



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 01:55 PM BST

PDB ID : 3J99
EMDB ID: : EMD-6209
Title : Structure of 20S supercomplex determined by single particle cryoelectron microscopy (State IIIb)
Authors : Zhao, M.; Wu, S.; Cheng, Y.; Brunger, A.T.
Deposited on : 2014-12-05
Resolution : 8.20 Å(reported)
Based on PDB ID : 1QCS, 1NSF, 1N7S

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>

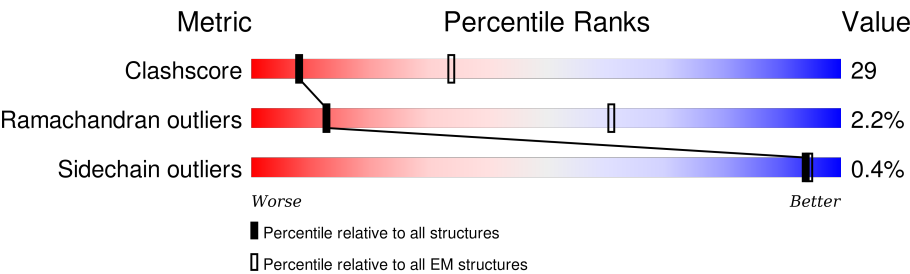
MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : trunk27241

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 8.20 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	747	
1	B	747	
1	C	747	
1	D	747	
1	E	747	
1	F	747	
2	G	297	
2	H	297	
2	I	297	

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Mol	Chain	Length	Quality of chain
2	J	297	
3	K	63	
4	L	67	
5	M	188	

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 40976 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 Vesicle-fusing ATPase.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	678	Total	C	N	O	S	0	0
			5039	3197	876	943	23		
1	B	672	Total	C	N	O	S	0	0
			4995	3168	863	940	24		
1	C	676	Total	C	N	O	S	0	0
			5027	3186	871	947	23		
1	D	673	Total	C	N	O	S	0	0
			4976	3157	856	939	24		
1	E	670	Total	C	N	O	S	0	0
			4992	3171	860	938	23		
1	F	654	Total	C	N	O	S	0	0
			4903	3112	849	918	24		

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-2	GLY	-	EXPRESSION TAG	UNP P18708
A	-1	ALA	-	EXPRESSION TAG	UNP P18708
A	0	HIS	-	EXPRESSION TAG	UNP P18708
B	-2	GLY	-	EXPRESSION TAG	UNP P18708
B	-1	ALA	-	EXPRESSION TAG	UNP P18708
B	0	HIS	-	EXPRESSION TAG	UNP P18708
C	-2	GLY	-	EXPRESSION TAG	UNP P18708
C	-1	ALA	-	EXPRESSION TAG	UNP P18708
C	0	HIS	-	EXPRESSION TAG	UNP P18708
D	-2	GLY	-	EXPRESSION TAG	UNP P18708
D	-1	ALA	-	EXPRESSION TAG	UNP P18708
D	0	HIS	-	EXPRESSION TAG	UNP P18708
E	-2	GLY	-	EXPRESSION TAG	UNP P18708
E	-1	ALA	-	EXPRESSION TAG	UNP P18708
E	0	HIS	-	EXPRESSION TAG	UNP P18708
F	-2	GLY	-	EXPRESSION TAG	UNP P18708
F	-1	ALA	-	EXPRESSION TAG	UNP P18708
F	0	HIS	-	EXPRESSION TAG	UNP P18708

- Molecule 2 is a protein called Alpha-soluble NSF attachment protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	H	286	Total	C	N	O	S	0	0
			2246	1415	373	441	17		
2	I	286	Total	C	N	O	S	0	0
			2249	1418	373	441	17		
2	J	286	Total	C	N	O	S	0	0
			2255	1424	373	441	17		
2	G	286	Total	C	N	O	S	0	0
			2249	1421	370	441	17		

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
H	-1	GLY	-	EXPRESSION TAG	UNP P54921
H	0	SER	-	EXPRESSION TAG	UNP P54921
I	-1	GLY	-	EXPRESSION TAG	UNP P54921
I	0	SER	-	EXPRESSION TAG	UNP P54921
J	-1	GLY	-	EXPRESSION TAG	UNP P54921
J	0	SER	-	EXPRESSION TAG	UNP P54921
G	-1	GLY	-	EXPRESSION TAG	UNP P54921
G	0	SER	-	EXPRESSION TAG	UNP P54921

- Molecule 3 is a protein called Vesicle-associated membrane protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	K	61	Total	C	N	O	S	0	0
			480	293	89	97	1		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
K	27	GLY	-	EXPRESSION TAG	UNP P63045

- Molecule 4 is a protein called Syntaxin-1A.

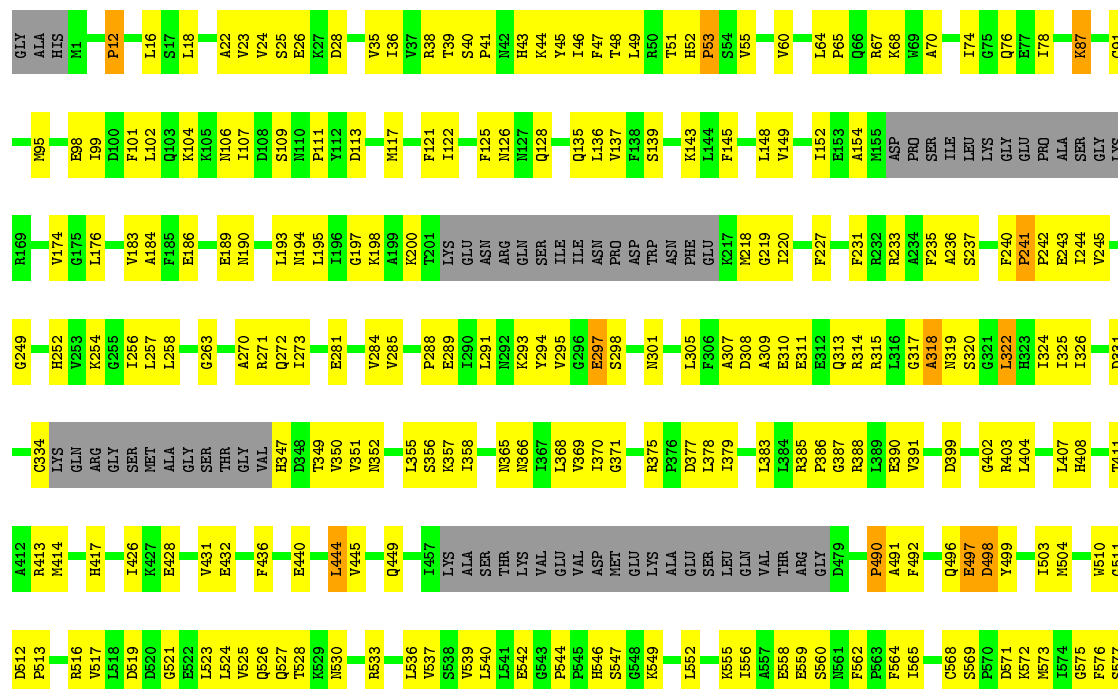
Mol	Chain	Residues	Atoms					AltConf	Trace
4	L	66	Total	C	N	O	S	0	0
			523	320	89	109	5		

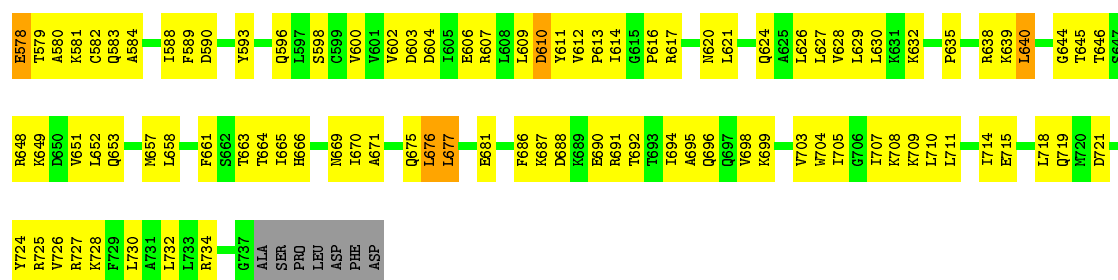
There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	190	MET	-	EXPRESSION TAG	UNP P32851

- Molecule 5 is a protein called Synaptosomal-associated protein 25.

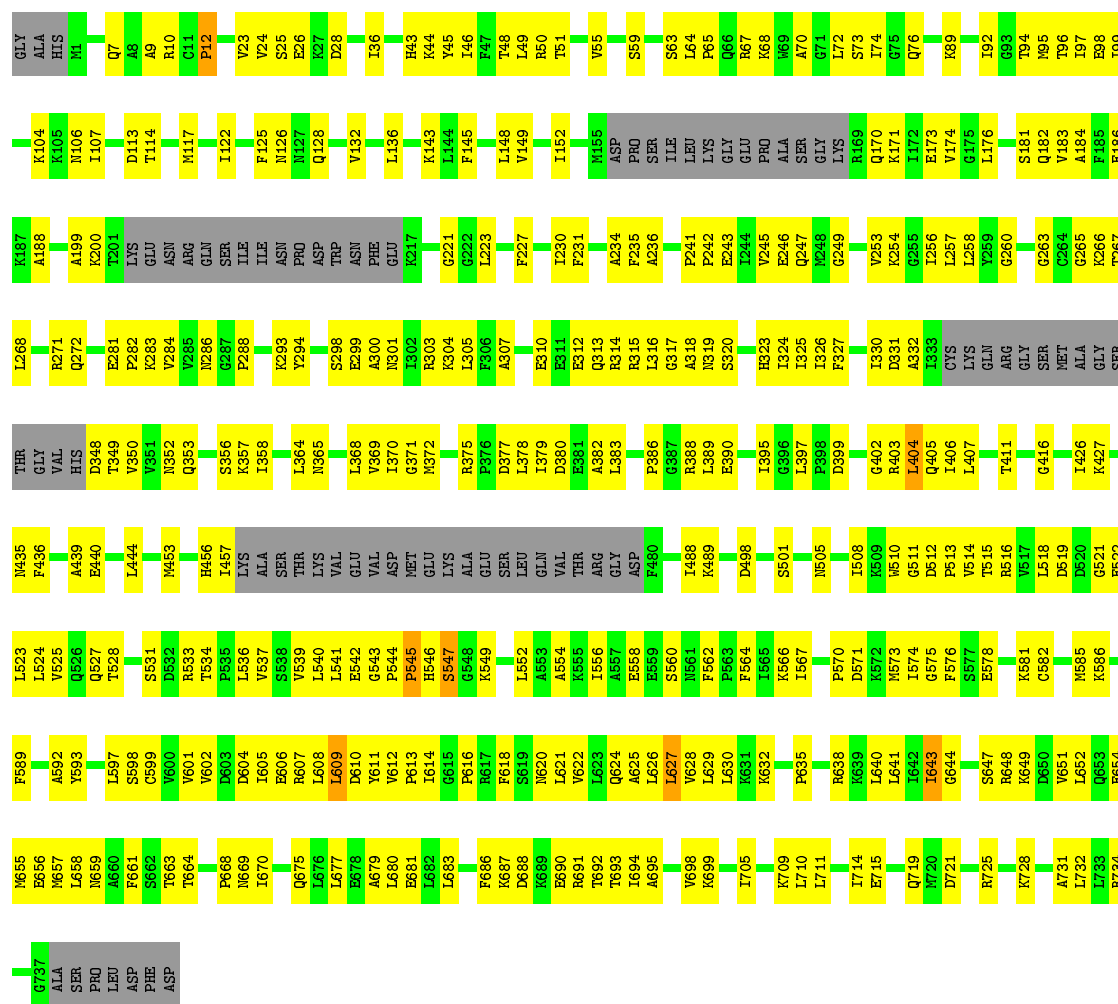
Mol	Chain	Residues	Atoms					AltConf	Trace
5	M	131	Total	C	N	O	S	0	0
			1042	617	195	221	9		





• Molecule 1: Vesicle-fusing ATPase

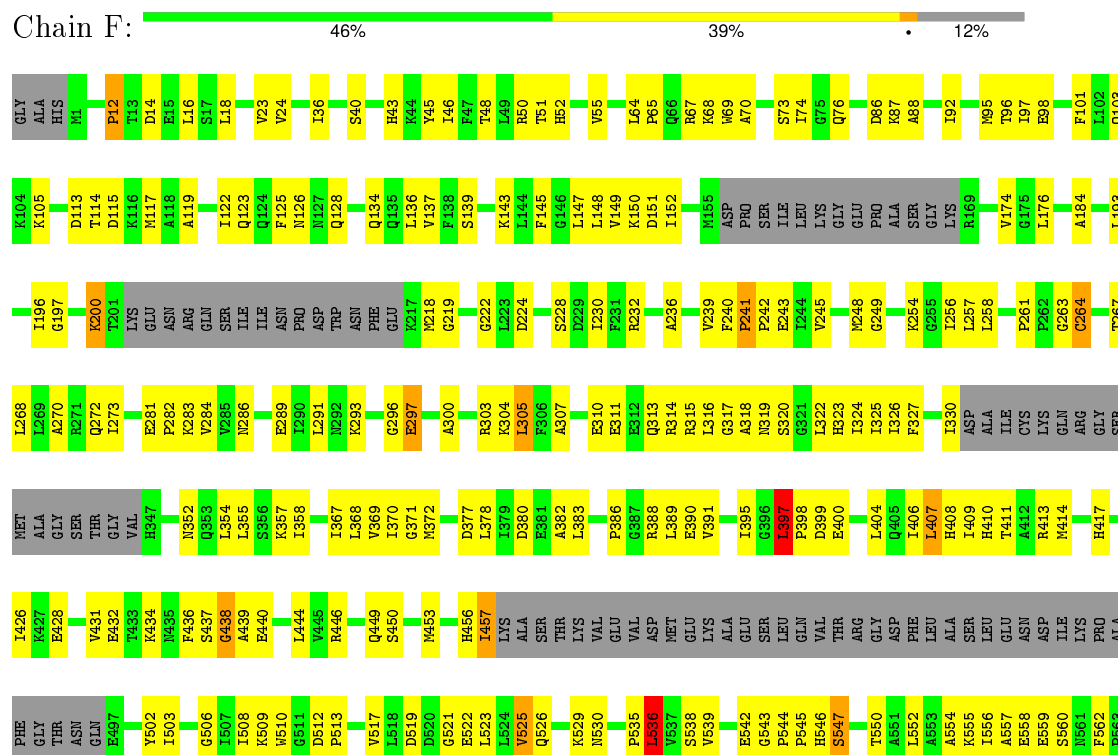
Chain D: 47% 42% 10%

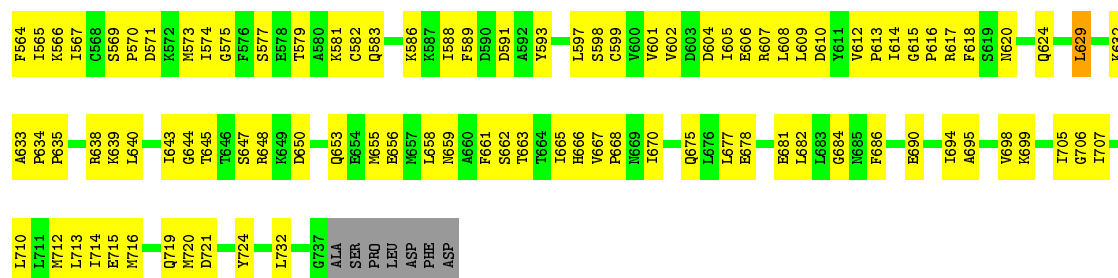


• Molecule 1: Vesicle-fusing ATPase

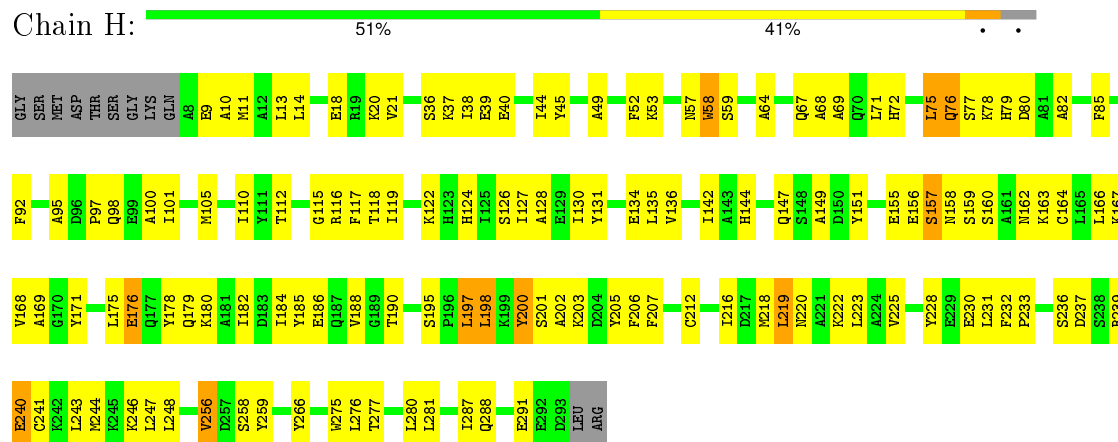
Chain E: 45% 42% 10%



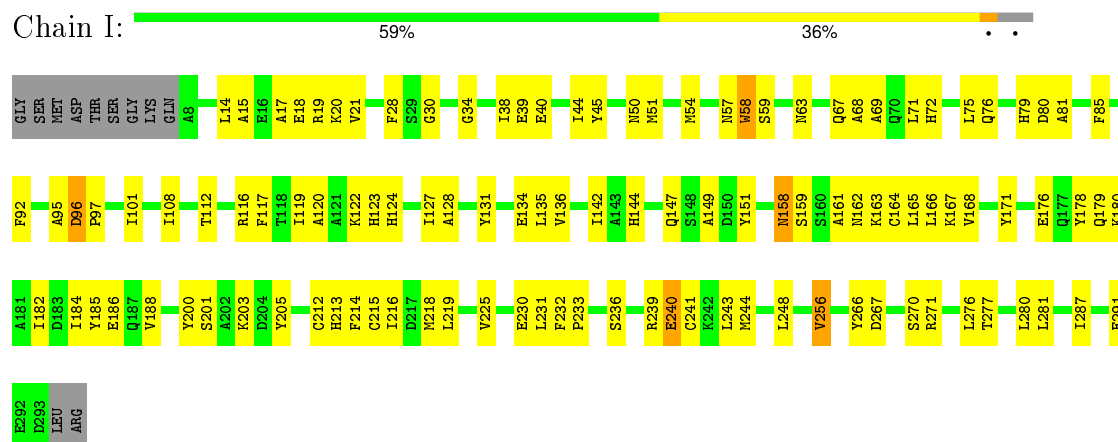




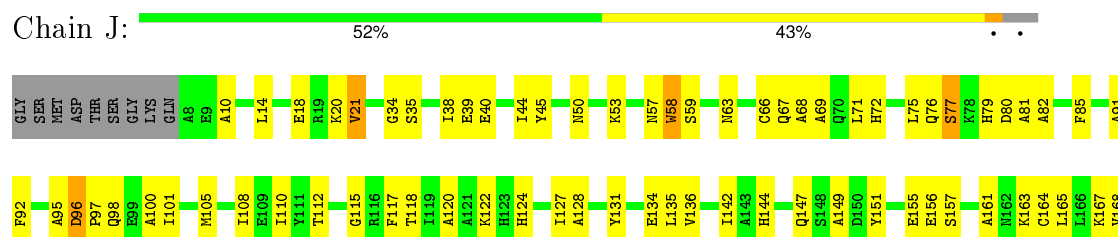
• Molecule 2: Alpha-soluble NSF attachment protein

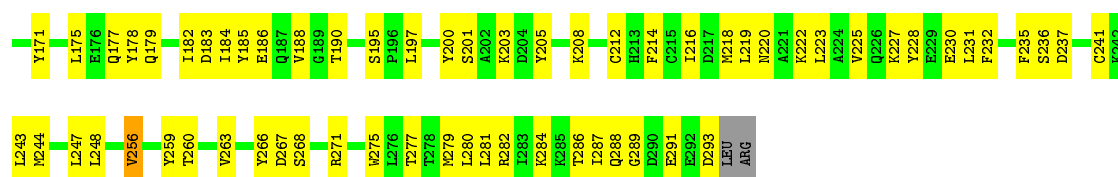


• Molecule 2: Alpha-soluble NSF attachment protein

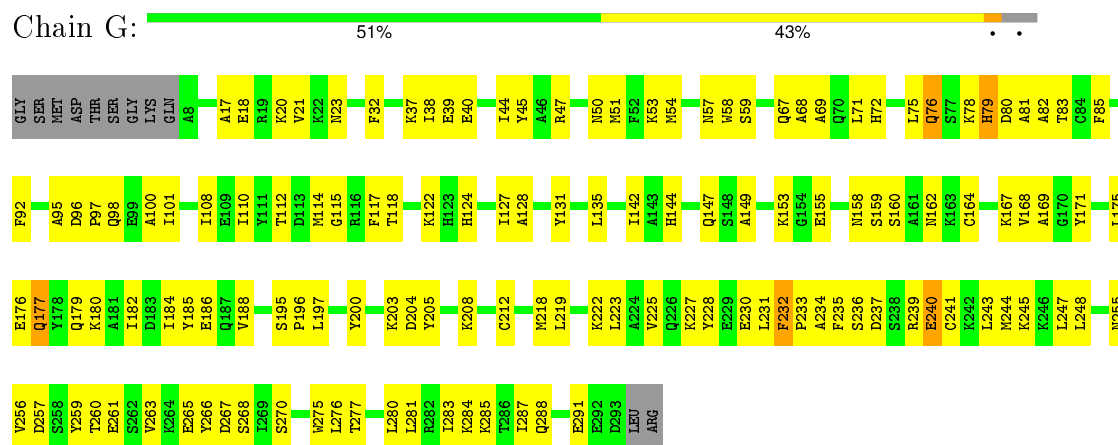


• Molecule 2: Alpha-soluble NSF attachment protein

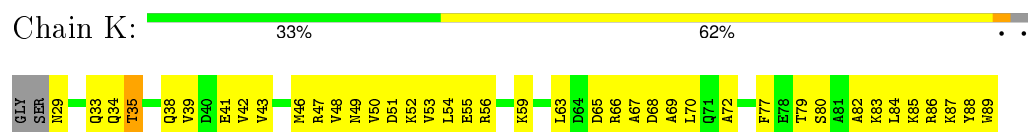




• Molecule 2: Alpha-soluble NSF attachment protein



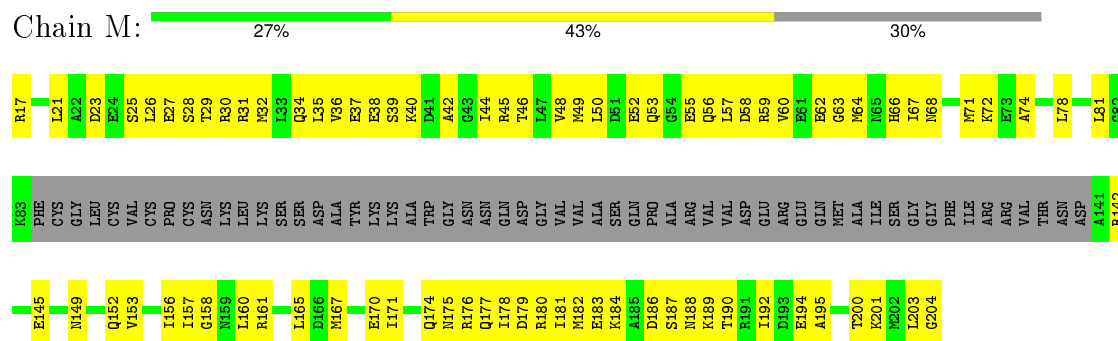
• Molecule 3: Vesicle-associated membrane protein 2



• Molecule 4: Syntaxin-1A



• Molecule 5: Synaptosomal-associated protein 25



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	14991	Depositor
Resolution determination method	FSC 0.143	Depositor
CTF correction method	Each particle	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	44	Depositor
Minimum defocus (nm)	-1800	Depositor
Maximum defocus (nm)	-2800	Depositor
Magnification	31000	Depositor
Image detector	GATAN K2 (4k x 4k)	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	0.48	0/5116	0.85	14/6925 (0.2%)
1	B	0.41	1/5069 (0.0%)	0.77	11/6863 (0.2%)
1	C	0.40	0/5102	0.74	6/6905 (0.1%)
1	D	0.42	0/5050	0.75	7/6840 (0.1%)
1	E	0.44	0/5068	0.81	9/6859 (0.1%)
1	F	0.43	1/4977 (0.0%)	0.79	12/6730 (0.2%)
2	G	0.35	0/2289	0.61	0/3079
2	H	0.38	0/2285	0.63	4/3073 (0.1%)
2	I	0.34	0/2288	0.59	1/3077 (0.0%)
2	J	0.36	0/2295	0.57	0/3086
3	K	0.25	0/483	0.42	0/648
4	L	0.23	0/527	0.42	0/704
5	M	0.22	0/1042	0.43	0/1385
All	All	0.41	2/41591 (0.0%)	0.74	64/56174 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	1
1	E	0	1
1	F	0	1
2	H	0	1
All	All	0	6

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	F	264	CYS	CB-SG	-5.77	1.72	1.81
1	B	547	SER	C-O	5.69	1.34	1.23

All (64) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	319	ASN	N-CA-C	-9.95	84.15	111.00
1	F	397	LEU	CA-CB-CG	9.06	136.15	115.30
1	E	629	LEU	CB-CG-CD1	-8.90	95.87	111.00
1	D	547	SER	C-N-CA	-8.85	103.72	122.30
1	C	322	LEU	CA-CB-CG	8.20	134.15	115.30
1	F	305	LEU	CA-CB-CG	7.88	133.43	115.30
1	F	629	LEU	CB-CG-CD1	-7.76	97.81	111.00
1	B	610	ASP	CB-CG-OD2	-7.58	111.48	118.30
1	C	677	LEU	CB-CG-CD2	-7.45	98.33	111.00
1	E	305	LEU	CA-CB-CG	7.41	132.34	115.30
1	B	305	LEU	CA-CB-CG	7.38	132.27	115.30
1	F	536	LEU	CA-CB-CG	7.03	131.47	115.30
1	E	652	LEU	CB-CG-CD2	-6.74	99.54	111.00
1	A	552	LEU	CA-CB-CG	6.62	130.54	115.30
1	B	395	ILE	CG1-CB-CG2	-6.60	96.88	111.40
1	C	444	LEU	CA-CB-CG	6.58	130.43	115.30
1	B	658	LEU	CB-CG-CD1	-6.57	99.83	111.00
1	B	708	LYS	CD-CE-NZ	6.50	126.64	111.70
1	A	305	LEU	CA-CB-CG	6.29	129.76	115.30
1	B	609	LEU	CA-CB-CG	-6.25	100.93	115.30
2	I	96	ASP	CB-CG-OD1	6.23	123.90	118.30
1	C	387	GLY	N-CA-C	-6.21	97.58	113.10
1	D	627	LEU	CB-CG-CD2	-6.01	100.78	111.00
1	B	543	GLY	N-CA-C	-5.99	98.13	113.10
1	D	609	LEU	CA-CB-CG	5.97	129.04	115.30
1	C	504	MET	C-N-CA	-5.95	106.82	121.70
2	H	198	LEU	CB-CG-CD2	-5.93	100.92	111.00
1	A	549	LYS	N-CA-C	-5.91	95.04	111.00
1	D	627	LEU	CA-CB-CG	-5.90	101.73	115.30
1	F	525	VAL	CG1-CB-CG2	5.88	120.31	110.90
1	A	641	LEU	CA-CB-CG	5.86	128.78	115.30
1	A	322	LEU	CA-CB-CG	5.85	128.75	115.30
1	D	643	ILE	CB-CA-C	-5.85	99.91	111.60
1	A	525	VAL	CG1-CB-CG2	5.84	120.25	110.90
1	F	543	GLY	C-N-CD	5.79	140.56	128.40
1	A	407	LEU	CA-CB-CG	5.65	128.29	115.30
1	E	395	ILE	CG1-CB-CG2	-5.61	99.05	111.40
1	A	398	PRO	CA-N-CD	-5.61	103.65	111.50
1	F	547	SER	N-CA-C	-5.46	96.27	111.00
1	B	548	GLY	N-CA-C	-5.44	99.50	113.10
1	A	216	GLU	N-CA-C	-5.43	96.34	111.00
1	F	640	LEU	CA-CB-CG	5.43	127.78	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	404	LEU	CA-CB-CG	5.42	127.76	115.30
2	H	197	LEU	CB-CG-CD1	5.40	120.18	111.00
1	A	665	ILE	CG1-CB-CG2	-5.39	99.53	111.40
1	A	236	ALA	N-CA-C	-5.39	96.46	111.00
1	A	261	PRO	C-N-CD	-5.37	108.78	120.60
1	D	416	GLY	N-CA-C	-5.32	99.80	113.10
1	B	479	ASP	N-CA-C	-5.31	96.66	111.00
1	E	676	LEU	CA-CB-CG	5.28	127.44	115.30
1	F	536	LEU	CB-CG-CD2	-5.25	102.08	111.00
1	E	438	GLY	N-CA-C	5.25	126.22	113.10
1	E	522	GLU	CA-CB-CG	5.22	124.89	113.40
1	E	397	LEU	CA-CB-CG	5.21	127.28	115.30
1	F	268	LEU	CA-CB-CG	5.20	127.27	115.30
2	H	219	LEU	CA-CB-CG	5.19	127.23	115.30
1	F	457	ILE	CG1-CB-CG2	-5.15	100.06	111.40
1	B	541	LEU	CA-CB-CG	5.13	127.11	115.30
1	C	640	LEU	CA-CB-CG	5.11	127.05	115.30
1	E	258	LEU	CA-CB-CG	5.09	127.01	115.30
2	H	75	LEU	CA-CB-CG	5.09	127.00	115.30
1	F	407	LEU	CA-CB-CG	5.07	126.95	115.30
1	A	441	LEU	CB-CG-CD2	-5.05	102.42	111.00
1	B	544	PRO	N-CA-C	-5.02	99.05	112.10

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	241	PRO	Peptide
1	A	321	GLY	Peptide
1	B	438	GLY	Peptide
1	E	438	GLY	Peptide
1	F	438	GLY	Peptide
2	H	200	TYR	Mainchain

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	5039	0	4945	309	0
1	B	4995	0	4920	281	0
1	C	5027	0	4945	329	0
1	D	4976	0	4880	318	0
1	E	4992	0	4910	318	0
1	F	4903	0	4853	308	0
2	G	2249	0	2188	114	0
2	H	2246	0	2183	128	0
2	I	2249	0	2192	99	0
2	J	2255	0	2199	129	0
3	K	480	0	465	73	0
4	L	523	0	497	52	0
5	M	1042	0	1022	118	0
All	All	40976	0	40199	2329	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 29.

