



## Full wwPDB EM Validation Report ⓘ

Nov 15, 2022 – 11:18 AM EST

PDB ID : 7KXR  
EMDB ID : EMD-23066  
Title : Protective antigen pore translocating lethal factor N-terminal domain  
Authors : Machen, A.J.; Freudenthal, B.D.  
Deposited on : 2020-12-04  
Resolution : 3.30 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](mailto: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>.

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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) : 2.31.2

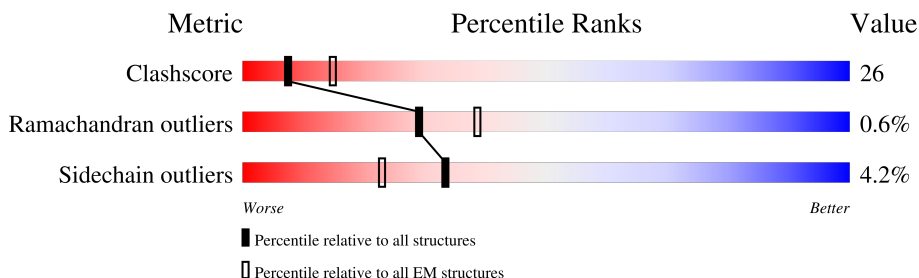
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.30 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  $\geq 3$ , 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	L	263	<div> <div>56%</div> <div> <div>35%</div> <div>36%</div> <div>12%</div> <div>16%</div> </div> </div>
2	A	562	<div> <div>11%</div> <div>69%</div> <div>30%</div> <div>.</div> </div>
2	B	562	<div> <div>11%</div> <div>61%</div> <div>35%</div> <div>.</div> </div>
2	C	562	<div> <div>14%</div> <div>67%</div> <div>31%</div> <div>.</div> </div>
2	D	562	<div> <div>12%</div> <div>73%</div> <div>26%</div> <div>.</div> </div>
2	E	562	<div> <div>12%</div> <div>70%</div> <div>27%</div> <div>.</div> </div>
2	F	562	<div> <div>10%</div> <div>72%</div> <div>28%</div> <div>.</div> </div>
2	G	562	<div> <div>10%</div> <div>67%</div> <div>29%</div> <div>.</div> </div>

## 2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 32826 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 Lethal factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	L	220	Total	C	N	O	S	0	0
			1795	1152	285	354	4		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	126	CYS	GLU	engineered mutation	UNP P15917

- Molecule 2 is a protein called Protective antigen.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	B	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	C	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	D	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	E	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	F	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		
2	G	562	Total	C	N	O	S	0	0
			4431	2769	765	891	6		

- Molecule 3 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
3	A	2	Total	Ca	0
			2	2	
3	B	2	Total	Ca	0
			2	2	

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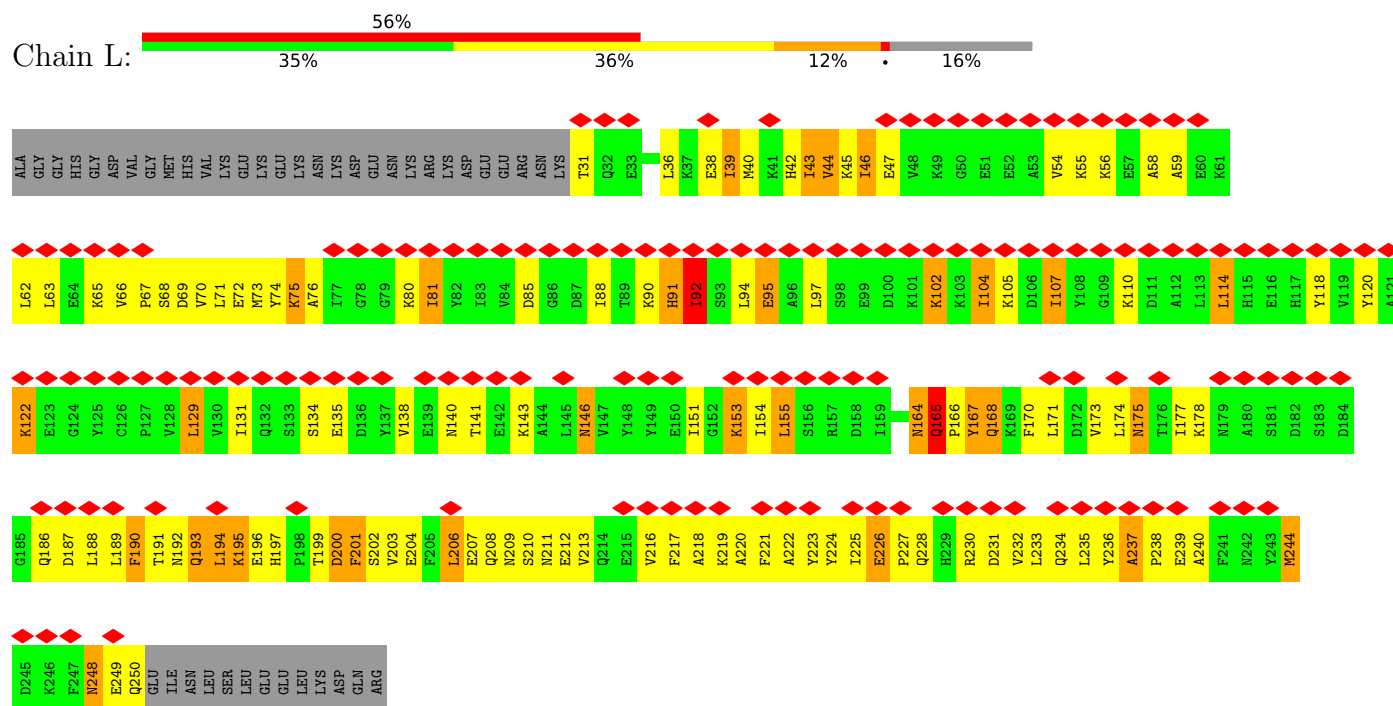
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Mol	Chain	Residues	Atoms		AltConf
3	C	2	Total 2	Ca 2	0
3	D	2	Total 2	Ca 2	0
3	E	2	Total 2	Ca 2	0
3	F	2	Total 2	Ca 2	0
3	G	2	Total 2	Ca 2	0

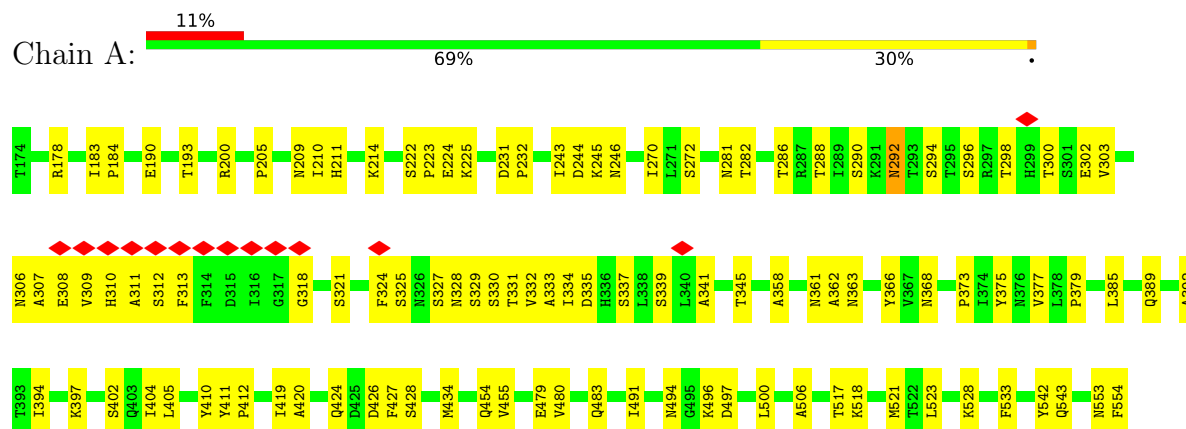
### 3 Residue-property plots

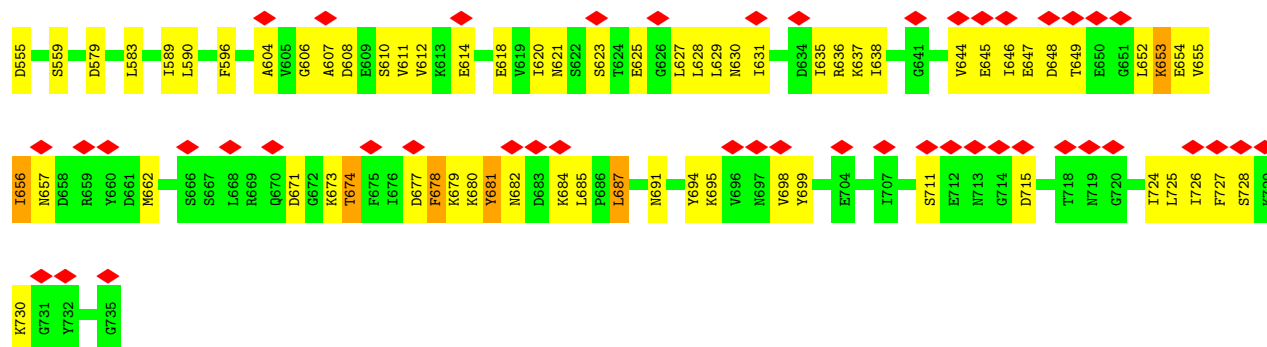
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion 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: Lethal factor

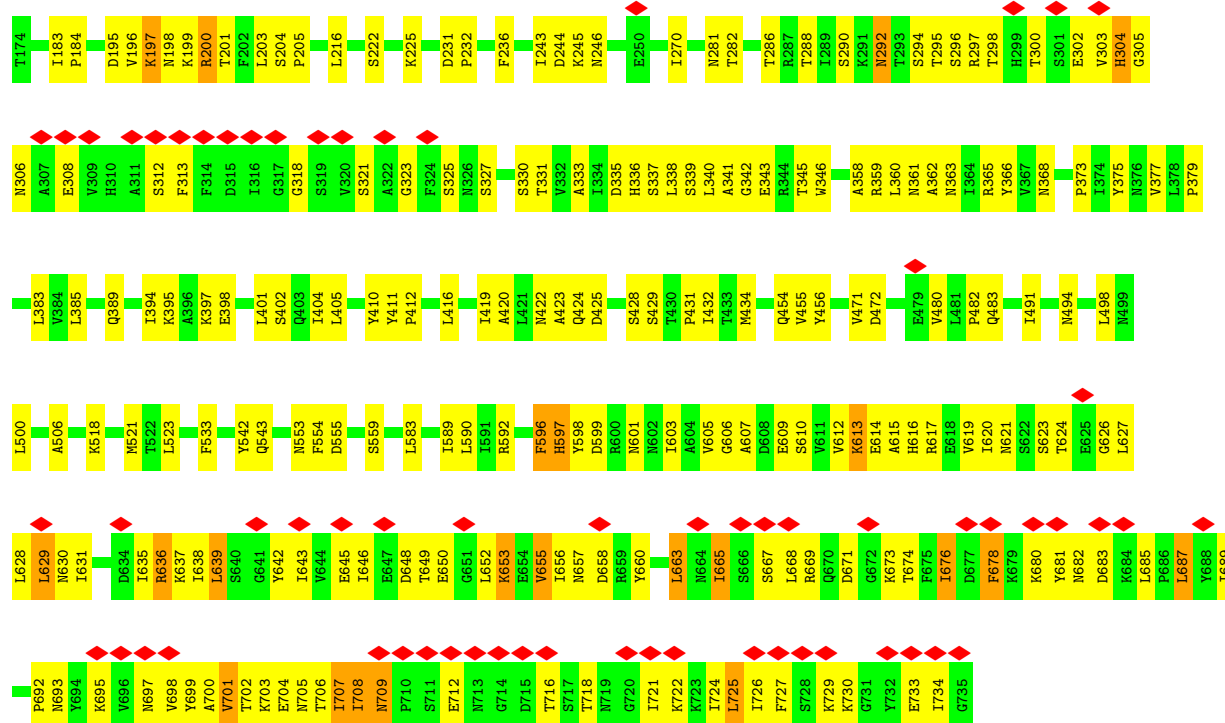


#### • Molecule 2: Protective antigen



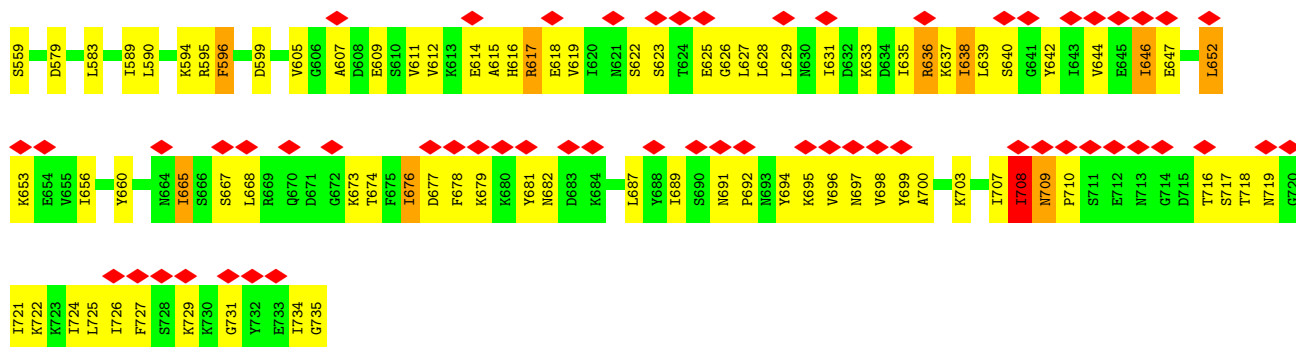


• Molecule 2: Protective antigen

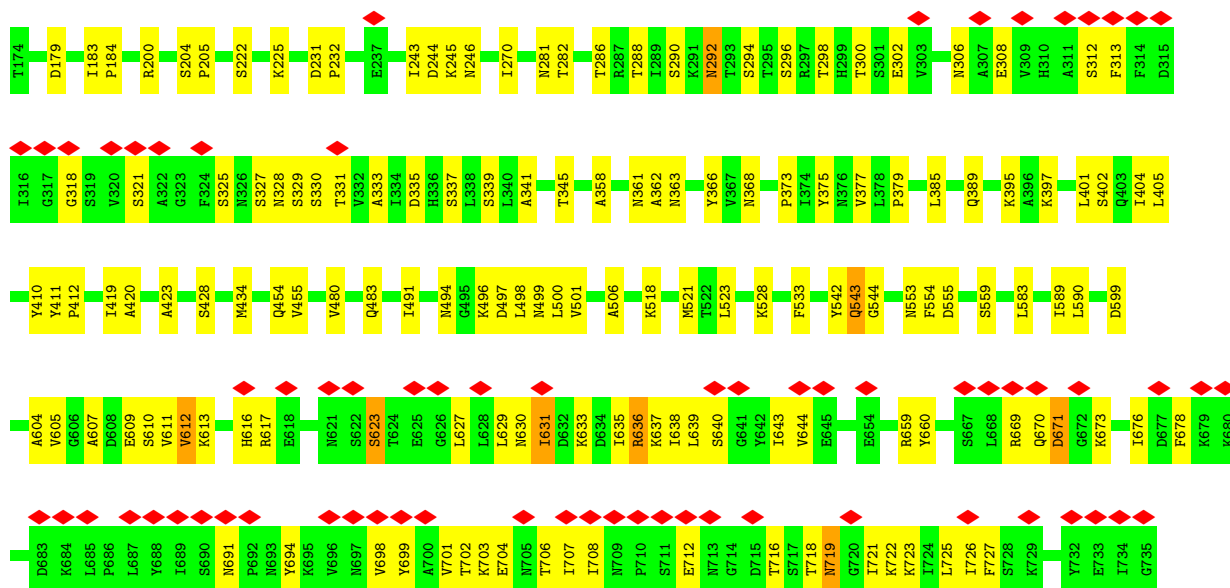


• Molecule 2: Protective antigen

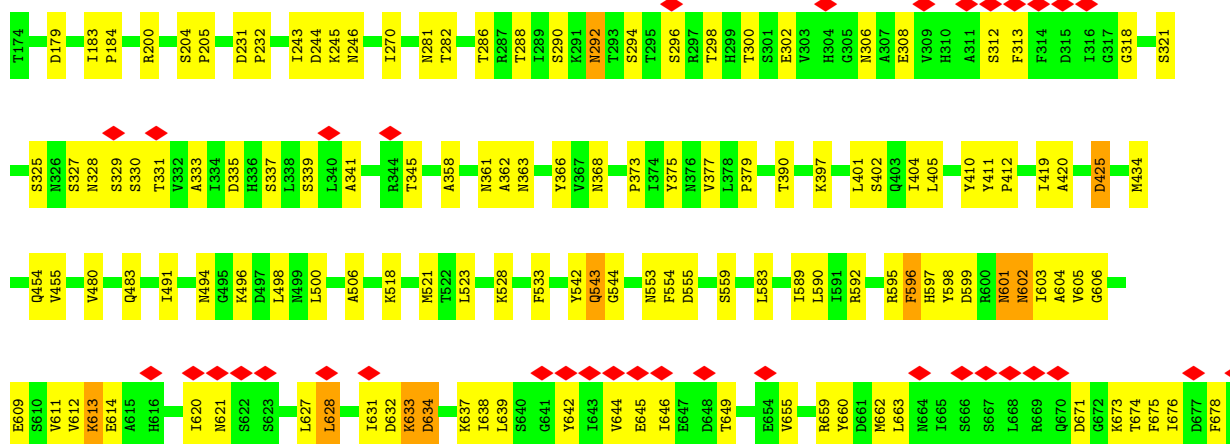


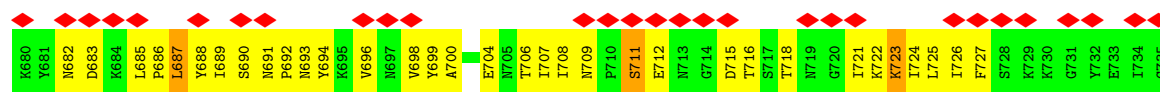


• Molecule 2: Protective antigen

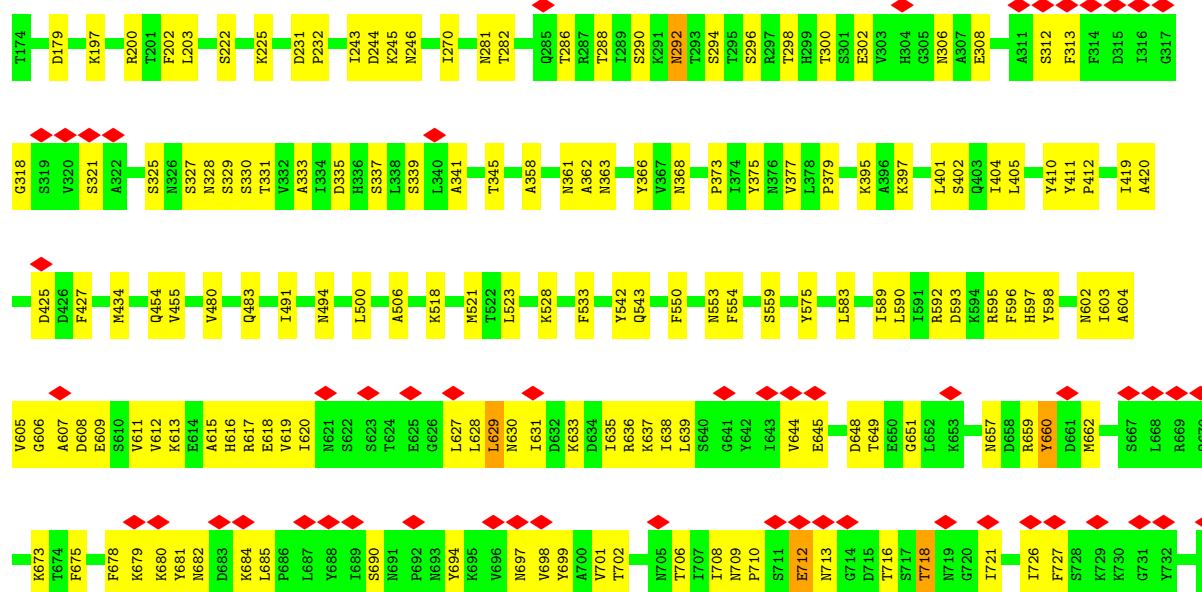


• Molecule 2: Protective antigen

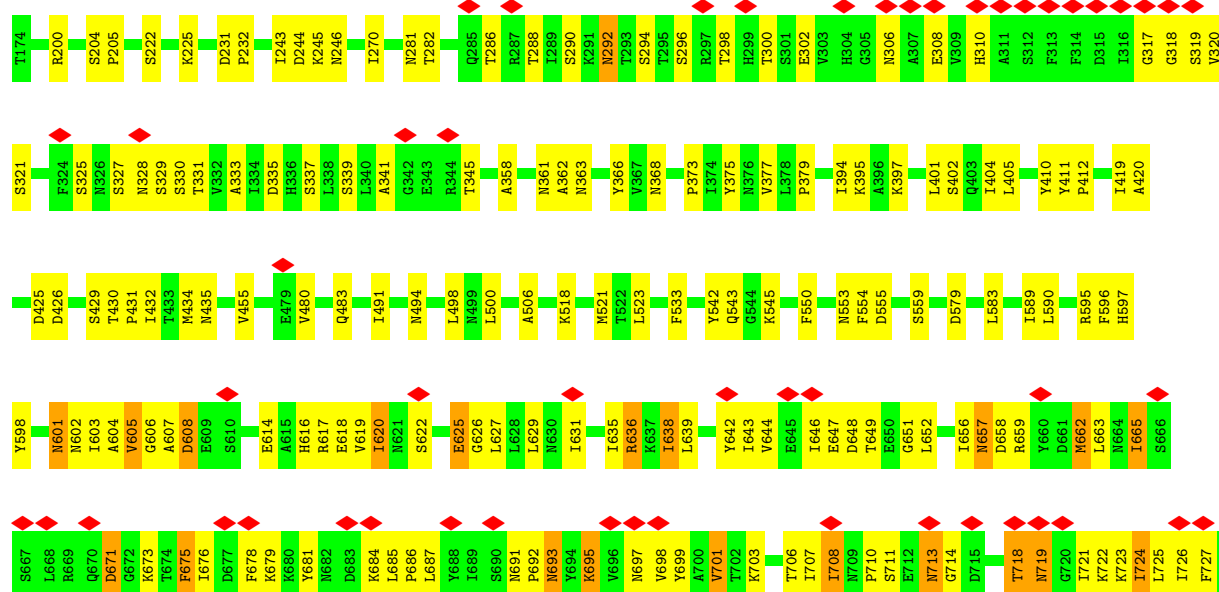




• Molecule 2: Protective antigen



• Molecule 2: Protective antigen





K729
K730
G731
Y732
E733
I734
G735

## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	122651	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	40	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	40.060	Depositor
Minimum map value	-25.293	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.854	Depositor
Recommended contour level	1.6	Depositor
Map size (Å)	321.0, 321.0, 321.0	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.605, 1.605, 1.605	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: CA

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	L	0.66	0/1829	0.78	0/2465
2	A	0.42	0/4508	0.60	0/6116
2	B	0.48	0/4508	0.62	0/6116
2	C	0.45	0/4508	0.61	0/6116
2	D	0.44	0/4508	0.59	0/6116
2	E	0.43	0/4508	0.60	0/6116
2	F	0.43	0/4508	0.58	0/6116
2	G	0.48	0/4508	0.62	0/6116
All	All	0.46	0/33385	0.61	0/45277

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

### 5.2 Too-close contacts [i](#)

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	L	1795	0	1775	232	0
2	A	4431	0	4372	215	0
2	B	4431	0	4372	292	0
2	C	4431	0	4372	236	0
2	D	4431	0	4372	168	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	E	4431	0	4372	181	0
2	F	4431	0	4372	185	0
2	G	4431	0	4372	276	0
3	A	2	0	0	0	0
3	B	2	0	0	0	0
3	C	2	0	0	0	0
3	D	2	0	0	0	0
3	E	2	0	0	0	0
3	F	2	0	0	0	0
3	G	2	0	0	0	0
All	All	32826	0	32379	1688	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 26.

