



# Full wwPDB X-ray Structure Validation Report i

Mar 31, 2014 – 05:40 PM BST

PDB ID : 1WE3  
Title : Crystal Structure of the Chaperonin Complex Cpn60/Cpn10/(ADP)7 from Thermus Thermophilus  
Authors : Shimamura, T.; Koike-Takeshita, A.; Yokoyama, K.; Masui, R.; Murai, N.; Yoshida, M.; Taguchi, H.; Iwata, S.  
Deposited on : 2004-05-23  
Resolution : 2.80 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

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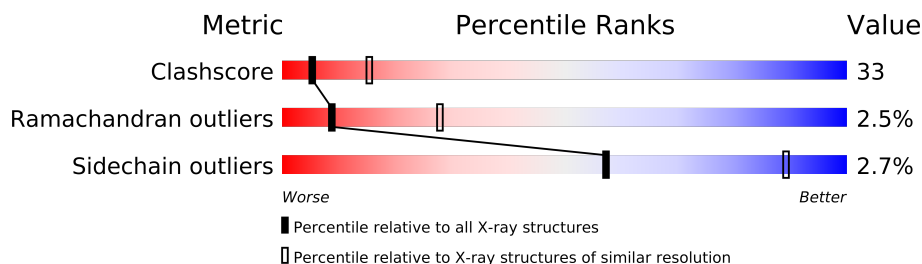
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity	:	4.02b-467
Mogul	:	1.15 2013
Xtriage (Phenix)	:	dev-1323
EDS	:	<b>NOT EXECUTED</b>
Percentile statistics	:	21963
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP)	:	stable23004

# 1 Overall quality at a glance

The reported resolution of this entry is 2.80 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)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	2295 (2.80-2.80)
Ramachandran outliers	78287	2252 (2.80-2.80)
Sidechain outliers	78261	2254 (2.80-2.80)


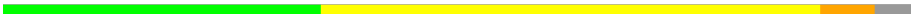
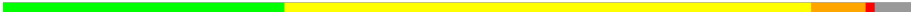

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	543	
1	B	543	
1	C	543	
1	D	543	
1	E	543	
1	F	543	
1	G	543	
1	H	543	
1	I	543	
1	J	543	
1	K	543	
1	L	543	
1	M	543	
1	N	543	
2	O	100	
2	P	100	
2	Q	100	

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Mol	Chain	Length	Quality of chain
2	R	100	
2	S	100	
2	T	100	
2	U	100	

## 2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 60639 atoms, of which 0 are hydrogen and 0 are deuterium.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, 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 cpn60(GroEL).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	B	527	Total	C	N	O	S	0	0	0
			3956	2484	686	781	5			
1	C	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	D	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	E	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	F	529	Total	C	N	O	S	0	0	0
			3974	2495	689	785	5			
1	G	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	H	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	I	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	J	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	K	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	L	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			
1	M	525	Total	C	N	O	S	0	0	0
			3938	2473	683	777	5			
1	N	526	Total	C	N	O	S	0	0	0
			3947	2478	684	780	5			

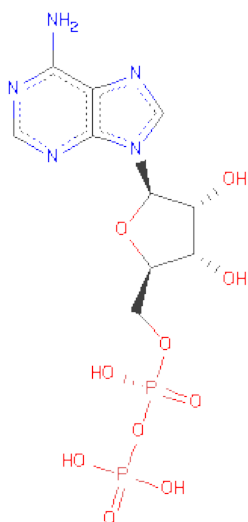
- Molecule 2 is a protein called cpn10(GroES).

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	O	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	P	94	Total	C	N	O	0	0	0
			723	460	123	140			
2	Q	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	R	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	S	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	T	96	Total	C	N	O	0	0	0
			739	470	126	143			
2	U	96	Total	C	N	O	0	0	0
			739	470	126	143			

- Molecule 3 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

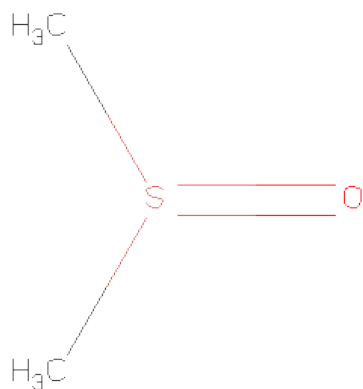
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	G	1	Total	Mg	0	0
			1	1		
3	D	1	Total	Mg	0	0
			1	1		
3	E	1	Total	Mg	0	0
			1	1		
3	B	1	Total	Mg	0	0
			1	1		
3	C	1	Total	Mg	0	0
			1	1		
3	A	1	Total	Mg	0	0
			1	1		
3	F	1	Total	Mg	0	0
			1	1		

- Molecule 4 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>10</sub>P<sub>2</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
4	A	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	B	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	C	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	D	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	E	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	F	1	Total	C	N	O	P	0	0
			27	10	5	10	2		
4	G	1	Total	C	N	O	P	0	0
			27	10	5	10	2		

- Molecule 5 is DIMETHYL SULFOXIDE (three-letter code: DMS) (formula: C<sub>2</sub>H<sub>6</sub>OS).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
5	H	1	Total	C	O	S	0	0
			4	2	1	1		
5	I	1	Total	C	O	S	0	0
			4	2	1	1		
5	J	1	Total	C	O	S	0	0
			4	2	1	1		
5	K	1	Total	C	O	S	0	0
			4	2	1	1		
5	L	1	Total	C	O	S	0	0
			4	2	1	1		
5	M	1	Total	C	O	S	0	0
			4	2	1	1		
5	N	1	Total	C	O	S	0	0
			4	2	1	1		

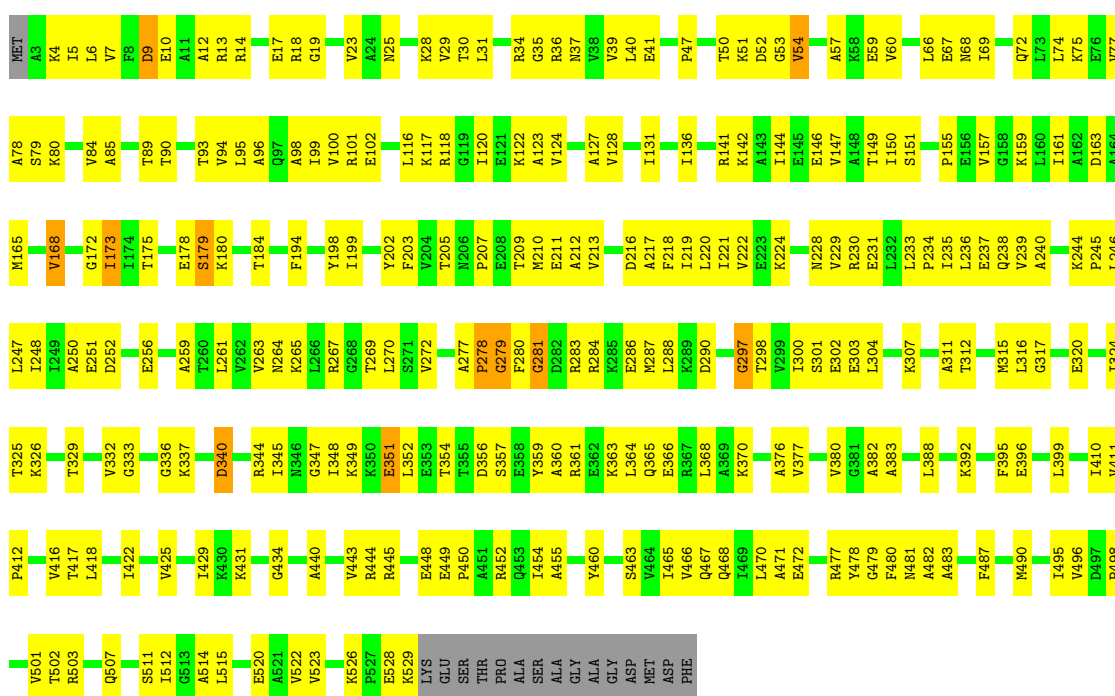
### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron 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 dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). 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.

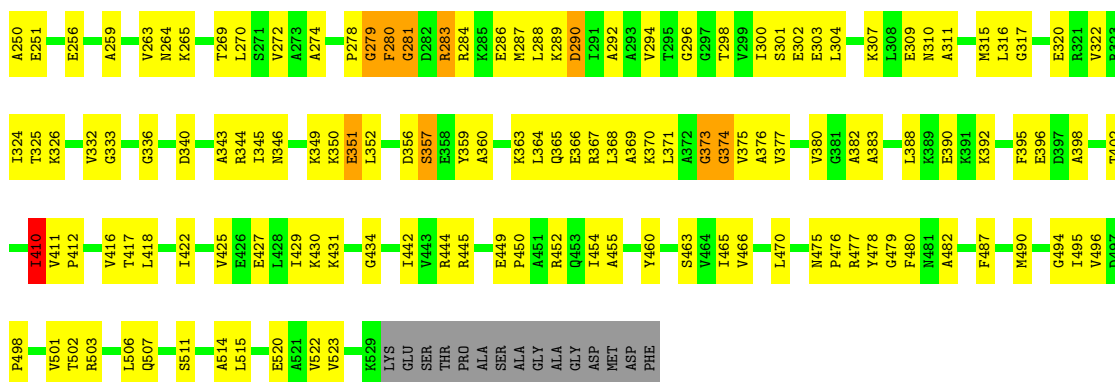
Note EDS was not executed.

- Molecule 1: cpn60(GroEL)

Chain A:

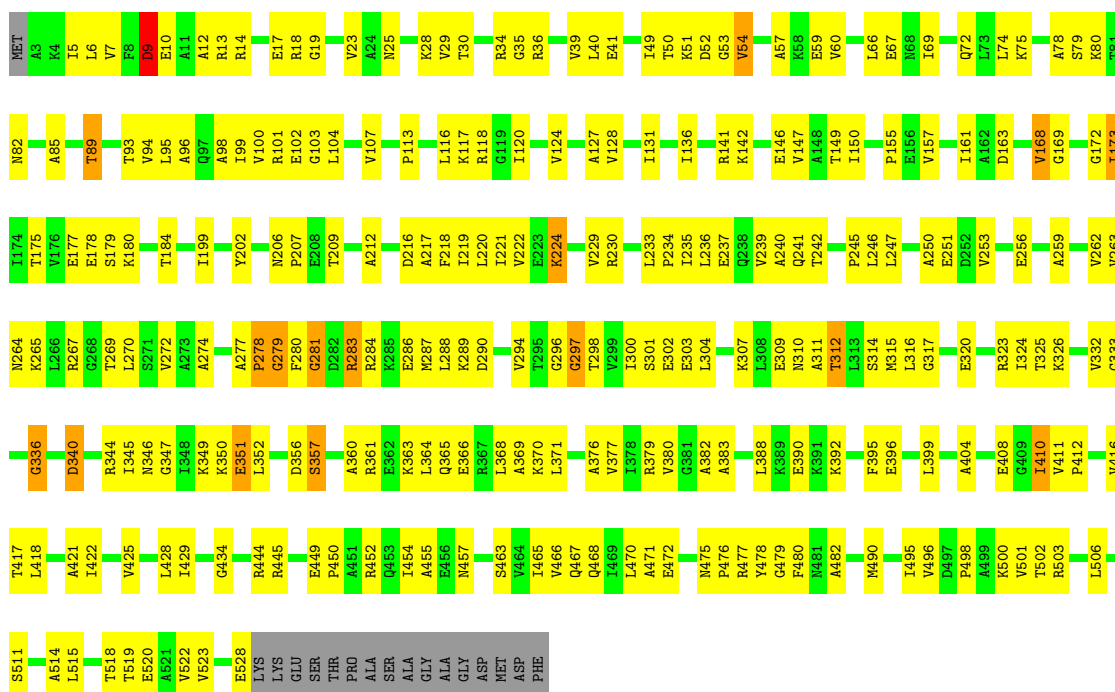






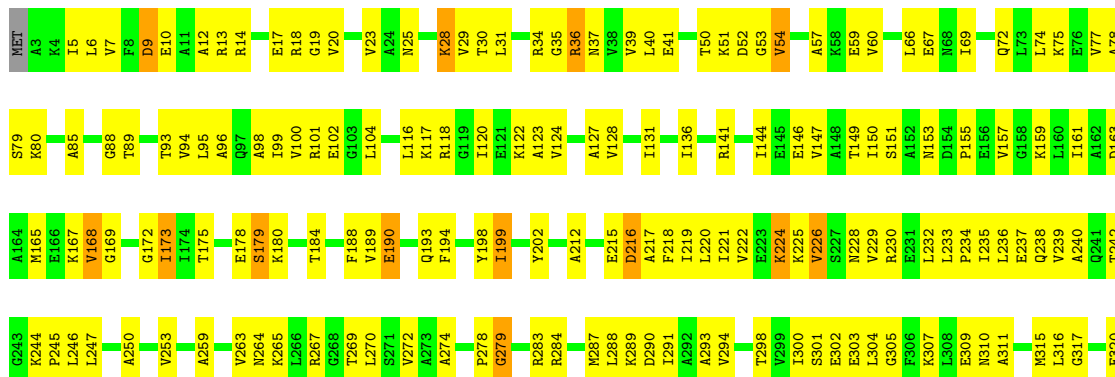
• Molecule 1: cpn60(GroEL)

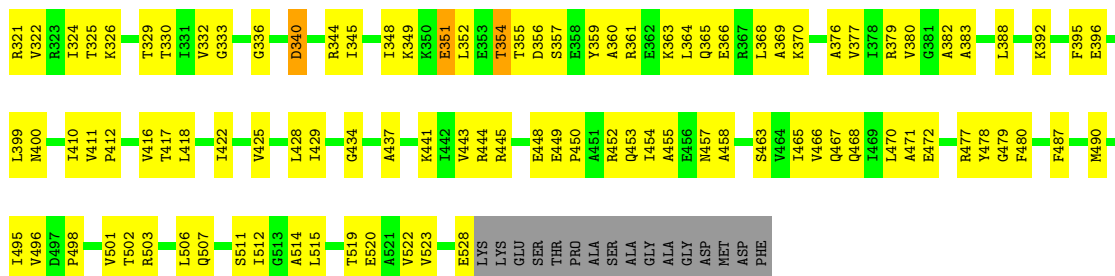
Chain C: 



• Molecule 1: cpn60(GroEL)

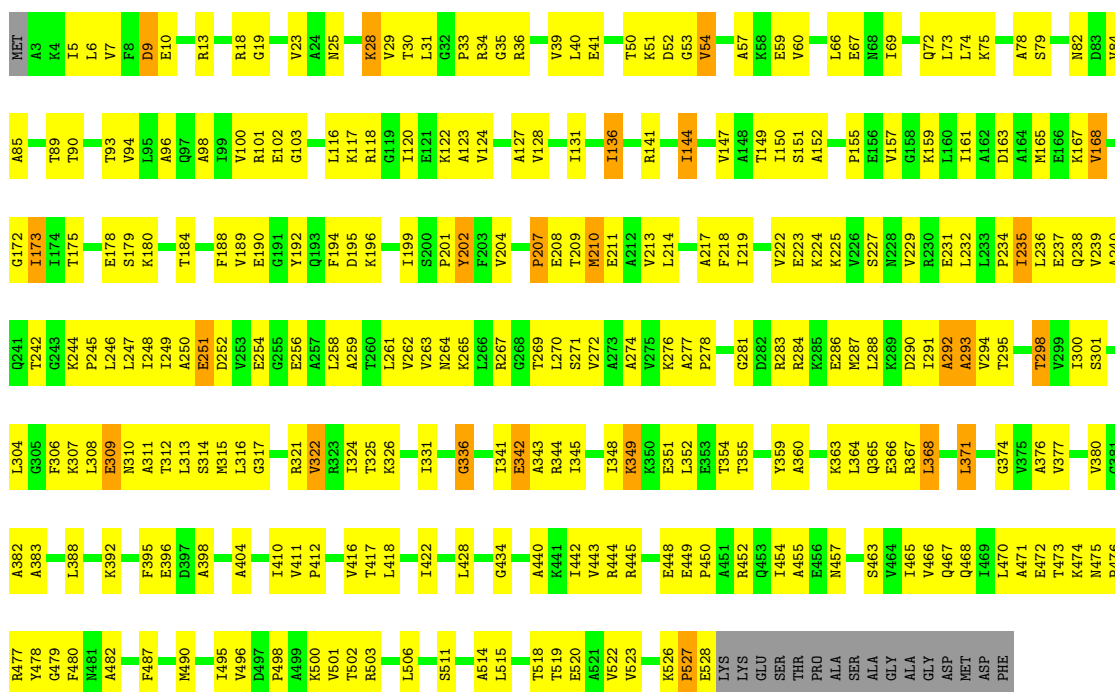
Chain D: 





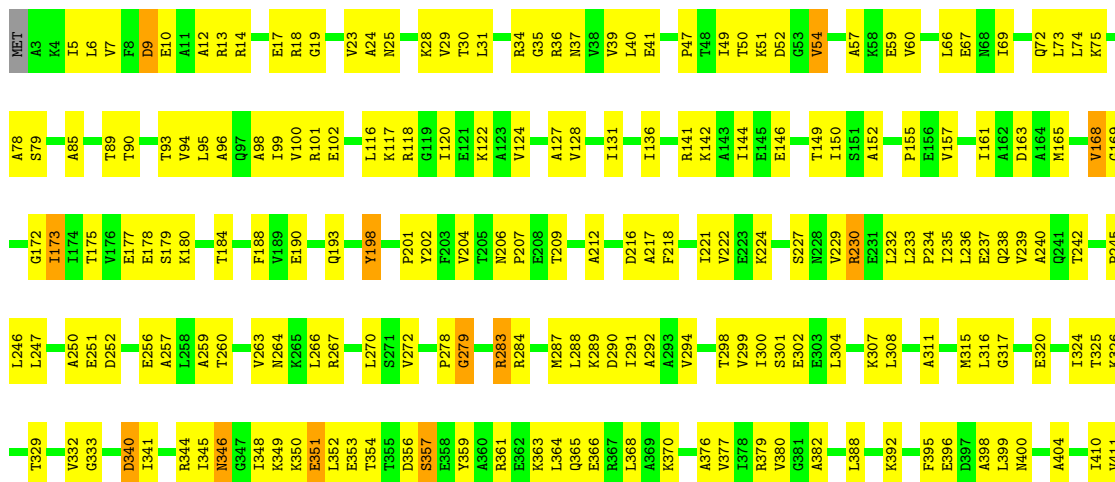
• Molecule 1: cpn60(GroEL)

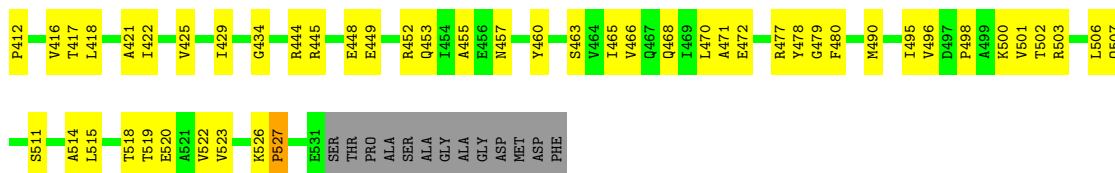
Chain E:



• Molecule 1: cpn60(GroEL)

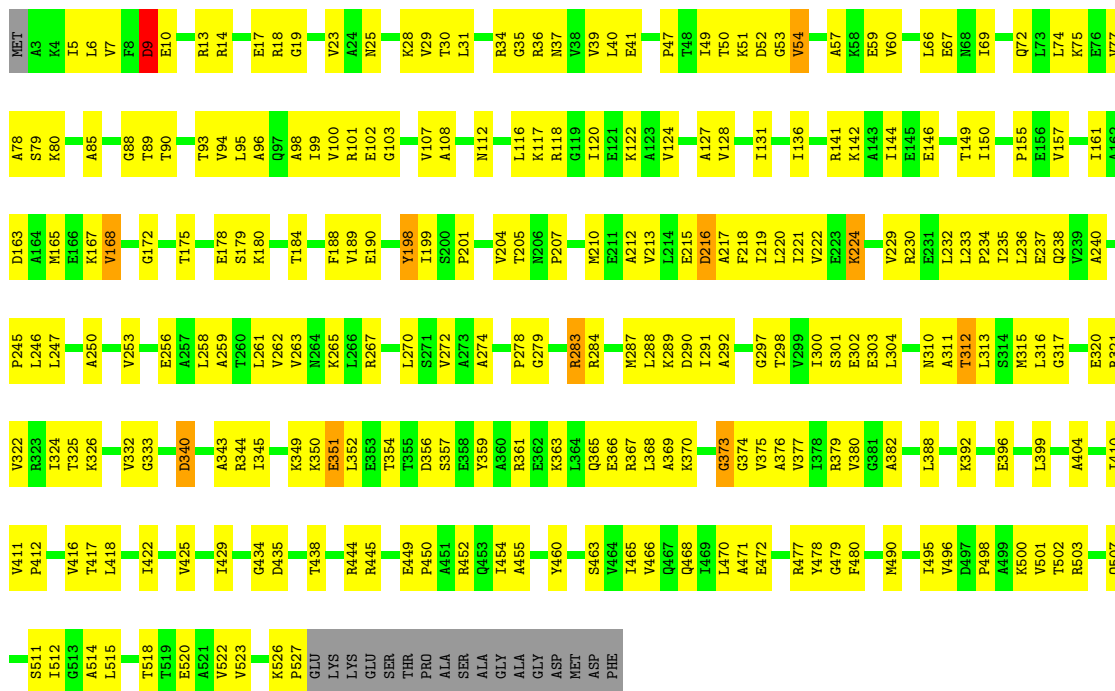
Chain F:





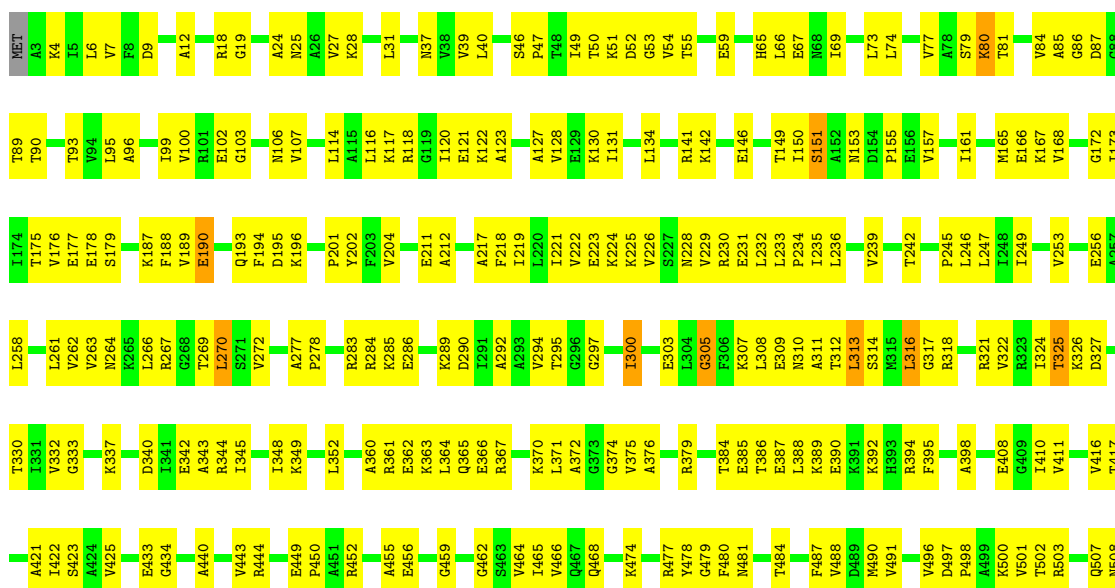
- Molecule 1: cpn60(GroEL)

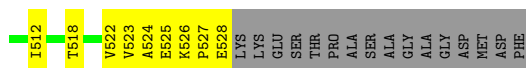
Chain G:



- Molecule 1: cpn60(GroEL)

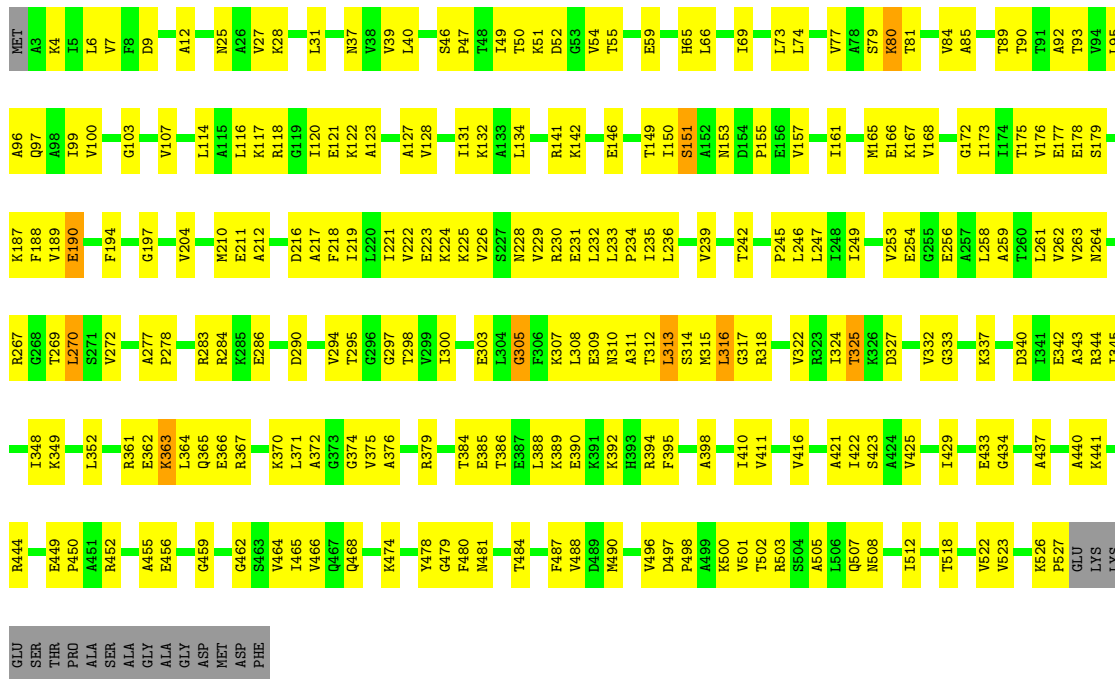
Chain H:





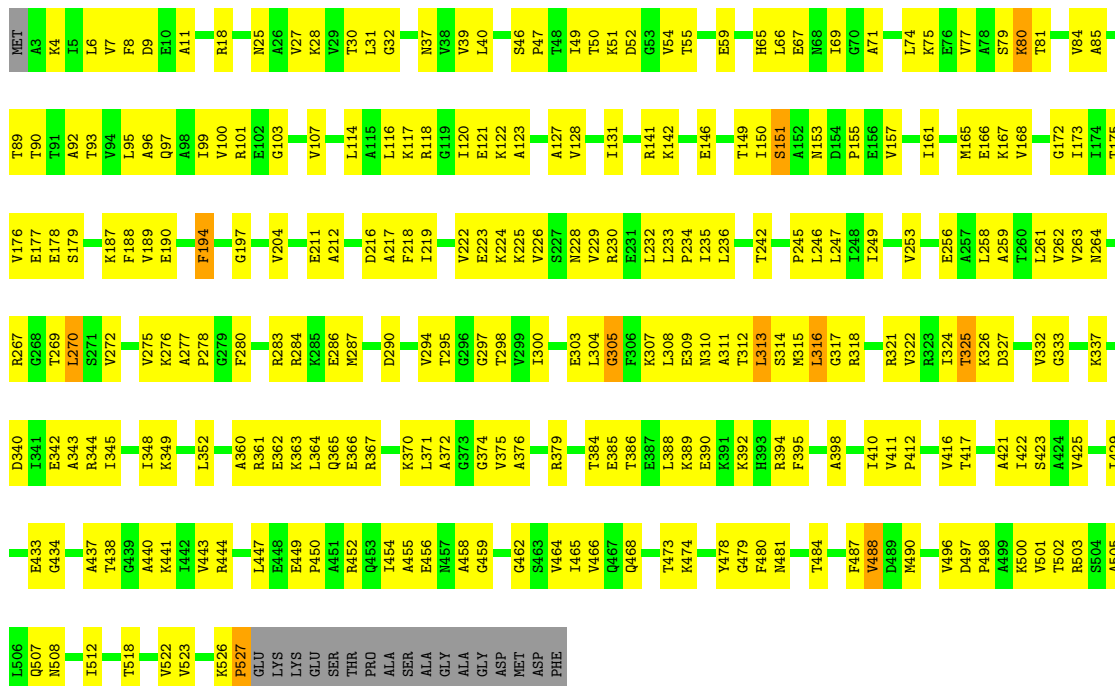
• Molecule 1: cpn60(GroEL)

Chain I:

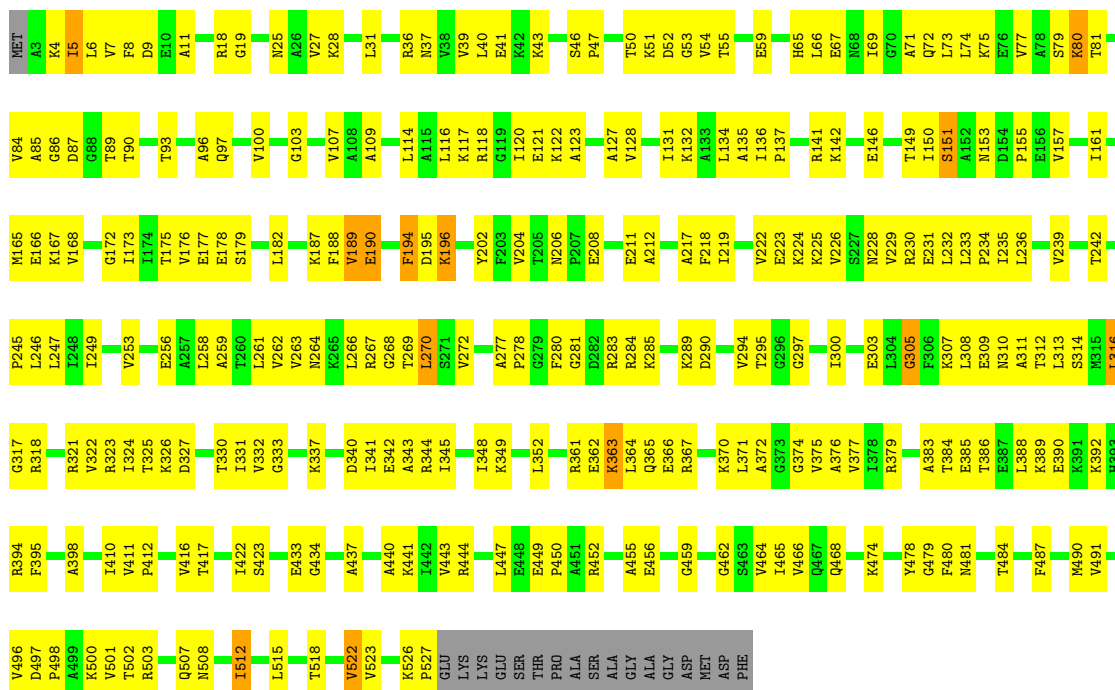


• Molecule 1: cpn60(GroEL)

Chain J:

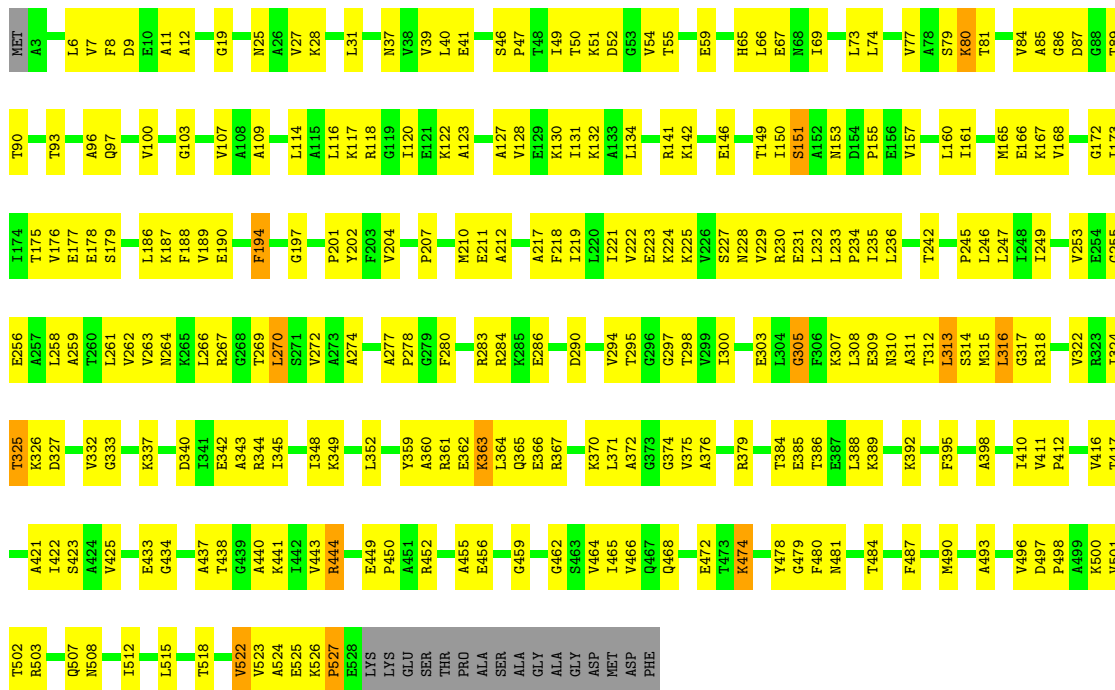






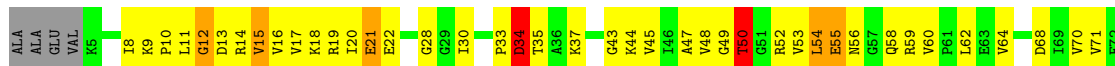
• Molecule 1: cpn60(GroEL)

Chain N: 



• Molecule 2: cpn10(GroES)

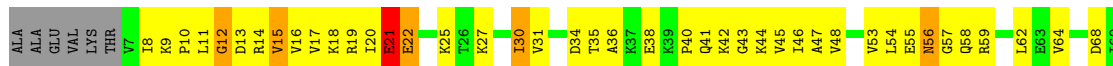
Chain O: 





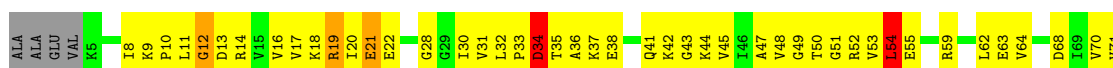
• Molecule 2: cpn10(GroES)

Chain P:



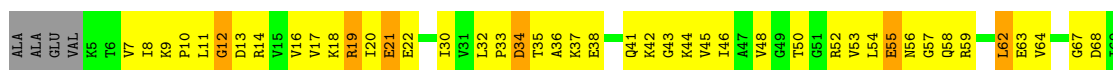
• Molecule 2: cpn10(GroES)

Chain Q:



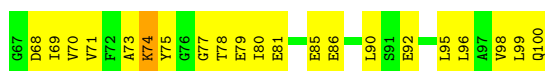
• Molecule 2: cpn10(GroES)

Chain R:



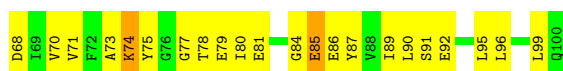
• Molecule 2: cpn10(GroES)

Chain S:



• Molecule 2: cpn10(GroES)

Chain T:



• Molecule 2: cpn10(GroES)

Chain U: 





## 4 Data and refinement statistics

EDS was not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	140.38Å 156.42Å 273.15Å 82.88° 85.35° 68.52°	Depositor
Resolution (Å)	39.98 – 2.80	Depositor
% Data completeness (in resolution range)	81.3 (39.98-2.80)	Depositor
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.35 (at 2.81Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.239 , 0.279	Depositor
Wilson B-factor (Å <sup>2</sup> )	55.6	Xtriage
Anisotropy	0.047	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.48$ , $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 429625 reflections	Xtriage
Total number of atoms	60639	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	71.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.53% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 5 Model quality

### 5.1 Standard geometry

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

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	0.44	0/3989	0.65	0/5383
1	B	0.43	1/3989 (0.0%)	0.65	1/5383 (0.0%)
1	C	0.45	0/3980	0.67	0/5372
1	D	0.42	0/3980	0.65	1/5372 (0.0%)
1	E	0.43	0/3980	0.64	0/5372
1	F	0.39	0/4007	0.63	0/5406
1	G	0.41	0/3971	0.64	0/5360
1	H	0.36	0/3980	0.60	0/5372
1	I	0.37	0/3971	0.60	0/5360
1	J	0.40	0/3971	0.62	0/5360
1	K	0.39	1/3971 (0.0%)	0.62	0/5360
1	L	0.38	0/3980	0.60	0/5372
1	M	0.39	1/3971 (0.0%)	0.62	1/5360 (0.0%)
1	N	0.38	0/3980	0.63	1/5372 (0.0%)
2	O	0.40	0/746	0.68	0/1003
2	P	0.54	0/730	0.77	0/982
2	Q	0.39	0/746	0.70	2/1003 (0.2%)
2	R	0.42	0/746	0.69	0/1003
2	S	0.42	0/746	0.72	1/1003 (0.1%)
2	T	0.39	0/746	0.67	0/1003
2	U	0.46	0/746	0.72	0/1003
All	All	0.41	3/60926 (0.0%)	0.64	7/82204 (0.0%)

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	237	GLU	CD-OE1	-5.26	1.19	1.25
1	M	512	ILE	CB-CG2	5.16	1.68	1.52
1	B	410	ILE	CB-CG2	5.08	1.68	1.52

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	N	444	ARG	NE-CZ-NH1	7.31	123.96	120.30
2	Q	51	GLY	N-CA-C	-5.32	99.81	113.10
1	M	512	ILE	CG1-CB-CG2	5.29	123.03	111.40
2	Q	54	LEU	CA-CB-CG	5.18	127.20	115.30
2	S	58	GLN	CA-CB-CG	5.13	124.69	113.40
1	D	190	GLU	N-CA-C	5.08	124.71	111.00
1	B	410	ILE	CG1-CB-CG2	5.05	122.51	111.40

There are no chirality outliers.

There are no planarity outliers.

## 5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3956	0	4129	242	0
1	B	3956	0	4129	237	0
1	C	3947	0	4116	244	1
1	D	3947	0	4116	264	0
1	E	3947	0	4116	290	3
1	F	3974	0	4148	248	0
1	G	3938	0	4110	225	0
1	H	3947	0	4116	259	0
1	I	3938	0	4110	246	0
1	J	3938	0	4110	264	0
1	K	3938	0	4110	259	1
1	L	3947	0	4116	315	1
1	M	3938	0	4110	375	0
1	N	3947	0	4116	298	4
2	O	739	0	786	104	0
2	P	723	0	766	104	0
2	Q	739	0	786	94	0
2	R	739	0	786	87	0
2	S	739	0	786	83	0
2	T	739	0	786	79	0
2	U	739	0	786	84	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
3	E	1	0	0	0	0
3	F	1	0	0	0	0
3	G	1	0	0	0	0
4	A	27	0	12	0	0
4	B	27	0	12	0	0
4	C	27	0	12	0	0
4	D	27	0	12	1	0
4	E	27	0	12	2	0
4	F	27	0	12	0	0
4	G	27	0	12	1	0
5	H	4	0	6	3	0
5	I	4	0	6	0	0
5	J	4	0	6	0	0
5	K	4	0	6	0	0
5	L	4	0	6	0	0
5	M	4	0	6	0	0
5	N	4	0	6	0	0
All	All	60639	0	63260	4051	5

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 33.

