | 2.27 | 0.48 |
| 1:P:458:VAL:C | 1:P:459:GLU:HG2 | 2.34 | 0.48 |
| 1:A:12:MET:HE1 | 1:B:68:MET:HE2 | 1.95 | 0.48 |
| 1:A:68:MET:SD | 1:H:12:MET:CE | 3.01 | 0.48 |
| 1:A:103:LEU:CD2 | 1:A:411:PHE:CE2 | 2.92 | 0.48 |
| 1:A:177:ALA:O | 1:A:181:VAL:HG13 | 2.13 | 0.48 |
| 1:B:250:MET:CE | 1:B:308:LYS:CG | 2.81 | 0.48 |
| 1:B:255:LYS:HG3 | 1:B:255:LYS:O | 2.12 | 0.48 |
| 1:C:263:PHE:HE1 | 1:C:332:ILE:HG21 | 1.77 | 0.48 |
| 1:C:268:ILE:HB | 1:C:273:GLN:NE2 | 2.28 | 0.48 |
| 1:C:491:ASP:CG | 1:D:44:MET:HG2 | 2.33 | 0.48 |
| 1:E:177:ALA:O | 1:E:193:ILE:HD11 | 2.14 | 0.48 |
| 1:E:199:SER:O | 1:E:327:SER:HB2 | 2.14 | 0.48 |
| 1:E:233:ALA:CA | 1:E:315:LEU:HD22 | 2.43 | 0.48 |
| 1:E:236:ASN:HA | 1:E:265:GLN:CB | 2.43 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:347:ILE:HG21 | 1:E:358:VAL:HG11 | 1.94 | 0.48 |
| 1:F:170:LEU:CD2 | 1:F:358:VAL:HG22 | 2.29 | 0.48 |
| 1:G:93:THR:O | 1:G:97:VAL:HG22 | 2.13 | 0.48 |
| 1:G:103:LEU:HD21 | 1:G:411:PHE:HD2 | 1.62 | 0.48 |
| 1:G:196:GLU:HG2 | 1:G:331:MET:CE | 2.41 | 0.48 |
| 1:H:106:LYS:HA | 1:H:106:LYS:HE3 | 1.95 | 0.48 |
| 1:H:254:ILE:CD1 | 1:H:262:LEU:CD1 | 2.86 | 0.48 |
| 1:H:402:GLY:O | 1:I:431:ILE:HD11 | 2.13 | 0.48 |
| 1:I:235:LEU:HB3 | 1:I:307:ILE:HA | 1.94 | 0.48 |
| 1:I:250:MET:HE3 | 1:I:308:LYS:CB | 2.41 | 0.48 |
| 1:J:198:LYS:O | 1:J:355:ILE:HD11 | 2.13 | 0.48 |
| 1:J:391:MET:CE | 1:J:438:ARG:NE | 2.76 | 0.48 |
| 1:K:152:LYS:NZ | 1:K:462:CYS:CA | 2.77 | 0.48 |
| 1:K:154:ALA:CB | 1:K:171:ALA:CB | 2.91 | 0.48 |
| 1:L:166:ALA:HB1 | 1:L:203:ILE:O | 2.12 | 0.48 |
| 1:L:369:VAL:O | 1:L:369:VAL:CG1 | 2.61 | 0.48 |
| 1:M:69:SER:N | 1:N:9:PRO:CG | 2.76 | 0.48 |
| 1:M:206:THR:HG21 | 1:M:347:ILE:CG2 | 2.38 | 0.48 |
| 1:M:219:VAL:HG23 | 1:M:273:GLN:HB3 | 1.94 | 0.48 |
| 1:O:68:MET:CE | 1:P:12:MET:HE3 | 2.43 | 0.48 |
| 1:O:219:VAL:HG21 | 1:O:268:ILE:CG1 | 2.41 | 0.48 |
| 1:O:222:GLN:CB | 1:O:277:ALA:HB1 | 2.42 | 0.48 |
| 1:P:403:ARG:CG | 1:P:403:ARG:NH1 | 2.68 | 0.48 |
| 1:A:42:LYS:HG3 | 1:A:426:ALA:CB | 2.40 | 0.48 |
| 1:A:120:VAL:CG1 | 1:A:121:VAL:N | 2.77 | 0.48 |
| 1:A:153:ILE:CG2 | 1:A:469:PRO:N | 2.77 | 0.48 |
| 1:B:115:VAL:HG23 | 1:B:116:HIS:O | 2.13 | 0.48 |
| 1:C:156:THR:CG2 | 1:C:468:GLU:HB3 | 2.44 | 0.48 |
| 1:C:171:ALA:O | 1:C:175:VAL:HG23 | 2.14 | 0.48 |
| 1:C:386:GLU:HB2 | 1:C:419:PRO:HG2 | 1.95 | 0.48 |
| 1:D:24:ASN:O | 1:D:27:ALA:HA | 2.14 | 0.48 |
| 1:D:391:MET:HE1 | 1:D:438:ARG:HB3 | 1.94 | 0.48 |
| 1:E:167:LYS:HG3 | 1:E:168:GLU:N | 2.27 | 0.48 |
| 1:E:248:LYS:HE2 | 1:E:275:TYR:CE1 | 2.48 | 0.48 |
| 1:F:42:LYS:NZ | 1:F:453:VAL:CG2 | 2.76 | 0.48 |
| 1:F:105:ARG:NH1 | 1:F:106:LYS:HD2 | 2.28 | 0.48 |
| 1:F:142:VAL:CG1 | 1:F:149:ILE:HD13 | 2.44 | 0.48 |
| 1:G:130:LYS:O | 1:G:130:LYS:HG3 | 2.12 | 0.48 |
| 1:G:223:MET:HB3 | 1:G:282:VAL:HG12 | 1.96 | 0.48 |
| 1:H:31:ILE:HG21 | 1:H:65:LEU:CD2 | 2.43 | 0.48 |
| 1:H:198:LYS:HD3 | 1:H:198:LYS:HA | 1.61 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:310:LEU:HG | 1:I:315:LEU:HD11 | 1.96 | 0.48 |
| 1:K:14:ARG:CG | 1:K:494:ILE:HG12 | 2.42 | 0.48 |
| 1:K:132:GLN:HE21 | 1:K:132:GLN:CA | 2.03 | 0.48 |
| 1:K:134:LEU:HD12 | 1:K:393:LEU:CD2 | 2.44 | 0.48 |
| 1:K:134:LEU:HD13 | 1:K:393:LEU:HG | 1.95 | 0.48 |
| 1:K:368:VAL:CB | 1:K:469:PRO:CG | 2.79 | 0.48 |
| 1:N:403:ARG:HA | 1:N:406:LEU:HD12 | 1.95 | 0.48 |
| 1:O:15:TYR:CE1 | 1:O:23:MET:SD | 3.06 | 0.48 |
| 1:O:420:ARG:HH11 | 1:O:420:ARG:CG | 2.17 | 0.48 |
| 1:P:377:ARG:HG2 | 1:P:470:LEU:CD1 | 2.43 | 0.48 |
| 1:B:100:ALA:HB1 | 1:B:484:THR:HG23 | 1.89 | 0.48 |
| 1:B:116:HIS:CD2 | 1:C:425:ASN:O | 2.66 | 0.48 |
| 1:C:12:MET:HE1 | 1:D:68:MET:HE1 | 1.94 | 0.48 |
| 1:C:42:LYS:HB2 | 1:C:425:ASN:HB2 | 1.87 | 0.48 |
| 1:C:85:GLN:OE1 | 1:C:476:ALA:HA | 2.13 | 0.48 |
| 1:C:102:GLU:OE2 | 1:C:417:VAL:HB | 2.14 | 0.48 |
| 1:C:232:ILE:HG13 | 1:C:261:VAL:CG1 | 2.43 | 0.48 |
| 1:D:12:MET:HE2 | 1:E:68:MET:HE1 | 1.91 | 0.48 |
| 1:D:234:LEU:CB | 1:D:292:MET:HE1 | 2.43 | 0.48 |
| 1:D:237:CYS:CB | 1:D:306:ASN:HA | 2.44 | 0.48 |
| 1:D:396:TYR:O | 1:D:396:TYR:CD2 | 2.66 | 0.48 |
| 1:D:491:ASP:OD1 | 1:E:44:MET:CB | 2.61 | 0.48 |
| 1:E:49:VAL:HG22 | 1:E:55:VAL:HG12 | 1.94 | 0.48 |
| 1:E:380:SER:N | 1:E:467:VAL:HG13 | 2.29 | 0.48 |
| 1:G:115:VAL:HG21 | 1:G:119:ILE:HG13 | 1.95 | 0.48 |
| 1:G:135:LEU:HA | 1:G:138:ILE:HD11 | 1.95 | 0.48 |
| 1:G:152:LYS:HE3 | 1:G:465:GLY:CA | 2.43 | 0.48 |
| 1:G:418:ILE:CB | 1:G:419:PRO:CD | 2.90 | 0.48 |
| 1:H:130:LYS:CD | 1:H:396:TYR:CG | 2.97 | 0.48 |
| 1:I:30:ILE:CG2 | 1:I:31:ILE:N | 2.76 | 0.48 |
| 1:I:69:SER:O | 1:J:9:PRO:CA | 2.60 | 0.48 |
| 1:I:89:VAL:HG11 | 1:I:472:VAL:CA | 2.37 | 0.48 |
| 1:I:135:LEU:HD11 | 1:I:385:THR:HG21 | 1.95 | 0.48 |
| 1:I:178:VAL:HG12 | 1:I:188:VAL:HG11 | 1.88 | 0.48 |
| 1:I:236:ASN:C | 1:I:265:GLN:HB3 | 2.33 | 0.48 |
| 1:I:254:ILE:HG21 | 1:I:262:LEU:HD13 | 1.95 | 0.48 |
| 1:I:254:ILE:CG2 | 1:I:281:ILE:CD1 | 2.91 | 0.48 |
| 1:I:326:ILE:O | 1:I:327:SER:CB | 2.61 | 0.48 |
| 1:J:42:LYS:HG3 | 1:J:426:ALA:N | 2.29 | 0.48 |
| 1:J:251:VAL:HG13 | 1:J:276:LEU:HD22 | 1.95 | 0.48 |
| 1:K:379:VAL:HB | 1:K:380:SER:HB2 | 1.95 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:68:MET:HG2 | 1:M:494:ILE:HD12 | 1.94 | 0.48 |
| 1:M:215:ASP:CG | 1:M:331:MET:HG2 | 2.34 | 0.48 |
| 1:M:324:ARG:HB2 | 1:M:333:PHE:CE1 | 2.48 | 0.48 |
| 1:N:101:GLY:HA2 | 1:N:104:LEU:HD12 | 1.95 | 0.48 |
| 1:N:116:HIS:C | 1:N:116:HIS:HD1 | 2.15 | 0.48 |
| 1:O:235:LEU:HD23 | 1:O:307:ILE:CA | 2.44 | 0.48 |
| 1:O:247:LEU:CG | 1:O:272:ALA:HB2 | 2.43 | 0.48 |
| 1:O:254:ILE:CD1 | 1:O:276:LEU:CD1 | 2.84 | 0.48 |
| 1:O:386:GLU:O | 1:O:389:LEU:HB2 | 2.13 | 0.48 |
| 1:P:346:LEU:HD23 | 1:P:348:ARG:HG2 | 1.95 | 0.48 |
| 1:A:12:MET:HE2 | 1:A:494:ILE:HG22 | 1.92 | 0.48 |
| 1:A:104:LEU:HD23 | 1:A:488:LEU:HD13 | 1.92 | 0.48 |
| 1:A:215:ASP:HB2 | 1:A:331:MET:HB3 | 1.95 | 0.48 |
| 1:A:223:MET:CE | 1:A:276:LEU:HB3 | 2.40 | 0.48 |
| 1:B:115:VAL:HB | 1:B:403:ARG:HE | 1.75 | 0.48 |
| 1:B:250:MET:HE3 | 1:B:308:LYS:CG | 2.41 | 0.48 |
| 1:C:37:SER:O | 1:C:43:GLY:HA2 | 2.13 | 0.48 |
| 1:C:77:MET:HE1 | 1:C:486:MET:HE1 | 1.90 | 0.48 |
| 1:C:89:VAL:HG21 | 1:C:472:VAL:CG1 | 2.36 | 0.48 |
| 1:C:121:VAL:HG13 | 1:C:488:LEU:CD2 | 2.44 | 0.48 |
| 1:C:193:ILE:HD12 | 1:C:366:VAL:HG11 | 1.96 | 0.48 |
| 1:C:406:LEU:CD1 | 1:C:406:LEU:N | 2.76 | 0.48 |
| 1:D:215:ASP:C | 1:D:216:LYS:HG2 | 2.34 | 0.48 |
| 1:D:308:LYS:HB2 | 1:D:308:LYS:HE3 | 1.38 | 0.48 |
| 1:D:369:VAL:O | 1:D:369:VAL:HG23 | 2.14 | 0.48 |
| 1:D:433:ILE:O | 1:D:436:LYS:HB2 | 2.14 | 0.48 |
| 1:E:169:LYS:HG2 | 1:E:204:ASP:O | 2.14 | 0.48 |
| 1:E:236:ASN:HA | 1:E:265:GLN:HB2 | 1.95 | 0.48 |
| 1:F:73:PRO:HB2 | 1:G:47:MET:HE1 | 1.94 | 0.48 |
| 1:F:437:VAL:CG2 | 1:F:451:LEU:HD12 | 2.41 | 0.48 |
| 1:G:36:ARG:CA | 1:G:37:SER:HB2 | 2.44 | 0.48 |
| 1:G:163:ALA:C | 1:G:165:LYS:N | 2.66 | 0.48 |
| 1:G:173:ILE:HD13 | 1:G:206:THR:OG1 | 2.13 | 0.48 |
| 1:G:263:PHE:CD2 | 1:G:295:LEU:HD22 | 2.48 | 0.48 |
| 1:G:368:VAL:HG21 | 1:G:469:PRO:HG2 | 1.92 | 0.48 |
| 1:H:36:ARG:HG3 | 1:H:37:SER:H | 1.78 | 0.48 |
| 1:H:223:MET:HE2 | 1:H:281:ILE:O | 2.13 | 0.48 |
| 1:H:254:ILE:CG2 | 1:H:259:ALA:HB3 | 2.43 | 0.48 |
| 1:I:45:ASP:C | 1:I:46:LYS:CG | 2.82 | 0.48 |
| 1:I:231:LYS:N | 1:I:231:LYS:CD | 2.77 | 0.48 |
| 1:J:69:SER:H | 1:K:9:PRO:HG3 | 1.78 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:340:PRO:O | 1:J:340:PRO:CG | 2.60 | 0.48 |
| 1:K:192:LEU:HD23 | 1:K:341:LYS:C | 2.34 | 0.48 |
| 1:K:223:MET:HG3 | 1:K:277:ALA:CB | 2.42 | 0.48 |
| 1:K:234:LEU:CB | 1:K:292:MET:CE | 2.86 | 0.48 |
| 1:K:237:CYS:CA | 1:K:307:ILE:H | 2.27 | 0.48 |
| 1:K:448:CYS:HB3 | 1:K:460:ASP:CB | 2.44 | 0.48 |
| 1:K:453:VAL:CG2 | 1:K:454:PHE:N | 2.74 | 0.48 |
| 1:L:169:LYS:HG3 | 1:L:204:ASP:HA | 1.95 | 0.48 |
| 1:L:192:LEU:HB3 | 1:L:342:ALA:CA | 2.43 | 0.48 |
| 1:L:218:ARG:CD | 1:L:282:VAL:CG1 | 2.92 | 0.48 |
| 1:L:437:VAL:HG21 | 1:L:451:LEU:HG | 1.90 | 0.48 |
| 1:M:231:LYS:N | 1:M:231:LYS:HD3 | 2.28 | 0.48 |
| 1:N:21:GLN:O | 1:N:25:ILE:HD12 | 2.14 | 0.48 |
| 1:N:42:LYS:HZ2 | 1:O:118:THR:HG22 | 1.78 | 0.48 |
| 1:N:135:LEU:CD2 | 1:N:138:ILE:HD11 | 2.32 | 0.48 |
| 1:N:254:ILE:HG23 | 1:N:259:ALA:CB | 2.43 | 0.48 |
| 1:O:25:ILE:HD13 | 1:O:108:GLU:CD | 2.34 | 0.48 |
| 1:O:235:LEU:HD23 | 1:O:307:ILE:CB | 2.43 | 0.48 |
| 1:O:262:LEU:CD1 | 1:O:310:LEU:HD11 | 2.42 | 0.48 |
| 1:O:307:ILE:O | 1:O:307:ILE:HG12 | 2.05 | 0.48 |
| 1:O:326:ILE:HG13 | 1:O:348:ARG:HH12 | 1.78 | 0.48 |
| 1:O:347:ILE:HB | 1:O:355:ILE:HG22 | 1.95 | 0.48 |
| 1:O:391:MET:HE2 | 1:O:438:ARG:CA | 2.40 | 0.48 |
| 1:O:448:CYS:CB | 1:O:460:ASP:HA | 2.43 | 0.48 |
| 1:P:64:ILE:HG22 | 1:P:65:LEU:HD22 | 1.96 | 0.48 |
| 1:P:96:ALA:CA | 1:P:480:ALA:HB1 | 2.42 | 0.48 |
| 1:P:218:ARG:CZ | 1:P:282:VAL:HG21 | 2.44 | 0.48 |
| 1:P:299:THR:HG23 | 1:P:334:VAL:CG1 | 2.44 | 0.48 |
| 1:A:47:MET:CE | 1:H:493:VAL:HG13 | 2.44 | 0.48 |
| 1:A:47:MET:HE2 | 1:H:493:VAL:CG1 | 2.44 | 0.48 |
| 1:A:49:VAL:HA | 1:A:54:ASP:O | 2.12 | 0.48 |
| 1:A:105:ARG:NE | 1:A:106:LYS:HG2 | 2.29 | 0.48 |
| 1:A:150:LEU:CD2 | 1:A:175:VAL:CG1 | 2.75 | 0.48 |
| 1:A:210:LYS:O | 1:A:340:PRO:HG3 | 2.13 | 0.48 |
| 1:B:174:ILE:HG22 | 1:B:362:VAL:CG2 | 2.43 | 0.48 |
| 1:B:268:ILE:HG21 | 1:B:273:GLN:CG | 2.44 | 0.48 |
| 1:B:339:HIS:CE1 | 1:B:341:LYS:CD | 2.92 | 0.48 |
| 1:B:346:LEU:HD21 | 1:B:348:ARG:HD3 | 1.95 | 0.48 |
| 1:C:138:ILE:HD13 | 1:C:385:THR:OG1 | 2.14 | 0.48 |
| 1:D:218:ARG:NH2 | 1:D:321:VAL:HG12 | 2.29 | 0.48 |
| 1:E:116:HIS:CD2 | 1:F:425:ASN:O | 2.67 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:130:LYS:HG3 | 1:E:396:TYR:CE1 | 2.49 | 0.48 |
| 1:E:233:ALA:CB | 1:E:315:LEU:CD1 | 2.92 | 0.48 |
| 1:E:235:LEU:HD11 | 1:E:307:ILE:C | 2.34 | 0.48 |
| 1:G:232:ILE:O | 1:G:315:LEU:HG | 2.14 | 0.48 |
| 1:G:235:LEU:HD23 | 1:G:310:LEU:CD1 | 2.43 | 0.48 |
| 1:I:140:CYS:CB | 1:I:447:LYS:HB3 | 2.44 | 0.48 |
| 1:I:213:LEU:HD22 | 1:I:331:MET:HE1 | 1.96 | 0.48 |
| 1:I:430:ALA:O | 1:I:434:LEU:HD23 | 2.12 | 0.48 |
| 1:J:15:TYR:HB3 | 1:J:19:ASP:HB2 | 1.95 | 0.48 |
| 1:J:42:LYS:HD2 | 1:J:425:ASN:O | 2.11 | 0.48 |
| 1:J:115:VAL:CG1 | 1:J:403:ARG:NE | 2.76 | 0.48 |
| 1:J:138:ILE:HD12 | 1:J:379:VAL:HG21 | 1.92 | 0.48 |
| 1:J:170:LEU:CD2 | 1:J:358:VAL:HG13 | 2.31 | 0.48 |
| 1:K:62:VAL:O | 1:K:62:VAL:HG22 | 2.13 | 0.48 |
| 1:L:48:LEU:CB | 1:L:56:VAL:CG2 | 2.90 | 0.48 |
| 1:L:124:TYR:CD1 | 1:L:124:TYR:N | 2.81 | 0.48 |
| 1:L:234:LEU:O | 1:L:304:ILE:HG13 | 2.13 | 0.48 |
| 1:L:433:ILE:HG22 | 1:L:451:LEU:CD2 | 2.43 | 0.48 |
| 1:M:220:SER:HB3 | 1:M:223:MET:SD | 2.53 | 0.48 |
| 1:M:254:ILE:CG2 | 1:M:281:ILE:CD1 | 2.92 | 0.48 |
| 1:O:82:ALA:HB1 | 1:O:93:THR:HG22 | 1.96 | 0.48 |
| 1:O:170:LEU:CD2 | 1:O:358:VAL:HG11 | 2.39 | 0.48 |
| 1:O:216:LYS:CG | 1:O:287:VAL:HG22 | 2.43 | 0.48 |
| 1:O:232:ILE:HG13 | 1:O:261:VAL:HG11 | 1.95 | 0.48 |
| 1:P:102:GLU:CG | 1:P:417:VAL:HG11 | 2.42 | 0.48 |
| 1:P:119:ILE:CG1 | 1:P:403:ARG:HH11 | 2.22 | 0.48 |
| 1:A:9:PRO:HD3 | 1:A:12:MET:CE | 2.44 | 0.48 |
| 1:A:9:PRO:CA | 1:B:69:SER:N | 2.76 | 0.48 |
| 1:A:63:THR:C | 1:A:66:ARG:HB2 | 2.34 | 0.48 |
| 1:A:177:ALA:CB | 1:A:208:LEU:HD11 | 2.44 | 0.48 |
| 1:A:240:GLU:O | 1:A:241:GLU:HG2 | 2.13 | 0.48 |
| 1:B:236:ASN:HA | 1:B:265:GLN:CB | 2.44 | 0.48 |
| 1:B:345:MET:SD | 1:B:362:VAL:HG11 | 2.54 | 0.48 |
| 1:B:396:TYR:O | 1:B:396:TYR:CG | 2.67 | 0.48 |
| 1:C:17:GLY:HA2 | 1:C:21:GLN:HE22 | 1.75 | 0.48 |
| 1:C:115:VAL:HG11 | 1:C:403:ARG:NE | 2.19 | 0.48 |
| 1:C:198:LYS:N | 1:C:355:ILE:HD13 | 2.28 | 0.48 |
| 1:C:236:ASN:HD21 | 1:C:305:THR:HG23 | 1.79 | 0.48 |
| 1:C:248:LYS:HD2 | 1:C:275:TYR:OH | 2.13 | 0.48 |
| 1:D:159:THR:HG22 | 1:D:164:GLU:OE1 | 2.14 | 0.48 |
| 1:D:227:VAL:CG1 | 1:D:260:ASN:OD1 | 2.60 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:488:LEU:CD2 | 1:D:488:LEU:C | 2.82 | 0.48 |
| 1:E:134:LEU:HB3 | 1:E:392:LYS:NZ | 2.28 | 0.48 |
| 1:E:190:LYS:H | 1:E:190:LYS:HG2 | 1.25 | 0.48 |
| 1:E:254:ILE:HG22 | 1:E:281:ILE:HD12 | 1.86 | 0.48 |
| 1:E:472:VAL:CG2 | 1:E:473:LYS:N | 2.76 | 0.48 |
| 1:F:371:CYS:HB2 | 1:F:471:ARG:NE | 2.25 | 0.48 |
| 1:G:130:LYS:HG2 | 1:G:393:LEU:HD23 | 1.90 | 0.48 |
| 1:G:194:LYS:CG | 1:G:195:ILE:H | 2.25 | 0.48 |
| 1:G:383:GLY:CA | 1:G:386:GLU:HG2 | 2.44 | 0.48 |
| 1:H:124:TYR:CE1 | 1:H:407:ALA:O | 2.66 | 0.48 |
| 1:I:251:VAL:HA | 1:I:254:ILE:HD12 | 1.94 | 0.48 |
| 1:I:304:ILE:CD1 | 1:I:310:LEU:HA | 2.44 | 0.48 |
| 1:I:347:ILE:HG23 | 1:I:358:VAL:HG11 | 1.96 | 0.48 |
| 1:I:365:ALA:O | 1:I:369:VAL:HG23 | 2.13 | 0.48 |
| 1:K:263:PHE:CZ | 1:K:295:LEU:HD21 | 2.49 | 0.48 |
| 1:L:66:ARG:HH21 | 1:L:83:LYS:HG3 | 1.79 | 0.48 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:CG | 2.44 | 0.48 |
| 1:L:262:LEU:CG | 1:L:310:LEU:HD21 | 2.43 | 0.48 |
| 1:L:376:GLY:N | 1:L:377:ARG:HB2 | 2.29 | 0.48 |
| 1:L:423:ALA:CB | 1:L:430:ALA:CB | 2.92 | 0.48 |
| 1:M:198:LYS:HB3 | 1:M:326:ILE:CD1 | 2.44 | 0.48 |
| 1:M:247:LEU:HD11 | 1:M:269:ASP:CB | 2.42 | 0.48 |
| 1:M:466:VAL:HG23 | 1:M:466:VAL:O | 2.14 | 0.48 |
| 1:N:69:SER:HB3 | 1:O:9:PRO:HA | 1.87 | 0.48 |
| 1:N:237:CYS:HB3 | 1:N:306:ASN:CA | 2.34 | 0.48 |
| 1:O:195:ILE:HD13 | 1:O:359:ALA:HB1 | 1.94 | 0.48 |
| 1:O:404:GLU:O | 1:O:408:VAL:HG13 | 2.13 | 0.48 |
| 1:A:15:TYR:CD1 | 1:A:23:MET:SD | 3.07 | 0.48 |
| 1:A:29:ARG:O | 1:A:32:ALA:HB3 | 2.14 | 0.48 |
| 1:A:389:LEU:HD13 | 1:A:415:LEU:CD2 | 2.42 | 0.48 |
| 1:B:36:ARG:CG | 1:B:37:SER:N | 2.76 | 0.48 |
| 1:B:215:ASP:OD1 | 1:B:331:MET:CG | 2.59 | 0.48 |
| 1:C:17:GLY:CA | 1:C:21:GLN:NE2 | 2.73 | 0.48 |
| 1:C:103:LEU:HD12 | 1:C:103:LEU:HA | 1.81 | 0.48 |
| 1:C:469:PRO:HG3 | 1:C:472:VAL:HG11 | 1.96 | 0.48 |
| 1:C:493:VAL:HG13 | 1:D:47:MET:HE2 | 1.95 | 0.48 |
| 1:D:199:SER:OG | 1:D:327:SER:CB | 2.62 | 0.48 |
| 1:D:222:GLN:HB3 | 1:D:277:ALA:CB | 2.38 | 0.48 |
| 1:D:265:GLN:HG2 | 1:D:266:LYS:NZ | 2.09 | 0.48 |
| 1:D:339:HIS:ND1 | 1:D:341:LYS:HD2 | 2.27 | 0.48 |
| 1:E:177:ALA:HB1 | 1:E:343:VAL:HG11 | 1.95 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:115:VAL:HG23 | 1:G:119:ILE:HB | 1.94 | 0.48 |
| 1:G:178:VAL:HG22 | 1:G:366:VAL:HG13 | 1.96 | 0.48 |
| 1:H:99:VAL:HG12 | 1:H:418:ILE:CD1 | 2.44 | 0.48 |
| 1:H:119:ILE:HD13 | 1:H:404:GLU:OE2 | 2.14 | 0.48 |
| 1:H:219:VAL:CG2 | 1:H:268:ILE:HD12 | 2.12 | 0.48 |
| 1:I:152:LYS:CB | 1:I:465:GLY:HA2 | 2.43 | 0.48 |
| 1:I:218:ARG:CZ | 1:I:282:VAL:HG11 | 2.44 | 0.48 |
| 1:I:234:LEU:H | 1:I:315:LEU:CD2 | 2.27 | 0.48 |
| 1:I:379:VAL:CG2 | 1:I:380:SER:N | 2.76 | 0.48 |
| 1:I:433:ILE:CG2 | 1:I:451:LEU:CD2 | 2.92 | 0.48 |
| 1:J:155:MET:HB3 | 1:J:167:LYS:HB2 | 1.95 | 0.48 |
| 1:J:174:ILE:CG2 | 1:J:362:VAL:CG2 | 2.78 | 0.48 |
| 1:J:459:GLU:HG3 | 1:J:461:MET:HG2 | 1.96 | 0.48 |
| 1:K:115:VAL:HG21 | 1:K:119:ILE:CB | 2.43 | 0.48 |
| 1:K:122:LYS:HA | 1:K:125:GLN:NE2 | 2.25 | 0.48 |
| 1:K:170:LEU:CD1 | 1:K:358:VAL:HG13 | 2.43 | 0.48 |
| 1:K:234:LEU:H | 1:K:315:LEU:CD1 | 2.21 | 0.48 |
| 1:L:235:LEU:CG | 1:L:307:ILE:HD13 | 2.42 | 0.48 |
| 1:L:368:VAL:HB | 1:L:469:PRO:HB3 | 1.96 | 0.48 |
| 1:L:380:SER:CB | 1:L:384:SER:HB2 | 2.41 | 0.48 |
| 1:M:69:SER:C | 1:N:8:LEU:C | 2.73 | 0.48 |
| 1:M:116:HIS:CG | 1:M:117:PRO:HD2 | 2.48 | 0.48 |
| 1:O:197:LYS:CB | 1:O:355:ILE:HG21 | 2.43 | 0.48 |
| 1:P:81:VAL:HG21 | 1:P:483:SER:OG | 2.14 | 0.48 |
| 1:P:397:ALA:C | 1:P:399:GLY:N | 2.67 | 0.48 |
| 1:P:452:ASN:OD1 | 1:P:454:PHE:CD2 | 2.67 | 0.48 |
| 1:A:152:LYS:HD3 | 1:A:467:VAL:CG2 | 2.43 | 0.48 |
| 1:A:165:LYS:HA | 1:A:165:LYS:CE | 2.42 | 0.48 |
| 1:B:235:LEU:HD12 | 1:B:264:CYS:HB3 | 1.96 | 0.48 |
| 1:B:299:THR:CG2 | 1:B:334:VAL:HG11 | 2.44 | 0.48 |
| 1:C:402:GLY:O | 1:C:405:GLN:HB3 | 2.13 | 0.48 |
| 1:C:416:GLU:O | 1:C:420:ARG:HB3 | 2.14 | 0.48 |
| 1:C:495:ALA:HA | 1:D:49:VAL:CG2 | 2.43 | 0.48 |
| 1:D:89:VAL:HG11 | 1:D:472:VAL:HG22 | 1.95 | 0.48 |
| 1:D:96:ALA:HB1 | 1:D:480:ALA:HB2 | 1.95 | 0.48 |
| 1:D:247:LEU:HG | 1:D:272:ALA:HB2 | 1.96 | 0.48 |
| 1:E:285:ARG:C | 1:E:287:VAL:H | 2.18 | 0.48 |
| 1:F:477:ILE:HG22 | 1:F:477:ILE:O | 2.13 | 0.48 |
| 1:G:121:VAL:HG23 | 1:G:122:LYS:N | 2.28 | 0.48 |
| 1:G:132:GLN:HA | 1:G:132:GLN:NE2 | 2.29 | 0.48 |
| 1:G:493:VAL:HG12 | 1:G:493:VAL:O | 2.14 | 0.48 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:165:LYS:CA | 1:H:165:LYS:HZ3 | 2.09 | 0.48 |
| 1:H:216:LYS:O | 1:H:332:ILE:HG13 | 2.14 | 0.48 |
| 1:H:393:LEU:HA | 1:H:396:TYR:HB3 | 1.96 | 0.48 |
| 1:I:130:LYS:HE2 | 1:I:134:LEU:CG | 2.44 | 0.48 |
| 1:J:241:GLU:HG2 | 1:J:250:MET:SD | 2.54 | 0.48 |
| 1:J:368:VAL:CG2 | 1:J:469:PRO:HG3 | 2.44 | 0.48 |
| 1:K:163:ALA:HB1 | 1:K:203:ILE:HG21 | 1.94 | 0.48 |
| 1:K:214:VAL:CG1 | 1:K:291:ASP:OD2 | 2.62 | 0.48 |
| 1:L:12:MET:HG3 | 1:L:494:ILE:HG23 | 1.96 | 0.48 |
| 1:L:82:ALA:HB1 | 1:L:93:THR:HG23 | 1.96 | 0.48 |
| 1:L:391:MET:CE | 1:L:438:ARG:O | 2.62 | 0.48 |
| 1:L:469:PRO:CB | 1:L:472:VAL:HG21 | 2.44 | 0.48 |
| 1:M:219:VAL:CG2 | 1:M:273:GLN:CG | 2.91 | 0.48 |
| 1:M:223:MET:CG | 1:M:282:VAL:HA | 2.43 | 0.48 |
| 1:M:339:HIS:HE1 | 1:M:341:LYS:HD2 | 1.74 | 0.48 |
| 1:N:48:LEU:C | 1:N:49:VAL:HG23 | 2.34 | 0.48 |
| 1:N:472:VAL:HG22 | 1:N:473:LYS:N | 2.29 | 0.48 |
| 1:O:38:THR:HG22 | 1:O:44:MET:O | 2.14 | 0.48 |
| 1:P:158:ILE:O | 1:P:158:ILE:HG23 | 2.07 | 0.48 |
| 1:P:469:PRO:HB2 | 1:P:472:VAL:HG21 | 1.95 | 0.48 |
| 1:A:8:LEU:HA | 1:B:70:VAL:N | 2.29 | 0.47 |
| 1:A:150:LEU:HB3 | 1:A:175:VAL:CG1 | 2.44 | 0.47 |
| 1:B:82:ALA:HB1 | 1:B:93:THR:HG22 | 1.96 | 0.47 |
| 1:B:105:ARG:HG2 | 1:B:105:ARG:NH1 | 2.16 | 0.47 |
| 1:B:462:CYS:SG | 1:B:467:VAL:HG21 | 2.54 | 0.47 |
| 1:C:42:LYS:CB | 1:C:425:ASN:HB2 | 2.43 | 0.47 |
| 1:C:44:MET:HE2 | 1:C:44:MET:CA | 2.32 | 0.47 |
| 1:C:219:VAL:HG11 | 1:C:268:ILE:HD12 | 1.95 | 0.47 |
| 1:C:391:MET:CE | 1:C:438:ARG:CB | 2.90 | 0.47 |
| 1:D:368:VAL:O | 1:D:371:CYS:HB2 | 2.13 | 0.47 |
| 1:D:431:ILE:CD1 | 1:M:403:ARG:CA | 2.91 | 0.47 |
| 1:E:216:LYS:HG3 | 1:E:287:VAL:HG22 | 1.96 | 0.47 |
| 1:E:218:ARG:HG3 | 1:E:323:GLU:HB2 | 1.97 | 0.47 |
| 1:F:14:ARG:CD | 1:F:494:ILE:HG12 | 2.44 | 0.47 |
| 1:F:116:HIS:CG | 1:F:117:PRO:HD2 | 2.49 | 0.47 |
| 1:F:152:LYS:HD3 | 1:F:465:GLY:CA | 2.29 | 0.47 |
| 1:F:425:ASN:C | 1:F:427:GLY:H | 2.17 | 0.47 |
| 1:G:192:LEU:HD21 | 1:G:341:LYS:HB2 | 1.96 | 0.47 |
| 1:H:119:ILE:HD12 | 1:H:403:ARG:HB2 | 1.95 | 0.47 |
| 1:H:130:LYS:HD3 | 1:H:393:LEU:CD1 | 2.36 | 0.47 |
| 1:H:212:VAL:HG21 | 1:H:294:LYS:C | 2.35 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:48:LEU:HD21 | 1:K:494:ILE:HD12 | 1.95 | 0.47 |
| 1:J:227:VAL:HG11 | 1:J:260:ASN:CG | 2.34 | 0.47 |
| 1:J:393:LEU:HA | 1:J:396:TYR:HB3 | 1.95 | 0.47 |
| 1:L:68:MET:CA | 1:M:8:LEU:HB3 | 2.44 | 0.47 |
| 1:L:152:LYS:NZ | 1:L:465:GLY:HA2 | 2.29 | 0.47 |
| 1:M:174:ILE:HG22 | 1:M:362:VAL:CG2 | 2.44 | 0.47 |
| 1:M:212:VAL:HG21 | 1:M:294:LYS:C | 2.33 | 0.47 |
| 1:N:96:ALA:O | 1:N:100:ALA:HB2 | 2.14 | 0.47 |
| 1:N:262:LEU:CD1 | 1:N:310:LEU:HD21 | 2.43 | 0.47 |
| 1:N:326:ILE:HD11 | 1:N:348:ARG:NH1 | 2.29 | 0.47 |
| 1:O:119:ILE:CG2 | 1:O:403:ARG:HD2 | 2.41 | 0.47 |
| 1:O:166:ALA:O | 1:O:170:LEU:HG | 2.13 | 0.47 |
| 1:O:174:ILE:HD12 | 1:O:365:ALA:HB1 | 1.96 | 0.47 |
| 1:O:216:LYS:C | 1:O:332:ILE:CD1 | 2.82 | 0.47 |
| 1:O:338:LYS:CE | 1:O:339:HIS:CB | 2.86 | 0.47 |
| 1:P:42:LYS:CD | 1:P:426:ALA:N | 2.77 | 0.47 |
| 1:P:64:ILE:HG23 | 1:P:65:LEU:N | 2.29 | 0.47 |
| 1:P:96:ALA:CB | 1:P:480:ALA:HB2 | 2.43 | 0.47 |
| 1:P:105:ARG:O | 1:P:105:ARG:HG2 | 2.03 | 0.47 |
| 1:P:106:LYS:O | 1:P:109:GLU:HG3 | 2.14 | 0.47 |
| 1:P:182:VAL:CB | 1:P:188:VAL:HG21 | 2.33 | 0.47 |
| 1:P:431:ILE:O | 1:P:435:VAL:HG23 | 2.14 | 0.47 |
| 1:A:34:THR:HG23 | 1:H:14:ARG:NH2 | 2.29 | 0.47 |
| 1:A:122:LYS:HA | 1:A:125:GLN:NE2 | 2.28 | 0.47 |
| 1:A:138:ILE:CG1 | 1:A:138:ILE:O | 2.56 | 0.47 |
| 1:A:154:ALA:CB | 1:A:174:ILE:CD1 | 2.70 | 0.47 |
| 1:A:166:ALA:HB2 | 1:A:203:ILE:HG22 | 1.95 | 0.47 |
| 1:A:194:LYS:HG3 | 1:A:294:LYS:HE3 | 1.96 | 0.47 |
| 1:B:11:ASN:OD1 | 1:C:51:ASP:HA | 2.13 | 0.47 |
| 1:B:70:VAL:HG22 | 1:B:76:LYS:NZ | 2.28 | 0.47 |
| 1:B:99:VAL:CG1 | 1:B:418:ILE:HD13 | 2.44 | 0.47 |
| 1:C:174:ILE:HG22 | 1:C:362:VAL:CB | 2.44 | 0.47 |
| 1:C:177:ALA:HB2 | 1:C:208:LEU:HD11 | 1.93 | 0.47 |
| 1:C:248:LYS:CG | 1:C:275:TYR:CE2 | 2.95 | 0.47 |
| 1:D:77:MET:SD | 1:D:486:MET:HE2 | 2.54 | 0.47 |
| 1:D:213:LEU:CD2 | 1:D:331:MET:HE1 | 2.38 | 0.47 |
| 1:E:153:ILE:HG23 | 1:E:469:PRO:HD3 | 1.91 | 0.47 |
| 1:E:218:ARG:HH11 | 1:E:218:ARG:HG2 | 1.78 | 0.47 |
| 1:E:233:ALA:HB1 | 1:E:310:LEU:HG | 1.95 | 0.47 |
| 1:E:431:ILE:CD1 | 1:N:406:LEU:HD13 | 2.43 | 0.47 |
| 1:G:192:LEU:HB3 | 1:G:342:ALA:HB2 | 1.96 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:208:LEU:HD13 | 1:G:345:MET:HG3 | 1.95 | 0.47 |
| 1:G:435:VAL:HG12 | 1:G:435:VAL:O | 2.14 | 0.47 |
| 1:H:158:ILE:HD13 | 1:H:170:LEU:HD23 | 1.97 | 0.47 |
| 1:H:227:VAL:CG1 | 1:H:228:THR:H | 2.26 | 0.47 |
| 1:H:437:VAL:HG22 | 1:H:458:VAL:HB | 1.95 | 0.47 |
| 1:I:234:LEU:HD22 | 1:I:301:ALA:HB1 | 1.96 | 0.47 |
| 1:I:405:GLN:HG2 | 1:I:406:LEU:H | 1.76 | 0.47 |
| 1:J:190:LYS:HZ3 | 1:J:367:GLY:HA2 | 1.79 | 0.47 |
| 1:J:377:ARG:NE | 1:J:470:LEU:CD1 | 2.77 | 0.47 |
| 1:J:403:ARG:CG | 1:J:403:ARG:NH1 | 2.48 | 0.47 |
| 1:J:469:PRO:HG2 | 1:J:472:VAL:HG21 | 1.96 | 0.47 |
| 1:K:236:ASN:OD1 | 1:K:236:ASN:C | 2.53 | 0.47 |
| 1:L:15:TYR:CD2 | 1:L:19:ASP:HB3 | 2.48 | 0.47 |
| 1:L:69:SER:O | 1:M:9:PRO:HG2 | 2.14 | 0.47 |
| 1:L:268:ILE:HD12 | 1:L:268:ILE:HG21 | 1.63 | 0.47 |
| 1:L:346:LEU:HD23 | 1:L:347:ILE:N | 2.28 | 0.47 |
| 1:M:214:VAL:CG1 | 1:M:291:ASP:CB | 2.92 | 0.47 |
| 1:M:219:VAL:CG2 | 1:M:223:MET:SD | 3.02 | 0.47 |
| 1:M:461:MET:HA | 1:M:466:VAL:CG2 | 2.43 | 0.47 |
| 1:O:47:MET:HG2 | 1:O:47:MET:O | 2.14 | 0.47 |
| 1:O:72:HIS:HB3 | 1:O:75:ALA:HB3 | 1.97 | 0.47 |
| 1:O:83:LYS:HG2 | 1:O:87:LYS:NZ | 2.30 | 0.47 |
| 1:O:147:LYS:HB2 | 1:O:147:LYS:HE2 | 1.73 | 0.47 |
| 1:O:235:LEU:CD1 | 1:O:262:LEU:CG | 2.91 | 0.47 |
| 1:O:237:CYS:SG | 1:O:238:ALA:HB2 | 2.53 | 0.47 |
| 1:P:23:MET:HE1 | 1:P:72:HIS:CE1 | 2.49 | 0.47 |
| 1:P:134:LEU:HB3 | 1:P:392:LYS:HE3 | 1.96 | 0.47 |
| 1:P:326:ILE:HD11 | 1:P:348:ARG:CZ | 2.44 | 0.47 |
| 1:A:155:MET:SD | 1:A:167:LYS:HD3 | 2.54 | 0.47 |
| 1:B:239:ILE:HG13 | 1:B:307:ILE:HG21 | 1.96 | 0.47 |
| 1:B:461:MET:HE1 | 1:B:466:VAL:HG21 | 1.96 | 0.47 |
| 1:C:268:ILE:HG21 | 1:C:273:GLN:HG2 | 1.96 | 0.47 |
| 1:C:414:ALA:O | 1:C:417:VAL:HG12 | 2.13 | 0.47 |
| 1:D:163:ALA:CB | 1:D:165:LYS:HB2 | 2.44 | 0.47 |
| 1:D:239:ILE:HG23 | 1:D:268:ILE:HG23 | 1.94 | 0.47 |
| 1:D:469:PRO:CG | 1:D:472:VAL:CG2 | 2.92 | 0.47 |
| 1:E:238:ALA:O | 1:E:307:ILE:HG23 | 2.13 | 0.47 |
| 1:F:130:LYS:HD3 | 1:F:393:LEU:HD21 | 1.92 | 0.47 |
| 1:F:234:LEU:C | 1:F:292:MET:HE1 | 2.34 | 0.47 |
| 1:F:433:ILE:CG2 | 1:F:451:LEU:CD2 | 2.86 | 0.47 |
| 1:G:72:HIS:HA | 1:G:75:ALA:CB | 2.27 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:461:MET:HA | 1:G:466:VAL:HG23 | 1.96 | 0.47 |
| 1:H:142:VAL:CG1 | 1:H:378:ILE:CD1 | 2.91 | 0.47 |
| 1:H:216:LYS:O | 1:H:332:ILE:CD1 | 2.63 | 0.47 |
| 1:H:235:LEU:CG | 1:H:307:ILE:CD1 | 2.92 | 0.47 |
| 1:H:351:THR:CG2 | 1:H:352:GLU:H | 2.12 | 0.47 |
| 1:H:391:MET:HE2 | 1:H:438:ARG:CG | 2.44 | 0.47 |
| 1:I:115:VAL:CG2 | 1:I:403:ARG:CD | 2.93 | 0.47 |
| 1:I:425:ASN:O | 1:J:116:HIS:CD2 | 2.67 | 0.47 |
| 1:J:206:THR:HG22 | 1:J:348:ARG:N | 2.28 | 0.47 |
| 1:J:209:ILE:HD11 | 1:J:213:LEU:HB2 | 1.96 | 0.47 |
| 1:K:104:LEU:CD2 | 1:K:488:LEU:HD13 | 2.44 | 0.47 |
| 1:K:121:VAL:C | 1:K:123:GLY:H | 2.17 | 0.47 |
| 1:K:130:LYS:C | 1:K:132:GLN:N | 2.67 | 0.47 |
| 1:L:435:VAL:O | 1:L:435:VAL:CG1 | 2.60 | 0.47 |
| 1:M:57:VAL:C | 1:M:58:THR:CG2 | 2.83 | 0.47 |
| 1:M:239:ILE:N | 1:M:307:ILE:CG2 | 2.77 | 0.47 |
| 1:N:42:LYS:HA | 1:N:42:LYS:HD3 | 1.65 | 0.47 |
| 1:N:68:MET:CG | 1:O:8:LEU:CD2 | 2.68 | 0.47 |
| 1:O:124:TYR:HE1 | 1:O:407:ALA:CB | 2.17 | 0.47 |
| 1:O:139:ALA:CB | 1:O:470:LEU:HD11 | 2.44 | 0.47 |
| 1:O:214:VAL:HB | 1:O:291:ASP:OD2 | 2.14 | 0.47 |
| 1:O:365:ALA:O | 1:O:369:VAL:HG12 | 2.15 | 0.47 |
| 1:P:72:HIS:O | 1:P:76:LYS:HD2 | 2.13 | 0.47 |
| 1:P:227:VAL:HG11 | 1:P:260:ASN:OD1 | 2.15 | 0.47 |
| 1:A:170:LEU:CD1 | 1:A:358:VAL:HG22 | 2.41 | 0.47 |
| 1:A:178:VAL:HG21 | 1:A:366:VAL:HG13 | 1.96 | 0.47 |
| 1:A:235:LEU:CD1 | 1:A:237:CYS:O | 2.62 | 0.47 |
| 1:A:236:ASN:O | 1:A:266:LYS:HG2 | 2.13 | 0.47 |
| 1:A:251:VAL:HG12 | 1:A:276:LEU:HD13 | 1.96 | 0.47 |
| 1:B:153:ILE:HD13 | 1:B:378:ILE:HG22 | 1.90 | 0.47 |
| 1:B:170:LEU:CD1 | 1:B:358:VAL:HG22 | 2.41 | 0.47 |
| 1:C:62:VAL:H | 1:C:93:THR:HG21 | 1.78 | 0.47 |
| 1:C:67:GLU:OE2 | 1:C:67:GLU:HA | 2.11 | 0.47 |
| 1:D:248:LYS:CE | 1:D:275:TYR:CZ | 2.97 | 0.47 |
| 1:E:135:LEU:HD21 | 1:E:385:THR:CG2 | 2.19 | 0.47 |
| 1:E:150:LEU:HB3 | 1:E:175:VAL:CG2 | 2.44 | 0.47 |
| 1:E:165:LYS:HE3 | 1:E:165:LYS:HB3 | 1.49 | 0.47 |
| 1:E:393:LEU:O | 1:E:396:TYR:HB3 | 2.14 | 0.47 |
| 1:F:208:LEU:HG | 1:F:210:LYS:HD3 | 1.96 | 0.47 |
| 1:F:211:GLY:C | 1:F:298:ALA:HB2 | 2.35 | 0.47 |
| 1:F:212:VAL:HG21 | 1:F:294:LYS:O | 2.14 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:346:LEU:HD22 | 1:G:348:ARG:HG2 | 1.96 | 0.47 |
| 1:H:248:LYS:HG3 | 1:H:275:TYR:CE2 | 2.50 | 0.47 |
| 1:H:345:MET:SD | 1:H:362:VAL:HG11 | 2.54 | 0.47 |
| 1:H:460:ASP:OD2 | 1:H:463:GLU:HG3 | 2.14 | 0.47 |
| 1:I:9:PRO:CD | 1:P:68:MET:HA | 2.41 | 0.47 |
| 1:I:42:LYS:CD | 1:I:426:ALA:HA | 2.43 | 0.47 |
| 1:I:119:ILE:HG23 | 1:I:403:ARG:HB2 | 1.95 | 0.47 |
| 1:I:158:ILE:O | 1:I:164:GLU:HA | 2.14 | 0.47 |
| 1:J:38:THR:HG23 | 1:J:46:LYS:HE2 | 1.97 | 0.47 |
| 1:J:368:VAL:HB | 1:J:469:PRO:CB | 2.44 | 0.47 |
| 1:J:400:ILE:HD11 | 1:J:408:VAL:HG11 | 1.95 | 0.47 |
| 1:K:113:GLN:O | 1:K:113:GLN:OE1 | 2.32 | 0.47 |
| 1:K:150:LEU:HG | 1:K:175:VAL:HG13 | 1.96 | 0.47 |
| 1:K:170:LEU:CD2 | 1:K:358:VAL:HG13 | 2.42 | 0.47 |
| 1:L:135:LEU:CD1 | 1:L:385:THR:HG21 | 2.44 | 0.47 |
| 1:L:403:ARG:O | 1:L:406:LEU:HB2 | 2.14 | 0.47 |
| 1:M:47:MET:HE2 | 1:N:493:VAL:HG13 | 1.96 | 0.47 |
| 1:M:436:LYS:HB3 | 1:M:458:VAL:HG22 | 1.95 | 0.47 |
| 1:N:103:LEU:CD2 | 1:N:411:PHE:CE2 | 2.90 | 0.47 |
| 1:N:174:ILE:HG13 | 1:N:175:VAL:H | 1.79 | 0.47 |
| 1:N:311:SER:O | 1:N:315:LEU:HD12 | 2.14 | 0.47 |
| 1:N:371:CYS:HB3 | 1:N:471:ARG:CD | 2.43 | 0.47 |
| 1:O:68:MET:HE2 | 1:P:9:PRO:CD | 2.41 | 0.47 |
| 1:O:171:ALA:HA | 1:O:174:ILE:HG12 | 1.95 | 0.47 |
| 1:O:233:ALA:HB3 | 1:O:310:LEU:HD11 | 1.96 | 0.47 |
| 1:O:237:CYS:SG | 1:O:238:ALA:CB | 3.02 | 0.47 |
| 1:O:293:GLU:H | 1:O:293:GLU:HG3 | 1.52 | 0.47 |
| 1:O:383:GLY:HA2 | 1:O:386:GLU:HG2 | 1.97 | 0.47 |
| 1:O:385:THR:HG21 | 1:O:473:LYS:HD2 | 1.95 | 0.47 |
| 1:O:461:MET:SD | 1:O:466:VAL:CG2 | 3.02 | 0.47 |
| 1:A:212:VAL:N | 1:A:298:ALA:HB2 | 2.30 | 0.47 |
| 1:A:235:LEU:HB2 | 1:A:310:LEU:CD2 | 2.45 | 0.47 |
| 1:A:241:GLU:HB3 | 1:A:246:MET:HB3 | 1.95 | 0.47 |
| 1:A:406:LEU:CD1 | 1:J:431:ILE:HD12 | 2.44 | 0.47 |
| 1:B:113:GLN:CD | 1:B:113:GLN:H | 2.16 | 0.47 |
| 1:C:25:ILE:HD13 | 1:C:108:GLU:OE2 | 2.14 | 0.47 |
| 1:C:48:LEU:HB3 | 1:C:68:MET:HE1 | 1.96 | 0.47 |
| 1:C:433:ILE:CG2 | 1:C:451:LEU:HD23 | 2.43 | 0.47 |
| 1:D:113:GLN:O | 1:D:113:GLN:CD | 2.52 | 0.47 |
| 1:D:165:LYS:HB2 | 1:D:203:ILE:HG21 | 1.97 | 0.47 |
| 1:E:116:HIS:CD2 | 1:E:117:PRO:HG2 | 2.50 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:130:LYS:O | 1:E:134:LEU:HG | 2.15 | 0.47 |
| 1:E:259:ALA:O | 1:E:281:ILE:HG23 | 2.15 | 0.47 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:N | 2.29 | 0.47 |
| 1:F:307:ILE:HD12 | 1:F:310:LEU:CB | 2.44 | 0.47 |
| 1:F:307:ILE:HD13 | 1:F:310:LEU:CB | 2.45 | 0.47 |
| 1:F:433:ILE:HA | 1:F:436:LYS:CD | 2.41 | 0.47 |
| 1:G:31:ILE:HG23 | 1:G:65:LEU:CD2 | 2.44 | 0.47 |
| 1:H:62:VAL:CG1 | 1:H:63:THR:H | 2.27 | 0.47 |
| 1:H:174:ILE:CD1 | 1:H:365:ALA:HB1 | 2.38 | 0.47 |
| 1:I:23:MET:CE | 1:I:72:HIS:CE1 | 2.97 | 0.47 |
| 1:J:42:LYS:CD | 1:J:426:ALA:CA | 2.92 | 0.47 |
| 1:J:235:LEU:HB2 | 1:J:264:CYS:CB | 2.42 | 0.47 |
| 1:K:68:MET:CA | 1:L:9:PRO:HG3 | 2.45 | 0.47 |
| 1:K:379:VAL:CB | 1:K:380:SER:HB2 | 2.44 | 0.47 |
| 1:L:31:ILE:HG22 | 1:L:31:ILE:O | 2.14 | 0.47 |
| 1:L:217:GLU:OE2 | 1:L:330:SER:HB2 | 2.14 | 0.47 |
| 1:L:235:LEU:O | 1:L:235:LEU:HD22 | 2.14 | 0.47 |
| 1:L:326:ILE:CG1 | 1:L:348:ARG:NH1 | 2.76 | 0.47 |
| 1:L:437:VAL:CG2 | 1:L:451:LEU:CG | 2.85 | 0.47 |
| 1:M:22:ARG:HH11 | 1:M:22:ARG:HG2 | 1.80 | 0.47 |
| 1:M:69:SER:CA | 1:N:9:PRO:HA | 2.44 | 0.47 |
| 1:M:182:VAL:CB | 1:M:188:VAL:CG1 | 2.93 | 0.47 |
| 1:M:453:VAL:CG2 | 1:M:454:PHE:N | 2.77 | 0.47 |
| 1:N:134:LEU:HB3 | 1:N:392:LYS:HZ2 | 1.78 | 0.47 |
| 1:N:217:GLU:HG2 | 1:N:330:SER:C | 2.35 | 0.47 |
| 1:N:234:LEU:O | 1:N:304:ILE:HG12 | 2.14 | 0.47 |
| 1:O:50:ASP:OD1 | 1:O:52:LEU:HB2 | 2.13 | 0.47 |
| 1:O:146:ASP:HB3 | 1:O:149:ILE:CG1 | 2.44 | 0.47 |
| 1:O:171:ALA:HA | 1:O:174:ILE:HD11 | 1.92 | 0.47 |
| 1:O:222:GLN:HB3 | 1:O:277:ALA:CB | 2.43 | 0.47 |
| 1:O:339:HIS:HE1 | 1:O:341:LYS:CD | 2.28 | 0.47 |
| 1:O:429:ASP:O | 1:O:433:ILE:HG13 | 2.14 | 0.47 |
| 1:P:36:ARG:HE | 1:P:36:ARG:HB3 | 1.33 | 0.47 |
| 1:P:130:LYS:HG3 | 1:P:393:LEU:HD22 | 1.97 | 0.47 |
| 1:P:218:ARG:NE | 1:P:282:VAL:HG11 | 2.29 | 0.47 |
| 1:P:299:THR:CG2 | 1:P:334:VAL:HG12 | 2.44 | 0.47 |
| 1:A:12:MET:SD | 1:A:494:ILE:HG22 | 2.55 | 0.47 |
| 1:A:124:TYR:HE1 | 1:A:407:ALA:C | 2.16 | 0.47 |
| 1:A:310:LEU:HD12 | 1:A:315:LEU:CD2 | 2.44 | 0.47 |
| 1:B:14:ARG:NH1 | 1:C:34:THR:CA | 2.67 | 0.47 |
| 1:B:116:HIS:CE1 | 1:B:117:PRO:HG2 | 2.50 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:251:VAL:HG11 | 1:B:276:LEU:HG | 1.88 | 0.47 |
| 1:C:126:ALA:O | 1:C:130:LYS:HB2 | 2.13 | 0.47 |
| 1:C:469:PRO:HG2 | 1:C:472:VAL:HG13 | 1.96 | 0.47 |
| 1:D:460:ASP:CG | 1:D:463:GLU:H | 2.16 | 0.47 |
| 1:E:268:ILE:HG22 | 1:E:273:GLN:HG3 | 1.93 | 0.47 |
| 1:E:312:ALA:O | 1:E:313:GLN:CB | 2.62 | 0.47 |
| 1:F:9:PRO:O | 1:F:12:MET:CB | 2.61 | 0.47 |
| 1:F:25:ILE:HD13 | 1:F:108:GLU:HG3 | 1.95 | 0.47 |
| 1:F:73:PRO:HA | 1:F:76:LYS:HD3 | 1.95 | 0.47 |
| 1:F:197:LYS:HB3 | 1:F:355:ILE:HB | 1.96 | 0.47 |
| 1:G:111:LEU:HD22 | 1:G:117:PRO:HB3 | 1.94 | 0.47 |
| 1:G:214:VAL:HG12 | 1:G:291:ASP:CB | 2.44 | 0.47 |
| 1:G:296:ALA:HB1 | 1:G:301:ALA:O | 2.14 | 0.47 |
| 1:G:494:ILE:HB | 1:H:68:MET:HE1 | 1.95 | 0.47 |
| 1:H:223:MET:HE2 | 1:H:276:LEU:CB | 2.42 | 0.47 |
| 1:I:45:ASP:C | 1:I:46:LYS:HG3 | 2.35 | 0.47 |
| 1:I:68:MET:HE2 | 1:J:9:PRO:HG2 | 1.96 | 0.47 |
| 1:I:130:LYS:HE2 | 1:I:134:LEU:HD21 | 1.97 | 0.47 |
| 1:I:347:ILE:CG2 | 1:I:358:VAL:HG12 | 2.40 | 0.47 |
| 1:I:380:SER:CB | 1:I:384:SER:CB | 2.84 | 0.47 |
| 1:J:69:SER:OG | 1:J:69:SER:O | 1.95 | 0.47 |
| 1:J:218:ARG:NH2 | 1:J:321:VAL:HG12 | 2.30 | 0.47 |
| 1:K:19:ASP:O | 1:K:23:MET:HG3 | 2.13 | 0.47 |
| 1:K:452:ASN:HB2 | 1:K:459:GLU:OE2 | 2.14 | 0.47 |
| 1:L:163:ALA:HB1 | 1:L:165:LYS:CB | 2.32 | 0.47 |
| 1:M:48:LEU:HD12 | 1:M:67:GLU:HB2 | 1.95 | 0.47 |
| 1:M:116:HIS:ND1 | 1:M:118:THR:HG23 | 2.30 | 0.47 |
| 1:M:130:LYS:HG2 | 1:M:393:LEU:HD22 | 1.96 | 0.47 |
| 1:M:163:ALA:HB1 | 1:M:165:LYS:H | 1.79 | 0.47 |
| 1:M:362:VAL:CG2 | 1:M:362:VAL:O | 2.62 | 0.47 |
| 1:N:214:VAL:HG12 | 1:N:291:ASP:OD2 | 2.14 | 0.47 |
| 1:N:325:LYS:C | 1:N:325:LYS:CD | 2.83 | 0.47 |
| 1:O:12:MET:N | 1:O:12:MET:HE1 | 2.30 | 0.47 |
| 1:O:96:ALA:O | 1:O:100:ALA:HB2 | 2.14 | 0.47 |
| 1:O:178:VAL:HG22 | 1:O:193:ILE:CD1 | 2.44 | 0.47 |
| 1:P:63:THR:CG2 | 1:P:63:THR:O | 2.62 | 0.47 |
| 1:P:211:GLY:HA2 | 1:P:298:ALA:HB1 | 1.96 | 0.47 |
| 1:P:235:LEU:HD13 | 1:P:237:CYS:O | 2.14 | 0.47 |
| 1:A:170:LEU:HD12 | 1:A:358:VAL:HG13 | 1.96 | 0.47 |
| 1:A:206:THR:CG2 | 1:A:347:ILE:HG22 | 2.42 | 0.47 |
| 1:A:235:LEU:HG | 1:A:307:ILE:CD1 | 2.44 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:238:ALA:C | 1:A:307:ILE:HG22 | 2.34 | 0.47 |
| 1:A:405:GLN:OE1 | 1:A:406:LEU:HD11 | 2.14 | 0.47 |
| 1:A:469:PRO:HD2 | 1:A:472:VAL:HG11 | 1.97 | 0.47 |
| 1:B:23:MET:HE2 | 1:B:72:HIS:HE1 | 1.77 | 0.47 |
| 1:B:115:VAL:HG11 | 1:B:403:ARG:HE | 1.79 | 0.47 |
| 1:B:138:ILE:HG12 | 1:B:139:ALA:N | 2.27 | 0.47 |
| 1:B:158:ILE:CD1 | 1:B:170:LEU:HB2 | 2.32 | 0.47 |
| 1:B:182:VAL:CG2 | 1:B:188:VAL:CG2 | 2.92 | 0.47 |
| 1:B:295:LEU:O | 1:B:299:THR:HG23 | 2.14 | 0.47 |
| 1:B:301:ALA:O | 1:B:302:ASN:CB | 2.62 | 0.47 |
| 1:B:369:VAL:O | 1:B:373:ILE:HG12 | 2.15 | 0.47 |
| 1:B:384:SER:CB | 1:B:441:HIS:CE1 | 2.97 | 0.47 |
| 1:C:209:ILE:HD11 | 1:C:213:LEU:HB2 | 1.96 | 0.47 |
| 1:C:301:ALA:C | 1:C:302:ASN:ND2 | 2.68 | 0.47 |
| 1:D:34:THR:HG22 | 1:D:35:VAL:HG13 | 1.95 | 0.47 |
| 1:D:42:LYS:HG3 | 1:D:425:ASN:CB | 2.35 | 0.47 |
| 1:D:147:LYS:HB3 | 1:D:147:LYS:HE2 | 1.74 | 0.47 |
| 1:D:178:VAL:HG21 | 1:D:366:VAL:HG22 | 1.97 | 0.47 |
| 1:D:223:MET:HE2 | 1:D:283:ALA:CB | 2.45 | 0.47 |
| 1:D:225:LYS:HD3 | 1:D:225:LYS:HA | 1.73 | 0.47 |
| 1:D:241:GLU:CG | 1:D:250:MET:SD | 3.02 | 0.47 |
| 1:E:177:ALA:CB | 1:E:193:ILE:HD12 | 2.41 | 0.47 |
| 1:E:233:ALA:HB2 | 1:E:315:LEU:CD1 | 2.45 | 0.47 |
| 1:E:274:HIS:O | 1:E:274:HIS:CG | 2.67 | 0.47 |
| 1:F:42:LYS:O | 1:F:425:ASN:HB3 | 2.15 | 0.47 |
| 1:F:164:GLU:HG3 | 1:F:167:LYS:HZ3 | 1.78 | 0.47 |
| 1:F:190:LYS:CE | 1:F:367:GLY:HA2 | 2.44 | 0.47 |
| 1:F:202:SER:OG | 1:F:203:ILE:HG23 | 2.13 | 0.47 |
| 1:F:460:ASP:CG | 1:F:463:GLU:H | 2.17 | 0.47 |
| 1:G:178:VAL:HG11 | 1:G:188:VAL:HG21 | 1.96 | 0.47 |
| 1:G:188:VAL:HG23 | 1:G:189:ASP:N | 2.29 | 0.47 |
| 1:G:234:LEU:HD11 | 1:G:296:ALA:CB | 2.40 | 0.47 |
| 1:G:430:ALA:O | 1:G:434:LEU:HD23 | 2.15 | 0.47 |
| 1:G:452:ASN:HB3 | 1:G:459:GLU:HG3 | 1.96 | 0.47 |
| 1:H:72:HIS:HA | 1:H:73:PRO:HD3 | 1.39 | 0.47 |
| 1:H:135:LEU:HD23 | 1:H:385:THR:HG21 | 1.95 | 0.47 |
| 1:H:265:GLN:CG | 1:H:266:LYS:CE | 2.93 | 0.47 |
| 1:H:265:GLN:CG | 1:H:266:LYS:NZ | 2.69 | 0.47 |
| 1:H:403:ARG:HA | 1:I:431:ILE:HD11 | 1.97 | 0.47 |
| 1:I:31:ILE:HG23 | 1:I:34:THR:OG1 | 2.15 | 0.47 |
| 1:I:70:VAL:H | 1:J:8:LEU:N | 2.12 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:158:ILE:HG12 | 1:I:361:ALA:CB | 2.40 | 0.47 |
| 1:I:233:ALA:CB | 1:I:315:LEU:CD1 | 2.92 | 0.47 |
| 1:I:234:LEU:CB | 1:I:292:MET:HE1 | 2.38 | 0.47 |
| 1:J:34:THR:HG22 | 1:J:35:VAL:H | 1.74 | 0.47 |
| 1:J:368:VAL:HG12 | 1:J:371:CYS:SG | 2.54 | 0.47 |
| 1:J:469:PRO:CG | 1:J:472:VAL:HG21 | 2.45 | 0.47 |
| 1:K:70:VAL:HA | 1:L:8:LEU:N | 2.30 | 0.47 |
| 1:K:102:GLU:C | 1:K:104:LEU:N | 2.66 | 0.47 |
| 1:K:104:LEU:HD23 | 1:K:488:LEU:HD13 | 1.97 | 0.47 |
| 1:K:420:ARG:HE | 1:K:430:ALA:HB3 | 1.79 | 0.47 |
| 1:L:105:ARG:CD | 1:L:106:LYS:N | 2.72 | 0.47 |
| 1:L:135:LEU:HD22 | 1:L:389:LEU:HD21 | 1.96 | 0.47 |
| 1:L:241:GLU:CG | 1:L:250:MET:SD | 3.03 | 0.47 |
| 1:L:380:SER:CB | 1:L:384:SER:CB | 2.92 | 0.47 |
| 1:L:460:ASP:OD2 | 1:L:463:GLU:CG | 2.62 | 0.47 |
| 1:M:8:LEU:C | 1:M:12:MET:HG2 | 2.35 | 0.47 |
| 1:M:218:ARG:HG3 | 1:M:323:GLU:OE2 | 2.14 | 0.47 |
| 1:M:262:LEU:CD1 | 1:M:310:LEU:CD1 | 2.91 | 0.47 |
| 1:M:391:MET:HE2 | 1:M:438:ARG:HG2 | 1.97 | 0.47 |
| 1:N:197:LYS:HB3 | 1:N:355:ILE:CG2 | 2.45 | 0.47 |
| 1:N:377:ARG:HB3 | 1:N:470:LEU:HD12 | 1.97 | 0.47 |
| 1:N:387:VAL:HG21 | 1:N:437:VAL:HG12 | 1.97 | 0.47 |
| 1:O:18:ARG:HB3 | 1:O:18:ARG:NH2 | 2.28 | 0.47 |
| 1:O:347:ILE:CD1 | 1:O:359:ALA:HB2 | 2.44 | 0.47 |
| 1:O:448:CYS:SG | 1:O:460:ASP:HA | 2.55 | 0.47 |
| 1:P:42:LYS:HG3 | 1:P:425:ASN:C | 2.34 | 0.47 |
| 1:P:63:THR:HA | 1:P:66:ARG:HG3 | 1.96 | 0.47 |
| 1:P:211:GLY:C | 1:P:298:ALA:CB | 2.83 | 0.47 |
| 1:P:230:ALA:C | 1:P:231:LYS:HD3 | 2.35 | 0.47 |
| 1:P:405:GLN:O | 1:P:409:ARG:HG3 | 2.15 | 0.47 |
| 1:A:380:SER:CB | 1:A:384:SER:HB2 | 2.45 | 0.47 |
| 1:B:235:LEU:HD13 | 1:B:237:CYS:O | 2.15 | 0.47 |
| 1:B:418:ILE:HG23 | 1:B:422:LEU:CD1 | 2.45 | 0.47 |
| 1:D:146:ASP:O | 1:D:150:LEU:HD22 | 2.14 | 0.47 |
| 1:D:326:ILE:HG12 | 1:D:348:ARG:HH12 | 1.79 | 0.47 |
| 1:D:488:LEU:HD22 | 1:D:488:LEU:C | 2.34 | 0.47 |
| 1:E:27:ALA:CB | 1:E:72:HIS:NE2 | 2.78 | 0.47 |
| 1:E:138:ILE:C | 1:E:138:ILE:CD1 | 2.83 | 0.47 |
| 1:F:8:LEU:HA | 1:G:68:MET:HG3 | 1.97 | 0.47 |
| 1:F:34:THR:CB | 1:F:35:VAL:HG22 | 2.45 | 0.47 |
| 1:F:72:HIS:HB3 | 1:F:74:ALA:HB3 | 1.97 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:130:LYS:HE2 | 1:F:396:TYR:HB2 | 1.97 | 0.47 |
| 1:F:488:LEU:HD12 | 1:F:488:LEU:O | 2.14 | 0.47 |
| 1:G:169:LYS:HG2 | 1:G:204:ASP:CB | 2.44 | 0.47 |
| 1:H:130:LYS:CE | 1:H:393:LEU:CD1 | 2.93 | 0.47 |
| 1:H:158:ILE:CD1 | 1:H:170:LEU:HB3 | 2.45 | 0.47 |
| 1:I:232:ILE:HD12 | 1:I:232:ILE:H | 1.80 | 0.47 |
| 1:I:279:GLU:OE1 | 1:I:281:ILE:HG13 | 2.14 | 0.47 |
| 1:I:281:ILE:HG23 | 1:I:281:ILE:HD13 | 1.52 | 0.47 |
| 1:K:96:ALA:O | 1:K:480:ALA:HB1 | 2.15 | 0.47 |
| 1:K:119:ILE:CG2 | 1:K:403:ARG:CB | 2.80 | 0.47 |
| 1:K:190:LYS:HZ2 | 1:K:367:GLY:HA2 | 1.80 | 0.47 |
| 1:K:213:LEU:HD11 | 1:K:333:PHE:CZ | 2.50 | 0.47 |
| 1:L:218:ARG:HG3 | 1:L:323:GLU:OE2 | 2.15 | 0.47 |
| 1:L:473:LYS:HA | 1:L:473:LYS:HE3 | 1.97 | 0.47 |
| 1:N:156:THR:CG2 | 1:N:468:GLU:CB | 2.82 | 0.47 |
| 1:N:178:VAL:HG22 | 1:N:193:ILE:HD11 | 1.92 | 0.47 |
| 1:N:225:LYS:HD3 | 1:N:225:LYS:HA | 1.59 | 0.47 |
| 1:O:56:VAL:O | 1:O:56:VAL:HG23 | 2.14 | 0.47 |
| 1:O:142:VAL:HG13 | 1:O:149:ILE:HD13 | 1.96 | 0.47 |
| 1:P:48:LEU:CG | 1:P:68:MET:CE | 2.73 | 0.47 |
| 1:C:134:LEU:CB | 1:C:392:LYS:HZ2 | 2.09 | 0.47 |
| 1:D:43:GLY:O | 1:D:44:MET:CE | 2.63 | 0.47 |
| 1:D:237:CYS:CA | 1:D:306:ASN:HA | 2.28 | 0.47 |
| 1:D:441:HIS:CG | 1:D:449:ALA:HB3 | 2.49 | 0.47 |
| 1:E:188:VAL:HG23 | 1:E:373:ILE:HG21 | 1.97 | 0.47 |
| 1:F:9:PRO:HG3 | 1:G:68:MET:CE | 2.45 | 0.47 |
| 1:F:38:THR:CG2 | 1:F:59:ASN:HB2 | 2.42 | 0.47 |
| 1:F:77:MET:CE | 1:F:487:LEU:HG | 2.45 | 0.47 |
| 1:F:234:LEU:CD1 | 1:F:301:ALA:CB | 2.93 | 0.47 |
| 1:F:403:ARG:CG | 1:O:431:ILE:HD11 | 2.44 | 0.47 |
| 1:F:405:GLN:HE22 | 1:O:438:ARG:HH22 | 1.63 | 0.47 |
| 1:G:239:ILE:CA | 1:G:307:ILE:HG21 | 2.45 | 0.47 |
| 1:H:236:ASN:C | 1:H:265:GLN:HB3 | 2.34 | 0.47 |
| 1:H:380:SER:HA | 1:H:467:VAL:HG13 | 1.97 | 0.47 |
| 1:I:130:LYS:NZ | 1:I:393:LEU:HD23 | 2.25 | 0.47 |
| 1:I:192:LEU:O | 1:I:342:ALA:HB1 | 2.14 | 0.47 |
| 1:J:233:ALA:CA | 1:J:315:LEU:CD2 | 2.77 | 0.47 |
| 1:K:116:HIS:C | 1:K:118:THR:N | 2.68 | 0.47 |
| 1:K:313:GLN:C | 1:K:315:LEU:N | 2.68 | 0.47 |
| 1:L:178:VAL:HG22 | 1:L:366:VAL:CG1 | 2.36 | 0.47 |
| 1:M:8:LEU:HD22 | 1:M:494:ILE:CD1 | 2.43 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:119:ILE:HG21 | 1:M:403:ARG:HB3 | 1.97 | 0.47 |
| 1:M:453:VAL:HG23 | 1:M:454:PHE:CG | 2.49 | 0.47 |
| 1:N:235:LEU:CD1 | 1:N:307:ILE:CD1 | 2.92 | 0.47 |
| 1:O:130:LYS:HZ2 | 1:O:396:TYR:HB2 | 1.80 | 0.47 |
| 1:O:150:LEU:CG | 1:O:175:VAL:HG13 | 2.45 | 0.47 |
| 1:O:161:LYS:HB3 | 1:O:357:GLU:OE1 | 2.15 | 0.47 |
| 1:O:188:VAL:CB | 1:O:373:ILE:HG13 | 2.45 | 0.47 |
| 1:O:453:VAL:CG2 | 1:O:454:PHE:N | 2.78 | 0.47 |
| 1:P:377:ARG:CG | 1:P:470:LEU:HD12 | 2.44 | 0.47 |
| 1:P:434:LEU:N | 1:P:434:LEU:HD23 | 2.29 | 0.47 |
| 1:A:23:MET:CE | 1:A:72:HIS:CE1 | 2.98 | 0.47 |
| 1:A:70:VAL:HA | 1:H:8:LEU:N | 2.30 | 0.47 |
| 1:A:156:THR:HG22 | 1:A:468:GLU:HA | 1.95 | 0.47 |
| 1:A:161:LYS:HB2 | 1:A:357:GLU:OE2 | 2.15 | 0.47 |
| 1:A:255:LYS:HD3 | 1:A:279:GLU:HB3 | 1.96 | 0.47 |
| 1:A:347:ILE:HB | 1:A:355:ILE:CG2 | 2.45 | 0.47 |
| 1:B:223:MET:H | 1:B:277:ALA:HB1 | 1.79 | 0.47 |
| 1:B:254:ILE:CG2 | 1:B:281:ILE:HD11 | 2.45 | 0.47 |
| 1:C:9:PRO:CD | 1:D:68:MET:CE | 2.93 | 0.47 |
| 1:C:35:VAL:CG1 | 1:C:64:ILE:HG21 | 2.31 | 0.47 |
| 1:C:158:ILE:CG2 | 1:C:164:GLU:HA | 2.45 | 0.47 |
| 1:C:223:MET:HB3 | 1:C:282:VAL:HA | 1.95 | 0.47 |
| 1:C:227:VAL:CG1 | 1:C:260:ASN:ND2 | 2.78 | 0.47 |
| 1:C:313:GLN:C | 1:C:315:LEU:N | 2.68 | 0.47 |
| 1:D:211:GLY:C | 1:D:298:ALA:HB1 | 2.35 | 0.47 |
| 1:E:48:LEU:HB2 | 1:E:56:VAL:HB | 1.96 | 0.47 |
| 1:E:214:VAL:HG11 | 1:E:295:LEU:HD11 | 1.97 | 0.47 |
| 1:E:233:ALA:CB | 1:E:315:LEU:HD11 | 2.45 | 0.47 |
| 1:F:492:ASP:OD2 | 1:G:46:LYS:HG2 | 2.14 | 0.47 |
| 1:G:166:ALA:O | 1:G:170:LEU:HB2 | 2.15 | 0.47 |
| 1:G:387:VAL:C | 1:G:390:SER:HB3 | 2.35 | 0.47 |
| 1:H:234:LEU:H | 1:H:315:LEU:HG | 1.80 | 0.47 |
| 1:I:77:MET:HB3 | 1:I:487:LEU:HD11 | 1.95 | 0.47 |
| 1:I:223:MET:CE | 1:I:276:LEU:HB2 | 2.45 | 0.47 |
| 1:I:235:LEU:HD22 | 1:I:307:ILE:O | 2.15 | 0.47 |
| 1:I:386:GLU:H | 1:I:386:GLU:HG2 | 1.15 | 0.47 |
| 1:J:134:LEU:HD11 | 1:J:393:LEU:HD21 | 1.93 | 0.47 |
| 1:J:233:ALA:HB1 | 1:J:310:LEU:HD12 | 1.91 | 0.47 |
| 1:K:68:MET:HG2 | 1:L:8:LEU:CD2 | 2.40 | 0.47 |
| 1:K:326:ILE:HG12 | 1:K:348:ARG:NH1 | 2.22 | 0.47 |
| 1:L:68:MET:O | 1:M:8:LEU:HA | 2.15 | 0.47 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:130:LYS:HG3 | 1:L:393:LEU:HD21 | 1.94 | 0.47 |
| 1:M:23:MET:HE1 | 1:M:72:HIS:CE1 | 2.50 | 0.47 |
| 1:M:343:VAL:O | 1:M:343:VAL:HG13 | 2.14 | 0.47 |
| 1:N:119:ILE:HD12 | 1:N:403:ARG:CG | 2.44 | 0.47 |
| 1:N:130:LYS:HD3 | 1:N:396:TYR:CE1 | 2.50 | 0.47 |
| 1:N:447:LYS:O | 1:N:448:CYS:HB3 | 2.15 | 0.47 |
| 1:O:16:MET:H | 1:O:16:MET:HG2 | 1.34 | 0.47 |
| 1:P:85:GLN:OE1 | 1:P:476:ALA:HA | 2.15 | 0.47 |
| 1:P:130:LYS:HG3 | 1:P:393:LEU:HD21 | 1.97 | 0.47 |
| 1:P:156:THR:HG21 | 1:P:468:GLU:HG2 | 1.97 | 0.47 |
| 1:A:247:LEU:HG | 1:A:272:ALA:HB2 | 1.97 | 0.46 |
| 1:A:405:GLN:HG2 | 1:A:406:LEU:HG | 1.96 | 0.46 |
| 1:B:25:ILE:HD13 | 1:B:108:GLU:CD | 2.35 | 0.46 |
| 1:C:18:ARG:CD | 1:C:22:ARG:HH12 | 2.27 | 0.46 |
| 1:C:115:VAL:HG21 | 1:C:403:ARG:HD2 | 1.96 | 0.46 |
| 1:C:115:VAL:CG2 | 1:C:119:ILE:HG21 | 2.45 | 0.46 |
| 1:C:156:THR:HG22 | 1:C:468:GLU:CA | 2.37 | 0.46 |
| 1:C:178:VAL:CG2 | 1:C:193:ILE:HD12 | 2.39 | 0.46 |
| 1:D:101:GLY:HA2 | 1:D:104:LEU:HD22 | 1.97 | 0.46 |
| 1:D:307:ILE:HD12 | 1:D:308:LYS:HA | 1.96 | 0.46 |
| 1:E:124:TYR:CD1 | 1:E:124:TYR:N | 2.79 | 0.46 |
| 1:E:134:LEU:HD12 | 1:E:393:LEU:HD11 | 1.97 | 0.46 |
| 1:E:210:LYS:HG3 | 1:E:343:VAL:HG21 | 1.95 | 0.46 |
| 1:G:134:LEU:HD22 | 1:G:392:LYS:CD | 2.45 | 0.46 |
| 1:G:156:THR:HG22 | 1:G:468:GLU:HA | 1.96 | 0.46 |
| 1:G:222:GLN:CA | 1:G:277:ALA:HB1 | 2.44 | 0.46 |
| 1:G:326:ILE:HG21 | 1:G:331:MET:SD | 2.56 | 0.46 |
| 1:H:31:ILE:HD13 | 1:H:31:ILE:HG23 | 1.57 | 0.46 |
| 1:H:130:LYS:CG | 1:H:393:LEU:HD12 | 2.42 | 0.46 |
| 1:J:247:LEU:O | 1:J:247:LEU:HD12 | 2.15 | 0.46 |
| 1:K:173:ILE:O | 1:K:208:LEU:HD13 | 2.15 | 0.46 |
| 1:L:51:ASP:OD1 | 1:M:11:ASN:CB | 2.63 | 0.46 |
| 1:L:236:ASN:OD1 | 1:L:236:ASN:C | 2.53 | 0.46 |
| 1:L:247:LEU:O | 1:L:251:VAL:HG23 | 2.15 | 0.46 |
| 1:M:14:ARG:HG3 | 1:M:494:ILE:HG12 | 1.96 | 0.46 |
| 1:M:34:THR:HG22 | 1:M:35:VAL:CB | 2.45 | 0.46 |
| 1:M:42:LYS:HG3 | 1:M:425:ASN:HB2 | 1.97 | 0.46 |
| 1:M:69:SER:O | 1:N:9:PRO:CA | 2.61 | 0.46 |
| 1:M:338:LYS:HD2 | 1:M:339:HIS:N | 2.30 | 0.46 |
| 1:N:237:CYS:CA | 1:N:306:ASN:HA | 2.45 | 0.46 |
| 1:N:304:ILE:CD1 | 1:N:310:LEU:HA | 2.45 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:219:VAL:CG1 | 1:O:283:ALA:HB3 | 2.45 | 0.46 |
| 1:O:299:THR:HG23 | 1:O:334:VAL:HG12 | 1.86 | 0.46 |
| 1:P:231:LYS:HD3 | 1:P:231:LYS:N | 2.29 | 0.46 |
| 1:P:234:LEU:CD1 | 1:P:301:ALA:HB1 | 2.44 | 0.46 |
| 1:P:400:ILE:HD11 | 1:P:408:VAL:CG1 | 2.45 | 0.46 |
| 1:A:115:VAL:CG1 | 1:A:119:ILE:CG2 | 2.94 | 0.46 |
| 1:A:156:THR:HB | 1:A:467:VAL:O | 2.16 | 0.46 |
| 1:A:218:ARG:NH2 | 1:A:321:VAL:HG12 | 2.30 | 0.46 |
| 1:A:231:LYS:HD3 | 1:A:231:LYS:H | 1.80 | 0.46 |
| 1:A:389:LEU:O | 1:A:393:LEU:HD12 | 2.15 | 0.46 |
| 1:A:471:ARG:HA | 1:A:472:VAL:HG23 | 1.97 | 0.46 |
| 1:B:42:LYS:HE3 | 1:B:453:VAL:CB | 2.33 | 0.46 |
| 1:B:76:LYS:HZ3 | 1:B:76:LYS:HG3 | 1.45 | 0.46 |
| 1:B:158:ILE:HD12 | 1:B:158:ILE:HG21 | 1.83 | 0.46 |
| 1:B:188:VAL:HB | 1:B:370:GLY:CA | 2.45 | 0.46 |
| 1:C:469:PRO:HG3 | 1:C:472:VAL:CG1 | 2.45 | 0.46 |
| 1:D:194:LYS:HB2 | 1:D:294:LYS:CD | 2.44 | 0.46 |
| 1:D:433:ILE:CG2 | 1:D:451:LEU:CD2 | 2.84 | 0.46 |
| 1:E:20:ALA:O | 1:E:24:ASN:HB2 | 2.15 | 0.46 |
| 1:E:96:ALA:C | 1:E:480:ALA:CB | 2.83 | 0.46 |
| 1:E:96:ALA:HA | 1:E:480:ALA:CB | 2.45 | 0.46 |
| 1:E:170:LEU:CD1 | 1:E:358:VAL:HG13 | 2.45 | 0.46 |
| 1:E:435:VAL:HG22 | 1:E:438:ARG:NH2 | 2.29 | 0.46 |
| 1:F:178:VAL:CG1 | 1:F:366:VAL:CG2 | 2.85 | 0.46 |
| 1:F:340:PRO:C | 1:F:342:ALA:H | 2.19 | 0.46 |
| 1:F:379:VAL:O | 1:F:467:VAL:HG13 | 2.15 | 0.46 |
| 1:F:403:ARG:CB | 1:O:431:ILE:CD1 | 2.93 | 0.46 |
| 1:G:125:GLN:O | 1:G:129:GLN:HG3 | 2.15 | 0.46 |
| 1:G:239:ILE:HG22 | 1:G:307:ILE:HG21 | 1.96 | 0.46 |
| 1:H:192:LEU:HD12 | 1:H:341:LYS:O | 2.14 | 0.46 |
| 1:H:247:LEU:CG | 1:H:272:ALA:HB2 | 2.44 | 0.46 |
| 1:H:306:ASN:HD21 | 1:H:308:LYS:HD2 | 1.80 | 0.46 |
| 1:I:169:LYS:HG2 | 1:I:204:ASP:O | 2.15 | 0.46 |
| 1:I:379:VAL:HG21 | 1:I:385:THR:OG1 | 2.15 | 0.46 |
| 1:J:142:VAL:HG21 | 1:J:378:ILE:CD1 | 2.42 | 0.46 |
| 1:L:347:ILE:CG2 | 1:L:358:VAL:CG1 | 2.93 | 0.46 |
| 1:L:453:VAL:H | 1:L:453:VAL:HG13 | 1.17 | 0.46 |
| 1:M:158:ILE:HD13 | 1:M:167:LYS:HA | 1.97 | 0.46 |
| 1:N:193:ILE:HG23 | 1:N:343:VAL:HG13 | 1.96 | 0.46 |
| 1:O:108:GLU:C | 1:O:110:LEU:N | 2.67 | 0.46 |
| 1:P:50:ASP:HB2 | 1:P:51:ASP:CA | 2.36 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:78:LEU:HD12 | 1:A:487:LEU:CD1 | 2.44 | 0.46 |
| 1:A:156:THR:O | 1:A:156:THR:HG22 | 2.15 | 0.46 |
| 1:A:170:LEU:CG | 1:A:358:VAL:HG22 | 2.45 | 0.46 |
| 1:B:308:LYS:HB2 | 1:B:308:LYS:HZ2 | 1.80 | 0.46 |
| 1:C:85:GLN:NE2 | 1:C:479:SER:HB3 | 2.31 | 0.46 |
| 1:C:461:MET:SD | 1:C:466:VAL:HG23 | 2.55 | 0.46 |
| 1:D:14:ARG:HD2 | 1:D:494:ILE:HD13 | 1.97 | 0.46 |
| 1:D:235:LEU:CD2 | 1:D:307:ILE:HA | 2.45 | 0.46 |
| 1:D:459:GLU:HB3 | 1:D:461:MET:HE2 | 1.97 | 0.46 |
| 1:E:8:LEU:HA | 1:F:68:MET:HG3 | 1.96 | 0.46 |
| 1:E:153:ILE:CG2 | 1:E:469:PRO:N | 2.79 | 0.46 |
| 1:E:153:ILE:CD1 | 1:E:372:THR:CG2 | 2.92 | 0.46 |
| 1:E:303:VAL:HG22 | 1:E:303:VAL:O | 2.15 | 0.46 |
| 1:F:124:TYR:N | 1:F:124:TYR:HD1 | 2.12 | 0.46 |
| 1:F:169:LYS:HE3 | 1:F:204:ASP:O | 2.15 | 0.46 |
| 1:G:391:MET:HE2 | 1:G:438:ARG:CG | 2.42 | 0.46 |
| 1:H:263:PHE:CE2 | 1:H:295:LEU:CD2 | 2.99 | 0.46 |
| 1:H:347:ILE:HG22 | 1:H:355:ILE:HG23 | 1.97 | 0.46 |
| 1:I:29:ARG:O | 1:I:33:GLU:HG3 | 2.16 | 0.46 |
| 1:I:105:ARG:O | 1:I:108:GLU:HB3 | 2.15 | 0.46 |
| 1:J:96:ALA:CA | 1:J:480:ALA:CB | 2.93 | 0.46 |
| 1:J:263:PHE:CE1 | 1:J:332:ILE:HG21 | 2.51 | 0.46 |
| 1:K:100:ALA:O | 1:K:104:LEU:CD1 | 2.63 | 0.46 |
| 1:K:254:ILE:HG21 | 1:K:262:LEU:HD13 | 1.97 | 0.46 |
| 1:K:459:GLU:O | 1:K:461:MET:CE | 2.64 | 0.46 |
| 1:L:105:ARG:CG | 1:L:106:LYS:N | 2.75 | 0.46 |
| 1:M:304:ILE:HD12 | 1:M:309:ASP:CB | 2.34 | 0.46 |
| 1:N:68:MET:SD | 1:O:494:ILE:CG2 | 3.01 | 0.46 |
| 1:N:93:THR:O | 1:N:97:VAL:HG23 | 2.15 | 0.46 |
| 1:N:198:LYS:CG | 1:N:331:MET:SD | 3.03 | 0.46 |
| 1:N:299:THR:HG22 | 1:N:334:VAL:HG12 | 1.98 | 0.46 |
| 1:O:142:VAL:HG11 | 1:O:378:ILE:HD13 | 1.98 | 0.46 |
| 1:O:241:GLU:HB3 | 1:O:246:MET:CG | 2.45 | 0.46 |
| 1:O:397:ALA:HB2 | 1:O:408:VAL:HG23 | 1.97 | 0.46 |
| 1:P:135:LEU:HD23 | 1:P:135:LEU:HA | 1.55 | 0.46 |
| 1:P:192:LEU:HD23 | 1:P:341:LYS:C | 2.36 | 0.46 |
| 1:P:400:ILE:HD11 | 1:P:408:VAL:CG2 | 2.46 | 0.46 |
| 1:A:48:LEU:HD22 | 1:H:494:ILE:HG21 | 1.97 | 0.46 |
| 1:A:97:VAL:O | 1:A:100:ALA:HB3 | 2.16 | 0.46 |
| 1:A:165:LYS:HA | 1:A:165:LYS:HE3 | 1.98 | 0.46 |
| 1:A:197:LYS:CA | 1:A:355:ILE:CG2 | 2.89 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:262:LEU:HD11 | 1:A:310:LEU:HD21 | 1.97 | 0.46 |
| 1:B:9:PRO:CD | 1:C:68:MET:HA | 2.46 | 0.46 |
| 1:B:39:LEU:CG | 1:B:40:GLY:H | 2.28 | 0.46 |
| 1:B:156:THR:HB | 1:B:467:VAL:O | 2.16 | 0.46 |
| 1:B:182:VAL:HB | 1:B:188:VAL:HG22 | 1.96 | 0.46 |
| 1:B:461:MET:O | 1:B:466:VAL:HG23 | 2.15 | 0.46 |
| 1:C:215:ASP:O | 1:C:216:LYS:HG2 | 2.14 | 0.46 |
| 1:C:403:ARG:O | 1:C:406:LEU:HB2 | 2.15 | 0.46 |
| 1:D:99:VAL:O | 1:D:103:LEU:HB2 | 2.15 | 0.46 |
| 1:D:116:HIS:CE1 | 1:D:117:PRO:HG2 | 2.50 | 0.46 |
| 1:D:389:LEU:CD1 | 1:D:415:LEU:CD2 | 2.93 | 0.46 |
| 1:E:235:LEU:HD13 | 1:E:310:LEU:CG | 2.45 | 0.46 |
| 1:E:248:LYS:CE | 1:E:275:TYR:CZ | 2.99 | 0.46 |
| 1:F:72:HIS:CA | 1:F:75:ALA:HB3 | 2.46 | 0.46 |
| 1:F:437:VAL:HG11 | 1:F:451:LEU:CD1 | 2.46 | 0.46 |
| 1:H:345:MET:SD | 1:H:362:VAL:HG21 | 2.55 | 0.46 |
| 1:H:447:LYS:HB2 | 1:H:462:CYS:HB2 | 1.97 | 0.46 |
| 1:I:198:LYS:HD3 | 1:I:198:LYS:HA | 1.80 | 0.46 |
| 1:I:218:ARG:NH1 | 1:I:282:VAL:CG2 | 2.76 | 0.46 |
| 1:I:299:THR:HG23 | 1:I:334:VAL:HG11 | 1.98 | 0.46 |
| 1:J:106:LYS:HE3 | 1:J:109:GLU:CD | 2.36 | 0.46 |
| 1:J:223:MET:HE2 | 1:J:276:LEU:HB3 | 1.96 | 0.46 |
| 1:K:339:HIS:CE1 | 1:K:341:LYS:HE2 | 2.51 | 0.46 |
| 1:K:461:MET:O | 1:K:466:VAL:HG23 | 2.15 | 0.46 |
| 1:L:98:VAL:HG12 | 1:L:99:VAL:CG1 | 2.45 | 0.46 |
| 1:L:107:ALA:O | 1:L:111:LEU:HG | 2.14 | 0.46 |
| 1:L:134:LEU:HD12 | 1:L:393:LEU:HG | 1.97 | 0.46 |
| 1:M:141:GLU:O | 1:M:142:VAL:HG22 | 2.15 | 0.46 |
| 1:M:468:GLU:HB2 | 1:M:469:PRO:HD2 | 1.97 | 0.46 |
| 1:N:234:LEU:H | 1:N:315:LEU:HD22 | 1.81 | 0.46 |
| 1:N:236:ASN:O | 1:N:266:LYS:HG2 | 2.16 | 0.46 |
| 1:N:461:MET:HE2 | 1:N:466:VAL:CG2 | 2.45 | 0.46 |
| 1:O:124:TYR:CD1 | 1:O:124:TYR:N | 2.82 | 0.46 |
| 1:O:178:VAL:CG2 | 1:O:366:VAL:CG1 | 2.92 | 0.46 |
| 1:O:223:MET:CG | 1:O:277:ALA:CA | 2.93 | 0.46 |
| 1:O:391:MET:O | 1:O:395:GLU:HG3 | 2.16 | 0.46 |
| 1:P:130:LYS:CG | 1:P:393:LEU:CD2 | 2.92 | 0.46 |
| 1:P:218:ARG:HD3 | 1:P:282:VAL:HG12 | 1.96 | 0.46 |
| 1:P:235:LEU:CG | 1:P:307:ILE:HD12 | 2.31 | 0.46 |
| 1:A:31:ILE:O | 1:A:34:THR:HB | 2.16 | 0.46 |
| 1:A:48:LEU:HD21 | 1:H:494:ILE:HD12 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:124:TYR:CD1 | 1:A:124:TYR:N | 2.83 | 0.46 |
| 1:A:198:LYS:HG3 | 1:A:326:ILE:HD13 | 1.98 | 0.46 |
| 1:A:199:SER:HB2 | 1:A:327:SER:HB2 | 1.96 | 0.46 |
| 1:A:448:CYS:HB2 | 1:A:460:ASP:CB | 2.43 | 0.46 |
| 1:B:254:ILE:CG2 | 1:B:259:ALA:CB | 2.93 | 0.46 |
| 1:B:339:HIS:HE1 | 1:B:341:LYS:CE | 2.28 | 0.46 |
| 1:B:494:ILE:HG21 | 1:C:48:LEU:CD2 | 2.46 | 0.46 |
| 1:C:12:MET:HE2 | 1:C:494:ILE:HG22 | 1.96 | 0.46 |
| 1:C:400:ILE:HD11 | 1:C:404:GLU:O | 2.16 | 0.46 |
| 1:D:219:VAL:CG1 | 1:D:273:GLN:HG2 | 2.44 | 0.46 |
| 1:E:115:VAL:HG21 | 1:E:403:ARG:HD3 | 1.98 | 0.46 |
| 1:E:326:ILE:CG1 | 1:E:348:ARG:NH1 | 2.76 | 0.46 |
| 1:E:418:ILE:HG22 | 1:E:419:PRO:HD3 | 1.97 | 0.46 |
| 1:E:437:VAL:HG21 | 1:E:451:LEU:CD2 | 2.46 | 0.46 |
| 1:F:222:GLN:HA | 1:F:277:ALA:CB | 2.45 | 0.46 |
| 1:G:35:VAL:O | 1:G:94:THR:HG21 | 2.15 | 0.46 |
| 1:G:312:ALA:HB1 | 1:G:313:GLN:CD | 2.36 | 0.46 |
| 1:H:105:ARG:NH1 | 1:H:106:LYS:HD2 | 2.30 | 0.46 |
| 1:H:236:ASN:CA | 1:H:265:GLN:HB3 | 2.45 | 0.46 |
| 1:I:394:ARG:NH2 | 1:I:413:ASP:CG | 2.69 | 0.46 |
| 1:J:161:LYS:CB | 1:J:357:GLU:OE2 | 2.61 | 0.46 |
| 1:J:191:ASP:HB3 | 1:J:192:LEU:CD1 | 2.44 | 0.46 |
| 1:J:227:VAL:HG11 | 1:J:260:ASN:OD1 | 2.16 | 0.46 |
| 1:K:151:THR:HA | 1:K:154:ALA:HB3 | 1.97 | 0.46 |
| 1:K:198:LYS:HB2 | 1:K:326:ILE:HD13 | 1.96 | 0.46 |
| 1:K:448:CYS:O | 1:K:449:ALA:HB2 | 2.15 | 0.46 |
| 1:L:232:ILE:HD11 | 1:L:321:VAL:HG21 | 1.98 | 0.46 |
| 1:L:389:LEU:HD12 | 1:L:415:LEU:HD13 | 1.97 | 0.46 |
| 1:L:460:ASP:OD2 | 1:L:463:GLU:HB2 | 2.15 | 0.46 |
| 1:M:48:LEU:O | 1:M:56:VAL:HG13 | 2.15 | 0.46 |
| 1:M:208:LEU:CD2 | 1:M:210:LYS:HE2 | 2.43 | 0.46 |
| 1:N:244:SER:O | 1:N:244:SER:OG | 1.97 | 0.46 |
| 1:N:307:ILE:HG13 | 1:N:307:ILE:O | 2.16 | 0.46 |
| 1:O:123:GLY:O | 1:O:408:VAL:HG12 | 2.16 | 0.46 |
| 1:O:138:ILE:HD12 | 1:O:385:THR:HG23 | 1.98 | 0.46 |
| 1:O:223:MET:HG3 | 1:O:277:ALA:CA | 2.46 | 0.46 |
| 1:O:352:GLU:H | 1:O:352:GLU:HG3 | 1.32 | 0.46 |
| 1:P:197:LYS:CA | 1:P:355:ILE:CG2 | 2.77 | 0.46 |
| 1:P:237:CYS:HB3 | 1:P:305:THR:O | 2.15 | 0.46 |
