



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 06:01 PM UTC

PDB ID : 8QXU / pdb_00008qxu
EMDB ID : EMD-18737
Title : In situ structure average of GroEL14-GroES7 complexes with wide GroEL7 trans ring conformation in Escherichia coli cytosol obtained by cryo electron tomography
Authors : Wagner, J.; Caravajal, A.I.; Beck, F.; Bracher, A.; Wan, W.; Bohn, S.; Kerner, R.; Baumeister, W.; Fernandez-Busnadiego, R.; Hartl, F.U.
Deposited on : 2023-10-25
Resolution : 12.00 Å(reported)
Based on initial models : 1KP8, 8P4M

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

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)

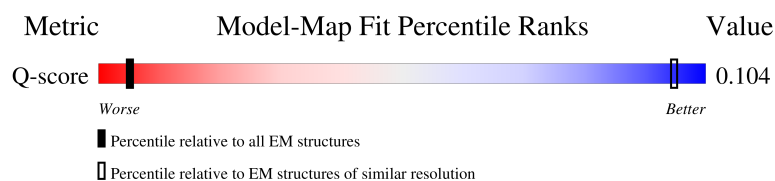
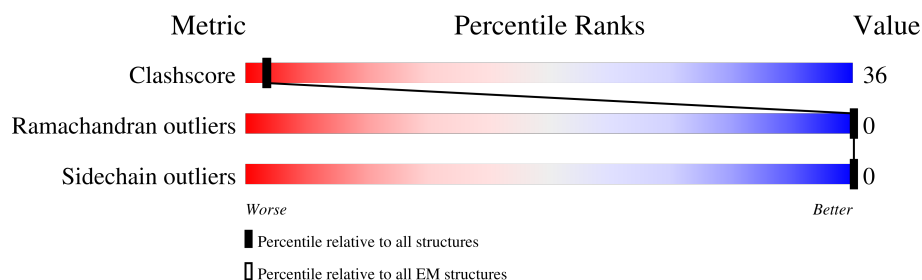
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 12.00 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	93 (11.50 - 12.50)

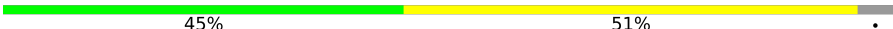
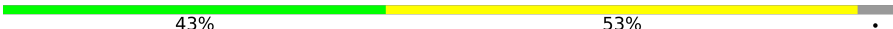
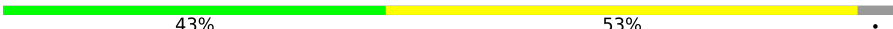
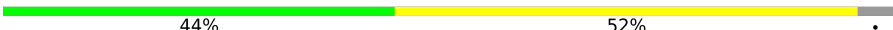
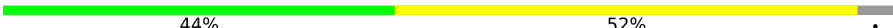
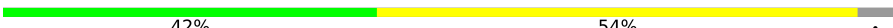
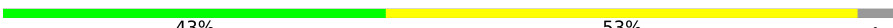
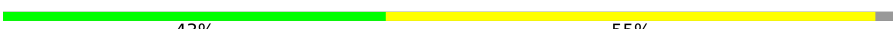
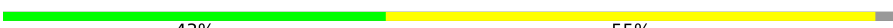
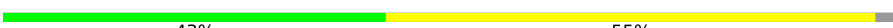
The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment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

Mol	Chain	Length	Quality of chain
1	A	547	
1	B	547	
1	C	547	

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Validation Pipeline (wwPDB-VP) : 2.49

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Mol	Chain	Length	Quality of chain	
1	D	547		.
1	E	547		.
1	F	547		.
1	G	547		.
1	H	547		.
1	I	547		.
1	J	547		.
1	K	547		.
1	L	547		.
1	M	547		.
1	N	547		.
2	O	97		.
2	P	97		.
2	Q	97		.
2	R	97		.
2	S	97		.
2	T	97		.
2	U	97		.

2 Entry composition [i](#)

There are 7 unique types of molecules in this entry. The entry contains 59458 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Chaperonin GroEL.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	B	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	C	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	D	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	E	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	F	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	G	524	Total	C	N	O	S	0	0
			3851	2395	665	771	20		
1	H	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	I	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	J	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	K	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	L	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	M	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		
1	N	525	Total	C	N	O	S	0	0
			3864	2403	667	774	20		

- Molecule 2 is a protein called Co-chaperonin GroES.

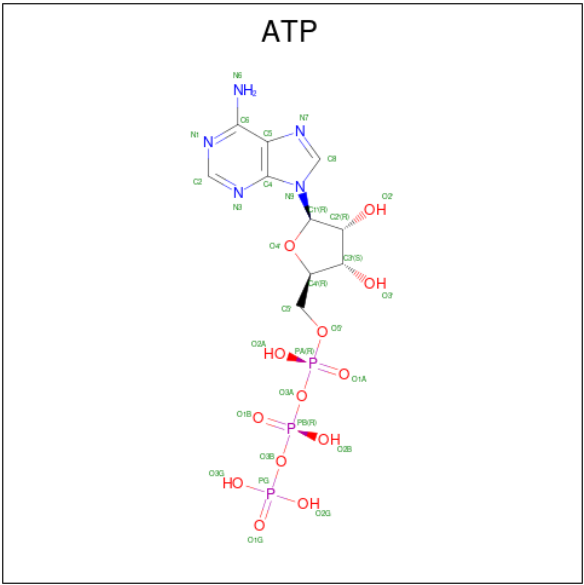
Mol	Chain	Residues	Atoms					AltConf	Trace
2	O	95	Total	C	N	O	S	0	0
			687	430	125	131	1		

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	P	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	Q	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	R	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	S	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	T	95	Total	C	N	O	S	0	0
			687	430	125	131	1		
2	U	95	Total	C	N	O	S	0	0
			687	430	125	131	1		

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).



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Mol	Chain	Residues	Atoms					AltConf
3	F	1	Total	C	N	O	P	0
			31	10	5	13	3	
3	G	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 4 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
4	A	1	Total	Mg	0
			1	1	
4	B	1	Total	Mg	0
			1	1	
4	C	1	Total	Mg	0
			1	1	
4	D	1	Total	Mg	0
			1	1	
4	E	1	Total	Mg	0
			1	1	
4	F	1	Total	Mg	0
			1	1	
4	G	1	Total	Mg	0
			1	1	
4	H	1	Total	Mg	0
			1	1	
4	I	1	Total	Mg	0
			1	1	
4	J	1	Total	Mg	0
			1	1	
4	K	1	Total	Mg	0
			1	1	
4	L	1	Total	Mg	0
			1	1	
4	M	1	Total	Mg	0
			1	1	
4	N	1	Total	Mg	0
			1	1	

- Molecule 5 is POTASSIUM ION (CCD ID: K) (formula: K).

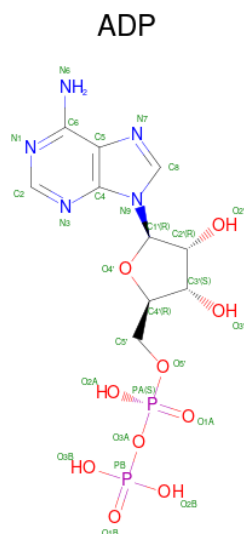
Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	K	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
5	B	1	Total 1	K 1	0
5	C	1	Total 1	K 1	0
5	D	1	Total 1	K 1	0
5	E	1	Total 1	K 1	0
5	F	1	Total 1	K 1	0
5	G	1	Total 1	K 1	0
5	H	1	Total 1	K 1	0
5	I	1	Total 1	K 1	0
5	J	1	Total 1	K 1	0
5	K	1	Total 1	K 1	0
5	L	1	Total 1	K 1	0
5	M	1	Total 1	K 1	0
5	N	1	Total 1	K 1	0

- Molecule 6 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).



Mol	Chain	Residues	Atoms					AltConf
6	H	1	Total 27	C 10	N 5	O 10	P 2	0
6	I	1	Total 27	C 10	N 5	O 10	P 2	0
6	J	1	Total 27	C 10	N 5	O 10	P 2	0
6	K	1	Total 27	C 10	N 5	O 10	P 2	0
6	L	1	Total 27	C 10	N 5	O 10	P 2	0
6	M	1	Total 27	C 10	N 5	O 10	P 2	0
6	N	1	Total 27	C 10	N 5	O 10	P 2	0

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	30	Total 30	O 30	0
7	B	29	Total 29	O 29	0
7	C	28	Total 28	O 28	0
7	D	30	Total 30	O 30	0
7	E	29	Total 29	O 29	0

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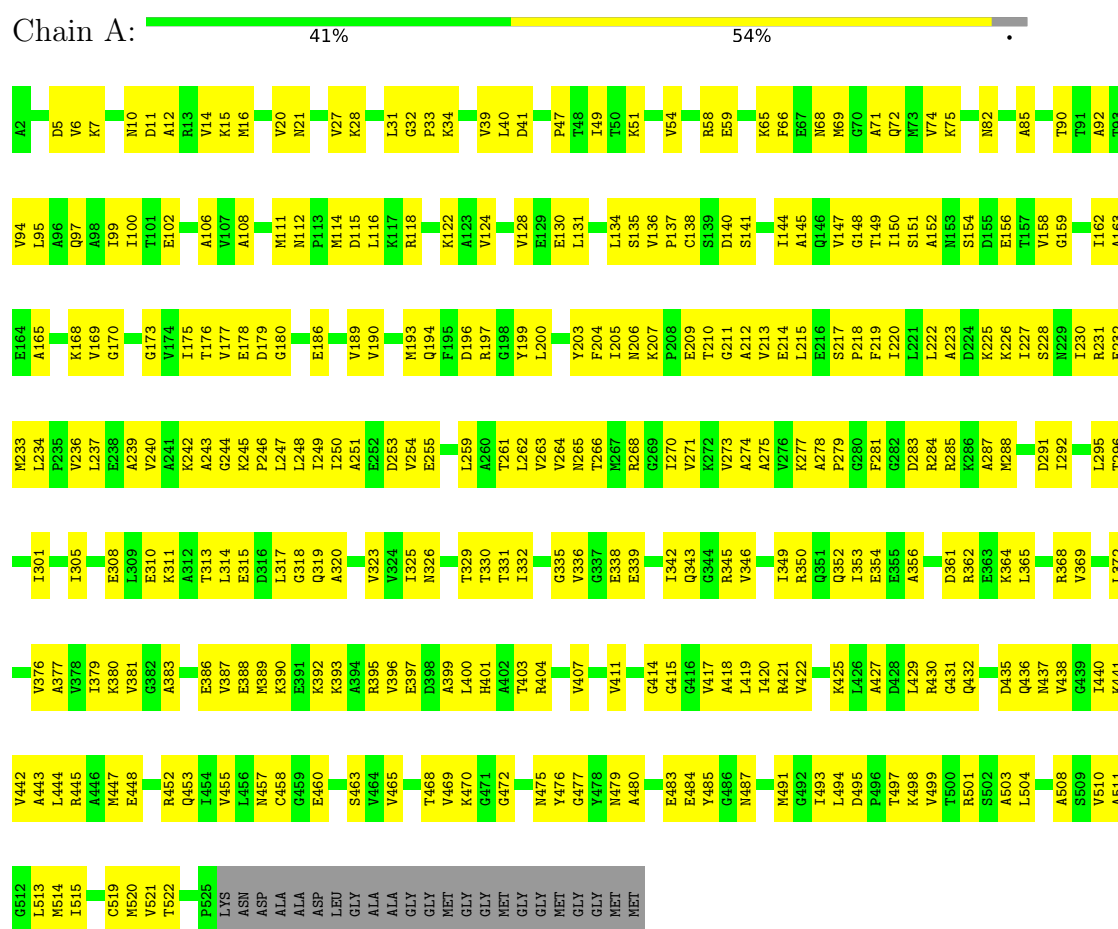
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Mol	Chain	Residues	Atoms		AltConf
7	F	30	Total 30	O 30	0
7	G	27	Total 27	O 27	0
7	H	1	Total 1	O 1	0
7	I	1	Total 1	O 1	0
7	J	1	Total 1	O 1	0
7	K	1	Total 1	O 1	0
7	L	1	Total 1	O 1	0
7	M	1	Total 1	O 1	0
7	N	1	Total 1	O 1	0

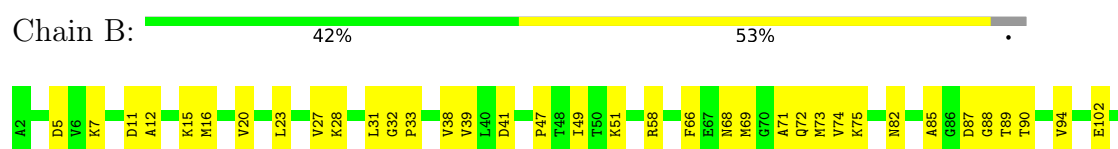
3 Residue-property plots

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

• Molecule 1: Chaperonin GroEL

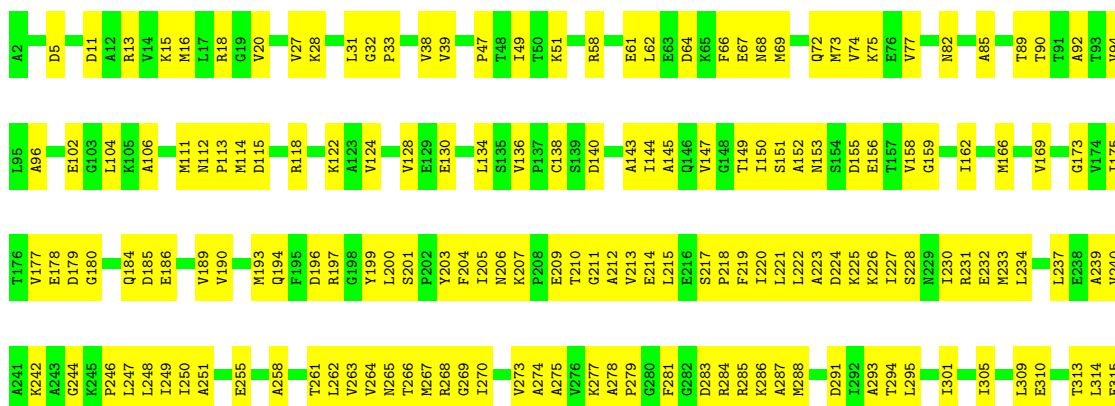
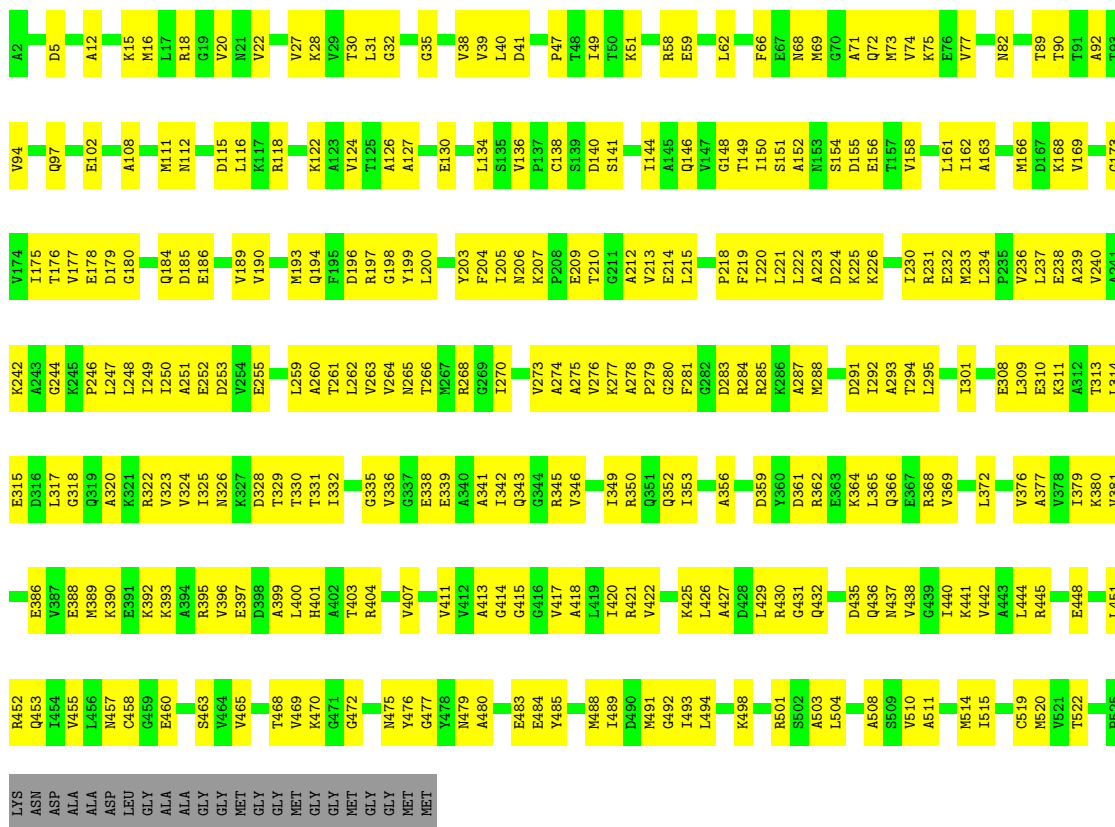
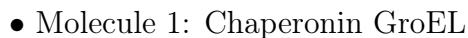


• Molecule 1: Chaperonin GroEL

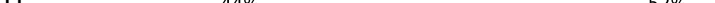


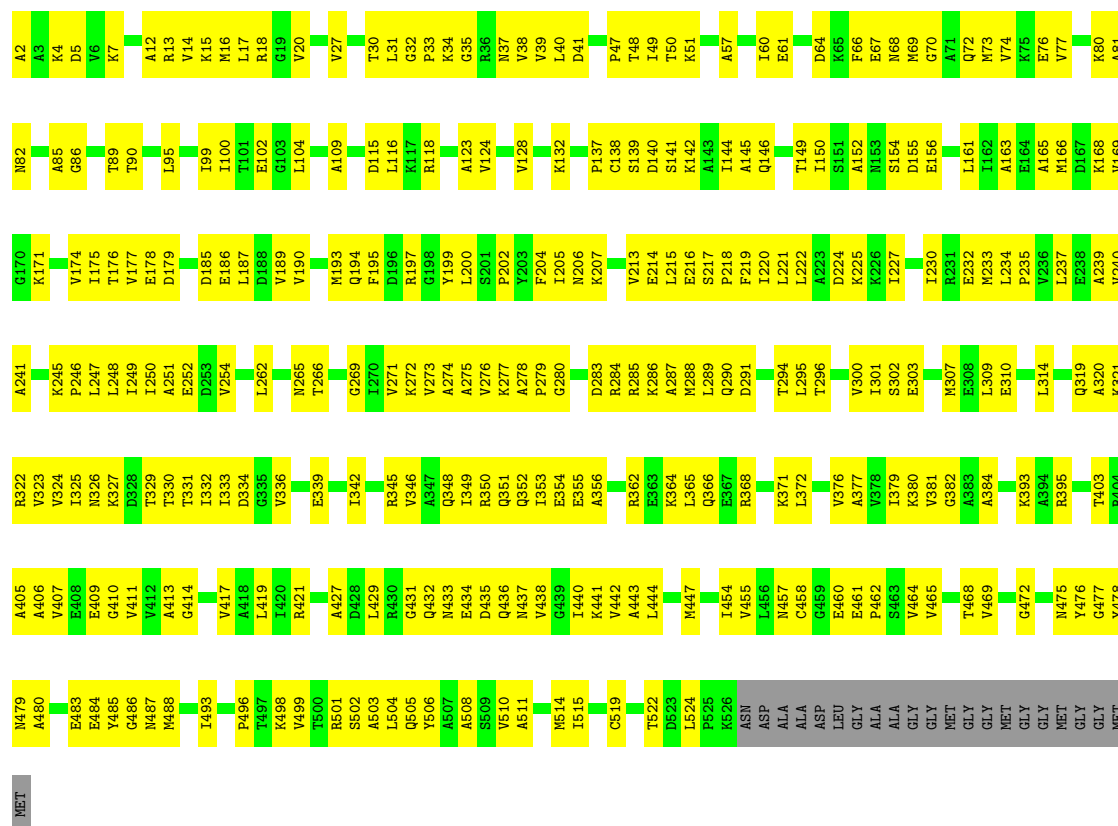




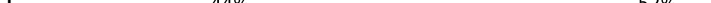


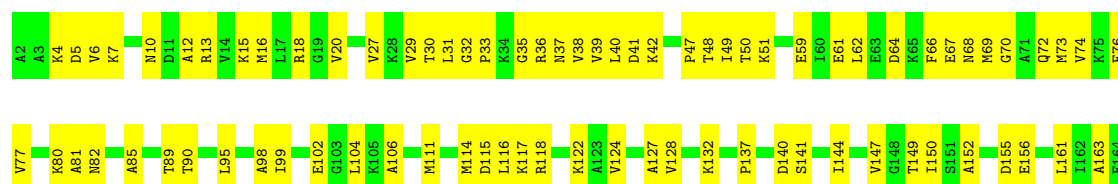
- Molecule 1: Chaperonin GroEL

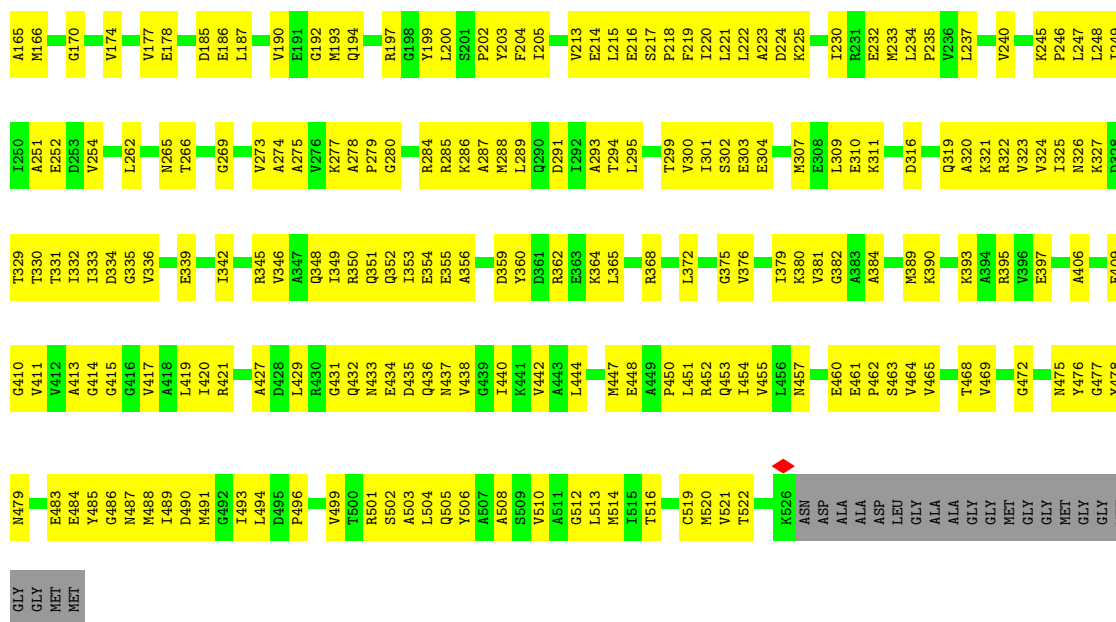
Chain H:  44% 52%



- Molecule 1: Chaperonin GroEL

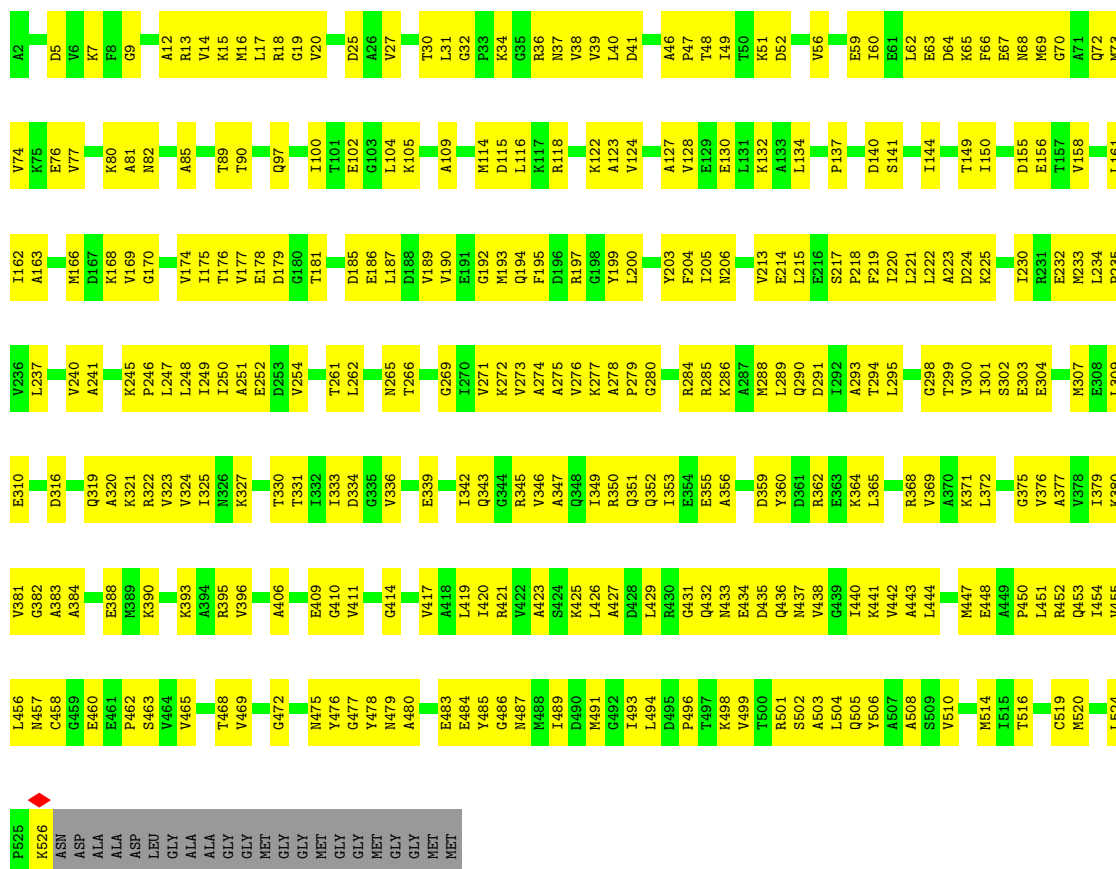
Chain I:  44% 52%



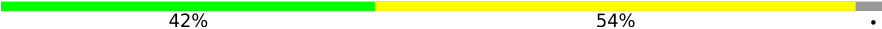


• Molecule 1: Chaperonin GroEL

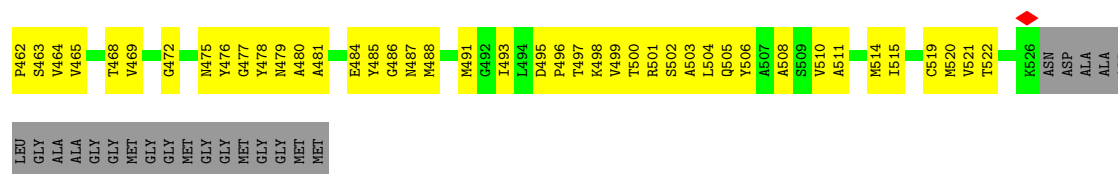
Chain J:



• Molecule 1: Chaperonin GroEL

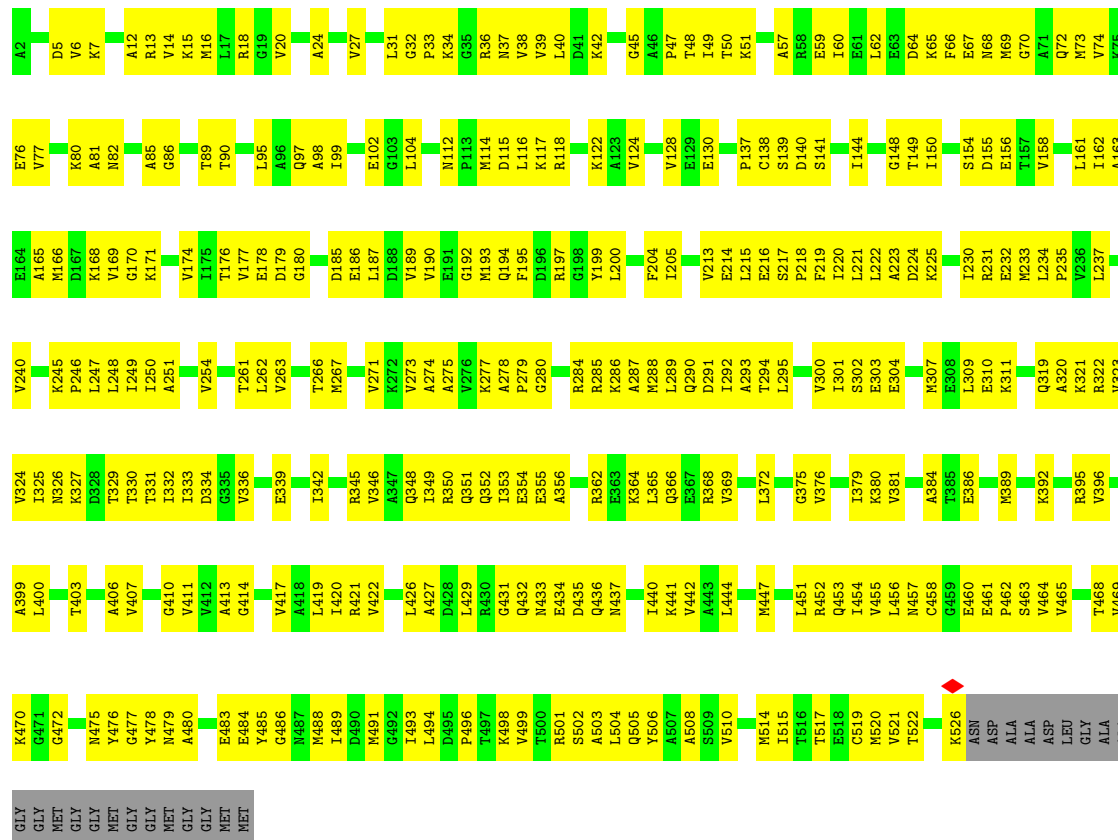
Chain K:  42% 54%

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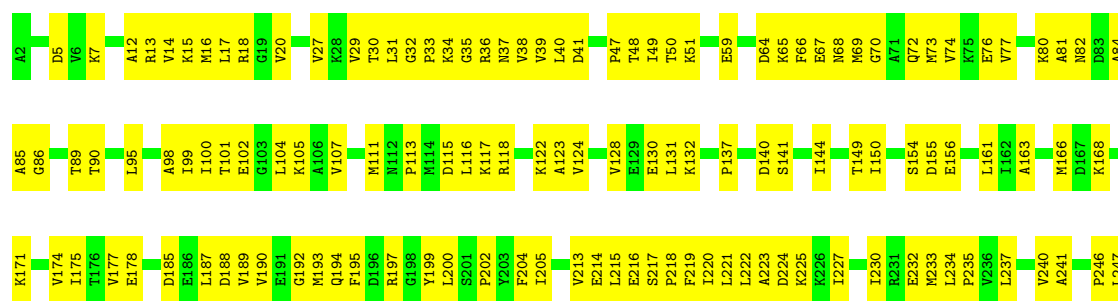
• Molecule 1: Chaperonin GroEL

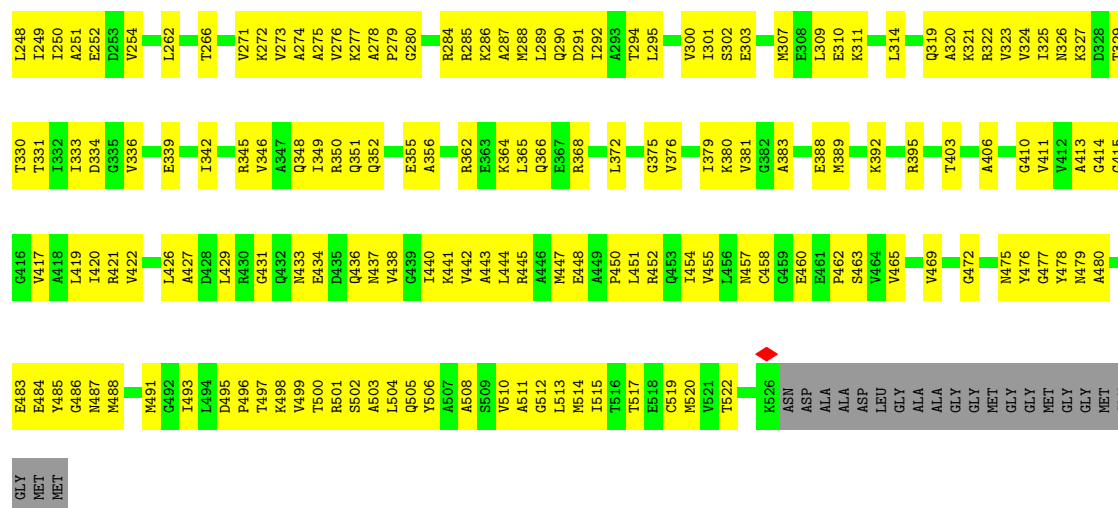
Chain M: 41% 55%



• Molecule 1: Chaperonin GroEL

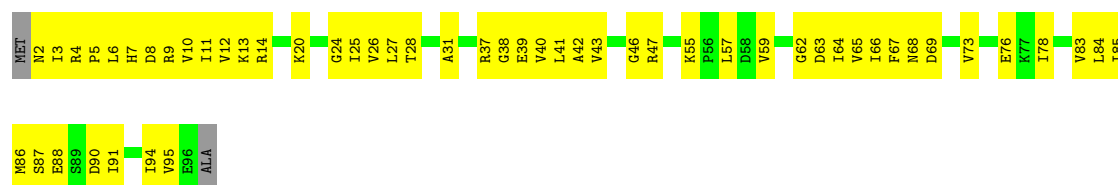
Chain N: 43% 53%





• Molecule 2: Co-chaperonin GroES

Chain O: 43% 55%



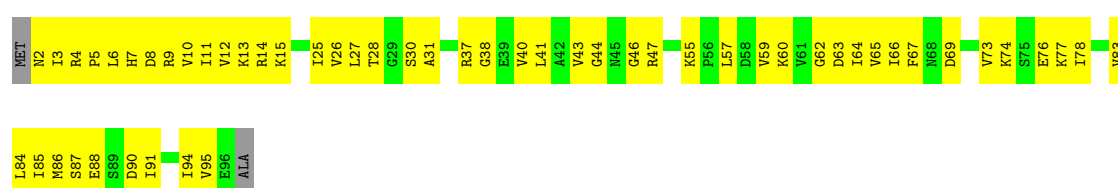
• Molecule 2: Co-chaperonin GroES

Chain P: 40% 58%



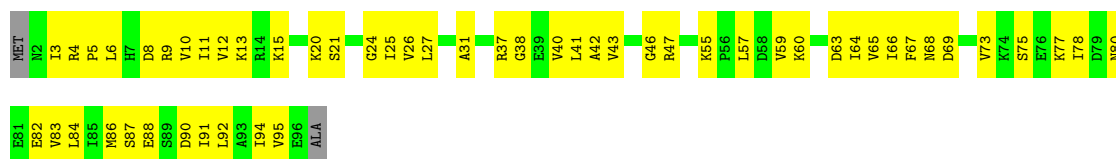
• Molecule 2: Co-chaperonin GroES

Chain Q: 42% 56%



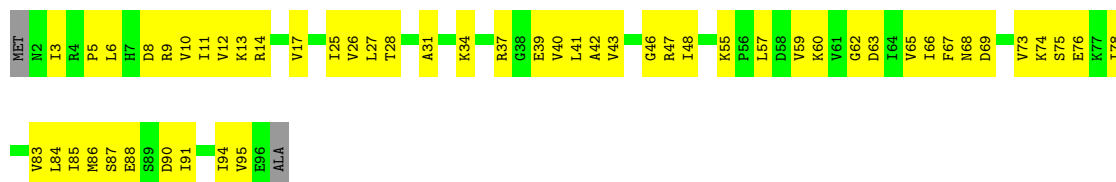
• Molecule 2: Co-chaperonin GroES

Chain R: 43% 55%



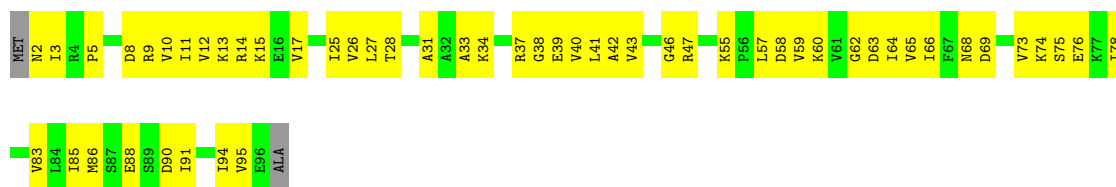
- Molecule 2: Co-chaperonin GroES

Chain S:
44% 54%



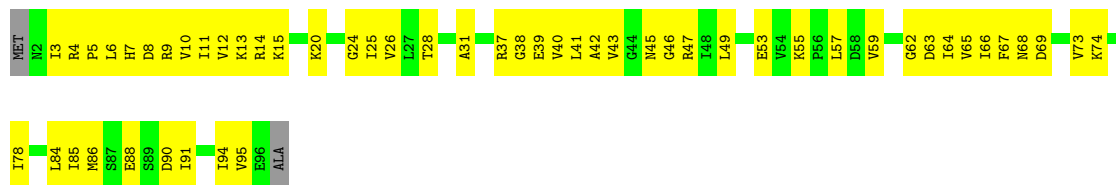
- Molecule 2: Co-chaperonin GroES

Chain T:
43% 55%



- Molecule 2: Co-chaperonin GroES

Chain U:
43% 55%



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C7	Depositor
Number of subtomograms used	10130	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	120	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.512	Depositor
Minimum map value	-0.283	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.052	Depositor
Recommended contour level	0.0981	Depositor
Map size (Å)	450.56, 450.56, 450.56	wwPDB
Map dimensions	128, 128, 128	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	3.52, 3.52, 3.52	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ADP, K, MG, ATP

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	A	0.20	0/3879	0.42	0/5238
1	B	0.20	0/3879	0.43	0/5238
1	C	0.20	0/3879	0.41	0/5238
1	D	0.20	0/3879	0.43	0/5238
1	E	0.20	0/3879	0.42	0/5238
1	F	0.19	0/3879	0.42	0/5238
1	G	0.20	0/3879	0.43	0/5238
1	H	0.20	0/3892	0.42	0/5254
1	I	0.21	0/3892	0.43	0/5254
1	J	0.20	0/3892	0.42	0/5254
1	K	0.20	0/3892	0.42	0/5254
1	L	0.20	0/3892	0.45	0/5254
1	M	0.20	0/3892	0.45	0/5254
1	N	0.20	0/3892	0.41	0/5254
2	O	0.23	0/690	0.44	0/930
2	P	0.22	0/690	0.45	0/930
2	Q	0.22	0/690	0.45	0/930
2	R	0.23	0/690	0.46	0/930
2	S	0.21	0/690	0.41	0/930
2	T	0.22	0/690	0.45	0/930
2	U	0.23	0/690	0.45	0/930
All	All	0.20	0/59227	0.43	0/79954

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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	3851	0	3970	286	0
1	B	3851	0	3971	288	0
1	C	3851	0	3971	284	0
1	D	3851	0	3970	268	0
1	E	3851	0	3970	274	0
1	F	3851	0	3970	290	0
1	G	3851	0	3970	271	0
1	H	3864	0	3989	282	0
1	I	3864	0	3989	285	0
1	J	3864	0	3989	292	0
1	K	3864	0	3989	301	0
1	L	3864	0	3989	283	0
1	M	3864	0	3989	298	0
1	N	3864	0	3989	292	0
2	O	687	0	718	65	0
2	P	687	0	718	69	0
2	Q	687	0	718	66	0
2	R	687	0	718	66	0
2	S	687	0	718	64	0
2	T	687	0	718	66	0
2	U	687	0	718	60	0
3	A	31	0	12	6	0
3	B	31	0	12	8	0
3	C	31	0	12	6	0
3	D	31	0	12	6	0
3	E	31	0	12	8	0
3	F	31	0	12	6	0
3	G	31	0	12	7	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
4	G	1	0	0	0	0
4	H	1	0	0	0	0
4	I	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	J	1	0	0	0	0
4	K	1	0	0	0	0
4	L	1	0	0	0	0
4	M	1	0	0	0	0
4	N	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
5	G	1	0	0	0	0
5	H	1	0	0	0	0
5	I	1	0	0	0	0
5	J	1	0	0	0	0
5	K	1	0	0	0	0
5	L	1	0	0	0	0
5	M	1	0	0	0	0
5	N	1	0	0	0	0
6	H	27	0	12	4	0
6	I	27	0	12	4	0
6	J	27	0	12	5	0
6	K	27	0	12	5	0
6	L	27	0	12	4	0
6	M	27	0	12	4	0
6	N	27	0	12	7	0
7	A	30	0	0	2	0
7	B	29	0	0	2	0
7	C	28	0	0	1	0
7	D	30	0	0	4	0
7	E	29	0	0	2	0
7	F	30	0	0	4	0
7	G	27	0	0	2	0
7	H	1	0	0	0	0
7	I	1	0	0	0	0
7	J	1	0	0	0	0
7	K	1	0	0	0	0
7	L	1	0	0	0	0
7	M	1	0	0	0	0
7	N	1	0	0	0	0
All	All	59458	0	60909	4276	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 36.

