



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 02:12 PM BST

PDB ID : 4A0W
EMDB ID: : EMD-1962
Title : model built against symmetry-free cryo-EM map of TRiC-ADP-ATFx
Authors : Cong, Y.; Schroder, G.F.; Meyer, A.S.; Jakana, J.; Ma, B.; Dougherty, M.T.; Schmid, M.F.; Reissmann, S.; Levitt, M.; Ludtke, S.L.; Frydman, J.; Chiu, W.
Deposited on : 2011-09-13
Resolution : 13.90 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>

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

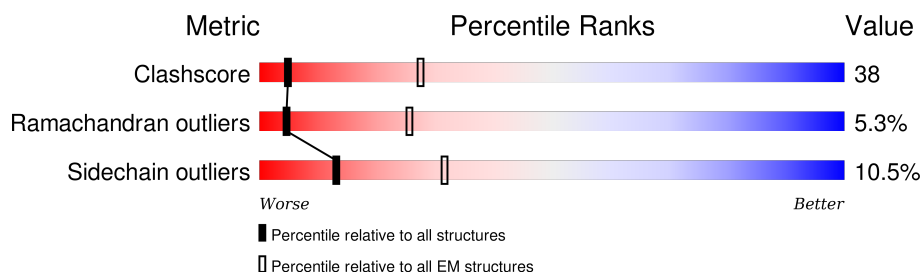
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 13.90 Å.

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



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

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$.

Mol	Chain	Length	Quality of chain
1	A	513	44% 46% 9% .
1	B	513	49% 41% 10% .
1	C	513	44% 43% 7% . .
1	D	513	43% 46% 10% .
1	E	513	48% 41% 10% .
1	F	513	45% 44% 10% .
1	G	513	46% 46% 8%
1	H	513	45% 41% 10% . .
1	I	513	46% 44% 9% .

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Mol	Chain	Length	Quality of chain
1	J	513	<div><div></div><div>48%</div><div>44%</div><div>7%</div><div></div></div>
1	K	513	<div><div></div><div>41%</div><div>47%</div><div>8%</div><div></div></div>
1	L	513	<div><div></div><div>45%</div><div>42%</div><div>8%</div><div></div></div>
1	M	513	<div><div></div><div>49%</div><div>43%</div><div>7%</div><div></div></div>
1	N	513	<div><div></div><div>43%</div><div>44%</div><div>9%</div><div></div></div>
1	O	513	<div><div></div><div>42%</div><div>44%</div><div>9%</div><div></div></div>
1	P	513	<div><div></div><div>47%</div><div>44%</div><div>8%</div><div></div></div>

2 Entry composition

There is only 1 type of molecule in this entry. The entry contains 60649 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

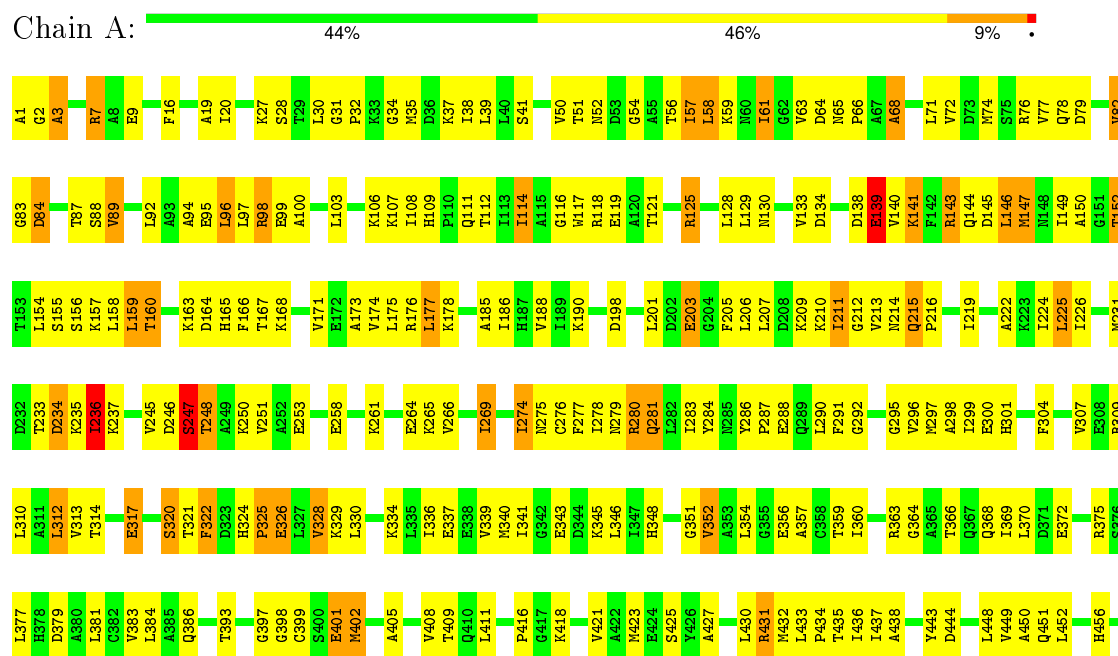
- Molecule 1 is a protein called T-COMPLEX PROTEIN 1 SUBUNIT BETA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	B	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	C	490	Total	C	N	O	S	0	0
			3673	2295	645	714	19		
1	D	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	E	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	F	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	G	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	H	492	Total	C	N	O	S	0	0
			3693	2308	649	717	19		
1	I	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	J	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	K	491	Total	C	N	O	S	0	0
			3681	2299	646	717	19		
1	L	490	Total	C	N	O	S	0	0
			3676	2296	645	716	19		
1	M	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		
1	N	493	Total	C	N	O	S	0	0
			3700	2312	650	719	19		
1	O	490	Total	C	N	O	S	0	0
			3676	2296	645	716	19		
1	P	513	Total	C	N	O	S	0	0
			3855	2409	679	748	19		

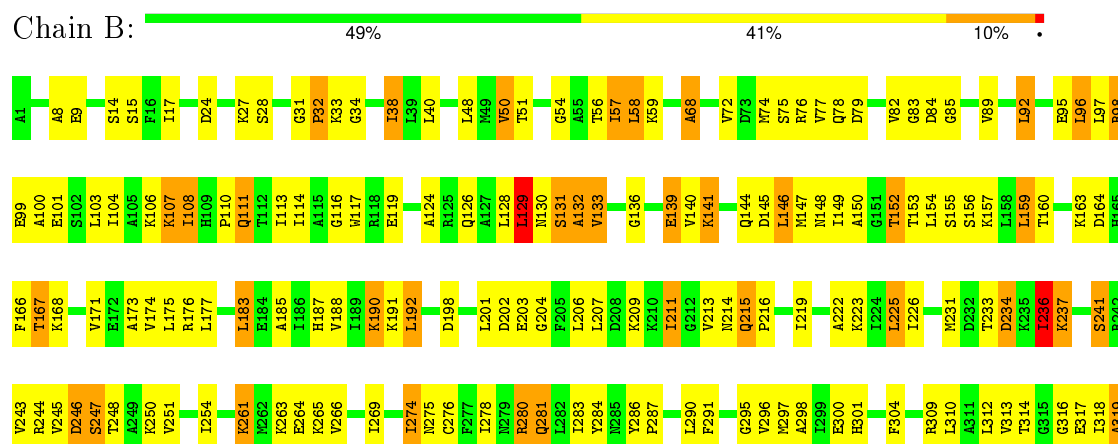
3 Residue-property plots

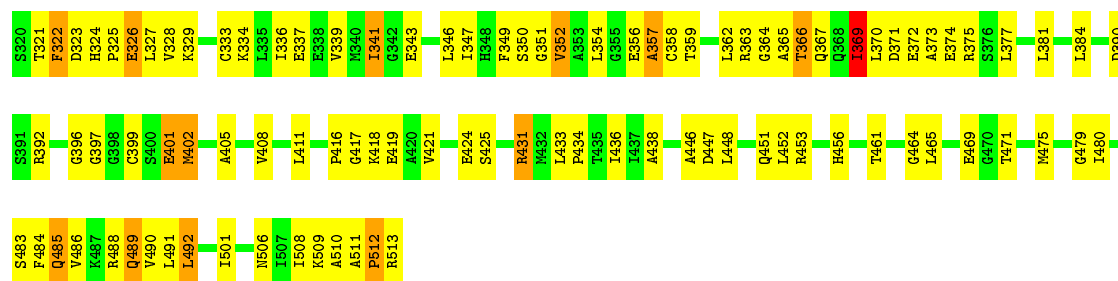
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

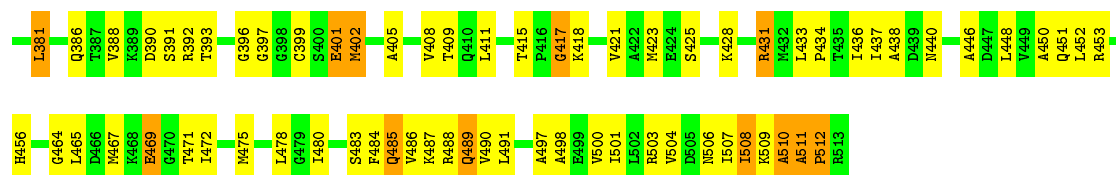
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

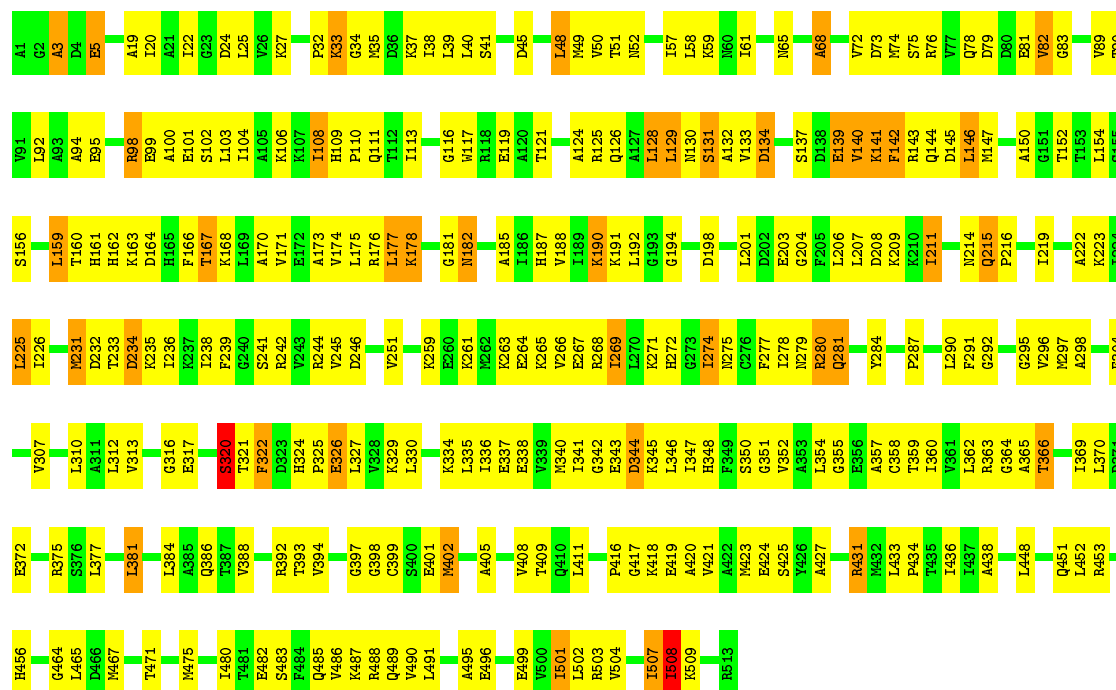






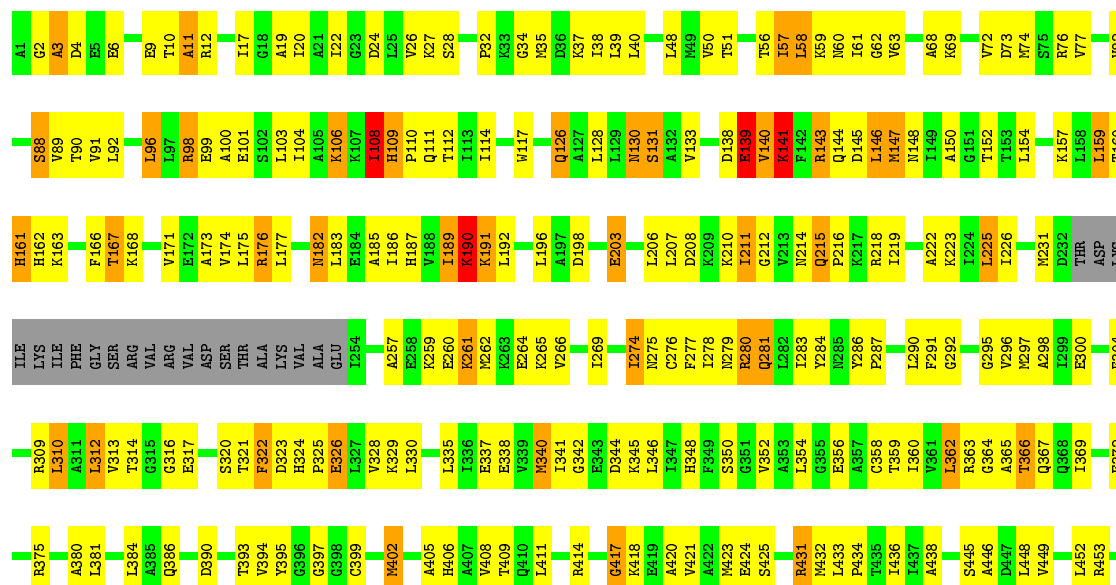
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

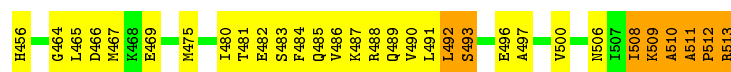
Chain G: 46% 46% 8%



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

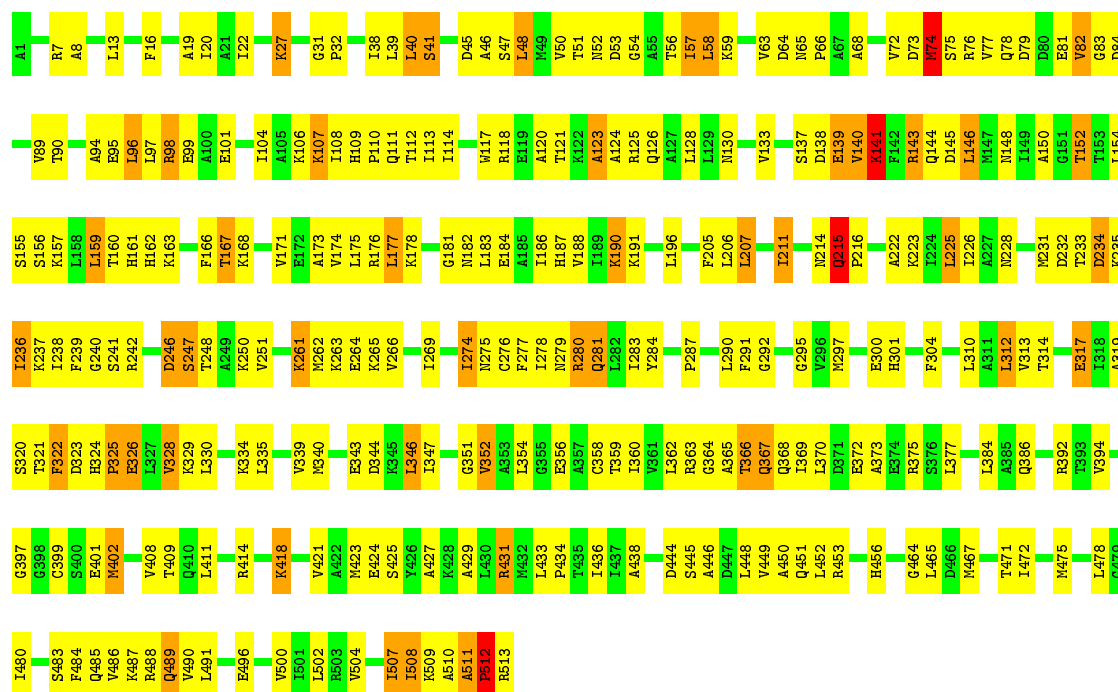
Chain H: 45% 41% 10%





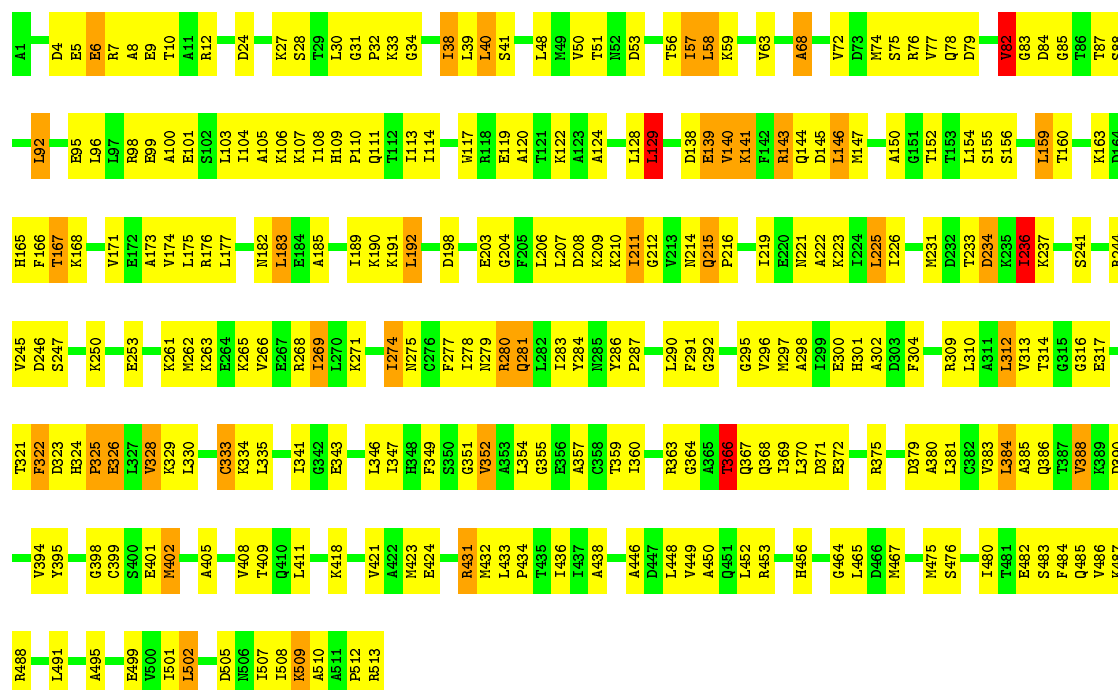
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain I: 46% 44% 9%



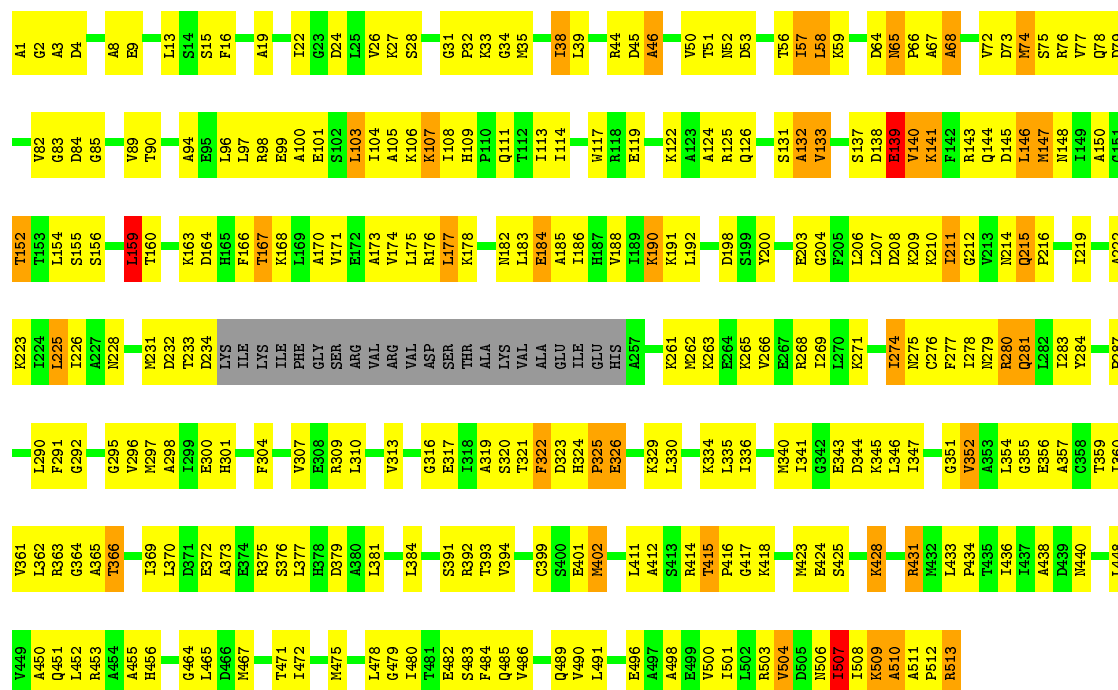
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain J: 48% 44% 7%



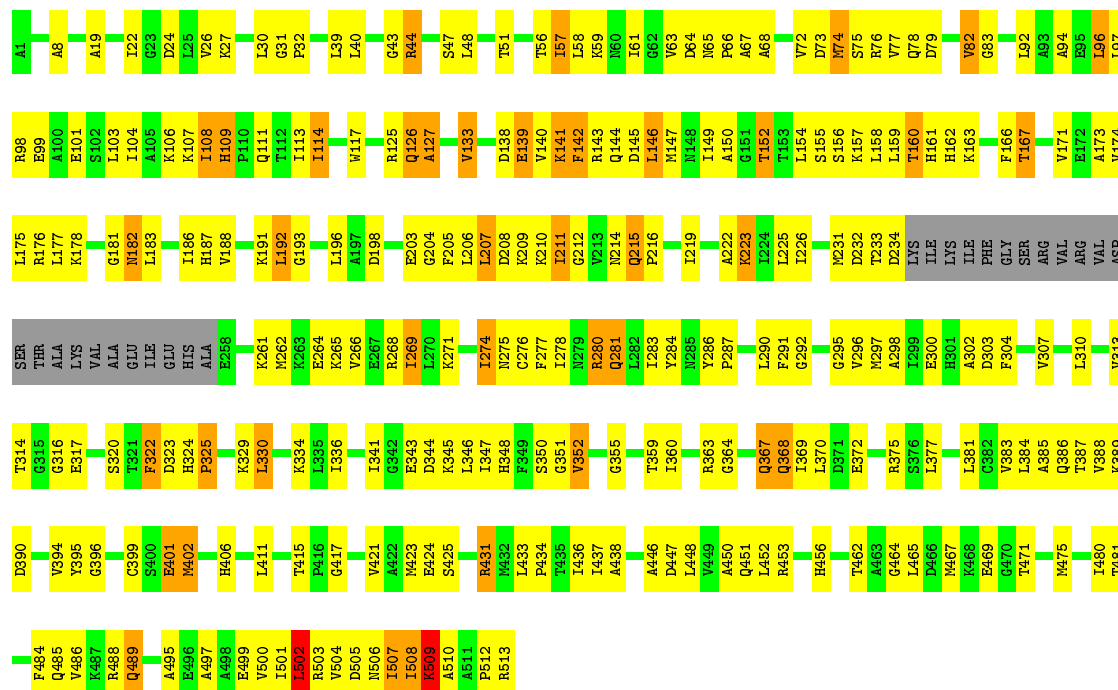
• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

Chain K: 

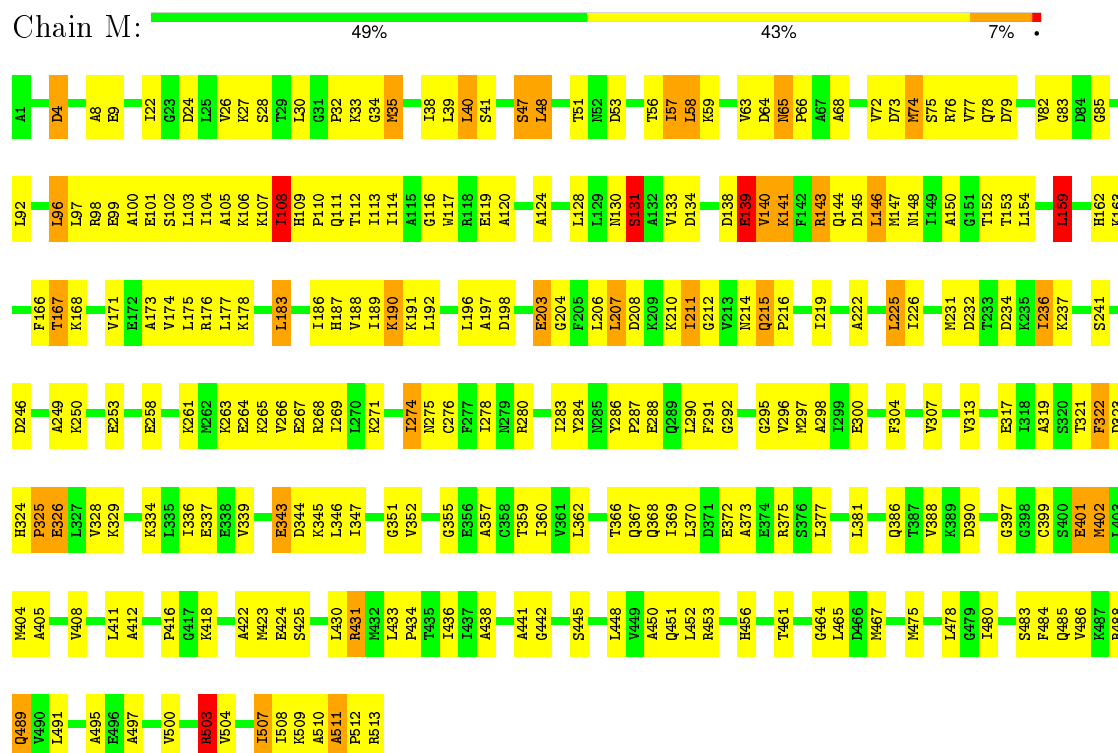


• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA

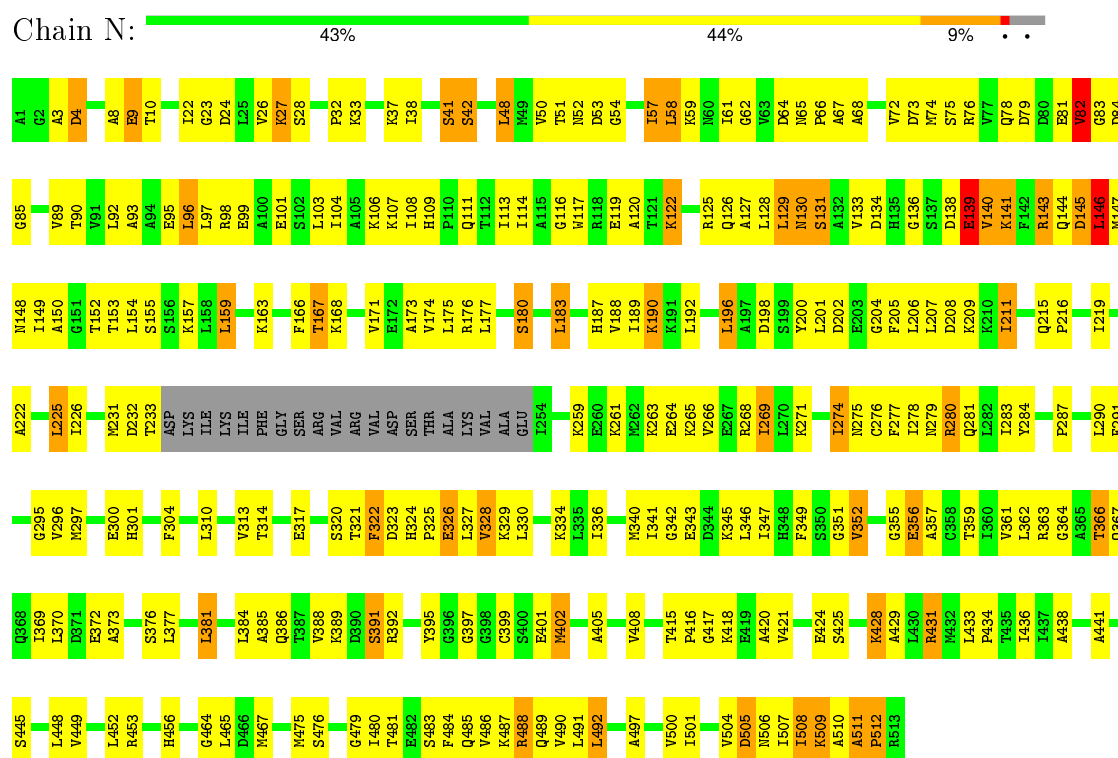
Chain L: 



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA



• Molecule 1: T-COMPLEX PROTEIN 1 SUBUNIT BETA





4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	EACH MICROGRAPH, Not provided	Depositor
Microscope	OTHER	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	18	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	50000	Depositor
Image detector	KODAK SO163 FILM	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 2$	RMSZ	$\# Z > 2$
1	A	0.45	0/3896	0.75	1/5249 (0.0%)
1	B	0.44	0/3896	0.74	0/5249
1	C	0.43	0/3711	0.72	0/5000
1	D	0.45	0/3896	0.73	3/5249 (0.1%)
1	E	0.45	0/3896	0.75	0/5249
1	F	0.46	0/3896	0.75	1/5249 (0.0%)
1	G	0.46	0/3896	0.76	1/5249 (0.0%)
1	H	0.45	0/3732	0.72	0/5028
1	I	0.45	0/3896	0.77	1/5249 (0.0%)
1	J	0.44	0/3896	0.71	0/5249
1	K	0.44	0/3719	0.71	0/5011
1	L	0.45	0/3714	0.71	0/5004
1	M	0.45	0/3896	0.73	1/5249 (0.0%)
1	N	0.43	0/3739	0.73	1/5038 (0.0%)
1	O	0.45	0/3714	0.75	0/5004
1	P	0.43	0/3896	0.76	1/5249 (0.0%)
All	All	0.45	0/61289	0.74	10/82575 (0.0%)

There are no bond length outliers.