| 1:A:12:MET:HE3 | 1:A:494:ILE:HG22 | 1.95 | 0.46 |
| 1:A:121:VAL:HG23 | 1:A:122:LYS:N | 2.30 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:127:ALA:HB2 | 1:A:408:VAL:CG1 | 2.39 | 0.46 |
| 1:A:142:VAL:CG1 | 1:A:378:ILE:HG23 | 2.45 | 0.46 |
| 1:A:150:LEU:HD23 | 1:A:175:VAL:HG12 | 1.87 | 0.46 |
| 1:A:193:ILE:HD13 | 1:A:366:VAL:CG2 | 2.41 | 0.46 |
| 1:A:215:ASP:C | 1:A:216:LYS:HG3 | 2.35 | 0.46 |
| 1:A:486:MET:HG2 | 1:A:487:LEU:N | 2.31 | 0.46 |
| 1:C:18:ARG:CG | 1:C:22:ARG:HH12 | 2.29 | 0.46 |
| 1:C:121:VAL:CG1 | 1:C:488:LEU:HD23 | 2.46 | 0.46 |
| 1:C:123:GLY:C | 1:C:124:TYR:HD1 | 2.17 | 0.46 |
| 1:C:178:VAL:HG21 | 1:C:366:VAL:CG2 | 2.36 | 0.46 |
| 1:C:235:LEU:HB2 | 1:C:310:LEU:HD13 | 1.97 | 0.46 |
| 1:C:394:ARG:O | 1:C:397:ALA:HB3 | 2.16 | 0.46 |
| 1:C:447:LYS:O | 1:C:448:CYS:CB | 2.62 | 0.46 |
| 1:D:119:ILE:HD12 | 1:D:403:ARG:HA | 1.96 | 0.46 |
| 1:D:224:PRO:O | 1:D:282:VAL:HG11 | 2.16 | 0.46 |
| 1:D:435:VAL:CG1 | 1:M:401:SER:OG | 2.64 | 0.46 |
| 1:D:438:ARG:HH22 | 1:M:405:GLN:NE2 | 2.14 | 0.46 |
| 1:F:135:LEU:HD21 | 1:F:385:THR:CG2 | 2.45 | 0.46 |
| 1:F:239:ILE:CD1 | 1:F:307:ILE:HG12 | 2.46 | 0.46 |
| 1:F:420:ARG:NE | 1:F:430:ALA:HB3 | 2.31 | 0.46 |
| 1:G:235:LEU:H | 1:G:292:MET:HE2 | 1.80 | 0.46 |
| 1:G:434:LEU:N | 1:G:434:LEU:CD2 | 2.79 | 0.46 |
| 1:H:119:ILE:CD1 | 1:H:403:ARG:HD3 | 2.45 | 0.46 |
| 1:H:122:LYS:HB3 | 1:H:404:GLU:OE2 | 2.14 | 0.46 |
| 1:H:158:ILE:CD1 | 1:H:167:LYS:HA | 2.43 | 0.46 |
| 1:H:310:LEU:HD21 | 1:H:315:LEU:HD21 | 1.97 | 0.46 |
| 1:H:389:LEU:O | 1:H:393:LEU:CD2 | 2.64 | 0.46 |
| 1:I:46:LYS:HB3 | 1:J:492:ASP:OD2 | 2.15 | 0.46 |
| 1:I:169:LYS:HB2 | 1:I:204:ASP:OD1 | 2.16 | 0.46 |
| 1:I:192:LEU:CD2 | 1:I:341:LYS:O | 2.62 | 0.46 |
| 1:K:195:ILE:HB | 1:K:359:ALA:HB1 | 1.96 | 0.46 |
| 1:K:239:ILE:HD12 | 1:K:307:ILE:CD1 | 2.44 | 0.46 |
| 1:L:223:MET:N | 1:L:277:ALA:CB | 2.74 | 0.46 |
| 1:L:233:ALA:CB | 1:L:315:LEU:HD13 | 2.45 | 0.46 |
| 1:M:33:GLU:HA | 1:M:36:ARG:NE | 2.30 | 0.46 |
| 1:M:48:LEU:HD22 | 1:M:68:MET:SD | 2.55 | 0.46 |
| 1:M:81:VAL:HG21 | 1:M:483:SER:OG | 2.16 | 0.46 |
| 1:M:346:LEU:HD22 | 1:M:348:ARG:HD3 | 1.98 | 0.46 |
| 1:N:122:LYS:HE3 | 1:N:125:GLN:HE22 | 1.81 | 0.46 |
| 1:N:339:HIS:CE1 | 1:N:341:LYS:CD | 2.98 | 0.46 |
| 1:N:437:VAL:HG11 | 1:N:451:LEU:HD12 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:237:CYS:H | 1:O:306:ASN:CA | 2.28 | 0.46 |
| 1:P:106:LYS:HE3 | 1:P:109:GLU:OE2 | 2.16 | 0.46 |
| 1:P:235:LEU:HD21 | 1:P:306:ASN:C | 2.35 | 0.46 |
| 1:P:235:LEU:CG | 1:P:307:ILE:HA | 2.44 | 0.46 |
| 1:A:158:ILE:HD13 | 1:A:170:LEU:HB2 | 1.96 | 0.46 |
| 1:A:218:ARG:NH2 | 1:A:282:VAL:HG21 | 2.29 | 0.46 |
| 1:A:223:MET:CE | 1:A:276:LEU:CB | 2.92 | 0.46 |
| 1:A:326:ILE:C | 1:A:328:GLY:N | 2.69 | 0.46 |
| 1:A:418:ILE:O | 1:A:422:LEU:HG | 2.16 | 0.46 |
| 1:B:67:GLU:OE2 | 1:B:67:GLU:HA | 2.16 | 0.46 |
| 1:B:102:GLU:OE2 | 1:B:417:VAL:CG2 | 2.63 | 0.46 |
| 1:C:31:ILE:HD12 | 1:C:31:ILE:HG23 | 1.58 | 0.46 |
| 1:D:23:MET:CE | 1:D:72:HIS:HE1 | 2.25 | 0.46 |
| 1:E:174:ILE:HD12 | 1:E:365:ALA:HB1 | 1.98 | 0.46 |
| 1:E:178:VAL:CG2 | 1:E:366:VAL:HG11 | 2.46 | 0.46 |
| 1:E:219:VAL:HG13 | 1:E:220:SER:H | 1.81 | 0.46 |
| 1:E:236:ASN:HB2 | 1:E:265:GLN:OE1 | 2.16 | 0.46 |
| 1:F:212:VAL:HB | 1:F:298:ALA:CB | 2.40 | 0.46 |
| 1:F:276:LEU:HD12 | 1:F:281:ILE:HG21 | 1.97 | 0.46 |
| 1:G:11:ASN:ND2 | 1:H:51:ASP:CA | 2.67 | 0.46 |
| 1:G:106:LYS:NZ | 1:G:109:GLU:CD | 2.69 | 0.46 |
| 1:G:197:LYS:CA | 1:G:355:ILE:HD13 | 2.46 | 0.46 |
| 1:G:414:ALA:C | 1:G:416:GLU:H | 2.19 | 0.46 |
| 1:G:431:ILE:HD11 | 1:P:406:LEU:HD13 | 1.97 | 0.46 |
| 1:H:42:LYS:HD2 | 1:H:426:ALA:N | 2.30 | 0.46 |
| 1:H:114:ASN:O | 1:H:114:ASN:CG | 2.33 | 0.46 |
| 1:H:162:GLY:O | 1:H:163:ALA:CB | 2.59 | 0.46 |
| 1:H:234:LEU:H | 1:H:315:LEU:CG | 2.29 | 0.46 |
| 1:H:403:ARG:CA | 1:I:431:ILE:HD11 | 2.45 | 0.46 |
| 1:J:67:GLU:O | 1:K:9:PRO:HG3 | 2.16 | 0.46 |
| 1:J:173:ILE:HD13 | 1:J:206:THR:O | 2.14 | 0.46 |
| 1:J:391:MET:HE1 | 1:J:438:ARG:NE | 2.30 | 0.46 |
| 1:K:142:VAL:HG13 | 1:K:142:VAL:O | 2.14 | 0.46 |
| 1:K:192:LEU:HD22 | 1:K:341:LYS:O | 2.16 | 0.46 |
| 1:L:311:SER:O | 1:L:315:LEU:HD12 | 2.15 | 0.46 |
| 1:L:403:ARG:NH1 | 1:L:403:ARG:HG2 | 2.30 | 0.46 |
| 1:L:435:VAL:HG13 | 1:L:438:ARG:HH22 | 1.81 | 0.46 |
| 1:L:491:ASP:O | 1:L:491:ASP:CG | 2.54 | 0.46 |
| 1:M:60:ASP:O | 1:M:64:ILE:HG13 | 2.15 | 0.46 |
| 1:M:147:LYS:HE2 | 1:M:147:LYS:HB3 | 1.63 | 0.46 |
| 1:M:192:LEU:CG | 1:M:342:ALA:CB | 2.92 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:119:ILE:HG23 | 1:N:403:ARG:HB2 | 1.94 | 0.46 |
| 1:N:192:LEU:O | 1:N:342:ALA:HB1 | 2.16 | 0.46 |
| 1:N:263:PHE:CZ | 1:N:332:ILE:HG21 | 2.50 | 0.46 |
| 1:O:119:ILE:HD12 | 1:O:403:ARG:HA | 1.98 | 0.46 |
| 1:P:8:LEU:CB | 1:P:12:MET:HE2 | 2.45 | 0.46 |
| 1:P:38:THR:CB | 1:P:59:ASN:HD22 | 2.25 | 0.46 |
| 1:P:326:ILE:C | 1:P:328:GLY:HA2 | 2.36 | 0.46 |
| 1:P:448:CYS:O | 1:P:449:ALA:CB | 2.63 | 0.46 |
| 1:A:144:ALA:HB1 | 1:A:373:ILE:HA | 1.98 | 0.46 |
| 1:A:233:ALA:HB1 | 1:A:310:LEU:CG | 2.44 | 0.46 |
| 1:A:235:LEU:HA | 1:A:235:LEU:HD23 | 1.49 | 0.46 |
| 1:A:368:VAL:CB | 1:A:469:PRO:CG | 2.94 | 0.46 |
| 1:B:9:PRO:HD3 | 1:C:68:MET:HA | 1.96 | 0.46 |
| 1:B:211:GLY:C | 1:B:298:ALA:CB | 2.84 | 0.46 |
| 1:B:232:ILE:HD12 | 1:B:232:ILE:N | 2.29 | 0.46 |
| 1:C:12:MET:HE3 | 1:C:494:ILE:CB | 2.45 | 0.46 |
| 1:C:42:LYS:NZ | 1:C:453:VAL:CB | 2.68 | 0.46 |
| 1:C:42:LYS:CG | 1:C:425:ASN:CB | 2.93 | 0.46 |
| 1:D:42:LYS:HE3 | 1:D:426:ALA:CA | 2.46 | 0.46 |
| 1:D:63:THR:HA | 1:D:66:ARG:HB2 | 1.98 | 0.46 |
| 1:D:233:ALA:CA | 1:D:315:LEU:HD13 | 2.44 | 0.46 |
| 1:D:241:GLU:HB3 | 1:D:246:MET:HB3 | 1.98 | 0.46 |
| 1:D:297:LYS:HG2 | 1:D:341:LYS:HG3 | 1.97 | 0.46 |
| 1:E:233:ALA:CA | 1:E:315:LEU:HD13 | 2.45 | 0.46 |
| 1:F:178:VAL:HG12 | 1:F:366:VAL:CG2 | 2.44 | 0.46 |
| 1:G:134:LEU:CD1 | 1:G:393:LEU:CD1 | 2.91 | 0.46 |
| 1:G:489:ARG:HH21 | 1:H:44:MET:CE | 2.21 | 0.46 |
| 1:H:70:VAL:CG2 | 1:H:76:LYS:CG | 2.92 | 0.46 |
| 1:H:391:MET:O | 1:H:395:GLU:HG3 | 2.15 | 0.46 |
| 1:I:42:LYS:HZ1 | 1:I:453:VAL:HG23 | 1.81 | 0.46 |
| 1:I:235:LEU:CD1 | 1:I:262:LEU:HD21 | 2.44 | 0.46 |
| 1:J:237:CYS:CB | 1:J:306:ASN:HA | 2.44 | 0.46 |
| 1:K:18:ARG:HA | 1:K:21:GLN:HB2 | 1.98 | 0.46 |
| 1:K:36:ARG:HE | 1:K:36:ARG:HB3 | 1.35 | 0.46 |
| 1:K:42:LYS:CB | 1:K:425:ASN:HB3 | 2.25 | 0.46 |
| 1:K:69:SER:CA | 1:L:9:PRO:HA | 2.46 | 0.46 |
| 1:K:192:LEU:HB3 | 1:K:342:ALA:HB2 | 1.91 | 0.46 |
| 1:K:239:ILE:CG2 | 1:K:307:ILE:HG12 | 2.43 | 0.46 |
| 1:K:251:VAL:HG13 | 1:K:276:LEU:CD1 | 2.45 | 0.46 |
| 1:K:305:THR:HG23 | 1:K:305:THR:O | 2.16 | 0.46 |
| 1:L:48:LEU:N | 1:L:56:VAL:CG2 | 2.78 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:197:LYS:CB | 1:L:355:ILE:CG2 | 2.79 | 0.46 |
| 1:L:223:MET:H | 1:L:277:ALA:HB2 | 1.81 | 0.46 |
| 1:M:16:MET:C | 1:M:20:ALA:HB2 | 2.36 | 0.46 |
| 1:M:193:ILE:HD13 | 1:M:366:VAL:HG21 | 1.96 | 0.46 |
| 1:M:235:LEU:HD13 | 1:M:307:ILE:CB | 2.46 | 0.46 |
| 1:M:250:MET:CE | 1:M:308:LYS:HB3 | 2.46 | 0.46 |
| 1:N:68:MET:CE | 1:O:9:PRO:CG | 2.93 | 0.46 |
| 1:N:234:LEU:CD1 | 1:N:296:ALA:HB2 | 2.46 | 0.46 |
| 1:O:8:LEU:CB | 1:O:9:PRO:CD | 2.90 | 0.46 |
| 1:O:178:VAL:CG1 | 1:O:188:VAL:HG11 | 2.45 | 0.46 |
| 1:O:219:VAL:HG13 | 1:O:273:GLN:HB3 | 1.97 | 0.46 |
| 1:P:64:ILE:CG2 | 1:P:65:LEU:N | 2.79 | 0.46 |
| 1:P:142:VAL:HG11 | 1:P:378:ILE:CD1 | 2.45 | 0.46 |
| 1:P:147:LYS:O | 1:P:147:LYS:HG2 | 2.15 | 0.46 |
| 1:P:170:LEU:HD11 | 1:P:358:VAL:HG21 | 1.98 | 0.46 |
| 1:P:218:ARG:HH11 | 1:P:218:ARG:HG2 | 1.81 | 0.46 |
| 1:A:9:PRO:HG3 | 1:B:69:SER:H | 1.79 | 0.46 |
| 1:A:12:MET:HA | 1:A:495:ALA:O | 2.16 | 0.46 |
| 1:A:113:GLN:NE2 | 1:A:113:GLN:CA | 2.73 | 0.46 |
| 1:A:119:ILE:HD12 | 1:A:403:ARG:HG3 | 1.97 | 0.46 |
| 1:A:197:LYS:CB | 1:A:355:ILE:CG2 | 2.94 | 0.46 |
| 1:A:406:LEU:HD13 | 1:J:431:ILE:HD12 | 1.97 | 0.46 |
| 1:B:138:ILE:CG2 | 1:B:388:GLU:HG2 | 2.46 | 0.46 |
| 1:B:197:LYS:CB | 1:B:355:ILE:CD1 | 2.92 | 0.46 |
| 1:B:223:MET:HE1 | 1:B:283:ALA:HB3 | 1.98 | 0.46 |
| 1:B:464:ASN:OD1 | 1:B:466:VAL:CG2 | 2.64 | 0.46 |
| 1:C:85:GLN:HE22 | 1:C:479:SER:CB | 2.29 | 0.46 |
| 1:C:138:ILE:O | 1:C:446:ASN:CB | 2.63 | 0.46 |
| 1:C:254:ILE:HD13 | 1:C:262:LEU:CD1 | 2.45 | 0.46 |
| 1:D:406:LEU:CG | 1:M:431:ILE:HD12 | 2.46 | 0.46 |
| 1:E:178:VAL:CG2 | 1:E:366:VAL:HG21 | 2.45 | 0.46 |
| 1:E:193:ILE:HD13 | 1:E:343:VAL:HG12 | 1.96 | 0.46 |
| 1:E:220:SER:HB3 | 1:E:273:GLN:HB2 | 1.98 | 0.46 |
| 1:E:459:GLU:CB | 1:E:461:MET:CE | 2.94 | 0.46 |
| 1:F:14:ARG:CZ | 1:G:34:THR:HA | 2.45 | 0.46 |
| 1:F:44:MET:HA | 1:F:44:MET:HE1 | 1.97 | 0.46 |
| 1:F:48:LEU:CG | 1:F:68:MET:CE | 2.86 | 0.46 |
| 1:F:233:ALA:HB1 | 1:F:315:LEU:HD13 | 1.95 | 0.46 |
| 1:F:263:PHE:CE2 | 1:F:295:LEU:HD21 | 2.51 | 0.46 |
| 1:F:299:THR:CG2 | 1:F:318:ALA:HB2 | 2.45 | 0.46 |
| 1:G:12:MET:HE3 | 1:H:69:SER:HB2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:147:LYS:HE3 | 1:G:147:LYS:HB3 | 1.83 | 0.46 |
| 1:G:197:LYS:CA | 1:G:355:ILE:CG2 | 2.81 | 0.46 |
| 1:G:206:THR:HG22 | 1:G:348:ARG:O | 2.16 | 0.46 |
| 1:H:77:MET:CG | 1:H:487:LEU:HD21 | 2.45 | 0.46 |
| 1:H:437:VAL:HG13 | 1:H:449:ALA:O | 2.16 | 0.46 |
| 1:I:63:THR:O | 1:I:63:THR:CG2 | 2.64 | 0.46 |
| 1:I:92:GLY:CA | 1:I:95:THR:HB | 2.46 | 0.46 |
| 1:I:326:ILE:CG2 | 1:I:331:MET:SD | 3.04 | 0.46 |
| 1:J:232:ILE:C | 1:J:315:LEU:HD22 | 2.36 | 0.46 |
| 1:K:138:ILE:CD1 | 1:K:385:THR:HG23 | 2.45 | 0.46 |
| 1:K:235:LEU:HD22 | 1:K:307:ILE:C | 2.36 | 0.46 |
| 1:L:12:MET:HE2 | 1:L:494:ILE:CB | 2.45 | 0.46 |
| 1:L:106:LYS:HB3 | 1:L:106:LYS:HE2 | 1.28 | 0.46 |
| 1:M:8:LEU:N | 1:M:8:LEU:HD12 | 2.31 | 0.46 |
| 1:N:31:ILE:H | 1:N:31:ILE:HD13 | 1.81 | 0.46 |
| 1:N:233:ALA:HB1 | 1:N:310:LEU:HD12 | 1.90 | 0.46 |
| 1:N:356:GLU:O | 1:N:359:ALA:HB3 | 2.15 | 0.46 |
| 1:N:461:MET:HB3 | 1:N:466:VAL:HG23 | 1.97 | 0.46 |
| 1:P:197:LYS:CB | 1:P:355:ILE:CG2 | 2.80 | 0.46 |
| 1:A:36:ARG:HG3 | 1:A:37:SER:N | 2.30 | 0.46 |
| 1:A:435:VAL:O | 1:A:435:VAL:CG1 | 2.65 | 0.46 |
| 1:B:142:VAL:HG22 | 1:B:149:ILE:HG12 | 1.90 | 0.46 |
| 1:B:217:GLU:CD | 1:B:330:SER:CB | 2.84 | 0.46 |
| 1:C:195:ILE:H | 1:C:195:ILE:HG12 | 1.43 | 0.46 |
| 1:C:235:LEU:CD2 | 1:C:306:ASN:O | 2.64 | 0.46 |
| 1:D:42:LYS:CE | 1:D:426:ALA:N | 2.79 | 0.46 |
| 1:D:48:LEU:HB2 | 1:D:56:VAL:CG1 | 2.46 | 0.46 |
| 1:D:214:VAL:HG12 | 1:D:291:ASP:HB3 | 1.98 | 0.46 |
| 1:D:338:LYS:HE3 | 1:D:339:HIS:HB3 | 1.97 | 0.46 |
| 1:E:119:ILE:O | 1:E:119:ILE:HG22 | 2.15 | 0.46 |
| 1:E:345:MET:SD | 1:E:362:VAL:HG21 | 2.56 | 0.46 |
| 1:F:212:VAL:HG21 | 1:F:294:LYS:HB2 | 1.97 | 0.46 |
| 1:F:218:ARG:CG | 1:F:323:GLU:OE2 | 2.63 | 0.46 |
| 1:F:391:MET:HE3 | 1:F:438:ARG:CA | 2.46 | 0.46 |
| 1:G:36:ARG:HG3 | 1:G:37:SER:H | 1.79 | 0.46 |
| 1:G:197:LYS:CB | 1:G:355:ILE:CG2 | 2.92 | 0.46 |
| 1:G:433:ILE:HG21 | 1:G:451:LEU:HD23 | 1.89 | 0.46 |
| 1:H:33:GLU:O | 1:H:36:ARG:HG2 | 2.16 | 0.46 |
| 1:H:219:VAL:HG13 | 1:H:273:GLN:CB | 2.37 | 0.46 |
| 1:H:236:ASN:ND2 | 1:H:289:LYS:NZ | 2.64 | 0.46 |
| 1:H:380:SER:HB2 | 1:H:384:SER:HB2 | 1.98 | 0.46 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:68:MET:HG3 | 1:J:8:LEU:CB | 2.46 | 0.46 |
| 1:I:139:ALA:HB2 | 1:I:377:ARG:CD | 2.25 | 0.46 |
| 1:I:346:LEU:HD23 | 1:I:347:ILE:N | 2.31 | 0.46 |
| 1:I:485:GLU:HA | 1:I:488:LEU:HB2 | 1.98 | 0.46 |
| 1:J:178:VAL:HG23 | 1:J:366:VAL:HG22 | 1.98 | 0.46 |
| 1:J:493:VAL:HG12 | 1:J:493:VAL:O | 2.16 | 0.46 |
| 1:K:197:LYS:HB2 | 1:K:355:ILE:CG1 | 2.46 | 0.46 |
| 1:K:225:LYS:HE3 | 1:K:323:GLU:OE1 | 2.16 | 0.46 |
| 1:K:339:HIS:O | 1:K:339:HIS:CG | 2.68 | 0.46 |
| 1:L:89:VAL:O | 1:L:89:VAL:HG23 | 2.08 | 0.46 |
| 1:L:198:LYS:CG | 1:L:326:ILE:HD13 | 2.43 | 0.46 |
| 1:L:326:ILE:CG1 | 1:L:348:ARG:HH12 | 2.21 | 0.46 |
| 1:M:106:LYS:CE | 1:M:106:LYS:HA | 2.46 | 0.46 |
| 1:M:165:LYS:HD2 | 1:M:165:LYS:HA | 1.53 | 0.46 |
| 1:M:180:ALA:CB | 1:M:210:LYS:NZ | 2.79 | 0.46 |
| 1:M:384:SER:HB3 | 1:M:449:ALA:C | 2.36 | 0.46 |
| 1:N:116:HIS:HD1 | 1:N:118:THR:H | 1.63 | 0.46 |
| 1:N:198:LYS:HD3 | 1:N:198:LYS:HA | 1.45 | 0.46 |
| 1:N:208:LEU:CD1 | 1:N:343:VAL:CG2 | 2.94 | 0.46 |
| 1:O:232:ILE:HG12 | 1:O:299:THR:HG21 | 1.98 | 0.46 |
| 1:O:258:GLY:HA3 | 1:O:312:ALA:HB2 | 1.98 | 0.46 |
| 1:P:134:LEU:HD13 | 1:P:392:LYS:CE | 2.40 | 0.46 |
| 1:P:136:LYS:HB3 | 1:P:136:LYS:HE3 | 1.85 | 0.46 |
| 1:A:42:LYS:HZ2 | 1:H:118:THR:HG21 | 1.81 | 0.45 |
| 1:A:96:ALA:HB1 | 1:A:480:ALA:HB2 | 1.98 | 0.45 |
| 1:A:119:ILE:HG22 | 1:A:120:VAL:N | 2.31 | 0.45 |
| 1:A:368:VAL:HG21 | 1:A:469:PRO:CG | 2.46 | 0.45 |
| 1:B:156:THR:HG21 | 1:B:468:GLU:CA | 2.46 | 0.45 |
| 1:B:379:VAL:HG22 | 1:B:380:SER:HB2 | 1.97 | 0.45 |
| 1:C:463:GLU:C | 1:C:464:ASN:HD22 | 2.18 | 0.45 |
| 1:D:163:ALA:HB1 | 1:D:165:LYS:CB | 2.43 | 0.45 |
| 1:D:173:ILE:HD11 | 1:D:206:THR:HG1 | 1.78 | 0.45 |
| 1:E:434:LEU:N | 1:E:434:LEU:CD2 | 2.79 | 0.45 |
| 1:F:118:THR:HG21 | 1:G:42:LYS:HZ1 | 1.77 | 0.45 |
| 1:G:156:THR:CG2 | 1:G:468:GLU:HB3 | 2.45 | 0.45 |
| 1:G:380:SER:CB | 1:G:384:SER:CB | 2.94 | 0.45 |
| 1:H:124:TYR:CE1 | 1:H:407:ALA:HA | 2.48 | 0.45 |
| 1:H:449:ALA:HB2 | 1:H:458:VAL:HG22 | 1.98 | 0.45 |
| 1:I:22:ARG:O | 1:I:26:LEU:HB2 | 2.17 | 0.45 |
| 1:I:115:VAL:CG2 | 1:I:403:ARG:NE | 2.71 | 0.45 |
| 1:I:233:ALA:CB | 1:I:310:LEU:HD21 | 2.46 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:178:VAL:O | 1:J:178:VAL:CG1 | 2.64 | 0.45 |
| 1:K:220:SER:HB2 | 1:K:273:GLN:C | 2.36 | 0.45 |
| 1:K:368:VAL:HB | 1:K:469:PRO:HB3 | 1.95 | 0.45 |
| 1:K:373:ILE:HD12 | 1:K:373:ILE:HG21 | 1.59 | 0.45 |
| 1:K:494:ILE:HG22 | 1:K:494:ILE:O | 2.15 | 0.45 |
| 1:L:37:SER:O | 1:L:43:GLY:HA2 | 2.16 | 0.45 |
| 1:L:223:MET:HE1 | 1:L:283:ALA:HB2 | 1.98 | 0.45 |
| 1:L:450:GLY:O | 1:L:451:LEU:CD1 | 2.61 | 0.45 |
| 1:M:36:ARG:HH11 | 1:M:36:ARG:HD3 | 1.43 | 0.45 |
| 1:M:223:MET:N | 1:M:277:ALA:CB | 2.79 | 0.45 |
| 1:M:464:ASN:CG | 1:M:466:VAL:HG22 | 2.36 | 0.45 |
| 1:N:391:MET:HE1 | 1:N:438:ARG:C | 2.36 | 0.45 |
| 1:O:149:ILE:O | 1:O:153:ILE:HG12 | 2.16 | 0.45 |
| 1:O:347:ILE:HD13 | 1:O:358:VAL:C | 2.36 | 0.45 |
| 1:P:52:LEU:H | 1:P:52:LEU:HG | 1.39 | 0.45 |
| 1:P:83:LYS:HB2 | 1:P:83:LYS:HE2 | 1.72 | 0.45 |
| 1:P:193:ILE:CD1 | 1:P:366:VAL:HG11 | 2.30 | 0.45 |
| 1:A:68:MET:C | 1:H:8:LEU:HA | 2.36 | 0.45 |
| 1:A:209:ILE:HD11 | 1:A:213:LEU:HB2 | 1.98 | 0.45 |
| 1:A:239:ILE:HG12 | 1:A:307:ILE:HG21 | 1.97 | 0.45 |
| 1:B:105:ARG:O | 1:B:108:GLU:HB3 | 2.16 | 0.45 |
| 1:B:211:GLY:C | 1:B:298:ALA:HB2 | 2.37 | 0.45 |
| 1:B:223:MET:HE3 | 1:B:273:GLN:HB3 | 1.96 | 0.45 |
| 1:B:314:ASP:C | 1:B:315:LEU:HD13 | 2.37 | 0.45 |
| 1:B:326:ILE:CG2 | 1:B:331:MET:SD | 3.05 | 0.45 |
| 1:B:418:ILE:HG22 | 1:B:422:LEU:HD12 | 1.97 | 0.45 |
| 1:C:70:VAL:CG2 | 1:C:71:GLU:N | 2.77 | 0.45 |
| 1:C:134:LEU:CD1 | 1:C:393:LEU:CD2 | 2.89 | 0.45 |
| 1:C:377:ARG:CD | 1:C:470:LEU:HD12 | 2.46 | 0.45 |
| 1:D:23:MET:HE2 | 1:D:72:HIS:CE1 | 2.52 | 0.45 |
| 1:D:130:LYS:HE2 | 1:D:396:TYR:CB | 2.41 | 0.45 |
| 1:E:332:ILE:HD13 | 1:E:332:ILE:HG21 | 1.76 | 0.45 |
| 1:F:118:THR:HG21 | 1:G:42:LYS:HZ3 | 1.78 | 0.45 |
| 1:F:139:ALA:HB3 | 1:F:377:ARG:NE | 2.29 | 0.45 |
| 1:F:170:LEU:HD11 | 1:F:358:VAL:CG1 | 2.46 | 0.45 |
| 1:F:214:VAL:CG1 | 1:F:291:ASP:HB2 | 2.46 | 0.45 |
| 1:F:234:LEU:N | 1:F:234:LEU:HD23 | 2.31 | 0.45 |
| 1:F:401:SER:CB | 1:O:435:VAL:HG11 | 2.47 | 0.45 |
| 1:H:166:ALA:HB3 | 1:H:203:ILE:CG2 | 2.46 | 0.45 |
| 1:I:326:ILE:CG1 | 1:I:348:ARG:NH1 | 2.79 | 0.45 |
| 1:I:347:ILE:HG21 | 1:I:358:VAL:CB | 2.46 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:56:VAL:HG12 | 1:J:56:VAL:O | 2.17 | 0.45 |
| 1:K:116:HIS:C | 1:K:118:THR:H | 2.20 | 0.45 |
| 1:K:156:THR:HG21 | 1:K:468:GLU:N | 2.29 | 0.45 |
| 1:K:209:ILE:HD11 | 1:K:213:LEU:HB2 | 1.97 | 0.45 |
| 1:M:124:TYR:N | 1:M:124:TYR:HD1 | 1.99 | 0.45 |
| 1:M:214:VAL:HG12 | 1:M:291:ASP:HB3 | 1.95 | 0.45 |
| 1:N:325:LYS:HZ3 | 1:N:328:GLY:N | 2.14 | 0.45 |
| 1:O:48:LEU:HD23 | 1:P:494:ILE:HG13 | 1.96 | 0.45 |
| 1:O:171:ALA:HA | 1:O:174:ILE:HD13 | 1.97 | 0.45 |
| 1:O:211:GLY:C | 1:O:298:ALA:HB1 | 2.36 | 0.45 |
| 1:O:223:MET:HE2 | 1:O:276:LEU:CB | 2.47 | 0.45 |
| 1:O:223:MET:HB3 | 1:O:282:VAL:HA | 1.98 | 0.45 |
| 1:P:30:ILE:HG22 | 1:P:31:ILE:N | 2.31 | 0.45 |
| 1:P:241:GLU:CG | 1:P:250:MET:SD | 3.04 | 0.45 |
| 1:P:347:ILE:HD12 | 1:P:359:ALA:HB2 | 1.98 | 0.45 |
| 1:A:68:MET:SD | 1:H:8:LEU:HD22 | 2.57 | 0.45 |
| 1:A:121:VAL:C | 1:A:123:GLY:N | 2.69 | 0.45 |
| 1:A:351:THR:HG23 | 1:A:352:GLU:HA | 1.97 | 0.45 |
| 1:B:42:LYS:HA | 1:B:42:LYS:HD3 | 1.58 | 0.45 |
| 1:B:237:CYS:CB | 1:B:306:ASN:CA | 2.63 | 0.45 |
| 1:C:281:ILE:HD13 | 1:C:281:ILE:HG23 | 1.69 | 0.45 |
| 1:D:402:GLY:C | 1:M:431:ILE:HD11 | 2.37 | 0.45 |
| 1:E:222:GLN:O | 1:E:224:PRO:HD3 | 2.16 | 0.45 |
| 1:F:9:PRO:HD3 | 1:G:68:MET:HE2 | 1.99 | 0.45 |
| 1:F:16:MET:N | 1:F:20:ALA:HB2 | 2.32 | 0.45 |
| 1:F:306:ASN:HD21 | 1:F:308:LYS:HD3 | 1.80 | 0.45 |
| 1:F:313:GLN:C | 1:F:315:LEU:N | 2.70 | 0.45 |
| 1:F:374:GLU:HG3 | 1:F:471:ARG:NH2 | 2.31 | 0.45 |
| 1:F:381:GLY:CA | 1:F:461:MET:CG | 2.76 | 0.45 |
| 1:G:39:LEU:CG | 1:G:40:GLY:H | 2.29 | 0.45 |
| 1:I:23:MET:HE2 | 1:I:72:HIS:CE1 | 2.51 | 0.45 |
| 1:I:230:ALA:HB1 | 1:I:261:VAL:HG23 | 1.97 | 0.45 |
| 1:I:491:ASP:OD1 | 1:I:491:ASP:C | 2.55 | 0.45 |
| 1:J:130:LYS:HE2 | 1:J:134:LEU:CG | 2.46 | 0.45 |
| 1:J:164:GLU:O | 1:J:167:LYS:HG2 | 2.16 | 0.45 |
| 1:J:306:ASN:OD1 | 1:J:307:ILE:HA | 2.16 | 0.45 |
| 1:K:162:GLY:O | 1:K:163:ALA:HB2 | 2.17 | 0.45 |
| 1:L:78:LEU:HD12 | 1:L:78:LEU:HA | 1.72 | 0.45 |
| 1:L:227:VAL:CG1 | 1:L:260:ASN:HD21 | 2.29 | 0.45 |
| 1:M:156:THR:CG2 | 1:M:468:GLU:HA | 2.47 | 0.45 |
| 1:N:152:LYS:CG | 1:N:465:GLY:O | 2.63 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:25:ILE:O | 1:O:29:ARG:HG3 | 2.17 | 0.45 |
| 1:O:142:VAL:CG1 | 1:O:378:ILE:HD13 | 2.46 | 0.45 |
| 1:O:152:LYS:HE3 | 1:O:462:CYS:C | 2.36 | 0.45 |
| 1:O:376:GLY:N | 1:O:377:ARG:HB2 | 2.31 | 0.45 |
| 1:O:437:VAL:HG21 | 1:O:451:LEU:CD2 | 2.45 | 0.45 |
| 1:P:233:ALA:CA | 1:P:315:LEU:HD11 | 2.46 | 0.45 |
| 1:A:47:MET:CE | 1:H:493:VAL:CG1 | 2.95 | 0.45 |
| 1:A:69:SER:HB3 | 1:H:9:PRO:CB | 2.45 | 0.45 |
| 1:A:170:LEU:HD21 | 1:A:358:VAL:HG22 | 1.98 | 0.45 |
| 1:A:254:ILE:HD13 | 1:A:262:LEU:CD1 | 2.45 | 0.45 |
| 1:A:379:VAL:HG21 | 1:A:385:THR:OG1 | 2.17 | 0.45 |
| 1:B:9:PRO:HD2 | 1:B:12:MET:HG2 | 1.99 | 0.45 |
| 1:B:62:VAL:HG21 | 1:B:66:ARG:HH21 | 1.81 | 0.45 |
| 1:B:124:TYR:HD1 | 1:B:407:ALA:HB1 | 1.78 | 0.45 |
| 1:B:289:LYS:HE2 | 1:B:289:LYS:HB2 | 1.71 | 0.45 |
| 1:C:123:GLY:CA | 1:C:407:ALA:HB3 | 2.41 | 0.45 |
| 1:D:36:ARG:HG3 | 1:D:37:SER:N | 2.31 | 0.45 |
| 1:D:433:ILE:HG23 | 1:D:437:VAL:HG23 | 1.98 | 0.45 |
| 1:D:491:ASP:CG | 1:E:44:MET:HG3 | 2.37 | 0.45 |
| 1:E:338:LYS:O | 1:E:338:LYS:CG | 2.64 | 0.45 |
| 1:E:368:VAL:CB | 1:E:469:PRO:CG | 2.74 | 0.45 |
| 1:F:42:LYS:HG2 | 1:F:426:ALA:N | 2.32 | 0.45 |
| 1:F:134:LEU:HD12 | 1:F:393:LEU:CG | 2.46 | 0.45 |
| 1:F:166:ALA:HB3 | 1:F:170:LEU:HD22 | 1.98 | 0.45 |
| 1:F:433:ILE:CG2 | 1:F:434:LEU:CD2 | 2.87 | 0.45 |
| 1:G:9:PRO:HD2 | 1:H:69:SER:CA | 2.47 | 0.45 |
| 1:H:86:GLU:HG2 | 1:H:86:GLU:O | 2.15 | 0.45 |
| 1:I:8:LEU:CD2 | 1:P:68:MET:HB3 | 2.46 | 0.45 |
| 1:J:212:VAL:O | 1:J:334:VAL:HG23 | 2.16 | 0.45 |
| 1:J:251:VAL:CG1 | 1:J:276:LEU:HD22 | 2.47 | 0.45 |
| 1:K:198:LYS:HA | 1:K:198:LYS:HD3 | 1.58 | 0.45 |
| 1:K:206:THR:HG21 | 1:K:347:ILE:HG23 | 1.98 | 0.45 |
| 1:K:433:ILE:HA | 1:K:436:LYS:HG3 | 1.98 | 0.45 |
| 1:L:68:MET:C | 1:M:8:LEU:CA | 2.85 | 0.45 |
| 1:L:70:VAL:HA | 1:M:9:PRO:N | 2.32 | 0.45 |
| 1:L:116:HIS:CE1 | 1:L:117:PRO:HG2 | 2.51 | 0.45 |
| 1:L:212:VAL:N | 1:L:298:ALA:CB | 2.79 | 0.45 |
| 1:L:448:CYS:SG | 1:L:460:ASP:CA | 3.04 | 0.45 |
| 1:M:69:SER:CB | 1:N:9:PRO:CA | 2.91 | 0.45 |
| 1:M:206:THR:OG1 | 1:M:347:ILE:CG2 | 2.64 | 0.45 |
| 1:M:213:LEU:CD1 | 1:M:333:PHE:CE2 | 2.96 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:223:MET:HB3 | 1:M:282:VAL:HA | 1.98 | 0.45 |
| 1:N:209:ILE:HD13 | 1:N:209:ILE:HG21 | 1.71 | 0.45 |
| 1:N:233:ALA:CB | 1:N:315:LEU:CD2 | 2.94 | 0.45 |
| 1:N:385:THR:O | 1:N:389:LEU:HG | 2.16 | 0.45 |
| 1:O:134:LEU:CD1 | 1:O:393:LEU:CD2 | 2.93 | 0.45 |
| 1:O:198:LYS:N | 1:O:355:ILE:CD1 | 2.79 | 0.45 |
| 1:P:210:LYS:HG2 | 1:P:343:VAL:CG2 | 2.46 | 0.45 |
| 1:P:234:LEU:H | 1:P:315:LEU:CD2 | 2.28 | 0.45 |
| 1:P:247:LEU:CD1 | 1:P:272:ALA:CB | 2.94 | 0.45 |
| 1:P:340:PRO:HB2 | 1:P:342:ALA:O | 2.17 | 0.45 |
| 1:A:198:LYS:HD3 | 1:A:198:LYS:HA | 1.53 | 0.45 |
| 1:A:235:LEU:HB2 | 1:A:310:LEU:HD21 | 1.98 | 0.45 |
| 1:A:381:GLY:O | 1:A:461:MET:HG3 | 2.16 | 0.45 |
| 1:A:429:ASP:O | 1:A:433:ILE:HG13 | 2.15 | 0.45 |
| 1:B:236:ASN:HA | 1:B:265:GLN:HB3 | 1.99 | 0.45 |
| 1:C:494:ILE:HB | 1:D:48:LEU:CD1 | 2.46 | 0.45 |
| 1:D:42:LYS:CG | 1:D:426:ALA:H | 2.28 | 0.45 |
| 1:D:72:HIS:O | 1:D:76:LYS:HG3 | 2.17 | 0.45 |
| 1:E:227:VAL:CG1 | 1:E:260:ASN:HD21 | 2.29 | 0.45 |
| 1:E:239:ILE:O | 1:E:247:LEU:HD21 | 2.17 | 0.45 |
| 1:F:121:VAL:HG23 | 1:F:122:LYS:N | 2.31 | 0.45 |
| 1:F:134:LEU:HD22 | 1:F:392:LYS:CD | 2.47 | 0.45 |
| 1:F:193:ILE:HG23 | 1:F:343:VAL:CG1 | 2.44 | 0.45 |
| 1:F:203:ILE:HG13 | 1:F:203:ILE:O | 2.16 | 0.45 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:CB | 2.47 | 0.45 |
| 1:G:235:LEU:HD21 | 1:G:307:ILE:CB | 2.47 | 0.45 |
| 1:H:49:VAL:HG12 | 1:H:50:ASP:O | 2.17 | 0.45 |
| 1:H:174:ILE:HG22 | 1:H:362:VAL:CB | 2.40 | 0.45 |
| 1:I:115:VAL:CG2 | 1:I:403:ARG:HD3 | 2.46 | 0.45 |
| 1:J:21:GLN:O | 1:J:25:ILE:HG13 | 2.16 | 0.45 |
| 1:J:22:ARG:HG2 | 1:J:23:MET:N | 2.32 | 0.45 |
| 1:J:86:GLU:CD | 1:J:87:LYS:H | 2.20 | 0.45 |
| 1:J:477:ILE:HD12 | 1:J:477:ILE:HG21 | 1.55 | 0.45 |
| 1:K:234:LEU:CA | 1:K:292:MET:HE1 | 2.47 | 0.45 |
| 1:L:44:MET:HE2 | 1:M:489:ARG:HH21 | 1.82 | 0.45 |
| 1:L:236:ASN:OD1 | 1:L:236:ASN:O | 2.35 | 0.45 |
| 1:M:169:LYS:HG2 | 1:M:204:ASP:HB3 | 1.97 | 0.45 |
| 1:M:461:MET:SD | 1:M:466:VAL:CG2 | 3.05 | 0.45 |
| 1:N:149:ILE:HG21 | 1:N:378:ILE:HD13 | 1.99 | 0.45 |
| 1:O:132:GLN:HA | 1:O:132:GLN:OE1 | 2.17 | 0.45 |
| 1:O:192:LEU:O | 1:O:342:ALA:HB1 | 2.15 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:66:ARG:HH21 | 1:P:83:LYS:HG3 | 1.82 | 0.45 |
| 1:P:169:LYS:HG2 | 1:P:204:ASP:O | 2.16 | 0.45 |
| 1:P:257:SER:O | 1:P:312:ALA:HB3 | 2.16 | 0.45 |
| 1:P:339:HIS:CE1 | 1:P:341:LYS:CD | 3.00 | 0.45 |
| 1:A:250:MET:CE | 1:A:308:LYS:HG2 | 2.47 | 0.45 |
| 1:A:431:ILE:HD11 | 1:J:403:ARG:N | 2.32 | 0.45 |
| 1:B:99:VAL:CG1 | 1:B:418:ILE:CD1 | 2.95 | 0.45 |
| 1:B:268:ILE:CG2 | 1:B:273:GLN:CG | 2.95 | 0.45 |
| 1:C:51:ASP:HB2 | 1:C:52:LEU:HD13 | 1.99 | 0.45 |
| 1:C:158:ILE:HB | 1:C:361:ALA:CB | 2.46 | 0.45 |
| 1:C:206:THR:HG21 | 1:C:347:ILE:CG2 | 2.27 | 0.45 |
| 1:C:206:THR:HB | 1:C:347:ILE:CG2 | 2.47 | 0.45 |
| 1:C:247:LEU:CG | 1:C:272:ALA:HB2 | 2.47 | 0.45 |
| 1:C:307:ILE:CG1 | 1:C:307:ILE:O | 2.65 | 0.45 |
| 1:C:325:LYS:HG3 | 1:C:330:SER:HB3 | 1.99 | 0.45 |
| 1:C:431:ILE:HG21 | 1:L:406:LEU:HD21 | 1.98 | 0.45 |
| 1:D:14:ARG:HH22 | 1:E:34:THR:HG23 | 1.75 | 0.45 |
| 1:D:148:GLU:HG2 | 1:D:152:LYS:HE3 | 1.99 | 0.45 |
| 1:D:173:ILE:HD13 | 1:D:206:THR:C | 2.37 | 0.45 |
| 1:D:198:LYS:C | 1:D:355:ILE:CD1 | 2.85 | 0.45 |
| 1:D:235:LEU:CD1 | 1:D:307:ILE:CG2 | 2.91 | 0.45 |
| 1:D:248:LYS:HE2 | 1:D:275:TYR:CZ | 2.51 | 0.45 |
| 1:D:326:ILE:HG12 | 1:D:348:ARG:NH1 | 2.32 | 0.45 |
| 1:E:206:THR:CG2 | 1:E:348:ARG:H | 2.12 | 0.45 |
| 1:F:448:CYS:CB | 1:F:460:ASP:HA | 2.31 | 0.45 |
| 1:F:461:MET:O | 1:F:467:VAL:CG2 | 2.64 | 0.45 |
| 1:G:383:GLY:O | 1:G:387:VAL:HG22 | 2.17 | 0.45 |
| 1:I:72:HIS:O | 1:I:76:LYS:HG2 | 2.16 | 0.45 |
| 1:I:325:LYS:HB2 | 1:I:325:LYS:HE3 | 1.38 | 0.45 |
| 1:I:347:ILE:HD11 | 1:I:359:ALA:HB2 | 1.98 | 0.45 |
| 1:I:366:VAL:HG12 | 1:I:366:VAL:O | 2.17 | 0.45 |
| 1:J:115:VAL:HG11 | 1:J:403:ARG:HE | 1.82 | 0.45 |
| 1:J:171:ALA:O | 1:J:175:VAL:HG23 | 2.16 | 0.45 |
| 1:J:223:MET:CE | 1:J:276:LEU:HB2 | 2.46 | 0.45 |
| 1:J:331:MET:HB3 | 1:J:331:MET:HE2 | 1.56 | 0.45 |
| 1:K:14:ARG:HG3 | 1:K:494:ILE:HG12 | 1.97 | 0.45 |
| 1:K:448:CYS:HB3 | 1:K:460:ASP:CA | 2.46 | 0.45 |
| 1:L:106:LYS:HE3 | 1:L:106:LYS:CA | 2.47 | 0.45 |
| 1:L:237:CYS:HB3 | 1:L:305:THR:C | 2.37 | 0.45 |
| 1:M:196:GLU:CD | 1:M:331:MET:HE1 | 2.37 | 0.45 |
| 1:M:235:LEU:HD11 | 1:M:310:LEU:CB | 2.47 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:296:ALA:HA | 1:M:301:ALA:CB | 2.37 | 0.45 |
| 1:N:22:ARG:HD2 | 1:N:23:MET:H | 1.80 | 0.45 |
| 1:N:138:ILE:CG1 | 1:N:139:ALA:N | 2.79 | 0.45 |
| 1:N:238:ALA:N | 1:N:266:LYS:HB2 | 2.32 | 0.45 |
| 1:N:438:ARG:CG | 1:N:439:ALA:N | 2.78 | 0.45 |
| 1:O:139:ALA:HB1 | 1:O:377:ARG:CG | 2.46 | 0.45 |
| 1:O:339:HIS:CG | 1:O:339:HIS:O | 2.69 | 0.45 |
| 1:O:453:VAL:H | 1:O:453:VAL:HG13 | 1.20 | 0.45 |
| 1:A:234:LEU:HD21 | 1:A:296:ALA:HB2 | 1.98 | 0.45 |
| 1:A:406:LEU:HD12 | 1:A:406:LEU:H | 1.82 | 0.45 |
| 1:B:208:LEU:HD13 | 1:B:345:MET:HG3 | 1.98 | 0.45 |
| 1:B:212:VAL:CG2 | 1:B:294:LYS:HB3 | 2.44 | 0.45 |
| 1:B:230:ALA:HB1 | 1:B:261:VAL:CG2 | 2.46 | 0.45 |
| 1:B:234:LEU:HD12 | 1:B:301:ALA:CB | 2.46 | 0.45 |
| 1:B:236:ASN:C | 1:B:265:GLN:HB3 | 2.36 | 0.45 |
| 1:D:161:LYS:HB2 | 1:D:357:GLU:OE2 | 2.16 | 0.45 |
| 1:D:167:LYS:HG3 | 1:D:168:GLU:N | 2.32 | 0.45 |
| 1:D:235:LEU:CD2 | 1:D:310:LEU:CD2 | 2.95 | 0.45 |
| 1:D:311:SER:O | 1:D:315:LEU:CG | 2.64 | 0.45 |
| 1:E:85:GLN:HE21 | 1:E:85:GLN:HB2 | 1.20 | 0.45 |
| 1:E:115:VAL:HG21 | 1:E:403:ARG:CD | 2.46 | 0.45 |
| 1:E:134:LEU:HD11 | 1:E:393:LEU:CD2 | 2.44 | 0.45 |
| 1:E:153:ILE:HG23 | 1:E:468:GLU:CA | 2.46 | 0.45 |
| 1:E:368:VAL:CG1 | 1:E:469:PRO:HG3 | 2.47 | 0.45 |
| 1:E:437:VAL:HA | 1:E:458:VAL:HG21 | 1.97 | 0.45 |
| 1:F:62:VAL:HG22 | 1:F:63:THR:N | 2.32 | 0.45 |
| 1:F:142:VAL:HG22 | 1:F:149:ILE:HG12 | 1.99 | 0.45 |
| 1:F:232:ILE:O | 1:F:315:LEU:HD22 | 2.16 | 0.45 |
| 1:F:306:ASN:ND2 | 1:F:308:LYS:HG3 | 2.31 | 0.45 |
| 1:F:339:HIS:HE1 | 1:F:341:LYS:CE | 2.29 | 0.45 |
| 1:G:223:MET:HG2 | 1:G:281:ILE:C | 2.37 | 0.45 |
| 1:H:36:ARG:CG | 1:H:37:SER:N | 2.77 | 0.45 |
| 1:H:125:GLN:H | 1:H:125:GLN:HG2 | 1.60 | 0.45 |
| 1:H:215:ASP:OD2 | 1:H:331:MET:CG | 2.56 | 0.45 |
| 1:H:406:LEU:HD11 | 1:I:431:ILE:HG13 | 1.98 | 0.45 |
| 1:I:68:MET:CG | 1:J:8:LEU:HD22 | 2.47 | 0.45 |
| 1:I:70:VAL:CG1 | 1:I:76:LYS:HD3 | 2.46 | 0.45 |
| 1:I:178:VAL:CG2 | 1:I:366:VAL:CG1 | 2.87 | 0.45 |
| 1:I:362:VAL:O | 1:I:362:VAL:HG22 | 2.17 | 0.45 |
| 1:J:223:MET:HB3 | 1:J:282:VAL:HG12 | 1.99 | 0.45 |
| 1:K:115:VAL:HG21 | 1:K:119:ILE:HG21 | 1.99 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:219:VAL:HG21 | 1:K:268:ILE:HG13 | 1.99 | 0.45 |
| 1:K:432:GLU:O | 1:K:436:LYS:HG3 | 2.17 | 0.45 |
| 1:L:8:LEU:HD22 | 1:L:494:ILE:HG21 | 1.99 | 0.45 |
| 1:L:254:ILE:CG2 | 1:L:259:ALA:HB3 | 2.45 | 0.45 |
| 1:M:46:LYS:HB3 | 1:N:492:ASP:OD2 | 2.17 | 0.45 |
| 1:M:159:THR:HA | 1:M:164:GLU:HB2 | 1.99 | 0.45 |
| 1:M:202:SER:OG | 1:M:203:ILE:HG12 | 2.16 | 0.45 |
| 1:N:100:ALA:CA | 1:N:484:THR:HG21 | 2.42 | 0.45 |
| 1:N:263:PHE:CE1 | 1:N:332:ILE:HG21 | 2.51 | 0.45 |
| 1:N:450:GLY:HA3 | 1:N:461:MET:SD | 2.57 | 0.45 |
| 1:O:18:ARG:HB3 | 1:O:18:ARG:CZ | 2.45 | 0.45 |
| 1:O:81:VAL:CG1 | 1:O:483:SER:HB3 | 2.42 | 0.45 |
| 1:O:233:ALA:HA | 1:O:315:LEU:HD23 | 1.98 | 0.45 |
| 1:P:42:LYS:HE3 | 1:P:42:LYS:HB3 | 1.45 | 0.45 |
| 1:P:148:GLU:HG2 | 1:P:148:GLU:O | 2.17 | 0.45 |
| 1:P:234:LEU:HD11 | 1:P:296:ALA:HB2 | 1.98 | 0.45 |
| 1:A:135:LEU:HD12 | 1:A:389:LEU:HD11 | 1.99 | 0.45 |
| 1:A:391:MET:CE | 1:A:438:ARG:HD2 | 2.45 | 0.45 |
| 1:A:433:ILE:O | 1:A:436:LYS:HB2 | 2.16 | 0.45 |
| 1:A:435:VAL:HG11 | 1:J:401:SER:HB3 | 1.95 | 0.45 |
| 1:B:63:THR:OG1 | 1:B:66:ARG:CD | 2.64 | 0.45 |
| 1:B:138:ILE:HG13 | 1:B:379:VAL:HG21 | 1.97 | 0.45 |
| 1:B:219:VAL:CG1 | 1:B:273:GLN:OE1 | 2.62 | 0.45 |
| 1:B:418:ILE:CG2 | 1:B:422:LEU:CD1 | 2.95 | 0.45 |
| 1:C:18:ARG:HD2 | 1:C:22:ARG:HH12 | 1.82 | 0.45 |
| 1:C:169:LYS:HG2 | 1:C:204:ASP:HB3 | 1.98 | 0.45 |
| 1:D:177:ALA:HB2 | 1:D:208:LEU:CD1 | 2.46 | 0.45 |
| 1:D:178:VAL:O | 1:D:182:VAL:HG12 | 2.17 | 0.45 |
| 1:D:391:MET:HB3 | 1:D:391:MET:HE2 | 1.70 | 0.45 |
| 1:D:435:VAL:HG11 | 1:M:401:SER:CB | 2.44 | 0.45 |
| 1:D:475:GLN:O | 1:D:475:GLN:HG3 | 2.17 | 0.45 |
| 1:E:135:LEU:CG | 1:E:385:THR:CG2 | 2.95 | 0.45 |
| 1:F:218:ARG:NH1 | 1:F:282:VAL:CG2 | 2.79 | 0.45 |
| 1:H:33:GLU:HA | 1:H:36:ARG:NE | 2.21 | 0.45 |
| 1:H:371:CYS:HA | 1:H:471:ARG:HH21 | 1.81 | 0.45 |
| 1:I:12:MET:HE2 | 1:P:68:MET:HE3 | 1.97 | 0.45 |
| 1:I:130:LYS:HG3 | 1:I:393:LEU:HD21 | 1.98 | 0.45 |
| 1:I:214:VAL:CG1 | 1:I:291:ASP:OD2 | 2.63 | 0.45 |
| 1:I:247:LEU:O | 1:I:251:VAL:HG23 | 2.17 | 0.45 |
| 1:I:247:LEU:CG | 1:I:272:ALA:HB2 | 2.29 | 0.45 |
| 1:J:122:LYS:C | 1:J:404:GLU:HG3 | 2.38 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:223:MET:HE3 | 1:J:276:LEU:CB | 2.47 | 0.45 |
| 1:J:263:PHE:CD2 | 1:J:295:LEU:HD22 | 2.51 | 0.45 |
| 1:J:321:VAL:HG12 | 1:J:321:VAL:O | 2.16 | 0.45 |
| 1:J:394:ARG:HH22 | 1:J:413:ASP:CG | 2.19 | 0.45 |
| 1:K:405:GLN:OE1 | 1:K:406:LEU:HD21 | 2.16 | 0.45 |
| 1:K:405:GLN:CG | 1:K:406:LEU:HG | 2.47 | 0.45 |
| 1:L:459:GLU:HG2 | 1:L:461:MET:CE | 2.47 | 0.45 |
| 1:M:42:LYS:CG | 1:M:425:ASN:HB2 | 2.47 | 0.45 |
| 1:M:115:VAL:CG1 | 1:M:403:ARG:NH1 | 2.79 | 0.45 |
| 1:N:30:ILE:O | 1:N:33:GLU:HB2 | 2.17 | 0.45 |
| 1:N:116:HIS:HE1 | 1:N:118:THR:HB | 1.82 | 0.45 |
| 1:N:169:LYS:HG2 | 1:N:204:ASP:CB | 2.46 | 0.45 |
| 1:N:254:ILE:HG23 | 1:N:259:ALA:HB3 | 1.98 | 0.45 |
| 1:N:352:GLU:H | 1:N:352:GLU:HG2 | 1.26 | 0.45 |
| 1:N:433:ILE:HG22 | 1:N:451:LEU:HD21 | 1.98 | 0.45 |
| 1:O:47:MET:CE | 1:P:493:VAL:HG21 | 2.47 | 0.45 |
| 1:O:105:ARG:NH1 | 1:O:106:LYS:HG2 | 2.32 | 0.45 |
| 1:O:141:GLU:O | 1:O:142:VAL:CB | 2.64 | 0.45 |
| 1:O:403:ARG:HG3 | 1:O:403:ARG:HH11 | 1.81 | 0.45 |
| 1:P:118:THR:HG22 | 1:P:118:THR:O | 2.16 | 0.45 |
| 1:P:158:ILE:HD13 | 1:P:170:LEU:HB2 | 1.99 | 0.45 |
| 1:P:197:LYS:HB3 | 1:P:355:ILE:HG22 | 1.97 | 0.45 |
| 1:A:25:ILE:HG21 | 1:A:108:GLU:OE2 | 2.17 | 0.45 |
| 1:A:118:THR:O | 1:A:121:VAL:HG23 | 2.17 | 0.45 |
| 1:A:209:ILE:C | 1:A:211:GLY:H | 2.20 | 0.45 |
| 1:A:219:VAL:HG23 | 1:A:285:ARG:HB3 | 1.99 | 0.45 |
| 1:A:276:LEU:HB3 | 1:A:281:ILE:O | 2.17 | 0.45 |
| 1:B:71:GLU:CG | 1:B:72:HIS:H | 2.16 | 0.45 |
| 1:B:220:SER:HB3 | 1:B:223:MET:HG3 | 1.99 | 0.45 |
| 1:B:307:ILE:HD11 | 1:B:310:LEU:CD1 | 2.46 | 0.45 |
| 1:C:42:LYS:HE3 | 1:C:453:VAL:HB | 1.97 | 0.45 |
| 1:C:170:LEU:CD2 | 1:C:358:VAL:CG1 | 2.88 | 0.45 |
| 1:C:236:ASN:HB2 | 1:C:265:GLN:OE1 | 2.17 | 0.45 |
| 1:D:42:LYS:HG3 | 1:D:426:ALA:N | 2.28 | 0.45 |
| 1:E:142:VAL:CG2 | 1:E:149:ILE:HD13 | 2.46 | 0.45 |
| 1:E:142:VAL:HG21 | 1:E:378:ILE:HD13 | 1.99 | 0.45 |
| 1:E:383:GLY:HA2 | 1:E:386:GLU:OE2 | 2.17 | 0.45 |
| 1:E:441:HIS:NE2 | 1:E:446:ASN:HA | 2.31 | 0.45 |
| 1:F:36:ARG:CG | 1:F:37:SER:N | 2.79 | 0.45 |
| 1:F:99:VAL:O | 1:F:103:LEU:HB2 | 2.16 | 0.45 |
| 1:F:116:HIS:NE2 | 1:F:117:PRO:HG2 | 2.31 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:235:LEU:HD22 | 1:F:262:LEU:CD2 | 2.43 | 0.45 |
| 1:F:420:ARG:HE | 1:F:430:ALA:CB | 2.30 | 0.45 |
| 1:G:105:ARG:NH1 | 1:G:106:LYS:CG | 2.80 | 0.45 |
| 1:G:343:VAL:CG1 | 1:G:343:VAL:O | 2.64 | 0.45 |
| 1:H:140:CYS:SG | 1:H:447:LYS:HB3 | 2.56 | 0.45 |
| 1:I:64:ILE:HG21 | 1:I:64:ILE:HD13 | 1.78 | 0.45 |
| 1:I:437:VAL:CG2 | 1:I:451:LEU:CD1 | 2.79 | 0.45 |
| 1:J:380:SER:OG | 1:J:447:LYS:HA | 2.16 | 0.45 |
| 1:K:345:MET:CE | 1:K:362:VAL:HG11 | 2.46 | 0.45 |
| 1:K:431:ILE:O | 1:K:435:VAL:HG23 | 2.16 | 0.45 |
| 1:L:38:THR:HG23 | 1:L:46:LYS:CE | 2.43 | 0.45 |
| 1:L:209:ILE:C | 1:L:211:GLY:H | 2.19 | 0.45 |
| 1:M:23:MET:SD | 1:M:72:HIS:HE1 | 2.39 | 0.45 |
| 1:M:68:MET:HB3 | 1:N:8:LEU:HD23 | 1.98 | 0.45 |
| 1:M:441:HIS:CD2 | 1:M:445:GLY:O | 2.70 | 0.45 |
| 1:N:146:ASP:HB3 | 1:N:149:ILE:HG12 | 1.98 | 0.45 |
| 1:N:182:VAL:CB | 1:N:188:VAL:CG2 | 2.92 | 0.45 |
| 1:N:214:VAL:CG1 | 1:N:291:ASP:HB3 | 2.47 | 0.45 |
| 1:N:268:ILE:CB | 1:N:273:GLN:HE21 | 2.28 | 0.45 |
| 1:N:326:ILE:O | 1:N:327:SER:HB3 | 2.17 | 0.45 |
| 1:O:64:ILE:HG22 | 1:O:65:LEU:HD22 | 1.98 | 0.45 |
| 1:O:413:ASP:O | 1:O:414:ALA:HB2 | 2.16 | 0.45 |
| 1:P:299:THR:HG21 | 1:P:334:VAL:CG1 | 2.47 | 0.45 |
| 1:P:383:GLY:HA2 | 1:P:386:GLU:HG2 | 1.99 | 0.45 |
| 1:A:45:ASP:OD1 | 1:A:45:ASP:N | 2.50 | 0.45 |
| 1:A:171:ALA:O | 1:A:175:VAL:HG23 | 2.17 | 0.45 |
| 1:A:193:ILE:HD12 | 1:A:366:VAL:HG21 | 1.99 | 0.45 |
| 1:A:380:SER:HB3 | 1:A:384:SER:CB | 2.47 | 0.45 |
| 1:B:14:ARG:HD2 | 1:B:494:ILE:HG12 | 1.99 | 0.45 |
| 1:B:15:TYR:C | 1:B:20:ALA:HB2 | 2.38 | 0.45 |
| 1:B:93:THR:O | 1:B:97:VAL:HG21 | 2.16 | 0.45 |
| 1:B:197:LYS:HA | 1:B:355:ILE:HD13 | 1.99 | 0.45 |
| 1:B:391:MET:CE | 1:B:438:ARG:O | 2.65 | 0.45 |
| 1:C:14:ARG:HH11 | 1:C:14:ARG:HD2 | 1.48 | 0.45 |
| 1:C:206:THR:CB | 1:C:347:ILE:HG23 | 2.47 | 0.45 |
| 1:C:235:LEU:CD1 | 1:C:235:LEU:C | 2.85 | 0.45 |
| 1:C:297:LYS:O | 1:C:340:PRO:HA | 2.17 | 0.45 |
| 1:C:403:ARG:N | 1:C:406:LEU:HD22 | 2.32 | 0.45 |
| 1:D:14:ARG:HH22 | 1:E:34:THR:CB | 2.27 | 0.45 |
| 1:D:177:ALA:CB | 1:D:208:LEU:HD11 | 2.46 | 0.45 |
| 1:D:259:ALA:O | 1:D:281:ILE:HD13 | 2.17 | 0.45 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:310:LEU:HD23 | 1:D:310:LEU:HA | 1.68 | 0.45 |
| 1:E:96:ALA:O | 1:E:480:ALA:HB1 | 2.17 | 0.45 |
| 1:E:182:VAL:HG11 | 1:E:373:ILE:HD12 | 1.98 | 0.45 |
| 1:E:346:LEU:CD2 | 1:E:348:ARG:HG2 | 2.47 | 0.45 |
| 1:E:448:CYS:O | 1:E:449:ALA:HB3 | 2.17 | 0.45 |
| 1:F:15:TYR:CD2 | 1:F:19:ASP:HB3 | 2.53 | 0.45 |
| 1:F:66:ARG:N | 1:F:79:ILE:HD13 | 2.32 | 0.45 |
| 1:F:68:MET:HA | 1:F:68:MET:HE2 | 1.99 | 0.45 |
| 1:F:77:MET:HE2 | 1:F:77:MET:HB2 | 1.76 | 0.45 |
| 1:F:174:ILE:CG2 | 1:F:362:VAL:HG23 | 2.47 | 0.45 |
| 1:F:190:LYS:H | 1:F:190:LYS:HG2 | 1.23 | 0.45 |
| 1:G:73:PRO:HA | 1:G:76:LYS:HD2 | 1.99 | 0.45 |
| 1:G:142:VAL:CG2 | 1:G:149:ILE:HG21 | 2.21 | 0.45 |
| 1:H:32:ALA:C | 1:H:34:THR:N | 2.70 | 0.45 |
| 1:H:77:MET:CG | 1:H:487:LEU:CD2 | 2.86 | 0.45 |
| 1:H:169:LYS:HG2 | 1:H:204:ASP:O | 2.17 | 0.45 |
| 1:I:224:PRO:O | 1:I:282:VAL:HG12 | 2.17 | 0.45 |
| 1:J:100:ALA:CB | 1:J:484:THR:HG21 | 2.22 | 0.45 |
| 1:J:134:LEU:CD1 | 1:J:393:LEU:CG | 2.95 | 0.45 |
| 1:J:269:ASP:O | 1:J:273:GLN:HG3 | 2.18 | 0.45 |
| 1:J:483:SER:O | 1:J:487:LEU:HD12 | 2.17 | 0.45 |
| 1:K:310:LEU:CD2 | 1:K:315:LEU:HD21 | 2.46 | 0.45 |
| 1:K:326:ILE:HD11 | 1:K:348:ARG:HH11 | 1.77 | 0.45 |
| 1:L:433:ILE:HG21 | 1:L:451:LEU:CD2 | 2.47 | 0.45 |
| 1:M:42:LYS:CE | 1:M:426:ALA:CA | 2.94 | 0.45 |
| 1:M:117:PRO:O | 1:M:120:VAL:CG1 | 2.64 | 0.45 |
| 1:M:150:LEU:CD2 | 1:M:175:VAL:HG13 | 2.10 | 0.45 |
| 1:M:156:THR:CG2 | 1:M:468:GLU:CA | 2.91 | 0.45 |
| 1:N:174:ILE:HG13 | 1:N:175:VAL:N | 2.31 | 0.45 |
| 1:N:208:LEU:HG | 1:N:210:LYS:HD2 | 1.98 | 0.45 |
| 1:N:377:ARG:NH1 | 1:N:470:LEU:CD1 | 2.80 | 0.45 |
| 1:N:486:MET:C | 1:N:488:LEU:H | 2.21 | 0.45 |
| 1:O:8:LEU:HB3 | 1:O:9:PRO:HD2 | 2.00 | 0.45 |
| 1:O:70:VAL:HG23 | 1:O:71:GLU:N | 2.32 | 0.45 |
| 1:O:96:ALA:HB3 | 1:O:97:VAL:HG13 | 1.99 | 0.45 |
| 1:O:237:CYS:HB3 | 1:O:306:ASN:CB | 2.47 | 0.45 |
| 1:O:346:LEU:HD23 | 1:O:347:ILE:H | 1.80 | 0.45 |
| 1:O:433:ILE:HB | 1:O:434:LEU:HD13 | 1.99 | 0.45 |
| 1:P:211:GLY:C | 1:P:298:ALA:HB2 | 2.38 | 0.45 |
| 1:P:418:ILE:HB | 1:P:419:PRO:CD | 2.44 | 0.45 |
| 1:A:96:ALA:O | 1:A:480:ALA:HB1 | 2.16 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:394:ARG:HH22 | 1:A:413:ASP:CG | 2.20 | 0.44 |
| 1:B:469:PRO:O | 1:B:469:PRO:HD2 | 2.18 | 0.44 |
| 1:E:372:THR:HB | 1:E:376:GLY:O | 2.18 | 0.44 |
| 1:E:384:SER:CA | 1:E:441:HIS:HE1 | 2.30 | 0.44 |
| 1:E:446:ASN:C | 1:E:448:CYS:H | 2.20 | 0.44 |
| 1:F:134:LEU:HD12 | 1:F:393:LEU:HG | 1.98 | 0.44 |
| 1:F:247:LEU:O | 1:F:251:VAL:HG23 | 2.17 | 0.44 |
| 1:F:312:ALA:HA | 1:F:315:LEU:HA | 1.98 | 0.44 |
| 1:G:248:LYS:HE3 | 1:G:275:TYR:CZ | 2.50 | 0.44 |
| 1:G:428:LEU:HD23 | 1:G:428:LEU:HA | 1.61 | 0.44 |
| 1:G:452:ASN:H | 1:G:459:GLU:HG3 | 1.81 | 0.44 |
| 1:H:105:ARG:NH1 | 1:H:106:LYS:CD | 2.80 | 0.44 |
| 1:H:156:THR:CB | 1:H:467:VAL:C | 2.84 | 0.44 |
| 1:H:304:ILE:CD1 | 1:H:310:LEU:CA | 2.94 | 0.44 |
| 1:I:153:ILE:HG23 | 1:I:469:PRO:N | 2.32 | 0.44 |
| 1:I:197:LYS:C | 1:I:355:ILE:HD13 | 2.38 | 0.44 |
| 1:I:212:VAL:HB | 1:I:298:ALA:HB2 | 1.93 | 0.44 |
| 1:I:488:LEU:HD12 | 1:I:488:LEU:HA | 1.37 | 0.44 |
| 1:J:223:MET:CE | 1:J:276:LEU:HB3 | 2.47 | 0.44 |
| 1:K:34:THR:HG23 | 1:L:14:ARG:NH2 | 2.32 | 0.44 |
| 1:K:48:LEU:HB3 | 1:K:68:MET:CE | 2.45 | 0.44 |
| 1:K:82:ALA:HB1 | 1:K:93:THR:HG23 | 1.97 | 0.44 |
| 1:K:192:LEU:CD2 | 1:K:341:LYS:O | 2.65 | 0.44 |
| 1:K:255:LYS:CE | 1:K:279:GLU:HB3 | 2.47 | 0.44 |
| 1:K:263:PHE:CZ | 1:K:332:ILE:HG21 | 2.52 | 0.44 |
| 1:K:266:LYS:HZ2 | 1:K:266:LYS:HG2 | 1.68 | 0.44 |
| 1:K:289:LYS:HD3 | 1:K:289:LYS:HA | 1.56 | 0.44 |
| 1:K:459:GLU:CG | 1:K:461:MET:HE1 | 2.46 | 0.44 |
| 1:L:86:GLU:OE1 | 1:L:86:GLU:O | 2.35 | 0.44 |
| 1:L:169:LYS:HE3 | 1:L:204:ASP:O | 2.17 | 0.44 |
| 1:L:344:THR:CG2 | 1:L:345:MET:N | 2.76 | 0.44 |
| 1:M:69:SER:N | 1:N:9:PRO:N | 2.66 | 0.44 |
| 1:M:163:ALA:C | 1:M:165:LYS:H | 2.20 | 0.44 |
| 1:M:170:LEU:HD22 | 1:M:358:VAL:HG11 | 1.97 | 0.44 |
| 1:M:180:ALA:HB2 | 1:M:210:LYS:NZ | 2.32 | 0.44 |
| 1:M:241:GLU:HG3 | 1:M:250:MET:SD | 2.57 | 0.44 |
| 1:M:375:ASP:CB | 1:M:377:ARG:HH22 | 2.29 | 0.44 |
| 1:M:391:MET:CE | 1:M:438:ARG:HA | 2.37 | 0.44 |
| 1:M:473:LYS:HA | 1:M:473:LYS:HE3 | 1.99 | 0.44 |
| 1:M:488:LEU:HA | 1:M:488:LEU:HD13 | 1.68 | 0.44 |
| 1:N:195:ILE:H | 1:N:195:ILE:HG12 | 1.64 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:235:LEU:CD1 | 1:N:307:ILE:HA | 2.46 | 0.44 |
| 1:N:278:LYS:HZ2 | 1:N:278:LYS:HG2 | 1.65 | 0.44 |
| 1:N:325:LYS:HZ3 | 1:N:328:GLY:H | 1.66 | 0.44 |
| 1:O:48:LEU:C | 1:O:56:VAL:HG22 | 2.37 | 0.44 |
| 1:O:134:LEU:CD1 | 1:O:393:LEU:HD21 | 2.46 | 0.44 |
| 1:O:220:SER:CB | 1:O:273:GLN:O | 2.64 | 0.44 |
| 1:O:223:MET:HE1 | 1:O:283:ALA:HB3 | 1.98 | 0.44 |
| 1:O:235:LEU:CB | 1:O:310:LEU:CD2 | 2.87 | 0.44 |
| 1:O:262:LEU:HD12 | 1:O:310:LEU:CD1 | 2.47 | 0.44 |
| 1:P:77:MET:CE | 1:P:487:LEU:CG | 2.91 | 0.44 |
| 1:A:299:THR:HG23 | 1:A:334:VAL:HG12 | 1.98 | 0.44 |
| 1:B:8:LEU:HB3 | 1:B:9:PRO:CD | 2.45 | 0.44 |
| 1:B:35:VAL:HG13 | 1:B:64:ILE:HG21 | 2.00 | 0.44 |
| 1:B:38:THR:HG22 | 1:B:59:ASN:HD22 | 1.81 | 0.44 |
| 1:B:276:LEU:CB | 1:B:281:ILE:HG21 | 2.40 | 0.44 |
| 1:B:308:LYS:H | 1:B:308:LYS:HG3 | 1.35 | 0.44 |
| 1:C:192:LEU:HD13 | 1:C:341:LYS:C | 2.37 | 0.44 |
| 1:C:405:GLN:O | 1:C:409:ARG:HG3 | 2.16 | 0.44 |
| 1:D:156:THR:CB | 1:D:467:VAL:C | 2.86 | 0.44 |
| 1:E:234:LEU:C | 1:E:310:LEU:HD12 | 2.38 | 0.44 |
| 1:E:251:VAL:HG11 | 1:E:276:LEU:HD22 | 1.98 | 0.44 |
| 1:F:39:LEU:CG | 1:F:40:GLY:N | 2.80 | 0.44 |
| 1:F:234:LEU:H | 1:F:315:LEU:HD11 | 1.80 | 0.44 |
| 1:F:235:LEU:HD23 | 1:F:262:LEU:HD21 | 1.94 | 0.44 |
| 1:F:265:GLN:HB3 | 1:F:266:LYS:H | 1.57 | 0.44 |
| 1:F:379:VAL:HG21 | 1:F:385:THR:OG1 | 2.17 | 0.44 |
| 1:G:213:LEU:HB3 | 1:G:344:THR:HG21 | 1.99 | 0.44 |
| 1:H:121:VAL:HG23 | 1:H:122:LYS:N | 2.32 | 0.44 |
| 1:H:142:VAL:CG1 | 1:H:149:ILE:CG1 | 2.95 | 0.44 |
| 1:H:142:VAL:HG12 | 1:H:378:ILE:HD11 | 1.99 | 0.44 |
| 1:H:250:MET:CE | 1:H:308:LYS:HG2 | 2.47 | 0.44 |
| 1:H:391:MET:CE | 1:H:438:ARG:HA | 2.46 | 0.44 |
| 1:I:268:ILE:HG21 | 1:I:273:GLN:CG | 2.46 | 0.44 |
| 1:I:413:ASP:O | 1:I:416:GLU:HB2 | 2.18 | 0.44 |
| 1:J:78:LEU:HD23 | 1:J:78:LEU:C | 2.37 | 0.44 |
| 1:J:197:LYS:HA | 1:J:355:ILE:CG2 | 2.48 | 0.44 |
| 1:J:211:GLY:C | 1:J:298:ALA:CB | 2.86 | 0.44 |
| 1:J:326:ILE:CG1 | 1:J:348:ARG:HH12 | 2.30 | 0.44 |
| 1:K:134:LEU:CD2 | 1:K:392:LYS:HZ2 | 2.31 | 0.44 |
| 1:K:156:THR:CG2 | 1:K:468:GLU:HA | 2.47 | 0.44 |
| 1:K:362:VAL:O | 1:K:366:VAL:HG23 | 2.18 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:379:VAL:HG11 | 1:K:385:THR:OG1 | 2.16 | 0.44 |
| 1:L:100:ALA:HB1 | 1:L:484:THR:CB | 2.45 | 0.44 |
| 1:M:33:GLU:HA | 1:M:36:ARG:HE | 1.82 | 0.44 |
| 1:M:82:ALA:HB2 | 1:M:97:VAL:CG2 | 2.42 | 0.44 |
| 1:M:156:THR:HG21 | 1:M:468:GLU:N | 2.32 | 0.44 |
| 1:N:218:ARG:HH12 | 1:N:332:ILE:HD13 | 1.83 | 0.44 |
| 1:N:235:LEU:CD2 | 1:N:306:ASN:O | 2.65 | 0.44 |
| 1:N:268:ILE:HG21 | 1:N:273:GLN:HG2 | 1.98 | 0.44 |
| 1:N:433:ILE:HG22 | 1:N:451:LEU:HD23 | 1.96 | 0.44 |
| 1:O:70:VAL:CG2 | 1:O:71:GLU:N | 2.78 | 0.44 |
| 1:O:130:LYS:NZ | 1:O:393:LEU:CD2 | 2.68 | 0.44 |
| 1:O:212:VAL:HG21 | 1:O:295:LEU:HA | 1.98 | 0.44 |
| 1:O:379:VAL:O | 1:O:468:GLU:HG3 | 2.17 | 0.44 |
| 1:P:218:ARG:CB | 1:P:323:GLU:OE2 | 2.65 | 0.44 |
| 1:A:62:VAL:O | 1:A:66:ARG:HG3 | 2.17 | 0.44 |
| 1:A:211:GLY:C | 1:A:298:ALA:HB1 | 2.37 | 0.44 |
| 1:A:239:ILE:O | 1:A:247:LEU:HD13 | 2.17 | 0.44 |
| 1:C:461:MET:HE2 | 1:C:461:MET:HB3 | 1.96 | 0.44 |
| 1:D:239:ILE:HA | 1:D:307:ILE:HG21 | 1.98 | 0.44 |
| 1:D:313:GLN:C | 1:D:315:LEU:N | 2.71 | 0.44 |
| 1:D:406:LEU:HD23 | 1:D:406:LEU:N | 2.17 | 0.44 |
| 1:D:471:ARG:O | 1:D:475:GLN:HB2 | 2.17 | 0.44 |
| 1:E:158:ILE:HG13 | 1:E:167:LYS:HA | 1.99 | 0.44 |
| 1:E:227:VAL:CG1 | 1:E:260:ASN:ND2 | 2.73 | 0.44 |
| 1:E:247:LEU:HD22 | 1:E:272:ALA:HB2 | 2.00 | 0.44 |
| 1:E:265:GLN:OE1 | 1:E:289:LYS:HB3 | 2.18 | 0.44 |
| 1:E:437:VAL:HG13 | 1:E:449:ALA:HB1 | 1.99 | 0.44 |
| 1:F:218:ARG:CZ | 1:F:282:VAL:HG21 | 2.48 | 0.44 |
| 1:G:89:VAL:CG2 | 1:G:368:VAL:CG1 | 2.95 | 0.44 |
| 1:G:338:LYS:HD2 | 1:G:339:HIS:CB | 2.47 | 0.44 |
| 1:H:397:ALA:HB2 | 1:H:408:VAL:HG23 | 2.00 | 0.44 |
| 1:I:192:LEU:CD1 | 1:I:297:LYS:HD3 | 2.47 | 0.44 |
| 1:I:254:ILE:HG22 | 1:I:259:ALA:HB3 | 1.99 | 0.44 |
| 1:I:383:GLY:O | 1:I:387:VAL:HG22 | 2.17 | 0.44 |
| 1:I:386:GLU:HG3 | 1:I:419:PRO:HG3 | 2.00 | 0.44 |
| 1:J:42:LYS:HB2 | 1:J:425:ASN:HB3 | 1.92 | 0.44 |
| 1:J:235:LEU:HD22 | 1:J:306:ASN:O | 2.15 | 0.44 |
| 1:J:460:ASP:OD1 | 1:J:460:ASP:O | 2.34 | 0.44 |
| 1:K:118:THR:O | 1:K:122:LYS:HB2 | 2.17 | 0.44 |
| 1:K:215:ASP:CG | 1:K:331:MET:HG2 | 2.34 | 0.44 |
| 1:K:375:ASP:CG | 1:K:377:ARG:NH2 | 2.70 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:383:GLY:HA3 | 1:K:386:GLU:HG2 | 2.00 | 0.44 |
| 1:L:127:ALA:CB | 1:L:408:VAL:HG12 | 2.35 | 0.44 |
| 1:L:432:GLU:O | 1:L:436:LYS:HG3 | 2.17 | 0.44 |
| 1:M:63:THR:CG2 | 1:M:63:THR:O | 2.65 | 0.44 |
| 1:M:130:LYS:CE | 1:M:393:LEU:HD23 | 2.45 | 0.44 |
| 1:N:49:VAL:CG2 | 1:N:55:VAL:CG1 | 2.82 | 0.44 |
| 1:N:86:GLU:HA | 1:N:90:GLY:HA2 | 1.98 | 0.44 |
| 1:N:190:LYS:HZ2 | 1:N:367:GLY:HA3 | 1.82 | 0.44 |
| 1:N:325:LYS:O | 1:N:325:LYS:HD2 | 2.18 | 0.44 |
| 1:O:263:PHE:CE2 | 1:O:295:LEU:CD2 | 3.00 | 0.44 |
| 1:P:389:LEU:HD13 | 1:P:415:LEU:HD13 | 1.99 | 0.44 |
| 1:A:24:ASN:HD22 | 1:A:24:ASN:HA | 1.23 | 0.44 |
| 1:A:36:ARG:HG3 | 1:A:37:SER:OG | 2.17 | 0.44 |
| 1:A:88:GLU:OE1 | 1:A:475:GLN:CB | 2.66 | 0.44 |
| 1:A:153:ILE:HG21 | 1:A:469:PRO:CA | 2.47 | 0.44 |
| 1:A:464:ASN:HB2 | 1:A:466:VAL:HG22 | 1.95 | 0.44 |
| 1:B:121:VAL:HG23 | 1:B:122:LYS:N | 2.29 | 0.44 |
| 1:B:135:LEU:HD23 | 1:B:385:THR:CG2 | 2.47 | 0.44 |
| 1:B:138:ILE:HD11 | 1:B:385:THR:HG23 | 1.96 | 0.44 |
| 1:B:235:LEU:CD2 | 1:B:310:LEU:HG | 2.47 | 0.44 |
| 1:B:473:LYS:O | 1:B:477:ILE:HG13 | 2.18 | 0.44 |
| 1:D:150:LEU:HB3 | 1:D:175:VAL:CG2 | 2.47 | 0.44 |
| 1:D:159:THR:CG2 | 1:D:164:GLU:OE1 | 2.65 | 0.44 |
| 1:D:169:LYS:O | 1:D:173:ILE:HG13 | 2.18 | 0.44 |
| 1:D:297:LYS:CB | 1:D:342:ALA:HB3 | 2.48 | 0.44 |
| 1:D:379:VAL:CG1 | 1:D:473:LYS:HG3 | 2.44 | 0.44 |
| 1:E:39:LEU:CG | 1:E:40:GLY:H | 2.19 | 0.44 |
| 1:E:134:LEU:HD22 | 1:E:392:LYS:NZ | 2.32 | 0.44 |
| 1:E:153:ILE:HG21 | 1:E:469:PRO:N | 2.32 | 0.44 |
| 1:E:162:GLY:O | 1:E:163:ALA:HB2 | 2.17 | 0.44 |
| 1:E:298:ALA:O | 1:E:337:CYS:HB3 | 2.17 | 0.44 |
| 1:E:384:SER:CA | 1:E:441:HIS:CE1 | 3.00 | 0.44 |
| 1:F:70:VAL:HB | 1:F:76:LYS:HG2 | 1.99 | 0.44 |
| 1:F:144:ALA:O | 1:F:150:LEU:HD11 | 2.17 | 0.44 |
| 1:F:391:MET:HE3 | 1:F:438:ARG:HB3 | 1.96 | 0.44 |
| 1:G:220:SER:CB | 1:G:277:ALA:CB | 2.91 | 0.44 |
| 1:H:383:GLY:HA2 | 1:H:386:GLU:OE2 | 2.17 | 0.44 |
| 1:I:304:ILE:HD12 | 1:I:309:ASP:CB | 2.47 | 0.44 |
| 1:J:32:ALA:O | 1:J:36:ARG:HB3 | 2.17 | 0.44 |
| 1:J:107:ALA:O | 1:J:111:LEU:HG | 2.18 | 0.44 |
| 1:J:220:SER:HB3 | 1:J:277:ALA:HB2 | 2.00 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:237:CYS:SG | 1:J:306:ASN:CA | 3.06 | 0.44 |
| 1:J:405:GLN:O | 1:J:409:ARG:HG3 | 2.18 | 0.44 |
| 1:J:431:ILE:O | 1:J:435:VAL:HG23 | 2.17 | 0.44 |
| 1:K:100:ALA:O | 1:K:104:LEU:HG | 2.17 | 0.44 |
| 1:K:163:ALA:HB1 | 1:K:203:ILE:CG2 | 2.47 | 0.44 |
| 1:K:311:SER:C | 1:K:315:LEU:HD22 | 2.37 | 0.44 |
| 1:L:143:GLY:O | 1:L:149:ILE:HD11 | 2.17 | 0.44 |
| 1:M:115:VAL:HG12 | 1:M:403:ARG:CZ | 2.45 | 0.44 |
| 1:M:181:VAL:CG1 | 1:M:341:LYS:O | 2.65 | 0.44 |
| 1:M:192:LEU:HG | 1:M:297:LYS:CD | 2.47 | 0.44 |
| 1:M:210:LYS:O | 1:M:340:PRO:HB3 | 2.17 | 0.44 |
| 1:M:239:ILE:HG23 | 1:M:267:GLY:O | 2.17 | 0.44 |
| 1:N:42:LYS:CG | 1:N:425:ASN:HB2 | 2.47 | 0.44 |
| 1:N:62:VAL:HG13 | 1:N:63:THR:N | 2.26 | 0.44 |
| 1:N:64:ILE:HD13 | 1:N:64:ILE:HG21 | 1.59 | 0.44 |
| 1:N:254:ILE:CD1 | 1:N:307:ILE:HD11 | 2.43 | 0.44 |
| 1:O:70:VAL:HG22 | 1:O:76:LYS:HE2 | 2.00 | 0.44 |
| 1:O:152:LYS:HE3 | 1:O:462:CYS:CA | 2.48 | 0.44 |
| 1:O:372:THR:HG22 | 1:O:372:THR:O | 2.18 | 0.44 |
| 1:P:48:LEU:HB3 | 1:P:49:VAL:H | 1.49 | 0.44 |
| 1:P:57:VAL:O | 1:P:58:THR:HG23 | 2.17 | 0.44 |
| 1:P:63:THR:HA | 1:P:66:ARG:HB2 | 1.99 | 0.44 |
| 1:P:170:LEU:HD21 | 1:P:358:VAL:CG2 | 2.47 | 0.44 |
| 1:P:232:ILE:HG23 | 1:P:261:VAL:HG12 | 2.00 | 0.44 |
| 1:P:325:LYS:CG | 1:P:328:GLY:O | 2.65 | 0.44 |
| 1:A:121:VAL:HG12 | 1:A:485:GLU:OE2 | 2.18 | 0.44 |
| 1:A:156:THR:HG21 | 1:A:468:GLU:CA | 2.48 | 0.44 |
| 1:A:311:SER:O | 1:A:315:LEU:HB2 | 2.17 | 0.44 |
| 1:A:384:SER:CB | 1:A:441:HIS:CE1 | 3.01 | 0.44 |
| 1:B:31:ILE:HG22 | 1:B:65:LEU:CD2 | 2.42 | 0.44 |
| 1:B:116:HIS:CE1 | 1:B:117:PRO:CG | 3.00 | 0.44 |
| 1:B:486:MET:HG2 | 1:B:486:MET:O | 2.16 | 0.44 |
| 1:C:265:GLN:O | 1:C:266:LYS:HG2 | 2.17 | 0.44 |
| 1:C:308:LYS:HE2 | 1:C:308:LYS:HB3 | 1.76 | 0.44 |
| 1:D:108:GLU:C | 1:D:110:LEU:N | 2.69 | 0.44 |
| 1:E:193:ILE:HG23 | 1:E:343:VAL:HG13 | 1.99 | 0.44 |
| 1:E:223:MET:HG2 | 1:E:282:VAL:HA | 1.99 | 0.44 |
| 1:E:271:LEU:HD12 | 1:E:271:LEU:O | 2.17 | 0.44 |
| 1:F:213:LEU:HD22 | 1:F:331:MET:HE1 | 1.99 | 0.44 |
| 1:F:237:CYS:CB | 1:F:306:ASN:HA | 2.44 | 0.44 |
| 1:F:239:ILE:HD13 | 1:F:239:ILE:HG21 | 1.80 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:255:LYS:CG | 1:F:279:GLU:CD | 2.86 | 0.44 |
| 1:G:177:ALA:HB2 | 1:G:208:LEU:HD13 | 1.97 | 0.44 |
| 1:G:247:LEU:CD2 | 1:G:272:ALA:CB | 2.88 | 0.44 |
| 1:G:369:VAL:O | 1:G:373:ILE:HG12 | 2.17 | 0.44 |
| 1:G:373:ILE:HD13 | 1:G:373:ILE:HA | 1.84 | 0.44 |
| 1:H:68:MET:O | 1:H:70:VAL:HG13 | 2.16 | 0.44 |
| 1:I:9:PRO:HA | 1:P:69:SER:HB3 | 2.00 | 0.44 |
| 1:I:42:LYS:HZ3 | 1:I:453:VAL:HB | 1.82 | 0.44 |
| 1:I:219:VAL:HG13 | 1:I:273:GLN:OE1 | 2.18 | 0.44 |
| 1:I:351:THR:O | 1:I:355:ILE:HG13 | 2.17 | 0.44 |
| 1:I:448:CYS:SG | 1:I:460:ASP:HB2 | 2.57 | 0.44 |
| 1:J:42:LYS:CB | 1:J:425:ASN:CB | 2.84 | 0.44 |
| 1:J:115:VAL:HG11 | 1:J:403:ARG:CD | 2.48 | 0.44 |
| 1:K:45:ASP:O | 1:K:46:LYS:CG | 2.66 | 0.44 |
| 1:K:62:VAL:HG13 | 1:K:63:THR:N | 2.33 | 0.44 |
| 1:K:236:ASN:OD1 | 1:K:305:THR:HG23 | 2.17 | 0.44 |
| 1:L:44:MET:CE | 1:M:489:ARG:HH21 | 2.31 | 0.44 |
| 1:L:448:CYS:SG | 1:L:460:ASP:CB | 3.05 | 0.44 |
| 1:M:339:HIS:HE1 | 1:M:341:LYS:NZ | 2.16 | 0.44 |
| 1:N:72:HIS:HA | 1:N:73:PRO:HD3 | 1.93 | 0.44 |
| 1:N:339:HIS:CE1 | 1:N:341:LYS:HD3 | 2.53 | 0.44 |
| 1:O:48:LEU:HB2 | 1:O:56:VAL:CG2 | 2.47 | 0.44 |
| 1:O:171:ALA:C | 1:O:174:ILE:HG12 | 2.38 | 0.44 |
| 1:O:254:ILE:HD13 | 1:O:307:ILE:CD1 | 2.45 | 0.44 |
| 1:P:123:GLY:HA3 | 1:P:407:ALA:CB | 2.47 | 0.44 |
| 1:P:396:TYR:O | 1:P:396:TYR:CG | 2.71 | 0.44 |
| 1:A:197:LYS:CB | 1:A:355:ILE:CB | 2.89 | 0.44 |
| 1:A:214:VAL:HG23 | 1:A:216:LYS:H | 1.82 | 0.44 |
| 1:A:215:ASP:HB3 | 1:A:331:MET:HE3 | 1.99 | 0.44 |
| 1:A:313:GLN:C | 1:A:315:LEU:N | 2.70 | 0.44 |
| 1:B:416:GLU:O | 1:B:420:ARG:HB2 | 2.18 | 0.44 |
| 1:B:431:ILE:HD13 | 1:K:403:ARG:HD3 | 1.99 | 0.44 |
| 1:C:273:GLN:H | 1:C:273:GLN:HG3 | 1.55 | 0.44 |
| 1:C:326:ILE:HG13 | 1:C:348:ARG:NH1 | 2.33 | 0.44 |
| 1:C:375:ASP:CG | 1:C:377:ARG:HH21 | 2.20 | 0.44 |
| 1:D:9:PRO:CD | 1:E:69:SER:O | 2.66 | 0.44 |
| 1:D:177:ALA:HB2 | 1:D:208:LEU:HD11 | 1.99 | 0.44 |
| 1:E:12:MET:HE3 | 1:E:494:ILE:O | 2.18 | 0.44 |
| 1:E:248:LYS:HE2 | 1:E:275:TYR:CZ | 2.53 | 0.44 |
| 1:F:134:LEU:HD22 | 1:F:392:LYS:HD2 | 1.99 | 0.44 |
| 1:F:263:PHE:CE1 | 1:F:332:ILE:HG21 | 2.52 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:438:ARG:HH12 | 1:O:405:GLN:HE22 | 1.65 | 0.44 |
| 1:G:124:TYR:CE1 | 1:G:407:ALA:C | 2.90 | 0.44 |
| 1:G:406:LEU:HD12 | 1:G:406:LEU:N | 2.31 | 0.44 |
| 1:G:447:LYS:O | 1:G:448:CYS:CB | 2.63 | 0.44 |
| 1:H:35:VAL:HG12 | 1:H:38:THR:HG1 | 1.79 | 0.44 |
| 1:H:120:VAL:HG13 | 1:H:121:VAL:N | 2.31 | 0.44 |
| 1:I:8:LEU:HD22 | 1:P:68:MET:HB3 | 1.99 | 0.44 |
| 1:I:228:THR:HG22 | 1:I:228:THR:O | 2.18 | 0.44 |
| 1:I:387:VAL:HG21 | 1:I:437:VAL:CG1 | 2.46 | 0.44 |
| 1:J:42:LYS:HE2 | 1:J:426:ALA:CA | 2.33 | 0.44 |
| 1:J:191:ASP:C | 1:J:193:ILE:N | 2.70 | 0.44 |
| 1:J:198:LYS:CD | 1:J:326:ILE:HG23 | 2.47 | 0.44 |
| 1:K:138:ILE:N | 1:K:139:ALA:HA | 2.32 | 0.44 |
| 1:K:235:LEU:CB | 1:K:307:ILE:HG22 | 2.48 | 0.44 |
| 1:K:236:ASN:HA | 1:K:265:GLN:HB3 | 1.90 | 0.44 |
| 1:K:420:ARG:HG2 | 1:K:420:ARG:NH1 | 2.06 | 0.44 |
| 1:L:17:GLY:HA2 | 1:L:21:GLN:NE2 | 2.32 | 0.44 |
| 1:L:71:GLU:N | 1:M:9:PRO:HD2 | 2.32 | 0.44 |
| 1:L:151:THR:HA | 1:L:154:ALA:HB3 | 1.99 | 0.44 |
| 1:L:391:MET:HE1 | 1:L:438:ARG:O | 2.18 | 0.44 |
| 1:M:12:MET:SD | 1:M:494:ILE:CG2 | 3.06 | 0.44 |
| 1:M:441:HIS:CD2 | 1:M:449:ALA:CA | 2.98 | 0.44 |
| 1:N:24:ASN:N | 1:N:24:ASN:ND2 | 2.65 | 0.44 |
| 1:N:194:LYS:HG2 | 1:N:195:ILE:N | 2.32 | 0.44 |
| 1:N:304:ILE:HD11 | 1:N:310:LEU:HA | 1.98 | 0.44 |
| 1:O:122:LYS:HG3 | 1:O:125:GLN:NE2 | 2.33 | 0.44 |
| 1:O:178:VAL:HG22 | 1:O:193:ILE:HD11 | 1.99 | 0.44 |
| 1:O:239:ILE:CG1 | 1:O:307:ILE:HG21 | 2.41 | 0.44 |
| 1:O:272:ALA:O | 1:O:276:LEU:HD23 | 2.18 | 0.44 |
| 1:P:267:GLY:C | 1:P:268:ILE:HG12 | 2.37 | 0.44 |
| 1:P:393:LEU:HA | 1:P:396:TYR:CB | 2.48 | 0.44 |
| 1:A:15:TYR:HD2 | 1:A:19:ASP:HB3 | 1.83 | 0.44 |
| 1:A:35:VAL:HG12 | 1:A:64:ILE:HD13 | 2.00 | 0.44 |
| 1:A:48:LEU:HD22 | 1:A:68:MET:HG2 | 1.99 | 0.44 |
| 1:A:116:HIS:NE2 | 1:B:425:ASN:HA | 2.32 | 0.44 |
| 1:A:134:LEU:HD22 | 1:A:392:LYS:HZ2 | 1.83 | 0.44 |
| 1:A:380:SER:HB3 | 1:A:384:SER:HB2 | 1.99 | 0.44 |
| 1:B:14:ARG:HH12 | 1:C:34:THR:CB | 2.31 | 0.44 |
| 1:B:234:LEU:HD12 | 1:B:301:ALA:HB1 | 2.00 | 0.44 |
| 1:B:241:GLU:HG2 | 1:B:250:MET:SD | 2.58 | 0.44 |
| 1:B:301:ALA:C | 1:B:302:ASN:CG | 2.76 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:34:THR:HG22 | 1:C:35:VAL:CB | 2.46 | 0.44 |
| 1:C:156:THR:CG2 | 1:C:468:GLU:CA | 2.96 | 0.44 |
| 1:C:173:ILE:HD11 | 1:C:206:THR:OG1 | 2.17 | 0.44 |
| 1:C:213:LEU:HD22 | 1:C:331:MET:HE2 | 1.99 | 0.44 |
| 1:C:235:LEU:HD22 | 1:C:306:ASN:O | 2.18 | 0.44 |
| 1:D:391:MET:CE | 1:D:438:ARG:HG2 | 2.47 | 0.44 |
| 1:E:37:SER:O | 1:E:43:GLY:HA2 | 2.17 | 0.44 |
| 1:E:68:MET:HE2 | 1:E:68:MET:HA | 1.99 | 0.44 |
| 1:E:153:ILE:HD13 | 1:E:372:THR:CG2 | 2.48 | 0.44 |
| 1:F:235:LEU:HD13 | 1:F:310:LEU:CD2 | 2.47 | 0.44 |
| 1:G:134:LEU:HB3 | 1:G:392:LYS:CE | 2.41 | 0.44 |
| 1:G:355:ILE:HG21 | 1:G:355:ILE:HD13 | 1.64 | 0.44 |