All (4276) 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:D:12:ALA:HA	1:D:520:MET:HE2	1.42	1.02
1:B:12:ALA:HA	1:B:520:MET:HE2	1.46	0.98
1:D:233:MET:HB3	1:D:237:LEU:HD23	1.49	0.95
1:L:166:MET:HB3	1:L:175:ILE:HD11	1.50	0.93
1:F:16:MET:HE2	1:F:520:MET:HE2	1.49	0.93
1:C:233:MET:HB3	1:C:237:LEU:HD23	1.50	0.92
1:J:249:ILE:HB	1:J:275:ALA:HA	1.53	0.90
1:D:240:VAL:HG21	1:D:247:LEU:HD12	1.52	0.89
1:K:192:GLY:H	1:K:375:GLY:HA2	1.38	0.88
1:L:417:VAL:HG11	1:L:477:GLY:HA3	1.54	0.88
2:O:57:LEU:HD23	2:O:88:GLU:HB2	1.56	0.88
1:K:249:ILE:HB	1:K:275:ALA:HA	1.53	0.87
1:C:69:MET:HE1	1:C:520:MET:HE2	1.55	0.87
1:F:233:MET:HB3	1:F:237:LEU:HD23	1.55	0.87
1:M:192:GLY:H	1:M:375:GLY:HA2	1.40	0.86
1:C:342:ILE:HG23	1:C:372:LEU:HG	1.54	0.86
1:K:279:PRO:HG2	1:K:288:MET:HB3	1.58	0.86
1:L:249:ILE:HB	1:L:275:ALA:HA	1.56	0.86
1:N:249:ILE:HB	1:N:275:ALA:HA	1.58	0.86
1:L:77:VAL:HG21	1:L:510:VAL:HB	1.58	0.86
1:M:249:ILE:HB	1:M:275:ALA:HA	1.54	0.86
1:B:342:ILE:HG23	1:B:372:LEU:HG	1.55	0.86
1:G:342:ILE:HG23	1:G:372:LEU:HG	1.55	0.86
1:J:100:ILE:HG23	1:J:514:MET:HE2	1.58	0.86
2:U:12:VAL:HG12	2:U:40:VAL:HG12	1.58	0.86
1:E:342:ILE:HG23	1:E:372:LEU:HG	1.56	0.85
1:H:249:ILE:HB	1:H:275:ALA:HA	1.57	0.85
1:I:249:ILE:HB	1:I:275:ALA:HA	1.58	0.85
1:M:166:MET:O	1:M:170:GLY:N	2.09	0.84
1:M:279:PRO:HG2	1:M:288:MET:HB3	1.59	0.84
2:Q:67:PHE:HB3	2:Q:91:ILE:HD13	1.59	0.84
1:H:352:GLN:OE1	1:H:368:ARG:NH2	2.09	0.84
1:L:240:VAL:HG11	1:L:247:LEU:HB2	1.60	0.84
1:K:77:VAL:HG21	1:K:510:VAL:HB	1.59	0.84
1:A:281:PHE:H	1:A:284:ARG:HG3	1.41	0.84
1:F:193:MET:HE1	1:F:372:LEU:HA	1.59	0.83
1:M:352:GLN:OE1	1:M:368:ARG:NH2	2.10	0.83
1:H:279:PRO:HG2	1:H:288:MET:HB3	1.58	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:240:VAL:HG11	1:I:247:LEU:HB2	1.59	0.83
1:M:240:VAL:HG11	1:M:247:LEU:HB2	1.59	0.83
1:L:263:VAL:HG12	1:L:267:MET:HE1	1.60	0.83
1:J:417:VAL:HG11	1:J:477:GLY:HA3	1.59	0.83
1:M:85:ALA:HB1	1:M:499:VAL:HA	1.57	0.83
1:H:417:VAL:HG11	1:H:477:GLY:HA3	1.60	0.82
1:N:15:LYS:HD3	1:N:18:ARG:HH21	1.42	0.82
1:H:85:ALA:HB1	1:H:499:VAL:HA	1.60	0.82
1:I:192:GLY:H	1:I:375:GLY:HA2	1.43	0.82
1:K:85:ALA:HB1	1:K:499:VAL:HA	1.61	0.82
1:E:281:PHE:H	1:E:284:ARG:HG3	1.44	0.82
1:H:240:VAL:HG11	1:H:247:LEU:HB2	1.60	0.82
1:M:77:VAL:HG21	1:M:510:VAL:HB	1.60	0.82
1:H:77:VAL:HG21	1:H:510:VAL:HB	1.61	0.82
1:L:321:LYS:HB2	1:L:334:ASP:HB3	1.62	0.82
1:I:321:LYS:HB2	1:I:334:ASP:HB3	1.60	0.82
2:O:65:VAL:HG12	2:O:94:ILE:HG22	1.62	0.82
1:J:333:ILE:HG23	1:J:376:VAL:HG21	1.62	0.81
2:O:12:VAL:HG12	2:O:40:VAL:HA	1.60	0.81
1:I:279:PRO:HG2	1:I:288:MET:HB3	1.61	0.81
1:J:85:ALA:HB1	1:J:499:VAL:HA	1.61	0.81
1:K:321:LYS:HB2	1:K:334:ASP:HB3	1.62	0.81
1:N:321:LYS:HB2	1:N:334:ASP:HB3	1.62	0.81
1:J:240:VAL:HG11	1:J:247:LEU:HB2	1.62	0.81
2:Q:73:VAL:HA	2:Q:86:MET:HB3	1.62	0.81
2:O:95:VAL:HA	2:P:3:ILE:HG22	1.62	0.81
2:P:57:LEU:HD23	2:P:88:GLU:HB2	1.63	0.81
1:K:333:ILE:HG23	1:K:376:VAL:HG21	1.63	0.81
1:N:232:GLU:HB3	1:N:309:LEU:HB2	1.62	0.81
1:J:321:LYS:HB2	1:J:334:ASP:HB3	1.63	0.81
1:F:342:ILE:HG23	1:F:372:LEU:HG	1.60	0.80
1:E:320:ALA:HA	1:E:336:VAL:H	1.45	0.80
1:N:192:GLY:HA3	1:N:376:VAL:HG13	1.64	0.80
1:K:240:VAL:HG11	1:K:247:LEU:HB2	1.62	0.80
1:L:333:ILE:HG23	1:L:376:VAL:HG21	1.64	0.80
1:N:279:PRO:HG2	1:N:288:MET:HB3	1.63	0.80
1:I:85:ALA:HB1	1:I:499:VAL:HA	1.63	0.80
1:M:321:LYS:HB2	1:M:334:ASP:HB3	1.63	0.80
1:H:69:MET:HB2	1:I:47:PRO:HG2	1.63	0.80
1:N:192:GLY:H	1:N:375:GLY:HA2	1.45	0.80
1:M:417:VAL:HG11	1:M:477:GLY:HA3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:413:ALA:HB1	1:M:488:MET:HB2	1.63	0.79
1:N:39:VAL:HG22	1:N:49:ILE:HG12	1.62	0.79
1:B:39:VAL:HG22	1:B:49:ILE:HG12	1.65	0.79
1:L:279:PRO:HG2	1:L:288:MET:HB3	1.64	0.79
1:K:365:LEU:HD23	1:K:368:ARG:HE	1.45	0.79
1:C:31:LEU:HB2	1:C:90:THR:HG21	1.65	0.79
1:H:232:GLU:HB3	1:H:309:LEU:HB2	1.63	0.79
2:U:11:ILE:HG12	2:U:85:ILE:HG12	1.65	0.79
1:K:417:VAL:HG11	1:K:477:GLY:HA3	1.65	0.79
1:B:223:ALA:HA	1:B:301:ILE:HB	1.65	0.78
1:B:248:LEU:HD22	1:B:323:VAL:HG11	1.65	0.78
1:I:417:VAL:HG11	1:I:477:GLY:HA3	1.65	0.78
1:L:69:MET:HG2	1:L:520:MET:HE1	1.64	0.78
1:N:333:ILE:HG23	1:N:376:VAL:HG21	1.65	0.78
1:I:69:MET:HB2	1:J:47:PRO:HG2	1.65	0.78
1:I:352:GLN:OE1	1:I:368:ARG:NH2	2.15	0.78
1:N:224:ASP:HB3	1:N:302:SER:HB3	1.65	0.78
1:N:240:VAL:HG11	1:N:247:LEU:HB2	1.64	0.78
1:A:233:MET:HB3	1:A:237:LEU:HD23	1.63	0.78
1:H:207:LYS:HD2	1:H:214:GLU:HG3	1.64	0.78
1:L:85:ALA:HB1	1:L:499:VAL:HA	1.64	0.78
1:I:232:GLU:HB3	1:I:309:LEU:HB2	1.66	0.78
1:J:12:ALA:HA	1:J:520:MET:HE2	1.63	0.78
2:R:57:LEU:HD23	2:R:88:GLU:HB2	1.66	0.78
1:K:144:ILE:HD12	1:K:166:MET:HE3	1.64	0.78
1:L:365:LEU:HD23	1:L:368:ARG:HE	1.48	0.78
1:F:39:VAL:HG22	1:F:49:ILE:HG12	1.65	0.78
1:L:39:VAL:HG22	1:L:49:ILE:HG12	1.66	0.78
1:B:122:LYS:HG2	1:B:429:LEU:HD21	1.64	0.78
1:D:420:ILE:HG12	1:D:448:GLU:HG2	1.66	0.78
1:B:233:MET:HB3	1:B:237:LEU:HD23	1.66	0.77
1:F:342:ILE:HG12	1:F:372:LEU:HD11	1.66	0.77
1:K:479:ASN:HB2	1:K:491:MET:HE3	1.66	0.77
1:E:122:LYS:HG2	1:E:429:LEU:HD21	1.65	0.77
1:N:417:VAL:HG11	1:N:477:GLY:HA3	1.64	0.77
1:E:39:VAL:HG22	1:E:49:ILE:HG12	1.65	0.77
1:G:295:LEU:HA	1:G:342:ILE:HD11	1.65	0.77
1:H:224:ASP:HB3	1:H:302:SER:HB3	1.64	0.77
1:J:192:GLY:H	1:J:375:GLY:HA2	1.48	0.77
1:G:193:MET:HG2	1:G:295:LEU:HD22	1.66	0.77
1:L:192:GLY:H	1:L:375:GLY:HA2	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:65:VAL:HG12	2:P:94:ILE:HG22	1.64	0.77
1:E:169:VAL:HG22	1:E:173:GLY:HA3	1.67	0.77
1:I:163:ALA:HA	1:I:166:MET:HE2	1.65	0.77
1:A:115:ASP:OD1	1:A:432:GLN:NE2	2.16	0.77
1:B:393:LYS:NZ	1:B:397:GLU:OE2	2.17	0.77
1:B:295:LEU:HA	1:B:342:ILE:HD11	1.67	0.77
1:N:352:GLN:OE1	1:N:368:ARG:NH2	2.14	0.77
2:T:69:ASP:HA	2:T:73:VAL:HG21	1.67	0.77
1:F:215:LEU:HD22	1:F:246:PRO:HB3	1.66	0.76
1:C:421:ARG:NH2	1:C:476:TYR:O	2.16	0.76
1:E:31:LEU:HB2	1:E:90:THR:HG21	1.67	0.76
2:P:69:ASP:HA	2:P:73:VAL:HG21	1.66	0.76
2:U:57:LEU:HD23	2:U:88:GLU:HB2	1.67	0.76
1:G:122:LYS:HG2	1:G:429:LEU:HD21	1.66	0.76
1:J:279:PRO:HG2	1:J:288:MET:HB3	1.67	0.76
1:A:122:LYS:HG2	1:A:429:LEU:HD21	1.67	0.76
1:G:16:MET:HB3	1:G:514:MET:HE1	1.68	0.76
1:G:223:ALA:HA	1:G:301:ILE:HB	1.68	0.76
1:L:232:GLU:HB3	1:L:309:LEU:HB2	1.68	0.76
1:G:240:VAL:HG21	1:G:247:LEU:HD12	1.65	0.76
1:K:349:ILE:HG21	1:K:368:ARG:HB2	1.68	0.76
1:M:333:ILE:HG23	1:M:376:VAL:HG21	1.68	0.76
1:C:122:LYS:HG2	1:C:429:LEU:HD21	1.66	0.76
1:N:349:ILE:HG21	1:N:368:ARG:HB2	1.68	0.76
1:B:421:ARG:NH2	1:B:476:TYR:O	2.16	0.76
2:T:57:LEU:HD23	2:T:88:GLU:HB2	1.68	0.76
1:D:215:LEU:HD22	1:D:246:PRO:HB3	1.68	0.75
1:C:281:PHE:H	1:C:284:ARG:HG3	1.52	0.75
1:N:85:ALA:HB1	1:N:499:VAL:HA	1.66	0.75
1:K:232:GLU:HB3	1:K:309:LEU:HB2	1.69	0.75
2:T:12:VAL:HG12	2:T:40:VAL:HA	1.69	0.75
1:G:31:LEU:HB2	1:G:90:THR:HG21	1.68	0.75
1:H:220:ILE:HD11	1:H:250:ILE:HD12	1.69	0.75
1:I:224:ASP:HB3	1:I:302:SER:HB3	1.65	0.75
1:F:180:GLY:N	1:F:381:VAL:O	2.20	0.75
1:C:295:LEU:HA	1:C:342:ILE:HD11	1.68	0.75
1:D:122:LYS:HG2	1:D:429:LEU:HD21	1.67	0.75
1:D:291:ASP:HB3	1:D:372:LEU:HD21	1.69	0.75
1:F:122:LYS:HG2	1:F:429:LEU:HD21	1.68	0.75
1:H:321:LYS:HB2	1:H:334:ASP:HB3	1.67	0.75
1:M:69:MET:HB2	1:N:47:PRO:HG2	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:Q:78:ILE:HG12	2:Q:83:VAL:HG21	1.69	0.74
1:F:51:LYS:NZ	3:F:601:ATP:O1A	2.20	0.74
1:J:232:GLU:HB3	1:J:309:LEU:HB2	1.70	0.74
1:C:169:VAL:HG22	1:C:173:GLY:HA3	1.69	0.74
1:N:274:ALA:HB1	1:N:325:ILE:HD13	1.69	0.74
1:C:469:VAL:HG13	1:C:477:GLY:HA2	1.70	0.74
1:M:214:GLU:HG3	1:M:324:VAL:HG22	1.68	0.74
1:D:469:VAL:HG13	1:D:477:GLY:HA2	1.70	0.74
1:B:169:VAL:HG22	1:B:173:GLY:HA3	1.70	0.74
1:G:393:LYS:NZ	1:G:397:GLU:OE2	2.18	0.74
1:I:420:ILE:HD12	1:I:451:LEU:HD13	1.70	0.74
1:M:353:ILE:HG23	1:M:362:ARG:HH12	1.52	0.74
1:N:213:VAL:HB	1:N:325:ILE:HG12	1.69	0.74
2:T:57:LEU:O	2:T:60:LYS:NZ	2.19	0.74
1:E:421:ARG:NH2	1:E:476:TYR:O	2.19	0.74
1:M:289:LEU:HD23	1:M:300:VAL:HG13	1.68	0.74
1:E:248:LEU:HD22	1:E:323:VAL:HG11	1.68	0.74
1:E:193:MET:HE1	1:E:372:LEU:HA	1.71	0.73
1:J:295:LEU:HD23	1:J:342:ILE:HG12	1.70	0.73
1:J:224:ASP:HB3	1:J:302:SER:HB3	1.68	0.73
1:D:169:VAL:HB	1:D:377:ALA:HB2	1.70	0.73
1:E:197:ARG:O	1:E:330:THR:OG1	2.06	0.73
2:S:69:ASP:HA	2:S:73:VAL:HG21	1.69	0.73
1:G:233:MET:HB3	1:G:237:LEU:HG	1.71	0.73
1:I:77:VAL:HG21	1:I:510:VAL:HB	1.71	0.73
1:M:295:LEU:HD23	1:M:342:ILE:HG12	1.71	0.73
1:M:420:ILE:HD12	1:M:451:LEU:HD13	1.70	0.73
1:C:339:GLU:HA	1:C:342:ILE:HD12	1.71	0.73
1:H:225:LYS:HD3	1:H:303:GLU:HG3	1.71	0.73
1:J:77:VAL:HG21	1:J:510:VAL:HB	1.69	0.73
1:L:339:GLU:O	1:L:343:GLN:NE2	2.22	0.73
1:M:6:VAL:HG22	1:M:521:VAL:HG12	1.71	0.73
1:G:16:MET:HE1	1:G:517:THR:HG21	1.68	0.73
1:G:215:LEU:HD22	1:G:246:PRO:HB3	1.70	0.73
1:K:420:ILE:HD12	1:K:451:LEU:HD13	1.71	0.73
1:G:115:ASP:OD1	1:G:432:GLN:NE2	2.21	0.73
1:I:349:ILE:HG21	1:I:368:ARG:HB2	1.70	0.73
1:D:41:ASP:HA	1:D:47:PRO:HB3	1.71	0.73
1:N:295:LEU:HD23	1:N:342:ILE:HG12	1.71	0.73
1:G:186:GLU:HB3	1:G:380:LYS:HB2	1.71	0.72
1:M:479:ASN:O	1:M:483:GLU:N	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:193:MET:HE1	1:G:372:LEU:HA	1.70	0.72
1:C:197:ARG:O	1:C:330:THR:OG1	2.07	0.72
1:D:248:LEU:HD22	1:D:323:VAL:HG11	1.71	0.72
1:F:421:ARG:NH2	1:F:476:TYR:O	2.18	0.72
1:A:21:ASN:OD1	1:A:97:GLN:NE2	2.23	0.72
1:A:262:LEU:HD22	1:A:273:VAL:HG21	1.70	0.72
1:A:469:VAL:HG13	1:A:477:GLY:HA2	1.71	0.72
1:D:281:PHE:H	1:D:284:ARG:HG3	1.54	0.72
1:F:115:ASP:OD1	1:F:432:GLN:NE2	2.20	0.72
1:F:230:ILE:HA	1:F:233:MET:HE2	1.71	0.72
1:J:352:GLN:HA	1:J:355:GLU:HG3	1.71	0.72
1:C:203:TYR:HB2	1:C:263:VAL:HB	1.71	0.72
1:D:169:VAL:HG22	1:D:173:GLY:HA3	1.72	0.72
1:F:20:VAL:HG13	1:F:74:VAL:HG21	1.71	0.72
1:J:431:GLY:N	1:J:437:ASN:OD1	2.23	0.72
1:K:139:SER:HA	1:K:171:LYS:HE3	1.72	0.72
1:K:289:LEU:HD23	1:K:300:VAL:HG13	1.72	0.72
2:T:10:VAL:N	2:T:86:MET:O	2.21	0.72
1:A:219:PHE:HD2	1:A:240:VAL:HG22	1.54	0.72
1:K:192:GLY:HA3	1:K:376:VAL:HG13	1.69	0.72
1:K:432:GLN:NE2	1:K:436:GLN:OE1	2.22	0.72
2:T:9:ARG:HB3	2:T:85:ILE:HD11	1.71	0.72
1:E:16:MET:HE3	1:E:520:MET:SD	2.29	0.72
1:F:184:GLN:NE2	1:F:185:ASP:OD1	2.23	0.72
1:F:169:VAL:HG22	1:F:173:GLY:HA3	1.71	0.72
1:G:240:VAL:O	1:G:244:GLY:N	2.23	0.72
1:D:231:ARG:HA	1:D:234:LEU:HD23	1.72	0.71
1:I:10:ASN:HA	1:I:13:ARG:HB2	1.71	0.71
1:K:111:MET:HB2	1:K:116:LEU:HD11	1.71	0.71
1:K:307:MET:HG2	1:K:311:LYS:HZ2	1.55	0.71
1:N:479:ASN:ND2	1:N:491:MET:SD	2.63	0.71
2:R:12:VAL:HG12	2:R:40:VAL:HA	1.72	0.71
1:G:281:PHE:H	1:G:284:ARG:HG3	1.53	0.71
2:Q:11:ILE:HD11	2:Q:83:VAL:HB	1.70	0.71
1:A:421:ARG:NH2	1:A:476:TYR:O	2.17	0.71
1:J:162:ILE:HG22	1:J:166:MET:HE2	1.72	0.71
1:A:58:ARG:HA	1:A:75:LYS:HD3	1.72	0.71
1:F:231:ARG:HA	1:F:234:LEU:HD23	1.72	0.71
1:C:115:ASP:OD1	1:C:432:GLN:NE2	2.23	0.71
1:D:326:ASN:OD1	1:D:329:THR:N	2.23	0.71
1:F:240:VAL:O	1:F:244:GLY:N	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:47:PRO:HG2	1:N:69:MET:HB2	1.73	0.71
2:P:10:VAL:N	2:P:86:MET:O	2.22	0.71
1:E:420:ILE:HG12	1:E:448:GLU:HG2	1.71	0.71
1:F:393:LYS:NZ	1:F:397:GLU:OE2	2.23	0.71
1:H:349:ILE:HG21	1:H:368:ARG:HB2	1.72	0.71
1:J:339:GLU:O	1:J:343:GLN:NE2	2.24	0.71
1:L:322:ARG:HB2	1:L:333:ILE:HB	1.70	0.71
1:F:102:GLU:HG3	1:F:442:VAL:HG22	1.73	0.71
1:F:193:MET:HG2	1:F:295:LEU:HD22	1.73	0.71
1:G:180:GLY:N	1:G:381:VAL:O	2.19	0.71
1:G:193:MET:HB2	1:G:332:ILE:HB	1.72	0.71
1:J:349:ILE:HD13	1:J:368:ARG:HG2	1.71	0.71
1:K:352:GLN:O	1:K:362:ARG:NH2	2.23	0.71
1:L:224:ASP:HB3	1:L:302:SER:HB3	1.72	0.71
1:M:431:GLY:N	1:M:437:ASN:OD1	2.23	0.71
1:N:81:ALA:O	1:N:85:ALA:CB	2.38	0.71
1:E:223:ALA:HA	1:E:301:ILE:HB	1.71	0.71
2:S:11:ILE:O	2:S:41:LEU:N	2.24	0.71
1:A:193:MET:HE1	1:A:372:LEU:HA	1.72	0.71
1:A:240:VAL:O	1:A:244:GLY:N	2.24	0.71
1:I:40:LEU:HD22	1:I:59:GLU:HG2	1.71	0.71
1:A:295:LEU:HA	1:A:342:ILE:HD11	1.73	0.70
1:D:240:VAL:O	1:D:244:GLY:N	2.22	0.70
1:J:455:VAL:HG13	1:J:460:GLU:HB2	1.73	0.70
1:M:421:ARG:NH2	1:M:476:TYR:O	2.22	0.70
1:N:431:GLY:N	1:N:437:ASN:OD1	2.24	0.70
1:J:220:ILE:HD11	1:J:250:ILE:HD12	1.72	0.70
1:B:213:VAL:N	1:B:325:ILE:O	2.24	0.70
1:A:197:ARG:O	1:A:330:THR:OG1	2.10	0.70
1:B:326:ASN:OD1	1:B:329:THR:N	2.23	0.70
1:G:230:ILE:HA	1:G:233:MET:HE2	1.73	0.70
1:J:432:GLN:NE2	1:J:436:GLN:OE1	2.24	0.70
1:M:224:ASP:HB3	1:M:302:SER:HB3	1.74	0.70
1:N:31:LEU:O	1:N:457:ASN:ND2	2.23	0.70
2:S:59:VAL:HG11	2:S:91:ILE:HG21	1.71	0.70
1:D:186:GLU:HB3	1:D:380:LYS:HB2	1.72	0.70
1:E:215:LEU:HD22	1:E:246:PRO:HB3	1.71	0.70
1:E:469:VAL:HG13	1:E:477:GLY:HA2	1.72	0.70
1:G:184:GLN:NE2	1:G:185:ASP:OD1	2.25	0.70
1:H:362:ARG:HH21	1:H:366:GLN:HB2	1.54	0.70
2:R:69:ASP:HA	2:R:73:VAL:HG21	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:12:ALA:HA	1:A:520:MET:HE2	1.72	0.70
1:B:281:PHE:H	1:B:284:ARG:HG3	1.55	0.70
1:F:102:GLU:HB3	1:F:442:VAL:HG13	1.73	0.70
1:F:150:ILE:HG13	1:F:493:ILE:HA	1.73	0.70
1:F:491:MET:HE3	1:F:493:ILE:HD12	1.72	0.70
1:K:224:ASP:HB3	1:K:302:SER:HB3	1.74	0.70
1:L:325:ILE:HG22	1:L:330:THR:HG23	1.73	0.70
2:P:12:VAL:HG22	2:P:86:MET:HE1	1.74	0.70
1:B:469:VAL:HG13	1:B:477:GLY:HA2	1.73	0.70
1:G:219:PHE:HD2	1:G:240:VAL:HG22	1.57	0.70
1:G:365:LEU:HD13	1:G:368:ARG:HD3	1.73	0.70
1:M:194:GLN:HG3	1:M:331:THR:HB	1.74	0.70
1:N:348:GLN:O	1:N:351:GLN:NE2	2.24	0.70
2:O:10:VAL:N	2:O:86:MET:O	2.25	0.70
2:Q:12:VAL:HG12	2:Q:40:VAL:HA	1.72	0.70
1:N:220:ILE:HD11	1:N:250:ILE:HD12	1.74	0.70
2:P:94:ILE:HG23	2:Q:6:LEU:HD11	1.74	0.70
2:R:67:PHE:HB3	2:R:91:ILE:HD13	1.73	0.70
1:B:240:VAL:O	1:B:244:GLY:N	2.23	0.70
1:G:356:ALA:O	1:G:362:ARG:NH2	2.24	0.70
1:K:233:MET:HG3	1:K:237:LEU:HG	1.74	0.70
1:K:431:GLY:N	1:K:437:ASN:OD1	2.25	0.70
1:A:169:VAL:HG22	1:A:173:GLY:HA3	1.72	0.70
1:C:169:VAL:HB	1:C:377:ALA:HB2	1.74	0.70
1:E:240:VAL:O	1:E:244:GLY:N	2.25	0.70
1:N:233:MET:HG3	1:N:237:LEU:HG	1.73	0.70
1:E:393:LYS:NZ	1:E:397:GLU:OE2	2.21	0.69
1:M:77:VAL:HG13	1:M:506:TYR:HB3	1.72	0.69
1:D:31:LEU:HB2	1:D:90:THR:HG21	1.73	0.69
1:F:279:PRO:HG2	1:F:288:MET:HB3	1.74	0.69
1:H:479:ASN:N	1:H:484:GLU:O	2.25	0.69
1:A:248:LEU:HD22	1:A:323:VAL:HG11	1.73	0.69
1:A:356:ALA:O	1:A:362:ARG:NH2	2.25	0.69
1:B:51:LYS:NZ	3:B:601:ATP:O1A	2.25	0.69
1:D:232:GLU:HA	1:D:310:GLU:HG3	1.75	0.69
1:G:248:LEU:HD22	1:G:323:VAL:HG11	1.72	0.69
1:H:31:LEU:O	1:H:457:ASN:ND2	2.24	0.69
1:I:193:MET:HG2	1:I:295:LEU:HD13	1.74	0.69
1:J:225:LYS:HD3	1:J:303:GLU:HG3	1.75	0.69
1:L:77:VAL:HG13	1:L:506:TYR:HB3	1.74	0.69
2:S:40:VAL:O	2:S:62:GLY:N	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:215:LEU:HD22	1:C:246:PRO:HB3	1.74	0.69
1:G:169:VAL:HG22	1:G:173:GLY:HA3	1.73	0.69
1:M:362:ARG:HH21	1:M:366:GLN:HG3	1.57	0.69
1:A:20:VAL:HG13	1:A:74:VAL:HG21	1.74	0.69
1:A:51:LYS:NZ	3:A:601:ATP:O1A	2.26	0.69
1:F:263:VAL:O	1:F:266:THR:OG1	2.11	0.69
1:G:263:VAL:O	1:G:266:THR:OG1	2.11	0.69
1:M:520:MET:HG2	1:N:39:VAL:HB	1.75	0.69
1:N:77:VAL:HG21	1:N:510:VAL:HB	1.74	0.69
1:N:225:LYS:HD3	1:N:303:GLU:HG3	1.75	0.69
1:N:362:ARG:HH21	1:N:366:GLN:HB2	1.57	0.69
1:G:495:ASP:OD2	3:G:601:ATP:O2'	2.09	0.69
1:I:413:ALA:HB1	1:I:488:MET:HB2	1.75	0.69
1:M:186:GLU:O	1:M:380:LYS:N	2.23	0.69
1:M:263:VAL:HG12	1:M:267:MET:HE1	1.75	0.69
1:M:350:ARG:HD3	1:M:353:ILE:HD12	1.75	0.69
1:B:58:ARG:HA	1:B:75:LYS:HD3	1.73	0.69
1:C:114:MET:SD	7:D:2003:HOH:O	2.51	0.69
1:C:420:ILE:HG12	1:C:448:GLU:HG2	1.75	0.69
1:I:325:ILE:HG22	1:I:330:THR:HG23	1.74	0.69
1:J:192:GLY:HA3	1:J:376:VAL:HG13	1.75	0.69
1:M:128:VAL:HG13	1:M:501:ARG:HG3	1.75	0.69
1:M:232:GLU:HB3	1:M:309:LEU:HB2	1.73	0.69
1:B:20:VAL:HG13	1:B:74:VAL:HG21	1.73	0.69
1:C:252:GLU:OE2	1:C:285:ARG:NH1	2.25	0.69
1:G:197:ARG:O	1:G:330:THR:OG1	2.10	0.69
1:H:81:ALA:O	1:H:85:ALA:CB	2.41	0.69
1:L:284:ARG:CZ	1:L:364:LYS:HB3	2.23	0.69
1:L:295:LEU:HD23	1:L:342:ILE:HG12	1.74	0.69
1:A:39:VAL:HG22	1:A:49:ILE:HG12	1.75	0.69
1:D:308:GLU:H	1:D:311:LYS:HD3	1.57	0.69
1:E:279:PRO:HG2	1:E:288:MET:HB3	1.75	0.69
1:H:322:ARG:HB2	1:H:333:ILE:HB	1.75	0.69
1:K:69:MET:HE1	1:L:47:PRO:HD2	1.73	0.69
1:K:520:MET:HG2	1:L:39:VAL:HB	1.73	0.69
1:A:263:VAL:O	1:A:266:THR:OG1	2.11	0.68
1:H:15:LYS:HD3	1:H:18:ARG:HH21	1.56	0.68
1:B:7:LYS:HB2	1:B:520:MET:HE3	1.76	0.68
1:G:130:GLU:HB2	1:G:422:VAL:HG13	1.73	0.68
1:I:289:LEU:HD23	1:I:300:VAL:HG13	1.75	0.68
1:M:174:VAL:HG23	1:M:376:VAL:HA	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:U:5:PRO:HG3	2:U:11:ILE:HG13	1.75	0.68
1:E:180:GLY:N	1:E:381:VAL:O	2.20	0.68
1:E:249:ILE:HB	1:E:275:ALA:HA	1.73	0.68
1:I:431:GLY:N	1:I:437:ASN:OD1	2.24	0.68
1:L:141:SER:HB3	1:L:163:ALA:HB1	1.76	0.68
1:B:220:ILE:N	1:B:318:GLY:O	2.23	0.68
1:M:40:LEU:HD13	1:M:59:GLU:HG3	1.75	0.68
1:M:325:ILE:HG22	1:M:330:THR:HG23	1.75	0.68
1:C:346:VAL:HB	1:C:369:VAL:HG13	1.76	0.68
1:F:185:ASP:HA	1:F:381:VAL:HA	1.75	0.68
1:F:226:LYS:HE2	1:F:253:ASP:HB3	1.76	0.68
1:M:16:MET:HE3	1:M:520:MET:HE1	1.75	0.68
1:A:193:MET:HG2	1:A:295:LEU:HD22	1.76	0.68
1:H:295:LEU:HA	1:H:342:ILE:HG12	1.75	0.68
1:L:420:ILE:HD12	1:L:451:LEU:HD13	1.74	0.68
1:L:421:ARG:NH2	1:L:476:TYR:O	2.24	0.68
1:F:281:PHE:H	1:F:284:ARG:HG3	1.58	0.68
2:S:13:LYS:HB2	2:S:41:LEU:HD11	1.74	0.68
1:C:479:ASN:N	1:C:484:GLU:O	2.26	0.68
1:I:519:CYS:HB3	1:J:38:VAL:HG22	1.76	0.68
1:K:84:ALA:O	1:K:498:LYS:NZ	2.23	0.68
1:L:81:ALA:O	1:L:85:ALA:CB	2.42	0.68
1:L:431:GLY:N	1:L:437:ASN:OD1	2.26	0.68
1:M:353:ILE:HG23	1:M:362:ARG:HH22	1.59	0.68
1:C:263:VAL:O	1:C:266:THR:OG1	2.11	0.68
1:L:346:VAL:HG13	1:L:350:ARG:NH1	2.09	0.68
2:P:11:ILE:HG22	2:P:41:LEU:HB2	1.73	0.68
2:T:13:LYS:HB2	2:T:41:LEU:HD11	1.74	0.68
1:B:353:ILE:HG23	1:B:362:ARG:HB2	1.75	0.68
1:J:325:ILE:HG22	1:J:330:THR:HG23	1.76	0.68
1:A:231:ARG:HH11	1:A:234:LEU:HD11	1.60	0.67
1:H:178:GLU:N	1:H:379:ILE:O	2.21	0.67
1:I:128:VAL:HG13	1:I:501:ARG:HG3	1.76	0.67
1:K:353:ILE:O	1:K:362:ARG:NH1	2.28	0.67
1:M:81:ALA:O	1:M:85:ALA:CB	2.42	0.67
2:T:59:VAL:HG21	2:T:91:ILE:HG21	1.76	0.67
1:C:15:LYS:HB2	1:C:520:MET:HE1	1.77	0.67
1:G:339:GLU:HA	1:G:342:ILE:HD12	1.75	0.67
1:L:104:LEU:HD21	1:L:514:MET:HG3	1.76	0.67
1:B:169:VAL:HB	1:B:377:ALA:HB2	1.77	0.67
1:H:194:GLN:HG3	1:H:331:THR:HB	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:81:ALA:O	1:J:85:ALA:CB	2.43	0.67
1:B:31:LEU:HB2	1:B:90:THR:HG21	1.75	0.67
1:D:51:LYS:NZ	3:D:601:ATP:O1A	2.26	0.67
1:G:231:ARG:HH11	2:U:31:ALA:HB1	1.60	0.67
1:I:455:VAL:HG13	1:I:460:GLU:HB2	1.74	0.67
1:J:291:ASP:OD1	1:J:345:ARG:NE	2.21	0.67
1:L:225:LYS:HD3	1:L:303:GLU:HG3	1.75	0.67
1:N:251:ALA:O	1:N:278:ALA:N	2.27	0.67
2:U:11:ILE:HD12	2:U:42:ALA:HB3	1.75	0.67
1:F:345:ARG:O	1:F:349:ILE:HG13	1.95	0.67
1:I:427:ALA:HA	1:I:444:LEU:HD13	1.76	0.67
1:M:31:LEU:O	1:M:457:ASN:ND2	2.26	0.67
1:N:413:ALA:HB1	1:N:488:MET:HB2	1.75	0.67
1:D:219:PHE:HD2	1:D:240:VAL:HG22	1.59	0.67
1:D:365:LEU:HD13	1:D:368:ARG:HD3	1.77	0.67
1:E:115:ASP:OD1	1:E:118:ARG:NH1	2.27	0.67
1:F:220:ILE:HG23	1:F:250:ILE:HD12	1.76	0.67
1:K:77:VAL:HG13	1:K:506:TYR:HB3	1.76	0.67
1:K:251:ALA:O	1:K:278:ALA:N	2.26	0.67
1:D:263:VAL:O	1:D:266:THR:OG1	2.13	0.67
1:E:213:VAL:N	1:E:325:ILE:O	2.27	0.67
1:L:7:LYS:HE3	1:L:15:LYS:HG3	1.76	0.67
1:M:200:LEU:HD13	1:M:254:VAL:H	1.59	0.67
2:Q:66:ILE:HD11	2:R:3:ILE:HD13	1.75	0.67
1:A:291:ASP:HB3	1:A:372:LEU:HD21	1.75	0.67
1:J:41:ASP:HA	1:J:47:PRO:HB3	1.75	0.67
1:J:177:VAL:O	1:J:393:LYS:NZ	2.28	0.67
1:K:31:LEU:O	1:K:457:ASN:ND2	2.25	0.67
1:K:419:LEU:HB3	1:K:447:MET:HB3	1.77	0.67
1:A:39:VAL:HG11	1:G:73:MET:HE1	1.77	0.67
1:F:240:VAL:HG21	1:F:247:LEU:HD12	1.76	0.67
1:H:431:GLY:N	1:H:437:ASN:OD1	2.24	0.67
1:K:178:GLU:N	1:K:379:ILE:O	2.24	0.67
1:N:20:VAL:HG22	1:N:74:VAL:HG21	1.76	0.67
1:C:15:LYS:HD3	1:C:18:ARG:HH21	1.60	0.67
1:D:115:ASP:OD1	1:D:118:ARG:NH1	2.26	0.67
1:D:295:LEU:HA	1:D:342:ILE:HD11	1.77	0.67
1:G:220:ILE:O	1:G:318:GLY:N	2.27	0.67
1:K:162:ILE:HG22	1:K:166:MET:HE2	1.76	0.67
1:K:214:GLU:HG3	1:K:324:VAL:HG22	1.77	0.67
2:Q:65:VAL:HG12	2:Q:94:ILE:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:220:ILE:O	1:D:318:GLY:N	2.27	0.66
1:G:231:ARG:HA	1:G:234:LEU:HG	1.77	0.66
1:J:251:ALA:O	1:J:278:ALA:N	2.28	0.66
1:C:207:LYS:HZ3	1:C:214:GLU:HB2	1.60	0.66
1:D:39:VAL:HG22	1:D:49:ILE:HG12	1.75	0.66
1:E:326:ASN:OD1	1:E:329:THR:N	2.22	0.66
1:G:115:ASP:OD1	1:G:118:ARG:NH1	2.26	0.66
1:J:349:ILE:HA	1:J:352:GLN:HG2	1.76	0.66
1:L:186:GLU:O	1:L:380:LYS:N	2.28	0.66
2:Q:65:VAL:HB	2:Q:91:ILE:HD12	1.78	0.66
2:R:95:VAL:HA	2:S:3:ILE:HG12	1.76	0.66
2:S:12:VAL:HG12	2:S:40:VAL:HA	1.76	0.66
1:D:415:GLY:HA2	3:D:601:ATP:H1'	1.77	0.66
1:E:51:LYS:NZ	3:E:601:ATP:O1A	2.29	0.66
1:E:339:GLU:HA	1:E:342:ILE:HD12	1.78	0.66
1:H:40:LEU:N	1:H:48:THR:O	2.28	0.66
1:H:41:ASP:HA	1:H:47:PRO:HB3	1.76	0.66
1:I:225:LYS:HD3	1:I:303:GLU:HG3	1.75	0.66
1:K:7:LYS:HE3	1:K:15:LYS:HG3	1.76	0.66
1:K:356:ALA:O	1:K:362:ARG:NH1	2.28	0.66
1:M:251:ALA:O	1:M:278:ALA:N	2.28	0.66
1:B:220:ILE:HG23	1:B:250:ILE:HD12	1.76	0.66
1:F:175:ILE:HB	1:F:404:ARG:HH12	1.61	0.66
1:H:325:ILE:HG22	1:H:330:THR:HG23	1.77	0.66
1:H:419:LEU:HB3	1:H:447:MET:HB3	1.77	0.66
1:K:274:ALA:HB1	1:K:325:ILE:HD13	1.78	0.66
1:L:15:LYS:HD3	1:L:18:ARG:HH21	1.59	0.66
1:M:36:ARG:NH2	1:M:456:LEU:O	2.25	0.66
1:C:223:ALA:HA	1:C:301:ILE:HB	1.77	0.66
1:D:15:LYS:HD3	1:D:18:ARG:HH21	1.61	0.66
1:D:58:ARG:HA	1:D:75:LYS:HD3	1.78	0.66
1:E:163:ALA:HA	1:E:166:MET:HE3	1.77	0.66
1:K:128:VAL:HG13	1:K:501:ARG:HG3	1.76	0.66
1:E:223:ALA:HB1	1:E:225:LYS:HG2	1.76	0.66
1:E:263:VAL:O	1:E:266:THR:OG1	2.10	0.66
1:F:248:LEU:HD22	1:F:323:VAL:HG11	1.76	0.66
1:N:249:ILE:O	1:N:276:VAL:N	2.25	0.66
2:S:73:VAL:HA	2:S:86:MET:HB3	1.77	0.66
1:A:228:SER:HA	1:A:255:GLU:HG3	1.78	0.66
1:C:115:ASP:OD1	1:C:118:ARG:NH1	2.28	0.66
1:C:326:ASN:OD1	1:C:329:THR:N	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:430:ARG:HH11	1:D:437:ASN:HB3	1.60	0.66
1:J:40:LEU:HD22	1:J:59:GLU:HG2	1.76	0.66
1:A:326:ASN:OD1	1:A:329:THR:N	2.28	0.66
1:D:230:ILE:HA	1:D:233:MET:HE2	1.78	0.66
1:E:226:LYS:HE2	1:E:253:ASP:HB3	1.77	0.66
1:G:265:ASN:OD1	2:U:26:VAL:N	2.26	0.66
1:K:104:LEU:HD21	1:K:514:MET:HG3	1.76	0.66
2:R:5:PRO:HG3	2:R:11:ILE:HG12	1.78	0.66
2:T:47:ARG:HH22	2:T:88:GLU:HB3	1.60	0.66
1:C:268:ARG:HG3	2:Q:26:VAL:HG21	1.76	0.66
1:D:265:ASN:OD1	2:R:26:VAL:N	2.27	0.66
1:G:85:ALA:HB1	1:G:499:VAL:HG22	1.78	0.66
1:G:225:LYS:HD3	1:G:309:LEU:HB2	1.78	0.66
1:G:431:GLY:HA3	1:G:436:GLN:HB3	1.77	0.66
1:I:31:LEU:O	1:I:457:ASN:ND2	2.26	0.66
2:O:78:ILE:HD11	2:O:83:VAL:HG11	1.78	0.66
2:U:67:PHE:HB3	2:U:91:ILE:HD13	1.77	0.66
1:A:16:MET:HE3	1:A:520:MET:SD	2.35	0.66
1:C:172:GLU:O	1:C:366:GLN:NE2	2.28	0.66
1:C:346:VAL:HA	1:C:349:ILE:HD12	1.77	0.66
1:H:5:ASP:HB2	1:H:524:LEU:HD23	1.78	0.66
1:H:128:VAL:HG13	1:H:501:ARG:HG3	1.78	0.66
1:J:166:MET:O	1:J:170:GLY:N	2.21	0.66
1:N:15:LYS:HD3	1:N:18:ARG:NH2	2.11	0.66
2:P:11:ILE:O	2:P:41:LEU:N	2.26	0.66
1:B:279:PRO:HG2	1:B:288:MET:HB3	1.77	0.65
1:B:479:ASN:ND2	1:B:491:MET:SD	2.69	0.65
1:F:193:MET:HB2	1:F:332:ILE:HB	1.78	0.65
1:I:81:ALA:O	1:I:85:ALA:CB	2.44	0.65
1:L:251:ALA:O	1:L:278:ALA:N	2.28	0.65
1:C:220:ILE:O	1:C:318:GLY:N	2.29	0.65
1:D:85:ALA:HB1	1:D:499:VAL:HG22	1.77	0.65
1:E:519:CYS:HB3	1:F:38:VAL:HG22	1.77	0.65
1:J:346:VAL:HG13	1:J:350:ARG:NH1	2.11	0.65
1:M:221:LEU:HB3	1:M:249:ILE:HA	1.78	0.65
1:I:20:VAL:HG22	1:I:74:VAL:HG21	1.78	0.65
2:P:47:ARG:N	2:P:55:LYS:O	2.29	0.65
2:U:73:VAL:HA	2:U:86:MET:HB3	1.78	0.65
1:B:216:GLU:OE2	1:B:322:ARG:NH1	2.28	0.65
1:G:113:PRO:HB2	1:G:516:THR:HA	1.78	0.65
1:M:455:VAL:HG13	1:M:460:GLU:HB2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:517:THR:HA	1:N:37:ASN:HB2	1.78	0.65
2:Q:10:VAL:HG11	2:Q:40:VAL:HG12	1.79	0.65
2:T:17:VAL:HG22	2:T:34:LYS:HA	1.77	0.65
1:C:320:ALA:HA	1:C:336:VAL:H	1.62	0.65
1:H:427:ALA:HA	1:H:444:LEU:HD13	1.77	0.65
1:K:225:LYS:HD3	1:K:303:GLU:HG3	1.78	0.65
1:M:352:GLN:HA	1:M:355:GLU:HG3	1.78	0.65
1:B:215:LEU:HD22	1:B:246:PRO:HB3	1.78	0.65
1:G:58:ARG:HA	1:G:75:LYS:HD3	1.79	0.65
1:G:415:GLY:HA2	3:G:601:ATP:H1'	1.78	0.65
1:I:333:ILE:HG23	1:I:376:VAL:HG21	1.78	0.65
1:J:144:ILE:HD12	1:J:166:MET:HE3	1.77	0.65
1:J:178:GLU:N	1:J:379:ILE:O	2.20	0.65
1:K:427:ALA:HA	1:K:444:LEU:HD13	1.77	0.65
1:L:139:SER:HA	1:L:171:LYS:HE3	1.78	0.65
1:A:215:LEU:HD22	1:A:246:PRO:HB3	1.79	0.65
1:C:431:GLY:HA3	1:C:436:GLN:HB3	1.79	0.65
1:E:231:ARG:HA	1:E:234:LEU:HG	1.79	0.65
1:E:349:ILE:HG23	1:E:365:LEU:HD12	1.78	0.65
1:F:213:VAL:N	1:F:325:ILE:O	2.27	0.65
1:L:197:ARG:NH2	1:L:280:GLY:O	2.30	0.65
1:L:420:ILE:HG12	1:L:448:GLU:HG2	1.77	0.65
2:S:10:VAL:N	2:S:86:MET:O	2.15	0.65
2:T:95:VAL:HA	2:U:3:ILE:HG12	1.77	0.65
1:A:249:ILE:HB	1:A:275:ALA:HA	1.79	0.65
1:B:213:VAL:HB	1:B:325:ILE:HB	1.79	0.65
1:B:325:ILE:HG13	1:B:330:THR:HG23	1.78	0.65
1:C:356:ALA:O	1:C:362:ARG:NH2	2.30	0.65
1:K:215:LEU:HB3	1:K:246:PRO:HB2	1.78	0.65
1:K:325:ILE:HG22	1:K:330:THR:HG23	1.79	0.65
1:N:132:LYS:HE3	1:N:501:ARG:HD3	1.78	0.65
1:N:141:SER:HB3	1:N:163:ALA:HB1	1.78	0.65
1:H:250:ILE:HG12	1:H:276:VAL:HB	1.78	0.65
1:I:66:PHE:HD1	1:I:520:MET:HE3	1.62	0.65
1:D:421:ARG:NH2	1:D:476:TYR:O	2.20	0.65
1:G:326:ASN:OD1	1:G:329:THR:N	2.23	0.65
1:H:251:ALA:O	1:H:278:ALA:N	2.29	0.65
1:I:70:GLY:HA2	1:I:73:MET:HE2	1.79	0.65
1:I:193:MET:HE3	1:I:295:LEU:HB3	1.78	0.65
1:L:31:LEU:O	1:L:457:ASN:ND2	2.23	0.65
1:N:81:ALA:O	1:N:85:ALA:HB2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:479:ASN:N	1:N:484:GLU:O	2.29	0.65
2:O:8:ASP:HA	2:O:57:LEU:HD11	1.77	0.65
1:B:111:MET:HE1	1:B:116:LEU:HD21	1.78	0.64
1:D:213:VAL:N	1:D:325:ILE:O	2.27	0.64
1:E:102:GLU:HB2	1:E:442:VAL:HG13	1.78	0.64
1:E:353:ILE:HG23	1:E:362:ARG:HB2	1.79	0.64
2:R:66:ILE:HD11	2:S:3:ILE:HD13	1.78	0.64
1:F:339:GLU:O	1:F:343:GLN:NE2	2.30	0.64
1:K:175:ILE:HA	1:K:377:ALA:HB3	1.78	0.64
1:K:220:ILE:HD11	1:K:250:ILE:HD12	1.77	0.64
2:Q:15:LYS:HE3	2:Q:64:ILE:HG23	1.79	0.64
2:U:11:ILE:O	2:U:41:LEU:N	2.21	0.64
1:B:268:ARG:HG3	2:P:26:VAL:HG21	1.78	0.64
1:D:71:ALA:HA	1:D:74:VAL:HG12	1.79	0.64
1:D:223:ALA:HA	1:D:301:ILE:HB	1.77	0.64
1:F:115:ASP:OD1	1:F:118:ARG:NH1	2.29	0.64
1:G:224:ASP:OD1	1:G:285:ARG:NH1	2.30	0.64
1:I:353:ILE:HA	1:I:362:ARG:HH22	1.61	0.64
1:I:421:ARG:NH2	1:I:476:TYR:O	2.29	0.64
1:J:70:GLY:HA2	1:J:73:MET:HE2	1.80	0.64
1:J:420:ILE:HG12	1:J:448:GLU:HG2	1.79	0.64
1:L:349:ILE:HD13	1:L:368:ARG:HB3	1.79	0.64
1:N:419:LEU:HB3	1:N:447:MET:HB3	1.80	0.64
2:S:27:LEU:HB3	2:S:31:ALA:HB3	1.78	0.64
1:F:220:ILE:O	1:F:318:GLY:N	2.30	0.64
1:N:70:GLY:HA2	1:N:73:MET:HE2	1.78	0.64
2:S:95:VAL:HA	2:T:3:ILE:HG12	1.79	0.64
1:C:51:LYS:NZ	3:C:601:ATP:O1A	2.30	0.64
1:E:220:ILE:O	1:E:318:GLY:N	2.30	0.64
1:J:421:ARG:NH2	1:J:476:TYR:O	2.26	0.64
1:L:222:LEU:HD13	1:L:293:ALA:HA	1.79	0.64
1:M:18:ARG:NE	1:M:67:GLU:OE2	2.30	0.64
2:R:38:GLY:HA3	2:R:67:PHE:HE1	1.62	0.64
1:A:148:GLY:HA2	1:A:399:ALA:HB1	1.80	0.64
1:B:172:GLU:O	1:B:366:GLN:NE2	2.31	0.64
1:J:233:MET:HG3	1:J:237:LEU:HG	1.80	0.64
2:O:94:ILE:HG23	2:P:6:LEU:HD21	1.78	0.64
2:P:14:ARG:NH2	2:P:69:ASP:OD2	2.31	0.64
2:Q:38:GLY:HA3	2:Q:67:PHE:HE1	1.61	0.64
2:R:12:VAL:HG22	2:R:84:LEU:HB2	1.80	0.64
1:B:220:ILE:O	1:B:318:GLY:N	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:20:VAL:HG22	1:G:74:VAL:HB	1.77	0.64
1:L:291:ASP:OD1	1:L:345:ARG:NE	2.27	0.64
1:N:326:ASN:N	1:N:329:THR:O	2.23	0.64
2:O:73:VAL:HA	2:O:86:MET:HB3	1.78	0.64
1:A:279:PRO:HG2	1:A:288:MET:HB3	1.79	0.64
1:D:279:PRO:HG2	1:D:288:MET:HB3	1.80	0.64
1:E:421:ARG:HH12	1:E:470:LYS:HA	1.63	0.64
1:F:349:ILE:HG22	1:F:365:LEU:HB3	1.80	0.64
1:J:62:LEU:HB2	1:J:68:ASN:HB2	1.80	0.64
1:N:291:ASP:OD1	1:N:345:ARG:NE	2.31	0.64
1:B:263:VAL:O	1:B:266:THR:OG1	2.13	0.64
1:D:270:ILE:HG21	2:R:25:ILE:HA	1.80	0.64
1:F:356:ALA:O	1:F:362:ARG:NH2	2.31	0.64
1:H:77:VAL:HG13	1:H:506:TYR:HB3	1.78	0.64
1:M:7:LYS:HE3	1:M:15:LYS:HG3	1.79	0.64
2:P:37:ARG:HH22	2:Q:78:ILE:HG22	1.62	0.64
2:P:59:VAL:HG21	2:P:91:ILE:HG21	1.80	0.64
1:F:320:ALA:HA	1:F:336:VAL:H	1.63	0.64
1:F:431:GLY:HA3	1:F:436:GLN:HB3	1.80	0.64
1:K:421:ARG:NH2	1:K:476:TYR:O	2.25	0.64
1:L:324:VAL:HB	1:L:331:THR:HB	1.80	0.64
1:A:349:ILE:HG23	1:A:365:LEU:HD12	1.80	0.63
1:A:365:LEU:HD13	1:A:368:ARG:HD3	1.80	0.63
1:E:365:LEU:HD13	1:E:368:ARG:HD3	1.81	0.63
1:I:326:ASN:N	1:I:329:THR:O	2.30	0.63
1:I:393:LYS:NZ	1:I:397:GLU:OE2	2.31	0.63
1:J:249:ILE:O	1:J:276:VAL:N	2.27	0.63
1:K:81:ALA:O	1:K:85:ALA:CB	2.45	0.63
1:L:322:ARG:O	1:L:333:ILE:N	2.30	0.63
1:F:15:LYS:HB3	1:F:66:PHE:HB2	1.80	0.63
1:F:203:TYR:HB2	1:F:263:VAL:HB	1.80	0.63
1:G:261:THR:O	1:G:265:ASN:ND2	2.31	0.63
1:H:61:GLU:OE2	1:H:72:GLN:NE2	2.31	0.63
1:I:40:LEU:N	1:I:48:THR:O	2.30	0.63
1:I:251:ALA:O	1:I:278:ALA:N	2.29	0.63
1:K:213:VAL:HB	1:K:325:ILE:HG12	1.79	0.63
1:L:455:VAL:HG13	1:L:460:GLU:HB2	1.79	0.63
1:M:197:ARG:NH2	1:M:280:GLY:O	2.31	0.63
1:F:186:GLU:O	1:F:380:LYS:N	2.26	0.63
1:G:479:ASN:N	1:G:484:GLU:O	2.27	0.63
1:I:41:ASP:HA	1:I:47:PRO:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:455:VAL:HG21	1:J:465:VAL:HG11	1.79	0.63
1:N:200:LEU:HD13	1:N:254:VAL:H	1.64	0.63
2:S:8:ASP:HA	2:S:57:LEU:HD11	1.78	0.63
2:T:8:ASP:HB3	2:T:47:ARG:HG3	1.80	0.63
1:A:31:LEU:HB2	1:A:90:THR:HG21	1.81	0.63
1:A:115:ASP:OD1	1:A:118:ARG:NH1	2.29	0.63
1:I:205:ILE:HA	1:I:213:VAL:HG22	1.79	0.63
1:J:214:GLU:HG3	1:J:324:VAL:HG22	1.80	0.63
1:M:225:LYS:HD3	1:M:303:GLU:HG3	1.80	0.63
1:N:427:ALA:HA	1:N:444:LEU:HD13	1.81	0.63
1:D:261:THR:O	1:D:265:ASN:ND2	2.31	0.63
1:D:339:GLU:HA	1:D:342:ILE:HD12	1.81	0.63
1:F:31:LEU:HB2	1:F:90:THR:HG21	1.81	0.63
1:I:197:ARG:HE	1:I:279:PRO:HA	1.63	0.63
1:N:205:ILE:HA	1:N:213:VAL:HG22	1.80	0.63
2:O:6:LEU:HD11	2:U:94:ILE:HG13	1.81	0.63
1:J:240:VAL:HG21	1:J:247:LEU:HD13	1.79	0.63
1:L:479:ASN:N	1:L:484:GLU:O	2.31	0.63
1:M:291:ASP:OD1	1:M:345:ARG:NE	2.32	0.63
2:O:14:ARG:NH2	2:O:69:ASP:OD2	2.31	0.63
1:E:233:MET:HB3	1:E:237:LEU:HD23	1.81	0.63
1:F:326:ASN:OD1	1:F:329:THR:N	2.28	0.63
1:G:320:ALA:HA	1:G:336:VAL:H	1.63	0.63
1:I:214:GLU:HG3	1:I:324:VAL:HG22	1.81	0.63
1:K:64:ASP:HB3	1:K:67:GLU:HB2	1.80	0.63
2:Q:10:VAL:N	2:Q:86:MET:O	2.29	0.63
1:D:325:ILE:HG13	1:D:330:THR:HG23	1.79	0.63
1:G:350:ARG:HA	1:G:353:ILE:HD12	1.81	0.63
1:I:200:LEU:HD21	1:I:277:LYS:HB2	1.79	0.63
1:I:501:ARG:NH1	1:I:505:GLN:OE1	2.32	0.63
1:J:266:THR:HG22	1:J:273:VAL:H	1.63	0.63
1:M:325:ILE:HA	1:M:330:THR:HA	1.80	0.63
1:B:130:GLU:HB2	1:B:422:VAL:HG13	1.79	0.62
1:B:231:ARG:HA	1:B:234:LEU:HG	1.81	0.62
1:E:342:ILE:HG12	1:E:372:LEU:HD11	1.79	0.62
1:H:7:LYS:HE3	1:H:15:LYS:HG3	1.80	0.62
1:J:447:MET:HE1	1:J:504:LEU:HD13	1.81	0.62
2:P:65:VAL:HB	2:P:91:ILE:HG23	1.81	0.62
2:R:13:LYS:HB2	2:R:41:LEU:HD11	1.81	0.62
1:A:203:TYR:HB2	1:A:263:VAL:HB	1.79	0.62
1:H:20:VAL:HG22	1:H:74:VAL:HG21	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:166:MET:O	1:I:170:GLY:N	2.32	0.62
1:M:411:VAL:HA	1:M:496:PRO:HA	1.80	0.62
1:M:479:ASN:N	1:M:484:GLU:O	2.27	0.62
2:P:11:ILE:HD12	2:P:42:ALA:HB3	1.81	0.62
2:S:68:ASN:N	2:S:90:ASP:O	2.31	0.62
1:F:339:GLU:HA	1:F:342:ILE:HD12	1.80	0.62
1:A:222:LEU:O	1:A:301:ILE:N	2.20	0.62
1:B:190:VAL:O	1:B:376:VAL:N	2.24	0.62
1:G:213:VAL:N	1:G:325:ILE:O	2.29	0.62
1:H:166:MET:HB3	1:H:175:ILE:HD11	1.81	0.62
1:H:235:PRO:HG3	1:H:310:GLU:HA	1.81	0.62
1:I:222:LEU:HD13	1:I:293:ALA:HA	1.81	0.62
1:L:21:ASN:HA	1:L:97:GLN:HE21	1.64	0.62
1:D:70:GLY:HA2	1:D:73:MET:HE3	1.81	0.62
1:D:421:ARG:HH12	1:D:470:LYS:HA	1.64	0.62
1:E:31:LEU:O	1:E:457:ASN:ND2	2.27	0.62
1:E:58:ARG:HA	1:E:75:LYS:HD3	1.80	0.62
1:H:139:SER:HA	1:H:171:LYS:HE3	1.82	0.62
1:I:477:GLY:N	1:I:486:GLY:O	2.31	0.62
1:K:36:ARG:NH2	1:K:456:LEU:O	2.31	0.62
1:L:205:ILE:HA	1:L:213:VAL:HG22	1.81	0.62
1:M:221:LEU:HD23	1:M:249:ILE:HG23	1.80	0.62
1:M:455:VAL:HG21	1:M:465:VAL:HG11	1.80	0.62
2:Q:15:LYS:HG3	2:Q:38:GLY:HA2	1.81	0.62
1:A:175:ILE:HB	1:A:404:ARG:HH12	1.65	0.62
1:C:27:VAL:HG12	1:C:90:THR:HG23	1.82	0.62
1:J:427:ALA:HA	1:J:444:LEU:HD13	1.81	0.62
1:M:155:ASP:OD2	1:M:395:ARG:NH1	2.33	0.62
2:P:8:ASP:HA	2:P:57:LEU:HD11	1.80	0.62
2:U:47:ARG:N	2:U:55:LYS:O	2.32	0.62
1:A:220:ILE:O	1:A:318:GLY:N	2.32	0.62
1:A:397:GLU:O	1:A:401:HIS:ND1	2.32	0.62
1:B:240:VAL:HG21	1:B:247:LEU:HD12	1.82	0.62
1:E:265:ASN:OD1	2:S:26:VAL:N	2.30	0.62
1:G:240:VAL:HG11	1:G:247:LEU:HB2	1.80	0.62
1:G:325:ILE:HG13	1:G:330:THR:HG23	1.82	0.62
1:H:200:LEU:HD13	1:H:254:VAL:H	1.65	0.62
1:I:111:MET:HG3	1:I:116:LEU:HD11	1.82	0.62
1:K:383:ALA:N	1:K:389:MET:HE1	2.14	0.62
1:M:65:LYS:O	1:M:69:MET:HG3	2.00	0.62
1:M:213:VAL:HB	1:M:325:ILE:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:365:LEU:HA	1:N:368:ARG:HG3	1.82	0.62
2:T:68:ASN:N	2:T:90:ASP:O	2.30	0.62
1:C:240:VAL:O	1:C:244:GLY:N	2.32	0.62
1:D:301:ILE:HD11	1:D:316:ASP:HB3	1.82	0.62
1:F:469:VAL:HG13	1:F:477:GLY:HA2	1.82	0.62
1:H:104:LEU:HD21	1:H:514:MET:HG3	1.81	0.62
1:I:197:ARG:NH2	1:I:280:GLY:O	2.32	0.62
1:K:117:LYS:NZ	1:K:121:ASP:OD2	2.32	0.62
1:M:501:ARG:NH1	1:M:505:GLN:OE1	2.33	0.62
1:C:16:MET:HB3	1:C:514:MET:HE3	1.81	0.62
1:F:213:VAL:HG11	1:F:274:ALA:HB2	1.82	0.62
1:J:322:ARG:O	1:J:333:ILE:N	2.29	0.62
1:N:82:ASN:HB2	1:N:89:THR:HG22	1.80	0.62
1:A:28:LYS:HE2	1:A:94:VAL:HG22	1.80	0.62
1:C:58:ARG:HA	1:C:75:LYS:HD3	1.80	0.62
1:C:213:VAL:N	1:C:325:ILE:O	2.27	0.62
1:E:230:ILE:HA	1:E:233:MET:HE2	1.82	0.62
1:F:249:ILE:HB	1:F:275:ALA:HA	1.81	0.62
1:G:186:GLU:O	1:G:380:LYS:N	2.30	0.62
1:I:240:VAL:HG21	1:I:247:LEU:HD13	1.80	0.62
1:K:291:ASP:OD1	1:K:345:ARG:NE	2.33	0.62
1:K:479:ASN:N	1:K:484:GLU:O	2.31	0.62
1:M:274:ALA:HB1	1:M:325:ILE:HD13	1.81	0.62
2:O:11:ILE:O	2:O:41:LEU:N	2.32	0.62
2:T:11:ILE:HG13	2:T:85:ILE:HD13	1.82	0.62
1:D:320:ALA:HA	1:D:336:VAL:H	1.65	0.61
1:G:205:ILE:HA	1:G:213:VAL:HG22	1.81	0.61
1:G:220:ILE:N	1:G:318:GLY:O	2.24	0.61
1:L:186:GLU:N	1:L:380:LYS:O	2.33	0.61
1:L:200:LEU:HD13	1:L:254:VAL:H	1.64	0.61
1:L:325:ILE:HA	1:L:330:THR:HA	1.81	0.61
1:C:279:PRO:HG2	1:C:288:MET:HB3	1.82	0.61
1:D:20:VAL:HG13	1:D:74:VAL:HG21	1.81	0.61
1:J:479:ASN:O	1:J:483:GLU:N	2.34	0.61
1:N:195:PHE:HZ	1:N:250:ILE:HD13	1.66	0.61
1:N:215:LEU:HB3	1:N:246:PRO:HB2	1.81	0.61
1:N:333:ILE:HG12	1:N:376:VAL:HG11	1.81	0.61
2:U:49:LEU:HD12	2:U:53:GLU:HB2	1.82	0.61
1:C:177:VAL:HG23	1:C:400:LEU:HD22	1.82	0.61
1:E:325:ILE:HG13	1:E:330:THR:HG23	1.82	0.61
1:I:82:ASN:HB2	1:I:89:THR:HG22	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:15:LYS:NZ	1:J:64:ASP:OD2	2.27	0.61
1:J:31:LEU:O	1:J:457:ASN:ND2	2.24	0.61
1:K:197:ARG:NH2	1:K:280:GLY:O	2.33	0.61
1:M:197:ARG:HE	1:M:279:PRO:HA	1.65	0.61
1:M:200:LEU:HD21	1:M:277:LYS:HB2	1.82	0.61
1:N:197:ARG:NH2	1:N:280:GLY:O	2.33	0.61
2:S:66:ILE:HG21	2:T:76:GLU:HG2	1.82	0.61
1:A:220:ILE:N	1:A:318:GLY:O	2.23	0.61
1:H:185:ASP:OD1	1:H:382:GLY:N	2.31	0.61
1:I:81:ALA:HB1	1:I:503:ALA:HA	1.81	0.61
1:I:479:ASN:ND2	1:I:491:MET:HG3	2.14	0.61
1:K:322:ARG:HB2	1:K:333:ILE:HB	1.81	0.61
1:N:325:ILE:HG22	1:N:330:THR:HG23	1.83	0.61
1:N:455:VAL:HG13	1:N:460:GLU:HB2	1.83	0.61
2:S:37:ARG:HH22	2:T:78:ILE:HG22	1.65	0.61
1:F:58:ARG:HA	1:F:75:LYS:HD3	1.81	0.61
1:H:266:THR:HG22	1:H:273:VAL:H	1.65	0.61
1:J:40:LEU:N	1:J:48:THR:O	2.31	0.61
1:J:213:VAL:HB	1:J:325:ILE:HG12	1.83	0.61
1:K:200:LEU:HD13	1:K:254:VAL:H	1.65	0.61
1:C:124:VAL:HG21	1:C:508:ALA:HB2	1.81	0.61
1:C:448:GLU:OE1	1:C:470:LYS:NZ	2.34	0.61
1:C:495:ASP:OD2	3:C:601:ATP:O2'	2.15	0.61
1:D:393:LYS:NZ	1:D:397:GLU:OE2	2.30	0.61
1:I:266:THR:HG22	1:I:273:VAL:H	1.64	0.61
1:J:215:LEU:HB3	1:J:246:PRO:HB2	1.81	0.61
1:K:39:VAL:HG13	1:K:49:ILE:HG12	1.81	0.61
1:K:322:ARG:O	1:K:333:ILE:N	2.28	0.61
1:M:322:ARG:O	1:M:333:ILE:N	2.30	0.61
1:N:301:ILE:HG12	1:N:307:MET:HE1	1.83	0.61
2:Q:40:VAL:HG23	2:Q:62:GLY:H	1.66	0.61
2:Q:47:ARG:NH2	2:Q:88:GLU:HB3	2.16	0.61
1:A:144:ILE:HG23	1:A:403:THR:HG21	1.82	0.61
1:E:220:ILE:HG23	1:E:250:ILE:HD12	1.83	0.61
1:G:469:VAL:HG13	1:G:477:GLY:HA2	1.82	0.61
1:H:81:ALA:O	1:H:85:ALA:HB3	2.00	0.61
1:J:322:ARG:HB2	1:J:333:ILE:HB	1.81	0.61
1:M:322:ARG:HB2	1:M:333:ILE:HB	1.82	0.61
1:A:519:CYS:HB3	1:B:38:VAL:HG22	1.80	0.61
1:F:295:LEU:HA	1:F:342:ILE:HD11	1.83	0.61
2:Q:86:MET:HE2	2:Q:90:ASP:HB2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:220:ILE:HG23	1:C:250:ILE:HD12	1.81	0.61
1:C:248:LEU:HD22	1:C:323:VAL:HG11	1.83	0.61
1:D:227:ILE:HD12	1:D:254:VAL:HG22	1.80	0.61
1:E:415:GLY:HA2	3:E:601:ATP:H1'	1.81	0.61
1:G:169:VAL:HB	1:G:377:ALA:HB2	1.82	0.61
1:I:325:ILE:HA	1:I:330:THR:HA	1.81	0.61
1:K:455:VAL:HG13	1:K:460:GLU:HB2	1.81	0.61
1:M:70:GLY:HA2	1:M:73:MET:HE2	1.83	0.61
1:N:155:ASP:OD2	1:N:395:ARG:NH1	2.34	0.61
1:A:251:ALA:O	1:A:278:ALA:N	2.33	0.61
1:A:431:GLY:HA3	1:A:436:GLN:HB3	1.82	0.61
1:C:231:ARG:HA	1:C:234:LEU:HG	1.83	0.61
1:H:38:VAL:HG22	1:N:519:CYS:HB3	1.82	0.61
1:H:339:GLU:HA	1:H:342:ILE:HD12	1.83	0.61
1:H:413:ALA:HB1	1:H:488:MET:HB2	1.83	0.61
1:I:218:PRO:HB3	1:I:246:PRO:HG2	1.83	0.61
1:J:122:LYS:NZ	1:J:432:GLN:OE1	2.34	0.61
1:K:32:GLY:HA3	1:K:454:ILE:HG23	1.83	0.61
1:L:223:ALA:HA	1:L:301:ILE:HB	1.82	0.61
1:M:38:VAL:O	1:M:50:THR:N	2.33	0.61
1:M:350:ARG:HA	1:M:353:ILE:HD12	1.83	0.61
2:U:15:LYS:HG3	2:U:38:GLY:HA2	1.83	0.61
1:B:27:VAL:HG12	1:B:90:THR:HG23	1.82	0.60
1:G:421:ARG:NH2	1:G:476:TYR:O	2.22	0.60
1:H:205:ILE:HA	1:H:213:VAL:HG22	1.81	0.60
1:I:174:VAL:HB	1:I:376:VAL:HG12	1.82	0.60
1:I:200:LEU:HD13	1:I:254:VAL:H	1.65	0.60
1:L:81:ALA:O	1:L:85:ALA:HB2	2.01	0.60
1:M:349:ILE:HG21	1:M:368:ARG:HB2	1.83	0.60
1:B:213:VAL:HG11	1:B:274:ALA:HB2	1.81	0.60
1:B:420:ILE:HG12	1:B:448:GLU:HG2	1.82	0.60
1:D:216:GLU:OE2	1:D:322:ARG:NH1	2.34	0.60
1:G:220:ILE:HG23	1:G:250:ILE:HD12	1.83	0.60
1:H:174:VAL:HG11	1:H:376:VAL:HG12	1.82	0.60
1:H:291:ASP:OD1	1:H:345:ARG:NE	2.32	0.60
1:L:84:ALA:O	1:L:498:LYS:NZ	2.27	0.60
1:N:14:VAL:HB	1:N:18:ARG:HH12	1.65	0.60
2:O:11:ILE:HG22	2:O:41:LEU:HB2	1.83	0.60
1:C:519:CYS:HB3	1:D:38:VAL:HG22	1.82	0.60
1:K:205:ILE:HA	1:K:213:VAL:HG22	1.82	0.60
2:P:12:VAL:HG12	2:P:40:VAL:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:T:11:ILE:HD12	2:T:42:ALA:HB3	1.83	0.60
1:B:66:PHE:HA	1:B:69:MET:HE2	1.84	0.60
1:B:69:MET:HB2	1:C:47:PRO:HG2	1.83	0.60
1:C:20:VAL:HG22	1:C:74:VAL:HB	1.83	0.60
1:D:177:VAL:HG23	1:D:400:LEU:HD22	1.84	0.60
1:E:158:VAL:HG11	1:E:396:VAL:HA	1.84	0.60
1:F:213:VAL:HB	1:F:325:ILE:HB	1.84	0.60
1:L:406:ALA:HB2	1:L:496:PRO:HG3	1.83	0.60
1:N:76:GLU:HG2	1:N:80:LYS:HE3	1.83	0.60
1:B:320:ALA:HA	1:B:336:VAL:H	1.66	0.60
1:E:152:ALA:HB2	1:E:399:ALA:HB2	1.83	0.60
1:E:205:ILE:HA	1:E:213:VAL:HG22	1.84	0.60
1:H:81:ALA:HB1	1:H:503:ALA:HA	1.83	0.60
1:H:274:ALA:HB1	1:H:325:ILE:HD13	1.82	0.60
1:M:433:ASN:H	1:M:436:GLN:HB2	1.67	0.60
1:M:477:GLY:N	1:M:486:GLY:O	2.34	0.60
1:N:16:MET:HE3	1:N:520:MET:HE1	1.81	0.60
1:A:85:ALA:HB1	1:A:499:VAL:HG22	1.83	0.60
1:B:177:VAL:HG23	1:B:400:LEU:HD22	1.84	0.60
1:B:231:ARG:NH2	2:P:31:ALA:O	2.34	0.60
1:E:264:VAL:O	1:E:268:ARG:HG2	2.02	0.60
1:H:349:ILE:HD13	1:H:368:ARG:HB3	1.84	0.60
1:H:351:GLN:HA	1:H:354:GLU:CD	2.25	0.60
1:K:386:GLU:O	1:K:389:MET:HB2	2.01	0.60
1:L:447:MET:HE1	1:L:504:LEU:HD13	1.83	0.60
1:L:501:ARG:NH1	1:L:505:GLN:OE1	2.34	0.60
2:O:12:VAL:O	2:O:84:LEU:N	2.34	0.60
2:T:73:VAL:HA	2:T:86:MET:HB3	1.83	0.60
1:A:186:GLU:HG3	1:A:380:LYS:HE2	1.84	0.60
1:B:232:GLU:HA	1:B:310:GLU:HG3	1.84	0.60
1:L:137:PRO:HA	1:L:410:GLY:HA2	1.84	0.60
1:M:427:ALA:HA	1:M:444:LEU:HD13	1.83	0.60
1:N:240:VAL:HG21	1:N:247:LEU:HD13	1.83	0.60
2:R:8:ASP:HA	2:R:57:LEU:HD11	1.83	0.60
1:A:27:VAL:HG12	1:A:90:THR:HG23	1.83	0.60
1:B:85:ALA:HB1	1:B:499:VAL:HG22	1.82	0.60
1:B:346:VAL:HB	1:B:369:VAL:HG22	1.83	0.60
1:C:452:ARG:HH12	1:C:463:SER:HA	1.65	0.60
1:D:262:LEU:HD22	1:D:273:VAL:HG21	1.84	0.60
1:H:202:PRO:HG2	1:I:384:ALA:HA	1.83	0.60
1:J:179:ASP:HA	1:J:381:VAL:HG22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:124:VAL:HG13	1:M:504:LEU:HG	1.84	0.60
1:N:421:ARG:NH2	1:N:476:TYR:O	2.26	0.60
1:A:209:GLU:HG2	1:A:210:THR:HG23	1.83	0.60
1:A:261:THR:O	1:A:265:ASN:ND2	2.33	0.60
1:A:346:VAL:HB	1:A:369:VAL:HG22	1.82	0.60
1:B:251:ALA:O	1:B:278:ALA:N	2.35	0.60
1:D:213:VAL:HB	1:D:325:ILE:HB	1.83	0.60
1:E:114:MET:SD	7:F:701:HOH:O	2.56	0.60
1:F:197:ARG:O	1:F:330:THR:OG1	2.12	0.60
1:F:350:ARG:HA	1:F:353:ILE:HD12	1.83	0.60
1:G:519:CYS:SG	1:G:520:MET:N	2.75	0.60
1:M:215:LEU:HB3	1:M:246:PRO:HB2	1.81	0.60
1:M:302:SER:HB2	1:M:304:GLU:HG2	1.83	0.60
2:R:46:GLY:HA2	2:R:57:LEU:HD12	1.84	0.60
1:A:213:VAL:N	1:A:325:ILE:O	2.29	0.60
1:A:393:LYS:NZ	1:A:397:GLU:OE2	2.26	0.60
1:C:393:LYS:NZ	1:C:397:GLU:OE2	2.30	0.60
1:E:232:GLU:HA	1:E:310:GLU:HG3	1.84	0.60
1:H:195:PHE:HZ	1:H:250:ILE:HD13	1.67	0.60
1:J:77:VAL:HG13	1:J:506:TYR:HB3	1.84	0.60
1:K:270:ILE:HG22	1:K:271:VAL:HG23	1.83	0.60
1:B:221:LEU:HB2	1:B:317:LEU:HD22	1.83	0.59
1:C:414:GLY:H	1:C:488:MET:HB3	1.67	0.59
1:D:346:VAL:HB	1:D:369:VAL:HG22	1.84	0.59
1:H:323:VAL:HG12	1:H:332:ILE:HG22	1.84	0.59
1:I:349:ILE:HD13	1:I:368:ARG:HB3	1.84	0.59
1:I:455:VAL:HG21	1:I:465:VAL:HG11	1.83	0.59
1:K:266:THR:HG22	1:K:273:VAL:H	1.66	0.59
1:K:295:LEU:HD23	1:K:342:ILE:HG12	1.82	0.59
1:K:325:ILE:HA	1:K:330:THR:HA	1.84	0.59
1:A:522:THR:HG22	1:B:41:ASP:HB2	1.83	0.59
1:C:421:ARG:HH12	1:C:470:LYS:HA	1.65	0.59
1:F:252:GLU:OE2	1:F:285:ARG:NH1	2.34	0.59
1:H:69:MET:HE2	1:I:47:PRO:HG2	1.84	0.59
1:I:39:VAL:HG13	1:I:49:ILE:HG12	1.84	0.59
1:J:200:LEU:HD13	1:J:254:VAL:H	1.66	0.59
1:J:420:ILE:HD12	1:J:451:LEU:HD13	1.83	0.59
1:A:264:VAL:O	1:A:268:ARG:HG2	2.03	0.59
1:A:287:ALA:HA	1:A:345:ARG:HH21	1.67	0.59
1:E:27:VAL:HG12	1:E:90:THR:HG23	1.83	0.59
1:G:177:VAL:HG23	1:G:400:LEU:HD22	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:215:LEU:HB3	1:H:246:PRO:HB2	1.84	0.59
1:H:365:LEU:HD23	1:H:368:ARG:HE	1.68	0.59
1:I:66:PHE:CD1	1:I:520:MET:HE3	2.37	0.59
1:M:39:VAL:HA	1:M:49:ILE:HA	1.85	0.59
1:N:128:VAL:HG13	1:N:501:ARG:HG3	1.84	0.59
1:B:349:ILE:HG23	1:B:365:LEU:HB3	1.83	0.59
1:C:149:THR:OG1	1:C:156:GLU:HA	2.02	0.59
1:F:264:VAL:O	1:F:268:ARG:HG2	2.02	0.59
1:H:13:ARG:HD3	1:H:514:MET:HE3	1.84	0.59
1:K:433:ASN:H	1:K:436:GLN:HB2	1.67	0.59
1:M:141:SER:HB3	1:M:163:ALA:HB1	1.83	0.59
1:N:325:ILE:HA	1:N:330:THR:HA	1.84	0.59
2:S:11:ILE:HG22	2:S:41:LEU:HB2	1.84	0.59
1:A:223:ALA:HB1	1:A:225:LYS:HG2	1.84	0.59
1:B:20:VAL:HG22	1:B:74:VAL:HB	1.83	0.59
1:C:144:ILE:HG23	1:C:403:THR:HB	1.84	0.59
1:D:197:ARG:O	1:D:330:THR:OG1	2.14	0.59
1:D:220:ILE:HG23	1:D:250:ILE:HD12	1.83	0.59
1:E:190:VAL:N	1:E:376:VAL:O	2.29	0.59
1:E:231:ARG:NH2	2:S:31:ALA:O	2.34	0.59
1:F:27:VAL:HG12	1:F:90:THR:HG23	1.85	0.59
1:G:262:LEU:HD22	1:G:273:VAL:HG21	1.84	0.59
1:H:197:ARG:NH2	1:H:280:GLY:O	2.35	0.59
1:I:419:LEU:HD22	1:I:447:MET:HG3	1.84	0.59
1:K:82:ASN:HB2	1:K:89:THR:HG22	1.83	0.59
1:M:240:VAL:HG21	1:M:247:LEU:HD13	1.83	0.59
1:N:194:GLN:HG3	1:N:331:THR:HB	1.83	0.59
2:P:46:GLY:HA2	2:P:57:LEU:HD12	1.83	0.59
2:T:46:GLY:HA2	2:T:57:LEU:HD12	1.83	0.59
2:T:65:VAL:HB	2:T:91:ILE:HG23	1.84	0.59
1:B:144:ILE:HG23	1:B:403:THR:HB	1.85	0.59
1:C:231:ARG:HH21	2:Q:31:ALA:HB1	1.67	0.59
1:D:27:VAL:HG12	1:D:90:THR:HG23	1.85	0.59
1:E:251:ALA:O	1:E:278:ALA:N	2.34	0.59
1:F:150:ILE:HD11	1:F:493:ILE:HG12	1.85	0.59
1:F:389:MET:O	1:F:389:MET:HE3	2.03	0.59
1:F:452:ARG:HH12	1:F:463:SER:HA	1.68	0.59
1:I:420:ILE:HG12	1:I:448:GLU:HG2	1.84	0.59
1:M:138:CYS:HB3	1:M:406:ALA:HB1	1.84	0.59
1:M:193:MET:HG2	1:M:295:LEU:HD13	1.82	0.59
2:Q:40:VAL:HG13	2:Q:65:VAL:HG21	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:230:ILE:HA	1:B:233:MET:HE2	1.83	0.59
1:B:519:CYS:HB3	1:C:38:VAL:HG22	1.85	0.59
1:G:221:LEU:HB2	1:G:317:LEU:HD22	1.84	0.59
1:K:301:ILE:HG12	1:K:307:MET:HE1	1.83	0.59
1:L:128:VAL:HG13	1:L:501:ARG:HG3	1.84	0.59
1:L:185:ASP:HA	1:L:381:VAL:HA	1.85	0.59
1:B:230:ILE:HD11	1:B:258:ALA:HA	1.85	0.59
1:G:102:GLU:HB2	1:G:442:VAL:HG13	1.84	0.59
1:H:82:ASN:HB2	1:H:89:THR:HG22	1.85	0.59
1:H:455:VAL:HG13	1:H:460:GLU:HB2	1.84	0.59
1:I:77:VAL:HG13	1:I:506:TYR:HB3	1.84	0.59
1:J:128:VAL:HG13	1:J:501:ARG:HG3	1.85	0.59
1:M:192:GLY:HA3	1:M:376:VAL:HG13	1.84	0.59
1:M:266:THR:HG22	1:M:273:VAL:H	1.68	0.59
1:E:124:VAL:HG21	1:E:508:ALA:HB2	1.84	0.59
1:E:346:VAL:HG13	1:E:372:LEU:HD23	1.83	0.59
1:I:295:LEU:HD23	1:I:342:ILE:HG12	1.84	0.59
1:K:196:ASP:HA	1:K:329:THR:HG22	1.85	0.59
1:M:291:ASP:HA	1:M:345:ARG:HG2	1.85	0.59
1:C:261:THR:HG21	2:Q:27:LEU:HD13	1.84	0.59
1:L:148:GLY:HA2	1:L:399:ALA:HB1	1.85	0.59
1:L:381:VAL:O	1:L:389:MET:HE1	2.03	0.59
2:Q:91:ILE:O	2:R:9:ARG:NH1	2.35	0.59
2:S:11:ILE:HD12	2:S:42:ALA:HB3	1.85	0.59
1:B:287:ALA:HA	1:B:345:ARG:HH21	1.68	0.58
1:I:322:ARG:O	1:I:333:ILE:N	2.30	0.58
1:K:168:LYS:HG2	1:K:189:VAL:HG13	1.85	0.58
1:L:82:ASN:HB2	1:L:89:THR:HG22	1.85	0.58
1:L:155:ASP:OD2	1:L:395:ARG:NH1	2.35	0.58
1:L:266:THR:HG22	1:L:273:VAL:H	1.68	0.58
2:O:46:GLY:HA2	2:O:57:LEU:HD12	1.84	0.58
2:Q:46:GLY:HA2	2:Q:57:LEU:HD12	1.84	0.58
1:C:391:GLU:OE1	1:C:395:ARG:NH1	2.36	0.58
1:F:205:ILE:HA	1:F:213:VAL:HG22	1.85	0.58
1:H:32:GLY:HA3	1:H:454:ILE:HG23	1.84	0.58
1:H:70:GLY:HA2	1:H:73:MET:HE2	1.84	0.58
1:I:73:MET:SD	1:J:47:PRO:HD2	2.43	0.58
1:N:81:ALA:HB1	1:N:503:ALA:HA	1.85	0.58
2:T:43:VAL:HG13	2:T:57:LEU:HD22	1.84	0.58
1:C:417:VAL:HG21	1:C:477:GLY:HA3	1.84	0.58
1:D:16:MET:HB3	1:D:514:MET:HE3	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:239:ALA:HA	1:E:242:LYS:HE2	1.86	0.58
1:G:28:LYS:HE2	1:G:94:VAL:HG22	1.85	0.58
1:G:149:THR:OG1	1:G:156:GLU:HA	2.03	0.58
1:G:452:ARG:HH12	1:G:463:SER:HA	1.68	0.58
1:J:205:ILE:HA	1:J:213:VAL:HG22	1.84	0.58
1:K:13:ARG:HD3	1:K:104:LEU:HD22	1.85	0.58
1:M:199:TYR:CE1	1:M:205:ILE:HD11	2.37	0.58
2:T:8:ASP:HA	2:T:57:LEU:HD11	1.84	0.58
1:B:190:VAL:N	1:B:376:VAL:O	2.27	0.58
1:G:203:TYR:HB2	1:G:263:VAL:CG2	2.33	0.58
1:G:222:LEU:O	1:G:301:ILE:N	2.28	0.58
1:J:185:ASP:OD1	1:J:382:GLY:N	2.34	0.58
1:K:326:ASN:N	1:K:329:THR:O	2.24	0.58
1:M:82:ASN:HB2	1:M:89:THR:HG22	1.84	0.58
1:M:346:VAL:HG22	1:M:372:LEU:HB3	1.84	0.58
1:M:353:ILE:HG23	1:M:362:ARG:NH1	2.17	0.58
2:P:94:ILE:HD11	2:Q:4:ARG:HE	1.68	0.58
1:A:169:VAL:HB	1:A:377:ALA:HB2	1.84	0.58
1:C:124:VAL:HG13	1:C:504:LEU:HG	1.84	0.58
1:C:148:GLY:O	1:C:152:ALA:N	2.35	0.58
1:D:214:GLU:HG3	1:D:324:VAL:HG22	1.83	0.58
1:F:262:LEU:HD22	1:F:273:VAL:HG21	1.85	0.58
1:F:265:ASN:OD1	2:T:26:VAL:N	2.28	0.58
1:G:264:VAL:O	1:G:268:ARG:HG2	2.03	0.58
1:G:443:ALA:O	1:G:447:MET:HG2	2.03	0.58
1:H:345:ARG:O	1:H:349:ILE:HG13	2.04	0.58
1:I:359:ASP:OD1	1:I:360:TYR:N	2.35	0.58
1:J:81:ALA:O	1:J:85:ALA:HB3	2.02	0.58
1:L:111:MET:HG3	1:L:116:LEU:HD11	1.85	0.58
1:N:266:THR:HG22	1:N:273:VAL:H	1.69	0.58
1:N:498:LYS:HG3	1:N:501:ARG:NH2	2.18	0.58
2:R:73:VAL:HG22	2:R:86:MET:SD	2.42	0.58
1:A:320:ALA:HA	1:A:335:GLY:HA2	1.86	0.58
1:B:124:VAL:HG21	1:B:508:ALA:HB2	1.86	0.58
1:D:130:GLU:HB2	1:D:422:VAL:HG13	1.86	0.58
1:D:231:ARG:HH21	1:D:234:LEU:HD21	1.68	0.58
1:E:266:THR:O	1:E:272:LYS:NZ	2.26	0.58
1:E:381:VAL:HG13	1:E:392:LYS:HE3	1.86	0.58
1:F:232:GLU:HA	1:F:310:GLU:HG3	1.86	0.58
1:H:190:VAL:O	1:H:376:VAL:N	2.34	0.58
1:I:202:PRO:HG2	1:J:384:ALA:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:458:CYS:SG	1:N:480:ALA:HB1	2.43	0.58
2:O:3:ILE:HG13	2:O:78:ILE:HG21	1.85	0.58
2:O:11:ILE:HG13	2:O:85:ILE:HD13	1.85	0.58
2:T:66:ILE:HD11	2:U:3:ILE:HD13	1.85	0.58
1:B:448:GLU:OE1	1:B:470:LYS:NZ	2.37	0.58
1:D:411:VAL:HG21	1:D:494:LEU:HD22	1.86	0.58
1:F:31:LEU:O	1:F:457:ASN:ND2	2.26	0.58
1:H:141:SER:HB3	1:H:163:ALA:HB1	1.84	0.58
2:P:11:ILE:HG23	2:P:83:VAL:HB	1.86	0.58
1:D:231:ARG:HH12	2:R:31:ALA:HB1	1.68	0.58
