Full wwPDB EM Validation Report ⓘ

Dec 13, 2023 – 06:35 PM JST

PDB ID	:	8IB8
EMDB ID	:	EMD-35335
Title	:	Human TRiC-PhLP2A-actin complex in the closed state
Authors	:	Roh, S.H.; Park, J.; Kim, H.; Lim, S.
Deposited on	:	2023-02-09
Resolution	:	4.42 Å(reported)
Based on initial model	:	7NVM

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

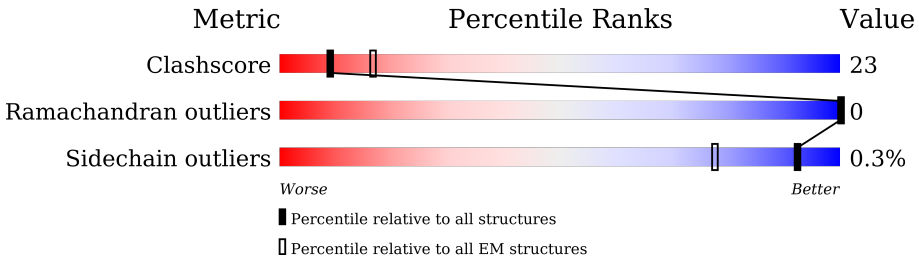
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

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

The reported resolution of this entry is 4.42 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	556	30% 50% 46% .
1	I	556	43% 49% 47% .
2	B	535	22% 55% 42% .
2	J	535	22% 53% 45% .
3	C	545	23% 49% 47% .
3	K	545	24% 48% 48% .
4	D	539	24% 52% 45% .
4	L	539	32% 50% 45% 5%

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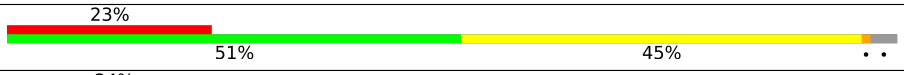
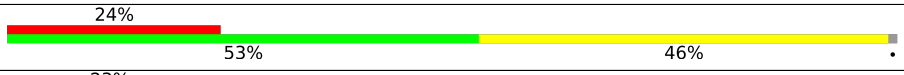
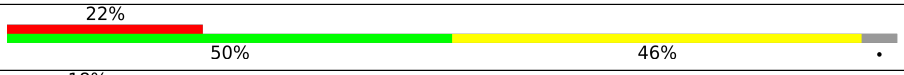
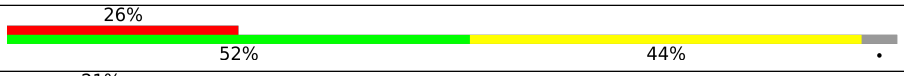
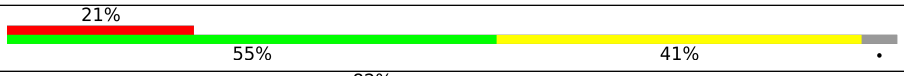
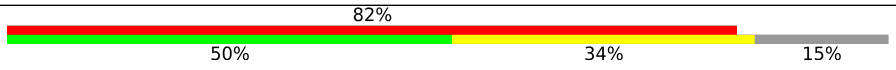
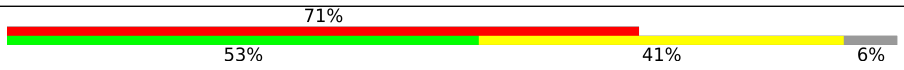
Mol	Chain	Length	Quality of chain
5	E	541	
5	M	541	
6	F	531	
6	N	531	
7	G	543	
7	O	543	
8	H	548	
8	P	548	
9	Q	239	
10	S	375	

2 Entry composition (i)

There are 10 unique types of molecules in this entry. The entry contains 68524 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called T-complex protein 1 subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	534	Total	C	N	O	S	0	0
			4051	2538	709	781	23		
1	I	534	Total	C	N	O	S	0	0
			4054	2540	709	782	23		

- Molecule 2 is a protein called T-complex protein 1 subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	521	Total	C	N	O	S	0	0
			3925	2455	694	757	19		
2	J	527	Total	C	N	O	S	0	0
			3963	2479	700	765	19		

- Molecule 3 is a protein called T-complex protein 1 subunit gamma.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	521	Total	C	N	O	S	0	0
			4051	2524	717	780	30		
3	K	521	Total	C	N	O	S	0	0
			4048	2523	715	780	30		

- Molecule 4 is a protein called T-complex protein 1 subunit delta.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	521	Total	C	N	O	S	0	0
			3935	2459	687	766	23		
4	L	513	Total	C	N	O	S	0	0
			3873	2422	674	754	23		

- Molecule 5 is a protein called T-complex protein 1 subunit epsilon.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	527	Total	C	N	O	S	0	0
			4063	2544	710	779	30		
5	M	524	Total	C	N	O	S	0	0
			4038	2528	707	773	30		

- Molecule 6 is a protein called T-complex protein 1 subunit zeta.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	525	Total	C	N	O	S	0	0
			4023	2528	704	770	21		
6	N	525	Total	C	N	O	S	0	0
			4024	2528	704	771	21		

- Molecule 7 is a protein called T-complex protein 1 subunit eta.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	522	Total	C	N	O	S	0	0
			4009	2533	693	760	23		
7	O	521	Total	C	N	O	S	0	0
			4002	2529	692	758	23		

- Molecule 8 is a protein called T-complex protein 1 subunit theta.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	528	Total	C	N	O	S	0	0
			4024	2540	684	773	27		
8	P	528	Total	C	N	O	S	0	0
			4024	2540	684	773	27		

- Molecule 9 is a protein called Phosducin-like protein 3.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	Q	202	Total	C	N	O	S	0	0
			1647	1049	272	320	6		

- Molecule 10 is a protein called ACTB protein (Fragment).

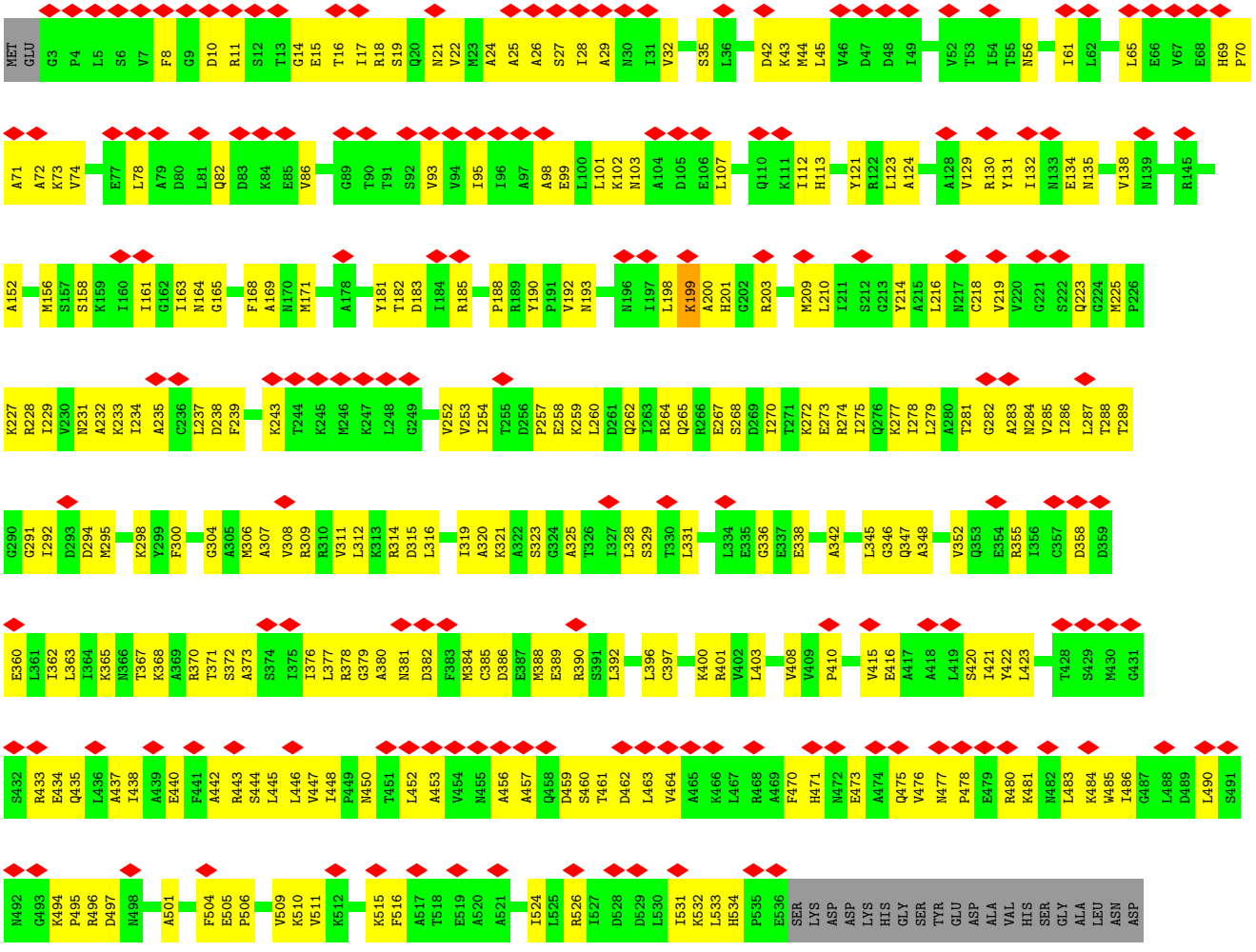
Mol	Chain	Residues	Atoms					AltConf	Trace
10	S	354	Total	C	N	O	S	0	0
			2770	1756	461	533	20		

3 Residue-property plots (i)

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

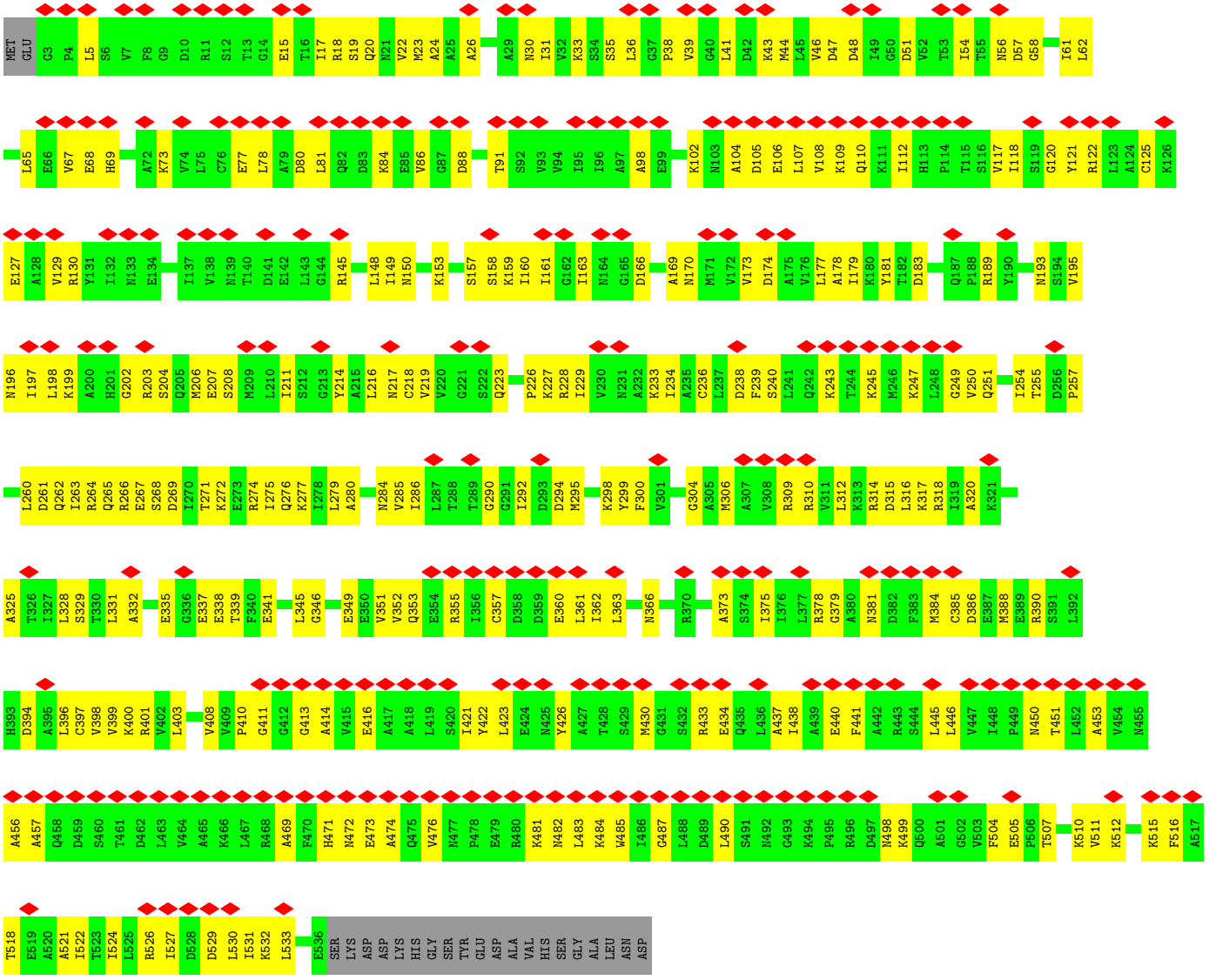
• Molecule 1: T-complex protein 1 subunit alpha

Chain A:



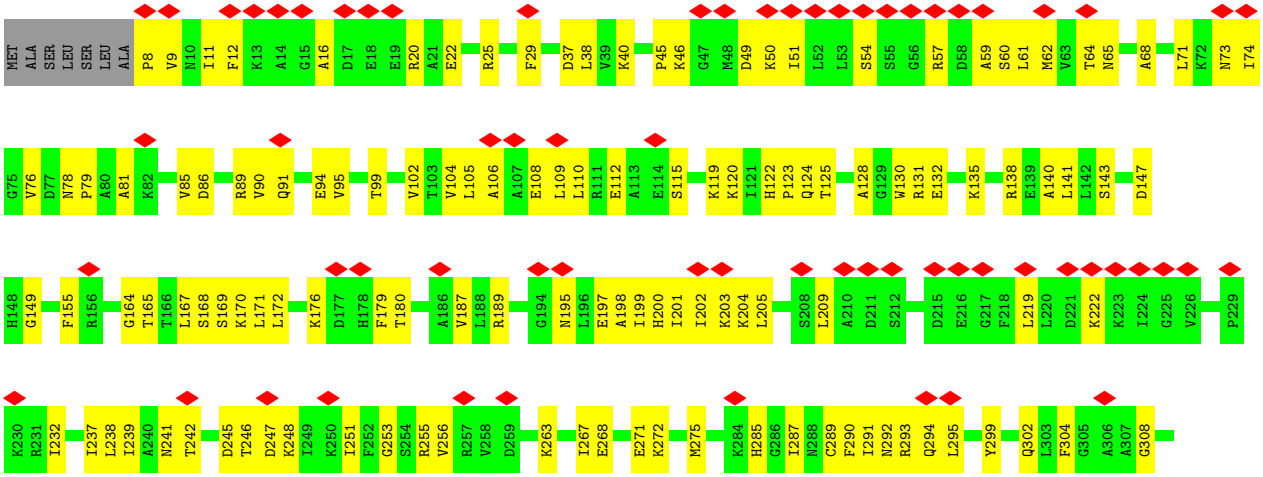
• Molecule 1: T-complex protein 1 subunit alpha

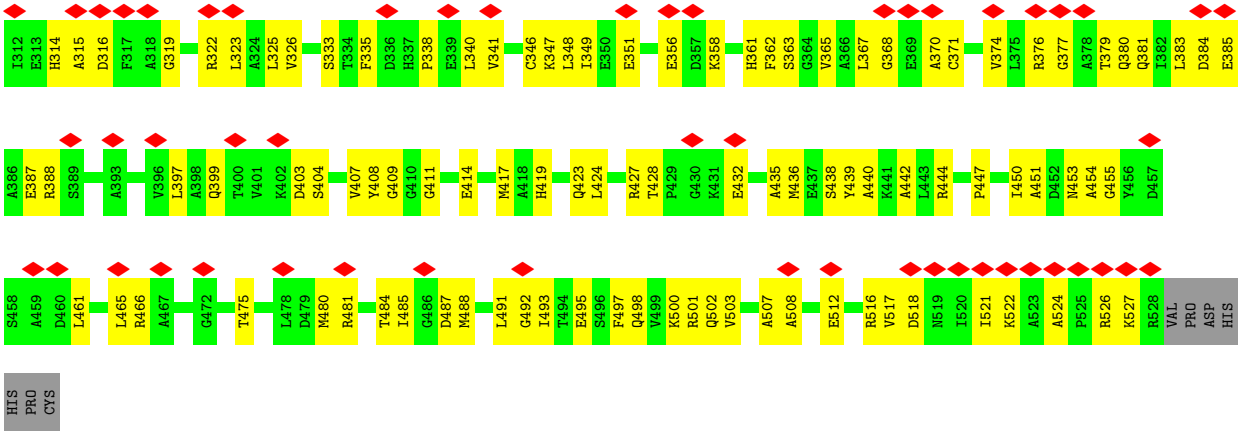
Chain I:



• Molecule 2: T-complex protein 1 subunit beta

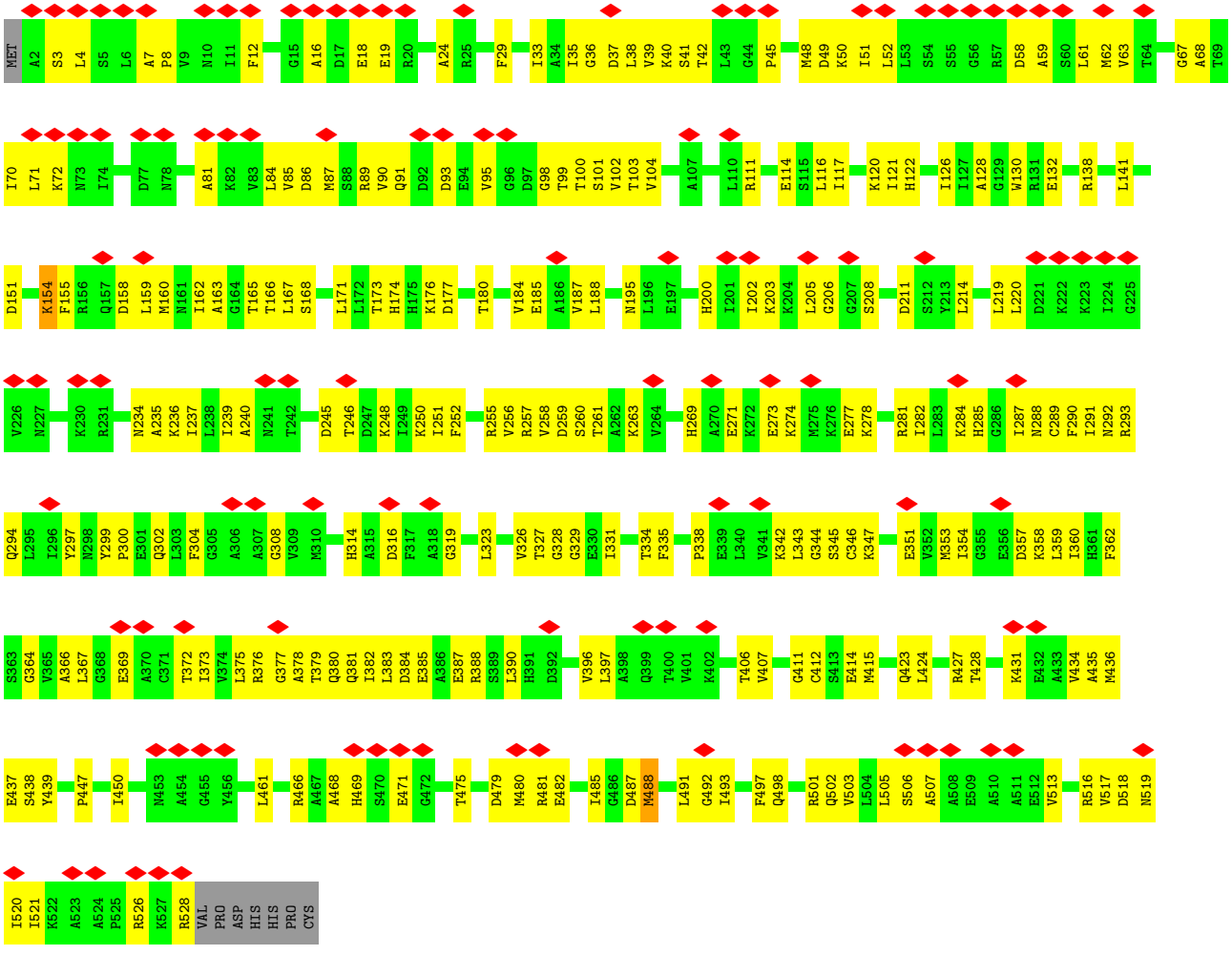
Chain B:





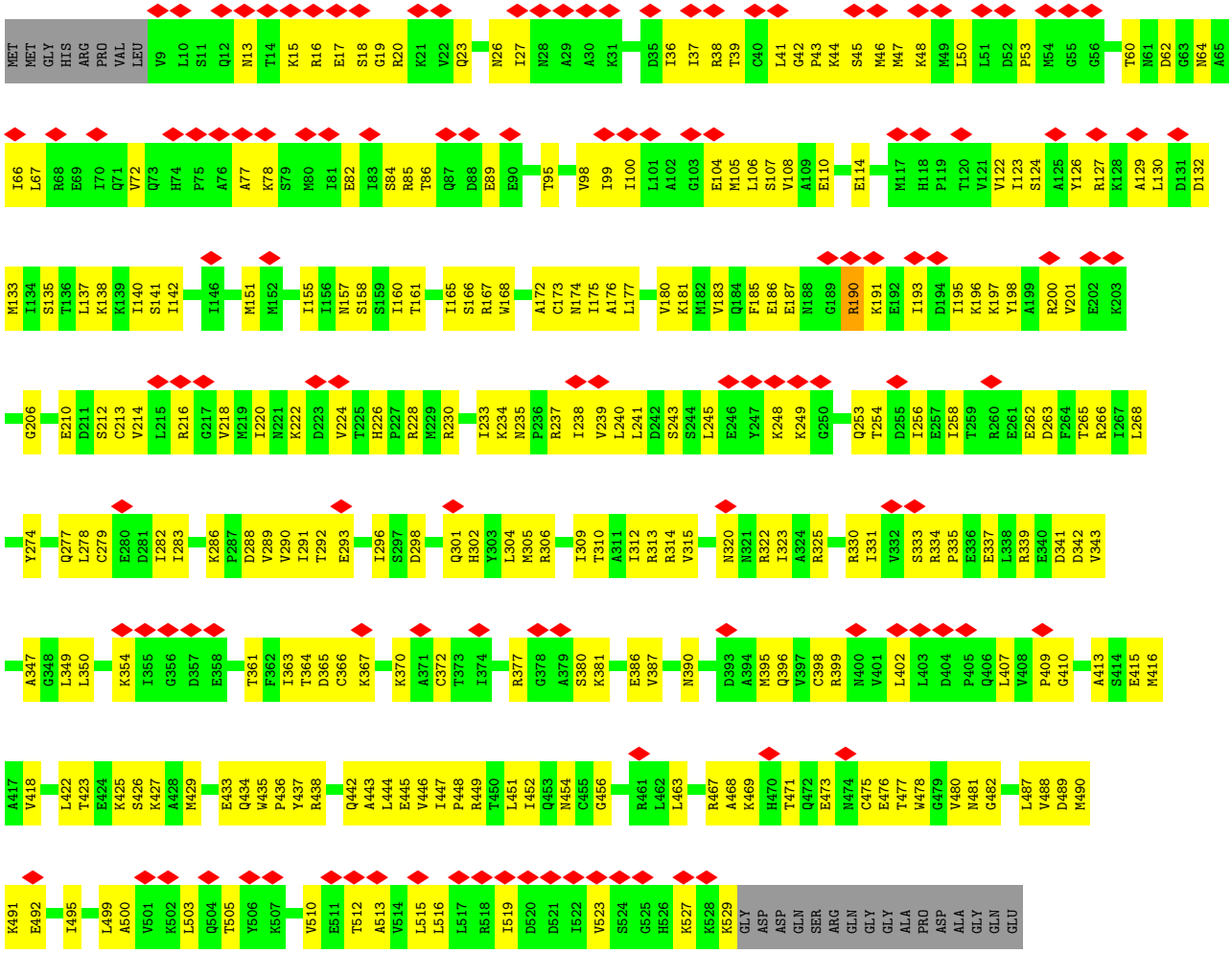
• Molecule 2: T-complex protein 1 subunit beta

Chain J:



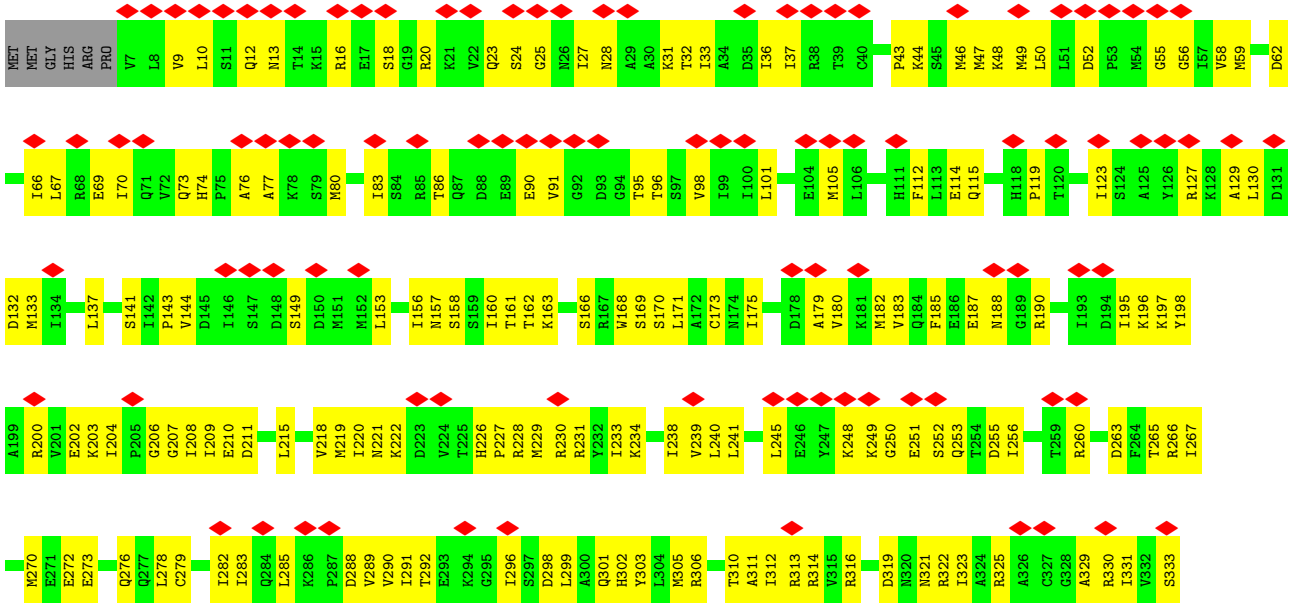
• Molecule 3: T-complex protein 1 subunit gamma

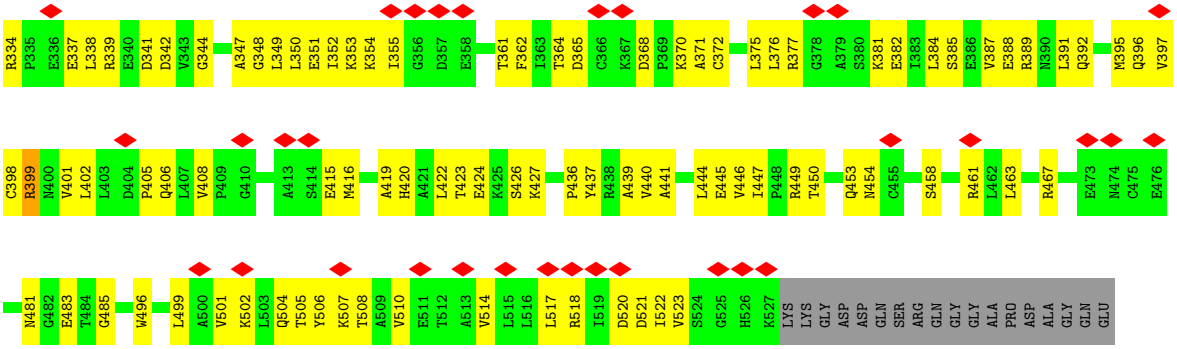
Chain C:



• Molecule 3: T-complex protein 1 subunit gamma

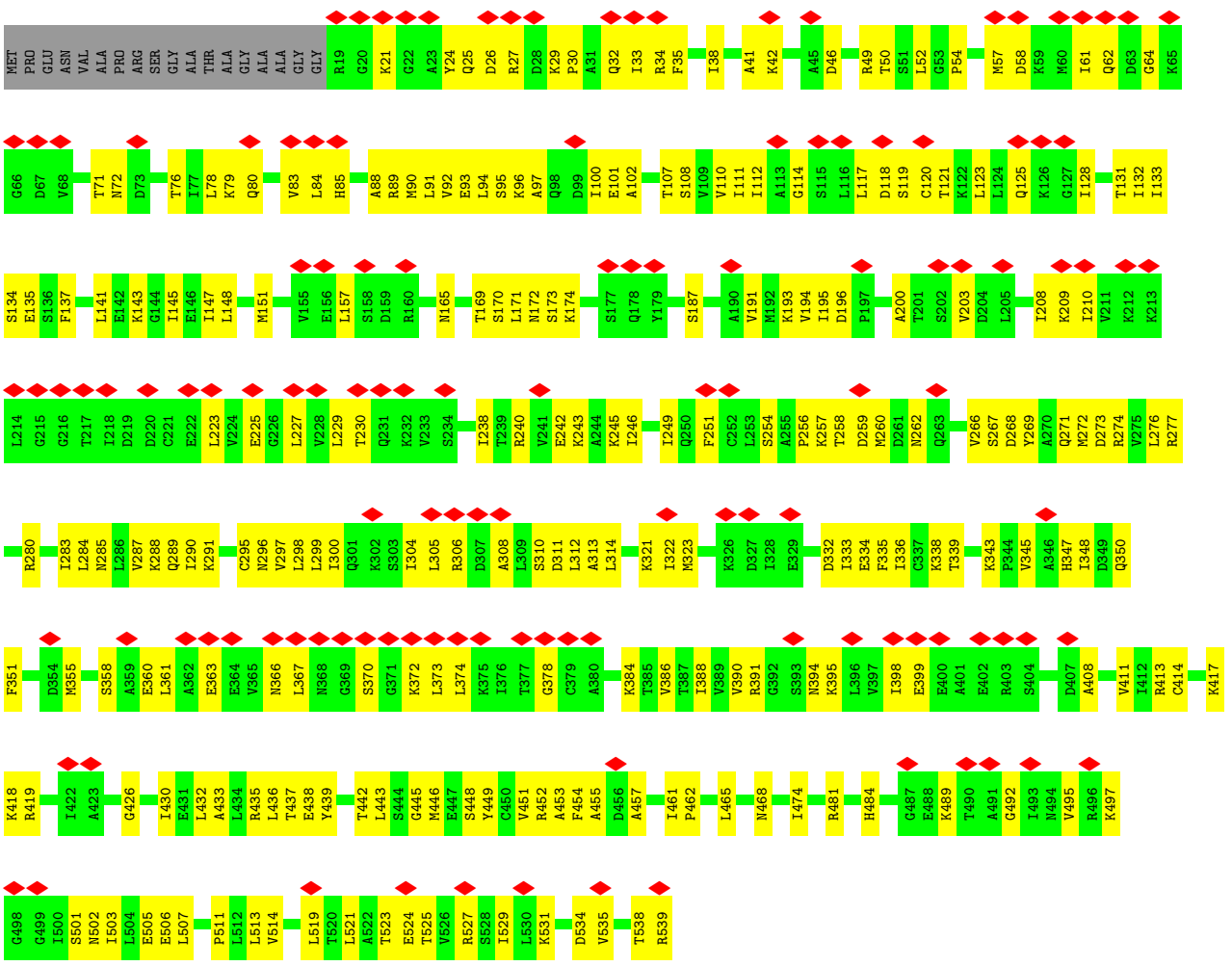
Chain K:





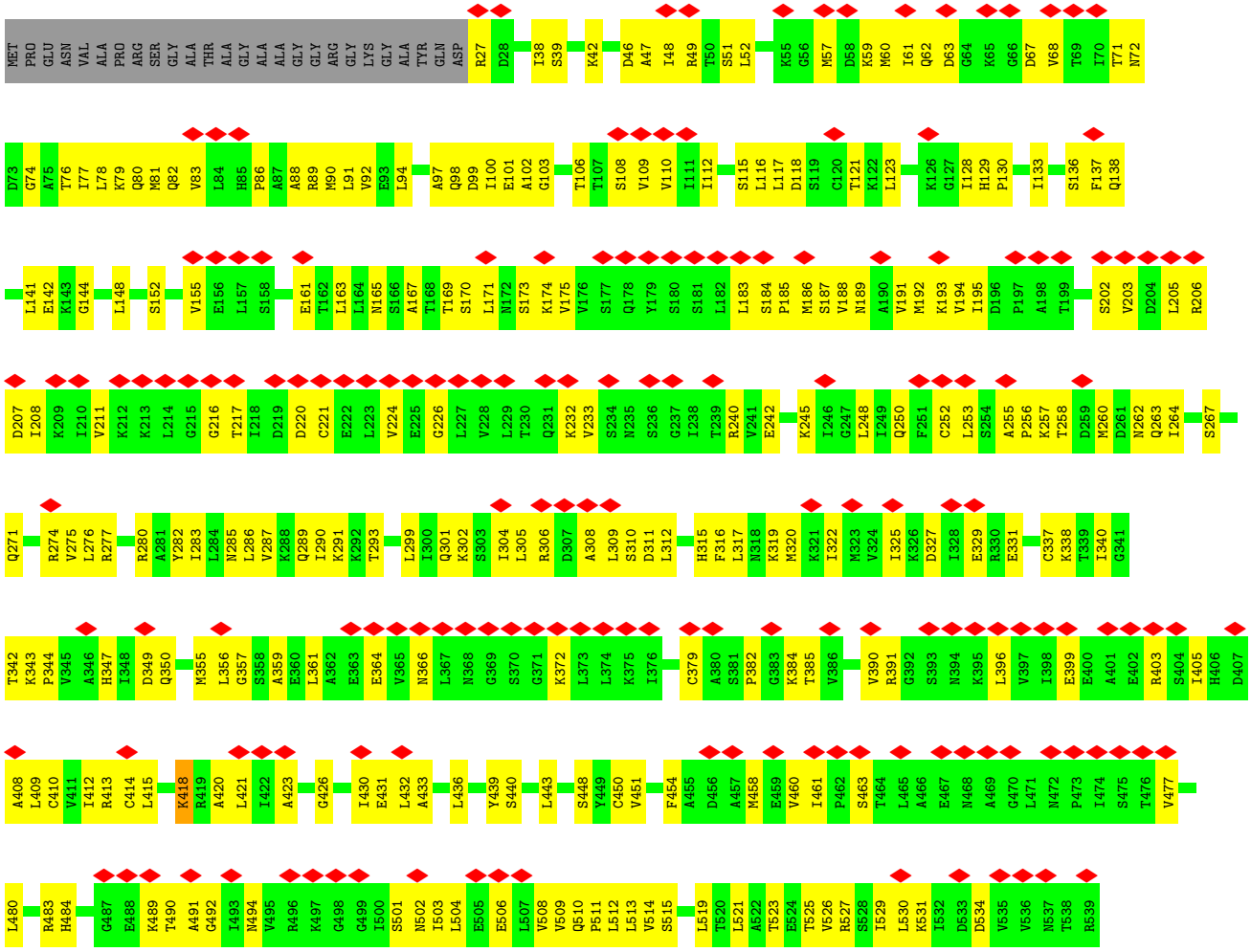
• Molecule 4: T-complex protein 1 subunit delta

Chain D:



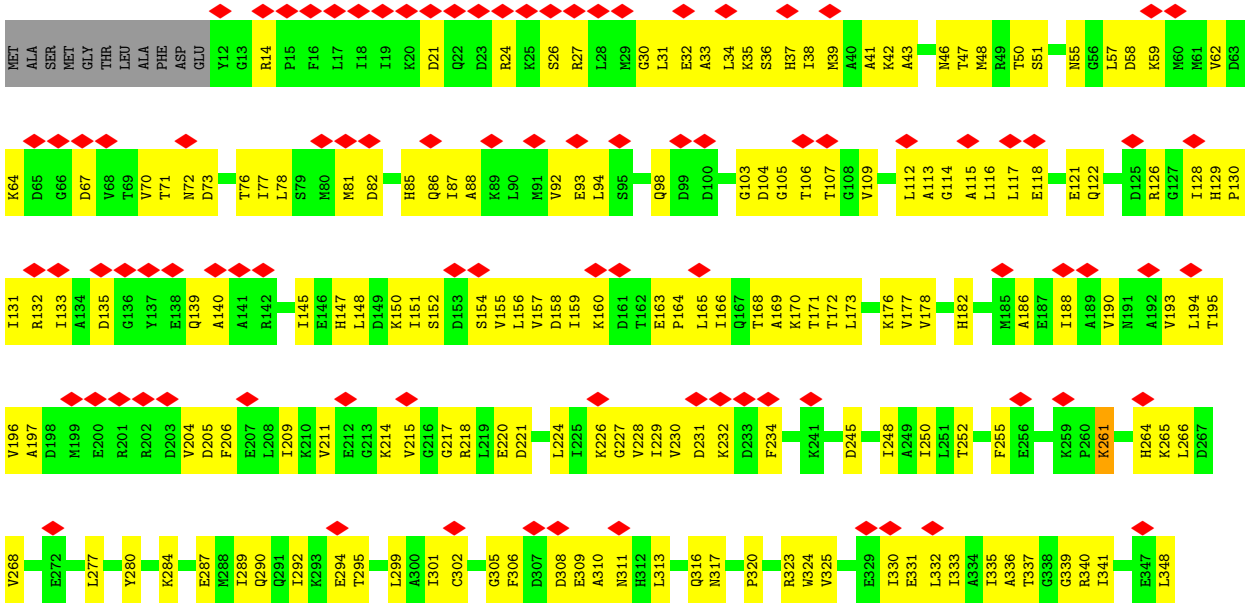
• Molecule 4: T-complex protein 1 subunit delta

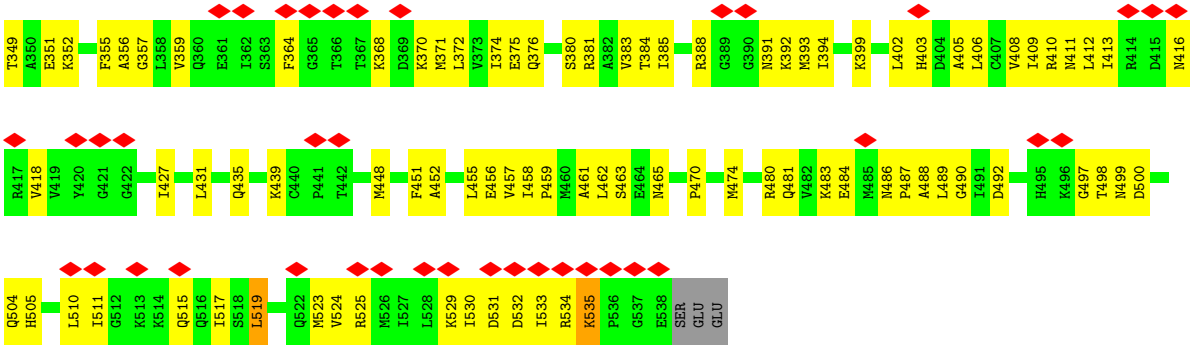
Chain L:



• Molecule 5: T-complex protein 1 subunit epsilon

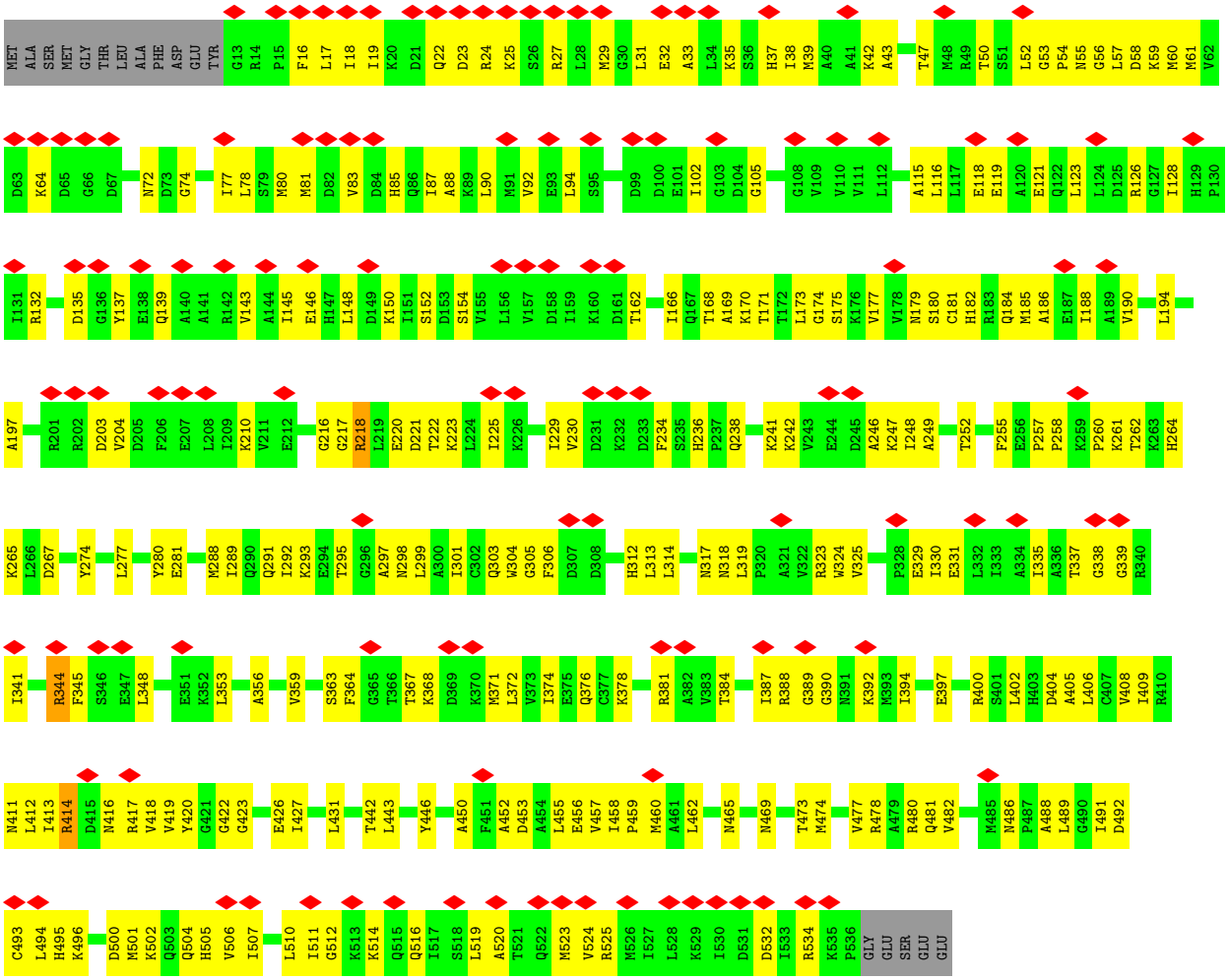
Chain E:





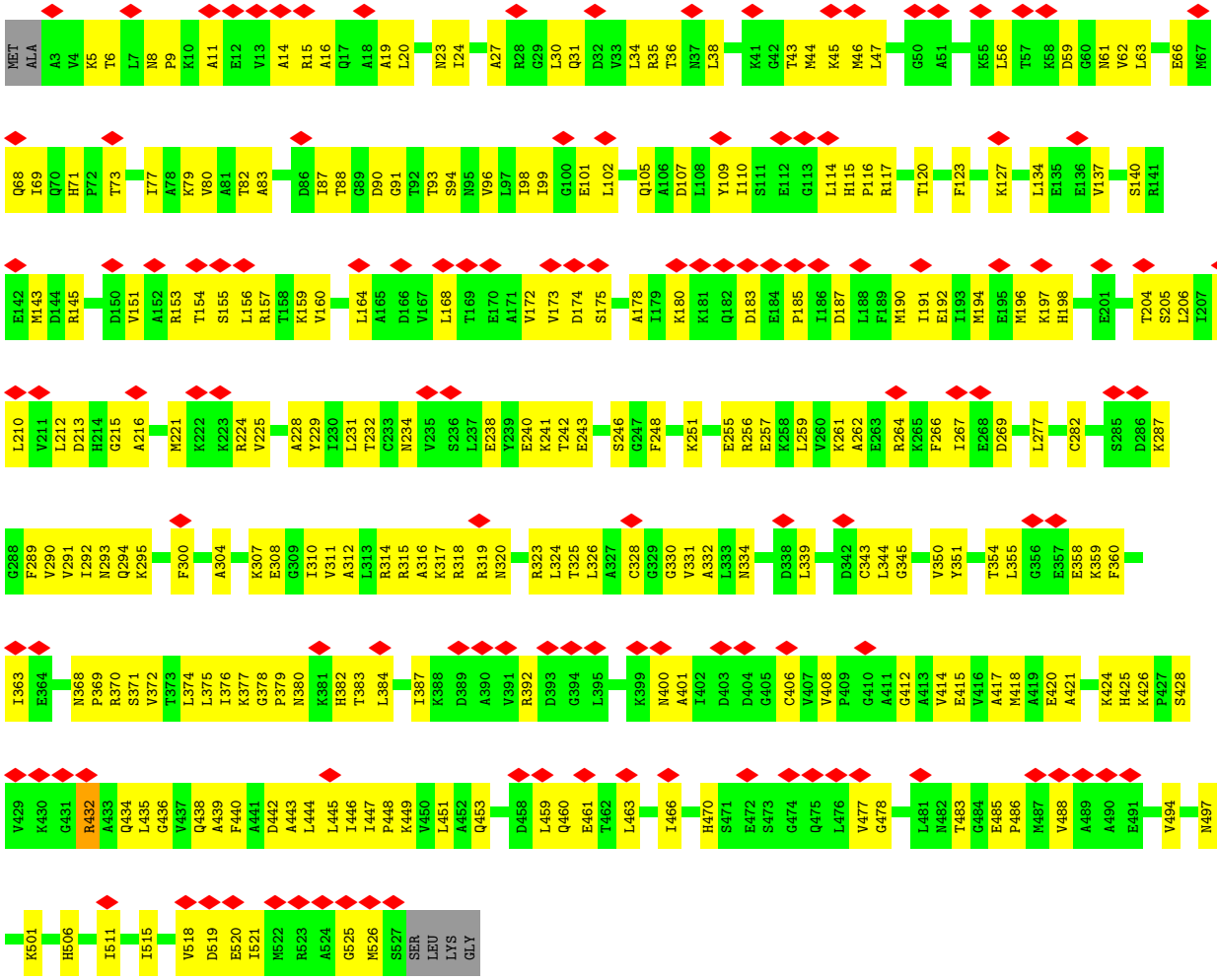
• Molecule 5: T-complex protein 1 subunit epsilon

Chain M:



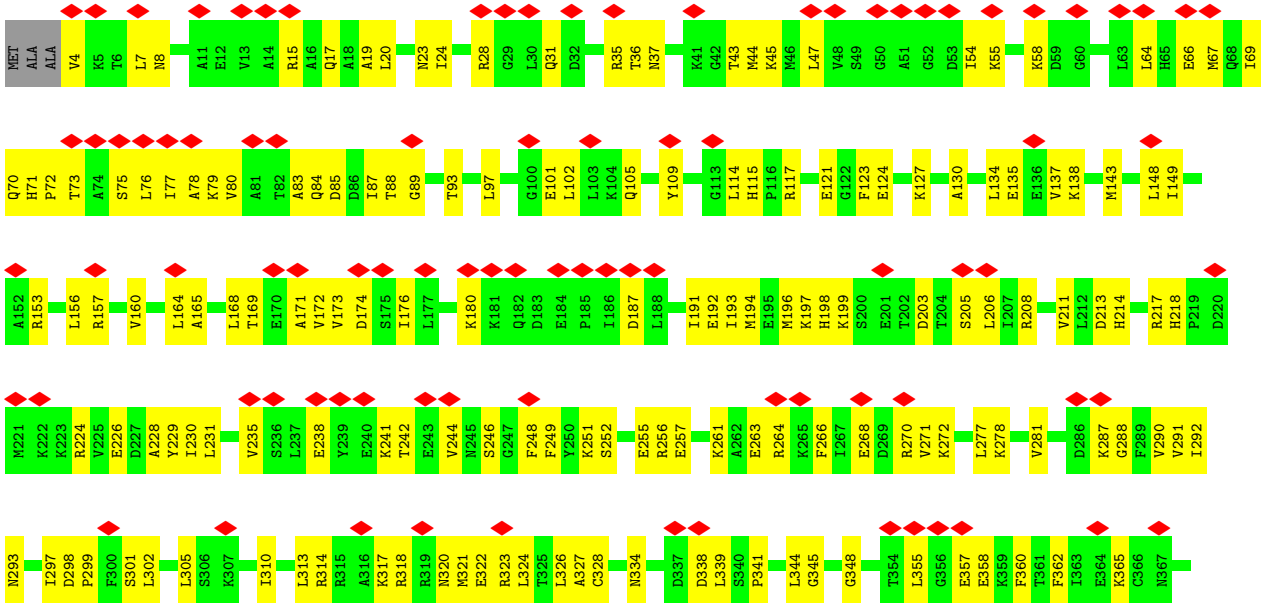
• Molecule 6: T-complex protein 1 subunit zeta

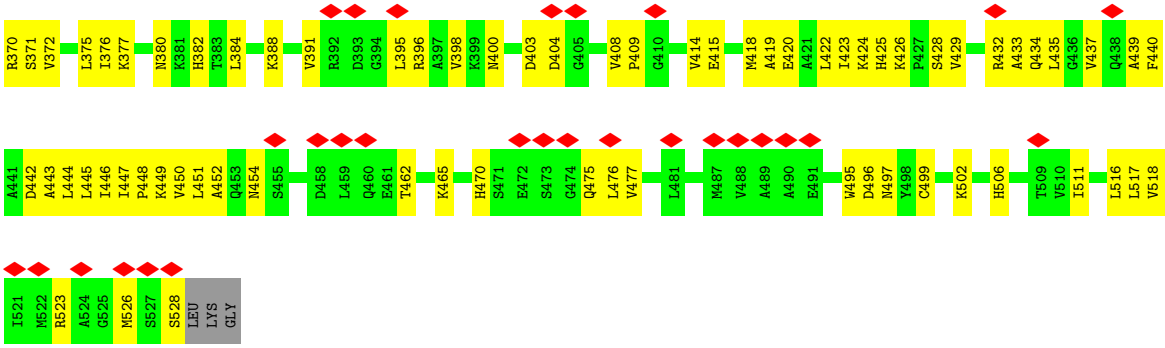
Chain F:



• Molecule 6: T-complex protein 1 subunit zeta

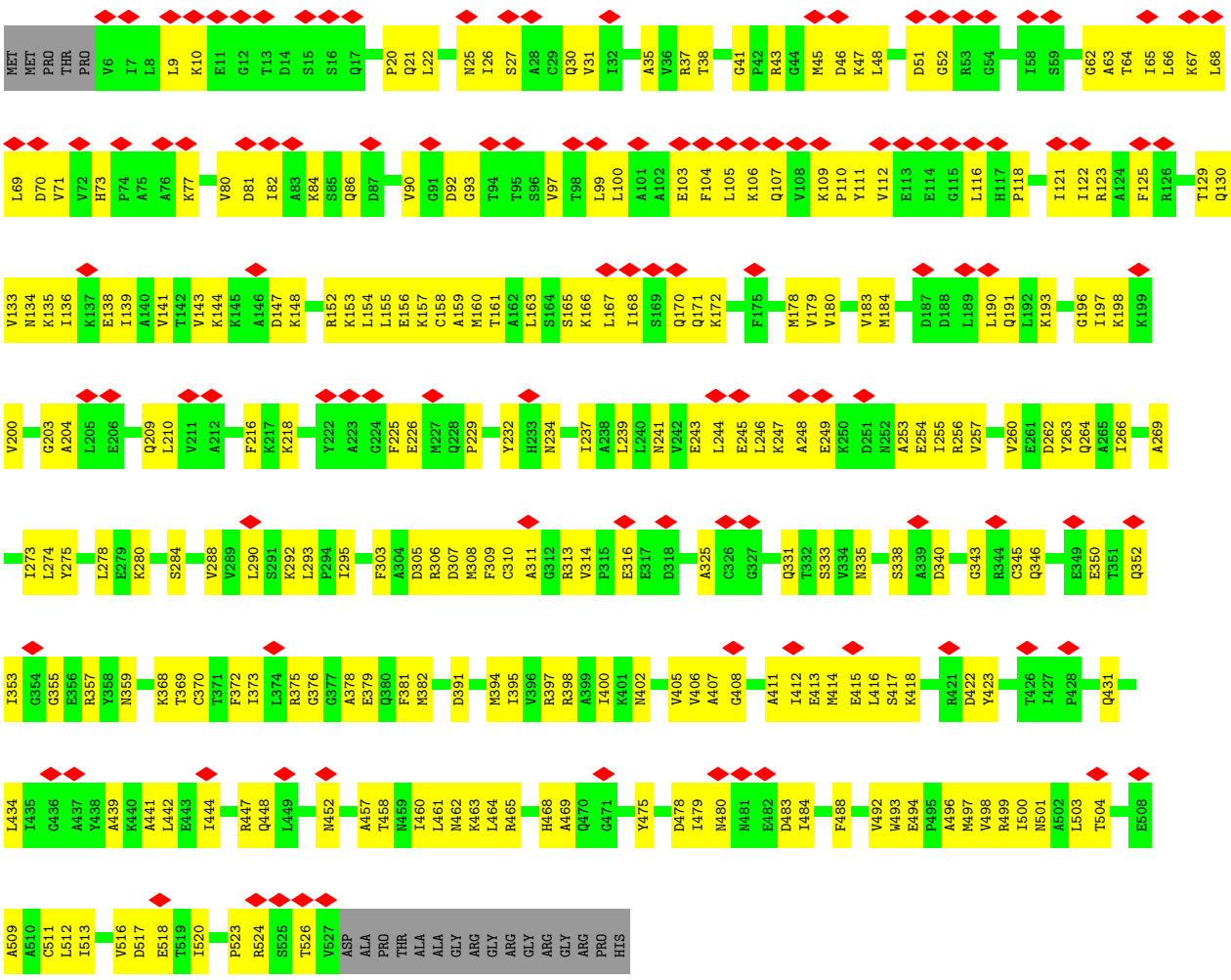
Chain N:





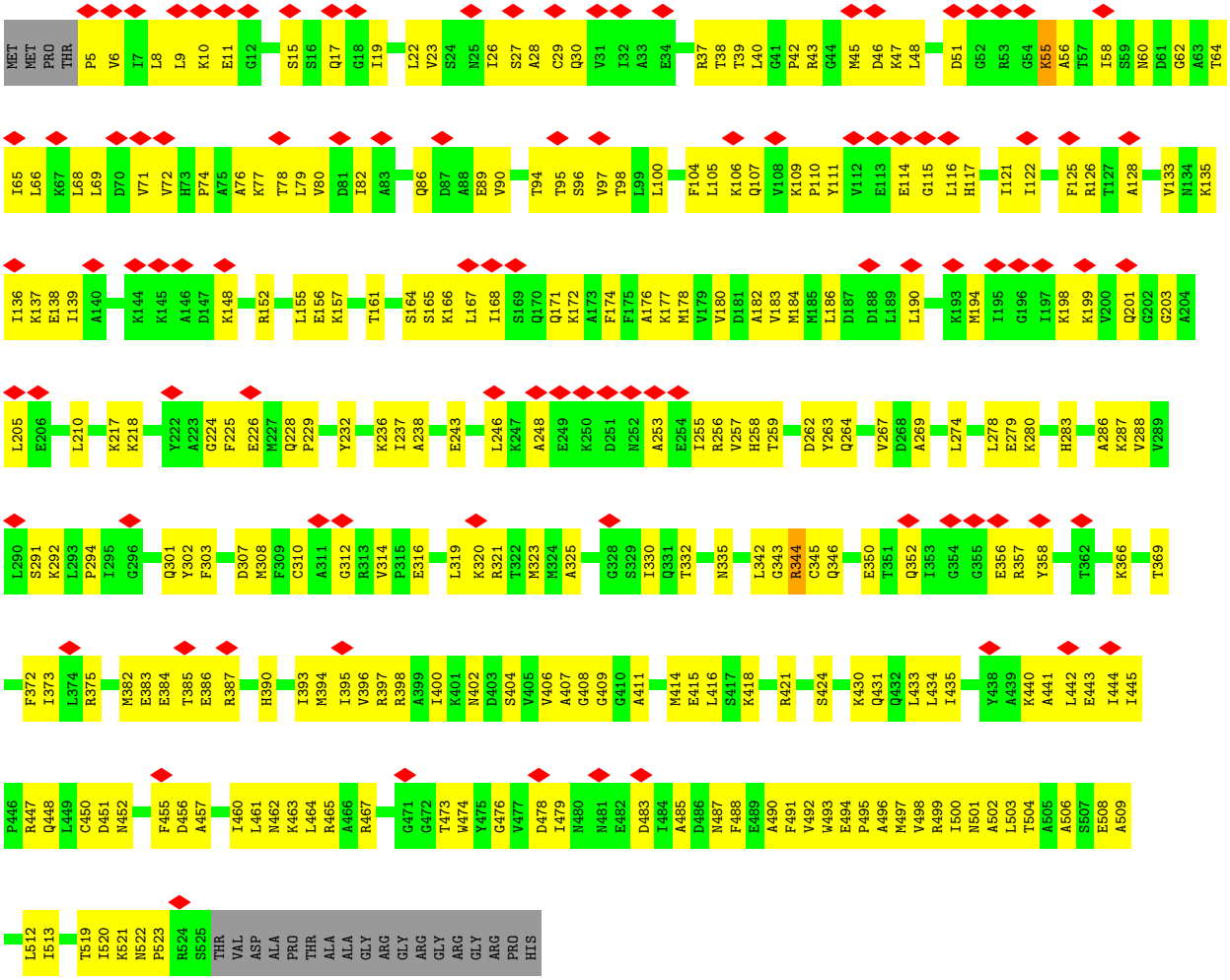
• Molecule 7: T-complex protein 1 subunit eta

Chain G:



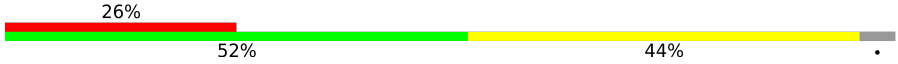
• Molecule 7: T-complex protein 1 subunit eta

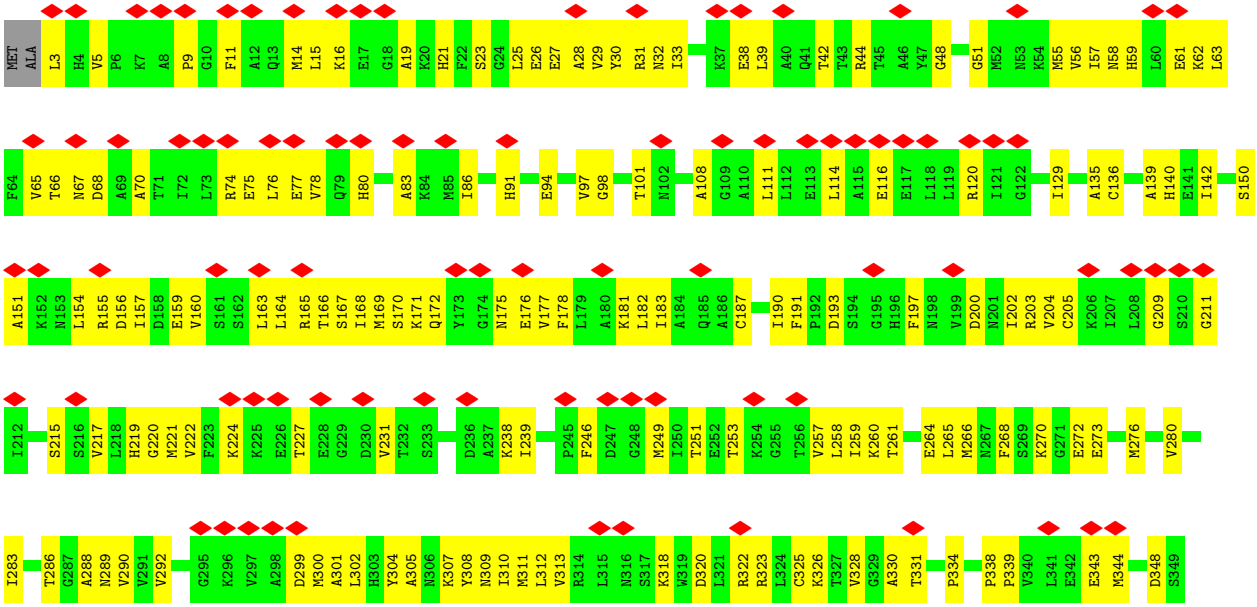
Chain O:

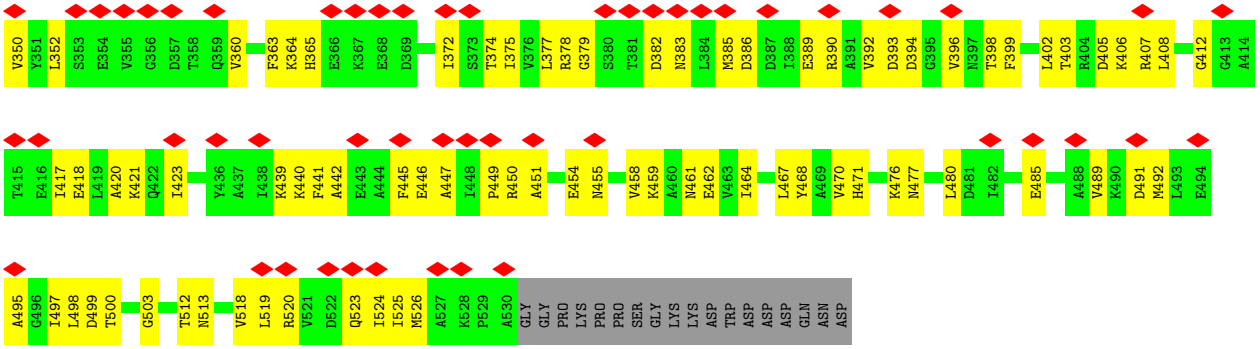


• Molecule 8: T-complex protein 1 subunit theta

Chain H:

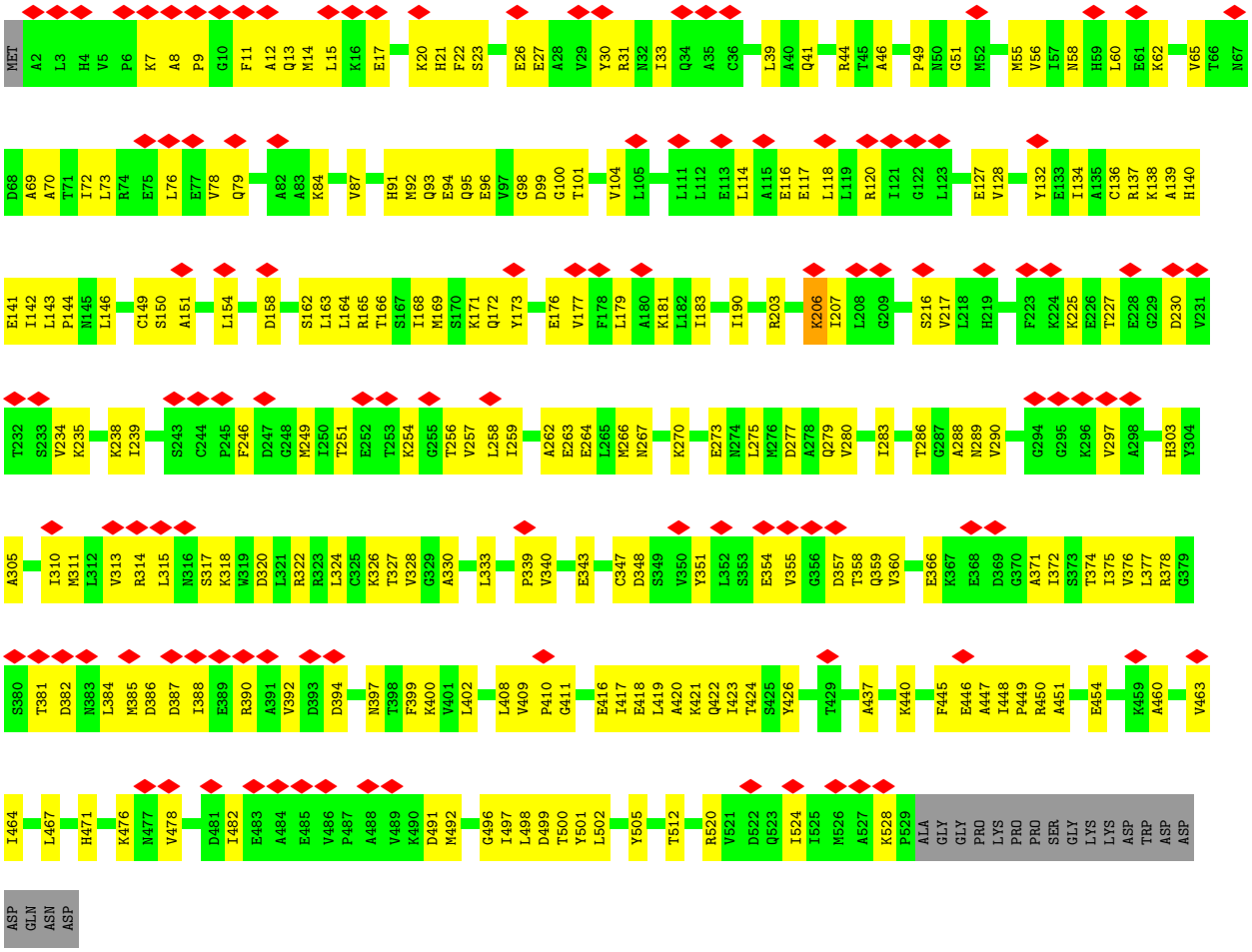






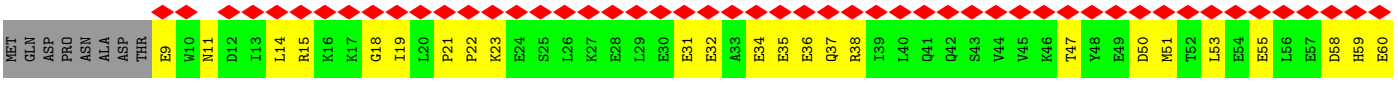
• Molecule 8: T-complex protein 1 subunit theta

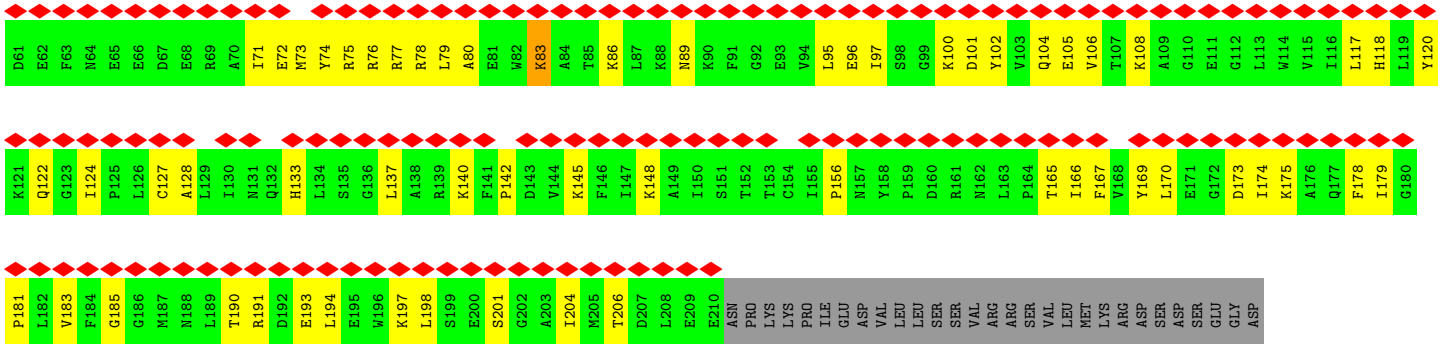
Chain P:



• Molecule 9: Phosducin-like protein 3

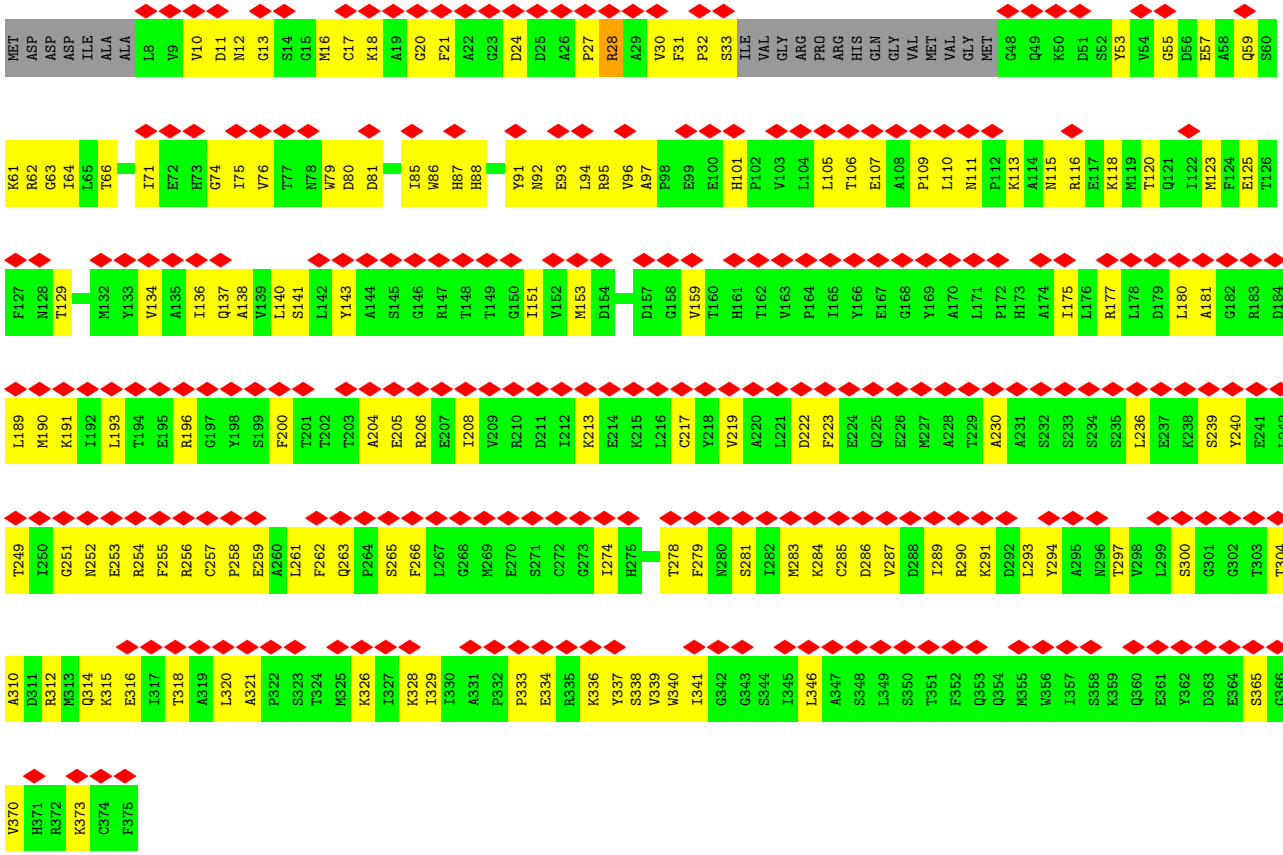
Chain Q:





• Molecule 10: ACTB protein (Fragment)

Chain S:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	8378	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE; CTF correction was performed for every micrographs	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.415	Depositor
Minimum map value	-0.185	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.027	Depositor
Recommended contour level	0.135	Depositor
Map size (Å)	352.0, 352.0, 352.0	wwPDB
Map dimensions	320, 320, 320	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.1, 1.1, 1.1	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	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.26	0/4091	0.51	0/5524
1	I	0.27	0/4094	0.52	0/5528
2	B	0.27	0/3968	0.53	0/5347
2	J	0.27	0/4006	0.51	0/5400
3	C	0.27	0/4096	0.53	0/5523
3	K	0.26	0/4093	0.53	0/5522
4	D	0.26	0/3967	0.53	0/5352
4	L	0.26	0/3904	0.53	0/5269
5	E	0.27	0/4112	0.52	1/5539 (0.0%)
5	M	0.27	0/4086	0.53	0/5504
6	F	0.27	0/4070	0.52	0/5487
6	N	0.27	0/4071	0.51	0/5488
7	G	0.28	0/4064	0.52	0/5485
7	O	0.27	0/4058	0.51	0/5476
8	H	0.27	0/4082	0.50	0/5518
8	P	0.27	0/4082	0.50	0/5518
9	Q	0.27	0/1678	0.55	0/2263
10	S	0.26	0/2830	0.50	0/3831
All	All	0.27	0/69352	0.52	1/93574 (0.0%)

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	E	519	LEU	CB-CG-CD2	-5.52	101.62	111.00

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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	4051	0	4203	212	0
1	I	4054	0	4213	208	0
2	B	3925	0	4042	196	0
2	J	3963	0	4083	218	0
3	C	4051	0	4187	219	0
3	K	4048	0	4181	235	0
4	D	3935	0	4144	206	0
4	L	3873	0	4086	207	0
5	E	4063	0	4183	230	0
5	M	4038	0	4165	208	0
6	F	4023	0	4161	210	0
6	N	4024	0	4161	204	0
7	G	4009	0	4114	225	0
7	O	4002	0	4106	225	0
8	H	4024	0	4094	197	0
8	P	4024	0	4094	168	0
9	Q	1647	0	1628	67	0
10	S	2770	0	2732	126	0
All	All	68524	0	70577	3214	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 23.