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	512	PRO	N-CA-CB	-7.85	93.88	103.30
1	N	488	ARG	CB-CA-C	-6.44	97.51	110.40
1	P	508	ILE	CB-CA-C	-6.11	99.37	111.60
1	I	74	MET	CA-CB-CG	6.06	123.60	113.30
1	D	242	ARG	N-CA-CB	-5.80	100.16	110.60
1	M	503	ARG	NE-CZ-NH1	5.57	123.09	120.30
1	A	147	MET	N-CA-CB	-5.27	101.11	110.60
1	D	107	LYS	N-CA-C	5.10	124.77	111.00
1	F	190	LYS	CB-CA-C	-5.10	100.21	110.40
1	G	508	ILE	N-CA-C	5.08	124.72	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	3855	0	3970	311	0
1	B	3855	0	3970	315	0
1	C	3673	0	3778	314	0
1	D	3855	0	3970	311	0
1	E	3855	0	3970	285	0
1	F	3855	0	3970	330	0
1	G	3855	0	3970	321	0
1	H	3693	0	3795	306	0
1	I	3855	0	3970	322	0
1	J	3855	0	3970	293	0
1	K	3681	0	3782	313	0
1	L	3676	0	3777	298	0
1	M	3855	0	3970	282	0
1	N	3700	0	3802	303	0
1	O	3676	0	3777	307	0
1	P	3855	0	3970	291	0
All	All	60649	0	62411	4706	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (4706) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:146:LEU:HD12	1:O:171:VAL:HG13	1.25	1.16
1:B:146:LEU:HD12	1:B:171:VAL:HG13	1.24	1.12
1:L:146:LEU:HD12	1:L:171:VAL:HG13	1.31	1.09
1:A:266:VAL:HB	1:A:290:LEU:HD21	1.35	1.08
1:D:266:VAL:HB	1:D:290:LEU:HD21	1.32	1.08
1:P:266:VAL:HB	1:P:290:LEU:HD21	1.36	1.05
1:O:266:VAL:HB	1:O:290:LEU:HD21	1.38	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:146:LEU:HD12	1:J:171:VAL:HG13	1.37	1.04
1:I:211:ILE:HD12	1:I:211:ILE:H	1.24	1.03
1:D:146:LEU:HD21	1:D:150:ALA:HB3	1.39	1.03
1:L:364:GLY:HA3	1:L:370:LEU:HD11	1.41	1.03
1:N:146:LEU:HD11	1:N:168:LYS:HA	1.37	1.02
1:D:146:LEU:HD12	1:D:171:VAL:HG13	1.39	1.00
1:E:266:VAL:HB	1:E:290:LEU:HD21	1.43	1.00
1:N:127:ALA:HB1	1:N:491:LEU:HD13	1.42	1.00
1:L:157:LYS:HB3	1:L:159:LEU:HD13	1.44	0.99
1:M:146:LEU:HD12	1:M:171:VAL:HG13	1.40	0.98
1:A:146:LEU:HD12	1:A:171:VAL:HG13	1.47	0.97
1:H:146:LEU:HD21	1:H:150:ALA:HB3	1.46	0.96
1:D:188:VAL:HB	1:D:377:LEU:HD22	1.46	0.96
1:B:341:ILE:HG22	1:B:363:ARG:HH21	1.30	0.96
1:F:511:ALA:HB1	1:F:512:PRO:HD2	1.47	0.95
1:G:146:LEU:HD12	1:G:171:VAL:HG13	1.47	0.95
1:H:146:LEU:HD12	1:H:171:VAL:HG13	1.48	0.94
1:O:211:ILE:H	1:O:211:ILE:HD12	1.30	0.93
1:A:146:LEU:HD22	1:A:168:LYS:HA	1.46	0.93
1:M:63:VAL:HG11	1:O:2:GLY:HA3	1.48	0.92
1:K:146:LEU:HD21	1:K:150:ALA:HB3	1.49	0.92
1:A:92:LEU:HD11	1:A:433:LEU:HD21	1.51	0.92
1:E:211:ILE:HD11	1:E:297:MET:HG3	1.52	0.92
1:F:106:LYS:HE2	1:F:113:ILE:HD11	1.49	0.92
1:D:79:ASP:HA	1:D:83:GLY:CA	2.01	0.91
1:H:446:ALA:HB2	1:P:108:ILE:HG21	1.52	0.91
1:K:269:ILE:HG23	1:K:274:ILE:HG21	1.52	0.91
1:H:211:ILE:HD11	1:H:297:MET:HG3	1.50	0.91
1:E:173:ALA:HB2	1:E:360:ILE:HD11	1.50	0.91
1:C:38:ILE:HD13	1:H:508:ILE:HA	1.52	0.91
1:O:140:VAL:HA	1:O:175:LEU:HD22	1.53	0.90
1:E:146:LEU:HD22	1:E:168:LYS:HA	1.53	0.90
1:O:38:ILE:HG22	1:O:50:VAL:HB	1.52	0.90
1:C:146:LEU:HD12	1:C:171:VAL:HG13	1.52	0.90
1:I:269:ILE:HG23	1:I:274:ILE:CG2	2.03	0.89
1:F:266:VAL:HB	1:F:290:LEU:HD21	1.54	0.89
1:N:146:LEU:HD23	1:N:150:ALA:HB3	1.54	0.89
1:C:79:ASP:HA	1:C:83:GLY:CA	2.02	0.89
1:H:171:VAL:HG12	1:H:384:LEU:HG	1.55	0.89
1:F:369:ILE:O	1:F:372:GLU:HG2	1.73	0.89
1:P:146:LEU:HD22	1:P:168:LYS:HA	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:211:ILE:HD11	1:P:297:MET:HG3	1.53	0.89
1:J:211:ILE:HD11	1:J:297:MET:HG3	1.53	0.88
1:D:507:ILE:HG23	1:H:39:LEU:HD23	1.51	0.88
1:B:146:LEU:HD21	1:B:150:ALA:HB3	1.55	0.88
1:B:269:ILE:HG23	1:B:274:ILE:CG2	2.02	0.88
1:K:159:LEU:H	1:K:159:LEU:HD13	1.37	0.88
1:B:79:ASP:HA	1:B:83:GLY:CA	2.04	0.88
1:G:146:LEU:HD23	1:G:147:MET:H	1.37	0.88
1:I:146:LEU:HD12	1:I:171:VAL:HG13	1.56	0.88
1:N:27:LYS:HD3	1:N:28:SER:N	1.88	0.88
1:E:38:ILE:H	1:G:508:ILE:HD13	1.37	0.87
1:F:245:VAL:HG11	1:F:250:LYS:HB3	1.55	0.87
1:A:27:LYS:HA	1:A:436:ILE:HD11	1.55	0.87
1:P:32:PRO:HA	1:P:155:SER:O	1.75	0.86
1:J:146:LEU:HD21	1:J:150:ALA:HB3	1.57	0.86
1:I:124:ALA:HA	1:I:491:LEU:HD13	1.57	0.86
1:B:106:LYS:HB3	1:I:446:ALA:HB2	1.57	0.86
1:J:82:VAL:HG21	1:J:483:SER:HB3	1.56	0.86
1:C:38:ILE:HG21	1:H:508:ILE:HG23	1.58	0.85
1:H:140:VAL:HA	1:H:175:LEU:HD22	1.56	0.85
1:J:40:LEU:HB2	1:J:48:LEU:HD21	1.57	0.85
1:E:79:ASP:HA	1:E:83:GLY:CA	2.06	0.85
1:P:38:ILE:HG22	1:P:50:VAL:HB	1.57	0.85
1:N:183:LEU:HD21	1:N:381:LEU:HD11	1.57	0.85
1:K:192:LEU:HG	1:K:366:THR:HG21	1.57	0.85
1:E:146:LEU:HD21	1:E:167:THR:HG23	1.58	0.85
1:M:269:ILE:HG23	1:M:274:ILE:HG22	1.57	0.85
1:C:114:ILE:HG23	1:C:499:GLU:HG3	1.59	0.84
1:L:233:THR:HG21	1:L:261:LYS:HE2	1.59	0.84
1:E:37:LYS:HB3	1:G:508:ILE:HG23	1.57	0.84
1:M:192:LEU:HG	1:M:366:THR:HG21	1.59	0.84
1:J:146:LEU:HD23	1:J:147:MET:H	1.42	0.84
1:C:146:LEU:HD23	1:C:147:MET:H	1.42	0.84
1:N:211:ILE:HD11	1:N:297:MET:HG3	1.60	0.84
1:K:67:ALA:HB2	1:K:507:ILE:HG21	1.58	0.84
1:I:266:VAL:HB	1:I:290:LEU:HD21	1.60	0.84
1:N:146:LEU:HD22	1:N:147:MET:H	1.43	0.83
1:B:108:ILE:H	1:B:108:ILE:HD12	1.40	0.83
1:F:138:ASP:O	1:F:139:GLU:HB2	1.78	0.83
1:L:211:ILE:HD11	1:L:297:MET:HG3	1.58	0.83
1:O:70:VAL:HG11	1:O:506:ASN:HB3	1.57	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:100:ALA:HA	1:M:103:LEU:HD13	1.59	0.83
1:L:266:VAL:HB	1:L:290:LEU:HD21	1.58	0.83
1:F:417:GLY:HA3	1:O:450:ALA:HB1	1.58	0.83
1:P:103:LEU:HG	1:P:113:ILE:HD13	1.59	0.83
1:N:82:VAL:O	1:N:386:GLN:HG3	1.77	0.83
1:E:214:ASN:O	1:E:215:GLN:HG2	1.78	0.82
1:E:25:LEU:HG	1:G:509:LYS:O	1.77	0.82
1:J:266:VAL:HB	1:J:290:LEU:HD21	1.59	0.82
1:B:269:ILE:HG23	1:B:274:ILE:HG21	1.61	0.82
1:N:38:ILE:HG22	1:N:50:VAL:HB	1.61	0.82
1:I:369:ILE:O	1:I:372:GLU:HB3	1.78	0.82
1:N:283:ILE:HG22	1:N:300:GLU:HG3	1.61	0.82
1:N:266:VAL:HB	1:N:290:LEU:HD21	1.60	0.82
1:I:269:ILE:HG23	1:I:274:ILE:HG21	1.59	0.82
1:F:211:ILE:HD11	1:F:297:MET:HG3	1.62	0.82
1:G:211:ILE:HD11	1:G:297:MET:HG3	1.62	0.82
1:A:245:VAL:HG11	1:A:250:LYS:HB3	1.60	0.81
1:M:146:LEU:HD21	1:M:150:ALA:HB3	1.62	0.81
1:O:65:ASN:H	1:O:65:ASN:HD22	1.26	0.81
1:C:48:LEU:H	1:C:48:LEU:HD12	1.41	0.81
1:C:211:ILE:CD1	1:C:211:ILE:H	1.92	0.81
1:H:269:ILE:HG23	1:H:274:ILE:CG2	2.10	0.81
1:A:265:LYS:O	1:A:269:ILE:HB	1.79	0.81
1:C:283:ILE:HG22	1:C:300:GLU:HG3	1.62	0.81
1:M:207:LEU:HD22	1:M:208:ASP:H	1.45	0.81
1:K:269:ILE:HG23	1:K:274:ILE:CG2	2.11	0.81
1:P:146:LEU:HD12	1:P:171:VAL:HG13	1.61	0.81
1:J:245:VAL:HG21	1:J:250:LYS:HD3	1.62	0.81
1:D:140:VAL:HA	1:D:175:LEU:HD22	1.62	0.81
1:I:140:VAL:HA	1:I:175:LEU:HD22	1.62	0.81
1:B:211:ILE:HD11	1:B:297:MET:HG3	1.63	0.81
1:A:433:LEU:O	1:A:436:ILE:HG22	1.80	0.81
1:L:448:LEU:HD21	1:L:465:LEU:HD12	1.61	0.81
1:K:211:ILE:HD11	1:K:297:MET:HG3	1.63	0.81
1:H:372:GLU:HG3	1:H:375:ARG:NH2	1.96	0.81
1:K:138:ASP:O	1:K:139:GLU:HB2	1.80	0.81
1:M:39:LEU:HA	1:O:509:LYS:HZ3	1.44	0.81
1:E:372:GLU:HA	1:E:375:ARG:NH1	1.96	0.81
1:C:166:PHE:CZ	1:C:198:ASP:HB3	2.16	0.80
1:F:475:MET:SD	1:F:480:ILE:HB	2.21	0.80
1:I:146:LEU:HD21	1:I:150:ALA:HB3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:283:ILE:HG22	1:P:300:GLU:HG3	1.62	0.80
1:P:448:LEU:HD21	1:P:465:LEU:HD12	1.63	0.80
1:L:146:LEU:HD23	1:L:147:MET:H	1.44	0.80
1:N:146:LEU:HB3	1:N:171:VAL:HG11	1.64	0.80
1:H:399:CYS:SG	1:H:464:GLY:HA3	2.22	0.80
1:L:402:MET:SD	1:L:456:HIS:HB2	2.21	0.80
1:O:79:ASP:HA	1:O:83:GLY:CA	2.12	0.80
1:G:78:GLN:OE1	1:G:489:GLN:HB2	1.81	0.80
1:K:159:LEU:HD23	1:K:163:LYS:HG2	1.62	0.80
1:K:146:LEU:HD13	1:K:168:LYS:HA	1.64	0.80
1:K:448:LEU:HD21	1:K:465:LEU:HD12	1.62	0.80
1:L:269:ILE:HG23	1:L:274:ILE:HG21	1.64	0.80
1:I:163:LYS:HA	1:I:166:PHE:CD1	2.17	0.79
1:M:442:GLY:O	1:O:109:HIS:HB3	1.81	0.79
1:P:206:LEU:HD11	1:P:346:LEU:HD23	1.62	0.79
1:L:133:VAL:HG11	1:L:394:VAL:HA	1.63	0.79
1:N:163:LYS:HA	1:N:166:PHE:CD1	2.17	0.79
1:A:176:ARG:HH12	1:A:201:LEU:HD21	1.46	0.79
1:G:364:GLY:HA3	1:G:370:LEU:HD13	1.65	0.79
1:K:154:LEU:HD22	1:K:167:THR:HB	1.65	0.79
1:B:188:VAL:HG11	1:B:377:LEU:HD22	1.63	0.79
1:B:108:ILE:CD1	1:I:446:ALA:HB3	2.13	0.79
1:L:265:LYS:O	1:L:269:ILE:HB	1.83	0.79
1:G:245:VAL:HG21	1:G:251:VAL:HG22	1.63	0.79
1:P:146:LEU:HD21	1:P:167:THR:HG23	1.65	0.78
1:G:133:VAL:HG23	1:G:134:ASP:H	1.45	0.78
1:B:448:LEU:HD21	1:B:465:LEU:HD12	1.62	0.78
1:L:163:LYS:HA	1:L:166:PHE:CD1	2.18	0.78
1:P:152:THR:OG1	1:P:480:ILE:HG23	1.83	0.78
1:M:206:LEU:HD11	1:M:346:LEU:HD23	1.64	0.78
1:P:324:HIS:O	1:P:329:LYS:HG2	1.83	0.78
1:O:269:ILE:HG23	1:O:274:ILE:CG2	2.13	0.78
1:A:154:LEU:HD22	1:A:167:THR:HB	1.66	0.78
1:O:448:LEU:HD21	1:O:465:LEU:HD12	1.65	0.78
1:K:148:ASN:HA	1:K:479:GLY:O	1.82	0.78
1:G:124:ALA:HB1	1:G:491:LEU:HD13	1.65	0.78
1:E:233:THR:HG21	1:E:261:LYS:HE2	1.66	0.78
1:H:324:HIS:O	1:H:329:LYS:HG2	1.84	0.78
1:N:109:HIS:NE2	1:N:111:GLN:HB2	1.98	0.78
1:M:38:ILE:HG21	1:O:507:ILE:HG13	1.63	0.78
1:A:211:ILE:HD11	1:A:297:MET:HG3	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:283:ILE:HG22	1:K:300:GLU:HG3	1.65	0.78
1:L:79:ASP:HA	1:L:83:GLY:CA	2.14	0.78
1:I:433:LEU:O	1:I:436:ILE:HG22	1.83	0.78
1:P:188:VAL:CG1	1:P:377:LEU:HD21	2.13	0.78
1:M:269:ILE:HG23	1:M:274:ILE:CG2	2.13	0.78
1:M:283:ILE:HG22	1:M:300:GLU:HG3	1.64	0.78
1:B:508:ILE:O	1:G:37:LYS:HD2	1.83	0.78
1:O:108:ILE:HG22	1:O:109:HIS:H	1.46	0.78
1:H:189:ILE:HG13	1:H:206:LEU:HD12	1.66	0.78
1:C:146:LEU:HD22	1:C:168:LYS:HA	1.63	0.77
1:A:203:GLU:H	1:A:203:GLU:CD	1.88	0.77
1:A:246:ASP:O	1:A:247:SER:HB3	1.84	0.77
1:J:402:MET:SD	1:J:456:HIS:HB2	2.23	0.77
1:B:59:LYS:HZ1	1:B:76:ARG:HB2	1.48	0.77
1:D:245:VAL:HG11	1:D:250:LYS:HB3	1.66	0.77
1:I:126:GLN:O	1:I:130:ASN:HB2	1.84	0.77
1:E:415:THR:O	1:E:420:ALA:HB2	1.84	0.77
1:P:163:LYS:HA	1:P:166:PHE:CD1	2.19	0.77
1:P:204:GLY:HA3	1:P:349:PHE:O	1.84	0.77
1:K:146:LEU:HD12	1:K:171:VAL:HG13	1.66	0.77
1:N:226:ILE:HD12	1:N:317:GLU:HG3	1.67	0.77
1:K:399:CYS:SG	1:K:464:GLY:HA3	2.25	0.77
1:C:109:HIS:CE1	1:C:111:GLN:HB2	2.20	0.77
1:G:27:LYS:HB2	1:G:436:ILE:CD1	2.13	0.77
1:A:79:ASP:HA	1:A:83:GLY:HA3	1.66	0.77
1:D:283:ILE:HG22	1:D:300:GLU:HG3	1.65	0.77
1:O:154:LEU:HD22	1:O:167:THR:HB	1.67	0.77
1:L:383:VAL:HG23	1:L:384:LEU:HD22	1.66	0.77
1:F:417:GLY:CA	1:O:450:ALA:HB1	2.14	0.77
1:H:269:ILE:HG23	1:H:274:ILE:HG21	1.66	0.77
1:L:504:VAL:HG22	1:P:369:ILE:HD11	1.64	0.77
1:B:433:LEU:O	1:B:436:ILE:HG22	1.84	0.77
1:C:169:LEU:HD11	1:C:201:LEU:HG	1.67	0.77
1:O:211:ILE:H	1:O:211:ILE:CD1	1.97	0.76
1:C:79:ASP:HA	1:C:83:GLY:HA2	1.67	0.76
1:G:265:LYS:O	1:G:269:ILE:HB	1.85	0.76
1:K:266:VAL:HB	1:K:290:LEU:HD21	1.66	0.76
1:K:163:LYS:HA	1:K:166:PHE:CD1	2.20	0.76
1:O:438:ALA:CB	1:O:448:LEU:HG	2.15	0.76
1:O:67:ALA:HB2	1:O:508:ILE:H	1.49	0.76
1:C:418:LYS:HA	1:L:453:ARG:NH2	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:89:VAL:HG12	1:I:490:VAL:HB	1.68	0.76
1:C:78:GLN:NE2	1:C:486:VAL:HA	2.00	0.76
1:B:146:LEU:HD23	1:B:147:MET:H	1.50	0.76
1:M:82:VAL:HA	1:M:386:GLN:HG3	1.66	0.76
1:D:248:THR:O	1:D:251:VAL:HG12	1.85	0.76
1:B:154:LEU:HD22	1:B:167:THR:HB	1.67	0.76
1:L:324:HIS:HB2	1:L:329:LYS:NZ	2.00	0.76
1:O:408:VAL:HA	1:O:411:LEU:HD12	1.66	0.76
1:I:211:ILE:H	1:I:211:ILE:CD1	1.97	0.76
1:F:140:VAL:HA	1:F:175:LEU:HD22	1.67	0.76
1:L:159:LEU:HD11	1:L:372:GLU:OE2	1.85	0.76
1:H:325:PRO:O	1:H:326:GLU:HG3	1.86	0.76
1:B:59:LYS:CE	1:B:76:ARG:HB2	2.14	0.76
1:D:372:GLU:HG3	1:D:375:ARG:NH1	2.00	0.76
1:J:128:LEU:HD23	1:J:394:VAL:HG11	1.66	0.76
1:E:265:LYS:O	1:E:269:ILE:HB	1.86	0.76
1:L:152:THR:OG1	1:L:480:ILE:HG23	1.85	0.76
1:N:188:VAL:CG1	1:N:377:LEU:HD22	2.15	0.76
1:I:38:ILE:HG22	1:I:50:VAL:HB	1.65	0.76
1:M:128:LEU:HD13	1:M:488:ARG:HG2	1.69	0.75
1:C:402:MET:SD	1:C:456:HIS:HB2	2.26	0.75
1:E:150:ALA:HB2	1:E:384:LEU:HD21	1.67	0.75
1:N:269:ILE:HG23	1:N:274:ILE:HG21	1.68	0.75
1:N:325:PRO:O	1:N:326:GLU:HG2	1.86	0.75
1:J:27:LYS:HD2	1:J:436:ILE:HD11	1.69	0.75
1:D:324:HIS:O	1:D:329:LYS:HG2	1.87	0.75
1:A:437:ILE:HB	1:A:465:LEU:HD12	1.69	0.75
1:M:59:LYS:HE2	1:M:76:ARG:HB2	1.66	0.75
1:P:146:LEU:HD12	1:P:171:VAL:CG1	2.16	0.75
1:E:79:ASP:HA	1:E:83:GLY:HA3	1.69	0.75
1:I:79:ASP:HA	1:I:83:GLY:CA	2.15	0.75
1:O:325:PRO:O	1:O:326:GLU:HG3	1.85	0.75
1:N:24:ASP:O	1:N:27:LYS:HD2	1.86	0.75
1:B:108:ILE:HD12	1:I:446:ALA:HB3	1.69	0.75
1:I:372:GLU:HG3	1:I:375:ARG:NH2	2.01	0.75
1:J:245:VAL:HG11	1:J:250:LYS:HB3	1.67	0.75
1:A:324:HIS:HB2	1:A:329:LYS:NZ	2.02	0.75
1:J:192:LEU:HG	1:J:343:GLU:OE1	1.85	0.75
1:L:79:ASP:HA	1:L:83:GLY:HA3	1.68	0.75
1:N:188:VAL:HG11	1:N:377:LEU:HD22	1.68	0.75
1:O:163:LYS:HA	1:O:166:PHE:CD1	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:92:LEU:H	1:J:92:LEU:HD13	1.52	0.75
1:A:79:ASP:HA	1:A:83:GLY:CA	2.16	0.75
1:H:58:LEU:HB3	1:H:72:VAL:CG1	2.16	0.75
1:G:204:GLY:O	1:G:359:THR:HB	1.87	0.75
1:L:146:LEU:HD12	1:L:171:VAL:CG1	2.12	0.75
1:C:497:ALA:HB1	1:C:500:VAL:HB	1.69	0.75
1:J:58:LEU:HB3	1:J:72:VAL:HG13	1.67	0.75
1:A:354:LEU:HD23	1:A:356:GLU:H	1.51	0.75
1:F:324:HIS:O	1:F:328:VAL:HG23	1.87	0.75
1:I:324:HIS:O	1:I:329:LYS:HG2	1.87	0.74
1:P:208:ASP:O	1:P:209:LYS:HG3	1.87	0.74
1:D:89:VAL:HG12	1:D:490:VAL:HB	1.69	0.74
1:K:214:ASN:O	1:K:215:GLN:HB2	1.87	0.74
1:P:250:LYS:O	1:P:253:GLU:HG2	1.86	0.74
1:A:146:LEU:HD22	1:A:168:LYS:CA	2.17	0.74
1:B:324:HIS:HB2	1:B:329:LYS:NZ	2.03	0.74
1:A:214:ASN:O	1:A:215:GLN:HB2	1.86	0.74
1:B:27:LYS:HA	1:B:436:ILE:HD11	1.67	0.74
1:M:124:ALA:O	1:M:128:LEU:HG	1.87	0.74
1:F:402:MET:SD	1:F:456:HIS:HB2	2.28	0.74
1:B:364:GLY:HA3	1:B:370:LEU:HD13	1.68	0.74
1:N:146:LEU:HD11	1:N:168:LYS:CA	2.15	0.74
1:K:325:PRO:O	1:K:326:GLU:HG3	1.86	0.74
1:K:206:LEU:HD21	1:K:346:LEU:HD23	1.68	0.74
1:E:483:SER:O	1:E:486:VAL:HG22	1.88	0.74
1:F:324:HIS:O	1:F:329:LYS:HG2	1.88	0.74
1:P:265:LYS:O	1:P:269:ILE:HB	1.87	0.74
1:F:433:LEU:O	1:F:436:ILE:HG22	1.86	0.74
1:B:369:ILE:O	1:B:372:GLU:HB3	1.87	0.74
1:D:510:ALA:HB2	1:H:57:ILE:HG12	1.69	0.74
1:O:51:THR:HG21	1:O:56:THR:HB	1.68	0.74
1:J:283:ILE:HG22	1:J:300:GLU:HG3	1.68	0.74
1:G:145:ASP:OD1	1:G:171:VAL:HB	1.87	0.73
1:O:79:ASP:HA	1:O:83:GLY:HA3	1.68	0.73
1:L:401:GLU:HG2	1:L:433:LEU:HD22	1.69	0.73
1:L:103:LEU:HG	1:L:113:ILE:HD13	1.70	0.73
1:A:269:ILE:HG23	1:A:274:ILE:HG21	1.70	0.73
1:K:32:PRO:HA	1:K:155:SER:O	1.88	0.73
1:P:79:ASP:HA	1:P:83:GLY:HA3	1.69	0.73
1:H:92:LEU:HD11	1:H:433:LEU:HD21	1.69	0.73
1:P:139:GLU:O	1:P:140:VAL:HB	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:269:ILE:HG23	1:E:274:ILE:HG21	1.71	0.73
1:L:214:ASN:O	1:L:215:GLN:HB2	1.88	0.73
1:N:127:ALA:CB	1:N:491:LEU:HD13	2.17	0.73
1:N:500:VAL:O	1:N:504:VAL:HG23	1.89	0.73
1:B:214:ASN:O	1:B:215:GLN:HB2	1.87	0.73
1:L:188:VAL:CG1	1:L:377:LEU:HD22	2.19	0.73
1:H:101:GLU:O	1:H:104:ILE:HG12	1.88	0.73
1:H:324:HIS:HB2	1:H:329:LYS:NZ	2.04	0.73
1:C:401:GLU:HG2	1:C:433:LEU:HD22	1.71	0.73
1:C:399:CYS:SG	1:C:464:GLY:HA3	2.28	0.73
1:G:146:LEU:HD12	1:G:171:VAL:CG1	2.17	0.73
1:C:146:LEU:HD12	1:C:171:VAL:CG1	2.19	0.73
1:J:204:GLY:O	1:J:359:THR:HB	1.89	0.73
1:A:226:ILE:HG12	1:A:278:ILE:HG23	1.71	0.73
1:A:38:ILE:HG22	1:A:50:VAL:HB	1.69	0.73
1:K:159:LEU:HD12	1:K:369:ILE:HG23	1.71	0.72
1:H:163:LYS:HA	1:H:166:PHE:CD1	2.24	0.72
1:I:79:ASP:HA	1:I:83:GLY:HA3	1.71	0.72
1:C:433:LEU:O	1:C:436:ILE:HG22	1.89	0.72
1:K:106:LYS:HE2	1:K:418:LYS:NZ	2.03	0.72
1:A:146:LEU:HD21	1:A:167:THR:HG23	1.71	0.72
1:P:214:ASN:O	1:P:215:GLN:HB2	1.87	0.72
1:O:214:ASN:O	1:O:215:GLN:HB2	1.89	0.72
1:F:74:MET:O	1:F:77:VAL:HG12	1.90	0.72
1:O:70:VAL:CG1	1:O:506:ASN:HB3	2.20	0.72
1:J:399:CYS:SG	1:J:464:GLY:HA3	2.29	0.72
1:B:313:VAL:HG22	1:B:357:ALA:HB3	1.71	0.72
1:H:214:ASN:O	1:H:215:GLN:HB2	1.88	0.72
1:B:283:ILE:HG22	1:B:300:GLU:HG3	1.69	0.72
1:K:192:LEU:HA	1:K:366:THR:HG21	1.71	0.72
1:J:59:LYS:HE2	1:J:76:ARG:HB2	1.72	0.72
1:B:191:LYS:HE2	1:B:346:LEU:HD11	1.72	0.72
1:F:324:HIS:ND1	1:F:325:PRO:HD3	2.05	0.72
1:G:145:ASP:O	1:G:171:VAL:HG11	1.90	0.72
1:H:27:LYS:HG3	1:H:436:ILE:HD11	1.69	0.72
1:K:103:LEU:HG	1:K:113:ILE:HD13	1.72	0.72
1:P:399:CYS:SG	1:P:464:GLY:HA3	2.30	0.72
1:E:188:VAL:HG21	1:E:377:LEU:HD13	1.72	0.72
1:I:214:ASN:O	1:I:215:GLN:HB2	1.90	0.72
1:C:497:ALA:CB	1:C:500:VAL:HB	2.20	0.72
1:L:146:LEU:HD23	1:L:147:MET:N	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:265:LYS:O	1:N:269:ILE:HB	1.89	0.71
1:D:63:VAL:HG22	1:E:513:ARG:HD3	1.72	0.71
1:E:248:THR:O	1:E:251:VAL:HG12	1.89	0.71
1:B:163:LYS:HA	1:B:166:PHE:CD1	2.24	0.71
1:A:141:LYS:HG2	1:A:144:GLN:HB2	1.73	0.71
1:O:114:ILE:HA	1:O:117:TRP:CE3	2.25	0.71
1:J:103:LEU:HG	1:J:113:ILE:HD13	1.72	0.71
1:A:163:LYS:HG3	1:A:166:PHE:CG	2.25	0.71
1:N:507:ILE:O	1:N:508:ILE:HB	1.89	0.71
1:K:233:THR:HG21	1:K:261:LYS:HE2	1.71	0.71
1:B:79:ASP:HA	1:B:83:GLY:HA3	1.70	0.71
1:F:111:GLN:HA	1:F:114:ILE:HD12	1.70	0.71
1:E:140:VAL:HA	1:E:175:LEU:HD22	1.73	0.71
1:K:219:ILE:HD11	1:K:336:ILE:HB	1.72	0.71
1:B:146:LEU:CD2	1:B:147:MET:H	2.04	0.71
1:G:399:CYS:SG	1:G:464:GLY:HA3	2.30	0.71
1:E:324:HIS:O	1:E:329:LYS:HG2	1.90	0.71
1:N:146:LEU:HD13	1:N:147:MET:N	2.06	0.71
1:L:226:ILE:HD13	1:L:307:VAL:HG13	1.72	0.71
1:O:475:MET:SD	1:O:480:ILE:HB	2.31	0.71
1:L:146:LEU:HD21	1:L:150:ALA:HB3	1.73	0.71
1:H:324:HIS:O	1:H:328:VAL:HG13	1.90	0.71
1:C:74:MET:O	1:C:77:VAL:HG12	1.90	0.71
1:C:214:ASN:O	1:C:215:GLN:HB2	1.90	0.71
1:J:214:ASN:O	1:J:215:GLN:HB2	1.88	0.71
1:D:133:VAL:HG23	1:D:134:ASP:H	1.52	0.71
1:A:146:LEU:HD12	1:A:171:VAL:CG1	2.19	0.71
1:G:125:ARG:HA	1:G:128:LEU:CD1	2.21	0.71
1:I:324:HIS:HB2	1:I:329:LYS:NZ	2.06	0.71
1:O:82:VAL:HG13	1:O:83:GLY:H	1.56	0.71
1:J:398:GLY:HA2	1:J:401:GLU:OE1	1.90	0.71
1:D:399:CYS:SG	1:D:464:GLY:HA3	2.30	0.71
1:P:74:MET:O	1:P:77:VAL:HG12	1.91	0.71
1:I:106:LYS:NZ	1:I:106:LYS:HB3	2.05	0.71
1:A:78:GLN:OE1	1:A:489:GLN:HG3	1.91	0.71
1:H:139:GLU:O	1:H:140:VAL:HB	1.91	0.71
1:C:124:ALA:HA	1:C:491:LEU:HD13	1.72	0.71
1:P:114:ILE:HD11	1:P:502:LEU:HB2	1.71	0.71
1:F:216:PRO:CG	1:F:295:GLY:HA2	2.21	0.71
1:F:216:PRO:HG2	1:F:295:GLY:HA2	1.73	0.71
1:B:145:ASP:O	1:B:171:VAL:HG11	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:510:ALA:N	1:H:39:LEU:HD13	2.06	0.70
1:D:214:ASN:O	1:D:215:GLN:HB2	1.91	0.70
1:K:160:THR:HG23	1:K:164:ASP:HB3	1.73	0.70
1:B:92:LEU:HD11	1:B:433:LEU:HD21	1.72	0.70
1:H:108:ILE:HG23	1:H:109:HIS:H	1.55	0.70
1:L:501:ILE:O	1:L:502:LEU:HB2	1.91	0.70
1:O:146:LEU:HD21	1:O:150:ALA:HB3	1.72	0.70
1:D:324:HIS:HB2	1:D:329:LYS:NZ	2.06	0.70
1:C:31:GLY:O	1:C:156:SER:HA	1.90	0.70
1:A:411:LEU:HB3	1:A:423:MET:SD	2.32	0.70
1:O:496:GLU:O	1:O:500:VAL:HG13	1.92	0.70
1:M:28:SER:HB2	1:M:35:MET:HG2	1.73	0.70
1:G:369:ILE:O	1:G:372:GLU:HB2	1.91	0.70
1:F:265:LYS:O	1:F:269:ILE:HB	1.91	0.70
1:C:133:VAL:HG11	1:C:393:THR:O	1.91	0.70
1:B:475:MET:SD	1:B:480:ILE:HB	2.30	0.70
1:L:178:LYS:NZ	1:L:388:VAL:HG11	2.07	0.70
1:K:163:LYS:O	1:K:166:PHE:HB2	1.91	0.70
1:E:146:LEU:HD12	1:E:171:VAL:CG1	2.21	0.70
1:E:146:LEU:HD23	1:E:147:MET:H	1.57	0.70
1:H:417:GLY:HA2	1:P:453:ARG:HH21	1.57	0.70
1:K:438:ALA:HB2	1:K:448:LEU:HG	1.73	0.70
1:B:416:PRO:HG2	1:B:419:GLU:OE1	1.90	0.70
1:F:399:CYS:SG	1:F:464:GLY:HA3	2.32	0.70
1:H:145:ASP:OD1	1:H:171:VAL:HB	1.92	0.70
1:C:101:GLU:O	1:C:104:ILE:HG12	1.91	0.70
1:E:399:CYS:SG	1:E:464:GLY:HA3	2.31	0.70
1:L:109:HIS:CE1	1:L:111:GLN:HB2	2.26	0.70
1:M:352:VAL:HG22	1:M:355:GLY:H	1.56	0.70
1:B:174:VAL:HG11	1:B:384:LEU:HB2	1.73	0.70
1:B:265:LYS:HE2	1:B:322:PHE:CE1	2.26	0.70
1:K:313:VAL:HG13	1:K:352:VAL:HB	1.73	0.70
1:H:484:PHE:CE2	1:H:488:ARG:HD3	2.26	0.70
1:P:411:LEU:HB3	1:P:423:MET:CE	2.22	0.70
1:H:88:SER:O	1:H:92:LEU:HD13	1.91	0.70
1:D:364:GLY:HA3	1:D:370:LEU:HD13	1.73	0.70
1:M:27:LYS:HG3	1:M:436:ILE:CG1	2.21	0.70
1:B:325:PRO:O	1:B:326:GLU:HG2	1.92	0.70
1:M:236:ILE:HG13	1:M:237:LYS:H	1.56	0.70
1:O:89:VAL:HG12	1:O:490:VAL:HB	1.73	0.70
1:M:214:ASN:O	1:M:215:GLN:HB2	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:146:LEU:HD23	1:A:147:MET:H	1.57	0.69
1:D:446:ALA:HB2	1:K:418:LYS:HD3	1.72	0.69
1:H:310:LEU:O	1:H:314:THR:HG22	1.92	0.69
1:J:475:MET:SD	1:J:480:ILE:HB	2.31	0.69
1:J:233:THR:HG21	1:J:261:LYS:HE2	1.71	0.69
1:A:258:GLU:OE2	1:A:284:TYR:HE2	1.75	0.69
1:J:82:VAL:HG21	1:J:483:SER:CB	2.21	0.69
1:P:92:LEU:HD11	1:P:433:LEU:HD21	1.74	0.69
1:H:341:ILE:HD11	1:H:348:HIS:CE1	2.27	0.69
1:L:324:HIS:O	1:L:329:LYS:HG2	1.92	0.69
1:K:186:ILE:HG22	1:K:377:LEU:HD21	1.74	0.69
1:H:133:VAL:HG22	1:H:395:TYR:CE2	2.27	0.69
1:N:233:THR:HG21	1:N:261:LYS:HE2	1.74	0.69
1:K:58:LEU:HB3	1:K:72:VAL:CG1	2.21	0.69
1:K:343:GLU:HG3	1:K:344:ASP:N	2.06	0.69
1:P:109:HIS:CE1	1:P:111:GLN:HB2	2.28	0.69
1:J:58:LEU:HB3	1:J:72:VAL:CG1	2.21	0.69
1:F:214:ASN:O	1:F:215:GLN:HB2	1.90	0.69
1:O:174:VAL:HG11	1:O:384:LEU:HB2	1.75	0.69
1:M:139:GLU:O	1:M:140:VAL:HB	1.91	0.69
1:H:112:THR:HG21	1:H:418:LYS:HD2	1.74	0.69
1:M:226:ILE:HG12	1:M:278:ILE:HG23	1.74	0.69
1:J:269:ILE:HG23	1:J:274:ILE:CG2	2.23	0.69
1:B:399:CYS:SG	1:B:464:GLY:HA3	2.33	0.69
1:E:30:LEU:CD1	1:E:30:LEU:H	2.04	0.69
1:O:96:LEU:HD13	1:O:97:LEU:N	2.07	0.69
1:G:216:PRO:HG2	1:G:295:GLY:HA2	1.74	0.69
1:B:236:ILE:HG22	1:B:237:LYS:H	1.58	0.69
1:E:59:LYS:HE2	1:E:76:ARG:HB2	1.74	0.69
1:J:216:PRO:HG2	1:J:295:GLY:HA2	1.75	0.69
1:A:174:VAL:HG12	1:A:381:LEU:HD22	1.75	0.69
1:K:139:GLU:O	1:K:140:VAL:HB	1.93	0.69
1:A:92:LEU:HG	1:A:433:LEU:HD11	1.74	0.69
1:E:146:LEU:HD12	1:E:171:VAL:HG13	1.73	0.69
1:H:39:LEU:O	1:H:48:LEU:HA	1.92	0.69
1:B:59:LYS:NZ	1:B:76:ARG:HB2	2.08	0.69
1:H:74:MET:O	1:H:77:VAL:HG12	1.93	0.69
1:F:236:ILE:HG22	1:F:237:LYS:H	1.58	0.69
1:M:188:VAL:CG1	1:M:377:LEU:HD21	2.23	0.69
1:E:433:LEU:O	1:E:436:ILE:HG22	1.93	0.69
1:B:146:LEU:HD12	1:B:171:VAL:CG1	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:139:GLU:OE2	1:A:178:LYS:HD3	1.93	0.69
1:L:219:ILE:HD11	1:L:336:ILE:HB	1.73	0.69
1:I:411:LEU:HB3	1:I:423:MET:SD	2.33	0.69
1:M:109:HIS:CE1	1:M:111:GLN:HB2	2.28	0.69
1:P:171:VAL:HA	1:P:174:VAL:HG22	1.75	0.69
1:O:65:ASN:O	1:O:508:ILE:HB	1.93	0.69
1:C:269:ILE:HG23	1:C:274:ILE:CG2	2.23	0.69
1:I:177:LEU:HG	1:I:186:ILE:HD11	1.75	0.69
1:O:166:PHE:CZ	1:O:198:ASP:HB3	2.28	0.68
1:P:324:HIS:HB2	1:P:329:LYS:NZ	2.08	0.68
1:A:114:ILE:HG21	1:A:502:LEU:HB2	1.74	0.68
1:N:59:LYS:HE2	1:N:76:ARG:HB2	1.73	0.68
1:A:19:ALA:HB1	1:A:94:ALA:HA	1.75	0.68
1:F:58:LEU:HB3	1:F:72:VAL:CG1	2.23	0.68
1:M:216:PRO:HG2	1:M:295:GLY:HA2	1.74	0.68
1:J:364:GLY:HA3	1:J:370:LEU:HD13	1.75	0.68
1:L:146:LEU:CD2	1:L:147:MET:H	2.06	0.68
1:B:269:ILE:HG23	1:B:274:ILE:HG22	1.75	0.68
1:B:317:GLU:HB2	1:B:329:LYS:HG2	1.75	0.68
1:C:269:ILE:HG23	1:C:274:ILE:HG21	1.74	0.68
1:P:129:LEU:N	1:P:129:LEU:HD22	2.08	0.68
1:M:59:LYS:HE2	1:M:76:ARG:CB	2.23	0.68
1:H:486:VAL:O	1:H:490:VAL:HG13	1.93	0.68
1:J:316:GLY:O	1:J:330:LEU:HB2	1.93	0.68
1:N:183:LEU:CD2	1:N:381:LEU:HD11	2.24	0.68
1:A:269:ILE:HG23	1:A:274:ILE:CG2	2.24	0.68
1:K:316:GLY:O	1:K:330:LEU:HB2	1.94	0.68
1:L:159:LEU:HD23	1:L:163:LYS:CD	2.23	0.68
1:I:317:GLU:HB3	1:I:329:LYS:HD3	1.74	0.68
1:E:283:ILE:HG22	1:E:300:GLU:HG3	1.73	0.68
1:E:74:MET:O	1:E:77:VAL:HG12	1.94	0.68
1:N:448:LEU:HD21	1:N:465:LEU:HD12	1.75	0.68
1:F:178:LYS:HE2	1:F:388:VAL:HG21	1.75	0.68
1:L:92:LEU:HD11	1:L:433:LEU:HD21	1.75	0.68
1:B:402:MET:SD	1:B:456:HIS:HB2	2.33	0.68
1:G:398:GLY:HA2	1:G:401:GLU:OE1	1.94	0.68
1:O:324:HIS:O	1:O:329:LYS:HG2	1.94	0.68
1:J:96:LEU:HD11	1:J:117:TRP:HZ2	1.58	0.68
1:A:78:GLN:NE2	1:A:486:VAL:HA	2.09	0.68
1:J:216:PRO:CG	1:J:295:GLY:HA2	2.23	0.68
1:F:508:ILE:HG22	1:F:509:LYS:H	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:214:ASN:O	1:G:215:GLN:HB2	1.92	0.68
1:G:146:LEU:HD21	1:G:167:THR:HG23	1.75	0.68
1:K:171:VAL:HG12	1:K:384:LEU:HG	1.74	0.68
1:G:418:LYS:HB2	1:N:449:VAL:HG11	1.75	0.68
1:J:59:LYS:CE	1:J:76:ARG:HB2	2.24	0.68
1:F:54:GLY:HA3	1:F:87:THR:HG21	1.75	0.68
1:J:63:VAL:HG21	1:K:1:ALA:HA	1.75	0.68
1:O:365:ALA:O	1:O:366:THR:HB	1.92	0.68
1:N:152:THR:OG1	1:N:480:ILE:HG23	1.94	0.68
1:E:38:ILE:O	1:G:508:ILE:HG21	1.92	0.68
1:I:434:PRO:HB3	1:I:452:LEU:CD2	2.24	0.68
1:A:159:LEU:HG	1:A:163:LYS:HD3	1.75	0.68
1:J:341:ILE:HG23	1:J:363:ARG:NH2	2.09	0.68
1:A:188:VAL:HG11	1:A:377:LEU:HD22	1.75	0.68
1:O:32:PRO:HA	1:O:155:SER:C	2.14	0.68
1:H:189:ILE:O	1:H:190:LYS:HB3	1.92	0.68
1:P:119:GLU:HB3	1:P:423:MET:HE3	1.76	0.68
1:M:433:LEU:O	1:M:436:ILE:HG22	1.94	0.68
1:O:316:GLY:O	1:O:330:LEU:HB2	1.94	0.68
1:J:74:MET:O	1:J:77:VAL:HG12	1.94	0.68
1:F:59:LYS:HE2	1:F:76:ARG:HB2	1.75	0.68
1:L:161:HIS:CD2	1:L:162:HIS:H	2.13	0.67
1:D:145:ASP:OD1	1:D:171:VAL:HB	1.94	0.67
1:O:265:LYS:HE2	1:O:322:PHE:CE2	2.30	0.67
1:A:369:ILE:O	1:A:372:GLU:HB3	1.94	0.67
1:M:399:CYS:SG	1:M:464:GLY:HA3	2.34	0.67
1:F:146:LEU:HD13	1:F:168:LYS:HA	1.76	0.67
1:P:99:GLU:HG2	1:P:425:SER:HB2	1.75	0.67
1:A:325:PRO:O	1:A:328:VAL:HG23	1.95	0.67
1:F:27:LYS:CB	1:F:436:ILE:HD11	2.23	0.67
1:K:58:LEU:HB3	1:K:72:VAL:HG13	1.76	0.67
1:O:483:SER:O	1:O:486:VAL:HG22	1.94	0.67
1:P:128:LEU:CD2	1:P:488:ARG:HG2	2.25	0.67
1:J:145:ASP:O	1:J:171:VAL:HG11	1.94	0.67
1:B:190:LYS:HE2	1:B:371:ASP:OD1	1.94	0.67
1:C:219:ILE:HD11	1:C:336:ILE:HB	1.76	0.67
1:O:74:MET:O	1:O:77:VAL:HG12	1.94	0.67
1:H:283:ILE:HG22	1:H:300:GLU:HG3	1.76	0.67
1:K:171:VAL:O	1:K:174:VAL:HG22	1.94	0.67
1:C:163:LYS:O	1:C:166:PHE:HB2	1.94	0.67
1:D:504:VAL:HG21	1:H:38:ILE:HG12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:324:HIS:O	1:N:328:VAL:HG22	1.95	0.67
1:L:475:MET:SD	1:L:480:ILE:HB	2.35	0.67
1:M:101:GLU:O	1:M:104:ILE:HG12	1.94	0.67
1:B:159:LEU:HD23	1:B:163:LYS:HG2	1.75	0.67
1:N:159:LEU:HG	1:N:163:LYS:CD	2.24	0.67
1:I:166:PHE:HD2	1:I:362:LEU:HD22	1.58	0.67
1:E:38:ILE:HG22	1:E:50:VAL:HB	1.76	0.67
1:H:157:LYS:HB3	1:H:159:LEU:HD11	1.77	0.67
1:D:418:LYS:HG3	1:K:450:ALA:HB2	1.75	0.67
1:H:411:LEU:O	1:H:414:ARG:HB3	1.95	0.67
1:H:177:LEU:HD11	1:H:186:ILE:HD11	1.76	0.67
1:D:402:MET:SD	1:D:456:HIS:HB2	2.34	0.67
1:O:58:LEU:HB3	1:O:72:VAL:HG13	1.77	0.67
1:O:511:ALA:N	1:O:512:PRO:HD3	2.09	0.67
1:J:146:LEU:CD2	1:J:147:MET:H	2.08	0.67
1:H:145:ASP:O	1:H:171:VAL:HG11	1.94	0.67
1:I:438:ALA:CB	1:I:448:LEU:HG	2.24	0.67
1:C:266:VAL:HB	1:C:290:LEU:HD21	1.74	0.67
1:A:317:GLU:HB2	1:A:329:LYS:HG2	1.74	0.67
1:A:483:SER:O	1:A:486:VAL:HG22	1.94	0.67
1:F:188:VAL:CG2	1:F:377:LEU:HD21	2.25	0.67
1:F:511:ALA:CB	1:F:512:PRO:HD2	2.23	0.67
1:O:269:ILE:HG23	1:O:274:ILE:HG21	1.76	0.67
1:J:38:ILE:HD12	1:J:38:ILE:H	1.60	0.67
1:B:452:LEU:HD13	1:B:465:LEU:HD13	1.75	0.67
1:N:324:HIS:HB2	1:N:329:LYS:NZ	2.09	0.67
1:F:508:ILE:HG22	1:F:509:LYS:N	2.09	0.67
1:D:6:GLU:HB3	1:D:10:THR:OG1	1.95	0.67
1:O:145:ASP:O	1:O:171:VAL:HG11	1.95	0.67
1:J:265:LYS:HE2	1:J:322:PHE:CE1	2.30	0.67
1:B:192:LEU:HB3	1:B:343:GLU:OE2	1.95	0.67
1:N:139:GLU:O	1:N:140:VAL:HB	1.95	0.67
1:O:130:ASN:O	1:O:131:SER:HB3	1.95	0.67
1:K:204:GLY:O	1:K:359:THR:HB	1.95	0.67
1:B:512:PRO:HB3	1:G:39:LEU:HB3	1.76	0.67
1:L:174:VAL:HG11	1:L:384:LEU:HB2	1.76	0.66
1:G:325:PRO:O	1:G:326:GLU:HG2	1.95	0.66
1:G:207:LEU:O	1:G:347:ILE:HG22	1.94	0.66
1:H:58:LEU:HB3	1:H:72:VAL:HG13	1.74	0.66
1:D:448:LEU:HD21	1:D:465:LEU:HD12	1.76	0.66
1:H:130:ASN:O	1:H:131:SER:HB3	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:32:PRO:HD2	1:F:467:MET:HE1	1.76	0.66
1:G:171:VAL:HG12	1:G:384:LEU:HG	1.76	0.66
1:P:146:LEU:HD23	1:P:147:MET:H	1.59	0.66
1:P:402:MET:SD	1:P:456:HIS:HB2	2.35	0.66
1:M:497:ALA:O	1:M:500:VAL:HG22	1.96	0.66
1:J:51:THR:HG21	1:J:56:THR:HB	1.77	0.66
1:K:59:LYS:HE2	1:K:76:ARG:HB2	1.76	0.66
1:L:138:ASP:O	1:L:139:GLU:HB2	1.94	0.66
1:H:191:LYS:HG2	1:H:341:ILE:CG2	2.25	0.66
1:A:82:VAL:HG13	1:A:83:GLY:H	1.58	0.66
1:D:446:ALA:CB	1:K:418:LYS:HD3	2.24	0.66
1:I:32:PRO:HA	1:I:155:SER:O	1.95	0.66
1:B:124:ALA:HA	1:B:491:LEU:HD13	1.78	0.66
1:I:128:LEU:HD22	1:I:484:PHE:CE2	2.29	0.66
1:H:32:PRO:HD2	1:H:467:MET:CE	2.25	0.66
1:J:146:LEU:HD12	1:J:171:VAL:CG1	2.19	0.66
1:G:146:LEU:HD23	1:G:147:MET:N	2.09	0.66
1:C:372:GLU:HG3	1:C:375:ARG:CZ	2.25	0.66
1:F:324:HIS:HB2	1:F:329:LYS:NZ	2.11	0.66
1:J:324:HIS:HB2	1:J:329:LYS:NZ	2.09	0.66
1:M:503:ARG:HG3	1:M:503:ARG:HH11	1.61	0.66
1:L:316:GLY:O	1:L:330:LEU:HB2	1.96	0.66
1:J:101:GLU:O	1:J:104:ILE:HG12	1.96	0.66
1:G:101:GLU:O	1:G:104:ILE:HG12	1.94	0.66
1:M:166:PHE:CE1	1:M:198:ASP:HB3	2.31	0.66
1:H:38:ILE:HD12	1:H:48:LEU:HD22	1.78	0.66
1:I:52:ASN:HD21	1:I:157:LYS:HD3	1.59	0.66
1:I:146:LEU:CD1	1:I:171:VAL:HG13	2.24	0.66
1:C:111:GLN:O	1:C:114:ILE:HB	1.95	0.66
1:P:79:ASP:HA	1:P:83:GLY:CA	2.24	0.66
1:K:100:ALA:HA	1:K:103:LEU:HD22	1.77	0.66
1:A:163:LYS:HA	1:A:166:PHE:CD1	2.30	0.66
1:I:74:MET:O	1:I:77:VAL:HG12	1.94	0.66
1:L:216:PRO:HG2	1:L:295:GLY:HA2	1.77	0.66
1:K:324:HIS:O	1:K:329:LYS:HG2	1.96	0.66
1:D:269:ILE:HG23	1:D:274:ILE:HG21	1.75	0.66
1:O:59:LYS:HE2	1:O:76:ARG:HB2	1.78	0.66
1:C:39:LEU:HD12	1:C:57:ILE:HD11	1.76	0.66
1:F:452:LEU:HD13	1:F:465:LEU:HD13	1.78	0.66
1:P:269:ILE:HG23	1:P:274:ILE:HG21	1.77	0.66
1:A:164:ASP:O	1:A:167:THR:HG22	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:511:ALA:HB1	1:F:512:PRO:CD	2.22	0.66
1:I:483:SER:O	1:I:486:VAL:HG22	1.96	0.66
1:D:265:LYS:O	1:D:269:ILE:HB	1.96	0.66
1:I:59:LYS:HE2	1:I:76:ARG:HB2	1.78	0.66
1:F:16:PHE:HA	1:F:97:LEU:HD23	1.77	0.66
1:H:390:ASP:HB3	1:H:485:GLN:OE1	1.96	0.66
1:N:204:GLY:HA3	1:N:349:PHE:O	1.95	0.66
1:N:146:LEU:HD22	1:N:147:MET:N	2.11	0.66
1:G:146:LEU:CD2	1:G:147:MET:H	2.06	0.66
1:C:369:ILE:O	1:C:372:GLU:HB3	1.96	0.66
1:C:211:ILE:HD12	1:C:211:ILE:H	1.61	0.66
1:C:448:LEU:HD21	1:C:465:LEU:HD12	1.77	0.66
1:B:190:LYS:HD2	1:B:190:LYS:C	2.16	0.66
1:O:111:GLN:HA	1:O:114:ILE:HG12	1.78	0.66
1:F:32:PRO:HD2	1:F:467:MET:CE	2.25	0.66
1:L:411:LEU:HB3	1:L:423:MET:SD	2.36	0.66
1:O:398:GLY:HA2	1:O:401:GLU:OE1	1.96	0.66
1:I:324:HIS:ND1	1:I:325:PRO:HD3	2.11	0.66
1:G:438:ALA:HB2	1:G:448:LEU:HG	1.76	0.66
1:B:213:VAL:HG11	1:F:304:PHE:CE1	2.31	0.66
1:F:101:GLU:O	1:F:104:ILE:HG12	1.95	0.66
1:O:233:THR:O	1:O:234:ASP:HB3	1.94	0.66
1:C:171:VAL:HG12	1:C:384:LEU:HG	1.78	0.65
1:K:192:LEU:HA	1:K:366:THR:CG2	2.27	0.65
1:L:402:MET:SD	1:L:453:ARG:HA	2.36	0.65
1:J:206:LEU:HD11	1:J:346:LEU:HD21	1.78	0.65
1:H:96:LEU:HD11	1:H:117:TRP:HZ2	1.61	0.65
1:N:154:LEU:HD22	1:N:167:THR:HB	1.79	0.65
1:J:433:LEU:O	1:J:436:ILE:HG22	1.96	0.65
1:P:408:VAL:HA	1:P:411:LEU:HD12	1.79	0.65
1:M:188:VAL:HG13	1:M:377:LEU:HD21	1.78	0.65
1:E:402:MET:SD	1:E:456:HIS:HB2	2.37	0.65
1:N:101:GLU:O	1:N:104:ILE:HG12	1.96	0.65
1:B:154:LEU:HD23	1:B:163:LYS:HG3	1.78	0.65
1:L:452:LEU:HD13	1:L:465:LEU:HD13	1.79	0.65
1:B:51:THR:HG21	1:B:56:THR:HB	1.78	0.65
1:D:141:LYS:HG2	1:D:144:GLN:HB2	1.77	0.65
1:E:139:GLU:HG2	1:E:140:VAL:HG23	1.79	0.65
1:O:411:LEU:HB3	1:O:423:MET:SD	2.37	0.65
1:A:434:PRO:HB3	1:A:452:LEU:CD2	2.26	0.65
1:M:112:THR:HG21	1:M:418:LYS:NZ	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:43:GLY:O	1:L:44:ARG:HG2	1.95	0.65
1:P:6:GLU:HB3	1:P:11:ALA:HB2	1.79	0.65
1:E:145:ASP:OD1	1:E:171:VAL:HB	1.96	0.65
1:C:159:LEU:HG	1:C:163:LYS:HG2	1.78	0.65
1:F:188:VAL:HG23	1:F:360:ILE:O	1.96	0.65
1:N:146:LEU:CD2	1:N:147:MET:H	2.08	0.65
1:N:150:ALA:HB2	1:N:384:LEU:HD11	1.78	0.65
1:B:59:LYS:HE2	1:B:76:ARG:HB2	1.78	0.65
1:G:33:LYS:N	1:G:33:LYS:HD2	2.11	0.65
1:P:27:LYS:HB2	1:P:436:ILE:HD11	1.77	0.65
1:B:372:GLU:O	1:B:375:ARG:HB3	1.96	0.65
1:L:99:GLU:HG2	1:L:425:SER:HB2	1.79	0.65
1:A:511:ALA:O	1:F:25:LEU:HG	1.97	0.65
1:J:341:ILE:HD12	1:J:346:LEU:HD23	1.78	0.65
1:F:128:LEU:O	1:F:129:LEU:HD22	1.97	0.65
1:N:369:ILE:O	1:N:372:GLU:HB3	1.97	0.65
1:M:163:LYS:HA	1:M:166:PHE:CD1	2.32	0.65
1:C:483:SER:O	1:C:486:VAL:HG22	1.97	0.65
1:C:418:LYS:HA	1:L:453:ARG:CZ	2.26	0.65
1:P:483:SER:O	1:P:486:VAL:HG22	1.96	0.65
1:F:438:ALA:HB2	1:F:448:LEU:HG	1.78	0.65
1:B:216:PRO:CG	1:B:295:GLY:HA2	2.27	0.65
1:D:74:MET:O	1:D:77:VAL:HG12	1.96	0.65
1:I:31:GLY:O	1:I:156:SER:HA	1.96	0.65
1:A:379:ASP:O	1:A:383:VAL:HG23	1.97	0.65
1:D:512:PRO:HB3	1:H:60:ASN:CG	2.18	0.65
1:O:146:LEU:HD23	1:O:147:MET:N	2.11	0.65
1:I:124:ALA:HA	1:I:491:LEU:CD1	2.27	0.65
1:O:152:THR:OG1	1:O:480:ILE:HG23	1.97	0.65
1:C:394:VAL:HG21	1:C:487:LYS:HG3	1.78	0.65
1:L:140:VAL:HA	1:L:175:LEU:HD22	1.79	0.65
1:E:163:LYS:HA	1:E:166:PHE:CD1	2.32	0.65
1:P:276:CYS:HA	1:P:297:MET:O	1.96	0.65
1:G:79:ASP:HA	1:G:82:VAL:O	1.97	0.65
1:O:325:PRO:C	1:O:326:GLU:HG3	2.17	0.65
1:J:324:HIS:ND1	1:J:325:PRO:HD3	2.11	0.65
1:C:219:ILE:HD12	1:C:275:ASN:HB3	1.78	0.65
1:A:74:MET:O	1:A:77:VAL:HG12	1.96	0.65
1:H:216:PRO:CG	1:H:295:GLY:HA2	2.27	0.65
1:K:38:ILE:HG22	1:K:50:VAL:HB	1.79	0.65
1:B:141:LYS:HG2	1:B:144:GLN:HB2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:140:VAL:HA	1:J:175:LEU:HD22	1.79	0.65
1:F:82:VAL:CG2	1:F:485:GLN:HG2	2.27	0.65
1:O:146:LEU:HD12	1:O:171:VAL:CG1	2.15	0.64
1:B:159:LEU:HD13	1:B:159:LEU:H	1.61	0.64
1:C:160:THR:HA	1:C:163:LYS:HB3	1.79	0.64
1:A:145:ASP:O	1:A:171:VAL:HG11	1.97	0.64
1:E:154:LEU:HD21	1:E:163:LYS:NZ	2.12	0.64
1:I:438:ALA:HB2	1:I:448:LEU:HG	1.77	0.64
1:K:192:LEU:HB2	1:K:343:GLU:CD	2.17	0.64
1:C:418:LYS:HD3	1:L:450:ALA:HB1	1.77	0.64
1:J:128:LEU:O	1:J:129:LEU:HB3	1.97	0.64
1:O:112:THR:HG22	1:O:418:LYS:HE3	1.77	0.64
1:J:236:ILE:HG23	1:J:237:LYS:N	2.12	0.64
1:P:265:LYS:HE2	1:P:322:PHE:CE1	2.33	0.64
1:F:108:ILE:CD1	1:O:446:ALA:HB3	2.28	0.64
1:N:433:LEU:O	1:N:436:ILE:HG22	1.96	0.64
1:D:324:HIS:ND1	1:D:325:PRO:HD3	2.12	0.64
1:I:128:LEU:HD22	1:I:484:PHE:CZ	2.32	0.64
1:P:84:ASP:OD1	1:P:383:VAL:HG22	1.98	0.64
1:F:41:SER:HB3	1:F:45:ASP:OD2	1.97	0.64
1:N:134:ASP:OD1	1:N:392:ARG:HA	1.98	0.64
1:H:325:PRO:C	1:H:326:GLU:HG3	2.16	0.64
1:B:512:PRO:HB3	1:G:39:LEU:HD13	1.79	0.64
1:O:372:GLU:HG3	1:O:375:ARG:NH1	2.12	0.64
1:C:216:PRO:CG	1:C:295:GLY:HA2	2.28	0.64
1:P:190:LYS:HA	1:P:362:LEU:O	1.97	0.64
1:F:176:ARG:NE	1:F:358:CYS:HB2	2.13	0.64
1:B:146:LEU:HD23	1:B:147:MET:N	2.13	0.64
1:P:269:ILE:HG23	1:P:274:ILE:CG2	2.28	0.64
1:A:146:LEU:HD21	1:A:150:ALA:HB3	1.80	0.64
1:B:341:ILE:HG22	1:B:363:ARG:NH2	2.10	0.64
1:P:146:LEU:HD22	1:P:168:LYS:CA	2.28	0.64
1:K:99:GLU:HG2	1:K:425:SER:CB	2.28	0.64
1:J:63:VAL:CG2	1:K:1:ALA:HA	2.27	0.64
1:F:483:SER:O	1:F:486:VAL:HG22	1.97	0.64
1:L:209:LYS:CE	1:L:302:ALA:HA	2.28	0.64
1:B:106:LYS:HB3	1:I:446:ALA:CB	2.28	0.64
1:I:38:ILE:HG21	1:N:506:ASN:ND2	2.12	0.64
1:F:402:MET:SD	1:F:453:ARG:HA	2.37	0.64
1:B:38:ILE:HG23	1:B:50:VAL:HB	1.80	0.64
1:E:188:VAL:HG11	1:E:377:LEU:HD22	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:216:PRO:HG2	1:N:295:GLY:HA2	1.78	0.64
1:P:59:LYS:HE2	1:P:76:ARG:HB2	1.79	0.64
1:J:119:GLU:O	1:J:122:LYS:HB3	1.97	0.64
1:N:219:ILE:HD12	1:N:275:ASN:HB3	1.80	0.64
1:M:39:LEU:HD22	1:O:3:ALA:HB3	1.79	0.64
1:G:78:GLN:NE2	1:G:486:VAL:HA	2.12	0.64
1:P:188:VAL:HG11	1:P:377:LEU:HD21	1.79	0.64
1:N:317:GLU:OE1	1:N:329:LYS:HD2	1.98	0.64
1:L:216:PRO:CG	1:L:295:GLY:HA2	2.28	0.64
1:J:138:ASP:O	1:J:139:GLU:HB2	1.98	0.64
1:I:183:LEU:O	1:I:184:GLU:HG3	1.97	0.64
1:D:475:MET:SD	1:D:480:ILE:HB	2.38	0.64
1:D:160:THR:HA	1:D:163:LYS:HB3	1.80	0.64
1:H:146:LEU:HD12	1:H:171:VAL:CG1	2.25	0.64
1:A:250:LYS:O	1:A:253:GLU:HG2	1.97	0.64
1:H:324:HIS:ND1	1:H:325:PRO:HD3	2.12	0.64
1:L:497:ALA:O	1:L:500:VAL:HG22	1.97	0.64
1:E:482:GLU:OE1	1:E:487:LYS:HE3	1.98	0.64
1:H:402:MET:SD	1:H:453:ARG:HA	2.38	0.64
1:O:114:ILE:HA	1:O:117:TRP:CZ3	2.33	0.64
1:A:231:MET:HB2	1:A:284:TYR:H	1.63	0.64
1:P:222:ALA:HA	1:P:275:ASN:OD1	1.97	0.64
1:G:364:GLY:HA3	1:G:370:LEU:CD1	2.28	0.64
1:G:433:LEU:O	1:G:436:ILE:HG22	1.98	0.64
1:O:324:HIS:ND1	1:O:325:PRO:HD3	2.12	0.64
1:B:89:VAL:HG12	1:B:490:VAL:HB	1.79	0.64
1:I:248:THR:O	1:I:251:VAL:HG12	1.98	0.64
1:K:210:LYS:HE2	1:K:212:GLY:O	1.97	0.64
1:K:146:LEU:CD1	1:K:171:VAL:HG13	2.26	0.63
1:B:418:LYS:HG3	1:I:450:ALA:HB2	1.80	0.63
1:P:173:ALA:CB	1:P:360:ILE:HD11	2.28	0.63
1:O:324:HIS:HB2	1:O:329:LYS:NZ	2.13	0.63
1:P:245:VAL:HG11	1:P:250:LYS:HB2	1.81	0.63
1:D:58:LEU:HB3	1:D:72:VAL:CG1	2.28	0.63
1:O:231:MET:HG3	1:O:283:ILE:HG13	1.80	0.63
1:C:208:ASP:O	1:C:209:LYS:HG3	1.98	0.63
1:A:364:GLY:HA3	1:A:370:LEU:CD1	2.28	0.63
1:D:246:ASP:O	1:D:247:SER:HB3	1.98	0.63
1:K:99:GLU:HG2	1:K:425:SER:HB2	1.81	0.63
1:B:192:LEU:HD23	1:B:366:THR:HG22	1.79	0.63
1:K:190:LYS:HB2	1:K:370:LEU:HD21	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:446:ALA:CB	1:I:107:LYS:HB2	2.28	0.63
1:D:79:ASP:HA	1:D:83:GLY:HA3	1.78	0.63
1:D:245:VAL:O	1:D:246:ASP:HB2	1.98	0.63
1:M:59:LYS:HE3	1:M:73:ASP:HA	1.79	0.63
1:A:418:LYS:HD3	1:M:450:ALA:HB2	1.79	0.63
1:F:236:ILE:HG22	1:F:237:LYS:N	2.13	0.63
1:A:109:HIS:CE1	1:A:111:GLN:HB2	2.33	0.63
1:G:99:GLU:CD	1:G:425:SER:HB2	2.19	0.63
1:B:130:ASN:O	1:B:131:SER:HB2	1.97	0.63
1:N:99:GLU:HG2	1:N:425:SER:HB2	1.80	0.63
1:G:58:LEU:HB3	1:G:72:VAL:HG11	1.81	0.63
1:B:145:ASP:OD1	1:B:171:VAL:HB	1.99	0.63
1:P:231:MET:HG3	1:P:283:ILE:HG13	1.81	0.63
1:P:369:ILE:O	1:P:372:GLU:HB3	1.98	0.63
1:B:513:ARG:HG3	1:G:45:ASP:OD2	1.99	0.63
1:A:89:VAL:HB	1:A:490:VAL:HG23	1.80	0.63
1:C:451:GLN:NE2	1:C:471:THR:HA	2.13	0.63
1:M:65:ASN:HA	1:M:510:ALA:CB	2.28	0.63
1:L:206:LEU:HD21	1:L:346:LEU:HD23	1.78	0.63
1:L:390:ASP:HB3	1:L:485:GLN:OE1	1.97	0.63
1:J:82:VAL:HA	1:J:386:GLN:CB	2.29	0.63
1:H:138:ASP:O	1:H:139:GLU:HB2	1.97	0.63
1:K:231:MET:HE1	1:K:265:LYS:HD3	1.79	0.63
1:I:123:ALA:HA	1:I:126:GLN:HE21	1.64	0.63
1:I:188:VAL:HG13	1:I:377:LEU:HD21	1.80	0.63
1:B:483:SER:O	1:B:486:VAL:HG22	1.99	0.63
1:E:141:LYS:HG2	1:E:144:GLN:HB2	1.80	0.63
1:L:146:LEU:HD21	1:L:167:THR:HG23	1.80	0.63
1:M:146:LEU:HD21	1:M:150:ALA:CB	2.28	0.63
1:P:401:GLU:HG2	1:P:433:LEU:HD22	1.80	0.63
1:K:438:ALA:CB	1:K:448:LEU:HG	2.27	0.63
1:C:58:LEU:HB3	1:C:72:VAL:HG11	1.79	0.63
1:F:163:LYS:HG3	1:F:166:PHE:CE2	2.34	0.63
1:K:133:VAL:HA	1:K:393:THR:O	1.99	0.63
1:J:145:ASP:OD1	1:J:171:VAL:HB	1.99	0.63
1:I:211:ILE:HD11	1:I:297:MET:HG3	1.80	0.63
1:H:146:LEU:CD2	1:H:147:MET:H	2.12	0.63
1:K:141:LYS:HG2	1:K:144:GLN:HB2	1.81	0.63
1:B:324:HIS:ND1	1:B:325:PRO:HD3	2.13	0.63
1:N:32:PRO:HD2	1:N:467:MET:CE	2.29	0.63
1:G:78:GLN:HG3	1:G:83:GLY:CA	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:401:GLU:HG2	1:G:433:LEU:HD22	1.81	0.63
1:P:219:ILE:HD12	1:P:275:ASN:HB3	1.80	0.63
1:I:399:CYS:SG	1:I:464:GLY:HA3	2.39	0.63
1:A:435:THR:OG1	1:M:107:LYS:HE2	1.99	0.63
1:F:108:ILE:HD13	1:O:444:ASP:OD2	1.99	0.63
1:C:79:ASP:HA	1:C:83:GLY:HA3	1.80	0.63
1:O:64:ASP:HB3	1:O:66:PRO:HD2	1.81	0.63
1:G:324:HIS:HB2	1:G:329:LYS:NZ	2.14	0.63
1:H:274:ILE:O	1:H:296:VAL:HG22	1.98	0.63
1:M:280:ARG:CD	1:M:304:PHE:HB2	2.29	0.63
1:K:51:THR:HG21	1:K:56:THR:HB	1.80	0.63
1:L:145:ASP:OD1	1:L:171:VAL:HB	1.98	0.63
1:N:146:LEU:CD1	1:N:168:LYS:HA	2.20	0.63
1:I:367:GLN:OE1	1:I:369:ILE:HB	1.99	0.63
1:M:74:MET:O	1:M:77:VAL:HG12	1.99	0.63
1:B:111:GLN:HA	1:B:114:ILE:CG1	2.29	0.63
1:D:145:ASP:O	1:D:171:VAL:HG11	1.99	0.62
1:I:27:LYS:CA	1:I:436:ILE:HD11	2.28	0.62
1:A:402:MET:SD	1:A:456:HIS:HB2	2.39	0.62
1:H:402:MET:SD	1:H:456:HIS:HB2	2.39	0.62
1:F:269:ILE:HG23	1:F:274:ILE:HG21	1.80	0.62
1:E:434:PRO:HB3	1:E:452:LEU:CD2	2.29	0.62
1:A:7:ARG:CZ	1:A:509:LYS:HE3	2.29	0.62
1:I:159:LEU:HD23	1:I:160:THR:N	2.13	0.62
1:I:402:MET:SD	1:I:456:HIS:HB2	2.39	0.62
1:B:438:ALA:HB2	1:B:448:LEU:HG	1.81	0.62
1:L:209:LYS:HE3	1:L:302:ALA:HA	1.81	0.62
1:C:484:PHE:CE2	1:C:488:ARG:HD3	2.35	0.62
1:N:146:LEU:HD13	1:N:147:MET:H	1.63	0.62
1:H:51:THR:HA	1:H:375:ARG:NH2	2.13	0.62
1:J:204:GLY:HA3	1:J:349:PHE:O	1.99	0.62
1:K:313:VAL:HG22	1:K:357:ALA:HB3	1.82	0.62
1:H:483:SER:O	1:H:486:VAL:HG22	1.99	0.62
1:I:58:LEU:HB3	1:I:72:VAL:HG11	1.79	0.62
1:O:280:ARG:HD2	1:O:304:PHE:HB2	1.80	0.62
1:H:497:ALA:O	1:H:500:VAL:HG22	1.99	0.62
1:I:265:LYS:HE2	1:I:322:PHE:CE1	2.34	0.62
1:B:326:GLU:HG3	1:B:327:LEU:N	2.15	0.62
1:H:434:PRO:HB3	1:H:452:LEU:CD2	2.30	0.62
1:H:448:LEU:HD11	1:H:465:LEU:HD11	1.81	0.62
1:I:108:ILE:HD12	1:I:418:LYS:HE3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:188:VAL:CG1	1:I:377:LEU:HD21	2.29	0.62
1:O:399:CYS:SG	1:O:464:GLY:HA3	2.39	0.62
1:B:128:LEU:CD1	1:B:488:ARG:HG2	2.30	0.62
1:D:411:LEU:O	1:D:414:ARG:HB3	1.99	0.62
1:O:343:GLU:HG3	1:O:344:ASP:N	2.14	0.62
1:D:138:ASP:O	1:D:139:GLU:HB2	1.99	0.62
1:H:417:GLY:HA2	1:P:453:ARG:NH2	2.13	0.62
1:L:324:HIS:HB2	1:L:329:LYS:HZ1	1.64	0.62
1:I:99:GLU:HB2	1:I:425:SER:HB2	1.81	0.62
1:H:22:ILE:HD12	1:H:90:THR:HG22	1.80	0.62
1:A:141:LYS:CG	1:A:144:GLN:HB2	2.29	0.62
1:G:372:GLU:O	1:G:375:ARG:HB3	2.00	0.62
1:I:138:ASP:O	1:I:139:GLU:HB2	2.00	0.62
1:E:24:ASP:O	1:E:27:LYS:HG2	1.98	0.62
1:H:82:VAL:HA	1:H:386:GLN:HG3	1.81	0.62
1:F:224:ILE:HD11	1:F:336:ILE:CD1	2.30	0.62
1:N:399:CYS:SG	1:N:464:GLY:HA3	2.39	0.62
1:N:96:LEU:HD13	1:N:97:LEU:N	2.14	0.62
1:J:146:LEU:HD23	1:J:147:MET:N	2.12	0.62
1:I:448:LEU:HD21	1:I:465:LEU:HD12	1.81	0.62
1:M:110:PRO:HA	1:M:113:ILE:HD12	1.82	0.62
1:G:274:ILE:O	1:G:296:VAL:HG22	1.99	0.62
1:B:213:VAL:HG11	1:F:304:PHE:HE1	1.63	0.62
1:G:233:THR:HG21	1:G:261:LYS:HE2	1.82	0.62
1:L:154:LEU:HD21	1:L:163:LYS:NZ	2.15	0.62
1:G:59:LYS:HE2	1:G:76:ARG:HB2	1.82	0.62
1:K:324:HIS:HB2	1:K:329:LYS:NZ	2.14	0.62
1:J:92:LEU:HD12	1:J:433:LEU:HD21	1.81	0.62
1:E:244:ARG:O	1:E:245:VAL:HG22	1.99	0.62
1:B:245:VAL:HG11	1:B:250:LYS:HB3	1.81	0.62
1:H:265:LYS:HE2	1:H:322:PHE:CE1	2.35	0.62
1:A:58:LEU:HB3	1:A:72:VAL:HG13	1.81	0.62
1:B:183:LEU:HD11	1:B:381:LEU:HD11	1.82	0.62
1:E:146:LEU:HD22	1:E:168:LYS:CA	2.27	0.62
1:B:101:GLU:O	1:B:104:ILE:HG12	2.00	0.62
1:H:141:LYS:HG3	1:H:144:GLN:HB2	1.82	0.62
1:L:438:ALA:HB2	1:L:448:LEU:HG	1.81	0.62
1:L:32:PRO:HA	1:L:156:SER:HA	1.82	0.62
1:M:183:LEU:HB2	1:M:381:LEU:HD21	1.82	0.62
1:K:79:ASP:HA	1:K:83:GLY:HA2	1.80	0.62
1:D:334:LYS:CD	1:D:351:GLY:HA3	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:146:LEU:CD1	1:A:171:VAL:HG13	2.25	0.62
1:G:171:VAL:CG1	1:G:384:LEU:HG	2.29	0.62
1:E:173:ALA:CB	1:E:360:ILE:HD11	2.27	0.62
1:P:452:LEU:HD13	1:P:465:LEU:HD13	1.82	0.62
1:G:177:LEU:O	1:G:177:LEU:HD12	2.00	0.62
1:B:99:GLU:HG2	1:B:425:SER:HB2	1.81	0.62
1:F:108:ILE:HD11	1:O:446:ALA:HB3	1.81	0.61
1:B:27:LYS:CA	1:B:436:ILE:HD11	2.30	0.61
1:P:176:ARG:NE	1:P:358:CYS:HB2	2.15	0.61
1:H:341:ILE:HG23	1:H:363:ARG:NH2	2.15	0.61
1:F:57:ILE:HG23	1:F:58:LEU:HD22	1.81	0.61
1:I:188:VAL:HG23	1:I:360:ILE:O	2.00	0.61
1:E:412:ALA:HB1	1:E:424:GLU:HB3	1.81	0.61
1:A:317:GLU:CB	1:A:329:LYS:HG2	2.29	0.61
1:M:324:HIS:HB2	1:M:329:LYS:NZ	2.15	0.61
1:C:108:ILE:HB	1:L:446:ALA:HB2	1.82	0.61
1:E:128:LEU:HD22	1:E:484:PHE:CZ	2.35	0.61
1:P:316:GLY:O	1:P:330:LEU:HB2	1.99	0.61
1:E:222:ALA:HA	1:E:275:ASN:HB2	1.83	0.61
1:I:106:LYS:HE2	1:I:418:LYS:HA	1.80	0.61
1:I:32:PRO:HD2	1:I:467:MET:CE	2.30	0.61
1:C:207:LEU:HD11	1:C:209:LYS:HE3	1.82	0.61
1:D:312:LEU:O	1:D:354:LEU:HD22	1.99	0.61
1:N:78:GLN:HE22	1:N:489:GLN:HE21	1.48	0.61
1:N:79:ASP:HA	1:N:83:GLY:HA2	1.82	0.61
1:A:177:LEU:HG	1:A:186:ILE:HD11	1.82	0.61
1:K:19:ALA:HB1	1:K:94:ALA:HA	1.82	0.61
1:B:171:VAL:HG12	1:B:384:LEU:HG	1.82	0.61
1:L:171:VAL:O	1:L:174:VAL:HG22	2.01	0.61
1:D:79:ASP:HA	1:D:83:GLY:HA2	1.80	0.61
1:M:39:LEU:HA	1:O:509:LYS:NZ	2.15	0.61
1:G:452:LEU:HD13	1:G:465:LEU:HD13	1.82	0.61
1:N:189:ILE:HG22	1:N:190:LYS:H	1.64	0.61
1:M:434:PRO:HB3	1:M:452:LEU:CD2	2.30	0.61
1:B:78:GLN:NE2	1:B:486:VAL:HA	2.15	0.61
1:D:313:VAL:HG13	1:D:352:VAL:HB	1.82	0.61
1:J:146:LEU:CD1	1:J:171:VAL:HG13	2.24	0.61
1:C:109:HIS:NE2	1:C:111:GLN:HB2	2.15	0.61
1:M:484:PHE:CE2	1:M:488:ARG:HD3	2.35	0.61
1:D:449:VAL:CG1	1:K:417:GLY:HA3	2.31	0.61
1:G:143:ARG:HE	1:G:143:ARG:HA	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:59:LYS:HE2	1:H:76:ARG:HB2	1.83	0.61
1:K:183:LEU:HD13	1:K:381:LEU:HG	1.81	0.61
1:D:210:LYS:HE2	1:D:212:GLY:O	2.00	0.61
1:L:188:VAL:HG11	1:L:377:LEU:HD22	1.82	0.61
1:I:121:THR:O	1:I:125:ARG:HG2	2.01	0.61
1:A:206:LEU:HD11	1:A:346:LEU:HD23	1.83	0.61
1:G:402:MET:SD	1:G:456:HIS:HB2	2.41	0.61
1:L:369:ILE:O	1:L:372:GLU:HB3	2.01	0.61
1:D:188:VAL:CB	1:D:377:LEU:HD22	2.25	0.61
1:C:265:LYS:HZ2	1:C:287:PRO:HG3	1.65	0.61
1:M:431:ARG:NH2	1:M:434:PRO:HG2	2.16	0.61
1:M:216:PRO:CG	1:M:295:GLY:HA2	2.30	0.61
1:M:258:GLU:OE2	1:M:284:TYR:HE2	1.84	0.61
1:L:32:PRO:HD2	1:L:467:MET:HE1	1.83	0.61
1:J:84:ASP:OD1	1:J:383:VAL:HG22	2.00	0.61
1:A:368:GLN:OE1	1:C:509:LYS:HE3	2.00	0.61
1:O:146:LEU:HD23	1:O:147:MET:H	1.65	0.61
1:D:159:LEU:HG	1:D:163:LYS:HB2	1.82	0.61
1:M:166:PHE:CZ	1:M:198:ASP:HB3	2.36	0.61
1:G:37:LYS:O	1:G:50:VAL:HA	2.00	0.61
1:L:188:VAL:HA	1:L:360:ILE:O	2.00	0.61
1:A:159:LEU:HD23	1:A:160:THR:N	2.15	0.61
1:B:131:SER:HA	1:B:461:THR:HG21	1.82	0.61
1:A:39:LEU:HD12	1:A:57:ILE:HG13	1.82	0.61
1:F:316:GLY:O	1:F:330:LEU:HB2	2.01	0.61
1:B:176:ARG:CZ	1:B:358:CYS:HB2	2.30	0.61
1:I:95:GLU:O	1:I:98:ARG:HD2	2.01	0.61
1:O:339:VAL:O	1:O:340:MET:HB2	2.01	0.61
1:L:64:ASP:CB	1:L:512:PRO:HA	2.31	0.61
1:B:171:VAL:O	1:B:174:VAL:HG22	2.01	0.61
1:K:166:PHE:CZ	1:K:198:ASP:HB3	2.36	0.61
1:C:146:LEU:HD23	1:C:147:MET:N	2.13	0.61
1:C:211:ILE:HD11	1:C:297:MET:HG3	1.83	0.61
1:P:206:LEU:HD21	1:P:346:LEU:HB3	1.83	0.61
1:C:27:LYS:CB	1:C:436:ILE:HD11	2.30	0.61
1:A:225:LEU:HD13	1:A:329:LYS:CE	2.31	0.61
1:K:106:LYS:HE2	1:K:418:LYS:HZ1	1.62	0.61
1:O:117:TRP:HE1	1:O:498:ALA:HB3	1.65	0.61
1:D:452:LEU:HD13	1:D:465:LEU:HD13	1.81	0.61
1:L:485:GLN:HB3	1:L:489:GLN:HE22	1.64	0.61
1:N:483:SER:O	1:N:486:VAL:HG22	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:367:GLN:CG	1:J:369:ILE:HB	2.31	0.61
1:F:89:VAL:HG12	1:F:490:VAL:HB	1.83	0.61
1:J:160:THR:HA	1:J:163:LYS:HB2	1.83	0.60
1:I:225:LEU:HD12	1:I:226:ILE:N	2.16	0.60
1:O:54:GLY:O	1:O:58:LEU:HD23	2.00	0.60
1:B:446:ALA:HB1	1:I:107:LYS:HB2	1.82	0.60
1:M:397:GLY:O	1:M:465:LEU:HD23	2.00	0.60
1:C:225:LEU:HA	1:C:329:LYS:HD3	1.83	0.60
1:M:146:LEU:HD13	1:M:167:THR:O	2.00	0.60
1:F:165:HIS:O	1:F:168:LYS:HB3	2.01	0.60
1:L:176:ARG:NH2	1:L:360:ILE:HG12	2.16	0.60
1:B:191:LYS:CE	1:B:346:LEU:HD11	2.30	0.60
1:I:475:MET:SD	1:I:480:ILE:HB	2.41	0.60
1:H:19:ALA:HB3	1:H:98:ARG:NH2	2.16	0.60
1:B:225:LEU:HD11	1:B:324:HIS:CE1	2.36	0.60
1:L:317:GLU:HB2	1:L:329:LYS:HD3	1.83	0.60
1:N:189:ILE:HG22	1:N:190:LYS:N	2.16	0.60
1:G:402:MET:CE	1:G:453:ARG:HG2	2.31	0.60
1:I:63:VAL:O	1:I:513:ARG:HD2	2.00	0.60
1:K:171:VAL:HG12	1:K:384:LEU:CG	2.31	0.60
1:E:159:LEU:HG	1:E:163:LYS:CD	2.31	0.60
1:A:475:MET:SD	1:A:480:ILE:HB	2.41	0.60
1:D:39:LEU:O	1:D:48:LEU:HA	2.02	0.60
1:D:133:VAL:HB	1:D:393:THR:O	2.01	0.60
1:O:497:ALA:O	1:O:500:VAL:HG22	2.01	0.60
1:B:110:PRO:O	1:B:113:ILE:HB	2.01	0.60
1:K:65:ASN:ND2	1:K:66:PRO:HD3	2.16	0.60
1:C:140:VAL:HA	1:C:175:LEU:HD22	1.82	0.60
1:B:203:GLU:OE2	1:B:350:SER:HB2	2.00	0.60
1:O:145:ASP:OD1	1:O:171:VAL:HB	2.01	0.60
1:L:154:LEU:HD21	1:L:163:LYS:HZ2	1.66	0.60
1:D:39:LEU:HD13	1:E:513:ARG:OXT	2.01	0.60
1:P:499:GLU:O	1:P:503:ARG:HG2	2.01	0.60
1:L:204:GLY:O	1:L:359:THR:HB	2.01	0.60
1:J:5:GLU:O	1:J:6:GLU:HB2	2.00	0.60
1:L:399:CYS:SG	1:L:464:GLY:HA3	2.41	0.60
1:N:122:LYS:O	1:N:125:ARG:HG2	2.01	0.60
1:K:146:LEU:HD12	1:K:171:VAL:HG22	1.83	0.60
1:F:106:LYS:CG	1:O:446:ALA:HB2	2.32	0.60
1:I:223:LYS:HB2	1:I:274:ILE:HA	1.84	0.60
1:H:37:LYS:O	1:H:50:VAL:HA	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:265:LYS:HZ3	1:B:287:PRO:HG3	1.65	0.60
1:M:112:THR:HG21	1:M:418:LYS:HZ1	1.67	0.60
1:K:475:MET:SD	1:K:480:ILE:HB	2.41	0.60
1:P:380:ALA:O	1:P:384:LEU:HD23	2.01	0.60
1:E:137:SER:OG	1:E:388:VAL:HA	2.01	0.60
1:H:28:SER:O	1:H:34:GLY:HA2	2.02	0.60
1:K:146:LEU:HD12	1:K:171:VAL:CG1	2.32	0.60
1:C:159:LEU:HD23	1:C:160:THR:N	2.15	0.60
1:F:145:ASP:O	1:F:171:VAL:HG11	2.01	0.60
1:G:483:SER:O	1:G:486:VAL:HG22	2.01	0.60
1:D:369:ILE:O	1:D:372:GLU:HB3	2.02	0.60
1:D:325:PRO:C	1:D:326:GLU:HG3	2.22	0.60
1:J:269:ILE:HG23	1:J:274:ILE:HG21	1.83	0.60
1:F:265:LYS:HE2	1:F:322:PHE:CE1	2.37	0.60
1:N:3:ALA:O	1:N:4:ASP:HB3	2.02	0.60
1:I:228:ASN:OD1	1:I:319:ALA:HB3	2.01	0.60
1:B:274:ILE:O	1:B:296:VAL:HG22	2.02	0.60
1:B:324:HIS:HB2	1:B:329:LYS:CE	2.31	0.60
1:M:366:THR:HG22	1:M:370:LEU:CD2	2.32	0.60
1:D:276:CYS:HA	1:D:297:MET:O	2.01	0.60
1:C:225:LEU:HD13	1:C:329:LYS:HE2	1.82	0.60
1:E:364:GLY:HA3	1:E:370:LEU:HD13	1.83	0.60
1:I:283:ILE:HG22	1:I:300:GLU:HG3	1.82	0.60
1:K:106:LYS:HE2	1:K:418:LYS:CE	2.32	0.60
1:O:58:LEU:HB3	1:O:72:VAL:CG1	2.31	0.60
1:N:128:LEU:O	1:N:129:LEU:HD22	2.01	0.60
1:J:79:ASP:HA	1:J:83:GLY:HA2	1.83	0.60
1:I:276:CYS:HA	1:I:297:MET:O	2.02	0.60
1:G:317:GLU:HB2	1:G:329:LYS:HD3	1.84	0.60
1:A:265:LYS:HE2	1:A:322:PHE:CE1	2.37	0.60
1:C:284:TYR:O	1:C:287:PRO:HD2	2.01	0.60
1:B:276:CYS:HA	1:B:297:MET:O	2.01	0.60
1:C:452:LEU:HD13	1:C:465:LEU:HD13	1.82	0.60
1:D:211:ILE:HD11	1:D:297:MET:HG3	1.84	0.60
1:M:433:LEU:HA	1:M:436:ILE:HG22	1.83	0.60
1:F:390:ASP:HB3	1:F:485:GLN:OE1	2.01	0.60
1:G:402:MET:SD	1:G:453:ARG:HA	2.41	0.60
1:N:54:GLY:O	1:N:58:LEU:HD23	2.01	0.60
1:L:196:LEU:O	1:L:196:LEU:HD12	2.01	0.60
1:G:32:PRO:HD2	1:G:467:MET:CE	2.32	0.60
1:A:106:LYS:HD2	1:A:421:VAL:HG11	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:163:LYS:HD2	1:D:166:PHE:HB2	1.83	0.59
1:A:140:VAL:HA	1:A:175:LEU:HD22	1.84	0.59
1:E:159:LEU:HG	1:E:163:LYS:HD3	1.84	0.59
1:B:324:HIS:HB2	1:B:329:LYS:HE2	1.84	0.59
1:M:274:ILE:O	1:M:296:VAL:HG22	2.02	0.59
1:M:47:SER:HB2	1:M:48:LEU:HD13	1.83	0.59
1:I:51:THR:HG21	1:I:56:THR:HB	1.84	0.59
1:I:118:ARG:O	1:I:121:THR:HB	2.01	0.59
1:G:89:VAL:HB	1:G:490:VAL:CG2	2.31	0.59
1:H:492:LEU:C	1:H:492:LEU:HD13	2.22	0.59
1:K:109:HIS:CE1	1:K:111:GLN:HB2	2.36	0.59
1:F:364:GLY:HA3	1:F:370:LEU:CG	2.32	0.59
1:F:145:ASP:OD1	1:F:171:VAL:HB	2.02	0.59
1:D:269:ILE:HG23	1:D:274:ILE:CG2	2.31	0.59
1:F:274:ILE:O	1:F:296:VAL:HG22	2.02	0.59
1:M:402:MET:SD	1:M:456:HIS:HB2	2.42	0.59
1:P:280:ARG:HD2	1:P:304:PHE:HB2	1.84	0.59
1:B:326:GLU:HG3	1:B:327:LEU:H	1.66	0.59
1:F:250:LYS:O	1:F:253:GLU:HG2	2.01	0.59
1:G:59:LYS:HE2	1:G:76:ARG:CB	2.32	0.59
1:L:283:ILE:HG22	1:L:300:GLU:HG3	1.84	0.59
1:B:190:LYS:O	1:B:190:LYS:HD2	2.02	0.59
1:B:50:VAL:HG13	1:B:375:ARG:NH2	2.16	0.59
1:E:30:LEU:HD13	1:E:30:LEU:H	1.64	0.59
1:I:74:MET:SD	1:I:74:MET:C	2.81	0.59
1:C:216:PRO:HG2	1:C:295:GLY:HA2	1.84	0.59
1:F:224:ILE:HD11	1:F:336:ILE:HD11	1.84	0.59
1:E:398:GLY:HA2	1:E:401:GLU:OE1	2.02	0.59
1:E:210:LYS:HE2	1:E:212:GLY:O	2.02	0.59
1:N:364:GLY:HA3	1:N:370:LEU:HD13	1.84	0.59
1:I:324:HIS:O	1:I:328:VAL:HG22	2.02	0.59
1:B:418:LYS:HG3	1:I:450:ALA:CA	2.32	0.59
1:A:431:ARG:NH2	1:A:434:PRO:HG2	2.17	0.59
1:M:401:GLU:HG2	1:M:433:LEU:HD22	1.83	0.59
1:M:509:LYS:HG2	1:M:509:LYS:O	2.01	0.59
1:G:352:VAL:HG23	1:G:355:GLY:H	1.66	0.59
1:K:101:GLU:O	1:K:104:ILE:HG12	2.00	0.59
1:I:222:ALA:HA	1:I:275:ASN:OD1	2.03	0.59
1:A:175:LEU:O	1:A:178:LYS:HB3	2.02	0.59
1:G:225:LEU:HD12	1:G:226:ILE:N	2.18	0.59
1:E:269:ILE:HG23	1:E:274:ILE:CG2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:284:TYR:O	1:D:287:PRO:HD2	2.02	0.59
1:J:324:HIS:O	1:J:328:VAL:HG22	2.02	0.59
1:E:324:HIS:ND1	1:E:325:PRO:HD3	2.18	0.59
1:N:402:MET:CE	1:N:453:ARG:HG2	2.33	0.59
1:P:128:LEU:HD22	1:P:488:ARG:HG2	1.85	0.59
1:O:233:THR:HG21	1:O:261:LYS:HE3	1.83	0.59
1:G:126:GLN:HA	1:G:130:ASN:ND2	2.17	0.59
1:A:149:ILE:O	1:A:152:THR:HG22	2.03	0.59
1:D:128:LEU:HD21	1:D:488:ARG:HG2	1.83	0.59
1:E:101:GLU:O	1:E:104:ILE:HG12	2.02	0.59
1:G:475:MET:SD	1:G:480:ILE:HB	2.42	0.59
1:J:12:ARG:HD3	1:J:501:ILE:HG21	1.82	0.59
1:E:236:ILE:HG23	1:E:238:ILE:H	1.67	0.59
1:O:190:LYS:HD3	1:O:370:LEU:HD23	1.84	0.59
1:L:178:LYS:HZ2	1:L:388:VAL:HG11	1.66	0.59
1:O:211:ILE:HD11	1:O:297:MET:HG3	1.83	0.59
1:I:226:ILE:HG12	1:I:278:ILE:HG23	1.83	0.59
1:N:32:PRO:HD2	1:N:467:MET:HE1	1.83	0.59
1:L:269:ILE:HG23	1:L:274:ILE:CG2	2.30	0.59
1:O:108:ILE:HG22	1:O:109:HIS:HD2	1.67	0.59
1:D:317:GLU:HB3	1:D:329:LYS:HD3	1.83	0.59
1:J:152:THR:HG21	1:J:480:ILE:HA	1.84	0.59
1:H:231:MET:HB2	1:H:284:TYR:H	1.66	0.59
1:C:137:SER:H	1:C:141:LYS:HE3	1.68	0.59
1:N:58:LEU:HB3	1:N:72:VAL:HG11	1.85	0.59
1:B:280:ARG:O	1:B:281:GLN:HB3	2.03	0.59
1:O:173:ALA:HB2	1:O:360:ILE:HD11	1.84	0.59
1:D:146:LEU:CD2	1:D:147:MET:H	2.16	0.59
1:O:390:ASP:HB3	1:O:485:GLN:HE21	1.68	0.59
1:H:58:LEU:HB3	1:H:72:VAL:HG11	1.83	0.59
1:F:58:LEU:HB3	1:F:72:VAL:HG11	1.85	0.59
1:B:484:PHE:HE2	1:B:488:ARG:NE	1.99	0.59
1:F:312:LEU:O	1:F:354:LEU:HD22	2.02	0.59
1:C:98:ARG:HE	1:C:98:ARG:HA	1.67	0.59
1:O:187:HIS:HB2	1:O:309:ARG:NH1	2.17	0.59
1:N:206:LEU:HD21	1:N:346:LEU:HD22	1.85	0.59
1:C:163:LYS:HA	1:C:166:PHE:CD1	2.38	0.59
1:M:40:LEU:HD22	1:M:41:SER:N	2.17	0.59
1:K:324:HIS:ND1	1:K:325:PRO:HD3	2.18	0.59
1:H:190:LYS:HG2	1:H:191:LYS:N	2.17	0.59
1:M:128:LEU:CD1	1:M:488:ARG:HG2	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:438:ALA:HB2	1:C:448:LEU:HG	1.84	0.59
1:J:274:ILE:O	1:J:296:VAL:HG22	2.03	0.59