1:E:231:ARG:HH21	2:S:31:ALA:HB1	1.69	0.58
1:E:261:THR:O	1:E:265:ASN:ND2	2.35	0.58
1:F:169:VAL:HB	1:F:377:ALA:HB2	1.84	0.58
1:F:479:ASN:ND2	1:F:491:MET:SD	2.77	0.58
1:G:144:ILE:HG23	1:G:403:THR:HB	1.84	0.58
1:M:5:ASP:N	1:M:522:THR:O	2.33	0.58
2:P:11:ILE:HG13	2:P:85:ILE:HD13	1.86	0.58
2:R:10:VAL:N	2:R:86:MET:O	2.29	0.58
2:R:15:LYS:HG2	2:R:38:GLY:HA2	1.85	0.58
1:C:251:ALA:O	1:C:278:ALA:N	2.37	0.58
1:F:35:GLY:O	7:F:701:HOH:O	2.16	0.58
1:H:166:MET:HB2	1:H:171:LYS:HA	1.85	0.58
1:H:421:ARG:NH2	1:H:476:TYR:O	2.27	0.58
1:L:81:ALA:HB1	1:L:503:ALA:HA	1.85	0.58
1:E:342:ILE:HA	1:E:372:LEU:HD21	1.86	0.58
1:G:409:GLU:OE2	1:G:501:ARG:NH2	2.36	0.58
1:I:419:LEU:HB3	1:I:447:MET:HB3	1.84	0.58
1:K:455:VAL:HG21	1:K:465:VAL:HG11	1.85	0.58
1:L:495:ASP:OD2	6:L:601:ADP:O2'	2.19	0.58
2:R:65:VAL:HB	2:R:91:ILE:HG23	1.85	0.58
2:T:40:VAL:HG23	2:T:62:GLY:H	1.68	0.58
2:U:65:VAL:HB	2:U:91:ILE:HG23	1.86	0.58
1:F:240:VAL:HG11	1:F:247:LEU:HB2	1.86	0.57
1:G:5:ASP:HB3	1:G:522:THR:OG1	2.04	0.57
1:I:185:ASP:OD1	1:I:382:GLY:N	2.29	0.57
1:J:82:ASN:HB2	1:J:89:THR:HG22	1.86	0.57
1:M:124:VAL:HG21	1:M:508:ALA:HB2	1.85	0.57
1:A:240:VAL:HG21	1:A:247:LEU:HD12	1.87	0.57
1:A:346:VAL:HA	1:A:349:ILE:HD12	1.85	0.57
1:B:415:GLY:HA2	3:B:601:ATP:H1'	1.85	0.57
1:D:66:PHE:HB3	1:D:520:MET:SD	2.44	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:158:VAL:HG11	1:D:396:VAL:HA	1.86	0.57
1:E:421:ARG:NH2	1:E:469:VAL:O	2.33	0.57
1:F:343:GLN:HA	1:F:346:VAL:HG22	1.84	0.57
1:H:326:ASN:N	1:H:329:THR:O	2.28	0.57
1:J:223:ALA:HA	1:J:301:ILE:HB	1.86	0.57
1:K:166:MET:HB3	1:K:171:LYS:HG2	1.86	0.57
2:P:14:ARG:HB3	2:P:67:PHE:HZ	1.69	0.57
1:A:443:ALA:O	1:A:447:MET:HG2	2.04	0.57
1:C:468:THR:HB	1:C:485:TYR:CE2	2.39	0.57
1:D:16:MET:HE1	1:D:69:MET:SD	2.44	0.57
1:G:196:ASP:HA	1:G:329:THR:HA	1.85	0.57
1:J:177:VAL:HA	1:J:379:ILE:HB	1.86	0.57
1:J:479:ASN:N	1:J:484:GLU:O	2.37	0.57
2:P:10:VAL:HG22	2:P:43:VAL:HG22	1.84	0.57
2:U:10:VAL:HG22	2:U:43:VAL:HG22	1.86	0.57
1:A:325:ILE:HG13	1:A:330:THR:HG23	1.86	0.57
1:A:417:VAL:HG21	1:A:477:GLY:HA3	1.86	0.57
1:B:431:GLY:HA3	1:B:436:GLN:HB3	1.85	0.57
1:C:20:VAL:HG13	1:C:74:VAL:HG21	1.87	0.57
1:C:230:ILE:HA	1:C:233:MET:HE2	1.85	0.57
1:D:288:MET:HE1	1:D:368:ARG:HG2	1.86	0.57
1:E:149:THR:OG1	1:E:156:GLU:HA	2.04	0.57
1:E:381:VAL:HG12	1:E:389:MET:HE1	1.86	0.57
1:F:261:THR:O	1:F:265:ASN:ND2	2.37	0.57
1:J:89:THR:N	6:J:601:ADP:O3B	2.37	0.57
1:J:290:GLN:OE1	1:J:294:THR:OG1	2.22	0.57
1:J:381:VAL:HG21	1:J:393:LYS:HG2	1.86	0.57
2:R:64:ILE:O	2:R:95:VAL:N	2.37	0.57
2:S:65:VAL:HG12	2:S:94:ILE:HA	1.86	0.57
1:A:420:ILE:HG12	1:A:448:GLU:HG2	1.85	0.57
1:D:203:TYR:HB2	1:D:263:VAL:HB	1.85	0.57
1:F:148:GLY:HA2	1:F:399:ALA:HB1	1.87	0.57
1:G:346:VAL:HB	1:G:369:VAL:HG22	1.85	0.57
1:H:193:MET:HG2	1:H:371:LYS:HB3	1.87	0.57
1:K:68:ASN:O	1:K:72:GLN:HG2	2.05	0.57
1:K:406:ALA:HB2	1:K:496:PRO:HG3	1.87	0.57
1:A:108:ALA:HB1	1:H:109:ALA:HB1	1.87	0.57
1:D:31:LEU:O	1:D:457:ASN:ND2	2.23	0.57
1:E:189:VAL:HA	1:E:377:ALA:HA	1.86	0.57
1:E:219:PHE:HD2	1:E:240:VAL:HG22	1.69	0.57
1:I:221:LEU:HB3	1:I:249:ILE:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:P:67:PHE:HB3	2:P:91:ILE:HD13	1.84	0.57
2:U:8:ASP:HA	2:U:57:LEU:HD11	1.85	0.57
1:A:288:MET:HE1	1:A:368:ARG:HG2	1.87	0.57
1:B:458:CYS:SG	1:B:480:ALA:HB1	2.44	0.57
1:E:323:VAL:HG22	1:E:332:ILE:HA	1.86	0.57
1:I:7:LYS:HE3	1:I:15:LYS:HG3	1.85	0.57
1:K:199:TYR:CE2	1:K:205:ILE:HD11	2.40	0.57
1:A:47:PRO:HG2	1:G:69:MET:HB3	1.86	0.57
1:B:239:ALA:HA	1:B:242:LYS:HE2	1.86	0.57
1:C:179:ASP:HA	1:C:381:VAL:HB	1.87	0.57
1:E:71:ALA:HA	1:E:74:VAL:HG12	1.86	0.57
1:G:389:MET:HE3	1:G:389:MET:O	2.04	0.57
1:H:411:VAL:HA	1:H:496:PRO:HA	1.87	0.57
1:L:343:GLN:HA	1:L:346:VAL:HB	1.85	0.57
1:L:350:ARG:NH1	1:L:369:VAL:HB	2.19	0.57
1:M:13:ARG:HD3	1:M:514:MET:HE3	1.87	0.57
1:M:421:ARG:NH1	1:M:469:VAL:O	2.37	0.57
2:R:11:ILE:HG22	2:R:41:LEU:HB2	1.87	0.57
1:A:130:GLU:HB2	1:A:422:VAL:HG13	1.86	0.57
1:B:180:GLY:N	1:B:381:VAL:O	2.28	0.57
1:B:321:LYS:NZ	1:B:336:VAL:HG11	2.20	0.57
1:D:264:VAL:O	1:D:268:ARG:HG2	2.05	0.57
1:E:278:ALA:HB3	1:E:285:ARG:HE	1.70	0.57
1:E:452:ARG:HH12	1:E:463:SER:HA	1.70	0.57
1:H:240:VAL:HG21	1:H:247:LEU:HD13	1.87	0.57
1:H:519:CYS:HB3	1:I:38:VAL:HG22	1.86	0.57
1:N:455:VAL:HG22	1:N:478:TYR:CE2	2.40	0.57
1:A:339:GLU:HA	1:A:342:ILE:HD12	1.86	0.57
1:B:199:TYR:CD2	1:B:213:VAL:HG23	2.40	0.57
1:B:339:GLU:HA	1:B:342:ILE:HD12	1.86	0.57
1:D:124:VAL:HG21	1:D:508:ALA:HB2	1.87	0.57
1:E:231:ARG:HD3	1:E:234:LEU:HD11	1.87	0.57
1:F:420:ILE:HG12	1:F:448:GLU:HG2	1.86	0.57
1:H:169:VAL:HG21	1:H:377:ALA:HB2	1.87	0.57
1:H:199:TYR:CE2	1:H:205:ILE:HD11	2.39	0.57
1:I:33:PRO:HD3	6:I:601:ADP:C4	2.39	0.57
1:I:39:VAL:HA	1:I:49:ILE:HA	1.87	0.57
1:J:18:ARG:NE	1:J:67:GLU:OE2	2.34	0.57
1:J:274:ALA:HB1	1:J:325:ILE:HD13	1.87	0.57
1:A:231:ARG:NH2	2:O:31:ALA:O	2.37	0.56
1:B:150:ILE:HG23	3:B:601:ATP:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:214:GLU:OE2	1:C:322:ARG:NH1	2.38	0.56
1:C:231:ARG:HD3	1:C:234:LEU:HD11	1.87	0.56
1:D:200:LEU:HD12	1:D:275:ALA:HB1	1.86	0.56
1:D:350:ARG:HA	1:D:353:ILE:HD12	1.87	0.56
1:G:150:ILE:HG13	1:G:493:ILE:HA	1.87	0.56
1:H:501:ARG:NH1	1:H:505:GLN:OE1	2.38	0.56
1:I:479:ASN:O	1:I:483:GLU:N	2.38	0.56
1:K:235:PRO:HG3	1:K:310:GLU:HA	1.87	0.56
1:K:352:GLN:OE1	1:K:368:ARG:NH2	2.38	0.56
1:M:27:VAL:HG12	1:M:90:THR:HG23	1.87	0.56
1:M:519:CYS:HB3	1:N:38:VAL:HG22	1.85	0.56
1:N:501:ARG:NH1	1:N:505:GLN:OE1	2.38	0.56
2:O:11:ILE:HG23	2:O:83:VAL:HB	1.85	0.56
2:S:66:ILE:HD11	2:T:3:ILE:HD13	1.87	0.56
2:U:12:VAL:HA	2:U:40:VAL:HA	1.87	0.56
1:B:487:ASN:O	1:B:491:MET:HG2	2.04	0.56
1:C:209:GLU:HG2	1:C:210:THR:HG23	1.87	0.56
1:C:230:ILE:H	1:C:230:ILE:HD12	1.69	0.56
1:C:349:ILE:HG22	1:C:365:LEU:HB3	1.86	0.56
1:F:220:ILE:HG13	1:F:248:LEU:HD23	1.87	0.56
1:G:15:LYS:HB2	1:G:520:MET:HE1	1.86	0.56
1:J:39:VAL:HG22	1:J:49:ILE:HG12	1.87	0.56
1:J:353:ILE:HD11	1:J:369:VAL:HG11	1.87	0.56
1:K:324:VAL:HB	1:K:331:THR:HG23	1.87	0.56
1:L:131:LEU:HD21	1:L:500:THR:HB	1.85	0.56
1:L:215:LEU:HB3	1:L:246:PRO:HB2	1.86	0.56
1:N:16:MET:HE1	1:N:69:MET:SD	2.45	0.56
2:O:76:GLU:HB3	2:O:78:ILE:HG23	1.87	0.56
2:Q:47:ARG:HH22	2:Q:88:GLU:HB3	1.70	0.56
1:A:265:ASN:OD1	2:O:26:VAL:N	2.28	0.56
1:B:179:ASP:OD1	1:B:393:LYS:HD2	2.06	0.56
1:B:206:ASN:HD21	1:B:214:GLU:HB3	1.70	0.56
1:B:261:THR:O	1:B:265:ASN:ND2	2.37	0.56
1:B:288:MET:HE1	1:B:368:ARG:HG2	1.86	0.56
1:B:343:GLN:HA	1:B:346:VAL:HG22	1.87	0.56
1:C:69:MET:HG2	1:C:73:MET:HE2	1.87	0.56
1:D:244:GLY:O	1:D:272:LYS:NZ	2.36	0.56
1:D:346:VAL:HA	1:D:349:ILE:HB	1.87	0.56
1:D:353:ILE:HG23	1:D:362:ARG:HB2	1.87	0.56
1:E:166:MET:HA	1:E:169:VAL:HG12	1.87	0.56
1:F:223:ALA:HB1	1:F:225:LYS:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:287:ALA:HA	1:F:345:ARG:HH21	1.70	0.56
1:G:124:VAL:HG21	1:G:508:ALA:HB2	1.86	0.56
1:H:27:VAL:HG12	1:H:90:THR:HG23	1.86	0.56
1:H:73:MET:SD	1:I:47:PRO:HD2	2.46	0.56
1:H:137:PRO:HA	1:H:410:GLY:HA2	1.87	0.56
1:I:381:VAL:HG23	1:I:389:MET:SD	2.45	0.56
1:J:218:PRO:HB3	1:J:246:PRO:HG2	1.88	0.56
1:K:81:ALA:HB1	1:K:503:ALA:HA	1.86	0.56
1:K:194:GLN:HG3	1:K:331:THR:HB	1.86	0.56
1:K:501:ARG:NH1	1:K:505:GLN:OE1	2.38	0.56
1:L:13:ARG:HD3	1:L:514:MET:HE3	1.87	0.56
1:L:301:ILE:HG12	1:L:307:MET:HE1	1.86	0.56
1:N:65:LYS:O	1:N:69:MET:HG3	2.04	0.56
1:N:131:LEU:HG	1:N:497:THR:HG23	1.87	0.56
1:N:223:ALA:HA	1:N:301:ILE:HB	1.87	0.56
2:T:58:ASP:OD2	2:U:7:HIS:NE2	2.39	0.56
1:G:279:PRO:HG2	1:G:288:MET:HB3	1.86	0.56
1:G:429:LEU:O	1:G:430:ARG:NH1	2.38	0.56
1:H:233:MET:HG3	1:H:237:LEU:HG	1.86	0.56
1:J:325:ILE:HA	1:J:330:THR:HA	1.88	0.56
1:K:487:ASN:O	1:K:491:MET:HG2	2.04	0.56
1:L:166:MET:HB2	1:L:171:LYS:HA	1.86	0.56
1:L:288:MET:HE1	1:L:368:ARG:HG2	1.88	0.56
1:M:33:PRO:HD3	6:M:601:ADP:C4	2.41	0.56
1:M:81:ALA:O	1:M:85:ALA:HB2	2.06	0.56
1:M:81:ALA:O	1:M:85:ALA:HB3	2.06	0.56
1:M:349:ILE:HD13	1:M:368:ARG:HB3	1.86	0.56
1:N:41:ASP:HA	1:N:47:PRO:HB3	1.87	0.56
2:S:10:VAL:HG13	2:S:40:VAL:HG13	1.87	0.56
1:A:177:VAL:HG23	1:A:400:LEU:HD22	1.88	0.56
1:B:197:ARG:O	1:B:330:THR:OG1	2.16	0.56
1:C:12:ALA:HA	1:C:520:MET:HE3	1.87	0.56
1:C:150:ILE:HG13	1:C:493:ILE:HA	1.87	0.56
1:C:166:MET:HA	1:C:169:VAL:HG12	1.86	0.56
1:D:287:ALA:HA	1:D:345:ARG:HH21	1.70	0.56
1:D:431:GLY:N	1:D:437:ASN:OD1	2.39	0.56
1:E:204:PHE:HD1	1:E:266:THR:HG21	1.70	0.56
1:G:27:VAL:HG12	1:G:90:THR:HG23	1.88	0.56
1:G:190:VAL:N	1:G:376:VAL:O	2.29	0.56
1:H:195:PHE:HB3	1:H:371:LYS:HE3	1.88	0.56
1:I:69:MET:HE1	1:J:39:VAL:HG12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:193:MET:HG2	1:J:295:LEU:HD13	1.87	0.56
1:M:351:GLN:HA	1:M:354:GLU:CD	2.31	0.56
2:U:46:GLY:HA2	2:U:57:LEU:HD12	1.86	0.56
1:A:65:LYS:O	1:A:69:MET:HG3	2.05	0.56
1:A:141:SER:HA	1:A:144:ILE:HD12	1.86	0.56
1:A:468:THR:HB	1:A:485:TYR:CE2	2.41	0.56
1:F:20:VAL:HG22	1:F:74:VAL:HB	1.85	0.56
1:G:199:TYR:CD2	1:G:213:VAL:HG23	2.41	0.56
1:H:498:LYS:HG3	1:H:501:ARG:NH2	2.20	0.56
1:I:124:VAL:HG21	1:I:508:ALA:HB2	1.88	0.56
1:K:295:LEU:HA	1:K:342:ILE:HG12	1.88	0.56
1:M:205:ILE:HA	1:M:213:VAL:HG22	1.88	0.56
1:N:161:LEU:HG	1:N:187:LEU:HD23	1.87	0.56
2:O:66:ILE:HG21	2:P:76:GLU:HG2	1.88	0.56
2:P:5:PRO:HB3	2:P:85:ILE:HD11	1.87	0.56
1:A:262:LEU:HD13	1:A:273:VAL:HG11	1.87	0.56
1:C:178:GLU:HA	1:C:393:LYS:HE2	1.87	0.56
1:F:239:ALA:HA	1:F:242:LYS:HE2	1.87	0.56
1:G:151:SER:OG	1:G:399:ALA:HA	2.06	0.56
1:I:5:ASP:N	1:I:522:THR:O	2.38	0.56
1:I:165:ALA:HB2	1:I:187:LEU:HD22	1.88	0.56
1:L:27:VAL:HG12	1:L:90:THR:HG23	1.88	0.56
1:L:274:ALA:HB1	1:L:325:ILE:HD13	1.86	0.56
2:O:26:VAL:HG12	2:O:28:THR:HG23	1.87	0.56
2:P:77:LYS:HG3	2:P:80:ASN:HA	1.87	0.56
2:Q:95:VAL:HA	2:R:3:ILE:HG12	1.87	0.56
2:T:14:ARG:HA	2:T:38:GLY:HA2	1.87	0.56
1:A:41:ASP:HB2	1:G:522:THR:HG22	1.87	0.56
1:B:247:LEU:HB3	1:B:273:VAL:HG22	1.87	0.56
1:G:158:VAL:HG11	1:G:396:VAL:HA	1.87	0.56
1:H:461:GLU:HG3	1:H:464:VAL:H	1.71	0.56
1:I:262:LEU:HD22	1:I:273:VAL:HG21	1.88	0.56
1:I:274:ALA:HB1	1:I:325:ILE:HD13	1.88	0.56
1:K:69:MET:HG3	1:K:73:MET:HE1	1.88	0.56
1:L:222:LEU:HD23	1:L:250:ILE:HB	1.87	0.56
1:M:233:MET:HG3	1:M:237:LEU:HG	1.87	0.56
1:M:235:PRO:HG3	1:M:310:GLU:HA	1.87	0.56
1:N:365:LEU:HD23	1:N:368:ARG:HE	1.71	0.56
2:O:5:PRO:HB3	2:O:85:ILE:HD11	1.88	0.56
2:P:20:LYS:NZ	2:P:23:GLY:O	2.38	0.56
1:A:230:ILE:HA	1:A:233:MET:HE2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:232:GLU:HA	1:C:310:GLU:HG3	1.87	0.56
1:E:69:MET:HB2	1:F:47:PRO:HG2	1.88	0.56
1:G:152:ALA:HB2	1:G:399:ALA:HB2	1.88	0.56
1:H:249:ILE:O	1:H:276:VAL:N	2.23	0.56
1:I:18:ARG:NE	1:I:67:GLU:OE2	2.38	0.56
1:I:81:ALA:O	1:I:85:ALA:HB2	2.06	0.56
1:L:16:MET:HE1	1:L:69:MET:HB3	1.88	0.56
1:L:218:PRO:HB3	1:L:246:PRO:HG2	1.88	0.56
1:L:345:ARG:NH2	1:L:368:ARG:HH12	2.03	0.56
2:O:43:VAL:HG13	2:O:57:LEU:HD22	1.87	0.56
1:A:205:ILE:HA	1:A:213:VAL:HG22	1.88	0.56
1:D:219:PHE:CD2	1:D:240:VAL:HG22	2.40	0.56
1:I:345:ARG:NH2	1:I:368:ARG:HH12	2.04	0.56
1:K:333:ILE:HG12	1:K:376:VAL:HG11	1.88	0.56
1:L:124:VAL:HG21	1:L:508:ALA:HB2	1.88	0.56
1:M:177:VAL:HA	1:M:379:ILE:HB	1.87	0.56
2:R:11:ILE:N	2:R:42:ALA:O	2.33	0.56
2:R:57:LEU:O	2:R:60:LYS:NZ	2.27	0.56
1:B:149:THR:OG1	1:B:156:GLU:HA	2.06	0.55
1:B:200:LEU:HD12	1:B:275:ALA:HB1	1.87	0.55
1:B:322:ARG:O	1:B:333:ILE:N	2.35	0.55
1:B:468:THR:HB	1:B:485:TYR:CE2	2.41	0.55
1:C:186:GLU:HB3	1:C:380:LYS:HB2	1.88	0.55
1:C:409:GLU:OE2	1:C:501:ARG:NH2	2.38	0.55
1:D:5:ASP:N	1:D:522:THR:O	2.27	0.55
1:E:143:ALA:O	1:E:147:VAL:HG23	2.06	0.55
1:E:443:ALA:O	1:E:447:MET:HG2	2.05	0.55
1:F:130:GLU:HB2	1:F:422:VAL:HG13	1.87	0.55
1:F:288:MET:HE1	1:F:368:ARG:HG2	1.88	0.55
1:G:214:GLU:HG3	1:G:324:VAL:HG22	1.88	0.55
1:H:384:ALA:HA	1:N:202:PRO:HG2	1.87	0.55
1:H:433:ASN:H	1:H:436:GLN:HB2	1.71	0.55
1:I:132:LYS:NZ	1:I:409:GLU:OE2	2.37	0.55
1:J:15:LYS:HB3	1:J:66:PHE:HB2	1.88	0.55
1:J:221:LEU:HD23	1:J:249:ILE:HG23	1.87	0.55
1:K:421:ARG:NH1	1:K:469:VAL:O	2.39	0.55
1:K:458:CYS:SG	1:K:480:ALA:HB1	2.47	0.55
1:K:477:GLY:N	1:K:486:GLY:O	2.39	0.55
1:M:498:LYS:HG3	1:M:501:ARG:NH2	2.21	0.55
2:T:64:ILE:O	2:T:95:VAL:N	2.39	0.55
2:U:38:GLY:HA3	2:U:67:PHE:HE1	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:308:GLU:H	1:C:311:LYS:HD3	1.70	0.55
1:D:431:GLY:HA3	1:D:436:GLN:HB3	1.88	0.55
1:G:213:VAL:HG11	1:G:274:ALA:HB2	1.88	0.55
1:H:219:PHE:CE2	1:H:314:LEU:HD22	2.40	0.55
1:I:155:ASP:OD2	1:I:395:ARG:HD2	2.06	0.55
1:I:178:GLU:N	1:I:379:ILE:O	2.25	0.55
1:K:479:ASN:HB2	1:K:491:MET:CE	2.35	0.55
1:L:233:MET:HG3	1:L:237:LEU:HG	1.86	0.55
1:L:339:GLU:HB3	1:L:343:GLN:HE22	1.71	0.55
1:L:433:ASN:H	1:L:436:GLN:HB2	1.70	0.55
1:B:365:LEU:HD13	1:B:368:ARG:HD3	1.87	0.55
1:B:452:ARG:HH12	1:B:463:SER:HA	1.71	0.55
1:C:302:SER:OG	1:C:304:GLU:OE1	2.23	0.55
1:D:150:ILE:HG23	3:D:601:ATP:C8	2.41	0.55
1:G:349:ILE:HG23	1:G:365:LEU:HD12	1.87	0.55
1:G:468:THR:HB	1:G:485:TYR:CE2	2.40	0.55
1:H:47:PRO:HD2	1:N:73:MET:SD	2.47	0.55
1:L:202:PRO:HG2	1:M:384:ALA:HA	1.88	0.55
1:M:461:GLU:HG3	1:M:464:VAL:H	1.71	0.55
1:N:346:VAL:HG22	1:N:372:LEU:HB3	1.87	0.55
2:P:40:VAL:HG23	2:P:62:GLY:H	1.71	0.55
2:P:95:VAL:HA	2:Q:3:ILE:HG22	1.87	0.55
1:A:16:MET:HE1	1:A:69:MET:SD	2.46	0.55
1:B:158:VAL:HG11	1:B:396:VAL:HA	1.87	0.55
1:B:193:MET:HB2	1:B:332:ILE:HB	1.89	0.55
1:D:204:PHE:HD1	1:D:266:THR:HG21	1.71	0.55
1:H:177:VAL:HA	1:H:379:ILE:HB	1.89	0.55
1:I:233:MET:HG3	1:I:237:LEU:HG	1.88	0.55
1:K:349:ILE:HD13	1:K:368:ARG:HB3	1.89	0.55
1:N:29:VAL:O	1:N:36:ARG:N	2.34	0.55
1:A:204:PHE:HD1	1:A:266:THR:HG21	1.72	0.55
1:A:343:GLN:HA	1:A:346:VAL:HG22	1.88	0.55
1:C:240:VAL:HG11	1:C:247:LEU:HB2	1.87	0.55
1:H:39:VAL:HG13	1:H:49:ILE:HG12	1.89	0.55
1:H:168:LYS:HG2	1:H:189:VAL:HG13	1.87	0.55
1:I:295:LEU:HA	1:I:342:ILE:HG12	1.89	0.55
1:I:381:VAL:HG11	1:I:393:LYS:HA	1.88	0.55
1:L:432:GLN:OE1	1:L:436:GLN:NE2	2.31	0.55
1:M:218:PRO:HB3	1:M:246:PRO:HG2	1.89	0.55
1:M:368:ARG:O	1:M:372:LEU:HD23	2.07	0.55
1:N:14:VAL:HB	1:N:18:ARG:NH1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:184:GLN:NE2	1:B:185:ASP:OD1	2.40	0.55
1:D:20:VAL:HG22	1:D:74:VAL:HB	1.88	0.55
1:E:431:GLY:HA3	1:E:436:GLN:HB3	1.89	0.55
1:E:468:THR:HB	1:E:485:TYR:CE2	2.42	0.55
1:F:166:MET:HA	1:F:169:VAL:HG12	1.89	0.55
1:G:39:VAL:HG22	1:G:49:ILE:HG12	1.88	0.55
1:H:155:ASP:OD2	1:H:395:ARG:HD2	2.06	0.55
1:I:302:SER:HB2	1:I:304:GLU:HG2	1.86	0.55
1:K:221:LEU:HB3	1:K:249:ILE:HA	1.87	0.55
1:L:427:ALA:HA	1:L:444:LEU:HD13	1.88	0.55
1:M:89:THR:N	6:M:601:ADP:O3B	2.39	0.55
1:N:89:THR:N	6:N:601:ADP:O3B	2.38	0.55
2:P:43:VAL:HG13	2:P:57:LEU:HD22	1.88	0.55
1:A:20:VAL:HG12	1:A:97:GLN:OE1	2.07	0.55
1:B:71:ALA:HA	1:B:74:VAL:HG12	1.89	0.55
1:B:230:ILE:O	1:B:234:LEU:N	2.40	0.55
1:E:150:ILE:HG23	3:E:601:ATP:C8	2.42	0.55
1:H:230:ILE:O	1:H:234:LEU:N	2.39	0.55
1:J:20:VAL:HG22	1:J:74:VAL:HG21	1.88	0.55
1:L:472:GLY:HA3	1:L:476:TYR:CD2	2.42	0.55
1:N:137:PRO:HA	1:N:410:GLY:HA2	1.89	0.55
1:B:356:ALA:O	1:B:362:ARG:NH2	2.39	0.55
1:C:240:VAL:HG21	1:C:247:LEU:HD13	1.89	0.55
1:C:414:GLY:HA3	1:C:493:ILE:HG22	1.89	0.55
1:E:65:LYS:O	1:E:69:MET:HG3	2.06	0.55
1:F:149:THR:OG1	1:F:156:GLU:HA	2.07	0.55
1:G:150:ILE:HG23	3:G:601:ATP:C8	2.42	0.55
1:I:346:VAL:HG22	1:I:372:LEU:HB3	1.88	0.55
1:J:279:PRO:O	1:J:285:ARG:HA	2.06	0.55
1:K:279:PRO:C	1:K:288:MET:HG3	2.31	0.55
1:L:203:TYR:HB2	1:L:263:VAL:HG13	1.89	0.55
1:M:117:LYS:HB2	1:M:515:ILE:HG21	1.89	0.55
2:R:67:PHE:CG	2:R:86:MET:HE1	2.42	0.55
1:A:452:ARG:HH12	1:A:463:SER:HA	1.71	0.55
1:B:102:GLU:HB2	1:B:442:VAL:HG13	1.88	0.55
1:B:221:LEU:HD23	1:B:249:ILE:HG12	1.88	0.55
1:D:349:ILE:HG23	1:D:365:LEU:HD12	1.89	0.55
1:E:28:LYS:HE2	1:E:94:VAL:HG22	1.89	0.55
1:E:69:MET:HE2	1:F:47:PRO:HG2	1.89	0.55
1:E:124:VAL:HG13	1:E:504:LEU:HG	1.88	0.55
1:E:432:GLN:HB2	1:E:436:GLN:NE2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:89:THR:N	6:H:601:ADP:O3B	2.39	0.55
1:H:291:ASP:HB3	1:H:372:LEU:HD21	1.87	0.55
1:H:301:ILE:HG21	1:H:309:LEU:HD23	1.89	0.55
1:I:322:ARG:HB2	1:I:333:ILE:HB	1.87	0.55
1:J:68:ASN:O	1:J:72:GLN:HG2	2.07	0.55
1:L:290:GLN:OE1	1:L:294:THR:OG1	2.24	0.55
1:B:166:MET:HA	1:B:169:VAL:HG12	1.89	0.55
1:E:20:VAL:HG13	1:E:74:VAL:HG21	1.89	0.55
1:E:20:VAL:HG22	1:E:74:VAL:HB	1.89	0.55
1:F:199:TYR:CD2	1:F:213:VAL:HG23	2.42	0.55
1:H:301:ILE:HG12	1:H:307:MET:HE1	1.88	0.55
1:I:68:ASN:O	1:I:72:GLN:HG2	2.07	0.55
1:J:85:ALA:HB2	1:J:502:SER:HB2	1.89	0.55
1:K:124:VAL:HG13	1:K:504:LEU:HG	1.88	0.55
1:K:197:ARG:HE	1:K:279:PRO:HA	1.72	0.55
1:K:414:GLY:HA3	1:K:493:ILE:HG22	1.89	0.55
1:L:461:GLU:HG3	1:L:464:VAL:H	1.71	0.55
2:Q:47:ARG:N	2:Q:55:LYS:O	2.40	0.55
2:S:65:VAL:HG21	2:S:91:ILE:HD12	1.88	0.55
1:A:220:ILE:HG23	1:A:250:ILE:HD12	1.88	0.54
1:B:219:PHE:CZ	1:B:245:LYS:HE2	2.42	0.54
1:C:193:MET:HB2	1:C:332:ILE:HB	1.89	0.54
1:E:221:LEU:HB2	1:E:317:LEU:HD22	1.89	0.54
1:H:197:ARG:HE	1:H:279:PRO:HA	1.72	0.54
1:J:199:TYR:CE1	1:J:205:ILE:HD11	2.42	0.54
1:J:411:VAL:HA	1:J:496:PRO:HA	1.89	0.54
1:L:199:TYR:CE2	1:L:205:ILE:HD11	2.42	0.54
1:M:353:ILE:HG23	1:M:362:ARG:NH2	2.22	0.54
1:N:433:ASN:H	1:N:436:GLN:HB2	1.72	0.54
2:T:11:ILE:HG22	2:T:41:LEU:HB2	1.88	0.54
1:A:220:ILE:HG13	1:A:248:LEU:HD23	1.88	0.54
1:A:414:GLY:HA3	1:A:493:ILE:HG22	1.89	0.54
1:B:323:VAL:HG22	1:B:332:ILE:HA	1.88	0.54
1:B:356:ALA:HB1	1:B:361:ASP:HB2	1.90	0.54
1:D:323:VAL:HG22	1:D:332:ILE:HA	1.89	0.54
1:F:200:LEU:HD12	1:F:275:ALA:HB1	1.89	0.54
1:I:13:ARG:HG3	1:I:104:LEU:HD22	1.89	0.54
1:K:185:ASP:OD2	1:K:392:LYS:HE3	2.07	0.54
2:T:15:LYS:HZ1	2:T:64:ILE:HG12	1.72	0.54
1:B:66:PHE:HB3	1:B:520:MET:SD	2.48	0.54
1:B:135:SER:HB3	1:B:497:THR:HG21	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:510:VAL:HG23	1:D:385:THR:HG21	1.90	0.54
1:E:200:LEU:HD12	1:E:275:ALA:HB1	1.89	0.54
1:E:250:ILE:HG23	1:E:278:ALA:HA	1.89	0.54
1:F:144:ILE:HG23	1:F:403:THR:HG21	1.89	0.54
1:G:220:ILE:HG13	1:G:248:LEU:HD23	1.89	0.54
1:H:352:GLN:HA	1:H:355:GLU:HG3	1.89	0.54
1:J:81:ALA:HB1	1:J:503:ALA:HA	1.90	0.54
1:K:27:VAL:HG12	1:K:90:THR:HG23	1.89	0.54
1:K:284:ARG:NE	1:K:364:LYS:HB3	2.23	0.54
1:L:279:PRO:C	1:L:288:MET:HG3	2.32	0.54
1:N:345:ARG:NH2	1:N:368:ARG:HH12	2.05	0.54
1:A:510:VAL:HG23	1:B:385:THR:HG21	1.89	0.54
1:D:205:ILE:HA	1:D:213:VAL:HG22	1.90	0.54
1:D:278:ALA:HB3	1:D:285:ARG:HH11	1.72	0.54
1:D:417:VAL:HG21	1:D:477:GLY:HA3	1.89	0.54
1:E:177:VAL:HG23	1:E:400:LEU:HD22	1.89	0.54
1:H:69:MET:SD	1:H:73:MET:HE1	2.48	0.54
1:H:419:LEU:HD22	1:H:447:MET:HG3	1.89	0.54
1:J:235:PRO:HG3	1:J:310:GLU:HA	1.89	0.54
1:K:31:LEU:HD13	1:K:90:THR:HB	1.88	0.54
1:K:249:ILE:O	1:K:276:VAL:N	2.34	0.54
1:K:346:VAL:HG22	1:K:372:LEU:HB3	1.89	0.54
2:P:12:VAL:HG22	2:P:84:LEU:HB2	1.90	0.54
1:A:421:ARG:HH12	1:A:470:LYS:HA	1.72	0.54
1:B:115:ASP:OD1	1:B:118:ARG:NH1	2.37	0.54
1:C:176:THR:O	1:C:379:ILE:N	2.28	0.54
1:C:288:MET:HE1	1:C:368:ARG:HG2	1.90	0.54
1:C:343:GLN:HA	1:C:346:VAL:HG22	1.89	0.54
1:D:397:GLU:O	1:D:401:HIS:ND1	2.41	0.54
1:E:152:ALA:O	1:E:395:ARG:NH1	2.41	0.54
1:E:200:LEU:HD21	1:E:277:LYS:HG3	1.89	0.54
1:F:204:PHE:HD1	1:F:266:THR:HG21	1.71	0.54
1:F:230:ILE:H	1:F:230:ILE:HD12	1.70	0.54
1:F:488:MET:HA	1:F:491:MET:HE2	1.89	0.54
1:H:455:VAL:HG21	1:H:465:VAL:HG11	1.89	0.54
1:J:155:ASP:OD2	1:J:395:ARG:HD2	2.07	0.54
1:J:162:ILE:HD11	1:J:396:VAL:HG13	1.89	0.54
1:J:356:ALA:HB2	1:J:365:LEU:HD12	1.88	0.54
1:K:81:ALA:O	1:K:85:ALA:HB2	2.08	0.54
2:R:11:ILE:HB	2:R:42:ALA:HB3	1.90	0.54
2:U:68:ASN:N	2:U:90:ASP:O	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:154:SER:N	7:A:2019:HOH:O	2.40	0.54
1:A:458:CYS:SG	1:A:480:ALA:HB1	2.47	0.54
1:D:122:LYS:HD3	1:D:440:ILE:HD11	1.88	0.54
1:D:353:ILE:HD13	1:D:366:GLN:HG3	1.90	0.54
1:E:7:LYS:HE2	1:E:11:ASP:HB3	1.90	0.54
1:F:152:ALA:HB2	1:F:399:ALA:HB2	1.90	0.54
1:G:51:LYS:NZ	3:G:601:ATP:O1A	2.41	0.54
1:G:200:LEU:N	1:G:275:ALA:O	2.40	0.54
1:J:16:MET:O	1:J:20:VAL:HG23	2.07	0.54
1:K:365:LEU:HA	1:K:368:ARG:HG3	1.90	0.54
1:L:240:VAL:HG21	1:L:247:LEU:HD13	1.90	0.54
1:N:199:TYR:CE2	1:N:205:ILE:HD11	2.41	0.54
1:C:111:MET:HE1	1:C:438:VAL:HB	1.89	0.54
1:G:194:GLN:O	1:G:371:LYS:NZ	2.40	0.54
1:H:115:ASP:CG	1:H:118:ARG:HH21	2.16	0.54
1:I:414:GLY:HA3	1:I:493:ILE:HG22	1.90	0.54
1:K:89:THR:N	6:K:601:ADP:O3B	2.38	0.54
1:K:383:ALA:H	1:K:389:MET:HE1	1.73	0.54
1:M:233:MET:HG2	1:M:262:LEU:HD21	1.89	0.54
1:B:150:ILE:HG13	1:B:493:ILE:HA	1.90	0.54
1:J:222:LEU:HD23	1:J:250:ILE:HB	1.89	0.54
1:L:177:VAL:HA	1:L:379:ILE:HB	1.89	0.54
1:M:81:ALA:HB1	1:M:503:ALA:HA	1.90	0.54
1:N:40:LEU:N	1:N:48:THR:O	2.37	0.54
2:S:43:VAL:HG13	2:S:57:LEU:HD22	1.89	0.54
2:U:13:LYS:HB2	2:U:41:LEU:HD11	1.89	0.54
1:B:421:ARG:O	1:B:425:LYS:HG3	2.08	0.54
1:B:479:ASN:N	1:B:484:GLU:O	2.40	0.54
1:C:204:PHE:HD1	1:C:266:THR:HG21	1.73	0.54
1:E:140:ASP:OD1	1:E:140:ASP:N	2.41	0.54
1:E:175:ILE:HB	1:E:404:ARG:HH12	1.72	0.54
1:H:295:LEU:HD13	1:H:332:ILE:HD11	1.88	0.54
1:I:479:ASN:N	1:I:484:GLU:O	2.37	0.54
1:J:498:LYS:HG3	1:J:501:ARG:NH2	2.23	0.54
1:L:250:ILE:HG23	1:L:278:ALA:HA	1.90	0.54
1:N:85:ALA:HB2	1:N:502:SER:HB2	1.89	0.54
1:N:166:MET:HB3	1:N:175:ILE:HD11	1.90	0.54
1:N:356:ALA:HB2	1:N:365:LEU:HD12	1.90	0.54
2:O:8:ASP:OD2	2:O:87:SER:OG	2.25	0.54
1:A:144:ILE:HG23	1:A:403:THR:CG2	2.36	0.54
1:A:200:LEU:HD12	1:A:275:ALA:HB1	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:190:VAL:N	1:C:376:VAL:O	2.27	0.54
1:C:364:LYS:O	1:C:368:ARG:HG3	2.07	0.54
1:E:214:GLU:HG3	1:E:324:VAL:HG22	1.89	0.54
1:G:64:ASP:O	1:G:68:ASN:N	2.35	0.54
1:G:420:ILE:HG12	1:G:448:GLU:HG2	1.89	0.54
1:H:39:VAL:HA	1:H:49:ILE:HA	1.90	0.54
1:H:324:VAL:HB	1:H:331:THR:HG22	1.90	0.54
1:H:349:ILE:O	1:H:353:ILE:HG13	2.07	0.54
1:I:177:VAL:HA	1:I:379:ILE:HB	1.90	0.54
1:I:324:VAL:N	1:I:331:THR:O	2.35	0.54
1:J:197:ARG:NH2	1:J:280:GLY:O	2.41	0.54
1:J:302:SER:HB2	1:J:304:GLU:HG2	1.90	0.54
1:K:10:ASN:HA	1:K:13:ARG:HB2	1.89	0.54
1:N:195:PHE:CZ	1:N:250:ILE:HD13	2.43	0.54
1:N:218:PRO:HG3	1:N:323:VAL:HG22	1.90	0.54
1:B:196:ASP:HA	1:B:329:THR:HA	1.88	0.53
1:D:346:VAL:HA	1:D:349:ILE:HD12	1.90	0.53
1:F:197:ARG:HD2	1:F:277:LYS:HB2	1.90	0.53
1:G:155:ASP:OD2	1:G:395:ARG:NH1	2.41	0.53
1:I:62:LEU:HB2	1:I:68:ASN:HB2	1.90	0.53
1:I:475:ASN:HB2	1:I:487:ASN:ND2	2.23	0.53
1:J:262:LEU:HD22	1:J:273:VAL:HG21	1.90	0.53
1:N:122:LYS:HD3	1:N:440:ILE:HD11	1.90	0.53
1:A:124:VAL:HG21	1:A:508:ALA:HB2	1.89	0.53
1:D:149:THR:OG1	1:D:156:GLU:HA	2.08	0.53
1:D:221:LEU:HD21	1:D:309:LEU:HD11	1.90	0.53
1:D:222:LEU:O	1:D:301:ILE:N	2.31	0.53
1:D:468:THR:HB	1:D:485:TYR:CE2	2.43	0.53
1:E:130:GLU:HB2	1:E:422:VAL:HG13	1.89	0.53
1:G:288:MET:HE1	1:G:368:ARG:HG2	1.89	0.53
1:G:411:VAL:HG21	1:G:494:LEU:HD22	1.88	0.53
1:J:66:PHE:HB3	1:J:520:MET:HE1	1.89	0.53
1:K:461:GLU:HG3	1:K:464:VAL:H	1.71	0.53
1:M:284:ARG:CZ	1:M:364:LYS:HD2	2.38	0.53
1:N:230:ILE:O	1:N:234:LEU:N	2.41	0.53
2:Q:57:LEU:HD23	2:Q:88:GLU:HB2	1.90	0.53
1:A:230:ILE:O	1:A:234:LEU:N	2.42	0.53
1:C:397:GLU:O	1:C:401:HIS:ND1	2.42	0.53
1:D:199:TYR:CD2	1:D:213:VAL:HG23	2.44	0.53
1:D:343:GLN:HA	1:D:346:VAL:HG22	1.90	0.53
1:F:429:LEU:HB3	1:F:440:ILE:HG21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:287:ALA:HA	1:G:345:ARG:HH21	1.72	0.53
1:G:346:VAL:HA	1:G:349:ILE:HD12	1.90	0.53
1:I:199:TYR:CE1	1:I:205:ILE:HD11	2.43	0.53
1:I:348:GLN:O	1:I:351:GLN:NE2	2.41	0.53
1:K:115:ASP:CG	1:K:118:ARG:HH21	2.16	0.53
1:K:155:ASP:OD2	1:K:395:ARG:HD2	2.08	0.53
1:K:177:VAL:HA	1:K:379:ILE:HB	1.89	0.53
1:M:20:VAL:HG22	1:M:74:VAL:HG21	1.90	0.53
1:M:82:ASN:O	1:M:86:GLY:N	2.30	0.53
1:N:495:ASP:OD2	6:N:601:ADP:O2'	2.23	0.53
2:O:13:LYS:HG2	2:O:41:LEU:HD21	1.91	0.53
1:A:193:MET:HB2	1:A:332:ILE:HB	1.90	0.53
1:B:73:MET:HE1	1:C:39:VAL:HG11	1.89	0.53
1:B:313:THR:OG1	1:B:315:GLU:OE1	2.25	0.53
1:C:29:VAL:O	1:C:36:ARG:N	2.39	0.53
1:C:431:GLY:N	1:C:437:ASN:OD1	2.41	0.53
1:C:458:CYS:SG	1:C:480:ALA:HB1	2.48	0.53
1:F:30:THR:HB	1:F:51:LYS:HG2	1.89	0.53
1:F:223:ALA:HA	1:F:301:ILE:HB	1.89	0.53
1:F:411:VAL:HG21	1:F:494:LEU:HD22	1.90	0.53
1:F:458:CYS:SG	1:F:480:ALA:HB1	2.49	0.53
1:F:468:THR:HB	1:F:485:TYR:CE1	2.43	0.53
1:G:287:ALA:HB1	1:G:368:ARG:CZ	2.39	0.53
1:I:230:ILE:O	1:I:234:LEU:N	2.41	0.53
1:I:417:VAL:HG21	1:I:488:MET:HG2	1.89	0.53
1:J:5:ASP:HB2	1:J:524:LEU:HD23	1.89	0.53
1:K:12:ALA:O	1:K:16:MET:HG2	2.08	0.53
1:L:131:LEU:HG	1:L:497:THR:HG23	1.89	0.53
1:A:448:GLU:OE1	1:A:470:LYS:NZ	2.42	0.53
1:A:479:ASN:ND2	1:A:491:MET:HG3	2.23	0.53
1:C:415:GLY:HA2	3:C:601:ATP:H1'	1.90	0.53
1:E:458:CYS:SG	1:E:480:ALA:HB1	2.48	0.53
1:H:31:LEU:HD13	1:H:90:THR:HB	1.90	0.53
1:I:291:ASP:OD1	1:I:345:ARG:NE	2.41	0.53
1:J:203:TYR:HE2	1:K:181:THR:HA	1.73	0.53
1:K:323:VAL:HA	1:K:332:ILE:HA	1.89	0.53
1:K:429:LEU:O	1:K:441:LYS:NZ	2.36	0.53
1:K:479:ASN:O	1:K:483:GLU:N	2.42	0.53
1:N:218:PRO:HB3	1:N:246:PRO:HG2	1.90	0.53
2:O:65:VAL:HG23	2:O:67:PHE:HD1	1.72	0.53
2:R:55:LYS:HE3	2:S:48:ILE:HG21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:140:ASP:N	1:D:140:ASP:OD1	2.40	0.53
1:G:20:VAL:HG13	1:G:74:VAL:HG21	1.89	0.53
1:K:218:PRO:HB3	1:K:246:PRO:HG2	1.91	0.53
1:M:165:ALA:HB2	1:M:187:LEU:HD22	1.90	0.53
1:N:247:LEU:HG	1:N:249:ILE:HD11	1.90	0.53
1:A:206:ASN:HD21	1:A:214:GLU:HB3	1.73	0.53
1:B:205:ILE:HA	1:B:213:VAL:HG22	1.91	0.53
1:F:190:VAL:O	1:F:376:VAL:N	2.39	0.53
1:F:364:LYS:O	1:F:368:ARG:HG3	2.08	0.53
1:H:350:ARG:HD3	1:H:353:ILE:HD12	1.91	0.53
1:I:122:LYS:HZ3	1:I:431:GLY:HA2	1.73	0.53
1:J:161:LEU:HG	1:J:187:LEU:HD23	1.90	0.53
1:J:301:ILE:HG12	1:J:307:MET:HE1	1.91	0.53
1:M:149:THR:OG1	1:M:156:GLU:HA	2.09	0.53
1:M:161:LEU:HG	1:M:187:LEU:HD23	1.90	0.53
1:M:365:LEU:HD23	1:M:368:ARG:HE	1.72	0.53
1:N:233:MET:HE1	1:N:249:ILE:CD1	2.39	0.53
2:T:47:ARG:O	2:T:55:LYS:N	2.35	0.53
1:A:158:VAL:HG11	1:A:396:VAL:HA	1.90	0.53
1:D:479:ASN:O	1:D:483:GLU:N	2.42	0.53
1:F:427:ALA:O	1:F:441:LYS:NZ	2.42	0.53
1:G:228:SER:O	1:G:258:ALA:HB2	2.09	0.53
1:G:230:ILE:HD12	1:G:230:ILE:H	1.73	0.53
1:I:16:MET:O	1:I:20:VAL:HG23	2.09	0.53
1:J:124:VAL:HG21	1:J:508:ALA:HB2	1.90	0.53
1:K:284:ARG:HB3	1:K:284:ARG:CZ	2.39	0.53
1:N:33:PRO:HD3	6:N:601:ADP:C4	2.44	0.53
1:N:178:GLU:N	1:N:379:ILE:O	2.21	0.53
2:P:66:ILE:HD11	2:Q:3:ILE:HG21	1.91	0.53
1:B:322:ARG:HB3	1:B:333:ILE:HB	1.91	0.53
1:D:65:LYS:O	1:D:69:MET:HG3	2.08	0.53
1:E:219:PHE:O	1:E:248:LEU:N	2.39	0.53
1:E:219:PHE:CZ	1:E:245:LYS:HE2	2.44	0.53
1:F:5:ASP:N	1:F:522:THR:O	2.26	0.53
1:J:233:MET:HE1	1:J:249:ILE:HD11	1.91	0.53
1:K:69:MET:HE2	1:K:73:MET:SD	2.49	0.53
1:L:89:THR:N	6:L:601:ADP:O3B	2.41	0.53
1:L:324:VAL:N	1:L:331:THR:O	2.38	0.53
1:N:81:ALA:O	1:N:85:ALA:HB3	2.09	0.53
1:N:193:MET:HG2	1:N:295:LEU:HD13	1.89	0.53
2:O:47:ARG:N	2:O:55:LYS:O	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:64:ILE:O	2:O:95:VAL:N	2.35	0.53
2:T:47:ARG:NH2	2:T:88:GLU:HB3	2.24	0.53
1:A:197:ARG:HD2	1:A:277:LYS:HB2	1.91	0.53
1:A:429:LEU:HB3	1:A:440:ILE:HG21	1.90	0.53
1:B:189:VAL:HA	1:B:377:ALA:HA	1.90	0.53
1:C:205:ILE:HA	1:C:213:VAL:HG22	1.91	0.53
1:D:239:ALA:HA	1:D:242:LYS:HE2	1.91	0.53
1:E:66:PHE:CD1	1:E:520:MET:HE3	2.44	0.53
1:E:479:ASN:HB3	1:E:484:GLU:HG2	1.90	0.53
1:G:421:ARG:HH12	1:G:470:LYS:HA	1.74	0.53
1:G:431:GLY:N	1:G:437:ASN:OD1	2.40	0.53
1:H:124:VAL:HG21	1:H:508:ALA:HB2	1.91	0.53
1:I:262:LEU:HD13	1:I:273:VAL:HG11	1.90	0.53
1:J:39:VAL:HA	1:J:49:ILE:HA	1.90	0.53
1:J:195:PHE:HB3	1:J:371:LYS:HE3	1.91	0.53
1:K:215:LEU:HB2	1:K:323:VAL:HG22	1.90	0.53
1:L:455:VAL:HG22	1:L:478:TYR:CE2	2.44	0.53
1:M:85:ALA:HB2	1:M:502:SER:HB2	1.91	0.53
1:M:116:LEU:HG	1:M:435:ASP:OD1	2.09	0.53
1:N:349:ILE:HG12	1:N:368:ARG:NH2	2.24	0.53
1:N:351:GLN:NE2	1:N:352:GLN:HG3	2.24	0.53
2:Q:10:VAL:HG22	2:Q:43:VAL:HG12	1.90	0.53
1:A:230:ILE:H	1:A:230:ILE:HD12	1.73	0.52
1:B:409:GLU:OE2	1:B:501:ARG:NE	2.40	0.52
1:B:429:LEU:O	1:B:430:ARG:NH1	2.37	0.52
1:C:352:GLN:HB3	1:C:365:LEU:HD13	1.92	0.52
1:D:232:GLU:HB3	1:D:309:LEU:HD23	1.91	0.52
1:D:292:ILE:O	1:D:296:THR:OG1	2.17	0.52
1:D:452:ARG:HG3	1:D:462:PRO:HB2	1.91	0.52
1:F:176:THR:O	1:F:379:ILE:N	2.31	0.52
1:G:153:ASN:HD22	1:G:395:ARG:HD3	1.74	0.52
1:G:221:LEU:HD23	1:G:249:ILE:HG12	1.92	0.52
1:I:489:ILE:HA	1:I:494:LEU:HD21	1.90	0.52
1:L:345:ARG:O	1:L:349:ILE:HG13	2.09	0.52
1:N:190:VAL:O	1:N:376:VAL:N	2.42	0.52
1:N:352:GLN:HA	1:N:355:GLU:HG3	1.91	0.52
1:A:180:GLY:N	1:A:381:VAL:O	2.35	0.52
1:A:232:GLU:HA	1:A:310:GLU:HG3	1.90	0.52
1:D:364:LYS:O	1:D:368:ARG:HG3	2.10	0.52
1:D:455:VAL:HG13	1:D:460:GLU:HB2	1.90	0.52
1:E:154:SER:N	7:E:720:HOH:O	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:479:ASN:HB3	1:F:484:GLU:HG2	1.92	0.52
1:G:343:GLN:HA	1:G:346:VAL:HG22	1.89	0.52
1:H:262:LEU:HD22	1:H:273:VAL:HG11	1.91	0.52
1:I:433:ASN:H	1:I:436:GLN:HB2	1.73	0.52
1:L:61:GLU:OE2	1:L:72:GLN:NE2	2.43	0.52
1:L:221:LEU:HB3	1:L:249:ILE:HA	1.90	0.52
1:N:149:THR:OG1	1:N:156:GLU:HA	2.08	0.52
2:O:76:GLU:HG3	2:U:66:ILE:HG21	1.91	0.52
2:R:68:ASN:N	2:R:90:ASP:O	2.35	0.52
2:T:59:VAL:HG22	2:T:94:ILE:HD11	1.90	0.52
1:C:102:GLU:OE1	1:C:445:ARG:NE	2.28	0.52
1:C:323:VAL:HG22	1:C:332:ILE:HA	1.90	0.52
1:D:349:ILE:HG23	1:D:365:LEU:HB3	1.91	0.52
1:E:128:VAL:HG13	1:E:501:ARG:HG3	1.90	0.52
1:E:193:MET:HG2	1:E:295:LEU:HD22	1.89	0.52
1:E:213:VAL:HG11	1:E:274:ALA:HB2	1.91	0.52
1:E:417:VAL:HG21	1:E:477:GLY:HA3	1.91	0.52
1:H:421:ARG:NH1	1:H:469:VAL:O	2.40	0.52
1:I:89:THR:N	6:I:601:ADP:O3B	2.41	0.52
1:I:102:GLU:HB2	1:I:442:VAL:HG13	1.92	0.52
1:J:215:LEU:HB2	1:J:323:VAL:HG22	1.90	0.52
1:J:501:ARG:NH1	1:J:505:GLN:OE1	2.41	0.52
1:K:345:ARG:NH2	1:K:368:ARG:HH12	2.07	0.52
1:K:368:ARG:O	1:K:372:LEU:HD23	2.09	0.52
1:L:324:VAL:O	1:L:331:THR:N	2.25	0.52
1:L:411:VAL:HA	1:L:496:PRO:HA	1.90	0.52
1:N:166:MET:HB2	1:N:171:LYS:HA	1.90	0.52
1:N:219:PHE:CE2	1:N:314:LEU:HD22	2.44	0.52
2:O:10:VAL:HG22	2:O:43:VAL:HG22	1.91	0.52
2:O:69:ASP:HA	2:O:73:VAL:HG21	1.90	0.52
1:A:278:ALA:HB3	1:A:285:ARG:HE	1.74	0.52
1:A:356:ALA:HB1	1:A:361:ASP:HB2	1.91	0.52
1:B:31:LEU:O	1:B:457:ASN:ND2	2.26	0.52
1:C:381:VAL:HG21	1:C:393:LYS:HA	1.90	0.52
1:F:124:VAL:HG21	1:F:508:ALA:HB2	1.91	0.52
1:F:448:GLU:OE1	1:F:470:LYS:NZ	2.41	0.52
1:G:397:GLU:O	1:G:401:HIS:ND1	2.43	0.52
1:H:345:ARG:NH2	1:H:368:ARG:HH12	2.07	0.52
1:J:433:ASN:H	1:J:436:GLN:HB2	1.73	0.52
1:K:419:LEU:HD22	1:K:447:MET:HG3	1.90	0.52
1:N:31:LEU:HD13	1:N:90:THR:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:224:ASP:OD2	1:N:286:LYS:HG2	2.09	0.52
1:N:411:VAL:HA	1:N:496:PRO:HA	1.92	0.52
1:B:397:GLU:O	1:B:401:HIS:ND1	2.43	0.52
1:D:421:ARG:O	1:D:425:LYS:HG3	2.09	0.52
1:E:295:LEU:HA	1:E:342:ILE:HD11	1.89	0.52
1:F:158:VAL:HG11	1:F:396:VAL:HA	1.91	0.52
1:G:124:VAL:HG13	1:G:504:LEU:HG	1.90	0.52
1:G:209:GLU:HG2	1:G:210:THR:HG23	1.91	0.52
1:H:68:ASN:O	1:H:72:GLN:HG2	2.10	0.52
1:J:221:LEU:HB3	1:J:249:ILE:HA	1.90	0.52
1:K:240:VAL:HG21	1:K:247:LEU:HD13	1.90	0.52
1:M:218:PRO:HG3	1:M:323:VAL:HG22	1.91	0.52
1:M:284:ARG:CZ	1:M:284:ARG:HB3	2.39	0.52
2:O:59:VAL:HG21	2:O:91:ILE:HG21	1.91	0.52
1:A:219:PHE:CZ	1:A:245:LYS:HE2	2.44	0.52
1:C:222:LEU:O	1:C:301:ILE:N	2.25	0.52
1:D:135:SER:HB3	1:D:497:THR:HG21	1.91	0.52
1:E:288:MET:HE1	1:E:368:ARG:HG2	1.92	0.52
1:E:414:GLY:HA3	1:E:493:ILE:HG22	1.91	0.52
1:H:144:ILE:HG23	1:H:403:THR:HB	1.92	0.52
1:H:186:GLU:O	1:H:380:LYS:N	2.30	0.52
1:I:215:LEU:HB3	1:I:246:PRO:HB2	1.91	0.52
1:I:235:PRO:HG3	1:I:310:GLU:HA	1.92	0.52
1:J:32:GLY:HA3	1:J:454:ILE:HG23	1.92	0.52
1:J:190:VAL:O	1:J:376:VAL:N	2.42	0.52
1:K:124:VAL:HG21	1:K:508:ALA:HB2	1.92	0.52
1:L:192:GLY:HA3	1:L:376:VAL:HG13	1.91	0.52
1:L:349:ILE:HG21	1:L:368:ARG:HB2	1.90	0.52
2:O:20:LYS:NZ	2:O:24:GLY:HA2	2.25	0.52
2:U:43:VAL:HG13	2:U:57:LEU:HD22	1.92	0.52
2:U:59:VAL:HG22	2:U:94:ILE:HD11	1.92	0.52
1:B:219:PHE:HD2	1:B:240:VAL:HG22	1.73	0.52
1:C:128:VAL:HG13	1:C:501:ARG:HG3	1.92	0.52
1:C:175:ILE:HB	1:C:404:ARG:HH12	1.74	0.52
1:C:193:MET:HG2	1:C:295:LEU:HD22	1.91	0.52
1:C:230:ILE:HD11	1:C:258:ALA:HA	1.91	0.52
1:F:31:LEU:HB2	1:F:90:THR:CG2	2.39	0.52
1:F:69:MET:HE1	1:F:520:MET:HB3	1.90	0.52
1:G:5:ASP:N	1:G:522:THR:O	2.36	0.52
1:G:140:ASP:OD1	1:G:140:ASP:N	2.42	0.52
1:H:241:ALA:HB2	1:H:271:VAL:HG22	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:345:ARG:O	1:I:349:ILE:HG13	2.10	0.52
1:I:461:GLU:HG3	1:I:464:VAL:H	1.75	0.52
1:K:122:LYS:NZ	1:K:432:GLN:OE1	2.42	0.52
1:K:345:ARG:O	1:K:349:ILE:HG13	2.09	0.52
1:K:420:ILE:HG12	1:K:448:GLU:HG2	1.91	0.52
1:M:349:ILE:O	1:M:353:ILE:HG13	2.10	0.52
1:M:421:ARG:HH12	1:M:469:VAL:C	2.18	0.52
1:N:215:LEU:HB2	1:N:323:VAL:HG22	1.91	0.52
1:N:429:LEU:HD23	1:N:440:ILE:HG12	1.92	0.52
1:A:239:ALA:HA	1:A:242:LYS:HE2	1.91	0.52
1:B:151:SER:HB2	1:B:399:ALA:HA	1.92	0.52
1:B:186:GLU:HG2	1:B:380:LYS:HB2	1.92	0.52
1:D:213:VAL:HG11	1:D:274:ALA:HB2	1.91	0.52
1:E:250:ILE:HD13	1:E:292:ILE:HD13	1.92	0.52
1:E:343:GLN:HA	1:E:346:VAL:HG22	1.91	0.52
1:F:190:VAL:N	1:F:376:VAL:O	2.33	0.52
1:F:325:ILE:HG13	1:F:330:THR:HG23	1.90	0.52
1:G:261:THR:OG1	2:U:28:THR:O	2.24	0.52
1:H:47:PRO:HG2	1:N:69:MET:HE2	1.92	0.52
1:H:76:GLU:HG2	1:H:80:LYS:HE3	1.92	0.52
1:H:440:ILE:O	1:H:444:LEU:HG	2.10	0.52
1:J:195:PHE:HZ	1:J:250:ILE:HD13	1.74	0.52
1:K:348:GLN:O	1:K:352:GLN:HG3	2.10	0.52
1:M:326:ASN:N	1:M:329:THR:O	2.24	0.52
1:N:77:VAL:HG13	1:N:506:TYR:HB3	1.91	0.52
1:N:322:ARG:HB2	1:N:333:ILE:HB	1.92	0.52
2:Q:37:ARG:HH12	2:R:3:ILE:HD11	1.75	0.52
1:A:39:VAL:O	1:G:520:MET:HA	2.10	0.52
1:A:69:MET:HE2	1:B:47:PRO:HG2	1.92	0.52
1:A:135:SER:HB3	1:A:497:THR:HG21	1.92	0.52
1:D:31:LEU:HB2	1:D:90:THR:CG2	2.38	0.52
1:D:458:CYS:SG	1:D:480:ALA:HB1	2.50	0.52
1:F:214:GLU:HG3	1:F:324:VAL:HG22	1.91	0.52
1:G:239:ALA:HA	1:G:242:LYS:HE2	1.92	0.52
1:I:204:PHE:HE2	1:I:275:ALA:HB3	1.75	0.52
1:J:31:LEU:HD13	1:J:90:THR:HB	1.92	0.52
1:K:222:LEU:HD23	1:K:250:ILE:HB	1.91	0.52
1:K:433:ASN:OD1	1:K:434:GLU:N	2.43	0.52
1:L:132:LYS:NZ	1:L:409:GLU:OE2	2.39	0.52
1:M:301:ILE:HG12	1:M:307:MET:HE1	1.91	0.52
1:N:115:ASP:O	1:N:436:GLN:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:11:ILE:HG12	2:S:85:ILE:HG12	1.91	0.52
2:U:26:VAL:HG12	2:U:28:THR:HG23	1.92	0.52
2:U:64:ILE:O	2:U:95:VAL:N	2.41	0.52
1:A:205:ILE:HD13	1:A:211:GLY:HA2	1.91	0.52
1:B:194:GLN:HG3	1:B:331:THR:HG22	1.92	0.52
1:D:73:MET:HE2	1:E:47:PRO:HG2	1.92	0.52
1:G:31:LEU:HB2	1:G:90:THR:CG2	2.40	0.52
1:G:214:GLU:OE2	1:G:322:ARG:NH1	2.43	0.52
1:G:364:LYS:O	1:G:368:ARG:HG3	2.09	0.52
1:G:414:GLY:HA3	1:G:493:ILE:HG22	1.92	0.52
1:H:477:GLY:N	1:H:486:GLY:O	2.39	0.52
1:I:85:ALA:HB2	1:I:502:SER:HB2	1.92	0.52
1:I:115:ASP:O	1:I:436:GLN:HG2	2.10	0.52
1:L:81:ALA:O	1:L:85:ALA:HB3	2.10	0.52
1:L:475:ASN:HB2	1:L:487:ASN:ND2	2.25	0.52
1:M:31:LEU:HD13	1:M:90:THR:HB	1.92	0.52
1:N:349:ILE:HD13	1:N:368:ARG:HB3	1.91	0.52
1:N:414:GLY:HA3	1:N:493:ILE:HG22	1.92	0.52
1:N:479:ASN:O	1:N:483:GLU:N	2.43	0.52
1:A:149:THR:OG1	1:A:156:GLU:HA	2.09	0.51
1:B:386:GLU:O	1:B:390:LYS:HG3	2.11	0.51
1:C:68:ASN:O	1:C:72:GLN:HG2	2.11	0.51
1:E:479:ASN:ND2	1:E:491:MET:HG3	2.24	0.51
1:G:421:ARG:O	1:G:425:LYS:HG3	2.10	0.51
1:H:115:ASP:O	1:H:436:GLN:HG2	2.09	0.51
1:H:455:VAL:HG22	1:H:478:TYR:CE2	2.45	0.51
1:I:221:LEU:N	1:I:248:LEU:O	2.28	0.51
1:L:85:ALA:HB2	1:L:502:SER:HB2	1.91	0.51
1:N:101:THR:HG22	1:N:105:LYS:HE2	1.91	0.51
2:R:77:LYS:HD2	2:R:80:ASN:HA	1.91	0.51
1:B:261:THR:HG21	2:P:27:LEU:HD13	1.92	0.51
1:B:417:VAL:HG21	1:B:477:GLY:HA3	1.92	0.51
1:C:283:ASP:OD1	1:C:284:ARG:N	2.43	0.51
1:C:313:THR:O	1:C:317:LEU:HG	2.09	0.51
1:C:314:LEU:HA	1:C:317:LEU:HD12	1.92	0.51
1:E:111:MET:HE1	1:E:116:LEU:HG	1.91	0.51
1:E:169:VAL:HB	1:E:377:ALA:HB2	1.92	0.51
1:F:68:ASN:O	1:F:72:GLN:HG2	2.09	0.51
1:G:465:VAL:HA	1:G:485:TYR:OH	2.10	0.51
1:I:368:ARG:O	1:I:372:LEU:HD23	2.10	0.51
1:J:350:ARG:HA	1:J:353:ILE:HD12	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:34:LYS:HB2	1:M:458:CYS:SG	2.51	0.51
1:M:498:LYS:HG3	1:M:501:ARG:HH21	1.74	0.51
1:A:71:ALA:HA	1:A:74:VAL:HG12	1.92	0.51
1:A:421:ARG:O	1:A:425:LYS:HG3	2.10	0.51
1:C:31:LEU:HB2	1:C:90:THR:CG2	2.38	0.51
1:G:472:GLY:HA3	1:G:476:TYR:CD2	2.44	0.51
1:H:197:ARG:NH1	1:H:277:LYS:HD3	2.26	0.51
1:I:16:MET:HE3	1:I:520:MET:HE1	1.92	0.51
1:J:247:LEU:HG	1:J:249:ILE:HD11	1.92	0.51
1:L:30:THR:HA	1:L:35:GLY:HA3	1.93	0.51
1:M:193:MET:HE3	1:M:295:LEU:HB3	1.92	0.51
1:M:345:ARG:O	1:M:349:ILE:HG13	2.10	0.51
1:N:279:PRO:O	1:N:285:ARG:HA	2.10	0.51
1:N:437:ASN:O	1:N:441:LYS:HG2	2.10	0.51
2:R:12:VAL:O	2:R:84:LEU:N	2.37	0.51
2:T:65:VAL:HG21	2:T:91:ILE:HD12	1.92	0.51
1:A:178:GLU:N	1:A:379:ILE:O	2.32	0.51
1:C:102:GLU:HB2	1:C:442:VAL:HG13	1.92	0.51
1:E:199:TYR:CD1	1:E:213:VAL:HG23	2.45	0.51
1:G:320:ALA:HA	1:G:335:GLY:HA2	1.93	0.51
1:H:342:ILE:HG23	1:H:372:LEU:HD12	1.92	0.51
1:I:301:ILE:HG12	1:I:307:MET:HE1	1.91	0.51
1:J:475:ASN:HB2	1:J:487:ASN:ND2	2.25	0.51
1:K:174:VAL:HG11	1:K:376:VAL:HG12	1.91	0.51
1:K:219:PHE:CE2	1:K:314:LEU:HD22	2.45	0.51
1:K:247:LEU:HG	1:K:249:ILE:HD11	1.92	0.51
1:M:39:VAL:HG22	1:M:49:ILE:HG23	1.92	0.51
1:M:95:LEU:O	1:M:99:ILE:HG13	2.11	0.51
1:M:204:PHE:HD1	1:M:266:THR:HG21	1.76	0.51
2:O:9:ARG:HB3	2:O:85:ILE:HD11	1.93	0.51
2:R:47:ARG:N	2:R:55:LYS:O	2.43	0.51
2:S:46:GLY:HA2	2:S:57:LEU:HD12	1.92	0.51
2:S:47:ARG:N	2:S:55:LYS:O	2.43	0.51
1:A:452:ARG:NH1	7:A:2013:HOH:O	2.29	0.51
1:B:230:ILE:HD12	1:B:230:ILE:H	1.75	0.51
1:C:150:ILE:HG23	3:C:601:ATP:C8	2.45	0.51
1:C:215:LEU:HD12	1:C:248:LEU:HB2	1.93	0.51
1:D:215:LEU:HD12	1:D:248:LEU:HB2	1.92	0.51
1:F:186:GLU:N	1:F:380:LYS:O	2.42	0.51
1:F:291:ASP:OD1	1:F:372:LEU:HD13	2.10	0.51
1:H:279:PRO:O	1:H:285:ARG:HA	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:472:GLY:HA3	1:H:476:TYR:CD2	2.45	0.51
1:I:27:VAL:HG12	1:I:90:THR:HG23	1.92	0.51
1:I:144:ILE:HB	1:I:166:MET:HE1	1.91	0.51
1:I:356:ALA:HB3	1:I:362:ARG:HH21	1.76	0.51
1:I:438:VAL:O	1:I:442:VAL:HG23	2.11	0.51
1:K:137:PRO:HA	1:K:410:GLY:HA2	1.92	0.51
1:K:472:GLY:HA3	1:K:476:TYR:CD2	2.45	0.51
1:M:122:LYS:HZ2	1:M:431:GLY:HA2	1.75	0.51
1:M:279:PRO:C	1:M:288:MET:HG3	2.36	0.51
1:N:32:GLY:HA3	1:N:454:ILE:HG23	1.91	0.51
1:N:39:VAL:HA	1:N:49:ILE:HA	1.92	0.51
1:N:131:LEU:HD21	1:N:500:THR:HB	1.93	0.51
1:B:381:VAL:C	1:B:389:MET:HE1	2.35	0.51
1:D:240:VAL:HG11	1:D:247:LEU:HB2	1.92	0.51
1:D:352:GLN:O	1:D:356:ALA:N	2.44	0.51
3:D:601:ATP:O1G	7:D:2001:HOH:O	2.19	0.51
1:F:71:ALA:HA	1:F:74:VAL:HG12	1.92	0.51
1:F:417:VAL:HG21	1:F:477:GLY:HA3	1.92	0.51
1:G:11:ASP:O	1:G:15:LYS:HG2	2.11	0.51
1:H:81:ALA:O	1:H:85:ALA:HB2	2.10	0.51
1:H:262:LEU:HB3	1:H:273:VAL:HG11	1.93	0.51
1:J:64:ASP:HB3	1:J:67:GLU:HB2	1.93	0.51
1:J:325:ILE:O	1:J:325:ILE:HG13	2.09	0.51
1:K:440:ILE:O	1:K:444:LEU:HG	2.11	0.51
1:L:69:MET:HE1	1:M:47:PRO:HD2	1.92	0.51
1:N:144:ILE:HD13	1:N:166:MET:SD	2.50	0.51
1:N:406:ALA:HB2	1:N:496:PRO:HG3	1.92	0.51
1:B:124:VAL:HG13	1:B:504:LEU:HG	1.91	0.51
1:B:200:LEU:HD21	1:B:277:LYS:HG3	1.92	0.51
1:B:250:ILE:HG23	1:B:278:ALA:HA	1.93	0.51
1:B:498:LYS:HG3	1:B:501:ARG:HH21	1.75	0.51
1:F:196:ASP:HA	1:F:329:THR:HA	1.91	0.51
1:F:519:CYS:HB3	1:G:38:VAL:HG22	1.92	0.51
1:G:175:ILE:HB	1:G:404:ARG:HH12	1.75	0.51
1:G:414:GLY:H	1:G:488:MET:HB3	1.76	0.51
1:H:15:LYS:NZ	1:H:64:ASP:OD2	2.33	0.51
1:H:85:ALA:HB2	1:H:502:SER:HB2	1.91	0.51
1:K:40:LEU:N	1:K:48:THR:O	2.44	0.51
1:K:479:ASN:CG	1:K:493:ILE:HD11	2.35	0.51
1:L:520:MET:HE3	1:M:39:VAL:HB	1.93	0.51
1:M:32:GLY:HA3	1:M:454:ILE:HG23	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:345:ARG:O	1:N:349:ILE:HG13	2.10	0.51
1:A:31:LEU:HB2	1:A:90:THR:CG2	2.40	0.51
1:A:150:ILE:HG23	3:A:601:ATP:C8	2.46	0.51
1:A:231:ARG:HA	1:A:234:LEU:HG	1.93	0.51
1:B:5:ASP:N	1:B:522:THR:O	2.29	0.51
1:C:200:LEU:HD12	1:C:275:ALA:HB1	1.91	0.51
1:D:16:MET:HE3	1:D:520:MET:SD	2.51	0.51
1:D:144:ILE:HG23	1:D:403:THR:HB	1.93	0.51
1:D:148:GLY:HA2	1:D:399:ALA:HB1	1.93	0.51
1:E:147:VAL:HG12	1:E:402:ALA:HB1	1.93	0.51
1:F:230:ILE:HG22	1:F:234:LEU:HD22	1.93	0.51
1:F:511:ALA:O	1:F:515:ILE:HG12	2.11	0.51
1:G:417:VAL:HG21	1:G:477:GLY:HA3	1.93	0.51
1:H:14:VAL:O	1:H:18:ARG:HG3	2.10	0.51
1:H:57:ALA:HA	1:H:60:ILE:HD12	1.93	0.51
1:H:213:VAL:HB	1:H:325:ILE:HG12	1.91	0.51
1:I:69:MET:SD	1:I:73:MET:HE1	2.50	0.51
1:I:279:PRO:O	1:I:285:ARG:HA	2.11	0.51
1:J:301:ILE:HG21	1:J:309:LEU:HD23	1.93	0.51
1:L:40:LEU:N	1:L:48:THR:O	2.42	0.51
1:L:57:ALA:HA	1:L:60:ILE:HD12	1.91	0.51
2:P:10:VAL:HG11	2:P:40:VAL:HG12	1.93	0.51
1:A:150:ILE:HG13	1:A:493:ILE:HA	1.92	0.51
1:C:158:VAL:HG11	1:C:396:VAL:HA	1.92	0.51
1:C:475:ASN:CG	1:C:489:ILE:HG12	2.36	0.51
1:C:517:THR:HG21	1:D:39:VAL:HG23	1.93	0.51
1:D:206:ASN:HD21	1:D:214:GLU:HB3	1.76	0.51
1:E:190:VAL:O	1:E:376:VAL:N	2.38	0.51
1:F:397:GLU:O	1:F:401:HIS:ND1	2.44	0.51
1:J:429:LEU:HG	1:J:440:ILE:HD13	1.93	0.51
1:L:224:ASP:OD2	1:L:286:LYS:HG2	2.10	0.51
1:M:158:VAL:HG13	1:M:396:VAL:HA	1.93	0.51
1:N:84:ALA:O	1:N:502:SER:OG	2.28	0.51
2:U:59:VAL:HG21	2:U:91:ILE:HG21	1.93	0.51
1:B:264:VAL:O	1:B:268:ARG:HG2	2.11	0.51
1:B:352:GLN:O	1:B:356:ALA:N	2.44	0.51
1:C:196:ASP:HA	1:C:329:THR:HA	1.93	0.51
1:H:351:GLN:NE2	1:H:352:GLN:HG3	2.26	0.51
1:I:81:ALA:O	1:I:85:ALA:HB3	2.10	0.51
1:K:56:VAL:HG12	1:K:60:ILE:HD11	1.92	0.51
1:L:429:LEU:HB3	1:L:440:ILE:HG21	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:178:GLU:N	1:M:379:ILE:O	2.29	0.51
1:N:346:VAL:O	1:N:350:ARG:HG2	2.11	0.51
1:N:368:ARG:O	1:N:372:LEU:HD23	2.11	0.51
1:A:66:PHE:CD1	1:A:520:MET:HE3	2.46	0.50
1:A:283:ASP:OD1	1:A:284:ARG:N	2.44	0.50
1:B:364:LYS:O	1:B:368:ARG:HG3	2.10	0.50
1:B:498:LYS:HG3	1:B:501:ARG:NH2	2.26	0.50
1:C:220:ILE:HG13	1:C:248:LEU:HD23	1.92	0.50
1:G:225:LYS:HZ2	1:G:309:LEU:H	1.59	0.50
1:I:284:ARG:NE	1:I:364:LYS:HB3	2.26	0.50
1:K:81:ALA:O	1:K:85:ALA:HB3	2.10	0.50
1:M:465:VAL:HA	1:M:485:TYR:OH	2.11	0.50
1:N:124:VAL:HG11	1:N:508:ALA:HB2	1.93	0.50
1:N:290:GLN:OE1	1:N:294:THR:OG1	2.30	0.50
1:A:200:LEU:N	1:A:275:ALA:O	2.37	0.50
1:C:190:VAL:O	1:C:376:VAL:N	2.36	0.50
1:E:213:VAL:HB	1:E:325:ILE:HB	1.94	0.50
1:E:219:PHE:CD2	1:E:240:VAL:HG22	2.46	0.50
1:E:240:VAL:HG21	1:E:247:LEU:HD12	1.92	0.50
1:G:136:VAL:HG23	1:G:411:VAL:HG23	1.94	0.50
1:G:458:CYS:SG	1:G:480:ALA:HB1	2.51	0.50
1:H:16:MET:O	1:H:20:VAL:HG23	2.11	0.50
1:I:6:VAL:HG13	1:I:521:VAL:HG22	1.92	0.50
1:J:27:VAL:HG12	1:J:90:THR:HG23	1.94	0.50
1:J:293:ALA:O	1:J:298:GLY:N	2.45	0.50
1:J:320:ALA:HA	1:J:336:VAL:H	1.75	0.50
1:J:429:LEU:O	1:J:441:LYS:NZ	2.39	0.50
1:J:460:GLU:O	1:J:462:PRO:HD3	2.11	0.50
1:L:186:GLU:HB3	1:L:380:LYS:HB2	1.93	0.50
1:N:38:VAL:O	1:N:50:THR:N	2.34	0.50
1:N:345:ARG:HH21	1:N:368:ARG:HH12	1.57	0.50
2:P:86:MET:HG2	2:P:87:SER:O	2.11	0.50
2:U:40:VAL:HG23	2:U:62:GLY:H	1.76	0.50
1:C:71:ALA:HA	1:C:74:VAL:HG12	1.93	0.50
1:D:287:ALA:HB1	1:D:368:ARG:CZ	2.41	0.50
1:E:386:GLU:O	1:E:390:LYS:HG3	2.11	0.50
1:E:522:THR:HG22	1:F:41:ASP:HB2	1.93	0.50
1:G:322:ARG:HB3	1:G:333:ILE:HB	1.93	0.50
1:I:472:GLY:HA3	1:I:476:TYR:CD2	2.47	0.50
1:J:414:GLY:HA3	1:J:493:ILE:HG22	1.94	0.50
1:J:468:THR:HB	1:J:485:TYR:CE2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:368:ARG:O	1:L:372:LEU:HD23	2.12	0.50
1:A:352:GLN:O	1:A:356:ALA:N	2.45	0.50
1:B:193:MET:HG2	1:B:295:LEU:HD22	1.93	0.50
1:B:308:GLU:H	1:B:311:LYS:HD3	1.77	0.50
1:D:206:ASN:ND2	1:D:214:GLU:O	2.44	0.50
1:E:308:GLU:H	1:E:311:LYS:HD3	1.75	0.50
1:I:115:ASP:CG	1:I:118:ARG:HH21	2.20	0.50
1:I:190:VAL:O	1:I:376:VAL:N	2.44	0.50
1:L:204:PHE:HE2	1:L:275:ALA:HB3	1.76	0.50
1:N:98:ALA:O	1:N:102:GLU:HG2	2.10	0.50
1:N:301:ILE:HG21	1:N:309:LEU:HD23	1.94	0.50
1:B:31:LEU:HB2	1:B:90:THR:CG2	2.39	0.50
1:B:228:SER:O	1:B:258:ALA:HB2	2.12	0.50
1:E:150:ILE:HG13	1:E:494:LEU:H	1.77	0.50
1:J:472:GLY:HA3	1:J:476:TYR:CD2	2.47	0.50
1:L:111:MET:HE3	1:L:435:ASP:OD1	2.11	0.50
1:L:200:LEU:HD21	1:L:277:LYS:HB2	1.92	0.50
1:M:16:MET:HE1	1:M:69:MET:SD	2.52	0.50
1:N:197:ARG:HE	1:N:279:PRO:HA	1.76	0.50
1:N:262:LEU:HD22	1:N:273:VAL:HG21	1.93	0.50
1:N:322:ARG:O	1:N:333:ILE:N	2.31	0.50
1:A:16:MET:HB3	1:A:514:MET:HE3	1.92	0.50
1:A:219:PHE:CD2	1:A:240:VAL:HG22	2.41	0.50
1:A:430:ARG:HH22	1:A:441:LYS:HE2	1.75	0.50
1:A:511:ALA:O	1:A:515:ILE:HG12	2.11	0.50
1:B:204:PHE:HD1	1:B:266:THR:HG21	1.77	0.50
1:B:287:ALA:HB1	1:B:368:ARG:CZ	2.42	0.50
1:C:399:ALA:O	1:C:403:THR:HG23	2.12	0.50
1:E:421:ARG:O	1:E:425:LYS:HG3	2.12	0.50
1:F:28:LYS:HE2	1:F:94:VAL:HG22	1.93	0.50
1:G:453:GLN:NE2	1:G:457:ASN:OD1	2.45	0.50
1:I:356:ALA:O	1:I:362:ARG:NH2	2.45	0.50
1:J:197:ARG:NH1	1:J:277:LYS:HD3	2.26	0.50
1:M:204:PHE:CD1	1:M:266:THR:HG21	2.47	0.50
2:Q:12:VAL:O	2:Q:84:LEU:N	2.45	0.50
1:A:179:ASP:OD1	1:A:393:LYS:HD2	2.11	0.50
1:A:223:ALA:HA	1:A:301:ILE:HB	1.93	0.50
1:B:102:GLU:OE1	1:B:445:ARG:NE	2.32	0.50
1:B:511:ALA:O	1:B:515:ILE:HG12	2.12	0.50
1:C:421:ARG:NH2	1:C:469:VAL:O	2.31	0.50
1:D:356:ALA:HB1	1:D:361:ASP:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:287:ALA:HA	1:F:345:ARG:NH2	2.27	0.50
1:G:429:LEU:HB3	1:G:440:ILE:HG21	1.93	0.50
1:I:15:LYS:O	1:I:67:GLU:HG2	2.11	0.50
1:L:163:ALA:O	1:L:167:ASP:HB2	2.12	0.50
1:M:204:PHE:HE2	1:M:275:ALA:HB3	1.77	0.50
1:N:188:ASP:OD1	1:N:188:ASP:N	2.45	0.50
1:N:197:ARG:NH1	1:N:277:LYS:HD3	2.26	0.50
2:R:43:VAL:HG13	2:R:57:LEU:HD22	1.94	0.50
1:C:213:VAL:HB	1:C:325:ILE:HB	1.92	0.50
1:D:291:ASP:O	1:D:294:THR:OG1	2.27	0.50
1:D:420:ILE:HG21	1:D:470:LYS:HG2	1.94	0.50
1:E:192:GLY:C	1:E:193:MET:HE2	2.37	0.50
1:E:264:VAL:HG21	2:S:28:THR:HG21	1.93	0.50
1:G:185:ASP:HA	1:G:381:VAL:HA	1.94	0.50
1:G:232:GLU:HA	1:G:310:GLU:HG3	1.94	0.50
1:H:37:ASN:ND2	1:H:51:LYS:HE2	2.26	0.50
1:H:406:ALA:HB2	1:H:496:PRO:HG3	1.94	0.50
1:I:104:LEU:HD21	1:I:514:MET:HG2	1.93	0.50
1:I:192:GLY:HA3	1:I:376:VAL:HG22	1.93	0.50
1:I:417:VAL:CG1	1:I:477:GLY:HA3	2.41	0.50
1:J:17:LEU:HB2	1:J:104:LEU:HD12	1.94	0.50
1:J:451:LEU:HD21	1:J:465:VAL:HG12	1.94	0.50
1:K:98:ALA:O	1:K:102:GLU:HG2	2.12	0.50
1:L:325:ILE:HG13	1:L:325:ILE:O	2.10	0.50
1:M:204:PHE:CE2	1:M:275:ALA:HB3	2.47	0.50
1:N:295:LEU:HA	1:N:342:ILE:HG12	1.94	0.50
1:B:32:GLY:HA2	3:B:601:ATP:O4'	2.11	0.50
1:B:87:ASP:OD1	1:B:88:GLY:N	2.41	0.50
1:D:386:GLU:O	1:D:390:LYS:HG3	2.11	0.50
1:F:16:MET:CE	1:F:520:MET:HE2	2.34	0.50
1:F:138:CYS:HB2	1:F:411:VAL:HG13	1.94	0.50
1:G:111:MET:HE1	1:G:438:VAL:HB	1.94	0.50
1:H:248:LEU:HD22	1:H:323:VAL:HG21	1.94	0.50
1:I:150:ILE:HD12	6:I:601:ADP:N7	2.26	0.50
1:J:114:MET:HE1	1:J:516:THR:HG22	1.93	0.50
1:J:241:ALA:HB2	1:J:271:VAL:HG22	1.94	0.50
1:J:421:ARG:NH1	1:J:469:VAL:O	2.44	0.50
1:L:106:ALA:O	1:L:111:MET:HG2	2.12	0.50
1:L:223:ALA:O	1:L:251:ALA:HA	2.12	0.50
1:L:235:PRO:HG3	1:L:310:GLU:HA	1.93	0.50
1:L:323:VAL:HG12	1:L:332:ILE:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:57:ALA:HA	1:M:60:ILE:HD12	1.93	0.50
1:N:204:PHE:HE2	1:N:275:ALA:HB3	1.76	0.50
2:R:66:ILE:HG21	2:S:76:GLU:HG2	1.93	0.50
2:U:13:LYS:N	2:U:39:GLU:O	2.43	0.50
1:A:151:SER:HB2	1:A:399:ALA:HA	1.94	0.49
1:D:259:LEU:O	1:D:263:VAL:HG13	2.12	0.49
1:D:448:GLU:HB3	1:D:452:ARG:NH1	2.27	0.49
1:G:179:ASP:OD1	1:G:389:MET:HE2	2.12	0.49
1:H:176:THR:O	1:H:379:ILE:N	2.43	0.49
1:H:200:LEU:HD21	1:H:277:LYS:HB2	1.94	0.49
1:J:81:ALA:O	1:J:85:ALA:HB2	2.11	0.49
1:J:122:LYS:NZ	1:J:431:GLY:HA2	2.27	0.49
1:L:264:VAL:HA	1:L:267:MET:HE2	1.94	0.49
1:L:423:ALA:HB2	1:L:447:MET:HB2	1.94	0.49
1:M:350:ARG:O	1:M:353:ILE:HB	2.11	0.49
1:B:321:LYS:HZ2	1:B:336:VAL:HG11	1.78	0.49
1:D:145:ALA:HA	1:D:159:GLY:C	2.37	0.49
1:F:214:GLU:OE2	1:F:322:ARG:NH1	2.46	0.49
1:H:47:PRO:CG	1:N:69:MET:HB2	2.41	0.49
1:I:31:LEU:HD23	1:I:453:GLN:HB3	1.94	0.49