All (3214) 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)
5:M:460:MET:HG2	5:M:474:MET:HE3	1.48	0.95
6:F:101:GLU:HG2	6:F:446:ILE:HD13	1.50	0.94
8:P:166:THR:HG23	8:P:497:ILE:HD12	1.53	0.90
6:N:160:VAL:HG21	6:N:164:LEU:HD22	1.55	0.87
4:D:94:LEU:HD11	4:D:521:LEU:HB3	1.57	0.86
1:I:193:ASN:O	1:I:318:ARG:NH2	2.09	0.85
1:A:526:ARG:NH2	4:D:57:MET:SD	2.49	0.85
6:F:45:LYS:HG3	8:H:523:GLN:HB3	1.60	0.84
2:J:526:ARG:HB2	5:M:64:LYS:HB2	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:119:GLU:HB3	5:M:450:ALA:HB1	1.57	0.84
2:J:8:PRO:HB3	5:M:39:MET:HB2	1.60	0.83
9:Q:165:THR:HG23	9:Q:179:ILE:HA	1.57	0.83
6:N:156:LEU:HD11	6:N:168:LEU:HD23	1.60	0.83
6:F:442:ASP:O	6:F:445:LEU:HB3	1.76	0.83
6:F:440:PHE:O	6:F:443:ALA:HB3	1.78	0.82
5:M:305:GLY:HA2	5:M:323:ARG:HB2	1.62	0.82
3:K:245:LEU:HB2	3:K:296:ILE:HA	1.62	0.82
9:Q:15:ARG:NH1	9:Q:21:PRO:O	2.13	0.81
9:Q:89:ASN:HD22	9:Q:142:PRO:HG2	1.46	0.81
2:J:255:ARG:HH12	2:J:257:ARG:HD2	1.45	0.81
1:I:196:ASN:ND2	1:I:214:TYR:OH	2.14	0.81
3:C:302:HIS:HB2	6:F:334:ASN:HB2	1.62	0.81
3:K:153:LEU:HG	3:K:173:CYS:HB3	1.62	0.81
3:K:419:ALA:HB2	3:K:444:LEU:HD22	1.63	0.80
8:P:318:LYS:HG3	8:P:322:ARG:HH21	1.45	0.80
3:K:228:ARG:HG2	3:K:305:MET:HG2	1.62	0.80
3:K:9:VAL:HG13	3:K:10:LEU:HG	1.63	0.79
4:L:418:LYS:HE3	4:L:513:LEU:HB2	1.64	0.79
4:L:78:LEU:HB3	4:L:92:VAL:HG22	1.64	0.79
1:I:524:ILE:HA	1:I:527:ILE:HD12	1.64	0.79
8:H:136:CYS:SG	8:H:140:HIS:NE2	2.55	0.79
4:D:52:LEU:HB2	4:D:107:THR:HB	1.65	0.79
5:E:154:SER:HA	5:E:416:ASN:HA	1.63	0.79
3:K:130:LEU:HB2	3:K:510:VAL:HG11	1.65	0.79
6:N:180:LYS:HZ3	6:N:370:ARG:HG3	1.47	0.79
7:O:10:LYS:HD2	7:O:523:PRO:HG2	1.65	0.79
1:I:86:VAL:HG12	1:I:88:ASP:H	1.47	0.78
3:K:313:ARG:HG3	3:K:314:ARG:H	1.46	0.78
8:H:21:HIS:HE1	8:H:23:SER:HB2	1.49	0.78
3:K:228:ARG:NH1	3:K:305:MET:SD	2.57	0.78
2:B:76:VAL:HG11	2:B:81:ALA:HB3	1.66	0.78
3:C:135:SER:HA	3:C:138:LYS:HE2	1.66	0.78
7:O:42:PRO:HG2	7:O:479:ILE:HG13	1.65	0.77
2:B:124:GLN:HG3	5:E:55:ASN:HB3	1.67	0.77
3:K:499:LEU:HA	3:K:502:LYS:HE3	1.66	0.77
2:J:255:ARG:HH22	7:O:256:ARG:HE	1.33	0.77
9:Q:15:ARG:NH2	9:Q:23:LYS:HG2	2.00	0.77
4:D:418:LYS:HD3	4:D:513:LEU:HB2	1.67	0.77
4:D:242:GLU:HG3	4:D:361:LEU:HD13	1.67	0.77
3:K:170:SER:O	3:K:173:CYS:HB2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:440:PHE:O	6:N:443:ALA:HB3	1.85	0.77
7:O:236:LYS:HB2	7:O:286:ALA:HA	1.66	0.77
1:A:113:HIS:H	1:A:433:ARG:HH22	1.31	0.76
3:C:410:GLY:HA3	3:C:495:ILE:HG12	1.66	0.76
5:E:140:ALA:HB2	5:E:448:MET:HG3	1.66	0.76
5:M:55:ASN:ND2	5:M:493:CYS:O	2.19	0.76
5:E:188:ILE:HG23	5:E:224:LEU:HB2	1.68	0.76
2:J:351:GLU:HA	2:J:360:ILE:HA	1.68	0.76
2:B:242:THR:O	2:B:294:GLN:NE2	2.18	0.75
2:B:205:LEU:HD13	4:D:97:ALA:HA	1.68	0.75
1:I:314:ARG:HA	1:I:317:LYS:HD3	1.68	0.75
7:O:26:ILE:HA	7:O:105:LEU:HD23	1.67	0.75
1:A:389:GLU:OE2	1:A:390:ARG:NH1	2.19	0.75
1:A:24:ALA:O	1:A:27:SER:HB3	1.86	0.75
6:F:317:LYS:HE2	6:F:320:ASN:HD21	1.50	0.75
8:P:478:VAL:HA	8:P:491:ASP:HA	1.69	0.75
8:P:55:MET:HG2	8:P:65:VAL:HG22	1.69	0.75
1:I:247:LYS:HG2	1:I:249:GLY:H	1.51	0.75
2:B:115:SER:O	2:B:119:LYS:NZ	2.20	0.74
5:M:170:LYS:O	5:M:182:HIS:NE2	2.19	0.74
1:I:315:ASP:HA	1:I:318:ARG:HD2	1.69	0.74
8:P:238:LYS:HB2	8:P:288:ALA:HA	1.68	0.74
2:J:89:ARG:HH22	5:M:392:LYS:H	1.34	0.74
3:K:351:GLU:HB3	3:K:353:LYS:HE3	1.68	0.74
2:J:236:LYS:H	2:J:288:ASN:HB3	1.52	0.74
7:O:26:ILE:HG23	7:O:105:LEU:HB3	1.69	0.74
2:J:91:GLN:HG3	2:J:99:THR:HG22	1.70	0.74
3:C:240:LEU:HD23	3:C:331:ILE:HG12	1.69	0.74
5:E:461:ALA:O	5:E:465:ASN:ND2	2.21	0.73
7:O:342:LEU:O	7:O:344:ARG:NH1	2.21	0.73
4:D:46:ASP:OD1	4:D:49:ARG:NH2	2.19	0.73
10:S:17:CYS:H	10:S:31:PHE:HB3	1.51	0.73
2:B:61:LEU:O	2:B:381:GLN:NE2	2.21	0.73
6:F:326:LEU:HB3	6:F:370:ARG:HB2	1.68	0.73
4:D:474:ILE:HD11	5:M:126:ARG:HB3	1.69	0.73
10:S:263:GLN:HE22	10:S:265:SER:HB2	1.53	0.73
5:E:215:VAL:O	5:E:388:ARG:NH1	2.22	0.73
5:E:530:ILE:HD11	7:G:48:LEU:HB2	1.70	0.73
8:H:74:ARG:HH12	8:H:75:GLU:HG2	1.53	0.73
7:O:60:ASN:HD21	7:O:166:LYS:HA	1.52	0.73
2:B:187:VAL:HG21	2:B:397:LEU:HB3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:512:LEU:HD11	8:H:383:ASN:HD21	1.53	0.73
4:D:148:LEU:HD11	4:D:519:LEU:HD21	1.70	0.73
8:H:94:GLU:HA	8:H:98:GLY:HA2	1.71	0.73
4:L:46:ASP:HA	4:L:49:ARG:HG3	1.69	0.73
10:S:18:LYS:HB3	10:S:27:PRO:HG3	1.71	0.73
2:B:65:ASN:ND2	2:B:169:SER:O	2.22	0.72
4:D:21:LYS:HD3	2:J:431:LYS:HB3	1.69	0.72
4:D:102:ALA:O	4:D:413:ARG:NH2	2.16	0.72
7:O:521:LYS:NZ	7:O:522:ASN:O	2.21	0.72
1:A:243:LYS:HE3	1:A:268:SER:HB2	1.72	0.72
4:D:451:VAL:HA	4:D:454:PHE:HD2	1.55	0.72
5:E:337:THR:HG23	5:E:339:GLY:H	1.53	0.72
3:K:227:PRO:HB3	6:N:322:GLU:HG3	1.71	0.72
6:N:148:LEU:HD12	6:N:398:VAL:HG23	1.70	0.72
7:G:148:LYS:NZ	7:G:184:MET:SD	2.60	0.72
2:B:65:ASN:HD22	2:B:170:LYS:HA	1.54	0.72
7:O:152:ARG:HG2	7:O:184:MET:HG3	1.70	0.72
2:J:61:LEU:HB2	4:L:89:ARG:HH21	1.55	0.71
4:L:338:LYS:HD2	4:L:384:LYS:HB2	1.71	0.71
5:E:399:LYS:O	5:E:403:HIS:ND1	2.23	0.71
1:I:122:ARG:NH2	1:I:125:CYS:SG	2.63	0.71
4:L:169:THR:HG21	4:L:508:VAL:HA	1.72	0.71
5:E:32:GLU:O	5:E:35:LYS:HB2	1.90	0.71
6:N:271:VAL:HB	6:N:305:LEU:HD21	1.72	0.71
6:F:320:ASN:OD1	6:F:323:ARG:NH1	2.23	0.71
8:H:200:ASP:HB3	8:H:323:ARG:HH22	1.55	0.71
6:N:54:ILE:HD11	8:P:84:LYS:HD2	1.72	0.71
3:C:45:SER:O	6:F:117:ARG:NH1	2.23	0.71
4:D:32:GLN:OE1	2:J:3:SER:OG	2.06	0.71
4:D:230:THR:HA	4:D:373:LEU:HD11	1.71	0.71
3:K:302:HIS:HB2	6:N:334:ASN:HB2	1.72	0.71
6:N:442:ASP:HA	6:N:445:LEU:HD12	1.72	0.71
6:N:429:VAL:O	6:N:434:GLN:NE2	2.22	0.71
10:S:107:GLU:O	10:S:137:GLN:NE2	2.21	0.71
3:C:349:LEU:HB3	3:C:364:THR:HB	1.73	0.70
4:D:287:VAL:HA	4:D:290:ILE:HD12	1.73	0.70
5:E:206:PHE:HA	5:E:209:ILE:HD12	1.73	0.70
7:G:66:LEU:HB3	7:G:80:VAL:HG23	1.73	0.70
7:O:487:ASN:HA	7:O:490:ALA:HB3	1.73	0.70
8:P:171:LYS:NZ	8:P:394:ASP:OD2	2.22	0.70
1:A:171:MET:HG3	1:A:210:LEU:HB2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:240:ARG:NH1	4:L:242:GLU:OE2	2.23	0.70
5:M:78:LEU:HB3	5:M:92:VAL:HG22	1.73	0.70
3:C:478:TRP:HA	3:C:489:ASP:HA	1.73	0.70
2:J:345:SER:HB2	2:J:366:ALA:HB2	1.73	0.70
1:A:218:CYS:HB3	1:A:308:VAL:HG11	1.73	0.70
1:A:532:LYS:HA	4:D:62:GLN:HE21	1.55	0.70
7:G:305:ASP:OD2	7:G:306:ARG:NH1	2.25	0.70
1:I:30:ASN:HA	1:I:33:LYS:HB2	1.71	0.70
5:E:94:LEU:HD13	5:E:523:MET:HG3	1.72	0.70
6:F:154:THR:HG21	6:F:494:VAL:HA	1.73	0.70
1:A:10:ASP:OD1	1:A:11:ARG:N	2.25	0.70
1:I:251:GLN:HA	3:K:253:GLN:HG3	1.74	0.70
8:P:206:LYS:HA	8:P:377:LEU:HB2	1.73	0.70
5:E:252:THR:O	9:Q:100:LYS:NZ	2.23	0.70
1:I:530:LEU:HA	4:L:60:MET:HB2	1.74	0.70
7:O:430:LYS:HG2	7:O:433:LEU:HD22	1.73	0.70
1:A:223:GLN:O	1:A:227:LYS:NZ	2.25	0.70
4:D:137:PHE:HD1	4:D:454:PHE:HZ	1.38	0.69
4:D:245:LYS:H	4:D:296:ASN:HB2	1.57	0.69
8:H:288:ALA:HB2	8:H:344:MET:HE2	1.74	0.69
7:O:79:LEU:HD23	7:O:82:ILE:HD11	1.74	0.69
1:A:355:ARG:NH2	1:A:358:ASP:OD1	2.24	0.69
6:F:91:GLY:H	6:F:159:LYS:HZ1	1.38	0.69
10:S:113:LYS:HD2	10:S:370:VAL:HG12	1.74	0.69
5:E:230:VAL:O	5:E:372:LEU:N	2.26	0.69
3:K:351:GLU:HB2	3:K:362:PHE:HB2	1.73	0.69
5:E:131:ILE:HG21	7:G:43:ARG:HD2	1.73	0.69
2:B:351:GLU:OE1	2:B:358:LYS:NZ	2.22	0.69
3:C:293:GLU:HA	3:C:315:VAL:H	1.57	0.69
5:E:112:LEU:HD12	5:E:458:ILE:HD11	1.73	0.69
8:H:302:LEU:HD13	8:H:312:LEU:HD12	1.74	0.69
5:M:33:ALA:O	5:M:37:HIS:ND1	2.26	0.69
4:D:209:LYS:NZ	4:D:210:ILE:O	2.26	0.69
8:H:171:LYS:NZ	8:H:394:ASP:OD2	2.18	0.69
1:I:39:VAL:HG21	1:I:456:ALA:HB2	1.75	0.69
2:B:199:ILE:O	2:B:322:ARG:NH2	2.25	0.69
3:C:160:ILE:HD11	3:C:165:ILE:HG13	1.75	0.69
7:G:43:ARG:NH2	7:G:480:ASN:OD1	2.25	0.69
1:A:367:THR:OG1	1:A:370:ARG:O	2.11	0.69
2:B:91:GLN:HB3	2:B:99:THR:HG22	1.74	0.69
3:C:527:LYS:O	3:C:529:LYS:NZ	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:29:LYS:HA	4:D:32:GLN:NE2	2.07	0.69
3:K:348:GLY:N	3:K:364:THR:O	2.25	0.69
3:K:395:MET:HG3	3:K:396:GLN:HE21	1.57	0.69
5:M:338:GLY:HA2	5:M:381:ARG:HH22	1.57	0.69
3:C:289:VAL:HG23	3:C:310:THR:HB	1.74	0.69
7:G:198:LYS:HE2	7:G:216:PHE:HA	1.74	0.69
1:I:121:TYR:HA	1:I:441:PHE:CZ	2.28	0.69
7:O:157:LYS:HD2	7:O:491:PHE:HB3	1.75	0.69
7:G:407:ALA:HB2	7:G:488:PHE:HD1	1.58	0.68
5:M:376:GLN:HE21	5:M:378:LYS:H	1.41	0.68
1:I:264:ARG:NH2	3:K:252:SER:OG	2.26	0.68
6:N:263:GLU:OE1	8:P:251:THR:OG1	2.11	0.68
6:N:429:VAL:HG13	6:N:434:GLN:HG2	1.73	0.68
3:C:265:THR:HG22	6:F:266:PHE:HB2	1.74	0.68
6:N:419:ALA:HB2	6:N:444:LEU:HD11	1.74	0.68
7:O:60:ASN:ND2	7:O:165:SER:O	2.26	0.68
5:E:228:VAL:HG11	5:E:333:ILE:HG12	1.76	0.68
7:G:488:PHE:O	7:G:493:TRP:NE1	2.25	0.68
3:K:382:GLU:OE2	6:N:79:LYS:NZ	2.26	0.68
5:E:264:HIS:HA	7:G:255:ILE:HB	1.74	0.68
6:F:68:GLN:HB3	8:H:16:LYS:HD3	1.76	0.68
4:L:248:LEU:HA	4:L:299:LEU:HB2	1.74	0.68
2:B:128:ALA:HA	2:B:131:ARG:HD2	1.76	0.68
2:B:488:MET:O	2:B:492:GLY:N	2.16	0.68
7:G:26:ILE:HG23	7:G:105:LEU:HG	1.75	0.68
1:I:150:ASN:HA	1:I:153:LYS:HD3	1.76	0.68
2:J:205:LEU:O	2:J:376:ARG:NH2	2.26	0.68
7:G:86:GLN:OE1	7:G:501:ASN:ND2	2.27	0.68
1:I:397:CYS:HA	1:I:400:LYS:HE3	1.75	0.68
2:J:58:ASP:O	4:L:89:ARG:NH1	2.27	0.68
5:M:94:LEU:HD11	5:M:519:LEU:HB3	1.75	0.68
6:N:426:LYS:HE3	6:N:434:GLN:HB3	1.76	0.68
3:C:290:VAL:HG13	3:C:309:ILE:HG21	1.75	0.68
1:I:299:TYR:OH	3:K:334:ARG:NH1	2.27	0.68
3:K:266:ARG:NH2	3:K:273:GLU:OE2	2.27	0.68
4:D:426:GLY:H	4:D:492:GLY:HA2	1.58	0.68
8:H:299:ASP:OD1	8:H:300:MET:N	2.27	0.68
6:N:153:ARG:HG2	6:N:169:THR:HG21	1.75	0.68
9:Q:15:ARG:HH21	9:Q:23:LYS:HG2	1.58	0.68
10:S:310:ALA:HB1	10:S:329:ILE:HD12	1.76	0.68
2:J:255:ARG:HE	5:M:265:LYS:HB3	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:101:GLU:OE1	6:N:443:ALA:HA	1.93	0.68
7:O:441:ALA:HA	7:O:444:ILE:HD12	1.76	0.68
9:Q:170:LEU:O	9:Q:175:LYS:NZ	2.27	0.68
6:F:153:ARG:HG3	6:F:157:ARG:HH21	1.59	0.67
4:L:510:GLN:NE2	4:L:515:SER:OG	2.27	0.67
1:I:199:LYS:HB2	1:I:385:CYS:SG	2.34	0.67
9:Q:124:ILE:HG23	9:Q:127:CYS:H	1.59	0.67
1:I:121:TYR:HA	1:I:441:PHE:HZ	1.59	0.67
3:K:265:THR:HG22	6:N:266:PHE:HB2	1.76	0.67
7:G:448:GLN:NE2	7:G:452:ASN:OD1	2.26	0.67
1:I:106:GLU:O	1:I:110:GLN:NE2	2.28	0.67
7:O:467:ARG:NH1	7:O:467:ARG:O	2.28	0.67
10:S:312:ARG:NH2	10:S:316:GLU:OE1	2.27	0.67
4:D:413:ARG:NH2	4:D:414:CYS:SG	2.66	0.67
1:I:166:ASP:O	1:I:170:ASN:ND2	2.27	0.67
6:N:264:ARG:NH2	6:N:298:ASP:OD2	2.28	0.67
9:Q:71:ILE:HG22	9:Q:75:ARG:NH1	2.10	0.67
2:B:444:ARG:HD3	2:B:466:ARG:HD2	1.76	0.67
4:D:360:GLU:HB3	4:D:378:GLY:HA3	1.77	0.67
8:H:166:THR:HG21	8:H:498:LEU:H	1.59	0.67
7:O:174:PHE:HA	7:O:177:LYS:HE2	1.75	0.67
2:B:414:GLU:OE1	2:B:414:GLU:N	2.25	0.67
5:E:227:GLY:HA2	5:E:376:GLN:HE22	1.60	0.67
6:F:174:ASP:O	6:F:208:ARG:NH1	2.28	0.67
1:I:266:ARG:NH1	1:I:269:ASP:OD2	2.28	0.67
10:S:249:THR:HG22	10:S:251:GLY:H	1.59	0.67
1:A:435:GLN:HA	1:A:438:ILE:HD12	1.76	0.67
3:C:129:ALA:O	3:C:133:MET:HG3	1.94	0.67
4:D:137:PHE:HD1	4:D:454:PHE:CZ	2.13	0.67
8:P:386:ASP:HB3	8:P:390:ARG:HH12	1.60	0.67
1:I:197:ILE:HD12	1:I:375:ILE:HB	1.77	0.67
7:O:183:VAL:HG11	7:O:396:VAL:HG11	1.76	0.67
4:D:271:GLN:HG2	4:D:274:ARG:HH21	1.60	0.67
5:E:128:ILE:HG23	5:E:133:ILE:HD11	1.76	0.67
6:F:194:MET:HB2	6:F:375:LEU:HA	1.76	0.67
1:I:181:TYR:O	1:I:189:ARG:N	2.28	0.67
7:O:279:GLU:O	7:O:283:HIS:ND1	2.25	0.67
3:C:262:GLU:OE2	3:C:265:THR:N	2.28	0.66
5:E:534:ARG:HH22	7:G:35:ALA:HB1	1.60	0.66
9:Q:14:LEU:O	9:Q:18:GLY:N	2.28	0.66
4:D:347:HIS:HB3	4:D:350:GLN:HG2	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:94:LEU:HD11	5:E:519:LEU:HD21	1.76	0.66
1:I:438:ILE:HA	1:I:441:PHE:HD2	1.60	0.66
1:A:15:GLU:O	1:A:19:SER:N	2.24	0.66
1:A:131:TYR:OH	1:A:481:LYS:NZ	2.29	0.66
1:A:496:ARG:HH22	1:A:501:ALA:HB2	1.59	0.66
3:C:197:LYS:O	3:C:322:ARG:NH1	2.27	0.66
4:L:118:ASP:O	4:L:121:THR:OG1	2.11	0.66
8:P:58:ASN:OD1	8:P:62:LYS:N	2.25	0.66
5:E:480:ARG:NH1	5:E:499:ASN:OD1	2.28	0.66
6:F:196:MET:SD	6:F:377:LYS:NZ	2.68	0.66
6:F:435:LEU:O	6:F:438:GLN:HB3	1.95	0.66
1:I:219:VAL:HB	1:I:353:GLN:HE21	1.60	0.66
4:L:483:ARG:HH21	4:L:491:ALA:HB1	1.60	0.66
7:O:323:MET:HG3	7:O:330:ILE:HG13	1.77	0.66
1:A:78:LEU:HD11	1:A:516:PHE:HB3	1.76	0.66
2:J:326:VAL:HG23	2:J:327:THR:HG23	1.76	0.66
10:S:365:SER:OG	10:S:368:SER:OG	2.11	0.66
1:I:240:SER:HA	1:I:290:GLY:HA3	1.78	0.66
7:O:303:PHE:O	7:O:307:ASP:N	2.29	0.66
5:E:250:ILE:HG22	5:E:341:ILE:HG23	1.78	0.66
10:S:189:LEU:HD11	10:S:257:CYS:HB2	1.76	0.66
6:F:110:ILE:HD13	6:F:116:PRO:HG3	1.78	0.66
1:I:163:ILE:O	3:K:127:ARG:NH1	2.27	0.66
2:J:239:ILE:HA	2:J:291:ILE:HG23	1.78	0.66
3:K:47:MET:N	6:N:517:LEU:O	2.29	0.66
6:N:231:LEU:HB3	6:N:291:VAL:HA	1.78	0.66
6:N:298:ASP:OD1	6:N:301:SER:OG	2.11	0.66
9:Q:133:HIS:O	9:Q:191:ARG:NH1	2.29	0.66
2:B:141:LEU:HD22	2:B:417:MET:HE1	1.76	0.66
2:B:219:LEU:HD23	2:B:361:HIS:HA	1.76	0.66
4:D:267:SER:N	4:D:271:GLN:OE1	2.28	0.66
4:L:194:VAL:HG12	4:L:195:ILE:HG23	1.78	0.66
3:C:298:ASP:HB2	6:F:334:ASN:HB3	1.77	0.65
4:D:72:ASN:ND2	4:D:173:SER:O	2.27	0.65
4:D:76:THR:O	4:D:80:GLN:NE2	2.29	0.65
3:K:436:PRO:O	3:K:439:ALA:HB3	1.95	0.65
6:F:478:GLY:H	6:F:488:VAL:HA	1.62	0.65
1:I:310:ARG:HB3	10:S:62:ARG:HD2	1.77	0.65
8:H:164:LEU:O	8:H:168:ILE:HG12	1.97	0.65
1:I:22:VAL:HG13	1:I:102:LYS:HD3	1.77	0.65
1:I:159:LYS:O	3:K:518:ARG:NH2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:245:ASP:HA	2:J:297:TYR:HB2	1.78	0.65
3:K:182:MET:SD	3:K:372:CYS:HB3	2.36	0.65
8:H:151:ALA:HB3	8:H:406:LYS:HB3	1.78	0.65
1:A:11:ARG:HG2	1:A:531:ILE:HG22	1.78	0.65
3:C:72:VAL:HG11	3:C:77:ALA:HB3	1.78	0.65
3:K:160:ILE:HD11	3:K:169:SER:HA	1.76	0.65
10:S:106:THR:HB	10:S:137:GLN:HE22	1.61	0.65
3:K:23:GLN:NE2	3:K:520:ASP:OD2	2.29	0.65
1:A:440:GLU:OE2	1:A:444:SER:OG	2.15	0.65
4:L:76:THR:O	4:L:80:GLN:NE2	2.30	0.65
9:Q:37:GLN:OE1	9:Q:38:ARG:NH1	2.29	0.65
1:A:323:SER:HA	1:A:367:THR:HB	1.79	0.65
8:H:3:LEU:HG	3:K:55:GLY:HA2	1.78	0.65
8:H:21:HIS:HD2	8:H:525:ILE:HG12	1.61	0.65
3:K:86:THR:O	3:K:90:GLU:HB2	1.96	0.65
8:H:44:ARG:HH22	8:H:450:ARG:HB3	1.61	0.65
3:K:143:PRO:HA	3:K:406:GLN:HA	1.77	0.65
6:N:193:ILE:HD11	6:N:376:ILE:HG13	1.79	0.65
7:O:155:LEU:HD22	7:O:396:VAL:HG13	1.77	0.65
2:B:271:GLU:OE2	2:B:272:LYS:NZ	2.24	0.64
2:J:116:LEU:HB2	2:J:121:ILE:HD12	1.78	0.64
6:N:257:GLU:OE1	6:N:261:LYS:NZ	2.30	0.64
5:E:159:ILE:HG22	5:E:194:LEU:HD11	1.77	0.64
5:E:195:THR:O	5:E:381:ARG:NH1	2.30	0.64
4:D:227:LEU:HB2	4:D:339:THR:HG21	1.77	0.64
8:H:325:CYS:HA	8:H:330:ALA:HB3	1.80	0.64
1:I:47:ASP:OD1	1:I:48:ASP:N	2.30	0.64
1:I:264:ARG:O	3:K:248:LYS:NZ	2.26	0.64
2:J:33:ILE:HD12	2:J:111:ARG:HH21	1.62	0.64
2:B:57:ARG:NH2	4:D:538:THR:OG1	2.29	0.64
3:C:347:ALA:HB1	3:C:363:ILE:HD11	1.78	0.64
6:F:160:VAL:HG21	6:F:164:LEU:HD22	1.79	0.64
7:O:5:PRO:HB3	8:P:31:ARG:HD2	1.80	0.64
7:G:418:LYS:NZ	7:G:468:HIS:O	2.25	0.64
1:I:145:ARG:HH12	1:I:149:ILE:HD11	1.62	0.64
1:A:370:ARG:NH1	1:A:371:THR:O	2.30	0.64
3:C:237:ARG:H	3:C:288:ASP:HB2	1.61	0.64
5:E:340:ARG:HB2	5:E:352:LYS:HB3	1.80	0.64
7:G:190:LEU:O	7:G:397:ARG:NH1	2.31	0.64
8:H:58:ASN:OD1	8:H:62:LYS:N	2.26	0.64
3:K:48:LYS:NZ	6:N:519:ASP:OD2	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Q:15:ARG:HH12	9:Q:22:PRO:HA	1.63	0.64
9:Q:102:TYR:HA	9:Q:105:GLU:OE2	1.96	0.64
4:D:245:LYS:O	4:D:297:VAL:N	2.31	0.64
6:N:80:VAL:HG21	6:N:511:ILE:HD12	1.78	0.64
4:D:430:ILE:HD11	4:D:481:ARG:HD2	1.80	0.64
5:E:152:SER:OG	5:E:418:VAL:O	2.14	0.64
5:M:25:LYS:NZ	5:M:27:ARG:HB2	2.13	0.64
5:M:418:VAL:HG11	5:M:507:ILE:HG23	1.78	0.64
2:B:488:MET:HA	2:B:491:LEU:HB2	1.79	0.64
3:C:133:MET:HB3	3:C:422:LEU:HD11	1.79	0.64
5:E:410:ARG:HH21	5:E:413:ILE:HG21	1.62	0.64
2:B:112:GLU:OE2	2:B:438:SER:OG	2.12	0.64
5:E:38:ILE:HD13	5:E:121:GLU:HB3	1.80	0.64
2:J:236:LYS:HB3	2:J:343:LEU:HD23	1.79	0.64
4:L:170:SER:O	4:L:174:LYS:NZ	2.22	0.64
5:M:502:LYS:O	5:M:505:HIS:NE2	2.31	0.64
8:P:49:PRO:HG2	8:P:482:ILE:HD11	1.78	0.64
1:A:264:ARG:HH21	3:C:248:LYS:HB2	1.63	0.63
2:B:167:LEU:HD12	2:B:180:THR:HG23	1.79	0.63
2:B:526:ARG:HE	5:E:64:LYS:HE2	1.63	0.63
2:J:37:ASP:HA	2:J:40:LYS:HG2	1.79	0.63
2:J:252:PHE:O	5:M:264:HIS:NE2	2.31	0.63
3:K:354:LYS:NZ	6:N:187:ASP:OD1	2.23	0.63
5:M:247:LYS:O	5:M:298:ASN:N	2.31	0.63
9:Q:166:ILE:HB	9:Q:178:PHE:HB2	1.79	0.63
7:G:81:ASP:HA	7:G:84:LYS:HD3	1.80	0.63
1:I:411:GLY:O	1:I:498:ASN:ND2	2.31	0.63
7:O:201:GLN:HA	7:O:382:MET:HE1	1.80	0.63
7:O:488:PHE:HA	7:O:493:TRP:HE1	1.62	0.63
1:A:233:LYS:HG2	1:A:347:GLN:HE22	1.62	0.63
5:E:490:GLY:N	5:E:499:ASN:O	2.32	0.63
1:I:505:GLU:HG2	1:I:510:LYS:HZ2	1.62	0.63
5:M:293:LYS:NZ	5:M:317:ASN:O	2.31	0.63
8:P:94:GLU:HG2	8:P:98:GLY:HA2	1.80	0.63
4:D:435:ARG:NH1	4:D:438:GLU:OE1	2.31	0.63
5:E:130:PRO:HA	5:E:133:ILE:HD12	1.80	0.63
1:I:181:TYR:HD2	1:I:189:ARG:HD2	1.63	0.63
1:I:353:GLN:HG2	1:I:360:GLU:HB3	1.80	0.63
3:K:388:GLU:HA	3:K:391:LEU:HD12	1.80	0.63
6:N:105:GLN:HB3	6:N:439:ALA:HB1	1.79	0.63
6:F:224:ARG:HA	6:F:351:TYR:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:304:ALA:HA	6:F:307:LYS:HE2	1.81	0.63
7:G:138:GLU:HG3	7:G:139:ILE:HG23	1.79	0.63
5:M:236:HIS:CE1	5:M:238:GLN:HB3	2.32	0.63
1:A:257:PRO:HG3	3:C:263:ASP:HB3	1.80	0.63
3:C:13:ASN:OD1	3:C:15:LYS:NZ	2.30	0.63
4:D:93:GLU:HA	4:D:96:LYS:HD3	1.81	0.63
4:D:249:ILE:HG12	4:D:298:LEU:HD11	1.81	0.63
5:E:155:VAL:HB	5:E:418:VAL:HB	1.80	0.63
7:G:41:GLY:H	7:G:165:SER:HB2	1.63	0.63
7:G:350:GLU:O	7:G:357:ARG:NH2	2.31	0.63
5:M:102:ILE:HG12	5:M:512:GLY:HA2	1.81	0.63
5:M:431:LEU:HD21	5:M:482:VAL:HG22	1.80	0.63
7:O:406:VAL:N	7:O:494:GLU:O	2.22	0.63
3:C:212:SER:OG	3:C:377:ARG:N	2.30	0.63
5:E:289:ILE:HG13	5:E:313:LEU:HD23	1.80	0.63
2:J:102:VAL:HG23	2:J:507:ALA:HB2	1.81	0.63
2:J:488:MET:HA	2:J:491:LEU:HB3	1.80	0.63
1:A:278:ILE:O	1:A:281:THR:OG1	2.17	0.63
1:A:416:GLU:HG3	1:A:448:ILE:HB	1.80	0.63
4:D:413:ARG:HG2	4:D:417:LYS:HD3	1.81	0.63
1:I:56:ASN:ND2	1:I:158:SER:O	2.32	0.63
3:K:437:TYR:O	3:K:440:VAL:HG22	1.99	0.63
6:N:196:MET:HG2	6:N:377:LYS:HZ3	1.63	0.63
3:C:108:VAL:HG21	3:C:443:ALA:HB2	1.80	0.63
1:I:526:ARG:HD3	4:L:175:VAL:HG23	1.80	0.63
5:M:489:LEU:HD23	5:M:500:ASP:HA	1.80	0.63
2:B:123:PRO:HG2	2:B:124:GLN:HE21	1.64	0.62
3:C:50:LEU:HD13	3:C:66:ILE:HG13	1.79	0.62
3:K:272:GLU:OE2	6:N:270:ARG:NH2	2.32	0.62
5:M:477:VAL:HG21	5:M:491:ILE:HG22	1.80	0.62
7:O:115:GLY:O	7:O:430:LYS:NZ	2.32	0.62
10:S:190:MET:HA	10:S:193:LEU:HB2	1.81	0.62
6:F:96:VAL:HA	6:F:99:ILE:HD12	1.80	0.62
6:F:449:LYS:HG3	6:F:459:LEU:HD12	1.79	0.62
8:H:191:PHE:HE1	8:H:197:PHE:HB2	1.62	0.62
8:H:286:THR:HG21	8:H:339:PRO:HD2	1.79	0.62
1:I:46:VAL:HG23	3:K:522:ILE:HD11	1.81	0.62
2:J:205:LEU:HB2	4:L:100:ILE:HD12	1.81	0.62
4:L:138:GLN:HB2	4:L:527:ARG:HH21	1.65	0.62
10:S:74:GLY:HA2	10:S:109:PRO:HD2	1.81	0.62
1:I:56:ASN:ND2	1:I:158:SER:OG	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:72:ASN:ND2	4:L:173:SER:O	2.32	0.62
8:P:207:ILE:HD13	8:P:376:VAL:HG23	1.81	0.62
3:C:43:PRO:O	6:F:117:ARG:NH2	2.33	0.62
1:I:19:SER:O	1:I:22:VAL:HB	1.99	0.62
7:O:292:LYS:HG3	7:O:319:LEU:HD13	1.80	0.62
8:P:46:ALA:HB1	8:P:51:GLY:HA2	1.80	0.62
6:F:445:LEU:HD11	6:F:463:LEU:HD21	1.82	0.62
7:G:21:GLN:NE2	7:G:25:ASN:OD1	2.33	0.62
7:G:191:GLN:HG3	7:G:193:LYS:H	1.65	0.62
6:N:192:GLU:OE2	6:N:323:ARG:NH2	2.33	0.62
7:O:37:ARG:O	7:O:448:GLN:NE2	2.25	0.62
5:E:459:PRO:HA	5:E:462:LEU:HD12	1.82	0.62
4:L:217:THR:HG23	4:L:220:ASP:H	1.65	0.62
4:L:451:VAL:HA	4:L:454:PHE:HD2	1.65	0.62
7:O:26:ILE:HB	7:O:109:LYS:HZ3	1.64	0.62
3:C:129:ALA:HA	3:C:437:TYR:HE1	1.65	0.62
3:C:413:ALA:HA	3:C:416:MET:HE1	1.82	0.62
6:F:91:GLY:O	6:F:94:SER:OG	2.14	0.62
6:F:379:PRO:HG2	6:F:383:THR:HG21	1.82	0.62
8:H:183:ILE:HD11	8:H:392:VAL:HG22	1.82	0.62
8:H:261:THR:N	8:H:264:GLU:OE2	2.31	0.62
1:I:511:VAL:O	1:I:515:LYS:HG2	2.00	0.62
3:K:306:ARG:NH2	6:N:338:ASP:O	2.33	0.62
7:O:48:LEU:HD11	7:O:56:ALA:HB1	1.82	0.62
2:B:498:GLN:OE1	2:B:501:ARG:NH2	2.33	0.62
7:G:133:VAL:HG13	7:G:500:ILE:HG12	1.80	0.62
2:J:102:VAL:HB	2:J:503:VAL:HG13	1.82	0.62
3:K:207:GLY:HA3	3:K:377:ARG:HB3	1.81	0.62
4:L:255:ALA:O	4:L:306:ARG:NH2	2.33	0.62
4:L:271:GLN:HA	4:L:274:ARG:HH11	1.63	0.62
7:O:462:ASN:OD1	7:O:465:ARG:NH1	2.33	0.62
3:C:98:VAL:HB	3:C:505:THR:HG23	1.80	0.62
2:J:261:THR:HB	4:L:256:PRO:HG2	1.81	0.62
7:O:110:PRO:O	7:O:114:GLU:N	2.30	0.62
1:A:152:ALA:O	1:A:156:MET:HG3	2.00	0.62
1:A:274:ARG:HG2	1:A:331:LEU:HD22	1.81	0.62
6:F:243:GLU:OE1	6:F:243:GLU:N	2.33	0.62
6:N:199:LYS:HB2	6:N:377:LYS:HB3	1.81	0.62
6:N:208:ARG:HA	6:N:372:VAL:HG12	1.79	0.62
3:C:245:LEU:HB2	3:C:296:ILE:HG23	1.82	0.61
5:E:51:SER:OG	5:E:72:ASN:ND2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:492:MET:HB3	8:H:497:ILE:HB	1.82	0.61
3:K:67:LEU:HA	3:K:70:ILE:HD12	1.82	0.61
5:M:203:ASP:OD2	7:O:357:ARG:NH1	2.31	0.61
6:N:36:THR:O	6:N:45:LYS:NZ	2.32	0.61
7:O:8:LEU:HB3	7:O:9:LEU:HD12	1.82	0.61
10:S:185:LEU:HD11	10:S:261:LEU:HB2	1.81	0.61
3:C:222:LYS:NZ	3:C:314:ARG:O	2.27	0.61
7:G:141:VAL:HG11	7:G:488:PHE:HE1	1.65	0.61
7:G:288:VAL:HG12	7:G:309:PHE:HB3	1.81	0.61
7:G:520:ILE:HB	8:H:56:VAL:HG23	1.82	0.61
8:P:500:THR:HG22	8:P:502:LEU:H	1.65	0.61
9:Q:50:ASP:HA	9:Q:74:TYR:HE2	1.65	0.61
10:S:213:LYS:HA	10:S:217:CYS:SG	2.39	0.61
4:D:304:ILE:HG22	4:D:305:LEU:HD12	1.83	0.61
1:I:320:ALA:HA	1:I:325:ALA:HB3	1.83	0.61
2:J:39:VAL:HG22	2:J:100:THR:HG23	1.82	0.61
2:J:86:ASP:O	2:J:89:ARG:HG2	2.00	0.61
3:K:144:VAL:N	3:K:405:PRO:O	2.29	0.61
6:N:31:GLN:NE2	6:N:97:LEU:O	2.33	0.61
6:N:292:ILE:HG12	6:N:313:LEU:HB2	1.82	0.61
6:N:348:GLY:HA3	6:N:365:LYS:HD2	1.81	0.61
10:S:253:GLU:HA	10:S:256:ARG:HB2	1.81	0.61
6:F:368:ASN:OD1	6:F:370:ARG:NH1	2.33	0.61
8:H:5:VAL:HG12	6:N:523:ARG:HD3	1.81	0.61
2:J:378:ALA:HA	4:L:521:LEU:HD22	1.82	0.61
8:P:23:SER:N	8:P:27:GLU:OE2	2.33	0.61
8:P:263:GLU:O	8:P:267:ASN:ND2	2.32	0.61
9:Q:117:LEU:HB3	9:Q:167:PHE:HB2	1.82	0.61
4:D:170:SER:HB2	4:D:411:VAL:HG21	1.82	0.61
7:G:460:ILE:HA	7:G:463:LYS:HE2	1.83	0.61
8:H:67:ASN:ND2	8:H:170:SER:O	2.32	0.61
3:K:98:VAL:HG22	3:K:505:THR:HG23	1.82	0.61
4:L:141:LEU:HD13	4:L:523:THR:HG21	1.82	0.61
5:M:72:ASN:ND2	5:M:175:SER:O	2.33	0.61
6:F:477:VAL:HA	6:F:488:VAL:HG12	1.83	0.61
8:H:55:MET:HB3	8:H:65:VAL:HG22	1.83	0.61
1:I:198:LEU:HD22	1:I:217:ASN:HD21	1.64	0.61
3:K:298:ASP:HA	3:K:301:GLN:HG2	1.83	0.61
3:K:399:ARG:HA	3:K:402:LEU:HD12	1.83	0.61
6:N:318:ARG:H	10:S:365:SER:HA	1.64	0.61
6:F:425:HIS:O	6:F:428:SER:OG	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:118:ILE:HG23	1:I:522:ILE:HG23	1.82	0.61
1:I:214:TYR:HE1	1:I:216:LEU:HD23	1.65	0.61
6:N:43:THR:O	6:N:45:LYS:NZ	2.32	0.61
6:F:354:THR:HA	6:F:359:LYS:HA	1.83	0.61
1:I:217:ASN:HB3	10:S:55:GLY:HA3	1.81	0.61
5:M:152:SER:HB3	5:M:510:LEU:HD13	1.83	0.61
5:M:486:ASN:HD21	5:M:489:LEU:HG	1.64	0.61
1:A:225:MET:HE2	1:A:306:MET:HA	1.81	0.61
2:B:347:LYS:HG3	2:B:348:LEU:HD12	1.81	0.61
3:C:481:ASN:HB2	3:C:488:VAL:HG22	1.83	0.61
4:D:333:ILE:HA	4:D:336:ILE:HD12	1.82	0.61
7:G:458:THR:O	7:G:462:ASN:ND2	2.34	0.61
1:I:31:ILE:O	3:K:16:ARG:NH2	2.34	0.61
2:J:274:LYS:O	2:J:277:GLU:HG2	2.00	0.61
4:L:133:ILE:HG22	4:L:137:PHE:CE2	2.36	0.61
7:O:107:GLN:HG3	7:O:441:ALA:HB2	1.83	0.61
8:P:305:ALA:HB1	8:P:310:ILE:HB	1.83	0.61
5:E:248:ILE:HD12	5:E:299:LEU:HD23	1.82	0.61
8:H:203:ARG:NH1	8:H:320:ASP:OD1	2.32	0.61
5:M:532:ASP:HB2	7:O:47:LYS:HD3	1.82	0.61
2:B:68:ALA:O	2:B:89:ARG:NH2	2.33	0.60
3:C:37:ILE:HA	3:C:48:LYS:HE3	1.83	0.60
8:H:31:ARG:HH22	8:H:524:ILE:HD13	1.66	0.60
2:J:203:LYS:HB3	2:J:383:LEU:HD13	1.82	0.60
2:J:347:LYS:HB2	2:J:364:GLY:HA3	1.83	0.60
2:J:516:ARG:HD3	5:M:177:VAL:HG12	1.82	0.60
4:L:130:PRO:HA	4:L:133:ILE:HD12	1.84	0.60
1:A:422:TYR:HB2	1:A:475:GLN:HE22	1.67	0.60
4:D:141:LEU:HB2	4:D:523:THR:HG21	1.81	0.60
7:O:86:GLN:OE1	7:O:501:ASN:ND2	2.33	0.60
7:O:199:LYS:HE3	7:O:382:MET:HB3	1.82	0.60
2:B:20:ARG:NH2	5:E:46:ASN:O	2.34	0.60
7:G:152:ARG:HG3	7:G:180:VAL:HG11	1.83	0.60
4:L:491:ALA:HA	4:L:502:ASN:HA	1.84	0.60
5:M:247:LYS:HB2	5:M:297:ALA:HA	1.83	0.60
5:M:261:LYS:NZ	7:O:246:LEU:O	2.34	0.60
5:E:523:MET:HE1	7:G:378:ALA:HB2	1.82	0.60
8:H:421:LYS:NZ	8:H:471:HIS:O	2.30	0.60
1:A:181:TYR:OH	1:A:185:ARG:NH2	2.33	0.60
2:B:50:LYS:HG3	4:D:534:ASP:HB3	1.83	0.60
3:C:206:GLY:O	3:C:377:ARG:NE	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:231:ASP:HA	5:E:371:MET:HG2	1.82	0.60
7:G:46:ASP:OD1	7:G:47:LYS:N	2.35	0.60
1:I:36:LEU:HB2	1:I:91:THR:HB	1.82	0.60
2:J:168:SER:HA	2:J:173:THR:HB	1.84	0.60
5:M:247:LYS:N	5:M:298:ASN:OD1	2.33	0.60
5:M:469:ASN:O	5:M:473:THR:OG1	2.15	0.60
7:O:136:ILE:HG21	7:O:500:ILE:HG12	1.82	0.60
3:C:20:ARG:NH2	3:C:114:GLU:OE2	2.25	0.60
3:C:37:ILE:HD11	3:C:99:ILE:HG21	1.83	0.60
4:D:112:ILE:HG12	4:D:461:ILE:HG13	1.83	0.60
5:E:73:ASP:OD1	5:E:106:THR:OG1	2.17	0.60
1:I:505:GLU:HG2	1:I:510:LYS:NZ	2.14	0.60
1:A:82:GLN:HG3	1:A:93:VAL:HG11	1.83	0.60
1:A:237:LEU:HD23	1:A:328:LEU:HB3	1.82	0.60
2:B:49:ASP:N	4:D:531:LYS:O	2.34	0.60
4:D:111:ILE:H	4:D:111:ILE:HD12	1.67	0.60
4:L:311:ASP:OD1	4:L:312:LEU:N	2.35	0.60
4:L:347:HIS:NE2	4:L:349:ASP:OD2	2.34	0.60
5:M:248:ILE:HG22	5:M:299:LEU:HB3	1.82	0.60
6:N:320:ASN:O	6:N:324:LEU:HG	2.02	0.60
8:P:259:ILE:HG23	8:P:264:GLU:HB2	1.83	0.60
9:Q:198:LEU:O	9:Q:201:SER:OG	2.17	0.60
7:G:129:THR:HG23	7:G:503:LEU:HB3	1.82	0.60
1:I:47:ASP:HB3	1:I:51:ASP:HB2	1.84	0.60
1:I:228:ARG:HD3	3:K:190:ARG:HE	1.66	0.60
4:L:410:CYS:O	4:L:413:ARG:HG2	2.02	0.60
5:M:54:PRO:HG2	5:M:422:GLY:HA2	1.84	0.60
7:O:461:LEU:HA	7:O:464:LEU:HD12	1.82	0.60
4:D:310:SER:O	4:D:314:LEU:N	2.33	0.60
8:H:292:VAL:HG22	8:H:313:VAL:HB	1.84	0.60
2:J:334:THR:H	5:M:312:HIS:HD2	1.50	0.60
4:L:189:ASN:O	4:L:193:LYS:HG2	2.02	0.60
5:M:402:LEU:O	5:M:406:LEU:HG	2.00	0.60
2:B:268:GLU:O	2:B:271:GLU:HG3	2.02	0.60
5:E:168:THR:HG21	5:E:412:LEU:HD22	1.84	0.60
7:G:152:ARG:O	7:G:156:GLU:HG3	2.02	0.60
7:G:325:ALA:HB2	7:G:369:THR:HG22	1.84	0.60
2:J:237:ILE:O	2:J:344:GLY:N	2.28	0.60
6:N:35:ARG:HD3	6:N:97:LEU:HD11	1.82	0.60
1:A:234:ILE:O	1:A:346:GLY:N	2.34	0.59
4:D:414:CYS:SG	4:D:417:LYS:NZ	2.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:38:GLU:O	8:H:42:THR:HG23	2.01	0.59
1:I:269:ASP:HA	1:I:272:LYS:HE2	1.83	0.59
2:J:411:GLY:O	2:J:415:MET:N	2.34	0.59
3:K:347:ALA:HA	3:K:365:ASP:HA	1.84	0.59
4:L:81:MET:HB3	4:L:83:VAL:HG13	1.83	0.59
4:L:290:ILE:O	4:L:293:THR:OG1	2.17	0.59
7:O:156:GLU:HG3	7:O:180:VAL:HG21	1.83	0.59
7:O:237:ILE:HA	7:O:288:VAL:HB	1.83	0.59
5:E:211:VAL:HG22	5:E:385:ILE:HD12	1.82	0.59
1:I:421:ILE:HG13	1:I:471:HIS:HB2	1.84	0.59
3:K:188:ASN:O	3:K:190:ARG:NH1	2.35	0.59
2:B:202:ILE:HB	2:B:374:VAL:HA	1.85	0.59
5:E:172:THR:HG21	5:E:408:VAL:HG11	1.84	0.59
6:F:91:GLY:N	6:F:159:LYS:HZ1	2.00	0.59
8:H:305:ALA:O	8:H:309:ASN:N	2.35	0.59
7:O:168:ILE:HG22	7:O:171:GLN:HB2	1.85	0.59
8:P:118:LEU:HD21	8:P:440:LYS:HG3	1.84	0.59
1:A:494:LYS:HG3	1:A:496:ARG:HB2	1.82	0.59
2:B:200:HIS:N	2:B:371:CYS:O	2.31	0.59
3:C:47:MET:O	6:F:518:VAL:HA	2.02	0.59
5:E:27:ARG:HH22	7:G:35:ALA:HA	1.67	0.59
5:E:116:LEU:HD23	5:E:524:VAL:HG21	1.84	0.59
5:E:498:THR:O	5:E:504:GLN:NE2	2.34	0.59
1:I:104:ALA:HB2	1:I:121:TYR:OH	2.03	0.59
2:J:42:THR:HA	2:J:48:MET:H	1.68	0.59
4:L:436:LEU:HD12	4:L:458:MET:HE3	1.83	0.59
5:M:118:GLU:O	5:M:121:GLU:HG3	2.02	0.59
9:Q:169:TYR:CE1	9:Q:174:ILE:HG12	2.38	0.59
1:A:86:VAL:HG11	1:A:509:VAL:HA	1.83	0.59
1:A:363:LEU:HB3	1:A:365:LYS:HE3	1.84	0.59
6:F:316:ALA:HB1	6:F:320:ASN:HD22	1.68	0.59
7:G:178:MET:SD	7:G:210:LEU:HB2	2.42	0.59
7:G:292:LYS:HD2	7:G:316:GLU:HG2	1.84	0.59
3:K:73:GLN:NE2	6:N:8:ASN:OD1	2.36	0.59
5:M:197:ALA:HA	5:M:204:VAL:HG22	1.84	0.59
5:M:492:ASP:HB3	5:M:495:HIS:HA	1.85	0.59
8:P:17:GLU:O	8:P:20:LYS:NZ	2.26	0.59
10:S:290:ARG:O	10:S:294:TYR:N	2.33	0.59
8:H:204:VAL:HG12	8:H:375:ILE:HB	1.83	0.59
5:M:335:ILE:O	5:M:381:ARG:NH2	2.36	0.59
7:O:137:LYS:HE2	7:O:500:ILE:HD13	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:383:GLU:HA	7:O:386:GLU:HG2	1.85	0.59
10:S:64:ILE:HD12	10:S:85:ILE:HA	1.83	0.59
3:C:20:ARG:HH12	3:C:23:GLN:HB2	1.68	0.59
3:C:130:LEU:HD12	3:C:133:MET:SD	2.43	0.59
3:K:233:ILE:HD13	3:K:288:ASP:HB3	1.84	0.59
5:M:331:GLU:OE1	7:O:225:PHE:N	2.36	0.59
8:P:227:THR:HG21	8:P:311:MET:HE1	1.85	0.59
1:A:129:VAL:HG11	1:A:515:LYS:HE3	1.84	0.59
8:P:128:VAL:HG22	8:P:132:TYR:CZ	2.38	0.59
5:E:234:PHE:HE2	5:E:320:PRO:HB3	1.66	0.59
7:G:133:VAL:HA	7:G:136:ILE:HD12	1.85	0.59
2:J:67:GLY:HA2	2:J:70:ILE:HD12	1.85	0.59
7:O:280:LYS:NZ	7:O:335:ASN:OD1	2.32	0.59
4:L:191:VAL:HG11	4:L:412:ILE:HG21	1.84	0.59
1:A:161:ILE:HD11	1:A:388:MET:HG2	1.83	0.58
1:A:231:ASN:OD1	1:A:368:LYS:NZ	2.36	0.58
8:H:44:ARG:NH2	8:H:447:ALA:O	2.36	0.58
1:I:130:ARG:NH2	1:I:422:TYR:OH	2.36	0.58
6:N:415:GLU:OE1	6:N:415:GLU:N	2.31	0.58
10:S:80:ASP:OD1	10:S:81:ASP:N	2.36	0.58
6:F:31:GLN:HG3	6:F:35:ARG:HH21	1.67	0.58
6:F:420:GLU:HG2	6:F:424:LYS:HE3	1.84	0.58
1:I:19:SER:O	1:I:23:MET:N	2.27	0.58
5:M:453:ASP:O	5:M:457:VAL:HG23	2.03	0.58
7:O:65:ILE:HA	7:O:68:LEU:HD12	1.86	0.58
6:F:36:THR:O	6:F:43:THR:N	2.36	0.58
2:J:8:PRO:HG2	5:M:43:ALA:HB2	1.85	0.58
3:K:450:THR:O	3:K:454:ASN:N	2.34	0.58
6:N:499:CYS:HA	6:N:502:LYS:HB3	1.85	0.58
7:O:408:GLY:O	7:O:487:ASN:ND2	2.36	0.58
3:C:44:LYS:NZ	3:C:482:GLY:O	2.29	0.58
6:F:43:THR:O	6:F:45:LYS:NZ	2.32	0.58
6:F:194:MET:N	6:F:374:LEU:O	2.29	0.58
1:I:481:LYS:HD2	1:I:484:LYS:HD2	1.86	0.58
2:J:278:LYS:HA	2:J:281:ARG:HE	1.69	0.58
3:K:153:LEU:HA	3:K:156:ILE:HD12	1.85	0.58
6:N:19:ALA:O	6:N:23:ASN:ND2	2.37	0.58
2:B:516:ARG:O	5:E:58:ASP:N	2.37	0.58
3:C:304:LEU:HD22	3:C:309:ILE:HG13	1.84	0.58
1:I:335:GLU:HG2	1:I:337:GLU:HG2	1.85	0.58
8:P:33:ILE:HG21	8:P:116:GLU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:217:VAL:HG23	8:P:375:ILE:HG12	1.84	0.58
2:B:12:PHE:HB3	2:B:16:ALA:HB3	1.85	0.58
3:C:20:ARG:NH1	3:C:23:GLN:HB2	2.19	0.58
4:L:183:LEU:HD13	4:L:405:ILE:HD11	1.85	0.58
2:B:132:GLU:HA	2:B:135:LYS:HD3	1.86	0.58
2:B:197:GLU:O	2:B:322:ARG:NE	2.28	0.58
2:B:199:ILE:HG22	2:B:371:CYS:HB2	1.86	0.58
3:C:452:ILE:O	3:C:456:GLY:N	2.36	0.58
4:D:118:ASP:OD1	4:D:119:SER:N	2.37	0.58
1:I:106:GLU:HG3	1:I:110:GLN:HE22	1.68	0.58
3:K:255:ASP:HA	6:N:246:SER:HA	1.85	0.58
4:L:359:ALA:HA	4:L:379:CYS:HA	1.86	0.58
4:L:430:ILE:HG21	4:L:480:LEU:HG	1.86	0.58
1:A:379:GLY:HA2	1:A:388:MET:HE1	1.86	0.58
2:B:475:THR:OG1	2:B:487:ASP:OD1	2.22	0.58
3:C:132:ASP:OD2	3:C:437:TYR:OH	2.21	0.58
5:E:169:ALA:O	5:E:173:LEU:HG	2.03	0.58
6:F:88:THR:OG1	6:F:400:ASN:ND2	2.36	0.58
8:H:15:LEU:HB3	8:H:19:ALA:HB3	1.86	0.58
7:O:495:PRO:HB2	7:O:498:VAL:HG23	1.85	0.58
1:A:163:ILE:HG22	3:C:127:ARG:HH11	1.68	0.58
3:C:48:LYS:NZ	6:F:520:GLU:OE1	2.37	0.58
3:C:165:ILE:HG21	3:C:387:VAL:HG12	1.86	0.58
4:D:25:GLN:NE2	4:D:27:ARG:O	2.30	0.58
4:D:367:LEU:HB3	4:D:391:ARG:HH12	1.69	0.58
2:J:407:VAL:HG13	2:J:497:PHE:HB2	1.86	0.58
5:M:246:ALA:HB1	5:M:298:ASN:HB2	1.86	0.58
3:C:138:LYS:O	3:C:141:SER:OG	2.17	0.58
5:E:113:ALA:O	5:E:117:LEU:HG	2.03	0.58
7:G:247:LYS:NZ	7:G:248:ALA:O	2.27	0.58
9:Q:167:PHE:HD2	9:Q:169:TYR:HH	1.51	0.58
7:G:447:ARG:NH2	1:I:110:GLN:O	2.36	0.57
2:J:297:TYR:HB3	2:J:300:PRO:HD2	1.86	0.57
8:P:410:PRO:HA	8:P:498:LEU:HA	1.85	0.57
1:A:300:PHE:O	1:A:304:GLY:N	2.37	0.57
4:L:274:ARG:HA	4:L:277:ARG:HG2	1.85	0.57
8:P:118:LEU:HD11	8:P:440:LYS:HG3	1.84	0.57
8:P:419:LEU:HA	8:P:422:GLN:HE21	1.69	0.57
10:S:28:ARG:HH21	10:S:94:LEU:HD12	1.68	0.57
3:C:62:ASP:OD1	3:C:95:THR:OG1	2.20	0.57
4:D:276:LEU:HB3	4:D:280:ARG:HH21	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:335:PHE:O	4:D:339:THR:N	2.37	0.57
5:E:31:LEU:HA	5:E:34:LEU:HD13	1.87	0.57
6:F:198:HIS:HB3	6:F:377:LYS:HD3	1.85	0.57
6:F:234:ASN:OD1	6:F:295:LYS:NZ	2.27	0.57
3:K:229:MET:SD	3:K:311:ALA:N	2.75	0.57
4:L:61:ILE:HD11	4:L:77:ILE:HG23	1.84	0.57
2:B:165:THR:O	2:B:168:SER:OG	2.16	0.57
3:C:36:ILE:HG23	3:C:37:ILE:HG23	1.86	0.57
6:F:355:LEU:N	6:F:358:GLU:O	2.37	0.57
8:H:70:ALA:HB2	8:H:101:THR:HG21	1.86	0.57
8:H:405:ASP:OD2	8:H:407:ARG:NH2	2.36	0.57
2:J:481:ARG:HG3	2:J:482:GLU:HG2	1.86	0.57
4:L:148:LEU:HD11	4:L:519:LEU:HD13	1.87	0.57
7:O:442:LEU:HD21	7:O:503:LEU:HD11	1.86	0.57
8:P:117:GLU:OE2	8:P:120:ARG:NH2	2.38	0.57
1:A:232:ALA:HB1	1:A:285:VAL:HG23	1.85	0.57
5:E:411:ASN:HB3	5:E:511:ILE:HD11	1.86	0.57
7:G:155:LEU:HD21	7:G:400:ILE:HD13	1.87	0.57
6:N:297:ILE:H	6:N:314:ARG:HE	1.53	0.57
7:O:352:GLN:HB2	7:O:357:ARG:HH11	1.69	0.57
4:D:108:SER:O	4:D:112:ILE:HG13	2.05	0.57
4:D:284:LEU:O	4:D:288:LYS:HG2	2.05	0.57
5:E:131:ILE:HG13	7:G:43:ARG:HB3	1.86	0.57
5:E:525:ARG:NH2	7:G:168:ILE:HA	2.18	0.57
1:I:236:CYS:HB3	1:I:316:LEU:HD11	1.85	0.57
1:I:286:ILE:N	1:I:306:MET:O	2.34	0.57
4:L:167:ALA:HB2	4:L:412:ILE:HD11	1.87	0.57
4:L:257:LYS:O	4:L:306:ARG:NH1	2.38	0.57
7:O:116:LEU:HD12	7:O:117:HIS:H	1.69	0.57
9:Q:11:ASN:O	9:Q:15:ARG:HG2	2.05	0.57
2:B:198:ALA:HB1	2:B:370:ALA:HA	1.85	0.57
2:B:524:ALA:N	5:E:82:ASP:OD2	2.37	0.57
4:D:436:LEU:HD21	4:D:454:PHE:HB3	1.86	0.57
6:F:134:LEU:HA	6:F:137:VAL:HG12	1.85	0.57
2:J:293:ARG:O	2:J:314:HIS:ND1	2.37	0.57
3:K:185:PHE:HB2	3:K:370:LYS:HD2	1.87	0.57
8:P:409:VAL:O	8:P:499:ASP:N	2.38	0.57
10:S:111:ASN:ND2	10:S:115:ASN:OD1	2.36	0.57
4:D:210:ILE:HD12	4:D:388:ILE:HB	1.86	0.57
5:E:402:LEU:O	5:E:406:LEU:HG	2.05	0.57
1:I:148:LEU:HD22	1:I:173:VAL:HG13	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:12:GLN:NE2	3:K:13:ASN:OD1	2.38	0.57
3:K:37:ILE:HD12	3:K:96:THR:HG23	1.87	0.57
8:P:381:THR:HG23	8:P:384:LEU:H	1.69	0.57
3:C:478:TRP:HE1	3:C:487:LEU:HB3	1.68	0.57
8:H:480:LEU:HA	8:H:489:VAL:HG12	1.86	0.57
3:C:239:VAL:HG12	3:C:343:VAL:HG22	1.87	0.57
3:K:245:LEU:HD12	3:K:296:ILE:HG23	1.87	0.57
5:M:289:ILE:HG13	5:M:313:LEU:HD13	1.86	0.57
6:N:72:PRO:O	6:N:75:SER:OG	2.17	0.57
7:O:415:GLU:OE2	7:O:474:TRP:N	2.24	0.57
8:P:225:LYS:HE2	8:P:315:LEU:HA	1.87	0.57
8:P:416:GLU:OE1	8:P:416:GLU:N	2.30	0.57
1:A:165:GLY:O	1:A:169:ALA:N	2.32	0.56
1:A:295:MET:HG3	3:C:333:SER:HB2	1.87	0.56
3:C:253:GLN:OE1	3:C:253:GLN:N	2.38	0.56
5:E:158:ASP:OD1	5:E:159:ILE:N	2.38	0.56
6:F:180:LYS:H	6:F:185:PRO:HG3	1.69	0.56
7:G:524:ARG:NH2	8:H:61:GLU:OE2	2.27	0.56
2:J:381:GLN:OE1	2:J:381:GLN:N	2.31	0.56
2:J:516:ARG:NH2	5:M:56:GLY:O	2.38	0.56
3:K:446:VAL:HA	3:K:449:ARG:HD2	1.87	0.56
6:N:256:ARG:NH2	8:P:249:MET:O	2.38	0.56
1:A:200:ALA:O	1:A:379:GLY:N	2.37	0.56
2:B:379:THR:HG21	4:D:90:MET:HE3	1.87	0.56
3:C:241:LEU:HG	3:C:243:SER:H	1.69	0.56
7:G:90:VAL:HG11	7:G:498:VAL:HG13	1.87	0.56
2:J:435:ALA:O	2:J:438:SER:OG	2.21	0.56
3:K:314:ARG:NH1	10:S:125:GLU:OE1	2.38	0.56
1:A:10:ASP:H	1:A:532:LYS:HB3	1.70	0.56
2:B:518:ASP:OD2	5:E:59:LYS:NZ	2.38	0.56
3:C:240:LEU:HD21	3:C:320:ASN:HB3	1.87	0.56
4:D:203:VAL:HB	4:D:413:ARG:HG3	1.87	0.56
5:E:32:GLU:OE1	5:E:32:GLU:N	2.36	0.56
8:H:187:CYS:HA	8:H:190:ILE:HG22	1.86	0.56
1:I:5:LEU:HD21	4:L:47:ALA:HB2	1.86	0.56
1:I:254:ILE:HB	3:K:256:ILE:HB	1.87	0.56
3:K:47:MET:O	6:N:519:ASP:N	2.39	0.56
3:K:233:ILE:H	3:K:350:LEU:HB3	1.69	0.56
4:L:267:SER:N	4:L:271:GLN:OE1	2.32	0.56
7:O:350:GLU:O	7:O:357:ARG:NH2	2.38	0.56
8:P:22:PHE:HB2	8:P:524:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:93:GLN:HG3	8:P:104:VAL:HG21	1.87	0.56
1:A:294:ASP:O	1:A:298:LYS:HG2	2.06	0.56
4:D:165:ASN:HD21	4:D:507:LEU:HD22	1.70	0.56
5:E:148:LEU:HG	5:E:510:LEU:HD11	1.88	0.56
2:J:35:ILE:HD11	2:J:81:ALA:HA	1.87	0.56
3:K:241:LEU:HD21	3:K:245:LEU:HD21	1.88	0.56
3:K:313:ARG:NH1	10:S:125:GLU:OE2	2.37	0.56
5:M:337:THR:HG23	5:M:339:GLY:H	1.71	0.56
5:M:420:TYR:OH	5:M:502:LYS:NZ	2.22	0.56
9:Q:34:GLU:O	9:Q:38:ARG:HG2	2.05	0.56
1:A:254:ILE:HG12	4:D:267:SER:HA	1.86	0.56
7:G:67:LYS:HD2	7:G:84:LYS:HG2	1.88	0.56
8:H:159:GLU:O	8:H:163:LEU:HG	2.06	0.56
1:I:245:LYS:NZ	3:K:253:GLN:OE1	2.38	0.56
2:J:71:LEU:HD22	2:J:85:VAL:HG12	1.87	0.56
3:K:195:ILE:HG22	3:K:198:TYR:H	1.69	0.56
7:O:55:LYS:HD2	7:O:55:LYS:O	2.05	0.56
7:O:90:VAL:HG13	7:O:398:ARG:HG3	1.88	0.56
2:B:403:ASP:OD2	2:B:498:GLN:NE2	2.39	0.56