All (4051) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:150:ILE:HD11	1:D:495:ILE:HA	1.22	1.21
1:N:235:ILE:HD11	1:N:311:ALA:HB3	1.29	1.14
1:D:173:ILE:HD11	1:D:365:GLN:HG3	1.16	1.14
1:M:182:LEU:HD11	1:N:363:LYS:NZ	1.62	1.13
1:L:189:VAL:HG12	1:L:190:GLU:H	1.13	1.12
2:O:54:LEU:HD21	2:P:57:GLY:H	1.10	1.12
1:E:150:ILE:HD11	1:E:495:ILE:HA	1.25	1.11
1:L:235:ILE:HD11	1:L:311:ALA:HB3	1.33	1.11
1:G:150:ILE:HD11	1:G:495:ILE:HA	1.30	1.11
1:J:325:THR:HG22	1:J:327:ASP:H	1.13	1.10
1:L:243:GLY:HA2	1:M:228:ASN:CB	1.80	1.10
1:K:235:ILE:HD11	1:K:311:ALA:HB3	1.30	1.10
1:C:150:ILE:HD11	1:C:495:ILE:HA	1.19	1.10
1:H:325:THR:HG22	1:H:327:ASP:H	1.15	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:182:LEU:HD11	1:M:363:LYS:HZ3	1.09	1.09
1:F:150:ILE:HD11	1:F:495:ILE:HA	1.23	1.09
1:B:150:ILE:HD11	1:B:495:ILE:HA	1.33	1.08
1:A:150:ILE:HD11	1:A:495:ILE:HA	1.28	1.08
1:M:136:ILE:HB	1:M:410:ILE:HG13	1.34	1.07
2:U:48:VAL:HG12	2:U:62:LEU:HD12	1.32	1.07
1:H:217:ALA:HB2	1:H:245:PRO:HG2	1.37	1.06
1:M:189:VAL:HG12	1:M:190:GLU:H	0.95	1.06
1:N:325:THR:HG22	1:N:327:ASP:H	1.18	1.06
1:I:235:ILE:HD11	1:I:311:ALA:HB3	1.31	1.05
1:N:189:VAL:HG11	1:N:333:GLY:HA2	1.36	1.05
1:I:325:THR:HG22	1:I:327:ASP:H	1.17	1.05
1:A:168:VAL:HG12	1:A:172:GLY:HA3	1.39	1.04
2:P:48:VAL:HG12	2:P:62:LEU:HD12	1.39	1.04
1:G:168:VAL:HG12	1:G:172:GLY:HA3	1.40	1.04
2:O:48:VAL:HG12	2:O:62:LEU:HD12	1.32	1.04
1:L:325:THR:HG22	1:L:327:ASP:H	1.23	1.04
1:B:229:VAL:HG21	2:P:36:ALA:HB2	1.39	1.04
1:E:240:ALA:HA	1:E:270:LEU:HD13	1.39	1.04
1:M:182:LEU:HD11	1:N:363:LYS:CE	1.87	1.03
1:L:243:GLY:HA2	1:M:228:ASN:HB2	1.04	1.03
1:L:217:ALA:HB2	1:L:245:PRO:HG2	1.38	1.03
1:D:168:VAL:HG12	1:D:172:GLY:HA3	1.41	1.03
1:H:235:ILE:HD11	1:H:311:ALA:HB3	1.35	1.03
1:B:251:GLU:HG3	1:B:284:ARG:HH12	1.21	1.02
1:I:217:ALA:HB2	1:I:245:PRO:HG2	1.41	1.02
1:D:7:VAL:HG21	1:D:66:LEU:HD11	1.42	1.02
1:J:235:ILE:HD11	1:J:311:ALA:HB3	1.39	1.02
1:B:343:ALA:HB2	1:C:207:PRO:HB3	1.42	1.02
1:B:168:VAL:HG12	1:B:172:GLY:HA3	1.42	1.01
1:K:325:THR:HG22	1:K:327:ASP:H	1.17	1.01
1:M:325:THR:HG22	1:M:327:ASP:H	1.23	1.01
1:K:217:ALA:HB2	1:K:245:PRO:HG2	1.41	1.01
1:N:217:ALA:HB2	1:N:245:PRO:HG2	1.42	1.01
1:M:235:ILE:HD11	1:M:311:ALA:HB3	1.40	1.01
1:G:50:THR:HG22	1:G:51:LYS:H	1.26	1.01
1:L:182:LEU:CD1	1:M:363:LYS:HZ3	1.74	1.00
2:O:70:VAL:HG11	2:O:95:LEU:HD22	1.40	1.00
2:O:15:VAL:HG21	2:O:95:LEU:HD11	1.43	1.00
1:E:50:THR:HG22	1:E:52:ASP:H	1.26	1.00
1:K:189:VAL:HG12	1:K:190:GLU:H	1.26	0.99
1:I:50:THR:HG22	1:I:52:ASP:H	1.23	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:50:THR:HG22	1:L:52:ASP:H	1.27	0.99
1:F:168:VAL:HG12	1:F:172:GLY:HA3	1.44	0.98
1:M:189:VAL:CG1	1:M:190:GLU:H	1.72	0.98
2:T:96:LEU:HA	2:U:14:ARG:HH11	1.29	0.98
1:M:323:ARG:NH2	1:M:392:LYS:HE2	1.79	0.97
1:E:352:LEU:HD13	1:E:364:LEU:HB2	1.44	0.97
1:M:182:LEU:CD1	1:N:363:LYS:HE2	1.94	0.97
1:C:168:VAL:HG12	1:C:172:GLY:HA3	1.43	0.97
1:J:217:ALA:HB2	1:J:245:PRO:HG2	1.46	0.97
1:M:178:GLU:N	1:M:321:ARG:NH1	2.13	0.96
1:N:50:THR:HG22	1:N:52:ASP:H	1.29	0.96
1:M:217:ALA:HB2	1:M:245:PRO:HG2	1.43	0.96
1:M:189:VAL:HG12	1:M:190:GLU:N	1.80	0.96
1:C:50:THR:HG22	1:C:51:LYS:H	1.31	0.96
1:L:182:LEU:HD11	1:M:363:LYS:NZ	1.80	0.95
1:H:189:VAL:HG11	1:H:333:GLY:HA2	1.47	0.95
1:C:7:VAL:HG21	1:C:66:LEU:HD11	1.45	0.95
1:M:50:THR:HG22	1:M:52:ASP:H	1.29	0.95
1:N:526:LYS:HG3	1:N:527:PRO:HD2	1.48	0.95
1:D:50:THR:HG22	1:D:52:ASP:H	1.26	0.95
2:Q:70:VAL:HG11	2:Q:95:LEU:HD22	1.46	0.95
1:M:176:VAL:O	1:M:323:ARG:NH1	1.98	0.95
1:L:410:ILE:HD12	1:L:496:VAL:HG11	1.47	0.95
1:J:189:VAL:HG12	1:J:190:GLU:H	1.31	0.95
1:E:50:THR:HG22	1:E:51:LYS:H	1.31	0.94
1:E:298:THR:HG23	1:E:304:LEU:HD23	1.48	0.94
1:I:189:VAL:HG12	1:I:190:GLU:H	1.32	0.94
1:C:237:GLU:HB3	2:Q:28:GLY:HA3	1.48	0.94
1:E:168:VAL:HG12	1:E:172:GLY:HA3	1.50	0.94
2:P:15:VAL:HG21	2:P:95:LEU:HD11	1.46	0.94
1:H:189:VAL:HG12	1:H:190:GLU:H	1.30	0.94
1:F:50:THR:HG22	1:F:51:LYS:H	1.31	0.94
2:O:52:ARG:NH2	2:P:53:VAL:HB	1.81	0.94
1:D:50:THR:HG22	1:D:51:LYS:H	1.29	0.93
2:P:70:VAL:HG11	2:P:95:LEU:HD22	1.50	0.93
2:R:70:VAL:HG11	2:R:95:LEU:HD22	1.46	0.93
1:A:50:THR:HG22	1:A:51:LYS:H	1.33	0.93
1:A:50:THR:HG22	1:A:52:ASP:H	1.29	0.93
1:J:168:VAL:HG12	1:J:172:GLY:HA3	1.51	0.93
2:S:12:GLY:O	2:S:13:ASP:HB3	1.65	0.93
1:B:50:THR:HG22	1:B:52:ASP:H	1.34	0.92
1:M:168:VAL:HG12	1:M:172:GLY:HA3	1.51	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:50:THR:HG22	1:J:52:ASP:H	1.33	0.92
1:K:168:VAL:HG12	1:K:172:GLY:HA3	1.51	0.92
1:N:189:VAL:HG12	1:N:190:GLU:H	1.34	0.92
1:G:235:ILE:HD11	1:G:311:ALA:HB3	1.49	0.92
1:E:325:THR:HG22	1:E:326:LYS:H	1.32	0.91
1:C:251:GLU:HG3	1:C:284:ARG:HH12	1.33	0.91
1:E:227:SER:HB3	1:E:254:GLU:HG3	1.50	0.91
2:T:70:VAL:HG11	2:T:95:LEU:HD22	1.52	0.91
1:F:212:ALA:HB3	1:F:324:ILE:HB	1.52	0.91
1:D:173:ILE:CD1	1:D:365:GLN:HG3	2.01	0.91
1:K:498:PRO:HB2	1:K:501:VAL:HG23	1.52	0.91
1:N:46:SER:HB2	1:N:47:PRO:HD2	1.53	0.90
1:I:50:THR:HG22	1:I:51:LYS:H	1.36	0.90
1:N:526:LYS:CG	1:N:527:PRO:HD2	2.01	0.90
1:M:384:THR:HA	1:N:280:PHE:CE1	2.06	0.90
1:J:40:LEU:HD23	1:J:59:GLU:HG3	1.53	0.90
1:H:50:THR:HG22	1:H:52:ASP:H	1.37	0.90
1:I:168:VAL:HG12	1:I:172:GLY:HA3	1.53	0.90
1:J:46:SER:HB2	1:J:47:PRO:HD2	1.54	0.90
1:M:182:LEU:CD1	1:N:363:LYS:CE	2.51	0.89
1:G:50:THR:HG22	1:G:52:ASP:H	1.36	0.89
1:L:180:LYS:CB	1:M:281:GLY:HA2	2.03	0.89
1:D:173:ILE:HD11	1:D:365:GLN:CG	2.02	0.89
1:L:168:VAL:HG12	1:L:172:GLY:HA3	1.54	0.89
2:O:48:VAL:CG1	2:O:62:LEU:HD12	2.03	0.89
1:H:168:VAL:HG12	1:H:172:GLY:HA3	1.53	0.89
1:D:212:ALA:HB3	1:D:324:ILE:HB	1.53	0.89
1:M:410:ILE:HD12	1:M:496:VAL:HG11	1.52	0.89
2:P:41:GLN:OE1	2:Q:80:ILE:HG12	1.73	0.89
1:F:7:VAL:HG21	1:F:66:LEU:HD11	1.53	0.88
1:B:50:THR:HG22	1:B:51:LYS:H	1.38	0.88
2:O:54:LEU:HD21	2:P:57:GLY:N	1.87	0.88
1:M:136:ILE:HB	1:M:410:ILE:CG1	2.02	0.88
1:B:511:SER:O	1:B:515:LEU:HD23	1.73	0.88
1:N:283:ARG:NH1	1:N:363:LYS:HE3	1.89	0.88
1:I:385:GLU:HB2	1:J:280:PHE:CD2	2.07	0.88
1:L:189:VAL:HG12	1:L:190:GLU:N	1.89	0.88
1:K:235:ILE:CD1	1:K:311:ALA:HB3	2.02	0.88
1:N:50:THR:HG22	1:N:51:LYS:H	1.38	0.88
1:M:372:ALA:C	1:M:374:GLY:H	1.75	0.88
1:J:189:VAL:HG11	1:J:333:GLY:HA2	1.56	0.88
1:N:410:ILE:HD12	1:N:496:VAL:HG11	1.56	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:K:234:PRO:HG3	1:K:309:GLU:HA	1.56	0.88
2:S:13:ASP:HA	2:S:62:LEU:HD21	1.55	0.88
1:H:498:PRO:HB2	1:H:501:VAL:HG23	1.55	0.88
1:L:40:LEU:HD23	1:L:59:GLU:HG3	1.54	0.88
1:E:209:THR:HG22	1:E:211:GLU:HG3	1.55	0.88
1:A:246:LEU:HB3	1:A:272:VAL:HG12	1.56	0.88
1:I:345:ILE:O	1:I:348:ILE:HG22	1.74	0.88
1:M:182:LEU:HD11	1:N:363:LYS:HE2	1.51	0.87
2:U:48:VAL:CG1	2:U:62:LEU:HD12	2.04	0.87
1:A:7:VAL:HG21	1:A:66:LEU:HD11	1.56	0.87
2:Q:32:LEU:HG	2:Q:33:PRO:HD2	1.56	0.87
1:N:168:VAL:HG12	1:N:172:GLY:HA3	1.54	0.87
1:G:235:ILE:HD11	1:G:311:ALA:CB	2.04	0.87
1:K:50:THR:HG22	1:K:51:LYS:H	1.40	0.87
1:J:498:PRO:HB2	1:J:501:VAL:HG23	1.57	0.87
1:J:345:ILE:O	1:J:348:ILE:HG22	1.75	0.86
1:I:234:PRO:HG3	1:I:309:GLU:HA	1.58	0.86
1:N:498:PRO:HB2	1:N:501:VAL:HG23	1.57	0.86
1:M:179:SER:HB2	1:M:379:ARG:HB3	1.57	0.86
1:L:50:THR:HG22	1:L:51:LYS:H	1.39	0.86
1:B:7:VAL:HG21	1:B:66:LEU:HD11	1.56	0.86
1:K:46:SER:HB2	1:K:47:PRO:HD2	1.55	0.86
1:M:323:ARG:NH1	1:M:392:LYS:NZ	2.24	0.86
2:Q:55:GLU:HG3	2:R:55:GLU:HG2	1.58	0.86
1:M:182:LEU:CD1	1:N:363:LYS:NZ	2.39	0.86
1:C:50:THR:HG22	1:C:52:ASP:H	1.40	0.86
1:I:270:LEU:HD22	1:I:272:VAL:HG13	1.55	0.86
1:L:149:THR:HG23	1:L:155:PRO:HA	1.58	0.86
2:O:54:LEU:CD2	2:P:57:GLY:H	1.87	0.85
2:U:70:VAL:HG11	2:U:95:LEU:HD22	1.56	0.85
1:L:498:PRO:HB2	1:L:501:VAL:HG23	1.58	0.85
1:E:224:LYS:HE2	1:E:301:SER:HA	1.56	0.85
1:H:179:SER:HB2	1:H:379:ARG:HB3	1.58	0.85
2:S:70:VAL:HG11	2:S:95:LEU:HD22	1.56	0.85
1:K:50:THR:HG22	1:K:52:ASP:H	1.39	0.85
1:E:235:ILE:HG12	1:E:311:ALA:HB3	1.58	0.85
1:I:410:ILE:HD12	1:I:496:VAL:HG11	1.56	0.85
1:M:323:ARG:HH22	1:M:392:LYS:HE2	1.40	0.85
1:N:235:ILE:CD1	1:N:311:ALA:HB3	2.06	0.85
1:I:46:SER:HB2	1:I:47:PRO:HD2	1.57	0.85
1:I:498:PRO:HB2	1:I:501:VAL:HG23	1.58	0.85
1:H:410:ILE:HD12	1:H:496:VAL:HG11	1.56	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:270:LEU:HD22	1:M:272:VAL:HG13	1.56	0.85
1:M:50:THR:HG22	1:M:51:LYS:H	1.40	0.84
1:L:235:ILE:CD1	1:L:311:ALA:HB3	2.08	0.84
2:U:13:ASP:HB2	2:U:62:LEU:HD21	1.58	0.84
1:K:149:THR:HG23	1:K:155:PRO:HA	1.59	0.84
1:N:40:LEU:HD23	1:N:59:GLU:HG3	1.58	0.84
1:M:182:LEU:HD11	1:N:363:LYS:HZ1	1.37	0.84
1:L:85:ALA:HB1	1:L:501:VAL:HG22	1.60	0.84
1:K:179:SER:HB2	1:K:379:ARG:HB3	1.58	0.84
1:L:268:GLY:O	1:M:256:GLU:HG3	1.78	0.84
1:N:179:SER:HB2	1:N:379:ARG:HB3	1.60	0.84
1:L:182:LEU:CD1	1:M:363:LYS:NZ	2.38	0.84
1:M:40:LEU:HD23	1:M:59:GLU:HG3	1.60	0.84
1:I:235:ILE:CD1	1:I:311:ALA:HB3	2.08	0.84
1:M:323:ARG:CZ	1:M:392:LYS:HE2	2.07	0.84
1:J:235:ILE:CD1	1:J:311:ALA:HB3	2.08	0.84
1:I:189:VAL:HG11	1:I:333:GLY:HA2	1.58	0.84
1:G:117:LYS:HG3	1:G:514:ALA:HB1	1.60	0.84
1:M:46:SER:HB2	1:M:47:PRO:HD2	1.59	0.84
1:H:270:LEU:HD22	1:H:272:VAL:HG13	1.60	0.84
2:P:21:GLU:O	2:P:22:GLU:O	1.95	0.83
1:N:149:THR:HG23	1:N:155:PRO:HA	1.60	0.83
1:N:74:LEU:HD21	1:N:93:THR:HG23	1.60	0.83
1:M:323:ARG:CZ	1:M:392:LYS:HZ1	1.89	0.83
1:G:7:VAL:HG21	1:G:66:LEU:HD11	1.60	0.83
1:M:149:THR:HG23	1:M:155:PRO:HA	1.60	0.83
1:J:149:THR:HG23	1:J:155:PRO:HA	1.58	0.83
1:J:50:THR:HG22	1:J:51:LYS:H	1.44	0.83
1:B:117:LYS:HG3	1:B:514:ALA:HB1	1.59	0.83
1:L:243:GLY:CA	1:M:228:ASN:HB2	1.99	0.83
1:L:270:LEU:HD22	1:L:272:VAL:HG13	1.60	0.83
1:K:345:ILE:O	1:K:348:ILE:HG22	1.79	0.83
1:B:228:ASN:HD22	1:B:231:GLU:HG3	1.43	0.83
1:H:40:LEU:HD23	1:H:59:GLU:HG3	1.59	0.83
1:J:410:ILE:HD12	1:J:496:VAL:HG11	1.61	0.82
1:K:410:ILE:HD12	1:K:496:VAL:HG11	1.61	0.82
1:C:117:LYS:HG3	1:C:514:ALA:HB1	1.61	0.82
1:M:178:GLU:O	1:M:321:ARG:NH2	2.12	0.82
1:L:180:LYS:HB2	1:M:281:GLY:HA2	1.60	0.82
1:L:179:SER:HB2	1:L:379:ARG:HB3	1.57	0.82
1:L:37:ASN:OD1	1:M:515:LEU:HD12	1.78	0.82
1:E:144:ILE:HD12	1:E:165:MET:HG2	1.62	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:46:SER:HB2	1:L:47:PRO:HD2	1.61	0.82
1:L:59:GLU:O	1:M:4:LYS:HG3	1.79	0.82
1:M:234:PRO:HG3	1:M:309:GLU:HA	1.59	0.82
1:J:179:SER:HB2	1:J:379:ARG:HB3	1.61	0.82
1:J:234:PRO:HG3	1:J:309:GLU:HA	1.61	0.82
1:I:179:SER:HB2	1:I:379:ARG:HB3	1.60	0.82
1:H:149:THR:HG23	1:H:155:PRO:HA	1.62	0.82
1:A:66:LEU:HD22	1:A:522:VAL:HG11	1.61	0.82
1:I:149:THR:HG23	1:I:155:PRO:HA	1.59	0.82
1:H:74:LEU:HD21	1:H:93:THR:HG23	1.62	0.82
1:M:247:LEU:HD22	1:M:322:VAL:HG11	1.62	0.82
1:M:136:ILE:N	1:M:410:ILE:O	2.12	0.82
1:C:236:LEU:HB2	2:Q:30:ILE:HD11	1.61	0.81
1:F:50:THR:HG22	1:F:52:ASP:H	1.44	0.81
1:C:237:GLU:CB	2:Q:28:GLY:HA3	2.09	0.81
2:Q:79:GLU:O	2:Q:80:ILE:HG13	1.78	0.81
1:K:270:LEU:HD22	1:K:272:VAL:HG13	1.61	0.81
1:M:178:GLU:N	1:M:321:ARG:HH12	1.76	0.81
1:H:46:SER:HB2	1:H:47:PRO:HD2	1.60	0.81
1:L:234:PRO:HG3	1:L:309:GLU:HA	1.62	0.81
1:M:85:ALA:HB1	1:M:501:VAL:HG22	1.62	0.81
1:N:345:ILE:O	1:N:348:ILE:HG22	1.80	0.81
1:I:40:LEU:HD23	1:I:59:GLU:HG3	1.60	0.81
1:E:66:LEU:HD22	1:E:522:VAL:HG11	1.62	0.81
1:H:345:ILE:O	1:H:348:ILE:HG22	1.80	0.81
1:E:117:LYS:HG3	1:E:514:ALA:HB1	1.62	0.81
1:H:235:ILE:CD1	1:H:311:ALA:HB3	2.10	0.81
1:M:498:PRO:HB2	1:M:501:VAL:HG23	1.62	0.81
1:G:246:LEU:HB3	1:G:272:VAL:HG12	1.61	0.81
1:I:116:LEU:O	1:I:120:ILE:HG13	1.81	0.81
1:K:40:LEU:HD23	1:K:59:GLU:HG3	1.61	0.81
2:P:41:GLN:HG2	2:P:74:LYS:HB3	1.63	0.80
1:A:117:LYS:HG3	1:A:514:ALA:HB1	1.63	0.80
1:D:259:ALA:O	1:D:263:VAL:HG23	1.82	0.80
1:F:66:LEU:HD22	1:F:522:VAL:HG11	1.63	0.80
1:N:270:LEU:HD22	1:N:272:VAL:HG13	1.63	0.80
1:D:117:LYS:HG3	1:D:514:ALA:HB1	1.63	0.80
2:Q:100:GLN:HB3	2:R:7:VAL:HB	1.63	0.80
1:D:50:THR:HG22	1:D:52:ASP:N	1.96	0.80
1:D:246:LEU:HB3	1:D:272:VAL:HG12	1.64	0.80
1:F:307:LYS:HE3	2:U:34:ASP:O	1.81	0.80
1:B:201:PRO:O	1:B:204:VAL:HG23	1.81	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:295:THR:HG22	1:L:318:ARG:N	1.97	0.80
1:B:251:GLU:HG3	1:B:284:ARG:NH1	1.97	0.80
2:T:96:LEU:HD23	2:U:14:ARG:NH1	1.97	0.80
1:F:117:LYS:HG3	1:F:514:ALA:HB1	1.63	0.80
1:L:77:VAL:HG13	1:L:80:LYS:HE2	1.63	0.80
1:N:234:PRO:HG3	1:N:309:GLU:HA	1.61	0.80
1:H:85:ALA:HB1	1:H:501:VAL:HG22	1.64	0.79
1:B:289:LYS:HE2	1:C:202:TYR:OH	1.82	0.79
1:C:150:ILE:CD1	1:C:495:ILE:HA	2.07	0.79
1:M:178:GLU:C	1:M:321:ARG:HH12	1.85	0.79
1:G:66:LEU:HD22	1:G:522:VAL:HG11	1.63	0.79
1:E:149:THR:HG23	1:E:155:PRO:HA	1.65	0.79
1:D:511:SER:O	1:D:515:LEU:HD23	1.83	0.79
1:A:307:LYS:HE3	2:P:34:ASP:O	1.83	0.79
1:E:50:THR:HG22	1:E:52:ASP:N	1.98	0.79
2:P:15:VAL:HG12	2:P:45:VAL:HG13	1.63	0.78
1:J:283:ARG:NH1	1:J:363:LYS:HE3	1.98	0.78
1:J:74:LEU:HD21	1:J:93:THR:HG23	1.65	0.78
1:J:270:LEU:HD22	1:J:272:VAL:HG13	1.65	0.78
1:I:422:ILE:HG23	1:I:444:ARG:HG3	1.66	0.78
1:J:228:ASN:HD21	1:J:230:ARG:HB3	1.49	0.78
1:N:295:THR:HG22	1:N:318:ARG:N	1.99	0.78
1:B:325:THR:HG22	1:B:326:LYS:H	1.48	0.78
1:E:69:ILE:HD11	1:F:41:GLU:HB2	1.66	0.78
1:E:7:VAL:HG21	1:E:66:LEU:HD11	1.64	0.78
1:C:218:PHE:HB3	1:C:316:LEU:HD13	1.65	0.78
1:M:229:VAL:HG23	1:M:256:GLU:HB3	1.65	0.78
1:J:116:LEU:O	1:J:120:ILE:HG13	1.84	0.78
1:D:150:ILE:HD11	1:D:495:ILE:CA	2.10	0.78
2:O:15:VAL:HG12	2:O:45:VAL:HG13	1.66	0.78
1:A:173:ILE:HD12	1:A:366:GLU:HA	1.65	0.78
1:N:362:GLU:O	1:N:365:GLN:HB2	1.83	0.78
1:D:66:LEU:HD22	1:D:522:VAL:HG11	1.64	0.78
1:D:173:ILE:HD12	1:D:369:ALA:HB2	1.65	0.77
1:I:332:VAL:HG22	1:I:375:VAL:HG11	1.66	0.77
2:T:52:ARG:HH21	2:U:53:VAL:HB	1.49	0.77
1:K:362:GLU:O	1:K:365:GLN:HB2	1.84	0.77
1:B:212:ALA:HB3	1:B:324:ILE:HB	1.66	0.77
1:I:228:ASN:HD21	1:I:230:ARG:HB3	1.49	0.77
1:E:267:ARG:HD3	2:S:31:VAL:HG21	1.65	0.77
1:K:249:ILE:O	1:K:249:ILE:HG22	1.84	0.77
1:E:351:GLU:HG3	1:F:326:LYS:NZ	2.00	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:B:229:VAL:HG21	2:P:36:ALA:CB	2.14	0.77
1:E:246:LEU:HB3	1:E:272:VAL:HG12	1.66	0.77
1:M:235:ILE:CD1	1:M:311:ALA:HB3	2.14	0.77
1:L:37:ASN:HD21	1:L:51:LYS:HE2	1.50	0.77
1:N:464:VAL:HG12	1:N:468:GLN:HE21	1.48	0.77
1:H:50:THR:HG22	1:H:51:LYS:H	1.48	0.77
1:N:85:ALA:HB1	1:N:501:VAL:HG22	1.67	0.77
1:I:85:ALA:HB1	1:I:501:VAL:HG22	1.67	0.77
1:I:283:ARG:NH1	1:I:363:LYS:HE3	2.00	0.77
1:B:230:ARG:NH2	2:P:38:GLU:OE2	2.17	0.76
2:T:54:LEU:HD11	2:U:55:GLU:HA	1.66	0.76
1:E:247:LEU:HD22	1:E:322:VAL:HG11	1.66	0.76
1:G:301:SER:HB2	1:G:304:LEU:HB3	1.65	0.76
1:N:283:ARG:HH11	1:N:363:LYS:HE3	1.50	0.76
1:M:283:ARG:NH1	1:M:363:LYS:HE3	2.00	0.76
1:D:50:THR:HG22	1:D:51:LYS:N	2.01	0.76
1:K:422:ILE:HG23	1:K:444:ARG:HG3	1.67	0.76
1:H:219:ILE:HD12	1:H:295:THR:HG23	1.67	0.76
1:L:54:VAL:HG22	1:L:89:THR:HG21	1.67	0.76
1:K:189:VAL:HG11	1:K:333:GLY:HA2	1.66	0.76
1:C:178:GLU:HG3	1:C:388:LEU:HD21	1.66	0.76
1:M:74:LEU:HD21	1:M:93:THR:HG23	1.67	0.76
1:M:345:ILE:O	1:M:348:ILE:HG22	1.86	0.76
1:N:84:VAL:HG12	1:N:500:LYS:HE2	1.68	0.76
1:N:189:VAL:CG1	1:N:333:GLY:HA2	2.15	0.76
1:B:66:LEU:HD22	1:B:522:VAL:HG11	1.67	0.76
1:A:50:THR:HG22	1:A:52:ASP:N	2.01	0.76
1:J:295:THR:HG22	1:J:318:ARG:N	2.00	0.76
1:M:332:VAL:HG13	1:M:377:VAL:HG21	1.68	0.76
1:K:295:THR:HG22	1:K:318:ARG:N	2.00	0.76
1:N:189:VAL:HG12	1:N:190:GLU:N	2.00	0.76
1:L:59:GLU:O	1:M:4:LYS:HE3	1.86	0.76
1:H:295:THR:HG22	1:H:318:ARG:N	2.01	0.76
1:D:69:ILE:HD11	1:E:41:GLU:HB2	1.68	0.75
1:M:228:ASN:HD21	1:M:230:ARG:HB3	1.50	0.75
1:H:189:VAL:CG1	1:H:333:GLY:HA2	2.16	0.75
2:S:10:PRO:HB2	2:S:14:ARG:O	1.86	0.75
1:I:295:THR:HG22	1:I:318:ARG:N	2.01	0.75
1:H:234:PRO:HG3	1:H:309:GLU:HA	1.66	0.75
1:D:116:LEU:O	1:D:120:ILE:HG13	1.87	0.75
2:T:96:LEU:HA	2:U:14:ARG:NH1	2.01	0.75
1:M:323:ARG:CZ	1:M:392:LYS:CE	2.64	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:362:GLU:O	1:J:365:GLN:HB2	1.86	0.75
1:F:511:SER:O	1:F:515:LEU:HD23	1.86	0.75
1:C:511:SER:O	1:C:515:LEU:HD23	1.87	0.75
1:M:464:VAL:HG12	1:M:468:GLN:HE21	1.52	0.75
1:K:300:ILE:HG21	1:K:308:LEU:HD23	1.69	0.75
2:P:48:VAL:CG1	2:P:62:LEU:HD12	2.15	0.75
1:N:526:LYS:CD	1:N:527:PRO:HD2	2.15	0.75
1:D:120:ILE:O	1:D:124:VAL:HG23	1.86	0.75
1:F:301:SER:HB2	1:F:304:LEU:HB3	1.67	0.75
1:K:74:LEU:HD21	1:K:93:THR:HG23	1.67	0.75
1:B:301:SER:HB2	1:B:304:LEU:HB3	1.68	0.75
1:C:98:ALA:HB2	1:C:449:GLU:HG3	1.66	0.75
1:I:74:LEU:HD21	1:I:93:THR:HG23	1.67	0.75
1:G:50:THR:HG22	1:G:51:LYS:N	2.01	0.75
1:B:498:PRO:O	1:B:501:VAL:HG22	1.87	0.75
1:G:150:ILE:CD1	1:G:495:ILE:HA	2.15	0.75
2:Q:96:LEU:HD23	2:R:14:ARG:HH21	1.49	0.75
1:E:50:THR:HG22	1:E:51:LYS:N	2.01	0.75
1:K:189:VAL:HG12	1:K:190:GLU:N	2.01	0.75
1:H:37:ASN:HD21	1:H:51:LYS:HE2	1.51	0.75
1:J:194:PHE:CD1	1:J:278:PRO:HB3	2.21	0.75
1:L:283:ARG:NH1	1:L:363:LYS:HE3	2.01	0.75
1:E:98:ALA:HB2	1:E:449:GLU:HG3	1.68	0.74
1:A:212:ALA:HB3	1:A:324:ILE:HB	1.67	0.74
1:D:235:ILE:HD11	1:D:311:ALA:HB3	1.67	0.74
1:E:349:LYS:HG3	1:E:368:LEU:HD11	1.69	0.74
1:E:498:PRO:O	1:E:501:VAL:HG22	1.86	0.74
1:F:98:ALA:HB2	1:F:449:GLU:HG3	1.67	0.74
1:G:178:GLU:HG3	1:G:388:LEU:HD21	1.69	0.74
1:B:150:ILE:CD1	1:B:495:ILE:HA	2.16	0.74
1:K:37:ASN:HD21	1:K:51:LYS:HE2	1.52	0.74
1:M:459:GLY:HA3	1:N:114:LEU:HD12	1.69	0.74
1:I:229:VAL:HG23	1:I:256:GLU:HB3	1.68	0.74
1:H:246:LEU:HB3	1:H:272:VAL:HG12	1.69	0.74
2:Q:96:LEU:HA	2:R:14:ARG:HE	1.53	0.74
1:G:229:VAL:HG21	2:U:36:ALA:HB2	1.69	0.74
1:B:178:GLU:HG3	1:B:388:LEU:HD21	1.69	0.74
1:K:77:VAL:HG13	1:K:80:LYS:HE2	1.69	0.74
1:M:323:ARG:NH2	1:M:392:LYS:CE	2.50	0.74
1:M:37:ASN:HD21	1:M:51:LYS:HE2	1.52	0.74
1:I:503:ARG:HH11	1:I:507:GLN:HE22	1.36	0.74
1:J:189:VAL:HG12	1:J:190:GLU:N	2.03	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:511:SER:O	1:G:515:LEU:HD23	1.88	0.74
1:B:259:ALA:O	1:B:263:VAL:HG23	1.87	0.74
1:M:136:ILE:O	1:M:410:ILE:N	2.19	0.73
2:P:96:LEU:HB3	2:Q:89:ILE:HG21	1.70	0.73
2:S:100:GLN:OE1	2:T:9:LYS:HE2	1.88	0.73
1:M:77:VAL:HG13	1:M:80:LYS:HE2	1.68	0.73
1:J:229:VAL:HG23	1:J:256:GLU:HB3	1.69	0.73
1:I:77:VAL:HG13	1:I:80:LYS:HE2	1.71	0.73
1:M:323:ARG:NH1	1:M:392:LYS:HE2	2.03	0.73
1:M:246:LEU:HB3	1:M:272:VAL:HG12	1.68	0.73
1:N:219:ILE:HD12	1:N:295:THR:HG23	1.69	0.73
1:I:7:VAL:HG21	1:I:66:LEU:HD11	1.69	0.73
1:G:120:ILE:O	1:G:124:VAL:HG23	1.88	0.73
1:J:77:VAL:HG13	1:J:80:LYS:HE2	1.69	0.73
1:D:235:ILE:HD11	1:D:311:ALA:CB	2.18	0.73
1:M:7:VAL:HG21	1:M:66:LEU:HD11	1.70	0.73
1:C:136:ILE:HD11	1:C:477:ARG:NH2	2.03	0.73
2:T:32:LEU:HG	2:T:33:PRO:HD2	1.67	0.73
1:C:236:LEU:CB	2:Q:30:ILE:HD11	2.18	0.73
1:B:149:THR:HG23	1:B:155:PRO:HA	1.69	0.73
1:A:34:ARG:HH12	1:G:118:ARG:HH22	1.36	0.73
2:Q:18:LYS:HG2	2:Q:87:TYR:CD2	2.24	0.73
1:I:219:ILE:HD12	1:I:295:THR:HG23	1.68	0.73
1:E:218:PHE:CE1	1:E:244:LYS:HD2	2.24	0.73
1:B:98:ALA:HB2	1:B:449:GLU:HG3	1.70	0.73
1:E:150:ILE:CD1	1:E:495:ILE:HA	2.12	0.73
2:S:13:ASP:OD1	2:S:13:ASP:O	2.07	0.73
1:C:120:ILE:O	1:C:124:VAL:HG23	1.89	0.73
1:N:235:ILE:HD11	1:N:311:ALA:CB	2.15	0.73
1:K:410:ILE:HB	1:K:496:VAL:CG1	2.19	0.73
1:I:290:ASP:OD1	1:I:371:LEU:HD11	1.89	0.73
1:L:194:PHE:CD1	1:L:278:PRO:HB3	2.23	0.73
1:H:277:ALA:HB3	1:H:284:ARG:HD2	1.71	0.73
1:J:37:ASN:HD21	1:J:51:LYS:HE2	1.53	0.73
1:M:212:ALA:HB3	1:M:324:ILE:HB	1.71	0.73
1:N:246:LEU:HB3	1:N:272:VAL:HG12	1.69	0.73
1:H:290:ASP:OD1	1:H:371:LEU:HD11	1.89	0.73
1:H:300:ILE:HG21	1:H:308:LEU:HD23	1.69	0.72
1:K:246:LEU:HB3	1:K:272:VAL:HG12	1.69	0.72
1:L:422:ILE:HG23	1:L:444:ARG:HG3	1.71	0.72
1:J:422:ILE:HG23	1:J:444:ARG:HG3	1.70	0.72
2:P:13:ASP:HB2	2:P:62:LEU:HD21	1.71	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:422:ILE:HG23	1:A:444:ARG:HG3	1.71	0.72
1:H:77:VAL:HG13	1:H:80:LYS:HE2	1.69	0.72
1:A:149:THR:HG23	1:A:155:PRO:HA	1.71	0.72
1:C:217:ALA:HB2	1:C:245:PRO:HB2	1.69	0.72
1:M:189:VAL:HG11	1:M:333:GLY:HA2	1.69	0.72
2:S:14:ARG:HG3	2:S:14:ARG:HH11	1.55	0.72
1:B:230:ARG:HH21	2:P:38:GLU:CD	1.92	0.72
1:N:384:THR:HG22	1:N:386:THR:H	1.54	0.72
1:A:259:ALA:O	1:A:263:VAL:HG23	1.88	0.72
1:H:362:GLU:O	1:H:365:GLN:HB2	1.90	0.72
1:M:410:ILE:HB	1:M:496:VAL:CG1	2.19	0.72
1:H:217:ALA:CB	1:H:245:PRO:HG2	2.19	0.72
1:L:297:GLY:HA3	1:L:317:GLY:H	1.54	0.72
1:G:218:PHE:HB3	1:G:316:LEU:HD13	1.72	0.72
1:K:85:ALA:HB1	1:K:501:VAL:HG22	1.70	0.72
1:L:503:ARG:HH11	1:L:507:GLN:HE22	1.37	0.72
1:C:325:THR:HG22	1:C:326:LYS:H	1.54	0.72
1:L:189:VAL:CG1	1:L:190:GLU:H	1.94	0.72
1:G:235:ILE:CD1	1:G:311:ALA:HB3	2.20	0.72
1:N:7:VAL:HG21	1:N:66:LEU:HD11	1.70	0.72
1:C:212:ALA:HB3	1:C:324:ILE:HB	1.72	0.72
2:O:81:GLU:HG3	2:O:85:GLU:H	1.55	0.72
1:N:422:ILE:HG23	1:N:444:ARG:HG3	1.72	0.72
1:E:178:GLU:HG3	1:E:388:LEU:HD21	1.72	0.72
1:F:233:LEU:O	1:F:237:GLU:HG3	1.88	0.72
1:F:150:ILE:CD1	1:F:495:ILE:HA	2.11	0.72
1:C:233:LEU:O	1:C:237:GLU:HG3	1.90	0.72
1:M:219:ILE:HD12	1:M:295:THR:HG23	1.71	0.72
1:M:295:THR:HG22	1:M:318:ARG:N	2.05	0.72
1:C:235:ILE:HD11	1:C:311:ALA:HB3	1.70	0.72
1:G:230:ARG:NH2	2:U:38:GLU:OE2	2.22	0.72
1:F:498:PRO:O	1:F:501:VAL:HG22	1.89	0.72
1:M:361:ARG:O	1:M:365:GLN:HG2	1.89	0.72
1:L:384:THR:HG22	1:L:386:THR:H	1.55	0.72
1:F:50:THR:HG22	1:F:51:LYS:N	2.03	0.72
1:E:269:THR:HG21	2:S:30:ILE:HA	1.72	0.72
1:M:224:LYS:HG2	1:M:225:LYS:N	2.05	0.72
1:N:224:LYS:HG2	1:N:225:LYS:N	2.05	0.72
1:L:228:ASN:HD21	1:L:230:ARG:HB3	1.54	0.72
1:B:246:LEU:HB3	1:B:272:VAL:HG12	1.71	0.72
1:L:243:GLY:CA	1:M:228:ASN:CB	2.63	0.71
2:R:8:ILE:HG21	2:R:16:VAL:HG21	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:74:LEU:HD12	1:J:512:ILE:CD1	2.20	0.71
1:F:217:ALA:HB2	1:F:245:PRO:HB2	1.72	0.71
1:K:235:ILE:HD11	1:K:311:ALA:CB	2.16	0.71
1:M:206:ASN:ND2	1:M:389:LYS:HE2	2.05	0.71
2:P:20:ILE:HG13	2:P:43:GLY:HA2	1.71	0.71
1:I:464:VAL:HG12	1:I:468:GLN:HE21	1.55	0.71
1:H:503:ARG:HH11	1:H:507:GLN:HE22	1.37	0.71
1:C:498:PRO:O	1:C:501:VAL:HG22	1.90	0.71
2:O:54:LEU:HG	2:P:55:GLU:O	1.90	0.71
2:T:10:PRO:HG3	2:T:47:ALA:O	1.89	0.71
1:G:149:THR:HG23	1:G:155:PRO:HA	1.70	0.71
1:J:384:THR:HG22	1:J:386:THR:H	1.54	0.71
1:F:19:GLY:HA3	1:F:67:GLU:O	1.91	0.71
1:J:85:ALA:HB1	1:J:501:VAL:HG22	1.71	0.71
1:D:498:PRO:O	1:D:501:VAL:HG22	1.91	0.71
1:J:361:ARG:O	1:J:365:GLN:HG2	1.90	0.71
1:L:74:LEU:HD21	1:L:93:THR:HG23	1.70	0.71
1:M:300:ILE:HG21	1:M:308:LEU:HD23	1.71	0.71
1:A:233:LEU:O	1:A:237:GLU:HG3	1.90	0.71
1:L:180:LYS:C	1:M:281:GLY:HA3	2.11	0.71
1:D:218:PHE:HB3	1:D:316:LEU:HD13	1.72	0.71
1:I:361:ARG:O	1:I:365:GLN:HG2	1.90	0.71
1:H:84:VAL:HG12	1:H:500:LYS:HE2	1.70	0.71
1:N:283:ARG:NH2	1:N:367:ARG:HD3	2.04	0.71
1:L:410:ILE:HB	1:L:496:VAL:CG1	2.21	0.71
1:F:259:ALA:O	1:F:263:VAL:HG23	1.90	0.71
1:L:74:LEU:HD12	1:L:512:ILE:HD12	1.72	0.71
1:J:232:LEU:HD22	1:J:236:LEU:HD22	1.71	0.71
1:H:283:ARG:NH2	1:H:367:ARG:HD3	2.06	0.71
1:L:283:ARG:HH12	1:L:364:LEU:HD12	1.56	0.71
1:C:50:THR:HG22	1:C:51:LYS:N	2.03	0.71
1:L:464:VAL:HG12	1:L:468:GLN:HE21	1.55	0.71
1:F:136:ILE:HD11	1:F:477:ARG:HH21	1.56	0.71
1:K:224:LYS:HG2	1:K:225:LYS:N	2.06	0.71
1:I:50:THR:HG22	1:I:52:ASP:N	2.04	0.71
1:C:66:LEU:HD22	1:C:522:VAL:HG11	1.72	0.71
1:J:219:ILE:HD12	1:J:295:THR:HG23	1.72	0.71
1:K:283:ARG:NH1	1:K:363:LYS:HE3	2.06	0.71
1:J:7:VAL:HG21	1:J:66:LEU:HD11	1.73	0.71
1:H:422:ILE:HG23	1:H:444:ARG:HG3	1.73	0.71
2:P:13:ASP:OD2	2:P:92:GLU:HB2	1.91	0.70
1:L:217:ALA:CB	1:L:245:PRO:HG2	2.20	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:50:THR:CG2	1:D:52:ASP:H	2.03	0.70
1:B:50:THR:HG22	1:B:52:ASP:N	2.06	0.70
1:F:229:VAL:HG12	1:F:233:LEU:HD11	1.71	0.70
1:D:98:ALA:HB2	1:D:449:GLU:HG3	1.73	0.70
1:K:464:VAL:HG12	1:K:468:GLN:HE21	1.56	0.70
1:L:50:THR:HG22	1:L:52:ASP:N	2.05	0.70
1:L:224:LYS:HG2	1:L:225:LYS:N	2.06	0.70
1:M:323:ARG:NH1	1:M:392:LYS:CE	2.53	0.70
1:K:228:ASN:HD21	1:K:230:ARG:HB3	1.55	0.70
1:A:69:ILE:HD11	1:B:41:GLU:HB2	1.72	0.70
1:A:98:ALA:HB2	1:A:449:GLU:HG3	1.73	0.70
1:N:503:ARG:HH11	1:N:507:GLN:HE22	1.38	0.70
1:K:84:VAL:HG12	1:K:500:LYS:HE2	1.72	0.70
1:J:246:LEU:HB3	1:J:272:VAL:HG12	1.73	0.70
1:C:246:LEU:HB3	1:C:272:VAL:HG12	1.72	0.70
1:K:361:ARG:O	1:K:365:GLN:HG2	1.91	0.70
1:B:50:THR:HG22	1:B:51:LYS:N	2.07	0.70
1:J:290:ASP:OD1	1:J:371:LEU:HD11	1.91	0.70
1:D:284:ARG:O	1:D:288:LEU:HG	1.91	0.70
1:K:194:PHE:CD1	1:K:278:PRO:HB3	2.27	0.70
1:A:368:LEU:HD12	1:A:368:LEU:O	1.92	0.70
1:M:277:ALA:HB3	1:M:284:ARG:HD2	1.72	0.70
1:L:526:LYS:CD	1:L:527:PRO:HD2	2.21	0.70
1:G:284:ARG:O	1:G:288:LEU:HG	1.91	0.70
1:N:194:PHE:CD1	1:N:278:PRO:HB3	2.26	0.70
1:D:366:GLU:O	1:D:370:LYS:HG3	1.91	0.70
2:Q:8:ILE:HD12	2:Q:8:ILE:N	2.07	0.70
1:N:77:VAL:HG13	1:N:80:LYS:HE2	1.74	0.70
1:J:74:LEU:HD12	1:J:512:ILE:HD12	1.72	0.70
1:A:526:LYS:HD3	1:A:529:LYS:CE	2.22	0.70
1:H:384:THR:HG22	1:H:386:THR:H	1.55	0.70
1:J:464:VAL:HG12	1:J:468:GLN:HE21	1.56	0.70
1:I:224:LYS:HG2	1:I:225:LYS:N	2.07	0.70
1:D:522:VAL:HG22	1:E:39:VAL:HB	1.74	0.70
1:L:229:VAL:HG23	1:L:256:GLU:HB3	1.73	0.70
1:N:228:ASN:HD21	1:N:230:ARG:HB3	1.56	0.70
1:K:7:VAL:HG21	1:K:66:LEU:HD11	1.74	0.70
1:D:23:VAL:HG22	1:D:60:VAL:HG11	1.72	0.70
1:D:234:PRO:O	1:D:238:GLN:HG3	1.91	0.70
1:B:352:LEU:HD21	1:B:364:LEU:HB2	1.73	0.70
1:M:283:ARG:NH2	1:M:367:ARG:HD3	2.08	0.69
1:D:94:VAL:HG12	1:D:449:GLU:HB3	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:498:PRO:O	1:G:501:VAL:HG22	1.92	0.69
1:G:373:GLY:O	1:G:375:VAL:N	2.25	0.69
1:H:189:VAL:HG12	1:H:190:GLU:N	2.05	0.69
1:I:277:ALA:HB3	1:I:284:ARG:HD2	1.74	0.69
1:I:84:VAL:HG12	1:I:500:LYS:HE2	1.74	0.69
1:M:323:ARG:CZ	1:M:392:LYS:NZ	2.53	0.69
1:N:116:LEU:O	1:N:120:ILE:HG13	1.92	0.69
1:M:116:LEU:O	1:M:120:ILE:HG13	1.91	0.69
1:I:246:LEU:HB3	1:I:272:VAL:HG12	1.74	0.69
1:N:277:ALA:HB3	1:N:284:ARG:HD2	1.73	0.69
1:M:54:VAL:HG22	1:M:89:THR:HG21	1.73	0.69
1:I:189:VAL:HG12	1:I:190:GLU:N	2.07	0.69
1:A:50:THR:HG22	1:A:51:LYS:N	2.07	0.69
1:E:515:LEU:HD12	1:F:49:ILE:HG21	1.73	0.69
1:G:98:ALA:HB2	1:G:449:GLU:HG3	1.74	0.69
1:N:37:ASN:HD21	1:N:51:LYS:HE2	1.55	0.69
1:M:385:GLU:HB2	1:N:280:PHE:CE2	2.27	0.69
1:F:234:PRO:O	1:F:238:GLN:HG3	1.92	0.69
2:S:8:ILE:HG21	2:S:16:VAL:HG21	1.73	0.69
1:I:235:ILE:HD11	1:I:311:ALA:CB	2.17	0.69
1:G:50:THR:HG22	1:G:52:ASP:N	2.07	0.69
1:D:50:THR:HG21	1:D:52:ASP:HB3	1.75	0.69
1:H:410:ILE:HB	1:H:496:VAL:CG1	2.23	0.69
1:L:219:ILE:HD12	1:L:295:THR:HG23	1.74	0.69
1:C:136:ILE:HD11	1:C:477:ARG:HH21	1.57	0.69
1:J:264:ASN:HB3	1:J:269:THR:HB	1.73	0.69
1:M:503:ARG:HH11	1:M:507:GLN:HE22	1.39	0.69
1:H:212:ALA:HB3	1:H:324:ILE:HB	1.75	0.69
2:S:10:PRO:HG3	2:S:47:ALA:O	1.93	0.69
1:L:269:THR:HA	1:M:256:GLU:CG	2.23	0.69
1:D:149:THR:HG23	1:D:155:PRO:HA	1.73	0.69
1:N:229:VAL:HG23	1:N:256:GLU:HB3	1.74	0.69
2:U:77:GLY:HA3	2:U:90:LEU:HD23	1.75	0.69
2:R:97:ALA:HA	2:S:11:LEU:CD1	2.23	0.69
1:L:246:LEU:HB3	1:L:272:VAL:HG12	1.73	0.69
1:N:361:ARG:O	1:N:365:GLN:HG2	1.92	0.69
2:R:81:GLU:HG3	2:R:85:GLU:H	1.58	0.69
1:A:120:ILE:O	1:A:124:VAL:HG23	1.93	0.69
2:R:13:ASP:HB2	2:R:62:LEU:HD11	1.75	0.69
1:H:283:ARG:NH1	1:H:363:LYS:HE3	2.07	0.69
1:F:118:ARG:HH22	1:G:34:ARG:HH12	1.41	0.69
1:A:498:PRO:O	1:A:501:VAL:HG22	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:224:LYS:HB3	1:G:302:GLU:OE1	1.92	0.69
1:M:268:GLY:HA3	1:N:227:SER:HB2	1.75	0.69
1:K:219:ILE:HD12	1:K:295:THR:HG23	1.74	0.68
1:E:511:SER:O	1:E:515:LEU:HD23	1.92	0.68
1:I:54:VAL:HG22	1:I:89:THR:HG21	1.74	0.68
1:H:229:VAL:HG23	1:H:256:GLU:HB3	1.75	0.68
1:M:366:GLU:O	1:M:370:LYS:HG3	1.94	0.68
1:N:526:LYS:HG3	1:N:527:PRO:CD	2.21	0.68
1:E:235:ILE:O	1:E:239:VAL:HG23	1.92	0.68
1:K:283:ARG:NH2	1:K:367:ARG:HD3	2.09	0.68
1:G:72:GLN:HE22	1:G:75:LYS:NZ	1.91	0.68
1:I:300:ILE:HG21	1:I:308:LEU:HD23	1.74	0.68
1:K:384:THR:HG22	1:K:386:THR:H	1.59	0.68
2:R:20:ILE:HG13	2:R:43:GLY:HA2	1.74	0.68
1:L:290:ASP:OD1	1:L:371:LEU:HD11	1.93	0.68
1:M:384:THR:HG22	1:M:386:THR:H	1.58	0.68
1:J:410:ILE:HB	1:J:496:VAL:CG1	2.23	0.68
1:J:277:ALA:HB3	1:J:284:ARG:HD2	1.74	0.68
1:D:382:ALA:HB3	1:D:388:LEU:HB2	1.75	0.68
1:G:259:ALA:O	1:G:263:VAL:HG23	1.94	0.68
1:J:224:LYS:HG2	1:J:225:LYS:N	2.09	0.68
1:E:527:PRO:O	1:E:528:GLU:HB2	1.93	0.68
1:I:410:ILE:HB	1:I:496:VAL:CG1	2.23	0.68
1:H:283:ARG:HH11	1:H:363:LYS:HE3	1.58	0.68
1:I:384:THR:HG22	1:I:386:THR:H	1.56	0.68
1:C:118:ARG:HH22	1:D:34:ARG:HH12	1.38	0.68
1:G:212:ALA:HB3	1:G:324:ILE:HB	1.73	0.68
1:F:279:GLY:C	1:F:284:ARG:HB3	2.13	0.68
1:F:72:GLN:HE22	1:F:75:LYS:NZ	1.90	0.68
1:B:218:PHE:HB3	1:B:316:LEU:HD13	1.76	0.68
1:B:235:ILE:HD11	1:B:316:LEU:HD21	1.75	0.68
1:I:59:GLU:O	1:J:4:LYS:HG3	1.92	0.68
1:D:279:GLY:C	1:D:284:ARG:HB3	2.14	0.68
1:H:464:VAL:HG12	1:H:468:GLN:HE21	1.58	0.68
1:C:450:PRO:O	1:C:454:ILE:HG13	1.94	0.68
1:K:229:VAL:HG23	1:K:256:GLU:HB3	1.75	0.68
2:U:73:ALA:HB1	2:U:75:TYR:CE2	2.29	0.68
1:G:189:VAL:CG1	1:G:190:GLU:N	2.56	0.68
2:O:45:VAL:HG21	2:O:64:VAL:HG11	1.74	0.68
1:E:325:THR:HG22	1:E:326:LYS:N	2.08	0.68
1:M:222:VAL:HG12	1:M:224:LYS:H	1.58	0.68
2:O:14:ARG:HH11	2:O:14:ARG:HG3	1.57	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:202:TYR:OH	1:G:289:LYS:HE2	1.94	0.68
1:F:235:ILE:HD11	1:F:311:ALA:HB3	1.74	0.68
1:L:180:LYS:HB3	1:M:281:GLY:HA2	1.75	0.68
1:I:366:GLU:O	1:I:370:LYS:HG3	1.94	0.68
1:M:362:GLU:O	1:M:365:GLN:HB2	1.92	0.68
1:C:72:GLN:HE22	1:C:75:LYS:NZ	1.90	0.68
1:C:96:ALA:O	1:C:100:VAL:HG23	1.92	0.68
1:E:307:LYS:HB3	1:E:310:ASN:HD22	1.58	0.68
1:A:150:ILE:HD11	1:A:495:ILE:CA	2.17	0.68
1:F:270:LEU:HG	1:F:272:VAL:HG13	1.76	0.68
1:J:300:ILE:HG21	1:J:308:LEU:HD23	1.76	0.68
1:N:290:ASP:OD1	1:N:371:LEU:HD11	1.93	0.68
1:E:50:THR:CG2	1:E:52:ASP:H	2.04	0.68
1:C:236:LEU:HB2	2:Q:30:ILE:CD1	2.23	0.68
1:B:373:GLY:O	1:B:375:VAL:N	2.27	0.68
2:P:80:ILE:HG22	2:P:81:GLU:N	2.09	0.68
1:F:69:ILE:HD11	1:G:41:GLU:HB2	1.75	0.68
2:O:13:ASP:HB2	2:O:62:LEU:HD21	1.76	0.67
2:O:20:ILE:HG13	2:O:43:GLY:HA2	1.76	0.67
1:I:217:ALA:CB	1:I:245:PRO:HG2	2.23	0.67
2:U:10:PRO:HB2	2:U:14:ARG:O	1.95	0.67
1:E:264:ASN:OD1	2:S:30:ILE:HG23	1.94	0.67
1:K:503:ARG:HH11	1:K:507:GLN:HE22	1.42	0.67
1:N:300:ILE:HG21	1:N:308:LEU:HD23	1.75	0.67
1:D:136:ILE:HD11	1:D:477:ARG:NH2	2.09	0.67
1:A:511:SER:O	1:A:515:LEU:HD23	1.95	0.67
1:E:256:GLU:OE1	2:S:36:ALA:HA	1.94	0.67
2:U:8:ILE:HD12	2:U:8:ILE:N	2.09	0.67
1:B:189:VAL:CG1	1:B:190:GLU:N	2.57	0.67
1:I:459:GLY:HA3	1:J:114:LEU:HD12	1.74	0.67
2:P:38:GLU:OE1	2:P:74:LYS:NZ	2.27	0.67
1:K:74:LEU:HD12	1:K:512:ILE:HD12	1.77	0.67
1:K:232:LEU:HD22	1:K:236:LEU:HD22	1.76	0.67
1:B:228:ASN:ND2	1:B:231:GLU:HG3	2.09	0.67
2:S:80:ILE:HG22	2:S:81:GLU:N	2.09	0.67
1:G:422:ILE:HG23	1:G:444:ARG:HG3	1.75	0.67
2:Q:79:GLU:C	2:Q:80:ILE:HG13	2.15	0.67
1:I:194:PHE:CD1	1:I:278:PRO:HB3	2.30	0.67
1:H:224:LYS:HG2	1:H:225:LYS:N	2.08	0.67
1:L:372:ALA:O	1:L:374:GLY:N	2.26	0.67
1:A:301:SER:HB2	1:A:304:LEU:HB3	1.77	0.67
1:I:37:ASN:HD21	1:I:51:LYS:HE2	1.59	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:410:ILE:HB	1:N:496:VAL:CG1	2.24	0.67
1:H:277:ALA:CB	1:H:284:ARG:HD2	2.25	0.67
1:H:249:ILE:HG22	1:H:249:ILE:O	1.93	0.67
1:A:50:THR:CG2	1:A:52:ASP:H	2.07	0.67
1:L:503:ARG:NH1	1:L:507:GLN:HE22	1.93	0.67
1:K:212:ALA:HB3	1:K:324:ILE:HB	1.77	0.67
1:C:19:GLY:HA3	1:C:67:GLU:O	1.95	0.67
2:U:81:GLU:HG3	2:U:85:GLU:H	1.59	0.67
1:A:455:ALA:HB1	1:A:465:ILE:HD12	1.76	0.67
1:D:325:THR:HG22	1:D:326:LYS:H	1.60	0.67
1:F:149:THR:HG23	1:F:155:PRO:HA	1.77	0.67
1:M:283:ARG:HH11	1:M:363:LYS:HE3	1.59	0.67
1:C:78:ALA:O	1:C:89:THR:HG22	1.95	0.67
1:I:385:GLU:HB2	1:J:280:PHE:CE2	2.30	0.67
2:Q:55:GLU:CG	2:R:55:GLU:HG2	2.24	0.67
1:K:277:ALA:HB3	1:K:284:ARG:HD2	1.76	0.67
2:P:8:ILE:HD12	2:P:8:ILE:N	2.10	0.67
1:L:84:VAL:HG12	1:L:500:LYS:HE2	1.77	0.67
1:N:249:ILE:O	1:N:249:ILE:HG22	1.94	0.67
1:L:277:ALA:HB3	1:L:284:ARG:HD2	1.77	0.67
1:F:96:ALA:O	1:F:100:VAL:HG23	1.94	0.67
1:A:279:GLY:C	1:A:284:ARG:HB3	2.16	0.67
1:N:217:ALA:CB	1:N:245:PRO:HG2	2.24	0.67
1:M:234:PRO:CG	1:M:309:GLU:HA	2.24	0.67
1:E:351:GLU:HG3	1:F:326:LYS:HZ1	1.59	0.67
1:L:40:LEU:HD23	1:L:59:GLU:CG	2.25	0.66
1:H:31:LEU:HD13	1:H:90:THR:HG22	1.76	0.66
1:D:352:LEU:HD21	1:D:364:LEU:HB2	1.76	0.66
1:G:116:LEU:O	1:G:120:ILE:HG13	1.95	0.66
1:I:362:GLU:O	1:I:365:GLN:HB2	1.96	0.66
1:J:267:ARG:O	1:K:256:GLU:HG3	1.95	0.66
1:L:408:GLU:OE2	1:L:500:LYS:HG3	1.94	0.66
1:H:524:ALA:HA	1:N:41:GLU:HG2	1.77	0.66
1:C:184:THR:HG23	1:C:380:VAL:HA	1.77	0.66
1:I:234:PRO:CG	1:I:309:GLU:HA	2.25	0.66
2:U:53:VAL:HG22	2:U:59:ARG:HG2	1.77	0.66
1:B:85:ALA:HB1	1:B:501:VAL:HG12	1.78	0.66
1:F:246:LEU:HB3	1:F:272:VAL:HG12	1.77	0.66
1:K:116:LEU:O	1:K:120:ILE:HG13	1.95	0.66
1:N:157:VAL:HG21	1:N:395:PHE:CZ	2.30	0.66
2:O:54:LEU:CD2	2:P:57:GLY:N	2.53	0.66
1:N:50:THR:HG22	1:N:52:ASP:N	2.08	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:290:ASP:HB3	1:E:371:LEU:HD21	1.77	0.66
1:K:234:PRO:CG	1:K:309:GLU:HA	2.23	0.66
1:H:54:VAL:HG22	1:H:89:THR:HG21	1.78	0.66
1:M:290:ASP:OD1	1:M:371:LEU:HD11	1.96	0.66
1:D:150:ILE:CD1	1:D:495:ILE:HA	2.14	0.66
1:J:40:LEU:HD23	1:J:59:GLU:CG	2.25	0.66
1:K:385:GLU:HB2	1:L:280:PHE:CD2	2.31	0.66
1:F:235:ILE:CD1	1:F:311:ALA:HB3	2.25	0.66
1:N:219:ILE:HD12	1:N:295:THR:CG2	2.25	0.66
1:M:422:ILE:HG23	1:M:444:ARG:HG3	1.78	0.66
1:I:219:ILE:HD12	1:I:295:THR:CG2	2.26	0.66
1:H:228:ASN:HD21	1:H:230:ARG:HB3	1.58	0.66
1:C:149:THR:HG23	1:C:155:PRO:HA	1.76	0.66
1:M:323:ARG:NH1	1:M:392:LYS:HZ1	1.89	0.66
1:K:410:ILE:HB	1:K:496:VAL:HG11	1.78	0.66
1:B:325:THR:HG22	1:B:326:LYS:N	2.11	0.66
1:E:94:VAL:CG1	1:E:449:GLU:HB3	2.25	0.66
1:J:212:ALA:HB3	1:J:324:ILE:HB	1.77	0.66
2:T:20:ILE:HG13	2:T:43:GLY:HA2	1.76	0.66
1:J:103:GLY:O	1:J:107:VAL:HG23	1.96	0.66
2:U:45:VAL:HG21	2:U:64:VAL:HG11	1.77	0.66
1:E:50:THR:HG21	1:E:52:ASP:HB3	1.76	0.66
1:A:246:LEU:HB3	1:A:272:VAL:CG1	2.25	0.66
1:G:382:ALA:HB3	1:G:388:LEU:HB2	1.77	0.66
1:D:94:VAL:CG1	1:D:449:GLU:HB3	2.25	0.66
1:E:217:ALA:HB2	1:E:245:PRO:HB2	1.78	0.65
1:L:180:LYS:CB	1:M:281:GLY:CA	2.74	0.65
1:N:277:ALA:CB	1:N:284:ARG:HD2	2.26	0.65
1:J:459:GLY:HA3	1:K:114:LEU:HD12	1.76	0.65
1:B:455:ALA:HB1	1:B:465:ILE:HD12	1.76	0.65
1:B:23:VAL:HG22	1:B:60:VAL:HG11	1.78	0.65
1:N:283:ARG:HD3	1:N:363:LYS:HE3	1.78	0.65
1:M:383:ALA:O	1:N:280:PHE:CD1	2.50	0.65
1:J:283:ARG:HH11	1:J:363:LYS:HE3	1.59	0.65
1:J:219:ILE:HD12	1:J:295:THR:CG2	2.26	0.65
1:F:94:VAL:CG1	1:F:449:GLU:HB3	2.25	0.65
1:B:290:ASP:O	1:B:294:VAL:HG23	1.96	0.65
2:P:10:PRO:HG3	2:P:47:ALA:O	1.96	0.65
1:E:199:ILE:HG13	1:E:274:ALA:O	1.96	0.65
2:O:8:ILE:HD12	2:O:8:ILE:N	2.10	0.65
1:K:232:LEU:HD21	1:K:236:LEU:HD13	1.75	0.65
2:P:73:ALA:HB1	2:P:75:TYR:CE2	2.31	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:283:ARG:HG2	1:N:363:LYS:HZ2	1.59	0.65
1:C:422:ILE:HG23	1:C:444:ARG:HG3	1.79	0.65
1:I:462:GLY:O	1:I:466:VAL:HG23	1.97	0.65
1:B:320:GLU:HB3	1:B:333:GLY:HA3	1.77	0.65
2:R:53:VAL:HG22	2:R:59:ARG:HG2	1.78	0.65
1:K:157:VAL:HG21	1:K:395:PHE:CE2	2.31	0.65
1:J:283:ARG:HH12	1:J:364:LEU:HD12	1.61	0.65
1:E:259:ALA:O	1:E:263:VAL:HG23	1.97	0.65
1:N:157:VAL:HG21	1:N:395:PHE:CE2	2.32	0.65
2:S:73:ALA:HB1	2:S:75:TYR:CE2	2.32	0.65
2:Q:20:ILE:HG13	2:Q:43:GLY:HA2	1.78	0.65
1:J:325:THR:HG22	1:J:327:ASP:N	1.98	0.65
1:H:7:VAL:HG21	1:H:66:LEU:HD11	1.77	0.65
1:L:366:GLU:O	1:L:370:LYS:HG3	1.97	0.65
1:A:94:VAL:CG1	1:A:449:GLU:HB3	2.26	0.65
1:A:116:LEU:O	1:A:120:ILE:HG13	1.97	0.65
1:K:96:ALA:O	1:K:100:VAL:HG23	1.97	0.65
1:I:325:THR:HG22	1:I:327:ASP:N	2.01	0.65
1:D:50:THR:CG2	1:D:51:LYS:H	2.08	0.65
1:F:522:VAL:HG22	1:G:39:VAL:HB	1.79	0.65
1:F:94:VAL:HG12	1:F:449:GLU:HB3	1.79	0.65
1:H:325:THR:HG22	1:H:327:ASP:N	2.00	0.65
1:G:50:THR:CG2	1:G:52:ASP:H	2.10	0.65
2:U:10:PRO:HG3	2:U:47:ALA:O	1.97	0.65
1:C:50:THR:HG22	1:C:52:ASP:N	2.10	0.65
1:D:54:VAL:HG22	1:D:89:THR:HG21	1.78	0.65
1:H:222:VAL:HG12	1:H:223:GLU:N	2.12	0.65
2:S:52:ARG:O	2:S:52:ARG:HG3	1.95	0.65
1:E:207:PRO:HG2	1:E:208:GLU:H	1.60	0.65
1:M:177:GLU:HB3	1:M:321:ARG:NH1	2.12	0.65
1:J:187:LYS:NZ	1:J:379:ARG:HG3	2.12	0.65
1:L:234:PRO:CG	1:L:309:GLU:HA	2.27	0.65
1:L:372:ALA:C	1:L:374:GLY:H	2.00	0.65
1:M:249:ILE:HG22	1:M:249:ILE:O	1.97	0.65
1:L:340:ASP:O	1:L:343:ALA:HB3	1.96	0.65
1:G:96:ALA:O	1:G:100:VAL:HG23	1.97	0.65
1:N:232:LEU:HD23	1:N:232:LEU:O	1.97	0.65
1:M:194:PHE:CD1	1:M:278:PRO:HB3	2.32	0.65
1:C:263:VAL:O	1:C:267:ARG:HB2	1.96	0.65
1:B:363:LYS:C	1:B:365:GLN:H	1.98	0.65
1:H:168:VAL:HG11	1:H:173:ILE:H	1.62	0.65
1:A:515:LEU:HD12	1:B:49:ILE:HG21	1.77	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:194:PHE:CD1	1:H:278:PRO:HB3	2.32	0.65
1:F:236:LEU:HB2	2:T:30:ILE:HD11	1.79	0.65
1:G:57:ALA:O	1:G:75:LYS:HD3	1.97	0.65
1:L:157:VAL:HG21	1:L:395:PHE:CE2	2.32	0.65
1:G:136:ILE:HD11	1:G:477:ARG:HH21	1.61	0.65
1:E:265:LYS:NZ	1:E:271:SER:HB2	2.11	0.64
1:J:283:ARG:NH2	1:J:367:ARG:HD3	2.12	0.64
1:M:277:ALA:CB	1:M:284:ARG:HD2	2.26	0.64
1:L:290:ASP:N	1:L:344:ARG:HH12	1.95	0.64
1:H:524:ALA:HB1	1:N:41:GLU:OE2	1.96	0.64
2:T:49:GLY:O	2:T:62:LEU:HD11	1.96	0.64
1:F:345:ILE:HG23	1:F:368:LEU:HD13	1.77	0.64
2:T:77:GLY:HA3	2:T:90:LEU:HD23	1.79	0.64
1:H:167:LYS:HD2	1:H:188:PHE:CZ	2.32	0.64
1:H:187:LYS:NZ	1:H:379:ARG:HG3	2.11	0.64
1:K:295:THR:HG22	1:K:317:GLY:C	2.18	0.64
1:L:74:LEU:HD12	1:L:512:ILE:CD1	2.26	0.64
2:T:45:VAL:HG21	2:T:64:VAL:HG11	1.79	0.64
1:M:173:ILE:HD11	1:M:370:LYS:HB3	1.78	0.64
2:S:8:ILE:HD12	2:S:8:ILE:N	2.13	0.64
1:L:79:SER:C	1:L:81:THR:H	2.01	0.64
1:F:120:ILE:O	1:F:124:VAL:HG23	1.98	0.64
1:E:141:ARG:NH2	1:E:163:ASP:OD1	2.30	0.64
2:S:45:VAL:HG21	2:S:64:VAL:HG11	1.78	0.64
1:B:50:THR:HG21	1:B:52:ASP:HB3	1.80	0.64
1:B:234:PRO:O	1:B:238:GLN:HG3	1.96	0.64
1:L:39:VAL:C	1:L:40:LEU:HD12	2.17	0.64
1:A:366:GLU:O	1:A:370:LYS:HG3	1.98	0.64
1:K:222:VAL:HG12	1:K:223:GLU:N	2.13	0.64
1:H:332:VAL:HG22	1:H:375:VAL:HG11	1.80	0.64
1:N:212:ALA:HB3	1:N:324:ILE:HB	1.78	0.64
1:H:157:VAL:HG21	1:H:395:PHE:CE2	2.33	0.64
1:B:422:ILE:HG23	1:B:444:ARG:HG3	1.77	0.64
1:N:31:LEU:HD13	1:N:90:THR:HG22	1.80	0.64
1:N:40:LEU:HD23	1:N:59:GLU:CG	2.27	0.64
1:H:74:LEU:HA	1:H:512:ILE:HD11	1.79	0.64
1:K:277:ALA:CB	1:K:284:ARG:HD2	2.28	0.64
2:O:56:ASN:HD21	2:P:56:ASN:HB3	1.63	0.64
1:L:50:THR:HG22	1:L:51:LYS:N	2.12	0.64
1:N:234:PRO:CG	1:N:309:GLU:HA	2.28	0.64
1:M:345:ILE:O	1:M:349:LYS:HG3	1.98	0.64
1:B:94:VAL:CG1	1:B:449:GLU:HB3	2.27	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:157:VAL:HG21	1:J:395:PHE:CE2	2.32	0.64
2:S:20:ILE:HG13	2:S:43:GLY:HA2	1.79	0.64
1:L:7:VAL:HG21	1:L:66:LEU:HD11	1.79	0.64
1:I:503:ARG:NH1	1:I:507:GLN:HE22	1.95	0.64
1:L:222:VAL:HG12	1:L:223:GLU:N	2.13	0.64
1:N:247:LEU:HD22	1:N:322:VAL:HG11	1.78	0.64
1:C:116:LEU:O	1:C:120:ILE:HG13	1.97	0.64
1:I:222:VAL:HG12	1:I:223:GLU:N	2.11	0.64
1:E:248:ILE:HD12	1:E:261:LEU:HD21	1.79	0.64
1:D:40:LEU:HD13	1:D:59:GLU:HG3	1.80	0.64
1:M:157:VAL:HG21	1:M:395:PHE:CE2	2.32	0.64
1:I:212:ALA:HB3	1:I:324:ILE:HB	1.79	0.64
2:P:100:GLN:HB2	2:Q:9:LYS:HE2	1.80	0.64
1:L:235:ILE:HD11	1:L:311:ALA:CB	2.18	0.64
1:D:304:LEU:CD1	1:E:262:VAL:HG11	2.27	0.64
1:I:189:VAL:CG1	1:I:333:GLY:HA2	2.26	0.64
1:A:522:VAL:HG22	1:B:39:VAL:HB	1.78	0.64
1:D:136:ILE:HD11	1:D:477:ARG:HH21	1.63	0.64
1:L:65:HIS:O	1:L:69:ILE:HG13	1.98	0.64
1:K:168:VAL:HG11	1:K:173:ILE:H	1.63	0.64
1:K:297:GLY:HA3	1:K:317:GLY:H	1.63	0.64
1:N:222:VAL:HG12	1:N:223:GLU:N	2.13	0.64
1:H:114:LEU:HD12	1:N:459:GLY:HA3	1.77	0.64
1:B:224:LYS:HB3	1:B:302:GLU:OE1	1.98	0.64
1:J:503:ARG:HH11	1:J:507:GLN:HE22	1.46	0.64
1:F:150:ILE:HD11	1:F:495:ILE:CA	2.14	0.63
2:S:100:GLN:OE1	2:T:9:LYS:CE	2.46	0.63
1:K:157:VAL:HG21	1:K:395:PHE:CZ	2.33	0.63
1:M:167:LYS:HD2	1:M:188:PHE:CZ	2.32	0.63
1:L:222:VAL:HG12	1:L:224:LYS:H	1.62	0.63
1:I:277:ALA:CB	1:I:284:ARG:HD2	2.29	0.63
1:G:94:VAL:CG1	1:G:449:GLU:HB3	2.28	0.63
1:H:157:VAL:HG21	1:H:395:PHE:CZ	2.34	0.63
1:L:312:THR:C	1:L:314:SER:H	2.01	0.63
1:A:210:MET:HE1	1:G:343:ALA:HA	1.80	0.63
1:H:247:LEU:HD22	1:H:322:VAL:HG11	1.80	0.63
2:Q:62:LEU:H	2:Q:62:LEU:HD12	1.63	0.63
1:I:232:LEU:HD21	1:I:236:LEU:HD13	1.79	0.63
1:H:264:ASN:HB3	1:H:269:THR:HB	1.78	0.63
2:P:15:VAL:CG2	2:P:95:LEU:HD11	2.26	0.63
1:N:50:THR:HG22	1:N:51:LYS:N	2.10	0.63
1:L:410:ILE:CD1	1:L:496:VAL:HG11	2.27	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:50:THR:HG22	1:F:52:ASP:N	2.12	0.63
2:P:81:GLU:HG3	2:P:85:GLU:H	1.63	0.63
1:L:116:LEU:O	1:L:120:ILE:HG13	1.98	0.63
1:K:167:LYS:HD2	1:K:188:PHE:CZ	2.34	0.63
1:L:361:ARG:O	1:L:365:GLN:HG2	1.98	0.63
1:K:290:ASP:OD1	1:K:371:LEU:HD11	1.98	0.63
1:D:222:VAL:O	1:D:250:ALA:HA	1.97	0.63
1:E:120:ILE:O	1:E:124:VAL:HG23	1.99	0.63
1:M:84:VAL:HG12	1:M:500:LYS:HE2	1.78	0.63
1:E:294:VAL:HA	1:E:341:ILE:HD11	1.79	0.63
1:E:94:VAL:HG12	1:E:449:GLU:HB3	1.79	0.63
1:F:290:ASP:O	1:F:294:VAL:HG23	1.98	0.63
1:B:19:GLY:HA3	1:B:67:GLU:O	1.98	0.63
1:M:173:ILE:HD11	1:M:370:LYS:CB	2.29	0.63
1:I:168:VAL:HG11	1:I:173:ILE:H	1.63	0.63
1:J:410:ILE:HB	1:J:496:VAL:HG11	1.79	0.63
1:M:219:ILE:HB	1:M:295:THR:HG21	1.81	0.63
2:O:81:GLU:HA	2:O:86:GLU:HA	1.81	0.63
1:E:19:GLY:HA3	1:E:67:GLU:O	1.97	0.63
1:N:337:LYS:HB2	1:N:340:ASP:OD2	1.98	0.63
1:N:189:VAL:CG1	1:N:190:GLU:H	2.10	0.63
1:E:223:GLU:O	1:E:251:GLU:HB2	1.98	0.63
2:S:96:LEU:HB3	2:T:89:ILE:HD13	1.81	0.63
1:H:222:VAL:HG12	1:H:224:LYS:H	1.64	0.63
2:T:62:LEU:HD12	2:T:62:LEU:H	1.63	0.63
2:Q:45:VAL:HG21	2:Q:64:VAL:HG11	1.80	0.63
1:B:298:THR:HB	1:B:315:MET:HB2	1.78	0.63
1:H:232:LEU:HD22	1:H:236:LEU:HD22	1.79	0.63
1:M:168:VAL:HG11	1:M:173:ILE:H	1.64	0.63
1:F:136:ILE:HD11	1:F:477:ARG:NH2	2.12	0.63
2:R:45:VAL:HG21	2:R:64:VAL:HG11	1.79	0.63
1:M:178:GLU:HB3	1:M:388:LEU:HD21	1.81	0.63
1:N:74:LEU:HD12	1:N:512:ILE:CD1	2.29	0.63
1:H:74:LEU:HD12	1:H:512:ILE:CD1	2.29	0.63
1:C:98:ALA:HB2	1:C:449:GLU:CG	2.28	0.63
1:J:277:ALA:CB	1:J:284:ARG:HD2	2.27	0.63
1:L:157:VAL:HG21	1:L:395:PHE:CZ	2.34	0.63
1:K:290:ASP:O	1:K:294:VAL:HG23	1.99	0.63
2:R:18:LYS:HG2	2:R:87:TYR:CD2	2.34	0.63
1:N:178:GLU:HB3	1:N:388:LEU:HD21	1.81	0.63
1:I:50:THR:HG22	1:I:51:LYS:N	2.10	0.63
1:L:264:ASN:HB3	1:L:269:THR:HB	1.81	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:222:VAL:HG12	1:N:224:LYS:H	1.64	0.63
2:R:48:VAL:HG13	2:R:62:LEU:HD23	1.79	0.63
1:K:178:GLU:HB3	1:K:388:LEU:HD21	1.81	0.63
1:C:168:VAL:HG12	1:C:168:VAL:O	1.99	0.62
1:A:39:VAL:HB	1:G:522:VAL:HG22	1.81	0.62
1:N:307:LYS:HE3	1:N:310:ASN:ND2	2.14	0.62
2:S:81:GLU:HG3	2:S:85:GLU:H	1.64	0.62
2:U:80:ILE:HG22	2:U:81:GLU:N	2.14	0.62
1:C:259:ALA:O	1:C:263:VAL:HG23	1.99	0.62
1:J:247:LEU:HD22	1:J:322:VAL:HG11	1.80	0.62
1:F:298:THR:HB	1:F:315:MET:HB2	1.81	0.62
1:D:450:PRO:O	1:D:454:ILE:HG13	1.98	0.62
1:E:283:ARG:NH2	1:E:366:GLU:OE1	2.32	0.62
1:E:264:ASN:CG	2:S:30:ILE:HG23	2.19	0.62
1:K:187:LYS:NZ	1:K:379:ARG:HG3	2.14	0.62
1:J:465:ILE:HD13	1:J:480:PHE:CE1	2.34	0.62
1:L:247:LEU:HD22	1:L:322:VAL:HG11	1.80	0.62
1:C:224:LYS:HB3	1:C:302:GLU:OE1	1.99	0.62
2:Q:41:GLN:HG2	2:Q:74:LYS:HB3	1.81	0.62
1:M:206:ASN:HD21	1:M:389:LYS:CD	2.12	0.62
1:C:124:VAL:O	1:C:128:VAL:HG23	1.99	0.62
1:H:503:ARG:NH1	1:H:507:GLN:HE22	1.97	0.62
1:M:503:ARG:NH1	1:M:507:GLN:HE22	1.98	0.62
1:A:352:LEU:HD21	1:A:364:LEU:HB2	1.81	0.62
1:I:157:VAL:HG21	1:I:395:PHE:CE2	2.34	0.62
1:E:265:LYS:HZ2	1:E:271:SER:HB2	1.64	0.62
1:M:50:THR:HG22	1:M:51:LYS:N	2.14	0.62
1:J:232:LEU:HD21	1:J:236:LEU:HD13	1.80	0.62
1:L:212:ALA:HB3	1:L:324:ILE:HB	1.81	0.62
1:F:168:VAL:O	1:F:168:VAL:HG12	2.00	0.62
1:I:187:LYS:NZ	1:I:379:ARG:HG3	2.14	0.62
1:G:256:GLU:HB3	2:U:35:THR:HB	1.81	0.62
1:E:422:ILE:HG23	1:E:444:ARG:HG3	1.80	0.62
1:L:345:ILE:O	1:L:348:ILE:HG22	1.99	0.62
1:E:455:ALA:HB1	1:E:465:ILE:HD12	1.81	0.62
1:C:175:THR:HB	1:C:377:VAL:HG22	1.80	0.62
1:J:54:VAL:HG22	1:J:89:THR:HG21	1.81	0.62
1:E:85:ALA:HB1	1:E:501:VAL:HG12	1.82	0.62
1:I:175:THR:HG21	1:I:177:GLU:OE2	2.00	0.62
1:F:455:ALA:HB1	1:F:465:ILE:HD12	1.81	0.62
2:P:45:VAL:HG21	2:P:64:VAL:HG11	1.80	0.62
1:A:50:THR:CG2	1:A:51:LYS:H	2.11	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:168:VAL:HG11	1:J:173:ILE:H	1.63	0.62
1:K:40:LEU:HD23	1:K:59:GLU:CG	2.29	0.62
1:B:94:VAL:HG12	1:B:449:GLU:HB3	1.80	0.62
1:I:222:VAL:HG12	1:I:224:LYS:H	1.63	0.62
1:G:411:VAL:HB	1:G:412:PRO:HD2	1.81	0.62
1:F:422:ILE:HG23	1:F:444:ARG:HG3	1.82	0.62
1:D:57:ALA:O	1:D:75:LYS:HD3	1.99	0.62
2:P:77:GLY:HA3	2:P:90:LEU:HD23	1.82	0.62
1:J:234:PRO:CG	1:J:309:GLU:HA	2.29	0.62
1:L:283:ARG:HH11	1:L:363:LYS:HE3	1.64	0.62
1:C:325:THR:HG22	1:C:326:LYS:N	2.15	0.62
1:J:290:ASP:O	1:J:294:VAL:HG23	1.99	0.62
1:L:526:LYS:CG	1:L:527:PRO:HD2	2.29	0.62
1:J:157:VAL:HG21	1:J:395:PHE:CZ	2.35	0.62
1:I:226:VAL:HG11	1:I:232:LEU:HD12	1.81	0.62
1:B:118:ARG:HH22	1:C:34:ARG:HH12	1.48	0.62
2:U:13:ASP:CB	2:U:62:LEU:HD21	2.30	0.62
1:J:189:VAL:CG1	1:J:333:GLY:HA2	2.28	0.62
1:M:187:LYS:NZ	1:M:379:ARG:HG3	2.14	0.62
1:A:218:PHE:HB3	1:A:316:LEU:HD13	1.82	0.62
1:L:462:GLY:O	1:L:466:VAL:HG23	2.00	0.62
1:N:189:VAL:HG11	1:N:333:GLY:CA	2.23	0.62