1:I:197:ARG:NH1	1:I:277:LYS:HD3	2.27	0.49
2:O:40:VAL:HG23	2:O:62:GLY:H	1.77	0.49
2:T:2:ASN:OD1	2:T:3:ILE:N	2.45	0.49
1:A:128:VAL:HG13	1:A:501:ARG:HG3	1.93	0.49
1:A:431:GLY:N	1:A:437:ASN:OD1	2.44	0.49
1:B:399:ALA:O	1:B:403:THR:HG23	2.13	0.49
1:C:186:GLU:O	1:C:380:LYS:N	2.33	0.49
1:C:458:CYS:HB3	1:C:483:GLU:OE2	2.13	0.49
1:D:196:ASP:HA	1:D:329:THR:HA	1.94	0.49
1:D:438:VAL:O	1:D:442:VAL:HG23	2.12	0.49
1:F:66:PHE:HB3	1:F:520:MET:HE1	1.94	0.49
1:J:265:ASN:O	1:J:269:GLY:N	2.45	0.49
1:L:37:ASN:ND2	1:L:51:LYS:HE2	2.27	0.49
1:L:180:GLY:H	1:L:389:MET:HE2	1.78	0.49
1:N:100:ILE:HD11	1:N:510:VAL:HG22	1.95	0.49
1:N:177:VAL:HA	1:N:379:ILE:HB	1.93	0.49
1:N:284:ARG:HB3	1:N:284:ARG:CZ	2.41	0.49
1:B:175:ILE:HB	1:B:404:ARG:HH12	1.77	0.49
1:D:262:LEU:HD13	1:D:273:VAL:HG11	1.94	0.49
1:E:144:ILE:O	1:E:403:THR:HG22	2.12	0.49
1:E:409:GLU:OE2	1:E:501:ARG:NH2	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:111:MET:HE1	1:F:435:ASP:HA	1.95	0.49
1:H:356:ALA:HB2	1:H:365:LEU:HD12	1.94	0.49
1:I:325:ILE:HG13	1:I:325:ILE:O	2.12	0.49
1:I:349:ILE:HG12	1:I:368:ARG:NH2	2.28	0.49
1:K:432:GLN:HB2	1:K:436:GLN:NE2	2.27	0.49
1:K:460:GLU:HG3	1:K:478:TYR:OH	2.12	0.49
1:L:291:ASP:OD2	1:L:368:ARG:HD2	2.12	0.49
1:L:414:GLY:HA3	1:L:493:ILE:HG22	1.94	0.49
1:M:69:MET:HE1	1:N:39:VAL:HG11	1.94	0.49
1:M:122:LYS:HZ2	1:M:440:ILE:HD11	1.76	0.49
1:N:124:VAL:HG13	1:N:504:LEU:HG	1.94	0.49
1:N:124:VAL:HG21	1:N:508:ALA:HB2	1.94	0.49
2:O:2:ASN:OD1	2:O:3:ILE:N	2.45	0.49
2:R:47:ARG:NH2	2:R:88:GLU:HB3	2.27	0.49
2:S:17:VAL:HG22	2:S:34:LYS:HA	1.95	0.49
2:U:20:LYS:HE3	2:U:24:GLY:HA2	1.93	0.49
1:A:33:PRO:HD3	3:A:601:ATP:C4	2.48	0.49
1:C:265:ASN:HA	1:C:268:ARG:HB2	1.95	0.49
1:D:220:ILE:HG13	1:D:248:LEU:HD23	1.95	0.49
1:E:194:GLN:HG3	1:E:331:THR:HG22	1.94	0.49
1:E:498:LYS:HG3	1:E:501:ARG:NH2	2.28	0.49
1:G:438:VAL:O	1:G:442:VAL:HG23	2.13	0.49
1:H:218:PRO:HG3	1:H:323:VAL:HG22	1.94	0.49
1:I:204:PHE:CE2	1:I:275:ALA:HB3	2.47	0.49
1:J:186:GLU:O	1:J:380:LYS:N	2.26	0.49
1:J:224:ASP:OD2	1:J:286:LYS:HG2	2.12	0.49
1:K:219:PHE:HD2	1:K:240:VAL:HG22	1.76	0.49
1:K:349:ILE:HG12	1:K:368:ARG:CZ	2.42	0.49
1:K:356:ALA:HB3	1:K:362:ARG:NH2	2.26	0.49
1:L:174:VAL:HG11	1:L:376:VAL:HG12	1.93	0.49
1:L:323:VAL:HA	1:L:332:ILE:HA	1.94	0.49
1:M:230:ILE:O	1:M:234:LEU:N	2.45	0.49
1:B:225:LYS:N	1:B:252:GLU:OE1	2.46	0.49
1:B:411:VAL:HG21	1:B:494:LEU:HD22	1.94	0.49
1:C:143:ALA:O	1:C:147:VAL:HG23	2.12	0.49
1:C:498:LYS:HG3	1:C:501:ARG:NH2	2.27	0.49
1:D:498:LYS:HG3	1:D:501:ARG:NH2	2.28	0.49
1:E:178:GLU:O	1:E:381:VAL:N	2.45	0.49
1:F:66:PHE:HB3	1:F:520:MET:SD	2.51	0.49
1:F:199:TYR:HE2	1:F:212:ALA:HA	1.75	0.49
1:H:433:ASN:OD1	1:H:434:GLU:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:31:LEU:HD13	1:I:90:THR:HB	1.94	0.49
1:L:352:GLN:HA	1:L:355:GLU:HG3	1.94	0.49
1:M:262:LEU:O	1:M:266:THR:HG23	2.12	0.49
2:Q:11:ILE:HG13	2:Q:41:LEU:HD12	1.95	0.49
1:A:169:VAL:HG11	1:A:175:ILE:HG13	1.95	0.49
1:A:438:VAL:O	1:A:442:VAL:HG23	2.13	0.49
1:C:199:TYR:CD2	1:C:213:VAL:HG23	2.48	0.49
1:C:205:ILE:HD13	1:C:211:GLY:HA2	1.94	0.49
1:C:264:VAL:O	1:C:268:ARG:HG2	2.13	0.49
1:D:136:VAL:HG23	1:D:411:VAL:HG23	1.94	0.49
1:G:143:ALA:O	1:G:147:VAL:HG23	2.12	0.49
1:H:38:VAL:O	1:H:50:THR:N	2.42	0.49
1:H:224:ASP:OD2	1:H:286:LYS:HG2	2.13	0.49
1:M:76:GLU:HG2	1:M:80:LYS:HE3	1.93	0.49
1:M:148:GLY:HA2	1:M:399:ALA:HB1	1.95	0.49
1:M:345:ARG:NH2	1:M:368:ARG:HH12	2.11	0.49
1:M:353:ILE:CG2	1:M:362:ARG:HH22	2.23	0.49
2:P:86:MET:HG3	2:P:90:ASP:HB2	1.95	0.49
1:A:141:SER:HB2	1:A:163:ALA:HB1	1.95	0.49
1:B:136:VAL:HG23	1:B:411:VAL:HG23	1.95	0.49
1:B:199:TYR:HE2	1:B:212:ALA:HA	1.76	0.49
1:E:287:ALA:HA	1:E:345:ARG:NH2	2.28	0.49
1:F:177:VAL:HG23	1:F:400:LEU:HD22	1.95	0.49
1:G:179:ASP:OD1	1:G:393:LYS:HD2	2.12	0.49
1:I:491:MET:HG2	1:I:493:ILE:HG13	1.93	0.49
1:J:37:ASN:ND2	1:J:51:LYS:HE2	2.27	0.49
1:J:206:ASN:ND2	1:J:214:GLU:O	2.45	0.49
1:K:130:GLU:OE1	1:K:426:LEU:HG	2.12	0.49
1:K:460:GLU:O	1:K:462:PRO:HD3	2.13	0.49
1:L:145:ALA:HA	1:L:159:GLY:C	2.38	0.49
1:L:417:VAL:O	1:L:421:ARG:HG2	2.13	0.49
1:M:346:VAL:O	1:M:350:ARG:HG2	2.12	0.49
1:B:16:MET:HB3	1:B:514:MET:HE3	1.94	0.49
1:C:215:LEU:HB3	1:C:246:PRO:HB2	1.93	0.49
1:C:386:GLU:O	1:C:389:MET:HB2	2.13	0.49
1:D:342:ILE:HG23	1:D:372:LEU:HB3	1.95	0.49
1:D:427:ALA:HA	1:D:444:LEU:HD13	1.94	0.49
1:E:283:ASP:OD1	1:E:284:ARG:N	2.46	0.49
1:E:291:ASP:OD1	1:E:372:LEU:HD22	2.11	0.49
1:F:154:SER:N	7:F:719:HOH:O	2.44	0.49
1:I:177:VAL:HG13	1:I:393:LYS:NZ	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:265:ASN:O	1:I:269:GLY:N	2.45	0.49
1:K:455:VAL:HG22	1:K:478:TYR:CE2	2.48	0.49
1:L:12:ALA:O	1:L:16:MET:HG2	2.11	0.49
1:L:32:GLY:HA3	1:L:454:ILE:HG23	1.95	0.49
1:M:171:LYS:HD2	1:M:407:VAL:HG22	1.93	0.49
1:M:468:THR:HB	1:M:485:TYR:CE2	2.48	0.49
1:N:16:MET:O	1:N:20:VAL:HG23	2.13	0.49
1:N:37:ASN:ND2	1:N:51:LYS:HE2	2.28	0.49
1:N:241:ALA:HB2	1:N:271:VAL:HG22	1.95	0.49
1:N:320:ALA:HA	1:N:336:VAL:H	1.78	0.49
1:B:421:ARG:HH12	1:B:470:LYS:HA	1.77	0.49
1:C:102:GLU:CB	1:C:442:VAL:HG13	2.43	0.49
1:D:41:ASP:OD1	1:D:47:PRO:HG3	2.13	0.49
1:E:179:ASP:OD1	1:E:393:LYS:HD2	2.13	0.49
1:F:116:LEU:HD21	1:F:438:VAL:HG12	1.95	0.49
1:F:209:GLU:HG2	1:F:210:THR:HG23	1.94	0.49
1:F:251:ALA:O	1:F:278:ALA:N	2.43	0.49
1:F:313:THR:O	1:F:317:LEU:HG	2.13	0.49
1:I:460:GLU:O	1:I:462:PRO:HD3	2.13	0.49
1:J:477:GLY:N	1:J:486:GLY:O	2.43	0.49
1:K:262:LEU:HD22	1:K:273:VAL:HG11	1.95	0.49
1:N:440:ILE:O	1:N:444:LEU:HG	2.13	0.49
1:A:189:VAL:HA	1:A:377:ALA:HA	1.94	0.48
1:A:421:ARG:NH2	1:A:469:VAL:O	2.37	0.48
1:B:33:PRO:HD3	3:B:601:ATP:C4	2.48	0.48
1:B:349:ILE:HG23	1:B:365:LEU:HD12	1.95	0.48
1:C:447:MET:HE2	1:C:447:MET:HA	1.95	0.48
1:E:364:LYS:O	1:E:368:ARG:HG3	2.12	0.48
1:G:283:ASP:OD1	1:G:284:ARG:N	2.46	0.48
1:G:458:CYS:HB3	1:G:483:GLU:OE2	2.13	0.48
1:I:284:ARG:HE	1:I:364:LYS:HB3	1.78	0.48
1:J:115:ASP:CG	1:J:118:ARG:HH21	2.21	0.48
1:J:122:LYS:HZ2	1:J:431:GLY:HA2	1.77	0.48
1:J:124:VAL:HG11	1:J:508:ALA:HB2	1.95	0.48
1:J:218:PRO:HG3	1:J:323:VAL:HG22	1.95	0.48
1:K:202:PRO:HG2	1:L:384:ALA:HA	1.94	0.48
1:K:415:GLY:HA2	6:K:601:ADP:N3	2.28	0.48
1:L:311:LYS:HD2	1:L:311:LYS:O	2.13	0.48
1:N:498:LYS:HG3	1:N:501:ARG:HH21	1.77	0.48
2:T:94:ILE:HG13	2:U:6:LEU:HD11	1.95	0.48
1:A:213:VAL:HB	1:A:325:ILE:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:114:MET:HE1	1:C:34:LYS:HG2	1.95	0.48
1:B:201:SER:HB2	1:B:259:LEU:HD21	1.95	0.48
1:B:472:GLY:HA3	1:B:476:TYR:CD2	2.48	0.48
1:E:32:GLY:HA2	3:E:601:ATP:O4'	2.13	0.48
1:E:301:ILE:HD11	1:E:316:ASP:HB3	1.95	0.48
1:F:140:ASP:N	1:F:140:ASP:OD1	2.46	0.48
1:F:472:GLY:HA3	1:F:476:TYR:CD2	2.48	0.48
1:H:175:ILE:HA	1:H:377:ALA:HB3	1.94	0.48
1:H:193:MET:O	1:H:331:THR:OG1	2.23	0.48
1:H:204:PHE:HE2	1:H:275:ALA:HB3	1.77	0.48
1:I:311:LYS:HD2	1:I:311:LYS:O	2.14	0.48
1:I:323:VAL:HG12	1:I:332:ILE:HG22	1.93	0.48
1:I:468:THR:HB	1:I:485:TYR:CE2	2.48	0.48
1:M:220:ILE:HG12	1:M:222:LEU:HD21	1.94	0.48
1:M:262:LEU:HB3	1:M:273:VAL:HG11	1.94	0.48
1:M:477:GLY:O	1:M:486:GLY:N	2.46	0.48
1:A:102:GLU:HB2	1:A:442:VAL:HG13	1.95	0.48
1:A:199:TYR:CD2	1:A:213:VAL:HG23	2.48	0.48
1:B:163:ALA:HA	1:B:166:MET:HE3	1.94	0.48
1:C:219:PHE:CZ	1:C:245:LYS:HD2	2.48	0.48
1:C:261:THR:O	1:C:265:ASN:ND2	2.44	0.48
1:C:387:VAL:HA	1:C:390:LYS:HE2	1.94	0.48
1:D:320:ALA:HA	1:D:335:GLY:HA2	1.93	0.48
1:G:150:ILE:O	7:G:701:HOH:O	2.20	0.48
1:I:37:ASN:ND2	1:I:51:LYS:HE2	2.27	0.48
1:I:301:ILE:HG21	1:I:309:LEU:HD23	1.94	0.48
1:J:163:ALA:HA	1:J:166:MET:HE3	1.94	0.48
1:J:204:PHE:HE2	1:J:275:ALA:HB3	1.77	0.48
1:K:262:LEU:HD22	1:K:273:VAL:HG21	1.95	0.48
1:L:6:VAL:HG22	1:L:521:VAL:HG22	1.95	0.48
1:L:460:GLU:O	1:L:462:PRO:HD3	2.14	0.48
1:M:39:VAL:HG13	1:M:49:ILE:HG12	1.95	0.48
1:N:115:ASP:CG	1:N:118:ARG:HH21	2.21	0.48
1:N:214:GLU:HG3	1:N:324:VAL:HG22	1.94	0.48
1:N:222:LEU:HD23	1:N:250:ILE:HB	1.96	0.48
1:N:383:ALA:HB1	1:N:388:GLU:HB3	1.95	0.48
1:N:472:GLY:HA3	1:N:476:TYR:CD2	2.48	0.48
2:S:65:VAL:HB	2:S:91:ILE:HG23	1.96	0.48
1:A:134:LEU:HD23	1:A:418:ALA:HB1	1.95	0.48
1:A:287:ALA:HA	1:A:345:ARG:NH2	2.27	0.48
1:A:427:ALA:HA	1:A:444:LEU:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:166:MET:HB3	1:B:175:ILE:HD11	1.94	0.48
1:B:240:VAL:HG11	1:B:247:LEU:HB2	1.95	0.48
1:C:325:ILE:HG13	1:C:330:THR:HG23	1.94	0.48
1:E:206:ASN:HD21	1:E:214:GLU:HB3	1.78	0.48
1:G:323:VAL:HG22	1:G:332:ILE:HA	1.94	0.48
1:I:186:GLU:O	1:I:380:LYS:N	2.26	0.48
1:I:429:LEU:HG	1:I:440:ILE:HD13	1.93	0.48
1:J:36:ARG:NH2	1:J:456:LEU:O	2.34	0.48
1:J:299:THR:N	1:J:316:ASP:O	2.43	0.48
1:L:149:THR:OG1	1:L:156:GLU:HA	2.13	0.48
1:L:193:MET:HG2	1:L:295:LEU:HD13	1.94	0.48
1:M:36:ARG:HE	1:M:457:ASN:HA	1.79	0.48
1:N:16:MET:HE3	1:N:520:MET:CE	2.44	0.48
2:O:11:ILE:HD12	2:O:42:ALA:HB3	1.94	0.48
2:P:64:ILE:O	2:P:95:VAL:N	2.38	0.48
2:T:26:VAL:HG12	2:T:28:THR:HG23	1.95	0.48
1:B:20:VAL:HA	1:B:74:VAL:HG11	1.95	0.48
1:B:346:VAL:HA	1:B:349:ILE:HD12	1.95	0.48
1:B:452:ARG:NH1	7:B:2009:HOH:O	2.30	0.48
1:C:247:LEU:HB3	1:C:273:VAL:HG22	1.95	0.48
1:D:246:PRO:HG3	1:D:272:LYS:HE2	1.93	0.48
1:E:231:ARG:HH22	2:S:27:LEU:HD13	1.79	0.48
1:F:151:SER:HB2	1:F:399:ALA:HA	1.96	0.48
1:F:352:GLN:HB3	1:F:365:LEU:HD13	1.96	0.48
1:G:61:GLU:HG2	1:G:72:GLN:OE1	2.13	0.48
1:H:325:ILE:HA	1:H:330:THR:HA	1.96	0.48
1:J:25:ASP:OD1	1:J:97:GLN:NE2	2.45	0.48
1:K:132:LYS:NZ	1:K:409:GLU:OE2	2.46	0.48
1:K:165:ALA:HB2	1:K:187:LEU:HD22	1.96	0.48
1:K:166:MET:HB3	1:K:171:LYS:HA	1.96	0.48
1:K:381:VAL:HG21	1:K:393:LYS:HB2	1.96	0.48
1:L:40:LEU:HD13	1:L:59:GLU:HG3	1.95	0.48
1:L:107:VAL:HG13	1:L:113:PRO:HG3	1.96	0.48
1:L:231:ARG:O	1:L:231:ARG:NH1	2.39	0.48
1:N:479:ASN:HB2	1:N:491:MET:SD	2.54	0.48
2:U:65:VAL:HG23	2:U:67:PHE:HD1	1.78	0.48
1:B:278:ALA:HB3	1:B:285:ARG:HH11	1.77	0.48
1:B:479:ASN:HB3	1:B:484:GLU:HG2	1.95	0.48
1:C:32:GLY:HA2	3:C:601:ATP:O4'	2.14	0.48
1:D:152:ALA:HB2	1:D:399:ALA:HB2	1.96	0.48
1:D:199:TYR:HE2	1:D:212:ALA:HA	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:166:MET:HA	1:G:169:VAL:HG12	1.94	0.48
1:G:189:VAL:HA	1:G:377:ALA:HA	1.96	0.48
1:G:226:LYS:HZ1	1:G:255:GLU:N	2.12	0.48
1:I:440:ILE:O	1:I:444:LEU:HG	2.13	0.48
1:J:194:GLN:HG3	1:J:331:THR:HB	1.95	0.48
1:J:284:ARG:HB3	1:J:284:ARG:CZ	2.44	0.48
1:M:279:PRO:O	1:M:285:ARG:HA	2.13	0.48
1:N:12:ALA:HA	1:N:520:MET:HE2	1.96	0.48
1:N:82:ASN:O	1:N:86:GLY:N	2.31	0.48
2:Q:14:ARG:NH1	2:Q:69:ASP:OD1	2.46	0.48
1:A:111:MET:HE2	1:A:116:LEU:HG	1.95	0.48
1:B:148:GLY:HA2	1:B:399:ALA:HB1	1.96	0.48
1:C:356:ALA:HB1	1:C:361:ASP:HB2	1.95	0.48
1:E:222:LEU:O	1:E:301:ILE:N	2.25	0.48
1:E:427:ALA:O	1:E:441:LYS:NZ	2.46	0.48
1:F:392:LYS:O	1:F:396:VAL:HG23	2.14	0.48
1:H:187:LEU:HB3	1:H:379:ILE:HG12	1.95	0.48
1:J:342:ILE:O	1:J:346:VAL:HG23	2.13	0.48
1:K:221:LEU:HD23	1:K:249:ILE:HG23	1.96	0.48
1:L:5:ASP:N	1:L:522:THR:O	2.44	0.48
1:M:472:GLY:HA3	1:M:476:TYR:CD2	2.48	0.48
1:N:199:TYR:CE2	1:N:327:LYS:HA	2.49	0.48
1:N:311:LYS:HD2	1:N:311:LYS:O	2.13	0.48
1:N:421:ARG:NH1	1:N:469:VAL:O	2.46	0.48
1:A:100:ILE:HA	1:A:515:ILE:HD11	1.95	0.48
1:A:176:THR:O	1:A:379:ILE:N	2.33	0.48
1:A:287:ALA:HB1	1:A:368:ARG:CZ	2.44	0.48
1:B:114:MET:CE	1:C:34:LYS:HG2	2.44	0.48
1:D:230:ILE:O	1:D:233:MET:N	2.41	0.48
1:E:6:VAL:HG22	1:E:521:VAL:HG13	1.96	0.48
1:F:207:LYS:HE2	1:F:212:ALA:HB3	1.95	0.48
1:H:30:THR:HB	1:H:51:LYS:C	2.38	0.48
1:I:161:LEU:HG	1:I:187:LEU:HD23	1.96	0.48
1:I:194:GLN:HA	1:I:330:THR:O	2.14	0.48
1:I:323:VAL:HA	1:I:332:ILE:HA	1.95	0.48
1:I:359:ASP:O	1:I:362:ARG:HB2	2.14	0.48
1:I:433:ASN:OD1	1:I:434:GLU:N	2.47	0.48
1:K:195:PHE:CE2	1:K:197:ARG:HB2	2.49	0.48
1:K:204:PHE:HE2	1:K:275:ALA:HB3	1.78	0.48
1:L:16:MET:O	1:L:20:VAL:HG23	2.14	0.48
1:M:311:LYS:O	1:M:311:LYS:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:37:ARG:HH22	2:P:78:ILE:HG22	1.78	0.48
1:A:219:PHE:HB3	1:A:317:LEU:HD13	1.95	0.48
1:A:364:LYS:O	1:A:368:ARG:HG3	2.13	0.48
1:B:427:ALA:O	1:B:441:LYS:NZ	2.46	0.48
1:C:144:ILE:HG21	1:C:166:MET:HE3	1.96	0.48
1:D:124:VAL:HG22	1:D:504:LEU:HD11	1.95	0.48
1:E:479:ASN:CG	1:E:493:ILE:HD11	2.39	0.48
1:F:122:LYS:NZ	1:F:430:ARG:O	2.34	0.48
1:F:141:SER:HB2	1:F:163:ALA:HB1	1.96	0.48
1:F:144:ILE:HG23	1:F:403:THR:CG2	2.44	0.48
1:F:220:ILE:N	1:F:318:GLY:O	2.33	0.48
1:G:102:GLU:CB	1:G:442:VAL:HG13	2.44	0.48
1:H:124:VAL:HG13	1:H:504:LEU:HG	1.95	0.48
1:H:320:ALA:HA	1:H:336:VAL:H	1.79	0.48
1:J:284:ARG:HE	1:J:364:LYS:HB3	1.78	0.48
1:K:70:GLY:HA2	1:K:73:MET:HE2	1.96	0.48
1:L:220:ILE:HG13	1:L:248:LEU:HD22	1.94	0.48
1:L:259:LEU:O	1:L:263:VAL:HG23	2.13	0.48
1:L:265:ASN:O	1:L:269:GLY:N	2.46	0.48
1:M:222:LEU:HD13	1:M:293:ALA:HA	1.96	0.48
2:P:40:VAL:HG23	2:P:62:GLY:N	2.29	0.48
1:A:415:GLY:HA2	3:A:601:ATP:H1'	1.96	0.48
1:A:475:ASN:HB2	1:A:487:ASN:ND2	2.29	0.48
1:B:226:LYS:HZ3	1:B:253:ASP:HB3	1.79	0.48
1:D:479:ASN:N	1:D:484:GLU:O	2.43	0.48
1:E:268:ARG:NH1	2:S:26:VAL:HG11	2.29	0.48
1:F:320:ALA:HA	1:F:335:GLY:HA2	1.95	0.48
1:F:430:ARG:HH12	1:F:441:LYS:HE2	1.79	0.48
1:F:469:VAL:HG22	1:F:477:GLY:C	2.39	0.48
1:G:115:ASP:CG	1:G:433:ASN:HD21	2.22	0.48
1:I:477:GLY:O	1:I:486:GLY:N	2.47	0.48
1:J:69:MET:SD	1:J:73:MET:HE1	2.53	0.48
1:L:262:LEU:HD22	1:L:273:VAL:HG21	1.95	0.48
1:L:421:ARG:NH1	1:L:469:VAL:O	2.46	0.48
1:L:479:ASN:HB2	1:L:491:MET:HE3	1.94	0.48
1:M:140:ASP:O	1:M:144:ILE:HG12	2.14	0.48
1:M:429:LEU:HG	1:M:440:ILE:HD13	1.95	0.48
2:P:12:VAL:CG2	2:P:84:LEU:HB2	2.44	0.48
2:S:5:PRO:HD3	2:S:42:ALA:HB1	1.96	0.48
2:S:67:PHE:CE2	2:S:69:ASP:HB3	2.49	0.48
1:A:207:LYS:HZ3	1:A:214:GLU:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:472:GLY:HA3	1:A:476:TYR:CD2	2.48	0.47
1:B:214:GLU:HG3	1:B:324:VAL:HG22	1.95	0.47
1:D:128:VAL:HG13	1:D:501:ARG:HG3	1.96	0.47
1:E:31:LEU:HB2	1:E:90:THR:CG2	2.40	0.47
1:E:33:PRO:HD3	3:E:601:ATP:C4	2.49	0.47
1:F:221:LEU:HD11	1:F:309:LEU:HD11	1.96	0.47
1:F:262:LEU:O	1:F:266:THR:HG23	2.14	0.47
1:F:422:VAL:HA	1:F:425:LYS:HE2	1.96	0.47
1:G:178:GLU:HA	1:G:393:LYS:HE2	1.95	0.47
1:G:399:ALA:O	1:G:403:THR:HG23	2.13	0.47
1:J:419:LEU:HD22	1:J:447:MET:SD	2.54	0.47
1:K:324:VAL:O	1:K:331:THR:N	2.43	0.47
1:M:419:LEU:HD22	1:M:447:MET:HE3	1.95	0.47
1:M:479:ASN:HB2	1:M:491:MET:SD	2.54	0.47
2:R:27:LEU:HB3	2:R:31:ALA:HB3	1.95	0.47
1:A:138:CYS:HB2	1:A:411:VAL:HG13	1.96	0.47
1:B:68:ASN:O	1:B:72:GLN:HG2	2.14	0.47
1:C:31:LEU:O	1:C:457:ASN:ND2	2.32	0.47
1:D:32:GLY:HA2	3:D:601:ATP:O4'	2.14	0.47
1:E:178:GLU:HA	1:E:393:LYS:HE2	1.95	0.47
1:F:134:LEU:HD23	1:F:418:ALA:HB1	1.95	0.47
1:G:206:ASN:HD21	1:G:214:GLU:HB3	1.79	0.47
3:G:601:ATP:H5'2	3:G:601:ATP:H8	1.79	0.47
1:H:319:GLN:HB2	1:H:336:VAL:HB	1.97	0.47
1:H:414:GLY:HA3	1:H:493:ILE:HG22	1.95	0.47
1:I:16:MET:HE1	1:I:66:PHE:O	2.14	0.47
1:I:365:LEU:HA	1:I:368:ARG:HG3	1.95	0.47
1:J:458:CYS:SG	1:J:480:ALA:HB1	2.54	0.47
1:J:465:VAL:HA	1:J:485:TYR:OH	2.14	0.47
1:K:193:MET:HE3	1:K:295:LEU:HD13	1.95	0.47
1:K:218:PRO:HG3	1:K:323:VAL:HG22	1.96	0.47
1:K:519:CYS:HB3	1:L:38:VAL:HG22	1.96	0.47
1:L:12:ALA:HB1	1:L:520:MET:SD	2.55	0.47
1:M:37:ASN:ND2	1:M:51:LYS:HE2	2.28	0.47
1:N:64:ASP:HB3	1:N:67:GLU:HB2	1.96	0.47
1:N:250:ILE:HG12	1:N:276:VAL:HB	1.94	0.47
2:R:65:VAL:HG23	2:R:67:PHE:HD1	1.79	0.47
2:S:74:LYS:O	2:S:85:ILE:N	2.46	0.47
1:A:11:ASP:O	1:A:15:LYS:HG2	2.13	0.47
1:A:458:CYS:HB3	1:A:483:GLU:OE2	2.14	0.47
1:D:146:GLN:HB2	1:D:494:LEU:HD12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:513:LEU:HD11	1:E:388:GLU:HA	1.95	0.47
1:F:427:ALA:HA	1:F:444:LEU:HD13	1.97	0.47
1:G:32:GLY:HA2	3:G:601:ATP:O4'	2.14	0.47
1:H:165:ALA:HB2	1:H:187:LEU:HD22	1.96	0.47
1:J:65:LYS:O	1:J:69:MET:HB2	2.14	0.47
1:J:440:ILE:O	1:J:444:LEU:HG	2.14	0.47
1:K:190:VAL:O	1:K:376:VAL:N	2.47	0.47
1:K:230:ILE:HD13	1:K:261:THR:HB	1.95	0.47
1:K:411:VAL:HG12	1:K:496:PRO:HA	1.97	0.47
1:K:421:ARG:HH12	1:K:469:VAL:C	2.22	0.47
1:L:194:GLN:HA	1:L:330:THR:O	2.14	0.47
1:M:14:VAL:O	1:M:18:ARG:HG3	2.12	0.47
1:M:323:VAL:HA	1:M:332:ILE:HA	1.97	0.47
1:M:324:VAL:HB	1:M:331:THR:HG23	1.96	0.47
1:N:122:LYS:HZ3	1:N:431:GLY:HA2	1.79	0.47
1:N:292:ILE:HA	1:N:295:LEU:HD12	1.95	0.47
1:N:460:GLU:O	1:N:462:PRO:HD3	2.15	0.47
2:O:4:ARG:NH1	2:U:94:ILE:HD12	2.30	0.47
2:O:38:GLY:HA3	2:O:67:PHE:HE1	1.79	0.47
2:Q:59:VAL:HG11	2:Q:91:ILE:HG21	1.95	0.47
2:R:73:VAL:HA	2:R:86:MET:HB3	1.96	0.47
2:R:94:ILE:HG13	2:S:6:LEU:HD11	1.96	0.47
1:A:227:ILE:HG23	1:A:233:MET:SD	2.54	0.47
1:A:346:VAL:HA	1:A:349:ILE:HB	1.96	0.47
1:C:20:VAL:HA	1:C:74:VAL:HG11	1.96	0.47
1:C:430:ARG:HD2	1:C:437:ASN:HB3	1.96	0.47
1:D:231:ARG:NH2	2:R:21:SER:OG	2.47	0.47
1:F:20:VAL:HG12	1:F:97:GLN:OE1	2.15	0.47
1:F:22:VAL:HG11	1:F:62:LEU:HD21	1.95	0.47
1:F:69:MET:HB3	1:G:47:PRO:HG2	1.96	0.47
1:G:128:VAL:HG13	1:G:501:ARG:HG3	1.96	0.47
1:I:353:ILE:HG23	1:I:362:ARG:NH1	2.30	0.47
1:I:460:GLU:HG3	1:I:478:TYR:OH	2.14	0.47
1:K:417:VAL:O	1:K:421:ARG:HG2	2.14	0.47
1:L:115:ASP:CG	1:L:118:ARG:HH21	2.22	0.47
1:L:148:GLY:CA	1:L:399:ALA:HB1	2.45	0.47
1:M:190:VAL:O	1:M:376:VAL:N	2.48	0.47
1:M:319:GLN:HB2	1:M:336:VAL:HB	1.96	0.47
1:M:339:GLU:HA	1:M:342:ILE:HD12	1.95	0.47
1:N:140:ASP:O	1:N:144:ILE:HG13	2.15	0.47
1:N:233:MET:HE1	1:N:249:ILE:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:417:VAL:O	1:N:421:ARG:HG2	2.14	0.47
1:N:420:ILE:HG12	1:N:448:GLU:HG2	1.97	0.47
1:N:477:GLY:N	1:N:486:GLY:O	2.48	0.47
2:Q:12:VAL:CG2	2:Q:84:LEU:HB2	2.45	0.47
1:A:5:ASP:N	1:A:522:THR:O	2.29	0.47
1:A:264:VAL:HG11	2:O:28:THR:HG21	1.95	0.47
1:B:259:LEU:O	1:B:263:VAL:HG13	2.15	0.47
1:C:422:VAL:HA	1:C:425:LYS:HE2	1.97	0.47
1:C:430:ARG:HD3	1:C:430:ARG:HA	1.74	0.47
1:D:194:GLN:H	1:D:371:LYS:HZ2	1.63	0.47
1:E:479:ASN:N	1:E:484:GLU:O	2.47	0.47
1:F:451:LEU:HD21	1:F:469:VAL:HG21	1.96	0.47
1:G:262:LEU:O	1:G:266:THR:HG23	2.15	0.47
1:G:402:ALA:O	1:G:496:PRO:HG3	2.15	0.47
1:H:69:MET:HE1	1:I:39:VAL:HG12	1.96	0.47
1:H:438:VAL:O	1:H:442:VAL:HG23	2.15	0.47
1:I:352:GLN:HA	1:I:355:GLU:HG3	1.95	0.47
1:I:353:ILE:HG23	1:I:362:ARG:HH12	1.79	0.47
1:J:339:GLU:HA	1:J:342:ILE:HD12	1.97	0.47
1:K:85:ALA:HB2	1:K:502:SER:HB2	1.95	0.47
1:K:124:VAL:HG11	1:K:508:ALA:HB2	1.95	0.47
1:L:76:GLU:HG2	1:L:80:LYS:HE3	1.95	0.47
1:L:204:PHE:CE2	1:L:275:ALA:HB3	2.49	0.47
1:L:455:VAL:HG21	1:L:465:VAL:HG11	1.96	0.47
1:M:290:GLN:OE1	1:M:294:THR:OG1	2.32	0.47
1:N:17:LEU:HD11	1:N:101:THR:HG23	1.97	0.47
1:N:95:LEU:O	1:N:99:ILE:HG13	2.13	0.47
2:T:47:ARG:N	2:T:55:LYS:O	2.47	0.47
1:A:152:ALA:HB2	1:A:399:ALA:HB2	1.97	0.47
1:A:165:ALA:HB2	1:A:379:ILE:HD11	1.97	0.47
1:A:353:ILE:HG23	1:A:362:ARG:HB2	1.95	0.47
1:B:455:VAL:HG13	1:B:460:GLU:HB2	1.97	0.47
1:C:112:ASN:ND2	1:C:115:ASP:OD2	2.42	0.47
1:C:226:LYS:HZ1	1:C:255:GLU:HG3	1.79	0.47
1:C:487:ASN:O	1:C:491:MET:HG2	2.14	0.47
1:H:460:GLU:HG3	1:H:478:TYR:OH	2.15	0.47
1:I:115:ASP:OD2	1:I:433:ASN:ND2	2.38	0.47
1:I:177:VAL:HG13	1:I:393:LYS:HZ3	1.79	0.47
1:I:514:MET:HG3	1:I:514:MET:O	2.11	0.47
1:L:169:VAL:HG21	1:L:377:ALA:HB2	1.96	0.47
1:M:348:GLN:O	1:M:351:GLN:HG3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:174:VAL:HG11	1:N:376:VAL:HG12	1.95	0.47
1:N:284:ARG:CZ	1:N:364:LYS:HD2	2.45	0.47
2:Q:13:LYS:HB2	2:Q:41:LEU:HD11	1.95	0.47
2:T:11:ILE:O	2:T:41:LEU:N	2.34	0.47
1:A:138:CYS:O	1:A:407:VAL:HA	2.14	0.47
1:A:215:LEU:HD12	1:A:248:LEU:HB2	1.96	0.47
1:A:259:LEU:O	1:A:263:VAL:HG13	2.15	0.47
1:A:386:GLU:O	1:A:390:LYS:HG3	2.15	0.47
1:B:69:MET:HB2	1:C:47:PRO:CG	2.45	0.47
1:C:66:PHE:HB3	1:C:520:MET:SD	2.54	0.47
1:C:218:PRO:HG2	1:C:323:VAL:HG23	1.97	0.47
1:C:230:ILE:HG22	1:C:234:LEU:HD23	1.96	0.47
1:C:519:CYS:SG	1:C:520:MET:N	2.88	0.47
1:D:190:VAL:N	1:D:376:VAL:O	2.41	0.47
1:D:207:LYS:NZ	1:D:214:GLU:HB2	2.30	0.47
1:D:231:ARG:NH2	1:D:234:LEU:HD21	2.29	0.47
1:D:511:ALA:O	1:D:515:ILE:HG12	2.13	0.47
1:E:16:MET:HE1	1:E:69:MET:SD	2.55	0.47
1:E:113:PRO:HB3	1:E:515:ILE:HG22	1.95	0.47
1:E:265:ASN:HA	1:E:268:ARG:HB2	1.97	0.47
1:E:313:THR:OG1	1:E:315:GLU:OE1	2.30	0.47
1:G:20:VAL:HA	1:G:74:VAL:HG11	1.97	0.47
1:G:301:ILE:HD11	1:G:316:ASP:HB3	1.97	0.47
1:H:5:ASP:N	1:H:522:THR:O	2.45	0.47
1:H:95:LEU:O	1:H:99:ILE:HG13	2.14	0.47
1:H:195:PHE:CD2	1:H:279:PRO:HB3	2.49	0.47
1:H:421:ARG:HH12	1:H:469:VAL:C	2.23	0.47
1:H:429:LEU:O	1:H:441:LYS:NZ	2.34	0.47
1:H:479:ASN:O	1:H:483:GLU:N	2.47	0.47
1:I:350:ARG:O	1:I:354:GLU:HG2	2.15	0.47
1:I:411:VAL:HA	1:I:496:PRO:HA	1.96	0.47
1:J:76:GLU:HG2	1:J:80:LYS:HE3	1.97	0.47
1:J:368:ARG:O	1:J:372:LEU:HD23	2.15	0.47
1:J:433:ASN:OD1	1:J:434:GLU:N	2.48	0.47
1:K:69:MET:HE1	1:L:47:PRO:CD	2.44	0.47
1:K:348:GLN:O	1:K:351:GLN:HG2	2.15	0.47
1:L:32:GLY:HA2	6:L:601:ADP:O4'	2.15	0.47
1:L:34:LYS:HE2	1:L:481:ALA:HA	1.96	0.47
1:L:138:CYS:O	1:L:407:VAL:HG22	2.15	0.47
1:M:45:GLY:O	1:M:47:PRO:HD3	2.15	0.47
1:M:475:ASN:HB3	1:M:489:ILE:HG12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:27:VAL:HG12	1:N:90:THR:HG23	1.97	0.47
1:N:141:SER:HA	1:N:144:ILE:HD12	1.95	0.47
1:N:168:LYS:HG2	1:N:189:VAL:HG13	1.96	0.47
1:N:193:MET:HE3	1:N:295:LEU:HB3	1.97	0.47
1:N:219:PHE:HD2	1:N:240:VAL:HG22	1.80	0.47
2:P:92:LEU:HD21	2:Q:74:LYS:HG3	1.96	0.47
2:Q:64:ILE:O	2:Q:95:VAL:N	2.40	0.47
1:E:113:PRO:HA	1:E:116:LEU:HD12	1.96	0.47
1:E:392:LYS:O	1:E:396:VAL:HG23	2.14	0.47
1:F:381:VAL:HG12	1:F:389:MET:HE1	1.97	0.47
1:H:12:ALA:O	1:H:16:MET:HG2	2.15	0.47
1:H:115:ASP:HB3	1:H:435:ASP:HB2	1.97	0.47
1:H:460:GLU:O	1:H:462:PRO:HD3	2.13	0.47
1:I:137:PRO:HA	1:I:410:GLY:HA2	1.96	0.47
1:I:465:VAL:HA	1:I:485:TYR:OH	2.14	0.47
1:J:438:VAL:O	1:J:442:VAL:HG23	2.15	0.47
1:K:177:VAL:HG13	1:K:393:LYS:HE2	1.97	0.47
1:N:123:ALA:HB2	1:N:440:ILE:HG12	1.96	0.47
1:N:248:LEU:HD21	1:N:250:ILE:HD11	1.97	0.47
1:A:7:LYS:HG2	1:A:66:PHE:CE1	2.49	0.47
1:A:40:LEU:HD13	1:A:59:GLU:HG3	1.97	0.47
1:A:383:ALA:HB3	1:A:389:MET:HE2	1.97	0.47
1:A:427:ALA:O	1:A:441:LYS:NZ	2.48	0.47
1:C:166:MET:HB3	1:C:175:ILE:HD11	1.96	0.47
1:C:270:ILE:HG21	2:Q:25:ILE:HA	1.97	0.47
1:C:427:ALA:HA	1:C:444:LEU:HD13	1.97	0.47
1:D:15:LYS:HD2	1:D:67:GLU:HG3	1.97	0.47
1:D:153:ASN:ND2	7:D:2003:HOH:O	2.46	0.47
1:D:222:LEU:HD21	1:D:292:ILE:HG22	1.96	0.47
1:D:261:THR:HG21	2:R:27:LEU:HD13	1.95	0.47
1:D:361:ASP:O	1:D:365:LEU:HD23	2.15	0.47
1:F:346:VAL:HB	1:F:369:VAL:HG13	1.97	0.47
1:G:361:ASP:O	1:G:365:LEU:HD23	2.15	0.47
1:H:279:PRO:C	1:H:288:MET:HG3	2.39	0.47
1:H:417:VAL:O	1:H:421:ARG:HG2	2.15	0.47
1:K:166:MET:HE1	1:K:403:THR:HB	1.97	0.47
1:L:345:ARG:HD2	1:L:348:GLN:OE1	2.14	0.47
1:M:351:GLN:NE2	1:M:352:GLN:HG3	2.30	0.47
2:P:38:GLY:HA3	2:P:67:PHE:HE1	1.80	0.47
2:T:12:VAL:HG12	2:T:40:VAL:HG12	1.97	0.47
1:B:128:VAL:HG13	1:B:501:ARG:HG3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:431:GLY:N	1:B:437:ASN:OD1	2.48	0.47
1:C:69:MET:HG3	1:D:47:PRO:HG2	1.97	0.47
1:D:217:SER:HA	1:D:320:ALA:O	2.15	0.47
1:D:392:LYS:O	1:D:396:VAL:HG23	2.15	0.47
1:E:339:GLU:O	1:E:342:ILE:HB	2.15	0.47
1:G:114:MET:HG3	1:G:118:ARG:NH1	2.30	0.47
1:G:247:LEU:HD21	1:G:249:ILE:HG13	1.96	0.47
1:H:284:ARG:CZ	1:H:364:LYS:HB3	2.45	0.47
1:H:333:ILE:HG23	1:H:376:VAL:HG21	1.96	0.47
1:H:349:ILE:HG12	1:H:368:ARG:CZ	2.45	0.47
1:I:289:LEU:HG	1:I:300:VAL:HG22	1.97	0.47
1:I:351:GLN:NE2	1:I:352:GLN:HG3	2.29	0.47
1:J:195:PHE:CZ	1:J:250:ILE:HD13	2.50	0.47
1:L:193:MET:HE3	1:L:295:LEU:HD13	1.96	0.47
1:L:295:LEU:HD21	1:L:372:LEU:HD13	1.96	0.47
1:M:460:GLU:O	1:M:462:PRO:HD3	2.15	0.47
2:Q:11:ILE:HB	2:Q:85:ILE:HD13	1.96	0.47
2:R:59:VAL:HG11	2:R:91:ILE:HG21	1.97	0.47
1:C:180:GLY:H	1:C:381:VAL:C	2.21	0.46
1:D:227:ILE:HB	1:D:254:VAL:HA	1.98	0.46
1:G:199:TYR:HE2	1:G:212:ALA:HA	1.79	0.46
1:G:392:LYS:O	1:G:396:VAL:HG23	2.14	0.46
1:G:427:ALA:O	1:G:441:LYS:NZ	2.47	0.46
1:H:195:PHE:HE2	1:H:197:ARG:HB2	1.80	0.46
1:H:346:VAL:O	1:H:350:ARG:HG2	2.15	0.46
1:I:339:GLU:HA	1:I:342:ILE:HB	1.96	0.46
1:J:193:MET:HE3	1:J:295:LEU:HB3	1.96	0.46
1:K:95:LEU:O	1:K:99:ILE:HG13	2.15	0.46
1:K:158:VAL:HG13	1:K:396:VAL:HG22	1.97	0.46
1:M:444:LEU:O	1:M:447:MET:HG2	2.15	0.46
1:N:284:ARG:NE	1:N:364:LYS:HB3	2.29	0.46
1:A:420:ILE:CG2	1:A:470:LYS:HG2	2.45	0.46
1:B:222:LEU:O	1:B:301:ILE:N	2.29	0.46
1:C:136:VAL:HG23	1:C:411:VAL:HG23	1.97	0.46
1:C:243:ALA:HB2	1:C:314:LEU:HD21	1.97	0.46
1:C:294:THR:HG22	1:C:341:ALA:HB1	1.97	0.46
1:D:230:ILE:HG22	1:D:234:LEU:HD22	1.97	0.46
1:E:193:MET:HE3	1:E:295:LEU:HD22	1.97	0.46
1:E:219:PHE:HB3	1:E:317:LEU:HD13	1.97	0.46
1:F:92:ALA:HB2	1:F:503:ALA:HB1	1.98	0.46
1:F:498:LYS:HG3	1:F:501:ARG:NH2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:348:GLN:O	1:H:351:GLN:NE2	2.48	0.46
1:H:511:ALA:O	1:H:515:ILE:HG13	2.16	0.46
1:J:7:LYS:HE3	1:J:15:LYS:HE3	1.96	0.46
1:J:137:PRO:HA	1:J:410:GLY:HA2	1.97	0.46
1:J:174:VAL:HG11	1:J:376:VAL:HG12	1.97	0.46
1:J:262:LEU:HD22	1:J:273:VAL:HG11	1.98	0.46
1:L:39:VAL:HA	1:L:49:ILE:HA	1.96	0.46
1:L:45:GLY:O	1:L:47:PRO:HD3	2.16	0.46
1:L:158:VAL:HG13	1:L:396:VAL:HA	1.97	0.46
1:M:250:ILE:HG23	1:M:278:ALA:HA	1.97	0.46
1:N:221:LEU:HD23	1:N:249:ILE:HD12	1.96	0.46
2:P:25:ILE:H	2:P:25:ILE:HD12	1.80	0.46
2:T:37:ARG:HH22	2:U:78:ILE:HG22	1.80	0.46
1:A:292:ILE:O	1:A:296:THR:OG1	2.22	0.46
1:B:227:ILE:HG23	1:B:233:MET:SD	2.56	0.46
1:C:359:ASP:HA	1:C:362:ARG:HE	1.80	0.46
1:D:178:GLU:N	1:D:379:ILE:O	2.41	0.46
1:D:387:VAL:HA	1:D:390:LYS:HE2	1.96	0.46
1:D:479:ASN:CG	1:D:493:ILE:HD11	2.40	0.46
1:F:149:THR:HA	1:F:155:ASP:O	2.16	0.46
1:F:215:LEU:HD12	1:F:248:LEU:HB2	1.97	0.46
1:G:66:PHE:HB3	1:G:520:MET:HE1	1.97	0.46
1:G:205:ILE:HD13	1:G:211:GLY:HA2	1.96	0.46
1:H:195:PHE:CZ	1:H:250:ILE:HD13	2.48	0.46
1:H:197:ARG:HD2	1:H:277:LYS:HB3	1.96	0.46
1:I:279:PRO:C	1:I:288:MET:HG3	2.40	0.46
1:J:177:VAL:C	1:J:393:LYS:HZ2	2.23	0.46
1:J:489:ILE:HA	1:J:494:LEU:HD21	1.97	0.46
1:K:32:GLY:HA2	6:K:601:ADP:O4'	2.15	0.46
1:K:224:ASP:OD2	1:K:286:LYS:HG2	2.16	0.46
1:K:339:GLU:HA	1:K:342:ILE:HD12	1.97	0.46
1:L:414:GLY:O	1:L:417:VAL:HG22	2.15	0.46
1:M:230:ILE:O	1:M:234:LEU:HG	2.15	0.46
1:N:195:PHE:CE2	1:N:197:ARG:HB2	2.50	0.46
1:N:287:ALA:HB1	1:N:368:ARG:NH1	2.31	0.46
1:A:136:VAL:HG23	1:A:411:VAL:HG23	1.97	0.46
1:A:186:GLU:HG2	1:A:380:LYS:HB2	1.96	0.46
1:A:190:VAL:N	1:A:376:VAL:O	2.32	0.46
1:A:237:LEU:HD12	1:A:271:VAL:HG21	1.96	0.46
1:B:143:ALA:O	1:B:147:VAL:HG23	2.16	0.46
1:B:214:GLU:HG2	1:B:322:ARG:HH11	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:370:ALA:HB1	1:B:375:GLY:O	2.15	0.46
1:D:223:ALA:HB1	1:D:225:LYS:HG2	1.98	0.46
1:F:150:ILE:HG23	3:F:601:ATP:C8	2.50	0.46
1:F:356:ALA:HB1	1:F:361:ASP:HB2	1.97	0.46
1:G:200:LEU:HD12	1:G:275:ALA:HB1	1.97	0.46
1:H:220:ILE:HG21	1:H:296:THR:HG21	1.96	0.46
1:I:223:ALA:O	1:I:251:ALA:HA	2.16	0.46
1:J:419:LEU:HD12	1:J:450:PRO:HG2	1.96	0.46
1:L:15:LYS:HB3	1:L:66:PHE:HB2	1.97	0.46
1:L:230:ILE:O	1:L:234:LEU:N	2.49	0.46
1:L:333:ILE:HG12	1:L:376:VAL:HG11	1.96	0.46
1:M:455:VAL:CG1	1:M:460:GLU:HB2	2.45	0.46
1:N:185:ASP:OD2	1:N:392:LYS:HE3	2.15	0.46
1:N:342:ILE:O	1:N:346:VAL:HG23	2.16	0.46
1:N:433:ASN:OD1	1:N:434:GLU:N	2.48	0.46
2:P:37:ARG:NH2	2:Q:77:LYS:O	2.48	0.46
2:S:17:VAL:HG21	2:S:34:LYS:HD2	1.98	0.46
1:A:6:VAL:HG22	1:A:521:VAL:HG13	1.98	0.46
1:A:32:GLY:HA2	3:A:601:ATP:O4'	2.15	0.46
1:A:102:GLU:OE1	1:A:445:ARG:NE	2.41	0.46
1:A:495:ASP:OD2	3:A:601:ATP:O2'	2.24	0.46
1:B:28:LYS:HE2	1:B:94:VAL:HG22	1.98	0.46
1:B:31:LEU:HD13	1:B:90:THR:HB	1.97	0.46
1:F:200:LEU:N	1:F:275:ALA:O	2.40	0.46
1:F:206:ASN:HD21	1:F:214:GLU:HB3	1.81	0.46
1:F:413:ALA:HB3	1:F:418:ALA:HB2	1.97	0.46
1:G:420:ILE:CG2	1:G:470:LYS:HG2	2.46	0.46
1:G:498:LYS:HG3	1:G:501:ARG:NH2	2.30	0.46
1:I:149:THR:OG1	1:I:156:GLU:HA	2.14	0.46
1:K:262:LEU:HB3	1:K:273:VAL:HG11	1.97	0.46
1:L:339:GLU:HG2	1:L:342:ILE:HD12	1.98	0.46
1:M:352:GLN:HA	1:M:355:GLU:CG	2.45	0.46
2:O:78:ILE:HA	2:U:37:ARG:HH22	1.81	0.46
2:S:9:ARG:HA	2:S:87:SER:HA	1.97	0.46
2:S:12:VAL:HG22	2:S:84:LEU:HB2	1.96	0.46
1:A:131:LEU:HD21	1:A:419:LEU:HD23	1.98	0.46
1:A:314:LEU:HA	1:A:317:LEU:HD12	1.97	0.46
1:B:7:LYS:HE2	1:B:11:ASP:HB3	1.98	0.46
1:B:12:ALA:HA	1:B:520:MET:CE	2.33	0.46
1:B:287:ALA:HA	1:B:345:ARG:NH2	2.31	0.46
1:C:62:LEU:HB2	1:C:68:ASN:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:350:ARG:O	1:C:354:GLU:HG2	2.15	0.46
1:E:77:VAL:HG12	1:E:92:ALA:HB1	1.97	0.46
1:F:206:ASN:ND2	1:F:214:GLU:O	2.48	0.46
1:F:493:ILE:HD13	3:F:601:ATP:N1	2.31	0.46
1:H:124:VAL:HG11	1:H:508:ALA:HB2	1.98	0.46
1:H:326:ASN:ND2	1:H:329:THR:OG1	2.43	0.46
1:I:95:LEU:O	1:I:99:ILE:HG13	2.15	0.46
1:I:287:ALA:HB1	1:I:368:ARG:CZ	2.46	0.46
1:I:339:GLU:HA	1:I:342:ILE:HD12	1.98	0.46
1:J:115:ASP:O	1:J:436:GLN:HG2	2.16	0.46
1:J:124:VAL:HG11	1:J:508:ALA:CB	2.46	0.46
1:J:274:ALA:HB1	1:J:325:ILE:CD1	2.45	0.46
1:K:115:ASP:O	1:K:436:GLN:HG2	2.16	0.46
1:M:69:MET:HA	1:M:72:GLN:HG2	1.97	0.46
2:T:46:GLY:HA2	2:T:57:LEU:CD1	2.45	0.46
1:B:453:GLN:NE2	1:B:457:ASN:OD1	2.48	0.46
1:C:77:VAL:HG11	1:C:96:ALA:HB2	1.97	0.46
1:C:152:ALA:HA	1:C:395:ARG:HG2	1.98	0.46
1:E:338:GLU:H	1:E:338:GLU:CD	2.23	0.46
1:H:174:VAL:HB	1:H:376:VAL:HA	1.97	0.46
1:H:274:ALA:HB1	1:H:325:ILE:CD1	2.46	0.46
1:H:325:ILE:O	1:H:325:ILE:HG13	2.15	0.46
1:I:417:VAL:O	1:I:421:ARG:HG2	2.15	0.46
1:K:7:LYS:HD3	1:K:12:ALA:HA	1.97	0.46
1:K:130:GLU:HB3	1:K:422:VAL:HG22	1.98	0.46
1:N:262:LEU:HD22	1:N:273:VAL:HG11	1.97	0.46
2:O:67:PHE:HB3	2:O:91:ILE:HD13	1.97	0.46
1:A:15:LYS:HB2	1:A:520:MET:HE1	1.98	0.46
1:A:217:SER:HA	1:A:320:ALA:O	2.16	0.46
1:B:346:VAL:HA	1:B:349:ILE:HB	1.98	0.46
1:D:370:ALA:HB1	1:D:375:GLY:O	2.16	0.46
1:H:64:ASP:HB3	1:H:67:GLU:HB2	1.98	0.46
1:H:227:ILE:HG12	1:H:309:LEU:HD11	1.96	0.46
1:I:421:ARG:HH12	1:I:469:VAL:C	2.24	0.46
1:J:230:ILE:O	1:J:234:LEU:N	2.49	0.46
1:J:295:LEU:HA	1:J:342:ILE:HG12	1.97	0.46
1:K:5:ASP:N	1:K:522:THR:O	2.40	0.46
1:K:19:GLY:HA3	1:K:67:GLU:O	2.16	0.46
1:K:42:LYS:HD3	1:K:46:ALA:O	2.15	0.46
1:L:115:ASP:HB3	1:L:435:ASP:HB2	1.97	0.46
1:M:195:PHE:CD2	1:M:279:PRO:HB3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:475:ASN:HB2	1:N:487:ASN:ND2	2.31	0.46
2:Q:14:ARG:HG3	2:Q:67:PHE:HZ	1.81	0.46
1:A:319:GLN:C	1:A:336:VAL:HG22	2.41	0.46
1:C:204:PHE:CD1	1:C:266:THR:HG21	2.50	0.46
1:C:262:LEU:HD22	1:C:273:VAL:HG21	1.97	0.46
1:D:261:THR:HG23	2:R:27:LEU:HA	1.96	0.46
1:D:523:ASP:OD1	1:D:524:LEU:N	2.48	0.46
1:E:231:ARG:HH11	1:E:234:LEU:HD11	1.81	0.46
1:E:294:THR:HG22	1:E:341:ALA:HB1	1.97	0.46
1:E:411:VAL:HG21	1:E:494:LEU:HD22	1.98	0.46
1:F:162:ILE:HG12	1:F:400:LEU:HD13	1.97	0.46
1:J:19:GLY:HA3	1:J:67:GLU:O	2.16	0.46
1:J:166:MET:HA	1:J:175:ILE:HD11	1.98	0.46
1:J:252:GLU:O	1:J:277:LYS:HG3	2.16	0.46
1:J:411:VAL:HG12	1:J:496:PRO:HA	1.98	0.46
1:J:432:GLN:HB2	1:J:436:GLN:NE2	2.30	0.46
1:K:279:PRO:O	1:K:285:ARG:HA	2.15	0.46
1:L:31:LEU:HD13	1:L:90:THR:HB	1.98	0.46
1:M:166:MET:O	1:M:169:VAL:N	2.49	0.46
2:O:25:ILE:H	2:O:25:ILE:HD12	1.81	0.46
2:T:11:ILE:HB	2:T:42:ALA:HB3	1.98	0.46
2:U:8:ASP:C	2:U:57:LEU:HD21	2.41	0.46
1:A:465:VAL:HA	1:A:485:TYR:OH	2.16	0.46
1:B:392:LYS:O	1:B:396:VAL:HG23	2.16	0.46
1:C:250:ILE:HG23	1:C:278:ALA:HA	1.98	0.46
1:C:345:ARG:O	1:C:349:ILE:HG13	2.15	0.46
1:D:169:VAL:HG13	1:D:170:GLY:O	2.16	0.46
1:E:11:ASP:O	1:E:15:LYS:HG2	2.16	0.46
1:E:259:LEU:O	1:E:263:VAL:HG13	2.16	0.46
1:F:15:LYS:HD3	1:F:18:ARG:HH21	1.80	0.46
1:G:204:PHE:CD1	1:G:266:THR:HG21	2.51	0.46
1:G:452:ARG:HH21	1:G:470:LYS:HZ1	1.64	0.46
1:I:76:GLU:HG2	1:I:80:LYS:HE2	1.97	0.46
1:I:421:ARG:NH1	1:I:469:VAL:O	2.47	0.46
1:N:419:LEU:HD12	1:N:450:PRO:HG2	1.98	0.46
2:O:68:ASN:N	2:O:90:ASP:O	2.34	0.46
2:O:76:GLU:OE1	2:O:85:ILE:HG22	2.16	0.46
2:R:8:ASP:O	2:R:57:LEU:HD21	2.16	0.46
2:U:11:ILE:HB	2:U:42:ALA:H	1.80	0.46
1:A:313:THR:O	1:A:317:LEU:HG	2.16	0.45
1:A:498:LYS:HG3	1:A:501:ARG:NH2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:219:PHE:CD2	1:B:240:VAL:HG22	2.50	0.45
1:C:455:VAL:HG13	1:C:460:GLU:HB2	1.99	0.45
1:D:124:VAL:HG13	1:D:504:LEU:HG	1.98	0.45
1:D:165:ALA:O	1:D:169:VAL:HG12	2.15	0.45
1:D:465:VAL:HA	1:D:485:TYR:OH	2.16	0.45
1:E:209:GLU:HG2	1:E:210:THR:HG23	1.98	0.45
1:F:102:GLU:CD	1:F:445:ARG:HE	2.24	0.45
1:F:126:ALA:O	1:F:130:GLU:HG2	2.16	0.45
1:F:259:LEU:O	1:F:263:VAL:HG13	2.15	0.45
1:G:339:GLU:O	1:G:342:ILE:HB	2.16	0.45
1:H:221:LEU:HB3	1:H:249:ILE:HA	1.98	0.45
1:H:458:CYS:SG	1:H:480:ALA:HB1	2.56	0.45
1:I:12:ALA:O	1:I:16:MET:HG2	2.16	0.45
1:K:475:ASN:HB2	1:K:487:ASN:ND2	2.31	0.45
1:L:190:VAL:O	1:L:376:VAL:N	2.49	0.45
1:M:222:LEU:HD23	1:M:250:ILE:HB	1.98	0.45
1:N:107:VAL:HG13	1:N:113:PRO:HG3	1.98	0.45
1:N:420:ILE:HD12	1:N:451:LEU:HD13	1.96	0.45
2:Q:57:LEU:O	2:Q:60:LYS:NZ	2.38	0.45
1:A:381:VAL:HG21	1:A:393:LYS:HA	1.98	0.45
1:C:287:ALA:HB1	1:C:368:ARG:CZ	2.46	0.45
1:C:453:GLN:NE2	1:C:457:ASN:OD1	2.49	0.45
1:D:69:MET:HB2	1:E:47:PRO:HG3	1.97	0.45
1:E:115:ASP:CG	1:E:433:ASN:HD21	2.23	0.45
1:E:352:GLN:O	1:E:356:ALA:N	2.49	0.45
1:E:356:ALA:HB1	1:E:361:ASP:HB2	1.98	0.45
1:F:124:VAL:HG13	1:F:504:LEU:HG	1.97	0.45
1:F:179:ASP:OD1	1:F:393:LYS:HD2	2.15	0.45
1:F:226:LYS:NZ	1:F:255:GLU:HG3	2.31	0.45
1:G:51:LYS:HD3	1:G:153:ASN:ND2	2.31	0.45
1:G:207:LYS:HE2	1:G:212:ALA:HB3	1.98	0.45
1:G:523:ASP:OD1	1:G:524:LEU:N	2.48	0.45
1:H:123:ALA:HB3	1:H:443:ALA:HB3	1.98	0.45
1:H:141:SER:HA	1:H:144:ILE:HD13	1.97	0.45
1:J:233:MET:HE1	1:J:249:ILE:CD1	2.47	0.45
1:J:479:ASN:CG	1:J:493:ILE:HD11	2.42	0.45
1:K:195:PHE:HE2	1:K:197:ARG:HB2	1.81	0.45
1:K:389:MET:HE2	1:K:389:MET:HA	1.99	0.45
1:K:438:VAL:O	1:K:442:VAL:HG23	2.15	0.45
1:L:498:LYS:HG3	1:L:501:ARG:NH2	2.31	0.45
1:M:40:LEU:N	1:M:48:THR:O	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:193:MET:SD	1:M:295:LEU:HD22	2.57	0.45
1:N:195:PHE:HE2	1:N:197:ARG:HB2	1.81	0.45
2:S:57:LEU:HD23	2:S:88:GLU:HB2	1.97	0.45
2:U:10:VAL:N	2:U:86:MET:O	2.23	0.45
2:U:25:ILE:HD12	2:U:25:ILE:H	1.81	0.45
1:B:204:PHE:CD1	1:B:266:THR:HG21	2.51	0.45
1:B:270:ILE:HG21	2:P:25:ILE:HA	1.99	0.45
1:D:287:ALA:HA	1:D:345:ARG:NH2	2.31	0.45
1:D:381:VAL:O	1:D:389:MET:HE1	2.16	0.45
1:E:465:VAL:HA	1:E:485:TYR:OH	2.15	0.45
1:F:230:ILE:O	1:F:233:MET:N	2.39	0.45
1:F:386:GLU:O	1:F:390:LYS:HD3	2.15	0.45
1:G:205:ILE:HG23	1:G:212:ALA:O	2.16	0.45
1:G:223:ALA:HB1	1:G:225:LYS:HG2	1.98	0.45
1:H:149:THR:OG1	1:H:156:GLU:HA	2.16	0.45
1:H:206:ASN:ND2	1:H:214:GLU:O	2.49	0.45
1:H:381:VAL:HG11	1:H:393:LYS:HA	1.98	0.45
1:I:76:GLU:O	1:I:80:LYS:HG3	2.17	0.45
1:J:102:GLU:HB2	1:J:442:VAL:HG13	1.98	0.45
1:K:116:LEU:HG	1:K:435:ASP:HB3	1.97	0.45
1:M:16:MET:HE1	1:M:66:PHE:O	2.16	0.45
1:M:76:GLU:O	1:M:80:LYS:HG3	2.15	0.45
1:N:195:PHE:CD2	1:N:279:PRO:HB3	2.51	0.45
2:O:37:ARG:HG2	2:O:66:ILE:HG12	1.98	0.45
2:P:75:SER:HA	2:P:83:VAL:O	2.17	0.45
2:Q:2:ASN:OD1	2:Q:3:ILE:N	2.50	0.45
1:A:111:MET:HE1	1:A:435:ASP:HA	1.98	0.45
1:B:169:VAL:HG13	1:B:170:GLY:O	2.16	0.45
1:B:226:LYS:NZ	1:B:253:ASP:HB3	2.31	0.45
1:B:429:LEU:HB3	1:B:440:ILE:HG21	1.99	0.45
1:C:130:GLU:HB2	1:C:422:VAL:HG13	1.98	0.45
1:D:69:MET:HB2	1:E:47:PRO:CG	2.46	0.45
1:E:122:LYS:NZ	1:E:430:ARG:O	2.37	0.45
1:E:346:VAL:HB	1:E:369:VAL:HG22	1.99	0.45
1:F:414:GLY:H	1:F:488:MET:HB3	1.81	0.45
3:F:601:ATP:H5'2	3:F:601:ATP:H8	1.81	0.45
1:G:291:ASP:HB3	1:G:372:LEU:HD13	1.98	0.45
1:H:246:PRO:HA	1:H:272:LYS:HB2	1.98	0.45
1:I:224:ASP:OD2	1:I:286:LYS:HG2	2.16	0.45
1:J:13:ARG:HB3	1:J:104:LEU:HD22	1.98	0.45
1:J:149:THR:OG1	1:J:156:GLU:HA	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:386:GLU:HA	1:K:389:MET:HG2	1.98	0.45
1:L:69:MET:HG3	1:L:73:MET:HE2	1.97	0.45
1:L:381:VAL:HG11	1:L:396:VAL:HG21	1.99	0.45
1:M:356:ALA:HB2	1:M:365:LEU:HD12	1.97	0.45
1:M:460:GLU:HG3	1:M:478:TYR:OH	2.17	0.45
1:N:199:TYR:CZ	1:N:327:LYS:HA	2.52	0.45
2:P:73:VAL:HA	2:P:86:MET:HB3	1.98	0.45
1:A:226:LYS:HE3	1:A:255:GLU:HG2	1.97	0.45
1:A:361:ASP:O	1:A:365:LEU:HD23	2.16	0.45
1:B:217:SER:HA	1:B:320:ALA:O	2.17	0.45
1:B:475:ASN:HB2	1:B:487:ASN:ND2	2.32	0.45
1:C:5:ASP:N	1:C:522:THR:O	2.29	0.45
1:C:66:PHE:O	1:C:69:MET:HE2	2.16	0.45
1:C:259:LEU:O	1:C:263:VAL:HG13	2.17	0.45
1:D:69:MET:HE1	1:E:39:VAL:HG12	1.99	0.45
1:D:146:GLN:CD	1:D:492:GLY:HA2	2.41	0.45
1:D:338:GLU:CD	1:D:338:GLU:H	2.24	0.45
1:F:353:ILE:HD13	1:F:366:GLN:HG3	1.98	0.45
1:F:430:ARG:HH22	1:F:441:LYS:HE2	1.81	0.45
1:G:321:LYS:HB3	1:G:334:ASP:HB3	1.98	0.45
1:I:520:MET:HG3	1:J:39:VAL:O	2.16	0.45
1:J:262:LEU:HB3	1:J:273:VAL:HG11	1.98	0.45
1:J:349:ILE:O	1:J:353:ILE:HG13	2.16	0.45
1:J:417:VAL:O	1:J:421:ARG:HG2	2.16	0.45
1:K:417:VAL:HG12	1:K:451:LEU:HD12	1.98	0.45
1:L:149:THR:HG22	1:L:154:SER:HA	1.97	0.45
1:N:111:MET:HB2	1:N:116:LEU:HD11	1.98	0.45
1:N:364:LYS:HD3	1:N:364:LYS:HA	1.74	0.45
1:N:419:LEU:HD22	1:N:447:MET:HG3	1.99	0.45
1:N:421:ARG:HH12	1:N:469:VAL:C	2.25	0.45
2:S:95:VAL:HG13	2:T:3:ILE:HD11	1.98	0.45
2:T:95:VAL:HG13	2:U:3:ILE:HD11	1.97	0.45
1:A:313:THR:OG1	1:A:315:GLU:OE1	2.30	0.45
1:B:198:GLY:N	1:B:328:ASP:O	2.50	0.45
1:C:198:GLY:N	1:C:328:ASP:O	2.50	0.45
1:C:224:ASP:N	1:C:301:ILE:O	2.48	0.45
1:C:248:LEU:HD22	1:C:323:VAL:HG21	1.98	0.45
1:C:402:ALA:O	1:C:496:PRO:HG3	2.16	0.45
1:D:204:PHE:CD1	1:D:266:THR:HG21	2.52	0.45
1:E:431:GLY:N	1:E:437:ASN:OD1	2.49	0.45
1:F:207:LYS:HZ2	1:F:214:GLU:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:268:ARG:NH1	2:T:26:VAL:HG11	2.32	0.45
1:F:381:VAL:HG13	1:F:392:LYS:HE3	1.99	0.45
1:G:222:LEU:HD22	1:G:293:ALA:HB2	1.98	0.45
1:G:429:LEU:HD23	1:G:440:ILE:HG12	1.98	0.45
1:H:465:VAL:HA	1:H:485:TYR:OH	2.17	0.45
1:I:203:TYR:HE2	1:J:181:THR:HA	1.81	0.45
1:I:346:VAL:O	1:I:350:ARG:HG2	2.16	0.45
1:I:487:ASN:HB3	1:I:490:ASP:OD2	2.17	0.45
1:J:134:LEU:HD21	1:J:425:LYS:NZ	2.32	0.45
1:J:140:ASP:O	1:J:144:ILE:HG12	2.16	0.45
1:J:423:ALA:HB2	1:J:447:MET:HB2	1.98	0.45
1:L:15:LYS:HD3	1:L:18:ARG:NH2	2.30	0.45
1:L:197:ARG:HE	1:L:279:PRO:HA	1.81	0.45
1:M:351:GLN:HA	1:M:354:GLU:OE1	2.17	0.45
1:M:417:VAL:HG21	1:M:488:MET:HG3	1.97	0.45
1:N:216:GLU:HG2	1:N:322:ARG:HD2	1.98	0.45
1:N:415:GLY:HA2	6:N:601:ADP:N3	2.32	0.45
2:O:12:VAL:CG2	2:O:84:LEU:HB2	2.47	0.45
2:P:88:GLU:OE1	2:Q:7:HIS:NE2	2.47	0.45
1:A:218:PRO:O	1:A:319:GLN:HA	2.17	0.45
1:A:308:GLU:HB2	1:A:311:LYS:HG3	1.99	0.45
1:A:342:ILE:HG23	1:A:372:LEU:HB3	1.98	0.45
1:B:265:ASN:HA	1:B:268:ARG:HB2	1.99	0.45
1:C:152:ALA:HB2	1:C:399:ALA:HB2	1.99	0.45
1:D:102:GLU:CB	1:D:442:VAL:HG13	2.46	0.45
1:D:219:PHE:CE2	1:D:314:LEU:HD23	2.52	0.45
1:F:452:ARG:HH21	1:F:470:LYS:NZ	2.15	0.45
1:G:322:ARG:O	1:G:333:ILE:N	2.45	0.45
1:H:252:GLU:O	1:H:277:LYS:HG3	2.17	0.45
1:I:192:GLY:HA3	1:I:376:VAL:HG13	1.98	0.45
1:J:102:GLU:HB3	1:J:442:VAL:HG22	1.98	0.45
1:K:193:MET:HG2	1:K:295:LEU:HD13	1.98	0.45
1:N:122:LYS:NZ	1:N:431:GLY:HA2	2.32	0.45
1:N:279:PRO:C	1:N:288:MET:HG3	2.42	0.45
1:A:31:LEU:HD13	1:A:90:THR:HB	1.99	0.45
1:A:102:GLU:CB	1:A:442:VAL:HG13	2.47	0.45
1:A:106:ALA:O	1:A:111:MET:HG2	2.17	0.45
1:B:145:ALA:HA	1:B:159:GLY:C	2.41	0.45
1:B:205:ILE:HG23	1:B:212:ALA:O	2.17	0.45
1:B:361:ASP:O	1:B:365:LEU:HD23	2.15	0.45
1:B:381:VAL:HG13	1:B:392:LYS:HE3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:262:LEU:O	1:C:266:THR:HG23	2.16	0.45
1:C:320:ALA:HA	1:C:335:GLY:HA2	1.97	0.45
1:D:220:ILE:HG22	1:D:222:LEU:HG	1.99	0.45
1:D:510:VAL:HG23	1:E:385:THR:HG21	1.98	0.45
1:E:141:SER:HB2	1:E:163:ALA:HB1	1.99	0.45
1:G:479:ASN:CG	1:G:493:ILE:HD11	2.41	0.45
1:H:76:GLU:O	1:H:80:LYS:HG3	2.17	0.45
1:H:219:PHE:HD2	1:H:240:VAL:HG22	1.80	0.45
1:H:349:ILE:HG12	1:H:368:ARG:NH2	2.31	0.45
1:I:233:MET:HE1	1:I:249:ILE:HD11	1.98	0.45
1:K:342:ILE:O	1:K:346:VAL:HG23	2.17	0.45
1:L:66:PHE:O	1:L:69:MET:HB3	2.17	0.45
1:L:339:GLU:HA	1:L:342:ILE:HB	1.99	0.45
1:M:115:ASP:CG	1:M:118:ARG:HH21	2.24	0.45
1:M:179:ASP:OD1	1:M:180:GLY:N	2.50	0.45
1:M:223:ALA:O	1:M:251:ALA:HA	2.17	0.45
2:T:40:VAL:HG22	2:T:63:ASP:O	2.17	0.45
1:A:68:ASN:O	1:A:72:GLN:HG2	2.16	0.45
1:A:114:MET:SD	1:A:118:ARG:NH2	2.88	0.45
1:C:87:ASP:OD1	1:C:88:GLY:N	2.50	0.45
1:F:136:VAL:HG23	1:F:411:VAL:HG23	1.99	0.45
1:F:138:CYS:O	1:F:407:VAL:HA	2.17	0.45
1:F:168:LYS:HD3	1:F:168:LYS:HA	1.70	0.45
1:F:280:GLY:C	1:F:285:ARG:HB2	2.42	0.45
1:H:32:GLY:HA2	6:H:601:ADP:O4'	2.17	0.45
1:H:199:TYR:CE2	1:H:327:LYS:HA	2.52	0.45
1:I:114:MET:SD	1:I:516:THR:HG22	2.56	0.45
1:J:69:MET:HG3	1:K:41:ASP:CG	2.42	0.45
1:L:130:GLU:CD	1:L:422:VAL:HA	2.42	0.45
1:L:230:ILE:HD13	1:L:261:THR:HB	1.98	0.45
1:L:419:LEU:HD22	1:L:447:MET:SD	2.56	0.45
1:L:421:ARG:HH12	1:L:469:VAL:C	2.25	0.45
1:M:98:ALA:O	1:M:102:GLU:HG2	2.17	0.45
1:M:185:ASP:HA	1:M:381:VAL:HA	1.98	0.45
1:N:429:LEU:HB3	1:N:440:ILE:HG21	1.98	0.45
2:O:78:ILE:HG22	2:U:37:ARG:HH22	1.82	0.45
2:O:94:ILE:HD11	2:P:4:ARG:HH11	1.81	0.45
2:Q:10:VAL:O	2:Q:86:MET:N	2.47	0.45
2:Q:69:ASP:HA	2:Q:73:VAL:HG21	1.99	0.45
2:T:11:ILE:HG23	2:T:83:VAL:HB	1.99	0.45
1:C:383:ALA:HB3	1:C:389:MET:HE2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:149:THR:HG21	1:E:156:GLU:OE2	2.16	0.45
1:F:226:LYS:HZ2	1:F:255:GLU:HG3	1.82	0.45
1:G:201:SER:HB3	1:G:204:PHE:CE2	2.51	0.45
1:I:122:LYS:NZ	1:I:431:GLY:HA2	2.30	0.45
1:K:82:ASN:O	1:K:86:GLY:N	2.31	0.45
1:K:265:ASN:O	1:K:269:GLY:N	2.50	0.45
1:K:366:GLN:HA	1:K:369:VAL:HG22	1.99	0.45
1:A:145:ALA:HA	1:A:159:GLY:C	2.42	0.44
1:B:146:GLN:CD	1:B:492:GLY:HA2	2.42	0.44
1:B:165:ALA:HB2	1:B:379:ILE:HD11	1.99	0.44
1:B:223:ALA:HB3	1:B:251:ALA:HB2	1.99	0.44
1:C:287:ALA:HA	1:C:345:ARG:HH21	1.81	0.44
1:D:230:ILE:H	1:D:230:ILE:HD12	1.81	0.44
1:E:128:VAL:HG21	1:E:505:GLN:HG3	1.98	0.44
1:E:475:ASN:HB2	1:E:487:ASN:ND2	2.31	0.44
1:F:77:VAL:HG12	1:F:92:ALA:HB1	1.98	0.44
1:F:361:ASP:O	1:F:365:LEU:HG	2.17	0.44
1:G:124:VAL:HG11	1:G:508:ALA:CB	2.47	0.44
1:G:144:ILE:HG21	1:G:166:MET:HE3	1.99	0.44
1:G:197:ARG:HD2	1:G:277:LYS:HB2	1.98	0.44
1:J:36:ARG:HE	1:J:457:ASN:HA	1.82	0.44
1:J:63:GLU:CD	1:J:63:GLU:H	2.25	0.44
1:J:76:GLU:O	1:J:80:LYS:HG3	2.16	0.44
1:J:141:SER:HA	1:J:144:ILE:HD11	1.99	0.44
1:J:195:PHE:CE2	1:J:197:ARG:HB2	2.52	0.44
1:L:64:ASP:HB3	1:L:67:GLU:HB2	2.00	0.44
1:L:69:MET:HG2	1:L:520:MET:CE	2.40	0.44
1:L:130:GLU:HG2	1:L:422:VAL:HG22	1.99	0.44
1:L:130:GLU:OE1	1:L:426:LEU:HG	2.17	0.44
1:L:263:VAL:O	1:L:266:THR:OG1	2.27	0.44
1:L:433:ASN:OD1	1:L:434:GLU:N	2.50	0.44
1:L:458:CYS:SG	1:L:480:ALA:HB1	2.57	0.44
1:M:174:VAL:HG11	1:M:194:GLN:HB2	1.99	0.44
1:M:429:LEU:HB3	1:M:440:ILE:HG21	1.98	0.44
2:S:10:VAL:HG11	2:S:91:ILE:HD11	1.99	0.44
1:A:140:ASP:N	1:A:140:ASP:OD1	2.48	0.44
1:C:111:MET:HE2	1:C:116:LEU:HD21	1.99	0.44
1:C:180:GLY:N	1:C:381:VAL:O	2.31	0.44
1:C:219:PHE:CE1	1:C:245:LYS:HD2	2.53	0.44
1:C:361:ASP:O	1:C:365:LEU:HG	2.16	0.44
1:D:414:GLY:HA3	1:D:493:ILE:HG22	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:383:ALA:HB1	1:E:388:GLU:HG2	2.00	0.44
1:E:429:LEU:HB3	1:E:440:ILE:HG21	1.99	0.44
1:E:448:GLU:OE1	1:E:470:LYS:NZ	2.42	0.44
1:F:69:MET:O	1:F:73:MET:HG2	2.16	0.44
1:F:346:VAL:HA	1:F:349:ILE:HD12	2.00	0.44
1:F:352:GLN:O	1:F:356:ALA:N	2.50	0.44
1:G:102:GLU:OE1	1:G:445:ARG:NE	2.38	0.44
1:G:215:LEU:HD12	1:G:248:LEU:HB2	1.98	0.44
1:H:142:LYS:NZ	1:H:146:GLN:HG3	2.32	0.44
1:H:222:LEU:HD23	1:H:250:ILE:HB	1.99	0.44
1:H:287:ALA:HB1	1:H:368:ARG:CZ	2.48	0.44
1:H:294:THR:HG21	1:H:345:ARG:HB2	1.98	0.44
1:K:5:ASP:HB3	1:K:522:THR:HG22	1.98	0.44
1:K:15:LYS:HD3	1:K:18:ARG:NH2	2.32	0.44
1:K:30:THR:HB	1:K:51:LYS:C	2.42	0.44
1:L:95:LEU:O	1:L:99:ILE:HG13	2.17	0.44
1:L:141:SER:HA	1:L:144:ILE:HD13	1.99	0.44
1:M:12:ALA:CB	1:M:520:MET:HE2	2.47	0.44
1:N:230:ILE:O	1:N:234:LEU:HG	2.17	0.44
1:N:252:GLU:O	1:N:277:LYS:HG3	2.17	0.44
2:S:11:ILE:HG23	2:S:83:VAL:HB	2.00	0.44
1:C:12:ALA:CA	1:C:520:MET:HE3	2.47	0.44
1:C:126:ALA:O	1:C:130:GLU:HG2	2.18	0.44
1:D:134:LEU:HD23	1:D:418:ALA:HB1	1.99	0.44
1:D:479:ASN:HB3	1:D:484:GLU:HG2	1.99	0.44
1:E:69:MET:HB2	1:F:47:PRO:CG	2.46	0.44
1:F:353:ILE:HG23	1:F:362:ARG:HB2	1.99	0.44
1:F:420:ILE:CG2	1:F:470:LYS:HG2	2.47	0.44
1:G:251:ALA:O	1:G:277:LYS:HA	2.18	0.44
1:H:230:ILE:O	1:H:234:LEU:HG	2.18	0.44
1:I:30:THR:HB	1:I:51:LYS:C	2.43	0.44
1:I:262:LEU:HD22	1:I:273:VAL:HG11	1.98	0.44
1:J:32:GLY:HA2	6:J:601:ADP:O4'	2.17	0.44
1:J:168:LYS:HG2	1:J:189:VAL:HG13	2.00	0.44
1:J:195:PHE:CD2	1:J:279:PRO:HB3	2.53	0.44
1:K:37:ASN:ND2	1:K:51:LYS:HE2	2.32	0.44
1:K:345:ARG:HD2	1:K:348:GLN:OE1	2.17	0.44
1:L:124:VAL:HG11	1:L:508:ALA:CB	2.47	0.44
1:L:465:VAL:HA	1:L:485:TYR:OH	2.17	0.44
1:M:112:ASN:OD1	1:M:114:MET:N	2.50	0.44
1:M:345:ARG:HD2	1:M:348:GLN:OE1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:349:ILE:HG12	1:M:368:ARG:NH2	2.32	0.44
1:A:112:ASN:HD21	1:A:114:MET:HE3	1.82	0.44
1:A:268:ARG:NH1	2:O:26:VAL:HG11	2.32	0.44
1:B:197:ARG:HD2	1:B:277:LYS:HB2	1.99	0.44
1:B:215:LEU:HD12	1:B:248:LEU:HB2	2.00	0.44
1:B:232:GLU:HG2	1:B:310:GLU:OE2	2.17	0.44
1:C:200:LEU:HD21	1:C:277:LYS:HG3	1.98	0.44
1:D:283:ASP:OD1	1:D:284:ARG:N	2.50	0.44
3:D:601:ATP:H5'2	3:D:601:ATP:H8	1.81	0.44
1:E:6:VAL:HG13	1:E:521:VAL:HG22	2.00	0.44
1:E:313:THR:O	1:E:317:LEU:HG	2.17	0.44
1:F:224:ASP:OD1	1:F:285:ARG:NH1	2.51	0.44
1:F:231:ARG:NH2	2:T:31:ALA:O	2.40	0.44
1:G:219:PHE:CD2	1:G:240:VAL:HG22	2.44	0.44
1:G:265:ASN:O	1:G:269:GLY:N	2.51	0.44
1:K:85:ALA:CB	1:K:499:VAL:HA	2.41	0.44
1:K:358:SER:O	1:K:362:ARG:HG2	2.17	0.44
1:L:30:THR:HB	1:L:51:LYS:C	2.43	0.44
1:L:221:LEU:HD23	1:L:249:ILE:HD12	1.99	0.44
1:M:130:GLU:OE1	1:M:426:LEU:HG	2.18	0.44
1:M:364:LYS:HD3	1:M:364:LYS:HA	1.76	0.44
2:Q:8:ASP:HA	2:Q:57:LEU:HD11	1.99	0.44
2:S:11:ILE:HB	2:S:42:ALA:HB3	1.99	0.44
1:A:440:ILE:O	1:A:444:LEU:HG	2.18	0.44
1:B:134:LEU:HD23	1:B:418:ALA:HB1	2.00	0.44
1:E:236:VAL:HG21	1:E:317:LEU:HD21	1.99	0.44
1:E:479:ASN:O	1:E:483:GLU:N	2.51	0.44
1:F:40:LEU:HD13	1:F:59:GLU:HG3	2.00	0.44
1:F:294:THR:HG22	1:F:341:ALA:HB1	1.99	0.44
1:G:349:ILE:HG23	1:G:365:LEU:CD1	2.47	0.44
1:H:215:LEU:HB2	1:H:323:VAL:HG22	1.99	0.44
1:H:239:ALA:C	1:H:314:LEU:HD21	2.42	0.44
1:I:218:PRO:HG3	1:I:323:VAL:HG22	1.99	0.44
1:I:294:THR:HG21	1:I:345:ARG:HB2	2.00	0.44
1:J:421:ARG:HH12	1:J:469:VAL:C	2.26	0.44
1:M:115:ASP:OD2	1:M:433:ASN:ND2	2.35	0.44
1:M:130:GLU:HB2	1:M:422:VAL:HG13	1.99	0.44
1:M:287:ALA:HB1	1:M:368:ARG:CZ	2.47	0.44
1:M:295:LEU:HA	1:M:342:ILE:HG12	1.99	0.44
2:Q:43:VAL:HB	2:Q:57:LEU:HD22	1.99	0.44
1:A:270:ILE:HG21	2:O:25:ILE:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:338:GLU:CD	1:A:338:GLU:H	2.24	0.44
1:B:420:ILE:CG2	1:B:470:LYS:HG2	2.47	0.44
1:B:479:ASN:O	1:B:483:GLU:N	2.50	0.44
1:C:112:ASN:OD1	1:C:114:MET:HE3	2.18	0.44
1:D:234:LEU:HD12	1:D:238:GLU:OE2	2.18	0.44
1:D:381:VAL:HG13	1:D:392:LYS:HE3	2.00	0.44
1:D:417:VAL:O	1:D:421:ARG:HG2	2.18	0.44
1:F:222:LEU:O	1:F:301:ILE:N	2.32	0.44
1:F:510:VAL:O	1:F:514:MET:HG2	2.18	0.44
1:G:112:ASN:ND2	1:G:115:ASP:OD2	2.43	0.44
1:G:313:THR:O	1:G:317:LEU:HG	2.17	0.44
1:G:346:VAL:HA	1:G:349:ILE:HB	2.00	0.44
1:H:195:PHE:CE2	1:H:197:ARG:HB2	2.53	0.44
1:I:29:VAL:O	1:I:36:ARG:N	2.26	0.44
1:I:193:MET:SD	1:I:295:LEU:HD22	2.58	0.44
1:I:216:GLU:HG2	1:I:322:ARG:HD2	1.99	0.44
1:I:475:ASN:HB2	1:I:487:ASN:HD21	1.82	0.44
1:J:30:THR:HB	1:J:51:LYS:C	2.43	0.44
1:J:31:LEU:HD23	1:J:453:GLN:HB3	2.00	0.44
1:K:149:THR:OG1	1:K:156:GLU:HA	2.18	0.44
1:M:148:GLY:CA	1:M:399:ALA:HB1	2.47	0.44
1:M:219:PHE:CD2	1:M:245:LYS:HD2	2.52	0.44
1:M:230:ILE:HD13	1:M:261:THR:HB	1.99	0.44
1:M:458:CYS:SG	1:M:480:ALA:HB1	2.57	0.44
1:N:5:ASP:N	1:N:522:THR:O	2.44	0.44
1:N:7:LYS:HE3	1:N:15:LYS:HG3	1.98	0.44
2:P:88:GLU:CD	2:Q:7:HIS:HE2	2.26	0.44
2:R:11:ILE:O	2:R:41:LEU:N	2.40	0.44
1:A:158:VAL:HG22	1:A:396:VAL:HG22	1.99	0.44
1:A:203:TYR:CE1	1:G:305:ILE:HG12	2.52	0.44
1:A:222:LEU:HD21	1:A:292:ILE:HG22	1.99	0.44