| 1:H:103:LEU:CD2 | 1:H:411:PHE:CE2 | 2.94 | 0.44 |
| 1:H:155:MET:O | 1:H:159:THR:HG23 | 2.17 | 0.44 |
| 1:H:306:ASN:ND2 | 1:H:308:LYS:HD2 | 2.33 | 0.44 |
| 1:I:119:ILE:CG1 | 1:I:403:ARG:HD2 | 2.44 | 0.44 |
| 1:I:237:CYS:HB3 | 1:I:306:ASN:HA | 1.97 | 0.44 |
| 1:I:368:VAL:CG2 | 1:I:469:PRO:CG | 2.93 | 0.44 |
| 1:I:381:GLY:O | 1:I:382:GLY:C | 2.56 | 0.44 |
| 1:J:115:VAL:CG2 | 1:J:119:ILE:HB | 2.48 | 0.44 |
| 1:J:391:MET:SD | 1:J:438:ARG:HB3 | 2.57 | 0.44 |
| 1:K:139:ALA:HB2 | 1:K:377:ARG:HG2 | 2.00 | 0.44 |
| 1:K:178:VAL:HB | 1:K:193:ILE:HD11 | 1.98 | 0.44 |
| 1:K:181:VAL:CG2 | 1:K:182:VAL:N | 2.81 | 0.44 |
| 1:K:377:ARG:HB3 | 1:K:470:LEU:CB | 2.47 | 0.44 |
| 1:K:437:VAL:CG2 | 1:K:451:LEU:HG | 2.43 | 0.44 |
| 1:L:85:GLN:OE1 | 1:L:476:ALA:HA | 2.18 | 0.44 |
| 1:L:257:SER:CB | 1:L:311:SER:HA | 2.48 | 0.44 |
| 1:M:400:ILE:HD12 | 1:M:404:GLU:CB | 2.48 | 0.44 |
| 1:M:469:PRO:HD2 | 1:M:472:VAL:CG1 | 2.47 | 0.44 |
| 1:N:34:THR:HB | 1:N:35:VAL:H | 1.61 | 0.44 |
| 1:N:138:ILE:CG1 | 1:N:139:ALA:H | 2.28 | 0.44 |
| 1:N:286:ARG:HH11 | 1:N:286:ARG:HD2 | 1.19 | 0.44 |
| 1:N:314:ASP:O | 1:N:315:LEU:HD23 | 2.18 | 0.44 |
| 1:N:358:VAL:O | 1:N:362:VAL:HG12 | 2.17 | 0.44 |
| 1:N:391:MET:H | 1:N:391:MET:HG2 | 1.56 | 0.44 |
| 1:O:47:MET:HE1 | 1:P:493:VAL:HG21 | 2.00 | 0.44 |
| 1:O:140:CYS:HB3 | 1:O:446:ASN:CG | 2.37 | 0.44 |
| 1:O:216:LYS:HG3 | 1:O:287:VAL:HG22 | 1.99 | 0.44 |
| 1:P:241:GLU:HB3 | 1:P:246:MET:HB3 | 1.99 | 0.44 |
| 1:P:379:VAL:CG2 | 1:P:380:SER:N | 2.81 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:263:PHE:CD1 | 1:A:295:LEU:CD1 | 3.01 | 0.44 |
| 1:A:263:PHE:CD1 | 1:A:295:LEU:HD11 | 2.53 | 0.44 |
| 1:B:9:PRO:CG | 1:C:68:MET:HA | 2.48 | 0.44 |
| 1:B:23:MET:CE | 1:B:72:HIS:CE1 | 2.84 | 0.44 |
| 1:B:35:VAL:CG1 | 1:B:64:ILE:HD13 | 2.47 | 0.44 |
| 1:B:98:VAL:C | 1:B:100:ALA:H | 2.20 | 0.44 |
| 1:B:116:HIS:ND1 | 1:B:117:PRO:CD | 2.67 | 0.44 |
| 1:B:130:LYS:CD | 1:B:393:LEU:HD23 | 2.42 | 0.44 |
| 1:B:401:SER:HB2 | 1:K:435:VAL:HG11 | 2.00 | 0.44 |
| 1:B:494:ILE:HG21 | 1:C:48:LEU:HD23 | 1.99 | 0.44 |
| 1:C:219:VAL:HG12 | 1:C:223:MET:SD | 2.57 | 0.44 |
| 1:C:435:VAL:HG13 | 1:C:438:ARG:NH2 | 2.33 | 0.44 |
| 1:D:255:LYS:CE | 1:D:279:GLU:CD | 2.86 | 0.44 |
| 1:E:54:ASP:C | 1:E:55:VAL:HG13 | 2.38 | 0.44 |
| 1:E:72:HIS:O | 1:E:76:LYS:HD2 | 2.18 | 0.44 |
| 1:E:116:HIS:NE2 | 1:E:117:PRO:HG2 | 2.32 | 0.44 |
| 1:E:136:LYS:HG2 | 1:E:377:ARG:NH1 | 2.33 | 0.44 |
| 1:E:190:LYS:NZ | 1:E:367:GLY:HA2 | 2.33 | 0.44 |
| 1:E:239:ILE:O | 1:E:239:ILE:HG23 | 2.18 | 0.44 |
| 1:E:254:ILE:HG22 | 1:E:281:ILE:HD13 | 1.91 | 0.44 |
| 1:E:262:LEU:CD1 | 1:E:310:LEU:CD2 | 2.86 | 0.44 |
| 1:E:421:THR:HG22 | 1:E:425:ASN:HD21 | 1.82 | 0.44 |
| 1:F:9:PRO:CD | 1:G:68:MET:HA | 2.24 | 0.44 |
| 1:F:16:MET:O | 1:F:16:MET:CG | 2.66 | 0.44 |
| 1:F:31:ILE:HG21 | 1:F:65:LEU:CD2 | 2.48 | 0.44 |
| 1:F:96:ALA:CB | 1:F:480:ALA:CB | 2.94 | 0.44 |
| 1:F:164:GLU:O | 1:F:167:LYS:HB3 | 2.17 | 0.44 |
| 1:G:130:LYS:HZ3 | 1:G:134:LEU:CG | 2.31 | 0.44 |
| 1:G:142:VAL:CG1 | 1:G:149:ILE:CD1 | 2.86 | 0.44 |
| 1:G:195:ILE:CG2 | 1:G:359:ALA:HB2 | 2.48 | 0.44 |
| 1:G:223:MET:HG3 | 1:G:277:ALA:CA | 2.48 | 0.44 |
| 1:G:223:MET:HE2 | 1:G:276:LEU:C | 2.38 | 0.44 |
| 1:G:345:MET:HB3 | 1:G:345:MET:HE3 | 1.56 | 0.44 |
| 1:G:438:ARG:NH1 | 1:P:405:GLN:HE22 | 2.16 | 0.44 |
| 1:H:99:VAL:HG12 | 1:H:418:ILE:HD11 | 1.98 | 0.44 |
| 1:H:338:LYS:CE | 1:H:339:HIS:HB2 | 2.48 | 0.44 |
| 1:H:383:GLY:O | 1:H:387:VAL:HG23 | 2.18 | 0.44 |
| 1:I:238:ALA:HB3 | 1:I:306:ASN:OD1 | 2.18 | 0.44 |
| 1:I:391:MET:SD | 1:I:442:ALA:HB2 | 2.57 | 0.44 |
| 1:J:39:LEU:CD1 | 1:J:40:GLY:H | 2.30 | 0.44 |
| 1:J:368:VAL:HB | 1:J:469:PRO:HB3 | 1.99 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:448:CYS:HB2 | 1:J:460:ASP:CG | 2.38 | 0.44 |
| 1:K:235:LEU:HD12 | 1:K:262:LEU:HD11 | 2.00 | 0.44 |
| 1:K:312:ALA:CA | 1:K:315:LEU:HB2 | 2.46 | 0.44 |
| 1:L:42:LYS:HG3 | 1:L:426:ALA:N | 2.32 | 0.44 |
| 1:L:210:LYS:O | 1:L:340:PRO:CB | 2.66 | 0.44 |
| 1:L:296:ALA:HA | 1:L:301:ALA:HB3 | 1.99 | 0.44 |
| 1:M:134:LEU:HD12 | 1:M:393:LEU:CG | 2.47 | 0.44 |
| 1:M:234:LEU:N | 1:M:315:LEU:HD21 | 2.30 | 0.44 |
| 1:M:235:LEU:CG | 1:M:310:LEU:HG | 2.47 | 0.44 |
| 1:N:44:MET:CE | 1:N:44:MET:CA | 2.92 | 0.44 |
| 1:N:326:ILE:CG2 | 1:N:331:MET:HG3 | 2.47 | 0.44 |
| 1:O:106:LYS:CE | 1:O:106:LYS:CA | 2.95 | 0.44 |
| 1:O:325:LYS:HE2 | 1:O:330:SER:OG | 2.18 | 0.44 |
| 1:P:170:LEU:O | 1:P:174:ILE:HG23 | 2.18 | 0.44 |
| 1:P:223:MET:N | 1:P:277:ALA:HB1 | 2.32 | 0.44 |
| 1:P:441:HIS:C | 1:P:443:SER:H | 2.20 | 0.44 |
| 1:A:102:GLU:C | 1:A:104:LEU:H | 2.22 | 0.44 |
| 1:A:216:LYS:HB2 | 1:A:287:VAL:HG22 | 2.00 | 0.44 |
| 1:A:219:VAL:CG2 | 1:A:273:GLN:CG | 2.95 | 0.44 |
| 1:B:178:VAL:HG13 | 1:B:188:VAL:CG1 | 2.48 | 0.44 |
| 1:B:464:ASN:ND2 | 1:B:464:ASN:C | 2.67 | 0.44 |
| 1:C:24:ASN:HD22 | 1:C:24:ASN:HA | 1.27 | 0.44 |
| 1:C:100:ALA:O | 1:C:104:LEU:HG | 2.17 | 0.44 |
| 1:C:291:ASP:O | 1:C:295:LEU:HG | 2.17 | 0.44 |
| 1:C:377:ARG:HB2 | 1:C:470:LEU:CG | 2.46 | 0.44 |
| 1:D:31:ILE:CG2 | 1:D:65:LEU:CD2 | 2.91 | 0.44 |
| 1:D:174:ILE:CD1 | 1:D:365:ALA:HB1 | 2.42 | 0.44 |
| 1:E:158:ILE:CD1 | 1:E:170:LEU:HB3 | 2.47 | 0.44 |
| 1:E:177:ALA:CB | 1:E:193:ILE:CD1 | 2.80 | 0.44 |
| 1:E:212:VAL:HG21 | 1:E:294:LYS:HB3 | 1.98 | 0.44 |
| 1:E:350:THR:OG1 | 1:E:354:VAL:HG21 | 2.18 | 0.44 |
| 1:F:141:GLU:O | 1:F:142:VAL:HB | 2.18 | 0.44 |
| 1:F:163:ALA:C | 1:F:165:LYS:N | 2.72 | 0.44 |
| 1:G:384:SER:OG | 1:G:441:HIS:HE1 | 2.00 | 0.44 |
| 1:G:462:CYS:HA | 1:G:465:GLY:HA2 | 2.00 | 0.44 |
| 1:H:153:ILE:HA | 1:H:467:VAL:O | 2.17 | 0.44 |
| 1:H:211:GLY:C | 1:H:298:ALA:CB | 2.86 | 0.44 |
| 1:H:239:ILE:HB | 1:H:307:ILE:CG2 | 2.21 | 0.44 |
| 1:H:468:GLU:H | 1:H:468:GLU:HG3 | 1.49 | 0.44 |
| 1:I:235:LEU:HD21 | 1:I:310:LEU:CG | 2.46 | 0.44 |
| 1:I:243:ALA:O | 1:I:244:SER:CB | 2.66 | 0.44 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:299:THR:HG22 | 1:I:318:ALA:HB2 | 1.99 | 0.44 |
| 1:J:155:MET:HE1 | 1:J:465:GLY:HA3 | 1.98 | 0.44 |
| 1:J:346:LEU:HD23 | 1:J:347:ILE:H | 1.83 | 0.44 |
| 1:K:391:MET:HE3 | 1:K:438:ARG:HA | 2.00 | 0.44 |
| 1:L:173:ILE:H | 1:L:173:ILE:HG12 | 1.71 | 0.44 |
| 1:L:214:VAL:HG12 | 1:L:291:ASP:OD2 | 2.17 | 0.44 |
| 1:L:234:LEU:HD21 | 1:L:296:ALA:N | 2.32 | 0.44 |
| 1:L:263:PHE:CE2 | 1:L:295:LEU:HD21 | 2.53 | 0.44 |
| 1:M:348:ARG:HH11 | 1:M:348:ARG:HD2 | 1.58 | 0.44 |
| 1:M:452:ASN:OD1 | 1:M:454:PHE:HD2 | 2.01 | 0.44 |
| 1:O:8:LEU:HD13 | 1:O:494:ILE:HD13 | 1.96 | 0.44 |
| 1:O:142:VAL:CG2 | 1:O:149:ILE:HG21 | 2.48 | 0.44 |
| 1:P:44:MET:CA | 1:P:44:MET:HE3 | 2.42 | 0.44 |
| 1:P:158:ILE:CD1 | 1:P:170:LEU:HB3 | 2.48 | 0.44 |
| 1:P:178:VAL:HG13 | 1:P:188:VAL:CG1 | 2.48 | 0.44 |
| 1:A:124:TYR:OH | 1:A:410:ALA:HB3 | 2.17 | 0.43 |
| 1:A:233:ALA:HB2 | 1:A:315:LEU:HG | 1.99 | 0.43 |
| 1:A:434:LEU:N | 1:A:434:LEU:CD2 | 2.80 | 0.43 |
| 1:A:464:ASN:HD22 | 1:A:464:ASN:HA | 1.62 | 0.43 |
| 1:B:72:HIS:HB3 | 1:B:75:ALA:CB | 2.48 | 0.43 |
| 1:B:142:VAL:CG2 | 1:B:149:ILE:CG1 | 2.79 | 0.43 |
| 1:B:241:GLU:CG | 1:B:250:MET:SD | 3.06 | 0.43 |
| 1:C:193:ILE:HD12 | 1:C:366:VAL:CG2 | 2.48 | 0.43 |
| 1:C:235:LEU:N | 1:C:292:MET:HE1 | 2.32 | 0.43 |
| 1:C:271:LEU:O | 1:C:271:LEU:HG | 2.18 | 0.43 |
| 1:C:387:VAL:O | 1:C:390:SER:HB3 | 2.18 | 0.43 |
| 1:D:124:TYR:HE1 | 1:D:407:ALA:O | 1.98 | 0.43 |
| 1:D:377:ARG:O | 1:D:470:LEU:HB2 | 2.18 | 0.43 |
| 1:E:44:MET:HA | 1:E:44:MET:CE | 2.48 | 0.43 |
| 1:E:222:GLN:CB | 1:E:277:ALA:HB1 | 2.47 | 0.43 |
| 1:E:236:ASN:CA | 1:E:265:GLN:CB | 2.95 | 0.43 |
| 1:F:62:VAL:CG1 | 1:F:63:THR:H | 2.18 | 0.43 |
| 1:G:134:LEU:CD1 | 1:G:393:LEU:CG | 2.96 | 0.43 |
| 1:G:178:VAL:HG21 | 1:G:366:VAL:HG22 | 1.92 | 0.43 |
| 1:G:251:VAL:CG1 | 1:G:276:LEU:HB3 | 2.48 | 0.43 |
| 1:I:263:PHE:CZ | 1:I:332:ILE:HG21 | 2.53 | 0.43 |
| 1:J:77:MET:HB2 | 1:J:487:LEU:HD21 | 1.99 | 0.43 |
| 1:J:104:LEU:HD21 | 1:J:484:THR:O | 2.18 | 0.43 |
| 1:J:119:ILE:CG2 | 1:J:119:ILE:O | 2.66 | 0.43 |
| 1:J:155:MET:HB2 | 1:J:167:LYS:HD3 | 1.98 | 0.43 |
| 1:K:124:TYR:OH | 1:K:410:ALA:HB3 | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:154:ALA:HB3 | 1:K:171:ALA:HB1 | 1.99 | 0.43 |
| 1:K:234:LEU:CB | 1:K:292:MET:HE1 | 2.48 | 0.43 |
| 1:K:346:LEU:HD22 | 1:K:348:ARG:HG2 | 1.99 | 0.43 |
| 1:L:152:LYS:HD3 | 1:L:467:VAL:CG2 | 2.48 | 0.43 |
| 1:L:340:PRO:HG2 | 1:L:340:PRO:O | 2.18 | 0.43 |
| 1:L:384:SER:OG | 1:L:441:HIS:HE1 | 2.00 | 0.43 |
| 1:M:31:ILE:HG21 | 1:M:65:LEU:HD22 | 1.97 | 0.43 |
| 1:N:326:ILE:HG13 | 1:N:348:ARG:NH1 | 2.33 | 0.43 |
| 1:O:113:GLN:NE2 | 1:O:113:GLN:CA | 2.81 | 0.43 |
| 1:O:380:SER:HA | 1:O:384:SER:HB2 | 1.99 | 0.43 |
| 1:A:190:LYS:H | 1:A:190:LYS:HG2 | 1.66 | 0.43 |
| 1:A:190:LYS:NZ | 1:A:367:GLY:HA2 | 2.32 | 0.43 |
| 1:A:196:GLU:OE2 | 1:A:197:LYS:CE | 2.66 | 0.43 |
| 1:B:143:GLY:O | 1:B:149:ILE:HD11 | 2.18 | 0.43 |
| 1:C:99:VAL:O | 1:C:103:LEU:HB2 | 2.18 | 0.43 |
| 1:D:216:LYS:HB2 | 1:D:287:VAL:HG22 | 2.00 | 0.43 |
| 1:D:219:VAL:CG1 | 1:D:220:SER:N | 2.80 | 0.43 |
| 1:D:494:ILE:HD12 | 1:D:494:ILE:HG21 | 1.72 | 0.43 |
| 1:E:22:ARG:C | 1:E:24:ASN:N | 2.71 | 0.43 |
| 1:E:72:HIS:CE1 | 1:E:74:ALA:HB3 | 2.53 | 0.43 |
| 1:E:135:LEU:HD21 | 1:E:473:LYS:HD2 | 2.01 | 0.43 |
| 1:E:209:ILE:O | 1:E:209:ILE:HG13 | 2.18 | 0.43 |
| 1:E:213:LEU:HD22 | 1:E:331:MET:CE | 2.48 | 0.43 |
| 1:E:218:ARG:HD3 | 1:E:282:VAL:HG22 | 1.99 | 0.43 |
| 1:E:468:GLU:H | 1:E:468:GLU:HG2 | 1.60 | 0.43 |
| 1:F:117:PRO:O | 1:F:121:VAL:HG13 | 2.17 | 0.43 |
| 1:F:263:PHE:CE1 | 1:F:332:ILE:HD13 | 2.53 | 0.43 |
| 1:F:346:LEU:HD22 | 1:F:348:ARG:HG2 | 2.00 | 0.43 |
| 1:F:418:ILE:O | 1:F:422:LEU:HG | 2.18 | 0.43 |
| 1:G:14:ARG:HH22 | 1:H:34:THR:CG2 | 2.30 | 0.43 |
| 1:G:22:ARG:HA | 1:G:25:ILE:CG1 | 2.48 | 0.43 |
| 1:G:105:ARG:NH1 | 1:G:106:LYS:HD2 | 2.28 | 0.43 |
| 1:G:120:VAL:O | 1:G:124:TYR:CD1 | 2.71 | 0.43 |
| 1:G:211:GLY:CA | 1:G:298:ALA:HB1 | 2.49 | 0.43 |
| 1:G:223:MET:HG3 | 1:G:277:ALA:HA | 2.00 | 0.43 |
| 1:G:248:LYS:CE | 1:G:275:TYR:CE1 | 3.00 | 0.43 |
| 1:G:299:THR:HG22 | 1:G:318:ALA:HB2 | 2.00 | 0.43 |
| 1:H:42:LYS:HD3 | 1:H:42:LYS:HA | 1.71 | 0.43 |
| 1:H:368:VAL:HG21 | 1:H:469:PRO:HG3 | 1.95 | 0.43 |
| 1:I:49:VAL:O | 1:J:12:MET:HE1 | 2.17 | 0.43 |
| 1:I:116:HIS:C | 1:I:118:THR:N | 2.71 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:138:ILE:HD11 | 1:I:385:THR:CG2 | 2.45 | 0.43 |
| 1:I:152:LYS:HD2 | 1:I:465:GLY:N | 2.33 | 0.43 |
| 1:I:304:ILE:HD13 | 1:I:310:LEU:HA | 1.99 | 0.43 |
| 1:I:385:THR:O | 1:I:389:LEU:HG | 2.17 | 0.43 |
| 1:J:241:GLU:CG | 1:J:250:MET:SD | 3.07 | 0.43 |
| 1:J:413:ASP:O | 1:J:416:GLU:HB2 | 2.18 | 0.43 |
| 1:L:48:LEU:HB2 | 1:L:56:VAL:CG2 | 2.27 | 0.43 |
| 1:L:115:VAL:CG2 | 1:L:403:ARG:CD | 2.90 | 0.43 |
| 1:L:158:ILE:HG21 | 1:L:167:LYS:HA | 1.99 | 0.43 |
| 1:L:235:LEU:HD11 | 1:L:239:ILE:HG22 | 1.94 | 0.43 |
| 1:L:281:ILE:HG21 | 1:L:281:ILE:HD13 | 1.83 | 0.43 |
| 1:M:89:VAL:CG2 | 1:M:89:VAL:O | 2.66 | 0.43 |
| 1:M:170:LEU:O | 1:M:174:ILE:HG23 | 2.18 | 0.43 |
| 1:M:299:THR:HG22 | 1:M:334:VAL:HG12 | 2.00 | 0.43 |
| 1:N:47:MET:HE1 | 1:O:493:VAL:HG11 | 1.99 | 0.43 |
| 1:N:68:MET:CE | 1:O:9:PRO:HD3 | 2.48 | 0.43 |
| 1:O:95:THR:C | 1:O:97:VAL:N | 2.70 | 0.43 |
| 1:O:106:LYS:CE | 1:O:109:GLU:CD | 2.87 | 0.43 |
| 1:O:156:THR:CG2 | 1:O:468:GLU:HA | 2.48 | 0.43 |
| 1:O:198:LYS:HE2 | 1:O:331:MET:SD | 2.58 | 0.43 |
| 1:O:214:VAL:CG1 | 1:O:291:ASP:CG | 2.77 | 0.43 |
| 1:P:77:MET:HE2 | 1:P:77:MET:HB2 | 1.50 | 0.43 |
| 1:P:85:GLN:HE22 | 1:P:476:ALA:N | 2.16 | 0.43 |
| 1:P:93:THR:O | 1:P:97:VAL:CG2 | 2.66 | 0.43 |
| 1:P:139:ALA:HA | 1:P:379:VAL:HB | 1.99 | 0.43 |
| 1:P:153:ILE:CG2 | 1:P:469:PRO:CD | 2.95 | 0.43 |
| 1:P:235:LEU:HD11 | 1:P:307:ILE:CA | 2.46 | 0.43 |
| 1:A:371:CYS:O | 1:A:375:ASP:HB2 | 2.18 | 0.43 |
| 1:B:60:ASP:C | 1:B:64:ILE:HD12 | 2.38 | 0.43 |
| 1:B:77:MET:HE2 | 1:B:486:MET:SD | 2.59 | 0.43 |
| 1:B:102:GLU:OE2 | 1:B:417:VAL:HG21 | 2.18 | 0.43 |
| 1:B:176:GLU:HB3 | 1:B:210:LYS:HZ2 | 1.83 | 0.43 |
| 1:B:198:LYS:HG3 | 1:B:326:ILE:HG21 | 2.01 | 0.43 |
| 1:B:453:VAL:H | 1:B:453:VAL:HG13 | 1.22 | 0.43 |
| 1:C:163:ALA:C | 1:C:165:LYS:N | 2.71 | 0.43 |
| 1:C:188:VAL:HB | 1:C:370:GLY:HA2 | 1.99 | 0.43 |
| 1:C:461:MET:CB | 1:C:466:VAL:CG2 | 2.95 | 0.43 |
| 1:D:170:LEU:CD1 | 1:D:358:VAL:HG13 | 2.41 | 0.43 |
| 1:D:255:LYS:HD3 | 1:D:279:GLU:CG | 2.47 | 0.43 |
| 1:E:110:LEU:C | 1:E:112:ASP:N | 2.71 | 0.43 |
| 1:E:235:LEU:HD12 | 1:E:306:ASN:O | 2.17 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:452:ASN:ND2 | 1:E:454:PHE:HB2 | 2.18 | 0.43 |
| 1:E:477:ILE:HD12 | 1:E:477:ILE:HG21 | 1.63 | 0.43 |
| 1:G:15:TYR:C | 1:G:20:ALA:HB2 | 2.38 | 0.43 |
| 1:G:152:LYS:HG2 | 1:G:465:GLY:C | 2.38 | 0.43 |
| 1:G:178:VAL:HG23 | 1:G:366:VAL:HG22 | 1.92 | 0.43 |
| 1:G:203:ILE:HG23 | 1:G:203:ILE:HD13 | 1.63 | 0.43 |
| 1:G:380:SER:HB2 | 1:G:384:SER:HB2 | 2.00 | 0.43 |
| 1:I:102:GLU:OE2 | 1:I:417:VAL:CG1 | 2.60 | 0.43 |
| 1:I:345:MET:HE1 | 1:I:362:VAL:CG1 | 2.24 | 0.43 |
| 1:J:235:LEU:HD22 | 1:J:307:ILE:CA | 2.48 | 0.43 |
| 1:K:45:ASP:C | 1:K:46:LYS:HG3 | 2.39 | 0.43 |
| 1:M:209:ILE:C | 1:M:211:GLY:H | 2.21 | 0.43 |
| 1:M:393:LEU:HD23 | 1:M:393:LEU:HA | 1.86 | 0.43 |
| 1:N:47:MET:HE3 | 1:O:73:PRO:HB2 | 2.00 | 0.43 |
| 1:N:222:GLN:O | 1:N:224:PRO:HD3 | 2.18 | 0.43 |
| 1:N:299:THR:HG22 | 1:N:334:VAL:CG1 | 2.48 | 0.43 |
| 1:O:171:ALA:HA | 1:O:174:ILE:CG1 | 2.47 | 0.43 |
| 1:P:17:GLY:O | 1:P:21:GLN:HG3 | 2.17 | 0.43 |
| 1:P:130:LYS:HD2 | 1:P:134:LEU:HG | 1.99 | 0.43 |
| 1:P:235:LEU:HB2 | 1:P:310:LEU:CD2 | 2.48 | 0.43 |
| 1:A:191:ASP:O | 1:A:294:LYS:HD3 | 2.18 | 0.43 |
| 1:A:219:VAL:CG1 | 1:A:223:MET:HE1 | 2.49 | 0.43 |
| 1:B:169:LYS:HG2 | 1:B:204:ASP:O | 2.19 | 0.43 |
| 1:B:182:VAL:CB | 1:B:188:VAL:CG2 | 2.95 | 0.43 |
| 1:B:218:ARG:CZ | 1:B:282:VAL:HG21 | 2.48 | 0.43 |
| 1:C:8:LEU:HD21 | 1:C:14:ARG:NH1 | 2.33 | 0.43 |
| 1:C:190:LYS:H | 1:C:190:LYS:HG2 | 1.57 | 0.43 |
| 1:C:304:ILE:HB | 1:C:305:THR:H | 1.82 | 0.43 |
| 1:C:389:LEU:HD12 | 1:C:415:LEU:HD13 | 2.01 | 0.43 |
| 1:C:394:ARG:HH22 | 1:C:413:ASP:CG | 2.21 | 0.43 |
| 1:C:469:PRO:HG2 | 1:C:472:VAL:CG1 | 2.47 | 0.43 |
| 1:D:102:GLU:OE2 | 1:D:417:VAL:HG11 | 2.19 | 0.43 |
| 1:D:236:ASN:ND2 | 1:D:289:LYS:HZ1 | 2.17 | 0.43 |
| 1:D:248:LYS:CD | 1:D:275:TYR:CZ | 3.01 | 0.43 |
| 1:D:391:MET:HE3 | 1:D:438:ARG:CG | 2.47 | 0.43 |
| 1:E:96:ALA:CA | 1:E:480:ALA:HB2 | 2.47 | 0.43 |
| 1:E:105:ARG:HH11 | 1:E:106:LYS:CG | 2.31 | 0.43 |
| 1:E:235:LEU:CD1 | 1:E:307:ILE:CB | 2.85 | 0.43 |
| 1:E:235:LEU:CD2 | 1:E:310:LEU:CD2 | 2.97 | 0.43 |
| 1:E:384:SER:CB | 1:E:441:HIS:CE1 | 2.91 | 0.43 |
| 1:F:208:LEU:CG | 1:F:210:LYS:HD3 | 2.47 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:313:GLN:HE21 | 1:F:313:GLN:HB3 | 1.77 | 0.43 |
| 1:G:197:LYS:HB3 | 1:G:355:ILE:CG2 | 2.49 | 0.43 |
| 1:H:234:LEU:N | 1:H:315:LEU:HG | 2.32 | 0.43 |
| 1:H:250:MET:HE3 | 1:H:308:LYS:HG2 | 2.00 | 0.43 |
| 1:I:8:LEU:HA | 1:P:69:SER:N | 2.33 | 0.43 |
| 1:I:34:THR:HA | 1:J:14:ARG:NH2 | 2.33 | 0.43 |
| 1:I:297:LYS:HB2 | 1:I:342:ALA:HB3 | 2.00 | 0.43 |
| 1:I:347:ILE:CD1 | 1:I:359:ALA:HB2 | 2.48 | 0.43 |
| 1:I:379:VAL:CG1 | 1:I:473:LYS:HG3 | 2.47 | 0.43 |
| 1:J:120:VAL:O | 1:J:124:TYR:CD2 | 2.72 | 0.43 |
| 1:K:200:GLY:O | 1:K:348:ARG:HB3 | 2.18 | 0.43 |
| 1:K:377:ARG:C | 1:K:378:ILE:CG2 | 2.86 | 0.43 |
| 1:L:124:TYR:HE1 | 1:L:407:ALA:CB | 2.28 | 0.43 |
| 1:L:130:LYS:HD2 | 1:L:393:LEU:HD21 | 1.99 | 0.43 |
| 1:M:48:LEU:CB | 1:M:56:VAL:HG13 | 2.47 | 0.43 |
| 1:M:195:ILE:CG1 | 1:M:359:ALA:HB1 | 2.49 | 0.43 |
| 1:M:391:MET:HE1 | 1:M:438:ARG:CA | 2.42 | 0.43 |
| 1:N:251:VAL:HG12 | 1:N:276:LEU:HG | 1.88 | 0.43 |
| 1:N:347:ILE:HB | 1:N:355:ILE:HG22 | 2.00 | 0.43 |
| 1:O:31:ILE:CG2 | 1:O:65:LEU:CD2 | 2.97 | 0.43 |
| 1:P:99:VAL:CG1 | 1:P:418:ILE:CD1 | 2.96 | 0.43 |
| 1:P:121:VAL:CG2 | 1:P:122:LYS:H | 2.27 | 0.43 |
| 1:P:122:LYS:HG3 | 1:P:125:GLN:NE2 | 2.33 | 0.43 |
| 1:P:296:ALA:CB | 1:P:301:ALA:O | 2.60 | 0.43 |
| 1:A:411:PHE:HZ | 1:A:481:ALA:HB2 | 1.84 | 0.43 |
| 1:A:448:CYS:O | 1:A:449:ALA:CB | 2.60 | 0.43 |
| 1:B:287:VAL:HG12 | 1:B:291:ASP:HB2 | 2.00 | 0.43 |
| 1:C:64:ILE:HG23 | 1:C:65:LEU:CD2 | 2.38 | 0.43 |
| 1:C:78:LEU:HD12 | 1:C:487:LEU:HD11 | 1.97 | 0.43 |
| 1:C:198:LYS:HG3 | 1:C:331:MET:SD | 2.58 | 0.43 |
| 1:C:206:THR:CB | 1:C:347:ILE:CG2 | 2.96 | 0.43 |
| 1:C:212:VAL:CG2 | 1:C:294:LYS:HB3 | 2.48 | 0.43 |
| 1:C:235:LEU:C | 1:C:235:LEU:HD22 | 2.33 | 0.43 |
| 1:C:341:LYS:H | 1:C:341:LYS:HG2 | 1.05 | 0.43 |
| 1:D:72:HIS:CD2 | 1:D:73:PRO:HD2 | 2.53 | 0.43 |
| 1:D:105:ARG:HD3 | 1:D:106:LYS:HG2 | 1.99 | 0.43 |
| 1:D:115:VAL:HG12 | 1:D:403:ARG:NH2 | 2.34 | 0.43 |
| 1:D:116:HIS:CG | 1:D:117:PRO:CD | 3.01 | 0.43 |
| 1:D:386:GLU:HB2 | 1:D:387:VAL:H | 1.66 | 0.43 |
| 1:E:36:ARG:CG | 1:E:37:SER:N | 2.81 | 0.43 |
| 1:E:306:ASN:OD1 | 1:E:307:ILE:HA | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:405:GLN:OE1 | 1:E:406:LEU:HD23 | 2.19 | 0.43 |
| 1:F:48:LEU:HD21 | 1:F:67:GLU:HB2 | 1.98 | 0.43 |
| 1:F:223:MET:HE2 | 1:F:283:ALA:CB | 2.49 | 0.43 |
| 1:F:326:ILE:HG13 | 1:F:348:ARG:NH1 | 2.34 | 0.43 |
| 1:G:8:LEU:N | 1:H:71:GLU:H | 2.12 | 0.43 |
| 1:G:34:THR:HG22 | 1:G:35:VAL:CG2 | 2.47 | 0.43 |
| 1:G:296:ALA:O | 1:G:300:GLY:HA2 | 2.18 | 0.43 |
| 1:H:89:VAL:HG22 | 1:H:89:VAL:O | 2.16 | 0.43 |
| 1:H:235:LEU:CD1 | 1:H:307:ILE:CB | 2.90 | 0.43 |
| 1:H:241:GLU:HB2 | 1:H:247:LEU:HB3 | 2.01 | 0.43 |
| 1:H:310:LEU:CD2 | 1:H:315:LEU:HD23 | 2.48 | 0.43 |
| 1:H:346:LEU:HD21 | 1:H:348:ARG:HD3 | 2.01 | 0.43 |
| 1:I:34:THR:HG23 | 1:J:14:ARG:HH22 | 1.83 | 0.43 |
| 1:I:62:VAL:HG13 | 1:I:63:THR:N | 2.34 | 0.43 |
| 1:I:174:ILE:HD13 | 1:I:174:ILE:HG21 | 1.69 | 0.43 |
| 1:I:259:ALA:O | 1:I:281:ILE:HD13 | 2.18 | 0.43 |
| 1:I:291:ASP:O | 1:I:295:LEU:HG | 2.18 | 0.43 |
| 1:J:22:ARG:O | 1:J:26:LEU:HB2 | 2.18 | 0.43 |
| 1:J:122:LYS:HA | 1:J:125:GLN:NE2 | 2.32 | 0.43 |
| 1:J:237:CYS:HB2 | 1:J:238:ALA:H | 1.67 | 0.43 |
| 1:K:69:SER:OG | 1:K:69:SER:O | 2.08 | 0.43 |
| 1:K:106:LYS:HA | 1:K:106:LYS:CE | 2.40 | 0.43 |
| 1:K:150:LEU:HB3 | 1:K:175:VAL:HG21 | 2.01 | 0.43 |
| 1:K:263:PHE:HZ | 1:K:332:ILE:HG21 | 1.84 | 0.43 |
| 1:K:379:VAL:C | 1:K:467:VAL:HG13 | 2.39 | 0.43 |
| 1:K:469:PRO:CG | 1:K:472:VAL:HG21 | 2.48 | 0.43 |
| 1:L:195:ILE:HG21 | 1:L:362:VAL:HG13 | 2.01 | 0.43 |
| 1:L:197:LYS:H | 1:L:197:LYS:HG3 | 1.65 | 0.43 |
| 1:L:384:SER:CA | 1:L:441:HIS:CE1 | 3.02 | 0.43 |
| 1:L:396:TYR:CE2 | 1:L:400:ILE:HD13 | 2.53 | 0.43 |
| 1:M:368:VAL:O | 1:M:371:CYS:HB2 | 2.18 | 0.43 |
| 1:M:483:SER:O | 1:M:486:MET:HB3 | 2.17 | 0.43 |
| 1:N:25:ILE:HG22 | 1:N:26:LEU:N | 2.33 | 0.43 |
| 1:N:232:ILE:HG13 | 1:N:261:VAL:CG1 | 2.42 | 0.43 |
| 1:N:240:GLU:O | 1:N:240:GLU:HG3 | 2.19 | 0.43 |
| 1:N:263:PHE:CG | 1:N:295:LEU:CD1 | 3.02 | 0.43 |
| 1:N:405:GLN:CG | 1:N:406:LEU:HG | 2.48 | 0.43 |
| 1:O:163:ALA:HB1 | 1:O:170:LEU:HD11 | 2.00 | 0.43 |
| 1:O:486:MET:C | 1:O:488:LEU:N | 2.71 | 0.43 |
| 1:P:30:ILE:CG2 | 1:P:31:ILE:HD13 | 2.49 | 0.43 |
| 1:P:194:LYS:CG | 1:P:195:ILE:N | 2.81 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:235:LEU:HD12 | 1:P:264:CYS:HB3 | 2.00 | 0.43 |
| 1:A:446:ASN:OD1 | 1:A:447:LYS:HG2 | 2.19 | 0.43 |
| 1:B:192:LEU:O | 1:B:342:ALA:HB1 | 2.18 | 0.43 |
| 1:B:248:LYS:CD | 1:B:275:TYR:CZ | 2.91 | 0.43 |
| 1:C:12:MET:HE1 | 1:D:68:MET:HE3 | 2.00 | 0.43 |
| 1:C:192:LEU:CD2 | 1:C:342:ALA:HB2 | 2.48 | 0.43 |
| 1:C:213:LEU:HD21 | 1:C:331:MET:HG3 | 2.01 | 0.43 |
| 1:C:281:ILE:HD12 | 1:C:281:ILE:HG21 | 1.61 | 0.43 |
| 1:C:461:MET:HB2 | 1:C:466:VAL:CG2 | 2.48 | 0.43 |
| 1:D:121:VAL:CG2 | 1:D:122:LYS:N | 2.80 | 0.43 |
| 1:E:42:LYS:CB | 1:E:425:ASN:CB | 2.78 | 0.43 |
| 1:E:132:GLN:NE2 | 1:E:132:GLN:CA | 2.82 | 0.43 |
| 1:E:141:GLU:C | 1:E:142:VAL:HG22 | 2.38 | 0.43 |
| 1:F:9:PRO:CB | 1:G:69:SER:N | 2.79 | 0.43 |
| 1:G:212:VAL:N | 1:G:298:ALA:HB1 | 2.34 | 0.43 |
| 1:G:255:LYS:HE3 | 1:G:279:GLU:HB3 | 2.01 | 0.43 |
| 1:H:36:ARG:HH11 | 1:H:36:ARG:HD3 | 1.38 | 0.43 |
| 1:H:120:VAL:CG1 | 1:H:121:VAL:N | 2.82 | 0.43 |
| 1:H:326:ILE:CD1 | 1:H:348:ARG:NH1 | 2.82 | 0.43 |
| 1:I:102:GLU:OE2 | 1:I:417:VAL:HG21 | 2.19 | 0.43 |
| 1:I:153:ILE:HG23 | 1:I:468:GLU:C | 2.39 | 0.43 |
| 1:I:178:VAL:HG11 | 1:I:188:VAL:CG1 | 2.46 | 0.43 |
| 1:I:489:ARG:NH2 | 1:P:44:MET:HE1 | 2.31 | 0.43 |
| 1:J:113:GLN:HE21 | 1:J:113:GLN:HB3 | 1.45 | 0.43 |
| 1:J:119:ILE:O | 1:J:119:ILE:HG22 | 2.18 | 0.43 |
| 1:J:154:ALA:HB1 | 1:J:174:ILE:HD12 | 1.94 | 0.43 |
| 1:K:69:SER:CA | 1:L:9:PRO:CA | 2.97 | 0.43 |
| 1:L:70:VAL:CA | 1:M:8:LEU:HA | 2.49 | 0.43 |
| 1:L:219:VAL:CG1 | 1:L:220:SER:N | 2.82 | 0.43 |
| 1:M:115:VAL:CG2 | 1:M:119:ILE:HB | 2.48 | 0.43 |
| 1:M:121:VAL:O | 1:M:125:GLN:HG2 | 2.18 | 0.43 |
| 1:M:368:VAL:CB | 1:M:469:PRO:CG | 2.75 | 0.43 |
| 1:M:375:ASP:CB | 1:M:377:ARG:NH2 | 2.82 | 0.43 |
| 1:N:119:ILE:HG21 | 1:N:403:ARG:HB3 | 1.94 | 0.43 |
| 1:N:192:LEU:HG | 1:N:342:ALA:HB2 | 2.01 | 0.43 |
| 1:N:209:ILE:HG13 | 1:N:211:GLY:HA3 | 1.99 | 0.43 |
| 1:N:235:LEU:CD1 | 1:N:307:ILE:CG1 | 2.97 | 0.43 |
| 1:O:102:GLU:HA | 1:O:102:GLU:OE1 | 2.18 | 0.43 |
| 1:P:62:VAL:HG22 | 1:P:63:THR:N | 2.33 | 0.43 |
| 1:A:9:PRO:HD3 | 1:A:12:MET:HE2 | 2.00 | 0.43 |
| 1:A:176:GLU:HB2 | 1:A:208:LEU:HD22 | 2.01 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:24:ASN:HD22 | 1:B:24:ASN:HA | 1.40 | 0.43 |
| 1:B:79:ILE:O | 1:B:83:LYS:HB2 | 2.19 | 0.43 |
| 1:B:153:ILE:HD12 | 1:B:153:ILE:HG21 | 1.63 | 0.43 |
| 1:B:198:LYS:HA | 1:B:198:LYS:HD3 | 1.32 | 0.43 |
| 1:B:219:VAL:HG13 | 1:B:273:GLN:CD | 2.38 | 0.43 |
| 1:B:385:THR:O | 1:B:389:LEU:HG | 2.19 | 0.43 |
| 1:C:139:ALA:HB1 | 1:C:377:ARG:HB3 | 2.01 | 0.43 |
| 1:D:42:LYS:HD3 | 1:D:42:LYS:HA | 1.53 | 0.43 |
| 1:D:247:LEU:HD21 | 1:D:269:ASP:HB3 | 2.00 | 0.43 |
| 1:E:105:ARG:CZ | 1:E:106:LYS:HG2 | 2.48 | 0.43 |
| 1:E:170:LEU:HD11 | 1:E:358:VAL:CG1 | 2.49 | 0.43 |
| 1:E:254:ILE:HG12 | 1:E:310:LEU:HD22 | 2.00 | 0.43 |
| 1:E:432:GLU:CD | 1:N:402:GLY:HA2 | 2.39 | 0.43 |
| 1:F:176:GLU:HB3 | 1:F:208:LEU:CD2 | 2.49 | 0.43 |
| 1:F:380:SER:HB2 | 1:F:384:SER:CB | 2.49 | 0.43 |
| 1:F:473:LYS:HE3 | 1:F:473:LYS:CA | 2.46 | 0.43 |
| 1:G:16:MET:HA | 1:G:491:ASP:O | 2.18 | 0.43 |
| 1:G:165:LYS:HA | 1:G:165:LYS:HD2 | 1.55 | 0.43 |
| 1:H:132:GLN:NE2 | 1:H:132:GLN:CA | 2.81 | 0.43 |
| 1:H:206:THR:CG2 | 1:H:348:ARG:N | 2.63 | 0.43 |
| 1:I:140:CYS:SG | 1:I:378:ILE:HG13 | 2.58 | 0.43 |
| 1:I:155:MET:HB2 | 1:I:167:LYS:HB2 | 1.99 | 0.43 |
| 1:I:156:THR:HG21 | 1:I:468:GLU:CA | 2.48 | 0.43 |
| 1:I:214:VAL:HB | 1:I:215:ASP:H | 1.77 | 0.43 |
| 1:I:262:LEU:CD1 | 1:I:310:LEU:CD2 | 2.97 | 0.43 |
| 1:J:232:ILE:O | 1:J:315:LEU:HD22 | 2.19 | 0.43 |
| 1:K:134:LEU:H | 1:K:134:LEU:HG | 1.56 | 0.43 |
| 1:K:139:ALA:CB | 1:K:377:ARG:HG2 | 2.48 | 0.43 |
| 1:K:141:GLU:HB2 | 1:K:142:VAL:H | 1.60 | 0.43 |
| 1:L:100:ALA:CB | 1:L:484:THR:CG2 | 2.69 | 0.43 |
| 1:L:117:PRO:C | 1:L:119:ILE:N | 2.71 | 0.43 |
| 1:L:209:ILE:CD1 | 1:L:213:LEU:HD12 | 2.49 | 0.43 |
| 1:N:42:LYS:CD | 1:O:118:THR:CG2 | 2.96 | 0.43 |
| 1:N:235:LEU:CG | 1:N:307:ILE:HG13 | 2.48 | 0.43 |
| 1:N:304:ILE:HD12 | 1:N:309:ASP:HB3 | 1.99 | 0.43 |
| 1:N:371:CYS:HB3 | 1:N:471:ARG:NH1 | 2.32 | 0.43 |
| 1:O:25:ILE:CD1 | 1:O:108:GLU:CD | 2.87 | 0.43 |
| 1:O:34:THR:CG2 | 1:P:14:ARG:NH2 | 2.74 | 0.43 |
| 1:O:134:LEU:HD22 | 1:O:392:LYS:HD3 | 2.00 | 0.43 |
| 1:O:220:SER:CB | 1:O:277:ALA:CB | 2.96 | 0.43 |
| 1:P:347:ILE:HD11 | 1:P:359:ALA:HB2 | 2.00 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:A:38:THR:HG23 | 1:A:46:LYS:HZ1 | 1.77 | 0.43 |
| 1:A:115:VAL:HG13 | 1:A:119:ILE:HB | 2.00 | 0.43 |
| 1:A:121:VAL:C | 1:A:123:GLY:H | 2.21 | 0.43 |
| 1:A:333:PHE:O | 1:A:334:VAL:HG22 | 2.18 | 0.43 |
| 1:B:8:LEU:HA | 1:C:68:MET:C | 2.38 | 0.43 |
| 1:B:227:VAL:HG11 | 1:B:260:ASN:CG | 2.38 | 0.43 |
| 1:B:299:THR:HG22 | 1:B:334:VAL:HG11 | 2.01 | 0.43 |
| 1:B:391:MET:CE | 1:B:438:ARG:HG2 | 2.49 | 0.43 |
| 1:C:299:THR:CG2 | 1:C:334:VAL:HG12 | 2.49 | 0.43 |
| 1:C:431:ILE:HG13 | 1:L:406:LEU:HD11 | 2.01 | 0.43 |
| 1:D:208:LEU:HD23 | 1:D:210:LYS:HE2 | 2.01 | 0.43 |
| 1:D:297:LYS:HB2 | 1:D:342:ALA:HB3 | 2.01 | 0.43 |
| 1:E:120:VAL:HG23 | 1:E:124:TYR:CD2 | 2.52 | 0.43 |
| 1:E:254:ILE:HG12 | 1:E:310:LEU:HD23 | 2.01 | 0.43 |
| 1:F:14:ARG:NE | 1:F:494:ILE:HD11 | 2.32 | 0.43 |
| 1:F:344:THR:HG22 | 1:F:345:MET:N | 2.34 | 0.43 |
| 1:G:12:MET:HE3 | 1:H:69:SER:CB | 2.49 | 0.43 |
| 1:G:121:VAL:HG23 | 1:G:122:LYS:H | 1.83 | 0.43 |
| 1:G:161:LYS:CB | 1:G:357:GLU:OE2 | 2.66 | 0.43 |
| 1:G:468:GLU:HA | 1:G:469:PRO:HD3 | 1.76 | 0.43 |
| 1:H:161:LYS:CB | 1:H:357:GLU:OE2 | 2.67 | 0.43 |
| 1:H:163:ALA:HA | 1:H:165:LYS:CG | 2.43 | 0.43 |
| 1:H:219:VAL:HG21 | 1:H:268:ILE:CG1 | 2.44 | 0.43 |
| 1:H:239:ILE:HG23 | 1:H:268:ILE:HG23 | 1.99 | 0.43 |
| 1:H:391:MET:HE2 | 1:H:438:ARG:CA | 2.48 | 0.43 |
| 1:I:235:LEU:CG | 1:I:310:LEU:HD22 | 2.48 | 0.43 |
| 1:I:268:ILE:HB | 1:I:273:GLN:NE2 | 2.19 | 0.43 |
| 1:J:34:THR:HG23 | 1:K:14:ARG:NH2 | 2.33 | 0.43 |
| 1:J:62:VAL:HG22 | 1:J:63:THR:N | 2.32 | 0.43 |
| 1:J:151:THR:O | 1:J:155:MET:HG3 | 2.19 | 0.43 |
| 1:J:181:VAL:HG23 | 1:J:182:VAL:N | 2.34 | 0.43 |
| 1:J:383:GLY:O | 1:J:387:VAL:HG22 | 2.19 | 0.43 |
| 1:K:166:ALA:HB3 | 1:K:170:LEU:HG | 2.00 | 0.43 |
| 1:L:16:MET:H | 1:L:16:MET:HG2 | 1.16 | 0.43 |
| 1:L:235:LEU:HD21 | 1:L:237:CYS:O | 2.19 | 0.43 |
| 1:L:338:LYS:CD | 1:L:339:HIS:HB2 | 2.38 | 0.43 |
| 1:M:115:VAL:HG21 | 1:M:119:ILE:HG21 | 2.00 | 0.43 |
| 1:M:251:VAL:HG11 | 1:M:276:LEU:CD2 | 2.35 | 0.43 |
| 1:M:260:ASN:O | 1:M:282:VAL:HG22 | 2.19 | 0.43 |
| 1:M:339:HIS:CE1 | 1:M:341:LYS:HG3 | 2.54 | 0.43 |
| 1:N:178:VAL:HG12 | 1:N:178:VAL:O | 2.18 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:233:ALA:HB1 | 1:N:315:LEU:HD11 | 2.01 | 0.43 |
| 1:N:346:LEU:CD2 | 1:N:348:ARG:HG2 | 2.44 | 0.43 |
| 1:N:461:MET:CE | 1:N:466:VAL:HG21 | 2.47 | 0.43 |
| 1:O:77:MET:CE | 1:O:486:MET:HE2 | 2.38 | 0.43 |
| 1:P:31:ILE:CG2 | 1:P:65:LEU:HG | 2.49 | 0.43 |
| 1:P:304:ILE:CD1 | 1:P:310:LEU:HA | 2.48 | 0.43 |
| 1:P:338:LYS:HD2 | 1:P:339:HIS:HB3 | 2.00 | 0.43 |
| 1:A:38:THR:CG2 | 1:A:46:LYS:HZ3 | 2.29 | 0.43 |
| 1:A:265:GLN:HA | 1:A:287:VAL:O | 2.19 | 0.43 |
| 1:B:12:MET:HA | 1:B:495:ALA:C | 2.39 | 0.43 |
| 1:B:14:ARG:CD | 1:B:494:ILE:HG12 | 2.49 | 0.43 |
| 1:B:362:VAL:O | 1:B:366:VAL:HG23 | 2.19 | 0.43 |
| 1:B:448:CYS:CB | 1:B:460:ASP:HA | 2.48 | 0.43 |
| 1:B:464:ASN:O | 1:B:464:ASN:CG | 2.55 | 0.43 |
| 1:B:473:LYS:HZ2 | 1:B:473:LYS:HG2 | 1.39 | 0.43 |
| 1:C:176:GLU:CB | 1:C:208:LEU:CD2 | 2.97 | 0.43 |
| 1:D:36:ARG:HE | 1:D:36:ARG:HB3 | 1.52 | 0.43 |
| 1:D:152:LYS:HB3 | 1:D:467:VAL:HG23 | 2.00 | 0.43 |
| 1:D:173:ILE:CD1 | 1:D:206:THR:OG1 | 2.62 | 0.43 |
| 1:D:203:ILE:H | 1:D:203:ILE:HG12 | 1.51 | 0.43 |
| 1:E:64:ILE:HD13 | 1:E:64:ILE:HG21 | 1.68 | 0.43 |
| 1:E:119:ILE:HD12 | 1:E:403:ARG:CB | 2.49 | 0.43 |
| 1:E:165:LYS:HA | 1:E:165:LYS:HD2 | 1.82 | 0.43 |
| 1:F:146:ASP:O | 1:F:150:LEU:HD13 | 2.19 | 0.43 |
| 1:F:223:MET:HB3 | 1:F:282:VAL:HA | 2.01 | 0.43 |
| 1:G:25:ILE:CD1 | 1:G:108:GLU:OE2 | 2.66 | 0.43 |
| 1:G:65:LEU:C | 1:G:79:ILE:HD13 | 2.39 | 0.43 |
| 1:G:307:ILE:HG13 | 1:G:307:ILE:O | 2.19 | 0.43 |
| 1:H:35:VAL:HG12 | 1:H:46:LYS:HZ2 | 1.83 | 0.43 |
| 1:H:311:SER:O | 1:H:315:LEU:HB2 | 2.18 | 0.43 |
| 1:H:345:MET:HE1 | 1:H:362:VAL:CG1 | 2.49 | 0.43 |
| 1:I:102:GLU:CD | 1:I:417:VAL:HG11 | 2.38 | 0.43 |
| 1:I:248:LYS:CG | 1:I:275:TYR:CE2 | 3.02 | 0.43 |
| 1:J:60:ASP:C | 1:J:64:ILE:HD12 | 2.39 | 0.43 |
| 1:J:169:LYS:HG2 | 1:J:204:ASP:HB3 | 1.99 | 0.43 |
| 1:J:178:VAL:HA | 1:J:181:VAL:HG22 | 2.01 | 0.43 |
| 1:J:195:ILE:H | 1:J:195:ILE:HG12 | 1.54 | 0.43 |
| 1:J:326:ILE:O | 1:J:327:SER:CB | 2.67 | 0.43 |
| 1:K:239:ILE:CB | 1:K:307:ILE:HG21 | 2.47 | 0.43 |
| 1:L:38:THR:HB | 1:L:59:ASN:HD22 | 1.83 | 0.43 |
| 1:L:68:MET:HE2 | 1:M:494:ILE:CG2 | 2.49 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:119:ILE:HG21 | 1:L:403:ARG:CG | 2.48 | 0.43 |
| 1:L:247:LEU:HD21 | 1:L:269:ASP:CB | 2.41 | 0.43 |
| 1:M:171:ALA:HA | 1:M:174:ILE:HG12 | 2.00 | 0.43 |
| 1:M:345:MET:HE3 | 1:M:345:MET:HB3 | 1.87 | 0.43 |
| 1:N:36:ARG:HG2 | 1:N:37:SER:OG | 2.19 | 0.43 |
| 1:N:48:LEU:O | 1:N:56:VAL:HG23 | 2.19 | 0.43 |
| 1:N:64:ILE:HG22 | 1:N:65:LEU:HG | 2.01 | 0.43 |
| 1:N:68:MET:SD | 1:O:8:LEU:HD13 | 2.59 | 0.43 |
| 1:N:158:ILE:HD11 | 1:N:170:LEU:HB3 | 2.00 | 0.43 |
| 1:O:18:ARG:HG3 | 1:O:22:ARG:NH2 | 2.33 | 0.43 |
| 1:O:216:LYS:CB | 1:O:284:ALA:HB1 | 2.49 | 0.43 |
| 1:O:326:ILE:CD1 | 1:O:348:ARG:NH1 | 2.81 | 0.43 |
| 1:O:347:ILE:CG2 | 1:O:358:VAL:HB | 2.42 | 0.43 |
| 1:P:209:ILE:HG21 | 1:P:209:ILE:HD13 | 1.71 | 0.43 |
| 1:P:276:LEU:CD2 | 1:P:281:ILE:HD13 | 2.48 | 0.43 |
| 1:P:375:ASP:CB | 1:P:377:ARG:HH22 | 2.32 | 0.43 |
| 1:A:9:PRO:CG | 1:B:68:MET:HA | 2.48 | 0.43 |
| 1:A:296:ALA:HA | 1:A:301:ALA:HB3 | 2.01 | 0.43 |
| 1:A:405:GLN:O | 1:A:409:ARG:HG3 | 2.19 | 0.43 |
| 1:B:116:HIS:CE1 | 1:B:117:PRO:HD2 | 2.47 | 0.43 |
| 1:B:139:ALA:HB2 | 1:B:470:LEU:HD11 | 2.01 | 0.43 |
| 1:B:140:CYS:SG | 1:B:447:LYS:HD3 | 2.59 | 0.43 |
| 1:C:82:ALA:HB1 | 1:C:93:THR:HG22 | 2.01 | 0.43 |
| 1:C:138:ILE:O | 1:C:446:ASN:HB3 | 2.19 | 0.43 |
| 1:C:144:ALA:HB1 | 1:C:373:ILE:HD13 | 2.00 | 0.43 |
| 1:C:214:VAL:HG12 | 1:C:291:ASP:OD2 | 2.19 | 0.43 |
| 1:C:247:LEU:HG | 1:C:272:ALA:HB2 | 2.01 | 0.43 |
| 1:D:209:ILE:HD11 | 1:D:213:LEU:HB2 | 2.00 | 0.43 |
| 1:E:138:ILE:O | 1:E:446:ASN:CB | 2.66 | 0.43 |
| 1:E:140:CYS:O | 1:E:142:VAL:HG22 | 2.19 | 0.43 |
| 1:E:148:GLU:O | 1:E:148:GLU:HG2 | 2.18 | 0.43 |
| 1:E:345:MET:HB3 | 1:E:345:MET:HE3 | 1.38 | 0.43 |
| 1:E:403:ARG:NH1 | 1:E:403:ARG:HG2 | 2.25 | 0.43 |
| 1:E:406:LEU:HD11 | 1:N:431:ILE:CG1 | 2.48 | 0.43 |
| 1:E:420:ARG:HG3 | 1:E:430:ALA:HB1 | 2.01 | 0.43 |
| 1:F:218:ARG:HD3 | 1:F:282:VAL:HB | 2.01 | 0.43 |
| 1:G:461:MET:HB3 | 1:G:466:VAL:HG23 | 2.01 | 0.43 |
| 1:H:42:LYS:CD | 1:H:426:ALA:N | 2.82 | 0.43 |
| 1:H:116:HIS:CE1 | 1:H:117:PRO:CG | 3.01 | 0.43 |
| 1:I:169:LYS:HG2 | 1:I:204:ASP:C | 2.39 | 0.43 |
| 1:I:213:LEU:HD22 | 1:I:331:MET:CE | 2.49 | 0.43 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:297:LYS:CB | 1:I:342:ALA:HB3 | 2.48 | 0.43 |
| 1:I:379:VAL:HG22 | 1:I:380:SER:N | 2.34 | 0.43 |
| 1:J:25:ILE:HG22 | 1:J:26:LEU:N | 2.34 | 0.43 |
| 1:J:77:MET:HB2 | 1:J:77:MET:HE2 | 1.72 | 0.43 |
| 1:J:152:LYS:HE2 | 1:J:462:CYS:O | 2.18 | 0.43 |
| 1:J:158:ILE:CD1 | 1:J:170:LEU:HB2 | 2.43 | 0.43 |
| 1:J:165:LYS:HA | 1:J:165:LYS:HD3 | 1.46 | 0.43 |
| 1:J:326:ILE:C | 1:J:328:GLY:N | 2.72 | 0.43 |
| 1:J:362:VAL:O | 1:J:366:VAL:HG23 | 2.19 | 0.43 |
| 1:K:178:VAL:HG21 | 1:K:188:VAL:HG11 | 2.01 | 0.43 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:HD13 | 1.90 | 0.43 |
| 1:K:448:CYS:O | 1:K:449:ALA:CB | 2.66 | 0.43 |
| 1:L:99:VAL:O | 1:L:103:LEU:HB2 | 2.18 | 0.43 |
| 1:L:194:LYS:HG2 | 1:L:195:ILE:H | 1.82 | 0.43 |
| 1:L:235:LEU:HD11 | 1:L:239:ILE:HG23 | 1.94 | 0.43 |
| 1:M:68:MET:HB3 | 1:N:9:PRO:HD3 | 2.01 | 0.43 |
| 1:M:178:VAL:CG2 | 1:M:178:VAL:O | 2.67 | 0.43 |
| 1:N:130:LYS:HD3 | 1:N:396:TYR:CG | 2.54 | 0.43 |
| 1:O:216:LYS:O | 1:O:332:ILE:CG1 | 2.60 | 0.43 |
| 1:O:248:LYS:CD | 1:O:275:TYR:CE2 | 3.02 | 0.43 |
| 1:P:72:HIS:HB3 | 1:P:75:ALA:HB2 | 2.00 | 0.43 |
| 1:P:153:ILE:CD1 | 1:P:378:ILE:CG2 | 2.96 | 0.43 |
| 1:P:211:GLY:O | 1:P:298:ALA:HB2 | 2.18 | 0.43 |
| 1:A:135:LEU:HD23 | 1:A:138:ILE:HD11 | 1.99 | 0.42 |
| 1:A:175:VAL:CG1 | 1:A:175:VAL:O | 2.62 | 0.42 |
| 1:A:299:THR:CG2 | 1:A:318:ALA:HB2 | 2.45 | 0.42 |
| 1:A:343:VAL:O | 1:A:343:VAL:HG13 | 2.19 | 0.42 |
| 1:A:368:VAL:CB | 1:A:469:PRO:HG2 | 2.49 | 0.42 |
| 1:B:14:ARG:NH1 | 1:C:34:THR:CB | 2.82 | 0.42 |
| 1:B:195:ILE:H | 1:B:195:ILE:HG12 | 1.65 | 0.42 |
| 1:C:135:LEU:CD2 | 1:C:385:THR:CG2 | 2.97 | 0.42 |
| 1:C:223:MET:N | 1:C:277:ALA:CB | 2.82 | 0.42 |
| 1:D:9:PRO:HB2 | 1:E:69:SER:O | 2.18 | 0.42 |
| 1:D:64:ILE:HG22 | 1:D:65:LEU:N | 2.33 | 0.42 |
| 1:D:69:SER:O | 1:D:69:SER:OG | 2.22 | 0.42 |
| 1:D:197:LYS:H | 1:D:197:LYS:HG2 | 1.07 | 0.42 |
| 1:E:135:LEU:HG | 1:E:385:THR:CG2 | 2.49 | 0.42 |
| 1:E:477:ILE:O | 1:E:481:ALA:HB2 | 2.19 | 0.42 |
| 1:E:495:ALA:HB2 | 1:F:49:VAL:CG2 | 2.46 | 0.42 |
| 1:F:9:PRO:HD2 | 1:F:12:MET:CG | 2.36 | 0.42 |
| 1:F:70:VAL:HG12 | 1:F:76:LYS:HG3 | 1.95 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:163:ALA:C | 1:F:165:LYS:H | 2.22 | 0.42 |
| 1:F:265:GLN:HG2 | 1:F:266:LYS:HE2 | 2.00 | 0.42 |
| 1:G:43:GLY:O | 1:G:44:MET:CE | 2.67 | 0.42 |
| 1:G:161:LYS:HB3 | 1:G:357:GLU:CD | 2.39 | 0.42 |
| 1:G:199:SER:HB2 | 1:G:327:SER:CB | 2.36 | 0.42 |
| 1:G:213:LEU:HD22 | 1:G:333:PHE:CE2 | 2.54 | 0.42 |
| 1:G:239:ILE:HG22 | 1:G:307:ILE:CG2 | 2.49 | 0.42 |
| 1:H:26:LEU:HD23 | 1:H:26:LEU:HA | 1.76 | 0.42 |
| 1:H:35:VAL:HG13 | 1:H:46:LYS:HZ3 | 1.81 | 0.42 |
| 1:H:178:VAL:CG2 | 1:H:188:VAL:CG1 | 2.88 | 0.42 |
| 1:H:233:ALA:HB3 | 1:H:310:LEU:HD11 | 2.00 | 0.42 |
| 1:H:247:LEU:CD1 | 1:H:272:ALA:CB | 2.83 | 0.42 |
| 1:I:152:LYS:HB3 | 1:I:465:GLY:HA2 | 2.01 | 0.42 |
| 1:I:235:LEU:CD2 | 1:I:310:LEU:CB | 2.66 | 0.42 |
| 1:J:115:VAL:CG1 | 1:J:403:ARG:HE | 2.31 | 0.42 |
| 1:K:8:LEU:HD13 | 1:K:494:ILE:HG23 | 1.99 | 0.42 |
| 1:K:136:LYS:H | 1:K:136:LYS:HG3 | 1.42 | 0.42 |
| 1:K:265:GLN:HE22 | 1:K:289:LYS:HZ2 | 1.62 | 0.42 |
| 1:L:276:LEU:HD12 | 1:L:281:ILE:HG22 | 1.83 | 0.42 |
| 1:L:355:ILE:HG21 | 1:L:355:ILE:HD13 | 1.65 | 0.42 |
| 1:M:169:LYS:HG2 | 1:M:204:ASP:CA | 2.49 | 0.42 |
| 1:N:17:GLY:O | 1:N:21:GLN:HB2 | 2.18 | 0.42 |
| 1:N:38:THR:HG21 | 1:N:59:ASN:O | 2.19 | 0.42 |
| 1:N:178:VAL:CG1 | 1:N:188:VAL:CG1 | 2.90 | 0.42 |
| 1:N:389:LEU:O | 1:N:393:LEU:HB2 | 2.19 | 0.42 |
| 1:N:460:ASP:OD1 | 1:N:460:ASP:C | 2.56 | 0.42 |
| 1:O:38:THR:HG21 | 1:O:46:LYS:CE | 2.49 | 0.42 |
| 1:O:304:ILE:HD13 | 1:O:309:ASP:HB3 | 1.86 | 0.42 |
| 1:O:459:GLU:HB3 | 1:O:461:MET:HE2 | 1.95 | 0.42 |
| 1:P:134:LEU:HB3 | 1:P:392:LYS:NZ | 2.34 | 0.42 |
| 1:P:181:VAL:HG23 | 1:P:182:VAL:N | 2.34 | 0.42 |
| 1:P:289:LYS:HG2 | 1:P:289:LYS:O | 2.19 | 0.42 |
| 1:A:9:PRO:CG | 1:B:68:MET:HE2 | 2.49 | 0.42 |
| 1:A:57:VAL:O | 1:A:58:THR:HG23 | 2.19 | 0.42 |
| 1:A:70:VAL:N | 1:H:8:LEU:N | 2.67 | 0.42 |
| 1:A:122:LYS:HB3 | 1:A:404:GLU:CG | 2.49 | 0.42 |
| 1:A:438:ARG:NH2 | 1:J:405:GLN:HE22 | 2.09 | 0.42 |
| 1:B:96:ALA:O | 1:B:480:ALA:HB1 | 2.18 | 0.42 |
| 1:B:119:ILE:CG2 | 1:B:120:VAL:N | 2.80 | 0.42 |
| 1:C:12:MET:HE3 | 1:C:494:ILE:CG2 | 2.48 | 0.42 |
| 1:C:135:LEU:HD23 | 1:C:385:THR:CG2 | 2.50 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:C:142:VAL:HG13 | 1:C:378:ILE:CD1 | 2.48 | 0.42 |
| 1:C:142:VAL:HG21 | 1:C:149:ILE:HG21 | 2.01 | 0.42 |
| 1:C:223:MET:CE | 1:C:283:ALA:CB | 2.97 | 0.42 |
| 1:C:405:GLN:HE22 | 1:L:438:ARG:HH12 | 1.66 | 0.42 |
| 1:D:142:VAL:CG2 | 1:D:143:GLY:N | 2.82 | 0.42 |
| 1:D:217:GLU:HG2 | 1:D:330:SER:O | 2.18 | 0.42 |
| 1:D:468:GLU:HB2 | 1:D:469:PRO:CD | 2.49 | 0.42 |
| 1:E:25:ILE:HD13 | 1:E:108:GLU:CD | 2.39 | 0.42 |
| 1:E:235:LEU:CD1 | 1:E:310:LEU:CG | 2.97 | 0.42 |
| 1:E:248:LYS:CD | 1:E:275:TYR:CE2 | 2.96 | 0.42 |
| 1:F:220:SER:CB | 1:F:223:MET:SD | 2.99 | 0.42 |
| 1:G:95:THR:HG22 | 1:G:96:ALA:N | 2.34 | 0.42 |
| 1:G:152:LYS:HE3 | 1:G:462:CYS:CA | 2.39 | 0.42 |
| 1:G:307:ILE:C | 1:G:309:ASP:N | 2.73 | 0.42 |
| 1:G:323:GLU:OE2 | 1:G:330:SER:HB3 | 2.20 | 0.42 |
| 1:G:326:ILE:O | 1:G:327:SER:CB | 2.67 | 0.42 |
| 1:G:383:GLY:HA2 | 1:G:386:GLU:OE2 | 2.20 | 0.42 |
| 1:G:388:GLU:HB2 | 1:G:441:HIS:CD2 | 2.54 | 0.42 |
| 1:G:418:ILE:HD12 | 1:G:418:ILE:HG23 | 1.83 | 0.42 |
| 1:H:42:LYS:HB3 | 1:H:425:ASN:HD22 | 1.83 | 0.42 |
| 1:H:215:ASP:HB2 | 1:H:331:MET:HE3 | 2.00 | 0.42 |
| 1:H:406:LEU:HD11 | 1:I:431:ILE:CD1 | 2.49 | 0.42 |
| 1:I:9:PRO:CG | 1:P:68:MET:HE1 | 2.49 | 0.42 |
| 1:I:377:ARG:CD | 1:I:470:LEU:HD11 | 2.28 | 0.42 |
| 1:I:387:VAL:O | 1:I:391:MET:HG2 | 2.19 | 0.42 |
| 1:J:30:ILE:HG22 | 1:J:31:ILE:CG1 | 2.49 | 0.42 |
| 1:J:211:GLY:HA2 | 1:J:337:CYS:SG | 2.59 | 0.42 |
| 1:J:255:LYS:HD3 | 1:J:279:GLU:HB3 | 2.01 | 0.42 |
| 1:J:377:ARG:CB | 1:J:470:LEU:HD12 | 2.48 | 0.42 |
| 1:K:132:GLN:NE2 | 1:K:132:GLN:CA | 2.60 | 0.42 |
| 1:K:188:VAL:HB | 1:K:370:GLY:HA2 | 2.00 | 0.42 |
| 1:K:237:CYS:HB3 | 1:K:305:THR:O | 2.19 | 0.42 |
| 1:L:39:LEU:CD1 | 1:L:40:GLY:H | 2.32 | 0.42 |
| 1:L:155:MET:HB2 | 1:L:167:LYS:HD3 | 2.01 | 0.42 |
| 1:L:437:VAL:CG2 | 1:L:451:LEU:HG | 2.49 | 0.42 |
| 1:L:459:GLU:HG2 | 1:L:461:MET:HE1 | 2.01 | 0.42 |
| 1:M:49:VAL:HG22 | 1:M:55:VAL:HG12 | 2.00 | 0.42 |
| 1:M:181:VAL:CB | 1:M:341:LYS:O | 2.67 | 0.42 |
| 1:M:216:LYS:HE3 | 1:M:285:ARG:O | 2.19 | 0.42 |
| 1:M:278:LYS:HZ2 | 1:M:278:LYS:HG2 | 1.76 | 0.42 |
| 1:M:431:ILE:O | 1:M:431:ILE:HG13 | 2.18 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:42:LYS:HZ3 | 1:O:118:THR:HG22 | 1.84 | 0.42 |
| 1:N:267:GLY:C | 1:N:268:ILE:HG12 | 2.39 | 0.42 |
| 1:P:99:VAL:HG11 | 1:P:418:ILE:HD13 | 2.01 | 0.42 |
| 1:P:190:LYS:HB3 | 1:P:190:LYS:HE2 | 1.75 | 0.42 |
| 1:A:152:LYS:HG2 | 1:A:465:GLY:O | 2.19 | 0.42 |
| 1:A:250:MET:CE | 1:A:307:ILE:HG23 | 2.50 | 0.42 |
| 1:A:352:GLU:H | 1:A:352:GLU:HG3 | 1.32 | 0.42 |
| 1:A:383:GLY:C | 1:A:386:GLU:CG | 2.88 | 0.42 |
| 1:A:437:VAL:HA | 1:A:458:VAL:HG13 | 2.00 | 0.42 |
| 1:B:8:LEU:HB3 | 1:C:68:MET:SD | 2.59 | 0.42 |
| 1:B:9:PRO:N | 1:C:69:SER:N | 2.67 | 0.42 |
| 1:B:296:ALA:CA | 1:B:301:ALA:HB3 | 2.49 | 0.42 |
| 1:B:377:ARG:O | 1:B:470:LEU:HB2 | 2.19 | 0.42 |
| 1:C:199:SER:HB2 | 1:C:327:SER:HB3 | 1.92 | 0.42 |
| 1:D:105:ARG:HH11 | 1:D:106:LYS:CG | 2.32 | 0.42 |
| 1:D:130:LYS:CD | 1:D:396:TYR:CG | 2.97 | 0.42 |
| 1:D:142:VAL:HG22 | 1:D:143:GLY:N | 2.35 | 0.42 |
| 1:D:188:VAL:HG23 | 1:D:373:ILE:CG1 | 2.46 | 0.42 |
| 1:D:192:LEU:O | 1:D:342:ALA:HB1 | 2.18 | 0.42 |
| 1:D:262:LEU:CG | 1:D:310:LEU:HD11 | 2.49 | 0.42 |
| 1:D:281:ILE:HG21 | 1:D:281:ILE:HD12 | 1.68 | 0.42 |
| 1:F:34:THR:HG22 | 1:F:35:VAL:CB | 2.49 | 0.42 |
| 1:F:223:MET:HE2 | 1:F:283:ALA:HB3 | 1.98 | 0.42 |
| 1:F:352:GLU:H | 1:F:352:GLU:HG2 | 1.30 | 0.42 |
| 1:G:68:MET:CA | 1:G:68:MET:CE | 2.90 | 0.42 |
| 1:G:130:LYS:HD3 | 1:G:396:TYR:CD1 | 2.55 | 0.42 |
| 1:G:192:LEU:HD12 | 1:G:192:LEU:N | 2.35 | 0.42 |
| 1:G:308:LYS:HB2 | 1:G:308:LYS:HE2 | 1.47 | 0.42 |
| 1:G:373:ILE:HD12 | 1:G:373:ILE:HG23 | 1.59 | 0.42 |
| 1:H:158:ILE:HB | 1:H:361:ALA:CB | 2.49 | 0.42 |
| 1:H:251:VAL:HG13 | 1:H:276:LEU:HG | 2.01 | 0.42 |
| 1:I:107:ALA:O | 1:I:111:LEU:HG | 2.19 | 0.42 |
| 1:I:198:LYS:H | 1:I:355:ILE:HD13 | 1.81 | 0.42 |
| 1:I:233:ALA:HB1 | 1:I:315:LEU:HD11 | 2.01 | 0.42 |
| 1:J:105:ARG:CZ | 1:J:106:LYS:CD | 2.96 | 0.42 |
| 1:J:130:LYS:NZ | 1:J:134:LEU:HD11 | 2.33 | 0.42 |
| 1:J:239:ILE:CD1 | 1:J:307:ILE:HG12 | 2.49 | 0.42 |
| 1:J:391:MET:O | 1:J:395:GLU:HG3 | 2.20 | 0.42 |
| 1:K:121:VAL:C | 1:K:123:GLY:N | 2.72 | 0.42 |
| 1:K:135:LEU:HD23 | 1:K:385:THR:CG2 | 2.44 | 0.42 |
| 1:K:235:LEU:HD13 | 1:K:307:ILE:HA | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:264:CYS:CB | 1:K:266:LYS:O | 2.65 | 0.42 |
| 1:L:156:THR:CG2 | 1:L:468:GLU:CB | 2.96 | 0.42 |
| 1:L:209:ILE:HD13 | 1:L:213:LEU:HD12 | 2.00 | 0.42 |
| 1:M:18:ARG:O | 1:M:18:ARG:HG2 | 2.19 | 0.42 |
| 1:N:142:VAL:CG1 | 1:N:149:ILE:CD1 | 2.73 | 0.42 |
| 1:N:159:THR:HA | 1:N:164:GLU:HG3 | 1.99 | 0.42 |
| 1:N:181:VAL:HG11 | 1:N:193:ILE:CG1 | 2.50 | 0.42 |
| 1:N:339:HIS:CE1 | 1:N:341:LYS:HD2 | 2.54 | 0.42 |
| 1:O:152:LYS:CG | 1:O:467:VAL:HG23 | 2.44 | 0.42 |
| 1:O:384:SER:C | 1:O:441:HIS:CE1 | 2.93 | 0.42 |
| 1:P:141:GLU:O | 1:P:142:VAL:HB | 2.19 | 0.42 |
| 1:P:341:LYS:HA | 1:P:341:LYS:HD3 | 1.52 | 0.42 |
| 1:P:346:LEU:CD2 | 1:P:348:ARG:HD3 | 2.49 | 0.42 |
| 1:A:124:TYR:HD1 | 1:A:124:TYR:N | 2.17 | 0.42 |
| 1:A:153:ILE:CD1 | 1:A:372:THR:OG1 | 2.64 | 0.42 |
| 1:A:308:LYS:HB2 | 1:A:308:LYS:HE3 | 1.55 | 0.42 |
| 1:A:427:GLY:C | 1:A:428:LEU:HD12 | 2.39 | 0.42 |
| 1:B:347:ILE:HG21 | 1:B:358:VAL:HG11 | 2.00 | 0.42 |
| 1:C:71:GLU:H | 1:C:71:GLU:HG2 | 1.46 | 0.42 |
| 1:C:192:LEU:CG | 1:C:342:ALA:HB2 | 2.50 | 0.42 |
| 1:C:250:MET:CE | 1:C:308:LYS:HG3 | 2.49 | 0.42 |
| 1:D:14:ARG:NH2 | 1:E:34:THR:CG2 | 2.75 | 0.42 |
| 1:D:105:ARG:NH1 | 1:D:106:LYS:CD | 2.76 | 0.42 |
| 1:D:154:ALA:HB1 | 1:D:171:ALA:HA | 2.01 | 0.42 |
| 1:D:178:VAL:CG2 | 1:D:366:VAL:HG22 | 2.49 | 0.42 |
| 1:E:42:LYS:HA | 1:E:42:LYS:HD3 | 1.55 | 0.42 |
| 1:E:494:ILE:O | 1:F:49:VAL:HG23 | 2.19 | 0.42 |
| 1:F:83:LYS:HG2 | 1:F:87:LYS:NZ | 2.33 | 0.42 |
| 1:G:119:ILE:HG21 | 1:G:403:ARG:HD2 | 2.02 | 0.42 |
| 1:G:174:ILE:HG21 | 1:G:174:ILE:HD13 | 1.64 | 0.42 |
| 1:G:203:ILE:H | 1:G:203:ILE:HG12 | 1.35 | 0.42 |
| 1:G:224:PRO:O | 1:G:282:VAL:CG1 | 2.68 | 0.42 |
| 1:G:376:GLY:CA | 1:G:377:ARG:HB2 | 2.11 | 0.42 |
| 1:H:131:ALA:O | 1:H:135:LEU:HD12 | 2.20 | 0.42 |
| 1:H:450:GLY:C | 1:H:451:LEU:HD12 | 2.39 | 0.42 |
| 1:H:459:GLU:HG3 | 1:H:460:ASP:H | 1.84 | 0.42 |
| 1:I:153:ILE:HD13 | 1:I:467:VAL:HG22 | 2.01 | 0.42 |
| 1:I:178:VAL:HG13 | 1:I:188:VAL:CG1 | 2.48 | 0.42 |
| 1:J:96:ALA:HA | 1:J:480:ALA:CB | 2.49 | 0.42 |
| 1:J:224:PRO:O | 1:J:282:VAL:HG11 | 2.18 | 0.42 |
| 1:J:238:ALA:HB1 | 1:J:240:GLU:H | 1.84 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:488:LEU:O | 1:J:488:LEU:CG | 2.63 | 0.42 |
| 1:L:44:MET:CE | 1:L:44:MET:HA | 2.49 | 0.42 |
| 1:L:170:LEU:HD21 | 1:L:358:VAL:HG22 | 2.00 | 0.42 |
| 1:L:299:THR:CG2 | 1:L:334:VAL:CG1 | 2.97 | 0.42 |
| 1:L:307:ILE:HD11 | 1:L:310:LEU:HD23 | 1.99 | 0.42 |
| 1:L:404:GLU:O | 1:L:408:VAL:HG22 | 2.19 | 0.42 |
| 1:L:438:ARG:HH11 | 1:L:438:ARG:HD3 | 1.29 | 0.42 |
| 1:M:134:LEU:HD12 | 1:M:393:LEU:CD2 | 2.42 | 0.42 |
| 1:M:247:LEU:O | 1:M:251:VAL:HG23 | 2.19 | 0.42 |
| 1:M:344:THR:HG22 | 1:M:345:MET:N | 2.33 | 0.42 |
| 1:M:441:HIS:CD2 | 1:M:449:ALA:HB3 | 2.54 | 0.42 |
| 1:N:192:LEU:O | 1:N:342:ALA:CA | 2.66 | 0.42 |
| 1:O:21:GLN:O | 1:O:25:ILE:HG13 | 2.19 | 0.42 |
| 1:O:43:GLY:O | 1:O:44:MET:HE3 | 2.19 | 0.42 |
| 1:O:230:ALA:HB1 | 1:O:261:VAL:CG2 | 2.49 | 0.42 |
| 1:O:237:CYS:HB2 | 1:O:306:ASN:HA | 1.92 | 0.42 |
| 1:P:35:VAL:C | 1:P:37:SER:N | 2.72 | 0.42 |
| 1:P:96:ALA:HA | 1:P:480:ALA:CB | 2.50 | 0.42 |
| 1:P:158:ILE:HD13 | 1:P:170:LEU:CB | 2.49 | 0.42 |
| 1:P:254:ILE:HG22 | 1:P:259:ALA:HB3 | 2.01 | 0.42 |
| 1:A:134:LEU:HD22 | 1:A:392:LYS:HE3 | 2.00 | 0.42 |
| 1:B:102:GLU:C | 1:B:104:LEU:N | 2.72 | 0.42 |
| 1:B:178:VAL:HG21 | 1:B:366:VAL:HG22 | 1.96 | 0.42 |
| 1:C:138:ILE:CD1 | 1:C:379:VAL:CG2 | 2.80 | 0.42 |
| 1:C:206:THR:CG2 | 1:C:347:ILE:CG2 | 2.93 | 0.42 |
| 1:C:206:THR:HB | 1:C:346:LEU:O | 2.19 | 0.42 |
| 1:C:233:ALA:HA | 1:C:315:LEU:CD1 | 2.49 | 0.42 |
| 1:C:459:GLU:O | 1:C:459:GLU:HG2 | 2.19 | 0.42 |
| 1:D:142:VAL:CG2 | 1:D:143:GLY:H | 2.32 | 0.42 |
| 1:D:212:VAL:HB | 1:D:298:ALA:HB3 | 2.01 | 0.42 |
| 1:D:268:ILE:HG21 | 1:D:268:ILE:HD13 | 1.56 | 0.42 |
| 1:D:335:GLU:O | 1:D:336:GLU:C | 2.58 | 0.42 |
| 1:D:389:LEU:CD1 | 1:D:415:LEU:HD21 | 2.42 | 0.42 |
| 1:D:391:MET:CE | 1:D:438:ARG:HD2 | 2.49 | 0.42 |
| 1:E:489:ARG:O | 1:E:490:ILE:C | 2.58 | 0.42 |
| 1:F:222:GLN:HB2 | 1:F:277:ALA:HB3 | 1.93 | 0.42 |
| 1:G:26:LEU:HD23 | 1:G:26:LEU:HA | 1.70 | 0.42 |
| 1:G:45:ASP:C | 1:G:46:LYS:HG3 | 2.40 | 0.42 |
| 1:G:219:VAL:HG13 | 1:G:273:GLN:CG | 2.39 | 0.42 |
| 1:G:401:SER:OG | 1:P:435:VAL:CG1 | 2.62 | 0.42 |
| 1:G:438:ARG:HH12 | 1:P:405:GLN:HE22 | 1.67 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:158:ILE:HD11 | 1:H:170:LEU:CB | 2.49 | 0.42 |
| 1:H:188:VAL:HG21 | 1:H:373:ILE:CD1 | 2.49 | 0.42 |
| 1:H:232:ILE:HD12 | 1:H:232:ILE:N | 2.34 | 0.42 |
| 1:H:310:LEU:HD21 | 1:H:315:LEU:CD2 | 2.48 | 0.42 |
| 1:H:448:CYS:SG | 1:H:460:ASP:HB2 | 2.60 | 0.42 |
| 1:J:38:THR:HG21 | 1:J:59:ASN:O | 2.19 | 0.42 |
| 1:J:418:ILE:O | 1:J:422:LEU:HG | 2.19 | 0.42 |
| 1:K:89:VAL:O | 1:K:89:VAL:CG2 | 2.67 | 0.42 |
| 1:K:124:TYR:CD2 | 1:K:411:PHE:HD2 | 2.37 | 0.42 |
| 1:K:144:ALA:O | 1:K:150:LEU:HD11 | 2.19 | 0.42 |
| 1:K:163:ALA:CB | 1:K:203:ILE:CG2 | 2.98 | 0.42 |
| 1:K:236:ASN:CA | 1:K:265:GLN:HB3 | 2.49 | 0.42 |
| 1:K:485:GLU:O | 1:K:485:GLU:HG3 | 2.18 | 0.42 |
| 1:L:68:MET:CG | 1:M:494:ILE:HG21 | 2.48 | 0.42 |
| 1:L:119:ILE:CG2 | 1:L:403:ARG:CB | 2.83 | 0.42 |
| 1:L:393:LEU:O | 1:L:396:TYR:HB3 | 2.19 | 0.42 |
| 1:L:475:GLN:HE21 | 1:L:475:GLN:HB2 | 1.73 | 0.42 |
| 1:M:341:LYS:HD3 | 1:M:341:LYS:HA | 1.67 | 0.42 |
| 1:N:234:LEU:HD23 | 1:N:234:LEU:N | 2.34 | 0.42 |
| 1:O:42:LYS:HG3 | 1:O:426:ALA:N | 2.26 | 0.42 |
| 1:O:77:MET:HB3 | 1:O:77:MET:HE3 | 1.84 | 0.42 |
| 1:O:122:LYS:HA | 1:O:125:GLN:NE2 | 2.33 | 0.42 |
| 1:O:192:LEU:CB | 1:O:342:ALA:HB2 | 2.37 | 0.42 |
| 1:P:71:GLU:HG3 | 1:P:72:HIS:N | 2.34 | 0.42 |
| 1:P:203:ILE:O | 1:P:203:ILE:HG13 | 2.19 | 0.42 |
| 1:P:470:LEU:HD23 | 1:P:470:LEU:HA | 2.01 | 0.42 |
| 1:B:124:TYR:CE1 | 1:B:407:ALA:O | 2.72 | 0.42 |
| 1:B:214:VAL:HG12 | 1:B:291:ASP:OD2 | 2.19 | 0.42 |
| 1:B:232:ILE:CG1 | 1:B:261:VAL:HG11 | 2.49 | 0.42 |
| 1:C:171:ALA:HA | 1:C:174:ILE:CD1 | 2.49 | 0.42 |
| 1:C:219:VAL:HG13 | 1:C:220:SER:N | 2.34 | 0.42 |
| 1:C:234:LEU:H | 1:C:315:LEU:CD2 | 2.28 | 0.42 |
| 1:C:235:LEU:CD1 | 1:C:307:ILE:CG1 | 2.97 | 0.42 |
| 1:C:384:SER:OG | 1:C:441:HIS:CE1 | 2.70 | 0.42 |
| 1:D:132:GLN:NE2 | 1:D:478:GLN:HG2 | 2.35 | 0.42 |
| 1:D:220:SER:HB3 | 1:D:273:GLN:HB3 | 2.01 | 0.42 |
| 1:D:237:CYS:SG | 1:D:306:ASN:HA | 2.58 | 0.42 |
| 1:D:268:ILE:HG22 | 1:D:273:GLN:HG3 | 2.02 | 0.42 |
| 1:E:12:MET:HE2 | 1:E:494:ILE:HB | 2.02 | 0.42 |
| 1:E:158:ILE:HD13 | 1:E:361:ALA:HB1 | 2.00 | 0.42 |
| 1:E:198:LYS:C | 1:E:355:ILE:HD11 | 2.40 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:E:235:LEU:HD22 | 1:E:310:LEU:CD2 | 2.48 | 0.42 |
| 1:F:139:ALA:HB1 | 1:F:378:ILE:O | 2.19 | 0.42 |
| 1:G:79:ILE:O | 1:G:83:LYS:HB2 | 2.19 | 0.42 |
| 1:G:150:LEU:HB3 | 1:G:175:VAL:CG2 | 2.50 | 0.42 |
| 1:G:340:PRO:CG | 1:G:340:PRO:O | 2.68 | 0.42 |
| 1:H:232:ILE:HD12 | 1:H:232:ILE:H | 1.84 | 0.42 |
| 1:H:377:ARG:C | 1:H:378:ILE:CG2 | 2.87 | 0.42 |
| 1:H:448:CYS:SG | 1:H:460:ASP:CA | 3.08 | 0.42 |
| 1:I:190:LYS:NZ | 1:I:367:GLY:CA | 2.83 | 0.42 |
| 1:I:235:LEU:CD2 | 1:I:310:LEU:HD22 | 2.50 | 0.42 |
| 1:I:235:LEU:HD21 | 1:I:310:LEU:HD22 | 2.01 | 0.42 |
| 1:J:63:THR:HA | 1:J:66:ARG:HB3 | 2.02 | 0.42 |
| 1:J:158:ILE:O | 1:J:164:GLU:HA | 2.19 | 0.42 |
| 1:J:326:ILE:HG12 | 1:J:348:ARG:NH1 | 2.34 | 0.42 |
| 1:J:355:ILE:C | 1:J:357:GLU:N | 2.73 | 0.42 |
| 1:K:16:MET:H | 1:K:16:MET:HG2 | 1.75 | 0.42 |
| 1:K:49:VAL:H | 1:L:12:MET:CE | 2.33 | 0.42 |
| 1:K:136:LYS:HE3 | 1:K:136:LYS:HB2 | 1.75 | 0.42 |
| 1:K:192:LEU:O | 1:K:342:ALA:CB | 2.67 | 0.42 |
| 1:K:234:LEU:HD12 | 1:K:296:ALA:HB2 | 1.98 | 0.42 |
| 1:K:255:LYS:CD | 1:K:279:GLU:HB3 | 2.48 | 0.42 |
| 1:L:42:LYS:HA | 1:L:42:LYS:HD3 | 1.79 | 0.42 |
| 1:L:49:VAL:O | 1:L:68:MET:HE2 | 2.20 | 0.42 |
| 1:L:77:MET:HE1 | 1:L:486:MET:CE | 2.41 | 0.42 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:HD23 | 2.01 | 0.42 |
| 1:L:405:GLN:O | 1:L:409:ARG:HG2 | 2.19 | 0.42 |
| 1:M:110:LEU:C | 1:M:112:ASP:N | 2.70 | 0.42 |
| 1:M:169:LYS:HG2 | 1:M:204:ASP:HA | 2.01 | 0.42 |
| 1:M:195:ILE:HG13 | 1:M:359:ALA:HB1 | 2.00 | 0.42 |
| 1:M:251:VAL:HG13 | 1:M:276:LEU:HD13 | 2.02 | 0.42 |
| 1:N:170:LEU:O | 1:N:174:ILE:HG23 | 2.19 | 0.42 |
| 1:O:138:ILE:HD12 | 1:O:385:THR:CB | 2.50 | 0.42 |
| 1:O:212:VAL:HG21 | 1:O:295:LEU:CA | 2.48 | 0.42 |
| 1:O:471:ARG:O | 1:O:475:GLN:HB2 | 2.19 | 0.42 |
| 1:P:119:ILE:CG1 | 1:P:403:ARG:HB2 | 2.48 | 0.42 |
| 1:P:138:ILE:CD1 | 1:P:385:THR:CG2 | 2.98 | 0.42 |
| 1:P:208:LEU:HD11 | 1:P:210:LYS:HE3 | 1.89 | 0.42 |
| 1:A:14:ARG:NH2 | 1:B:34:THR:HG23 | 2.33 | 0.42 |
| 1:A:144:ALA:O | 1:A:145:GLN:CB | 2.65 | 0.42 |
| 1:B:38:THR:HG22 | 1:B:44:MET:O | 2.19 | 0.42 |
| 1:B:72:HIS:HB3 | 1:B:75:ALA:HB2 | 2.01 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:192:LEU:HD13 | 1:B:192:LEU:H | 1.84 | 0.42 |
| 1:B:268:ILE:CG2 | 1:B:273:GLN:HG2 | 2.47 | 0.42 |
| 1:C:77:MET:HE3 | 1:C:490:ILE:HD12 | 2.01 | 0.42 |
| 1:C:167:LYS:HG2 | 1:C:168:GLU:N | 2.34 | 0.42 |
| 1:C:239:ILE:CG2 | 1:C:307:ILE:HD13 | 2.50 | 0.42 |
| 1:C:255:LYS:CE | 1:C:279:GLU:HG2 | 2.09 | 0.42 |
| 1:C:306:ASN:ND2 | 1:C:308:LYS:HG3 | 2.35 | 0.42 |
| 1:D:41:PRO:HB2 | 1:D:453:VAL:HG11 | 2.00 | 0.42 |
| 1:D:153:ILE:HG21 | 1:D:153:ILE:HD13 | 1.60 | 0.42 |
| 1:D:195:ILE:HG21 | 1:D:362:VAL:HG13 | 2.02 | 0.42 |
| 1:D:368:VAL:HA | 1:D:371:CYS:SG | 2.60 | 0.42 |
| 1:D:391:MET:HE3 | 1:D:438:ARG:HB3 | 1.94 | 0.42 |
| 1:E:116:HIS:CE1 | 1:E:117:PRO:HG2 | 2.54 | 0.42 |
| 1:E:139:ALA:CB | 1:E:377:ARG:HD2 | 2.48 | 0.42 |
| 1:E:312:ALA:CA | 1:E:315:LEU:HD12 | 2.47 | 0.42 |
| 1:F:289:LYS:HA | 1:F:292:MET:HB2 | 2.01 | 0.42 |
| 1:F:403:ARG:N | 1:O:431:ILE:HD11 | 2.35 | 0.42 |
| 1:G:48:LEU:CD1 | 1:G:67:GLU:HB2 | 2.50 | 0.42 |
| 1:G:138:ILE:HA | 1:G:446:ASN:HB3 | 2.02 | 0.42 |
| 1:G:307:ILE:C | 1:G:309:ASP:H | 2.21 | 0.42 |
| 1:H:102:GLU:OE1 | 1:H:102:GLU:HA | 2.19 | 0.42 |
| 1:H:134:LEU:HB3 | 1:H:392:LYS:HZ2 | 1.85 | 0.42 |
| 1:H:182:VAL:HG23 | 1:H:188:VAL:CG2 | 2.45 | 0.42 |
| 1:I:38:THR:HG23 | 1:I:46:LYS:NZ | 2.35 | 0.42 |
| 1:I:404:GLU:N | 1:I:404:GLU:CD | 2.73 | 0.42 |
| 1:J:36:ARG:HE | 1:J:36:ARG:HB2 | 1.16 | 0.42 |
| 1:J:38:THR:CG2 | 1:J:46:LYS:HE2 | 2.50 | 0.42 |
| 1:J:61:GLY:N | 1:J:64:ILE:HD12 | 2.35 | 0.42 |
| 1:J:430:ALA:O | 1:J:434:LEU:HD23 | 2.19 | 0.42 |
| 1:K:77:MET:HE2 | 1:K:77:MET:HB2 | 1.70 | 0.42 |
| 1:K:267:GLY:C | 1:K:268:ILE:HG12 | 2.40 | 0.42 |
| 1:L:48:LEU:CD2 | 1:M:494:ILE:CD1 | 2.92 | 0.42 |
| 1:L:70:VAL:CA | 1:M:8:LEU:N | 2.81 | 0.42 |
| 1:L:198:LYS:N | 1:L:355:ILE:CD1 | 2.83 | 0.42 |
| 1:M:174:ILE:HD13 | 1:M:174:ILE:HG21 | 1.88 | 0.42 |
| 1:M:216:LYS:C | 1:M:332:ILE:HG13 | 2.40 | 0.42 |
| 1:M:460:ASP:CG | 1:M:463:GLU:N | 2.67 | 0.42 |
| 1:M:468:GLU:HB2 | 1:M:469:PRO:CD | 2.49 | 0.42 |
| 1:N:68:MET:SD | 1:O:12:MET:CG | 3.07 | 0.42 |
| 1:N:133:GLU:H | 1:N:133:GLU:HG2 | 1.36 | 0.42 |
| 1:N:339:HIS:CG | 1:N:339:HIS:O | 2.72 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:N:347:ILE:HB | 1:N:355:ILE:CG2 | 2.49 | 0.42 |
| 1:O:110:LEU:HA | 1:O:110:LEU:HD23 | 1.87 | 0.42 |
| 1:O:375:ASP:CG | 1:O:377:ARG:HE | 2.23 | 0.42 |
| 1:O:391:MET:CE | 1:O:438:ARG:CA | 2.96 | 0.42 |
| 1:O:431:ILE:O | 1:O:431:ILE:HG13 | 2.20 | 0.42 |
| 1:O:459:GLU:CB | 1:O:461:MET:CE | 2.89 | 0.42 |
| 1:P:171:ALA:HA | 1:P:174:ILE:HD13 | 2.02 | 0.42 |
| 1:P:416:GLU:OE2 | 1:P:434:LEU:HD12 | 2.19 | 0.42 |
| 1:A:227:VAL:HG11 | 1:A:260:ASN:ND2 | 2.34 | 0.42 |
| 1:A:303:VAL:O | 1:A:303:VAL:CG2 | 2.67 | 0.42 |
| 1:B:31:ILE:HD13 | 1:B:31:ILE:HG23 | 1.72 | 0.42 |
| 1:B:158:ILE:HG21 | 1:B:170:LEU:HD12 | 2.01 | 0.42 |
| 1:B:281:ILE:HG23 | 1:B:281:ILE:HD13 | 1.81 | 0.42 |
| 1:B:296:ALA:HB1 | 1:B:301:ALA:O | 2.19 | 0.42 |
| 1:C:195:ILE:HB | 1:C:359:ALA:CB | 2.50 | 0.42 |
| 1:D:97:VAL:O | 1:D:100:ALA:HB3 | 2.18 | 0.42 |
| 1:D:404:GLU:O | 1:D:408:VAL:HG22 | 2.18 | 0.42 |
| 1:E:235:LEU:CD1 | 1:E:307:ILE:C | 2.88 | 0.42 |
| 1:E:339:HIS:NE2 | 1:E:341:LYS:HD2 | 2.34 | 0.42 |
| 1:F:225:LYS:O | 1:F:226:LYS:HB2 | 2.19 | 0.42 |
| 1:F:240:GLU:O | 1:F:240:GLU:CG | 2.67 | 0.42 |
| 1:G:36:ARG:HH11 | 1:G:36:ARG:HD2 | 1.50 | 0.42 |
| 1:G:166:ALA:CB | 1:G:203:ILE:CG2 | 2.75 | 0.42 |
| 1:G:166:ALA:CB | 1:G:203:ILE:HG22 | 2.45 | 0.42 |
| 1:G:212:VAL:N | 1:G:298:ALA:CB | 2.82 | 0.42 |
| 1:G:494:ILE:O | 1:H:68:MET:HE1 | 2.19 | 0.42 |
| 1:H:164:GLU:C | 1:H:165:LYS:HZ3 | 2.23 | 0.42 |