1:E:54:VAL:HG22	1:E:89:THR:HG21	1.82	0.62
1:C:50:THR:HG21	1:C:52:ASP:HB3	1.82	0.62
2:U:92:GLU:HA	2:U:95:LEU:HD12	1.79	0.62
1:B:382:ALA:HB3	1:B:388:LEU:HB2	1.81	0.62
2:O:84:GLY:CA	2:U:27:LYS:HD3	2.30	0.62
1:G:234:PRO:O	1:G:238:GLN:HG3	2.00	0.62
1:G:94:VAL:HG12	1:G:449:GLU:HB3	1.82	0.62
1:I:247:LEU:HD22	1:I:322:VAL:HG11	1.82	0.62
1:E:348:ILE:HD11	1:E:367:ARG:NE	2.14	0.62
1:A:416:VAL:HG21	1:A:490:MET:HG3	1.81	0.62
1:K:465:ILE:HD13	1:K:480:PHE:CE1	2.35	0.62
1:I:340:ASP:O	1:I:343:ALA:HB3	1.99	0.62
1:M:283:ARG:HG2	1:M:363:LYS:HZ2	1.64	0.61
1:B:343:ALA:HB2	1:C:207:PRO:CB	2.26	0.61
1:L:180:LYS:HB3	1:M:281:GLY:N	2.15	0.61
1:B:522:VAL:HG22	1:C:39:VAL:HB	1.82	0.61
1:I:283:ARG:NH2	1:I:367:ARG:HD3	2.14	0.61
1:H:219:ILE:HD12	1:H:295:THR:CG2	2.30	0.61
1:N:503:ARG:NH1	1:N:507:GLN:HE22	1.98	0.61
1:F:235:ILE:HD11	1:F:311:ALA:CB	2.30	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:195:ASP:O	1:H:196:LYS:HD3	1.99	0.61
1:A:229:VAL:HG23	1:A:256:GLU:OE2	2.00	0.61
2:O:73:ALA:HB1	2:O:75:TYR:CE2	2.35	0.61
1:M:283:ARG:HD3	1:M:363:LYS:NZ	2.15	0.61
1:M:235:ILE:HD11	1:M:311:ALA:CB	2.23	0.61
2:S:25:LYS:HG2	2:S:31:VAL:HG22	1.82	0.61
1:C:94:VAL:HG12	1:C:449:GLU:HB3	1.81	0.61
1:I:74:LEU:HD12	1:I:512:ILE:HD12	1.82	0.61
1:H:283:ARG:HH12	1:H:364:LEU:HD12	1.64	0.61
1:L:7:VAL:HG12	1:L:12:ALA:HB2	1.82	0.61
1:B:120:ILE:O	1:B:124:VAL:HG23	2.00	0.61
1:M:50:THR:HG22	1:M:52:ASP:N	2.09	0.61
1:F:218:PHE:HB3	1:F:316:LEU:HD13	1.80	0.61
1:J:178:GLU:HB3	1:J:388:LEU:HD21	1.82	0.61
1:L:189:VAL:HG11	1:L:333:GLY:HA2	1.81	0.61
1:G:52:ASP:OD1	1:G:54:VAL:HG23	2.01	0.61
1:A:50:THR:HG21	1:A:52:ASP:HB3	1.81	0.61
1:M:229:VAL:HG23	1:M:256:GLU:CB	2.29	0.61
1:C:270:LEU:HG	1:C:272:VAL:HG13	1.80	0.61
1:C:416:VAL:HG21	1:C:490:MET:HG3	1.81	0.61
1:F:178:GLU:HG3	1:F:388:LEU:HD21	1.82	0.61
1:M:195:ASP:O	1:M:196:LYS:HD3	2.00	0.61
1:H:178:GLU:HB3	1:H:388:LEU:HD21	1.82	0.61
1:I:410:ILE:HB	1:I:496:VAL:HG11	1.82	0.61
1:I:74:LEU:HD12	1:I:512:ILE:CD1	2.30	0.61
1:I:249:ILE:O	1:I:249:ILE:HG22	2.00	0.61
1:M:264:ASN:HB3	1:M:269:THR:HB	1.83	0.61
1:N:264:ASN:HB3	1:N:269:THR:HB	1.80	0.61
1:I:167:LYS:HD2	1:I:188:PHE:CZ	2.34	0.61
1:L:49:ILE:HG21	1:M:515:LEU:HD21	1.82	0.61
2:O:52:ARG:HH21	2:P:53:VAL:HB	1.63	0.61
1:K:74:LEU:HD12	1:K:512:ILE:CD1	2.31	0.61
1:A:233:LEU:HD23	2:O:30:ILE:HD13	1.82	0.61
1:I:157:VAL:HG21	1:I:395:PHE:CZ	2.35	0.61
1:H:452:ARG:HH11	1:H:452:ARG:HG2	1.65	0.61
1:H:96:ALA:O	1:H:100:VAL:HG23	2.00	0.61
1:A:23:VAL:HG22	1:A:60:VAL:HG11	1.83	0.61
2:P:22:GLU:OE2	2:P:38:GLU:O	2.19	0.61
1:C:235:ILE:CD1	1:C:311:ALA:HB3	2.30	0.61
1:I:283:ARG:HH12	1:I:364:LEU:HD12	1.64	0.61
1:A:136:ILE:HD11	1:A:477:ARG:NH2	2.16	0.61
1:D:422:ILE:HG23	1:D:444:ARG:HG3	1.82	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:300:ILE:HG21	1:L:308:LEU:HD23	1.81	0.61
1:H:218:PHE:CE1	1:H:242:THR:HG21	2.35	0.61
1:A:325:THR:HG22	1:A:326:LYS:H	1.65	0.61
1:N:167:LYS:HD2	1:N:188:PHE:CZ	2.35	0.61
1:H:361:ARG:O	1:H:365:GLN:HG2	2.01	0.61
1:A:237:GLU:CD	2:O:28:GLY:HA3	2.21	0.61
1:A:85:ALA:HB1	1:A:501:VAL:HG12	1.83	0.61
1:D:175:THR:HB	1:D:377:VAL:HG22	1.83	0.61
1:G:50:THR:HG21	1:G:52:ASP:HB3	1.83	0.61
1:F:78:ALA:O	1:F:89:THR:HG22	2.00	0.61
1:E:522:VAL:HG22	1:F:39:VAL:HB	1.81	0.61
1:I:229:VAL:HG23	1:I:256:GLU:CB	2.30	0.61
1:A:94:VAL:HG12	1:A:449:GLU:HB3	1.83	0.61
1:A:235:ILE:HD12	1:A:311:ALA:CB	2.31	0.61
1:I:264:ASN:HB3	1:I:269:THR:HB	1.81	0.61
1:A:19:GLY:HA3	1:A:67:GLU:O	2.00	0.61
1:C:368:LEU:O	1:C:368:LEU:HD12	2.00	0.61
1:C:411:VAL:HB	1:C:412:PRO:HD2	1.83	0.61
1:N:283:ARG:NH1	1:N:363:LYS:HG3	2.15	0.61
1:C:50:THR:CG2	1:C:51:LYS:H	2.10	0.61
1:G:240:ALA:HA	1:G:270:LEU:HD13	1.83	0.61
1:D:98:ALA:HB2	1:D:449:GLU:CG	2.31	0.61
1:J:167:LYS:HD2	1:J:188:PHE:CZ	2.36	0.61
1:K:264:ASN:HB3	1:K:269:THR:HB	1.82	0.61
1:D:18:ARG:HD2	1:D:67:GLU:OE2	2.01	0.61
2:O:11:LEU:O	2:O:12:GLY:C	2.39	0.61
1:M:178:GLU:H	1:M:321:ARG:NH1	1.95	0.60
1:L:180:LYS:O	1:M:280:PHE:C	2.40	0.60
1:D:85:ALA:HB1	1:D:501:VAL:HG12	1.82	0.60
1:C:94:VAL:CG1	1:C:449:GLU:HB3	2.30	0.60
1:N:224:LYS:HG2	1:N:225:LYS:H	1.66	0.60
1:L:277:ALA:CB	1:L:284:ARG:HD2	2.30	0.60
1:F:368:LEU:O	1:F:368:LEU:HD12	2.01	0.60
1:E:348:ILE:HD11	1:E:367:ARG:HE	1.65	0.60
1:D:6:LEU:HD22	1:D:523:VAL:HG22	1.82	0.60
1:L:232:LEU:HD22	1:L:236:LEU:HD22	1.82	0.60
1:G:222:VAL:O	1:G:250:ALA:HA	2.01	0.60
1:H:116:LEU:O	1:H:120:ILE:HG13	2.01	0.60
1:B:136:ILE:HD11	1:B:477:ARG:NH2	2.16	0.60
1:B:50:THR:CG2	1:B:52:ASP:H	2.11	0.60
1:K:345:ILE:HG22	1:K:349:LYS:HE3	1.83	0.60
1:H:290:ASP:N	1:H:344:ARG:HH12	1.99	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:19:GLY:HA3	1:D:67:GLU:O	2.01	0.60
2:O:9:LYS:HE2	2:U:100:GLN:HB2	1.82	0.60
1:M:232:LEU:HD22	1:M:236:LEU:HD22	1.83	0.60
1:M:410:ILE:HB	1:M:496:VAL:HG11	1.82	0.60
1:K:217:ALA:CB	1:K:245:PRO:HG2	2.25	0.60
1:G:50:THR:CG2	1:G:51:LYS:H	2.06	0.60
1:F:54:VAL:HG22	1:F:89:THR:HG21	1.83	0.60
1:C:300:ILE:O	1:C:300:ILE:HG22	2.01	0.60
1:M:222:VAL:HG12	1:M:223:GLU:N	2.16	0.60
1:D:287:MET:O	1:D:291:ILE:HG13	2.01	0.60
2:R:45:VAL:O	2:R:46:ILE:HD13	2.01	0.60
1:E:23:VAL:HG22	1:E:60:VAL:HG11	1.82	0.60
1:F:184:THR:HG23	1:F:380:VAL:HA	1.82	0.60
1:M:178:GLU:OE1	1:M:323:ARG:NH2	2.33	0.60
1:E:345:ILE:HD11	1:E:368:LEU:HD23	1.82	0.60
1:H:219:ILE:HB	1:H:295:THR:HG21	1.84	0.60
2:Q:96:LEU:HA	2:R:14:ARG:NE	2.16	0.60
1:I:229:VAL:CG2	1:I:256:GLU:HB3	2.31	0.60
1:K:263:VAL:O	1:K:267:ARG:HB2	2.01	0.60
1:M:268:GLY:O	1:N:227:SER:OG	2.18	0.60
1:C:455:ALA:HB1	1:C:465:ILE:HD12	1.83	0.60
2:T:25:LYS:HG2	2:T:31:VAL:HG22	1.83	0.60
1:B:366:GLU:O	1:B:370:LYS:HG3	2.01	0.60
1:E:360:ALA:O	1:E:364:LEU:HG	2.01	0.60
1:L:180:LYS:HB3	1:M:281:GLY:CA	2.31	0.60
1:I:40:LEU:HD23	1:I:59:GLU:CG	2.30	0.60
1:D:235:ILE:CD1	1:D:311:ALA:HB3	2.29	0.60
2:O:80:ILE:HG22	2:O:81:GLU:N	2.15	0.60
1:K:224:LYS:HG2	1:K:225:LYS:H	1.66	0.60
1:G:222:VAL:HG22	1:G:300:ILE:HD12	1.82	0.60
1:J:249:ILE:O	1:J:249:ILE:HG22	2.01	0.60
1:H:312:THR:C	1:H:314:SER:H	2.05	0.60
1:K:219:ILE:HD12	1:K:295:THR:CG2	2.32	0.60
1:H:234:PRO:CG	1:H:309:GLU:HA	2.32	0.60
1:L:526:LYS:HG3	1:L:527:PRO:HD2	1.82	0.60
1:D:178:GLU:HG3	1:D:388:LEU:HD21	1.83	0.60
1:M:157:VAL:HG21	1:M:395:PHE:CZ	2.36	0.60
1:F:382:ALA:HB3	1:F:388:LEU:HB2	1.83	0.60
1:I:465:ILE:HD13	1:I:480:PHE:CE1	2.36	0.60
2:U:13:ASP:C	2:U:13:ASP:OD1	2.40	0.60
1:H:189:VAL:CG1	1:H:190:GLU:H	2.11	0.60
1:I:74:LEU:HA	1:I:512:ILE:HD11	1.84	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:501:VAL:HG23	1:C:502:THR:N	2.17	0.60
1:G:85:ALA:HB1	1:G:501:VAL:HG12	1.84	0.60
2:R:80:ILE:HG22	2:R:81:GLU:N	2.17	0.60
1:A:72:GLN:HE22	1:A:75:LYS:NZ	2.00	0.60
2:Q:73:ALA:HB1	2:Q:75:TYR:CE2	2.37	0.60
1:J:50:THR:HG22	1:J:52:ASP:N	2.12	0.60
1:N:74:LEU:HA	1:N:512:ILE:HD11	1.84	0.60
1:H:40:LEU:HD23	1:H:59:GLU:CG	2.29	0.60
1:J:222:VAL:HG12	1:J:224:LYS:H	1.66	0.60
1:G:23:VAL:HG22	1:G:60:VAL:HG11	1.83	0.60
1:C:404:ALA:HB1	1:C:500:LYS:HB3	1.82	0.60
1:H:527:PRO:O	1:H:528:GLU:HG2	2.02	0.60
1:M:182:LEU:HD12	1:N:363:LYS:HE2	1.82	0.60
1:E:225:LYS:HG3	1:E:252:ASP:HB3	1.84	0.60
1:E:251:GLU:HA	1:E:277:ALA:HB2	1.83	0.60
1:H:316:LEU:CD2	1:H:316:LEU:H	2.15	0.60
1:B:69:ILE:HD11	1:C:41:GLU:HB2	1.83	0.60
1:K:79:SER:C	1:K:81:THR:H	2.05	0.60
1:L:178:GLU:HB3	1:L:388:LEU:HD21	1.83	0.60
2:R:73:ALA:HB1	2:R:75:TYR:CE2	2.36	0.60
1:D:150:ILE:CD1	1:D:496:VAL:H	2.14	0.60
1:N:168:VAL:HG11	1:N:173:ILE:H	1.66	0.60
1:K:50:THR:HG22	1:K:52:ASP:N	2.15	0.60
1:F:233:LEU:HD23	2:T:30:ILE:HD13	1.84	0.60
1:J:222:VAL:HG12	1:J:223:GLU:N	2.17	0.60
1:B:72:GLN:HE22	1:B:75:LYS:NZ	2.00	0.60
2:T:81:GLU:HA	2:T:85:GLU:O	2.02	0.60
1:N:465:ILE:HD13	1:N:480:PHE:CE1	2.36	0.60
1:M:372:ALA:C	1:M:374:GLY:N	2.48	0.59
1:M:229:VAL:CG2	1:M:256:GLU:HB3	2.32	0.59
1:F:325:THR:HG22	1:F:326:LYS:H	1.66	0.59
2:Q:96:LEU:HD23	2:R:14:ARG:NH2	2.16	0.59
1:L:283:ARG:NH2	1:L:367:ARG:HD3	2.17	0.59
1:L:526:LYS:HD2	1:L:527:PRO:HD2	1.84	0.59
1:E:258:LEU:HA	1:E:261:LEU:HD12	1.83	0.59
1:H:232:LEU:HD21	1:H:236:LEU:HD13	1.84	0.59
1:B:136:ILE:HD11	1:B:477:ARG:HH21	1.68	0.59
1:A:178:GLU:HG3	1:A:388:LEU:HD21	1.83	0.59
1:K:54:VAL:HG22	1:K:89:THR:HG21	1.84	0.59
1:D:118:ARG:HH22	1:E:34:ARG:HH12	1.50	0.59
1:J:312:THR:C	1:J:314:SER:H	2.05	0.59
1:M:410:ILE:CD1	1:M:496:VAL:HG11	2.29	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:410:ILE:HB	1:L:496:VAL:HG11	1.83	0.59
1:L:180:LYS:O	1:M:281:GLY:HA3	2.02	0.59
1:E:98:ALA:HB2	1:E:449:GLU:CG	2.32	0.59
1:E:382:ALA:HB3	1:E:388:LEU:HB2	1.83	0.59
1:I:157:VAL:O	1:I:161:ILE:HG13	2.01	0.59
1:L:232:LEU:HD21	1:L:236:LEU:HD13	1.84	0.59
1:M:390:GLU:OE1	1:M:394:ARG:NH1	2.35	0.59
1:D:416:VAL:HG21	1:D:490:MET:HG3	1.85	0.59
1:C:237:GLU:CG	2:Q:28:GLY:HA3	2.31	0.59
1:M:40:LEU:HD23	1:M:59:GLU:CG	2.32	0.59
1:J:233:LEU:N	1:J:234:PRO:HD2	2.17	0.59
2:U:41:GLN:HG2	2:U:74:LYS:HB3	1.83	0.59
1:D:290:ASP:O	1:D:294:VAL:HG23	2.02	0.59
2:T:8:ILE:HD12	2:T:8:ILE:N	2.17	0.59
1:N:283:ARG:HH12	1:N:364:LEU:HD12	1.67	0.59
1:M:136:ILE:HD11	1:M:491:VAL:CG2	2.33	0.59
1:E:213:VAL:O	1:E:214:LEU:HD23	2.02	0.59
1:K:189:VAL:CG1	1:K:190:GLU:H	2.08	0.59
1:M:177:GLU:HB3	1:M:321:ARG:HH11	1.67	0.59
1:G:127:ALA:O	1:G:131:ILE:HG13	2.02	0.59
2:S:96:LEU:HB3	2:T:89:ILE:HG21	1.84	0.59
1:J:458:ALA:O	1:K:114:LEU:HD12	2.02	0.59
1:B:116:LEU:O	1:B:120:ILE:HG13	2.01	0.59
2:T:8:ILE:H	2:T:8:ILE:HD12	1.67	0.59
1:J:28:LYS:NZ	1:J:97:GLN:HE22	1.99	0.59
1:N:218:PHE:CE1	1:N:242:THR:HG21	2.38	0.59
1:L:118:ARG:O	1:L:122:LYS:HG3	2.02	0.59
1:M:410:ILE:HB	1:M:496:VAL:HG12	1.84	0.59
1:I:325:THR:CG2	1:I:327:ASP:H	2.05	0.59
1:C:54:VAL:HG22	1:C:89:THR:HG21	1.84	0.59
1:H:295:THR:HG22	1:H:317:GLY:C	2.21	0.59
1:I:232:LEU:HD22	1:I:236:LEU:HD22	1.84	0.59
1:L:232:LEU:O	1:L:232:LEU:HD23	2.03	0.59
1:H:79:SER:C	1:H:81:THR:H	2.05	0.59
1:L:167:LYS:HD2	1:L:188:PHE:CZ	2.37	0.59
1:K:103:GLY:O	1:K:107:VAL:HG23	2.02	0.59
1:J:84:VAL:HG12	1:J:500:LYS:HE2	1.84	0.59
1:G:30:THR:O	1:G:35:GLY:HA3	2.02	0.59
1:K:128:VAL:HA	1:K:131:ILE:HD12	1.83	0.59
1:H:410:ILE:HB	1:H:496:VAL:HG11	1.83	0.59
1:M:74:LEU:HD12	1:M:512:ILE:CD1	2.32	0.59
1:F:301:SER:HB2	1:F:304:LEU:CB	2.33	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:290:ASP:N	1:I:344:ARG:HH12	2.00	0.59
1:K:283:ARG:HH12	1:K:364:LEU:HD12	1.66	0.59
1:K:267:ARG:HG2	1:L:256:GLU:CD	2.23	0.59
1:C:57:ALA:O	1:C:75:LYS:HD3	2.02	0.59
1:B:136:ILE:HB	1:B:410:ILE:HG22	1.84	0.59
1:F:366:GLU:O	1:F:370:LYS:HG3	2.03	0.59
1:H:337:LYS:HB2	1:H:340:ASP:OD2	2.02	0.59
2:S:12:GLY:O	2:S:13:ASP:CB	2.45	0.59
1:E:281:GLY:O	1:E:284:ARG:HG2	2.02	0.59
1:L:187:LYS:NZ	1:L:379:ARG:HG3	2.17	0.59
1:M:219:ILE:HD12	1:M:295:THR:CG2	2.32	0.59
1:L:295:THR:HG22	1:L:317:GLY:C	2.23	0.59
1:C:382:ALA:HB3	1:C:388:LEU:HB2	1.84	0.59
1:J:229:VAL:HG23	1:J:256:GLU:CB	2.32	0.59
1:F:284:ARG:O	1:F:288:LEU:HG	2.03	0.59
2:U:81:GLU:HA	2:U:85:GLU:O	2.02	0.59
1:D:325:THR:HG22	1:D:326:LYS:N	2.18	0.59
1:K:290:ASP:N	1:K:344:ARG:HH12	2.00	0.59
1:I:178:GLU:HB3	1:I:388:LEU:HD21	1.83	0.59
1:N:79:SER:C	1:N:81:THR:H	2.06	0.59
1:E:283:ARG:NH1	1:E:363:LYS:HB3	2.17	0.59
1:N:187:LYS:NZ	1:N:379:ARG:HG3	2.18	0.59
1:C:235:ILE:HD11	1:C:311:ALA:CB	2.33	0.59
1:D:224:LYS:HB3	1:D:302:GLU:OE1	2.03	0.59
1:B:229:VAL:HG12	1:B:233:LEU:HD11	1.85	0.59
1:G:301:SER:HB2	1:G:304:LEU:CB	2.31	0.59
1:I:74:LEU:HA	1:I:512:ILE:CD1	2.32	0.59
1:B:498:PRO:HG2	1:B:501:VAL:CG2	2.32	0.59
1:G:279:GLY:C	1:G:284:ARG:HB3	2.22	0.59
1:L:180:LYS:C	1:M:281:GLY:CA	2.71	0.59
1:L:74:LEU:HA	1:L:512:ILE:CD1	2.32	0.59
1:H:283:ARG:NH1	1:H:363:LYS:HG3	2.17	0.59
1:K:222:VAL:HG12	1:K:224:LYS:H	1.68	0.59
2:U:84:GLY:O	2:U:85:GLU:HG3	2.03	0.59
1:H:157:VAL:O	1:H:161:ILE:HG13	2.03	0.59
1:F:157:VAL:HG22	1:F:395:PHE:CZ	2.37	0.59
1:H:459:GLY:HA3	1:I:114:LEU:HD12	1.85	0.59
1:N:175:THR:HG21	1:N:177:GLU:OE2	2.02	0.59
1:J:332:VAL:HG22	1:J:375:VAL:HG11	1.85	0.59
1:L:182:LEU:HD12	1:M:363:LYS:NZ	2.18	0.58
1:J:217:ALA:CB	1:J:245:PRO:HG2	2.26	0.58
1:F:116:LEU:O	1:F:120:ILE:HG13	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:382:ALA:HB3	1:A:388:LEU:HB2	1.85	0.58
1:C:230:ARG:O	1:C:234:PRO:HD2	2.03	0.58
1:F:50:THR:HG21	1:F:52:ASP:HB3	1.83	0.58
1:C:278:PRO:O	1:C:279:GLY:O	2.21	0.58
1:L:168:VAL:HG11	1:L:173:ILE:H	1.67	0.58
1:K:496:VAL:HG12	1:K:497:ASP:H	1.68	0.58
1:B:247:LEU:HD13	1:B:324:ILE:HD11	1.85	0.58
1:D:501:VAL:HG23	1:D:502:THR:N	2.18	0.58
1:F:237:GLU:CG	2:T:28:GLY:HA3	2.32	0.58
2:R:81:GLU:HA	2:R:86:GLU:HA	1.85	0.58
1:H:118:ARG:O	1:H:122:LYS:HG3	2.02	0.58
1:A:136:ILE:HD11	1:A:477:ARG:HH21	1.67	0.58
1:L:226:VAL:HG11	1:L:232:LEU:HD12	1.84	0.58
2:T:81:GLU:HG3	2:T:85:GLU:H	1.67	0.58
1:D:141:ARG:NH2	1:D:163:ASP:OD1	2.29	0.58
2:S:56:ASN:N	2:S:56:ASN:OD1	2.35	0.58
1:A:298:THR:HB	1:A:315:MET:HB2	1.85	0.58
1:C:349:LYS:C	1:C:351:GLU:H	2.06	0.58
2:O:45:VAL:HG21	2:O:64:VAL:CG1	2.32	0.58
1:C:136:ILE:CD1	1:C:477:ARG:HH21	2.16	0.58
1:F:85:ALA:HB1	1:F:501:VAL:HG12	1.84	0.58
1:L:224:LYS:HG2	1:L:225:LYS:H	1.68	0.58
1:B:124:VAL:O	1:B:128:VAL:HG23	2.03	0.58
1:H:106:ASN:HD21	5:H:545:DMS:H11	1.68	0.58
1:K:175:THR:HG21	1:K:177:GLU:OE2	2.03	0.58
2:Q:34:ASP:OD1	2:Q:34:ASP:N	2.35	0.58
1:L:465:ILE:HD13	1:L:480:PHE:CE1	2.39	0.58
1:K:312:THR:C	1:K:314:SER:H	2.07	0.58
1:N:258:LEU:O	1:N:262:VAL:HG23	2.03	0.58
1:B:498:PRO:HG2	1:B:501:VAL:HG22	1.84	0.58
2:O:14:ARG:HE	2:U:96:LEU:HD23	1.68	0.58
1:N:103:GLY:O	1:N:107:VAL:HG23	2.04	0.58
1:M:79:SER:C	1:M:81:THR:H	2.06	0.58
1:L:175:THR:HG21	1:L:177:GLU:OE2	2.03	0.58
1:M:31:LEU:HD13	1:M:90:THR:HG22	1.84	0.58
1:H:235:ILE:HD11	1:H:311:ALA:CB	2.23	0.58
2:R:96:LEU:HA	2:S:14:ARG:HE	1.67	0.58
1:M:345:ILE:HG22	1:M:349:LYS:HE3	1.85	0.58
2:U:20:ILE:HG13	2:U:43:GLY:HA2	1.86	0.58
2:T:80:ILE:HG22	2:T:81:GLU:N	2.19	0.58
1:L:36:ARG:HB3	1:M:518:THR:O	2.04	0.58
1:J:81:THR:OG1	1:J:508:ASN:ND2	2.35	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:8:ILE:N	2:R:8:ILE:HD12	2.19	0.58
1:N:229:VAL:HG23	1:N:256:GLU:CB	2.34	0.58
1:E:116:LEU:O	1:E:120:ILE:HG13	2.04	0.58
1:E:18:ARG:HD2	1:E:67:GLU:OE2	2.04	0.58
1:D:72:GLN:HE22	1:D:75:LYS:NZ	2.01	0.58
2:O:34:ASP:OD1	2:O:34:ASP:N	2.31	0.58
1:M:218:PHE:CE1	1:M:242:THR:HG21	2.39	0.58
1:C:298:THR:HB	1:C:315:MET:HB2	1.84	0.58
1:J:96:ALA:O	1:J:100:VAL:HG23	2.03	0.58
1:E:326:LYS:O	1:E:326:LYS:HD3	2.03	0.58
1:I:263:VAL:O	1:I:267:ARG:HB2	2.03	0.58
1:H:229:VAL:HG23	1:H:256:GLU:CB	2.33	0.58
1:N:290:ASP:N	1:N:344:ARG:HH12	2.01	0.58
2:R:73:ALA:O	2:R:75:TYR:N	2.36	0.58
1:C:253:VAL:HG21	1:C:274:ALA:HB1	1.85	0.58
1:M:337:LYS:HB2	1:M:340:ASP:OD2	2.04	0.58
1:M:259:ALA:O	1:M:263:VAL:HG23	2.03	0.58
1:H:325:THR:CG2	1:H:327:ASP:H	2.05	0.58
1:G:78:ALA:O	1:G:89:THR:HG22	2.04	0.58
1:J:189:VAL:CG1	1:J:190:GLU:H	2.12	0.58
1:I:234:PRO:HG3	1:I:309:GLU:CA	2.33	0.58
2:T:81:GLU:HA	2:T:86:GLU:HA	1.84	0.58
1:G:392:LYS:O	1:G:396:GLU:HG3	2.04	0.58
1:G:88:GLY:HA2	4:G:7551:ADP:O2B	2.03	0.58
1:L:249:ILE:O	1:L:249:ILE:HG22	2.02	0.58
1:D:101:ARG:HG3	1:D:102:GLU:N	2.19	0.58
2:Q:11:LEU:O	2:Q:12:GLY:C	2.40	0.58
1:N:283:ARG:CZ	1:N:363:LYS:HG3	2.33	0.58
1:A:150:ILE:CD1	1:A:495:ILE:HA	2.19	0.58
1:M:37:ASN:OD1	1:N:515:LEU:HD12	2.03	0.58
1:C:237:GLU:HB3	2:Q:28:GLY:CA	2.27	0.58
1:B:78:ALA:O	1:B:89:THR:HG22	2.04	0.58
1:A:124:VAL:O	1:A:128:VAL:HG23	2.02	0.58
1:K:157:VAL:O	1:K:161:ILE:HG13	2.03	0.58
2:R:17:VAL:HG12	2:R:18:LYS:N	2.18	0.58
1:D:229:VAL:HG21	2:R:36:ALA:HB2	1.86	0.58
1:E:72:GLN:HE22	1:E:75:LYS:NZ	2.02	0.58
1:J:303:GLU:C	1:J:305:GLY:H	2.07	0.58
1:G:450:PRO:O	1:G:454:ILE:HG13	2.04	0.58
1:K:234:PRO:HG3	1:K:309:GLU:CA	2.32	0.58
1:F:325:THR:HG22	1:F:326:LYS:N	2.19	0.58
1:J:295:THR:HG22	1:J:317:GLY:C	2.24	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:18:LYS:HZ1	2:T:85:GLU:CD	2.06	0.58
1:B:300:ILE:O	1:B:300:ILE:HG22	2.02	0.58
2:S:77:GLY:HA3	2:S:90:LEU:HD23	1.86	0.58
1:G:6:LEU:HD22	1:G:523:VAL:HG22	1.86	0.58
1:M:385:GLU:N	1:N:280:PHE:CE2	2.72	0.57
1:N:410:ILE:HB	1:N:496:VAL:HG11	1.85	0.57
1:H:345:ILE:O	1:H:349:LYS:HG3	2.04	0.57
1:D:235:ILE:CG1	1:D:311:ALA:HB3	2.33	0.57
1:I:303:GLU:C	1:I:305:GLY:H	2.08	0.57
1:M:462:GLY:O	1:M:466:VAL:HG23	2.03	0.57
1:C:150:ILE:HD11	1:C:495:ILE:CA	2.12	0.57
1:M:307:LYS:HE3	1:M:310:ASN:ND2	2.19	0.57
1:I:283:ARG:HH11	1:I:363:LYS:HE3	1.66	0.57
1:L:54:VAL:HG22	1:L:89:THR:CG2	2.32	0.57
1:M:332:VAL:CG1	1:M:377:VAL:HG21	2.34	0.57
1:I:219:ILE:HB	1:I:295:THR:HG21	1.85	0.57
1:N:290:ASP:O	1:N:294:VAL:HG23	2.04	0.57
1:B:366:GLU:O	1:B:369:ALA:HB3	2.03	0.57
1:A:57:ALA:O	1:A:75:LYS:HD3	2.03	0.57
1:G:19:GLY:HA3	1:G:67:GLU:O	2.03	0.57
1:L:316:LEU:CD2	1:L:316:LEU:H	2.18	0.57
1:F:23:VAL:HG22	1:F:60:VAL:HG11	1.85	0.57
1:M:283:ARG:HH12	1:M:364:LEU:HD12	1.69	0.57
1:L:219:ILE:HD12	1:L:295:THR:CG2	2.34	0.57
1:G:263:VAL:O	1:G:267:ARG:HB2	2.04	0.57
2:R:21:GLU:H	2:R:21:GLU:CD	2.07	0.57
2:O:54:LEU:HD11	2:P:55:GLU:HA	1.86	0.57
1:M:178:GLU:CA	1:M:321:ARG:HH12	2.17	0.57
1:B:54:VAL:HG22	1:B:89:THR:HG21	1.86	0.57
1:E:312:THR:HG22	1:E:314:SER:H	1.69	0.57
1:N:74:LEU:HD12	1:N:512:ILE:HD12	1.87	0.57
1:C:85:ALA:HB1	1:C:501:VAL:HG12	1.86	0.57
1:M:290:ASP:N	1:M:344:ARG:HH12	2.02	0.57
1:L:337:LYS:HB2	1:L:340:ASP:OD2	2.04	0.57
1:B:96:ALA:O	1:B:100:VAL:HG23	2.03	0.57
2:P:13:ASP:HB2	2:P:62:LEU:CD2	2.34	0.57
1:E:352:LEU:HD21	1:E:365:GLN:HG2	1.87	0.57
1:L:410:ILE:HB	1:L:496:VAL:HG12	1.86	0.57
1:N:74:LEU:HA	1:N:512:ILE:CD1	2.34	0.57
1:H:74:LEU:HA	1:H:512:ILE:CD1	2.33	0.57
1:K:74:LEU:HA	1:K:512:ILE:CD1	2.35	0.57
1:J:79:SER:C	1:J:81:THR:H	2.08	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:41:GLU:OE2	1:N:524:ALA:HB1	2.05	0.57
2:P:71:VAL:CG1	2:Q:80:ILE:HD13	2.35	0.57
1:L:362:GLU:O	1:L:365:GLN:HB2	2.04	0.57
1:B:18:ARG:HD2	1:B:67:GLU:OE2	2.05	0.57
1:L:345:ILE:O	1:L:349:LYS:HG3	2.04	0.57
2:T:8:ILE:HG21	2:T:16:VAL:HG21	1.86	0.57
2:T:56:ASN:O	2:T:58:GLN:HG3	2.04	0.57
1:I:312:THR:C	1:I:314:SER:H	2.07	0.57
1:G:175:THR:HB	1:G:377:VAL:HG22	1.86	0.57
1:I:79:SER:C	1:I:81:THR:H	2.07	0.57
1:K:50:THR:HG22	1:K:51:LYS:N	2.14	0.57
1:H:256:GLU:HG3	1:N:267:ARG:O	2.04	0.57
1:N:157:VAL:O	1:N:161:ILE:HG13	2.05	0.57
1:A:235:ILE:HD12	1:A:311:ALA:HB1	1.87	0.57
2:O:77:GLY:HA3	2:O:90:LEU:HD23	1.86	0.57
1:D:298:THR:HB	1:D:315:MET:HB2	1.87	0.57
1:E:118:ARG:HH22	1:F:34:ARG:HH12	1.52	0.57
1:M:283:ARG:CD	1:M:363:LYS:HZ2	2.17	0.57
1:M:496:VAL:HG12	1:M:497:ASP:H	1.69	0.57
1:A:168:VAL:HG12	1:A:168:VAL:O	2.05	0.57
1:G:168:VAL:HG12	1:G:168:VAL:O	2.05	0.57
1:J:235:ILE:HD11	1:J:311:ALA:CB	2.26	0.57
1:C:229:VAL:HG23	1:C:256:GLU:OE2	2.03	0.57
1:E:225:LYS:HD3	1:E:254:GLU:CD	2.25	0.57
1:M:295:THR:HG22	1:M:317:GLY:C	2.25	0.57
1:N:233:LEU:N	1:N:234:PRO:HD2	2.20	0.57
1:D:128:VAL:HG13	1:D:503:ARG:HG3	1.85	0.57
2:R:81:GLU:HA	2:R:85:GLU:O	2.05	0.57
1:M:263:VAL:O	1:M:267:ARG:HB2	2.04	0.57
1:K:340:ASP:O	1:K:343:ALA:HB3	2.04	0.57
2:T:73:ALA:HB1	2:T:75:TYR:CE2	2.39	0.57
1:G:233:LEU:O	1:G:237:GLU:HG3	2.04	0.57
2:R:34:ASP:HA	2:R:37:LYS:HE2	1.85	0.57
1:N:421:ALA:O	1:N:425:VAL:HG23	2.05	0.57
2:Q:54:LEU:HD11	2:R:57:GLY:CA	2.34	0.57
1:B:349:LYS:C	1:B:351:GLU:H	2.07	0.57
1:G:40:LEU:HD13	1:G:59:GLU:HG3	1.87	0.57
1:G:184:THR:HG23	1:G:380:VAL:HA	1.86	0.57
2:Q:17:VAL:O	2:Q:87:TYR:HB3	2.05	0.57
1:L:40:LEU:N	1:L:40:LEU:HD12	2.19	0.57
1:F:98:ALA:HB2	1:F:449:GLU:CG	2.33	0.57
2:T:10:PRO:HB2	2:T:14:ARG:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:13:ASP:HA	2:T:62:LEU:HD21	1.87	0.57
2:R:17:VAL:O	2:R:87:TYR:HB3	2.05	0.57
1:L:303:GLU:C	1:L:305:GLY:H	2.08	0.57
1:M:146:GLU:O	1:M:150:ILE:HG13	2.05	0.57
1:G:452:ARG:NH1	1:G:463:SER:HA	2.19	0.57
1:D:80:LYS:HE2	1:E:383:ALA:O	2.04	0.57
1:J:127:ALA:O	1:J:131:ILE:HG13	2.04	0.57
1:B:199:ILE:HG13	1:B:274:ALA:O	2.05	0.57
1:H:74:LEU:HD12	1:H:512:ILE:HD12	1.87	0.57
1:H:345:ILE:HG22	1:H:349:LYS:HE3	1.86	0.57
1:I:295:THR:HG22	1:I:317:GLY:C	2.24	0.57
1:H:283:ARG:HD3	1:H:363:LYS:HE3	1.87	0.57
1:N:54:VAL:HG22	1:N:89:THR:HG21	1.87	0.57
1:C:290:ASP:O	1:C:294:VAL:HG23	2.04	0.57
1:N:127:ALA:O	1:N:131:ILE:HG13	2.04	0.57
1:C:445:ARG:CZ	1:C:452:ARG:HH21	2.18	0.57
1:L:31:LEU:HD13	1:L:90:THR:HG22	1.86	0.57
1:B:345:ILE:HG23	1:B:368:LEU:HD13	1.87	0.57
1:F:101:ARG:HG3	1:F:102:GLU:N	2.20	0.57
1:C:220:LEU:HG	1:C:222:VAL:HG23	1.87	0.56
2:P:27:LYS:HD3	2:Q:84:GLY:HA3	1.86	0.56
1:J:496:VAL:HG12	1:J:497:ASP:H	1.70	0.56
1:E:144:ILE:CD1	1:E:165:MET:HG2	2.34	0.56
1:L:219:ILE:HB	1:L:295:THR:HG21	1.87	0.56
1:H:283:ARG:HH22	1:H:364:LEU:HA	1.70	0.56
1:B:359:TYR:CZ	1:B:363:LYS:HE3	2.40	0.56
1:I:31:LEU:HD13	1:I:90:THR:HG22	1.87	0.56
1:G:201:PRO:O	1:G:204:VAL:HG23	2.05	0.56
1:G:95:LEU:O	1:G:99:ILE:HG13	2.05	0.56
1:F:411:VAL:HB	1:F:412:PRO:HD2	1.87	0.56
1:M:283:ARG:HD3	1:M:363:LYS:HZ2	1.69	0.56
1:M:65:HIS:O	1:M:69:ILE:HG13	2.05	0.56
1:N:307:LYS:HE3	1:N:310:ASN:HD21	1.71	0.56
1:L:27:VAL:HG12	1:L:90:THR:HG23	1.88	0.56
1:A:320:GLU:HB3	1:A:333:GLY:HA3	1.87	0.56
1:B:427:GLU:OE2	1:B:430:LYS:HD2	2.05	0.56
1:M:208:GLU:OE1	1:M:389:LYS:HD3	2.05	0.56
1:H:50:THR:HG22	1:H:51:LYS:N	2.18	0.56
1:L:180:LYS:HB3	1:M:281:GLY:H	1.68	0.56
1:N:410:ILE:CD1	1:N:496:VAL:HG11	2.34	0.56
1:L:47:PRO:HB3	1:M:69:ILE:HG23	1.86	0.56
1:D:127:ALA:O	1:D:131:ILE:HG13	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:S:100:GLN:CG	2:T:9:LYS:HE2	2.35	0.56
1:L:229:VAL:HG23	1:L:256:GLU:CB	2.35	0.56
1:I:54:VAL:HG22	1:I:89:THR:CG2	2.35	0.56
1:K:229:VAL:HG23	1:K:256:GLU:CB	2.35	0.56
1:A:301:SER:HB2	1:A:304:LEU:CB	2.35	0.56
2:O:97:ALA:HA	2:P:11:LEU:HG	1.86	0.56
1:G:136:ILE:HD11	1:G:477:ARG:NH2	2.21	0.56
1:M:157:VAL:O	1:M:161:ILE:HG13	2.05	0.56
1:D:320:GLU:HB3	1:D:333:GLY:HA3	1.87	0.56
2:O:50:THR:O	2:O:50:THR:HG23	2.05	0.56
1:K:372:ALA:C	1:K:374:GLY:H	2.08	0.56
1:G:283:ARG:O	1:G:287:MET:HG3	2.05	0.56
1:J:6:LEU:HD23	1:J:523:VAL:HG22	1.85	0.56
1:M:6:LEU:HD23	1:M:523:VAL:HG22	1.87	0.56
1:G:416:VAL:HG21	1:G:490:MET:HG3	1.86	0.56
1:M:217:ALA:CB	1:M:245:PRO:HG2	2.25	0.56
2:O:52:ARG:HH21	2:P:53:VAL:CG1	2.18	0.56
1:G:235:ILE:CG1	1:G:311:ALA:HB3	2.36	0.56
2:Q:80:ILE:HG22	2:Q:81:GLU:N	2.20	0.56
1:H:496:VAL:HG12	1:H:497:ASP:N	2.20	0.56
1:M:258:LEU:O	1:M:262:VAL:HG23	2.06	0.56
1:J:411:VAL:O	1:J:496:VAL:HG13	2.05	0.56
1:K:496:VAL:HG12	1:K:497:ASP:N	2.21	0.56
1:M:233:LEU:N	1:M:234:PRO:HD2	2.21	0.56
1:I:297:GLY:HA3	1:I:317:GLY:H	1.70	0.56
1:K:7:VAL:HG12	1:K:12:ALA:HB2	1.87	0.56
1:A:501:VAL:HG23	1:A:502:THR:N	2.20	0.56
1:H:106:ASN:HD21	5:H:545:DMS:C1	2.19	0.56
1:M:27:VAL:HG12	1:M:90:THR:HG23	1.87	0.56
2:Q:44:LYS:HA	2:Q:68:ASP:O	2.05	0.56
1:A:175:THR:HB	1:A:377:VAL:HG22	1.86	0.56
1:H:465:ILE:HD13	1:H:480:PHE:CE1	2.40	0.56
1:G:298:THR:HB	1:G:315:MET:HB2	1.88	0.56
1:E:50:THR:CG2	1:E:51:LYS:H	2.09	0.56
1:C:168:VAL:CG1	1:C:172:GLY:HA3	2.27	0.56
2:O:52:ARG:NH2	2:P:53:VAL:CB	2.65	0.56
1:L:157:VAL:O	1:L:161:ILE:HG13	2.06	0.56
1:A:325:THR:HG22	1:A:326:LYS:N	2.20	0.56
1:B:147:VAL:CG2	1:B:410:ILE:HD11	2.35	0.56
1:D:229:VAL:HG11	2:R:32:LEU:CD2	2.35	0.56
1:J:31:LEU:HD13	1:J:90:THR:HG22	1.87	0.56
1:C:520:GLU:HB3	1:D:29:VAL:HG11	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:341:ILE:C	1:E:343:ALA:H	2.08	0.56
1:L:283:ARG:HH12	1:L:364:LEU:CD1	2.18	0.56
1:G:465:ILE:HD13	1:G:480:PHE:CE2	2.41	0.56
1:J:340:ASP:O	1:J:343:ALA:HB3	2.05	0.56
1:H:303:GLU:C	1:H:305:GLY:H	2.08	0.56
1:B:219:ILE:HG22	1:B:221:ILE:HG13	1.86	0.56
1:B:452:ARG:NH1	1:B:463:SER:HA	2.21	0.56
1:J:496:VAL:HG12	1:J:497:ASP:N	2.20	0.56
1:C:178:GLU:CG	1:C:388:LEU:HD21	2.36	0.56
1:B:501:VAL:HG23	1:B:502:THR:N	2.20	0.56
2:O:18:LYS:HG2	2:O:87:TYR:CD2	2.40	0.56
1:K:385:GLU:HB2	1:L:280:PHE:CE2	2.41	0.56
1:K:118:ARG:O	1:K:122:LYS:HG3	2.05	0.56
1:D:78:ALA:O	1:D:89:THR:HG22	2.06	0.56
2:Q:18:LYS:HE3	2:Q:86:GLU:O	2.05	0.56
1:K:307:LYS:HE3	1:K:310:ASN:ND2	2.21	0.56
1:H:218:PHE:HE1	1:H:242:THR:HG21	1.70	0.56
1:I:27:VAL:HG12	1:I:90:THR:HG23	1.88	0.56
1:D:455:ALA:HB1	1:D:465:ILE:HD12	1.87	0.56
1:C:23:VAL:HG22	1:C:60:VAL:HG11	1.86	0.56
1:M:283:ARG:CG	1:M:363:LYS:HZ2	2.18	0.56
2:T:95:LEU:O	2:U:14:ARG:NH1	2.38	0.56
1:J:345:ILE:O	1:J:349:LYS:HG3	2.06	0.56
1:L:283:ARG:HG2	1:L:363:LYS:HZ2	1.70	0.56
1:A:332:VAL:HG12	1:A:333:GLY:N	2.21	0.56
1:D:189:VAL:HG13	1:D:193:GLN:HG2	1.86	0.56
1:J:197:GLY:HA3	1:J:325:THR:O	2.06	0.56
1:H:59:GLU:O	1:I:4:LYS:HG3	2.07	0.56
1:D:199:ILE:HG13	1:D:274:ALA:O	2.06	0.56
1:I:103:GLY:O	1:I:107:VAL:HG23	2.06	0.56
1:G:345:ILE:HG23	1:G:368:LEU:HD13	1.87	0.56
1:G:345:ILE:HG23	1:G:368:LEU:CD1	2.36	0.56
1:I:25:ASN:HA	1:I:28:LYS:HE2	1.87	0.56
1:A:361:ARG:O	1:A:365:GLN:HB2	2.06	0.56
1:A:452:ARG:NH1	1:A:463:SER:HA	2.21	0.56
1:E:306:PHE:CE2	1:E:315:MET:SD	2.99	0.56
1:F:150:ILE:CD1	1:F:496:VAL:H	2.19	0.55
1:B:301:SER:HB2	1:B:304:LEU:CB	2.34	0.55
2:Q:8:ILE:HG21	2:Q:16:VAL:HG21	1.87	0.55
1:M:232:LEU:HD21	1:M:236:LEU:HD13	1.88	0.55
1:J:218:PHE:CE1	1:J:242:THR:HG21	2.40	0.55
1:C:307:LYS:HB3	1:C:310:ASN:HD22	1.71	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:201:PRO:O	1:F:204:VAL:HG23	2.05	0.55
1:N:295:THR:HG22	1:N:317:GLY:C	2.26	0.55
1:B:98:ALA:HB2	1:B:449:GLU:CG	2.34	0.55
2:R:78:THR:HG22	2:R:79:GLU:N	2.21	0.55
1:C:465:ILE:HD13	1:C:480:PHE:CD2	2.42	0.55
1:C:307:LYS:HE3	1:C:309:GLU:OE1	2.05	0.55
1:M:103:GLY:O	1:M:107:VAL:HG23	2.06	0.55
1:C:69:ILE:HD11	1:D:41:GLU:HB2	1.88	0.55
1:N:307:LYS:HB3	1:N:309:GLU:OE1	2.06	0.55
1:E:267:ARG:HG3	1:E:267:ARG:HH11	1.71	0.55
1:B:178:GLU:CG	1:B:388:LEU:HD21	2.36	0.55
1:C:127:ALA:O	1:C:131:ILE:HG13	2.06	0.55
1:F:237:GLU:HB3	2:T:28:GLY:HA3	1.87	0.55
1:C:72:GLN:HE22	1:C:75:LYS:HZ1	1.52	0.55
1:C:290:ASP:HB3	1:C:371:LEU:HD21	1.89	0.55
1:D:199:ILE:O	1:D:199:ILE:HG22	2.06	0.55
1:K:325:THR:HG22	1:K:327:ASP:N	2.02	0.55
2:S:11:LEU:O	2:S:13:ASP:N	2.39	0.55
1:F:501:VAL:HG23	1:F:502:THR:N	2.22	0.55
1:H:366:GLU:O	1:H:370:LYS:HG3	2.06	0.55
1:D:136:ILE:CD1	1:D:477:ARG:HH21	2.19	0.55
1:B:283:ARG:O	1:B:287:MET:HG3	2.06	0.55
1:D:345:ILE:HG23	1:D:368:LEU:HD13	1.87	0.55
1:F:14:ARG:NH1	1:M:109:ALA:HA	2.22	0.55
1:G:349:LYS:C	1:G:351:GLU:H	2.10	0.55
2:T:96:LEU:HD23	2:U:14:ARG:HH11	1.71	0.55
1:J:50:THR:HG22	1:J:51:LYS:N	2.17	0.55
1:H:496:VAL:HG12	1:H:497:ASP:H	1.71	0.55
1:N:232:LEU:HD22	1:N:236:LEU:HD22	1.87	0.55
2:P:56:ASN:N	2:P:56:ASN:OD1	2.39	0.55
2:O:9:LYS:O	2:U:97:ALA:HA	2.07	0.55
1:D:168:VAL:O	1:D:168:VAL:HG12	2.07	0.55
1:B:220:LEU:HD13	1:B:235:ILE:CD1	2.36	0.55
1:E:294:VAL:HA	1:E:341:ILE:CD1	2.35	0.55
1:N:496:VAL:HG12	1:N:497:ASP:N	2.21	0.55
2:R:79:GLU:O	2:R:80:ILE:HG13	2.06	0.55
1:I:232:LEU:HD23	1:I:232:LEU:O	2.07	0.55
1:I:218:PHE:CE1	1:I:242:THR:HG21	2.42	0.55
1:E:101:ARG:HG3	1:E:102:GLU:N	2.21	0.55
1:M:182:LEU:CD1	1:N:363:LYS:HZ3	2.17	0.55
1:M:496:VAL:HG12	1:M:497:ASP:N	2.22	0.55
1:L:41:GLU:HB3	1:M:69:ILE:HD11	1.88	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:501:VAL:HG23	1:E:502:THR:N	2.22	0.55
1:I:290:ASP:O	1:I:294:VAL:HG23	2.07	0.55
1:D:144:ILE:CD1	1:D:165:MET:HG2	2.37	0.55
1:E:354:THR:HG22	1:E:354:THR:O	2.07	0.55
1:K:518:THR:O	1:K:518:THR:HG22	2.07	0.55
1:E:30:THR:O	1:E:35:GLY:HA3	2.06	0.55
1:F:320:GLU:HB3	1:F:333:GLY:HA3	1.88	0.55
1:D:95:LEU:O	1:D:99:ILE:HG13	2.07	0.55
1:F:50:THR:CG2	1:F:52:ASP:H	2.18	0.55
1:E:277:ALA:HB1	1:E:284:ARG:HD2	1.88	0.55
1:M:224:LYS:HG2	1:M:225:LYS:H	1.70	0.55
1:G:501:VAL:HG23	1:G:502:THR:N	2.21	0.55
2:P:85:GLU:HA	2:P:85:GLU:OE1	2.05	0.55
1:H:224:LYS:HG2	1:H:225:LYS:H	1.72	0.55
1:N:303:GLU:C	1:N:305:GLY:H	2.09	0.55
1:C:52:ASP:OD1	1:C:54:VAL:HG23	2.07	0.55
1:N:518:THR:O	1:N:518:THR:HG22	2.05	0.55
1:H:50:THR:HG22	1:H:52:ASP:N	2.16	0.55
1:N:496:VAL:HG12	1:N:497:ASP:H	1.71	0.55
1:D:217:ALA:HB2	1:D:245:PRO:HB2	1.89	0.55
1:H:307:LYS:HE3	1:H:310:ASN:ND2	2.21	0.55
1:A:228:ASN:HD22	1:A:231:GLU:HG3	1.72	0.55
1:G:189:VAL:HG13	1:G:190:GLU:N	2.21	0.55
1:C:18:ARG:HD2	1:C:67:GLU:OE2	2.07	0.55
2:P:11:LEU:O	2:P:12:GLY:C	2.45	0.55
1:N:232:LEU:HD21	1:N:236:LEU:HD13	1.89	0.55
1:A:207:PRO:HB3	1:G:343:ALA:HB2	1.88	0.55
1:D:6:LEU:CD2	1:D:523:VAL:HG22	2.37	0.55
1:I:118:ARG:O	1:I:122:LYS:HG3	2.07	0.55
1:E:157:VAL:HG22	1:E:395:PHE:CZ	2.41	0.55
1:D:307:LYS:HB2	1:D:310:ASN:HD22	1.71	0.55
1:E:222:VAL:HA	1:E:300:ILE:HB	1.88	0.55
1:M:178:GLU:N	1:M:321:ARG:HH11	2.02	0.55
1:B:230:ARG:O	1:B:234:PRO:HD2	2.08	0.55
1:G:246:LEU:HB3	1:G:272:VAL:CG1	2.35	0.55
1:G:178:GLU:CG	1:G:388:LEU:HD21	2.36	0.55
1:F:235:ILE:CG1	1:F:311:ALA:HB3	2.37	0.55
1:K:24:ALA:O	1:K:28:LYS:HG2	2.07	0.55
1:N:312:THR:C	1:N:314:SER:H	2.10	0.55
2:P:70:VAL:HG11	2:P:95:LEU:CD2	2.30	0.54
1:D:301:SER:HB2	1:D:304:LEU:HB2	1.89	0.54
1:F:230:ARG:HA	1:F:233:LEU:HD12	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:232:LEU:HD23	1:J:236:LEU:HB2	1.88	0.54
1:H:360:ALA:O	1:H:363:LYS:HG2	2.07	0.54
1:F:284:ARG:HG3	1:F:284:ARG:HH11	1.71	0.54
1:L:372:ALA:C	1:L:374:GLY:N	2.60	0.54
2:Q:73:ALA:O	2:Q:75:TYR:N	2.40	0.54
1:G:455:ALA:HB1	1:G:465:ILE:HD12	1.89	0.54
1:C:366:GLU:O	1:C:370:LYS:HG3	2.06	0.54
1:L:518:THR:O	1:L:518:THR:HG22	2.07	0.54
1:D:452:ARG:NH1	1:D:463:SER:HA	2.23	0.54
1:K:31:LEU:HD13	1:K:90:THR:HG22	1.89	0.54
1:J:175:THR:HG21	1:J:177:GLU:OE2	2.07	0.54
1:J:490:MET:CE	1:J:490:MET:HA	2.37	0.54
1:D:168:VAL:HG21	1:D:376:ALA:HB2	1.88	0.54
1:C:50:THR:CG2	1:C:52:ASP:H	2.15	0.54
2:O:60:VAL:HG21	2:P:53:VAL:HG11	1.89	0.54
1:C:222:VAL:O	1:C:250:ALA:HA	2.07	0.54
1:H:410:ILE:HB	1:H:496:VAL:HG12	1.88	0.54
1:K:345:ILE:O	1:K:349:LYS:HG3	2.07	0.54
1:J:307:LYS:HE3	1:J:310:ASN:ND2	2.23	0.54
1:A:284:ARG:O	1:A:288:LEU:HG	2.07	0.54
1:K:175:THR:HG22	1:K:176:VAL:N	2.22	0.54
1:J:337:LYS:HB2	1:J:340:ASP:OD2	2.07	0.54
1:K:27:VAL:HG12	1:K:90:THR:HG23	1.88	0.54
1:G:526:LYS:HG3	1:G:527:PRO:HD2	1.88	0.54
1:F:520:GLU:HB3	1:G:29:VAL:HG11	1.89	0.54
2:Q:10:PRO:HG3	2:Q:47:ALA:O	2.06	0.54
1:G:366:GLU:O	1:G:370:LYS:HG3	2.07	0.54
1:D:218:PHE:HE1	1:D:244:LYS:HB2	1.73	0.54
1:L:297:GLY:HA3	1:L:317:GLY:N	2.20	0.54
1:G:101:ARG:HG3	1:G:102:GLU:N	2.23	0.54
1:K:332:VAL:HG22	1:K:375:VAL:HG11	1.88	0.54
1:L:41:GLU:HB3	1:M:69:ILE:CD1	2.38	0.54
1:K:410:ILE:HB	1:K:496:VAL:HG12	1.88	0.54
1:J:283:ARG:HD3	1:J:363:LYS:NZ	2.22	0.54
2:R:14:ARG:HH11	2:R:14:ARG:HG3	1.73	0.54
1:M:459:GLY:CA	1:N:114:LEU:HD12	2.37	0.54
1:C:147:VAL:CG2	1:C:410:ILE:HD11	2.37	0.54
2:R:85:GLU:HA	2:R:85:GLU:OE1	2.08	0.54
1:M:226:VAL:HG11	1:M:232:LEU:HD12	1.88	0.54
1:N:316:LEU:CD2	1:N:316:LEU:H	2.19	0.54
2:O:22:GLU:N	2:O:22:GLU:OE1	2.35	0.54
1:L:63:GLU:OE2	1:M:526:LYS:HE2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:360:ALA:O	1:N:363:LYS:HG2	2.06	0.54
1:L:240:ALA:O	1:M:228:ASN:OD1	2.25	0.54
1:K:219:ILE:HB	1:K:295:THR:HG21	1.90	0.54
1:J:157:VAL:O	1:J:161:ILE:HG13	2.06	0.54
1:C:199:ILE:HG13	1:C:274:ALA:O	2.06	0.54
1:I:316:LEU:CD2	1:I:316:LEU:H	2.21	0.54
1:E:219:ILE:N	1:E:317:GLY:O	2.41	0.54
1:I:96:ALA:O	1:I:100:VAL:HG23	2.07	0.54
1:B:101:ARG:HG3	1:B:102:GLU:N	2.23	0.54
1:D:411:VAL:HB	1:D:412:PRO:HD2	1.89	0.54
1:I:410:ILE:HB	1:I:496:VAL:HG12	1.89	0.54
1:D:240:ALA:HA	1:D:270:LEU:HD13	1.90	0.54
1:F:136:ILE:CD1	1:F:477:ARG:HH21	2.20	0.54
1:J:263:VAL:O	1:J:267:ARG:HB2	2.08	0.54
1:M:41:GLU:HG2	1:N:524:ALA:HA	1.90	0.54
1:A:365:GLN:OE1	1:A:365:GLN:HA	2.08	0.54
2:T:41:GLN:HG2	2:T:74:LYS:HB3	1.90	0.54
1:C:361:ARG:O	1:C:365:GLN:HB2	2.08	0.54
1:L:452:ARG:HH11	1:L:452:ARG:HG2	1.72	0.54
1:E:325:THR:CG2	1:E:326:LYS:H	2.14	0.54
1:I:410:ILE:CD1	1:I:496:VAL:HG11	2.35	0.54
1:D:246:LEU:HB3	1:D:272:VAL:CG1	2.34	0.54
1:G:124:VAL:O	1:G:128:VAL:HG23	2.08	0.54
2:U:18:LYS:HG2	2:U:87:TYR:CD2	2.43	0.54
1:H:226:VAL:HG11	1:H:232:LEU:HD12	1.89	0.54
1:M:218:PHE:HB3	1:M:316:LEU:HG	1.89	0.54
1:C:360:ALA:O	1:C:364:LEU:HG	2.07	0.54
1:C:30:THR:O	1:C:35:GLY:HA3	2.08	0.54
1:E:31:LEU:HB2	1:E:90:THR:HG21	1.89	0.54
1:D:472:GLU:HB3	1:D:478:TYR:CD2	2.43	0.54
1:M:141:ARG:NH1	1:M:166:GLU:HG3	2.23	0.54
1:B:416:VAL:HG21	1:B:479:GLY:HA3	1.88	0.54
1:A:41:GLU:HB2	1:G:69:ILE:HD11	1.90	0.54
1:M:208:GLU:OE1	1:M:389:LYS:CD	2.55	0.54
1:M:307:LYS:HB3	1:M:309:GLU:OE1	2.08	0.54
1:E:247:LEU:HD22	1:E:322:VAL:CG1	2.36	0.54
1:H:307:LYS:HB3	1:H:309:GLU:OE1	2.08	0.54
1:F:232:LEU:HB3	1:F:236:LEU:CD1	2.38	0.54
1:K:283:ARG:HH11	1:K:363:LYS:HE3	1.71	0.54
2:P:100:GLN:OE1	2:Q:9:LYS:CE	2.56	0.54
1:J:316:LEU:O	1:J:316:LEU:HD23	2.08	0.54
1:A:222:VAL:O	1:A:250:ALA:HA	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:261:LEU:O	1:G:265:LYS:HB2	2.08	0.54
1:J:118:ARG:O	1:J:122:LYS:HG3	2.08	0.54
1:H:6:LEU:HD23	1:H:523:VAL:HG22	1.90	0.54
1:I:233:LEU:N	1:I:234:PRO:HD2	2.23	0.54
1:J:232:LEU:HD23	1:J:232:LEU:O	2.08	0.54
1:K:366:GLU:O	1:K:370:LYS:HG3	2.08	0.54
1:A:127:ALA:O	1:A:131:ILE:HG13	2.07	0.54
1:K:503:ARG:NH1	1:K:507:GLN:HE22	2.04	0.54
2:S:80:ILE:CG2	2:S:81:GLU:N	2.71	0.54
1:I:226:VAL:CG1	1:I:232:LEU:HD12	2.38	0.54
1:L:345:ILE:HG22	1:L:349:LYS:HE3	1.89	0.54
1:L:218:PHE:CE1	1:L:242:THR:HG21	2.43	0.54
1:J:6:LEU:CD2	1:J:523:VAL:HG22	2.38	0.54
1:M:96:ALA:O	1:M:100:VAL:HG23	2.07	0.54
1:C:173:ILE:HD12	1:C:369:ALA:HB2	1.89	0.54
1:M:303:GLU:C	1:M:305:GLY:H	2.10	0.54
1:G:217:ALA:HB2	1:G:245:PRO:HB2	1.89	0.54
1:K:303:GLU:C	1:K:305:GLY:H	2.11	0.54
1:L:204:VAL:HG13	1:L:211:GLU:O	2.07	0.54
2:Q:81:GLU:HG3	2:Q:85:GLU:H	1.70	0.53
1:K:233:LEU:N	1:K:234:PRO:HD2	2.23	0.53
1:M:247:LEU:HD22	1:M:322:VAL:CG1	2.36	0.53
1:C:136:ILE:HB	1:C:410:ILE:HG22	1.89	0.53
1:I:352:LEU:HD21	1:I:365:GLN:HE22	1.73	0.53
1:F:235:ILE:HG12	1:F:311:ALA:HB3	1.90	0.53
2:O:8:ILE:HG21	2:O:16:VAL:HG21	1.90	0.53
1:L:455:ALA:HB1	1:L:465:ILE:HD12	1.89	0.53
2:S:41:GLN:HG2	2:S:74:LYS:HB3	1.89	0.53
1:I:452:ARG:HH11	1:I:452:ARG:HG2	1.73	0.53
1:M:135:ALA:O	1:M:137:PRO:HD3	2.08	0.53
1:C:40:LEU:HD13	1:C:59:GLU:HG3	1.89	0.53
1:A:219:ILE:HG22	1:A:221:ILE:HG13	1.90	0.53
1:K:189:VAL:CG1	1:K:333:GLY:HA2	2.37	0.53
1:K:168:VAL:HG12	1:K:172:GLY:CA	2.33	0.53
1:N:234:PRO:HG3	1:N:309:GLU:CA	2.36	0.53
1:A:230:ARG:O	1:A:234:PRO:HD2	2.09	0.53
1:B:287:MET:O	1:B:290:ASP:HB2	2.09	0.53
2:O:8:ILE:H	2:O:8:ILE:HD12	1.74	0.53
1:H:526:LYS:HG3	1:H:527:PRO:HD2	1.90	0.53
1:M:316:LEU:H	1:M:316:LEU:CD2	2.20	0.53
1:J:316:LEU:CD2	1:J:316:LEU:H	2.21	0.53
1:C:173:ILE:HD12	1:C:369:ALA:CB	2.38	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:T:34:ASP:N	2:T:34:ASP:OD1	2.36	0.53
2:R:11:LEU:O	2:R:12:GLY:C	2.46	0.53
1:I:95:LEU:O	1:I:99:ILE:HG13	2.08	0.53
1:H:25:ASN:HA	1:H:28:LYS:HE2	1.90	0.53
1:M:372:ALA:O	1:M:374:GLY:N	2.38	0.53
1:I:307:LYS:HE3	1:I:310:ASN:ND2	2.24	0.53
1:I:496:VAL:HG12	1:I:497:ASP:N	2.23	0.53
1:H:233:LEU:N	1:H:234:PRO:HD2	2.22	0.53
2:O:18:LYS:HE3	2:O:86:GLU:O	2.09	0.53
1:H:229:VAL:CG2	1:H:256:GLU:HB3	2.38	0.53
1:M:290:ASP:O	1:M:294:VAL:HG23	2.07	0.53
1:J:503:ARG:NH1	1:J:507:GLN:HE22	2.04	0.53
1:G:144:ILE:HD12	1:G:165:MET:HG2	1.91	0.53
1:A:98:ALA:HB2	1:A:449:GLU:CG	2.38	0.53
1:C:465:ILE:HD13	1:C:480:PHE:CE2	2.42	0.53
1:F:222:VAL:HG22	1:F:300:ILE:HD12	1.91	0.53
1:L:459:GLY:HA3	1:M:114:LEU:HD12	1.91	0.53
2:R:52:ARG:HG3	2:R:52:ARG:O	2.09	0.53
2:U:44:LYS:HA	2:U:68:ASP:O	2.08	0.53
1:F:445:ARG:CZ	1:F:452:ARG:HH21	2.22	0.53
1:F:351:GLU:OE2	1:G:326:LYS:NZ	2.23	0.53
1:E:189:VAL:CG1	1:E:190:GLU:N	2.70	0.53
1:E:40:LEU:HD13	1:E:59:GLU:HG3	1.90	0.53
1:I:151:SER:HB2	1:I:398:ALA:HA	1.90	0.53
1:C:340:ASP:O	1:C:344:ARG:HB2	2.09	0.53
1:E:78:ALA:O	1:E:89:THR:HG22	2.08	0.53
2:P:53:VAL:HG22	2:P:59:ARG:HE	1.74	0.53
1:E:278:PRO:HG3	1:E:291:ILE:HD11	1.90	0.53
1:D:198:TYR:O	1:D:198:TYR:HD1	1.92	0.53
1:H:263:VAL:O	1:H:267:ARG:HB2	2.09	0.53
1:J:229:VAL:CG2	1:J:256:GLU:HB3	2.36	0.53
1:G:98:ALA:HB2	1:G:449:GLU:CG	2.39	0.53
1:A:202:TYR:CE1	1:G:289:LYS:NZ	2.71	0.53
1:N:316:LEU:O	1:N:316:LEU:HD23	2.09	0.53
1:J:27:VAL:HG12	1:J:90:THR:HG23	1.90	0.53
1:F:349:LYS:C	1:F:351:GLU:H	2.11	0.53
1:K:421:ALA:O	1:K:425:VAL:HG23	2.08	0.53
1:E:520:GLU:HB3	1:F:29:VAL:HG11	1.91	0.53
1:D:150:ILE:CD1	1:D:496:VAL:N	2.72	0.53
1:N:50:THR:CG2	1:N:51:LYS:H	2.18	0.53
1:N:410:ILE:HB	1:N:496:VAL:HG12	1.90	0.53
1:M:234:PRO:HG3	1:M:309:GLU:CA	2.33	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:263:VAL:O	1:N:267:ARG:HB2	2.08	0.53
1:D:477:ARG:HH11	1:D:477:ARG:HG3	1.74	0.53
1:N:218:PHE:HE1	1:N:242:THR:HG21	1.72	0.53
1:H:201:PRO:O	1:H:204:VAL:HG23	2.08	0.53
1:J:452:ARG:HG2	1:J:452:ARG:HH11	1.73	0.53
1:B:411:VAL:HB	1:B:412:PRO:HD2	1.90	0.53
1:B:144:ILE:HD12	1:B:165:MET:HG2	1.89	0.53
1:E:201:PRO:O	1:E:204:VAL:HG22	2.09	0.53
1:K:218:PHE:CE1	1:K:242:THR:HG21	2.44	0.53
1:E:416:VAL:HG21	1:E:490:MET:HG3	1.90	0.53
1:J:219:ILE:HB	1:J:295:THR:HG21	1.91	0.53
1:F:240:ALA:HA	1:F:270:LEU:HD13	1.90	0.53
1:B:189:VAL:HG13	1:B:190:GLU:N	2.24	0.53
1:K:25:ASN:HA	1:K:28:LYS:HE2	1.90	0.53
1:K:218:PHE:HB3	1:K:316:LEU:HG	1.90	0.53
1:K:142:LYS:O	1:K:146:GLU:HG3	2.09	0.53
1:A:96:ALA:O	1:A:100:VAL:HG23	2.07	0.53
1:D:301:SER:HB2	1:D:304:LEU:CB	2.38	0.53
1:M:323:ARG:HH12	1:M:392:LYS:HE2	1.69	0.53
1:E:168:VAL:HG12	1:E:168:VAL:O	2.09	0.53
1:E:224:LYS:HD2	1:E:224:LYS:H	1.74	0.53
1:E:238:GLN:HB3	1:E:313:LEU:HG	1.90	0.53
1:K:411:VAL:O	1:K:496:VAL:HG13	2.09	0.53
1:J:194:PHE:CG	1:J:278:PRO:HB3	2.44	0.53
1:H:267:ARG:O	1:I:256:GLU:HG3	2.08	0.53
1:G:72:GLN:HE22	1:G:75:LYS:HZ3	1.57	0.53
1:M:226:VAL:CG1	1:M:232:LEU:HD12	2.39	0.53
1:I:6:LEU:HD23	1:I:523:VAL:HG22	1.90	0.53
1:H:103:GLY:O	1:H:107:VAL:HG23	2.09	0.53
1:L:259:ALA:O	1:L:263:VAL:HG23	2.08	0.53
1:H:175:THR:HG21	1:H:177:GLU:OE2	2.09	0.53
1:N:28:LYS:NZ	1:N:97:GLN:HE22	2.07	0.53
1:C:206:ASN:HB3	1:C:209:THR:OG1	2.08	0.53
1:I:189:VAL:CG1	1:I:190:GLU:H	2.14	0.53
1:E:287:MET:O	1:E:290:ASP:HB2	2.08	0.53
1:E:294:VAL:HG23	1:E:295:THR:N	2.24	0.53
1:M:383:ALA:HB1	1:N:359:TYR:OH	2.08	0.53
1:B:228:ASN:HD21	1:B:230:ARG:HB2	1.74	0.53
1:E:321:ARG:O	1:E:322:VAL:HG23	2.09	0.53
2:O:81:GLU:HA	2:O:85:GLU:O	2.09	0.53
1:F:230:ARG:O	1:F:234:PRO:HD2	2.08	0.53
1:J:224:LYS:HG2	1:J:225:LYS:H	1.73	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:312:THR:C	1:M:314:SER:H	2.12	0.53
1:M:452:ARG:HG2	1:M:452:ARG:HH11	1.73	0.53
1:I:518:THR:HG22	1:I:518:THR:O	2.09	0.53
2:P:44:LYS:HA	2:P:68:ASP:O	2.09	0.53
1:E:466:VAL:HG12	1:E:470:LEU:HD12	1.91	0.53
1:N:141:ARG:NH1	1:N:166:GLU:HG3	2.24	0.53
1:N:283:ARG:HG2	1:N:363:LYS:NZ	2.24	0.53
2:P:13:ASP:CB	2:P:62:LEU:HD21	2.37	0.53
1:D:7:VAL:HG21	1:D:66:LEU:CD1	2.29	0.53
1:B:7:VAL:HG12	1:B:12:ALA:HB2	1.91	0.53
1:E:234:PRO:O	1:E:238:GLN:HG3	2.09	0.53
1:B:360:ALA:O	1:B:364:LEU:HG	2.09	0.53
1:A:229:VAL:HG23	1:A:256:GLU:CD	2.29	0.53
1:J:218:PHE:HE1	1:J:242:THR:HG21	1.74	0.53
1:K:316:LEU:CD2	1:K:316:LEU:H	2.22	0.53
1:D:184:THR:HG23	1:D:380:VAL:HA	1.90	0.53
2:Q:53:VAL:HG22	2:Q:59:ARG:HG2	1.91	0.53
1:J:117:LYS:O	1:J:121:GLU:HG3	2.09	0.53
1:C:320:GLU:HB3	1:C:333:GLY:HA3	1.91	0.53
1:K:258:LEU:O	1:K:262:VAL:HG23	2.09	0.53
1:E:147:VAL:CG2	1:E:410:ILE:HD11	2.38	0.52
1:J:283:ARG:HG2	1:J:363:LYS:HZ2	1.74	0.52
2:T:52:ARG:NH2	2:U:53:VAL:HB	2.21	0.52
1:C:347:GLY:O	1:C:351:GLU:HB2	2.08	0.52
1:E:57:ALA:O	1:E:75:LYS:HD3	2.08	0.52
1:M:142:LYS:O	1:M:146:GLU:HG3	2.08	0.52
1:D:368:LEU:HD12	1:D:368:LEU:O	2.09	0.52
2:O:53:VAL:HG22	2:O:59:ARG:HG2	1.90	0.52
1:E:52:ASP:OD1	1:E:54:VAL:HG23	2.09	0.52
1:F:52:ASP:OD1	1:F:54:VAL:HG23	2.09	0.52
2:S:10:PRO:C	2:S:11:LEU:HD12	2.30	0.52
1:L:283:ARG:HD3	1:L:363:LYS:NZ	2.24	0.52
1:A:236:LEU:HB2	2:O:30:ILE:HD11	1.90	0.52
1:H:222:VAL:HG12	1:H:223:GLU:H	1.73	0.52
1:J:458:ALA:O	1:K:114:LEU:CD1	2.56	0.52
1:B:345:ILE:HG23	1:B:368:LEU:CD1	2.39	0.52
1:B:307:LYS:HD3	1:B:309:GLU:OE2	2.09	0.52
1:F:340:ASP:O	1:F:344:ARG:HB2	2.10	0.52
1:N:96:ALA:O	1:N:100:VAL:HG23	2.09	0.52
1:A:30:THR:O	1:A:35:GLY:HA3	2.09	0.52
1:F:518:THR:OG1	1:G:37:ASN:ND2	2.41	0.52
1:E:278:PRO:CG	1:E:291:ILE:HD11	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:Q:52:ARG:NH2	2:R:53:VAL:HB	2.24	0.52
1:K:127:ALA:O	1:K:131:ILE:HG13	2.09	0.52
1:F:222:VAL:O	1:F:250:ALA:HA	2.10	0.52
1:F:452:ARG:NH1	1:F:463:SER:HA	2.23	0.52
1:G:253:VAL:HG12	1:G:258:LEU:HB2	1.91	0.52
1:G:258:LEU:O	1:G:262:VAL:HG23	2.09	0.52
1:N:151:SER:HB2	1:N:398:ALA:HA	1.91	0.52
1:M:465:ILE:HD13	1:M:480:PHE:CE1	2.44	0.52
1:J:142:LYS:O	1:J:146:GLU:HG3	2.10	0.52
1:A:150:ILE:HG22	1:A:151:SER:N	2.24	0.52
1:B:50:THR:CG2	1:B:51:LYS:H	2.16	0.52
1:K:168:VAL:HG11	1:K:173:ILE:N	2.24	0.52
1:L:41:GLU:OE2	1:M:65:HIS:ND1	2.42	0.52
1:L:307:LYS:HB3	1:L:309:GLU:OE1	2.08	0.52
1:D:263:VAL:O	1:D:267:ARG:HB2	2.10	0.52
1:H:297:GLY:HA3	1:H:317:GLY:H	1.74	0.52
1:D:124:VAL:O	1:D:128:VAL:HG23	2.10	0.52
1:A:466:VAL:HG12	1:A:470:LEU:HD12	1.91	0.52
1:L:218:PHE:HB3	1:L:316:LEU:HG	1.92	0.52
2:T:38:GLU:OE1	2:T:74:LYS:NZ	2.34	0.52
1:L:458:ALA:O	1:M:114:LEU:HD12	2.09	0.52
1:N:141:ARG:HH11	1:N:166:GLU:HG3	1.74	0.52
1:J:526:LYS:CD	1:J:527:PRO:HD2	2.40	0.52
2:S:44:LYS:HA	2:S:68:ASP:O	2.08	0.52
2:O:13:ASP:CB	2:O:62:LEU:HD21	2.40	0.52
1:F:7:VAL:HG12	1:F:12:ALA:HB2	1.90	0.52
1:I:411:VAL:O	1:I:496:VAL:HG13	2.09	0.52
1:J:410:ILE:HB	1:J:496:VAL:HG12	1.92	0.52
1:K:222:VAL:HG12	1:K:223:GLU:H	1.74	0.52
2:P:8:ILE:HG21	2:P:16:VAL:HG21	1.91	0.52
1:A:118:ARG:O	1:A:122:LYS:HG3	2.10	0.52
1:F:144:ILE:CD1	1:F:165:MET:HG2	2.40	0.52
1:E:448:GLU:OE1	1:E:452:ARG:NH2	2.43	0.52
1:L:142:LYS:O	1:L:146:GLU:HG3	2.09	0.52
1:N:6:LEU:HD23	1:N:523:VAL:HG22	1.91	0.52
1:L:151:SER:HB2	1:L:398:ALA:HA	1.91	0.52
1:B:515:LEU:HD12	1:C:49:ILE:HG21	1.90	0.52
1:F:128:VAL:HG13	1:F:503:ARG:HG3	1.92	0.52
1:H:218:PHE:HB3	1:H:316:LEU:HG	1.91	0.52
1:L:175:THR:HG22	1:L:176:VAL:N	2.25	0.52
1:C:452:ARG:NH1	1:C:463:SER:HA	2.25	0.52
1:D:293:ALA:HB1	1:D:340:ASP:HB3	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:157:VAL:HG22	1:D:395:PHE:CZ	2.45	0.52
1:M:168:VAL:HG11	1:M:173:ILE:N	2.25	0.52
2:O:48:VAL:CG1	2:O:62:LEU:CD1	2.83	0.52
1:D:304:LEU:HD11	1:E:262:VAL:HG11	1.90	0.52
1:B:232:LEU:O	1:B:235:ILE:HG22	2.09	0.52
1:E:209:THR:CG2	1:E:211:GLU:HG3	2.32	0.52
1:L:233:LEU:N	1:L:234:PRO:HD2	2.25	0.52
1:E:131:ILE:HD13	1:E:502:THR:HG22	1.92	0.52
1:H:54:VAL:HG22	1:H:89:THR:CG2	2.39	0.52
2:R:50:THR:CG2	2:R:59:ARG:HD3	2.40	0.52
1:D:466:VAL:HG12	1:D:470:LEU:HD12	1.92	0.52
1:L:226:VAL:CG1	1:L:232:LEU:HD12	2.40	0.52
1:N:175:THR:HG22	1:N:176:VAL:N	2.25	0.52
1:L:25:ASN:HA	1:L:28:LYS:HE2	1.92	0.52
1:G:361:ARG:O	1:G:365:GLN:HB2	2.08	0.52
1:A:277:ALA:HB1	1:A:278:PRO:HD2	1.91	0.52
2:P:25:LYS:HG2	2:P:31:VAL:HG22	1.92	0.52
1:B:222:VAL:O	1:B:250:ALA:HA	2.10	0.52
1:C:7:VAL:HG12	1:C:12:ALA:HB2	1.92	0.52
2:S:45:VAL:HG21	2:S:64:VAL:CG1	2.39	0.52
1:I:168:VAL:HG12	1:I:172:GLY:CA	2.35	0.52
1:H:7:VAL:HG12	1:H:12:ALA:HB2	1.92	0.52
1:H:283:ARG:NH2	1:H:367:ARG:CD	2.73	0.52
1:N:340:ASP:O	1:N:343:ALA:HB3	2.10	0.52
2:T:56:ASN:O	2:T:58:GLN:N	2.43	0.52
1:B:345:ILE:HG22	1:B:346:ASN:N	2.25	0.52
1:H:518:THR:O	1:H:518:THR:HG22	2.10	0.52
1:J:462:GLY:O	1:J:466:VAL:HG23	2.09	0.52
1:F:175:THR:HB	1:F:377:VAL:HG22	1.91	0.52
1:C:141:ARG:NH2	1:C:163:ASP:OD1	2.43	0.52
1:N:283:ARG:NH2	1:N:367:ARG:CD	2.72	0.52
1:L:180:LYS:O	1:M:281:GLY:N	2.43	0.52
1:I:496:VAL:HG12	1:I:497:ASP:H	1.74	0.52
1:M:39:VAL:C	1:M:40:LEU:HD12	2.30	0.52
1:I:283:ARG:HD3	1:I:363:LYS:NZ	2.25	0.52
1:H:292:ALA:HB1	1:H:297:GLY:O	2.09	0.52
1:A:128:VAL:HG13	1:A:503:ARG:HG3	1.90	0.52
2:R:20:ILE:CG1	2:R:43:GLY:HA2	2.40	0.52
2:O:96:LEU:O	2:P:14:ARG:HD3	2.09	0.52
1:N:27:VAL:HG12	1:N:90:THR:HG23	1.92	0.52
1:A:235:ILE:HD11	1:A:316:LEU:HD21	1.91	0.52
1:J:128:VAL:HA	1:J:131:ILE:HD12	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:290:ASP:OD2	1:C:371:LEU:HD11	2.10	0.52
1:N:131:ILE:HD13	1:N:502:THR:HG22	1.92	0.52
1:M:141:ARG:HH11	1:M:166:GLU:HG3	1.74	0.52
1:E:452:ARG:NH1	1:E:463:SER:HA	2.24	0.52
1:L:28:LYS:NZ	1:L:97:GLN:HE22	2.07	0.52
2:T:21:GLU:H	2:T:21:GLU:CD	2.13	0.52
1:F:30:THR:O	1:F:35:GLY:HA3	2.10	0.52
1:D:416:VAL:HG21	1:D:479:GLY:HA3	1.92	0.52
1:E:294:VAL:HG23	1:E:295:THR:HG23	1.92	0.52
1:J:40:LEU:N	1:J:40:LEU:HD12	2.25	0.52
1:I:307:LYS:HB3	1:I:309:GLU:OE1	2.10	0.52
1:M:297:GLY:HA3	1:M:317:GLY:H	1.73	0.52
2:T:13:ASP:C	2:T:13:ASP:OD1	2.48	0.52
1:L:79:SER:O	1:L:81:THR:N	2.43	0.52
1:I:6:LEU:CD2	1:I:523:VAL:HG22	2.40	0.52
1:F:144:ILE:HD12	1:F:165:MET:HG2	1.92	0.52
1:E:418:LEU:HD12	1:E:418:LEU:H	1.75	0.52
1:A:392:LYS:O	1:A:396:GLU:HG3	2.09	0.52
1:N:142:LYS:O	1:N:146:GLU:HG3	2.10	0.52
1:I:142:LYS:O	1:I:146:GLU:HG3	2.08	0.52
1:K:141:ARG:NH1	1:K:166:GLU:HG3	2.25	0.52
1:I:258:LEU:O	1:I:262:VAL:HG23	2.10	0.52
2:U:62:LEU:C	2:U:64:VAL:H	2.14	0.51
1:B:235:ILE:O	1:B:239:VAL:HG23	2.10	0.51
1:H:168:VAL:CG1	1:H:173:ILE:H	2.24	0.51
1:N:219:ILE:HB	1:N:295:THR:HG21	1.91	0.51
1:N:297:GLY:HA3	1:N:317:GLY:H	1.75	0.51
1:M:54:VAL:HG22	1:M:89:THR:CG2	2.37	0.51
1:B:465:ILE:HD13	1:B:480:PHE:CE2	2.44	0.51