1:B:207:LYS:NZ	1:B:214:GLU:HB2	2.32	0.44
1:B:222:LEU:HB2	1:B:300:VAL:HA	2.00	0.44
1:C:77:VAL:HG12	1:C:92:ALA:HB1	1.99	0.44
1:C:134:LEU:HD23	1:C:418:ALA:HB1	2.00	0.44
1:C:230:ILE:O	1:C:234:LEU:N	2.51	0.44
1:C:239:ALA:HA	1:C:242:LYS:HE2	1.98	0.44
1:E:12:ALA:O	1:E:16:MET:HG2	2.18	0.44
1:E:511:ALA:O	1:E:515:ILE:HG12	2.17	0.44
1:F:152:ALA:O	1:F:395:ARG:HD2	2.18	0.44
1:F:169:VAL:HB	1:F:377:ALA:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:178:GLU:N	1:G:379:ILE:O	2.47	0.44
1:J:123:ALA:HB3	1:J:443:ALA:HB3	2.00	0.44
1:J:284:ARG:O	1:J:288:MET:HG2	2.18	0.44
1:J:319:GLN:HB2	1:J:336:VAL:HB	2.00	0.44
1:J:359:ASP:HA	1:J:362:ARG:HB3	1.99	0.44
1:K:69:MET:HG2	1:K:520:MET:HE1	1.99	0.44
1:K:323:VAL:HB	1:K:332:ILE:HG22	2.00	0.44
1:L:124:VAL:HG11	1:L:508:ALA:HB2	1.99	0.44
1:L:299:THR:N	1:L:316:ASP:O	2.44	0.44
1:M:24:ALA:HB3	1:M:97:GLN:HG3	2.00	0.44
1:M:349:ILE:HG12	1:M:368:ARG:CZ	2.48	0.44
1:M:389:MET:HE2	1:M:389:MET:HA	1.99	0.44
2:P:6:LEU:HB3	2:P:7:HIS:CD2	2.52	0.44
1:A:350:ARG:NH2	1:A:369:VAL:HG11	2.32	0.44
1:B:128:VAL:HG21	1:B:505:GLN:HG3	2.00	0.44
1:B:475:ASN:CG	1:B:489:ILE:HG12	2.43	0.44
1:C:111:MET:HE3	1:C:435:ASP:OD1	2.18	0.44
1:D:115:ASP:CG	1:D:433:ASN:HD21	2.26	0.44
1:D:462:PRO:O	1:D:466:ALA:CB	2.66	0.44
1:E:523:ASP:OD1	1:E:524:LEU:N	2.51	0.44
1:F:338:GLU:H	1:F:338:GLU:CD	2.24	0.44
1:F:431:GLY:N	1:F:437:ASN:OD1	2.43	0.44
1:G:77:VAL:HG12	1:G:92:ALA:HB1	1.99	0.44
1:G:455:VAL:CG1	1:G:460:GLU:HB2	2.47	0.44
1:H:16:MET:HE1	1:H:66:PHE:O	2.18	0.44
1:H:34:LYS:HB2	1:H:458:CYS:SG	2.58	0.44
1:H:217:SER:O	1:H:245:LYS:HD3	2.17	0.44
1:H:350:ARG:HA	1:H:353:ILE:HD12	1.99	0.44
1:J:230:ILE:O	1:J:234:LEU:HG	2.18	0.44
1:K:498:LYS:HG3	1:K:501:ARG:NH2	2.33	0.44
1:L:220:ILE:HD11	1:L:250:ILE:HD12	2.00	0.44
1:M:178:GLU:HB2	1:M:380:LYS:HD3	1.99	0.44
1:N:130:GLU:HB2	1:N:422:VAL:HG13	2.00	0.44
2:O:67:PHE:CB	2:O:86:MET:HE1	2.47	0.44
2:R:75:SER:HB3	2:R:82:GLU:OE1	2.18	0.44
1:A:239:ALA:HB1	1:A:314:LEU:HD11	2.00	0.44
1:A:419:LEU:HD23	1:A:419:LEU:HA	1.87	0.44
1:C:232:GLU:HB3	1:C:309:LEU:HD23	2.00	0.44
1:C:279:PRO:O	1:C:285:ARG:HA	2.18	0.44
1:D:198:GLY:N	1:D:328:ASP:O	2.51	0.44
1:E:82:ASN:HB2	1:E:89:THR:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:452:ARG:HH21	1:E:470:LYS:NZ	2.16	0.44
1:F:250:ILE:HD13	1:F:292:ILE:HD13	2.00	0.44
1:H:283:ASP:OD1	1:H:284:ARG:N	2.51	0.44
1:I:452:ARG:HH12	1:I:463:SER:HA	1.83	0.44
1:J:176:THR:O	1:J:379:ILE:N	2.45	0.44
1:J:246:PRO:HA	1:J:272:LYS:HB2	2.00	0.44
1:K:34:LYS:HB2	1:K:458:CYS:SG	2.58	0.44
1:M:417:VAL:O	1:M:421:ARG:HG2	2.17	0.44
2:P:9:ARG:HA	2:P:87:SER:HA	1.99	0.44
2:Q:5:PRO:O	2:Q:44:GLY:HA2	2.18	0.44
2:Q:94:ILE:HG23	2:R:6:LEU:HD11	1.99	0.44
1:A:34:LYS:HG2	1:G:114:MET:HE2	2.00	0.43
1:A:162:ILE:HG12	1:A:400:LEU:HD13	1.99	0.43
1:A:349:ILE:HG23	1:A:365:LEU:HB3	1.99	0.43
1:B:122:LYS:NZ	1:B:430:ARG:O	2.43	0.43
1:B:220:ILE:HG13	1:B:248:LEU:HD23	2.00	0.43
1:B:421:ARG:NH2	1:B:469:VAL:O	2.44	0.43
1:C:221:LEU:HD21	1:C:309:LEU:HD11	1.99	0.43
1:C:443:ALA:O	1:C:447:MET:HG2	2.18	0.43
1:D:184:GLN:N	1:D:382:GLY:HA3	2.32	0.43
1:D:251:ALA:O	1:D:278:ALA:N	2.51	0.43
1:D:264:VAL:HA	1:D:267:MET:SD	2.57	0.43
1:D:305:ILE:O	1:E:264:VAL:HG22	2.18	0.43
1:D:420:ILE:CG2	1:D:470:LYS:HG2	2.48	0.43
1:E:458:CYS:HB3	1:E:483:GLU:OE2	2.17	0.43
1:F:417:VAL:O	1:F:421:ARG:HG2	2.18	0.43
1:F:475:ASN:CG	1:F:489:ILE:HG12	2.42	0.43
1:G:217:SER:HA	1:G:320:ALA:O	2.18	0.43
1:G:270:ILE:HG21	2:U:25:ILE:HA	2.00	0.43
1:H:193:MET:H	1:H:332:ILE:HG13	1.83	0.43
1:I:221:LEU:HD23	1:I:249:ILE:HD12	1.99	0.43
1:J:69:MET:HG2	1:K:47:PRO:CG	2.48	0.43
1:J:383:ALA:HB1	1:J:388:GLU:HB3	2.00	0.43
1:K:252:GLU:O	1:K:277:LYS:HG3	2.18	0.43
1:K:349:ILE:O	1:K:353:ILE:HG13	2.18	0.43
1:K:414:GLY:O	1:K:417:VAL:HG22	2.18	0.43
1:N:30:THR:HB	1:N:51:LYS:C	2.43	0.43
1:A:479:ASN:HB3	1:A:484:GLU:HG2	2.00	0.43
1:E:220:ILE:HG22	1:E:222:LEU:HG	2.00	0.43
1:F:219:PHE:CZ	1:F:314:LEU:HD23	2.54	0.43
1:F:359:ASP:HA	1:F:362:ARG:HE	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:239:ALA:HB1	1:G:314:LEU:HD11	1.99	0.43
1:H:82:ASN:O	1:H:86:GLY:N	2.32	0.43
1:H:364:LYS:HA	1:H:364:LYS:HD3	1.81	0.43
1:I:69:MET:HE1	1:J:39:VAL:CG1	2.48	0.43
1:I:342:ILE:O	1:I:346:VAL:HG23	2.18	0.43
1:J:56:VAL:HG12	1:J:60:ILE:HD11	1.99	0.43
1:J:104:LEU:HD23	1:J:104:LEU:HA	1.60	0.43
1:L:262:LEU:HB3	1:L:273:VAL:HG11	2.00	0.43
1:L:352:GLN:C	1:L:365:LEU:HD13	2.43	0.43
1:M:386:GLU:O	1:M:389:MET:HB3	2.18	0.43
1:N:34:LYS:HB2	1:N:458:CYS:SG	2.58	0.43
1:N:262:LEU:HB3	1:N:273:VAL:HG11	2.00	0.43
1:N:349:ILE:HG21	1:N:368:ARG:CB	2.45	0.43
2:Q:9:ARG:HA	2:Q:87:SER:HA	2.00	0.43
1:C:339:GLU:O	1:C:342:ILE:HB	2.18	0.43
1:D:475:ASN:CG	1:D:489:ILE:HG12	2.44	0.43
1:E:6:VAL:HG22	1:E:521:VAL:HG22	2.00	0.43
1:E:207:LYS:NZ	1:E:214:GLU:HB2	2.33	0.43
1:E:520:MET:HE2	1:E:520:MET:HB3	1.86	0.43
1:F:440:ILE:O	1:F:444:LEU:HG	2.17	0.43
1:G:138:CYS:HB3	1:G:406:ALA:HB1	2.01	0.43
1:G:268:ARG:NH1	2:U:26:VAL:HG11	2.33	0.43
1:G:452:ARG:NH1	7:G:714:HOH:O	2.30	0.43
1:H:179:ASP:HA	1:H:381:VAL:HG22	2.00	0.43
1:H:265:ASN:O	1:H:269:GLY:N	2.51	0.43
1:H:475:ASN:HB2	1:H:487:ASN:ND2	2.33	0.43
1:I:390:LYS:NZ	1:I:393:LYS:HG2	2.33	0.43
1:I:479:ASN:HB2	1:I:491:MET:HE2	2.00	0.43
1:J:20:VAL:HG22	1:J:74:VAL:CG2	2.47	0.43
1:K:4:LYS:HB3	1:K:521:VAL:HG13	2.00	0.43
1:K:195:PHE:CZ	1:K:250:ILE:HD13	2.53	0.43
1:K:468:THR:HB	1:K:485:TYR:CE2	2.53	0.43
1:L:140:ASP:O	1:L:144:ILE:HD12	2.18	0.43
1:L:218:PRO:HG3	1:L:323:VAL:HG22	2.00	0.43
1:L:349:ILE:HG21	1:L:368:ARG:CB	2.49	0.43
1:M:230:ILE:HG12	1:M:261:THR:HG21	2.00	0.43
1:N:130:GLU:CD	1:N:426:LEU:HG	2.43	0.43
1:N:219:PHE:CD2	1:N:314:LEU:HD22	2.52	0.43
1:B:178:GLU:HG3	1:B:380:LYS:HG3	2.01	0.43
1:D:162:ILE:HG23	1:D:400:LEU:HD12	2.00	0.43
1:D:226:LYS:NZ	1:D:253:ASP:HB3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:108:ALA:HB1	1:K:109:ALA:HB1	1.99	0.43
1:F:221:LEU:HD12	1:F:236:VAL:HG11	2.00	0.43
1:G:227:ILE:HG23	1:G:233:MET:SD	2.58	0.43
1:H:142:LYS:HD2	1:H:145:ALA:HB3	2.01	0.43
1:H:405:ALA:HB1	1:H:498:LYS:HB3	2.00	0.43
1:H:433:ASN:HB3	1:H:436:GLN:HG3	2.00	0.43
1:I:104:LEU:HD11	1:I:514:MET:HE2	2.00	0.43
1:I:124:VAL:HG13	1:I:504:LEU:HG	2.01	0.43
1:J:15:LYS:HD3	1:J:18:ARG:NH2	2.34	0.43
1:J:127:ALA:HB3	1:J:504:LEU:HD21	2.00	0.43
1:K:102:GLU:HG3	1:K:445:ARG:NH1	2.33	0.43
1:K:199:TYR:CE2	1:K:327:LYS:HA	2.53	0.43
1:K:219:PHE:CD2	1:K:314:LEU:HD22	2.54	0.43
1:L:31:LEU:HB3	1:L:453:GLN:HG3	1.99	0.43
1:L:262:LEU:HD13	1:L:273:VAL:HG11	2.00	0.43
1:M:224:ASP:OD2	1:M:286:LYS:HG2	2.18	0.43
1:M:381:VAL:HG23	1:M:389:MET:SD	2.58	0.43
2:T:75:SER:HA	2:T:83:VAL:O	2.17	0.43
1:A:124:VAL:HG22	1:A:504:LEU:HD11	2.00	0.43
1:A:243:ALA:HB2	1:A:314:LEU:HD21	2.01	0.43
1:A:392:LYS:O	1:A:396:VAL:HG23	2.19	0.43
1:C:106:ALA:O	1:C:111:MET:HG2	2.19	0.43
1:D:260:ALA:HA	1:D:263:VAL:HG22	2.00	0.43
1:E:239:ALA:HB1	1:E:314:LEU:HD11	2.00	0.43
1:E:240:VAL:HG21	1:E:247:LEU:CD1	2.48	0.43
1:F:20:VAL:HA	1:F:74:VAL:HG11	2.00	0.43
1:F:127:ALA:N	1:F:426:LEU:HD11	2.34	0.43
1:F:178:GLU:N	1:F:379:ILE:O	2.42	0.43
1:F:205:ILE:HG23	1:F:212:ALA:O	2.19	0.43
1:G:113:PRO:CB	1:G:516:THR:HA	2.45	0.43
1:G:219:PHE:CE2	1:G:314:LEU:HD23	2.53	0.43
1:G:268:ARG:HG3	2:U:26:VAL:HG21	2.00	0.43
1:H:152:ALA:HB3	1:H:155:ASP:HB2	2.01	0.43
1:H:221:LEU:N	1:H:248:LEU:O	2.28	0.43
1:H:479:ASN:CG	1:H:493:ILE:HD11	2.43	0.43
1:I:411:VAL:HG12	1:I:496:PRO:HA	2.00	0.43
1:J:276:VAL:HG12	1:J:277:LYS:O	2.17	0.43
1:J:455:VAL:CG1	1:J:460:GLU:HB2	2.45	0.43
1:K:111:MET:HB3	1:K:435:ASP:CG	2.43	0.43
1:K:115:ASP:OD2	1:K:433:ASN:ND2	2.35	0.43
1:K:168:LYS:HE2	1:K:168:LYS:HB2	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:221:LEU:HD23	1:L:249:ILE:HG23	2.01	0.43
1:M:16:MET:O	1:M:20:VAL:HG23	2.18	0.43
1:M:42:LYS:N	1:M:47:PRO:HB3	2.33	0.43
1:M:197:ARG:NH1	1:M:277:LYS:HD3	2.33	0.43
2:P:13:LYS:HG2	2:P:41:LEU:HD21	2.00	0.43
2:S:67:PHE:CG	2:S:86:MET:HE1	2.52	0.43
2:T:14:ARG:NH1	2:T:34:LYS:HZ2	2.16	0.43
2:U:10:VAL:O	2:U:86:MET:HG3	2.18	0.43
1:B:200:LEU:N	1:B:275:ALA:O	2.35	0.43
1:B:440:ILE:O	1:B:444:LEU:HG	2.18	0.43
1:C:34:LYS:O	1:C:36:ARG:NH1	2.52	0.43
1:C:219:PHE:HB3	1:C:317:LEU:HB3	2.01	0.43
1:D:452:ARG:HH22	1:D:470:LYS:HE2	1.83	0.43
1:E:62:LEU:O	1:E:68:ASN:HB2	2.18	0.43
1:E:270:ILE:HG21	2:S:25:ILE:HA	2.00	0.43
1:E:349:ILE:HG23	1:E:365:LEU:CD1	2.48	0.43
1:H:235:PRO:CG	1:H:310:GLU:HA	2.47	0.43
1:H:432:GLN:HB2	1:H:436:GLN:NE2	2.34	0.43
1:H:468:THR:HB	1:H:485:TYR:CE2	2.54	0.43
1:I:324:VAL:HB	1:I:331:THR:HB	2.00	0.43
1:I:365:LEU:HD23	1:I:368:ARG:HE	1.83	0.43
1:L:477:GLY:N	1:L:486:GLY:O	2.51	0.43
1:L:478:TYR:C	1:L:488:MET:HE1	2.44	0.43
1:L:511:ALA:O	1:L:515:ILE:HG13	2.19	0.43
1:N:123:ALA:HB3	1:N:443:ALA:HB3	2.01	0.43
1:N:222:LEU:HD11	1:N:292:ILE:HG22	1.99	0.43
2:P:15:LYS:HE2	2:P:64:ILE:HG23	2.01	0.43
2:R:63:ASP:HB3	2:R:94:ILE:HG23	2.00	0.43
2:U:74:LYS:HE3	2:U:74:LYS:HB3	1.72	0.43
1:A:152:ALA:O	1:A:395:ARG:HD2	2.18	0.43
1:A:218:PRO:HG2	1:A:323:VAL:HG23	2.00	0.43
1:B:339:GLU:HG3	1:B:343:GLN:OE1	2.18	0.43
1:B:465:VAL:HA	1:B:485:TYR:OH	2.17	0.43
1:C:429:LEU:HB3	1:C:440:ILE:HG21	2.01	0.43
1:D:207:LYS:HE2	1:D:212:ALA:HB3	2.00	0.43
1:F:149:THR:HG22	1:F:154:SER:HA	1.99	0.43
1:F:287:ALA:HB1	1:F:368:ARG:CZ	2.49	0.43
1:F:415:GLY:HA2	3:F:601:ATP:H1'	2.01	0.43
1:H:102:GLU:HB3	1:H:442:VAL:HG22	2.01	0.43
1:H:345:ARG:HD2	1:H:348:GLN:OE1	2.19	0.43
1:I:345:ARG:HD2	1:I:348:GLN:OE1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:9:GLY:O	1:J:13:ARG:HG2	2.19	0.43
1:J:277:LYS:NZ	1:J:285:ARG:HH21	2.17	0.43
1:J:516:THR:O	1:K:37:ASN:HB2	2.19	0.43
1:K:197:ARG:NH1	1:K:277:LYS:HD3	2.33	0.43
1:K:230:ILE:O	1:K:234:LEU:HG	2.18	0.43
1:L:115:ASP:O	1:L:436:GLN:HG2	2.18	0.43
1:M:263:VAL:O	1:M:266:THR:OG1	2.22	0.43
1:N:68:ASN:O	1:N:72:GLN:HG2	2.17	0.43
1:N:352:GLN:O	1:N:356:ALA:N	2.52	0.43
2:R:9:ARG:HA	2:R:87:SER:HA	2.00	0.43
1:A:455:VAL:HG13	1:A:460:GLU:HB2	2.00	0.43
1:B:102:GLU:CB	1:B:442:VAL:HG13	2.49	0.43
1:B:223:ALA:O	1:B:251:ALA:HA	2.19	0.43
1:B:252:GLU:HA	1:B:285:ARG:NH1	2.34	0.43
1:B:427:ALA:HA	1:B:444:LEU:HD13	2.00	0.43
1:C:239:ALA:HB1	1:C:314:LEU:HD12	1.99	0.43
1:C:277:LYS:HB3	1:C:277:LYS:HE3	1.88	0.43
1:E:77:VAL:HG11	1:E:96:ALA:HB2	2.01	0.43
1:E:135:SER:HB3	1:E:497:THR:HG21	2.00	0.43
1:E:230:ILE:H	1:E:230:ILE:HD12	1.84	0.43
1:E:262:LEU:O	1:E:266:THR:HG23	2.19	0.43
1:E:295:LEU:HD12	1:E:342:ILE:HD11	2.00	0.43
1:F:179:ASP:OD1	1:F:389:MET:HE2	2.19	0.43
1:F:222:LEU:HD22	1:F:293:ALA:HB2	2.01	0.43
1:F:225:LYS:HE2	1:F:225:LYS:HB2	1.83	0.43
1:G:452:ARG:HH21	1:G:470:LYS:NZ	2.16	0.43
1:H:190:VAL:O	1:H:376:VAL:HG22	2.19	0.43
1:K:69:MET:HG2	1:K:520:MET:CE	2.49	0.43
1:K:185:ASP:HA	1:K:380:LYS:O	2.19	0.43
1:K:187:LEU:HB3	1:K:379:ILE:HG12	2.01	0.43
1:K:274:ALA:HB1	1:K:325:ILE:CD1	2.48	0.43
1:K:291:ASP:HB3	1:K:372:LEU:HD21	2.00	0.43
1:L:111:MET:HE2	1:L:116:LEU:HD21	2.00	0.43
1:L:349:ILE:O	1:L:353:ILE:HG13	2.19	0.43
1:M:33:PRO:HD2	1:M:454:ILE:HG23	2.00	0.43
1:M:168:LYS:HE2	1:M:168:LYS:HB2	1.83	0.43
1:M:199:TYR:CE1	1:M:327:LYS:HA	2.54	0.43
1:N:81:ALA:HA	1:N:506:TYR:CD2	2.54	0.43
1:N:465:VAL:HA	1:N:485:TYR:OH	2.19	0.43
1:A:387:VAL:HA	1:A:390:LYS:HE2	2.01	0.43
1:A:452:ARG:HH21	1:A:470:LYS:NZ	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:69:MET:O	1:B:73:MET:HG2	2.18	0.43
1:B:270:ILE:HG22	1:B:271:VAL:HG13	2.00	0.43
1:B:339:GLU:O	1:B:342:ILE:HB	2.18	0.43
1:C:227:ILE:HG23	1:C:233:MET:SD	2.59	0.43
1:C:239:ALA:HB1	1:C:314:LEU:CD1	2.49	0.43
1:D:209:GLU:HG2	1:D:210:THR:HG23	2.01	0.43
1:E:136:VAL:HG23	1:E:411:VAL:HG23	2.01	0.43
1:F:207:LYS:NZ	1:F:214:GLU:HB2	2.34	0.43
1:F:265:ASN:HA	1:F:268:ARG:HB2	2.01	0.43
1:F:308:GLU:HB2	1:F:311:LYS:HG3	2.01	0.43
1:F:421:ARG:O	1:F:425:LYS:HG3	2.19	0.43
1:F:429:LEU:O	1:F:430:ARG:NH1	2.52	0.43
1:F:453:GLN:NE2	1:F:457:ASN:OD1	2.52	0.43
1:G:207:LYS:NZ	1:G:214:GLU:HB2	2.34	0.43
1:H:41:ASP:CG	1:N:69:MET:HG2	2.44	0.43
1:H:290:GLN:HG3	1:H:345:ARG:NE	2.33	0.43
1:I:147:VAL:HG11	1:I:406:ALA:HB2	2.00	0.43
1:I:217:SER:HA	1:I:320:ALA:O	2.19	0.43
1:I:513:LEU:HA	1:I:513:LEU:HD23	1.87	0.43
1:J:364:LYS:HD3	1:J:364:LYS:HA	1.67	0.43
1:J:390:LYS:HA	1:J:393:LYS:HB2	2.01	0.43
1:J:460:GLU:HG3	1:J:478:TYR:OH	2.18	0.43
1:L:104:LEU:HD23	1:L:104:LEU:HA	1.82	0.43
1:L:144:ILE:HG12	1:L:166:MET:HE3	2.01	0.43
1:L:195:PHE:CE2	1:L:197:ARG:HB2	2.54	0.43
1:L:319:GLN:HB2	1:L:336:VAL:HB	2.01	0.43
1:M:15:LYS:HD3	1:M:18:ARG:NH2	2.34	0.43
1:M:150:ILE:HG13	1:M:494:LEU:H	1.84	0.43
1:M:301:ILE:HG21	1:M:309:LEU:HD23	2.00	0.43
1:M:333:ILE:HG12	1:M:376:VAL:HG11	2.00	0.43
1:N:287:ALA:HB1	1:N:368:ARG:CZ	2.48	0.43
1:N:513:LEU:HA	1:N:513:LEU:HD23	1.75	0.43
2:O:8:ASP:O	2:O:57:LEU:HD21	2.18	0.43
2:R:20:LYS:HE3	2:R:24:GLY:HA2	2.01	0.43
2:U:14:ARG:NH2	2:U:69:ASP:OD1	2.50	0.43
2:U:65:VAL:HG12	2:U:94:ILE:HG12	2.01	0.43
1:B:417:VAL:O	1:B:421:ARG:HG2	2.19	0.43
1:C:292:ILE:O	1:C:296:THR:OG1	2.33	0.43
1:C:350:ARG:HA	1:C:353:ILE:HD12	2.01	0.43
1:C:452:ARG:NH1	7:C:707:HOH:O	2.30	0.43
1:E:10:ASN:O	1:E:14:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:361:ASP:O	1:E:365:LEU:HD23	2.19	0.43
1:G:417:VAL:O	1:G:421:ARG:HG2	2.19	0.43
1:H:289:LEU:HD22	1:H:300:VAL:HG13	2.00	0.43
1:H:479:ASN:N	1:H:488:MET:HE1	2.34	0.43
1:I:39:VAL:HG22	1:I:49:ILE:HG23	2.01	0.43
1:I:124:VAL:HG11	1:I:508:ALA:HB2	2.01	0.43
1:I:252:GLU:O	1:I:277:LYS:HG3	2.19	0.43
1:J:130:GLU:OE1	1:J:426:LEU:HG	2.18	0.43
1:J:174:VAL:CG1	1:J:376:VAL:HG12	2.49	0.43
1:K:193:MET:SD	1:K:295:LEU:HD22	2.58	0.43
1:K:223:ALA:HA	1:K:301:ILE:HB	2.00	0.43
1:L:124:VAL:HG22	1:L:504:LEU:HD11	2.01	0.43
1:M:73:MET:SD	1:N:47:PRO:HD2	2.59	0.43
1:M:139:SER:O	1:M:171:LYS:HD3	2.18	0.43
1:N:149:THR:HG22	1:N:154:SER:HA	2.00	0.43
1:N:235:PRO:HG3	1:N:310:GLU:HA	2.01	0.43
2:P:20:LYS:HZ1	2:P:24:GLY:HA2	1.83	0.43
2:R:88:GLU:HG2	2:R:91:ILE:HG13	2.01	0.43
2:S:67:PHE:HE2	2:S:69:ASP:HB3	1.83	0.43
2:S:69:ASP:OD1	2:S:69:ASP:N	2.51	0.43
2:S:73:VAL:HG22	2:S:86:MET:SD	2.59	0.43
1:A:194:GLN:HA	1:A:331:THR:HA	2.01	0.42
1:A:232:GLU:HG2	1:A:310:GLU:OE2	2.19	0.42
1:B:131:LEU:HD21	1:B:419:LEU:HD23	2.01	0.42
1:B:186:GLU:HG3	1:B:380:LYS:HE2	2.01	0.42
1:B:291:ASP:OD1	1:B:345:ARG:HG2	2.19	0.42
1:C:35:GLY:O	1:C:51:LYS:HE2	2.19	0.42
1:C:54:VAL:HG11	1:C:82:ASN:HB2	2.01	0.42
1:C:66:PHE:HB3	1:C:520:MET:HE1	2.01	0.42
1:C:469:VAL:HG22	1:C:477:GLY:C	2.44	0.42
1:D:214:GLU:OE2	1:D:322:ARG:NH1	2.52	0.42
1:D:399:ALA:O	1:D:403:THR:HG23	2.18	0.42
1:E:203:TYR:HB2	1:E:263:VAL:HB	2.01	0.42
1:E:277:LYS:HE3	1:E:285:ARG:HH22	1.84	0.42
1:F:158:VAL:HG22	1:F:396:VAL:HG22	1.99	0.42
1:F:198:GLY:N	1:F:328:ASP:O	2.53	0.42
1:H:161:LEU:HG	1:H:187:LEU:HD23	2.00	0.42
1:H:169:VAL:CG2	1:H:377:ALA:HB2	2.48	0.42
1:J:124:VAL:HG22	1:J:504:LEU:HD11	2.01	0.42
1:J:262:LEU:HD13	1:J:273:VAL:HG11	2.01	0.42
1:K:339:GLU:HA	1:K:342:ILE:HB	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:20:VAL:HG22	1:N:74:VAL:CG2	2.45	0.42
1:N:69:MET:HA	1:N:72:GLN:HG2	2.01	0.42
1:N:104:LEU:HD21	1:N:514:MET:HE3	2.00	0.42
1:N:339:GLU:HA	1:N:342:ILE:HD12	2.00	0.42
1:N:514:MET:HA	1:N:517:THR:OG1	2.19	0.42
2:R:37:ARG:HH12	2:S:3:ILE:HD11	1.84	0.42
2:R:78:ILE:HD11	2:R:83:VAL:HG11	2.01	0.42
1:A:207:LYS:HD2	1:A:212:ALA:HB3	2.01	0.42
1:B:194:GLN:HA	1:B:331:THR:HA	2.00	0.42
1:C:169:VAL:HG13	1:C:170:GLY:O	2.18	0.42
1:E:205:ILE:HD13	1:E:211:GLY:HA2	2.02	0.42
1:E:220:ILE:HG13	1:E:248:LEU:HD23	2.01	0.42
1:F:308:GLU:H	1:F:311:LYS:HD3	1.84	0.42
1:G:62:LEU:O	1:G:68:ASN:HB2	2.18	0.42
1:G:162:ILE:HG23	1:G:400:LEU:HD12	2.01	0.42
1:G:455:VAL:HG13	1:G:460:GLU:HB2	2.00	0.42
1:H:138:CYS:O	1:H:407:VAL:HG22	2.19	0.42
1:H:199:TYR:CZ	1:H:327:LYS:HA	2.54	0.42
1:I:69:MET:HE2	1:J:47:PRO:HG2	2.00	0.42
1:I:299:THR:N	1:I:316:ASP:O	2.47	0.42
1:I:327:LYS:HE2	1:I:327:LYS:HB3	1.82	0.42
1:K:246:PRO:HA	1:K:272:LYS:HB2	2.00	0.42
1:L:76:GLU:O	1:L:80:LYS:HG3	2.19	0.42
1:L:162:ILE:HG23	1:L:400:LEU:HD12	2.01	0.42
1:L:177:VAL:HG22	1:L:393:LYS:HE2	2.01	0.42
1:L:320:ALA:HA	1:L:336:VAL:H	1.85	0.42
1:M:429:LEU:O	1:M:441:LYS:NZ	2.39	0.42
1:N:13:ARG:HA	1:N:514:MET:CE	2.49	0.42
1:N:32:GLY:HA2	6:N:601:ADP:O4'	2.19	0.42
1:N:40:LEU:HD22	1:N:59:GLU:HB3	2.02	0.42
1:N:451:LEU:O	1:N:455:VAL:HG23	2.19	0.42
2:P:3:ILE:HD13	2:P:78:ILE:HG21	2.00	0.42
2:T:5:PRO:HD3	2:T:42:ALA:HB1	2.01	0.42
1:B:82:ASN:HB2	1:B:89:THR:HG21	2.01	0.42
1:B:115:ASP:OD2	1:B:433:ASN:ND2	2.32	0.42
1:B:338:GLU:HG2	1:B:338:GLU:O	2.19	0.42
1:B:441:LYS:HB3	1:B:445:ARG:NH1	2.34	0.42
1:C:242:LYS:HE2	1:C:242:LYS:HB2	1.89	0.42
1:C:250:ILE:HD11	1:C:332:ILE:HD11	2.02	0.42
1:C:353:ILE:HG23	1:C:362:ARG:HB2	2.01	0.42
1:C:479:ASN:HB2	1:C:491:MET:HE1	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:197:ARG:HD2	1:D:277:LYS:HB2	2.00	0.42
1:D:313:THR:O	1:D:317:LEU:HG	2.20	0.42
1:E:48:THR:HG22	1:E:390:LYS:NZ	2.35	0.42
1:E:199:TYR:HE1	1:E:212:ALA:HA	1.83	0.42
1:E:199:TYR:HA	1:E:276:VAL:HG12	2.01	0.42
1:E:207:LYS:HE2	1:E:212:ALA:HB3	2.00	0.42
1:F:12:ALA:HA	1:F:520:MET:HE3	2.01	0.42
1:F:283:ASP:OD1	1:F:284:ARG:N	2.52	0.42
1:G:122:LYS:NZ	1:G:430:ARG:O	2.41	0.42
1:J:158:VAL:HG13	1:J:396:VAL:HG22	1.99	0.42
1:K:30:THR:HA	1:K:35:GLY:HA3	2.02	0.42
1:K:429:LEU:HB3	1:K:440:ILE:HG21	2.01	0.42
1:L:339:GLU:HA	1:L:342:ILE:HD12	2.00	0.42
1:M:433:ASN:OD1	1:M:434:GLU:N	2.52	0.42
1:N:35:GLY:HA2	1:N:457:ASN:HB3	2.00	0.42
1:A:169:VAL:HG13	1:A:170:GLY:O	2.19	0.42
1:A:253:ASP:OD1	1:A:254:VAL:N	2.50	0.42
1:A:336:VAL:HG23	1:A:336:VAL:O	2.20	0.42
1:B:205:ILE:HD13	1:B:211:GLY:HA2	2.01	0.42
1:B:276:VAL:HG11	1:B:330:THR:OG1	2.19	0.42
1:B:313:THR:O	1:B:317:LEU:HG	2.19	0.42
3:B:601:ATP:O1G	7:B:2001:HOH:O	2.21	0.42
1:C:135:SER:HB3	1:C:497:THR:HG21	2.00	0.42
1:C:260:ALA:HA	1:C:263:VAL:HG22	2.02	0.42
1:D:448:GLU:HB3	1:D:452:ARG:CZ	2.50	0.42
1:G:77:VAL:HG11	1:G:96:ALA:HB2	2.02	0.42
1:G:277:LYS:HB3	1:G:277:LYS:HE3	1.90	0.42
1:H:35:GLY:HA2	1:H:457:ASN:HB3	2.00	0.42
1:H:295:LEU:HD23	1:H:342:ILE:HD13	2.02	0.42
1:I:15:LYS:NZ	1:I:64:ASP:OD2	2.42	0.42
1:I:215:LEU:O	1:I:323:VAL:HG22	2.20	0.42
1:I:219:PHE:CE2	1:I:245:LYS:HD2	2.55	0.42
1:I:349:ILE:HG12	1:I:368:ARG:CZ	2.50	0.42
1:I:447:MET:O	1:I:450:PRO:HD2	2.19	0.42
1:J:12:ALA:O	1:J:16:MET:HG2	2.19	0.42
1:J:14:VAL:O	1:J:18:ARG:HG3	2.20	0.42
1:J:31:LEU:HB3	1:J:453:GLN:HG3	2.01	0.42
1:J:406:ALA:HB2	1:J:496:PRO:HG3	2.01	0.42
1:K:46:ALA:HA	1:K:47:PRO:HD3	1.78	0.42
1:K:320:ALA:HA	1:K:336:VAL:H	1.84	0.42
1:L:279:PRO:O	1:L:285:ARG:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:390:LYS:HA	1:L:390:LYS:HD2	1.74	0.42
1:L:452:ARG:HH12	1:L:463:SER:HA	1.83	0.42
1:M:62:LEU:HB2	1:M:68:ASN:HB2	2.02	0.42
1:M:168:LYS:HG2	1:M:189:VAL:HG13	2.02	0.42
1:M:185:ASP:OD2	1:M:392:LYS:HE3	2.19	0.42
1:N:319:GLN:HB2	1:N:336:VAL:HB	2.01	0.42
2:O:47:ARG:NH2	2:O:88:GLU:HB3	2.35	0.42
2:P:8:ASP:O	2:P:57:LEU:HD21	2.19	0.42
2:R:4:ARG:HH12	2:R:6:LEU:HD23	1.85	0.42
1:A:513:LEU:HB3	1:B:49:ILE:HD13	2.01	0.42
1:B:69:MET:HE1	1:B:520:MET:HB3	2.02	0.42
1:B:124:VAL:HG22	1:B:504:LEU:HD11	2.01	0.42
1:B:250:ILE:HD11	1:B:332:ILE:HD11	2.00	0.42
1:D:455:VAL:CG1	1:D:460:GLU:HB2	2.49	0.42
1:E:7:LYS:HB2	1:E:520:MET:HE2	2.02	0.42
1:E:440:ILE:O	1:E:444:LEU:HG	2.20	0.42
1:G:448:GLU:OE1	1:G:470:LYS:NZ	2.53	0.42
1:I:220:ILE:HG12	1:I:222:LEU:HD21	2.02	0.42
1:I:356:ALA:HB3	1:I:362:ARG:NH2	2.35	0.42
1:J:46:ALA:HA	1:J:47:PRO:HD3	1.90	0.42
1:K:9:GLY:N	1:K:518:GLU:O	2.39	0.42
1:K:220:ILE:HG12	1:K:222:LEU:HD21	2.01	0.42
1:K:230:ILE:O	1:K:234:LEU:N	2.52	0.42
1:K:451:LEU:HD11	1:K:469:VAL:HG21	2.02	0.42
1:L:175:ILE:HG21	1:L:400:LEU:HD11	2.01	0.42
1:L:230:ILE:O	1:L:234:LEU:HG	2.18	0.42
1:M:102:GLU:HB3	1:M:442:VAL:HG22	2.02	0.42
1:M:452:ARG:HH12	1:M:463:SER:HA	1.84	0.42
1:N:117:LYS:HD2	1:N:512:GLY:O	2.19	0.42
1:N:174:VAL:CG1	1:N:376:VAL:HG12	2.50	0.42
1:N:262:LEU:HD13	1:N:273:VAL:HG11	2.02	0.42
1:N:276:VAL:HG12	1:N:277:LYS:O	2.19	0.42
2:O:27:LEU:HB3	2:O:31:ALA:HB3	2.01	0.42
1:B:178:GLU:O	1:B:381:VAL:N	2.51	0.42
1:B:349:ILE:HG21	1:B:369:VAL:HG23	2.02	0.42
1:D:443:ALA:O	1:D:447:MET:HG2	2.20	0.42
1:F:323:VAL:HG22	1:F:332:ILE:HA	2.01	0.42
1:I:353:ILE:HA	1:I:362:ARG:HH12	1.84	0.42
1:J:34:LYS:HB2	1:J:458:CYS:SG	2.59	0.42
1:J:52:ASP:O	1:J:56:VAL:HG23	2.20	0.42
1:J:132:LYS:NZ	1:J:409:GLU:OE2	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:360:TYR:CE1	1:J:364:LYS:HE3	2.55	0.42
1:K:14:VAL:O	1:K:18:ARG:HG3	2.19	0.42
1:K:140:ASP:OD1	1:K:141:SER:N	2.52	0.42
1:K:146:GLN:HB2	1:K:494:LEU:HD12	2.01	0.42
1:L:195:PHE:CD2	1:L:279:PRO:HB3	2.54	0.42
1:L:204:PHE:CD1	1:L:266:THR:HG21	2.55	0.42
1:L:219:PHE:CD2	1:L:245:LYS:HD2	2.55	0.42
1:M:150:ILE:HD12	6:M:601:ADP:N7	2.35	0.42
1:N:438:VAL:O	1:N:442:VAL:HG23	2.20	0.42
1:N:460:GLU:HG3	1:N:478:TYR:OH	2.19	0.42
2:R:59:VAL:HG22	2:R:88:GLU:HG3	2.01	0.42
1:B:15:LYS:HG3	1:B:520:MET:HE1	2.00	0.42
1:B:23:LEU:HD22	1:B:74:VAL:HG13	2.02	0.42
1:B:469:VAL:HG22	1:B:477:GLY:C	2.45	0.42
1:C:262:LEU:HD13	1:C:273:VAL:HG11	2.01	0.42
1:C:338:GLU:H	1:C:338:GLU:CD	2.28	0.42
1:C:386:GLU:O	1:C:390:LYS:HG3	2.20	0.42
1:D:227:ILE:HG22	1:D:255:GLU:OE1	2.19	0.42
1:D:277:LYS:HB3	1:D:277:LYS:HE3	1.90	0.42
1:E:112:ASN:ND2	7:E:722:HOH:O	2.49	0.42
1:E:455:VAL:HG13	1:E:460:GLU:HB2	2.02	0.42
1:F:465:VAL:HA	1:F:485:TYR:OH	2.20	0.42
1:G:264:VAL:HA	1:G:267:MET:SD	2.60	0.42
1:H:248:LEU:HD21	1:H:250:ILE:HD11	2.02	0.42
1:J:417:VAL:HG12	1:J:451:LEU:HD12	2.02	0.42
1:K:319:GLN:HB2	1:K:336:VAL:HB	2.02	0.42
1:K:346:VAL:O	1:K:350:ARG:HG2	2.20	0.42
1:L:102:GLU:HB3	1:L:442:VAL:HG22	2.02	0.42
1:M:13:ARG:HA	1:M:514:MET:CE	2.50	0.42
1:M:420:ILE:HG23	1:M:470:LYS:HG2	2.00	0.42
1:M:434:GLU:HA	1:M:437:ASN:ND2	2.34	0.42
1:N:150:ILE:HD12	6:N:601:ADP:N7	2.35	0.42
1:N:217:SER:HA	1:N:320:ALA:O	2.19	0.42
1:N:220:ILE:HA	1:N:248:LEU:HB3	2.01	0.42
1:N:511:ALA:O	1:N:515:ILE:HG13	2.19	0.42
2:S:8:ASP:CG	2:S:47:ARG:HE	2.27	0.42
2:S:73:VAL:HG11	2:S:84:LEU:HD23	2.02	0.42
1:A:95:LEU:O	1:A:99:ILE:HG13	2.20	0.42
1:A:441:LYS:HB3	1:A:445:ARG:NH1	2.34	0.42
1:B:33:PRO:HG3	3:B:601:ATP:C6	2.55	0.42
1:B:207:LYS:HE2	1:B:212:ALA:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:283:ASP:OD1	1:B:284:ARG:N	2.53	0.42
1:D:115:ASP:O	1:D:436:GLN:HG2	2.20	0.42
1:E:134:LEU:HD23	1:E:418:ALA:HB1	2.01	0.42
1:E:230:ILE:HD11	1:E:258:ALA:HA	2.02	0.42
3:E:601:ATP:H8	3:E:601:ATP:H5'2	1.85	0.42
1:F:218:PRO:HG2	1:F:323:VAL:HG23	2.02	0.42
1:G:232:GLU:HG2	1:G:310:GLU:OE2	2.20	0.42
1:H:33:PRO:HD3	6:H:601:ADP:N9	2.35	0.42
1:H:193:MET:HE2	1:H:372:LEU:HD22	2.01	0.42
1:H:368:ARG:O	1:H:372:LEU:HD23	2.19	0.42
1:I:319:GLN:HB2	1:I:336:VAL:HB	2.01	0.42
1:I:364:LYS:HD3	1:I:364:LYS:HA	1.69	0.42
1:J:214:GLU:OE1	1:J:214:GLU:N	2.52	0.42
1:J:345:ARG:O	1:J:349:ILE:HG13	2.20	0.42
1:J:476:TYR:HA	1:J:487:ASN:HA	2.01	0.42
1:L:68:ASN:O	1:L:72:GLN:HG2	2.20	0.42
1:L:168:LYS:HG2	1:L:189:VAL:HG13	2.02	0.42
1:L:443:ALA:O	1:L:447:MET:HG2	2.20	0.42
1:L:520:MET:HE2	1:L:520:MET:HB3	1.77	0.42
1:M:39:VAL:HG22	1:M:49:ILE:HG12	2.01	0.42
1:M:137:PRO:HA	1:M:410:GLY:HA2	2.00	0.42
1:M:144:ILE:HG23	1:M:403:THR:HB	2.02	0.42
1:M:489:ILE:HG23	1:M:494:LEU:HD21	2.00	0.42
1:N:124:VAL:HG11	1:N:508:ALA:CB	2.49	0.42
1:N:452:ARG:HH12	1:N:463:SER:HA	1.85	0.42
1:N:479:ASN:CG	1:N:493:ILE:HD11	2.45	0.42
2:O:40:VAL:HG22	2:O:63:ASP:O	2.20	0.42
2:R:92:LEU:HB3	2:S:85:ILE:HG21	2.02	0.42
1:A:69:MET:HB2	1:B:47:PRO:CG	2.50	0.42
1:A:175:ILE:HB	1:A:404:ARG:NH1	2.33	0.42
1:A:196:ASP:HA	1:A:329:THR:HA	2.01	0.42
1:B:194:GLN:O	1:B:371:LYS:NZ	2.52	0.42
1:B:243:ALA:HB2	1:B:314:LEU:HD21	2.02	0.42
1:B:523:ASP:OD1	1:B:524:LEU:N	2.53	0.42
1:C:128:VAL:HG21	1:C:505:GLN:HG3	2.02	0.42
1:C:452:ARG:HH21	1:C:470:LYS:NZ	2.18	0.42
1:D:205:ILE:HG23	1:D:212:ALA:O	2.20	0.42
1:E:387:VAL:HA	1:E:390:LYS:HE2	2.02	0.42
1:G:194:GLN:HA	1:G:331:THR:HA	2.02	0.42
1:G:199:TYR:CZ	1:G:205:ILE:HD11	2.55	0.42
1:I:432:GLN:HB2	1:I:436:GLN:NE2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:33:PRO:HD3	6:K:601:ADP:C4	2.55	0.42
1:K:233:MET:HE1	1:K:249:ILE:CD1	2.50	0.42
1:K:417:VAL:HG12	1:K:451:LEU:CD1	2.50	0.42
1:K:478:TYR:HA	1:K:485:TYR:HA	2.00	0.42
1:L:432:GLN:HB2	1:L:436:GLN:OE1	2.20	0.42
1:M:15:LYS:NZ	1:M:64:ASP:OD2	2.35	0.42
1:M:216:GLU:HG2	1:M:322:ARG:HD2	2.01	0.42
1:M:320:ALA:HA	1:M:336:VAL:H	1.85	0.42
1:N:248:LEU:HD22	1:N:323:VAL:HG21	2.01	0.42
2:O:12:VAL:HG22	2:O:84:LEU:HB2	2.02	0.42
2:O:40:VAL:HG11	2:O:59:VAL:HG11	2.02	0.42
2:Q:25:ILE:H	2:Q:25:ILE:HD12	1.83	0.42
2:U:12:VAL:O	2:U:84:LEU:HB2	2.20	0.42
1:A:31:LEU:O	1:A:457:ASN:ND2	2.24	0.42
1:A:215:LEU:HB3	1:A:246:PRO:HB2	2.02	0.42
1:C:33:PRO:HD3	3:C:601:ATP:C8	2.54	0.42
1:C:162:ILE:HG23	1:C:400:LEU:HD12	2.01	0.42
1:D:48:THR:HG22	1:D:390:LYS:NZ	2.35	0.42
1:D:207:LYS:HZ2	1:D:214:GLU:HB2	1.84	0.42
1:F:168:LYS:HB3	1:F:189:VAL:HB	2.02	0.42
1:F:250:ILE:HG23	1:F:278:ALA:HA	2.02	0.42
1:F:313:THR:OG1	1:F:315:GLU:OE1	2.31	0.42
1:G:18:ARG:HE	1:G:67:GLU:CD	2.28	0.42
1:G:261:THR:HA	2:U:28:THR:OG1	2.20	0.42
1:G:524:LEU:HD23	1:G:524:LEU:HA	1.92	0.42
1:H:217:SER:HA	1:H:320:ALA:O	2.20	0.42
1:I:32:GLY:HA3	1:I:454:ILE:HG23	2.01	0.42
1:I:127:ALA:HB3	1:I:504:LEU:HD21	2.02	0.42
1:J:217:SER:HA	1:J:320:ALA:O	2.19	0.42
1:J:452:ARG:HH12	1:J:463:SER:HA	1.85	0.42
1:K:221:LEU:N	1:K:248:LEU:O	2.31	0.42
1:K:223:ALA:O	1:K:251:ALA:HA	2.19	0.42
1:L:144:ILE:HG21	1:L:166:MET:HE2	2.02	0.42
1:M:85:ALA:CB	1:M:499:VAL:HA	2.40	0.42
1:M:353:ILE:HD11	1:M:369:VAL:HG11	2.02	0.42
2:R:59:VAL:HG12	2:R:94:ILE:HD11	2.01	0.42
1:A:240:VAL:HG21	1:A:247:LEU:CD1	2.49	0.41
1:A:261:THR:HG23	2:O:26:VAL:O	2.20	0.41
1:B:162:ILE:HG12	1:B:400:LEU:HD13	2.01	0.41
1:B:231:ARG:HH11	1:B:234:LEU:HD11	1.85	0.41
1:B:447:MET:HA	1:B:447:MET:HE2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:34:LYS:HA	1:C:36:ARG:HH22	1.84	0.41
1:D:143:ALA:O	1:D:147:VAL:HG23	2.20	0.41
1:D:186:GLU:O	1:D:380:LYS:N	2.30	0.41
1:D:448:GLU:O	1:D:452:ARG:HD3	2.20	0.41
1:E:158:VAL:HG13	1:E:396:VAL:HG13	2.02	0.41
1:E:197:ARG:HD2	1:E:277:LYS:HB2	2.02	0.41
1:E:206:ASN:ND2	1:E:214:GLU:O	2.53	0.41
1:F:82:ASN:HB2	1:F:89:THR:HG21	2.02	0.41
1:F:222:LEU:HD21	1:F:292:ILE:HG22	2.00	0.41
1:F:455:VAL:HG13	1:F:460:GLU:HB2	2.01	0.41
1:F:455:VAL:CG1	1:F:460:GLU:HB2	2.50	0.41
1:G:441:LYS:HB3	1:G:445:ARG:NH1	2.35	0.41
1:G:455:VAL:HG21	1:G:465:VAL:HG11	2.02	0.41
1:G:469:VAL:HG22	1:G:477:GLY:C	2.45	0.41
1:H:2:ALA:O	1:H:4:LYS:HG2	2.20	0.41
1:H:100:ILE:HG12	1:H:511:ALA:HA	2.02	0.41
1:H:132:LYS:NZ	1:H:409:GLU:OE2	2.43	0.41
1:H:250:ILE:HA	1:H:276:VAL:O	2.20	0.41
1:I:15:LYS:HD3	1:I:18:ARG:NH2	2.35	0.41
1:I:406:ALA:HB2	1:I:496:PRO:HG3	2.02	0.41
1:J:34:LYS:HE3	1:J:483:GLU:OE1	2.20	0.41
1:J:199:TYR:CE1	1:J:327:LYS:HA	2.54	0.41
1:J:343:GLN:HA	1:J:346:VAL:HB	2.02	0.41
1:K:195:PHE:CD2	1:K:279:PRO:HB3	2.55	0.41
1:K:199:TYR:CZ	1:K:327:LYS:HA	2.55	0.41
1:K:287:ALA:HB1	1:K:368:ARG:CZ	2.50	0.41
1:K:447:MET:O	1:K:450:PRO:HD2	2.21	0.41
1:L:301:ILE:HG21	1:L:309:LEU:HD23	2.02	0.41
1:M:16:MET:HG3	1:M:514:MET:SD	2.60	0.41
1:M:20:VAL:HG22	1:M:74:VAL:CG2	2.50	0.41
1:M:162:ILE:HG23	1:M:400:LEU:HD12	2.01	0.41
1:M:217:SER:HA	1:M:320:ALA:O	2.20	0.41
1:M:231:ARG:O	1:M:231:ARG:NH1	2.43	0.41
1:M:432:GLN:HB2	1:M:436:GLN:NE2	2.34	0.41
2:S:39:GLU:N	2:S:39:GLU:OE1	2.53	0.41
2:T:25:ILE:H	2:T:25:ILE:HD12	1.85	0.41
1:A:20:VAL:HG22	1:A:74:VAL:HB	2.02	0.41
1:A:295:LEU:HD21	1:A:335:GLY:H	1.86	0.41
1:A:323:VAL:HG22	1:A:332:ILE:HA	2.02	0.41
1:B:149:THR:HG22	1:B:154:SER:HA	2.01	0.41
1:B:323:VAL:HG22	1:B:332:ILE:HG12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:36:ARG:NE	1:C:36:ARG:HA	2.35	0.41
1:C:207:LYS:HD2	1:C:212:ALA:HB3	2.01	0.41
1:C:217:SER:HA	1:C:320:ALA:O	2.20	0.41
1:C:465:VAL:HA	1:C:485:TYR:OH	2.20	0.41
1:D:18:ARG:HE	1:D:67:GLU:CD	2.28	0.41
1:E:205:ILE:HG23	1:E:212:ALA:O	2.20	0.41
1:E:217:SER:HA	1:E:320:ALA:O	2.20	0.41
1:F:150:ILE:CG1	1:F:493:ILE:HA	2.47	0.41
1:F:276:VAL:HG11	1:F:330:THR:OG1	2.20	0.41
1:F:458:CYS:HB3	1:F:483:GLU:OE2	2.20	0.41
1:F:519:CYS:SG	1:F:520:MET:N	2.93	0.41
1:G:338:GLU:CD	1:G:338:GLU:H	2.27	0.41
1:I:106:ALA:O	1:I:111:MET:HG2	2.19	0.41
1:I:111:MET:HB2	1:I:435:ASP:CG	2.45	0.41
1:J:479:ASN:HB2	1:J:491:MET:CE	2.50	0.41
1:K:16:MET:HG3	1:K:514:MET:HE1	2.01	0.41
1:K:248:LEU:HB2	1:K:323:VAL:HG21	2.03	0.41
1:L:69:MET:HA	1:L:69:MET:HE3	2.02	0.41
1:M:7:LYS:HE3	1:M:15:LYS:HE3	2.02	0.41
1:N:289:LEU:HD22	1:N:300:VAL:HG13	2.01	0.41
1:N:381:VAL:HG23	1:N:389:MET:SD	2.60	0.41
2:S:25:ILE:H	2:S:25:ILE:HD12	1.85	0.41
1:A:305:ILE:O	1:B:264:VAL:HG22	2.20	0.41
1:A:349:ILE:HG23	1:A:365:LEU:CD1	2.47	0.41
1:A:452:ARG:HH21	1:A:470:LYS:HZ1	1.68	0.41
1:B:452:ARG:HH21	1:B:470:LYS:NZ	2.17	0.41
1:D:123:ALA:HB2	1:D:440:ILE:HG23	2.02	0.41
1:D:239:ALA:HB1	1:D:314:LEU:HD11	2.02	0.41
1:E:345:ARG:O	1:E:349:ILE:HG13	2.20	0.41
1:E:466:ALA:O	1:E:470:LYS:HG3	2.20	0.41
1:F:108:ALA:HB1	1:J:109:ALA:HB1	2.03	0.41
1:F:219:PHE:CD2	1:F:240:VAL:HG22	2.55	0.41
1:F:339:GLU:HB3	1:F:343:GLN:HE22	1.84	0.41
1:F:421:ARG:HH12	1:F:470:LYS:HA	1.84	0.41
1:G:31:LEU:HD23	1:G:453:GLN:HG3	2.02	0.41
1:H:20:VAL:HG22	1:H:74:VAL:CG2	2.48	0.41
1:I:117:LYS:HD2	1:I:512:GLY:O	2.20	0.41
1:J:414:GLY:O	1:J:417:VAL:HG22	2.20	0.41
1:K:217:SER:HA	1:K:320:ALA:O	2.21	0.41
1:L:31:LEU:HD23	1:L:453:GLN:HB3	2.03	0.41
1:L:230:ILE:HG12	1:L:261:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:149:THR:HG22	1:M:154:SER:HA	2.02	0.41
1:M:284:ARG:NE	1:M:364:LYS:HB3	2.35	0.41
1:M:339:GLU:HA	1:M:342:ILE:HB	2.01	0.41
1:N:85:ALA:CB	1:N:499:VAL:HA	2.43	0.41
1:N:187:LEU:HB3	1:N:379:ILE:HG12	2.02	0.41
1:A:455:VAL:CG1	1:A:460:GLU:HB2	2.50	0.41
1:B:178:GLU:HA	1:B:393:LYS:HE2	2.01	0.41
1:B:443:ALA:O	1:B:447:MET:HG2	2.21	0.41
1:C:194:GLN:HA	1:C:331:THR:HA	2.03	0.41
1:C:511:ALA:O	1:C:515:ILE:HG12	2.20	0.41
1:D:222:LEU:HD22	1:D:293:ALA:HB2	2.02	0.41
1:F:28:LYS:HD3	1:F:453:GLN:OE1	2.21	0.41
1:F:194:GLN:HA	1:F:331:THR:HA	2.02	0.41
1:F:277:LYS:HB3	1:F:277:LYS:HE3	1.90	0.41
1:F:399:ALA:O	1:F:403:THR:OG1	2.28	0.41
1:F:510:VAL:HG23	1:G:385:THR:HG21	2.01	0.41
1:G:381:VAL:HG13	1:G:392:LYS:HE3	2.03	0.41
1:G:475:ASN:CG	1:G:489:ILE:HG12	2.45	0.41
1:H:116:LEU:HD23	1:H:435:ASP:O	2.21	0.41
1:I:38:VAL:O	1:I:50:THR:N	2.47	0.41
1:J:150:ILE:HD12	6:J:601:ADP:N7	2.34	0.41
1:J:339:GLU:HA	1:J:342:ILE:HB	2.02	0.41
1:K:124:VAL:HG11	1:K:508:ALA:CB	2.50	0.41
1:L:179:ASP:OD1	1:L:389:MET:HE2	2.20	0.41
1:L:451:LEU:O	1:L:455:VAL:HG23	2.20	0.41
1:M:186:GLU:N	1:M:380:LYS:O	2.53	0.41
2:P:66:ILE:HG21	2:Q:76:GLU:HG2	2.03	0.41
2:P:77:LYS:HE2	2:P:77:LYS:HB2	1.89	0.41
2:R:12:VAL:HG12	2:R:40:VAL:HG12	2.01	0.41
2:T:73:VAL:HG22	2:T:86:MET:SD	2.61	0.41
1:A:350:ARG:O	1:A:354:GLU:HG2	2.20	0.41
1:C:115:ASP:CG	1:C:433:ASN:HD21	2.28	0.41
1:C:472:GLY:HA3	1:C:476:TYR:CD2	2.56	0.41
1:C:491:MET:HE3	1:C:493:ILE:HD12	2.01	0.41
1:D:102:GLU:HB2	1:D:442:VAL:HG13	2.02	0.41
1:D:149:THR:HG22	1:D:154:SER:HA	2.01	0.41
1:E:15:LYS:HE2	1:E:67:GLU:HG3	2.01	0.41
1:E:54:VAL:HG11	1:E:82:ASN:HB2	2.02	0.41
1:E:178:GLU:N	1:E:379:ILE:O	2.45	0.41
1:E:219:PHE:HB2	1:E:247:LEU:HA	2.02	0.41
1:E:475:ASN:CG	1:E:489:ILE:HG12	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:475:ASN:O	1:F:488:MET:N	2.52	0.41
1:G:13:ARG:HD2	1:G:104:LEU:HD22	2.01	0.41
1:H:17:LEU:HD12	1:H:17:LEU:HA	1.83	0.41
1:H:215:LEU:HB3	1:H:218:PRO:HB3	2.02	0.41
1:H:216:GLU:HG2	1:H:322:ARG:HD2	2.01	0.41
1:H:220:ILE:HA	1:H:248:LEU:HB3	2.03	0.41
1:J:169:VAL:CG2	1:J:377:ALA:HB2	2.51	0.41
1:J:443:ALA:O	1:J:447:MET:HG2	2.20	0.41
1:J:493:ILE:HG12	6:J:601:ADP:N6	2.35	0.41
1:J:516:THR:OG1	1:K:37:ASN:OD1	2.18	0.41
1:K:150:ILE:HD12	6:K:601:ADP:N7	2.36	0.41
1:K:294:THR:HG21	1:K:345:ARG:HB2	2.01	0.41
1:K:465:VAL:HA	1:K:485:TYR:OH	2.20	0.41
1:K:522:THR:HA	1:L:41:ASP:HB3	2.02	0.41
1:L:289:LEU:HD22	1:L:300:VAL:HG13	2.03	0.41
1:M:104:LEU:HD21	1:M:514:MET:HG2	2.01	0.41
1:N:15:LYS:HB3	1:N:66:PHE:HB2	2.03	0.41
2:O:6:LEU:HB3	2:O:7:HIS:CD2	2.55	0.41
2:U:37:ARG:HA	2:U:65:VAL:O	2.20	0.41
1:A:92:ALA:HB2	1:A:503:ALA:HB1	2.03	0.41
1:B:206:ASN:ND2	1:B:214:GLU:O	2.53	0.41
1:C:34:LYS:HB2	1:C:458:CYS:SG	2.60	0.41
1:D:158:VAL:HG22	1:D:396:VAL:HG22	2.01	0.41
1:D:421:ARG:NH2	1:D:469:VAL:O	2.44	0.41
1:E:455:VAL:CG1	1:E:460:GLU:HB2	2.51	0.41
1:E:472:GLY:HA3	1:E:476:TYR:CD2	2.56	0.41
1:G:134:LEU:HD23	1:G:418:ALA:HB1	2.01	0.41
1:I:124:VAL:HG11	1:I:508:ALA:CB	2.51	0.41
1:I:152:ALA:HB3	1:I:155:ASP:HB2	2.03	0.41
1:J:105:LYS:HA	1:J:105:LYS:HD2	1.69	0.41
1:K:489:ILE:HA	1:K:494:LEU:HD21	2.03	0.41
1:L:239:ALA:C	1:L:314:LEU:HD21	2.45	0.41
1:N:144:ILE:HG23	1:N:403:THR:HB	2.02	0.41
1:N:185:ASP:HA	1:N:380:LYS:O	2.21	0.41
1:N:284:ARG:NH1	1:N:364:LYS:HD2	2.36	0.41
1:N:455:VAL:HG21	1:N:465:VAL:HG11	2.01	0.41
2:R:95:VAL:HG13	2:S:3:ILE:HD11	2.02	0.41
1:A:420:ILE:HG21	1:A:470:LYS:HG2	2.01	0.41
1:C:257:GLU:HG3	2:Q:30:SER:H	1.85	0.41
1:C:440:ILE:O	1:C:444:LEU:HG	2.21	0.41
1:D:138:CYS:HB3	1:D:406:ALA:HB1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:262:LEU:O	1:D:266:THR:HG23	2.20	0.41
1:D:469:VAL:HG22	1:D:477:GLY:C	2.46	0.41
1:E:33:PRO:HG3	3:E:601:ATP:C6	2.55	0.41
1:F:32:GLY:HA2	3:F:601:ATP:O4'	2.20	0.41
1:F:452:ARG:NH1	7:F:708:HOH:O	2.29	0.41
1:G:33:PRO:HD3	3:G:601:ATP:C8	2.56	0.41
1:G:106:ALA:O	1:G:111:MET:HG2	2.21	0.41
1:G:223:ALA:C	1:G:225:LYS:H	2.29	0.41
1:G:263:VAL:HG22	1:G:267:MET:HE1	2.03	0.41
1:G:287:ALA:HA	1:G:345:ARG:NH2	2.34	0.41
1:G:348:GLN:HA	1:G:351:GLN:OE1	2.20	0.41
1:G:370:ALA:HB1	1:G:375:GLY:O	2.21	0.41
1:H:140:ASP:O	1:H:144:ILE:HD12	2.21	0.41
1:H:351:GLN:HA	1:H:354:GLU:OE2	2.20	0.41
1:I:415:GLY:HA2	6:I:601:ADP:N3	2.35	0.41
1:J:124:VAL:HG13	1:J:504:LEU:HG	2.03	0.41
1:J:250:ILE:HG12	1:J:276:VAL:HB	2.03	0.41
1:J:480:ALA:H	6:J:601:ADP:H2	1.69	0.41
1:J:526:LYS:HA	1:J:526:LYS:HD2	1.78	0.41
1:K:123:ALA:HB3	1:K:443:ALA:HB3	2.01	0.41
1:L:199:TYR:CZ	1:L:327:LYS:HA	2.56	0.41
1:L:213:VAL:HB	1:L:325:ILE:HG12	2.03	0.41
1:M:31:LEU:HD23	1:M:453:GLN:HB3	2.03	0.41
1:M:68:ASN:O	1:M:72:GLN:HG2	2.20	0.41
1:M:433:ASN:HB3	1:M:436:GLN:HG3	2.02	0.41
1:N:345:ARG:HD2	1:N:348:GLN:OE1	2.20	0.41
2:P:5:PRO:HD3	2:P:42:ALA:HB1	2.03	0.41
2:R:12:VAL:CG2	2:R:84:LEU:HB2	2.49	0.41
2:R:37:ARG:NH2	2:S:78:ILE:HG22	2.35	0.41
2:R:38:GLY:HA3	2:R:67:PHE:CE1	2.50	0.41
2:T:15:LYS:HE2	2:T:39:GLU:HB2	2.03	0.41
2:T:17:VAL:HG13	2:T:33:ALA:O	2.20	0.41
2:T:74:LYS:O	2:T:85:ILE:N	2.54	0.41
1:A:34:LYS:HB2	1:A:458:CYS:SG	2.61	0.41
1:A:136:VAL:HA	1:A:137:PRO:HD3	1.95	0.41
1:A:213:VAL:O	1:A:325:ILE:N	2.32	0.41
1:A:248:LEU:HD12	1:A:274:ALA:O	2.21	0.41
1:A:277:LYS:HB3	1:A:277:LYS:HE3	1.92	0.41
1:A:453:GLN:NE2	1:A:457:ASN:OD1	2.53	0.41
1:B:144:ILE:HG21	1:B:166:MET:HE3	2.01	0.41
1:C:194:GLN:HG3	1:C:331:THR:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:219:PHE:HB3	1:C:317:LEU:HD13	2.02	0.41
1:C:323:VAL:HG22	1:C:332:ILE:HG12	2.03	0.41
1:C:517:THR:CG2	1:D:39:VAL:HG23	2.50	0.41
1:D:7:LYS:HB2	1:D:520:MET:HE3	2.03	0.41
1:D:239:ALA:HB1	1:D:314:LEU:CD1	2.50	0.41
1:E:308:GLU:HB2	1:E:311:LYS:HG3	2.03	0.41
1:E:397:GLU:O	1:E:401:HIS:ND1	2.54	0.41
1:F:270:ILE:HG21	2:T:25:ILE:HA	2.02	0.41
1:G:250:ILE:HG23	1:G:278:ALA:HA	2.02	0.41
1:H:124:VAL:HG11	1:H:508:ALA:CB	2.51	0.41
1:I:149:THR:HG21	1:I:156:GLU:OE2	2.20	0.41
1:J:219:PHE:CD2	1:J:245:LYS:HD2	2.56	0.41
1:J:347:ALA:O	1:J:351:GLN:HG3	2.20	0.41
1:J:519:CYS:HB3	1:K:38:VAL:HG22	2.02	0.41
1:K:149:THR:HG21	1:K:156:GLU:OE2	2.21	0.41
1:K:220:ILE:HG22	1:K:318:GLY:C	2.46	0.41
1:L:217:SER:HA	1:L:320:ALA:O	2.21	0.41
1:L:233:MET:HG2	1:L:262:LEU:HD21	2.02	0.41
1:L:274:ALA:HB1	1:L:325:ILE:CD1	2.51	0.41
1:L:431:GLY:HA3	1:L:436:GLN:HB3	2.02	0.41
1:M:176:THR:O	1:M:379:ILE:N	2.45	0.41
1:M:289:LEU:HD12	1:M:289:LEU:HA	1.87	0.41
2:Q:10:VAL:HB	2:Q:86:MET:SD	2.61	0.41
2:S:75:SER:HA	2:S:83:VAL:O	2.21	0.41
2:U:40:VAL:HG22	2:U:63:ASP:O	2.20	0.41
1:A:54:VAL:HG11	1:A:82:ASN:HB2	2.02	0.41
1:A:144:ILE:HG21	1:A:163:ALA:HA	2.02	0.41
1:A:168:LYS:HB3	1:A:189:VAL:HG11	2.03	0.41
1:A:226:LYS:NZ	1:A:253:ASP:HB3	2.36	0.41
1:A:320:ALA:HA	1:A:336:VAL:H	1.86	0.41
1:C:111:MET:CE	1:C:435:ASP:HA	2.51	0.41
1:C:123:ALA:HB2	1:C:440:ILE:HG23	2.02	0.41
1:C:138:CYS:HB3	1:C:406:ALA:HB1	2.03	0.41
1:C:145:ALA:HA	1:C:159:GLY:C	2.45	0.41
1:D:15:LYS:HG3	1:D:520:MET:HE1	2.03	0.41
1:D:360:TYR:O	1:D:364:LYS:HG2	2.20	0.41
1:D:460:GLU:HB3	1:D:465:VAL:HG21	2.03	0.41
1:E:193:MET:HE2	1:E:193:MET:N	2.36	0.41
1:E:287:ALA:HA	1:E:345:ARG:HH21	1.86	0.41
1:F:112:ASN:ND2	1:F:115:ASP:OD2	2.46	0.41
1:F:146:GLN:CD	1:F:492:GLY:HA2	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:261:THR:HG23	2:T:27:LEU:HA	2.03	0.41
1:F:264:VAL:HG11	2:T:28:THR:HG21	2.02	0.41
1:F:430:ARG:HH22	1:F:441:LYS:CE	2.34	0.41
1:G:69:MET:HE2	1:G:69:MET:HB2	1.81	0.41
1:G:82:ASN:HB2	1:G:89:THR:HG21	2.03	0.41
1:G:145:ALA:HA	1:G:159:GLY:C	2.46	0.41
1:G:217:SER:N	1:G:218:PRO:HD3	2.36	0.41
1:G:323:VAL:HG12	1:G:325:ILE:HD11	2.02	0.41
1:G:421:ARG:NH2	1:G:469:VAL:O	2.48	0.41
1:H:18:ARG:HB2	1:H:67:GLU:HG2	2.01	0.41
1:H:149:THR:HG22	1:H:154:SER:HA	2.03	0.41
1:H:150:ILE:HD12	6:H:601:ADP:N7	2.36	0.41
1:H:429:LEU:HB3	1:H:440:ILE:HG21	2.02	0.41
1:I:4:LYS:HE2	1:J:59:GLU:OE2	2.21	0.41
1:I:33:PRO:HD2	1:I:454:ILE:HG23	2.01	0.41
1:I:141:SER:HB3	1:I:163:ALA:HB1	2.03	0.41
1:I:455:VAL:CG1	1:I:460:GLU:HB2	2.48	0.41
1:I:488:MET:HE3	1:I:493:ILE:HD12	2.03	0.41
1:I:488:MET:HE3	1:I:488:MET:HA	2.03	0.41
1:J:70:GLY:HA2	1:J:73:MET:CE	2.50	0.41
1:K:5:ASP:HB3	1:K:522:THR:CG2	2.51	0.41
1:K:16:MET:HE1	1:K:69:MET:HB3	2.03	0.41
1:K:149:THR:HG22	1:K:154:SER:HA	2.03	0.41
1:K:511:ALA:O	1:K:515:ILE:HG13	2.20	0.41
1:L:180:GLY:H	1:L:389:MET:CE	2.33	0.41
1:L:262:LEU:HD22	1:L:273:VAL:HG11	2.03	0.41
1:L:291:ASP:HA	1:L:345:ARG:HG2	2.03	0.41
1:M:220:ILE:HG13	1:M:248:LEU:HD22	2.03	0.41
1:M:262:LEU:HD13	1:M:273:VAL:HG11	2.03	0.41
1:M:271:VAL:O	1:M:273:VAL:HG23	2.21	0.41
1:M:324:VAL:HB	1:M:331:THR:CG2	2.51	0.41
1:M:342:ILE:O	1:M:346:VAL:HG23	2.20	0.41
1:M:411:VAL:HG12	1:M:496:PRO:HA	2.02	0.41
1:M:414:GLY:HA3	1:M:493:ILE:HG22	2.02	0.41
1:N:13:ARG:HA	1:N:514:MET:HE1	2.01	0.41
2:O:39:GLU:OE1	2:O:64:ILE:HG13	2.20	0.41
2:P:49:LEU:HD12	2:P:53:GLU:HG2	2.03	0.41
2:P:94:ILE:HD11	2:Q:4:ARG:NE	2.35	0.41
2:Q:14:ARG:HG3	2:Q:67:PHE:CZ	2.55	0.41
2:U:5:PRO:HB3	2:U:9:ARG:HB2	2.02	0.41
1:A:28:LYS:HD3	1:A:453:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:342:ILE:HG23	1:A:372:LEU:HD12	2.03	0.41
1:B:136:VAL:HA	1:B:137:PRO:HD3	1.94	0.41
1:B:152:ALA:O	1:B:395:ARG:HD2	2.20	0.41
1:B:305:ILE:HD12	1:B:305:ILE:HA	1.97	0.41
1:B:381:VAL:O	1:B:389:MET:HE1	2.21	0.41
1:C:149:THR:HG21	1:C:156:GLU:OE2	2.20	0.41
1:C:264:VAL:HG21	2:Q:28:THR:HG21	2.03	0.41
1:D:28:LYS:O	1:D:453:GLN:NE2	2.54	0.41
1:D:178:GLU:OE2	1:D:380:LYS:HD2	2.21	0.41
1:D:234:LEU:N	1:D:235:PRO:HD2	2.36	0.41
1:E:100:ILE:HA	1:E:515:ILE:HD11	2.03	0.41
1:E:360:TYR:O	1:E:364:LYS:HG2	2.21	0.41
1:F:189:VAL:HA	1:F:377:ALA:HA	2.02	0.41
1:F:429:LEU:HD23	1:F:440:ILE:HG12	2.03	0.41
1:G:420:ILE:HG23	1:G:470:LYS:HG2	2.03	0.41
1:H:2:ALA:O	1:I:61:GLU:HB2	2.21	0.41
1:H:220:ILE:HG12	1:H:222:LEU:HG	2.02	0.41
1:I:519:CYS:O	1:J:38:VAL:HA	2.21	0.41
1:K:513:LEU:HD23	1:K:513:LEU:HA	1.93	0.41
1:K:526:LYS:HD2	1:K:526:LYS:HA	1.79	0.41
1:M:292:ILE:HA	1:M:295:LEU:HD12	2.03	0.41
1:M:325:ILE:O	1:M:325:ILE:HG13	2.21	0.41
1:N:221:LEU:N	1:N:248:LEU:O	2.29	0.41
2:R:25:ILE:HD12	2:R:25:ILE:H	1.86	0.41
1:A:10:ASN:O	1:A:14:VAL:HG23	2.21	0.40
1:A:236:VAL:O	1:A:240:VAL:HG23	2.21	0.40
1:A:250:ILE:HG23	1:A:278:ALA:HA	2.03	0.40
1:A:432:GLN:HG2	1:A:436:GLN:HG3	2.02	0.40
1:B:149:THR:HA	1:B:155:ASP:O	2.21	0.40
1:B:158:VAL:HG22	1:B:396:VAL:HG22	2.03	0.40
1:C:225:LYS:N	1:C:252:GLU:OE1	2.53	0.40
1:C:228:SER:O	1:C:255:GLU:HB2	2.21	0.40
1:C:308:GLU:N	1:C:311:LYS:HD3	2.36	0.40
1:E:193:MET:HB2	1:E:332:ILE:HB	2.02	0.40
1:E:213:VAL:O	1:E:325:ILE:N	2.35	0.40
1:E:223:ALA:HB3	1:E:251:ALA:HB2	2.03	0.40
1:E:243:ALA:HB2	1:E:314:LEU:HD21	2.03	0.40
1:F:41:ASP:HA	1:F:47:PRO:HB3	2.02	0.40
1:F:169:VAL:HG11	1:F:175:ILE:HG13	2.02	0.40
1:F:234:LEU:HD12	1:F:238:GLU:OE2	2.21	0.40
1:G:286:LYS:HA	1:G:286:LYS:HD3	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:479:ASN:HB3	1:G:482:THR:HB	2.02	0.40
1:H:352:GLN:HA	1:H:355:GLU:CG	2.51	0.40
1:J:81:ALA:HA	1:J:506:TYR:CD2	2.56	0.40
1:J:289:LEU:HD23	1:J:300:VAL:HG22	2.02	0.40
1:J:360:TYR:O	1:J:364:LYS:HG2	2.21	0.40
1:K:122:LYS:HZ3	1:K:431:GLY:HA2	1.86	0.40
1:K:194:GLN:HA	1:K:331:THR:HA	2.03	0.40
1:K:252:GLU:HG3	1:K:285:ARG:CZ	2.52	0.40
1:L:353:ILE:HG23	1:L:362:ARG:HD2	2.04	0.40
1:M:219:PHE:CE2	1:M:245:LYS:HD2	2.56	0.40
1:N:192:GLY:N	1:N:375:GLY:HA2	2.24	0.40
1:N:493:ILE:HD13	6:N:601:ADP:N1	2.36	0.40
2:P:40:VAL:HG11	2:P:59:VAL:HG11	2.04	0.40
2:T:5:PRO:HB3	2:T:85:ILE:HD11	2.03	0.40
2:U:4:ARG:NH2	2:U:45:ASN:HB3	2.36	0.40
2:U:49:LEU:N	2:U:53:GLU:O	2.35	0.40
1:A:116:LEU:HD21	1:A:438:VAL:HG12	2.03	0.40
1:A:383:ALA:HB1	1:A:388:GLU:HB3	2.03	0.40
1:A:479:ASN:O	1:A:483:GLU:N	2.54	0.40
1:B:138:CYS:HB3	1:B:406:ALA:HB1	2.04	0.40
1:B:419:LEU:HD23	1:B:419:LEU:HA	1.94	0.40
1:C:197:ARG:HD2	1:C:277:LYS:HB2	2.03	0.40
1:C:304:GLU:HG3	1:D:203:TYR:CE2	2.56	0.40
1:D:12:ALA:O	1:D:16:MET:HG2	2.21	0.40
1:D:33:PRO:HB2	1:D:481:ALA:HB2	2.03	0.40
1:D:255:GLU:HG2	1:D:257:GLU:H	1.86	0.40
1:D:452:ARG:NH1	1:D:466:ALA:HB1	2.36	0.40
1:E:430:ARG:HH12	1:E:441:LYS:HE2	1.86	0.40
1:G:115:ASP:O	1:G:436:GLN:HG2	2.20	0.40
1:H:289:LEU:HD23	1:H:300:VAL:HG22	2.04	0.40
1:I:42:LYS:H	1:I:47:PRO:HB3	1.85	0.40
1:I:140:ASP:O	1:I:144:ILE:HG13	2.20	0.40
1:I:247:LEU:O	1:I:273:VAL:HA	2.21	0.40
1:I:252:GLU:HG3	1:I:285:ARG:CZ	2.50	0.40
1:J:193:MET:HE3	1:J:295:LEU:HD13	2.03	0.40
1:K:127:ALA:HB3	1:K:504:LEU:HD21	2.03	0.40
1:K:162:ILE:HD11	1:K:396:VAL:HG13	2.02	0.40
1:K:284:ARG:CZ	1:K:364:LYS:HD2	2.51	0.40
1:K:324:VAL:HB	1:K:331:THR:CG2	2.50	0.40
1:K:349:ILE:HG12	1:K:368:ARG:NH2	2.36	0.40
1:L:33:PRO:HD3	6:L:601:ADP:N9	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:295:LEU:HA	1:L:342:ILE:HG12	2.03	0.40
1:M:13:ARG:HA	1:M:514:MET:HE1	2.02	0.40
1:N:197:ARG:HD2	1:N:277:LYS:HB3	2.03	0.40
2:P:37:ARG:HA	2:P:65:VAL:O	2.22	0.40
2:R:67:PHE:HA	2:R:91:ILE:HA	2.02	0.40
1:B:114:MET:HB3	1:B:118:ARG:CZ	2.51	0.40
1:B:292:ILE:O	1:B:296:THR:OG1	2.28	0.40
1:B:323:VAL:HA	1:B:331:THR:O	2.21	0.40
3:B:601:ATP:H8	3:B:601:ATP:H5'2	1.85	0.40
1:C:82:ASN:HB2	1:C:89:THR:HG21	2.03	0.40
1:C:420:ILE:CG2	1:C:470:LYS:HG2	2.51	0.40
1:D:20:VAL:HA	1:D:74:VAL:HG11	2.03	0.40
1:E:20:VAL:HA	1:E:74:VAL:HG11	2.03	0.40
1:E:31:LEU:HD23	1:E:453:GLN:HG3	2.04	0.40
1:E:194:GLN:HE21	1:E:329:THR:HG21	1.85	0.40
1:E:197:ARG:CZ	1:E:279:PRO:HA	2.51	0.40
1:E:203:TYR:CB	1:E:263:VAL:HB	2.51	0.40
1:E:495:ASP:OD2	3:E:601:ATP:O2'	2.33	0.40
1:E:513:LEU:HD11	1:F:388:GLU:HA	2.02	0.40
1:F:200:LEU:HD21	1:F:277:LYS:HG3	2.03	0.40
1:F:260:ALA:HA	1:F:263:VAL:HG22	2.02	0.40
1:I:30:THR:HA	1:I:35:GLY:HA3	2.03	0.40
1:I:81:ALA:HA	1:I:506:TYR:CD2	2.56	0.40
1:I:98:ALA:O	1:I:102:GLU:HG2	2.21	0.40
1:I:320:ALA:HA	1:I:335:GLY:HA2	2.04	0.40
1:J:248:LEU:HD21	1:J:250:ILE:HD11	2.03	0.40
1:K:479:ASN:ND2	1:K:493:ILE:HD11	2.37	0.40
1:L:179:ASP:HA	1:L:389:MET:HE2	2.02	0.40
1:L:348:GLN:HA	1:L:351:GLN:OE1	2.20	0.40
1:M:526:LYS:HD2	1:M:526:LYS:HA	1.80	0.40
1:N:7:LYS:HE3	1:N:15:LYS:HE3	2.03	0.40
1:N:30:THR:HA	1:N:35:GLY:HA3	2.04	0.40
1:N:102:GLU:HG3	1:N:445:ARG:NH1	2.36	0.40
1:N:246:PRO:HA	1:N:272:LYS:HB2	2.04	0.40
2:Q:40:VAL:HG22	2:Q:63:ASP:O	2.22	0.40
2:T:27:LEU:HB3	2:T:31:ALA:HB3	2.02	0.40
1:A:136:VAL:O	1:A:411:VAL:N	2.32	0.40
1:A:475:ASN:HB2	1:A:487:ASN:CG	2.47	0.40
1:A:479:ASN:N	1:A:484:GLU:O	2.53	0.40
1:B:115:ASP:O	1:B:436:GLN:HG2	2.21	0.40
1:B:455:VAL:HG21	1:B:465:VAL:HG11	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:183:LEU:HA	1:C:383:ALA:N	2.37	0.40
1:C:392:LYS:O	1:C:396:VAL:HG23	2.21	0.40
1:C:417:VAL:O	1:C:421:ARG:HG2	2.21	0.40
1:D:7:LYS:HG3	1:D:520:MET:HE3	2.03	0.40
1:D:82:ASN:HB2	1:D:89:THR:HG21	2.03	0.40
1:D:114:MET:CE	1:E:34:LYS:HG2	2.51	0.40
1:D:462:PRO:O	1:D:466:ALA:HB3	2.21	0.40
1:E:218:PRO:HG2	1:E:323:VAL:HG23	2.02	0.40
1:E:233:MET:O	1:E:237:LEU:HB2	2.21	0.40
1:E:420:ILE:CG2	1:E:470:LYS:HG2	2.51	0.40
1:F:161:LEU:HD12	1:F:161:LEU:HA	1.88	0.40
1:F:223:ALA:HB1	1:F:225:LYS:CG	2.51	0.40
1:F:413:ALA:HB1	1:F:488:MET:HG3	2.04	0.40
1:H:214:GLU:OE1	1:H:324:VAL:HG22	2.22	0.40
1:I:414:GLY:O	1:I:488:MET:HG3	2.21	0.40
1:J:116:LEU:HD23	1:J:435:ASP:O	2.21	0.40
1:K:230:ILE:HG12	1:K:261:THR:HG21	2.03	0.40
1:K:325:ILE:O	1:K:325:ILE:HG13	2.21	0.40
1:L:81:ALA:HA	1:L:506:TYR:CD2	2.56	0.40
1:L:468:THR:HB	1:L:485:TYR:CE2	2.56	0.40
1:M:351:GLN:HA	1:M:354:GLU:OE2	2.21	0.40
1:N:227:ILE:HG12	1:N:309:LEU:HD11	2.03	0.40
1:N:447:MET:O	1:N:450:PRO:HD2	2.21	0.40
2:O:10:VAL:HG11	2:O:40:VAL:HG12	2.03	0.40
2:P:47:ARG:NH2	2:P:88:GLU:HB3	2.36	0.40
2:Q:6:LEU:O	2:Q:9:ARG:HG3	2.22	0.40
2:T:11:ILE:N	2:T:42:ALA:O	2.44	0.40
1:A:147:VAL:HG22	1:A:494:LEU:HB2	2.03	0.40
1:A:513:LEU:HD12	1:B:387:VAL:HG23	2.03	0.40
1:B:455:VAL:CG1	1:B:460:GLU:HB2	2.51	0.40
1:C:31:LEU:HD13	1:C:90:THR:HB	2.04	0.40
1:C:220:ILE:HG22	1:C:222:LEU:HG	2.03	0.40
1:C:455:VAL:CG1	1:C:460:GLU:HB2	2.51	0.40
1:D:154:SER:N	7:D:2018:HOH:O	2.54	0.40
1:D:235:PRO:HG3	1:D:310:GLU:O	2.22	0.40
1:D:249:ILE:HB	1:D:275:ALA:HA	2.04	0.40
1:D:297:GLY:HA2	1:D:338:GLU:OE2	2.21	0.40
1:F:342:ILE:HG23	1:F:372:LEU:CG	2.41	0.40
1:F:430:ARG:HD3	1:F:437:ASN:CG	2.46	0.40
1:G:294:THR:HG22	1:G:341:ALA:HB1	2.04	0.40
1:G:313:THR:OG1	1:G:315:GLU:OE1	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:39:VAL:HG22	1:H:49:ILE:HG12	2.04	0.40
1:H:102:GLU:HB2	1:H:442:VAL:HG13	2.04	0.40
1:H:262:LEU:HD22	1:H:273:VAL:HG21	2.03	0.40
1:I:287:ALA:HB1	1:I:368:ARG:NH1	2.37	0.40
1:J:230:ILE:HD13	1:J:261:THR:HB	2.03	0.40
1:K:204:PHE:CE2	1:K:275:ALA:HB3	2.56	0.40
1:L:20:VAL:HG13	1:L:74:VAL:HG21	2.04	0.40
1:L:519:CYS:O	1:M:38:VAL:HA	2.21	0.40
1:M:33:PRO:HG3	6:M:601:ADP:C6	2.56	0.40
1:N:291:ASP:HA	1:N:345:ARG:HG2	2.02	0.40
1:N:295:LEU:HD21	1:N:372:LEU:HD13	2.04	0.40
2:Q:67:PHE:HA	2:Q:91:ILE:HA	2.03	0.40
2:S:14:ARG:HH21	2:S:67:PHE:HE2	1.69	0.40
2:S:60:LYS:N	2:S:63:ASP:OD2	2.35	0.40
2:T:25:ILE:HG22	2:T:27:LEU:HD22	2.04	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	522/547 (95%)	504 (97%)	18 (3%)	0	100	100
1	B	522/547 (95%)	509 (98%)	13 (2%)	0	100	100
1	C	522/547 (95%)	506 (97%)	16 (3%)	0	100	100
1	D	522/547 (95%)	510 (98%)	12 (2%)	0	100	100
1	E	522/547 (95%)	507 (97%)	15 (3%)	0	100	100
1	F	522/547 (95%)	507 (97%)	15 (3%)	0	100	100
1	G	522/547 (95%)	510 (98%)	12 (2%)	0	100	100
1	H	523/547 (96%)	500 (96%)	23 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	I	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	J	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	K	523/547 (96%)	500 (96%)	23 (4%)	0	100	100
1	L	523/547 (96%)	499 (95%)	24 (5%)	0	100	100
1	M	523/547 (96%)	504 (96%)	19 (4%)	0	100	100
1	N	523/547 (96%)	502 (96%)	21 (4%)	0	100	100
2	O	93/97 (96%)	87 (94%)	6 (6%)	0	100	100
2	P	93/97 (96%)	88 (95%)	5 (5%)	0	100	100
2	Q	93/97 (96%)	89 (96%)	4 (4%)	0	100	100
2	R	93/97 (96%)	87 (94%)	6 (6%)	0	100	100
2	S	93/97 (96%)	85 (91%)	8 (9%)	0	100	100
2	T	93/97 (96%)	90 (97%)	3 (3%)	0	100	100
2	U	93/97 (96%)	89 (96%)	4 (4%)	0	100	100
All	All	7966/8337 (96%)	7673 (96%)	293 (4%)	0	100	100

