



Full wwPDB EM Validation Report ⓘ

Feb 24, 2024 – 05:07 PM EST

PDB ID : 7LUM
EMDB ID : EMD-23522
Title : Human TRiC in ATP/AlFx closed state
Authors : Knowlton, J.J.; Gestaut, D.; Ma, B.; Taylor, G.; Seven, A.B.; Leitner, A.; Wilson, G.J.; Shanker, S.; Yates, N.A.; Prasad, B.V.V.; Aebersold, R.; Chiu, W.; Frydman, J.; Dermody, T.S.
Deposited on : 2021-02-22
Resolution : 4.50 Å(reported)

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 : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

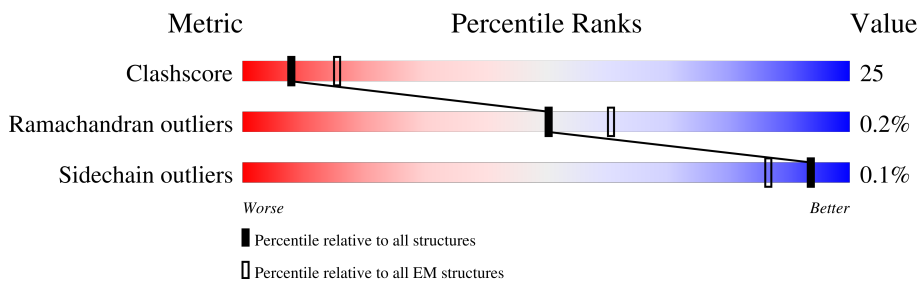
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.50 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	D	541	
1	L	541	
2	E	535	
2	M	535	
3	F	539	
3	N	539	
4	H	545	
4	P	545	

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Mol	Chain	Length	Quality of chain
5	C	543	<p>11% 55% 41%</p>
5	K	543	<p>10% 57% 39%</p>
6	B	548	<p>14% 49% 47%</p>
6	J	548	<p>11% 49% 46%</p>
7	A	531	<p>13% 55% 43%</p>
7	I	531	<p>12% 54% 44%</p>
8	G	556	<p>13% 45% 50%</p>
8	O	556	<p>11% 47% 48%</p>

2 Entry composition [i](#)

There are 8 unique types of molecules in this entry. The entry contains 63978 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 epsilon.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	L	527	Total	C	N	O	S	0	0
			4063	2544	710	779	30		
1	D	527	Total	C	N	O	S	0	0
			4063	2544	710	779	30		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	M	518	Total	C	N	O	S	0	0
			3898	2438	687	754	19		
2	E	518	Total	C	N	O	S	0	0
			3898	2438	687	754	19		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	N	518	Total	C	N	O	S	0	0
			3911	2445	680	763	23		
3	F	518	Total	C	N	O	S	0	0
			3911	2445	680	763	23		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	H	521	Total	C	N	O	S	0	0
			4050	2524	716	780	30		
4	P	521	Total	C	N	O	S	0	0
			4050	2524	716	780	30		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	K	522	Total	C	N	O	S	0	0
			4007	2534	690	759	24		
5	C	522	Total	C	N	O	S	0	0
			4007	2534	690	759	24		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	J	524	Total	C	N	O	S	0	0
			3994	2520	678	769	27		
6	B	524	Total	C	N	O	S	0	0
			3994	2520	678	769	27		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	525	Total	C	N	O	S	0	0
			4023	2528	704	770	21		
7	A	525	Total	C	N	O	S	0	0
			4023	2528	704	770	21		

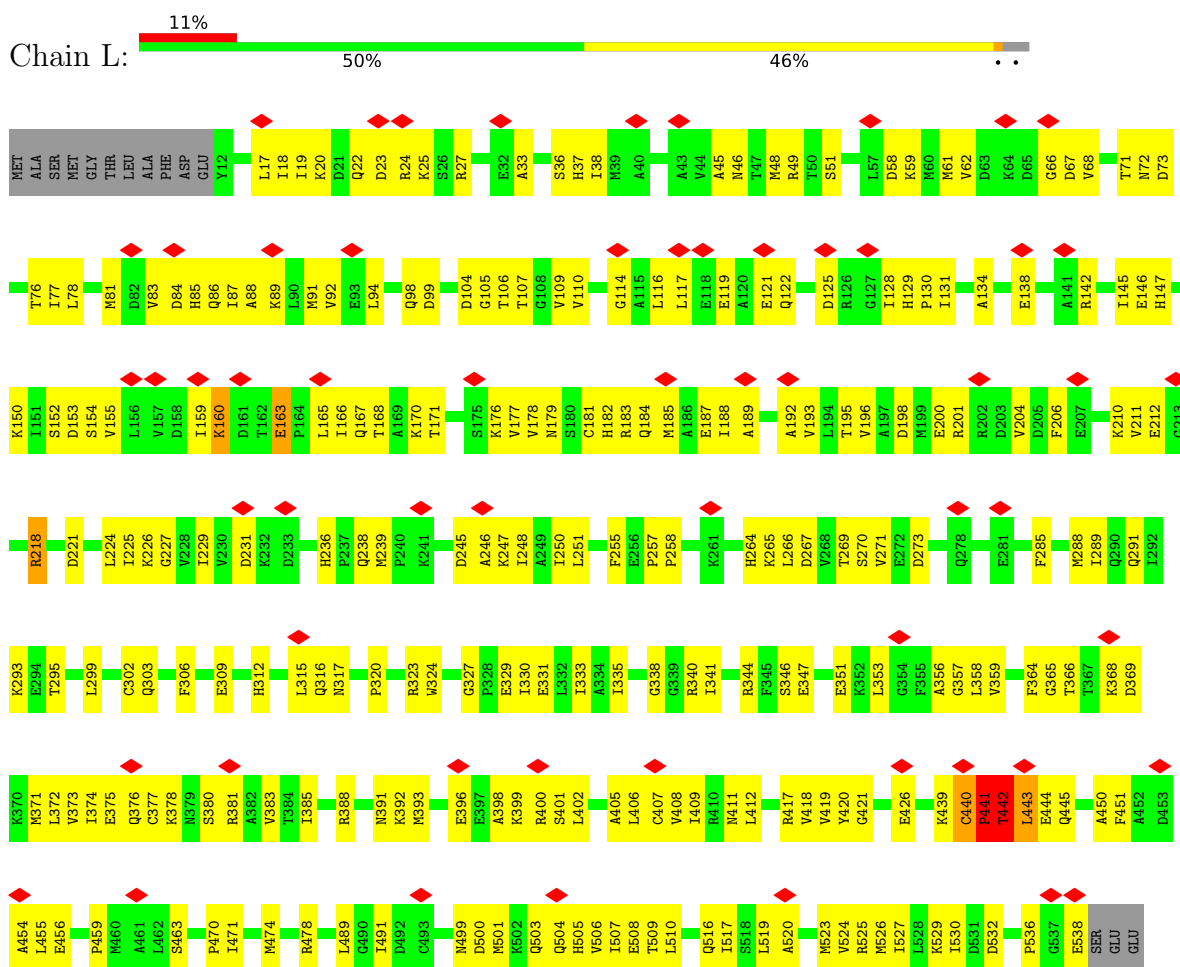
- Molecule 8 is a protein called T-complex protein 1 subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	O	532	Total	C	N	O	S	0	0
			4043	2533	707	780	23		
8	G	532	Total	C	N	O	S	0	0
			4043	2533	707	780	23		

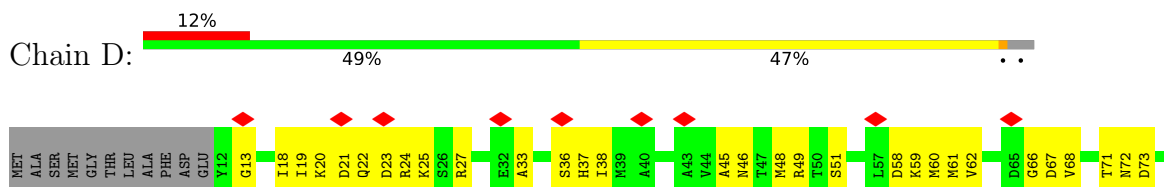
3 Residue-property plots

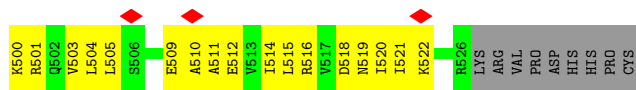
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