All (1688) 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)
2:C:619:VAL:HG21	2:C:727:PHE:CE1	1.40	1.56
2:G:699:TYR:CE1	2:G:725:LEU:HD13	1.51	1.44
2:G:699:TYR:CZ	2:G:725:LEU:HD13	1.57	1.39
2:B:678:PHE:CD2	2:B:687:LEU:HD11	1.56	1.38
2:G:596:PHE:HZ	2:G:635:ILE:CD1	1.34	1.37
2:G:596:PHE:CZ	2:G:635:ILE:HD13	1.59	1.35
2:C:619:VAL:CG2	2:C:727:PHE:HE1	1.43	1.31
2:B:678:PHE:CE2	2:B:687:LEU:HD11	1.66	1.30
2:G:620:ILE:HD11	2:G:629:LEU:CD1	1.61	1.29
2:G:671:ASP:HB3	2:G:673:LYS:NZ	1.48	1.28
2:A:646:ILE:HD11	2:A:687:LEU:CD2	1.64	1.27
2:G:699:TYR:CE1	2:G:725:LEU:HB2	1.68	1.27
1:L:134:SER:HB2	1:L:138:VAL:CG1	1.66	1.24
2:G:620:ILE:CD1	2:G:629:LEU:HD12	1.66	1.24
1:L:155:LEU:HD12	1:L:218:ALA:CB	1.69	1.23
2:C:691:ASN:OD1	2:C:692:PRO:CD	1.89	1.21
2:G:691:ASN:OD1	2:G:692:PRO:HD2	1.39	1.20
2:G:699:TYR:CE1	2:G:725:LEU:CD1	2.24	1.20
2:A:630:ASN:ND2	2:A:673:LYS:HG3	1.57	1.19
2:C:644:VAL:CG1	2:C:678:PHE:HE2	1.54	1.18
2:C:727:PHE:CE2	2:C:729:LYS:HG2	1.79	1.17
2:G:699:TYR:HE1	2:G:725:LEU:CB	1.58	1.17
2:F:606:GLY:HA2	2:F:702:THR:HB	1.27	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:718:THR:HG22	2:F:721:ILE:HD12	1.20	1.16
2:G:659:ARG:HB2	2:G:662:MET:SD	1.84	1.16
2:D:644:VAL:HG21	2:D:678:PHE:CE2	1.80	1.16
2:D:644:VAL:CG2	2:D:678:PHE:CE2	2.29	1.15
2:F:660:TYR:CE2	2:F:716:THR:HB	1.80	1.15
2:A:649:THR:HG23	2:A:695:LYS:HZ1	0.99	1.15
2:F:709:ASN:CG	2:F:710:PRO:HD2	1.66	1.15
2:D:635:ILE:HD13	2:D:638:ILE:HD11	1.28	1.14
2:F:718:THR:HG22	2:F:721:ILE:CD1	1.77	1.14
1:L:191:THR:HG22	1:L:219:LYS:NZ	1.64	1.13
2:F:607:ALA:HB2	2:F:638:ILE:HD12	1.31	1.13
1:L:188:LEU:CD2	2:A:210:ILE:HA	1.78	1.12
2:E:599:ASP:HB3	2:E:605:VAL:CG2	1.79	1.12
2:A:623:SER:OG	2:A:625:GLU:HG3	1.47	1.12
2:F:660:TYR:HE2	2:F:716:THR:CB	1.61	1.11
2:C:644:VAL:CG1	2:C:678:PHE:CE2	2.33	1.11
2:G:642:TYR:HB2	2:G:665:ILE:HD12	1.16	1.11
2:E:646:ILE:HD11	2:E:687:LEU:HD11	1.34	1.10
2:G:620:ILE:CD1	2:G:629:LEU:CD1	2.24	1.10
2:G:699:TYR:CE1	2:G:725:LEU:CB	2.32	1.10
2:A:695:LYS:HG3	2:A:730:LYS:HD3	1.15	1.10
2:C:644:VAL:CG2	2:C:678:PHE:CE2	2.35	1.10
2:G:678:PHE:CZ	2:G:698:VAL:HG21	1.86	1.09
2:G:679:LYS:HE3	2:G:685:LEU:HA	1.30	1.09
2:C:644:VAL:HG11	2:C:678:PHE:CE2	1.86	1.09
2:G:659:ARG:HD3	2:G:662:MET:HE1	1.30	1.09
2:D:701:VAL:HG11	2:D:706:THR:HG22	1.33	1.09
2:D:701:VAL:HG12	2:D:706:THR:CG2	1.83	1.08
2:B:498:LEU:HD21	2:B:596:PHE:HE2	1.18	1.08
2:G:658:ASP:OD1	2:G:718:THR:HG22	1.50	1.08
2:C:691:ASN:OD1	2:C:692:PRO:HD2	1.48	1.08
2:A:630:ASN:HD21	2:A:673:LYS:HG3	1.05	1.07
2:C:644:VAL:HG21	2:C:678:PHE:CE2	1.88	1.07
1:L:40:MET:HA	1:L:43:ILE:HD12	1.11	1.07
2:G:596:PHE:CE2	2:G:638:ILE:HD13	1.89	1.07
1:L:143:LYS:HA	1:L:143:LYS:HE2	1.32	1.06
2:B:626:GLY:HA2	2:B:678:PHE:CZ	1.89	1.06
1:L:102:LYS:HA	1:L:102:LYS:HE3	1.34	1.06
2:C:696:VAL:N	2:C:734:ILE:HD11	1.69	1.06
2:A:646:ILE:CD1	2:A:687:LEU:HD21	1.85	1.06
2:A:649:THR:HG23	2:A:695:LYS:NZ	1.67	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:701:VAL:CG1	2:D:706:THR:HG22	1.85	1.05
1:L:134:SER:HB2	1:L:138:VAL:HG11	1.27	1.05
2:C:708:ILE:H	2:C:708:ILE:HD12	1.23	1.03
2:D:701:VAL:HG12	2:D:706:THR:HG23	1.34	1.03
2:E:682:ASN:HB3	2:E:685:LEU:O	1.56	1.03
2:G:620:ILE:HD11	2:G:629:LEU:HD12	1.20	1.03
1:L:134:SER:CB	1:L:138:VAL:HG11	1.89	1.03
2:C:668:LEU:HD12	2:C:673:LYS:O	1.59	1.03
1:L:155:LEU:HD12	1:L:218:ALA:HB2	1.37	1.02
1:L:188:LEU:HD21	2:A:210:ILE:HA	1.39	1.02
1:L:237:ALA:HB3	1:L:238:PRO:HD2	1.39	1.02
2:D:533:PHE:CE1	2:D:542:TYR:HB2	1.95	1.02
2:G:699:TYR:HE1	2:G:725:LEU:HB2	0.85	1.02
2:F:708:ILE:H	2:F:708:ILE:HD12	1.25	1.02
1:L:221:PHE:O	1:L:225:ILE:HG23	1.60	1.01
2:B:533:PHE:CE1	2:B:542:TYR:HB2	1.94	1.01
2:F:533:PHE:CE1	2:F:542:TYR:HB2	1.96	1.01
2:B:204:SER:OG	2:B:205:PRO:HD2	1.58	1.01
2:B:615:ALA:HB2	2:B:635:ILE:HG21	1.43	1.01
2:D:644:VAL:CG2	2:D:678:PHE:HE2	1.72	1.01
2:C:696:VAL:H	2:C:734:ILE:HD11	1.23	1.00
2:G:596:PHE:CD2	2:G:638:ILE:HD13	1.96	1.00
2:C:533:PHE:CE1	2:C:542:TYR:HB2	1.96	1.00
2:G:596:PHE:CZ	2:G:635:ILE:CD1	2.26	1.00
2:D:701:VAL:CG1	2:D:706:THR:CG2	2.39	0.99
2:A:644:VAL:HG11	2:A:678:PHE:HD2	1.27	0.99
1:L:188:LEU:HD22	2:A:210:ILE:HG12	1.43	0.99
2:E:533:PHE:CE1	2:E:542:TYR:HB2	1.97	0.99
2:G:533:PHE:CE1	2:G:542:TYR:HB2	1.96	0.99
2:E:646:ILE:HD11	2:E:687:LEU:CD1	1.93	0.99
2:D:635:ILE:CD1	2:D:638:ILE:HD11	1.92	0.99
1:L:92:ILE:HG22	2:F:427:PHE:CZ	1.98	0.98
2:C:691:ASN:OD1	2:C:692:PRO:HD3	1.61	0.98
2:B:642:TYR:CE2	2:B:700:ALA:HB2	1.97	0.98
2:F:660:TYR:HE2	2:F:716:THR:CA	1.75	0.98
2:G:685:LEU:HB3	2:G:686:PRO:HD2	1.45	0.98
1:L:237:ALA:CB	1:L:238:PRO:CD	2.41	0.98
2:F:660:TYR:CE2	2:F:716:THR:CB	2.42	0.98
1:L:56:LYS:HE3	2:A:298:THR:CG2	1.94	0.98
2:F:635:ILE:O	2:F:638:ILE:HG12	1.63	0.98
1:L:170:PHE:HE1	1:L:174:LEU:HB2	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:695:LYS:HD2	2:A:730:LYS:HE3	1.45	0.97
1:L:155:LEU:HD12	1:L:218:ALA:HB1	1.45	0.97
2:B:655:VAL:HG11	2:B:718:THR:HG21	1.46	0.97
2:E:663:LEU:HD23	2:E:663:LEU:H	1.30	0.97
1:L:56:LYS:HE3	2:A:298:THR:HG23	1.44	0.97
2:B:678:PHE:CD2	2:B:687:LEU:CD1	2.48	0.97
1:L:134:SER:HB2	1:L:138:VAL:HG12	1.44	0.96
1:L:102:LYS:HG2	2:B:472:ASP:HA	1.46	0.96
2:A:607:ALA:H	2:A:638:ILE:HD12	1.27	0.96
2:E:599:ASP:HB3	2:E:605:VAL:HG22	1.45	0.96
2:F:718:THR:CG2	2:F:721:ILE:HD12	1.94	0.96
1:L:191:THR:HG22	1:L:219:LYS:HZ3	1.22	0.96
2:G:662:MET:HB3	2:G:681:TYR:CZ	1.98	0.96
2:B:607:ALA:HB2	2:B:638:ILE:HD12	1.47	0.96
2:D:640:SER:HB3	2:D:706:THR:HG21	1.45	0.95
2:G:671:ASP:HB3	2:G:673:LYS:HZ1	1.02	0.95
1:L:237:ALA:CB	1:L:238:PRO:HD2	1.95	0.95
2:G:620:ILE:HD11	2:G:629:LEU:HD11	1.44	0.95
2:G:691:ASN:OD1	2:G:692:PRO:CD	2.14	0.95
2:F:618:GLU:HB3	2:F:630:ASN:H	1.32	0.95
2:C:644:VAL:HG11	2:C:678:PHE:CD2	2.02	0.94
2:B:655:VAL:CG1	2:B:718:THR:HG21	1.96	0.94
1:L:188:LEU:HD22	2:A:210:ILE:CG1	1.97	0.94
2:E:612:VAL:HG11	2:E:724:ILE:CD1	1.96	0.94
1:L:188:LEU:HD22	2:A:210:ILE:CB	1.97	0.94
2:D:629:LEU:HB3	2:D:631:ILE:HD11	1.47	0.94
2:G:679:LYS:HG3	2:G:685:LEU:C	1.88	0.94
1:L:188:LEU:HD22	2:A:210:ILE:HG23	1.50	0.94
2:B:627:LEU:HD21	2:B:698:VAL:HG11	1.50	0.93
2:G:678:PHE:HZ	2:G:698:VAL:HG21	1.19	0.93
2:A:607:ALA:N	2:A:638:ILE:HD12	1.83	0.93
2:B:203:LEU:HD23	2:B:236:PHE:HE1	1.32	0.93
1:L:188:LEU:CD2	2:A:210:ILE:HG12	1.99	0.93
2:G:671:ASP:CB	2:G:673:LYS:NZ	2.33	0.92
2:G:596:PHE:HZ	2:G:635:ILE:HD13	0.76	0.92
2:C:647:GLU:HB2	2:C:697:ASN:ND2	1.84	0.92
2:C:647:GLU:HB2	2:C:697:ASN:HD21	1.35	0.91
2:A:533:PHE:CE1	2:A:542:TYR:HB2	2.04	0.91
2:D:617:ARG:HA	2:D:617:ARG:HE	1.35	0.91
2:C:727:PHE:HE2	2:C:729:LYS:HG2	1.28	0.91
2:G:699:TYR:CE1	2:G:725:LEU:CG	2.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:699:TYR:CZ	2:G:725:LEU:CD1	2.48	0.90
2:F:709:ASN:ND2	2:F:710:PRO:HD2	1.86	0.90
2:B:498:LEU:HD21	2:B:596:PHE:CE2	2.07	0.90
2:G:699:TYR:HD1	2:G:724:ILE:O	1.55	0.90
1:L:155:LEU:CD1	1:L:218:ALA:CB	2.49	0.90
2:F:698:VAL:HB	2:F:727:PHE:HB3	1.53	0.90
2:A:224:GLU:OE1	2:B:201:THR:HG22	1.70	0.90
2:A:646:ILE:HD11	2:A:687:LEU:HD21	0.91	0.89
2:B:615:ALA:CB	2:B:635:ILE:HG21	2.03	0.89
2:G:706:THR:HA	2:G:721:ILE:HD11	1.54	0.89
1:L:188:LEU:HD22	2:A:210:ILE:CG2	2.01	0.89
2:G:659:ARG:HD3	2:G:662:MET:CE	2.02	0.89
1:L:233:LEU:HD21	1:L:240:ALA:HB1	1.52	0.89
2:G:658:ASP:OD1	2:G:718:THR:CG2	2.20	0.89
1:L:88:ILE:CG2	1:L:90:LYS:HE3	2.02	0.89
2:B:678:PHE:CE2	2:B:687:LEU:CD1	2.53	0.88
2:G:643:ILE:HD11	2:G:718:THR:OG1	1.73	0.88
2:G:662:MET:HB3	2:G:681:TYR:CE1	2.08	0.88
2:A:653:LYS:HE3	2:A:653:LYS:H	1.38	0.88
2:G:699:TYR:OH	2:G:725:LEU:HD22	1.73	0.88
2:C:638:ILE:HG12	2:C:639:LEU:HD22	1.56	0.88
2:G:642:TYR:HB2	2:G:665:ILE:CD1	2.03	0.87
1:L:237:ALA:HB1	1:L:238:PRO:CD	2.04	0.87
2:C:426:ASP:OD1	2:C:426:ASP:N	2.06	0.87
2:F:679:LYS:HE3	2:F:684:LYS:O	1.74	0.87
1:L:92:ILE:CG2	2:F:427:PHE:CZ	2.57	0.87
2:F:660:TYR:CE2	2:F:716:THR:CA	2.58	0.87
2:C:700:ALA:H	2:C:726:ILE:HD13	1.38	0.87
2:A:652:LEU:HD12	2:A:694:TYR:CE2	2.10	0.86
1:L:40:MET:CA	1:L:43:ILE:HD12	2.03	0.86
1:L:102:LYS:CG	2:B:472:ASP:HA	2.05	0.86
1:L:170:PHE:CE1	1:L:174:LEU:HB2	2.11	0.86
2:B:655:VAL:HG11	2:B:718:THR:CG2	2.06	0.86
2:B:702:THR:OG1	2:B:705:ASN:CB	2.24	0.86
2:F:660:TYR:CE2	2:F:716:THR:HA	2.11	0.86
2:G:616:HIS:CE1	2:G:631:ILE:HG23	2.10	0.86
2:E:689:ILE:HG21	2:E:696:VAL:CG2	2.06	0.86
2:G:595:ARG:O	2:G:607:ALA:CB	2.24	0.85
1:L:88:ILE:HG21	1:L:90:LYS:HE3	1.57	0.85
2:C:466:ASN:HD21	2:C:470:ARG:HH21	1.20	0.85
2:E:689:ILE:HG21	2:E:696:VAL:HG22	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:679:LYS:HG3	2:F:685:LEU:N	1.91	0.85
2:A:653:LYS:H	2:A:653:LYS:CE	1.89	0.85
2:G:601:ASN:ND2	2:G:601:ASN:O	2.08	0.85
2:A:695:LYS:CG	2:A:730:LYS:HD3	2.03	0.85
2:F:627:LEU:CD1	2:F:678:PHE:HZ	1.89	0.85
1:L:92:ILE:HG22	2:F:427:PHE:HZ	1.40	0.85
2:E:612:VAL:HG11	2:E:724:ILE:HD11	1.58	0.85
2:F:618:GLU:O	2:F:629:LEU:HB3	1.77	0.85
2:B:302:GLU:HB3	2:B:325:SER:HB2	1.57	0.85
2:C:642:TYR:HB2	2:C:665:ILE:HD11	1.57	0.85
2:D:699:TYR:CD1	2:D:725:LEU:HA	2.12	0.85
2:C:709:ASN:HB3	2:C:710:PRO:CD	2.05	0.85
2:G:642:TYR:CB	2:G:665:ILE:HD12	2.05	0.85
2:E:597:HIS:O	2:E:605:VAL:HB	1.77	0.84
2:C:727:PHE:CE2	2:C:729:LYS:CG	2.58	0.84
2:F:662:MET:HE3	2:F:681:TYR:O	1.77	0.84
1:L:244:MET:HA	1:L:244:MET:CE	2.07	0.84
2:D:678:PHE:HZ	2:D:698:VAL:HG21	1.43	0.84
2:F:197:LYS:HB3	2:F:202:PHE:HE2	1.38	0.84
1:L:188:LEU:CD2	2:A:210:ILE:CA	2.56	0.84
2:B:700:ALA:N	2:B:726:ILE:HD13	1.92	0.84
2:G:679:LYS:CE	2:G:685:LEU:HA	2.08	0.84
1:L:165:GLN:H	1:L:166:PRO:CD	1.91	0.83
2:C:622:SER:HB3	2:C:729:LYS:HG3	1.57	0.83
2:D:635:ILE:HD13	2:D:638:ILE:CD1	2.07	0.83
2:B:669:ARG:HA	2:B:669:ARG:HE	1.39	0.83
1:L:120:TYR:HE1	1:L:131:ILE:HG13	1.43	0.83
2:F:660:TYR:HE2	2:F:716:THR:HA	1.42	0.83
2:F:679:LYS:HE3	2:F:684:LYS:C	1.99	0.83
2:C:718:THR:HB	2:C:721:ILE:HD12	1.59	0.83
2:D:644:VAL:HG22	2:D:678:PHE:CE2	2.12	0.83
2:G:678:PHE:HE2	2:G:698:VAL:HG22	1.43	0.83
2:F:617:ARG:HA	2:F:617:ARG:HE	1.44	0.83
2:G:679:LYS:HG3	2:G:685:LEU:O	1.78	0.83
2:F:627:LEU:HG	2:F:678:PHE:CZ	2.14	0.83
2:G:659:ARG:HB2	2:G:662:MET:CE	2.08	0.83
2:G:678:PHE:CZ	2:G:698:VAL:CG2	2.62	0.82
2:E:646:ILE:CD1	2:E:688:TYR:O	2.28	0.82
1:L:153:LYS:HB2	1:L:153:LYS:NZ	1.93	0.82
2:E:646:ILE:CD1	2:E:687:LEU:HD11	2.09	0.82
2:E:633:LYS:H	2:E:633:LYS:HD3	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:197:LYS:H	2:B:197:LYS:HD2	1.45	0.82
2:C:678:PHE:HZ	2:C:698:VAL:HG22	1.43	0.81
2:D:678:PHE:HZ	2:D:698:VAL:CG2	1.92	0.81
2:G:708:ILE:HD12	2:G:708:ILE:O	1.80	0.81
2:D:498:LEU:HD13	2:D:604:ALA:CB	2.10	0.81
2:D:644:VAL:CG1	2:D:678:PHE:CE2	2.63	0.81
2:D:644:VAL:HG11	2:D:678:PHE:CD2	2.15	0.81
1:L:195:LYS:HE2	1:L:195:LYS:N	1.96	0.81
2:A:695:LYS:HG3	2:A:730:LYS:CD	2.04	0.81
2:B:639:LEU:H	2:B:639:LEU:HD22	1.44	0.81
1:L:97:LEU:HD23	1:L:97:LEU:H	1.46	0.80
2:B:702:THR:OG1	2:B:705:ASN:HB3	1.81	0.80
2:C:700:ALA:N	2:C:726:ILE:HD13	1.95	0.80
2:E:639:LEU:HD21	2:E:700:ALA:HB1	1.64	0.80
2:B:700:ALA:HB3	2:B:726:ILE:HD11	1.63	0.80
2:G:595:ARG:O	2:G:607:ALA:HB1	1.81	0.80
2:G:678:PHE:CE2	2:G:698:VAL:CG2	2.64	0.80
1:L:143:LYS:HA	1:L:143:LYS:CE	2.09	0.80
1:L:155:LEU:CD1	1:L:218:ALA:HB2	2.12	0.80
2:B:200:ARG:HB2	2:B:200:ARG:NH1	1.95	0.80
2:D:644:VAL:HG21	2:D:678:PHE:CD2	2.16	0.80
2:D:644:VAL:CG1	2:D:678:PHE:HE2	1.95	0.80
2:A:620:ILE:HG13	2:A:629:LEU:HA	1.64	0.79
2:F:628:LEU:HD13	2:F:675:PHE:HB2	1.64	0.79
1:L:165:GLN:N	1:L:166:PRO:CD	2.46	0.79
2:D:617:ARG:HA	2:D:617:ARG:NE	1.97	0.79
2:G:678:PHE:CE2	2:G:698:VAL:HG22	2.18	0.79
2:G:713:ASN:HD22	2:G:713:ASN:H	1.30	0.79
1:L:232:VAL:HG22	2:A:205:PRO:HD2	1.63	0.79
2:D:498:LEU:HD13	2:D:604:ALA:HB2	1.63	0.79
2:F:607:ALA:HB2	2:F:638:ILE:CD1	2.11	0.79
2:B:196:VAL:HG12	2:B:201:THR:HA	1.63	0.79
2:C:619:VAL:CG2	2:C:727:PHE:CE1	2.33	0.79
2:B:701:VAL:HG11	2:B:706:THR:OG1	1.83	0.78
2:A:644:VAL:HG11	2:A:678:PHE:CD2	2.18	0.78
2:C:727:PHE:HE2	2:C:729:LYS:CG	1.96	0.78
1:L:237:ALA:HB1	1:L:238:PRO:HD3	1.63	0.78
2:C:545:LYS:HB2	2:C:545:LYS:NZ	1.99	0.78
2:F:618:GLU:O	2:F:629:LEU:HD12	1.84	0.78
1:L:191:THR:HG22	1:L:219:LYS:HZ1	1.47	0.78
2:G:596:PHE:HE2	2:G:638:ILE:HD13	1.45	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:197:LYS:CB	2:F:202:PHE:HE2	1.95	0.78
2:G:671:ASP:CB	2:G:673:LYS:HZ1	1.93	0.78
2:A:193:THR:HG21	2:A:211:HIS:CD2	2.19	0.77
2:G:625:GLU:HA	2:G:679:LYS:HB2	1.67	0.77
2:D:204:SER:OG	2:D:205:PRO:HD2	1.83	0.77
2:E:646:ILE:HD13	2:E:688:TYR:O	1.83	0.77
2:B:601:ASN:HB2	2:B:603:ILE:HD13	1.66	0.77
1:L:155:LEU:O	1:L:155:LEU:HD22	1.84	0.77
2:F:644:VAL:HG21	2:F:678:PHE:HD1	1.48	0.77
2:C:644:VAL:HG13	2:C:678:PHE:HE2	1.45	0.77
2:E:204:SER:OG	2:E:205:PRO:HD2	1.83	0.77
2:A:533:PHE:HE1	2:A:542:TYR:CD1	2.02	0.77
2:C:644:VAL:CG2	2:C:678:PHE:HE2	1.86	0.77
1:L:92:ILE:CG2	2:F:427:PHE:HZ	1.94	0.76
2:A:623:SER:OG	2:A:625:GLU:CG	2.32	0.76
2:B:623:SER:HB2	2:B:628:LEU:HB2	1.67	0.76
2:G:647:GLU:HB3	2:G:695:LYS:HD3	1.66	0.76
2:D:533:PHE:HE1	2:D:542:TYR:HD2	1.34	0.76
2:B:200:ARG:HB2	2:B:200:ARG:HH11	1.47	0.76
2:F:708:ILE:HD12	2:F:708:ILE:N	2.01	0.76
2:G:685:LEU:HB3	2:G:686:PRO:CD	2.15	0.76
2:B:669:ARG:HG3	2:B:673:LYS:HE2	1.67	0.75
1:L:129:LEU:HD22	1:L:129:LEU:N	2.01	0.75
1:L:165:GLN:HG3	1:L:165:GLN:O	1.85	0.75
2:E:659:ARG:HD3	2:E:662:MET:SD	2.26	0.75
2:E:663:LEU:H	2:E:663:LEU:CD2	1.98	0.75
2:F:616:HIS:ND1	2:F:726:ILE:HG12	2.01	0.75
1:L:165:GLN:N	1:L:166:PRO:HD2	2.01	0.75
2:F:660:TYR:CZ	2:F:716:THR:HB	2.21	0.75
2:G:597:HIS:HB2	2:G:606:GLY:O	1.87	0.75
2:G:659:ARG:CD	2:G:662:MET:HE1	2.12	0.75
1:L:188:LEU:CD2	2:A:210:ILE:HG23	2.16	0.75
2:E:682:ASN:CB	2:E:685:LEU:O	2.34	0.74
2:E:689:ILE:CG2	2:E:696:VAL:HG22	2.17	0.74
2:B:685:LEU:HD12	2:B:685:LEU:O	1.88	0.74
2:D:644:VAL:HG11	2:D:678:PHE:CE2	2.22	0.74
2:C:633:LYS:H	2:C:633:LYS:HD3	1.51	0.74
2:G:699:TYR:CD1	2:G:725:LEU:HA	2.22	0.74
1:L:174:LEU:O	1:L:177:ILE:HG13	1.87	0.74
1:L:102:LYS:HE3	1:L:102:LYS:CA	2.17	0.74
1:L:233:LEU:HD21	1:L:240:ALA:CB	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:644:VAL:CB	2:C:678:PHE:HE2	2.01	0.74
2:D:605:VAL:HG12	2:D:704:GLU:HB3	1.68	0.74
2:G:643:ILE:HD13	2:G:718:THR:HG23	1.70	0.74
2:G:706:THR:HA	2:G:721:ILE:CD1	2.17	0.74
2:B:601:ASN:HB2	2:B:603:ILE:CD1	2.17	0.74
2:B:639:LEU:HD22	2:B:639:LEU:N	2.01	0.74
2:C:617:ARG:HA	2:C:617:ARG:NE	2.03	0.74
2:G:620:ILE:CG1	2:G:629:LEU:HD12	2.18	0.74
1:L:233:LEU:O	1:L:233:LEU:HD13	1.87	0.74
2:D:702:THR:O	2:D:706:THR:HG23	1.88	0.74
2:A:644:VAL:CG1	2:A:678:PHE:HD2	1.99	0.74
1:L:221:PHE:O	1:L:225:ILE:CG2	2.35	0.73
2:C:696:VAL:HG23	2:C:734:ILE:HD13	1.69	0.73
2:G:699:TYR:CD1	2:G:724:ILE:O	2.41	0.73
2:A:695:LYS:HD2	2:A:730:LYS:CE	2.18	0.73
2:B:607:ALA:CB	2:B:638:ILE:HD12	2.18	0.73
2:A:496:LYS:HB2	2:A:542:TYR:OH	1.88	0.73
2:E:645:GLU:HB3	2:E:655:VAL:HG22	1.70	0.73
2:B:678:PHE:HD2	2:B:687:LEU:HD11	1.45	0.73
2:C:204:SER:HB2	2:C:205:PRO:HD2	1.70	0.73
2:C:619:VAL:HG11	2:C:727:PHE:CD1	2.23	0.73
2:C:668:LEU:CD1	2:C:673:LYS:O	2.36	0.73
2:A:649:THR:CG2	2:A:695:LYS:HZ1	1.91	0.73
2:F:612:VAL:CG1	2:F:726:ILE:HD11	2.19	0.73
2:F:708:ILE:H	2:F:708:ILE:CD1	2.01	0.73
2:A:678:PHE:HD1	2:A:678:PHE:H	1.37	0.73
2:B:203:LEU:O	2:B:203:LEU:HD12	1.88	0.73
2:B:422:ASN:O	2:B:431:PRO:HA	1.88	0.72
2:B:592:ARG:HD2	2:B:598:TYR:CE2	2.22	0.72
2:E:723:LYS:H	2:E:723:LYS:HD2	1.52	0.72
2:C:696:VAL:CG2	2:C:734:ILE:HD13	2.18	0.72
2:D:533:PHE:HE1	2:D:542:TYR:CD2	2.07	0.72
2:G:659:ARG:CD	2:G:662:MET:CE	2.66	0.72
1:L:196:GLU:OE1	1:L:196:GLU:N	2.21	0.72
2:C:619:VAL:HG11	2:C:727:PHE:HD1	1.53	0.72
2:D:722:LYS:NZ	2:D:722:LYS:HB3	2.04	0.72
2:E:712:GLU:OE1	2:E:712:GLU:N	2.21	0.72
2:A:630:ASN:HD21	2:A:673:LYS:CG	1.95	0.72
2:D:708:ILE:HD12	2:D:708:ILE:N	2.05	0.72
2:E:599:ASP:CB	2:E:605:VAL:CG2	2.65	0.72
2:F:718:THR:HA	2:F:721:ILE:HD12	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:227:PRO:HA	1:L:230:ARG:HE	1.55	0.72
2:D:644:VAL:HG22	2:D:678:PHE:HE2	1.49	0.72
2:G:620:ILE:HD12	2:G:629:LEU:CD1	2.15	0.72
1:L:62:LEU:HD22	1:L:62:LEU:N	2.04	0.72
2:F:627:LEU:HG	2:F:678:PHE:HZ	1.52	0.72
2:A:606:GLY:HA2	2:A:638:ILE:HB	1.71	0.72
2:B:626:GLY:CA	2:B:678:PHE:CZ	2.71	0.72
2:F:712:GLU:CD	2:F:712:GLU:H	1.94	0.72
2:G:618:GLU:HA	2:G:618:GLU:OE1	1.90	0.71
2:D:640:SER:CB	2:D:706:THR:HG21	2.18	0.71
2:C:644:VAL:HG22	2:C:678:PHE:CE2	2.26	0.71
2:C:617:ARG:HA	2:C:617:ARG:HE	1.54	0.71
2:F:627:LEU:CG	2:F:678:PHE:HZ	2.03	0.71
2:D:660:TYR:CD1	2:D:707:ILE:HD11	2.26	0.71
2:D:708:ILE:HD12	2:D:708:ILE:H	1.56	0.71
2:F:645:GLU:OE2	2:F:699:TYR:CE2	2.43	0.71
2:C:703:LYS:HZ2	2:C:703:LYS:HB3	1.55	0.71
2:G:642:TYR:CD1	2:G:665:ILE:CD1	2.74	0.71
2:F:294:SER:HB2	2:F:333:ALA:HB3	1.73	0.71
2:C:206:TRP:NE1	2:C:218:LYS:HD2	2.06	0.71
2:C:708:ILE:HD12	2:C:708:ILE:N	2.04	0.71
2:B:669:ARG:HA	2:B:669:ARG:NE	2.05	0.70
2:B:701:VAL:CG1	2:B:706:THR:OG1	2.39	0.70
2:B:338:LEU:HB2	2:C:291:LYS:HB3	1.72	0.70
2:B:642:TYR:O	2:B:663:LEU:HD12	1.91	0.70
2:C:700:ALA:H	2:C:726:ILE:CD1	2.04	0.70
2:B:702:THR:OG1	2:B:705:ASN:HB2	1.90	0.70
2:G:294:SER:HB2	2:G:333:ALA:HB3	1.73	0.70
2:A:394:ILE:HG23	2:A:424:GLN:HA	1.72	0.70
2:B:623:SER:HB2	2:B:628:LEU:CB	2.22	0.70
2:E:682:ASN:ND2	2:E:686:PRO:C	2.45	0.70
1:L:102:LYS:HA	1:L:102:LYS:CE	2.19	0.70
1:L:114:LEU:O	1:L:114:LEU:HD13	1.91	0.70
2:E:599:ASP:HB3	2:E:605:VAL:HG21	1.70	0.70
2:E:688:TYR:CZ	2:E:690:SER:HA	2.27	0.70
2:B:340:LEU:N	2:C:289:ILE:O	2.23	0.70
2:D:294:SER:HB2	2:D:333:ALA:HB3	1.73	0.69
2:E:633:LYS:H	2:E:633:LYS:CD	2.05	0.69
2:G:663:LEU:HD21	2:G:701:VAL:HG21	1.73	0.69
2:G:665:ILE:HD11	2:G:676:ILE:HG23	1.74	0.69
1:L:134:SER:CA	1:L:138:VAL:HG11	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:644:VAL:HG12	2:A:656:ILE:HD11	1.74	0.69
2:A:646:ILE:CD1	2:A:687:LEU:CD2	2.59	0.69
2:E:294:SER:HB2	2:E:333:ALA:HB3	1.73	0.69
2:A:306:ASN:HB3	2:A:321:SER:HB2	1.75	0.69
2:B:306:ASN:HB3	2:B:321:SER:HB2	1.75	0.69
2:B:294:SER:HB2	2:B:333:ALA:HB3	1.73	0.69
2:C:545:LYS:HB2	2:C:545:LYS:HZ3	1.55	0.69
2:F:306:ASN:HB3	2:F:321:SER:HB2	1.75	0.69
2:G:306:ASN:HB3	2:G:321:SER:HB2	1.75	0.69
1:L:235:LEU:HD23	1:L:235:LEU:O	1.93	0.69
2:G:665:ILE:CG1	2:G:676:ILE:HG23	2.23	0.69
2:A:607:ALA:HB2	2:A:638:ILE:CD1	2.23	0.69
2:B:626:GLY:HA2	2:B:678:PHE:CE2	2.26	0.69
2:B:642:TYR:HB2	2:B:665:ILE:HG13	1.74	0.69
2:F:662:MET:HG2	2:F:681:TYR:HD2	1.57	0.69
1:L:168:GLN:HE21	1:L:168:GLN:CA	2.05	0.69
2:B:708:ILE:O	2:B:708:ILE:HD12	1.92	0.69
2:C:294:SER:HB2	2:C:333:ALA:HB3	1.73	0.69
2:D:629:LEU:CB	2:D:631:ILE:HD11	2.22	0.69
2:B:655:VAL:HG23	2:B:657:ASN:O	1.93	0.69
2:G:498:LEU:HD13	2:G:604:ALA:CB	2.23	0.69
2:G:671:ASP:O	2:G:673:LYS:NZ	2.26	0.69
2:A:294:SER:HB2	2:A:333:ALA:HB3	1.73	0.68
2:G:659:ARG:NE	2:G:662:MET:HE3	2.07	0.68
2:G:671:ASP:HB3	2:G:673:LYS:HZ3	1.53	0.68