All (2329) 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:B:490:PRO:HA	1:B:491:ALA:HB3	1.46	0.93
1:A:490:PRO:HA	1:A:491:ALA:HB3	1.50	0.92
1:C:386:PRO:HA	1:C:390:GLU:HA	1.54	0.90
1:C:490:PRO:HA	1:C:491:ALA:HB3	1.51	0.90
1:F:545:PRO:HA	1:F:547:SER:H	1.38	0.89
1:F:105:LYS:HZ3	2:G:257:ASP:HB2	1.39	0.87
1:C:240:PHE:HD2	1:C:244:ILE:HG21	1.37	0.86
2:I:38:ILE:HD11	2:I:71:LEU:HB3	1.57	0.86
1:D:628:VAL:HG11	1:E:574:ILE:HG21	1.57	0.86
2:H:219:LEU:HB2	2:H:222:LYS:HB3	1.57	0.86
1:B:256:ILE:HG13	1:B:370:ILE:HG22	1.57	0.86
2:I:80:ASP:OD1	5:M:187:SER:OG	1.93	0.86
3:K:56:ARG:HD2	5:M:171:ILE:HG23	1.58	0.85
2:J:235:PHE:HB3	3:K:38:GLN:HE21	1.38	0.85
1:F:539:VAL:HB	1:F:643:ILE:HG12	1.59	0.85
1:B:327:PHE:HB2	1:B:330:ILE:HG22	1.59	0.85
1:E:386:PRO:HA	1:E:390:GLU:HA	1.59	0.84
1:A:264:CYS:SG	1:A:265:GLY:N	2.48	0.84
1:E:256:ILE:HG13	1:E:370:ILE:HG22	1.58	0.84
1:C:497:GLU:O	1:C:499:TYR:N	2.09	0.84
1:A:542:GLU:HG2	1:A:649:LYS:HD2	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:38:ILE:HG23	2:I:75:LEU:HD12	1.59	0.84
1:A:305:LEU:HD23	1:A:325:ILE:HG21	1.59	0.84
1:E:526:GLN:NE2	1:F:719:GLN:O	2.10	0.83
1:E:585:MET:HG3	1:E:589:PHE:CZ	2.13	0.83
1:A:562:PHE:CD2	1:A:597:LEU:HD21	2.14	0.83
1:E:327:PHE:HB2	1:E:330:ILE:HG22	1.58	0.83
1:E:527:GLN:O	1:E:531:SER:OG	1.97	0.83
1:F:570:PRO:HG2	1:F:604:ASP:HB2	1.61	0.83
2:G:159:SER:OG	5:M:48:VAL:HG13	1.79	0.83
1:C:111:PRO:HG3	1:C:194:ASN:ND2	1.94	0.83
1:F:386:PRO:HA	1:F:390:GLU:HA	1.60	0.83
2:G:219:LEU:HB2	2:G:222:LYS:HB3	1.58	0.83
1:D:518:LEU:HD21	1:D:552:LEU:HD22	1.61	0.83
2:J:201:SER:HG	2:J:205:TYR:HE1	1.25	0.82
2:H:157:SER:HA	4:L:228:GLU:OE1	1.79	0.82
1:D:606:GLU:HA	1:D:609:LEU:HG	1.59	0.82
1:A:398:PRO:HG3	1:A:436:PHE:O	1.78	0.82
1:F:327:PHE:HB2	1:F:330:ILE:HG22	1.59	0.82
1:C:256:ILE:HG13	1:C:370:ILE:HG22	1.61	0.82
3:K:54:LEU:HD21	4:L:222:LEU:HD13	1.61	0.81
1:B:566:LYS:HD2	1:B:588:ILE:HG23	1.62	0.81
1:A:705:ILE:HD13	1:A:710:LEU:HD12	1.61	0.81
1:D:510:TRP:HE3	1:D:675:GLN:HG2	1.45	0.81
1:E:490:PRO:HA	1:E:491:ALA:HB3	1.61	0.81
2:H:116:ARG:NH2	3:K:68:ASP:OD2	2.13	0.81
2:J:201:SER:HB2	5:M:165:LEU:HD11	1.60	0.81
1:A:502:TYR:HE2	1:A:567:ILE:HG21	1.45	0.80
1:D:313:GLN:HE22	1:D:364:LEU:HA	1.45	0.80
1:B:386:PRO:HA	1:B:390:GLU:HA	1.62	0.80
2:J:235:PHE:CZ	3:K:34:GLN:HG2	2.17	0.80
1:C:687:LYS:N	1:C:690:GLU:OE2	2.14	0.80
1:F:256:ILE:HG13	1:F:370:ILE:HG22	1.63	0.80
1:D:510:TRP:CD2	1:D:670:ILE:HG22	2.16	0.80
1:E:240:PHE:HD2	1:E:244:ILE:HG21	1.46	0.80
5:M:32:MET:HA	5:M:35:LEU:HD12	1.65	0.79
1:A:497:GLU:O	1:A:499:TYR:N	2.15	0.79
2:I:72:HIS:HE1	2:I:80:ASP:HB2	1.47	0.79
1:B:407:LEU:HD11	1:B:426:ILE:HG23	1.64	0.79
1:E:587:LYS:NZ	1:E:587:LYS:O	2.15	0.79
1:E:720:MET:HG3	1:E:728:LYS:HE3	1.65	0.79
2:J:219:LEU:HB2	2:J:222:LYS:HB3	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:527:GLN:HE22	1:F:716:MET:HG2	1.48	0.79
1:C:627:LEU:HD12	1:D:607:ARG:HH12	1.47	0.79
1:E:686:PHE:HE1	1:E:714:ILE:HG23	1.47	0.79
1:E:407:LEU:HD11	1:E:426:ILE:HG23	1.65	0.79
1:B:589:PHE:HE1	1:B:600:VAL:HG11	1.48	0.78
1:C:690:GLU:HB2	1:C:726:VAL:HG21	1.65	0.78
1:C:313:GLN:O	1:C:317:GLY:N	2.17	0.78
1:F:545:PRO:HA	1:F:547:SER:N	1.99	0.78
1:E:589:PHE:CZ	1:E:629:LEU:HD11	2.19	0.78
1:E:618:PHE:HZ	1:F:612:VAL:HG11	1.48	0.78
1:F:525:VAL:HG13	1:F:562:PHE:CE1	2.18	0.78
1:A:557:ALA:O	1:A:560:SER:OG	2.01	0.78
1:B:526:GLN:HE21	1:C:719:GLN:HB3	1.48	0.78
5:M:49:MET:HB3	5:M:53:GLN:NE2	1.99	0.78
1:F:105:LYS:NZ	2:G:257:ASP:HB2	1.99	0.77
1:A:316:LEU:HB3	1:A:320:SER:HB2	1.65	0.77
1:A:713:LEU:HD21	1:A:732:LEU:HB3	1.67	0.77
1:D:627:LEU:HD21	1:D:657:MET:HG3	1.67	0.77
2:H:119:ILE:HD11	3:K:65:ASP:OD2	1.85	0.77
1:C:676:LEU:HD12	1:C:705:ILE:HG21	1.64	0.77
1:A:686:PHE:HE2	1:A:714:ILE:HG12	1.49	0.77
1:A:285:VAL:HG13	1:A:326:ILE:HD11	1.65	0.77
1:A:353:GLN:HA	1:B:288:PRO:HG3	1.65	0.77
1:F:407:LEU:HD11	1:F:426:ILE:HG23	1.65	0.77
1:E:246:GLU:O	1:F:413:ARG:NH1	2.14	0.76
5:M:50:LEU:HB3	5:M:170:GLU:HG2	1.67	0.76
1:B:621:LEU:HD11	1:C:575:GLY:HA2	1.66	0.76
1:D:399:ASP:O	1:D:403:ARG:N	2.19	0.76
1:D:605:ILE:HD11	1:D:644:GLY:HA3	1.67	0.76
1:A:115:ASP:CB	1:A:242:PRO:HG3	2.16	0.76
1:D:106:ASN:HB3	1:D:143:LYS:HZ1	1.50	0.76
1:C:496:GLN:O	1:C:498:ASP:N	2.19	0.76
1:C:540:LEU:HB3	1:C:664:THR:HG22	1.68	0.76
1:A:353:GLN:HE21	1:A:357:LYS:HG2	1.50	0.75
2:H:228:TYR:OH	2:H:237:ASP:OD1	2.05	0.75
1:E:585:MET:HA	1:E:588:ILE:HD12	1.68	0.75
1:A:316:LEU:HB3	1:A:320:SER:CB	2.17	0.75
1:C:407:LEU:HD11	1:C:426:ILE:HG23	1.66	0.75
1:C:524:LEU:HD21	1:C:537:VAL:CG1	2.16	0.75
1:A:525:VAL:HG13	1:A:562:PHE:CZ	2.21	0.75
4:L:209:ILE:HG21	5:M:32:MET:HG3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:386:PRO:HA	1:D:390:GLU:HA	1.69	0.75
1:D:728:LYS:HE3	1:D:732:LEU:HD11	1.69	0.75
1:F:536:LEU:HD11	1:F:634:PRO:HD3	1.66	0.75
1:F:98:GLU:HB3	1:F:148:LEU:HB3	1.69	0.75
1:D:67:ARG:HD2	2:J:218:MET:HE2	1.68	0.75
1:C:331:ASP:HA	1:C:379:ILE:HD11	1.69	0.74
2:J:53:LYS:HE3	2:G:117:PHE:HD2	1.52	0.74
1:A:221:GLY:HA3	1:A:406:ILE:HD11	1.70	0.74
2:H:149:ALA:HB2	2:H:164:CYS:HB2	1.67	0.74
1:E:300:ALA:O	1:E:304:LYS:HG2	1.87	0.74
1:E:653:GLN:HA	1:E:658:LEU:HB2	1.67	0.74
1:D:711:LEU:HA	1:D:714:ILE:HD12	1.70	0.74
1:E:625:ALA:HA	1:F:574:ILE:HD11	1.70	0.74
2:H:239:ARG:NH1	4:L:214:ASP:OD1	2.21	0.73
1:C:544:PRO:O	1:C:547:SER:OG	2.06	0.73
1:E:606:GLU:OE2	1:E:646:THR:OG1	2.06	0.73
1:E:624:GLN:NE2	1:F:610:ASP:OD1	2.20	0.73
1:C:98:GLU:HB3	1:C:148:LEU:HB3	1.70	0.73
1:C:724:TYR:HD2	1:C:727:ARG:HH21	1.36	0.73
1:F:300:ALA:O	1:F:304:LYS:HG2	1.87	0.73
2:I:21:VAL:HG21	2:I:71:LEU:HD22	1.71	0.73
1:B:540:LEU:HD23	1:B:661:PHE:CD1	2.23	0.73
1:F:303:ARG:HG3	1:F:357:LYS:HE2	1.70	0.73
1:E:240:PHE:CD2	1:E:244:ILE:HG21	2.23	0.73
1:C:524:LEU:HD21	1:C:537:VAL:HG11	1.70	0.73
1:B:300:ALA:O	1:B:304:LYS:HG2	1.89	0.73
1:C:611:TYR:CE1	1:C:616:PRO:HB2	2.23	0.73
1:A:115:ASP:HB2	1:A:242:PRO:HG3	1.70	0.73
1:E:563:PRO:HG2	1:E:595:SER:OG	1.88	0.73
2:I:200:TYR:HB3	3:K:47:ARG:HH22	1.54	0.73
1:C:318:ALA:O	1:C:319:ASN:ND2	2.21	0.73
1:E:553:ALA:HA	1:E:556:ILE:HD12	1.70	0.72
1:C:109:SER:OG	1:C:315:ARG:HB3	1.88	0.72
3:K:53:VAL:HG22	4:L:226:GLN:HE22	1.54	0.72
2:H:115:GLY:HA2	2:G:50:ASN:ND2	2.04	0.72
1:A:309:ALA:HB1	1:A:367:ILE:HG21	1.71	0.72
1:F:569:SER:OG	1:F:571:ASP:OD2	2.06	0.72
1:A:549:LYS:NZ	1:A:647:SER:OG	2.19	0.72
1:D:106:ASN:HB3	1:D:143:LYS:NZ	2.04	0.72
1:A:602:VAL:HG12	1:A:605:ILE:HG12	1.71	0.72
2:G:175:LEU:HD23	2:G:177:GLN:HE21	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:564:PHE:O	1:F:598:SER:OG	2.04	0.72
1:D:626:LEU:HB3	1:D:657:MET:HE3	1.72	0.72
1:C:533:ARG:O	1:D:505:ASN:ND2	2.22	0.72
1:F:606:GLU:OE1	1:F:606:GLU:N	2.22	0.72
1:D:527:GLN:HE21	1:E:715:GLU:HG3	1.54	0.72
2:G:72:HIS:HE1	2:G:80:ASP:HB2	1.55	0.72
1:F:105:LYS:NZ	2:G:255:ASN:OD1	2.21	0.72
3:K:63:LEU:HD22	5:M:178:ILE:HG23	1.71	0.72
1:A:677:LEU:HD21	1:A:695:ALA:HA	1.70	0.72
1:E:686:PHE:HB3	1:E:690:GLU:HB2	1.71	0.72
1:C:691:ARG:HA	1:C:694:ILE:HD12	1.72	0.72
1:F:555:LYS:NZ	1:F:559:GLU:OE2	2.14	0.72
1:D:654:GLU:HB3	1:E:614:ILE:HD11	1.72	0.71
3:K:42:VAL:HG11	5:M:160:LEU:HD13	1.71	0.71
1:A:125:PHE:HA	1:A:128:GLN:NE2	2.05	0.71
1:D:544:PRO:O	1:D:547:SER:HB3	1.90	0.71
2:I:72:HIS:CE1	2:I:80:ASP:HB2	2.25	0.71
1:F:634:PRO:HB2	1:F:638:ARG:HG3	1.70	0.71
1:A:553:ALA:HA	1:A:556:ILE:HD12	1.73	0.71
1:A:562:PHE:HD2	1:A:597:LEU:HD21	1.55	0.71
2:G:228:TYR:OH	2:G:237:ASP:OD1	2.05	0.71
1:B:303:ARG:HG3	1:B:357:LYS:HE2	1.73	0.71
1:A:351:VAL:O	1:A:355:LEU:HG	1.90	0.71
1:F:125:PHE:HA	1:F:128:GLN:NE2	2.06	0.71
1:C:718:LEU:O	1:C:725:ARG:NH1	2.24	0.71
1:E:538:SER:OG	1:E:661:PHE:HA	1.91	0.71
2:G:235:PHE:CG	5:M:152:GLN:HG2	2.25	0.71
1:D:301:ASN:HA	1:D:304:LYS:HD3	1.71	0.71
5:M:49:MET:HB3	5:M:53:GLN:HE21	1.54	0.70
1:C:630:LEU:HD11	1:C:661:PHE:CE1	2.25	0.70
1:C:652:LEU:HD22	1:C:657:MET:HG2	1.73	0.70
1:F:517:VAL:HG13	1:F:665:ILE:HG21	1.73	0.70
1:A:326:ILE:HG22	1:A:370:ILE:HG12	1.73	0.70
1:F:264:CYS:SG	1:F:395:ILE:HG22	2.32	0.70
1:E:125:PHE:HA	1:E:128:GLN:NE2	2.07	0.70
2:J:235:PHE:CE2	3:K:34:GLN:HG2	2.26	0.70
1:E:680:LEU:HD13	1:E:694:ILE:HD13	1.73	0.70
1:E:303:ARG:HG3	1:E:357:LYS:HE2	1.73	0.70
1:C:564:PHE:O	1:C:598:SER:OG	2.10	0.70
1:E:253:VAL:N	1:F:446:ARG:HH12	1.89	0.70
1:E:586:LYS:NZ	1:F:574:ILE:O	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:83:LYS:HD2	5:M:203:LEU:HD11	1.73	0.70
1:E:513:PRO:HA	1:E:516:ARG:HG2	1.72	0.70
1:D:620:ASN:O	1:D:624:GLN:HG2	1.92	0.70
1:B:627:LEU:HD21	1:B:657:MET:HG3	1.74	0.70
1:A:564:PHE:CE1	1:A:566:LYS:HB2	2.27	0.70
3:K:52:LYS:HB3	5:M:171:ILE:HD13	1.74	0.70
1:E:510:TRP:CZ3	1:E:670:ILE:HG13	2.27	0.70
1:D:513:PRO:HA	1:D:516:ARG:HG2	1.73	0.70
1:E:397:LEU:HD22	1:E:398:PRO:HD2	1.73	0.69
1:C:513:PRO:O	1:C:516:ARG:HG2	1.91	0.69
2:H:18:GLU:HA	2:H:21:VAL:HG12	1.74	0.69
1:E:706:GLY:O	1:E:710:LEU:N	2.24	0.69
1:E:549:LYS:HA	1:E:552:LEU:HD12	1.75	0.69
3:K:63:LEU:HD13	5:M:182:MET:HG2	1.75	0.69
1:C:111:PRO:HG3	1:C:194:ASN:HD22	1.55	0.69
1:F:96:THR:HB	1:F:151:ASP:H	1.57	0.69
1:E:603:ASP:OD2	1:E:645:THR:OG1	2.09	0.69
1:B:581:LYS:NZ	1:B:608:LEU:O	2.25	0.69
1:B:713:LEU:HD22	1:B:732:LEU:HB3	1.74	0.69
1:A:502:TYR:CE2	1:A:567:ILE:HG21	2.26	0.69
1:D:353:GLN:HE22	1:E:288:PRO:HG2	1.56	0.69
1:E:625:ALA:O	1:E:629:LEU:HG	1.93	0.69
1:E:670:ILE:HG22	1:E:672:THR:H	1.57	0.69
2:J:101:ILE:HG21	2:J:135:LEU:HD11	1.75	0.69
1:B:533:ARG:HG3	1:B:534:THR:H	1.58	0.69
1:E:592:ALA:HB1	1:E:640:LEU:HD22	1.75	0.68
1:F:513:PRO:O	1:F:517:VAL:HG23	1.94	0.68
2:I:101:ILE:HG21	2:I:135:LEU:HD11	1.75	0.68
1:B:98:GLU:HB3	1:B:148:LEU:HB3	1.73	0.68
1:B:624:GLN:NE2	1:C:610:ASP:O	2.25	0.68
1:C:542:GLU:CB	1:C:649:LYS:HD3	2.24	0.68
1:C:578:GLU:HB3	1:C:621:LEU:HB3	1.75	0.68
2:J:200:TYR:HE2	3:K:41:GLU:HG2	1.58	0.68
1:F:358:ILE:HD12	1:F:388:ARG:HB3	1.74	0.68
1:B:125:PHE:HA	1:B:128:GLN:NE2	2.08	0.68
2:H:203:LYS:HD3	2:H:236:SER:HB3	1.74	0.68
1:D:543:GLY:H	1:D:549:LYS:HD3	1.59	0.68
2:J:50:ASN:ND2	2:G:115:GLY:HA2	2.07	0.68
1:A:653:GLN:NE2	1:A:653:GLN:O	2.26	0.68
4:L:211:GLU:HA	4:L:214:ASP:OD2	1.92	0.68
1:A:503:ILE:HG23	1:A:506:GLY:HA2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:64:LEU:HA	1:B:67:ARG:HE	1.58	0.68
1:D:67:ARG:HB3	2:J:218:MET:SD	2.34	0.68
1:D:404:LEU:HA	1:D:407:LEU:HD12	1.74	0.68
1:A:258:LEU:HA	1:A:393:MET:O	1.94	0.68
1:F:589:PHE:HD2	1:F:629:LEU:HD13	1.57	0.68
1:C:596:GLN:HA	1:C:638:ARG:HD3	1.74	0.68
2:J:228:TYR:OH	2:J:237:ASP:OD1	2.10	0.68
1:A:262:PRO:HG2	1:A:374:ASN:OD1	1.94	0.68
1:B:538:SER:HB3	1:B:661:PHE:CD2	2.29	0.68
1:F:92:ILE:HG21	1:F:95:MET:HB2	1.75	0.67
1:B:12:PRO:HG2	1:B:23:VAL:HG11	1.75	0.67
1:E:685:ASN:HB3	1:E:718:LEU:HD11	1.75	0.67
1:D:628:VAL:HG13	1:E:571:ASP:OD1	1.93	0.67
1:B:449:GLN:O	1:B:453:MET:HG2	1.94	0.67
4:L:216:PHE:CE2	5:M:39:SER:HB2	2.30	0.67
1:E:589:PHE:CD2	1:E:629:LEU:HD21	2.29	0.67
1:F:536:LEU:HD21	1:F:632:LYS:O	1.93	0.67
1:D:358:ILE:HD12	1:D:388:ARG:HB3	1.76	0.67
2:H:115:GLY:HA2	2:G:50:ASN:HD21	1.58	0.67
2:H:216:ILE:HG12	2:H:218:MET:H	1.59	0.67
1:A:64:LEU:HB3	1:A:65:PRO:HD3	1.77	0.67
1:E:12:PRO:HG2	1:E:23:VAL:HG11	1.77	0.67
2:J:271:ARG:NH2	2:G:234:ALA:HB2	2.10	0.67
1:E:449:GLN:O	1:E:453:MET:HG2	1.95	0.67
1:C:106:ASN:HB3	1:C:143:LYS:NZ	2.10	0.67
1:D:546:HIS:ND1	1:D:709:LYS:HD3	2.10	0.67
1:D:510:TRP:CE3	1:D:670:ILE:HG22	2.30	0.67
1:E:311:GLU:OE1	1:E:314:ARG:NE	2.26	0.67
1:B:524:LEU:HD21	1:B:663:THR:HG21	1.75	0.67
1:F:311:GLU:OE1	1:F:314:ARG:NE	2.26	0.67
3:K:83:LYS:HG2	3:K:86:ARG:NH2	2.09	0.67
1:C:125:PHE:HA	1:C:128:GLN:NE2	2.10	0.67
1:A:720:MET:O	1:A:725:ARG:NE	2.20	0.67
1:B:654:GLU:O	1:C:613:PRO:HG3	1.95	0.66
2:J:230:GLU:HG2	2:J:231:LEU:N	2.09	0.66
1:B:358:ILE:HD12	1:B:388:ARG:HB3	1.78	0.66
1:D:234:ALA:HA	1:D:253:VAL:HG11	1.77	0.66
1:F:535:PRO:HA	1:F:639:LYS:HG2	1.76	0.66
1:D:527:GLN:HE22	1:E:715:GLU:C	1.99	0.66
1:F:258:LEU:HB3	1:F:395:ILE:HD11	1.75	0.66
1:F:570:PRO:HA	1:F:573:MET:HE2	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:563:PRO:HD2	1:A:597:LEU:HD22	1.76	0.66
5:M:40:LYS:O	5:M:44:ILE:HG13	1.96	0.66
1:E:602:VAL:O	1:E:644:GLY:HA2	1.94	0.66
1:A:687:LYS:N	1:A:690:GLU:OE1	2.28	0.66
1:F:605:ILE:HD11	1:F:644:GLY:HA3	1.76	0.66
1:F:612:VAL:HG12	1:F:617:ARG:HB2	1.77	0.66
2:H:197:LEU:HD12	5:M:45:ARG:HD3	1.78	0.66
1:C:546:HIS:HA	1:C:708:LYS:HD3	1.78	0.66
4:L:240:ALA:HA	4:L:243:TYR:HD2	1.59	0.66
2:J:53:LYS:HE3	2:G:117:PHE:CD2	2.31	0.66
1:F:437:SER:OG	1:F:440:GLU:HG2	1.96	0.66
2:G:21:VAL:HG21	2:G:71:LEU:HD22	1.78	0.66
1:F:635:PRO:O	1:F:638:ARG:HG2	1.96	0.66
1:A:231:PHE:CD1	1:A:235:PHE:HE2	2.13	0.66
1:E:64:LEU:HB3	1:E:65:PRO:HD3	1.78	0.66
2:H:21:VAL:HG21	2:H:71:LEU:HD22	1.77	0.65
1:C:236:ALA:HB1	1:D:453:MET:HB3	1.77	0.65
1:B:589:PHE:CE1	1:B:600:VAL:HG11	2.30	0.65
1:A:607:ARG:HD3	1:F:624:GLN:NE2	2.11	0.65
2:H:233:PRO:HB3	2:G:268:SER:O	1.95	0.65
1:E:652:LEU:CD2	1:E:657:MET:HB3	2.27	0.65
1:F:570:PRO:HG2	1:F:604:ASP:CB	2.26	0.65
1:E:640:LEU:HD12	1:E:641:LEU:N	2.10	0.65
1:B:224:ASP:O	1:B:228:SER:HB2	1.97	0.65
1:F:721:ASP:HB2	1:F:724:TYR:HD1	1.60	0.65
1:E:534:THR:HG23	1:F:715:GLU:HG3	1.78	0.65
1:A:562:PHE:HD2	1:A:597:LEU:CD2	2.10	0.65
1:A:240:PHE:HE2	1:B:453:MET:HB3	1.61	0.65
2:J:271:ARG:NH2	2:G:231:LEU:HB2	2.11	0.65
1:D:223:LEU:HD11	1:D:395:ILE:HG12	1.77	0.65
1:B:40:SER:CB	1:B:41:PRO:HD2	2.27	0.65
1:A:710:LEU:O	1:A:714:ILE:HG13	1.96	0.65
1:D:10:ARG:HG3	1:D:67:ARG:HH12	1.61	0.65
1:F:307:ALA:O	1:F:311:GLU:HG2	1.96	0.65
1:F:184:ALA:HB1	1:F:200:LYS:O	1.97	0.65
1:E:652:LEU:HD23	1:E:657:MET:HB3	1.79	0.65
2:H:155:GLU:C	2:H:157:SER:H	1.99	0.65
1:D:652:LEU:HB3	1:D:658:LEU:HB2	1.78	0.65
1:D:695:ALA:HB1	1:D:699:LYS:HE3	1.77	0.65
5:M:153:VAL:O	5:M:157:ILE:HG12	1.97	0.65
1:C:711:LEU:HA	1:C:714:ILE:HD12	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:612:VAL:HG11	1:F:618:PHE:HZ	1.60	0.65
1:D:528:THR:OG1	1:D:641:LEU:HD12	1.96	0.65
1:E:358:ILE:HD12	1:E:388:ARG:HB3	1.77	0.65
1:E:624:GLN:OE1	1:E:624:GLN:HA	1.95	0.65
1:B:538:SER:HB3	1:B:661:PHE:HD2	1.61	0.65
1:D:12:PRO:HG2	1:D:23:VAL:HG11	1.79	0.65
1:A:624:GLN:HG3	1:B:610:ASP:OD2	1.96	0.65
1:D:245:VAL:O	1:D:249:GLY:N	2.29	0.65
1:D:74:ILE:O	2:J:214:PHE:HE2	1.79	0.65
1:D:573:MET:SD	1:D:581:LYS:HD3	2.37	0.65
1:F:64:LEU:HB3	1:F:65:PRO:HD3	1.78	0.65
1:E:14:ASP:O	1:E:18:LEU:HG	1.96	0.65
1:F:224:ASP:O	1:F:228:SER:HB2	1.97	0.65
1:E:536:LEU:HD12	1:E:640:LEU:O	1.97	0.64
1:A:671:ALA:HA	1:A:703:VAL:O	1.97	0.64
1:D:64:LEU:HB3	1:D:65:PRO:HD3	1.79	0.64
2:G:149:ALA:HB2	2:G:164:CYS:HB2	1.79	0.64
1:F:222:GLY:HA3	1:F:399:ASP:OD2	1.97	0.64
4:L:234:GLU:O	4:L:238:GLU:HG2	1.97	0.64
1:A:521:GLY:O	1:A:525:VAL:HG23	1.97	0.64
1:C:649:LYS:HE2	1:C:658:LEU:HD13	1.78	0.64
3:K:83:LYS:HG2	3:K:86:ARG:HH22	1.62	0.64
1:B:64:LEU:HB3	1:B:65:PRO:HD3	1.79	0.64
2:G:158:ASN:OD1	2:G:162:ASN:ND2	2.30	0.64
1:B:326:ILE:HG22	1:B:370:ILE:HG13	1.79	0.64
1:B:36:ILE:HD11	1:B:44:LYS:HB3	1.79	0.64
1:F:695:ALA:HB1	1:F:699:LYS:HE3	1.80	0.64
4:L:223:VAL:HG21	5:M:46:THR:HG23	1.79	0.64
1:F:670:ILE:HG23	1:F:675:GLN:HB2	1.79	0.64
5:M:57:LEU:HA	5:M:60:VAL:HB	1.79	0.64
2:G:256:VAL:HG21	2:G:288:GLN:HG3	1.79	0.64
1:E:640:LEU:HD12	1:E:641:LEU:H	1.63	0.64
1:F:713:LEU:HD22	1:F:732:LEU:HB3	1.80	0.64
5:M:68:ASN:HA	5:M:188:ASN:OD1	1.98	0.64
2:J:128:ALA:HB2	2:J:144:HIS:HB2	1.80	0.63
1:F:105:LYS:HZ3	2:G:257:ASP:CB	2.11	0.63
2:H:72:HIS:HE1	2:H:80:ASP:HB2	1.62	0.63
1:E:604:ASP:HB3	1:E:607:ARG:HB3	1.80	0.63
1:D:284:VAL:HG23	1:D:324:ILE:O	1.97	0.63
1:B:528:THR:O	1:B:639:LYS:HD2	1.98	0.63
1:D:632:LYS:NZ	1:E:571:ASP:HB3	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:42:ALA:HA	5:M:45:ARG:NH2	2.13	0.63
2:H:101:ILE:HG21	2:H:135:LEU:HD11	1.80	0.63
2:H:128:ALA:HB2	2:H:144:HIS:HB2	1.80	0.63
1:E:710:LEU:O	1:E:714:ILE:HG13	1.98	0.63
1:A:111:PRO:HD2	1:A:320:SER:C	2.18	0.63
1:A:256:ILE:HG13	1:A:370:ILE:HG22	1.79	0.63
1:F:96:THR:CG2	1:F:150:LYS:HB2	2.28	0.63
1:A:672:THR:OG1	1:A:675:GLN:OE1	2.12	0.63
2:G:72:HIS:CE1	2:G:80:ASP:HB2	2.34	0.63
1:F:550:THR:HA	1:F:645:THR:HG21	1.80	0.63
2:H:230:GLU:HG3	2:H:237:ASP:HB3	1.79	0.63
1:E:681:GLU:HA	1:E:691:ARG:HE	1.63	0.63
2:H:216:ILE:HD13	2:H:220:ASN:HB2	1.79	0.63
1:C:245:VAL:O	1:C:249:GLY:N	2.32	0.63
1:A:508:ILE:HB	1:A:682:LEU:HD22	1.80	0.63
2:I:116:ARG:HH21	3:K:66:ARG:NH1	1.97	0.63
1:E:224:ASP:O	1:E:228:SER:HB2	1.98	0.63
1:C:358:ILE:CB	1:C:388:ARG:HG3	2.28	0.63
5:M:170:GLU:HG3	5:M:174:GLN:HE21	1.64	0.62
1:F:284:VAL:HG23	1:F:324:ILE:O	1.99	0.62
1:F:67:ARG:NH1	1:F:74:ILE:HD11	2.13	0.62
1:C:64:LEU:HA	1:C:67:ARG:HE	1.64	0.62
1:B:596:GLN:HA	1:B:638:ARG:HG2	1.79	0.62
1:D:604:ASP:HB3	1:D:607:ARG:CB	2.29	0.62
1:E:404:LEU:O	1:E:408:HIS:HB2	1.98	0.62
1:F:48:THR:HG21	1:F:128:GLN:HG2	1.81	0.62
2:J:235:PHE:CE2	3:K:35:THR:HA	2.34	0.62
1:E:628:VAL:O	1:E:632:LYS:N	2.33	0.62
1:E:587:LYS:HZ1	1:E:591:ASP:CG	2.03	0.62
1:F:404:LEU:O	1:F:408:HIS:HB2	1.99	0.62
1:A:238:ARG:HA	1:A:252:HIS:CE1	2.35	0.62
1:D:125:PHE:HA	1:D:128:GLN:NE2	2.14	0.62
1:C:590:ASP:HA	1:C:593:TYR:CD2	2.34	0.62
1:E:586:LYS:HA	1:E:589:PHE:CD2	2.34	0.62
1:E:674:GLU:HA	1:E:677:LEU:HD12	1.81	0.62
1:D:521:GLY:O	1:D:525:VAL:HG23	1.98	0.62
2:G:159:SER:HG	5:M:48:VAL:HG13	1.61	0.62
1:D:545:PRO:HD3	1:D:647:SER:OG	1.99	0.62
1:D:319:ASN:HB3	1:D:320:SER:HB2	1.81	0.62
2:G:101:ILE:HG21	2:G:135:LEU:HD11	1.80	0.62
2:G:235:PHE:CD1	5:M:152:GLN:HG2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:397:LEU:CB	1:A:398:PRO:HD3	2.30	0.62
1:B:221:GLY:HA3	1:B:406:ILE:HG13	1.80	0.62
1:F:538:SER:O	1:F:663:THR:HG22	1.99	0.62
1:D:348:ASP:O	1:D:352:ASN:ND2	2.33	0.62
1:B:307:ALA:O	1:B:311:GLU:HG2	2.00	0.62
1:B:311:GLU:OE1	1:B:314:ARG:NE	2.28	0.62
1:E:513:PRO:O	1:E:517:VAL:HG23	2.00	0.62
1:B:398:PRO:HG3	1:B:436:PHE:O	2.00	0.62
1:C:289:GLU:O	1:C:291:LEU:N	2.24	0.62
1:D:312:GLU:CG	1:D:313:GLN:H	2.13	0.62
1:D:651:VAL:O	1:D:655:MET:HG2	1.99	0.62
1:A:610:ASP:HA	1:F:624:GLN:NE2	2.15	0.61
1:D:554:ALA:O	1:D:558:GLU:HG2	2.00	0.61
1:A:423:ASP:HB2	1:A:480:PHE:CB	2.30	0.61
1:C:624:GLN:O	1:C:628:VAL:HG23	1.99	0.61
1:C:542:GLU:HB3	1:C:649:LYS:HD3	1.83	0.61
1:A:678:GLU:O	1:A:682:LEU:HD12	1.99	0.61
1:A:353:GLN:HA	1:B:288:PRO:CG	2.30	0.61
1:A:270:ALA:O	1:A:273:ILE:HG22	2.00	0.61
1:B:540:LEU:HA	1:B:644:GLY:O	2.00	0.61
2:H:20:LYS:HE2	2:H:37:LYS:HA	1.83	0.61
4:L:205:LEU:O	4:L:209:ILE:HG12	2.01	0.61
5:M:167:MET:O	5:M:171:ILE:HG13	2.01	0.61
1:D:353:GLN:HE22	1:E:288:PRO:CG	2.12	0.61
1:C:67:ARG:NH1	1:C:74:ILE:HD11	2.16	0.61
1:E:697:GLN:HG3	1:E:730:LEU:HD11	1.82	0.61
1:A:449:GLN:NE2	1:F:248:MET:O	2.34	0.61
1:F:566:LYS:HD2	1:F:567:ILE:N	2.16	0.61
1:A:549:LYS:HE3	1:A:646:THR:C	2.21	0.61
1:F:565:ILE:HG23	1:F:599:CYS:HB3	1.81	0.61
1:C:540:LEU:HD12	1:C:644:GLY:O	2.01	0.61
1:F:95:MET:CE	1:F:97:ILE:HD11	2.30	0.61
1:A:231:PHE:CE1	1:A:235:PHE:HE2	2.18	0.61
1:B:236:ALA:HA	1:B:239:VAL:HG12	1.83	0.61
1:E:240:PHE:HB3	1:E:244:ILE:HB	1.83	0.61
1:A:597:LEU:HD23	1:A:597:LEU:C	2.21	0.61
1:D:585:MET:O	1:D:589:PHE:HD2	1.84	0.61
2:I:69:ALA:HB1	2:I:85:PHE:CE1	2.36	0.61
1:E:284:VAL:HG23	1:E:324:ILE:O	2.00	0.61
1:D:606:GLU:O	1:D:610:ASP:N	2.34	0.61
1:A:628:VAL:HG11	1:B:571:ASP:HA	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:64:LEU:HB3	1:C:65:PRO:HD3	1.81	0.61
1:C:436:PHE:HB3	1:C:440:GLU:OE1	2.00	0.61
1:B:548:GLY:O	1:B:552:LEU:HD23	2.00	0.61
1:A:627:LEU:HD13	1:B:607:ARG:HH12	1.66	0.61
1:B:563:PRO:HD2	1:B:597:LEU:HB2	1.83	0.61
1:B:295:VAL:HB	1:C:294:TYR:CG	2.36	0.61
1:D:312:GLU:OE1	1:D:323:HIS:ND1	2.33	0.60
1:C:576:PHE:HB2	1:C:581:LYS:HE3	1.83	0.60
1:C:579:THR:O	1:C:583:GLN:HG2	2.01	0.60
1:D:436:PHE:HE2	1:D:444:LEU:HD12	1.66	0.60
1:D:122:ILE:HD12	1:D:181:SER:HB2	1.83	0.60
1:A:382:ALA:O	1:A:385:ARG:HG2	2.02	0.60
1:C:695:ALA:HB1	1:C:699:LYS:HE3	1.83	0.60
1:F:96:THR:HG21	1:F:150:LYS:HB2	1.83	0.60
1:B:106:ASN:HB3	1:B:143:LYS:NZ	2.16	0.60
1:A:184:ALA:HB1	1:A:200:LYS:O	2.01	0.60
2:G:200:TYR:O	2:G:203:LYS:HE2	2.01	0.60
1:C:711:LEU:O	1:C:715:GLU:HG2	2.01	0.60
1:D:527:GLN:NE2	1:E:715:GLU:O	2.32	0.60
2:J:200:TYR:O	2:J:203:LYS:HE2	2.01	0.60
2:J:57:ASN:O	2:J:59:SER:N	2.34	0.60
1:B:625:ALA:O	1:B:629:LEU:HG	2.02	0.60
1:C:614:ILE:C	1:C:616:PRO:HA	2.22	0.60
1:D:534:THR:OG1	1:E:715:GLU:HG2	2.01	0.60
1:C:383:LEU:HD22	1:C:388:ARG:HD2	1.83	0.60
1:C:375:ARG:HH12	1:C:378:LEU:HG	1.66	0.60
1:E:266:LYS:HG2	1:E:395:ILE:HG12	1.83	0.60
1:A:536:LEU:HD23	1:A:633:ALA:HA	1.83	0.60
3:K:87:LYS:HD2	5:M:204:GLY:OXT	2.02	0.60
1:C:540:LEU:HB2	1:C:661:PHE:CD2	2.35	0.60
1:C:658:LEU:HD11	1:C:664:THR:HG21	1.83	0.60
1:B:95:MET:HG3	1:B:152:ILE:HG12	1.83	0.60
1:D:256:ILE:O	1:D:370:ILE:HA	2.02	0.60
1:D:263:GLY:O	1:D:439:ALA:N	2.34	0.60
1:D:171:LYS:HB3	1:D:171:LYS:NZ	2.16	0.60
1:C:386:PRO:HD2	1:D:440:GLU:OE1	2.00	0.60
5:M:174:GLN:O	5:M:178:ILE:HG13	2.01	0.60
1:D:313:GLN:O	1:D:317:GLY:N	2.35	0.60
1:F:397:LEU:HB3	1:F:398:PRO:CD	2.32	0.60
1:A:617:ARG:HH11	1:A:617:ARG:HG3	1.65	0.60
2:H:232:PHE:HB2	2:H:233:PRO:HD3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:627:LEU:O	1:A:631:LYS:NZ	2.35	0.60
2:I:96:ASP:OD1	2:I:97:PRO:HD3	2.02	0.60
1:A:513:PRO:O	1:A:517:VAL:HG23	2.01	0.60
2:I:51:MET:HA	2:I:54:MET:HG2	1.83	0.60
1:E:326:ILE:HG22	1:E:370:ILE:HG13	1.83	0.60
1:A:540:LEU:HD11	1:A:646:THR:HG22	1.83	0.60
1:B:245:VAL:O	1:B:249:GLY:N	2.35	0.60
1:F:95:MET:HE2	1:F:97:ILE:HD11	1.84	0.60
2:I:34:GLY:O	2:I:38:ILE:HG22	2.02	0.60
1:D:404:LEU:HD11	1:D:427:LYS:HE3	1.83	0.60
2:J:67:GLN:O	2:J:71:LEU:HG	2.02	0.60
1:C:624:GLN:NE2	1:D:610:ASP:HB2	2.17	0.60
1:B:526:GLN:NE2	1:C:719:GLN:HB3	2.17	0.60
2:I:225:VAL:HG23	2:I:241:CYS:HB2	1.84	0.60
1:E:307:ALA:O	1:E:311:GLU:HG2	2.01	0.60
5:M:58:ASP:O	5:M:62:GLU:HG3	2.01	0.59
1:E:236:ALA:HA	1:E:239:VAL:HG12	1.84	0.59
5:M:74:ALA:O	5:M:78:LEU:HG	2.02	0.59
1:D:312:GLU:HG2	1:D:313:GLN:H	1.66	0.59
1:E:407:LEU:CD1	1:E:426:ILE:HG23	2.32	0.59
1:B:571:ASP:OD2	1:B:571:ASP:N	2.34	0.59
1:F:197:GLY:O	1:F:200:LYS:HE2	2.01	0.59
4:L:218:ASP:O	4:L:222:LEU:HG	2.01	0.59
1:B:354:LEU:O	1:B:358:ILE:HG12	2.03	0.59
1:D:528:THR:OG1	1:D:537:VAL:HG21	2.02	0.59
1:D:625:ALA:O	1:D:629:LEU:HG	2.02	0.59
2:J:112:THR:HG23	2:J:117:PHE:HE1	1.66	0.59
2:H:230:GLU:HG2	2:H:231:LEU:N	2.17	0.59
1:F:612:VAL:CG1	1:F:617:ARG:HB2	2.32	0.59
1:C:577:SER:O	1:C:580:ALA:N	2.33	0.59
1:D:513:PRO:HB3	1:D:516:ARG:HE	1.65	0.59
1:F:354:LEU:O	1:F:358:ILE:HG12	2.02	0.59
1:F:242:PRO:HD2	1:F:243:GLU:H	1.67	0.59
1:E:380:ASP:OD1	1:E:382:ALA:N	2.35	0.59
1:A:683:LEU:HB3	1:A:685:ASN:ND2	2.18	0.59
3:K:88:TYR:CD2	5:M:81:LEU:HD11	2.37	0.59
3:K:39:VAL:HG11	4:L:209:ILE:HD13	1.84	0.59
1:E:721:ASP:O	1:E:725:ARG:HG3	2.02	0.59
1:B:490:PRO:HA	1:B:491:ALA:CB	2.22	0.59
1:C:256:ILE:HG22	1:C:391:VAL:HG11	1.84	0.59
1:D:512:ASP:O	1:D:515:THR:OG1	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:582:CYS:SG	1:A:621:LEU:HG	2.43	0.59
1:C:46:ILE:HD12	1:C:174:VAL:HG21	1.84	0.59
1:A:560:SER:HB2	1:A:562:PHE:CE1	2.38	0.59
1:D:604:ASP:HB3	1:D:607:ARG:HB3	1.85	0.59
1:C:377:ASP:OD2	1:C:377:ASP:N	2.35	0.59
1:D:286:ASN:HB2	1:D:327:PHE:HD1	1.67	0.59
1:C:198:LYS:HD2	1:C:198:LYS:N	2.17	0.59
1:A:189:GLU:CD	1:A:189:GLU:H	2.06	0.59
1:B:327:PHE:HB2	1:B:330:ILE:CG2	2.32	0.59
1:B:407:LEU:CD1	1:B:426:ILE:HG23	2.32	0.59
1:D:67:ARG:CD	2:J:218:MET:HE2	2.33	0.59
1:C:511:GLY:HA3	1:C:513:PRO:HD2	1.85	0.59
1:A:670:ILE:HG23	1:A:675:GLN:HB2	1.85	0.59
1:C:12:PRO:HG2	1:C:23:VAL:HG11	1.85	0.59
1:C:256:ILE:HA	1:C:391:VAL:HG13	1.84	0.59
1:D:513:PRO:O	1:D:516:ARG:HG2	2.03	0.59
1:D:299:GLU:OE1	1:D:350:VAL:HG13	2.03	0.59
1:A:562:PHE:CD2	1:A:597:LEU:CD2	2.85	0.58
1:A:111:PRO:HD2	1:A:321:GLY:N	2.18	0.58
1:E:532:ASP:OD2	1:E:533:ARG:N	2.35	0.58
1:C:311:GLU:HA	1:C:314:ARG:HG2	1.85	0.58
1:E:573:MET:SD	1:E:581:LYS:HG2	2.43	0.58
1:F:380:ASP:OD1	1:F:382:ALA:N	2.34	0.58
1:B:128:GLN:O	1:B:176:LEU:HD12	2.04	0.58
1:A:67:ARG:NH1	1:A:74:ILE:HD11	2.18	0.58
1:A:726:VAL:O	1:A:730:LEU:HG	2.04	0.58
1:B:437:SER:O	1:B:440:GLU:HB2	2.03	0.58
1:B:545:PRO:O	1:B:546:HIS:HB2	2.03	0.58
1:B:296:GLY:H	1:B:297:GLU:CB	2.17	0.58
1:A:687:LYS:HB2	1:A:690:GLU:HG3	1.85	0.58
1:E:581:LYS:NZ	1:E:610:ASP:OD1	2.35	0.58
2:G:142:ILE:HG23	2:G:168:VAL:HG13	1.84	0.58
1:E:648:ARG:NE	1:E:650:ASP:OD1	2.31	0.58
2:J:225:VAL:HG23	2:J:241:CYS:HB2	1.84	0.58
1:F:604:ASP:HB3	1:F:607:ARG:HB2	1.85	0.58
1:C:533:ARG:HB2	1:D:715:GLU:OE1	2.03	0.58
1:F:383:LEU:O	1:F:389:LEU:HB2	2.03	0.58
1:D:383:LEU:O	1:D:389:LEU:HB2	2.03	0.58
1:D:267:THR:HA	1:D:372:MET:SD	2.44	0.58
5:M:176:ARG:HA	5:M:179:ASP:OD2	2.03	0.58
1:A:598:SER:OG	1:A:640:LEU:HD12	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:284:VAL:HG23	1:B:324:ILE:O	2.03	0.58
1:D:73:SER:O	1:D:76:GLN:HG2	2.03	0.58
1:D:114:THR:OG1	1:D:199:ALA:HB3	2.03	0.58
1:F:326:ILE:HG22	1:F:370:ILE:HG13	1.85	0.58
1:E:686:PHE:CE1	1:E:714:ILE:HG23	2.34	0.58
1:E:296:GLY:H	1:E:297:GLU:CB	2.16	0.58
1:B:605:ILE:HD11	1:B:644:GLY:HA3	1.84	0.58
1:B:578:GLU:HG3	1:B:619:SER:HB2	1.86	0.58
1:F:650:ASP:O	1:F:653:GLN:HG3	2.03	0.58
1:A:315:ARG:O	1:A:316:LEU:HD12	2.03	0.58
1:A:539:VAL:HG13	1:A:643:ILE:HA	1.84	0.58
1:B:380:ASP:OD1	1:B:382:ALA:N	2.36	0.58
1:C:240:PHE:CD2	1:C:244:ILE:HG21	2.29	0.58
1:E:713:LEU:HD22	1:E:732:LEU:HD13	1.85	0.58
1:D:618:PHE:CE2	1:E:614:ILE:HD12	2.39	0.58
1:A:694:ILE:O	1:A:698:VAL:HG13	2.04	0.58
1:E:289:GLU:C	1:E:291:LEU:H	2.07	0.57
2:G:69:ALA:HB1	2:G:85:PHE:CE1	2.39	0.57
2:I:38:ILE:CD1	2:I:71:LEU:HB3	2.33	0.57
1:F:521:GLY:O	1:F:525:VAL:HG23	2.04	0.57
1:A:242:PRO:HD2	1:A:243:GLU:H	1.69	0.57
1:C:404:LEU:O	1:C:408:HIS:HB2	2.03	0.57
1:B:397:LEU:CD2	1:B:398:PRO:HD2	2.34	0.57
2:J:21:VAL:HG23	2:J:38:ILE:HD12	1.86	0.57
1:C:728:LYS:O	1:C:732:LEU:HG	2.03	0.57
1:C:254:LYS:O	1:C:368:LEU:HA	2.04	0.57
1:C:490:PRO:HA	1:C:491:ALA:CB	2.28	0.57
5:M:36:VAL:HG23	5:M:156:ILE:HG21	1.85	0.57