- Molecule 1: T-complex protein 1 subunit epsilon

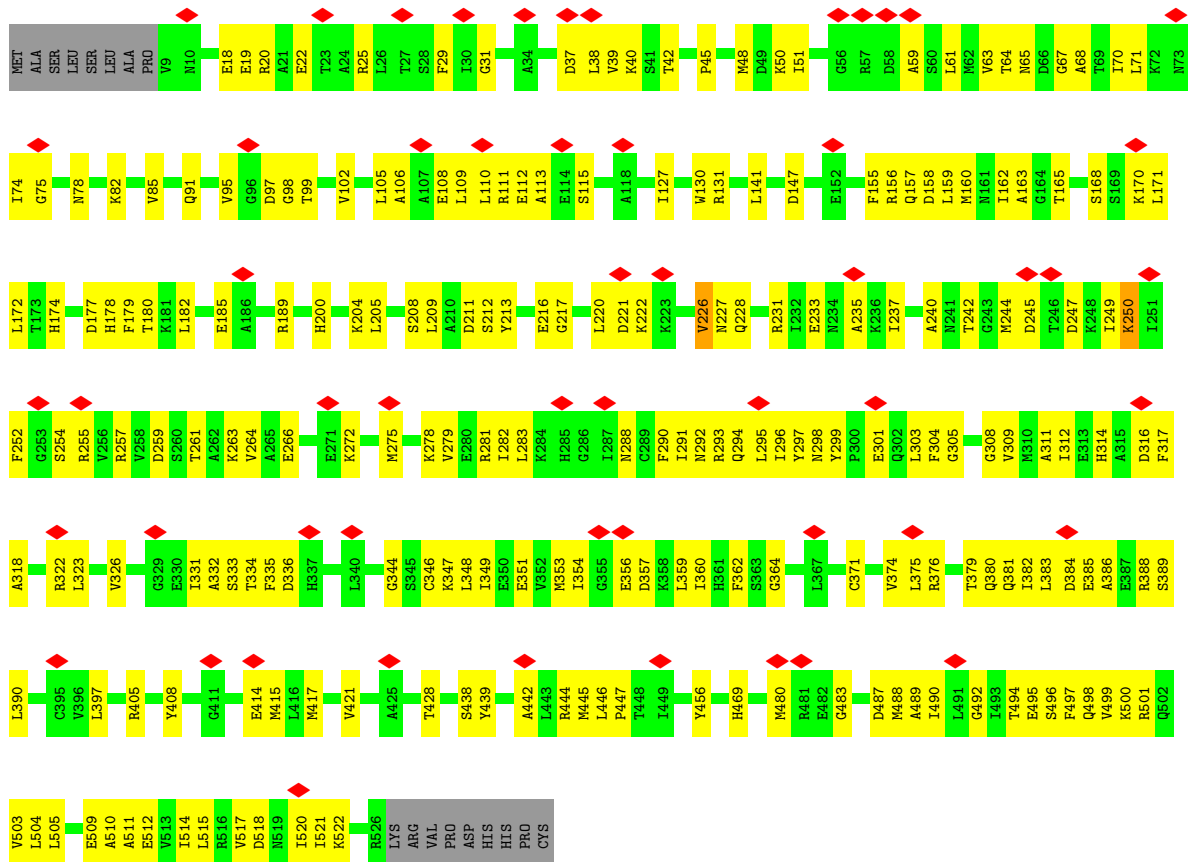


- Molecule 1: T-complex protein 1 subunit epsilon

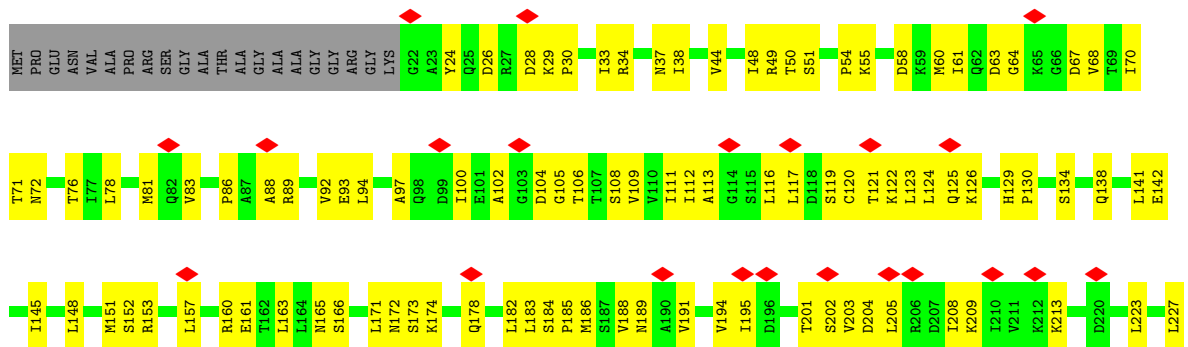


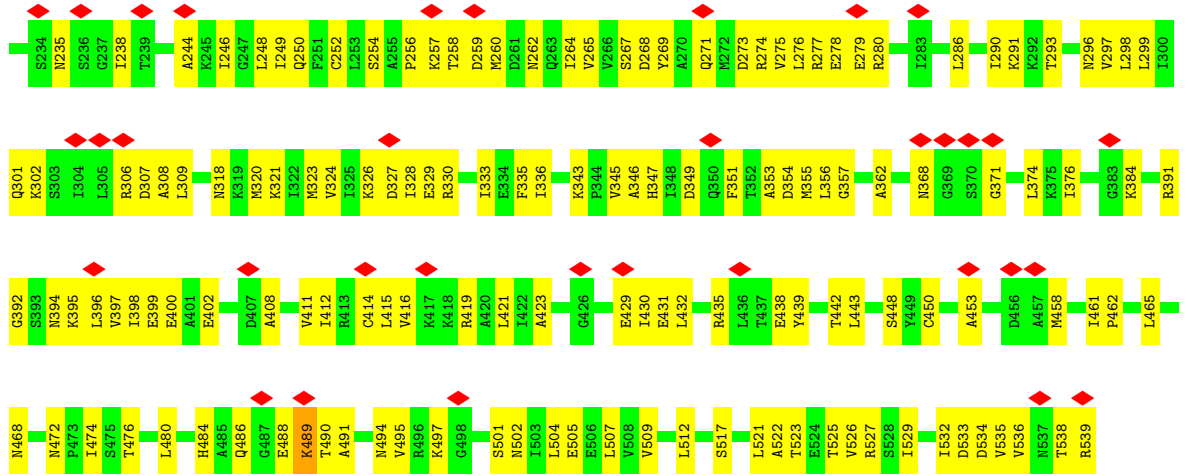


• Molecule 2: T-complex protein 1 subunit beta

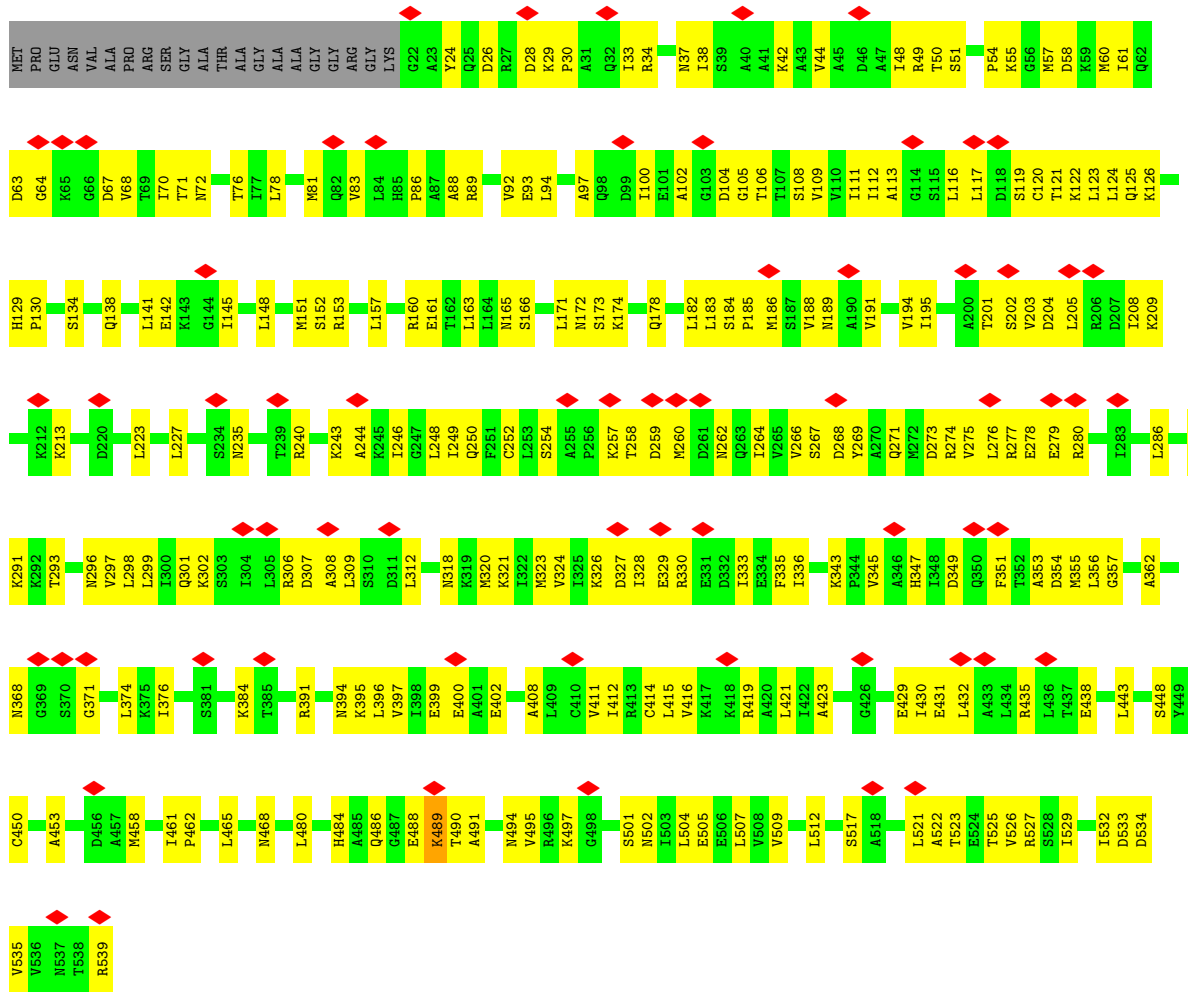


• Molecule 3: T-complex protein 1 subunit delta

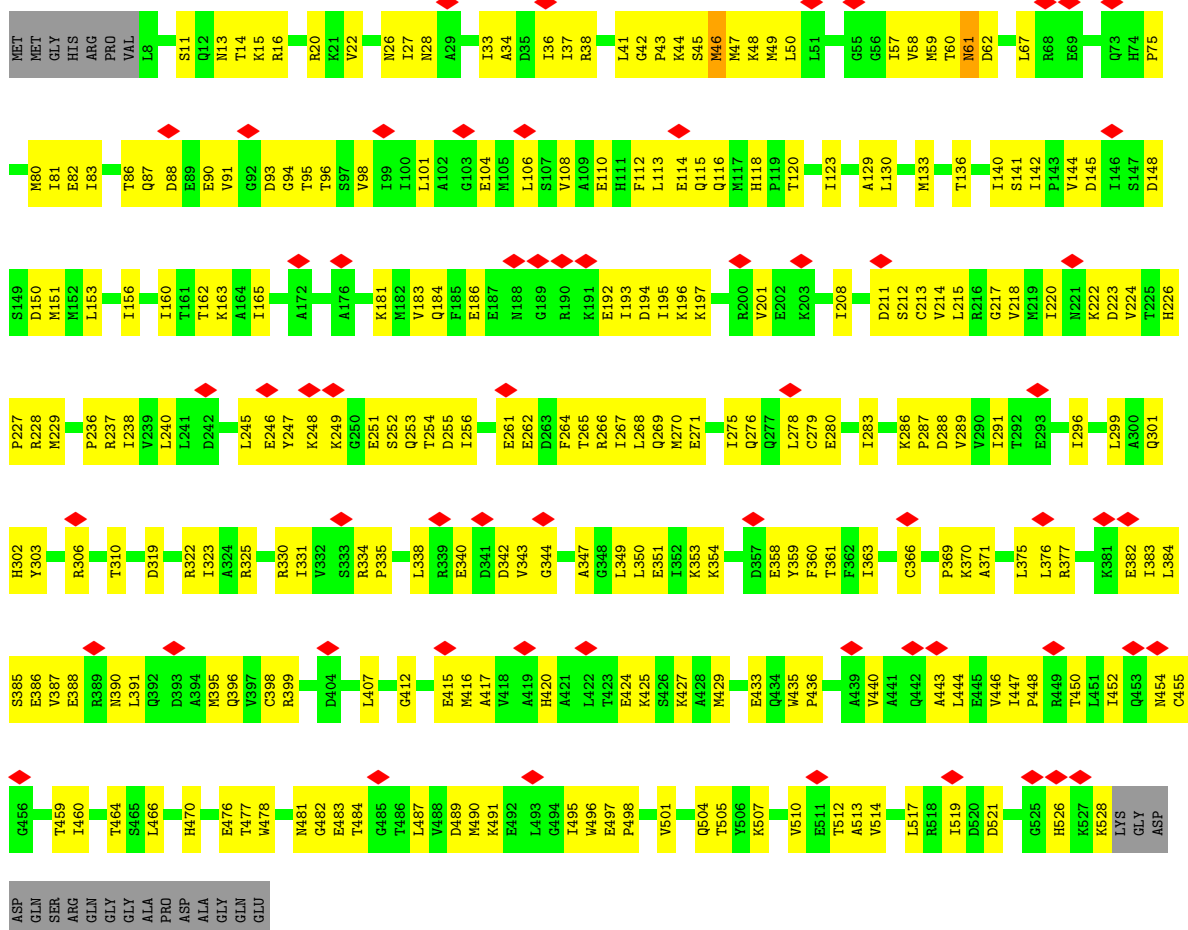




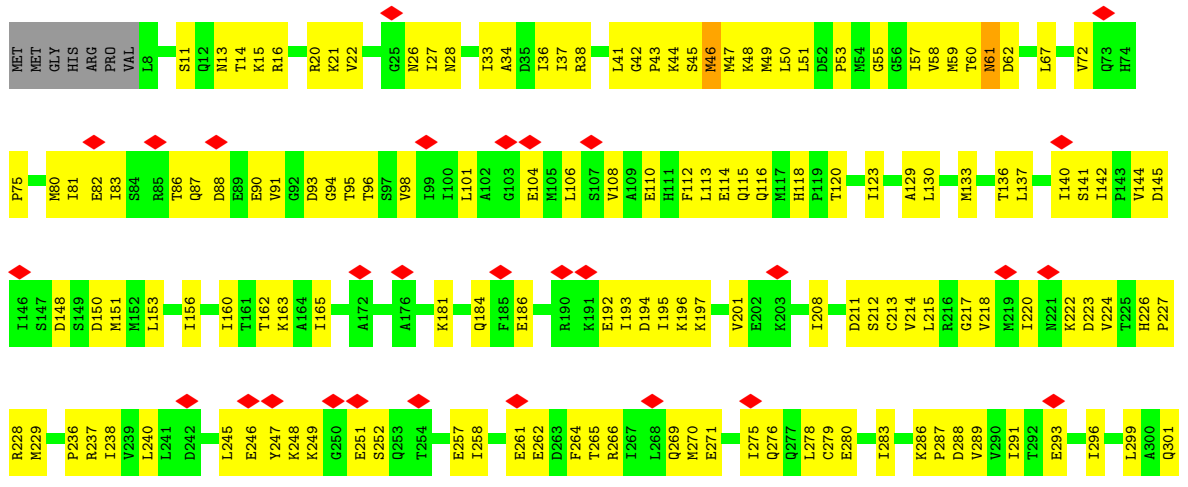
• Molecule 3: T-complex protein 1 subunit delta

