



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 01:49 PM BST

PDB ID : 2J9I
EMDB ID: : EMD-1290
Title : Lengsin is a survivor of an ancient family of class I glutamine synthetases in eukaryotes that has undergone evolutionary re- engineering for a tissue-specific role in the vertebrate eye lens.
Authors : Wyatt, K.; White, H.E.; Wang, L.; Bateman, O.A.; Slingsby, C.; Orlova, E.V.; Wistow, G.
Deposited on : 2006-11-09
Resolution : 17.00 Å(reported)
Based on PDB ID : 1F52

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.

For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.

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

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : trunk27241

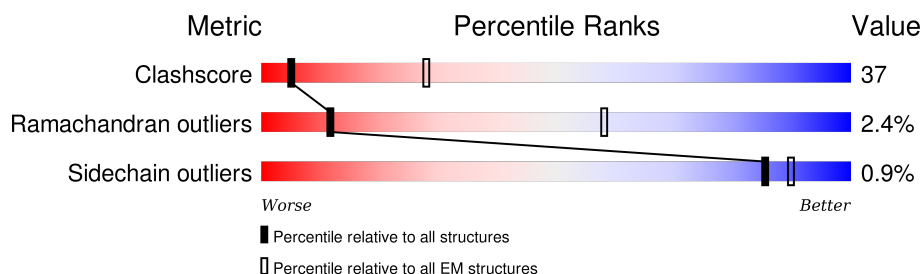
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 17.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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 $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	A	421	81% 18% .
1	B	421	81% 18% .
1	C	421	82% 17% .
1	D	421	82% 17% .
1	E	421	82% 17% .
1	F	421	82% 17% .
1	G	421	81% 18% .
1	H	421	82% 17% .
1	I	421	81% 18% .

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Mol	Chain	Length	Quality of chain
1	J	421	<div><div></div><div>81%</div><div>18%</div><div></div></div>
1	K	421	<div><div></div><div>82%</div><div>17%</div><div></div></div>
1	L	421	<div><div></div><div>81%</div><div>18%</div><div></div></div>

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 33420 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.

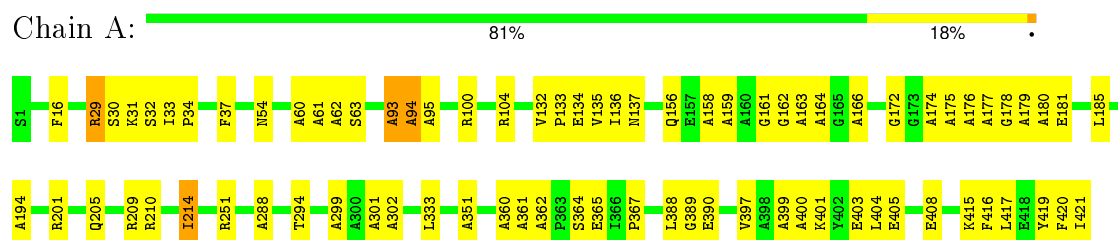
- Molecule 1 is a protein called GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	B	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	C	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	D	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	E	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	F	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	G	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	H	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	I	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	J	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	K	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		
1	L	421	Total	C	N	O	S	0	0
			2785	1731	492	554	8		

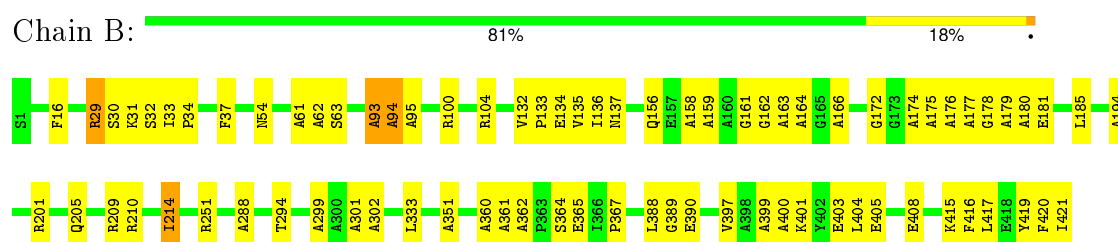
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

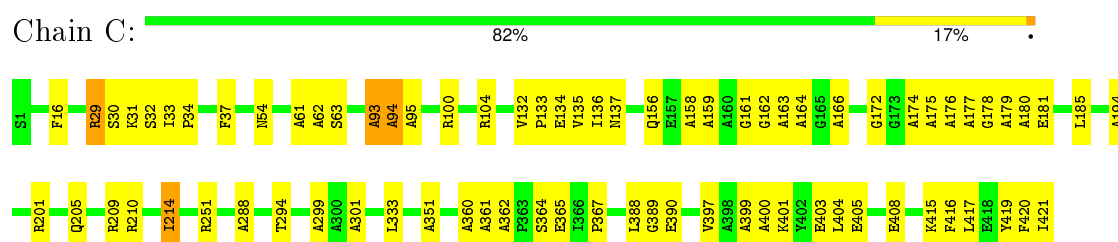
• Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



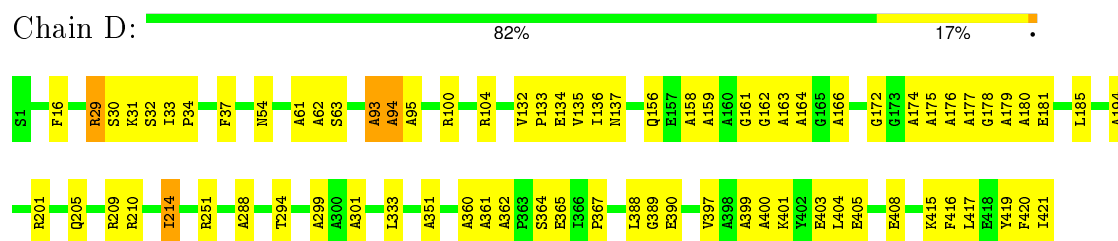
• Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



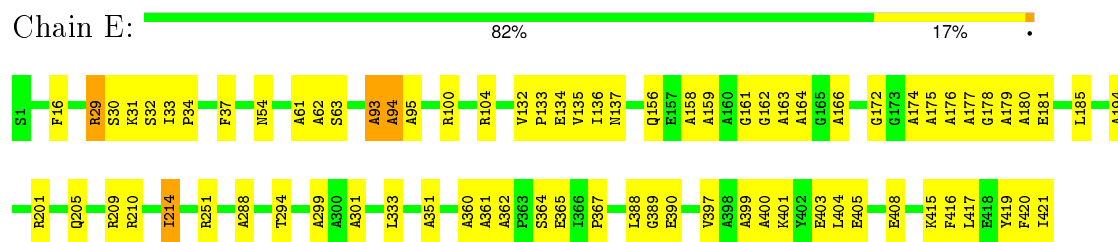
• Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



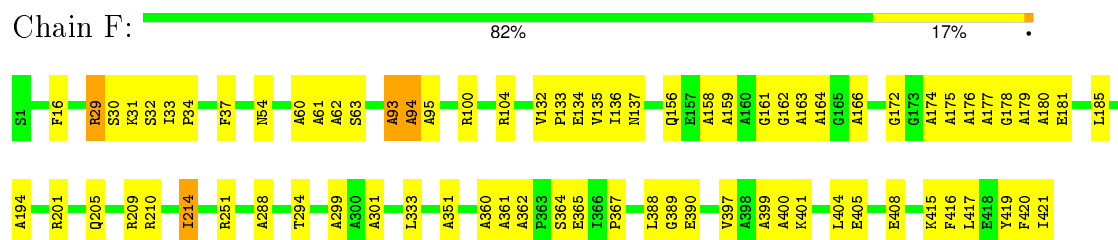
• Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



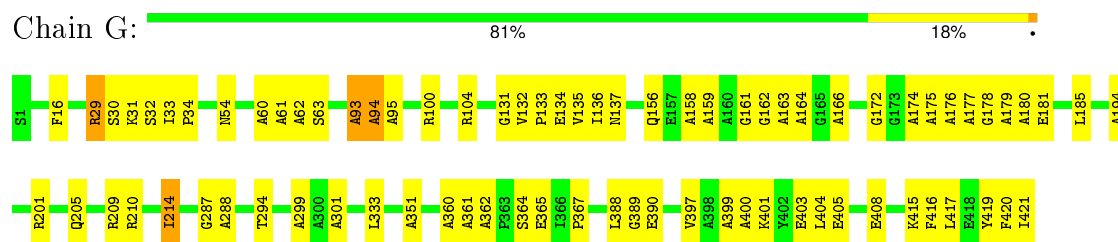
• Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



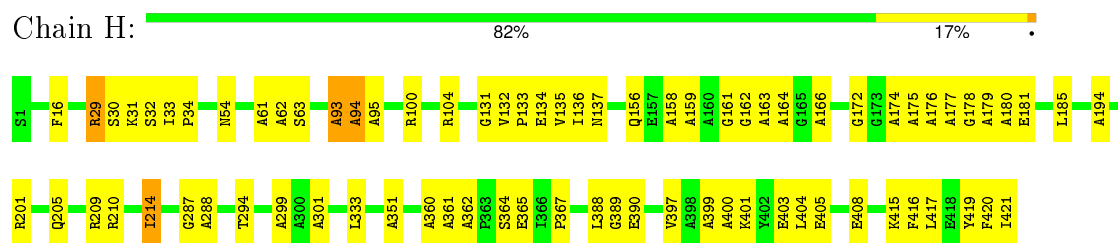
- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



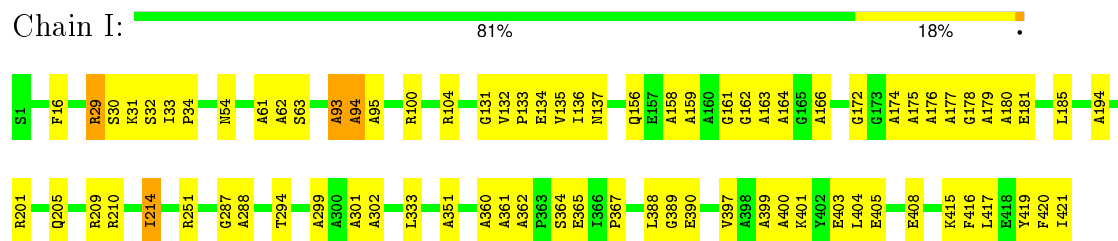
- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



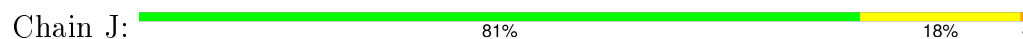
- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1

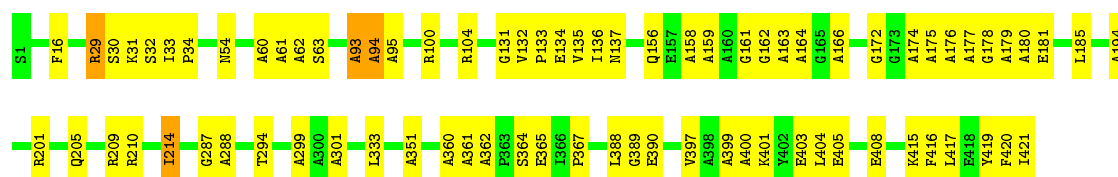


- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1



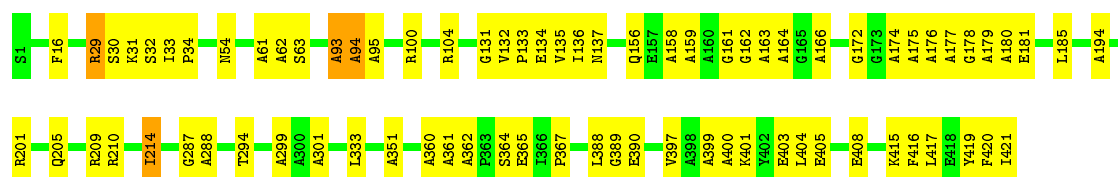
- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1





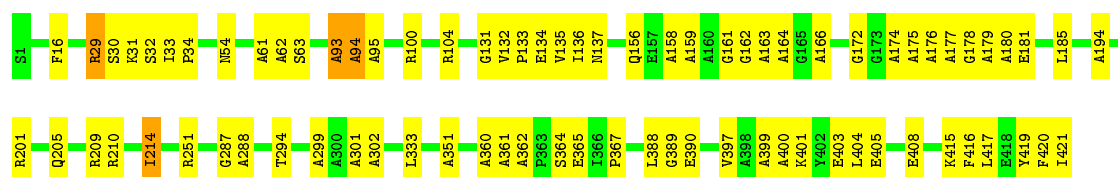
- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1

Chain K: 82% 17% •



- Molecule 1: GLUTAMATE-AMMONIA LIGASE DOMAIN-CONTAINING PROTEIN 1

Chain L: 81% 18% •



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	PHASE FLIPPING	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	Not provided	Depositor
Minimum defocus (nm)	170	Depositor
Maximum defocus (nm)	320	Depositor
Magnification	50000	Depositor
Image detector	Not provided	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
1	A	0.69	0/2824	1.03	9/3853 (0.2%)
1	B	0.69	0/2824	1.03	9/3853 (0.2%)
1	C	0.69	0/2824	1.03	9/3853 (0.2%)
1	D	0.69	0/2824	1.03	9/3853 (0.2%)
1	E	0.69	0/2824	1.03	9/3853 (0.2%)
1	F	0.69	0/2824	1.03	9/3853 (0.2%)
1	G	0.69	0/2824	1.03	8/3853 (0.2%)
1	H	0.69	0/2824	1.03	8/3853 (0.2%)
1	I	0.69	0/2824	1.03	9/3853 (0.2%)
1	J	0.69	0/2824	1.03	8/3853 (0.2%)
1	K	0.69	0/2824	1.03	8/3853 (0.2%)
1	L	0.69	0/2824	1.03	9/3853 (0.2%)
All	All	0.69	0/33888	1.03	104/46236 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	3
1	B	0	3
1	C	0	3
1	D	0	3
1	E	0	3
1	F	0	3
1	G	0	3
1	H	0	3
1	I	0	3
1	J	0	3
1	K	0	3
1	L	0	3
All	All	0	36

There are no bond length outliers.

All (104) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	201	ARG	NE-CZ-NH1	7.22	123.91	120.30
1	F	201	ARG	NE-CZ-NH1	7.22	123.91	120.30
1	A	201	ARG	NE-CZ-NH1	7.19	123.89	120.30
1	D	201	ARG	NE-CZ-NH1	7.19	123.89	120.30
1	B	201	ARG	NE-CZ-NH1	7.15	123.88	120.30
1	E	201	ARG	NE-CZ-NH1	7.15	123.88	120.30
1	G	201	ARG	NE-CZ-NH1	7.02	123.81	120.30
1	J	201	ARG	NE-CZ-NH1	7.02	123.81	120.30
1	H	201	ARG	NE-CZ-NH1	6.98	123.79	120.30
1	K	201	ARG	NE-CZ-NH1	6.98	123.79	120.30
1	I	201	ARG	NE-CZ-NH1	6.97	123.78	120.30
1	L	201	ARG	NE-CZ-NH1	6.97	123.78	120.30
1	B	94	ALA	CB-CA-C	6.20	119.39	110.10
1	E	94	ALA	CB-CA-C	6.20	119.39	110.10
1	A	94	ALA	CB-CA-C	6.18	119.38	110.10
1	D	94	ALA	CB-CA-C	6.18	119.38	110.10
1	C	94	ALA	CB-CA-C	6.18	119.36	110.10
1	F	94	ALA	CB-CA-C	6.18	119.36	110.10
1	I	94	ALA	CB-CA-C	6.16	119.34	110.10
1	L	94	ALA	CB-CA-C	6.16	119.34	110.10
1	H	94	ALA	CB-CA-C	6.14	119.31	110.10
1	K	94	ALA	CB-CA-C	6.14	119.31	110.10
1	G	94	ALA	CB-CA-C	6.14	119.31	110.10
1	J	94	ALA	CB-CA-C	6.14	119.31	110.10
1	C	104	ARG	NE-CZ-NH1	6.06	123.33	120.30
1	F	104	ARG	NE-CZ-NH1	6.06	123.33	120.30
1	A	104	ARG	NE-CZ-NH1	6.03	123.31	120.30
1	D	104	ARG	NE-CZ-NH1	6.03	123.31	120.30
1	B	104	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	E	104	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	G	104	ARG	NE-CZ-NH1	5.98	123.29	120.30
1	J	104	ARG	NE-CZ-NH1	5.98	123.29	120.30
1	I	104	ARG	NE-CZ-NH1	5.96	123.28	120.30
1	L	104	ARG	NE-CZ-NH1	5.96	123.28	120.30
1	H	104	ARG	NE-CZ-NH1	5.95	123.27	120.30
1	K	104	ARG	NE-CZ-NH1	5.95	123.27	120.30
1	I	29	ARG	NE-CZ-NH1	5.73	123.17	120.30
1	L	29	ARG	NE-CZ-NH1	5.73	123.17	120.30
1	H	29	ARG	NE-CZ-NH1	5.73	123.16	120.30
1	K	29	ARG	NE-CZ-NH1	5.73	123.16	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	29	ARG	NE-CZ-NH1	5.72	123.16	120.30
1	E	29	ARG	NE-CZ-NH1	5.72	123.16	120.30
1	G	29	ARG	NE-CZ-NH1	5.72	123.16	120.30
1	J	29	ARG	NE-CZ-NH1	5.72	123.16	120.30
1	C	29	ARG	NE-CZ-NH1	5.70	123.15	120.30
1	F	29	ARG	NE-CZ-NH1	5.70	123.15	120.30
1	A	29	ARG	NE-CZ-NH1	5.68	123.14	120.30
1	D	29	ARG	NE-CZ-NH1	5.68	123.14	120.30
1	B	100	ARG	NE-CZ-NH2	5.29	122.94	120.30
1	E	100	ARG	NE-CZ-NH2	5.29	122.94	120.30
1	A	100	ARG	NE-CZ-NH2	5.28	122.94	120.30
1	D	100	ARG	NE-CZ-NH2	5.28	122.94	120.30
1	C	100	ARG	NE-CZ-NH2	5.24	122.92	120.30
1	F	100	ARG	NE-CZ-NH2	5.24	122.92	120.30
1	H	100	ARG	NE-CZ-NH2	5.24	122.92	120.30
1	K	100	ARG	NE-CZ-NH2	5.24	122.92	120.30
1	G	100	ARG	NE-CZ-NH2	5.23	122.92	120.30
1	J	100	ARG	NE-CZ-NH2	5.23	122.92	120.30
1	G	389	GLY	C-N-CA	5.23	134.77	121.70
1	J	389	GLY	C-N-CA	5.23	134.77	121.70
1	B	389	GLY	C-N-CA	5.22	134.75	121.70
1	E	389	GLY	C-N-CA	5.22	134.75	121.70
1	H	389	GLY	C-N-CA	5.22	134.74	121.70
1	K	389	GLY	C-N-CA	5.22	134.74	121.70
1	C	389	GLY	C-N-CA	5.21	134.74	121.70
1	F	389	GLY	C-N-CA	5.21	134.74	121.70
1	I	100	ARG	NE-CZ-NH2	5.21	122.91	120.30
1	L	100	ARG	NE-CZ-NH2	5.21	122.91	120.30
1	I	389	GLY	C-N-CA	5.21	134.73	121.70
1	L	389	GLY	C-N-CA	5.21	134.73	121.70
1	A	389	GLY	C-N-CA	5.21	134.72	121.70
1	D	389	GLY	C-N-CA	5.21	134.72	121.70
1	B	251	ARG	NE-CZ-NH1	5.15	122.88	120.30
1	E	251	ARG	NE-CZ-NH1	5.15	122.88	120.30
1	A	210	ARG	NE-CZ-NH2	5.12	122.86	120.30
1	D	210	ARG	NE-CZ-NH2	5.12	122.86	120.30
1	I	210	ARG	NE-CZ-NH2	5.11	122.85	120.30
1	L	210	ARG	NE-CZ-NH2	5.11	122.85	120.30
1	G	210	ARG	NE-CZ-NH2	5.10	122.85	120.30
1	J	210	ARG	NE-CZ-NH2	5.10	122.85	120.30
1	C	210	ARG	NE-CZ-NH2	5.09	122.84	120.30
1	F	210	ARG	NE-CZ-NH2	5.09	122.84	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	H	210	ARG	NE-CZ-NH2	5.09	122.84	120.30
1	K	210	ARG	NE-CZ-NH2	5.09	122.84	120.30
1	A	251	ARG	NE-CZ-NH1	5.08	122.84	120.30
1	D	251	ARG	NE-CZ-NH1	5.08	122.84	120.30
1	A	180	ALA	C-N-CA	5.04	134.30	121.70
1	D	180	ALA	C-N-CA	5.04	134.30	121.70
1	C	180	ALA	C-N-CA	5.02	134.25	121.70
1	C	251	ARG	NE-CZ-NH1	5.02	122.81	120.30
1	F	180	ALA	C-N-CA	5.02	134.25	121.70
1	F	251	ARG	NE-CZ-NH1	5.02	122.81	120.30
1	B	180	ALA	C-N-CA	5.02	134.25	121.70
1	E	180	ALA	C-N-CA	5.02	134.25	121.70
1	I	180	ALA	C-N-CA	5.02	134.25	121.70
1	L	180	ALA	C-N-CA	5.02	134.25	121.70
1	B	210	ARG	NE-CZ-NH2	5.02	122.81	120.30
1	E	210	ARG	NE-CZ-NH2	5.02	122.81	120.30
1	I	251	ARG	NE-CZ-NH1	5.01	122.81	120.30
1	L	251	ARG	NE-CZ-NH1	5.01	122.81	120.30
1	H	180	ALA	C-N-CA	5.00	134.21	121.70
1	K	180	ALA	C-N-CA	5.00	134.21	121.70
1	G	180	ALA	C-N-CA	5.00	134.20	121.70
1	J	180	ALA	C-N-CA	5.00	134.20	121.70

There are no chirality outliers.

All (36) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	362	ALA	Peptide
1	A	364	SER	Peptide
1	A	388	LEU	Peptide
1	B	362	ALA	Peptide
1	B	364	SER	Peptide
1	B	388	LEU	Peptide
1	C	362	ALA	Peptide
1	C	364	SER	Peptide
1	C	388	LEU	Peptide
1	D	362	ALA	Peptide
1	D	364	SER	Peptide
1	D	388	LEU	Peptide
1	E	362	ALA	Peptide
1	E	364	SER	Peptide
1	E	388	LEU	Peptide

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Mol	Chain	Res	Type	Group
1	F	362	ALA	Peptide
1	F	364	SER	Peptide
1	F	388	LEU	Peptide
1	G	362	ALA	Peptide
1	G	364	SER	Peptide
1	G	388	LEU	Peptide
1	H	362	ALA	Peptide
1	H	364	SER	Peptide
1	H	388	LEU	Peptide
1	I	362	ALA	Peptide
1	I	364	SER	Peptide
1	I	388	LEU	Peptide
1	J	362	ALA	Peptide
1	J	364	SER	Peptide
1	J	388	LEU	Peptide
1	K	362	ALA	Peptide
1	K	364	SER	Peptide
1	K	388	LEU	Peptide
1	L	362	ALA	Peptide
1	L	364	SER	Peptide
1	L	388	LEU	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2785	0	2714	426	0
1	B	2785	0	2714	427	0
1	C	2785	0	2714	424	0
1	D	2785	0	2714	427	0
1	E	2785	0	2714	425	0
1	F	2785	0	2714	424	0
1	G	2785	0	2708	389	0
1	H	2785	0	2708	386	0
1	I	2785	0	2708	399	0
1	J	2785	0	2708	388	0
1	K	2785	0	2708	386	0
1	L	2785	0	2708	397	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	33420	0	32532	2467	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 37.