1:H:452:ARG:NH1	1:H:452:ARG:HG2	2.24	0.51
1:A:136:ILE:CD1	1:A:477:ARG:HH21	2.23	0.51
1:J:84:VAL:O	1:J:84:VAL:HG12	2.11	0.51
1:D:101:ARG:CG	1:D:102:GLU:N	2.73	0.51
1:D:144:ILE:HD12	1:D:165:MET:HG2	1.91	0.51
1:H:481:ASN:HD21	1:H:484:THR:HG23	1.75	0.51
1:E:184:THR:HG23	1:E:380:VAL:HA	1.91	0.51
1:I:131:ILE:HD13	1:I:502:THR:HG22	1.92	0.51
1:C:283:ARG:O	1:C:287:MET:HG3	2.10	0.51
1:N:437:ALA:O	1:N:441:LYS:HG3	2.09	0.51
1:H:151:SER:HB2	1:H:398:ALA:HA	1.92	0.51
1:M:411:VAL:O	1:M:496:VAL:HG13	2.11	0.51
1:K:168:VAL:HG21	1:K:376:ALA:HB2	1.93	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:326:LYS:HD3	1:E:326:LYS:C	2.30	0.51
1:L:307:LYS:HE3	1:L:310:ASN:ND2	2.25	0.51
1:K:295:THR:HG22	1:K:317:GLY:HA3	1.92	0.51
1:C:352:LEU:HD21	1:C:364:LEU:HB2	1.90	0.51
1:K:141:ARG:HH11	1:K:166:GLU:HG3	1.75	0.51
1:G:25:ASN:HA	1:G:28:LYS:HG2	1.92	0.51
1:M:178:GLU:C	1:M:321:ARG:NH1	2.61	0.51
1:A:78:ALA:O	1:A:89:THR:HG22	2.10	0.51
1:E:209:THR:HG22	1:E:211:GLU:CG	2.36	0.51
2:O:78:THR:HG22	2:O:80:ILE:HD11	1.92	0.51
1:A:202:TYR:CZ	1:G:289:LYS:NZ	2.72	0.51
1:M:481:ASN:HD21	1:M:484:THR:HG23	1.74	0.51
1:H:141:ARG:NH1	1:H:166:GLU:HG3	2.25	0.51
1:D:289:LYS:NZ	1:E:202:TYR:CE1	2.77	0.51
1:B:10:GLU:N	1:B:13:ARG:NH1	2.58	0.51
1:A:450:PRO:O	1:A:454:ILE:HG13	2.10	0.51
1:C:6:LEU:HD22	1:C:523:VAL:HG22	1.91	0.51
1:J:421:ALA:O	1:J:425:VAL:HG23	2.11	0.51
1:A:52:ASP:OD1	1:A:54:VAL:HG23	2.10	0.51
1:E:498:PRO:HG2	1:E:501:VAL:CG2	2.40	0.51
1:F:18:ARG:HD2	1:F:67:GLU:OE2	2.10	0.51
1:H:525:GLU:N	1:N:41:GLU:OE2	2.37	0.51
1:D:229:VAL:HG21	2:R:36:ALA:CB	2.39	0.51
1:C:457:ASN:N	1:C:457:ASN:HD22	2.08	0.51
1:C:251:GLU:HG3	1:C:284:ARG:NH1	2.13	0.51
1:I:168:VAL:CG1	1:I:173:ILE:H	2.24	0.51
1:J:297:GLY:HA3	1:J:317:GLY:H	1.75	0.51
2:P:17:VAL:HG12	2:P:18:LYS:N	2.24	0.51
1:A:131:ILE:HD13	1:A:502:THR:HG22	1.91	0.51
1:F:57:ALA:O	1:F:75:LYS:HD3	2.10	0.51
1:A:202:TYR:OH	1:G:289:LYS:CE	2.58	0.51
2:S:73:ALA:O	2:S:75:TYR:N	2.42	0.51
1:H:232:LEU:HD23	1:H:232:LEU:O	2.10	0.51
1:F:101:ARG:CG	1:F:102:GLU:N	2.73	0.51
1:M:6:LEU:CD2	1:M:523:VAL:HG22	2.41	0.51
1:J:175:THR:HG22	1:J:176:VAL:N	2.25	0.51
1:J:123:ALA:HB2	1:J:440:ALA:HA	1.92	0.51
1:B:233:LEU:O	1:B:237:GLU:HG3	2.10	0.51
1:J:168:VAL:HG11	1:J:173:ILE:N	2.26	0.51
2:P:41:GLN:HE21	2:P:74:LYS:HG2	1.76	0.51
1:E:267:ARG:CD	2:S:31:VAL:HG21	2.36	0.51
1:C:498:PRO:HG2	1:C:501:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:144:ILE:CD1	1:G:165:MET:HG2	2.40	0.51
1:G:325:THR:HG22	1:G:326:LYS:H	1.75	0.51
1:N:25:ASN:HA	1:N:28:LYS:HE2	1.91	0.51
1:I:127:ALA:O	1:I:131:ILE:HG13	2.10	0.51
1:A:101:ARG:HG3	1:A:102:GLU:N	2.26	0.51
1:K:247:LEU:HD22	1:K:322:VAL:HG11	1.92	0.51
1:M:127:ALA:O	1:M:131:ILE:HG13	2.10	0.51
1:C:101:ARG:HG3	1:C:102:GLU:N	2.25	0.51
1:M:151:SER:HB2	1:M:398:ALA:HA	1.92	0.51
1:B:286:GLU:OE1	1:B:344:ARG:NH2	2.42	0.51
1:D:359:TYR:CE1	1:D:363:LYS:HE2	2.45	0.51
1:N:283:ARG:HH21	1:N:367:ARG:CD	2.24	0.51
1:G:168:VAL:HG21	1:G:376:ALA:HB2	1.92	0.51
2:Q:96:LEU:O	2:R:14:ARG:HD3	2.11	0.51
1:C:128:VAL:HA	1:C:131:ILE:HD12	1.91	0.51
1:I:222:VAL:HG12	1:I:223:GLU:H	1.75	0.51
2:P:80:ILE:HG22	2:P:81:GLU:H	1.76	0.51
2:T:45:VAL:HG21	2:T:64:VAL:CG1	2.40	0.51
1:K:28:LYS:NZ	1:K:97:GLN:HE22	2.09	0.51
2:R:44:LYS:HA	2:R:68:ASP:O	2.11	0.51
1:A:468:GLN:O	1:A:471:ALA:HB3	2.11	0.51
1:A:520:GLU:HB3	1:B:29:VAL:HG11	1.92	0.51
1:M:136:ILE:HD11	1:M:491:VAL:HG22	1.91	0.51
1:I:345:ILE:O	1:I:349:LYS:HG3	2.11	0.51
1:L:229:VAL:CG2	1:L:256:GLU:HB3	2.41	0.51
1:A:207:PRO:CB	1:G:343:ALA:HB2	2.41	0.51
1:D:445:ARG:CZ	1:D:452:ARG:HH21	2.24	0.51
1:E:10:GLU:N	1:E:13:ARG:NH1	2.59	0.51
1:G:14:ARG:NH1	1:G:17:GLU:OE1	2.44	0.51
1:D:519:THR:HG23	1:E:39:VAL:HG23	1.92	0.51
1:N:342:GLU:HA	1:N:345:ILE:HD12	1.93	0.51
1:L:295:THR:HG22	1:L:317:GLY:HA3	1.93	0.51
1:E:149:THR:HG23	1:E:155:PRO:CA	2.37	0.51
1:N:84:VAL:HG12	1:N:84:VAL:O	2.10	0.51
1:J:194:PHE:CB	1:J:278:PRO:HB3	2.41	0.51
1:C:128:VAL:HG13	1:C:503:ARG:HG3	1.93	0.51
2:P:98:VAL:O	2:Q:9:LYS:HB2	2.11	0.51
1:M:232:LEU:O	1:M:232:LEU:HD23	2.11	0.51
2:T:79:GLU:O	2:T:80:ILE:HG13	2.10	0.51
1:C:74:LEU:HD21	1:C:93:THR:CG2	2.41	0.51
1:E:249:ILE:HD11	1:E:331:ILE:HD11	1.93	0.51
1:K:452:ARG:HH11	1:K:452:ARG:HG2	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:S:21:GLU:H	2:S:21:GLU:CD	2.15	0.51
1:G:219:ILE:HG22	1:G:221:ILE:HG13	1.93	0.51
1:J:141:ARG:NH1	1:J:166:GLU:HG3	2.26	0.51
1:M:175:THR:HG22	1:M:176:VAL:N	2.26	0.51
1:C:229:VAL:HG23	1:C:256:GLU:CD	2.31	0.51
1:K:297:GLY:HA3	1:K:317:GLY:N	2.26	0.51
1:N:229:VAL:CG2	1:N:256:GLU:HB3	2.40	0.51
2:S:79:GLU:O	2:S:80:ILE:HG13	2.11	0.51
1:G:477:ARG:HH11	1:G:477:ARG:HG3	1.76	0.51
1:H:340:ASP:O	1:H:343:ALA:HB3	2.09	0.51
1:G:18:ARG:HD2	1:G:67:GLU:OE2	2.12	0.51
1:H:24:ALA:O	1:H:28:LYS:HG2	2.10	0.51
1:M:123:ALA:HB2	1:M:440:ALA:HA	1.91	0.51
1:F:177:GLU:O	1:F:379:ARG:HA	2.11	0.51
1:F:352:LEU:C	1:F:354:THR:H	2.14	0.51
1:C:289:LYS:CE	1:D:202:TYR:OH	2.59	0.51
1:A:356:ASP:O	1:A:357:SER:C	2.50	0.51
1:D:54:VAL:HG11	1:D:79:SER:HA	1.92	0.50
1:C:219:ILE:HG22	1:C:221:ILE:HG13	1.93	0.50
1:H:168:VAL:HG11	1:H:173:ILE:N	2.25	0.50
2:T:54:LEU:HD21	2:U:57:GLY:H	1.76	0.50
1:F:237:GLU:CB	2:T:28:GLY:HA3	2.41	0.50
1:F:477:ARG:HH11	1:F:477:ARG:HG3	1.75	0.50
2:R:62:LEU:C	2:R:64:VAL:H	2.15	0.50
1:H:141:ARG:HH11	1:H:166:GLU:HG3	1.75	0.50
1:J:151:SER:HB2	1:J:398:ALA:HA	1.92	0.50
2:O:33:PRO:C	2:O:35:THR:H	2.14	0.50
1:D:356:ASP:O	1:D:357:SER:C	2.49	0.50
1:M:437:ALA:O	1:M:441:LYS:HG3	2.10	0.50
1:E:214:LEU:HB3	1:E:245:PRO:CB	2.41	0.50
1:J:168:VAL:HG21	1:J:376:ALA:HB2	1.93	0.50
2:Q:84:GLY:O	2:Q:85:GLU:HB2	2.11	0.50
2:U:42:LYS:HA	2:U:70:VAL:O	2.11	0.50
1:D:218:PHE:CE1	1:D:242:THR:HG21	2.45	0.50
1:I:283:ARG:HD3	1:I:363:LYS:HZ1	1.77	0.50
1:C:147:VAL:HG23	1:C:410:ILE:HD11	1.94	0.50
1:H:283:ARG:HH21	1:H:367:ARG:CD	2.24	0.50
1:I:224:LYS:HG2	1:I:225:LYS:H	1.73	0.50
1:I:175:THR:HG22	1:I:176:VAL:N	2.27	0.50
1:H:316:LEU:O	1:H:316:LEU:HD23	2.12	0.50
1:H:102:GLU:HB3	5:H:545:DMS:H13	1.92	0.50
1:A:118:ARG:HH22	1:B:34:ARG:HH12	1.59	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:253:VAL:O	1:L:258:LEU:HD22	2.11	0.50
1:I:65:HIS:O	1:I:69:ILE:HG13	2.11	0.50
1:F:416:VAL:HG21	1:F:479:GLY:HA3	1.93	0.50
1:D:147:VAL:CG2	1:D:410:ILE:HD11	2.40	0.50
1:D:147:VAL:HG23	1:D:410:ILE:HD11	1.92	0.50
1:H:290:ASP:O	1:H:294:VAL:HG23	2.11	0.50
1:H:175:THR:HG22	1:H:176:VAL:N	2.25	0.50
1:K:449:GLU:HB2	1:K:450:PRO:HD3	1.94	0.50
1:J:65:HIS:O	1:J:69:ILE:HG13	2.12	0.50
1:N:332:VAL:HG22	1:N:375:VAL:HG11	1.92	0.50
1:L:96:ALA:O	1:L:100:VAL:HG23	2.12	0.50
1:C:425:VAL:O	1:C:429:ILE:HG13	2.11	0.50
1:A:54:VAL:HG22	1:A:89:THR:HG21	1.94	0.50
1:J:168:VAL:CG1	1:J:173:ILE:H	2.24	0.50
2:P:21:GLU:O	2:P:22:GLU:C	2.50	0.50
1:N:345:ILE:O	1:N:349:LYS:HG3	2.12	0.50
1:E:127:ALA:O	1:E:131:ILE:HG13	2.11	0.50
1:N:114:LEU:O	1:N:118:ARG:HG3	2.12	0.50
1:L:228:ASN:HB3	1:L:231:GLU:HG2	1.92	0.50
1:G:136:ILE:CD1	1:G:477:ARG:HH21	2.23	0.50
1:J:54:VAL:HG22	1:J:89:THR:CG2	2.41	0.50
1:A:448:GLU:OE1	1:A:452:ARG:NH2	2.45	0.50
1:N:481:ASN:HD21	1:N:484:THR:HG23	1.77	0.50
2:T:50:THR:HG23	2:T:59:ARG:HD3	1.94	0.50
1:B:425:VAL:O	1:B:429:ILE:HG13	2.11	0.50
1:B:217:ALA:HB2	1:B:245:PRO:HB2	1.93	0.50
1:I:141:ARG:NH1	1:I:166:GLU:HG3	2.27	0.50
1:L:298:THR:N	1:L:315:MET:O	2.43	0.50
1:L:50:THR:CG2	1:L:51:LYS:H	2.19	0.50
1:C:236:LEU:CB	2:Q:30:ILE:CD1	2.86	0.50
2:O:52:ARG:HH21	2:P:53:VAL:CB	2.23	0.50
1:E:351:GLU:CG	1:F:326:LYS:HZ1	2.24	0.50
1:I:283:ARG:HG2	1:I:363:LYS:HZ2	1.76	0.50
1:F:515:LEU:HD12	1:G:49:ILE:HG21	1.92	0.50
1:A:345:ILE:HG23	1:A:368:LEU:HD13	1.93	0.50
1:I:84:VAL:O	1:I:84:VAL:HG12	2.11	0.50
1:G:466:VAL:HG12	1:G:470:LEU:HD12	1.93	0.50
1:L:312:THR:O	1:L:314:SER:N	2.43	0.50
1:I:114:LEU:O	1:I:118:ARG:HG3	2.12	0.50
1:J:218:PHE:HB3	1:J:316:LEU:HG	1.93	0.50
1:M:131:ILE:HD13	1:M:502:THR:HG22	1.92	0.50
1:M:204:VAL:HG13	1:M:211:GLU:O	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:199:ILE:HG22	1:A:199:ILE:O	2.10	0.50
1:H:19:GLY:HA3	1:H:67:GLU:O	2.12	0.50
1:B:264:ASN:OD1	2:P:30:ILE:HA	2.12	0.50
1:M:175:THR:HG21	1:M:177:GLU:OE2	2.12	0.50
2:Q:33:PRO:C	2:Q:35:THR:H	2.15	0.50
1:N:352:LEU:HD21	1:N:365:GLN:HE22	1.77	0.50
1:I:259:ALA:O	1:I:263:VAL:HG23	2.11	0.50
1:C:477:ARG:HH11	1:C:477:ARG:HG3	1.75	0.50
2:T:33:PRO:C	2:T:35:THR:H	2.15	0.50
1:K:66:LEU:HD22	1:K:522:VAL:HG21	1.93	0.50
2:U:80:ILE:CG2	2:U:81:GLU:N	2.74	0.50
2:T:85:GLU:OE1	2:T:85:GLU:HA	2.11	0.50
1:C:25:ASN:HA	1:C:28:LYS:HG2	1.93	0.50
2:S:71:VAL:HG23	2:S:99:LEU:HD13	1.93	0.50
1:M:25:ASN:HA	1:M:28:LYS:HE2	1.93	0.50
1:H:128:VAL:HA	1:H:131:ILE:HD12	1.94	0.50
1:J:325:THR:CG2	1:J:326:LYS:N	2.74	0.50
1:M:283:ARG:NH2	1:M:367:ARG:CD	2.75	0.50
1:D:168:VAL:CG1	1:D:172:GLY:HA3	2.29	0.50
1:I:50:THR:CG2	1:I:51:LYS:H	2.16	0.50
1:L:61:GLU:O	1:M:4:LYS:N	2.36	0.50
1:A:261:LEU:O	1:A:265:LYS:HB2	2.10	0.50
1:K:300:ILE:O	1:K:300:ILE:HG22	2.11	0.50
2:O:79:GLU:O	2:O:80:ILE:HG13	2.11	0.50
1:F:236:LEU:HB2	2:T:30:ILE:CD1	2.41	0.50
1:F:498:PRO:HG2	1:F:501:VAL:CG2	2.42	0.50
1:L:74:LEU:HA	1:L:512:ILE:HD11	1.93	0.50
2:U:18:LYS:HE3	2:U:86:GLU:O	2.11	0.50
1:L:408:GLU:OE1	1:L:500:LYS:HA	2.11	0.50
1:M:194:PHE:CB	1:M:278:PRO:HB3	2.42	0.50
1:E:23:VAL:CG1	1:E:74:LEU:HD23	2.40	0.50
1:M:526:LYS:CD	1:M:527:PRO:HD2	2.42	0.50
1:H:6:LEU:CD2	1:H:523:VAL:HG22	2.41	0.50
2:S:38:GLU:HG3	2:S:74:LYS:NZ	2.26	0.50
1:H:204:VAL:HG13	1:H:211:GLU:O	2.12	0.50
1:I:146:GLU:O	1:I:150:ILE:HG13	2.12	0.50
1:C:356:ASP:O	1:C:357:SER:C	2.50	0.50
1:J:518:THR:HG22	1:J:518:THR:O	2.12	0.50
1:E:416:VAL:HG21	1:E:479:GLY:HA3	1.94	0.50
2:U:48:VAL:CG1	2:U:62:LEU:CD1	2.85	0.50
1:A:168:VAL:HG21	1:A:376:ALA:HB2	1.94	0.50
1:C:522:VAL:HG22	1:D:39:VAL:HB	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:385:GLU:HB2	1:N:280:PHE:CD2	2.46	0.50
1:I:168:VAL:HG11	1:I:173:ILE:N	2.25	0.50
1:J:410:ILE:CD1	1:J:496:VAL:HG11	2.39	0.50
1:F:498:PRO:HG2	1:F:501:VAL:HG22	1.94	0.50
1:J:290:ASP:N	1:J:344:ARG:HH12	2.09	0.50
1:I:194:PHE:CG	1:I:278:PRO:HB3	2.47	0.50
1:G:465:ILE:HD13	1:G:480:PHE:CD2	2.46	0.50
1:M:114:LEU:O	1:M:118:ARG:HG3	2.12	0.50
1:G:198:TYR:O	1:G:198:TYR:HD1	1.95	0.50
1:B:10:GLU:N	1:B:13:ARG:HH12	2.10	0.50
1:L:258:LEU:O	1:L:262:VAL:HG23	2.11	0.50
1:B:40:LEU:HD13	1:B:59:GLU:HG3	1.94	0.50
1:L:141:ARG:HH11	1:L:166:GLU:HG3	1.77	0.50
1:H:421:ALA:O	1:H:425:VAL:HG23	2.11	0.50
1:M:168:VAL:CG1	1:M:173:ILE:H	2.24	0.50
1:A:168:VAL:CG1	1:A:172:GLY:HA3	2.25	0.50
1:A:54:VAL:HG11	1:A:79:SER:HA	1.94	0.50
1:C:498:PRO:HG2	1:C:501:VAL:HG22	1.94	0.50
1:A:526:LYS:HB3	1:A:529:LYS:HE3	1.93	0.50
1:B:57:ALA:O	1:B:75:LYS:HD3	2.12	0.50
1:I:218:PHE:HB3	1:I:316:LEU:HG	1.93	0.50
1:J:141:ARG:HH11	1:J:166:GLU:HG3	1.77	0.50
1:M:43:LYS:HG2	1:N:525:GLU:HG3	1.94	0.50
1:E:73:LEU:CD2	1:F:47:PRO:HD2	2.42	0.50
1:I:168:VAL:HG21	1:I:376:ALA:HB2	1.93	0.49
1:H:410:ILE:CD1	1:H:496:VAL:HG11	2.35	0.49
1:G:66:LEU:CD2	1:G:522:VAL:HG11	2.37	0.49
2:O:84:GLY:HA3	2:U:27:LYS:HD3	1.93	0.49
1:N:222:VAL:HG12	1:N:223:GLU:H	1.76	0.49
2:P:80:ILE:CG2	2:P:81:GLU:N	2.73	0.49
2:Q:45:VAL:HG21	2:Q:64:VAL:CG1	2.41	0.49
1:E:348:ILE:HD13	1:E:367:ARG:HB3	1.93	0.49
2:O:10:PRO:HA	2:U:97:ALA:HB2	1.94	0.49
2:Q:54:LEU:HD11	2:R:57:GLY:HA2	1.94	0.49
1:J:490:MET:HA	1:J:490:MET:HE2	1.92	0.49
1:E:450:PRO:O	1:E:454:ILE:HG13	2.11	0.49
1:F:466:VAL:HG12	1:F:470:LEU:HD12	1.94	0.49
1:L:481:ASN:HD21	1:L:484:THR:HG23	1.76	0.49
1:N:283:ARG:HD3	1:N:363:LYS:CE	2.41	0.49
1:B:168:VAL:HG21	1:B:376:ALA:HB2	1.93	0.49
1:J:74:LEU:HA	1:J:512:ILE:CD1	2.41	0.49
2:T:14:ARG:HH11	2:T:14:ARG:HG3	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:222:VAL:HG12	1:L:223:GLU:H	1.77	0.49
1:B:128:VAL:HG13	1:B:503:ARG:HG3	1.94	0.49
1:M:526:LYS:HG3	1:M:527:PRO:HD2	1.94	0.49
1:H:18:ARG:HD2	1:H:67:GLU:OE1	2.12	0.49
1:N:123:ALA:HB2	1:N:440:ALA:HA	1.94	0.49
1:B:418:LEU:H	1:B:418:LEU:HD12	1.77	0.49
1:C:142:LYS:HE2	1:C:146:GLU:OE2	2.11	0.49
2:O:62:LEU:C	2:O:64:VAL:H	2.14	0.49
1:B:168:VAL:O	1:B:168:VAL:HG12	2.11	0.49
1:G:54:VAL:HG22	1:G:89:THR:HG21	1.94	0.49
1:K:307:LYS:HB3	1:K:309:GLU:OE1	2.12	0.49
1:H:411:VAL:O	1:H:496:VAL:HG13	2.13	0.49
1:M:40:LEU:N	1:M:40:LEU:HD12	2.27	0.49
1:M:307:LYS:HE3	1:M:310:ASN:HD21	1.75	0.49
1:J:283:ARG:HD3	1:J:363:LYS:HZ1	1.76	0.49
1:F:233:LEU:HD23	2:T:30:ILE:CD1	2.42	0.49
1:B:270:LEU:HG	1:B:272:VAL:HG13	1.92	0.49
2:R:80:ILE:CG2	2:R:81:GLU:N	2.76	0.49
2:U:17:VAL:HG12	2:U:18:LYS:N	2.27	0.49
1:A:477:ARG:HH11	1:A:477:ARG:HG3	1.77	0.49
1:D:193:GLN:HB3	1:D:330:THR:HG23	1.95	0.49
1:I:128:VAL:HA	1:I:131:ILE:HD12	1.94	0.49
1:A:4:LYS:HG3	1:B:59:GLU:O	2.12	0.49
1:L:123:ALA:HB2	1:L:440:ALA:HA	1.94	0.49
1:A:157:VAL:HG22	1:A:395:PHE:CZ	2.47	0.49
1:G:179:SER:HB2	1:G:379:ARG:HB3	1.94	0.49
1:M:283:ARG:HH21	1:M:367:ARG:CD	2.25	0.49
1:C:284:ARG:O	1:C:288:LEU:HG	2.12	0.49
1:I:267:ARG:O	1:J:256:GLU:HG3	2.13	0.49
1:H:194:PHE:CG	1:H:278:PRO:HB3	2.47	0.49
1:L:290:ASP:N	1:L:344:ARG:NH1	2.60	0.49
2:Q:52:ARG:HH21	2:R:53:VAL:CG1	2.25	0.49
2:P:100:GLN:CB	2:Q:9:LYS:HE2	2.42	0.49
1:L:114:LEU:O	1:L:118:ARG:HG3	2.13	0.49
1:M:518:THR:HG22	1:M:518:THR:O	2.12	0.49
1:K:372:ALA:O	1:K:374:GLY:N	2.42	0.49
1:M:239:VAL:HG22	1:M:313:LEU:CD1	2.43	0.49
1:B:142:LYS:HE2	1:B:146:GLU:OE2	2.13	0.49
1:J:449:GLU:HB2	1:J:450:PRO:HD3	1.93	0.49
1:J:450:PRO:O	1:J:454:ILE:HG13	2.13	0.49
1:M:178:GLU:O	1:M:321:ARG:CZ	2.60	0.49
1:F:54:VAL:HG11	1:F:79:SER:HA	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:S:14:ARG:CG	2:S:14:ARG:HH11	2.23	0.49
1:L:269:THR:HA	1:M:256:GLU:HG3	1.92	0.49
1:N:7:VAL:HG21	1:N:66:LEU:CD1	2.42	0.49
1:K:40:LEU:N	1:K:40:LEU:HD12	2.28	0.49
1:E:498:PRO:HG2	1:E:501:VAL:HG22	1.94	0.49
1:G:230:ARG:O	1:G:234:PRO:HD2	2.13	0.49
1:K:283:ARG:HG2	1:K:363:LYS:HZ2	1.77	0.49
1:K:229:VAL:CG2	1:K:256:GLU:HB3	2.40	0.49
1:G:325:THR:HG22	1:G:326:LYS:N	2.28	0.49
1:F:179:SER:HB2	1:F:379:ARG:HB3	1.95	0.49
2:P:30:ILE:O	2:P:30:ILE:HG22	2.12	0.49
1:L:141:ARG:NH1	1:L:166:GLU:HG3	2.27	0.49
1:A:417:THR:HG23	1:A:418:LEU:HD12	1.95	0.49
1:D:25:ASN:HA	1:D:28:LYS:HG2	1.93	0.49
1:E:194:PHE:CD1	1:E:196:LYS:HB2	2.48	0.49
1:E:392:LYS:O	1:E:396:GLU:HG3	2.11	0.49
1:B:6:LEU:HD22	1:B:523:VAL:HG22	1.94	0.49
1:D:150:ILE:HD12	1:D:496:VAL:H	1.76	0.49
1:J:325:THR:CG2	1:J:327:ASP:H	2.04	0.49
2:U:45:VAL:HG21	2:U:64:VAL:CG1	2.40	0.49
1:L:496:VAL:HG12	1:L:497:ASP:N	2.26	0.49
1:L:168:VAL:HG11	1:L:173:ILE:N	2.27	0.49
1:E:224:LYS:CE	1:E:301:SER:HA	2.35	0.49
1:B:304:LEU:HD11	1:C:262:VAL:HG11	1.94	0.49
2:O:78:THR:HG22	2:O:79:GLU:N	2.26	0.49
1:G:72:GLN:NE2	1:G:75:LYS:NZ	2.60	0.49
1:C:72:GLN:NE2	1:C:75:LYS:NZ	2.59	0.49
2:S:81:GLU:HA	2:S:86:GLU:HA	1.93	0.49
2:P:100:GLN:OE1	2:Q:9:LYS:HE2	2.13	0.49
1:N:218:PHE:HB3	1:N:316:LEU:HG	1.93	0.49
1:K:337:LYS:HB2	1:K:340:ASP:OD2	2.12	0.49
1:B:417:THR:HG23	1:B:418:LEU:HD12	1.94	0.49
2:S:22:GLU:OE1	2:S:22:GLU:N	2.39	0.49
1:F:425:VAL:O	1:F:429:ILE:HG13	2.13	0.49
1:N:210:MET:HE2	1:N:210:MET:HA	1.95	0.49
1:E:468:GLN:O	1:E:471:ALA:HB3	2.12	0.49
1:A:29:VAL:HG11	1:G:520:GLU:HB3	1.93	0.49
1:A:14:ARG:NH1	1:A:17:GLU:OE1	2.46	0.49
1:C:312:THR:HB	1:C:314:SER:OG	2.12	0.49
1:K:77:VAL:O	1:K:80:LYS:HG2	2.13	0.49
1:I:7:VAL:HG21	1:I:66:LEU:CD1	2.41	0.49
1:B:363:LYS:C	1:B:365:GLN:N	2.64	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:383:ALA:O	1:G:80:LYS:HE2	2.13	0.49
1:B:157:VAL:HG22	1:B:395:PHE:CZ	2.48	0.49
1:B:220:LEU:HG	1:B:222:VAL:HG23	1.94	0.49
1:N:65:HIS:O	1:N:69:ILE:HG13	2.12	0.49
1:G:118:ARG:O	1:G:122:LYS:HG3	2.13	0.49
1:K:161:ILE:O	1:K:165:MET:HG3	2.13	0.49
1:K:151:SER:HB2	1:K:398:ALA:HA	1.94	0.49
2:O:44:LYS:HA	2:O:68:ASP:O	2.12	0.49
1:F:31:LEU:HB2	1:F:90:THR:HG21	1.95	0.49
1:I:123:ALA:HB2	1:I:440:ALA:HA	1.94	0.49
1:M:168:VAL:HG21	1:M:376:ALA:HB2	1.95	0.49
1:F:168:VAL:HG21	1:F:376:ALA:HB2	1.94	0.49
1:F:50:THR:CG2	1:F:51:LYS:H	2.11	0.49
1:K:168:VAL:CG1	1:K:173:ILE:H	2.24	0.49
1:M:385:GLU:O	1:M:389:LYS:HG3	2.13	0.49
1:J:234:PRO:HG3	1:J:309:GLU:CA	2.38	0.49
1:K:226:VAL:HG11	1:K:232:LEU:HD12	1.95	0.49
2:P:100:GLN:CG	2:Q:9:LYS:HE2	2.42	0.49
1:M:84:VAL:O	1:M:84:VAL:HG12	2.13	0.49
1:G:526:LYS:CG	1:G:527:PRO:HD2	2.43	0.49
1:A:101:ARG:CG	1:A:102:GLU:N	2.76	0.49
1:E:10:GLU:N	1:E:13:ARG:HH12	2.11	0.49
1:A:411:VAL:HB	1:A:412:PRO:HD2	1.94	0.49
2:O:71:VAL:HG23	2:O:99:LEU:HD13	1.94	0.49
1:A:425:VAL:O	1:A:429:ILE:HG13	2.13	0.49
1:D:225:LYS:O	1:D:226:VAL:HG23	2.13	0.49
1:N:283:ARG:HH22	1:N:364:LEU:HA	1.77	0.49
1:N:411:VAL:O	1:N:496:VAL:HG13	2.13	0.49
1:J:345:ILE:HG22	1:J:349:LYS:HE3	1.95	0.49
1:D:270:LEU:HG	1:D:272:VAL:HG13	1.94	0.49
1:J:352:LEU:HD21	1:J:365:GLN:HE22	1.78	0.49
1:A:234:PRO:O	1:A:238:GLN:HG3	2.13	0.49
1:L:526:LYS:HG3	1:L:527:PRO:CD	2.43	0.49
2:U:78:THR:HG22	2:U:80:ILE:HD11	1.94	0.49
1:B:465:ILE:HD13	1:B:480:PHE:CD2	2.48	0.49
1:J:161:ILE:O	1:J:165:MET:HG3	2.13	0.49
1:J:25:ASN:HA	1:J:28:LYS:HE2	1.95	0.49
1:G:6:LEU:CD2	1:G:523:VAL:HG22	2.43	0.49
1:E:136:ILE:HD11	1:E:477:ARG:NH2	2.28	0.49
1:E:175:THR:HB	1:E:377:VAL:HG22	1.95	0.49
1:A:144:ILE:CD1	1:A:165:MET:HG2	2.43	0.49
1:D:361:ARG:O	1:D:365:GLN:HB2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:168:VAL:HG21	1:C:376:ALA:HB2	1.95	0.48
1:B:50:THR:HA	1:B:390:GLU:OE1	2.13	0.48
1:H:522:VAL:HA	1:N:39:VAL:O	2.13	0.48
1:M:295:THR:HG22	1:M:317:GLY:HA3	1.94	0.48
1:E:149:THR:CG2	1:E:155:PRO:HA	2.40	0.48
1:B:247:LEU:HD22	1:B:322:VAL:HG11	1.94	0.48
1:I:228:ASN:HB3	1:I:231:GLU:HG2	1.95	0.48
1:I:219:ILE:O	1:I:221:ILE:HG13	2.12	0.48
1:N:118:ARG:O	1:N:122:LYS:HG3	2.13	0.48
1:G:416:VAL:HG21	1:G:479:GLY:HA3	1.94	0.48
1:D:448:GLU:OE1	1:D:452:ARG:NH2	2.46	0.48
1:E:194:PHE:HD1	1:E:196:LYS:HB2	1.78	0.48
1:I:416:VAL:HG21	1:I:490:MET:HG3	1.94	0.48
1:H:142:LYS:O	1:H:146:GLU:HG3	2.13	0.48
1:L:375:VAL:HG12	1:L:375:VAL:O	2.13	0.48
1:E:352:LEU:HD21	1:E:365:GLN:CG	2.42	0.48
1:E:227:SER:CB	1:E:254:GLU:HG3	2.31	0.48
2:Q:17:VAL:HG12	2:Q:18:LYS:N	2.29	0.48
1:M:253:VAL:HG11	1:M:261:LEU:HD12	1.95	0.48
1:K:295:THR:HG22	1:K:317:GLY:CA	2.44	0.48
2:Q:96:LEU:HD23	2:R:14:ARG:HE	1.78	0.48
1:C:408:GLU:OE1	1:C:503:ARG:NH2	2.46	0.48
1:F:232:LEU:HD23	1:F:308:LEU:HD21	1.94	0.48
1:M:222:VAL:HG12	1:M:223:GLU:H	1.77	0.48
1:D:222:VAL:HB	1:D:250:ALA:HB2	1.94	0.48
1:I:161:ILE:O	1:I:165:MET:HG3	2.14	0.48
1:D:118:ARG:O	1:D:122:LYS:HG3	2.13	0.48
1:G:445:ARG:CZ	1:G:452:ARG:HH21	2.25	0.48
1:B:264:ASN:HB3	1:B:269:THR:HB	1.95	0.48
1:E:477:ARG:HH11	1:E:477:ARG:HG3	1.79	0.48
1:A:431:LYS:HG3	1:A:431:LYS:O	2.12	0.48
1:F:356:ASP:O	1:F:357:SER:C	2.52	0.48
1:B:141:ARG:NH2	1:B:163:ASP:OD1	2.42	0.48
1:A:37:ASN:ND2	1:G:518:THR:OG1	2.46	0.48
1:B:25:ASN:HA	1:B:28:LYS:HG2	1.94	0.48
1:D:490:MET:HE1	1:D:495:ILE:HG21	1.96	0.48
1:A:142:LYS:HE2	1:A:146:GLU:OE2	2.13	0.48
1:K:325:THR:CG2	1:K:326:LYS:N	2.76	0.48
2:O:52:ARG:HG3	2:O:52:ARG:O	2.12	0.48
1:K:233:LEU:O	1:K:237:GLU:HB2	2.14	0.48
1:H:4:LYS:HG3	1:N:59:GLU:O	2.13	0.48
2:Q:49:GLY:O	2:Q:62:LEU:HD11	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:222:VAL:HG22	1:D:300:ILE:HD12	1.94	0.48
1:N:81:THR:OG1	1:N:508:ASN:ND2	2.46	0.48
1:D:10:GLU:N	1:D:13:ARG:NH1	2.61	0.48
1:J:390:GLU:OE1	1:J:394:ARG:NH1	2.46	0.48
1:C:417:THR:HG23	1:C:418:LEU:HD12	1.95	0.48
1:N:366:GLU:O	1:N:370:LYS:HG3	2.13	0.48
1:D:359:TYR:OH	1:D:363:LYS:HE3	2.14	0.48
1:E:147:VAL:HG23	1:E:410:ILE:HD11	1.95	0.48
1:C:150:ILE:CD1	1:C:496:VAL:H	2.26	0.48
2:U:13:ASP:CA	2:U:62:LEU:HD21	2.43	0.48
1:M:39:VAL:O	1:N:522:VAL:HA	2.13	0.48
1:N:7:VAL:HG12	1:N:12:ALA:HB2	1.95	0.48
1:N:120:ILE:HG23	1:N:443:VAL:CG2	2.43	0.48
1:L:194:PHE:CG	1:L:278:PRO:HB3	2.48	0.48
1:F:72:GLN:NE2	1:F:75:LYS:NZ	2.59	0.48
2:S:81:GLU:HA	2:S:85:GLU:O	2.13	0.48
2:R:53:VAL:HG22	2:R:59:ARG:CG	2.42	0.48
1:A:198:TYR:HD1	1:A:198:TYR:O	1.96	0.48
1:F:25:ASN:HA	1:F:28:LYS:HG2	1.94	0.48
1:L:180:LYS:O	1:M:281:GLY:CA	2.61	0.48
1:E:237:GLU:HG2	2:S:30:ILE:HD12	1.96	0.48
1:C:235:ILE:CG1	1:C:311:ALA:HB3	2.43	0.48
1:E:229:VAL:HG23	1:E:256:GLU:HG3	1.95	0.48
1:N:84:VAL:HG12	1:N:500:LYS:CE	2.42	0.48
1:D:284:ARG:HG3	1:D:284:ARG:HH11	1.79	0.48
2:R:46:ILE:O	2:R:46:ILE:HG22	2.12	0.48
1:F:288:LEU:HD23	1:F:291:ILE:HD12	1.95	0.48
1:D:300:ILE:O	1:D:300:ILE:HG22	2.13	0.48
1:F:416:VAL:HG21	1:F:490:MET:HG3	1.96	0.48
1:I:141:ARG:HH11	1:I:166:GLU:HG3	1.77	0.48
1:N:452:ARG:HH11	1:N:452:ARG:HG2	1.77	0.48
1:K:71:ALA:O	1:K:75:LYS:HG3	2.13	0.48
2:S:13:ASP:OD1	2:S:92:GLU:HB2	2.14	0.48
1:F:519:THR:HG23	1:G:39:VAL:HG23	1.96	0.48
1:A:240:ALA:HA	1:A:270:LEU:HD13	1.96	0.48
1:L:269:THR:HA	1:M:256:GLU:CD	2.34	0.48
1:D:242:THR:HG22	1:D:244:LYS:HG2	1.94	0.48
2:O:79:GLU:HG2	2:O:88:VAL:HG22	1.95	0.48
1:J:385:GLU:HB2	1:K:280:PHE:CD2	2.48	0.48
1:H:283:ARG:CZ	1:H:363:LYS:HG3	2.44	0.48
1:C:149:THR:HG23	1:C:155:PRO:CA	2.44	0.48
1:A:23:VAL:CG1	1:A:74:LEU:HD23	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:287:MET:O	1:G:291:ILE:HG13	2.13	0.48
1:G:101:ARG:CG	1:G:102:GLU:N	2.76	0.48
1:B:416:VAL:HG21	1:B:490:MET:HG3	1.96	0.48
1:A:6:LEU:HD22	1:A:523:VAL:HG22	1.95	0.48
1:G:410:ILE:HD11	1:G:496:VAL:HG21	1.94	0.48
1:A:80:LYS:HE2	1:B:383:ALA:O	2.14	0.48
1:K:123:ALA:HB2	1:K:440:ALA:HA	1.96	0.48
1:L:6:LEU:HD23	1:L:523:VAL:HG22	1.94	0.48
1:N:360:ALA:O	1:N:364:LEU:HD13	2.13	0.48
2:P:45:VAL:HG21	2:P:64:VAL:CG1	2.43	0.48
1:L:168:VAL:CG1	1:L:173:ILE:H	2.26	0.48
1:H:295:THR:HG22	1:H:317:GLY:HA3	1.95	0.48
1:A:247:LEU:HD13	1:A:324:ILE:HD11	1.95	0.48
2:O:80:ILE:CG2	2:O:81:GLU:N	2.77	0.48
1:I:175:THR:CG2	1:I:177:GLU:OE2	2.61	0.48
1:E:118:ARG:O	1:E:122:LYS:HG3	2.14	0.48
1:I:28:LYS:NZ	1:I:97:GLN:HE22	2.11	0.48
1:J:95:LEU:O	1:J:99:ILE:HG13	2.13	0.48
1:I:437:ALA:O	1:I:441:LYS:HG3	2.14	0.48
1:N:372:ALA:C	1:N:374:GLY:H	2.16	0.48
2:R:22:GLU:OE1	2:R:22:GLU:N	2.38	0.48
1:D:30:THR:O	1:D:35:GLY:HA3	2.12	0.48
1:G:503:ARG:O	1:G:507:GLN:HG3	2.14	0.48
1:J:481:ASN:HD21	1:J:484:THR:HG23	1.79	0.48
1:J:71:ALA:O	1:J:75:LYS:HG3	2.14	0.48
1:L:416:VAL:HG21	1:L:479:GLY:HA3	1.95	0.48
1:H:65:HIS:O	1:H:69:ILE:HG13	2.13	0.48
1:K:239:VAL:HG22	1:K:313:LEU:CD1	2.44	0.48
1:M:228:ASN:HB3	1:M:231:GLU:HG2	1.96	0.48
1:B:229:VAL:HG23	1:B:256:GLU:OE2	2.13	0.48
1:I:40:LEU:HD12	1:I:40:LEU:N	2.28	0.48
2:O:17:VAL:HG12	2:O:18:LYS:N	2.29	0.48
1:G:498:PRO:HG2	1:G:501:VAL:HG22	1.96	0.48
2:U:81:GLU:CG	2:U:85:GLU:H	2.27	0.48
1:F:287:MET:O	1:F:290:ASP:HB2	2.13	0.48
1:E:157:VAL:O	1:E:161:ILE:HG12	2.13	0.48
1:D:14:ARG:NH1	1:D:17:GLU:OE1	2.47	0.48
1:E:490:MET:HE1	1:E:495:ILE:HG21	1.95	0.48
1:G:54:VAL:HG11	1:G:79:SER:HA	1.96	0.48
1:C:277:ALA:O	1:C:278:PRO:O	2.32	0.48
1:D:247:LEU:HD13	1:D:324:ILE:HD11	1.95	0.48
1:A:246:LEU:CB	1:A:272:VAL:HG12	2.37	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:198:TYR:CE1	1:F:326:LYS:HA	2.49	0.48
1:F:232:LEU:HB3	1:F:236:LEU:HD11	1.95	0.48
1:K:84:VAL:O	1:K:84:VAL:HG12	2.14	0.48
1:N:6:LEU:CD2	1:N:523:VAL:HG22	2.44	0.48
1:D:161:ILE:HD12	1:D:399:LEU:CD2	2.44	0.48
1:G:344:ARG:HD2	1:G:344:ARG:HA	1.60	0.48
1:L:239:VAL:HG22	1:L:313:LEU:CD1	2.44	0.48
1:C:54:VAL:HG11	1:C:79:SER:HA	1.95	0.48
1:E:284:ARG:O	1:E:288:LEU:HG	2.13	0.48
1:N:168:VAL:HG12	1:N:172:GLY:CA	2.37	0.48
1:N:168:VAL:HG21	1:N:376:ALA:HB2	1.94	0.48
1:N:222:VAL:CG1	1:N:223:GLU:N	2.76	0.48
1:N:259:ALA:O	1:N:263:VAL:HG23	2.14	0.48
1:H:222:VAL:CG1	1:H:223:GLU:N	2.77	0.48
2:Q:62:LEU:C	2:Q:64:VAL:H	2.18	0.48
1:N:462:GLY:O	1:N:466:VAL:HG23	2.14	0.48
1:L:131:ILE:HD13	1:L:502:THR:HG22	1.95	0.48
1:M:168:VAL:HG12	1:M:172:GLY:CA	2.33	0.47
1:E:245:PRO:HA	1:E:271:SER:OG	2.14	0.47
1:I:50:THR:CG2	1:I:52:ASP:H	2.10	0.47
1:A:261:LEU:HD22	1:A:272:VAL:HG21	1.96	0.47
2:O:80:ILE:CG1	2:U:41:GLN:OE1	2.62	0.47
2:P:17:VAL:CG1	2:P:43:GLY:HA3	2.44	0.47
1:H:84:VAL:HG12	1:H:84:VAL:O	2.13	0.47
2:P:79:GLU:O	2:P:80:ILE:HG13	2.13	0.47
1:K:79:SER:O	1:K:81:THR:N	2.47	0.47
1:I:218:PHE:HE1	1:I:242:THR:HG21	1.78	0.47
1:L:458:ALA:O	1:M:114:LEU:CD1	2.62	0.47
1:B:144:ILE:CD1	1:B:165:MET:HG2	2.44	0.47
1:D:344:ARG:HA	1:D:344:ARG:HD2	1.66	0.47
1:L:24:ALA:O	1:L:28:LYS:HG2	2.13	0.47
1:J:258:LEU:O	1:J:262:VAL:HG23	2.14	0.47
1:D:528:GLU:H	1:D:528:GLU:CD	2.17	0.47
1:A:217:ALA:HB2	1:A:245:PRO:HB2	1.95	0.47
1:F:410:ILE:HD11	1:F:496:VAL:HG21	1.96	0.47
1:N:526:LYS:HD2	1:N:527:PRO:HD2	1.93	0.47
1:I:297:GLY:HA3	1:I:317:GLY:N	2.28	0.47
1:A:460:TYR:HB3	1:A:465:ILE:HD11	1.95	0.47
1:H:120:ILE:HG23	1:H:443:VAL:CG2	2.44	0.47
1:B:136:ILE:CD1	1:B:477:ARG:HH21	2.27	0.47
1:L:263:VAL:O	1:L:267:ARG:HB2	2.14	0.47
1:L:128:VAL:HA	1:L:131:ILE:HD12	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:224:LYS:HB3	1:F:302:GLU:OE1	2.14	0.47
2:S:46:ILE:O	2:S:46:ILE:HG22	2.14	0.47
1:F:359:TYR:CZ	1:F:363:LYS:HE2	2.49	0.47
1:K:298:THR:N	1:K:315:MET:O	2.47	0.47
1:E:251:GLU:O	1:E:252:ASP:HB2	2.14	0.47
1:M:206:ASN:HD21	1:M:389:LYS:HE2	1.80	0.47
1:D:265:LYS:HA	1:D:270:LEU:O	2.13	0.47
1:B:289:LYS:HE2	1:C:202:TYR:HH	1.79	0.47
1:A:349:LYS:C	1:A:351:GLU:H	2.16	0.47
1:I:363:LYS:O	1:I:366:GLU:HG2	2.15	0.47
2:P:81:GLU:HA	2:P:86:GLU:HA	1.96	0.47
2:S:18:LYS:HZ1	2:S:85:GLU:CD	2.17	0.47
2:O:56:ASN:HB2	2:O:58:GLN:HG3	1.96	0.47
1:J:28:LYS:HZ2	1:J:97:GLN:HE22	1.63	0.47
1:D:159:LYS:HE2	1:D:163:ASP:OD2	2.14	0.47
2:Q:10:PRO:HB2	2:Q:14:ARG:O	2.14	0.47
1:K:146:GLU:O	1:K:150:ILE:HG13	2.14	0.47
1:C:6:LEU:CD2	1:C:523:VAL:HG22	2.44	0.47
1:B:6:LEU:CD2	1:B:523:VAL:HG22	2.45	0.47
1:F:6:LEU:HD22	1:F:523:VAL:HG22	1.96	0.47
1:K:6:LEU:HD23	1:K:523:VAL:HG22	1.96	0.47
1:K:65:HIS:O	1:K:69:ILE:HG13	2.14	0.47
1:N:325:THR:HG22	1:N:327:ASP:N	2.04	0.47
1:G:37:ASN:HB3	1:G:50:THR:O	2.14	0.47
2:R:96:LEU:O	2:S:14:ARG:HD3	2.14	0.47
1:K:168:VAL:CG2	1:K:376:ALA:HB2	2.44	0.47
1:N:69:ILE:O	1:N:73:LEU:HB2	2.14	0.47
1:E:210:MET:HE3	1:E:210:MET:HA	1.96	0.47
1:L:232:LEU:HD23	1:L:236:LEU:HB2	1.96	0.47
1:D:465:ILE:HD13	1:D:480:PHE:CE2	2.50	0.47
1:M:118:ARG:O	1:M:122:LYS:HG3	2.14	0.47
1:H:127:ALA:O	1:H:131:ILE:HG13	2.14	0.47
1:A:344:ARG:HA	1:A:344:ARG:HD2	1.67	0.47
2:O:13:ASP:HB2	2:O:62:LEU:CD2	2.44	0.47
1:I:39:VAL:C	1:I:40:LEU:HD12	2.35	0.47
1:J:363:LYS:O	1:J:366:GLU:HG2	2.14	0.47
1:K:300:ILE:HG21	1:K:308:LEU:CD2	2.42	0.47
1:B:149:THR:HG23	1:B:155:PRO:CA	2.41	0.47
1:H:194:PHE:CB	1:H:278:PRO:HB3	2.45	0.47
2:Q:8:ILE:H	2:Q:8:ILE:HD12	1.78	0.47
1:F:118:ARG:O	1:F:122:LYS:HG3	2.15	0.47
1:H:228:ASN:HB3	1:H:231:GLU:HG2	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:194:PHE:CG	1:M:278:PRO:HB3	2.50	0.47
1:F:465:ILE:HD13	1:F:480:PHE:CE2	2.49	0.47
2:T:50:THR:CG2	2:T:59:ARG:HD3	2.45	0.47
1:A:144:ILE:HD12	1:A:165:MET:HG2	1.96	0.47
1:C:418:LEU:H	1:C:418:LEU:HD12	1.79	0.47
2:T:44:LYS:HA	2:T:68:ASP:O	2.13	0.47
1:A:95:LEU:O	1:A:99:ILE:HG13	2.15	0.47
1:F:526:LYS:O	1:F:527:PRO:C	2.52	0.47
1:K:462:GLY:O	1:K:466:VAL:HG23	2.14	0.47
1:A:10:GLU:N	1:A:13:ARG:NH1	2.62	0.47
1:N:19:GLY:HA3	1:N:67:GLU:O	2.14	0.47
1:A:224:LYS:HB3	1:A:302:GLU:OE1	2.13	0.47
1:D:150:ILE:HG22	1:D:151:SER:N	2.28	0.47
1:E:265:LYS:HD3	1:E:272:VAL:H	1.80	0.47
2:R:8:ILE:CG2	2:R:16:VAL:HG21	2.42	0.47
2:S:100:GLN:CD	2:T:9:LYS:HE2	2.35	0.47
1:L:194:PHE:CB	1:L:278:PRO:HB3	2.44	0.47
1:A:237:GLU:CG	2:O:28:GLY:HA3	2.45	0.47
1:H:178:GLU:OE2	1:H:392:LYS:HE3	2.15	0.47
1:F:520:GLU:HG2	1:G:29:VAL:HG13	1.96	0.47
1:J:146:GLU:O	1:J:150:ILE:HG13	2.14	0.47
1:F:289:LYS:O	1:F:292:ALA:HB3	2.15	0.47
1:B:356:ASP:O	1:B:357:SER:C	2.53	0.47
1:M:228:ASN:ND2	1:M:230:ARG:HB3	2.25	0.47
1:E:240:ALA:HB2	1:E:270:LEU:HD22	1.96	0.47
1:B:284:ARG:O	1:B:288:LEU:HG	2.14	0.47
1:E:54:VAL:CG2	1:E:89:THR:HG21	2.44	0.47
1:B:52:ASP:OD1	1:B:54:VAL:HG23	2.14	0.47
1:B:54:VAL:HG13	1:B:89:THR:HG21	1.95	0.47
1:A:203:PHE:HA	1:A:265:LYS:HE3	1.97	0.47
1:I:345:ILE:HG22	1:I:349:LYS:HE3	1.97	0.47
1:B:289:LYS:O	1:B:292:ALA:HB3	2.15	0.47
1:B:127:ALA:O	1:B:131:ILE:HG13	2.14	0.47
1:L:194:PHE:N	1:L:194:PHE:CD2	2.82	0.47
1:A:149:THR:HG23	1:A:155:PRO:CA	2.43	0.47
1:F:236:LEU:CB	2:T:30:ILE:HD11	2.44	0.47
1:K:222:VAL:CG1	1:K:223:GLU:N	2.78	0.47
2:P:84:GLY:O	2:P:85:GLU:HB2	2.14	0.47
1:N:300:ILE:HG22	1:N:300:ILE:O	2.14	0.47
1:L:84:VAL:O	1:L:84:VAL:HG12	2.15	0.47
1:K:114:LEU:O	1:K:118:ARG:HG3	2.14	0.47
1:B:290:ASP:HB3	1:B:371:LEU:HD21	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:127:ALA:O	1:F:131:ILE:HG13	2.15	0.47
1:H:226:VAL:CG1	1:H:232:LEU:HD12	2.43	0.47
1:A:360:ALA:O	1:A:364:LEU:HG	2.15	0.47
2:O:10:PRO:HG2	2:O:49:GLY:HA2	1.97	0.47
2:O:9:LYS:HB2	2:U:98:VAL:O	2.14	0.47
1:A:359:TYR:OH	1:A:363:LYS:HE3	2.15	0.47
1:K:425:VAL:O	1:K:429:ILE:HG13	2.15	0.47
1:C:101:ARG:CG	1:C:102:GLU:N	2.78	0.47
1:M:28:LYS:NZ	1:M:97:GLN:HE22	2.12	0.47
1:E:6:LEU:HD22	1:E:523:VAL:HG22	1.96	0.47
1:A:40:LEU:HD13	1:A:59:GLU:HG3	1.96	0.47
1:F:141:ARG:NH2	1:F:163:ASP:OD1	2.45	0.47
1:H:390:GLU:OE1	1:H:394:ARG:NH1	2.48	0.47
1:C:161:ILE:HD12	1:C:399:LEU:CD2	2.45	0.47
1:M:168:VAL:CG2	1:M:376:ALA:HB2	2.45	0.47
1:L:496:VAL:HG12	1:L:497:ASP:H	1.80	0.47
1:L:168:VAL:HG21	1:L:376:ALA:HB2	1.97	0.47
1:L:234:PRO:HG3	1:L:309:GLU:CA	2.37	0.47
1:N:219:ILE:O	1:N:221:ILE:HG13	2.15	0.47
1:K:74:LEU:HA	1:K:512:ILE:HD13	1.96	0.47
1:H:286:GLU:HG3	1:H:367:ARG:NH2	2.29	0.47
1:K:224:LYS:CG	1:K:225:LYS:N	2.77	0.47
2:T:80:ILE:CG2	2:T:81:GLU:N	2.78	0.47
1:N:146:GLU:O	1:N:150:ILE:HG13	2.14	0.47
1:M:5:ILE:HG23	1:M:5:ILE:O	2.15	0.47
1:E:25:ASN:HA	1:E:28:LYS:HG2	1.96	0.47
1:G:77:VAL:HG23	1:G:512:ILE:HG13	1.96	0.47
1:C:301:SER:HB2	1:C:304:LEU:CB	2.45	0.47
1:A:25:ASN:HA	1:A:28:LYS:HG2	1.97	0.47
1:H:258:LEU:O	1:H:262:VAL:HG23	2.14	0.47
1:N:449:GLU:HB2	1:N:450:PRO:HD3	1.97	0.47
1:D:232:LEU:HB3	1:D:236:LEU:CD1	2.45	0.47
1:N:360:ALA:O	1:N:364:LEU:CD1	2.62	0.47
1:J:168:VAL:CG2	1:J:376:ALA:HB2	2.44	0.47
1:A:351:GLU:OE2	1:B:326:LYS:NZ	2.38	0.47
1:I:7:VAL:HG12	1:I:12:ALA:HB2	1.96	0.47
1:D:360:ALA:O	1:D:364:LEU:HG	2.15	0.47
1:H:114:LEU:O	1:H:118:ARG:HG3	2.15	0.47
1:L:312:THR:C	1:L:314:SER:N	2.67	0.47
1:A:222:VAL:HG22	1:A:300:ILE:HD12	1.95	0.47
1:M:128:VAL:HA	1:M:131:ILE:HD12	1.97	0.47
1:B:152:ALA:HB2	1:B:398:ALA:HB2	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:167:LYS:HB2	1:D:188:PHE:CE2	2.49	0.47
1:B:184:THR:HG23	1:B:380:VAL:HA	1.96	0.47
2:O:54:LEU:HG	2:O:55:GLU:H	1.80	0.47
1:M:173:ILE:HG13	1:M:370:LYS:HA	1.97	0.47
1:M:173:ILE:HD11	1:M:370:LYS:CG	2.45	0.47
1:N:325:THR:CG2	1:N:326:LYS:N	2.78	0.47
2:Q:81:GLU:HA	2:Q:86:GLU:HA	1.96	0.47
1:L:179:SER:CB	1:L:379:ARG:HB3	2.37	0.47
1:L:219:ILE:HD13	1:L:331:ILE:HD13	1.97	0.47
1:I:222:VAL:CG1	1:I:223:GLU:N	2.76	0.47
1:K:232:LEU:HD23	1:K:236:LEU:HB2	1.97	0.47
1:L:69:ILE:O	1:L:73:LEU:HB2	2.15	0.47
1:I:337:LYS:HB2	1:I:340:ASP:OD2	2.15	0.47
1:K:316:LEU:HD23	1:K:316:LEU:O	2.14	0.47
1:E:417:THR:HG23	1:E:418:LEU:HD12	1.97	0.47
1:A:472:GLU:HB3	1:A:478:TYR:CD2	2.49	0.47
1:C:177:GLU:O	1:C:379:ARG:HA	2.15	0.47
2:U:25:LYS:HG2	2:U:31:VAL:HG22	1.97	0.47
1:L:475:ASN:OD1	1:L:477:ARG:N	2.43	0.47
1:B:450:PRO:O	1:B:454:ILE:HG13	2.15	0.47
1:E:265:LYS:HA	1:E:270:LEU:O	2.14	0.46
1:E:293:ALA:O	1:E:336:GLY:HA3	2.15	0.46
1:M:383:ALA:CB	1:N:359:TYR:OH	2.63	0.46
1:J:46:SER:HB2	1:J:47:PRO:CD	2.37	0.46
1:N:66:LEU:HD22	1:N:522:VAL:HG21	1.97	0.46
1:B:189:VAL:HG12	1:B:190:GLU:N	2.30	0.46
1:K:232:LEU:O	1:K:232:LEU:HD23	2.15	0.46
2:U:79:GLU:O	2:U:80:ILE:HG13	2.15	0.46
1:E:128:VAL:HG13	1:E:503:ARG:HG3	1.96	0.46
1:K:455:ALA:HB1	1:K:465:ILE:HD12	1.96	0.46
1:K:458:ALA:O	1:L:114:LEU:HD12	2.15	0.46
1:H:79:SER:O	1:H:81:THR:N	2.48	0.46
1:N:79:SER:O	1:N:81:THR:N	2.47	0.46
1:C:264:ASN:HB3	1:C:269:THR:HB	1.95	0.46
1:G:108:ALA:CB	1:N:109:ALA:CB	2.93	0.46
1:F:40:LEU:HD13	1:F:59:GLU:HG3	1.96	0.46
1:A:150:ILE:CD1	1:A:496:VAL:H	2.27	0.46
2:T:91:SER:O	2:T:95:LEU:HG	2.14	0.46
1:H:168:VAL:HG21	1:H:376:ALA:HB2	1.96	0.46
2:Q:33:PRO:O	2:Q:35:THR:N	2.48	0.46
1:I:307:LYS:HE3	1:I:310:ASN:HD21	1.80	0.46
1:L:149:THR:HG23	1:L:155:PRO:CA	2.40	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:239:VAL:HG11	1:D:246:LEU:HB2	1.96	0.46
1:C:235:ILE:O	1:C:239:VAL:HG23	2.15	0.46
1:I:224:LYS:CG	1:I:225:LYS:N	2.78	0.46
2:R:48:VAL:CG1	2:R:62:LEU:HD23	2.46	0.46
1:F:72:GLN:HE22	1:F:75:LYS:HZ3	1.60	0.46
1:G:422:ILE:HD12	1:G:470:LEU:HD21	1.98	0.46
1:F:128:VAL:HA	1:F:131:ILE:HD12	1.97	0.46
1:K:375:VAL:O	1:K:375:VAL:HG12	2.15	0.46
1:H:123:ALA:HB2	1:H:440:ALA:HA	1.97	0.46
1:C:296:GLY:CA	1:C:336:GLY:HA2	2.44	0.46
1:D:359:TYR:CZ	1:D:363:LYS:CE	2.98	0.46
1:E:235:ILE:HG12	1:E:311:ALA:CB	2.37	0.46
1:H:40:LEU:HD12	1:H:40:LEU:N	2.30	0.46
1:K:410:ILE:CD1	1:K:496:VAL:HG11	2.38	0.46
1:J:283:ARG:HD2	1:J:283:ARG:HA	1.70	0.46
2:U:33:PRO:C	2:U:35:THR:H	2.19	0.46
1:H:363:LYS:O	1:H:366:GLU:HG2	2.16	0.46
1:K:194:PHE:CG	1:K:278:PRO:HB3	2.50	0.46
1:J:465:ILE:HD13	1:J:480:PHE:CD1	2.51	0.46
2:Q:54:LEU:CD1	2:R:57:GLY:N	2.79	0.46
2:Q:97:ALA:HA	2:R:11:LEU:HG	1.98	0.46
1:C:286:GLU:OE1	1:C:344:ARG:NH2	2.48	0.46
1:C:289:LYS:NZ	1:D:202:TYR:CZ	2.66	0.46
1:A:29:VAL:HG13	1:G:520:GLU:HG2	1.96	0.46
1:G:103:GLY:O	1:G:107:VAL:HG23	2.15	0.46
1:G:157:VAL:O	1:G:161:ILE:HG12	2.16	0.46
1:F:361:ARG:O	1:F:365:GLN:HB2	2.16	0.46
1:F:396:GLU:O	1:F:400:ASN:ND2	2.48	0.46
1:N:526:LYS:O	1:N:527:PRO:C	2.54	0.46
1:D:54:VAL:CG2	1:D:89:THR:HG21	2.44	0.46
1:F:263:VAL:O	1:F:267:ARG:HB2	2.15	0.46
1:E:168:VAL:HG21	1:E:376:ALA:HB2	1.98	0.46
1:C:279:GLY:C	1:C:284:ARG:HB3	2.36	0.46
1:A:66:LEU:CD2	1:A:522:VAL:HG11	2.38	0.46
1:L:307:LYS:HE3	1:L:310:ASN:HD21	1.80	0.46
2:O:84:GLY:O	2:O:85:GLU:HB2	2.15	0.46
1:A:230:ARG:HA	1:A:233:LEU:HD12	1.98	0.46
1:A:498:PRO:HG2	1:A:501:VAL:HG22	1.96	0.46
1:I:232:LEU:HD23	1:I:236:LEU:HB2	1.98	0.46
1:I:69:ILE:O	1:I:73:LEU:HB2	2.15	0.46
1:E:231:GLU:O	1:E:309:GLU:HA	2.15	0.46
1:E:192:TYR:C	1:E:192:TYR:CD2	2.88	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:141:ARG:NH2	1:G:163:ASP:OD1	2.38	0.46
1:K:19:GLY:HA3	1:K:67:GLU:O	2.15	0.46
1:K:117:LYS:O	1:K:121:GLU:HG3	2.16	0.46
2:R:97:ALA:HA	2:S:11:LEU:HD13	1.95	0.46
1:I:168:VAL:CG2	1:I:376:ALA:HB2	2.44	0.46
1:I:385:GLU:O	1:I:389:LYS:HG3	2.15	0.46
1:I:228:ASN:ND2	1:I:230:ARG:HB3	2.24	0.46
1:H:297:GLY:HA3	1:H:317:GLY:N	2.30	0.46
1:N:117:LYS:O	1:N:120:ILE:N	2.48	0.46
1:G:229:VAL:HG11	2:U:32:LEU:CD2	2.45	0.46
2:R:79:GLU:C	2:R:80:ILE:HD12	2.36	0.46
2:P:73:ALA:O	2:P:75:TYR:N	2.48	0.46
1:D:161:ILE:HD12	1:D:399:LEU:HD21	1.96	0.46
1:J:425:VAL:O	1:J:429:ILE:HG13	2.16	0.46
1:C:528:GLU:OE1	1:C:528:GLU:N	2.48	0.46
1:E:123:ALA:HB3	1:E:443:VAL:HG21	1.98	0.46
1:F:227:SER:C	1:F:257:ALA:HB2	2.36	0.46
1:G:199:ILE:O	1:G:199:ILE:HG22	2.15	0.46
1:C:7:VAL:CG2	1:C:66:LEU:HD11	2.30	0.46
1:E:518:THR:OG1	1:F:37:ASN:ND2	2.48	0.46
1:F:54:VAL:CG2	1:F:89:THR:HG21	2.45	0.46
1:E:343:ALA:HB2	1:F:207:PRO:HB2	1.97	0.46
1:N:40:LEU:HD12	1:N:40:LEU:N	2.31	0.46
1:H:39:VAL:C	1:H:40:LEU:HD12	2.36	0.46
1:B:246:LEU:HB3	1:B:272:VAL:CG1	2.43	0.46
1:L:222:VAL:CG1	1:L:223:GLU:N	2.78	0.46
1:K:232:LEU:CD2	1:K:236:LEU:HD13	2.43	0.46
1:E:465:ILE:HD13	1:E:480:PHE:CE2	2.51	0.46
1:G:363:LYS:C	1:G:365:GLN:H	2.18	0.46
1:B:466:VAL:HG12	1:B:470:LEU:HD12	1.96	0.46
1:G:320:GLU:HB3	1:G:333:GLY:HA3	1.97	0.46
1:I:204:VAL:HG13	1:I:211:GLU:O	2.15	0.46
1:K:416:VAL:HG21	1:K:479:GLY:HA3	1.98	0.46
1:A:31:LEU:HB2	1:A:90:THR:HG21	1.97	0.46
1:K:311:ALA:HA	1:K:315:MET:SD	2.55	0.46
1:D:7:VAL:HG12	1:D:12:ALA:HB2	1.98	0.46
1:E:292:ALA:O	1:E:293:ALA:C	2.54	0.46
1:N:46:SER:HB2	1:N:47:PRO:CD	2.36	0.46
1:N:168:VAL:CG2	1:N:376:ALA:HB2	2.46	0.46
1:A:498:PRO:HG2	1:A:501:VAL:CG2	2.45	0.46
1:K:120:ILE:HG23	1:K:443:VAL:CG2	2.45	0.46
1:F:178:GLU:CG	1:F:388:LEU:HD21	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:310:ASN:HB3	2:O:34:ASP:OD2	2.15	0.46
1:L:316:LEU:O	1:L:316:LEU:HD23	2.16	0.46
1:B:445:ARG:CZ	1:B:452:ARG:HH21	2.28	0.46
1:K:218:PHE:HE1	1:K:242:THR:HG21	1.81	0.46
1:G:199:ILE:HG13	1:G:274:ALA:O	2.15	0.46
1:D:457:ASN:N	1:D:457:ASN:HD22	2.14	0.46
1:G:312:THR:HG22	1:G:313:LEU:H	1.80	0.46
1:D:52:ASP:OD1	1:D:54:VAL:HG23	2.15	0.46
1:M:206:ASN:HD21	1:M:389:LYS:CE	2.29	0.46
1:N:168:VAL:HG11	1:N:173:ILE:N	2.29	0.46
1:M:179:SER:CB	1:M:379:ARG:HB3	2.38	0.46
1:J:307:LYS:HB3	1:J:309:GLU:OE1	2.15	0.46
1:L:283:ARG:HA	1:L:283:ARG:HD2	1.70	0.46
1:N:228:ASN:HB3	1:N:231:GLU:HG2	1.97	0.46
2:U:78:THR:HG22	2:U:80:ILE:CD1	2.46	0.46
1:L:316:LEU:HD23	1:L:316:LEU:H	1.80	0.46
1:E:231:GLU:HB3	1:E:308:LEU:HB3	1.97	0.46
1:G:321:ARG:HG2	1:G:322:VAL:N	2.31	0.46
1:J:372:ALA:O	1:J:374:GLY:N	2.45	0.46
1:F:95:LEU:O	1:F:99:ILE:HG13	2.16	0.46
1:K:204:VAL:HG13	1:K:211:GLU:O	2.16	0.46
1:M:363:LYS:O	1:M:366:GLU:HG2	2.16	0.46
1:A:147:VAL:HG23	1:A:410:ILE:HD11	1.97	0.46
1:I:311:ALA:HA	1:I:315:MET:SD	2.56	0.46
1:L:325:THR:CG2	1:L:326:LYS:N	2.79	0.46
1:C:222:VAL:HG22	1:C:300:ILE:HD12	1.97	0.46
1:H:168:VAL:CG2	1:H:376:ALA:HB2	2.46	0.46
1:K:246:LEU:HB3	1:K:272:VAL:CG1	2.44	0.46
1:L:363:LYS:O	1:L:366:GLU:HG2	2.16	0.46
1:G:284:ARG:HH11	1:G:284:ARG:HG3	1.80	0.46
1:M:316:LEU:H	1:M:316:LEU:HD23	1.81	0.46
1:C:363:LYS:C	1:C:365:GLN:H	2.19	0.46
1:F:354:THR:O	1:F:354:THR:HG22	2.16	0.46
1:H:131:ILE:HD13	1:H:502:THR:HG22	1.97	0.46
1:H:372:ALA:C	1:H:374:GLY:H	2.19	0.46
1:M:117:LYS:O	1:M:121:GLU:HG3	2.16	0.46
1:M:136:ILE:HD11	1:M:491:VAL:HG21	1.97	0.46
2:U:13:ASP:HA	2:U:62:LEU:HD21	1.98	0.46
1:J:283:ARG:NH2	1:J:367:ARG:CD	2.78	0.46
1:E:69:ILE:CD1	1:F:41:GLU:HB2	2.42	0.46
1:E:178:GLU:CG	1:E:388:LEU:HD21	2.43	0.46
1:A:529:LYS:HE2	1:B:63:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:189:VAL:HG13	1:G:190:GLU:H	1.79	0.46
1:A:465:ILE:HD13	1:A:480:PHE:CE2	2.51	0.46
2:T:17:VAL:O	2:T:87:TYR:HB3	2.16	0.46
1:I:117:LYS:O	1:I:121:GLU:HG3	2.16	0.46
1:M:81:THR:OG1	1:M:508:ASN:ND2	2.49	0.46
1:J:177:GLU:HB3	1:J:321:ARG:NH1	2.31	0.46
1:D:478:TYR:CE1	1:D:487:PHE:HB3	2.51	0.46
1:N:416:VAL:HG21	1:N:479:GLY:HA3	1.98	0.46
1:E:167:LYS:HB2	1:E:188:PHE:CE2	2.51	0.46
2:R:38:GLU:HG2	2:R:38:GLU:H	1.54	0.46
1:N:204:VAL:HG13	1:N:211:GLU:O	2.15	0.46
1:A:141:ARG:NH2	1:A:163:ASP:OD1	2.47	0.46
1:A:179:SER:OG	1:A:180:LYS:N	2.49	0.46
1:L:103:GLY:O	1:L:107:VAL:HG23	2.15	0.46
1:C:14:ARG:NH1	1:C:17:GLU:OE1	2.49	0.46
1:N:283:ARG:HD2	1:N:283:ARG:HA	1.72	0.45
1:E:283:ARG:O	1:E:287:MET:HG3	2.15	0.45
1:J:39:VAL:C	1:J:40:LEU:HD12	2.37	0.45
1:E:263:VAL:HG13	1:E:267:ARG:NH1	2.31	0.45
1:K:219:ILE:O	1:K:221:ILE:HG13	2.16	0.45
1:H:307:LYS:HE3	1:H:310:ASN:HD21	1.80	0.45
2:S:96:LEU:O	2:T:14:ARG:HD3	2.16	0.45
1:D:74:LEU:HD21	1:D:93:THR:CG2	2.45	0.45
1:M:120:ILE:HG23	1:M:443:VAL:CG2	2.46	0.45
2:R:84:GLY:O	2:R:85:GLU:HB2	2.16	0.45
1:J:259:ALA:O	1:J:263:VAL:HG23	2.17	0.45
2:S:17:VAL:HG12	2:S:18:LYS:N	2.31	0.45
2:U:17:VAL:O	2:U:87:TYR:HB3	2.16	0.45
1:L:84:VAL:HG12	1:L:500:LYS:CE	2.45	0.45
1:A:250:ALA:O	1:A:251:GLU:C	2.53	0.45
1:I:452:ARG:NH1	1:I:452:ARG:HG2	2.31	0.45
1:A:337:LYS:O	1:A:340:ASP:HB2	2.15	0.45
1:D:305:GLY:HA3	2:S:33:PRO:HB2	1.96	0.45
1:K:63:GLU:HG2	1:L:3:ALA:HB1	1.97	0.45
1:L:390:GLU:OE1	1:L:394:ARG:NH1	2.49	0.45
1:I:526:LYS:HG3	1:I:527:PRO:HD2	1.98	0.45
1:M:175:THR:OG1	1:M:330:THR:HG21	2.16	0.45
1:E:227:SER:HB3	1:E:254:GLU:CG	2.33	0.45
2:Q:85:GLU:HA	2:Q:85:GLU:OE1	2.15	0.45
1:D:219:ILE:N	1:D:317:GLY:O	2.40	0.45
1:J:194:PHE:N	1:J:194:PHE:CD2	2.84	0.45
1:N:117:LYS:O	1:N:118:ARG:C	2.55	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:85:GLU:OE1	2:O:85:GLU:HA	2.15	0.45
1:A:345:ILE:C	1:A:347:GLY:H	2.19	0.45
1:M:268:GLY:HA3	1:N:227:SER:CB	2.43	0.45
2:U:73:ALA:O	2:U:75:TYR:N	2.49	0.45
1:B:189:VAL:HG13	1:B:190:GLU:H	1.81	0.45
1:L:79:SER:C	1:L:81:THR:N	2.68	0.45
1:M:161:ILE:O	1:M:165:MET:HG3	2.16	0.45
1:B:118:ARG:O	1:B:122:LYS:HG3	2.16	0.45
1:M:218:PHE:HE1	1:M:242:THR:HG21	1.78	0.45
1:N:312:THR:HG22	1:N:313:LEU:N	2.31	0.45
1:E:31:LEU:HD13	1:E:90:THR:HG22	1.98	0.45
1:A:418:LEU:HD12	1:A:418:LEU:H	1.82	0.45
1:B:30:THR:O	1:B:35:GLY:HA3	2.15	0.45
1:G:207:PRO:O	1:G:210:MET:HE3	2.16	0.45
2:T:71:VAL:HG23	2:T:99:LEU:HD13	1.98	0.45
1:L:421:ALA:O	1:L:425:VAL:HG23	2.15	0.45
1:C:472:GLU:HB3	1:C:478:TYR:CD2	2.51	0.45
1:D:173:ILE:HG22	1:D:173:ILE:O	2.16	0.45
1:B:220:LEU:HD13	1:B:235:ILE:HD13	1.98	0.45
1:L:50:THR:HG21	1:L:55:THR:HB	1.97	0.45
1:I:307:LYS:HB2	1:I:310:ASN:ND2	2.31	0.45
1:K:46:SER:CB	1:K:47:PRO:HD2	2.38	0.45
2:U:91:SER:O	2:U:95:LEU:HG	2.17	0.45
1:H:295:THR:HG22	1:H:317:GLY:CA	2.47	0.45
1:J:194:PHE:CE1	1:J:278:PRO:HD3	2.52	0.45
1:I:194:PHE:CB	1:I:278:PRO:HB3	2.46	0.45
1:B:506:LEU:HD12	1:B:506:LEU:O	2.16	0.45
1:D:455:ALA:O	1:D:458:ALA:HB3	2.17	0.45
1:E:101:ARG:CG	1:E:102:GLU:N	2.79	0.45
1:H:416:VAL:HG21	1:H:479:GLY:HA3	1.98	0.45
1:M:178:GLU:H	1:M:321:ARG:HH11	1.64	0.45
1:L:59:GLU:OE1	1:M:4:LYS:NZ	2.35	0.45
1:N:168:VAL:CG1	1:N:173:ILE:H	2.28	0.45
1:J:283:ARG:HG2	1:J:363:LYS:NZ	2.31	0.45
1:N:295:THR:HG22	1:N:317:GLY:HA3	1.99	0.45
1:C:240:ALA:HA	1:C:270:LEU:HD13	1.98	0.45
2:O:79:GLU:C	2:O:80:ILE:HD12	2.36	0.45
1:H:84:VAL:HG12	1:H:500:LYS:CE	2.44	0.45
1:G:498:PRO:HG2	1:G:501:VAL:CG2	2.46	0.45
1:H:27:VAL:HG12	1:H:90:THR:HG23	1.97	0.45
1:I:232:LEU:CD2	1:I:236:LEU:HD13	2.47	0.45
1:D:220:LEU:HG	1:D:222:VAL:HG23	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:300:ILE:O	1:F:300:ILE:HG22	2.15	0.45
1:M:452:ARG:HG2	1:M:452:ARG:NH1	2.32	0.45
1:H:86:GLY:O	1:H:87:ASP:HB2	2.17	0.45
1:D:396:GLU:O	1:D:400:ASN:ND2	2.49	0.45
1:I:197:GLY:HA3	1:I:325:THR:O	2.16	0.45
2:P:41:GLN:HG2	2:P:74:LYS:CB	2.40	0.45
1:M:253:VAL:O	1:M:258:LEU:HD22	2.16	0.45
1:E:66:LEU:HD22	1:E:522:VAL:CG1	2.42	0.45
1:J:283:ARG:HD3	1:J:363:LYS:HE3	1.99	0.45
1:D:124:VAL:HG13	1:D:506:LEU:HG	1.98	0.45
1:K:80:LYS:HE3	1:K:508:ASN:OD1	2.16	0.45
2:S:98:VAL:O	2:T:9:LYS:N	2.46	0.45
1:E:465:ILE:HD13	1:E:480:PHE:CD2	2.50	0.45
1:E:74:LEU:HD21	1:E:93:THR:CG2	2.47	0.45
1:A:359:TYR:CE1	1:A:363:LYS:HE2	2.52	0.45
1:G:198:TYR:CE1	1:G:326:LYS:HA	2.52	0.45
1:L:253:VAL:HG11	1:L:261:LEU:HD12	1.98	0.45
1:A:287:MET:O	1:A:290:ASP:HB2	2.17	0.45
1:B:280:PHE:O	1:B:281:GLY:C	2.55	0.45
1:A:205:THR:HB	1:A:213:VAL:H	1.82	0.45
1:F:283:ARG:HB2	1:F:283:ARG:HH11	1.82	0.45
1:C:103:GLY:O	1:C:107:VAL:HG23	2.17	0.45
1:M:37:ASN:H	1:N:518:THR:HG22	1.81	0.45
1:F:51:LYS:O	1:F:51:LYS:HG2	2.16	0.45
1:E:264:ASN:ND2	2:S:30:ILE:HG23	2.31	0.45
1:I:187:LYS:HZ1	1:I:379:ARG:HG3	1.81	0.45
1:D:287:MET:O	1:D:290:ASP:HB2	2.17	0.45
1:F:235:ILE:CD1	1:F:311:ALA:CB	2.92	0.45
1:K:54:VAL:HG22	1:K:89:THR:CG2	2.45	0.45
1:M:267:ARG:O	1:N:255:GLY:HA3	2.16	0.45
1:I:416:VAL:HG21	1:I:479:GLY:HA3	1.98	0.45
1:C:179:SER:OG	1:C:180:LYS:N	2.49	0.45
2:O:21:GLU:CD	2:O:21:GLU:H	2.20	0.45
1:J:18:ARG:HD2	1:J:67:GLU:OE1	2.16	0.45
1:M:19:GLY:HA3	1:M:67:GLU:O	2.16	0.45
1:F:468:GLN:O	1:F:471:ALA:HB3	2.16	0.45
1:I:239:VAL:HG22	1:I:313:LEU:CD1	2.46	0.45
1:I:298:THR:N	1:I:315:MET:O	2.50	0.45
1:M:323:ARG:HH12	1:M:392:LYS:CE	2.28	0.45
1:E:238:GLN:O	1:E:313:LEU:HD11	2.16	0.45
1:J:366:GLU:O	1:J:370:LYS:HG3	2.17	0.45
1:L:283:ARG:HH22	1:L:364:LEU:HA	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:263:VAL:O	1:A:267:ARG:HG2	2.17	0.45
1:J:455:ALA:HB1	1:J:465:ILE:HD12	1.98	0.45
1:A:348:ILE:HG21	1:A:364:LEU:O	2.16	0.45
1:H:178:GLU:CD	1:H:392:LYS:HE3	2.36	0.45
1:B:477:ARG:HG3	1:B:477:ARG:HH11	1.80	0.45
1:I:178:GLU:OE2	1:I:392:LYS:HE3	2.17	0.45
1:F:14:ARG:NH1	1:F:17:GLU:OE1	2.50	0.45
1:D:468:GLN:O	1:D:471:ALA:HB3	2.17	0.45
1:J:95:LEU:HD21	1:J:450:PRO:HG2	1.99	0.45
2:O:89:ILE:O	2:O:89:ILE:HG22	2.16	0.45
2:U:22:GLU:N	2:U:22:GLU:OE1	2.39	0.45
1:G:215:GLU:O	1:G:216:ASP:C	2.53	0.45
1:E:103:GLY:HA2	1:E:442:ILE:HD13	1.99	0.45
1:B:14:ARG:NH1	1:B:17:GLU:OE1	2.49	0.45
1:J:92:ALA:HB2	1:J:505:ALA:HA	1.99	0.45
1:M:383:ALA:O	1:N:280:PHE:HD1	1.98	0.45
1:J:120:ILE:HG23	1:J:443:VAL:CG2	2.47	0.45
1:B:131:ILE:HD13	1:B:502:THR:HG22	1.99	0.45
1:N:194:PHE:CD2	1:N:194:PHE:N	2.84	0.45
1:N:194:PHE:CB	1:N:278:PRO:HB3	2.47	0.45
2:O:20:ILE:CG1	2:O:43:GLY:HA2	2.45	0.45
1:C:466:VAL:HG12	1:C:470:LEU:HD12	1.99	0.45
1:E:348:ILE:HD11	1:E:367:ARG:CZ	2.46	0.45
1:A:18:ARG:HD2	1:A:67:GLU:OE2	2.17	0.45
2:Q:34:ASP:HA	2:Q:37:LYS:HE2	1.99	0.45
1:H:69:ILE:O	1:H:73:LEU:HB2	2.16	0.45
1:E:231:GLU:HB2	1:E:308:LEU:HD23	1.97	0.45
1:J:438:THR:O	1:J:441:LYS:HB2	2.16	0.45
1:D:96:ALA:O	1:D:100:VAL:HG23	2.16	0.45
1:M:416:VAL:HG21	1:M:479:GLY:HA3	1.98	0.45
1:E:54:VAL:HG13	1:E:89:THR:HG21	1.98	0.45
2:T:92:GLU:HA	2:T:95:LEU:HD12	1.99	0.45
1:C:237:GLU:CG	2:Q:30:ILE:HD12	2.47	0.45
2:Q:80:ILE:CG2	2:Q:81:GLU:N	2.79	0.45
1:K:179:SER:CB	1:K:379:ARG:HB3	2.39	0.45
1:M:522:VAL:CG2	1:M:522:VAL:O	2.64	0.45
1:I:247:LEU:HD13	1:I:324:ILE:HD11	1.99	0.45
1:E:348:ILE:HD11	1:E:367:ARG:NH2	2.32	0.45
2:T:84:GLY:O	2:T:85:GLU:HB2	2.17	0.45
1:N:128:VAL:HA	1:N:131:ILE:HD12	1.98	0.45