1:L:167:TYR:HD1	1:L:167:TYR:H	1.42	0.68
2:F:718:THR:HG22	2:F:721:ILE:HD13	1.74	0.68
2:B:626:GLY:HA2	2:B:678:PHE:CE1	2.27	0.68
2:B:656:ILE:CG2	2:B:682:ASN:OD1	2.42	0.68
2:C:700:ALA:HB3	2:C:726:ILE:HD11	1.75	0.68
1:L:178:LYS:HB2	1:L:178:LYS:HZ2	1.58	0.68
2:D:599:ASP:N	2:D:599:ASP:OD1	2.26	0.68
2:A:332:VAL:O	2:B:297:ARG:N	2.27	0.68
2:G:693:ASN:ND2	2:G:693:ASN:O	2.27	0.68
1:L:56:LYS:CE	2:A:298:THR:CG2	2.71	0.68
1:L:227:PRO:HA	1:L:230:ARG:NE	2.08	0.68
2:E:639:LEU:CD2	2:E:700:ALA:HB1	2.22	0.68
2:C:703:LYS:HB3	2:C:703:LYS:NZ	2.08	0.68
2:E:682:ASN:O	2:E:685:LEU:HB2	1.93	0.68
2:A:604:ALA:O	2:A:638:ILE:HG22	1.93	0.68
2:C:636:ARG:C	2:C:636:ARG:HD3	2.14	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:306:ASN:HB3	2:C:321:SER:HB2	1.75	0.68
2:C:709:ASN:HB3	2:C:710:PRO:HD2	1.75	0.68
2:G:596:PHE:CD2	2:G:638:ILE:CD1	2.75	0.68
2:E:306:ASN:HB3	2:E:321:SER:HB2	1.75	0.67
1:L:88:ILE:HB	1:L:90:LYS:NZ	2.09	0.67
1:L:188:LEU:CD2	2:A:210:ILE:CB	2.72	0.67
2:C:533:PHE:HE1	2:C:542:TYR:CD1	2.12	0.67
2:G:300:THR:HB	2:G:327:SER:HB3	1.76	0.67
1:L:45:LYS:HZ1	2:G:310:HIS:HB2	1.59	0.67
2:C:300:THR:HB	2:C:327:SER:HB3	1.76	0.67
2:D:671:ASP:OD1	2:D:671:ASP:N	2.27	0.67
2:E:533:PHE:HE1	2:E:542:TYR:CD1	2.13	0.67
2:F:300:THR:HB	2:F:327:SER:HB3	1.76	0.67
2:D:300:THR:HB	2:D:327:SER:HB3	1.76	0.67
2:G:595:ARG:O	2:G:607:ALA:HB2	1.93	0.67
2:G:643:ILE:HB	2:G:723:LYS:HE2	1.77	0.67
2:B:643:ILE:HG12	2:B:663:LEU:CD1	2.25	0.67
2:D:678:PHE:CZ	2:D:698:VAL:CG2	2.77	0.67
2:B:203:LEU:HD23	2:B:236:PHE:CE1	2.23	0.67
2:D:712:GLU:OE1	2:D:712:GLU:N	2.22	0.67
2:C:699:TYR:CD1	2:C:725:LEU:HA	2.30	0.67
2:G:533:PHE:HE1	2:G:542:TYR:CD1	2.13	0.67
2:G:596:PHE:CD2	2:G:638:ILE:HG21	2.29	0.67
1:L:178:LYS:HB2	1:L:178:LYS:NZ	2.09	0.67
2:G:646:ILE:CD1	2:G:656:ILE:HD11	2.24	0.67
1:L:153:LYS:HB2	1:L:153:LYS:HZ3	1.59	0.67
2:A:300:THR:HB	2:A:327:SER:HB3	1.76	0.67
2:A:656:ILE:H	2:A:656:ILE:HD13	1.59	0.67
2:G:394:ILE:HG13	2:G:432:ILE:HD11	1.77	0.67
1:L:134:SER:HA	1:L:138:VAL:HG11	1.77	0.66
2:B:614:GLU:OE1	2:B:614:GLU:HA	1.94	0.66
2:D:306:ASN:HB3	2:D:321:SER:HB2	1.75	0.66
2:E:604:ALA:HB1	2:E:638:ILE:HG22	1.75	0.66
2:E:708:ILE:C	2:E:708:ILE:HD12	2.15	0.66
2:C:708:ILE:H	2:C:708:ILE:CD1	2.03	0.66
2:E:725:LEU:HD23	2:E:725:LEU:C	2.16	0.66
2:F:628:LEU:HB2	2:F:675:PHE:HD1	1.59	0.66
2:A:303:VAL:O	2:G:325:SER:HA	1.95	0.66
2:E:483:GLN:NE2	2:F:244:ASP:OD1	2.28	0.66
1:L:97:LEU:HD23	1:L:97:LEU:N	2.11	0.66
2:E:682:ASN:HD22	2:E:686:PRO:C	1.99	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:653:LYS:N	2:B:653:LYS:HD3	2.10	0.66
2:C:731:GLY:HA2	2:C:734:ILE:HD12	1.76	0.66
2:E:631:ILE:HG22	2:E:674:THR:OG1	1.96	0.66
2:E:300:THR:HB	2:E:327:SER:HB3	1.76	0.66
1:L:110:LYS:HD3	2:B:236:PHE:CE2	2.31	0.66
2:A:596:PHE:CD1	2:A:607:ALA:HB2	2.31	0.66
2:A:635:ILE:O	2:A:638:ILE:HG12	1.96	0.66
2:F:553:ASN:HD21	2:F:592:ARG:HH21	1.42	0.66
2:G:596:PHE:HD2	2:G:638:ILE:HD13	1.59	0.66
2:G:644:VAL:HG11	2:G:678:PHE:HD2	1.60	0.66
2:G:706:THR:CA	2:G:721:ILE:HD11	2.25	0.66
2:B:204:SER:OG	2:B:205:PRO:CD	2.42	0.66
2:E:500:LEU:HD11	2:E:602:ASN:HB2	1.77	0.66
2:E:609:GLU:OE1	2:E:609:GLU:N	2.22	0.66
2:E:498:LEU:HD21	2:E:596:PHE:CE2	2.32	0.65
2:G:665:ILE:HG12	2:G:665:ILE:O	1.96	0.65
2:A:325:SER:HA	2:B:304:HIS:HA	1.77	0.65
2:E:682:ASN:HD22	2:E:687:LEU:N	1.95	0.65
2:G:620:ILE:CD1	2:G:629:LEU:HD11	2.12	0.65
1:L:155:LEU:HD22	1:L:155:LEU:C	2.15	0.65
2:A:653:LYS:HE3	2:A:653:LYS:N	2.09	0.65
1:L:202:SER:O	1:L:202:SER:OG	2.11	0.65
2:D:631:ILE:HD12	2:D:631:ILE:N	2.10	0.65
2:D:635:ILE:O	2:D:638:ILE:HG13	1.97	0.65
2:E:609:GLU:H	2:E:609:GLU:CD	2.00	0.65
1:L:186:GLN:C	1:L:188:LEU:H	1.99	0.65
2:B:300:THR:HB	2:B:327:SER:HB3	1.78	0.65
2:A:662:MET:HE3	2:A:681:TYR:CD1	2.31	0.65
2:D:635:ILE:O	2:D:638:ILE:CG1	2.45	0.65
2:G:731:GLY:HA2	2:G:734:ILE:CD1	2.27	0.65
1:L:56:LYS:HE3	2:A:298:THR:HG21	1.78	0.65
2:B:203:LEU:CD2	2:B:236:PHE:HE1	2.07	0.65
2:B:653:LYS:HD3	2:B:653:LYS:H	1.62	0.65
2:C:633:LYS:HD3	2:C:633:LYS:N	2.10	0.65
2:G:657:ASN:OD1	2:G:657:ASN:N	2.27	0.65
2:B:597:HIS:HB3	2:B:606:GLY:HA3	1.79	0.64
2:B:601:ASN:CB	2:B:603:ILE:CD1	2.75	0.64
2:B:603:ILE:HD12	2:B:603:ILE:N	2.12	0.64
2:F:232:PRO:HD3	2:F:480:VAL:HG11	1.80	0.64
2:G:232:PRO:HD3	2:G:480:VAL:HG11	1.79	0.64
2:B:609:GLU:CD	2:B:609:GLU:H	1.99	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:644:VAL:HG21	2:C:678:PHE:CD2	2.32	0.64
2:E:232:PRO:HD3	2:E:480:VAL:HG11	1.80	0.64
2:A:673:LYS:N	2:A:673:LYS:HD2	2.12	0.64
2:F:197:LYS:CB	2:F:202:PHE:CE2	2.81	0.64
2:F:598:TYR:HB3	2:F:602:ASN:HA	1.80	0.64
2:F:533:PHE:HE1	2:F:542:TYR:CD1	2.15	0.64
2:G:646:ILE:HD12	2:G:656:ILE:HD11	1.79	0.64
2:A:272:SER:HB3	2:G:435:ASN:HD22	1.63	0.64
2:B:290:SER:HB2	2:B:337:SER:HB2	1.80	0.64
2:B:680:LYS:C	2:B:680:LYS:HD3	2.18	0.64
2:A:290:SER:HB2	2:A:337:SER:HB2	1.80	0.64
2:G:731:GLY:HA2	2:G:734:ILE:HD12	1.79	0.64
1:L:56:LYS:CE	2:A:298:THR:HG21	2.27	0.64
2:A:725:LEU:C	2:A:725:LEU:HD13	2.18	0.64
2:C:290:SER:HB2	2:C:337:SER:HB2	1.80	0.64
2:C:628:LEU:HD23	2:C:628:LEU:C	2.18	0.64
2:G:659:ARG:CB	2:G:662:MET:SD	2.76	0.64
2:A:662:MET:CE	2:A:681:TYR:CD1	2.80	0.64
2:A:680:LYS:C	2:A:680:LYS:HD3	2.19	0.64
2:C:709:ASN:HB3	2:C:710:PRO:HD3	1.80	0.64
2:E:606:GLY:HA2	2:E:638:ILE:HB	1.79	0.64
1:L:90:LYS:N	1:L:90:LYS:HD2	2.13	0.64
2:D:232:PRO:HD3	2:D:480:VAL:HG11	1.80	0.64
2:D:638:ILE:HG13	2:D:639:LEU:HD22	1.80	0.64
2:G:288:THR:HB	2:G:339:SER:HB2	1.81	0.63
2:G:290:SER:HB2	2:G:337:SER:HB2	1.80	0.63
2:G:643:ILE:HD12	2:G:723:LYS:HD3	1.80	0.63
2:A:232:PRO:HD3	2:A:480:VAL:HG11	1.80	0.63
2:B:601:ASN:O	2:B:603:ILE:HD12	1.98	0.63
2:B:617:ARG:O	2:B:617:ARG:HD3	1.98	0.63
2:D:290:SER:HB2	2:D:337:SER:HB2	1.80	0.63
2:F:597:HIS:O	2:F:605:VAL:HG22	1.99	0.63
1:L:36:LEU:HD23	1:L:36:LEU:C	2.19	0.63
2:A:726:ILE:HD12	2:A:726:ILE:C	2.19	0.63
2:B:288:THR:HB	2:B:339:SER:HB2	1.81	0.63
2:C:288:THR:HB	2:C:339:SER:HB2	1.81	0.63
2:E:612:VAL:CG1	2:E:724:ILE:CD1	2.76	0.63
2:B:483:GLN:NE2	2:C:244:ASP:OD1	2.32	0.63
2:B:609:GLU:OE1	2:B:609:GLU:N	2.21	0.63
2:C:292:ASN:HD22	2:C:293:THR:N	1.97	0.63
2:D:703:LYS:HA	2:D:706:THR:OG1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:601:ASN:O	2:E:601:ASN:ND2	2.30	0.63
2:B:197:LYS:H	2:B:197:LYS:CD	2.10	0.63
2:C:636:ARG:HD3	2:C:636:ARG:O	1.98	0.63
2:D:636:ARG:HD3	2:D:636:ARG:C	2.19	0.63
2:D:712:GLU:H	2:D:712:GLU:CD	1.98	0.63
1:L:71:LEU:HD23	1:L:71:LEU:C	2.19	0.63
2:A:288:THR:HB	2:A:339:SER:HB2	1.81	0.63
2:A:302:GLU:HB3	2:A:325:SER:HB2	1.81	0.63
2:B:339:SER:HA	2:C:290:SER:HA	1.81	0.63
2:B:613:LYS:HD2	2:B:617:ARG:NH2	2.14	0.63
2:C:627:LEU:H	2:C:676:ILE:HG22	1.64	0.63
2:D:302:GLU:HB3	2:D:325:SER:HB2	1.81	0.63
2:E:302:GLU:HB3	2:E:325:SER:HB2	1.81	0.63
2:G:699:TYR:CD1	2:G:725:LEU:HD13	2.25	0.63
1:L:244:MET:HA	1:L:244:MET:HE3	1.80	0.63
2:A:628:LEU:HD11	2:A:673:LYS:HB2	1.81	0.63
2:F:288:THR:HB	2:F:339:SER:HB2	1.81	0.63
2:G:605:VAL:HG12	2:G:703:LYS:CB	2.29	0.63
2:A:685:LEU:HD12	2:A:685:LEU:O	1.99	0.62
2:D:670:GLN:O	2:D:670:GLN:NE2	2.32	0.62
2:F:617:ARG:HA	2:F:617:ARG:NE	2.14	0.62
2:B:613:LYS:CE	2:B:617:ARG:HH22	2.12	0.62
2:C:660:TYR:HB2	2:C:707:ILE:HD12	1.79	0.62
2:C:678:PHE:HZ	2:C:698:VAL:CG2	2.12	0.62
2:C:696:VAL:CB	2:C:734:ILE:HD13	2.29	0.62
2:D:659:ARG:HG2	2:D:716:THR:OG1	1.99	0.62
2:F:596:PHE:HD2	2:F:638:ILE:HG21	1.63	0.62
1:L:232:VAL:HG22	2:A:205:PRO:CD	2.27	0.62
2:B:657:ASN:HD21	2:B:663:LEU:HD13	1.64	0.62
2:C:612:VAL:HG11	2:C:724:ILE:HG21	1.81	0.62
2:C:633:LYS:H	2:C:633:LYS:CD	2.12	0.62
2:D:288:THR:HB	2:D:339:SER:HB2	1.81	0.62
2:G:719:ASN:O	2:G:719:ASN:ND2	2.33	0.62
2:A:331:THR:HA	2:B:298:THR:HA	1.80	0.62
2:C:232:PRO:HD3	2:C:480:VAL:HG11	1.80	0.62
1:L:141:THR:HG22	2:A:190:GLU:HG2	1.80	0.62
2:C:647:GLU:HB3	2:C:695:LYS:HB2	1.82	0.62
2:B:606:GLY:HA2	2:B:704:GLU:HG2	1.80	0.62
2:B:656:ILE:HG22	2:B:682:ASN:OD1	2.00	0.62
2:D:699:TYR:HE1	2:D:725:LEU:HG	1.65	0.62
2:B:232:PRO:HD3	2:B:480:VAL:HG11	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:302:GLU:HB3	2:G:325:SER:HB2	1.81	0.62
2:D:699:TYR:CE1	2:D:725:LEU:HA	2.35	0.62
2:F:618:GLU:CB	2:F:630:ASN:H	2.09	0.62
1:L:154:ILE:O	1:L:154:ILE:HG13	2.00	0.62
2:C:696:VAL:HB	2:C:734:ILE:HD13	1.81	0.62
2:E:290:SER:HB2	2:E:337:SER:HB2	1.80	0.62
2:B:658:ASP:O	2:B:716:THR:HA	2.00	0.61
2:F:290:SER:HB2	2:F:337:SER:HB2	1.80	0.61
2:C:483:GLN:NE2	2:D:244:ASP:OD1	2.33	0.61
2:E:288:THR:HB	2:E:339:SER:HB2	1.81	0.61
1:L:63:LEU:C	1:L:63:LEU:HD13	2.21	0.61
2:C:665:ILE:CG2	2:C:681:TYR:HD2	2.13	0.61
2:C:689:ILE:O	2:C:689:ILE:HG22	2.00	0.61
2:B:498:LEU:CD2	2:B:596:PHE:HE2	2.05	0.61
2:B:698:VAL:O	2:B:726:ILE:HB	2.00	0.61
2:F:618:GLU:O	2:F:629:LEU:CB	2.47	0.61
2:G:730:LYS:HB2	2:G:733:GLU:HG3	1.82	0.61
1:L:102:LYS:HB3	2:B:472:ASP:OD1	2.00	0.61
1:L:122:LYS:HD3	1:L:122:LYS:N	2.15	0.61
2:A:625:GLU:HA	2:A:679:LYS:HD2	1.83	0.61
2:B:629:LEU:HD13	2:B:631:ILE:HG13	1.83	0.61
1:L:120:TYR:CE1	1:L:131:ILE:HG13	2.31	0.61
2:A:282:THR:HB	2:A:345:THR:HB	1.83	0.61
2:C:665:ILE:HD13	2:C:676:ILE:HG12	1.83	0.61
2:D:483:GLN:NE2	2:E:244:ASP:OD1	2.33	0.61
2:B:424:GLN:HE22	2:C:422:ASN:HD21	1.49	0.61
1:L:195:LYS:HE2	1:L:195:LYS:H	1.65	0.61
1:L:226:GLU:HB3	1:L:227:PRO:CD	2.31	0.61
2:B:341:ALA:HA	2:C:288:THR:HA	1.81	0.61
2:F:197:LYS:HB3	2:F:202:PHE:CE2	2.30	0.61
2:F:282:THR:HB	2:F:345:THR:HB	1.83	0.61
2:G:282:THR:HB	2:G:345:THR:HB	1.83	0.61
2:C:696:VAL:HB	2:C:734:ILE:CD1	2.31	0.60
2:G:627:LEU:HB2	2:G:678:PHE:HE1	1.66	0.60
2:G:699:TYR:CE2	2:G:725:LEU:HD13	2.32	0.60
2:B:203:LEU:HD12	2:B:203:LEU:C	2.21	0.60
2:B:642:TYR:CE2	2:B:700:ALA:CB	2.80	0.60
1:L:40:MET:HA	1:L:43:ILE:CD1	2.07	0.60
1:L:220:ALA:HA	1:L:223:TYR:HD2	1.66	0.60
2:E:397:LYS:HE2	2:E:425:ASP:O	2.01	0.60
2:F:302:GLU:HB3	2:F:325:SER:HB2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:605:VAL:HG12	2:G:703:LYS:HB2	1.81	0.60
1:L:104:ILE:N	1:L:104:ILE:HD12	2.17	0.60
2:A:685:LEU:HD12	2:A:685:LEU:C	2.22	0.60
2:B:282:THR:HB	2:B:345:THR:HB	1.83	0.60
2:C:678:PHE:CZ	2:C:698:VAL:HG22	2.33	0.60
1:L:88:ILE:HB	1:L:90:LYS:HZ2	1.66	0.60
1:L:188:LEU:HD23	2:A:209:ASN:O	2.02	0.60
2:A:324:PHE:O	2:B:305:GLY:N	2.32	0.60
2:A:533:PHE:CE1	2:A:542:TYR:CB	2.82	0.60
2:D:423:ALA:CB	2:D:428:SER:HB2	2.32	0.60
2:F:618:GLU:HB3	2:F:630:ASN:N	2.10	0.60
2:G:671:ASP:C	2:G:673:LYS:NZ	2.54	0.60
2:G:699:TYR:CD1	2:G:725:LEU:CA	2.85	0.60
2:G:701:VAL:HG13	2:G:723:LYS:HD2	1.81	0.60
1:L:165:GLN:H	1:L:166:PRO:HD3	1.65	0.60
2:B:424:GLN:O	2:B:424:GLN:HG2	2.02	0.60
2:B:685:LEU:HD12	2:B:685:LEU:C	2.22	0.60
2:E:597:HIS:O	2:E:605:VAL:CB	2.49	0.60
2:G:596:PHE:HD2	2:G:638:ILE:CD1	2.15	0.60
2:C:619:VAL:CB	2:C:727:PHE:HE1	2.13	0.60
2:G:708:ILE:HD12	2:G:708:ILE:C	2.22	0.60
1:L:165:GLN:H	1:L:166:PRO:HD2	1.64	0.60
2:B:596:PHE:N	2:B:596:PHE:CD1	2.70	0.60
2:C:622:SER:CB	2:C:729:LYS:HG3	2.31	0.60
2:C:640:SER:HB2	2:C:703:LYS:HD2	1.84	0.60
2:C:734:ILE:O	2:C:735:GLY:OXT	2.19	0.60
2:E:282:THR:HB	2:E:345:THR:HB	1.83	0.60
2:E:711:SER:HB2	2:E:715:ASP:O	2.01	0.60
2:G:395:LYS:O	2:G:397:LYS:NZ	2.35	0.60
2:G:617:ARG:O	2:G:617:ARG:HG3	2.01	0.60
2:F:596:PHE:H	2:F:596:PHE:HD1	1.45	0.59
2:B:619:VAL:O	2:B:619:VAL:HG22	2.02	0.59
2:B:700:ALA:H	2:B:726:ILE:HD13	1.67	0.59
2:F:679:LYS:CE	2:F:684:LYS:C	2.70	0.59
2:B:646:ILE:HD12	2:B:656:ILE:HD11	1.83	0.59
2:E:592:ARG:HD2	2:E:598:TYR:HB2	1.84	0.59
2:F:596:PHE:CD1	2:F:596:PHE:N	2.71	0.59
1:L:36:LEU:HD23	1:L:36:LEU:O	2.03	0.59
2:C:629:LEU:HD12	2:C:629:LEU:N	2.17	0.59
1:L:235:LEU:HD23	1:L:235:LEU:C	2.23	0.59
2:A:483:GLN:NE2	2:B:244:ASP:OD1	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:638:ILE:HG13	2:B:639:LEU:HD13	1.83	0.59
2:B:705:ASN:ND2	2:B:722:LYS:O	2.35	0.59
2:E:596:PHE:N	2:E:596:PHE:CD1	2.70	0.59
2:A:210:ILE:O	2:A:210:ILE:HG22	2.03	0.59
2:B:603:ILE:HD12	2:B:603:ILE:H	1.67	0.59
2:F:606:GLY:HA2	2:F:702:THR:CB	2.18	0.59
2:B:425:ASP:HB2	2:B:429:SER:H	1.68	0.59
2:C:498:LEU:HD21	2:C:596:PHE:HE2	1.65	0.59
2:G:616:HIS:NE2	2:G:631:ILE:HG12	2.18	0.59
2:G:644:VAL:HG11	2:G:678:PHE:CD2	2.38	0.59
2:G:647:GLU:CD	2:G:695:LYS:NZ	2.56	0.59
2:G:679:LYS:HE3	2:G:685:LEU:CA	2.20	0.59
2:C:533:PHE:CE1	2:C:542:TYR:CB	2.82	0.59
2:C:699:TYR:CE1	2:C:725:LEU:HA	2.37	0.59
2:D:533:PHE:CE1	2:D:542:TYR:CB	2.81	0.59
2:D:636:ARG:HD3	2:D:636:ARG:O	2.03	0.59
1:L:203:VAL:HG13	1:L:203:VAL:O	2.03	0.58
1:L:244:MET:HA	1:L:244:MET:HE2	1.85	0.58
2:B:292:ASN:HB3	2:B:335:ASP:HB2	1.85	0.58
2:B:718:THR:O	2:B:718:THR:HG22	2.02	0.58
2:C:282:THR:HB	2:C:345:THR:HB	1.83	0.58
2:C:595:ARG:HD2	2:C:611:VAL:HG11	1.84	0.58
2:F:679:LYS:HG2	2:F:684:LYS:HA	1.85	0.58
2:D:499:ASN:O	2:D:501:VAL:HG23	2.03	0.58
2:C:644:VAL:HG13	2:C:678:PHE:CE2	2.24	0.58
2:C:709:ASN:CB	2:C:710:PRO:CD	2.77	0.58
2:D:708:ILE:H	2:D:708:ILE:CD1	2.15	0.58
2:F:619:VAL:HA	2:F:629:LEU:HD12	1.85	0.58
2:G:642:TYR:O	2:G:663:LEU:HD12	2.03	0.58
2:E:494:ASN:ND2	2:E:598:TYR:CE2	2.72	0.58
1:L:88:ILE:HG22	1:L:90:LYS:HE3	1.83	0.58
2:B:613:LYS:CE	2:B:617:ARG:NH2	2.66	0.58
2:A:596:PHE:CE1	2:A:607:ALA:HB2	2.38	0.58
2:C:292:ASN:HB3	2:C:335:ASP:HB2	1.85	0.58
2:D:282:THR:HB	2:D:345:THR:HB	1.84	0.58
2:F:644:VAL:HG21	2:F:678:PHE:CD1	2.35	0.58
2:G:644:VAL:CG2	2:G:678:PHE:CE2	2.86	0.58
2:A:682:ASN:ND2	2:A:685:LEU:HD11	2.19	0.58
2:C:395:LYS:O	2:C:397:LYS:NZ	2.35	0.58
2:E:292:ASN:HB3	2:E:335:ASP:HB2	1.85	0.58
2:G:292:ASN:HB3	2:G:335:ASP:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:40:MET:O	1:L:43:ILE:HB	2.03	0.58
2:A:224:GLU:CD	2:B:201:THR:HG22	2.23	0.58
2:A:292:ASN:HB3	2:A:335:ASP:HB2	1.85	0.58
2:F:358:ALA:HB3	2:F:434:MET:HB3	1.86	0.58
2:F:616:HIS:CE1	2:F:726:ILE:HG12	2.38	0.58
1:L:71:LEU:HD23	1:L:71:LEU:O	2.04	0.58
2:B:620:ILE:HD13	2:B:630:ASN:H	1.67	0.58
2:E:596:PHE:N	2:E:596:PHE:HD1	2.02	0.58
2:G:665:ILE:CD1	2:G:676:ILE:HG23	2.33	0.58
1:L:129:LEU:HD22	1:L:129:LEU:H	1.69	0.57
2:A:608:ASP:HB3	2:A:611:VAL:HG23	1.86	0.57
2:B:358:ALA:HB3	2:B:434:MET:HB3	1.86	0.57
2:B:629:LEU:H	2:B:629:LEU:HD12	1.68	0.57
2:C:358:ALA:HB3	2:C:434:MET:HB3	1.86	0.57
2:C:644:VAL:CB	2:C:678:PHE:CE2	2.82	0.57
2:F:483:GLN:NE2	2:G:244:ASP:OD1	2.36	0.57
2:F:629:LEU:HD22	2:F:629:LEU:N	2.19	0.57
2:F:395:LYS:O	2:F:397:LYS:NZ	2.35	0.57
2:G:298:THR:HB	2:G:329:SER:HB2	1.86	0.57
2:A:646:ILE:HD11	2:A:687:LEU:HD23	1.78	0.57
2:C:673:LYS:N	2:C:673:LYS:HD2	2.18	0.57
2:D:292:ASN:HB3	2:D:335:ASP:HB2	1.85	0.57
2:D:633:LYS:HD3	2:D:633:LYS:N	2.19	0.57
2:D:698:VAL:HB	2:D:727:PHE:HB3	1.87	0.57
2:E:698:VAL:HB	2:E:727:PHE:HB3	1.87	0.57
2:F:292:ASN:HB3	2:F:335:ASP:HB2	1.85	0.57
2:C:298:THR:HB	2:C:329:SER:HB2	1.86	0.57
2:C:466:ASN:ND2	2:C:470:ARG:HH21	1.98	0.57
2:G:598:TYR:CD1	2:G:604:ALA:HA	2.40	0.57
2:G:619:VAL:HG13	2:G:619:VAL:O	2.02	0.57
2:F:718:THR:CB	2:F:721:ILE:HD12	2.33	0.57
2:G:699:TYR:OH	2:G:725:LEU:CD2	2.50	0.57
2:A:358:ALA:HB3	2:A:434:MET:HB3	1.86	0.57
2:D:395:LYS:O	2:D:397:LYS:NZ	2.35	0.57
2:F:298:THR:HB	2:F:329:SER:HB2	1.86	0.57
1:L:72:GLU:HA	1:L:75:LYS:HE3	1.87	0.57
2:D:617:ARG:HE	2:D:617:ARG:CA	2.14	0.57
2:E:659:ARG:HB2	2:E:662:MET:CG	2.35	0.57
2:F:618:GLU:HG3	2:F:630:ASN:O	2.04	0.57
2:G:596:PHE:HA	2:G:607:ALA:HB2	1.87	0.57
1:L:167:TYR:N	1:L:167:TYR:CD1	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:225:ILE:HG13	1:L:225:ILE:O	2.05	0.57
2:B:395:LYS:O	2:B:397:LYS:NZ	2.35	0.57
2:C:625:GLU:HA	2:C:678:PHE:HB2	1.87	0.57
2:C:716:THR:HG22	2:C:716:THR:O	2.05	0.57
2:F:718:THR:CA	2:F:721:ILE:HD12	2.35	0.57
2:G:358:ALA:HB3	2:G:434:MET:HB3	1.86	0.57
2:D:678:PHE:CZ	2:D:698:VAL:HG21	2.33	0.56
2:A:310:HIS:HA	2:G:318:GLY:O	2.06	0.56
2:B:725:LEU:HD22	2:B:726:ILE:H	1.70	0.56
2:C:635:ILE:O	2:C:639:LEU:HD23	2.05	0.56
2:D:678:PHE:CZ	2:D:698:VAL:HG22	2.40	0.56
2:E:358:ALA:HB3	2:E:434:MET:HB3	1.86	0.56
2:E:723:LYS:HD2	2:E:723:LYS:N	2.18	0.56
1:L:174:LEU:O	1:L:174:LEU:HD23	2.04	0.56
1:L:201:PHE:N	1:L:201:PHE:CD1	2.72	0.56
2:A:211:HIS:O	2:A:214:LYS:N	2.37	0.56
2:A:298:THR:HB	2:A:329:SER:HB2	1.86	0.56
2:A:332:VAL:N	2:B:297:ARG:O	2.29	0.56
2:A:630:ASN:ND2	2:A:673:LYS:CG	2.50	0.56
2:B:643:ILE:HA	2:B:663:LEU:CD1	2.36	0.56
2:B:683:ASP:C	2:B:685:LEU:H	2.09	0.56
2:D:358:ALA:HB3	2:D:434:MET:HB3	1.86	0.56
2:D:497:ASP:O	2:D:637:LYS:NZ	2.39	0.56
2:E:646:ILE:HD11	2:E:687:LEU:HD12	1.84	0.56
2:A:625:GLU:HA	2:A:679:LYS:CD	2.35	0.56
2:G:625:GLU:HG2	2:G:679:LYS:HD2	1.88	0.56
2:G:713:ASN:HD22	2:G:713:ASN:N	1.99	0.56
2:D:722:LYS:HB3	2:D:722:LYS:HZ3	1.71	0.56
1:L:92:ILE:HD13	1:L:92:ILE:C	2.25	0.56
1:L:102:LYS:O	2:B:472:ASP:CG	2.44	0.56
1:L:155:LEU:CD1	1:L:218:ALA:HB1	2.25	0.56
1:L:155:LEU:HD13	1:L:155:LEU:N	2.21	0.56
2:A:607:ALA:CB	2:A:638:ILE:CD1	2.83	0.56
2:B:533:PHE:HE1	2:B:542:TYR:CD1	2.23	0.56
2:D:298:THR:HB	2:D:329:SER:HB2	1.86	0.56
2:D:635:ILE:HA	2:D:638:ILE:HD11	1.88	0.56
2:E:298:THR:HB	2:E:329:SER:HB2	1.87	0.56
2:E:631:ILE:CG2	2:E:674:THR:OG1	2.53	0.56
2:A:649:THR:CG2	2:A:695:LYS:NZ	2.58	0.56
2:B:700:ALA:CB	2:B:726:ILE:HD11	2.35	0.56
2:F:593:ASP:OD1	2:F:595:ARG:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:45:LYS:NZ	2:G:310:HIS:HB2	2.20	0.56
2:A:682:ASN:CG	2:A:685:LEU:HD11	2.26	0.56
2:B:642:TYR:CD2	2:B:700:ALA:HB2	2.41	0.56
2:B:669:ARG:HB2	2:B:673:LYS:HG3	1.87	0.56
2:F:680:LYS:O	2:F:680:LYS:HD3	2.05	0.56
2:B:610:SER:O	2:B:613:LYS:HB2	2.06	0.56
1:L:168:GLN:HE21	1:L:168:GLN:HA	1.70	0.55
2:C:665:ILE:HG23	2:C:681:TYR:CD2	2.41	0.55
2:D:611:VAL:O	2:D:611:VAL:HG12	2.06	0.55
2:F:615:ALA:HB1	2:F:635:ILE:HG21	1.88	0.55
2:G:616:HIS:HE1	2:G:631:ILE:HG23	1.64	0.55
2:G:699:TYR:CD1	2:G:725:LEU:HB2	2.37	0.55
1:L:94:LEU:HG	1:L:94:LEU:O	2.06	0.55
2:A:427:PHE:N	2:A:427:PHE:CD1	2.71	0.55
2:A:678:PHE:CD1	2:A:678:PHE:N	2.73	0.55
2:C:677:ASP:OD1	2:C:679:LYS:HG3	2.06	0.55
2:B:624:THR:HB	2:B:734:ILE:HG22	1.87	0.55
2:C:596:PHE:N	2:C:596:PHE:CD1	2.71	0.55
2:G:533:PHE:HE1	2:G:542:TYR:HD1	1.55	0.55
2:B:368:ASN:HB2	2:B:405:LEU:HG	1.89	0.55
2:B:643:ILE:HG12	2:B:663:LEU:HD11	1.88	0.55
2:C:368:ASN:HB2	2:C:405:LEU:HG	1.89	0.55
2:E:612:VAL:CG1	2:E:724:ILE:HD12	2.36	0.55
2:E:634:ASP:OD1	2:E:634:ASP:N	2.39	0.55
2:E:639:LEU:HD13	2:E:639:LEU:C	2.27	0.55
1:L:232:VAL:CG2	2:A:205:PRO:CG	2.84	0.55
2:D:368:ASN:HB2	2:D:405:LEU:HG	1.89	0.55
2:E:368:ASN:HB2	2:E:405:LEU:HG	1.89	0.55
2:G:533:PHE:CE1	2:G:542:TYR:CB	2.82	0.55
1:L:153:LYS:HB2	1:L:153:LYS:HZ2	1.70	0.55
1:L:195:LYS:HE2	1:L:195:LYS:CA	2.37	0.55
2:B:655:VAL:CG2	2:B:657:ASN:O	2.55	0.55
2:D:725:LEU:HD23	2:D:725:LEU:C	2.27	0.55
1:L:194:LEU:O	1:L:194:LEU:HD22	2.06	0.55
2:B:601:ASN:C	2:B:603:ILE:HD12	2.27	0.55
2:B:701:VAL:HG11	2:B:706:THR:HG1	1.72	0.55
2:C:498:LEU:HD21	2:C:596:PHE:CE2	2.41	0.55
2:D:605:VAL:HG12	2:D:605:VAL:O	2.07	0.55
2:F:709:ASN:OD1	2:F:710:PRO:HD2	2.04	0.55