| 1:H:223:MET:SD | 1:H:282:VAL:HA | 2.60 | 0.42 |
| 1:I:166:ALA:CB | 1:I:203:ILE:CG2 | 2.97 | 0.42 |
| 1:I:208:LEU:CD2 | 1:I:343:VAL:CG2 | 2.93 | 0.42 |
| 1:J:138:ILE:O | 1:J:446:ASN:CB | 2.68 | 0.42 |
| 1:J:220:SER:CB | 1:J:277:ALA:HB2 | 2.50 | 0.42 |
| 1:J:397:ALA:C | 1:J:399:GLY:H | 2.22 | 0.42 |
| 1:K:85:GLN:NE2 | 1:K:479:SER:CB | 2.82 | 0.42 |
| 1:K:119:ILE:CD1 | 1:K:403:ARG:HH11 | 2.32 | 0.42 |
| 1:K:130:LYS:HD2 | 1:K:396:TYR:CE1 | 2.54 | 0.42 |
| 1:K:135:LEU:CD2 | 1:K:385:THR:CG2 | 2.97 | 0.42 |
| 1:K:203:ILE:H | 1:K:203:ILE:HG12 | 1.48 | 0.42 |
| 1:K:248:LYS:HE2 | 1:K:275:TYR:CE1 | 2.55 | 0.42 |
| 1:K:472:VAL:HG12 | 1:K:473:LYS:N | 2.34 | 0.42 |
| 1:L:16:MET:HA | 1:L:20:ALA:HB2 | 2.00 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:L:400:ILE:HD11 | 1:L:408:VAL:HG21 | 2.01 | 0.42 |
| 1:M:18:ARG:HA | 1:M:21:GLN:CG | 2.49 | 0.42 |
| 1:M:68:MET:CG | 1:N:8:LEU:CD2 | 2.97 | 0.42 |
| 1:M:140:CYS:HB3 | 1:M:446:ASN:CG | 2.39 | 0.42 |
| 1:M:239:ILE:HD12 | 1:M:307:ILE:HG12 | 2.01 | 0.42 |
| 1:M:425:ASN:C | 1:N:116:HIS:NE2 | 2.73 | 0.42 |
| 1:N:31:ILE:H | 1:N:31:ILE:CD1 | 2.31 | 0.42 |
| 1:N:63:THR:O | 1:N:63:THR:HG23 | 2.20 | 0.42 |
| 1:N:140:CYS:SG | 1:N:447:LYS:HB3 | 2.59 | 0.42 |
| 1:N:182:VAL:HB | 1:N:188:VAL:HG21 | 1.99 | 0.42 |
| 1:O:63:THR:O | 1:O:63:THR:HG23 | 2.20 | 0.42 |
| 1:O:85:GLN:NE2 | 1:O:479:SER:HB2 | 2.35 | 0.42 |
| 1:O:262:LEU:CD1 | 1:O:310:LEU:CD1 | 2.97 | 0.42 |
| 1:O:377:ARG:O | 1:O:470:LEU:HB2 | 2.20 | 0.42 |
| 1:P:15:TYR:HD2 | 1:P:19:ASP:HB3 | 1.85 | 0.42 |
| 1:P:30:ILE:HG22 | 1:P:31:ILE:CB | 2.49 | 0.42 |
| 1:P:197:LYS:C | 1:P:355:ILE:HD13 | 2.39 | 0.42 |
| 1:P:213:LEU:HD11 | 1:P:346:LEU:CD1 | 2.50 | 0.42 |
| 1:P:265:GLN:OE1 | 1:P:289:LYS:CG | 2.68 | 0.42 |
| 1:P:418:ILE:CB | 1:P:419:PRO:CD | 2.98 | 0.42 |
| 1:A:152:LYS:CE | 1:A:462:CYS:C | 2.88 | 0.42 |
| 1:A:327:SER:O | 1:A:327:SER:OG | 2.29 | 0.42 |
| 1:B:254:ILE:HG22 | 1:B:281:ILE:HD11 | 2.02 | 0.42 |
| 1:C:119:ILE:HG21 | 1:C:403:ARG:HD2 | 2.00 | 0.42 |
| 1:C:135:LEU:HD21 | 1:C:385:THR:HG21 | 2.00 | 0.42 |
| 1:C:136:LYS:H | 1:C:136:LYS:HG3 | 1.67 | 0.42 |
| 1:C:233:ALA:C | 1:C:315:LEU:HD22 | 2.38 | 0.42 |
| 1:D:42:LYS:CG | 1:D:426:ALA:N | 2.82 | 0.42 |
| 1:D:492:ASP:OD2 | 1:E:46:LYS:HG2 | 2.20 | 0.42 |
| 1:E:170:LEU:O | 1:E:174:ILE:HG23 | 2.20 | 0.42 |
| 1:E:232:ILE:HG22 | 1:E:234:LEU:HD23 | 2.02 | 0.42 |
| 1:E:254:ILE:O | 1:E:259:ALA:HB3 | 2.20 | 0.42 |
| 1:E:339:HIS:CE1 | 1:E:341:LYS:HD3 | 2.55 | 0.42 |
| 1:F:42:LYS:HZ1 | 1:F:453:VAL:CG2 | 2.33 | 0.42 |
| 1:F:250:MET:HE3 | 1:F:308:LYS:HG2 | 2.02 | 0.42 |
| 1:G:155:MET:SD | 1:G:167:LYS:HD3 | 2.60 | 0.42 |
| 1:G:391:MET:HE1 | 1:G:438:ARG:O | 2.19 | 0.42 |
| 1:H:49:VAL:O | 1:H:68:MET:HE3 | 2.20 | 0.42 |
| 1:H:130:LYS:CE | 1:H:396:TYR:HB2 | 2.50 | 0.42 |
| 1:H:386:GLU:H | 1:H:386:GLU:HG2 | 1.32 | 0.42 |
| 1:H:464:ASN:HD22 | 1:H:464:ASN:HA | 1.55 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:130:LYS:CG | 1:I:393:LEU:HD21 | 2.50 | 0.42 |
| 1:I:156:THR:HB | 1:I:467:VAL:C | 2.39 | 0.42 |
| 1:I:343:VAL:O | 1:I:343:VAL:CG1 | 2.62 | 0.42 |
| 1:I:475:GLN:O | 1:I:479:SER:HB2 | 2.20 | 0.42 |
| 1:J:98:VAL:C | 1:J:100:ALA:H | 2.22 | 0.42 |
| 1:J:210:LYS:O | 1:J:340:PRO:HB3 | 2.19 | 0.42 |
| 1:K:174:ILE:HD12 | 1:K:365:ALA:HB1 | 2.01 | 0.42 |
| 1:L:197:LYS:C | 1:L:355:ILE:HD13 | 2.41 | 0.42 |
| 1:L:254:ILE:HG22 | 1:L:259:ALA:CB | 2.45 | 0.42 |
| 1:L:368:VAL:HG21 | 1:L:469:PRO:HG3 | 2.02 | 0.42 |
| 1:M:138:ILE:HD13 | 1:M:385:THR:OG1 | 2.20 | 0.42 |
| 1:M:147:LYS:O | 1:M:151:THR:HG23 | 2.20 | 0.42 |
| 1:M:177:ALA:CB | 1:M:208:LEU:HD13 | 2.40 | 0.42 |
| 1:M:338:LYS:HD2 | 1:M:338:LYS:C | 2.39 | 0.42 |
| 1:N:153:ILE:HG23 | 1:N:469:PRO:CD | 2.49 | 0.42 |
| 1:O:42:LYS:HE2 | 1:O:426:ALA:N | 2.34 | 0.42 |
| 1:O:83:LYS:HG2 | 1:O:87:LYS:HZ2 | 1.84 | 0.42 |
| 1:O:100:ALA:CB | 1:O:484:THR:CG2 | 2.73 | 0.42 |
| 1:P:178:VAL:HG22 | 1:P:366:VAL:CG2 | 2.46 | 0.42 |
| 1:P:299:THR:HG21 | 1:P:334:VAL:HG11 | 2.01 | 0.42 |
| 1:A:42:LYS:NZ | 1:H:118:THR:HG21 | 2.35 | 0.42 |
| 1:A:68:MET:HB3 | 1:H:8:LEU:HA | 2.01 | 0.42 |
| 1:A:219:VAL:CB | 1:A:273:GLN:HG2 | 2.50 | 0.42 |
| 1:B:154:ALA:O | 1:B:158:ILE:HG12 | 2.20 | 0.42 |
| 1:B:255:LYS:HD3 | 1:B:279:GLU:CD | 2.40 | 0.42 |
| 1:C:143:GLY:O | 1:C:149:ILE:HD11 | 2.19 | 0.42 |
| 1:C:211:GLY:CA | 1:C:298:ALA:HB1 | 2.50 | 0.42 |
| 1:C:325:LYS:HE2 | 1:C:330:SER:OG | 2.19 | 0.42 |
| 1:C:448:CYS:O | 1:C:449:ALA:HB2 | 2.20 | 0.42 |
| 1:D:48:LEU:O | 1:D:56:VAL:HB | 2.20 | 0.42 |
| 1:D:94:THR:HG23 | 1:D:98:VAL:CG2 | 2.49 | 0.42 |
| 1:E:68:MET:CE | 1:E:68:MET:CA | 2.98 | 0.42 |
| 1:E:212:VAL:HB | 1:E:298:ALA:CB | 2.49 | 0.42 |
| 1:E:213:LEU:HD11 | 1:E:333:PHE:CE2 | 2.54 | 0.42 |
| 1:E:464:ASN:HB3 | 1:E:466:VAL:CG2 | 2.38 | 0.42 |
| 1:G:35:VAL:CG1 | 1:G:64:ILE:HG21 | 2.50 | 0.42 |
| 1:G:62:VAL:O | 1:G:66:ARG:HB2 | 2.19 | 0.42 |
| 1:G:238:ALA:C | 1:G:307:ILE:CG2 | 2.88 | 0.42 |
| 1:G:339:HIS:O | 1:G:339:HIS:ND1 | 2.53 | 0.42 |
| 1:G:364:ASP:O | 1:G:368:VAL:HG22 | 2.20 | 0.42 |
| 1:G:452:ASN:CB | 1:G:459:GLU:HG3 | 2.50 | 0.42 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:G:460:ASP:OD2 | 1:G:463:GLU:HG3 | 2.20 | 0.42 |
| 1:H:182:VAL:O | 1:H:182:VAL:CG2 | 2.60 | 0.42 |
| 1:H:389:LEU:CD1 | 1:H:415:LEU:CD1 | 2.97 | 0.42 |
| 1:I:178:VAL:HG21 | 1:I:366:VAL:CG2 | 2.47 | 0.42 |
| 1:J:263:PHE:CE2 | 1:J:295:LEU:CD2 | 3.03 | 0.42 |
| 1:J:381:GLY:HA2 | 1:J:468:GLU:CD | 2.41 | 0.42 |
| 1:J:437:VAL:CG1 | 1:J:451:LEU:HD11 | 2.41 | 0.42 |
| 1:K:77:MET:CB | 1:K:80:GLU:OE1 | 2.64 | 0.42 |
| 1:K:291:ASP:O | 1:K:295:LEU:HD12 | 2.20 | 0.42 |
| 1:K:404:GLU:O | 1:K:408:VAL:HG13 | 2.20 | 0.42 |
| 1:L:70:VAL:HA | 1:M:8:LEU:HA | 1.99 | 0.42 |
| 1:L:156:THR:HG21 | 1:L:468:GLU:HB3 | 2.00 | 0.42 |
| 1:L:400:ILE:HD13 | 1:L:400:ILE:HG23 | 1.82 | 0.42 |
| 1:M:284:ALA:HB2 | 1:M:332:ILE:CD1 | 2.50 | 0.42 |
| 1:M:420:ARG:CZ | 1:M:430:ALA:HB3 | 2.49 | 0.42 |
| 1:M:441:HIS:CD2 | 1:M:449:ALA:CB | 3.02 | 0.42 |
| 1:N:362:VAL:O | 1:N:362:VAL:HG22 | 2.20 | 0.42 |
| 1:N:459:GLU:O | 1:N:459:GLU:HG3 | 2.20 | 0.42 |
| 1:O:135:LEU:CD2 | 1:O:385:THR:CG2 | 2.98 | 0.42 |
| 1:O:240:GLU:O | 1:O:240:GLU:CG | 2.66 | 0.42 |
| 1:P:96:ALA:CB | 1:P:480:ALA:CB | 2.97 | 0.42 |
| 1:P:156:THR:HG23 | 1:P:156:THR:O | 2.20 | 0.42 |
| 1:P:213:LEU:HD12 | 1:P:346:LEU:HD12 | 1.97 | 0.42 |
| 1:P:232:ILE:HG13 | 1:P:261:VAL:CG1 | 2.48 | 0.42 |
| 1:P:377:ARG:CG | 1:P:470:LEU:CD1 | 2.98 | 0.42 |
| 1:A:15:TYR:CD2 | 1:A:19:ASP:HB3 | 2.55 | 0.41 |
| 1:A:152:LYS:HZ1 | 1:A:465:GLY:N | 2.19 | 0.41 |
| 1:A:192:LEU:HG | 1:A:342:ALA:CB | 2.40 | 0.41 |
| 1:B:30:ILE:CG2 | 1:B:31:ILE:HG12 | 2.45 | 0.41 |
| 1:B:35:VAL:HG12 | 1:B:64:ILE:HD13 | 2.02 | 0.41 |
| 1:B:119:ILE:HG21 | 1:B:403:ARG:HD3 | 2.01 | 0.41 |
| 1:B:134:LEU:CD2 | 1:B:392:LYS:NZ | 2.79 | 0.41 |
| 1:B:212:VAL:N | 1:B:298:ALA:CB | 2.83 | 0.41 |
| 1:B:453:VAL:CG2 | 1:B:454:PHE:CD1 | 3.03 | 0.41 |
| 1:C:59:ASN:HD22 | 1:C:59:ASN:C | 2.22 | 0.41 |
| 1:D:139:ALA:HB1 | 1:D:377:ARG:HG3 | 2.01 | 0.41 |
| 1:E:77:MET:HB3 | 1:E:77:MET:HE2 | 1.66 | 0.41 |
| 1:E:91:ASP:OD2 | 1:E:368:VAL:HG11 | 2.20 | 0.41 |
| 1:E:124:TYR:CE1 | 1:E:407:ALA:O | 2.71 | 0.41 |
| 1:E:431:ILE:HD11 | 1:N:403:ARG:CA | 2.50 | 0.41 |
| 1:E:466:VAL:HG22 | 1:E:466:VAL:H | 1.55 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:174:ILE:HD12 | 1:F:365:ALA:HB1 | 2.02 | 0.41 |
| 1:F:232:ILE:H | 1:F:232:ILE:CD1 | 2.33 | 0.41 |
| 1:G:82:ALA:HB2 | 1:G:97:VAL:HG21 | 2.01 | 0.41 |
| 1:G:377:ARG:NE | 1:G:470:LEU:HD12 | 2.35 | 0.41 |
| 1:G:433:ILE:O | 1:G:437:VAL:HG23 | 2.20 | 0.41 |
| 1:G:465:GLY:C | 1:G:467:VAL:HG23 | 2.40 | 0.41 |
| 1:H:247:LEU:HG | 1:H:272:ALA:HB2 | 2.02 | 0.41 |
| 1:H:384:SER:OG | 1:H:441:HIS:HE1 | 2.03 | 0.41 |
| 1:I:42:LYS:CE | 1:I:426:ALA:CA | 2.97 | 0.41 |
| 1:I:161:LYS:HB3 | 1:I:357:GLU:OE2 | 2.20 | 0.41 |
| 1:I:171:ALA:O | 1:I:175:VAL:HG23 | 2.20 | 0.41 |
| 1:I:191:ASP:O | 1:I:294:LYS:HE3 | 2.20 | 0.41 |
| 1:I:223:MET:CB | 1:I:282:VAL:HA | 2.37 | 0.41 |
| 1:J:169:LYS:HG2 | 1:J:204:ASP:CB | 2.50 | 0.41 |
| 1:K:119:ILE:CD1 | 1:K:403:ARG:NH1 | 2.82 | 0.41 |
| 1:K:265:GLN:HB3 | 1:K:266:LYS:H | 1.67 | 0.41 |
| 1:K:308:LYS:CB | 1:K:308:LYS:HZ2 | 2.31 | 0.41 |
| 1:K:326:ILE:HG21 | 1:K:331:MET:SD | 2.60 | 0.41 |
| 1:L:235:LEU:CG | 1:L:310:LEU:HD22 | 2.49 | 0.41 |
| 1:M:394:ARG:NH2 | 1:M:413:ASP:CG | 2.73 | 0.41 |
| 1:N:35:VAL:HG12 | 1:N:38:THR:OG1 | 2.19 | 0.41 |
| 1:N:347:ILE:CG2 | 1:N:355:ILE:HG23 | 2.49 | 0.41 |
| 1:P:106:LYS:HE3 | 1:P:106:LYS:HA | 2.02 | 0.41 |
| 1:P:123:GLY:HA2 | 1:P:404:GLU:HB3 | 2.02 | 0.41 |
| 1:P:133:GLU:O | 1:P:137:THR:HG23 | 2.20 | 0.41 |
| 1:P:232:ILE:CD1 | 1:P:232:ILE:N | 2.82 | 0.41 |
| 1:P:308:LYS:HE2 | 1:P:308:LYS:HB3 | 1.83 | 0.41 |
| 1:A:30:ILE:HG21 | 1:A:31:ILE:HG12 | 1.92 | 0.41 |
| 1:A:233:ALA:CB | 1:A:310:LEU:HD11 | 2.31 | 0.41 |
| 1:A:391:MET:HE1 | 1:A:438:ARG:O | 2.21 | 0.41 |
| 1:A:448:CYS:CB | 1:A:460:ASP:CB | 2.97 | 0.41 |
| 1:B:36:ARG:HE | 1:B:36:ARG:HB3 | 1.47 | 0.41 |
| 1:B:99:VAL:O | 1:B:103:LEU:HB2 | 2.20 | 0.41 |
| 1:B:235:LEU:HG | 1:B:310:LEU:HD12 | 1.91 | 0.41 |
| 1:B:263:PHE:CD2 | 1:B:295:LEU:HD13 | 2.55 | 0.41 |
| 1:B:308:LYS:HB2 | 1:B:308:LYS:HZ3 | 1.83 | 0.41 |
| 1:B:431:ILE:CD1 | 1:K:403:ARG:HD3 | 2.50 | 0.41 |
| 1:C:130:LYS:O | 1:C:134:LEU:HG | 2.19 | 0.41 |
| 1:C:142:VAL:HG21 | 1:C:149:ILE:CG2 | 2.50 | 0.41 |
| 1:C:158:ILE:HG23 | 1:C:164:GLU:HA | 2.02 | 0.41 |
| 1:C:368:VAL:HG21 | 1:C:469:PRO:CG | 2.48 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:134:LEU:CD1 | 1:D:393:LEU:HD21 | 2.49 | 0.41 |
| 1:D:152:LYS:HG2 | 1:D:465:GLY:CA | 2.47 | 0.41 |
| 1:D:209:ILE:HD13 | 1:D:209:ILE:HG21 | 1.84 | 0.41 |
| 1:D:251:VAL:HG11 | 1:D:276:LEU:HD22 | 2.01 | 0.41 |
| 1:D:422:LEU:N | 1:D:425:ASN:ND2 | 2.67 | 0.41 |
| 1:E:12:MET:CE | 1:F:49:VAL:O | 2.68 | 0.41 |
| 1:E:170:LEU:O | 1:E:174:ILE:HD13 | 2.20 | 0.41 |
| 1:E:209:ILE:HD13 | 1:E:209:ILE:HG21 | 1.87 | 0.41 |
| 1:E:262:LEU:HD11 | 1:E:310:LEU:HD22 | 2.00 | 0.41 |
| 1:E:358:VAL:O | 1:E:362:VAL:HG12 | 2.20 | 0.41 |
| 1:E:400:ILE:CD1 | 1:E:408:VAL:CG1 | 2.93 | 0.41 |
| 1:F:116:HIS:HD2 | 1:F:118:THR:OG1 | 2.03 | 0.41 |
| 1:F:175:VAL:O | 1:F:175:VAL:HG12 | 2.20 | 0.41 |
| 1:F:276:LEU:HB2 | 1:F:281:ILE:HG13 | 2.00 | 0.41 |
| 1:G:194:LYS:CG | 1:G:195:ILE:N | 2.83 | 0.41 |
| 1:G:239:ILE:CA | 1:G:307:ILE:CG2 | 2.99 | 0.41 |
| 1:G:386:GLU:HG3 | 1:G:419:PRO:HG3 | 2.02 | 0.41 |
| 1:G:489:ARG:NE | 1:H:44:MET:HE1 | 2.35 | 0.41 |
| 1:H:72:HIS:ND1 | 1:H:73:PRO:CD | 2.83 | 0.41 |
| 1:H:212:VAL:HG23 | 1:H:298:ALA:HB2 | 2.02 | 0.41 |
| 1:H:338:LYS:HE3 | 1:H:339:HIS:HB2 | 2.00 | 0.41 |
| 1:I:12:MET:CE | 1:I:494:ILE:CG2 | 2.96 | 0.41 |
| 1:I:233:ALA:HB2 | 1:I:315:LEU:HD13 | 2.02 | 0.41 |
| 1:J:138:ILE:O | 1:J:446:ASN:HB2 | 2.20 | 0.41 |
| 1:J:391:MET:CE | 1:J:438:ARG:HE | 2.33 | 0.41 |
| 1:K:55:VAL:HG11 | 1:L:73:PRO:HB3 | 2.02 | 0.41 |
| 1:K:83:LYS:HB3 | 1:K:83:LYS:HE2 | 1.56 | 0.41 |
| 1:K:142:VAL:CG1 | 1:K:142:VAL:O | 2.67 | 0.41 |
| 1:K:170:LEU:CD1 | 1:K:358:VAL:HG22 | 2.50 | 0.41 |
| 1:K:224:PRO:O | 1:K:282:VAL:CG1 | 2.68 | 0.41 |
| 1:K:230:ALA:HB1 | 1:K:261:VAL:CG2 | 2.49 | 0.41 |
| 1:K:232:ILE:O | 1:K:315:LEU:CG | 2.66 | 0.41 |
| 1:L:36:ARG:CG | 1:L:37:SER:N | 2.80 | 0.41 |
| 1:L:134:LEU:HD23 | 1:L:134:LEU:HA | 1.73 | 0.41 |
| 1:L:188:VAL:HG13 | 1:L:373:ILE:HG13 | 1.94 | 0.41 |
| 1:L:385:THR:HG21 | 1:L:473:LYS:HD2 | 2.02 | 0.41 |
| 1:M:71:GLU:CG | 1:M:72:HIS:N | 2.82 | 0.41 |
| 1:M:178:VAL:HB | 1:M:193:ILE:CD1 | 2.49 | 0.41 |
| 1:M:274:HIS:ND1 | 1:M:274:HIS:O | 2.52 | 0.41 |
| 1:M:341:LYS:HD3 | 1:M:341:LYS:H | 1.84 | 0.41 |
| 1:M:431:ILE:O | 1:M:435:VAL:HG23 | 2.19 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:434:LEU:HD22 | 1:M:451:LEU:HD21 | 1.97 | 0.41 |
| 1:M:452:ASN:OD1 | 1:M:454:PHE:CD2 | 2.73 | 0.41 |
| 1:N:12:MET:HG2 | 1:N:494:ILE:HG22 | 2.02 | 0.41 |
| 1:N:218:ARG:HH12 | 1:N:332:ILE:CD1 | 2.33 | 0.41 |
| 1:N:227:VAL:HG11 | 1:N:260:ASN:CG | 2.40 | 0.41 |
| 1:O:31:ILE:HG22 | 1:O:65:LEU:CD2 | 2.50 | 0.41 |
| 1:O:178:VAL:CG2 | 1:O:193:ILE:CD1 | 2.98 | 0.41 |
| 1:O:211:GLY:C | 1:O:298:ALA:HB3 | 2.40 | 0.41 |
| 1:O:218:ARG:HH22 | 1:O:321:VAL:HG12 | 1.84 | 0.41 |
| 1:P:42:LYS:HD3 | 1:P:426:ALA:N | 2.36 | 0.41 |
| 1:P:178:VAL:HG21 | 1:P:366:VAL:HG13 | 1.99 | 0.41 |
| 1:P:232:ILE:HA | 1:P:261:VAL:HB | 2.01 | 0.41 |
| 1:P:233:ALA:CA | 1:P:315:LEU:CD1 | 2.96 | 0.41 |
| 1:P:369:VAL:O | 1:P:369:VAL:CG1 | 2.68 | 0.41 |
| 1:P:464:ASN:CB | 1:P:466:VAL:HG22 | 2.50 | 0.41 |
| 1:A:9:PRO:CD | 1:A:12:MET:CE | 2.97 | 0.41 |
| 1:A:69:SER:OG | 1:H:9:PRO:HA | 2.20 | 0.41 |
| 1:A:247:LEU:HD11 | 1:A:272:ALA:HB3 | 2.02 | 0.41 |
| 1:A:250:MET:HE2 | 1:A:308:LYS:HG2 | 2.03 | 0.41 |
| 1:A:389:LEU:HD22 | 1:A:393:LEU:CD1 | 2.49 | 0.41 |
| 1:A:441:HIS:HD1 | 1:A:449:ALA:HB3 | 1.85 | 0.41 |
| 1:B:120:VAL:O | 1:B:124:TYR:CD1 | 2.73 | 0.41 |
| 1:B:355:ILE:HG21 | 1:B:355:ILE:HD13 | 1.73 | 0.41 |
| 1:B:401:SER:CB | 1:K:435:VAL:CG1 | 2.98 | 0.41 |
| 1:B:418:ILE:O | 1:B:422:LEU:HD12 | 2.21 | 0.41 |
| 1:C:206:THR:HG22 | 1:C:348:ARG:N | 2.31 | 0.41 |
| 1:C:304:ILE:HG21 | 1:C:309:ASP:HB3 | 2.00 | 0.41 |
| 1:D:247:LEU:HD12 | 1:D:247:LEU:O | 2.20 | 0.41 |
| 1:D:353:HIS:O | 1:D:357:GLU:HB3 | 2.21 | 0.41 |
| 1:E:8:LEU:HD22 | 1:E:494:ILE:CG2 | 2.49 | 0.41 |
| 1:E:62:VAL:HG13 | 1:E:63:THR:H | 1.82 | 0.41 |
| 1:E:254:ILE:CG2 | 1:E:259:ALA:HB3 | 2.50 | 0.41 |
| 1:F:143:GLY:HA3 | 1:F:146:ASP:HB2 | 2.01 | 0.41 |
| 1:F:441:HIS:CG | 1:F:449:ALA:HB3 | 2.52 | 0.41 |
| 1:G:347:ILE:CD1 | 1:G:359:ALA:HB3 | 2.50 | 0.41 |
| 1:G:418:ILE:HG22 | 1:G:419:PRO:HD3 | 2.01 | 0.41 |
| 1:G:494:ILE:HG21 | 1:H:68:MET:HE2 | 1.98 | 0.41 |
| 1:H:265:GLN:HG2 | 1:H:266:LYS:HG2 | 2.02 | 0.41 |
| 1:H:265:GLN:CD | 1:H:289:LYS:HB2 | 2.40 | 0.41 |
| 1:I:135:LEU:CD1 | 1:I:385:THR:HG21 | 2.50 | 0.41 |
| 1:I:142:VAL:HG11 | 1:I:149:ILE:CB | 2.50 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:163:ALA:C | 1:I:165:LYS:H | 2.24 | 0.41 |
| 1:I:198:LYS:C | 1:I:355:ILE:HD11 | 2.41 | 0.41 |
| 1:I:235:LEU:HD12 | 1:I:262:LEU:CD2 | 2.48 | 0.41 |
| 1:I:402:GLY:O | 1:I:406:LEU:HD21 | 2.21 | 0.41 |
| 1:I:453:VAL:H | 1:I:453:VAL:HG13 | 1.38 | 0.41 |
| 1:J:24:ASN:HD22 | 1:J:24:ASN:HA | 1.36 | 0.41 |
| 1:J:119:ILE:CD1 | 1:J:403:ARG:HB2 | 2.33 | 0.41 |
| 1:J:196:GLU:C | 1:J:197:LYS:HG3 | 2.29 | 0.41 |
| 1:J:311:SER:O | 1:J:315:LEU:HD12 | 2.20 | 0.41 |
| 1:J:345:MET:HE1 | 1:J:362:VAL:HG21 | 2.01 | 0.41 |
| 1:K:437:VAL:HG13 | 1:K:449:ALA:O | 2.20 | 0.41 |
| 1:K:461:MET:SD | 1:K:466:VAL:HG23 | 2.61 | 0.41 |
| 1:L:450:GLY:O | 1:L:458:VAL:HA | 2.20 | 0.41 |
| 1:L:452:ASN:HD21 | 1:L:454:PHE:HB2 | 1.86 | 0.41 |
| 1:M:34:THR:CG2 | 1:M:35:VAL:CG2 | 2.76 | 0.41 |
| 1:M:171:ALA:HA | 1:M:174:ILE:CD1 | 2.50 | 0.41 |
| 1:N:247:LEU:HD11 | 1:N:272:ALA:CB | 2.50 | 0.41 |
| 1:O:44:MET:CE | 1:P:489:ARG:NH2 | 2.84 | 0.41 |
| 1:O:68:MET:CA | 1:P:9:PRO:CD | 2.98 | 0.41 |
| 1:O:250:MET:HE2 | 1:O:308:LYS:CG | 2.48 | 0.41 |
| 1:O:254:ILE:HG12 | 1:O:307:ILE:HD11 | 2.02 | 0.41 |
| 1:P:209:ILE:HD11 | 1:P:213:LEU:HB2 | 2.01 | 0.41 |
| 1:P:232:ILE:N | 1:P:232:ILE:HD12 | 2.35 | 0.41 |
| 1:P:434:LEU:N | 1:P:434:LEU:HD22 | 2.33 | 0.41 |
| 1:A:72:HIS:O | 1:A:75:ALA:HB3 | 2.20 | 0.41 |
| 1:A:144:ALA:O | 1:A:145:GLN:HB3 | 2.13 | 0.41 |
| 1:A:210:LYS:CB | 1:A:340:PRO:HG2 | 2.51 | 0.41 |
| 1:A:380:SER:HB3 | 1:A:384:SER:OG | 2.20 | 0.41 |
| 1:B:206:THR:HG22 | 1:B:348:ARG:N | 2.34 | 0.41 |
| 1:B:386:GLU:HG3 | 1:B:419:PRO:HG3 | 2.02 | 0.41 |
| 1:B:420:ARG:O | 1:B:423:ALA:HB3 | 2.20 | 0.41 |
| 1:C:235:LEU:O | 1:C:264:CYS:HA | 2.20 | 0.41 |
| 1:C:254:ILE:HG22 | 1:C:281:ILE:HD11 | 2.01 | 0.41 |
| 1:C:391:MET:HE1 | 1:C:438:ARG:C | 2.40 | 0.41 |
| 1:D:42:LYS:HB3 | 1:D:425:ASN:HB3 | 1.98 | 0.41 |
| 1:D:157:SER:HG | 1:D:368:VAL:HG21 | 1.85 | 0.41 |
| 1:D:198:LYS:HD3 | 1:D:198:LYS:HA | 1.88 | 0.41 |
| 1:D:232:ILE:HA | 1:D:261:VAL:HB | 2.02 | 0.41 |
| 1:E:418:ILE:HB | 1:E:419:PRO:CD | 2.50 | 0.41 |
| 1:F:134:LEU:HD22 | 1:F:392:LYS:NZ | 2.36 | 0.41 |
| 1:F:153:ILE:H | 1:F:153:ILE:HG13 | 1.66 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:F:192:LEU:CB | 1:F:342:ALA:CB | 2.99 | 0.41 |
| 1:F:263:PHE:HE1 | 1:F:332:ILE:HD13 | 1.86 | 0.41 |
| 1:G:241:GLU:CG | 1:G:246:MET:HB3 | 2.47 | 0.41 |
| 1:G:347:ILE:CD1 | 1:G:359:ALA:CB | 2.98 | 0.41 |
| 1:G:347:ILE:HB | 1:G:355:ILE:HG23 | 2.02 | 0.41 |
| 1:G:461:MET:CA | 1:G:466:VAL:HG23 | 2.50 | 0.41 |
| 1:H:234:LEU:CD1 | 1:H:301:ALA:HB3 | 2.50 | 0.41 |
| 1:H:265:GLN:OE1 | 1:H:289:LYS:HG3 | 2.20 | 0.41 |
| 1:H:355:ILE:HG21 | 1:H:355:ILE:HD13 | 1.87 | 0.41 |
| 1:I:48:LEU:HB3 | 1:I:68:MET:HE1 | 2.01 | 0.41 |
| 1:I:104:LEU:HD21 | 1:I:484:THR:HB | 2.02 | 0.41 |
| 1:I:105:ARG:HG2 | 1:I:106:LYS:N | 2.23 | 0.41 |
| 1:I:153:ILE:CD1 | 1:I:378:ILE:CB | 2.93 | 0.41 |
| 1:I:164:GLU:O | 1:I:165:LYS:C | 2.59 | 0.41 |
| 1:J:100:ALA:HB1 | 1:J:484:THR:CB | 2.51 | 0.41 |
| 1:K:192:LEU:HB2 | 1:K:342:ALA:CA | 2.49 | 0.41 |
| 1:K:239:ILE:O | 1:K:247:LEU:CD1 | 2.68 | 0.41 |
| 1:L:248:LYS:CE | 1:L:275:TYR:CZ | 3.03 | 0.41 |
| 1:L:400:ILE:HD11 | 1:L:408:VAL:HG11 | 2.02 | 0.41 |
| 1:M:105:ARG:HH11 | 1:M:105:ARG:HD3 | 1.50 | 0.41 |
| 1:M:170:LEU:HD22 | 1:M:358:VAL:CG2 | 2.51 | 0.41 |
| 1:M:315:LEU:HD23 | 1:M:315:LEU:HA | 1.85 | 0.41 |
| 1:M:379:VAL:HG13 | 1:M:470:LEU:HD21 | 2.02 | 0.41 |
| 1:N:116:HIS:CE1 | 1:N:118:THR:HB | 2.55 | 0.41 |
| 1:N:389:LEU:O | 1:N:393:LEU:CD2 | 2.68 | 0.41 |
| 1:O:156:THR:HG21 | 1:O:468:GLU:HA | 1.98 | 0.41 |
| 1:O:169:LYS:HG2 | 1:O:204:ASP:OD1 | 2.20 | 0.41 |
| 1:O:193:ILE:CD1 | 1:O:366:VAL:HG11 | 2.42 | 0.41 |
| 1:P:99:VAL:CG1 | 1:P:418:ILE:HD11 | 2.50 | 0.41 |
| 1:P:198:LYS:HG3 | 1:P:331:MET:SD | 2.60 | 0.41 |
| 1:P:210:LYS:HG2 | 1:P:343:VAL:HG21 | 2.02 | 0.41 |
| 1:A:206:THR:CB | 1:A:347:ILE:HG23 | 2.50 | 0.41 |
| 1:A:461:MET:SD | 1:A:466:VAL:HG23 | 2.60 | 0.41 |
| 1:B:263:PHE:CG | 1:B:295:LEU:HD13 | 2.56 | 0.41 |
| 1:B:276:LEU:C | 1:B:281:ILE:HB | 2.41 | 0.41 |
| 1:B:346:LEU:CD2 | 1:B:348:ARG:HD3 | 2.50 | 0.41 |
| 1:B:391:MET:HE1 | 1:B:438:ARG:C | 2.41 | 0.41 |
| 1:B:422:LEU:HA | 1:B:425:ASN:ND2 | 2.23 | 0.41 |
| 1:C:351:THR:C | 1:C:353:HIS:N | 2.74 | 0.41 |
| 1:C:377:ARG:NH1 | 1:C:470:LEU:HD11 | 2.36 | 0.41 |
| 1:D:71:GLU:H | 1:D:71:GLU:HG3 | 1.63 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:403:ARG:CD | 1:M:431:ILE:CD1 | 2.81 | 0.41 |
| 1:E:182:VAL:CG2 | 1:E:188:VAL:HG22 | 2.49 | 0.41 |
| 1:E:299:THR:CG2 | 1:E:334:VAL:CG1 | 2.99 | 0.41 |
| 1:E:371:CYS:SG | 1:E:471:ARG:CB | 3.08 | 0.41 |
| 1:E:384:SER:C | 1:E:441:HIS:CE1 | 2.94 | 0.41 |
| 1:E:469:PRO:CG | 1:E:472:VAL:CG1 | 2.71 | 0.41 |
| 1:F:12:MET:HG3 | 1:F:494:ILE:HG22 | 2.02 | 0.41 |
| 1:F:35:VAL:O | 1:F:94:THR:HG21 | 2.20 | 0.41 |
| 1:F:156:THR:O | 1:F:156:THR:HG23 | 2.20 | 0.41 |
| 1:F:232:ILE:HG23 | 1:F:261:VAL:HG12 | 2.02 | 0.41 |
| 1:F:406:LEU:HD13 | 1:O:431:ILE:HD12 | 2.01 | 0.41 |
| 1:F:430:ALA:O | 1:F:434:LEU:HD23 | 2.20 | 0.41 |
| 1:G:145:GLN:H | 1:G:145:GLN:HG3 | 1.60 | 0.41 |
| 1:G:230:ALA:HB1 | 1:G:261:VAL:CG2 | 2.50 | 0.41 |
| 1:H:158:ILE:HD13 | 1:H:158:ILE:HG21 | 1.72 | 0.41 |
| 1:H:182:VAL:O | 1:H:182:VAL:HG13 | 2.20 | 0.41 |
| 1:H:345:MET:CE | 1:H:362:VAL:CG1 | 2.86 | 0.41 |
| 1:I:85:GLN:OE1 | 1:I:476:ALA:HA | 2.21 | 0.41 |
| 1:I:113:GLN:HE21 | 1:I:113:GLN:HB2 | 1.68 | 0.41 |
| 1:I:156:THR:HG21 | 1:I:468:GLU:N | 2.36 | 0.41 |
| 1:I:369:VAL:C | 1:I:371:CYS:H | 2.22 | 0.41 |
| 1:J:23:MET:O | 1:J:72:HIS:CE1 | 2.74 | 0.41 |
| 1:J:119:ILE:CG2 | 1:J:403:ARG:CB | 2.74 | 0.41 |
| 1:J:196:GLU:C | 1:J:347:ILE:HG22 | 2.41 | 0.41 |
| 1:J:372:THR:HG22 | 1:J:376:GLY:C | 2.40 | 0.41 |
| 1:K:488:LEU:HD12 | 1:K:488:LEU:HA | 1.63 | 0.41 |
| 1:L:73:PRO:HA | 1:L:76:LYS:HG3 | 2.03 | 0.41 |
| 1:L:138:ILE:HA | 1:L:446:ASN:HB3 | 2.03 | 0.41 |
| 1:M:8:LEU:HB2 | 1:M:12:MET:HE1 | 1.96 | 0.41 |
| 1:M:122:LYS:HB3 | 1:M:404:GLU:CG | 2.51 | 0.41 |
| 1:M:490:ILE:HG21 | 1:M:490:ILE:HD13 | 1.78 | 0.41 |
| 1:N:68:MET:SD | 1:O:9:PRO:HD3 | 2.59 | 0.41 |
| 1:N:102:GLU:C | 1:N:104:LEU:N | 2.72 | 0.41 |
| 1:N:149:ILE:CG2 | 1:N:378:ILE:HD13 | 2.51 | 0.41 |
| 1:N:158:ILE:H | 1:N:158:ILE:HG13 | 1.73 | 0.41 |
| 1:N:292:MET:HE2 | 1:N:292:MET:HB3 | 1.57 | 0.41 |
| 1:O:18:ARG:CG | 1:O:19:ASP:N | 2.68 | 0.41 |
| 1:O:96:ALA:O | 1:O:480:ALA:HB1 | 2.20 | 0.41 |
| 1:O:122:LYS:HA | 1:O:125:GLN:OE1 | 2.20 | 0.41 |
| 1:O:155:MET:HB2 | 1:O:167:LYS:HD3 | 1.99 | 0.41 |
| 1:O:235:LEU:CD2 | 1:O:307:ILE:N | 2.70 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:434:LEU:O | 1:O:438:ARG:HB2 | 2.20 | 0.41 |
| 1:P:289:LYS:HE3 | 1:P:289:LYS:HB3 | 1.93 | 0.41 |
| 1:P:345:MET:HE1 | 1:P:362:VAL:HG11 | 1.98 | 0.41 |
| 1:P:461:MET:O | 1:P:466:VAL:HG23 | 2.20 | 0.41 |
| 1:A:18:ARG:HA | 1:A:21:GLN:OE1 | 2.20 | 0.41 |
| 1:A:130:LYS:CD | 1:A:393:LEU:HD23 | 2.38 | 0.41 |
| 1:A:170:LEU:HD12 | 1:A:358:VAL:HG11 | 2.03 | 0.41 |
| 1:A:216:LYS:CB | 1:A:287:VAL:HG22 | 2.51 | 0.41 |
| 1:C:98:VAL:C | 1:C:100:ALA:H | 2.24 | 0.41 |
| 1:C:132:GLN:HA | 1:C:132:GLN:NE2 | 2.36 | 0.41 |
| 1:C:298:ALA:O | 1:C:337:CYS:HB3 | 2.20 | 0.41 |
| 1:C:314:ASP:O | 1:C:315:LEU:CB | 2.69 | 0.41 |
| 1:D:362:VAL:HA | 1:D:365:ALA:HB3 | 2.02 | 0.41 |
| 1:E:153:ILE:HG21 | 1:E:469:PRO:HA | 2.02 | 0.41 |
| 1:E:177:ALA:HB1 | 1:E:343:VAL:CG1 | 2.51 | 0.41 |
| 1:F:8:LEU:CD1 | 1:G:68:MET:CG | 2.81 | 0.41 |
| 1:F:232:ILE:HA | 1:F:261:VAL:HB | 2.02 | 0.41 |
| 1:G:255:LYS:O | 1:G:255:LYS:HG3 | 2.19 | 0.41 |
| 1:G:307:ILE:CG1 | 1:G:307:ILE:O | 2.69 | 0.41 |
| 1:H:78:LEU:HD11 | 1:H:484:THR:CG2 | 2.49 | 0.41 |
| 1:H:121:VAL:CG2 | 1:H:122:LYS:N | 2.83 | 0.41 |
| 1:H:235:LEU:CG | 1:H:307:ILE:CB | 2.98 | 0.41 |
| 1:I:142:VAL:CG2 | 1:I:149:ILE:HG21 | 2.48 | 0.41 |
| 1:I:144:ALA:O | 1:I:150:LEU:HD11 | 2.20 | 0.41 |
| 1:I:202:SER:C | 1:I:204:ASP:H | 2.24 | 0.41 |
| 1:J:106:LYS:HE2 | 1:J:106:LYS:HB3 | 1.33 | 0.41 |
| 1:J:191:ASP:CB | 1:J:192:LEU:HD13 | 2.47 | 0.41 |
| 1:J:236:ASN:OD1 | 1:J:236:ASN:O | 2.39 | 0.41 |
| 1:J:264:CYS:C | 1:J:266:LYS:HA | 2.39 | 0.41 |
| 1:K:77:MET:HE1 | 1:K:487:LEU:HG | 2.02 | 0.41 |
| 1:K:156:THR:CB | 1:K:467:VAL:O | 2.68 | 0.41 |
| 1:K:355:ILE:HD12 | 1:K:355:ILE:HG21 | 1.82 | 0.41 |
| 1:L:38:THR:HB | 1:L:59:ASN:ND2 | 2.35 | 0.41 |
| 1:L:70:VAL:N | 1:M:8:LEU:HA | 2.35 | 0.41 |
| 1:L:134:LEU:HD13 | 1:L:392:LYS:HB3 | 2.02 | 0.41 |
| 1:L:174:ILE:CD1 | 1:L:365:ALA:CB | 2.88 | 0.41 |
| 1:L:212:VAL:N | 1:L:298:ALA:HB1 | 2.36 | 0.41 |
| 1:L:233:ALA:CA | 1:L:315:LEU:CD1 | 2.93 | 0.41 |
| 1:L:384:SER:CA | 1:L:441:HIS:HE1 | 2.33 | 0.41 |
| 1:M:8:LEU:HD13 | 1:M:12:MET:HE2 | 2.02 | 0.41 |
| 1:M:239:ILE:HD12 | 1:M:254:ILE:HD11 | 2.03 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:429:ASP:HB2 | 1:M:430:ALA:H | 1.45 | 0.41 |
| 1:N:22:ARG:O | 1:N:26:LEU:HB2 | 2.21 | 0.41 |
| 1:N:30:ILE:CG2 | 1:N:31:ILE:HD13 | 2.34 | 0.41 |
| 1:N:36:ARG:HE | 1:N:36:ARG:HB3 | 1.26 | 0.41 |
| 1:N:207:GLU:OE2 | 1:N:346:LEU:HD13 | 2.19 | 0.41 |
| 1:O:227:VAL:HG11 | 1:O:260:ASN:ND2 | 2.36 | 0.41 |
| 1:P:326:ILE:CG1 | 1:P:348:ARG:NH1 | 2.83 | 0.41 |
| 1:A:47:MET:HE2 | 1:H:493:VAL:HG13 | 2.03 | 0.41 |
| 1:A:153:ILE:HG23 | 1:A:468:GLU:C | 2.41 | 0.41 |
| 1:B:85:GLN:OE1 | 1:B:475:GLN:HB3 | 2.20 | 0.41 |
| 1:B:116:HIS:CG | 1:B:117:PRO:CD | 3.04 | 0.41 |
| 1:B:165:LYS:C | 1:B:167:LYS:H | 2.24 | 0.41 |
| 1:B:350:THR:OG1 | 1:B:354:VAL:CG2 | 2.68 | 0.41 |
| 1:B:406:LEU:HD21 | 1:K:431:ILE:HD13 | 2.02 | 0.41 |
| 1:C:85:GLN:HE22 | 1:C:479:SER:HB3 | 1.84 | 0.41 |
| 1:C:197:LYS:C | 1:C:355:ILE:HD13 | 2.41 | 0.41 |
| 1:C:326:ILE:HG13 | 1:C:348:ARG:HH12 | 1.86 | 0.41 |
| 1:D:31:ILE:HG21 | 1:D:65:LEU:CG | 2.51 | 0.41 |
| 1:D:47:MET:HG2 | 1:D:47:MET:O | 2.21 | 0.41 |
| 1:D:448:CYS:CB | 1:D:460:ASP:HA | 2.20 | 0.41 |
| 1:E:130:LYS:HZ2 | 1:E:396:TYR:CB | 2.33 | 0.41 |
| 1:E:142:VAL:HG21 | 1:E:149:ILE:HD13 | 2.02 | 0.41 |
| 1:E:153:ILE:HD11 | 1:E:378:ILE:HG22 | 2.03 | 0.41 |
| 1:E:178:VAL:CG2 | 1:E:366:VAL:CG1 | 2.99 | 0.41 |
| 1:E:347:ILE:HG21 | 1:E:358:VAL:CB | 2.51 | 0.41 |
| 1:E:369:VAL:CG2 | 1:E:369:VAL:O | 2.68 | 0.41 |
| 1:F:235:LEU:HD22 | 1:F:310:LEU:CD2 | 2.48 | 0.41 |
| 1:F:255:LYS:O | 1:F:255:LYS:HG3 | 2.19 | 0.41 |
| 1:G:434:LEU:CD2 | 1:G:434:LEU:H | 2.34 | 0.41 |
| 1:H:72:HIS:ND1 | 1:H:73:PRO:HD2 | 2.36 | 0.41 |
| 1:I:181:VAL:HB | 1:I:192:LEU:HD23 | 2.03 | 0.41 |
| 1:I:234:LEU:H | 1:I:315:LEU:HD22 | 1.86 | 0.41 |
| 1:I:281:ILE:HG22 | 1:I:282:VAL:O | 2.20 | 0.41 |
| 1:I:338:LYS:HE3 | 1:I:338:LYS:HB3 | 1.87 | 0.41 |
| 1:J:78:LEU:HA | 1:J:81:VAL:HG23 | 2.03 | 0.41 |
| 1:J:170:LEU:CD2 | 1:J:358:VAL:CG2 | 2.98 | 0.41 |
| 1:J:338:LYS:HD2 | 1:J:339:HIS:N | 2.36 | 0.41 |
| 1:K:68:MET:HE3 | 1:K:68:MET:H | 1.85 | 0.41 |
| 1:K:145:GLN:H | 1:K:145:GLN:HG3 | 1.74 | 0.41 |
| 1:K:145:GLN:HA | 1:K:150:LEU:CD2 | 2.51 | 0.41 |
| 1:L:62:VAL:CG1 | 1:L:63:THR:N | 2.81 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:68:MET:HE1 | 1:N:9:PRO:HG2 | 2.02 | 0.41 |
| 1:M:394:ARG:HH22 | 1:M:413:ASP:CG | 2.24 | 0.41 |
| 1:N:121:VAL:O | 1:N:125:GLN:HG2 | 2.20 | 0.41 |
| 1:N:234:LEU:N | 1:N:315:LEU:HD22 | 2.35 | 0.41 |
| 1:O:56:VAL:O | 1:O:56:VAL:CG2 | 2.68 | 0.41 |
| 1:O:434:LEU:HD12 | 1:O:434:LEU:HA | 1.83 | 0.41 |
| 1:P:12:MET:HG3 | 1:P:495:ALA:N | 2.35 | 0.41 |
| 1:P:61:GLY:HA2 | 1:P:64:ILE:HD12 | 2.03 | 0.41 |
| 1:P:286:ARG:CG | 1:P:286:ARG:NH1 | 2.84 | 0.41 |
| 1:A:116:HIS:HE2 | 1:B:425:ASN:HA | 1.85 | 0.41 |
| 1:A:120:VAL:CG1 | 1:A:121:VAL:H | 2.34 | 0.41 |
| 1:A:130:LYS:HG2 | 1:A:393:LEU:HD22 | 1.98 | 0.41 |
| 1:A:233:ALA:CA | 1:A:315:LEU:HD11 | 2.47 | 0.41 |
| 1:B:8:LEU:C | 1:C:70:VAL:N | 2.74 | 0.41 |
| 1:B:212:VAL:HG12 | 1:B:295:LEU:HD23 | 2.02 | 0.41 |
| 1:B:406:LEU:HD11 | 1:K:431:ILE:HD13 | 2.02 | 0.41 |
| 1:B:438:ARG:HH22 | 1:K:405:GLN:HE22 | 1.69 | 0.41 |
| 1:C:219:VAL:CG1 | 1:C:220:SER:N | 2.84 | 0.41 |
| 1:C:435:VAL:HG13 | 1:C:438:ARG:HH21 | 1.85 | 0.41 |
| 1:C:459:GLU:OE1 | 1:C:461:MET:CE | 2.69 | 0.41 |
| 1:D:66:ARG:CA | 1:D:79:ILE:HD12 | 2.50 | 0.41 |
| 1:D:68:MET:H | 1:D:68:MET:HG2 | 1.55 | 0.41 |
| 1:D:296:ALA:CA | 1:D:301:ALA:HB3 | 2.50 | 0.41 |
| 1:D:400:ILE:HG21 | 1:D:400:ILE:HD13 | 1.80 | 0.41 |
| 1:E:355:ILE:HG21 | 1:E:355:ILE:HD13 | 1.87 | 0.41 |
| 1:F:140:CYS:SG | 1:F:140:CYS:O | 2.79 | 0.41 |
| 1:F:143:GLY:O | 1:F:149:ILE:CD1 | 2.67 | 0.41 |
| 1:F:155:MET:CE | 1:F:465:GLY:HA3 | 2.50 | 0.41 |
| 1:G:111:LEU:H | 1:G:111:LEU:HG | 1.81 | 0.41 |
| 1:G:193:ILE:HD12 | 1:G:366:VAL:CG2 | 2.30 | 0.41 |
| 1:H:140:CYS:HB3 | 1:H:446:ASN:OD1 | 2.21 | 0.41 |
| 1:H:403:ARG:HA | 1:I:431:ILE:CD1 | 2.50 | 0.41 |
| 1:I:27:ALA:CB | 1:I:72:HIS:CD2 | 2.93 | 0.41 |
| 1:I:32:ALA:O | 1:I:36:ARG:HB3 | 2.21 | 0.41 |
| 1:I:39:LEU:HG | 1:I:40:GLY:N | 2.35 | 0.41 |
| 1:I:80:GLU:HA | 1:I:83:LYS:HE2 | 2.02 | 0.41 |
| 1:I:130:LYS:HZ1 | 1:I:134:LEU:CD1 | 2.31 | 0.41 |
| 1:I:262:LEU:HD12 | 1:I:310:LEU:HD21 | 2.03 | 0.41 |
| 1:I:386:GLU:HB2 | 1:I:419:PRO:HG2 | 2.02 | 0.41 |
| 1:J:211:GLY:CA | 1:J:298:ALA:HB1 | 2.51 | 0.41 |
| 1:J:268:ILE:HG21 | 1:J:268:ILE:HD13 | 1.71 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:8:LEU:HB3 | 1:K:9:PRO:HD2 | 2.02 | 0.41 |
| 1:K:152:LYS:NZ | 1:K:462:CYS:CB | 2.84 | 0.41 |
| 1:K:239:ILE:HB | 1:K:307:ILE:CB | 2.47 | 0.41 |
| 1:K:248:LYS:CD | 1:K:275:TYR:CE2 | 3.03 | 0.41 |
| 1:L:69:SER:O | 1:M:9:PRO:CG | 2.68 | 0.41 |
| 1:L:115:VAL:O | 1:L:117:PRO:CD | 2.68 | 0.41 |
| 1:L:158:ILE:HD13 | 1:L:170:LEU:CD2 | 2.51 | 0.41 |
| 1:L:174:ILE:HD13 | 1:L:365:ALA:CB | 2.50 | 0.41 |
| 1:L:192:LEU:HD23 | 1:L:341:LYS:C | 2.41 | 0.41 |
| 1:L:336:GLU:H | 1:L:336:GLU:HG2 | 1.78 | 0.41 |
| 1:L:368:VAL:HB | 1:L:469:PRO:CB | 2.50 | 0.41 |
| 1:L:383:GLY:CA | 1:L:386:GLU:CG | 2.81 | 0.41 |
| 1:M:194:LYS:HB2 | 1:M:294:LYS:HD3 | 2.02 | 0.41 |
| 1:M:212:VAL:CG2 | 1:M:298:ALA:HB2 | 2.47 | 0.41 |
| 1:M:227:VAL:HG12 | 1:M:228:THR:H | 1.86 | 0.41 |
| 1:M:235:LEU:O | 1:M:264:CYS:CA | 2.66 | 0.41 |
| 1:M:326:ILE:HD13 | 1:M:326:ILE:HG21 | 1.83 | 0.41 |
| 1:M:339:HIS:CE1 | 1:M:341:LYS:CG | 3.04 | 0.41 |
| 1:N:9:PRO:HD2 | 1:N:12:MET:HE3 | 2.02 | 0.41 |
| 1:N:26:LEU:O | 1:N:30:ILE:HG13 | 2.21 | 0.41 |
| 1:N:235:LEU:HD21 | 1:N:307:ILE:O | 2.20 | 0.41 |
| 1:N:384:SER:OG | 1:N:441:HIS:CE1 | 2.68 | 0.41 |
| 1:O:8:LEU:HB3 | 1:O:9:PRO:HD3 | 2.02 | 0.41 |
| 1:O:12:MET:CE | 1:O:12:MET:CA | 2.99 | 0.41 |
| 1:O:31:ILE:CG2 | 1:O:65:LEU:CG | 2.99 | 0.41 |
| 1:O:69:SER:OG | 1:P:9:PRO:HB3 | 2.20 | 0.41 |
| 1:O:235:LEU:CG | 1:O:307:ILE:CB | 2.73 | 0.41 |
| 1:O:460:ASP:CG | 1:O:463:GLU:H | 2.23 | 0.41 |
| 1:P:101:GLY:HA2 | 1:P:104:LEU:HD12 | 2.02 | 0.41 |
| 1:P:223:MET:HG2 | 1:P:281:ILE:O | 2.20 | 0.41 |
| 1:P:257:SER:OG | 1:P:312:ALA:N | 2.54 | 0.41 |
| 1:P:265:GLN:OE1 | 1:P:289:LYS:CB | 2.66 | 0.41 |
| 1:P:385:THR:O | 1:P:389:LEU:HG | 2.21 | 0.41 |
| 1:P:438:ARG:HH11 | 1:P:438:ARG:HD3 | 1.46 | 0.41 |
| 1:P:460:ASP:CG | 1:P:463:GLU:H | 2.24 | 0.41 |
| 1:A:210:LYS:CB | 1:A:340:PRO:CG | 2.99 | 0.41 |
| 1:A:219:VAL:CG1 | 1:A:273:GLN:CB | 2.91 | 0.41 |
| 1:A:312:ALA:O | 1:A:313:GLN:HB3 | 2.21 | 0.41 |
| 1:A:366:VAL:HG12 | 1:A:366:VAL:O | 2.20 | 0.41 |
| 1:A:488:LEU:HD12 | 1:A:488:LEU:HA | 1.74 | 0.41 |
| 1:B:123:GLY:HA3 | 1:B:407:ALA:HB3 | 2.01 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:154:ALA:HB1 | 1:B:171:ALA:HA | 2.03 | 0.41 |
| 1:B:212:VAL:HG21 | 1:B:294:LYS:C | 2.41 | 0.41 |
| 1:B:216:LYS:HG3 | 1:B:285:ARG:O | 2.21 | 0.41 |
| 1:B:265:GLN:O | 1:B:266:LYS:HE3 | 2.20 | 0.41 |
| 1:B:289:LYS:CG | 1:B:289:LYS:O | 2.69 | 0.41 |
| 1:B:383:GLY:HA2 | 1:B:386:GLU:CG | 2.51 | 0.41 |
| 1:B:394:ARG:NH2 | 1:B:413:ASP:CG | 2.74 | 0.41 |
| 1:B:401:SER:HB2 | 1:K:435:VAL:CG1 | 2.51 | 0.41 |
| 1:C:15:TYR:O | 1:C:492:ASP:HA | 2.21 | 0.41 |
| 1:C:97:VAL:HG23 | 1:C:97:VAL:H | 1.65 | 0.41 |
| 1:C:208:LEU:HD21 | 1:C:210:LYS:CE | 2.49 | 0.41 |
| 1:C:254:ILE:CG2 | 1:C:281:ILE:CD1 | 2.98 | 0.41 |
| 1:C:352:GLU:HA | 1:C:355:ILE:CG1 | 2.50 | 0.41 |
| 1:C:435:VAL:O | 1:C:435:VAL:CG1 | 2.67 | 0.41 |
| 1:D:36:ARG:CG | 1:D:37:SER:H | 2.32 | 0.41 |
| 1:D:41:PRO:HG2 | 1:D:453:VAL:HG11 | 2.01 | 0.41 |
| 1:D:42:LYS:NZ | 1:D:426:ALA:CA | 2.71 | 0.41 |
| 1:D:223:MET:N | 1:D:277:ALA:HB1 | 2.35 | 0.41 |
| 1:D:368:VAL:CB | 1:D:469:PRO:HG3 | 2.44 | 0.41 |
| 1:D:381:GLY:O | 1:D:461:MET:HG3 | 2.21 | 0.41 |
| 1:E:9:PRO:CB | 1:F:69:SER:HB3 | 2.50 | 0.41 |
| 1:E:42:LYS:CG | 1:E:426:ALA:N | 2.83 | 0.41 |
| 1:E:347:ILE:HG21 | 1:E:358:VAL:HB | 2.02 | 0.41 |
| 1:F:38:THR:HG23 | 1:F:46:LYS:HE2 | 2.02 | 0.41 |
| 1:F:77:MET:HB3 | 1:F:80:GLU:OE1 | 2.21 | 0.41 |
| 1:F:265:GLN:HA | 1:F:287:VAL:O | 2.21 | 0.41 |
| 1:F:352:GLU:O | 1:F:355:ILE:HG13 | 2.20 | 0.41 |
| 1:F:397:ALA:CB | 1:F:408:VAL:HG23 | 2.47 | 0.41 |
| 1:G:15:TYR:CD1 | 1:G:23:MET:SD | 3.14 | 0.41 |
| 1:G:72:HIS:CD2 | 1:G:73:PRO:HD2 | 2.55 | 0.41 |
| 1:G:113:GLN:HE21 | 1:G:113:GLN:HB2 | 1.53 | 0.41 |
| 1:G:130:LYS:HZ3 | 1:G:134:LEU:CD1 | 2.33 | 0.41 |
| 1:G:153:ILE:HG23 | 1:G:153:ILE:HD13 | 1.50 | 0.41 |
| 1:G:418:ILE:HD13 | 1:G:418:ILE:HA | 1.81 | 0.41 |
| 1:G:460:ASP:OD2 | 1:G:463:GLU:CG | 2.69 | 0.41 |
| 1:G:477:ILE:O | 1:G:477:ILE:CG2 | 2.69 | 0.41 |
| 1:H:41:PRO:CG | 1:H:453:VAL:HG11 | 2.51 | 0.41 |
| 1:H:118:THR:HG22 | 1:H:118:THR:O | 2.21 | 0.41 |
| 1:H:138:ILE:CG2 | 1:H:388:GLU:HG2 | 2.51 | 0.41 |
| 1:H:217:GLU:O | 1:H:323:GLU:HG3 | 2.19 | 0.41 |
| 1:H:247:LEU:HD11 | 1:H:272:ALA:HB3 | 1.96 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:H:257:SER:CB | 1:H:311:SER:HA | 2.50 | 0.41 |
| 1:I:68:MET:HE2 | 1:J:12:MET:CE | 2.50 | 0.41 |
| 1:I:70:VAL:HG13 | 1:I:70:VAL:O | 2.21 | 0.41 |
| 1:I:192:LEU:HG | 1:I:342:ALA:CB | 2.47 | 0.41 |
| 1:I:239:ILE:CG2 | 1:I:307:ILE:HG21 | 2.45 | 0.41 |
| 1:I:333:PHE:O | 1:I:334:VAL:HG22 | 2.21 | 0.41 |
| 1:I:428:LEU:HA | 1:I:428:LEU:HD23 | 1.63 | 0.41 |
| 1:J:178:VAL:HG21 | 1:J:366:VAL:CG1 | 2.39 | 0.41 |
| 1:J:195:ILE:HB | 1:J:359:ALA:HB1 | 2.02 | 0.41 |
| 1:J:199:SER:HB2 | 1:J:327:SER:CB | 2.51 | 0.41 |
| 1:J:236:ASN:ND2 | 1:J:289:LYS:NZ | 2.68 | 0.41 |
| 1:J:347:ILE:HG21 | 1:J:355:ILE:CG2 | 2.46 | 0.41 |
| 1:J:389:LEU:CD1 | 1:J:415:LEU:HD13 | 2.49 | 0.41 |
| 1:J:464:ASN:HB2 | 1:J:466:VAL:HG22 | 2.03 | 0.41 |
| 1:K:39:LEU:HG | 1:K:40:GLY:H | 1.85 | 0.41 |
| 1:K:77:MET:HE2 | 1:K:487:LEU:HD11 | 2.02 | 0.41 |
| 1:K:119:ILE:HG23 | 1:K:403:ARG:CA | 2.51 | 0.41 |
| 1:K:203:ILE:HD13 | 1:K:203:ILE:HG23 | 1.68 | 0.41 |
| 1:K:377:ARG:C | 1:K:378:ILE:HG23 | 2.40 | 0.41 |
| 1:K:380:SER:HB2 | 1:K:385:THR:OG1 | 2.20 | 0.41 |
| 1:L:9:PRO:O | 1:L:12:MET:HB2 | 2.20 | 0.41 |
| 1:L:66:ARG:N | 1:L:79:ILE:HD13 | 2.36 | 0.41 |
| 1:L:97:VAL:O | 1:L:100:ALA:HB3 | 2.20 | 0.41 |
| 1:L:158:ILE:HG22 | 1:L:164:GLU:HA | 2.01 | 0.41 |
| 1:L:203:ILE:H | 1:L:203:ILE:HG12 | 1.20 | 0.41 |
| 1:L:239:ILE:HG21 | 1:L:239:ILE:HD13 | 1.90 | 0.41 |
| 1:L:351:THR:CG2 | 1:L:352:GLU:N | 2.83 | 0.41 |
| 1:L:356:GLU:O | 1:L:359:ALA:HB3 | 2.21 | 0.41 |
| 1:M:77:MET:CE | 1:M:486:MET:CE | 2.98 | 0.41 |
| 1:M:447:LYS:HB2 | 1:M:462:CYS:CB | 2.44 | 0.41 |
| 1:M:474:THR:O | 1:M:478:GLN:HG3 | 2.21 | 0.41 |
| 1:N:47:MET:CE | 1:O:493:VAL:CG1 | 2.99 | 0.41 |
| 1:N:191:ASP:O | 1:N:294:LYS:HE2 | 2.21 | 0.41 |
| 1:N:377:ARG:CD | 1:N:470:LEU:HD11 | 2.40 | 0.41 |
| 1:N:377:ARG:CB | 1:N:470:LEU:CD1 | 2.97 | 0.41 |
| 1:N:377:ARG:HB3 | 1:N:470:LEU:CD1 | 2.51 | 0.41 |
| 1:N:431:ILE:O | 1:N:431:ILE:HG12 | 2.21 | 0.41 |
| 1:N:446:ASN:OD1 | 1:N:447:LYS:N | 2.54 | 0.41 |
| 1:O:40:GLY:HA3 | 1:O:41:PRO:HD2 | 1.68 | 0.41 |
| 1:O:152:LYS:HE2 | 1:O:462:CYS:SG | 2.61 | 0.41 |
| 1:O:158:ILE:HD12 | 1:O:167:LYS:HB2 | 2.02 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:O:368:VAL:HB | 1:O:469:PRO:CB | 2.50 | 0.41 |
| 1:O:368:VAL:CG2 | 1:O:469:PRO:CG | 2.99 | 0.41 |
| 1:O:406:LEU:HD12 | 1:O:406:LEU:H | 1.86 | 0.41 |
| 1:P:166:ALA:O | 1:P:170:LEU:HB2 | 2.21 | 0.41 |
| 1:P:206:THR:CB | 1:P:347:ILE:CG2 | 2.97 | 0.41 |
| 1:P:284:ALA:HB2 | 1:P:332:ILE:CD1 | 2.51 | 0.41 |
| 1:P:435:VAL:HG13 | 1:P:438:ARG:HH22 | 1.84 | 0.41 |
| 1:P:452:ASN:HD21 | 1:P:454:PHE:HB2 | 1.86 | 0.41 |
| 1:A:152:LYS:NZ | 1:A:462:CYS:C | 2.74 | 0.41 |
| 1:A:208:LEU:HD21 | 1:A:210:LYS:CE | 2.50 | 0.41 |
| 1:A:312:ALA:O | 1:A:313:GLN:CB | 2.69 | 0.41 |
| 1:A:389:LEU:HD12 | 1:A:415:LEU:HD23 | 2.01 | 0.41 |
| 1:B:13:LYS:HE3 | 1:B:15:TYR:OH | 2.21 | 0.41 |
| 1:B:130:LYS:CD | 1:B:393:LEU:CD2 | 2.87 | 0.41 |
| 1:B:206:THR:CG2 | 1:B:347:ILE:CG2 | 2.98 | 0.41 |
| 1:C:158:ILE:O | 1:C:164:GLU:HA | 2.20 | 0.41 |
| 1:C:163:ALA:C | 1:C:165:LYS:H | 2.23 | 0.41 |
| 1:C:178:VAL:HG21 | 1:C:366:VAL:CG1 | 2.46 | 0.41 |
| 1:C:254:ILE:O | 1:C:259:ALA:HB3 | 2.21 | 0.41 |
| 1:C:263:PHE:CE1 | 1:C:332:ILE:HD12 | 2.56 | 0.41 |
| 1:C:352:GLU:HA | 1:C:355:ILE:CD1 | 2.51 | 0.41 |
| 1:C:418:ILE:HG23 | 1:C:418:ILE:HD12 | 1.71 | 0.41 |
| 1:C:468:GLU:CB | 1:C:469:PRO:HD2 | 2.50 | 0.41 |
| 1:D:239:ILE:HG21 | 1:D:268:ILE:HG23 | 2.01 | 0.41 |
| 1:D:377:ARG:HB3 | 1:D:470:LEU:CB | 2.51 | 0.41 |
| 1:D:380:SER:CB | 1:D:384:SER:HB2 | 2.38 | 0.41 |
| 1:E:344:THR:CG2 | 1:E:345:MET:N | 2.84 | 0.41 |
| 1:F:9:PRO:HA | 1:G:69:SER:CA | 2.48 | 0.41 |
| 1:F:31:ILE:HG21 | 1:F:65:LEU:HD22 | 2.01 | 0.41 |
| 1:F:96:ALA:HA | 1:F:480:ALA:HB3 | 2.03 | 0.41 |
| 1:F:116:HIS:CD2 | 1:F:117:PRO:HG2 | 2.56 | 0.41 |
| 1:F:306:ASN:ND2 | 1:F:308:LYS:HD3 | 2.36 | 0.41 |
| 1:G:96:ALA:HB3 | 1:G:97:VAL:HG13 | 2.02 | 0.41 |
| 1:G:198:LYS:HD2 | 1:G:326:ILE:HG23 | 2.03 | 0.41 |
| 1:G:448:CYS:SG | 1:G:460:ASP:CB | 3.08 | 0.41 |
| 1:H:116:HIS:CG | 1:H:117:PRO:HG2 | 2.56 | 0.41 |
| 1:H:138:ILE:HD13 | 1:H:385:THR:CB | 2.50 | 0.41 |
| 1:I:188:VAL:HB | 1:I:370:GLY:HA2 | 2.03 | 0.41 |
| 1:I:268:ILE:HD12 | 1:I:273:GLN:HG2 | 2.02 | 0.41 |
| 1:I:400:ILE:CD1 | 1:I:408:VAL:HG11 | 2.51 | 0.41 |
| 1:J:21:GLN:O | 1:J:25:ILE:CG1 | 2.69 | 0.41 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:J:232:ILE:HD11 | 1:J:321:VAL:HG21 | 2.03 | 0.41 |
| 1:J:368:VAL:CG1 | 1:J:469:PRO:HB3 | 2.51 | 0.41 |
| 1:K:134:LEU:HD22 | 1:K:392:LYS:NZ | 2.36 | 0.41 |
| 1:K:235:LEU:HB3 | 1:K:307:ILE:HG22 | 2.02 | 0.41 |
| 1:L:265:GLN:CG | 1:L:266:LYS:NZ | 2.84 | 0.41 |
| 1:M:68:MET:SD | 1:N:8:LEU:HD22 | 2.61 | 0.41 |
| 1:M:171:ALA:HA | 1:M:174:ILE:HD11 | 2.03 | 0.41 |
| 1:M:210:LYS:O | 1:M:340:PRO:CB | 2.69 | 0.41 |
| 1:M:420:ARG:NH1 | 1:M:420:ARG:C | 2.74 | 0.41 |
| 1:M:460:ASP:OD2 | 1:M:463:GLU:CG | 2.69 | 0.41 |
| 1:N:47:MET:HE2 | 1:O:493:VAL:CG1 | 2.51 | 0.41 |
| 1:N:414:ALA:C | 1:N:416:GLU:H | 2.24 | 0.41 |
| 1:N:428:LEU:HD23 | 1:N:428:LEU:HA | 1.87 | 0.41 |
| 1:O:68:MET:HG3 | 1:P:12:MET:HE3 | 1.99 | 0.41 |
| 1:O:135:LEU:CD2 | 1:O:385:THR:HG21 | 2.51 | 0.41 |
| 1:O:235:LEU:HD13 | 1:O:262:LEU:CD2 | 2.47 | 0.41 |
| 1:O:281:ILE:HD13 | 1:O:281:ILE:HG21 | 1.86 | 0.41 |
| 1:P:77:MET:SD | 1:P:487:LEU:HG | 2.61 | 0.41 |
| 1:P:452:ASN:H | 1:P:459:GLU:HG3 | 1.85 | 0.41 |
| 1:A:116:HIS:CB | 1:A:117:PRO:CD | 2.95 | 0.40 |
| 1:B:12:MET:SD | 1:B:495:ALA:N | 2.94 | 0.40 |
| 1:B:194:LYS:HG2 | 1:B:195:ILE:N | 2.36 | 0.40 |
| 1:B:218:ARG:HB2 | 1:B:323:GLU:OE1 | 2.21 | 0.40 |
| 1:C:98:VAL:C | 1:C:100:ALA:N | 2.74 | 0.40 |
| 1:D:81:VAL:HG11 | 1:D:483:SER:HB3 | 1.93 | 0.40 |
| 1:D:236:ASN:HA | 1:D:265:GLN:CB | 2.45 | 0.40 |
| 1:D:391:MET:SD | 1:D:442:ALA:HB2 | 2.61 | 0.40 |
| 1:E:82:ALA:HB2 | 1:E:97:VAL:CG2 | 2.37 | 0.40 |
| 1:E:150:LEU:HB3 | 1:E:175:VAL:HG21 | 2.03 | 0.40 |
| 1:E:379:VAL:CG1 | 1:E:470:LEU:HD21 | 2.51 | 0.40 |
| 1:F:192:LEU:CG | 1:F:342:ALA:CB | 2.88 | 0.40 |
| 1:F:438:ARG:NH1 | 1:O:405:GLN:HE22 | 2.19 | 0.40 |
| 1:G:150:LEU:CD2 | 1:G:175:VAL:CG1 | 2.77 | 0.40 |
| 1:G:192:LEU:O | 1:G:342:ALA:HB1 | 2.21 | 0.40 |
| 1:G:215:ASP:OD1 | 1:G:331:MET:HG2 | 2.22 | 0.40 |
| 1:H:98:VAL:C | 1:H:100:ALA:H | 2.24 | 0.40 |
| 1:H:111:LEU:HD22 | 1:H:117:PRO:HB3 | 2.03 | 0.40 |
| 1:H:211:GLY:HA2 | 1:H:337:CYS:SG | 2.60 | 0.40 |
| 1:H:435:VAL:O | 1:H:435:VAL:HG12 | 2.21 | 0.40 |
| 1:I:216:LYS:O | 1:I:332:ILE:HD12 | 2.21 | 0.40 |
| 1:I:254:ILE:HG21 | 1:I:262:LEU:CD1 | 2.51 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:I:368:VAL:HG11 | 1:I:469:PRO:CG | 2.49 | 0.40 |
| 1:I:437:VAL:HG13 | 1:I:449:ALA:O | 2.21 | 0.40 |
| 1:I:444:ASN:HD22 | 1:I:444:ASN:HA | 1.59 | 0.40 |
| 1:I:489:ARG:HE | 1:P:44:MET:HE1 | 1.84 | 0.40 |
| 1:J:115:VAL:HG11 | 1:J:403:ARG:HD2 | 2.02 | 0.40 |
| 1:J:190:LYS:HZ1 | 1:J:367:GLY:HA2 | 1.85 | 0.40 |
| 1:J:219:VAL:HG11 | 1:J:223:MET:HE1 | 2.02 | 0.40 |
| 1:K:254:ILE:CD1 | 1:K:276:LEU:HD11 | 2.51 | 0.40 |
| 1:K:371:CYS:HB3 | 1:K:471:ARG:HD2 | 2.02 | 0.40 |
| 1:L:12:MET:CE | 1:L:494:ILE:C | 2.86 | 0.40 |
| 1:L:325:LYS:HG3 | 1:L:330:SER:OG | 2.20 | 0.40 |
| 1:L:377:ARG:C | 1:L:470:LEU:HD22 | 2.41 | 0.40 |
| 1:M:130:LYS:HZ1 | 1:M:396:TYR:HB2 | 1.83 | 0.40 |
| 1:M:435:VAL:O | 1:M:435:VAL:CG1 | 2.67 | 0.40 |
| 1:M:460:ASP:OD1 | 1:M:463:GLU:N | 2.54 | 0.40 |
| 1:N:122:LYS:O | 1:N:404:GLU:CG | 2.67 | 0.40 |
| 1:N:146:ASP:OD2 | 1:N:149:ILE:CD1 | 2.62 | 0.40 |
| 1:N:178:VAL:HG13 | 1:N:181:VAL:HG22 | 2.03 | 0.40 |
| 1:N:233:ALA:CA | 1:N:315:LEU:CG | 2.99 | 0.40 |
| 1:O:70:VAL:CG2 | 1:O:76:LYS:CG | 2.97 | 0.40 |
| 1:O:214:VAL:HG11 | 1:O:291:ASP:CB | 2.43 | 0.40 |
| 1:O:276:LEU:HB3 | 1:O:281:ILE:HD12 | 2.02 | 0.40 |
| 1:P:63:THR:O | 1:P:63:THR:HG22 | 2.22 | 0.40 |
| 1:P:81:VAL:CG2 | 1:P:483:SER:OG | 2.69 | 0.40 |
| 1:P:113:GLN:NE2 | 1:P:113:GLN:C | 2.67 | 0.40 |
| 1:P:113:GLN:O | 1:P:114:ASN:HB2 | 2.21 | 0.40 |
| 1:P:158:ILE:CD1 | 1:P:170:LEU:CB | 2.99 | 0.40 |
| 1:P:209:ILE:O | 1:P:211:GLY:N | 2.54 | 0.40 |
| 1:P:213:LEU:CD1 | 1:P:346:LEU:CD1 | 2.96 | 0.40 |
| 1:P:391:MET:CE | 1:P:438:ARG:CB | 2.84 | 0.40 |
| 1:A:166:ALA:O | 1:A:170:LEU:HB2 | 2.21 | 0.40 |
| 1:A:178:VAL:HG22 | 1:A:193:ILE:HD13 | 2.00 | 0.40 |
| 1:A:212:VAL:CB | 1:A:298:ALA:HB2 | 2.51 | 0.40 |
| 1:A:223:MET:HG3 | 1:A:277:ALA:CB | 2.51 | 0.40 |
| 1:B:178:VAL:CG2 | 1:B:366:VAL:CG1 | 2.97 | 0.40 |
| 1:B:178:VAL:HG13 | 1:B:188:VAL:HG11 | 1.96 | 0.40 |
| 1:B:236:ASN:O | 1:B:266:LYS:HG2 | 2.22 | 0.40 |
| 1:C:158:ILE:HD13 | 1:C:170:LEU:HB3 | 1.97 | 0.40 |
| 1:C:307:ILE:HG13 | 1:C:307:ILE:O | 2.22 | 0.40 |
| 1:C:389:LEU:CD1 | 1:C:415:LEU:HD13 | 2.51 | 0.40 |
| 1:C:433:ILE:O | 1:C:433:ILE:HG22 | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:214:VAL:CG1 | 1:D:291:ASP:HB3 | 2.52 | 0.40 |
| 1:E:8:LEU:HD23 | 1:F:68:MET:SD | 2.60 | 0.40 |
| 1:E:116:HIS:CE1 | 1:E:117:PRO:CG | 3.05 | 0.40 |
| 1:E:124:TYR:CZ | 1:E:407:ALA:HA | 2.56 | 0.40 |
| 1:E:223:MET:HB3 | 1:E:282:VAL:HA | 2.03 | 0.40 |
| 1:E:254:ILE:HD11 | 1:E:307:ILE:CD1 | 2.50 | 0.40 |
| 1:E:281:ILE:HD13 | 1:E:281:ILE:HG23 | 1.83 | 0.40 |
| 1:E:371:CYS:SG | 1:E:471:ARG:HB2 | 2.61 | 0.40 |
| 1:E:435:VAL:HG11 | 1:N:401:SER:HB2 | 2.03 | 0.40 |
| 1:E:486:MET:CG | 1:E:487:LEU:N | 2.78 | 0.40 |
| 1:F:9:PRO:HG2 | 1:F:12:MET:SD | 2.61 | 0.40 |
| 1:F:211:GLY:C | 1:F:298:ALA:HB1 | 2.41 | 0.40 |
| 1:F:312:ALA:HA | 1:F:315:LEU:HB2 | 2.03 | 0.40 |
| 1:G:122:LYS:HB3 | 1:G:404:GLU:CG | 2.52 | 0.40 |
| 1:G:264:CYS:SG | 1:G:268:ILE:HD11 | 2.61 | 0.40 |
| 1:H:24:ASN:HD22 | 1:H:24:ASN:HA | 1.11 | 0.40 |
| 1:H:158:ILE:HB | 1:H:361:ALA:HB1 | 2.03 | 0.40 |
| 1:H:218:ARG:HG3 | 1:H:323:GLU:HG3 | 2.02 | 0.40 |
| 1:H:223:MET:CG | 1:H:277:ALA:CB | 2.97 | 0.40 |
| 1:H:234:LEU:H | 1:H:315:LEU:HD21 | 1.84 | 0.40 |
| 1:I:35:VAL:HG23 | 1:I:38:THR:OG1 | 2.21 | 0.40 |
| 1:I:117:PRO:C | 1:I:120:VAL:HG12 | 2.41 | 0.40 |
| 1:I:136:LYS:HB2 | 1:I:136:LYS:HE2 | 1.78 | 0.40 |
| 1:I:468:GLU:HB2 | 1:I:469:PRO:HD2 | 2.01 | 0.40 |
| 1:J:25:ILE:HG21 | 1:J:108:GLU:OE2 | 2.22 | 0.40 |
| 1:J:82:ALA:HB1 | 1:J:93:THR:HG23 | 1.89 | 0.40 |
| 1:L:44:MET:HE2 | 1:L:44:MET:HA | 2.02 | 0.40 |
| 1:L:68:MET:HG3 | 1:M:494:ILE:HD12 | 2.03 | 0.40 |
| 1:L:276:LEU:O | 1:L:281:ILE:HB | 2.20 | 0.40 |
| 1:M:135:LEU:HD22 | 1:M:473:LYS:HG3 | 2.02 | 0.40 |
| 1:N:120:VAL:CG1 | 1:N:121:VAL:N | 2.85 | 0.40 |
| 1:N:192:LEU:HD23 | 1:N:341:LYS:HB2 | 2.04 | 0.40 |
| 1:N:466:VAL:HG23 | 1:N:466:VAL:O | 2.22 | 0.40 |
| 1:O:152:LYS:HE3 | 1:O:462:CYS:HA | 2.03 | 0.40 |
| 1:O:216:LYS:CA | 1:O:332:ILE:CD1 | 2.95 | 0.40 |
| 1:O:434:LEU:H | 1:O:434:LEU:HD22 | 1.86 | 0.40 |
| 1:P:162:GLY:O | 1:P:163:ALA:CB | 2.69 | 0.40 |
| 1:P:223:MET:HB3 | 1:P:282:VAL:HA | 2.02 | 0.40 |
| 1:P:477:ILE:HG21 | 1:P:477:ILE:HD12 | 1.78 | 0.40 |
| 1:A:73:PRO:HA | 1:A:76:LYS:CG | 2.49 | 0.40 |
| 1:A:437:VAL:CB | 1:A:458:VAL:HG13 | 2.50 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:B:31:ILE:HG21 | 1:B:65:LEU:CD2 | 2.34 | 0.40 |
| 1:B:96:ALA:CA | 1:B:480:ALA:CB | 3.00 | 0.40 |
| 1:B:105:ARG:HH12 | 1:B:106:LYS:CD | 2.28 | 0.40 |
| 1:B:161:LYS:C | 1:B:163:ALA:H | 2.25 | 0.40 |
| 1:B:460:ASP:CG | 1:B:463:GLU:N | 2.73 | 0.40 |
| 1:C:14:ARG:HG3 | 1:C:494:ILE:HG12 | 2.03 | 0.40 |
| 1:C:17:GLY:C | 1:C:21:GLN:CD | 2.80 | 0.40 |
| 1:C:89:VAL:O | 1:C:89:VAL:HG23 | 2.14 | 0.40 |
| 1:C:134:LEU:HD22 | 1:C:392:LYS:HZ2 | 1.86 | 0.40 |
| 1:C:235:LEU:CG | 1:C:307:ILE:HG13 | 2.51 | 0.40 |
| 1:C:332:ILE:HG21 | 1:C:332:ILE:HD13 | 1.63 | 0.40 |
| 1:C:464:ASN:HB2 | 1:C:466:VAL:HG22 | 2.02 | 0.40 |
| 1:D:77:MET:HE2 | 1:D:77:MET:HB3 | 1.46 | 0.40 |
| 1:D:120:VAL:O | 1:D:124:TYR:CD2 | 2.74 | 0.40 |
| 1:D:235:LEU:HD22 | 1:D:307:ILE:HA | 2.03 | 0.40 |
| 1:D:379:VAL:CG2 | 1:D:380:SER:N | 2.82 | 0.40 |
| 1:D:420:ARG:HG3 | 1:D:430:ALA:HB1 | 2.03 | 0.40 |
| 1:D:431:ILE:O | 1:D:435:VAL:HG23 | 2.21 | 0.40 |
| 1:E:174:ILE:HD12 | 1:E:365:ALA:CB | 2.51 | 0.40 |
| 1:E:289:LYS:HB2 | 1:E:292:MET:HB3 | 2.04 | 0.40 |
| 1:E:461:MET:SD | 1:E:466:VAL:CG2 | 3.09 | 0.40 |
| 1:F:72:HIS:CD2 | 1:F:73:PRO:HD2 | 2.46 | 0.40 |
| 1:F:142:VAL:HG21 | 1:F:149:ILE:CG2 | 2.37 | 0.40 |
| 1:F:304:ILE:HD11 | 1:F:310:LEU:HA | 2.03 | 0.40 |
| 1:F:345:MET:HE3 | 1:F:345:MET:HB3 | 1.79 | 0.40 |
| 1:F:428:LEU:HD13 | 1:F:428:LEU:HA | 1.56 | 0.40 |
| 1:F:494:ILE:HD13 | 1:F:494:ILE:HG21 | 1.65 | 0.40 |
| 1:G:38:THR:HG23 | 1:G:44:MET:O | 2.22 | 0.40 |
| 1:G:196:GLU:CG | 1:G:331:MET:CE | 2.99 | 0.40 |
| 1:H:31:ILE:CG2 | 1:H:65:LEU:HD21 | 2.51 | 0.40 |
| 1:H:235:LEU:HG | 1:H:307:ILE:HD12 | 2.03 | 0.40 |
| 1:H:307:ILE:O | 1:H:307:ILE:CD1 | 2.62 | 0.40 |
| 1:H:381:GLY:C | 1:H:383:GLY:H | 2.24 | 0.40 |
| 1:H:435:VAL:HG13 | 1:H:438:ARG:NH2 | 2.36 | 0.40 |
| 1:I:23:MET:HE1 | 1:I:72:HIS:HE1 | 1.86 | 0.40 |
| 1:I:68:MET:CB | 1:J:8:LEU:HA | 2.51 | 0.40 |
| 1:I:255:LYS:HD3 | 1:I:279:GLU:CG | 2.51 | 0.40 |
| 1:I:464:ASN:HB2 | 1:I:466:VAL:CG2 | 2.48 | 0.40 |
| 1:J:192:LEU:O | 1:J:342:ALA:HA | 2.21 | 0.40 |
| 1:K:8:LEU:HD13 | 1:K:494:ILE:HG21 | 2.01 | 0.40 |
| 1:K:143:GLY:O | 1:K:149:ILE:HD11 | 2.22 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:K:152:LYS:HD3 | 1:K:465:GLY:HA2 | 2.04 | 0.40 |
| 1:K:182:VAL:HG21 | 1:K:188:VAL:HG23 | 2.02 | 0.40 |
| 1:K:223:MET:HE2 | 1:K:276:LEU:HB3 | 1.98 | 0.40 |
| 1:K:235:LEU:CD1 | 1:K:310:LEU:HG | 2.51 | 0.40 |
| 1:L:134:LEU:HD22 | 1:L:392:LYS:CD | 2.51 | 0.40 |
| 1:L:448:CYS:O | 1:L:449:ALA:CB | 2.67 | 0.40 |
| 1:M:8:LEU:CD2 | 1:M:494:ILE:CD1 | 2.99 | 0.40 |
| 1:M:141:GLU:O | 1:M:142:VAL:CG2 | 2.69 | 0.40 |
| 1:M:198:LYS:CB | 1:M:326:ILE:HD13 | 2.50 | 0.40 |
| 1:M:333:PHE:HE2 | 1:M:346:LEU:HD12 | 1.86 | 0.40 |
| 1:M:347:ILE:HG21 | 1:M:358:VAL:HG11 | 2.02 | 0.40 |
| 1:N:23:MET:HE3 | 1:N:72:HIS:CE1 | 2.56 | 0.40 |
| 1:N:163:ALA:C | 1:N:165:LYS:N | 2.74 | 0.40 |
| 1:N:169:LYS:HG2 | 1:N:204:ASP:HB3 | 2.03 | 0.40 |
| 1:N:177:ALA:O | 1:N:181:VAL:HG13 | 2.22 | 0.40 |
| 1:O:198:LYS:C | 1:O:355:ILE:CD1 | 2.89 | 0.40 |
| 1:O:348:ARG:HH11 | 1:O:348:ARG:HD2 | 1.31 | 0.40 |
| 1:O:401:SER:HB2 | 1:O:402:GLY:H | 1.65 | 0.40 |
| 1:P:24:ASN:HD22 | 1:P:24:ASN:HA | 1.59 | 0.40 |
| 1:P:153:ILE:HD11 | 1:P:372:THR:HG21 | 2.04 | 0.40 |
| 1:P:255:LYS:CD | 1:P:279:GLU:HG2 | 2.51 | 0.40 |
| 1:P:281:ILE:HG21 | 1:P:281:ILE:HD13 | 1.61 | 0.40 |
| 1:P:285:ARG:HB2 | 1:P:286:ARG:H | 1.48 | 0.40 |
| 1:P:314:ASP:C | 1:P:315:LEU:HD23 | 2.42 | 0.40 |
| 1:P:358:VAL:O | 1:P:362:VAL:HG12 | 2.21 | 0.40 |
| 1:P:441:HIS:NE2 | 1:P:446:ASN:HA | 2.36 | 0.40 |
| 1:A:34:THR:HA | 1:H:14:ARG:CZ | 2.47 | 0.40 |
| 1:A:166:ALA:CB | 1:A:170:LEU:CD2 | 2.92 | 0.40 |
| 1:A:348:ARG:HH11 | 1:A:348:ARG:HD2 | 1.50 | 0.40 |
| 1:A:436:LYS:HB3 | 1:A:458:VAL:HG22 | 2.03 | 0.40 |
| 1:B:93:THR:O | 1:B:97:VAL:CG2 | 2.69 | 0.40 |
| 1:B:115:VAL:HB | 1:B:403:ARG:CD | 2.51 | 0.40 |
| 1:B:115:VAL:HG12 | 1:B:403:ARG:HE | 1.84 | 0.40 |
| 1:B:211:GLY:HA2 | 1:B:337:CYS:SG | 2.61 | 0.40 |
| 1:B:219:VAL:HG12 | 1:B:220:SER:H | 1.79 | 0.40 |
| 1:C:36:ARG:HG3 | 1:C:37:SER:OG | 2.21 | 0.40 |
| 1:C:138:ILE:O | 1:C:446:ASN:HB2 | 2.21 | 0.40 |
| 1:C:156:THR:OG1 | 1:C:467:VAL:N | 2.55 | 0.40 |
| 1:C:314:ASP:C | 1:C:315:LEU:HG | 2.42 | 0.40 |
| 1:C:468:GLU:H | 1:C:468:GLU:HG2 | 1.79 | 0.40 |
| 1:C:473:LYS:O | 1:C:477:ILE:HG13 | 2.21 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:D:46:LYS:HD3 | 1:D:64:ILE:CD1 | 2.51 | 0.40 |
| 1:D:181:VAL:CG2 | 1:D:182:VAL:N | 2.84 | 0.40 |
| 1:D:192:LEU:CB | 1:D:342:ALA:HB2 | 2.50 | 0.40 |
| 1:E:15:TYR:HB3 | 1:E:19:ASP:C | 2.41 | 0.40 |
| 1:E:96:ALA:HA | 1:E:480:ALA:HB3 | 2.02 | 0.40 |
| 1:E:138:ILE:HG12 | 1:E:385:THR:HG23 | 2.02 | 0.40 |
| 1:E:211:GLY:O | 1:E:298:ALA:HB2 | 2.22 | 0.40 |
| 1:E:222:GLN:HB3 | 1:E:277:ALA:HB3 | 2.02 | 0.40 |
| 1:E:402:GLY:O | 1:E:406:LEU:HD11 | 2.22 | 0.40 |
| 1:F:146:ASP:HB3 | 1:F:149:ILE:CG1 | 2.48 | 0.40 |
| 1:F:459:GLU:OE2 | 1:F:461:MET:CE | 2.70 | 0.40 |
| 1:G:12:MET:CB | 1:G:494:ILE:CG2 | 2.77 | 0.40 |
| 1:G:64:ILE:HG21 | 1:G:64:ILE:HD13 | 1.67 | 0.40 |
| 1:G:82:ALA:HB1 | 1:G:93:THR:HG22 | 2.03 | 0.40 |
| 1:G:134:LEU:HD11 | 1:G:393:LEU:CG | 2.50 | 0.40 |
| 1:G:151:THR:HA | 1:G:154:ALA:HB3 | 2.02 | 0.40 |
| 1:G:198:LYS:HD3 | 1:G:198:LYS:HA | 1.93 | 0.40 |
| 1:I:64:ILE:HG23 | 1:I:65:LEU:HD22 | 2.02 | 0.40 |
| 1:I:70:VAL:N | 1:J:8:LEU:N | 2.70 | 0.40 |
| 1:I:102:GLU:C | 1:I:104:LEU:H | 2.25 | 0.40 |
| 1:I:206:THR:HB | 1:I:347:ILE:HA | 2.03 | 0.40 |
| 1:I:264:CYS:C | 1:I:266:LYS:H | 2.24 | 0.40 |
| 1:J:135:LEU:HD13 | 1:J:138:ILE:HD11 | 2.03 | 0.40 |
| 1:J:152:LYS:HG2 | 1:J:465:GLY:C | 2.41 | 0.40 |
| 1:J:218:ARG:NH1 | 1:J:282:VAL:HG21 | 2.36 | 0.40 |
| 1:J:225:LYS:O | 1:J:226:LYS:CB | 2.69 | 0.40 |
| 1:J:368:VAL:CB | 1:J:469:PRO:CB | 2.97 | 0.40 |
| 1:J:422:LEU:HA | 1:J:422:LEU:HD23 | 1.88 | 0.40 |
| 1:K:276:LEU:HD12 | 1:K:281:ILE:CD1 | 2.49 | 0.40 |
| 1:K:375:ASP:CG | 1:K:377:ARG:HH22 | 2.25 | 0.40 |
| 1:L:351:THR:C | 1:L:353:HIS:H | 2.25 | 0.40 |
| 1:M:206:THR:OG1 | 1:M:347:ILE:HG23 | 2.21 | 0.40 |
| 1:N:212:VAL:HG21 | 1:N:294:LYS:CB | 2.51 | 0.40 |
| 1:N:254:ILE:HD12 | 1:N:276:LEU:HD21 | 2.03 | 0.40 |
| 1:N:287:VAL:CG1 | 1:N:291:ASP:HB2 | 2.50 | 0.40 |
| 1:O:190:LYS:HZ3 | 1:O:367:GLY:CA | 2.34 | 0.40 |
| 1:O:209:ILE:HD13 | 1:O:209:ILE:HG21 | 1.82 | 0.40 |
| 1:O:241:GLU:HG3 | 1:O:246:MET:HG3 | 2.02 | 0.40 |
| 1:P:31:ILE:CG2 | 1:P:65:LEU:CD1 | 2.99 | 0.40 |
| 1:P:135:LEU:HD21 | 1:P:389:LEU:HD21 | 2.03 | 0.40 |
| 1:P:214:VAL:CG1 | 1:P:291:ASP:OD2 | 2.67 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:P:251:VAL:CG1 | 1:P:276:LEU:CG | 2.87 | 0.40 |
| 1:A:15:TYR:O | 1:A:19:ASP:CB | 2.63 | 0.40 |
| 1:A:42:LYS:CE | 1:A:426:ALA:CA | 2.70 | 0.40 |
| 1:A:122:LYS:HB3 | 1:A:404:GLU:CD | 2.41 | 0.40 |
| 1:A:198:LYS:N | 1:A:355:ILE:HD13 | 2.36 | 0.40 |
| 1:A:452:ASN:OD1 | 1:A:454:PHE:CD2 | 2.75 | 0.40 |
| 1:B:254:ILE:HG21 | 1:B:262:LEU:HD13 | 2.03 | 0.40 |
| 1:B:326:ILE:HD11 | 1:B:348:ARG:CZ | 2.51 | 0.40 |
| 1:B:391:MET:HE3 | 1:B:438:ARG:HA | 1.98 | 0.40 |
| 1:C:116:HIS:CD2 | 1:D:425:ASN:O | 2.75 | 0.40 |
| 1:C:250:MET:HE1 | 1:C:307:ILE:CG2 | 2.43 | 0.40 |
| 1:C:274:HIS:ND1 | 1:C:274:HIS:C | 2.75 | 0.40 |
| 1:C:431:ILE:HD11 | 1:L:402:GLY:C | 2.42 | 0.40 |
| 1:D:110:LEU:C | 1:D:112:ASP:N | 2.73 | 0.40 |
| 1:D:119:ILE:HG23 | 1:D:403:ARG:HB2 | 1.98 | 0.40 |
| 1:D:212:VAL:CG2 | 1:D:298:ALA:HB2 | 2.51 | 0.40 |
| 1:D:218:ARG:HG3 | 1:D:323:GLU:HB2 | 2.02 | 0.40 |
| 1:D:307:ILE:HD12 | 1:D:308:LYS:CA | 2.43 | 0.40 |
| 1:E:48:LEU:HD13 | 1:E:68:MET:HE3 | 2.03 | 0.40 |
| 1:E:49:VAL:HG13 | 1:E:54:ASP:O | 2.21 | 0.40 |
| 1:E:435:VAL:HG22 | 1:N:405:GLN:HE22 | 1.86 | 0.40 |
| 1:F:21:GLN:C | 1:F:25:ILE:HD12 | 2.40 | 0.40 |
| 1:F:234:LEU:HD11 | 1:F:296:ALA:CA | 2.51 | 0.40 |
| 1:G:159:THR:HA | 1:G:164:GLU:HB2 | 2.03 | 0.40 |
| 1:G:236:ASN:O | 1:G:237:CYS:CB | 2.69 | 0.40 |
| 1:G:406:LEU:CD2 | 1:P:431:ILE:HG13 | 2.52 | 0.40 |
| 1:G:494:ILE:HB | 1:H:68:MET:CE | 2.51 | 0.40 |
| 1:H:223:MET:HG2 | 1:H:277:ALA:CA | 2.51 | 0.40 |
| 1:H:235:LEU:CD1 | 1:H:307:ILE:CG1 | 3.00 | 0.40 |
| 1:H:396:TYR:CG | 1:H:396:TYR:O | 2.74 | 0.40 |
| 1:H:459:GLU:HG3 | 1:H:460:ASP:N | 2.35 | 0.40 |
| 1:J:130:LYS:HE2 | 1:J:134:LEU:CD2 | 2.49 | 0.40 |
| 1:J:134:LEU:HD13 | 1:J:393:LEU:HG | 2.03 | 0.40 |
| 1:J:163:ALA:HB1 | 1:J:203:ILE:HG21 | 2.03 | 0.40 |
| 1:K:41:PRO:CG | 1:K:453:VAL:HG11 | 2.48 | 0.40 |
| 1:K:372:THR:HG22 | 1:K:377:ARG:O | 2.21 | 0.40 |
| 1:L:31:ILE:HG21 | 1:L:65:LEU:CD2 | 2.51 | 0.40 |
| 1:L:138:ILE:HD12 | 1:L:385:THR:CG2 | 2.45 | 0.40 |
| 1:L:236:ASN:CA | 1:L:265:GLN:HB3 | 2.47 | 0.40 |
| 1:M:36:ARG:HG2 | 1:M:37:SER:H | 1.80 | 0.40 |
| 1:M:135:LEU:CD2 | 1:M:385:THR:HG21 | 2.49 | 0.40 |