1:G:119:GLU:HB3	1:G:423:MET:HE3	1.84	0.59
1:J:30:LEU:HG	1:J:87:THR:O	2.03	0.59
1:F:248:THR:O	1:F:251:VAL:HG12	2.02	0.59
1:P:31:GLY:O	1:P:156:SER:HA	2.03	0.59
1:L:166:PHE:CZ	1:L:198:ASP:HB3	2.38	0.59
1:C:114:ILE:HA	1:C:117:TRP:CE3	2.38	0.59
1:C:114:ILE:HD12	1:C:499:GLU:HG3	1.84	0.59
1:N:219:ILE:HB	1:N:275:ASN:HB3	1.84	0.59
1:H:191:LYS:HG2	1:H:341:ILE:HG21	1.84	0.59
1:J:434:PRO:HB3	1:J:452:LEU:CD2	2.33	0.59
1:D:245:VAL:CG1	1:D:250:LYS:HB3	2.33	0.59
1:A:82:VAL:HA	1:A:386:GLN:CD	2.23	0.59
1:K:59:LYS:HE3	1:K:73:ASP:HA	1.83	0.59
1:F:448:LEU:HD21	1:F:465:LEU:HD12	1.84	0.59
1:C:143:ARG:NE	1:C:143:ARG:HA	2.17	0.59
1:O:451:GLN:HE22	1:O:471:THR:HA	1.68	0.59
1:L:166:PHE:CE1	1:L:198:ASP:HB3	2.38	0.59
1:D:154:LEU:CD2	1:D:163:LYS:HG3	2.32	0.59
1:D:173:ALA:O	1:D:176:ARG:HG2	2.03	0.59
1:N:452:LEU:HD13	1:N:465:LEU:HD13	1.84	0.59
1:G:133:VAL:HG12	1:G:393:THR:O	2.01	0.59
1:G:133:VAL:HG23	1:G:134:ASP:N	2.17	0.59
1:J:95:GLU:OE1	1:J:432:MET:HB3	2.02	0.59
1:A:478:LEU:HB3	1:A:480:ILE:HD12	1.84	0.59
1:A:38:ILE:HG12	1:C:506:ASN:HD21	1.68	0.59
1:E:225:LEU:HD13	1:E:329:LYS:HE2	1.85	0.59
1:F:485:GLN:HB2	1:F:489:GLN:OE1	2.03	0.59
1:A:498:ALA:O	1:A:501:ILE:HG22	2.02	0.59
1:L:268:ARG:O	1:L:271:LYS:HG2	2.03	0.59
1:I:216:PRO:CG	1:I:295:GLY:HA2	2.33	0.59
1:B:148:ASN:HA	1:B:479:GLY:O	2.02	0.59
1:P:312:LEU:O	1:P:354:LEU:HD22	2.03	0.59
1:H:9:GLU:HG2	1:H:10:THR:N	2.17	0.59
1:J:166:PHE:CZ	1:J:198:ASP:HB3	2.38	0.58
1:D:154:LEU:CD2	1:D:167:THR:HB	2.33	0.58
1:G:146:LEU:CD2	1:G:167:THR:HG23	2.33	0.58
1:K:140:VAL:HA	1:K:175:LEU:HD22	1.85	0.58
1:D:390:ASP:HB2	1:D:485:GLN:HE22	1.68	0.58
1:I:145:ASP:O	1:I:171:VAL:HG11	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:21:ALA:O	1:D:25:LEU:HD23	2.03	0.58
1:E:219:ILE:HG21	1:E:275:ASN:O	2.02	0.58
1:P:216:PRO:HG2	1:P:295:GLY:HA2	1.85	0.58
1:G:366:THR:O	1:G:366:THR:HG23	2.03	0.58
1:I:163:LYS:O	1:I:166:PHE:HB2	2.03	0.58
1:C:231:MET:HG3	1:C:283:ILE:HG13	1.85	0.58
1:A:418:LYS:HA	1:M:453:ARG:NH2	2.17	0.58
1:K:66:PRO:HB3	1:K:509:LYS:NZ	2.18	0.58
1:N:106:LYS:HG3	1:N:418:LYS:NZ	2.18	0.58
1:B:48:LEU:HD21	1:F:506:ASN:CG	2.22	0.58
1:N:127:ALA:HB1	1:N:491:LEU:CD1	2.25	0.58
1:F:51:THR:HG22	1:F:53:ASP:H	1.67	0.58
1:B:231:MET:HG3	1:B:283:ILE:HG13	1.84	0.58
1:N:431:ARG:O	1:N:434:PRO:HD2	2.03	0.58
1:C:211:ILE:HD13	1:C:211:ILE:H	1.68	0.58
1:P:226:ILE:HB	1:P:317:GLU:OE2	2.03	0.58
1:K:324:HIS:CG	1:K:325:PRO:HD3	2.38	0.58
1:C:509:LYS:N	1:C:509:LYS:HD2	2.17	0.58
1:L:186:ILE:CD1	1:L:381:LEU:HD21	2.34	0.58
1:E:313:VAL:HG13	1:E:352:VAL:HB	1.85	0.58
1:J:82:VAL:HA	1:J:386:GLN:HB3	1.84	0.58
1:G:326:GLU:HG3	1:G:327:LEU:N	2.18	0.58
1:C:40:LEU:HD21	1:H:2:GLY:HA2	1.85	0.58
1:P:173:ALA:HB2	1:P:360:ILE:HD11	1.85	0.58
1:P:372:GLU:HA	1:P:375:ARG:NH2	2.18	0.58
1:L:226:ILE:HG12	1:L:278:ILE:HG23	1.85	0.58
1:H:126:GLN:O	1:H:126:GLN:HG2	2.02	0.58
1:J:385:ALA:O	1:J:388:VAL:HG13	2.03	0.58
1:F:31:GLY:O	1:F:156:SER:HB3	2.03	0.58
1:I:235:LYS:O	1:I:236:ILE:HG22	2.04	0.58
1:M:483:SER:O	1:M:486:VAL:HG22	2.04	0.58
1:A:171:VAL:O	1:A:174:VAL:HG22	2.03	0.58
1:K:146:LEU:HD13	1:K:168:LYS:CA	2.33	0.58
1:M:265:LYS:HZ2	1:M:287:PRO:HG3	1.67	0.58
1:G:274:ILE:HG23	1:G:296:VAL:HG21	1.85	0.58
1:P:188:VAL:HG13	1:P:377:LEU:HD21	1.85	0.58
1:C:402:MET:SD	1:C:453:ARG:HA	2.42	0.58
1:E:59:LYS:HE2	1:E:76:ARG:CB	2.32	0.58
1:I:96:LEU:HD22	1:I:96:LEU:O	2.04	0.58
1:D:431:ARG:O	1:D:434:PRO:HD2	2.03	0.58
1:K:274:ILE:O	1:K:296:VAL:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:402:MET:CE	1:K:453:ARG:HG2	2.34	0.58
1:D:39:LEU:HB3	1:E:513:ARG:O	2.03	0.58
1:D:408:VAL:HA	1:D:411:LEU:HD12	1.84	0.58
1:K:216:PRO:HG2	1:K:295:GLY:HA2	1.85	0.58
1:E:99:GLU:O	1:E:103:LEU:HD13	2.03	0.58
1:C:145:ASP:O	1:C:171:VAL:HG11	2.03	0.58
1:P:146:LEU:CD2	1:P:167:THR:HG23	2.33	0.58
1:F:146:LEU:HD21	1:F:150:ALA:HB3	1.85	0.58
1:B:401:GLU:HG2	1:B:433:LEU:HD22	1.84	0.58
1:F:421:VAL:HB	1:O:453:ARG:HH22	1.69	0.58
1:K:322:PHE:HA	1:K:324:HIS:CD2	2.39	0.58
1:D:316:GLY:C	1:D:317:GLU:HG2	2.23	0.58
1:P:114:ILE:HD11	1:P:502:LEU:CB	2.34	0.58
1:I:32:PRO:HD2	1:I:467:MET:SD	2.44	0.58
1:L:313:VAL:HG13	1:L:352:VAL:HB	1.86	0.58
1:J:143:ARG:HE	1:J:143:ARG:HA	1.69	0.58
1:O:341:ILE:HG23	1:O:363:ARG:NH2	2.19	0.58
1:M:145:ASP:OD1	1:M:171:VAL:HB	2.04	0.58
1:A:171:VAL:CG1	1:A:384:LEU:HG	2.33	0.58
1:N:27:LYS:HD3	1:N:28:SER:H	1.66	0.58
1:L:274:ILE:O	1:L:296:VAL:HG22	2.03	0.58
1:J:92:LEU:HA	1:J:95:GLU:OE2	2.03	0.58
1:N:269:ILE:HG23	1:N:274:ILE:CG2	2.32	0.58
1:O:89:VAL:HA	1:O:490:VAL:HG23	1.86	0.58
1:G:39:LEU:O	1:G:48:LEU:HA	2.03	0.58
1:B:111:GLN:HA	1:B:114:ILE:HG12	1.86	0.58
1:C:324:HIS:ND1	1:C:325:PRO:HD3	2.18	0.58
1:I:478:LEU:HB3	1:I:480:ILE:HD12	1.86	0.58
1:A:116:GLY:O	1:A:119:GLU:HB2	2.03	0.58
1:P:41:SER:O	1:P:45:ASP:HB2	2.04	0.58
1:D:119:GLU:O	1:D:122:LYS:HB3	2.03	0.58
1:K:483:SER:O	1:K:486:VAL:HG22	2.03	0.58
1:B:185:ALA:HA	1:B:309:ARG:CD	2.33	0.58
1:O:146:LEU:HD11	1:O:150:ALA:CB	2.34	0.58
1:O:146:LEU:HD13	1:O:167:THR:O	2.02	0.58
1:D:146:LEU:HD12	1:D:171:VAL:CG1	2.24	0.58
1:G:160:THR:HA	1:G:163:LYS:HB3	1.85	0.58
1:I:325:PRO:C	1:I:326:GLU:HG3	2.23	0.58
1:I:171:VAL:HG12	1:I:384:LEU:HG	1.84	0.58
1:F:225:LEU:HD11	1:F:324:HIS:ND1	2.19	0.58
1:A:114:ILE:HA	1:A:117:TRP:CE3	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:190:LYS:O	1:I:190:LYS:HD2	2.04	0.58
1:B:390:ASP:CB	1:B:485:GLN:HE22	2.17	0.58
1:B:140:VAL:HA	1:B:175:LEU:HD22	1.86	0.58
1:I:171:VAL:O	1:I:175:LEU:HG	2.03	0.58
1:M:39:LEU:HD23	1:O:509:LYS:HZ3	1.68	0.58
1:H:154:LEU:HD21	1:H:163:LYS:NZ	2.19	0.58
1:J:324:HIS:O	1:J:329:LYS:HG2	2.03	0.58
1:I:106:LYS:CE	1:I:418:LYS:HA	2.33	0.58
1:H:108:ILE:HG23	1:H:109:HIS:N	2.19	0.58
1:C:133:VAL:HG23	1:C:134:ASP:H	1.68	0.58
1:M:58:LEU:HB3	1:M:72:VAL:HG11	1.85	0.58
1:I:451:GLN:HE22	1:I:471:THR:HA	1.69	0.58
1:B:57:ILE:HG23	1:B:58:LEU:HD22	1.86	0.58
1:I:82:VAL:HA	1:I:386:GLN:HG3	1.85	0.58
1:F:284:TYR:O	1:F:287:PRO:HD2	2.04	0.58
1:I:269:ILE:HG23	1:I:274:ILE:HG22	1.85	0.57
1:M:48:LEU:HD12	1:O:508:ILE:CD1	2.34	0.57
1:M:207:LEU:HD22	1:M:208:ASP:N	2.18	0.57
1:L:434:PRO:HB3	1:L:452:LEU:CD2	2.34	0.57
1:O:269:ILE:HG23	1:O:274:ILE:HG22	1.86	0.57
1:N:504:VAL:O	1:N:505:ASP:HB2	2.04	0.57
1:M:24:ASP:O	1:M:27:LYS:HB3	2.03	0.57
1:A:284:TYR:O	1:A:287:PRO:HD2	2.03	0.57
1:A:287:PRO:O	1:A:291:PHE:HD1	1.85	0.57
1:C:209:LYS:NZ	1:C:303:ASP:H	2.01	0.57
1:F:231:MET:HG3	1:F:283:ILE:HG13	1.85	0.57
1:P:134:ASP:O	1:P:135:HIS:HB2	2.03	0.57
1:M:178:LYS:NZ	1:M:388:VAL:HB	2.19	0.57
1:P:431:ARG:NH1	1:P:453:ARG:HD3	2.18	0.57
1:O:402:MET:SD	1:O:456:HIS:HB2	2.45	0.57
1:N:508:ILE:O	1:N:509:LYS:HB2	2.04	0.57
1:L:114:ILE:HA	1:L:117:TRP:CE3	2.39	0.57
1:G:99:GLU:HG3	1:G:425:SER:CB	2.34	0.57
1:B:74:MET:O	1:B:77:VAL:HG12	2.04	0.57
1:E:109:HIS:CE1	1:E:111:GLN:HB2	2.39	0.57
1:M:475:MET:SD	1:M:480:ILE:HB	2.44	0.57
1:G:154:LEU:HD22	1:G:167:THR:HB	1.85	0.57
1:A:27:LYS:HG3	1:A:436:ILE:HG13	1.85	0.57
1:N:434:PRO:HB3	1:N:452:LEU:CD2	2.33	0.57
1:G:324:HIS:ND1	1:G:325:PRO:HD3	2.18	0.57
1:J:448:LEU:HD21	1:J:465:LEU:HD12	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:27:LYS:CA	1:F:436:ILE:HD11	2.34	0.57
1:I:48:LEU:HD13	1:N:508:ILE:HD11	1.87	0.57
1:H:89:VAL:HG11	1:H:490:VAL:HG11	1.86	0.57
1:M:503:ARG:CG	1:M:503:ARG:HH11	2.18	0.57
1:P:216:PRO:CG	1:P:295:GLY:HA2	2.33	0.57
1:D:163:LYS:O	1:D:166:PHE:HB2	2.04	0.57
1:M:63:VAL:HA	1:M:513:ARG:HA	1.86	0.57
1:P:163:LYS:O	1:P:166:PHE:HB2	2.05	0.57
1:G:128:LEU:HD22	1:G:129:LEU:HD22	1.86	0.57
1:H:161:HIS:CG	1:H:162:HIS:H	2.22	0.57
1:P:82:VAL:HG13	1:P:83:GLY:H	1.70	0.57
1:F:96:LEU:HD22	1:F:96:LEU:C	2.25	0.57
1:J:206:LEU:HD21	1:J:346:LEU:HG	1.85	0.57
1:B:173:ALA:O	1:B:176:ARG:HG2	2.05	0.57
1:M:133:VAL:HG23	1:M:134:ASP:H	1.69	0.57
1:K:191:LYS:HA	1:K:191:LYS:HE3	1.86	0.57
1:B:222:ALA:HA	1:B:275:ASN:OD1	2.04	0.57
1:K:226:ILE:HG12	1:K:278:ILE:HG23	1.86	0.57
1:F:225:LEU:CD1	1:F:329:LYS:HE2	2.34	0.57
1:B:100:ALA:HA	1:B:103:LEU:HD13	1.86	0.57
1:M:411:LEU:HB3	1:M:423:MET:HE1	1.86	0.57
1:H:99:GLU:O	1:H:103:LEU:HD13	2.04	0.57
1:D:78:GLN:HE21	1:D:486:VAL:HA	1.69	0.57
1:F:141:LYS:HG2	1:F:144:GLN:HB2	1.85	0.57
1:J:92:LEU:HB3	1:J:433:LEU:HD11	1.86	0.57
1:N:274:ILE:HG23	1:N:296:VAL:HG21	1.85	0.57
1:D:61:ILE:HG21	1:E:513:ARG:HG2	1.85	0.57
1:N:59:LYS:HE3	1:N:73:ASP:HA	1.85	0.57
1:F:408:VAL:HA	1:F:411:LEU:HD12	1.87	0.57
1:D:163:LYS:HA	1:D:166:PHE:CD1	2.38	0.57
1:H:171:VAL:O	1:H:174:VAL:HG22	2.04	0.57
1:H:133:VAL:HG21	1:H:394:VAL:HA	1.86	0.57
1:J:190:LYS:HD3	1:J:370:LEU:HD23	1.87	0.57
1:F:452:LEU:HA	1:F:472:ILE:HG21	1.85	0.57
1:H:22:ILE:O	1:H:26:VAL:HG22	2.05	0.57
1:P:364:GLY:HA3	1:P:370:LEU:HD21	1.87	0.57
1:C:203:GLU:OE2	1:C:350:SER:HB2	2.03	0.57
1:A:341:ILE:HD11	1:A:348:HIS:CE1	2.40	0.57
1:I:141:LYS:HG2	1:I:144:GLN:HB2	1.86	0.57
1:E:133:VAL:HG11	1:E:393:THR:O	2.05	0.57
1:K:126:GLN:NE2	1:K:411:LEU:HD11	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:161:HIS:CD2	1:I:162:HIS:H	2.23	0.57
1:E:503:ARG:O	1:E:504:VAL:HB	2.05	0.57
1:O:163:LYS:O	1:O:166:PHE:HB2	2.03	0.57
1:G:154:LEU:HD23	1:G:163:LYS:HG3	1.87	0.57
1:I:452:LEU:HD13	1:I:465:LEU:HD13	1.86	0.57
1:A:245:VAL:CG1	1:A:250:LYS:HB3	2.33	0.57
1:L:231:MET:HG3	1:L:283:ILE:HG13	1.87	0.57
1:P:325:PRO:C	1:P:326:GLU:HG3	2.24	0.57
1:K:177:LEU:HD23	1:K:186:ILE:HD11	1.86	0.57
1:I:128:LEU:HD11	1:I:488:ARG:HB3	1.86	0.57
1:G:116:GLY:O	1:G:119:GLU:HB2	2.05	0.57
1:N:52:ASN:ND2	1:N:157:LYS:HA	2.20	0.57
1:M:210:LYS:HE2	1:M:212:GLY:O	2.05	0.57
1:A:248:THR:O	1:A:251:VAL:HG12	2.04	0.57
1:D:499:GLU:O	1:D:503:ARG:HG2	2.05	0.57
1:D:159:LEU:HG	1:D:163:LYS:CG	2.35	0.57
1:K:341:ILE:HG23	1:K:363:ARG:CZ	2.34	0.57
1:G:128:LEU:HD22	1:G:129:LEU:CD2	2.34	0.57
1:N:226:ILE:HG12	1:N:278:ILE:HG23	1.87	0.57
1:K:59:LYS:HE2	1:K:76:ARG:CB	2.35	0.57
1:F:173:ALA:HA	1:F:176:ARG:CZ	2.34	0.57
1:G:126:GLN:HA	1:G:130:ASN:HD22	1.69	0.57
1:N:143:ARG:HA	1:N:143:ARG:HE	1.69	0.57
1:N:356:GLU:HG3	1:N:356:GLU:O	2.05	0.57
1:H:128:LEU:HD11	1:H:491:LEU:CD1	2.34	0.57
1:I:40:LEU:HD13	1:I:41:SER:H	1.69	0.57
1:A:210:LYS:HE2	1:A:212:GLY:O	2.04	0.57
1:O:183:LEU:HD11	1:O:381:LEU:HD11	1.86	0.57
1:M:138:ASP:O	1:M:139:GLU:HB2	2.05	0.57
1:K:146:LEU:HD23	1:K:148:ASN:H	1.70	0.57
1:B:108:ILE:HD12	1:B:108:ILE:N	2.15	0.57
1:P:438:ALA:HB2	1:P:448:LEU:HG	1.86	0.57
1:P:188:VAL:HA	1:P:360:ILE:O	2.05	0.57
1:C:92:LEU:HD11	1:C:433:LEU:HD21	1.87	0.57
1:P:417:GLY:HA2	1:P:420:ALA:HB3	1.86	0.57
1:P:24:ASP:O	1:P:27:LYS:HG2	2.05	0.57
1:O:231:MET:HB2	1:O:284:TYR:H	1.68	0.57
1:M:58:LEU:HB3	1:M:72:VAL:CG1	2.35	0.57
1:D:365:ALA:O	1:D:366:THR:HG22	2.05	0.56
1:E:394:VAL:HG21	1:E:487:LYS:HG3	1.87	0.56
1:K:32:PRO:HA	1:K:156:SER:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:365:ALA:O	1:B:366:THR:HG23	2.04	0.56
1:A:510:ALA:O	1:F:25:LEU:HD11	2.05	0.56
1:F:82:VAL:C	1:F:386:GLN:HG3	2.26	0.56
1:N:216:PRO:CG	1:N:295:GLY:HA2	2.35	0.56
1:O:61:ILE:HG12	1:O:63:VAL:HG23	1.87	0.56
1:A:219:ILE:HD12	1:A:275:ASN:HB3	1.87	0.56
1:C:313:VAL:HG13	1:C:352:VAL:HG21	1.87	0.56
1:O:154:LEU:HD23	1:O:163:LYS:HG3	1.86	0.56
1:K:145:ASP:O	1:K:171:VAL:HG11	2.05	0.56
1:D:508:ILE:O	1:D:509:LYS:HB2	2.05	0.56
1:H:57:ILE:C	1:H:57:ILE:HD13	2.26	0.56
1:L:506:ASN:HB3	1:P:38:ILE:HG12	1.87	0.56
1:H:417:GLY:CA	1:P:453:ARG:HH21	2.18	0.56
1:I:120:ALA:O	1:I:123:ALA:HB3	2.04	0.56
1:N:326:GLU:HG3	1:N:327:LEU:N	2.21	0.56
1:L:99:GLU:O	1:L:103:LEU:HD13	2.05	0.56
1:I:106:LYS:HZ2	1:I:106:LYS:HB3	1.70	0.56
1:E:453:ARG:NH2	1:J:418:LYS:HA	2.20	0.56
1:O:433:LEU:O	1:O:436:ILE:HG22	2.05	0.56
1:B:54:GLY:O	1:B:58:LEU:HD23	2.05	0.56
1:D:483:SER:O	1:D:486:VAL:HG22	2.05	0.56
1:E:106:LYS:HG2	1:E:108:ILE:HG12	1.86	0.56
1:O:101:GLU:O	1:O:104:ILE:HG23	2.05	0.56
1:M:276:CYS:HA	1:M:297:MET:O	2.05	0.56
1:K:200:TYR:O	1:K:361:VAL:HG23	2.04	0.56
1:M:51:THR:HG21	1:M:56:THR:HB	1.87	0.56
1:D:36:ASP:OD2	1:D:158:LEU:HB2	2.05	0.56
1:E:211:ILE:HD13	1:E:215:GLN:HG3	1.87	0.56
1:D:507:ILE:CG2	1:H:39:LEU:HD23	2.32	0.56
1:K:192:LEU:HB2	1:K:343:GLU:OE2	2.06	0.56
1:L:222:ALA:HA	1:L:275:ASN:HB2	1.86	0.56
1:F:152:THR:OG1	1:F:480:ILE:HA	2.06	0.56
1:G:78:GLN:HG3	1:G:83:GLY:HA2	1.87	0.56
1:G:206:LEU:HD23	1:G:348:HIS:HD2	1.70	0.56
1:N:324:HIS:ND1	1:N:325:PRO:HD3	2.20	0.56
1:C:434:PRO:HB3	1:C:452:LEU:CD2	2.35	0.56
1:F:317:GLU:HB3	1:F:329:LYS:HD3	1.87	0.56
1:L:99:GLU:HG2	1:L:425:SER:CB	2.35	0.56
1:H:402:MET:HG2	1:H:431:ARG:NH2	2.20	0.56
1:P:96:LEU:HD21	1:P:117:TRP:HZ2	1.70	0.56
1:F:431:ARG:HA	1:F:431:ARG:NE	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:334:LYS:CB	1:O:351:GLY:HA3	2.35	0.56
1:M:411:LEU:HB3	1:M:423:MET:CE	2.35	0.56
1:H:185:ALA:HA	1:H:309:ARG:NE	2.21	0.56
1:K:280:ARG:HD2	1:K:304:PHE:HB2	1.87	0.56
1:D:339:VAL:O	1:D:340:MET:HB2	2.05	0.56
1:M:162:HIS:HB3	1:M:198:ASP:OD2	2.06	0.56
1:M:63:VAL:CG1	1:O:2:GLY:HA3	2.29	0.56
1:N:27:LYS:HG2	1:N:436:ILE:CD1	2.36	0.56
1:H:369:ILE:O	1:H:372:GLU:HB3	2.06	0.56
1:A:276:CYS:HA	1:A:297:MET:O	2.05	0.56
1:H:345:LYS:C	1:H:346:LEU:HD12	2.26	0.56
1:N:324:HIS:HB2	1:N:329:LYS:HZ3	1.69	0.56
1:E:89:VAL:HG12	1:E:490:VAL:HB	1.88	0.56
1:D:63:VAL:HG22	1:E:513:ARG:CD	2.35	0.56
1:M:325:PRO:C	1:M:326:GLU:HG3	2.26	0.56
1:E:453:ARG:HH22	1:J:418:LYS:HA	1.70	0.56
1:F:58:LEU:HB3	1:F:72:VAL:HG13	1.87	0.56
1:P:59:LYS:HE3	1:P:73:ASP:HA	1.87	0.56
1:C:108:ILE:HB	1:L:446:ALA:CB	2.35	0.56
1:F:450:ALA:CB	1:O:417:GLY:H	2.18	0.56
1:B:251:VAL:HG21	1:F:240:GLY:CA	2.35	0.56
1:E:226:ILE:HG12	1:E:278:ILE:HG23	1.87	0.56
1:I:334:LYS:CB	1:I:351:GLY:HA3	2.36	0.56
1:O:367:GLN:O	1:O:370:LEU:HB3	2.05	0.56
1:L:157:LYS:HB3	1:L:159:LEU:CD1	2.28	0.56
1:K:166:PHE:HE2	1:K:363:ARG:O	1.88	0.56
1:F:106:LYS:CE	1:F:113:ILE:HD11	2.31	0.56
1:F:146:LEU:HB2	1:F:171:VAL:HG21	1.88	0.56
1:N:82:VAL:HB	1:N:485:GLN:HB3	1.86	0.56
1:L:284:TYR:O	1:L:287:PRO:HD2	2.05	0.56
1:C:27:LYS:HB3	1:C:436:ILE:HD11	1.88	0.56
1:D:24:ASP:O	1:D:27:LYS:HG2	2.05	0.56
1:K:334:LYS:CG	1:K:351:GLY:HA3	2.36	0.56
1:G:381:LEU:C	1:G:381:LEU:HD12	2.26	0.56
1:F:343:GLU:HG3	1:F:344:ASP:H	1.71	0.56
1:N:130:ASN:O	1:N:131:SER:HB3	2.06	0.56
1:C:154:LEU:CD2	1:C:167:THR:HB	2.36	0.56
1:P:154:LEU:CD2	1:P:167:THR:HB	2.36	0.56
1:C:114:ILE:HG23	1:C:499:GLU:CG	2.34	0.56
1:K:433:LEU:O	1:K:436:ILE:HG22	2.04	0.56
1:I:123:ALA:HA	1:I:126:GLN:HG2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:152:THR:OG1	1:C:480:ILE:HA	2.06	0.56
1:K:186:ILE:CG2	1:K:377:LEU:HD21	2.35	0.56
1:N:99:GLU:CG	1:N:425:SER:HB2	2.35	0.56
1:D:128:LEU:O	1:D:129:LEU:HB2	2.06	0.56
1:A:30:LEU:HG	1:A:87:THR:O	2.06	0.56
1:K:500:VAL:HG12	1:K:503:ARG:NH1	2.20	0.56
1:H:141:LYS:CG	1:H:144:GLN:HB2	2.36	0.56
1:C:40:LEU:HD22	1:H:510:ALA:HB2	1.88	0.56
1:K:209:LYS:HE2	1:K:301:HIS:O	2.06	0.56
1:J:438:ALA:HB2	1:J:448:LEU:HG	1.86	0.56
1:H:68:ALA:O	1:H:72:VAL:HG23	2.06	0.56
1:D:39:LEU:HD21	1:E:511:ALA:HB1	1.86	0.56
1:M:402:MET:CE	1:M:453:ARG:HG2	2.35	0.56
1:N:59:LYS:HE2	1:N:76:ARG:CB	2.35	0.56
1:N:402:MET:SD	1:N:453:ARG:HA	2.46	0.56
1:D:128:LEU:CD2	1:D:488:ARG:HG2	2.36	0.56
1:L:186:ILE:HD12	1:L:381:LEU:HD11	1.87	0.56
1:N:280:ARG:HD2	1:N:304:PHE:HB2	1.88	0.56
1:O:219:ILE:HB	1:O:275:ASN:HB3	1.86	0.56
1:O:99:GLU:O	1:O:103:LEU:HD13	2.06	0.56
1:J:508:ILE:O	1:J:509:LYS:HB2	2.06	0.56
1:C:191:LYS:HZ1	1:C:346:LEU:HD11	1.69	0.56
1:N:207:LEU:O	1:N:347:ILE:HG22	2.04	0.56
1:E:131:SER:OG	1:E:461:THR:HG21	2.06	0.56
1:F:75:SER:O	1:F:78:GLN:HB3	2.04	0.56
1:N:367:GLN:CG	1:N:369:ILE:HB	2.36	0.56
1:G:163:LYS:O	1:G:166:PHE:HB2	2.06	0.56
1:G:146:LEU:CD1	1:G:171:VAL:HG13	2.29	0.56
1:L:431:ARG:O	1:L:434:PRO:HD2	2.06	0.56
1:A:325:PRO:C	1:A:326:GLU:HG3	2.26	0.56
1:K:32:PRO:HG2	1:K:467:MET:CE	2.36	0.56
1:M:313:VAL:O	1:M:352:VAL:HG23	2.06	0.56
1:P:484:PHE:CE2	1:P:488:ARG:HD3	2.41	0.56
1:O:334:LYS:O	1:O:335:LEU:HB2	2.06	0.56
1:G:312:LEU:O	1:G:354:LEU:HD22	2.06	0.56
1:D:280:ARG:HD2	1:D:304:PHE:HB2	1.87	0.56
1:B:132:ALA:O	1:B:133:VAL:HG22	2.06	0.56
1:A:2:GLY:O	1:A:3:ALA:HB2	2.05	0.56
1:E:280:ARG:HD2	1:E:304:PHE:HB2	1.88	0.56
1:K:340:MET:HG2	1:K:345:LYS:HG2	1.87	0.56
1:D:139:GLU:O	1:D:140:VAL:HB	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:231:MET:HG3	1:I:283:ILE:HG13	1.87	0.56
1:N:231:MET:HG3	1:N:283:ILE:HG13	1.88	0.56
1:G:284:TYR:O	1:G:287:PRO:HD2	2.05	0.56
1:D:254:ILE:HG21	1:E:238:ILE:HG13	1.88	0.56
1:F:231:MET:HB2	1:F:284:TYR:H	1.70	0.56
1:L:157:LYS:CB	1:L:159:LEU:HD13	2.26	0.56
1:B:284:TYR:O	1:B:287:PRO:HD2	2.06	0.56
1:N:287:PRO:O	1:N:291:PHE:HD1	1.88	0.56
1:G:226:ILE:HG12	1:G:278:ILE:HG23	1.88	0.56
1:B:452:LEU:HD22	1:B:465:LEU:HD11	1.87	0.56
1:D:58:LEU:HB3	1:D:72:VAL:HG11	1.87	0.56
1:N:138:ASP:O	1:N:139:GLU:HB2	2.06	0.56
1:F:280:ARG:HD2	1:F:304:PHE:HB2	1.87	0.56
1:P:338:GLU:OE1	1:P:345:LYS:HD3	2.06	0.56
1:J:211:ILE:CD1	1:J:297:MET:HG3	2.32	0.55
1:B:231:MET:HB2	1:B:284:TYR:H	1.72	0.55
1:I:431:ARG:HH21	1:I:434:PRO:HG2	1.71	0.55
1:M:232:ASP:HA	1:M:284:TYR:CD1	2.41	0.55
1:G:326:GLU:HG3	1:G:327:LEU:H	1.71	0.55
1:K:401:GLU:OE1	1:K:433:LEU:HB3	2.06	0.55
1:O:108:ILE:HG22	1:O:109:HIS:CD2	2.41	0.55
1:C:431:ARG:HH21	1:C:434:PRO:HG2	1.71	0.55
1:H:433:LEU:O	1:H:436:ILE:HG22	2.06	0.55
1:M:226:ILE:HD13	1:M:307:VAL:HG13	1.87	0.55
1:O:52:ASN:H	1:O:375:ARG:HD3	1.71	0.55
1:K:317:GLU:HB2	1:K:329:LYS:HD3	1.87	0.55
1:H:163:LYS:HG3	1:H:166:PHE:CG	2.41	0.55
1:J:192:LEU:HG	1:J:343:GLU:CD	2.27	0.55
1:P:115:ALA:O	1:P:118:ARG:HB3	2.05	0.55
1:F:59:LYS:HE3	1:F:73:ASP:HA	1.87	0.55
1:F:188:VAL:HG22	1:F:377:LEU:HD21	1.87	0.55
1:F:431:ARG:HA	1:F:431:ARG:CZ	2.37	0.55
1:K:66:PRO:HB3	1:K:509:LYS:HZ3	1.71	0.55
1:O:185:ALA:HA	1:O:309:ARG:HE	1.70	0.55
1:O:379:ASP:O	1:O:383:VAL:HG23	2.06	0.55
1:E:33:LYS:HA	1:E:33:LYS:HE3	1.88	0.55
1:I:280:ARG:HD2	1:I:304:PHE:HB2	1.87	0.55
1:D:218:ARG:HD2	1:D:337:GLU:OE1	2.06	0.55
1:M:32:PRO:HD2	1:M:467:MET:CE	2.36	0.55
1:F:204:GLY:HA3	1:F:349:PHE:O	2.06	0.55
1:L:159:LEU:N	1:L:159:LEU:HD12	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:269:ILE:HG23	1:G:274:ILE:CG2	2.36	0.55
1:L:274:ILE:HG23	1:L:296:VAL:HG21	1.87	0.55
1:P:317:GLU:HB2	1:P:329:LYS:HD3	1.87	0.55
1:I:59:LYS:HE3	1:I:73:ASP:HA	1.87	0.55
1:D:226:ILE:HG12	1:D:278:ILE:HG23	1.88	0.55
1:D:32:PRO:O	1:D:155:SER:HB3	2.07	0.55
1:J:146:LEU:HD21	1:J:167:THR:HG23	1.88	0.55
1:I:365:ALA:O	1:I:366:THR:HB	2.07	0.55
1:F:478:LEU:HB3	1:F:480:ILE:HD13	1.87	0.55
1:H:163:LYS:O	1:H:166:PHE:HB2	2.06	0.55
1:E:231:MET:HG3	1:E:283:ILE:HG13	1.87	0.55
1:A:324:HIS:ND1	1:A:325:PRO:HD3	2.21	0.55
1:M:431:ARG:NH1	1:M:453:ARG:HD3	2.20	0.55
1:D:14:SER:O	1:D:17:ILE:HG22	2.07	0.55
1:H:12:ARG:HD3	1:H:100:ALA:HB1	1.88	0.55
1:B:312:LEU:O	1:B:354:LEU:HD22	2.05	0.55
1:G:176:ARG:HH22	1:G:360:ILE:CG1	2.18	0.55
1:K:276:CYS:HA	1:K:297:MET:O	2.06	0.55
1:A:397:GLY:O	1:A:465:LEU:HG	2.06	0.55
1:B:375:ARG:HH11	1:B:375:ARG:HG3	1.70	0.55
1:J:231:MET:HB2	1:J:284:TYR:H	1.71	0.55
1:K:352:VAL:HG22	1:K:355:GLY:H	1.72	0.55
1:K:176:ARG:HH21	1:K:360:ILE:HG12	1.71	0.55
1:K:364:GLY:HA3	1:K:370:LEU:HD13	1.88	0.55
1:P:124:ALA:O	1:P:128:LEU:HG	2.06	0.55
1:H:99:GLU:HG3	1:H:425:SER:CB	2.36	0.55
1:E:133:VAL:HG21	1:E:393:THR:O	2.06	0.55
1:L:334:LYS:HB3	1:L:350:SER:O	2.07	0.55
1:K:28:SER:O	1:K:34:GLY:HA2	2.05	0.55
1:M:266:VAL:HB	1:M:290:LEU:HD21	1.89	0.55
1:N:159:LEU:HG	1:N:163:LYS:HD3	1.87	0.55
1:K:451:GLN:HE22	1:K:471:THR:HA	1.72	0.55
1:A:226:ILE:HD11	1:A:310:LEU:HD12	1.88	0.55
1:F:109:HIS:CE1	1:F:111:GLN:HB2	2.42	0.55
1:M:317:GLU:HB2	1:M:329:LYS:HG2	1.87	0.55
1:N:99:GLU:CD	1:N:425:SER:HB2	2.27	0.55
1:A:54:GLY:O	1:A:58:LEU:HD23	2.06	0.55
1:I:216:PRO:HG2	1:I:295:GLY:HA2	1.87	0.55
1:H:489:GLN:O	1:H:493:SER:HB2	2.06	0.55
1:F:451:GLN:NE2	1:F:471:THR:HA	2.21	0.55
1:H:365:ALA:O	1:H:366:THR:HB	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:159:LEU:HG	1:N:163:LYS:HD2	1.87	0.55
1:I:27:LYS:O	1:I:436:ILE:HD11	2.07	0.55
1:F:317:GLU:CB	1:F:329:LYS:HD3	2.37	0.55
1:J:325:PRO:C	1:J:326:GLU:HG3	2.27	0.55
1:J:96:LEU:HD11	1:J:117:TRP:CZ2	2.41	0.55
1:B:152:THR:OG1	1:B:480:ILE:HG23	2.06	0.55
1:I:54:GLY:O	1:I:58:LEU:HD23	2.07	0.55
1:I:236:ILE:HG23	1:I:238:ILE:H	1.71	0.55
1:D:268:ARG:O	1:D:271:LYS:HG2	2.07	0.55
1:G:141:LYS:HG2	1:G:144:GLN:HB2	1.88	0.55
1:M:334:LYS:CB	1:M:351:GLY:HA3	2.36	0.55
1:A:171:VAL:HA	1:A:174:VAL:HG22	1.87	0.55
1:B:324:HIS:HB2	1:B:329:LYS:HZ1	1.72	0.55
1:P:324:HIS:ND1	1:P:325:PRO:HD3	2.22	0.55
1:O:452:LEU:HD13	1:O:465:LEU:HD13	1.88	0.55
1:H:161:HIS:CD2	1:H:162:HIS:H	2.24	0.55
1:N:324:HIS:O	1:N:329:LYS:HG2	2.07	0.55
1:C:92:LEU:CD1	1:C:433:LEU:HD21	2.36	0.55
1:O:322:PHE:HA	1:O:324:HIS:CD2	2.42	0.55
1:M:431:ARG:HH21	1:M:434:PRO:HG2	1.72	0.55
1:M:92:LEU:HG	1:M:433:LEU:HD21	1.89	0.55
1:P:27:LYS:CB	1:P:436:ILE:HD11	2.37	0.55
1:H:216:PRO:HG3	1:H:295:GLY:HA2	1.89	0.55
1:B:280:ARG:HD2	1:B:304:PHE:HB2	1.88	0.55
1:O:185:ALA:HA	1:O:309:ARG:NE	2.21	0.55
1:O:101:GLU:HA	1:O:104:ILE:CG2	2.37	0.55
1:J:32:PRO:HD2	1:J:467:MET:CE	2.37	0.55
1:M:143:ARG:HH22	1:M:168:LYS:HE3	1.72	0.55
1:K:78:GLN:HE22	1:K:489:GLN:HB3	1.71	0.55
1:L:59:LYS:HE2	1:L:76:ARG:HB2	1.89	0.55
1:O:188:VAL:CB	1:O:377:LEU:HD13	2.37	0.55
1:N:145:ASP:HB3	1:N:171:VAL:HG21	1.87	0.55
1:A:150:ALA:HB1	1:A:167:THR:OG1	2.06	0.55
1:N:149:ILE:O	1:N:152:THR:HG22	2.05	0.55
1:I:452:LEU:HD13	1:I:465:LEU:CD1	2.37	0.55
1:C:114:ILE:CG2	1:C:499:GLU:HG3	2.33	0.55
1:C:276:CYS:HA	1:C:297:MET:O	2.06	0.55
1:G:133:VAL:HB	1:G:393:THR:H	1.72	0.55
1:N:111:GLN:O	1:N:114:ILE:HB	2.06	0.55
1:G:431:ARG:HA	1:G:431:ARG:CZ	2.37	0.55
1:A:324:HIS:HB2	1:A:329:LYS:CE	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:108:ILE:CD1	1:I:418:LYS:HE3	2.36	0.55
1:L:390:ASP:CB	1:L:485:GLN:HE22	2.20	0.55
1:G:222:ALA:HB1	1:G:336:ILE:HD12	1.89	0.55
1:H:312:LEU:O	1:H:354:LEU:HD22	2.05	0.55
1:E:75:SER:O	1:E:78:GLN:HB3	2.07	0.55
1:C:111:GLN:HA	1:C:114:ILE:HG12	1.87	0.55
1:G:324:HIS:O	1:G:329:LYS:HG2	2.07	0.55
1:L:504:VAL:HG22	1:P:369:ILE:CD1	2.36	0.55
1:C:402:MET:CE	1:C:453:ARG:HG2	2.37	0.55
1:J:231:MET:HG3	1:J:283:ILE:HG13	1.88	0.55
1:P:128:LEU:HD21	1:P:488:ARG:HG2	1.88	0.55
1:J:139:GLU:O	1:J:140:VAL:HB	2.07	0.55
1:F:222:ALA:HA	1:F:275:ASN:OD1	2.06	0.55
1:D:334:LYS:O	1:D:335:LEU:HB2	2.07	0.55
1:E:364:GLY:HA3	1:E:370:LEU:CD1	2.37	0.55
1:E:104:ILE:O	1:E:107:LYS:HB2	2.06	0.55
1:G:190:LYS:HA	1:G:362:LEU:O	2.06	0.55
1:N:32:PRO:HA	1:N:155:SER:HB3	1.88	0.54
1:E:82:VAL:HG11	1:E:485:GLN:HG2	1.89	0.54
1:L:27:LYS:HB2	1:L:436:ILE:HG12	1.88	0.54
1:C:58:LEU:HB3	1:C:72:VAL:CG1	2.38	0.54
1:E:200:TYR:HD2	1:E:363:ARG:NH2	2.05	0.54
1:A:32:PRO:HD2	1:A:467:MET:CE	2.37	0.54
1:B:106:LYS:O	1:B:107:LYS:HB3	2.07	0.54
1:C:265:LYS:O	1:C:269:ILE:HB	2.07	0.54
1:K:284:TYR:O	1:K:287:PRO:HD2	2.08	0.54
1:O:96:LEU:HD13	1:O:96:LEU:C	2.27	0.54
1:N:93:ALA:O	1:N:96:LEU:HD12	2.07	0.54
1:N:58:LEU:HB3	1:N:72:VAL:CG1	2.37	0.54
1:G:219:ILE:HD12	1:G:275:ASN:HB3	1.88	0.54
1:A:209:LYS:HE2	1:A:301:HIS:O	2.08	0.54
1:E:190:LYS:C	1:E:190:LYS:HD2	2.28	0.54
1:A:213:VAL:HG11	1:C:304:PHE:CZ	2.42	0.54
1:H:146:LEU:HD23	1:H:147:MET:N	2.22	0.54
1:K:145:ASP:OD1	1:K:171:VAL:HB	2.07	0.54
1:E:163:LYS:O	1:E:166:PHE:HB2	2.08	0.54
1:I:157:LYS:HB3	1:I:159:LEU:HD22	1.90	0.54
1:D:25:LEU:HG	1:E:512:PRO:HD3	1.90	0.54
1:B:513:ARG:HA	1:G:61:ILE:HG12	1.89	0.54
1:P:107:LYS:O	1:P:107:LYS:HG2	2.08	0.54
1:A:236:ILE:HG23	1:A:237:LYS:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:497:ALA:O	1:F:500:VAL:HG22	2.08	0.54
1:L:451:GLN:HE22	1:L:471:THR:HA	1.71	0.54
1:A:128:LEU:O	1:A:129:LEU:HB2	2.07	0.54
1:A:171:VAL:HG12	1:A:384:LEU:HG	1.89	0.54
1:E:215:GLN:HB3	1:E:292:GLY:HA2	1.89	0.54
1:B:324:HIS:O	1:B:328:VAL:HG23	2.08	0.54
1:K:152:THR:OG1	1:K:480:ILE:HG23	2.07	0.54
1:O:188:VAL:HB	1:O:377:LEU:HD13	1.89	0.54
1:H:143:ARG:HA	1:H:143:ARG:HE	1.72	0.54
1:C:84:ASP:OD1	1:C:383:VAL:HG13	2.07	0.54
1:I:75:SER:O	1:I:78:GLN:HB3	2.08	0.54
1:O:207:LEU:O	1:O:347:ILE:HG22	2.08	0.54
1:L:74:MET:O	1:L:77:VAL:HG12	2.07	0.54
1:H:171:VAL:CG1	1:H:384:LEU:HG	2.34	0.54
1:I:146:LEU:HD21	1:I:150:ALA:CB	2.35	0.54
1:M:231:MET:HG3	1:M:283:ILE:HG13	1.89	0.54
1:F:146:LEU:HG	1:F:171:VAL:CG1	2.38	0.54
1:G:287:PRO:O	1:G:291:PHE:HD2	1.90	0.54
1:G:121:THR:O	1:G:125:ARG:HG3	2.07	0.54
1:K:231:MET:HG3	1:K:283:ILE:HG13	1.88	0.54
1:O:324:HIS:O	1:O:328:VAL:HG13	2.06	0.54
1:J:110:PRO:HB2	1:J:502:LEU:HB3	1.88	0.54
1:A:114:ILE:HA	1:A:117:TRP:CZ3	2.43	0.54
1:N:99:GLU:OE2	1:N:428:LYS:HE2	2.08	0.54
1:A:58:LEU:HB3	1:A:72:VAL:CG1	2.37	0.54
1:H:59:LYS:CE	1:H:76:ARG:HB2	2.37	0.54
1:J:208:ASP:O	1:J:209:LYS:HG3	2.07	0.54
1:I:176:ARG:CZ	1:I:358:CYS:HB2	2.38	0.54
1:P:161:HIS:CD2	1:P:162:HIS:H	2.26	0.54
1:O:154:LEU:HD21	1:O:163:LYS:NZ	2.23	0.54
1:F:106:LYS:HG3	1:O:446:ALA:HB2	1.90	0.54
1:H:211:ILE:CD1	1:H:297:MET:HG3	2.32	0.54
1:E:171:VAL:O	1:E:174:VAL:HG22	2.08	0.54
1:G:226:ILE:HB	1:G:317:GLU:OE2	2.08	0.54
1:O:108:ILE:HG22	1:O:109:HIS:N	2.20	0.54
1:H:225:LEU:HD12	1:H:226:ILE:N	2.22	0.54
1:K:209:LYS:HD3	1:K:300:GLU:O	2.08	0.54
1:O:96:LEU:HD11	1:O:498:ALA:CB	2.37	0.54
1:M:27:LYS:HG3	1:M:436:ILE:HG13	1.90	0.54
1:I:488:ARG:HG3	1:I:489:GLN:OE1	2.07	0.54
1:E:108:ILE:HD11	1:J:449:VAL:HB	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:334:LYS:CG	1:L:351:GLY:HA3	2.37	0.54
1:E:22:ILE:HD12	1:E:90:THR:CG2	2.38	0.54
1:I:191:LYS:HE3	1:I:346:LEU:HG	1.90	0.54
1:B:160:THR:HA	1:B:163:LYS:HB3	1.90	0.54
1:L:139:GLU:O	1:L:140:VAL:HB	2.08	0.54
1:N:146:LEU:HD11	1:N:168:LYS:HG3	1.90	0.54
1:C:146:LEU:CD2	1:C:147:MET:H	2.15	0.54
1:P:211:ILE:CD1	1:P:297:MET:HG3	2.34	0.54
1:B:431:ARG:HH21	1:B:434:PRO:HG2	1.73	0.54
1:M:82:VAL:HA	1:M:386:GLN:CG	2.37	0.54
1:A:112:THR:HG21	1:A:418:LYS:HD2	1.88	0.54
1:D:462:THR:O	1:D:475:MET:HB3	2.08	0.54
1:O:283:ILE:HG22	1:O:300:GLU:HG3	1.88	0.54
1:C:139:GLU:OE1	1:C:140:VAL:HG23	2.08	0.54
1:N:159:LEU:HB3	1:N:369:ILE:CG2	2.38	0.54
1:E:159:LEU:O	1:E:163:LYS:HB3	2.07	0.54
1:C:159:LEU:HD13	1:C:372:GLU:OE2	2.08	0.54
1:L:149:ILE:O	1:L:152:THR:HG22	2.07	0.54
1:L:462:THR:O	1:L:475:MET:HB3	2.06	0.54
1:D:269:ILE:HD13	1:D:274:ILE:HG21	1.89	0.54
1:F:226:ILE:O	1:F:329:LYS:HE3	2.07	0.54
1:F:82:VAL:HG21	1:F:485:GLN:HG2	1.88	0.54
1:G:5:GLU:HG2	1:G:5:GLU:O	2.07	0.54
1:M:222:ALA:HA	1:M:275:ASN:HB2	1.89	0.54
1:E:310:LEU:O	1:E:314:THR:HG22	2.07	0.54
1:G:163:LYS:HA	1:G:166:PHE:CD1	2.43	0.54
1:N:448:LEU:HD21	1:N:465:LEU:CD1	2.37	0.54
1:K:434:PRO:HB3	1:K:452:LEU:CD2	2.37	0.54
1:G:24:ASP:O	1:G:27:LYS:HG2	2.08	0.54
1:A:155:SER:HA	1:A:160:THR:HG21	1.89	0.54
1:A:96:LEU:HD21	1:A:117:TRP:CZ2	2.43	0.54
1:A:96:LEU:HD21	1:A:117:TRP:HZ2	1.72	0.54
1:N:402:MET:HE3	1:N:453:ARG:HG2	1.90	0.54
1:O:372:GLU:O	1:O:375:ARG:HB3	2.07	0.54
1:B:110:PRO:O	1:B:114:ILE:HG12	2.08	0.54
1:L:155:SER:HA	1:L:160:THR:HG21	1.89	0.54
1:J:372:GLU:O	1:J:375:ARG:HB3	2.08	0.54
1:C:329:LYS:HB2	1:C:329:LYS:NZ	2.23	0.54
1:I:152:THR:OG1	1:I:480:ILE:HG23	2.07	0.54
1:F:364:GLY:HA3	1:F:370:LEU:HD21	1.89	0.54
1:G:137:SER:OG	1:G:388:VAL:HA	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:40:LEU:HD13	1:E:41:SER:O	2.07	0.54
1:C:310:LEU:O	1:C:314:THR:HG22	2.08	0.54
1:P:500:VAL:O	1:P:504:VAL:HG22	2.08	0.54
1:B:334:LYS:CD	1:B:351:GLY:HA3	2.38	0.54
1:I:154:LEU:HD22	1:I:167:THR:HB	1.89	0.54
1:B:418:LYS:HG3	1:I:450:ALA:CB	2.37	0.54
1:L:219:ILE:HB	1:L:275:ASN:HB3	1.90	0.54
1:P:176:ARG:CD	1:P:358:CYS:HB2	2.38	0.54
1:J:431:ARG:HH21	1:J:434:PRO:HG2	1.73	0.54
1:P:187:HIS:O	1:P:359:THR:HG23	2.08	0.54
1:H:433:LEU:HB2	1:H:434:PRO:HD3	1.89	0.54
1:C:345:LYS:C	1:C:346:LEU:HD12	2.28	0.54
1:C:280:ARG:HD2	1:C:304:PHE:HB2	1.90	0.54
1:G:203:GLU:HB2	1:G:350:SER:HB2	1.90	0.54
1:M:173:ALA:O	1:M:176:ARG:HG2	2.07	0.54
1:J:210:LYS:HE2	1:J:212:GLY:O	2.08	0.54
1:F:190:LYS:HD3	1:F:374:GLU:HB2	1.90	0.54
1:O:354:LEU:HD23	1:O:356:GLU:H	1.73	0.54
1:E:161:HIS:CG	1:E:162:HIS:H	2.26	0.54
1:B:166:PHE:CZ	1:B:198:ASP:HB3	2.42	0.53
1:P:262:MET:HG3	1:P:290:LEU:HD22	1.89	0.53
1:E:369:ILE:O	1:E:372:GLU:HB3	2.09	0.53
1:I:79:ASP:HA	1:I:83:GLY:HA2	1.88	0.53
1:O:317:GLU:HB2	1:O:329:LYS:HD3	1.89	0.53
1:A:512:PRO:HG2	1:F:57:ILE:HD12	1.90	0.53
1:A:52:ASN:H	1:A:375:ARG:HH11	1.55	0.53
1:F:232:ASP:HA	1:F:284:TYR:CD1	2.43	0.53
1:J:209:LYS:HE2	1:J:301:HIS:O	2.07	0.53
1:G:496:GLU:HA	1:G:499:GLU:HB3	1.90	0.53
1:J:411:LEU:HB3	1:J:423:MET:CE	2.38	0.53
1:O:146:LEU:CD2	1:O:147:MET:H	2.20	0.53
1:D:159:LEU:HG	1:D:163:LYS:CB	2.39	0.53
1:M:141:LYS:HG2	1:M:144:GLN:HB2	1.89	0.53
1:F:106:LYS:HE2	1:F:113:ILE:CD1	2.33	0.53
1:A:82:VAL:HG13	1:A:83:GLY:N	2.22	0.53
1:F:225:LEU:HD12	1:F:226:ILE:N	2.24	0.53
1:M:117:TRP:CD1	1:M:495:ALA:HA	2.43	0.53
1:F:188:VAL:HG21	1:F:377:LEU:HD11	1.90	0.53
1:L:32:PRO:HD2	1:L:467:MET:CE	2.38	0.53
1:I:222:ALA:HA	1:I:275:ASN:HB2	1.91	0.53
1:B:219:ILE:HB	1:B:275:ASN:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:174:VAL:O	1:J:177:LEU:HB3	2.08	0.53
1:L:96:LEU:HD13	1:L:97:LEU:N	2.24	0.53
1:K:207:LEU:HB3	1:K:347:ILE:CG2	2.38	0.53
1:D:425:SER:O	1:D:428:LYS:HG2	2.08	0.53
1:K:321:THR:O	1:K:323:ASP:N	2.41	0.53
1:I:231:MET:HB2	1:I:284:TYR:H	1.72	0.53
1:P:159:LEU:N	1:P:159:LEU:HD13	2.24	0.53
1:J:40:LEU:N	1:K:3:ALA:HB2	2.23	0.53
1:M:38:ILE:O	1:M:38:ILE:HG13	2.07	0.53
1:A:211:ILE:HG13	1:A:298:ALA:O	2.09	0.53
1:D:324:HIS:O	1:D:328:VAL:HG23	2.08	0.53
1:O:397:GLY:HA3	1:O:475:MET:HE1	1.91	0.53
1:K:188:VAL:CG1	1:K:377:LEU:HD22	2.38	0.53
1:E:222:ALA:HB1	1:E:336:ILE:HD12	1.90	0.53
1:L:58:LEU:HB3	1:L:72:VAL:HG11	1.90	0.53
1:B:266:VAL:HB	1:B:290:LEU:HD21	1.88	0.53
1:G:223:LYS:HD3	1:G:272:HIS:CE1	2.43	0.53
1:N:310:LEU:O	1:N:314:THR:HG22	2.07	0.53
1:M:211:ILE:HG13	1:M:298:ALA:O	2.09	0.53
1:M:99:GLU:HB3	1:M:425:SER:HB2	1.90	0.53
1:I:312:LEU:O	1:I:354:LEU:HD22	2.08	0.53
1:P:108:ILE:HG22	1:P:109:HIS:N	2.23	0.53
1:N:283:ILE:HG22	1:N:300:GLU:CG	2.37	0.53
1:L:231:MET:HB2	1:L:284:TYR:H	1.74	0.53
1:D:25:LEU:HG	1:E:512:PRO:HG3	1.91	0.53
1:F:269:ILE:HG23	1:F:274:ILE:CG2	2.37	0.53
1:E:59:LYS:CE	1:E:76:ARG:HB2	2.39	0.53
1:K:216:PRO:CG	1:K:295:GLY:HA2	2.39	0.53
1:E:99:GLU:HG2	1:E:425:SER:HB2	1.90	0.53
1:D:15:SER:OG	1:D:501:ILE:HG21	2.08	0.53
1:H:317:GLU:HB3	1:H:330:LEU:H	1.74	0.53
1:K:376:SER:O	1:K:379:ASP:HB2	2.09	0.53
1:A:233:THR:HG21	1:A:261:LYS:HE2	1.89	0.53
1:B:509:LYS:HG3	1:G:38:ILE:O	2.08	0.53
1:N:154:LEU:HD13	1:N:167:THR:OG1	2.09	0.53
1:O:40:LEU:HD23	1:O:48:LEU:HG	1.89	0.53
1:C:287:PRO:O	1:C:291:PHE:HD1	1.91	0.53
1:J:433:LEU:HB2	1:J:434:PRO:HD3	1.91	0.53
1:D:89:VAL:CG1	1:D:490:VAL:HB	2.38	0.53
1:G:216:PRO:CG	1:G:295:GLY:HA2	2.37	0.53
1:D:512:PRO:O	1:D:513:ARG:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:82:VAL:HG13	1:F:486:VAL:HG12	1.90	0.53
1:G:141:LYS:CG	1:G:144:GLN:HB2	2.38	0.53
1:E:242:ARG:N	1:E:242:ARG:HD3	2.24	0.53
1:K:268:ARG:O	1:K:271:LYS:HG2	2.09	0.53
1:J:280:ARG:HD2	1:J:304:PHE:HB2	1.90	0.53
1:A:280:ARG:HD2	1:A:304:PHE:HB2	1.91	0.53
1:M:177:LEU:HG	1:M:186:ILE:HD11	1.91	0.53
1:E:204:GLY:HA3	1:E:349:PHE:O	2.08	0.53
1:L:163:LYS:O	1:L:166:PHE:HB2	2.08	0.53
1:O:211:ILE:HG13	1:O:298:ALA:O	2.09	0.53
1:N:438:ALA:HB2	1:N:448:LEU:HG	1.90	0.53
1:B:431:ARG:O	1:B:434:PRO:HD2	2.09	0.53
1:C:402:MET:HG2	1:C:431:ARG:HH22	1.74	0.53
1:O:265:LYS:HE2	1:O:322:PHE:CZ	2.44	0.53
1:F:325:PRO:C	1:F:326:GLU:HG3	2.29	0.53
1:J:274:ILE:HG23	1:J:296:VAL:HG21	1.91	0.53
1:K:313:VAL:CG1	1:K:352:VAL:HB	2.39	0.53
1:F:39:LEU:CD1	1:F:57:ILE:HG13	2.38	0.53
1:B:216:PRO:HG2	1:B:295:GLY:HA2	1.91	0.53
1:B:114:ILE:HA	1:B:117:TRP:CE3	2.43	0.53
1:F:310:LEU:O	1:F:314:THR:HG22	2.08	0.53
1:J:12:ARG:HB2	1:J:501:ILE:HG23	1.90	0.53
1:H:110:PRO:O	1:H:114:ILE:HG12	2.09	0.53
1:L:143:ARG:NE	1:L:143:ARG:HA	2.24	0.53
1:K:52:ASN:H	1:K:375:ARG:NH2	2.06	0.53
1:G:280:ARG:HD2	1:G:304:PHE:HB2	1.89	0.53
1:G:146:LEU:HB2	1:G:171:VAL:HG21	1.90	0.53
1:C:159:LEU:HG	1:C:163:LYS:CG	2.39	0.53
1:K:211:ILE:HG12	1:K:298:ALA:H	1.73	0.53
1:N:274:ILE:O	1:N:296:VAL:HG22	2.09	0.53
1:E:231:MET:HB2	1:E:284:TYR:H	1.73	0.53
1:D:211:ILE:HG13	1:D:298:ALA:O	2.09	0.53
1:L:207:LEU:HD11	1:L:209:LYS:HE2	1.89	0.53
1:P:334:LYS:CD	1:P:351:GLY:HA3	2.39	0.53
1:E:334:LYS:HB3	1:E:351:GLY:HA3	1.91	0.53
1:D:22:ILE:HD12	1:D:90:THR:CG2	2.39	0.53
1:P:101:GLU:O	1:P:104:ILE:HG23	2.09	0.53
1:A:16:PHE:HA	1:A:97:LEU:HD23	1.90	0.53
1:P:185:ALA:HA	1:P:309:ARG:CD	2.39	0.53
1:O:146:LEU:HB2	1:O:171:VAL:CG2	2.39	0.53
1:P:284:TYR:O	1:P:287:PRO:HD2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:146:LEU:CD2	1:M:150:ALA:HB3	2.35	0.53
1:G:146:LEU:HD11	1:G:150:ALA:CB	2.39	0.53
1:P:159:LEU:H	1:P:159:LEU:HD22	1.74	0.53
1:I:140:VAL:HA	1:I:175:LEU:CD2	2.35	0.53
1:B:418:LYS:HD3	1:I:449:VAL:CG1	2.38	0.53
1:O:65:ASN:H	1:O:65:ASN:ND2	2.00	0.53
1:C:431:ARG:CZ	1:C:431:ARG:HA	2.39	0.53
1:M:79:ASP:O	1:M:83:GLY:HA2	2.09	0.53
1:J:114:ILE:HD11	1:J:502:LEU:HD23	1.91	0.53
1:F:274:ILE:HG23	1:F:296:VAL:CG2	2.39	0.53
1:A:283:ILE:HG22	1:A:300:GLU:HG3	1.91	0.53
1:J:341:ILE:HD12	1:J:346:LEU:CD2	2.39	0.53
1:F:163:LYS:HG3	1:F:166:PHE:CD2	2.44	0.53
1:K:496:GLU:O	1:K:500:VAL:HG13	2.08	0.53
1:M:511:ALA:HB3	1:M:512:PRO:HD3	1.91	0.53
1:E:203:GLU:HG2	1:E:350:SER:HB2	1.91	0.53
1:P:266:VAL:HG21	1:P:290:LEU:HD11	1.91	0.53
1:D:82:VAL:HG13	1:D:83:GLY:N	2.24	0.53
1:F:367:GLN:OE1	1:F:369:ILE:HB	2.08	0.53
1:P:208:ASP:C	1:P:209:LYS:HG3	2.29	0.53
1:F:27:LYS:HB2	1:F:436:ILE:HD11	1.91	0.53
1:J:284:TYR:O	1:J:287:PRO:HD2	2.09	0.53
1:K:65:ASN:H	1:K:65:ASN:HD22	1.57	0.53
1:J:79:ASP:HA	1:J:83:GLY:CA	2.39	0.53
1:N:89:VAL:HG12	1:N:490:VAL:HB	1.91	0.53
1:M:412:ALA:CB	1:M:424:GLU:HB3	2.39	0.53
1:G:259:LYS:O	1:G:263:LYS:HG2	2.09	0.53
1:K:89:VAL:HG12	1:K:490:VAL:HG23	1.91	0.53
1:C:372:GLU:O	1:C:375:ARG:HB3	2.08	0.53
1:E:37:LYS:HD2	1:G:508:ILE:HG12	1.91	0.53
1:M:231:MET:HB2	1:M:284:TYR:H	1.73	0.53
1:B:211:ILE:HG12	1:B:298:ALA:H	1.74	0.53
1:K:452:LEU:HD13	1:K:465:LEU:CD1	2.39	0.53
1:N:326:GLU:HG3	1:N:327:LEU:H	1.73	0.53
1:A:434:PRO:HB3	1:A:452:LEU:HD23	1.91	0.53
1:J:322:PHE:HA	1:J:324:HIS:CD2	2.44	0.53
1:H:453:ARG:HH22	1:P:418:LYS:HG3	1.74	0.53
1:O:117:TRP:NE1	1:O:498:ALA:HB3	2.24	0.53
1:P:96:LEU:O	1:P:96:LEU:HD22	2.09	0.53
1:H:109:HIS:CE1	1:H:111:GLN:HB2	2.44	0.53
1:G:32:PRO:HD2	1:G:467:MET:HE1	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:390:ASP:HB2	1:B:485:GLN:HE22	1.74	0.53
1:P:185:ALA:HA	1:P:309:ARG:HD3	1.91	0.53
1:D:451:GLN:HE22	1:D:471:THR:HA	1.74	0.53
1:P:366:THR:O	1:P:366:THR:HG22	2.09	0.53
1:P:337:GLU:HG3	1:P:339:VAL:HG23	1.90	0.53
1:A:482:GLU:OE1	1:A:487:LYS:HE3	2.08	0.53
1:C:402:MET:HE1	1:C:406:HIS:HB2	1.91	0.52
1:H:402:MET:HG2	1:H:431:ARG:HH22	1.74	0.52
1:F:114:ILE:HA	1:F:117:TRP:CZ3	2.44	0.52
1:P:114:ILE:HA	1:P:117:TRP:CE3	2.44	0.52
1:F:1:ALA:N	1:F:508:ILE:HD12	2.25	0.52
1:D:449:VAL:HG11	1:K:417:GLY:HA3	1.91	0.52
1:F:483:SER:HB2	1:F:486:VAL:HG13	1.91	0.52
1:L:32:PRO:HA	1:L:155:SER:O	2.09	0.52
1:K:79:ASP:HA	1:K:83:GLY:CA	2.39	0.52
1:N:78:GLN:NE2	1:N:489:GLN:HE21	2.06	0.52
1:J:369:ILE:O	1:J:372:GLU:HB2	2.09	0.52
1:K:64:ASP:CG	1:K:66:PRO:HD2	2.30	0.52
1:G:20:ILE:HB	1:G:98:ARG:NH2	2.24	0.52
1:A:405:ALA:HB2	1:A:430:LEU:HB2	1.91	0.52
1:O:364:GLY:HA3	1:O:370:LEU:CD1	2.39	0.52
1:J:154:LEU:HB3	1:J:160:THR:OG1	2.08	0.52
1:G:297:MET:CE	1:G:347:ILE:HD11	2.39	0.52
1:H:56:THR:HG21	1:H:375:ARG:CD	2.39	0.52
1:A:163:LYS:HG3	1:A:166:PHE:HB2	1.91	0.52
1:B:149:ILE:O	1:B:152:THR:HG22	2.08	0.52
1:L:107:LYS:O	1:L:108:ILE:HD13	2.10	0.52
1:M:500:VAL:HA	1:M:503:ARG:NH1	2.24	0.52
1:E:161:HIS:CD2	1:E:162:HIS:H	2.27	0.52
1:A:216:PRO:HG2	1:A:295:GLY:HA2	1.91	0.52
1:B:254:ILE:CG2	1:F:238:ILE:HD12	2.40	0.52
1:E:114:ILE:HA	1:E:117:TRP:CE3	2.44	0.52
1:M:131:SER:HB2	1:M:461:THR:HG21	1.91	0.52
1:O:190:LYS:HA	1:O:362:LEU:O	2.10	0.52
1:D:171:VAL:HA	1:D:174:VAL:HG22	1.92	0.52
1:H:146:LEU:HB2	1:H:171:VAL:HG21	1.90	0.52
1:D:176:ARG:NH1	1:D:201:LEU:HD21	2.25	0.52
1:F:51:THR:HA	1:F:375:ARG:HD2	1.91	0.52
1:J:483:SER:O	1:J:486:VAL:HG22	2.09	0.52
1:E:394:VAL:HG23	1:E:482:GLU:HB2	1.91	0.52
1:H:482:GLU:OE1	1:H:487:LYS:HE2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:280:ARG:HD2	1:L:304:PHE:HB2	1.90	0.52
1:N:99:GLU:HG2	1:N:425:SER:CB	2.39	0.52
1:M:438:ALA:CB	1:M:448:LEU:HG	2.40	0.52
1:I:110:PRO:HA	1:I:113:ILE:HD12	1.90	0.52
1:A:313:VAL:CG1	1:A:352:VAL:HG11	2.40	0.52
1:D:450:ALA:HB2	1:K:416:PRO:HB3	1.90	0.52
1:E:154:LEU:HD21	1:E:163:LYS:HZ2	1.73	0.52
1:C:146:LEU:HD11	1:C:150:ALA:CB	2.39	0.52
1:I:225:LEU:HD13	1:I:329:LYS:HE2	1.91	0.52
1:M:345:LYS:C	1:M:346:LEU:HD12	2.30	0.52
1:P:226:ILE:HG12	1:P:278:ILE:HG23	1.91	0.52
1:D:231:MET:HB2	1:D:284:TYR:H	1.73	0.52
1:A:431:ARG:O	1:A:434:PRO:HD2	2.10	0.52
1:I:392:ARG:C	1:I:484:PHE:HB2	2.30	0.52
1:B:226:ILE:HG12	1:B:278:ILE:HG23	1.92	0.52
1:O:148:ASN:HA	1:O:479:GLY:O	2.10	0.52
1:D:146:LEU:CD1	1:D:171:VAL:HG13	2.28	0.52
1:E:171:VAL:HA	1:E:174:VAL:HG22	1.91	0.52
1:N:231:MET:HB2	1:N:284:TYR:H	1.75	0.52
1:L:438:ALA:CB	1:L:448:LEU:HG	2.40	0.52
1:H:159:LEU:O	1:H:163:LYS:HB3	2.10	0.52
1:C:27:LYS:HB2	1:C:436:ILE:HD11	1.92	0.52
1:L:99:GLU:CG	1:L:425:SER:HB2	2.39	0.52
1:C:219:ILE:HB	1:C:275:ASN:HB3	1.90	0.52
1:G:402:MET:HE3	1:G:453:ARG:HG2	1.91	0.52
1:N:48:LEU:HD13	1:N:48:LEU:N	2.24	0.52
1:G:408:VAL:HA	1:G:411:LEU:HD12	1.91	0.52
1:E:176:ARG:HD2	1:E:358:CYS:SG	2.50	0.52
1:J:313:VAL:HG13	1:J:352:VAL:HG21	1.91	0.52
1:J:505:ASP:O	1:J:507:ILE:HG12	2.09	0.52
1:B:174:VAL:HG12	1:B:381:LEU:HD22	1.92	0.52
1:C:145:ASP:OD1	1:C:171:VAL:HB	2.10	0.52
1:I:145:ASP:OD1	1:I:171:VAL:HB	2.09	0.52
1:F:276:CYS:HA	1:F:297:MET:O	2.09	0.52
1:J:245:VAL:C	1:J:247:SER:H	2.13	0.52
1:K:222:ALA:HA	1:K:275:ASN:OD1	2.09	0.52
1:N:52:ASN:OD1	1:N:157:LYS:HG2	2.09	0.52
1:F:334:LYS:CG	1:F:351:GLY:HA3	2.38	0.52
1:G:219:ILE:HB	1:G:275:ASN:HB3	1.92	0.52
1:P:313:VAL:HG22	1:P:357:ALA:HB3	1.91	0.52
1:P:143:ARG:HA	1:P:143:ARG:HE	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:78:GLN:NE2	1:L:486:VAL:HA	2.24	0.52
1:M:171:VAL:O	1:M:174:VAL:HG22	2.09	0.52
1:G:171:VAL:O	1:G:174:VAL:HG22	2.10	0.52
1:G:171:VAL:HA	1:G:174:VAL:HG22	1.90	0.52
1:I:283:ILE:HG22	1:I:300:GLU:CG	2.39	0.52
1:P:145:ASP:O	1:P:171:VAL:HG11	2.09	0.52
1:G:83:GLY:H	1:G:486:VAL:HG12	1.75	0.52
1:P:475:MET:SD	1:P:480:ILE:HB	2.49	0.52
1:H:338:GLU:HA	1:H:346:LEU:O	2.10	0.52
1:J:104:ILE:HG13	1:J:105:ALA:N	2.24	0.52
1:G:130:ASN:O	1:G:131:SER:HB2	2.09	0.52
1:P:210:LYS:HE2	1:P:212:GLY:O	2.10	0.52
1:O:171:VAL:O	1:O:174:VAL:HG22	2.10	0.52
1:B:171:VAL:O	1:B:175:LEU:HG	2.10	0.52
1:P:269:ILE:HG12	1:P:274:ILE:HG21	1.91	0.52
1:K:163:LYS:HD2	1:K:166:PHE:CG	2.45	0.52
1:F:106:LYS:HG2	1:O:446:ALA:HB2	1.92	0.52
1:P:157:LYS:HB3	1:P:159:LEU:CD2	2.39	0.52
1:P:150:ALA:HB1	1:P:167:THR:OG1	2.10	0.52
1:P:38:ILE:CG2	1:P:50:VAL:HB	2.33	0.52
1:G:324:HIS:CG	1:G:325:PRO:HD3	2.44	0.52
1:I:89:VAL:HA	1:I:490:VAL:HG23	1.91	0.52
1:G:187:HIS:O	1:G:359:THR:HG23	2.10	0.52
1:A:159:LEU:CG	1:A:163:LYS:HD3	2.38	0.52
1:F:82:VAL:CG1	1:F:486:VAL:HG12	2.39	0.52
1:A:364:GLY:HA3	1:A:370:LEU:HD11	1.90	0.52
1:L:484:PHE:CE2	1:L:488:ARG:HD3	2.44	0.52
1:N:192:LEU:HB2	1:N:343:GLU:OE1	2.08	0.52
1:J:207:LEU:O	1:J:347:ILE:HG22	2.09	0.52
1:I:507:ILE:O	1:I:508:ILE:HB	2.09	0.52
1:A:61:ILE:CG2	1:A:63:VAL:HG23	2.40	0.52
1:J:146:LEU:HB2	1:J:171:VAL:HG21	1.92	0.52
1:J:128:LEU:HB3	1:J:484:PHE:CE1	2.44	0.52
1:K:313:VAL:HG13	1:K:352:VAL:CB	2.39	0.52
1:A:74:MET:HG2	1:A:493:SER:OG	2.10	0.52
1:A:340:MET:HG2	1:A:345:LYS:HG2	1.91	0.52
1:B:219:ILE:HD12	1:B:275:ASN:HB3	1.91	0.52
1:C:44:ARG:HH11	1:C:44:ARG:HG3	1.75	0.52
1:I:19:ALA:HB1	1:I:94:ALA:HA	1.92	0.52
1:G:268:ARG:O	1:G:271:LYS:HG2	2.10	0.52
1:P:507:ILE:HG22	1:P:508:ILE:HG23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:190:LYS:HD3	1:O:370:LEU:CD2	2.39	0.52
1:N:146:LEU:CD1	1:N:147:MET:H	2.23	0.52
1:K:174:VAL:HG21	1:K:384:LEU:CB	2.40	0.52
1:J:38:ILE:O	1:J:39:LEU:HB2	2.10	0.52
1:F:152:THR:HG21	1:F:480:ILE:HG23	1.92	0.52
1:O:82:VAL:HG13	1:O:83:GLY:N	2.22	0.52
1:O:452:LEU:HD13	1:O:465:LEU:CD1	2.40	0.52
1:K:225:LEU:HD11	1:K:324:HIS:ND1	2.25	0.52
1:J:448:LEU:HD21	1:J:465:LEU:CD1	2.40	0.52
1:F:128:LEU:C	1:F:129:LEU:HD13	2.30	0.52
1:L:207:LEU:HB3	1:L:347:ILE:HG23	1.92	0.52
1:G:313:VAL:HG13	1:G:352:VAL:CG1	2.40	0.52
1:B:219:ILE:HD11	1:B:336:ILE:HB	1.91	0.52
1:A:219:ILE:HB	1:A:275:ASN:HB3	1.92	0.52
1:E:96:LEU:HD13	1:E:97:LEU:N	2.24	0.52
1:G:140:VAL:HA	1:G:175:LEU:HD22	1.91	0.52
1:P:58:LEU:HB3	1:P:72:VAL:CG1	2.40	0.52
1:A:31:GLY:O	1:A:156:SER:HA	2.09	0.52
1:M:175:LEU:HD23	1:M:178:LYS:HE2	1.91	0.51
1:G:146:LEU:HD21	1:G:150:ALA:HB3	1.92	0.51
1:I:225:LEU:HD11	1:I:324:HIS:ND1	2.26	0.51
1:N:431:ARG:NH2	1:N:434:PRO:HG2	2.25	0.51
1:K:192:LEU:HG	1:K:366:THR:CG2	2.33	0.51
1:G:59:LYS:CE	1:G:76:ARG:HB2	2.40	0.51
1:L:283:ILE:HG22	1:L:300:GLU:CG	2.40	0.51
1:A:173:ALA:HB2	1:A:360:ILE:HD11	1.92	0.51
1:D:367:GLN:HG2	1:D:369:ILE:H	1.74	0.51
1:J:231:MET:HE1	1:J:265:LYS:HD3	1.92	0.51
1:H:438:ALA:HB2	1:H:448:LEU:HG	1.91	0.51
1:G:99:GLU:HG3	1:G:425:SER:HB2	1.91	0.51
1:H:496:GLU:O	1:H:500:VAL:HG13	2.10	0.51
1:O:368:GLN:O	1:O:371:ASP:HB2	2.10	0.51
1:I:207:LEU:O	1:I:347:ILE:HG22	2.10	0.51
1:B:510:ALA:HB3	1:G:25:LEU:CG	2.39	0.51
1:M:372:GLU:HG2	1:M:375:ARG:NH2	2.25	0.51
1:I:187:HIS:O	1:I:359:THR:HG23	2.09	0.51
1:H:280:ARG:HD2	1:H:304:PHE:HB2	1.91	0.51
1:O:141:LYS:HG2	1:O:144:GLN:HB2	1.91	0.51
1:L:431:ARG:CZ	1:L:431:ARG:HA	2.40	0.51
1:G:485:GLN:HB3	1:G:488:ARG:HH21	1.75	0.51
1:J:192:LEU:HD13	1:J:366:THR:OG1	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:452:LEU:HD13	1:H:465:LEU:HD13	1.92	0.51
1:I:58:LEU:HB3	1:I:72:VAL:CG1	2.41	0.51
1:L:310:LEU:O	1:L:313:VAL:HB	2.11	0.51
1:G:499:GLU:O	1:G:503:ARG:HG3	2.10	0.51
1:C:405:ALA:HA	1:C:408:VAL:HG22	1.92	0.51
1:O:171:VAL:O	1:O:175:LEU:HG	2.10	0.51
1:G:51:THR:HA	1:G:375:ARG:HD2	1.93	0.51
1:P:171:VAL:CA	1:P:174:VAL:HG22	2.39	0.51
1:G:507:ILE:HD12	1:G:508:ILE:HG13	1.92	0.51
1:G:124:ALA:O	1:G:128:LEU:HD12	2.10	0.51
1:B:438:ALA:CB	1:B:448:LEU:HG	2.40	0.51
1:D:366:THR:O	1:D:366:THR:HG23	2.09	0.51
1:J:128:LEU:HD21	1:J:487:LYS:HB2	1.92	0.51
1:L:152:THR:HG21	1:L:481:THR:O	2.10	0.51
1:N:497:ALA:O	1:N:501:ILE:HG12	2.10	0.51
1:J:223:LYS:HB2	1:J:274:ILE:HA	1.91	0.51
1:J:287:PRO:O	1:J:291:PHE:HD2	1.93	0.51
1:O:32:PRO:HB2	1:O:467:MET:CE	2.40	0.51
1:D:402:MET:CE	1:D:453:ARG:HG2	2.40	0.51
1:I:32:PRO:HD2	1:I:467:MET:HE1	1.91	0.51
1:F:431:ARG:O	1:F:434:PRO:HD2	2.10	0.51
1:A:509:LYS:H	1:F:37:LYS:NZ	2.07	0.51
1:F:219:ILE:HB	1:F:275:ASN:HB3	1.92	0.51
1:I:451:GLN:NE2	1:I:471:THR:HA	2.25	0.51
1:F:500:VAL:HA	1:F:503:ARG:HG2	1.92	0.51
1:D:103:LEU:HD11	1:D:113:ILE:HG13	1.93	0.51
1:J:221:ASN:HA	1:J:333:CYS:HB2	1.93	0.51
1:E:92:LEU:O	1:E:95:GLU:HG2	2.11	0.51
1:O:276:CYS:HA	1:O:297:MET:O	2.10	0.51
1:I:171:VAL:HA	1:I:174:VAL:HG22	1.93	0.51
1:B:418:LYS:HG3	1:I:450:ALA:HA	1.91	0.51
1:O:66:PRO:HG3	1:O:510:ALA:HB3	1.93	0.51
1:C:274:ILE:HG23	1:C:274:ILE:O	2.10	0.51
1:K:32:PRO:HG2	1:K:467:MET:HE3	1.93	0.51
1:P:219:ILE:HD11	1:P:336:ILE:HB	1.92	0.51
1:B:447:ASP:CA	1:I:107:LYS:HG2	2.40	0.51
1:L:39:LEU:O	1:L:48:LEU:HA	2.11	0.51
1:L:64:ASP:HB3	1:L:512:PRO:HA	1.92	0.51
1:J:367:GLN:HG2	1:J:369:ILE:HB	1.93	0.51
1:C:191:LYS:HZ1	1:C:346:LEU:HD21	1.76	0.51
1:B:126:GLN:HE22	1:B:411:LEU:HD11	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:219:ILE:HB	1:J:275:ASN:HB3	1.91	0.51
1:O:191:LYS:HG2	1:O:341:ILE:HG22	1.93	0.51
1:I:284:TYR:O	1:I:287:PRO:HD2	2.09	0.51
1:B:24:ASP:O	1:B:27:LYS:HG2	2.10	0.51
1:L:82:VAL:HA	1:L:386:GLN:HG3	1.92	0.51
1:P:204:GLY:O	1:P:359:THR:HB	2.11	0.51
1:N:274:ILE:HG23	1:N:296:VAL:CG2	2.40	0.51
1:L:108:ILE:HG22	1:L:109:HIS:N	2.26	0.51
1:F:154:LEU:HD22	1:F:167:THR:HB	1.92	0.51
1:C:41:SER:HB3	1:C:45:ASP:OD2	2.11	0.51
1:D:130:ASN:O	1:D:131:SER:HB3	2.11	0.51
1:O:166:PHE:HD2	1:O:362:LEU:HD22	1.76	0.51
1:M:171:VAL:HA	1:M:174:VAL:HG22	1.91	0.51
1:A:171:VAL:O	1:A:175:LEU:HG	2.11	0.51
1:B:418:LYS:HA	1:I:453:ARG:NH2	2.25	0.51
1:O:485:GLN:HA	1:O:488:ARG:HG2	1.92	0.51
1:J:216:PRO:HG3	1:J:295:GLY:HA2	1.93	0.51
1:C:106:LYS:O	1:C:108:ILE:HG23	2.11	0.51
1:M:448:LEU:HD21	1:M:465:LEU:CD1	2.41	0.51
1:G:176:ARG:HE	1:G:358:CYS:HB2	1.76	0.51
1:I:143:ARG:HA	1:I:143:ARG:HE	1.75	0.51
1:O:501:ILE:O	1:O:502:LEU:HD12	2.10	0.51
1:L:191:LYS:HD2	1:L:344:ASP:HB3	1.92	0.51
1:P:19:ALA:HB1	1:P:94:ALA:HA	1.93	0.51
1:C:334:LYS:HD3	1:C:351:GLY:HA3	1.91	0.51
1:L:159:LEU:HD23	1:L:163:LYS:HD3	1.92	0.51
1:C:367:GLN:CD	1:C:369:ILE:HB	2.31	0.51
1:I:174:VAL:HG11	1:I:384:LEU:HB2	1.93	0.51
1:G:225:LEU:HG	1:G:277:PHE:CD1	2.46	0.51
1:A:274:ILE:O	1:A:296:VAL:HG22	2.10	0.51
1:L:223:LYS:HB2	1:L:274:ILE:HA	1.93	0.51
1:G:191:LYS:O	1:G:370:LEU:HD21	2.11	0.51
1:K:231:MET:HB2	1:K:284:TYR:H	1.75	0.51
1:K:283:ILE:CG2	1:K:300:GLU:HG3	2.38	0.51
1:C:397:GLY:O	1:C:465:LEU:HD23	2.10	0.51
1:D:324:HIS:HB2	1:D:329:LYS:HZ3	1.76	0.51
1:O:324:HIS:HB2	1:O:329:LYS:CE	2.40	0.51
1:B:313:VAL:HG13	1:B:352:VAL:HG21	1.93	0.51
1:N:508:ILE:HG22	1:N:509:LYS:HG3	1.93	0.51
1:K:219:ILE:HB	1:K:275:ASN:HB3	1.92	0.51
1:M:319:ALA:HA	1:M:329:LYS:HZ1	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:431:ARG:HH21	1:E:434:PRO:HG2	1.75	0.51
1:B:128:LEU:HD11	1:B:488:ARG:HG2	1.93	0.51
1:A:222:ALA:HA	1:A:275:ASN:OD1	2.11	0.51
1:K:334:LYS:HG3	1:K:351:GLY:HA3	1.93	0.51
1:H:143:ARG:O	1:H:143:ARG:HG3	2.10	0.51
1:D:110:PRO:O	1:D:113:ILE:HB	2.11	0.51
1:G:338:GLU:OE1	1:G:345:LYS:HE3	2.10	0.51
1:C:210:LYS:HE2	1:C:212:GLY:O	2.11	0.51
1:K:124:ALA:HA	1:K:491:LEU:HD13	1.93	0.51
1:N:373:ALA:HA	1:N:376:SER:HB2	1.92	0.51
1:I:211:ILE:N	1:I:211:ILE:CD1	2.72	0.51
1:N:163:LYS:HG3	1:N:166:PHE:CG	2.46	0.51
1:M:145:ASP:O	1:M:171:VAL:HG11	2.11	0.51
1:C:40:LEU:HD22	1:H:510:ALA:CB	2.40	0.51
1:O:402:MET:CE	1:O:453:ARG:HG2	2.41	0.51
1:J:431:ARG:O	1:J:434:PRO:HD2	2.11	0.51
1:E:284:TYR:O	1:E:287:PRO:HD2	2.10	0.51
1:F:401:GLU:HG2	1:F:433:LEU:HD22	1.92	0.51
1:E:30:LEU:N	1:E:30:LEU:CD1	2.73	0.51
1:B:236:ILE:HG22	1:B:237:LYS:N	2.25	0.51
1:F:59:LYS:HE2	1:F:76:ARG:CB	2.40	0.51
1:L:183:LEU:HD12	1:L:381:LEU:HD22	1.93	0.51
1:M:219:ILE:HB	1:M:275:ASN:HB3	1.92	0.51
1:O:354:LEU:HD21	1:O:356:GLU:HB3	1.92	0.51
1:D:114:ILE:HD11	1:D:502:LEU:CD1	2.40	0.51
1:D:114:ILE:HD11	1:D:502:LEU:HD12	1.93	0.51
1:D:415:THR:HB	1:D:419:GLU:HB2	1.91	0.51
1:D:236:ILE:HG23	1:D:237:LYS:N	2.26	0.51
1:K:131:SER:O	1:K:132:ALA:HB3	2.11	0.51
1:B:163:LYS:O	1:B:166:PHE:HB2	2.11	0.51
1:L:162:HIS:HB3	1:L:198:ASP:OD2	2.11	0.51
1:H:399:CYS:SG	1:H:475:MET:HB2	2.51	0.51
1:G:159:LEU:HD23	1:G:160:THR:N	2.25	0.51
1:O:211:ILE:CD1	1:O:211:ILE:N	2.71	0.51
1:C:154:LEU:CD2	1:C:163:LYS:HG3	2.41	0.51
1:B:402:MET:SD	1:B:453:ARG:HA	2.51	0.51
1:G:431:ARG:O	1:G:434:PRO:HD2	2.10	0.51
1:M:59:LYS:CE	1:M:76:ARG:HB2	2.38	0.51
1:M:324:HIS:HB2	1:M:329:LYS:CE	2.41	0.51
1:C:222:ALA:HA	1:C:275:ASN:HB2	1.92	0.51
1:C:451:GLN:HE22	1:C:471:THR:HA	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:176:ARG:NE	1:O:358:CYS:HB2	2.26	0.51
1:B:187:HIS:HB2	1:B:309:ARG:NH1	2.25	0.51
1:I:334:LYS:CD	1:I:351:GLY:HA3	2.41	0.51
1:D:101:GLU:O	1:D:104:ILE:HG12	2.10	0.51
1:M:163:LYS:O	1:M:166:PHE:HB2	2.10	0.51
1:H:475:MET:SD	1:H:480:ILE:HB	2.51	0.51
1:C:166:PHE:CE1	1:C:198:ASP:HB3	2.46	0.51
1:I:364:GLY:HA3	1:I:370:LEU:CD2	2.41	0.51
1:L:274:ILE:HG23	1:L:296:VAL:CG2	2.41	0.51
1:H:187:HIS:O	1:H:359:THR:HG23	2.11	0.51
1:D:234:ASP:OD2	1:E:237:LYS:HE3	2.11	0.51
1:A:324:HIS:HB2	1:A:329:LYS:HE2	1.92	0.51
1:J:265:LYS:O	1:J:269:ILE:HB	2.11	0.51
1:B:397:GLY:HA3	1:B:475:MET:CE	2.41	0.51
1:N:99:GLU:O	1:N:103:LEU:HD13	2.11	0.51
1:D:313:VAL:HG13	1:D:352:VAL:CB	2.41	0.51
1:H:207:LEU:HD13	1:H:208:ASP:N	2.26	0.51
1:F:233:THR:O	1:F:234:ASP:HB3	2.11	0.51
1:A:451:GLN:NE2	1:A:471:THR:HA	2.26	0.51
1:G:108:ILE:HG22	1:G:109:HIS:N	2.26	0.51
1:C:499:GLU:HG2	1:C:503:ARG:HH21	1.76	0.50
1:L:448:LEU:HD13	1:L:448:LEU:C	2.31	0.50
1:P:431:ARG:O	1:P:434:PRO:HD2	2.10	0.50
1:H:324:HIS:HB2	1:H:329:LYS:CE	2.42	0.50
1:H:159:LEU:HG	1:H:163:LYS:HD3	1.94	0.50
1:I:89:VAL:HA	1:I:490:VAL:CG2	2.41	0.50
1:L:324:HIS:HB2	1:L:329:LYS:HZ3	1.76	0.50
1:J:192:LEU:HD13	1:J:366:THR:CG2	2.41	0.50
1:B:192:LEU:CD2	1:B:366:THR:HG22	2.41	0.50
1:L:111:GLN:O	1:L:114:ILE:HB	2.12	0.50
1:E:431:ARG:HA	1:E:431:ARG:CZ	2.42	0.50
1:M:111:GLN:O	1:M:114:ILE:HB	2.10	0.50
1:G:40:LEU:HB2	1:G:48:LEU:HD23	1.94	0.50
1:B:128:LEU:O	1:B:129:LEU:HB2	2.11	0.50
1:D:405:ALA:HA	1:D:408:VAL:HG22	1.93	0.50
1:G:152:THR:CG2	1:G:480:ILE:HG23	2.40	0.50
1:C:98:ARG:CA	1:C:98:ARG:HE	2.24	0.50
1:H:128:LEU:HD11	1:H:491:LEU:HD12	1.92	0.50
1:O:15:SER:OG	1:O:501:ILE:HG21	2.11	0.50
1:B:310:LEU:O	1:B:314:THR:HG22	2.10	0.50
1:P:231:MET:HB2	1:P:284:TYR:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:146:LEU:CD2	1:J:167:THR:HG23	2.41	0.50
1:D:159:LEU:HG	1:D:163:LYS:HG2	1.94	0.50
1:A:146:LEU:CD2	1:A:147:MET:H	2.24	0.50
1:I:262:MET:SD	1:I:290:LEU:HB2	2.52	0.50
1:L:269:ILE:CG2	1:L:274:ILE:HG21	2.37	0.50
1:O:448:LEU:C	1:O:448:LEU:HD13	2.32	0.50
1:L:82:VAL:HG13	1:L:83:GLY:N	2.25	0.50
1:J:274:ILE:HG23	1:J:296:VAL:CG2	2.41	0.50
1:A:163:LYS:HG3	1:A:166:PHE:CB	2.40	0.50
1:M:324:HIS:HB2	1:M:329:LYS:HE2	1.92	0.50
1:M:438:ALA:HB2	1:M:448:LEU:HG	1.92	0.50
1:H:99:GLU:HG3	1:H:425:SER:HB2	1.94	0.50
1:K:82:VAL:HB	1:K:485:GLN:HB3	1.93	0.50
1:M:131:SER:CB	1:M:461:THR:HG21	2.41	0.50
1:K:154:LEU:HD23	1:K:163:LYS:HG3	1.92	0.50
1:H:211:ILE:HB	1:H:215:GLN:OE1	2.10	0.50
1:C:75:SER:O	1:C:78:GLN:HB3	2.11	0.50
1:P:166:PHE:CZ	1:P:198:ASP:HB3	2.47	0.50
1:I:171:VAL:O	1:I:174:VAL:HG22	2.11	0.50
1:B:418:LYS:HE3	1:I:446:ALA:O	2.11	0.50
1:M:48:LEU:HG	1:O:506:ASN:ND2	2.27	0.50
1:I:372:GLU:HG3	1:I:375:ARG:HH21	1.73	0.50
1:G:207:LEU:HD22	1:G:208:ASP:N	2.26	0.50
1:G:269:ILE:HG23	1:G:274:ILE:HG21	1.92	0.50
1:C:48:LEU:HG	1:H:510:ALA:HB3	1.92	0.50
1:K:287:PRO:O	1:K:291:PHE:HD1	1.94	0.50
1:P:176:ARG:HD2	1:P:358:CYS:HB2	1.93	0.50
1:H:106:LYS:NZ	1:H:418:LYS:HA	2.26	0.50
1:H:286:TYR:HB2	1:H:287:PRO:HD3	1.94	0.50
1:D:433:LEU:O	1:D:436:ILE:HG22	2.11	0.50
1:F:334:LYS:HD2	1:F:351:GLY:HA3	1.94	0.50
1:F:469:GLU:HG2	1:F:471:THR:OG1	2.11	0.50
1:H:312:LEU:HD22	1:H:354:LEU:HD22	1.93	0.50
1:C:69:LYS:HD3	1:C:510:ALA:HB3	1.91	0.50
1:G:334:LYS:CD	1:G:351:GLY:HA3	2.42	0.50
1:N:173:ALA:O	1:N:176:ARG:HG2	2.11	0.50
1:L:101:GLU:O	1:L:104:ILE:HG12	2.12	0.50
1:O:163:LYS:HD2	1:O:166:PHE:CG	2.47	0.50
1:L:146:LEU:CD2	1:L:167:THR:HG23	2.41	0.50
1:G:50:VAL:HG11	1:G:372:GLU:HG2	1.94	0.50
1:I:160:THR:HA	1:I:163:LYS:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:23:GLY:O	1:N:27:LYS:HB3	2.12	0.50
1:N:441:ALA:HB2	1:N:467:MET:HG2	1.94	0.50
1:I:452:LEU:HA	1:I:472:ILE:HG21	1.93	0.50
1:F:146:LEU:HG	1:F:171:VAL:HG11	1.92	0.50
1:H:166:PHE:CZ	1:H:198:ASP:HB3	2.47	0.50
1:O:119:GLU:HB3	1:O:423:MET:HE3	1.93	0.50
1:D:58:LEU:HB3	1:D:72:VAL:HG13	1.93	0.50
1:P:59:LYS:CE	1:P:76:ARG:HB2	2.41	0.50
1:C:209:LYS:HZ1	1:C:303:ASP:H	1.59	0.50
1:D:334:LYS:HD3	1:D:351:GLY:HA3	1.92	0.50
1:E:190:LYS:HD2	1:E:190:LYS:O	2.11	0.50
1:F:261:LYS:O	1:F:264:GLU:HG2	2.12	0.50
1:M:343:GLU:HG2	1:M:344:ASP:N	2.25	0.50
1:F:268:ARG:O	1:F:271:LYS:HG2	2.11	0.50
1:I:510:ALA:O	1:I:511:ALA:HB2	2.11	0.50
1:O:146:LEU:HD11	1:O:150:ALA:HB3	1.93	0.50
1:A:146:LEU:CD2	1:A:167:THR:HG23	2.39	0.50
1:C:171:VAL:O	1:C:174:VAL:HG22	2.11	0.50
1:F:139:GLU:O	1:F:140:VAL:HB	2.12	0.50
1:G:225:LEU:HD21	1:G:324:HIS:CE1	2.46	0.50
1:P:324:HIS:HB2	1:P:329:LYS:HZ1	1.77	0.50
1:A:211:ILE:HG12	1:A:298:ALA:H	1.77	0.50
1:H:359:THR:HG22	1:H:360:ILE:N	2.27	0.50
1:D:225:LEU:HD11	1:D:324:HIS:ND1	2.27	0.50
1:H:431:ARG:O	1:H:434:PRO:HD2	2.10	0.50
1:J:110:PRO:CB	1:J:502:LEU:HB3	2.42	0.50
1:C:133:VAL:HG21	1:C:393:THR:H	1.77	0.50
1:L:117:TRP:HD1	1:L:495:ALA:HB1	1.75	0.50
1:P:115:ALA:O	1:P:119:GLU:HG2	2.12	0.50
1:P:280:ARG:HG3	1:P:304:PHE:HB2	1.94	0.50
1:N:146:LEU:HD21	1:N:167:THR:HG23	1.93	0.50
1:O:79:ASP:HA	1:O:83:GLY:HA2	1.93	0.50
1:G:245:VAL:HG11	1:G:251:VAL:HG22	1.93	0.50
1:D:372:GLU:O	1:D:375:ARG:HG2	2.12	0.50
1:C:27:LYS:HA	1:C:30:LEU:HD13	1.92	0.50
1:C:452:LEU:HD13	1:C:465:LEU:CD1	2.41	0.50
1:K:99:GLU:CG	1:K:425:SER:HB2	2.42	0.50
1:A:159:LEU:CD1	1:A:163:LYS:HD3	2.42	0.50
1:K:170:ALA:O	1:K:173:ALA:HB3	2.12	0.50
1:M:324:HIS:O	1:M:329:LYS:HG3	2.12	0.50
1:N:402:MET:SD	1:N:456:HIS:HB2	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:216:PRO:HG3	1:B:295:GLY:HA2	1.94	0.50