1:B:101:ARG:CG	1:B:102:GLU:N	2.80	0.45
1:B:431:LYS:O	1:B:431:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:518:THR:OG1	1:D:37:ASN:ND2	2.50	0.45
1:G:425:VAL:O	1:G:429:ILE:HG13	2.17	0.45
1:H:239:VAL:HG22	1:H:313:LEU:CD1	2.47	0.45
1:C:280:PHE:O	1:C:281:GLY:C	2.55	0.45
1:K:481:ASN:HD21	1:K:484:THR:HG23	1.81	0.45
1:N:286:GLU:HG3	1:N:367:ARG:NH2	2.31	0.45
1:M:283:ARG:HA	1:M:283:ARG:HD2	1.70	0.45
1:B:150:ILE:CD1	1:B:496:VAL:H	2.30	0.45
1:C:54:VAL:CG2	1:C:89:THR:HG21	2.47	0.45
2:S:10:PRO:CB	2:S:14:ARG:O	2.62	0.45
1:J:149:THR:HG23	1:J:155:PRO:CA	2.39	0.45
1:L:295:THR:HG22	1:L:317:GLY:CA	2.47	0.45
1:I:375:VAL:HG12	1:I:375:VAL:O	2.17	0.45
1:E:267:ARG:HG3	1:E:267:ARG:NH1	2.31	0.45
1:E:247:LEU:HD13	1:E:324:ILE:HD11	1.98	0.45
1:H:309:GLU:OE1	1:H:309:GLU:N	2.40	0.45
2:O:78:THR:HG22	2:O:80:ILE:CD1	2.46	0.45
2:R:13:ASP:O	2:R:62:LEU:HD21	2.16	0.45
1:N:161:ILE:O	1:N:165:MET:HG3	2.17	0.45
1:H:161:ILE:O	1:H:165:MET:HG3	2.17	0.45
1:D:189:VAL:CG1	1:D:193:GLN:HG2	2.47	0.45
1:B:159:LYS:HE2	1:B:163:ASP:OD2	2.16	0.45
1:K:201:PRO:O	1:K:204:VAL:HG23	2.16	0.45
1:I:449:GLU:HB2	1:I:450:PRO:HD3	1.99	0.45
1:H:202:TYR:HD2	1:H:266:LEU:HD11	1.82	0.45
1:F:418:LEU:H	1:F:418:LEU:HD12	1.81	0.45
1:B:279:GLY:C	1:B:284:ARG:HB3	2.37	0.44
1:M:178:GLU:OE2	1:M:392:LYS:HE3	2.16	0.44
1:C:7:VAL:HG21	1:C:66:LEU:CD1	2.33	0.44
1:M:50:THR:HG21	1:M:55:THR:HB	1.99	0.44
1:B:54:VAL:HG11	1:B:79:SER:HA	1.98	0.44
1:E:343:ALA:HB2	1:F:207:PRO:CB	2.47	0.44
1:H:168:VAL:HG12	1:H:172:GLY:CA	2.34	0.44
1:K:46:SER:HB2	1:K:47:PRO:CD	2.38	0.44
1:M:47:PRO:CG	1:N:73:LEU:HD13	2.47	0.44
1:N:149:THR:HG23	1:N:155:PRO:CA	2.41	0.44
1:D:246:LEU:O	1:D:272:VAL:HA	2.16	0.44
1:I:290:ASP:N	1:I:344:ARG:NH1	2.66	0.44
1:F:229:VAL:HG23	1:F:256:GLU:CG	2.47	0.44
1:K:228:ASN:HB3	1:K:231:GLU:HG2	1.99	0.44
2:S:8:ILE:HD12	2:S:8:ILE:H	1.82	0.44
1:F:235:ILE:O	1:F:239:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:F:124:VAL:O	1:F:128:VAL:HG23	2.16	0.44
1:E:248:ILE:CD1	1:E:261:LEU:HD21	2.44	0.44
1:G:220:LEU:HG	1:G:222:VAL:HG23	1.97	0.44
1:N:455:ALA:HB1	1:N:465:ILE:HD12	1.99	0.44
1:C:349:LYS:C	1:C:351:GLU:N	2.69	0.44
1:K:372:ALA:C	1:K:374:GLY:N	2.69	0.44
1:K:253:VAL:O	1:K:258:LEU:HD22	2.16	0.44
1:B:10:GLU:HA	1:B:13:ARG:HH11	1.83	0.44
1:K:6:LEU:CD2	1:K:523:VAL:HG22	2.47	0.44
1:G:207:PRO:O	1:G:210:MET:CE	2.66	0.44
1:E:411:VAL:HB	1:E:412:PRO:HD2	1.98	0.44
1:E:286:GLU:OE2	1:E:344:ARG:NH2	2.43	0.44
1:J:204:VAL:HG13	1:J:211:GLU:O	2.18	0.44
1:D:418:LEU:H	1:D:418:LEU:HD12	1.81	0.44
1:D:233:LEU:O	1:D:237:GLU:HG3	2.17	0.44
1:C:168:VAL:CG1	1:C:168:VAL:O	2.65	0.44
2:S:13:ASP:OD1	2:S:13:ASP:C	2.56	0.44
1:E:291:ILE:O	1:E:294:VAL:HG22	2.18	0.44
1:A:515:LEU:HD12	1:B:49:ILE:CG2	2.46	0.44
1:G:229:VAL:HG23	1:G:256:GLU:CG	2.47	0.44
1:H:300:ILE:HG21	1:H:308:LEU:CD2	2.45	0.44
1:D:149:THR:HG23	1:D:155:PRO:CA	2.43	0.44
1:K:385:GLU:O	1:K:389:LYS:HG3	2.18	0.44
1:J:458:ALA:C	1:K:114:LEU:CD1	2.85	0.44
1:M:232:LEU:HD23	1:M:236:LEU:HB2	1.99	0.44
1:B:349:LYS:O	1:B:351:GLU:N	2.51	0.44
1:E:222:VAL:O	1:E:250:ALA:HA	2.17	0.44
1:C:421:ALA:O	1:C:425:VAL:HG23	2.18	0.44
1:H:253:VAL:HG11	1:H:261:LEU:HD12	1.99	0.44
1:A:478:TYR:CE1	1:A:487:PHE:HB3	2.52	0.44
1:D:392:LYS:O	1:D:396:GLU:HG3	2.17	0.44
1:K:202:TYR:HD2	1:K:266:LEU:HD11	1.82	0.44
2:S:50:THR:CG2	2:S:59:ARG:HD3	2.47	0.44
2:O:15:VAL:CG2	2:O:95:LEU:HD11	2.30	0.44
1:B:218:PHE:HA	1:B:317:GLY:O	2.17	0.44
1:I:309:GLU:N	1:I:309:GLU:OE1	2.42	0.44
1:N:253:VAL:HG11	1:N:261:LEU:HD12	1.99	0.44
1:K:292:ALA:HB1	1:K:297:GLY:O	2.18	0.44
2:O:78:THR:CG2	2:O:80:ILE:HD11	2.46	0.44
1:L:74:LEU:HA	1:L:512:ILE:HD13	1.98	0.44
1:K:278:PRO:O	1:K:284:ARG:HD3	2.17	0.44
1:M:268:GLY:C	1:N:227:SER:HG	2.14	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:U:69:ILE:O	2:U:98:VAL:HG13	2.17	0.44
1:D:101:ARG:CG	1:D:102:GLU:H	2.31	0.44
1:D:349:LYS:C	1:D:351:GLU:H	2.19	0.44
2:R:41:GLN:HG2	2:R:74:LYS:HB3	1.99	0.44
1:J:307:LYS:HB2	1:J:310:ASN:ND2	2.32	0.44
1:I:66:LEU:HD22	1:I:522:VAL:HG21	1.98	0.44
1:H:80:LYS:HE3	1:H:508:ASN:OD1	2.18	0.44
1:K:283:ARG:HD3	1:K:363:LYS:NZ	2.32	0.44
1:K:7:VAL:HG21	1:K:66:LEU:CD1	2.47	0.44
2:R:78:THR:HG22	2:R:80:ILE:CD1	2.47	0.44
1:L:290:ASP:O	1:L:294:VAL:HG23	2.17	0.44
1:J:222:VAL:CG1	1:J:223:GLU:N	2.81	0.44
2:O:93:ARG:O	2:P:14:ARG:NH2	2.50	0.44
1:H:455:ALA:HB1	1:H:465:ILE:HD12	2.00	0.44
1:C:301:SER:HB2	1:C:304:LEU:HB3	1.99	0.44
1:D:425:VAL:O	1:D:429:ILE:HG13	2.18	0.44
2:T:51:GLY:HA3	2:T:60:VAL:O	2.17	0.44
1:D:31:LEU:HD23	1:D:453:GLN:HB3	1.98	0.44
1:H:117:LYS:O	1:H:121:GLU:HG3	2.17	0.44
1:G:468:GLN:O	1:G:471:ALA:HB3	2.17	0.44
1:H:37:ASN:ND2	1:H:51:LYS:HE2	2.26	0.44
1:D:247:LEU:HD22	1:D:322:VAL:HG11	2.00	0.44
2:Q:79:GLU:HG2	2:Q:88:VAL:HG13	1.99	0.44
1:H:66:LEU:HD22	1:H:522:VAL:HG21	1.99	0.44
1:I:179:SER:CB	1:I:379:ARG:HB3	2.40	0.44
1:M:352:LEU:HD21	1:M:365:GLN:HE22	1.83	0.44
1:B:240:ALA:HA	1:B:270:LEU:HD13	2.00	0.44
1:I:352:LEU:HD21	1:I:365:GLN:NE2	2.33	0.44
1:D:23:VAL:CG1	1:D:74:LEU:HD23	2.47	0.44
1:E:526:LYS:HA	1:E:527:PRO:HD3	1.82	0.44
1:B:460:TYR:HB3	1:B:465:ILE:HD11	2.00	0.44
2:O:73:ALA:O	2:O:75:TYR:N	2.51	0.44
1:N:54:VAL:HG22	1:N:89:THR:CG2	2.47	0.44
1:J:253:VAL:HG11	1:J:261:LEU:HD12	1.99	0.44
1:F:392:LYS:O	1:F:396:GLU:HG3	2.18	0.44
1:C:50:THR:HA	1:C:390:GLU:OE1	2.17	0.44
1:E:227:SER:HA	1:E:254:GLU:O	2.17	0.44
1:L:168:VAL:HG12	1:L:172:GLY:CA	2.36	0.44
1:M:69:ILE:O	1:M:73:LEU:HB2	2.17	0.44
1:B:39:VAL:HG22	1:B:49:ILE:HG12	1.99	0.44
1:N:39:VAL:C	1:N:40:LEU:HD12	2.38	0.44
1:J:187:LYS:HZ1	1:J:379:ARG:HG3	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:342:GLU:HA	1:H:345:ILE:HD12	2.00	0.44
1:N:307:LYS:HB2	1:N:310:ASN:ND2	2.33	0.44
1:N:297:GLY:HA3	1:N:317:GLY:N	2.33	0.44
2:U:53:VAL:HG22	2:U:59:ARG:CG	2.48	0.44
1:N:194:PHE:CG	1:N:278:PRO:HB3	2.52	0.44
2:R:78:THR:CG2	2:R:80:ILE:HD11	2.48	0.44
2:S:78:THR:HG22	2:S:79:GLU:N	2.32	0.44
1:H:224:LYS:CG	1:H:225:LYS:N	2.79	0.44
1:L:178:GLU:OE2	1:L:392:LYS:HE3	2.18	0.44
1:N:175:THR:CG2	1:N:177:GLU:OE2	2.65	0.44
1:F:74:LEU:HD21	1:F:93:THR:CG2	2.47	0.44
2:Q:54:LEU:HD11	2:R:57:GLY:N	2.31	0.44
1:L:22:ALA:HB1	1:M:6:LEU:HD12	1.99	0.44
1:J:412:PRO:HD2	1:J:417:THR:OG1	2.17	0.44
1:L:452:ARG:HG2	1:L:452:ARG:NH1	2.32	0.44
1:F:179:SER:OG	1:F:180:LYS:N	2.51	0.44
1:E:136:ILE:CD1	1:E:477:ARG:HH21	2.31	0.44
2:S:19:ARG:HA	2:S:42:LYS:O	2.17	0.44
1:B:179:SER:OG	1:B:180:LYS:N	2.51	0.44
1:L:168:VAL:CG2	1:L:376:ALA:HB2	2.47	0.44
1:J:307:LYS:HE3	1:J:310:ASN:HD21	1.83	0.44
1:L:283:ARG:HD3	1:L:363:LYS:HE3	2.00	0.44
1:N:222:VAL:CG1	1:N:223:GLU:H	2.31	0.44
2:U:81:GLU:HG3	2:U:85:GLU:C	2.38	0.44
1:D:348:ILE:HG21	1:D:364:LEU:O	2.17	0.44
1:A:229:VAL:HG23	1:A:256:GLU:CG	2.47	0.44
1:C:520:GLU:HB3	1:D:29:VAL:CG1	2.47	0.44
2:O:33:PRO:O	2:O:35:THR:N	2.51	0.44
1:B:180:LYS:HD3	1:B:180:LYS:HA	1.81	0.44
1:K:49:ILE:HG13	1:K:49:ILE:O	2.18	0.44
1:C:323:ARG:HG2	1:C:323:ARG:HH11	1.82	0.44
1:I:478:TYR:CZ	1:I:487:PHE:HB3	2.53	0.44
2:R:33:PRO:C	2:R:35:THR:H	2.20	0.44
1:N:160:LEU:HD22	1:N:186:LEU:HB2	2.00	0.44
1:M:285:LYS:HG2	1:M:289:LYS:HE3	2.00	0.44
1:G:472:GLU:HB3	1:G:478:TYR:CD2	2.52	0.44
1:F:150:ILE:CD1	1:F:496:VAL:N	2.80	0.44
2:P:13:ASP:CA	2:P:62:LEU:HD21	2.48	0.44
1:G:270:LEU:HG	1:G:272:VAL:HG13	1.98	0.44
1:N:253:VAL:HG21	1:N:274:ALA:HB1	2.00	0.44
2:P:17:VAL:O	2:P:87:TYR:HB3	2.17	0.44
1:L:526:LYS:O	1:L:527:PRO:C	2.56	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:385:GLU:O	1:H:389:LYS:HG3	2.18	0.44
1:K:226:VAL:CG1	1:K:232:LEU:HD12	2.48	0.44
2:P:8:ILE:CD1	2:P:8:ILE:N	2.80	0.44
1:L:247:LEU:HD13	1:L:324:ILE:HD11	2.00	0.44
1:H:312:THR:C	1:H:314:SER:N	2.71	0.44
1:G:233:LEU:CD2	2:U:30:ILE:HG21	2.48	0.44
2:O:53:VAL:HG22	2:O:59:ARG:HE	1.82	0.44
1:M:455:ALA:HB1	1:M:465:ILE:HD12	1.98	0.44
1:A:10:GLU:N	1:A:13:ARG:HH12	2.15	0.44
1:E:152:ALA:HB2	1:E:398:ALA:HB2	2.00	0.44
1:D:264:ASN:HB3	1:D:269:THR:HB	2.00	0.44
1:C:113:PRO:HG3	1:D:36:ARG:NH1	2.32	0.44
1:E:478:TYR:CE1	1:E:487:PHE:HB3	2.53	0.44
1:H:325:THR:CG2	1:H:326:LYS:N	2.81	0.44
2:P:48:VAL:CG1	2:P:62:LEU:CD1	2.93	0.44
1:J:30:THR:HB	1:J:51:LYS:O	2.17	0.44
1:J:37:ASN:OD1	1:K:515:LEU:HD12	2.18	0.44
1:L:39:VAL:HG11	1:M:69:ILE:HG21	1.98	0.44
1:J:179:SER:CB	1:J:379:ARG:HB3	2.41	0.44
1:D:218:PHE:CE1	1:D:244:LYS:HB2	2.52	0.44
1:D:218:PHE:HA	1:D:317:GLY:O	2.18	0.44
1:J:194:PHE:HB2	1:J:278:PRO:HB3	1.99	0.44
1:A:34:ARG:NH1	1:G:112:ASN:HD21	2.16	0.44
1:A:422:ILE:HD12	1:A:470:LEU:HD21	2.00	0.44
1:E:515:LEU:HD12	1:F:49:ILE:CG2	2.44	0.44
1:K:384:THR:HG22	1:K:385:GLU:N	2.33	0.44
2:P:10:PRO:HB2	2:P:14:ARG:O	2.17	0.44
1:K:178:GLU:CD	1:K:392:LYS:HE3	2.38	0.44
1:I:81:THR:OG1	1:I:508:ASN:ND2	2.50	0.44
1:J:412:PRO:HB3	1:J:490:MET:HB2	2.00	0.44
1:M:526:LYS:CG	1:M:527:PRO:HD2	2.48	0.44
1:F:348:ILE:HG21	1:F:364:LEU:O	2.18	0.44
1:C:289:LYS:HE2	1:D:202:TYR:OH	2.18	0.44
1:H:146:GLU:O	1:H:150:ILE:HG13	2.18	0.44
1:G:142:LYS:O	1:G:146:GLU:HG3	2.18	0.44
1:D:359:TYR:CZ	1:D:363:LYS:HE3	2.52	0.43
1:E:150:ILE:HG22	1:E:151:SER:N	2.32	0.43
1:E:355:THR:CG2	1:E:360:ALA:HB3	2.48	0.43
2:R:98:VAL:O	2:S:9:LYS:HB2	2.18	0.43
2:P:21:GLU:C	2:P:22:GLU:O	2.54	0.43
2:Q:81:GLU:HA	2:Q:85:GLU:O	2.18	0.43
1:N:345:ILE:HG22	1:N:349:LYS:HE3	1.99	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:U:50:THR:CG2	2:U:59:ARG:HD3	2.48	0.43
1:L:194:PHE:CE2	1:L:329:THR:HB	2.53	0.43
1:F:229:VAL:HG12	1:F:233:LEU:CD1	2.44	0.43
1:L:228:ASN:ND2	1:L:230:ARG:HB3	2.29	0.43
1:B:265:LYS:HA	1:B:270:LEU:O	2.17	0.43
1:J:286:GLU:OE2	1:J:344:ARG:NH2	2.50	0.43
2:R:17:VAL:CG1	2:R:18:LYS:N	2.81	0.43
1:C:345:ILE:HG22	1:C:346:ASN:N	2.33	0.43
1:M:316:LEU:HD23	1:M:316:LEU:O	2.18	0.43
1:F:23:VAL:CG1	1:F:74:LEU:HD23	2.48	0.43
1:D:321:ARG:HB3	1:D:332:VAL:HB	2.00	0.43
1:D:465:ILE:HD13	1:D:480:PHE:CD2	2.52	0.43
1:G:349:LYS:C	1:G:351:GLU:N	2.71	0.43
1:J:526:LYS:HG3	1:J:527:PRO:HD2	1.99	0.43
1:C:80:LYS:HE2	1:D:383:ALA:O	2.18	0.43
1:B:256:GLU:HB3	2:P:35:THR:HB	2.00	0.43
1:E:54:VAL:HG11	1:E:79:SER:HA	1.99	0.43
1:L:385:GLU:O	1:L:389:LYS:HG3	2.16	0.43
2:P:20:ILE:O	2:P:40:PRO:HB3	2.18	0.43
1:J:226:VAL:CG1	1:J:232:LEU:HD12	2.48	0.43
1:J:7:VAL:HG21	1:J:66:LEU:CD1	2.47	0.43
1:I:300:ILE:HG21	1:I:308:LEU:CD2	2.46	0.43
1:F:235:ILE:HD13	1:F:235:ILE:HG21	1.82	0.43
1:M:194:PHE:HB2	1:M:278:PRO:HB3	1.99	0.43
1:H:232:LEU:HD23	1:H:236:LEU:HB2	2.00	0.43
1:F:460:TYR:HB3	1:F:465:ILE:HD11	2.01	0.43
2:T:17:VAL:HG12	2:T:18:LYS:N	2.33	0.43
1:I:316:LEU:HD23	1:I:316:LEU:O	2.18	0.43
1:G:359:TYR:CE1	1:G:363:LYS:HE2	2.52	0.43
1:I:253:VAL:O	1:I:258:LEU:HD22	2.18	0.43
1:A:157:VAL:O	1:A:161:ILE:HG12	2.17	0.43
1:F:6:LEU:CD2	1:F:523:VAL:HG22	2.49	0.43
1:E:231:GLU:CB	1:E:308:LEU:HD23	2.49	0.43
1:L:117:LYS:O	1:L:121:GLU:HG3	2.18	0.43
1:M:412:PRO:HB3	1:M:490:MET:HB2	2.00	0.43
1:F:221:ILE:HG22	1:F:299:VAL:HG13	2.00	0.43
2:Q:38:GLU:HG2	2:Q:38:GLU:H	1.58	0.43
2:T:22:GLU:N	2:T:22:GLU:OE1	2.46	0.43
1:H:49:ILE:HG13	1:H:49:ILE:O	2.16	0.43
1:L:342:GLU:O	1:L:346:ASN:ND2	2.51	0.43
1:I:425:VAL:O	1:I:429:ILE:HG13	2.19	0.43
1:L:39:VAL:HG11	1:M:69:ILE:CG2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:J:342:GLU:HA	1:J:345:ILE:HD12	1.99	0.43
1:K:39:VAL:C	1:K:40:LEU:HD12	2.39	0.43
1:C:501:VAL:HG23	1:C:502:THR:H	1.81	0.43
1:K:194:PHE:N	1:K:194:PHE:CD2	2.86	0.43
2:U:17:VAL:CG1	2:U:43:GLY:HA3	2.48	0.43
1:E:207:PRO:O	1:E:210:MET:HE3	2.18	0.43
1:B:503:ARG:O	1:B:507:GLN:HG3	2.18	0.43
1:B:147:VAL:HG23	1:B:410:ILE:HD11	2.00	0.43
1:K:459:GLY:HA3	1:L:114:LEU:HD12	2.00	0.43
1:L:175:THR:CG2	1:L:177:GLU:OE2	2.65	0.43
1:B:452:ARG:HH11	1:B:463:SER:HA	1.83	0.43
1:D:452:ARG:HH11	1:D:463:SER:HA	1.84	0.43
1:B:307:LYS:HB2	1:B:310:ASN:HD22	1.83	0.43
1:L:425:VAL:O	1:L:429:ILE:HG13	2.17	0.43
1:M:132:LYS:C	1:M:134:LEU:H	2.22	0.43
1:C:297:GLY:H	1:C:317:GLY:HA2	1.83	0.43
1:E:33:PRO:HG3	4:E:5551:ADP:C6	2.53	0.43
1:N:433:GLU:HG2	1:N:434:GLY:N	2.33	0.43
1:L:478:TYR:CZ	1:L:487:PHE:HB3	2.54	0.43
1:L:311:ALA:HA	1:L:315:MET:SD	2.58	0.43
1:B:235:ILE:HD12	1:B:311:ALA:HB1	2.00	0.43
1:M:178:GLU:CA	1:M:321:ARG:NH1	2.79	0.43
2:P:41:GLN:HB3	2:P:72:PHE:O	2.18	0.43
1:B:289:LYS:CE	1:C:202:TYR:OH	2.60	0.43
1:N:444:ARG:HG2	1:N:444:ARG:O	2.18	0.43
1:F:229:VAL:HG23	1:F:256:GLU:OE2	2.18	0.43
1:M:222:VAL:CG1	1:M:223:GLU:N	2.80	0.43
1:K:283:ARG:HH22	1:K:364:LEU:HA	1.84	0.43
1:F:72:GLN:HE22	1:F:75:LYS:HZ1	1.66	0.43
1:F:218:PHE:HA	1:F:317:GLY:O	2.19	0.43
2:P:80:ILE:CG2	2:P:81:GLU:H	2.31	0.43
1:H:375:VAL:O	1:H:375:VAL:HG12	2.18	0.43
1:J:312:THR:C	1:J:314:SER:N	2.71	0.43
1:I:316:LEU:HD23	1:I:316:LEU:H	1.82	0.43
1:F:520:GLU:HB3	1:G:29:VAL:CG1	2.48	0.43
1:F:448:GLU:OE1	1:F:452:ARG:NH2	2.51	0.43
1:E:445:ARG:CZ	1:E:452:ARG:HH21	2.31	0.43
1:F:352:LEU:HD21	1:F:364:LEU:HB2	2.01	0.43
1:G:410:ILE:HG12	1:G:496:VAL:HB	2.00	0.43
1:G:340:ASP:O	1:G:344:ARG:HB2	2.19	0.43
1:C:157:VAL:O	1:C:161:ILE:HG12	2.18	0.43
1:D:77:VAL:HG23	1:D:512:ILE:HG13	1.99	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:71:ALA:O	1:M:75:LYS:HG3	2.18	0.43
1:A:209:THR:O	1:A:211:GLU:HG3	2.18	0.43
1:D:179:SER:HB2	1:D:379:ARG:HB3	2.00	0.43
1:B:296:GLY:CA	1:B:336:GLY:HA2	2.48	0.43
1:A:147:VAL:CG2	1:A:410:ILE:HD11	2.48	0.43
2:P:15:VAL:CG1	2:P:45:VAL:HG13	2.42	0.43
1:K:217:ALA:HB1	1:K:245:PRO:O	2.19	0.43
1:F:168:VAL:CG1	1:F:168:VAL:O	2.66	0.43
1:A:51:LYS:O	1:A:51:LYS:HG2	2.18	0.43
1:E:341:ILE:O	1:E:345:ILE:HG22	2.19	0.43
1:I:270:LEU:CD2	1:I:272:VAL:HG13	2.38	0.43
1:B:325:THR:CG2	1:B:326:LYS:H	2.25	0.43
1:E:242:THR:O	1:E:242:THR:HG22	2.18	0.43
1:K:84:VAL:HG12	1:K:500:LYS:CE	2.44	0.43
1:H:79:SER:C	1:H:81:THR:N	2.72	0.43
1:C:199:ILE:O	1:C:199:ILE:HG22	2.19	0.43
1:L:313:LEU:O	1:L:313:LEU:HG	2.17	0.43
1:H:253:VAL:O	1:H:258:LEU:HD22	2.17	0.43
1:A:478:TYR:CZ	1:A:487:PHE:HB3	2.54	0.43
1:G:320:GLU:O	1:G:321:ARG:HB2	2.19	0.43
1:D:417:THR:HG23	1:D:418:LEU:HD12	2.00	0.43
1:F:73:LEU:CD2	1:G:47:PRO:HD2	2.49	0.43
1:D:520:GLU:HB3	1:E:29:VAL:HG11	2.01	0.43
1:J:49:ILE:O	1:J:49:ILE:HG13	2.19	0.43
1:J:313:LEU:HG	1:J:313:LEU:O	2.19	0.43
1:B:198:TYR:HD1	1:B:198:TYR:O	2.01	0.43
1:N:132:LYS:C	1:N:134:LEU:H	2.21	0.43
1:A:220:LEU:HD23	1:A:248:ILE:HG23	2.01	0.43
1:M:190:GLU:HG3	1:M:341:ILE:HD13	1.99	0.43
2:O:13:ASP:CA	2:O:62:LEU:HD21	2.49	0.43
1:E:262:VAL:O	1:E:265:LYS:HB3	2.19	0.43
1:D:54:VAL:HG13	1:D:89:THR:HG21	2.00	0.43
2:S:62:LEU:C	2:S:64:VAL:H	2.21	0.43
2:P:71:VAL:HG13	2:Q:80:ILE:HD13	1.99	0.43
1:L:40:LEU:CD1	1:L:40:LEU:N	2.81	0.43
1:K:342:GLU:O	1:K:346:ASN:ND2	2.51	0.43
1:J:360:ALA:O	1:J:363:LYS:HG2	2.17	0.43
2:R:78:THR:CG2	2:R:79:GLU:N	2.81	0.43
1:J:222:VAL:HG12	1:J:223:GLU:H	1.84	0.43
2:T:11:LEU:O	2:T:13:ASP:N	2.52	0.43
1:E:124:VAL:O	1:E:128:VAL:HG23	2.18	0.43
1:A:218:PHE:HA	1:A:317:GLY:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:253:VAL:HG21	1:D:274:ALA:HB1	2.01	0.43
1:A:452:ARG:HH11	1:A:463:SER:HA	1.83	0.43
1:E:31:LEU:HB2	1:E:90:THR:CG2	2.47	0.43
1:H:193:GLN:HE21	1:H:330:THR:CG2	2.31	0.43
1:N:298:THR:N	1:N:315:MET:O	2.51	0.43
1:L:95:LEU:O	1:L:99:ILE:HG13	2.18	0.43
1:I:49:ILE:HG13	1:I:49:ILE:O	2.18	0.43
1:A:84:VAL:HG12	1:A:84:VAL:O	2.18	0.43
1:M:8:PHE:CD1	1:M:8:PHE:N	2.87	0.43
1:E:475:ASN:HA	1:E:476:PRO:HD2	1.92	0.43
1:F:152:ALA:HB2	1:F:398:ALA:HB2	2.00	0.43
1:G:297:GLY:N	1:G:317:GLY:HA2	2.34	0.43
1:C:229:VAL:O	1:C:233:LEU:HG	2.18	0.43
1:C:237:GLU:HG2	2:Q:30:ILE:HD12	2.00	0.43
1:B:51:LYS:O	1:B:51:LYS:HG2	2.18	0.43
1:A:261:LEU:CD2	1:A:272:VAL:HG21	2.48	0.43
1:A:66:LEU:HD22	1:A:522:VAL:CG1	2.42	0.43
1:E:237:GLU:O	1:E:238:GLN:C	2.57	0.43
1:M:295:THR:HG22	1:M:317:GLY:CA	2.48	0.43
1:N:261:LEU:HD22	1:N:272:VAL:HG21	1.99	0.43
1:C:506:LEU:HD12	1:C:506:LEU:O	2.18	0.43
1:H:352:LEU:HD21	1:H:365:GLN:HE22	1.84	0.43
1:K:222:VAL:CG1	1:K:223:GLU:H	2.32	0.43
1:F:288:LEU:HD23	1:F:288:LEU:HA	1.88	0.43
1:H:222:VAL:CG1	1:H:223:GLU:H	2.32	0.43
1:E:210:MET:CE	1:E:210:MET:HA	2.49	0.43
1:F:465:ILE:HD13	1:F:480:PHE:CD2	2.53	0.43
1:B:199:ILE:O	1:B:199:ILE:HG22	2.19	0.43
1:F:344:ARG:HA	1:F:344:ARG:HD2	1.63	0.43
1:D:157:VAL:O	1:D:161:ILE:HG12	2.19	0.43
1:J:372:ALA:C	1:J:374:GLY:H	2.20	0.43
2:S:53:VAL:HG22	2:S:59:ARG:HG2	1.99	0.43
2:Q:71:VAL:HG23	2:Q:99:LEU:HD13	2.01	0.43
1:M:202:TYR:HD2	1:M:266:LEU:HD11	1.84	0.43
1:A:150:ILE:CD1	1:A:496:VAL:N	2.82	0.43
1:N:197:GLY:HA3	1:N:325:THR:O	2.19	0.43
1:I:50:THR:HG21	1:I:55:THR:HB	2.01	0.43
1:L:37:ASN:ND2	1:L:51:LYS:HE2	2.26	0.43
2:R:97:ALA:HA	2:S:11:LEU:HD12	2.01	0.43
1:H:234:PRO:HG3	1:H:309:GLU:CA	2.41	0.43
1:D:503:ARG:O	1:D:507:GLN:HG3	2.19	0.43
1:L:283:ARG:HD3	1:L:363:LYS:HZ1	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:224:LYS:CG	1:M:225:LYS:N	2.78	0.43
1:C:501:VAL:CG2	1:C:502:THR:N	2.82	0.43
1:H:286:GLU:HG3	1:H:367:ARG:HH22	1.84	0.43
1:A:297:GLY:H	1:A:317:GLY:HA2	1.84	0.43
2:T:78:THR:HG22	2:T:80:ILE:HD11	2.00	0.43
1:N:438:THR:O	1:N:441:LYS:HB2	2.19	0.43
1:E:232:LEU:HB3	1:E:236:LEU:CD1	2.48	0.43
1:F:457:ASN:HD22	1:F:457:ASN:N	2.17	0.43
1:I:390:GLU:OE1	1:I:394:ARG:NH1	2.51	0.43
2:R:56:ASN:HB2	2:R:58:GLN:HG3	1.99	0.43
1:K:307:LYS:HE3	1:K:310:ASN:HD21	1.82	0.43
1:H:179:SER:CB	1:H:379:ARG:HB3	2.38	0.43
1:N:77:VAL:HG11	1:N:512:ILE:HG13	2.00	0.43
1:E:519:THR:HG23	1:F:39:VAL:HG23	2.00	0.43
1:C:124:VAL:HG13	1:C:506:LEU:HG	2.00	0.43
1:J:226:VAL:HG11	1:J:232:LEU:HD12	1.99	0.43
1:D:230:ARG:O	1:D:234:PRO:HD2	2.18	0.43
2:S:80:ILE:HG22	2:S:81:GLU:H	1.83	0.43
1:A:235:ILE:HD12	1:A:311:ALA:HB3	1.99	0.43
2:Q:21:GLU:CD	2:Q:21:GLU:H	2.22	0.43
1:C:392:LYS:O	1:C:396:GLU:HG3	2.19	0.43
1:N:86:GLY:O	1:N:87:ASP:HB2	2.19	0.43
1:I:92:ALA:HB2	1:I:505:ALA:HA	2.00	0.43
1:K:390:GLU:OE1	1:K:394:ARG:NH1	2.51	0.43
1:A:264:ASN:HB3	1:A:269:THR:HB	2.01	0.43
1:F:472:GLU:HB3	1:F:478:TYR:CD2	2.54	0.43
1:B:103:GLY:HA2	1:B:442:ILE:HD13	2.00	0.43
1:N:286:GLU:HG3	1:N:367:ARG:HH22	1.84	0.43
1:E:410:ILE:HD11	1:E:496:VAL:HG21	2.01	0.43
1:E:214:LEU:HB3	1:E:245:PRO:HB3	2.01	0.43
1:C:51:LYS:HG2	1:C:51:LYS:O	2.19	0.43
1:L:47:PRO:HD2	1:M:72:GLN:HB3	2.01	0.43
1:L:47:PRO:CD	1:M:72:GLN:HB2	2.49	0.43
1:E:224:LYS:N	1:E:224:LYS:HD2	2.33	0.43
1:M:307:LYS:HB2	1:M:310:ASN:ND2	2.34	0.43
1:M:247:LEU:HD13	1:M:324:ILE:HD11	2.00	0.43
2:O:80:ILE:HG12	2:U:41:GLN:OE1	2.18	0.43
2:P:20:ILE:CG1	2:P:43:GLY:HA2	2.46	0.43
1:J:384:THR:HG22	1:J:385:GLU:N	2.33	0.43
1:J:385:GLU:O	1:J:389:LYS:HG3	2.19	0.43
1:F:288:LEU:HA	1:F:291:ILE:HD12	2.00	0.43
2:S:85:GLU:HA	2:S:85:GLU:OE1	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:I:455:ALA:HB1	1:I:465:ILE:HD12	2.01	0.43
1:K:175:THR:CG2	1:K:177:GLU:OE2	2.66	0.43
1:L:218:PHE:HE1	1:L:242:THR:HG21	1.82	0.43
1:L:6:LEU:CD2	1:L:523:VAL:HG22	2.49	0.43
1:B:520:GLU:HB3	1:C:29:VAL:HG11	2.01	0.43
1:D:215:GLU:O	1:D:216:ASP:C	2.57	0.43
1:K:86:GLY:O	1:K:87:ASP:HB2	2.19	0.43
1:B:235:ILE:HD12	1:B:311:ALA:CB	2.49	0.42
1:L:297:GLY:CA	1:L:317:GLY:N	2.81	0.42
1:I:283:ARG:HG2	1:I:363:LYS:NZ	2.33	0.42
1:H:290:ASP:N	1:H:344:ARG:NH1	2.65	0.42
1:N:224:LYS:CG	1:N:225:LYS:N	2.78	0.42
1:I:84:VAL:HG12	1:I:500:LYS:CE	2.47	0.42
2:R:62:LEU:HD12	2:R:62:LEU:HA	1.78	0.42
1:F:279:GLY:O	1:F:284:ARG:HD3	2.19	0.42
1:A:465:ILE:HD13	1:A:480:PHE:CD2	2.53	0.42
1:B:332:VAL:HG12	1:B:333:GLY:N	2.33	0.42
2:T:49:GLY:O	2:T:62:LEU:CD1	2.65	0.42
2:T:62:LEU:C	2:T:64:VAL:H	2.21	0.42
1:C:416:VAL:HG21	1:C:479:GLY:HA3	2.01	0.42
1:F:161:ILE:HD12	1:F:399:LEU:CD2	2.49	0.42
1:F:157:VAL:O	1:F:161:ILE:HG12	2.19	0.42
1:K:312:THR:C	1:K:314:SER:N	2.72	0.42
1:K:69:ILE:O	1:K:73:LEU:HB2	2.19	0.42
1:A:10:GLU:HA	1:A:13:ARG:HH11	1.84	0.42
1:M:285:LYS:O	1:M:289:LYS:HG3	2.19	0.42
2:P:89:ILE:HG22	2:P:89:ILE:O	2.18	0.42
1:G:417:THR:HG23	1:G:418:LEU:HD12	2.00	0.42
1:H:433:GLU:HG2	1:H:434:GLY:N	2.34	0.42
1:M:411:VAL:HB	1:M:417:THR:OG1	2.19	0.42
1:E:294:VAL:O	1:E:336:GLY:N	2.52	0.42
1:A:246:LEU:O	1:A:272:VAL:HA	2.19	0.42
1:H:246:LEU:HB3	1:H:272:VAL:CG1	2.46	0.42
1:N:253:VAL:O	1:N:258:LEU:HD22	2.18	0.42
1:D:219:ILE:HG22	1:D:221:ILE:HG13	2.00	0.42
1:K:74:LEU:HA	1:K:512:ILE:HD11	2.00	0.42
1:L:384:THR:HG22	1:L:385:GLU:N	2.34	0.42
1:F:217:ALA:CB	1:F:245:PRO:HB2	2.46	0.42
1:D:23:VAL:HG22	1:D:60:VAL:CG1	2.44	0.42
2:P:79:GLU:HG2	2:P:88:VAL:HG22	2.02	0.42
2:P:81:GLU:HA	2:P:85:GLU:O	2.19	0.42
1:L:408:GLU:O	1:L:499:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:H:53:GLY:HA3	1:H:90:THR:OG1	2.20	0.42
2:O:97:ALA:HB2	2:P:10:PRO:HA	2.00	0.42
1:L:161:ILE:O	1:L:165:MET:HG3	2.18	0.42
1:K:460:TYR:CE2	1:K:480:PHE:HZ	2.37	0.42
1:H:316:LEU:H	1:H:316:LEU:HD23	1.83	0.42
2:T:78:THR:HG22	2:T:79:GLU:N	2.33	0.42
1:J:131:ILE:HD13	1:J:502:THR:HG22	2.01	0.42
1:M:313:LEU:O	1:M:313:LEU:HG	2.19	0.42
1:L:475:ASN:OD1	1:L:475:ASN:C	2.57	0.42
1:E:33:PRO:HD3	4:E:5551:ADP:C5	2.54	0.42
1:M:202:TYR:CD2	1:M:266:LEU:HD11	2.54	0.42
1:H:478:TYR:CZ	1:H:487:PHE:HB3	2.54	0.42
1:B:475:ASN:HA	1:B:476:PRO:HD2	1.93	0.42
2:Q:22:GLU:OE1	2:Q:22:GLU:N	2.42	0.42
1:I:372:ALA:C	1:I:374:GLY:H	2.22	0.42
1:M:283:ARG:NH1	1:M:363:LYS:HG3	2.33	0.42
1:M:325:THR:CG2	1:M:326:LYS:N	2.82	0.42
1:G:51:LYS:HG2	1:G:51:LYS:O	2.19	0.42
1:C:519:THR:HG23	1:D:39:VAL:HG23	2.01	0.42
1:M:37:ASN:ND2	1:M:51:LYS:HE2	2.26	0.42
1:E:239:VAL:HG22	1:E:313:LEU:CD2	2.49	0.42
1:D:218:PHE:CZ	1:D:242:THR:HG21	2.55	0.42
1:D:218:PHE:O	1:D:246:LEU:HD12	2.19	0.42
1:C:265:LYS:HA	1:C:270:LEU:O	2.19	0.42
1:I:194:PHE:HB2	1:I:278:PRO:HB3	2.02	0.42
1:E:159:LYS:HE2	1:E:163:ASP:OD2	2.19	0.42
1:L:352:LEU:HD21	1:L:365:GLN:HE22	1.84	0.42
1:J:312:THR:O	1:J:314:SER:N	2.48	0.42
1:G:452:ARG:HH11	1:G:463:SER:HA	1.81	0.42
1:F:251:GLU:O	1:F:252:ASP:HB2	2.19	0.42
1:J:452:ARG:HG2	1:J:452:ARG:NH1	2.33	0.42
1:A:184:THR:HG23	1:A:380:VAL:HA	2.02	0.42
1:H:95:LEU:O	1:H:99:ILE:HG13	2.18	0.42
2:Q:19:ARG:HA	2:Q:42:LYS:O	2.19	0.42
1:D:490:MET:CE	1:D:495:ILE:HG21	2.49	0.42
1:M:178:GLU:O	1:M:321:ARG:NH1	2.53	0.42
2:R:42:LYS:HA	2:R:70:VAL:O	2.20	0.42
1:D:131:ILE:HD13	1:D:502:THR:HG22	2.01	0.42
1:G:149:THR:HG23	1:G:155:PRO:CA	2.44	0.42
1:J:458:ALA:C	1:K:114:LEU:HD12	2.39	0.42
2:T:48:VAL:HG11	2:T:64:VAL:O	2.19	0.42
1:A:297:GLY:N	1:A:317:GLY:HA2	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:10:PRO:HG3	2:O:47:ALA:O	2.19	0.42
1:L:178:GLU:CD	1:L:392:LYS:HE3	2.40	0.42
1:J:488:VAL:HG23	1:J:490:MET:CE	2.50	0.42
1:F:341:ILE:O	1:F:344:ARG:N	2.51	0.42
2:U:6:THR:HB	2:U:82:ILE:CG2	2.49	0.42
1:E:96:ALA:O	1:E:100:VAL:HG23	2.19	0.42
1:G:404:ALA:HB1	1:G:500:LYS:HB3	2.01	0.42
1:G:31:LEU:HB2	1:G:90:THR:HG21	2.01	0.42
1:B:80:LYS:HE2	1:C:383:ALA:O	2.18	0.42
1:F:404:ALA:HB1	1:F:500:LYS:HB3	2.02	0.42
1:B:167:LYS:O	1:B:168:VAL:HG23	2.19	0.42
1:M:36:ARG:HD2	1:N:518:THR:HG23	2.02	0.42
1:E:345:ILE:HD12	1:E:371:LEU:O	2.20	0.42
1:I:342:GLU:HA	1:I:345:ILE:HD12	2.01	0.42
1:A:7:VAL:HG12	1:A:12:ALA:HB2	2.02	0.42
2:Q:32:LEU:HG	2:Q:36:ALA:HB3	2.00	0.42
2:R:16:VAL:HG12	2:R:16:VAL:O	2.18	0.42
1:J:228:ASN:ND2	1:J:230:ARG:HB3	2.25	0.42
1:I:286:GLU:HG3	1:I:367:ARG:NH2	2.34	0.42
1:J:297:GLY:HA3	1:J:317:GLY:N	2.35	0.42
1:N:384:THR:HG22	1:N:385:GLU:N	2.35	0.42
1:K:283:ARG:NH2	1:K:367:ARG:CD	2.80	0.42
1:K:290:ASP:N	1:K:344:ARG:NH1	2.66	0.42
1:E:124:VAL:HG13	1:E:506:LEU:HG	2.01	0.42
1:J:178:GLU:OE2	1:J:392:LYS:HE3	2.20	0.42
1:I:312:THR:C	1:I:314:SER:N	2.73	0.42
1:G:287:MET:O	1:G:290:ASP:HB2	2.18	0.42
1:H:177:GLU:HB3	1:H:321:ARG:NH1	2.34	0.42
1:K:452:ARG:NH1	1:K:452:ARG:HG2	2.33	0.42
1:J:32:GLY:HA3	1:J:454:ILE:HG23	2.01	0.42
1:H:202:TYR:CD2	1:H:266:LEU:HD11	2.55	0.42
1:H:477:ARG:HD3	1:H:491:VAL:HG21	2.01	0.42
1:G:10:GLU:N	1:G:13:ARG:NH1	2.68	0.42
1:H:449:GLU:HB2	1:H:450:PRO:HD3	2.00	0.42
1:F:206:ASN:HB3	1:F:209:THR:OG1	2.19	0.42
1:F:410:ILE:HD11	1:F:496:VAL:CG2	2.49	0.42
1:F:150:ILE:HD12	1:F:496:VAL:H	1.83	0.42
1:E:50:THR:CG2	1:E:52:ASP:HB3	2.48	0.42
1:L:49:ILE:O	1:L:49:ILE:HG13	2.19	0.42
1:C:221:ILE:HG23	1:C:288:LEU:HD22	2.01	0.42
2:Q:81:GLU:C	2:Q:82:ILE:HG13	2.39	0.42
1:J:283:ARG:HD3	1:J:363:LYS:CE	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:242:THR:HG22	1:E:244:LYS:HG3	2.01	0.42
1:B:373:GLY:O	1:B:375:VAL:HG23	2.20	0.42
1:F:503:ARG:O	1:F:507:GLN:HG3	2.19	0.42
2:Q:50:THR:CG2	2:Q:59:ARG:HD3	2.49	0.42
1:L:332:VAL:HG22	1:L:375:VAL:HG11	2.02	0.42
1:E:188:PHE:N	1:E:188:PHE:CD1	2.88	0.42
1:D:233:LEU:HD23	2:R:30:ILE:HD13	2.01	0.42
1:E:472:GLU:HB3	1:E:478:TYR:CD2	2.54	0.42
2:Q:77:GLY:HA3	2:Q:90:LEU:HD23	1.99	0.42
2:U:21:GLU:H	2:U:21:GLU:CD	2.22	0.42
1:F:202:TYR:CD2	1:F:266:LEU:HD11	2.54	0.42
1:B:31:LEU:HB2	1:B:90:THR:HG21	2.00	0.42
1:L:449:GLU:O	1:L:450:PRO:C	2.58	0.42
1:D:150:ILE:O	1:D:153:ASN:N	2.51	0.42
2:P:42:LYS:HA	2:P:70:VAL:O	2.20	0.42
1:N:50:THR:CG2	1:N:52:ASP:H	2.14	0.42
2:O:52:ARG:NH2	2:P:53:VAL:O	2.53	0.42
1:K:149:THR:HG23	1:K:155:PRO:CA	2.41	0.42
1:J:295:THR:HG22	1:J:317:GLY:HA3	2.02	0.42
1:M:66:LEU:HD22	1:M:522:VAL:HG21	2.00	0.42
1:B:149:THR:CG2	1:B:155:PRO:HA	2.44	0.42
1:C:217:ALA:HB1	1:C:245:PRO:O	2.20	0.42
1:A:228:ASN:HD21	1:A:230:ARG:HB2	1.85	0.42
1:D:288:LEU:HD23	1:D:291:ILE:HD12	2.01	0.42
1:G:189:VAL:HG12	1:G:190:GLU:N	2.33	0.42
1:F:149:THR:HG23	1:F:155:PRO:CA	2.49	0.42
1:M:290:ASP:N	1:M:344:ARG:NH1	2.68	0.42
1:B:74:LEU:HD21	1:B:93:THR:CG2	2.50	0.42
1:D:422:ILE:HD12	1:D:470:LEU:HD21	2.01	0.42
2:O:11:LEU:O	2:O:12:GLY:O	2.38	0.42
1:G:23:VAL:CG1	1:G:74:LEU:HD23	2.49	0.42
1:K:79:SER:C	1:K:81:THR:N	2.72	0.42
1:M:340:ASP:O	1:M:343:ALA:HB3	2.19	0.42
1:A:445:ARG:CZ	1:A:452:ARG:HH21	2.33	0.42
1:N:130:LYS:O	1:N:134:LEU:HB2	2.20	0.42
1:E:180:LYS:HA	1:E:180:LYS:HD3	1.85	0.42
1:C:95:LEU:O	1:C:99:ILE:HG13	2.20	0.42
1:L:217:ALA:HB1	1:L:245:PRO:O	2.20	0.42
1:C:206:ASN:HA	1:C:207:PRO:HD3	1.81	0.42
1:E:225:LYS:HD3	1:E:254:GLU:OE1	2.19	0.42
2:P:27:LYS:HD3	2:Q:84:GLY:CA	2.49	0.42
2:P:71:VAL:HG23	2:P:99:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:L:187:LYS:HZ2	1:L:379:ARG:HG3	1.82	0.42
1:I:222:VAL:CG1	1:I:223:GLU:H	2.32	0.42
2:U:81:GLU:HG3	2:U:85:GLU:N	2.28	0.42
1:M:194:PHE:CD2	1:M:194:PHE:N	2.87	0.42
1:C:345:ILE:HG23	1:C:368:LEU:HD13	2.02	0.42
1:N:465:ILE:HD13	1:N:480:PHE:CD1	2.55	0.42
1:A:363:LYS:C	1:A:365:GLN:H	2.23	0.42
1:D:468:GLN:HB3	1:D:487:PHE:CE2	2.55	0.42
1:G:410:ILE:HD11	1:G:496:VAL:CG2	2.49	0.42
1:G:332:VAL:HG12	1:G:333:GLY:N	2.34	0.42
1:K:202:TYR:CD2	1:K:266:LEU:HD11	2.54	0.42
1:E:457:ASN:HD22	1:E:457:ASN:N	2.18	0.42
1:I:481:ASN:HD21	1:I:484:THR:HG23	1.84	0.42
1:K:8:PHE:O	1:K:11:ALA:HB3	2.20	0.42
2:R:100:GLN:HB2	2:S:7:VAL:HB	2.01	0.42
1:A:410:ILE:HG12	1:A:496:VAL:HB	2.01	0.42
1:N:217:ALA:HB2	1:N:245:PRO:CG	2.31	0.42
1:E:359:TYR:O	1:E:363:LYS:HG2	2.19	0.42
1:K:50:THR:HG21	1:K:55:THR:HB	2.02	0.42
1:M:297:GLY:HA3	1:M:317:GLY:N	2.34	0.42
1:J:74:LEU:HA	1:J:512:ILE:HD11	2.00	0.42
1:K:283:ARG:HH12	1:K:364:LEU:CD1	2.31	0.42
2:Q:8:ILE:CD1	2:Q:8:ILE:N	2.77	0.42
1:B:373:GLY:O	1:B:374:GLY:C	2.57	0.42
1:A:284:ARG:HG3	1:A:284:ARG:HH11	1.85	0.42
2:R:53:VAL:HG22	2:R:59:ARG:HE	1.83	0.42
1:F:124:VAL:HG13	1:F:506:LEU:HG	2.02	0.42
1:D:72:GLN:HE22	1:D:75:LYS:HZ1	1.67	0.42
1:C:349:LYS:O	1:C:351:GLU:N	2.53	0.42
1:J:303:GLU:C	1:J:305:GLY:N	2.73	0.42
1:B:368:LEU:O	1:B:368:LEU:HD12	2.20	0.42
1:F:332:VAL:HG12	1:F:333:GLY:N	2.34	0.42
1:D:463:SER:O	1:D:467:GLN:HG2	2.19	0.42
1:E:190:GLU:HA	1:E:190:GLU:OE2	2.20	0.42
1:I:253:VAL:HG12	1:I:258:LEU:HB2	2.01	0.42
1:B:9:ASP:C	1:B:13:ARG:NH1	2.73	0.42
1:N:207:PRO:O	1:N:210:MET:HE2	2.19	0.42
1:J:253:VAL:O	1:J:258:LEU:HD22	2.19	0.42
1:D:233:LEU:CD2	2:R:30:ILE:HG21	2.49	0.42
1:L:528:GLU:H	1:L:528:GLU:HG3	1.63	0.42
1:E:84:VAL:O	1:E:84:VAL:HG12	2.19	0.42
1:F:10:GLU:N	1:F:13:ARG:NH1	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:150:ILE:CD1	1:E:496:VAL:H	2.33	0.42
1:B:250:ALA:O	1:B:251:GLU:C	2.57	0.42
1:K:197:GLY:HA3	1:K:325:THR:O	2.20	0.42
1:J:37:ASN:ND2	1:J:51:LYS:HE2	2.28	0.42
1:M:206:ASN:ND2	1:M:389:LYS:CE	2.79	0.42
2:Q:18:LYS:HG2	2:Q:87:TYR:HD2	1.80	0.42
1:B:66:LEU:HD22	1:B:522:VAL:CG1	2.46	0.42
2:R:7:VAL:HG12	2:R:8:ILE:N	2.35	0.42
1:D:244:LYS:HA	1:D:245:PRO:HD3	1.93	0.42
1:H:300:ILE:HG22	1:H:300:ILE:O	2.20	0.42
1:L:224:LYS:CG	1:L:225:LYS:N	2.76	0.42
1:J:224:LYS:CG	1:J:225:LYS:N	2.80	0.42
2:S:80:ILE:CG2	2:S:81:GLU:H	2.32	0.42
2:O:8:ILE:CD1	2:O:8:ILE:N	2.79	0.42
1:L:66:LEU:HD22	1:L:522:VAL:HG21	2.01	0.42
1:J:178:GLU:CD	1:J:392:LYS:HE3	2.40	0.42
1:F:173:ILE:HD12	1:F:366:GLU:HA	2.02	0.42
1:G:368:LEU:HD12	1:G:368:LEU:O	2.19	0.42
1:A:250:ALA:C	1:A:252:ASP:N	2.73	0.42
1:F:250:ALA:C	1:F:252:ASP:N	2.73	0.42
1:B:144:ILE:HD13	1:B:402:THR:CG2	2.50	0.42
1:E:136:ILE:HD12	1:E:477:ARG:HH21	1.85	0.42
1:G:9:ASP:HB3	1:G:10:GLU:H	1.61	0.42
1:C:13:ARG:HB3	1:C:104:LEU:HD22	2.01	0.42
1:L:202:TYR:HD2	1:L:266:LEU:HD11	1.84	0.42
1:E:50:THR:CG2	1:E:51:LYS:N	2.71	0.41
1:L:411:VAL:O	1:L:496:VAL:HG13	2.20	0.41
1:K:50:THR:CG2	1:K:52:ASP:H	2.22	0.41
1:L:307:LYS:HB2	1:L:310:ASN:ND2	2.35	0.41
1:N:464:VAL:HG12	1:N:468:GLN:NE2	2.26	0.41
1:C:136:ILE:CD1	1:C:477:ARG:NH2	2.76	0.41
2:O:78:THR:CG2	2:O:79:GLU:N	2.83	0.41
1:J:66:LEU:HD22	1:J:522:VAL:HG21	2.01	0.41
1:K:194:PHE:CB	1:K:278:PRO:HB3	2.49	0.41
1:A:503:ARG:O	1:A:507:GLN:HG3	2.20	0.41
1:F:218:PHE:O	1:F:246:LEU:HD12	2.19	0.41
2:U:7:VAL:HG12	2:U:8:ILE:N	2.34	0.41
2:U:78:THR:CG2	2:U:80:ILE:HD11	2.50	0.41
1:M:53:GLY:HA3	1:M:90:THR:OG1	2.19	0.41
1:C:463:SER:O	1:C:467:GLN:HG2	2.20	0.41
1:E:463:SER:O	1:E:467:GLN:HG2	2.20	0.41
1:D:146:GLU:O	1:D:147:VAL:C	2.59	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:N:201:PRO:O	1:N:204:VAL:HG23	2.20	0.41
1:M:18:ARG:HD2	1:M:67:GLU:OE1	2.20	0.41
1:C:468:GLN:O	1:C:471:ALA:HB3	2.20	0.41
1:C:475:ASN:HA	1:C:476:PRO:HD2	1.94	0.41
1:M:433:GLU:HG2	1:M:434:GLY:N	2.35	0.41
1:C:150:ILE:CD1	1:C:496:VAL:N	2.83	0.41
1:L:325:THR:HG22	1:L:327:ASP:N	2.08	0.41
1:H:411:VAL:HB	1:H:417:THR:OG1	2.19	0.41
1:I:283:ARG:HH12	1:I:364:LEU:CD1	2.30	0.41
1:H:307:LYS:HB2	1:H:310:ASN:ND2	2.35	0.41
1:C:247:LEU:HD13	1:C:324:ILE:HD11	2.01	0.41
1:A:501:VAL:CG2	1:A:502:THR:N	2.83	0.41
1:N:236:LEU:HD12	1:N:236:LEU:HA	1.92	0.41
1:B:124:VAL:HG13	1:B:506:LEU:HG	2.01	0.41
1:A:74:LEU:HD21	1:A:93:THR:CG2	2.50	0.41
1:M:79:SER:C	1:M:81:THR:N	2.73	0.41
1:G:161:ILE:HD12	1:G:399:LEU:CD2	2.50	0.41
1:J:433:GLU:HG2	1:J:434:GLY:N	2.33	0.41
1:N:412:PRO:HD2	1:N:417:THR:OG1	2.20	0.41
1:E:173:ILE:O	1:E:173:ILE:HG22	2.18	0.41
1:H:130:LYS:O	1:H:134:LEU:HB2	2.20	0.41
1:G:435:ASP:O	1:G:438:THR:HB	2.19	0.41
1:I:132:LYS:C	1:I:134:LEU:H	2.23	0.41
1:G:367:ARG:C	1:G:369:ALA:H	2.23	0.41
2:P:62:LEU:C	2:P:64:VAL:H	2.23	0.41
1:D:51:LYS:O	1:D:51:LYS:HG2	2.20	0.41
1:C:250:ALA:O	1:C:251:GLU:C	2.57	0.41
1:A:239:VAL:HG11	1:A:246:LEU:HB2	2.02	0.41
2:Q:33:PRO:C	2:Q:35:THR:N	2.73	0.41
1:M:47:PRO:HG2	1:N:73:LEU:CD1	2.51	0.41
1:E:256:GLU:HA	1:E:259:ALA:HB3	2.02	0.41
2:Q:89:ILE:HG22	2:Q:89:ILE:O	2.20	0.41
1:D:178:GLU:CG	1:D:388:LEU:HD21	2.48	0.41
1:D:352:LEU:C	1:D:354:THR:H	2.24	0.41
1:C:422:ILE:HD12	1:C:470:LEU:HD21	2.01	0.41
1:F:101:ARG:CG	1:F:102:GLU:H	2.32	0.41
1:J:526:LYS:CG	1:J:527:PRO:HD2	2.50	0.41
1:D:340:ASP:O	1:D:344:ARG:HB2	2.19	0.41
1:B:13:ARG:HB3	1:B:104:LEU:HD22	2.01	0.41
1:C:269:THR:HG21	2:Q:31:VAL:H	1.85	0.41
2:S:33:PRO:C	2:S:35:THR:H	2.24	0.41
1:D:180:LYS:HD3	1:D:180:LYS:HA	1.82	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:8:PHE:O	1:M:11:ALA:HB3	2.21	0.41
1:G:10:GLU:HA	1:G:13:ARG:HH11	1.85	0.41
1:L:202:TYR:CD2	1:L:266:LEU:HD11	2.55	0.41
1:J:275:VAL:HG12	1:J:276:LYS:O	2.20	0.41
1:L:92:ALA:HB2	1:L:505:ALA:HA	2.02	0.41
1:F:193:GLN:HB2	1:F:329:THR:O	2.21	0.41
1:M:86:GLY:O	1:M:87:ASP:HB2	2.20	0.41
1:M:173:ILE:HD11	1:M:370:LYS:HG2	2.01	0.41
2:P:45:VAL:O	2:P:46:ILE:HD13	2.21	0.41
1:B:54:VAL:HG13	1:B:89:THR:CG2	2.50	0.41
1:M:384:THR:HA	1:N:280:PHE:CD1	2.54	0.41
1:K:37:ASN:OD1	1:L:515:LEU:HD12	2.19	0.41
1:E:264:ASN:OD1	1:E:269:THR:HG21	2.20	0.41
1:C:235:ILE:HG12	1:C:311:ALA:HB3	2.02	0.41
1:L:283:ARG:HG2	1:L:363:LYS:NZ	2.34	0.41
1:A:228:ASN:ND2	1:A:231:GLU:HG3	2.34	0.41
1:H:384:THR:HB	1:H:387:GLU:H	1.86	0.41
1:G:74:LEU:HD21	1:G:93:THR:CG2	2.50	0.41
1:J:79:SER:O	1:J:81:THR:N	2.53	0.41
2:S:38:GLU:HG3	2:S:74:LYS:HZ3	1.84	0.41
1:F:452:ARG:HH11	1:F:463:SER:HA	1.85	0.41
1:J:526:LYS:HD2	1:J:527:PRO:HD2	2.00	0.41
1:A:29:VAL:CG1	1:G:520:GLU:HB3	2.49	0.41
1:E:136:ILE:CD1	1:E:477:ARG:NH2	2.84	0.41
1:I:487:PHE:C	1:I:488:VAL:HG13	2.41	0.41
2:T:19:ARG:HA	2:T:42:LYS:O	2.21	0.41
1:J:8:PHE:O	1:J:11:ALA:HB3	2.20	0.41
1:H:490:MET:HA	1:H:490:MET:CE	2.51	0.41
1:I:210:MET:HE2	1:I:210:MET:HA	2.02	0.41
1:G:180:LYS:HD3	1:G:180:LYS:HA	1.86	0.41
1:B:175:THR:HB	1:B:377:VAL:HG22	2.02	0.41
1:F:142:LYS:O	1:F:146:GLU:HG3	2.20	0.41
1:E:490:MET:CE	1:E:495:ILE:HG21	2.50	0.41
1:F:37:ASN:HB3	1:F:50:THR:O	2.20	0.41
2:S:11:LEU:HB3	2:S:12:GLY:H	1.74	0.41
1:I:46:SER:CB	1:I:47:PRO:HD2	2.39	0.41
1:M:47:PRO:HB3	1:N:69:ILE:HG23	2.02	0.41
1:M:322:VAL:HG22	1:M:331:ILE:HG12	2.03	0.41
1:L:309:GLU:N	1:L:309:GLU:OE1	2.41	0.41
1:D:246:LEU:CB	1:D:272:VAL:HG12	2.42	0.41
1:J:283:ARG:O	1:J:287:MET:HG3	2.21	0.41
1:K:283:ARG:HG2	1:K:363:LYS:NZ	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:20:VAL:HG13	1:D:74:LEU:HD13	2.02	0.41
1:D:228:ASN:HD21	1:D:230:ARG:HB2	1.85	0.41
1:I:278:PRO:O	1:I:284:ARG:HD3	2.20	0.41
2:O:14:ARG:HE	2:U:96:LEU:HA	1.85	0.41
1:F:239:VAL:HG11	1:F:246:LEU:HB2	2.01	0.41
1:F:239:VAL:O	1:F:242:THR:N	2.41	0.41
2:U:81:GLU:HA	2:U:86:GLU:HA	2.03	0.41
1:F:345:ILE:HG22	1:F:346:ASN:N	2.36	0.41
1:F:10:GLU:N	1:F:13:ARG:HH12	2.19	0.41
1:N:49:ILE:HG13	1:N:49:ILE:O	2.21	0.41
1:G:205:THR:HB	1:G:213:VAL:H	1.84	0.41
1:F:260:THR:HG22	1:F:264:ASN:ND2	2.36	0.41
1:B:392:LYS:O	1:B:396:GLU:HG3	2.21	0.41
1:G:168:VAL:HG12	1:G:172:GLY:CA	2.30	0.41
1:B:167:LYS:HB2	1:B:188:PHE:CE2	2.54	0.41
1:B:79:SER:O	1:B:82:ASN:N	2.53	0.41
1:F:247:LEU:HD13	1:F:324:ILE:HD11	2.01	0.41
1:L:87:ASP:O	1:L:501:VAL:HG13	2.21	0.41
1:M:261:LEU:HD22	1:M:272:VAL:HG21	2.02	0.41
1:M:219:ILE:HD13	1:M:331:ILE:HD13	2.03	0.41
1:H:219:ILE:O	1:H:221:ILE:HG13	2.21	0.41
1:D:235:ILE:HG12	1:D:311:ALA:HB3	2.01	0.41
2:O:81:GLU:CG	2:O:85:GLU:H	2.31	0.41
2:O:80:ILE:HG13	2:U:41:GLN:OE1	2.21	0.41
1:A:233:LEU:HD23	2:O:30:ILE:CD1	2.48	0.41
1:A:529:LYS:HZ1	1:B:63:GLU:HB2	1.85	0.41
1:D:149:THR:CG2	1:D:155:PRO:HA	2.46	0.41
1:J:375:VAL:HG12	1:J:375:VAL:O	2.20	0.41
1:M:79:SER:O	1:M:81:THR:N	2.53	0.41
2:O:34:ASP:HA	2:O:37:LYS:HE2	2.02	0.41
1:I:79:SER:C	1:I:81:THR:N	2.74	0.41
1:E:157:VAL:HG13	1:E:395:PHE:CD2	2.55	0.41
1:N:313:LEU:HG	1:N:313:LEU:O	2.21	0.41
1:A:161:ILE:HD12	1:A:399:LEU:CD2	2.51	0.41
1:B:157:VAL:O	1:B:161:ILE:HG12	2.20	0.41
1:D:17:GLU:HB2	1:D:104:LEU:CD1	2.51	0.41
1:A:286:GLU:OE1	1:A:344:ARG:NH2	2.53	0.41
1:G:367:ARG:C	1:G:369:ALA:N	2.73	0.41
1:A:481:ASN:O	1:A:483:ALA:N	2.54	0.41
1:L:132:LYS:C	1:L:134:LEU:H	2.24	0.41
1:C:428:LEU:O	1:C:428:LEU:HD12	2.19	0.41
1:K:112:ASN:HA	1:K:113:PRO:HD3	1.96	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:280:PHE:O	1:A:281:GLY:C	2.59	0.41
1:E:214:LEU:HB3	1:E:245:PRO:HB2	2.02	0.41
1:D:50:THR:CG2	1:D:52:ASP:HB3	2.48	0.41
1:C:241:GLN:HE21	2:Q:28:GLY:HA2	1.85	0.41
2:P:53:VAL:HG22	2:P:59:ARG:HG2	2.02	0.41
1:E:277:ALA:HA	1:E:278:PRO:HD3	1.96	0.41
1:L:86:GLY:O	1:L:87:ASP:HB2	2.20	0.41
1:I:46:SER:HB2	1:I:47:PRO:CD	2.39	0.41
1:K:342:GLU:HA	1:K:345:ILE:HD12	2.02	0.41
1:M:342:GLU:HA	1:M:345:ILE:HD12	2.01	0.41
1:H:408:GLU:OE2	1:H:500:LYS:HG3	2.20	0.41
1:J:232:LEU:CD2	1:J:236:LEU:HB2	2.50	0.41
1:K:283:ARG:HD3	1:K:363:LYS:HE3	2.03	0.41
1:G:247:LEU:HD13	1:G:324:ILE:HD11	2.03	0.41
2:O:97:ALA:HB1	2:P:9:LYS:O	2.21	0.41
1:D:72:GLN:NE2	1:D:75:LYS:NZ	2.68	0.41
1:E:348:ILE:CD1	1:E:367:ARG:NE	2.84	0.41
1:N:375:VAL:O	1:N:375:VAL:HG12	2.19	0.41
1:J:437:ALA:O	1:J:441:LYS:HG3	2.21	0.41
1:D:123:ALA:HA	1:D:428:LEU:HD23	2.02	0.41
1:J:473:THR:O	1:J:473:THR:HG22	2.21	0.41
1:G:232:LEU:HB3	1:G:236:LEU:CD1	2.51	0.41
1:A:77:VAL:HG23	1:A:512:ILE:HG13	2.01	0.41
1:N:8:PHE:O	1:N:11:ALA:HB3	2.21	0.41
1:H:217:ALA:HB1	1:H:245:PRO:O	2.20	0.41
1:C:79:SER:O	1:C:82:ASN:N	2.53	0.41
1:C:239:VAL:HG11	1:C:246:LEU:HB2	2.03	0.41
1:F:198:TYR:HD1	1:F:198:TYR:O	2.03	0.41
1:L:283:ARG:HD3	1:L:363:LYS:CE	2.51	0.41
2:S:69:ILE:O	2:S:98:VAL:HG13	2.21	0.41
1:H:283:ARG:HD2	1:H:283:ARG:HA	1.74	0.41
1:I:117:LYS:O	1:I:118:ARG:C	2.58	0.41
1:G:40:LEU:HD13	1:G:59:GLU:CG	2.50	0.41
1:D:332:VAL:HG12	1:D:333:GLY:N	2.35	0.41
1:G:460:TYR:HB3	1:G:465:ILE:HD11	2.02	0.41
1:A:463:SER:O	1:A:467:GLN:HG2	2.21	0.41
1:E:123:ALA:HA	1:E:428:LEU:HD23	2.02	0.41
1:F:417:THR:HG23	1:F:418:LEU:HD12	2.01	0.41
1:N:478:TYR:CZ	1:N:487:PHE:HB3	2.55	0.41
1:F:188:PHE:CD1	1:F:188:PHE:N	2.89	0.41
1:G:352:LEU:C	1:G:354:THR:H	2.24	0.41
1:G:356:ASP:O	1:G:357:SER:C	2.59	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:M:449:GLU:HB2	1:M:450:PRO:HD3	2.03	0.41
1:I:433:GLU:HG2	1:I:434:GLY:N	2.36	0.41
1:D:194:PHE:CE1	1:D:329:THR:HB	2.56	0.41
1:D:363:LYS:C	1:D:365:GLN:H	2.23	0.41
2:O:54:LEU:CG	2:P:55:GLU:O	2.66	0.41
1:B:150:ILE:HD11	1:B:494:GLY:O	2.21	0.41
2:U:13:ASP:HB2	2:U:62:LEU:CD2	2.39	0.41
1:B:229:VAL:HG12	1:B:233:LEU:CD1	2.49	0.41
1:F:168:VAL:O	1:F:172:GLY:HA3	2.21	0.41
1:E:304:LEU:O	1:F:263:VAL:HG22	2.21	0.41
2:S:48:VAL:HG11	2:S:64:VAL:O	2.19	0.41
2:S:14:ARG:CG	2:S:14:ARG:NH1	2.83	0.41
1:B:54:VAL:CG2	1:B:89:THR:HG21	2.50	0.41
1:D:198:TYR:HB3	1:D:324:ILE:HG21	2.02	0.41
1:D:198:TYR:O	1:D:198:TYR:CD1	2.72	0.41
2:Q:78:THR:HG22	2:Q:79:GLU:N	2.36	0.41
1:L:246:LEU:HB3	1:L:272:VAL:CG1	2.47	0.41
1:H:149:THR:HG23	1:H:155:PRO:CA	2.43	0.41
1:I:149:THR:HG23	1:I:155:PRO:CA	2.40	0.41
1:A:173:ILE:HD12	1:A:366:GLU:CA	2.45	0.41
2:T:52:ARG:HG3	2:T:52:ARG:O	2.20	0.41
1:L:360:ALA:O	1:L:363:LYS:HG2	2.21	0.41
1:H:194:PHE:HB2	1:H:278:PRO:HB3	2.03	0.41
1:H:278:PRO:O	1:H:284:ARG:HD3	2.21	0.41
1:K:363:LYS:O	1:K:366:GLU:HG2	2.20	0.41
1:K:228:ASN:ND2	1:K:230:ARG:HB3	2.29	0.41
1:A:345:ILE:C	1:A:347:GLY:N	2.74	0.41
1:J:344:ARG:HH11	1:J:344:ARG:HG3	1.84	0.41
1:H:384:THR:HG22	1:H:385:GLU:N	2.36	0.41
2:R:62:LEU:O	2:R:64:VAL:N	2.54	0.41
1:C:72:GLN:O	1:C:75:LYS:N	2.54	0.41
2:Q:20:ILE:CG1	2:Q:43:GLY:HA2	2.46	0.41
1:N:247:LEU:HD22	1:N:322:VAL:CG1	2.49	0.41
1:K:178:GLU:OE2	1:K:392:LYS:HE3	2.20	0.41
1:A:354:THR:HG22	1:A:354:THR:O	2.20	0.41
1:A:416:VAL:HG21	1:A:479:GLY:HA3	2.03	0.41
1:K:465:ILE:HD13	1:K:480:PHE:CD1	2.56	0.41
2:O:9:LYS:HE2	2:U:100:GLN:OE1	2.21	0.41
1:A:68:ASN:O	1:A:72:GLN:HG2	2.20	0.41
1:B:199:ILE:HD12	1:B:274:ALA:HB1	2.03	0.41
1:J:175:THR:CG2	1:J:177:GLU:OE2	2.69	0.41
1:F:250:ALA:O	1:F:251:GLU:C	2.60	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:C:332:VAL:HG12	1:C:333:GLY:N	2.36	0.41
1:F:31:LEU:HD23	1:F:453:GLN:HB3	2.02	0.41
1:F:24:ALA:O	1:F:28:LYS:HG2	2.20	0.41
1:E:231:GLU:HA	1:E:309:GLU:HG2	2.03	0.41
1:I:421:ALA:O	1:I:425:VAL:HG23	2.20	0.41
1:N:412:PRO:HB3	1:N:490:MET:HB2	2.03	0.41
1:H:462:GLY:O	1:H:466:VAL:HG23	2.19	0.41
1:D:437:ALA:O	1:D:441:LYS:HG3	2.21	0.41
1:J:298:THR:N	1:J:315:MET:O	2.52	0.41
1:A:123:ALA:HB2	1:A:440:ALA:HA	2.03	0.41
1:A:123:ALA:HB3	1:A:443:VAL:HG21	2.03	0.41
1:N:202:TYR:HD2	1:N:266:LEU:HD11	1.85	0.41
2:R:9:LYS:HA	2:R:10:PRO:HD2	1.94	0.41
1:L:433:GLU:HG2	1:L:434:GLY:N	2.36	0.41
1:D:355:THR:CG2	1:D:361:ARG:HG2	2.50	0.41
1:N:50:THR:HG21	1:N:55:THR:HB	2.02	0.41
1:K:37:ASN:ND2	1:K:51:LYS:HE2	2.29	0.41
1:E:238:GLN:C	1:E:313:LEU:HD21	2.41	0.41
1:N:362:GLU:HA	1:N:365:GLN:CG	2.51	0.41
1:M:77:VAL:HB	1:M:512:ILE:HD11	2.03	0.41
1:K:297:GLY:CA	1:K:317:GLY:N	2.84	0.41
1:D:128:VAL:HA	1:D:131:ILE:HD12	2.01	0.41
1:D:74:LEU:HD21	1:D:93:THR:HG23	2.03	0.41
2:R:62:LEU:C	2:R:64:VAL:N	2.75	0.41
1:N:290:ASP:N	1:N:344:ARG:NH1	2.66	0.41
1:F:421:ALA:O	1:F:425:VAL:HG23	2.20	0.41
1:G:10:GLU:N	1:G:13:ARG:HH12	2.19	0.41
1:B:478:TYR:CE1	1:B:487:PHE:HB3	2.56	0.41
1:M:478:TYR:CZ	1:M:487:PHE:HB3	2.56	0.41
1:D:359:TYR:CZ	1:D:363:LYS:HE2	2.56	0.40
1:N:217:ALA:HB1	1:N:245:PRO:O	2.21	0.40
1:E:79:SER:O	1:E:82:ASN:N	2.54	0.40
2:R:19:ARG:HA	2:R:42:LYS:O	2.20	0.40
2:S:9:LYS:HA	2:S:10:PRO:HD2	1.94	0.40
1:E:278:PRO:HG3	1:E:291:ILE:CD1	2.50	0.40
1:H:50:THR:HG21	1:H:55:THR:HB	2.02	0.40
1:L:221:ILE:HD11	1:L:291:ILE:HG22	2.04	0.40
1:N:295:THR:HG22	1:N:317:GLY:CA	2.51	0.40
2:U:50:THR:HG22	2:U:51:GLY:O	2.21	0.40
1:C:217:ALA:CB	1:C:245:PRO:HB2	2.44	0.40
1:F:237:GLU:OE2	2:T:28:GLY:N	2.54	0.40
2:P:81:GLU:HG3	2:P:85:GLU:O	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:G:23:VAL:HB	1:G:74:LEU:HD23	2.03	0.40
1:E:123:ALA:HB2	1:E:440:ALA:HA	2.03	0.40
1:A:159:LYS:HE2	1:A:163:ASP:OD2	2.21	0.40
1:E:478:TYR:CZ	1:E:487:PHE:HB3	2.57	0.40
1:D:179:SER:OG	1:D:180:LYS:N	2.54	0.40
1:E:404:ALA:HB1	1:E:500:LYS:HB3	2.02	0.40
1:M:375:VAL:O	1:M:375:VAL:HG12	2.20	0.40
1:J:416:VAL:HG21	1:J:479:GLY:HA3	2.02	0.40
1:J:478:TYR:CZ	1:J:487:PHE:HB3	2.56	0.40
1:L:189:VAL:CG1	1:L:190:GLU:N	2.61	0.40
1:C:150:ILE:HD12	1:C:496:VAL:H	1.86	0.40
2:U:45:VAL:O	2:U:46:ILE:HD13	2.20	0.40
1:B:251:GLU:CG	1:B:284:ARG:HH12	2.10	0.40
1:E:54:VAL:HG13	1:E:89:THR:CG2	2.52	0.40
1:C:168:VAL:O	1:C:172:GLY:HA3	2.22	0.40
1:L:219:ILE:O	1:L:221:ILE:HG13	2.19	0.40
1:L:80:LYS:HE3	1:L:508:ASN:OD1	2.21	0.40
1:D:501:VAL:CG2	1:D:502:THR:N	2.84	0.40
2:S:98:VAL:HB	2:T:9:LYS:HB2	2.03	0.40
1:K:268:GLY:O	1:L:228:ASN:HB2	2.21	0.40
2:O:14:ARG:NE	2:U:96:LEU:HD23	2.33	0.40
2:Q:13:ASP:O	2:Q:62:LEU:CD2	2.69	0.40
1:D:229:VAL:HG11	2:R:32:LEU:HD21	2.02	0.40
1:A:47:PRO:HG3	1:G:69:ILE:HG23	2.03	0.40
1:D:10:GLU:N	1:D:13:ARG:HH12	2.19	0.40
1:C:161:ILE:HD12	1:C:399:LEU:HD21	2.03	0.40
1:C:180:LYS:HD3	1:C:180:LYS:HA	1.87	0.40
1:H:285:LYS:O	1:H:289:LYS:HG3	2.22	0.40
1:L:197:GLY:HA3	1:L:325:THR:O	2.21	0.40
1:L:50:THR:CG2	1:L:52:ASP:H	2.13	0.40
1:J:50:THR:HG21	1:J:55:THR:HB	2.03	0.40
1:E:341:ILE:C	1:E:343:ALA:N	2.73	0.40
1:F:66:LEU:CD2	1:F:522:VAL:HG11	2.43	0.40
1:A:270:LEU:HG	1:A:272:VAL:HG13	2.04	0.40
1:H:7:VAL:HG21	1:H:66:LEU:CD1	2.50	0.40
1:M:46:SER:HB2	1:M:47:PRO:CD	2.42	0.40
1:J:411:VAL:O	1:J:496:VAL:CG1	2.68	0.40
1:J:283:ARG:HH21	1:J:367:ARG:CD	2.34	0.40
1:C:218:PHE:O	1:C:246:LEU:HD12	2.20	0.40
1:D:501:VAL:HG23	1:D:502:THR:H	1.84	0.40
1:N:385:GLU:O	1:N:389:LYS:HG3	2.20	0.40
2:O:14:ARG:HG3	2:O:14:ARG:NH1	2.30	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:O:9:LYS:O	2:U:97:ALA:CA	2.68	0.40
1:K:337:LYS:C	1:K:339:GLU:N	2.74	0.40
1:L:26:ALA:HB2	1:M:6:LEU:HD22	2.03	0.40
1:C:23:VAL:CG1	1:C:74:LEU:HD23	2.51	0.40
1:E:10:GLU:HA	1:E:13:ARG:HH11	1.86	0.40
1:A:6:LEU:CD2	1:A:523:VAL:HG22	2.51	0.40
1:G:503:ARG:HG2	1:G:507:GLN:OE1	2.21	0.40
1:G:312:THR:HG22	1:G:313:LEU:N	2.36	0.40
1:D:88:GLY:HA2	4:D:4551:ADP:O2B	2.22	0.40
1:A:146:GLU:O	1:A:147:VAL:C	2.59	0.40
2:S:11:LEU:HD12	2:S:11:LEU:N	2.36	0.40
1:M:206:ASN:HD21	1:M:389:LYS:CG	2.35	0.40
2:Q:18:LYS:HZ1	2:Q:85:GLU:CD	2.24	0.40
1:A:265:LYS:HA	1:A:270:LEU:O	2.21	0.40
1:M:179:SER:HB2	1:M:379:ARG:CB	2.41	0.40
1:E:312:THR:HG22	1:E:313:LEU:N	2.37	0.40
1:C:218:PHE:CE1	1:C:242:THR:HG21	2.57	0.40
1:I:267:ARG:HG2	1:J:256:GLU:CD	2.42	0.40
1:G:128:VAL:HA	1:G:131:ILE:HD12	2.04	0.40
1:I:225:LYS:HD3	1:I:254:GLU:OE2	2.21	0.40
2:R:78:THR:HG22	2:R:80:ILE:HD11	2.02	0.40
1:N:178:GLU:CD	1:N:392:LYS:HE3	2.42	0.40
1:B:367:ARG:C	1:B:369:ALA:N	2.75	0.40
1:B:349:LYS:C	1:B:351:GLU:N	2.71	0.40
1:E:520:GLU:HG2	1:F:29:VAL:HG13	2.02	0.40
1:I:253:VAL:HG11	1:I:261:LEU:HD12	2.03	0.40
1:L:127:ALA:O	1:L:131:ILE:HG13	2.21	0.40
1:A:244:LYS:HA	1:A:245:PRO:HD3	1.95	0.40
1:D:123:ALA:HB3	1:D:443:VAL:HG21	2.03	0.40
2:R:89:ILE:HG22	2:R:89:ILE:O	2.20	0.40
1:G:167:LYS:HB2	1:G:188:PHE:CE2	2.56	0.40
1:M:178:GLU:CD	1:M:323:ARG:NH2	2.74	0.40
2:S:92:GLU:HA	2:S:95:LEU:HD12	2.04	0.40
1:M:385:GLU:HB2	1:N:280:PHE:HE2	1.80	0.40
1:F:284:ARG:HG3	1:F:284:ARG:NH1	2.37	0.40
1:B:23:VAL:CG1	1:B:74:LEU:HD23	2.51	0.40
2:O:96:LEU:HD23	2:P:14:ARG:HE	1.85	0.40
1:A:352:LEU:C	1:A:354:THR:H	2.24	0.40
1:F:222:VAL:HA	1:F:300:ILE:HB	2.03	0.40
1:C:457:ASN:N	1:C:457:ASN:ND2	2.70	0.40
1:N:452:ARG:NH1	1:N:452:ARG:HG2	2.37	0.40
1:C:157:VAL:HG13	1:C:395:PHE:CD2	2.57	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:D:232:LEU:HB3	1:D:236:LEU:HD11	2.03	0.40
2:P:54:LEU:HB3	2:P:58:GLN:HB3	2.04	0.40
1:L:19:GLY:HA3	1:L:67:GLU:O	2.20	0.40
1:A:194:PHE:CE1	1:A:329:THR:HB	2.56	0.40
1:C:9:ASP:HB3	1:C:10:GLU:H	1.55	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:E:474:LYS:CE	1:N:472:GLU:OE1[1_455]	1.85	0.35
1:K:474:LYS:NZ	1:N:493:ALA:O[1_455]	1.93	0.27
1:C:141:ARG:NH2	1:L:353:GLU:OE1[1_565]	2.11	0.09
1:E:473:THR:OG1	1:N:474:LYS:CE[1_455]	2.17	0.03
1:E:474:LYS:NZ	1:N:472:GLU:OE1[1_455]	2.18	0.02