2:G:699:TYR:CD1	2:G:725:LEU:CB	2.90	0.55
1:L:167:TYR:HD1	1:L:167:TYR:N	2.03	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:368:ASN:HB2	2:F:405:LEU:HG	1.89	0.55
2:B:533:PHE:CE1	2:B:542:TYR:CB	2.82	0.54
2:G:722:LYS:N	2:G:722:LYS:HD2	2.22	0.54
1:L:188:LEU:HD23	2:A:210:ILE:HG12	1.87	0.54
2:A:681:TYR:O	2:A:681:TYR:HD1	1.90	0.54
2:D:644:VAL:CB	2:D:678:PHE:HE2	2.19	0.54
2:C:617:ARG:HE	2:C:617:ARG:CA	2.19	0.54
2:C:700:ALA:N	2:C:726:ILE:CD1	2.65	0.54
2:F:616:HIS:CG	2:F:726:ILE:HG12	2.42	0.54
2:F:638:ILE:HG13	2:F:639:LEU:HD22	1.87	0.54
2:G:431:PRO:O	2:G:431:PRO:HG2	2.07	0.54
2:E:533:PHE:CE1	2:E:542:TYR:CB	2.82	0.54
2:F:605:VAL:HG23	2:F:605:VAL:O	2.07	0.54
2:F:662:MET:HA	2:F:681:TYR:CD2	2.43	0.54
2:B:200:ARG:HH11	2:B:200:ARG:CB	2.20	0.54
2:G:608:ASP:OD1	2:G:608:ASP:N	2.40	0.54
1:L:219:LYS:HG2	1:L:223:TYR:CE2	2.43	0.54
2:C:700:ALA:HB2	2:C:726:ILE:HG12	1.89	0.54
2:E:659:ARG:CG	2:E:662:MET:SD	2.96	0.54
2:E:682:ASN:ND2	2:E:686:PRO:O	2.41	0.54
2:A:368:ASN:HB2	2:A:405:LEU:HG	1.89	0.54
1:L:135:GLU:O	1:L:138:VAL:HG23	2.08	0.54
2:B:553:ASN:HB2	2:B:590:LEU:HB3	1.90	0.54
2:B:642:TYR:HE2	2:B:700:ALA:HB2	1.68	0.54
2:B:705:ASN:ND2	2:B:722:LYS:HB2	2.22	0.54
1:L:46:ILE:HG23	1:L:46:ILE:O	2.08	0.54
1:L:226:GLU:HB3	1:L:227:PRO:HD2	1.90	0.54
2:B:196:VAL:HG23	2:B:196:VAL:O	2.08	0.54
2:B:639:LEU:H	2:B:639:LEU:CD2	2.19	0.54
2:C:497:ASP:O	2:C:637:LYS:NZ	2.41	0.54
2:C:533:PHE:HE1	2:C:542:TYR:HD1	1.55	0.54
2:G:643:ILE:HD13	2:G:718:THR:CG2	2.37	0.54
1:L:193:GLN:HG3	1:L:193:GLN:O	2.07	0.53
2:E:649:THR:HG22	2:E:693:ASN:HB3	1.89	0.53
2:E:659:ARG:CD	2:E:662:MET:SD	2.95	0.53
2:F:197:LYS:HB2	2:F:202:PHE:CE2	2.43	0.53
2:G:659:ARG:CD	2:G:662:MET:HE3	2.38	0.53
2:G:678:PHE:HB3	2:G:687:LEU:HD21	1.90	0.53
2:G:684:LYS:HD2	2:G:684:LYS:N	2.22	0.53
2:G:698:VAL:HB	2:G:727:PHE:HD2	1.73	0.53
1:L:47:GLU:OE1	1:L:47:GLU:HA	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:698:VAL:HB	2:B:727:PHE:HB3	1.90	0.53
2:C:206:TRP:CE2	2:C:218:LYS:HD2	2.43	0.53
2:E:599:ASP:N	2:E:605:VAL:HG23	2.23	0.53
2:E:621:ASN:HB3	2:E:628:LEU:HB2	1.90	0.53
2:E:642:TYR:HD1	2:E:699:TYR:O	1.92	0.53
2:F:553:ASN:HB2	2:F:590:LEU:HB3	1.90	0.53
1:L:92:ILE:HG21	2:F:427:PHE:CE1	2.44	0.53
1:L:155:LEU:CD1	1:L:155:LEU:H	2.21	0.53
2:D:286:THR:HB	2:D:341:ALA:HB3	1.91	0.53
2:E:599:ASP:OD1	2:E:603:ILE:N	2.33	0.53
2:G:368:ASN:HB2	2:G:405:LEU:HG	1.89	0.53
2:B:655:VAL:HG11	2:B:718:THR:OG1	2.07	0.53
2:E:553:ASN:HB2	2:E:590:LEU:HB3	1.90	0.53
2:G:662:MET:CB	2:G:681:TYR:CZ	2.84	0.53
2:G:699:TYR:CZ	2:G:725:LEU:HD22	2.44	0.53
2:C:553:ASN:HB2	2:C:590:LEU:HB3	1.90	0.53
2:G:397:LYS:CE	2:G:426:ASP:HA	2.38	0.53
2:G:644:VAL:HG21	2:G:678:PHE:CD2	2.44	0.53
2:G:647:GLU:CD	2:G:695:LYS:HZ2	2.11	0.53
2:G:731:GLY:O	2:G:734:ILE:HB	2.09	0.53
1:L:232:VAL:HG22	2:A:205:PRO:CG	2.39	0.53
2:A:656:ILE:HD13	2:A:656:ILE:N	2.23	0.53
2:E:682:ASN:ND2	2:E:687:LEU:HA	2.24	0.53
2:A:286:THR:HB	2:A:341:ALA:HB3	1.91	0.53
2:A:553:ASN:HB2	2:A:590:LEU:HB3	1.90	0.53
2:C:491:ILE:HG12	2:C:589:ILE:HB	1.91	0.53
2:G:663:LEU:O	2:G:665:ILE:CG2	2.57	0.53
2:A:309:VAL:O	2:G:319:SER:HA	2.08	0.53
2:C:286:THR:HB	2:C:341:ALA:HB3	1.91	0.53
2:C:696:VAL:N	2:C:734:ILE:CD1	2.58	0.53
2:E:286:THR:HB	2:E:341:ALA:HB3	1.91	0.53
2:G:553:ASN:HB2	2:G:590:LEU:HB3	1.90	0.53
2:A:497:ASP:O	2:A:637:LYS:NZ	2.41	0.53
2:A:631:ILE:HD12	2:A:674:THR:HG21	1.91	0.53
2:B:195:ASP:HB2	2:B:216:LEU:CD1	2.39	0.53
2:D:553:ASN:HB2	2:D:590:LEU:HB3	1.90	0.53
2:F:627:LEU:HD12	2:F:678:PHE:HZ	1.72	0.53
2:G:699:TYR:CD1	2:G:725:LEU:CD1	2.88	0.53
2:B:699:TYR:CZ	2:B:725:LEU:HD23	2.43	0.53
2:C:665:ILE:H	2:C:665:ILE:HD12	1.73	0.53
2:D:691:ASN:HB3	2:D:694:TYR:CD1	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:620:ILE:CG2	2:E:628:LEU:HD23	2.40	0.53
2:F:680:LYS:HD2	2:F:681:TYR:CD1	2.44	0.53
2:G:657:ASN:HD22	2:G:681:TYR:HB2	1.74	0.53
2:B:203:LEU:CD2	2:B:236:PHE:CE1	2.88	0.52
2:F:596:PHE:CD2	2:F:638:ILE:HG21	2.44	0.52
2:F:662:MET:CE	2:F:681:TYR:O	2.53	0.52
1:L:95:GLU:O	2:B:398:GLU:OE2	2.27	0.52
1:L:168:GLN:HA	1:L:168:GLN:NE2	2.23	0.52
1:L:173:VAL:O	1:L:177:ILE:HG23	2.10	0.52
2:C:627:LEU:HB2	2:C:629:LEU:HD11	1.91	0.52
2:E:708:ILE:HD12	2:E:708:ILE:O	2.09	0.52
2:G:286:THR:HB	2:G:341:ALA:HB3	1.91	0.52
2:G:662:MET:HB3	2:G:681:TYR:OH	2.07	0.52
1:L:95:GLU:HG2	2:A:426:ASP:OD2	2.09	0.52
2:B:491:ILE:HG12	2:B:589:ILE:HB	1.91	0.52
2:B:606:GLY:HA2	2:B:704:GLU:CD	2.30	0.52
2:B:616:HIS:CD2	2:B:726:ILE:HG13	2.45	0.52
2:B:712:GLU:OE1	2:B:712:GLU:N	2.42	0.52
2:D:491:ILE:HG12	2:D:589:ILE:HB	1.91	0.52
2:G:498:LEU:HD13	2:G:604:ALA:HB1	1.90	0.52
2:B:336:HIS:O	2:C:292:ASN:ND2	2.42	0.52
2:B:678:PHE:CD2	2:B:687:LEU:HD21	2.45	0.52
2:C:206:TRP:CD1	2:C:218:LYS:HE3	2.45	0.52
2:E:690:SER:HB3	2:E:694:TYR:CE2	2.44	0.52
1:L:105:LYS:HD3	1:L:107:ILE:HD11	1.91	0.52
2:G:679:LYS:O	2:G:679:LYS:HG2	2.09	0.52
2:G:644:VAL:HG22	2:G:678:PHE:HE2	1.73	0.52
1:L:191:THR:CG2	1:L:219:LYS:HZ3	2.09	0.52
2:B:286:THR:HB	2:B:341:ALA:HB3	1.91	0.52
2:F:494:ASN:HB3	2:F:500:LEU:HD23	1.91	0.52
2:C:292:ASN:HD22	2:C:293:THR:H	1.58	0.52
2:C:665:ILE:HG23	2:C:681:TYR:HD2	1.75	0.52
2:D:708:ILE:N	2:D:708:ILE:CD1	2.73	0.52
2:F:286:THR:HB	2:F:341:ALA:HB3	1.91	0.52
2:G:425:ASP:OD2	2:G:430:THR:OG1	2.21	0.52
2:A:517:THR:HG22	2:B:199:LYS:O	2.10	0.52
2:A:654:GLU:HG2	2:A:654:GLU:O	2.09	0.52
2:C:656:ILE:CG2	2:C:682:ASN:HD22	2.22	0.52
2:E:596:PHE:HZ	2:E:634:ASP:HB3	1.75	0.52
2:F:533:PHE:CE1	2:F:542:TYR:CB	2.82	0.52
2:G:491:ILE:HG12	2:G:589:ILE:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:649:THR:HG22	2:G:693:ASN:OD1	2.10	0.52
1:L:204:GLU:O	1:L:204:GLU:HG3	2.09	0.52
1:L:168:GLN:CA	1:L:168:GLN:NE2	2.73	0.51
2:B:680:LYS:HD2	2:B:681:TYR:CD1	2.45	0.51
2:D:629:LEU:HD23	2:D:631:ILE:HD11	1.92	0.51
2:F:553:ASN:HD21	2:F:592:ARG:NH2	2.08	0.51
2:F:627:LEU:CD1	2:F:678:PHE:CZ	2.80	0.51
1:L:155:LEU:CD1	1:L:155:LEU:N	2.73	0.51
2:E:663:LEU:HD23	2:E:663:LEU:N	2.09	0.51
2:G:614:GLU:O	2:G:617:ARG:NH1	2.43	0.51
2:G:644:VAL:HG21	2:G:678:PHE:CE2	2.45	0.51
1:L:69:ASP:O	1:L:73:MET:HG3	2.11	0.51
2:B:646:ILE:CD1	2:B:656:ILE:HD11	2.40	0.51
2:C:694:TYR:O	2:C:731:GLY:CA	2.58	0.51
2:D:644:VAL:HG11	2:D:678:PHE:HD2	1.70	0.51
2:F:491:ILE:HG12	2:F:589:ILE:HB	1.91	0.51
2:G:425:ASP:CG	2:G:430:THR:HB	2.31	0.51
2:G:616:HIS:CD2	2:G:726:ILE:HD13	2.45	0.51
2:B:425:ASP:OD2	2:B:429:SER:OG	2.25	0.51
2:E:628:LEU:HD12	2:E:675:PHE:CD1	2.45	0.51
2:B:606:GLY:HA2	2:B:704:GLU:CG	2.41	0.51
2:E:246:ASN:HB2	2:E:373:PRO:HG3	1.93	0.51
2:F:246:ASN:HB2	2:F:373:PRO:HG3	1.92	0.51
2:B:592:ARG:HD2	2:B:598:TYR:CD2	2.45	0.51
2:B:660:TYR:HA	2:B:663:LEU:HD23	1.92	0.51
1:L:102:LYS:HG3	2:B:472:ASP:HA	1.90	0.51
2:B:246:ASN:HB2	2:B:373:PRO:HG3	1.93	0.51
2:D:722:LYS:NZ	2:D:722:LYS:CB	2.74	0.51
1:L:175:ASN:CG	1:L:203:VAL:HG12	2.31	0.51
2:B:494:ASN:HB3	2:B:500:LEU:HD23	1.93	0.51
2:C:625:GLU:H	2:C:687:LEU:HG	1.75	0.51
2:C:687:LEU:N	2:C:687:LEU:HD23	2.25	0.51
2:F:533:PHE:HE1	2:F:542:TYR:HD1	1.58	0.51
1:L:151:ILE:HB	1:L:222:ALA:HB2	1.92	0.51
2:B:667:SER:O	2:B:674:THR:HG23	2.10	0.51
2:E:491:ILE:HG12	2:E:589:ILE:HB	1.91	0.51
2:C:494:ASN:HB3	2:C:500:LEU:HD23	1.93	0.50
2:F:660:TYR:CD2	2:F:716:THR:HA	2.47	0.50
2:G:658:ASP:OD1	2:G:718:THR:CB	2.59	0.50
2:G:659:ARG:CB	2:G:662:MET:CE	2.85	0.50
1:L:151:ILE:HD13	1:L:222:ALA:HB1	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:153:LYS:HD3	1:L:153:LYS:N	2.26	0.50
2:A:494:ASN:HB3	2:A:500:LEU:HD23	1.93	0.50
2:A:711:SER:HB2	2:A:715:ASP:HB2	1.93	0.50
2:E:691:ASN:HB3	2:E:692:PRO:HD2	1.93	0.50
1:L:170:PHE:CD1	1:L:170:PHE:C	2.83	0.50
2:A:246:ASN:HB2	2:A:373:PRO:HG3	1.93	0.50
2:A:311:ALA:O	2:G:317:GLY:HA2	2.12	0.50
2:A:392:ALA:HB1	2:A:394:ILE:HD11	1.93	0.50
2:A:491:ILE:HG12	2:A:589:ILE:HB	1.91	0.50
2:B:668:LEU:C	2:B:668:LEU:HD23	2.32	0.50
2:E:660:TYR:HD2	2:E:716:THR:HB	1.76	0.50
2:G:494:ASN:HB3	2:G:500:LEU:HD23	1.93	0.50
1:L:97:LEU:N	1:L:97:LEU:CD2	2.75	0.50
1:L:197:HIS:HB2	1:L:200:ASP:HB3	1.91	0.50
1:L:206:LEU:HD12	1:L:207:GLU:H	1.75	0.50
1:L:208:GLN:O	1:L:208:GLN:HG2	2.12	0.50
2:A:333:ALA:HA	2:B:296:SER:HA	1.93	0.50
2:B:243:ILE:O	2:B:245:LYS:NZ	2.43	0.50
2:B:716:THR:O	2:B:716:THR:HG23	2.12	0.50
2:C:246:ASN:HB2	2:C:373:PRO:HG3	1.93	0.50
2:D:246:ASN:HB2	2:D:373:PRO:HG3	1.93	0.50
2:D:635:ILE:O	2:D:638:ILE:HG12	2.11	0.50
2:B:342:GLY:O	2:C:287:ARG:N	2.29	0.50
2:C:646:ILE:O	2:C:646:ILE:HG22	2.10	0.50
2:E:605:VAL:O	2:E:605:VAL:HG12	2.10	0.50
2:A:620:ILE:HB	2:A:628:LEU:O	2.12	0.50
2:D:699:TYR:CD2	2:D:723:LYS:HD3	2.47	0.50
2:E:659:ARG:HB2	2:E:662:MET:HG3	1.92	0.50
1:L:88:ILE:CG2	1:L:90:LYS:CE	2.86	0.50
2:B:483:GLN:HE22	2:C:244:ASP:HA	1.77	0.50
2:C:243:ILE:O	2:C:245:LYS:NZ	2.43	0.50
2:D:494:ASN:HB3	2:D:500:LEU:HD23	1.93	0.50
2:E:498:LEU:HD11	2:E:596:PHE:HE2	1.76	0.50
2:E:523:LEU:HA	2:E:583:LEU:HD11	1.94	0.50
2:F:660:TYR:HE2	2:F:716:THR:CG2	2.23	0.50
1:L:178:LYS:NZ	1:L:178:LYS:CB	2.73	0.49
2:B:197:LYS:HD2	2:B:197:LYS:N	2.19	0.49
2:C:631:ILE:HD12	2:C:674:THR:HG21	1.93	0.49
2:E:723:LYS:N	2:E:723:LYS:CD	2.75	0.49
2:F:300:THR:O	2:F:327:SER:N	2.45	0.49
2:B:200:ARG:HH11	2:B:200:ARG:H	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:523:LEU:HA	2:B:583:LEU:HD11	1.94	0.49
2:D:523:LEU:HA	2:D:583:LEU:HD11	1.94	0.49
2:D:644:VAL:HG13	2:D:678:PHE:HE2	1.76	0.49
2:G:300:THR:O	2:G:327:SER:N	2.45	0.49
2:G:730:LYS:HB2	2:G:733:GLU:CG	2.42	0.49
1:L:56:LYS:HE2	2:A:298:THR:HG21	1.94	0.49
2:A:327:SER:HA	2:B:302:GLU:HA	1.94	0.49
2:A:523:LEU:HA	2:A:583:LEU:HD11	1.94	0.49
2:A:611:VAL:HA	2:A:614:GLU:HG2	1.95	0.49
2:G:647:GLU:CB	2:G:695:LYS:HD3	2.40	0.49
2:G:706:THR:CA	2:G:721:ILE:CD1	2.87	0.49
2:E:300:THR:O	2:E:327:SER:N	2.45	0.49
2:E:498:LEU:HD12	2:E:637:LYS:HB2	1.95	0.49
2:G:620:ILE:HG13	2:G:629:LEU:HD12	1.93	0.49
2:A:307:ALA:O	2:G:321:SER:HA	2.12	0.49
2:B:377:VAL:HB	2:B:402:SER:HB3	1.94	0.49
2:C:617:ARG:NE	2:C:617:ARG:CA	2.74	0.49
2:E:494:ASN:HB3	2:E:500:LEU:HD23	1.93	0.49
2:F:270:ILE:HB	2:F:361:ASN:HB3	1.94	0.49
2:F:679:LYS:HA	2:F:682:ASN:HB3	1.94	0.49
2:G:644:VAL:HG22	2:G:678:PHE:CE2	2.48	0.49
2:G:711:SER:OG	2:G:714:GLY:HA2	2.12	0.49
2:A:243:ILE:O	2:A:245:LYS:NZ	2.43	0.49
2:A:618:GLU:HG3	2:A:629:LEU:HD11	1.93	0.49
2:B:383:LEU:CD1	2:B:432:ILE:HD13	2.42	0.49
2:C:668:LEU:HD12	2:C:674:THR:HA	1.95	0.49
2:C:718:THR:CB	2:C:721:ILE:HD12	2.36	0.49
2:E:270:ILE:HB	2:E:361:ASN:HB3	1.94	0.49
2:E:646:ILE:CG1	2:E:687:LEU:HD11	2.42	0.49
2:F:296:SER:O	2:F:330:SER:HA	2.13	0.49
2:F:425:ASP:OD2	2:G:429:SER:CB	2.60	0.49
2:G:596:PHE:CZ	2:G:635:ILE:HD12	2.36	0.49
2:A:300:THR:O	2:A:327:SER:N	2.45	0.49
2:A:610:SER:O	2:A:614:GLU:HG2	2.13	0.49
2:B:656:ILE:HG21	2:B:682:ASN:OD1	2.12	0.49
2:E:533:PHE:HE1	2:E:542:TYR:HD1	1.55	0.49
2:E:646:ILE:CD1	2:E:687:LEU:CD1	2.78	0.49
2:E:691:ASN:HB3	2:E:692:PRO:CD	2.43	0.49
2:G:246:ASN:HB2	2:G:373:PRO:HG3	1.93	0.49
1:L:62:LEU:N	1:L:62:LEU:CD2	2.73	0.49
2:A:377:VAL:HB	2:A:402:SER:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:648:ASP:N	2:B:648:ASP:OD1	2.45	0.49
2:E:659:ARG:HG3	2:E:662:MET:SD	2.53	0.49
2:F:377:VAL:HB	2:F:402:SER:HB3	1.94	0.49
2:F:523:LEU:HA	2:F:583:LEU:HD11	1.94	0.49
2:G:296:SER:O	2:G:330:SER:HA	2.13	0.49
2:G:699:TYR:HE1	2:G:725:LEU:CG	2.03	0.49
1:L:122:LYS:HE3	1:L:129:LEU:HD12	1.95	0.49
1:L:175:ASN:HA	1:L:203:VAL:HG11	1.95	0.49
2:A:533:PHE:CE1	2:A:542:TYR:CD1	2.91	0.49
2:D:699:TYR:HD2	2:D:723:LYS:HD3	1.77	0.49
2:E:601:ASN:O	2:E:603:ILE:HG13	2.13	0.49
1:L:91:HIS:HD1	2:A:427:PHE:HD2	1.60	0.49
2:A:653:LYS:H	2:A:653:LYS:HE2	1.77	0.49
2:E:296:SER:O	2:E:330:SER:HA	2.13	0.49
2:G:590:LEU:HD21	2:G:602:ASN:ND2	2.28	0.49
1:L:230:ARG:O	1:L:234:GLN:N	2.46	0.48
2:B:655:VAL:HG11	2:B:718:THR:CB	2.43	0.48
2:C:270:ILE:HB	2:C:361:ASN:HB3	1.94	0.48
1:L:118:TYR:CE1	1:L:131:ILE:HD12	2.47	0.48
1:L:164:ASN:N	1:L:164:ASN:ND2	2.60	0.48
2:B:678:PHE:HD2	2:B:687:LEU:CD1	2.11	0.48
2:C:302:GLU:HG2	2:C:325:SER:HB2	1.94	0.48
2:G:523:LEU:HA	2:G:583:LEU:HD11	1.94	0.48
2:G:662:MET:CB	2:G:681:TYR:OH	2.60	0.48
2:A:296:SER:O	2:A:330:SER:HA	2.13	0.48
2:B:695:LYS:HD3	2:B:729:LYS:HA	1.95	0.48
2:C:377:VAL:HB	2:C:402:SER:HB3	1.94	0.48
2:A:644:VAL:HG22	2:A:698:VAL:HG22	1.95	0.48
2:C:300:THR:O	2:C:327:SER:N	2.45	0.48
2:C:726:ILE:HD12	2:C:726:ILE:N	2.28	0.48
2:D:270:ILE:HB	2:D:361:ASN:HB3	1.94	0.48
2:G:377:VAL:HB	2:G:402:SER:HB3	1.94	0.48
2:B:636:ARG:HA	2:B:639:LEU:HD23	1.95	0.48
2:C:523:LEU:HA	2:C:583:LEU:HD11	1.94	0.48
2:C:699:TYR:HE1	2:C:725:LEU:HG	1.79	0.48
2:E:682:ASN:ND2	2:E:687:LEU:N	2.59	0.48
2:G:663:LEU:O	2:G:665:ILE:HG23	2.14	0.48
2:B:270:ILE:HB	2:B:361:ASN:HB3	1.95	0.48
2:C:656:ILE:HG23	2:C:682:ASN:HD22	1.79	0.48
2:D:377:VAL:HB	2:D:402:SER:HB3	1.94	0.48
2:E:377:VAL:HB	2:E:402:SER:HB3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:270:ILE:HB	2:G:361:ASN:HB3	1.94	0.48
2:G:648:ASP:OD2	2:G:652:LEU:HD12	2.14	0.48
2:A:673:LYS:N	2:A:673:LYS:CD	2.76	0.48
2:D:296:SER:O	2:D:330:SER:HA	2.13	0.48
2:D:300:THR:O	2:D:327:SER:N	2.45	0.48
2:D:629:LEU:CG	2:D:631:ILE:HD11	2.44	0.48
2:D:633:LYS:CD	2:D:633:LYS:H	2.26	0.48
2:G:699:TYR:HD1	2:G:725:LEU:HA	1.74	0.48
1:L:186:GLN:C	1:L:188:LEU:N	2.67	0.48
2:B:700:ALA:N	2:B:726:ILE:CD1	2.71	0.48
2:G:693:ASN:HA	2:G:732:TYR:CE2	2.49	0.48
2:G:730:LYS:O	2:G:734:ILE:HG13	2.14	0.48
2:B:296:SER:HB2	2:B:331:THR:HB	1.96	0.48
2:B:702:THR:HG1	2:B:705:ASN:HB2	1.78	0.48
2:C:694:TYR:O	2:C:734:ILE:HD12	2.13	0.48
2:D:243:ILE:O	2:D:245:LYS:NZ	2.42	0.48
2:A:270:ILE:HB	2:A:361:ASN:HB3	1.94	0.48
2:A:454:GLN:NE2	2:B:401:LEU:O	2.47	0.48
2:B:296:SER:O	2:B:330:SER:HA	2.13	0.48
2:C:296:SER:O	2:C:330:SER:HA	2.13	0.48
2:C:296:SER:HB2	2:C:331:THR:HB	1.96	0.48
1:L:146:ASN:C	1:L:146:ASN:HD22	2.17	0.47
1:L:249:GLU:HA	1:L:249:GLU:OE1	2.14	0.47
2:A:614:GLU:OE1	2:A:614:GLU:HA	2.14	0.47
2:B:483:GLN:HE22	2:C:245:LYS:H	1.62	0.47
2:B:621:ASN:HB3	2:B:628:LEU:HG	1.96	0.47
2:B:629:LEU:HD12	2:B:629:LEU:N	2.28	0.47
2:C:696:VAL:CB	2:C:734:ILE:CD1	2.91	0.47
2:F:645:GLU:HG3	2:F:697:ASN:HB2	1.95	0.47
2:A:296:SER:HB2	2:A:331:THR:HB	1.96	0.47
2:C:703:LYS:NZ	2:C:703:LYS:CB	2.74	0.47
2:D:631:ILE:HD12	2:D:631:ILE:H	1.79	0.47
2:E:454:GLN:NE2	2:F:401:LEU:O	2.47	0.47
1:L:188:LEU:CD2	2:A:210:ILE:CG1	2.71	0.47
1:L:226:GLU:O	1:L:230:ARG:HG3	2.14	0.47
1:L:228:GLN:OE1	1:L:228:GLN:N	2.38	0.47
1:L:233:LEU:HA	1:L:236:TYR:HD1	1.80	0.47
2:B:665:ILE:HB	2:B:676:ILE:HB	1.97	0.47
1:L:209:ASN:OD1	1:L:212:GLU:OE2	2.32	0.47
2:B:336:HIS:HB2	2:C:293:THR:HG22	1.96	0.47
2:B:613:LYS:CD	2:B:617:ARG:NH2	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:688:TYR:OH	2:E:690:SER:HA	2.14	0.47
1:L:102:LYS:CA	1:L:102:LYS:CE	2.86	0.47
2:A:612:VAL:HG21	2:A:724:ILE:HD12	1.95	0.47
2:B:360:LEU:HB2	2:B:432:ILE:HB	1.95	0.47
2:D:643:ILE:HD13	2:D:723:LYS:HE2	1.97	0.47
2:E:663:LEU:CD2	2:E:663:LEU:N	2.72	0.47
2:F:660:TYR:CE2	2:F:716:THR:CG2	2.96	0.47
2:G:642:TYR:CD1	2:G:665:ILE:HD11	2.49	0.47
2:A:397:LYS:HE2	2:A:426:ASP:HA	1.96	0.47
2:B:613:LYS:HE2	2:B:617:ARG:HH22	1.79	0.47
2:F:592:ARG:HB3	2:F:598:TYR:CE1	2.49	0.47
1:L:167:TYR:HB2	1:L:171:LEU:HB2	1.96	0.47
2:A:244:ASP:HA	2:G:483:GLN:HE22	1.80	0.47
2:A:426:ASP:C	2:A:428:SER:H	2.16	0.47
2:B:645:GLU:HB2	2:B:653:LYS:HB2	1.96	0.47
2:B:700:ALA:CB	2:B:726:ILE:CD1	2.92	0.47
2:B:721:ILE:HG22	2:B:722:LYS:HG2	1.96	0.47
2:E:671:ASP:HB2	2:E:673:LYS:NZ	2.30	0.47
2:G:697:ASN:HB3	2:G:699:TYR:CE2	2.50	0.47
2:D:296:SER:HB2	2:D:331:THR:HB	1.96	0.47
2:G:693:ASN:HA	2:G:732:TYR:CD2	2.49	0.47
1:L:175:ASN:CG	1:L:203:VAL:CG1	2.84	0.47
2:A:533:PHE:HE1	2:A:542:TYR:CG	2.33	0.47
2:A:662:MET:HE2	2:A:681:TYR:CD1	2.49	0.47
2:F:648:ASP:HB3	2:F:651:GLY:H	1.80	0.47
2:G:430:THR:O	2:G:430:THR:HG22	2.14	0.47
1:L:129:LEU:N	1:L:129:LEU:CD2	2.73	0.47
2:B:642:TYR:O	2:B:663:LEU:CD1	2.62	0.47
2:D:506:ALA:HB1	2:D:518:LYS:HZ2	1.80	0.47
2:E:243:ILE:O	2:E:245:LYS:NZ	2.42	0.47
2:E:506:ALA:HB1	2:E:518:LYS:HZ2	1.80	0.47
1:L:244:MET:CE	1:L:244:MET:CA	2.85	0.46
2:A:662:MET:HE3	2:A:681:TYR:CE1	2.51	0.46
2:E:296:SER:HB2	2:E:331:THR:HB	1.96	0.46
2:F:620:ILE:CD1	2:F:673:LYS:HG2	2.46	0.46
2:F:627:LEU:HG	2:F:678:PHE:CE2	2.48	0.46
2:G:648:ASP:HB3	2:G:651:GLY:H	1.80	0.46
2:A:375:TYR:HE1	2:A:404:ILE:HG23	1.81	0.46
2:D:607:ALA:HB3	2:D:612:VAL:HG22	1.96	0.46
2:D:718:THR:HB	2:D:721:ILE:HD13	1.97	0.46
2:E:375:TYR:HE1	2:E:404:ILE:HG23	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:602:ASN:OD1	2:E:602:ASN:N	2.47	0.46
2:E:642:TYR:CD1	2:E:699:TYR:O	2.68	0.46
2:F:718:THR:HA	2:F:721:ILE:CD1	2.43	0.46
1:L:74:TYR:C	1:L:76:ALA:H	2.19	0.46
2:A:631:ILE:CD1	2:A:674:THR:HG21	2.44	0.46
2:B:412:PRO:HD3	2:B:419:ILE:HG23	1.98	0.46
2:F:296:SER:HB2	2:F:331:THR:HB	1.96	0.46
2:G:296:SER:HB2	2:G:331:THR:HB	1.96	0.46
2:C:617:ARG:HG3	2:C:618:GLU:HG3	1.97	0.46
2:F:718:THR:CG2	2:F:721:ILE:CD1	2.67	0.46
1:L:193:GLN:NE2	1:L:212:GLU:HG3	2.30	0.46
2:B:375:TYR:HE1	2:B:404:ILE:HG23	1.81	0.46
2:B:650:GLU:OE2	2:B:652:LEU:HD12	2.16	0.46
2:F:618:GLU:O	2:F:629:LEU:CD1	2.58	0.46
1:L:178:LYS:O	1:L:178:LYS:HG2	2.15	0.46
2:A:645:GLU:HB3	2:A:655:VAL:HG22	1.97	0.46
2:B:638:ILE:HA	2:B:703:LYS:NZ	2.31	0.46
2:B:669:ARG:HE	2:B:669:ARG:CA	2.18	0.46
2:C:466:ASN:HD21	2:C:470:ARG:NH2	1.99	0.46
2:C:665:ILE:CG2	2:C:681:TYR:CD2	2.97	0.46
2:D:627:LEU:HG	2:D:678:PHE:HE1	1.79	0.46
2:G:243:ILE:O	2:G:245:LYS:NZ	2.43	0.46
2:G:375:TYR:HE1	2:G:404:ILE:HG23	1.81	0.46
2:A:607:ALA:CB	2:A:638:ILE:HD12	2.46	0.46
2:B:709:ASN:N	2:B:709:ASN:OD1	2.47	0.46
2:G:412:PRO:HD3	2:G:419:ILE:HG23	1.98	0.46
2:G:648:ASP:HB2	2:G:652:LEU:HB2	1.97	0.46
1:L:31:THR:HG22	1:L:31:THR:O	2.16	0.46
2:A:681:TYR:CD1	2:A:681:TYR:C	2.89	0.46
2:A:698:VAL:HB	2:A:727:PHE:HB3	1.97	0.46
2:B:337:SER:HA	2:C:292:ASN:HA	1.98	0.46
2:B:642:TYR:HB2	2:B:665:ILE:CG1	2.42	0.46
2:G:598:TYR:CE1	2:G:604:ALA:HA	2.51	0.46
2:B:195:ASP:HB2	2:B:216:LEU:HD13	1.97	0.46
2:B:343:GLU:HA	2:C:285:GLN:O	2.15	0.46
2:B:678:PHE:HD2	2:B:687:LEU:CG	2.28	0.46
2:C:633:LYS:N	2:C:633:LYS:CD	2.77	0.46
2:D:659:ARG:HG2	2:D:716:THR:CB	2.45	0.46
2:D:718:THR:CB	2:D:721:ILE:HD13	2.46	0.46
2:F:604:ALA:HB1	2:F:638:ILE:HG22	1.98	0.46
2:D:635:ILE:HD12	2:D:638:ILE:HD11	1.88	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:612:VAL:HG12	2:F:726:ILE:HD11	1.97	0.46
2:F:627:LEU:HD12	2:F:678:PHE:CZ	2.49	0.46
1:L:107:ILE:O	1:L:107:ILE:HG22	2.16	0.45
2:A:657:ASN:HA	2:A:662:MET:HE1	1.98	0.45
2:C:412:PRO:HD3	2:C:419:ILE:HG23	1.98	0.45
2:E:592:ARG:HD2	2:E:598:TYR:CB	2.46	0.45
2:G:724:ILE:O	2:G:724:ILE:HD13	2.16	0.45
1:L:186:GLN:O	1:L:188:LEU:N	2.47	0.45
2:C:717:SER:C	2:C:719:ASN:H	2.19	0.45
2:D:375:TYR:HE1	2:D:404:ILE:HG23	1.81	0.45