1:F:554:ALA:O	1:F:558:GLU:HG3	2.05	0.57
1:B:589:PHE:HE2	1:B:629:LEU:HB3	1.68	0.57
1:F:407:LEU:CD1	1:F:426:ILE:HG23	2.34	0.57
1:A:257:LEU:HG	1:A:389:LEU:HD12	1.86	0.57
1:D:284:VAL:HB	1:D:325:ILE:HA	1.86	0.57
1:E:399:ASP:HB2	1:E:402:GLY:H	1.69	0.57
1:B:385:ARG:NH1	1:C:263:GLY:HA2	2.19	0.57
1:F:522:GLU:OE2	1:F:526:GLN:HG2	2.05	0.57
4:L:198:ARG:O	4:L:202:ILE:HG13	2.03	0.57
3:K:70:LEU:HD13	5:M:189:LYS:HB2	1.86	0.57
2:G:160:SER:OG	5:M:52:GLU:OE2	2.19	0.57
1:E:437:SER:O	1:E:440:GLU:HB2	2.05	0.57
1:B:695:ALA:HB1	1:B:699:LYS:HE3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:334:CYS:HA	1:C:351:VAL:HG22	1.86	0.57
1:B:670:ILE:HG23	1:B:675:GLN:HB2	1.86	0.57
1:D:680:LEU:HB2	1:D:691:ARG:HH21	1.68	0.57
1:C:606:GLU:HG2	1:C:607:ARG:N	2.18	0.57
5:M:200:THR:O	5:M:203:LEU:HB2	2.05	0.57
1:A:607:ARG:HD3	1:F:624:GLN:HE22	1.69	0.57
1:A:247:GLN:O	1:B:413:ARG:NH1	2.37	0.57
2:I:128:ALA:HB2	2:I:144:HIS:HB2	1.87	0.57
1:A:313:GLN:NE2	1:A:365:ASN:O	2.36	0.57
1:B:424:VAL:N	1:B:479:ASP:N	2.52	0.57
1:A:322:LEU:HA	1:A:366:ASN:O	2.04	0.57
1:E:502:TYR:CZ	1:E:567:ILE:HG21	2.40	0.57
1:D:510:TRP:CE3	1:D:675:GLN:HG2	2.34	0.57
1:B:404:LEU:O	1:B:408:HIS:HB2	2.05	0.57
1:A:306:PHE:CD1	1:A:357:LYS:HB3	2.40	0.57
5:M:68:ASN:O	5:M:72:LYS:HG3	2.04	0.57
1:E:289:GLU:O	1:E:291:LEU:N	2.25	0.57
1:A:307:ALA:O	1:A:310:GLU:HG3	2.05	0.57
1:C:490:PRO:HB2	1:C:492:PHE:N	2.20	0.56
1:C:240:PHE:HZ	1:D:456:HIS:HB3	1.69	0.56
2:I:75:LEU:O	2:I:76:GLN:HG2	2.04	0.56
1:E:672:THR:OG1	1:E:675:GLN:HB2	2.04	0.56
1:D:510:TRP:HB3	1:D:679:ALA:HB2	1.87	0.56
1:D:312:GLU:CG	1:D:313:GLN:N	2.67	0.56
1:C:407:LEU:CD1	1:C:426:ILE:HG23	2.32	0.56
1:D:686:PHE:CE1	1:D:714:ILE:HG23	2.40	0.56
1:B:267:THR:HA	1:B:372:MET:SD	2.46	0.56
3:K:39:VAL:O	3:K:43:VAL:HG23	2.05	0.56
1:E:240:PHE:HZ	1:F:456:HIS:HB2	1.69	0.56
1:F:562:PHE:HE2	1:F:597:LEU:HD12	1.69	0.56
1:C:540:LEU:HD23	1:C:649:LYS:HE3	1.88	0.56
1:C:411:THR:O	1:C:414:MET:HB2	2.06	0.56
1:B:353:GLN:HA	1:C:288:PRO:HG3	1.88	0.56
1:A:352:ASN:HA	1:A:355:LEU:HD12	1.87	0.56
1:A:449:GLN:O	1:A:453:MET:HG2	2.05	0.56
1:D:592:ALA:HB1	1:D:640:LEU:HD13	1.86	0.56
2:H:117:PHE:CD2	2:G:53:LYS:HE3	2.40	0.56
1:C:694:ILE:O	1:C:698:VAL:HG22	2.06	0.56
2:H:38:ILE:HD11	2:H:71:LEU:HB3	1.88	0.56
1:B:533:ARG:HG3	1:B:534:THR:HG23	1.87	0.56
5:M:55:GLU:HA	5:M:58:ASP:OD2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:502:TYR:OH	1:E:569:SER:OG	2.20	0.56
1:A:267:THR:OG1	1:A:328:ASP:OD2	2.23	0.56
1:B:361:VAL:O	1:C:271:ARG:HD2	2.05	0.56
1:D:648:ARG:HG3	1:D:651:VAL:HG23	1.87	0.56
1:F:196:ILE:CA	1:F:200:LYS:HD3	2.35	0.56
1:B:552:LEU:O	1:B:556:ILE:HG13	2.06	0.56
1:E:684:GLY:HA2	1:E:691:ARG:HH21	1.70	0.56
1:B:73:SER:O	1:B:76:GLN:HG2	2.05	0.56
1:C:95:MET:HG3	1:C:152:ILE:HG12	1.86	0.56
1:F:327:PHE:HB2	1:F:330:ILE:CG2	2.35	0.56
1:B:404:LEU:HG	1:B:426:ILE:HG22	1.88	0.56
1:C:524:LEU:HD21	1:C:537:VAL:HG12	1.87	0.56
1:F:296:GLY:H	1:F:297:GLU:CB	2.19	0.56
1:B:383:LEU:O	1:B:389:LEU:HB2	2.06	0.56
1:A:408:HIS:HA	1:A:426:ILE:HD12	1.88	0.56
1:C:690:GLU:CB	1:C:726:VAL:HG21	2.36	0.56
1:B:289:GLU:O	1:B:291:LEU:N	2.29	0.56
1:A:223:LEU:HD12	1:A:227:PHE:HB2	1.88	0.56
3:K:80:SER:O	3:K:84:LEU:HG	2.06	0.56
1:B:114:THR:OG1	1:B:199:ALA:HB3	2.06	0.56
1:C:555:LYS:HA	1:C:558:GLU:OE1	2.05	0.56
1:D:242:PRO:HD2	1:D:243:GLU:H	1.69	0.56
1:B:559:GLU:O	1:B:561:ASN:ND2	2.38	0.56
1:A:111:PRO:O	1:A:319:ASN:ND2	2.39	0.55
1:C:542:GLU:HB2	1:C:649:LYS:HD3	1.88	0.55
1:D:527:GLN:HE22	1:E:716:MET:HA	1.71	0.55
1:F:96:THR:HB	1:F:151:ASP:N	2.19	0.55
1:D:303:ARG:HD3	1:D:353:GLN:CG	2.36	0.55
2:G:128:ALA:HB2	2:G:144:HIS:HB2	1.87	0.55
1:A:676:LEU:CD1	1:A:710:LEU:HD11	2.36	0.55
1:E:573:MET:O	1:E:576:PHE:HB2	2.07	0.55
1:D:731:ALA:HA	1:D:734:ARG:NH1	2.21	0.55
1:C:527:GLN:HB2	1:D:719:GLN:HG3	1.88	0.55
2:I:116:ARG:HH11	2:I:116:ARG:HG3	1.71	0.55
1:F:437:SER:O	1:F:440:GLU:HB2	2.05	0.55
1:E:354:LEU:O	1:E:358:ILE:HG12	2.06	0.55
3:K:77:PHE:HE1	5:M:78:LEU:HD11	1.70	0.55
1:B:549:LYS:HZ3	1:B:647:SER:HA	1.72	0.55
5:M:180:ARG:O	5:M:184:LYS:HD3	2.07	0.55
2:I:127:ILE:HG23	2:I:131:TYR:CE1	2.41	0.55
2:G:232:PHE:H	2:G:233:PRO:HD2	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:593:TYR:O	1:D:638:ARG:HG2	2.07	0.55
2:H:233:PRO:HG2	2:G:268:SER:HA	1.87	0.55
1:F:67:ARG:HH12	1:F:74:ILE:HD11	1.71	0.55
1:A:678:GLU:O	1:A:681:GLU:HG2	2.05	0.55
5:M:177:GLN:HA	5:M:180:ARG:NH1	2.21	0.55
1:C:40:SER:OG	1:C:41:PRO:HD2	2.07	0.55
1:F:529:LYS:HG3	1:F:597:LEU:HD11	1.89	0.55
1:D:527:GLN:NE2	1:E:716:MET:HA	2.21	0.55
1:B:576:PHE:HB2	1:B:581:LYS:HG3	1.89	0.55
1:F:196:ILE:HA	1:F:200:LYS:HD3	1.89	0.55
1:F:503:ILE:HG22	1:F:506:GLY:H	1.71	0.55
1:F:18:LEU:HA	1:F:137:VAL:HG23	1.89	0.55
1:A:121:PHE:CD2	1:A:183:VAL:HG21	2.40	0.55
1:B:503:ILE:HG12	1:B:551:ALA:HA	1.88	0.55
2:H:40:GLU:O	2:H:44:ILE:HG12	2.07	0.55
1:E:242:PRO:HD2	1:E:243:GLU:H	1.71	0.55
1:F:715:GLU:O	1:F:719:GLN:HG2	2.07	0.55
1:E:652:LEU:HD22	1:E:658:LEU:HD13	1.89	0.55
1:D:315:ARG:C	1:D:316:LEU:HD12	2.27	0.55
1:D:67:ARG:HB3	2:J:218:MET:CG	2.37	0.55
1:A:690:GLU:O	1:A:694:ILE:HG13	2.05	0.55
5:M:56:GLN:O	5:M:60:VAL:HG23	2.06	0.55
1:A:411:THR:OG1	1:A:426:ILE:HD11	2.07	0.55
1:A:709:LYS:HA	1:A:709:LYS:HE2	1.88	0.55
1:A:688:ASP:OD1	1:A:689:LYS:N	2.39	0.55
2:I:149:ALA:HB2	2:I:164:CYS:HB2	1.89	0.55
1:F:632:LYS:HD2	1:F:633:ALA:H	1.71	0.55
1:A:242:PRO:HD2	1:A:243:GLU:CD	2.27	0.55
1:D:547:SER:OG	1:D:549:LYS:HG3	2.06	0.55
1:A:223:LEU:CD1	1:A:227:PHE:HB2	2.36	0.55
2:J:39:GLU:HB2	2:J:75:LEU:HD13	1.89	0.55
1:A:531:SER:O	1:A:639:LYS:HE2	2.05	0.55
1:B:414:MET:HA	1:B:414:MET:HE2	1.89	0.55
4:L:206:GLU:HG3	5:M:28:SER:OG	2.06	0.55
1:C:533:ARG:HD2	1:D:505:ASN:OD1	2.06	0.55
1:D:686:PHE:HB2	1:D:691:ARG:HG2	1.89	0.55
2:G:80:ASP:O	2:G:83:THR:OG1	2.24	0.55
1:F:542:GLU:O	1:F:666:HIS:ND1	2.39	0.55
2:H:39:GLU:HB2	2:H:75:LEU:HD11	1.88	0.55
2:H:124:HIS:HE1	2:H:147:GLN:HB3	1.71	0.55
1:E:671:ALA:HA	1:E:703:VAL:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:179:GLN:O	2:I:182:ILE:HG12	2.07	0.55
2:I:39:GLU:HB2	2:I:75:LEU:HD11	1.89	0.55
1:A:542:GLU:OE2	1:A:666:HIS:NE2	2.40	0.55
3:K:46:MET:O	3:K:50:VAL:HG23	2.07	0.55
1:B:589:PHE:CE2	1:B:629:LEU:HB3	2.41	0.55
1:E:383:LEU:O	1:E:389:LEU:HB2	2.07	0.55
2:I:108:ILE:HD12	2:I:127:ILE:HD12	1.89	0.55
2:J:35:SER:HB3	2:J:75:LEU:HD12	1.88	0.55
1:B:242:PRO:HD2	1:B:243:GLU:H	1.71	0.55
1:F:613:PRO:HD3	1:F:648:ARG:HH12	1.72	0.55
4:L:200:SER:O	4:L:204:LYS:HG3	2.07	0.55
1:E:527:GLN:HG3	1:F:719:GLN:HG3	1.87	0.55
1:B:289:GLU:C	1:B:291:LEU:H	2.09	0.55
1:D:10:ARG:HA	1:D:67:ARG:NH1	2.22	0.55
1:E:516:ARG:O	1:E:519:ASP:OD1	2.24	0.55
1:F:410:HIS:O	1:F:414:MET:HG2	2.06	0.55
1:D:632:LYS:HZ1	1:E:571:ASP:HB3	1.73	0.54
1:A:677:LEU:HG	1:A:695:ALA:HB2	1.88	0.54
1:D:67:ARG:HB3	2:J:218:MET:HG2	1.88	0.54
1:B:310:GLU:OE2	1:B:357:LYS:NZ	2.40	0.54
1:E:673:GLY:HA3	1:E:698:VAL:HB	1.89	0.54
1:A:571:ASP:HA	1:A:574:ILE:HG23	1.89	0.54
1:C:536:LEU:HD12	1:C:640:LEU:HB3	1.89	0.54
1:F:635:PRO:HD2	1:F:638:ARG:HD2	1.89	0.54
2:H:195:SER:C	2:H:197:LEU:H	2.10	0.54
1:C:688:ASP:O	1:C:692:THR:HG23	2.07	0.54
1:A:383:LEU:O	1:A:389:LEU:HB2	2.07	0.54
1:C:577:SER:O	1:C:579:THR:N	2.40	0.54
1:A:563:PRO:HG2	1:A:597:LEU:O	2.07	0.54
1:A:300:ALA:O	1:A:304:LYS:HG3	2.08	0.54
1:A:503:ILE:CG2	1:A:506:GLY:HA2	2.37	0.54
2:G:230:GLU:HG2	2:G:231:LEU:N	2.23	0.54
1:D:663:THR:HG22	1:D:664:THR:N	2.21	0.54
1:E:689:LYS:O	1:E:692:THR:OG1	2.25	0.54
1:C:653:GLN:HG3	1:C:658:LEU:HD23	1.89	0.54
1:E:552:LEU:HD11	1:E:667:VAL:HG11	1.88	0.54
4:L:248:VAL:O	4:L:252:LYS:HG3	2.07	0.54
1:A:625:ALA:O	1:A:629:LEU:HG	2.07	0.54
1:F:602:VAL:N	1:F:643:ILE:O	2.26	0.54
1:E:604:ASP:O	1:E:608:LEU:N	2.38	0.54
2:G:67:GLN:O	2:G:71:LEU:HG	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:227:PHE:O	1:C:231:PHE:HB2	2.08	0.54
2:G:57:ASN:O	2:G:59:SER:N	2.41	0.54
1:D:380:ASP:OD1	1:D:382:ALA:N	2.37	0.54
1:C:307:ALA:O	1:C:310:GLU:HG2	2.07	0.54
1:C:18:LEU:HA	1:C:137:VAL:HG23	1.90	0.54
1:A:293:LYS:O	1:A:294:TYR:CG	2.61	0.54
1:E:95:MET:HG3	1:E:152:ILE:HG12	1.90	0.54
2:H:239:ARG:NH2	4:L:217:MET:HG3	2.23	0.54
1:D:687:LYS:O	1:D:691:ARG:HG3	2.07	0.54
1:E:670:ILE:HD12	1:E:670:ILE:H	1.73	0.54
1:C:106:ASN:HB3	1:C:143:LYS:HZ2	1.72	0.54
1:C:64:LEU:O	1:C:68:LYS:HG3	2.07	0.54
5:M:17:ARG:CZ	5:M:21:LEU:HD21	2.38	0.54
1:B:270:ALA:O	1:B:273:ILE:HG22	2.08	0.54
2:H:256:VAL:HG11	2:H:288:GLN:HG2	1.90	0.54
1:F:544:PRO:HD2	1:F:547:SER:OG	2.08	0.54
1:F:105:LYS:CE	2:G:257:ASP:HB2	2.37	0.54
1:E:240:PHE:HZ	1:F:456:HIS:CB	2.21	0.54
1:A:111:PRO:HD2	1:A:320:SER:HA	1.89	0.54
1:E:550:THR:HA	1:E:645:THR:HG21	1.89	0.54
5:M:59:ARG:HA	5:M:62:GLU:OE1	2.08	0.54
1:F:270:ALA:O	1:F:273:ILE:HG22	2.08	0.54
1:E:104:LYS:HA	1:E:107:ILE:HD11	1.90	0.54
1:E:284:VAL:O	1:E:326:ILE:HG12	2.06	0.54
1:F:555:LYS:HA	1:F:555:LYS:HE2	1.90	0.54
1:F:542:GLU:HB2	1:F:666:HIS:HA	1.90	0.54
4:L:198:ARG:HG2	4:L:202:ILE:HD11	1.89	0.54
1:F:525:VAL:HG13	1:F:562:PHE:HE1	1.72	0.54
1:B:570:PRO:HG3	1:B:608:LEU:HD23	1.89	0.54
1:B:728:LYS:HE3	1:B:732:LEU:HD21	1.89	0.54
1:D:98:GLU:HB3	1:D:148:LEU:HB3	1.90	0.54
1:E:508:ILE:HB	1:E:682:LEU:HD13	1.90	0.54
1:D:681:GLU:HG2	1:D:691:ARG:NH1	2.23	0.53
1:D:257:LEU:HG	1:D:371:GLY:O	2.07	0.53
1:C:589:PHE:CD2	1:C:629:LEU:HD13	2.43	0.53
1:A:424:VAL:HG22	1:A:479:ASP:O	2.08	0.53
1:F:606:GLU:OE2	1:F:647:SER:HB2	2.07	0.53
3:K:51:ASP:O	3:K:55:GLU:HG3	2.07	0.53
1:A:12:PRO:HG2	1:A:23:VAL:HG11	1.90	0.53
1:F:710:LEU:O	1:F:714:ILE:HG13	2.08	0.53
3:K:56:ARG:HB3	3:K:56:ARG:NH1	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:657:MET:HG2	1:D:661:PHE:CE2	2.44	0.53
1:E:310:GLU:OE2	1:E:357:LYS:NZ	2.41	0.53
1:B:397:LEU:HD11	1:B:595:SER:HA	1.89	0.53
1:C:728:LYS:HE3	1:C:732:LEU:HD21	1.91	0.53
1:C:40:SER:HB3	1:C:43:HIS:HB2	1.88	0.53
1:C:18:LEU:HD13	1:C:139:SER:HB2	1.90	0.53
2:H:95:ALA:HB1	2:H:97:PRO:HD2	1.90	0.53
1:C:308:ASP:OD1	1:C:309:ALA:N	2.41	0.53
2:I:120:ALA:O	2:I:124:HIS:HB2	2.08	0.53
1:B:261:PRO:HB3	1:B:594:LYS:NZ	2.23	0.53
2:J:188:VAL:HG13	2:J:205:TYR:HD2	1.73	0.53
1:C:285:VAL:HG13	1:C:326:ILE:HD11	1.89	0.53
4:L:230:ILE:HD12	5:M:53:GLN:OE1	2.08	0.53
1:D:64:LEU:N	1:D:67:ARG:HH21	2.06	0.53
1:D:677:LEU:O	1:D:691:ARG:NH2	2.41	0.53
2:G:266:TYR:C	2:G:268:SER:H	2.10	0.53
1:F:245:VAL:O	1:F:249:GLY:N	2.37	0.53
1:E:399:ASP:O	1:E:403:ARG:N	2.34	0.53
1:B:626:LEU:O	1:B:630:LEU:HG	2.09	0.53
1:D:95:MET:HG3	1:D:152:ILE:HG12	1.91	0.53
1:B:284:VAL:O	1:B:326:ILE:HG12	2.09	0.53
2:I:116:ARG:HH21	3:K:66:ARG:HH12	1.57	0.53
1:A:406:ILE:O	1:A:409:ILE:HG22	2.09	0.53
1:D:686:PHE:HE1	1:D:714:ILE:HG23	1.74	0.53
1:D:524:LEU:O	1:D:527:GLN:HB3	2.08	0.53
1:D:23:VAL:HG12	1:D:55:VAL:HG21	1.90	0.53
5:M:171:ILE:HG22	5:M:175:ASN:HD21	1.73	0.53
1:E:684:GLY:HA2	1:E:691:ARG:NH2	2.24	0.53
1:F:559:GLU:OE1	1:F:559:GLU:HA	2.08	0.53
1:B:546:HIS:O	1:B:549:LYS:HE3	2.08	0.53
1:D:36:ILE:HD11	1:D:44:LYS:HB3	1.91	0.53
2:H:203:LYS:NZ	2:H:239:ARG:HH21	2.05	0.53
3:K:42:VAL:HG21	5:M:157:ILE:HD12	1.91	0.53
1:F:562:PHE:CD1	1:F:599:CYS:HB2	2.44	0.53
1:C:613:PRO:HD3	1:C:648:ARG:NH2	2.24	0.53
1:E:595:SER:HB3	1:E:598:SER:HB3	1.90	0.53
1:C:584:ALA:O	1:C:588:ILE:HG13	2.09	0.53
1:E:666:HIS:CD2	1:E:668:PRO:HD3	2.44	0.53
1:A:724:TYR:HD1	1:A:727:ARG:HH12	1.56	0.53
1:D:539:VAL:HG13	1:D:643:ILE:HG13	1.91	0.53
3:K:33:GLN:HG2	4:L:201:GLU:HG3	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:239:ARG:HH22	4:L:217:MET:HG3	1.73	0.53
1:F:617:ARG:HG3	1:F:617:ARG:HH11	1.73	0.53
1:F:263:GLY:HA3	1:F:437:SER:HA	1.89	0.53
2:H:72:HIS:CE1	2:H:80:ASP:HB2	2.44	0.53
3:K:67:ALA:O	3:K:70:LEU:HB3	2.09	0.53
1:A:121:PHE:HD2	1:A:183:VAL:HG21	1.73	0.53
1:F:236:ALA:HA	1:F:239:VAL:HG12	1.91	0.53
1:A:315:ARG:C	1:A:316:LEU:HD12	2.29	0.53
1:A:64:LEU:HA	1:A:67:ARG:HE	1.74	0.53
2:G:38:ILE:HD11	2:G:71:LEU:HB3	1.91	0.53
2:J:266:TYR:C	2:J:268:SER:H	2.11	0.53
1:C:122:ILE:O	1:C:126:ASN:HB3	2.08	0.53
1:A:544:PRO:HB2	1:A:669:ASN:ND2	2.24	0.53
1:A:113:ASP:O	1:A:117:MET:HG3	2.09	0.53
2:J:219:LEU:CB	2:J:222:LYS:HB3	2.36	0.53
1:C:135:GLN:HG2	1:C:148:LEU:HD13	1.91	0.53
1:F:720:MET:HB3	1:F:724:TYR:HB2	1.91	0.53
1:D:599:CYS:SG	1:D:641:LEU:HD22	2.49	0.53
1:E:267:THR:HA	1:E:372:MET:SD	2.48	0.53
2:H:57:ASN:O	2:H:59:SER:N	2.42	0.53
1:A:136:LEU:HD23	1:A:136:LEU:N	2.24	0.53
1:D:74:ILE:HG13	2:J:218:MET:HE3	1.91	0.52
1:A:64:LEU:HA	1:A:67:ARG:HH21	1.75	0.52
1:E:506:GLY:O	1:E:508:ILE:N	2.40	0.52
1:A:286:ASN:HB2	1:A:327:PHE:CB	2.39	0.52
1:C:388:ARG:NH1	1:C:388:ARG:HB2	2.24	0.52
1:A:536:LEU:HD23	1:A:634:PRO:HD3	1.91	0.52
1:D:265:GLY:O	1:D:268:LEU:HG	2.09	0.52
1:A:719:GLN:HG2	1:F:523:LEU:HG	1.91	0.52
2:I:119:ILE:O	2:I:122:LYS:HB2	2.09	0.52
1:D:113:ASP:O	1:D:117:MET:HG3	2.09	0.52
1:E:122:ILE:O	1:E:126:ASN:HB3	2.09	0.52
1:F:512:ASP:OD1	1:F:513:PRO:HD3	2.09	0.52
2:J:45:TYR:HB2	2:J:68:ALA:HB2	1.89	0.52
2:H:207:PHE:HB2	2:H:240:GLU:HG2	1.91	0.52
2:G:182:ILE:O	2:G:186:GLU:HG2	2.10	0.52
1:D:64:LEU:O	1:D:68:LYS:HG3	2.09	0.52
1:C:688:ASP:OD1	1:C:691:ARG:NH2	2.31	0.52
1:D:300:ALA:O	1:D:303:ARG:HB3	2.09	0.52
2:I:158:ASN:O	2:I:162:ASN:ND2	2.39	0.52
2:I:147:GLN:HG2	2:I:151:TYR:CE2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:242:PRO:HD2	1:C:243:GLU:H	1.74	0.52
1:E:313:GLN:O	1:E:317:GLY:N	2.42	0.52
1:C:444:LEU:HD12	1:C:445:VAL:HG23	1.91	0.52
1:A:525:VAL:HG13	1:A:562:PHE:CE1	2.43	0.52
1:E:549:LYS:O	1:E:552:LEU:HB2	2.10	0.52
1:B:421:SER:HB3	1:B:424:VAL:HG23	1.91	0.52
1:E:666:HIS:HD2	1:E:668:PRO:HD3	1.75	0.52
2:G:239:ARG:NH2	5:M:37:GLU:OE1	2.42	0.52
1:C:521:GLY:HA3	1:C:556:ILE:HD13	1.92	0.52
1:E:36:ILE:HD11	1:E:44:LYS:HB3	1.91	0.52
1:A:428:GLU:O	1:A:432:GLU:HG2	2.10	0.52
1:C:281:GLU:CB	1:C:324:ILE:HD13	2.40	0.52
1:F:289:GLU:O	1:F:291:LEU:N	2.32	0.52
2:H:179:GLN:O	2:H:182:ILE:HG12	2.10	0.52
2:J:175:LEU:HD23	2:J:177:GLN:HE21	1.74	0.52
1:F:635:PRO:HB2	1:F:638:ARG:NH1	2.25	0.52
1:F:128:GLN:O	1:F:176:LEU:HD12	2.09	0.52
1:D:128:GLN:O	1:D:176:LEU:HD12	2.09	0.52
1:F:450:SER:O	1:F:453:MET:HB2	2.09	0.52
1:B:34:HIS:HB2	1:B:83:TYR:O	2.10	0.52
1:C:399:ASP:O	1:C:403:ARG:N	2.36	0.52
2:H:243:LEU:HD13	2:H:266:TYR:HB2	1.92	0.52
2:H:246:LYS:HZ1	2:H:258:SER:HB3	1.75	0.52
1:D:94:THR:HA	1:D:182:GLN:O	2.09	0.52
1:C:703:VAL:O	1:C:704:TRP:HD1	1.93	0.52
1:B:113:ASP:O	1:B:117:MET:HG3	2.09	0.52
1:F:86:ASP:C	1:F:88:ALA:H	2.13	0.52
2:H:9:GLU:O	2:H:13:LEU:HG	2.10	0.52
1:B:606:GLU:N	1:B:606:GLU:OE1	2.43	0.52
1:D:312:GLU:O	1:D:316:LEU:N	2.38	0.52
1:A:716:MET:HG2	1:A:732:LEU:HD11	1.92	0.52
1:E:18:LEU:HD13	1:E:139:SER:OG	2.10	0.52
5:M:52:GLU:O	5:M:56:GLN:HG3	2.10	0.52
1:B:106:ASN:HB3	1:B:143:LYS:HZ1	1.75	0.52
1:E:270:ALA:O	1:E:273:ILE:HG22	2.09	0.52
1:A:222:GLY:O	1:A:224:ASP:N	2.42	0.52
5:M:171:ILE:HG22	5:M:175:ASN:ND2	2.24	0.52
1:D:528:THR:CB	1:D:641:LEU:HD12	2.40	0.52
1:A:227:PHE:CE1	1:A:273:ILE:HD13	2.45	0.52
1:F:14:ASP:O	1:F:18:LEU:HG	2.09	0.52
1:D:104:LYS:HA	1:D:107:ILE:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:244:MET:O	2:H:248:LEU:HG	2.09	0.52
2:G:40:GLU:O	2:G:44:ILE:HG12	2.09	0.52
2:J:149:ALA:HB2	2:J:164:CYS:HB2	1.92	0.52
2:H:219:LEU:HD12	2:H:223:LEU:HB2	1.91	0.52
1:C:525:VAL:HG13	1:C:562:PHE:CZ	2.45	0.52
1:F:562:PHE:HB2	1:F:565:ILE:HG12	1.92	0.52
1:D:527:GLN:NE2	1:E:715:GLU:HG3	2.23	0.52
1:A:355:LEU:HB3	1:A:388:ARG:NH1	2.25	0.52
1:F:96:THR:O	1:F:149:VAL:HA	2.10	0.52
1:B:576:PHE:HB3	1:B:580:ALA:HB3	1.90	0.52
1:C:231:PHE:O	1:C:235:PHE:HB2	2.09	0.52
1:C:326:ILE:HB	1:C:370:ILE:HD11	1.92	0.52
1:D:604:ASP:HB3	1:D:607:ARG:HB2	1.91	0.52
1:C:611:TYR:CZ	1:C:651:VAL:HG11	2.45	0.52
2:I:271:ARG:NH2	2:J:231:LEU:HB2	2.25	0.52
2:G:127:ILE:HG23	2:G:131:TYR:CE1	2.44	0.52
1:F:655:MET:O	1:F:656:GLU:CB	2.58	0.52
1:E:705:ILE:HD13	1:E:710:LEU:HD13	1.91	0.51
1:A:300:ALA:HA	1:A:303:ARG:HG2	1.92	0.51
1:A:607:ARG:NH1	1:F:624:GLN:OE1	2.42	0.51
1:A:407:LEU:HD12	1:A:426:ILE:HG23	1.92	0.51
2:I:116:ARG:NH1	5:M:186:ASP:OD2	2.43	0.51
1:A:646:THR:HG21	1:A:652:LEU:HD22	1.93	0.51
1:E:527:GLN:NE2	1:F:716:MET:HG2	2.20	0.51
1:E:664:THR:C	1:E:665:ILE:HD13	2.29	0.51
1:A:565:ILE:HA	1:A:599:CYS:O	2.09	0.51
2:G:51:MET:HA	2:G:54:MET:HG2	1.93	0.51
5:M:25:SER:O	5:M:29:THR:HG23	2.11	0.51
1:C:612:VAL:CG1	1:C:617:ARG:HB3	2.40	0.51
2:G:266:TYR:CZ	2:G:270:SER:HB2	2.44	0.51
1:A:598:SER:O	1:A:640:LEU:HA	2.11	0.51
2:H:112:THR:HG23	2:H:117:PHE:CE1	2.45	0.51
1:D:43:HIS:HB3	1:D:45:TYR:HE1	1.74	0.51
1:E:611:TYR:CE1	1:E:616:PRO:HB2	2.44	0.51
1:D:260:GLY:N	1:D:266:LYS:HD3	2.25	0.51
2:J:167:LYS:HE2	2:J:171:TYR:HE2	1.75	0.51
1:F:313:GLN:O	1:F:317:GLY:N	2.43	0.51
1:F:544:PRO:O	1:F:547:SER:OG	2.25	0.51
1:D:657:MET:HG2	1:D:661:PHE:HE2	1.76	0.51
1:E:612:VAL:HG22	1:E:613:PRO:HD2	1.92	0.51
1:F:517:VAL:HG13	1:F:665:ILE:CG2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:512:ASP:N	1:D:513:PRO:CD	2.74	0.51
1:A:102:LEU:HD22	1:A:137:VAL:HG12	1.91	0.51
1:D:560:SER:HB2	1:D:562:PHE:CD1	2.45	0.51
2:J:243:LEU:HD13	2:J:266:TYR:HB2	1.92	0.51
1:A:546:HIS:NE2	1:F:659:ASN:OD1	2.43	0.51
2:H:69:ALA:HB1	2:H:85:PHE:CE1	2.45	0.51
1:E:428:GLU:O	1:E:432:GLU:HG2	2.10	0.51
2:H:155:GLU:C	2:H:157:SER:N	2.64	0.51
1:A:326:ILE:HG22	1:A:370:ILE:CG1	2.41	0.51
1:E:247:GLN:HA	1:F:417:HIS:ND1	2.26	0.51
1:C:614:ILE:O	1:C:616:PRO:HA	2.10	0.51
1:D:618:PHE:HE1	1:E:612:VAL:HG21	1.76	0.51
5:M:179:ASP:O	5:M:183:GLU:HG2	2.11	0.51
2:J:243:LEU:HD22	2:J:266:TYR:CD2	2.45	0.51
1:C:310:GLU:OE2	1:C:357:LYS:NZ	2.27	0.51
2:H:49:ALA:HB2	2:H:64:ALA:HB3	1.93	0.51
1:A:283:LYS:HA	1:A:324:ILE:O	2.11	0.51
5:M:44:ILE:O	5:M:48:VAL:HG23	2.11	0.51
1:D:313:GLN:OE1	1:D:365:ASN:O	2.29	0.51
2:I:200:TYR:C	3:K:47:ARG:HH12	2.14	0.51
1:B:570:PRO:HD3	1:B:603:ASP:HB3	1.93	0.51
5:M:177:GLN:O	5:M:181:ILE:HG13	2.11	0.51
2:I:124:HIS:HE1	2:I:147:GLN:HB3	1.76	0.51
2:J:69:ALA:HB1	2:J:85:PHE:CE1	2.46	0.51
1:D:221:GLY:HA3	1:D:406:ILE:HD13	1.93	0.51
2:G:260:THR:HG21	2:G:284:LYS:HE3	1.93	0.51
1:A:521:GLY:HA2	1:A:524:LEU:HD12	1.93	0.51
1:D:522:GLU:OE2	1:D:556:ILE:HA	2.10	0.51
1:D:656:GLU:OE1	1:E:613:PRO:HB3	2.10	0.51
2:H:67:GLN:O	2:H:71:LEU:HG	2.10	0.51
1:E:674:GLU:O	1:E:677:LEU:HB2	2.11	0.51
1:C:573:MET:HB3	1:C:576:PHE:CD2	2.46	0.51
1:F:653:GLN:HB3	1:F:658:LEU:HD23	1.93	0.51
1:E:46:ILE:HD12	1:E:174:VAL:HG21	1.92	0.51
1:C:136:LEU:N	1:C:136:LEU:HD23	2.26	0.51
1:A:198:LYS:O	1:A:198:LYS:HD3	2.10	0.51
2:J:235:PHE:CB	3:K:38:GLN:HE21	2.17	0.51
1:E:327:PHE:CZ	1:E:369:VAL:HG21	2.46	0.51
1:A:686:PHE:CE2	1:A:714:ILE:HG12	2.37	0.51
2:H:45:TYR:HE2	2:H:71:LEU:HD11	1.75	0.51
1:C:236:ALA:HB1	1:D:453:MET:CB	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:163:LYS:O	2:I:167:LYS:HG2	2.10	0.51
1:B:136:LEU:N	1:B:136:LEU:HD23	2.26	0.51
2:I:67:GLN:O	2:I:71:LEU:HG	2.11	0.51
1:C:404:LEU:HG	1:C:426:ILE:HG22	1.93	0.51
1:C:596:GLN:HA	1:C:638:ARG:CD	2.40	0.51
2:J:230:GLU:HG3	2:J:237:ASP:CB	2.41	0.51
1:A:673:GLY:O	1:A:677:LEU:HD22	2.11	0.51
1:E:303:ARG:CG	1:E:357:LYS:HE2	2.41	0.51
2:G:153:LYS:HE2	2:G:158:ASN:HD22	1.76	0.51
2:G:185:TYR:HA	2:G:188:VAL:HG12	1.92	0.51
1:F:538:SER:H	1:F:662:SER:CB	2.24	0.51
1:C:375:ARG:NH1	1:C:378:LEU:HG	2.26	0.51
1:F:113:ASP:O	1:F:117:MET:HG3	2.11	0.51
1:E:230:ILE:HD11	1:E:391:VAL:HG11	1.93	0.51
1:C:295:VAL:O	1:D:294:TYR:HB2	2.10	0.51
1:F:258:LEU:CB	1:F:395:ILE:HD11	2.40	0.50
1:B:539:VAL:HG21	1:B:665:ILE:HD12	1.93	0.50
1:E:64:LEU:HA	1:E:67:ARG:HE	1.75	0.50
1:F:721:ASP:HB2	1:F:724:TYR:CD1	2.44	0.50
1:D:528:THR:HG22	1:D:597:LEU:HD11	1.93	0.50
1:A:546:HIS:CE1	1:A:709:LYS:HE3	2.46	0.50
5:M:26:LEU:HG	5:M:30:ARG:HH12	1.75	0.50
1:E:590:ASP:O	1:E:593:TYR:HB2	2.11	0.50
1:B:24:VAL:HG12	1:B:60:VAL:HG13	1.92	0.50
2:H:197:LEU:HD12	5:M:45:ARG:CD	2.41	0.50
1:C:524:LEU:CD2	1:C:537:VAL:HG11	2.37	0.50
1:D:618:PHE:CE1	1:E:612:VAL:HG21	2.47	0.50
1:B:303:ARG:CG	1:B:357:LYS:HE2	2.41	0.50
1:C:399:ASP:O	1:C:402:GLY:N	2.45	0.50
1:F:281:GLU:N	1:F:282:PRO:HA	2.26	0.50
1:E:245:VAL:O	1:E:249:GLY:N	2.39	0.50
1:D:136:LEU:HD23	1:D:136:LEU:N	2.26	0.50
1:C:730:LEU:O	1:C:734:ARG:HG3	2.11	0.50
5:M:171:ILE:CG2	5:M:175:ASN:HD21	2.24	0.50
2:H:158:ASN:N	4:L:228:GLU:OE1	2.43	0.50
1:F:284:VAL:O	1:F:326:ILE:HG12	2.12	0.50
1:A:315:ARG:HG2	1:A:316:LEU:CD1	2.40	0.50
1:C:612:VAL:HG12	1:C:617:ARG:HB3	1.93	0.50
1:C:691:ARG:HB2	1:C:691:ARG:HH11	1.76	0.50
1:B:571:ASP:O	1:B:574:ILE:HG13	2.11	0.50
1:B:295:VAL:C	1:C:294:TYR:HB2	2.31	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:565:ILE:HG13	1:A:599:CYS:HB3	1.92	0.50
1:A:347:HIS:N	1:A:348:ASP:HA	2.25	0.50
2:G:20:LYS:HE2	2:G:37:LYS:HA	1.93	0.50
1:C:233:ARG:CZ	1:C:233:ARG:HB2	2.41	0.50
1:D:593:TYR:OH	1:D:632:LYS:HD2	2.11	0.50
2:G:235:PHE:CD2	5:M:152:GLN:HG2	2.46	0.50
1:C:686:PHE:HE1	1:C:714:ILE:HG23	1.76	0.50
1:C:677:LEU:HD21	1:C:695:ALA:CB	2.42	0.50
2:J:200:TYR:HE2	3:K:41:GLU:CG	2.23	0.50
1:D:89:LYS:NZ	1:D:170:GLN:HE22	2.10	0.50
1:F:267:THR:HA	1:F:372:MET:SD	2.52	0.50
1:C:284:VAL:HG11	1:C:305:LEU:HD11	1.93	0.50
1:C:24:VAL:O	1:C:51:THR:HA	2.12	0.50
1:B:651:VAL:CG1	1:B:655:MET:CE	2.90	0.50
1:E:136:LEU:N	1:E:136:LEU:HD23	2.25	0.50
1:C:560:SER:HB2	1:C:562:PHE:CE1	2.46	0.50
1:E:585:MET:HG3	1:E:589:PHE:HZ	1.69	0.50
1:B:589:PHE:HD2	1:B:629:LEU:HD22	1.76	0.50
1:E:654:GLU:CD	1:F:614:ILE:HD11	2.32	0.50
1:F:589:PHE:CD2	1:F:629:LEU:HD22	2.47	0.50
1:F:436:PHE:HB3	1:F:440:GLU:CB	2.41	0.50
1:E:593:TYR:CD2	1:E:635:PRO:HD3	2.47	0.50
1:A:95:MET:HG3	1:A:152:ILE:HG12	1.92	0.50
2:G:244:MET:O	2:G:248:LEU:HG	2.12	0.50
1:B:499:TYR:HA	1:B:502:TYR:CD2	2.46	0.50
5:M:142:ARG:HH11	5:M:142:ARG:HG2	1.76	0.50
1:A:650:ASP:OD1	1:A:650:ASP:N	2.45	0.50
5:M:149:ASN:HA	5:M:152:GLN:NE2	2.27	0.50
1:E:327:PHE:HB2	1:E:330:ILE:CG2	2.35	0.50
1:C:533:ARG:C	1:D:505:ASN:HD21	2.14	0.50
1:D:690:GLU:O	1:D:693:THR:OG1	2.22	0.50
2:I:200:TYR:CB	3:K:47:ARG:HH12	2.25	0.50
1:D:298:SER:O	1:D:301:ASN:HB3	2.12	0.50
1:D:331:ASP:HA	1:D:379:ILE:HD11	1.92	0.50
1:C:428:GLU:O	1:C:432:GLU:HG2	2.12	0.50
1:A:398:PRO:HD2	1:A:434:LYS:O	2.12	0.50
3:K:46:MET:SD	3:K:49:ASN:ND2	2.85	0.50
1:B:249:GLY:HA2	1:C:413:ARG:NH1	2.26	0.50
2:H:38:ILE:HG23	2:H:75:LEU:HD12	1.94	0.50
1:B:533:ARG:HG3	1:B:534:THR:N	2.26	0.50
1:A:258:LEU:O	1:A:372:MET:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:64:LEU:HA	1:F:67:ARG:HE	1.77	0.50
2:H:20:LYS:HG2	2:H:37:LYS:HB3	1.92	0.50
1:C:375:ARG:NH2	1:C:377:ASP:OD1	2.44	0.50
2:J:18:GLU:HA	2:J:21:VAL:HG12	1.94	0.50
1:D:114:THR:HG21	1:D:200:LYS:HG2	1.94	0.50
1:F:508:ILE:C	1:F:509:LYS:HD3	2.32	0.50
1:B:485:GLU:O	1:B:490:PRO:HD3	2.11	0.50
1:F:570:PRO:CG	1:F:604:ASP:HB2	2.39	0.50
1:D:310:GLU:O	1:D:313:GLN:NE2	2.45	0.50
1:D:616:PRO:HG2	1:E:614:ILE:HG21	1.93	0.50
1:B:353:GLN:HE21	1:B:357:LYS:HG2	1.77	0.50
1:F:114:THR:HG21	1:F:200:LYS:HA	1.93	0.50
1:D:589:PHE:CE2	1:D:629:LEU:HD13	2.46	0.50
2:G:256:VAL:HG22	2:G:256:VAL:O	2.12	0.50
1:E:258:LEU:HB3	1:E:395:ILE:HD11	1.94	0.50
1:B:503:ILE:HD11	1:B:554:ALA:HB3	1.94	0.50
1:A:286:ASN:HB2	1:A:327:PHE:HB3	1.93	0.50
1:B:651:VAL:HG12	1:B:655:MET:CE	2.42	0.50
1:B:628:VAL:CG1	1:C:571:ASP:HA	2.42	0.50
1:B:428:GLU:O	1:B:432:GLU:HG2	2.11	0.50
1:B:195:LEU:HB2	1:B:200:LYS:HE3	1.94	0.50
1:F:136:LEU:N	1:F:136:LEU:HD23	2.26	0.50
1:C:113:ASP:O	1:C:117:MET:HG3	2.12	0.50
2:H:98:GLN:CD	2:H:98:GLN:H	2.15	0.50
1:C:36:ILE:HD11	1:C:44:LYS:HB3	1.92	0.50
5:M:46:THR:O	5:M:50:LEU:HG	2.11	0.49
1:A:540:LEU:HD12	1:A:644:GLY:O	2.12	0.49
2:G:243:LEU:HD13	2:G:266:TYR:HB2	1.94	0.49
1:D:581:LYS:O	1:D:585:MET:HG2	2.12	0.49
1:D:330:ILE:HD12	1:D:331:ASP:N	2.27	0.49
2:H:112:THR:HG23	2:H:117:PHE:HE1	1.76	0.49
2:H:243:LEU:HD22	2:H:266:TYR:CD2	2.47	0.49
1:A:132:VAL:HG23	1:A:173:GLU:O	2.12	0.49
2:H:239:ARG:HH22	4:L:213:HIS:CE1	2.30	0.49
1:A:397:LEU:CB	1:A:398:PRO:CD	2.89	0.49
1:F:327:PHE:CZ	1:F:369:VAL:HG21	2.47	0.49
1:D:540:LEU:HD12	1:D:661:PHE:CE1	2.47	0.49
4:L:240:ALA:HA	4:L:243:TYR:CD2	2.44	0.49
1:F:64:LEU:O	1:F:68:LYS:HG2	2.12	0.49
2:I:214:PHE:CE1	2:I:216:ILE:HB	2.47	0.49
1:D:508:ILE:HG12	1:D:683:LEU:HD21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:614:ILE:O	1:B:616:PRO:HA	2.12	0.49
1:B:230:ILE:HD11	1:B:391:VAL:HG11	1.93	0.49
1:C:510:TRP:CE3	1:C:670:ILE:HG12	2.46	0.49
3:K:85:LYS:HG3	3:K:89:TRP:HE3	1.77	0.49
1:A:493:GLY:HA2	1:A:494:THR:CB	2.41	0.49
1:F:712:MET:O	1:F:716:MET:HG3	2.11	0.49
1:D:627:LEU:HD13	1:E:607:ARG:HH12	1.78	0.49
1:C:331:ASP:HA	1:C:379:ILE:CD1	2.39	0.49
1:B:569:SER:HA	1:B:603:ASP:HB3	1.95	0.49
1:B:63:SER:O	1:B:67:ARG:HG3	2.12	0.49
1:D:48:THR:HG21	1:D:128:GLN:HG2	1.95	0.49
1:A:683:LEU:HB3	1:A:685:ASN:HD22	1.75	0.49
1:A:411:THR:HG21	1:A:426:ILE:HD11	1.93	0.49
1:D:26:GLU:HG2	1:D:51:THR:HB	1.93	0.49
1:B:14:ASP:O	1:B:18:LEU:HD13	2.11	0.49
5:M:190:THR:HG22	5:M:194:GLU:OE2	2.12	0.49
5:M:31:ARG:O	5:M:35:LEU:HG	2.13	0.49
1:E:653:GLN:OE1	1:E:658:LEU:HD23	2.13	0.49
1:B:568:CYS:SG	1:B:588:ILE:HD12	2.53	0.49
1:A:445:VAL:O	1:A:449:GLN:HG2	2.12	0.49
1:C:589:PHE:CE1	1:C:600:VAL:HG11	2.48	0.49
1:A:299:GLU:HG3	1:B:289:GLU:CB	2.41	0.49
1:D:602:VAL:O	1:D:644:GLY:HA2	2.13	0.49
2:G:17:ALA:O	2:G:21:VAL:HG12	2.11	0.49
1:E:697:GLN:HG3	1:E:730:LEU:CD1	2.41	0.49
2:I:92:PHE:HD1	2:I:97:PRO:HG2	1.77	0.49
2:H:142:ILE:HG23	2:H:168:VAL:HG13	1.94	0.49
5:M:149:ASN:HA	5:M:152:GLN:HE21	1.77	0.49
1:A:505:ASN:OD1	1:A:711:LEU:HD13	2.13	0.49
2:G:162:ASN:OD1	2:G:188:VAL:HG23	2.13	0.49
1:E:352:ASN:HA	1:E:355:LEU:HD12	1.95	0.49
2:I:20:LYS:NZ	2:I:40:GLU:HG2	2.28	0.49
1:F:352:ASN:HA	1:F:355:LEU:HD12	1.93	0.49
1:D:721:ASP:O	1:D:725:ARG:HG3	2.13	0.49
2:I:18:GLU:HA	2:I:21:VAL:HG12	1.94	0.49
1:D:681:GLU:HG2	1:D:691:ARG:CZ	2.43	0.49
1:D:325:ILE:O	1:D:369:VAL:HA	2.13	0.49
1:F:411:THR:O	1:F:414:MET:HB2	2.13	0.49
1:B:499:TYR:HA	1:B:502:TYR:CE2	2.47	0.49
2:G:95:ALA:HB1	2:G:97:PRO:HD2	1.95	0.49
2:J:40:GLU:O	2:J:44:ILE:HG12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:120:ALA:O	2:J:124:HIS:HB2	2.12	0.49