4:D:311:ASP:OD1	4:D:312:LEU:N	2.37	0.56
2:J:271:GLU:HG2	5:M:274:TYR:CZ	2.40	0.56
4:L:205:LEU:HD21	4:L:413:ARG:HD3	1.88	0.56
4:L:291:LYS:HD3	4:L:322:ILE:HD11	1.87	0.56
7:O:462:ASN:HA	7:O:465:ARG:HD2	1.88	0.56
10:S:200:PHE:HZ	10:S:246:GLN:HE22	1.52	0.56
1:A:168:PHE:O	1:A:171:MET:HB3	2.06	0.56
2:B:122:HIS:NE2	5:E:465:ASN:O	2.39	0.56
2:B:304:PHE:O	2:B:308:GLY:N	2.39	0.56
3:C:27:ILE:HG12	3:C:110:GLU:HB2	1.87	0.56
3:C:46:MET:HG3	6:F:519:ASP:HB3	1.88	0.56
5:E:14:ARG:HH22	7:G:20:PRO:HB3	1.70	0.56
5:E:98:GLN:NE2	5:E:515:GLN:OE1	2.37	0.56
1:I:178:ALA:HB3	1:I:373:ALA:HB2	1.88	0.56
4:L:38:ILE:HG23	4:L:117:LEU:HB3	1.86	0.56
7:O:478:ASP:N	7:O:483:ASP:O	2.32	0.56
8:P:166:THR:OG1	8:P:496:GLY:O	2.24	0.56
8:H:418:GLU:HG2	8:H:471:HIS:CD2	2.41	0.56
3:K:339:ARG:NH2	3:K:341:ASP:OD2	2.39	0.56
5:M:288:MET:HE3	5:M:345:PHE:CE1	2.40	0.56
6:N:174:ASP:OD2	6:N:208:ARG:NH2	2.39	0.56
8:P:70:ALA:HB2	8:P:101:THR:HG21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:302:GLN:HE22	4:D:345:VAL:HA	1.71	0.56
3:K:282:ILE:HD13	3:K:338:LEU:HD22	1.87	0.56
4:L:133:ILE:HG22	4:L:137:PHE:HE2	1.71	0.56
4:L:340:ILE:HG22	4:L:357:GLY:HA3	1.86	0.56
3:C:130:LEU:HD13	3:C:510:VAL:HG21	1.88	0.56
6:F:47:LEU:HD13	6:F:66:GLU:HB2	1.87	0.56
3:K:32:THR:HB	6:N:7:LEU:HD21	1.87	0.56
6:N:229:TYR:HB3	6:N:344:LEU:HD23	1.87	0.56
6:N:357:GLU:HG2	6:N:358:GLU:HG3	1.87	0.56
10:S:283:MET:O	10:S:290:ARG:NH2	2.39	0.56
1:A:292:ILE:H	1:A:309:ARG:HD2	1.69	0.55
2:B:407:VAL:HG21	2:B:500:LYS:HG3	1.87	0.55
5:E:14:ARG:NH2	7:G:20:PRO:HB3	2.21	0.55
3:K:463:LEU:HD21	3:K:467:ARG:HH22	1.72	0.55
1:A:291:GLY:HA2	1:A:309:ARG:HB2	1.88	0.55
2:B:326:VAL:O	2:B:367:LEU:HB2	2.07	0.55
3:C:447:ILE:O	3:C:451:LEU:HG	2.06	0.55
5:E:313:LEU:O	5:E:317:ASN:ND2	2.39	0.55
5:E:331:GLU:OE1	7:G:225:PHE:N	2.36	0.55
1:I:202:GLY:N	1:I:379:GLY:O	2.40	0.55
1:I:386:ASP:HB3	1:I:390:ARG:HH12	1.72	0.55
2:J:379:THR:HG23	2:J:382:ILE:H	1.72	0.55
5:M:265:LYS:HB2	7:O:255:ILE:O	2.07	0.55
1:A:138:VAL:N	1:A:408:VAL:O	2.28	0.55
1:A:225:MET:HE3	1:A:300:PHE:HB3	1.88	0.55
5:E:173:LEU:HB2	5:E:182:HIS:CD2	2.41	0.55
6:F:421:ALA:HA	6:F:424:LYS:HD2	1.87	0.55
1:I:129:VAL:HG21	1:I:515:LYS:HD3	1.89	0.55
2:J:498:GLN:O	2:J:501:ARG:HG3	2.07	0.55
6:N:31:GLN:HE22	6:N:101:GLU:HB2	1.70	0.55
2:B:356:GLU:HG2	4:D:100:ILE:HG23	1.88	0.55
3:C:282:ILE:HG13	3:C:335:PRO:HB3	1.87	0.55
4:D:511:PRO:HG2	4:D:514:VAL:HG23	1.88	0.55
5:E:36:SER:O	5:E:39:MET:HB2	2.06	0.55
7:O:404:SER:O	7:O:496:ALA:N	2.27	0.55
9:Q:95:LEU:HD13	9:Q:97:ILE:HG23	1.89	0.55
10:S:200:PHE:HB3	10:S:205:GLU:HB3	1.89	0.55
1:A:74:VAL:HG11	1:A:524:ILE:HD11	1.89	0.55
1:A:274:ARG:O	1:A:278:ILE:HG12	2.06	0.55
2:B:74:ILE:HA	4:D:539:ARG:HH12	1.72	0.55
2:J:160:MET:SD	2:J:184:VAL:HG21	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:255:ARG:NH2	7:O:256:ARG:HE	2.03	0.55
5:M:115:ALA:HB1	5:M:457:VAL:HG21	1.88	0.55
5:M:145:ILE:HG23	5:M:514:LYS:HG2	1.89	0.55
7:O:64:THR:O	7:O:68:LEU:HG	2.07	0.55
7:O:89:GLU:HG3	7:O:90:VAL:HG23	1.88	0.55
7:O:497:MET:HA	7:O:500:ILE:HD12	1.88	0.55
4:D:462:PRO:HA	4:D:465:LEU:HD12	1.89	0.55
6:F:212:LEU:HD11	6:F:320:ASN:ND2	2.22	0.55
7:G:123:ARG:HD2	7:G:431:GLN:HE22	1.70	0.55
8:H:68:ASP:OD1	8:H:101:THR:OG1	2.20	0.55
8:H:160:VAL:HG11	8:H:187:CYS:SG	2.46	0.55
3:K:203:LYS:HB2	3:K:384:LEU:HD13	1.89	0.55
5:M:314:LEU:O	5:M:318:ASN:N	2.39	0.55
6:N:71:HIS:HB2	8:P:14:MET:HE2	1.88	0.55
1:A:312:LEU:HD22	1:A:314:ARG:HG2	1.88	0.55
3:C:64:ASN:ND2	3:C:84:SER:OG	2.37	0.55
4:D:91:LEU:HD22	4:D:110:VAL:HG13	1.89	0.55
6:F:69:ILE:O	8:H:16:LYS:NZ	2.29	0.55
7:G:109:LYS:O	7:G:112:VAL:HG12	2.07	0.55
7:G:331:GLN:NE2	7:G:333:SER:O	2.28	0.55
2:J:260:SER:OG	2:J:263:LYS:NZ	2.29	0.55
3:K:16:ARG:HG3	3:K:523:VAL:HG22	1.87	0.55
4:L:337:CYS:SG	4:L:344:PRO:HD3	2.47	0.55
5:M:116:LEU:O	5:M:137:TYR:OH	2.20	0.55
6:N:238:GLU:OE1	6:N:238:GLU:N	2.40	0.55
6:N:268:GLU:HA	6:N:271:VAL:HG22	1.88	0.55
10:S:151:ILE:HG12	10:S:153:MET:HE2	1.87	0.55
1:A:386:ASP:O	1:A:389:GLU:HG3	2.07	0.55
2:B:451:ALA:O	2:B:455:GLY:N	2.40	0.55
5:E:34:LEU:HA	5:E:37:HIS:HD1	1.71	0.55
6:F:34:LEU:HD12	6:F:93:THR:HG23	1.88	0.55
7:G:526:THR:OG1	8:H:59:HIS:O	2.24	0.55
1:I:203:ARG:HB2	1:I:207:GLU:HG3	1.88	0.55
3:K:203:LYS:HA	3:K:376:LEU:HB2	1.89	0.55
2:B:256:VAL:HG23	4:D:260:MET:HG3	1.89	0.55
3:C:195:ILE:HG22	3:C:198:TYR:H	1.71	0.55
4:D:268:ASP:OD1	4:D:269:TYR:N	2.40	0.55
8:H:451:ALA:HA	8:H:454:GLU:HG2	1.89	0.55
1:I:22:VAL:O	1:I:26:ALA:N	2.40	0.55
1:I:414:ALA:HB2	1:I:487:GLY:HA3	1.88	0.55
3:K:67:LEU:HD13	3:K:70:ILE:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:381:LYS:HB3	6:N:79:LYS:NZ	2.22	0.55
6:N:37:ASN:ND2	6:N:58:LYS:O	2.40	0.55
7:O:37:ARG:NH1	7:O:448:GLN:HG2	2.21	0.55
8:P:139:ALA:HA	8:P:142:ILE:HG22	1.87	0.55
8:P:327:THR:HG23	8:P:328:VAL:HG13	1.89	0.55
8:P:418:GLU:HG2	8:P:471:HIS:CE1	2.41	0.55
8:P:492:MET:HB3	8:P:497:ILE:HG23	1.89	0.55
3:C:157:ASN:HA	3:C:160:ILE:HG22	1.89	0.55
6:F:192:GLU:OE1	6:F:323:ARG:NH2	2.40	0.55
6:F:376:ILE:HD13	6:F:387:ILE:HG22	1.90	0.55
6:N:85:ASP:HA	6:N:89:GLY:HA2	1.89	0.55
6:N:341:PRO:HA	6:N:344:LEU:HD13	1.89	0.55
1:A:35:SER:OG	1:A:56:ASN:O	2.21	0.54
2:B:293:ARG:HA	2:B:315:ALA:HB3	1.88	0.54
5:E:147:HIS:HA	5:E:150:LYS:HE2	1.88	0.54
6:F:38:LEU:HB2	6:F:93:THR:HB	1.88	0.54
7:G:51:ASP:OD1	7:G:52:GLY:N	2.40	0.54
7:G:408:GLY:N	7:G:492:VAL:O	2.28	0.54
3:K:123:ILE:HD12	3:K:514:VAL:HG13	1.89	0.54
3:K:234:LYS:HD3	3:K:349:LEU:HD13	1.88	0.54
4:L:129:HIS:O	4:L:133:ILE:HG13	2.07	0.54
5:M:314:LEU:HD22	5:M:319:LEU:HB3	1.89	0.54
6:N:450:VAL:O	6:N:454:ASN:N	2.39	0.54
5:E:104:ASP:OD1	5:E:176:LYS:NZ	2.30	0.54
6:F:255:GLU:O	6:F:259:LEU:HG	2.07	0.54
1:I:255:THR:O	3:K:260:ARG:NH2	2.28	0.54
2:J:130:TRP:NE1	2:J:439:TYR:HB2	2.22	0.54
3:K:263:ASP:O	3:K:267:ILE:N	2.37	0.54
7:O:520:ILE:HB	8:P:56:VAL:HG13	1.87	0.54
3:C:124:SER:HA	3:C:127:ARG:HD3	1.89	0.54
6:F:432:ARG:O	6:F:435:LEU:HB2	2.07	0.54
2:J:38:LEU:O	2:J:50:LYS:NZ	2.37	0.54
2:J:205:LEU:HD22	4:L:97:ALA:HB2	1.88	0.54
4:L:277:ARG:HA	4:L:280:ARG:HE	1.71	0.54
5:M:61:MET:SD	5:M:61:MET:N	2.79	0.54
5:M:359:VAL:HG12	5:M:374:ILE:HG13	1.89	0.54
6:N:121:GLU:O	6:N:124:GLU:HG2	2.08	0.54
1:A:8:PHE:CE2	1:A:534:HIS:HB3	2.42	0.54
3:C:200:ARG:NH1	3:C:201:VAL:H	2.06	0.54
3:C:445:GLU:O	3:C:448:PRO:HD2	2.06	0.54
4:D:61:ILE:HG21	4:D:80:GLN:HG2	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:38:ILE:HG12	4:L:117:LEU:HD12	1.88	0.54
8:P:348:ASP:OD2	8:P:366:GLU:N	2.39	0.54
1:A:380:ALA:N	1:A:384:MET:SD	2.70	0.54
6:F:61:ASN:HD21	6:F:82:THR:HG23	1.73	0.54
6:F:282:CYS:SG	6:F:287:LYS:HD2	2.48	0.54
6:F:318:ARG:HG2	6:F:319:ARG:HH22	1.72	0.54
8:H:154:LEU:HG	8:H:403:THR:HA	1.89	0.54
8:H:276:MET:HG3	8:H:304:TYR:HE2	1.73	0.54
1:I:38:PRO:HA	1:I:157:SER:HB2	1.90	0.54
2:J:173:THR:HA	2:J:176:LYS:HB3	1.89	0.54
6:N:180:LYS:HZ2	6:N:326:LEU:HB2	1.72	0.54
6:N:440:PHE:O	6:N:443:ALA:CB	2.55	0.54
8:P:235:LYS:NZ	8:P:351:TYR:OH	2.36	0.54
3:C:160:ILE:O	3:C:166:SER:OG	2.25	0.54
3:C:396:GLN:OE1	3:C:399:ARG:NH2	2.29	0.54
4:D:58:ASP:HB2	4:D:71:THR:O	2.08	0.54
8:H:200:ASP:O	8:H:323:ARG:NH1	2.41	0.54
1:I:396:LEU:HA	1:I:399:VAL:HG22	1.90	0.54
2:J:48:MET:HG3	2:J:49:ASP:H	1.72	0.54
2:J:256:VAL:HB	4:L:262:ASN:HB3	1.90	0.54
4:L:68:VAL:HG13	4:L:396:LEU:HD11	1.88	0.54
4:L:302:LYS:NZ	4:L:327:ASP:HB3	2.22	0.54
6:N:31:GLN:HG2	6:N:97:LEU:HD13	1.89	0.54
4:D:446:MET:HA	4:D:449:TYR:HD2	1.73	0.54
7:G:130:GLN:NE2	7:G:134:ASN:OD1	2.40	0.54
7:G:395:ILE:HG23	7:G:398:ARG:HH21	1.72	0.54
8:H:114:LEU:HD22	8:H:440:LYS:HD2	1.89	0.54
8:H:283:ILE:O	8:H:286:THR:OG1	2.18	0.54
1:I:125:CYS:HB2	1:I:518:THR:HG21	1.90	0.54
5:M:168:THR:HG23	5:M:507:ILE:HG22	1.90	0.54
6:N:67:MET:HB3	6:N:69:ILE:HG12	1.90	0.54
6:N:198:HIS:HB3	6:N:355:LEU:HD21	1.90	0.54
7:O:128:ALA:HB2	7:O:435:ILE:HD12	1.89	0.54
8:P:450:ARG:HH21	8:P:464:ILE:HD12	1.73	0.54
1:A:416:GLU:HB3	1:A:445:LEU:O	2.08	0.54
5:E:43:ALA:O	5:E:47:THR:N	2.39	0.54
5:E:157:VAL:HA	5:E:165:LEU:HD11	1.89	0.54
7:G:90:VAL:HG21	7:G:498:VAL:HA	1.90	0.54
7:G:447:ARG:HH12	7:G:458:THR:HG22	1.73	0.54
8:H:23:SER:H	8:H:27:GLU:HB2	1.72	0.54
1:I:41:LEU:HD13	3:K:520:ASP:HB3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:349:GLU:HG3	1:I:366:ASN:HB3	1.88	0.54
1:I:529:ASP:OD1	1:I:530:LEU:N	2.40	0.54
2:J:251:ILE:HD11	5:M:257:PRO:HB2	1.89	0.54
3:K:158:SER:OG	3:K:496:TRP:O	2.19	0.54
4:L:194:VAL:HG21	4:L:208:ILE:HG12	1.90	0.54
5:M:405:ALA:O	5:M:409:ILE:HG12	2.07	0.54
7:O:390:HIS:HA	7:O:393:ILE:HD12	1.90	0.54
2:B:461:LEU:HD22	2:B:485:ILE:HD11	1.90	0.54
3:C:216:ARG:NH1	3:C:365:ASP:O	2.41	0.54
3:C:237:ARG:NH1	3:C:286:LYS:O	2.41	0.54
4:D:448:SER:HB2	4:D:452:ARG:NH1	2.23	0.54
5:E:196:VAL:HG13	5:E:204:VAL:HG21	1.89	0.54
5:E:486:ASN:ND2	5:E:500:ASP:OD1	2.41	0.54
1:I:250:VAL:HG22	4:L:264:ILE:HG13	1.89	0.54
3:K:37:ILE:HG13	3:K:37:ILE:O	2.08	0.54
6:N:251:LYS:NZ	6:N:255:GLU:OE2	2.36	0.54
10:S:140:LEU:HB3	10:S:339:VAL:HA	1.90	0.54
1:A:478:PRO:HA	1:A:481:LYS:HB2	1.90	0.54
3:C:330:ARG:NH1	3:C:341:ASP:OD2	2.41	0.54
8:H:166:THR:HA	8:H:169:MET:CE	2.38	0.54
4:L:208:ILE:HD13	4:L:409:LEU:HD13	1.90	0.54
4:L:248:LEU:H	4:L:342:THR:HG21	1.72	0.54
2:B:171:LEU:HA	4:D:531:LYS:HZ3	1.74	0.53
4:D:273:ASP:HB2	4:D:277:ARG:NH1	2.22	0.53
8:H:21:HIS:CE1	8:H:23:SER:HB2	2.38	0.53
1:I:276:GLN:O	1:I:280:ALA:N	2.41	0.53
4:L:431:GLU:OE1	4:L:484:HIS:ND1	2.27	0.53
6:N:168:LEU:HD11	6:N:391:VAL:HG12	1.90	0.53
7:O:476:GLY:HA3	7:O:487:ASN:ND2	2.23	0.53
8:P:143:LEU:HD12	8:P:146:LEU:HD12	1.89	0.53
10:S:92:ASN:O	10:S:95:ARG:NH2	2.41	0.53
10:S:239:SER:HA	10:S:247:VAL:HG13	1.90	0.53
1:A:103:ASN:OD1	1:A:443:ARG:NH2	2.41	0.53
1:A:294:ASP:OD1	1:A:294:ASP:N	2.40	0.53
3:C:415:GLU:HB3	3:C:444:LEU:HG	1.89	0.53
5:E:94:LEU:HD11	5:E:519:LEU:CD2	2.38	0.53
8:H:259:ILE:HD11	8:H:268:PHE:CE1	2.43	0.53
3:K:168:TRP:NE1	3:K:210:GLU:OE2	2.42	0.53
3:K:171:LEU:HD21	3:K:210:GLU:HA	1.90	0.53
7:O:218:LYS:NZ	7:O:226:GLU:OE2	2.41	0.53
2:B:436:MET:O	2:B:440:ALA:N	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:157:ASN:O	3:C:161:THR:OG1	2.26	0.53
3:C:230:ARG:HD2	3:C:233:ILE:HD11	1.90	0.53
3:C:435:TRP:HB2	3:C:436:PRO:HD3	1.91	0.53
6:F:59:ASP:HB3	6:F:62:VAL:HG22	1.90	0.53
6:F:109:TYR:HB3	6:F:114:LEU:HD23	1.90	0.53
7:G:37:ARG:O	7:G:448:GLN:NE2	2.41	0.53
7:G:303:PHE:HD2	7:G:310:CYS:HB3	1.73	0.53
1:I:24:ALA:HA	3:K:9:VAL:HG21	1.90	0.53
1:I:160:ILE:HG23	1:I:161:ILE:HG23	1.89	0.53
2:J:203:LYS:HD2	2:J:383:LEU:HB3	1.90	0.53
2:J:334:THR:N	5:M:312:HIS:HD2	2.06	0.53
3:K:157:ASN:OD1	3:K:169:SER:HB3	2.09	0.53
3:K:368:ASP:OD1	3:K:368:ASP:N	2.41	0.53
4:L:431:GLU:HB2	4:L:484:HIS:CE1	2.42	0.53
1:A:228:ARG:N	3:C:187:GLU:OE2	2.40	0.53
2:B:384:ASP:O	2:B:387:GLU:HG3	2.07	0.53
3:C:228:ARG:NH2	6:F:330:GLY:O	2.42	0.53
5:E:218:ARG:NH2	5:E:221:ASP:OD1	2.42	0.53
8:H:268:PHE:O	8:H:272:GLU:HG2	2.08	0.53
8:H:386:ASP:O	8:H:389:GLU:HG2	2.08	0.53
2:J:255:ARG:NH1	4:L:263:GLN:HE22	2.06	0.53
6:N:277:LEU:HD22	6:N:339:LEU:HD13	1.91	0.53
1:A:408:VAL:HG11	1:A:504:PHE:HB3	1.89	0.53
2:B:385:GLU:OE1	2:B:388:ARG:NE	2.30	0.53
3:C:325:ARG:HG3	3:C:370:LYS:HB2	1.90	0.53
5:E:284:LYS:O	5:E:287:GLU:HG3	2.09	0.53
6:F:164:LEU:HD11	6:F:387:ILE:HG12	1.91	0.53
6:F:229:TYR:HE2	6:F:287:LYS:HB3	1.74	0.53
8:H:58:ASN:HD21	8:H:62:LYS:HB2	1.74	0.53
2:J:61:LEU:HD12	4:L:89:ARG:HE	1.72	0.53
2:J:68:ALA:HB1	2:J:72:LYS:HZ3	1.74	0.53
2:J:68:ALA:O	2:J:72:LYS:HD3	2.09	0.53
4:L:74:GLY:HA2	4:L:77:ILE:HD12	1.90	0.53
4:L:258:THR:OG1	4:L:260:MET:O	2.19	0.53
1:A:56:ASN:ND2	1:A:158:SER:O	2.42	0.53
1:A:82:GLN:HG2	1:A:516:PHE:HD2	1.74	0.53
3:C:342:ASP:OD1	3:C:343:VAL:N	2.42	0.53
5:E:245:ASP:HB3	5:E:355:PHE:CZ	2.43	0.53
5:E:295:THR:HG21	5:E:348:LEU:HD11	1.89	0.53
6:F:101:GLU:OE1	6:F:443:ALA:HA	2.08	0.53
7:G:262:ASP:O	7:G:266:ILE:HG12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:267:GLU:OE2	3:K:252:SER:N	2.40	0.53
2:J:205:LEU:HB3	4:L:97:ALA:HA	1.91	0.53
3:K:52:ASP:HB3	3:K:56:GLY:H	1.72	0.53
6:N:64:LEU:HD13	6:N:78:ALA:HA	1.90	0.53
3:C:230:ARG:NH2	3:C:288:ASP:O	2.42	0.53
3:C:418:VAL:O	3:C:422:LEU:HG	2.09	0.53
4:D:492:GLY:HA3	4:D:503:ILE:HD13	1.91	0.53
1:I:203:ARG:HG2	3:K:504:GLN:HE22	1.73	0.53
3:K:229:MET:SD	3:K:310:THR:HA	2.48	0.53
4:L:436:LEU:HD22	4:L:451:VAL:HG13	1.91	0.53
7:O:383:GLU:O	7:O:386:GLU:HG2	2.09	0.53
8:P:41:GLN:HA	8:P:44:ARG:HB3	1.90	0.53
2:B:340:LEU:HG	5:E:316:GLN:HB2	1.91	0.53
3:C:423:THR:HG22	3:C:427:LYS:HE2	1.90	0.53
4:D:240:ARG:HB2	4:D:363:GLU:HG3	1.91	0.53
6:F:20:LEU:O	6:F:24:ILE:HG12	2.09	0.53
7:G:244:LEU:HD12	7:G:295:ILE:HG23	1.91	0.53
3:K:130:LEU:HD13	3:K:510:VAL:HG21	1.90	0.53
3:K:161:THR:HA	3:K:166:SER:HB3	1.90	0.53
7:O:42:PRO:HA	7:O:165:SER:H	1.73	0.53
1:A:260:LEU:O	1:A:264:ARG:HB2	2.09	0.53
3:C:313:ARG:HE	9:Q:59:HIS:CE1	2.27	0.53
6:F:23:ASN:ND2	6:F:518:VAL:HG21	2.24	0.53
7:G:378:ALA:HB3	7:G:381:PHE:HB3	1.89	0.53
1:I:218:CYS:HB2	1:I:362:ILE:HD12	1.91	0.53
3:K:73:GLN:NE2	6:N:528:SER:OG	2.42	0.53
3:K:298:ASP:OD1	3:K:301:GLN:NE2	2.42	0.53
5:M:501:MET:SD	5:M:504:GLN:HB2	2.48	0.53
6:N:17:GLN:O	6:N:17:GLN:NE2	2.37	0.53
6:N:130:ALA:HB2	6:N:422:LEU:HD11	1.90	0.53
1:A:238:ASP:N	1:A:328:LEU:O	2.33	0.53
1:A:298:LYS:HE3	3:C:331:ILE:HB	1.89	0.53
2:B:20:ARG:NH1	5:E:47:THR:HA	2.24	0.53
1:I:446:LEU:HG	1:I:450:ASN:HD21	1.74	0.53
2:J:406:THR:HA	2:J:497:PHE:H	1.72	0.53
2:J:513:VAL:HG21	5:M:394:ILE:HD11	1.91	0.53
4:L:117:LEU:O	4:L:121:THR:HG23	2.08	0.53
4:L:338:LYS:HD2	4:L:384:LYS:HE2	1.90	0.53
6:N:224:ARG:NH1	6:N:226:GLU:OE2	2.42	0.53
8:P:149:CYS:SG	8:P:150:SER:N	2.82	0.53
1:A:130:ARG:HH22	1:A:131:TYR:HD1	1.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:214:TYR:CE2	1:A:216:LEU:HB2	2.44	0.52
4:D:310:SER:HB3	4:D:313:ALA:HB3	1.90	0.52
5:E:470:PRO:O	5:E:474:MET:HG2	2.09	0.52
7:G:64:THR:O	7:G:68:LEU:HG	2.09	0.52
1:I:33:LYS:HE2	1:I:451:THR:OG1	2.09	0.52
4:L:343:LYS:HB2	4:L:355:MET:SD	2.49	0.52
7:O:9:LEU:HA	8:P:78:VAL:HA	1.91	0.52
7:O:79:LEU:HD22	7:O:98:THR:HG23	1.91	0.52
8:P:58:ASN:ND2	8:P:60:LEU:HB2	2.24	0.52
9:Q:31:GLU:O	9:Q:35:GLU:HG3	2.09	0.52
4:D:285:ASN:O	4:D:289:GLN:HG2	2.09	0.52
5:E:218:ARG:N	5:E:221:ASP:OD2	2.33	0.52
5:E:532:ASP:HB3	7:G:47:LYS:HG3	1.90	0.52
7:G:274:LEU:O	7:G:278:LEU:HG	2.08	0.52
8:H:420:ALA:HB2	8:H:445:PHE:HB2	1.90	0.52
4:L:99:ASP:HA	4:L:103:GLY:HA2	1.91	0.52
5:M:442:THR:HG1	5:M:446:TYR:HH	1.55	0.52
6:N:101:GLU:HG3	6:N:446:ILE:HB	1.89	0.52
7:O:460:ILE:HA	7:O:463:LYS:HE2	1.90	0.52
10:S:63:GLY:O	10:S:66:THR:OG1	2.21	0.52
1:A:227:LYS:N	3:C:187:GLU:OE2	2.43	0.52
2:B:8:PRO:HG2	5:E:39:MET:HB3	1.91	0.52
3:C:330:ARG:HD3	3:C:342:ASP:HA	1.92	0.52
4:D:208:ILE:HG23	4:D:386:VAL:HG23	1.92	0.52
4:D:439:TYR:O	4:D:442:THR:OG1	2.26	0.52
5:E:410:ARG:NH2	5:E:413:ILE:HG12	2.25	0.52
7:G:200:VAL:HG11	7:G:353:ILE:HG22	1.92	0.52
7:G:290:LEU:HD12	7:G:314:VAL:HG21	1.91	0.52
7:G:478:ASP:OD1	7:G:479:ILE:N	2.43	0.52
2:J:163:ALA:O	2:J:167:LEU:HG	2.09	0.52
4:L:129:HIS:CG	4:L:130:PRO:HD2	2.44	0.52
4:D:50:THR:HA	4:D:468:ASN:HD21	1.74	0.52
4:D:54:PRO:HB2	4:D:495:VAL:HG21	1.90	0.52
7:G:92:ASP:OD1	7:G:93:GLY:N	2.43	0.52
8:H:23:SER:N	8:H:27:GLU:OE1	2.40	0.52
5:M:52:LEU:HD23	5:M:462:LEU:HG	1.91	0.52
5:M:323:ARG:HG3	5:M:324:TRP:CD1	2.45	0.52
5:M:325:VAL:HG12	5:M:329:GLU:HG3	1.91	0.52
6:N:44:MET:HB3	8:P:520:ARG:O	2.09	0.52
7:O:476:GLY:HA3	7:O:487:ASN:HD21	1.73	0.52
8:P:333:LEU:HD21	8:P:339:PRO:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:183:ASP:O	1:A:185:ARG:NH1	2.41	0.52
3:C:106:LEU:HD21	3:C:513:ALA:HA	1.91	0.52
4:D:187:SER:O	4:D:191:VAL:HG23	2.10	0.52
4:D:350:GLN:O	4:D:355:MET:HE1	2.10	0.52
4:D:445:GLY:O	4:D:448:SER:OG	2.23	0.52
6:F:27:ALA:HA	6:F:30:LEU:HD12	1.91	0.52
7:G:391:ASP:O	7:G:395:ILE:HG12	2.09	0.52
1:I:267:GLU:OE2	3:K:251:GLU:N	2.36	0.52
2:J:59:ALA:O	4:L:89:ARG:NH2	2.42	0.52
3:K:314:ARG:HB2	10:S:125:GLU:HB3	1.90	0.52
4:L:523:THR:HA	4:L:526:VAL:HG22	1.90	0.52
5:M:267:ASP:N	7:O:257:VAL:O	2.42	0.52
8:P:422:GLN:NE2	8:P:423:ILE:HG13	2.24	0.52
10:S:115:ASN:HA	10:S:118:LYS:HE3	1.90	0.52
1:A:506:PRO:HG2	1:A:509:VAL:HG23	1.92	0.52
3:C:177:LEU:HD11	3:C:181:LYS:HE3	1.92	0.52
4:D:35:PHE:HD1	4:D:38:ILE:HD11	1.75	0.52
4:D:238:ILE:HG22	4:D:323:MET:SD	2.50	0.52
5:E:290:GLN:O	5:E:294:GLU:HB2	2.09	0.52
6:F:73:THR:O	6:F:77:ILE:HG12	2.10	0.52
7:G:43:ARG:HG3	7:G:479:ILE:HG21	1.90	0.52
1:I:332:ALA:HA	1:I:338:GLU:HA	1.92	0.52
1:I:410:PRO:HB2	1:I:498:ASN:HB2	1.90	0.52
3:K:450:THR:HA	3:K:453:GLN:HB2	1.92	0.52
6:N:419:ALA:O	6:N:423:ILE:HG12	2.08	0.52
8:P:7:LYS:HB3	8:P:12:ALA:HB1	1.92	0.52
8:P:216:SER:OG	8:P:217:VAL:N	2.41	0.52
10:S:27:PRO:HD3	10:S:340:TRP:CE2	2.44	0.52
2:B:292:ASN:ND2	2:B:294:GLN:O	2.42	0.52
2:B:436:MET:HA	2:B:439:TYR:HB3	1.90	0.52
3:C:279:CYS:HA	3:C:282:ILE:HD12	1.92	0.52
8:H:3:LEU:HD22	6:N:526:MET:HE2	1.92	0.52
8:H:209:GLY:N	8:H:379:GLY:O	2.43	0.52
1:I:15:GLU:O	1:I:18:ARG:HB2	2.08	0.52
2:J:52:LEU:HD21	2:J:70:ILE:HG23	1.90	0.52
4:L:144:GLY:O	4:L:148:LEU:HG	2.09	0.52
5:M:295:THR:HG21	5:M:348:LEU:HD11	1.92	0.52
5:M:314:LEU:HA	5:M:317:ASN:HB2	1.92	0.52
7:O:478:ASP:HB3	7:O:483:ASP:H	1.75	0.52
8:P:44:ARG:NH1	8:P:454:GLU:OE1	2.42	0.52
8:P:163:LEU:HD13	8:P:402:LEU:HD21	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:Q:193:GLU:O	9:Q:197:LYS:HG3	2.09	0.52
3:C:185:PHE:HB2	3:C:370:LYS:HD2	1.92	0.52
3:C:380:SER:HB3	6:F:80:VAL:HG22	1.92	0.52
2:J:49:ASP:N	2:J:49:ASP:OD1	2.43	0.52
3:K:36:ILE:HD11	6:N:4:VAL:HG11	1.91	0.52
3:K:46:MET:HG3	6:N:519:ASP:HB2	1.92	0.52
3:K:220:ILE:HD12	3:K:222:LYS:HE2	1.90	0.52
5:M:154:SER:HA	5:M:416:ASN:HA	1.91	0.52
7:O:178:MET:HE2	7:O:210:LEU:HB2	1.91	0.52
1:A:26:ALA:HA	1:A:98:ALA:HB1	1.92	0.52
1:A:209:MET:HB3	1:A:376:ILE:HB	1.92	0.52
1:A:234:ILE:N	1:A:346:GLY:O	2.26	0.52
2:B:285:HIS:HA	2:B:338:PRO:HB3	1.92	0.52
3:C:198:TYR:HA	3:C:322:ARG:HG2	1.92	0.52
3:C:291:ILE:HD11	3:C:315:VAL:HG21	1.92	0.52
6:F:417:ALA:HA	6:F:470:HIS:NE2	2.25	0.52
8:H:459:LYS:NZ	8:H:461:ASN:HB2	2.25	0.52
1:I:245:LYS:HZ3	3:K:252:SER:HA	1.74	0.52
3:K:240:LEU:HD23	3:K:329:ALA:HB3	1.92	0.52
5:M:171:THR:HG21	5:M:506:VAL:HA	1.92	0.52
5:M:501:MET:HG2	5:M:506:VAL:HG22	1.91	0.52
6:N:168:LEU:HD12	6:N:171:ALA:HB3	1.92	0.52
8:P:91:HIS:NE2	8:P:95:GLN:OE1	2.43	0.52
1:A:95:ILE:O	1:A:99:GLU:HG2	2.09	0.52
2:B:205:LEU:O	2:B:376:ARG:NH2	2.40	0.52
4:D:338:LYS:NZ	4:D:384:LYS:HB2	2.25	0.52
8:H:305:ALA:HB1	8:H:310:ILE:HB	1.90	0.52
5:M:297:ALA:HB2	5:M:353:LEU:HD13	1.92	0.52
6:N:31:GLN:OE1	6:N:35:ARG:NH2	2.43	0.52
7:O:135:LYS:HE3	7:O:139:ILE:HD13	1.92	0.52
7:O:395:ILE:HD12	7:O:495:PRO:HG2	1.92	0.52
8:P:190:ILE:O	8:P:190:ILE:HG13	2.10	0.52
10:S:340:TRP:HE3	10:S:341:ILE:HD13	1.75	0.52
1:A:423:LEU:HB3	1:A:442:ALA:HB2	1.90	0.51
3:C:142:ILE:HG13	3:C:142:ILE:O	2.10	0.51
3:C:354:LYS:NZ	6:F:187:ASP:HB2	2.24	0.51
4:D:50:THR:HA	4:D:468:ASN:ND2	2.26	0.51
4:D:83:VAL:HG12	4:D:85:HIS:H	1.74	0.51
5:E:38:ILE:HG21	5:E:121:GLU:HB3	1.92	0.51
5:E:292:ILE:HD13	5:E:348:LEU:HD22	1.92	0.51
5:E:324:TRP:CE3	9:Q:156:PRO:HG3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:238:GLU:OE1	6:F:238:GLU:N	2.39	0.51
1:I:469:ALA:O	1:I:473:GLU:HG2	2.09	0.51
2:J:98:GLY:O	2:J:101:SER:OG	2.18	0.51
3:K:481:ASN:O	3:K:485:GLY:N	2.35	0.51
6:N:409:PRO:HG2	6:N:476:LEU:HD12	1.91	0.51
7:O:82:ILE:HG21	7:O:509:ALA:HB2	1.93	0.51
1:A:372:SER:OG	1:A:373:ALA:N	2.43	0.51
2:B:444:ARG:HH11	2:B:466:ARG:HD2	1.76	0.51
4:D:24:TYR:HD1	2:J:122:HIS:ND1	2.09	0.51
4:D:27:ARG:H	2:J:120:LYS:HZ3	1.58	0.51
5:E:525:ARG:HH22	7:G:168:ILE:HA	1.74	0.51
6:F:6:THR:HG22	7:O:5:PRO:HD3	1.92	0.51
6:F:231:LEU:HD23	6:F:291:VAL:HG22	1.91	0.51
1:I:268:SER:O	1:I:271:THR:OG1	2.26	0.51
3:K:132:ASP:HB3	3:K:422:LEU:HD22	1.92	0.51
5:M:229:ILE:HG22	5:M:384:THR:HG21	1.93	0.51
6:N:496:ASP:OD1	6:N:497:ASN:N	2.42	0.51
1:A:112:ILE:HA	1:A:433:ARG:HH12	1.76	0.51
4:D:134:SER:HB2	4:D:527:ARG:HE	1.76	0.51
5:E:480:ARG:NE	5:E:484:GLU:OE2	2.39	0.51
6:F:47:LEU:HD23	8:H:525:ILE:HB	1.93	0.51
6:F:257:GLU:O	6:F:261:LYS:HG2	2.10	0.51
2:J:128:ALA:O	2:J:132:GLU:HG2	2.10	0.51
6:N:299:PRO:HA	6:N:302:LEU:HB2	1.91	0.51
10:S:97:ALA:O	10:S:101:HIS:ND1	2.39	0.51
10:S:116:ARG:O	10:S:120:THR:HG23	2.10	0.51
2:B:95:VAL:HG22	2:B:399:GLN:HG3	1.92	0.51
3:C:16:ARG:HG3	3:C:523:VAL:HG22	1.91	0.51
4:D:448:SER:HB2	4:D:452:ARG:HH12	1.75	0.51
5:E:405:ALA:O	5:E:409:ILE:HG12	2.10	0.51
6:F:107:ASP:HA	6:F:110:ILE:HG22	1.91	0.51
6:F:497:ASN:O	6:F:501:LYS:HG2	2.11	0.51
7:G:141:VAL:O	7:G:405:VAL:N	2.33	0.51
1:I:223:GLN:O	1:I:227:LYS:NZ	2.43	0.51
3:K:251:GLU:N	3:K:251:GLU:OE1	2.43	0.51
4:L:382:PRO:O	4:L:384:LYS:NZ	2.32	0.51
8:P:79:GLN:HA	8:P:79:GLN:NE2	2.25	0.51
1:A:14:GLY:O	1:A:17:ILE:HG22	2.10	0.51
1:A:423:LEU:HD22	1:A:442:ALA:HB2	1.91	0.51
2:B:204:LYS:O	2:B:376:ARG:HA	2.11	0.51
2:B:438:SER:O	2:B:442:ALA:N	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:484:HIS:CE1	4:D:489:LYS:HG2	2.45	0.51
5:E:129:HIS:HB3	5:E:132:ARG:HD3	1.93	0.51
5:E:220:GLU:OE1	5:E:220:GLU:N	2.38	0.51
5:M:25:LYS:HZ1	5:M:27:ARG:HB2	1.74	0.51
7:O:51:ASP:OD1	7:O:51:ASP:N	2.42	0.51
8:P:409:VAL:HG23	8:P:499:ASP:HB3	1.93	0.51
10:S:159:VAL:HG21	10:S:177:ARG:NE	2.26	0.51
1:A:258:GLU:OE1	3:C:266:ARG:NH2	2.43	0.51
1:A:423:LEU:HD21	1:A:438:ILE:O	2.11	0.51
3:C:173:CYS:SG	3:C:174:ASN:N	2.84	0.51
5:E:217:GLY:HA3	5:E:388:ARG:HB3	1.92	0.51
7:G:422:ASP:OD1	7:G:423:TYR:N	2.44	0.51
1:I:265:GLN:HG3	1:I:269:ASP:OD2	2.11	0.51
2:J:174:HIS:CD2	4:L:531:LYS:HD2	2.45	0.51
2:J:214:LEU:HD13	2:J:373:ILE:HG12	1.93	0.51
2:J:334:THR:HG21	5:M:313:LEU:HD21	1.91	0.51
3:K:62:ASP:OD2	3:K:95:THR:OG1	2.28	0.51
6:N:475:GLN:HB3	6:N:477:VAL:HG23	1.91	0.51
7:O:111:TYR:CE2	7:O:433:LEU:HB3	2.46	0.51
9:Q:47:THR:OG1	9:Q:51:MET:HG2	2.11	0.51
10:S:188:TYR:HD1	10:S:191:LYS:HE3	1.73	0.51
1:A:289:THR:HG23	1:A:316:LEU:HD22	1.93	0.51
2:B:73:ASN:O	4:D:539:ARG:NH1	2.44	0.51
2:B:292:ASN:ND2	2:B:295:LEU:O	2.43	0.51
4:D:58:ASP:HB3	4:D:72:ASN:OD1	2.10	0.51
6:F:190:MET:HE3	6:F:371:SER:HB2	1.93	0.51
6:F:440:PHE:O	6:F:443:ALA:CB	2.57	0.51
2:J:436:MET:O	2:J:439:TYR:HB3	2.11	0.51
2:J:461:LEU:HD22	2:J:485:ILE:HD11	1.92	0.51
2:J:488:MET:HB2	2:J:493:ILE:HB	1.93	0.51
3:K:510:VAL:O	3:K:514:VAL:HG23	2.11	0.51
4:L:440:SER:HB2	4:L:451:VAL:HG12	1.93	0.51
6:N:20:LEU:O	6:N:24:ILE:HG12	2.10	0.51
6:N:211:VAL:HG22	6:N:362:PHE:HA	1.92	0.51
7:O:111:TYR:HE2	7:O:433:LEU:HB3	1.75	0.51
9:Q:55:GLU:HA	9:Q:58:ASP:HB2	1.93	0.51
1:A:452:LEU:O	1:A:456:ALA:N	2.42	0.51
4:D:257:LYS:HD3	4:D:262:ASN:HD21	1.75	0.51
4:D:395:LYS:O	4:D:399:GLU:HG2	2.10	0.51
4:D:492:GLY:N	4:D:501:SER:O	2.40	0.51
5:E:37:HIS:NE2	5:E:533:ILE:HD11	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:207:GLU:OE2	3:K:507:LYS:NZ	2.44	0.51
2:J:185:GLU:HA	2:J:188:LEU:HD12	1.91	0.51
4:L:286:LEU:O	4:L:290:ILE:HD12	2.10	0.51
5:M:486:ASN:ND2	5:M:488:ALA:O	2.44	0.51
6:N:84:GLN:NE2	6:N:88:THR:OG1	2.43	0.51
7:O:407:ALA:HB1	7:O:487:ASN:HB2	1.93	0.51
8:P:355:VAL:O	8:P:378:ARG:NH1	2.44	0.51
10:S:219:VAL:HG23	10:S:306:TYR:HE2	1.75	0.51
1:A:229:ILE:HG13	1:A:231:ASN:H	1.75	0.51
2:B:45:PRO:HB3	2:B:168:SER:HB2	1.92	0.51
2:B:71:LEU:HD13	2:B:85:VAL:HA	1.92	0.51
5:E:173:LEU:HB3	5:E:178:VAL:HG13	1.93	0.51
7:G:402:ASN:ND2	7:G:497:MET:SD	2.71	0.51
7:G:461:LEU:HA	7:G:464:LEU:HG	1.93	0.51
8:H:156:ASP:O	8:H:160:VAL:HG23	2.10	0.51
3:K:32:THR:HG22	6:N:4:VAL:HG13	1.93	0.51
3:K:112:PHE:HA	3:K:115:GLN:HE22	1.76	0.51
3:K:227:PRO:HG3	6:N:322:GLU:HA	1.93	0.51
10:S:258:PRO:O	10:S:261:LEU:HB3	2.11	0.51
1:A:69:HIS:O	1:A:72:ALA:N	2.39	0.51
2:B:275:MET:HB3	2:B:299:TYR:HE2	1.75	0.51
3:C:196:LYS:HD2	3:C:399:ARG:HH12	1.76	0.51
4:D:171:LEU:HD11	4:D:408:ALA:HB2	1.93	0.51
6:F:442:ASP:O	6:F:445:LEU:CB	2.55	0.51
8:H:97:VAL:HG21	8:H:503:GLY:HA2	1.93	0.51
1:I:285:VAL:HG11	1:I:351:VAL:HG11	1.92	0.51
2:J:415:MET:HE1	2:J:466:ARG:N	2.26	0.51
6:N:73:THR:O	6:N:77:ILE:HG12	2.11	0.51
6:N:403:ASP:OD1	6:N:404:ASP:N	2.44	0.51
8:P:8:ALA:C	8:P:13:GLN:HE21	2.15	0.51
1:A:22:VAL:HG22	1:A:101:LEU:HG	1.93	0.50
1:A:272:LYS:HA	1:A:275:ILE:HD12	1.93	0.50
2:B:518:ASP:HB3	5:E:57:LEU:HG	1.93	0.50
6:F:460:GLN:HE22	6:N:114:LEU:HD21	1.76	0.50
7:G:143:VAL:HG13	7:G:154:LEU:HD13	1.91	0.50
7:G:241:ASN:N	7:G:331:GLN:O	2.44	0.50
8:H:32:ASN:OD1	8:H:33:ILE:N	2.44	0.50
1:I:62:LEU:HA	1:I:65:LEU:HD13	1.92	0.50
3:K:204:ILE:HD13	3:K:375:LEU:HD12	1.91	0.50
3:K:415:GLU:OE1	3:K:416:MET:HE2	2.10	0.50
4:L:211:VAL:O	4:L:390:VAL:HG12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:94:THR:HA	7:O:97:VAL:HG22	1.93	0.50
1:A:421:ILE:HG13	1:A:471:HIS:HB2	1.92	0.50
1:A:453:ALA:HB3	1:A:460:SER:HB3	1.93	0.50
2:B:439:TYR:O	2:B:442:ALA:HB3	2.11	0.50
3:C:302:HIS:O	3:C:306:ARG:NH1	2.44	0.50
5:E:232:LYS:NZ	5:E:325:VAL:HA	2.26	0.50
6:F:210:LEU:HD11	6:F:323:ARG:HD3	1.94	0.50
1:I:381:ASN:OD1	1:I:384:MET:HG3	2.11	0.50
1:I:446:LEU:HG	1:I:450:ASN:ND2	2.27	0.50
2:J:235:ALA:HB1	2:J:289:CYS:HB2	1.92	0.50
3:K:289:VAL:HG22	3:K:310:THR:HB	1.93	0.50
4:L:224:VAL:HG22	4:L:226:GLY:H	1.75	0.50
7:O:352:GLN:OE1	7:O:356:GLU:N	2.43	0.50
5:E:21:ASP:HB3	5:E:24:ARG:HB2	1.94	0.50
5:E:340:ARG:CZ	7:G:305:ASP:HA	2.41	0.50
6:F:15:ARG:O	6:F:19:ALA:N	2.38	0.50
8:H:328:VAL:HG12	8:H:365:HIS:CE1	2.47	0.50
2:J:195:ASN:HA	5:M:368:LYS:HE3	1.93	0.50
2:J:411:GLY:HA2	2:J:414:GLU:HB3	1.94	0.50
4:L:492:GLY:N	4:L:501:SER:O	2.43	0.50
7:O:135:LYS:O	7:O:138:GLU:HG2	2.11	0.50
7:O:316:GLU:HG2	7:O:320:LYS:HD3	1.92	0.50
7:O:345:CYS:SG	7:O:346:GLN:N	2.85	0.50
4:D:366:ASN:OD1	4:D:367:LEU:N	2.44	0.50
5:E:78:LEU:HB3	5:E:92:VAL:HG22	1.94	0.50
7:G:411:ALA:O	7:G:415:GLU:HG2	2.10	0.50
2:J:12:PHE:HB3	2:J:16:ALA:HB3	1.92	0.50
2:J:19:GLU:HG3	2:J:24:ALA:HB2	1.94	0.50
2:J:81:ALA:O	2:J:85:VAL:HG13	2.11	0.50
2:J:90:VAL:HA	2:J:93:ASP:OD2	2.11	0.50
4:L:207:ASP:HA	4:L:385:THR:HG22	1.94	0.50
5:M:50:THR:OG1	5:M:59:LYS:NZ	2.44	0.50
6:N:69:ILE:HD12	8:P:14:MET:HB3	1.94	0.50
8:P:448:ILE:HB	8:P:449:PRO:HD3	1.92	0.50
9:Q:173:ASP:O	9:Q:175:LYS:NZ	2.37	0.50
10:S:123:MET:SD	10:S:129:THR:OG1	2.67	0.50
10:S:230:ALA:HB2	10:S:236:LEU:HD12	1.94	0.50
1:A:25:ALA:O	1:A:28:ILE:HG22	2.11	0.50
5:E:301:ILE:HD11	5:E:330:ILE:HG12	1.93	0.50
6:F:56:LEU:HD12	6:F:382:HIS:CD2	2.46	0.50
6:F:90:ASP:OD2	6:F:155:SER:OG	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:232:THR:HG23	6:F:332:ALA:HA	1.93	0.50
6:F:378:GLY:N	6:F:384:LEU:HD21	2.27	0.50
6:F:483:THR:HG23	6:F:485:GLU:HG2	1.94	0.50
7:G:280:LYS:O	7:G:284:SER:OG	2.15	0.50
7:G:418:LYS:HD2	7:G:469:ALA:HA	1.92	0.50
7:G:439:ALA:HA	7:G:442:LEU:HD12	1.93	0.50
8:H:251:THR:OG1	8:H:253:THR:O	2.27	0.50
4:L:78:LEU:HD11	4:L:110:VAL:HG21	1.93	0.50
5:M:180:SER:OG	5:M:181:CYS:N	2.43	0.50
7:O:104:PHE:HE2	7:O:506:ALA:HB1	1.75	0.50
7:O:152:ARG:HA	7:O:155:LEU:HD12	1.93	0.50
1:A:121:TYR:OH	1:A:440:GLU:OE1	2.20	0.50
2:B:102:VAL:HG23	2:B:507:ALA:HB2	1.93	0.50
3:C:210:GLU:OE1	3:C:210:GLU:N	2.39	0.50
3:C:334:ARG:O	3:C:337:GLU:HG2	2.11	0.50
2:J:285:HIS:CG	2:J:338:PRO:HA	2.46	0.50
3:K:210:GLU:OE1	3:K:210:GLU:N	2.44	0.50
3:K:231:ARG:HB3	3:K:352:ILE:HB	1.92	0.50
3:K:238:ILE:HD11	3:K:291:ILE:HG23	1.94	0.50
3:K:290:VAL:N	3:K:310:THR:O	2.36	0.50
5:M:249:ALA:O	5:M:301:ILE:N	2.43	0.50
1:A:416:GLU:HA	1:A:445:LEU:HD12	1.94	0.50
3:C:18:SER:OG	3:C:19:GLY:N	2.45	0.50
3:C:155:ILE:HD11	3:C:407:LEU:HD11	1.93	0.50
3:C:301:GLN:O	3:C:305:MET:HG2	2.12	0.50
4:D:332:ASP:O	4:D:335:PHE:HB3	2.12	0.50
6:F:127:LYS:NZ	6:F:506:HIS:HA	2.27	0.50
2:J:259:ASP:OD1	2:J:260:SER:N	2.45	0.50
2:J:329:GLY:O	5:M:238:GLN:NE2	2.34	0.50
4:L:216:GLY:HA3	4:L:391:ARG:HB3	1.94	0.50
6:N:214:HIS:HD2	10:S:373:LYS:HD3	1.77	0.50
1:A:10:ASP:O	1:A:532:LYS:N	2.42	0.50
3:C:191:LYS:O	3:C:193:ILE:HG23	2.12	0.50
3:C:492:GLU:OE1	3:C:492:GLU:N	2.44	0.50
6:F:215:GLY:HA3	6:F:359:LYS:HG3	1.93	0.50
6:F:319:ARG:O	6:F:323:ARG:HG3	2.12	0.50
7:G:269:ALA:HB1	8:H:266:MET:CE	2.41	0.50
1:I:148:LEU:HD21	1:I:403:LEU:HD11	1.93	0.50
2:J:4:LEU:HD21	2:J:8:PRO:HD3	1.92	0.50
2:J:258:VAL:HB	2:J:263:LYS:HD2	1.94	0.50
2:J:282:ILE:HG12	2:J:335:PHE:CG	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:137:PHE:CD1	4:L:454:PHE:HE1	2.30	0.50
4:L:152:SER:OG	4:L:512:LEU:HD22	2.11	0.50
5:M:230:VAL:O	5:M:372:LEU:N	2.40	0.50
6:N:72:PRO:O	6:N:76:LEU:HG	2.12	0.50
8:P:326:LYS:HE3	8:P:372:ILE:HD11	1.92	0.50
2:B:65:ASN:ND2	2:B:170:LYS:HA	2.24	0.50
2:B:239:ILE:HA	2:B:291:ILE:HB	1.94	0.50
3:C:477:THR:HG21	3:C:491:LYS:HG3	1.93	0.50
7:G:26:ILE:O	7:G:30:GLN:HG2	2.12	0.50
7:G:197:ILE:HD13	7:G:372:PHE:HB2	1.93	0.50
7:G:513:ILE:HA	7:G:516:VAL:HG23	1.94	0.50
1:I:38:PRO:HG2	1:I:490:LEU:HD12	1.92	0.50
1:I:98:ALA:O	1:I:102:LYS:HG2	2.12	0.50
3:K:291:ILE:HG22	3:K:312:ILE:HB	1.93	0.50
4:L:302:LYS:HA	4:L:327:ASP:HA	1.94	0.50
7:O:135:LYS:HD2	7:O:138:GLU:OE2	2.12	0.50
7:O:190:LEU:HD21	7:O:400:ILE:HD11	1.93	0.50
7:O:238:ALA:N	7:O:288:VAL:O	2.38	0.50
8:P:315:LEU:HD13	8:P:320:ASP:HB3	1.94	0.50
1:A:298:LYS:HG3	3:C:333:SER:HB3	1.94	0.49
2:B:149:GLY:HA2	2:B:155:PHE:HB2	1.94	0.49
6:F:232:THR:HA	6:F:292:ILE:HB	1.92	0.49
8:H:323:ARG:HD3	8:H:372:ILE:HG12	1.93	0.49
1:I:227:LYS:O	1:I:352:VAL:HA	2.12	0.49
3:K:129:ALA:O	3:K:133:MET:HG3	2.12	0.49
3:K:387:VAL:O	3:K:391:LEU:HG	2.12	0.49
4:L:282:TYR:CZ	4:L:286:LEU:HD11	2.47	0.49
8:P:397:ASN:HA	8:P:400:LYS:HG2	1.94	0.49
3:C:423:THR:O	3:C:427:LYS:HG2	2.12	0.49
5:E:525:ARG:NH1	7:G:170:GLN:OE1	2.45	0.49
7:G:313:ARG:NH2	9:Q:108:LYS:HE2	2.27	0.49
1:I:208:SER:OG	1:I:378:ARG:N	2.32	0.49
1:I:219:VAL:HG12	1:I:361:LEU:HA	1.93	0.49
1:I:275:ILE:O	1:I:279:LEU:N	2.37	0.49
2:J:501:ARG:HH22	5:M:218:ARG:NH2	2.11	0.49
3:K:46:MET:HE3	6:N:518:VAL:O	2.11	0.49
5:M:267:ASP:O	7:O:258:HIS:HA	2.11	0.49
5:M:363:SER:O	5:M:367:THR:OG1	2.29	0.49
7:O:8:LEU:HD21	8:P:39:LEU:HB2	1.93	0.49
7:O:46:ASP:HB3	7:O:58:ILE:HD11	1.94	0.49
8:P:471:HIS:O	8:P:476:LYS:NZ	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:59:ALA:HB1	4:D:89:ARG:HH21	1.76	0.49
2:B:484:THR:O	2:B:485:ILE:HD13	2.12	0.49
7:G:416:LEU:HD22	7:G:499:ARG:NH2	2.28	0.49
8:H:322:ARG:O	8:H:326:LYS:HG3	2.12	0.49
2:J:61:LEU:HD11	4:L:86:PRO:HA	1.93	0.49
2:J:61:LEU:HD21	4:L:86:PRO:HB3	1.94	0.49
2:J:200:HIS:HB3	2:J:372:THR:HA	1.94	0.49
2:J:424:LEU:HA	2:J:427:ARG:HE	1.76	0.49
5:M:260:PRO:HD3	7:O:267:VAL:HG22	1.94	0.49
5:M:376:GLN:NE2	5:M:378:LYS:HG2	2.27	0.49
8:P:136:CYS:SG	8:P:512:THR:HG21	2.52	0.49
9:Q:59:HIS:ND1	9:Q:60:GLU:OE2	2.45	0.49
9:Q:80:ALA:O	9:Q:83:LYS:HG3	2.12	0.49
1:A:43:LYS:HD2	1:A:61:ILE:HD13	1.94	0.49
3:C:249:LYS:HE3	6:F:243:GLU:HB3	1.94	0.49
5:E:173:LEU:HD12	5:E:182:HIS:HD2	1.76	0.49
6:F:415:GLU:HA	6:F:418:MET:HE3	1.94	0.49
7:G:22:LEU:HD11	7:G:112:VAL:HG21	1.93	0.49
8:H:32:ASN:HA	8:H:80:HIS:CE1	2.48	0.49
1:I:106:GLU:HA	1:I:109:LYS:HE2	1.93	0.49
2:J:316:ASP:OD2	2:J:319:GLY:N	2.35	0.49
4:L:61:ILE:HG21	4:L:80:GLN:HB3	1.94	0.49
1:A:415:VAL:HG11	1:A:510:LYS:HE2	1.93	0.49
2:B:51:ILE:HB	4:D:535:VAL:HG22	1.94	0.49
3:C:187:GLU:O	3:C:190:ARG:NH1	2.46	0.49
3:C:226:HIS:CE1	3:C:228:ARG:HB2	2.47	0.49
4:D:521:LEU:O	4:D:525:THR:OG1	2.24	0.49
7:G:504:THR:HG21	8:H:211:GLY:H	1.76	0.49
2:J:51:ILE:N	4:L:534:ASP:O	2.46	0.49
3:K:334:ARG:HB3	3:K:337:GLU:HB2	1.93	0.49
6:N:205:SER:OG	6:N:206:LEU:N	2.46	0.49
8:P:84:LYS:HA	8:P:87:VAL:HG12	1.95	0.49
1:A:277:LYS:NZ	1:A:338:GLU:OE2	2.43	0.49
7:G:516:VAL:HG13	8:H:55:MET:SD	2.53	0.49
1:I:339:THR:OG1	1:I:341:GLU:OE2	2.29	0.49
2:J:327:THR:HB	2:J:345:SER:H	1.76	0.49
3:K:267:ILE:HA	3:K:270:MET:HG2	1.94	0.49
7:O:194:MET:SD	7:O:321:ARG:HG3	2.53	0.49
8:P:114:LEU:O	8:P:118:LEU:HG	2.13	0.49
8:P:324:LEU:O	8:P:328:VAL:HG22	2.13	0.49
3:C:175:ILE:HD13	3:C:213:CYS:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:262:GLU:OE1	6:F:262:ALA:HB1	2.12	0.49
4:D:238:ILE:HG13	4:D:321:LYS:HB3	1.95	0.49
6:F:191:ILE:HD12	6:F:372:VAL:HG22	1.94	0.49
7:G:160:MET:HB2	7:G:172:LYS:HE2	1.94	0.49
2:J:114:GLU:HA	2:J:117:ILE:HG12	1.94	0.49
2:J:171:LEU:HG	4:L:531:LYS:HE2	1.94	0.49
2:J:354:ILE:HD12	2:J:359:LEU:HD12	1.94	0.49
5:M:123:LEU:HD23	5:M:128:ILE:HD13	1.94	0.49
5:M:478:ARG:O	5:M:482:VAL:HG23	2.13	0.49
7:O:94:THR:O	7:O:97:VAL:HG22	2.13	0.49
7:O:394:MET:O	7:O:398:ARG:HG2	2.12	0.49
10:S:285:CYS:HB3	10:S:289:ILE:HD11	1.93	0.49
10:S:314:GLN:HB2	10:S:329:ILE:HG21	1.94	0.49
10:S:337:TYR:O	10:S:341:ILE:HG12	2.13	0.49
2:B:516:ARG:HA	5:E:57:LEU:HD12	1.95	0.49
5:E:305:GLY:HA2	5:E:323:ARG:HB2	1.94	0.49
1:I:67:VAL:HG22	3:K:10:LEU:HD22	1.94	0.49
2:J:39:VAL:HG13	2:J:104:VAL:HG22	1.94	0.49
3:K:160:ILE:HA	3:K:163:LYS:HG2	1.95	0.49
4:L:253:LEU:HD22	4:L:309:LEU:HA	1.94	0.49
5:M:119:GLU:HG3	5:M:450:ALA:O	2.12	0.49
5:M:426:GLU:HG3	5:M:458:ILE:HB	1.95	0.49
7:O:161:THR:OG1	7:O:493:TRP:N	2.42	0.49
7:O:217:LYS:HA	7:O:358:TYR:CD1	2.48	0.49
8:P:179:LEU:HD11	8:P:388:ILE:HG23	1.94	0.49
8:P:216:SER:H	8:P:376:VAL:HG13	1.78	0.49
10:S:258:PRO:HB3	10:S:306:TYR:OH	2.12	0.49
2:B:348:LEU:HB2	2:B:363:SER:OG	2.12	0.49
5:E:26:SER:HB3	5:E:535:LYS:HE3	1.95	0.49
7:G:209:GLN:HG2	7:G:373:ILE:HB	1.95	0.49
8:H:412:GLY:HA3	8:H:492:MET:HG2	1.95	0.49
2:J:239:ILE:HB	2:J:331:ILE:HA	1.94	0.49
4:L:76:THR:C	4:L:80:GLN:HE22	2.16	0.49
5:M:19:ILE:HA	7:O:71:VAL:HG23	1.93	0.49
5:M:387:ILE:HD11	5:M:402:LEU:HD21	1.94	0.49
10:S:12:ASN:N	10:S:106:THR:OG1	2.46	0.49
10:S:293:LEU:O	10:S:297:THR:OG1	2.31	0.49
1:A:234:ILE:HA	1:A:285:VAL:HB	1.95	0.49
2:B:526:ARG:HG2	2:B:527:LYS:HG2	1.95	0.49
3:C:105:MET:SD	3:C:126:TYR:HE1	2.36	0.49
6:F:180:LYS:HB2	6:F:183:ASP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:212:LEU:HD11	6:F:320:ASN:HD22	1.78	0.49
6:F:314:ARG:HB2	6:F:315:ARG:HG2	1.94	0.49
7:G:97:VAL:HA	7:G:100:LEU:HG	1.94	0.49
7:G:132:ALA:O	7:G:136:ILE:HG13	2.13	0.49
1:I:68:GLU:O	1:I:73:LYS:NZ	2.43	0.49
3:K:25:GLY:HA2	3:K:28:ASN:HD22	1.78	0.49
4:L:287:VAL:HG21	4:L:316:PHE:HD2	1.77	0.49
7:O:174:PHE:O	7:O:177:LYS:HG2	2.13	0.49
7:O:476:GLY:N	7:O:485:ALA:O	2.46	0.49
8:P:166:THR:HG21	8:P:498:LEU:H	1.77	0.49
10:S:286:ASP:O	10:S:290:ARG:HG3	2.13	0.49
1:A:199:LYS:HA	1:A:377:LEU:HG	1.94	0.48
3:C:41:LEU:HG	3:C:42:GLY:H	1.78	0.48
3:C:258:ILE:HD12	3:C:263:ASP:HB2	1.95	0.48
3:C:468:ALA:O	3:C:471:THR:HG22	2.12	0.48
4:D:137:PHE:HA	4:D:454:PHE:CZ	2.48	0.48
8:H:160:VAL:HG22	8:H:399:PHE:HE2	1.78	0.48
1:I:179:ILE:HD13	1:I:195:VAL:HG13	1.95	0.48
2:J:502:GLN:OE1	2:J:506:SER:OG	2.30	0.48
3:K:171:LEU:HD22	3:K:210:GLU:HG3	1.95	0.48
4:L:186:MET:SD	4:L:187:SER:N	2.86	0.48
7:O:382:MET:O	7:O:385:THR:OG1	2.27	0.48
10:S:281:SER:O	10:S:284:LYS:NZ	2.45	0.48
1:A:450:ASN:HD21	1:A:464:VAL:HG21	1.78	0.48
3:C:180:VAL:HG22	3:C:395:MET:HG3	1.95	0.48
4:D:355:MET:N	4:D:355:MET:SD	2.86	0.48
4:L:526:VAL:HA	4:L:529:ILE:HD12	1.94	0.48
7:O:19:ILE:HD13	7:O:22:LEU:HD12	1.95	0.48
7:O:226:GLU:H	7:O:228:GLN:HE22	1.61	0.48
8:P:227:THR:HG22	8:P:313:VAL:HG22	1.94	0.48
2:B:253:GLY:HA3	5:E:264:HIS:CD2	2.48	0.48
2:B:361:HIS:NE2	2:B:363:SER:HB3	2.28	0.48
3:C:339:ARG:NE	3:C:341:ASP:OD1	2.46	0.48
3:C:426:SER:HA	3:C:429:MET:HG3	1.95	0.48
4:D:119:SER:HB2	4:D:457:ALA:HB2	1.95	0.48
4:D:157:LEU:HD11	4:D:419:ARG:HH21	1.78	0.48
6:F:123:PHE:CE1	6:F:440:PHE:HB2	2.48	0.48
6:F:153:ARG:HG3	6:F:157:ARG:NH2	2.26	0.48
8:H:318:LYS:O	8:H:322:ARG:HG3	2.13	0.48
8:H:418:GLU:HG3	8:H:476:LYS:HA	1.94	0.48
9:Q:55:GLU:OE1	9:Q:55:GLU:N	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S:21:PHE:N	10:S:24:ASP:OD2	2.46	0.48
1:A:123:LEU:HD11	1:A:438:ILE:HD13	1.96	0.48
1:A:203:ARG:HD2	1:A:203:ARG:H	1.79	0.48
3:C:291:ILE:HA	3:C:312:ILE:O	2.14	0.48
4:D:296:ASN:O	4:D:322:ILE:HG13	2.13	0.48
8:H:26:GLU:HA	8:H:30:TYR:CE2	2.48	0.48
1:I:78:LEU:HD11	1:I:516:PHE:HB3	1.95	0.48
1:I:120:GLY:HA2	1:I:434:GLU:OE2	2.14	0.48
2:J:240:ALA:O	2:J:293:ARG:N	2.33	0.48