All (2467) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:133:PRO:HD2	1:F:162:GLY:CA	1.22	1.66
1:E:37:PHE:HE1	1:F:185:LEU:CD2	1.02	1.64
1:A:162:GLY:CA	1:F:133:PRO:HD2	1.22	1.63
1:I:162:GLY:CA	1:J:133:PRO:HD2	1.17	1.62
1:D:133:PRO:HD2	1:E:162:GLY:CA	1.22	1.62
1:D:37:PHE:HE1	1:E:185:LEU:CD2	1.02	1.62
1:H:162:GLY:CA	1:I:133:PRO:HD2	1.17	1.62
1:A:185:LEU:CD2	1:F:37:PHE:HE1	1.02	1.61
1:J:162:GLY:CA	1:K:133:PRO:HD2	1.17	1.58
1:A:133:PRO:HD2	1:B:162:GLY:CA	1.22	1.58
1:C:37:PHE:HE1	1:D:185:LEU:CD2	1.02	1.58
1:C:133:PRO:HD2	1:D:162:GLY:CA	1.22	1.57
1:G:162:GLY:CA	1:H:133:PRO:HD2	1.17	1.57
1:E:37:PHE:CE1	1:F:185:LEU:CD2	1.87	1.57
1:A:37:PHE:HE1	1:B:185:LEU:CD2	1.02	1.57
1:A:37:PHE:CE1	1:B:185:LEU:CD2	1.87	1.56
1:B:133:PRO:HD2	1:C:162:GLY:CA	1.22	1.56
1:D:37:PHE:CE1	1:E:185:LEU:CD2	1.87	1.55
1:B:37:PHE:HE1	1:C:185:LEU:CD2	1.02	1.55
1:K:162:GLY:CA	1:L:133:PRO:HD2	1.17	1.54
1:G:133:PRO:HD2	1:L:162:GLY:CA	1.17	1.54
1:B:37:PHE:CE1	1:C:185:LEU:CD2	1.87	1.54
1:A:185:LEU:CD2	1:F:37:PHE:CE1	1.87	1.54
1:E:134:GLU:HG2	1:F:158:ALA:CB	1.06	1.53
1:I:177:ALA:CA	1:J:32:SER:N	1.72	1.52
1:H:162:GLY:HA2	1:I:133:PRO:CD	1.37	1.52
1:J:162:GLY:HA2	1:K:133:PRO:CD	1.37	1.52
1:K:162:GLY:HA2	1:L:133:PRO:CD	1.37	1.52
1:G:177:ALA:CA	1:H:32:SER:N	1.72	1.51
1:B:134:GLU:HG2	1:C:158:ALA:CB	1.06	1.51
1:C:37:PHE:CE1	1:D:185:LEU:CD2	1.87	1.51
1:I:162:GLY:HA2	1:J:133:PRO:CD	1.37	1.50
1:A:158:ALA:CB	1:F:134:GLU:HG2	1.06	1.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:177:ALA:CA	1:I:32:SER:N	1.72	1.50
1:C:134:GLU:HG2	1:D:158:ALA:CB	1.06	1.50
1:A:134:GLU:HG2	1:B:158:ALA:CB	1.06	1.50
1:G:32:SER:N	1:L:177:ALA:CA	1.72	1.50
1:D:134:GLU:HG2	1:E:158:ALA:CB	1.06	1.49
1:G:162:GLY:HA2	1:H:133:PRO:CD	1.37	1.49
1:J:177:ALA:CA	1:K:32:SER:N	1.72	1.49
1:B:133:PRO:CG	1:C:163:ALA:H	1.26	1.49
1:D:133:PRO:CG	1:E:163:ALA:H	1.26	1.48
1:G:133:PRO:CD	1:L:162:GLY:HA2	1.37	1.48
1:G:133:PRO:CG	1:L:163:ALA:H	1.27	1.48
1:G:163:ALA:H	1:H:133:PRO:CG	1.27	1.48
1:A:163:ALA:H	1:F:133:PRO:CG	1.26	1.47
1:D:32:SER:H	1:E:177:ALA:CA	1.26	1.47
1:K:177:ALA:CA	1:L:32:SER:N	1.72	1.47
1:I:163:ALA:H	1:J:133:PRO:CG	1.27	1.47
1:E:133:PRO:CG	1:F:163:ALA:H	1.26	1.47
1:E:32:SER:H	1:F:177:ALA:CA	1.26	1.46
1:A:32:SER:H	1:B:177:ALA:CA	1.26	1.46
1:C:32:SER:H	1:D:177:ALA:CA	1.26	1.46
1:B:32:SER:N	1:C:177:ALA:CA	1.76	1.46
1:H:163:ALA:H	1:I:133:PRO:CG	1.27	1.46
1:C:133:PRO:CG	1:D:163:ALA:H	1.26	1.46
1:K:163:ALA:H	1:L:133:PRO:CG	1.27	1.46
1:K:162:GLY:CA	1:L:133:PRO:CD	1.92	1.46
1:J:163:ALA:H	1:K:133:PRO:CG	1.27	1.45
1:A:162:GLY:HA2	1:F:133:PRO:CD	1.45	1.45
1:C:32:SER:N	1:D:177:ALA:CA	1.76	1.45
1:D:133:PRO:CD	1:E:162:GLY:HA2	1.45	1.44
1:A:133:PRO:CG	1:B:163:ALA:H	1.26	1.44
1:I:158:ALA:CB	1:J:134:GLU:HG2	0.98	1.44
1:H:158:ALA:CB	1:I:134:GLU:HG2	0.98	1.44
1:B:32:SER:H	1:C:177:ALA:CA	1.26	1.44
1:K:158:ALA:CB	1:L:134:GLU:HG2	0.98	1.44
1:E:32:SER:N	1:F:177:ALA:CA	1.76	1.43
1:A:177:ALA:CA	1:F:32:SER:N	1.76	1.43
1:D:32:SER:N	1:E:177:ALA:CA	1.76	1.43
1:E:133:PRO:CD	1:F:162:GLY:HA2	1.45	1.43
1:J:162:GLY:CA	1:K:133:PRO:CD	1.92	1.43
1:G:134:GLU:HG2	1:L:158:ALA:CB	0.98	1.43
1:A:177:ALA:CA	1:F:32:SER:H	1.26	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:133:PRO:CD	1:B:162:GLY:HA2	1.45	1.43
1:C:133:PRO:CD	1:D:162:GLY:HA2	1.45	1.43
1:I:162:GLY:CA	1:J:133:PRO:CD	1.92	1.42
1:B:133:PRO:CD	1:C:162:GLY:HA2	1.45	1.41
1:A:162:GLY:CA	1:F:133:PRO:CD	1.99	1.41
1:B:31:LYS:CB	1:C:176:ALA:O	1.69	1.41
1:G:133:PRO:CD	1:L:162:GLY:CA	1.92	1.41
1:C:31:LYS:CB	1:D:176:ALA:O	1.69	1.40
1:A:32:SER:N	1:B:177:ALA:CA	1.76	1.40
1:G:214:ILE:CD1	1:L:161:GLY:O	1.69	1.40
1:A:164:ALA:HB1	1:F:209:ARG:NH2	1.09	1.40
1:D:133:PRO:CD	1:E:162:GLY:CA	1.98	1.40
1:G:164:ALA:HB1	1:H:209:ARG:NH2	1.07	1.40
1:G:209:ARG:NH2	1:L:164:ALA:HB1	1.07	1.40
1:J:161:GLY:O	1:K:214:ILE:CD1	1.69	1.39
1:A:176:ALA:O	1:F:31:LYS:CB	1.69	1.39
1:E:133:PRO:CD	1:F:162:GLY:CA	1.99	1.39
1:E:209:ARG:NH2	1:F:164:ALA:HB1	1.09	1.39
1:E:408:GLU:OE2	1:J:419:TYR:CZ	1.76	1.39
1:K:161:GLY:O	1:L:214:ILE:CD1	1.69	1.38
1:D:419:TYR:HB3	1:I:401:LYS:CA	1.53	1.38
1:E:419:TYR:HB3	1:J:401:LYS:CA	1.53	1.38
1:G:161:GLY:O	1:H:214:ILE:CD1	1.69	1.38
1:H:164:ALA:HB1	1:I:209:ARG:NH2	1.07	1.38
1:A:209:ARG:NH2	1:B:164:ALA:HB1	1.09	1.38
1:G:162:GLY:CA	1:H:133:PRO:CD	1.92	1.38
1:A:31:LYS:CB	1:B:176:ALA:O	1.68	1.38
1:G:164:ALA:CB	1:H:209:ARG:HH21	1.36	1.38
1:G:209:ARG:HH21	1:L:164:ALA:CB	1.36	1.38
1:K:164:ALA:HB1	1:L:209:ARG:NH2	1.07	1.38
1:B:209:ARG:HH21	1:C:164:ALA:CB	1.37	1.38
1:D:31:LYS:CB	1:E:176:ALA:O	1.68	1.38
1:H:162:GLY:CA	1:I:133:PRO:CD	1.92	1.38
1:E:31:LYS:CB	1:F:176:ALA:O	1.69	1.37
1:E:419:TYR:CZ	1:J:408:GLU:OE2	1.78	1.37
1:F:408:GLU:OE2	1:K:419:TYR:CZ	1.76	1.37
1:I:164:ALA:CB	1:J:209:ARG:HH21	1.36	1.37
1:A:209:ARG:HH21	1:B:164:ALA:CB	1.37	1.37
1:D:408:GLU:OE2	1:I:419:TYR:CZ	1.76	1.37
1:C:419:TYR:HB3	1:H:401:LYS:CA	1.53	1.37
1:I:164:ALA:HB1	1:J:209:ARG:NH2	1.07	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:419:TYR:HB3	1:L:401:LYS:CA	1.53	1.37
1:A:408:GLU:OE2	1:L:419:TYR:CZ	1.76	1.37
1:B:408:GLU:OE2	1:G:419:TYR:CZ	1.76	1.37
1:I:161:GLY:O	1:J:214:ILE:CD1	1.69	1.37
1:H:161:GLY:O	1:I:214:ILE:CD1	1.69	1.37
1:H:164:ALA:CB	1:I:209:ARG:HH21	1.36	1.37
1:J:164:ALA:HB1	1:K:209:ARG:NH2	1.07	1.37
1:B:419:TYR:HB3	1:G:401:LYS:CA	1.53	1.37
1:E:421:ILE:OXT	1:J:397:VAL:HG13	1.19	1.36
1:B:419:TYR:CZ	1:G:408:GLU:OE2	1.78	1.36
1:C:209:ARG:HH21	1:D:164:ALA:CB	1.37	1.36
1:D:31:LYS:HA	1:E:176:ALA:C	1.46	1.36
1:A:133:PRO:CD	1:B:162:GLY:CA	1.98	1.36
1:D:419:TYR:CZ	1:I:408:GLU:OE2	1.78	1.36
1:K:164:ALA:CB	1:L:209:ARG:HH21	1.36	1.36
1:A:419:TYR:CZ	1:L:408:GLU:OE2	1.78	1.36
1:F:419:TYR:HB3	1:K:401:LYS:CA	1.53	1.36
1:C:133:PRO:CD	1:D:162:GLY:CA	1.99	1.36
1:B:31:LYS:CG	1:C:176:ALA:O	1.73	1.36
1:F:419:TYR:CZ	1:K:408:GLU:OE2	1.78	1.36
1:E:31:LYS:HA	1:F:176:ALA:C	1.46	1.36
1:A:176:ALA:C	1:F:31:LYS:HA	1.46	1.36
1:A:31:LYS:HA	1:B:176:ALA:C	1.46	1.36
1:B:209:ARG:NH2	1:C:164:ALA:HB1	1.09	1.36
1:J:164:ALA:CB	1:K:209:ARG:HH21	1.36	1.36
1:C:408:GLU:OE2	1:H:419:TYR:CZ	1.76	1.36
1:C:214:ILE:HD13	1:D:161:GLY:O	1.18	1.36
1:J:177:ALA:HA	1:K:31:LYS:C	1.46	1.36
1:A:164:ALA:CB	1:F:209:ARG:HH21	1.37	1.36
1:C:209:ARG:NH2	1:D:164:ALA:HB1	1.09	1.36
1:D:209:ARG:NH2	1:E:164:ALA:HB1	1.09	1.36
1:A:31:LYS:CG	1:B:176:ALA:O	1.73	1.35
1:K:177:ALA:HA	1:L:32:SER:N	1.04	1.35
1:E:209:ARG:HH21	1:F:164:ALA:CB	1.37	1.35
1:C:419:TYR:CZ	1:H:408:GLU:OE2	1.78	1.35
1:D:209:ARG:HH21	1:E:164:ALA:CB	1.37	1.35
1:G:29:ARG:HB3	1:L:175:ALA:CB	1.55	1.35
1:G:32:SER:N	1:L:177:ALA:HA	1.04	1.35
1:K:177:ALA:HA	1:L:31:LYS:C	1.46	1.35
1:I:177:ALA:HA	1:J:32:SER:N	1.04	1.35
1:D:421:ILE:C	1:I:397:VAL:CG1	1.93	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:421:ILE:C	1:K:397:VAL:CG1	1.93	1.35
1:D:32:SER:N	1:E:177:ALA:HA	1.02	1.35
1:B:133:PRO:CD	1:C:162:GLY:CA	1.99	1.35
1:H:177:ALA:HA	1:I:32:SER:N	1.04	1.35
1:K:175:ALA:CB	1:L:29:ARG:HB3	1.55	1.35
1:E:32:SER:N	1:F:177:ALA:HA	1.02	1.35
1:H:175:ALA:CB	1:I:29:ARG:HB3	1.55	1.35
1:C:31:LYS:CG	1:D:176:ALA:O	1.73	1.34
1:A:176:ALA:O	1:F:31:LYS:CG	1.73	1.34
1:K:161:GLY:C	1:L:131:GLY:O	1.66	1.34
1:J:175:ALA:CB	1:K:29:ARG:HB3	1.55	1.34
1:I:175:ALA:CB	1:J:29:ARG:HB3	1.55	1.34
1:G:131:GLY:O	1:L:161:GLY:C	1.66	1.34
1:D:421:ILE:OXT	1:I:397:VAL:HG13	1.19	1.34
1:D:31:LYS:CG	1:E:176:ALA:O	1.73	1.34
1:C:31:LYS:HA	1:D:176:ALA:C	1.46	1.34
1:G:175:ALA:CB	1:H:29:ARG:HB3	1.55	1.34
1:C:32:SER:N	1:D:177:ALA:HA	1.02	1.34
1:A:177:ALA:HA	1:F:32:SER:N	1.02	1.33
1:G:161:GLY:C	1:H:131:GLY:O	1.66	1.33
1:G:177:ALA:HA	1:H:31:LYS:C	1.46	1.33
1:J:177:ALA:HA	1:K:32:SER:N	1.04	1.33
1:B:31:LYS:HA	1:C:176:ALA:C	1.46	1.33
1:G:177:ALA:HA	1:H:32:SER:N	1.04	1.33
1:I:177:ALA:HA	1:J:31:LYS:C	1.46	1.33
1:D:214:ILE:HD13	1:E:161:GLY:O	1.18	1.33
1:E:31:LYS:CG	1:F:176:ALA:O	1.73	1.32
1:A:32:SER:N	1:B:177:ALA:HA	1.02	1.32
1:B:214:ILE:HD13	1:C:161:GLY:O	1.18	1.32
1:B:32:SER:N	1:C:177:ALA:HA	1.02	1.32
1:G:158:ALA:HA	1:H:133:PRO:O	1.28	1.32
1:A:37:PHE:CE1	1:B:185:LEU:HD23	1.57	1.32
1:G:31:LYS:C	1:L:177:ALA:HA	1.46	1.32
1:B:421:ILE:C	1:G:397:VAL:CG1	1.93	1.32
1:B:31:LYS:C	1:C:177:ALA:HA	1.50	1.31
1:C:419:TYR:CB	1:H:401:LYS:HA	1.60	1.31
1:E:421:ILE:C	1:J:397:VAL:CG1	1.93	1.31
1:B:419:TYR:CB	1:G:401:LYS:HA	1.60	1.31
1:H:161:GLY:C	1:I:131:GLY:O	1.66	1.31
1:J:161:GLY:C	1:K:131:GLY:O	1.66	1.31
1:H:177:ALA:HA	1:I:31:LYS:C	1.46	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:419:TYR:CB	1:I:401:LYS:HA	1.60	1.31
1:F:421:ILE:OXT	1:K:397:VAL:HG13	1.19	1.30
1:G:29:ARG:CB	1:L:175:ALA:HB2	1.61	1.30
1:J:174:ALA:CB	1:K:54:ASN:HD21	1.44	1.30
1:D:31:LYS:C	1:E:177:ALA:HA	1.50	1.30
1:A:419:TYR:CB	1:L:401:LYS:HA	1.60	1.30
1:K:175:ALA:HB2	1:L:29:ARG:CB	1.62	1.30
1:K:174:ALA:CB	1:L:54:ASN:HD21	1.44	1.30
1:G:54:ASN:HD21	1:L:174:ALA:CB	1.44	1.30
1:G:174:ALA:CB	1:H:54:ASN:HD21	1.44	1.30
1:I:161:GLY:C	1:J:131:GLY:O	1.66	1.30
1:A:214:ILE:HD13	1:B:161:GLY:O	1.18	1.30
1:A:31:LYS:C	1:B:177:ALA:HA	1.50	1.30
1:G:175:ALA:HB2	1:H:29:ARG:CB	1.61	1.30
1:I:174:ALA:CB	1:J:54:ASN:HD21	1.44	1.30
1:E:31:LYS:C	1:F:177:ALA:HA	1.50	1.29
1:H:158:ALA:HA	1:I:133:PRO:O	1.28	1.29
1:E:214:ILE:HD13	1:F:161:GLY:O	1.18	1.29
1:C:31:LYS:C	1:D:177:ALA:HA	1.50	1.29
1:F:401:LYS:CA	1:K:419:TYR:HB3	1.61	1.29
1:A:401:LYS:CA	1:L:419:TYR:HB3	1.61	1.29
1:J:175:ALA:HB2	1:K:29:ARG:CB	1.61	1.29
1:B:37:PHE:CE1	1:C:185:LEU:HD23	1.57	1.29
1:B:401:LYS:CA	1:G:419:TYR:HB3	1.61	1.29
1:B:134:GLU:CG	1:C:158:ALA:HB2	0.81	1.29
1:E:401:LYS:CA	1:J:419:TYR:HB3	1.61	1.29
1:H:175:ALA:HB2	1:I:29:ARG:CB	1.62	1.29
1:H:174:ALA:CB	1:I:54:ASN:HD21	1.44	1.29
1:A:176:ALA:O	1:F:31:LYS:HG2	1.30	1.28
1:B:31:LYS:CA	1:C:176:ALA:O	1.81	1.28
1:D:401:LYS:CA	1:I:419:TYR:HB3	1.61	1.28
1:A:397:VAL:HG13	1:L:421:ILE:OXT	1.31	1.28
1:E:134:GLU:CG	1:F:158:ALA:HB2	0.81	1.28
1:A:158:ALA:HB2	1:F:134:GLU:CG	0.81	1.28
1:C:31:LYS:CA	1:D:176:ALA:O	1.81	1.28
1:C:134:GLU:CG	1:D:158:ALA:HB2	0.81	1.28
1:G:133:PRO:O	1:L:158:ALA:HA	1.28	1.28
1:E:419:TYR:CB	1:J:401:LYS:HA	1.60	1.28
1:F:419:TYR:CB	1:K:401:LYS:HA	1.60	1.28
1:C:401:LYS:CA	1:H:419:TYR:HB3	1.61	1.28
1:I:175:ALA:HB2	1:J:29:ARG:CB	1.61	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:421:ILE:C	1:H:397:VAL:CG1	1.93	1.28
1:A:134:GLU:CG	1:B:158:ALA:HB2	0.81	1.28
1:D:134:GLU:CG	1:E:158:ALA:HB2	0.81	1.28
1:H:162:GLY:CA	1:I:214:ILE:HD11	1.63	1.28
1:C:421:ILE:OXT	1:H:397:VAL:HG13	1.19	1.28
1:I:162:GLY:N	1:J:131:GLY:O	1.67	1.27
1:J:162:GLY:N	1:K:131:GLY:O	1.67	1.27
1:G:134:GLU:CG	1:L:158:ALA:HB2	0.79	1.27
1:E:31:LYS:CA	1:F:176:ALA:O	1.81	1.27
1:G:214:ILE:HD11	1:L:162:GLY:CA	1.63	1.27
1:H:158:ALA:HB2	1:I:134:GLU:CG	0.80	1.27
1:F:401:LYS:HD3	1:K:420:PHE:CD2	1.29	1.27
1:I:158:ALA:HB2	1:J:134:GLU:CG	0.79	1.27
1:A:177:ALA:HA	1:F:31:LYS:C	1.50	1.27
1:G:162:GLY:CA	1:H:214:ILE:HD11	1.63	1.27
1:A:31:LYS:CA	1:B:176:ALA:O	1.81	1.27
1:A:161:GLY:O	1:F:214:ILE:HD13	1.18	1.27
1:D:214:ILE:CD1	1:E:161:GLY:O	1.83	1.27
1:D:31:LYS:CA	1:E:176:ALA:O	1.81	1.27
1:C:37:PHE:CE1	1:D:185:LEU:HD23	1.57	1.27
1:A:175:ALA:HB2	1:F:29:ARG:CB	1.65	1.27
1:A:161:GLY:O	1:F:214:ILE:CD1	1.83	1.26
1:B:214:ILE:HD11	1:C:162:GLY:CA	1.65	1.26
1:K:158:ALA:HB2	1:L:134:GLU:CG	0.80	1.26
1:A:29:ARG:CB	1:B:175:ALA:HB2	1.65	1.26
1:A:176:ALA:O	1:F:31:LYS:CA	1.81	1.26
1:C:214:ILE:HD11	1:D:162:GLY:CA	1.65	1.26
1:E:29:ARG:CB	1:F:175:ALA:HB2	1.65	1.26
1:D:133:PRO:O	1:E:158:ALA:HA	1.32	1.26
1:G:162:GLY:N	1:H:131:GLY:O	1.67	1.26
1:B:397:VAL:HG13	1:G:421:ILE:OXT	1.31	1.26
1:I:162:GLY:CA	1:J:214:ILE:HD11	1.63	1.26
1:A:134:GLU:CG	1:B:158:ALA:CB	1.77	1.26
1:B:401:LYS:HD3	1:G:420:PHE:CD2	1.29	1.26
1:A:133:PRO:O	1:B:158:ALA:HA	1.32	1.26
1:C:214:ILE:CD1	1:D:161:GLY:O	1.83	1.26
1:A:30:SER:N	1:B:175:ALA:HB1	1.51	1.26
1:E:214:ILE:CD1	1:F:161:GLY:O	1.83	1.25
1:D:214:ILE:HD11	1:E:162:GLY:CA	1.65	1.25
1:J:158:ALA:HA	1:K:133:PRO:O	1.28	1.25
1:B:133:PRO:O	1:C:158:ALA:HA	1.32	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:29:ARG:HB3	1:F:175:ALA:CB	1.66	1.25
1:E:397:VAL:HG13	1:J:421:ILE:OXT	1.31	1.25
1:G:131:GLY:O	1:L:162:GLY:N	1.67	1.25
1:C:401:LYS:HA	1:H:419:TYR:CB	1.65	1.25
1:A:175:ALA:HB1	1:F:30:SER:N	1.51	1.25
1:D:397:VAL:HG13	1:I:421:ILE:OXT	1.31	1.25
1:E:421:ILE:CA	1:J:397:VAL:HG11	1.57	1.25
1:A:401:LYS:HA	1:L:419:TYR:CB	1.65	1.25
1:E:214:ILE:HD11	1:F:162:GLY:CA	1.65	1.25
1:A:185:LEU:HD23	1:F:37:PHE:CE1	1.57	1.25
1:A:421:ILE:OXT	1:L:397:VAL:HG13	1.19	1.25
1:B:29:ARG:CB	1:C:175:ALA:HB2	1.65	1.25
1:H:162:GLY:N	1:I:131:GLY:O	1.67	1.25
1:B:214:ILE:CD1	1:C:161:GLY:O	1.83	1.25
1:F:401:LYS:HA	1:K:419:TYR:CB	1.65	1.25
1:D:401:LYS:HA	1:I:419:TYR:CB	1.65	1.25
1:D:29:ARG:CB	1:E:175:ALA:HB2	1.65	1.25
1:C:397:VAL:HG13	1:H:421:ILE:OXT	1.31	1.25
1:J:162:GLY:CA	1:K:214:ILE:HD11	1.63	1.25
1:A:214:ILE:HD11	1:B:162:GLY:CA	1.65	1.25
1:K:162:GLY:CA	1:L:214:ILE:HD11	1.63	1.25
1:B:401:LYS:HA	1:G:419:TYR:CB	1.65	1.25
1:B:29:ARG:HB3	1:C:175:ALA:CB	1.66	1.25
1:D:29:ARG:HB3	1:E:175:ALA:CB	1.66	1.25
1:A:162:GLY:CA	1:F:214:ILE:HD11	1.65	1.24
1:I:158:ALA:HA	1:J:133:PRO:O	1.28	1.24
1:C:31:LYS:HG2	1:D:176:ALA:O	1.30	1.24
1:C:133:PRO:O	1:D:158:ALA:HA	1.32	1.24
1:B:30:SER:N	1:C:175:ALA:HB1	1.51	1.24
1:B:62:ALA:N	1:C:301:ALA:HB2	1.52	1.24
1:A:421:ILE:C	1:L:397:VAL:CG1	1.93	1.24
1:A:175:ALA:CB	1:F:29:ARG:HB3	1.66	1.24
1:E:397:VAL:CG1	1:J:421:ILE:C	2.06	1.24
1:C:29:ARG:HB3	1:D:175:ALA:CB	1.66	1.24
1:A:301:ALA:HB2	1:F:62:ALA:N	1.53	1.24
1:F:397:VAL:HG13	1:K:421:ILE:OXT	1.31	1.24
1:E:133:PRO:O	1:F:158:ALA:HA	1.32	1.24
1:E:401:LYS:HA	1:J:419:TYR:CB	1.65	1.24
1:B:397:VAL:CG1	1:G:421:ILE:C	2.06	1.24
1:E:134:GLU:CG	1:F:158:ALA:CB	1.77	1.24
1:A:214:ILE:CD1	1:B:161:GLY:O	1.83	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:421:ILE:CA	1:K:397:VAL:HG11	1.57	1.24
1:K:162:GLY:N	1:L:131:GLY:O	1.67	1.24
1:D:421:ILE:CA	1:I:397:VAL:HG11	1.57	1.24
1:C:29:ARG:CB	1:D:175:ALA:HB2	1.65	1.24
1:A:158:ALA:HA	1:F:133:PRO:O	1.32	1.23
1:D:37:PHE:CE1	1:E:185:LEU:HD23	1.57	1.23
1:E:30:SER:N	1:F:175:ALA:HB1	1.51	1.23
1:C:397:VAL:CG1	1:H:421:ILE:C	2.06	1.23
1:H:161:GLY:O	1:I:214:ILE:HD13	1.05	1.23
1:D:401:LYS:HD3	1:I:420:PHE:CD2	1.29	1.23
1:B:421:ILE:OXT	1:G:397:VAL:HG13	1.19	1.23
1:I:161:GLY:O	1:J:214:ILE:HD13	1.05	1.23
1:A:31:LYS:HG2	1:B:176:ALA:O	1.31	1.23
1:F:397:VAL:CG1	1:K:421:ILE:C	2.06	1.23
1:K:158:ALA:HA	1:L:133:PRO:O	1.28	1.23
1:C:30:SER:N	1:D:175:ALA:HB1	1.51	1.23
1:G:161:GLY:O	1:H:214:ILE:HD13	1.05	1.22
1:E:401:LYS:HD3	1:J:420:PHE:CD2	1.29	1.22
1:A:401:LYS:HD3	1:L:420:PHE:CD2	1.29	1.22
1:C:62:ALA:N	1:D:301:ALA:HB2	1.53	1.22
1:D:30:SER:N	1:E:175:ALA:HB1	1.51	1.22
1:A:62:ALA:N	1:B:301:ALA:HB2	1.52	1.22
1:A:397:VAL:CG1	1:L:421:ILE:C	2.06	1.22
1:D:397:VAL:CG1	1:I:421:ILE:C	2.06	1.22
1:A:62:ALA:H	1:B:301:ALA:CB	1.53	1.22
1:E:62:ALA:N	1:F:301:ALA:HB2	1.52	1.22
1:A:301:ALA:CB	1:F:62:ALA:H	1.53	1.22
1:C:62:ALA:H	1:D:301:ALA:CB	1.53	1.22
1:A:29:ARG:HB3	1:B:175:ALA:CB	1.66	1.21
1:D:62:ALA:H	1:E:301:ALA:CB	1.53	1.21
1:A:421:ILE:CA	1:L:397:VAL:HG11	1.57	1.21
1:E:62:ALA:H	1:F:301:ALA:CB	1.53	1.21
1:J:161:GLY:O	1:K:214:ILE:HD13	1.05	1.21
1:B:134:GLU:CG	1:C:158:ALA:CB	1.77	1.21
1:K:175:ALA:HB1	1:L:30:SER:N	1.56	1.21
1:A:158:ALA:CB	1:F:134:GLU:CG	1.77	1.21
1:E:420:PHE:CD2	1:J:401:LYS:HD3	1.42	1.20
1:G:214:ILE:HD13	1:L:161:GLY:O	1.05	1.20
1:B:62:ALA:H	1:C:301:ALA:CB	1.53	1.20
1:B:31:LYS:HG2	1:C:176:ALA:O	1.30	1.20
1:C:421:ILE:CA	1:H:397:VAL:HG11	1.57	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:175:ALA:HB1	1:K:30:SER:N	1.56	1.20
1:D:62:ALA:N	1:E:301:ALA:HB2	1.52	1.20
1:I:301:ALA:CB	1:J:62:ALA:H	1.52	1.20
1:G:30:SER:N	1:L:175:ALA:HB1	1.56	1.20
1:E:37:PHE:CE1	1:F:185:LEU:HD23	1.57	1.19
1:C:134:GLU:CG	1:D:158:ALA:CB	1.77	1.19
1:K:156:GLN:NE2	1:L:137:ASN:ND2	1.91	1.19
1:C:421:ILE:OXT	1:H:397:VAL:CG1	1.90	1.19
1:A:137:ASN:ND2	1:B:156:GLN:HE22	1.41	1.19
1:B:31:LYS:HA	1:C:176:ALA:O	1.40	1.19
1:J:156:GLN:NE2	1:K:137:ASN:ND2	1.91	1.19
1:G:156:GLN:NE2	1:H:137:ASN:HD22	1.41	1.19
1:H:156:GLN:NE2	1:I:137:ASN:HD22	1.41	1.19
1:J:301:ALA:CB	1:K:62:ALA:H	1.52	1.19
1:F:421:ILE:OXT	1:K:397:VAL:CG1	1.90	1.19
1:B:421:ILE:CA	1:G:397:VAL:HG11	1.57	1.18
1:G:137:ASN:ND2	1:L:156:GLN:NE2	1.91	1.18
1:C:134:GLU:HG3	1:D:158:ALA:HB2	1.24	1.18
1:I:175:ALA:HB1	1:J:30:SER:N	1.56	1.18
1:D:135:VAL:HB	1:E:156:GLN:HA	1.25	1.18
1:B:137:ASN:ND2	1:C:156:GLN:HE22	1.41	1.18
1:K:161:GLY:O	1:L:214:ILE:HD13	1.05	1.18
1:A:137:ASN:ND2	1:B:156:GLN:NE2	1.92	1.18
1:D:135:VAL:N	1:E:156:GLN:O	1.76	1.18
1:H:301:ALA:CB	1:I:62:ALA:H	1.52	1.18
1:I:156:GLN:NE2	1:J:137:ASN:ND2	1.91	1.18
1:D:420:PHE:CD2	1:I:401:LYS:HD3	1.42	1.18
1:G:175:ALA:HB1	1:H:30:SER:N	1.56	1.18
1:G:137:ASN:HD22	1:L:156:GLN:NE2	1.41	1.18
1:A:156:GLN:HE22	1:F:137:ASN:ND2	1.41	1.18
1:C:401:LYS:HD3	1:H:420:PHE:CD2	1.29	1.18
1:G:156:GLN:NE2	1:H:137:ASN:ND2	1.91	1.18
1:D:134:GLU:HG3	1:E:158:ALA:HB2	1.24	1.17
1:H:156:GLN:NE2	1:I:137:ASN:ND2	1.91	1.17
1:A:156:GLN:NE2	1:F:137:ASN:ND2	1.92	1.17
1:H:175:ALA:HB1	1:I:30:SER:N	1.56	1.17
1:B:137:ASN:ND2	1:C:156:GLN:NE2	1.92	1.17
1:K:156:GLN:NE2	1:L:137:ASN:HD22	1.41	1.17
1:C:137:ASN:ND2	1:D:156:GLN:HE22	1.41	1.17
1:A:163:ALA:N	1:F:133:PRO:CG	2.08	1.17
1:H:301:ALA:HB2	1:I:62:ALA:N	1.49	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:163:ALA:N	1:J:133:PRO:CG	2.07	1.16
1:C:133:PRO:CG	1:D:163:ALA:N	2.08	1.16
1:D:137:ASN:ND2	1:E:156:GLN:HE22	1.41	1.16
1:E:137:ASN:ND2	1:F:156:GLN:HE22	1.41	1.16
1:B:421:ILE:OXT	1:G:397:VAL:CG1	1.90	1.16
1:E:135:VAL:HB	1:F:156:GLN:HA	1.25	1.16
1:A:288:ALA:HB1	1:F:400:ALA:HA	1.26	1.16
1:C:419:TYR:CE1	1:H:404:LEU:C	2.19	1.16
1:C:135:VAL:HB	1:D:156:GLN:HA	1.25	1.16
1:E:137:ASN:ND2	1:F:156:GLN:NE2	1.92	1.16
1:A:174:ALA:CB	1:F:54:ASN:HD21	1.59	1.16
1:J:163:ALA:N	1:K:133:PRO:CG	2.08	1.16
1:D:419:TYR:CE1	1:I:404:LEU:C	2.19	1.16
1:B:419:TYR:CE1	1:G:404:LEU:C	2.19	1.16
1:A:135:VAL:N	1:B:156:GLN:O	1.76	1.16
1:E:54:ASN:HD21	1:F:174:ALA:CB	1.59	1.16
1:E:133:PRO:CG	1:F:163:ALA:N	2.08	1.16
1:E:31:LYS:HA	1:F:176:ALA:O	1.40	1.16
1:A:133:PRO:CG	1:B:163:ALA:N	2.08	1.16
1:B:134:GLU:HG3	1:C:158:ALA:HB2	1.24	1.16
1:E:419:TYR:CE1	1:J:404:LEU:C	2.19	1.16
1:A:419:TYR:CE1	1:L:404:LEU:C	2.19	1.16
1:C:137:ASN:ND2	1:D:156:GLN:NE2	1.92	1.16
1:D:54:ASN:HD21	1:E:174:ALA:CB	1.59	1.16
1:K:158:ALA:CB	1:L:134:GLU:CG	1.74	1.15
1:A:135:VAL:HB	1:B:156:GLN:HA	1.25	1.15
1:B:133:PRO:CG	1:C:163:ALA:N	2.08	1.15
1:E:421:ILE:OXT	1:J:397:VAL:CG1	1.90	1.15
1:C:420:PHE:CD2	1:H:401:LYS:HD3	1.42	1.15
1:J:156:GLN:HE22	1:K:137:ASN:ND2	1.44	1.15
1:B:135:VAL:HB	1:C:156:GLN:HA	1.25	1.15
1:C:54:ASN:HD21	1:D:174:ALA:CB	1.59	1.15
1:A:54:ASN:HD21	1:B:174:ALA:CB	1.59	1.15
1:D:133:PRO:CG	1:E:163:ALA:N	2.08	1.15
1:H:163:ALA:N	1:I:133:PRO:CG	2.08	1.15
1:G:163:ALA:N	1:H:133:PRO:CG	2.08	1.15
1:J:156:GLN:NE2	1:K:137:ASN:HD22	1.41	1.15
1:D:137:ASN:ND2	1:E:156:GLN:NE2	1.92	1.15
1:I:163:ALA:N	1:J:133:PRO:HG2	1.62	1.15
1:J:163:ALA:N	1:K:133:PRO:HG2	1.62	1.15
1:K:156:GLN:HE22	1:L:137:ASN:ND2	1.44	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:137:ASN:HD22	1:C:156:GLN:NE2	1.44	1.15
1:I:156:GLN:HE22	1:J:137:ASN:ND2	1.44	1.15
1:H:158:ALA:HB2	1:I:134:GLU:HG3	1.27	1.15
1:K:163:ALA:N	1:L:133:PRO:CG	2.08	1.15
1:G:209:ARG:NH2	1:L:164:ALA:CB	2.01	1.15
1:A:176:ALA:O	1:F:31:LYS:HA	1.40	1.14
1:F:419:TYR:CE1	1:K:404:LEU:C	2.19	1.14
1:G:135:VAL:HB	1:L:156:GLN:HA	1.29	1.14
1:A:156:GLN:NE2	1:F:137:ASN:HD22	1.44	1.14
1:D:134:GLU:CG	1:E:158:ALA:CB	1.77	1.14
1:E:400:ALA:HA	1:F:288:ALA:HB1	1.26	1.14
1:B:397:VAL:HG11	1:G:421:ILE:CA	1.70	1.14
1:F:397:VAL:HG11	1:K:421:ILE:CA	1.70	1.14
1:G:156:GLN:HE22	1:H:137:ASN:ND2	1.44	1.14
1:H:163:ALA:N	1:I:133:PRO:HG2	1.62	1.14
1:A:137:ASN:HD22	1:B:156:GLN:NE2	1.44	1.14
1:A:156:GLN:HA	1:F:135:VAL:HB	1.25	1.14
1:B:54:ASN:HD21	1:C:174:ALA:CB	1.59	1.14
1:K:288:ALA:HB1	1:L:400:ALA:HA	1.30	1.14
1:A:400:ALA:HA	1:B:288:ALA:HB1	1.26	1.14
1:D:31:LYS:HG2	1:E:176:ALA:O	1.31	1.14
1:D:31:LYS:HA	1:E:176:ALA:O	1.40	1.14
1:K:163:ALA:N	1:L:133:PRO:HG2	1.62	1.14
1:G:214:ILE:CD1	1:L:162:GLY:CA	2.26	1.14
1:G:133:PRO:CG	1:L:163:ALA:N	2.07	1.14
1:C:137:ASN:HD22	1:D:156:GLN:NE2	1.44	1.14
1:K:301:ALA:CB	1:L:62:ALA:H	1.52	1.14
1:G:301:ALA:CB	1:H:62:ALA:H	1.52	1.14
1:E:37:PHE:CE1	1:F:185:LEU:HD21	1.66	1.13
1:I:162:GLY:CA	1:J:214:ILE:CD1	2.26	1.13
1:G:164:ALA:CB	1:H:209:ARG:NH2	2.01	1.13
1:H:156:GLN:HE22	1:I:137:ASN:ND2	1.44	1.13
1:H:156:GLN:HA	1:I:135:VAL:HB	1.29	1.13
1:E:137:ASN:HD22	1:F:156:GLN:NE2	1.44	1.13
1:J:288:ALA:HB1	1:K:400:ALA:HA	1.30	1.13
1:I:158:ALA:HB2	1:J:134:GLU:HG3	1.27	1.13
1:G:162:GLY:CA	1:H:214:ILE:CD1	2.26	1.13
1:F:405:GLU:HG2	1:K:416:PHE:HD2	1.12	1.13
1:I:156:GLN:NE2	1:J:137:ASN:HD22	1.41	1.13
1:C:31:LYS:HA	1:D:176:ALA:O	1.40	1.13
1:E:404:LEU:C	1:J:419:TYR:CE1	2.22	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:404:LEU:C	1:H:419:TYR:CE1	2.22	1.13
1:K:156:GLN:HA	1:L:135:VAL:HB	1.29	1.13
1:H:288:ALA:HB1	1:I:400:ALA:HA	1.30	1.13
1:G:163:ALA:N	1:H:133:PRO:HG2	1.62	1.13
1:G:133:PRO:HG2	1:L:163:ALA:N	1.62	1.13
1:F:404:LEU:C	1:K:419:TYR:CE1	2.22	1.13
1:C:416:PHE:HD2	1:H:405:GLU:HG2	1.08	1.13
1:J:162:GLY:CA	1:K:214:ILE:CD1	2.26	1.12
1:K:158:ALA:HB2	1:L:134:GLU:HG3	1.27	1.12
1:B:404:LEU:C	1:G:419:TYR:CE1	2.22	1.12
1:A:404:LEU:C	1:L:419:TYR:CE1	2.22	1.12
1:G:156:GLN:HA	1:H:135:VAL:HB	1.29	1.12
1:E:134:GLU:HG3	1:F:158:ALA:HB2	1.24	1.12
1:H:162:GLY:CA	1:I:214:ILE:CD1	2.26	1.12
1:K:162:GLY:CA	1:L:214:ILE:CD1	2.26	1.12
1:G:175:ALA:HB1	1:H:30:SER:H	0.99	1.12
1:I:164:ALA:CB	1:J:209:ARG:NH2	2.01	1.12
1:G:137:ASN:ND2	1:L:156:GLN:HE22	1.44	1.12
1:I:288:ALA:HB1	1:J:400:ALA:HA	1.30	1.12
1:D:404:LEU:C	1:I:419:TYR:CE1	2.22	1.12
1:G:288:ALA:HB1	1:H:400:ALA:HA	1.30	1.12
1:A:162:GLY:CA	1:F:214:ILE:CD1	2.28	1.11
1:A:421:ILE:OXT	1:L:397:VAL:CG1	1.90	1.11
1:G:30:SER:H	1:L:175:ALA:HB1	0.99	1.11
1:D:137:ASN:HD22	1:E:156:GLN:NE2	1.44	1.11
1:A:61:ALA:O	1:B:299:ALA:C	1.89	1.11
1:C:61:ALA:O	1:D:299:ALA:C	1.89	1.11
1:D:133:PRO:HG2	1:E:163:ALA:N	1.65	1.11
1:A:214:ILE:CD1	1:B:162:GLY:CA	2.28	1.11
1:D:421:ILE:OXT	1:I:397:VAL:CG1	1.90	1.11
1:E:416:PHE:HD2	1:J:405:GLU:HG2	1.08	1.11
1:K:164:ALA:CB	1:L:209:ARG:NH2	2.01	1.11
1:K:301:ALA:HB2	1:L:62:ALA:N	1.49	1.11
1:H:158:ALA:CB	1:I:134:GLU:CG	1.74	1.11
1:B:37:PHE:CE1	1:C:185:LEU:HD21	1.66	1.11
1:A:416:PHE:HD2	1:L:405:GLU:HG2	1.08	1.11
1:J:175:ALA:HB1	1:K:30:SER:H	0.99	1.11
1:G:62:ALA:N	1:L:301:ALA:HB2	1.49	1.11
1:B:400:ALA:HA	1:C:288:ALA:HB1	1.26	1.11
1:A:185:LEU:HD21	1:F:37:PHE:CE1	1.66	1.11
1:A:133:PRO:HG2	1:B:163:ALA:N	1.65	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:31:LYS:HA	1:B:176:ALA:O	1.40	1.11
1:F:420:PHE:CD2	1:K:401:LYS:HD3	1.42	1.11
1:G:62:ALA:H	1:L:301:ALA:CB	1.52	1.11
1:G:400:ALA:HA	1:L:288:ALA:HB1	1.30	1.11
1:E:214:ILE:CD1	1:F:162:GLY:CA	2.28	1.11
1:C:32:SER:H	1:D:177:ALA:C	1.54	1.11
1:B:420:PHE:CD2	1:G:401:LYS:HD3	1.42	1.11
1:A:397:VAL:HG11	1:L:421:ILE:CA	1.70	1.11
1:E:397:VAL:HG11	1:J:421:ILE:CA	1.70	1.11
1:D:404:LEU:HD22	1:I:419:TYR:HE2	1.16	1.10
1:B:401:LYS:CD	1:G:420:PHE:CD2	2.16	1.10
1:B:416:PHE:HD2	1:G:405:GLU:HG2	1.08	1.10
1:C:397:VAL:HG11	1:H:421:ILE:CA	1.70	1.10
1:E:61:ALA:O	1:F:299:ALA:C	1.89	1.10
1:D:32:SER:H	1:E:177:ALA:C	1.53	1.10
1:A:134:GLU:HG3	1:B:158:ALA:HB2	1.24	1.10
1:A:37:PHE:CE1	1:B:185:LEU:HD21	1.66	1.10
1:B:32:SER:H	1:C:177:ALA:C	1.54	1.10
1:C:401:LYS:CD	1:H:420:PHE:CD2	2.16	1.10
1:I:156:GLN:HA	1:J:135:VAL:HB	1.29	1.10
1:A:299:ALA:C	1:F:61:ALA:O	1.89	1.10
1:C:400:ALA:HA	1:D:288:ALA:CB	1.82	1.10
1:A:163:ALA:N	1:F:133:PRO:HG2	1.65	1.10
1:D:37:PHE:CE1	1:E:185:LEU:HD21	1.66	1.10
1:B:133:PRO:HG2	1:C:163:ALA:N	1.65	1.10
1:B:214:ILE:CD1	1:C:162:GLY:CA	2.28	1.10
1:D:416:PHE:HD2	1:I:405:GLU:HG2	1.08	1.10
1:I:301:ALA:HB2	1:J:62:ALA:N	1.49	1.10
1:B:61:ALA:O	1:C:299:ALA:C	1.89	1.10
1:D:61:ALA:O	1:E:299:ALA:C	1.89	1.10
1:D:214:ILE:CD1	1:E:162:GLY:CA	2.28	1.10
1:A:177:ALA:C	1:F:32:SER:H	1.54	1.10
1:C:133:PRO:HG2	1:D:163:ALA:N	1.65	1.10
1:E:401:LYS:CD	1:J:420:PHE:CD2	2.16	1.10
1:I:158:ALA:CB	1:J:134:GLU:CG	1.74	1.09
1:G:134:GLU:HG3	1:L:158:ALA:HB2	1.27	1.09
1:E:405:GLU:HG2	1:J:416:PHE:CD2	1.87	1.09
1:A:209:ARG:NH2	1:B:164:ALA:CB	2.04	1.09
1:G:133:PRO:CD	1:L:162:GLY:HA3	1.83	1.09
1:D:405:GLU:HG2	1:I:416:PHE:CD2	1.87	1.09
1:I:175:ALA:HB1	1:J:30:SER:H	0.99	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:214:ILE:CD1	1:D:162:GLY:CA	2.28	1.09
1:H:164:ALA:CB	1:I:209:ARG:NH2	2.01	1.09
1:H:175:ALA:HB1	1:I:30:SER:H	0.99	1.09
1:A:400:ALA:HA	1:B:288:ALA:CB	1.82	1.09
1:E:32:SER:H	1:F:177:ALA:C	1.54	1.09
1:A:32:SER:H	1:B:177:ALA:C	1.53	1.09
1:E:416:PHE:CD2	1:J:405:GLU:HG2	1.88	1.09
1:A:405:GLU:HG2	1:L:416:PHE:HD2	1.12	1.09
1:B:405:GLU:HG2	1:G:416:PHE:CD2	1.87	1.09
1:C:405:GLU:HG2	1:H:416:PHE:CD2	1.87	1.09
1:D:397:VAL:HG11	1:I:421:ILE:CA	1.70	1.09
1:H:288:ALA:CB	1:I:400:ALA:HA	1.82	1.09
1:G:288:ALA:CB	1:H:400:ALA:HA	1.82	1.09
1:D:400:ALA:HA	1:E:288:ALA:CB	1.82	1.09
1:C:214:ILE:HD12	1:D:162:GLY:O	1.53	1.09
1:E:404:LEU:HD22	1:J:419:TYR:HE2	1.16	1.09
1:D:416:PHE:CD2	1:I:405:GLU:HG2	1.88	1.09
1:F:405:GLU:HG2	1:K:416:PHE:CD2	1.87	1.09
1:A:288:ALA:CB	1:F:400:ALA:HA	1.82	1.09
1:C:400:ALA:HA	1:D:288:ALA:HB1	1.26	1.09
1:F:404:LEU:HD22	1:K:419:TYR:HE2	1.15	1.08
1:C:416:PHE:CD2	1:H:405:GLU:HG2	1.88	1.08
1:F:416:PHE:CD2	1:K:405:GLU:HG2	1.88	1.08
1:G:301:ALA:HB2	1:H:62:ALA:N	1.49	1.08
1:B:400:ALA:HA	1:C:288:ALA:CB	1.82	1.08
1:E:31:LYS:HG2	1:F:176:ALA:O	1.30	1.08
1:G:134:GLU:CG	1:L:158:ALA:CB	1.74	1.08
1:A:404:LEU:HD22	1:L:419:TYR:HE2	1.16	1.08
1:E:400:ALA:HA	1:F:288:ALA:CB	1.82	1.08
1:B:405:GLU:HG2	1:G:416:PHE:HD2	1.12	1.08
1:J:164:ALA:CB	1:K:209:ARG:NH2	2.01	1.08
1:B:416:PHE:CD2	1:G:405:GLU:HG2	1.88	1.08
1:K:175:ALA:HB1	1:L:30:SER:H	0.99	1.08
1:J:156:GLN:HA	1:K:135:VAL:HB	1.29	1.08
1:D:400:ALA:HA	1:E:288:ALA:HB1	1.26	1.08
1:E:419:TYR:OH	1:J:408:GLU:HG3	1.54	1.08
1:C:419:TYR:OH	1:H:408:GLU:HG3	1.54	1.08
1:B:419:TYR:OH	1:G:408:GLU:HG3	1.54	1.08
1:G:400:ALA:HA	1:L:288:ALA:CB	1.82	1.08
1:E:133:PRO:HG2	1:F:163:ALA:N	1.65	1.08
1:A:419:TYR:OH	1:L:408:GLU:HG3	1.54	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:405:GLU:HG2	1:L:416:PHE:CD2	1.87	1.08
1:F:419:TYR:OH	1:K:408:GLU:HG3	1.54	1.08
1:D:419:TYR:OH	1:I:408:GLU:HG3	1.54	1.07
1:K:288:ALA:CB	1:L:400:ALA:HA	1.82	1.07
1:G:162:GLY:HA3	1:H:133:PRO:CD	1.83	1.07
1:D:405:GLU:HG2	1:I:416:PHE:HD2	1.12	1.07
1:A:416:PHE:CD2	1:L:405:GLU:HG2	1.88	1.07
1:F:416:PHE:HD2	1:K:405:GLU:HG2	1.08	1.07
1:C:397:VAL:CG1	1:H:421:ILE:OXT	2.02	1.07
1:A:158:ALA:HB2	1:F:134:GLU:HG3	1.24	1.07
1:B:214:ILE:HD12	1:C:162:GLY:O	1.53	1.07