There are no Ramachandran outliers to report.

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	403/414 (97%)	403 (100%)	0	100	100
1	B	403/414 (97%)	403 (100%)	0	100	100
1	C	403/414 (97%)	403 (100%)	0	100	100
1	D	403/414 (97%)	403 (100%)	0	100	100
1	E	403/414 (97%)	403 (100%)	0	100	100
1	F	403/414 (97%)	403 (100%)	0	100	100
1	G	403/414 (97%)	403 (100%)	0	100	100
1	H	405/414 (98%)	405 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	I	405/414 (98%)	405 (100%)	0	100	100
1	J	405/414 (98%)	405 (100%)	0	100	100
1	K	405/414 (98%)	405 (100%)	0	100	100
1	L	405/414 (98%)	405 (100%)	0	100	100
1	M	405/414 (98%)	405 (100%)	0	100	100
1	N	405/414 (98%)	405 (100%)	0	100	100
2	O	73/80 (91%)	73 (100%)	0	100	100
2	P	73/80 (91%)	73 (100%)	0	100	100
2	Q	73/80 (91%)	73 (100%)	0	100	100
2	R	73/80 (91%)	73 (100%)	0	100	100
2	S	73/80 (91%)	73 (100%)	0	100	100
2	T	73/80 (91%)	73 (100%)	0	100	100
2	U	73/80 (91%)	73 (100%)	0	100	100
All	All	6167/6356 (97%)	6167 (100%)	0	100	100