3:K:80:MET:HA	3:K:83:ILE:HG12	1.95	0.48
3:K:211:ASP:HB2	3:K:377:ARG:HB2	1.95	0.48
3:K:408:VAL:O	3:K:502:LYS:NZ	2.46	0.48
3:K:423:THR:O	3:K:426:SER:OG	2.31	0.48
6:N:462:THR:HA	6:N:465:LYS:HE2	1.96	0.48
8:P:183:ILE:HD11	8:P:392:VAL:HG22	1.96	0.48
1:A:533:LEU:HD22	4:D:64:GLY:H	1.77	0.48
2:B:74:ILE:HD11	4:D:538:THR:HG22	1.96	0.48
2:B:128:ALA:O	2:B:132:GLU:HG2	2.14	0.48
3:C:222:LYS:HE3	3:C:315:VAL:HG22	1.96	0.48
5:E:480:ARG:HA	5:E:483:LYS:HG2	1.96	0.48
7:G:25:ASN:HA	7:G:73:HIS:CE1	2.49	0.48
7:G:109:LYS:HB3	7:G:110:PRO:HD3	1.95	0.48
3:K:24:SER:HA	3:K:27:ILE:HD12	1.95	0.48
3:K:420:HIS:O	3:K:424:GLU:HG2	2.13	0.48
4:L:418:LYS:HZ2	4:L:420:ALA:HB3	1.77	0.48
6:N:448:PRO:O	6:N:451:LEU:HB2	2.14	0.48
7:O:332:THR:OG1	8:P:303:HIS:ND1	2.46	0.48
8:P:386:ASP:HB3	8:P:390:ARG:NH1	2.27	0.48
10:S:153:MET:O	10:S:300:SER:OG	2.27	0.48
1:A:182:THR:HA	1:A:188:PRO:HA	1.94	0.48
4:D:193:LYS:NZ	4:D:225:GLU:OE1	2.34	0.48
5:E:88:ALA:O	5:E:92:VAL:HG23	2.14	0.48
5:E:231:ASP:OD1	5:E:231:ASP:N	2.43	0.48
5:E:305:GLY:HA3	5:E:324:TRP:CE2	2.49	0.48
6:F:308:GLU:OE1	6:F:308:GLU:N	2.47	0.48
6:F:350:VAL:HG22	6:F:363:ILE:HG22	1.95	0.48
7:G:499:ARG:HH12	7:G:503:LEU:HG	1.76	0.48
8:H:66:THR:HG22	8:H:68:ASP:H	1.79	0.48
1:I:67:VAL:HG12	1:I:73:LYS:HG2	1.95	0.48
3:K:20:ARG:NH1	3:K:114:GLU:O	2.46	0.48
4:L:72:ASN:HD22	4:L:174:LYS:HA	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:138:LYS:HA	6:N:408:VAL:HG12	1.95	0.48
6:N:218:HIS:HB2	6:N:302:LEU:HD13	1.96	0.48
7:O:397:ARG:NH2	7:O:398:ARG:HH22	2.12	0.48
9:Q:102:TYR:O	9:Q:106:VAL:HG23	2.14	0.48
10:S:30:VAL:HG23	10:S:32:PRO:HD3	1.96	0.48
2:B:54:SER:OG	2:B:60:SER:N	2.47	0.48
2:B:333:SER:OG	5:E:309:GLU:HA	2.13	0.48
3:C:365:ASP:OD1	3:C:366:CYS:N	2.46	0.48
4:D:291:LYS:NZ	4:D:295:CYS:O	2.43	0.48
4:D:484:HIS:CD2	4:D:489:LYS:HA	2.48	0.48
5:E:232:LYS:HZ2	5:E:325:VAL:HA	1.78	0.48
5:E:280:TYR:OH	7:G:264:GLN:OE1	2.23	0.48
6:F:38:LEU:HD22	6:F:93:THR:HB	1.95	0.48
1:I:229:ILE:HG21	1:I:284:ASN:HB3	1.95	0.48
4:L:245:LYS:HB3	4:L:356:LEU:HD13	1.96	0.48
5:M:17:LEU:HA	5:M:22:GLN:OE1	2.14	0.48
1:A:480:ARG:NE	1:A:483:LEU:HG	2.27	0.48
2:B:46:LYS:HB2	2:B:453:ASN:HB3	1.95	0.48
4:D:26:ASP:H	2:J:120:LYS:HD3	1.79	0.48
6:F:105:GLN:HB3	6:F:439:ALA:HB1	1.94	0.48
6:F:190:MET:HE2	6:F:326:LEU:HD12	1.95	0.48
6:F:248:PHE:CD1	6:F:259:LEU:HD13	2.49	0.48
6:F:277:LEU:HD22	6:F:339:LEU:HD13	1.96	0.48
7:G:204:ALA:O	7:G:375:ARG:HB2	2.14	0.48
2:J:158:ASP:O	2:J:162:ILE:HG13	2.14	0.48
3:K:392:GLN:O	3:K:396:GLN:HG2	2.14	0.48
5:M:135:ASP:O	5:M:139:GLN:HG2	2.13	0.48
6:N:328:CYS:HB3	6:N:345:GLY:HA3	1.95	0.48
7:O:164:SER:O	7:O:165:SER:OG	2.29	0.48
8:P:277:ASP:HA	8:P:280:VAL:HG22	1.95	0.48
10:S:13:GLY:N	10:S:16:MET:O	2.42	0.48
1:A:198:LEU:HB2	1:A:376:ILE:HD13	1.95	0.48
2:B:38:LEU:HG	2:B:50:LYS:HE3	1.96	0.48
2:B:294:GLN:HA	2:B:314:HIS:HA	1.96	0.48
5:E:197:ALA:HA	5:E:204:VAL:HB	1.96	0.48
1:I:298:LYS:HG2	3:K:333:SER:H	1.79	0.48
2:J:518:ASP:OD2	5:M:50:THR:OG1	2.21	0.48
5:M:39:MET:HA	5:M:42:LYS:HE2	1.95	0.48
6:N:134:LEU:HA	6:N:137:VAL:HG22	1.95	0.48
6:N:409:PRO:HG3	6:N:495:TRP:CZ3	2.49	0.48
7:O:457:ALA:HA	7:O:460:ILE:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:158:SER:HB2	3:C:495:ILE:HA	1.96	0.48
4:D:273:ASP:OD1	4:D:274:ARG:N	2.46	0.48
8:H:164:LEU:HD11	8:H:399:PHE:HB2	1.96	0.48
8:H:239:ILE:HA	8:H:290:VAL:HB	1.96	0.48
2:J:334:THR:H	5:M:312:HIS:CD2	2.31	0.48
2:J:424:LEU:O	2:J:428:THR:N	2.46	0.48
3:K:50:LEU:HB3	3:K:58:VAL:HG13	1.96	0.48
3:K:123:ILE:HG23	3:K:514:VAL:HG13	1.96	0.48
7:O:74:PRO:HA	7:O:77:LYS:HZ3	1.79	0.48
7:O:411:ALA:HB2	7:O:476:GLY:HA2	1.96	0.48
8:P:127:GLU:H	8:P:127:GLU:CD	2.17	0.48
8:P:239:ILE:HD11	8:P:347:CYS:HB3	1.96	0.48
8:P:318:LYS:HG3	8:P:322:ARG:NH2	2.22	0.48
10:S:57:GLU:OE2	10:S:93:GLU:HG3	2.13	0.48
10:S:185:LEU:HD11	10:S:261:LEU:HD13	1.96	0.48
1:A:420:SER:OG	1:A:442:ALA:O	2.23	0.47
2:B:256:VAL:HG21	4:D:258:THR:HG21	1.94	0.47
3:C:124:SER:O	3:C:127:ARG:HG2	2.13	0.47
3:C:206:GLY:HA3	6:F:87:ILE:HG13	1.96	0.47
6:F:47:LEU:HD11	6:F:63:LEU:HD12	1.96	0.47
5:M:85:HIS:CE1	5:M:87:ILE:HG12	2.49	0.47
6:N:31:GLN:O	6:N:35:ARG:HG2	2.14	0.47
6:N:419:ALA:HB2	6:N:444:LEU:HD21	1.96	0.47
2:B:263:LYS:O	2:B:267:ILE:HG12	2.15	0.47
5:E:155:VAL:HG21	5:E:412:LEU:HD21	1.96	0.47
6:F:204:THR:HG23	6:F:375:LEU:O	2.14	0.47
8:H:136:CYS:HG	8:H:140:HIS:CD2	2.30	0.47
8:H:227:THR:HG23	8:H:352:LEU:HD22	1.96	0.47
8:H:449:PRO:HB2	8:H:464:ILE:HD11	1.96	0.47
3:K:101:LEU:O	3:K:105:MET:HG3	2.14	0.47
3:K:240:LEU:HB3	3:K:331:ILE:HG12	1.94	0.47
10:S:314:GLN:O	10:S:318:THR:OG1	2.18	0.47
3:C:305:MET:HB2	3:C:306:ARG:HH12	1.79	0.47
4:D:29:LYS:O	4:D:33:ILE:HD12	2.14	0.47
4:D:394:ASN:OD1	4:D:395:LYS:N	2.34	0.47
5:E:93:GLU:OE2	7:G:379:GLU:N	2.35	0.47
7:G:90:VAL:HG22	7:G:398:ARG:NH1	2.28	0.47
7:G:196:GLY:N	7:G:370:CYS:O	2.40	0.47
1:I:474:ALA:HB2	1:I:483:LEU:HB2	1.95	0.47
3:K:316:ARG:NH2	3:K:319:ASP:OD2	2.47	0.47
5:M:216:GLY:O	5:M:389:GLY:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:449:LYS:O	6:N:452:ALA:HB3	2.14	0.47
7:O:447:ARG:HG3	7:O:457:ALA:CB	2.43	0.47
8:P:203:ARG:HB2	8:P:374:THR:HB	1.96	0.47
10:S:11:ASP:N	10:S:11:ASP:OD1	2.46	0.47
1:A:214:TYR:HE2	1:A:216:LEU:HB2	1.78	0.47
1:A:287:LEU:HB3	1:A:311:VAL:HG21	1.97	0.47
2:B:481:ARG:HH21	2:B:491:LEU:HD22	1.80	0.47
3:C:342:ASP:OD1	3:C:343:VAL:HG23	2.14	0.47
3:C:438:ARG:O	3:C:442:GLN:HG2	2.14	0.47
4:D:335:PHE:O	4:D:339:THR:OG1	2.25	0.47
5:E:59:LYS:HD2	5:E:77:ILE:HD13	1.97	0.47
7:G:413:GLU:O	7:G:416:LEU:HG	2.15	0.47
1:I:43:LYS:HG2	3:K:521:ASP:HB2	1.97	0.47
2:J:367:LEU:HB3	2:J:369:GLU:HG3	1.96	0.47
3:K:129:ALA:HA	3:K:437:TYR:CE2	2.50	0.47
3:K:256:ILE:O	6:N:246:SER:OG	2.20	0.47
5:M:280:TYR:OH	7:O:264:GLN:OE1	2.27	0.47
9:Q:77:ARG:HA	9:Q:77:ARG:NH1	2.29	0.47
9:Q:104:GLN:O	9:Q:108:LYS:HB2	2.14	0.47
10:S:31:PHE:CZ	10:S:33:SER:HA	2.50	0.47
3:C:137:LEU:HG	3:C:499:LEU:HD11	1.96	0.47
3:C:292:THR:O	3:C:314:ARG:N	2.48	0.47
4:D:88:ALA:HA	4:D:91:LEU:HD12	1.95	0.47
8:H:205:CYS:O	8:H:377:LEU:N	2.44	0.47
8:H:222:VAL:HG13	8:H:360:VAL:HG23	1.96	0.47
8:H:348:ASP:HB2	8:H:365:HIS:HA	1.96	0.47
6:N:15:ARG:NH1	6:N:520:GLU:OE2	2.46	0.47
7:O:263:TYR:O	7:O:267:VAL:HG23	2.15	0.47
2:B:29:PHE:CE1	2:B:110:LEU:HD12	2.49	0.47
2:B:135:LYS:O	2:B:138:ARG:HG2	2.14	0.47
8:H:217:VAL:HG22	8:H:375:ILE:HG12	1.96	0.47
1:I:386:ASP:HB3	1:I:390:ARG:NH1	2.29	0.47
2:J:200:HIS:HB3	2:J:372:THR:HG22	1.95	0.47
2:J:526:ARG:O	2:J:528:ARG:NH2	2.47	0.47
3:K:368:ASP:O	3:K:370:LYS:NZ	2.48	0.47
4:L:347:HIS:HB3	4:L:350:GLN:NE2	2.29	0.47
5:M:411:ASN:HB3	5:M:511:ILE:HD11	1.96	0.47
8:P:73:LEU:HB2	8:P:87:VAL:HG23	1.97	0.47
1:A:252:VAL:O	3:C:254:THR:HA	2.14	0.47
1:A:270:ILE:O	1:A:273:GLU:HG2	2.14	0.47
1:A:386:ASP:HB3	1:A:390:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:481:LYS:HE3	1:A:484:LYS:HD3	1.96	0.47
2:B:268:GLU:HG3	2:B:272:LYS:HZ3	1.79	0.47
3:C:104:GLU:HG2	3:C:446:VAL:HB	1.96	0.47
3:C:175:ILE:HG23	3:C:214:VAL:H	1.80	0.47
3:C:256:ILE:O	6:F:246:SER:OG	2.20	0.47
3:C:277:GLN:HG3	3:C:278:LEU:HD12	1.96	0.47
5:E:359:VAL:HG12	5:E:374:ILE:HG23	1.96	0.47
6:F:151:VAL:HG11	6:F:401:ALA:HB2	1.96	0.47
6:F:213:ASP:HA	6:F:360:PHE:CD1	2.50	0.47
6:F:318:ARG:HG2	6:F:319:ARG:NH2	2.28	0.47
7:G:107:GLN:HG3	7:G:441:ALA:HB2	1.96	0.47
7:G:210:LEU:HD13	7:G:372:PHE:HE1	1.79	0.47
7:G:518:GLU:O	8:H:55:MET:HG2	2.15	0.47
8:H:25:LEU:HD12	8:H:29:VAL:HG21	1.97	0.47
8:H:178:PHE:HA	8:H:181:LYS:HD2	1.96	0.47
8:H:386:ASP:HB3	8:H:390:ARG:HH12	1.79	0.47
8:H:418:GLU:HG2	8:H:471:HIS:NE2	2.29	0.47
8:H:499:ASP:OD1	8:H:500:THR:N	2.48	0.47
1:I:57:ASP:N	1:I:57:ASP:OD1	2.47	0.47
2:J:518:ASP:HB3	5:M:57:LEU:HD13	1.97	0.47
3:K:18:SER:OG	3:K:520:ASP:OD1	2.33	0.47
3:K:112:PHE:HA	3:K:115:GLN:NE2	2.29	0.47
3:K:263:ASP:HA	3:K:266:ARG:HB3	1.96	0.47
3:K:279:CYS:O	3:K:283:ILE:HG12	2.14	0.47
3:K:381:LYS:HB3	6:N:79:LYS:HZ1	1.79	0.47
5:M:23:ASP:OD1	5:M:24:ARG:N	2.48	0.47
6:N:43:THR:OG1	6:N:45:LYS:NZ	2.28	0.47
6:N:143:MET:HB3	6:N:148:LEU:HD21	1.97	0.47
6:N:214:HIS:CD2	10:S:373:LYS:HD3	2.50	0.47
6:N:324:LEU:HA	6:N:327:ALA:HB3	1.97	0.47
6:N:395:LEU:HA	6:N:398:VAL:HG12	1.97	0.47
8:P:423:ILE:HD12	8:P:445:PHE:HZ	1.80	0.47
10:S:196:ARG:HD3	10:S:252:ASN:HD21	1.79	0.47
1:A:233:LYS:O	1:A:284:ASN:N	2.44	0.47
3:C:26:ASN:HD21	3:C:516:LEU:HB3	1.80	0.47
3:C:60:THR:CG2	3:C:66:ILE:HB	2.45	0.47
3:C:381:LYS:H	6:F:79:LYS:HE3	1.79	0.47
4:D:229:LEU:HB2	4:D:374:LEU:HD23	1.97	0.47
7:G:406:VAL:N	7:G:494:GLU:O	2.34	0.47
1:I:355:ARG:HB2	1:I:360:GLU:HG3	1.96	0.47
1:I:507:THR:HA	1:I:510:LYS:HZ1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:236:LYS:HE2	2:J:288:ASN:HB2	1.97	0.47
2:J:328:GLY:O	2:J:342:LYS:NZ	2.36	0.47
2:J:488:MET:O	2:J:492:GLY:N	2.45	0.47
3:K:23:GLN:O	3:K:27:ILE:HG13	2.15	0.47
4:L:432:LEU:HD23	4:L:458:MET:HG2	1.97	0.47
5:M:246:ALA:O	5:M:356:ALA:N	2.32	0.47
7:O:138:GLU:HG3	7:O:139:ILE:HG23	1.96	0.47
7:O:287:LYS:HD2	7:O:308:MET:HB3	1.96	0.47
8:P:21:HIS:NE2	8:P:23:SER:HB2	2.29	0.47
8:P:99:ASP:OD1	8:P:100:GLY:N	2.48	0.47
9:Q:181:PRO:O	9:Q:185:GLY:N	2.48	0.47
9:Q:183:VAL:HG22	9:Q:197:LYS:HZ1	1.80	0.47
10:S:110:LEU:HD12	10:S:175:ILE:HG21	1.96	0.47
2:B:436:MET:O	2:B:439:TYR:HB3	2.15	0.47
3:C:274:TYR:HA	3:C:277:GLN:HG2	1.97	0.47
6:F:439:ALA:O	6:F:443:ALA:N	2.47	0.47
7:G:63:ALA:HB1	7:G:67:LYS:NZ	2.29	0.47
7:G:122:ILE:HG23	7:G:511:CYS:SG	2.55	0.47
7:G:406:VAL:HG13	7:G:496:ALA:HB2	1.97	0.47
8:H:458:VAL:HG12	8:H:485:GLU:H	1.80	0.47
8:H:467:LEU:HA	8:H:470:VAL:HG22	1.97	0.47
1:I:453:ALA:O	1:I:457:ALA:N	2.48	0.47
2:J:304:PHE:O	2:J:308:GLY:N	2.43	0.47
3:K:27:ILE:O	3:K:31:LYS:HG2	2.15	0.47
3:K:215:LEU:HD12	3:K:219:MET:HB2	1.97	0.47
3:K:241:LEU:HD23	3:K:292:THR:HB	1.96	0.47
5:M:331:GLU:HB2	7:O:224:GLY:H	1.80	0.47
6:N:135:GLU:O	6:N:138:LYS:HG2	2.14	0.47
6:N:451:LEU:HA	6:N:454:ASN:HB2	1.97	0.47
7:O:253:ALA:HA	8:P:257:VAL:HB	1.97	0.47
7:O:456:ASP:OD1	7:O:457:ALA:N	2.48	0.47
7:O:508:GLU:O	7:O:512:LEU:HG	2.15	0.47
8:P:246:PHE:HB3	8:P:297:VAL:HA	1.96	0.47
10:S:180:LEU:HD21	10:S:261:LEU:HD12	1.96	0.47
10:S:259:GLU:HB2	10:S:266:PHE:CE2	2.50	0.47
1:A:132:ILE:HD13	1:A:510:LYS:HB3	1.97	0.47
1:A:252:VAL:HG22	4:D:266:VAL:HB	1.96	0.47
2:B:232:ILE:HG22	2:B:349:ILE:HB	1.97	0.47
4:D:367:LEU:HB2	4:D:370:SER:HB2	1.97	0.47
5:E:156:LEU:HD23	5:E:164:PRO:HG2	1.95	0.47
6:F:83:ALA:O	6:F:87:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:135:LYS:O	7:G:139:ILE:HG12	2.14	0.47
7:G:237:ILE:O	7:G:343:GLY:N	2.44	0.47
8:H:231:VAL:O	8:H:311:MET:HG3	2.15	0.47
8:H:307:LYS:HE3	8:H:308:TYR:CE1	2.50	0.47
2:J:155:PHE:O	2:J:159:LEU:HD23	2.14	0.47
3:K:44:LYS:HE2	6:N:117:ARG:HE	1.80	0.47
3:K:183:VAL:HG12	3:K:371:ALA:HA	1.96	0.47
3:K:220:ILE:HG13	3:K:361:THR:HB	1.97	0.47
7:O:278:LEU:HD13	7:O:302:TYR:CG	2.50	0.47
9:Q:183:VAL:HG22	9:Q:197:LYS:NZ	2.29	0.47
1:A:370:ARG:HG2	1:A:371:THR:H	1.80	0.46
2:B:105:LEU:HD22	2:B:507:ALA:HB1	1.96	0.46
4:D:436:LEU:HD23	4:D:455:ALA:HA	1.97	0.46
5:E:135:ASP:O	5:E:139:GLN:HG2	2.15	0.46
5:E:159:ILE:HG13	5:E:160:LYS:HG2	1.97	0.46
6:F:466:ILE:HD13	6:F:486:PRO:HB3	1.95	0.46
1:I:218:CYS:O	1:I:362:ILE:N	2.37	0.46
2:J:468:ALA:O	2:J:471:GLU:HG2	2.14	0.46
4:L:440:SER:OG	4:L:448:SER:O	2.27	0.46
5:M:31:LEU:HD21	5:M:35:LYS:NZ	2.30	0.46
5:M:169:ALA:O	5:M:173:LEU:HG	2.15	0.46
5:M:344:ARG:NH1	5:M:345:PHE:HB2	2.29	0.46
6:N:149:ILE:HD11	6:N:173:VAL:HG21	1.97	0.46
8:P:49:PRO:HG3	8:P:169:MET:CE	2.45	0.46
1:A:22:VAL:HG13	1:A:102:LYS:HG2	1.98	0.46
1:A:262:GLN:O	1:A:265:GLN:HG2	2.16	0.46
2:B:423:GLN:HB3	2:B:427:ARG:HH12	1.81	0.46
3:C:37:ILE:HG21	3:C:67:LEU:HD21	1.96	0.46
6:F:47:LEU:HD22	6:F:66:GLU:O	2.14	0.46
6:F:292:ILE:HG22	6:F:294:GLN:HE22	1.81	0.46
7:G:290:LEU:HD13	7:G:311:ALA:HB3	1.97	0.46
1:I:261:ASP:OD1	1:I:262:GLN:N	2.47	0.46
1:I:274:ARG:NH2	1:I:338:GLU:OE1	2.46	0.46
2:J:323:LEU:HA	2:J:326:VAL:HG22	1.98	0.46
2:J:353:MET:HB3	4:L:202:SER:OG	2.15	0.46
3:K:33:ILE:HD11	3:K:77:ALA:HA	1.97	0.46
4:L:329:GLU:OE1	4:L:331:GLU:N	2.48	0.46
6:N:8:ASN:OD1	6:N:528:SER:OG	2.34	0.46
6:N:71:HIS:HB2	8:P:14:MET:CE	2.45	0.46
1:A:134:GLU:OE2	1:A:135:ASN:ND2	2.45	0.46
2:B:201:ILE:HG21	2:B:387:GLU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:253:GLY:HA3	5:E:264:HIS:NE2	2.31	0.46
4:D:88:ALA:O	4:D:92:VAL:HG23	2.15	0.46
5:E:94:LEU:HD13	5:E:523:MET:HE3	1.95	0.46
6:F:38:LEU:HD11	6:F:91:GLY:HA2	1.96	0.46
7:G:90:VAL:HG12	7:G:92:ASP:H	1.81	0.46
7:G:406:VAL:HB	7:G:412:ILE:HG21	1.97	0.46
7:G:462:ASN:N	7:G:465:ARG:HH21	2.13	0.46
8:H:393:ASP:HA	8:H:396:VAL:HG22	1.96	0.46
1:I:422:TYR:O	1:I:426:TYR:N	2.38	0.46
2:J:206:GLY:O	2:J:377:GLY:N	2.48	0.46
3:K:195:ILE:HG23	3:K:197:LYS:HE2	1.97	0.46
4:L:188:VAL:HG12	4:L:192:MET:HE1	1.98	0.46
4:L:250:GLN:O	4:L:301:GLN:NE2	2.48	0.46
5:M:525:ARG:NH2	7:O:167:LEU:O	2.48	0.46
7:O:172:LYS:O	7:O:176:ALA:HB2	2.15	0.46
7:O:274:LEU:O	7:O:278:LEU:HG	2.14	0.46
7:O:431:GLN:O	7:O:435:ILE:HG12	2.14	0.46
9:Q:11:ASN:O	9:Q:14:LEU:HB2	2.16	0.46
10:S:62:ARG:O	10:S:66:THR:HG23	2.14	0.46
2:B:346:CYS:SG	2:B:365:VAL:HG13	2.56	0.46
2:B:435:ALA:O	2:B:438:SER:OG	2.32	0.46
5:E:118:GLU:O	5:E:122:GLN:HG2	2.16	0.46
5:E:226:LYS:HA	5:E:383:VAL:HG23	1.97	0.46
6:F:80:VAL:HG21	6:F:511:ILE:HD12	1.97	0.46
6:F:242:THR:CG2	6:F:246:SER:H	2.29	0.46
6:F:290:VAL:HA	6:F:311:VAL:O	2.16	0.46
8:H:150:SER:HA	8:H:408:LEU:HD23	1.98	0.46
6:N:230:ILE:N	6:N:345:GLY:O	2.46	0.46
7:O:414:MET:HE1	7:O:443:GLU:HA	1.98	0.46
1:A:453:ALA:O	1:A:457:ALA:N	2.48	0.46
3:C:39:THR:HG23	3:C:454:ASN:OD1	2.15	0.46
3:C:500:ALA:HA	3:C:503:LEU:HD12	1.97	0.46
6:F:408:VAL:HG12	6:F:414:VAL:HG21	1.97	0.46
7:G:99:LEU:O	7:G:103:GLU:OE1	2.34	0.46
2:J:95:VAL:HG12	2:J:396:VAL:HG22	1.98	0.46
10:S:75:ILE:HG23	10:S:111:ASN:ND2	2.31	0.46
1:A:434:GLU:O	1:A:438:ILE:HG13	2.16	0.46
6:F:156:LEU:HD21	6:F:168:LEU:HD13	1.96	0.46
7:G:67:LYS:HD2	7:G:84:LYS:CG	2.46	0.46
8:H:31:ARG:NH1	8:H:31:ARG:HB3	2.31	0.46
1:I:17:ILE:HA	1:I:20:GLN:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:200:HIS:O	2:J:373:ILE:N	2.46	0.46
3:K:44:LYS:HG2	6:N:117:ARG:NH2	2.30	0.46
3:K:179:ALA:O	3:K:183:VAL:HG22	2.16	0.46
4:L:108:SER:O	4:L:112:ILE:HG13	2.16	0.46
5:M:105:GLY:HA3	5:M:516:GLN:NE2	2.30	0.46
1:A:138:VAL:HG13	1:A:410:PRO:HD3	1.98	0.46
1:A:443:ARG:HA	1:A:446:LEU:HD12	1.98	0.46
2:B:424:LEU:O	2:B:428:THR:OG1	2.18	0.46
4:D:121:THR:HG22	4:D:125:GLN:HE22	1.80	0.46
4:D:141:LEU:O	4:D:145:ILE:HG12	2.15	0.46
5:E:277:LEU:HD23	7:G:260:VAL:HG12	1.97	0.46
6:F:44:MET:SD	6:F:56:LEU:HB3	2.56	0.46
6:F:461:GLU:OE1	6:F:461:GLU:N	2.39	0.46
8:H:77:GLU:OE1	8:H:77:GLU:N	2.49	0.46
8:H:177:VAL:O	8:H:181:LYS:HG3	2.15	0.46
8:H:238:LYS:HB3	8:H:344:MET:CE	2.45	0.46
1:I:257:PRO:O	1:I:260:LEU:HB3	2.15	0.46
3:K:221:ASN:O	3:K:222:LYS:HD3	2.16	0.46
5:M:255:PHE:H	5:M:306:PHE:HB3	1.81	0.46
5:M:481:GLN:CD	5:M:489:LEU:HB2	2.36	0.46
5:M:494:LEU:HB3	5:M:496:LYS:HE3	1.98	0.46
5:M:501:MET:CG	5:M:506:VAL:HG22	2.45	0.46
5:M:520:ALA:O	5:M:524:VAL:HG22	2.16	0.46
6:N:191:ILE:HD12	6:N:372:VAL:HG22	1.97	0.46
6:N:425:HIS:O	6:N:428:SER:OG	2.16	0.46
7:O:76:ALA:O	7:O:80:VAL:HG23	2.14	0.46
7:O:107:GLN:HE22	7:O:440:LYS:HE3	1.81	0.46
8:P:140:HIS:HD1	8:P:505:TYR:HE1	1.64	0.46
8:P:283:ILE:O	8:P:286:THR:HG22	2.16	0.46
10:S:251:GLY:HA2	10:S:254:ARG:HD3	1.98	0.46
1:A:70:PRO:HA	1:A:73:LYS:HG2	1.98	0.46
1:A:397:CYS:O	1:A:401:ARG:HG2	2.15	0.46
2:B:37:ASP:O	2:B:40:LYS:HG2	2.15	0.46
3:C:429:MET:SD	3:C:434:GLN:HB3	2.56	0.46
4:D:390:VAL:O	4:D:391:ARG:HD2	2.15	0.46
6:F:205:SER:OG	6:F:206:LEU:N	2.49	0.46
8:H:382:ASP:HA	8:H:385:MET:HG2	1.98	0.46
2:J:293:ARG:NH1	2:J:294:GLN:HE21	2.14	0.46
3:K:238:ILE:O	3:K:344:GLY:N	2.41	0.46
5:M:74:GLY:HA2	5:M:77:ILE:HD13	1.97	0.46
6:N:127:LYS:NZ	6:N:506:HIS:HA	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:199:LYS:HB3	6:N:203:ASP:OD2	2.15	0.46
6:N:443:ALA:O	6:N:446:ILE:HG22	2.16	0.46
8:P:447:ALA:O	8:P:451:ALA:N	2.37	0.46
2:B:120:LYS:NZ	4:L:27:ARG:HG3	2.30	0.46
2:B:189:ARG:NE	2:B:368:GLY:O	2.40	0.46
3:C:20:ARG:NH1	3:C:20:ARG:O	2.49	0.46
5:E:103:GLY:O	5:E:106:THR:HG23	2.16	0.46
5:E:214:LYS:HG2	5:E:364:PHE:CZ	2.50	0.46
5:E:410:ARG:NH2	5:E:413:ILE:HG21	2.30	0.46
5:E:486:ASN:HB3	5:E:489:LEU:HD23	1.98	0.46
8:H:30:TYR:OH	8:H:120:ARG:NH2	2.42	0.46
2:J:302:GLN:HE22	4:L:350:GLN:HG2	1.81	0.46
4:L:161:GLU:O	4:L:165:ASN:ND2	2.49	0.46
4:L:439:TYR:CZ	4:L:443:LEU:HD22	2.51	0.46
5:M:217:GLY:HA3	5:M:388:ARG:HB3	1.97	0.46
6:N:198:HIS:CE1	6:N:199:LYS:HG2	2.50	0.46
6:N:228:ALA:HA	6:N:288:GLY:HA3	1.98	0.46
6:N:297:ILE:H	6:N:314:ARG:NE	2.12	0.46
10:S:107:GLU:OE1	10:S:134:VAL:HB	2.16	0.46
10:S:285:CYS:O	10:S:290:ARG:NH2	2.44	0.46
3:C:446:VAL:HA	3:C:449:ARG:NH1	2.31	0.46
5:E:147:HIS:O	5:E:151:ILE:HG12	2.16	0.46
5:E:150:LYS:HG2	5:E:151:ILE:HD13	1.97	0.46
5:E:299:LEU:HA	5:E:320:PRO:O	2.16	0.46
6:F:289:PHE:CZ	6:F:344:LEU:HD21	2.51	0.46
7:G:26:ILE:HB	7:G:109:LYS:NZ	2.31	0.46
8:H:221:MET:CE	8:H:323:ARG:HB3	2.46	0.46
1:I:243:LYS:NZ	3:K:250:GLY:HA2	2.31	0.46
2:J:84:LEU:HD13	2:J:87:MET:SD	2.56	0.46
2:J:165:THR:O	2:J:168:SER:OG	2.25	0.46
2:J:290:PHE:CZ	2:J:292:ASN:HB2	2.51	0.46
2:J:423:GLN:HG3	2:J:427:ARG:NH1	2.30	0.46
4:L:408:ALA:O	4:L:412:ILE:HG12	2.16	0.46
7:O:409:GLY:HA3	7:O:487:ASN:HD21	1.81	0.46
9:Q:101:ASP:OD1	9:Q:104:GLN:HB3	2.16	0.46
10:S:10:VAL:HA	10:S:18:LYS:O	2.16	0.46
10:S:312:ARG:HH11	10:S:315:LYS:HG3	1.80	0.46
1:A:403:LEU:HD23	1:A:403:LEU:HA	1.79	0.45
2:B:62:MET:HA	2:B:381:GLN:CD	2.37	0.45
2:B:245:ASP:O	2:B:248:LYS:NZ	2.48	0.45
4:D:256:PRO:O	4:D:257:LYS:HE2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:266:VAL:HG11	4:D:272:MET:SD	2.56	0.45
8:H:423:ILE:HB	8:H:442:ALA:HB2	1.98	0.45
1:I:202:GLY:HA3	1:I:378:ARG:HB3	1.98	0.45
1:I:532:LYS:HG2	4:L:62:GLN:NE2	2.31	0.45
2:J:50:LYS:HA	4:L:534:ASP:HB3	1.98	0.45
3:K:43:PRO:HA	3:K:162:THR:HA	1.98	0.45
3:K:44:LYS:HE3	3:K:483:GLU:HA	1.98	0.45
4:L:163:LEU:HD23	4:L:415:LEU:HD13	1.98	0.45
5:M:252:THR:O	5:M:304:TRP:NE1	2.32	0.45
7:O:97:VAL:HG12	7:O:502:ALA:HB1	1.97	0.45
7:O:116:LEU:HD22	7:O:430:LYS:HD2	1.98	0.45
8:P:317:SER:HB3	8:P:320:ASP:CG	2.36	0.45
3:C:240:LEU:HD13	3:C:291:ILE:HG23	1.98	0.45
5:E:228:VAL:HB	5:E:374:ILE:HB	1.98	0.45
8:H:33:ILE:HG21	8:H:116:GLU:HB2	1.98	0.45
8:H:439:LYS:HB2	8:H:439:LYS:HE3	1.67	0.45
1:I:174:ASP:HA	1:I:177:LEU:HD12	1.97	0.45
1:I:211:ILE:HD13	1:I:363:LEU:HD13	1.97	0.45
1:I:416:GLU:HA	1:I:445:LEU:HD21	1.98	0.45
2:J:518:ASP:OD1	5:M:59:LYS:HG2	2.16	0.45
3:K:49:MET:HG3	3:K:59:MET:SD	2.56	0.45
6:N:36:THR:C	6:N:45:LYS:HZ3	2.20	0.45
6:N:75:SER:O	6:N:79:LYS:HG3	2.16	0.45
6:N:317:LYS:O	6:N:320:ASN:HB2	2.16	0.45
7:O:237:ILE:N	7:O:343:GLY:O	2.33	0.45
8:P:460:ALA:HA	8:P:463:VAL:HG22	1.97	0.45
9:Q:19:ILE:O	9:Q:19:ILE:HG22	2.16	0.45
9:Q:71:ILE:HG22	9:Q:75:ARG:HH12	1.79	0.45
10:S:309:ILE:HG13	10:S:310:ALA:N	2.30	0.45
10:S:333:PRO:HG2	10:S:334:GLU:OE1	2.16	0.45
10:S:336:LYS:HE2	10:S:337:TYR:CZ	2.52	0.45
3:C:165:ILE:HA	3:C:168:TRP:HZ3	1.81	0.45
3:C:230:ARG:HH22	3:C:288:ASP:HB3	1.81	0.45
4:D:271:GLN:HG2	4:D:274:ARG:NH2	2.30	0.45
5:E:492:ASP:OD1	5:E:497:GLY:N	2.49	0.45
6:F:8:ASN:HB3	6:F:11:ALA:HB2	1.98	0.45
7:G:100:LEU:HA	7:G:103:GLU:OE2	2.16	0.45
8:H:238:LYS:HB3	8:H:344:MET:HE2	1.98	0.45
8:H:459:LYS:HD2	8:H:462:GLU:HB2	1.98	0.45
1:I:125:CYS:SG	1:I:515:LYS:HD2	2.56	0.45
1:I:226:PRO:HB3	3:K:188:ASN:HD21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:184:SER:OG	4:L:185:PRO:HD3	2.15	0.45
4:L:418:LYS:NZ	4:L:512:LEU:HD23	2.31	0.45
5:M:274:TYR:O	5:M:277:LEU:HG	2.16	0.45
5:M:341:ILE:HG21	7:O:301:GLN:HG2	1.97	0.45
6:N:414:VAL:O	6:N:418:MET:HE2	2.17	0.45
8:P:134:ILE:HG12	8:P:137:ARG:HH21	1.81	0.45
1:A:531:ILE:HD11	4:D:61:ILE:HD12	1.98	0.45
3:C:268:LEU:HD12	6:F:266:PHE:CG	2.51	0.45
4:D:169:THR:HA	4:D:172:ASN:OD1	2.16	0.45
7:G:447:ARG:HG3	7:G:457:ALA:HB1	1.97	0.45
8:H:172:GLN:HB3	8:H:175:ASN:OD1	2.15	0.45
3:K:206:GLY:HA3	6:N:87:ILE:HG13	1.97	0.45
4:L:283:ILE:O	4:L:287:VAL:HG23	2.17	0.45
5:M:295:THR:HG23	5:M:297:ALA:H	1.81	0.45
7:O:64:THR:HG21	7:O:387:ARG:NH1	2.32	0.45
7:O:398:ARG:NH2	8:P:357:ASP:OD1	2.49	0.45
7:O:519:THR:HA	8:P:55:MET:O	2.16	0.45
8:P:172:GLN:NE2	8:P:172:GLN:H	2.14	0.45
8:P:528:LYS:HZ2	9:Q:9:GLU:N	2.13	0.45
10:S:143:TYR:HE2	10:S:346:LEU:HD12	1.82	0.45
10:S:193:LEU:HD13	10:S:200:PHE:HD2	1.82	0.45
4:D:343:LYS:HB2	4:D:355:MET:HA	1.99	0.45
5:E:38:ILE:O	5:E:41:ALA:HB3	2.16	0.45
5:E:70:VAL:HG12	5:E:393:MET:HB3	1.98	0.45
5:E:525:ARG:NH2	7:G:170:GLN:HE22	2.14	0.45
6:F:115:HIS:HA	6:F:116:PRO:HD3	1.85	0.45
7:G:234:ASN:HA	7:G:346:GLN:HA	1.98	0.45
7:G:237:ILE:HD11	7:G:345:CYS:SG	2.56	0.45
8:H:135:ALA:HB1	8:H:441:PHE:CD1	2.50	0.45
8:H:155:ARG:NH1	8:H:193:ASP:O	2.50	0.45
1:I:263:ILE:HA	1:I:266:ARG:HG2	1.98	0.45
1:I:430:MET:HE2	1:I:434:GLU:OE1	2.16	0.45
2:J:138:ARG:HD3	2:J:505:LEU:HD21	1.99	0.45
2:J:177:ASP:N	2:J:177:ASP:OD1	2.50	0.45
3:K:208:ILE:N	3:K:211:ASP:OD2	2.36	0.45
4:L:48:ILE:HG22	4:L:48:ILE:O	2.17	0.45
5:M:16:PHE:CE2	5:M:18:ILE:HG12	2.51	0.45
5:M:223:LYS:HE2	5:M:225:ILE:HD11	1.99	0.45
6:N:109:TYR:HB3	6:N:114:LEU:HD12	1.98	0.45
7:O:473:THR:HB	7:O:474:TRP:CE3	2.52	0.45
8:P:72:ILE:O	8:P:76:LEU:HG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:418:GLU:HG2	8:P:471:HIS:HE1	1.80	0.45
1:A:42:ASP:O	3:C:519:ILE:HD12	2.16	0.45
1:A:192:VAL:HG12	1:A:193:ASN:H	1.80	0.45
1:A:233:LYS:HD2	1:A:282:GLY:O	2.16	0.45
4:D:24:TYR:CD1	2:J:122:HIS:HA	2.52	0.45
4:D:132:ILE:H	4:D:132:ILE:HD12	1.80	0.45
4:D:137:PHE:HA	4:D:454:PHE:HZ	1.80	0.45
4:D:196:ASP:OD1	4:D:200:ALA:HB2	2.16	0.45
4:D:443:LEU:O	4:D:448:SER:HB3	2.16	0.45
8:H:48:GLY:H	8:H:51:GLY:HA3	1.81	0.45
8:H:459:LYS:HZ3	8:H:461:ASN:HB2	1.81	0.45
2:J:41:SER:O	2:J:48:MET:HB3	2.16	0.45
2:J:475:THR:OG1	2:J:487:ASP:OD1	2.29	0.45
3:K:391:LEU:O	3:K:395:MET:HG2	2.17	0.45
3:K:504:GLN:O	3:K:508:THR:OG1	2.30	0.45
4:L:47:ALA:HB3	4:L:48:ILE:HD12	1.98	0.45
4:L:188:VAL:HG12	4:L:192:MET:CE	2.47	0.45
4:L:317:LEU:HG	4:L:322:ILE:HB	1.98	0.45
7:O:203:GLY:HA3	7:O:375:ARG:HB3	1.99	0.45
7:O:237:ILE:O	7:O:343:GLY:N	2.38	0.45
1:A:228:ARG:HB2	1:A:352:VAL:HG23	1.99	0.45
1:A:342:ALA:O	1:A:345:LEU:HG	2.16	0.45
2:B:46:LYS:HG3	2:B:454:ALA:HA	1.98	0.45
2:B:105:LEU:O	2:B:109:LEU:HD23	2.16	0.45
3:C:258:ILE:HG12	6:F:246:SER:OG	2.17	0.45
3:C:381:LYS:HD3	6:F:79:LYS:HE2	1.99	0.45
4:D:131:THR:O	4:D:135:GLU:HG2	2.17	0.45
6:F:216:ALA:O	6:F:359:LYS:HE3	2.17	0.45
7:G:100:LEU:HA	7:G:103:GLU:CD	2.37	0.45
8:H:191:PHE:CE1	8:H:197:PHE:HB2	2.49	0.45
3:K:397:VAL:O	3:K:401:VAL:HG23	2.17	0.45
4:L:242:GLU:HG2	4:L:361:LEU:HD13	1.98	0.45
6:N:153:ARG:O	6:N:157:ARG:HG2	2.16	0.45
7:O:72:VAL:O	7:O:72:VAL:HG13	2.17	0.45
7:O:356:GLU:HG3	7:O:358:TYR:CE1	2.52	0.45
7:O:430:LYS:HA	7:O:433:LEU:HD13	1.98	0.45
8:P:169:MET:HA	8:P:176:GLU:HG2	1.99	0.45
8:P:225:LYS:HD3	8:P:314:ARG:O	2.17	0.45
10:S:274:ILE:O	10:S:278:THR:HG23	2.16	0.45
1:A:381:ASN:HB2	3:C:82:GLU:HB3	1.98	0.45
1:A:459:ASP:O	1:A:463:LEU:HG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:484:LYS:HE2	1:A:485:TRP:CH2	2.52	0.45
3:C:480:VAL:HA	3:C:487:LEU:HD23	1.99	0.45
4:D:436:LEU:HD21	4:D:454:PHE:CB	2.47	0.45
7:G:62:GLY:HA2	7:G:65:ILE:HD12	1.99	0.45
7:G:77:LYS:HA	7:G:80:VAL:HG12	1.99	0.45
7:G:116:LEU:HD21	7:G:434:LEU:HD11	1.99	0.45
7:G:254:GLU:HB2	8:H:258:LEU:HD23	1.99	0.45
7:G:303:PHE:CD2	7:G:310:CYS:HB3	2.51	0.45
7:G:417:SER:OG	7:G:442:LEU:O	2.34	0.45
1:I:272:LYS:O	1:I:275:ILE:HB	2.17	0.45
6:N:249:PHE:HD2	8:P:258:LEU:HD21	1.82	0.45
8:P:150:SER:HA	8:P:408:LEU:HG	1.98	0.45
8:P:420:ALA:O	8:P:424:THR:HG23	2.16	0.45
1:A:32:VAL:HA	1:A:43:LYS:HE2	1.99	0.45
1:A:312:LEU:CD2	1:A:314:ARG:HG2	2.47	0.45
2:B:323:LEU:HD21	2:B:362:PHE:HE2	1.82	0.45
4:D:133:ILE:HG22	4:D:137:PHE:CZ	2.52	0.45
4:D:492:GLY:HA3	4:D:503:ILE:HB	1.98	0.45
5:E:50:THR:OG1	5:E:59:LYS:NZ	2.47	0.45
5:E:486:ASN:ND2	5:E:488:ALA:O	2.48	0.45
7:G:180:VAL:O	7:G:184:MET:HG2	2.17	0.45
8:H:51:GLY:HA2	8:H:455:ASN:ND2	2.32	0.45
8:H:67:ASN:HD21	8:H:171:LYS:HD3	1.82	0.45
1:I:397:CYS:O	1:I:400:LYS:HG2	2.17	0.45
2:J:234:ASN:N	2:J:347:LYS:O	2.38	0.45
3:K:119:PRO:HB3	3:K:517:LEU:HG	1.99	0.45
4:L:39:SER:HA	4:L:42:LYS:HE2	1.98	0.45
5:M:262:THR:OG1	7:O:248:ALA:HA	2.16	0.45
7:O:416:LEU:HB3	7:O:442:LEU:HD13	1.99	0.45
8:P:26:GLU:HA	8:P:30:TYR:CE2	2.52	0.45
1:A:69:HIS:O	1:A:71:ALA:N	2.50	0.45
1:A:233:LYS:HG2	1:A:347:GLN:NE2	2.29	0.45
1:A:470:PHE:O	1:A:473:GLU:HG2	2.17	0.45
2:B:122:HIS:CD2	2:B:124:GLN:HG2	2.52	0.45
2:B:140:ALA:O	2:B:143:SER:OG	2.30	0.45
3:C:72:VAL:H	3:C:78:LYS:NZ	2.15	0.45
3:C:469:LYS:HB3	3:C:475:CYS:SG	2.57	0.45
4:D:296:ASN:C	4:D:322:ILE:HG13	2.38	0.45
5:E:105:GLY:O	5:E:109:VAL:HG23	2.17	0.45
5:E:163:GLU:HA	5:E:166:ILE:HD12	1.99	0.45
5:E:168:THR:O	5:E:172:THR:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:412:GLY:HA2	6:F:415:GLU:OE1	2.17	0.45
1:I:199:LYS:HD2	10:S:53:TYR:CE1	2.52	0.45
2:J:84:LEU:O	2:J:87:MET:HG2	2.16	0.45
2:J:126:ILE:H	2:J:126:ILE:HD12	1.82	0.45
3:K:395:MET:HG3	3:K:396:GLN:NE2	2.29	0.45
4:L:460:VAL:O	4:L:463:SER:OG	2.26	0.45
5:M:265:LYS:H	7:O:255:ILE:HB	1.82	0.45
5:M:423:GLY:HA2	5:M:426:GLU:HG2	1.98	0.45
6:N:70:GLN:O	8:P:14:MET:HE1	2.17	0.45
7:O:38:THR:O	7:O:452:ASN:ND2	2.50	0.45
8:P:92:MET:O	8:P:96:GLU:HG2	2.17	0.45
10:S:205:GLU:HA	10:S:208:ILE:HG12	1.99	0.45
10:S:304:THR:OG1	10:S:309:ILE:HD13	2.17	0.45
3:C:409:PRO:HG2	3:C:477:THR:HA	1.98	0.44
5:E:94:LEU:HD12	5:E:94:LEU:HA	1.71	0.44
7:G:71:VAL:HG23	7:G:77:LYS:HG3	1.99	0.44
7:G:100:LEU:O	7:G:104:PHE:CD2	2.70	0.44
7:G:395:ILE:HA	7:G:398:ARG:HE	1.80	0.44
8:H:151:ALA:N	8:H:408:LEU:HD23	2.32	0.44
1:I:434:GLU:OE2	1:I:438:ILE:HD11	2.16	0.44
2:J:29:PHE:HE2	2:J:117:ILE:HD11	1.81	0.44
2:J:447:PRO:HA	2:J:450:ILE:HD12	1.99	0.44
2:J:517:VAL:HA	5:M:58:ASP:O	2.17	0.44
3:K:50:LEU:HD23	3:K:69:GLU:HB2	2.00	0.44
5:M:29:MET:N	5:M:32:GLU:OE2	2.50	0.44
7:O:133:VAL:O	7:O:137:LYS:HG2	2.17	0.44
8:P:164:LEU:HD21	8:P:399:PHE:HB2	1.99	0.44
8:P:173:TYR:HA	8:P:176:GLU:OE2	2.17	0.44
9:Q:73:MET:O	9:Q:77:ARG:HG2	2.17	0.44
2:B:488:MET:HB2	2:B:493:ILE:HB	2.00	0.44
3:C:218:VAL:HG11	3:C:323:ILE:HG12	1.98	0.44
3:C:477:THR:O	3:C:490:MET:HB2	2.17	0.44
4:D:114:GLY:HA2	4:D:117:LEU:HD12	1.99	0.44
5:E:132:ARG:NH2	7:G:479:ILE:O	2.51	0.44
6:F:319:ARG:HB2	6:F:323:ARG:NH1	2.32	0.44
1:I:394:ASP:O	1:I:398:VAL:HG23	2.17	0.44
3:K:249:LYS:HZ2	6:N:244:VAL:HA	1.82	0.44
3:K:330:ARG:H	3:K:342:ASP:HB3	1.81	0.44
5:M:166:ILE:HA	5:M:186:ALA:HB1	1.98	0.44
5:M:456:GLU:O	5:M:459:PRO:HD2	2.16	0.44
8:P:230:ASP:OD1	8:P:230:ASP:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S:223:PHE:HA	10:S:255:PHE:HE2	1.82	0.44
1:A:107:LEU:HD21	1:A:437:ALA:HA	1.99	0.44
2:B:125:THR:HG22	2:B:432:GLU:HG3	1.99	0.44
3:C:50:LEU:HB3	3:C:66:ILE:HD11	2.00	0.44
4:D:143:LYS:HA	4:D:143:LYS:HD2	1.70	0.44
5:E:150:LYS:HE2	5:E:150:LYS:HB3	1.77	0.44
5:E:170:LYS:O	5:E:182:HIS:NE2	2.31	0.44
5:E:529:LYS:HZ3	7:G:167:LEU:HG	1.82	0.44
8:H:446:GLU:OE2	8:H:464:ILE:HG21	2.17	0.44
8:H:477:ASN:O	8:H:491:ASP:HA	2.17	0.44
2:J:111:ARG:O	2:J:114:GLU:HG3	2.17	0.44
3:K:200:ARG:HB2	3:K:322:ARG:CZ	2.47	0.44
3:K:416:MET:CE	3:K:445:GLU:HA	2.47	0.44
6:N:115:HIS:ND1	6:N:117:ARG:HG3	2.33	0.44
7:O:121:ILE:HA	7:O:434:LEU:HD13	1.99	0.44
10:S:263:GLN:NE2	10:S:265:SER:HB2	2.26	0.44
2:B:376:ARG:NH1	4:D:101:GLU:OE1	2.46	0.44
3:C:234:LYS:HD3	3:C:235:ASN:OD1	2.17	0.44
3:C:433:GLU:O	3:C:436:PRO:HD2	2.18	0.44
5:E:94:LEU:CD1	5:E:523:MET:HG3	2.45	0.44
5:E:115:ALA:HB1	5:E:457:VAL:HG21	1.98	0.44
8:H:74:ARG:HB2	8:H:91:HIS:HE1	1.83	0.44
1:I:320:ALA:O	1:I:325:ALA:N	2.50	0.44
2:J:384:ASP:HB3	2:J:388:ARG:HH12	1.81	0.44
4:L:511:PRO:O	4:L:514:VAL:HG12	2.17	0.44
5:M:480:ARG:NH2	5:M:489:LEU:HD22	2.32	0.44
7:O:404:SER:OG	7:O:497:MET:HG3	2.18	0.44
7:O:450:CYS:SG	7:O:457:ALA:HB2	2.57	0.44
7:O:504:THR:O	7:O:508:GLU:HG3	2.18	0.44
8:P:172:GLN:H	8:P:172:GLN:CD	2.21	0.44
10:S:219:VAL:HA	10:S:255:PHE:CE1	2.52	0.44
1:A:99:GLU:HG3	1:A:447:VAL:HG21	1.98	0.44
1:A:233:LYS:HB2	1:A:283:ALA:HA	1.98	0.44
1:A:473:GLU:HA	1:A:476:VAL:HG22	1.99	0.44
3:C:365:ASP:OD1	3:C:367:LYS:N	2.50	0.44
4:D:120:CYS:HA	4:D:123:LEU:HD12	2.00	0.44
5:E:30:GLY:O	5:E:33:ALA:HB3	2.18	0.44
5:E:118:GLU:O	5:E:121:GLU:HG2	2.17	0.44
8:H:139:ALA:HA	8:H:142:ILE:HG22	1.98	0.44
1:I:262:GLN:O	1:I:265:GLN:HB3	2.17	0.44
4:L:116:LEU:HD12	4:L:137:PHE:HE1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:221:CYS:SG	4:L:390:VAL:HA	2.57	0.44
4:L:503:ILE:HG23	4:L:508:VAL:HB	1.98	0.44
5:M:501:MET:SD	5:M:506:VAL:HG22	2.58	0.44
6:N:198:HIS:CD2	6:N:199:LYS:HE3	2.52	0.44
6:N:281:VAL:HG22	6:N:341:PRO:HG3	1.99	0.44
7:O:243:GLU:HG3	7:O:294:PRO:O	2.18	0.44
8:P:275:LEU:O	8:P:279:GLN:HG3	2.17	0.44
1:A:129:VAL:HG21	1:A:515:LYS:HE3	2.00	0.44
1:A:279:LEU:HD21	1:A:300:PHE:CE1	2.53	0.44
2:B:22:GLU:O	2:B:25:ARG:HG2	2.18	0.44
2:B:518:ASP:OD1	5:E:59:LYS:HG2	2.17	0.44
3:C:305:MET:HB2	3:C:306:ARG:NH1	2.33	0.44
4:D:38:ILE:HB	4:D:42:LYS:NZ	2.32	0.44
4:D:305:LEU:HD21	9:Q:128:ALA:O	2.17	0.44
5:E:126:ARG:HH21	4:L:477:VAL:HB	1.83	0.44
5:E:152:SER:HB2	5:E:510:LEU:HD13	2.00	0.44
6:F:101:GLU:HG2	6:F:446:ILE:HG21	2.00	0.44
6:F:196:MET:HG3	6:F:377:LYS:HG2	2.00	0.44
7:G:136:ILE:HD13	7:G:499:ARG:HB3	1.99	0.44
8:H:25:LEU:HG	8:H:30:TYR:CE1	2.52	0.44
8:H:28:ALA:HA	8:H:31:ARG:HH12	1.83	0.44
8:H:500:THR:HG23	8:H:503:GLY:H	1.82	0.44
1:I:183:ASP:HB3	1:I:189:ARG:HG3	2.00	0.44
1:I:234:ILE:HB	1:I:346:GLY:HA3	2.00	0.44
2:J:50:LYS:HE3	4:L:534:ASP:OD2	2.17	0.44
2:J:274:LYS:HD3	5:M:274:TYR:OH	2.18	0.44
3:K:441:ALA:O	3:K:444:LEU:HB3	2.18	0.44
4:L:61:ILE:HD13	4:L:80:GLN:HB2	1.98	0.44
5:M:404:ASP:O	5:M:408:VAL:HG23	2.17	0.44
6:N:28:ARG:NH1	6:N:35:ARG:HH22	2.15	0.44
6:N:271:VAL:HG11	6:N:301:SER:HB2	1.99	0.44
8:P:7:LYS:O	8:P:13:GLN:NE2	2.49	0.44
10:S:141:SER:HA	10:S:338:SER:OG	2.18	0.44
1:A:348:ALA:O	1:A:368:LYS:NZ	2.47	0.44
2:B:164:GLY:HA2	2:B:176:LYS:HD2	1.99	0.44
2:B:205:LEU:CD1	4:D:97:ALA:HA	2.45	0.44
4:D:433:ALA:O	4:D:437:THR:HG23	2.17	0.44
5:E:169:ALA:O	5:E:172:THR:OG1	2.23	0.44
5:E:232:LYS:N	5:E:232:LYS:HD3	2.32	0.44
6:F:98:ILE:HD11	6:F:447:ILE:HD11	2.00	0.44
7:G:338:SER:OG	7:G:340:ASP:OD1	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:417:ILE:HG13	8:H:467:LEU:HD23	2.00	0.44
2:J:250:LYS:HG2	5:M:281:GLU:OE2	2.18	0.44
7:O:11:GLU:O	7:O:523:PRO:HG3	2.18	0.44
7:O:168:ILE:HG23	7:O:205:LEU:HD13	2.00	0.44
7:O:350:GLU:OE2	7:O:357:ARG:NE	2.39	0.44
10:S:75:ILE:HG23	10:S:111:ASN:HD21	1.83	0.44
10:S:79:TRP:HH2	10:S:115:ASN:O	2.01	0.44
2:B:106:ALA:O	2:B:110:LEU:HD23	2.18	0.44
2:B:205:LEU:HD23	2:B:380:GLN:OE1	2.18	0.44
2:B:497:PHE:CZ	2:B:501:ARG:HD3	2.53	0.44
4:D:34:ARG:O	4:D:38:ILE:HG12	2.18	0.44
5:E:486:ASN:ND2	5:E:489:LEU:HB3	2.32	0.44
7:G:22:LEU:HD11	7:G:112:VAL:HG11	1.99	0.44
7:G:198:LYS:HB2	7:G:373:ILE:HD13	2.00	0.44
1:I:206:MET:SD	1:I:206:MET:N	2.91	0.44
1:I:512:LYS:HD2	1:I:516:PHE:HE2	1.82	0.44
2:J:163:ALA:O	2:J:166:THR:OG1	2.29	0.44
3:K:180:VAL:HG21	3:K:398:CYS:SG	2.57	0.44
5:M:132:ARG:HH22	7:O:43:ARG:NH2	2.16	0.44
6:N:93:THR:O	6:N:97:LEU:HD23	2.18	0.44
6:N:338:ASP:N	6:N:338:ASP:OD1	2.51	0.44
8:P:158:ASP:N	8:P:158:ASP:OD1	2.50	0.44
8:P:289:ASN:O	8:P:311:MET:HB2	2.17	0.44
9:Q:15:ARG:CZ	9:Q:21:PRO:O	2.64	0.44
10:S:64:ILE:HG13	10:S:88:HIS:HB3	2.00	0.44
1:A:392:LEU:O	1:A:396:LEU:HG	2.18	0.44
3:C:46:MET:CG	6:F:519:ASP:HB3	2.47	0.44
3:C:386:GLU:O	3:C:390:ASN:ND2	2.50	0.44
4:D:119:SER:OG	4:D:453:ALA:HB1	2.18	0.44
5:E:193:VAL:HG21	5:E:409:ILE:HB	1.98	0.44
7:G:104:PHE:HZ	7:G:442:LEU:HD23	1.83	0.44
1:I:277:LYS:HE3	1:I:331:LEU:HD12	1.99	0.44
1:I:533:LEU:N	4:L:62:GLN:HE21	2.15	0.44
2:J:4:LEU:HD21	2:J:7:ALA:HB3	2.00	0.44
2:J:346:CYS:SG	2:J:347:LYS:N	2.91	0.44
2:J:353:MET:HA	2:J:358:LYS:HD3	1.99	0.44
2:J:423:GLN:HG3	2:J:427:ARG:CZ	2.48	0.44
3:K:168:TRP:O	3:K:171:LEU:HB3	2.18	0.44
4:L:79:LYS:O	4:L:82:GLN:NE2	2.51	0.44
4:L:232:LYS:HD3	4:L:233:VAL:O	2.17	0.44
4:L:320:MET:HG3	4:L:322:ILE:HG13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:264:HIS:O	5:M:265:LYS:HE2	2.18	0.44
5:M:303:GLN:HG3	5:M:325:VAL:O	2.18	0.44
5:M:390:GLY:H	5:M:394:ILE:HG21	1.83	0.44
5:M:452:ALA:O	5:M:456:GLU:OE1	2.36	0.44
6:N:194:MET:HE1	6:N:196:MET:HB2	2.00	0.44
7:O:407:ALA:HB3	7:O:474:TRP:CD1	2.53	0.44
8:P:30:TYR:HD1	8:P:33:ILE:HD12	1.82	0.44
10:S:326:LYS:HB2	10:S:328:LYS:NZ	2.32	0.44
1:A:379:GLY:HA3	1:A:385:CYS:SG	2.58	0.43
2:B:423:GLN:HB2	2:B:427:ARG:HH22	1.83	0.43
2:B:447:PRO:O	2:B:450:ILE:HB	2.18	0.43
3:C:38:ARG:HG3	3:C:100:ILE:HD12	2.00	0.43
4:D:223:LEU:HA	4:D:388:ILE:HG12	1.99	0.43
5:E:266:LEU:HG	7:G:257:VAL:HG23	2.00	0.43
6:F:328:CYS:SG	6:F:345:GLY:HA3	2.58	0.43
7:G:141:VAL:HG21	7:G:488:PHE:CZ	2.53	0.43
7:G:161:THR:OG1	7:G:493:TRP:N	2.51	0.43
7:G:168:ILE:HB	7:G:171:GLN:OE1	2.17	0.43
7:G:269:ALA:HB1	8:H:266:MET:HE1	1.99	0.43
8:H:39:LEU:HD12	8:H:39:LEU:HA	1.90	0.43
8:H:163:LEU:HD13	8:H:402:LEU:HD21	2.00	0.43
8:H:171:LYS:HB3	8:H:172:GLN:NE2	2.33	0.43
1:I:218:CYS:HB3	10:S:59:GLN:HE22	1.83	0.43
2:J:327:THR:HB	2:J:345:SER:N	2.33	0.43
4:L:63:ASP:OD2	4:L:67:ASP:HB2	2.18	0.43
4:L:253:LEU:H	4:L:308:ALA:HA	1.83	0.43
4:L:366:ASN:HB3	4:L:372:LYS:HE2	1.99	0.43
5:M:179:ASN:O	5:M:182:HIS:HB2	2.18	0.43
5:M:488:ALA:HB1	5:M:501:MET:HB3	2.00	0.43
6:N:180:LYS:NZ	6:N:370:ARG:HG3	2.24	0.43
7:O:39:THR:OG1	7:O:40:LEU:N	2.51	0.43
7:O:96:SER:OG	7:O:499:ARG:NH1	2.46	0.43
7:O:397:ARG:CZ	7:O:398:ARG:HH12	2.31	0.43
8:P:411:GLY:O	8:P:492:MET:HG3	2.18	0.43
10:S:318:THR:HA	10:S:321:ALA:HB3	1.99	0.43
1:A:44:MET:N	3:C:519:ILE:HD11	2.32	0.43
1:A:347:GLN:O	1:A:368:LYS:N	2.39	0.43
3:C:240:LEU:CD1	3:C:291:ILE:HG23	2.48	0.43
4:D:21:LYS:H	4:D:21:LYS:HD2	1.82	0.43
4:D:240:ARG:NE	4:D:242:GLU:OE2	2.50	0.43
5:E:27:ARG:NH2	7:G:35:ALA:HA	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:71:THR:HG21	5:E:76:THR:HG23	1.98	0.43
5:E:451:PHE:O	5:E:455:LEU:HG	2.18	0.43
6:F:197:LYS:HG2	6:F:384:LEU:HD12	2.00	0.43
7:G:147:ASP:OD1	7:G:147:ASP:N	2.48	0.43
7:G:239:LEU:O	7:G:331:GLN:N	2.48	0.43
8:H:386:ASP:HB3	8:H:390:ARG:NH1	2.33	0.43
1:I:169:ALA:O	1:I:173:VAL:HG23	2.18	0.43
1:I:233:LYS:HD3	1:I:233:LYS:HA	1.80	0.43
2:J:208:SER:H	2:J:211:ASP:HB2	1.83	0.43
2:J:480:MET:H	2:J:491:LEU:HD21	1.83	0.43
3:K:36:ILE:HG12	6:N:4:VAL:HG21	1.99	0.43
3:K:227:PRO:CB	6:N:322:GLU:HG3	2.45	0.43
4:L:316:PHE:HD1	4:L:319:LYS:HZ1	1.66	0.43
4:L:418:LYS:NZ	4:L:420:ALA:HB3	2.33	0.43
5:M:210:LYS:HB3	5:M:384:THR:HG23	2.00	0.43
6:N:278:LYS:HE2	6:N:310:ILE:HD11	1.99	0.43
8:P:164:LEU:O	8:P:168:ILE:HG12	2.17	0.43
8:P:417:ILE:HG13	8:P:467:LEU:HD13	2.00	0.43
9:Q:50:ASP:HA	9:Q:74:TYR:CE2	2.48	0.43
1:A:18:ARG:O	1:A:21:ASN:HB2	2.17	0.43
2:B:62:MET:HA	2:B:381:GLN:NE2	2.33	0.43
5:E:171:THR:OG1	5:E:505:HIS:O	2.36	0.43
5:E:458:ILE:H	5:E:458:ILE:HD12	1.84	0.43
6:F:34:LEU:HB3	6:F:93:THR:HG23	2.01	0.43
6:F:225:VAL:N	6:F:350:VAL:O	2.35	0.43
6:F:380:ASN:HD21	6:F:382:HIS:CE1	2.36	0.43
6:F:449:LYS:O	6:F:453:GLN:N	2.40	0.43
7:G:483:ASP:OD1	7:G:484:ILE:N	2.45	0.43
8:H:156:ASP:OD1	8:H:157:ILE:N	2.49	0.43
2:J:384:ASP:O	2:J:387:GLU:HG2	2.17	0.43
3:K:185:PHE:CE2	3:K:187:GLU:HB2	2.54	0.43
4:L:91:LEU:HD22	4:L:110:VAL:HG13	2.00	0.43
5:M:25:LYS:HZ3	5:M:27:ARG:HB2	1.80	0.43
5:M:217:GLY:C	5:M:218:ARG:HD3	2.38	0.43
9:Q:96:GLU:CG	9:Q:148:LYS:HE3	2.49	0.43
9:Q:120:TYR:HE2	9:Q:122:GLN:HB3	1.84	0.43
10:S:196:ARG:HH21	10:S:248:ILE:HG13	1.83	0.43
2:B:411:GLY:HA2	2:B:414:GLU:HB2	1.99	0.43
2:B:461:LEU:O	2:B:465:LEU:HD23	2.18	0.43
3:C:226:HIS:HE1	3:C:228:ARG:HB2	1.82	0.43
4:D:38:ILE:HB	4:D:42:LYS:HZ3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:306:PHE:HD2	5:E:310:ALA:HB3	1.83	0.43