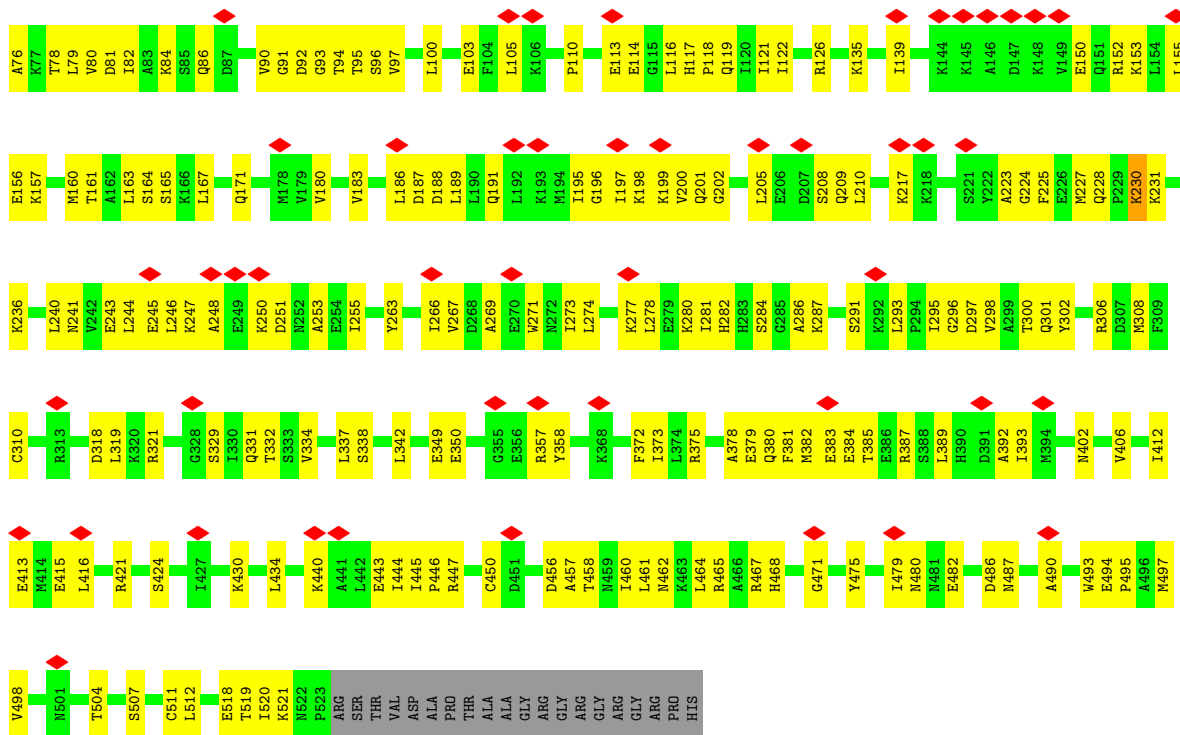


• Molecule 4: T-complex protein 1 subunit gamma

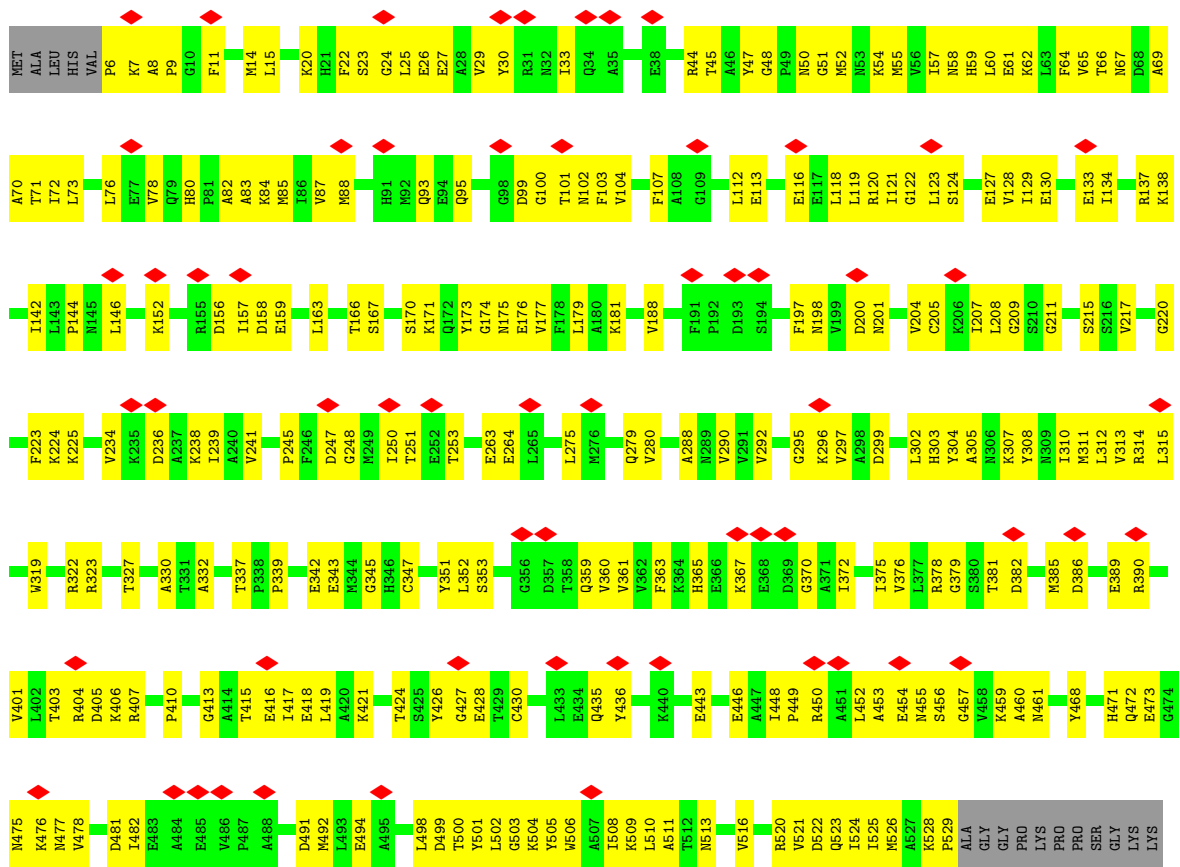


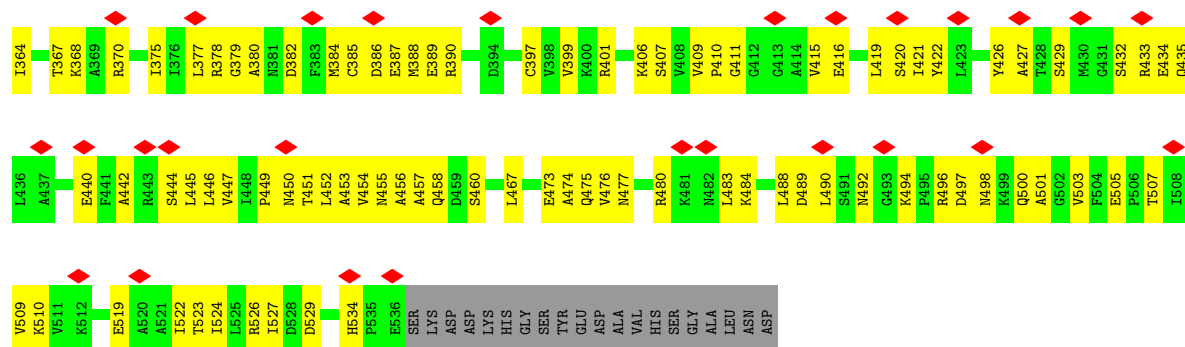
• Molecule 4: T-complex protein 1 subunit gamma





• Molecule 6: T-complex protein 1 subunit theta





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	334000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TALOS ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/\text{\AA}^2$)	36	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.073	Depositor
Minimum map value	-0.028	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.004	Depositor
Recommended contour level	0.017	Depositor
Map size (Å)	369.6, 369.6, 369.6	wwPDB
Map dimensions	280, 280, 280	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.32, 1.32, 1.32	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	D	0.36	0/4112	0.53	0/5539
1	L	0.36	0/4112	0.53	0/5539
2	E	0.35	0/3940	0.51	0/5311
2	M	0.35	0/3940	0.51	0/5311
3	F	0.35	0/3943	0.52	0/5322
3	N	0.35	0/3943	0.52	0/5322
4	H	0.36	0/4095	0.54	1/5523 (0.0%)
4	P	0.36	0/4095	0.54	1/5523 (0.0%)
5	C	0.38	0/4064	0.53	0/5487
5	K	0.38	0/4064	0.53	0/5487
6	B	0.36	0/4051	0.53	0/5474
6	J	0.36	0/4051	0.53	0/5474
7	A	0.35	0/4070	0.51	0/5487
7	I	0.35	0/4070	0.51	0/5487
8	G	0.35	0/4082	0.52	0/5511
8	O	0.35	0/4082	0.52	0/5511
All	All	0.36	0/64714	0.52	2/87308 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	D	0	5
1	L	0	5
2	E	0	3
2	M	0	3
6	B	0	1
6	J	0	1
7	A	0	1
7	I	0	1
8	G	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
8	O	0	1
All	All	0	22

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	46	MET	CB-CG-SD	-5.10	97.09	112.40
4	P	46	MET	CB-CG-SD	-5.10	97.10	112.40

There are no chirality outliers.

All (22) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
7	A	198	HIS	Peptide
6	B	430	CYS	Peptide
1	D	160	LYS	Peptide
1	D	163	GLU	Peptide
1	D	440	CYS	Peptide
1	D	441	PRO	Peptide
1	D	442	THR	Peptide
2	E	226	VAL	Peptide
2	E	250	LYS	Peptide
2	E	428	THR	Peptide
8	G	111	LYS	Peptide
7	I	198	HIS	Peptide
6	J	430	CYS	Peptide
1	L	160	LYS	Peptide
1	L	163	GLU	Peptide
1	L	440	CYS	Peptide
1	L	441	PRO	Peptide
1	L	442	THR	Peptide
2	M	226	VAL	Peptide
2	M	250	LYS	Peptide
2	M	428	THR	Peptide
8	O	111	LYS	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	4063	0	4183	254	0
1	L	4063	0	4183	245	0
2	E	3898	0	4008	191	0
2	M	3898	0	4008	214	0
3	F	3911	0	4115	225	0
3	N	3911	0	4115	221	0
4	H	4050	0	4185	233	0
4	P	4050	0	4185	235	0
5	C	4007	0	4110	219	0
5	K	4007	0	4110	200	0
6	B	3994	0	4063	236	0
6	J	3994	0	4063	241	0
7	A	4023	0	4161	207	0
7	I	4023	0	4161	214	0
8	G	4043	0	4203	258	0
8	O	4043	0	4203	246	0
All	All	63978	0	66056	3235	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 25.