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| Atom-1 | Atom-2 | Interatomic distance (Å) | Clash overlap (Å) |
|------------------|------------------|--------------------------|-------------------|
| 1:M:190:LYS:H | 1:M:190:LYS:HG2 | 0.97 | 0.40 |
| 1:M:451:LEU:HD12 | 1:M:451:LEU:N | 2.36 | 0.40 |
| 1:N:120:VAL:O | 1:N:124:TYR:CD1 | 2.74 | 0.40 |
| 1:N:326:ILE:C | 1:N:328:GLY:N | 2.74 | 0.40 |
| 1:N:393:LEU:HD13 | 1:N:393:LEU:HA | 1.98 | 0.40 |
| 1:O:234:LEU:CD2 | 1:O:296:ALA:HB2 | 2.51 | 0.40 |
| 1:O:234:LEU:HB2 | 1:O:315:LEU:HD11 | 2.04 | 0.40 |
| 1:O:235:LEU:CD2 | 1:O:264:CYS:HB3 | 2.52 | 0.40 |
| 1:O:359:ALA:HA | 1:O:362:VAL:HG12 | 2.04 | 0.40 |
| 1:P:215:ASP:O | 1:P:216:LYS:HD3 | 2.22 | 0.40 |

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|---------------|-----------|----------|----------|-------------|---|
| 1 | A | 489/521 (94%) | 345 (71%) | 78 (16%) | 66 (14%) | 0 | 4 |
| 1 | B | 489/521 (94%) | 343 (70%) | 85 (17%) | 61 (12%) | 0 | 5 |
| 1 | C | 489/521 (94%) | 346 (71%) | 68 (14%) | 75 (15%) | 0 | 3 |
| 1 | D | 489/521 (94%) | 339 (69%) | 80 (16%) | 70 (14%) | 0 | 4 |
| 1 | E | 489/521 (94%) | 339 (69%) | 80 (16%) | 70 (14%) | 0 | 4 |
| 1 | F | 489/521 (94%) | 345 (71%) | 74 (15%) | 70 (14%) | 0 | 4 |
| 1 | G | 489/521 (94%) | 347 (71%) | 77 (16%) | 65 (13%) | 0 | 5 |
| 1 | H | 489/521 (94%) | 334 (68%) | 84 (17%) | 71 (14%) | 0 | 4 |
| 1 | I | 489/521 (94%) | 343 (70%) | 78 (16%) | 68 (14%) | 0 | 4 |
| 1 | J | 489/521 (94%) | 350 (72%) | 71 (14%) | 68 (14%) | 0 | 4 |
| 1 | K | 489/521 (94%) | 353 (72%) | 81 (17%) | 55 (11%) | 0 | 7 |
| 1 | L | 489/521 (94%) | 337 (69%) | 89 (18%) | 63 (13%) | 0 | 5 |