1:K:162:GLY:HA3	1:L:133:PRO:CD	1.83	1.07
1:F:397:VAL:CG1	1:K:421:ILE:OXT	2.02	1.07
1:E:214:ILE:HD12	1:F:162:GLY:O	1.53	1.07
1:J:301:ALA:HB2	1:K:62:ALA:N	1.49	1.07
1:A:214:ILE:HD12	1:B:162:GLY:O	1.53	1.07
1:A:214:ILE:HD12	1:B:162:GLY:C	1.76	1.07
1:D:421:ILE:CA	1:I:397:VAL:CG1	2.32	1.07
1:D:401:LYS:CD	1:I:420:PHE:CD2	2.16	1.07
1:D:209:ARG:NH2	1:E:164:ALA:CB	2.04	1.07
1:I:288:ALA:CB	1:J:400:ALA:HA	1.82	1.07
1:A:162:GLY:C	1:F:214:ILE:HD12	1.76	1.06
1:C:37:PHE:CE1	1:D:185:LEU:HD21	1.66	1.06
1:C:214:ILE:HD12	1:D:162:GLY:C	1.76	1.06
1:B:214:ILE:HD12	1:C:162:GLY:C	1.76	1.06
1:J:288:ALA:CB	1:K:400:ALA:HA	1.82	1.06
1:E:214:ILE:HD12	1:F:162:GLY:C	1.76	1.06
1:A:162:GLY:O	1:F:214:ILE:HD12	1.53	1.06
1:A:421:ILE:CA	1:L:397:VAL:CG1	2.32	1.06
1:B:404:LEU:HD22	1:G:419:TYR:HE2	1.16	1.06
1:D:214:ILE:HD12	1:E:162:GLY:C	1.76	1.06
1:E:405:GLU:HG2	1:J:416:PHE:HD2	1.12	1.06
1:C:209:ARG:NH2	1:D:164:ALA:CB	2.04	1.06
1:D:214:ILE:HD12	1:E:162:GLY:O	1.53	1.06
1:E:421:ILE:CA	1:J:397:VAL:CG1	2.32	1.05
1:C:421:ILE:CA	1:H:397:VAL:CG1	2.32	1.05
1:A:420:PHE:CD2	1:L:401:LYS:HD3	1.42	1.05
1:C:404:LEU:HD22	1:H:419:TYR:HE2	1.15	1.05
1:D:397:VAL:CG1	1:I:421:ILE:OXT	2.02	1.05
1:G:162:GLY:HA3	1:H:214:ILE:CD1	1.86	1.05
1:A:164:ALA:CB	1:F:209:ARG:NH2	2.04	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:404:LEU:HD22	1:L:419:TYR:CE2	1.90	1.05
1:F:420:PHE:CD2	1:K:401:LYS:CD	2.27	1.05
1:A:397:VAL:CG1	1:L:421:ILE:OXT	2.02	1.05
1:G:214:ILE:CD1	1:L:162:GLY:HA3	1.86	1.05
1:H:177:ALA:HA	1:I:31:LYS:CA	1.87	1.05
1:E:209:ARG:NH2	1:F:164:ALA:CB	2.04	1.04
1:C:404:LEU:HD22	1:H:419:TYR:CE2	1.90	1.04
1:H:162:GLY:HA3	1:I:214:ILE:CD1	1.86	1.04
1:G:177:ALA:HA	1:H:31:LYS:CA	1.87	1.04
1:F:419:TYR:HE2	1:K:404:LEU:HD22	1.23	1.04
1:H:162:GLY:HA3	1:I:133:PRO:CD	1.83	1.04
1:G:214:ILE:HD12	1:L:162:GLY:O	1.58	1.04
1:F:404:LEU:HD22	1:K:419:TYR:CE2	1.90	1.04
1:B:404:LEU:HD22	1:G:419:TYR:CE2	1.90	1.04
1:J:162:GLY:O	1:K:214:ILE:HD12	1.58	1.04
1:B:133:PRO:CD	1:C:162:GLY:HA3	1.88	1.04
1:B:408:GLU:HG3	1:G:419:TYR:OH	1.58	1.04
1:J:162:GLY:HA3	1:K:133:PRO:CD	1.83	1.03
1:I:177:ALA:HA	1:J:31:LYS:CA	1.87	1.03
1:A:408:GLU:HG3	1:L:419:TYR:OH	1.58	1.03
1:K:162:GLY:HA3	1:L:214:ILE:CD1	1.86	1.03
1:E:30:SER:H	1:F:175:ALA:HB1	0.89	1.03
1:H:162:GLY:O	1:I:214:ILE:HD12	1.58	1.03
1:D:419:TYR:HE2	1:I:404:LEU:HD22	1.23	1.03
1:D:404:LEU:HD22	1:I:419:TYR:CE2	1.90	1.03
1:C:419:TYR:HE2	1:H:404:LEU:HD22	1.23	1.03
1:B:419:TYR:HE2	1:G:404:LEU:HD22	1.23	1.03
1:C:405:GLU:HG2	1:H:416:PHE:HD2	1.12	1.03
1:I:162:GLY:HA3	1:J:214:ILE:CD1	1.86	1.03
1:C:133:PRO:CD	1:D:162:GLY:HA3	1.88	1.03
1:B:30:SER:H	1:C:175:ALA:HB1	0.89	1.03
1:C:30:SER:H	1:D:175:ALA:HB1	0.89	1.03
1:D:214:ILE:CD1	1:E:162:GLY:HA3	1.88	1.02
1:G:31:LYS:CA	1:L:177:ALA:HA	1.87	1.02
1:E:404:LEU:HD22	1:J:419:TYR:CE2	1.90	1.02
1:C:408:GLU:OE2	1:H:419:TYR:CE1	2.12	1.02
1:C:408:GLU:HG3	1:H:419:TYR:OH	1.58	1.02
1:A:175:ALA:HB1	1:F:30:SER:H	0.89	1.02
1:J:162:GLY:HA3	1:K:214:ILE:CD1	1.86	1.02
1:K:177:ALA:HA	1:L:31:LYS:CA	1.87	1.02
1:E:408:GLU:OE2	1:J:419:TYR:CE1	2.12	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:408:GLU:OE2	1:L:419:TYR:CE1	2.12	1.02
1:C:214:ILE:CD1	1:D:162:GLY:HA3	1.88	1.02
1:J:177:ALA:HA	1:K:31:LYS:CA	1.87	1.02
1:F:408:GLU:HG3	1:K:419:TYR:OH	1.58	1.02
1:G:54:ASN:ND2	1:L:174:ALA:CB	2.23	1.02
1:I:162:GLY:HA3	1:J:133:PRO:CD	1.83	1.02
1:A:133:PRO:CD	1:B:162:GLY:HA3	1.88	1.02
1:K:162:GLY:O	1:L:214:ILE:HD12	1.58	1.02
1:B:209:ARG:NH2	1:C:164:ALA:CB	2.04	1.02
1:B:397:VAL:CG1	1:G:421:ILE:OXT	2.02	1.02
1:C:37:PHE:HE1	1:D:185:LEU:HD21	1.02	1.02
1:F:408:GLU:OE2	1:K:419:TYR:CE1	2.12	1.02
1:A:419:TYR:HE2	1:L:404:LEU:HD22	1.23	1.02
1:E:397:VAL:CG1	1:J:421:ILE:OXT	2.02	1.02
1:G:162:GLY:O	1:H:214:ILE:HD12	1.58	1.01
1:B:214:ILE:CD1	1:C:162:GLY:HA3	1.88	1.01
1:E:214:ILE:CD1	1:F:162:GLY:HA3	1.88	1.01
1:I:162:GLY:O	1:J:214:ILE:HD12	1.58	1.01
1:C:420:PHE:CD2	1:H:401:LYS:CD	2.27	1.01
1:B:408:GLU:OE2	1:G:419:TYR:CE1	2.12	1.01
1:B:420:PHE:CD2	1:G:401:LYS:CD	2.27	1.01
1:D:30:SER:H	1:E:175:ALA:HB1	0.89	1.01
1:D:408:GLU:HG3	1:I:419:TYR:OH	1.58	1.01
1:D:408:GLU:OE2	1:I:419:TYR:CE1	2.12	1.01
1:J:174:ALA:CB	1:K:54:ASN:ND2	2.23	1.01
1:A:158:ALA:CA	1:F:134:GLU:HG2	1.91	1.01
1:I:162:GLY:C	1:J:214:ILE:HD12	1.81	1.01
1:E:408:GLU:HG3	1:J:419:TYR:OH	1.58	1.01
1:F:401:LYS:CD	1:K:420:PHE:CD2	2.16	1.01
1:H:162:GLY:C	1:I:214:ILE:HD12	1.81	1.01
1:G:162:GLY:HA3	1:H:133:PRO:HD3	1.43	1.01
1:E:419:TYR:HE2	1:J:404:LEU:HD22	1.23	1.01
1:G:174:ALA:CB	1:H:54:ASN:ND2	2.23	1.01
1:H:162:GLY:HA3	1:I:133:PRO:HD3	1.43	1.00
1:G:133:PRO:HD3	1:L:162:GLY:HA3	1.43	1.00
1:I:174:ALA:CB	1:J:54:ASN:ND2	2.23	1.00
1:I:162:GLY:HA3	1:J:133:PRO:HD3	1.43	1.00
1:D:133:PRO:CD	1:E:162:GLY:HA3	1.88	1.00
1:K:174:ALA:CB	1:L:54:ASN:ND2	2.23	1.00
1:A:299:ALA:O	1:F:61:ALA:C	2.00	1.00
1:D:61:ALA:C	1:E:299:ALA:O	2.00	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:134:GLU:HG2	1:F:158:ALA:CA	1.91	1.00
1:E:37:PHE:HE1	1:F:185:LEU:HD23	0.85	1.00
1:A:214:ILE:CD1	1:B:162:GLY:HA3	1.88	1.00
1:A:420:PHE:CD2	1:L:401:LYS:CD	2.27	1.00
1:H:174:ALA:CB	1:I:54:ASN:ND2	2.23	1.00
1:A:30:SER:H	1:B:175:ALA:HB1	0.89	1.00
1:D:30:SER:H	1:E:175:ALA:CB	1.75	1.00
1:A:61:ALA:C	1:B:299:ALA:O	2.00	1.00
1:B:134:GLU:HG2	1:C:158:ALA:CA	1.91	1.00
1:E:30:SER:H	1:F:175:ALA:CB	1.75	1.00
1:A:163:ALA:H	1:F:133:PRO:HG2	0.83	1.00
1:J:162:GLY:C	1:K:214:ILE:HD12	1.81	1.00
1:A:134:GLU:HG2	1:B:158:ALA:CA	1.91	1.00
1:A:133:PRO:HG2	1:B:163:ALA:H	0.83	1.00
1:C:31:LYS:HA	1:D:177:ALA:N	1.76	1.00
1:C:30:SER:H	1:D:175:ALA:CB	1.75	1.00
1:A:162:GLY:HA3	1:F:214:ILE:CD1	1.88	0.99
1:C:134:GLU:HG2	1:D:158:ALA:CA	1.91	0.99
1:A:37:PHE:HE1	1:B:185:LEU:HD21	1.01	0.99
1:A:175:ALA:CB	1:F:30:SER:H	1.75	0.99
1:B:61:ALA:C	1:C:299:ALA:O	2.00	0.99
1:A:162:GLY:HA3	1:F:133:PRO:CD	1.88	0.99
1:D:420:PHE:CD2	1:I:401:LYS:CD	2.27	0.99
1:C:61:ALA:C	1:D:299:ALA:O	2.00	0.99
1:A:185:LEU:HD23	1:F:37:PHE:HE1	0.85	0.99
1:G:214:ILE:HD12	1:L:162:GLY:C	1.81	0.99
1:B:30:SER:H	1:C:175:ALA:CB	1.75	0.99
1:E:31:LYS:HA	1:F:177:ALA:N	1.76	0.99
1:D:37:PHE:HE1	1:E:185:LEU:HD23	0.85	0.99
1:G:162:GLY:C	1:H:214:ILE:HD12	1.81	0.99
1:D:134:GLU:HG2	1:E:158:ALA:CA	1.91	0.99
1:D:31:LYS:HA	1:E:177:ALA:N	1.76	0.99
1:A:31:LYS:HA	1:B:177:ALA:N	1.76	0.99
1:A:30:SER:H	1:B:175:ALA:CB	1.75	0.99
1:A:177:ALA:N	1:F:31:LYS:HA	1.76	0.99
1:B:31:LYS:HA	1:C:177:ALA:N	1.76	0.99
1:E:61:ALA:C	1:F:299:ALA:O	2.00	0.99
1:E:133:PRO:HG2	1:F:163:ALA:H	0.83	0.98
1:K:162:GLY:C	1:L:214:ILE:HD12	1.81	0.98
1:E:133:PRO:CD	1:F:162:GLY:HA3	1.88	0.98
1:B:37:PHE:HE1	1:C:185:LEU:HD21	1.01	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:PRO:HG2	1:C:163:ALA:H	0.83	0.98
1:D:133:PRO:HG2	1:E:163:ALA:H	0.83	0.98
1:C:133:PRO:HG2	1:D:163:ALA:H	0.83	0.98
1:A:401:LYS:CD	1:L:420:PHE:CD2	2.16	0.98
1:H:177:ALA:CB	1:I:32:SER:N	2.26	0.98
1:A:37:PHE:HE1	1:B:185:LEU:HD23	0.85	0.98
1:K:162:GLY:HA3	1:L:133:PRO:HD3	1.43	0.97
1:H:158:ALA:CA	1:I:134:GLU:HG2	1.94	0.97
1:A:185:LEU:HD21	1:F:37:PHE:HE1	1.02	0.97
1:K:158:ALA:CA	1:L:134:GLU:HG2	1.94	0.97
1:G:177:ALA:CB	1:H:32:SER:N	2.26	0.97
1:I:177:ALA:CB	1:J:32:SER:N	2.26	0.97
1:E:37:PHE:HE1	1:F:185:LEU:HD21	1.01	0.97
1:G:32:SER:N	1:L:177:ALA:CB	2.26	0.97
1:K:177:ALA:CB	1:L:32:SER:N	2.26	0.97
1:G:162:GLY:HA3	1:H:214:ILE:HD11	0.97	0.97
1:E:214:ILE:CD1	1:F:162:GLY:C	2.33	0.97
1:C:37:PHE:HE1	1:D:185:LEU:HD23	0.85	0.97
1:G:134:GLU:HG2	1:L:158:ALA:CA	1.94	0.97
1:G:214:ILE:HD11	1:L:162:GLY:HA3	0.97	0.97
1:H:162:GLY:HA3	1:I:214:ILE:HD11	0.97	0.97
1:A:397:VAL:CG1	1:L:421:ILE:CA	2.42	0.97
1:B:397:VAL:CG1	1:G:421:ILE:CA	2.42	0.97
1:E:397:VAL:CG1	1:J:421:ILE:CA	2.42	0.97
1:J:162:GLY:HA3	1:K:133:PRO:HD3	1.43	0.97
1:A:419:TYR:CE2	1:L:404:LEU:HD22	2.00	0.96
1:I:162:GLY:HA3	1:J:214:ILE:HD11	0.97	0.96
1:J:177:ALA:CB	1:K:32:SER:N	2.26	0.96
1:A:162:GLY:C	1:F:214:ILE:CD1	2.33	0.96
1:K:162:GLY:HA3	1:L:214:ILE:HD11	0.97	0.96
1:D:421:ILE:C	1:I:397:VAL:HG11	1.71	0.96
1:I:158:ALA:CA	1:J:134:GLU:HG2	1.94	0.96
1:B:214:ILE:CD1	1:C:162:GLY:C	2.33	0.96
1:J:162:GLY:HA3	1:K:214:ILE:HD11	0.97	0.96
1:F:401:LYS:HD3	1:K:420:PHE:HD2	1.31	0.96
1:G:163:ALA:H	1:H:133:PRO:HG2	0.80	0.96
1:B:37:PHE:HE1	1:C:185:LEU:HD23	0.85	0.96
1:B:415:LYS:HD3	1:G:408:GLU:HG2	1.48	0.96
1:J:161:GLY:CA	1:K:131:GLY:O	2.14	0.96
1:C:214:ILE:CD1	1:D:162:GLY:C	2.33	0.96
1:B:214:ILE:HD11	1:C:162:GLY:HA3	0.98	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:163:ALA:H	1:L:133:PRO:HG2	0.80	0.96
1:D:214:ILE:CD1	1:E:162:GLY:C	2.33	0.96
1:A:214:ILE:CD1	1:B:162:GLY:C	2.33	0.96
1:C:415:LYS:HD3	1:H:408:GLU:HG2	1.48	0.96
1:I:163:ALA:H	1:J:133:PRO:HG2	0.80	0.96
1:D:214:ILE:HD11	1:E:162:GLY:HA3	0.98	0.96
1:A:421:ILE:C	1:L:397:VAL:HG11	1.71	0.95
1:A:415:LYS:HD3	1:L:408:GLU:HG2	1.48	0.95
1:E:415:LYS:HD3	1:J:408:GLU:HG2	1.48	0.95
1:B:419:TYR:CE2	1:G:404:LEU:HD22	2.00	0.95
1:J:163:ALA:H	1:K:133:PRO:HG2	0.80	0.95
1:C:419:TYR:CE2	1:H:404:LEU:HD22	2.00	0.95
1:B:401:LYS:HD3	1:G:420:PHE:HD2	1.31	0.95
1:I:299:ALA:C	1:J:61:ALA:O	2.05	0.95
1:E:214:ILE:HD11	1:F:162:GLY:HA3	0.98	0.95
1:G:133:PRO:HG2	1:L:163:ALA:H	0.80	0.95
1:D:415:LYS:HD3	1:I:408:GLU:HG2	1.48	0.95
1:F:419:TYR:CE2	1:K:404:LEU:HD22	2.00	0.95
1:F:415:LYS:HD3	1:K:408:GLU:HG2	1.48	0.95
1:J:299:ALA:C	1:K:61:ALA:O	2.05	0.95
1:H:163:ALA:H	1:I:133:PRO:HG2	0.80	0.95
1:K:161:GLY:CA	1:L:131:GLY:O	2.14	0.95
1:G:299:ALA:C	1:H:61:ALA:O	2.05	0.95
1:A:214:ILE:HD11	1:B:162:GLY:HA3	0.98	0.95
1:I:161:GLY:CA	1:J:131:GLY:O	2.14	0.95
1:A:31:LYS:CA	1:B:177:ALA:HA	1.97	0.95
1:D:134:GLU:CD	1:E:158:ALA:HB2	1.87	0.95
1:G:161:GLY:CA	1:H:131:GLY:O	2.14	0.95
1:H:299:ALA:C	1:I:61:ALA:O	2.05	0.95
1:E:134:GLU:CD	1:F:158:ALA:HB2	1.87	0.95
1:A:162:GLY:HA3	1:F:214:ILE:HD11	0.98	0.95
1:B:31:LYS:CA	1:C:177:ALA:HA	1.97	0.95
1:C:214:ILE:HD11	1:D:162:GLY:HA3	0.98	0.94
1:C:397:VAL:CG1	1:H:421:ILE:CA	2.42	0.94
1:E:404:LEU:CD2	1:J:419:TYR:CE2	2.45	0.94
1:D:419:TYR:CE2	1:I:404:LEU:HD22	2.00	0.94
1:H:161:GLY:CA	1:I:131:GLY:O	2.14	0.94
1:C:134:GLU:CD	1:D:158:ALA:HB2	1.87	0.94
1:K:299:ALA:C	1:L:61:ALA:O	2.05	0.94
1:G:61:ALA:O	1:L:299:ALA:C	2.05	0.94
1:D:31:LYS:CA	1:E:177:ALA:HA	1.97	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:177:ALA:HA	1:F:31:LYS:CA	1.97	0.94
1:D:133:PRO:HD3	1:E:162:GLY:HA3	1.48	0.94
1:G:131:GLY:O	1:L:161:GLY:CA	2.14	0.94
1:A:158:ALA:HB2	1:F:134:GLU:CD	1.87	0.94
1:C:133:PRO:HD3	1:D:162:GLY:HA3	1.49	0.94
1:A:419:TYR:CE1	1:L:408:GLU:OE2	2.21	0.94
1:E:31:LYS:CA	1:F:177:ALA:HA	1.97	0.93
1:B:133:PRO:HD3	1:C:162:GLY:HA3	1.48	0.93
1:C:419:TYR:CE1	1:H:408:GLU:OE2	2.21	0.93
1:C:31:LYS:CA	1:D:177:ALA:HA	1.97	0.93
1:C:401:LYS:HD3	1:H:420:PHE:HD2	1.31	0.93
1:A:135:VAL:CA	1:B:156:GLN:O	2.00	0.93
1:E:133:PRO:HD3	1:F:162:GLY:HA3	1.48	0.93
1:E:419:TYR:CE2	1:J:404:LEU:HD22	2.00	0.93
1:A:419:TYR:OH	1:L:408:GLU:OE2	1.86	0.93
1:F:419:TYR:OH	1:K:408:GLU:OE2	1.86	0.93
1:B:134:GLU:CD	1:C:158:ALA:HB2	1.87	0.93
1:A:162:GLY:HA3	1:F:133:PRO:HD3	1.49	0.93
1:E:419:TYR:CE1	1:J:408:GLU:OE2	2.21	0.93
1:D:419:TYR:CE1	1:I:408:GLU:OE2	2.21	0.93
1:D:419:TYR:OH	1:I:408:GLU:OE2	1.86	0.92
1:G:54:ASN:HD21	1:L:174:ALA:HB1	1.34	0.92
1:H:162:GLY:C	1:I:214:ILE:CD1	2.38	0.92
1:A:134:GLU:CD	1:B:158:ALA:HB2	1.87	0.92
1:A:421:ILE:C	1:L:397:VAL:HG13	1.74	0.92
1:B:419:TYR:CE1	1:G:408:GLU:OE2	2.21	0.92
1:A:397:VAL:HG11	1:L:421:ILE:C	1.83	0.92
1:I:162:GLY:C	1:J:214:ILE:CD1	2.38	0.92
1:A:133:PRO:HD3	1:B:162:GLY:HA3	1.48	0.92
1:G:214:ILE:CD1	1:L:162:GLY:C	2.38	0.92
1:F:419:TYR:CE1	1:K:408:GLU:OE2	2.21	0.92
1:B:404:LEU:CD2	1:G:419:TYR:CE2	2.45	0.91
1:K:162:GLY:C	1:L:214:ILE:CD1	2.38	0.91
1:J:162:GLY:C	1:K:214:ILE:CD1	2.38	0.91
1:C:419:TYR:HD1	1:H:405:GLU:HG3	1.36	0.91
1:F:419:TYR:CE2	1:K:404:LEU:CD2	2.52	0.91
1:K:174:ALA:HB1	1:L:54:ASN:HD21	1.34	0.91
1:J:174:ALA:HB1	1:K:54:ASN:HD21	1.34	0.91
1:A:404:LEU:CD2	1:L:419:TYR:CE2	2.45	0.91
1:B:419:TYR:OH	1:G:408:GLU:OE2	1.86	0.91
1:F:419:TYR:HD1	1:K:405:GLU:HG3	1.36	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:421:ILE:C	1:H:397:VAL:HG11	1.71	0.91
1:I:158:ALA:HB3	1:J:134:GLU:HG2	1.49	0.91
1:A:419:TYR:HD1	1:L:405:GLU:HG3	1.36	0.91
1:F:404:LEU:CD2	1:K:419:TYR:CE2	2.45	0.91
1:C:419:TYR:OH	1:H:408:GLU:OE2	1.86	0.91
1:B:397:VAL:HG11	1:G:421:ILE:C	1.83	0.90
1:A:61:ALA:O	1:B:299:ALA:CA	2.20	0.90
1:E:419:TYR:OH	1:J:408:GLU:OE2	1.86	0.90
1:B:419:TYR:HD1	1:G:405:GLU:HG3	1.36	0.90
1:K:158:ALA:HB3	1:L:134:GLU:HG2	1.49	0.90
1:G:134:GLU:HG2	1:L:158:ALA:HB3	1.49	0.90
1:E:420:PHE:CD2	1:J:401:LYS:CD	2.27	0.90
1:D:408:GLU:HG2	1:I:415:LYS:HD3	1.54	0.90
1:B:408:GLU:HG2	1:G:415:LYS:HD3	1.54	0.90
1:E:408:GLU:HG2	1:J:415:LYS:HD3	1.54	0.90
1:A:401:LYS:HD3	1:L:420:PHE:HD2	1.31	0.90
1:C:61:ALA:O	1:D:299:ALA:CA	2.20	0.90
1:B:205:GLN:OE1	1:C:166:ALA:HB2	1.72	0.90
1:E:419:TYR:HD1	1:J:405:GLU:HG3	1.36	0.90
1:D:404:LEU:CD2	1:I:419:TYR:CE2	2.45	0.90
1:D:135:VAL:CA	1:E:156:GLN:O	2.00	0.90
1:E:205:GLN:OE1	1:F:166:ALA:HB2	1.72	0.90
1:G:162:GLY:C	1:H:214:ILE:CD1	2.38	0.90
1:F:408:GLU:OE2	1:K:419:TYR:OH	1.90	0.90
1:H:174:ALA:HB1	1:I:54:ASN:HD21	1.34	0.90
1:H:175:ALA:CB	1:I:30:SER:H	1.85	0.90
1:B:421:ILE:C	1:G:397:VAL:HG11	1.71	0.90
1:I:175:ALA:CB	1:J:30:SER:H	1.85	0.90
1:E:397:VAL:HG13	1:J:421:ILE:C	1.84	0.90
1:A:299:ALA:CA	1:F:61:ALA:O	2.20	0.90
1:A:419:TYR:CE2	1:L:404:LEU:CD2	2.52	0.89
1:C:408:GLU:HG2	1:H:415:LYS:HD3	1.54	0.89
1:I:174:ALA:HB1	1:J:54:ASN:HD21	1.34	0.89
1:A:408:GLU:HG2	1:L:415:LYS:HD3	1.54	0.89
1:J:175:ALA:CB	1:K:30:SER:H	1.85	0.89
1:D:61:ALA:O	1:E:299:ALA:CA	2.20	0.89
1:A:205:GLN:OE1	1:B:166:ALA:HB2	1.72	0.89
1:D:205:GLN:OE1	1:E:166:ALA:HB2	1.72	0.89
1:G:30:SER:H	1:L:175:ALA:CB	1.85	0.89
1:B:61:ALA:O	1:C:299:ALA:CA	2.20	0.89
1:C:205:GLN:OE1	1:D:166:ALA:HB2	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:175:ALA:CB	1:L:30:SER:H	1.85	0.89
1:D:419:TYR:HD1	1:I:405:GLU:HG3	1.36	0.89
1:D:421:ILE:C	1:I:397:VAL:HG13	1.74	0.89
1:G:161:GLY:C	1:H:214:ILE:CD1	2.42	0.89
1:A:166:ALA:HB2	1:F:205:GLN:OE1	1.72	0.89
1:B:408:GLU:OE2	1:G:419:TYR:OH	1.90	0.89
1:C:408:GLU:OE2	1:H:419:TYR:OH	1.90	0.89
1:A:299:ALA:O	1:F:61:ALA:CB	2.22	0.89
1:G:214:ILE:CD1	1:L:161:GLY:C	2.42	0.88
1:F:408:GLU:HG2	1:K:415:LYS:HD3	1.54	0.88
1:D:408:GLU:OE2	1:I:419:TYR:OH	1.90	0.88
1:E:61:ALA:CB	1:F:299:ALA:O	2.22	0.88
1:D:401:LYS:HD3	1:I:420:PHE:HD2	1.31	0.88
1:C:404:LEU:CD2	1:H:419:TYR:CE2	2.45	0.88
1:H:158:ALA:HB3	1:I:134:GLU:HG2	1.49	0.88
1:A:408:GLU:OE2	1:L:419:TYR:OH	1.90	0.88
1:B:419:TYR:OH	1:G:408:GLU:CG	2.22	0.88
1:E:61:ALA:O	1:F:299:ALA:CA	2.20	0.88
1:E:408:GLU:OE2	1:J:419:TYR:OH	1.90	0.88
1:J:161:GLY:C	1:K:214:ILE:CD1	2.42	0.88
1:K:161:GLY:C	1:L:214:ILE:CD1	2.42	0.88
1:G:31:LYS:HA	1:L:177:ALA:N	1.67	0.88
1:A:419:TYR:OH	1:L:408:GLU:CG	2.22	0.88
1:G:174:ALA:HB1	1:H:54:ASN:HD21	1.34	0.88
1:A:61:ALA:CB	1:B:299:ALA:O	2.22	0.88
1:H:161:GLY:C	1:I:214:ILE:CD1	2.42	0.88
1:C:419:TYR:OH	1:H:408:GLU:CG	2.22	0.88
1:F:421:ILE:C	1:K:397:VAL:HG11	1.71	0.88
1:C:419:TYR:HH	1:H:408:GLU:HG3	1.40	0.87
1:E:397:VAL:HG11	1:J:421:ILE:C	1.83	0.87
1:H:158:ALA:HB2	1:I:134:GLU:CD	1.95	0.87
1:B:421:ILE:CA	1:G:397:VAL:CG1	2.32	0.87
1:B:415:LYS:HD3	1:G:408:GLU:CG	2.04	0.87
1:F:419:TYR:OH	1:K:408:GLU:CG	2.22	0.87
1:I:161:GLY:C	1:J:214:ILE:CD1	2.42	0.87
1:B:397:VAL:HG13	1:G:421:ILE:C	1.84	0.87
1:A:415:LYS:HD3	1:L:408:GLU:CG	2.04	0.87
1:F:415:LYS:HD3	1:K:408:GLU:CG	2.04	0.87
1:C:61:ALA:CB	1:D:299:ALA:O	2.22	0.87
1:G:134:GLU:CD	1:L:158:ALA:HB2	1.94	0.87
1:D:419:TYR:OH	1:I:408:GLU:CG	2.22	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:299:ALA:O	1:J:61:ALA:CB	2.18	0.87
1:E:421:ILE:C	1:J:397:VAL:HG13	1.75	0.87
1:B:421:ILE:C	1:G:397:VAL:HG13	1.75	0.87
1:D:54:ASN:ND2	1:E:174:ALA:CB	2.38	0.87
1:E:419:TYR:OH	1:J:408:GLU:CG	2.22	0.86
1:K:158:ALA:HB2	1:L:134:GLU:CD	1.95	0.86
1:G:299:ALA:O	1:H:61:ALA:C	2.14	0.86
1:B:61:ALA:CB	1:C:299:ALA:O	2.22	0.86
1:K:299:ALA:O	1:L:61:ALA:C	2.14	0.86
1:E:415:LYS:HD3	1:J:408:GLU:CG	2.04	0.86
1:J:299:ALA:O	1:K:61:ALA:C	2.14	0.86
1:I:299:ALA:O	1:J:61:ALA:C	2.14	0.86
1:I:158:ALA:HB2	1:J:134:GLU:CD	1.94	0.86
1:D:415:LYS:HD3	1:I:408:GLU:CG	2.04	0.86
1:G:299:ALA:O	1:H:61:ALA:CB	2.18	0.86
1:C:415:LYS:HD3	1:H:408:GLU:CG	2.04	0.86
1:A:174:ALA:CB	1:F:54:ASN:ND2	2.38	0.86
1:D:61:ALA:CB	1:E:299:ALA:O	2.22	0.86
1:D:419:TYR:CE2	1:I:404:LEU:CD2	2.52	0.86
1:A:54:ASN:ND2	1:B:174:ALA:CB	2.38	0.86
1:A:37:PHE:CD1	1:B:185:LEU:CD2	2.59	0.86
1:E:401:LYS:CD	1:J:420:PHE:HD2	1.85	0.86
1:G:61:ALA:C	1:L:299:ALA:O	2.14	0.86
1:C:37:PHE:CD1	1:D:185:LEU:CD2	2.59	0.85
1:I:177:ALA:N	1:J:31:LYS:HA	1.67	0.85
1:G:29:ARG:CB	1:L:175:ALA:CB	2.37	0.85
1:C:54:ASN:ND2	1:D:174:ALA:CB	2.38	0.85
1:K:163:ALA:H	1:L:133:PRO:HG3	1.41	0.85
1:C:401:LYS:CD	1:H:420:PHE:HD2	1.85	0.85
1:C:419:TYR:CE1	1:H:405:GLU:N	2.44	0.85
1:D:209:ARG:CZ	1:E:164:ALA:HB1	2.06	0.85
1:B:54:ASN:ND2	1:C:174:ALA:CB	2.38	0.85
1:D:37:PHE:CD1	1:E:185:LEU:CD2	2.59	0.85
1:A:164:ALA:HB1	1:F:209:ARG:CZ	2.06	0.85
1:B:419:TYR:CE1	1:G:405:GLU:N	2.44	0.85
1:D:397:VAL:HG13	1:I:421:ILE:C	1.84	0.85
1:G:133:PRO:HG3	1:L:163:ALA:H	1.41	0.85
1:E:54:ASN:ND2	1:F:174:ALA:CB	2.38	0.85
1:A:185:LEU:CD2	1:F:37:PHE:CD1	2.59	0.85
1:F:419:TYR:CE1	1:K:405:GLU:N	2.44	0.85
1:F:397:VAL:HG11	1:K:421:ILE:C	1.83	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:419:TYR:CE1	1:I:405:GLU:N	2.44	0.85
1:E:419:TYR:CE1	1:J:405:GLU:N	2.44	0.85
1:C:397:VAL:HG11	1:H:421:ILE:C	1.83	0.85
1:H:299:ALA:O	1:I:61:ALA:C	2.14	0.85
1:A:30:SER:N	1:B:175:ALA:CB	2.38	0.84
1:A:419:TYR:CE1	1:L:405:GLU:N	2.44	0.84
1:C:209:ARG:CZ	1:D:164:ALA:HB1	2.06	0.84
1:G:177:ALA:N	1:H:31:LYS:HA	1.67	0.84
1:E:209:ARG:CZ	1:F:164:ALA:HB1	2.06	0.84
1:E:419:TYR:CE2	1:J:404:LEU:CD2	2.52	0.84
1:C:419:TYR:CE2	1:H:404:LEU:CD2	2.52	0.84
1:I:177:ALA:CA	1:J:31:LYS:HA	2.08	0.84
1:J:177:ALA:CA	1:K:31:LYS:HA	2.08	0.84
1:C:32:SER:N	1:D:177:ALA:CB	2.40	0.84
1:G:31:LYS:HA	1:L:177:ALA:CA	2.08	0.84
1:K:177:ALA:CA	1:L:31:LYS:HA	2.08	0.84
1:A:209:ARG:CZ	1:B:164:ALA:HB1	2.06	0.84
1:A:397:VAL:HG13	1:L:421:ILE:C	1.84	0.84
1:H:299:ALA:O	1:I:61:ALA:CB	2.18	0.84
1:B:32:SER:N	1:C:177:ALA:CB	2.40	0.84
1:B:37:PHE:CD1	1:C:185:LEU:CD2	2.59	0.84
1:B:419:TYR:HH	1:G:408:GLU:HG3	1.42	0.84
1:K:288:ALA:HB1	1:L:400:ALA:CA	2.08	0.84
1:G:400:ALA:CA	1:L:288:ALA:HB1	2.08	0.84
1:D:32:SER:N	1:E:177:ALA:CB	2.40	0.84
1:A:32:SER:N	1:B:177:ALA:CB	2.40	0.84
1:G:163:ALA:H	1:H:133:PRO:HG3	1.41	0.83
1:C:408:GLU:CG	1:H:419:TYR:OH	2.26	0.83
1:G:175:ALA:CB	1:H:30:SER:H	1.85	0.83
1:G:288:ALA:HB1	1:H:400:ALA:CA	2.08	0.83
1:I:162:GLY:CA	1:J:133:PRO:HD3	2.01	0.83
1:A:177:ALA:CB	1:F:32:SER:N	2.40	0.83
1:E:401:LYS:HD3	1:J:420:PHE:HD2	1.31	0.83
1:B:408:GLU:CG	1:G:419:TYR:OH	2.26	0.83
1:E:37:PHE:CD1	1:F:185:LEU:CD2	2.59	0.83
1:H:177:ALA:CA	1:I:31:LYS:HA	2.08	0.83
1:J:177:ALA:N	1:K:31:LYS:HA	1.67	0.83
1:D:408:GLU:CG	1:I:419:TYR:OH	2.26	0.83
1:C:408:GLU:HG3	1:H:419:TYR:HH	1.41	0.83
1:A:288:ALA:HB1	1:F:400:ALA:CA	2.08	0.83
1:E:400:ALA:CA	1:F:288:ALA:HB1	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:163:ALA:H	1:J:133:PRO:HG3	1.41	0.83
1:G:177:ALA:CA	1:H:31:LYS:HA	2.08	0.83
1:A:408:GLU:CG	1:L:419:TYR:OH	2.26	0.83
1:F:420:PHE:HD2	1:K:401:LYS:HD3	1.43	0.83
1:D:397:VAL:CG1	1:I:421:ILE:CA	2.42	0.83
1:E:32:SER:N	1:F:177:ALA:CB	2.40	0.83
1:B:30:SER:N	1:C:175:ALA:CB	2.38	0.83
1:J:288:ALA:HB1	1:K:400:ALA:CA	2.08	0.83
1:K:299:ALA:O	1:L:61:ALA:CB	2.18	0.83
1:H:163:ALA:H	1:I:133:PRO:HG3	1.41	0.83
1:E:408:GLU:CG	1:J:419:TYR:OH	2.26	0.83
1:F:408:GLU:CG	1:K:419:TYR:OH	2.26	0.83
1:C:30:SER:N	1:D:175:ALA:CB	2.38	0.83
1:B:209:ARG:CZ	1:C:164:ALA:HB1	2.06	0.83
1:B:62:ALA:H	1:C:301:ALA:HB2	0.68	0.83
1:B:408:GLU:HG3	1:G:419:TYR:HH	1.43	0.83
1:H:177:ALA:CA	1:I:31:LYS:CA	2.57	0.83
1:D:397:VAL:HG11	1:I:421:ILE:C	1.83	0.83
1:F:421:ILE:CA	1:K:397:VAL:CG1	2.32	0.82
1:A:400:ALA:CA	1:B:288:ALA:HB1	2.09	0.82
1:A:134:GLU:HG2	1:B:158:ALA:HB3	1.57	0.82
1:H:177:ALA:N	1:I:31:LYS:HA	1.67	0.82
1:D:419:TYR:CD1	1:I:405:GLU:N	2.48	0.82
1:E:419:TYR:CD1	1:J:405:GLU:N	2.48	0.82
1:A:419:TYR:CD1	1:L:405:GLU:N	2.48	0.82
1:I:288:ALA:HB1	1:J:400:ALA:CA	2.08	0.82
1:F:419:TYR:CD1	1:K:405:GLU:N	2.48	0.82
1:C:134:GLU:HG2	1:D:158:ALA:HB3	1.57	0.82
1:G:177:ALA:CA	1:H:31:LYS:CA	2.57	0.82
1:B:419:TYR:CD1	1:G:405:GLU:N	2.48	0.82
1:E:419:TYR:HH	1:J:408:GLU:HG3	1.44	0.82
1:J:163:ALA:H	1:K:133:PRO:HG3	1.41	0.82
1:C:419:TYR:CD1	1:H:405:GLU:N	2.48	0.82
1:A:163:ALA:H	1:F:133:PRO:HG3	1.44	0.81
1:A:133:PRO:HG3	1:B:163:ALA:H	1.44	0.81
1:G:133:PRO:O	1:L:158:ALA:CA	2.22	0.81
1:D:419:TYR:HH	1:I:408:GLU:HG3	1.46	0.81
1:C:62:ALA:H	1:D:301:ALA:HB2	0.68	0.81
1:A:61:ALA:C	1:B:299:ALA:C	2.39	0.81
1:B:134:GLU:HG2	1:C:158:ALA:HB3	1.57	0.81
1:K:177:ALA:CA	1:L:31:LYS:CA	2.57	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:158:ALA:CA	1:I:133:PRO:O	2.22	0.81
1:E:421:ILE:C	1:J:397:VAL:HG11	1.71	0.81
1:B:31:LYS:CA	1:C:176:ALA:C	2.35	0.81
1:E:62:ALA:H	1:F:301:ALA:HB2	0.68	0.81
1:H:288:ALA:HB1	1:I:400:ALA:CA	2.08	0.81
1:C:61:ALA:C	1:D:299:ALA:C	2.39	0.81
1:B:400:ALA:CA	1:C:288:ALA:HB1	2.08	0.81
1:D:62:ALA:H	1:E:301:ALA:HB2	0.67	0.80
1:H:156:GLN:HE22	1:I:137:ASN:HD22	0.81	0.80
1:I:156:GLN:HE22	1:J:137:ASN:HD22	0.81	0.80
1:B:419:TYR:CE2	1:G:404:LEU:CD2	2.52	0.80
1:G:156:GLN:HE22	1:H:137:ASN:HD22	0.81	0.80
1:J:177:ALA:CA	1:K:31:LYS:CA	2.57	0.80
1:J:156:GLN:HE22	1:K:137:ASN:HD22	0.81	0.80
1:B:133:PRO:HG3	1:C:163:ALA:H	1.44	0.80
1:G:175:ALA:CB	1:H:29:ARG:CB	2.37	0.80
1:G:158:ALA:CA	1:H:133:PRO:O	2.22	0.80
1:J:175:ALA:CB	1:K:29:ARG:CB	2.37	0.80
1:K:301:ALA:HB2	1:L:62:ALA:H	0.67	0.80
1:J:299:ALA:O	1:K:61:ALA:CB	2.18	0.80
1:E:133:PRO:HG3	1:F:163:ALA:H	1.44	0.80
1:J:301:ALA:HB2	1:K:62:ALA:H	0.67	0.80
1:E:61:ALA:C	1:F:299:ALA:C	2.39	0.80
1:C:415:LYS:HD3	1:H:408:GLU:CD	2.03	0.80
1:H:166:ALA:HB2	1:I:205:GLN:OE1	1.82	0.80
1:A:301:ALA:HB2	1:F:62:ALA:H	0.68	0.79
1:C:400:ALA:CA	1:D:288:ALA:HB1	2.08	0.79
1:D:37:PHE:HE1	1:E:185:LEU:HD21	1.01	0.79
1:K:156:GLN:HE22	1:L:137:ASN:HD22	0.81	0.79
1:G:137:ASN:HD22	1:L:156:GLN:HE22	0.81	0.79
1:I:166:ALA:HB2	1:J:205:GLN:OE1	1.82	0.79
1:I:158:ALA:CA	1:J:133:PRO:O	2.22	0.79
1:C:133:PRO:HG3	1:D:163:ALA:H	1.44	0.79
1:F:401:LYS:CD	1:K:420:PHE:HD2	1.85	0.79
1:D:54:ASN:HD21	1:E:174:ALA:HB1	1.48	0.79
1:G:166:ALA:HB2	1:H:205:GLN:OE1	1.82	0.79
1:K:177:ALA:N	1:L:31:LYS:HA	1.67	0.79
1:E:415:LYS:HD3	1:J:408:GLU:CD	2.03	0.79
1:F:415:LYS:HD3	1:K:408:GLU:CD	2.03	0.79
1:I:175:ALA:CB	1:J:29:ARG:CB	2.37	0.79
1:D:61:ALA:C	1:E:299:ALA:C	2.39	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:177:ALA:CA	1:J:31:LYS:CA	2.57	0.79
1:J:166:ALA:HB2	1:K:205:GLN:OE1	1.82	0.79
1:G:205:GLN:OE1	1:L:166:ALA:HB2	1.82	0.79
1:F:408:GLU:CG	1:K:415:LYS:HD3	2.12	0.79
1:B:401:LYS:CD	1:G:420:PHE:HD2	1.85	0.79
1:C:214:ILE:HG13	1:D:163:ALA:O	1.84	0.79
1:D:408:GLU:HG3	1:I:419:TYR:HH	1.43	0.79
1:A:174:ALA:HB1	1:F:54:ASN:HD21	1.48	0.79
1:K:166:ALA:HB2	1:L:205:GLN:OE1	1.82	0.79
1:E:420:PHE:HD2	1:J:401:LYS:HD3	1.43	0.78
1:B:408:GLU:CG	1:G:415:LYS:HD3	2.12	0.78
1:C:135:VAL:CB	1:D:156:GLN:HA	2.11	0.78
1:C:405:GLU:HG3	1:H:419:TYR:HD1	1.49	0.78
1:C:408:GLU:CG	1:H:415:LYS:HD3	2.12	0.78
1:A:163:ALA:O	1:F:214:ILE:HG13	1.84	0.78
1:J:158:ALA:CA	1:K:133:PRO:O	2.22	0.78
1:G:301:ALA:HB2	1:H:62:ALA:H	0.67	0.78
1:G:62:ALA:H	1:L:301:ALA:HB2	0.67	0.78
1:E:214:ILE:HG13	1:F:163:ALA:O	1.84	0.78
1:I:158:ALA:CB	1:J:134:GLU:HG3	1.95	0.78
1:E:405:GLU:HG3	1:J:419:TYR:HD1	1.48	0.78
1:F:405:GLU:HG3	1:K:419:TYR:HD1	1.49	0.78
1:D:405:GLU:HG3	1:I:419:TYR:HD1	1.48	0.78
1:A:408:GLU:CG	1:L:415:LYS:HD3	2.12	0.78
1:B:415:LYS:HD3	1:G:408:GLU:CD	2.03	0.78
1:F:419:TYR:HH	1:K:408:GLU:HG3	1.46	0.78
1:H:175:ALA:CB	1:I:29:ARG:CB	2.37	0.78
1:A:62:ALA:H	1:B:301:ALA:HB2	0.67	0.78
1:J:301:ALA:HB2	1:J:62:ALA:H	0.67	0.78
1:A:214:ILE:HG13	1:B:163:ALA:O	1.84	0.78
1:E:408:GLU:CG	1:J:415:LYS:HD3	2.12	0.78
1:B:214:ILE:HG13	1:C:163:ALA:O	1.84	0.78
1:A:419:TYR:HH	1:L:408:GLU:HG3	1.46	0.78
1:B:135:VAL:CB	1:C:156:GLN:HA	2.11	0.78
1:B:61:ALA:C	1:C:299:ALA:C	2.39	0.78
1:D:400:ALA:CA	1:E:288:ALA:HB1	2.09	0.78
1:K:175:ALA:CB	1:L:29:ARG:CB	2.37	0.78
1:A:299:ALA:C	1:F:61:ALA:C	2.39	0.78
1:A:134:GLU:CD	1:B:158:ALA:CB	2.50	0.77
1:A:31:LYS:HB3	1:B:176:ALA:O	1.84	0.77
1:D:408:GLU:CG	1:I:415:LYS:HD3	2.12	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:299:ALA:O	1:L:61:ALA:HB3	1.85	0.77
1:A:415:LYS:HD3	1:L:408:GLU:CD	2.03	0.77
1:A:405:GLU:HG3	1:L:419:TYR:HD1	1.48	0.77
1:D:214:ILE:HG13	1:E:163:ALA:O	1.84	0.77
1:K:177:ALA:C	1:L:32:SER:N	2.38	0.77
1:J:174:ALA:HB3	1:K:54:ASN:HD21	1.48	0.77
1:G:61:ALA:O	1:L:299:ALA:CA	2.33	0.77
1:G:61:ALA:HB3	1:L:299:ALA:O	1.85	0.77
1:D:415:LYS:HD3	1:I:408:GLU:CD	2.03	0.77
1:E:54:ASN:HD21	1:F:174:ALA:HB1	1.48	0.77
1:I:299:ALA:CA	1:J:61:ALA:O	2.33	0.77
1:J:299:ALA:O	1:K:61:ALA:HB3	1.85	0.77
1:B:405:GLU:HG3	1:G:419:TYR:HD1	1.48	0.77
1:E:30:SER:N	1:F:175:ALA:CB	2.38	0.77
1:J:299:ALA:CA	1:K:61:ALA:O	2.33	0.77
1:G:61:ALA:CB	1:L:299:ALA:O	2.18	0.77
1:J:177:ALA:C	1:K:32:SER:N	2.38	0.77
1:D:135:VAL:CB	1:E:156:GLN:HA	2.11	0.77
1:H:301:ALA:HB2	1:I:62:ALA:H	0.67	0.77
1:C:419:TYR:CZ	1:H:404:LEU:C	2.58	0.77
1:H:175:ALA:CB	1:I:30:SER:N	2.45	0.77
1:A:61:ALA:CB	1:B:299:ALA:C	2.24	0.77
1:D:133:PRO:HG3	1:E:163:ALA:H	1.44	0.77
1:B:405:GLU:N	1:G:419:TYR:CE1	2.53	0.77
1:G:299:ALA:CA	1:H:61:ALA:O	2.33	0.77
1:K:299:ALA:CA	1:L:61:ALA:O	2.33	0.77
1:C:404:LEU:HD12	1:H:419:TYR:HA	1.68	0.76
1:B:419:TYR:CZ	1:G:404:LEU:C	2.58	0.76
1:F:419:TYR:CZ	1:K:404:LEU:C	2.58	0.76
1:C:405:GLU:N	1:H:419:TYR:CE1	2.53	0.76
1:I:299:ALA:O	1:J:61:ALA:HB3	1.85	0.76
1:G:299:ALA:O	1:H:61:ALA:HB3	1.85	0.76
1:H:299:ALA:CA	1:I:61:ALA:O	2.33	0.76
1:B:32:SER:H	1:C:178:GLY:N	1.82	0.76
1:G:134:GLU:CD	1:L:158:ALA:CB	2.54	0.76
1:A:404:LEU:HD12	1:L:419:TYR:HA	1.67	0.76
1:E:135:VAL:CB	1:F:156:GLN:HA	2.11	0.76
1:I:163:ALA:N	1:J:133:PRO:HG3	1.99	0.76
1:D:32:SER:H	1:E:178:GLY:N	1.82	0.76
1:G:32:SER:N	1:L:177:ALA:C	2.38	0.76
1:E:405:GLU:N	1:J:419:TYR:CE1	2.53	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:405:GLU:N	1:G:419:TYR:CD1	2.54	0.76
1:A:175:ALA:CB	1:F:30:SER:N	2.38	0.76
1:A:54:ASN:HD21	1:B:174:ALA:HB1	1.48	0.76
1:E:37:PHE:CE1	1:F:185:LEU:HD22	2.18	0.76
1:A:32:SER:H	1:B:178:GLY:N	1.82	0.76
1:K:163:ALA:N	1:L:133:PRO:HG3	1.99	0.76
1:D:404:LEU:HD12	1:I:419:TYR:HA	1.67	0.76
1:B:404:LEU:HD12	1:G:419:TYR:HA	1.67	0.76
1:H:299:ALA:O	1:I:61:ALA:HB3	1.85	0.76
1:D:214:ILE:CD1	1:E:161:GLY:C	2.54	0.76
1:C:32:SER:H	1:D:178:GLY:N	1.82	0.76
1:G:31:LYS:CA	1:L:177:ALA:CA	2.57	0.76
1:E:408:GLU:HG3	1:J:419:TYR:HH	1.48	0.76
1:J:175:ALA:CB	1:K:30:SER:N	2.45	0.76
1:F:405:GLU:N	1:K:419:TYR:CE1	2.53	0.76