All (3235) 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)
3:F:269:TYR:HA	8:G:266:ARG:HH12	1.14	1.06
4:P:507:LYS:HE2	8:O:204:SER:HB3	1.44	0.98
6:J:522:ASP:OD1	7:I:45:LYS:NZ	1.97	0.97
4:H:507:LYS:HE2	8:G:204:SER:HB3	1.46	0.94
6:B:522:ASP:OD1	7:A:45:LYS:NZ	2.02	0.93
6:J:88:MET:SD	7:I:380:ASN:ND2	2.42	0.92
6:J:314:ARG:HG3	6:J:315:LEU:HG	1.52	0.91
4:P:47:MET:HB3	7:I:517:LEU:O	1.71	0.90
6:B:314:ARG:HG3	6:B:315:LEU:HG	1.52	0.90
5:C:458:THR:H	8:O:111:LYS:NZ	1.69	0.89
3:F:269:TYR:HA	8:G:266:ARG:NH1	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:79:LEU:HA	5:C:82:ILE:HD12	1.55	0.86
4:P:48:LYS:NZ	7:I:520:GLU:O	2.07	0.86
4:P:45:SER:O	7:I:117:ARG:NH2	2.08	0.86
2:E:356:GLU:HG2	3:F:100:ILE:HD11	1.58	0.86
4:H:251:GLU:O	8:G:245:LYS:NZ	2.09	0.85
1:L:364:PHE:HB2	1:L:388:ARG:HH21	1.42	0.85
5:K:79:LEU:HA	5:K:82:ILE:HD12	1.55	0.85
6:J:211:GLY:HA2	6:J:379:GLY:HA2	1.60	0.84
1:D:344:ARG:NH2	1:D:347:GLU:OE2	2.10	0.84
6:B:211:GLY:HA2	6:B:379:GLY:HA2	1.59	0.84
4:H:228:ARG:HH12	7:A:331:VAL:HA	1.42	0.84
2:E:171:LEU:O	3:F:527:ARG:NH1	2.11	0.84
3:F:201:THR:HG22	3:F:202:SER:H	1.41	0.84
4:P:72:VAL:HG12	7:I:7:LEU:HD21	1.59	0.84
1:D:364:PHE:HB2	1:D:388:ARG:HH21	1.42	0.83
3:F:269:TYR:O	8:G:266:ARG:NH2	2.11	0.83
1:L:344:ARG:NH2	1:L:347:GLU:OE2	2.10	0.83
8:G:228:ARG:HG3	8:G:352:VAL:HG22	1.61	0.83
1:D:97:SER:OG	5:C:201:GLN:NE2	2.12	0.83
4:P:48:LYS:NZ	7:I:520:GLU:H	1.77	0.83
8:O:228:ARG:HG3	8:O:352:VAL:HG22	1.61	0.82
1:L:66:GLY:O	2:M:82:LYS:NZ	2.12	0.82
3:N:201:THR:HG22	3:N:202:SER:H	1.41	0.82
5:K:415:GLU:OE1	5:K:468:HIS:NE2	2.12	0.81
1:L:179:ASN:HA	1:L:182:HIS:HB3	1.61	0.81
5:C:415:GLU:OE1	5:C:468:HIS:NE2	2.13	0.81
6:J:365:HIS:HE2	6:J:367:LYS:HE2	1.45	0.81
2:M:245:ASP:HA	2:M:297:TYR:HB2	1.62	0.81
4:H:228:ARG:NH1	7:A:331:VAL:HA	1.94	0.81
4:H:267:ILE:HG22	8:G:257:PRO:HB3	1.63	0.81
1:D:179:ASN:HA	1:D:182:HIS:HB3	1.61	0.81
2:E:245:ASP:HA	2:E:297:TYR:HB2	1.61	0.81
6:J:295:GLY:O	6:J:314:ARG:NH2	2.13	0.81
6:B:295:GLY:O	6:B:314:ARG:NH2	2.14	0.81
3:F:123:LEU:HA	3:F:126:LYS:HB3	1.63	0.81
4:H:249:LYS:NZ	7:A:243:GLU:O	2.13	0.80
3:N:94:LEU:HD12	3:N:525:THR:HG21	1.62	0.80
3:N:123:LEU:HA	3:N:126:LYS:HB3	1.63	0.80
3:F:94:LEU:HD12	3:F:525:THR:HG21	1.62	0.80
7:I:45:LYS:HA	7:I:45:LYS:HE3	1.63	0.80
4:P:28:ASN:OD1	6:B:30:TYR:OH	1.97	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:45:SER:O	7:A:117:ARG:NH2	2.15	0.80
6:B:365:HIS:HE2	6:B:367:LYS:HE2	1.46	0.80
7:A:45:LYS:HA	7:A:45:LYS:HE3	1.63	0.80
7:A:453:GLN:HB2	7:A:459:LEU:HD21	1.64	0.80
1:L:426:GLU:HB2	1:L:455:LEU:HD21	1.63	0.80
5:C:26:ILE:HD12	5:C:105:LEU:HD12	1.64	0.79
6:J:523:GLN:HG2	7:I:45:LYS:NZ	1.97	0.79
4:H:226:HIS:HB2	4:H:301:GLN:HE21	1.47	0.79
1:L:470:PRO:HG2	1:L:471:ILE:HD12	1.65	0.79
1:D:426:GLU:HB2	1:D:455:LEU:HD21	1.63	0.79
4:H:302:HIS:HB2	7:A:334:ASN:HB2	1.64	0.79
1:L:146:GLU:OE1	1:L:150:LYS:NZ	2.16	0.79
4:H:165:ILE:HG12	4:H:390:ASN:HD22	1.48	0.79
1:D:470:PRO:HG2	1:D:471:ILE:HD12	1.65	0.79
7:I:453:GLN:HB2	7:I:459:LEU:HD21	1.64	0.78
1:D:146:GLU:OE1	1:D:150:LYS:NZ	2.16	0.78
4:H:75:PRO:HB3	8:G:52:VAL:HG11	1.64	0.78
6:B:47:TYR:HB2	6:B:102:ASN:HB2	1.65	0.78
5:K:26:ILE:HD12	5:K:105:LEU:HD12	1.64	0.78
6:J:47:TYR:HB2	6:J:102:ASN:HB2	1.65	0.78
4:P:229:MET:HG2	4:P:310:THR:HA	1.66	0.78
4:P:165:ILE:HG12	4:P:390:ASN:HD22	1.48	0.78
4:H:194:ASP:O	4:H:399:ARG:NH1	2.16	0.78
4:H:229:MET:HG2	4:H:310:THR:HA	1.66	0.78
4:P:194:ASP:O	4:P:399:ARG:NH1	2.17	0.78
1:D:98:GLN:HG2	1:D:109:VAL:HG21	1.65	0.77
4:P:226:HIS:HB2	4:P:301:GLN:HE21	1.47	0.77
3:N:55:LYS:HD2	8:O:113:HIS:CE1	2.19	0.77
6:B:54:LYS:NZ	6:B:55:MET:O	2.17	0.77
2:E:291:ILE:HG22	2:E:312:ILE:HB	1.66	0.77
4:H:93:ASP:OD2	4:H:163:LYS:NZ	2.18	0.77
7:I:234:ASN:OD1	7:I:334:ASN:ND2	2.18	0.76
1:L:59:LYS:NZ	2:M:518:ASP:OD1	2.17	0.76
4:H:104:GLU:HG2	4:H:446:VAL:HG11	1.68	0.76
4:P:116:GLN:HE22	6:B:460:ALA:H	1.33	0.76
6:J:54:LYS:NZ	6:J:55:MET:O	2.17	0.76
8:O:8:PHE:O	8:O:534:HIS:N	2.15	0.76
1:L:98:GLN:HG2	1:L:109:VAL:HG21	1.65	0.76
3:F:277:ARG:HG2	3:F:280:ARG:HH22	1.50	0.76
4:P:104:GLU:HG2	4:P:446:VAL:HG11	1.68	0.76
3:N:277:ARG:HG2	3:N:280:ARG:HH22	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:386:ASP:HB3	6:B:390:ARG:HH22	1.50	0.76
7:I:278:LYS:HD3	7:I:282:CYS:HB3	1.68	0.76
1:D:201:ARG:NH1	5:C:231:LYS:HD2	2.01	0.76
2:M:379:THR:HG22	2:M:381:GLN:H	1.50	0.76
1:D:471:ILE:HG21	3:N:126:LYS:HZ1	1.48	0.76
2:M:22:GLU:OE1	3:F:28:ASP:N	2.17	0.76
1:D:265:LYS:O	2:E:255:ARG:NH2	2.18	0.76
4:H:248:LYS:O	8:G:264:ARG:NH1	2.19	0.76
7:I:415:GLU:HG3	7:I:447:ILE:HD13	1.68	0.76
8:G:8:PHE:O	8:G:534:HIS:N	2.15	0.76
1:L:471:ILE:HG21	3:F:126:LYS:HZ1	1.50	0.75
2:M:291:ILE:HG22	2:M:312:ILE:HB	1.66	0.75
4:P:93:ASP:OD2	4:P:163:LYS:NZ	2.18	0.75
7:A:278:LYS:HD3	7:A:282:CYS:HB3	1.68	0.75
2:M:356:GLU:HG2	3:N:100:ILE:HD11	1.67	0.75
7:I:496:ASP:OD1	7:I:497:ASN:N	2.20	0.75
8:G:160:ILE:HG23	8:G:161:ILE:HG23	1.68	0.75
3:F:267:SER:N	3:F:271:GLN:OE1	2.19	0.75
6:J:386:ASP:HB3	6:J:390:ARG:HH22	1.50	0.75
7:A:234:ASN:OD1	7:A:334:ASN:ND2	2.18	0.75
7:A:496:ASP:OD1	7:A:497:ASN:N	2.20	0.74
8:O:136:LEU:HD11	8:O:407:SER:HB2	1.69	0.74
1:L:171:THR:HG21	1:L:507:ILE:H	1.51	0.74
5:C:93:GLY:O	5:C:97:VAL:N	2.20	0.74
7:I:150:ASP:OD1	7:I:153:ARG:NH1	2.20	0.74
7:A:150:ASP:OD1	7:A:153:ARG:NH1	2.20	0.74
8:O:291:GLY:HA2	8:O:310:ARG:HH21	1.52	0.74
1:D:78:LEU:HB3	1:D:92:VAL:HG22	1.68	0.74
2:M:50:LYS:NZ	3:N:534:ASP:HB3	2.02	0.74
3:F:151:MET:HB2	3:F:489:LYS:HD2	1.70	0.74
5:K:241:ASN:ND2	6:J:299:ASP:OD2	2.21	0.74
8:G:291:GLY:HA2	8:G:310:ARG:HH21	1.52	0.74
2:E:379:THR:HG22	2:E:381:GLN:H	1.50	0.74
4:H:116:GLN:HE22	6:J:460:ALA:H	1.34	0.73
7:A:415:GLU:HG3	7:A:447:ILE:HD13	1.68	0.73
8:G:136:LEU:HD11	8:G:407:SER:HB2	1.69	0.73
2:E:18:GLU:OE2	2:E:20:ARG:NH2	2.20	0.73
3:N:267:SER:N	3:N:271:GLN:OE1	2.19	0.73
4:P:75:PRO:HB3	8:O:52:VAL:HG11	1.71	0.73
8:O:89:GLY:O	8:O:93:VAL:N	2.20	0.73
3:F:252:CYS:SG	3:F:306:ARG:NH2	2.61	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:318:ASP:OD1	5:K:321:ARG:NH1	2.21	0.73
7:I:176:ILE:HA	7:I:179:ILE:HD12	1.71	0.73
1:L:76:THR:HG21	1:L:400:ARG:HD2	1.71	0.73
1:D:76:THR:HG21	1:D:400:ARG:HD2	1.71	0.73
1:L:78:LEU:HB3	1:L:92:VAL:HG22	1.68	0.73
2:M:174:HIS:HB2	3:N:527:ARG:NH1	2.04	0.73
3:N:151:MET:HB2	3:N:489:LYS:HD2	1.70	0.73
4:P:110:GLU:HA	4:P:113:LEU:HD23	1.69	0.73
4:P:477:THR:HG21	4:P:491:LYS:HG3	1.71	0.73
7:I:216:ALA:HB1	7:I:221:MET:HG3	1.71	0.73
8:O:160:ILE:HG23	8:O:161:ILE:HG23	1.68	0.73
1:D:456:GLU:OE1	1:D:478:ARG:NH2	2.22	0.73
4:H:477:THR:HG21	4:H:491:LYS:HG3	1.71	0.72
1:L:456:GLU:OE1	1:L:478:ARG:NH2	2.22	0.72
4:H:110:GLU:HA	4:H:113:LEU:HD23	1.69	0.72
2:M:42:THR:OG1	2:M:65:ASN:OD1	2.06	0.72
5:C:318:ASP:OD1	5:C:321:ARG:NH1	2.21	0.72
3:N:252:CYS:SG	3:N:306:ARG:NH2	2.61	0.72
4:P:108:VAL:HG11	4:P:443:ALA:HB2	1.72	0.72
2:E:51:ILE:HD11	3:F:532:ILE:HD13	1.72	0.72
3:F:394:ASN:HD21	3:F:396:LEU:HB2	1.54	0.72
4:H:108:VAL:HG11	4:H:443:ALA:HB2	1.72	0.72
5:K:183:VAL:HG23	5:K:186:LEU:HD12	1.71	0.72
6:B:209:GLY:N	6:B:379:GLY:O	2.23	0.72
7:I:503:GLN:NE2	7:I:507:SER:OG	2.23	0.72
1:D:265:LYS:HG3	2:E:255:ARG:CZ	2.20	0.72
1:D:396:GLU:HA	1:D:399:LYS:HD3	1.72	0.72
2:E:42:THR:OG1	2:E:65:ASN:OD1	2.07	0.72
5:K:81:ASP:HA	5:K:84:LYS:HE2	1.70	0.72
7:I:105:GLN:NE2	7:I:442:ASP:OD2	2.23	0.72
7:A:105:GLN:NE2	7:A:442:ASP:OD2	2.23	0.72
4:H:450:THR:O	4:H:454:ASN:ND2	2.21	0.72
7:A:503:GLN:NE2	7:A:507:SER:OG	2.23	0.72
1:D:171:THR:HG21	1:D:507:ILE:H	1.51	0.71
2:M:18:GLU:OE2	2:M:20:ARG:NH2	2.20	0.71
3:N:394:ASN:HD21	3:N:396:LEU:HB2	1.54	0.71
5:C:183:VAL:HG23	5:C:186:LEU:HD12	1.71	0.71
8:O:452:LEU:HD22	8:O:490:LEU:HD11	1.73	0.71
8:G:89:GLY:O	8:G:93:VAL:N	2.20	0.71
3:N:353:ALA:HA	3:N:356:LEU:HD13	1.73	0.71