6:F:68:GLN:NE2	8:H:526:MET:O	2.52	0.43
6:F:102:LEU:HD12	6:F:123:PHE:CE2	2.53	0.43
6:F:290:VAL:HG13	6:F:311:VAL:HG12	2.00	0.43
6:F:418:MET:HE3	6:F:444:LEU:HD13	1.99	0.43
7:G:116:LEU:HD12	7:G:116:LEU:HA	1.87	0.43
1:I:306:MET:HE3	1:I:351:VAL:HG13	2.00	0.43
3:K:66:ILE:HG22	3:K:67:LEU:HD22	2.01	0.43
3:K:101:LEU:HD21	3:K:447:ILE:CG1	2.49	0.43
4:L:91:LEU:HD13	4:L:110:VAL:HG13	2.00	0.43
4:L:102:ALA:O	4:L:410:CYS:HB3	2.19	0.43
4:L:325:ILE:HD13	4:L:325:ILE:HA	1.89	0.43
6:N:168:LEU:CD1	6:N:391:VAL:HG12	2.48	0.43
6:N:268:GLU:O	6:N:272:LYS:HG2	2.19	0.43
7:O:29:CYS:SG	7:O:79:LEU:HD11	2.58	0.43
7:O:30:GLN:HG3	7:O:106:LYS:HE2	2.01	0.43
7:O:40:LEU:HB2	7:O:95:THR:OG1	2.18	0.43
7:O:135:LYS:O	7:O:139:ILE:HG12	2.19	0.43
7:O:148:LYS:HZ1	7:O:152:ARG:HH21	1.66	0.43
7:O:190:LEU:HD22	7:O:397:ARG:HD2	2.01	0.43
7:O:356:GLU:HG3	7:O:358:TYR:CZ	2.53	0.43
8:P:44:ARG:NH1	8:P:451:ALA:HA	2.33	0.43
10:S:18:LYS:HB3	10:S:27:PRO:CG	2.45	0.43
1:A:163:ILE:HG13	1:A:164:ASN:H	1.84	0.43
1:A:201:HIS:O	3:C:86:THR:HG23	2.18	0.43
2:B:322:ARG:HA	2:B:325:LEU:HD12	2.01	0.43
2:B:465:LEU:HD21	2:B:485:ILE:HD12	1.98	0.43
2:B:502:GLN:NE2	2:B:503:VAL:HG23	2.34	0.43
5:E:85:HIS:CE1	5:E:87:ILE:HG12	2.53	0.43
6:F:145:ARG:CZ	6:F:173:VAL:HG11	2.49	0.43
6:F:221:MET:HE1	6:F:312:ALA:H	1.83	0.43
7:G:394:MET:O	7:G:398:ARG:HG3	2.19	0.43
8:H:51:GLY:HA2	8:H:455:ASN:HD22	1.82	0.43
1:I:58:GLY:HA2	1:I:61:ILE:HD12	1.99	0.43
1:I:204:SER:OG	1:I:207:GLU:HG2	2.18	0.43
1:I:233:LYS:HB3	1:I:345:LEU:HD13	2.00	0.43
2:J:202:ILE:O	2:J:375:LEU:N	2.45	0.43
2:J:255:ARG:NE	5:M:265:LYS:HB3	2.30	0.43
3:K:196:LYS:HG2	3:K:396:GLN:HE22	1.83	0.43
6:N:235:VAL:O	6:N:293:ASN:ND2	2.52	0.43
8:P:327:THR:HA	8:P:371:ALA:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:TYR:O	1:A:400:LYS:NZ	2.38	0.43
1:A:384:MET:HB3	3:C:515:LEU:HD12	2.01	0.43
2:B:104:VAL:O	2:B:108:GLU:HG2	2.19	0.43
2:B:203:LYS:HB3	2:B:383:LEU:HD13	2.00	0.43
2:B:251:ILE:HD11	7:G:263:TYR:CE2	2.53	0.43
2:B:285:HIS:NE2	2:B:335:PHE:O	2.47	0.43
2:B:419:HIS:O	2:B:423:GLN:HG2	2.18	0.43
3:C:167:ARG:HB2	3:C:168:TRP:CE3	2.54	0.43
3:C:268:LEU:HD12	6:F:266:PHE:CD1	2.54	0.43
3:C:473:GLU:HA	3:C:476:GLU:OE2	2.18	0.43
5:E:37:HIS:HD2	5:E:87:ILE:HD11	1.84	0.43
5:E:302:CYS:O	5:E:324:TRP:N	2.52	0.43
5:E:456:GLU:O	5:E:459:PRO:HD2	2.19	0.43
6:F:172:VAL:HA	6:F:175:SER:HB3	2.00	0.43
8:H:78:VAL:HG21	8:H:83:ALA:HB3	1.99	0.43
8:H:164:LEU:HD22	8:H:398:THR:HB	2.00	0.43
8:H:246:PHE:HE1	8:H:301:ALA:HB3	1.84	0.43
8:H:417:ILE:HD12	8:H:468:TYR:HE1	1.84	0.43
8:H:421:LYS:HB3	8:H:421:LYS:HE2	1.69	0.43
1:I:238:ASP:N	1:I:328:LEU:O	2.44	0.43
1:I:385:CYS:HA	1:I:388:MET:HE1	2.00	0.43
2:J:220:LEU:HD12	2:J:362:PHE:CZ	2.54	0.43
2:J:284:LYS:HE3	2:J:338:PRO:HD3	2.00	0.43
3:K:74:HIS:O	3:K:76:ALA:N	2.51	0.43
3:K:137:LEU:HD22	3:K:506:TYR:CE2	2.54	0.43
4:L:129:HIS:CD2	4:L:130:PRO:HD2	2.53	0.43
4:L:490:THR:HB	4:L:504:LEU:HG	2.01	0.43
5:M:344:ARG:HH11	5:M:345:PHE:HB2	1.84	0.43
5:M:412:LEU:HD12	5:M:417:ARG:HB2	1.99	0.43
6:N:420:GLU:HG3	6:N:470:HIS:NE2	2.34	0.43
7:O:104:PHE:CE2	7:O:506:ALA:HB1	2.52	0.43
7:O:259:THR:HB	7:O:262:ASP:OD2	2.18	0.43
10:S:279:PHE:CD2	10:S:320:LEU:HD23	2.54	0.43
1:A:292:ILE:HG13	1:A:309:ARG:HB3	2.00	0.43
1:A:452:LEU:HB3	1:A:490:LEU:HD22	2.00	0.43
2:B:9:VAL:O	2:B:11:ILE:HG13	2.19	0.43
2:B:79:PRO:HD3	2:B:522:LYS:HE2	2.01	0.43
2:B:164:GLY:HA2	2:B:180:THR:HG21	2.01	0.43
2:B:251:ILE:HD11	7:G:263:TYR:HE2	1.83	0.43
2:B:255:ARG:O	5:E:268:VAL:HG22	2.19	0.43
4:D:78:LEU:HD11	4:D:110:VAL:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:194:VAL:HG12	4:D:195:ILE:HG23	2.01	0.43
4:D:246:ILE:HD11	4:D:299:LEU:HD23	1.99	0.43
7:G:218:LYS:HB2	7:G:359:ASN:OD1	2.19	0.43
7:G:225:PHE:CG	7:G:226:GLU:N	2.87	0.43
7:G:253:ALA:HA	8:H:257:VAL:HG23	2.01	0.43
7:G:516:VAL:HA	8:H:55:MET:CE	2.49	0.43
1:I:300:PHE:O	1:I:304:GLY:N	2.50	0.43
3:K:200:ARG:NH2	3:K:202:GLU:OE2	2.52	0.43
3:K:226:HIS:CD2	6:N:334:ASN:HD21	2.37	0.43
4:L:271:GLN:O	4:L:275:VAL:HG23	2.18	0.43
4:L:309:LEU:HD12	4:L:310:SER:H	1.83	0.43
5:M:288:MET:HA	5:M:291:GLN:OE1	2.19	0.43
5:M:423:GLY:O	5:M:427:ILE:HD12	2.19	0.43
5:M:486:ASN:ND2	5:M:489:LEU:HG	2.32	0.43
6:N:400:ASN:HA	6:N:403:ASP:OD2	2.19	0.43
6:N:446:ILE:O	6:N:450:VAL:HG13	2.19	0.43
7:O:210:LEU:HD13	7:O:372:PHE:CE2	2.54	0.43
8:P:172:GLN:NE2	8:P:387:ASP:OD1	2.52	0.43
10:S:57:GLU:CD	10:S:92:ASN:HB3	2.39	0.43
10:S:94:LEU:HD23	10:S:96:VAL:HG11	2.01	0.43
10:S:217:CYS:HB3	10:S:258:PRO:HD3	2.00	0.43
2:B:54:SER:HB3	2:B:57:ARG:NH2	2.33	0.43
3:C:433:GLU:H	3:C:433:GLU:CD	2.22	0.43
4:D:257:LYS:HA	4:D:262:ASN:ND2	2.33	0.43
4:D:394:ASN:O	4:D:398:ILE:HG12	2.19	0.43
6:F:180:LYS:HD3	6:F:370:ARG:HH21	1.84	0.43
6:F:331:VAL:HB	6:F:343:CYS:HA	2.01	0.43
7:G:111:TYR:HB3	7:G:116:LEU:HD23	2.01	0.43
7:G:135:LYS:O	7:G:138:GLU:HG2	2.19	0.43
7:G:156:GLU:HG2	7:G:180:VAL:HG21	2.00	0.43
7:G:243:GLU:N	7:G:293:LEU:HD12	2.32	0.43
7:G:397:ARG:O	7:G:400:ILE:HG22	2.19	0.43
8:H:219:HIS:H	8:H:364:LYS:NZ	2.17	0.43
8:H:266:MET:O	8:H:270:LYS:HD3	2.18	0.43
8:H:273:GLU:HA	8:H:276:MET:HE3	2.01	0.43
2:J:412:CYS:SG	2:J:469:HIS:NE2	2.80	0.43
3:K:90:GLU:HG2	3:K:504:GLN:NE2	2.33	0.43
5:M:25:LYS:HE2	5:M:534:ARG:CD	2.49	0.43
5:M:77:ILE:O	5:M:81:MET:HG2	2.19	0.43
5:M:255:PHE:HB2	5:M:306:PHE:HB2	1.99	0.43
6:N:83:ALA:O	6:N:87:ILE:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:248:PHE:N	8:P:254:LYS:O	2.51	0.43
6:N:432:ARG:CZ	6:N:435:LEU:HD11	2.49	0.43
7:O:229:PRO:O	7:O:232:TYR:OH	2.34	0.43
10:S:12:ASN:N	10:S:12:ASN:OD1	2.51	0.43
1:A:274:ARG:NH2	1:A:338:GLU:OE1	2.51	0.43
1:A:450:ASN:HA	1:A:460:SER:HB2	2.00	0.43
2:B:251:ILE:HG21	5:E:277:LEU:HD22	2.00	0.43
2:B:340:LEU:HD21	5:E:316:GLN:O	2.18	0.43
3:C:23:GLN:O	3:C:27:ILE:HG22	2.19	0.43
3:C:216:ARG:NH2	3:C:367:LYS:O	2.52	0.43
6:F:178:ALA:HB1	6:F:369:PRO:O	2.18	0.43
6:F:231:LEU:N	6:F:290:VAL:O	2.45	0.43
7:G:10:LYS:HE3	7:G:523:PRO:HG2	2.01	0.43
7:G:30:GLN:OE1	7:G:106:LYS:HB2	2.19	0.43
7:G:492:VAL:O	7:G:492:VAL:HG13	2.18	0.43
8:H:31:ARG:HH21	8:H:80:HIS:CE1	2.37	0.43
8:H:57:ILE:HD12	8:H:63:LEU:HG	2.00	0.43
2:J:100:THR:O	2:J:104:VAL:HG23	2.18	0.43
2:J:380:GLN:NE2	2:J:383:LEU:HD12	2.34	0.43
4:L:71:THR:OG1	4:L:76:THR:OG1	2.36	0.43
4:L:101:GLU:O	4:L:413:ARG:NH1	2.49	0.43
4:L:252:CYS:HA	4:L:308:ALA:HB2	2.00	0.43
5:M:146:GLU:OE2	5:M:150:LYS:HD2	2.18	0.43
6:N:194:MET:HE2	6:N:375:LEU:HD22	2.01	0.43
10:S:204:ALA:O	10:S:208:ILE:HG23	2.18	0.43
3:C:196:LYS:HD2	3:C:399:ARG:NH1	2.34	0.43
3:C:354:LYS:HZ3	6:F:187:ASP:HB2	1.83	0.43
4:D:79:LYS:HZ1	4:D:95:SER:HB3	1.83	0.43
4:D:151:MET:H	4:D:151:MET:HG2	1.70	0.43
5:E:452:ALA:HA	5:E:455:LEU:HD12	2.01	0.43
7:G:179:VAL:O	7:G:183:VAL:HG22	2.19	0.43
7:G:303:PHE:HB3	7:G:308:MET:O	2.19	0.43
1:I:80:ASP:O	1:I:84:LYS:HG3	2.18	0.43
1:I:145:ARG:NH2	1:I:174:ASP:OD1	2.51	0.43
3:K:218:VAL:HG11	3:K:323:ILE:HG12	2.01	0.43
3:K:381:LYS:NZ	3:K:385:SER:HB3	2.34	0.43
4:L:48:ILE:HA	4:L:59:LYS:HE2	2.01	0.43
4:L:115:SER:HB3	4:L:460:VAL:HG21	2.00	0.43
4:L:171:LEU:HA	4:L:174:LYS:HE2	2.00	0.43
5:M:242:LYS:HE3	5:M:242:LYS:HB3	1.82	0.43
8:P:154:LEU:HD21	8:P:402:LEU:HG	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:290:VAL:HG12	8:P:311:MET:CB	2.48	0.43
10:S:283:MET:HE1	10:S:290:ARG:HD3	2.01	0.43
1:A:286:ILE:HG13	1:A:300:PHE:CZ	2.54	0.42
2:B:91:GLN:NE2	2:B:502:GLN:HE22	2.17	0.42
3:C:279:CYS:O	3:C:283:ILE:HG13	2.18	0.42
4:D:249:ILE:HD13	4:D:249:ILE:HA	1.87	0.42
4:D:258:THR:OG1	4:D:260:MET:O	2.33	0.42
5:E:306:PHE:O	5:E:323:ARG:NH1	2.52	0.42
8:H:167:SER:OG	8:H:394:ASP:HB3	2.19	0.42
1:I:510:LYS:HB2	1:I:510:LYS:HE2	1.86	0.42
2:J:86:ASP:HB3	2:J:89:ARG:NH2	2.34	0.42
2:J:234:ASN:HA	2:J:347:LYS:HA	2.01	0.42
2:J:255:ARG:HH11	4:L:263:GLN:HE22	1.67	0.42
2:J:519:ASN:ND2	2:J:521:ILE:HD11	2.34	0.42
3:K:168:TRP:CZ3	3:K:209:ILE:HG21	2.54	0.42
4:L:38:ILE:HG22	4:L:42:LYS:NZ	2.34	0.42
6:N:172:VAL:O	6:N:176:ILE:HG12	2.19	0.42
6:N:197:LYS:HG2	6:N:384:LEU:HG	2.01	0.42
6:N:321:MET:SD	6:N:322:GLU:N	2.92	0.42
7:O:43:ARG:HD3	7:O:43:ARG:HA	1.91	0.42
7:O:451:ASP:OD1	7:O:452:ASN:N	2.51	0.42
10:S:86:TRP:CH2	10:S:105:LEU:HG	2.54	0.42
10:S:180:LEU:HD23	10:S:181:ALA:N	2.34	0.42
1:A:473:GLU:O	1:A:477:ASN:HB2	2.19	0.42
1:A:494:LYS:HD3	1:A:495:PRO:HD2	2.01	0.42
2:B:54:SER:HB2	2:B:57:ARG:HB2	2.01	0.42
3:C:512:THR:O	3:C:516:LEU:HD23	2.19	0.42
4:D:245:LYS:NZ	4:D:358:SER:OG	2.50	0.42
4:D:259:ASP:OD1	4:D:259:ASP:N	2.52	0.42
5:E:48:MET:HE2	5:E:107:THR:HG22	2.01	0.42
5:E:532:ASP:HB3	7:G:47:LYS:HA	2.01	0.42
8:H:215:SER:OG	8:H:378:ARG:N	2.49	0.42
8:H:276:MET:HG3	8:H:304:TYR:CE2	2.51	0.42
8:H:495:ALA:HB3	8:H:497:ILE:HG12	2.02	0.42
2:J:299:TYR:HB3	2:J:300:PRO:HD3	1.99	0.42
2:J:354:ILE:N	2:J:357:ASP:O	2.53	0.42
3:K:321:ASN:O	3:K:325:ARG:HG2	2.19	0.42
3:K:458:SER:OG	3:K:461:ARG:NH1	2.52	0.42
6:N:396:ARG:HD3	6:N:396:ARG:HA	1.76	0.42
8:P:359:GLN:OE1	8:P:360:VAL:N	2.52	0.42
9:Q:53:LEU:HD22	9:Q:78:ARG:HG3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:S:263:GLN:HB3	10:S:266:PHE:CD2	2.54	0.42
1:A:377:LEU:HD13	1:A:388:MET:HE3	2.01	0.42
2:B:241:ASN:ND2	2:B:293:ARG:HE	2.17	0.42
3:C:183:VAL:HG22	3:C:372:CYS:N	2.34	0.42
5:E:261:LYS:NZ	7:G:246:LEU:O	2.34	0.42
5:E:306:PHE:CD2	5:E:310:ALA:HB3	2.54	0.42
5:E:427:ILE:O	5:E:431:LEU:HG	2.19	0.42
7:G:229:PRO:HB2	7:G:232:TYR:CZ	2.53	0.42
8:H:209:GLY:HA3	8:H:378:ARG:HH21	1.83	0.42
1:I:35:SER:HB2	1:I:56:ASN:O	2.19	0.42
2:J:45:PRO:HD2	2:J:450:ILE:HG23	2.00	0.42
2:J:176:LYS:O	2:J:180:THR:HG23	2.18	0.42
2:J:287:ILE:HD11	2:J:290:PHE:HB2	2.01	0.42
3:K:285:LEU:HD13	3:K:338:LEU:HD23	2.00	0.42
3:K:325:ARG:HB3	3:K:370:LYS:HB2	2.01	0.42
4:L:51:SER:HA	4:L:57:MET:H	1.83	0.42
4:L:248:LEU:N	4:L:342:THR:HG21	2.34	0.42
5:M:218:ARG:HB2	5:M:220:GLU:HG2	2.01	0.42
5:M:229:ILE:HD11	5:M:371:MET:HG2	2.01	0.42
5:M:257:PRO:HA	5:M:258:PRO:HD3	1.94	0.42
6:N:44:MET:SD	6:N:58:LYS:HG3	2.59	0.42
8:P:142:ILE:HG21	8:P:422:GLN:NE2	2.34	0.42
8:P:177:VAL:O	8:P:181:LYS:HG3	2.19	0.42
8:P:324:LEU:HA	8:P:327:THR:HG22	2.01	0.42
9:Q:118:HIS:NE2	9:Q:120:TYR:HB3	2.34	0.42
10:S:326:LYS:HD2	10:S:328:LYS:HE3	2.01	0.42
1:A:511:VAL:O	1:A:515:LYS:HG2	2.18	0.42
2:B:130:TRP:HE1	2:B:439:TYR:HB2	1.85	0.42
2:B:167:LEU:HD22	2:B:172:LEU:HB2	2.01	0.42
2:B:377:GLY:H	2:B:383:LEU:HD21	1.83	0.42
2:B:508:ALA:O	2:B:512:GLU:HG3	2.18	0.42
4:D:27:ARG:H	2:J:120:LYS:NZ	2.16	0.42
6:F:127:LYS:HZ2	6:F:506:HIS:HA	1.84	0.42
6:F:231:LEU:HB3	6:F:291:VAL:HA	2.01	0.42
7:G:9:LEU:HD22	8:H:76:LEU:HD21	2.02	0.42
7:G:352:GLN:OE1	7:G:355:GLY:N	2.52	0.42
1:I:5:LEU:HD23	1:I:5:LEU:HA	1.84	0.42
2:J:61:LEU:HD23	2:J:61:LEU:HA	1.91	0.42
2:J:521:ILE:O	5:M:61:MET:HB2	2.19	0.42
4:L:52:LEU:HD11	4:L:108:SER:HB3	2.00	0.42
4:L:94:LEU:HD21	4:L:109:VAL:HG22	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:484:HIS:CE1	4:L:489:LYS:HG2	2.55	0.42
5:M:364:PHE:HB2	5:M:367:THR:OG1	2.19	0.42
6:N:241:LYS:HD3	6:N:242:THR:N	2.34	0.42
6:N:516:LEU:HD23	6:N:516:LEU:HA	1.80	0.42
9:Q:75:ARG:HG3	9:Q:78:ARG:NH1	2.34	0.42
9:Q:204:ILE:HG22	9:Q:206:THR:HG23	2.02	0.42
10:S:136:ILE:HG22	10:S:138:ALA:H	1.84	0.42
1:A:15:GLU:HA	1:A:18:ARG:HB3	2.02	0.42
1:A:235:ALA:O	1:A:286:ILE:HA	2.18	0.42
2:B:340:LEU:O	2:B:341:VAL:HG23	2.19	0.42
3:C:423:THR:O	3:C:426:SER:OG	2.30	0.42
6:F:14:ALA:HB3	6:F:521:ILE:HB	2.00	0.42
7:G:159:ALA:O	7:G:163:LEU:HG	2.19	0.42
2:J:151:ASP:OD1	2:J:154:LYS:HB3	2.19	0.42
4:L:152:SER:HB3	4:L:512:LEU:HD13	2.02	0.42
5:M:148:LEU:HD23	5:M:514:LYS:HG3	2.01	0.42
5:M:319:LEU:HD12	5:M:319:LEU:HA	1.92	0.42
7:O:395:ILE:HG23	7:O:495:PRO:HG3	2.01	0.42
8:P:151:ALA:HB3	8:P:402:LEU:HD11	2.01	0.42
1:A:264:ARG:NE	3:C:248:LYS:O	2.51	0.42
1:A:384:MET:SD	1:A:388:MET:HE2	2.60	0.42
2:B:195:ASN:OD1	2:B:198:ALA:N	2.52	0.42
2:B:293:ARG:O	2:B:315:ALA:N	2.53	0.42
3:C:27:ILE:HD11	3:C:107:SER:HA	2.01	0.42
4:D:41:ALA:HB1	4:D:117:LEU:HD13	2.02	0.42
4:D:249:ILE:HD12	4:D:251:PHE:CE1	2.54	0.42
5:E:38:ILE:C	5:E:42:LYS:HZ3	2.22	0.42
5:E:368:LYS:O	5:E:370:LYS:HE2	2.19	0.42
6:F:266:PHE:O	6:F:269:ASP:OD1	2.37	0.42
6:F:446:ILE:HG13	6:F:447:ILE:N	2.34	0.42
7:G:100:LEU:HA	7:G:103:GLU:OE1	2.20	0.42
7:G:509:ALA:O	7:G:513:ILE:HG12	2.19	0.42
8:H:165:ARG:HD2	8:H:176:GLU:HB3	2.01	0.42
8:H:518:VAL:HG23	8:H:519:LEU:HD22	2.01	0.42
1:I:127:GLU:HB3	1:I:130:ARG:HH21	1.85	0.42
2:J:52:LEU:HB2	2:J:62:MET:SD	2.59	0.42
2:J:384:ASP:HB3	2:J:388:ARG:NH1	2.35	0.42
3:K:238:ILE:HG23	3:K:344:GLY:HA3	2.02	0.42
3:K:385:SER:O	3:K:389:ARG:HG3	2.19	0.42
4:L:399:GLU:HB3	4:L:403:ARG:HH12	1.83	0.42
5:M:323:ARG:HG3	5:M:324:TRP:NE1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:452:ALA:O	5:M:455:LEU:HB2	2.19	0.42
6:N:229:TYR:OH	6:N:287:LYS:NZ	2.49	0.42
6:N:420:GLU:HB3	6:N:424:LYS:NZ	2.34	0.42
7:O:237:ILE:HD11	7:O:345:CYS:HB2	2.01	0.42
7:O:314:VAL:HB	7:O:319:LEU:HD11	2.01	0.42
8:P:11:PHE:CZ	8:P:15:LEU:HD13	2.55	0.42
8:P:254:LYS:H	8:P:254:LYS:HG2	1.71	0.42
8:P:354:GLU:OE2	8:P:358:THR:N	2.53	0.42
10:S:240:TYR:N	10:S:247:VAL:HG22	2.35	0.42
2:B:290:PHE:CE2	2:B:292:ASN:HB2	2.54	0.42
3:C:224:VAL:HG22	3:C:226:HIS:H	1.85	0.42
5:E:306:PHE:HE1	5:E:323:ARG:HB3	1.85	0.42
5:E:391:ASN:HB3	5:E:394:ILE:HG22	2.02	0.42
6:F:46:MET:HE3	6:F:56:LEU:HD21	2.00	0.42
7:G:516:VAL:HA	8:H:55:MET:HE1	2.00	0.42
1:I:499:LYS:HA	1:I:504:PHE:HE2	1.85	0.42
2:J:434:VAL:O	2:J:437:GLU:HG3	2.19	0.42
3:K:24:SER:O	3:K:28:ASN:ND2	2.53	0.42
4:L:329:GLU:OE1	4:L:331:GLU:HG3	2.19	0.42
4:L:396:LEU:HD23	4:L:396:LEU:HA	1.81	0.42
4:L:405:ILE:O	4:L:409:LEU:HG	2.20	0.42
5:M:413:ILE:HB	5:M:414:ARG:NH1	2.34	0.42
5:M:481:GLN:HA	5:M:489:LEU:HD12	2.01	0.42
6:N:213:ASP:HA	6:N:360:PHE:CD1	2.54	0.42
6:N:447:ILE:HB	6:N:448:PRO:HD3	2.01	0.42
8:P:162:SER:O	8:P:165:ARG:HG2	2.20	0.42
8:P:328:VAL:HG23	8:P:330:ALA:H	1.85	0.42
10:S:18:LYS:HE2	10:S:18:LYS:HB2	1.88	0.42
1:A:381:ASN:O	1:A:384:MET:HG3	2.20	0.42
5:E:77:ILE:O	5:E:81:MET:HG3	2.19	0.42
5:E:356:ALA:HA	5:E:376:GLN:HA	2.01	0.42
6:F:16:ALA:O	6:F:20:LEU:HG	2.20	0.42
6:F:68:GLN:HE21	8:H:19:ALA:HB1	1.83	0.42
6:F:196:MET:HE2	6:F:355:LEU:HD22	2.01	0.42
7:G:243:GLU:OE1	7:G:247:LYS:HD3	2.20	0.42
7:G:468:HIS:NE2	7:G:475:TYR:HB2	2.35	0.42
8:H:11:PHE:HE2	8:H:21:HIS:CE1	2.38	0.42
1:I:73:LYS:O	1:I:77:GLU:OE1	2.38	0.42
1:I:294:ASP:OD1	1:I:295:MET:N	2.52	0.42
2:J:36:GLY:O	2:J:40:LYS:N	2.28	0.42
2:J:479:ASP:OD2	2:J:482:GLU:N	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:98:GLN:HG2	4:L:106:THR:HG22	2.01	0.42
5:M:80:MET:O	5:M:81:MET:HE2	2.20	0.42
5:M:90:LEU:HB3	5:M:523:MET:HE1	2.00	0.42
6:N:47:LEU:HB3	6:N:66:GLU:CD	2.39	0.42
6:N:217:ARG:HG3	6:N:314:ARG:HH11	1.84	0.42
6:N:293:ASN:O	6:N:314:ARG:HA	2.19	0.42
7:O:15:SER:HB3	7:O:17:GLN:HE22	1.85	0.42
7:O:27:SER:HA	7:O:30:GLN:HG2	2.00	0.42
7:O:269:ALA:HB1	8:P:266:MET:CE	2.49	0.42
7:O:292:LYS:HZ2	7:O:316:GLU:HG3	1.85	0.42
7:O:408:GLY:N	7:O:492:VAL:O	2.48	0.42
8:P:262:ALA:O	8:P:266:MET:HG2	2.20	0.42
10:S:223:PHE:HA	10:S:255:PHE:CE2	2.54	0.42
2:B:45:PRO:HG3	2:B:480:MET:SD	2.60	0.42
2:B:120:LYS:HZ1	4:L:27:ARG:HG3	1.85	0.42
2:B:199:ILE:HA	2:B:371:CYS:HB2	2.02	0.42
2:B:383:LEU:HD23	2:B:383:LEU:HA	1.88	0.42
3:C:176:ALA:O	3:C:180:VAL:HG23	2.19	0.42
4:D:348:ILE:O	4:D:351:PHE:HB3	2.19	0.42
4:D:435:ARG:O	4:D:438:GLU:HG2	2.20	0.42
4:D:502:ASN:O	4:D:506:GLU:HG2	2.20	0.42
5:E:114:GLY:O	5:E:117:LEU:N	2.52	0.42
5:E:264:HIS:C	5:E:265:LYS:HD3	2.40	0.42
5:E:292:ILE:O	5:E:295:THR:HG22	2.19	0.42
5:E:357:GLY:N	5:E:375:GLU:O	2.53	0.42
5:E:391:ASN:O	5:E:394:ILE:HG22	2.20	0.42
6:F:264:ARG:O	6:F:267:ILE:HG12	2.20	0.42
7:G:121:ILE:HG13	7:G:125:PHE:CE2	2.55	0.42
2:J:162:ILE:O	2:J:166:THR:HG23	2.20	0.42
3:K:91:VAL:HG11	3:K:501:VAL:HA	2.02	0.42
3:K:278:LEU:HD12	3:K:278:LEU:HA	1.93	0.42
4:L:128:ILE:HD13	4:L:450:CYS:SG	2.59	0.42
4:L:426:GLY:O	4:L:430:ILE:HG22	2.20	0.42
4:L:526:VAL:O	4:L:530:LEU:HD23	2.20	0.42
7:O:402:ASN:ND2	7:O:404:SER:HB3	2.34	0.42
7:O:406:VAL:O	7:O:494:GLU:N	2.37	0.42
1:A:253:VAL:N	4:D:266:VAL:O	2.53	0.42
2:B:237:ILE:HG23	2:B:289:CYS:SG	2.60	0.42
2:B:247:ASP:HB3	2:B:275:MET:HE1	2.01	0.42
3:C:137:LEU:HA	3:C:140:ILE:HG12	2.02	0.42
4:D:283:ILE:O	4:D:287:VAL:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:300:ILE:HG22	4:D:308:ALA:HB1	2.01	0.42
5:E:35:LYS:O	5:E:39:MET:HG3	2.20	0.42
5:E:214:LYS:HG2	5:E:364:PHE:CE2	2.55	0.42
5:E:392:LYS:HE2	5:E:392:LYS:HB3	1.86	0.42
6:F:228:ALA:HB1	6:F:290:VAL:HG23	2.02	0.42
6:F:251:LYS:HE2	6:F:251:LYS:HB2	1.92	0.42
6:F:293:ASN:CG	6:F:295:LYS:H	2.24	0.42
7:G:163:LEU:HA	7:G:166:LYS:HB2	2.01	0.42
8:H:259:ILE:HD11	8:H:268:PHE:HE1	1.84	0.42
2:J:63:VAL:O	2:J:385:GLU:HB2	2.20	0.42
3:K:204:ILE:HG12	3:K:355:ILE:HD12	2.01	0.42
6:N:168:LEU:HD21	6:N:391:VAL:HA	2.01	0.42
7:O:182:ALA:O	7:O:186:LEU:HG	2.20	0.42
7:O:411:ALA:O	7:O:414:MET:N	2.52	0.42
7:O:487:ASN:O	7:O:491:PHE:N	2.53	0.42
8:P:134:ILE:HG12	8:P:137:ARG:HE	1.85	0.42
8:P:234:VAL:HG11	8:P:289:ASN:HB3	2.01	0.42
8:P:382:ASP:O	8:P:385:MET:HB2	2.20	0.42
8:P:446:GLU:O	8:P:449:PRO:HD2	2.20	0.42
10:S:61:LYS:HG3	10:S:88:HIS:HE2	1.85	0.42
1:A:124:ALA:HB1	1:A:423:LEU:HD11	2.02	0.41
1:A:485:TRP:O	1:A:497:ASP:HA	2.20	0.41
2:B:517:VAL:HA	5:E:58:ASP:O	2.19	0.41
3:C:122:VAL:HG12	3:C:126:TYR:CE2	2.55	0.41
3:C:220:ILE:CG2	3:C:361:THR:HB	2.50	0.41
3:C:240:LEU:HG	3:C:331:ILE:HG23	2.02	0.41
7:G:136:ILE:HG21	7:G:500:ILE:HG13	2.02	0.41
7:G:273:ILE:HD11	8:H:265:LEU:HG	2.02	0.41
8:H:394:ASP:O	8:H:398:THR:OG1	2.28	0.41
1:I:69:HIS:O	1:I:73:LYS:HG3	2.20	0.41
1:I:413:GLY:HA2	1:I:416:GLU:HB2	2.01	0.41
3:K:137:LEU:HD21	3:K:499:LEU:HD11	2.02	0.41
4:L:88:ALA:O	4:L:92:VAL:HG23	2.20	0.41
4:L:195:ILE:HG21	4:L:203:VAL:HG23	2.01	0.41
4:L:276:LEU:O	4:L:280:ARG:HG3	2.19	0.41
5:M:56:GLY:HA2	5:M:465:ASN:OD1	2.20	0.41
6:N:156:LEU:HB3	6:N:165:ALA:CB	2.49	0.41
7:O:121:ILE:HG22	7:O:125:PHE:HE2	1.84	0.41
7:O:198:LYS:HB2	7:O:373:ILE:HD13	2.02	0.41
10:S:10:VAL:O	10:S:105:LEU:HD13	2.20	0.41
10:S:222:ASP:OD1	10:S:222:ASP:N	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:298:LYS:NZ	3:C:331:ILE:HG22	2.35	0.41
1:A:382:ASP:H	3:C:85:ARG:NH2	2.18	0.41
2:B:167:LEU:HD23	2:B:167:LEU:HA	1.79	0.41
3:C:151:MET:O	3:C:155:ILE:HG13	2.20	0.41
4:D:272:MET:O	4:D:276:LEU:HD23	2.20	0.41
4:D:333:ILE:HG13	4:D:334:GLU:N	2.35	0.41
5:E:481:GLN:NE2	5:E:487:PRO:O	2.54	0.41
6:F:30:LEU:O	6:F:34:LEU:HD23	2.21	0.41
6:F:77:ILE:HD13	6:F:511:ILE:HD11	2.01	0.41
6:F:460:GLN:NE2	6:N:114:LEU:HD21	2.35	0.41
7:G:243:GLU:HG2	7:G:245:GLU:H	1.85	0.41
7:G:517:ASP:H	8:H:55:MET:HE3	1.85	0.41
8:H:9:PRO:HG2	8:P:9:PRO:HB3	2.01	0.41
1:I:105:ASP:HA	1:I:108:VAL:HG12	2.01	0.41
1:I:112:ILE:HG23	1:I:433:ARG:HD3	2.01	0.41
2:J:202:ILE:N	2:J:373:ILE:O	2.47	0.41
2:J:236:LYS:O	2:J:289:CYS:N	2.47	0.41
3:K:18:SER:OG	3:K:521:ASP:OD1	2.28	0.41
4:L:133:ILE:O	4:L:136:SER:OG	2.24	0.41
4:L:155:VAL:HB	4:L:421:LEU:HD23	2.02	0.41
6:N:31:GLN:HG2	6:N:35:ARG:HE	1.85	0.41
7:O:66:LEU:HA	7:O:69:LEU:HD12	2.02	0.41
7:O:303:PHE:HD2	7:O:310:CYS:HB2	1.84	0.41
10:S:279:PHE:O	10:S:283:MET:HG2	2.20	0.41
1:A:35:SER:HB2	1:A:43:LYS:NZ	2.35	0.41
4:D:46:ASP:CG	4:D:49:ARG:HH12	2.23	0.41
4:D:474:ILE:HG13	5:M:128:ILE:HD11	2.03	0.41
5:E:336:ALA:HB1	5:E:376:GLN:NE2	2.35	0.41
6:F:143:MET:SD	6:F:143:MET:N	2.92	0.41
6:F:426:LYS:C	6:F:428:SER:H	2.24	0.41
6:F:448:PRO:HA	6:F:451:LEU:HB2	2.02	0.41
7:G:69:LEU:HD23	7:G:70:ASP:N	2.36	0.41
7:G:82:ILE:HD13	7:G:509:ALA:HB2	2.02	0.41
8:H:331:THR:OG1	8:H:343:GLU:HB3	2.21	0.41
8:H:350:VAL:O	8:H:350:VAL:HG23	2.20	0.41
1:I:121:TYR:HE2	1:I:521:ALA:HB1	1.85	0.41
1:I:416:GLU:HG3	1:I:445:LEU:HD11	2.02	0.41
1:I:437:ALA:O	1:I:440:GLU:HG2	2.20	0.41
4:L:277:ARG:HA	4:L:280:ARG:NE	2.34	0.41
7:O:291:SER:HB3	7:O:312:GLY:HA2	2.01	0.41
7:O:445:ILE:O	7:O:448:GLN:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:450:CYS:HB2	7:O:455:PHE:CZ	2.55	0.41
8:P:137:ARG:HA	8:P:140:HIS:HB2	2.03	0.41
9:Q:86:LYS:HA	9:Q:89:ASN:OD1	2.20	0.41
10:S:106:THR:HB	10:S:137:GLN:NE2	2.31	0.41
1:A:129:VAL:HG13	1:A:511:VAL:HG13	2.02	0.41
1:A:237:LEU:O	1:A:288:THR:HA	2.19	0.41
1:A:408:VAL:HG13	1:A:505:GLU:O	2.20	0.41
2:B:62:MET:HA	2:B:381:GLN:OE1	2.21	0.41
2:B:90:VAL:O	2:B:94:GLU:HG2	2.20	0.41
2:B:179:PHE:HZ	2:B:209:LEU:HB3	1.86	0.41
2:B:516:ARG:CZ	5:E:177:VAL:HG22	2.50	0.41
4:D:123:LEU:HB3	4:D:128:ILE:HD12	2.03	0.41
4:D:165:ASN:ND2	4:D:507:LEU:HD22	2.34	0.41
4:D:366:ASN:ND2	4:D:372:LYS:HE2	2.35	0.41
4:D:474:ILE:CG1	5:M:128:ILE:HD11	2.51	0.41
4:D:505:GLU:HG3	4:D:506:GLU:OE2	2.20	0.41
5:E:145:ILE:HD11	5:E:517:ILE:HB	2.02	0.41
5:E:255:PHE:HB2	5:E:306:PHE:HB2	2.02	0.41
7:G:292:LYS:HD2	7:G:316:GLU:OE2	2.20	0.41
8:H:83:ALA:HA	8:H:86:ILE:HG22	2.02	0.41
1:I:78:LEU:O	1:I:81:LEU:HG	2.20	0.41
1:I:121:TYR:CD1	1:I:441:PHE:CZ	3.09	0.41
3:K:381:LYS:HZ1	3:K:385:SER:HB3	1.84	0.41
5:M:38:ILE:HG13	5:M:39:MET:N	2.35	0.41
5:M:43:ALA:O	5:M:47:THR:OG1	2.25	0.41
5:M:123:LEU:HD23	5:M:123:LEU:O	2.20	0.41
7:O:23:VAL:HA	7:O:109:LYS:HZ2	1.85	0.41
9:Q:190:THR:O	9:Q:194:LEU:HD23	2.20	0.41
1:A:315:ASP:O	1:A:319:ILE:HG13	2.20	0.41
1:A:321:LYS:HE2	1:A:321:LYS:HB2	1.88	0.41
2:B:76:VAL:HG22	2:B:78:ASN:H	1.84	0.41
2:B:384:ASP:O	2:B:388:ARG:HG3	2.21	0.41
3:C:172:ALA:HA	3:C:175:ILE:HD12	2.02	0.41
4:D:173:SER:HG	4:D:174:LYS:HZ2	1.61	0.41
4:D:439:TYR:HD2	4:D:451:VAL:HG11	1.86	0.41
5:E:214:LYS:HG3	5:E:388:ARG:HH11	1.85	0.41
7:G:27:SER:O	7:G:31:VAL:HG23	2.20	0.41
7:G:38:THR:OG1	7:G:47:LYS:NZ	2.46	0.41
7:G:118:PRO:HA	7:G:121:ILE:HG22	2.02	0.41
8:H:417:ILE:HD12	8:H:468:TYR:CE1	2.55	0.41
1:I:294:ASP:OD2	3:K:333:SER:OG	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:408:VAL:HG21	1:I:504:PHE:HB3	2.02	0.41
1:I:472:ASN:O	1:I:476:VAL:HG22	2.20	0.41
2:J:99:THR:O	2:J:103:THR:HG23	2.19	0.41
3:K:171:LEU:O	3:K:175:ILE:HG13	2.20	0.41
3:K:299:LEU:HD11	3:K:303:TYR:CZ	2.55	0.41
4:L:77:ILE:O	4:L:81:MET:HE1	2.20	0.41
4:L:138:GLN:HE21	4:L:142:GLU:HG3	1.85	0.41
5:M:16:PHE:HZ	7:O:28:ALA:HB2	1.84	0.41
5:M:83:VAL:HG21	5:M:88:ALA:CB	2.51	0.41
6:N:102:LEU:HD23	6:N:102:LEU:HA	1.93	0.41
7:O:218:LYS:HB3	7:O:357:ARG:O	2.21	0.41
8:P:128:VAL:HG23	8:P:437:ALA:HB2	2.01	0.41
8:P:137:ARG:O	8:P:140:HIS:HB2	2.21	0.41
8:P:340:VAL:HG22	8:P:343:GLU:CD	2.40	0.41
1:A:218:CYS:HB2	1:A:362:ILE:CG1	2.49	0.41
1:A:483:LEU:O	1:A:486:ILE:HG22	2.21	0.41
2:B:86:ASP:O	2:B:90:VAL:HG23	2.21	0.41
2:B:147:ASP:OD1	2:B:404:SER:OG	2.33	0.41
2:B:256:VAL:HG11	4:D:258:THR:HG21	2.03	0.41
3:C:313:ARG:HE	9:Q:59:HIS:HE1	1.68	0.41
4:D:147:ILE:CG2	4:D:432:LEU:HD23	2.50	0.41
4:D:521:LEU:HA	4:D:524:GLU:HG3	2.02	0.41
5:E:529:LYS:NZ	7:G:167:LEU:HG	2.36	0.41
5:E:532:ASP:CB	7:G:47:LYS:HG3	2.51	0.41
6:F:206:LEU:HD23	6:F:206:LEU:H	1.86	0.41
7:G:280:LYS:HE3	7:G:335:ASN:HA	2.03	0.41
8:H:221:MET:HE2	8:H:323:ARG:HB3	2.03	0.41
1:I:423:LEU:HG	1:I:438:ILE:HG22	2.02	0.41
2:J:519:ASN:HD21	2:J:521:ILE:HD11	1.85	0.41
2:J:526:ARG:HD2	5:M:64:LYS:HD3	2.02	0.41
4:L:38:ILE:O	4:L:42:LYS:HG3	2.21	0.41
4:L:102:ALA:HA	4:L:414:CYS:SG	2.61	0.41
5:M:53:GLY:HA3	5:M:54:PRO:HD3	1.91	0.41
5:M:148:LEU:HD11	5:M:419:VAL:HG11	2.03	0.41
5:M:162:THR:O	5:M:166:ILE:HG12	2.21	0.41
5:M:234:PHE:CE2	5:M:241:LYS:HA	2.55	0.41
5:M:325:VAL:HB	5:M:330:ILE:HD11	2.02	0.41
5:M:453:ASP:HA	5:M:456:GLU:CD	2.40	0.41
6:N:54:ILE:O	6:N:55:LYS:HD2	2.20	0.41
6:N:196:MET:HG2	6:N:377:LYS:NZ	2.33	0.41
7:O:38:THR:HB	7:O:45:MET:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:78:THR:HG21	7:O:513:ILE:HD11	2.02	0.41
7:O:402:ASN:HD22	7:O:404:SER:HB3	1.85	0.41
10:S:187:ASP:OD1	10:S:206:ARG:NH1	2.51	0.41
1:A:203:ARG:H	1:A:378:ARG:NH2	2.18	0.41
2:B:316:ASP:OD1	2:B:319:GLY:HA3	2.20	0.41
4:D:84:LEU:HA	4:D:89:ARG:NH2	2.35	0.41
5:E:532:ASP:OD1	5:E:533:ILE:N	2.54	0.41
6:F:77:ILE:HD11	6:F:515:ILE:HD11	2.02	0.41
6:F:426:LYS:O	6:F:434:GLN:HG2	2.21	0.41
7:G:157:LYS:O	7:G:160:MET:HG3	2.21	0.41
7:G:158:CYS:SG	7:G:405:VAL:HG11	2.61	0.41
7:G:275:TYR:CD1	7:G:278:LEU:HD12	2.56	0.41
8:H:129:ILE:HD13	8:H:520:ARG:HG3	2.03	0.41
8:H:289:ASN:OD1	8:H:290:VAL:HG23	2.20	0.41
1:I:44:MET:O	3:K:522:ILE:HA	2.20	0.41
1:I:274:ARG:HA	1:I:277:LYS:HD3	2.03	0.41
1:I:530:LEU:HD12	1:I:531:ILE:N	2.35	0.41
2:J:141:LEU:HG	2:J:497:PHE:CE1	2.56	0.41
4:L:410:CYS:HA	4:L:413:ARG:HG2	2.02	0.41
5:M:88:ALA:O	5:M:92:VAL:HG23	2.20	0.41
5:M:292:ILE:HA	5:M:348:LEU:HD21	2.02	0.41
5:M:442:THR:OG1	5:M:443:LEU:N	2.54	0.41
7:O:23:VAL:HG13	7:O:109:LYS:NZ	2.36	0.41
7:O:406:VAL:HG13	7:O:496:ALA:HA	2.02	0.41
8:P:418:GLU:O	8:P:422:GLN:HG3	2.20	0.41
9:Q:95:LEU:HD21	9:Q:145:LYS:HE2	2.03	0.41
10:S:20:GLY:HA3	10:S:27:PRO:HA	2.02	0.41
1:A:219:VAL:HG12	1:A:360:GLU:HG3	2.02	0.41
1:A:320:ALA:HA	1:A:325:ALA:HB3	2.03	0.41
1:A:389:GLU:OE2	1:A:390:ARG:HG3	2.21	0.41
2:B:408:TYR:HB3	2:B:488:MET:HE1	2.03	0.41
2:B:521:ILE:HG21	5:E:81:MET:HE2	2.02	0.41
3:C:228:ARG:HE	6:F:325:THR:HB	1.86	0.41
4:D:525:THR:O	4:D:529:ILE:HG13	2.20	0.41
7:G:172:LYS:HE2	7:G:172:LYS:HB3	1.80	0.41
7:G:249:GLU:HG2	8:H:268:PHE:CD2	2.55	0.41
7:G:303:PHE:O	7:G:307:ASP:N	2.54	0.41
8:H:182:LEU:HD21	8:H:375:ILE:HG21	2.02	0.41
1:I:107:LEU:HD22	1:I:117:VAL:HG21	2.03	0.41
1:I:202:GLY:H	1:I:379:GLY:H	1.67	0.41
2:J:285:HIS:CE1	2:J:338:PRO:HA	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:149:SER:O	3:K:153:LEU:HD13	2.20	0.41
4:L:285:ASN:O	4:L:289:GLN:HG2	2.20	0.41
4:L:315:HIS:CE1	4:L:319:LYS:HZ2	2.39	0.41
5:M:190:VAL:O	5:M:194:LEU:HG	2.20	0.41
7:O:269:ALA:O	8:P:266:MET:HE1	2.20	0.41
8:P:49:PRO:HG3	8:P:169:MET:HE3	2.02	0.41
9:Q:76:ARG:O	9:Q:79:LEU:HG	2.21	0.41
9:Q:183:VAL:O	9:Q:197:LYS:NZ	2.54	0.41
10:S:291:LYS:O	10:S:294:TYR:HB2	2.20	0.41
1:A:259:LYS:HE3	1:A:259:LYS:HB3	1.89	0.41
1:A:286:ILE:O	1:A:307:ALA:HA	2.21	0.41
1:A:483:LEU:HA	1:A:483:LEU:HD23	1.83	0.41
2:B:71:LEU:HD22	2:B:85:VAL:HG22	2.01	0.41
2:B:409:GLY:N	2:B:495:GLU:OE1	2.54	0.41
3:C:53:PRO:HG3	6:F:525:GLY:HA3	2.01	0.41
3:C:86:THR:O	3:C:89:GLU:HG3	2.21	0.41
3:C:195:ILE:HG21	3:C:198:TYR:HD1	1.86	0.41
4:D:42:LYS:HD2	4:D:118:ASP:HB3	2.02	0.41
5:E:62:VAL:HA	5:E:67:ASP:O	2.21	0.41
5:E:129:HIS:HD1	5:E:131:ILE:HB	1.86	0.41
5:E:227:GLY:HA2	5:E:376:GLN:NE2	2.32	0.41
5:E:349:THR:HB	5:E:351:GLU:OE1	2.21	0.41
6:F:71:HIS:CE1	8:H:14:MET:HB3	2.56	0.41
6:F:229:TYR:HB3	6:F:344:LEU:HD22	2.02	0.41
6:F:232:THR:HB	6:F:324:LEU:HD23	2.02	0.41
6:F:300:PHE:CE1	8:H:334:PRO:HB2	2.56	0.41
7:G:116:LEU:HD21	7:G:434:LEU:HD21	2.03	0.41
7:G:143:VAL:CG1	7:G:154:LEU:HD13	2.50	0.41
7:G:144:LYS:HD2	7:G:144:LYS:HA	1.84	0.41
8:H:3:LEU:O	6:N:523:ARG:HD2	2.21	0.41
8:H:136:CYS:SG	8:H:512:THR:HG21	2.61	0.41
1:I:77:GLU:HA	1:I:80:ASP:OD2	2.20	0.41
1:I:196:ASN:OD1	1:I:318:ARG:NH1	2.53	0.41
1:I:437:ALA:O	1:I:441:PHE:CD2	2.74	0.41
2:J:90:VAL:HG21	5:M:390:GLY:O	2.21	0.41
2:J:219:LEU:HB2	2:J:372:THR:HG21	2.03	0.41
2:J:375:LEU:HD11	2:J:390:LEU:HD21	2.03	0.41
2:J:434:VAL:HA	2:J:437:GLU:HG3	2.02	0.41
2:J:520:ILE:HD13	5:M:60:MET:O	2.21	0.41
3:K:226:HIS:CG	3:K:227:PRO:HD2	2.55	0.41
3:K:233:ILE:N	3:K:350:LEU:HB3	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:245:LEU:HD12	3:K:296:ILE:HG12	2.03	0.41
3:K:446:VAL:HA	3:K:449:ARG:CD	2.50	0.41
4:L:42:LYS:HE2	4:L:42:LYS:HB2	1.82	0.41
4:L:61:ILE:HG21	4:L:80:GLN:CB	2.51	0.41
4:L:112:ILE:HG12	4:L:461:ILE:HD11	2.02	0.41
4:L:282:TYR:O	4:L:286:LEU:HG	2.21	0.41
4:L:304:ILE:HG22	4:L:305:LEU:N	2.35	0.41
4:L:433:ALA:HB2	4:L:458:MET:HB2	2.03	0.41
5:M:174:GLY:O	5:M:175:SER:OG	2.39	0.41
5:M:221:ASP:HB2	5:M:388:ARG:HB2	2.02	0.41
5:M:292:ILE:O	5:M:295:THR:HG22	2.21	0.41
6:N:376:ILE:HG22	6:N:384:LEU:HD13	2.02	0.41
6:N:388:LYS:HA	6:N:391:VAL:HG22	2.02	0.41
7:O:384:GLU:O	7:O:387:ARG:HG2	2.21	0.41
7:O:421:ARG:HA	7:O:424:SER:HB3	2.03	0.41
8:P:421:LYS:HE3	8:P:421:LYS:HB3	1.90	0.41
9:Q:32:GLU:O	9:Q:36:GLU:HG2	2.21	0.41
1:A:239:PHE:HD2	1:A:329:SER:O	2.03	0.41
2:B:64:THR:HA	2:B:385:GLU:CD	2.42	0.41
3:C:15:LYS:HB3	3:C:17:GLU:OE2	2.21	0.41
3:C:240:LEU:HD12	3:C:291:ILE:O	2.21	0.41
3:C:350:LEU:HD13	3:C:363:ILE:HD13	2.03	0.41
4:D:497:LYS:HE2	4:D:497:LYS:HB3	1.92	0.41
5:E:132:ARG:HD2	7:G:43:ARG:HH12	1.85	0.41
5:E:186:ALA:O	5:E:190:VAL:HG13	2.21	0.41
5:E:393:MET:N	5:E:393:MET:SD	2.94	0.41
6:F:5:LYS:HE3	6:F:9:PRO:O	2.20	0.41
6:F:240:GLU:N	6:F:240:GLU:OE1	2.54	0.41
6:F:379:PRO:HG3	8:H:513:ASN:ND2	2.36	0.41
7:G:368:LYS:HA	7:G:368:LYS:HD3	1.78	0.41
7:G:414:MET:HG3	7:G:464:LEU:HD13	2.03	0.41
8:H:57:ILE:CD1	8:H:63:LEU:HG	2.51	0.41
8:H:220:GLY:HA3	8:H:363:PHE:O	2.20	0.41
1:I:228:ARG:HG2	3:K:190:ARG:HH21	1.86	0.41
1:I:292:ILE:HG13	1:I:309:ARG:HB3	2.03	0.41
2:J:18:GLU:HB3	2:J:521:ILE:HG23	2.03	0.41
2:J:187:VAL:HG21	2:J:397:LEU:HB3	2.02	0.41
2:J:269:HIS:O	2:J:273:GLU:HG2	2.20	0.41
3:K:267:ILE:O	3:K:270:MET:HG2	2.21	0.41
3:K:424:GLU:HA	3:K:427:LYS:NZ	2.36	0.41
4:L:494:ASN:ND2	4:L:506:GLU:OE2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:185:MET:HG3	5:M:222:THR:HG21	2.02	0.41
6:N:123:PHE:CD1	6:N:440:PHE:HD2	2.39	0.41
6:N:252:SER:N	6:N:255:GLU:OE1	2.54	0.41
8:P:44:ARG:O	8:P:44:ARG:HD2	2.20	0.41
9:Q:137:LEU:HD12	9:Q:140:LYS:HE2	2.03	0.41
9:Q:140:LYS:NZ	9:Q:191:ARG:HD2	2.36	0.41
10:S:11:ASP:OD1	10:S:18:LYS:HB2	2.21	0.41
10:S:71:ILE:HD12	10:S:76:VAL:HA	2.02	0.41
10:S:87:HIS:O	10:S:91:TYR:HB2	2.21	0.41
10:S:287:VAL:HG22	10:S:290:ARG:CZ	2.51	0.41
1:A:252:VAL:HG13	4:D:266:VAL:HG12	2.03	0.40
1:A:336:GLY:O	4:D:280:ARG:HD2	2.21	0.40
1:A:381:ASN:OD1	1:A:384:MET:HG3	2.21	0.40
1:A:461:THR:OG1	1:A:462:ASP:N	2.54	0.40
1:A:505:GLU:OE1	1:A:506:PRO:HD2	2.21	0.40
2:B:9:VAL:HB	5:E:39:MET:HE2	2.03	0.40
2:B:246:THR:O	2:B:246:THR:HG22	2.20	0.40
3:C:185:PHE:CG	3:C:186:GLU:N	2.89	0.40
3:C:380:SER:HA	6:F:79:LYS:NZ	2.36	0.40
4:D:243:LYS:NZ	4:D:360:GLU:OE1	2.41	0.40
5:E:229:ILE:HG12	5:E:384:THR:HG21	2.03	0.40
6:F:191:ILE:HG23	6:F:372:VAL:HG23	2.03	0.40
6:F:446:ILE:HA	6:F:449:LYS:HE3	2.03	0.40
7:G:398:ARG:C	7:G:497:MET:HE1	2.41	0.40
1:I:357:CYS:SG	1:I:378:ARG:NH2	2.94	0.40
2:J:381:GLN:NE2	4:L:90:MET:SD	2.94	0.40
4:L:364:GLU:OE2	4:L:372:LYS:NZ	2.40	0.40
9:Q:72:GLU:HG2	9:Q:75:ARG:HH21	1.86	0.40
10:S:189:LEU:O	10:S:193:LEU:N	2.54	0.40
1:A:26:ALA:O	1:A:29:ALA:HB3	2.21	0.40
1:A:45:LEU:HD22	1:A:65:LEU:HD21	2.04	0.40
1:A:123:LEU:HD12	1:A:124:ALA:N	2.37	0.40
2:B:85:VAL:O	2:B:89:ARG:HG2	2.21	0.40
2:B:290:PHE:HE2	2:B:292:ASN:HB2	1.86	0.40
2:B:414:GLU:OE2	2:B:500:LYS:NZ	2.34	0.40
3:C:238:ILE:HD11	3:C:347:ALA:HB2	2.02	0.40
3:C:463:LEU:HD21	3:C:467:ARG:HH22	1.86	0.40
5:E:332:LEU:HA	5:E:335:ILE:HD12	2.04	0.40
6:F:116:PRO:O	6:F:120:THR:HG23	2.21	0.40
7:G:376:GLY:HA3	7:G:382:MET:SD	2.60	0.40
8:H:203:ARG:O	8:H:374:THR:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:280:VAL:HG12	8:H:308:TYR:CD2	2.56	0.40
1:I:239:PHE:HB2	1:I:329:SER:O	2.22	0.40
1:I:397:CYS:O	1:I:401:ARG:HG2	2.21	0.40
2:J:245:ASP:CG	2:J:246:THR:HG23	2.42	0.40
3:K:239:VAL:HG23	3:K:290:VAL:HG23	2.02	0.40
4:L:423:ALA:HA	4:L:509:VAL:HA	2.03	0.40
5:M:184:GLN:O	5:M:188:ILE:HG23	2.20	0.40
6:N:327:ALA:HB2	6:N:371:SER:HB2	2.03	0.40
6:N:433:ALA:O	6:N:437:VAL:HG23	2.21	0.40
7:O:418:LYS:HE3	7:O:418:LYS:HB3	1.91	0.40
9:Q:47:THR:OG1	9:Q:50:ASP:HB2	2.21	0.40
1:A:267:GLU:OE1	1:A:267:GLU:N	2.54	0.40
3:C:123:ILE:HA	3:C:126:TYR:HD2	1.85	0.40
3:C:222:LYS:HE3	3:C:315:VAL:HA	2.04	0.40
5:E:261:LYS:HG2	7:G:247:LYS:HA	2.02	0.40
5:E:463:SER:OG	5:E:470:PRO:HA	2.22	0.40
5:E:531:ASP:HB3	7:G:45:MET:CE	2.51	0.40
6:F:123:PHE:HE1	6:F:436:GLY:O	2.04	0.40
6:F:256:ARG:NE	8:H:249:MET:O	2.54	0.40
6:F:339:LEU:HA	6:F:339:LEU:HD23	1.80	0.40
7:G:256:ARG:O	8:H:260:LYS:HG2	2.21	0.40
7:G:418:LYS:HB3	7:G:418:LYS:HE2	1.84	0.40
8:H:108:ALA:HA	8:H:111:LEU:HG	2.02	0.40
8:H:417:ILE:HG23	8:H:468:TYR:CE1	2.56	0.40
2:J:220:LEU:HD11	2:J:323:LEU:HD21	2.03	0.40
3:K:227:PRO:O	3:K:230:ARG:NH2	2.54	0.40
3:K:276:GLN:HA	3:K:303:TYR:CE2	2.56	0.40
3:K:313:ARG:HG3	3:K:314:ARG:N	2.26	0.40
4:L:123:LEU:HB3	4:L:128:ILE:HD12	2.03	0.40
4:L:137:PHE:CD1	4:L:454:PHE:CE1	3.07	0.40
5:M:154:SER:HA	5:M:416:ASN:CA	2.51	0.40
5:M:397:GLU:OE1	5:M:400:ARG:NH1	2.50	0.40
5:M:494:LEU:HD12	5:M:504:GLN:NE2	2.36	0.40
6:N:230:ILE:HD13	6:N:290:VAL:HB	2.04	0.40
6:N:380:ASN:HB3	6:N:382:HIS:CD2	2.55	0.40
7:O:172:LYS:O	7:O:176:ALA:CB	2.70	0.40
7:O:325:ALA:O	7:O:366:LYS:HB2	2.21	0.40
8:P:138:LYS:HE2	8:P:426:TYR:CD1	2.56	0.40
1:A:496:ARG:NH2	1:A:501:ALA:HB2	2.33	0.40
2:B:222:LYS:HE2	2:B:315:ALA:HA	2.04	0.40
2:B:238:LEU:HB2	2:B:287:ILE:HG21	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:45:SER:H	6:F:117:ARG:NH1	2.20	0.40
3:C:398:CYS:O	3:C:402:LEU:HG	2.21	0.40
5:E:308:ASP:HA	5:E:311:ASN:HB2	2.03	0.40
5:E:435:GLN:O	5:E:439:LYS:HG2	2.21	0.40
5:E:531:ASP:HB3	7:G:45:MET:HE3	2.02	0.40
6:F:140:SER:HA	6:F:406:CYS:HA	2.04	0.40
6:F:308:GLU:HG2	6:F:310:ILE:HG13	2.04	0.40
7:G:153:LYS:O	7:G:157:LYS:HG2	2.21	0.40
8:H:283:ILE:HG13	8:H:338:PRO:HG3	2.03	0.40
1:I:44:MET:HE3	1:I:54:ILE:HG13	2.04	0.40
1:I:434:GLU:O	1:I:438:ILE:HG12	2.21	0.40
2:J:130:TRP:CD1	2:J:439:TYR:HB2	2.57	0.40
3:K:158:SER:CB	3:K:496:TRP:H	2.34	0.40
4:L:525:THR:O	4:L:529:ILE:HG13	2.21	0.40
5:M:139:GLN:O	5:M:143:VAL:HG23	2.21	0.40
6:N:196:MET:HG3	6:N:198:HIS:CE1	2.56	0.40
6:N:249:PHE:CD2	8:P:256:THR:HB	2.57	0.40
7:O:228:GLN:H	7:O:228:GLN:CD	2.23	0.40
8:P:69:ALA:HA	8:P:72:ILE:HD12	2.03	0.40
8:P:138:LYS:O	8:P:141:GLU:HG3	2.20	0.40
8:P:144:PRO:HG3	8:P:501:TYR:CZ	2.56	0.40
8:P:270:LYS:O	8:P:273:GLU:HG2	2.20	0.40
9:Q:190:THR:OG1	9:Q:191:ARG:N	2.55	0.40
1:A:16:THR:O	1:A:19:SER:HB2	2.22	0.40
1:A:421:ILE:HD13	1:A:421:ILE:HA	1.95	0.40
2:B:130:TRP:NE1	2:B:439:TYR:HB2	2.36	0.40
3:C:132:ASP:OD1	3:C:425:LYS:HD3	2.22	0.40
4:D:29:LYS:HB3	4:D:30:PRO:HD3	2.04	0.40
4:D:254:SER:OG	4:D:306:ARG:NE	2.54	0.40
5:E:204:VAL:HG22	5:E:205:ASP:H	1.86	0.40
5:E:336:ALA:HA	5:E:380:SER:HB2	2.03	0.40
7:G:103:GLU:OE2	7:G:444:ILE:HG21	2.21	0.40
7:G:163:LEU:HD12	7:G:172:LYS:HA	2.03	0.40
7:G:203:GLY:HA3	7:G:375:ARG:HB3	2.03	0.40
8:H:190:ILE:HG21	8:H:202:ILE:HD11	2.03	0.40
1:I:312:LEU:HB2	1:I:315:ASP:OD2	2.21	0.40
1:I:482:ASN:HA	1:I:485:TRP:CD1	2.56	0.40
2:J:248:LYS:H	2:J:248:LYS:HG2	1.72	0.40
3:K:137:LEU:O	3:K:141:SER:N	2.54	0.40
3:K:322:ARG:HG2	3:K:371:ALA:HB1	2.03	0.40
3:K:426:SER:HB3	3:K:437:TYR:CE1	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:5:PRO:HB2	7:O:6:VAL:H	1.78	0.40
7:O:62:GLY:H	7:O:95:THR:HG23	1.86	0.40
7:O:100:LEU:HD22	7:O:442:LEU:HD23	2.03	0.40
7:O:109:LYS:N	7:O:110:PRO:HD2	2.37	0.40
7:O:122:ILE:O	7:O:126:ARG:HG2	2.21	0.40
7:O:194:MET:HG3	7:O:369:THR:OG1	2.22	0.40
10:S:261:LEU:HD23	10:S:262:PHE:CE1	2.56	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	532/556 (96%)	486 (91%)	46 (9%)	0	100	100
1	I	532/556 (96%)	485 (91%)	47 (9%)	0	100	100
2	B	519/535 (97%)	481 (93%)	38 (7%)	0	100	100
2	J	525/535 (98%)	494 (94%)	31 (6%)	0	100	100
3	C	519/545 (95%)	486 (94%)	33 (6%)	0	100	100
3	K	519/545 (95%)	486 (94%)	33 (6%)	0	100	100
4	D	519/539 (96%)	492 (95%)	27 (5%)	0	100	100
4	L	511/539 (95%)	486 (95%)	25 (5%)	0	100	100
5	E	525/541 (97%)	495 (94%)	30 (6%)	0	100	100
5	M	522/541 (96%)	491 (94%)	31 (6%)	0	100	100
6	F	523/531 (98%)	491 (94%)	32 (6%)	0	100	100
6	N	523/531 (98%)	495 (95%)	28 (5%)	0	100	100
7	G	520/543 (96%)	492 (95%)	28 (5%)	0	100	100
7	O	519/543 (96%)	481 (93%)	38 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	H	526/548 (96%)	494 (94%)	32 (6%)	0	100	100
8	P	526/548 (96%)	496 (94%)	30 (6%)	0	100	100
9	Q	200/239 (84%)	190 (95%)	10 (5%)	0	100	100
10	S	350/375 (93%)	321 (92%)	29 (8%)	0	100	100
All	All	8910/9290 (96%)	8342 (94%)	568 (6%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains (i)