2:D:640:SER:HB2	2:D:703:LYS:HG2	1.97	0.45
2:E:597:HIS:O	2:E:605:VAL:CG2	2.64	0.45
2:E:711:SER:CB	2:E:715:ASP:O	2.64	0.45
2:F:375:TYR:HE1	2:F:404:ILE:HG23	1.81	0.45
2:F:412:PRO:HD3	2:F:419:ILE:HG23	1.98	0.45
2:F:454:GLN:NE2	2:G:401:LEU:O	2.49	0.45
1:L:233:LEU:HA	1:L:236:TYR:CD1	2.51	0.45
2:B:638:ILE:O	2:B:703:LYS:HG3	2.16	0.45
2:E:644:VAL:CG1	2:E:687:LEU:HD22	2.46	0.45
2:G:204:SER:HB2	2:G:205:PRO:HD2	1.98	0.45
2:G:605:VAL:HG12	2:G:703:LYS:HB3	1.98	0.45
2:G:671:ASP:C	2:G:673:LYS:HZ2	2.11	0.45
1:L:92:ILE:HG23	1:L:92:ILE:O	2.16	0.45
2:B:300:THR:N	2:B:327:SER:O	2.38	0.45
2:C:206:TRP:CD1	2:C:218:LYS:CE	3.00	0.45
2:C:375:TYR:HE1	2:C:404:ILE:HG23	1.81	0.45
2:C:609:GLU:OE2	2:C:722:LYS:HE3	2.16	0.45
2:C:625:GLU:HA	2:C:687:LEU:HD21	1.98	0.45
2:D:633:LYS:H	2:D:633:LYS:HE2	1.82	0.45
2:G:545:LYS:HD2	2:G:550:PHE:CZ	2.51	0.45
2:G:620:ILE:HD12	2:G:629:LEU:HG	1.97	0.45
2:G:642:TYR:CG	2:G:665:ILE:CD1	2.99	0.45
2:A:479:GLU:HG2	2:B:471:VAL:HG23	1.98	0.45
2:A:680:LYS:NZ	2:A:681:TYR:HB2	2.31	0.45
1:L:67:PRO:O	1:L:70:VAL:N	2.49	0.45
1:L:88:ILE:HG21	1:L:90:LYS:CE	2.38	0.45
2:B:615:ALA:HB1	2:B:635:ILE:HG21	1.94	0.45
2:B:638:ILE:HA	2:B:703:LYS:HZ2	1.80	0.45
2:D:635:ILE:CD1	2:D:638:ILE:CD1	2.77	0.45
2:G:620:ILE:HD12	2:G:629:LEU:CG	2.47	0.45
2:G:679:LYS:HE2	2:G:684:LYS:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:226:GLU:OE1	1:L:227:PRO:HD3	2.17	0.45
2:A:630:ASN:N	2:A:630:ASN:HD22	2.13	0.45
2:B:697:ASN:HA	2:B:727:PHE:O	2.16	0.45
2:C:623:SER:H	2:C:627:LEU:HD23	1.81	0.45
2:C:647:GLU:CB	2:C:697:ASN:HD21	2.18	0.45
2:C:691:ASN:CG	2:C:692:PRO:HD2	2.28	0.45
2:D:412:PRO:HD3	2:D:419:ILE:HG23	1.98	0.45
2:F:645:GLU:OE2	2:F:699:TYR:HE2	1.97	0.45
1:L:55:LYS:N	1:L:55:LYS:HD3	2.32	0.45
2:A:412:PRO:HD3	2:A:419:ILE:HG23	1.98	0.45
2:A:681:TYR:CD1	2:A:681:TYR:O	2.70	0.45
2:B:506:ALA:HB1	2:B:518:LYS:HZ2	1.82	0.45
2:B:607:ALA:HB2	2:B:638:ILE:CD1	2.32	0.45
2:B:650:GLU:OE2	2:B:652:LEU:CD1	2.65	0.45
2:B:678:PHE:HE2	2:B:687:LEU:CD1	2.22	0.45
2:D:633:LYS:N	2:D:633:LYS:CD	2.80	0.45
2:E:632:ASP:OD1	2:E:634:ASP:N	2.47	0.45
1:L:224:TYR:CD2	1:L:224:TYR:O	2.70	0.45
2:D:623:SER:H	2:D:627:LEU:HD23	1.82	0.45
2:E:412:PRO:HD3	2:E:419:ILE:HG23	1.98	0.45
2:E:671:ASP:HB2	2:E:673:LYS:HZ2	1.82	0.45
2:F:629:LEU:HB2	2:F:631:ILE:HG13	1.99	0.45
2:G:647:GLU:OE2	2:G:695:LYS:NZ	2.50	0.45
1:L:74:TYR:C	1:L:76:ALA:N	2.70	0.44
2:B:423:ALA:HB1	2:B:428:SER:HA	1.99	0.44
2:C:709:ASN:N	2:C:709:ASN:HD22	2.16	0.44
2:E:596:PHE:CZ	2:E:634:ASP:HB3	2.52	0.44
2:E:682:ASN:ND2	2:E:687:LEU:CA	2.80	0.44
2:F:243:ILE:O	2:F:245:LYS:NZ	2.43	0.44
2:F:709:ASN:CG	2:F:710:PRO:CD	2.60	0.44
2:G:397:LYS:HE2	2:G:426:ASP:HA	1.98	0.44
2:B:198:ASN:HB3	2:B:200:ARG:NH1	2.32	0.44
2:B:533:PHE:HE1	2:B:542:TYR:HB2	1.70	0.44
2:C:596:PHE:HA	2:C:607:ALA:HA	1.99	0.44
2:C:708:ILE:HB	2:C:709:ASN:H	1.54	0.44
2:E:543:GLN:HB3	2:E:544:GLY:H	1.65	0.44
2:E:604:ALA:CB	2:E:638:ILE:HG22	2.46	0.44
2:E:628:LEU:HD12	2:E:675:PHE:HD1	1.82	0.44
2:G:606:GLY:HA2	2:G:638:ILE:HD12	1.98	0.44
1:L:39:ILE:HD13	1:L:39:ILE:O	2.17	0.44
1:L:174:LEU:HD11	1:L:216:VAL:HG11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:195:LYS:N	1:L:195:LYS:CE	2.73	0.44
2:A:394:ILE:CG2	2:A:424:GLN:HA	2.43	0.44
2:B:680:LYS:C	2:B:680:LYS:CD	2.86	0.44
2:E:722:LYS:HE3	2:E:724:ILE:CG2	2.48	0.44
2:F:627:LEU:HD12	2:F:698:VAL:HG21	1.98	0.44
2:A:607:ALA:CB	2:A:638:ILE:HD11	2.48	0.44
2:A:611:VAL:HA	2:A:614:GLU:CG	2.47	0.44
2:A:685:LEU:C	2:A:685:LEU:CD1	2.85	0.44
2:B:643:ILE:HA	2:B:663:LEU:HD12	1.99	0.44
2:B:680:LYS:HD2	2:B:681:TYR:CE1	2.52	0.44
2:C:599:ASP:HB3	2:C:605:VAL:HG21	2.00	0.44
2:D:718:THR:HB	2:D:721:ILE:CD1	2.48	0.44
2:E:649:THR:CG2	2:E:693:ASN:HB3	2.47	0.44
2:E:659:ARG:HB2	2:E:662:MET:SD	2.57	0.44
2:E:724:ILE:O	2:E:726:ILE:HG12	2.18	0.44
2:E:725:LEU:C	2:E:725:LEU:CD2	2.86	0.44
2:F:657:ASN:HA	2:F:662:MET:HE1	2.00	0.44
1:L:175:ASN:HD22	1:L:175:ASN:C	2.19	0.44
1:L:235:LEU:C	1:L:235:LEU:CD2	2.85	0.44
2:A:612:VAL:HG21	2:A:724:ILE:CD1	2.47	0.44
2:C:366:TYR:HB2	2:C:411:TYR:HB3	1.99	0.44
2:E:595:ARG:HB3	2:E:611:VAL:CG1	2.48	0.44
2:F:203:LEU:HD13	2:F:203:LEU:C	2.38	0.44
2:F:553:ASN:ND2	2:F:592:ARG:NH2	2.65	0.44
2:G:377:VAL:HG12	2:G:379:PRO:HD3	2.00	0.44
1:L:177:ILE:C	1:L:177:ILE:HD12	2.38	0.44
1:L:227:PRO:HB3	1:L:230:ARG:HH21	1.80	0.44
2:B:671:ASP:HB3	2:B:673:LYS:HG2	1.99	0.44
2:C:377:VAL:HG12	2:C:379:PRO:HD3	2.00	0.44
2:D:543:GLN:HB3	2:D:544:GLY:H	1.65	0.44
2:F:377:VAL:HG12	2:F:379:PRO:HD3	2.00	0.44
2:F:627:LEU:CD1	2:F:698:VAL:HG21	2.47	0.44
2:G:626:GLY:HA3	2:G:675:PHE:CE2	2.51	0.44
2:A:680:LYS:HD3	2:A:681:TYR:N	2.32	0.44
2:C:385:LEU:N	2:C:389:GLN:O	2.46	0.44
2:E:595:ARG:HB3	2:E:611:VAL:HG11	1.99	0.44
2:E:718:THR:HB	2:E:721:ILE:HB	2.00	0.44
2:G:506:ALA:HB1	2:G:518:LYS:HZ2	1.83	0.44
2:G:699:TYR:CE1	2:G:725:LEU:CD2	3.00	0.44
2:A:725:LEU:HD11	2:A:728:SER:HB2	2.00	0.44
2:B:366:TYR:HB2	2:B:411:TYR:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:377:VAL:HG12	2:B:379:PRO:HD3	2.00	0.44
2:B:643:ILE:HG12	2:B:663:LEU:HD12	1.98	0.44
2:C:614:GLU:O	2:C:617:ARG:HB2	2.17	0.44
2:D:377:VAL:HG12	2:D:379:PRO:HD3	2.00	0.44
2:E:390:THR:HB	2:F:363:ASN:ND2	2.33	0.44
2:E:620:ILE:HB	2:E:628:LEU:HD23	2.00	0.44
2:G:366:TYR:HB2	2:G:411:TYR:HB3	1.99	0.44
2:G:699:TYR:HD1	2:G:725:LEU:CA	2.31	0.44
2:G:727:PHE:CE1	2:G:729:LYS:HG2	2.52	0.44
1:L:167:TYR:CB	1:L:171:LEU:HB2	2.48	0.44
1:L:175:ASN:CB	1:L:203:VAL:CG1	2.95	0.44
2:B:554:PHE:HB2	2:B:559:SER:HB2	2.00	0.44
2:D:366:TYR:HB2	2:D:411:TYR:HB3	1.99	0.44
2:G:636:ARG:HD3	2:G:636:ARG:C	2.37	0.44
2:G:699:TYR:CE1	2:G:725:LEU:HD22	2.52	0.44
2:A:330:SER:O	2:B:298:THR:HA	2.18	0.43
2:A:377:VAL:HG12	2:A:379:PRO:HD3	2.00	0.43
2:A:621:ASN:HD22	2:A:621:ASN:N	2.16	0.43
2:A:726:ILE:C	2:A:726:ILE:CD1	2.86	0.43
2:B:183:ILE:HA	2:B:184:PRO:HD3	1.88	0.43
2:B:700:ALA:H	2:B:726:ILE:CD1	2.31	0.43
2:F:366:TYR:HB2	2:F:411:TYR:HB3	1.99	0.43
2:F:506:ALA:HB1	2:F:518:LYS:HZ2	1.83	0.43
1:L:209:ASN:C	1:L:211:ASN:H	2.21	0.43
2:A:554:PHE:HB2	2:A:559:SER:HB2	2.00	0.43
2:A:647:GLU:HG3	2:A:652:LEU:H	1.84	0.43
2:C:615:ALA:HB1	2:C:635:ILE:HG13	2.00	0.43
2:A:645:GLU:HG2	2:A:699:TYR:HE1	1.84	0.43
2:B:685:LEU:C	2:B:685:LEU:CD1	2.86	0.43
2:C:554:PHE:HB2	2:C:559:SER:HB2	2.00	0.43
2:C:652:LEU:HD23	2:C:653:LYS:H	1.82	0.43
1:L:43:ILE:O	1:L:43:ILE:HG22	2.19	0.43
2:A:334:ILE:HG22	2:B:295:THR:OG1	2.19	0.43
2:A:363:ASN:HA	2:A:419:ILE:O	2.19	0.43
2:A:426:ASP:C	2:A:428:SER:N	2.71	0.43
2:B:613:LYS:HE3	2:B:617:ARG:NH2	2.33	0.43
2:D:707:ILE:HG13	2:D:707:ILE:O	2.18	0.43
2:G:671:ASP:C	2:G:673:LYS:HZ3	2.22	0.43
1:L:42:HIS:C	1:L:44:VAL:H	2.22	0.43
2:A:671:ASP:HB2	2:A:673:LYS:HD3	2.00	0.43
2:A:725:LEU:C	2:A:725:LEU:CD1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:624:THR:CB	2:B:734:ILE:HG22	2.48	0.43
2:C:506:ALA:HB1	2:C:518:LYS:HZ2	1.82	0.43
2:D:363:ASN:HA	2:D:419:ILE:O	2.19	0.43
2:D:616:HIS:HD2	2:D:629:LEU:CD2	2.31	0.43
2:E:708:ILE:C	2:E:708:ILE:CD1	2.85	0.43
2:G:298:THR:O	2:G:328:ASN:HA	2.19	0.43
2:G:521:MET:HG3	2:G:583:LEU:HD12	2.01	0.43
2:G:603:ILE:O	2:G:605:VAL:HG22	2.18	0.43
2:B:678:PHE:CB	2:B:687:LEU:HD21	2.48	0.43
2:C:454:GLN:NE2	2:D:401:LEU:O	2.51	0.43
2:D:298:THR:O	2:D:328:ASN:HA	2.19	0.43
2:D:554:PHE:HB2	2:D:559:SER:HB2	2.01	0.43
2:D:633:LYS:H	2:D:633:LYS:CE	2.31	0.43
2:D:644:VAL:HG13	2:D:678:PHE:CE2	2.50	0.43
2:D:669:ARG:HD2	2:D:669:ARG:HA	1.92	0.43
2:E:377:VAL:HG12	2:E:379:PRO:HD3	2.00	0.43
2:E:644:VAL:HG11	2:E:678:PHE:CD1	2.54	0.43
2:F:425:ASP:OD2	2:G:429:SER:HB3	2.18	0.43
2:G:363:ASN:HA	2:G:419:ILE:O	2.19	0.43
2:G:643:ILE:CD1	2:G:718:THR:OG1	2.57	0.43
1:L:39:ILE:O	1:L:43:ILE:HG13	2.18	0.43
2:A:366:TYR:HB2	2:A:411:TYR:HB3	1.99	0.43
2:B:363:ASN:HA	2:B:419:ILE:O	2.19	0.43
2:C:628:LEU:C	2:C:628:LEU:CD2	2.86	0.43
2:E:521:MET:HG3	2:E:583:LEU:HD12	2.01	0.43
2:F:553:ASN:ND2	2:F:592:ARG:HH21	2.14	0.43
2:E:554:PHE:HB2	2:E:559:SER:HB2	2.00	0.43
2:F:298:THR:O	2:F:328:ASN:HA	2.19	0.43
2:F:521:MET:HG3	2:F:583:LEU:HD12	2.01	0.43
2:F:608:ASP:HB3	2:F:611:VAL:CG2	2.49	0.43
2:F:690:SER:HB3	2:F:694:TYR:HE2	1.84	0.43
2:F:712:GLU:OE1	2:F:712:GLU:N	2.51	0.43
1:L:71:LEU:C	1:L:71:LEU:CD2	2.86	0.43
2:A:244:ASP:OD1	2:G:483:GLN:NE2	2.51	0.43
2:A:298:THR:O	2:A:328:ASN:HA	2.19	0.43
2:B:312:SER:OG	2:B:313:PHE:N	2.52	0.43
2:D:629:LEU:O	2:D:673:LYS:HB3	2.19	0.43
2:D:633:LYS:HD3	2:D:633:LYS:H	1.81	0.43
2:E:312:SER:OG	2:E:313:PHE:N	2.52	0.43
2:E:496:LYS:HB2	2:E:542:TYR:OH	2.19	0.43
2:E:687:LEU:HD21	2:E:696:VAL:HG13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:609:GLU:HG2	2:F:613:LYS:HE3	2.01	0.43
2:F:662:MET:HB3	2:F:662:MET:HE2	1.94	0.43
2:F:701:VAL:HG12	2:F:706:THR:HB	2.01	0.43
1:L:174:LEU:HD23	1:L:174:LEU:C	2.39	0.43
2:C:366:TYR:O	2:C:410:TYR:HA	2.19	0.43
2:C:656:ILE:HG23	2:C:682:ASN:ND2	2.33	0.43
2:C:667:SER:O	2:C:674:THR:OG1	2.29	0.43
2:D:308:GLU:O	2:D:318:GLY:HA2	2.19	0.43
2:D:643:ILE:CD1	2:D:723:LYS:HE2	2.49	0.43
2:E:366:TYR:HB2	2:E:411:TYR:HB3	1.99	0.43
2:A:366:TYR:O	2:A:410:TYR:HA	2.19	0.42
2:A:521:MET:HG3	2:A:583:LEU:HD12	2.01	0.42
2:B:623:SER:HB2	2:B:628:LEU:HB3	1.97	0.42
2:B:638:ILE:HG13	2:B:639:LEU:CD1	2.47	0.42
2:B:683:ASP:C	2:B:685:LEU:N	2.72	0.42
2:C:668:LEU:HD12	2:C:673:LYS:C	2.36	0.42
2:E:363:ASN:HA	2:E:419:ILE:O	2.19	0.42
2:F:308:GLU:O	2:F:318:GLY:HA2	2.19	0.42
2:G:662:MET:CG	2:G:681:TYR:OH	2.67	0.42
2:B:366:TYR:O	2:B:410:TYR:HA	2.19	0.42
2:B:678:PHE:HB2	2:B:687:LEU:HD21	2.01	0.42
2:B:705:ASN:HD21	2:B:722:LYS:H	1.66	0.42
2:C:612:VAL:HG13	2:C:616:HIS:HD2	1.84	0.42
2:D:660:TYR:CG	2:D:707:ILE:HD11	2.54	0.42
2:E:183:ILE:HA	2:E:184:PRO:HD3	1.88	0.42
2:E:366:TYR:O	2:E:410:TYR:HA	2.19	0.42
2:F:363:ASN:HA	2:F:419:ILE:O	2.19	0.42
2:F:554:PHE:HB2	2:F:559:SER:HB2	2.00	0.42
2:F:633:LYS:O	2:F:637:LYS:HG3	2.18	0.42
2:F:659:ARG:HB2	2:F:662:MET:CG	2.48	0.42
2:G:590:LEU:CD2	2:G:602:ASN:ND2	2.82	0.42
1:L:36:LEU:C	1:L:36:LEU:CD2	2.86	0.42
1:L:190:PHE:CE1	1:L:196:GLU:HB2	2.54	0.42
2:C:691:ASN:CG	2:C:692:PRO:CD	2.78	0.42
2:D:183:ILE:HA	2:D:184:PRO:HD3	1.87	0.42
2:E:725:LEU:HD23	2:E:726:ILE:N	2.33	0.42
2:F:606:GLY:CA	2:F:702:THR:HB	2.20	0.42
2:F:619:VAL:HA	2:F:629:LEU:CD1	2.46	0.42
2:F:628:LEU:HB2	2:F:675:PHE:CD1	2.46	0.42
2:G:658:ASP:OD1	2:G:718:THR:HB	2.19	0.42
2:A:308:GLU:O	2:A:318:GLY:HA2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:206:TRP:CD1	2:C:218:LYS:HD2	2.53	0.42
2:C:694:TYR:O	2:C:731:GLY:HA2	2.20	0.42
2:D:635:ILE:HD13	2:D:635:ILE:HA	1.80	0.42
2:D:670:GLN:NE2	2:D:670:GLN:C	2.73	0.42
2:F:312:SER:OG	2:F:313:PHE:N	2.52	0.42
2:F:366:TYR:O	2:F:410:TYR:HA	2.19	0.42
2:G:554:PHE:HB2	2:G:559:SER:HB2	2.00	0.42
2:C:626:GLY:CA	2:C:677:ASP:HA	2.50	0.42
2:C:700:ALA:CB	2:C:726:ILE:HD11	2.47	0.42
1:L:63:LEU:HD11	1:L:65:LYS:O	2.19	0.42
1:L:248:ASN:C	1:L:248:ASN:HD22	2.21	0.42
2:A:648:ASP:HB2	2:A:694:TYR:CD2	2.54	0.42
2:B:308:GLU:O	2:B:318:GLY:HA2	2.19	0.42
2:B:653:LYS:N	2:B:653:LYS:CD	2.78	0.42
2:C:231:ASP:OD1	2:C:231:ASP:N	2.53	0.42
2:C:609:GLU:O	2:C:612:VAL:HB	2.19	0.42
2:C:727:PHE:CZ	2:C:729:LYS:HD3	2.54	0.42
2:E:231:ASP:OD1	2:E:231:ASP:N	2.53	0.42
2:E:620:ILE:HG21	2:E:628:LEU:HD23	2.01	0.42
2:G:231:ASP:N	2:G:231:ASP:OD1	2.53	0.42
2:A:231:ASP:N	2:A:231:ASP:OD1	2.53	0.42
2:A:312:SER:OG	2:A:313:PHE:N	2.52	0.42
2:A:385:LEU:N	2:A:389:GLN:O	2.46	0.42
2:A:627:LEU:HG	2:A:678:PHE:CZ	2.55	0.42
2:C:496:LYS:HB2	2:C:542:TYR:OH	2.19	0.42
2:D:454:GLN:NE2	2:E:401:LEU:O	2.53	0.42
2:D:722:LYS:HB3	2:D:722:LYS:HZ2	1.80	0.42
2:F:362:ALA:O	2:F:420:ALA:HA	2.20	0.42
1:L:231:ASP:O	1:L:234:GLN:HB3	2.20	0.42
2:B:385:LEU:N	2:B:389:GLN:O	2.46	0.42
2:B:456:TYR:HB2	2:C:403:GLN:HE22	1.84	0.42
2:B:601:ASN:HB3	2:B:603:ILE:HD11	2.01	0.42
2:C:363:ASN:HA	2:C:419:ILE:O	2.19	0.42
2:C:521:MET:HG3	2:C:583:LEU:HD12	2.01	0.42
2:D:231:ASP:N	2:D:231:ASP:OD1	2.53	0.42
2:E:298:THR:O	2:E:328:ASN:HA	2.19	0.42
2:E:683:ASP:C	2:E:685:LEU:N	2.73	0.42
2:F:618:GLU:CB	2:F:630:ASN:N	2.78	0.42
2:B:521:MET:HG3	2:B:583:LEU:HD12	2.01	0.42
2:B:617:ARG:NE	2:B:617:ARG:HA	2.35	0.42
2:B:629:LEU:HD12	2:B:629:LEU:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:385:LEU:N	2:D:389:GLN:O	2.46	0.42
2:E:613:LYS:O	2:E:613:LYS:HG3	2.20	0.42
2:F:673:LYS:N	2:F:673:LYS:HD2	2.35	0.42
2:G:555:ASP:N	2:G:555:ASP:OD1	2.53	0.42
1:L:46:ILE:O	1:L:46:ILE:HD13	2.20	0.42
2:A:362:ALA:O	2:A:420:ALA:HA	2.20	0.42
2:B:379:PRO:HA	2:B:455:VAL:HA	2.02	0.42
2:B:383:LEU:HD11	2:B:432:ILE:HD13	2.02	0.42
2:B:680:LYS:HD3	2:B:680:LYS:O	2.19	0.42
2:C:298:THR:O	2:C:328:ASN:HA	2.19	0.42
2:C:379:PRO:HA	2:C:455:VAL:HA	2.02	0.42
2:C:644:VAL:HG11	2:C:678:PHE:HD2	1.75	0.42
2:D:379:PRO:HA	2:D:455:VAL:HA	2.02	0.42
2:D:521:MET:HG3	2:D:583:LEU:HD12	2.01	0.42
2:D:719:ASN:ND2	2:D:719:ASN:C	2.73	0.42
2:E:379:PRO:HA	2:E:455:VAL:HA	2.02	0.42
2:E:601:ASN:C	2:E:601:ASN:HD22	2.22	0.42
2:F:550:PHE:O	2:F:575:TYR:OH	2.28	0.42
2:G:638:ILE:HG12	2:G:639:LEU:HD22	2.02	0.42
1:L:210:SER:HA	1:L:213:VAL:HG22	2.02	0.41
2:B:394:ILE:HD11	2:B:424:GLN:HG3	2.02	0.41
2:B:638:ILE:C	2:B:703:LYS:HZ2	2.24	0.41
2:B:695:LYS:NZ	2:B:730:LYS:HB2	2.35	0.41
2:D:312:SER:OG	2:D:313:PHE:N	2.52	0.41
2:D:366:TYR:O	2:D:410:TYR:HA	2.19	0.41
2:D:496:LYS:CA	2:D:542:TYR:OH	2.68	0.41
2:F:616:HIS:ND1	2:F:726:ILE:CG1	2.76	0.41
2:G:362:ALA:O	2:G:420:ALA:HA	2.20	0.41
2:A:684:LYS:HA	2:A:684:LYS:HD2	1.79	0.41
2:D:722:LYS:CB	2:D:722:LYS:HZ2	2.33	0.41
2:E:362:ALA:O	2:E:420:ALA:HA	2.20	0.41
2:E:682:ASN:CG	2:E:685:LEU:O	2.58	0.41
1:L:120:TYR:HD1	1:L:131:ILE:HD11	1.85	0.41
1:L:174:LEU:HA	1:L:177:ILE:CG1	2.51	0.41
1:L:174:LEU:HD22	1:L:178:LYS:HZ1	1.84	0.41
2:A:555:ASP:N	2:A:555:ASP:OD1	2.53	0.41
2:B:454:GLN:HE22	2:C:402:SER:HA	1.86	0.41
2:C:312:SER:OG	2:C:313:PHE:N	2.52	0.41
2:C:612:VAL:HG13	2:C:616:HIS:CD2	2.55	0.41
2:C:660:TYR:CB	2:C:707:ILE:HD12	2.49	0.41
2:C:725:LEU:C	2:C:725:LEU:HD23	2.40	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:366:TYR:O	2:G:410:TYR:HA	2.19	0.41
2:G:695:LYS:H	2:G:695:LYS:HG3	1.51	0.41
1:L:151:ILE:HD13	1:L:222:ALA:CB	2.50	0.41
1:L:236:TYR:O	1:L:239:GLU:HG2	2.21	0.41
2:A:308:GLU:HA	2:G:320:VAL:O	2.20	0.41
2:A:379:PRO:HA	2:A:455:VAL:HA	2.02	0.41
2:B:359:ARG:HA	2:B:432:ILE:O	2.20	0.41
2:E:308:GLU:O	2:E:318:GLY:HA2	2.19	0.41
2:E:597:HIS:N	2:E:606:GLY:O	2.50	0.41
2:F:231:ASP:OD1	2:F:231:ASP:N	2.53	0.41
2:F:595:ARG:HB2	2:F:596:PHE:CD1	2.55	0.41
2:G:308:GLU:O	2:G:318:GLY:HA2	2.19	0.41
2:G:405:LEU:HD12	2:G:405:LEU:HA	1.89	0.41
2:G:618:GLU:HB3	2:G:620:ILE:CD1	2.50	0.41
2:C:609:GLU:HA	2:C:612:VAL:HB	2.03	0.41
2:D:362:ALA:O	2:D:420:ALA:HA	2.20	0.41
2:F:603:ILE:O	2:F:605:VAL:HG13	2.21	0.41
2:F:617:ARG:HG3	2:F:617:ARG:O	2.21	0.41
2:G:622:SER:HB2	2:G:734:ILE:HG12	2.03	0.41
2:G:730:LYS:HB3	2:G:732:TYR:CE2	2.55	0.41
2:A:178:ARG:NH1	2:B:200:ARG:HB3	2.36	0.41
2:B:724:ILE:HD12	2:B:725:LEU:H	1.84	0.41
2:E:633:LYS:HE2	2:E:633:LYS:HB2	1.79	0.41
2:B:362:ALA:O	2:B:420:ALA:HA	2.20	0.41
2:B:533:PHE:HE1	2:B:542:TYR:HD1	1.63	0.41
2:B:637:LYS:O	2:B:703:LYS:NZ	2.29	0.41
2:E:528:LYS:HA	2:E:533:PHE:HB2	2.03	0.41
2:E:671:ASP:OD1	2:E:671:ASP:N	2.51	0.41
2:G:658:ASP:O	2:G:662:MET:SD	2.79	0.41
1:L:209:ASN:C	1:L:211:ASN:N	2.74	0.41
2:A:677:ASP:OD1	2:A:680:LYS:N	2.53	0.41
2:B:620:ILE:HG12	2:B:630:ASN:HB2	2.03	0.41
2:B:707:ILE:HG23	2:B:709:ASN:H	1.86	0.41
2:C:627:LEU:HD11	2:C:698:VAL:HG21	2.02	0.41
2:D:613:LYS:HB3	2:D:726:ILE:HD11	2.03	0.41
2:E:179:ASP:OD1	2:E:179:ASP:N	2.53	0.41
2:E:605:VAL:HG12	2:E:704:GLU:HB3	2.02	0.41
2:F:179:ASP:OD1	2:F:179:ASP:N	2.53	0.41
1:L:42:HIS:O	1:L:44:VAL:N	2.54	0.41
2:A:224:GLU:OE1	2:B:201:THR:CG2	2.56	0.41
2:A:506:ALA:HB1	2:A:518:LYS:HZ2	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:222:SER:HB3	2:B:225:LYS:HB2	2.03	0.41
2:B:345:THR:HA	2:C:283:ASP:O	2.21	0.41
2:B:346:TRP:N	2:C:283:ASP:O	2.48	0.41
2:B:605:VAL:O	2:B:703:LYS:HB2	2.21	0.41
2:B:660:TYR:O	2:B:663:LEU:HB2	2.21	0.41
2:C:183:ILE:HA	2:C:184:PRO:HD3	1.88	0.41
2:C:308:GLU:O	2:C:318:GLY:HA2	2.19	0.41
2:C:362:ALA:O	2:C:420:ALA:HA	2.20	0.41
2:C:551:ASP:HB3	2:C:594:LYS:HE3	2.02	0.41
2:D:528:LYS:HA	2:D:533:PHE:HB2	2.03	0.41
2:D:555:ASP:N	2:D:555:ASP:OD1	2.53	0.41
2:F:379:PRO:HA	2:F:455:VAL:HA	2.02	0.41
2:F:616:HIS:HB3	2:F:726:ILE:HG23	2.01	0.41
2:F:648:ASP:OD1	2:F:649:THR:N	2.54	0.41
2:A:394:ILE:HD12	2:A:424:GLN:HB2	2.03	0.41
2:A:528:LYS:HA	2:A:533:PHE:HB2	2.03	0.41
2:B:365:ARG:NH2	2:B:416:LEU:O	2.29	0.41
2:C:579:ASP:OD1	2:C:579:ASP:N	2.54	0.41
2:D:179:ASP:N	2:D:179:ASP:OD1	2.53	0.41
2:D:496:LYS:HA	2:D:542:TYR:OH	2.20	0.41
2:E:691:ASN:H	2:E:694:TYR:HD2	1.67	0.41
2:A:679:LYS:H	2:A:679:LYS:HG2	1.74	0.40
2:B:198:ASN:HB3	2:B:200:ARG:HH12	1.87	0.40
2:B:231:ASP:OD1	2:B:231:ASP:N	2.53	0.40
2:B:423:ALA:CB	2:B:428:SER:HB3	2.51	0.40
2:C:179:ASP:OD1	2:C:179:ASP:N	2.53	0.40
2:A:183:ILE:HA	2:A:184:PRO:HD3	1.87	0.40
2:A:223:PRO:HG3	2:B:200:ARG:HD2	2.03	0.40
2:A:579:ASP:N	2:A:579:ASP:OD1	2.54	0.40
2:A:596:PHE:CD1	2:A:607:ALA:CB	3.04	0.40
2:B:555:ASP:N	2:B:555:ASP:OD1	2.53	0.40
2:C:691:ASN:HB3	2:C:694:TYR:CD1	2.56	0.40
2:D:222:SER:HB3	2:D:225:LYS:HB2	2.03	0.40
2:E:555:ASP:N	2:E:555:ASP:OD1	2.53	0.40
2:E:627:LEU:HB2	2:E:676:ILE:HB	2.03	0.40
2:G:222:SER:HB3	2:G:225:LYS:HB2	2.03	0.40
1:L:80:LYS:N	1:L:80:LYS:HD3	2.37	0.40
2:B:612:VAL:O	2:B:612:VAL:CG1	2.69	0.40
2:B:655:VAL:CG2	2:B:655:VAL:O	2.69	0.40
2:C:528:LYS:HA	2:C:533:PHE:HB2	2.03	0.40
2:C:665:ILE:HD13	2:C:676:ILE:CG1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:629:LEU:HB3	2:D:631:ILE:CD1	2.34	0.40
2:D:629:LEU:HD23	2:D:631:ILE:CG1	2.51	0.40
2:D:670:GLN:HE21	2:D:671:ASP:HA	1.86	0.40
2:D:718:THR:CB	2:D:721:ILE:CD1	2.99	0.40
2:E:612:VAL:C	2:E:614:GLU:H	2.24	0.40
2:F:528:LYS:HA	2:F:533:PHE:HB2	2.03	0.40
2:G:431:PRO:O	2:G:431:PRO:CG	2.70	0.40
2:G:646:ILE:CG1	2:G:656:ILE:HD11	2.51	0.40
2:G:656:ILE:N	2:G:656:ILE:HD13	2.35	0.40
2:G:719:ASN:ND2	2:G:719:ASN:C	2.73	0.40
1:L:212:GLU:CD	1:L:212:GLU:H	2.25	0.40
2:A:222:SER:HB3	2:A:225:LYS:HB2	2.03	0.40
2:B:303:VAL:HA	2:B:323:GLY:O	2.22	0.40
2:C:197:LYS:HB3	2:C:202:PHE:CE1	2.56	0.40
2:C:668:LEU:HA	2:C:674:THR:HA	2.03	0.40
2:F:222:SER:HB3	2:F:225:LYS:HB2	2.03	0.40
2:G:533:PHE:HE1	2:G:542:TYR:HB2	1.74	0.40
2:G:579:ASP:N	2:G:579:ASP:OD1	2.54	0.40
1:L:38:GLU:HA	1:L:38:GLU:OE1	2.22	0.40
2:B:482:PRO:HB3	2:C:246:ASN:HD21	1.87	0.40
2:B:599:ASP:OD1	2:B:603:ILE:N	2.53	0.40
2:C:302:GLU:CG	2:C:325:SER:HB2	2.50	0.40
2:C:699:TYR:HA	2:C:726:ILE:HD13	2.03	0.40
2:G:379:PRO:HA	2:G:455:VAL:HA	2.02	0.40
2:G:722:LYS:N	2:G:722:LYS:CD	2.84	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	L	218/263 (83%)	168 (77%)	35 (16%)	15 (7%)	<b>1</b> <b>8</b>