1:J:236:ILE:HG23	1:J:237:LYS:H	1.75	0.50
1:J:280:ARG:O	1:J:281:GLN:HB3	2.12	0.50
1:E:96:LEU:HD21	1:E:117:TRP:CZ2	2.47	0.50
1:B:96:LEU:HD13	1:B:96:LEU:C	2.32	0.50
1:H:222:ALA:HA	1:H:275:ASN:OD1	2.12	0.50
1:D:239:PHE:HB3	1:D:241:SER:H	1.77	0.50
1:M:146:LEU:CD2	1:M:147:MET:H	2.24	0.50
1:O:48:LEU:HD12	1:O:48:LEU:H	1.77	0.50
1:L:452:LEU:HD22	1:L:465:LEU:HD11	1.92	0.50
1:G:129:LEU:N	1:G:129:LEU:HD13	2.27	0.50
1:L:287:PRO:O	1:L:291:PHE:HD1	1.95	0.50
1:M:191:LYS:NZ	1:M:346:LEU:HD11	2.26	0.50
1:H:226:ILE:HA	1:H:278:ILE:O	2.11	0.50
1:L:317:GLU:OE1	1:L:329:LYS:HD2	2.11	0.50
1:A:324:HIS:O	1:A:329:LYS:HG3	2.12	0.50
1:O:117:TRP:HD1	1:O:495:ALA:HB1	1.77	0.50
1:J:100:ALA:HA	1:J:103:LEU:HD22	1.94	0.50
1:D:211:ILE:HD13	1:D:215:GLN:OE1	2.12	0.50
1:P:411:LEU:HB3	1:P:423:MET:HE2	1.91	0.50
1:C:222:ALA:HA	1:C:275:ASN:OD1	2.12	0.50
1:C:106:LYS:NZ	1:C:108:ILE:HD11	2.26	0.50
1:H:185:ALA:HA	1:H:309:ARG:CD	2.40	0.50
1:P:22:ILE:HD12	1:P:90:THR:CG2	2.42	0.50
1:B:318:ILE:HG22	1:B:318:ILE:O	2.11	0.50
1:H:509:LYS:NZ	1:H:509:LYS:HB2	2.26	0.50
1:F:2:GLY:O	1:F:3:ALA:HB2	2.10	0.50
1:N:163:LYS:O	1:N:166:PHE:HB2	2.11	0.50
1:M:146:LEU:CD1	1:M:171:VAL:HG13	2.28	0.50
1:D:79:ASP:HA	1:D:83:GLY:N	2.26	0.50
1:I:232:ASP:HA	1:I:284:TYR:CD1	2.47	0.50
1:N:475:MET:SD	1:N:480:ILE:HB	2.52	0.50
1:G:508:ILE:O	1:G:508:ILE:HG22	2.12	0.50
1:B:418:LYS:HD3	1:I:449:VAL:HG12	1.92	0.50
1:G:211:ILE:CD1	1:G:297:MET:HG3	2.38	0.50
1:K:452:LEU:HD13	1:K:465:LEU:HD13	1.93	0.50
1:K:232:ASP:HA	1:K:284:TYR:HB2	1.94	0.50
1:J:152:THR:HG23	1:J:480:ILE:HG12	1.92	0.50
1:O:59:LYS:HE3	1:O:73:ASP:HA	1.94	0.50
1:O:31:GLY:O	1:O:156:SER:HA	2.12	0.50
1:A:364:GLY:HA3	1:A:370:LEU:HD13	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:411:LEU:HB3	1:M:423:MET:SD	2.51	0.50
1:F:203:GLU:HG3	1:F:350:SER:HB2	1.92	0.50
1:I:173:ALA:O	1:I:176:ARG:HG2	2.12	0.50
1:E:96:LEU:O	1:E:96:LEU:HD22	2.12	0.50
1:J:352:VAL:HG22	1:J:355:GLY:H	1.77	0.50
1:O:182:ASN:HD22	1:O:182:ASN:N	2.10	0.50
1:C:59:LYS:CE	1:C:76:ARG:HB2	2.41	0.50
1:L:367:GLN:C	1:L:369:ILE:H	2.14	0.50
1:P:274:ILE:HG23	1:P:274:ILE:O	2.12	0.50
1:J:163:LYS:HA	1:J:166:PHE:CD1	2.47	0.50
1:D:154:LEU:HD22	1:D:167:THR:HB	1.93	0.50
1:A:138:ASP:O	1:A:139:GLU:HB2	2.10	0.50
1:K:274:ILE:HG23	1:K:296:VAL:CG2	2.41	0.50
1:F:51:THR:HA	1:F:375:ARG:HH11	1.77	0.50
1:M:265:LYS:HE2	1:M:322:PHE:CZ	2.47	0.50
1:G:78:GLN:HG3	1:G:83:GLY:HA3	1.94	0.50
1:K:448:LEU:C	1:K:448:LEU:HD13	2.32	0.50
1:K:265:LYS:HE2	1:K:322:PHE:CE1	2.47	0.50
1:A:431:ARG:CZ	1:A:431:ARG:HA	2.42	0.50
1:H:394:VAL:HG21	1:H:487:LYS:HG3	1.94	0.50
1:E:219:ILE:HB	1:E:275:ASN:HB3	1.94	0.50
1:F:487:LYS:HA	1:F:490:VAL:HG12	1.94	0.50
1:B:485:GLN:HB2	1:B:489:GLN:HE22	1.76	0.50
1:H:312:LEU:HD22	1:H:354:LEU:CD2	2.42	0.50
1:A:209:LYS:HB2	1:A:299:ILE:HG23	1.94	0.50
1:N:352:VAL:HG23	1:N:355:GLY:H	1.77	0.50
1:H:511:ALA:HB3	1:H:512:PRO:HD2	1.93	0.50
1:B:337:GLU:HG3	1:B:339:VAL:HG23	1.93	0.50
1:O:146:LEU:HB2	1:O:171:VAL:HG21	1.94	0.49
1:N:166:PHE:CE1	1:N:198:ASP:HB3	2.47	0.49
1:G:146:LEU:HD22	1:G:168:LYS:HA	1.93	0.49
1:K:341:ILE:HG23	1:K:363:ARG:NH2	2.27	0.49
1:D:506:ASN:O	1:H:37:LYS:HD2	2.11	0.49
1:I:154:LEU:CD2	1:I:163:LYS:HG3	2.42	0.49
1:B:452:LEU:HD13	1:B:465:LEU:CD1	2.42	0.49
1:A:496:GLU:HA	1:A:499:GLU:HB3	1.94	0.49
1:F:448:LEU:HD11	1:F:465:LEU:HD11	1.92	0.49
1:O:433:LEU:O	1:O:437:ILE:HG12	2.12	0.49
1:A:89:VAL:HB	1:A:490:VAL:CG2	2.42	0.49
1:F:163:LYS:HG2	1:F:163:LYS:O	2.11	0.49
1:K:509:LYS:O	1:K:510:ALA:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:287:PRO:O	1:F:291:PHE:HD1	1.95	0.49
1:E:226:ILE:HD12	1:E:317:GLU:HG3	1.94	0.49
1:C:334:LYS:HD3	1:C:351:GLY:CA	2.42	0.49
1:J:334:LYS:CD	1:J:351:GLY:HA3	2.41	0.49
1:M:96:LEU:C	1:M:96:LEU:HD13	2.31	0.49
1:G:335:LEU:HD21	1:G:337:GLU:OE1	2.11	0.49
1:M:187:HIS:O	1:M:359:THR:HG23	2.11	0.49
1:H:174:VAL:HA	1:H:177:LEU:HD12	1.94	0.49
1:C:502:LEU:HD22	1:C:502:LEU:H	1.77	0.49
1:G:324:HIS:HB2	1:G:329:LYS:HE2	1.94	0.49
1:O:82:VAL:HA	1:O:386:GLN:HG3	1.93	0.49
1:E:274:ILE:HG23	1:E:274:ILE:O	2.13	0.49
1:H:438:ALA:CB	1:H:448:LEU:HG	2.42	0.49
1:P:96:LEU:HD21	1:P:117:TRP:CZ2	2.47	0.49
1:K:176:ARG:NH2	1:K:360:ILE:HG12	2.27	0.49
1:A:372:GLU:HG3	1:A:375:ARG:CZ	2.42	0.49
1:I:32:PRO:HA	1:I:155:SER:C	2.32	0.49
1:F:176:ARG:HH12	1:F:201:LEU:HD21	1.77	0.49
1:H:22:ILE:HD12	1:H:90:THR:CG2	2.42	0.49
1:G:32:PRO:O	1:G:156:SER:HA	2.12	0.49
1:P:39:LEU:HD12	1:P:57:ILE:HD11	1.94	0.49
1:P:57:ILE:HG23	1:P:58:LEU:HD23	1.93	0.49
1:M:204:GLY:O	1:M:359:THR:HB	2.11	0.49
1:C:188:VAL:HG11	1:C:377:LEU:HD22	1.94	0.49
1:B:32:PRO:HA	1:B:155:SER:HB3	1.94	0.49
1:N:259:LYS:O	1:N:263:LYS:HG2	2.12	0.49
1:L:171:VAL:O	1:L:175:LEU:HG	2.11	0.49
1:E:171:VAL:CG1	1:E:384:LEU:HG	2.42	0.49
1:F:171:VAL:O	1:F:174:VAL:HG22	2.12	0.49
1:B:27:LYS:CB	1:B:436:ILE:HD11	2.43	0.49
1:K:263:LYS:O	1:K:266:VAL:HG12	2.11	0.49
1:D:287:PRO:O	1:D:291:PHE:HD1	1.95	0.49
1:H:402:MET:CE	1:H:453:ARG:HG2	2.42	0.49
1:A:38:ILE:HG13	1:A:38:ILE:O	2.12	0.49
1:M:402:MET:HG2	1:M:431:ARG:HH22	1.76	0.49
1:M:225:LEU:HD13	1:M:329:LYS:CE	2.43	0.49
1:C:222:ALA:HA	1:C:275:ASN:CB	2.42	0.49
1:D:448:LEU:C	1:D:448:LEU:HD13	2.33	0.49
1:N:57:ILE:HG23	1:N:58:LEU:CD2	2.42	0.49
1:N:9:GLU:CD	1:N:9:GLU:H	2.14	0.49
1:B:202:ASP:HB2	1:B:359:THR:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:394:VAL:HG23	1:O:482:GLU:HB2	1.94	0.49
1:N:421:VAL:O	1:N:424:GLU:HG2	2.13	0.49
1:O:425:SER:O	1:O:428:LYS:HG2	2.13	0.49
1:E:207:LEU:HD13	1:E:208:ASP:N	2.27	0.49
1:C:78:GLN:NE2	1:C:489:GLN:HB2	2.27	0.49
1:P:157:LYS:HB3	1:P:159:LEU:HD22	1.94	0.49
1:G:322:PHE:HA	1:G:324:HIS:CD2	2.47	0.49
1:P:438:ALA:CB	1:P:448:LEU:HG	2.42	0.49
1:J:438:ALA:CB	1:J:448:LEU:HG	2.42	0.49
1:C:452:LEU:HD11	1:C:456:HIS:HE1	1.77	0.49
1:J:192:LEU:O	1:J:192:LEU:HD12	2.12	0.49
1:D:61:ILE:HG12	1:E:513:ARG:HG2	1.94	0.49
1:A:159:LEU:HD22	1:A:159:LEU:N	2.27	0.49
1:A:485:GLN:HG3	1:A:488:ARG:HH21	1.76	0.49
1:K:185:ALA:CB	1:K:357:ALA:HA	2.42	0.49
1:E:59:LYS:HE3	1:E:73:ASP:HA	1.92	0.49
1:P:379:ASP:O	1:P:383:VAL:HG23	2.12	0.49
1:B:111:GLN:O	1:B:114:ILE:HB	2.12	0.49
1:I:39:LEU:HD12	1:I:57:ILE:HG13	1.94	0.49
1:N:192:LEU:HG	1:N:366:THR:CG2	2.43	0.49
1:E:341:ILE:HG23	1:E:363:ARG:NH2	2.26	0.49
1:J:408:VAL:HA	1:J:411:LEU:HD12	1.95	0.49
1:J:313:VAL:HG22	1:J:357:ALA:HB3	1.94	0.49
1:J:334:LYS:HD2	1:J:351:GLY:HA3	1.93	0.49
1:A:143:ARG:HE	1:A:143:ARG:HA	1.77	0.49
1:H:405:ALA:HA	1:H:408:VAL:HG22	1.94	0.49
1:C:425:SER:O	1:C:428:LYS:HG2	2.12	0.49
1:G:451:GLN:HE22	1:G:471:THR:HA	1.76	0.49
1:I:215:GLN:HG3	1:I:292:GLY:HA2	1.94	0.49
1:C:166:PHE:CD2	1:C:362:LEU:HD22	2.47	0.49
1:P:171:VAL:O	1:P:174:VAL:HG22	2.12	0.49
1:J:38:ILE:HD13	1:J:39:LEU:H	1.77	0.49
1:A:334:LYS:CB	1:A:351:GLY:HA3	2.42	0.49
1:O:116:GLY:O	1:O:119:GLU:HB2	2.12	0.49
1:J:111:GLN:HA	1:J:114:ILE:HG12	1.94	0.49
1:M:373:ALA:O	1:M:377:LEU:HB2	2.12	0.49
1:K:59:LYS:CE	1:K:76:ARG:HB2	2.42	0.49
1:H:216:PRO:HG2	1:H:295:GLY:HA2	1.94	0.49
1:B:141:LYS:CG	1:B:144:GLN:HB2	2.43	0.49
1:B:75:SER:O	1:B:78:GLN:HB3	2.13	0.49
1:C:325:PRO:C	1:C:326:GLU:HG3	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2:GLY:HA2	1:A:513:ARG:NH1	2.27	0.49
1:A:32:PRO:HD2	1:A:467:MET:HE1	1.93	0.49
1:M:99:GLU:O	1:M:102:SER:HB2	2.12	0.49
1:G:139:GLU:O	1:G:140:VAL:HB	2.12	0.49
1:I:239:PHE:O	1:I:241:SER:N	2.45	0.49
1:I:343:GLU:HG3	1:I:344:ASP:H	1.76	0.49
1:E:198:ASP:O	1:E:199:SER:HB3	2.12	0.49
1:I:145:ASP:OD2	1:I:175:LEU:HD11	2.12	0.49
1:F:146:LEU:HD21	1:F:150:ALA:CB	2.42	0.49
1:F:175:LEU:HA	1:F:178:LYS:HD2	1.95	0.49
1:N:284:TYR:O	1:N:287:PRO:HD2	2.12	0.49
1:N:108:ILE:HG22	1:N:109:HIS:N	2.27	0.49
1:N:114:ILE:HA	1:N:117:TRP:CE3	2.47	0.49
1:K:99:GLU:CD	1:K:425:SER:HB2	2.32	0.49
1:J:110:PRO:O	1:J:113:ILE:HB	2.12	0.49
1:N:67:ALA:HB1	1:N:507:ILE:HG21	1.95	0.49
1:P:116:GLY:O	1:P:119:GLU:HB2	2.12	0.49
1:E:438:ALA:HB2	1:E:448:LEU:HG	1.94	0.49
1:C:222:ALA:HA	1:C:275:ASN:CG	2.33	0.49
1:L:187:HIS:HB3	1:L:359:THR:HG23	1.94	0.49
1:A:508:ILE:HB	1:F:37:LYS:HZ1	1.77	0.49
1:F:370:LEU:O	1:F:370:LEU:HD13	2.13	0.49
1:E:96:LEU:C	1:E:96:LEU:HD13	2.33	0.49
1:A:312:LEU:O	1:A:312:LEU:HD22	2.13	0.49
1:F:381:LEU:O	1:F:381:LEU:HD22	2.11	0.49
1:P:395:TYR:HE2	1:P:476:SER:HG	1.61	0.49
1:F:124:ALA:HA	1:F:491:LEU:HD13	1.95	0.49
1:K:412:ALA:CB	1:K:424:GLU:HB3	2.43	0.49
1:M:159:LEU:HD22	1:M:159:LEU:N	2.28	0.49
1:K:192:LEU:O	1:K:343:GLU:HB3	2.13	0.49
1:N:211:ILE:CD1	1:N:297:MET:HG3	2.37	0.49
1:C:262:MET:HE1	1:C:286:TYR:HB3	1.94	0.49
1:K:431:ARG:O	1:K:434:PRO:HD2	2.12	0.49
1:B:434:PRO:HB3	1:B:452:LEU:CD2	2.42	0.49
1:B:451:GLN:HE22	1:B:471:THR:HA	1.78	0.49
1:H:277:PHE:CE2	1:H:279:ASN:HB2	2.47	0.49
1:B:364:GLY:HA3	1:B:370:LEU:CD1	2.39	0.49
1:O:111:GLN:HA	1:O:114:ILE:CG1	2.42	0.49
1:H:108:ILE:CG2	1:H:109:HIS:N	2.75	0.49
1:M:236:ILE:HG13	1:M:237:LYS:N	2.24	0.49
1:F:82:VAL:HG11	1:F:486:VAL:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:392:ARG:HG3	1:N:484:PHE:CD2	2.47	0.49
1:L:345:LYS:C	1:L:346:LEU:HD12	2.33	0.49
1:G:397:GLY:HA3	1:G:475:MET:CE	2.43	0.49
1:J:209:LYS:HE2	1:J:302:ALA:HA	1.93	0.49
1:D:190:LYS:HD2	1:D:190:LYS:O	2.12	0.49
1:K:107:LYS:HD2	1:K:107:LYS:O	2.13	0.49
1:E:35:MET:CE	1:G:504:VAL:HG12	2.43	0.49
1:N:95:GLU:CD	1:N:429:ALA:HB1	2.32	0.49
1:D:150:ALA:O	1:D:154:LEU:HD13	2.12	0.49
1:N:171:VAL:O	1:N:174:VAL:HG22	2.12	0.49
1:E:277:PHE:O	1:E:298:ALA:HA	2.12	0.49
1:K:274:ILE:HG23	1:K:296:VAL:HG21	1.94	0.49
1:E:138:ASP:O	1:E:139:GLU:HB2	2.12	0.49
1:B:225:LEU:HD11	1:B:324:HIS:ND1	2.27	0.49
1:P:32:PRO:HD2	1:P:467:MET:SD	2.52	0.49
1:I:366:THR:C	1:I:367:GLN:HG3	2.32	0.49
1:C:274:ILE:O	1:C:296:VAL:HG22	2.13	0.49
1:J:484:PHE:CE2	1:J:488:ARG:HD3	2.48	0.49
1:O:226:ILE:HB	1:O:317:GLU:OE2	2.13	0.49
1:F:114:ILE:HA	1:F:117:TRP:CE3	2.47	0.49
1:L:111:GLN:HA	1:L:114:ILE:HG12	1.94	0.49
1:G:99:GLU:CG	1:G:425:SER:HB2	2.42	0.49
1:F:163:LYS:HA	1:F:166:PHE:CD1	2.48	0.49
1:F:500:VAL:O	1:F:504:VAL:HG22	2.12	0.49
1:P:185:ALA:HB1	1:P:357:ALA:HB1	1.95	0.49
1:C:51:THR:HG21	1:C:56:THR:HB	1.95	0.49
1:L:368:GLN:HE22	1:M:507:ILE:HD11	1.77	0.49
1:N:340:MET:HG2	1:N:345:LYS:HG2	1.95	0.49
1:N:146:LEU:CG	1:N:147:MET:H	2.26	0.49
1:G:159:LEU:HG	1:G:163:LYS:HG2	1.95	0.49
1:I:146:LEU:HD13	1:I:167:THR:O	2.12	0.49
1:C:265:LYS:HE2	1:C:322:PHE:CE1	2.48	0.49
1:G:125:ARG:HA	1:G:128:LEU:HD11	1.95	0.49
1:A:484:PHE:CE2	1:A:488:ARG:HD3	2.48	0.49
1:M:188:VAL:CG2	1:M:377:LEU:HD21	2.43	0.49
1:D:402:MET:SD	1:D:453:ARG:HA	2.53	0.49
1:I:334:LYS:HB3	1:I:351:GLY:HA3	1.94	0.49
1:B:263:LYS:O	1:B:266:VAL:HG12	2.13	0.49
1:N:176:ARG:HH12	1:N:201:LEU:HD11	1.77	0.49
1:G:502:LEU:O	1:G:502:LEU:HD23	2.12	0.49
1:C:116:GLY:O	1:C:119:GLU:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:343:GLU:HG3	1:G:344:ASP:N	2.28	0.49
1:O:22:ILE:HD12	1:O:90:THR:CG2	2.43	0.49
1:B:14:SER:O	1:B:17:ILE:HG22	2.13	0.49
1:E:54:GLY:O	1:E:58:LEU:HD23	2.13	0.49
1:H:266:VAL:HB	1:H:290:LEU:HD21	1.94	0.49
1:E:19:ALA:HB1	1:E:94:ALA:HA	1.94	0.49
1:L:159:LEU:HD23	1:L:163:LYS:HD2	1.92	0.49
1:L:385:ALA:O	1:L:388:VAL:HG12	2.13	0.49
1:I:166:PHE:CD2	1:I:362:LEU:HD22	2.42	0.49
1:J:40:LEU:H	1:K:3:ALA:HB2	1.77	0.49
1:C:496:GLU:O	1:C:497:ALA:HB3	2.12	0.49
1:L:431:ARG:HH21	1:L:434:PRO:HG2	1.77	0.49
1:N:265:LYS:HE2	1:N:322:PHE:CE1	2.48	0.49
1:F:96:LEU:HD11	1:F:498:ALA:HB1	1.94	0.49
1:E:128:LEU:HD11	1:E:488:ARG:HD3	1.95	0.49
1:C:324:HIS:HB2	1:C:329:LYS:NZ	2.28	0.49
1:O:173:ALA:O	1:O:176:ARG:HG2	2.13	0.49
1:O:381:LEU:O	1:O:381:LEU:HD22	2.12	0.49
1:O:103:LEU:CD2	1:O:113:ILE:HG21	2.43	0.49
1:C:345:LYS:O	1:C:346:LEU:HD12	2.12	0.49
1:P:192:LEU:HB2	1:P:366:THR:OG1	2.12	0.49
1:M:96:LEU:HD22	1:M:96:LEU:O	2.13	0.49
1:C:123:ALA:O	1:C:126:GLN:HG2	2.13	0.49
1:G:22:ILE:HD12	1:G:90:THR:CG2	2.42	0.49
1:B:287:PRO:O	1:B:291:PHE:HD2	1.96	0.48
1:I:159:LEU:HG	1:I:163:LYS:HG2	1.94	0.48
1:N:27:LYS:HG2	1:N:436:ILE:HD11	1.94	0.48
1:I:452:LEU:HD22	1:I:465:LEU:HD11	1.95	0.48
1:M:366:THR:HG22	1:M:370:LEU:HD22	1.95	0.48
1:G:225:LEU:HG	1:G:277:PHE:CE1	2.48	0.48
1:L:92:LEU:CD1	1:L:433:LEU:HD21	2.40	0.48
1:F:397:GLY:HA3	1:F:475:MET:CE	2.43	0.48
1:F:396:GLY:HA3	1:F:480:ILE:HG22	1.95	0.48
1:P:431:ARG:HH21	1:P:434:PRO:HG2	1.78	0.48
1:M:27:LYS:HG3	1:M:436:ILE:HG12	1.93	0.48
1:N:233:THR:CG2	1:N:261:LYS:HE2	2.43	0.48
1:P:485:GLN:HG2	1:P:488:ARG:HH21	1.78	0.48
1:O:173:ALA:CB	1:O:360:ILE:HD11	2.43	0.48
1:A:341:ILE:HG23	1:A:363:ARG:NH2	2.28	0.48
1:E:108:ILE:HA	1:J:446:ALA:CB	2.43	0.48
1:O:26:VAL:HG23	1:O:91:VAL:HG22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:390:ASP:CB	1:M:485:GLN:HE22	2.26	0.48
1:D:159:LEU:HD22	1:D:159:LEU:H	1.78	0.48
1:C:154:LEU:HD22	1:C:167:THR:HB	1.93	0.48
1:B:79:ASP:HA	1:B:83:GLY:HA2	1.93	0.48
1:I:146:LEU:HD23	1:I:148:ASN:H	1.78	0.48
1:P:402:MET:CE	1:P:453:ARG:HG2	2.42	0.48
1:I:123:ALA:HA	1:I:126:GLN:CG	2.43	0.48
1:E:287:PRO:O	1:E:291:PHE:HD1	1.96	0.48
1:A:324:HIS:HB2	1:A:329:LYS:HZ3	1.76	0.48
1:B:38:ILE:CG2	1:B:50:VAL:HB	2.43	0.48
1:F:274:ILE:HG23	1:F:296:VAL:HG21	1.94	0.48
1:D:452:LEU:HD13	1:D:465:LEU:CD1	2.42	0.48
1:E:117:TRP:HD1	1:E:495:ALA:HB1	1.77	0.48
1:H:511:ALA:HB3	1:H:512:PRO:CD	2.43	0.48
1:G:424:GLU:O	1:G:427:ALA:HB3	2.13	0.48
1:A:506:ASN:ND2	1:F:440:ASN:HA	2.28	0.48
1:N:141:LYS:CE	1:N:144:GLN:HB2	2.43	0.48
1:A:108:ILE:CD1	1:M:445:SER:HB2	2.43	0.48
1:O:139:GLU:HG3	1:O:140:VAL:N	2.28	0.48
1:B:146:LEU:HD13	1:B:167:THR:O	2.12	0.48
1:C:171:VAL:CG1	1:C:384:LEU:HG	2.42	0.48
1:C:117:TRP:HE1	1:C:498:ALA:HB3	1.76	0.48
1:C:211:ILE:CD1	1:C:211:ILE:N	2.69	0.48
1:P:373:ALA:O	1:P:377:LEU:HB2	2.13	0.48
1:A:334:LYS:HB3	1:A:351:GLY:HA3	1.96	0.48
1:I:486:VAL:O	1:I:490:VAL:HG12	2.13	0.48
1:C:475:MET:SD	1:C:480:ILE:HB	2.53	0.48
1:F:226:ILE:HG12	1:F:278:ILE:HG23	1.94	0.48
1:H:452:LEU:HD11	1:H:456:HIS:HE1	1.78	0.48
1:D:57:ILE:HD11	1:E:513:ARG:OXT	2.12	0.48
1:M:188:VAL:HA	1:M:360:ILE:O	2.11	0.48
1:J:12:ARG:HD3	1:J:501:ILE:CG2	2.43	0.48
1:E:503:ARG:HG3	1:E:504:VAL:N	2.26	0.48
1:N:52:ASN:HD21	1:N:157:LYS:HA	1.78	0.48
1:I:280:ARG:O	1:I:281:GLN:HB3	2.13	0.48
1:M:390:ASP:HB2	1:M:485:GLN:HE22	1.77	0.48
1:J:28:SER:O	1:J:34:GLY:HA2	2.13	0.48
1:G:417:GLY:HA2	1:G:420:ALA:HB3	1.95	0.48
1:D:117:TRP:CD1	1:D:495:ALA:HB1	2.48	0.48
1:O:263:LYS:O	1:O:267:GLU:HG2	2.13	0.48
1:G:110:PRO:HA	1:G:113:ILE:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:141:LYS:HE2	1:M:144:GLN:CG	2.44	0.48
1:K:154:LEU:CD2	1:K:163:LYS:HG3	2.44	0.48
1:K:154:LEU:HD13	1:K:167:THR:OG1	2.13	0.48
1:E:145:ASP:O	1:E:171:VAL:HG11	2.14	0.48
1:I:163:LYS:HA	1:I:166:PHE:HD1	1.76	0.48
1:N:92:LEU:HD11	1:N:433:LEU:HD21	1.96	0.48
1:N:232:ASP:HA	1:N:284:TYR:CD1	2.48	0.48
1:A:225:LEU:HD11	1:A:324:HIS:CE1	2.49	0.48
1:K:99:GLU:O	1:K:103:LEU:HD13	2.12	0.48
1:K:233:THR:O	1:K:234:ASP:HB3	2.13	0.48
1:K:309:ARG:O	1:K:313:VAL:HG23	2.13	0.48
1:M:431:ARG:HA	1:M:431:ARG:CZ	2.43	0.48
1:A:369:ILE:O	1:A:372:GLU:CB	2.62	0.48
1:A:372:GLU:HG3	1:A:375:ARG:NH2	2.28	0.48
1:P:219:ILE:HB	1:P:275:ASN:HB3	1.94	0.48
1:O:284:TYR:CE2	1:O:286:TYR:HD2	2.31	0.48
1:M:280:ARG:HD2	1:M:304:PHE:HB2	1.95	0.48
1:F:219:ILE:HD11	1:F:336:ILE:HB	1.96	0.48
1:E:108:ILE:HD12	1:J:446:ALA:O	2.12	0.48
1:E:130:ASN:O	1:E:131:SER:HB2	2.13	0.48
1:A:313:VAL:HG22	1:A:357:ALA:HB3	1.95	0.48
1:G:334:LYS:CB	1:G:351:GLY:HA3	2.43	0.48
1:K:13:LEU:HD21	1:K:511:ALA:O	2.13	0.48
1:J:380:ALA:O	1:J:384:LEU:HD22	2.12	0.48
1:K:45:ASP:O	1:K:46:ALA:HB2	2.12	0.48
1:D:222:ALA:HA	1:D:275:ASN:HB2	1.96	0.48
1:H:183:LEU:CD1	1:H:186:ILE:HD12	2.43	0.48
1:H:61:ILE:HG13	1:H:62:GLY:N	2.28	0.48
1:I:431:ARG:O	1:I:434:PRO:HD2	2.13	0.48
1:L:452:LEU:HD11	1:L:456:HIS:HE1	1.77	0.48
1:M:57:ILE:HD13	1:M:57:ILE:O	2.14	0.48
1:H:226:ILE:HG12	1:H:278:ILE:HG23	1.95	0.48
1:G:448:LEU:HD21	1:G:465:LEU:HD12	1.95	0.48
1:E:284:TYR:CE2	1:E:286:TYR:HD2	2.32	0.48
1:J:109:HIS:CE1	1:J:111:GLN:HB2	2.48	0.48
1:L:226:ILE:HA	1:L:278:ILE:O	2.14	0.48
1:J:341:ILE:HG23	1:J:363:ARG:CZ	2.43	0.48
1:G:41:SER:HB3	1:G:45:ASP:OD2	2.14	0.48
1:B:513:ARG:HG3	1:G:45:ASP:CG	2.34	0.48
1:F:448:LEU:C	1:F:448:LEU:HD13	2.33	0.48
1:F:452:LEU:HD13	1:F:465:LEU:CD1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:107:LYS:HG2	1:N:107:LYS:O	2.13	0.48
1:B:116:GLY:O	1:B:119:GLU:HB2	2.14	0.48
1:O:202:ASP:HB2	1:O:359:THR:HG22	1.94	0.48
1:K:22:ILE:HD12	1:K:90:THR:CG2	2.43	0.48
1:L:145:ASP:O	1:L:171:VAL:HG11	2.13	0.48
1:O:38:ILE:HD12	1:O:48:LEU:HD22	1.95	0.48
1:C:380:ALA:O	1:C:384:LEU:HD23	2.14	0.48
1:I:324:HIS:HB2	1:I:329:LYS:HZ1	1.78	0.48
1:B:79:ASP:HA	1:B:83:GLY:N	2.29	0.48
1:M:48:LEU:HD12	1:O:508:ILE:HD11	1.95	0.48
1:I:366:THR:HG23	1:I:366:THR:O	2.13	0.48
1:H:51:THR:HG23	1:H:375:ARG:CZ	2.44	0.48
1:P:431:ARG:HA	1:P:431:ARG:CZ	2.43	0.48
1:G:59:LYS:HE3	1:G:73:ASP:HA	1.95	0.48
1:G:82:VAL:HG22	1:G:386:GLN:HB3	1.94	0.48
1:O:126:GLN:OE1	1:O:411:LEU:HD11	2.13	0.48
1:P:82:VAL:HG13	1:P:83:GLY:N	2.28	0.48
1:F:96:LEU:HD13	1:F:97:LEU:N	2.28	0.48
1:E:322:PHE:HA	1:E:324:HIS:CD2	2.48	0.48
1:E:27:LYS:CB	1:E:436:ILE:HD11	2.44	0.48
1:H:284:TYR:O	1:H:287:PRO:HD2	2.13	0.48
1:C:39:LEU:CD1	1:C:57:ILE:HD11	2.40	0.48
1:N:75:SER:O	1:N:78:GLN:HB3	2.14	0.48
1:I:96:LEU:HD13	1:I:97:LEU:N	2.29	0.48
1:M:152:THR:OG1	1:M:480:ILE:HA	2.13	0.48
1:F:411:LEU:HB3	1:F:423:MET:SD	2.53	0.48
1:B:334:LYS:CB	1:B:351:GLY:HA3	2.43	0.48
1:E:203:GLU:CG	1:E:350:SER:HB2	2.43	0.48
1:G:110:PRO:O	1:G:113:ILE:HB	2.13	0.48
1:I:45:ASP:O	1:I:47:SER:N	2.43	0.48
1:J:4:ASP:CG	1:J:513:ARG:HG2	2.33	0.48
1:J:146:LEU:HD11	1:J:150:ALA:CB	2.43	0.48
1:F:510:ALA:O	1:F:511:ALA:CB	2.61	0.48
1:G:164:ASP:O	1:G:167:THR:HG22	2.14	0.48
1:P:146:LEU:CD2	1:P:147:MET:H	2.26	0.48
1:I:52:ASN:ND2	1:I:157:LYS:HD3	2.27	0.48
1:N:219:ILE:HD11	1:N:336:ILE:HB	1.94	0.48
1:N:222:ALA:HA	1:N:275:ASN:HB2	1.95	0.48
1:P:99:GLU:HG2	1:P:425:SER:CB	2.43	0.48
1:L:431:ARG:NH2	1:L:434:PRO:HG2	2.28	0.48
1:C:433:LEU:HB2	1:C:434:PRO:HD3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:434:PRO:HB3	1:C:452:LEU:HD22	1.96	0.48
1:A:452:LEU:HD11	1:A:456:HIS:CE1	2.49	0.48
1:A:411:LEU:CB	1:A:423:MET:SD	3.02	0.48
1:E:448:LEU:HD21	1:E:465:LEU:CD1	2.44	0.48
1:O:284:TYR:O	1:O:287:PRO:HD2	2.14	0.48
1:M:32:PRO:HD2	1:M:467:MET:HE1	1.96	0.48
1:P:143:ARG:NE	1:P:143:ARG:HA	2.28	0.48
1:D:111:GLN:HG2	1:H:35:MET:CE	2.43	0.48
1:D:222:ALA:HA	1:D:275:ASN:OD1	2.14	0.48
1:J:9:GLU:HG3	1:J:10:THR:N	2.29	0.48
1:G:266:VAL:HB	1:G:290:LEU:HD21	1.95	0.48
1:A:28:SER:HB2	1:A:35:MET:SD	2.53	0.48
1:M:190:LYS:HA	1:M:362:LEU:O	2.14	0.48
1:K:122:LYS:O	1:K:125:ARG:HG2	2.13	0.48
1:D:188:VAL:HA	1:D:360:ILE:O	2.14	0.48
1:B:274:ILE:HG23	1:B:296:VAL:CG2	2.44	0.48
1:B:106:LYS:CB	1:I:446:ALA:HB2	2.37	0.48
1:C:211:ILE:HG13	1:C:298:ALA:H	1.79	0.48
1:F:226:ILE:HG12	1:F:278:ILE:CG2	2.43	0.48
1:E:487:LYS:HA	1:E:490:VAL:HG12	1.94	0.48
1:M:431:ARG:O	1:M:434:PRO:HD2	2.14	0.48
1:K:177:LEU:HD12	1:K:177:LEU:C	2.33	0.48
1:A:496:GLU:HA	1:A:499:GLU:CB	2.44	0.48
1:D:418:LYS:HB3	1:D:418:LYS:NZ	2.29	0.48
1:O:58:LEU:HD12	1:O:72:VAL:HG22	1.95	0.48
1:G:99:GLU:O	1:G:102:SER:HB2	2.13	0.48
1:A:345:LYS:C	1:A:346:LEU:HD12	2.34	0.48
1:H:6:GLU:HB3	1:H:11:ALA:HB1	1.95	0.48
1:A:2:GLY:O	1:A:3:ALA:CB	2.62	0.48
1:N:148:ASN:HA	1:N:479:GLY:O	2.13	0.48
1:E:52:ASN:HB3	1:E:157:LYS:HG2	1.96	0.48
1:A:95:GLU:HA	1:A:98:ARG:HD2	1.96	0.48
1:F:392:ARG:C	1:F:484:PHE:HB2	2.33	0.48
1:P:238:ILE:O	1:P:240:GLY:N	2.46	0.48
1:O:145:ASP:OD2	1:O:175:LEU:HD11	2.13	0.48
1:B:160:THR:HG23	1:B:164:ASP:HB3	1.94	0.48
1:H:211:ILE:HG12	1:H:298:ALA:H	1.78	0.48
1:F:372:GLU:HB2	1:F:375:ARG:HH21	1.79	0.48
1:G:277:PHE:O	1:G:298:ALA:HA	2.14	0.48
1:D:283:ILE:HG22	1:D:300:GLU:CG	2.42	0.48
1:C:24:ASP:O	1:C:27:LYS:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:434:PRO:HB3	1:M:452:LEU:HD22	1.95	0.48
1:N:261:LYS:O	1:N:264:GLU:HG2	2.13	0.48
1:M:225:LEU:HD11	1:M:324:HIS:CE1	2.47	0.48
1:O:57:ILE:HG23	1:O:58:LEU:CD2	2.44	0.48
1:M:51:THR:HG22	1:M:53:ASP:O	2.14	0.48
1:M:334:LYS:HB2	1:M:351:GLY:HA3	1.95	0.48
1:J:32:PRO:HD2	1:J:467:MET:HE1	1.94	0.48
1:B:206:LEU:HD13	1:B:206:LEU:C	2.35	0.48
1:D:489:GLN:HE21	1:D:489:GLN:H	1.62	0.48
1:O:259:LYS:O	1:O:262:MET:HB3	2.13	0.48
1:C:114:ILE:HD12	1:C:499:GLU:HA	1.96	0.48
1:N:232:ASP:HA	1:N:284:TYR:HB2	1.96	0.48
1:K:106:LYS:HE2	1:K:418:LYS:HE2	1.94	0.48
1:K:173:ALA:HB1	1:K:360:ILE:CD1	2.43	0.48
1:M:226:ILE:HA	1:M:278:ILE:O	2.14	0.48
1:A:188:VAL:CG1	1:A:377:LEU:HD22	2.43	0.48
1:I:188:VAL:CG2	1:I:377:LEU:HD21	2.44	0.48
1:D:254:ILE:CG2	1:E:238:ILE:HG13	2.44	0.48
1:O:222:ALA:HA	1:O:275:ASN:OD1	2.13	0.48
1:G:176:ARG:HD2	1:G:358:CYS:SG	2.54	0.48
1:L:58:LEU:HB3	1:L:72:VAL:CG1	2.44	0.48
1:K:13:LEU:HD23	1:K:13:LEU:C	2.34	0.48
1:I:206:LEU:O	1:I:206:LEU:HD12	2.14	0.48
1:C:364:GLY:HA3	1:C:370:LEU:HD13	1.96	0.48
1:D:203:GLU:CD	1:D:203:GLU:H	2.17	0.48
1:N:208:ASP:O	1:N:209:LYS:HG3	2.13	0.48
1:B:326:GLU:CG	1:B:327:LEU:H	2.23	0.47
1:B:104:ILE:C	1:B:106:LYS:H	2.18	0.47
1:B:418:LYS:CG	1:I:450:ALA:HA	2.43	0.47
1:J:40:LEU:HB2	1:J:48:LEU:CD2	2.37	0.47
1:P:38:ILE:HG22	1:P:50:VAL:CB	2.35	0.47
1:L:222:ALA:HA	1:L:275:ASN:CB	2.44	0.47
1:D:421:VAL:O	1:D:424:GLU:HG2	2.14	0.47
1:K:24:ASP:O	1:K:27:LYS:HG2	2.14	0.47
1:L:133:VAL:HG12	1:L:395:TYR:CE2	2.49	0.47
1:P:173:ALA:HA	1:P:176:ARG:CZ	2.43	0.47
1:I:114:ILE:HA	1:I:117:TRP:CE3	2.49	0.47
1:P:82:VAL:HG13	1:P:486:VAL:HG12	1.96	0.47
1:J:117:TRP:O	1:J:120:ALA:HB3	2.14	0.47
1:E:324:HIS:O	1:E:328:VAL:HG23	2.13	0.47
1:M:35:MET:SD	1:M:35:MET:N	2.86	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:485:GLN:HB3	1:F:488:ARG:HH21	1.79	0.47
1:F:176:ARG:CZ	1:F:358:CYS:HB2	2.44	0.47
1:O:337:GLU:OE2	1:O:339:VAL:HG22	2.14	0.47
1:N:128:LEU:C	1:N:129:LEU:HD13	2.34	0.47
1:B:96:LEU:HD13	1:B:97:LEU:N	2.29	0.47
1:C:188:VAL:HG21	1:C:377:LEU:HD13	1.96	0.47
1:G:100:ALA:HA	1:G:103:LEU:HD13	1.95	0.47
1:C:125:ARG:HG2	1:C:128:LEU:HD12	1.96	0.47
1:E:475:MET:SD	1:E:480:ILE:HB	2.54	0.47
1:N:187:HIS:O	1:N:359:THR:HG23	2.14	0.47
1:O:191:LYS:NZ	1:O:346:LEU:HD13	2.29	0.47
1:D:163:LYS:HE3	1:D:376:SER:OG	2.13	0.47
1:C:150:ALA:HB1	1:C:167:THR:OG1	2.14	0.47
1:I:274:ILE:HG23	1:I:274:ILE:O	2.14	0.47
1:M:192:LEU:H	1:M:192:LEU:HD12	1.79	0.47
1:G:324:HIS:HB2	1:G:329:LYS:CE	2.43	0.47
1:C:274:ILE:HG23	1:C:296:VAL:CG2	2.44	0.47
1:G:124:ALA:CB	1:G:491:LEU:HD13	2.41	0.47
1:H:341:ILE:HG23	1:H:363:ARG:CZ	2.44	0.47
1:J:402:MET:CE	1:J:453:ARG:HG2	2.44	0.47
1:J:128:LEU:HD23	1:J:394:VAL:CG1	2.41	0.47
1:A:225:LEU:HG	1:A:277:PHE:CD1	2.49	0.47
1:F:154:LEU:HD21	1:F:163:LYS:NZ	2.29	0.47
1:F:163:LYS:HA	1:F:166:PHE:CE1	2.49	0.47
1:O:335:LEU:HD21	1:O:337:GLU:OE1	2.13	0.47
1:E:313:VAL:HG13	1:E:352:VAL:CB	2.44	0.47
1:D:32:PRO:HA	1:D:155:SER:HB3	1.96	0.47
1:G:176:ARG:NE	1:G:358:CYS:HB2	2.29	0.47
1:A:497:ALA:O	1:A:500:VAL:HG12	2.14	0.47
1:D:71:LEU:HD12	1:D:497:ALA:HB1	1.95	0.47
1:I:22:ILE:HD12	1:I:90:THR:CG2	2.44	0.47
1:L:364:GLY:HA3	1:L:370:LEU:CD1	2.28	0.47
1:E:159:LEU:HD13	1:E:159:LEU:H	1.79	0.47
1:E:175:LEU:O	1:E:178:LYS:HG2	2.14	0.47
1:P:146:LEU:CD1	1:P:171:VAL:HG13	2.37	0.47
1:C:112:THR:HG21	1:C:418:LYS:HD2	1.96	0.47
1:H:189:ILE:HG22	1:H:190:LYS:N	2.29	0.47
1:H:27:LYS:HG3	1:H:436:ILE:CD1	2.43	0.47
1:K:58:LEU:HB3	1:K:72:VAL:HG11	1.95	0.47
1:A:57:ILE:HG23	1:A:58:LEU:CD2	2.44	0.47
1:J:84:ASP:CG	1:J:85:GLY:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:509:LYS:HA	1:C:509:LYS:CE	2.44	0.47
1:L:310:LEU:O	1:L:314:THR:HG22	2.13	0.47
1:E:108:ILE:HD13	1:J:446:ALA:HA	1.95	0.47
1:L:334:LYS:HD2	1:L:351:GLY:HA3	1.96	0.47
1:N:61:ILE:HG13	1:N:62:GLY:N	2.30	0.47
1:P:341:ILE:HG23	1:P:363:ARG:NH2	2.30	0.47
1:C:261:LYS:O	1:C:264:GLU:HG2	2.14	0.47
1:D:146:LEU:HD23	1:D:148:ASN:H	1.80	0.47
1:D:166:PHE:CZ	1:D:198:ASP:HB3	2.49	0.47
1:F:51:THR:HG21	1:F:56:THR:HB	1.96	0.47
1:I:159:LEU:C	1:I:159:LEU:HD23	2.34	0.47
1:N:452:LEU:HD13	1:N:465:LEU:CD1	2.44	0.47
1:I:434:PRO:HB3	1:I:452:LEU:HD23	1.96	0.47
1:J:38:ILE:HD12	1:J:38:ILE:N	2.24	0.47
1:J:40:LEU:HD13	1:J:41:SER:N	2.29	0.47
1:G:274:ILE:HG23	1:G:296:VAL:CG2	2.44	0.47
1:P:402:MET:SD	1:P:453:ARG:HA	2.55	0.47
1:G:81:GLU:HB3	1:G:485:GLN:HG3	1.95	0.47
1:B:433:LEU:HA	1:B:436:ILE:HG22	1.95	0.47
1:D:250:LYS:O	1:D:253:GLU:HG2	2.13	0.47
1:N:269:ILE:CG2	1:N:274:ILE:HG21	2.41	0.47
1:O:324:HIS:HB2	1:O:329:LYS:HE2	1.95	0.47
1:H:24:ASP:O	1:H:27:LYS:HB3	2.15	0.47
1:L:188:VAL:HG12	1:L:377:LEU:HD22	1.94	0.47
1:E:324:HIS:HB2	1:E:329:LYS:NZ	2.30	0.47
1:J:233:THR:O	1:J:234:ASP:HB3	2.14	0.47
1:L:488:ARG:HG3	1:L:489:GLN:OE1	2.14	0.47
1:I:96:LEU:HD13	1:I:96:LEU:C	2.35	0.47
1:K:207:LEU:HD13	1:K:208:ASP:N	2.29	0.47
1:L:67:ALA:HB2	1:L:507:ILE:HB	1.96	0.47
1:D:51:THR:HG21	1:D:56:THR:HB	1.95	0.47
1:M:263:LYS:O	1:M:267:GLU:HG2	2.14	0.47
1:B:28:SER:O	1:B:34:GLY:HA2	2.14	0.47
1:K:175:LEU:O	1:K:178:LYS:HG2	2.15	0.47
1:E:146:LEU:CD2	1:E:147:MET:H	2.25	0.47
1:K:2:GLY:O	1:K:3:ALA:HB3	2.13	0.47
1:L:506:ASN:CB	1:P:38:ILE:HG12	2.45	0.47
1:K:343:GLU:HG3	1:K:344:ASP:HB2	1.95	0.47
1:K:192:LEU:CG	1:K:366:THR:HG21	2.36	0.47
1:A:274:ILE:HG23	1:A:296:VAL:HG21	1.96	0.47
1:D:500:VAL:HG12	1:H:369:ILE:HD11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:159:LEU:HD23	1:H:163:LYS:HD3	1.97	0.47
1:D:369:ILE:HG23	1:D:372:GLU:OE1	2.15	0.47
1:C:92:LEU:O	1:C:95:GLU:HG2	2.14	0.47
1:D:316:GLY:O	1:D:317:GLU:HG2	2.15	0.47
1:M:226:ILE:HG12	1:M:278:ILE:CG2	2.42	0.47
1:C:57:ILE:C	1:C:57:ILE:HD13	2.34	0.47
1:B:248:THR:O	1:B:251:VAL:HG12	2.14	0.47
1:F:334:LYS:HD3	1:F:335:LEU:N	2.30	0.47
1:E:52:ASN:CB	1:E:157:LYS:HG2	2.44	0.47
1:L:509:LYS:HG3	1:L:510:ALA:N	2.29	0.47
1:E:365:ALA:O	1:E:366:THR:HG23	2.15	0.47
1:O:210:LYS:HE2	1:O:212:GLY:O	2.14	0.47
1:E:32:PRO:HD2	1:E:467:MET:CE	2.44	0.47
1:L:277:PHE:O	1:L:298:ALA:HA	2.15	0.47
1:K:114:ILE:HA	1:K:117:TRP:CZ3	2.49	0.47
1:L:210:LYS:HE2	1:L:212:GLY:O	2.15	0.47
1:G:52:ASN:H	1:G:375:ARG:HH11	1.62	0.47
1:K:198:ASP:O	1:K:363:ARG:HB2	2.14	0.47
1:E:146:LEU:HD21	1:E:167:THR:CG2	2.38	0.47
1:I:154:LEU:O	1:I:157:LYS:HB2	2.15	0.47
1:J:82:VAL:HG11	1:J:483:SER:HB2	1.97	0.47
1:K:365:ALA:C	1:K:366:THR:HG23	2.35	0.47
1:F:397:GLY:HA3	1:F:475:MET:HE1	1.96	0.47
1:P:433:LEU:HB2	1:P:434:PRO:HD3	1.96	0.47
1:N:504:VAL:HG12	1:N:506:ASN:H	1.80	0.47
1:H:448:LEU:HD11	1:H:465:LEU:CD1	2.44	0.47
1:O:96:LEU:HD22	1:O:96:LEU:O	2.15	0.47
1:M:111:GLN:HA	1:M:114:ILE:HG12	1.97	0.47
1:A:499:GLU:O	1:A:502:LEU:HB3	2.15	0.47
1:A:51:THR:HA	1:A:375:ARG:HD2	1.96	0.47
1:F:434:PRO:HB3	1:F:452:LEU:CD2	2.45	0.47
1:F:201:LEU:HD22	1:F:202:ASP:N	2.29	0.47
1:L:209:LYS:NZ	1:L:303:ASP:H	2.11	0.47
1:B:89:VAL:CG1	1:B:490:VAL:HB	2.42	0.47
1:A:508:ILE:O	1:A:509:LYS:CG	2.62	0.47
1:J:379:ASP:O	1:J:383:VAL:HG23	2.14	0.47
1:C:385:ALA:O	1:C:388:VAL:HG12	2.15	0.47
1:M:509:LYS:CG	1:M:509:LYS:O	2.63	0.47
1:E:133:VAL:HG23	1:E:134:ASP:OD1	2.14	0.47
1:N:280:ARG:HG3	1:N:304:PHE:CA	2.45	0.47
1:K:13:LEU:HD11	1:K:513:ARG:HB3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:345:LYS:C	1:O:346:LEU:HD12	2.35	0.47
1:O:160:THR:HA	1:O:163:LYS:HB3	1.96	0.47
1:B:154:LEU:HD22	1:B:167:THR:CB	2.43	0.47
1:B:159:LEU:CD2	1:B:163:LYS:HG2	2.41	0.47
1:L:146:LEU:HB2	1:L:171:VAL:HG21	1.96	0.47
1:J:146:LEU:HB2	1:J:171:VAL:CG2	2.45	0.47
1:D:159:LEU:H	1:D:159:LEU:CD2	2.27	0.47
1:H:146:LEU:HD23	1:H:147:MET:H	1.79	0.47
1:K:146:LEU:HD12	1:K:171:VAL:CG2	2.44	0.47
1:C:150:ALA:O	1:C:154:LEU:HD13	2.15	0.47
1:I:225:LEU:HG	1:I:277:PHE:CD1	2.49	0.47
1:C:78:GLN:HE22	1:C:489:GLN:HB2	1.80	0.47
1:E:485:GLN:HB2	1:E:489:GLN:HE22	1.79	0.47
1:E:81:GLU:O	1:E:82:VAL:HB	2.15	0.47
1:C:497:ALA:CA	1:C:500:VAL:HB	2.44	0.47
1:L:261:LYS:O	1:L:264:GLU:HG2	2.15	0.47
1:I:263:LYS:O	1:I:266:VAL:HG12	2.15	0.47
1:J:263:LYS:O	1:J:266:VAL:HG12	2.15	0.47
1:G:297:MET:HE1	1:G:347:ILE:HD11	1.97	0.47
1:C:265:LYS:NZ	1:C:287:PRO:HG3	2.29	0.47
1:L:433:LEU:O	1:L:436:ILE:HG22	2.14	0.47
1:L:433:LEU:HB2	1:L:434:PRO:HD3	1.97	0.47
1:G:59:LYS:HZ1	1:G:75:SER:HB3	1.79	0.47
1:G:206:LEU:HD23	1:G:348:HIS:CD2	2.49	0.47
1:K:231:MET:HG2	1:K:279:ASN:HD22	1.80	0.47
1:M:124:ALA:HA	1:M:491:LEU:HD13	1.97	0.47
1:I:59:LYS:HE2	1:I:76:ARG:CB	2.42	0.47
1:F:93:ALA:O	1:F:96:LEU:HD12	2.14	0.47
1:O:397:GLY:HA3	1:O:475:MET:CE	2.45	0.47
1:P:119:GLU:OE1	1:P:423:MET:HE3	2.15	0.47
1:H:485:GLN:HE21	1:H:488:ARG:HH21	1.63	0.47
1:M:324:HIS:O	1:M:328:VAL:HG23	2.15	0.47
1:A:511:ALA:C	1:F:25:LEU:HG	2.34	0.47
1:C:57:ILE:HG23	1:C:58:LEU:HD22	1.96	0.47
1:A:71:LEU:O	1:A:74:MET:HB3	2.14	0.47
1:B:128:LEU:HD13	1:B:488:ARG:HG2	1.94	0.47
1:E:124:ALA:O	1:E:128:LEU:HG	2.14	0.47
1:F:364:GLY:HA3	1:F:370:LEU:CD2	2.44	0.47
1:D:433:LEU:HB2	1:D:434:PRO:HD3	1.96	0.47
1:D:226:ILE:HA	1:D:278:ILE:O	2.14	0.47
1:D:32:PRO:HD2	1:D:467:MET:CE	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:451:GLN:HE22	1:F:471:THR:HA	1.77	0.47
1:M:222:ALA:HA	1:M:275:ASN:OD1	2.15	0.47
1:L:96:LEU:C	1:L:96:LEU:HD13	2.35	0.47
1:G:140:VAL:HG22	1:G:178:LYS:NZ	2.29	0.47
1:N:141:LYS:HE2	1:N:144:GLN:HB2	1.97	0.47
1:L:508:ILE:HG23	1:L:509:LYS:N	2.29	0.47
1:O:392:ARG:C	1:O:484:PHE:HB2	2.35	0.47
1:G:117:TRP:HD1	1:G:495:ALA:HB1	1.80	0.47
1:I:196:LEU:HD13	1:I:196:LEU:C	2.35	0.47
1:O:143:ARG:HE	1:O:143:ARG:HA	1.79	0.47
1:M:268:ARG:O	1:M:271:LYS:HG2	2.14	0.47
1:C:412:ALA:HA	1:C:423:MET:HG2	1.96	0.47
1:M:405:ALA:HA	1:M:408:VAL:HG22	1.96	0.47
1:H:174:VAL:HG12	1:H:381:LEU:HD22	1.96	0.47
1:G:146:LEU:HD11	1:G:150:ALA:HB3	1.97	0.47
1:E:159:LEU:HG	1:E:163:LYS:HD2	1.96	0.47
1:I:287:PRO:O	1:I:291:PHE:HD2	1.97	0.47
1:N:448:LEU:HD11	1:N:465:LEU:HD11	1.96	0.47
1:G:206:LEU:HD21	1:G:346:LEU:HB3	1.96	0.47
1:E:261:LYS:O	1:E:264:GLU:HG2	2.15	0.47
1:G:92:LEU:HD11	1:G:433:LEU:HD21	1.97	0.47
1:P:483:SER:HB2	1:P:486:VAL:HG13	1.96	0.47
1:J:111:GLN:O	1:J:114:ILE:HB	2.15	0.47
1:C:124:ALA:CA	1:C:491:LEU:HD13	2.41	0.47
1:B:397:GLY:HA3	1:B:475:MET:HE1	1.97	0.47
1:D:452:LEU:HA	1:D:472:ILE:HG21	1.95	0.47
1:F:173:ALA:O	1:F:176:ARG:HG2	2.14	0.47
1:L:32:PRO:CA	1:L:156:SER:HA	2.45	0.47
1:O:334:LYS:CG	1:O:351:GLY:HA3	2.45	0.47
1:G:32:PRO:HD2	1:G:467:MET:HE3	1.96	0.47
1:F:364:GLY:HA3	1:F:370:LEU:HD11	1.96	0.47
1:F:364:GLY:HA3	1:F:370:LEU:HG	1.95	0.47
1:B:222:ALA:HA	1:B:275:ASN:CG	2.36	0.47
1:D:78:GLN:NE2	1:D:486:VAL:HA	2.29	0.47
1:B:510:ALA:HB3	1:G:25:LEU:HD11	1.95	0.47
1:N:136:GLY:HA2	1:N:391:SER:O	2.15	0.47
1:D:107:LYS:O	1:D:108:ILE:HB	2.15	0.47
1:J:421:VAL:O	1:J:424:GLU:HG2	2.15	0.47
1:N:41:SER:OG	1:N:42:SER:N	2.47	0.47
1:N:116:GLY:O	1:N:119:GLU:HB2	2.15	0.47
1:I:211:ILE:HB	1:I:215:GLN:OE1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:322:PHE:HA	1:I:324:HIS:CD2	2.48	0.47
1:F:366:THR:C	1:F:367:GLN:HG3	2.36	0.47
1:D:509:LYS:HE2	1:H:63:VAL:HG21	1.97	0.47
1:N:326:GLU:CG	1:N:327:LEU:H	2.26	0.47
1:K:399:CYS:SG	1:K:464:GLY:CA	3.01	0.47
1:C:448:LEU:C	1:C:448:LEU:HD13	2.36	0.47
1:A:399:CYS:HA	1:A:456:HIS:NE2	2.29	0.47
1:J:110:PRO:HA	1:J:113:ILE:HD12	1.97	0.47
1:G:215:GLN:HE21	1:G:292:GLY:N	2.13	0.47
1:H:287:PRO:O	1:H:291:PHE:HD1	1.98	0.47
1:I:57:ILE:HG23	1:I:58:LEU:HD22	1.97	0.47
1:E:503:ARG:O	1:E:504:VAL:CB	2.63	0.47
1:B:312:LEU:HD13	1:B:354:LEU:CD2	2.45	0.47
1:G:175:LEU:O	1:G:178:LYS:HD2	2.15	0.47
1:D:207:LEU:HD13	1:D:208:ASP:N	2.29	0.47
1:C:341:ILE:C	1:C:343:GLU:H	2.19	0.47
1:J:31:GLY:O	1:J:156:SER:HA	2.15	0.47
1:B:164:ASP:O	1:B:167:THR:HG22	2.15	0.47
1:J:146:LEU:HD13	1:J:167:THR:O	2.13	0.47
1:M:163:LYS:HA	1:M:166:PHE:HD1	1.80	0.47
1:P:154:LEU:HD22	1:P:167:THR:HB	1.96	0.47
1:B:283:ILE:CG2	1:B:300:GLU:HG3	2.40	0.47
1:P:32:PRO:HD2	1:P:467:MET:CE	2.45	0.47
1:J:75:SER:O	1:J:78:GLN:HB3	2.15	0.47
1:N:276:CYS:HA	1:N:297:MET:O	2.15	0.47
1:N:82:VAL:HB	1:N:485:GLN:CB	2.44	0.47
1:K:448:LEU:HD22	1:K:451:GLN:HE21	1.79	0.47
1:I:117:TRP:O	1:I:120:ALA:HB3	2.15	0.47
1:C:201:LEU:HD23	1:C:360:ILE:HG12	1.95	0.47
1:C:438:ALA:CB	1:C:448:LEU:HG	2.44	0.47
1:D:57:ILE:HG23	1:D:58:LEU:HD22	1.96	0.47
1:L:280:ARG:O	1:L:281:GLN:HB3	2.15	0.47
1:I:57:ILE:HG23	1:I:58:LEU:CD2	2.45	0.47
1:L:352:VAL:HG23	1:L:355:GLY:H	1.78	0.47
1:K:89:VAL:HG12	1:K:490:VAL:CG2	2.45	0.47
1:P:186:ILE:HG21	1:P:381:LEU:HD11	1.96	0.47
1:O:127:ALA:HB3	1:O:491:LEU:CD1	2.45	0.47
1:K:84:ASP:CG	1:K:85:GLY:H	2.16	0.47
1:A:450:ALA:HB2	1:M:108:ILE:HD13	1.96	0.47
1:K:15:SER:HB3	1:K:501:ILE:CG2	2.45	0.47
1:M:63:VAL:HG11	1:O:2:GLY:CA	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:174:VAL:HG11	1:K:384:LEU:HB2	1.97	0.46
1:K:369:ILE:O	1:K:372:GLU:HB3	2.13	0.46
1:D:509:LYS:N	1:H:39:LEU:HD22	2.31	0.46
1:I:448:LEU:C	1:I:448:LEU:HD13	2.36	0.46
1:C:231:MET:CG	1:C:283:ILE:HG13	2.45	0.46
1:K:31:GLY:O	1:K:156:SER:HA	2.15	0.46
1:P:134:ASP:O	1:P:135:HIS:CB	2.62	0.46
1:O:103:LEU:HD21	1:O:113:ILE:HG21	1.96	0.46
1:B:226:ILE:HG12	1:B:278:ILE:CG2	2.45	0.46
1:L:469:GLU:HA	1:L:469:GLU:OE1	2.14	0.46
1:P:283:ILE:HG22	1:P:300:GLU:CG	2.38	0.46
1:N:159:LEU:HB3	1:N:369:ILE:HG22	1.97	0.46
1:K:174:VAL:HG21	1:K:384:LEU:HB3	1.96	0.46
1:H:40:LEU:HB2	1:H:48:LEU:CD2	2.45	0.46
1:N:448:LEU:HD13	1:N:448:LEU:C	2.36	0.46
1:E:38:ILE:O	1:E:38:ILE:HG13	2.15	0.46
1:M:57:ILE:HD13	1:M:57:ILE:C	2.35	0.46
1:B:448:LEU:HD13	1:B:448:LEU:C	2.36	0.46
1:B:92:LEU:HD11	1:B:433:LEU:HD11	1.97	0.46
1:O:431:ARG:HH21	1:O:434:PRO:HG3	1.80	0.46
1:E:233:THR:O	1:E:234:ASP:HB3	2.15	0.46
1:J:402:MET:HG2	1:J:431:ARG:HH22	1.80	0.46
1:I:394:VAL:HG21	1:I:487:LYS:HG3	1.97	0.46
1:A:166:PHE:CZ	1:A:198:ASP:HB3	2.50	0.46
1:F:216:PRO:HG2	1:F:295:GLY:CA	2.44	0.46
1:H:133:VAL:HG22	1:H:395:TYR:CD2	2.50	0.46
1:F:82:VAL:HG23	1:F:485:GLN:OE1	2.16	0.46
1:F:222:ALA:HA	1:F:275:ASN:HB2	1.97	0.46
1:E:107:LYS:O	1:E:107:LYS:HG2	2.15	0.46
1:A:222:ALA:HA	1:A:275:ASN:HB2	1.96	0.46
1:C:334:LYS:HB3	1:C:351:GLY:HA3	1.97	0.46
1:C:233:THR:HG21	1:C:261:LYS:HE2	1.97	0.46
1:G:19:ALA:HB1	1:G:94:ALA:CB	2.45	0.46
1:P:65:ASN:ND2	1:P:66:PRO:HD3	2.30	0.46
1:N:341:ILE:HG23	1:N:363:ARG:HH21	1.79	0.46
1:P:343:GLU:HG3	1:P:344:ASP:H	1.80	0.46
1:O:154:LEU:HD21	1:O:163:LYS:HZ2	1.80	0.46
1:B:146:LEU:O	1:B:147:MET:HB2	2.15	0.46
1:L:159:LEU:H	1:L:159:LEU:HD12	1.80	0.46
1:M:146:LEU:HD22	1:M:147:MET:H	1.80	0.46
1:A:401:GLU:HG2	1:A:433:LEU:HD22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:27:LYS:CA	1:A:436:ILE:HD11	2.37	0.46
1:C:146:LEU:HD22	1:C:168:LYS:CA	2.40	0.46
1:P:146:LEU:HD21	1:P:150:ALA:HB3	1.97	0.46
1:I:38:ILE:HG21	1:N:506:ASN:HD22	1.81	0.46
1:E:431:ARG:O	1:E:434:PRO:HD2	2.16	0.46
1:I:95:GLU:CD	1:I:429:ALA:HA	2.35	0.46
1:C:324:HIS:O	1:C:329:LYS:HB2	2.15	0.46
1:E:100:ALA:HA	1:E:103:LEU:HD22	1.96	0.46
1:D:116:GLY:O	1:D:119:GLU:HB2	2.15	0.46
1:F:204:GLY:HA3	1:F:350:SER:HA	1.96	0.46
1:P:57:ILE:HG23	1:P:58:LEU:CD2	2.45	0.46
1:P:58:LEU:HB3	1:P:72:VAL:HG11	1.97	0.46
1:K:15:SER:HB3	1:K:501:ILE:HG22	1.96	0.46
1:H:313:VAL:HG13	1:H:352:VAL:CG2	2.44	0.46
1:F:187:HIS:O	1:F:359:THR:HG23	2.15	0.46
1:K:4:ASP:HB3	1:K:508:ILE:HG23	1.98	0.46
1:O:364:GLY:HA3	1:O:370:LEU:HD13	1.98	0.46
1:L:141:LYS:O	1:L:145:ASP:HB2	2.15	0.46
1:D:390:ASP:CB	1:D:485:GLN:HE22	2.29	0.46
1:B:322:PHE:HA	1:B:324:HIS:CD2	2.51	0.46
1:F:171:VAL:HA	1:F:174:VAL:HG22	1.96	0.46
1:A:176:ARG:HH22	1:A:360:ILE:CG1	2.29	0.46
1:B:27:LYS:HB2	1:B:436:ILE:HD11	1.97	0.46
1:D:246:ASP:O	1:D:247:SER:CB	2.64	0.46
1:D:274:ILE:HG23	1:D:274:ILE:O	2.15	0.46
1:D:39:LEU:HD21	1:E:511:ALA:CB	2.46	0.46
1:A:372:GLU:O	1:A:375:ARG:HB3	2.16	0.46
1:C:216:PRO:HG2	1:C:295:GLY:CA	2.45	0.46
1:F:15:SER:CB	1:F:501:ILE:HG23	2.44	0.46
1:B:15:SER:HB3	1:B:501:ILE:HG21	1.97	0.46
1:I:13:LEU:O	1:I:16:PHE:HB3	2.15	0.46
1:L:146:LEU:HD13	1:L:167:THR:O	2.15	0.46
1:D:154:LEU:HD21	1:D:163:LYS:NZ	2.31	0.46
1:H:397:GLY:HA3	1:H:475:MET:CE	2.46	0.46
1:H:397:GLY:HA3	1:H:475:MET:HE1	1.98	0.46
1:H:274:ILE:O	1:H:274:ILE:HG23	2.15	0.46
1:C:231:MET:HB2	1:C:284:TYR:H	1.81	0.46
1:C:283:ILE:CG2	1:C:300:GLU:HG3	2.41	0.46
1:J:448:LEU:HD13	1:J:448:LEU:C	2.35	0.46
1:E:283:ILE:HG22	1:E:300:GLU:CG	2.41	0.46
1:A:402:MET:HG2	1:A:431:ARG:HH22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:215:GLN:HG3	1:A:292:GLY:HA2	1.97	0.46
1:H:448:LEU:HD13	1:H:448:LEU:C	2.35	0.46
1:D:25:LEU:HD22	1:D:25:LEU:N	2.31	0.46
1:F:111:GLN:HA	1:F:114:ILE:CD1	2.42	0.46
1:G:222:ALA:HA	1:G:275:ASN:HB2	1.97	0.46
1:M:219:ILE:HD11	1:M:336:ILE:HB	1.97	0.46
1:C:190:LYS:HD2	1:C:190:LYS:O	2.14	0.46
1:J:268:ARG:O	1:J:271:LYS:HG2	2.15	0.46
1:N:367:GLN:HG2	1:N:369:ILE:HB	1.97	0.46
1:N:122:LYS:CD	1:N:125:ARG:HE	2.28	0.46
1:C:367:GLN:NE2	1:C:369:ILE:HD12	2.30	0.46
1:G:225:LEU:HD13	1:G:329:LYS:CE	2.44	0.46
1:H:274:ILE:HG23	1:H:296:VAL:CG2	2.46	0.46
1:L:231:MET:HE1	1:L:265:LYS:HD3	1.97	0.46
1:O:431:ARG:NH1	1:O:453:ARG:HD3	2.30	0.46
1:P:117:TRP:HB3	1:P:499:GLU:OE2	2.15	0.46
1:L:209:LYS:NZ	1:L:302:ALA:HA	2.30	0.46
1:I:188:VAL:HG22	1:I:377:LEU:HD21	1.98	0.46
1:L:512:PRO:O	1:L:513:ARG:HB3	2.16	0.46
1:M:448:LEU:HA	1:M:451:GLN:HE21	1.80	0.46
1:H:99:GLU:HG3	1:H:425:SER:HB3	1.97	0.46
1:E:224:ILE:HD11	1:E:349:PHE:HE2	1.80	0.46
1:G:405:ALA:HA	1:G:408:VAL:HG22	1.98	0.46
1:B:85:GLY:HA2	1:B:153:THR:OG1	2.16	0.46
1:G:160:THR:HG23	1:G:164:ASP:HB3	1.96	0.46
1:C:367:GLN:HG2	1:C:369:ILE:H	1.80	0.46
1:H:57:ILE:O	1:H:57:ILE:HD13	2.15	0.46
1:B:324:HIS:CG	1:B:325:PRO:HD3	2.51	0.46
1:I:27:LYS:HA	1:I:436:ILE:HD11	1.97	0.46
1:E:82:VAL:HG13	1:E:83:GLY:N	2.31	0.46
1:C:111:GLN:HA	1:C:114:ILE:CG1	2.46	0.46
1:G:208:ASP:O	1:G:209:LYS:HG3	2.16	0.46
1:G:269:ILE:HG12	1:G:274:ILE:HG21	1.97	0.46
1:B:297:MET:CE	1:B:347:ILE:HD11	2.46	0.46
1:K:226:ILE:HA	1:K:278:ILE:O	2.15	0.46
1:J:402:MET:SD	1:J:453:ARG:HA	2.55	0.46
1:E:269:ILE:CG2	1:E:274:ILE:HG21	2.41	0.46
1:J:192:LEU:HD22	1:J:366:THR:HG21	1.98	0.46
1:P:81:GLU:O	1:P:386:GLN:NE2	2.49	0.46
1:C:124:ALA:CB	1:C:491:LEU:HB3	2.46	0.46
1:H:390:ASP:HB2	1:H:485:GLN:HE22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:402:MET:HG2	1:E:431:ARG:HH22	1.81	0.46
1:G:418:LYS:H	1:N:453:ARG:NH1	2.14	0.46
1:O:59:LYS:CE	1:O:76:ARG:HB2	2.45	0.46
1:F:431:ARG:HH21	1:F:434:PRO:HG2	1.79	0.46
1:L:208:ASP:O	1:L:209:LYS:HG3	2.16	0.46
1:C:137:SER:O	1:C:388:VAL:HG23	2.15	0.46
1:M:177:LEU:O	1:M:177:LEU:HD13	2.16	0.46
1:L:143:ARG:HE	1:L:143:ARG:HA	1.81	0.46
1:D:117:TRP:HD1	1:D:495:ALA:HB1	1.81	0.46
1:I:101:GLU:O	1:I:104:ILE:HG12	2.15	0.46
1:L:343:GLU:H	1:L:343:GLU:CD	2.19	0.46
1:K:74:MET:O	1:K:77:VAL:HG12	2.16	0.46
1:M:141:LYS:HE2	1:M:144:GLN:HG2	1.97	0.46
1:M:159:LEU:HG	1:M:163:LYS:HD2	1.97	0.46
1:C:154:LEU:HD23	1:C:163:LYS:HG3	1.98	0.46
1:C:485:GLN:O	1:C:489:GLN:HG2	2.16	0.46
1:L:276:CYS:HA	1:L:297:MET:O	2.16	0.46
1:G:225:LEU:HD11	1:G:324:HIS:ND1	2.30	0.46
1:A:274:ILE:HG23	1:A:274:ILE:O	2.16	0.46
1:A:176:ARG:HH22	1:A:360:ILE:HG13	1.80	0.46
1:P:226:ILE:HG12	1:P:278:ILE:CG2	2.46	0.46
1:O:274:ILE:O	1:O:274:ILE:HG23	2.15	0.46
1:H:191:LYS:HG3	1:H:192:LEU:N	2.31	0.46
1:N:501:ILE:HA	1:N:504:VAL:HG23	1.97	0.46
1:A:37:LYS:O	1:A:50:VAL:HA	2.15	0.46
1:I:408:VAL:HA	1:I:411:LEU:HD12	1.98	0.46
1:J:51:THR:HG22	1:J:53:ASP:O	2.15	0.46
1:C:57:ILE:O	1:C:57:ILE:HD13	2.15	0.46
1:O:52:ASN:HB2	1:O:375:ARG:HH11	1.81	0.46
1:P:31:GLY:C	1:P:156:SER:HA	2.36	0.46
1:H:219:ILE:HB	1:H:275:ASN:HB3	1.96	0.46
1:B:492:LEU:O	1:B:492:LEU:HD13	2.16	0.46
1:G:162:HIS:HB3	1:G:198:ASP:OD2	2.16	0.46
1:A:384:LEU:N	1:A:384:LEU:HD22	2.31	0.46
1:D:82:VAL:CG1	1:D:83:GLY:N	2.78	0.46
1:P:150:ALA:O	1:P:154:LEU:HD13	2.16	0.46
1:L:431:ARG:CZ	1:L:453:ARG:HD3	2.45	0.46
1:P:176:ARG:CZ	1:P:358:CYS:HB2	2.46	0.46
1:D:233:THR:O	1:D:234:ASP:HB3	2.15	0.46
1:O:225:LEU:HD11	1:O:324:HIS:ND1	2.30	0.46
1:D:89:VAL:HA	1:D:490:VAL:HG21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:222:ALA:HA	1:K:275:ASN:CG	2.36	0.46
1:M:478:LEU:HB3	1:M:480:ILE:HD12	1.97	0.46
1:A:219:ILE:HD12	1:A:275:ASN:CB	2.46	0.46
1:J:405:ALA:HA	1:J:408:VAL:HG22	1.97	0.46
1:A:16:PHE:HA	1:A:97:LEU:CD2	2.45	0.46
1:G:159:LEU:HB3	1:G:369:ILE:HG23	1.97	0.46
1:I:27:LYS:C	1:I:436:ILE:HD11	2.36	0.46
1:C:117:TRP:HD1	1:C:495:ALA:CB	2.29	0.46
1:G:82:VAL:HG11	1:G:483:SER:CB	2.45	0.46
1:D:421:VAL:HB	1:K:453:ARG:HH12	1.81	0.46
1:O:438:ALA:HB2	1:O:448:LEU:HG	1.94	0.46
1:A:334:LYS:CD	1:A:351:GLY:HA3	2.46	0.46
1:J:452:LEU:HD13	1:J:465:LEU:HD13	1.98	0.46
1:A:163:LYS:CG	1:A:166:PHE:HB2	2.46	0.46
1:F:25:LEU:N	1:F:25:LEU:HD22	2.31	0.46
1:O:32:PRO:HB2	1:O:467:MET:HE1	1.98	0.46
1:I:188:VAL:HG21	1:I:377:LEU:HD11	1.98	0.46
1:E:103:LEU:HG	1:E:113:ILE:HD13	1.97	0.46
1:D:130:ASN:O	1:D:131:SER:CB	2.64	0.46
1:N:176:ARG:HH12	1:N:201:LEU:HD21	1.81	0.46
1:N:313:VAL:HG13	1:N:352:VAL:HB	1.97	0.46
1:C:188:VAL:CG2	1:C:377:LEU:HD13	2.46	0.46
1:I:206:LEU:C	1:I:206:LEU:HD12	2.36	0.46
1:D:143:ARG:HE	1:D:143:ARG:HA	1.80	0.46
1:K:39:LEU:HD12	1:K:57:ILE:HG13	1.98	0.46
1:M:250:LYS:HE2	1:M:253:GLU:OE1	2.16	0.46
1:C:226:ILE:HG12	1:C:278:ILE:CG2	2.45	0.46
1:P:287:PRO:O	1:P:291:PHE:HD1	1.98	0.45
1:F:159:LEU:HB3	1:F:372:GLU:OE2	2.16	0.45
1:L:262:MET:SD	1:L:290:LEU:HB2	2.56	0.45
1:L:431:ARG:NH1	1:L:453:ARG:HD3	2.31	0.45
1:B:402:MET:CE	1:B:453:ARG:HG2	2.47	0.45
1:H:324:HIS:HB2	1:H:329:LYS:HZ1	1.78	0.45
1:H:189:ILE:CG1	1:H:206:LEU:HD12	2.43	0.45
1:J:431:ARG:CZ	1:J:431:ARG:HA	2.46	0.45
1:L:396:GLY:O	1:L:475:MET:HG2	2.16	0.45
1:D:274:ILE:O	1:D:296:VAL:HG22	2.16	0.45
1:A:397:GLY:HA3	1:A:475:MET:CE	2.46	0.45
1:J:317:GLU:HB2	1:J:329:LYS:HD3	1.98	0.45
1:P:386:GLN:HG2	1:P:389:LYS:HG3	1.98	0.45
1:D:141:LYS:CG	1:D:144:GLN:HB2	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:207:LEU:HD13	1:C:208:ASP:N	2.30	0.45
1:O:451:GLN:NE2	1:O:471:THR:HA	2.31	0.45
1:D:431:ARG:HH21	1:D:434:PRO:HG2	1.81	0.45
1:E:99:GLU:CB	1:E:425:SER:HB2	2.45	0.45
1:E:311:ALA:HA	1:E:314:THR:CG2	2.46	0.45
1:D:111:GLN:O	1:D:114:ILE:HB	2.16	0.45
1:A:438:ALA:HB2	1:A:448:LEU:HG	1.96	0.45
1:P:269:ILE:CG2	1:P:274:ILE:HG21	2.46	0.45
1:D:154:LEU:HD21	1:D:167:THR:HB	1.98	0.45
1:N:154:LEU:HD21	1:N:163:LYS:NZ	2.32	0.45
1:C:38:ILE:O	1:C:38:ILE:HG13	2.15	0.45
1:P:171:VAL:O	1:P:175:LEU:HG	2.15	0.45
1:K:402:MET:HG2	1:K:431:ARG:HH22	1.81	0.45
1:B:431:ARG:NH2	1:B:434:PRO:HG2	2.30	0.45
1:I:487:LYS:HA	1:I:490:VAL:HG12	1.98	0.45
1:D:405:ALA:HA	1:D:408:VAL:CG2	2.47	0.45
1:O:313:VAL:HG13	1:O:352:VAL:CB	2.46	0.45
1:B:510:ALA:HB3	1:G:25:LEU:HG	1.97	0.45
1:H:511:ALA:O	1:H:513:ARG:N	2.49	0.45
1:A:107:LYS:O	1:A:107:LYS:HG2	2.17	0.45
1:D:204:GLY:HA3	1:D:350:SER:HA	1.98	0.45
1:C:176:ARG:NE	1:C:358:CYS:HB2	2.31	0.45
1:B:319:ALA:HA	1:B:329:LYS:HZ1	1.81	0.45
1:I:154:LEU:HD21	1:I:163:LYS:HG3	1.99	0.45
1:M:103:LEU:HD21	1:M:113:ILE:HG21	1.98	0.45
1:G:232:ASP:HA	1:G:284:TYR:CD1	2.51	0.45
1:M:39:LEU:HD12	1:M:57:ILE:HD11	1.97	0.45
1:B:452:LEU:HD11	1:B:456:HIS:CE1	2.51	0.45
1:P:317:GLU:CB	1:P:329:LYS:HD3	2.46	0.45
1:J:452:LEU:HD13	1:J:465:LEU:CD1	2.46	0.45
1:G:27:LYS:HB2	1:G:436:ILE:HD12	1.97	0.45
1:P:369:ILE:O	1:P:372:GLU:CB	2.64	0.45
1:D:366:THR:O	1:D:367:GLN:HB3	2.17	0.45
1:J:216:PRO:HG2	1:J:295:GLY:CA	2.45	0.45
1:O:58:LEU:CB	1:O:72:VAL:HG13	2.44	0.45
1:I:485:GLN:HE22	1:I:488:ARG:NH2	2.15	0.45
1:F:219:ILE:HD12	1:F:275:ASN:HB3	1.98	0.45
1:N:206:LEU:C	1:N:206:LEU:HD13	2.37	0.45
1:B:57:ILE:HG23	1:B:58:LEU:CD2	2.45	0.45
1:P:365:ALA:O	1:P:366:THR:CB	2.64	0.45
1:A:28:SER:O	1:A:34:GLY:HA2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:114:ILE:HA	1:K:117:TRP:CE3	2.51	0.45
1:J:277:PHE:CE2	1:J:279:ASN:HB2	2.51	0.45
1:D:37:LYS:HZ2	1:E:509:LYS:HA	1.81	0.45
1:O:122:LYS:O	1:O:125:ARG:HB2	2.15	0.45
1:F:341:ILE:HG23	1:F:363:ARG:NH2	2.30	0.45
1:C:99:GLU:O	1:C:103:LEU:HD13	2.17	0.45
1:B:150:ALA:O	1:B:154:LEU:HD13	2.16	0.45
1:D:82:VAL:HB	1:D:485:GLN:HB2	1.97	0.45
1:P:99:GLU:O	1:P:103:LEU:HD13	2.16	0.45
1:I:367:GLN:OE1	1:I:370:LEU:HG	2.17	0.45
1:O:4:ASP:HB3	1:O:509:LYS:CE	2.46	0.45
1:H:417:GLY:HA3	1:P:450:ALA:HA	1.98	0.45
1:K:232:ASP:HA	1:K:284:TYR:CD1	2.52	0.45
1:J:114:ILE:HA	1:J:117:TRP:CE3	2.51	0.45
1:O:32:PRO:O	1:O:155:SER:O	2.34	0.45
1:B:512:PRO:C	1:G:61:ILE:HG21	2.36	0.45
1:B:129:LEU:HA	1:B:129:LEU:HD12	1.73	0.45
1:N:79:ASP:HA	1:N:83:GLY:CA	2.46	0.45
1:K:119:GLU:HB3	1:K:423:MET:SD	2.56	0.45
1:M:485:GLN:HB3	1:M:489:GLN:HE22	1.80	0.45
1:M:106:LYS:HD3	1:M:108:ILE:HG13	1.99	0.45
1:J:226:ILE:HG12	1:J:278:ILE:CG2	2.47	0.45
1:O:41:SER:HB3	1:O:45:ASP:OD2	2.17	0.45
1:F:52:ASN:HD21	1:F:157:LYS:HA	1.80	0.45
1:B:209:LYS:HE2	1:B:301:HIS:O	2.16	0.45
1:D:311:ALA:HA	1:D:314:THR:HG22	1.98	0.45
1:M:146:LEU:O	1:M:147:MET:HB2	2.17	0.45
1:M:171:VAL:O	1:M:175:LEU:HG	2.17	0.45
1:I:324:HIS:HB2	1:I:329:LYS:CE	2.45	0.45
1:G:507:ILE:HB	1:G:508:ILE:H	1.59	0.45
1:I:402:MET:CE	1:I:453:ARG:HG2	2.47	0.45
1:I:431:ARG:CZ	1:I:453:ARG:HD3	2.45	0.45
1:L:506:ASN:ND2	1:P:38:ILE:HG12	2.31	0.45
1:L:233:THR:O	1:L:234:ASP:HB3	2.17	0.45
1:N:222:ALA:HA	1:N:275:ASN:OD1	2.16	0.45
1:N:219:ILE:CD1	1:N:275:ASN:HB3	2.46	0.45
1:G:226:ILE:HG12	1:G:278:ILE:CG2	2.47	0.45
1:C:286:TYR:HB2	1:C:287:PRO:HD3	1.98	0.45
1:B:27:LYS:HB2	1:B:436:ILE:CD1	2.47	0.45
1:H:324:HIS:HB2	1:H:329:LYS:HE2	1.98	0.45
1:A:277:PHE:CE2	1:A:279:ASN:HB2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:402:MET:CE	1:F:453:ARG:HG2	2.46	0.45
1:B:371:ASP:O	1:B:374:GLU:HB3	2.16	0.45
1:A:159:LEU:CD2	1:A:159:LEU:N	2.80	0.45
1:B:396:GLY:HA3	1:B:480:ILE:HG22	1.97	0.45
1:E:402:MET:CE	1:E:453:ARG:HG2	2.46	0.45
1:E:433:LEU:HB2	1:E:434:PRO:HD3	1.98	0.45
1:L:205:PHE:HA	1:L:359:THR:OG1	2.16	0.45
1:O:309:ARG:O	1:O:313:VAL:HG23	2.16	0.45
1:E:334:LYS:CB	1:E:351:GLY:HA3	2.47	0.45
1:J:313:VAL:HG13	1:J:352:VAL:CG2	2.47	0.45
1:N:313:VAL:HG13	1:N:352:VAL:CG1	2.47	0.45
1:A:107:LYS:O	1:A:108:ILE:HG13	2.16	0.45
1:D:342:GLY:C	1:D:343:GLU:HG2	2.36	0.45
1:H:259:LYS:O	1:H:262:MET:HB3	2.16	0.45
1:H:203:GLU:HG2	1:H:350:SER:OG	2.15	0.45
1:F:207:LEU:O	1:F:208:ASP:CB	2.65	0.45
1:L:154:LEU:HD22	1:L:167:THR:HB	1.98	0.45
1:H:146:LEU:CD1	1:H:171:VAL:HG13	2.34	0.45
1:H:380:ALA:O	1:H:384:LEU:HD23	2.17	0.45
1:I:138:ASP:O	1:I:139:GLU:CB	2.64	0.45
1:J:78:GLN:HE21	1:J:82:VAL:HG12	1.82	0.45
1:J:99:GLU:O	1:J:103:LEU:HD13	2.16	0.45
1:E:27:LYS:CD	1:E:436:ILE:HD11	2.47	0.45
1:F:57:ILE:O	1:F:57:ILE:HD13	2.17	0.45
1:N:392:ARG:HG3	1:N:484:PHE:CG	2.51	0.45
1:A:39:LEU:HD22	1:C:1:ALA:C	2.37	0.45
1:E:391:SER:C	1:E:392:ARG:HG3	2.36	0.45
1:B:185:ALA:HA	1:B:309:ARG:HG2	1.98	0.45
1:G:341:ILE:O	1:G:343:GLU:N	2.46	0.45
1:D:204:GLY:O	1:D:359:THR:HB	2.16	0.45
1:P:284:TYR:CE2	1:P:286:TYR:CD1	3.05	0.45
1:H:152:THR:HG21	1:H:480:ILE:HA	1.98	0.45
1:O:277:PHE:O	1:O:298:ALA:HA	2.17	0.45
1:K:159:LEU:HD12	1:K:369:ILE:CG2	2.44	0.45
1:E:211:ILE:HG12	1:E:298:ALA:H	1.82	0.45
1:E:171:VAL:O	1:E:175:LEU:HG	2.16	0.45
1:C:164:ASP:O	1:C:167:THR:HG22	2.17	0.45
1:D:509:LYS:HG2	1:H:63:VAL:HG21	1.97	0.45
1:G:211:ILE:HG23	1:G:298:ALA:O	2.17	0.45
1:C:277:PHE:O	1:C:298:ALA:HA	2.17	0.45
1:O:4:ASP:HB3	1:O:509:LYS:NZ	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:194:GLY:HA2	1:G:364:GLY:O	2.16	0.45
1:G:363:ARG:O	1:G:370:LEU:HD11	2.16	0.45
1:M:313:VAL:HG22	1:M:357:ALA:HB3	1.98	0.45
1:F:188:VAL:CG1	1:F:377:LEU:HD21	2.47	0.45
1:L:206:LEU:HD11	1:L:346:LEU:HD23	1.99	0.45
1:E:313:VAL:O	1:E:352:VAL:HG23	2.17	0.45
1:E:313:VAL:CG1	1:E:352:VAL:HB	2.45	0.45
1:I:236:ILE:HG12	1:I:237:LYS:H	1.81	0.45
1:M:119:GLU:OE1	1:M:119:GLU:HA	2.16	0.45
1:M:32:PRO:HD2	1:M:467:MET:HE3	1.99	0.45
1:A:451:GLN:HE22	1:A:471:THR:HA	1.81	0.45
1:B:96:LEU:O	1:B:96:LEU:HD22	2.16	0.45
1:C:19:ALA:HB1	1:C:94:ALA:HA	1.98	0.45
1:C:320:SER:HB2	1:C:321:THR:H	1.61	0.45
1:M:140:VAL:HA	1:M:175:LEU:HD22	1.98	0.45
1:E:146:LEU:CD1	1:E:171:VAL:HG13	2.45	0.45
1:G:265:LYS:HE2	1:G:322:PHE:CE1	2.51	0.45
1:B:433:LEU:HB2	1:B:434:PRO:HD3	1.98	0.45
1:C:431:ARG:O	1:C:434:PRO:HD2	2.16	0.45
1:E:235:LYS:O	1:E:237:LYS:N	2.47	0.45
1:I:76:ARG:O	1:I:79:ASP:HB3	2.16	0.45
1:A:159:LEU:HG	1:A:163:LYS:CD	2.45	0.45
1:O:500:VAL:O	1:O:504:VAL:HG22	2.17	0.45
1:G:215:GLN:HE21	1:G:292:GLY:CA	2.30	0.45
1:N:140:VAL:HA	1:N:175:LEU:HD13	1.99	0.45
1:L:31:GLY:O	1:L:156:SER:HA	2.17	0.45
1:J:219:ILE:HD12	1:J:275:ASN:HB3	1.98	0.45
1:I:65:ASN:ND2	1:I:66:PRO:HD3	2.32	0.45
1:F:22:ILE:HD12	1:F:90:THR:CG2	2.47	0.45
1:O:165:HIS:O	1:O:168:LYS:HB3	2.17	0.45
1:O:366:THR:HG23	1:O:367:GLN:HG3	1.98	0.45
1:K:171:VAL:O	1:K:175:LEU:HG	2.17	0.45
1:F:103:LEU:O	1:F:106:LYS:HB3	2.16	0.45
1:C:163:LYS:HD2	1:C:166:PHE:CG	2.52	0.45
1:N:183:LEU:HD23	1:N:183:LEU:O	2.16	0.45
1:P:226:ILE:HA	1:P:278:ILE:O	2.16	0.45
1:I:123:ALA:O	1:I:126:GLN:HG2	2.17	0.45
1:N:274:ILE:HG23	1:N:274:ILE:O	2.17	0.45
1:G:431:ARG:NH2	1:G:434:PRO:HG2	2.32	0.45
1:G:233:THR:O	1:G:234:ASP:HB3	2.17	0.45
1:B:222:ALA:HA	1:B:275:ASN:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:75:SER:O	1:L:78:GLN:HB3	2.16	0.45
1:D:96:LEU:O	1:D:96:LEU:HD22	2.17	0.45
1:D:64:ASP:CG	1:D:66:PRO:HD2	2.37	0.45
1:O:268:ARG:O	1:O:271:LYS:HG2	2.17	0.45
1:F:79:ASP:HA	1:F:83:GLY:HA2	1.98	0.45
1:P:286:TYR:HB2	1:P:287:PRO:HD3	1.98	0.45
1:E:146:LEU:HD12	1:E:171:VAL:HG11	1.99	0.45
1:B:274:ILE:HG23	1:B:274:ILE:O	2.16	0.45
1:I:433:LEU:HB2	1:I:434:PRO:HD3	1.99	0.45
1:G:226:ILE:HA	1:G:278:ILE:O	2.17	0.45
1:B:211:ILE:HG13	1:B:298:ALA:O	2.17	0.45
1:B:402:MET:HG3	1:B:452:LEU:HG	1.99	0.45
1:P:173:ALA:O	1:P:176:ARG:HG2	2.17	0.45
1:H:154:LEU:HD21	1:H:163:LYS:HZ3	1.79	0.45
1:D:261:LYS:O	1:D:264:GLU:HG2	2.17	0.45
1:A:452:LEU:HD13	1:A:465:LEU:HD22	1.98	0.45
1:F:225:LEU:HG	1:F:277:PHE:CD1	2.52	0.45
1:F:225:LEU:HD13	1:F:329:LYS:HE2	1.99	0.45
1:H:453:ARG:CZ	1:P:417:GLY:H	2.30	0.45
1:B:313:VAL:CG2	1:B:357:ALA:HB3	2.45	0.45
1:J:114:ILE:HD13	1:J:117:TRP:CZ3	2.52	0.45
1:F:99:GLU:HG3	1:F:425:SER:CB	2.47	0.45
1:E:324:HIS:HB2	1:E:329:LYS:HZ3	1.82	0.45
1:K:313:VAL:O	1:K:352:VAL:HG23	2.16	0.45
1:E:431:ARG:NH2	1:E:434:PRO:HG2	2.32	0.45
1:I:408:VAL:HG21	1:I:427:ALA:HA	1.98	0.45
1:H:231:MET:HG3	1:H:283:ILE:HG13	1.99	0.45
1:P:222:ALA:HA	1:P:275:ASN:CG	2.37	0.45
1:A:432:MET:O	1:A:435:THR:HB	2.17	0.45
1:C:325:PRO:O	1:C:326:GLU:HG3	2.17	0.45
1:G:365:ALA:O	1:G:366:THR:HG22	2.17	0.45
1:O:222:ALA:HA	1:O:275:ASN:HB2	1.98	0.45
1:D:451:GLN:NE2	1:D:471:THR:HA	2.32	0.45
1:O:371:ASP:O	1:O:374:GLU:HB3	2.17	0.45
1:N:209:LYS:HE2	1:N:301:HIS:O	2.17	0.45
1:C:343:GLU:HG3	1:C:344:ASP:H	1.81	0.45
1:P:186:ILE:HG21	1:P:381:LEU:CD1	2.47	0.45
1:M:337:GLU:HG3	1:M:339:VAL:HG23	1.99	0.45
1:P:268:ARG:O	1:P:271:LYS:HG2	2.17	0.45
1:J:141:LYS:HD2	1:J:144:GLN:HB2	1.98	0.45
1:P:255:GLU:HG3	1:P:256:HIS:N	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:159:LEU:CD1	1:L:159:LEU:H	2.30	0.44
1:D:146:LEU:HD23	1:D:147:MET:N	2.32	0.44
1:C:146:LEU:HD21	1:C:167:THR:HG23	1.99	0.44
1:C:259:LYS:O	1:C:262:MET:HB3	2.17	0.44
1:K:431:ARG:HH21	1:K:434:PRO:HG2	1.81	0.44
1:N:117:TRP:O	1:N:120:ALA:HB3	2.17	0.44
1:K:206:LEU:HD21	1:K:346:LEU:HB3	1.98	0.44
1:M:215:GLN:HG3	1:M:292:GLY:HA2	1.98	0.44
1:E:438:ALA:CB	1:E:448:LEU:HG	2.47	0.44
1:M:114:ILE:HA	1:M:117:TRP:HE3	1.82	0.44
1:C:487:LYS:O	1:C:490:VAL:HG12	2.17	0.44
1:I:191:LYS:CE	1:I:346:LEU:HG	2.47	0.44
1:I:354:LEU:HG	1:I:356:GLU:H	1.82	0.44
1:D:203:GLU:HG2	1:D:350:SER:HB2	1.99	0.44
1:C:381:LEU:HD23	1:C:381:LEU:C	2.38	0.44
1:N:84:ASP:N	1:N:84:ASP:OD1	2.50	0.44
1:H:257:ALA:O	1:H:260:GLU:HB3	2.16	0.44
1:L:51:THR:HG21	1:L:56:THR:OG1	2.17	0.44
1:O:338:GLU:OE1	1:O:345:LYS:HE2	2.17	0.44
1:B:168:LYS:O	1:B:171:VAL:HG22	2.17	0.44
1:J:154:LEU:HD23	1:J:163:LYS:HB3	1.99	0.44
1:D:146:LEU:HB2	1:D:171:VAL:HG21	1.98	0.44
1:N:122:LYS:HD2	1:N:125:ARG:HE	1.82	0.44
1:M:146:LEU:HB2	1:M:171:VAL:HG21	1.99	0.44
1:E:384:LEU:N	1:E:384:LEU:HD22	2.32	0.44
1:C:171:VAL:HA	1:C:174:VAL:HG22	1.98	0.44
1:I:168:LYS:O	1:I:171:VAL:HG22	2.17	0.44
1:L:211:ILE:CD1	1:L:297:MET:HG3	2.40	0.44
1:M:113:ILE:HG23	1:M:422:ALA:HB1	1.99	0.44
1:G:317:GLU:OE2	1:G:329:LYS:HE3	2.17	0.44
1:A:201:LEU:CD2	1:A:360:ILE:HG12	2.47	0.44
1:G:431:ARG:HH21	1:G:434:PRO:HG2	1.83	0.44
1:D:225:LEU:HD11	1:D:324:HIS:CE1	2.52	0.44
1:P:114:ILE:HA	1:P:117:TRP:CZ3	2.51	0.44
1:K:188:VAL:HG21	1:K:362:LEU:HD12	2.00	0.44
1:P:129:LEU:N	1:P:129:LEU:CD2	2.80	0.44
1:O:261:LYS:O	1:O:264:GLU:HG2	2.17	0.44
1:F:485:GLN:HG3	1:F:489:GLN:HE22	1.83	0.44
1:L:280:ARG:HG3	1:L:304:PHE:HB2	1.98	0.44
1:N:96:LEU:C	1:N:96:LEU:HD13	2.37	0.44
1:E:392:ARG:C	1:E:484:PHE:HB2	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:415:THR:HG21	1:F:423:MET:SD	2.58	0.44
1:D:280:ARG:O	1:D:281:GLN:HB3	2.17	0.44