1:A:405:GLU:N	1:L:419:TYR:CD1	2.54	0.76
1:B:54:ASN:HD21	1:C:174:ALA:HB1	1.48	0.76
1:D:61:ALA:CB	1:E:299:ALA:C	2.24	0.76
1:C:214:ILE:CD1	1:D:161:GLY:C	2.54	0.76
1:G:134:GLU:HG3	1:L:158:ALA:CB	1.95	0.76
1:D:405:GLU:N	1:I:419:TYR:CD1	2.54	0.76
1:C:405:GLU:N	1:H:419:TYR:CD1	2.54	0.76
1:K:174:ALA:HB3	1:L:54:ASN:HD21	1.48	0.76
1:E:214:ILE:CD1	1:F:161:GLY:C	2.54	0.76
1:E:32:SER:H	1:F:178:GLY:N	1.82	0.76
1:A:161:GLY:C	1:F:214:ILE:CD1	2.54	0.76
1:D:405:GLU:N	1:I:419:TYR:CE1	2.53	0.76
1:A:135:VAL:CB	1:B:156:GLN:HA	2.11	0.76
1:E:134:GLU:CD	1:F:158:ALA:CB	2.50	0.75
1:I:162:GLY:CA	1:J:214:ILE:HD12	2.13	0.75
1:C:133:PRO:O	1:D:158:ALA:CA	2.26	0.75
1:I:177:ALA:C	1:J:32:SER:N	2.38	0.75
1:E:405:GLU:N	1:J:419:TYR:CD1	2.54	0.75
1:D:419:TYR:CZ	1:I:404:LEU:C	2.58	0.75
1:D:30:SER:N	1:E:175:ALA:CB	2.38	0.75
1:D:31:LYS:HA	1:E:177:ALA:CA	2.17	0.75
1:B:133:PRO:O	1:C:158:ALA:CA	2.26	0.75
1:H:177:ALA:C	1:I:32:SER:N	2.38	0.75
1:C:420:PHE:HD2	1:H:401:LYS:CD	1.98	0.75
1:A:419:TYR:CZ	1:L:404:LEU:C	2.58	0.75
1:I:175:ALA:CB	1:J:30:SER:N	2.45	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:178:GLY:N	1:F:32:SER:H	1.82	0.75
1:K:164:ALA:HB1	1:L:209:ARG:CZ	2.10	0.75
1:A:420:PHE:HD2	1:L:401:LYS:CD	1.98	0.75
1:G:54:ASN:HD21	1:L:174:ALA:HB3	1.48	0.75
1:C:31:LYS:HA	1:D:177:ALA:CA	2.17	0.75
1:E:419:TYR:CZ	1:J:404:LEU:C	2.58	0.75
1:F:404:LEU:HD12	1:K:419:TYR:HA	1.68	0.75
1:C:404:LEU:CB	1:H:419:TYR:CE1	2.67	0.75
1:B:31:LYS:HB3	1:C:176:ALA:O	1.84	0.75
1:G:177:ALA:C	1:H:32:SER:N	2.38	0.75
1:A:156:GLN:HA	1:F:135:VAL:CB	2.11	0.75
1:F:405:GLU:N	1:K:419:TYR:CD1	2.54	0.75
1:E:31:LYS:HA	1:F:177:ALA:CA	2.17	0.75
1:E:404:LEU:HD12	1:J:419:TYR:HA	1.67	0.75
1:A:177:ALA:CA	1:F:31:LYS:HA	2.17	0.75
1:K:158:ALA:CA	1:L:133:PRO:O	2.22	0.75
1:C:54:ASN:HD21	1:D:174:ALA:HB1	1.48	0.75
1:C:37:PHE:CE1	1:D:185:LEU:HD22	2.18	0.75
1:A:401:LYS:CD	1:L:420:PHE:HD2	1.85	0.75
1:G:156:GLN:HA	1:H:135:VAL:CB	2.15	0.75
1:I:158:ALA:CB	1:J:134:GLU:CD	2.54	0.74
1:A:214:ILE:CD1	1:B:161:GLY:C	2.54	0.74
1:F:421:ILE:C	1:K:397:VAL:HG13	1.74	0.74
1:H:158:ALA:CB	1:I:134:GLU:HG3	1.95	0.74
1:A:31:LYS:HA	1:B:177:ALA:CA	2.17	0.74
1:B:214:ILE:CD1	1:C:161:GLY:C	2.54	0.74
1:C:421:ILE:HA	1:H:397:VAL:HG11	1.68	0.74
1:A:405:GLU:N	1:L:419:TYR:CE1	2.53	0.74
1:J:164:ALA:HB1	1:K:209:ARG:CZ	2.10	0.74
1:B:31:LYS:HA	1:C:177:ALA:CA	2.17	0.74
1:E:61:ALA:O	1:F:299:ALA:O	2.04	0.74
1:A:133:PRO:HD2	1:B:162:GLY:C	2.07	0.74
1:A:37:PHE:CE1	1:B:185:LEU:HD22	2.18	0.74
1:J:174:ALA:HB2	1:K:54:ASN:HD21	1.51	0.74
1:G:135:VAL:CB	1:L:156:GLN:HA	2.15	0.74
1:D:133:PRO:HD2	1:E:162:GLY:C	2.07	0.74
1:G:133:PRO:HG3	1:L:163:ALA:N	1.99	0.74
1:A:420:PHE:HD2	1:L:401:LYS:HD3	1.43	0.74
1:K:175:ALA:HB1	1:L:29:ARG:C	2.08	0.74
1:H:175:ALA:HB1	1:I:29:ARG:CA	2.18	0.74
1:J:175:ALA:HB1	1:K:29:ARG:C	2.08	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:174:ALA:HB2	1:J:54:ASN:ND2	2.03	0.74
1:A:162:GLY:C	1:F:133:PRO:HD2	2.07	0.73
1:C:34:PRO:HD3	1:D:179:ALA:H	1.53	0.73
1:K:175:ALA:CB	1:L:30:SER:N	2.45	0.73
1:G:175:ALA:HB1	1:H:29:ARG:CA	2.18	0.73
1:K:174:ALA:HB2	1:L:54:ASN:HD21	1.51	0.73
1:H:174:ALA:HB2	1:I:54:ASN:ND2	2.03	0.73
1:F:397:VAL:HG13	1:K:421:ILE:C	1.84	0.73
1:D:137:ASN:HD22	1:E:156:GLN:HE22	0.77	0.73
1:C:137:ASN:HD22	1:D:156:GLN:HE22	0.77	0.73
1:H:163:ALA:N	1:I:133:PRO:HG3	1.99	0.73
1:A:179:ALA:H	1:F:34:PRO:HD3	1.53	0.73
1:D:401:LYS:CD	1:I:420:PHE:HD2	1.85	0.73
1:D:135:VAL:H	1:E:156:GLN:C	1.91	0.73
1:A:158:ALA:CB	1:F:134:GLU:CD	2.50	0.73
1:G:209:ARG:CZ	1:L:164:ALA:HB1	2.10	0.73
1:A:34:PRO:HD3	1:B:179:ALA:H	1.53	0.73
1:A:135:VAL:H	1:B:156:GLN:C	1.91	0.73
1:E:133:PRO:HG3	1:F:163:ALA:N	2.02	0.73
1:J:163:ALA:N	1:K:133:PRO:HG3	1.99	0.73
1:B:34:PRO:HD3	1:C:179:ALA:H	1.53	0.73
1:G:164:ALA:HB1	1:H:209:ARG:CZ	2.10	0.73
1:C:421:ILE:C	1:H:397:VAL:HG13	1.74	0.73
1:G:174:ALA:HB2	1:H:54:ASN:ND2	2.03	0.73
1:H:156:GLN:HA	1:I:135:VAL:CB	2.15	0.73
1:A:163:ALA:N	1:F:133:PRO:HG3	2.02	0.73
1:I:175:ALA:HB1	1:J:29:ARG:CA	2.18	0.73
1:A:175:ALA:HB1	1:F:29:ARG:C	2.09	0.73
1:C:397:VAL:HG13	1:H:421:ILE:C	1.84	0.73
1:A:137:ASN:HD22	1:B:156:GLN:HE22	0.77	0.73
1:C:31:LYS:HB3	1:D:176:ALA:O	1.84	0.73
1:G:29:ARG:C	1:L:175:ALA:HB1	2.08	0.73
1:B:137:ASN:HD22	1:C:156:GLN:HE22	0.77	0.73
1:E:34:PRO:HD3	1:F:179:ALA:H	1.53	0.73
1:D:34:PRO:HD3	1:E:179:ALA:H	1.53	0.73
1:B:421:ILE:HA	1:G:397:VAL:HG11	1.68	0.73
1:H:175:ALA:HB1	1:I:29:ARG:C	2.08	0.73
1:G:174:ALA:HB3	1:H:54:ASN:HD21	1.48	0.73
1:G:29:ARG:CA	1:L:175:ALA:HB1	2.18	0.73
1:B:29:ARG:CB	1:C:175:ALA:CB	2.45	0.73
1:E:31:LYS:HB3	1:F:176:ALA:O	1.84	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:PRO:HD2	1:C:162:GLY:C	2.07	0.72
1:E:133:PRO:HD2	1:F:162:GLY:C	2.07	0.72
1:E:29:ARG:C	1:F:175:ALA:HB1	2.09	0.72
1:D:31:LYS:HB3	1:E:176:ALA:O	1.84	0.72
1:C:31:LYS:CA	1:D:177:ALA:CA	2.68	0.72
1:F:419:TYR:CE1	1:K:404:LEU:O	2.43	0.72
1:B:31:LYS:CA	1:C:177:ALA:CA	2.68	0.72
1:D:419:TYR:HA	1:I:404:LEU:HD12	1.72	0.72
1:E:421:ILE:HA	1:J:397:VAL:HG11	1.68	0.72
1:I:172:GLY:C	1:J:29:ARG:NH1	2.43	0.72
1:B:61:ALA:CB	1:C:299:ALA:C	2.24	0.72
1:C:419:TYR:HA	1:H:404:LEU:HD12	1.72	0.72
1:A:419:TYR:CE1	1:L:404:LEU:O	2.43	0.72
1:I:175:ALA:HB1	1:J:29:ARG:C	2.08	0.72
1:G:172:GLY:C	1:H:29:ARG:NH1	2.43	0.72
1:G:163:ALA:N	1:H:133:PRO:HG3	1.99	0.72
1:G:175:ALA:HB1	1:H:29:ARG:C	2.08	0.72
1:D:29:ARG:CB	1:E:175:ALA:CB	2.45	0.72
1:E:137:ASN:HD22	1:F:156:GLN:HE22	0.77	0.72
1:A:29:ARG:C	1:B:175:ALA:HB1	2.09	0.72
1:B:61:ALA:O	1:C:299:ALA:O	2.04	0.72
1:E:419:TYR:CE1	1:J:404:LEU:O	2.43	0.72
1:J:175:ALA:HB1	1:K:29:ARG:CA	2.18	0.72
1:C:61:ALA:O	1:D:299:ALA:O	2.04	0.72
1:C:133:PRO:HD2	1:D:162:GLY:C	2.07	0.72
1:E:419:TYR:HA	1:J:404:LEU:HD12	1.72	0.72
1:H:164:ALA:CA	1:I:209:ARG:HH21	2.03	0.72
1:A:185:LEU:HD22	1:F:37:PHE:CE1	2.18	0.71
1:H:172:GLY:C	1:I:29:ARG:NH1	2.43	0.71
1:A:61:ALA:HB3	1:B:299:ALA:O	1.90	0.71
1:K:178:GLY:C	1:L:33:ILE:HG22	2.11	0.71
1:I:164:ALA:CA	1:J:209:ARG:HH21	2.03	0.71
1:B:61:ALA:HB3	1:C:299:ALA:O	1.90	0.71
1:H:158:ALA:CB	1:I:134:GLU:CD	2.54	0.71
1:A:133:PRO:HG3	1:B:163:ALA:N	2.02	0.71
1:B:134:GLU:CD	1:C:158:ALA:CB	2.50	0.71
1:D:420:PHE:HD2	1:I:401:LYS:HD3	1.43	0.71
1:I:164:ALA:HB1	1:J:209:ARG:CZ	2.10	0.71
1:G:29:ARG:NH1	1:L:172:GLY:C	2.43	0.71
1:J:172:GLY:C	1:K:29:ARG:NH1	2.43	0.71
1:G:54:ASN:ND2	1:L:174:ALA:HB2	2.03	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:29:ARG:C	1:C:175:ALA:HB1	2.09	0.71
1:D:133:PRO:HG3	1:E:163:ALA:N	2.02	0.71
1:G:178:GLY:C	1:H:33:ILE:HG22	2.11	0.71
1:B:419:TYR:HA	1:G:404:LEU:HD12	1.72	0.71
1:K:175:ALA:HB1	1:L:29:ARG:CA	2.18	0.71
1:C:29:ARG:C	1:D:175:ALA:HB1	2.09	0.71
1:C:134:GLU:CD	1:D:158:ALA:CB	2.50	0.71
1:J:178:GLY:C	1:K:33:ILE:HG22	2.11	0.71
1:J:164:ALA:CA	1:K:209:ARG:HH21	2.03	0.71
1:D:134:GLU:HG3	1:E:158:ALA:CB	1.95	0.71
1:D:31:LYS:CA	1:E:177:ALA:CA	2.68	0.71
1:F:419:TYR:HA	1:K:404:LEU:HD12	1.72	0.71
1:K:158:ALA:CB	1:L:134:GLU:CD	2.54	0.71
1:E:404:LEU:O	1:J:419:TYR:CE1	2.43	0.71
1:K:164:ALA:CA	1:L:209:ARG:HH21	2.03	0.71
1:F:420:PHE:HD2	1:K:401:LYS:CD	1.98	0.71
1:K:172:GLY:C	1:L:29:ARG:NH1	2.43	0.71
1:K:156:GLN:HA	1:L:135:VAL:CB	2.15	0.71
1:A:134:GLU:HG3	1:B:158:ALA:CB	1.95	0.71
1:G:164:ALA:CA	1:H:209:ARG:HH21	2.03	0.71
1:D:420:PHE:HD2	1:I:401:LYS:CD	1.98	0.71
1:A:419:TYR:HA	1:L:404:LEU:HD12	1.72	0.71
1:A:61:ALA:O	1:B:299:ALA:O	2.04	0.71
1:A:31:LYS:CA	1:B:177:ALA:CA	2.68	0.71
1:C:419:TYR:CE1	1:H:404:LEU:O	2.43	0.71
1:D:29:ARG:C	1:E:175:ALA:HB1	2.09	0.71
1:A:156:GLN:HE22	1:F:137:ASN:HD22	0.77	0.71
1:K:158:ALA:CB	1:L:134:GLU:HG3	1.95	0.71
1:B:419:TYR:CE1	1:G:404:LEU:O	2.43	0.71
1:D:29:ARG:CA	1:E:175:ALA:HB1	2.21	0.71
1:C:29:ARG:CA	1:D:175:ALA:HB1	2.21	0.71
1:I:156:GLN:HA	1:J:135:VAL:CB	2.15	0.71
1:F:404:LEU:O	1:K:419:TYR:CE1	2.43	0.70
1:H:174:ALA:HB3	1:I:54:ASN:HD21	1.48	0.70
1:B:29:ARG:CA	1:C:175:ALA:HB1	2.21	0.70
1:G:209:ARG:HH21	1:L:164:ALA:CA	2.03	0.70
1:H:164:ALA:HB1	1:I:209:ARG:CZ	2.10	0.70
1:D:404:LEU:O	1:J:419:TYR:CE1	2.43	0.70
1:H:178:GLY:C	1:I:33:ILE:HG22	2.11	0.70
1:G:33:ILE:HG22	1:L:178:GLY:C	2.11	0.70
1:C:29:ARG:CB	1:D:175:ALA:CB	2.45	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:299:ALA:O	1:F:61:ALA:HB3	1.90	0.70
1:D:419:TYR:CE1	1:I:404:LEU:O	2.43	0.70
1:E:134:GLU:HG2	1:F:158:ALA:HB3	1.57	0.70
1:A:176:ALA:C	1:F:31:LYS:CA	2.35	0.70
1:A:176:ALA:O	1:F:31:LYS:HB3	1.84	0.70
1:A:421:ILE:HA	1:L:397:VAL:HG11	1.68	0.70
1:B:415:LYS:CD	1:G:408:GLU:CD	2.58	0.70
1:C:61:ALA:HB3	1:D:299:ALA:O	1.90	0.70
1:A:299:ALA:C	1:F:61:ALA:CB	2.24	0.70
1:B:209:ARG:HH21	1:C:164:ALA:CA	2.05	0.70
1:B:37:PHE:CE1	1:C:185:LEU:HD22	2.18	0.70
1:A:404:LEU:O	1:L:419:TYR:CE1	2.43	0.70
1:A:408:GLU:CD	1:L:415:LYS:HD3	2.12	0.70
1:K:174:ALA:HB2	1:L:54:ASN:ND2	2.03	0.70
1:D:61:ALA:HB3	1:E:299:ALA:O	1.90	0.70
1:C:209:ARG:HH21	1:D:164:ALA:CA	2.05	0.70
1:C:404:LEU:O	1:H:419:TYR:CE1	2.43	0.70
1:G:175:ALA:CB	1:H:30:SER:N	2.45	0.70
1:J:156:GLN:HA	1:K:135:VAL:CB	2.15	0.70
1:D:134:GLU:CD	1:E:158:ALA:CB	2.50	0.70
1:E:29:ARG:CA	1:F:175:ALA:HB1	2.21	0.70
1:E:29:ARG:HH12	1:F:172:GLY:HA2	1.57	0.70
1:C:408:GLU:CD	1:H:415:LYS:HD3	2.12	0.70
1:E:29:ARG:CB	1:F:175:ALA:CB	2.45	0.70
1:I:178:GLY:C	1:J:33:ILE:HG22	2.11	0.69
1:D:408:GLU:CD	1:I:415:LYS:HD3	2.12	0.69
1:B:404:LEU:O	1:G:419:TYR:CE1	2.43	0.69
1:A:175:ALA:CB	1:F:29:ARG:CB	2.45	0.69
1:A:172:GLY:HA2	1:F:29:ARG:HH12	1.57	0.69
1:D:61:ALA:O	1:E:299:ALA:O	2.04	0.69
1:E:419:TYR:CB	1:J:401:LYS:CA	2.43	0.69
1:A:29:ARG:CA	1:B:175:ALA:HB1	2.21	0.69
1:D:29:ARG:HH12	1:E:172:GLY:HA2	1.57	0.69
1:D:133:PRO:O	1:E:158:ALA:CA	2.26	0.69
1:D:209:ARG:HH21	1:E:164:ALA:CA	2.05	0.69
1:A:415:LYS:CD	1:L:408:GLU:CD	2.58	0.69
1:C:415:LYS:CD	1:H:408:GLU:CD	2.58	0.69
1:C:61:ALA:CB	1:D:299:ALA:C	2.24	0.69
1:E:61:ALA:HB3	1:F:299:ALA:O	1.90	0.69
1:D:421:ILE:HA	1:I:397:VAL:HG11	1.68	0.69
1:A:29:ARG:HH12	1:B:172:GLY:HA2	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:133:PRO:HG3	1:C:163:ALA:N	2.02	0.69
1:C:29:ARG:HH12	1:D:172:GLY:HA2	1.57	0.69
1:A:158:ALA:HB3	1:F:134:GLU:HG2	1.57	0.69
1:A:158:ALA:CB	1:F:134:GLU:HG3	1.95	0.69
1:C:133:PRO:HG3	1:D:163:ALA:N	2.02	0.69
1:F:408:GLU:CD	1:K:415:LYS:HD3	2.12	0.69
1:I:174:ALA:HB3	1:J:54:ASN:HD21	1.48	0.69
1:E:29:ARG:CA	1:F:175:ALA:CB	2.71	0.69
1:B:29:ARG:CA	1:C:175:ALA:CB	2.71	0.69
1:B:29:ARG:HH12	1:C:172:GLY:HA2	1.57	0.69
1:E:408:GLU:CD	1:J:415:LYS:HD3	2.12	0.69
1:A:175:ALA:HB1	1:F:29:ARG:CA	2.21	0.69
1:D:29:ARG:CA	1:E:175:ALA:CB	2.71	0.69
1:H:172:GLY:C	1:I:29:ARG:HH12	1.97	0.68
1:G:162:GLY:C	1:H:133:PRO:HD2	2.12	0.68
1:A:29:ARG:CA	1:B:175:ALA:CB	2.71	0.68
1:B:134:GLU:HG3	1:C:158:ALA:CB	1.95	0.68
1:D:32:SER:N	1:E:178:GLY:N	2.42	0.68
1:K:172:GLY:C	1:L:29:ARG:HH12	1.97	0.68
1:A:177:ALA:CA	1:F:31:LYS:CA	2.68	0.68
1:B:32:SER:N	1:C:178:GLY:N	2.42	0.68
1:J:174:ALA:HB2	1:K:54:ASN:ND2	2.03	0.68
1:E:420:PHE:HD2	1:J:401:LYS:CD	1.98	0.68
1:A:175:ALA:CB	1:F:29:ARG:CA	2.71	0.68
1:A:299:ALA:O	1:F:61:ALA:O	2.04	0.68
1:D:37:PHE:CE1	1:E:185:LEU:HD22	2.18	0.68
1:K:162:GLY:C	1:L:133:PRO:HD2	2.12	0.68
1:J:178:GLY:N	1:K:32:SER:N	2.42	0.68
1:C:419:TYR:CE1	1:H:404:LEU:CB	2.72	0.68
1:G:29:ARG:CA	1:L:175:ALA:CB	2.72	0.68
1:I:172:GLY:C	1:J:29:ARG:HH12	1.97	0.68
1:C:29:ARG:CA	1:D:175:ALA:CB	2.71	0.68
1:A:158:ALA:CA	1:F:133:PRO:O	2.26	0.68
1:E:209:ARG:HH21	1:F:164:ALA:CA	2.05	0.68
1:B:408:GLU:CD	1:G:415:LYS:HD3	2.12	0.68
1:G:30:SER:N	1:L:175:ALA:CB	2.45	0.68
1:A:29:ARG:NH1	1:B:172:GLY:C	2.48	0.68
1:D:29:ARG:NH1	1:E:172:GLY:C	2.48	0.68
1:A:419:TYR:OH	1:L:408:GLU:CD	2.32	0.68
1:J:172:GLY:C	1:K:29:ARG:HH12	1.97	0.68
1:I:175:ALA:CB	1:J:29:ARG:CA	2.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:29:ARG:HB3	1:B:175:ALA:HB2	0.77	0.68
1:C:29:ARG:NH1	1:D:172:GLY:C	2.48	0.68
1:H:162:GLY:CA	1:I:214:ILE:HD12	2.13	0.67
1:B:133:PRO:CD	1:C:163:ALA:H	2.07	0.67
1:G:32:SER:N	1:L:178:GLY:N	2.42	0.67
1:K:178:GLY:N	1:L:32:SER:N	2.42	0.67
1:D:404:LEU:C	1:I:419:TYR:CZ	2.68	0.67
1:I:156:GLN:NE2	1:J:137:ASN:HD21	1.92	0.67
1:H:178:GLY:C	1:I:33:ILE:CG2	2.63	0.67
1:F:419:TYR:OH	1:K:408:GLU:CD	2.32	0.67
1:E:29:ARG:NH1	1:F:172:GLY:C	2.48	0.67
1:G:178:GLY:N	1:H:32:SER:N	2.42	0.67
1:K:178:GLY:C	1:L:33:ILE:CG2	2.63	0.67
1:A:164:ALA:CA	1:F:209:ARG:HH21	2.05	0.67
1:F:404:LEU:C	1:K:419:TYR:CZ	2.68	0.67
1:F:415:LYS:CD	1:K:408:GLU:CD	2.58	0.67
1:H:175:ALA:CB	1:I:29:ARG:CA	2.72	0.67
1:G:172:GLY:C	1:H:29:ARG:HH12	1.97	0.67
1:G:33:ILE:CG2	1:L:178:GLY:C	2.63	0.67
1:A:404:LEU:C	1:L:419:TYR:CZ	2.68	0.67
1:I:178:GLY:C	1:J:33:ILE:CG2	2.63	0.67
1:J:156:GLN:NE2	1:K:137:ASN:HD21	1.92	0.67
1:J:178:GLY:C	1:K:33:ILE:CG2	2.63	0.67
1:G:29:ARG:HH12	1:L:172:GLY:C	1.97	0.67
1:A:214:ILE:HD12	1:B:162:GLY:CA	2.16	0.67
1:B:404:LEU:CB	1:G:419:TYR:CE1	2.67	0.67
1:B:419:TYR:CB	1:G:401:LYS:CA	2.43	0.67
1:D:134:GLU:HG2	1:E:158:ALA:HB3	1.57	0.67
1:A:172:GLY:C	1:F:29:ARG:NH1	2.48	0.67
1:C:134:GLU:HG3	1:D:158:ALA:CB	1.95	0.67
1:I:178:GLY:N	1:J:32:SER:N	2.42	0.67
1:F:421:ILE:HA	1:K:397:VAL:HG11	1.68	0.67
1:K:175:ALA:CB	1:L:29:ARG:CA	2.72	0.67
1:J:94:ALA:HB1	1:J:95:ALA:HA	1.77	0.67
1:A:94:ALA:HB1	1:A:95:ALA:HA	1.77	0.67
1:A:32:SER:N	1:B:178:GLY:N	2.42	0.67
1:H:178:GLY:N	1:I:32:SER:N	2.42	0.67
1:C:404:LEU:C	1:H:419:TYR:CZ	2.68	0.67
1:J:175:ALA:CB	1:K:29:ARG:CA	2.72	0.67
1:E:31:LYS:CA	1:F:177:ALA:CA	2.68	0.66
1:E:32:SER:N	1:F:178:GLY:N	2.42	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:404:LEU:C	1:G:419:TYR:CZ	2.68	0.66
1:A:135:VAL:HB	1:B:156:GLN:CA	2.16	0.66
1:K:94:ALA:HB1	1:K:95:ALA:HA	1.77	0.66
1:L:94:ALA:HB1	1:L:95:ALA:HA	1.77	0.66
1:G:178:GLY:C	1:H:33:ILE:CG2	2.63	0.66
1:G:135:VAL:HB	1:L:156:GLN:CA	2.18	0.66
1:F:94:ALA:HB1	1:F:95:ALA:HA	1.77	0.66
1:E:133:PRO:O	1:F:158:ALA:CA	2.26	0.66
1:J:162:GLY:N	1:K:131:GLY:C	2.49	0.66
1:A:29:ARG:CB	1:B:175:ALA:CB	2.45	0.66
1:C:29:ARG:HH12	1:D:172:GLY:CA	2.09	0.66
1:I:94:ALA:HB1	1:I:95:ALA:HA	1.77	0.66
1:E:404:LEU:C	1:J:419:TYR:CZ	2.68	0.66
1:E:419:TYR:OH	1:J:408:GLU:CD	2.32	0.66
1:B:29:ARG:NH1	1:C:172:GLY:C	2.48	0.66
1:D:29:ARG:HH12	1:E:172:GLY:CA	2.09	0.66
1:A:136:ILE:HA	1:B:156:GLN:HB3	1.78	0.66
1:A:156:GLN:NE2	1:F:137:ASN:HD21	1.93	0.66
1:E:94:ALA:HB1	1:E:95:ALA:HA	1.77	0.66
1:C:133:PRO:CD	1:D:163:ALA:H	2.07	0.66
1:K:163:ALA:O	1:L:214:ILE:HG13	1.96	0.66
1:K:156:GLN:HB3	1:L:136:ILE:HA	1.78	0.66
1:B:94:ALA:HB1	1:B:95:ALA:HA	1.77	0.66
1:K:162:GLY:N	1:L:131:GLY:C	2.49	0.66
1:C:419:TYR:CB	1:H:401:LYS:CA	2.43	0.66
1:J:156:GLN:HB3	1:K:136:ILE:HA	1.78	0.66
1:A:156:GLN:HB3	1:F:136:ILE:HA	1.78	0.66
1:G:163:ALA:O	1:H:214:ILE:HG13	1.96	0.66
1:D:415:LYS:CD	1:I:408:GLU:CD	2.58	0.66
1:A:209:ARG:HH21	1:B:164:ALA:CA	2.05	0.66
1:B:29:ARG:HH12	1:C:172:GLY:CA	2.09	0.66
1:J:162:GLY:CA	1:K:214:ILE:HD12	2.13	0.66
1:J:163:ALA:O	1:K:214:ILE:HG13	1.96	0.66
1:C:419:TYR:OH	1:H:408:GLU:CD	2.32	0.66
1:I:299:ALA:C	1:J:61:ALA:C	2.54	0.66
1:B:419:TYR:OH	1:G:408:GLU:CD	2.32	0.66
1:K:156:GLN:CA	1:L:135:VAL:HB	2.18	0.66
1:G:299:ALA:C	1:H:61:ALA:C	2.54	0.66
1:G:214:ILE:HG13	1:L:163:ALA:O	1.96	0.66
1:G:177:ALA:CA	1:H:31:LYS:C	2.37	0.66
1:E:61:ALA:O	1:F:299:ALA:HA	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:94:ALA:HB1	1:G:95:ALA:HA	1.77	0.66
1:D:419:TYR:OH	1:I:408:GLU:CD	2.32	0.65
1:D:94:ALA:HB1	1:D:95:ALA:HA	1.77	0.65
1:G:133:PRO:HD2	1:L:162:GLY:C	2.12	0.65
1:K:179:ALA:N	1:L:33:ILE:HG22	2.12	0.65
1:A:419:TYR:CE1	1:L:404:LEU:CB	2.72	0.65
1:A:29:ARG:HH12	1:B:172:GLY:CA	2.09	0.65
1:E:29:ARG:HH12	1:F:172:GLY:CA	2.09	0.65
1:G:136:ILE:HA	1:L:156:GLN:HB3	1.78	0.65
1:B:136:ILE:HA	1:C:156:GLN:HB3	1.78	0.65
1:D:61:ALA:O	1:E:299:ALA:HA	1.96	0.65
1:K:299:ALA:C	1:L:61:ALA:C	2.54	0.65
1:D:419:TYR:CB	1:I:401:LYS:CA	2.43	0.65
1:G:175:ALA:CB	1:H:29:ARG:CA	2.72	0.65
1:A:174:ALA:HB3	1:F:54:ASN:HD21	1.60	0.65
1:A:299:ALA:HA	1:F:61:ALA:O	1.96	0.65
1:H:163:ALA:O	1:I:214:ILE:HG13	1.96	0.65
1:B:29:ARG:HB3	1:C:175:ALA:HB2	0.77	0.65
1:K:156:GLN:NE2	1:L:137:ASN:HD21	1.92	0.65
1:I:156:GLN:HB3	1:J:136:ILE:HA	1.78	0.65
1:E:136:ILE:HA	1:F:156:GLN:HB3	1.78	0.65
1:I:163:ALA:O	1:J:214:ILE:HG13	1.96	0.65
1:A:178:GLY:N	1:F:32:SER:N	2.42	0.65
1:G:33:ILE:HG22	1:L:179:ALA:N	2.12	0.65
1:B:420:PHE:HD2	1:G:401:LYS:CD	1.98	0.65
1:A:172:GLY:CA	1:F:29:ARG:HH12	2.09	0.65
1:H:94:ALA:HB1	1:H:95:ALA:HA	1.77	0.65
1:C:94:ALA:HB1	1:C:95:ALA:HA	1.77	0.65
1:J:179:ALA:N	1:K:33:ILE:HG22	2.12	0.65
1:G:131:GLY:C	1:L:162:GLY:N	2.49	0.65
1:A:419:TYR:CB	1:L:401:LYS:CA	2.43	0.65
1:D:133:PRO:CD	1:E:163:ALA:H	2.07	0.65
1:C:136:ILE:HA	1:D:156:GLN:HB3	1.78	0.64
1:A:61:ALA:O	1:B:299:ALA:HA	1.96	0.64
1:A:133:PRO:O	1:B:158:ALA:CA	2.26	0.64
1:D:136:ILE:HA	1:E:156:GLN:HB3	1.78	0.64
1:G:156:GLN:HB3	1:H:136:ILE:HA	1.78	0.64
1:H:156:GLN:HB3	1:I:136:ILE:HA	1.78	0.64
1:G:299:ALA:O	1:H:61:ALA:O	2.15	0.64
1:H:299:ALA:O	1:I:61:ALA:O	2.15	0.64
1:K:162:GLY:CA	1:L:214:ILE:HD12	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:179:ALA:N	1:J:33:ILE:HG22	2.12	0.64
1:H:172:GLY:CA	1:I:29:ARG:HH12	2.11	0.64
1:C:61:ALA:O	1:D:299:ALA:HA	1.96	0.64
1:K:299:ALA:O	1:L:61:ALA:O	2.15	0.64
1:G:172:GLY:CA	1:H:29:ARG:HH12	2.11	0.64
1:J:156:GLN:CA	1:K:135:VAL:HB	2.18	0.64
1:A:163:ALA:N	1:F:133:PRO:CD	2.61	0.64
1:G:162:GLY:N	1:H:131:GLY:C	2.49	0.64
1:A:137:ASN:HD21	1:B:156:GLN:NE2	1.93	0.64
1:E:137:ASN:HD21	1:F:156:GLN:NE2	1.93	0.64
1:E:133:PRO:CD	1:F:163:ALA:H	2.07	0.64
1:B:133:PRO:CD	1:C:163:ALA:N	2.61	0.64
1:H:179:ALA:N	1:I:33:ILE:HG22	2.12	0.64
1:A:175:ALA:HB2	1:F:29:ARG:HB3	0.77	0.64
1:B:397:VAL:HG11	1:G:421:ILE:HA	1.77	0.64
1:G:161:GLY:C	1:H:131:GLY:C	2.55	0.64
1:K:161:GLY:C	1:L:131:GLY:C	2.55	0.64
1:G:179:ALA:N	1:H:33:ILE:HG22	2.12	0.64
1:G:214:ILE:HD12	1:L:162:GLY:CA	2.13	0.64
1:B:135:VAL:HB	1:C:156:GLN:CA	2.16	0.64
1:F:404:LEU:CB	1:K:419:TYR:CE1	2.67	0.64
1:B:61:ALA:O	1:C:299:ALA:HA	1.96	0.64
1:C:37:PHE:CD1	1:D:185:LEU:HD21	2.31	0.63
1:E:408:GLU:CD	1:J:419:TYR:OH	2.37	0.63
1:I:172:GLY:CA	1:J:29:ARG:HH12	2.11	0.63
1:F:397:VAL:HG11	1:K:421:ILE:HA	1.77	0.63
1:G:137:ASN:HD21	1:L:156:GLN:NE2	1.92	0.63
1:E:61:ALA:CB	1:F:299:ALA:C	2.24	0.63
1:G:29:ARG:HH12	1:L:172:GLY:CA	2.11	0.63
1:E:29:ARG:HB3	1:F:175:ALA:HB2	0.77	0.63
1:A:163:ALA:H	1:F:133:PRO:CD	2.07	0.63
1:D:31:LYS:HG2	1:E:176:ALA:C	2.16	0.63
1:H:162:GLY:N	1:I:131:GLY:C	2.49	0.63
1:F:408:GLU:CD	1:K:415:LYS:CD	2.66	0.63
1:K:172:GLY:CA	1:L:29:ARG:HH12	2.11	0.63
1:B:408:GLU:CD	1:G:415:LYS:CD	2.66	0.63
1:J:172:GLY:CA	1:K:29:ARG:HH12	2.11	0.63
1:H:156:GLN:NE2	1:I:137:ASN:HD21	1.92	0.63
1:J:299:ALA:C	1:K:61:ALA:C	2.54	0.63
1:H:162:GLY:N	1:I:214:ILE:CD1	2.62	0.63
1:D:419:TYR:HD1	1:I:405:GLU:CG	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:419:TYR:HD1	1:J:405:GLU:CG	2.11	0.63
1:A:421:ILE:OXT	1:L:397:VAL:CB	2.39	0.63
1:A:408:GLU:CD	1:L:419:TYR:OH	2.37	0.63
1:C:29:ARG:HB3	1:D:175:ALA:HB2	0.77	0.63
1:C:62:ALA:N	1:D:301:ALA:CB	2.33	0.63
1:D:62:ALA:N	1:E:301:ALA:CB	2.33	0.63
1:D:419:TYR:CA	1:I:401:LYS:HA	2.29	0.63
1:A:404:LEU:CB	1:L:419:TYR:CE1	2.67	0.63
1:E:54:ASN:HD21	1:F:174:ALA:HB3	1.60	0.63
1:E:31:LYS:C	1:F:177:ALA:CA	2.43	0.63
1:I:162:GLY:N	1:J:214:ILE:CD1	2.62	0.63
1:D:408:GLU:CD	1:I:419:TYR:OH	2.37	0.63
1:B:419:TYR:HB3	1:G:401:LYS:HA	0.71	0.63
1:C:401:LYS:HA	1:H:419:TYR:HB3	0.73	0.63
1:G:156:GLN:NE2	1:H:137:ASN:HD21	1.92	0.63
1:D:54:ASN:HD21	1:E:174:ALA:HB2	1.60	0.62
1:E:31:LYS:HG2	1:F:176:ALA:C	2.16	0.62
1:C:133:PRO:CD	1:D:163:ALA:N	2.61	0.62
1:E:419:TYR:CA	1:J:401:LYS:HA	2.29	0.62
1:A:133:PRO:CD	1:B:163:ALA:N	2.61	0.62
1:G:162:GLY:N	1:H:214:ILE:CD1	2.62	0.62
1:B:419:TYR:CE1	1:G:404:LEU:CB	2.72	0.62
1:B:137:ASN:HD21	1:C:156:GLN:NE2	1.93	0.62
1:H:299:ALA:C	1:I:61:ALA:C	2.54	0.62
1:G:61:ALA:C	1:L:299:ALA:C	2.54	0.62
1:K:162:GLY:N	1:L:214:ILE:CD1	2.62	0.62
1:D:29:ARG:HB3	1:E:175:ALA:HB2	0.77	0.62
1:C:397:VAL:HG11	1:H:421:ILE:HA	1.77	0.62
1:E:134:GLU:HG3	1:F:158:ALA:CB	1.95	0.62
1:F:408:GLU:CD	1:K:419:TYR:OH	2.37	0.62
1:A:419:TYR:CA	1:L:401:LYS:HA	2.29	0.62
1:F:419:TYR:HD1	1:K:405:GLU:CG	2.12	0.62
1:H:158:ALA:HB1	1:I:134:GLU:CG	2.17	0.62
1:C:32:SER:N	1:D:178:GLY:N	2.42	0.62
1:E:415:LYS:CD	1:J:408:GLU:CD	2.58	0.62
1:C:419:TYR:HD1	1:H:405:GLU:CG	2.12	0.62
1:C:419:TYR:CA	1:H:401:LYS:HA	2.29	0.62
1:I:299:ALA:O	1:J:61:ALA:O	2.15	0.62
1:I:162:GLY:N	1:J:131:GLY:C	2.49	0.62
1:B:419:TYR:CA	1:G:401:LYS:HA	2.29	0.62
1:C:408:GLU:CD	1:H:419:TYR:OH	2.37	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:397:VAL:HG11	1:L:421:ILE:HA	1.77	0.62
1:I:158:ALA:HB1	1:J:134:GLU:CG	2.17	0.62
1:F:401:LYS:HA	1:K:419:TYR:HB3	0.73	0.62
1:B:408:GLU:CD	1:G:419:TYR:OH	2.37	0.62
1:A:156:GLN:CA	1:F:135:VAL:HB	2.16	0.62
1:A:174:ALA:HB2	1:F:54:ASN:HD21	1.60	0.62
1:G:61:ALA:O	1:L:299:ALA:O	2.15	0.62
1:E:214:ILE:HD12	1:F:162:GLY:CA	2.16	0.62
1:C:31:LYS:HG2	1:D:176:ALA:C	2.16	0.62
1:K:161:GLY:HA2	1:L:131:GLY:O	2.00	0.62
1:F:419:TYR:CA	1:K:401:LYS:HA	2.29	0.62
1:I:172:GLY:HA2	1:J:29:ARG:HH12	1.65	0.62
1:I:161:GLY:C	1:J:131:GLY:C	2.55	0.62
1:I:162:GLY:C	1:J:133:PRO:HD2	2.12	0.62
1:A:133:PRO:CD	1:B:163:ALA:H	2.07	0.62
1:E:419:TYR:HB3	1:J:401:LYS:HA	0.71	0.62
1:A:419:TYR:HB3	1:L:401:LYS:HA	0.71	0.62
1:H:172:GLY:HA2	1:I:29:ARG:HH12	1.65	0.62
1:A:176:ALA:C	1:F:31:LYS:HG2	2.16	0.61
1:E:419:TYR:HB3	1:J:401:LYS:CB	2.28	0.61
1:C:419:TYR:HB3	1:H:401:LYS:HA	0.71	0.61
1:J:172:GLY:HA2	1:K:29:ARG:HH12	1.65	0.61
1:J:162:GLY:N	1:K:214:ILE:CD1	2.62	0.61
1:A:419:TYR:CZ	1:L:404:LEU:CA	2.79	0.61
1:C:135:VAL:HB	1:D:156:GLN:CA	2.16	0.61
1:E:133:PRO:CD	1:F:163:ALA:N	2.61	0.61
1:D:133:PRO:CD	1:E:163:ALA:N	2.61	0.61
1:C:31:LYS:C	1:D:177:ALA:CA	2.43	0.61
1:E:408:GLU:CD	1:J:415:LYS:CD	2.66	0.61
1:E:401:LYS:HA	1:J:419:TYR:HB3	0.73	0.61
1:I:156:GLN:CA	1:J:135:VAL:HB	2.18	0.61
1:J:299:ALA:O	1:K:61:ALA:O	2.15	0.61
1:A:419:TYR:HD1	1:L:405:GLU:CG	2.12	0.61
1:F:419:TYR:CZ	1:K:404:LEU:CA	2.79	0.61
1:E:54:ASN:HD21	1:F:174:ALA:HB2	1.60	0.61
1:D:37:PHE:CD1	1:E:185:LEU:HD21	2.31	0.61
1:H:161:GLY:C	1:I:131:GLY:C	2.55	0.61
1:J:162:GLY:C	1:K:133:PRO:HD2	2.12	0.61
1:G:214:ILE:CD1	1:L:162:GLY:N	2.62	0.61
1:B:419:TYR:HD1	1:G:405:GLU:CG	2.11	0.61
1:K:172:GLY:HA2	1:L:29:ARG:HH12	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:172:GLY:HA2	1:H:29:ARG:HH12	1.65	0.61
1:D:137:ASN:HD21	1:E:156:GLN:NE2	1.93	0.61
1:I:93:ALA:HB3	1:I:94:ALA:HB3	1.83	0.61
1:F:419:TYR:HB3	1:K:401:LYS:CB	2.28	0.61
1:B:93:ALA:HB3	1:B:94:ALA:HB3	1.83	0.61
1:D:408:GLU:CD	1:I:415:LYS:CD	2.66	0.61
1:G:29:ARG:HH12	1:L:172:GLY:HA2	1.65	0.61
1:B:54:ASN:HD21	1:C:174:ALA:HB2	1.60	0.61
1:I:288:ALA:HB1	1:J:399:ALA:O	2.01	0.61
1:H:177:ALA:CA	1:I:31:LYS:C	2.37	0.61
1:B:419:TYR:HB3	1:G:401:LYS:CB	2.28	0.61
1:H:288:ALA:HB1	1:I:399:ALA:O	2.01	0.61
1:G:288:ALA:HB1	1:H:399:ALA:O	2.01	0.61
1:B:401:LYS:HA	1:G:419:TYR:HB3	0.73	0.61
1:B:416:PHE:CD2	1:G:405:GLU:CG	2.77	0.61
1:E:62:ALA:N	1:F:301:ALA:CB	2.33	0.61
1:J:161:GLY:HA2	1:K:131:GLY:O	2.00	0.60
1:D:404:LEU:C	1:I:419:TYR:CD1	2.75	0.60
1:E:419:TYR:CD1	1:J:404:LEU:C	2.75	0.60
1:A:419:TYR:HB3	1:L:401:LYS:CB	2.28	0.60
1:G:400:ALA:CA	1:L:288:ALA:CB	2.71	0.60
1:A:93:ALA:HB3	1:A:94:ALA:HB3	1.83	0.60
1:A:162:GLY:CA	1:F:214:ILE:HD12	2.16	0.60
1:E:419:TYR:CZ	1:J:404:LEU:CA	2.79	0.60
1:A:401:LYS:HA	1:L:419:TYR:HB3	0.73	0.60
1:H:93:ALA:HB3	1:H:94:ALA:HB3	1.83	0.60
1:G:134:GLU:CG	1:L:158:ALA:HB1	2.17	0.60
1:G:131:GLY:C	1:L:161:GLY:C	2.55	0.60
1:A:404:LEU:C	1:L:419:TYR:CD1	2.75	0.60
1:B:404:LEU:C	1:G:419:TYR:CD1	2.75	0.60
1:K:175:ALA:HB2	1:L:29:ARG:HB3	0.69	0.60
1:D:397:VAL:HG11	1:I:421:ILE:HA	1.77	0.60
1:E:62:ALA:N	1:F:301:ALA:CA	2.64	0.60
1:D:54:ASN:HD21	1:E:174:ALA:HB3	1.60	0.60
1:J:288:ALA:HB1	1:K:399:ALA:O	2.01	0.60
1:J:93:ALA:HB3	1:J:94:ALA:HB3	1.83	0.60
1:D:93:ALA:HB3	1:D:94:ALA:HB3	1.83	0.60
1:G:399:ALA:O	1:L:288:ALA:HB1	2.01	0.60
1:C:93:ALA:HB3	1:C:94:ALA:HB3	1.83	0.60
1:A:31:LYS:HG2	1:B:176:ALA:C	2.16	0.60
1:B:31:LYS:HG2	1:C:176:ALA:C	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:404:LEU:CB	1:J:419:TYR:CE1	2.67	0.60
1:F:416:PHE:CD2	1:K:405:GLU:CG	2.77	0.60
1:A:54:ASN:ND2	1:B:174:ALA:HB2	2.17	0.60
1:G:93:ALA:HB3	1:G:94:ALA:HB3	1.83	0.60
1:E:404:LEU:C	1:J:419:TYR:CD1	2.75	0.60
1:L:93:ALA:HB3	1:L:94:ALA:HB3	1.83	0.60
1:C:419:TYR:CD1	1:H:404:LEU:C	2.75	0.60
1:F:419:TYR:CB	1:K:401:LYS:CA	2.43	0.60
1:F:419:TYR:HB3	1:K:401:LYS:HA	0.71	0.60
1:G:29:ARG:HB3	1:L:175:ALA:HB2	0.69	0.60
1:K:288:ALA:HB2	1:L:400:ALA:O	2.02	0.60
1:E:93:ALA:HB3	1:E:94:ALA:HB3	1.83	0.60
1:C:416:PHE:CD2	1:H:405:GLU:CG	2.77	0.60
1:C:408:GLU:CD	1:H:415:LYS:CD	2.66	0.60
1:C:54:ASN:ND2	1:D:174:ALA:HB2	2.17	0.60
1:K:288:ALA:HB1	1:L:399:ALA:O	2.01	0.60
1:H:162:GLY:C	1:I:133:PRO:HD2	2.12	0.59
1:K:179:ALA:H	1:L:34:PRO:HD3	1.68	0.59
1:I:288:ALA:CB	1:J:400:ALA:CA	2.71	0.59
1:F:419:TYR:CB	1:K:401:LYS:CB	2.79	0.59
1:B:54:ASN:ND2	1:C:174:ALA:HB2	2.17	0.59
1:D:419:TYR:HB3	1:I:401:LYS:HA	0.71	0.59
1:A:408:GLU:CD	1:L:415:LYS:CD	2.66	0.59
1:C:29:ARG:HH12	1:D:172:GLY:C	2.06	0.59
1:I:179:ALA:H	1:J:34:PRO:HD3	1.68	0.59
1:H:179:ALA:H	1:I:34:PRO:HD3	1.68	0.59
1:B:421:ILE:OXT	1:G:397:VAL:CB	2.39	0.59
1:C:404:LEU:C	1:H:419:TYR:CD1	2.75	0.59
1:H:175:ALA:HB2	1:I:29:ARG:HB3	0.69	0.59
1:J:288:ALA:HB2	1:K:400:ALA:O	2.02	0.59
1:B:404:LEU:CA	1:G:419:TYR:CZ	2.83	0.59
1:G:34:PRO:HD3	1:L:179:ALA:H	1.68	0.59
1:A:419:TYR:CZ	1:L:408:GLU:CD	2.73	0.59
1:B:29:ARG:HH12	1:C:172:GLY:C	2.06	0.59
1:I:288:ALA:HB2	1:J:400:ALA:O	2.02	0.59
1:K:93:ALA:HB3	1:K:94:ALA:HB3	1.83	0.59
1:F:93:ALA:HB3	1:F:94:ALA:HB3	1.83	0.59
1:E:405:GLU:OE2	1:J:420:PHE:CE2	2.56	0.59
1:A:301:ALA:CA	1:F:62:ALA:N	2.64	0.59
1:G:179:ALA:H	1:H:34:PRO:HD3	1.68	0.59
1:D:404:LEU:CA	1:I:419:TYR:CZ	2.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:405:GLU:OE2	1:I:420:PHE:CE2	2.56	0.59
1:G:175:ALA:HB2	1:H:29:ARG:HB3	0.69	0.59
1:G:133:PRO:HD3	1:L:162:GLY:CA	2.01	0.59
1:D:419:TYR:CB	1:I:401:LYS:CB	2.79	0.59
1:D:29:ARG:HH12	1:E:172:GLY:C	2.06	0.59
1:D:54:ASN:ND2	1:E:174:ALA:HB2	2.17	0.59
1:G:301:ALA:CB	1:H:62:ALA:N	2.30	0.59
1:H:288:ALA:HB2	1:I:400:ALA:O	2.02	0.59
1:J:179:ALA:H	1:K:34:PRO:HD3	1.68	0.58
1:J:175:ALA:HB2	1:K:29:ARG:HB3	0.69	0.58
1:C:54:ASN:HD21	1:D:174:ALA:HB3	1.60	0.58
1:J:161:GLY:C	1:K:131:GLY:C	2.55	0.58
1:E:29:ARG:HH12	1:F:172:GLY:C	2.06	0.58
1:D:135:VAL:HB	1:E:156:GLN:CA	2.16	0.58
1:G:288:ALA:HB2	1:H:400:ALA:O	2.02	0.58
1:F:405:GLU:OE2	1:K:420:PHE:CE2	2.56	0.58
1:A:405:GLU:OE2	1:L:420:PHE:CE2	2.56	0.58
1:B:420:PHE:CE2	1:G:405:GLU:OE2	2.57	0.58
1:G:162:GLY:CA	1:H:214:ILE:HD12	2.13	0.58
1:G:131:GLY:O	1:L:161:GLY:HA2	2.00	0.58
1:I:177:ALA:CA	1:J:31:LYS:C	2.37	0.58
1:D:420:PHE:CE2	1:I:405:GLU:OE2	2.57	0.58
1:C:420:PHE:CE2	1:H:405:GLU:OE2	2.57	0.58
1:F:420:PHE:CE2	1:K:405:GLU:OE2	2.57	0.58
1:C:405:GLU:OE2	1:H:420:PHE:CE2	2.56	0.58