## 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 X-ray entries followed by that with respect to entries of similar resolution. 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	525/543 (97%)	456 (87%)	56 (11%)	13 (2%)	9	28
1	B	525/543 (97%)	458 (87%)	55 (10%)	12 (2%)	10	31
1	C	524/543 (96%)	451 (86%)	58 (11%)	15 (3%)	7	23
1	D	524/543 (96%)	441 (84%)	67 (13%)	16 (3%)	7	21
1	E	524/543 (96%)	440 (84%)	65 (12%)	19 (4%)	5	17
1	F	527/543 (97%)	453 (86%)	60 (11%)	14 (3%)	8	25
1	G	523/543 (96%)	447 (86%)	65 (12%)	11 (2%)	11	33
1	H	524/543 (96%)	457 (87%)	60 (12%)	7 (1%)	18	51
1	I	523/543 (96%)	457 (87%)	61 (12%)	5 (1%)	22	60
1	J	523/543 (96%)	456 (87%)	58 (11%)	9 (2%)	14	42
1	K	523/543 (96%)	458 (88%)	57 (11%)	8 (2%)	15	46

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	L	524/543 (96%)	454 (87%)	63 (12%)	7 (1%)	18	51
1	M	523/543 (96%)	455 (87%)	61 (12%)	7 (1%)	18	51
1	N	524/543 (96%)	457 (87%)	61 (12%)	6 (1%)	21	57
2	O	94/100 (94%)	74 (79%)	13 (14%)	7 (7%)	2	3
2	P	92/100 (92%)	72 (78%)	13 (14%)	7 (8%)	2	3
2	Q	94/100 (94%)	75 (80%)	12 (13%)	7 (7%)	2	3
2	R	94/100 (94%)	75 (80%)	11 (12%)	8 (8%)	1	2
2	S	94/100 (94%)	72 (77%)	17 (18%)	5 (5%)	3	9
2	T	94/100 (94%)	72 (77%)	15 (16%)	7 (7%)	2	3
2	U	94/100 (94%)	77 (82%)	10 (11%)	7 (7%)	2	3
All	All	7992/8302 (96%)	6857 (86%)	938 (12%)	197 (2%)	9	28