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| Mol | Chain | Analysed | Favoured | Allowed | Outliers | Percentiles | |
|-----|-------|-----------------|------------|------------|------------|-------------|---|
| 1 | M | 489/521 (94%) | 352 (72%) | 76 (16%) | 61 (12%) | 0 | 5 |
| 1 | N | 489/521 (94%) | 348 (71%) | 72 (15%) | 69 (14%) | 0 | 4 |
| 1 | O | 489/521 (94%) | 343 (70%) | 73 (15%) | 73 (15%) | 0 | 3 |
| 1 | P | 489/521 (94%) | 339 (69%) | 80 (16%) | 70 (14%) | 0 | 4 |
| All | All | 7824/8336 (94%) | 5503 (70%) | 1246 (16%) | 1075 (14%) | 1 | 4 |

All (1075) Ramachandran outliers are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 8 | LEU |
| 1 | A | 9 | PRO |
| 1 | A | 10 | GLU |
| 1 | A | 16 | MET |
| 1 | A | 62 | VAL |
| 1 | A | 63 | THR |
| 1 | A | 68 | MET |
| 1 | A | 69 | SER |
| 1 | A | 84 | THR |
| 1 | A | 88 | GLU |
| 1 | A | 96 | ALA |
| 1 | A | 111 | LEU |
| 1 | A | 113 | GLN |
| 1 | A | 114 | ASN |
| 1 | A | 163 | ALA |
| 1 | A | 185 | GLU |
| 1 | A | 187 | LYS |
| 1 | A | 201 | ALA |
| 1 | A | 210 | LYS |
| 1 | A | 219 | VAL |
| 1 | A | 226 | LYS |
| 1 | A | 228 | THR |
| 1 | A | 238 | ALA |
| 1 | A | 243 | ALA |
| 1 | A | 245 | GLU |
| 1 | A | 286 | ARG |
| 1 | A | 314 | ASP |
| 1 | A | 319 | GLY |
| 1 | A | 350 | THR |
| 1 | A | 352 | GLU |
| 1 | A | 356 | GLU |
| 1 | A | 386 | GLU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 401 | SER |
| 1 | A | 428 | LEU |
| 1 | A | 446 | ASN |
| 1 | A | 472 | VAL |
| 1 | A | 486 | MET |
| 1 | A | 487 | LEU |
| 1 | A | 489 | ARG |
| 1 | A | 490 | ILE |
| 1 | A | 496 | ALA |
| 1 | B | 10 | GLU |
| 1 | B | 11 | ASN |
| 1 | B | 12 | MET |
| 1 | B | 16 | MET |
| 1 | B | 19 | ASP |
| 1 | B | 69 | SER |
| 1 | B | 97 | VAL |
| 1 | B | 103 | LEU |
| 1 | B | 113 | GLN |
| 1 | B | 114 | ASN |
| 1 | B | 185 | GLU |
| 1 | B | 201 | ALA |
| 1 | B | 210 | LYS |
| 1 | B | 219 | VAL |
| 1 | B | 226 | LYS |
| 1 | B | 228 | THR |
| 1 | B | 238 | ALA |
| 1 | B | 244 | SER |
| 1 | B | 267 | GLY |
| 1 | B | 286 | ARG |
| 1 | B | 289 | LYS |
| 1 | B | 290 | SER |
| 1 | B | 305 | THR |
| 1 | B | 328 | GLY |
| 1 | B | 356 | GLU |
| 1 | B | 365 | ALA |
| 1 | B | 449 | ALA |
| 1 | B | 472 | VAL |
| 1 | B | 490 | ILE |
| 1 | C | 10 | GLU |
| 1 | C | 22 | ARG |
| 1 | C | 23 | MET |
| 1 | C | 42 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 43 | GLY |
| 1 | C | 62 | VAL |
| 1 | C | 68 | MET |
| 1 | C | 69 | SER |
| 1 | C | 70 | VAL |
| 1 | C | 87 | LYS |
| 1 | C | 115 | VAL |
| 1 | C | 118 | THR |
| 1 | C | 136 | LYS |
| 1 | C | 141 | GLU |
| 1 | C | 142 | VAL |
| 1 | C | 163 | ALA |
| 1 | C | 199 | SER |
| 1 | C | 201 | ALA |
| 1 | C | 219 | VAL |
| 1 | C | 222 | GLN |
| 1 | C | 238 | ALA |
| 1 | C | 245 | GLU |
| 1 | C | 246 | MET |
| 1 | C | 267 | GLY |
| 1 | C | 271 | LEU |
| 1 | C | 352 | GLU |
| 1 | C | 368 | VAL |
| 1 | C | 378 | ILE |
| 1 | C | 381 | GLY |
| 1 | C | 400 | ILE |
| 1 | C | 405 | GLN |
| 1 | C | 406 | LEU |
| 1 | C | 415 | LEU |
| 1 | C | 446 | ASN |
| 1 | C | 461 | MET |
| 1 | C | 462 | CYS |
| 1 | C | 489 | ARG |
| 1 | C | 490 | ILE |
| 1 | D | 8 | LEU |
| 1 | D | 9 | PRO |
| 1 | D | 10 | GLU |
| 1 | D | 11 | ASN |
| 1 | D | 27 | ALA |
| 1 | D | 28 | GLY |
| 1 | D | 69 | SER |
| 1 | D | 93 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 94 | THR |
| 1 | D | 120 | VAL |
| 1 | D | 190 | LYS |
| 1 | D | 201 | ALA |
| 1 | D | 210 | LYS |
| 1 | D | 219 | VAL |
| 1 | D | 224 | PRO |
| 1 | D | 228 | THR |
| 1 | D | 243 | ALA |
| 1 | D | 245 | GLU |
| 1 | D | 285 | ARG |
| 1 | D | 286 | ARG |
| 1 | D | 298 | ALA |
| 1 | D | 299 | THR |
| 1 | D | 305 | THR |
| 1 | D | 309 | ASP |
| 1 | D | 310 | LEU |
| 1 | D | 313 | GLN |
| 1 | D | 314 | ASP |
| 1 | D | 341 | LYS |
| 1 | D | 352 | GLU |
| 1 | D | 404 | GLU |
| 1 | D | 406 | LEU |
| 1 | D | 422 | LEU |
| 1 | D | 426 | ALA |
| 1 | D | 466 | VAL |
| 1 | D | 476 | ALA |
| 1 | D | 477 | ILE |
| 1 | E | 23 | MET |
| 1 | E | 30 | ILE |
| 1 | E | 56 | VAL |
| 1 | E | 69 | SER |
| 1 | E | 88 | GLU |
| 1 | E | 94 | THR |
| 1 | E | 111 | LEU |
| 1 | E | 115 | VAL |
| 1 | E | 139 | ALA |
| 1 | E | 163 | ALA |
| 1 | E | 201 | ALA |
| 1 | E | 218 | ARG |
| 1 | E | 219 | VAL |
| 1 | E | 222 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | E | 226 | LYS |
| 1 | E | 238 | ALA |
| 1 | E | 243 | ALA |
| 1 | E | 245 | GLU |
| 1 | E | 259 | ALA |
| 1 | E | 286 | ARG |
| 1 | E | 301 | ALA |
| 1 | E | 307 | ILE |
| 1 | E | 308 | LYS |
| 1 | E | 314 | ASP |
| 1 | E | 315 | LEU |
| 1 | E | 369 | VAL |
| 1 | E | 410 | ALA |
| 1 | E | 417 | VAL |
| 1 | E | 447 | LYS |
| 1 | E | 472 | VAL |
| 1 | E | 478 | GLN |
| 1 | E | 488 | LEU |
| 1 | E | 490 | ILE |
| 1 | F | 10 | GLU |
| 1 | F | 69 | SER |
| 1 | F | 111 | LEU |
| 1 | F | 114 | ASN |
| 1 | F | 115 | VAL |
| 1 | F | 144 | ALA |
| 1 | F | 190 | LYS |
| 1 | F | 199 | SER |
| 1 | F | 204 | ASP |
| 1 | F | 205 | ASP |
| 1 | F | 209 | ILE |
| 1 | F | 210 | LYS |
| 1 | F | 222 | GLN |
| 1 | F | 226 | LYS |
| 1 | F | 243 | ALA |
| 1 | F | 244 | SER |
| 1 | F | 245 | GLU |
| 1 | F | 281 | ILE |
| 1 | F | 311 | SER |
| 1 | F | 314 | ASP |
| 1 | F | 341 | LYS |
| 1 | F | 352 | GLU |
| 1 | F | 380 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 415 | LEU |
| 1 | F | 472 | VAL |
| 1 | F | 489 | ARG |
| 1 | F | 490 | ILE |
| 1 | G | 9 | PRO |
| 1 | G | 11 | ASN |
| 1 | G | 36 | ARG |
| 1 | G | 51 | ASP |
| 1 | G | 69 | SER |
| 1 | G | 70 | VAL |
| 1 | G | 96 | ALA |
| 1 | G | 111 | LEU |
| 1 | G | 120 | VAL |
| 1 | G | 142 | VAL |
| 1 | G | 163 | ALA |
| 1 | G | 164 | GLU |
| 1 | G | 190 | LYS |
| 1 | G | 192 | LEU |
| 1 | G | 201 | ALA |
| 1 | G | 210 | LYS |
| 1 | G | 226 | LYS |
| 1 | G | 245 | GLU |
| 1 | G | 246 | MET |
| 1 | G | 247 | LEU |
| 1 | G | 291 | ASP |
| 1 | G | 305 | THR |
| 1 | G | 306 | ASN |
| 1 | G | 336 | GLU |
| 1 | G | 401 | SER |
| 1 | G | 415 | LEU |
| 1 | G | 429 | ASP |
| 1 | G | 449 | ALA |
| 1 | G | 451 | LEU |
| 1 | G | 465 | GLY |
| 1 | G | 466 | VAL |
| 1 | G | 484 | THR |
| 1 | H | 10 | GLU |
| 1 | H | 13 | LYS |
| 1 | H | 21 | GLN |
| 1 | H | 31 | ILE |
| 1 | H | 51 | ASP |
| 1 | H | 61 | GLY |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | H | 68 | MET |
| 1 | H | 71 | GLU |
| 1 | H | 89 | VAL |
| 1 | H | 139 | ALA |
| 1 | H | 142 | VAL |
| 1 | H | 163 | ALA |
| 1 | H | 164 | GLU |
| 1 | H | 188 | VAL |
| 1 | H | 201 | ALA |
| 1 | H | 204 | ASP |
| 1 | H | 205 | ASP |
| 1 | H | 210 | LYS |
| 1 | H | 224 | PRO |
| 1 | H | 244 | SER |
| 1 | H | 254 | ILE |
| 1 | H | 257 | SER |
| 1 | H | 270 | ASP |
| 1 | H | 298 | ALA |
| 1 | H | 306 | ASN |
| 1 | H | 307 | ILE |
| 1 | H | 308 | LYS |
| 1 | H | 364 | ASP |
| 1 | H | 399 | GLY |
| 1 | H | 415 | LEU |
| 1 | H | 430 | ALA |
| 1 | H | 449 | ALA |
| 1 | I | 8 | LEU |
| 1 | I | 10 | GLU |
| 1 | I | 11 | ASN |
| 1 | I | 45 | ASP |
| 1 | I | 68 | MET |
| 1 | I | 69 | SER |
| 1 | I | 70 | VAL |
| 1 | I | 129 | GLN |
| 1 | I | 130 | LYS |
| 1 | I | 144 | ALA |
| 1 | I | 152 | LYS |
| 1 | I | 167 | LYS |
| 1 | I | 201 | ALA |
| 1 | I | 203 | ILE |
| 1 | I | 210 | LYS |
| 1 | I | 225 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 238 | ALA |
| 1 | I | 243 | ALA |
| 1 | I | 257 | SER |
| 1 | I | 270 | ASP |
| 1 | I | 298 | ALA |
| 1 | I | 299 | THR |
| 1 | I | 305 | THR |
| 1 | I | 314 | ASP |
| 1 | I | 329 | ASP |
| 1 | I | 417 | VAL |
| 1 | I | 422 | LEU |
| 1 | I | 449 | ALA |
| 1 | I | 489 | ARG |
| 1 | J | 31 | ILE |
| 1 | J | 34 | THR |
| 1 | J | 51 | ASP |
| 1 | J | 68 | MET |
| 1 | J | 86 | GLU |
| 1 | J | 120 | VAL |
| 1 | J | 134 | LEU |
| 1 | J | 185 | GLU |
| 1 | J | 192 | LEU |
| 1 | J | 201 | ALA |
| 1 | J | 210 | LYS |
| 1 | J | 219 | VAL |
| 1 | J | 226 | LYS |
| 1 | J | 228 | THR |
| 1 | J | 243 | ALA |
| 1 | J | 245 | GLU |
| 1 | J | 266 | LYS |
| 1 | J | 269 | ASP |
| 1 | J | 286 | ARG |
| 1 | J | 289 | LYS |
| 1 | J | 305 | THR |
| 1 | J | 307 | ILE |
| 1 | J | 337 | CYS |
| 1 | J | 342 | ALA |
| 1 | J | 352 | GLU |
| 1 | J | 417 | VAL |
| 1 | J | 466 | VAL |
| 1 | J | 489 | ARG |
| 1 | K | 13 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 68 | MET |
| 1 | K | 69 | SER |
| 1 | K | 75 | ALA |
| 1 | K | 91 | ASP |
| 1 | K | 94 | THR |
| 1 | K | 117 | PRO |
| 1 | K | 122 | LYS |
| 1 | K | 142 | VAL |
| 1 | K | 201 | ALA |
| 1 | K | 210 | LYS |
| 1 | K | 226 | LYS |
| 1 | K | 243 | ALA |
| 1 | K | 301 | ALA |
| 1 | K | 308 | LYS |
| 1 | K | 313 | GLN |
| 1 | K | 314 | ASP |
| 1 | K | 356 | GLU |
| 1 | K | 383 | GLY |
| 1 | K | 401 | SER |
| 1 | K | 472 | VAL |
| 1 | K | 490 | ILE |
| 1 | L | 10 | GLU |
| 1 | L | 13 | LYS |
| 1 | L | 31 | ILE |
| 1 | L | 37 | SER |
| 1 | L | 69 | SER |
| 1 | L | 91 | ASP |
| 1 | L | 103 | LEU |
| 1 | L | 117 | PRO |
| 1 | L | 118 | THR |
| 1 | L | 120 | VAL |
| 1 | L | 148 | GLU |
| 1 | L | 162 | GLY |
| 1 | L | 164 | GLU |
| 1 | L | 185 | GLU |
| 1 | L | 201 | ALA |
| 1 | L | 210 | LYS |
| 1 | L | 226 | LYS |
| 1 | L | 243 | ALA |
| 1 | L | 245 | GLU |
| 1 | L | 260 | ASN |
| 1 | L | 298 | ALA |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 314 | ASP |
| 1 | L | 342 | ALA |
| 1 | L | 374 | GLU |
| 1 | L | 381 | GLY |
| 1 | L | 405 | GLN |
| 1 | L | 406 | LEU |
| 1 | L | 417 | VAL |
| 1 | L | 462 | CYS |
| 1 | L | 472 | VAL |
| 1 | M | 9 | PRO |
| 1 | M | 19 | ASP |
| 1 | M | 30 | ILE |
| 1 | M | 69 | SER |
| 1 | M | 70 | VAL |
| 1 | M | 80 | GLU |
| 1 | M | 93 | THR |
| 1 | M | 94 | THR |
| 1 | M | 103 | LEU |
| 1 | M | 115 | VAL |
| 1 | M | 164 | GLU |
| 1 | M | 191 | ASP |
| 1 | M | 201 | ALA |
| 1 | M | 219 | VAL |
| 1 | M | 226 | LYS |
| 1 | M | 243 | ALA |
| 1 | M | 245 | GLU |
| 1 | M | 298 | ALA |
| 1 | M | 305 | THR |
| 1 | M | 314 | ASP |
| 1 | M | 336 | GLU |
| 1 | M | 368 | VAL |
| 1 | M | 381 | GLY |
| 1 | M | 384 | SER |
| 1 | M | 401 | SER |
| 1 | M | 447 | LYS |
| 1 | M | 449 | ALA |
| 1 | M | 466 | VAL |
| 1 | M | 496 | ALA |
| 1 | N | 10 | GLU |
| 1 | N | 30 | ILE |
| 1 | N | 31 | ILE |
| 1 | N | 34 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | N | 60 | ASP |
| 1 | N | 68 | MET |
| 1 | N | 69 | SER |
| 1 | N | 108 | GLU |
| 1 | N | 109 | GLU |
| 1 | N | 133 | GLU |
| 1 | N | 141 | GLU |
| 1 | N | 142 | VAL |
| 1 | N | 144 | ALA |
| 1 | N | 158 | ILE |
| 1 | N | 181 | VAL |
| 1 | N | 185 | GLU |
| 1 | N | 201 | ALA |
| 1 | N | 205 | ASP |
| 1 | N | 218 | ARG |
| 1 | N | 224 | PRO |
| 1 | N | 226 | LYS |
| 1 | N | 228 | THR |
| 1 | N | 244 | SER |
| 1 | N | 267 | GLY |
| 1 | N | 301 | ALA |
| 1 | N | 307 | ILE |
| 1 | N | 314 | ASP |
| 1 | N | 383 | GLY |
| 1 | N | 426 | ALA |
| 1 | N | 430 | ALA |
| 1 | N | 447 | LYS |
| 1 | N | 466 | VAL |
| 1 | N | 487 | LEU |
| 1 | O | 19 | ASP |
| 1 | O | 30 | ILE |
| 1 | O | 51 | ASP |
| 1 | O | 69 | SER |
| 1 | O | 71 | GLU |
| 1 | O | 96 | ALA |
| 1 | O | 109 | GLU |
| 1 | O | 131 | ALA |
| 1 | O | 143 | GLY |
| 1 | O | 210 | LYS |
| 1 | O | 219 | VAL |
| 1 | O | 243 | ALA |
| 1 | O | 257 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 270 | ASP |
| 1 | O | 276 | LEU |
| 1 | O | 286 | ARG |
| 1 | O | 296 | ALA |
| 1 | O | 299 | THR |
| 1 | O | 308 | LYS |
| 1 | O | 404 | GLU |
| 1 | O | 426 | ALA |
| 1 | O | 465 | GLY |
| 1 | O | 478 | GLN |
| 1 | O | 489 | ARG |
| 1 | O | 490 | ILE |
| 1 | O | 496 | ALA |
| 1 | P | 36 | ARG |
| 1 | P | 48 | LEU |
| 1 | P | 49 | VAL |
| 1 | P | 69 | SER |
| 1 | P | 75 | ALA |
| 1 | P | 87 | LYS |
| 1 | P | 88 | GLU |
| 1 | P | 110 | LEU |
| 1 | P | 111 | LEU |
| 1 | P | 124 | TYR |
| 1 | P | 129 | GLN |
| 1 | P | 142 | VAL |
| 1 | P | 143 | GLY |
| 1 | P | 201 | ALA |
| 1 | P | 210 | LYS |
| 1 | P | 221 | ALA |
| 1 | P | 226 | LYS |
| 1 | P | 238 | ALA |
| 1 | P | 243 | ALA |
| 1 | P | 245 | GLU |
| 1 | P | 265 | GLN |
| 1 | P | 270 | ASP |
| 1 | P | 286 | ARG |
| 1 | P | 290 | SER |
| 1 | P | 298 | ALA |
| 1 | P | 299 | THR |
| 1 | P | 305 | THR |
| 1 | P | 309 | ASP |
| 1 | P | 313 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 406 | LEU |
| 1 | P | 415 | LEU |
| 1 | P | 490 | ILE |
| 1 | P | 496 | ALA |
| 1 | A | 60 | ASP |
| 1 | A | 64 | ILE |
| 1 | A | 139 | ALA |
| 1 | A | 224 | PRO |
| 1 | A | 290 | SER |
| 1 | A | 298 | ALA |
| 1 | A | 307 | ILE |
| 1 | A | 310 | LEU |
| 1 | A | 334 | VAL |
| 1 | A | 460 | ASP |
| 1 | B | 37 | SER |
| 1 | B | 51 | ASP |
| 1 | B | 96 | ALA |
| 1 | B | 126 | ALA |
| 1 | B | 139 | ALA |
| 1 | B | 155 | MET |
| 1 | B | 163 | ALA |
| 1 | B | 229 | ASP |
| 1 | B | 243 | ALA |
| 1 | B | 245 | GLU |
| 1 | B | 256 | ALA |
| 1 | B | 307 | ILE |
| 1 | B | 350 | THR |
| 1 | B | 382 | GLY |
| 1 | C | 12 | MET |
| 1 | C | 34 | THR |
| 1 | C | 63 | THR |
| 1 | C | 103 | LEU |
| 1 | C | 111 | LEU |
| 1 | C | 139 | ALA |
| 1 | C | 179 | SER |
| 1 | C | 185 | GLU |
| 1 | C | 190 | LYS |
| 1 | C | 226 | LYS |
| 1 | C | 244 | SER |
| 1 | C | 303 | VAL |
| 1 | C | 308 | LYS |
| 1 | C | 314 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 336 | GLU |
| 1 | C | 376 | GLY |
| 1 | C | 380 | SER |
| 1 | C | 401 | SER |
| 1 | C | 430 | ALA |
| 1 | C | 469 | PRO |
| 1 | D | 88 | GLU |
| 1 | D | 165 | LYS |
| 1 | D | 238 | ALA |
| 1 | D | 400 | ILE |
| 1 | D | 405 | GLN |
| 1 | D | 428 | LEU |
| 1 | D | 486 | MET |
| 1 | E | 12 | MET |
| 1 | E | 64 | ILE |
| 1 | E | 68 | MET |
| 1 | E | 155 | MET |
| 1 | E | 160 | GLY |
| 1 | E | 164 | GLU |
| 1 | E | 185 | GLU |
| 1 | E | 190 | LYS |
| 1 | E | 209 | ILE |
| 1 | E | 305 | THR |
| 1 | E | 368 | VAL |
| 1 | E | 380 | SER |
| 1 | E | 381 | GLY |
| 1 | E | 382 | GLY |
| 1 | E | 449 | ALA |
| 1 | E | 466 | VAL |
| 1 | F | 54 | ASP |
| 1 | F | 59 | ASN |
| 1 | F | 68 | MET |
| 1 | F | 71 | GLU |
| 1 | F | 74 | ALA |
| 1 | F | 75 | ALA |
| 1 | F | 99 | VAL |
| 1 | F | 103 | LEU |
| 1 | F | 143 | GLY |
| 1 | F | 184 | ASP |
| 1 | F | 185 | GLU |
| 1 | F | 201 | ALA |
| 1 | F | 291 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 298 | ALA |
| 1 | F | 308 | LYS |
| 1 | F | 377 | ARG |
| 1 | F | 381 | GLY |
| 1 | F | 427 | GLY |
| 1 | F | 442 | ALA |
| 1 | F | 456 | GLY |
| 1 | G | 8 | LEU |
| 1 | G | 45 | ASP |
| 1 | G | 63 | THR |
| 1 | G | 71 | GLU |
| 1 | G | 94 | THR |
| 1 | G | 139 | ALA |
| 1 | G | 185 | GLU |
| 1 | G | 219 | VAL |
| 1 | G | 238 | ALA |
| 1 | G | 254 | ILE |
| 1 | G | 266 | LYS |
| 1 | G | 290 | SER |
| 1 | G | 307 | ILE |
| 1 | G | 376 | GLY |
| 1 | H | 69 | SER |
| 1 | H | 77 | MET |
| 1 | H | 113 | GLN |
| 1 | H | 185 | GLU |
| 1 | H | 186 | GLY |
| 1 | H | 226 | LYS |
| 1 | H | 228 | THR |
| 1 | H | 238 | ALA |
| 1 | H | 305 | THR |
| 1 | H | 343 | VAL |
| 1 | H | 354 | VAL |
| 1 | H | 421 | THR |
| 1 | H | 456 | GLY |
| 1 | H | 487 | LEU |
| 1 | I | 75 | ALA |
| 1 | I | 96 | ALA |
| 1 | I | 114 | ASN |
| 1 | I | 139 | ALA |
| 1 | I | 185 | GLU |
| 1 | I | 271 | LEU |
| 1 | I | 308 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 313 | GLN |
| 1 | I | 328 | GLY |
| 1 | I | 354 | VAL |
| 1 | I | 370 | GLY |
| 1 | I | 406 | LEU |
| 1 | I | 407 | ALA |
| 1 | I | 471 | ARG |
| 1 | I | 490 | ILE |
| 1 | I | 496 | ALA |
| 1 | J | 69 | SER |
| 1 | J | 75 | ALA |
| 1 | J | 111 | LEU |
| 1 | J | 139 | ALA |
| 1 | J | 191 | ASP |
| 1 | J | 238 | ALA |
| 1 | J | 239 | ILE |
| 1 | J | 254 | ILE |
| 1 | J | 267 | GLY |
| 1 | J | 343 | VAL |
| 1 | J | 353 | HIS |
| 1 | J | 354 | VAL |
| 1 | J | 371 | CYS |
| 1 | J | 381 | GLY |
| 1 | J | 384 | SER |
| 1 | J | 430 | ALA |
| 1 | K | 12 | MET |
| 1 | K | 37 | SER |
| 1 | K | 106 | LYS |
| 1 | K | 114 | ASN |
| 1 | K | 164 | GLU |
| 1 | K | 185 | GLU |
| 1 | K | 238 | ALA |
| 1 | K | 244 | SER |
| 1 | K | 352 | GLU |
| 1 | K | 355 | ILE |
| 1 | K | 382 | GLY |
| 1 | K | 430 | ALA |
| 1 | K | 449 | ALA |
| 1 | K | 489 | ARG |
| 1 | K | 496 | ALA |
| 1 | L | 11 | ASN |
| 1 | L | 62 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 75 | ALA |
| 1 | L | 114 | ASN |
| 1 | L | 219 | VAL |
| 1 | L | 238 | ALA |
| 1 | L | 244 | SER |
| 1 | L | 257 | SER |
| 1 | L | 271 | LEU |
| 1 | L | 337 | CYS |
| 1 | L | 350 | THR |
| 1 | L | 356 | GLU |
| 1 | L | 382 | GLY |
| 1 | L | 460 | ASP |
| 1 | M | 11 | ASN |
| 1 | M | 12 | MET |
| 1 | M | 51 | ASP |
| 1 | M | 68 | MET |
| 1 | M | 88 | GLU |
| 1 | M | 114 | ASN |
| 1 | M | 139 | ALA |
| 1 | M | 148 | GLU |
| 1 | M | 185 | GLU |
| 1 | M | 210 | LYS |
| 1 | M | 267 | GLY |
| 1 | M | 291 | ASP |
| 1 | M | 301 | ALA |
| 1 | M | 350 | THR |
| 1 | M | 382 | GLY |
| 1 | N | 19 | ASP |
| 1 | N | 21 | GLN |
| 1 | N | 51 | ASP |
| 1 | N | 62 | VAL |
| 1 | N | 85 | GLN |
| 1 | N | 88 | GLU |
| 1 | N | 94 | THR |
| 1 | N | 139 | ALA |
| 1 | N | 221 | ALA |
| 1 | N | 238 | ALA |
| 1 | N | 239 | ILE |
| 1 | N | 243 | ALA |
| 1 | N | 305 | THR |
| 1 | N | 328 | GLY |
| 1 | N | 352 | GLU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | N | 384 | SER |
| 1 | N | 415 | LEU |
| 1 | N | 449 | ALA |
| 1 | N | 456 | GLY |
| 1 | O | 11 | ASN |
| 1 | O | 20 | ALA |
| 1 | O | 21 | GLN |
| 1 | O | 34 | THR |
| 1 | O | 95 | THR |
| 1 | O | 139 | ALA |
| 1 | O | 185 | GLU |
| 1 | O | 191 | ASP |
| 1 | O | 228 | THR |
| 1 | O | 245 | GLU |
| 1 | O | 271 | LEU |
| 1 | O | 295 | LEU |
| 1 | O | 298 | ALA |
| 1 | O | 352 | GLU |
| 1 | O | 354 | VAL |
| 1 | O | 370 | GLY |
| 1 | O | 373 | ILE |
| 1 | O | 401 | SER |
| 1 | O | 434 | LEU |
| 1 | O | 479 | SER |
| 1 | O | 487 | LEU |
| 1 | P | 62 | VAL |
| 1 | P | 80 | GLU |
| 1 | P | 123 | GLY |
| 1 | P | 158 | ILE |
| 1 | P | 185 | GLU |
| 1 | P | 199 | SER |
| 1 | P | 203 | ILE |
| 1 | P | 204 | ASP |
| 1 | P | 230 | ALA |
| 1 | P | 267 | GLY |
| 1 | P | 307 | ILE |
| 1 | P | 380 | SER |
| 1 | P | 397 | ALA |
| 1 | P | 405 | GLN |
| 1 | P | 449 | ALA |
| 1 | P | 472 | VAL |
| 1 | A | 18 | ARG |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 289 | LYS |
| 1 | A | 311 | SER |
| 1 | A | 346 | LEU |
| 1 | A | 365 | ALA |
| 1 | A | 457 | ALA |
| 1 | A | 471 | ARG |
| 1 | B | 258 | GLY |
| 1 | B | 306 | ASN |
| 1 | B | 313 | GLN |
| 1 | B | 334 | VAL |
| 1 | B | 355 | ILE |
| 1 | B | 380 | SER |
| 1 | B | 401 | SER |
| 1 | B | 460 | ASP |
| 1 | C | 99 | VAL |
| 1 | C | 164 | GLU |
| 1 | C | 258 | GLY |
| 1 | C | 323 | GLU |
| 1 | C | 340 | PRO |
| 1 | D | 37 | SER |
| 1 | D | 139 | ALA |
| 1 | D | 164 | GLU |
| 1 | D | 185 | GLU |
| 1 | D | 191 | ASP |
| 1 | D | 258 | GLY |
| 1 | D | 431 | ILE |
| 1 | D | 490 | ILE |
| 1 | E | 11 | ASN |
| 1 | E | 54 | ASP |
| 1 | E | 66 | ARG |
| 1 | E | 166 | ALA |
| 1 | E | 210 | LYS |
| 1 | E | 244 | SER |
| 1 | E | 274 | HIS |
| 1 | E | 289 | LYS |
| 1 | E | 461 | MET |
| 1 | E | 489 | ARG |
| 1 | F | 17 | GLY |
| 1 | F | 102 | GLU |
| 1 | F | 158 | ILE |
| 1 | F | 162 | GLY |
| 1 | F | 182 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 273 | GLN |
| 1 | F | 457 | ALA |
| 1 | F | 462 | CYS |
| 1 | F | 496 | ALA |
| 1 | G | 34 | THR |
| 1 | G | 62 | VAL |
| 1 | G | 109 | GLU |
| 1 | G | 114 | ASN |
| 1 | G | 430 | ALA |
| 1 | H | 87 | LYS |
| 1 | H | 91 | ASP |
| 1 | H | 166 | ALA |
| 1 | H | 237 | CYS |
| 1 | H | 252 | ALA |
| 1 | H | 336 | GLU |
| 1 | H | 377 | ARG |
| 1 | H | 403 | ARG |
| 1 | H | 462 | CYS |
| 1 | H | 478 | GLN |
| 1 | I | 19 | ASP |
| 1 | I | 66 | ARG |
| 1 | I | 117 | PRO |
| 1 | I | 245 | GLU |
| 1 | I | 415 | LEU |
| 1 | J | 11 | ASN |
| 1 | J | 77 | MET |
| 1 | J | 186 | GLY |
| 1 | J | 260 | ASN |
| 1 | J | 401 | SER |
| 1 | J | 459 | GLU |
| 1 | J | 487 | LEU |
| 1 | K | 9 | PRO |
| 1 | K | 11 | ASN |
| 1 | K | 111 | LEU |
| 1 | K | 116 | HIS |
| 1 | K | 257 | SER |
| 1 | K | 258 | GLY |
| 1 | K | 305 | THR |
| 1 | K | 398 | GLU |
| 1 | L | 34 | THR |
| 1 | L | 139 | ALA |
| 1 | L | 165 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 246 | MET |
| 1 | L | 268 | ILE |
| 1 | L | 352 | GLU |
| 1 | L | 415 | LEU |
| 1 | L | 479 | SER |
| 1 | M | 34 | THR |
| 1 | M | 118 | THR |
| 1 | M | 238 | ALA |
| 1 | M | 258 | GLY |
| 1 | M | 390 | SER |
| 1 | M | 420 | ARG |
| 1 | M | 453 | VAL |
| 1 | N | 59 | ASN |
| 1 | N | 67 | GLU |
| 1 | N | 99 | VAL |
| 1 | N | 257 | SER |
| 1 | N | 290 | SER |
| 1 | N | 311 | SER |
| 1 | O | 23 | MET |
| 1 | O | 68 | MET |
| 1 | O | 77 | MET |
| 1 | O | 114 | ASN |
| 1 | O | 118 | THR |
| 1 | O | 201 | ALA |
| 1 | O | 275 | TYR |
| 1 | O | 311 | SER |
| 1 | P | 10 | GLU |
| 1 | P | 51 | ASP |
| 1 | P | 244 | SER |
| 1 | P | 249 | ASP |
| 1 | P | 314 | ASP |
| 1 | P | 426 | ALA |
| 1 | P | 460 | ASP |
| 1 | A | 34 | THR |
| 1 | A | 61 | GLY |
| 1 | B | 116 | HIS |
| 1 | B | 181 | VAL |
| 1 | B | 311 | SER |
| 1 | B | 325 | LYS |
| 1 | C | 116 | HIS |
| 1 | C | 287 | VAL |
| 1 | C | 290 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 226 | LYS |
| 1 | D | 290 | SER |
| 1 | D | 427 | GLY |
| 1 | D | 457 | ALA |
| 1 | E | 17 | GLY |
| 1 | E | 51 | ASP |
| 1 | E | 258 | GLY |
| 1 | E | 311 | SER |
| 1 | E | 409 | ARG |
| 1 | F | 31 | ILE |
| 1 | F | 60 | ASP |
| 1 | F | 62 | VAL |
| 1 | F | 303 | VAL |
| 1 | F | 370 | GLY |
| 1 | F | 383 | GLY |
| 1 | G | 72 | HIS |
| 1 | G | 103 | LEU |
| 1 | G | 243 | ALA |
| 1 | G | 268 | ILE |
| 1 | G | 310 | LEU |
| 1 | G | 380 | SER |
| 1 | H | 11 | ASN |
| 1 | H | 12 | MET |
| 1 | H | 41 | PRO |
| 1 | H | 115 | VAL |
| 1 | H | 165 | LYS |
| 1 | H | 342 | ALA |
| 1 | H | 472 | VAL |
| 1 | I | 9 | PRO |
| 1 | I | 244 | SER |
| 1 | I | 258 | GLY |
| 1 | I | 307 | ILE |
| 1 | I | 315 | LEU |
| 1 | I | 401 | SER |
| 1 | I | 453 | VAL |
| 1 | J | 66 | ARG |
| 1 | J | 148 | GLU |
| 1 | J | 274 | HIS |
| 1 | J | 298 | ALA |
| 1 | J | 449 | ALA |
| 1 | J | 472 | VAL |
| 1 | K | 21 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 102 | GLU |
| 1 | K | 113 | GLN |
| 1 | K | 187 | LYS |
| 1 | K | 224 | PRO |
| 1 | L | 30 | ILE |
| 1 | L | 188 | VAL |
| 1 | M | 66 | ARG |
| 1 | M | 228 | THR |
| 1 | N | 120 | VAL |
| 1 | N | 313 | GLN |
| 1 | O | 142 | VAL |
| 1 | O | 158 | ILE |
| 1 | O | 238 | ALA |
| 1 | O | 301 | ALA |
| 1 | O | 343 | VAL |
| 1 | O | 449 | ALA |
| 1 | P | 128 | ALA |
| 1 | P | 184 | ASP |
| 1 | P | 228 | THR |
| 1 | P | 311 | SER |
| 1 | P | 401 | SER |
| 1 | P | 469 | PRO |
| 1 | P | 487 | LEU |
| 1 | P | 493 | VAL |
| 1 | A | 95 | THR |
| 1 | B | 259 | ALA |
| 1 | B | 314 | ASP |
| 1 | C | 61 | GLY |
| 1 | C | 286 | ARG |
| 1 | C | 305 | THR |
| 1 | D | 116 | HIS |
| 1 | D | 124 | TYR |
| 1 | D | 239 | ILE |
| 1 | D | 287 | VAL |
| 1 | D | 336 | GLU |
| 1 | D | 399 | GLY |
| 1 | D | 401 | SER |
| 1 | E | 367 | GLY |
| 1 | F | 80 | GLU |
| 1 | F | 117 | PRO |
| 1 | F | 167 | LYS |
| 1 | F | 446 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | G | 12 | MET |
| 1 | G | 54 | ASP |
| 1 | G | 478 | GLN |
| 1 | H | 363 | ASP |
| 1 | H | 382 | GLY |
| 1 | H | 401 | SER |
| 1 | I | 37 | SER |
| 1 | I | 163 | ALA |
| 1 | I | 182 | VAL |
| 1 | I | 226 | LYS |
| 1 | J | 18 | ARG |
| 1 | J | 35 | VAL |
| 1 | J | 39 | LEU |
| 1 | J | 45 | ASP |
| 1 | J | 115 | VAL |
| 1 | J | 163 | ALA |
| 1 | J | 258 | GLY |
| 1 | J | 334 | VAL |
| 1 | J | 340 | PRO |
| 1 | K | 86 | GLU |
| 1 | K | 228 | THR |
| 1 | K | 371 | CYS |
| 1 | K | 432 | GLU |
| 1 | L | 223 | MET |
| 1 | L | 258 | GLY |
| 1 | L | 293 | GLU |
| 1 | L | 401 | SER |
| 1 | L | 457 | ALA |
| 1 | M | 8 | LEU |
| 1 | M | 75 | ALA |
| 1 | M | 356 | GLU |
| 1 | N | 66 | ARG |
| 1 | N | 210 | LYS |
| 1 | N | 258 | GLY |
| 1 | N | 310 | LEU |
| 1 | N | 329 | ASP |
| 1 | O | 72 | HIS |
| 1 | O | 130 | LYS |
| 1 | O | 224 | PRO |
| 1 | O | 310 | LEU |
| 1 | O | 350 | THR |
| 1 | O | 446 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 144 | ALA |
| 1 | P | 258 | GLY |
| 1 | A | 186 | GLY |
| 1 | C | 457 | ALA |
| 1 | D | 31 | ILE |
| 1 | D | 62 | VAL |
| 1 | D | 343 | VAL |
| 1 | E | 224 | PRO |
| 1 | E | 229 | ASP |
| 1 | E | 329 | ASP |
| 1 | E | 401 | SER |
| 1 | F | 329 | ASP |
| 1 | G | 21 | GLN |
| 1 | G | 102 | GLU |
| 1 | H | 314 | ASP |
| 1 | H | 334 | VAL |
| 1 | I | 33 | GLU |
| 1 | I | 219 | VAL |
| 1 | I | 286 | ARG |
| 1 | K | 245 | GLU |
| 1 | L | 228 | THR |
| 1 | N | 340 | PRO |
| 1 | O | 226 | LYS |
| 1 | O | 429 | ASP |
| 1 | A | 142 | VAL |
| 1 | B | 72 | HIS |
| 1 | B | 188 | VAL |
| 1 | C | 307 | ILE |
| 1 | D | 123 | GLY |
| 1 | D | 142 | VAL |
| 1 | D | 268 | ILE |
| 1 | D | 334 | VAL |
| 1 | G | 116 | HIS |
| 1 | H | 99 | VAL |
| 1 | J | 62 | VAL |
| 1 | L | 334 | VAL |
| 1 | L | 355 | ILE |
| 1 | N | 339 | HIS |
| 1 | O | 117 | PRO |
| 1 | O | 173 | ILE |
| 1 | P | 465 | GLY |
| 1 | A | 116 | HIS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 303 | VAL |
| 1 | B | 417 | VAL |
| 1 | C | 9 | PRO |
| 1 | C | 343 | VAL |
| 1 | F | 72 | HIS |
| 1 | L | 209 | ILE |
| 1 | M | 72 | HIS |
| 1 | N | 117 | PRO |
| 1 | O | 9 | PRO |
| 1 | P | 117 | PRO |
| 1 | C | 334 | VAL |
| 1 | E | 287 | VAL |
| 1 | F | 30 | ILE |
| 1 | F | 334 | VAL |
| 1 | G | 490 | ILE |
| 1 | H | 62 | VAL |
| 1 | H | 319 | GLY |
| 1 | O | 115 | VAL |
| 1 | A | 355 | ILE |
| 1 | I | 31 | ILE |
| 1 | I | 142 | VAL |
| 1 | I | 158 | ILE |
| 1 | I | 334 | VAL |
| 1 | J | 224 | PRO |
| 1 | M | 73 | PRO |
| 1 | M | 472 | VAL |
| 1 | P | 30 | ILE |
| 1 | P | 239 | ILE |
| 1 | B | 120 | VAL |
| 1 | C | 399 | GLY |
| 1 | D | 267 | GLY |
| 1 | G | 35 | VAL |
| 1 | M | 116 | HIS |
| 1 | M | 400 | ILE |
| 1 | N | 219 | VAL |