1:A:416:PHE:CD2	1:L:405:GLU:CG	2.77	0.58
1:B:405:GLU:OE2	1:G:420:PHE:CE2	2.56	0.58
1:A:29:ARG:HH12	1:B:172:GLY:C	2.06	0.58
1:C:137:ASN:HD21	1:D:156:GLN:NE2	1.93	0.58
1:I:161:GLY:HA2	1:J:131:GLY:O	2.00	0.58
1:G:161:GLY:HA2	1:H:131:GLY:O	2.00	0.58
1:E:420:PHE:CE2	1:J:405:GLU:OE2	2.57	0.58
1:G:400:ALA:O	1:L:288:ALA:HB2	2.02	0.58
1:E:37:PHE:CD1	1:F:185:LEU:HD21	2.31	0.58
1:A:31:LYS:CA	1:B:176:ALA:C	2.35	0.58
1:A:172:GLY:C	1:F:29:ARG:HH12	2.06	0.58
1:E:404:LEU:CA	1:J:419:TYR:CZ	2.83	0.58
1:C:404:LEU:CA	1:H:419:TYR:CZ	2.83	0.58
1:E:401:LYS:CA	1:J:419:TYR:CB	2.50	0.58
1:D:419:TYR:CE1	1:I:404:LEU:CB	2.72	0.58
1:H:156:GLN:CA	1:I:135:VAL:HB	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:420:PHE:CE2	1:L:405:GLU:OE2	2.57	0.58
1:D:62:ALA:N	1:E:301:ALA:CA	2.64	0.58
1:F:408:GLU:CD	1:K:419:TYR:CZ	2.74	0.57
1:C:61:ALA:CA	1:D:299:ALA:O	2.52	0.57
1:B:61:ALA:CA	1:C:299:ALA:O	2.52	0.57
1:A:62:ALA:N	1:B:301:ALA:CB	2.33	0.57
1:G:61:ALA:O	1:L:299:ALA:HA	2.04	0.57
1:C:31:LYS:CA	1:D:176:ALA:C	2.35	0.57
1:E:419:TYR:CZ	1:J:404:LEU:O	2.58	0.57
1:K:299:ALA:HA	1:L:61:ALA:O	2.04	0.57
1:F:404:LEU:C	1:K:419:TYR:CD1	2.75	0.57
1:A:401:LYS:CA	1:L:419:TYR:CB	2.50	0.57
1:F:419:TYR:CZ	1:K:404:LEU:O	2.58	0.57
1:E:419:TYR:CZ	1:J:408:GLU:CD	2.73	0.57
1:C:421:ILE:OXT	1:H:397:VAL:CB	2.39	0.57
1:C:419:TYR:CB	1:H:401:LYS:CB	2.79	0.57
1:F:419:TYR:CZ	1:K:408:GLU:CD	2.73	0.57
1:G:174:ALA:HB3	1:H:54:ASN:ND2	2.13	0.57
1:E:397:VAL:HG11	1:J:421:ILE:HA	1.77	0.57
1:A:61:ALA:CA	1:B:299:ALA:O	2.52	0.57
1:E:419:TYR:CD1	1:J:405:GLU:HG3	2.28	0.57
1:H:161:GLY:HA2	1:I:131:GLY:O	2.00	0.57
1:D:419:TYR:CZ	1:I:404:LEU:O	2.58	0.57
1:F:419:TYR:CD1	1:K:404:LEU:C	2.75	0.57
1:F:419:TYR:CD1	1:K:405:GLU:HG3	2.28	0.57
1:E:54:ASN:ND2	1:F:174:ALA:HB2	2.17	0.57
1:B:54:ASN:HD21	1:C:174:ALA:HB3	1.60	0.57
1:D:61:ALA:CA	1:E:299:ALA:O	2.52	0.57
1:B:31:LYS:C	1:C:177:ALA:CA	2.43	0.57
1:B:419:TYR:CZ	1:G:404:LEU:O	2.58	0.57
1:A:299:ALA:O	1:F:61:ALA:CA	2.52	0.57
1:E:33:ILE:HG22	1:F:178:GLY:C	2.25	0.56
1:D:31:LYS:CA	1:E:176:ALA:C	2.35	0.56
1:C:37:PHE:CD1	1:D:185:LEU:HD22	2.39	0.56
1:B:62:ALA:N	1:C:301:ALA:CA	2.64	0.56
1:C:62:ALA:N	1:D:301:ALA:CA	2.64	0.56
1:E:133:PRO:CD	1:F:162:GLY:C	2.72	0.56
1:H:163:ALA:N	1:I:133:PRO:CD	2.68	0.56
1:A:404:LEU:CA	1:L:419:TYR:CZ	2.83	0.56
1:B:419:TYR:CB	1:G:401:LYS:CB	2.79	0.56
1:A:62:ALA:N	1:B:301:ALA:CA	2.64	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:61:ALA:CA	1:F:299:ALA:O	2.52	0.56
1:H:299:ALA:HA	1:I:61:ALA:O	2.04	0.56
1:A:185:LEU:HD22	1:F:37:PHE:CD1	2.39	0.56
1:A:33:ILE:HG22	1:B:178:GLY:C	2.25	0.56
1:D:421:ILE:OXT	1:I:397:VAL:CB	2.39	0.56
1:J:288:ALA:CB	1:K:400:ALA:CA	2.71	0.56
1:A:133:PRO:CD	1:B:162:GLY:C	2.72	0.56
1:C:33:ILE:HG22	1:D:178:GLY:C	2.25	0.56
1:D:419:TYR:CD1	1:I:405:GLU:HG3	2.28	0.56
1:A:419:TYR:CD1	1:L:405:GLU:HG3	2.28	0.56
1:J:174:ALA:HB3	1:K:54:ASN:ND2	2.13	0.56
1:D:37:PHE:CD1	1:E:185:LEU:HD22	2.39	0.56
1:B:33:ILE:HG22	1:C:178:GLY:C	2.25	0.56
1:F:404:LEU:CA	1:K:419:TYR:CZ	2.83	0.56
1:C:419:TYR:CZ	1:H:404:LEU:O	2.58	0.56
1:K:288:ALA:CB	1:L:400:ALA:CA	2.71	0.56
1:A:178:GLY:C	1:F:33:ILE:HG22	2.25	0.56
1:E:37:PHE:CD1	1:F:185:LEU:HD22	2.39	0.56
1:B:401:LYS:HD2	1:G:420:PHE:CD2	2.32	0.56
1:A:301:ALA:CB	1:F:62:ALA:N	2.33	0.56
1:G:299:ALA:HA	1:H:61:ALA:O	2.04	0.56
1:E:421:ILE:OXT	1:J:397:VAL:CB	2.39	0.56
1:D:404:LEU:CB	1:I:419:TYR:CE1	2.67	0.56
1:C:419:TYR:CZ	1:H:404:LEU:CA	2.79	0.56
1:C:416:PHE:HD2	1:H:405:GLU:CG	2.01	0.56
1:I:175:ALA:HB2	1:J:29:ARG:HB3	0.69	0.56
1:J:299:ALA:HA	1:K:61:ALA:O	2.04	0.56
1:B:62:ALA:N	1:C:301:ALA:CB	2.33	0.55
1:D:33:ILE:HG22	1:E:178:GLY:C	2.25	0.55
1:G:133:PRO:CD	1:L:162:GLY:C	2.73	0.55
1:G:156:GLN:CA	1:H:135:VAL:HB	2.18	0.55
1:A:185:LEU:HD21	1:F:37:PHE:CD1	2.31	0.55
1:D:416:PHE:HD2	1:I:405:GLU:CG	2.01	0.55
1:D:419:TYR:CZ	1:I:404:LEU:CA	2.79	0.55
1:E:419:TYR:CB	1:J:401:LYS:CB	2.79	0.55
1:A:419:TYR:CZ	1:L:404:LEU:O	2.58	0.55
1:A:174:ALA:HB2	1:F:54:ASN:ND2	2.17	0.55
1:A:401:LYS:HD2	1:L:420:PHE:CD2	2.32	0.55
1:E:135:VAL:HB	1:F:156:GLN:CA	2.16	0.55
1:I:158:ALA:N	1:J:134:GLU:HA	2.22	0.55
1:A:31:LYS:C	1:B:177:ALA:CA	2.43	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:134:GLU:HA	1:L:158:ALA:N	2.22	0.55
1:G:163:ALA:N	1:H:133:PRO:CD	2.68	0.55
1:F:419:TYR:CE1	1:K:404:LEU:CB	2.72	0.55
1:I:299:ALA:HA	1:J:61:ALA:O	2.04	0.55
1:D:133:PRO:CD	1:E:162:GLY:C	2.72	0.55
1:G:158:ALA:N	1:H:134:GLU:HA	2.22	0.55
1:G:31:LYS:C	1:L:177:ALA:CA	2.37	0.55
1:D:417:LEU:O	1:I:401:LYS:HE2	2.07	0.55
1:E:419:TYR:CE1	1:J:404:LEU:CB	2.72	0.55
1:B:419:TYR:CZ	1:G:404:LEU:CA	2.79	0.55
1:F:417:LEU:O	1:K:401:LYS:HE2	2.07	0.55
1:B:33:ILE:CG2	1:C:178:GLY:C	2.76	0.55
1:A:417:LEU:O	1:L:401:LYS:HE2	2.07	0.55
1:B:405:GLU:CG	1:G:416:PHE:CD2	2.78	0.55
1:D:33:ILE:CG2	1:E:178:GLY:C	2.76	0.55
1:J:158:ALA:N	1:K:134:GLU:HA	2.22	0.55
1:B:37:PHE:CD1	1:C:185:LEU:HD21	2.31	0.55
1:A:419:TYR:CB	1:L:401:LYS:CB	2.79	0.55
1:H:174:ALA:HB3	1:I:54:ASN:ND2	2.13	0.55
1:C:33:ILE:CG2	1:D:178:GLY:C	2.76	0.54
1:G:162:GLY:C	1:H:133:PRO:CD	2.73	0.54
1:K:158:ALA:N	1:L:134:GLU:HA	2.22	0.54
1:B:417:LEU:O	1:G:401:LYS:HE2	2.07	0.54
1:A:205:GLN:OE1	1:B:166:ALA:CB	2.52	0.54
1:C:417:LEU:O	1:H:401:LYS:HE2	2.07	0.54
1:E:33:ILE:CG2	1:F:178:GLY:C	2.76	0.54
1:A:178:GLY:C	1:F:33:ILE:CG2	2.76	0.54
1:A:54:ASN:HD21	1:B:174:ALA:HB3	1.60	0.54
1:C:214:ILE:HD12	1:D:162:GLY:CA	2.16	0.54
1:A:33:ILE:CG2	1:B:178:GLY:C	2.76	0.54
1:E:61:ALA:CA	1:F:299:ALA:C	2.75	0.54
1:C:214:ILE:CD1	1:D:162:GLY:N	2.71	0.54
1:A:37:PHE:CD1	1:B:185:LEU:HD21	2.31	0.54
1:F:421:ILE:OXT	1:K:397:VAL:CB	2.39	0.54
1:A:299:ALA:C	1:F:61:ALA:CA	2.76	0.54
1:B:61:ALA:CA	1:C:299:ALA:C	2.75	0.54
1:A:214:ILE:CD1	1:B:162:GLY:N	2.71	0.54
1:B:214:ILE:CD1	1:C:162:GLY:N	2.71	0.54
1:B:32:SER:CA	1:C:177:ALA:CA	2.82	0.54
1:D:401:LYS:CA	1:I:419:TYR:CB	2.50	0.54
1:I:174:ALA:HB3	1:J:54:ASN:ND2	2.13	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:158:ALA:N	1:I:134:GLU:HA	2.22	0.54
1:J:162:GLY:C	1:K:133:PRO:CD	2.73	0.54
1:K:162:GLY:C	1:L:133:PRO:CD	2.73	0.54
1:E:417:LEU:O	1:J:401:LYS:HE2	2.07	0.54
1:D:401:LYS:HA	1:I:419:TYR:HB3	0.73	0.54
1:B:419:TYR:CD1	1:G:405:GLU:HG3	2.28	0.54
1:C:405:GLU:CG	1:H:416:PHE:CD2	2.78	0.54
1:C:61:ALA:CA	1:D:299:ALA:C	2.76	0.54
1:D:61:ALA:CA	1:E:299:ALA:C	2.76	0.54
1:D:34:PRO:CD	1:E:179:ALA:H	2.21	0.53
1:C:133:PRO:CD	1:D:162:GLY:C	2.72	0.53
1:D:419:TYR:HB3	1:I:401:LYS:CB	2.28	0.53
1:C:419:TYR:CD1	1:H:405:GLU:HG3	2.28	0.53
1:G:174:ALA:HB2	1:H:54:ASN:HD21	1.51	0.53
1:A:419:TYR:CD1	1:L:404:LEU:C	2.75	0.53
1:D:205:GLN:OE1	1:E:166:ALA:CB	2.52	0.53
1:D:214:ILE:CD1	1:E:162:GLY:N	2.71	0.53
1:J:177:ALA:CA	1:K:31:LYS:C	2.37	0.53
1:D:419:TYR:O	1:I:401:LYS:N	2.42	0.53
1:E:133:PRO:HG2	1:F:163:ALA:CB	2.38	0.53
1:E:34:PRO:CD	1:F:179:ALA:H	2.21	0.53
1:A:162:GLY:N	1:F:214:ILE:CD1	2.71	0.53
1:B:132:VAL:HA	1:C:162:GLY:HA2	1.91	0.53
1:C:419:TYR:O	1:H:401:LYS:N	2.42	0.53
1:A:61:ALA:CA	1:B:299:ALA:C	2.76	0.53
1:E:205:GLN:OE1	1:F:166:ALA:CB	2.52	0.53
1:A:166:ALA:CB	1:F:205:GLN:OE1	2.52	0.53
1:A:179:ALA:H	1:F:34:PRO:CD	2.21	0.53
1:D:133:PRO:HG2	1:E:163:ALA:CB	2.38	0.53
1:A:132:VAL:HA	1:B:162:GLY:HA2	1.91	0.53
1:D:408:GLU:CD	1:I:419:TYR:CZ	2.74	0.53
1:A:405:GLU:CG	1:L:416:PHE:CD2	2.78	0.53
1:B:416:PHE:HD2	1:G:405:GLU:CG	2.01	0.53
1:B:419:TYR:CD1	1:G:404:LEU:C	2.75	0.53
1:C:401:LYS:CA	1:H:419:TYR:CB	2.50	0.53
1:C:205:GLN:OE1	1:D:166:ALA:CB	2.52	0.53
1:A:133:PRO:HG2	1:B:163:ALA:CB	2.38	0.53
1:C:408:GLU:CD	1:H:419:TYR:CZ	2.74	0.53
1:D:214:ILE:HD12	1:E:162:GLY:CA	2.16	0.53
1:E:416:PHE:CD2	1:J:405:GLU:CG	2.77	0.53
1:F:401:LYS:HD2	1:K:420:PHE:CD2	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:214:ILE:CD1	1:F:162:GLY:N	2.71	0.53
1:E:31:LYS:CA	1:F:176:ALA:C	2.35	0.53
1:D:31:LYS:C	1:E:177:ALA:CA	2.43	0.53
1:I:162:GLY:C	1:J:133:PRO:CD	2.73	0.53
1:H:162:GLY:C	1:I:133:PRO:CD	2.73	0.53
1:E:419:TYR:O	1:J:401:LYS:N	2.42	0.52
1:B:419:TYR:O	1:G:401:LYS:N	2.42	0.52
1:K:174:ALA:HB3	1:L:54:ASN:ND2	2.13	0.52
1:A:162:GLY:C	1:F:133:PRO:CD	2.72	0.52
1:F:401:LYS:CB	1:K:419:TYR:HB3	2.37	0.52
1:A:401:LYS:CB	1:L:419:TYR:HB3	2.37	0.52
1:B:133:PRO:HG2	1:C:163:ALA:CB	2.38	0.52
1:K:158:ALA:HB1	1:L:134:GLU:CG	2.17	0.52
1:E:401:LYS:CB	1:J:419:TYR:HB3	2.37	0.52
1:E:416:PHE:HD2	1:J:405:GLU:CG	2.01	0.52
1:A:288:ALA:HB2	1:F:400:ALA:O	2.10	0.52
1:C:400:ALA:O	1:D:288:ALA:HB2	2.10	0.52
1:A:163:ALA:CB	1:F:133:PRO:HG2	2.38	0.52
1:G:161:GLY:O	1:H:214:ILE:HD12	1.95	0.52
1:B:401:LYS:CA	1:G:419:TYR:CB	2.50	0.52
1:A:162:GLY:HA2	1:F:132:VAL:HA	1.90	0.52
1:C:133:PRO:HG2	1:D:163:ALA:CB	2.38	0.52
1:D:416:PHE:CD2	1:I:405:GLU:CG	2.77	0.52
1:A:37:PHE:CD1	1:B:185:LEU:HD22	2.39	0.52
1:B:37:PHE:CD1	1:C:185:LEU:HD22	2.39	0.52
1:E:132:VAL:HA	1:F:162:GLY:HA2	1.91	0.52
1:D:401:LYS:HA	1:I:419:TYR:CA	2.38	0.52
1:E:133:PRO:HD2	1:F:162:GLY:HA2	0.53	0.52
1:A:158:ALA:N	1:F:134:GLU:HG2	2.25	0.52
1:E:400:ALA:O	1:F:288:ALA:HB2	2.10	0.52
1:C:134:GLU:HG2	1:D:158:ALA:N	2.25	0.52
1:C:401:LYS:HD2	1:H:420:PHE:CD2	2.32	0.52
1:B:400:ALA:O	1:C:288:ALA:HB2	2.10	0.52
1:D:132:VAL:HA	1:E:162:GLY:HA2	1.91	0.51
1:A:404:LEU:CA	1:L:419:TYR:CE1	2.93	0.51
1:B:133:PRO:CD	1:C:162:GLY:C	2.72	0.51
1:B:134:GLU:HG2	1:C:158:ALA:N	2.25	0.51
1:F:419:TYR:O	1:K:401:LYS:N	2.42	0.51
1:A:162:GLY:HA2	1:F:133:PRO:HD2	0.54	0.51
1:D:133:PRO:HD2	1:E:162:GLY:HA2	0.53	0.51
1:D:404:LEU:CA	1:I:419:TYR:CE1	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:400:ALA:O	1:E:288:ALA:HB2	2.10	0.51
1:G:61:ALA:CA	1:L:299:ALA:O	2.59	0.51
1:C:132:VAL:HA	1:D:162:GLY:HA2	1.90	0.51
1:E:404:LEU:CA	1:J:419:TYR:CE1	2.93	0.51
1:A:419:TYR:O	1:L:401:LYS:N	2.42	0.51
1:B:419:TYR:CZ	1:G:408:GLU:CD	2.73	0.51
1:J:299:ALA:O	1:K:61:ALA:CA	2.59	0.51
1:B:205:GLN:OE1	1:C:166:ALA:CB	2.52	0.51
1:B:214:ILE:HD12	1:C:162:GLY:CA	2.16	0.51
1:E:134:GLU:HG2	1:F:158:ALA:N	2.25	0.51
1:A:177:ALA:CA	1:F:31:LYS:C	2.43	0.51
1:H:299:ALA:O	1:I:61:ALA:CA	2.59	0.51
1:E:33:ILE:HG22	1:F:179:ALA:N	2.26	0.51
1:F:404:LEU:CA	1:K:419:TYR:CE1	2.93	0.51
1:C:400:ALA:CA	1:D:288:ALA:CB	2.73	0.51
1:E:134:GLU:HA	1:F:158:ALA:N	2.26	0.51
1:D:134:GLU:HG2	1:E:158:ALA:N	2.25	0.51
1:A:134:GLU:HG2	1:B:158:ALA:N	2.25	0.51
1:A:34:PRO:CD	1:B:179:ALA:H	2.21	0.51
1:D:33:ILE:HG22	1:E:179:ALA:N	2.26	0.51
1:A:134:GLU:HA	1:B:158:ALA:N	2.26	0.51
1:B:33:ILE:HG22	1:C:179:ALA:N	2.26	0.50
1:C:419:TYR:CZ	1:H:408:GLU:CD	2.73	0.50
1:D:32:SER:CA	1:E:177:ALA:CA	2.82	0.50
1:I:299:ALA:O	1:J:61:ALA:CA	2.59	0.50
1:I:161:GLY:O	1:J:214:ILE:HD11	1.96	0.50
1:C:419:TYR:HB3	1:H:401:LYS:CB	2.28	0.50
1:C:404:LEU:CA	1:H:419:TYR:CE1	2.93	0.50
1:A:400:ALA:O	1:B:288:ALA:HB2	2.10	0.50
1:I:161:GLY:O	1:J:214:ILE:HD12	1.95	0.50
1:D:134:GLU:HA	1:E:158:ALA:N	2.26	0.50
1:C:133:PRO:HD2	1:D:162:GLY:HA2	0.54	0.50
1:B:134:GLU:HA	1:C:158:ALA:N	2.26	0.50
1:D:408:GLU:CD	1:I:419:TYR:CE1	2.85	0.50
1:A:416:PHE:HD2	1:L:405:GLU:CG	2.01	0.50
1:A:158:ALA:N	1:F:134:GLU:HA	2.26	0.50
1:A:33:ILE:HG22	1:B:179:ALA:N	2.26	0.50
1:A:133:PRO:HD2	1:B:162:GLY:HA2	0.53	0.50
1:B:404:LEU:CA	1:G:419:TYR:CE1	2.93	0.50
1:C:408:GLU:CD	1:H:419:TYR:CE1	2.85	0.50
1:G:299:ALA:O	1:H:61:ALA:CA	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:161:GLY:O	1:L:214:ILE:HD12	1.95	0.50
1:F:404:LEU:O	1:K:419:TYR:CZ	2.65	0.50
1:F:416:PHE:HD2	1:K:405:GLU:CG	2.01	0.50
1:A:179:ALA:N	1:F:33:ILE:HG22	2.26	0.50
1:K:299:ALA:O	1:L:61:ALA:CA	2.59	0.50
1:A:404:LEU:O	1:L:419:TYR:CZ	2.65	0.50
1:H:161:GLY:C	1:I:214:ILE:HD12	2.32	0.49
1:C:33:ILE:HG22	1:D:179:ALA:N	2.26	0.49
1:E:408:GLU:CD	1:J:419:TYR:CE1	2.85	0.49
1:F:419:TYR:CE1	1:K:404:LEU:CA	2.95	0.49
1:C:134:GLU:HA	1:D:158:ALA:N	2.26	0.49
1:B:34:PRO:CD	1:C:179:ALA:H	2.21	0.49
1:E:408:GLU:CD	1:J:419:TYR:CZ	2.74	0.49
1:D:405:GLU:CG	1:I:416:PHE:CD2	2.78	0.49
1:C:404:LEU:O	1:H:419:TYR:CZ	2.65	0.49
1:D:397:VAL:CB	1:I:421:ILE:OXT	2.51	0.49
1:H:161:GLY:O	1:I:214:ILE:HD11	1.96	0.49
1:B:133:PRO:HD2	1:C:162:GLY:HA2	0.53	0.49
1:E:135:VAL:H	1:F:156:GLN:C	1.91	0.49
1:G:288:ALA:CB	1:H:400:ALA:CA	2.71	0.49
1:G:400:ALA:HA	1:L:288:ALA:HB3	1.88	0.49
1:C:399:ALA:O	1:D:288:ALA:HB1	2.13	0.49
1:B:408:GLU:CD	1:G:419:TYR:CZ	2.74	0.49
1:C:405:GLU:CG	1:H:419:TYR:HD1	2.24	0.49
1:A:288:ALA:HB1	1:F:399:ALA:O	2.13	0.49
1:D:404:LEU:O	1:I:419:TYR:CZ	2.65	0.49
1:D:401:LYS:N	1:I:419:TYR:O	2.46	0.49
1:B:399:ALA:O	1:C:288:ALA:HB1	2.13	0.49
1:G:209:ARG:HH21	1:L:164:ALA:HB1	0.67	0.49
1:D:419:TYR:CD1	1:I:404:LEU:C	2.75	0.49
1:C:401:LYS:N	1:H:419:TYR:O	2.46	0.49
1:A:399:ALA:O	1:B:288:ALA:HB1	2.13	0.49
1:D:399:ALA:O	1:E:288:ALA:HB1	2.13	0.49
1:F:405:GLU:CG	1:K:416:PHE:CD2	2.78	0.49
1:A:419:TYR:CE1	1:L:404:LEU:CA	2.95	0.49
1:B:408:GLU:CD	1:G:419:TYR:CE1	2.85	0.49
1:G:164:ALA:HB1	1:H:209:ARG:HH21	0.67	0.49
1:F:401:LYS:CB	1:K:419:TYR:CB	2.89	0.49
1:H:162:GLY:N	1:I:214:ILE:HD11	2.23	0.49
1:A:401:LYS:HA	1:L:419:TYR:CA	2.38	0.49
1:E:399:ALA:O	1:F:288:ALA:HB1	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:401:LYS:HA	1:K:419:TYR:CA	2.38	0.49
1:B:404:LEU:O	1:G:419:TYR:CZ	2.65	0.49
1:E:405:GLU:CG	1:J:419:TYR:HD1	2.24	0.48
1:J:164:ALA:HB1	1:K:209:ARG:HH21	0.67	0.48
1:H:288:ALA:CB	1:I:400:ALA:CA	2.71	0.48
1:F:408:GLU:CD	1:K:419:TYR:CE1	2.85	0.48
1:D:401:LYS:CB	1:I:419:TYR:CB	2.89	0.48
1:B:401:LYS:N	1:G:419:TYR:O	2.46	0.48
1:E:401:LYS:N	1:J:419:TYR:O	2.46	0.48
1:D:405:GLU:CG	1:I:419:TYR:HD1	2.24	0.48
1:A:177:ALA:CA	1:F:32:SER:CA	2.82	0.48
1:C:34:PRO:CD	1:D:179:ALA:H	2.21	0.48
1:H:164:ALA:HB1	1:I:209:ARG:HH21	0.67	0.48
1:E:32:SER:CA	1:F:177:ALA:CA	2.82	0.48
1:A:408:GLU:CD	1:L:419:TYR:CE1	2.85	0.48
1:E:16:PHE:HE2	1:F:181:GLU:HB3	1.79	0.48
1:B:16:PHE:HE2	1:C:181:GLU:HB3	1.79	0.48
1:B:401:LYS:CB	1:G:419:TYR:CB	2.89	0.48
1:G:62:ALA:N	1:L:301:ALA:CB	2.30	0.48
1:E:404:LEU:O	1:J:419:TYR:CZ	2.65	0.48
1:I:288:ALA:HB2	1:J:403:GLU:HB2	1.25	0.48
1:D:16:PHE:HE2	1:E:181:GLU:HB3	1.79	0.48
1:K:162:GLY:N	1:L:214:ILE:HD11	2.23	0.47
1:E:401:LYS:HD2	1:J:420:PHE:CD2	2.32	0.47
1:D:419:TYR:CE1	1:I:404:LEU:CA	2.95	0.47
1:K:164:ALA:HB1	1:L:209:ARG:HH21	0.67	0.47
1:I:164:ALA:HB1	1:J:209:ARG:HH21	0.67	0.47
1:C:419:TYR:CE1	1:H:404:LEU:CA	2.95	0.47
1:C:135:VAL:H	1:D:156:GLN:C	1.91	0.47
1:B:400:ALA:CA	1:C:288:ALA:CB	2.73	0.47
1:A:181:GLU:HB3	1:F:16:PHE:HE2	1.79	0.47
1:C:403:GLU:HB2	1:D:288:ALA:HB2	1.29	0.47
1:J:93:ALA:H	1:J:94:ALA:C	2.18	0.47
1:K:93:ALA:H	1:K:94:ALA:C	2.18	0.47
1:F:93:ALA:H	1:F:94:ALA:C	2.18	0.47
1:K:161:GLY:C	1:L:214:ILE:HD12	2.32	0.47
1:A:93:ALA:H	1:A:94:ALA:C	2.18	0.47
1:L:93:ALA:H	1:L:94:ALA:C	2.18	0.47
1:F:401:LYS:N	1:K:419:TYR:O	2.46	0.47
1:C:397:VAL:CB	1:H:421:ILE:OXT	2.51	0.47
1:E:93:ALA:H	1:E:94:ALA:C	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:93:ALA:H	1:G:94:ALA:C	2.18	0.47
1:D:93:ALA:H	1:D:94:ALA:C	2.18	0.47
1:I:185:LEU:HD21	1:J:34:PRO:HD2	1.67	0.47
1:A:401:LYS:N	1:L:419:TYR:O	2.46	0.47
1:K:288:ALA:HB2	1:L:403:GLU:HB2	1.25	0.47
1:H:185:LEU:HD21	1:I:34:PRO:HD2	1.67	0.47
1:F:401:LYS:CA	1:K:419:TYR:CB	2.50	0.47
1:D:401:LYS:HD2	1:I:420:PHE:CD2	2.32	0.47
1:G:403:GLU:HB2	1:L:288:ALA:HB2	1.25	0.47
1:I:93:ALA:H	1:I:94:ALA:C	2.18	0.47
1:B:93:ALA:H	1:B:94:ALA:C	2.18	0.47
1:C:16:PHE:HE2	1:D:181:GLU:HB3	1.79	0.47
1:E:34:PRO:HB2	1:F:185:LEU:HD22	1.49	0.47
1:A:185:LEU:HD21	1:F:34:PRO:HD2	1.60	0.47
1:J:161:GLY:C	1:K:214:ILE:HD12	2.32	0.47
1:J:161:GLY:O	1:K:214:ILE:HD11	1.96	0.47
1:A:34:PRO:HD2	1:B:185:LEU:HD21	1.60	0.47
1:C:401:LYS:CB	1:H:419:TYR:CB	2.89	0.47
1:D:400:ALA:CA	1:E:288:ALA:CB	2.73	0.47
1:H:93:ALA:H	1:H:94:ALA:C	2.18	0.47
1:C:93:ALA:H	1:C:94:ALA:C	2.18	0.47
1:E:132:VAL:HG13	1:F:159:ALA:O	2.15	0.47
1:G:54:ASN:ND2	1:L:174:ALA:HB3	2.13	0.47
1:A:185:LEU:HD22	1:F:34:PRO:HB2	1.49	0.47
1:A:159:ALA:O	1:F:132:VAL:HG13	2.15	0.47
1:G:161:GLY:C	1:H:214:ILE:HD12	2.32	0.47
1:B:401:LYS:CB	1:G:419:TYR:HB3	2.37	0.47
1:G:54:ASN:CG	1:L:174:ALA:CB	2.83	0.47
1:B:401:LYS:HA	1:G:419:TYR:CA	2.38	0.46
1:G:162:GLY:N	1:H:214:ILE:HD11	2.23	0.46
1:E:405:GLU:CG	1:J:416:PHE:CD2	2.78	0.46
1:C:401:LYS:HD2	1:H:420:PHE:HD2	1.76	0.46
1:K:288:ALA:HB3	1:L:400:ALA:HA	1.88	0.46
1:D:403:GLU:HB2	1:E:288:ALA:HB2	1.29	0.46
1:E:401:LYS:HA	1:J:419:TYR:CA	2.38	0.46
1:B:419:TYR:CE1	1:G:404:LEU:CA	2.95	0.46
1:B:397:VAL:CB	1:G:421:ILE:OXT	2.51	0.46
1:D:419:TYR:CZ	1:I:408:GLU:CD	2.73	0.46
1:A:16:PHE:HE2	1:B:181:GLU:HB3	1.79	0.46
1:A:34:PRO:HB2	1:B:185:LEU:HD22	1.49	0.46
1:B:132:VAL:HG13	1:C:159:ALA:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:135:VAL:H	1:C:156:GLN:C	1.91	0.46
1:D:132:VAL:HG13	1:E:159:ALA:O	2.15	0.46
1:A:132:VAL:HG13	1:B:159:ALA:O	2.15	0.46
1:C:132:VAL:HG13	1:D:159:ALA:O	2.15	0.46
1:A:408:GLU:CD	1:L:419:TYR:CZ	2.74	0.46
1:K:301:ALA:CB	1:L:62:ALA:N	2.30	0.46
1:H:287:GLY:CA	1:I:403:GLU:HB3	2.44	0.46
1:C:34:PRO:HB2	1:D:185:LEU:HD22	1.49	0.46
1:K:174:ALA:CB	1:L:54:ASN:CG	2.83	0.46
1:J:156:GLN:HB3	1:K:136:ILE:CA	2.42	0.46
1:B:403:GLU:HB2	1:C:288:ALA:HB2	1.29	0.46
1:H:159:ALA:O	1:I:132:VAL:HG13	2.16	0.46
1:I:159:ALA:O	1:J:132:VAL:HG13	2.16	0.45
1:G:161:GLY:O	1:H:214:ILE:HD11	1.96	0.45
1:E:419:TYR:CE1	1:J:404:LEU:CA	2.95	0.45
1:J:288:ALA:HB3	1:K:400:ALA:HA	1.88	0.45
1:I:166:ALA:CB	1:J:205:GLN:OE1	2.60	0.45
1:G:159:ALA:O	1:H:132:VAL:HG13	2.16	0.45
1:A:405:GLU:OE2	1:L:420:PHE:HE2	2.00	0.45
1:J:287:GLY:CA	1:K:403:GLU:HB3	2.44	0.45
1:J:288:ALA:HB2	1:K:403:GLU:HB2	1.25	0.45
1:I:288:ALA:HB3	1:J:400:ALA:HA	1.88	0.45
1:K:159:ALA:O	1:L:132:VAL:HG13	2.16	0.45
1:G:185:LEU:HD22	1:H:34:PRO:HB2	1.63	0.45
1:J:185:LEU:HD21	1:K:34:PRO:HD2	1.67	0.45
1:G:156:GLN:C	1:H:135:VAL:H	2.00	0.45
1:G:287:GLY:CA	1:H:403:GLU:HB3	2.44	0.45
1:E:34:PRO:HD2	1:F:185:LEU:HD21	1.60	0.45
1:J:159:ALA:O	1:K:132:VAL:HG13	2.16	0.45
1:B:133:PRO:HD2	1:C:163:ALA:N	2.31	0.45
1:G:185:LEU:HD21	1:H:34:PRO:HD2	1.67	0.45
1:I:174:ALA:CB	1:J:54:ASN:CG	2.83	0.45
1:J:301:ALA:CB	1:K:62:ALA:N	2.30	0.45
1:A:32:SER:CA	1:B:177:ALA:CA	2.82	0.45
1:J:174:ALA:CB	1:K:54:ASN:CG	2.83	0.45
1:A:400:ALA:CA	1:B:288:ALA:CB	2.73	0.45
1:I:287:GLY:CA	1:J:403:GLU:HB3	2.44	0.45
1:A:401:LYS:CB	1:L:419:TYR:CB	2.89	0.44
1:K:156:GLN:HB3	1:L:136:ILE:CA	2.42	0.44
1:C:405:GLU:OE2	1:H:420:PHE:HE2	2.00	0.44
1:H:174:ALA:CB	1:I:54:ASN:CG	2.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:161:GLY:C	1:J:214:ILE:HD12	2.32	0.44
1:G:132:VAL:HG13	1:L:159:ALA:O	2.16	0.44
1:E:404:LEU:CD1	1:J:419:TYR:HA	2.44	0.44
1:B:419:TYR:CE1	1:G:408:GLU:CD	2.91	0.44
1:H:179:ALA:H	1:I:34:PRO:CD	2.31	0.44
1:B:404:LEU:CD1	1:G:419:TYR:HA	2.44	0.44
1:A:136:ILE:CA	1:B:156:GLN:HB3	2.39	0.44
1:I:179:ALA:H	1:J:34:PRO:CD	2.31	0.44
1:F:397:VAL:CB	1:K:421:ILE:OXT	2.51	0.44
1:G:174:ALA:CB	1:H:54:ASN:CG	2.83	0.44
1:B:404:LEU:HD12	1:G:419:TYR:CA	2.44	0.44
1:D:209:ARG:HH21	1:E:164:ALA:HB1	0.62	0.44
1:H:301:ALA:CB	1:I:62:ALA:N	2.30	0.44
1:B:32:SER:H	1:C:177:ALA:HA	0.86	0.44
1:G:179:ALA:H	1:H:34:PRO:CD	2.31	0.44
1:C:54:ASN:HD21	1:D:174:ALA:HB2	1.60	0.44
1:H:288:ALA:HB2	1:I:403:GLU:HB2	1.25	0.44
1:I:181:GLU:HB3	1:J:16:PHE:HE2	1.83	0.44
1:G:181:GLU:HB3	1:H:16:PHE:HE2	1.83	0.44
1:E:405:GLU:OE2	1:J:420:PHE:HE2	2.00	0.43
1:C:209:ARG:HH21	1:D:164:ALA:HB1	0.62	0.43
1:A:135:VAL:N	1:B:156:GLN:C	2.59	0.43
1:G:403:GLU:HB3	1:L:287:GLY:CA	2.44	0.43
1:K:185:LEU:HD21	1:L:34:PRO:HD2	1.67	0.43
1:K:177:ALA:CA	1:L:31:LYS:C	2.37	0.43
1:C:419:TYR:CE1	1:H:408:GLU:CD	2.91	0.43
1:K:287:GLY:HA2	1:L:403:GLU:HB3	2.00	0.43
1:J:287:GLY:HA2	1:K:403:GLU:HB3	2.00	0.43
1:J:166:ALA:CB	1:K:205:GLN:OE1	2.60	0.43
1:J:179:ALA:H	1:K:34:PRO:CD	2.31	0.43
1:A:419:TYR:CE1	1:L:408:GLU:CD	2.91	0.43
1:J:163:ALA:N	1:K:133:PRO:CD	2.68	0.43
1:J:176:ALA:N	1:K:31:LYS:HG2	2.34	0.43
1:E:401:LYS:HE2	1:J:417:LEU:O	2.19	0.43
1:E:420:PHE:CD2	1:J:401:LYS:HD2	2.39	0.43
1:D:29:ARG:HA	1:E:175:ALA:HB1	2.01	0.43
1:G:34:PRO:CD	1:L:179:ALA:H	2.31	0.43
1:G:164:ALA:CB	1:H:209:ARG:CZ	2.86	0.43
1:A:163:ALA:N	1:F:133:PRO:HD2	2.31	0.43
1:H:176:ALA:N	1:I:31:LYS:HG2	2.34	0.43
1:D:401:LYS:HE2	1:I:417:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:401:LYS:HE2	1:H:417:LEU:O	2.19	0.43
1:K:287:GLY:CA	1:L:403:GLU:HB3	2.44	0.43
1:J:181:GLU:HB3	1:K:16:PHE:HE2	1.83	0.43
1:K:179:ALA:H	1:L:34:PRO:CD	2.31	0.43
1:E:404:LEU:HD12	1:J:419:TYR:CA	2.44	0.43
1:K:166:ALA:CB	1:L:205:GLN:OE1	2.60	0.43
1:A:60:ALA:HB3	1:B:302:ALA:HB2	1.42	0.43
1:G:16:PHE:HE2	1:L:181:GLU:HB3	1.83	0.43
1:G:34:PRO:HB2	1:L:185:LEU:HD22	1.63	0.43
1:F:401:LYS:HE2	1:K:417:LEU:O	2.19	0.43
1:D:404:LEU:CD1	1:I:419:TYR:HA	2.44	0.43
1:C:419:TYR:HB3	1:H:401:LYS:C	2.31	0.43
1:A:401:LYS:HE2	1:L:417:LEU:O	2.19	0.43
1:B:401:LYS:HE2	1:G:417:LEU:O	2.19	0.43
1:K:161:GLY:O	1:L:214:ILE:HD11	1.96	0.43
1:A:209:ARG:HH21	1:B:164:ALA:HB1	0.62	0.43
1:G:205:GLN:OE1	1:L:166:ALA:CB	2.60	0.43
1:H:181:GLU:HB3	1:I:16:PHE:HE2	1.83	0.43
1:I:176:ALA:N	1:J:31:LYS:HG2	2.34	0.43
1:H:288:ALA:HB3	1:I:400:ALA:HA	1.88	0.43
1:I:163:ALA:CB	1:J:133:PRO:HG2	2.49	0.42
1:I:185:LEU:HD22	1:J:34:PRO:HB2	1.63	0.42
1:E:401:LYS:CB	1:J:419:TYR:CB	2.89	0.42
1:G:174:ALA:CB	1:H:54:ASN:OD1	2.67	0.42
1:H:174:ALA:CB	1:I:54:ASN:OD1	2.67	0.42
1:A:29:ARG:HA	1:B:175:ALA:HB1	2.01	0.42
1:K:181:GLU:HB3	1:L:16:PHE:HE2	1.83	0.42
1:E:209:ARG:HH21	1:F:164:ALA:HB1	0.62	0.42
1:K:174:ALA:CB	1:L:54:ASN:OD1	2.67	0.42
1:G:133:PRO:HG2	1:L:163:ALA:CB	2.49	0.42
1:D:419:TYR:CE1	1:I:405:GLU:CA	3.02	0.42
1:I:174:ALA:CB	1:J:54:ASN:OD1	2.67	0.42
1:K:156:GLN:C	1:L:135:VAL:H	2.00	0.42
1:G:135:VAL:H	1:L:156:GLN:C	2.00	0.42
1:G:166:ALA:CB	1:H:205:GLN:OE1	2.60	0.42
1:A:404:LEU:HD12	1:L:419:TYR:CA	2.44	0.42
1:F:419:TYR:CE1	1:K:405:GLU:CA	3.02	0.42
1:G:54:ASN:OD1	1:L:174:ALA:CB	2.67	0.42
1:H:287:GLY:HA2	1:I:403:GLU:HB3	2.00	0.42
1:J:163:ALA:CB	1:K:133:PRO:HG2	2.49	0.42
1:G:214:ILE:HD11	1:L:161:GLY:O	1.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:176:ALA:N	1:H:31:LYS:HG2	2.34	0.42
1:E:419:TYR:CE1	1:J:405:GLU:CA	3.02	0.42
1:B:209:ARG:HH21	1:C:164:ALA:HB1	0.62	0.42
1:J:174:ALA:CB	1:K:54:ASN:OD1	2.67	0.42
1:C:29:ARG:HA	1:D:175:ALA:HB1	2.01	0.42
1:G:287:GLY:HA2	1:H:403:GLU:HB3	2.00	0.42
1:K:163:ALA:CB	1:L:133:PRO:HG2	2.49	0.42
1:G:31:LYS:HG2	1:L:176:ALA:N	2.34	0.42
1:A:164:ALA:HB1	1:F:209:ARG:HH21	0.62	0.42
1:A:419:TYR:CE1	1:L:405:GLU:CA	3.02	0.42
1:C:404:LEU:HD12	1:H:419:TYR:CA	2.44	0.42
1:I:163:ALA:N	1:J:133:PRO:CD	2.68	0.42
1:D:132:VAL:HA	1:E:162:GLY:CA	2.50	0.42
1:H:161:GLY:O	1:I:214:ILE:HD12	1.95	0.42
1:B:405:GLU:CG	1:G:419:TYR:HD1	2.24	0.42
1:B:405:GLU:OE2	1:G:420:PHE:HE2	2.00	0.42
1:H:174:ALA:HB2	1:I:54:ASN:CG	2.40	0.42
1:A:132:VAL:HA	1:B:162:GLY:CA	2.50	0.42
1:C:132:VAL:HA	1:D:162:GLY:CA	2.50	0.42
1:G:214:ILE:HD12	1:L:161:GLY:C	2.32	0.42
1:D:419:TYR:CE1	1:I:408:GLU:CD	2.91	0.42
1:D:405:GLU:OE2	1:I:420:PHE:HE2	2.00	0.42
1:C:419:TYR:CE1	1:H:405:GLU:CA	3.02	0.42
1:C:401:LYS:HA	1:H:419:TYR:CA	2.38	0.42
1:E:132:VAL:HA	1:F:162:GLY:CA	2.50	0.42
1:D:34:PRO:HD2	1:E:185:LEU:HD21	1.60	0.42
1:H:163:ALA:CB	1:I:133:PRO:HG2	2.49	0.42
1:C:133:PRO:HD2	1:D:163:ALA:N	2.31	0.42
1:K:176:ALA:N	1:L:31:LYS:HG2	2.34	0.42
1:F:419:TYR:CE1	1:K:408:GLU:CD	2.91	0.42
1:B:34:PRO:HD2	1:C:185:LEU:HD21	1.60	0.42
1:F:405:GLU:OE2	1:K:420:PHE:HE2	2.00	0.42
1:A:174:ALA:HB3	1:F:54:ASN:ND2	2.27	0.42
1:E:400:ALA:CA	1:F:288:ALA:CB	2.73	0.42
1:I:287:GLY:HA2	1:J:403:GLU:HB3	2.00	0.42
1:G:403:GLU:HB3	1:L:287:GLY:HA2	2.00	0.42
1:A:419:TYR:O	1:L:397:VAL:O	2.38	0.41
1:B:419:TYR:HB3	1:G:401:LYS:C	2.31	0.41
1:I:174:ALA:HB2	1:J:54:ASN:CG	2.40	0.41
1:C:54:ASN:ND2	1:D:174:ALA:HB3	2.27	0.41
1:G:34:PRO:HD2	1:L:185:LEU:HD21	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:405:GLU:CG	1:L:419:TYR:HD1	2.24	0.41
1:B:419:TYR:CE1	1:G:405:GLU:CA	3.02	0.41
1:G:136:ILE:CA	1:L:156:GLN:HB3	2.42	0.41
1:G:288:ALA:HB2	1:H:403:GLU:HB2	1.25	0.41
1:H:162:GLY:HA2	1:I:132:VAL:HA	2.03	0.41
1:F:404:LEU:CD1	1:K:419:TYR:HA	2.44	0.41
1:I:301:ALA:CB	1:J:62:ALA:N	2.30	0.41
1:I:162:GLY:HA2	1:J:132:VAL:HA	2.02	0.41
1:F:419:TYR:O	1:K:397:VAL:O	2.38	0.41
1:E:403:GLU:HB2	1:F:288:ALA:HB2	1.29	0.41
1:B:132:VAL:HA	1:C:162:GLY:CA	2.50	0.41
1:J:185:LEU:HD22	1:K:34:PRO:HB2	1.63	0.41
1:B:419:TYR:O	1:G:397:VAL:O	2.38	0.41
1:J:161:GLY:O	1:K:214:ILE:HD12	1.95	0.41
1:G:134:GLU:HG2	1:L:158:ALA:N	2.34	0.41
1:F:404:LEU:HD12	1:K:419:TYR:CA	2.44	0.41
1:I:164:ALA:CB	1:J:209:ARG:CZ	2.86	0.41
1:D:404:LEU:HD12	1:I:419:TYR:CA	2.44	0.41
1:E:32:SER:H	1:F:177:ALA:HA	0.86	0.41
1:A:162:GLY:CA	1:F:132:VAL:HA	2.50	0.41
1:E:419:TYR:CE1	1:J:408:GLU:CD	2.91	0.41
1:G:174:ALA:HB2	1:H:54:ASN:CG	2.40	0.41
1:A:54:ASN:HD21	1:B:174:ALA:HB2	1.60	0.41
1:I:302:ALA:HB2	1:J:60:ALA:HB3	1.47	0.41
1:A:175:ALA:HB1	1:F:29:ARG:HA	2.01	0.41
1:E:134:GLU:HG2	1:F:158:ALA:HB2	0.42	0.41
1:D:34:PRO:HB2	1:E:185:LEU:HD22	1.49	0.41
1:J:162:GLY:HA2	1:K:132:VAL:HA	2.02	0.41
1:C:32:SER:CA	1:D:177:ALA:CA	2.82	0.41
1:G:163:ALA:CB	1:H:133:PRO:HG2	2.49	0.41
1:B:34:PRO:HB2	1:C:185:LEU:HD22	1.49	0.41
1:K:162:GLY:HA2	1:L:132:VAL:HA	2.03	0.41
1:D:419:TYR:HE1	1:I:405:GLU:HA	1.86	0.41
1:E:419:TYR:HE1	1:J:405:GLU:HA	1.86	0.41
1:A:403:GLU:HB2	1:B:288:ALA:HB2	1.29	0.41
1:A:302:ALA:HB2	1:F:60:ALA:HB3	1.42	0.41
1:G:60:ALA:HB3	1:L:302:ALA:HB2	1.47	0.41
1:G:214:ILE:HD12	1:L:161:GLY:O	1.95	0.41
1:G:132:VAL:HA	1:L:162:GLY:HA2	2.02	0.41
1:E:419:TYR:O	1:J:397:VAL:O	2.38	0.40
1:H:164:ALA:CB	1:I:209:ARG:CZ	2.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:419:TYR:O	1:H:397:VAL:O	2.38	0.40
1:F:420:PHE:CD2	1:K:401:LYS:HD2	2.39	0.40
1:H:166:ALA:CB	1:I:205:GLN:OE1	2.60	0.40
1:D:420:PHE:HE2	1:I:405:GLU:OE2	2.04	0.40
1:F:405:GLU:CG	1:K:419:TYR:HD1	2.24	0.40
1:F:419:TYR:HE1	1:K:405:GLU:HA	1.86	0.40
1:A:288:ALA:CB	1:F:400:ALA:CA	2.73	0.40
1:D:420:PHE:CD2	1:I:401:LYS:HD2	2.39	0.40
1:D:419:TYR:O	1:I:397:VAL:O	2.38	0.40
1:A:419:TYR:HE1	1:L:405:GLU:HA	1.86	0.40
1:A:156:GLN:C	1:F:135:VAL:H	1.91	0.40
1:K:162:GLY:HA2	1:L:133:PRO:HD2	0.42	0.40
1:C:419:TYR:HE1	1:H:405:GLU:HA	1.86	0.40
1:C:209:ARG:CZ	1:D:164:ALA:CB	2.85	0.40
1:G:54:ASN:CG	1:L:174:ALA:HB2	2.40	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	B	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	C	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	D	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	E	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	F	419/421 (100%)	373 (89%)	36 (9%)	10 (2%)	7	47
1	G	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47
1	H	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	I	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47
1	J	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47
1	K	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47
1	L	419/421 (100%)	372 (89%)	37 (9%)	10 (2%)	7	47
All	All	5028/5052 (100%)	4470 (89%)	438 (9%)	120 (2%)	12	47