3:F:353:ALA:HA	3:F:356:LEU:HD13	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:60:THR:HG22	4:P:62:ASP:H	1.54	0.71
8:G:233:LYS:HB3	8:G:283:ALA:HA	1.72	0.71
1:L:396:GLU:HA	1:L:399:LYS:HD3	1.72	0.71
5:C:458:THR:H	8:O:111:LYS:HZ3	1.35	0.71
6:J:209:GLY:N	6:J:379:GLY:O	2.23	0.71
7:A:176:ILE:HA	7:A:179:ILE:HD12	1.70	0.71
7:A:216:ALA:HB1	7:A:221:MET:HG3	1.71	0.71
8:O:233:LYS:HB3	8:O:283:ALA:HA	1.72	0.71
4:P:450:THR:O	4:P:454:ASN:ND2	2.21	0.71
5:C:81:ASP:HA	5:C:84:LYS:HE2	1.70	0.71
5:C:150:GLU:HB2	5:C:153:LYS:HG3	1.72	0.71
5:C:521:LYS:HE2	6:B:57:ILE:HD11	1.72	0.71
1:D:471:ILE:HA	1:D:474:MET:HG3	1.72	0.71
1:D:526:MET:HG3	5:C:381:PHE:HE1	1.55	0.71
3:F:71:THR:HG21	3:F:76:THR:HB	1.73	0.71
5:C:81:ASP:OD2	6:B:381:THR:HA	1.89	0.71
5:K:93:GLY:O	5:K:97:VAL:N	2.20	0.71
8:G:100:LEU:HD12	8:G:121:TYR:HE2	1.56	0.71
8:G:452:LEU:HD22	8:G:490:LEU:HD11	1.73	0.71
3:N:71:THR:HG21	3:N:76:THR:HB	1.73	0.71
4:H:60:THR:HG22	4:H:62:ASP:H	1.54	0.71
7:I:148:LEU:HD12	7:I:398:VAL:HG13	1.73	0.71
3:N:34:ARG:O	3:N:38:ILE:HG12	1.90	0.71
3:N:78:LEU:HB3	3:N:92:VAL:HG22	1.73	0.71
3:F:34:ARG:O	3:F:38:ILE:HG12	1.90	0.71
7:A:148:LEU:HD12	7:A:398:VAL:HG13	1.73	0.71
3:F:38:ILE:HD12	3:F:117:LEU:HD12	1.73	0.70
3:N:83:VAL:HG11	3:N:88:ALA:HB3	1.73	0.70
4:P:186:GLU:HA	4:P:192:GLU:HB3	1.73	0.70
3:F:58:ASP:OD1	8:G:526:ARG:NE	2.24	0.70
7:I:497:ASN:HB2	7:I:500:VAL:HG23	1.72	0.70
1:D:529:LYS:NZ	5:C:44:GLY:O	2.24	0.70
4:P:48:LYS:HZ3	7:I:520:GLU:H	1.39	0.70
8:O:100:LEU:HD12	8:O:121:TYR:HE2	1.56	0.70
5:C:45:MET:O	5:C:60:ASN:ND2	2.24	0.70
3:F:78:LEU:HB3	3:F:92:VAL:HG22	1.73	0.70
1:L:471:ILE:HA	1:L:474:MET:HG3	1.72	0.70
2:M:226:VAL:O	2:M:228:GLN:N	2.25	0.70
3:F:534:ASP:OD1	3:F:535:VAL:N	2.25	0.70
6:J:401:VAL:HA	6:J:404:ARG:HG3	1.72	0.70
6:B:401:VAL:HA	6:B:404:ARG:HG3	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:238:ASP:HB3	8:G:329:SER:HA	1.73	0.70
7:A:497:ASN:HB2	7:A:500:VAL:HG23	1.72	0.70
8:O:246:MET:HB3	8:O:250:VAL:HB	1.73	0.70
8:G:246:MET:HB3	8:G:250:VAL:HB	1.73	0.70
3:F:83:VAL:HG11	3:F:88:ALA:HB3	1.73	0.70
6:B:129:ILE:HD12	6:B:516:VAL:HG23	1.74	0.69
8:O:238:ASP:HB3	8:O:329:SER:HA	1.73	0.69
1:D:525:ARG:NH2	5:C:167:LEU:O	2.25	0.69
3:N:38:ILE:HD12	3:N:117:LEU:HD12	1.73	0.69
8:O:191:PRO:O	8:O:194:SER:OG	2.11	0.69
1:L:179:ASN:O	1:L:182:HIS:ND1	2.25	0.69
4:H:186:GLU:HA	4:H:192:GLU:HB3	1.73	0.69
5:K:45:MET:O	5:K:60:ASN:ND2	2.24	0.69
5:K:150:GLU:HB2	5:K:153:LYS:HG3	1.72	0.69
8:O:137:ILE:HD13	8:O:410:PRO:HD3	1.75	0.69
8:O:285:VAL:HA	8:O:306:MET:HB3	1.75	0.69
2:M:496:SER:HB3	2:M:499:VAL:HG23	1.74	0.69
5:C:8:LEU:HD22	6:B:38:GLU:HB3	1.73	0.69
6:J:296:LYS:HA	6:J:314:ARG:HH12	1.58	0.69
6:B:15:LEU:HD23	7:A:71:HIS:CD2	2.27	0.69
2:E:496:SER:HB3	2:E:499:VAL:HG23	1.74	0.69
8:G:409:VAL:HG23	8:G:507:THR:HG22	1.75	0.69
1:D:66:GLY:O	2:E:82:LYS:NZ	2.26	0.69
3:F:57:MET:HE3	8:G:114:PRO:HG2	1.75	0.69
4:H:208:ILE:HD13	7:A:506:HIS:HB3	1.74	0.69
5:C:329:SER:O	5:C:331:GLN:NE2	2.25	0.69
1:L:309:GLU:OE1	2:M:333:SER:HB3	1.92	0.69
2:M:221:ASP:OD1	2:M:222:LYS:NZ	2.26	0.69
1:D:62:VAL:HB	2:E:522:LYS:HA	1.74	0.69
2:E:91:GLN:HG3	2:E:102:VAL:HG21	1.75	0.69
2:E:226:VAL:O	2:E:228:GLN:N	2.25	0.69
3:N:33:ILE:O	3:N:37:ASN:ND2	2.25	0.69
6:J:129:ILE:HD12	6:J:516:VAL:HG23	1.74	0.69
6:B:296:LYS:HA	6:B:314:ARG:HH12	1.58	0.69
8:G:137:ILE:HD13	8:G:410:PRO:HD3	1.75	0.68
1:L:239:MET:SD	1:L:320:PRO:HA	2.33	0.68
3:N:534:ASP:OD1	3:N:535:VAL:N	2.25	0.68
4:P:477:THR:O	4:P:490:MET:N	2.24	0.68
1:D:239:MET:SD	1:D:320:PRO:HA	2.33	0.68
4:P:208:ILE:HD13	7:I:506:HIS:HB3	1.75	0.68
5:K:117:HIS:NE2	6:J:457:GLY:HA3	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:204:THR:OG1	7:A:377:LYS:N	2.26	0.68
2:M:268:GLU:HG3	3:N:256:PRO:HB3	1.74	0.68
2:M:347:LYS:HB3	2:M:364:GLY:HA3	1.75	0.68
4:P:470:HIS:HE2	4:P:476:GLU:HA	1.58	0.68
5:K:413:GLU:N	5:K:413:GLU:OE1	2.27	0.68
8:G:100:LEU:HD12	8:G:121:TYR:CE2	2.29	0.68
4:H:470:HIS:HE2	4:H:476:GLU:HA	1.58	0.68
2:M:91:GLN:HG3	2:M:102:VAL:HG21	1.75	0.68
8:O:409:VAL:HG23	8:O:507:THR:HG22	1.75	0.68
6:B:292:VAL:HG12	6:B:313:VAL:HB	1.76	0.68
1:D:338:GLY:O	1:D:340:ARG:NH2	2.27	0.68
4:H:526:HIS:NE2	4:H:528:LYS:O	2.27	0.68
8:G:285:VAL:HA	8:G:306:MET:HB3	1.75	0.68
2:M:45:PRO:HG2	2:M:480:MET:HG3	1.75	0.68
5:C:241:ASN:ND2	6:B:299:ASP:OD2	2.26	0.68
1:D:93:GLU:OE1	5:C:378:ALA:HA	1.93	0.68
1:D:179:ASN:O	1:D:182:HIS:ND1	2.25	0.68
1:D:201:ARG:HH12	5:C:231:LYS:HD2	1.58	0.68
6:J:58:ASN:OD1	6:J:62:LYS:N	2.24	0.67
6:B:15:LEU:HD23	7:A:71:HIS:HD2	1.60	0.67
8:O:100:LEU:HD12	8:O:121:TYR:CE2	2.28	0.67
3:N:58:ASP:HB3	3:N:72:ASN:HB2	1.77	0.67
4:H:218:VAL:HG21	4:H:323:ILE:HG12	1.76	0.67
4:H:477:THR:O	4:H:490:MET:N	2.24	0.67
5:K:421:ARG:O	5:K:424:SER:OG	2.13	0.67
1:L:62:VAL:HB	2:M:522:LYS:HA	1.75	0.67
2:M:141:LEU:HD13	2:M:417:MET:HE2	1.77	0.67
5:C:39:THR:O	5:C:45:MET:N	2.24	0.67
1:L:338:GLY:O	1:L:340:ARG:NH2	2.27	0.67
1:D:226:LYS:HA	1:D:383:VAL:HG23	1.76	0.67
1:D:376:GLN:HE22	1:D:378:LYS:HB2	1.59	0.67
3:F:58:ASP:HB3	3:F:72:ASN:HB2	1.77	0.67
6:J:15:LEU:HB3	7:I:69:ILE:HD12	1.76	0.67
8:G:191:PRO:O	8:G:194:SER:OG	2.11	0.67
1:D:153:ASP:OD1	1:D:154:SER:N	2.28	0.67
5:C:247:LYS:HD3	5:C:250:LYS:HB2	1.76	0.67
2:M:417:MET:SD	2:M:504:LEU:HD11	2.34	0.67
5:K:247:LYS:HD3	5:K:250:LYS:HB2	1.76	0.67
5:C:413:GLU:N	5:C:413:GLU:OE1	2.27	0.67
8:O:203:ARG:HD2	8:O:378:ARG:HE	1.59	0.67
8:O:415:VAL:HG21	8:O:510:LYS:HG3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:141:LEU:HD13	2:E:417:MET:HE2	1.77	0.67
5:C:421:ARG:O	5:C:424:SER:OG	2.13	0.67
6:J:292:VAL:HG12	6:J:313:VAL:HB	1.76	0.67
2:E:45:PRO:HG2	2:E:480:MET:HG3	1.75	0.67
2:E:347:LYS:HB3	2:E:364:GLY:HA3	1.75	0.67
6:J:523:GLN:H	7:I:45:LYS:HZ1	1.41	0.67
6:B:207:ILE:O	6:B:378:ARG:NH1	2.28	0.67
7:I:20:LEU:HD21	7:I:110:ILE:HD12	1.77	0.67
7:A:382:HIS:CE1	7:A:383:THR:HG23	2.30	0.67
4:P:218:VAL:HG21	4:P:323:ILE:HG12	1.76	0.67
7:I:382:HIS:CE1	7:I:383:THR:HG23	2.30	0.67
8:G:203:ARG:HD2	8:G:378:ARG:HE	1.59	0.67
4:H:433:GLU:OE1	4:H:433:GLU:N	2.25	0.67
4:P:98:VAL:HG22	4:P:505:THR:HG23	1.76	0.67
7:I:204:THR:OG1	7:I:377:LYS:N	2.26	0.67
8:O:56:ASN:HD21	8:O:159:LYS:HA	1.60	0.67
2:M:189:ARG:NH2	2:M:216:GLU:O	2.28	0.66
8:G:56:ASN:HD21	8:G:159:LYS:HA	1.60	0.66
2:E:417:MET:SD	2:E:504:LEU:HD11	2.34	0.66
4:P:257:GLU:OE2	7:I:249:PHE:N	2.26	0.66
6:B:305:ALA:HB1	6:B:310:ILE:HB	1.78	0.66
3:N:244:ALA:HA	3:N:296:ASN:HD21	1.60	0.66
3:F:244:ALA:HA	3:F:296:ASN:HD21	1.60	0.66
6:J:305:ALA:HB1	6:J:310:ILE:HB	1.78	0.66
7:A:478:GLY:N	7:A:487:MET:O	2.27	0.66
8:G:415:VAL:HG21	8:G:510:LYS:HG3	1.75	0.66
2:E:414:GLU:HA	2:E:417:MET:HG3	1.77	0.66
7:A:20:LEU:HD21	7:A:110:ILE:HD12	1.77	0.66
4:H:265:THR:HG22	7:A:266:PHE:HB2	1.77	0.66
5:C:255:ILE:HG22	6:B:259:ILE:HG12	1.78	0.66
1:L:109:VAL:HG22	1:L:516:GLN:HG3	1.78	0.66
3:F:290:ILE:O	3:F:293:THR:OG1	2.14	0.66
4:P:526:HIS:NE2	4:P:528:LYS:O	2.27	0.66
5:K:217:LYS:HA	5:K:358:TYR:CE1	2.30	0.66
7:I:460:GLN:HB3	7:A:432:ARG:HH22	1.60	0.66
1:D:93:GLU:OE2	5:C:201:GLN:NE2	2.26	0.66
5:C:6:VAL:HG21	6:B:80:HIS:HD2	1.60	0.66
6:J:207:ILE:O	6:J:378:ARG:NH1	2.28	0.66
1:D:109:VAL:HG22	1:D:516:GLN:HG3	1.78	0.66
7:I:218:HIS:HB3	7:I:221:MET:HG2	1.77	0.66
8:G:225:MET:HE1	8:G:307:ALA:H	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:226:LYS:HA	1:L:383:VAL:HG23	1.76	0.66
1:L:376:GLN:HE22	1:L:378:LYS:HB2	1.59	0.66
6:J:322:ARG:HD2	7:I:219:PRO:HG3	1.78	0.66
7:A:218:HIS:HB3	7:A:221:MET:HG2	1.77	0.66
2:E:316:ASP:OD1	2:E:317:PHE:N	2.26	0.66
3:N:186:MET:SD	3:N:223:LEU:HB2	2.36	0.66
3:N:290:ILE:O	3:N:293:THR:OG1	2.14	0.66
4:H:266:ARG:HH22	8:G:258:GLU:HA	1.59	0.66
5:K:209:GLN:HB3	5:K:373:ILE:HB	1.78	0.66
8:O:183:ASP:O	8:O:185:ARG:N	2.27	0.65
4:H:262:GLU:OE1	4:H:262:GLU:N	2.29	0.65