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

The Analysed column shows the number of residues for which the sidechain conformation was

analysed, and the total number of residues.

| Mol | Chain | Analysed | Rotameric | Outliers | Percentiles | |
|-----|-------|-----------------|------------|------------|-------------|---|
| 1 | A | 393/413 (95%) | 261 (66%) | 132 (34%) | 0 | 2 |
| 1 | B | 393/413 (95%) | 245 (62%) | 148 (38%) | 0 | 0 |
| 1 | C | 393/413 (95%) | 261 (66%) | 132 (34%) | 0 | 2 |
| 1 | D | 393/413 (95%) | 240 (61%) | 153 (39%) | 0 | 0 |
| 1 | E | 393/413 (95%) | 248 (63%) | 145 (37%) | 0 | 0 |
| 1 | F | 393/413 (95%) | 241 (61%) | 152 (39%) | 0 | 0 |
| 1 | G | 393/413 (95%) | 252 (64%) | 141 (36%) | 0 | 1 |
| 1 | H | 393/413 (95%) | 240 (61%) | 153 (39%) | 0 | 0 |
| 1 | I | 393/413 (95%) | 247 (63%) | 146 (37%) | 0 | 0 |
| 1 | J | 393/413 (95%) | 258 (66%) | 135 (34%) | 0 | 1 |
| 1 | K | 393/413 (95%) | 257 (65%) | 136 (35%) | 0 | 1 |
| 1 | L | 393/413 (95%) | 249 (63%) | 144 (37%) | 0 | 1 |
| 1 | M | 393/413 (95%) | 237 (60%) | 156 (40%) | 0 | 0 |
| 1 | N | 393/413 (95%) | 251 (64%) | 142 (36%) | 0 | 1 |
| 1 | O | 393/413 (95%) | 240 (61%) | 153 (39%) | 0 | 0 |
| 1 | P | 393/413 (95%) | 233 (59%) | 160 (41%) | 0 | 0 |
| All | All | 6288/6608 (95%) | 3960 (63%) | 2328 (37%) | 1 | 0 |

All (2328) residues with a non-rotameric sidechain are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 7 | VAL |
| 1 | A | 8 | LEU |
| 1 | A | 10 | GLU |
| 1 | A | 12 | MET |
| 1 | A | 18 | ARG |
| 1 | A | 19 | ASP |
| 1 | A | 23 | MET |
| 1 | A | 26 | LEU |
| 1 | A | 30 | ILE |
| 1 | A | 31 | ILE |
| 1 | A | 35 | VAL |
| 1 | A | 37 | SER |
| 1 | A | 39 | LEU |
| 1 | A | 48 | LEU |
| 1 | A | 55 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 69 | SER |
| 1 | A | 70 | VAL |
| 1 | A | 73 | PRO |
| 1 | A | 76 | LYS |
| 1 | A | 77 | MET |
| 1 | A | 80 | GLU |
| 1 | A | 83 | LYS |
| 1 | A | 85 | GLN |
| 1 | A | 89 | VAL |
| 1 | A | 94 | THR |
| 1 | A | 97 | VAL |
| 1 | A | 105 | ARG |
| 1 | A | 106 | LYS |
| 1 | A | 111 | LEU |
| 1 | A | 112 | ASP |
| 1 | A | 113 | GLN |
| 1 | A | 114 | ASN |
| 1 | A | 115 | VAL |
| 1 | A | 119 | ILE |
| 1 | A | 121 | VAL |
| 1 | A | 122 | LYS |
| 1 | A | 129 | GLN |
| 1 | A | 130 | LYS |
| 1 | A | 135 | LEU |
| 1 | A | 138 | ILE |
| 1 | A | 140 | CYS |
| 1 | A | 141 | GLU |
| 1 | A | 145 | GLN |
| 1 | A | 148 | GLU |
| 1 | A | 157 | SER |
| 1 | A | 159 | THR |
| 1 | A | 161 | LYS |
| 1 | A | 164 | GLU |
| 1 | A | 167 | LYS |
| 1 | A | 170 | LEU |
| 1 | A | 173 | ILE |
| 1 | A | 183 | ASP |
| 1 | A | 187 | LYS |
| 1 | A | 190 | LYS |
| 1 | A | 191 | ASP |
| 1 | A | 197 | LYS |
| 1 | A | 204 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 205 | ASP |
| 1 | A | 218 | ARG |
| 1 | A | 226 | LYS |
| 1 | A | 228 | THR |
| 1 | A | 231 | LYS |
| 1 | A | 235 | LEU |
| 1 | A | 236 | ASN |
| 1 | A | 237 | CYS |
| 1 | A | 239 | ILE |
| 1 | A | 242 | THR |
| 1 | A | 244 | SER |
| 1 | A | 257 | SER |
| 1 | A | 260 | ASN |
| 1 | A | 262 | LEU |
| 1 | A | 268 | ILE |
| 1 | A | 271 | LEU |
| 1 | A | 273 | GLN |
| 1 | A | 278 | LYS |
| 1 | A | 282 | VAL |
| 1 | A | 286 | ARG |
| 1 | A | 289 | LYS |
| 1 | A | 290 | SER |
| 1 | A | 293 | GLU |
| 1 | A | 294 | LYS |
| 1 | A | 297 | LYS |
| 1 | A | 303 | VAL |
| 1 | A | 307 | ILE |
| 1 | A | 308 | LYS |
| 1 | A | 309 | ASP |
| 1 | A | 310 | LEU |
| 1 | A | 313 | GLN |
| 1 | A | 317 | ASP |
| 1 | A | 320 | LEU |
| 1 | A | 336 | GLU |
| 1 | A | 338 | LYS |
| 1 | A | 341 | LYS |
| 1 | A | 346 | LEU |
| 1 | A | 347 | ILE |
| 1 | A | 348 | ARG |
| 1 | A | 351 | THR |
| 1 | A | 352 | GLU |
| 1 | A | 355 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 356 | GLU |
| 1 | A | 372 | THR |
| 1 | A | 377 | ARG |
| 1 | A | 379 | VAL |
| 1 | A | 385 | THR |
| 1 | A | 386 | GLU |
| 1 | A | 390 | SER |
| 1 | A | 403 | ARG |
| 1 | A | 406 | LEU |
| 1 | A | 415 | LEU |
| 1 | A | 418 | ILE |
| 1 | A | 420 | ARG |
| 1 | A | 424 | GLU |
| 1 | A | 425 | ASN |
| 1 | A | 428 | LEU |
| 1 | A | 431 | ILE |
| 1 | A | 441 | HIS |
| 1 | A | 446 | ASN |
| 1 | A | 447 | LYS |
| 1 | A | 448 | CYS |
| 1 | A | 458 | VAL |
| 1 | A | 462 | CYS |
| 1 | A | 464 | ASN |
| 1 | A | 467 | VAL |
| 1 | A | 468 | GLU |
| 1 | A | 470 | LEU |
| 1 | A | 471 | ARG |
| 1 | A | 472 | VAL |
| 1 | A | 473 | LYS |
| 1 | A | 477 | ILE |
| 1 | A | 483 | SER |
| 1 | A | 485 | GLU |
| 1 | A | 492 | ASP |
| 1 | B | 7 | VAL |
| 1 | B | 10 | GLU |
| 1 | B | 12 | MET |
| 1 | B | 13 | LYS |
| 1 | B | 18 | ARG |
| 1 | B | 19 | ASP |
| 1 | B | 21 | GLN |
| 1 | B | 24 | ASN |
| 1 | B | 31 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 35 | VAL |
| 1 | B | 37 | SER |
| 1 | B | 39 | LEU |
| 1 | B | 42 | LYS |
| 1 | B | 51 | ASP |
| 1 | B | 54 | ASP |
| 1 | B | 60 | ASP |
| 1 | B | 63 | THR |
| 1 | B | 68 | MET |
| 1 | B | 70 | VAL |
| 1 | B | 72 | HIS |
| 1 | B | 78 | LEU |
| 1 | B | 86 | GLU |
| 1 | B | 88 | GLU |
| 1 | B | 91 | ASP |
| 1 | B | 105 | ARG |
| 1 | B | 110 | LEU |
| 1 | B | 112 | ASP |
| 1 | B | 113 | GLN |
| 1 | B | 114 | ASN |
| 1 | B | 116 | HIS |
| 1 | B | 118 | THR |
| 1 | B | 122 | LYS |
| 1 | B | 132 | GLN |
| 1 | B | 136 | LYS |
| 1 | B | 138 | ILE |
| 1 | B | 140 | CYS |
| 1 | B | 141 | GLU |
| 1 | B | 150 | LEU |
| 1 | B | 153 | ILE |
| 1 | B | 155 | MET |
| 1 | B | 157 | SER |
| 1 | B | 158 | ILE |
| 1 | B | 164 | GLU |
| 1 | B | 165 | LYS |
| 1 | B | 167 | LYS |
| 1 | B | 168 | GLU |
| 1 | B | 172 | GLU |
| 1 | B | 187 | LYS |
| 1 | B | 188 | VAL |
| 1 | B | 191 | ASP |
| 1 | B | 192 | LEU |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 193 | ILE |
| 1 | B | 195 | ILE |
| 1 | B | 197 | LYS |
| 1 | B | 198 | LYS |
| 1 | B | 199 | SER |
| 1 | B | 203 | ILE |
| 1 | B | 204 | ASP |
| 1 | B | 205 | ASP |
| 1 | B | 210 | LYS |
| 1 | B | 215 | ASP |
| 1 | B | 219 | VAL |
| 1 | B | 225 | LYS |
| 1 | B | 228 | THR |
| 1 | B | 229 | ASP |
| 1 | B | 231 | LYS |
| 1 | B | 236 | ASN |
| 1 | B | 239 | ILE |
| 1 | B | 240 | GLU |
| 1 | B | 244 | SER |
| 1 | B | 246 | MET |
| 1 | B | 249 | ASP |
| 1 | B | 251 | VAL |
| 1 | B | 255 | LYS |
| 1 | B | 257 | SER |
| 1 | B | 260 | ASN |
| 1 | B | 266 | LYS |
| 1 | B | 273 | GLN |
| 1 | B | 281 | ILE |
| 1 | B | 285 | ARG |
| 1 | B | 286 | ARG |
| 1 | B | 289 | LYS |
| 1 | B | 290 | SER |
| 1 | B | 293 | GLU |
| 1 | B | 299 | THR |
| 1 | B | 302 | ASN |
| 1 | B | 303 | VAL |
| 1 | B | 304 | ILE |
| 1 | B | 307 | ILE |
| 1 | B | 308 | LYS |
| 1 | B | 309 | ASP |
| 1 | B | 311 | SER |
| 1 | B | 313 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 314 | ASP |
| 1 | B | 315 | LEU |
| 1 | B | 320 | LEU |
| 1 | B | 327 | SER |
| 1 | B | 329 | ASP |
| 1 | B | 330 | SER |
| 1 | B | 336 | GLU |
| 1 | B | 338 | LYS |
| 1 | B | 340 | PRO |
| 1 | B | 341 | LYS |
| 1 | B | 343 | VAL |
| 1 | B | 345 | MET |
| 1 | B | 346 | LEU |
| 1 | B | 347 | ILE |
| 1 | B | 348 | ARG |
| 1 | B | 350 | THR |
| 1 | B | 351 | THR |
| 1 | B | 354 | VAL |
| 1 | B | 380 | SER |
| 1 | B | 386 | GLU |
| 1 | B | 395 | GLU |
| 1 | B | 400 | ILE |
| 1 | B | 401 | SER |
| 1 | B | 403 | ARG |
| 1 | B | 404 | GLU |
| 1 | B | 406 | LEU |
| 1 | B | 413 | ASP |
| 1 | B | 415 | LEU |
| 1 | B | 418 | ILE |
| 1 | B | 420 | ARG |
| 1 | B | 421 | THR |
| 1 | B | 428 | LEU |
| 1 | B | 431 | ILE |
| 1 | B | 433 | ILE |
| 1 | B | 438 | ARG |
| 1 | B | 441 | HIS |
| 1 | B | 446 | ASN |
| 1 | B | 447 | LYS |
| 1 | B | 451 | LEU |
| 1 | B | 453 | VAL |
| 1 | B | 463 | GLU |
| 1 | B | 464 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | B | 467 | VAL |
| 1 | B | 468 | GLU |
| 1 | B | 470 | LEU |
| 1 | B | 471 | ARG |
| 1 | B | 473 | LYS |
| 1 | B | 475 | GLN |
| 1 | B | 477 | ILE |
| 1 | B | 483 | SER |
| 1 | B | 486 | MET |
| 1 | B | 487 | LEU |
| 1 | B | 488 | LEU |
| 1 | B | 491 | ASP |
| 1 | B | 497 | GLU |
| 1 | C | 8 | LEU |
| 1 | C | 10 | GLU |
| 1 | C | 12 | MET |
| 1 | C | 16 | MET |
| 1 | C | 18 | ARG |
| 1 | C | 22 | ARG |
| 1 | C | 23 | MET |
| 1 | C | 38 | THR |
| 1 | C | 42 | LYS |
| 1 | C | 44 | MET |
| 1 | C | 49 | VAL |
| 1 | C | 52 | LEU |
| 1 | C | 59 | ASN |
| 1 | C | 60 | ASP |
| 1 | C | 66 | ARG |
| 1 | C | 68 | MET |
| 1 | C | 69 | SER |
| 1 | C | 70 | VAL |
| 1 | C | 72 | HIS |
| 1 | C | 77 | MET |
| 1 | C | 78 | LEU |
| 1 | C | 85 | GLN |
| 1 | C | 87 | LYS |
| 1 | C | 91 | ASP |
| 1 | C | 106 | LYS |
| 1 | C | 111 | LEU |
| 1 | C | 113 | GLN |
| 1 | C | 114 | ASN |
| 1 | C | 115 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 118 | THR |
| 1 | C | 124 | TYR |
| 1 | C | 130 | LYS |
| 1 | C | 136 | LYS |
| 1 | C | 140 | CYS |
| 1 | C | 146 | ASP |
| 1 | C | 147 | LYS |
| 1 | C | 156 | THR |
| 1 | C | 157 | SER |
| 1 | C | 158 | ILE |
| 1 | C | 161 | LYS |
| 1 | C | 164 | GLU |
| 1 | C | 167 | LYS |
| 1 | C | 170 | LEU |
| 1 | C | 183 | ASP |
| 1 | C | 187 | LYS |
| 1 | C | 188 | VAL |
| 1 | C | 189 | ASP |
| 1 | C | 190 | LYS |
| 1 | C | 191 | ASP |
| 1 | C | 195 | ILE |
| 1 | C | 197 | LYS |
| 1 | C | 198 | LYS |
| 1 | C | 203 | ILE |
| 1 | C | 205 | ASP |
| 1 | C | 206 | THR |
| 1 | C | 213 | LEU |
| 1 | C | 215 | ASP |
| 1 | C | 218 | ARG |
| 1 | C | 219 | VAL |
| 1 | C | 224 | PRO |
| 1 | C | 226 | LYS |
| 1 | C | 228 | THR |
| 1 | C | 231 | LYS |
| 1 | C | 236 | ASN |
| 1 | C | 242 | THR |
| 1 | C | 244 | SER |
| 1 | C | 257 | SER |
| 1 | C | 268 | ILE |
| 1 | C | 270 | ASP |
| 1 | C | 271 | LEU |
| 1 | C | 273 | GLN |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 285 | ARG |
| 1 | C | 286 | ARG |
| 1 | C | 290 | SER |
| 1 | C | 292 | MET |
| 1 | C | 297 | LYS |
| 1 | C | 302 | ASN |
| 1 | C | 303 | VAL |
| 1 | C | 305 | THR |
| 1 | C | 308 | LYS |
| 1 | C | 309 | ASP |
| 1 | C | 313 | GLN |
| 1 | C | 314 | ASP |
| 1 | C | 320 | LEU |
| 1 | C | 325 | LYS |
| 1 | C | 327 | SER |
| 1 | C | 330 | SER |
| 1 | C | 331 | MET |
| 1 | C | 336 | GLU |
| 1 | C | 338 | LYS |
| 1 | C | 341 | LYS |
| 1 | C | 346 | LEU |
| 1 | C | 347 | ILE |
| 1 | C | 348 | ARG |
| 1 | C | 351 | THR |
| 1 | C | 353 | HIS |
| 1 | C | 363 | ASP |
| 1 | C | 368 | VAL |
| 1 | C | 373 | ILE |
| 1 | C | 377 | ARG |
| 1 | C | 379 | VAL |
| 1 | C | 380 | SER |
| 1 | C | 384 | SER |
| 1 | C | 386 | GLU |
| 1 | C | 400 | ILE |
| 1 | C | 403 | ARG |
| 1 | C | 406 | LEU |
| 1 | C | 411 | PHE |
| 1 | C | 413 | ASP |
| 1 | C | 420 | ARG |
| 1 | C | 421 | THR |
| 1 | C | 428 | LEU |
| 1 | C | 431 | ILE |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | C | 438 | ARG |
| 1 | C | 441 | HIS |
| 1 | C | 446 | ASN |
| 1 | C | 448 | CYS |
| 1 | C | 455 | THR |
| 1 | C | 461 | MET |
| 1 | C | 470 | LEU |
| 1 | C | 472 | VAL |
| 1 | C | 473 | LYS |
| 1 | C | 477 | ILE |
| 1 | C | 479 | SER |
| 1 | C | 483 | SER |
| 1 | C | 485 | GLU |
| 1 | C | 487 | LEU |
| 1 | C | 489 | ARG |
| 1 | C | 491 | ASP |
| 1 | C | 493 | VAL |
| 1 | C | 494 | ILE |
| 1 | C | 497 | GLU |
| 1 | D | 8 | LEU |
| 1 | D | 12 | MET |
| 1 | D | 19 | ASP |
| 1 | D | 21 | GLN |
| 1 | D | 22 | ARG |
| 1 | D | 23 | MET |
| 1 | D | 25 | ILE |
| 1 | D | 26 | LEU |
| 1 | D | 31 | ILE |
| 1 | D | 33 | GLU |
| 1 | D | 34 | THR |
| 1 | D | 35 | VAL |
| 1 | D | 37 | SER |
| 1 | D | 39 | LEU |
| 1 | D | 41 | PRO |
| 1 | D | 42 | LYS |
| 1 | D | 44 | MET |
| 1 | D | 46 | LYS |
| 1 | D | 48 | LEU |
| 1 | D | 51 | ASP |
| 1 | D | 52 | LEU |
| 1 | D | 54 | ASP |
| 1 | D | 56 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 58 | THR |
| 1 | D | 59 | ASN |
| 1 | D | 65 | LEU |
| 1 | D | 66 | ARG |
| 1 | D | 70 | VAL |
| 1 | D | 71 | GLU |
| 1 | D | 72 | HIS |
| 1 | D | 73 | PRO |
| 1 | D | 77 | MET |
| 1 | D | 78 | LEU |
| 1 | D | 81 | VAL |
| 1 | D | 89 | VAL |
| 1 | D | 94 | THR |
| 1 | D | 104 | LEU |
| 1 | D | 105 | ARG |
| 1 | D | 106 | LYS |
| 1 | D | 108 | GLU |
| 1 | D | 110 | LEU |
| 1 | D | 111 | LEU |
| 1 | D | 112 | ASP |
| 1 | D | 113 | GLN |
| 1 | D | 114 | ASN |
| 1 | D | 116 | HIS |
| 1 | D | 119 | ILE |
| 1 | D | 135 | LEU |
| 1 | D | 136 | LYS |
| 1 | D | 138 | ILE |
| 1 | D | 141 | GLU |
| 1 | D | 145 | GLN |
| 1 | D | 150 | LEU |
| 1 | D | 153 | ILE |
| 1 | D | 158 | ILE |
| 1 | D | 159 | THR |
| 1 | D | 161 | LYS |
| 1 | D | 164 | GLU |
| 1 | D | 170 | LEU |
| 1 | D | 172 | GLU |
| 1 | D | 173 | ILE |
| 1 | D | 182 | VAL |
| 1 | D | 187 | LYS |
| 1 | D | 188 | VAL |
| 1 | D | 189 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 190 | LYS |
| 1 | D | 191 | ASP |
| 1 | D | 192 | LEU |
| 1 | D | 193 | ILE |
| 1 | D | 195 | ILE |
| 1 | D | 199 | SER |
| 1 | D | 203 | ILE |
| 1 | D | 204 | ASP |
| 1 | D | 205 | ASP |
| 1 | D | 210 | LYS |
| 1 | D | 212 | VAL |
| 1 | D | 215 | ASP |
| 1 | D | 216 | LYS |
| 1 | D | 217 | GLU |
| 1 | D | 218 | ARG |
| 1 | D | 225 | LYS |
| 1 | D | 227 | VAL |
| 1 | D | 229 | ASP |
| 1 | D | 231 | LYS |
| 1 | D | 235 | LEU |
| 1 | D | 236 | ASN |
| 1 | D | 239 | ILE |
| 1 | D | 240 | GLU |
| 1 | D | 249 | ASP |
| 1 | D | 257 | SER |
| 1 | D | 260 | ASN |
| 1 | D | 270 | ASP |
| 1 | D | 271 | LEU |
| 1 | D | 273 | GLN |
| 1 | D | 276 | LEU |
| 1 | D | 281 | ILE |
| 1 | D | 285 | ARG |
| 1 | D | 286 | ARG |
| 1 | D | 292 | MET |
| 1 | D | 303 | VAL |
| 1 | D | 307 | ILE |
| 1 | D | 308 | LYS |
| 1 | D | 309 | ASP |
| 1 | D | 313 | GLN |
| 1 | D | 315 | LEU |
| 1 | D | 317 | ASP |
| 1 | D | 320 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 326 | ILE |
| 1 | D | 327 | SER |
| 1 | D | 334 | VAL |
| 1 | D | 336 | GLU |
| 1 | D | 338 | LYS |
| 1 | D | 339 | HIS |
| 1 | D | 341 | LYS |
| 1 | D | 346 | LEU |
| 1 | D | 348 | ARG |
| 1 | D | 351 | THR |
| 1 | D | 352 | GLU |
| 1 | D | 356 | GLU |
| 1 | D | 369 | VAL |
| 1 | D | 372 | THR |
| 1 | D | 377 | ARG |
| 1 | D | 379 | VAL |
| 1 | D | 386 | GLU |
| 1 | D | 403 | ARG |
| 1 | D | 404 | GLU |
| 1 | D | 406 | LEU |
| 1 | D | 411 | PHE |
| 1 | D | 413 | ASP |
| 1 | D | 415 | LEU |
| 1 | D | 418 | ILE |
| 1 | D | 422 | LEU |
| 1 | D | 431 | ILE |
| 1 | D | 433 | ILE |
| 1 | D | 434 | LEU |
| 1 | D | 441 | HIS |
| 1 | D | 446 | ASN |
| 1 | D | 447 | LYS |
| 1 | D | 448 | CYS |
| 1 | D | 451 | LEU |
| 1 | D | 467 | VAL |
| 1 | D | 470 | LEU |
| 1 | D | 472 | VAL |
| 1 | D | 473 | LYS |
| 1 | D | 477 | ILE |
| 1 | D | 478 | GLN |
| 1 | D | 485 | GLU |
| 1 | D | 488 | LEU |
| 1 | D | 489 | ARG |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 490 | ILE |
| 1 | D | 491 | ASP |
| 1 | D | 494 | ILE |
| 1 | D | 497 | GLU |
| 1 | E | 7 | VAL |
| 1 | E | 8 | LEU |
| 1 | E | 12 | MET |
| 1 | E | 16 | MET |
| 1 | E | 18 | ARG |
| 1 | E | 21 | GLN |
| 1 | E | 23 | MET |
| 1 | E | 24 | ASN |
| 1 | E | 26 | LEU |
| 1 | E | 31 | ILE |
| 1 | E | 37 | SER |
| 1 | E | 38 | THR |
| 1 | E | 42 | LYS |
| 1 | E | 54 | ASP |
| 1 | E | 60 | ASP |
| 1 | E | 65 | LEU |
| 1 | E | 68 | MET |
| 1 | E | 70 | VAL |
| 1 | E | 71 | GLU |
| 1 | E | 72 | HIS |
| 1 | E | 77 | MET |
| 1 | E | 78 | LEU |
| 1 | E | 80 | GLU |
| 1 | E | 84 | THR |
| 1 | E | 85 | GLN |
| 1 | E | 88 | GLU |
| 1 | E | 93 | THR |
| 1 | E | 95 | THR |
| 1 | E | 105 | ARG |
| 1 | E | 106 | LYS |
| 1 | E | 110 | LEU |
| 1 | E | 113 | GLN |
| 1 | E | 114 | ASN |
| 1 | E | 115 | VAL |
| 1 | E | 118 | THR |
| 1 | E | 120 | VAL |
| 1 | E | 122 | LYS |
| 1 | E | 130 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | E | 133 | GLU |
| 1 | E | 135 | LEU |
| 1 | E | 138 | ILE |
| 1 | E | 142 | VAL |
| 1 | E | 145 | GLN |
| 1 | E | 153 | ILE |
| 1 | E | 155 | MET |
| 1 | E | 157 | SER |
| 1 | E | 158 | ILE |
| 1 | E | 164 | GLU |
| 1 | E | 167 | LYS |
| 1 | E | 170 | LEU |
| 1 | E | 182 | VAL |
| 1 | E | 187 | LYS |
| 1 | E | 191 | ASP |
| 1 | E | 193 | ILE |
| 1 | E | 197 | LYS |
| 1 | E | 198 | LYS |
| 1 | E | 199 | SER |
| 1 | E | 203 | ILE |
| 1 | E | 204 | ASP |
| 1 | E | 205 | ASP |
| 1 | E | 208 | LEU |
| 1 | E | 210 | LYS |
| 1 | E | 213 | LEU |
| 1 | E | 216 | LYS |
| 1 | E | 224 | PRO |
| 1 | E | 227 | VAL |
| 1 | E | 228 | THR |
| 1 | E | 229 | ASP |
| 1 | E | 231 | LYS |
| 1 | E | 235 | LEU |
| 1 | E | 236 | ASN |
| 1 | E | 237 | CYS |
| 1 | E | 239 | ILE |
| 1 | E | 244 | SER |
| 1 | E | 247 | LEU |
| 1 | E | 253 | GLU |
| 1 | E | 255 | LYS |
| 1 | E | 257 | SER |
| 1 | E | 260 | ASN |
| 1 | E | 262 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | E | 266 | LYS |
| 1 | E | 273 | GLN |
| 1 | E | 276 | LEU |
| 1 | E | 281 | ILE |
| 1 | E | 285 | ARG |
| 1 | E | 286 | ARG |
| 1 | E | 289 | LYS |
| 1 | E | 290 | SER |
| 1 | E | 293 | GLU |
| 1 | E | 295 | LEU |
| 1 | E | 302 | ASN |
| 1 | E | 303 | VAL |
| 1 | E | 304 | ILE |
| 1 | E | 308 | LYS |
| 1 | E | 309 | ASP |
| 1 | E | 310 | LEU |
| 1 | E | 313 | GLN |
| 1 | E | 325 | LYS |
| 1 | E | 337 | CYS |
| 1 | E | 338 | LYS |
| 1 | E | 341 | LYS |
| 1 | E | 346 | LEU |
| 1 | E | 347 | ILE |
| 1 | E | 348 | ARG |
| 1 | E | 350 | THR |
| 1 | E | 351 | THR |
| 1 | E | 352 | GLU |
| 1 | E | 353 | HIS |
| 1 | E | 354 | VAL |
| 1 | E | 356 | GLU |
| 1 | E | 364 | ASP |
| 1 | E | 366 | VAL |
| 1 | E | 368 | VAL |
| 1 | E | 372 | THR |
| 1 | E | 373 | ILE |
| 1 | E | 377 | ARG |
| 1 | E | 379 | VAL |
| 1 | E | 380 | SER |
| 1 | E | 384 | SER |
| 1 | E | 386 | GLU |
| 1 | E | 391 | MET |
| 1 | E | 393 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | E | 403 | ARG |
| 1 | E | 406 | LEU |
| 1 | E | 411 | PHE |
| 1 | E | 418 | ILE |
| 1 | E | 420 | ARG |
| 1 | E | 431 | ILE |
| 1 | E | 432 | GLU |
| 1 | E | 446 | ASN |
| 1 | E | 447 | LYS |
| 1 | E | 455 | THR |
| 1 | E | 461 | MET |
| 1 | E | 464 | ASN |
| 1 | E | 470 | LEU |
| 1 | E | 472 | VAL |
| 1 | E | 473 | LYS |
| 1 | E | 477 | ILE |
| 1 | E | 479 | SER |
| 1 | E | 483 | SER |
| 1 | E | 489 | ARG |
| 1 | E | 490 | ILE |
| 1 | E | 493 | VAL |
| 1 | E | 494 | ILE |
| 1 | E | 497 | GLU |
| 1 | F | 8 | LEU |
| 1 | F | 9 | PRO |
| 1 | F | 10 | GLU |
| 1 | F | 12 | MET |
| 1 | F | 22 | ARG |
| 1 | F | 26 | LEU |
| 1 | F | 30 | ILE |
| 1 | F | 31 | ILE |
| 1 | F | 35 | VAL |
| 1 | F | 36 | ARG |
| 1 | F | 37 | SER |
| 1 | F | 38 | THR |
| 1 | F | 39 | LEU |
| 1 | F | 42 | LYS |
| 1 | F | 45 | ASP |
| 1 | F | 46 | LYS |
| 1 | F | 48 | LEU |
| 1 | F | 50 | ASP |
| 1 | F | 54 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 55 | VAL |
| 1 | F | 57 | VAL |
| 1 | F | 59 | ASN |
| 1 | F | 66 | ARG |
| 1 | F | 68 | MET |
| 1 | F | 69 | SER |
| 1 | F | 73 | PRO |
| 1 | F | 76 | LYS |
| 1 | F | 77 | MET |
| 1 | F | 78 | LEU |
| 1 | F | 81 | VAL |
| 1 | F | 83 | LYS |
| 1 | F | 85 | GLN |
| 1 | F | 94 | THR |
| 1 | F | 97 | VAL |
| 1 | F | 106 | LYS |
| 1 | F | 111 | LEU |
| 1 | F | 113 | GLN |
| 1 | F | 114 | ASN |
| 1 | F | 115 | VAL |
| 1 | F | 116 | HIS |
| 1 | F | 118 | THR |
| 1 | F | 119 | ILE |
| 1 | F | 120 | VAL |
| 1 | F | 130 | LYS |
| 1 | F | 140 | CYS |
| 1 | F | 141 | GLU |
| 1 | F | 145 | GLN |
| 1 | F | 153 | ILE |
| 1 | F | 155 | MET |
| 1 | F | 156 | THR |
| 1 | F | 157 | SER |
| 1 | F | 164 | GLU |
| 1 | F | 165 | LYS |
| 1 | F | 167 | LYS |
| 1 | F | 170 | LEU |
| 1 | F | 173 | ILE |
| 1 | F | 178 | VAL |
| 1 | F | 189 | ASP |
| 1 | F | 190 | LYS |
| 1 | F | 191 | ASP |
| 1 | F | 193 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 197 | LYS |
| 1 | F | 199 | SER |
| 1 | F | 203 | ILE |
| 1 | F | 205 | ASP |
| 1 | F | 210 | LYS |
| 1 | F | 215 | ASP |
| 1 | F | 222 | GLN |
| 1 | F | 224 | PRO |
| 1 | F | 225 | LYS |
| 1 | F | 228 | THR |
| 1 | F | 229 | ASP |
| 1 | F | 231 | LYS |
| 1 | F | 232 | ILE |
| 1 | F | 235 | LEU |
| 1 | F | 236 | ASN |
| 1 | F | 237 | CYS |
| 1 | F | 239 | ILE |
| 1 | F | 240 | GLU |
| 1 | F | 244 | SER |
| 1 | F | 251 | VAL |
| 1 | F | 255 | LYS |
| 1 | F | 257 | SER |
| 1 | F | 270 | ASP |
| 1 | F | 273 | GLN |
| 1 | F | 276 | LEU |
| 1 | F | 282 | VAL |
| 1 | F | 285 | ARG |
| 1 | F | 286 | ARG |
| 1 | F | 289 | LYS |
| 1 | F | 290 | SER |
| 1 | F | 291 | ASP |
| 1 | F | 293 | GLU |
| 1 | F | 294 | LYS |
| 1 | F | 295 | LEU |
| 1 | F | 299 | THR |
| 1 | F | 303 | VAL |
| 1 | F | 307 | ILE |
| 1 | F | 308 | LYS |
| 1 | F | 311 | SER |
| 1 | F | 313 | GLN |
| 1 | F | 320 | LEU |
| 1 | F | 327 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 330 | SER |
| 1 | F | 338 | LYS |
| 1 | F | 341 | LYS |
| 1 | F | 346 | LEU |
| 1 | F | 347 | ILE |
| 1 | F | 348 | ARG |
| 1 | F | 350 | THR |
| 1 | F | 351 | THR |
| 1 | F | 354 | VAL |
| 1 | F | 355 | ILE |
| 1 | F | 360 | ARG |
| 1 | F | 362 | VAL |
| 1 | F | 368 | VAL |
| 1 | F | 373 | ILE |
| 1 | F | 374 | GLU |
| 1 | F | 375 | ASP |
| 1 | F | 377 | ARG |
| 1 | F | 379 | VAL |
| 1 | F | 380 | SER |
| 1 | F | 386 | GLU |
| 1 | F | 391 | MET |
| 1 | F | 403 | ARG |
| 1 | F | 411 | PHE |
| 1 | F | 415 | LEU |
| 1 | F | 416 | GLU |
| 1 | F | 417 | VAL |
| 1 | F | 428 | LEU |
| 1 | F | 431 | ILE |
| 1 | F | 435 | VAL |
| 1 | F | 438 | ARG |
| 1 | F | 441 | HIS |
| 1 | F | 446 | ASN |
| 1 | F | 447 | LYS |
| 1 | F | 451 | LEU |
| 1 | F | 455 | THR |
| 1 | F | 458 | VAL |
| 1 | F | 461 | MET |
| 1 | F | 463 | GLU |
| 1 | F | 467 | VAL |
| 1 | F | 468 | GLU |
| 1 | F | 469 | PRO |
| 1 | F | 470 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | F | 471 | ARG |
| 1 | F | 473 | LYS |
| 1 | F | 474 | THR |
| 1 | F | 477 | ILE |
| 1 | F | 479 | SER |
| 1 | F | 482 | GLU |
| 1 | F | 488 | LEU |
| 1 | G | 7 | VAL |
| 1 | G | 10 | GLU |
| 1 | G | 11 | ASN |
| 1 | G | 14 | ARG |
| 1 | G | 22 | ARG |
| 1 | G | 31 | ILE |
| 1 | G | 36 | ARG |
| 1 | G | 38 | THR |
| 1 | G | 39 | LEU |
| 1 | G | 42 | LYS |
| 1 | G | 44 | MET |
| 1 | G | 51 | ASP |
| 1 | G | 58 | THR |
| 1 | G | 60 | ASP |
| 1 | G | 64 | ILE |
| 1 | G | 68 | MET |
| 1 | G | 69 | SER |
| 1 | G | 70 | VAL |
| 1 | G | 72 | HIS |
| 1 | G | 73 | PRO |
| 1 | G | 76 | LYS |
| 1 | G | 77 | MET |
| 1 | G | 78 | LEU |
| 1 | G | 79 | ILE |
| 1 | G | 81 | VAL |
| 1 | G | 91 | ASP |
| 1 | G | 93 | THR |
| 1 | G | 99 | VAL |
| 1 | G | 106 | LYS |
| 1 | G | 111 | LEU |
| 1 | G | 113 | GLN |
| 1 | G | 114 | ASN |
| 1 | G | 115 | VAL |
| 1 | G | 124 | TYR |
| 1 | G | 134 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | G | 135 | LEU |
| 1 | G | 136 | LYS |
| 1 | G | 140 | CYS |
| 1 | G | 141 | GLU |
| 1 | G | 145 | GLN |
| 1 | G | 147 | LYS |
| 1 | G | 150 | LEU |
| 1 | G | 155 | MET |
| 1 | G | 156 | THR |
| 1 | G | 157 | SER |
| 1 | G | 164 | GLU |
| 1 | G | 165 | LYS |
| 1 | G | 167 | LYS |
| 1 | G | 185 | GLU |
| 1 | G | 187 | LYS |
| 1 | G | 188 | VAL |
| 1 | G | 189 | ASP |
| 1 | G | 190 | LYS |
| 1 | G | 191 | ASP |
| 1 | G | 192 | LEU |
| 1 | G | 193 | ILE |
| 1 | G | 195 | ILE |
| 1 | G | 199 | SER |
| 1 | G | 203 | ILE |
| 1 | G | 204 | ASP |
| 1 | G | 213 | LEU |
| 1 | G | 215 | ASP |
| 1 | G | 217 | GLU |
| 1 | G | 219 | VAL |
| 1 | G | 222 | GLN |
| 1 | G | 226 | LYS |
| 1 | G | 227 | VAL |
| 1 | G | 228 | THR |
| 1 | G | 229 | ASP |
| 1 | G | 231 | LYS |
| 1 | G | 234 | LEU |
| 1 | G | 242 | THR |
| 1 | G | 244 | SER |
| 1 | G | 250 | MET |
| 1 | G | 254 | ILE |
| 1 | G | 266 | LYS |
| 1 | G | 268 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | G | 271 | LEU |
| 1 | G | 276 | LEU |
| 1 | G | 278 | LYS |
| 1 | G | 279 | GLU |
| 1 | G | 281 | ILE |
| 1 | G | 285 | ARG |
| 1 | G | 286 | ARG |
| 1 | G | 289 | LYS |
| 1 | G | 292 | MET |
| 1 | G | 293 | GLU |
| 1 | G | 294 | LYS |
| 1 | G | 295 | LEU |
| 1 | G | 303 | VAL |
| 1 | G | 304 | ILE |
| 1 | G | 307 | ILE |
| 1 | G | 308 | LYS |
| 1 | G | 309 | ASP |
| 1 | G | 313 | GLN |
| 1 | G | 315 | LEU |
| 1 | G | 317 | ASP |
| 1 | G | 320 | LEU |
| 1 | G | 325 | LYS |
| 1 | G | 327 | SER |
| 1 | G | 336 | GLU |
| 1 | G | 338 | LYS |
| 1 | G | 341 | LYS |
| 1 | G | 345 | MET |
| 1 | G | 346 | LEU |
| 1 | G | 352 | GLU |
| 1 | G | 362 | VAL |
| 1 | G | 378 | ILE |
| 1 | G | 379 | VAL |
| 1 | G | 380 | SER |
| 1 | G | 384 | SER |
| 1 | G | 386 | GLU |
| 1 | G | 388 | GLU |
| 1 | G | 389 | LEU |
| 1 | G | 390 | SER |
| 1 | G | 391 | MET |
| 1 | G | 394 | ARG |
| 1 | G | 395 | GLU |
| 1 | G | 401 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | G | 403 | ARG |
| 1 | G | 413 | ASP |
| 1 | G | 421 | THR |
| 1 | G | 425 | ASN |
| 1 | G | 431 | ILE |
| 1 | G | 441 | HIS |
| 1 | G | 448 | CYS |
| 1 | G | 451 | LEU |
| 1 | G | 453 | VAL |
| 1 | G | 455 | THR |
| 1 | G | 459 | GLU |
| 1 | G | 470 | LEU |
| 1 | G | 472 | VAL |
| 1 | G | 473 | LYS |
| 1 | G | 477 | ILE |
| 1 | G | 479 | SER |
| 1 | G | 484 | THR |
| 1 | G | 486 | MET |
| 1 | G | 488 | LEU |
| 1 | G | 491 | ASP |
| 1 | G | 494 | ILE |
| 1 | G | 497 | GLU |
| 1 | H | 7 | VAL |
| 1 | H | 10 | GLU |
| 1 | H | 11 | ASN |
| 1 | H | 12 | MET |
| 1 | H | 14 | ARG |
| 1 | H | 16 | MET |
| 1 | H | 18 | ARG |
| 1 | H | 19 | ASP |
| 1 | H | 23 | MET |
| 1 | H | 24 | ASN |
| 1 | H | 25 | ILE |
| 1 | H | 26 | LEU |
| 1 | H | 31 | ILE |
| 1 | H | 35 | VAL |
| 1 | H | 37 | SER |
| 1 | H | 44 | MET |
| 1 | H | 45 | ASP |
| 1 | H | 54 | ASP |
| 1 | H | 55 | VAL |
| 1 | H | 68 | MET |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | H | 69 | SER |
| 1 | H | 71 | GLU |
| 1 | H | 76 | LYS |
| 1 | H | 77 | MET |
| 1 | H | 78 | LEU |
| 1 | H | 79 | ILE |
| 1 | H | 80 | GLU |
| 1 | H | 81 | VAL |
| 1 | H | 105 | ARG |
| 1 | H | 106 | LYS |
| 1 | H | 112 | ASP |
| 1 | H | 113 | GLN |
| 1 | H | 114 | ASN |
| 1 | H | 116 | HIS |
| 1 | H | 122 | LYS |
| 1 | H | 124 | TYR |
| 1 | H | 129 | GLN |
| 1 | H | 132 | GLN |
| 1 | H | 134 | LEU |
| 1 | H | 138 | ILE |
| 1 | H | 147 | LYS |
| 1 | H | 148 | GLU |
| 1 | H | 150 | LEU |
| 1 | H | 156 | THR |
| 1 | H | 157 | SER |
| 1 | H | 158 | ILE |
| 1 | H | 159 | THR |
| 1 | H | 165 | LYS |
| 1 | H | 167 | LYS |
| 1 | H | 170 | LEU |
| 1 | H | 172 | GLU |
| 1 | H | 173 | ILE |
| 1 | H | 178 | VAL |
| 1 | H | 187 | LYS |
| 1 | H | 188 | VAL |
| 1 | H | 189 | ASP |
| 1 | H | 190 | LYS |
| 1 | H | 192 | LEU |
| 1 | H | 193 | ILE |
| 1 | H | 197 | LYS |
| 1 | H | 199 | SER |
| 1 | H | 203 | ILE |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | H | 205 | ASP |
| 1 | H | 213 | LEU |
| 1 | H | 215 | ASP |
| 1 | H | 219 | VAL |
| 1 | H | 222 | GLN |
| 1 | H | 225 | LYS |
| 1 | H | 227 | VAL |
| 1 | H | 228 | THR |
| 1 | H | 231 | LYS |
| 1 | H | 235 | LEU |
| 1 | H | 236 | ASN |
| 1 | H | 239 | ILE |
| 1 | H | 247 | LEU |
| 1 | H | 251 | VAL |
| 1 | H | 254 | ILE |
| 1 | H | 257 | SER |
| 1 | H | 266 | LYS |
| 1 | H | 268 | ILE |
| 1 | H | 270 | ASP |
| 1 | H | 271 | LEU |
| 1 | H | 273 | GLN |
| 1 | H | 276 | LEU |
| 1 | H | 278 | LYS |
| 1 | H | 279 | GLU |
| 1 | H | 285 | ARG |
| 1 | H | 286 | ARG |
| 1 | H | 293 | GLU |
| 1 | H | 294 | LYS |
| 1 | H | 297 | LYS |
| 1 | H | 302 | ASN |
| 1 | H | 303 | VAL |
| 1 | H | 305 | THR |
| 1 | H | 306 | ASN |
| 1 | H | 308 | LYS |
| 1 | H | 309 | ASP |
| 1 | H | 310 | LEU |
| 1 | H | 315 | LEU |
| 1 | H | 317 | ASP |
| 1 | H | 320 | LEU |
| 1 | H | 323 | GLU |
| 1 | H | 327 | SER |
| 1 | H | 330 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | H | 335 | GLU |
| 1 | H | 338 | LYS |
| 1 | H | 341 | LYS |
| 1 | H | 347 | ILE |
| 1 | H | 348 | ARG |
| 1 | H | 351 | THR |
| 1 | H | 352 | GLU |
| 1 | H | 355 | ILE |
| 1 | H | 357 | GLU |
| 1 | H | 364 | ASP |
| 1 | H | 368 | VAL |
| 1 | H | 377 | ARG |
| 1 | H | 378 | ILE |
| 1 | H | 380 | SER |
| 1 | H | 384 | SER |
| 1 | H | 386 | GLU |
| 1 | H | 388 | GLU |
| 1 | H | 391 | MET |
| 1 | H | 394 | ARG |
| 1 | H | 398 | GLU |
| 1 | H | 403 | ARG |
| 1 | H | 406 | LEU |
| 1 | H | 411 | PHE |
| 1 | H | 413 | ASP |
| 1 | H | 415 | LEU |
| 1 | H | 417 | VAL |
| 1 | H | 418 | ILE |
| 1 | H | 420 | ARG |
| 1 | H | 421 | THR |
| 1 | H | 422 | LEU |
| 1 | H | 425 | ASN |
| 1 | H | 431 | ILE |
| 1 | H | 432 | GLU |
| 1 | H | 434 | LEU |
| 1 | H | 441 | HIS |
| 1 | H | 446 | ASN |
| 1 | H | 455 | THR |
| 1 | H | 462 | CYS |
| 1 | H | 464 | ASN |
| 1 | H | 467 | VAL |
| 1 | H | 468 | GLU |
| 1 | H | 470 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | H | 473 | LYS |
| 1 | H | 478 | GLN |
| 1 | H | 485 | GLU |
| 1 | H | 487 | LEU |
| 1 | H | 488 | LEU |
| 1 | H | 489 | ARG |
| 1 | H | 497 | GLU |
| 1 | I | 11 | ASN |
| 1 | I | 12 | MET |
| 1 | I | 18 | ARG |
| 1 | I | 19 | ASP |
| 1 | I | 24 | ASN |
| 1 | I | 25 | ILE |
| 1 | I | 26 | LEU |
| 1 | I | 31 | ILE |
| 1 | I | 33 | GLU |
| 1 | I | 37 | SER |
| 1 | I | 44 | MET |
| 1 | I | 48 | LEU |
| 1 | I | 51 | ASP |
| 1 | I | 57 | VAL |
| 1 | I | 63 | THR |
| 1 | I | 66 | ARG |
| 1 | I | 68 | MET |
| 1 | I | 69 | SER |
| 1 | I | 70 | VAL |
| 1 | I | 71 | GLU |
| 1 | I | 77 | MET |
| 1 | I | 78 | LEU |
| 1 | I | 81 | VAL |
| 1 | I | 85 | GLN |
| 1 | I | 91 | ASP |
| 1 | I | 95 | THR |
| 1 | I | 98 | VAL |
| 1 | I | 105 | ARG |
| 1 | I | 106 | LYS |
| 1 | I | 110 | LEU |
| 1 | I | 113 | GLN |
| 1 | I | 114 | ASN |
| 1 | I | 115 | VAL |
| 1 | I | 116 | HIS |
| 1 | I | 122 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 124 | TYR |
| 1 | I | 129 | GLN |
| 1 | I | 130 | LYS |
| 1 | I | 132 | GLN |
| 1 | I | 134 | LEU |
| 1 | I | 135 | LEU |
| 1 | I | 141 | GLU |
| 1 | I | 145 | GLN |
| 1 | I | 147 | LYS |
| 1 | I | 148 | GLU |
| 1 | I | 152 | LYS |
| 1 | I | 153 | ILE |
| 1 | I | 157 | SER |
| 1 | I | 164 | GLU |
| 1 | I | 167 | LYS |
| 1 | I | 170 | LEU |
| 1 | I | 172 | GLU |
| 1 | I | 173 | ILE |
| 1 | I | 179 | SER |
| 1 | I | 190 | LYS |
| 1 | I | 191 | ASP |
| 1 | I | 195 | ILE |
| 1 | I | 197 | LYS |
| 1 | I | 203 | ILE |
| 1 | I | 208 | LEU |
| 1 | I | 209 | ILE |
| 1 | I | 210 | LYS |
| 1 | I | 216 | LYS |
| 1 | I | 218 | ARG |
| 1 | I | 222 | GLN |
| 1 | I | 225 | LYS |
| 1 | I | 226 | LYS |
| 1 | I | 228 | THR |
| 1 | I | 231 | LYS |
| 1 | I | 234 | LEU |
| 1 | I | 236 | ASN |
| 1 | I | 239 | ILE |
| 1 | I | 246 | MET |
| 1 | I | 257 | SER |
| 1 | I | 260 | ASN |
| 1 | I | 266 | LYS |
| 1 | I | 270 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 278 | LYS |
| 1 | I | 281 | ILE |
| 1 | I | 285 | ARG |
| 1 | I | 288 | LYS |
| 1 | I | 290 | SER |
| 1 | I | 294 | LYS |
| 1 | I | 295 | LEU |
| 1 | I | 299 | THR |
| 1 | I | 303 | VAL |
| 1 | I | 305 | THR |
| 1 | I | 307 | ILE |
| 1 | I | 308 | LYS |
| 1 | I | 309 | ASP |
| 1 | I | 311 | SER |
| 1 | I | 313 | GLN |
| 1 | I | 314 | ASP |
| 1 | I | 315 | LEU |
| 1 | I | 317 | ASP |
| 1 | I | 325 | LYS |
| 1 | I | 326 | ILE |
| 1 | I | 327 | SER |
| 1 | I | 340 | PRO |
| 1 | I | 341 | LYS |
| 1 | I | 346 | LEU |
| 1 | I | 348 | ARG |
| 1 | I | 350 | THR |
| 1 | I | 354 | VAL |
| 1 | I | 356 | GLU |
| 1 | I | 357 | GLU |
| 1 | I | 368 | VAL |
| 1 | I | 371 | CYS |
| 1 | I | 373 | ILE |
| 1 | I | 377 | ARG |
| 1 | I | 379 | VAL |
| 1 | I | 380 | SER |
| 1 | I | 386 | GLU |
| 1 | I | 403 | ARG |
| 1 | I | 406 | LEU |
| 1 | I | 411 | PHE |
| 1 | I | 415 | LEU |
| 1 | I | 416 | GLU |
| 1 | I | 417 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | I | 420 | ARG |
| 1 | I | 421 | THR |
| 1 | I | 422 | LEU |
| 1 | I | 424 | GLU |
| 1 | I | 431 | ILE |
| 1 | I | 435 | VAL |
| 1 | I | 438 | ARG |
| 1 | I | 441 | HIS |
| 1 | I | 444 | ASN |
| 1 | I | 446 | ASN |
| 1 | I | 453 | VAL |
| 1 | I | 459 | GLU |
| 1 | I | 461 | MET |
| 1 | I | 466 | VAL |
| 1 | I | 467 | VAL |
| 1 | I | 470 | LEU |
| 1 | I | 471 | ARG |
| 1 | I | 472 | VAL |
| 1 | I | 473 | LYS |
| 1 | I | 477 | ILE |
| 1 | I | 479 | SER |
| 1 | I | 484 | THR |
| 1 | I | 487 | LEU |
| 1 | I | 489 | ARG |
| 1 | I | 491 | ASP |
| 1 | I | 493 | VAL |
| 1 | I | 497 | GLU |
| 1 | J | 7 | VAL |
| 1 | J | 8 | LEU |
| 1 | J | 10 | GLU |
| 1 | J | 12 | MET |
| 1 | J | 14 | ARG |
| 1 | J | 18 | ARG |
| 1 | J | 19 | ASP |
| 1 | J | 22 | ARG |
| 1 | J | 26 | LEU |
| 1 | J | 30 | ILE |
| 1 | J | 31 | ILE |
| 1 | J | 34 | THR |
| 1 | J | 35 | VAL |
| 1 | J | 36 | ARG |
| 1 | J | 38 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | J | 42 | LYS |
| 1 | J | 44 | MET |
| 1 | J | 54 | ASP |
| 1 | J | 55 | VAL |
| 1 | J | 56 | VAL |
| 1 | J | 65 | LEU |
| 1 | J | 66 | ARG |
| 1 | J | 68 | MET |
| 1 | J | 70 | VAL |
| 1 | J | 77 | MET |
| 1 | J | 81 | VAL |
| 1 | J | 87 | LYS |
| 1 | J | 89 | VAL |
| 1 | J | 91 | ASP |
| 1 | J | 106 | LYS |
| 1 | J | 111 | LEU |
| 1 | J | 113 | GLN |
| 1 | J | 114 | ASN |
| 1 | J | 120 | VAL |
| 1 | J | 121 | VAL |
| 1 | J | 122 | LYS |
| 1 | J | 129 | GLN |
| 1 | J | 134 | LEU |
| 1 | J | 135 | LEU |
| 1 | J | 136 | LYS |
| 1 | J | 140 | CYS |
| 1 | J | 141 | GLU |
| 1 | J | 142 | VAL |
| 1 | J | 150 | LEU |
| 1 | J | 155 | MET |
| 1 | J | 156 | THR |
| 1 | J | 157 | SER |
| 1 | J | 164 | GLU |
| 1 | J | 167 | LYS |
| 1 | J | 182 | VAL |
| 1 | J | 183 | ASP |
| 1 | J | 185 | GLU |
| 1 | J | 187 | LYS |
| 1 | J | 189 | ASP |
| 1 | J | 190 | LYS |
| 1 | J | 192 | LEU |
| 1 | J | 194 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | J | 195 | ILE |
| 1 | J | 197 | LYS |
| 1 | J | 198 | LYS |
| 1 | J | 203 | ILE |
| 1 | J | 205 | ASP |
| 1 | J | 210 | LYS |
| 1 | J | 215 | ASP |
| 1 | J | 219 | VAL |
| 1 | J | 224 | PRO |
| 1 | J | 225 | LYS |
| 1 | J | 226 | LYS |
| 1 | J | 228 | THR |
| 1 | J | 231 | LYS |
| 1 | J | 234 | LEU |
| 1 | J | 236 | ASN |
| 1 | J | 237 | CYS |
| 1 | J | 239 | ILE |
| 1 | J | 240 | GLU |
| 1 | J | 242 | THR |
| 1 | J | 254 | ILE |
| 1 | J | 260 | ASN |
| 1 | J | 266 | LYS |
| 1 | J | 269 | ASP |
| 1 | J | 270 | ASP |
| 1 | J | 271 | LEU |
| 1 | J | 273 | GLN |
| 1 | J | 281 | ILE |
| 1 | J | 285 | ARG |
| 1 | J | 286 | ARG |
| 1 | J | 293 | GLU |
| 1 | J | 295 | LEU |
| 1 | J | 297 | LYS |
| 1 | J | 302 | ASN |
| 1 | J | 303 | VAL |
| 1 | J | 307 | ILE |
| 1 | J | 308 | LYS |
| 1 | J | 309 | ASP |
| 1 | J | 310 | LEU |
| 1 | J | 315 | LEU |
| 1 | J | 320 | LEU |
| 1 | J | 327 | SER |
| 1 | J | 334 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | J | 336 | GLU |
| 1 | J | 338 | LYS |
| 1 | J | 341 | LYS |
| 1 | J | 343 | VAL |
| 1 | J | 346 | LEU |
| 1 | J | 348 | ARG |
| 1 | J | 352 | GLU |
| 1 | J | 354 | VAL |
| 1 | J | 371 | CYS |
| 1 | J | 372 | THR |
| 1 | J | 377 | ARG |
| 1 | J | 379 | VAL |
| 1 | J | 386 | GLU |
| 1 | J | 395 | GLU |
| 1 | J | 401 | SER |
| 1 | J | 403 | ARG |
| 1 | J | 406 | LEU |
| 1 | J | 411 | PHE |
| 1 | J | 413 | ASP |
| 1 | J | 416 | GLU |
| 1 | J | 418 | ILE |
| 1 | J | 425 | ASN |
| 1 | J | 431 | ILE |
| 1 | J | 436 | LYS |
| 1 | J | 446 | ASN |
| 1 | J | 455 | THR |
| 1 | J | 459 | GLU |
| 1 | J | 461 | MET |
| 1 | J | 470 | LEU |
| 1 | J | 471 | ARG |
| 1 | J | 473 | LYS |
| 1 | J | 474 | THR |
| 1 | J | 477 | ILE |
| 1 | J | 486 | MET |
| 1 | J | 488 | LEU |
| 1 | J | 497 | GLU |
| 1 | K | 10 | GLU |
| 1 | K | 11 | ASN |
| 1 | K | 12 | MET |
| 1 | K | 13 | LYS |
| 1 | K | 14 | ARG |
| 1 | K | 15 | TYR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 16 | MET |
| 1 | K | 19 | ASP |
| 1 | K | 21 | GLN |
| 1 | K | 23 | MET |
| 1 | K | 25 | ILE |
| 1 | K | 26 | LEU |
| 1 | K | 31 | ILE |
| 1 | K | 35 | VAL |
| 1 | K | 37 | SER |
| 1 | K | 44 | MET |
| 1 | K | 68 | MET |
| 1 | K | 71 | GLU |
| 1 | K | 77 | MET |
| 1 | K | 78 | LEU |
| 1 | K | 81 | VAL |
| 1 | K | 83 | LYS |
| 1 | K | 84 | THR |
| 1 | K | 86 | GLU |
| 1 | K | 94 | THR |
| 1 | K | 97 | VAL |
| 1 | K | 106 | LYS |
| 1 | K | 110 | LEU |
| 1 | K | 111 | LEU |
| 1 | K | 113 | GLN |
| 1 | K | 114 | ASN |
| 1 | K | 116 | HIS |
| 1 | K | 122 | LYS |
| 1 | K | 124 | TYR |
| 1 | K | 130 | LYS |
| 1 | K | 134 | LEU |
| 1 | K | 136 | LYS |
| 1 | K | 140 | CYS |
| 1 | K | 141 | GLU |
| 1 | K | 142 | VAL |
| 1 | K | 145 | GLN |
| 1 | K | 147 | LYS |
| 1 | K | 150 | LEU |
| 1 | K | 153 | ILE |
| 1 | K | 157 | SER |
| 1 | K | 159 | THR |
| 1 | K | 164 | GLU |
| 1 | K | 167 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 178 | VAL |
| 1 | K | 179 | SER |
| 1 | K | 188 | VAL |
| 1 | K | 189 | ASP |
| 1 | K | 191 | ASP |
| 1 | K | 192 | LEU |
| 1 | K | 195 | ILE |
| 1 | K | 197 | LYS |
| 1 | K | 199 | SER |
| 1 | K | 203 | ILE |
| 1 | K | 204 | ASP |
| 1 | K | 205 | ASP |
| 1 | K | 210 | LYS |
| 1 | K | 213 | LEU |
| 1 | K | 215 | ASP |
| 1 | K | 217 | GLU |
| 1 | K | 224 | PRO |
| 1 | K | 229 | ASP |
| 1 | K | 231 | LYS |
| 1 | K | 232 | ILE |
| 1 | K | 236 | ASN |
| 1 | K | 240 | GLU |
| 1 | K | 260 | ASN |
| 1 | K | 268 | ILE |
| 1 | K | 278 | LYS |
| 1 | K | 285 | ARG |
| 1 | K | 289 | LYS |
| 1 | K | 291 | ASP |
| 1 | K | 292 | MET |
| 1 | K | 294 | LYS |
| 1 | K | 295 | LEU |
| 1 | K | 302 | ASN |
| 1 | K | 307 | ILE |
| 1 | K | 308 | LYS |
| 1 | K | 309 | ASP |
| 1 | K | 310 | LEU |
| 1 | K | 313 | GLN |
| 1 | K | 315 | LEU |
| 1 | K | 320 | LEU |
| 1 | K | 327 | SER |
| 1 | K | 330 | SER |
| 1 | K | 336 | GLU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 337 | CYS |
| 1 | K | 338 | LYS |
| 1 | K | 341 | LYS |
| 1 | K | 343 | VAL |
| 1 | K | 348 | ARG |
| 1 | K | 351 | THR |
| 1 | K | 360 | ARG |
| 1 | K | 371 | CYS |
| 1 | K | 374 | GLU |
| 1 | K | 377 | ARG |
| 1 | K | 378 | ILE |
| 1 | K | 379 | VAL |
| 1 | K | 380 | SER |
| 1 | K | 384 | SER |
| 1 | K | 386 | GLU |
| 1 | K | 401 | SER |
| 1 | K | 403 | ARG |
| 1 | K | 406 | LEU |
| 1 | K | 413 | ASP |
| 1 | K | 415 | LEU |
| 1 | K | 416 | GLU |
| 1 | K | 418 | ILE |
| 1 | K | 420 | ARG |
| 1 | K | 428 | LEU |
| 1 | K | 429 | ASP |
| 1 | K | 431 | ILE |
| 1 | K | 434 | LEU |
| 1 | K | 441 | HIS |
| 1 | K | 443 | SER |
| 1 | K | 446 | ASN |
| 1 | K | 448 | CYS |
| 1 | K | 453 | VAL |
| 1 | K | 455 | THR |
| 1 | K | 459 | GLU |
| 1 | K | 460 | ASP |
| 1 | K | 461 | MET |
| 1 | K | 466 | VAL |
| 1 | K | 468 | GLU |
| 1 | K | 470 | LEU |
| 1 | K | 473 | LYS |
| 1 | K | 475 | GLN |
| 1 | K | 479 | SER |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 485 | GLU |
| 1 | K | 486 | MET |
| 1 | K | 487 | LEU |
| 1 | K | 489 | ARG |
| 1 | L | 10 | GLU |
| 1 | L | 11 | ASN |
| 1 | L | 12 | MET |
| 1 | L | 13 | LYS |
| 1 | L | 16 | MET |
| 1 | L | 18 | ARG |
| 1 | L | 19 | ASP |
| 1 | L | 26 | LEU |
| 1 | L | 31 | ILE |
| 1 | L | 35 | VAL |
| 1 | L | 37 | SER |
| 1 | L | 39 | LEU |
| 1 | L | 44 | MET |
| 1 | L | 49 | VAL |
| 1 | L | 51 | ASP |
| 1 | L | 52 | LEU |
| 1 | L | 54 | ASP |
| 1 | L | 56 | VAL |
| 1 | L | 57 | VAL |
| 1 | L | 59 | ASN |
| 1 | L | 63 | THR |
| 1 | L | 68 | MET |
| 1 | L | 69 | SER |
| 1 | L | 77 | MET |
| 1 | L | 78 | LEU |
| 1 | L | 94 | THR |
| 1 | L | 102 | GLU |
| 1 | L | 105 | ARG |
| 1 | L | 106 | LYS |
| 1 | L | 111 | LEU |
| 1 | L | 113 | GLN |
| 1 | L | 114 | ASN |
| 1 | L | 115 | VAL |
| 1 | L | 120 | VAL |
| 1 | L | 122 | LYS |
| 1 | L | 130 | LYS |
| 1 | L | 135 | LEU |
| 1 | L | 137 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 140 | CYS |
| 1 | L | 142 | VAL |
| 1 | L | 145 | GLN |
| 1 | L | 149 | ILE |
| 1 | L | 153 | ILE |
| 1 | L | 155 | MET |
| 1 | L | 157 | SER |
| 1 | L | 164 | GLU |
| 1 | L | 167 | LYS |
| 1 | L | 169 | LYS |
| 1 | L | 170 | LEU |
| 1 | L | 172 | GLU |
| 1 | L | 183 | ASP |
| 1 | L | 187 | LYS |
| 1 | L | 188 | VAL |
| 1 | L | 189 | ASP |
| 1 | L | 190 | LYS |
| 1 | L | 195 | ILE |
| 1 | L | 197 | LYS |
| 1 | L | 199 | SER |
| 1 | L | 203 | ILE |
| 1 | L | 206 | THR |
| 1 | L | 212 | VAL |
| 1 | L | 215 | ASP |
| 1 | L | 216 | LYS |
| 1 | L | 219 | VAL |
| 1 | L | 224 | PRO |
| 1 | L | 227 | VAL |
| 1 | L | 228 | THR |
| 1 | L | 229 | ASP |
| 1 | L | 231 | LYS |
| 1 | L | 234 | LEU |
| 1 | L | 235 | LEU |
| 1 | L | 250 | MET |
| 1 | L | 251 | VAL |
| 1 | L | 253 | GLU |
| 1 | L | 255 | LYS |
| 1 | L | 257 | SER |
| 1 | L | 260 | ASN |
| 1 | L | 266 | LYS |
| 1 | L | 268 | ILE |
| 1 | L | 270 | ASP |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 276 | LEU |
| 1 | L | 278 | LYS |
| 1 | L | 285 | ARG |
| 1 | L | 286 | ARG |
| 1 | L | 289 | LYS |
| 1 | L | 290 | SER |
| 1 | L | 291 | ASP |
| 1 | L | 292 | MET |
| 1 | L | 293 | GLU |
| 1 | L | 295 | LEU |
| 1 | L | 303 | VAL |
| 1 | L | 308 | LYS |
| 1 | L | 309 | ASP |
| 1 | L | 313 | GLN |
| 1 | L | 315 | LEU |
| 1 | L | 323 | GLU |
| 1 | L | 327 | SER |
| 1 | L | 336 | GLU |
| 1 | L | 337 | CYS |
| 1 | L | 338 | LYS |
| 1 | L | 340 | PRO |
| 1 | L | 341 | LYS |
| 1 | L | 345 | MET |
| 1 | L | 347 | ILE |
| 1 | L | 348 | ARG |
| 1 | L | 351 | THR |
| 1 | L | 352 | GLU |
| 1 | L | 353 | HIS |
| 1 | L | 354 | VAL |
| 1 | L | 363 | ASP |
| 1 | L | 371 | CYS |
| 1 | L | 373 | ILE |
| 1 | L | 374 | GLU |
| 1 | L | 375 | ASP |
| 1 | L | 377 | ARG |
| 1 | L | 387 | VAL |
| 1 | L | 394 | ARG |
| 1 | L | 400 | ILE |
| 1 | L | 403 | ARG |
| 1 | L | 404 | GLU |
| 1 | L | 409 | ARG |
| 1 | L | 413 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | L | 415 | LEU |
| 1 | L | 417 | VAL |
| 1 | L | 429 | ASP |
| 1 | L | 431 | ILE |
| 1 | L | 434 | LEU |
| 1 | L | 438 | ARG |
| 1 | L | 441 | HIS |
| 1 | L | 443 | SER |
| 1 | L | 453 | VAL |
| 1 | L | 455 | THR |
| 1 | L | 462 | CYS |
| 1 | L | 468 | GLU |
| 1 | L | 470 | LEU |
| 1 | L | 471 | ARG |
| 1 | L | 473 | LYS |
| 1 | L | 483 | SER |
| 1 | L | 486 | MET |
| 1 | L | 487 | LEU |
| 1 | L | 488 | LEU |
| 1 | L | 489 | ARG |
| 1 | L | 491 | ASP |
| 1 | L | 494 | ILE |
| 1 | M | 7 | VAL |
| 1 | M | 8 | LEU |
| 1 | M | 9 | PRO |
| 1 | M | 11 | ASN |
| 1 | M | 12 | MET |
| 1 | M | 13 | LYS |
| 1 | M | 16 | MET |
| 1 | M | 22 | ARG |
| 1 | M | 24 | ASN |
| 1 | M | 26 | LEU |
| 1 | M | 31 | ILE |
| 1 | M | 34 | THR |
| 1 | M | 36 | ARG |
| 1 | M | 37 | SER |
| 1 | M | 39 | LEU |
| 1 | M | 42 | LYS |
| 1 | M | 44 | MET |
| 1 | M | 45 | ASP |
| 1 | M | 47 | MET |
| 1 | M | 48 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | M | 52 | LEU |
| 1 | M | 55 | VAL |
| 1 | M | 56 | VAL |
| 1 | M | 57 | VAL |
| 1 | M | 59 | ASN |
| 1 | M | 65 | LEU |
| 1 | M | 66 | ARG |
| 1 | M | 69 | SER |
| 1 | M | 70 | VAL |
| 1 | M | 72 | HIS |
| 1 | M | 77 | MET |
| 1 | M | 78 | LEU |
| 1 | M | 83 | LYS |
| 1 | M | 87 | LYS |
| 1 | M | 88 | GLU |
| 1 | M | 94 | THR |
| 1 | M | 95 | THR |
| 1 | M | 102 | GLU |
| 1 | M | 103 | LEU |
| 1 | M | 105 | ARG |
| 1 | M | 106 | LYS |
| 1 | M | 110 | LEU |
| 1 | M | 112 | ASP |
| 1 | M | 113 | GLN |
| 1 | M | 114 | ASN |
| 1 | M | 115 | VAL |
| 1 | M | 122 | LYS |
| 1 | M | 124 | TYR |
| 1 | M | 130 | LYS |
| 1 | M | 132 | GLN |
| 1 | M | 133 | GLU |
| 1 | M | 136 | LYS |
| 1 | M | 138 | ILE |
| 1 | M | 147 | LYS |
| 1 | M | 148 | GLU |
| 1 | M | 156 | THR |
| 1 | M | 157 | SER |
| 1 | M | 158 | ILE |
| 1 | M | 164 | GLU |
| 1 | M | 170 | LEU |
| 1 | M | 173 | ILE |
| 1 | M | 178 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | M | 188 | VAL |
| 1 | M | 190 | LYS |
| 1 | M | 191 | ASP |
| 1 | M | 192 | LEU |
| 1 | M | 195 | ILE |
| 1 | M | 197 | LYS |
| 1 | M | 198 | LYS |
| 1 | M | 199 | SER |
| 1 | M | 203 | ILE |
| 1 | M | 204 | ASP |
| 1 | M | 206 | THR |
| 1 | M | 217 | GLU |
| 1 | M | 219 | VAL |
| 1 | M | 222 | GLN |
| 1 | M | 224 | PRO |
| 1 | M | 225 | LYS |
| 1 | M | 227 | VAL |
| 1 | M | 228 | THR |
| 1 | M | 229 | ASP |
| 1 | M | 231 | LYS |
| 1 | M | 232 | ILE |
| 1 | M | 236 | ASN |
| 1 | M | 242 | THR |
| 1 | M | 244 | SER |
| 1 | M | 247 | LEU |
| 1 | M | 250 | MET |
| 1 | M | 255 | LYS |
| 1 | M | 260 | ASN |
| 1 | M | 262 | LEU |
| 1 | M | 264 | CYS |
| 1 | M | 268 | ILE |
| 1 | M | 270 | ASP |
| 1 | M | 271 | LEU |
| 1 | M | 278 | LYS |
| 1 | M | 281 | ILE |
| 1 | M | 286 | ARG |
| 1 | M | 288 | LYS |
| 1 | M | 290 | SER |
| 1 | M | 291 | ASP |
| 1 | M | 302 | ASN |
| 1 | M | 303 | VAL |
| 1 | M | 306 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | M | 307 | ILE |
| 1 | M | 308 | LYS |
| 1 | M | 310 | LEU |
| 1 | M | 313 | GLN |
| 1 | M | 320 | LEU |
| 1 | M | 326 | ILE |
| 1 | M | 327 | SER |
| 1 | M | 338 | LYS |
| 1 | M | 341 | LYS |
| 1 | M | 346 | LEU |
| 1 | M | 347 | ILE |
| 1 | M | 348 | ARG |
| 1 | M | 351 | THR |
| 1 | M | 353 | HIS |
| 1 | M | 368 | VAL |
| 1 | M | 373 | ILE |
| 1 | M | 377 | ARG |
| 1 | M | 378 | ILE |
| 1 | M | 380 | SER |
| 1 | M | 403 | ARG |
| 1 | M | 406 | LEU |
| 1 | M | 411 | PHE |
| 1 | M | 413 | ASP |
| 1 | M | 417 | VAL |
| 1 | M | 418 | ILE |
| 1 | M | 420 | ARG |
| 1 | M | 429 | ASP |
| 1 | M | 431 | ILE |
| 1 | M | 433 | ILE |
| 1 | M | 434 | LEU |
| 1 | M | 441 | HIS |
| 1 | M | 446 | ASN |
| 1 | M | 447 | LYS |
| 1 | M | 448 | CYS |
| 1 | M | 451 | LEU |
| 1 | M | 453 | VAL |
| 1 | M | 455 | THR |
| 1 | M | 458 | VAL |
| 1 | M | 459 | GLU |
| 1 | M | 462 | CYS |
| 1 | M | 464 | ASN |
| 1 | M | 470 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | M | 471 | ARG |
| 1 | M | 472 | VAL |
| 1 | M | 473 | LYS |
| 1 | M | 477 | ILE |
| 1 | M | 478 | GLN |
| 1 | M | 483 | SER |
| 1 | M | 487 | LEU |
| 1 | M | 488 | LEU |
| 1 | M | 489 | ARG |
| 1 | M | 494 | ILE |
| 1 | N | 7 | VAL |
| 1 | N | 8 | LEU |
| 1 | N | 11 | ASN |
| 1 | N | 12 | MET |
| 1 | N | 14 | ARG |
| 1 | N | 16 | MET |
| 1 | N | 18 | ARG |
| 1 | N | 19 | ASP |
| 1 | N | 22 | ARG |
| 1 | N | 31 | ILE |
| 1 | N | 34 | THR |
| 1 | N | 35 | VAL |
| 1 | N | 36 | ARG |
| 1 | N | 38 | THR |
| 1 | N | 39 | LEU |
| 1 | N | 58 | THR |
| 1 | N | 59 | ASN |
| 1 | N | 60 | ASP |
| 1 | N | 68 | MET |
| 1 | N | 70 | VAL |
| 1 | N | 72 | HIS |
| 1 | N | 78 | LEU |
| 1 | N | 85 | GLN |
| 1 | N | 88 | GLU |
| 1 | N | 93 | THR |
| 1 | N | 94 | THR |
| 1 | N | 98 | VAL |
| 1 | N | 99 | VAL |
| 1 | N | 105 | ARG |
| 1 | N | 106 | LYS |
| 1 | N | 110 | LEU |
| 1 | N | 113 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | N | 114 | ASN |
| 1 | N | 115 | VAL |
| 1 | N | 120 | VAL |
| 1 | N | 124 | TYR |
| 1 | N | 129 | GLN |
| 1 | N | 133 | GLU |
| 1 | N | 134 | LEU |
| 1 | N | 136 | LYS |
| 1 | N | 141 | GLU |
| 1 | N | 142 | VAL |
| 1 | N | 145 | GLN |
| 1 | N | 147 | LYS |
| 1 | N | 149 | ILE |
| 1 | N | 157 | SER |
| 1 | N | 158 | ILE |
| 1 | N | 161 | LYS |
| 1 | N | 165 | LYS |
| 1 | N | 167 | LYS |
| 1 | N | 179 | SER |
| 1 | N | 181 | VAL |
| 1 | N | 187 | LYS |
| 1 | N | 188 | VAL |
| 1 | N | 195 | ILE |
| 1 | N | 197 | LYS |
| 1 | N | 199 | SER |
| 1 | N | 203 | ILE |
| 1 | N | 205 | ASP |
| 1 | N | 210 | LYS |
| 1 | N | 215 | ASP |
| 1 | N | 216 | LYS |
| 1 | N | 217 | GLU |
| 1 | N | 218 | ARG |
| 1 | N | 219 | VAL |
| 1 | N | 225 | LYS |
| 1 | N | 228 | THR |
| 1 | N | 231 | LYS |
| 1 | N | 232 | ILE |
| 1 | N | 234 | LEU |
| 1 | N | 236 | ASN |
| 1 | N | 239 | ILE |
| 1 | N | 241 | GLU |
| 1 | N | 242 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | N | 245 | GLU |
| 1 | N | 251 | VAL |
| 1 | N | 260 | ASN |
| 1 | N | 266 | LYS |
| 1 | N | 268 | ILE |
| 1 | N | 270 | ASP |
| 1 | N | 271 | LEU |
| 1 | N | 273 | GLN |
| 1 | N | 276 | LEU |
| 1 | N | 278 | LYS |
| 1 | N | 282 | VAL |
| 1 | N | 285 | ARG |
| 1 | N | 286 | ARG |
| 1 | N | 290 | SER |
| 1 | N | 297 | LYS |
| 1 | N | 302 | ASN |
| 1 | N | 303 | VAL |
| 1 | N | 305 | THR |
| 1 | N | 307 | ILE |
| 1 | N | 308 | LYS |
| 1 | N | 309 | ASP |
| 1 | N | 310 | LEU |
| 1 | N | 311 | SER |
| 1 | N | 314 | ASP |
| 1 | N | 317 | ASP |
| 1 | N | 320 | LEU |
| 1 | N | 325 | LYS |
| 1 | N | 330 | SER |
| 1 | N | 334 | VAL |
| 1 | N | 336 | GLU |
| 1 | N | 338 | LYS |
| 1 | N | 341 | LYS |
| 1 | N | 348 | ARG |
| 1 | N | 351 | THR |
| 1 | N | 352 | GLU |
| 1 | N | 355 | ILE |
| 1 | N | 356 | GLU |
| 1 | N | 357 | GLU |
| 1 | N | 368 | VAL |
| 1 | N | 372 | THR |
| 1 | N | 377 | ARG |
| 1 | N | 379 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | N | 385 | THR |
| 1 | N | 386 | GLU |
| 1 | N | 394 | ARG |
| 1 | N | 403 | ARG |
| 1 | N | 418 | ILE |
| 1 | N | 420 | ARG |
| 1 | N | 431 | ILE |
| 1 | N | 432 | GLU |
| 1 | N | 434 | LEU |
| 1 | N | 435 | VAL |
| 1 | N | 438 | ARG |
| 1 | N | 441 | HIS |
| 1 | N | 446 | ASN |
| 1 | N | 447 | LYS |
| 1 | N | 458 | VAL |
| 1 | N | 461 | MET |
| 1 | N | 467 | VAL |
| 1 | N | 470 | LEU |
| 1 | N | 471 | ARG |
| 1 | N | 472 | VAL |
| 1 | N | 473 | LYS |
| 1 | N | 486 | MET |
| 1 | N | 488 | LEU |
| 1 | N | 489 | ARG |
| 1 | N | 491 | ASP |
| 1 | N | 494 | ILE |
| 1 | O | 11 | ASN |
| 1 | O | 12 | MET |
| 1 | O | 18 | ARG |
| 1 | O | 19 | ASP |
| 1 | O | 21 | GLN |
| 1 | O | 26 | LEU |
| 1 | O | 29 | ARG |
| 1 | O | 30 | ILE |
| 1 | O | 31 | ILE |
| 1 | O | 37 | SER |
| 1 | O | 39 | LEU |
| 1 | O | 44 | MET |
| 1 | O | 48 | LEU |
| 1 | O | 54 | ASP |
| 1 | O | 60 | ASP |
| 1 | O | 62 | VAL |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 64 | ILE |
| 1 | O | 65 | LEU |
| 1 | O | 66 | ARG |
| 1 | O | 68 | MET |
| 1 | O | 70 | VAL |
| 1 | O | 71 | GLU |
| 1 | O | 72 | HIS |
| 1 | O | 77 | MET |
| 1 | O | 78 | LEU |
| 1 | O | 84 | THR |
| 1 | O | 93 | THR |
| 1 | O | 97 | VAL |
| 1 | O | 106 | LYS |
| 1 | O | 111 | LEU |
| 1 | O | 112 | ASP |
| 1 | O | 113 | GLN |
| 1 | O | 116 | HIS |
| 1 | O | 119 | ILE |
| 1 | O | 122 | LYS |
| 1 | O | 129 | GLN |
| 1 | O | 130 | LYS |
| 1 | O | 134 | LEU |
| 1 | O | 136 | LYS |
| 1 | O | 138 | ILE |
| 1 | O | 141 | GLU |
| 1 | O | 147 | LYS |
| 1 | O | 149 | ILE |
| 1 | O | 155 | MET |
| 1 | O | 157 | SER |
| 1 | O | 159 | THR |
| 1 | O | 164 | GLU |
| 1 | O | 167 | LYS |
| 1 | O | 169 | LYS |
| 1 | O | 173 | ILE |
| 1 | O | 183 | ASP |
| 1 | O | 187 | LYS |
| 1 | O | 191 | ASP |
| 1 | O | 192 | LEU |
| 1 | O | 195 | ILE |
| 1 | O | 197 | LYS |
| 1 | O | 199 | SER |
| 1 | O | 203 | ILE |