All (120) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	360	ALA
1	B	360	ALA
1	C	360	ALA
1	D	360	ALA
1	E	360	ALA
1	F	360	ALA
1	G	360	ALA
1	H	360	ALA
1	I	360	ALA
1	J	360	ALA
1	K	360	ALA
1	L	360	ALA
1	A	93	ALA
1	B	93	ALA
1	C	93	ALA
1	D	93	ALA
1	E	93	ALA
1	F	93	ALA
1	G	93	ALA
1	H	93	ALA
1	I	93	ALA
1	J	93	ALA
1	K	93	ALA
1	L	93	ALA
1	A	194	ALA
1	A	294	THR
1	A	365	GLU
1	B	194	ALA
1	B	294	THR
1	B	365	GLU
1	C	194	ALA
1	C	294	THR

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Mol	Chain	Res	Type
1	C	365	GLU
1	D	194	ALA
1	D	294	THR
1	D	365	GLU
1	E	194	ALA
1	E	294	THR
1	E	365	GLU
1	F	194	ALA
1	F	294	THR
1	F	365	GLU
1	G	194	ALA
1	G	294	THR
1	G	365	GLU
1	H	194	ALA
1	H	294	THR
1	H	365	GLU
1	I	194	ALA
1	I	294	THR
1	I	365	GLU
1	J	194	ALA
1	J	294	THR
1	J	365	GLU
1	K	194	ALA
1	K	294	THR
1	K	365	GLU
1	L	194	ALA
1	L	294	THR
1	L	365	GLU
1	A	63	SER
1	A	351	ALA
1	A	390	GLU
1	B	63	SER
1	B	351	ALA
1	B	390	GLU
1	C	63	SER
1	C	351	ALA
1	C	390	GLU
1	D	63	SER
1	D	351	ALA
1	D	390	GLU
1	E	63	SER
1	E	351	ALA