1:C:347:HIS:O	1:C:350:VAL:HG22	2.13	0.49
1:A:295:VAL:HB	1:B:294:TYR:CB	2.43	0.49
1:B:272:GLN:OE1	1:B:272:GLN:HA	2.13	0.49
2:H:203:LYS:O	2:H:206:PHE:N	2.46	0.49
1:E:256:ILE:O	1:E:370:ILE:HA	2.13	0.49
1:C:609:LEU:O	1:C:610:ASP:HB2	2.11	0.49
2:I:142:ILE:HG23	2:I:168:VAL:HG13	1.95	0.49
2:J:124:HIS:HE1	2:J:147:GLN:HB3	1.77	0.49
2:I:50:ASN:ND2	2:J:115:GLY:HA2	2.27	0.49
1:C:101:PHE:CD2	1:C:107:ILE:HA	2.48	0.49
2:J:118:THR:O	2:J:122:LYS:HG2	2.13	0.49
3:K:66:ARG:NH2	5:M:182:MET:HB3	2.26	0.49
5:M:178:ILE:O	5:M:182:MET:HG3	2.12	0.49
1:E:510:TRP:CE3	1:E:670:ILE:HG13	2.47	0.49
1:D:284:VAL:HG21	1:D:325:ILE:HG22	1.95	0.49
1:D:268:LEU:HA	1:D:271:ARG:HD2	1.95	0.49
1:D:564:PHE:HD2	1:D:598:SER:HB2	1.78	0.49
3:K:69:ALA:O	3:K:72:ALA:HB3	2.12	0.49
1:F:103:GLN:C	1:F:105:LYS:H	2.15	0.49
1:F:105:LYS:HE2	2:G:257:ASP:HB2	1.95	0.49
2:I:17:ALA:O	2:I:21:VAL:HG12	2.12	0.49
2:I:45:TYR:HB2	2:I:68:ALA:HB2	1.94	0.49
2:G:223:LEU:O	2:G:227:LYS:HG3	2.13	0.49
1:F:535:PRO:HB2	1:F:536:LEU:HD13	1.93	0.49
1:C:705:ILE:HD11	1:C:710:LEU:HA	1.94	0.49
1:A:128:GLN:O	1:A:176:LEU:HD12	2.11	0.49
2:J:127:ILE:HG23	2:J:131:TYR:CE1	2.48	0.49
1:E:236:ALA:O	1:E:239:VAL:HG12	2.13	0.49
2:H:243:LEU:HD22	2:H:266:TYR:CG	2.48	0.49
1:F:45:TYR:CE2	1:F:70:ALA:HA	2.48	0.49
1:B:669:ASN:CG	1:B:706:GLY:HA2	2.33	0.49
2:I:266:TYR:CZ	2:I:270:SER:HB2	2.48	0.49
1:B:256:ILE:O	1:B:370:ILE:HA	2.13	0.48
1:C:677:LEU:HD11	1:C:698:VAL:CG2	2.42	0.48
1:F:95:MET:HG3	1:F:152:ILE:HG12	1.95	0.48
1:E:696:GLN:HB3	1:E:697:GLN:NE2	2.28	0.48
1:F:428:GLU:O	1:F:432:GLU:HG2	2.13	0.48
1:C:349:THR:O	1:C:352:ASN:HB3	2.13	0.48
2:H:185:TYR:HA	2:H:188:VAL:HG12	1.94	0.48
2:H:36:SER:OG	5:M:201:LYS:HE2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:170:GLU:HG3	5:M:174:GLN:NE2	2.27	0.48
2:H:45:TYR:HB2	2:H:68:ALA:HB2	1.94	0.48
1:A:262:PRO:HA	1:A:263:GLY:HA2	1.71	0.48
1:D:242:PRO:HD2	1:D:243:GLU:N	2.28	0.48
1:E:596:GLN:O	1:E:638:ARG:HA	2.13	0.48
1:B:45:TYR:CE2	1:B:70:ALA:HA	2.48	0.48
1:D:254:LYS:O	1:D:368:LEU:HA	2.13	0.48
3:K:56:ARG:HD2	5:M:171:ILE:HG12	1.95	0.48
1:D:670:ILE:HD11	1:D:705:ILE:HG23	1.94	0.48
1:D:310:GLU:O	1:D:313:GLN:HG2	2.13	0.48
1:C:611:TYR:HE1	1:C:616:PRO:HB2	1.76	0.48
1:E:538:SER:OG	1:E:662:SER:N	2.43	0.48
1:A:609:LEU:O	1:A:610:ASP:HB3	2.13	0.48
1:E:257:LEU:HG	1:E:371:GLY:O	2.13	0.48
1:D:663:THR:CG2	1:D:664:THR:N	2.76	0.48
1:C:193:LEU:HD21	1:C:195:LEU:HD21	1.95	0.48
1:A:490:PRO:HA	1:A:491:ALA:CB	2.23	0.48
1:E:404:LEU:HG	1:E:426:ILE:HG22	1.96	0.48
1:F:404:LEU:HG	1:F:426:ILE:HG22	1.96	0.48
1:F:114:THR:HG21	1:F:200:LYS:HG2	1.94	0.48
1:B:38:ARG:HB3	1:B:79:GLU:HB2	1.95	0.48
1:C:436:PHE:CD1	1:C:436:PHE:N	2.81	0.48
2:J:72:HIS:CE1	2:J:80:ASP:HB2	2.49	0.48
1:B:710:LEU:O	1:B:714:ILE:HG13	2.12	0.48
1:B:265:GLY:O	1:B:268:LEU:HG	2.13	0.48
1:A:611:TYR:CE2	1:A:651:VAL:HG11	2.48	0.48
1:D:652:LEU:HD13	1:D:657:MET:HB3	1.96	0.48
1:C:616:PRO:HG2	1:D:614:ILE:HD13	1.95	0.48
1:D:304:LYS:HA	1:D:307:ALA:HB3	1.95	0.48
1:A:612:VAL:HG12	1:A:617:ARG:HB2	1.94	0.48
1:B:236:ALA:O	1:B:239:VAL:HG12	2.14	0.48
2:H:182:ILE:O	2:H:186:GLU:HG2	2.14	0.48
2:J:235:PHE:CD2	3:K:38:GLN:HB2	2.49	0.48
1:E:714:ILE:O	1:E:718:LEU:HG	2.12	0.48
1:E:654:GLU:CG	1:F:614:ILE:HD11	2.43	0.48
1:E:598:SER:OG	1:E:639:LYS:O	2.16	0.48
1:D:618:PHE:HE2	1:E:614:ILE:HD12	1.78	0.48
1:A:388:ARG:O	1:A:389:LEU:HD22	2.13	0.48
1:A:620:ASN:ND2	1:B:610:ASP:OD1	2.46	0.48
1:D:326:ILE:HG22	1:D:370:ILE:HG13	1.95	0.48
1:B:578:GLU:CG	1:B:619:SER:HB2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:33:GLN:HG2	4:L:201:GLU:CB	2.44	0.48
1:F:236:ALA:O	1:F:239:VAL:HG12	2.13	0.48
1:E:281:GLU:N	1:E:282:PRO:HA	2.28	0.48
1:C:184:ALA:HB1	1:C:200:LYS:O	2.14	0.48
1:E:658:LEU:HD12	1:E:658:LEU:HA	1.62	0.48
2:J:201:SER:CB	5:M:165:LEU:HD11	2.37	0.48
1:A:299:GLU:HG2	1:A:353:GLN:HG2	1.95	0.48
1:E:670:ILE:HG22	1:E:672:THR:N	2.27	0.48
1:B:531:SER:HA	1:B:639:LYS:HD3	1.96	0.48
1:A:428:GLU:O	1:A:431:VAL:HG12	2.14	0.48
1:F:136:LEU:H	1:F:136:LEU:HD23	1.79	0.48
1:D:375:ARG:NH2	1:D:377:ASP:OD2	2.47	0.48
2:J:182:ILE:O	2:J:186:GLU:HG2	2.13	0.48
1:A:575:GLY:HA3	1:F:586:LYS:HZ1	1.79	0.48
1:D:315:ARG:O	1:D:316:LEU:HD12	2.14	0.48
1:E:705:ILE:HG13	1:E:709:LYS:HG3	1.95	0.48
2:I:201:SER:N	3:K:47:ARG:NH1	2.61	0.48
1:C:677:LEU:HD11	1:C:698:VAL:HG21	1.96	0.48
1:D:184:ALA:HA	1:D:199:ALA:O	2.14	0.48
1:A:403:ARG:O	1:A:407:LEU:HG	2.14	0.48
1:B:628:VAL:HG13	1:C:571:ASP:HA	1.95	0.48
1:B:516:ARG:O	1:B:519:ASP:OD1	2.31	0.48
1:B:352:ASN:HA	1:B:355:LEU:HD12	1.95	0.48
1:A:485:GLU:O	1:A:489:LYS:CB	2.62	0.48
2:H:201:SER:O	2:H:203:LYS:N	2.47	0.48
2:H:230:GLU:HG3	2:H:237:ASP:CB	2.41	0.48
1:E:526:GLN:HA	1:E:529:LYS:HG2	1.96	0.48
1:B:249:GLY:HA3	1:C:414:MET:CE	2.44	0.48
1:D:570:PRO:HA	1:D:573:MET:HB3	1.96	0.48
2:G:256:VAL:HG11	2:G:288:GLN:HG2	1.96	0.48
1:A:423:ASP:HB2	1:A:480:PHE:N	2.29	0.48
1:E:693:THR:O	1:E:697:GLN:NE2	2.22	0.48
1:F:18:LEU:HD13	1:F:139:SER:OG	2.13	0.48
1:C:322:LEU:HD22	1:C:366:ASN:O	2.14	0.48
1:D:578:GLU:OE1	1:D:621:LEU:HD13	2.13	0.48
1:D:402:GLY:HA2	1:D:405:GLN:OE1	2.12	0.48
1:B:399:ASP:O	1:B:403:ARG:N	2.42	0.48
1:A:593:TYR:HB3	1:A:635:PRO:HD3	1.96	0.48
1:A:104:LYS:HA	1:A:107:ILE:HD11	1.96	0.48
2:I:57:ASN:O	2:I:59:SER:N	2.46	0.48
3:K:42:VAL:HG11	5:M:160:LEU:CD1	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:325:ILE:HG13	1:B:369:VAL:HB	1.95	0.48
1:E:605:ILE:HA	1:E:608:LEU:HB3	1.96	0.48
1:C:612:VAL:CG2	1:C:613:PRO:HD2	2.44	0.48
2:G:177:GLN:HB3	2:G:180:LYS:HB2	1.96	0.48
3:K:83:LYS:HD2	5:M:203:LEU:CD1	2.43	0.48
3:K:29:ASN:CB	4:L:198:ARG:HH12	2.26	0.48
1:A:222:GLY:HA3	1:A:402:GLY:HA3	1.94	0.48
1:C:270:ALA:O	1:C:273:ILE:HG22	2.14	0.48
1:B:327:PHE:CZ	1:B:369:VAL:HG21	2.50	0.47
1:A:255:GLY:HA3	1:A:389:LEU:HD13	1.96	0.47
2:H:127:ILE:HG23	2:H:131:TYR:CE1	2.48	0.47
1:C:576:PHE:HB3	1:C:580:ALA:HB3	1.96	0.47
1:E:428:GLU:O	1:E:431:VAL:HG12	2.13	0.47
1:B:185:PHE:O	1:B:200:LYS:HA	2.14	0.47
1:B:91:CYS:O	1:B:154:ALA:HA	2.14	0.47
1:F:579:THR:O	1:F:583:GLN:HG2	2.13	0.47
1:F:286:ASN:OD1	1:F:327:PHE:HD1	1.97	0.47
5:M:45:ARG:O	5:M:49:MET:HG3	2.14	0.47
1:F:303:ARG:CG	1:F:357:LYS:HE2	2.39	0.47
1:D:531:SER:OG	1:D:534:THR:OG1	2.29	0.47
1:F:257:LEU:HG	1:F:371:GLY:O	2.12	0.47
1:B:406:ILE:HB	1:B:441:LEU:HD13	1.96	0.47
5:M:26:LEU:HG	5:M:30:ARG:NH1	2.29	0.47
1:C:26:GLU:HG2	1:C:51:THR:HB	1.95	0.47
1:C:36:ILE:HG23	1:C:36:ILE:O	2.13	0.47
1:B:319:ASN:HB3	1:B:320:SER:HB2	1.96	0.47
2:H:167:LYS:HE2	2:H:171:TYR:HE2	1.80	0.47
1:E:319:ASN:HB3	1:E:320:SER:HB2	1.95	0.47
2:I:14:LEU:O	2:I:17:ALA:HB3	2.14	0.47
2:H:203:LYS:HZ1	2:H:239:ARG:HH21	1.63	0.47
1:B:36:ILE:O	1:B:36:ILE:HG23	2.14	0.47
1:F:653:GLN:HA	1:F:658:LEU:HB3	1.94	0.47
1:C:18:LEU:HA	1:C:137:VAL:CG2	2.44	0.47
1:E:104:LYS:HA	1:E:107:ILE:CD1	2.44	0.47
1:D:95:MET:CE	1:D:97:ILE:HD11	2.44	0.47
1:B:428:GLU:O	1:B:431:VAL:HG12	2.14	0.47
1:C:91:CYS:O	1:C:154:ALA:HA	2.14	0.47
1:E:315:ARG:HG3	1:E:316:LEU:HD12	1.94	0.47
1:E:153:GLU:OE1	1:E:169:ARG:HD3	2.14	0.47
1:E:286:ASN:OD1	1:E:327:PHE:HD1	1.97	0.47
1:D:257:LEU:HB2	1:D:389:LEU:HD13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:243:LEU:HD22	2:G:266:TYR:CD2	2.49	0.47
2:G:243:LEU:HD22	2:G:266:TYR:CG	2.49	0.47
1:B:436:PHE:HB3	1:B:440:GLU:CB	2.44	0.47
2:G:179:GLN:O	2:G:182:ILE:HG12	2.13	0.47
2:J:256:VAL:HG21	2:J:288:GLN:HG3	1.95	0.47
4:L:216:PHE:CD2	5:M:39:SER:HB2	2.49	0.47
1:C:686:PHE:CE1	1:C:714:ILE:HG23	2.49	0.47
1:F:256:ILE:O	1:F:370:ILE:HA	2.14	0.47
1:C:681:GLU:HG3	1:C:691:ARG:HD2	1.97	0.47
1:D:655:MET:O	1:D:656:GLU:HB2	2.14	0.47
5:M:64:MET:HG3	5:M:181:ILE:HG23	1.95	0.47
2:J:212:CYS:HA	2:J:279:MET:HE2	1.95	0.47
1:B:579:THR:O	1:B:583:GLN:HG2	2.14	0.47
1:A:489:LYS:H	1:A:490:PRO:HD2	1.80	0.47
4:L:222:LEU:O	4:L:226:GLN:HG3	2.15	0.47
1:B:297:GLU:O	1:B:300:ALA:HB3	2.14	0.47
1:E:128:GLN:O	1:E:176:LEU:HD12	2.14	0.47
1:C:512:ASP:N	1:C:513:PRO:CD	2.77	0.47
1:E:257:LEU:HB2	1:E:389:LEU:HD13	1.96	0.47
2:J:96:ASP:H	2:J:97:PRO:HD2	1.80	0.47
2:I:162:ASN:O	2:I:166:LEU:HG	2.14	0.47
1:C:18:LEU:HD23	1:C:137:VAL:HG21	1.97	0.47
2:I:167:LYS:HE2	2:I:171:TYR:HE2	1.79	0.47
2:H:162:ASN:ND2	2:H:188:VAL:HG23	2.29	0.47
1:D:281:GLU:N	1:D:282:PRO:HA	2.29	0.47
1:D:635:PRO:O	1:D:638:ARG:HB2	2.14	0.47
1:C:562:PHE:O	1:C:565:ILE:HD11	2.15	0.47
2:J:201:SER:OG	2:J:205:TYR:HE1	1.92	0.47
2:J:219:LEU:H	2:J:219:LEU:HD23	1.80	0.47
1:D:694:ILE:O	1:D:698:VAL:HG22	2.15	0.47
1:E:612:VAL:CG2	1:E:613:PRO:HD2	2.45	0.47
1:C:626:LEU:HD13	1:C:657:MET:HE2	1.96	0.47
1:C:593:TYR:CE2	1:C:632:LYS:NZ	2.83	0.47
1:C:40:SER:HB3	1:C:43:HIS:CG	2.49	0.47
1:C:445:VAL:HG12	1:C:449:GLN:HE22	1.79	0.47
1:C:325:ILE:HG13	1:C:369:VAL:HG23	1.96	0.47
1:D:564:PHE:HB3	1:D:598:SER:HB3	1.95	0.47
1:E:26:GLU:HG2	1:E:51:THR:HB	1.95	0.47
1:B:455:ARG:HH21	1:B:481:LEU:CB	2.28	0.47
2:J:263:VAL:HG23	2:J:280:LEU:HD13	1.96	0.47
1:A:630:LEU:HD11	1:A:657:MET:HE3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:82:ALA:HB2	2:G:110:ILE:HG21	1.95	0.47
2:H:276:LEU:O	2:H:280:LEU:HG	2.14	0.47
3:K:46:MET:HA	3:K:49:ASN:HB2	1.95	0.47
1:C:721:ASP:O	1:C:725:ARG:HG3	2.14	0.47
1:B:257:LEU:HG	1:B:371:GLY:O	2.15	0.47
1:A:687:LYS:NZ	1:A:722:PRO:HB3	2.29	0.47
1:F:323:HIS:HB2	1:F:367:ILE:HG22	1.97	0.47
1:E:106:ASN:HB3	1:E:143:LYS:NZ	2.29	0.47
1:B:640:LEU:CD2	1:B:642:ILE:HG13	2.44	0.47
1:C:356:SER:HB3	1:D:288:PRO:HG3	1.97	0.47
1:D:611:TYR:CE2	1:D:613:PRO:HA	2.50	0.47
1:E:240:PHE:HE1	1:F:457:ILE:CD1	2.28	0.47
1:A:242:PRO:HD2	1:A:243:GLU:N	2.29	0.47
1:A:510:TRP:CE3	1:A:675:GLN:HG2	2.50	0.47
1:C:311:GLU:O	1:C:314:ARG:HG2	2.15	0.47
1:C:322:LEU:HD12	1:C:324:ILE:HD11	1.97	0.47
1:D:688:ASP:O	1:D:692:THR:HG23	2.15	0.47
1:D:246:GLU:HG2	1:D:247:GLN:N	2.30	0.47
3:K:50:VAL:O	3:K:54:LEU:HG	2.15	0.47
1:A:111:PRO:CD	1:A:320:SER:HA	2.45	0.47
1:A:256:ILE:CG1	1:A:370:ILE:HG22	2.44	0.47
1:B:627:LEU:HB3	1:C:607:ARG:NH2	2.29	0.47
1:D:453:MET:O	1:D:457:ILE:HG13	2.15	0.47
1:B:397:LEU:HD22	1:B:398:PRO:HD2	1.97	0.47
2:J:147:GLN:HG2	2:J:151:TYR:CE2	2.50	0.47
1:B:323:HIS:HB2	1:B:367:ILE:HG22	1.97	0.47
1:E:113:ASP:O	1:E:117:MET:HG3	2.15	0.47
1:E:16:LEU:HD11	1:E:52:HIS:CD2	2.50	0.47
5:M:28:SER:O	5:M:32:MET:HB2	2.15	0.46
1:C:707:ILE:O	1:C:711:LEU:HG	2.15	0.46
1:B:307:ALA:HA	1:B:310:GLU:HG2	1.97	0.46
1:A:564:PHE:CZ	1:A:566:LYS:HB2	2.50	0.46
2:G:188:VAL:HG13	2:G:205:TYR:HD2	1.80	0.46
1:F:686:PHE:HE1	1:F:714:ILE:HG23	1.79	0.46
2:H:180:LYS:O	2:H:184:ILE:HG13	2.15	0.46
1:D:45:TYR:CE2	1:D:70:ALA:HA	2.49	0.46
2:G:260:THR:HA	2:G:263:VAL:HG12	1.96	0.46
1:D:89:LYS:NZ	1:D:89:LYS:HB3	2.29	0.46
1:E:40:SER:OG	1:E:43:HIS:HB2	2.15	0.46
2:I:230:GLU:HG2	2:I:231:LEU:N	2.30	0.46
1:F:40:SER:HB3	1:F:43:HIS:ND1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:244:MET:O	2:I:248:LEU:HG	2.15	0.46
1:A:542:GLU:HA	1:A:646:THR:O	2.15	0.46
1:A:562:PHE:CE1	1:A:641:LEU:HD21	2.50	0.46
5:M:42:ALA:HA	5:M:45:ARG:CZ	2.44	0.46
1:D:536:LEU:HD21	1:D:630:LEU:O	2.15	0.46
2:G:203:LYS:HZ2	2:G:236:SER:C	2.18	0.46
5:M:34:GLN:HA	5:M:37:GLU:HB2	1.95	0.46
1:A:611:TYR:CE1	1:A:616:PRO:HB2	2.51	0.46
2:H:11:MET:HA	2:H:14:LEU:HD12	1.97	0.46
1:B:653:GLN:OE1	1:B:658:LEU:HD22	2.15	0.46
1:E:627:LEU:HG	1:E:657:MET:HE1	1.97	0.46
1:A:319:ASN:O	1:A:320:SER:HB2	2.15	0.46
1:A:111:PRO:HG3	1:A:321:GLY:O	2.16	0.46
1:C:414:MET:CE	1:C:414:MET:HA	2.45	0.46
1:E:562:PHE:CD1	1:E:597:LEU:HG	2.50	0.46
2:I:200:TYR:HB2	3:K:47:ARG:HH12	1.79	0.46
1:B:64:LEU:CA	1:B:67:ARG:HH21	2.28	0.46
2:G:45:TYR:HB2	2:G:68:ALA:HB2	1.98	0.46
1:B:149:VAL:HG11	1:B:152:ILE:HD11	1.98	0.46
2:J:63:ASN:O	2:J:67:GLN:HG3	2.15	0.46
1:E:46:ILE:HD12	1:E:174:VAL:HG11	1.96	0.46
4:L:210:ARG:HH21	5:M:31:ARG:HH21	1.63	0.46
1:D:312:GLU:HG3	1:D:313:GLN:N	2.31	0.46
1:D:627:LEU:HA	1:D:627:LEU:HD23	1.56	0.46
1:E:250:CYS:SG	1:F:446:ARG:HD2	2.55	0.46
1:C:355:LEU:O	1:C:388:ARG:NH2	2.42	0.46
1:D:571:ASP:O	1:D:574:ILE:HG13	2.15	0.46
2:I:81:ALA:O	2:I:85:PHE:HD1	1.99	0.46
1:B:261:PRO:HB3	1:B:594:LYS:HZ2	1.78	0.46
1:F:289:GLU:C	1:F:291:LEU:H	2.14	0.46
1:E:111:PRO:HB2	1:E:196:ILE:HD13	1.98	0.46
1:E:188:ALA:O	1:E:189:GLU:C	2.53	0.46
1:C:45:TYR:CE2	1:C:70:ALA:HA	2.50	0.46
1:D:542:GLU:OE2	1:D:649:LYS:HD2	2.16	0.46
1:C:240:PHE:HE2	1:D:456:HIS:HD1	1.62	0.46
2:I:21:VAL:HG23	2:I:38:ILE:HD13	1.96	0.46
1:B:249:GLY:N	1:C:414:MET:HE1	2.30	0.46
1:C:536:LEU:CD1	1:C:640:LEU:HB3	2.46	0.46
4:L:252:LYS:O	4:L:255:VAL:HG22	2.15	0.46
1:B:628:VAL:HG13	1:C:571:ASP:OD1	2.16	0.46
2:G:98:GLN:C	2:G:100:ALA:H	2.19	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:67:ILE:O	5:M:71:MET:HG2	2.15	0.46
1:C:568:CYS:HB2	1:C:602:VAL:HA	1.97	0.46
4:L:212:LEU:HA	4:L:215:MET:CE	2.46	0.46
1:F:325:ILE:HG13	1:F:369:VAL:HB	1.96	0.46
1:E:510:TRP:CE3	1:E:511:GLY:HA3	2.50	0.46
1:F:503:ILE:HD11	1:F:554:ALA:HB3	1.98	0.46
1:C:428:GLU:O	1:C:431:VAL:HG12	2.15	0.46
1:B:46:ILE:HD12	1:B:174:VAL:HG21	1.97	0.46
2:G:118:THR:O	2:G:122:LYS:HG2	2.15	0.46
2:G:235:PHE:CD2	5:M:152:GLN:HA	2.50	0.46
1:D:310:GLU:O	1:D:313:GLN:CG	2.64	0.46
2:J:203:LYS:HD3	2:J:236:SER:HB3	1.97	0.46
1:D:407:LEU:O	1:D:411:THR:HG23	2.16	0.46
1:C:64:LEU:HA	1:C:67:ARG:HH21	1.81	0.46
1:E:236:ALA:HA	1:E:239:VAL:CG1	2.46	0.46
1:E:440:GLU:O	1:E:444:LEU:HG	2.16	0.46
1:D:519:ASP:O	1:D:523:LEU:HG	2.15	0.46
1:E:272:GLN:HA	1:E:272:GLN:OE1	2.14	0.46
1:B:249:GLY:HA3	1:C:414:MET:HE1	1.96	0.46
1:C:106:ASN:HB3	1:C:143:LYS:HZ1	1.77	0.46
5:M:62:GLU:O	5:M:66:HIS:HB2	2.16	0.46
1:B:76:GLN:HE21	1:B:78:ILE:CG2	2.29	0.46
1:A:546:HIS:CE1	1:F:659:ASN:OD1	2.69	0.46
2:G:182:ILE:CG2	2:G:212:CYS:HB2	2.46	0.46
1:A:548:GLY:C	1:A:550:THR:N	2.65	0.46
2:H:166:LEU:HD21	2:H:205:TYR:CE2	2.51	0.46
1:B:281:GLU:N	1:B:282:PRO:HA	2.31	0.46
4:L:210:ARG:NH2	5:M:31:ARG:HH21	2.13	0.46
1:A:398:PRO:HG3	1:A:436:PHE:C	2.36	0.46
2:G:79:HIS:O	2:G:83:THR:HG23	2.15	0.46
1:E:307:ALA:HA	1:E:310:GLU:HG2	1.98	0.46
1:C:513:PRO:HA	1:C:516:ARG:HG2	1.98	0.46
2:G:203:LYS:HB3	2:G:240:GLU:HG3	1.98	0.46
1:C:23:VAL:HG12	1:C:55:VAL:CG2	2.46	0.46
2:J:287:ILE:O	2:J:291:GLU:HG3	2.15	0.46
1:F:23:VAL:HG12	1:F:55:VAL:HG21	1.98	0.46
1:E:531:SER:HB3	1:E:534:THR:O	2.16	0.46
1:B:523:LEU:HA	1:B:526:GLN:HG2	1.98	0.46
1:A:242:PRO:O	1:A:245:VAL:HG12	2.16	0.46
1:C:540:LEU:HD22	1:C:661:PHE:CD2	2.51	0.46
1:B:402:GLY:O	1:B:406:ILE:HD12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:184:LYS:HD2	5:M:184:LYS:N	2.31	0.46
3:K:29:ASN:HA	4:L:198:ARG:NH1	2.30	0.46
1:A:23:VAL:HG12	1:A:55:VAL:HG21	1.98	0.46
2:H:95:ALA:CB	2:H:97:PRO:HD2	2.46	0.46
5:M:27:GLU:O	5:M:31:ARG:HG3	2.16	0.45
1:D:609:LEU:O	1:D:610:ASP:OD1	2.34	0.45
1:A:713:LEU:CD2	1:A:732:LEU:HB3	2.41	0.45
2:I:200:TYR:O	2:I:203:LYS:HE2	2.16	0.45
1:F:517:VAL:HG21	1:F:667:VAL:HG22	1.98	0.45
1:B:236:ALA:HA	1:B:239:VAL:CG1	2.45	0.45
1:D:122:ILE:HD11	1:D:183:VAL:HG23	1.97	0.45
1:B:24:VAL:HG23	1:B:51:THR:HG22	1.97	0.45
2:G:20:LYS:HG2	2:G:37:LYS:HB3	1.98	0.45
2:H:159:SER:OG	4:L:225:SER:HB2	2.15	0.45
1:A:623:LEU:O	1:A:626:LEU:HB3	2.16	0.45
1:F:545:PRO:CB	1:F:546:HIS:HA	2.44	0.45
1:E:589:PHE:CE2	1:E:629:LEU:HD21	2.52	0.45
1:C:285:VAL:HA	1:C:326:ILE:HG13	1.97	0.45
1:B:627:LEU:CD2	1:B:657:MET:HG3	2.44	0.45
1:E:519:ASP:O	1:E:522:GLU:HB2	2.17	0.45
1:F:440:GLU:O	1:F:444:LEU:HG	2.16	0.45
1:A:215:PHE:N	1:A:231:PHE:CE2	2.84	0.45
1:D:608:LEU:O	1:D:622:VAL:HG11	2.16	0.45
1:E:677:LEU:HD11	1:E:695:ALA:HA	1.99	0.45
1:D:122:ILE:HD11	1:D:183:VAL:CG2	2.46	0.45
1:F:707:ILE:O	1:F:710:LEU:HB3	2.15	0.45
2:J:81:ALA:O	2:J:85:PHE:HD1	1.98	0.45
1:A:91:CYS:O	1:A:154:ALA:HA	2.17	0.45
2:J:195:SER:C	2:J:197:LEU:H	2.19	0.45
1:C:620:ASN:O	1:C:624:GLN:HG2	2.15	0.45
2:H:45:TYR:CE2	2:H:71:LEU:HD11	2.51	0.45
1:F:242:PRO:HD2	1:F:243:GLU:N	2.32	0.45
1:B:423:ASP:HB2	1:B:479:ASP:N	2.31	0.45
2:I:164:CYS:O	2:I:168:VAL:HG23	2.16	0.45
2:I:214:PHE:HD1	2:I:214:PHE:H	1.64	0.45
5:M:17:ARG:NE	5:M:21:LEU:HD11	2.32	0.45
2:G:124:HIS:HE1	2:G:147:GLN:HB3	1.81	0.45
2:I:232:PHE:HB2	2:I:233:PRO:HD3	1.97	0.45
1:B:121:PHE:CD2	1:B:183:VAL:HG21	2.52	0.45
2:J:161:ALA:O	2:J:165:LEU:HG	2.16	0.45
4:L:247:ALA:O	4:L:251:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:56:ARG:HH21	5:M:174:GLN:CB	2.30	0.45
1:D:609:LEU:CD1	1:D:611:TYR:HB2	2.47	0.45
1:A:705:ILE:HD13	1:A:710:LEU:CD1	2.38	0.45
1:F:254:LYS:O	1:F:368:LEU:HA	2.16	0.45
1:B:540:LEU:O	1:B:540:LEU:HD12	2.16	0.45
1:C:128:GLN:O	1:C:176:LEU:HD12	2.16	0.45
1:D:122:ILE:O	1:D:126:ASN:HB3	2.16	0.45
5:M:176:ARG:HD3	5:M:180:ARG:NH1	2.31	0.45
1:A:23:VAL:HG12	1:A:55:VAL:CG2	2.47	0.45
1:D:564:PHE:HB3	1:D:598:SER:CB	2.46	0.45
1:E:27:LYS:HD2	1:E:57:PRO:HG3	1.97	0.45
1:F:16:LEU:HD11	1:F:52:HIS:HD2	1.80	0.45
1:D:567:ILE:HG23	1:D:601:VAL:HB	1.99	0.45
1:D:533:ARG:HD2	1:E:505:ASN:ND2	2.32	0.45
2:I:63:ASN:O	2:I:67:GLN:HG3	2.15	0.45
1:A:542:GLU:OE2	1:A:666:HIS:CD2	2.69	0.45
1:F:597:LEU:HA	1:F:639:LYS:O	2.17	0.45
1:D:686:PHE:HB3	1:D:690:GLU:HG3	1.97	0.45
1:A:258:LEU:HD12	1:A:258:LEU:O	2.17	0.45
1:E:23:VAL:HG12	1:E:55:VAL:HG21	1.98	0.45
1:F:618:PHE:HE1	1:F:620:ASN:HA	1.82	0.45
1:A:624:GLN:HA	1:A:624:GLN:OE1	2.16	0.45
1:D:286:ASN:HB2	1:D:327:PHE:CD1	2.50	0.45
1:D:36:ILE:HG23	1:D:36:ILE:O	2.16	0.45
1:F:113:ASP:OD1	1:F:115:ASP:HB2	2.17	0.45
1:A:611:TYR:HA	1:A:618:PHE:HB3	1.99	0.45
1:E:113:ASP:HA	1:E:196:ILE:HG13	1.98	0.45
1:F:12:PRO:HG2	1:F:23:VAL:HG11	1.98	0.45
1:B:122:ILE:O	1:B:126:ASN:HB3	2.17	0.45
1:C:121:PHE:HD2	1:C:183:VAL:HG21	1.81	0.45
2:J:197:LEU:HD13	3:K:52:LYS:HE3	1.99	0.45
1:E:527:GLN:HA	1:F:719:GLN:HG3	1.97	0.45
2:J:188:VAL:HG13	2:J:205:TYR:CD2	2.51	0.45
1:C:540:LEU:HD11	1:C:646:THR:HG22	1.99	0.45
1:B:247:GLN:O	1:C:414:MET:SD	2.75	0.45
1:B:125:PHE:HD2	1:B:130:PHE:HZ	1.65	0.45
1:B:40:SER:CB	1:B:41:PRO:CD	2.94	0.45
1:D:326:ILE:HG22	1:D:370:ILE:CG1	2.47	0.45
1:E:436:PHE:HB3	1:E:440:GLU:CB	2.47	0.45
1:F:18:LEU:HA	1:F:137:VAL:CG2	2.46	0.45
1:F:414:MET:SD	1:F:449:GLN:NE2	2.88	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:101:PHE:CD2	1:E:107:ILE:HA	2.51	0.45
1:F:705:ILE:HG12	1:F:706:GLY:O	2.15	0.45
1:E:45:TYR:CE2	1:E:70:ALA:HA	2.52	0.45
1:C:220:ILE:HD11	1:C:272:GLN:HG3	1.97	0.45
1:E:507:ILE:HA	1:E:507:ILE:HD13	1.75	0.45
1:F:605:ILE:O	1:F:608:LEU:HG	2.16	0.45
1:E:586:LYS:NZ	1:F:575:GLY:HA3	2.31	0.45
1:F:327:PHE:CE2	1:F:369:VAL:HG21	2.52	0.45
1:C:256:ILE:O	1:C:370:ILE:HA	2.17	0.45
1:D:710:LEU:HG	1:D:714:ILE:HD11	1.99	0.45
1:D:303:ARG:HD3	1:D:353:GLN:CD	2.37	0.45
1:B:436:PHE:N	1:B:436:PHE:CD1	2.84	0.45
1:F:242:PRO:CD	1:F:243:GLU:H	2.28	0.45
1:B:24:VAL:O	1:B:51:THR:HA	2.16	0.45
1:B:536:LEU:HD12	1:B:640:LEU:O	2.17	0.45
2:J:223:LEU:O	2:J:227:LYS:HG3	2.16	0.45
1:A:45:TYR:CE2	1:A:70:ALA:HA	2.52	0.45
1:A:489:LYS:N	1:A:490:PRO:HD2	2.31	0.45
2:J:185:TYR:HA	2:J:188:VAL:HG12	1.97	0.45
1:F:612:VAL:HG13	1:F:614:ILE:O	2.16	0.45
1:C:331:ASP:CA	1:C:379:ILE:HD11	2.44	0.45
1:C:613:PRO:HD3	1:C:648:ARG:HH22	1.81	0.45
1:F:552:LEU:O	1:F:556:ILE:HG13	2.16	0.45
1:F:263:GLY:O	1:F:398:PRO:HG3	2.17	0.45
2:J:72:HIS:O	2:J:75:LEU:HB3	2.16	0.45
1:F:449:GLN:O	1:F:453:MET:HG2	2.17	0.45
1:C:99:ILE:HG23	1:C:193:LEU:HD23	1.98	0.45
1:D:132:VAL:HG23	1:D:173:GLU:O	2.17	0.45
1:B:218:MET:HA	1:B:219:GLY:HA2	1.75	0.45
1:A:509:LYS:HG2	1:A:515:THR:OG1	2.17	0.45
1:E:86:ASP:O	1:E:88:ALA:N	2.49	0.45
1:F:119:ALA:O	1:F:123:GLN:HB2	2.17	0.45
1:A:69:TRP:CE2	1:A:134:GLN:HA	2.52	0.45
1:C:552:LEU:HD23	1:C:552:LEU:HA	1.81	0.45
4:L:210:ARG:HH11	4:L:210:ARG:HG2	1.82	0.45
1:A:436:PHE:CD2	1:A:444:LEU:HD11	2.51	0.45
1:E:713:LEU:CD2	1:E:732:LEU:HD13	2.47	0.45
1:D:589:PHE:CD2	1:D:629:LEU:HD13	2.52	0.45
1:A:457:ILE:CD1	1:F:236:ALA:HB1	2.47	0.45
3:K:82:ALA:O	3:K:85:LYS:HB3	2.17	0.45
1:B:348:ASP:O	1:B:352:ASN:ND2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:319:ASN:HB3	1:F:320:SER:HB2	1.97	0.45
1:E:299:GLU:HG3	1:E:349:THR:CB	2.47	0.45
1:A:526:GLN:O	1:A:530:ASN:HB2	2.16	0.45
1:A:122:ILE:O	1:A:126:ASN:HB3	2.17	0.45
2:H:176:GLU:O	2:H:178:TYR:N	2.47	0.45
1:C:539:VAL:HG23	1:C:663:THR:HG23	1.98	0.45
1:A:36:ILE:O	1:A:36:ILE:HG23	2.15	0.45
2:H:203:LYS:HB2	2:H:203:LYS:HE3	1.52	0.45
1:C:555:LYS:O	1:C:559:GLU:HG2	2.17	0.45
1:D:670:ILE:HG12	1:D:705:ILE:O	2.17	0.45
2:H:116:ARG:HG3	2:H:116:ARG:NH1	2.32	0.45
1:D:686:PHE:HB2	1:D:691:ARG:CG	2.47	0.45
2:I:236:SER:HA	2:I:239:ARG:NH1	2.32	0.45
1:C:511:GLY:C	1:C:513:PRO:HD2	2.36	0.45
1:D:303:ARG:HH11	1:D:357:LYS:CE	2.30	0.45
2:J:230:GLU:HG3	2:J:237:ASP:HB3	1.98	0.45
1:A:610:ASP:OD1	1:F:620:ASN:ND2	2.50	0.45
1:A:617:ARG:NH1	1:A:617:ARG:HG3	2.30	0.45
1:E:721:ASP:HB2	1:E:724:TYR:CD2	2.52	0.45
1:E:149:VAL:HG11	1:E:152:ILE:HD11	1.97	0.45
2:I:243:LEU:HD13	2:I:266:TYR:HB2	1.99	0.45
1:B:677:LEU:O	1:B:681:GLU:HG3	2.17	0.45
2:H:78:LYS:HB3	2:H:110:ILE:HG23	1.98	0.45
2:H:53:LYS:HD2	2:I:117:PHE:CE2	2.51	0.45
1:F:36:ILE:O	1:F:36:ILE:HG23	2.17	0.45
1:D:628:VAL:O	1:D:632:LYS:N	2.51	0.44
1:E:325:ILE:HG13	1:E:369:VAL:HB	1.98	0.44
1:D:552:LEU:O	1:D:556:ILE:HG13	2.18	0.44
1:A:502:TYR:N	1:A:502:TYR:HD1	2.15	0.44
1:A:111:PRO:HG2	1:A:320:SER:HA	1.99	0.44
1:F:307:ALA:O	1:F:310:GLU:HG2	2.17	0.44
1:B:311:GLU:O	1:B:314:ARG:HG2	2.17	0.44
1:A:721:ASP:O	1:A:725:ARG:HG3	2.17	0.44
1:A:270:ALA:HA	1:A:273:ILE:HG22	1.98	0.44
2:J:38:ILE:HD11	2:J:71:LEU:HB3	1.98	0.44
1:E:101:PHE:HE1	1:E:193:LEU:HB2	1.82	0.44
5:M:142:ARG:NH1	5:M:142:ARG:HG2	2.33	0.44
1:F:428:GLU:O	1:F:431:VAL:HG12	2.16	0.44
1:E:377:ASP:OD1	1:E:378:LEU:N	2.50	0.44
1:A:24:VAL:HG11	1:A:49:LEU:HD22	1.98	0.44
1:A:636:GLN:HA	1:A:637:GLY:HA2	1.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:227:PHE:O	1:D:230:ILE:HG22	2.17	0.44
1:A:573:MET:HA	1:A:576:PHE:CD2	2.53	0.44
3:K:43:VAL:HG13	4:L:215:MET:HE1	1.99	0.44
1:A:242:PRO:HD2	1:A:243:GLU:OE1	2.17	0.44
1:C:547:SER:HB2	1:C:549:LYS:HG3	2.00	0.44
1:E:536:LEU:HD22	1:E:634:PRO:HD3	1.98	0.44
2:G:47:ARG:O	2:G:50:ASN:HB3	2.17	0.44
1:D:624:GLN:OE1	1:D:624:GLN:HA	2.18	0.44
1:C:635:PRO:HB2	1:C:638:ARG:NH1	2.31	0.44
1:E:67:ARG:NH1	1:E:74:ILE:HD11	2.32	0.44
1:B:528:THR:HG21	1:B:641:LEU:HD13	2.00	0.44
1:D:731:ALA:HA	1:D:734:ARG:HH12	1.82	0.44
2:I:166:LEU:HD21	2:I:205:TYR:CE2	2.52	0.44
3:K:55:GLU:O	3:K:59:LYS:HG3	2.18	0.44
2:H:92:PHE:HB3	2:H:98:GLN:O	2.16	0.44
2:J:20:LYS:NZ	2:J:40:GLU:HG2	2.31	0.44
2:I:243:LEU:HD22	2:I:266:TYR:CG	2.51	0.44
1:F:24:VAL:O	1:F:51:THR:HA	2.17	0.44
2:G:283:ILE:O	2:G:287:ILE:HG13	2.17	0.44
2:G:287:ILE:O	2:G:291:GLU:HG3	2.17	0.44
1:A:16:LEU:HD11	1:A:52:HIS:HD2	1.81	0.44
1:D:510:TRP:NE1	1:D:514:VAL:HG21	2.33	0.44
1:E:691:ARG:HA	1:E:694:ILE:HD12	1.99	0.44
1:B:246:GLU:HG3	1:C:417:HIS:CE1	2.53	0.44
1:C:544:PRO:HG2	1:C:669:ASN:CG	2.37	0.44
1:E:563:PRO:HD2	1:E:597:LEU:O	2.18	0.44
2:H:101:ILE:O	2:H:105:MET:HG3	2.18	0.44
2:J:21:VAL:O	2:J:21:VAL:HG22	2.18	0.44
2:J:182:ILE:CG2	2:J:212:CYS:HB2	2.47	0.44
1:A:410:HIS:NE2	1:A:442:GLU:HG2	2.32	0.44
1:F:272:GLN:HA	1:F:272:GLN:OE1	2.17	0.44
1:E:254:LYS:O	1:E:368:LEU:HA	2.17	0.44
1:C:499:TYR:HB3	1:C:558:GLU:OE2	2.18	0.44
1:A:502:TYR:N	1:A:502:TYR:CD1	2.84	0.44
1:F:525:VAL:HG11	1:F:560:SER:CB	2.47	0.44
1:B:546:HIS:O	1:B:547:SER:OG	2.27	0.44
2:J:243:LEU:O	2:J:247:LEU:HG	2.18	0.44
1:E:36:ILE:O	1:E:36:ILE:HG23	2.17	0.44
1:E:507:ILE:O	1:E:507:ILE:HG22	2.17	0.44
1:B:101:PHE:CD2	1:B:107:ILE:HA	2.52	0.44
1:E:69:TRP:NE1	1:E:134:GLN:HA	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:588:ILE:O	1:F:591:ASP:HB2	2.18	0.44
1:B:16:LEU:HD11	1:B:52:HIS:HD2	1.82	0.44
2:G:32:PHE:HD1	2:G:32:PHE:H	1.65	0.44
2:I:276:LEU:O	2:I:280:LEU:HG	2.18	0.44
1:E:586:LYS:NZ	1:F:574:ILE:HG23	2.33	0.44
1:E:327:PHE:CE2	1:E:369:VAL:HG21	2.52	0.44
1:F:560:SER:HB2	1:F:562:PHE:CD1	2.52	0.44
1:C:606:GLU:HB2	1:C:648:ARG:HD2	1.99	0.44
3:K:79:THR:O	3:K:83:LYS:HG3	2.18	0.44
2:H:75:LEU:O	2:H:76:GLN:HB3	2.17	0.44
1:B:569:SER:OG	1:B:571:ASP:OD2	2.34	0.44
1:E:65:PRO:HG2	1:E:137:VAL:HG13	2.00	0.44
1:C:104:LYS:HA	1:C:107:ILE:HD11	1.98	0.44
1:E:539:VAL:HG13	1:E:643:ILE:HA	2.00	0.44
2:G:225:VAL:HG23	2:G:241:CYS:HB2	1.99	0.44
1:E:114:THR:CG2	1:E:195:LEU:HB3	2.47	0.44
1:D:632:LYS:HZ3	1:E:571:ASP:HB3	1.82	0.44
5:M:152:GLN:O	5:M:156:ILE:HG13	2.18	0.44
1:F:324:ILE:HG12	1:F:368:LEU:HD11	2.00	0.44
1:D:626:LEU:O	1:D:630:LEU:HG	2.17	0.44
1:D:527:GLN:HE22	1:E:716:MET:CA	2.31	0.44
1:F:261:PRO:O	1:F:264:CYS:HB2	2.18	0.44
1:F:436:PHE:CD2	1:F:444:LEU:HD11	2.53	0.44
2:G:81:ALA:O	2:G:85:PHE:HD1	2.01	0.44
1:A:254:LYS:O	1:A:368:LEU:HA	2.17	0.44
1:C:721:ASP:HB2	1:C:724:TYR:CD1	2.52	0.44
1:C:688:ASP:HA	1:C:691:ARG:NH1	2.32	0.44
2:I:180:LYS:O	2:I:184:ILE:HG13	2.18	0.44
1:A:611:TYR:HD1	1:A:618:PHE:HB3	1.82	0.44
1:C:76:GLN:HE21	1:C:78:ILE:CG2	2.30	0.44
2:J:216:ILE:HG12	2:J:220:ASN:HB2	1.98	0.44
1:F:218:MET:HA	1:F:219:GLY:HA2	1.74	0.44
2:G:75:LEU:O	2:G:76:GLN:HB3	2.18	0.44
1:B:254:LYS:O	1:B:368:LEU:HA	2.18	0.44
1:D:627:LEU:CD2	1:D:657:MET:HG3	2.43	0.44
1:B:246:GLU:HA	1:C:413:ARG:HH12	1.83	0.44
1:B:353:GLN:HA	1:C:288:PRO:CG	2.47	0.44
1:D:388:ARG:O	1:D:389:LEU:HD23	2.18	0.44
1:C:149:VAL:HG11	1:C:152:ILE:HD11	1.99	0.44
2:H:169:ALA:HB2	2:H:184:ILE:HB	2.00	0.44
1:C:257:LEU:HG	1:C:371:GLY:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:167:LYS:HE2	2:G:171:TYR:HE2	1.83	0.44
1:E:524:LEU:HD11	1:E:663:THR:HG21	1.99	0.44
1:F:69:TRP:CE2	1:F:134:GLN:HA	2.53	0.44
1:F:315:ARG:HG3	1:F:316:LEU:HD12	2.00	0.44
1:B:609:LEU:HA	1:B:609:LEU:HD23	1.60	0.44
4:L:213:HIS:NE2	5:M:38:GLU:OE1	2.51	0.44
1:E:654:GLU:HG2	1:F:614:ILE:HD11	1.99	0.44
1:E:641:LEU:HD12	1:E:641:LEU:O	2.18	0.44
2:J:101:ILE:HB	2:J:131:TYR:OH	2.18	0.44
1:F:257:LEU:HB2	1:F:389:LEU:HD13	1.99	0.44
1:D:236:ALA:HB1	1:E:453:MET:HG3	2.00	0.44
1:D:709:LYS:HA	1:D:709:LYS:HD2	1.81	0.44
1:E:436:PHE:N	1:E:436:PHE:CD1	2.86	0.44
1:D:89:LYS:HZ3	1:D:89:LYS:HB3	1.83	0.44
1:D:25:SER:HB3	1:D:28:ASP:OD2	2.18	0.44