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Continued from previous page...

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 204 | ASP |
| 1 | O | 213 | LEU |
| 1 | O | 216 | LYS |
| 1 | O | 217 | GLU |
| 1 | O | 218 | ARG |
| 1 | O | 219 | VAL |
| 1 | O | 222 | GLN |
| 1 | O | 224 | PRO |
| 1 | O | 225 | LYS |
| 1 | O | 226 | LYS |
| 1 | O | 228 | THR |
| 1 | O | 231 | LYS |
| 1 | O | 235 | LEU |
| 1 | O | 236 | ASN |
| 1 | O | 237 | CYS |
| 1 | O | 239 | ILE |
| 1 | O | 240 | GLU |
| 1 | O | 246 | MET |
| 1 | O | 250 | MET |
| 1 | O | 253 | GLU |
| 1 | O | 254 | ILE |
| 1 | O | 257 | SER |
| 1 | O | 268 | ILE |
| 1 | O | 270 | ASP |
| 1 | O | 271 | LEU |
| 1 | O | 273 | GLN |
| 1 | O | 276 | LEU |
| 1 | O | 281 | ILE |
| 1 | O | 285 | ARG |
| 1 | O | 286 | ARG |
| 1 | O | 288 | LYS |
| 1 | O | 290 | SER |
| 1 | O | 291 | ASP |
| 1 | O | 292 | MET |
| 1 | O | 293 | GLU |
| 1 | O | 294 | LYS |
| 1 | O | 302 | ASN |
| 1 | O | 303 | VAL |
| 1 | O | 305 | THR |
| 1 | O | 308 | LYS |
| 1 | O | 309 | ASP |
| 1 | O | 310 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 311 | SER |
| 1 | O | 313 | GLN |
| 1 | O | 315 | LEU |
| 1 | O | 320 | LEU |
| 1 | O | 327 | SER |
| 1 | O | 330 | SER |
| 1 | O | 336 | GLU |
| 1 | O | 338 | LYS |
| 1 | O | 341 | LYS |
| 1 | O | 346 | LEU |
| 1 | O | 348 | ARG |
| 1 | O | 350 | THR |
| 1 | O | 352 | GLU |
| 1 | O | 354 | VAL |
| 1 | O | 355 | ILE |
| 1 | O | 357 | GLU |
| 1 | O | 364 | ASP |
| 1 | O | 372 | THR |
| 1 | O | 373 | ILE |
| 1 | O | 375 | ASP |
| 1 | O | 377 | ARG |
| 1 | O | 379 | VAL |
| 1 | O | 384 | SER |
| 1 | O | 386 | GLU |
| 1 | O | 391 | MET |
| 1 | O | 398 | GLU |
| 1 | O | 401 | SER |
| 1 | O | 403 | ARG |
| 1 | O | 404 | GLU |
| 1 | O | 405 | GLN |
| 1 | O | 411 | PHE |
| 1 | O | 418 | ILE |
| 1 | O | 421 | THR |
| 1 | O | 424 | GLU |
| 1 | O | 429 | ASP |
| 1 | O | 431 | ILE |
| 1 | O | 433 | ILE |
| 1 | O | 434 | LEU |
| 1 | O | 438 | ARG |
| 1 | O | 441 | HIS |
| 1 | O | 446 | ASN |
| 1 | O | 447 | LYS |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 455 | THR |
| 1 | O | 459 | GLU |
| 1 | O | 461 | MET |
| 1 | O | 468 | GLU |
| 1 | O | 471 | ARG |
| 1 | O | 473 | LYS |
| 1 | O | 477 | ILE |
| 1 | O | 478 | GLN |
| 1 | O | 484 | THR |
| 1 | O | 487 | LEU |
| 1 | O | 489 | ARG |
| 1 | P | 8 | LEU |
| 1 | P | 9 | PRO |
| 1 | P | 16 | MET |
| 1 | P | 18 | ARG |
| 1 | P | 22 | ARG |
| 1 | P | 23 | MET |
| 1 | P | 26 | LEU |
| 1 | P | 30 | ILE |
| 1 | P | 31 | ILE |
| 1 | P | 34 | THR |
| 1 | P | 35 | VAL |
| 1 | P | 39 | LEU |
| 1 | P | 42 | LYS |
| 1 | P | 45 | ASP |
| 1 | P | 48 | LEU |
| 1 | P | 49 | VAL |
| 1 | P | 52 | LEU |
| 1 | P | 54 | ASP |
| 1 | P | 59 | ASN |
| 1 | P | 65 | LEU |
| 1 | P | 68 | MET |
| 1 | P | 69 | SER |
| 1 | P | 72 | HIS |
| 1 | P | 76 | LYS |
| 1 | P | 77 | MET |
| 1 | P | 78 | LEU |
| 1 | P | 80 | GLU |
| 1 | P | 83 | LYS |
| 1 | P | 85 | GLN |
| 1 | P | 88 | GLU |
| 1 | P | 93 | THR |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 94 | THR |
| 1 | P | 99 | VAL |
| 1 | P | 105 | ARG |
| 1 | P | 106 | LYS |
| 1 | P | 108 | GLU |
| 1 | P | 109 | GLU |
| 1 | P | 110 | LEU |
| 1 | P | 111 | LEU |
| 1 | P | 113 | GLN |
| 1 | P | 114 | ASN |
| 1 | P | 118 | THR |
| 1 | P | 122 | LYS |
| 1 | P | 129 | GLN |
| 1 | P | 130 | LYS |
| 1 | P | 133 | GLU |
| 1 | P | 134 | LEU |
| 1 | P | 136 | LYS |
| 1 | P | 138 | ILE |
| 1 | P | 141 | GLU |
| 1 | P | 142 | VAL |
| 1 | P | 145 | GLN |
| 1 | P | 153 | ILE |
| 1 | P | 155 | MET |
| 1 | P | 156 | THR |
| 1 | P | 157 | SER |
| 1 | P | 158 | ILE |
| 1 | P | 159 | THR |
| 1 | P | 164 | GLU |
| 1 | P | 167 | LYS |
| 1 | P | 170 | LEU |
| 1 | P | 172 | GLU |
| 1 | P | 173 | ILE |
| 1 | P | 183 | ASP |
| 1 | P | 184 | ASP |
| 1 | P | 187 | LYS |
| 1 | P | 191 | ASP |
| 1 | P | 195 | ILE |
| 1 | P | 197 | LYS |
| 1 | P | 199 | SER |
| 1 | P | 202 | SER |
| 1 | P | 203 | ILE |
| 1 | P | 204 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 205 | ASP |
| 1 | P | 208 | LEU |
| 1 | P | 215 | ASP |
| 1 | P | 224 | PRO |
| 1 | P | 227 | VAL |
| 1 | P | 228 | THR |
| 1 | P | 229 | ASP |
| 1 | P | 231 | LYS |
| 1 | P | 232 | ILE |
| 1 | P | 235 | LEU |
| 1 | P | 236 | ASN |
| 1 | P | 239 | ILE |
| 1 | P | 240 | GLU |
| 1 | P | 244 | SER |
| 1 | P | 260 | ASN |
| 1 | P | 264 | CYS |
| 1 | P | 270 | ASP |
| 1 | P | 271 | LEU |
| 1 | P | 273 | GLN |
| 1 | P | 276 | LEU |
| 1 | P | 278 | LYS |
| 1 | P | 282 | VAL |
| 1 | P | 288 | LYS |
| 1 | P | 290 | SER |
| 1 | P | 292 | MET |
| 1 | P | 297 | LYS |
| 1 | P | 299 | THR |
| 1 | P | 303 | VAL |
| 1 | P | 304 | ILE |
| 1 | P | 308 | LYS |
| 1 | P | 310 | LEU |
| 1 | P | 311 | SER |
| 1 | P | 313 | GLN |
| 1 | P | 317 | ASP |
| 1 | P | 320 | LEU |
| 1 | P | 327 | SER |
| 1 | P | 330 | SER |
| 1 | P | 336 | GLU |
| 1 | P | 339 | HIS |
| 1 | P | 341 | LYS |
| 1 | P | 343 | VAL |
| 1 | P | 346 | LEU |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 347 | ILE |
| 1 | P | 348 | ARG |
| 1 | P | 350 | THR |
| 1 | P | 351 | THR |
| 1 | P | 357 | GLU |
| 1 | P | 368 | VAL |
| 1 | P | 377 | ARG |
| 1 | P | 379 | VAL |
| 1 | P | 380 | SER |
| 1 | P | 384 | SER |
| 1 | P | 385 | THR |
| 1 | P | 386 | GLU |
| 1 | P | 403 | ARG |
| 1 | P | 406 | LEU |
| 1 | P | 413 | ASP |
| 1 | P | 418 | ILE |
| 1 | P | 420 | ARG |
| 1 | P | 421 | THR |
| 1 | P | 424 | GLU |
| 1 | P | 431 | ILE |
| 1 | P | 434 | LEU |
| 1 | P | 443 | SER |
| 1 | P | 446 | ASN |
| 1 | P | 448 | CYS |
| 1 | P | 451 | LEU |
| 1 | P | 452 | ASN |
| 1 | P | 458 | VAL |
| 1 | P | 462 | CYS |
| 1 | P | 464 | ASN |
| 1 | P | 467 | VAL |
| 1 | P | 468 | GLU |
| 1 | P | 469 | PRO |
| 1 | P | 470 | LEU |
| 1 | P | 473 | LYS |
| 1 | P | 475 | GLN |
| 1 | P | 477 | ILE |
| 1 | P | 479 | SER |
| 1 | P | 486 | MET |
| 1 | P | 487 | LEU |
| 1 | P | 489 | ARG |
| 1 | P | 490 | ILE |
| 1 | P | 492 | ASP |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | P | 493 | VAL |
| 1 | P | 494 | ILE |
| 1 | P | 497 | GLU |

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (177) such sidechains are listed below:

| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | A | 24 | ASN |
| 1 | A | 72 | HIS |
| 1 | A | 125 | GLN |
| 1 | A | 425 | ASN |
| 1 | A | 441 | HIS |
| 1 | A | 452 | ASN |
| 1 | A | 464 | ASN |
| 1 | B | 24 | ASN |
| 1 | B | 59 | ASN |
| 1 | B | 72 | HIS |
| 1 | B | 113 | GLN |
| 1 | B | 125 | GLN |
| 1 | B | 425 | ASN |
| 1 | B | 441 | HIS |
| 1 | B | 452 | ASN |
| 1 | C | 21 | GLN |
| 1 | C | 24 | ASN |
| 1 | C | 125 | GLN |
| 1 | C | 132 | GLN |
| 1 | C | 260 | ASN |
| 1 | C | 302 | ASN |
| 1 | C | 339 | HIS |
| 1 | C | 405 | GLN |
| 1 | C | 441 | HIS |
| 1 | C | 452 | ASN |
| 1 | C | 464 | ASN |
| 1 | C | 478 | GLN |
| 1 | D | 24 | ASN |
| 1 | D | 59 | ASN |
| 1 | D | 72 | HIS |
| 1 | D | 113 | GLN |
| 1 | D | 116 | HIS |
| 1 | D | 125 | GLN |
| 1 | D | 132 | GLN |
| 1 | D | 236 | ASN |

Continued on next page...

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | D | 273 | GLN |
| 1 | D | 313 | GLN |
| 1 | D | 405 | GLN |
| 1 | D | 425 | ASN |
| 1 | D | 441 | HIS |
| 1 | D | 452 | ASN |
| 1 | D | 475 | GLN |
| 1 | D | 478 | GLN |
| 1 | E | 24 | ASN |
| 1 | E | 116 | HIS |
| 1 | E | 125 | GLN |
| 1 | E | 132 | GLN |
| 1 | E | 236 | ASN |
| 1 | E | 260 | ASN |
| 1 | E | 339 | HIS |
| 1 | E | 425 | ASN |
| 1 | E | 441 | HIS |
| 1 | E | 452 | ASN |
| 1 | E | 464 | ASN |
| 1 | E | 475 | GLN |
| 1 | F | 24 | ASN |
| 1 | F | 72 | HIS |
| 1 | F | 85 | GLN |
| 1 | F | 113 | GLN |
| 1 | F | 116 | HIS |
| 1 | F | 132 | GLN |
| 1 | F | 145 | GLN |
| 1 | F | 222 | GLN |
| 1 | F | 236 | ASN |
| 1 | F | 313 | GLN |
| 1 | F | 441 | HIS |
| 1 | F | 452 | ASN |
| 1 | G | 11 | ASN |
| 1 | G | 24 | ASN |
| 1 | G | 72 | HIS |
| 1 | G | 113 | GLN |
| 1 | G | 125 | GLN |
| 1 | G | 132 | GLN |
| 1 | G | 236 | ASN |
| 1 | G | 260 | ASN |
| 1 | G | 273 | GLN |
| 1 | G | 425 | ASN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | G | 441 | HIS |
| 1 | G | 444 | ASN |
| 1 | G | 452 | ASN |
| 1 | G | 464 | ASN |
| 1 | G | 478 | GLN |
| 1 | H | 24 | ASN |
| 1 | H | 72 | HIS |
| 1 | H | 113 | GLN |
| 1 | H | 125 | GLN |
| 1 | H | 132 | GLN |
| 1 | H | 236 | ASN |
| 1 | H | 339 | HIS |
| 1 | H | 425 | ASN |
| 1 | H | 441 | HIS |
| 1 | H | 452 | ASN |
| 1 | H | 478 | GLN |
| 1 | I | 24 | ASN |
| 1 | I | 72 | HIS |
| 1 | I | 113 | GLN |
| 1 | I | 114 | ASN |
| 1 | I | 132 | GLN |
| 1 | I | 236 | ASN |
| 1 | I | 339 | HIS |
| 1 | I | 441 | HIS |
| 1 | I | 444 | ASN |
| 1 | I | 464 | ASN |
| 1 | J | 24 | ASN |
| 1 | J | 72 | HIS |
| 1 | J | 113 | GLN |
| 1 | J | 116 | HIS |
| 1 | J | 125 | GLN |
| 1 | J | 236 | ASN |
| 1 | J | 302 | ASN |
| 1 | J | 339 | HIS |
| 1 | J | 405 | GLN |
| 1 | J | 444 | ASN |
| 1 | J | 478 | GLN |
| 1 | K | 24 | ASN |
| 1 | K | 113 | GLN |
| 1 | K | 125 | GLN |
| 1 | K | 129 | GLN |
| 1 | K | 132 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | K | 265 | GLN |
| 1 | K | 339 | HIS |
| 1 | K | 425 | ASN |
| 1 | K | 441 | HIS |
| 1 | K | 444 | ASN |
| 1 | K | 464 | ASN |
| 1 | L | 24 | ASN |
| 1 | L | 59 | ASN |
| 1 | L | 116 | HIS |
| 1 | L | 302 | ASN |
| 1 | L | 313 | GLN |
| 1 | L | 339 | HIS |
| 1 | L | 425 | ASN |
| 1 | L | 441 | HIS |
| 1 | L | 452 | ASN |
| 1 | L | 475 | GLN |
| 1 | M | 24 | ASN |
| 1 | M | 72 | HIS |
| 1 | M | 125 | GLN |
| 1 | M | 260 | ASN |
| 1 | M | 273 | GLN |
| 1 | M | 274 | HIS |
| 1 | M | 339 | HIS |
| 1 | M | 405 | GLN |
| 1 | M | 441 | HIS |
| 1 | M | 452 | ASN |
| 1 | N | 24 | ASN |
| 1 | N | 85 | GLN |
| 1 | N | 113 | GLN |
| 1 | N | 125 | GLN |
| 1 | N | 222 | GLN |
| 1 | N | 339 | HIS |
| 1 | N | 425 | ASN |
| 1 | N | 441 | HIS |
| 1 | N | 475 | GLN |
| 1 | N | 478 | GLN |
| 1 | O | 24 | ASN |
| 1 | O | 72 | HIS |
| 1 | O | 113 | GLN |
| 1 | O | 116 | HIS |
| 1 | O | 125 | GLN |
| 1 | O | 129 | GLN |

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| Mol | Chain | Res | Type |
|-----|-------|-----|------|
| 1 | O | 339 | HIS |
| 1 | O | 405 | GLN |
| 1 | O | 441 | HIS |
| 1 | O | 452 | ASN |
| 1 | O | 478 | GLN |
| 1 | P | 24 | ASN |
| 1 | P | 59 | ASN |
| 1 | P | 72 | HIS |
| 1 | P | 85 | GLN |
| 1 | P | 113 | GLN |
| 1 | P | 114 | ASN |
| 1 | P | 125 | GLN |
| 1 | P | 339 | HIS |
| 1 | P | 405 | GLN |
| 1 | P | 452 | ASN |
| 1 | P | 478 | GLN |

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

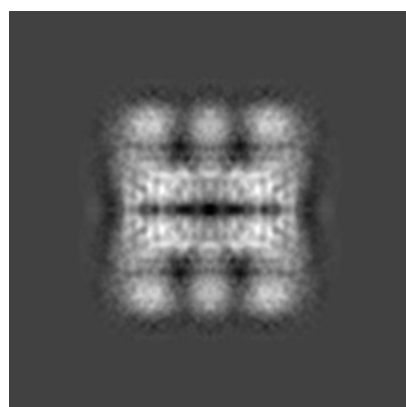
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-5140. These allow visual inspection of the internal detail of the map and identification of artifacts.

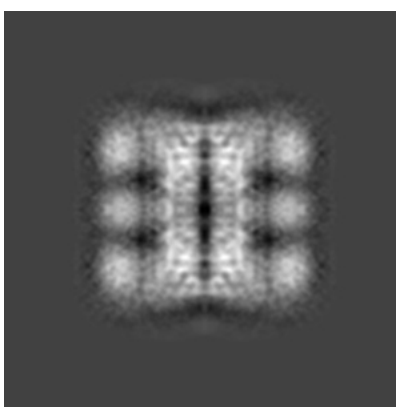
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

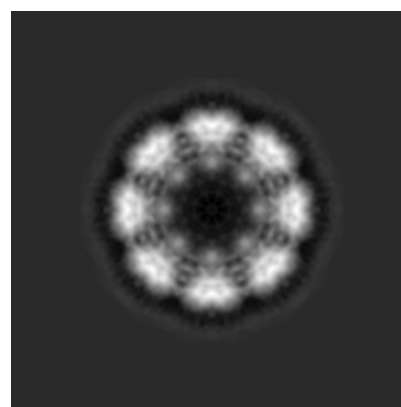
6.1.1 Primary map



X



Y

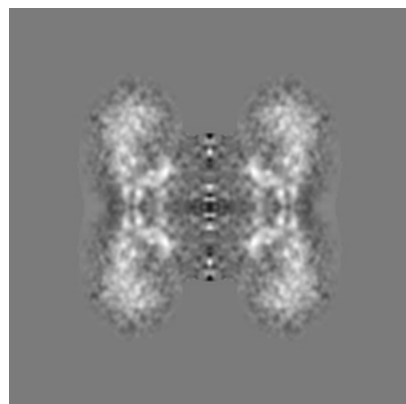


Z

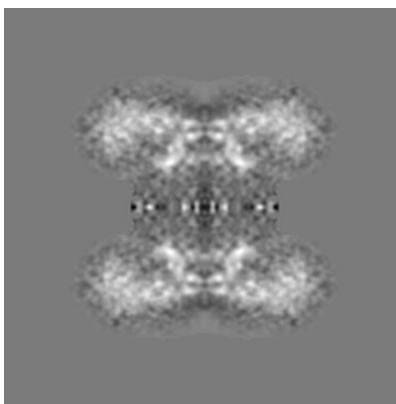
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

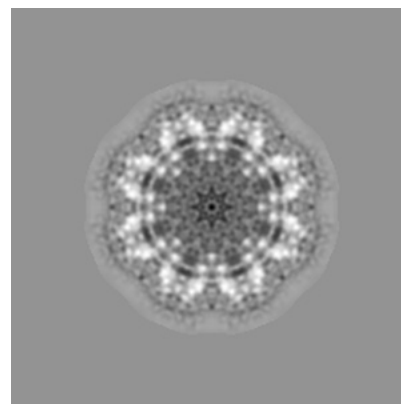
6.2.1 Primary map



X Index: 120



Y Index: 120

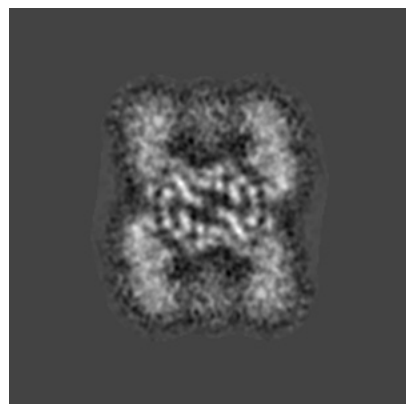


Z Index: 120

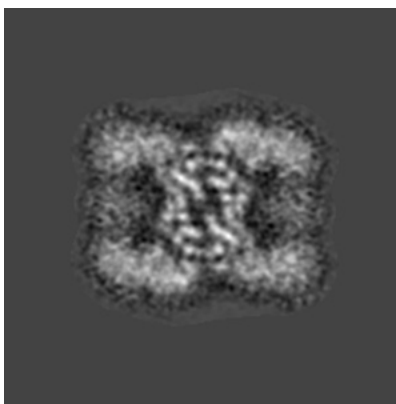
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

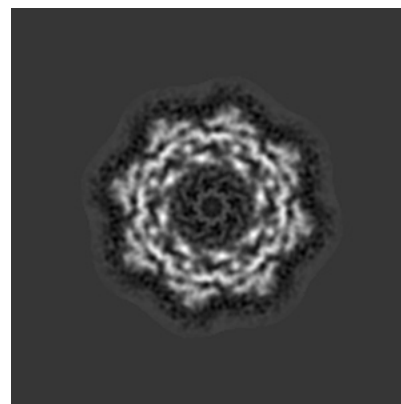
6.3.1 Primary map



X Index: 85



Y Index: 155

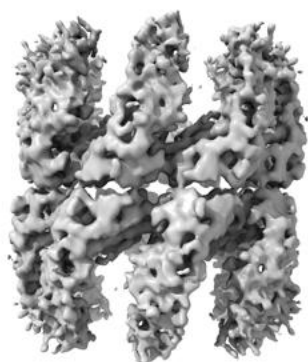


Z Index: 129

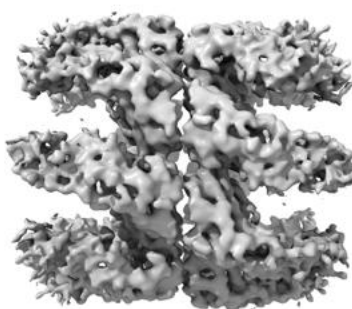
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views [i](#)

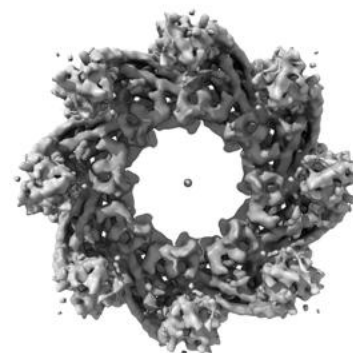
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.95. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

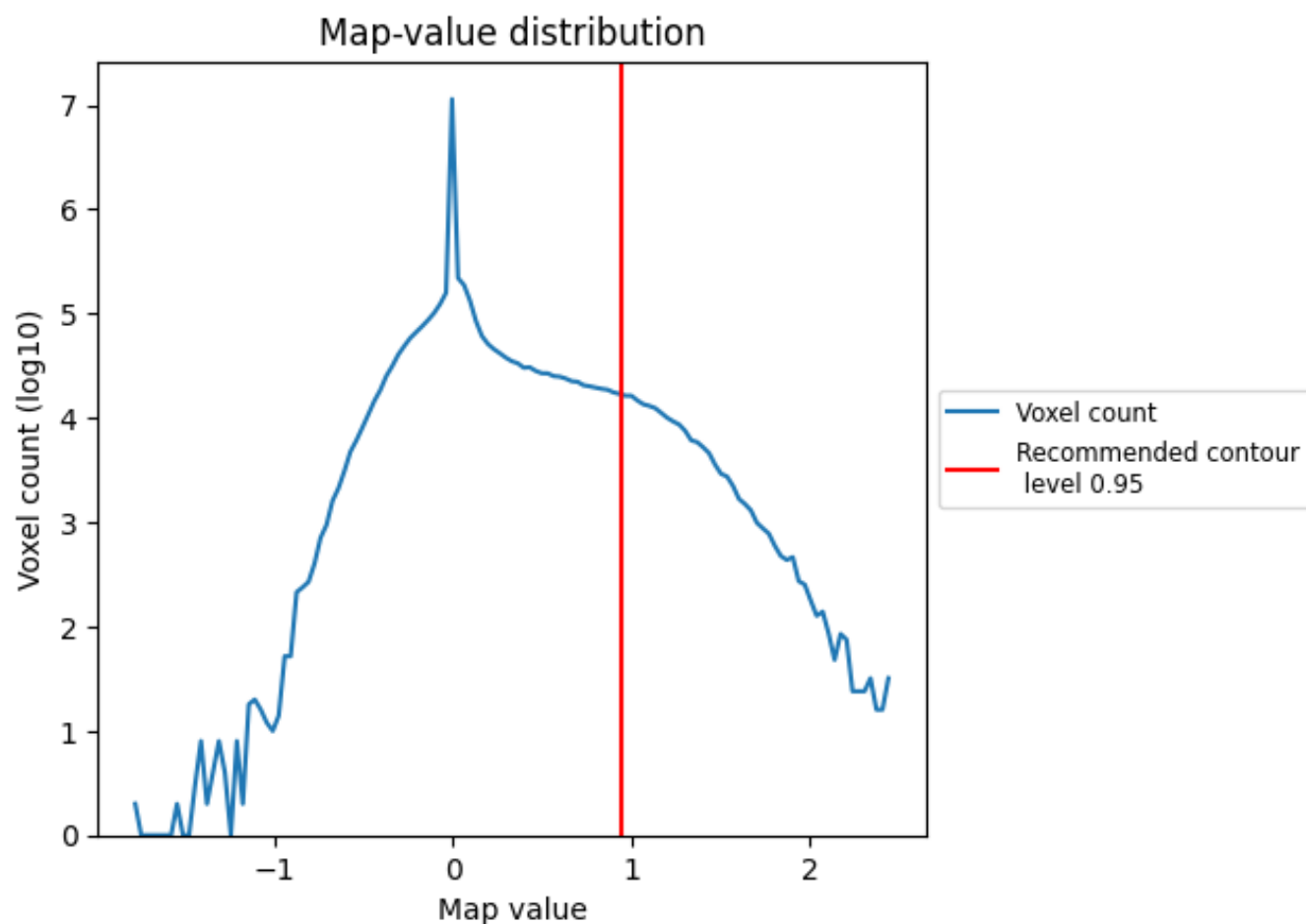
6.5 Mask visualisation

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

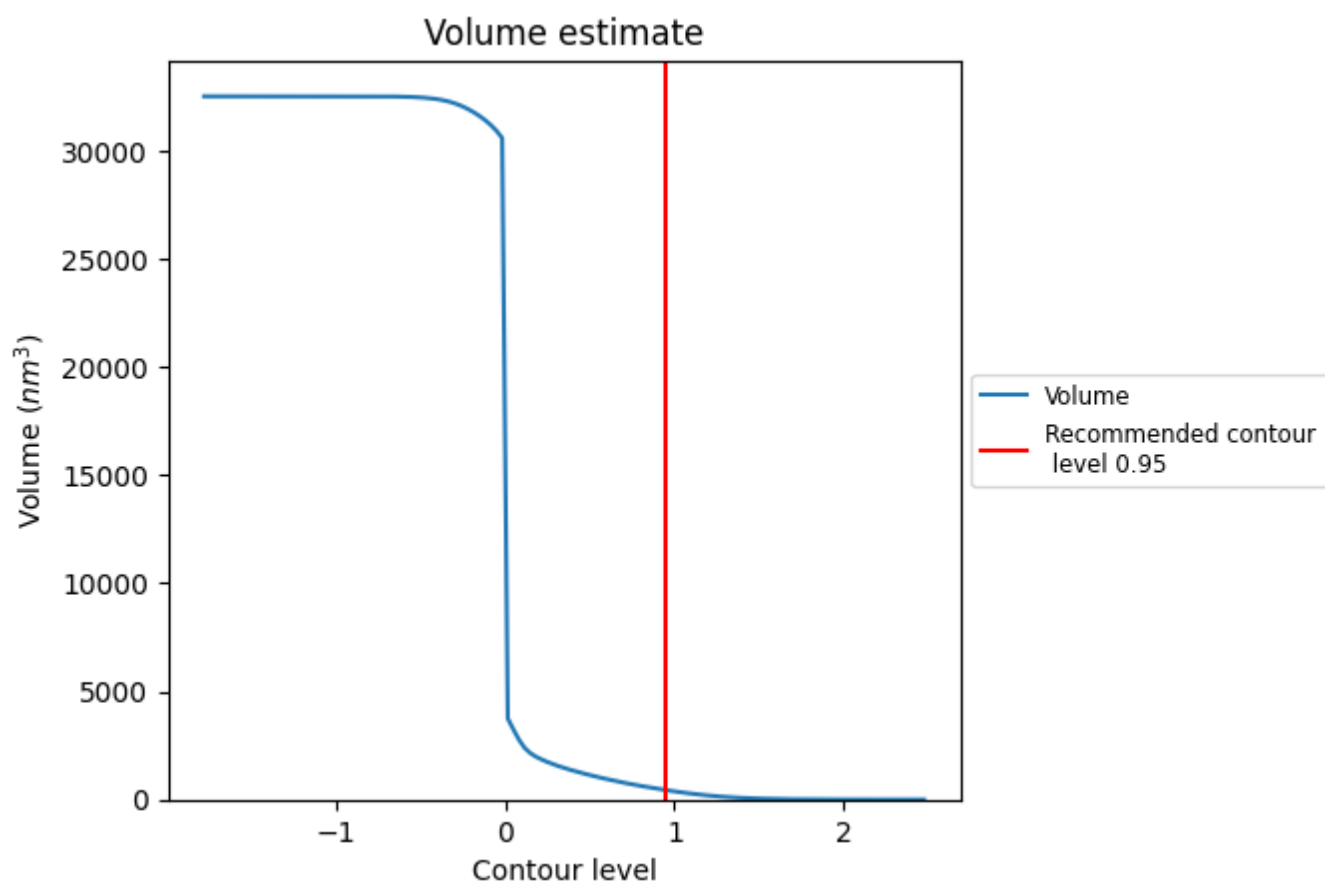
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

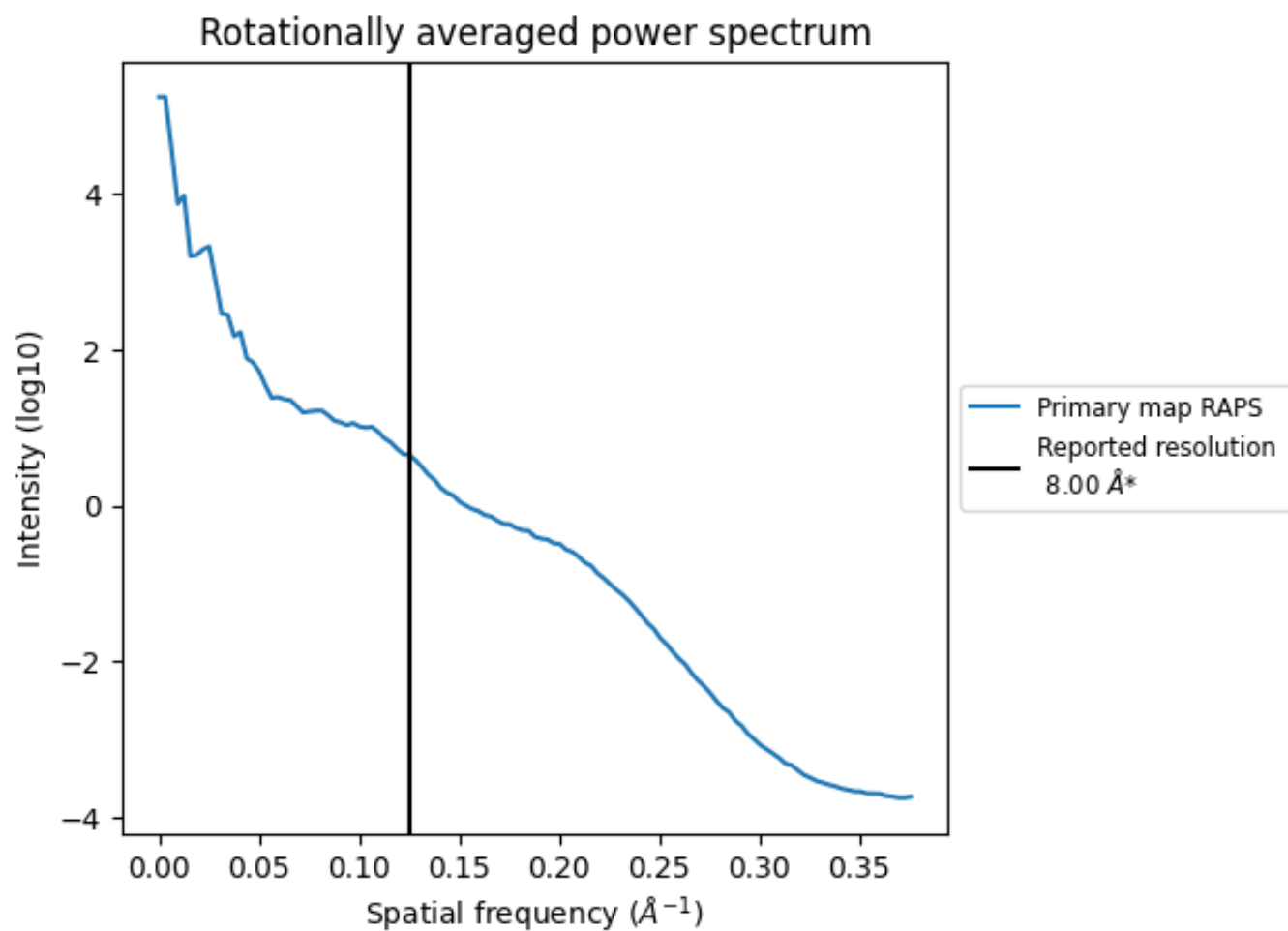
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 437 nm³; this corresponds to an approximate mass of 395 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.125 Å⁻¹

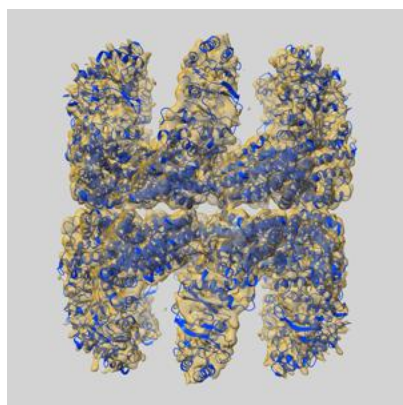
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

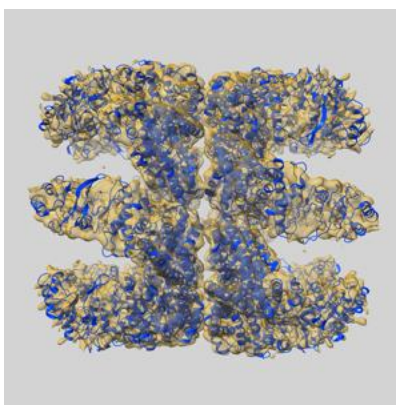
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-5140 and PDB model 3IYF. Per-residue inclusion information can be found in section [3](#) on page [7](#).

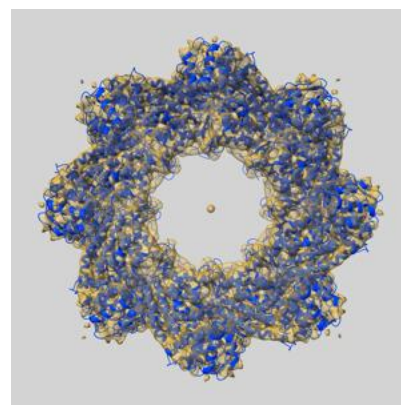
9.1 Map-model overlay [i](#)



X



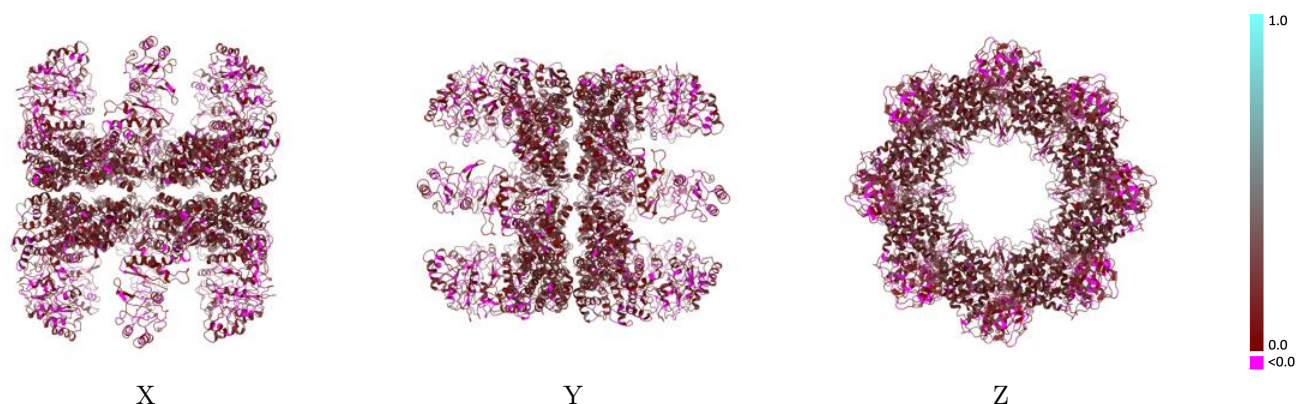
Y



Z

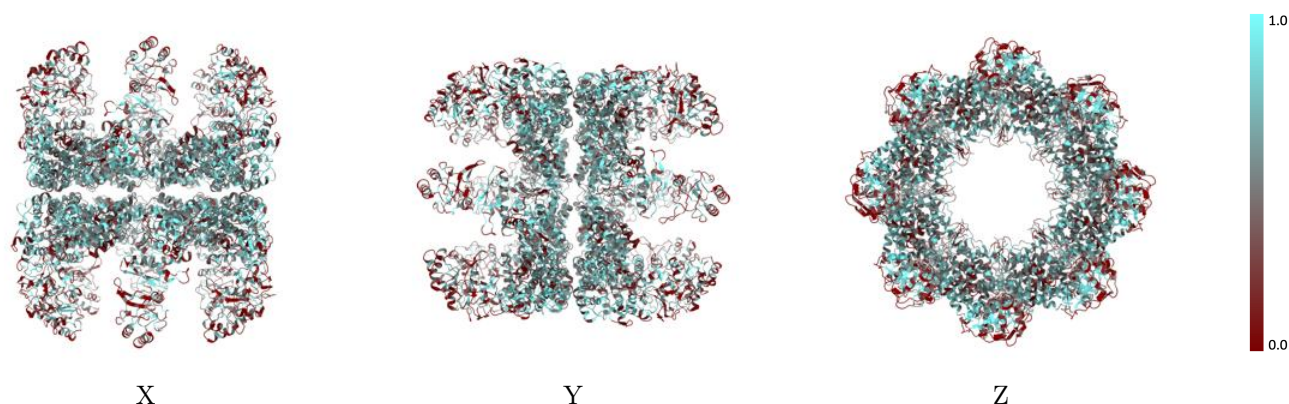
The images above show the 3D surface view of the map at the recommended contour level 0.95 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



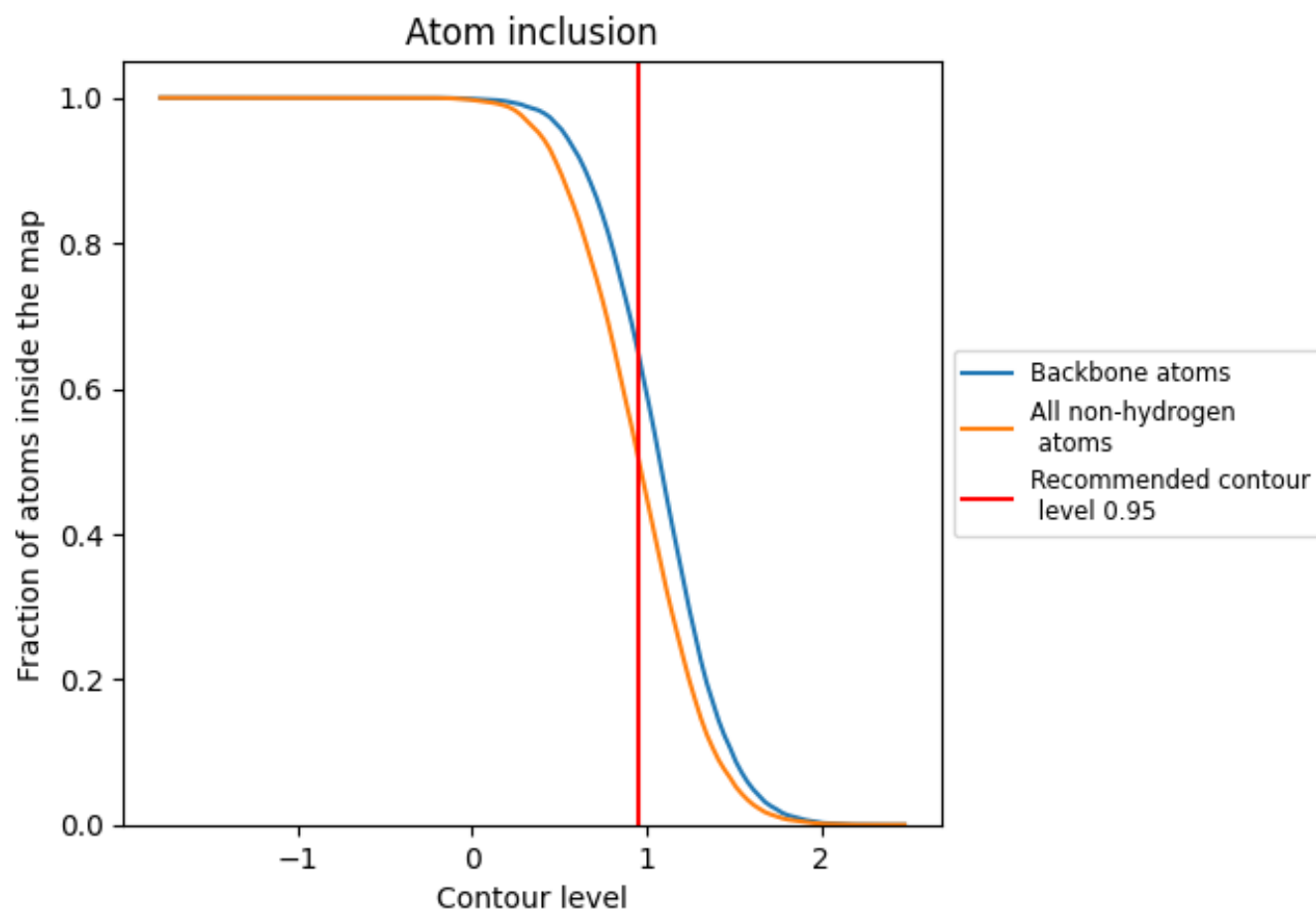
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.95).

9.4 Atom inclusion [i](#)



At the recommended contour level, 65% of all backbone atoms, 51% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.95) and Q-score for the entire model and for each chain.

| Chain | Atom inclusion | Q-score |
|-------|-------------------------------|-------------------------------|
| All | <div><div></div></div> 0.5070 | <div><div></div></div> 0.1510 |
| A | <div><div></div></div> 0.5094 | <div><div></div></div> 0.1500 |
| B | <div><div></div></div> 0.5102 | <div><div></div></div> 0.1480 |
| C | <div><div></div></div> 0.5119 | <div><div></div></div> 0.1510 |
| D | <div><div></div></div> 0.5077 | <div><div></div></div> 0.1520 |
| E | <div><div></div></div> 0.5066 | <div><div></div></div> 0.1550 |
| F | <div><div></div></div> 0.5033 | <div><div></div></div> 0.1500 |
| G | <div><div></div></div> 0.4981 | <div><div></div></div> 0.1500 |
| H | <div><div></div></div> 0.5094 | <div><div></div></div> 0.1520 |
| I | <div><div></div></div> 0.5033 | <div><div></div></div> 0.1510 |
| J | <div><div></div></div> 0.5072 | <div><div></div></div> 0.1510 |
| K | <div><div></div></div> 0.5061 | <div><div></div></div> 0.1510 |
| L | <div><div></div></div> 0.5088 | <div><div></div></div> 0.1490 |
| M | <div><div></div></div> 0.5105 | <div><div></div></div> 0.1540 |
| N | <div><div></div></div> 0.5041 | <div><div></div></div> 0.1530 |
| O | <div><div></div></div> 0.5077 | <div><div></div></div> 0.1490 |
| P | <div><div></div></div> 0.5080 | <div><div></div></div> 0.1530 |