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	443/463 (96%)	442 (100%)	1 (0%)	93	96
1	I	445/463 (96%)	445 (100%)	0	100	100
2	B	415/427 (97%)	415 (100%)	0	100	100
2	J	419/427 (98%)	417 (100%)	2 (0%)	88	93
3	C	452/469 (96%)	451 (100%)	1 (0%)	93	96
3	K	452/469 (96%)	451 (100%)	1 (0%)	93	96
4	D	443/452 (98%)	443 (100%)	0	100	100
4	L	438/452 (97%)	436 (100%)	2 (0%)	88	93
5	E	445/456 (98%)	442 (99%)	3 (1%)	84	90
5	M	443/456 (97%)	440 (99%)	3 (1%)	84	90
6	F	438/442 (99%)	434 (99%)	4 (1%)	78	87
6	N	439/442 (99%)	439 (100%)	0	100	100
7	G	429/443 (97%)	429 (100%)	0	100	100
7	O	428/443 (97%)	426 (100%)	2 (0%)	88	93
8	H	436/452 (96%)	435 (100%)	1 (0%)	93	96
8	P	436/452 (96%)	435 (100%)	1 (0%)	93	96
9	Q	178/215 (83%)	177 (99%)	1 (1%)	86	92

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
10	S	302/318 (95%)	301 (100%)	1 (0%)	92 95
All	All	7481/7741 (97%)	7458 (100%)	23 (0%)	92 95