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Mol	Chain	Res	Type
1	E	390	GLU
1	F	63	SER
1	F	351	ALA
1	F	390	GLU
1	G	63	SER
1	G	351	ALA
1	G	390	GLU
1	H	63	SER
1	H	351	ALA
1	H	390	GLU
1	I	63	SER
1	I	351	ALA
1	I	390	GLU
1	J	63	SER
1	J	351	ALA
1	J	390	GLU
1	K	63	SER
1	K	351	ALA
1	K	390	GLU
1	L	63	SER
1	L	351	ALA
1	L	390	GLU
1	A	361	ALA
1	A	367	PRO
1	B	361	ALA
1	B	367	PRO
1	C	361	ALA
1	C	367	PRO
1	D	361	ALA
1	D	367	PRO
1	E	361	ALA
1	E	367	PRO
1	F	361	ALA
1	F	367	PRO
1	G	361	ALA
1	G	367	PRO
1	H	361	ALA
1	H	367	PRO
1	I	361	ALA
1	I	367	PRO
1	J	361	ALA
1	J	367	PRO

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Mol	Chain	Res	Type
1	K	361	ALA
1	K	367	PRO
1	L	361	ALA
1	L	367	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	B	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	C	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	D	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	E	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	F	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	G	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	H	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	I	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	J	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	K	212/212 (100%)	210 (99%)	2 (1%)	84	93
1	L	212/212 (100%)	210 (99%)	2 (1%)	84	93
All	All	2544/2544 (100%)	2520 (99%)	24 (1%)	85	93