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	A	560/562 (100%)	531 (95%)	29 (5%)	0	100	100
2	B	560/562 (100%)	522 (93%)	36 (6%)	2 (0%)	34	66
2	C	560/562 (100%)	538 (96%)	19 (3%)	3 (0%)	29	61
2	D	560/562 (100%)	533 (95%)	26 (5%)	1 (0%)	47	77
2	E	560/562 (100%)	534 (95%)	25 (4%)	1 (0%)	47	77
2	F	560/562 (100%)	540 (96%)	20 (4%)	0	100	100
2	G	560/562 (100%)	531 (95%)	27 (5%)	2 (0%)	34	66
All	All	4138/4197 (99%)	3897 (94%)	217 (5%)	24 (1%)	29	57

All (24) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L	54	VAL
1	L	81	ILE
1	L	107	ILE
1	L	237	ALA
2	C	617	ARG
2	D	609	GLU
1	L	43	ILE
1	L	58	ALA
1	L	68	SER
1	L	85	ASP
2	B	687	LEU
2	C	708	ILE
2	E	613	LYS
1	L	75	LYS
2	B	692	PRO
2	G	710	PRO
1	L	59	ALA
1	L	91	HIS
1	L	165	GLN
1	L	187	ASP
2	G	625	GLU
1	L	92	ILE
2	C	709	ASN
1	L	226	GLU