1:J:177:LEU:HD13	1:J:177:LEU:C	2.38	0.44
1:G:106:LYS:HD2	1:G:113:ILE:HD11	1.99	0.44
1:P:75:SER:O	1:P:78:GLN:HB3	2.17	0.44
1:L:174:VAL:HG11	1:L:384:LEU:CB	2.46	0.44
1:B:261:LYS:O	1:B:264:GLU:HG2	2.16	0.44
1:B:286:TYR:HB2	1:B:287:PRO:HD3	1.98	0.44
1:P:100:ALA:HA	1:P:103:LEU:HD13	1.99	0.44
1:H:367:GLN:HG3	1:H:369:ILE:HB	1.99	0.44
1:O:402:MET:SD	1:O:453:ARG:HA	2.57	0.44
1:G:434:PRO:HB3	1:G:452:LEU:CD2	2.47	0.44
1:C:431:ARG:NH1	1:C:453:ARG:HD3	2.32	0.44
1:C:452:LEU:HD11	1:C:456:HIS:CE1	2.52	0.44
1:A:225:LEU:HD13	1:A:329:LYS:HE3	2.00	0.44
1:F:326:GLU:HB2	1:F:327:LEU:H	1.57	0.44
1:D:446:ALA:CA	1:K:418:LYS:HD3	2.46	0.44
1:B:356:GLU:O	1:B:357:ALA:HB2	2.17	0.44
1:D:40:LEU:HB2	1:D:48:LEU:HD23	1.99	0.44
1:A:159:LEU:HG	1:A:163:LYS:HB3	1.99	0.44
1:K:177:LEU:CD1	1:K:177:LEU:C	2.85	0.44
1:G:57:ILE:HG23	1:G:58:LEU:HD22	1.99	0.44
1:L:206:LEU:HD23	1:L:348:HIS:CD2	2.53	0.44
1:A:39:LEU:CD1	1:A:57:ILE:HG13	2.46	0.44
1:M:438:ALA:O	1:M:441:ALA:HB3	2.16	0.44
1:D:124:ALA:O	1:D:128:LEU:HG	2.18	0.44
1:A:2:GLY:HA2	1:A:513:ARG:HH11	1.83	0.44
1:L:59:LYS:HE3	1:L:73:ASP:HA	2.00	0.44
1:P:161:HIS:CG	1:P:162:HIS:H	2.35	0.44
1:H:280:ARG:O	1:H:281:GLN:HB3	2.17	0.44
1:D:502:LEU:HD13	1:D:502:LEU:C	2.37	0.44
1:O:115:ALA:O	1:O:118:ARG:HB3	2.17	0.44
1:N:415:THR:OG1	1:N:420:ALA:HA	2.18	0.44
1:N:395:TYR:HE1	1:N:476:SER:HG	1.63	0.44
1:L:166:PHE:CE1	1:L:198:ASP:CB	3.00	0.44
1:K:166:PHE:CE2	1:K:363:ARG:O	2.70	0.44
1:K:274:ILE:O	1:K:274:ILE:HG23	2.17	0.44
1:I:225:LEU:HG	1:I:277:PHE:CE1	2.53	0.44
1:I:225:LEU:CD1	1:I:329:LYS:HE2	2.47	0.44
1:P:145:ASP:OD1	1:P:171:VAL:HB	2.17	0.44
1:L:222:ALA:HA	1:L:275:ASN:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:402:MET:CE	1:L:453:ARG:HG2	2.48	0.44
1:H:56:THR:HG21	1:H:375:ARG:HD2	1.98	0.44
1:L:274:ILE:O	1:L:274:ILE:HG23	2.17	0.44
1:E:231:MET:HE1	1:E:265:LYS:HD3	2.00	0.44
1:J:269:ILE:HG23	1:J:274:ILE:HG22	1.98	0.44
1:A:51:THR:HG21	1:A:56:THR:HB	1.98	0.44
1:F:314:THR:HG23	1:F:316:GLY:H	1.83	0.44
1:H:6:GLU:HB3	1:H:11:ALA:CB	2.46	0.44
1:F:450:ALA:HB1	1:O:417:GLY:H	1.82	0.44
1:E:226:ILE:HD13	1:E:307:VAL:HG13	2.00	0.44
1:E:28:SER:HB2	1:E:35:MET:HG2	2.00	0.44
1:B:321:THR:O	1:B:323:ASP:N	2.51	0.44
1:L:341:ILE:HG23	1:L:363:ARG:CZ	2.47	0.44
1:D:321:THR:O	1:D:323:ASP:N	2.51	0.44
1:L:372:GLU:HG3	1:L:375:ARG:NH2	2.31	0.44
1:N:159:LEU:N	1:N:159:LEU:HD22	2.32	0.44
1:M:146:LEU:HD23	1:M:148:ASN:H	1.82	0.44
1:I:27:LYS:CB	1:I:436:ILE:HD11	2.47	0.44
1:N:219:ILE:HG21	1:N:275:ASN:O	2.17	0.44
1:N:222:ALA:HA	1:N:275:ASN:CB	2.48	0.44
1:P:448:LEU:C	1:P:448:LEU:HD13	2.37	0.44
1:C:398:GLY:HA2	1:C:401:GLU:OE1	2.18	0.44
1:C:402:MET:HE2	1:C:453:ARG:HG2	1.99	0.44
1:J:68:ALA:O	1:J:72:VAL:HG23	2.17	0.44
1:F:323:ASP:C	1:F:325:PRO:HD2	2.38	0.44
1:C:399:CYS:SG	1:C:464:GLY:CA	3.03	0.44
1:E:30:LEU:HD12	1:E:30:LEU:H	1.82	0.44
1:F:128:LEU:HA	1:F:128:LEU:HD22	1.79	0.44
1:G:68:ALA:O	1:G:72:VAL:HG23	2.17	0.44
1:I:20:ILE:N	1:I:98:ARG:HH22	2.15	0.44
1:C:317:GLU:HB3	1:C:329:LYS:HG3	1.99	0.44
1:M:119:GLU:CD	1:M:423:MET:HE3	2.38	0.44
1:P:334:LYS:HD3	1:P:351:GLY:HA3	1.98	0.44
1:A:309:ARG:O	1:A:313:VAL:HG23	2.18	0.44
1:D:106:LYS:C	1:D:107:LYS:HG2	2.38	0.44
1:N:51:THR:HG22	1:N:53:ASP:H	1.82	0.44
1:I:109:HIS:HB3	1:I:112:THR:OG1	2.17	0.44
1:N:65:ASN:N	1:N:66:PRO:HD2	2.33	0.44
1:K:394:VAL:HG23	1:K:482:GLU:HB2	1.99	0.44
1:N:22:ILE:HD12	1:N:90:THR:CG2	2.47	0.44
1:F:67:ALA:HB2	1:F:507:ILE:HG21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:165:HIS:O	1:J:168:LYS:HB3	2.17	0.44
1:A:145:ASP:OD1	1:A:171:VAL:HB	2.17	0.44
1:H:276:CYS:HA	1:H:297:MET:O	2.18	0.44
1:C:174:VAL:O	1:C:177:LEU:HB3	2.18	0.44
1:L:402:MET:HE1	1:L:406:HIS:HB2	2.00	0.44
1:K:433:LEU:HB2	1:K:434:PRO:HD3	2.00	0.44
1:L:265:LYS:HE2	1:L:322:PHE:CE1	2.53	0.44
1:K:226:ILE:HG12	1:K:278:ILE:CG2	2.47	0.44
1:N:189:ILE:CG2	1:N:190:LYS:H	2.30	0.44
1:C:452:LEU:HD22	1:C:465:LEU:HD11	1.99	0.44
1:K:206:LEU:HD11	1:K:346:LEU:HD23	1.99	0.44
1:E:483:SER:HB2	1:E:486:VAL:HG13	2.00	0.44
1:J:324:HIS:HB2	1:J:329:LYS:CE	2.47	0.44
1:F:109:HIS:NE2	1:F:111:GLN:HB2	2.33	0.44
1:C:108:ILE:HB	1:L:446:ALA:CA	2.48	0.44
1:N:128:LEU:O	1:N:129:LEU:HD13	2.17	0.44
1:K:109:HIS:NE2	1:K:111:GLN:HB2	2.33	0.44
1:N:366:THR:H	1:N:370:LEU:HD22	1.83	0.44
1:A:222:ALA:HA	1:A:275:ASN:CG	2.37	0.44
1:D:280:ARG:HG3	1:D:304:PHE:HB2	1.99	0.44
1:K:415:THR:HG23	1:K:416:PRO:HD2	2.00	0.44
1:O:143:ARG:HA	1:O:143:ARG:NE	2.33	0.44
1:F:52:ASN:ND2	1:F:157:LYS:HA	2.33	0.44
1:G:192:LEU:HD12	1:G:192:LEU:N	2.33	0.44
1:L:22:ILE:O	1:L:26:VAL:HG22	2.18	0.44
1:E:191:LYS:HD2	1:E:344:ASP:HB3	1.99	0.44
1:N:510:ALA:O	1:N:511:ALA:HB3	2.18	0.44
1:H:146:LEU:HD13	1:H:167:THR:O	2.17	0.44
1:D:176:ARG:HH22	1:D:360:ILE:HG13	1.82	0.44
1:I:226:ILE:HA	1:I:278:ILE:O	2.17	0.44
1:P:211:ILE:HG12	1:P:298:ALA:H	1.82	0.44
1:F:245:VAL:CG1	1:F:250:LYS:HB3	2.37	0.44
1:A:96:LEU:HD22	1:A:96:LEU:O	2.18	0.44
1:H:261:LYS:O	1:H:265:LYS:HG3	2.17	0.44
1:O:110:PRO:O	1:O:113:ILE:HB	2.18	0.44
1:I:191:LYS:NZ	1:I:346:LEU:HG	2.31	0.44
1:I:109:HIS:CE1	1:I:111:GLN:HB2	2.53	0.44
1:H:421:VAL:O	1:H:424:GLU:HG2	2.17	0.44
1:O:154:LEU:HD13	1:O:167:THR:OG1	2.18	0.44
1:H:215:GLN:HE21	1:H:292:GLY:N	2.16	0.44
1:E:166:PHE:CZ	1:E:198:ASP:HB3	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:207:LEU:HB3	1:M:347:ILE:CG2	2.48	0.44
1:H:372:GLU:HG3	1:H:375:ARG:HH22	1.81	0.44
1:K:431:ARG:NH2	1:K:434:PRO:HG2	2.32	0.44
1:K:32:PRO:HA	1:K:156:SER:CA	2.48	0.44
1:J:110:PRO:HB3	1:J:502:LEU:CG	2.48	0.44
1:A:159:LEU:H	1:A:159:LEU:HD22	1.82	0.44
1:H:112:THR:CG2	1:H:418:LYS:HD2	2.44	0.44
1:F:438:ALA:CB	1:F:448:LEU:HG	2.45	0.44
1:G:143:ARG:NE	1:G:143:ARG:HA	2.32	0.44
1:D:433:LEU:O	1:D:437:ILE:HG12	2.17	0.44
1:B:251:VAL:HG21	1:F:240:GLY:HA2	1.98	0.44
1:K:334:LYS:HD3	1:K:335:LEU:N	2.33	0.44
1:A:513:ARG:NE	1:F:63:VAL:HG11	2.33	0.44
1:I:173:ALA:HA	1:I:176:ARG:CZ	2.48	0.44
1:J:222:ALA:HA	1:J:275:ASN:HB2	1.99	0.44
1:D:415:THR:HA	1:D:416:PRO:HD3	1.93	0.44
1:P:51:THR:HG22	1:P:53:ASP:O	2.18	0.44
1:H:406:HIS:O	1:H:409:THR:HG22	2.17	0.44
1:C:28:SER:O	1:C:34:GLY:HA2	2.18	0.44
1:A:393:THR:HB	1:A:481:THR:OG1	2.18	0.44
1:D:146:LEU:CD2	1:D:147:MET:N	2.80	0.44
1:C:38:ILE:HG21	1:H:508:ILE:HG12	2.00	0.44
1:C:163:LYS:HA	1:C:166:PHE:HD1	1.83	0.44
1:P:159:LEU:HD23	1:P:163:LYS:CD	2.48	0.44
1:I:146:LEU:HD13	1:I:168:LYS:HA	1.99	0.44
1:I:163:LYS:HD2	1:I:166:PHE:CG	2.53	0.44
1:N:449:VAL:HG12	1:N:453:ARG:NH2	2.33	0.44
1:A:158:LEU:HD23	1:A:369:ILE:HD12	1.99	0.44
1:F:362:LEU:HD11	1:F:377:LEU:HD22	1.99	0.44
1:H:96:LEU:O	1:H:96:LEU:HD22	2.18	0.44
1:O:52:ASN:H	1:O:375:ARG:CD	2.31	0.44
1:H:26:VAL:CG2	1:H:91:VAL:HG22	2.47	0.44
1:E:244:ARG:O	1:E:245:VAL:HG13	2.17	0.44
1:G:453:ARG:HH21	1:N:417:GLY:HA2	1.83	0.44
1:N:52:ASN:HD21	1:N:157:LYS:HG2	1.83	0.44
1:N:205:PHE:HA	1:N:359:THR:OG1	2.18	0.44
1:H:352:VAL:O	1:H:352:VAL:HG13	2.18	0.44
1:A:133:VAL:HG13	1:A:134:ASP:H	1.82	0.44
1:H:210:LYS:HE2	1:H:212:GLY:O	2.18	0.44
1:B:31:GLY:O	1:B:156:SER:HA	2.17	0.44
1:P:232:ASP:HA	1:P:284:TYR:HB2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:163:LYS:HG3	1:N:166:PHE:HB2	2.00	0.43
1:N:146:LEU:HD21	1:N:168:LYS:HA	2.00	0.43
1:I:154:LEU:HD13	1:I:167:THR:OG1	2.18	0.43
1:A:269:ILE:CG2	1:A:274:ILE:HG21	2.44	0.43
1:H:190:LYS:HA	1:H:362:LEU:O	2.18	0.43
1:L:149:ILE:HG21	1:L:387:THR:OG1	2.18	0.43
1:C:431:ARG:NH2	1:C:434:PRO:HG2	2.32	0.43
1:O:326:GLU:HB2	1:O:327:LEU:H	1.67	0.43
1:J:225:LEU:HD11	1:J:324:HIS:CE1	2.53	0.43
1:H:431:ARG:HH21	1:H:434:PRO:HG2	1.83	0.43
1:M:28:SER:O	1:M:34:GLY:HA2	2.18	0.43
1:H:133:VAL:HG21	1:H:394:VAL:CA	2.47	0.43
1:F:59:LYS:CE	1:F:76:ARG:HB2	2.43	0.43
1:J:236:ILE:CG2	1:J:237:LYS:N	2.81	0.43
1:F:176:ARG:NH1	1:F:201:LEU:HD21	2.33	0.43
1:D:408:VAL:HG23	1:D:427:ALA:HB1	2.00	0.43
1:J:50:VAL:HG13	1:J:375:ARG:HH21	1.83	0.43
1:K:104:ILE:HG13	1:K:105:ALA:N	2.32	0.43
1:M:404:MET:CE	1:M:430:LEU:HD11	2.48	0.43
1:F:52:ASN:HD21	1:F:157:LYS:HG2	1.82	0.43
1:D:191:LYS:NZ	1:D:346:LEU:HD21	2.32	0.43
1:N:510:ALA:C	1:N:512:PRO:HD2	2.38	0.43
1:K:310:LEU:O	1:K:310:LEU:HD13	2.18	0.43
1:G:416:PRO:HB2	1:G:419:GLU:OE1	2.17	0.43
1:C:65:ASN:ND2	1:C:66:PRO:HD3	2.33	0.43
1:N:268:ARG:O	1:N:271:LYS:HG2	2.17	0.43
1:O:364:GLY:HA3	1:O:370:LEU:CD2	2.47	0.43
1:B:154:LEU:HD23	1:B:163:LYS:CG	2.45	0.43
1:N:163:LYS:HG3	1:N:166:PHE:CB	2.48	0.43
1:N:125:ARG:C	1:N:127:ALA:H	2.21	0.43
1:G:369:ILE:HA	1:G:372:GLU:CD	2.38	0.43
1:K:146:LEU:HD13	1:K:167:THR:O	2.17	0.43
1:N:438:ALA:CB	1:N:448:LEU:HG	2.48	0.43
1:M:269:ILE:HG23	1:M:274:ILE:HG21	1.97	0.43
1:E:25:LEU:HD22	1:E:25:LEU:N	2.32	0.43
1:K:226:ILE:HD13	1:K:307:VAL:HG13	1.99	0.43
1:M:82:VAL:CA	1:M:386:GLN:HG3	2.42	0.43
1:L:323:ASP:C	1:L:325:PRO:HD2	2.39	0.43
1:E:274:ILE:O	1:E:296:VAL:HG22	2.18	0.43
1:D:286:TYR:HB2	1:D:287:PRO:HD3	2.00	0.43
1:O:226:ILE:HG12	1:O:278:ILE:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:324:HIS:CG	1:O:325:PRO:HD3	2.52	0.43
1:K:99:GLU:HG2	1:K:425:SER:HB3	1.98	0.43
1:I:106:LYS:HZ1	1:I:418:LYS:HD3	1.83	0.43
1:M:188:VAL:HB	1:M:360:ILE:HB	2.00	0.43
1:O:369:ILE:O	1:O:372:GLU:CB	2.65	0.43
1:L:64:ASP:CG	1:L:66:PRO:HD2	2.39	0.43
1:L:313:VAL:HG13	1:L:352:VAL:CG1	2.48	0.43
1:D:75:SER:O	1:D:78:GLN:HB3	2.18	0.43
1:I:280:ARG:O	1:I:281:GLN:CB	2.66	0.43
1:J:222:ALA:HA	1:J:275:ASN:OD1	2.18	0.43
1:P:233:THR:HG21	1:P:261:LYS:HE2	1.99	0.43
1:M:203:GLU:CD	1:M:203:GLU:H	2.21	0.43
1:K:354:LEU:HD22	1:K:356:GLU:CB	2.48	0.43
1:L:19:ALA:HB1	1:L:94:ALA:HA	2.00	0.43
1:D:88:SER:O	1:D:92:LEU:HD13	2.17	0.43
1:N:200:TYR:O	1:N:361:VAL:HB	2.17	0.43
1:E:321:THR:O	1:E:323:ASP:N	2.51	0.43
1:L:146:LEU:HD11	1:L:150:ALA:CB	2.47	0.43
1:H:146:LEU:HD23	1:H:148:ASN:H	1.83	0.43
1:H:148:ASN:O	1:H:152:THR:HG23	2.18	0.43
1:K:164:ASP:O	1:K:167:THR:HG22	2.19	0.43
1:C:369:ILE:HG23	1:C:372:GLU:OE1	2.18	0.43
1:P:32:PRO:CD	1:P:467:MET:HE1	2.48	0.43
1:K:27:LYS:O	1:K:436:ILE:HD11	2.18	0.43
1:A:173:ALA:O	1:A:176:ARG:HG2	2.18	0.43
1:O:274:ILE:O	1:O:296:VAL:HG22	2.19	0.43
1:N:226:ILE:HA	1:N:278:ILE:O	2.18	0.43
1:E:394:VAL:CG2	1:E:482:GLU:HB2	2.48	0.43
1:O:117:TRP:HZ2	1:O:498:ALA:HB1	1.84	0.43
1:F:236:ILE:CG2	1:F:237:LYS:H	2.28	0.43
1:E:431:ARG:NH1	1:E:453:ARG:HD3	2.33	0.43
1:B:216:PRO:HG2	1:B:295:GLY:CA	2.48	0.43
1:E:219:ILE:H	1:E:219:ILE:HD13	1.83	0.43
1:M:116:GLY:O	1:M:119:GLU:HB2	2.18	0.43
1:G:170:ALA:O	1:G:173:ALA:HB3	2.18	0.43
1:L:334:LYS:CD	1:L:351:GLY:HA3	2.49	0.43
1:O:159:LEU:HD22	1:O:159:LEU:N	2.33	0.43
1:B:405:ALA:HA	1:B:408:VAL:HG22	2.00	0.43
1:D:404:MET:HE2	1:D:430:LEU:HG	1.99	0.43
1:J:163:LYS:HA	1:J:166:PHE:HD1	1.82	0.43
1:D:52:ASN:CB	1:D:157:LYS:HG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:154:LEU:CD2	1:A:167:THR:HB	2.41	0.43
1:B:274:ILE:HG23	1:B:296:VAL:HG21	2.00	0.43
1:I:146:LEU:HB2	1:I:171:VAL:HG21	2.00	0.43
1:E:37:LYS:HZ2	1:G:507:ILE:HG22	1.83	0.43
1:G:274:ILE:O	1:G:274:ILE:HG23	2.17	0.43
1:G:225:LEU:HD13	1:G:329:LYS:HE2	2.00	0.43
1:D:265:LYS:HE2	1:D:322:PHE:CE1	2.54	0.43
1:K:215:GLN:HG3	1:K:292:GLY:HA2	2.00	0.43
1:A:51:THR:HA	1:A:375:ARG:HH11	1.84	0.43
1:I:125:ARG:HA	1:I:128:LEU:HD12	2.00	0.43
1:L:280:ARG:HG2	1:L:302:ALA:O	2.19	0.43
1:B:176:ARG:HH12	1:B:201:LEU:HD21	1.82	0.43
1:I:205:PHE:HA	1:I:359:THR:OG1	2.18	0.43
1:O:196:LEU:C	1:O:196:LEU:HD13	2.39	0.43
1:F:177:LEU:HD13	1:F:177:LEU:C	2.39	0.43
1:M:321:THR:O	1:M:323:ASP:N	2.52	0.43
1:G:188:VAL:HB	1:G:377:LEU:HD13	2.01	0.43
1:I:421:VAL:O	1:I:424:GLU:HG2	2.18	0.43
1:P:30:LEU:HD11	1:P:87:THR:O	2.17	0.43
1:P:231:MET:HE1	1:P:265:LYS:HD3	2.00	0.43
1:M:154:LEU:HD21	1:M:163:LYS:NZ	2.34	0.43
1:M:159:LEU:HG	1:M:163:LYS:CD	2.48	0.43
1:I:265:LYS:O	1:I:269:ILE:HG13	2.18	0.43
1:F:365:ALA:O	1:F:366:THR:HG23	2.18	0.43
1:E:38:ILE:HD12	1:E:48:LEU:HD22	1.99	0.43
1:J:40:LEU:H	1:K:3:ALA:CB	2.31	0.43
1:K:365:ALA:O	1:K:366:THR:HG23	2.19	0.43
1:M:287:PRO:O	1:M:291:PHE:HD2	2.01	0.43
1:L:284:TYR:CE2	1:L:286:TYR:HD1	2.37	0.43
1:H:159:LEU:CD2	1:H:163:LYS:HD3	2.49	0.43
1:C:398:GLY:HA2	1:C:401:GLU:CD	2.39	0.43
1:E:486:VAL:O	1:E:490:VAL:HG12	2.19	0.43
1:F:433:LEU:HA	1:F:436:ILE:HG22	2.01	0.43
1:H:431:ARG:CZ	1:H:431:ARG:HA	2.49	0.43
1:F:111:GLN:O	1:F:114:ILE:HB	2.18	0.43
1:D:215:GLN:HE21	1:D:292:GLY:N	2.17	0.43
1:D:438:ALA:CB	1:D:448:LEU:HG	2.49	0.43
1:G:58:LEU:HB3	1:G:72:VAL:CG1	2.49	0.43
1:A:509:LYS:H	1:F:37:LYS:HZ1	1.66	0.43
1:I:99:GLU:CB	1:I:425:SER:HB2	2.46	0.43
1:G:261:LYS:O	1:G:264:GLU:HG2	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:192:LEU:HG	1:N:366:THR:HG21	1.99	0.43
1:G:499:GLU:HG2	1:G:503:ARG:HG3	1.99	0.43
1:B:254:ILE:HG21	1:F:238:ILE:HD12	2.00	0.43
1:G:19:ALA:HB1	1:G:94:ALA:HA	2.00	0.43
1:J:57:ILE:O	1:J:57:ILE:HD13	2.18	0.43
1:I:242:ARG:HB3	1:I:242:ARG:NH1	2.34	0.43
1:B:233:THR:O	1:B:234:ASP:HB3	2.18	0.43
1:K:392:ARG:C	1:K:484:PHE:HB2	2.38	0.43
1:C:230:GLY:HA2	1:C:279:ASN:HD21	1.83	0.43
1:J:159:LEU:HB2	1:J:163:LYS:HG3	2.01	0.43
1:H:183:LEU:HD13	1:H:381:LEU:HD11	2.01	0.43
1:D:82:VAL:HA	1:D:386:GLN:HG3	2.01	0.43
1:C:79:ASP:CA	1:C:83:GLY:HA2	2.44	0.43
1:P:154:LEU:HD21	1:P:163:LYS:NZ	2.33	0.43
1:I:433:LEU:HA	1:I:436:ILE:HG22	2.01	0.43
1:J:38:ILE:HB	1:J:48:LEU:HD22	2.00	0.43
1:N:225:LEU:HD11	1:N:324:HIS:ND1	2.34	0.43
1:A:82:VAL:HA	1:A:386:GLN:NE2	2.34	0.43
1:F:99:GLU:HG3	1:F:425:SER:HB2	2.00	0.43
1:K:173:ALA:HB1	1:K:360:ILE:HD11	1.99	0.43
1:A:512:PRO:HD3	1:F:39:LEU:HD21	1.99	0.43
1:J:191:LYS:HE3	1:J:346:LEU:HD22	2.00	0.43
1:F:446:ALA:CB	1:O:418:LYS:HG2	2.48	0.43
1:A:68:ALA:O	1:A:72:VAL:HG23	2.19	0.43
1:D:313:VAL:CG1	1:D:352:VAL:HB	2.48	0.43
1:K:381:LEU:HD22	1:K:381:LEU:O	2.19	0.43
1:C:317:GLU:CD	1:C:329:LYS:HG3	2.39	0.43
1:B:280:ARG:O	1:B:281:GLN:CB	2.66	0.43
1:E:103:LEU:CD2	1:E:113:ILE:HD13	2.49	0.43
1:P:508:ILE:HD12	1:P:509:LYS:HD3	1.99	0.43
1:D:190:LYS:C	1:D:190:LYS:HD2	2.39	0.43
1:P:65:ASN:CG	1:P:66:PRO:HD3	2.38	0.43
1:L:158:LEU:O	1:L:158:LEU:HG	2.19	0.43
1:D:381:LEU:HD22	1:D:381:LEU:O	2.18	0.43
1:B:95:GLU:HA	1:B:98:ARG:HD2	2.01	0.43
1:B:246:ASP:O	1:B:247:SER:HB2	2.19	0.43
1:G:394:VAL:HG23	1:G:482:GLU:HB2	1.99	0.43
1:I:231:MET:HE1	1:I:265:LYS:HD3	2.01	0.43
1:N:149:ILE:HB	1:N:481:THR:HG23	2.01	0.43
1:N:266:VAL:CB	1:N:290:LEU:HD21	2.38	0.43
1:L:448:LEU:HD21	1:L:465:LEU:CD1	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:128:LEU:HD23	1:G:488:ARG:HG2	2.01	0.43
1:I:123:ALA:HA	1:I:126:GLN:NE2	2.31	0.43
1:I:483:SER:HB2	1:I:486:VAL:HG13	2.00	0.43
1:L:103:LEU:O	1:L:106:LYS:HB2	2.18	0.43
1:C:506:ASN:O	1:C:507:ILE:HG13	2.18	0.43
1:F:96:LEU:HD23	1:F:117:TRP:HZ2	1.84	0.43
1:J:341:ILE:CD1	1:J:346:LEU:HD23	2.46	0.43
1:L:280:ARG:O	1:L:281:GLN:CB	2.67	0.43
1:A:222:ALA:HA	1:A:275:ASN:CB	2.48	0.43
1:I:334:LYS:HD3	1:I:351:GLY:HA3	2.01	0.43
1:N:313:VAL:HG22	1:N:357:ALA:HB3	2.00	0.43
1:A:224:ILE:HD11	1:A:336:ILE:HD11	1.99	0.43
1:A:99:GLU:HG2	1:A:425:SER:HB2	2.00	0.43
1:J:106:LYS:O	1:J:108:ILE:HG13	2.18	0.43
1:J:154:LEU:HD22	1:J:167:THR:HB	2.01	0.43
1:E:262:MET:HG2	1:E:290:LEU:HD22	2.01	0.43
1:B:508:ILE:H	1:G:37:LYS:HZ2	1.66	0.43
1:O:38:ILE:HD12	1:O:48:LEU:CD2	2.48	0.43
1:H:141:LYS:HA	1:H:141:LYS:HD2	1.71	0.43
1:M:274:ILE:HG23	1:M:274:ILE:O	2.18	0.43
1:F:145:ASP:OD2	1:F:175:LEU:HD11	2.18	0.43
1:B:297:MET:HE1	1:B:347:ILE:HD11	2.01	0.43
1:K:402:MET:SD	1:K:456:HIS:HB2	2.58	0.43
1:N:501:ILE:HA	1:N:504:VAL:CG2	2.49	0.43
1:C:397:GLY:HA3	1:C:475:MET:HE1	2.00	0.43
1:L:173:ALA:HA	1:L:176:ARG:CZ	2.48	0.43
1:A:226:ILE:HD13	1:A:307:VAL:HG13	2.01	0.43
1:J:215:GLN:HA	1:J:292:GLY:HA2	2.00	0.43
1:C:133:VAL:HG21	1:C:393:THR:O	2.19	0.43
1:B:511:ALA:N	1:B:512:PRO:HD3	2.33	0.43
1:L:209:LYS:HZ1	1:L:303:ASP:H	1.66	0.43
1:H:59:LYS:NZ	1:H:76:ARG:HB2	2.34	0.43
1:C:329:LYS:HB2	1:C:329:LYS:HZ3	1.83	0.43
1:B:334:LYS:HD3	1:B:351:GLY:HA3	2.00	0.43
1:K:57:ILE:O	1:K:57:ILE:HD13	2.19	0.43
1:E:177:LEU:C	1:E:177:LEU:HD13	2.39	0.43
1:D:196:LEU:HA	1:D:196:LEU:HD22	1.85	0.43
1:J:173:ALA:HA	1:J:176:ARG:CZ	2.49	0.43
1:F:92:LEU:O	1:F:95:GLU:HG2	2.18	0.43
1:I:496:GLU:O	1:I:500:VAL:HG22	2.19	0.43
1:G:181:GLY:O	1:G:182:ASN:CB	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:310:LEU:O	1:J:314:THR:HG22	2.19	0.43
1:E:496:GLU:O	1:E:500:VAL:HG13	2.18	0.43
1:C:26:VAL:HG23	1:C:91:VAL:HG22	2.00	0.43
1:O:158:LEU:O	1:O:160:THR:N	2.52	0.43
1:B:163:LYS:HD2	1:B:166:PHE:CG	2.54	0.43
1:L:141:LYS:HG2	1:L:144:GLN:HB2	2.00	0.43
1:O:266:VAL:HB	1:O:290:LEU:CD2	2.29	0.43
1:A:139:GLU:O	1:A:141:LYS:N	2.52	0.43
1:G:159:LEU:HG	1:G:163:LYS:CG	2.48	0.43
1:G:50:VAL:HG22	1:G:375:ARG:NH1	2.34	0.43
1:I:225:LEU:HD13	1:I:329:LYS:CE	2.49	0.43
1:I:277:PHE:CE2	1:I:279:ASN:HB2	2.54	0.43
1:H:140:VAL:HG12	1:H:141:LYS:N	2.34	0.43
1:C:269:ILE:HG12	1:C:274:ILE:HG21	2.01	0.43
1:K:27:LYS:HB2	1:K:436:ILE:CD1	2.49	0.43
1:J:24:ASP:O	1:J:27:LYS:HG2	2.19	0.43
1:J:431:ARG:NH2	1:J:434:PRO:HG2	2.33	0.43
1:O:226:ILE:HG12	1:O:278:ILE:HG23	2.01	0.43
1:P:209:LYS:NZ	1:P:302:ALA:HA	2.34	0.43
1:H:445:SER:O	1:H:449:VAL:HG23	2.19	0.43
1:H:431:ARG:HD3	1:H:453:ARG:NH1	2.33	0.43
1:D:32:PRO:HA	1:D:155:SER:CB	2.49	0.43
1:H:366:THR:HG23	1:H:366:THR:O	2.19	0.43
1:I:19:ALA:HB1	1:I:94:ALA:CA	2.49	0.43
1:G:266:VAL:HG13	1:G:267:GLU:N	2.34	0.43
1:H:313:VAL:HG13	1:H:352:VAL:HB	2.00	0.43
1:K:74:MET:SD	1:K:77:VAL:HG12	2.59	0.43
1:A:59:LYS:HE2	1:A:76:ARG:HB2	2.01	0.43
1:F:259:LYS:O	1:F:263:LYS:HG2	2.19	0.43
1:J:390:ASP:HB2	1:J:485:GLN:HE22	1.84	0.43
1:C:192:LEU:HB3	1:C:366:THR:HG22	2.00	0.43
1:L:61:ILE:HG23	1:L:63:VAL:HG23	2.01	0.43
1:N:277:PHE:CE2	1:N:279:ASN:HB2	2.53	0.43
1:O:189:ILE:HG22	1:O:190:LYS:N	2.33	0.43
1:P:211:ILE:HD13	1:P:215:GLN:CB	2.49	0.43
1:P:215:GLN:HE21	1:P:292:GLY:N	2.17	0.43
1:B:265:LYS:HZ3	1:B:287:PRO:CG	2.32	0.43
1:B:108:ILE:HG13	1:I:444:ASP:CG	2.39	0.43
1:O:82:VAL:HG21	1:O:485:GLN:HG3	2.00	0.43
1:B:448:LEU:HA	1:B:451:GLN:HE21	1.84	0.43
1:F:321:THR:O	1:F:323:ASP:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:297:MET:CE	1:D:347:ILE:HD11	2.49	0.43
1:F:236:ILE:CG2	1:F:237:LYS:N	2.82	0.43
1:A:158:LEU:HD13	1:C:504:VAL:HG21	2.00	0.43
1:F:32:PRO:HD2	1:F:467:MET:HE3	1.99	0.43
1:B:110:PRO:HA	1:B:113:ILE:HD12	2.00	0.43
1:H:59:LYS:HE3	1:H:73:ASP:HA	2.01	0.43
1:O:334:LYS:HB3	1:O:351:GLY:HA3	2.01	0.43
1:F:283:ILE:HG22	1:F:300:GLU:HG3	1.99	0.43
1:K:411:LEU:HD13	1:K:423:MET:HE3	2.00	0.43
1:K:373:ALA:HA	1:K:376:SER:HB3	2.00	0.43
1:A:185:ALA:HA	1:A:309:ARG:HE	1.84	0.43
1:M:405:ALA:HA	1:M:408:VAL:CG2	2.48	0.43
1:L:193:GLY:HA3	1:L:343:GLU:OE2	2.19	0.43
1:J:183:LEU:O	1:J:183:LEU:HG	2.19	0.43
1:N:177:LEU:HD13	1:N:177:LEU:C	2.39	0.43
1:H:196:LEU:HD13	1:H:196:LEU:C	2.40	0.43
1:L:161:HIS:CG	1:L:162:HIS:H	2.37	0.42
1:D:198:ASP:O	1:D:199:SER:HB3	2.19	0.42
1:K:171:VAL:HG12	1:K:384:LEU:CD1	2.49	0.42
1:C:146:LEU:HD11	1:C:150:ALA:HB3	2.01	0.42
1:L:24:ASP:O	1:L:27:LYS:HG2	2.19	0.42
1:E:258:GLU:O	1:E:261:LYS:HB2	2.18	0.42
1:H:341:ILE:HD11	1:H:348:HIS:NE2	2.33	0.42
1:E:269:ILE:HG12	1:E:274:ILE:HG21	2.00	0.42
1:C:402:MET:HG2	1:C:431:ARG:NH2	2.34	0.42
1:F:274:ILE:HG23	1:F:274:ILE:O	2.19	0.42
1:M:433:LEU:HB2	1:M:434:PRO:HD3	2.00	0.42
1:I:485:GLN:HE22	1:I:488:ARG:HH21	1.67	0.42
1:I:74:MET:O	1:I:74:MET:SD	2.77	0.42
1:A:7:ARG:NH2	1:A:509:LYS:HG3	2.34	0.42
1:H:26:VAL:HG23	1:H:91:VAL:HG22	2.01	0.42
1:B:390:ASP:HB3	1:B:485:GLN:HE22	1.84	0.42
1:G:176:ARG:NH1	1:G:201:LEU:HD21	2.34	0.42
1:P:57:ILE:HD13	1:P:57:ILE:O	2.19	0.42
1:D:110:PRO:O	1:D:114:ILE:HG12	2.18	0.42
1:C:188:VAL:CG1	1:C:377:LEU:HD22	2.50	0.42
1:I:64:ASP:CG	1:I:66:PRO:HD2	2.39	0.42
1:C:64:ASP:CG	1:C:66:PRO:HD2	2.39	0.42
1:B:177:LEU:C	1:B:177:LEU:HD13	2.39	0.42
1:I:233:THR:O	1:I:234:ASP:HB3	2.18	0.42
1:H:173:ALA:HA	1:H:176:ARG:NE	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:231:MET:CG	1:P:283:ILE:HG13	2.48	0.42
1:D:159:LEU:CD2	1:D:159:LEU:N	2.82	0.42
1:M:197:ALA:O	1:M:198:ASP:HB2	2.19	0.42
1:E:297:MET:CE	1:E:347:ILE:HD11	2.49	0.42
1:F:159:LEU:HB3	1:F:372:GLU:CD	2.39	0.42
1:J:40:LEU:CD1	1:J:40:LEU:C	2.87	0.42
1:N:82:VAL:HA	1:N:386:GLN:CD	2.39	0.42
1:J:263:LYS:HA	1:J:266:VAL:HG12	2.02	0.42
1:C:211:ILE:HG23	1:C:298:ALA:O	2.19	0.42
1:H:269:ILE:HG23	1:H:274:ILE:HG22	1.97	0.42
1:A:437:ILE:CB	1:A:465:LEU:HD12	2.44	0.42
1:A:465:LEU:HD23	1:A:465:LEU:N	2.34	0.42
1:K:31:GLY:C	1:K:156:SER:HA	2.39	0.42
1:P:81:GLU:O	1:P:82:VAL:HB	2.19	0.42
1:F:96:LEU:O	1:F:96:LEU:HD22	2.19	0.42
1:L:114:ILE:HA	1:L:117:TRP:CZ3	2.53	0.42
1:O:483:SER:HB2	1:O:486:VAL:HG13	2.01	0.42
1:D:453:ARG:NH2	1:K:417:GLY:HA2	2.33	0.42
1:L:207:LEU:CD1	1:L:209:LYS:HE2	2.48	0.42
1:J:367:GLN:HG2	1:J:369:ILE:H	1.84	0.42
1:F:284:TYR:CE2	1:F:286:TYR:HD1	2.37	0.42
1:L:59:LYS:HE3	1:L:72:VAL:O	2.19	0.42
1:H:312:LEU:HA	1:H:312:LEU:HD23	1.84	0.42
1:F:381:LEU:HD22	1:F:381:LEU:C	2.40	0.42
1:B:421:VAL:O	1:B:424:GLU:HG2	2.19	0.42
1:E:64:ASP:CG	1:E:66:PRO:HD2	2.40	0.42
1:P:242:ARG:C	1:P:243:VAL:HG23	2.39	0.42
1:H:466:ASP:HB3	1:H:469:GLU:HB3	2.01	0.42
1:N:145:ASP:O	1:N:146:LEU:HB3	2.20	0.42
1:B:506:ASN:O	1:B:508:ILE:HG12	2.19	0.42
1:C:38:ILE:CG2	1:H:508:ILE:HG12	2.50	0.42
1:E:154:LEU:HD21	1:E:163:LYS:HZ3	1.81	0.42
1:N:27:LYS:HD3	1:N:27:LYS:C	2.37	0.42
1:K:192:LEU:CA	1:K:366:THR:HG21	2.46	0.42
1:M:265:LYS:O	1:M:269:ILE:HG13	2.19	0.42
1:M:284:TYR:O	1:M:287:PRO:HD2	2.19	0.42
1:P:12:ARG:HD2	1:P:100:ALA:HB1	2.02	0.42
1:G:129:LEU:HA	1:G:392:ARG:HH22	1.83	0.42
1:C:406:HIS:O	1:C:409:THR:HG22	2.19	0.42
1:J:399:CYS:SG	1:J:464:GLY:CA	3.03	0.42
1:O:89:VAL:HA	1:O:490:VAL:CG2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:486:VAL:HG23	1:H:487:LYS:N	2.33	0.42
1:O:69:LYS:O	1:O:72:VAL:HB	2.19	0.42
1:I:57:ILE:HD13	1:I:57:ILE:O	2.19	0.42
1:O:187:HIS:HB2	1:O:309:ARG:HH12	1.83	0.42
1:E:313:VAL:HG13	1:E:352:VAL:CG2	2.49	0.42
1:A:185:ALA:HA	1:A:309:ARG:NE	2.34	0.42
1:B:32:PRO:HA	1:B:155:SER:CB	2.48	0.42
1:J:395:TYR:HE2	1:J:476:SER:OG	2.01	0.42
1:L:499:GLU:HG2	1:L:503:ARG:HE	1.84	0.42
1:C:22:ILE:HD12	1:C:90:THR:CG2	2.49	0.42
1:A:100:ALA:O	1:A:103:LEU:HB2	2.19	0.42
1:J:368:GLN:O	1:J:371:ASP:HB2	2.19	0.42
1:N:163:LYS:HG2	1:N:163:LYS:O	2.19	0.42
1:N:163:LYS:CG	1:N:166:PHE:HB2	2.49	0.42
1:N:146:LEU:CD2	1:N:167:THR:HG23	2.49	0.42
1:K:140:VAL:HG12	1:K:141:LYS:N	2.35	0.42
1:A:398:GLY:HA2	1:A:401:GLU:OE1	2.19	0.42
1:E:277:PHE:CE2	1:E:279:ASN:HB2	2.53	0.42
1:N:27:LYS:HG2	1:N:436:ILE:HD12	1.99	0.42
1:B:108:ILE:HG23	1:I:444:ASP:OD2	2.18	0.42
1:I:51:THR:HG22	1:I:53:ASP:H	1.84	0.42
1:B:92:LEU:CD1	1:B:433:LEU:HD11	2.49	0.42
1:N:188:VAL:O	1:N:189:ILE:HD13	2.19	0.42
1:E:511:ALA:HA	1:E:512:PRO:HD3	1.88	0.42
1:E:324:HIS:CG	1:E:325:PRO:HD3	2.54	0.42
1:F:269:ILE:HG12	1:F:274:ILE:HG21	2.01	0.42
1:K:173:ALA:HA	1:K:176:ARG:CZ	2.48	0.42
1:L:216:PRO:HG2	1:L:295:GLY:CA	2.48	0.42
1:P:24:ASP:HA	1:P:27:LYS:HD3	2.00	0.42
1:P:222:ALA:HA	1:P:275:ASN:HB2	2.02	0.42
1:L:205:PHE:HA	1:L:359:THR:CB	2.49	0.42
1:B:78:GLN:HE21	1:B:486:VAL:HA	1.83	0.42
1:E:125:ARG:HG2	1:E:128:LEU:HD12	2.01	0.42
1:F:487:LYS:HD3	1:F:487:LYS:HA	1.90	0.42
1:M:51:THR:CG2	1:M:56:THR:HB	2.48	0.42
1:B:314:THR:HG23	1:B:316:GLY:H	1.84	0.42
1:L:509:LYS:HA	1:L:509:LYS:HE2	2.01	0.42
1:F:247:SER:C	1:F:249:ALA:H	2.22	0.42
1:A:320:SER:HB2	1:A:321:THR:H	1.64	0.42
1:N:321:THR:O	1:N:323:ASP:N	2.52	0.42
1:D:171:VAL:O	1:D:174:VAL:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:38:ILE:HG21	1:H:508:ILE:CG2	2.40	0.42
1:C:197:ALA:O	1:C:198:ASP:HB2	2.20	0.42
1:C:82:VAL:HG13	1:C:83:GLY:N	2.35	0.42
1:C:500:VAL:HA	1:C:503:ARG:HG2	2.02	0.42
1:P:191:LYS:NZ	1:P:346:LEU:HD11	2.34	0.42
1:P:326:GLU:HB2	1:P:327:LEU:H	1.58	0.42
1:E:274:ILE:HG23	1:E:296:VAL:HG21	2.02	0.42
1:D:61:ILE:HG13	1:D:62:GLY:N	2.34	0.42
1:M:324:HIS:ND1	1:M:325:PRO:HD3	2.35	0.42
1:E:27:LYS:HB2	1:E:436:ILE:HD11	2.02	0.42
1:E:434:PRO:HB3	1:E:452:LEU:HD23	1.99	0.42
1:M:104:ILE:HG13	1:M:105:ALA:N	2.34	0.42
1:O:57:ILE:HG23	1:O:58:LEU:HD22	2.02	0.42
1:F:82:VAL:HB	1:F:485:GLN:HG2	2.00	0.42
1:C:508:ILE:O	1:C:509:LYS:HB2	2.20	0.42
1:I:81:GLU:O	1:I:82:VAL:HB	2.19	0.42
1:C:280:ARG:HG3	1:C:304:PHE:HA	2.00	0.42
1:K:22:ILE:O	1:K:26:VAL:HG22	2.19	0.42
1:G:117:TRP:CD1	1:G:495:ALA:HB1	2.55	0.42
1:N:22:ILE:O	1:N:26:VAL:HG22	2.19	0.42
1:C:183:LEU:O	1:C:184:GLU:HG3	2.19	0.42
1:B:40:LEU:C	1:B:40:LEU:HD13	2.40	0.42
1:K:455:ALA:HB2	1:K:472:ILE:HD12	2.02	0.42
1:D:504:VAL:HG21	1:H:38:ILE:HG23	2.00	0.42
1:B:284:TYR:CE2	1:B:286:TYR:CD1	3.08	0.42
1:I:139:GLU:OE2	1:I:140:VAL:HG23	2.20	0.42
1:G:291:PHE:HD1	1:G:296:VAL:CG1	2.33	0.42
1:G:317:GLU:CB	1:G:329:LYS:HD3	2.49	0.42
1:H:420:ALA:HB3	1:P:453:ARG:NH2	2.34	0.42
1:L:232:ASP:HA	1:L:284:TYR:HB2	2.02	0.42
1:G:245:VAL:HG21	1:G:251:VAL:CG2	2.42	0.42
1:G:448:LEU:HD11	1:G:465:LEU:HD11	2.01	0.42
1:B:191:LYS:N	1:B:362:LEU:O	2.49	0.42
1:J:114:ILE:HA	1:J:117:TRP:CZ3	2.54	0.42
1:A:418:LYS:CD	1:M:450:ALA:HB2	2.48	0.42
1:E:431:ARG:CZ	1:E:453:ARG:HD3	2.50	0.42
1:O:287:PRO:O	1:O:291:PHE:HD1	2.03	0.42
1:D:411:LEU:HB3	1:D:423:MET:SD	2.60	0.42
1:L:57:ILE:O	1:L:57:ILE:HD13	2.19	0.42
1:F:232:ASP:OD1	1:F:284:TYR:HD1	2.03	0.42
1:E:133:VAL:HG21	1:E:393:THR:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:219:ILE:HG21	1:A:275:ASN:O	2.18	0.42
1:A:237:LYS:O	1:A:237:LYS:HD3	2.19	0.42
1:I:346:LEU:N	1:I:346:LEU:HD12	2.35	0.42
1:N:48:LEU:H	1:N:48:LEU:HD22	1.84	0.42
1:D:117:TRP:O	1:D:120:ALA:HB3	2.20	0.42
1:N:334:LYS:CD	1:N:351:GLY:HA3	2.49	0.42
1:M:85:GLY:HA2	1:M:153:THR:OG1	2.19	0.42
1:H:17:ILE:O	1:H:20:ILE:HG22	2.19	0.42
1:L:139:GLU:OE2	1:L:178:LYS:HD2	2.19	0.42
1:L:150:ALA:O	1:L:154:LEU:HD13	2.20	0.42
1:L:163:LYS:HA	1:L:166:PHE:HD1	1.79	0.42
1:F:106:LYS:HE3	1:F:418:LYS:HZ1	1.84	0.42
1:B:326:GLU:CG	1:B:327:LEU:N	2.80	0.42
1:C:110:PRO:HB2	1:C:502:LEU:HG	2.01	0.42
1:M:192:LEU:CG	1:M:366:THR:HG21	2.41	0.42
1:G:231:MET:C	1:G:284:TYR:HB2	2.40	0.42
1:C:262:MET:SD	1:C:290:LEU:HB2	2.60	0.42
1:D:261:LYS:O	1:D:265:LYS:HG3	2.20	0.42
1:E:89:VAL:HA	1:E:490:VAL:HG21	2.02	0.42
1:F:96:LEU:CD2	1:F:117:TRP:HZ2	2.31	0.42
1:I:106:LYS:HB3	1:I:106:LYS:HZ3	1.83	0.42
1:C:444:ASP:OD1	1:L:108:ILE:HG13	2.19	0.42
1:A:7:ARG:HB3	1:A:509:LYS:HB2	2.02	0.42
1:L:57:ILE:C	1:L:57:ILE:HD13	2.40	0.42
1:K:108:ILE:HG22	1:K:109:HIS:N	2.33	0.42
1:L:182:ASN:CG	1:L:183:LEU:H	2.22	0.42
1:O:101:GLU:HA	1:O:104:ILE:HG23	2.01	0.42
1:P:57:ILE:HD13	1:P:57:ILE:C	2.39	0.42
1:G:451:GLN:NE2	1:G:471:THR:HA	2.35	0.42
1:A:20:ILE:HB	1:A:98:ARG:NH2	2.34	0.42
1:H:176:ARG:NE	1:H:358:CYS:HB2	2.34	0.42
1:A:64:ASP:CG	1:A:66:PRO:HD2	2.40	0.42
1:O:139:GLU:O	1:O:141:LYS:N	2.52	0.42
1:B:145:ASP:OD2	1:B:175:LEU:HD11	2.20	0.42
1:K:67:ALA:O	1:K:68:ALA:HB2	2.19	0.42
1:O:65:ASN:OD1	1:O:510:ALA:HB2	2.19	0.42
1:G:81:GLU:O	1:G:82:VAL:CG2	2.68	0.42
1:P:325:PRO:HA	1:P:329:LYS:HG3	2.00	0.42
1:A:334:LYS:HD3	1:A:351:GLY:HA3	2.01	0.42
1:L:324:HIS:ND1	1:L:325:PRO:HD3	2.35	0.42
1:N:190:LYS:HA	1:N:362:LEU:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:324:HIS:CG	1:J:325:PRO:HD3	2.54	0.42
1:F:99:GLU:CG	1:F:425:SER:HB2	2.49	0.42
1:K:173:ALA:O	1:K:176:ARG:HG2	2.20	0.42
1:A:84:ASP:OD2	1:A:383:VAL:HG22	2.19	0.42
1:B:447:ASP:HA	1:I:107:LYS:HG2	2.00	0.42
1:M:404:MET:O	1:M:408:VAL:HG22	2.20	0.42
1:C:341:ILE:O	1:C:343:GLU:N	2.49	0.42
1:D:143:ARG:O	1:D:143:ARG:HG3	2.19	0.42
1:C:312:LEU:HD13	1:C:312:LEU:O	2.20	0.42
1:N:405:ALA:HA	1:N:408:VAL:HG22	2.02	0.42
1:J:7:ARG:HH21	1:N:37:LYS:HD2	1.85	0.42
1:I:246:ASP:OD1	1:I:250:LYS:HD2	2.20	0.42
1:O:198:ASP:O	1:O:363:ARG:HB2	2.20	0.42
1:K:168:LYS:O	1:K:171:VAL:HG22	2.20	0.42
1:I:226:ILE:HG12	1:I:278:ILE:CG2	2.50	0.42
1:C:82:VAL:HB	1:C:485:GLN:OE1	2.20	0.42
1:B:223:LYS:HB2	1:B:274:ILE:HA	2.00	0.42
1:N:433:LEU:HB2	1:N:434:PRO:HD3	2.00	0.42
1:B:106:LYS:O	1:B:107:LYS:CB	2.66	0.42
1:I:51:THR:HA	1:I:375:ARG:NH1	2.35	0.42
1:O:431:ARG:HA	1:O:431:ARG:CZ	2.49	0.42
1:N:109:HIS:CD2	1:N:111:GLN:HB2	2.54	0.42
1:A:203:GLU:HG2	1:A:351:GLY:H	1.84	0.42
1:N:324:HIS:CG	1:N:325:PRO:HD3	2.55	0.42
1:D:372:GLU:HG3	1:D:375:ARG:CZ	2.48	0.42
1:D:258:GLU:OE2	1:D:284:TYR:CE2	2.72	0.42
1:D:211:ILE:HG12	1:D:298:ALA:H	1.85	0.42
1:J:189:ILE:HG22	1:J:190:LYS:N	2.34	0.42
1:F:45:ASP:O	1:F:46:ALA:HB3	2.20	0.42
1:C:108:ILE:HB	1:L:446:ALA:HA	2.02	0.42
1:I:397:GLY:HA3	1:I:475:MET:CE	2.49	0.42
1:G:131:SER:HB3	1:G:132:ALA:H	1.68	0.42
1:B:185:ALA:HA	1:B:309:ARG:HD3	2.02	0.42
1:F:405:ALA:HA	1:F:408:VAL:HG22	2.01	0.42
1:F:203:GLU:CG	1:F:350:SER:HB2	2.50	0.42
1:D:32:PRO:HD2	1:D:467:MET:HE1	2.00	0.42
1:L:96:LEU:O	1:L:96:LEU:HD22	2.19	0.42
1:J:280:ARG:O	1:J:281:GLN:CB	2.68	0.42
1:I:507:ILE:HG22	1:I:508:ILE:N	2.35	0.42
1:L:191:LYS:HD3	1:L:192:LEU:H	1.84	0.42
1:K:74:MET:SD	1:K:74:MET:O	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:448:LEU:C	1:A:448:LEU:HD13	2.40	0.42
1:D:37:LYS:O	1:D:50:VAL:HG23	2.20	0.42
1:P:261:LYS:O	1:P:264:GLU:HG2	2.20	0.42
1:I:500:VAL:O	1:I:504:VAL:HG12	2.20	0.42
1:D:19:ALA:HB3	1:D:98:ARG:HH22	1.85	0.42
1:J:312:LEU:O	1:J:354:LEU:HD22	2.19	0.42
1:P:368:GLN:O	1:P:371:ASP:HB2	2.20	0.42
1:L:126:GLN:H	1:L:126:GLN:HG2	1.61	0.42
1:O:191:LYS:HD3	1:O:344:ASP:HB3	2.01	0.42
1:B:154:LEU:O	1:B:157:LYS:HB2	2.20	0.42
1:P:266:VAL:CG2	1:P:290:LEU:HD11	2.50	0.42
1:E:266:VAL:HB	1:E:290:LEU:CD2	2.30	0.42
1:G:163:LYS:HA	1:G:166:PHE:HD1	1.84	0.42
1:K:146:LEU:CD2	1:K:147:MET:H	2.33	0.42
1:C:163:LYS:HD2	1:C:166:PHE:CD1	2.55	0.42
1:C:154:LEU:HD21	1:C:167:THR:HB	2.02	0.42
1:G:265:LYS:NZ	1:G:287:PRO:HG3	2.35	0.42
1:P:452:LEU:HD13	1:P:465:LEU:CD1	2.49	0.42
1:P:452:LEU:HD22	1:P:465:LEU:HD11	2.02	0.42
1:H:162:HIS:HB3	1:H:198:ASP:OD2	2.20	0.42
1:A:82:VAL:CG1	1:A:83:GLY:H	2.30	0.42
1:J:284:TYR:CE2	1:J:286:TYR:CD1	3.08	0.42
1:K:222:ALA:HA	1:K:275:ASN:HB2	2.02	0.42
1:A:231:MET:HG3	1:A:283:ILE:HG13	2.02	0.42
1:F:215:GLN:HG3	1:F:292:GLY:HA2	2.02	0.42
1:H:106:LYS:HZ2	1:H:418:LYS:HA	1.84	0.42
1:P:280:ARG:HG3	1:P:304:PHE:CA	2.50	0.42
1:C:143:ARG:HA	1:C:143:ARG:HE	1.84	0.42
1:D:24:ASP:HA	1:D:27:LYS:HD3	2.01	0.42
1:I:280:ARG:HG3	1:I:304:PHE:CA	2.50	0.42
1:D:226:ILE:HG12	1:D:278:ILE:CG2	2.49	0.42
1:K:75:SER:O	1:K:78:GLN:HB2	2.20	0.42
1:G:188:VAL:CB	1:G:377:LEU:HD13	2.50	0.42
1:O:177:LEU:HD13	1:O:177:LEU:C	2.40	0.42
1:F:338:GLU:OE2	1:F:345:LYS:HE2	2.20	0.42
1:O:154:LEU:CD2	1:O:163:LYS:HG3	2.50	0.41
1:B:146:LEU:CD2	1:B:167:THR:HG23	2.50	0.41
1:H:146:LEU:CD2	1:H:147:MET:N	2.79	0.41
1:P:164:ASP:O	1:P:167:THR:HG22	2.20	0.41
1:N:219:ILE:HD12	1:N:275:ASN:CB	2.49	0.41
1:N:219:ILE:CD1	1:N:276:CYS:HB2	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:365:ALA:O	1:I:366:THR:CB	2.67	0.41
1:G:326:GLU:CG	1:G:327:LEU:H	2.29	0.41
1:K:211:ILE:HG13	1:K:298:ALA:O	2.20	0.41
1:H:191:LYS:HE3	1:H:346:LEU:HD13	2.02	0.41
1:D:245:VAL:HG12	1:D:246:ASP:N	2.34	0.41
1:B:370:LEU:O	1:B:373:ALA:HB3	2.20	0.41
1:J:284:TYR:CE2	1:J:286:TYR:HD1	2.38	0.41
1:D:57:ILE:HD13	1:D:57:ILE:C	2.41	0.41
1:F:68:ALA:O	1:F:72:VAL:HG23	2.20	0.41
1:J:236:ILE:CD1	1:J:237:LYS:H	2.33	0.41
1:I:373:ALA:O	1:I:377:LEU:HB2	2.20	0.41
1:B:128:LEU:HD22	1:B:484:PHE:CZ	2.55	0.41
1:A:57:ILE:O	1:A:57:ILE:HD13	2.20	0.41
1:F:310:LEU:HD13	1:F:310:LEU:O	2.20	0.41
1:C:140:VAL:HG12	1:C:141:LYS:N	2.33	0.41
1:D:280:ARG:HG3	1:D:304:PHE:CA	2.50	0.41
1:M:222:ALA:HA	1:M:275:ASN:CB	2.49	0.41
1:A:261:LYS:O	1:A:264:GLU:HG2	2.19	0.41
1:E:117:TRP:HD1	1:E:495:ALA:CB	2.32	0.41
1:P:54:GLY:O	1:P:58:LEU:HD23	2.20	0.41
1:K:57:ILE:C	1:K:57:ILE:HD13	2.40	0.41
1:N:510:ALA:O	1:N:511:ALA:CB	2.68	0.41
1:I:313:VAL:HG13	1:I:352:VAL:HG21	2.02	0.41
1:A:1:ALA:HB2	1:F:61:ILE:HG21	2.02	0.41
1:L:163:LYS:O	1:L:163:LYS:HG2	2.20	0.41
1:A:171:VAL:CA	1:A:174:VAL:HG22	2.50	0.41
1:E:211:ILE:CD1	1:E:297:MET:HG3	2.34	0.41
1:H:508:ILE:HG22	1:H:508:ILE:O	2.20	0.41
1:I:300:GLU:OE2	1:I:301:HIS:HB2	2.20	0.41
1:M:286:TYR:HB2	1:M:287:PRO:HD3	2.02	0.41
1:F:139:GLU:HG2	1:F:178:LYS:HZ1	1.84	0.41
1:P:402:MET:HE2	1:P:453:ARG:HG2	2.02	0.41
1:K:452:LEU:HD22	1:K:465:LEU:HD11	2.02	0.41
1:P:225:LEU:HD11	1:P:324:HIS:CE1	2.55	0.41
1:H:157:LYS:HB3	1:H:159:LEU:CD1	2.48	0.41
1:N:189:ILE:CG2	1:N:190:LYS:N	2.82	0.41
1:A:397:GLY:HA3	1:A:475:MET:HE1	2.02	0.41
1:F:96:LEU:HA	1:F:99:GLU:OE2	2.20	0.41
1:A:286:TYR:HB2	1:A:287:PRO:HD3	2.01	0.41
1:F:1:ALA:H1	1:F:508:ILE:HD12	1.85	0.41
1:F:448:LEU:HD11	1:F:465:LEU:CD1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:112:THR:HG21	1:M:418:LYS:HZ2	1.83	0.41
1:A:508:ILE:HB	1:F:37:LYS:NZ	2.35	0.41
1:M:58:LEU:HA	1:M:58:LEU:HD13	1.88	0.41
1:C:226:ILE:HG12	1:C:278:ILE:HG23	2.02	0.41
1:J:141:LYS:HA	1:J:141:LYS:HD3	1.91	0.41
1:J:176:ARG:HH22	1:J:360:ILE:HG12	1.85	0.41
1:F:133:VAL:HB	1:F:393:THR:O	2.20	0.41
1:K:16:PHE:HA	1:K:97:LEU:HD23	2.01	0.41
1:C:263:LYS:O	1:C:267:GLU:HG2	2.19	0.41
1:D:146:LEU:HD13	1:D:167:THR:O	2.20	0.41
1:N:174:VAL:HG11	1:N:384:LEU:CB	2.50	0.41
1:M:141:LYS:HG3	1:M:144:GLN:H	1.85	0.41
1:E:207:LEU:O	1:E:347:ILE:HG22	2.19	0.41
1:O:38:ILE:O	1:O:38:ILE:HG13	2.21	0.41
1:P:154:LEU:CD2	1:P:163:LYS:HG2	2.50	0.41
1:N:438:ALA:O	1:N:441:ALA:HB3	2.20	0.41
1:N:397:GLY:HA3	1:N:475:MET:CE	2.51	0.41
1:E:79:ASP:HA	1:E:83:GLY:HA2	1.92	0.41
1:M:40:LEU:HD23	1:M:47:SER:O	2.20	0.41
1:J:324:HIS:HB2	1:J:329:LYS:HZ3	1.84	0.41
1:E:402:MET:HE3	1:E:453:ARG:HG2	2.03	0.41
1:J:51:THR:CG2	1:J:56:THR:HB	2.47	0.41
1:H:96:LEU:HD11	1:H:117:TRP:CZ2	2.49	0.41
1:J:138:ASP:O	1:J:139:GLU:CB	2.67	0.41
1:I:57:ILE:HD13	1:I:57:ILE:C	2.40	0.41
1:B:392:ARG:HB3	1:B:484:PHE:CG	2.55	0.41
1:H:261:LYS:O	1:H:264:GLU:HG2	2.20	0.41
1:K:183:LEU:HB2	1:K:381:LEU:HG	2.02	0.41
1:O:339:VAL:O	1:O:340:MET:CB	2.67	0.41
1:A:280:ARG:HG3	1:A:304:PHE:HB2	2.02	0.41
1:J:313:VAL:HG13	1:J:352:VAL:CB	2.51	0.41
1:H:222:ALA:HA	1:H:275:ASN:HB2	2.00	0.41
1:K:428:LYS:C	1:K:428:LYS:HD3	2.41	0.41
1:I:310:LEU:O	1:I:314:THR:HG22	2.20	0.41
1:I:261:LYS:O	1:I:264:GLU:HG2	2.20	0.41
1:O:158:LEU:C	1:O:160:THR:H	2.23	0.41
1:L:159:LEU:HG	1:L:369:ILE:HG23	2.01	0.41
1:N:171:VAL:HG12	1:N:384:LEU:HD12	2.02	0.41
1:P:154:LEU:HD21	1:P:167:THR:HB	2.02	0.41
1:B:261:LYS:O	1:B:265:LYS:HG3	2.20	0.41
1:M:261:LYS:O	1:M:264:GLU:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:M:48:LEU:HD22	1:M:48:LEU:H	1.85	0.41
1:P:225:LEU:HD13	1:P:329:LYS:CE	2.50	0.41
1:H:225:LEU:HG	1:H:277:PHE:CD1	2.55	0.41
1:J:452:LEU:CD2	1:J:465:LEU:HD21	2.50	0.41
1:L:500:VAL:O	1:L:504:VAL:HG23	2.20	0.41
1:A:215:GLN:HE21	1:A:292:GLY:N	2.18	0.41
1:B:190:LYS:HD3	1:B:370:LEU:HD23	2.01	0.41
1:J:324:HIS:HB2	1:J:329:LYS:HE2	2.02	0.41
1:B:399:CYS:SG	1:B:464:GLY:CA	3.08	0.41
1:N:445:SER:O	1:N:449:VAL:HG23	2.21	0.41
1:A:52:ASN:CG	1:A:157:LYS:HG2	2.40	0.41
1:D:397:GLY:O	1:D:465:LEU:HB2	2.21	0.41
1:N:103:LEU:HD21	1:N:113:ILE:HG21	2.02	0.41
1:B:114:ILE:HD13	1:B:117:TRP:CZ3	2.55	0.41
1:F:364:GLY:HA3	1:F:370:LEU:CD1	2.51	0.41
1:G:152:THR:HG21	1:G:480:ILE:HG23	2.02	0.41
1:O:313:VAL:HG13	1:O:352:VAL:HB	2.03	0.41
1:N:130:ASN:O	1:N:131:SER:CB	2.69	0.41
1:J:32:PRO:HD2	1:J:467:MET:HE3	2.02	0.41
1:G:95:GLU:HA	1:G:98:ARG:HD2	2.02	0.41
1:D:236:ILE:HG23	1:D:237:LYS:H	1.83	0.41
1:O:394:VAL:CG2	1:O:482:GLU:HB2	2.50	0.41
1:A:35:MET:HG2	1:C:505:ASP:OD2	2.21	0.41
1:J:57:ILE:C	1:J:57:ILE:HD13	2.40	0.41
1:L:421:VAL:O	1:L:424:GLU:HG2	2.21	0.41
1:C:337:GLU:HG3	1:C:339:VAL:CG2	2.50	0.41
1:N:385:ALA:O	1:N:388:VAL:HG22	2.19	0.41
1:L:385:ALA:O	1:L:389:LYS:HG2	2.21	0.41
1:P:287:PRO:O	1:P:290:LEU:HB3	2.21	0.41
1:E:338:GLU:HA	1:E:347:ILE:HA	2.03	0.41
1:F:266:VAL:CG2	1:F:290:LEU:HD11	2.50	0.41
1:J:38:ILE:CD1	1:J:39:LEU:H	2.32	0.41
1:M:261:LYS:O	1:M:265:LYS:HG3	2.20	0.41
1:C:109:HIS:HA	1:C:110:PRO:HD2	1.87	0.41
1:I:364:GLY:HA3	1:I:370:LEU:HD21	2.01	0.41
1:L:24:ASP:HA	1:L:27:LYS:HD3	2.03	0.41
1:B:191:LYS:HG3	1:B:192:LEU:H	1.85	0.41
1:C:133:VAL:HG23	1:C:134:ASP:N	2.35	0.41
1:M:236:ILE:HG23	1:M:237:LYS:N	2.35	0.41
1:A:511:ALA:HA	1:A:512:PRO:HD3	1.87	0.41
1:F:508:ILE:CG2	1:F:509:LYS:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:63:VAL:HG22	1:K:1:ALA:HA	2.02	0.41
1:J:206:LEU:HD13	1:J:206:LEU:C	2.41	0.41
1:J:206:LEU:HD11	1:J:346:LEU:CD2	2.49	0.41
1:H:284:TYR:CE2	1:H:286:TYR:CD1	3.09	0.41
1:F:362:LEU:HD13	1:F:373:ALA:HB1	2.02	0.41
1:F:104:ILE:HG13	1:F:105:ALA:N	2.35	0.41
1:P:219:ILE:HD12	1:P:275:ASN:CB	2.49	0.41
1:F:166:PHE:CD1	1:F:198:ASP:HB2	2.56	0.41
1:N:489:GLN:HA	1:N:492:LEU:HD11	2.03	0.41
1:N:192:LEU:N	1:N:192:LEU:HD12	2.36	0.41
1:L:183:LEU:N	1:L:183:LEU:HD22	2.36	0.41
1:O:219:ILE:HD12	1:O:275:ASN:HB3	2.01	0.41
1:P:107:LYS:CG	1:P:107:LYS:O	2.68	0.41
1:I:191:LYS:O	1:I:363:ARG:HA	2.20	0.41
1:M:99:GLU:CB	1:M:425:SER:HB2	2.50	0.41
1:I:110:PRO:O	1:I:113:ILE:HB	2.20	0.41
1:N:176:ARG:NH1	1:N:201:LEU:HD11	2.35	0.41
1:E:58:LEU:HB3	1:E:72:VAL:CG1	2.50	0.41
1:A:108:ILE:HD13	1:M:445:SER:N	2.36	0.41
1:O:128:LEU:HD23	1:O:128:LEU:HA	1.79	0.41
1:G:316:GLY:O	1:G:330:LEU:HB2	2.21	0.41
1:M:22:ILE:O	1:M:26:VAL:HG22	2.20	0.41
1:B:174:VAL:HG12	1:B:381:LEU:CD2	2.51	0.41
1:L:159:LEU:O	1:L:161:HIS:N	2.53	0.41
1:J:146:LEU:HD22	1:J:168:LYS:HA	2.02	0.41
1:D:145:ASP:OD2	1:D:175:LEU:HD11	2.21	0.41
1:D:157:LYS:HB3	1:D:159:LEU:CD2	2.50	0.41
1:M:140:VAL:HG12	1:M:141:LYS:N	2.35	0.41
1:A:146:LEU:O	1:A:147:MET:HB2	2.19	0.41
1:E:145:ASP:OD2	1:E:175:LEU:HD11	2.21	0.41
1:I:431:ARG:NH2	1:I:434:PRO:HG2	2.34	0.41
1:F:139:GLU:HG2	1:F:178:LYS:NZ	2.36	0.41
1:G:277:PHE:CE2	1:G:279:ASN:HB2	2.56	0.41
1:L:433:LEU:O	1:L:437:ILE:HG12	2.21	0.41
1:G:128:LEU:CG	1:G:488:ARG:HG2	2.51	0.41
1:K:452:LEU:HD11	1:K:456:HIS:CE1	2.56	0.41
1:H:225:LEU:HD11	1:H:324:HIS:CE1	2.55	0.41
1:D:245:VAL:O	1:D:246:ASP:CB	2.67	0.41
1:N:326:GLU:CG	1:N:327:LEU:N	2.83	0.41
1:J:394:VAL:HG23	1:J:482:GLU:HB2	2.02	0.41
1:J:225:LEU:HD13	1:J:329:LYS:HE3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:48:LEU:CD1	1:N:508:ILE:HD11	2.49	0.41
1:N:59:LYS:CE	1:N:76:ARG:HB2	2.47	0.41
1:F:57:ILE:C	1:F:57:ILE:HD13	2.41	0.41
1:M:399:CYS:SG	1:M:464:GLY:CA	3.06	0.41
1:I:99:GLU:HB2	1:I:425:SER:CB	2.47	0.41
1:F:222:ALA:HA	1:F:275:ASN:CG	2.41	0.41
1:E:222:ALA:HB1	1:E:336:ILE:CD1	2.51	0.41
1:N:57:ILE:HG23	1:N:58:LEU:HD22	2.02	0.41
1:I:222:ALA:HA	1:I:275:ASN:CB	2.50	0.41
1:J:12:ARG:CD	1:J:501:ILE:HG21	2.49	0.41
1:H:99:GLU:CG	1:H:425:SER:HB2	2.50	0.41
1:H:354:LEU:HD21	1:H:356:GLU:HB2	2.02	0.41
1:L:126:GLN:O	1:L:127:ALA:HB2	2.21	0.41
1:F:282:LEU:N	1:F:282:LEU:HD22	2.36	0.41
1:E:330:LEU:HD22	1:E:330:LEU:N	2.36	0.41
1:J:495:ALA:O	1:J:499:GLU:HB2	2.21	0.41
1:E:408:VAL:HG21	1:E:427:ALA:HA	2.02	0.41
1:A:165:HIS:O	1:A:168:LYS:HB3	2.20	0.41
1:G:52:ASN:H	1:G:375:ARG:NH1	2.18	0.41
1:D:509:LYS:HG3	1:H:61:ILE:HG21	2.03	0.41
1:I:146:LEU:CD1	1:I:167:THR:O	2.68	0.41
1:I:146:LEU:HD12	1:I:171:VAL:CG1	2.40	0.41
1:M:103:LEU:HD23	1:M:113:ILE:HD13	2.03	0.41
1:P:100:ALA:HA	1:P:103:LEU:HD22	2.02	0.41
1:C:262:MET:CE	1:C:286:TYR:HB3	2.51	0.41
1:C:269:ILE:CG2	1:C:274:ILE:HG21	2.45	0.41
1:G:82:VAL:HG11	1:G:483:SER:OG	2.20	0.41
1:G:75:SER:O	1:G:78:GLN:HB3	2.21	0.41
1:K:225:LEU:HD13	1:K:226:ILE:N	2.35	0.41
1:P:373:ALA:O	1:P:377:LEU:CB	2.68	0.41
1:H:154:LEU:HD21	1:H:163:LYS:HZ2	1.85	0.41
1:H:187:HIS:NE2	1:H:189:ILE:HD11	2.36	0.41
1:J:452:LEU:HD11	1:J:456:HIS:CE1	2.55	0.41
1:M:76:ARG:HA	1:M:79:ASP:HB3	2.02	0.41
1:J:58:LEU:HA	1:J:58:LEU:HD13	1.91	0.41
1:B:190:LYS:HD3	1:B:370:LEU:CD2	2.51	0.41
1:D:446:ALA:HB2	1:K:418:LYS:CD	2.44	0.41
1:J:346:LEU:HD12	1:J:346:LEU:HA	1.90	0.41
1:M:448:LEU:HD11	1:M:465:LEU:HD11	2.03	0.41
1:L:313:VAL:HG13	1:L:352:VAL:CB	2.49	0.41
1:J:309:ARG:O	1:J:313:VAL:HG23	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:K:45:ASP:O	1:K:46:ALA:CB	2.69	0.41
1:D:191:LYS:HG3	1:D:193:GLY:H	1.85	0.41
1:J:173:ALA:O	1:J:176:ARG:HG2	2.20	0.41
1:E:196:LEU:HD13	1:E:196:LEU:C	2.41	0.41
1:D:277:PHE:CE2	1:D:279:ASN:HB2	2.55	0.41
1:B:68:ALA:O	1:B:72:VAL:HG23	2.21	0.41
1:H:218:ARG:HG3	1:H:337:GLU:HB3	2.03	0.41
1:L:141:LYS:HE2	1:L:144:GLN:HB2	2.02	0.41
1:N:146:LEU:CD1	1:N:168:LYS:HG3	2.50	0.41
1:M:146:LEU:CD2	1:M:147:MET:N	2.83	0.41
1:K:384:LEU:HD22	1:K:384:LEU:N	2.36	0.41
1:E:165:HIS:O	1:E:168:LYS:HB3	2.21	0.41
1:N:266:VAL:HB	1:N:290:LEU:CD2	2.40	0.41
1:M:207:LEU:HB3	1:M:347:ILE:HG23	2.02	0.41
1:K:277:PHE:O	1:K:298:ALA:HA	2.21	0.41
1:L:231:MET:CG	1:L:283:ILE:HG13	2.51	0.41
1:P:317:GLU:OE2	1:P:329:LYS:HE3	2.20	0.41
1:G:452:LEU:HD13	1:G:465:LEU:CD1	2.49	0.41
1:D:231:MET:HB3	1:D:265:LYS:NZ	2.35	0.41
1:D:324:HIS:CG	1:D:325:PRO:HD3	2.56	0.41
1:F:433:LEU:O	1:F:437:ILE:HG12	2.20	0.41
1:H:453:ARG:CZ	1:P:417:GLY:N	2.84	0.41
1:D:57:ILE:HD13	1:D:57:ILE:O	2.20	0.41
1:A:485:GLN:O	1:A:489:GLN:HG2	2.20	0.41
1:K:190:LYS:HA	1:K:362:LEU:O	2.21	0.41
1:K:58:LEU:HA	1:K:58:LEU:HD12	1.89	0.41
1:E:448:LEU:C	1:E:448:LEU:HD13	2.41	0.41
1:P:219:ILE:CD1	1:P:275:ASN:HB3	2.49	0.41
1:E:392:ARG:O	1:E:484:PHE:HB2	2.20	0.41
1:H:185:ALA:HA	1:H:309:ARG:HD3	2.03	0.41
1:F:334:LYS:HD3	1:F:335:LEU:CB	2.51	0.41
1:J:32:PRO:HA	1:J:155:SER:O	2.21	0.41
1:L:447:ASP:O	1:L:451:GLN:HG2	2.21	0.41
1:F:190:LYS:HB2	1:F:190:LYS:HE3	1.87	0.41
1:M:412:ALA:HB1	1:M:424:GLU:HB3	2.02	0.41
1:I:511:ALA:N	1:I:512:PRO:HD2	2.36	0.41
1:M:96:LEU:HD13	1:M:97:LEU:N	2.35	0.41
1:F:35:MET:CE	1:F:440:ASN:HB2	2.50	0.41
1:L:177:LEU:HD13	1:L:177:LEU:O	2.21	0.41
1:K:33:LYS:HB2	1:K:440:ASN:OD1	2.21	0.41
1:F:239:PHE:HB2	1:F:241:SER:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:393:THR:HB	1:H:481:THR:OG1	2.20	0.41
1:J:321:THR:O	1:J:323:ASP:N	2.53	0.41
1:K:228:ASN:ND2	1:K:319:ALA:HB3	2.36	0.41
1:E:26:VAL:HG23	1:E:91:VAL:CG2	2.51	0.41
1:E:263:LYS:HA	1:E:266:VAL:HG12	2.02	0.41
1:H:168:LYS:O	1:H:171:VAL:HG22	2.21	0.41
1:G:159:LEU:N	1:G:159:LEU:HD22	2.36	0.41
1:A:92:LEU:HD12	1:A:92:LEU:N	2.36	0.41
1:F:266:VAL:HB	1:F:290:LEU:CD2	2.37	0.41
1:I:139:GLU:HG2	1:I:178:LYS:NZ	2.36	0.41
1:P:32:PRO:HD2	1:P:467:MET:HE1	2.00	0.41
1:I:431:ARG:NH1	1:I:453:ARG:HD3	2.36	0.41
1:H:2:GLY:O	1:H:3:ALA:HB2	2.21	0.41
1:P:452:LEU:HD11	1:P:456:HIS:HE1	1.84	0.41
1:L:82:VAL:HG13	1:L:83:GLY:H	1.86	0.41
1:K:231:MET:HG2	1:K:279:ASN:ND2	2.35	0.41
1:H:159:LEU:CG	1:H:163:LYS:HD3	2.50	0.41
1:G:433:LEU:HB2	1:G:434:PRO:HD3	2.03	0.41
1:G:448:LEU:HD13	1:G:448:LEU:C	2.41	0.41
1:F:225:LEU:HG	1:F:277:PHE:CE1	2.56	0.41
1:J:274:ILE:O	1:J:274:ILE:HG23	2.21	0.41
1:K:103:LEU:O	1:K:106:LYS:HB3	2.20	0.41
1:F:399:CYS:SG	1:F:464:GLY:CA	3.06	0.41
1:F:215:GLN:HE21	1:F:292:GLY:N	2.19	0.41
1:H:411:LEU:HB3	1:H:423:MET:CE	2.50	0.41
1:O:31:GLY:HA3	1:O:437:ILE:HD12	2.02	0.41
1:O:258:GLU:O	1:O:261:LYS:HB2	2.20	0.41
1:C:490:VAL:O	1:C:494:ALA:N	2.54	0.41
1:L:280:ARG:HG3	1:L:304:PHE:CA	2.51	0.41
1:K:51:THR:HG22	1:K:53:ASP:O	2.21	0.41
1:I:216:PRO:HG2	1:I:295:GLY:CA	2.51	0.41
1:H:10:THR:O	1:H:11:ALA:HB2	2.21	0.41
1:B:222:ALA:HA	1:B:275:ASN:CB	2.51	0.41
1:K:334:LYS:HD2	1:K:351:GLY:HA3	2.03	0.41
1:F:203:GLU:HG3	1:F:351:GLY:H	1.86	0.41
1:K:485:GLN:HG3	1:K:489:GLN:OE1	2.21	0.41
1:M:211:ILE:HG22	1:M:288:GLU:OE1	2.21	0.41
1:H:316:GLY:O	1:H:330:LEU:HB3	2.21	0.41
1:A:234:ASP:CG	1:A:235:LYS:H	2.23	0.41
1:A:233:THR:O	1:A:234:ASP:HB3	2.21	0.41
1:A:280:ARG:O	1:A:281:GLN:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:P:185:ALA:HA	1:P:309:ARG:HG2	2.03	0.41
1:E:35:MET:HE2	1:G:504:VAL:HG12	2.02	0.41
1:P:48:LEU:N	1:P:48:LEU:CD1	2.84	0.41
1:G:501:ILE:HA	1:G:501:ILE:HD12	1.78	0.41
1:G:142:PHE:N	1:G:142:PHE:CD1	2.86	0.41
1:J:124:ALA:HB2	1:J:491:LEU:CD1	2.51	0.41
1:O:216:PRO:CG	1:O:295:GLY:HA2	2.51	0.41
1:D:30:LEU:HD12	1:D:30:LEU:H	1.86	0.41
1:P:177:LEU:C	1:P:177:LEU:HD13	2.41	0.41
1:F:119:GLU:O	1:F:122:LYS:HB3	2.20	0.41
1:M:138:ASP:O	1:M:139:GLU:CB	2.68	0.41
1:M:150:ALA:O	1:M:154:LEU:HD13	2.21	0.41
1:D:82:VAL:CG1	1:D:83:GLY:H	2.34	0.41
1:N:431:ARG:HH21	1:N:434:PRO:HG2	1.86	0.41
1:N:397:GLY:O	1:N:465:LEU:HD23	2.20	0.41
1:L:219:ILE:HD13	1:L:276:CYS:HB2	2.03	0.41
1:M:40:LEU:HD22	1:M:41:SER:H	1.86	0.41
1:L:27:LYS:HA	1:L:30:LEU:HD13	2.03	0.41
1:F:480:ILE:N	1:F:480:ILE:HD12	2.36	0.41
1:G:82:VAL:HG21	1:G:483:SER:HB3	2.03	0.41
1:K:431:ARG:HA	1:K:431:ARG:CZ	2.51	0.41
1:O:411:LEU:O	1:O:415:THR:HG22	2.21	0.41
1:A:399:CYS:SG	1:A:464:GLY:HA3	2.61	0.41
1:K:186:ILE:HG23	1:K:360:ILE:HD12	2.02	0.41
1:M:117:TRP:O	1:M:120:ALA:HB3	2.21	0.41
1:D:402:MET:HB3	1:D:456:HIS:CG	2.56	0.41
1:D:455:ALA:HB2	1:D:472:ILE:HD12	2.03	0.41
1:F:280:ARG:HG3	1:F:304:PHE:CA	2.50	0.41
1:H:219:ILE:HD12	1:H:275:ASN:HB3	2.03	0.41
1:G:103:LEU:HD21	1:G:113:ILE:HG21	2.03	0.41
1:E:423:MET:HB2	1:E:423:MET:HE2	1.87	0.41
1:A:408:VAL:HG23	1:A:427:ALA:HB1	2.02	0.41
1:G:320:SER:HB2	1:G:321:THR:H	1.63	0.41
1:P:207:LEU:HB3	1:P:347:ILE:CG2	2.51	0.41
1:O:147:MET:SD	1:O:168:LYS:HE2	2.61	0.40
1:P:140:VAL:HA	1:P:175:LEU:HD22	2.03	0.40
1:D:509:LYS:HG2	1:H:63:VAL:CG2	2.51	0.40
1:N:152:THR:HG21	1:N:481:THR:O	2.21	0.40
1:I:436:ILE:HD13	1:I:436:ILE:HG21	1.87	0.40
1:E:82:VAL:HA	1:E:386:GLN:HG3	2.03	0.40
1:I:367:GLN:CD	1:I:369:ILE:HB	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:O:119:GLU:HG3	1:O:419:GLU:HB3	2.03	0.40
1:N:508:ILE:HA	1:N:508:ILE:HD13	1.72	0.40
1:G:399:CYS:SG	1:G:464:GLY:CA	3.06	0.40
1:M:226:ILE:HB	1:M:317:GLU:OE2	2.21	0.40
1:E:30:LEU:HG	1:E:87:THR:O	2.20	0.40
1:E:452:LEU:HD13	1:E:465:LEU:HD13	2.03	0.40
1:A:117:TRP:HD1	1:A:495:ALA:HA	1.86	0.40
1:O:233:THR:HG21	1:O:261:LYS:CE	2.48	0.40
1:F:82:VAL:HA	1:F:386:GLN:HG3	2.03	0.40
1:A:449:VAL:HG21	1:M:107:LYS:HD2	2.02	0.40
1:G:487:LYS:HA	1:G:490:VAL:HG12	2.03	0.40
1:G:89:VAL:HB	1:G:490:VAL:HG23	2.02	0.40
1:F:370:LEU:HA	1:F:370:LEU:HD22	1.81	0.40
1:D:27:LYS:HB2	1:D:436:ILE:HD13	2.03	0.40
1:K:280:ARG:O	1:K:281:GLN:CB	2.68	0.40
1:K:280:ARG:O	1:K:281:GLN:HB3	2.21	0.40
1:G:176:ARG:HH22	1:G:360:ILE:HG13	1.83	0.40
1:J:207:LEU:HD22	1:J:208:ASP:H	1.85	0.40
1:G:185:ALA:HB1	1:G:357:ALA:HB1	2.03	0.40
1:A:443:TYR:CE2	1:A:470:GLY:HA3	2.56	0.40
1:A:146:LEU:HD11	1:A:150:ALA:CB	2.52	0.40
1:H:215:GLN:HG3	1:H:292:GLY:HA2	2.03	0.40
1:I:324:HIS:HB2	1:I:329:LYS:HE2	2.03	0.40
1:J:211:ILE:HG23	1:J:298:ALA:O	2.21	0.40
1:N:222:ALA:HA	1:N:275:ASN:CG	2.41	0.40
1:N:219:ILE:HD13	1:N:276:CYS:HB2	2.02	0.40
1:F:171:VAL:O	1:F:175:LEU:HG	2.22	0.40
1:C:112:THR:CG2	1:C:418:LYS:HD2	2.51	0.40
1:B:92:LEU:N	1:B:92:LEU:CD1	2.84	0.40
1:M:38:ILE:HD13	1:O:507:ILE:HG13	2.02	0.40
1:H:191:LYS:HB2	1:H:191:LYS:HE2	1.78	0.40
1:D:322:PHE:HA	1:D:324:HIS:CD2	2.57	0.40
1:D:215:GLN:HG3	1:D:292:GLY:HA2	2.03	0.40
1:O:57:ILE:O	1:O:57:ILE:HD13	2.21	0.40
1:O:401:GLU:HG2	1:O:433:LEU:HD22	2.03	0.40
1:N:484:PHE:HE2	1:N:488:ARG:HE	1.65	0.40
1:L:32:PRO:HA	1:L:155:SER:C	2.41	0.40
1:D:310:LEU:O	1:D:313:VAL:HB	2.21	0.40
1:I:222:ALA:HA	1:I:275:ASN:CG	2.41	0.40
1:G:219:ILE:HD12	1:G:275:ASN:CB	2.51	0.40
1:C:280:ARG:HG2	1:C:302:ALA:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:J:209:LYS:CE	1:J:302:ALA:HA	2.50	0.40
1:E:41:SER:H	1:G:3:ALA:HA	1.86	0.40
1:E:58:LEU:HB3	1:E:72:VAL:HG11	2.02	0.40
1:G:421:VAL:O	1:G:424:GLU:HG2	2.21	0.40
1:P:240:GLY:O	1:P:241:SER:HB2	2.20	0.40
1:C:173:ALA:HA	1:C:176:ARG:CZ	2.51	0.40
1:I:65:ASN:CG	1:I:66:PRO:HD3	2.41	0.40
1:A:205:PHE:HA	1:A:359:THR:OG1	2.21	0.40
1:D:177:LEU:HD13	1:D:177:LEU:C	2.41	0.40
1:P:393:THR:HB	1:P:481:THR:OG1	2.22	0.40
1:M:367:GLN:CD	1:M:369:ILE:HD12	2.42	0.40
1:C:421:VAL:O	1:C:424:GLU:HG2	2.21	0.40
1:P:321:THR:O	1:P:323:ASP:N	2.55	0.40
1:E:93:ALA:HA	1:E:494:ALA:HB1	2.03	0.40
1:M:64:ASP:C	1:M:66:PRO:HD2	2.42	0.40
1:O:163:LYS:HA	1:O:166:PHE:HD1	1.82	0.40
1:H:38:ILE:HG22	1:H:50:VAL:HG12	2.03	0.40
1:E:37:LYS:O	1:E:50:VAL:HA	2.21	0.40
1:G:226:ILE:HD13	1:G:307:VAL:HG13	2.03	0.40
1:M:39:LEU:HD12	1:M:57:ILE:CD1	2.52	0.40
1:G:191:LYS:CE	1:G:346:LEU:HD21	2.51	0.40
1:F:27:LYS:HB2	1:F:436:ILE:CD1	2.51	0.40
1:L:215:GLN:HE21	1:L:292:GLY:N	2.19	0.40
1:A:310:LEU:O	1:A:314:THR:HG22	2.21	0.40
1:D:446:ALA:HA	1:K:418:LYS:HD3	2.02	0.40
1:K:418:LYS:HB3	1:K:418:LYS:NZ	2.36	0.40
1:C:487:LYS:HA	1:C:490:VAL:HG12	2.04	0.40
1:D:354:LEU:HD21	1:D:356:GLU:HB3	2.04	0.40
1:L:39:LEU:CD1	1:L:57:ILE:HD11	2.51	0.40
1:L:39:LEU:HD13	1:L:513:ARG:HH22	1.85	0.40
1:N:143:ARG:HA	1:N:143:ARG:NE	2.35	0.40
1:E:280:ARG:HG2	1:E:302:ALA:O	2.20	0.40
1:J:177:LEU:HD21	1:J:182:ASN:O	2.21	0.40
1:J:177:LEU:HG	1:J:381:LEU:HD21	2.03	0.40
1:J:384:LEU:N	1:J:384:LEU:HD13	2.37	0.40
1:M:189:ILE:HG22	1:M:190:LYS:N	2.35	0.40
1:D:81:GLU:HA	1:D:81:GLU:OE1	2.21	0.40
1:D:216:PRO:CG	1:D:295:GLY:HA2	2.51	0.40
1:A:337:GLU:HG3	1:A:339:VAL:CG2	2.51	0.40
1:E:46:ALA:O	1:E:47:SER:HB2	2.22	0.40
1:K:96:LEU:HD12	1:K:498:ALA:HB1	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:339:VAL:CG1	1:I:340:MET:N	2.83	0.40
1:H:146:LEU:HD13	1:H:168:LYS:HA	2.02	0.40
1:G:154:LEU:CD2	1:G:163:LYS:HG3	2.49	0.40
1:E:154:LEU:HD22	1:E:167:THR:HB	2.02	0.40
1:C:50:VAL:HG13	1:C:375:ARG:HH21	1.87	0.40
1:L:222:ALA:HA	1:L:275:ASN:CG	2.42	0.40
1:K:433:LEU:H	1:K:433:LEU:HD12	1.86	0.40
1:G:133:VAL:CG2	1:G:134:ASP:H	2.26	0.40
1:O:452:LEU:HD11	1:O:456:HIS:CE1	2.56	0.40
1:N:325:PRO:O	1:N:326:GLU:CG	2.65	0.40
1:D:233:THR:HG21	1:D:261:LYS:CE	2.51	0.40
1:O:317:GLU:OE2	1:O:329:LYS:HE3	2.22	0.40
1:I:106:LYS:CE	1:I:418:LYS:HD3	2.52	0.40
1:G:214:ASN:O	1:G:215:GLN:CB	2.66	0.40
1:P:222:ALA:HB1	1:P:336:ILE:HD12	2.04	0.40
1:L:206:LEU:H	1:L:359:THR:HG21	1.86	0.40
1:O:280:ARG:O	1:O:281:GLN:HB3	2.22	0.40
1:E:244:ARG:CG	1:E:245:VAL:H	2.35	0.40
1:J:12:ARG:CA	1:J:501:ILE:HD12	2.52	0.40
1:G:280:ARG:O	1:G:281:GLN:HB3	2.22	0.40
1:K:107:LYS:HE3	1:K:107:LYS:HB3	1.90	0.40
1:N:341:ILE:HG23	1:N:363:ARG:NH2	2.36	0.40
1:D:193:GLY:HA2	1:D:343:GLU:OE2	2.22	0.40
1:D:19:ALA:HB1	1:D:94:ALA:HA	2.03	0.40
1:M:75:SER:O	1:M:78:GLN:HB3	2.21	0.40
1:A:125:ARG:HG3	1:A:125:ARG:H	1.70	0.40
1:C:96:LEU:HD22	1:C:96:LEU:O	2.22	0.40
1:D:59:LYS:HZ1	1:D:76:ARG:N	2.20	0.40
1:D:59:LYS:HE2	1:D:76:ARG:HB2	2.02	0.40
1:O:88:SER:O	1:O:92:LEU:HD13	2.22	0.40
1:N:85:GLY:O	1:N:153:THR:HG23	2.22	0.40
1:I:321:THR:O	1:I:323:ASP:N	2.55	0.40
1:G:146:LEU:HD13	1:G:167:THR:O	2.19	0.40
1:C:146:LEU:HB2	1:C:171:VAL:HG21	2.03	0.40
1:B:291:PHE:HD1	1:B:296:VAL:CG1	2.35	0.40
1:E:39:LEU:HD21	1:G:508:ILE:O	2.21	0.40
1:F:178:LYS:CE	1:F:388:VAL:HG21	2.48	0.40
1:J:250:LYS:HG3	1:J:253:GLU:OE1	2.22	0.40
1:H:166:PHE:HZ	1:H:363:ARG:O	2.05	0.40
1:N:322:PHE:HA	1:N:324:HIS:CD2	2.56	0.40
1:P:372:GLU:HA	1:P:375:ARG:CZ	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:237:LYS:HG3	1:E:237:LYS:O	2.21	0.40
1:H:69:LYS:O	1:H:72:VAL:HB	2.22	0.40
1:H:449:VAL:HG12	1:H:453:ARG:NH1	2.36	0.40
1:L:176:ARG:HH22	1:L:360:ILE:HG12	1.84	0.40
1:A:163:LYS:O	1:A:166:PHE:HB2	2.21	0.40
1:K:222:ALA:HA	1:K:275:ASN:CB	2.52	0.40
1:M:433:LEU:CA	1:M:436:ILE:HG22	2.52	0.40
1:M:452:LEU:HD11	1:M:456:HIS:CE1	2.57	0.40
1:J:63:VAL:HG21	1:K:1:ALA:CA	2.47	0.40
1:M:500:VAL:O	1:M:504:VAL:HB	2.22	0.40
1:F:82:VAL:HA	1:F:386:GLN:CG	2.52	0.40
1:P:59:LYS:HE2	1:P:76:ARG:CB	2.51	0.40
1:A:57:ILE:C	1:A:57:ILE:HD13	2.41	0.40
1:L:186:ILE:HD12	1:L:381:LEU:HD21	2.02	0.40
1:F:284:TYR:CE2	1:F:286:TYR:CD1	3.09	0.40
1:G:173:ALA:O	1:G:176:ARG:HG2	2.21	0.40
1:A:32:PRO:HD2	1:A:467:MET:HE3	2.04	0.40
1:J:185:ALA:HB1	1:J:357:ALA:HB1	2.03	0.40
1:B:510:ALA:HB3	1:G:25:LEU:CD1	2.51	0.40
1:F:22:ILE:HG13	1:F:23:GLY:N	2.37	0.40
1:N:64:ASP:C	1:N:66:PRO:HD2	2.41	0.40
1:B:204:GLY:HA3	1:B:349:PHE:O	2.21	0.40
1:H:321:THR:O	1:H:323:ASP:N	2.54	0.40
1:E:418:LYS:HD2	1:J:450:ALA:CB	2.52	0.40
1:P:416:PRO:HB2	1:P:419:GLU:OE1	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	511/513 (100%)	459 (90%)	30 (6%)	22 (4%)	3	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	511/513 (100%)	455 (89%)	27 (5%)	29 (6%)	2	28
1	C	486/513 (95%)	442 (91%)	22 (4%)	22 (4%)	3	33
1	D	511/513 (100%)	456 (89%)	22 (4%)	33 (6%)	1	25
1	E	511/513 (100%)	445 (87%)	26 (5%)	40 (8%)	1	20
1	F	511/513 (100%)	461 (90%)	19 (4%)	31 (6%)	2	26
1	G	511/513 (100%)	462 (90%)	25 (5%)	24 (5%)	3	32
1	H	488/513 (95%)	437 (90%)	24 (5%)	27 (6%)	2	29
1	I	511/513 (100%)	453 (89%)	27 (5%)	31 (6%)	2	26
1	J	511/513 (100%)	462 (90%)	27 (5%)	22 (4%)	3	34
1	K	487/513 (95%)	444 (91%)	20 (4%)	23 (5%)	3	32
1	L	486/513 (95%)	435 (90%)	28 (6%)	23 (5%)	3	32
1	M	511/513 (100%)	455 (89%)	33 (6%)	23 (4%)	3	33
1	N	489/513 (95%)	435 (89%)	30 (6%)	24 (5%)	3	31
1	O	486/513 (95%)	445 (92%)	18 (4%)	23 (5%)	3	32
1	P	511/513 (100%)	465 (91%)	21 (4%)	25 (5%)	3	31
All	All	8032/8208 (98%)	7211 (90%)	399 (5%)	422 (5%)	4	29