All (24) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	214	ILE
1	A	333	LEU
1	B	214	ILE
1	B	333	LEU
1	C	214	ILE
1	C	333	LEU

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Mol	Chain	Res	Type
1	D	214	ILE
1	D	333	LEU
1	E	214	ILE
1	E	333	LEU
1	F	214	ILE
1	F	333	LEU
1	G	214	ILE
1	G	333	LEU
1	H	214	ILE
1	H	333	LEU
1	I	214	ILE
1	I	333	LEU
1	J	214	ILE
1	J	333	LEU
1	K	214	ILE
1	K	333	LEU
1	L	214	ILE
1	L	333	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (24) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	54	ASN
1	A	156	GLN
1	B	54	ASN
1	B	156	GLN
1	C	54	ASN
1	C	156	GLN
1	D	54	ASN
1	D	156	GLN
1	E	54	ASN
1	E	156	GLN
1	F	54	ASN
1	F	156	GLN
1	G	54	ASN
1	G	156	GLN
1	H	54	ASN
1	H	156	GLN
1	I	54	ASN
1	I	156	GLN
1	J	54	ASN
1	J	156	GLN

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Mol	Chain	Res	Type
1	K	54	ASN
1	K	156	GLN
1	L	54	ASN
1	L	156	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains [i](#)

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.