2:H:200:TYR:CE2	5:M:38:GLU:HG2	2.53	0.43
4:L:216:PHE:CZ	5:M:39:SER:HB2	2.53	0.43
1:F:307:ALA:HA	1:F:310:GLU:HG2	1.99	0.43
2:I:203:LYS:HB2	2:I:203:LYS:HE3	1.74	0.43
1:C:320:SER:O	1:C:320:SER:OG	2.31	0.43
1:C:677:LEU:O	1:C:681:GLU:OE1	2.36	0.43
2:H:38:ILE:CD1	2:H:71:LEU:HB3	2.47	0.43
2:J:108:ILE:HD12	2:J:127:ILE:HD12	1.99	0.43
1:C:582:CYS:SG	1:C:621:LEU:HG	2.58	0.43
1:F:240:PHE:HA	1:F:241:PRO:HD3	1.75	0.43
2:J:247:LEU:HD22	2:J:259:TYR:CD1	2.52	0.43
1:C:671:ALA:HA	1:C:703:VAL:O	2.17	0.43
2:H:167:LYS:HE2	2:H:171:TYR:CE2	2.53	0.43
1:C:528:THR:O	1:C:639:LYS:HD3	2.18	0.43
1:F:589:PHE:O	1:F:593:TYR:CD1	2.71	0.43
1:E:246:GLU:HG2	1:E:247:GLN:N	2.33	0.43
1:A:355:LEU:HD22	1:A:388:ARG:NH1	2.33	0.43
1:F:436:PHE:N	1:F:436:PHE:CD1	2.85	0.43
1:A:624:GLN:HG3	1:B:610:ASP:CG	2.38	0.43
1:B:531:SER:CB	1:B:639:LYS:HD3	2.47	0.43
1:E:696:GLN:HA	1:E:696:GLN:OE1	2.18	0.43
2:J:112:THR:HG23	2:J:117:PHE:CE1	2.48	0.43
2:I:188:VAL:HG13	2:I:205:TYR:HD2	1.82	0.43
2:H:225:VAL:HG23	2:H:241:CYS:HB2	1.99	0.43
2:G:204:ASP:OD2	2:G:208:LYS:HE2	2.18	0.43
1:D:99:ILE:HD11	1:D:145:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:122:ILE:O	1:F:126:ASN:HB3	2.19	0.43
1:A:713:LEU:HD23	1:A:713:LEU:HA	1.74	0.43
2:G:83:THR:HB	4:L:235:TYR:OH	2.18	0.43
1:D:543:GLY:O	1:D:647:SER:HA	2.18	0.43
1:B:257:LEU:HB2	1:B:389:LEU:HD13	2.00	0.43
1:A:609:LEU:HD23	1:A:609:LEU:HA	1.78	0.43
1:E:726:VAL:O	1:E:730:LEU:HG	2.19	0.43
2:H:58:TRP:HB3	2:H:95:ALA:HB2	2.00	0.43
1:D:149:VAL:HG11	1:D:152:ILE:HD11	2.00	0.43
1:B:669:ASN:OD1	1:B:706:GLY:HA2	2.17	0.43
2:J:256:VAL:HG21	2:J:288:GLN:CG	2.48	0.43
2:G:98:GLN:H	2:G:98:GLN:CD	2.22	0.43
5:M:63:GLY:O	5:M:67:ILE:HG13	2.17	0.43
1:B:508:ILE:HD13	1:B:683:LEU:HD21	2.00	0.43
2:G:247:LEU:HB3	2:G:259:TYR:HE1	1.84	0.43
2:J:178:TYR:OH	2:J:282:ARG:HG2	2.18	0.43
1:E:91:CYS:O	1:E:154:ALA:HA	2.18	0.43
3:K:56:ARG:HH21	5:M:174:GLN:HB3	1.83	0.43
1:E:628:VAL:HB	1:F:574:ILE:HD12	2.00	0.43
1:E:705:ILE:CD1	1:E:713:LEU:HD12	2.49	0.43
1:A:242:PRO:O	1:A:246:GLU:OE1	2.36	0.43
1:D:9:ALA:HA	1:D:74:ILE:HG23	2.00	0.43
2:G:112:THR:HG23	2:G:117:PHE:CE1	2.53	0.43
1:A:219:GLY:O	1:A:220:ILE:HG13	2.18	0.43
1:C:318:ALA:C	1:C:319:ASN:HD22	2.21	0.43
1:C:511:GLY:CA	1:C:513:PRO:HD2	2.48	0.43
1:C:48:THR:HG21	1:C:128:GLN:HG2	2.00	0.43
1:B:440:GLU:O	1:B:444:LEU:HG	2.19	0.43
1:C:289:GLU:C	1:C:291:LEU:H	2.16	0.43
2:I:185:TYR:HA	2:I:188:VAL:HG12	1.99	0.43
1:E:299:GLU:HG3	1:E:349:THR:OG1	2.19	0.43
1:A:24:VAL:O	1:A:51:THR:HA	2.19	0.43
2:I:161:ALA:O	2:I:165:LEU:HG	2.18	0.43
2:I:176:GLU:O	2:I:178:TYR:N	2.50	0.43
1:C:569:SER:HB3	1:C:572:LYS:HG2	2.00	0.43
1:B:327:PHE:CE2	1:B:369:VAL:HG21	2.52	0.43
1:C:408:HIS:ND1	1:C:408:HIS:O	2.46	0.43
2:J:230:GLU:HG2	2:J:231:LEU:H	1.81	0.43
1:F:95:MET:HE3	1:F:97:ILE:HD11	1.99	0.43
1:B:23:VAL:HG12	1:B:55:VAL:HG21	2.00	0.43
1:A:235:PHE:N	1:A:235:PHE:CD1	2.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:188:ASN:O	5:M:192:ILE:HG13	2.19	0.43
2:H:186:GLU:O	2:H:190:THR:HG23	2.19	0.43
1:C:193:LEU:HG	1:C:195:LEU:HG	1.99	0.43
2:I:112:THR:HG23	2:I:117:PHE:HE1	1.83	0.43
1:C:39:THR:HG22	1:C:78:ILE:HG22	1.99	0.43
1:B:671:ALA:HA	1:B:703:VAL:O	2.18	0.43
1:F:589:PHE:N	1:F:589:PHE:CD1	2.85	0.43
1:D:67:ARG:HH11	1:D:74:ILE:HD11	1.82	0.43
1:F:310:GLU:OE2	1:F:357:LYS:NZ	2.50	0.43
2:G:256:VAL:HG21	2:G:288:GLN:CG	2.48	0.43
1:C:64:LEU:CA	1:C:67:ARG:HH21	2.31	0.43
2:J:59:SER:OG	2:J:97:PRO:HD3	2.18	0.43
1:C:378:LEU:HA	1:C:378:LEU:HD23	1.83	0.43
1:D:331:ASP:O	1:D:332:ALA:HB3	2.19	0.43
1:A:407:LEU:CD1	1:A:426:ILE:HG23	2.48	0.43
2:I:182:ILE:O	2:I:186:GLU:HG2	2.17	0.43
1:A:222:GLY:CA	1:A:402:GLY:HA3	2.48	0.43
1:B:651:VAL:CG1	1:B:655:MET:HE3	2.48	0.43
2:H:163:LYS:O	2:H:167:LYS:HG2	2.19	0.43
1:E:717:SER:OG	1:E:729:PHE:HB2	2.19	0.43
2:I:134:GLU:O	2:I:136:VAL:HG23	2.18	0.43
2:J:134:GLU:O	2:J:136:VAL:HG23	2.19	0.43
1:B:187:LYS:HZ3	1:B:315:ARG:NH1	2.17	0.43
1:D:566:LYS:HA	1:D:566:LYS:HD3	1.81	0.43
1:D:50:ARG:HH11	1:D:50:ARG:HG2	1.84	0.43
5:M:32:MET:O	5:M:36:VAL:HG22	2.18	0.43
1:E:627:LEU:HG	1:E:657:MET:CE	2.48	0.43
1:F:555:LYS:HD3	1:F:559:GLU:HG2	2.01	0.43
1:E:311:GLU:O	1:E:314:ARG:HG2	2.18	0.43
1:F:96:THR:HG22	1:F:150:LYS:HB2	2.00	0.43
1:E:388:ARG:O	1:E:389:LEU:HD23	2.18	0.43
1:B:507:ILE:HG13	1:B:555:LYS:HD3	2.00	0.43
1:C:99:ILE:HD11	1:C:145:PHE:CD2	2.53	0.43
2:H:162:ASN:HD22	2:H:188:VAL:HG23	1.84	0.43
2:G:78:LYS:HB2	2:G:114:MET:HE2	2.01	0.43
2:H:239:ARG:NH2	4:L:213:HIS:CE1	2.87	0.43
1:E:585:MET:HG3	1:E:589:PHE:CE2	2.53	0.43
2:I:201:SER:N	3:K:47:ARG:HH12	2.16	0.43
2:H:21:VAL:O	2:H:21:VAL:HG13	2.19	0.43
1:B:242:PRO:HD2	1:B:243:GLU:N	2.33	0.43
5:M:23:ASP:O	5:M:26:LEU:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:275:TRP:CE3	2:H:276:LEU:HD23	2.54	0.43
2:H:118:THR:O	2:H:122:LYS:HG2	2.18	0.43
1:B:240:PHE:HA	1:B:241:PRO:HD3	1.75	0.43
1:F:73:SER:O	1:F:76:GLN:HG2	2.18	0.43
1:C:297:GLU:O	1:C:301:ASN:N	2.39	0.43
1:E:628:VAL:HB	1:F:574:ILE:CD1	2.48	0.43
1:F:536:LEU:HD11	1:F:633:ALA:HA	2.00	0.43
2:I:200:TYR:C	3:K:47:ARG:NH1	2.72	0.43
1:B:95:MET:HE2	1:B:97:ILE:HD11	2.01	0.43
1:B:8:ALA:HB3	1:B:73:SER:O	2.19	0.43
1:E:241:PRO:HA	1:E:242:PRO:HA	1.62	0.43
1:F:690:GLU:O	1:F:694:ILE:HG13	2.19	0.43
2:J:186:GLU:O	2:J:190:THR:HG23	2.18	0.43
1:B:121:PHE:HD2	1:B:183:VAL:HG21	1.84	0.43
1:A:106:ASN:HB3	1:A:143:LYS:NZ	2.34	0.43
1:D:7:GLN:O	1:D:59:SER:HB2	2.19	0.43
2:G:261:GLU:O	2:G:265:GLU:HG3	2.18	0.43
1:B:259:TYR:CD2	1:B:376:PRO:HD3	2.54	0.43
1:D:541:LEU:HD12	1:D:541:LEU:O	2.19	0.43
1:A:686:PHE:CE2	1:A:714:ILE:HG23	2.54	0.43
1:E:676:LEU:O	1:E:680:LEU:HG	2.19	0.43
1:B:576:PHE:HB2	1:B:581:LYS:CG	2.49	0.43
1:D:356:SER:OG	1:E:288:PRO:HB3	2.18	0.43
1:A:690:GLU:HB3	1:A:726:VAL:HG22	2.01	0.43
1:D:562:PHE:CD2	1:D:597:LEU:HG	2.54	0.43
1:A:632:LYS:HE3	1:A:633:ALA:O	2.19	0.43
3:K:77:PHE:CE1	5:M:78:LEU:HD11	2.52	0.43
1:D:539:VAL:CG1	1:D:643:ILE:HG13	2.49	0.43
1:C:284:VAL:HB	1:C:325:ILE:HA	2.01	0.43
1:A:437:SER:OG	1:A:440:GLU:HG2	2.19	0.43
1:B:707:ILE:O	1:B:711:LEU:HG	2.19	0.43
2:J:244:MET:O	2:J:248:LEU:HG	2.19	0.43
1:B:324:ILE:HG12	1:B:368:LEU:HD11	2.01	0.42
1:E:586:LYS:O	1:E:589:PHE:HB2	2.19	0.42
1:C:540:LEU:HD22	1:C:661:PHE:CE2	2.54	0.42
1:C:542:GLU:HG2	1:C:666:HIS:HA	2.01	0.42
1:D:63:SER:C	1:D:67:ARG:HE	2.22	0.42
1:F:311:GLU:O	1:F:314:ARG:HG2	2.18	0.42
1:A:653:GLN:HB2	1:A:658:LEU:HD23	2.01	0.42
2:J:21:VAL:HG21	2:J:71:LEU:HD22	2.01	0.42
2:J:243:LEU:HD22	2:J:266:TYR:CG	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:40:GLU:O	2:I:44:ILE:HG13	2.19	0.42
1:A:575:GLY:HA3	1:F:586:LYS:CE	2.49	0.42
2:J:289:GLY:O	2:J:293:ASP:HB2	2.19	0.42
1:C:218:MET:HA	1:C:219:GLY:HA2	1.82	0.42
1:C:603:ASP:HA	1:C:645:THR:OG1	2.19	0.42
2:H:277:THR:O	2:H:281:LEU:HD13	2.19	0.42
1:C:258:LEU:HD12	1:C:258:LEU:O	2.19	0.42
1:C:385:ARG:HA	1:C:386:PRO:HD3	1.92	0.42
5:M:178:ILE:HG22	5:M:182:MET:HE2	2.00	0.42
1:B:407:LEU:O	1:B:411:THR:OG1	2.28	0.42
1:A:115:ASP:CG	1:A:242:PRO:HG3	2.40	0.42
1:A:64:LEU:O	1:A:68:LYS:HG3	2.19	0.42
1:B:541:LEU:HA	1:B:665:ILE:O	2.19	0.42
2:G:18:GLU:HA	2:G:21:VAL:HG12	2.01	0.42
1:D:331:ASP:CA	1:D:379:ILE:HD11	2.48	0.42
1:E:648:ARG:NE	1:E:651:VAL:HG13	2.34	0.42
2:I:159:SER:OG	3:K:55:GLU:HG2	2.18	0.42
1:D:406:ILE:HD12	1:D:406:ILE:HG23	1.68	0.42
1:B:612:VAL:HG13	1:B:614:ILE:O	2.19	0.42
2:J:179:GLN:O	2:J:182:ILE:HG12	2.19	0.42
1:B:536:LEU:HD22	1:B:632:LYS:O	2.19	0.42
1:E:265:GLY:O	1:E:268:LEU:HG	2.19	0.42
2:J:142:ILE:HG23	2:J:168:VAL:HG13	2.01	0.42
1:F:677:LEU:O	1:F:681:GLU:HG3	2.19	0.42
2:H:10:ALA:HB1	2:H:52:PHE:CZ	2.53	0.42
1:D:510:TRP:CB	1:D:679:ALA:HB2	2.48	0.42
1:F:525:VAL:HG11	1:F:560:SER:HA	2.01	0.42
1:A:108:ASP:OD2	1:A:315:ARG:NH1	2.43	0.42
1:D:74:ILE:HG13	2:J:218:MET:CE	2.49	0.42
2:I:203:LYS:NZ	2:I:236:SER:HB3	2.34	0.42
1:F:552:LEU:HD12	1:F:667:VAL:HG21	2.01	0.42
1:A:503:ILE:O	1:A:505:ASN:N	2.40	0.42
1:F:114:THR:CG2	1:F:200:LYS:HG2	2.49	0.42
1:B:397:LEU:CD1	1:B:596:GLN:HG3	2.50	0.42
1:F:526:GLN:O	1:F:530:ASN:HB2	2.19	0.42
1:F:686:PHE:HB3	1:F:690:GLU:HB2	2.00	0.42
1:D:268:LEU:HA	1:D:271:ARG:CD	2.49	0.42
1:E:299:GLU:HG3	1:E:349:THR:HB	2.01	0.42
1:A:52:HIS:C	1:A:54:SER:H	2.23	0.42
2:I:58:TRP:HB3	2:I:95:ALA:CB	2.49	0.42
1:C:186:GLU:HG3	1:C:186:GLU:O	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:527:GLN:HA	1:F:719:GLN:CD	2.39	0.42
1:C:256:ILE:HG22	1:C:391:VAL:CG1	2.49	0.42
1:D:573:MET:SD	1:D:608:LEU:HD22	2.59	0.42
2:I:179:GLN:HG3	2:I:180:LYS:N	2.35	0.42
1:F:270:ALA:HA	1:F:273:ILE:HG22	2.01	0.42
1:F:232:ARG:O	1:F:236:ALA:HB3	2.18	0.42
2:I:119:ILE:HD12	2:I:122:LYS:HG3	2.01	0.42
1:E:46:ILE:HG21	1:E:85:PHE:CZ	2.54	0.42
1:C:510:TRP:CZ3	1:C:670:ILE:HG12	2.54	0.42
2:G:39:GLU:HB2	2:G:75:LEU:HD11	2.01	0.42
2:J:66:CYS:SG	2:J:92:PHE:HE2	2.43	0.42
2:I:45:TYR:HE2	2:I:71:LEU:HD11	1.85	0.42
1:A:110:ASN:HD22	1:A:321:GLY:HA2	1.83	0.42
5:M:17:ARG:HE	5:M:21:LEU:HD11	1.83	0.42
2:H:247:LEU:HD22	2:H:259:TYR:CD1	2.54	0.42
1:D:498:ASP:O	1:D:501:SER:HB3	2.18	0.42
1:F:230:ILE:HD11	1:F:391:VAL:HG11	2.00	0.42
1:E:406:ILE:O	1:E:409:ILE:HG22	2.20	0.42
4:L:211:GLU:O	4:L:214:ASP:HB2	2.19	0.42
1:F:557:ALA:HB2	1:F:601:VAL:HG21	2.02	0.42
1:F:602:VAL:O	1:F:644:GLY:HA2	2.20	0.42
1:D:690:GLU:O	1:D:694:ILE:HG13	2.19	0.42
2:I:203:LYS:HB3	2:I:240:GLU:HG3	2.00	0.42
1:A:65:PRO:HG2	1:A:137:VAL:HG13	2.01	0.42
2:J:21:VAL:HG23	2:J:38:ILE:CD1	2.50	0.42
1:C:23:VAL:HG12	1:C:55:VAL:HG21	2.00	0.42
2:H:182:ILE:CG2	2:H:212:CYS:HB2	2.50	0.42
1:B:593:TYR:OH	1:B:632:LYS:HG2	2.19	0.42
1:B:309:ALA:HB1	1:B:367:ILE:HG21	2.01	0.42
1:F:615:GLY:HA3	1:F:616:PRO:C	2.39	0.42
1:F:143:LYS:HB3	1:F:145:PHE:HE1	1.84	0.42
1:C:519:ASP:O	1:C:523:LEU:HG	2.19	0.42
1:F:678:GLU:O	1:F:682:LEU:HG	2.20	0.42
3:K:46:MET:HG3	4:L:216:PHE:CE1	2.55	0.42
1:A:686:PHE:O	1:A:691:ARG:NH2	2.53	0.42
1:C:686:PHE:HB3	1:C:690:GLU:OE2	2.20	0.42
1:B:541:LEU:O	1:B:541:LEU:HD12	2.20	0.42
1:A:624:GLN:CG	1:B:610:ASP:OD2	2.66	0.42
1:C:632:LYS:HG3	1:D:571:ASP:CG	2.40	0.42
1:D:114:THR:HG21	1:D:200:LYS:CG	2.49	0.42
1:B:507:ILE:CG1	1:B:555:LYS:HD3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:555:LYS:O	1:B:559:GLU:HG2	2.20	0.42
1:F:694:ILE:O	1:F:698:VAL:HG22	2.20	0.42
1:C:101:PHE:CE1	1:C:193:LEU:HD13	2.54	0.42
1:C:121:PHE:CD2	1:C:183:VAL:HG21	2.54	0.42
1:A:52:HIS:HA	1:A:53:PRO:HD3	1.91	0.42
2:G:208:LYS:HG2	2:G:275:TRP:CZ3	2.55	0.42
2:J:98:GLN:C	2:J:100:ALA:H	2.23	0.42
1:F:377:ASP:OD1	1:F:378:LEU:N	2.52	0.42
2:G:245:LYS:HB2	2:G:245:LYS:NZ	2.35	0.42
2:H:198:LEU:C	2:H:200:TYR:N	2.73	0.42
1:B:286:ASN:OD1	1:B:327:PHE:HD1	2.03	0.42
1:E:534:THR:HG21	1:F:712:MET:HA	2.01	0.42
1:D:511:GLY:CA	1:D:675:GLN:HE21	2.33	0.42
1:D:313:GLN:HG3	1:D:314:ARG:N	2.34	0.42
1:E:669:ASN:CG	1:E:706:GLY:HA2	2.40	0.42
1:A:316:LEU:O	1:A:320:SER:HB2	2.20	0.42
1:A:299:GLU:OE1	1:A:303:ARG:NH2	2.51	0.42
1:F:297:GLU:O	1:F:300:ALA:HB3	2.19	0.42
1:A:262:PRO:CG	1:A:374:ASN:OD1	2.66	0.42
1:E:11:CYS:HA	1:E:12:PRO:HD3	1.97	0.42
1:B:539:VAL:HA	1:B:663:THR:O	2.19	0.42
2:G:38:ILE:CD1	2:G:71:LEU:HB3	2.50	0.42
1:B:397:LEU:HD23	1:B:398:PRO:HD2	2.01	0.42
5:M:78:LEU:CD1	5:M:195:ALA:HB1	2.50	0.42
1:C:325:ILE:O	1:C:369:VAL:HA	2.19	0.42
1:B:502:TYR:CE2	1:B:567:ILE:HD13	2.55	0.42
2:J:98:GLN:H	2:J:98:GLN:NE2	2.18	0.42
2:I:15:ALA:O	2:I:19:ARG:HG3	2.19	0.42
2:I:277:THR:O	2:I:281:LEU:HD13	2.20	0.42
2:J:260:THR:HG21	2:J:284:LYS:HE3	2.01	0.42
2:H:203:LYS:HD3	2:H:236:SER:CB	2.47	0.42
1:E:240:PHE:HD2	1:E:244:ILE:CG2	2.26	0.42
1:E:713:LEU:HD23	1:E:713:LEU:HA	1.79	0.42
1:A:319:ASN:O	1:A:320:SER:CB	2.67	0.42
1:B:246:GLU:HG2	1:B:247:GLN:N	2.35	0.42
1:A:718:LEU:O	1:A:725:ARG:NE	2.52	0.42
1:A:231:PHE:CE2	1:A:235:PHE:HD2	2.38	0.42
2:H:101:ILE:HB	2:H:131:TYR:OH	2.20	0.42
1:D:268:LEU:O	1:D:271:ARG:HG2	2.20	0.42
1:F:582:CYS:SG	1:F:586:LYS:HE3	2.60	0.42
2:G:195:SER:C	2:G:197:LEU:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:35:VAL:HG11	1:C:49:LEU:HD11	2.02	0.42
3:K:42:VAL:HG21	5:M:157:ILE:HG23	2.02	0.42
1:E:307:ALA:O	1:E:310:GLU:HG2	2.20	0.42
2:G:45:TYR:HE2	2:G:71:LEU:HD11	1.84	0.42
1:D:23:VAL:HG12	1:D:55:VAL:CG2	2.50	0.42
1:C:291:LEU:HA	1:C:298:SER:CB	2.50	0.42
2:I:69:ALA:HB1	2:I:85:PHE:CD1	2.55	0.42
1:F:242:PRO:O	1:F:245:VAL:HG12	2.20	0.42
2:J:72:HIS:CE1	2:J:77:SER:HB2	2.55	0.42
2:I:184:ILE:O	2:I:188:VAL:HG12	2.20	0.42
2:H:246:LYS:NZ	2:H:258:SER:HB3	2.35	0.42
1:C:38:ARG:HH11	1:C:38:ARG:HG2	1.84	0.42
1:C:38:ARG:HG3	1:C:44:LYS:HE2	2.01	0.42
2:J:282:ARG:O	2:J:286:THR:HG23	2.19	0.42
1:B:631:LYS:NZ	1:C:604:ASP:OD2	2.35	0.42
1:E:268:LEU:HD12	1:E:269:LEU:N	2.35	0.42
1:D:659:ASN:OD1	1:E:546:HIS:HE1	2.03	0.42
1:A:261:PRO:HD2	1:A:395:ILE:O	2.20	0.42
1:F:605:ILE:N	1:F:606:GLU:OE1	2.53	0.41
3:K:53:VAL:HG13	3:K:54:LEU:N	2.35	0.41
1:A:706:GLY:O	1:A:710:LEU:N	2.50	0.41
1:D:510:TRP:HZ2	1:D:668:PRO:O	2.03	0.41
2:J:53:LYS:HG3	2:J:58:TRP:CZ3	2.55	0.41
1:E:512:ASP:N	1:E:513:PRO:CD	2.82	0.41
1:C:355:LEU:HA	1:C:388:ARG:NE	2.34	0.41
1:C:590:ASP:HA	1:C:593:TYR:HD2	1.80	0.41
1:D:319:ASN:HA	1:D:320:SER:HA	1.81	0.41
2:G:108:ILE:HD12	2:G:127:ILE:HD12	2.02	0.41
1:D:327:PHE:HB2	1:D:330:ILE:CG2	2.50	0.41
1:D:96:THR:HA	1:D:184:ALA:O	2.20	0.41
1:F:658:LEU:HA	1:F:661:PHE:HD2	1.84	0.41
1:C:95:MET:CG	1:C:152:ILE:HG12	2.49	0.41
1:B:24:VAL:HG11	1:B:49:LEU:HD22	2.02	0.41
2:G:92:PHE:HD1	2:G:97:PRO:HG2	1.84	0.41
2:I:243:LEU:HD22	2:I:266:TYR:CD2	2.55	0.41
1:F:24:VAL:HA	1:F:55:VAL:HG11	2.02	0.41
2:I:213:HIS:C	2:I:215:CYS:H	2.23	0.41
1:B:512:ASP:N	1:B:513:PRO:CD	2.83	0.41
1:D:231:PHE:HA	1:D:235:PHE:CD2	2.55	0.41
2:I:287:ILE:O	2:I:291:GLU:HG3	2.20	0.41
2:H:228:TYR:CE2	2:H:230:GLU:HB2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:213:HIS:HD2	5:M:35:LEU:HA	1.85	0.41
2:J:188:VAL:HG22	2:J:205:TYR:HE2	1.86	0.41
1:F:629:LEU:O	1:F:632:LYS:HB3	2.20	0.41
1:A:356:SER:CB	1:B:288:PRO:HD3	2.50	0.41
1:A:220:ILE:HG22	1:A:221:GLY:N	2.33	0.41
1:B:388:ARG:O	1:B:389:LEU:HD23	2.20	0.41
1:D:608:LEU:C	1:D:622:VAL:HG11	2.41	0.41
1:B:406:ILE:O	1:B:409:ILE:HG22	2.19	0.41
1:A:517:VAL:HG13	1:A:665:ILE:CG2	2.50	0.41
1:C:197:GLY:C	1:C:198:LYS:HD2	2.40	0.41
1:A:322:LEU:HD13	1:A:366:ASN:O	2.19	0.41
1:F:236:ALA:HA	1:F:239:VAL:CG1	2.49	0.41
1:B:513:PRO:O	1:B:517:VAL:HG23	2.20	0.41
1:A:98:GLU:HB3	1:A:148:LEU:HB3	2.01	0.41
1:A:7:GLN:H	1:A:59:SER:HA	1.85	0.41
1:B:69:TRP:CE2	1:B:134:GLN:HA	2.54	0.41
1:C:503:ILE:HG22	1:C:503:ILE:O	2.19	0.41
1:C:386:PRO:HA	1:C:390:GLU:CA	2.37	0.41
1:A:357:LYS:HE3	1:A:357:LYS:HA	2.01	0.41
1:F:502:TYR:HD2	1:F:503:ILE:HG13	1.85	0.41
1:F:502:TYR:CD2	1:F:503:ILE:HG13	2.55	0.41
2:J:268:SER:HA	2:G:233:PRO:HG3	2.03	0.41
1:B:503:ILE:HG22	1:B:506:GLY:H	1.85	0.41
5:M:17:ARG:O	5:M:21:LEU:HG	2.20	0.41
1:D:46:ILE:HD12	1:D:174:VAL:HG21	2.02	0.41
1:E:259:TYR:HA	1:E:373:THR:O	2.20	0.41
1:D:582:CYS:O	1:D:586:LYS:HG3	2.19	0.41
2:J:91:ALA:O	2:J:95:ALA:HB2	2.21	0.41
2:J:155:GLU:C	2:J:157:SER:H	2.23	0.41
1:C:696:GLN:NE2	1:C:696:GLN:O	2.53	0.41
2:H:200:TYR:O	4:L:217:MET:CE	2.68	0.41
1:B:523:LEU:O	1:B:526:GLN:HG2	2.21	0.41
1:C:676:LEU:HD12	1:C:705:ILE:CG2	2.44	0.41
1:E:250:CYS:SG	1:F:446:ARG:HB2	2.60	0.41
2:J:101:ILE:O	2:J:105:MET:HG3	2.20	0.41
1:F:388:ARG:O	1:F:389:LEU:HD23	2.19	0.41
1:B:38:ARG:HG3	1:B:44:LYS:HE3	2.03	0.41
1:E:697:GLN:O	1:E:701:LYS:HD2	2.21	0.41
1:D:436:PHE:CE2	1:D:444:LEU:HD12	2.49	0.41
1:F:18:LEU:HD23	1:F:137:VAL:HG21	2.02	0.41
1:E:242:PRO:HD2	1:E:243:GLU:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:271:ARG:HG2	1:D:272:GLN:N	2.34	0.41
1:E:451:THR:O	1:E:454:ASN:HB3	2.20	0.41
1:C:237:SER:OG	1:C:252:HIS:ND1	2.45	0.41
2:G:281:LEU:O	2:G:285:LYS:HG3	2.20	0.41
1:C:526:GLN:OE1	1:C:530:ASN:ND2	2.54	0.41
1:F:545:PRO:HB3	1:F:546:HIS:HA	2.02	0.41
2:J:184:ILE:O	2:J:188:VAL:HG12	2.21	0.41
1:E:686:PHE:O	1:E:691:ARG:NH1	2.53	0.41
1:D:543:GLY:N	1:D:549:LYS:HD3	2.30	0.41
1:C:621:LEU:HD11	1:D:575:GLY:HA2	2.01	0.41
1:B:232:ARG:O	1:B:236:ALA:HB3	2.20	0.41
1:E:721:ASP:HB2	1:E:724:TYR:HD2	1.85	0.41
2:I:182:ILE:HG22	2:I:212:CYS:HB2	2.01	0.41
2:I:119:ILE:HD11	2:I:123:HIS:HE1	1.85	0.41
1:F:319:ASN:HA	1:F:320:SER:HA	1.91	0.41
2:J:277:THR:O	2:J:281:LEU:HD13	2.20	0.41
1:F:46:ILE:HD12	1:F:174:VAL:HG21	2.02	0.41
1:A:380:ASP:OD1	1:A:381:GLU:N	2.54	0.41
1:D:669:ASN:N	1:D:669:ASN:OD1	2.46	0.41
1:B:326:ILE:HG22	1:B:370:ILE:CG1	2.49	0.41
2:H:237:ASP:C	2:H:239:ARG:H	2.23	0.41
2:J:201:SER:HB2	5:M:165:LEU:CD1	2.43	0.41
1:D:313:GLN:O	1:D:317:GLY:CA	2.68	0.41
1:C:690:GLU:HB2	1:C:726:VAL:CG2	2.43	0.41
1:C:711:LEU:HD23	1:C:711:LEU:N	2.36	0.41
1:E:618:PHE:CD1	1:E:618:PHE:C	2.93	0.41
3:K:79:THR:HG22	3:K:83:LYS:HE3	2.02	0.41
1:F:64:LEU:HA	1:F:67:ARG:HH21	1.84	0.41
1:B:95:MET:CG	1:B:152:ILE:HG12	2.50	0.41
1:F:242:PRO:CD	1:F:243:GLU:N	2.83	0.41
1:E:40:SER:HB2	1:E:41:PRO:HD2	2.02	0.41
2:G:277:THR:O	2:G:281:LEU:HD13	2.21	0.41
2:H:134:GLU:O	2:H:136:VAL:HG23	2.20	0.41
1:C:517:VAL:HG13	1:C:665:ILE:HG21	2.01	0.41
1:C:709:LYS:HD2	1:C:709:LYS:HA	1.82	0.41
3:K:39:VAL:HG22	5:M:157:ILE:HD11	2.03	0.41
1:F:601:VAL:HG22	1:F:643:ILE:HD12	2.03	0.41
1:E:324:ILE:HG12	1:E:368:LEU:HD11	2.02	0.41
1:C:560:SER:HB2	1:C:562:PHE:CZ	2.56	0.41
1:A:652:LEU:HA	1:A:655:MET:SD	2.60	0.41
2:H:156:GLU:O	2:H:158:ASN:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:673:GLY:O	1:A:676:LEU:HB3	2.20	0.41
1:E:598:SER:O	1:E:640:LEU:HA	2.20	0.41
1:A:620:ASN:O	1:A:624:GLN:HG2	2.21	0.41
1:A:517:VAL:HG13	1:A:665:ILE:HG21	2.02	0.41
1:C:102:LEU:HD22	1:C:137:VAL:HG12	2.02	0.41
1:D:92:ILE:HG21	1:D:95:MET:HB2	2.02	0.41
1:C:87:LYS:HA	1:C:91:CYS:SG	2.61	0.41
2:H:175:LEU:O	2:H:176:GLU:HB3	2.20	0.41
1:B:690:GLU:O	1:B:694:ILE:HG13	2.21	0.41
2:J:208:LYS:HG2	2:J:275:TRP:CZ3	2.56	0.41
1:B:347:HIS:O	1:B:350:VAL:HG22	2.20	0.41
1:A:707:ILE:HA	1:A:710:LEU:HB2	2.03	0.41
1:D:72:LEU:C	2:J:218:MET:SD	2.99	0.41
1:E:297:GLU:O	1:E:300:ALA:HB3	2.21	0.41
1:A:215:PHE:N	1:A:231:PHE:CZ	2.89	0.41
1:A:610:ASP:OD1	1:F:624:GLN:HG3	2.20	0.41
1:B:423:ASP:CB	1:B:479:ASP:N	2.84	0.41
1:C:241:PRO:HA	1:C:242:PRO:HA	1.65	0.41
2:H:82:ALA:HB2	2:H:110:ILE:HG21	2.02	0.41
1:E:643:ILE:N	1:E:643:ILE:HD12	2.35	0.41
1:B:313:GLN:O	1:B:317:GLY:N	2.53	0.41
2:G:169:ALA:HB2	2:G:184:ILE:HB	2.03	0.41
1:B:94:THR:HB	1:B:153:GLU:HB2	2.02	0.41
1:A:86:ASP:C	1:A:88:ALA:H	2.22	0.41
2:I:39:GLU:HB2	2:I:75:LEU:CD1	2.50	0.41
3:K:48:VAL:HG12	3:K:52:LYS:NZ	2.36	0.41
3:K:56:ARG:CD	5:M:171:ILE:HG23	2.41	0.41
2:H:200:TYR:N	2:H:200:TYR:CD1	2.89	0.41
1:C:499:TYR:OH	1:C:565:ILE:HB	2.20	0.41
4:L:216:PHE:O	4:L:219:MET:HB3	2.21	0.41
1:A:676:LEU:HD12	1:A:710:LEU:HD11	2.03	0.41
2:H:116:ARG:HG3	2:H:116:ARG:HH11	1.86	0.41
1:C:726:VAL:H	1:C:726:VAL:HG23	1.64	0.41
1:E:607:ARG:HD3	1:E:607:ARG:HA	1.82	0.41
1:D:711:LEU:O	1:D:715:GLU:HG2	2.21	0.41
1:C:648:ARG:HD3	1:C:651:VAL:HG21	2.02	0.41
1:D:618:PHE:CD2	1:D:655:MET:HE1	2.56	0.41
2:H:18:GLU:HA	2:H:21:VAL:CG1	2.48	0.41
1:D:303:ARG:HH11	1:D:357:LYS:HE3	1.85	0.41
1:B:533:ARG:CG	1:B:534:THR:H	2.24	0.41
1:A:240:PHE:CG	1:A:244:ILE:HD11	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:612:VAL:CG1	1:A:617:ARG:HB2	2.50	0.41
1:D:249:GLY:HA3	1:E:413:ARG:NH1	2.36	0.41
1:F:510:TRP:HZ3	1:F:675:GLN:NE2	2.19	0.41
1:B:406:ILE:H	1:B:406:ILE:HD12	1.86	0.41
1:D:349:THR:HA	1:D:352:ASN:HD22	1.85	0.41
3:K:77:PHE:HZ	5:M:74:ALA:HB1	1.85	0.41
1:D:331:ASP:HA	1:D:379:ILE:CD1	2.51	0.41
4:L:194:GLU:O	4:L:198:ARG:HB2	2.21	0.41
2:I:162:ASN:H	2:I:162:ASN:HD22	1.69	0.41
2:I:182:ILE:CG2	2:I:212:CYS:HB2	2.50	0.41
2:J:163:LYS:O	2:J:167:LYS:HG2	2.20	0.41
2:J:167:LYS:HE2	2:J:171:TYR:CE2	2.55	0.41
2:H:98:GLN:C	2:H:100:ALA:H	2.25	0.41
2:H:160:SER:O	2:H:163:LYS:HB3	2.21	0.41
2:J:256:VAL:O	2:J:256:VAL:HG22	2.21	0.41
1:B:52:HIS:C	1:B:54:SER:H	2.24	0.41
2:G:276:LEU:O	2:G:280:LEU:HG	2.20	0.41
1:C:22:ALA:HB3	1:C:49:LEU:HD23	2.03	0.41
1:A:261:PRO:HB3	1:A:594:LYS:HD3	2.03	0.41
2:H:126:SER:O	2:H:130:ILE:HG13	2.21	0.41
1:F:400:GLU:OE2	1:F:434:LYS:HA	2.21	0.41
1:E:35:VAL:HG13	1:E:49:LEU:HD11	2.02	0.41
1:E:231:PHE:O	1:E:235:PHE:CD2	2.74	0.41
2:J:10:ALA:O	2:J:14:LEU:HG	2.21	0.41
2:I:256:VAL:HG22	2:I:256:VAL:O	2.21	0.41
4:L:237:VAL:O	4:L:241:VAL:HG23	2.21	0.41
1:F:406:ILE:O	1:F:409:ILE:HG22	2.20	0.41
1:D:258:LEU:HD12	1:D:258:LEU:O	2.21	0.41
2:J:235:PHE:CG	3:K:38:GLN:NE2	2.89	0.41
1:E:705:ILE:HD12	1:E:713:LEU:HD12	2.02	0.41
1:B:289:GLU:C	1:B:291:LEU:N	2.73	0.41
1:E:623:LEU:HD23	1:E:624:GLN:NE2	2.36	0.41
1:D:527:GLN:HA	1:E:719:GLN:HG3	2.02	0.41
1:B:307:ALA:O	1:B:310:GLU:HG2	2.20	0.41
1:F:542:GLU:N	1:F:665:ILE:O	2.52	0.41
1:F:264:CYS:SG	1:F:395:ILE:CG2	3.06	0.41
1:E:92:ILE:HG13	1:E:176:LEU:N	2.36	0.41
1:B:385:ARG:HH21	1:B:388:ARG:CZ	2.34	0.41
1:D:570:PRO:O	1:D:573:MET:HB3	2.21	0.41
2:H:179:GLN:HG3	2:H:180:LYS:N	2.35	0.41
1:F:86:ASP:O	1:F:88:ALA:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:184:ALA:HB1	1:B:200:LYS:O	2.20	0.41
1:E:596:GLN:HA	1:E:638:ARG:HA	2.03	0.41
2:G:275:TRP:CE3	2:G:276:LEU:HD23	2.55	0.41
1:D:24:VAL:HG11	1:D:49:LEU:HD22	2.02	0.41
1:F:101:PHE:CE1	1:F:193:LEU:HD13	2.55	0.41
1:B:377:ASP:OD1	1:B:378:LEU:N	2.54	0.41
5:M:25:SER:O	5:M:28:SER:HB3	2.22	0.40
1:A:549:LYS:CB	1:A:667:VAL:HG21	2.51	0.40
1:E:627:LEU:HD13	1:F:607:ARG:CZ	2.51	0.40
1:C:313:GLN:NE2	1:C:365:ASN:O	2.52	0.40
1:C:379:ILE:HA	1:C:379:ILE:HD13	1.71	0.40
1:E:640:LEU:HG	1:E:642:ILE:CD1	2.51	0.40
1:C:691:ARG:HB2	1:C:691:ARG:NH1	2.35	0.40
1:F:97:ILE:HG21	1:F:147:LEU:HD22	2.04	0.40
1:F:436:PHE:HD2	1:F:444:LEU:HD11	1.86	0.40
1:E:63:SER:O	1:E:67:ARG:HG3	2.21	0.40
1:D:223:LEU:HD23	1:D:223:LEU:O	2.21	0.40
1:F:658:LEU:O	1:F:658:LEU:HD12	2.21	0.40
1:B:612:VAL:HG12	1:B:617:ARG:O	2.21	0.40
1:D:377:ASP:OD1	1:D:378:LEU:N	2.54	0.40
2:J:256:VAL:HG11	2:J:288:GLN:HG2	2.03	0.40
1:C:16:LEU:HD11	1:C:52:HIS:HD2	1.86	0.40
2:J:82:ALA:HB2	2:J:110:ILE:HG21	2.03	0.40
1:C:189:GLU:O	1:C:190:ASN:HB2	2.20	0.40
1:D:186:GLU:O	1:D:186:GLU:HG3	2.21	0.40
1:F:50:ARG:HG2	1:F:50:ARG:HH11	1.86	0.40
1:C:407:LEU:O	1:C:411:THR:OG1	2.30	0.40
1:D:612:VAL:HG13	1:D:614:ILE:O	2.21	0.40
2:I:240:GLU:OE1	2:I:241:CYS:HB3	2.21	0.40
1:A:63:SER:O	1:A:67:ARG:HG3	2.21	0.40
1:C:388:ARG:HB2	1:C:388:ARG:CZ	2.52	0.40
2:H:147:GLN:HG2	2:H:151:TYR:CE2	2.57	0.40
2:H:256:VAL:HG22	2:H:256:VAL:O	2.21	0.40
1:C:629:LEU:HD23	1:C:629:LEU:HA	1.76	0.40
5:M:30:ARG:NH2	5:M:145:GLU:OE2	2.54	0.40
2:G:118:THR:HG22	2:G:155:GLU:HG3	2.03	0.40
1:C:52:HIS:HA	1:C:53:PRO:HD3	1.93	0.40
1:F:577:SER:O	1:F:581:LYS:HG3	2.22	0.40
1:F:609:LEU:HD23	1:F:609:LEU:HA	1.80	0.40
3:K:56:ARG:HD2	5:M:171:ILE:CG2	2.41	0.40
1:D:511:GLY:HA3	1:D:675:GLN:HE21	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:490:PRO:HA	1:E:491:ALA:CB	2.36	0.40
1:C:627:LEU:HD23	1:C:627:LEU:HA	1.77	0.40
1:B:249:GLY:CA	1:C:414:MET:HE1	2.51	0.40
1:C:319:ASN:HA	1:C:320:SER:HA	1.87	0.40
1:A:566:LYS:HA	1:A:566:LYS:HD3	1.68	0.40
1:D:263:GLY:HA2	1:D:439:ALA:HB3	2.04	0.40
1:F:241:PRO:HA	1:F:242:PRO:HA	1.53	0.40
2:J:45:TYR:CB	2:J:68:ALA:HB2	2.51	0.40
1:C:324:ILE:HD12	1:C:324:ILE:N	2.36	0.40
1:B:519:ASP:OD1	1:B:520:ASP:N	2.55	0.40
2:J:98:GLN:H	2:J:98:GLN:CD	2.25	0.40
5:M:158:GLY:O	5:M:161:ARG:HB3	2.22	0.40
1:A:377:ASP:OD2	1:A:378:LEU:HD23	2.21	0.40
1:C:25:SER:HB3	1:C:28:ASP:OD2	2.21	0.40
1:D:397:LEU:HD22	1:D:435:ASN:O	2.22	0.40
2:H:287:ILE:O	2:H:291:GLU:HG3	2.21	0.40
1:A:38:ARG:HH11	1:A:38:ARG:HG2	1.85	0.40
2:H:198:LEU:HD21	4:L:224:GLU:OE1	2.21	0.40
2:H:201:SER:C	2:H:203:LYS:H	2.24	0.40
2:J:203:LYS:HD2	2:J:236:SER:O	2.21	0.40
1:D:407:LEU:HB2	1:D:426:ILE:HG23	2.02	0.40
1:C:638:ARG:HH11	1:C:638:ARG:HG3	1.86	0.40
1:A:240:PHE:HA	1:A:241:PRO:HD3	1.91	0.40
1:D:573:MET:HA	1:D:576:PHE:CD2	2.57	0.40
1:B:546:HIS:HB3	1:B:547:SER:H	1.42	0.40
4:L:191:ALA:HB3	4:L:194:GLU:HG2	2.03	0.40
2:I:179:GLN:HB3	2:I:214:PHE:HB3	2.02	0.40
1:D:221:GLY:O	1:D:406:ILE:HD11	2.21	0.40
1:C:510:TRP:O	1:C:675:GLN:HG3	2.21	0.40
2:G:96:ASP:H	2:G:97:PRO:HD2	1.86	0.40
1:C:47:PHE:HZ	1:C:70:ALA:HB2	1.86	0.40
1:C:604:ASP:H	1:C:645:THR:HG1	1.67	0.40
1:A:693:THR:O	1:A:697:GLN:OE1	2.40	0.40
1:E:140:PHE:O	1:E:141:ASN:HB2	2.21	0.40
2:H:237:ASP:C	2:H:239:ARG:N	2.75	0.40
4:L:223:VAL:HG13	4:L:224:GLU:N	2.36	0.40
2:G:219:LEU:HD12	2:G:223:LEU:HB2	2.04	0.40
1:C:624:GLN:OE1	1:C:624:GLN:HA	2.21	0.40
1:A:732:LEU:HD23	1:A:732:LEU:HA	1.86	0.40
1:A:300:ALA:O	1:A:303:ARG:HG2	2.21	0.40
1:A:231:PHE:CD1	1:A:235:PHE:CE2	3.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:266:TYR:C	2:G:268:SER:N	2.75	0.40
5:M:56:GLN:HA	5:M:59:ARG:NH2	2.35	0.40
1:B:531:SER:CA	1:B:639:LYS:HD3	2.51	0.40
2:G:101:ILE:HB	2:G:131:TYR:OH	2.20	0.40
2:J:38:ILE:CD1	2:J:71:LEU:HB3	2.52	0.40
1:B:242:PRO:CD	1:B:243:GLU:N	2.85	0.40
1:E:95:MET:CE	1:E:97:ILE:HD11	2.51	0.40
2:J:175:LEU:HD23	2:J:177:GLN:NE2	2.36	0.40
1:B:113:ASP:HA	1:B:196:ILE:HG13	2.04	0.40
1:C:24:VAL:HG12	1:C:60:VAL:HG22	2.03	0.40
1:F:101:PHE:H	1:F:101:PHE:HD1	1.68	0.40
1:E:441:LEU:O	1:E:445:VAL:HG23	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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	668/747 (89%)	614 (92%)	37 (6%)	17 (2%)	7	46
1	B	662/747 (89%)	593 (90%)	55 (8%)	14 (2%)	9	50
1	C	666/747 (89%)	615 (92%)	39 (6%)	12 (2%)	11	53
1	D	663/747 (89%)	607 (92%)	47 (7%)	9 (1%)	14	58
1	E	658/747 (88%)	603 (92%)	41 (6%)	14 (2%)	9	50
1	F	644/747 (86%)	587 (91%)	44 (7%)	13 (2%)	9	51
2	G	284/297 (96%)	230 (81%)	43 (15%)	11 (4%)	4	36
2	H	284/297 (96%)	229 (81%)	46 (16%)	9 (3%)	5	41
2	I	284/297 (96%)	227 (80%)	48 (17%)	9 (3%)	5	41
2	J	284/297 (96%)	232 (82%)	41 (14%)	11 (4%)	4	36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	K	59/63 (94%)	56 (95%)	2 (3%)	1 (2%)	11	55
4	L	64/67 (96%)	56 (88%)	8 (12%)	0	100	100
5	M	127/188 (68%)	124 (98%)	3 (2%)	0	100	100
All	All	5347/5988 (89%)	4773 (89%)	454 (8%)	120 (2%)	13	49