All (23) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	199	LYS
3	C	190	ARG
5	E	86	GLN
5	E	261	LYS
5	E	535	LYS
6	F	241	LYS
6	F	392	ARG
6	F	432	ARG
6	F	526	MET
8	H	224	LYS
2	J	154	LYS
2	J	488	MET
3	K	399	ARG
4	L	206	ARG
4	L	418	LYS
5	M	218	ARG
5	M	344	ARG
5	M	414	ARG
7	O	55	LYS
7	O	344	ARG
8	P	206	LYS
9	Q	83	LYS
10	S	28	ARG

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

Mol	Chain	Res	Type
2	B	502	GLN
4	D	62	GLN
4	D	80	GLN
4	D	347	HIS
5	E	72	ASN
5	E	376	GLN
6	F	68	GLN
6	F	382	HIS

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Mol	Chain	Res	Type
6	F	460	GLN
7	G	21	GLN
7	G	73	HIS
7	G	119	GLN
7	G	130	GLN
7	G	134	ASN
7	G	380	GLN
7	G	501	ASN
8	H	365	HIS
1	I	56	ASN
1	I	110	GLN
1	I	170	ASN
1	I	196	ASN
1	I	217	ASN
1	I	223	GLN
1	I	353	GLN
2	J	294	GLN
3	K	28	ASN
3	K	73	GLN
3	K	188	ASN
3	K	301	GLN
3	K	396	GLN
4	L	62	GLN
4	L	72	ASN
4	L	80	GLN
4	L	263	GLN
4	L	510	GLN
5	M	46	ASN
5	M	312	HIS
5	M	316	GLN
6	N	71	HIS
6	N	198	HIS
6	N	334	ASN
7	O	134	ASN
7	O	487	ASN
7	O	501	ASN
8	P	172	GLN
8	P	422	GLN
8	P	471	HIS
9	Q	89	ASN
10	S	59	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

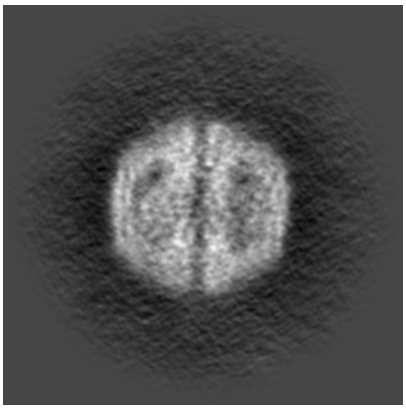
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-35335. These allow visual inspection of the internal detail of the map and identification of artifacts.

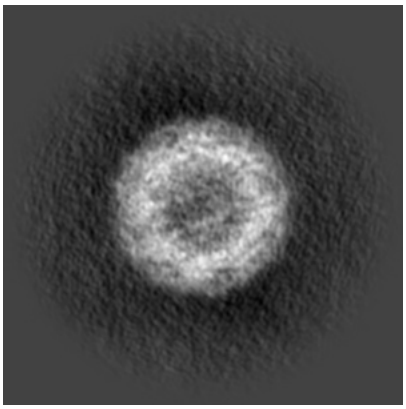
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

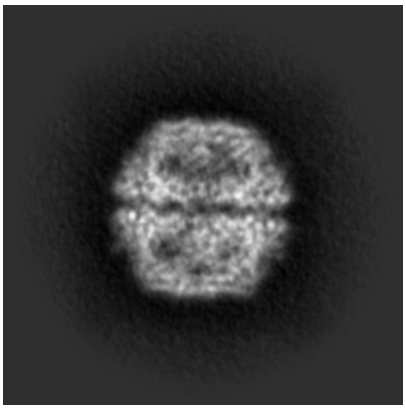
6.1.1 Primary map



X

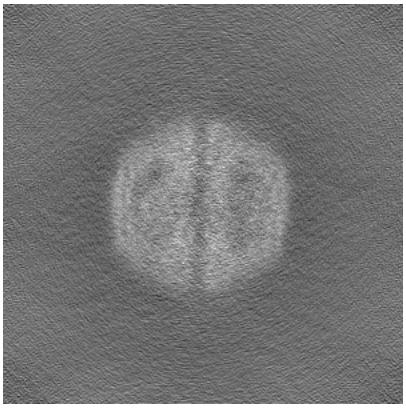


Y

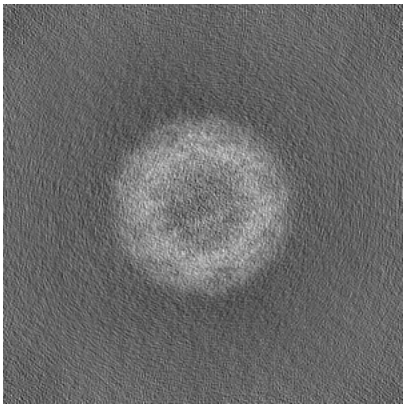


Z

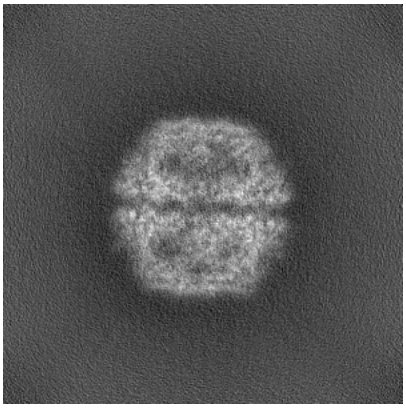
6.1.2 Raw map



X



Y

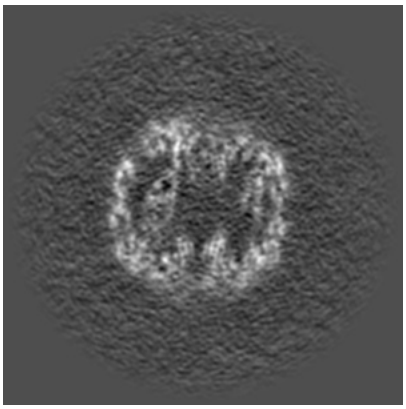


Z

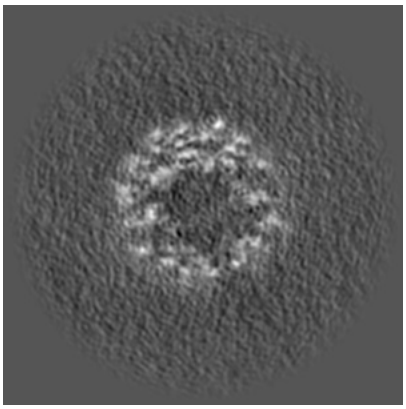
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

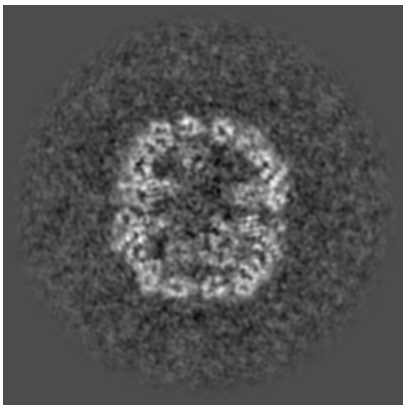
6.2.1 Primary map



X Index: 160

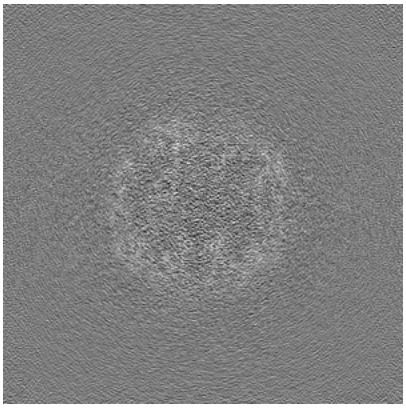


Y Index: 160

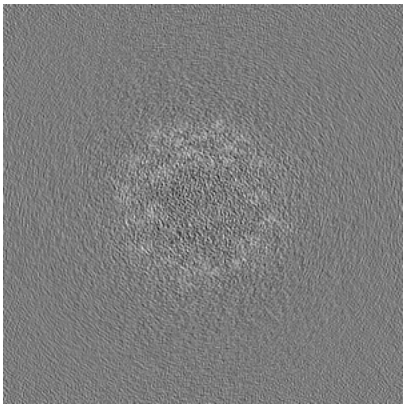


Z Index: 160

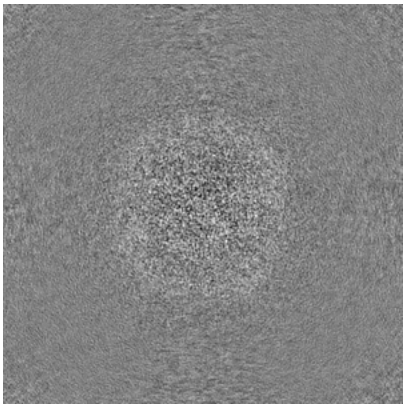
6.2.2 Raw map



X Index: 160



Y Index: 160

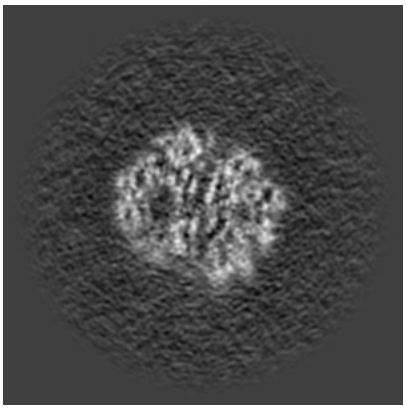


Z Index: 160

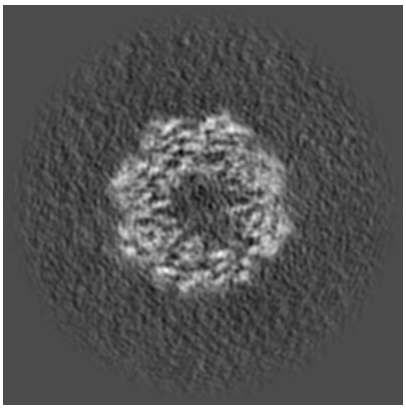
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

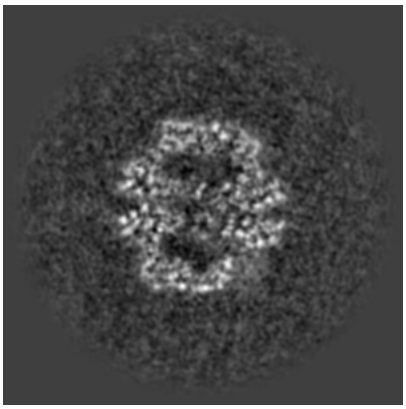
6.3.1 Primary map



X Index: 119

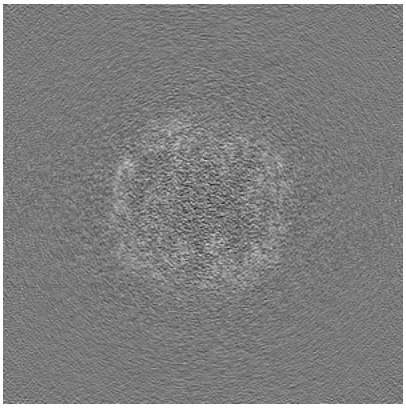


Y Index: 167

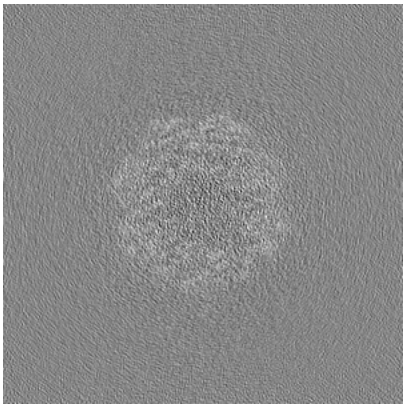


Z Index: 184

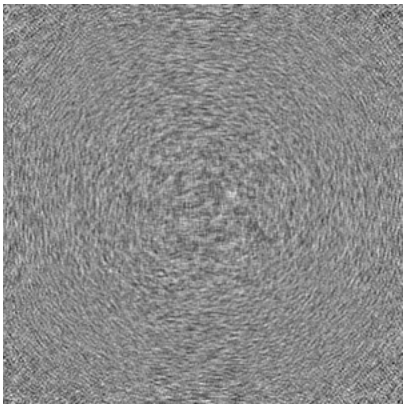
6.3.2 Raw map



X Index: 161



Y Index: 166

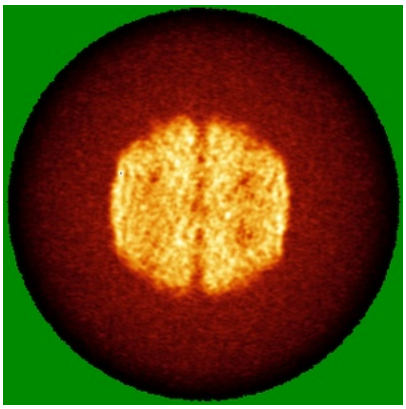


Z Index: 0

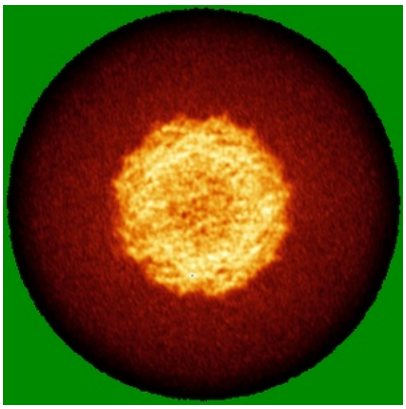
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

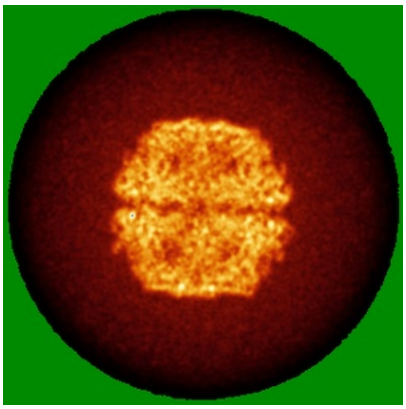
6.4.1 Primary map



X

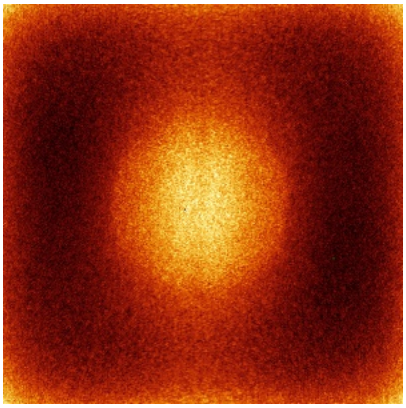


Y

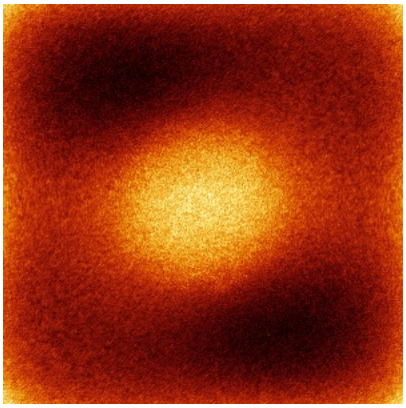


Z

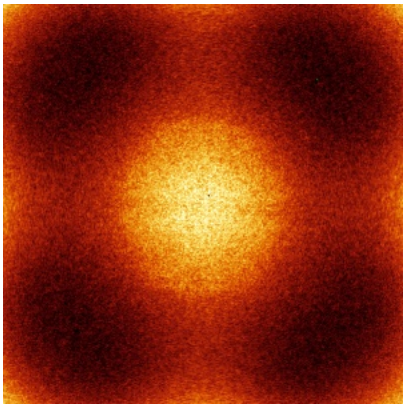
6.4.2 Raw map



X



Y

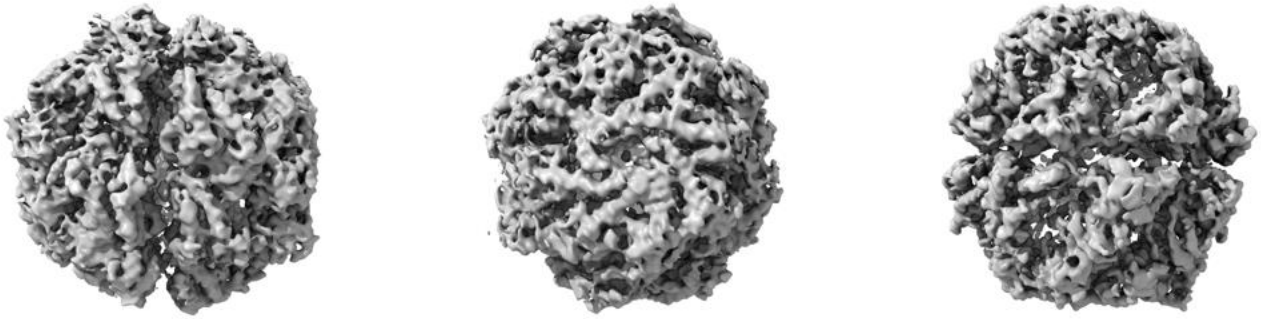


Z

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

6.5 Orthogonal surface views (i)

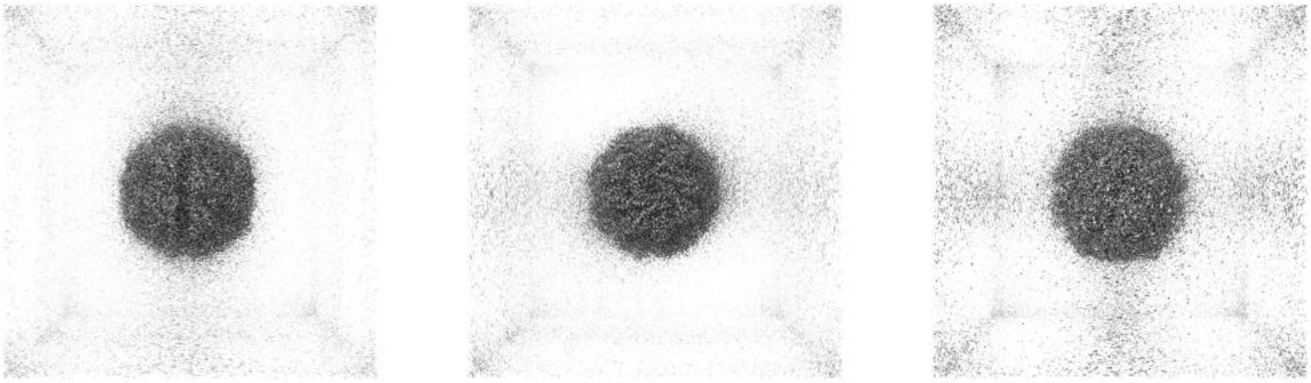
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.135. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

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

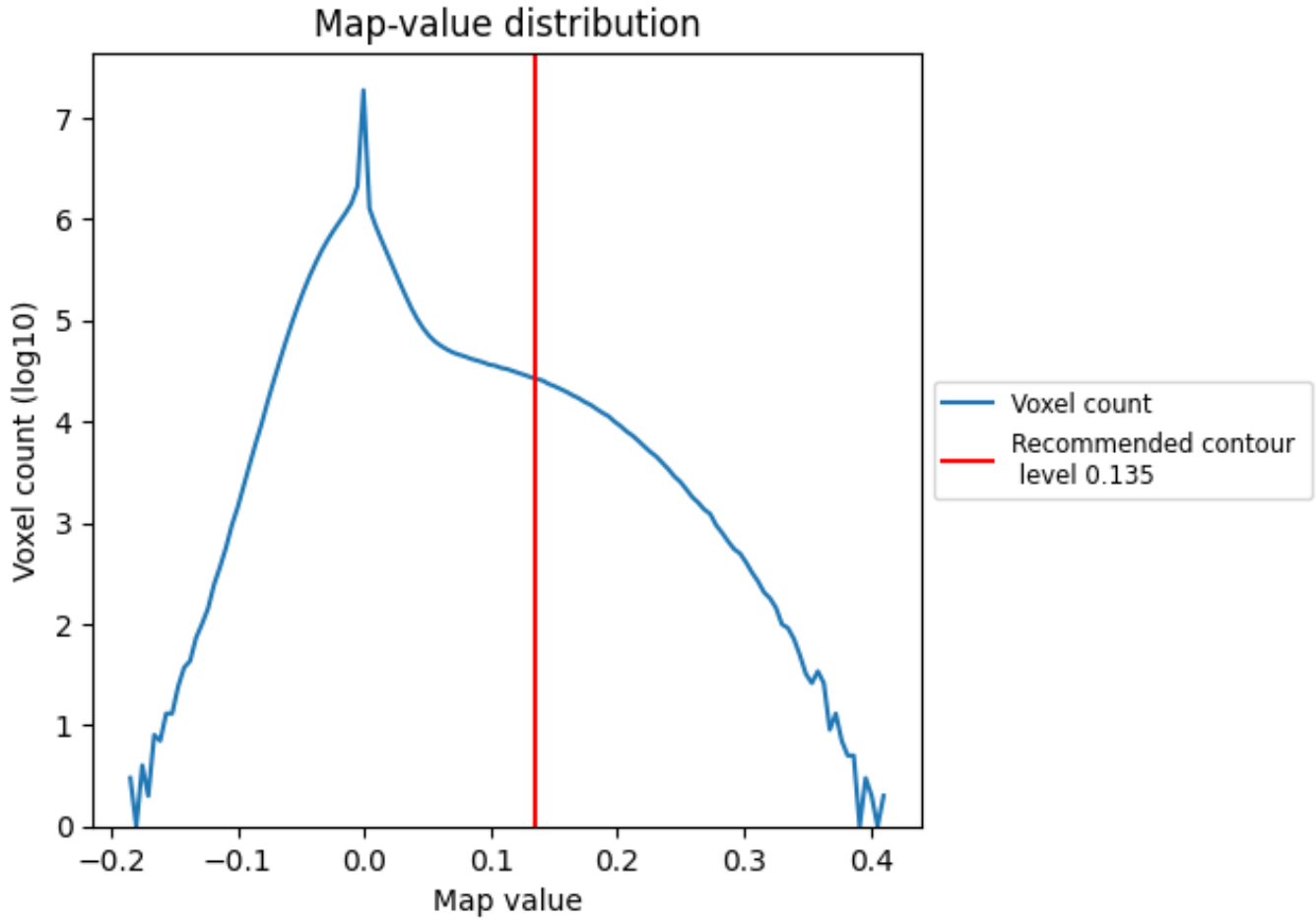
6.6 Mask visualisation (i)

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

7 Map analysis

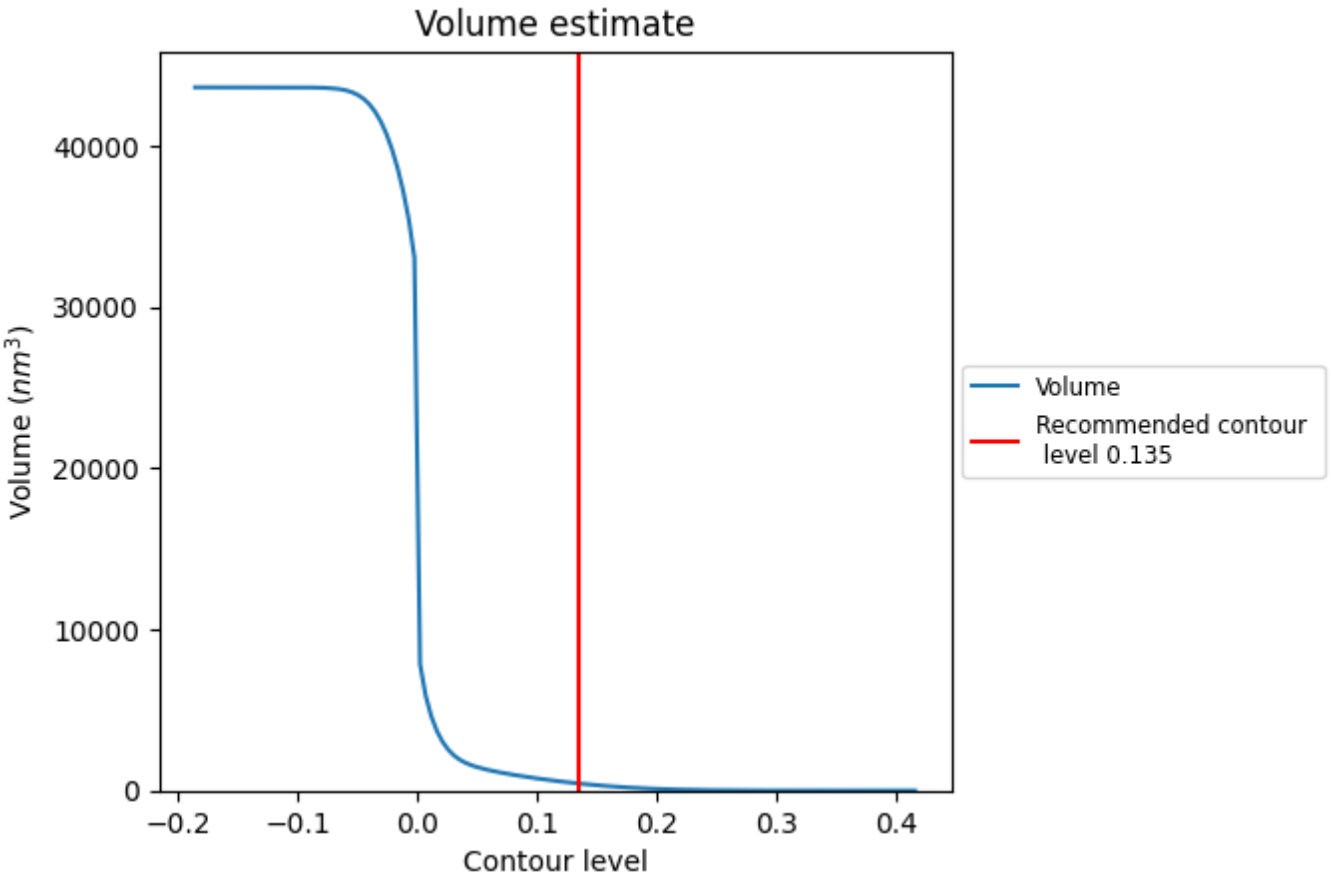
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

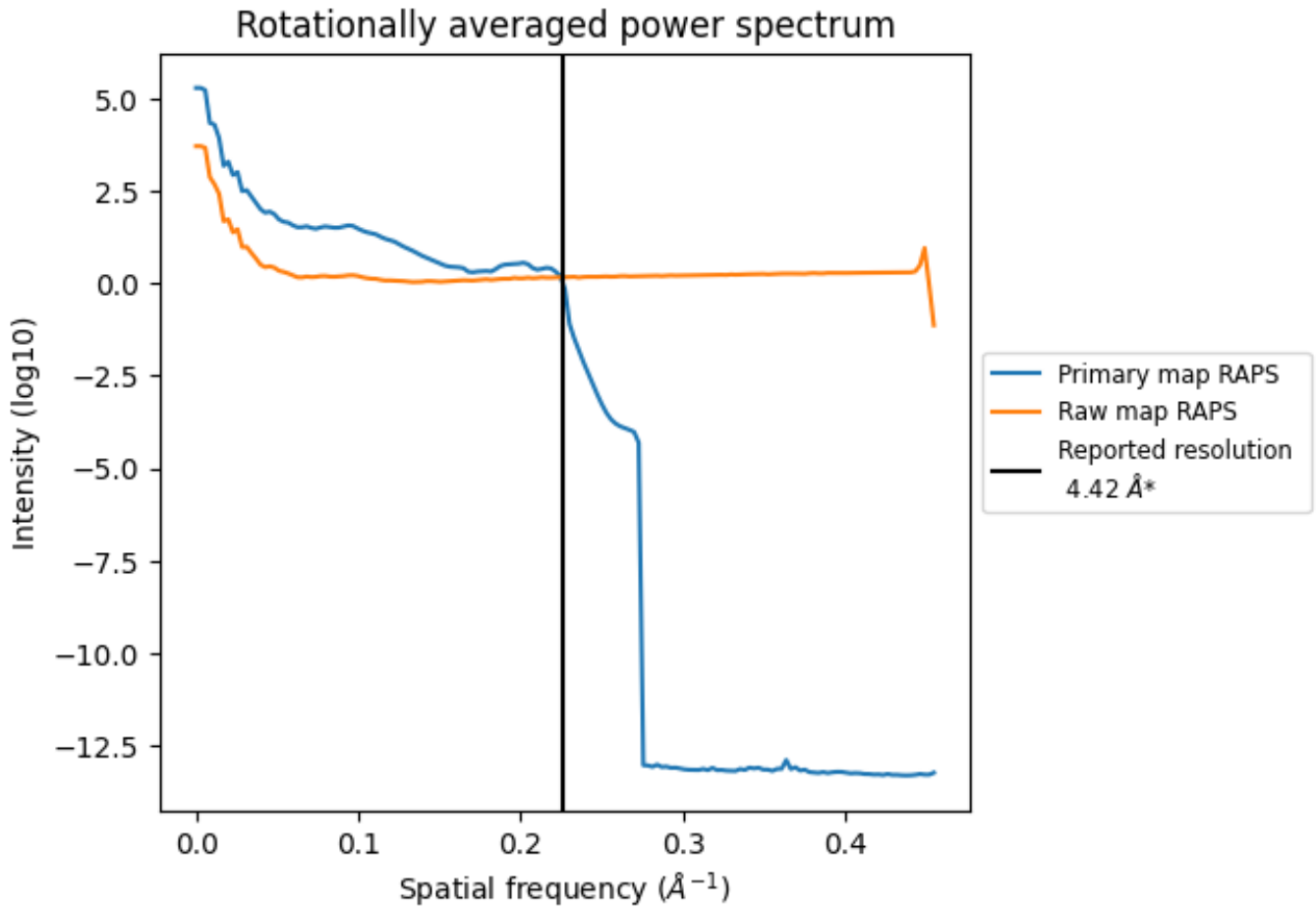
7.2 Volume estimate



The volume at the recommended contour level is 437 nm^3; this corresponds to an approximate mass of 395 kDa.

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

7.3 Rotationally averaged power spectrum (i)

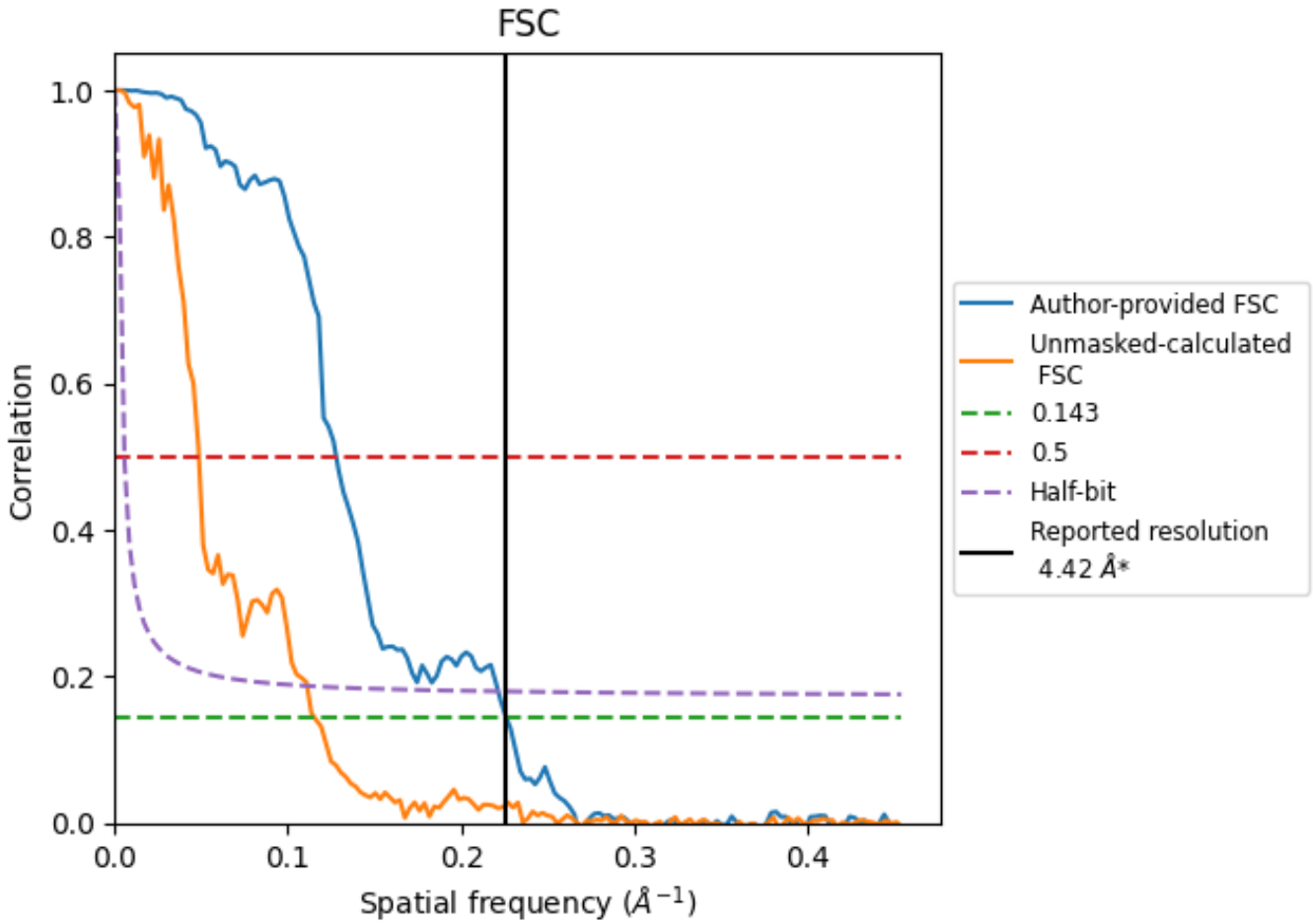


*Reported resolution corresponds to spatial frequency of 0.226 $Å^{-1}$

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.226 Å^{-1}

8.2 Resolution estimates (i)

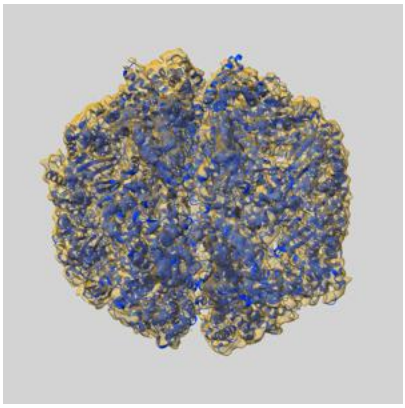
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.42	-	-
Author-provided FSC curve	4.42	7.82	4.51
Unmasked-calculated*	8.65	20.58	9.00

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 8.65 differs from the reported value 4.42 by more than 10 %

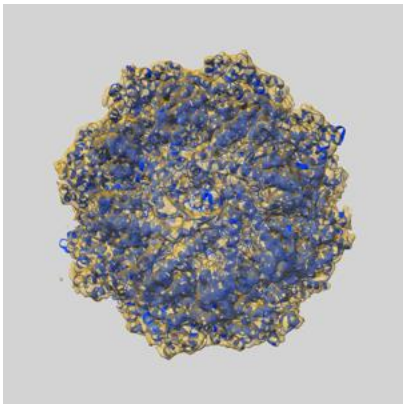
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-35335 and PDB model 8IB8. Per-residue inclusion information can be found in section 3 on page 6.

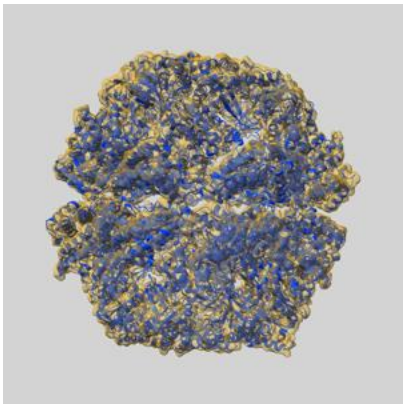
9.1 Map-model overlay



X



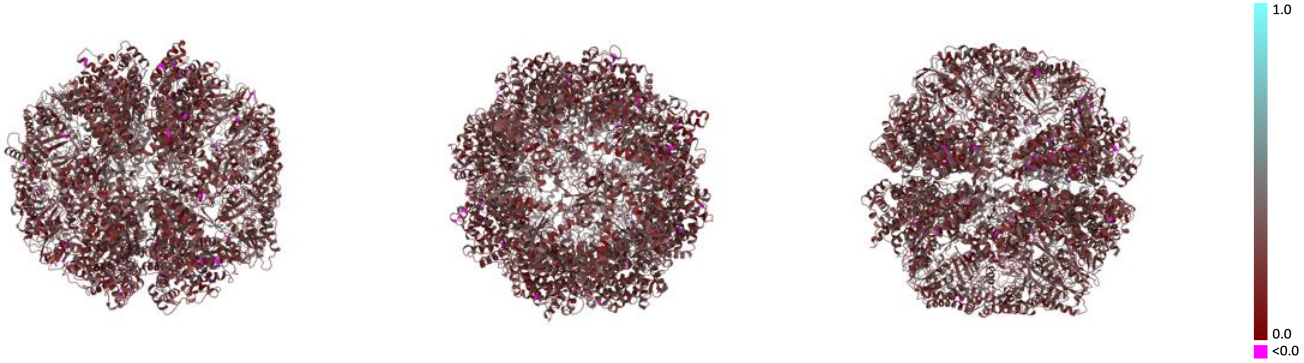
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.135 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

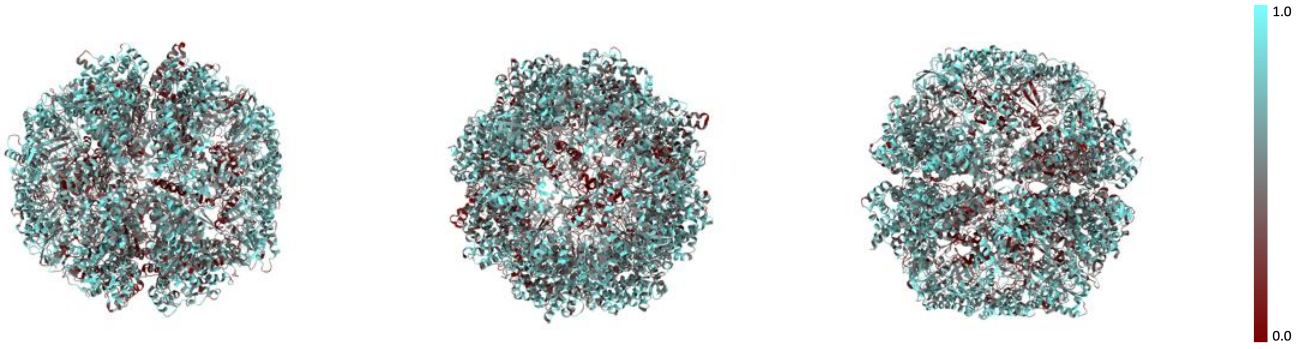
9.2 Q-score mapped to coordinate model



X Y Z

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

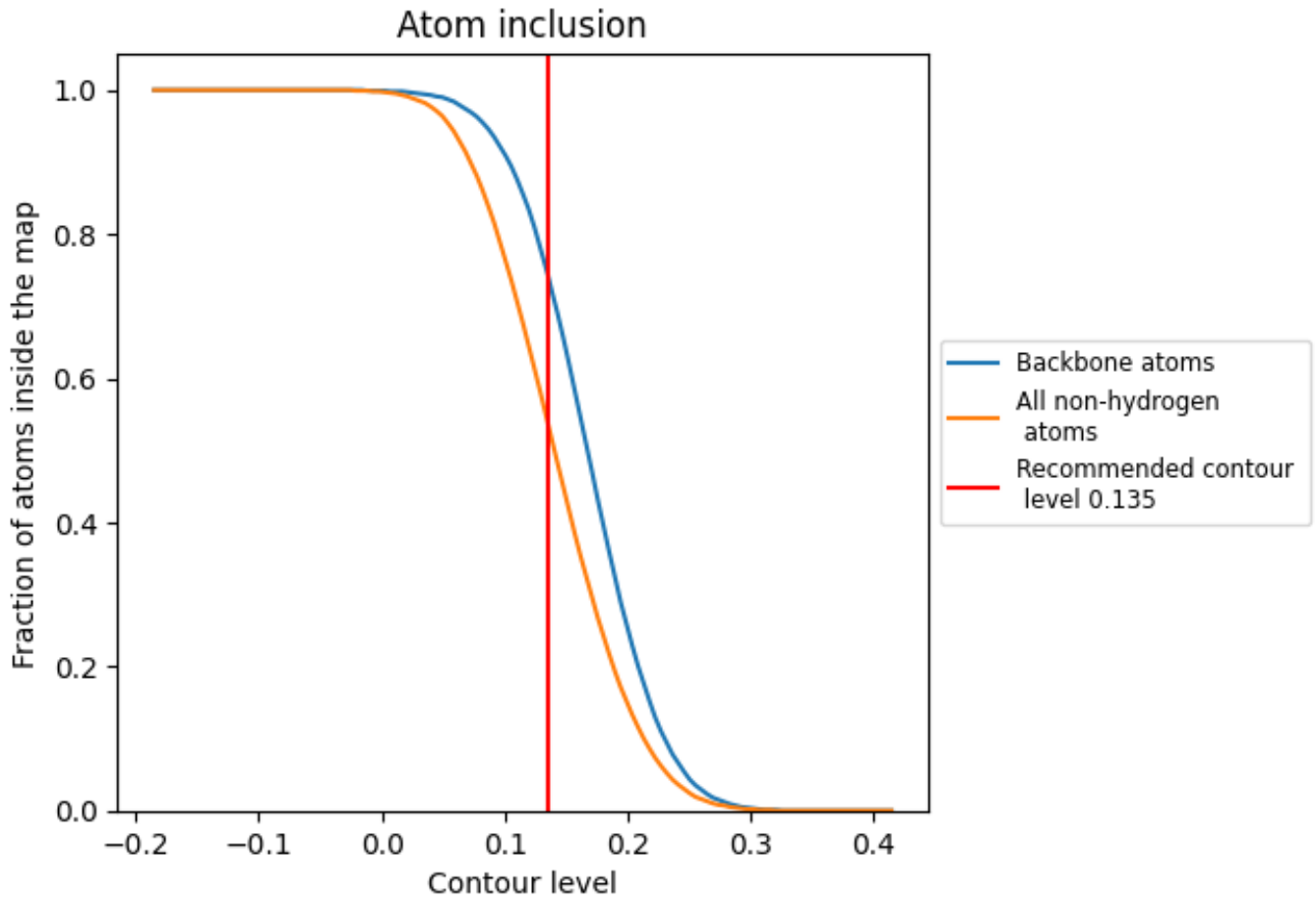
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.135).

9.4 Atom inclusion (i)



At the recommended contour level, 75% of all backbone atoms, 54% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.135) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5400	0.2710
A	0.5430	0.2600
B	0.5880	0.2860
C	0.5760	0.2680
D	0.5770	0.2640
E	0.5670	0.2750
F	0.5680	0.2840
G	0.5850	0.2630
H	0.5690	0.2740
I	0.4290	0.2520
J	0.5840	0.2730
K	0.5610	0.2610
L	0.5090	0.2560
M	0.5840	0.2820
N	0.5800	0.2810
O	0.6320	0.2740
P	0.5930	0.2850
Q	0.0730	0.2730
S	0.2400	0.2660