All (422) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	3	ALA
1	A	82	VAL
1	A	84	ASP
1	A	141	LYS
1	A	234	ASP
1	A	236	ILE
1	A	247	SER
1	A	281	GLN
1	A	325	PRO
1	A	366	THR
1	A	506	ASN
1	A	509	LYS
1	A	511	ALA
1	B	84	ASP
1	B	131	SER
1	B	141	LYS
1	B	215	GLN

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Mol	Chain	Res	Type
1	B	234	ASP
1	B	236	ILE
1	B	241	SER
1	B	246	ASP
1	B	247	SER
1	B	281	GLN
1	B	326	GLU
1	B	357	ALA
1	B	366	THR
1	B	369	ILE
1	C	3	ALA
1	C	31	GLY
1	C	215	GLN
1	C	274	ILE
1	C	281	GLN
1	C	509	LYS
1	C	511	ALA
1	D	8	ALA
1	D	68	ALA
1	D	131	SER
1	D	139	GLU
1	D	182	ASN
1	D	215	GLN
1	D	234	ASP
1	D	236	ILE
1	D	239	PHE
1	D	241	SER
1	D	242	ARG
1	D	244	ARG
1	D	246	ASP
1	D	247	SER
1	D	281	GLN
1	D	325	PRO
1	D	509	LYS
1	D	511	ALA
1	D	512	PRO
1	E	6	GLU
1	E	36	ASP
1	E	82	VAL
1	E	139	GLU
1	E	161	HIS
1	E	199	SER