All (197) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	9	ASP
1	A	278	PRO
1	B	9	ASP
1	B	278	PRO
1	C	9	ASP
1	C	278	PRO
1	C	279	GLY
1	D	9	ASP
1	D	190	GLU
1	D	278	PRO
1	E	9	ASP
1	E	292	ALA
1	E	293	ALA
1	F	9	ASP
1	F	278	PRO
1	G	9	ASP
1	G	278	PRO
1	H	9	ASP
1	I	9	ASP
1	J	9	ASP
1	K	9	ASP
1	L	9	ASP
1	M	9	ASP

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Mol	Chain	Res	Type
1	N	9	ASP
2	O	74	LYS
2	P	22	GLU
2	P	74	LYS
2	Q	19	ARG
2	Q	54	LEU
2	Q	74	LYS
2	R	74	LYS
2	S	12	GLY
2	S	74	LYS
2	T	12	GLY
2	T	19	ARG
2	T	74	LYS
2	U	74	LYS
1	A	168	VAL
1	A	279	GLY
1	A	336	GLY
1	A	528	GLU
1	B	168	VAL
1	B	216	ASP
1	B	279	GLY
1	B	350	LYS
1	B	374	GLY
1	B	434	GLY
1	C	168	VAL
1	C	169	GLY
1	C	281	GLY
1	C	336	GLY
1	C	434	GLY
1	D	168	VAL
1	D	336	GLY
1	E	28	LYS
1	E	179	SER
1	E	336	GLY
1	G	373	GLY
1	G	374	GLY
1	H	305	GLY
1	I	305	GLY
1	J	305	GLY
1	K	305	GLY
1	L	305	GLY
1	M	305	GLY