4:P:49:MET:HA	4:P:59:MET:HA	1.78	0.65
4:P:433:GLU:OE1	4:P:433:GLU:N	2.25	0.65
5:K:39:THR:O	5:K:45:MET:N	2.24	0.65
1:D:407:CYS:O	1:D:411:ASN:ND2	2.26	0.65
2:M:414:GLU:HA	2:M:417:MET:HG3	1.77	0.65
3:F:186:MET:SD	3:F:223:LEU:HB2	2.36	0.65
4:P:114:GLU:HG2	6:B:450:ARG:HH21	1.61	0.65
6:J:80:HIS:HE1	6:J:82:ALA:HB3	1.61	0.65
1:D:51:SER:OG	1:D:72:ASN:OD1	2.15	0.65
6:B:58:ASN:OD1	6:B:62:LYS:N	2.23	0.65
8:O:386:ASP:O	8:O:389:GLU:HG3	1.97	0.65
2:E:228:GLN:NE2	2:E:309:VAL:O	2.30	0.65
3:F:258:THR:OG1	3:F:260:MET:O	2.14	0.65
4:P:526:HIS:ND1	8:O:47:ASP:HB2	2.11	0.65
6:B:54:LYS:O	6:B:66:THR:N	2.24	0.65
7:I:478:GLY:N	7:I:487:MET:O	2.27	0.65
7:A:181:LYS:HG2	7:A:370:ARG:HH22	1.62	0.65
2:M:228:GLN:NE2	2:M:309:VAL:O	2.30	0.65
4:H:42:GLY:O	4:H:45:SER:HB3	1.97	0.65
4:H:98:VAL:HG22	4:H:505:THR:HG23	1.76	0.65
5:C:282:HIS:ND1	5:C:306:ARG:HD3	2.12	0.65
6:J:367:LYS:HG3	6:J:370:GLY:H	1.62	0.65
1:L:364:PHE:CE1	1:L:371:MET:HG2	2.32	0.65
1:L:529:LYS:NZ	5:K:45:MET:SD	2.64	0.65
1:D:364:PHE:CE1	1:D:371:MET:HG2	2.32	0.65
2:M:316:ASP:OD1	2:M:317:PHE:N	2.26	0.65
1:L:24:ARG:NH1	1:L:538:GLU:O	2.30	0.65
1:L:501:MET:HA	1:L:504:GLN:HB3	1.79	0.65
2:E:189:ARG:NH2	2:E:216:GLU:O	2.28	0.65
4:P:265:THR:HG22	7:I:266:PHE:HB2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:119:GLN:HA	5:K:122:ILE:HG12	1.78	0.65
5:K:350:GLU:OE1	5:K:357:ARG:NE	2.30	0.65
5:C:119:GLN:HA	5:C:122:ILE:HG12	1.78	0.65
5:C:217:LYS:HA	5:C:358:TYR:CE1	2.30	0.65
1:D:501:MET:HA	1:D:504:GLN:HB3	1.79	0.65
5:K:119:GLN:OE1	6:J:50:ASN:HA	1.97	0.65
5:K:282:HIS:ND1	5:K:306:ARG:HD3	2.12	0.65
5:C:10:LYS:HG3	6:B:77:GLU:OE2	1.97	0.65
8:G:351:VAL:HG22	8:G:364:ILE:HG12	1.79	0.65
5:K:26:ILE:HG23	5:K:105:LEU:HB3	1.78	0.65
6:B:80:HIS:HE1	6:B:82:ALA:HB3	1.61	0.65
8:G:56:ASN:ND2	8:G:158:SER:O	2.29	0.65
1:L:153:ASP:OD1	1:L:154:SER:N	2.28	0.64
4:H:47:MET:HB3	7:A:517:LEU:O	1.97	0.64
4:H:266:ARG:NH1	8:G:258:GLU:HG3	2.11	0.64
4:P:42:GLY:O	4:P:45:SER:HB3	1.97	0.64
3:N:38:ILE:HG23	3:N:117:LEU:HB3	1.80	0.64
3:F:264:ILE:HB	8:G:250:VAL:HG22	1.79	0.64
4:H:424:GLU:HA	4:H:427:LYS:HZ3	1.62	0.64
5:C:458:THR:H	8:O:111:LYS:HZ1	1.44	0.64
7:A:37:ASN:ND2	7:A:58:LYS:O	2.30	0.64
1:L:529:LYS:NZ	5:K:45:MET:HA	2.12	0.64
6:J:54:LYS:O	6:J:66:THR:N	2.24	0.64
8:O:56:ASN:HD21	8:O:159:LYS:HD2	1.63	0.64
8:O:56:ASN:ND2	8:O:158:SER:O	2.29	0.64
1:D:24:ARG:NH1	1:D:538:GLU:O	2.30	0.64
8:G:386:ASP:O	8:G:389:GLU:HG3	1.96	0.64
4:H:208:ILE:HG12	7:A:506:HIS:HD1	1.61	0.64
4:H:252:SER:HB2	8:G:246:MET:HG2	1.79	0.64
8:G:56:ASN:HD21	8:G:159:LYS:HD2	1.63	0.64
2:E:220:LEU:HB2	2:E:360:ILE:HB	1.79	0.64
2:E:221:ASP:OD1	2:E:222:LYS:NZ	2.26	0.64
3:F:491:ALA:HA	3:F:502:ASN:HA	1.80	0.64
4:H:220:ILE:HB	4:H:361:THR:HB	1.79	0.64
5:C:21:GLN:O	5:C:25:ASN:ND2	2.31	0.64
6:J:33:ILE:HG21	6:J:116:GLU:HG2	1.79	0.64
8:G:194:SER:HA	8:G:318:ARG:HH11	1.63	0.64
8:G:229:ILE:HG22	8:G:231:ASN:H	1.63	0.64
4:P:220:ILE:HB	4:P:361:THR:HB	1.79	0.64
5:C:209:GLN:HB3	5:C:373:ILE:HB	1.78	0.64
2:M:51:ILE:HB	3:N:535:VAL:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:257:LYS:HD3	8:G:248:LEU:HD12	1.79	0.64
4:H:49:MET:HA	4:H:59:MET:HA	1.78	0.64
4:P:261:GLU:HB3	7:I:262:ALA:HB2	1.79	0.64
8:O:229:ILE:HG22	8:O:231:ASN:H	1.63	0.64
2:M:220:LEU:HB2	2:M:360:ILE:HB	1.80	0.64
3:F:38:ILE:HG23	3:F:117:LEU:HB3	1.80	0.64
5:C:241:ASN:HB3	5:C:332:THR:HG22	1.80	0.64
5:C:350:GLU:OE1	5:C:357:ARG:NE	2.30	0.64
6:B:367:LYS:HG3	6:B:370:GLY:H	1.62	0.64
1:L:177:VAL:HA	2:M:516:ARG:HH22	1.63	0.64
1:D:442:THR:O	1:D:444:GLU:N	2.31	0.64
5:K:21:GLN:O	5:K:25:ASN:ND2	2.31	0.64
6:B:247:ASP:OD1	6:B:248:GLY:N	2.31	0.64
2:E:97:ASP:OD1	2:E:98:GLY:N	2.29	0.63
2:E:220:LEU:HD11	2:E:323:LEU:HD21	1.80	0.63
3:F:33:ILE:O	3:F:37:ASN:ND2	2.25	0.63
3:F:55:LYS:HD2	8:G:113:HIS:CE1	2.32	0.63
5:C:26:ILE:HG23	5:C:105:LEU:HB3	1.78	0.63
6:J:146:LEU:HD11	6:J:418:GLU:HG2	1.79	0.63
6:J:234:VAL:HG12	6:J:236:ASP:H	1.64	0.63
6:B:33:ILE:HG21	6:B:116:GLU:HG2	1.79	0.63
6:B:280:VAL:HG21	6:B:304:TYR:HB3	1.80	0.63
8:O:351:VAL:HG22	8:O:364:ILE:HG12	1.79	0.63
3:N:227:LEU:HD11	3:N:336:ILE:HG12	1.81	0.63
4:H:114:GLU:HG2	6:J:450:ARG:HH21	1.63	0.63
4:H:481:ASN:OD1	4:H:484:THR:N	2.28	0.63
6:J:247:ASP:OD1	6:J:248:GLY:N	2.31	0.63
8:O:194:SER:HA	8:O:318:ARG:HH11	1.63	0.63
3:N:491:ALA:HA	3:N:502:ASN:HA	1.80	0.63
5:C:458:THR:N	8:O:111:LYS:HZ3	1.96	0.63
1:L:51:SER:OG	1:L:72:ASN:OD1	2.15	0.63
6:J:500:THR:HG23	6:J:503:GLY:H	1.64	0.63
8:O:432:SER:OG	8:O:433:ARG:N	2.31	0.63
1:L:67:ASP:OD1	1:L:68:VAL:N	2.32	0.63
1:L:442:THR:O	1:L:444:GLU:N	2.31	0.63
4:P:415:GLU:N	4:P:415:GLU:OE2	2.31	0.63
4:P:424:GLU:HA	4:P:427:LYS:HZ3	1.64	0.63
4:P:481:ASN:OD1	4:P:484:THR:N	2.28	0.63
8:G:202:GLY:N	8:G:379:GLY:O	2.30	0.63
3:N:347:HIS:ND1	3:N:349:ASP:OD1	2.32	0.63
3:F:227:LEU:HD11	3:F:336:ILE:HG12	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:236:PRO:HG3	4:P:350:LEU:HB2	1.80	0.63
7:I:446:ILE:HD13	7:I:449:LYS:HD2	1.80	0.63
2:M:68:ALA:HB2	2:M:99:THR:HG21	1.80	0.63
2:E:205:LEU:O	2:E:376:ARG:NH1	2.30	0.63
5:K:80:VAL:HG12	5:K:84:LYS:HZ3	1.63	0.63
8:G:480:ARG:O	8:G:484:LYS:N	2.23	0.63
2:M:220:LEU:HD11	2:M:323:LEU:HD21	1.80	0.63
3:N:29:LYS:HE3	3:N:33:ILE:HD11	1.80	0.63
4:H:415:GLU:N	4:H:415:GLU:OE2	2.31	0.63
4:P:399:ARG:HH22	8:O:355:ARG:NH2	1.97	0.63
6:B:146:LEU:HD11	6:B:418:GLU:HG2	1.79	0.63
7:I:181:LYS:HG2	7:I:370:ARG:HH22	1.62	0.63
2:M:97:ASP:OD1	2:M:98:GLY:N	2.29	0.62
5:K:378:ALA:HB3	5:K:381:PHE:CG	2.34	0.62
5:C:86:GLN:HB3	5:C:94:THR:HG22	1.81	0.62
7:A:446:ILE:HD13	7:A:449:LYS:HD2	1.80	0.62
6:B:234:VAL:HG12	6:B:236:ASP:H	1.64	0.62
7:A:445:LEU:HD13	7:A:463:LEU:HD11	1.81	0.62
8:O:86:VAL:HG11	8:O:509:VAL:HG13	1.82	0.62
8:O:300:PHE:O	8:O:304:GLY:N	2.32	0.62
8:G:300:PHE:O	8:G:304:GLY:N	2.32	0.62
8:G:432:SER:OG	8:G:433:ARG:N	2.31	0.62
2:E:379:THR:HB	2:E:382:ILE:H	1.64	0.62
3:F:29:LYS:HE3	3:F:33:ILE:HD11	1.80	0.62
3:F:291:LYS:HG3	3:F:320:MET:SD	2.39	0.62
3:F:347:HIS:ND1	3:F:349:ASP:OD1	2.32	0.62
8:G:86:VAL:HG11	8:G:509:VAL:HG13	1.82	0.62
2:E:68:ALA:HB2	2:E:99:THR:HG21	1.80	0.62
6:B:500:THR:HG23	6:B:503:GLY:H	1.63	0.62
8:G:88:ASP:OD2	8:G:91:THR:OG1	2.13	0.62
3:N:161:GLU:O	3:N:165:ASN:ND2	2.33	0.62
3:F:268:ASP:OD1	8:G:259:LYS:NZ	2.32	0.62
4:P:262:GLU:OE1	4:P:262:GLU:N	2.29	0.62
5:K:241:ASN:HB3	5:K:332:THR:HG22	1.80	0.62
6:J:280:VAL:HG21	6:J:304:TYR:HB3	1.80	0.62
7:A:200:SER:OG	7:A:202:THR:N	2.33	0.62
2:E:226:VAL:HG22	2:E:227:ASN:H	1.64	0.62
3:N:291:LYS:HG3	3:N:320:MET:SD	2.39	0.62
5:K:329:SER:O	5:K:331:GLN:NE2	2.25	0.62
8:G:183:ASP:O	8:G:185:ARG:N	2.26	0.62
8:G:416:GLU:HA	8:G:419:LEU:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:67:ASP:OD1	1:D:68:VAL:N	2.32	0.62
2:M:379:THR:HB	2:M:382:ILE:H	1.64	0.62
4:H:236:PRO:HG3	4:H:350:LEU:HB2	1.80	0.62
4:P:193:ILE:HG21	8:O:227:LYS:HE2	1.81	0.62
7:A:426:LYS:O	7:A:428:SER:N	2.30	0.62
1:L:407:CYS:O	1:L:411:ASN:ND2	2.26	0.62
2:E:288:ASN:HA	2:E:309:VAL:HG22	1.81	0.62
3:N:494:ASN:OD1	3:N:497:LYS:N	2.29	0.62
5:C:378:ALA:HB3	5:C:381:PHE:CG	2.34	0.62
2:M:205:LEU:O	2:M:376:ARG:NH1	2.30	0.62
3:N:462:PRO:HA	3:N:465:LEU:HD12	1.82	0.62
4:P:386:GLU:OE2	4:P:390:ASN:ND2	2.33	0.62
7:I:200:SER:OG	7:I:202:THR:N	2.33	0.62
1:L:236:HIS:H	1:L:239:MET:HE1	1.65	0.62
1:D:188:ILE:HG23	1:D:224:LEU:HB3	1.81	0.62
3:F:161:GLU:O	3:F:165:ASN:ND2	2.32	0.62
6:J:7:LYS:HA	7:A:523:ARG:CZ	2.30	0.62
7:I:445:LEU:HD13	7:I:463:LEU:HD11	1.81	0.62
7:I:466:ILE:HG21	7:I:479:VAL:HG22	1.82	0.62
6:J:523:GLN:HG2	7:I:45:LYS:HZ1	1.65	0.61
2:M:226:VAL:HG22	2:M:227:ASN:H	1.64	0.61
2:M:293:ARG:NH1	2:M:294:GLN:OE1	2.33	0.61
4:H:452:ILE:HG21	4:H:459:THR:HA	1.82	0.61
6:J:481:ASP:OD1	6:J:482:ILE:N	2.33	0.61
6:B:481:ASP:OD1	6:B:482:ILE:N	2.33	0.61