There are no protein residues with a non-rotameric sidechain to report.

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (49) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	10	ASN
1	A	72	GLN
1	A	319	GLN
1	A	453	GLN
1	B	72	GLN
1	B	453	GLN
1	C	10	ASN
1	C	68	ASN
1	C	453	GLN
1	D	72	GLN
1	D	290	GLN
1	D	453	GLN
1	E	10	ASN
1	E	68	ASN
1	E	112	ASN
1	E	194	GLN
1	E	453	GLN

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Mol	Chain	Res	Type
1	F	68	ASN
1	F	194	GLN
1	F	343	GLN
1	F	453	GLN
1	F	479	ASN
1	G	10	ASN
1	G	68	ASN
1	G	453	GLN
1	G	505	GLN
1	H	68	ASN
1	H	72	GLN
1	I	72	GLN
1	I	487	ASN
1	J	343	GLN
1	K	72	GLN
1	L	10	ASN
1	L	21	ASN
1	L	68	ASN
1	L	72	GLN
1	L	97	GLN
1	L	343	GLN
1	M	10	ASN
1	M	68	ASN
1	M	72	GLN
1	M	487	ASN
1	N	68	ASN
1	N	72	GLN
1	N	82	ASN
1	N	487	ASN
2	O	68	ASN
2	Q	68	ASN
2	S	68	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 42 ligands modelled in this entry, 28 are monoatomic - leaving 14 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ATP	D	601	4,5	32,33,33	0.27	0	48,52,52	0.29	0
6	ADP	I	601	4,5	28,29,29	1.37	4 (14%)	43,45,45	1.88	9 (20%)
6	ADP	N	601	4,5	28,29,29	1.39	5 (17%)	43,45,45	1.85	10 (23%)
3	ATP	G	601	4,5	32,33,33	0.26	0	48,52,52	0.29	0
6	ADP	J	601	4,5	28,29,29	1.40	4 (14%)	43,45,45	1.86	10 (23%)
3	ATP	B	601	4,5	32,33,33	0.27	0	48,52,52	0.29	0
3	ATP	F	601	4,5	32,33,33	0.28	0	48,52,52	0.29	0
3	ATP	C	601	5	32,33,33	0.27	0	48,52,52	0.29	0
3	ATP	A	601	4,5	32,33,33	0.27	0	48,52,52	0.28	0
6	ADP	K	601	4,5	28,29,29	1.39	4 (14%)	43,45,45	1.84	10 (23%)
6	ADP	H	601	4,5	28,29,29	1.39	4 (14%)	43,45,45	1.86	10 (23%)
6	ADP	M	601	4,5	28,29,29	1.38	4 (14%)	43,45,45	1.88	9 (20%)
3	ATP	E	601	4,5	32,33,33	0.27	0	48,52,52	0.29	0
6	ADP	L	601	4,5	28,29,29	1.40	5 (17%)	43,45,45	1.84	10 (23%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	D	601	4,5	-	5/22/38/38	0/3/3/3
6	ADP	I	601	4,5	-	6/16/32/32	0/3/3/3
6	ADP	N	601	4,5	-	5/16/32/32	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	G	601	4,5	-	6/22/38/38	0/3/3/3
6	ADP	J	601	4,5	-	6/16/32/32	0/3/3/3
3	ATP	B	601	4,5	-	4/22/38/38	0/3/3/3
3	ATP	F	601	4,5	-	4/22/38/38	0/3/3/3
3	ATP	C	601	5	-	4/22/38/38	0/3/3/3
3	ATP	A	601	4,5	-	2/22/38/38	0/3/3/3
6	ADP	K	601	4,5	-	6/16/32/32	0/3/3/3
6	ADP	H	601	4,5	-	5/16/32/32	0/3/3/3
6	ADP	M	601	4,5	-	6/16/32/32	0/3/3/3
3	ATP	E	601	4,5	-	3/22/38/38	0/3/3/3
6	ADP	L	601	4,5	-	5/16/32/32	0/3/3/3

All (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	J	601	ADP	C5-C4	4.60	1.47	1.39
6	L	601	ADP	C5-C4	4.57	1.47	1.39
6	M	601	ADP	C5-C4	4.57	1.47	1.39
6	N	601	ADP	C5-C4	4.56	1.47	1.39
6	I	601	ADP	C5-C4	4.55	1.47	1.39
6	H	601	ADP	C5-C4	4.55	1.47	1.39
6	K	601	ADP	C5-C4	4.55	1.47	1.39
6	H	601	ADP	C5-C6	2.71	1.48	1.41
6	L	601	ADP	C5-C6	2.69	1.48	1.41
6	K	601	ADP	C5-C6	2.69	1.48	1.41
6	J	601	ADP	C5-C6	2.66	1.48	1.41
6	N	601	ADP	C5-C6	2.64	1.48	1.41
6	M	601	ADP	C5-C6	2.54	1.48	1.41
6	I	601	ADP	C5-C6	2.53	1.48	1.41
6	I	601	ADP	C5-N7	-2.42	1.34	1.39
6	J	601	ADP	C5-N7	-2.41	1.34	1.39
6	M	601	ADP	C5-N7	-2.40	1.34	1.39
6	L	601	ADP	C8-N7	2.39	1.36	1.31
6	N	601	ADP	C5-N7	-2.38	1.34	1.39
6	K	601	ADP	C5-N7	-2.38	1.34	1.39
6	H	601	ADP	C8-N7	2.36	1.36	1.31
6	N	601	ADP	C8-N7	2.33	1.36	1.31
6	H	601	ADP	C5-N7	-2.33	1.34	1.39
6	K	601	ADP	C8-N7	2.31	1.36	1.31
6	L	601	ADP	C5-N7	-2.27	1.34	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	J	601	ADP	C8-N7	2.27	1.36	1.31
6	M	601	ADP	C8-N7	2.18	1.35	1.31
6	I	601	ADP	C8-N7	2.13	1.35	1.31
6	L	601	ADP	C4-N9	-2.09	1.33	1.37
6	N	601	ADP	C4-N9	-2.04	1.33	1.37

All (68) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	I	601	ADP	C5-C4-N3	-5.89	118.61	126.72
6	J	601	ADP	C5-C4-N3	-5.86	118.65	126.72
6	H	601	ADP	C5-C4-N3	-5.83	118.69	126.72
6	K	601	ADP	C5-C4-N3	-5.80	118.74	126.72
6	N	601	ADP	C5-C4-N3	-5.76	118.78	126.72
6	M	601	ADP	C5-C4-N3	-5.75	118.80	126.72
6	L	601	ADP	C5-C4-N3	-5.58	119.03	126.72
6	I	601	ADP	N3-C4-N9	4.91	135.52	127.17
6	M	601	ADP	N3-C4-N9	4.87	135.45	127.17
6	J	601	ADP	N3-C4-N9	4.69	135.14	127.17
6	K	601	ADP	N3-C4-N9	4.56	134.91	127.17
6	N	601	ADP	N3-C4-N9	4.53	134.87	127.17
6	H	601	ADP	N3-C4-N9	4.45	134.74	127.17
6	L	601	ADP	N3-C4-N9	4.27	134.44	127.17
6	H	601	ADP	C2-N3-C4	3.79	121.09	111.83
6	L	601	ADP	C2-N3-C4	3.79	121.08	111.83
6	N	601	ADP	C2-N3-C4	3.75	120.98	111.83
6	H	601	ADP	C4-C5-N7	-3.70	106.35	110.58
6	I	601	ADP	C2-N3-C4	3.70	120.87	111.83
6	J	601	ADP	C2-N3-C4	3.70	120.86	111.83
6	K	601	ADP	C2-N3-C4	3.69	120.84	111.83
6	M	601	ADP	C2-N3-C4	3.67	120.79	111.83
6	L	601	ADP	C4-C5-N7	-3.65	106.41	110.58
6	K	601	ADP	C4-C5-N7	-3.55	106.52	110.58
6	N	601	ADP	C4-C5-N7	-3.54	106.53	110.58
6	J	601	ADP	C4-C5-N7	-3.54	106.54	110.58
6	L	601	ADP	N3-C2-N1	-3.48	123.31	128.58
6	M	601	ADP	N3-C2-N1	-3.30	123.58	128.58
6	H	601	ADP	N3-C2-N1	-3.28	123.61	128.58
6	N	601	ADP	N3-C2-N1	-3.28	123.62	128.58
6	I	601	ADP	N3-C2-N1	-3.26	123.65	128.58
6	I	601	ADP	C4-C5-N7	-3.20	106.92	110.58
6	J	601	ADP	N3-C2-N1	-3.15	123.82	128.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	M	601	ADP	C4-C5-N7	-3.12	107.01	110.58
6	K	601	ADP	N3-C2-N1	-3.12	123.86	128.58
6	M	601	ADP	C4-N9-C8	3.12	109.01	105.74
6	I	601	ADP	C4-N9-C8	2.98	108.87	105.74
6	J	601	ADP	C4-N9-C8	2.86	108.74	105.74
6	N	601	ADP	C4-N9-C8	2.84	108.72	105.74
6	L	601	ADP	C4-N9-C8	2.78	108.65	105.74
6	K	601	ADP	C4-N9-C8	2.76	108.63	105.74
6	H	601	ADP	C5-N7-C8	2.71	107.71	103.45
6	J	601	ADP	C5-N7-C8	2.70	107.70	103.45
6	K	601	ADP	C5-N7-C8	2.67	107.65	103.45
6	H	601	ADP	C4-N9-C8	2.66	108.53	105.74
6	N	601	ADP	C5-N7-C8	2.64	107.60	103.45
6	L	601	ADP	C5-N7-C8	2.62	107.58	103.45
6	I	601	ADP	C5-N7-C8	2.53	107.42	103.45
6	M	601	ADP	C5-N7-C8	2.47	107.34	103.45
6	J	601	ADP	C3'-C2'-C1'	2.42	106.03	101.46
6	I	601	ADP	C3'-C2'-C1'	2.40	106.00	101.46
6	L	601	ADP	C6-C5-N7	2.38	136.67	132.09
6	H	601	ADP	C3'-C2'-C1'	2.36	105.93	101.46
6	M	601	ADP	C3'-C2'-C1'	2.35	105.90	101.46
6	K	601	ADP	C3'-C2'-C1'	2.33	105.87	101.46
6	N	601	ADP	C3'-C2'-C1'	2.31	105.83	101.46
6	L	601	ADP	C3'-C2'-C1'	2.31	105.82	101.46
6	H	601	ADP	C6-C5-N7	2.27	136.47	132.09
6	N	601	ADP	N9-C8-N7	-2.21	110.80	113.94
6	N	601	ADP	C6-C5-N7	2.20	136.33	132.09
6	J	601	ADP	N9-C8-N7	-2.19	110.82	113.94
6	L	601	ADP	N9-C8-N7	-2.19	110.83	113.94
6	H	601	ADP	N9-C8-N7	-2.18	110.84	113.94
6	K	601	ADP	N9-C8-N7	-2.17	110.86	113.94
6	M	601	ADP	N9-C8-N7	-2.14	110.90	113.94
6	K	601	ADP	C6-C5-N7	2.13	136.19	132.09
6	I	601	ADP	N9-C8-N7	-2.11	110.94	113.94
6	J	601	ADP	C6-C5-N7	2.06	136.07	132.09

There are no chirality outliers.

All (67) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	D	601	ATP	C5'-O5'-PA-O2A
6	H	601	ADP	C5'-O5'-PA-O3A

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Mol	Chain	Res	Type	Atoms
6	I	601	ADP	C5'-O5'-PA-O1A
6	I	601	ADP	C5'-O5'-PA-O3A
6	J	601	ADP	C5'-O5'-PA-O1A
6	J	601	ADP	C5'-O5'-PA-O3A
6	K	601	ADP	C5'-O5'-PA-O1A
6	K	601	ADP	C5'-O5'-PA-O3A
6	L	601	ADP	C5'-O5'-PA-O1A
6	L	601	ADP	C5'-O5'-PA-O3A
6	M	601	ADP	C5'-O5'-PA-O1A
6	M	601	ADP	C5'-O5'-PA-O3A
6	N	601	ADP	C5'-O5'-PA-O1A
6	N	601	ADP	C5'-O5'-PA-O3A
3	B	601	ATP	C3'-C4'-C5'-O5'
3	D	601	ATP	C3'-C4'-C5'-O5'
3	E	601	ATP	C3'-C4'-C5'-O5'
3	G	601	ATP	C3'-C4'-C5'-O5'
3	D	601	ATP	O4'-C4'-C5'-O5'
6	H	601	ADP	O4'-C4'-C5'-O5'
6	H	601	ADP	C3'-C4'-C5'-O5'
6	J	601	ADP	O4'-C4'-C5'-O5'
6	J	601	ADP	C3'-C4'-C5'-O5'
6	K	601	ADP	C3'-C4'-C5'-O5'
6	L	601	ADP	O4'-C4'-C5'-O5'
3	A	601	ATP	C3'-C4'-C5'-O5'
3	B	601	ATP	O4'-C4'-C5'-O5'
3	E	601	ATP	O4'-C4'-C5'-O5'
3	G	601	ATP	O4'-C4'-C5'-O5'
6	L	601	ADP	C3'-C4'-C5'-O5'
6	M	601	ADP	O4'-C4'-C5'-O5'
6	I	601	ADP	O4'-C4'-C5'-O5'
6	K	601	ADP	O4'-C4'-C5'-O5'
6	N	601	ADP	O4'-C4'-C5'-O5'
6	M	601	ADP	C3'-C4'-C5'-O5'
3	C	601	ATP	PB-O3A-PA-O1A
6	I	601	ADP	C3'-C4'-C5'-O5'
6	N	601	ADP	C3'-C4'-C5'-O5'
3	F	601	ATP	PB-O3B-PG-O2G
3	F	601	ATP	C3'-C4'-C5'-O5'
3	C	601	ATP	PG-O3B-PB-O1B
6	K	601	ADP	PB-O3A-PA-O2A
3	D	601	ATP	C5'-O5'-PA-O1A
6	H	601	ADP	C5'-O5'-PA-O1A

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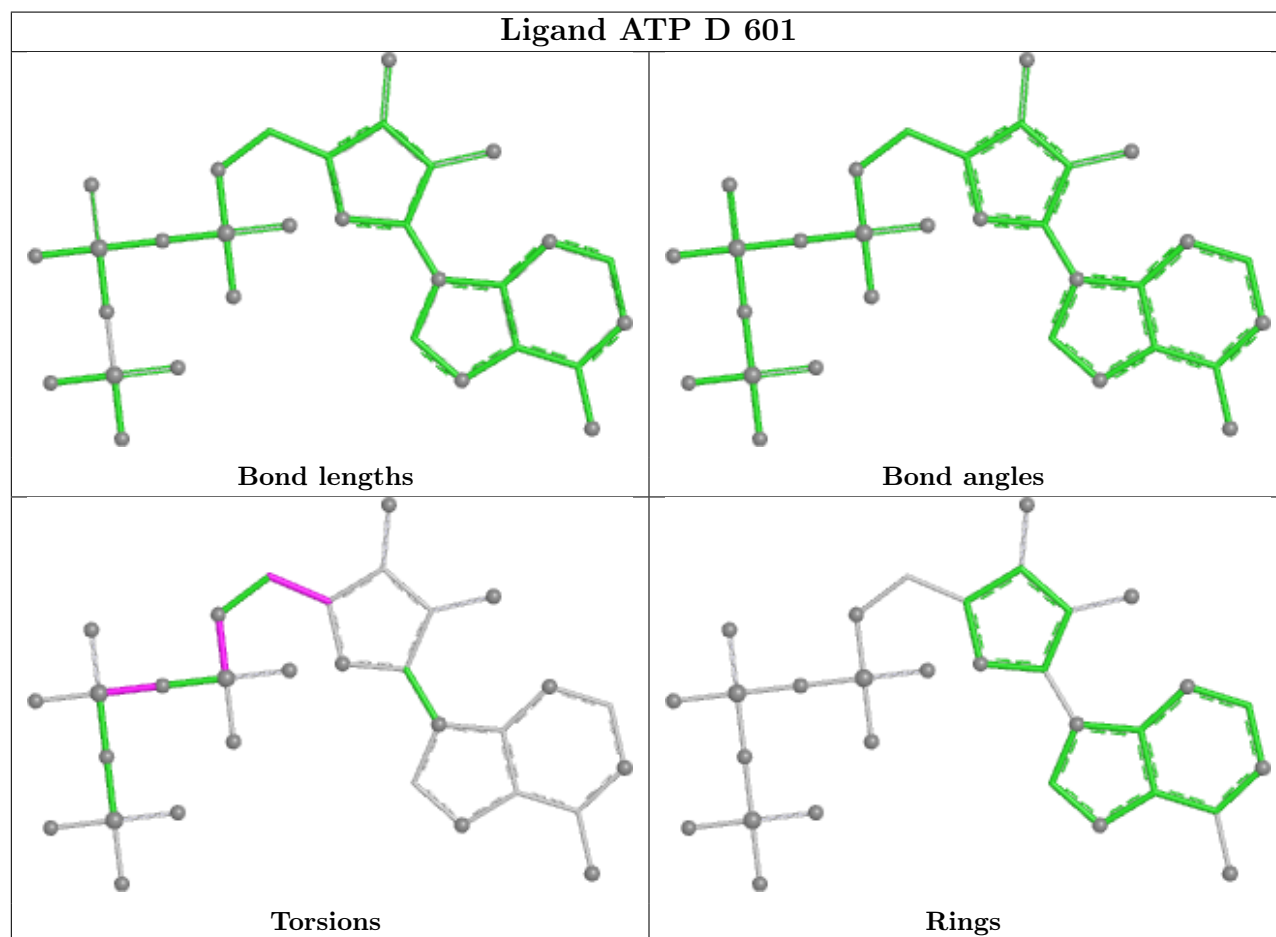
Mol	Chain	Res	Type	Atoms
3	F	601	ATP	PA-O3A-PB-O1B
6	H	601	ADP	PB-O3A-PA-O2A
6	I	601	ADP	PB-O3A-PA-O2A
6	J	601	ADP	PB-O3A-PA-O2A
6	L	601	ADP	PB-O3A-PA-O2A
6	M	601	ADP	PB-O3A-PA-O2A
6	N	601	ADP	PB-O3A-PA-O2A
3	A	601	ATP	O4'-C4'-C5'-O5'
3	C	601	ATP	PB-O3A-PA-O2A
3	G	601	ATP	PA-O3A-PB-O1B
3	E	601	ATP	PB-O3B-PG-O2G
3	B	601	ATP	PG-O3B-PB-O2B
3	B	601	ATP	PA-O3A-PB-O2B
3	C	601	ATP	PG-O3B-PB-O2B
3	D	601	ATP	PA-O3A-PB-O2B
3	F	601	ATP	PA-O3A-PB-O2B
3	G	601	ATP	PA-O3A-PB-O2B
6	I	601	ADP	PB-O3A-PA-O1A
6	J	601	ADP	PB-O3A-PA-O1A
6	K	601	ADP	PB-O3A-PA-O1A
3	G	601	ATP	PG-O3B-PB-O3A
6	M	601	ADP	C2'-C1'-N9-C8
3	G	601	ATP	PG-O3B-PB-O2B

There are no ring outliers.

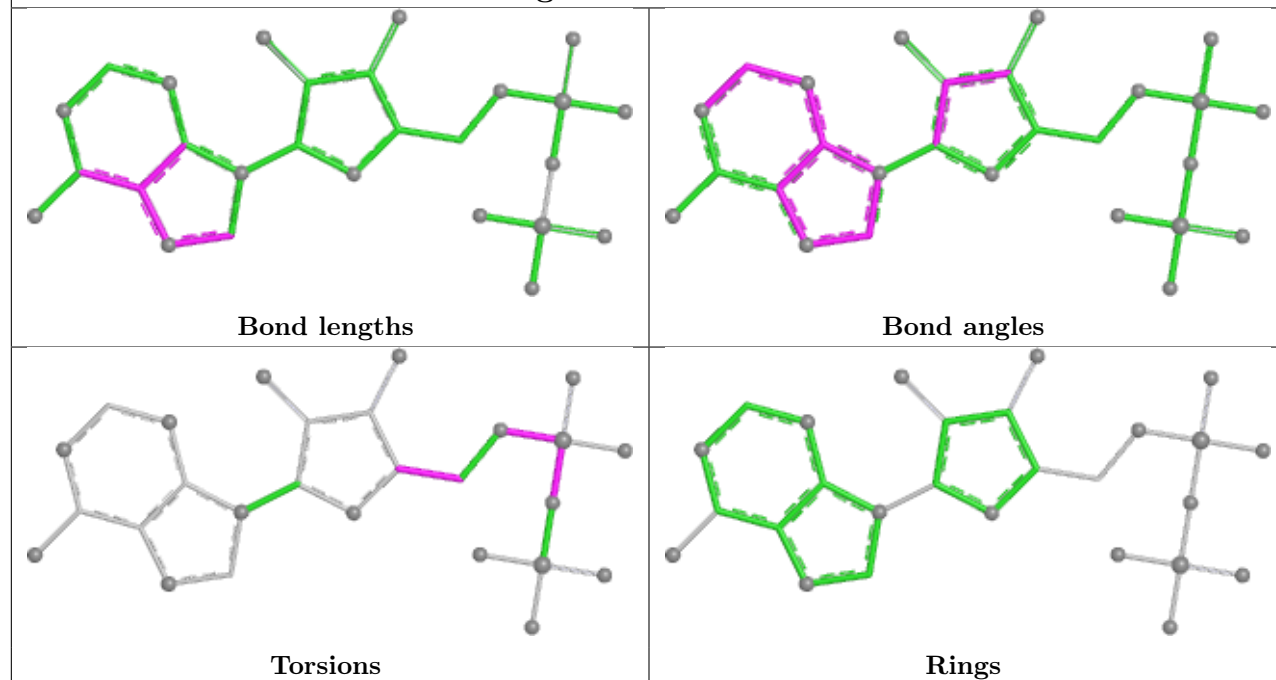
14 monomers are involved in 80 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	D	601	ATP	6	0
6	I	601	ADP	4	0
6	N	601	ADP	7	0
3	G	601	ATP	7	0
6	J	601	ADP	5	0
3	B	601	ATP	8	0
3	F	601	ATP	6	0
3	C	601	ATP	6	0
3	A	601	ATP	6	0
6	K	601	ADP	5	0
6	H	601	ADP	4	0
6	M	601	ADP	4	0
3	E	601	ATP	8	0
6	L	601	ADP	4	0

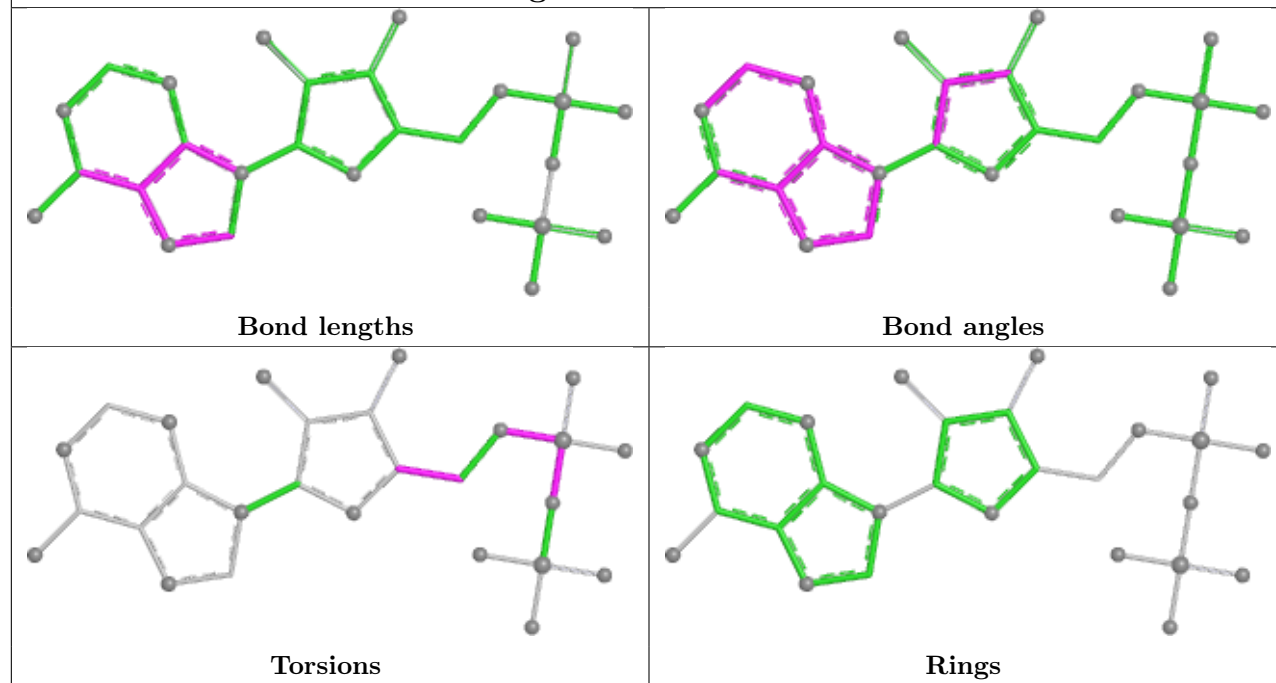
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

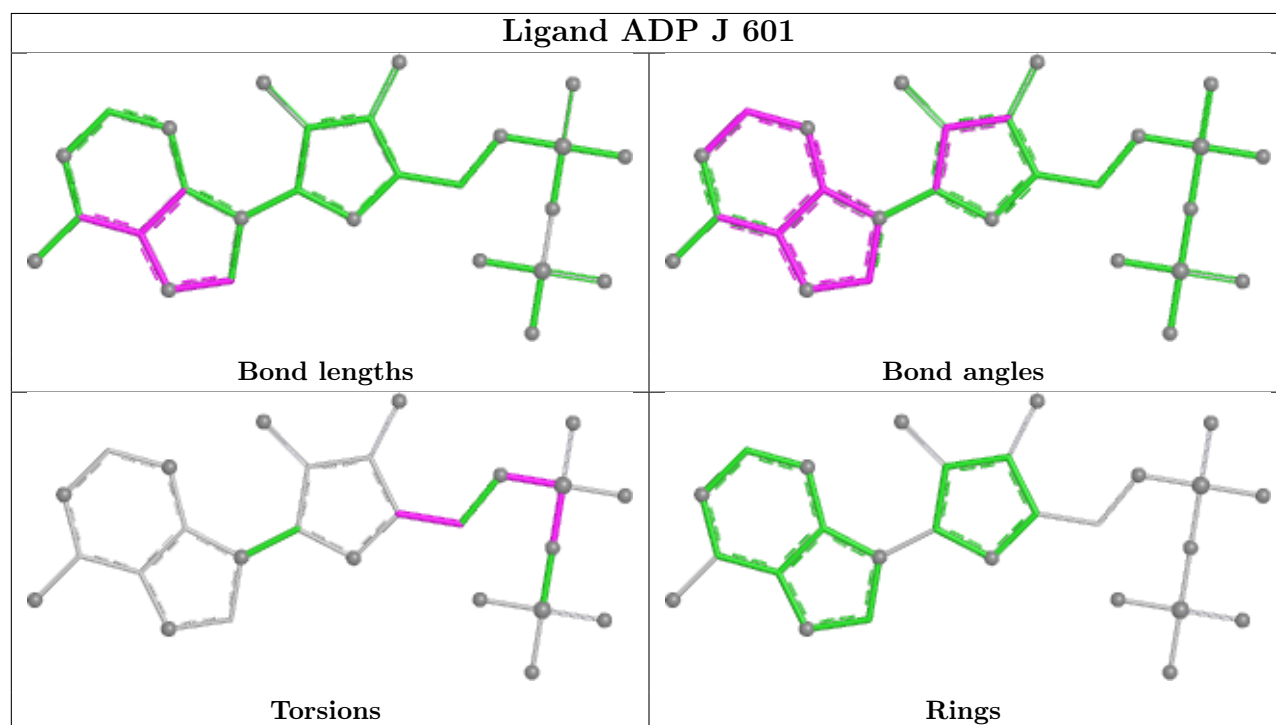
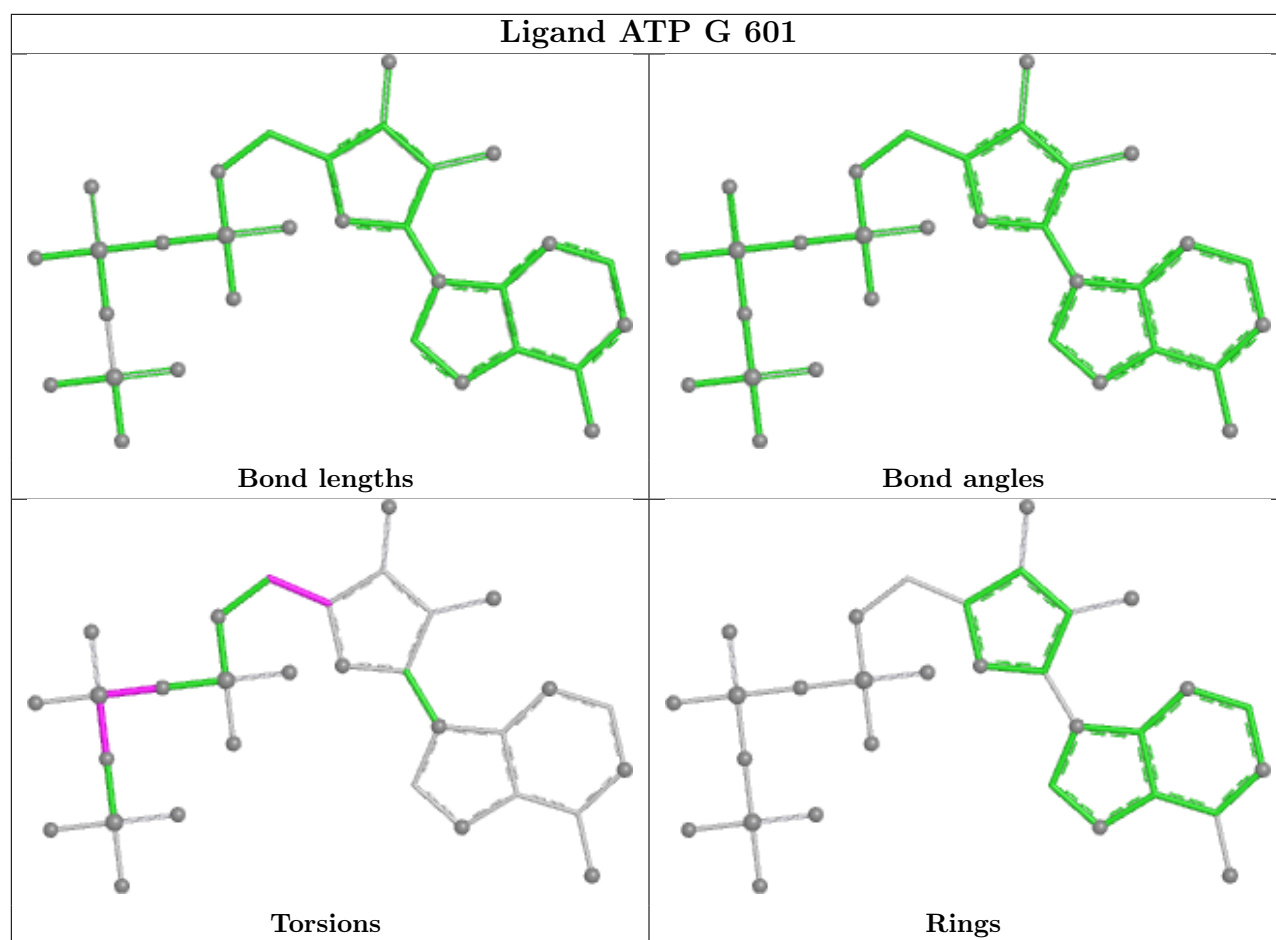