All (120) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	223	LEU
1	A	293	LYS
1	A	294	TYR
1	A	318	ALA
1	A	320	SER
1	A	333	ILE
1	A	397	LEU
1	A	498	ASP
1	A	504	MET
1	B	12	PRO
1	B	283	LYS
1	B	297	GLU
1	B	318	ALA
1	B	439	ALA
1	B	489	LYS
1	C	297	GLU
1	C	318	ALA
1	C	497	GLU
1	C	498	ASP
1	C	578	GLU
1	D	188	ALA
1	D	283	LYS
1	D	318	ALA
1	D	489	LYS
1	E	283	LYS
1	E	297	GLU
1	E	318	ALA
1	E	439	ALA
1	E	489	LYS
1	F	200	LYS
1	F	283	LYS
1	F	297	GLU
1	F	318	ALA

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Mol	Chain	Res	Type
1	F	439	ALA
2	H	58	TRP
2	H	79	HIS
2	I	219	LEU
2	J	58	TRP
2	J	76	GLN
2	G	58	TRP
2	G	176	GLU
1	C	293	LYS
1	C	610	ASP
1	E	12	PRO
1	E	88	ALA
1	E	507	ILE
1	F	87	LYS
2	H	76	GLN
2	H	202	ALA
2	I	79	HIS
2	J	156	GLU
2	G	76	GLN
2	G	79	HIS
2	G	218	MET
1	A	12	PRO
1	A	241	PRO
1	A	242	PRO
1	A	264	CYS
1	B	241	PRO
1	B	293	LYS
1	B	502	TYR
1	C	241	PRO
1	D	293	LYS
1	E	241	PRO
1	E	293	LYS
1	F	12	PRO
1	F	241	PRO
1	F	293	LYS
2	H	240	GLU
2	H	256	VAL
2	I	58	TRP
2	J	34	GLY
2	J	77	SER
2	J	79	HIS
2	J	267	ASP