7:I:426:LYS:O	7:I:428:SER:N	2.30	0.61
7:A:466:ILE:HG21	7:A:479:VAL:HG22	1.82	0.61
8:G:263:ILE:O	8:G:267:GLU:HG3	2.00	0.61
8:G:489:ASP:OD1	8:G:490:LEU:N	2.33	0.61
1:D:236:HIS:H	1:D:239:MET:CE	2.13	0.61
6:J:478:VAL:HA	6:J:491:ASP:HA	1.82	0.61
6:B:22:PHE:HB2	6:B:524:ILE:HB	1.82	0.61
7:I:185:PRO:O	7:I:399:LYS:NZ	2.34	0.61
8:O:489:ASP:OD1	8:O:490:LEU:N	2.33	0.61
8:G:432:SER:OG	8:G:434:GLU:OE1	2.12	0.61
1:L:188:ILE:HG23	1:L:224:LEU:HB3	1.81	0.61
6:B:238:LYS:HB2	6:B:288:ALA:HA	1.82	0.61
8:O:99:GLU:HG3	8:O:444:SER:HB2	1.81	0.61
8:O:258:GLU:OE1	8:O:258:GLU:N	2.34	0.61
3:N:258:THR:OG1	3:N:260:MET:O	2.14	0.61
4:P:247:TYR:HD2	7:I:243:GLU:CD	2.04	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:263:GLU:N	6:B:263:GLU:OE2	2.33	0.61
7:A:195:GLU:HB2	7:A:384:LEU:HD22	1.83	0.61
8:O:416:GLU:HA	8:O:419:LEU:HB2	1.82	0.61
1:D:132:ARG:NH1	5:C:482:GLU:OE2	2.33	0.61
1:D:347:GLU:OE1	5:C:302:TYR:OH	2.17	0.61
4:H:90:GLU:HG2	4:H:504:GLN:HE21	1.65	0.61
4:H:386:GLU:OE2	4:H:390:ASN:ND2	2.33	0.61
4:H:478:TRP:HA	4:H:489:ASP:HA	1.83	0.61
7:I:37:ASN:ND2	7:I:58:LYS:O	2.30	0.61
7:I:91:GLY:O	7:I:95:ASN:N	2.29	0.61
1:L:501:MET:O	1:L:505:HIS:N	2.34	0.61
2:M:288:ASN:HA	2:M:309:VAL:HG22	1.82	0.61
4:H:116:GLN:HE21	6:J:459:LYS:HA	1.66	0.61
5:K:86:GLN:HB3	5:K:94:THR:HG22	1.81	0.61
6:J:22:PHE:HB2	6:J:524:ILE:HB	1.82	0.61
8:O:263:ILE:O	8:O:267:GLU:HG3	2.00	0.61
1:D:229:ILE:HG12	1:D:371:MET:HE2	1.83	0.61
2:M:298:ASN:HA	2:M:301:GLU:HG2	1.82	0.61
2:E:293:ARG:NH1	2:E:294:GLN:OE1	2.33	0.61
4:H:50:LEU:N	4:H:58:VAL:O	2.33	0.61
4:P:50:LEU:N	4:P:58:VAL:O	2.33	0.61
5:C:200:VAL:HG13	5:C:375:ARG:HH21	1.66	0.61
7:I:349:LEU:HB3	7:I:364:GLU:HB3	1.83	0.61
7:A:185:PRO:O	7:A:399:LYS:NZ	2.34	0.61
8:G:99:GLU:HG3	8:G:444:SER:HB2	1.81	0.61
8:G:300:PHE:HD1	8:G:307:ALA:HB2	1.64	0.61
1:L:236:HIS:H	1:L:239:MET:CE	2.13	0.61
5:K:186:LEU:HD21	5:K:195:ILE:HG23	1.83	0.61
5:K:189:LEU:HG	5:K:191:GLN:HG2	1.83	0.61
7:I:19:ALA:HB1	7:I:521:ILE:HG12	1.82	0.61
4:P:116:GLN:NE2	6:B:460:ALA:H	1.99	0.60
4:P:478:TRP:HA	4:P:489:ASP:HA	1.83	0.60
1:L:356:ALA:HA	1:L:376:GLN:HG2	1.83	0.60
1:D:163:GLU:OE1	1:D:163:GLU:N	2.33	0.60
2:M:159:LEU:HD12	2:M:397:LEU:HD11	1.83	0.60
2:E:159:LEU:HD12	2:E:397:LEU:HD11	1.83	0.60
3:F:298:LEU:HD23	3:F:324:VAL:HG23	1.83	0.60
5:K:114:GLU:OE1	8:G:460:SER:OG	2.15	0.60
8:O:300:PHE:HD1	8:O:307:ALA:HB2	1.65	0.60
1:D:93:GLU:OE2	5:C:379:GLU:N	2.33	0.60
1:D:501:MET:O	1:D:505:HIS:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:302:GLN:OE1	3:N:346:ALA:N	2.34	0.60
5:K:512:LEU:HD11	6:J:65:VAL:HG11	1.83	0.60
6:B:478:VAL:HA	6:B:491:ASP:HA	1.81	0.60
7:A:349:LEU:HB3	7:A:364:GLU:HB3	1.83	0.60
8:O:284:ASN:O	8:O:306:MET:N	2.34	0.60
8:G:258:GLU:OE1	8:G:258:GLU:N	2.33	0.60
1:L:327:GLY:O	1:L:330:ILE:N	2.35	0.60
4:H:116:GLN:NE2	6:J:460:ALA:H	1.99	0.60
4:P:90:GLU:HG2	4:P:504:GLN:HE21	1.65	0.60
5:K:81:ASP:OD2	6:J:381:THR:HA	2.02	0.60
5:C:48:LEU:HB2	5:C:58:ILE:HG22	1.83	0.60
6:J:223:PHE:HB3	6:J:225:LYS:HE2	1.83	0.60
6:J:238:LYS:HB2	6:J:288:ALA:HA	1.82	0.60
7:A:19:ALA:HB1	7:A:521:ILE:HG12	1.82	0.60
1:L:168:THR:O	1:L:171:THR:OG1	2.18	0.60
2:E:112:GLU:OE1	2:E:438:SER:HB2	2.02	0.60
4:H:106:LEU:HD21	4:H:513:ALA:HA	1.84	0.60
4:P:452:ILE:HG21	4:P:459:THR:HA	1.82	0.60
5:C:186:LEU:HD21	5:C:195:ILE:HG23	1.83	0.60
6:J:296:LYS:HA	6:J:314:ARG:HH22	1.67	0.60
8:O:246:MET:O	8:O:247:LYS:HG3	2.02	0.60
1:L:177:VAL:N	2:M:516:ARG:HH12	2.00	0.60
3:F:462:PRO:HA	3:F:465:LEU:HD12	1.82	0.60
4:H:340:GLU:HA	4:H:343:VAL:HG23	1.83	0.60
4:H:466:LEU:HB2	4:H:487:LEU:HD11	1.82	0.60
4:P:44:LYS:NZ	7:I:117:ARG:HD3	2.17	0.60
4:P:150:ASP:HA	4:P:153:LEU:HD12	1.82	0.60
4:P:302:HIS:HB2	7:I:334:ASN:HB2	1.83	0.60
4:P:466:LEU:HB2	4:P:487:LEU:HD11	1.82	0.60
7:A:212:LEU:HB2	7:A:361:THR:HB	1.82	0.60
8:G:284:ASN:O	8:G:306:MET:N	2.34	0.60
1:L:18:ILE:N	1:L:22:GLN:OE1	2.30	0.60
1:D:356:ALA:HA	1:D:376:GLN:HG2	1.83	0.60
4:P:228:ARG:HH12	7:I:331:VAL:HA	1.67	0.60
5:K:406:VAL:HB	5:K:412:ILE:HD11	1.84	0.60
8:O:286:ILE:HG21	8:O:300:PHE:HE1	1.67	0.60
8:G:147:CYS:HA	8:G:150:ASN:HD22	1.67	0.60
3:N:81:MET:HB3	3:N:83:VAL:HG23	1.84	0.60
3:N:394:ASN:ND2	3:N:396:LEU:HB2	2.17	0.60
3:F:362:ALA:HB2	3:F:376:ILE:HG23	1.83	0.60
4:H:118:HIS:CE1	8:G:41:LEU:HD21	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:382:GLU:HG2	4:P:383:ILE:HD12	1.84	0.60
5:K:200:VAL:HG13	5:K:375:ARG:HH21	1.66	0.60
5:C:406:VAL:HB	5:C:412:ILE:HD11	1.84	0.60
6:B:85:MET:HE1	7:A:54:ILE:HD12	1.82	0.60
6:B:296:LYS:HA	6:B:314:ARG:HH22	1.67	0.60
7:I:212:LEU:HB2	7:I:361:THR:HB	1.82	0.60
8:O:480:ARG:HA	8:O:483:LEU:HB2	1.84	0.60
1:L:211:VAL:HG22	1:L:385:ILE:HD11	1.84	0.60
1:D:327:GLY:O	1:D:330:ILE:N	2.35	0.60
3:F:429:GLU:N	3:F:429:GLU:OE2	2.35	0.60
4:P:106:LEU:HD21	4:P:513:ALA:HA	1.84	0.60
5:K:381:PHE:O	5:K:385:THR:OG1	2.17	0.60
7:I:195:GLU:HB2	7:I:384:LEU:HD22	1.83	0.60
1:L:163:GLU:OE1	1:L:163:GLU:N	2.33	0.60
1:L:500:ASP:OD1	1:L:503:GLN:N	2.29	0.60
2:E:22:GLU:OE1	3:N:28:ASP:N	2.30	0.60
3:F:105:GLY:O	3:F:109:VAL:N	2.30	0.60
5:K:16:SER:O	5:K:21:GLN:NE2	2.32	0.60
8:G:286:ILE:HG21	8:G:300:PHE:HE1	1.67	0.60
2:E:298:ASN:HA	2:E:301:GLU:HG2	1.82	0.59
3:F:81:MET:HB3	3:F:83:VAL:HG23	1.84	0.59
4:H:150:ASP:HA	4:H:153:LEU:HD12	1.82	0.59
4:H:226:HIS:CG	4:H:227:PRO:HD2	2.37	0.59
4:P:340:GLU:HA	4:P:343:VAL:HG23	1.83	0.59
5:K:48:LEU:HB2	5:K:58:ILE:HG22	1.83	0.59
6:J:263:GLU:N	6:J:263:GLU:OE2	2.33	0.59
7:A:176:ILE:HD13	7:A:179:ILE:HD12	1.84	0.59
4:P:226:HIS:HB2	4:P:301:GLN:NE2	2.17	0.59
4:P:280:GLU:HA	4:P:283:ILE:HG12	1.84	0.59
6:J:250:ILE:HG12	7:I:256:ARG:HH21	1.65	0.59
7:I:488:VAL:HG12	7:I:491:GLU:H	1.67	0.59
8:O:480:ARG:O	8:O:484:LYS:N	2.22	0.59
8:G:246:MET:O	8:G:247:LYS:HG3	2.02	0.59
1:L:192:ALA:O	1:L:195:THR:OG1	2.20	0.59
1:D:331:GLU:HG2	5:C:223:ALA:O	2.02	0.59
1:D:532:ASP:HB3	5:C:47:LYS:HD2	1.84	0.59
3:F:213:LYS:O	3:F:391:ARG:NH1	2.35	0.59
4:H:48:LYS:HA	4:H:48:LYS:HE3	1.84	0.59
4:H:165:ILE:HD11	4:H:387:VAL:HG22	1.84	0.59
4:H:208:ILE:N	4:H:211:ASP:OD2	2.33	0.59
4:H:412:GLY:HA3	4:H:448:PRO:HG3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:91:GLY:O	7:A:95:ASN:N	2.29	0.59
2:M:488:MET:O	2:M:492:GLY:N	2.35	0.59
3:N:429:GLU:N	3:N:429:GLU:OE2	2.35	0.59
5:C:189:LEU:HG	5:C:191:GLN:HG2	1.83	0.59
6:B:223:PHE:HB3	6:B:225:LYS:HE2	1.82	0.59
8:O:27:SER:O	8:O:31:ILE:HG12	2.02	0.59
8:O:147:CYS:HA	8:O:150:ASN:HD22	1.67	0.59
3:F:185:PRO:HA	3:F:188:VAL:HG12	1.84	0.59
4:H:319:ASP:OD1	4:H:322:ARG:NH1	2.36	0.59
4:P:165:ILE:HD11	4:P:387:VAL:HG22	1.84	0.59
4:P:226:HIS:CG	4:P:227:PRO:HD2	2.37	0.59
4:P:228:ARG:NH1	7:I:331:VAL:HA	2.17	0.59
5:C:519:THR:HG22	6:B:55:MET:SD	2.42	0.59
7:I:176:ILE:HD13	7:I:179:ILE:HD12	1.84	0.59
1:L:229:ILE:HG12	1:L:371:MET:HE2	1.85	0.59
2:M:112:GLU:OE1	2:M:438:SER:HB2	2.02	0.59
3:N:362:ALA:HB2	3:N:376:ILE:HG23	1.83	0.59
8:O:225:MET:HE1	8:O:307:ALA:H	1.67	0.59
8:G:347:GLN:HB2	8:G:368:LYS:HG2	1.84	0.59
1:D:38:ILE:HD12	1:D:117:LEU:HB3	1.84	0.59
2:M:379:THR:HA	3:N:93:GLU:OE2	2.02	0.59
2:E:488:MET:O	2:E:492:GLY:N	2.35	0.59
3:N:298:LEU:HD23	3:N:324:VAL:HG23	1.83	0.59
3:F:60:MET:HG2	3:F:70:ILE:HG12	1.85	0.59
4:H:382:GLU:HG2	4:H:383:ILE:HD12	1.84	0.59
1:L:526:MET:HG3	5:K:381:PHE:HE1	1.67	0.59
4:P:48:LYS:HA	4:P:48:LYS:HE3	1.84	0.59
4:P:249:LYS:NZ	7:I:243:GLU:O	2.29	0.59
8:O:377:LEU:HD13	8:O:388:MET:HG3	1.85	0.59
1:L:236:HIS:CE1	1:L:238:GLN:HB2	2.38	0.59
1:D:211:VAL:HG22	1:D:385:ILE:HD11	1.84	0.59
3:F:399:GLU:O	3:F:402:GLU:HG3	2.03	0.59
4:H:280:GLU:HA	4:H:283:ILE:HG12	1.84	0.59
4:P:412:GLY:HA3	4:P:448:PRO:HG3	1.83	0.59
5:C:208:SER:HA	5:C:375:ARG:HG2	1.84	0.59
1:L:368:LYS:HG2	1:L:369:ASP:N	2.18	0.59
2:M:262:ALA:HB2	3:N:278:GLU:OE2	2.03	0.59
4:H:48:LYS:NZ	7:A:520:GLU:O	2.35	0.59