### 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	L	198/236 (84%)	163 (82%)	35 (18%)	2	8
2	A	499/501 (100%)	487 (98%)	12 (2%)	49	73
2	B	499/501 (100%)	472 (95%)	27 (5%)	22	53
2	C	499/501 (100%)	483 (97%)	16 (3%)	39	67
2	D	499/501 (100%)	486 (97%)	13 (3%)	46	71
2	E	499/501 (100%)	482 (97%)	17 (3%)	37	65
2	F	499/501 (100%)	489 (98%)	10 (2%)	55	76
2	G	499/501 (100%)	475 (95%)	24 (5%)	25	56
All	All	3691/3743 (99%)	3537 (96%)	154 (4%)	33	60

All (154) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L	39	ILE
1	L	44	VAL
1	L	46	ILE
1	L	66	VAL
1	L	81	ILE
1	L	92	ILE
1	L	95	GLU
1	L	102	LYS
1	L	104	ILE
1	L	114	LEU
1	L	122	LYS
1	L	129	LEU
1	L	140	ASN
1	L	146	ASN
1	L	153	LYS
1	L	155	LEU
1	L	164	ASN
1	L	165	GLN
1	L	167	TYR

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Mol	Chain	Res	Type
1	L	168	GLN
1	L	175	ASN
1	L	189	LEU
1	L	190	PHE
1	L	192	ASN
1	L	193	GLN
1	L	194	LEU
1	L	195	LYS
1	L	199	THR
1	L	200	ASP
1	L	201	PHE
1	L	206	LEU
1	L	217	PHE
1	L	244	MET
1	L	248	ASN
1	L	250	GLN
2	A	200	ARG
2	A	281	ASN
2	A	292	ASN
2	A	543	GLN
2	A	636	ARG
2	A	653	LYS
2	A	656	ILE
2	A	674	THR
2	A	678	PHE
2	A	681	TYR
2	A	687	LEU
2	A	691	ASN
2	B	197	LYS
2	B	200	ARG
2	B	281	ASN
2	B	292	ASN
2	B	304	HIS
2	B	543	GLN
2	B	596	PHE
2	B	597	HIS
2	B	613	LYS
2	B	629	LEU
2	B	636	ARG
2	B	639	LEU
2	B	649	THR
2	B	653	LYS

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Mol	Chain	Res	Type
2	B	655	VAL
2	B	663	LEU
2	B	665	ILE
2	B	676	ILE
2	B	678	PHE
2	B	689	ILE
2	B	693	ASN
2	B	701	VAL
2	B	707	ILE
2	B	708	ILE
2	B	709	ASN
2	B	725	LEU
2	B	733	GLU
2	C	200	ARG
2	C	281	ASN
2	C	292	ASN
2	C	302	GLU
2	C	425	ASP
2	C	426	ASP
2	C	543	GLN
2	C	545	LYS
2	C	596	PHE
2	C	636	ARG
2	C	638	ILE
2	C	646	ILE
2	C	652	LEU
2	C	665	ILE
2	C	676	ILE
2	C	708	ILE
2	D	200	ARG
2	D	281	ASN
2	D	292	ASN
2	D	543	GLN
2	D	610	SER
2	D	612	VAL
2	D	623	SER
2	D	630	ASN
2	D	631	ILE
2	D	636	ARG
2	D	671	ASP
2	D	676	ILE
2	D	719	ASN

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Mol	Chain	Res	Type
2	E	200	ARG
2	E	281	ASN
2	E	292	ASN
2	E	425	ASP
2	E	543	GLN
2	E	596	PHE
2	E	601	ASN
2	E	602	ASN
2	E	628	LEU
2	E	633	LYS
2	E	634	ASP
2	E	687	LEU
2	E	706	THR
2	E	707	ILE
2	E	709	ASN
2	E	711	SER
2	E	723	LYS
2	F	200	ARG
2	F	281	ASN
2	F	292	ASN
2	F	543	GLN
2	F	629	LEU
2	F	636	ARG
2	F	660	TYR
2	F	712	GLU
2	F	713	ASN
2	F	718	THR
2	G	200	ARG
2	G	281	ASN
2	G	292	ASN
2	G	543	GLN
2	G	601	ASN
2	G	605	VAL
2	G	608	ASP
2	G	620	ILE
2	G	636	ARG
2	G	638	ILE
2	G	657	ASN
2	G	662	MET
2	G	665	ILE
2	G	671	ASP
2	G	675	PHE

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Mol	Chain	Res	Type
2	G	693	ASN
2	G	695	LYS
2	G	701	VAL
2	G	707	ILE
2	G	708	ILE
2	G	713	ASN
2	G	718	THR
2	G	719	ASN
2	G	724	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (77) such sidechains are listed below:

Mol	Chain	Res	Type
1	L	32	GLN
1	L	132	GLN
1	L	140	ASN
1	L	146	ASN
1	L	165	GLN
1	L	168	GLN
1	L	175	ASN
1	L	186	GLN
1	L	192	ASN
1	L	211	ASN
1	L	214	GLN
1	L	234	GLN
1	L	248	ASN
2	A	211	HIS
2	A	281	ASN
2	A	292	ASN
2	A	389	GLN
2	A	564	ASN
2	A	584	ASN
2	A	621	ASN
2	A	630	ASN
2	A	705	ASN
2	B	281	ASN
2	B	292	ASN
2	B	424	GLN
2	B	438	GLN
2	B	483	GLN
2	B	564	ASN
2	B	584	ASN

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Mol	Chain	Res	Type
2	B	691	ASN
2	B	713	ASN
2	C	281	ASN
2	C	292	ASN
2	C	389	GLN
2	C	466	ASN
2	C	564	ASN
2	C	584	ASN
2	C	616	HIS
2	C	682	ASN
2	C	693	ASN
2	C	697	ASN
2	C	709	ASN
2	D	281	ASN
2	D	292	ASN
2	D	389	GLN
2	D	564	ASN
2	D	584	ASN
2	D	616	HIS
2	D	670	GLN
2	D	719	ASN
2	E	281	ASN
2	E	292	ASN
2	E	389	GLN
2	E	564	ASN
2	E	584	ASN
2	E	601	ASN
2	E	682	ASN
2	E	693	ASN
2	E	705	ASN
2	E	719	ASN
2	F	281	ASN
2	F	292	ASN
2	F	389	GLN
2	F	553	ASN
2	F	564	ASN
2	F	584	ASN
2	F	601	ASN
2	G	281	ASN
2	G	292	ASN
2	G	389	GLN
2	G	483	GLN

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Mol	Chain	Res	Type
2	G	564	ASN
2	G	584	ASN
2	G	601	ASN
2	G	616	HIS
2	G	682	ASN
2	G	713	ASN

### 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](#)

Of 14 ligands modelled in this entry, 14 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-23066. These allow visual inspection of the internal detail of the map and identification of artifacts.