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Mol	Chain	Res	Type
2	G	240	GLU
3	K	35	THR
1	B	546	HIS
1	C	87	LYS
1	D	12	PRO
1	E	87	LYS
1	E	189	GLU
1	F	397	LEU
2	H	157	SER
2	I	158	ASN
2	I	218	MET
2	I	240	GLU
2	I	256	VAL
2	G	267	ASP
1	A	53	PRO
1	A	398	PRO
1	A	668	PRO
1	B	53	PRO
1	B	547	SER
1	C	53	PRO
1	D	241	PRO
2	H	77	SER
2	J	232	PHE
2	G	23	ASN
2	G	177	GLN
1	A	87	LYS
1	B	490	PRO
1	C	12	PRO
1	E	438	GLY
1	E	490	PRO
1	F	438	GLY
1	F	668	PRO
2	H	176	GLU
2	I	267	ASP
2	J	256	VAL
2	G	232	PHE
1	B	438	GLY
1	D	488	ILE
1	F	684	GLY
2	J	96	ASP
2	G	196	PRO
1	C	490	PRO

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Mol	Chain	Res	Type
2	I	30	GLY
2	J	21	VAL
1	D	545	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	511/638 (80%)	509 (100%)	2 (0%)	93	96
1	B	512/638 (80%)	508 (99%)	4 (1%)	86	94
1	C	513/638 (80%)	512 (100%)	1 (0%)	95	97
1	D	506/638 (79%)	505 (100%)	1 (0%)	95	97
1	E	511/638 (80%)	508 (99%)	3 (1%)	90	95
1	F	505/638 (79%)	501 (99%)	4 (1%)	86	94
2	G	234/244 (96%)	234 (100%)	0	100	100
2	H	233/244 (96%)	233 (100%)	0	100	100
2	I	234/244 (96%)	233 (100%)	1 (0%)	93	96
2	J	235/244 (96%)	234 (100%)	1 (0%)	93	96
3	K	49/54 (91%)	49 (100%)	0	100	100
4	L	56/61 (92%)	56 (100%)	0	100	100
5	M	114/161 (71%)	114 (100%)	0	100	100
All	All	4213/5080 (83%)	4196 (100%)	17 (0%)	94	96