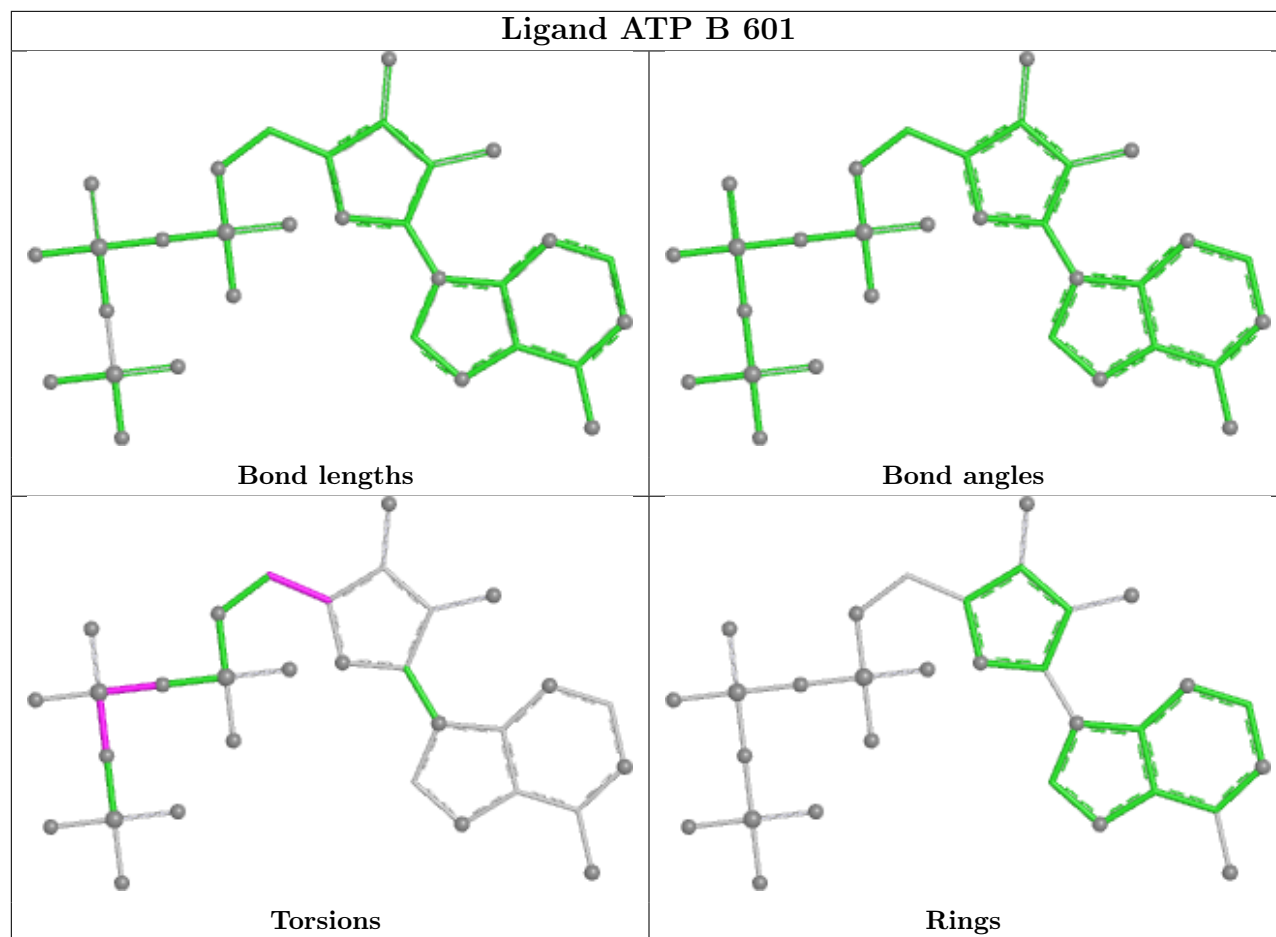
Ligand ADP I 601



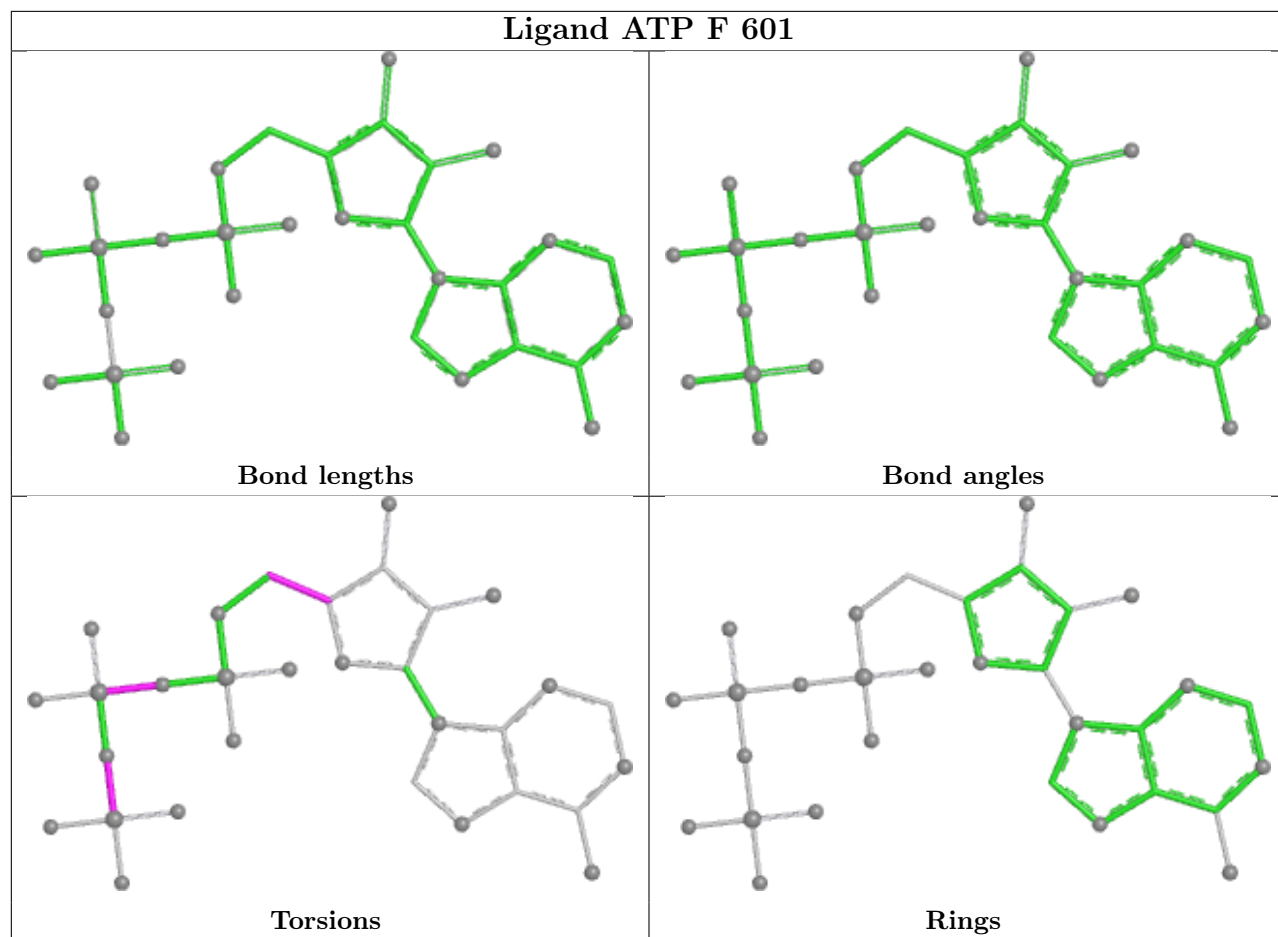
Ligand ADP N 601

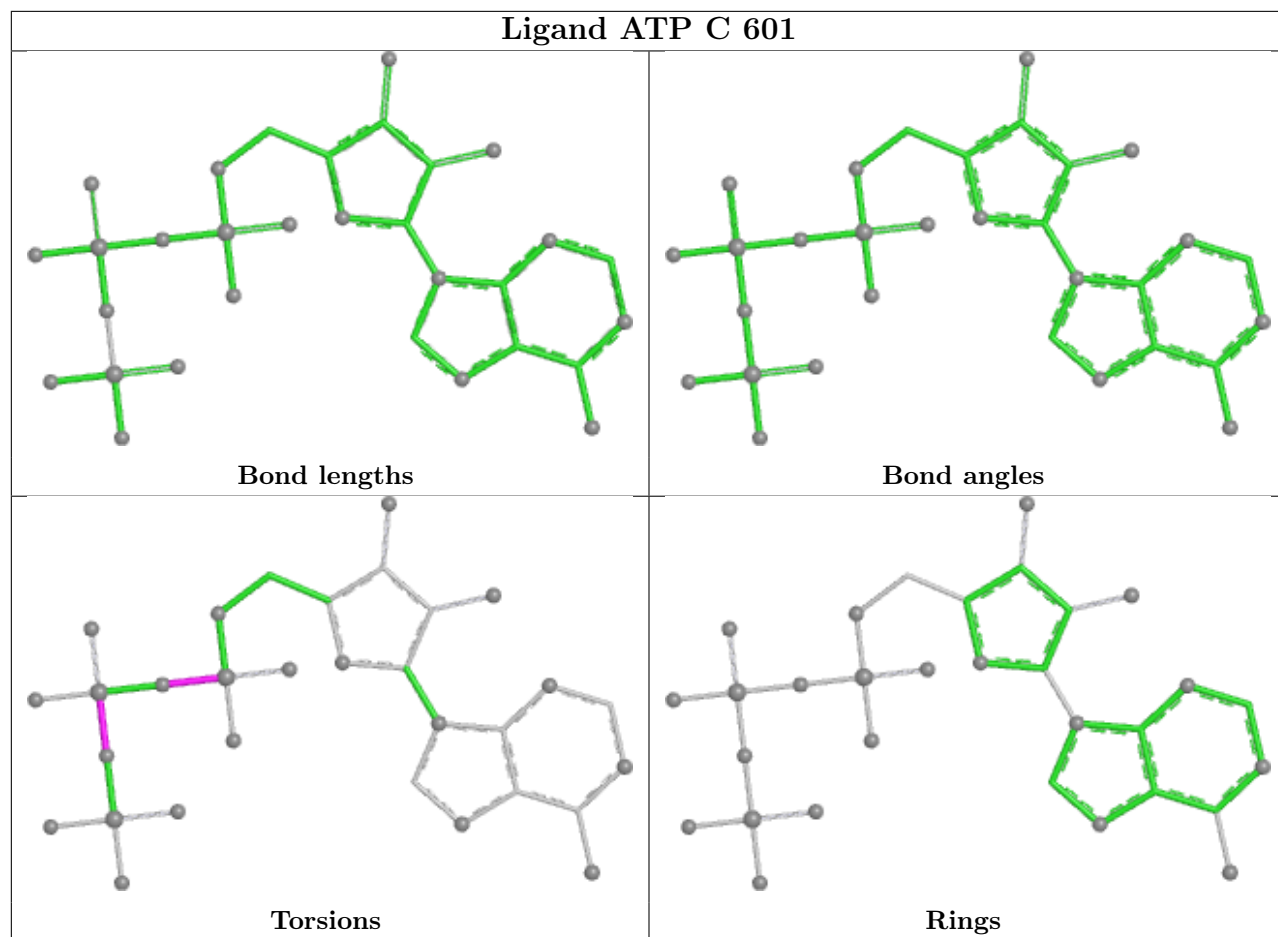




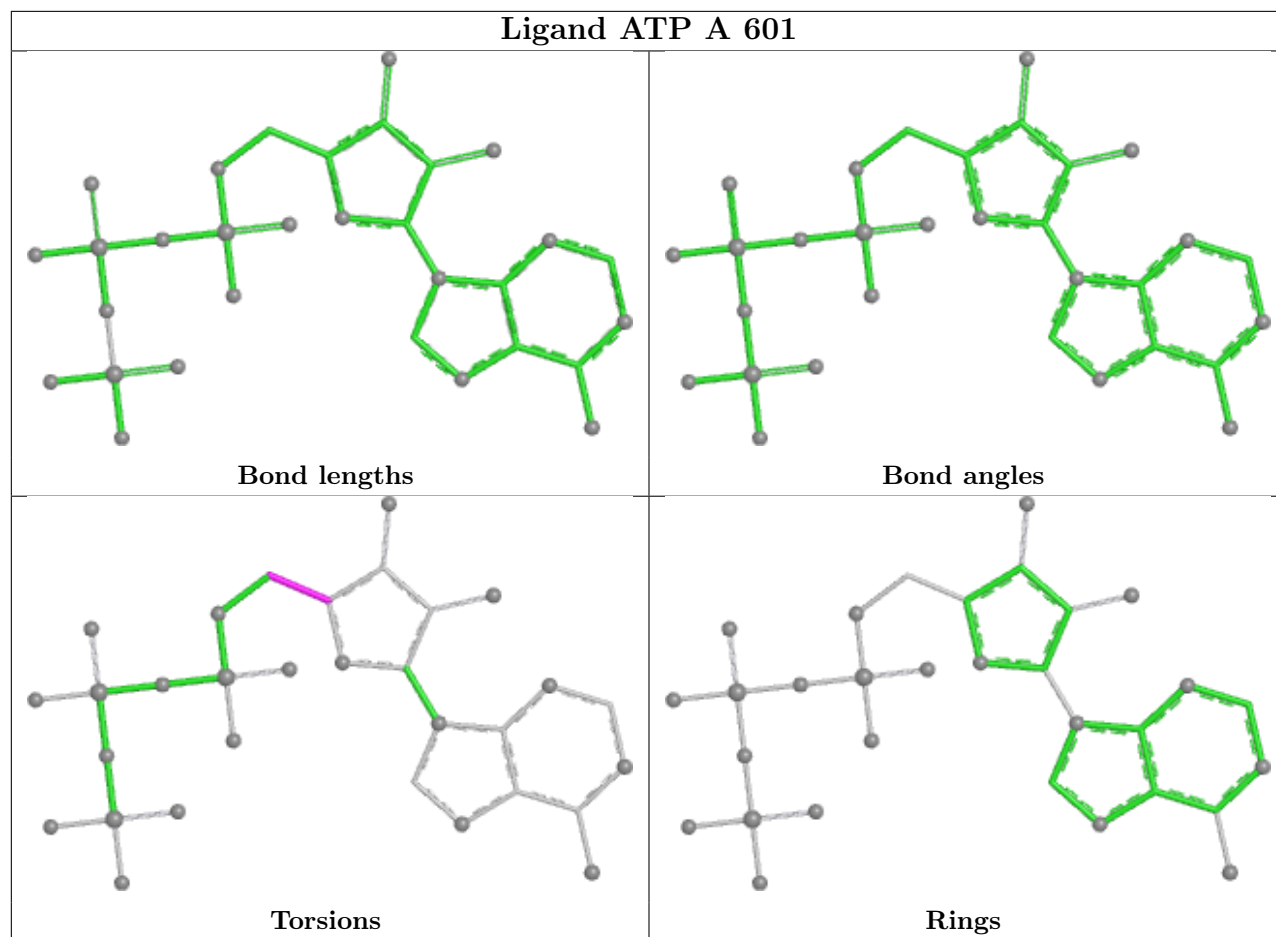


Ligand ATP F 601

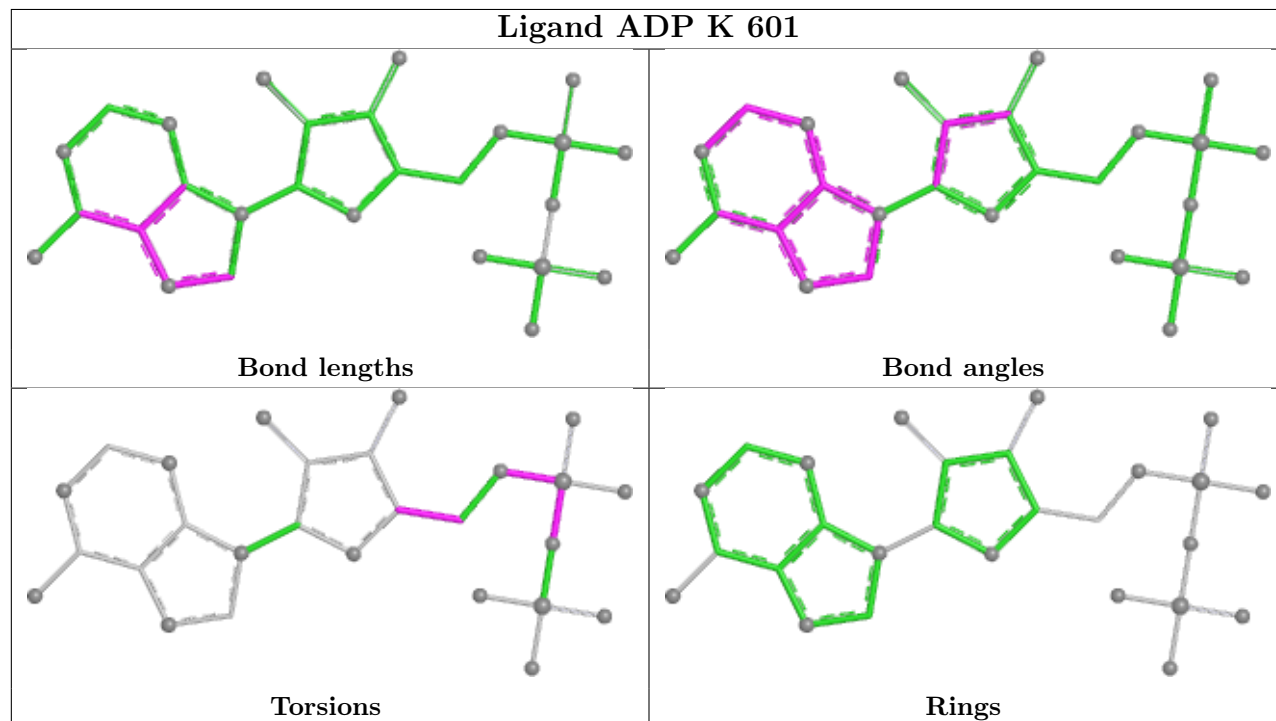


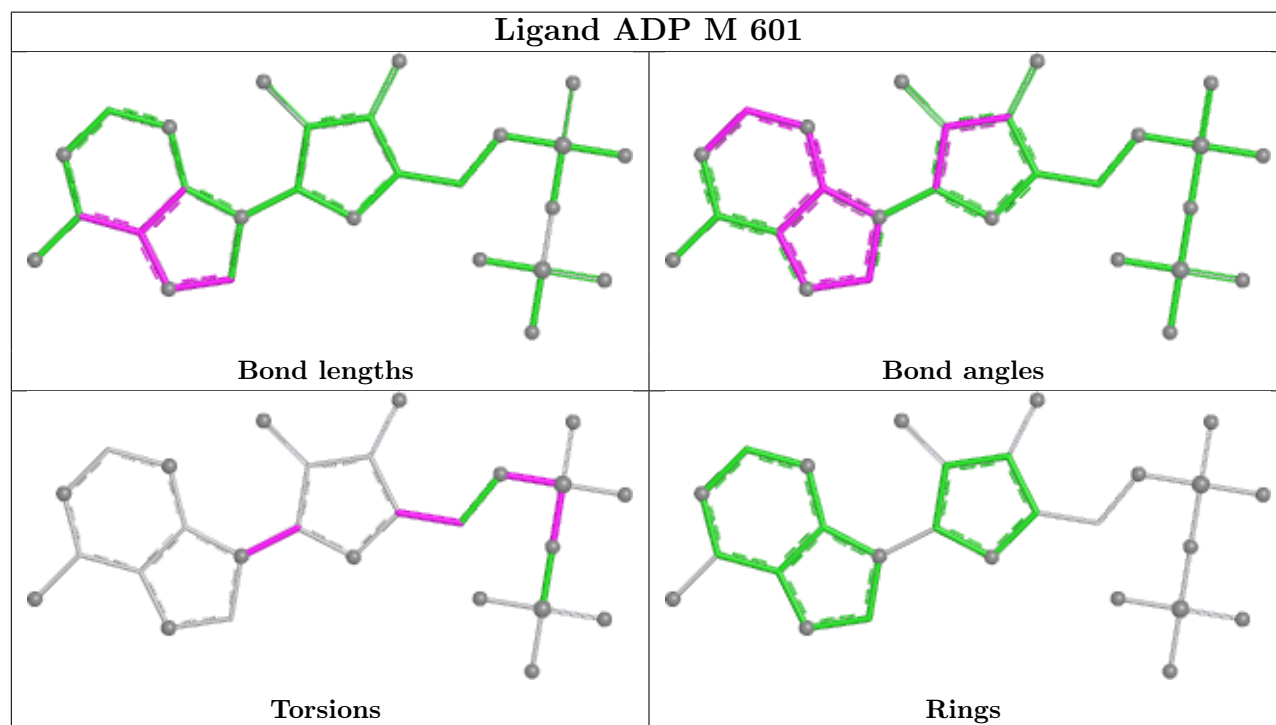
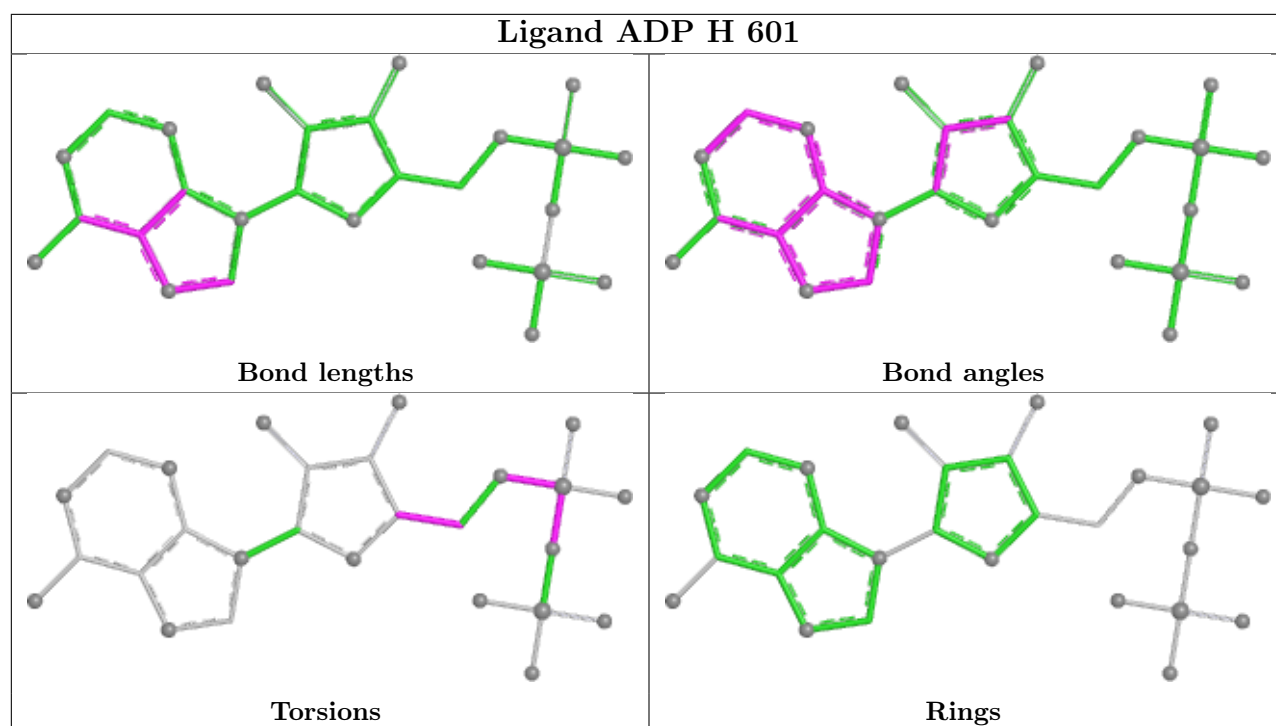


Ligand ATP A 601

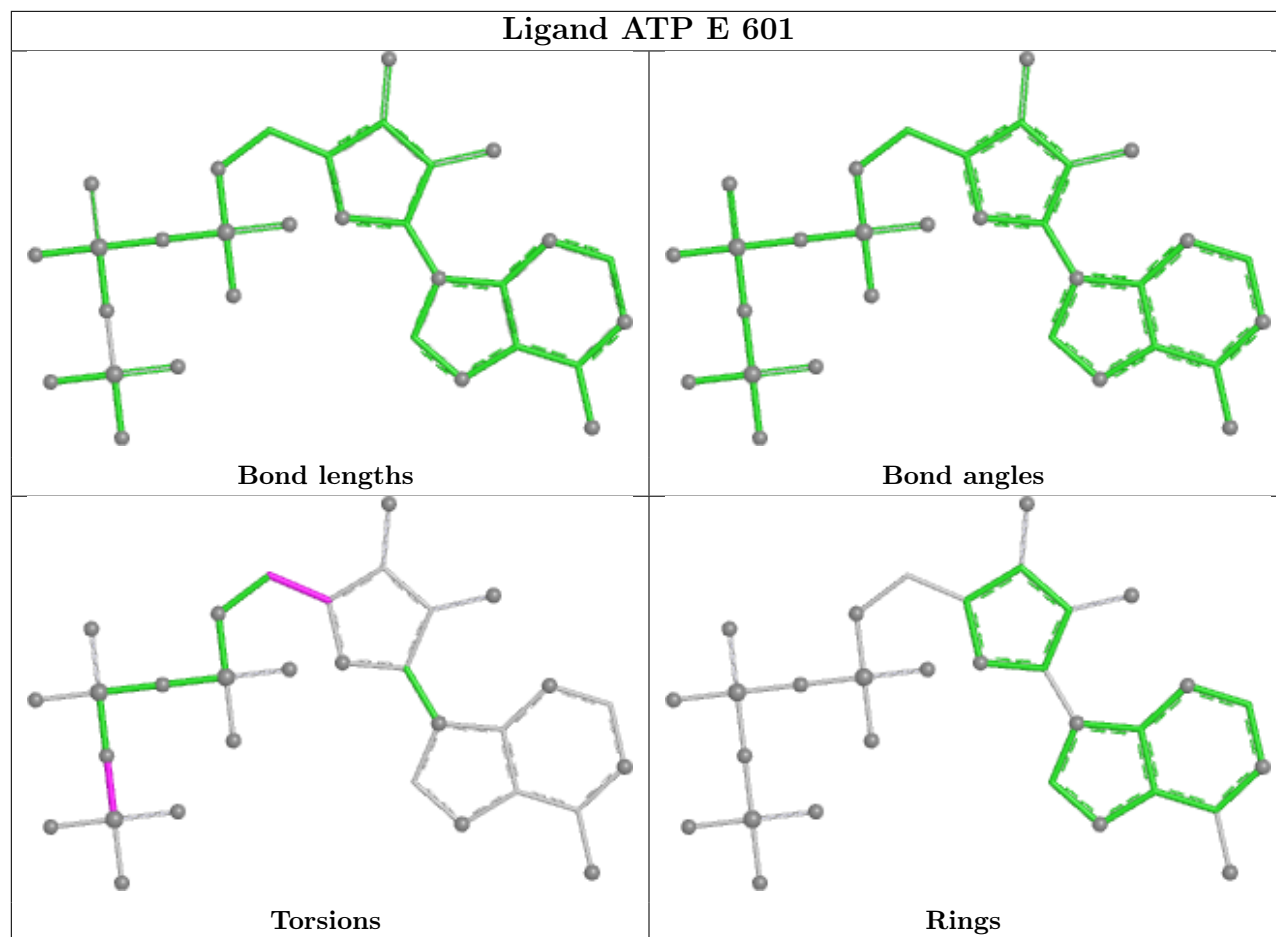


Ligand ADP K 601

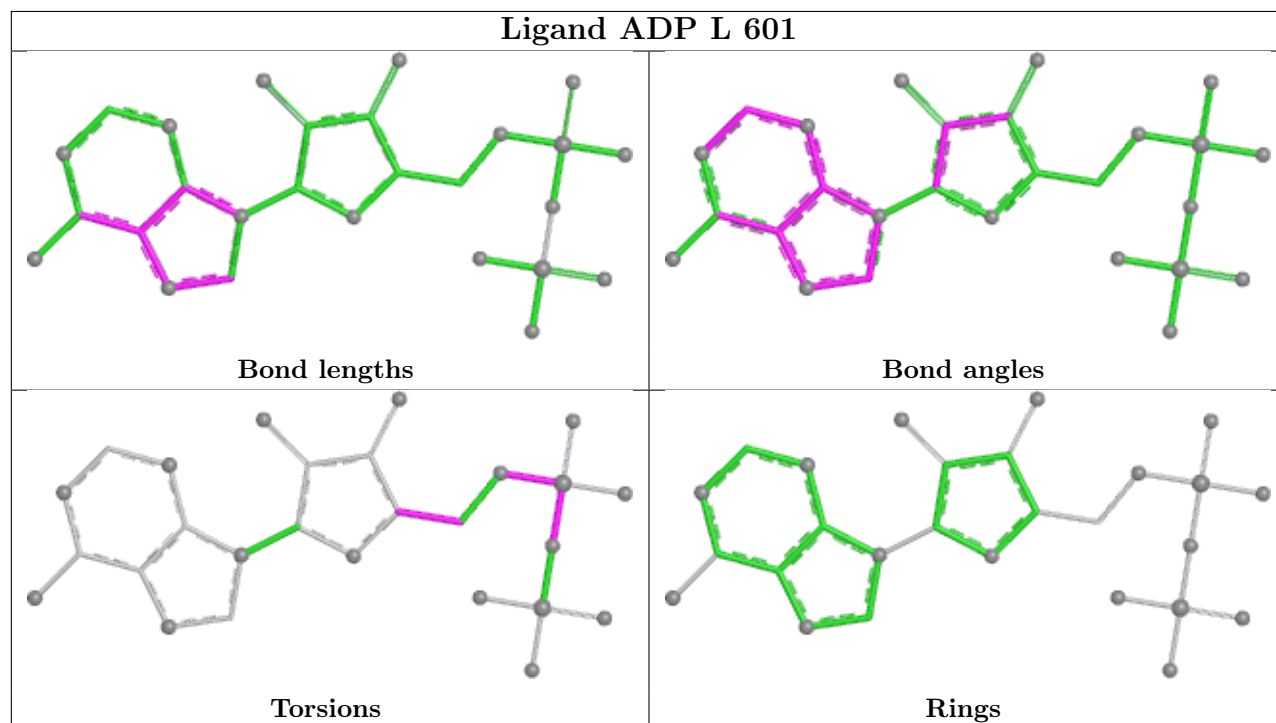




Ligand ATP E 601



Ligand ADP L 601



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

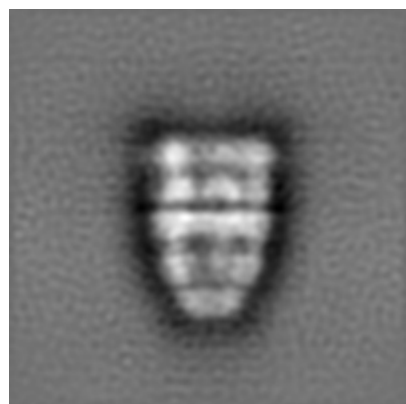
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-18737. These allow visual inspection of the internal detail of the map and identification of artifacts.

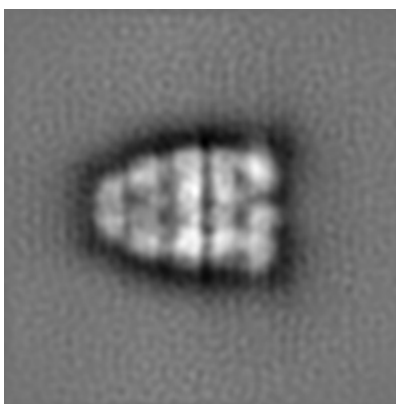
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

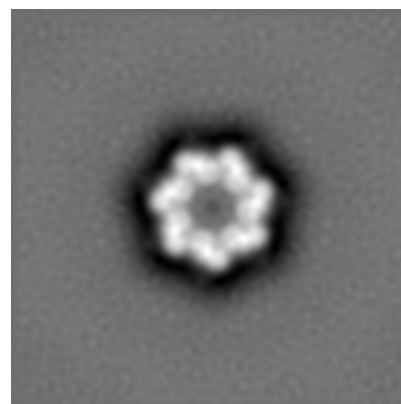
6.1.1 Primary map



X

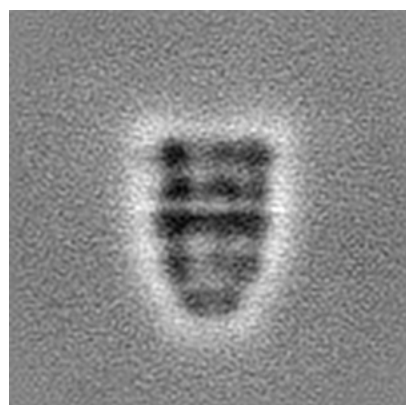


Y

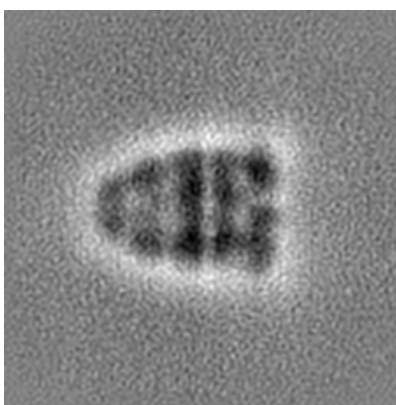


Z

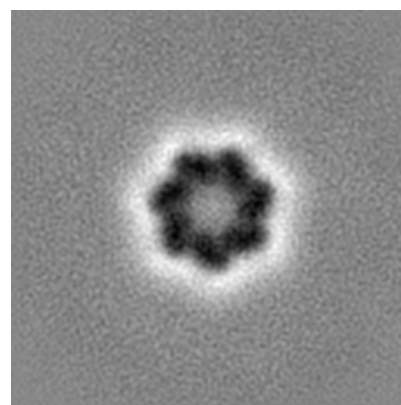
6.1.2 Raw map



X



Y

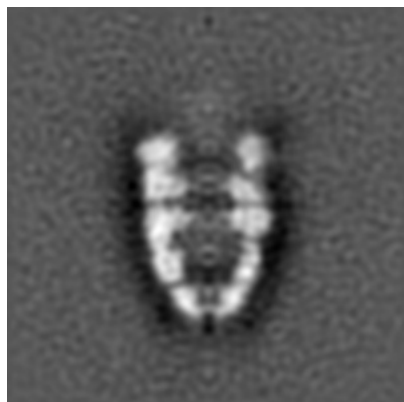


Z

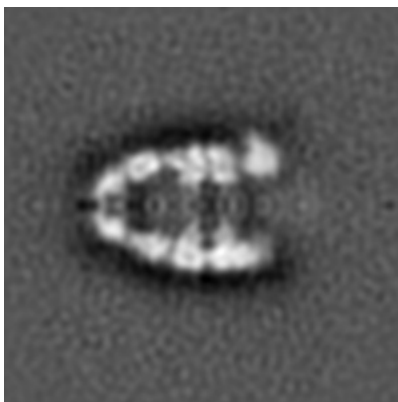
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

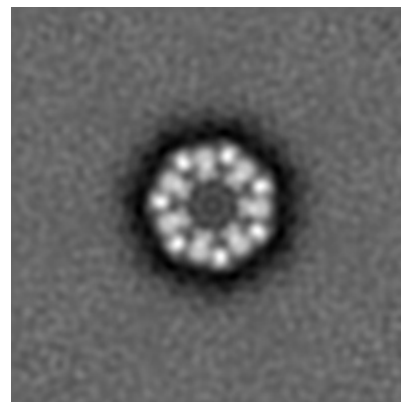
6.2.1 Primary map



X Index: 64



Y Index: 64

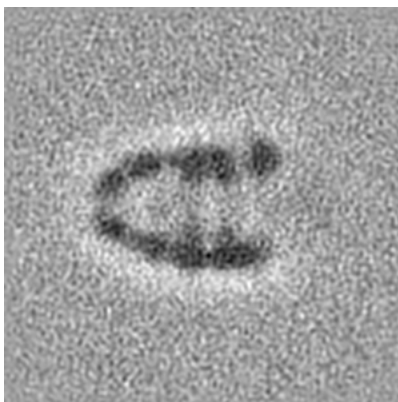


Z Index: 64

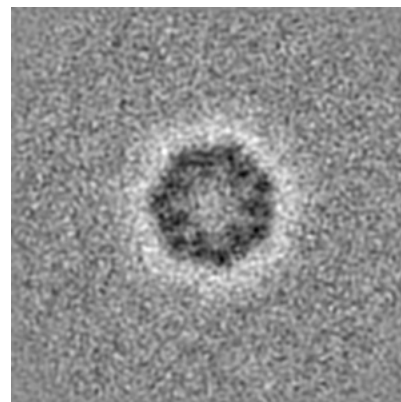
6.2.2 Raw map



X Index: 64



Y Index: 64

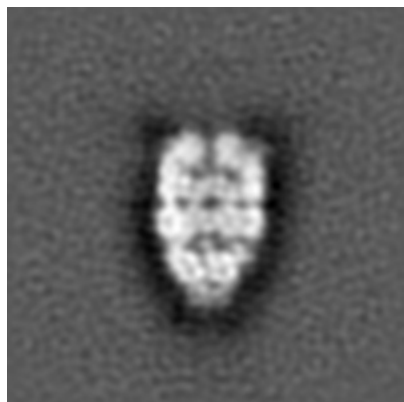


Z Index: 64

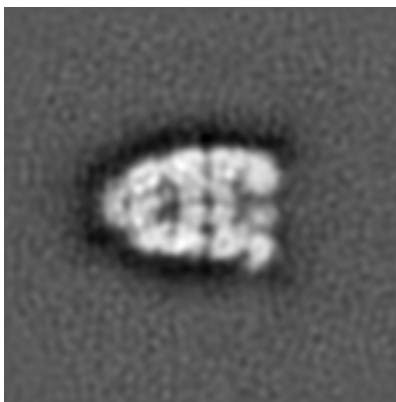
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

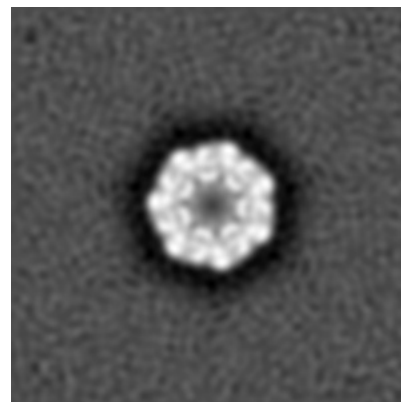
6.3.1 Primary map



X Index: 53



Y Index: 54

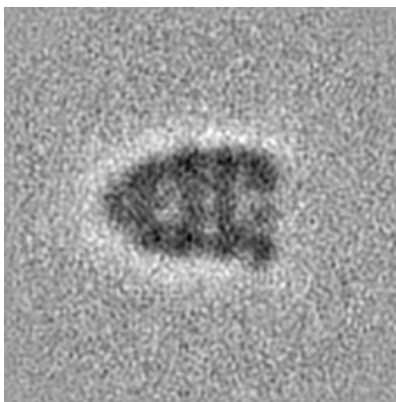


Z Index: 61

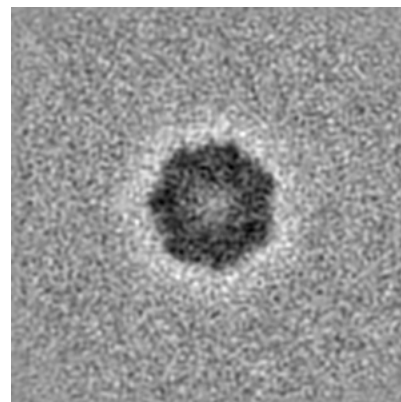
6.3.2 Raw map



X Index: 52



Y Index: 54

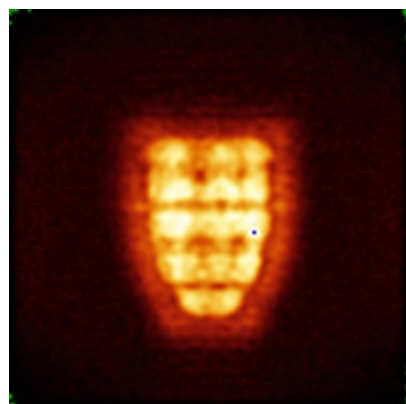


Z Index: 60

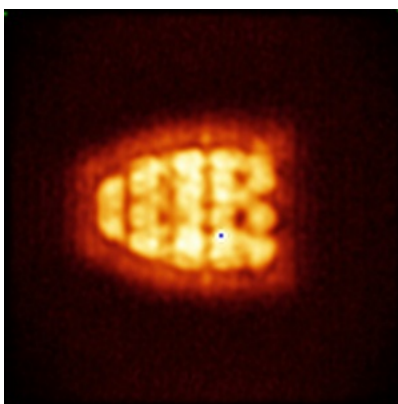
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

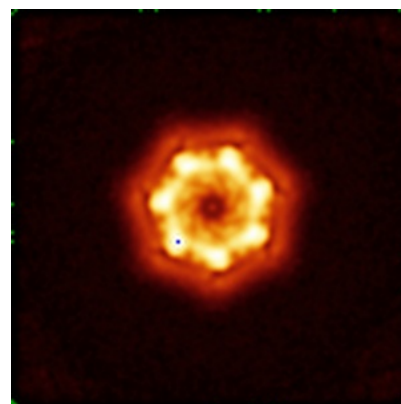
6.4.1 Primary map



X

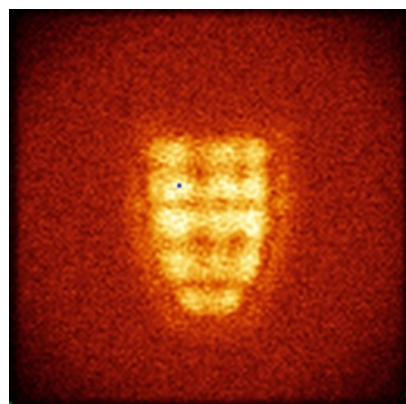


Y

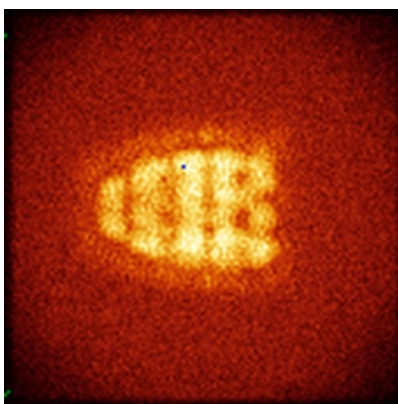


Z

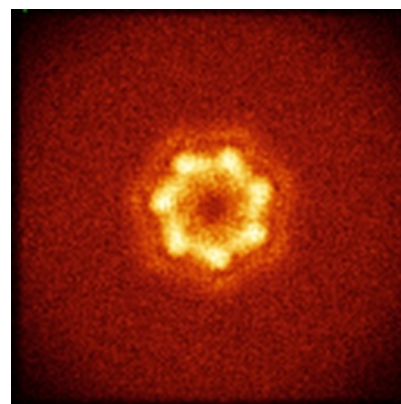
6.4.2 Raw map



X



Y



Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

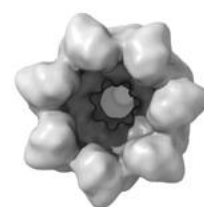
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.0981. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

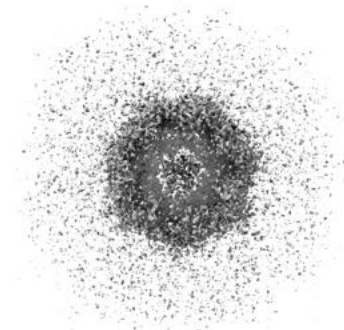
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

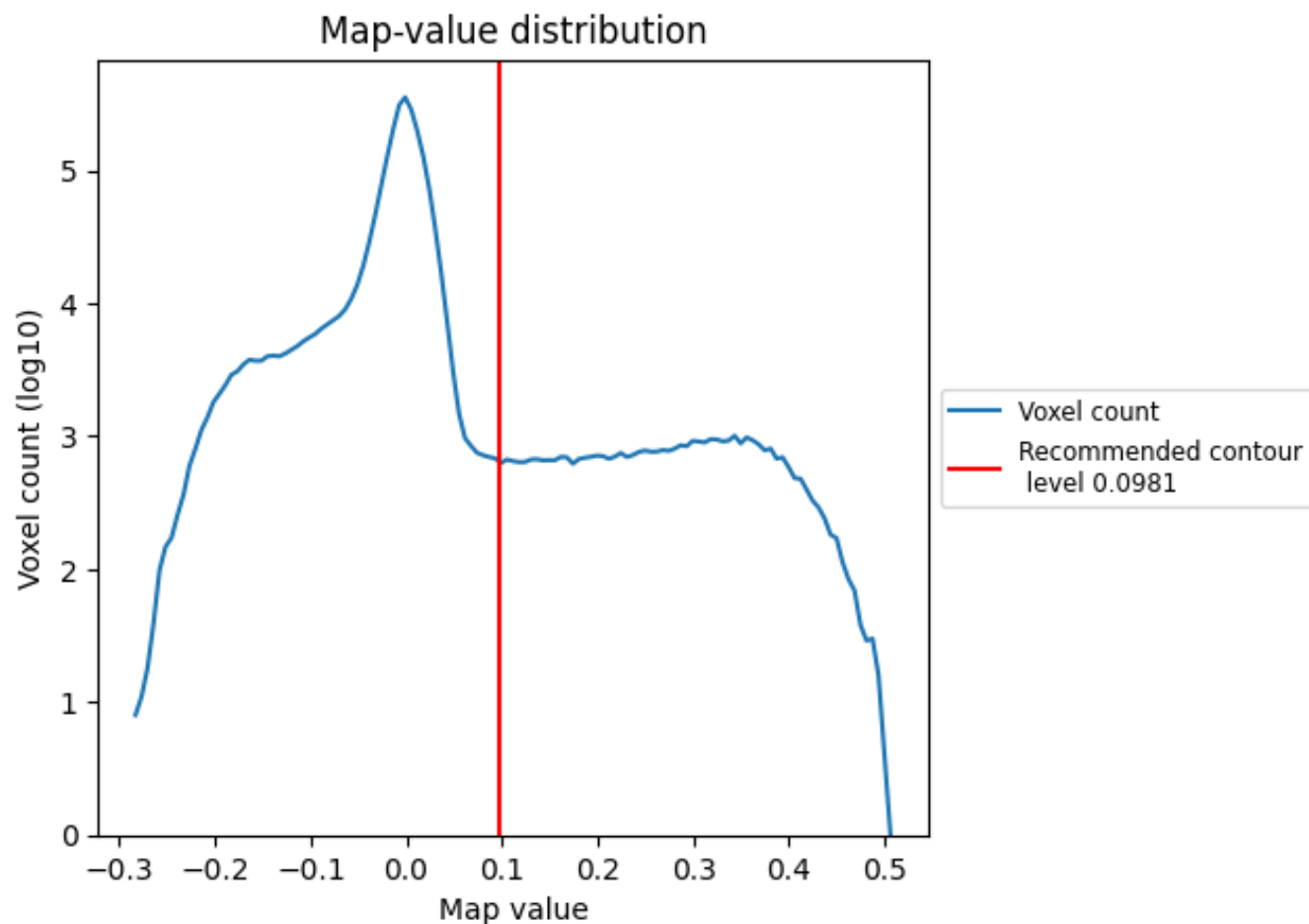
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

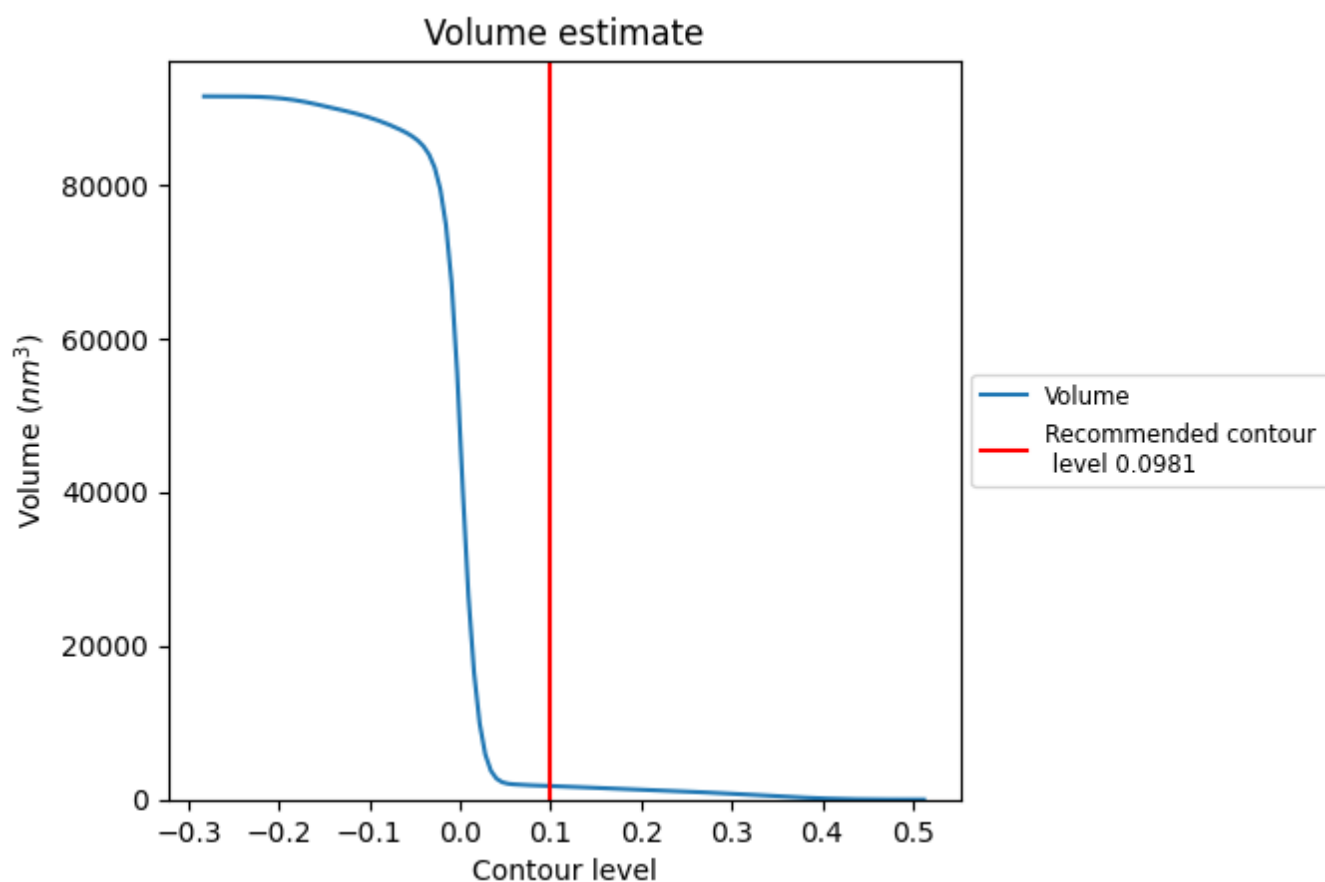
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

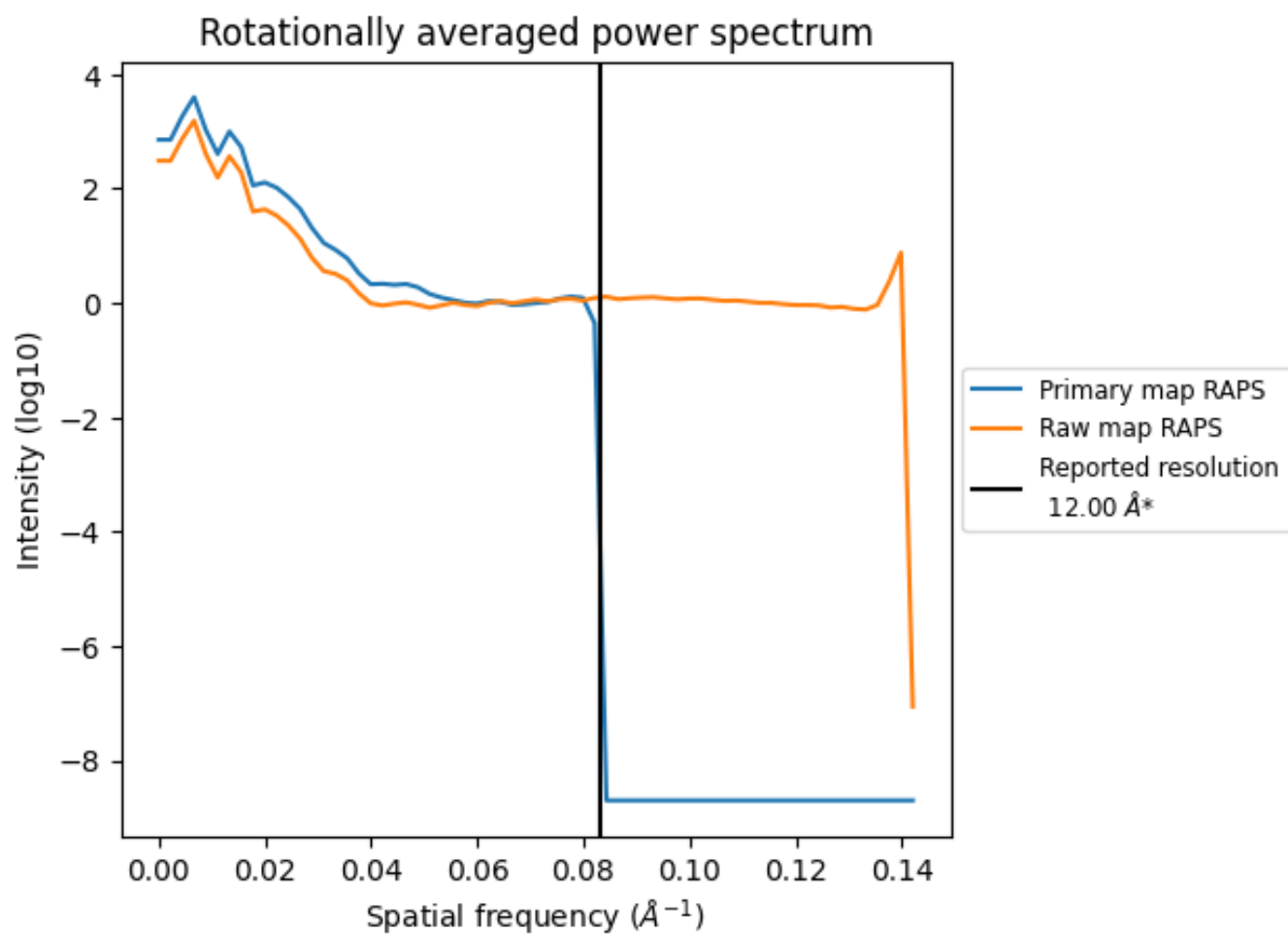
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1763 nm³; this corresponds to an approximate mass of 1593 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

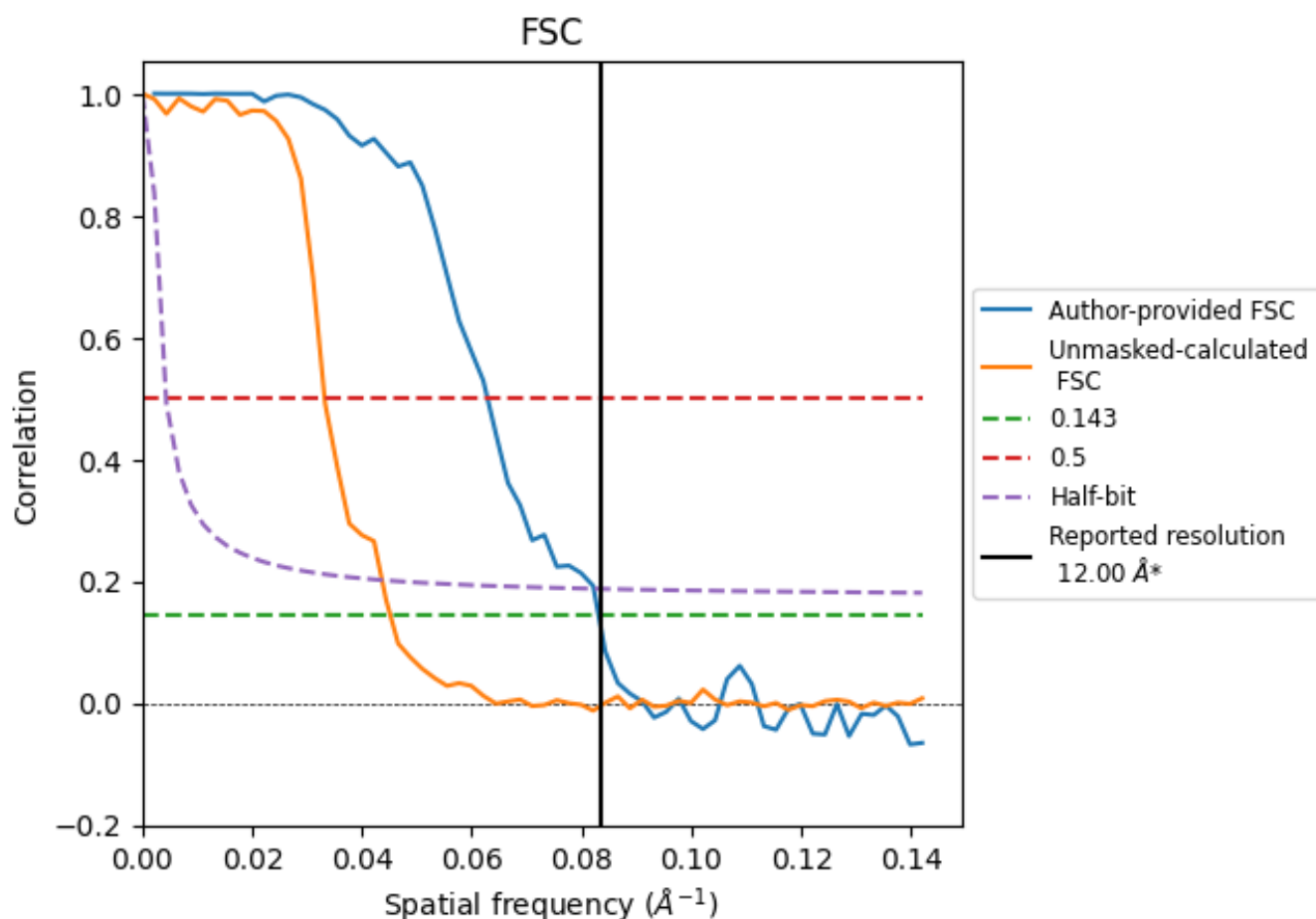


*Reported resolution corresponds to spatial frequency of $0.083 \text{ \AA}^{-1}$

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.083 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

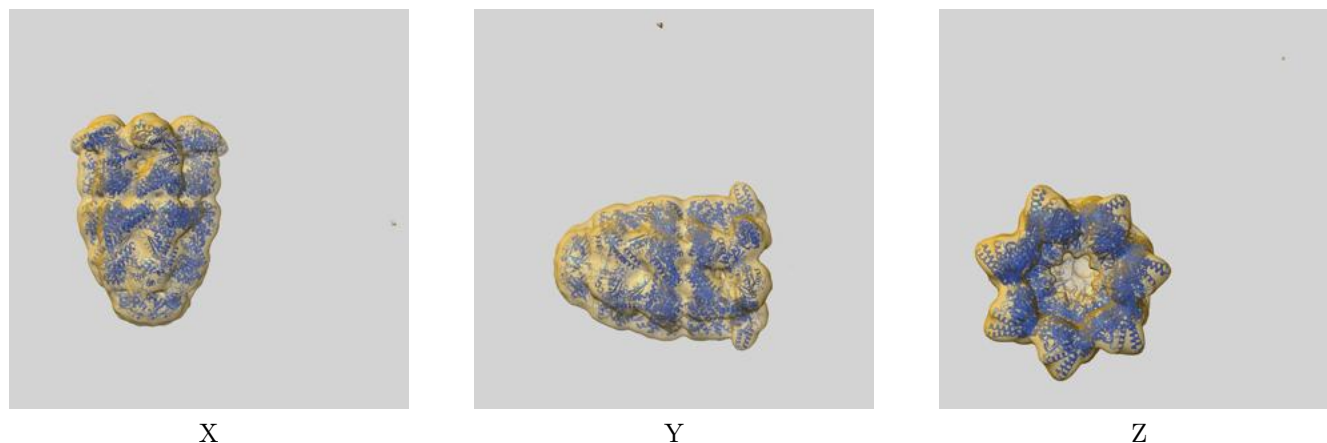
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	12.00	-	-
Author-provided FSC curve	12.03	15.90	12.17
Unmasked-calculated*	22.12	30.12	22.94

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 22.12 differs from the reported value 12.0 by more than 10 %

9 Map-model fit [i](#)

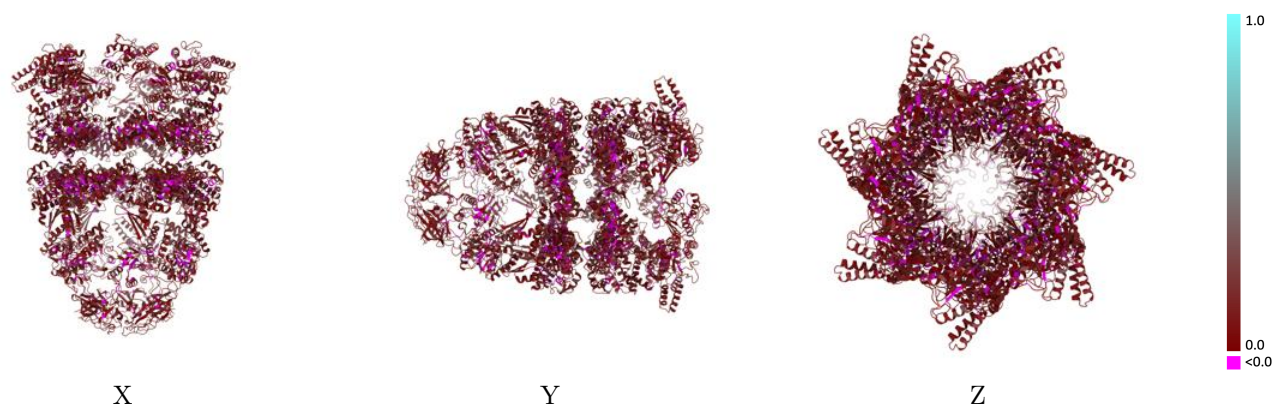
This section contains information regarding the fit between EMDB map EMD-18737 and PDB model 8QXU. Per-residue inclusion information can be found in section [3](#) on page [10](#).

9.1 Map-model overlay [i](#)



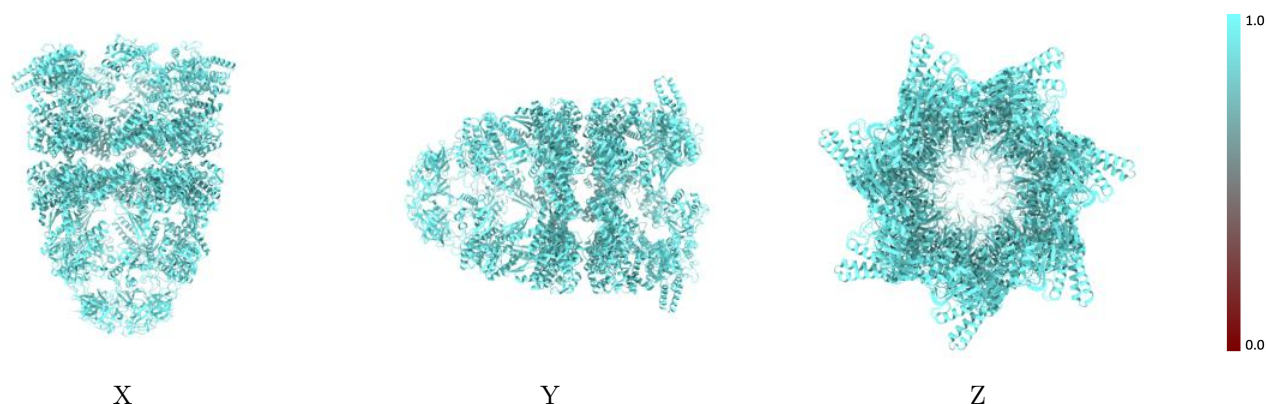
The images above show the 3D surface view of the map at the recommended contour level 0.0981 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



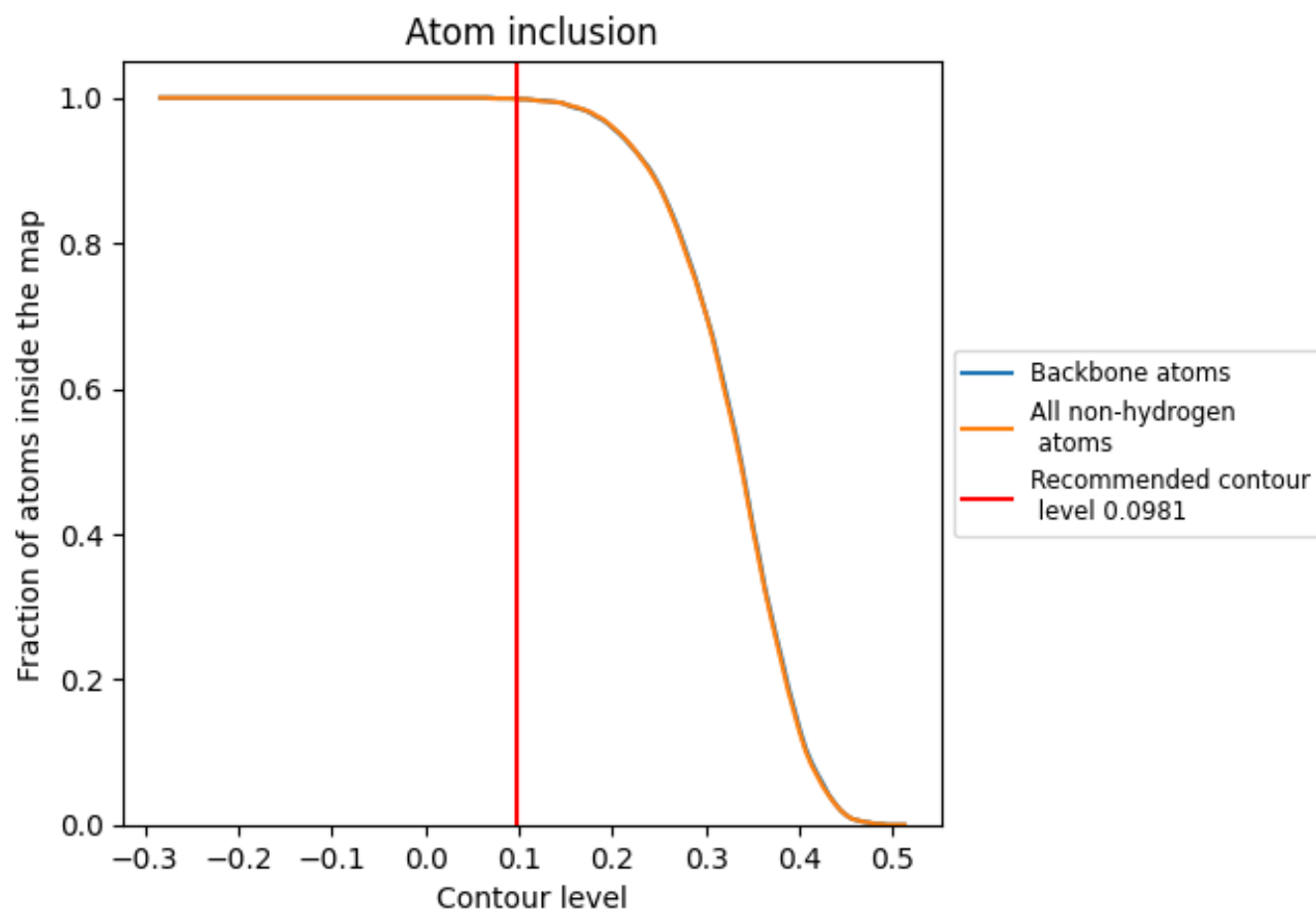
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.0981).

9.4 Atom inclusion [i](#)



At the recommended contour level, 100% of all backbone atoms, 100% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.0981) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9980	 0.1040
A	 1.0000	 0.1080
B	 1.0000	 0.1060
C	 1.0000	 0.1070
D	 1.0000	 0.1040
E	 1.0000	 0.1040
F	 1.0000	 0.1040
G	 1.0000	 0.1070
H	 0.9970	 0.1010
I	 0.9960	 0.1000
J	 0.9960	 0.1030
K	 0.9960	 0.1010
L	 0.9960	 0.1000
M	 0.9960	 0.1020
N	 0.9960	 0.1040
O	 1.0000	 0.1090
P	 1.0000	 0.1080
Q	 1.0000	 0.1030
R	 1.0000	 0.1090
S	 1.0000	 0.1090
T	 1.0000	 0.1070
U	 1.0000	 0.1040