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Mol	Chain	Res	Type
1	E	220	GLU
1	E	234	ASP
1	E	237	LYS
1	E	244	ARG
1	E	245	VAL
1	E	325	PRO
1	E	366	THR
1	E	504	VAL
1	E	509	LYS
1	F	3	ALA
1	F	46	ALA
1	F	139	GLU
1	F	208	ASP
1	F	215	GLN
1	F	234	ASP
1	F	236	ILE
1	F	325	PRO
1	F	366	THR
1	F	510	ALA
1	F	511	ALA
1	F	512	PRO
1	G	5	GLU
1	G	34	GLY
1	G	82	VAL
1	G	141	LYS
1	G	182	ASN
1	G	215	GLN
1	G	234	ASP
1	G	326	GLU
1	G	342	GLY
1	G	366	THR
1	G	508	ILE
1	H	11	ALA
1	H	108	ILE
1	H	131	SER
1	H	139	GLU
1	H	190	LYS
1	H	215	GLN
1	H	366	THR
1	H	511	ALA
1	H	512	PRO
1	I	41	SER

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Mol	Chain	Res	Type
1	I	46	ALA
1	I	82	VAL
1	I	84	ASP
1	I	137	SER
1	I	139	GLU
1	I	182	ASN
1	I	215	GLN
1	I	236	ILE
1	I	240	GLY
1	I	281	GLN
1	I	325	PRO
1	I	366	THR
1	I	508	ILE
1	I	509	LYS
1	I	511	ALA
1	I	512	PRO
1	J	6	GLU
1	J	8	ALA
1	J	139	GLU
1	J	215	GLN
1	J	234	ASP
1	J	236	ILE
1	J	241	SER
1	J	281	GLN
1	J	325	PRO
1	J	509	LYS
1	K	46	ALA
1	K	68	ALA
1	K	133	VAL
1	K	137	SER
1	K	139	GLU
1	K	141	LYS
1	K	215	GLN
1	K	281	GLN
1	K	322	PHE
1	K	325	PRO
1	K	366	THR
1	K	506	ASN
1	K	510	ALA
1	K	512	PRO
1	L	68	ALA
1	L	82	VAL