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Mol	Chain	Res	Type
1	N	305	GLY
2	O	54	LEU
2	Q	12	GLY
2	Q	34	ASP
2	R	19	ARG
2	S	19	ARG
2	S	54	LEU
2	T	57	GLY
2	U	12	GLY
2	U	34	ASP
2	U	63	GLU
1	A	482	ALA
1	C	216	ASP
1	C	350	LYS
1	D	199	ILE
1	D	216	ASP
1	E	168	VAL
1	E	276	LYS
1	E	342	GLU
1	F	169	GLY
1	F	190	GLU
1	F	216	ASP
1	F	350	LYS
1	G	168	VAL
1	G	216	ASP
1	G	434	GLY
1	H	80	LYS
1	J	313	LEU
1	K	80	LYS
1	L	80	LYS
1	L	313	LEU
1	L	447	LEU
1	N	80	LYS
1	N	527	PRO
2	O	12	GLY
2	O	19	ARG
2	O	34	ASP
2	P	12	GLY
2	P	19	ARG
2	P	21	GLU
2	R	34	ASP
2	R	54	LEU

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Mol	Chain	Res	Type
2	S	66	GLU
2	T	34	ASP
2	U	19	ARG
1	A	216	ASP
1	A	297	GLY
1	A	434	GLY
1	B	281	GLY
1	B	357	SER
1	B	373	GLY
1	C	357	SER
1	C	482	ALA
1	D	53	GLY
1	D	179	SER
1	D	224	LYS
1	E	207	PRO
1	E	482	ALA
1	E	527	PRO
1	F	230	ARG
1	F	279	GLY
1	G	224	LYS
1	H	313	LEU
1	H	474	LYS
1	I	313	LEU
1	J	80	LYS
1	J	447	LEU
1	J	474	LYS
1	K	313	LEU
1	K	447	LEU
1	K	474	LYS
1	M	80	LYS
1	M	189	VAL
1	N	313	LEU
1	N	474	LYS
2	P	85	GLU
2	Q	85	GLU
2	R	12	GLY
2	R	63	GLU
1	A	179	SER
1	C	224	LYS
1	D	28	LYS
1	D	279	GLY
1	D	354	THR

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Mol	Chain	Res	Type
1	D	434	GLY
1	E	195	ASP
1	E	202	TYR
1	E	371	LEU
1	E	374	GLY
1	F	168	VAL
1	F	353	GLU
1	G	292	ALA
1	G	350	LYS
1	H	300	ILE
1	I	80	LYS
1	I	474	LYS
1	J	101	ARG
1	L	474	LYS
1	M	474	LYS
2	O	50	THR
2	O	85	GLU
2	Q	63	GLU
2	R	85	GLU
2	T	85	GLU
1	B	482	ALA
1	D	169	GLY
1	E	53	GLY
1	F	346	ASN
1	F	357	SER
1	F	434	GLY
1	J	304	LEU
1	M	447	LEU
2	U	85	GLU
1	A	281	GLY
1	C	53	GLY
1	E	322	VAL
1	F	527	PRO
1	K	300	ILE
1	M	5	ILE
2	P	30	ILE
1	A	53	GLY
1	E	434	GLY
1	G	53	GLY
2	T	53	VAL
1	C	297	GLY
1	D	226	VAL

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Mol	Chain	Res	Type
1	J	488	VAL
1	L	189	VAL
2	R	67	GLY
1	H	488	VAL
1	K	189	VAL
2	U	67	GLY

### 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 X-ray entries followed by that with respect to entries of similar resolution. 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	412/423 (97%)	402 (98%)	10 (2%)	61	91
1	B	412/423 (97%)	399 (97%)	13 (3%)	51	85
1	C	411/423 (97%)	399 (97%)	12 (3%)	55	88
1	D	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	E	411/423 (97%)	395 (96%)	16 (4%)	43	80
1	F	414/423 (98%)	405 (98%)	9 (2%)	64	92
1	G	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	H	411/423 (97%)	403 (98%)	8 (2%)	69	94
1	I	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	J	410/423 (97%)	400 (98%)	10 (2%)	61	91
1	K	410/423 (97%)	401 (98%)	9 (2%)	64	92
1	L	411/423 (97%)	401 (98%)	10 (2%)	61	91
1	M	410/423 (97%)	399 (97%)	11 (3%)	57	89
1	N	411/423 (97%)	401 (98%)	10 (2%)	61	91
2	O	81/83 (98%)	76 (94%)	5 (6%)	26	60
2	P	79/83 (95%)	76 (96%)	3 (4%)	44	80
2	Q	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	R	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	S	81/83 (98%)	78 (96%)	3 (4%)	45	81
2	T	81/83 (98%)	77 (95%)	4 (5%)	35	71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	U	81/83 (98%)	78 (96%)	3 (4%)	45 81
All	All	6319/6503 (97%)	6147 (97%)	172 (3%)	57 89

All (172) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	5	ILE
1	A	9	ASP
1	A	36	ARG
1	A	54	VAL
1	A	173	ILE
1	A	283	ARG
1	A	303	GLU
1	A	312	THR
1	A	340	ASP
1	A	351	GLU
1	B	5	ILE
1	B	9	ASP
1	B	36	ARG
1	B	54	VAL
1	B	173	ILE
1	B	234	PRO
1	B	280	PHE
1	B	283	ARG
1	B	290	ASP
1	B	303	GLU
1	B	340	ASP
1	B	351	GLU
1	B	410	ILE
1	C	5	ILE
1	C	9	ASP
1	C	36	ARG
1	C	54	VAL
1	C	89	THR
1	C	173	ILE
1	C	283	ARG
1	C	303	GLU
1	C	312	THR
1	C	340	ASP
1	C	351	GLU
1	C	410	ILE
1	D	5	ILE

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Mol	Chain	Res	Type
1	D	9	ASP
1	D	36	ARG
1	D	54	VAL
1	D	173	ILE
1	D	283	ARG
1	D	303	GLU
1	D	309	GLU
1	D	340	ASP
1	D	351	GLU
1	E	5	ILE
1	E	9	ASP
1	E	36	ARG
1	E	54	VAL
1	E	136	ILE
1	E	144	ILE
1	E	173	ILE
1	E	210	MET
1	E	235	ILE
1	E	251	GLU
1	E	298	THR
1	E	309	GLU
1	E	316	LEU
1	E	342	GLU
1	E	349	LYS
1	E	368	LEU
1	F	5	ILE
1	F	9	ASP
1	F	36	ARG
1	F	54	VAL
1	F	173	ILE
1	F	198	TYR
1	F	283	ARG
1	F	340	ASP
1	F	351	GLU
1	G	5	ILE
1	G	9	ASP
1	G	36	ARG
1	G	54	VAL
1	G	198	TYR
1	G	283	ARG
1	G	303	GLU
1	G	312	THR

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Mol	Chain	Res	Type
1	G	340	ASP
1	G	351	GLU
1	H	151	SER
1	H	153	ASN
1	H	190	GLU
1	H	270	LEU
1	H	316	LEU
1	H	325	THR
1	H	423	SER
1	H	456	GLU
1	I	151	SER
1	I	153	ASN
1	I	190	GLU
1	I	216	ASP
1	I	270	LEU
1	I	316	LEU
1	I	325	THR
1	I	363	LYS
1	I	423	SER
1	I	456	GLU
1	J	151	SER
1	J	153	ASN
1	J	194	PHE
1	J	216	ASP
1	J	270	LEU
1	J	316	LEU
1	J	325	THR
1	J	423	SER
1	J	456	GLU
1	J	527	PRO
1	K	151	SER
1	K	153	ASN
1	K	194	PHE
1	K	237	GLU
1	K	270	LEU
1	K	316	LEU
1	K	363	LYS
1	K	423	SER
1	K	456	GLU
1	L	151	SER
1	L	153	ASN
1	L	194	PHE

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Mol	Chain	Res	Type
1	L	270	LEU
1	L	316	LEU
1	L	325	THR
1	L	363	LYS
1	L	423	SER
1	L	456	GLU
1	L	522	VAL
1	M	151	SER
1	M	153	ASN
1	M	190	GLU
1	M	194	PHE
1	M	196	LYS
1	M	270	LEU
1	M	316	LEU
1	M	363	LYS
1	M	423	SER
1	M	456	GLU
1	M	522	VAL
1	N	151	SER
1	N	153	ASN
1	N	194	PHE
1	N	270	LEU
1	N	316	LEU
1	N	325	THR
1	N	363	LYS
1	N	423	SER
1	N	456	GLU
1	N	522	VAL
2	O	15	VAL
2	O	21	GLU
2	O	34	ASP
2	O	50	THR
2	O	55	GLU
2	P	15	VAL
2	P	21	GLU
2	P	56	ASN
2	Q	21	GLU
2	Q	34	ASP
2	Q	48	VAL
2	R	21	GLU
2	R	55	GLU
2	R	62	LEU

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Mol	Chain	Res	Type
2	S	21	GLU
2	S	48	VAL
2	S	56	ASN
2	T	13	ASP
2	T	21	GLU
2	T	34	ASP
2	T	48	VAL
2	U	13	ASP
2	U	21	GLU
2	U	92	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (132) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	72	GLN
1	A	106	ASN
1	A	228	ASN
1	A	310	ASN
1	A	400	ASN
1	A	457	ASN
1	B	72	GLN
1	B	228	ASN
1	B	310	ASN
1	B	400	ASN
1	B	457	ASN
1	C	72	GLN
1	C	106	ASN
1	C	241	GLN
1	C	310	ASN
1	C	400	ASN
1	C	457	ASN
1	D	72	GLN
1	D	106	ASN
1	D	310	ASN
1	D	400	ASN
1	D	457	ASN
1	E	72	GLN
1	E	193	GLN
1	E	310	ASN
1	E	346	ASN
1	E	400	ASN
1	E	457	ASN

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Mol	Chain	Res	Type
1	F	72	GLN
1	F	310	ASN
1	F	400	ASN
1	F	457	ASN
1	G	72	GLN
1	G	310	ASN
1	G	400	ASN
1	G	457	ASN
1	H	37	ASN
1	H	97	GLN
1	H	106	ASN
1	H	153	ASN
1	H	193	GLN
1	H	228	ASN
1	H	310	ASN
1	H	346	ASN
1	H	365	GLN
1	H	400	ASN
1	H	468	GLN
1	H	481	ASN
1	H	507	GLN
1	H	508	ASN
1	I	37	ASN
1	I	97	GLN
1	I	153	ASN
1	I	193	GLN
1	I	228	ASN
1	I	264	ASN
1	I	310	ASN
1	I	346	ASN
1	I	365	GLN
1	I	400	ASN
1	I	468	GLN
1	I	481	ASN
1	I	507	GLN
1	I	508	ASN
1	J	37	ASN
1	J	97	GLN
1	J	153	ASN
1	J	193	GLN
1	J	228	ASN
1	J	310	ASN

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Mol	Chain	Res	Type
1	J	346	ASN
1	J	365	GLN
1	J	400	ASN
1	J	468	GLN
1	J	481	ASN
1	J	507	GLN
1	J	508	ASN
1	K	37	ASN
1	K	97	GLN
1	K	106	ASN
1	K	112	ASN
1	K	153	ASN
1	K	193	GLN
1	K	228	ASN
1	K	264	ASN
1	K	310	ASN
1	K	346	ASN
1	K	365	GLN
1	K	400	ASN
1	K	468	GLN
1	K	481	ASN
1	K	507	GLN
1	K	508	ASN
1	L	37	ASN
1	L	97	GLN
1	L	153	ASN
1	L	193	GLN
1	L	228	ASN
1	L	310	ASN
1	L	365	GLN
1	L	400	ASN
1	L	468	GLN
1	L	481	ASN
1	L	507	GLN
1	L	508	ASN
1	M	37	ASN
1	M	97	GLN
1	M	153	ASN
1	M	193	GLN
1	M	228	ASN
1	M	310	ASN
1	M	346	ASN

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Mol	Chain	Res	Type
1	M	365	GLN
1	M	400	ASN
1	M	468	GLN
1	M	481	ASN
1	M	507	GLN
1	M	508	ASN
1	N	37	ASN
1	N	97	GLN
1	N	153	ASN
1	N	228	ASN
1	N	310	ASN
1	N	346	ASN
1	N	365	GLN
1	N	400	ASN
1	N	468	GLN
1	N	481	ASN
1	N	507	GLN
1	N	508	ASN
2	O	56	ASN
2	Q	41	GLN

### 5.3.3 RNA ⓘ

There are no RNA chains 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 ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 21 ligands modelled in this entry, 7 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
4	ADP	A	1551	3	29,29,29	1.33	4 (13%)	45,45,45	2.29	8 (17%)
4	ADP	B	2551	3	29,29,29	1.44	5 (17%)	45,45,45	2.44	8 (17%)
4	ADP	C	3551	3	29,29,29	1.56	5 (17%)	45,45,45	2.42	7 (15%)
4	ADP	D	4551	3	29,29,29	1.56	6 (20%)	45,45,45	2.30	9 (20%)
4	ADP	E	5551	3	29,29,29	1.42	5 (17%)	45,45,45	2.41	8 (17%)
4	ADP	F	6551	3	29,29,29	1.63	5 (17%)	45,45,45	2.44	8 (17%)
4	ADP	G	7551	3	29,29,29	1.50	6 (20%)	45,45,45	2.38	8 (17%)
5	DMS	H	545	-	3,3,3	0.22	0	3,3,3	0.61	0
5	DMS	I	545	-	3,3,3	0.26	0	3,3,3	0.61	0
5	DMS	J	545	-	3,3,3	0.36	0	3,3,3	0.68	0
5	DMS	K	545	-	3,3,3	0.28	0	3,3,3	0.62	0
5	DMS	L	545	-	3,3,3	0.30	0	3,3,3	0.63	0
5	DMS	M	601	-	3,3,3	0.27	0	3,3,3	0.58	0
5	DMS	N	701	-	3,3,3	0.25	0	3,3,3	0.59	0

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
4	ADP	A	1551	3	-	0/16/32/32	0/1/3/3
4	ADP	B	2551	3	-	0/16/32/32	0/1/3/3
4	ADP	C	3551	3	-	0/16/32/32	0/1/3/3
4	ADP	D	4551	3	-	0/16/32/32	0/1/3/3
4	ADP	E	5551	3	-	0/16/32/32	0/1/3/3
4	ADP	F	6551	3	-	0/16/32/32	0/1/3/3
4	ADP	G	7551	3	-	0/16/32/32	0/1/3/3
5	DMS	H	545	-	-	0/0/0/0	0/0/0/0
5	DMS	I	545	-	-	0/0/0/0	0/0/0/0
5	DMS	J	545	-	-	0/0/0/0	0/0/0/0
5	DMS	K	545	-	-	0/0/0/0	0/0/0/0
5	DMS	L	545	-	-	0/0/0/0	0/0/0/0
5	DMS	M	601	-	-	0/0/0/0	0/0/0/0
5	DMS	N	701	-	-	0/0/0/0	0/0/0/0

All (36) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	F	6551	ADP	C4-N9	-4.40	1.31	1.37
4	C	3551	ADP	C2'-C1'	-4.40	1.47	1.53
4	F	6551	ADP	C2'-C1'	-4.33	1.47	1.53
4	G	7551	ADP	C4-N9	-4.09	1.31	1.37
4	E	5551	ADP	C4-N9	-3.83	1.32	1.37
4	C	3551	ADP	C4-N9	-3.61	1.32	1.37
4	D	4551	ADP	C4-N9	-3.50	1.32	1.37
4	B	2551	ADP	C4-N9	-3.46	1.32	1.37
4	D	4551	ADP	C2-N3	3.39	1.38	1.32
4	B	2551	ADP	C2'-C1'	-3.24	1.48	1.53
4	G	7551	ADP	C2'-C1'	-3.19	1.48	1.53
4	B	2551	ADP	C2-N3	3.14	1.38	1.32
4	D	4551	ADP	C2'-C1'	-3.12	1.49	1.53
4	A	1551	ADP	C2'-C1'	-3.10	1.49	1.53
4	D	4551	ADP	PB-O2B	2.73	1.64	1.54
4	F	6551	ADP	C2-N3	2.69	1.37	1.32
4	A	1551	ADP	C4-N9	-2.64	1.33	1.37
4	A	1551	ADP	O4'-C1'	2.49	1.45	1.41
4	G	7551	ADP	O4'-C1'	2.49	1.45	1.41
4	F	6551	ADP	C5-N7	-2.43	1.31	1.40
4	C	3551	ADP	C2-N3	2.42	1.37	1.32
4	G	7551	ADP	C4-N3	2.42	1.39	1.35
4	A	1551	ADP	C2-N3	2.40	1.36	1.32
4	E	5551	ADP	C2'-C1'	-2.35	1.50	1.53
4	E	5551	ADP	C4-N3	2.30	1.39	1.35
4	C	3551	ADP	C4-N3	2.22	1.39	1.35
4	D	4551	ADP	O4'-C1'	2.21	1.44	1.41
4	G	7551	ADP	PA-O2A	-2.19	1.45	1.55
4	E	5551	ADP	PA-O2A	-2.16	1.45	1.55
4	D	4551	ADP	PA-O2A	-2.13	1.45	1.55
4	B	2551	ADP	C5-N7	-2.12	1.32	1.40
4	E	5551	ADP	C2-N3	2.11	1.36	1.32
4	G	7551	ADP	C2-N1	2.10	1.38	1.33
4	B	2551	ADP	PA-O2A	-2.07	1.45	1.55
4	F	6551	ADP	PB-O3A	-2.02	1.56	1.60
4	C	3551	ADP	PA-O2A	-2.00	1.46	1.55

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	C	3551	ADP	N3-C2-N1	-12.97	117.86	128.71
4	G	7551	ADP	N3-C2-N1	-12.91	117.91	128.71
4	E	5551	ADP	N3-C2-N1	-12.74	118.06	128.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	4551	ADP	N3-C2-N1	-12.51	118.25	128.71
4	A	1551	ADP	N3-C2-N1	-12.43	118.32	128.71
4	F	6551	ADP	N3-C2-N1	-12.39	118.35	128.71
4	B	2551	ADP	N3-C2-N1	-12.30	118.42	128.71
4	B	2551	ADP	O4'-C1'-N9	5.00	113.09	108.44
4	F	6551	ADP	O4'-C1'-N9	4.88	112.98	108.44
4	F	6551	ADP	N3-C4-N9	4.37	133.32	125.43
4	C	3551	ADP	N3-C4-N9	4.24	133.08	125.43
4	A	1551	ADP	N3-C4-N9	4.23	133.06	125.43
4	G	7551	ADP	N3-C4-N9	4.21	133.03	125.43
4	B	2551	ADP	N3-C4-N9	4.18	132.99	125.43
4	E	5551	ADP	N3-C4-N9	4.13	132.89	125.43
4	C	3551	ADP	O4'-C1'-N9	4.06	112.22	108.44
4	D	4551	ADP	N3-C4-N9	4.01	132.68	125.43
4	A	1551	ADP	C4'-O4'-C1'	-3.53	105.92	109.75
4	G	7551	ADP	C2-N3-C4	3.39	123.66	114.01
4	B	2551	ADP	C4-C5-N7	-3.33	106.67	109.52
4	E	5551	ADP	C4-C5-N7	-3.22	106.76	109.52
4	F	6551	ADP	C4-C5-N7	-3.22	106.76	109.52
4	E	5551	ADP	C4'-O4'-C1'	-3.22	106.25	109.75
4	E	5551	ADP	C2-N3-C4	3.17	123.03	114.01
4	B	2551	ADP	C4'-O4'-C1'	-3.14	106.34	109.75
4	B	2551	ADP	C2-N3-C4	3.14	122.94	114.01
4	C	3551	ADP	C4'-O4'-C1'	-3.13	106.35	109.75
4	E	5551	ADP	C5-C4-N3	-3.02	119.13	125.70
4	F	6551	ADP	C2-N3-C4	3.02	122.60	114.01
4	C	3551	ADP	C2-N3-C4	3.01	122.59	114.01
4	D	4551	ADP	C2-N3-C4	2.98	122.48	114.01
4	G	7551	ADP	C5-C4-N3	-2.97	119.22	125.70
4	G	7551	ADP	C4-C5-N7	-2.97	106.98	109.52
4	B	2551	ADP	C5-C4-N3	-2.91	119.37	125.70
4	A	1551	ADP	C2-N3-C4	2.84	122.09	114.01
4	F	6551	ADP	C4'-O4'-C1'	-2.82	106.68	109.75
4	F	6551	ADP	C5-C4-N3	-2.73	119.75	125.70
4	D	4551	ADP	O4'-C1'-N9	2.68	110.94	108.44
4	F	6551	ADP	O4'-C4'-C5'	2.62	118.70	109.36
4	C	3551	ADP	C5-C4-N3	-2.57	120.10	125.70
4	D	4551	ADP	C5-C4-N3	-2.55	120.15	125.70
4	A	1551	ADP	O4'-C1'-N9	2.49	110.75	108.44
4	G	7551	ADP	O4'-C1'-N9	2.40	110.67	108.44
4	B	2551	ADP	O4'-C4'-C5'	2.39	117.88	109.36
4	G	7551	ADP	C4'-O4'-C1'	-2.38	107.17	109.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	D	4551	ADP	O4'-C4'-C5'	2.33	117.66	109.36
4	E	5551	ADP	C3'-C2'-C1'	-2.30	97.31	100.91
4	G	7551	ADP	O4'-C4'-C5'	2.26	117.41	109.36
4	D	4551	ADP	C4-C5-N7	-2.22	107.62	109.52
4	A	1551	ADP	C5-C4-N3	-2.21	120.88	125.70
4	C	3551	ADP	O4'-C4'-C5'	2.21	117.23	109.36
4	D	4551	ADP	C4'-O4'-C1'	-2.19	107.37	109.75
4	A	1551	ADP	C2-N1-C6	2.09	122.55	118.77
4	E	5551	ADP	O4'-C4'-C5'	2.09	116.83	109.36
4	A	1551	ADP	O4'-C4'-C5'	2.08	116.79	109.36
4	D	4551	ADP	PA-O3A-PB	2.01	137.56	131.68

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

### 6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

### 6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

### 6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

### 6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.