All (17) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	305	LEU
1	A	322	LEU
1	B	305	LEU
1	B	322	LEU
1	B	325	ILE

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Mol	Chain	Res	Type
1	B	327	PHE
1	C	676	LEU
1	D	305	LEU
1	E	305	LEU
1	E	322	LEU
1	E	327	PHE
1	F	305	LEU
1	F	322	LEU
1	F	519	ASP
1	F	536	LEU
2	I	28	PHE
2	J	183	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (39) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	110	ASN
1	A	194	ASN
1	A	319	ASN
1	A	353	GLN
1	A	685	ASN
1	B	128	GLN
1	B	313	GLN
1	B	352	ASN
1	B	526	GLN
1	B	561	ASN
1	B	620	ASN
1	C	20	ASN
1	C	194	ASN
1	C	319	ASN
1	C	659	ASN
1	C	675	GLN
1	D	106	ASN
1	D	128	GLN
1	D	313	GLN
1	D	352	ASN
1	D	353	GLN
1	D	527	GLN
1	D	659	ASN
1	D	675	GLN
1	E	43	HIS
1	E	527	GLN

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Mol	Chain	Res	Type
1	E	546	HIS
1	E	666	HIS
1	F	252	HIS
2	H	72	HIS
2	H	162	ASN
2	I	72	HIS
2	J	50	ASN
2	J	98	GLN
2	J	162	ASN
2	G	50	ASN
2	G	72	HIS
3	K	38	GLN
4	L	226	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.