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Mol	Chain	Res	Type
1	L	127	ALA
1	L	139	GLU
1	L	142	PHE
1	L	160	THR
1	L	215	GLN
1	L	281	GLN
1	L	325	PRO
1	L	368	GLN
1	L	508	ILE
1	L	509	LYS
1	M	30	LEU
1	M	131	SER
1	M	139	GLU
1	M	141	LYS
1	M	159	LEU
1	M	215	GLN
1	M	246	ASP
1	M	416	PRO
1	N	4	ASP
1	N	8	ALA
1	N	131	SER
1	N	139	GLU
1	N	326	GLU
1	N	508	ILE
1	N	509	LYS
1	N	511	ALA
1	N	512	PRO
1	O	3	ALA
1	O	68	ALA
1	O	82	VAL
1	O	131	SER
1	O	215	GLN
1	O	340	MET
1	O	366	THR
1	O	507	ILE
1	P	48	LEU
1	P	82	VAL
1	P	135	HIS
1	P	136	GLY
1	P	138	ASP
1	P	140	VAL
1	P	215	GLN

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Mol	Chain	Res	Type
1	P	234	ASP
1	P	239	PHE
1	P	243	VAL
1	P	366	THR
1	P	506	ASN
1	P	508	ILE
1	P	512	PRO
1	A	68	ALA
1	A	215	GLN
1	A	274	ILE
1	A	322	PHE
1	B	8	ALA
1	B	68	ALA
1	B	82	VAL
1	B	107	LYS
1	B	129	LEU
1	B	132	ALA
1	B	133	VAL
1	B	136	GLY
1	B	274	ILE
1	B	319	ALA
1	B	322	PHE
1	C	8	ALA
1	C	68	ALA
1	C	82	VAL
1	C	140	VAL
1	C	160	THR
1	C	322	PHE
1	C	342	GLY
1	C	343	GLU
1	C	417	GLY
1	C	507	ILE
1	D	82	VAL
1	D	108	ILE
1	D	141	LYS
1	D	160	THR
1	D	181	GLY
1	D	274	ILE
1	D	322	PHE
1	D	508	ILE
1	E	68	ALA
1	E	123	ALA

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Mol	Chain	Res	Type
1	E	129	LEU
1	E	135	HIS
1	E	140	VAL
1	E	274	ILE
1	E	322	PHE
1	E	331	GLY
1	E	342	GLY
1	F	8	ALA
1	F	68	ALA
1	F	141	LYS
1	F	274	ILE
1	F	322	PHE
1	F	342	GLY
1	F	417	GLY
1	F	508	ILE
1	G	3	ALA
1	G	68	ALA
1	G	131	SER
1	G	134	ASP
1	G	139	GLU
1	G	236	ILE
1	G	274	ILE
1	G	322	PHE
1	H	161	HIS
1	H	274	ILE
1	H	322	PHE
1	H	417	GLY
1	H	506	ASN
1	I	8	ALA
1	I	141	LYS
1	I	234	ASP
1	I	246	ASP
1	I	247	SER
1	I	274	ILE
1	I	322	PHE
1	J	68	ALA
1	J	141	LYS
1	J	246	ASP
1	J	274	ILE
1	J	322	PHE
1	J	366	THR
1	K	8	ALA

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Mol	Chain	Res	Type
1	K	274	ILE
1	K	504	VAL
1	K	507	ILE
1	L	8	ALA
1	L	114	ILE
1	L	141	LYS
1	L	274	ILE
1	L	322	PHE
1	L	502	LEU
1	M	4	ASP
1	M	8	ALA
1	M	47	SER
1	M	68	ALA
1	M	234	ASP
1	M	236	ILE
1	M	249	ALA
1	M	274	ILE
1	M	322	PHE
1	M	511	ALA
1	N	68	ALA
1	N	81	GLU
1	N	82	VAL
1	N	141	LYS
1	N	146	LEU
1	N	183	LEU
1	N	196	LEU
1	N	274	ILE
1	N	322	PHE
1	O	8	ALA
1	O	141	LYS
1	O	159	LEU
1	O	181	GLY
1	O	274	ILE
1	P	68	ALA
1	P	114	ILE
1	P	141	LYS
1	P	274	ILE
1	P	322	PHE
1	P	325	PRO
1	A	88	SER
1	A	139	GLU
1	A	416	PRO

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Mol	Chain	Res	Type
1	B	32	PRO
1	B	139	GLU
1	B	417	GLY
1	B	512	PRO
1	C	141	LYS
1	C	159	LEU
1	C	325	PRO
1	D	183	LEU
1	D	335	LEU
1	E	159	LEU
1	E	236	ILE
1	E	281	GLN
1	F	197	ALA
1	F	281	GLN
1	F	343	GLU
1	G	281	GLN
1	H	3	ALA
1	H	88	SER
1	H	130	ASN
1	H	141	LYS
1	H	182	ASN
1	H	281	GLN
1	H	340	MET
1	H	510	ALA
1	I	107	LYS
1	J	88	SER
1	J	129	LEU
1	K	132	ALA
1	K	184	GLU
1	L	47	SER
1	L	181	GLY
1	L	182	ASN
1	M	140	VAL
1	M	325	PRO
1	N	133	VAL
1	N	180	SER
1	N	281	GLN
1	O	84	ASP
1	O	139	GLU
1	O	281	GLN
1	O	322	PHE
1	O	335	LEU

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Mol	Chain	Res	Type
1	P	84	ASP
1	P	281	GLN
1	P	509	LYS
1	A	114	ILE
1	C	46	ALA
1	D	84	ASP
1	D	199	SER
1	D	367	GLN
1	E	134	ASP
1	E	141	LYS
1	E	412	ALA
1	E	506	ASN
1	H	140	VAL
1	I	123	ALA
1	J	510	ALA
1	J	512	PRO
1	K	140	VAL
1	E	8	ALA
1	E	47	SER
1	E	192	LEU
1	F	114	ILE
1	F	241	SER
1	F	326	GLU
1	G	320	SER
1	I	68	ALA
1	I	133	VAL
1	J	140	VAL
1	K	159	LEU
1	O	160	THR
1	C	320	SER
1	E	41	SER
1	G	238	ILE
1	K	182	ASN
1	L	108	ILE
1	L	417	GLY
1	M	108	ILE
1	M	241	SER
1	M	508	ILE
1	N	140	VAL
1	O	140	VAL
1	O	326	GLU
1	E	43	GLY

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Mol	Chain	Res	Type
1	E	114	ILE
1	E	512	PRO
1	F	108	ILE
1	I	140	VAL
1	A	507	ILE
1	F	181	GLY
1	F	238	ILE
1	G	140	VAL
1	G	507	ILE
1	H	508	ILE
1	N	342	GLY
1	N	416	PRO
1	O	133	VAL
1	E	108	ILE
1	H	189	ILE
1	H	342	GLY
1	I	507	ILE
1	J	82	VAL
1	O	108	ILE
1	P	108	ILE
1	D	140	VAL
1	E	215	GLN
1	F	82	VAL
1	F	140	VAL
1	H	364	GLY
1	I	181	GLY
1	P	342	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 PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	409/409 (100%)	362 (88%)	47 (12%)	7	32
1	B	409/409 (100%)	367 (90%)	42 (10%)	9	37
1	C	389/409 (95%)	350 (90%)	39 (10%)	9	38

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	409/409 (100%)	362 (88%)	47 (12%)	7	32
1	E	409/409 (100%)	370 (90%)	39 (10%)	11	41
1	F	409/409 (100%)	364 (89%)	45 (11%)	8	34
1	G	409/409 (100%)	369 (90%)	40 (10%)	10	39
1	H	391/409 (96%)	349 (89%)	42 (11%)	8	36
1	I	409/409 (100%)	364 (89%)	45 (11%)	8	34
1	J	409/409 (100%)	372 (91%)	37 (9%)	12	44
1	K	390/409 (95%)	349 (90%)	41 (10%)	8	36
1	L	390/409 (95%)	354 (91%)	36 (9%)	11	43
1	M	409/409 (100%)	373 (91%)	36 (9%)	12	45
1	N	392/409 (96%)	344 (88%)	48 (12%)	6	31
1	O	390/409 (95%)	347 (89%)	43 (11%)	8	34
1	P	409/409 (100%)	360 (88%)	49 (12%)	6	31
All	All	6432/6544 (98%)	5756 (90%)	676 (10%)	13	36

All (676) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	7	ARG
1	A	9	GLU
1	A	41	SER
1	A	57	ILE
1	A	58	LEU
1	A	61	ILE
1	A	65	ASN
1	A	89	VAL
1	A	96	LEU
1	A	98	ARG
1	A	118	ARG
1	A	121	THR
1	A	125	ARG
1	A	130	ASN
1	A	139	GLU
1	A	143	ARG
1	A	146	LEU
1	A	152	THR
1	A	159	LEU

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Mol	Chain	Res	Type
1	A	160	THR
1	A	177	LEU
1	A	190	LYS
1	A	203	GLU
1	A	207	LEU
1	A	211	ILE
1	A	225	LEU
1	A	236	ILE
1	A	247	SER
1	A	248	THR
1	A	269	ILE
1	A	280	ARG
1	A	288	GLU
1	A	312	LEU
1	A	317	GLU
1	A	320	SER
1	A	326	GLU
1	A	328	VAL
1	A	330	LEU
1	A	343	GLU
1	A	352	VAL
1	A	401	GLU
1	A	402	MET
1	A	409	THR
1	A	431	ARG
1	A	444	ASP
1	A	489	GLN
1	A	503	ARG
1	B	9	GLU
1	B	33	LYS
1	B	38	ILE
1	B	50	VAL
1	B	57	ILE
1	B	58	LEU
1	B	92	LEU
1	B	96	LEU
1	B	98	ARG
1	B	108	ILE
1	B	111	GLN
1	B	129	LEU
1	B	139	GLU
1	B	146	LEU

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Mol	Chain	Res	Type
1	B	152	THR
1	B	159	LEU
1	B	167	THR
1	B	183	LEU
1	B	190	LYS
1	B	192	LEU
1	B	207	LEU
1	B	211	ILE
1	B	225	LEU
1	B	236	ILE
1	B	237	LYS
1	B	241	SER
1	B	243	VAL
1	B	244	ARG
1	B	261	LYS
1	B	280	ARG
1	B	333	CYS
1	B	341	ILE
1	B	352	VAL
1	B	367	GLN
1	B	369	ILE
1	B	401	GLU
1	B	402	MET
1	B	431	ARG
1	B	469	GLU
1	B	485	GLN
1	B	489	GLN
1	B	492	LEU
1	C	25	LEU
1	C	29	THR
1	C	40	LEU
1	C	48	LEU
1	C	52	ASN
1	C	57	ILE
1	C	74	MET
1	C	81	GLU
1	C	96	LEU
1	C	98	ARG
1	C	135	HIS
1	C	138	ASP
1	C	139	GLU
1	C	146	LEU

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Mol	Chain	Res	Type
1	C	152	THR
1	C	159	LEU
1	C	190	LYS
1	C	192	LEU
1	C	201	LEU
1	C	211	ILE
1	C	225	LEU
1	C	263	LYS
1	C	269	ILE
1	C	280	ARG
1	C	308	GLU
1	C	312	LEU
1	C	314	THR
1	C	320	SER
1	C	326	GLU
1	C	352	VAL
1	C	383	VAL
1	C	391	SER
1	C	401	GLU
1	C	402	MET
1	C	423	MET
1	C	431	ARG
1	C	493	SER
1	C	502	LEU
1	C	509	LYS
1	D	17	ILE
1	D	35	MET
1	D	48	LEU
1	D	50	VAL
1	D	57	ILE
1	D	74	MET
1	D	96	LEU
1	D	98	ARG
1	D	126	GLN
1	D	143	ARG
1	D	146	LEU
1	D	159	LEU
1	D	167	THR
1	D	180	SER
1	D	182	ASN
1	D	189	ILE
1	D	190	LYS

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Mol	Chain	Res	Type
1	D	203	GLU
1	D	211	ILE
1	D	215	GLN
1	D	219	ILE
1	D	225	LEU
1	D	231	MET
1	D	236	ILE
1	D	238	ILE
1	D	269	ILE
1	D	280	ARG
1	D	284	TYR
1	D	288	GLU
1	D	317	GLU
1	D	326	GLU
1	D	330	LEU
1	D	341	ILE
1	D	343	GLU
1	D	346	LEU
1	D	352	VAL
1	D	367	GLN
1	D	381	LEU
1	D	401	GLU
1	D	402	MET
1	D	409	THR
1	D	415	THR
1	D	431	ARG
1	D	489	GLN
1	D	508	ILE
1	D	509	LYS
1	D	512	PRO
1	E	30	LEU
1	E	33	LYS
1	E	40	LEU
1	E	42	SER
1	E	48	LEU
1	E	57	ILE
1	E	58	LEU
1	E	74	MET
1	E	96	LEU
1	E	98	ARG
1	E	129	LEU
1	E	134	ASP

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Mol	Chain	Res	Type
1	E	146	LEU
1	E	159	LEU
1	E	167	THR
1	E	178	LYS
1	E	190	LYS
1	E	203	GLU
1	E	211	ILE
1	E	215	GLN
1	E	219	ILE
1	E	225	LEU
1	E	242	ARG
1	E	244	ARG
1	E	258	GLU
1	E	269	ILE
1	E	280	ARG
1	E	346	LEU
1	E	352	VAL
1	E	391	SER
1	E	402	MET
1	E	409	THR
1	E	428	LYS
1	E	431	ARG
1	E	469	GLU
1	E	476	SER
1	E	485	GLN
1	E	489	GLN
1	E	513	ARG
1	F	10	THR
1	F	27	LYS
1	F	35	MET
1	F	40	LEU
1	F	48	LEU
1	F	57	ILE
1	F	58	LEU
1	F	74	MET
1	F	96	LEU
1	F	128	LEU
1	F	129	LEU
1	F	139	GLU
1	F	146	LEU
1	F	159	LEU
1	F	167	THR

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Mol	Chain	Res	Type
1	F	182	ASN
1	F	201	LEU
1	F	211	ILE
1	F	217	LYS
1	F	225	LEU
1	F	235	LYS
1	F	238	ILE
1	F	244	ARG
1	F	247	SER
1	F	261	LYS
1	F	269	ILE
1	F	280	ARG
1	F	312	LEU
1	F	317	GLU
1	F	320	SER
1	F	326	GLU
1	F	346	LEU
1	F	352	VAL
1	F	367	GLN
1	F	370	LEU
1	F	381	LEU
1	F	391	SER
1	F	401	GLU
1	F	402	MET
1	F	409	THR
1	F	428	LYS
1	F	431	ARG
1	F	469	GLU
1	F	485	GLN
1	F	489	GLN
1	G	33	LYS
1	G	35	MET
1	G	48	LEU
1	G	49	MET
1	G	65	ASN
1	G	74	MET
1	G	98	ARG
1	G	108	ILE
1	G	111	GLN
1	G	128	LEU
1	G	129	LEU
1	G	142	PHE

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Mol	Chain	Res	Type
1	G	146	LEU
1	G	159	LEU
1	G	161	HIS
1	G	167	THR
1	G	177	LEU
1	G	178	LYS
1	G	190	LYS
1	G	211	ILE
1	G	225	LEU
1	G	231	MET
1	G	235	LYS
1	G	239	PHE
1	G	241	SER
1	G	242	ARG
1	G	244	ARG
1	G	246	ASP
1	G	269	ILE
1	G	280	ARG
1	G	310	LEU
1	G	320	SER
1	G	340	MET
1	G	344	ASP
1	G	381	LEU
1	G	402	MET
1	G	409	THR
1	G	431	ARG
1	G	501	ILE
1	G	508	ILE
1	H	4	ASP
1	H	57	ILE
1	H	58	LEU
1	H	96	LEU
1	H	98	ARG
1	H	106	LYS
1	H	108	ILE
1	H	109	HIS
1	H	126	GLN
1	H	139	GLU
1	H	141	LYS
1	H	143	ARG
1	H	146	LEU
1	H	147	MET

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Mol	Chain	Res	Type
1	H	159	LEU
1	H	160	THR
1	H	167	THR
1	H	176	ARG
1	H	182	ASN
1	H	190	LYS
1	H	191	LYS
1	H	203	GLU
1	H	211	ILE
1	H	223	LYS
1	H	225	LEU
1	H	261	LYS
1	H	280	ARG
1	H	310	LEU
1	H	312	LEU
1	H	320	SER
1	H	326	GLU
1	H	335	LEU
1	H	340	MET
1	H	344	ASP
1	H	362	LEU
1	H	402	MET
1	H	431	ARG
1	H	432	MET
1	H	492	LEU
1	H	493	SER
1	H	509	LYS
1	H	513	ARG
1	I	7	ARG
1	I	27	LYS
1	I	40	LEU
1	I	48	LEU
1	I	57	ILE
1	I	58	LEU
1	I	74	MET
1	I	96	LEU
1	I	98	ARG
1	I	141	LYS
1	I	143	ARG
1	I	146	LEU
1	I	152	THR
1	I	159	LEU

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Mol	Chain	Res	Type
1	I	167	THR
1	I	177	LEU
1	I	190	LYS
1	I	207	LEU
1	I	211	ILE
1	I	215	GLN
1	I	225	LEU
1	I	247	SER
1	I	261	LYS
1	I	280	ARG
1	I	312	LEU
1	I	317	GLU
1	I	320	SER
1	I	326	GLU
1	I	328	VAL
1	I	330	LEU
1	I	335	LEU
1	I	346	LEU
1	I	352	VAL
1	I	367	GLN
1	I	368	GLN
1	I	401	GLU
1	I	402	MET
1	I	409	THR
1	I	414	ARG
1	I	418	LYS
1	I	431	ARG
1	I	445	SER
1	I	489	GLN
1	I	502	LEU
1	I	512	PRO
1	J	33	LYS
1	J	38	ILE
1	J	40	LEU
1	J	57	ILE
1	J	58	LEU
1	J	82	VAL
1	J	92	LEU
1	J	98	ARG
1	J	107	LYS
1	J	129	LEU
1	J	143	ARG

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Mol	Chain	Res	Type
1	J	146	LEU
1	J	159	LEU
1	J	167	THR
1	J	183	LEU
1	J	192	LEU
1	J	203	GLU
1	J	211	ILE
1	J	225	LEU
1	J	236	ILE
1	J	244	ARG
1	J	262	MET
1	J	269	ILE
1	J	280	ARG
1	J	312	LEU
1	J	326	GLU
1	J	328	VAL
1	J	333	CYS
1	J	335	LEU
1	J	352	VAL
1	J	366	THR
1	J	384	LEU
1	J	388	VAL
1	J	402	MET
1	J	409	THR
1	J	431	ARG
1	J	502	LEU
1	K	9	GLU
1	K	35	MET
1	K	38	ILE
1	K	44	ARG
1	K	57	ILE
1	K	58	LEU
1	K	65	ASN
1	K	74	MET
1	K	98	ARG
1	K	103	LEU
1	K	107	LYS
1	K	139	GLU
1	K	143	ARG
1	K	146	LEU
1	K	147	MET
1	K	152	THR

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Mol	Chain	Res	Type
1	K	159	LEU
1	K	167	THR
1	K	177	LEU
1	K	184	GLU
1	K	190	LYS
1	K	203	GLU
1	K	211	ILE
1	K	223	LYS
1	K	225	LEU
1	K	262	MET
1	K	280	ARG
1	K	320	SER
1	K	326	GLU
1	K	352	VAL
1	K	391	SER
1	K	402	MET
1	K	414	ARG
1	K	415	THR
1	K	428	LYS
1	K	431	ARG
1	K	478	LEU
1	K	504	VAL
1	K	507	ILE
1	K	509	LYS
1	K	513	ARG
1	L	40	LEU
1	L	44	ARG
1	L	57	ILE
1	L	65	ASN
1	L	74	MET
1	L	96	LEU
1	L	98	ARG
1	L	109	HIS
1	L	125	ARG
1	L	126	GLN
1	L	133	VAL
1	L	142	PHE
1	L	146	LEU
1	L	152	THR
1	L	167	THR
1	L	192	LEU
1	L	203	GLU

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Mol	Chain	Res	Type
1	L	207	LEU
1	L	211	ILE
1	L	223	LYS
1	L	225	LEU
1	L	269	ILE
1	L	280	ARG
1	L	320	SER
1	L	330	LEU
1	L	352	VAL
1	L	367	GLN
1	L	401	GLU
1	L	402	MET
1	L	415	THR
1	L	431	ARG
1	L	489	GLN
1	L	502	LEU
1	L	505	ASP
1	L	507	ILE
1	L	509	LYS
1	M	4	ASP
1	M	9	GLU
1	M	33	LYS
1	M	35	MET
1	M	40	LEU
1	M	48	LEU
1	M	57	ILE
1	M	58	LEU
1	M	65	ASN
1	M	74	MET
1	M	96	LEU
1	M	98	ARG
1	M	108	ILE
1	M	130	ASN
1	M	131	SER
1	M	139	GLU
1	M	143	ARG
1	M	146	LEU
1	M	159	LEU
1	M	167	THR
1	M	183	LEU
1	M	190	LYS
1	M	196	LEU

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Mol	Chain	Res	Type
1	M	203	GLU
1	M	207	LEU
1	M	211	ILE
1	M	225	LEU
1	M	326	GLU
1	M	343	GLU
1	M	368	GLN
1	M	401	GLU
1	M	402	MET
1	M	431	ARG
1	M	489	GLN
1	M	503	ARG
1	M	507	ILE
1	N	9	GLU
1	N	10	THR
1	N	27	LYS
1	N	33	LYS
1	N	41	SER
1	N	42	SER
1	N	48	LEU
1	N	57	ILE
1	N	58	LEU
1	N	74	MET
1	N	82	VAL
1	N	96	LEU
1	N	98	ARG
1	N	122	LYS
1	N	126	GLN
1	N	129	LEU
1	N	130	ASN
1	N	139	GLU
1	N	143	ARG
1	N	145	ASP
1	N	146	LEU
1	N	159	LEU
1	N	167	THR
1	N	180	SER
1	N	190	LYS
1	N	196	LEU
1	N	202	ASP
1	N	211	ILE
1	N	215	GLN

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Mol	Chain	Res	Type
1	N	225	LEU
1	N	269	ILE
1	N	280	ARG
1	N	320	SER
1	N	328	VAL
1	N	330	LEU
1	N	352	VAL
1	N	356	GLU
1	N	366	THR
1	N	381	LEU
1	N	389	LYS
1	N	391	SER
1	N	401	GLU
1	N	402	MET
1	N	428	LYS
1	N	431	ARG
1	N	487	LYS
1	N	492	LEU
1	N	505	ASP
1	O	25	LEU
1	O	35	MET
1	O	57	ILE
1	O	58	LEU
1	O	65	ASN
1	O	74	MET
1	O	88	SER
1	O	96	LEU
1	O	98	ARG
1	O	104	ILE
1	O	109	HIS
1	O	111	GLN
1	O	112	THR
1	O	129	LEU
1	O	131	SER
1	O	138	ASP
1	O	139	GLU
1	O	146	LEU
1	O	147	MET
1	O	152	THR
1	O	159	LEU
1	O	167	THR
1	O	182	ASN

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Mol	Chain	Res	Type
1	O	190	LYS
1	O	201	LEU
1	O	211	ILE
1	O	215	GLN
1	O	225	LEU
1	O	234	ASP
1	O	280	ARG
1	O	326	GLU
1	O	343	GLU
1	O	352	VAL
1	O	354	LEU
1	O	359	THR
1	O	367	GLN
1	O	369	ILE
1	O	381	LEU
1	O	402	MET
1	O	409	THR
1	O	431	ARG
1	O	501	ILE
1	O	508	ILE
1	P	48	LEU
1	P	57	ILE
1	P	58	LEU
1	P	81	GLU
1	P	96	LEU
1	P	98	ARG
1	P	104	ILE
1	P	106	LYS
1	P	125	ARG
1	P	126	GLN
1	P	129	LEU
1	P	139	GLU
1	P	140	VAL
1	P	144	GLN
1	P	146	LEU
1	P	152	THR
1	P	159	LEU
1	P	178	LYS
1	P	180	SER
1	P	184	GLU
1	P	190	LYS
1	P	191	LYS

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Mol	Chain	Res	Type
1	P	192	LEU
1	P	203	GLU
1	P	207	LEU
1	P	211	ILE
1	P	223	LYS
1	P	225	LEU
1	P	238	ILE
1	P	243	VAL
1	P	244	ARG
1	P	255	GLU
1	P	262	MET
1	P	269	ILE
1	P	280	ARG
1	P	326	GLU
1	P	352	VAL
1	P	367	GLN
1	P	370	LEU
1	P	388	VAL
1	P	389	LYS
1	P	401	GLU
1	P	402	MET
1	P	418	LYS
1	P	431	ARG
1	P	436	ILE
1	P	500	VAL
1	P	507	ILE
1	P	509	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (100) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	130	ASN
1	A	148	ASN
1	A	348	HIS
1	A	386	GLN
1	A	410	GLN
1	A	451	GLN
1	A	506	ASN
1	B	126	GLN
1	B	161	HIS
1	B	386	GLN
1	B	451	GLN

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Mol	Chain	Res	Type
1	C	348	HIS
1	C	367	GLN
1	C	368	GLN
1	C	386	GLN
1	C	410	GLN
1	C	451	GLN
1	D	126	GLN
1	D	182	ASN
1	D	281	GLN
1	D	348	HIS
1	D	386	GLN
1	D	410	GLN
1	D	451	GLN
1	D	489	GLN
1	E	109	HIS
1	E	161	HIS
1	E	182	ASN
1	E	215	GLN
1	F	182	ASN
1	F	386	GLN
1	F	410	GLN
1	F	451	GLN
1	G	65	ASN
1	G	111	GLN
1	G	130	ASN
1	G	348	HIS
1	G	410	GLN
1	G	451	GLN
1	H	60	ASN
1	H	78	GLN
1	H	126	GLN
1	H	348	HIS
1	H	410	GLN
1	H	451	GLN
1	H	489	GLN
1	I	126	GLN
1	I	161	HIS
1	I	182	ASN
1	I	368	GLN
1	I	410	GLN
1	I	451	GLN
1	I	485	GLN

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Mol	Chain	Res	Type
1	I	489	GLN
1	J	78	GLN
1	J	130	ASN
1	J	161	HIS
1	J	410	GLN
1	J	451	GLN
1	K	65	ASN
1	K	78	GLN
1	K	126	GLN
1	K	182	ASN
1	K	272	HIS
1	K	410	GLN
1	K	451	GLN
1	L	161	HIS
1	L	165	HIS
1	L	182	ASN
1	L	348	HIS
1	L	368	GLN
1	L	386	GLN
1	L	410	GLN
1	L	451	GLN
1	M	130	ASN
1	M	161	HIS
1	M	386	GLN
1	M	410	GLN
1	M	451	GLN
1	M	485	GLN
1	M	489	GLN
1	N	78	GLN
1	N	368	GLN
1	N	386	GLN
1	N	451	GLN
1	N	489	GLN
1	O	65	ASN
1	O	109	HIS
1	O	182	ASN
1	O	348	HIS
1	O	386	GLN
1	O	410	GLN
1	O	451	GLN
1	O	485	GLN
1	O	506	ASN

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Mol	Chain	Res	Type
1	P	52	ASN
1	P	144	GLN
1	P	161	HIS
1	P	386	GLN
1	P	451	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.