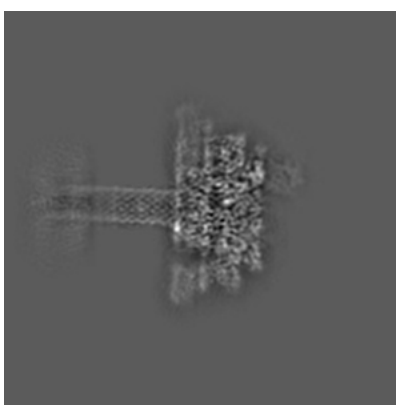
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

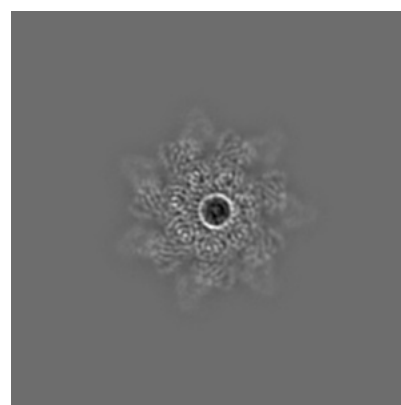
#### 6.1.1 Primary map



X



Y



Z

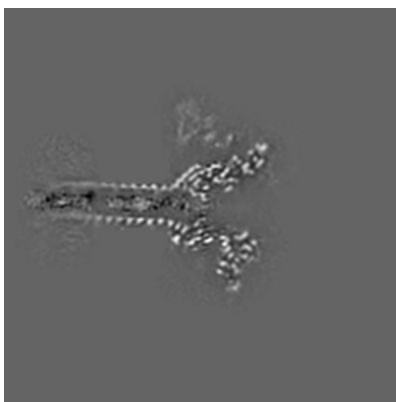
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

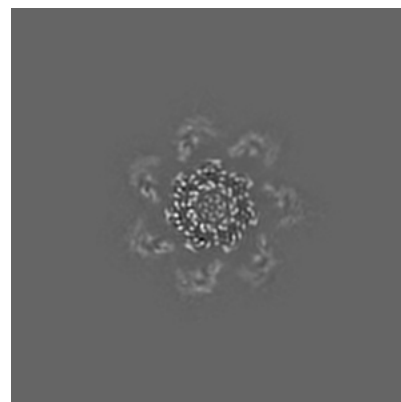
#### 6.2.1 Primary map



X Index: 100



Y Index: 100



Z Index: 100

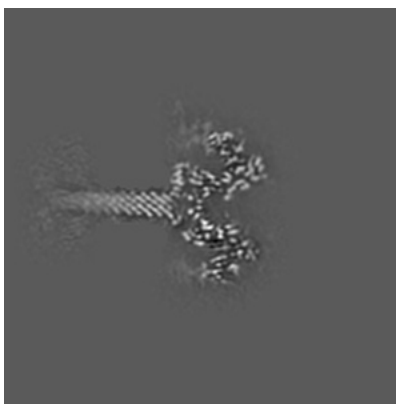
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

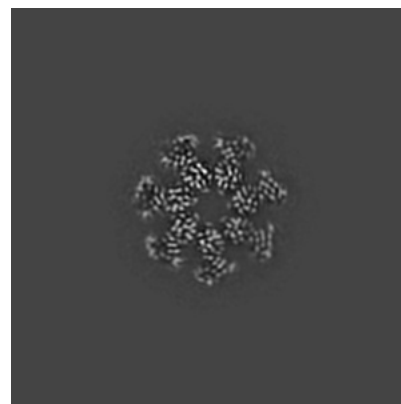
### 6.3.1 Primary map



X Index: 95



Y Index: 107



Z Index: 110

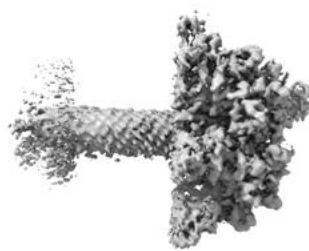
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

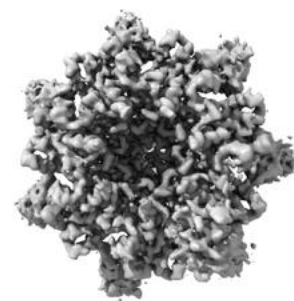
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 1.6. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

## 6.5 Mask visualisation

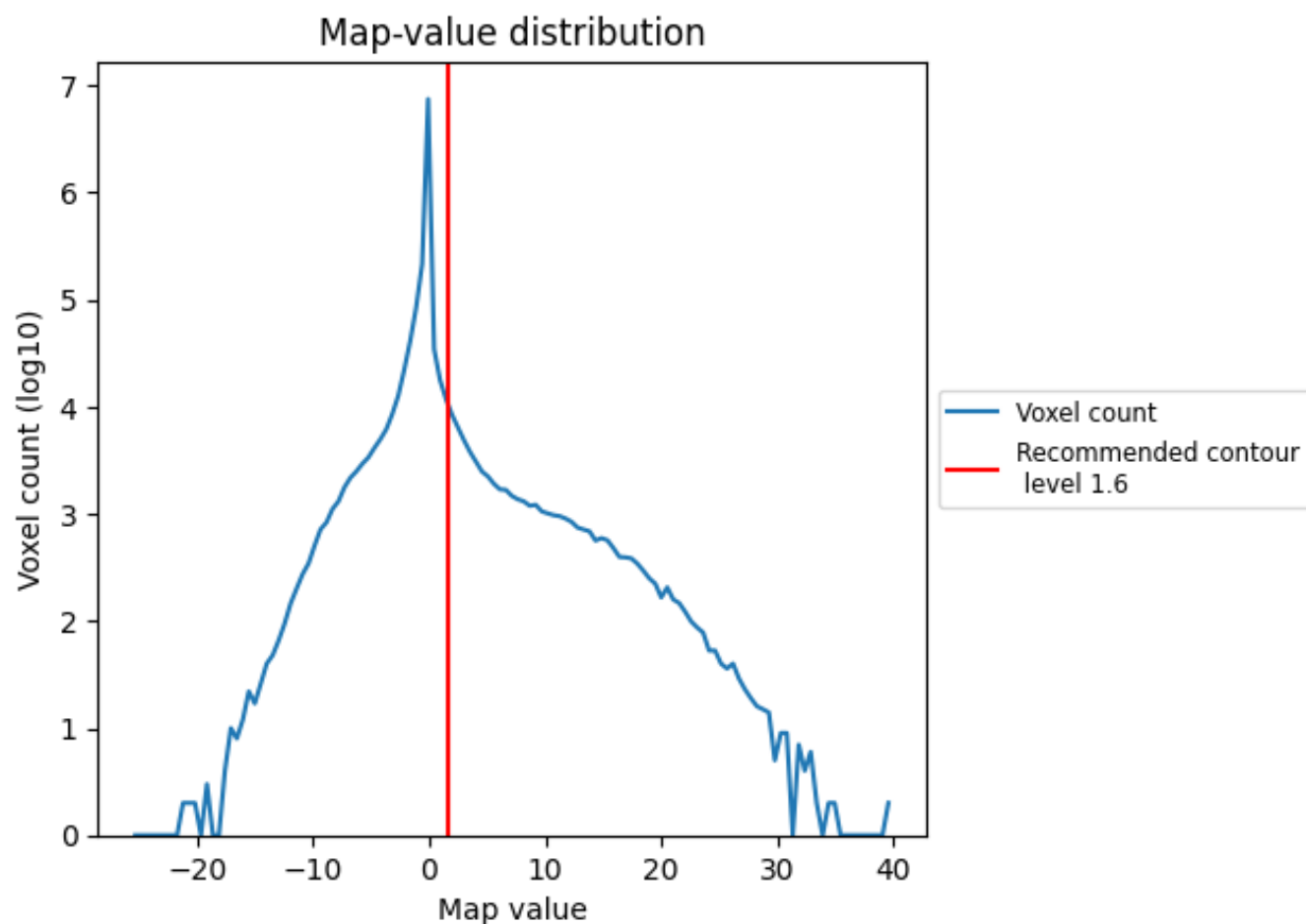
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

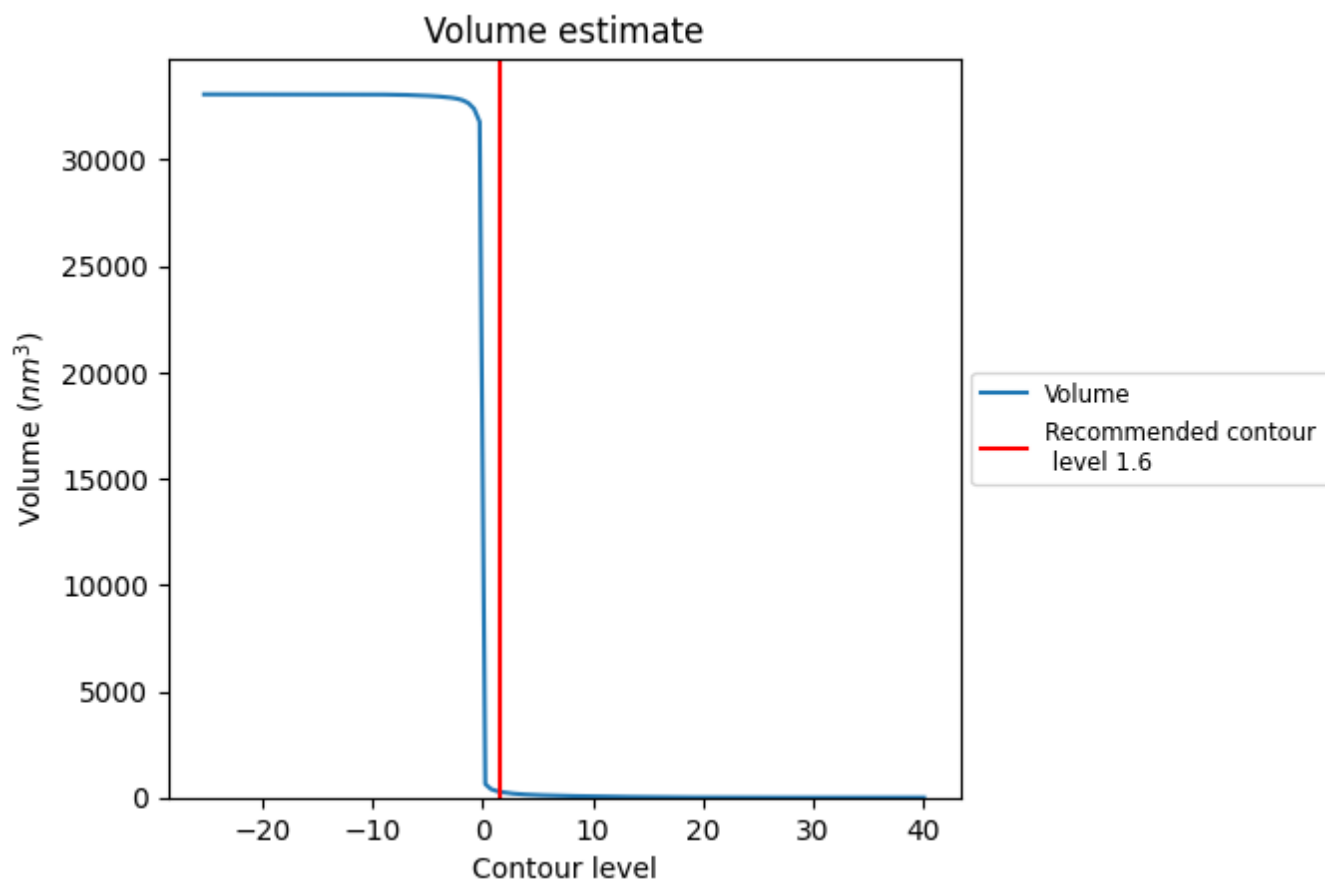
This section contains the results of statistical analysis of the map.

### 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.

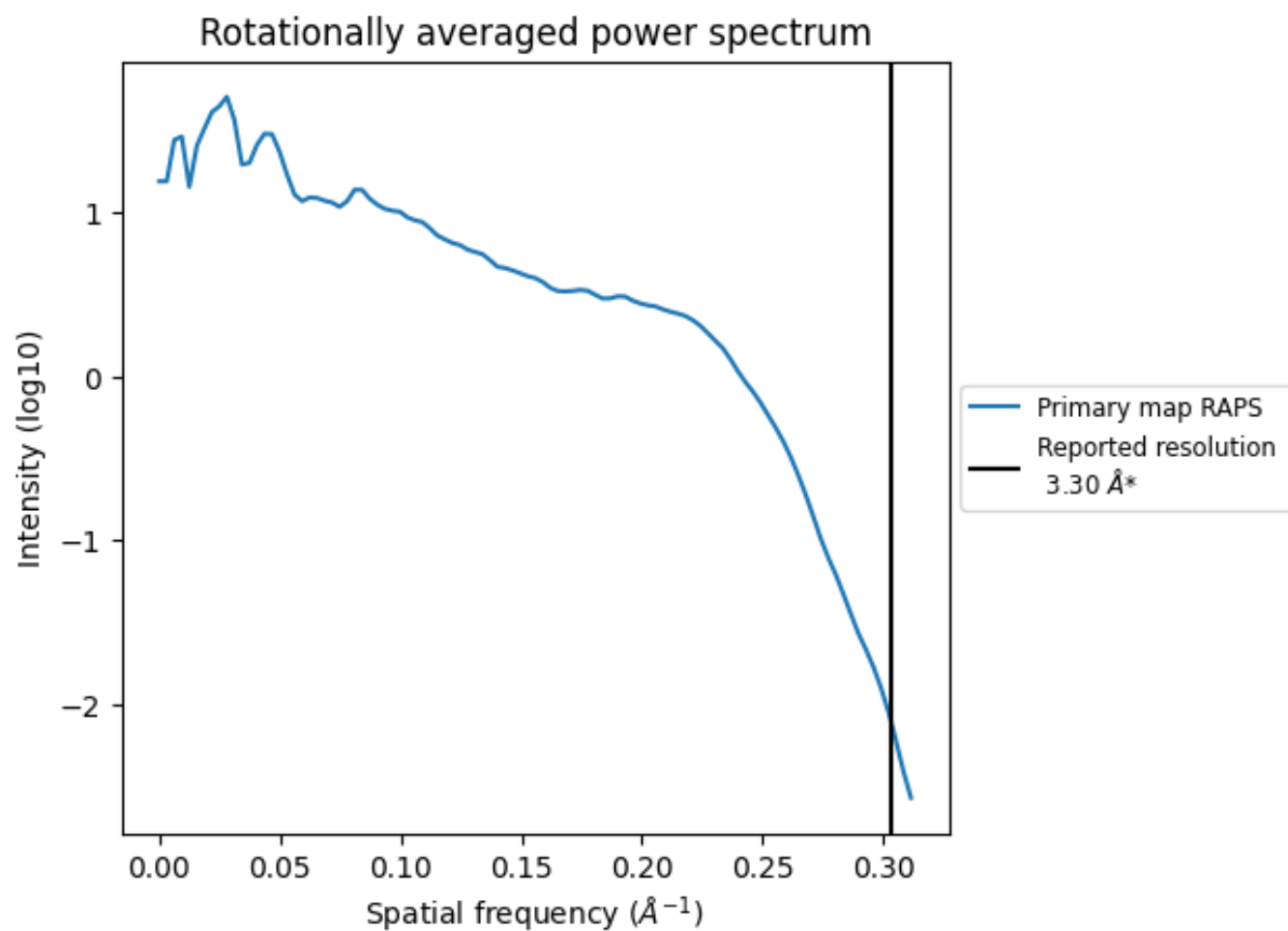
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 272  $\text{nm}^3$ ; this corresponds to an approximate mass of 245 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 0.303 Å<sup>-1</sup>

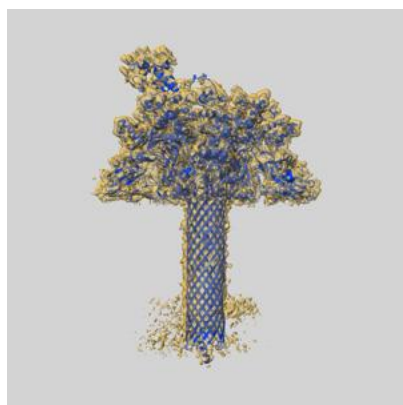
## 8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

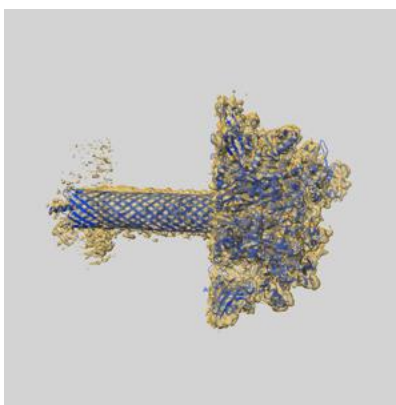
## 9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-23066 and PDB model 7KXR. Per-residue inclusion information can be found in [section 3](#) on [page 5](#).

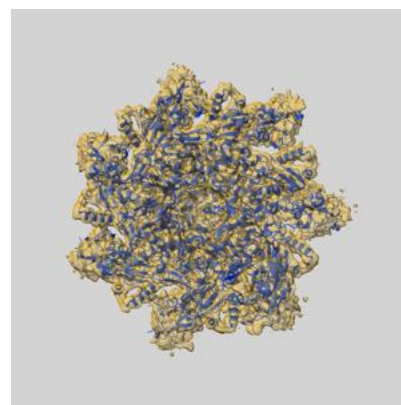
### 9.1 Map-model overlay [i](#)



X



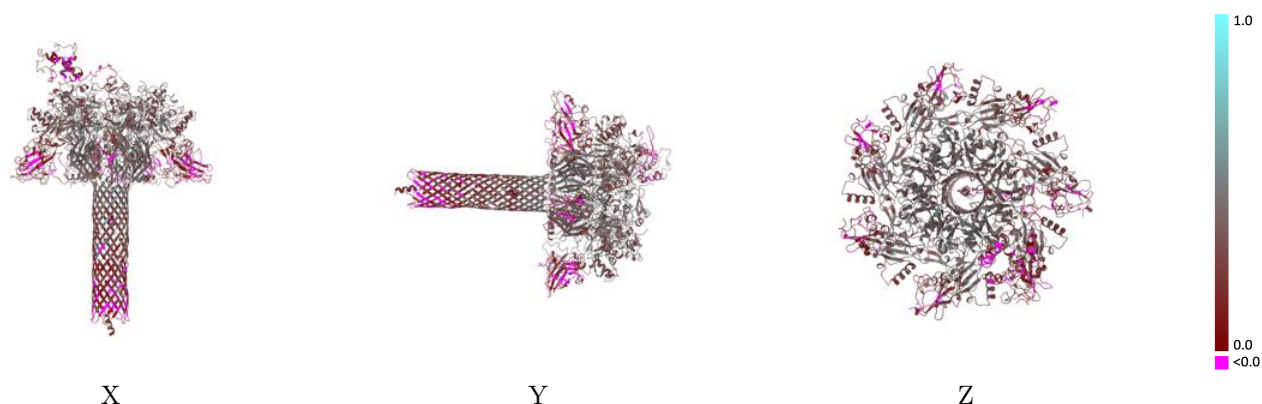
Y



Z

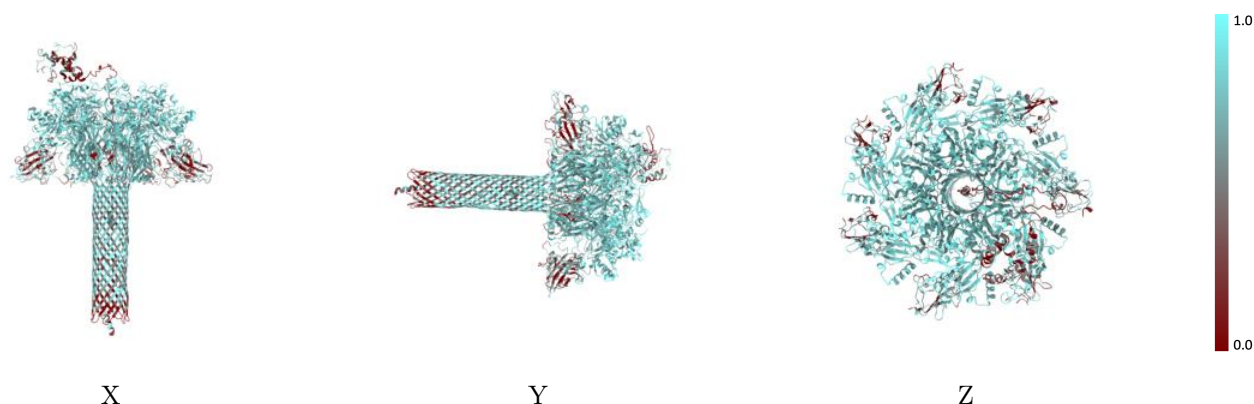
The images above show the 3D surface view of the map at the recommended contour level 1.6 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model [i](#)



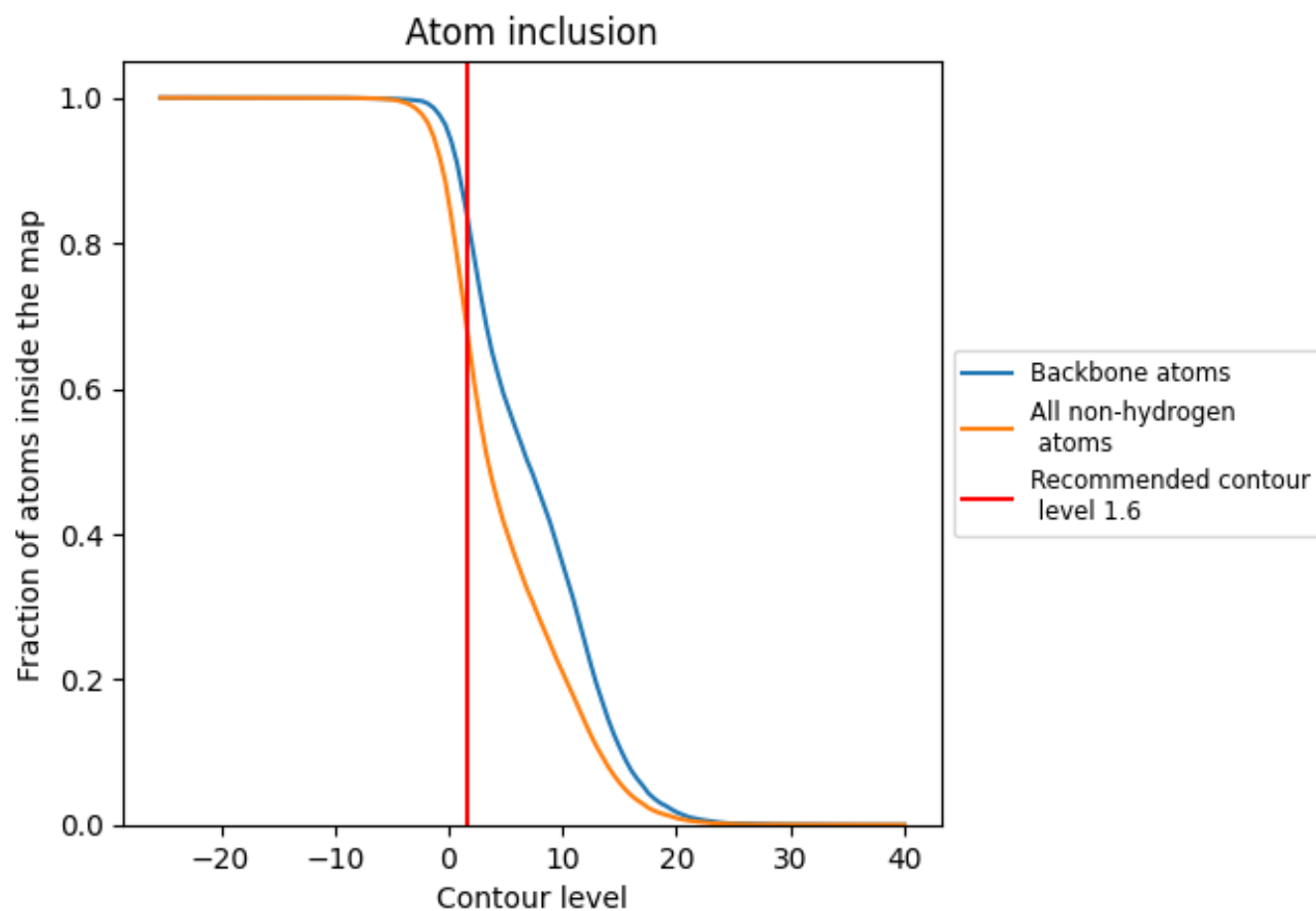
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (1.6).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 68% 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 (1.6) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.6841	<div></div> 0.3150
A	<div></div> 0.7035	<div></div> 0.3230
B	<div></div> 0.6950	<div></div> 0.3250
C	<div></div> 0.6852	<div></div> 0.3250
D	<div></div> 0.7071	<div></div> 0.3260
E	<div></div> 0.7037	<div></div> 0.3220
F	<div></div> 0.7291	<div></div> 0.3240
G	<div></div> 0.7273	<div></div> 0.3380
L	<div></div> 0.2853	<div></div> 0.1300

1.0

0.0

<0.0