5:C:280:LYS:O	5:C:284:SER:OG	2.20	0.59
7:A:84:GLN:HE21	7:A:88:THR:HG22	1.68	0.59
8:G:480:ARG:HA	8:G:483:LEU:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:236:HIS:CE1	1:D:238:GLN:HB2	2.38	0.58
3:F:430:ILE:HD13	3:F:480:LEU:HD22	1.84	0.58
5:K:479:ILE:HG13	5:K:480:ASN:N	2.17	0.58
6:B:209:GLY:O	6:B:379:GLY:N	2.36	0.58
6:B:248:GLY:C	7:A:256:ARG:HH22	2.06	0.58
7:A:488:VAL:HG12	7:A:491:GLU:H	1.67	0.58
8:O:347:GLN:HB2	8:O:368:LYS:HG2	1.84	0.58
1:D:459:PRO:HB3	1:D:491:ILE:HD11	1.86	0.58
2:M:205:LEU:HD21	2:M:380:GLN:HG2	1.85	0.58
3:N:213:LYS:O	3:N:391:ARG:NH1	2.35	0.58
5:K:208:SER:HA	5:K:375:ARG:HG2	1.84	0.58
5:K:280:LYS:O	5:K:284:SER:OG	2.19	0.58
8:G:27:SER:O	8:G:31:ILE:HG12	2.02	0.58
2:M:282:ILE:HG12	2:M:335:PHE:CE2	2.38	0.58
3:N:399:GLU:O	3:N:402:GLU:HG3	2.03	0.58
6:J:522:ASP:OD1	6:J:523:GLN:N	2.36	0.58
8:G:377:LEU:HD13	8:G:388:MET:HG3	1.85	0.58
1:L:331:GLU:HG3	1:L:341:ILE:HD11	1.85	0.58
1:D:46:ASN:OD1	1:D:49:ARG:NH2	2.36	0.58
1:D:85:HIS:HE1	1:D:87:ILE:HB	1.69	0.58
3:N:185:PRO:HA	3:N:188:VAL:HG12	1.84	0.58
6:J:9:PRO:HG3	7:A:12:GLU:CD	2.23	0.58
6:J:29:VAL:HG22	6:J:120:ARG:HH11	1.68	0.58
7:I:84:GLN:HE21	7:I:88:THR:HG22	1.68	0.58
2:E:379:THR:O	2:E:383:LEU:N	2.23	0.58
3:F:394:ASN:ND2	3:F:396:LEU:HB2	2.17	0.58
4:P:212:SER:OG	4:P:377:ARG:N	2.30	0.58
4:P:319:ASP:OD1	4:P:322:ARG:NH1	2.36	0.58
8:G:342:ALA:HA	8:G:345:LEU:HD23	1.85	0.58
1:L:459:PRO:HB3	1:L:491:ILE:HD11	1.86	0.58
1:D:368:LYS:HG2	1:D:369:ASP:N	2.18	0.58
3:N:488:GLU:O	3:N:490:THR:N	2.37	0.58
1:L:85:HIS:HE1	1:L:87:ILE:HB	1.69	0.58
1:D:201:ARG:NH1	5:C:349:GLU:OE2	2.37	0.58
2:E:379:THR:HA	3:F:93:GLU:OE2	2.03	0.58
4:H:226:HIS:HB2	4:H:301:GLN:NE2	2.17	0.58
1:L:46:ASN:OD1	1:L:49:ARG:NH2	2.37	0.58
1:D:93:GLU:CD	5:C:379:GLU:H	2.06	0.58
1:D:201:ARG:HH11	5:C:231:LYS:HB2	1.67	0.58
2:M:212:SER:OG	2:M:376:ARG:N	2.37	0.58
2:E:487:ASP:OD1	2:E:490:ILE:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:60:MET:HG2	3:N:70:ILE:HG12	1.85	0.58
3:N:430:ILE:HD13	3:N:480:LEU:HD22	1.84	0.58
4:H:399:ARG:HH22	8:G:355:ARG:NH2	2.02	0.58
5:C:278:LEU:HD11	5:C:302:TYR:HB2	1.85	0.58
6:B:29:VAL:HG22	6:B:120:ARG:HH11	1.68	0.58
7:A:218:HIS:CD2	7:A:220:ASP:H	2.21	0.58
1:D:18:ILE:N	1:D:22:GLN:OE1	2.30	0.58
1:D:48:MET:HG3	1:D:110:VAL:HG21	1.85	0.58
2:E:282:ILE:HG12	2:E:335:PHE:CE2	2.38	0.58
4:P:101:LEU:HD12	4:P:447:ILE:HD11	1.86	0.58
5:C:103:GLU:HG3	5:C:444:ILE:HG12	1.86	0.58
8:O:34:SER:HA	8:O:455:ASN:HD21	1.69	0.58
1:L:59:LYS:HZ3	2:M:519:ASN:HB2	1.68	0.58
1:L:525:ARG:NH2	5:K:167:LEU:HD12	2.18	0.58
5:C:117:HIS:NE2	6:B:457:GLY:HA3	2.19	0.58
3:F:345:VAL:HG11	3:F:351:PHE:HB2	1.85	0.57
4:H:399:ARG:HH22	8:G:355:ARG:HH22	1.51	0.57
4:H:470:HIS:NE2	4:H:476:GLU:HA	2.19	0.57
5:K:244:LEU:O	5:K:296:GLY:N	2.35	0.57
5:C:479:ILE:HG13	5:C:480:ASN:N	2.17	0.57
6:J:209:GLY:O	6:J:379:GLY:N	2.36	0.57
7:I:218:HIS:CD2	7:I:220:ASP:H	2.21	0.57
1:L:38:ILE:HD12	1:L:117:LEU:HB3	1.84	0.57
8:O:202:GLY:N	8:O:379:GLY:O	2.30	0.57
8:O:266:ARG:HA	8:O:269:ASP:HB2	1.86	0.57
8:G:295:MET:HA	8:G:295:MET:HE3	1.86	0.57
4:P:208:ILE:HG12	7:I:506:HIS:HD1	1.69	0.57
5:C:90:VAL:HB	5:C:498:VAL:HG22	1.85	0.57
5:C:245:GLU:HG3	5:C:248:ALA:HB2	1.86	0.57
6:B:522:ASP:OD1	6:B:523:GLN:N	2.36	0.57
7:A:99:ILE:HD11	7:A:508:CYS:HA	1.86	0.57
1:L:48:MET:HG3	1:L:110:VAL:HG21	1.85	0.57
2:M:279:VAL:HA	2:M:282:ILE:HD12	1.87	0.57
2:E:205:LEU:HD21	2:E:380:GLN:HG2	1.85	0.57
4:H:238:ILE:HB	4:H:344:GLY:HA3	1.86	0.57
4:H:519:ILE:HD12	8:G:44:MET:HG2	1.87	0.57
5:C:8:LEU:O	6:B:78:VAL:HG13	2.04	0.57
6:J:88:MET:HE3	7:I:381:LYS:H	1.69	0.57
7:A:366:CYS:HB2	7:A:369:PRO:HB3	1.86	0.57
1:D:331:GLU:HG3	1:D:341:ILE:HD11	1.85	0.57
4:H:101:LEU:HD12	4:H:447:ILE:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:40:LEU:HD23	5:K:41:GLY:N	2.20	0.57
5:K:90:VAL:HB	5:K:498:VAL:HG22	1.85	0.57
5:K:278:LEU:HD11	5:K:302:TYR:HB2	1.85	0.57
8:G:34:SER:HA	8:G:455:ASN:HD21	1.69	0.57
2:E:212:SER:OG	2:E:376:ARG:N	2.37	0.57
2:E:279:VAL:HA	2:E:282:ILE:HD12	1.87	0.57
3:F:423:ALA:HA	3:F:509:VAL:HG12	1.87	0.57
4:P:238:ILE:HB	4:P:344:GLY:HA3	1.86	0.57
4:P:245:LEU:HD23	4:P:296:ILE:HG23	1.86	0.57
5:K:59:SER:HA	5:K:384:GLU:OE1	2.05	0.57
6:B:239:ILE:HB	6:B:345:GLY:HA3	1.87	0.57
6:B:386:ASP:HB3	6:B:390:ARG:NH2	2.19	0.57
8:O:342:ALA:HA	8:O:345:LEU:HD23	1.85	0.57
8:G:152:ALA:O	8:G:156:MET:HG2	2.05	0.57
1:L:357:GLY:H	1:L:376:GLN:HA	1.70	0.57
1:D:264:HIS:HB2	5:C:255:ILE:HD11	1.86	0.57
3:N:345:VAL:HG11	3:N:351:PHE:HB2	1.85	0.57
5:C:40:LEU:HD23	5:C:41:GLY:N	2.20	0.57
6:B:223:PHE:HB2	6:B:361:VAL:HB	1.87	0.57
8:O:152:ALA:O	8:O:156:MET:HG2	2.05	0.57
1:L:185:MET:HA	1:L:188:ILE:HD12	1.87	0.57
2:M:52:LEU:HD12	3:N:538:THR:HG22	1.87	0.57
3:N:298:LEU:N	3:N:323:MET:O	2.33	0.57
3:F:488:GLU:O	3:F:490:THR:N	2.37	0.57
4:H:265:THR:HG21	7:A:265:LYS:HE3	1.86	0.57
5:K:443:GLU:O	5:K:446:PRO:HD2	2.05	0.57
5:C:40:LEU:HD12	5:C:95:THR:OG1	2.05	0.57
7:I:160:VAL:HG12	7:I:386:GLN:HE22	1.70	0.57
8:G:42:ASP:HB3	8:G:56:ASN:HB3	1.87	0.57
8:G:266:ARG:HA	8:G:269:ASP:HB2	1.87	0.57
1:D:97:SER:HB3	5:C:202:GLY:HA2	1.87	0.57
1:D:185:MET:HA	1:D:188:ILE:HD12	1.87	0.57
1:D:192:ALA:O	1:D:195:THR:OG1	2.20	0.57
3:F:38:ILE:CD1	3:F:117:LEU:HD12	2.35	0.57
3:F:329:GLU:N	3:F:329:GLU:OE2	2.37	0.57
5:K:66:LEU:HB3	5:K:80:VAL:HG13	1.86	0.57
5:C:198:LYS:HZ1	5:C:217:LYS:H	1.53	0.57
6:B:152:LYS:NZ	6:B:406:LYS:HE3	2.20	0.57
7:I:366:CYS:HB2	7:I:369:PRO:HB3	1.86	0.57
2:M:292:ASN:OD1	2:M:293:ARG:N	2.38	0.57
4:H:245:LEU:HD23	4:H:296:ILE:HG23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:71:VAL:HG11	5:K:76:ALA:HB3	1.86	0.57
5:C:59:SER:HA	5:C:384:GLU:OE1	2.05	0.57
6:J:118:LEU:HB3	6:J:123:LEU:HD12	1.86	0.57
6:J:133:GLU:OE2	6:J:137:ARG:NH2	2.38	0.57
7:A:42:GLY:HA2	7:A:454:ASN:HD21	1.70	0.57
8:G:230:VAL:HA	8:G:350:GLU:HG3	1.86	0.57
1:D:168:THR:O	1:D:171:THR:OG1	2.18	0.56
1:D:329:GLU:O	1:D:333:ILE:HG12	2.05	0.56
4:P:470:HIS:NE2	4:P:476:GLU:HA	2.19	0.56
6:J:22:PHE:O	6:J:523:GLN:HB2	2.05	0.56
6:J:386:ASP:HB3	6:J:390:ARG:NH2	2.19	0.56
7:A:5:LYS:NZ	7:A:12:GLU:HA	2.19	0.56
7:A:190:MET:N	7:A:190:MET:SD	2.77	0.56
8:G:176:VAL:HG11	8:G:399:VAL:HG11	1.87	0.56
1:L:183:ARG:NE	1:L:187:GLU:OE2	2.38	0.56
3:N:309:LEU:HD23	3:N:326:LYS:HE2	1.87	0.56
4:P:258:ILE:HG12	7:I:248:PHE:HB3	1.87	0.56
5:K:42:PRO:HB2	5:K:479:ILE:HD13	1.87	0.56
5:K:126:ARG:NE	5:K:511:CYS:SG	2.78	0.56
5:K:198:LYS:HZ1	5:K:217:LYS:H	1.54	0.56
5:K:245:GLU:HG3	5:K:248:ALA:HB2	1.86	0.56
5:C:253:ALA:HB2	6:B:257:VAL:HG13	1.86	0.56
6:J:223:PHE:HB2	6:J:361:VAL:HB	1.87	0.56
6:J:239:ILE:HB	6:J:345:GLY:HA3	1.87	0.56
8:O:230:VAL:HA	8:O:350:GLU:HG3	1.86	0.56
1:L:154:SER:HA	1:L:417:ARG:HA	1.86	0.56
1:L:264:HIS:HB2	5:K:255:ILE:HD11	1.86	0.56
1:L:329:GLU:O	1:L:333:ILE:HG12	2.05	0.56
1:D:154:SER:HA	1:D:417:ARG:HA	1.86	0.56
1:D:525:ARG:HH22	5:C:167:LEU:C	2.08	0.56
2:M:204:LYS:O	2:M:376:ARG:NH1	2.38	0.56
2:E:250:LYS:HB3	2:E:252:PHE:CZ	2.41	0.56
2:E:292:ASN:OD1	2:E:293:ARG:N	2.38	0.56
3:N:119:SER:HB3	3:N:453:ALA:HB1	1.87	0.56
3:N:148:LEU:HA	3:N:151:MET:SD	2.46	0.56
3:N:152:SER:HB2	3:N:512:LEU:HD12	1.86	0.56
3:N:329:GLU:N	3:N:329:GLU:OE2	2.37	0.56
3:N:423:ALA:HA	3:N:509:VAL:HG12	1.87	0.56
4:H:217:GLY:HA3	4:H:363:ILE:O	2.05	0.56
4:P:48:LYS:HZ3	7:I:520:GLU:CD	2.08	0.56
4:P:83:ILE:HD13	4:P:512:THR:OG1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:40:LEU:HD12	5:K:95:THR:OG1	2.05	0.56
5:K:103:GLU:HG3	5:K:444:ILE:HG12	1.86	0.56
5:C:22:LEU:O	5:C:26:ILE:HG12	2.05	0.56
5:C:443:GLU:O	5:C:446:PRO:HD2	2.05	0.56
5:C:447:ARG:NH1	8:O:110:GLN:OE1	2.39	0.56
6:J:264:GLU:N	6:J:264:GLU:OE1	2.38	0.56
6:B:118:LEU:HB3	6:B:123:LEU:HD12	1.86	0.56
7:I:5:LYS:NZ	7:I:12:GLU:HA	2.19	0.56
7:A:146:GLU:HA	7:A:149:ILE:HD12	1.87	0.56
8:O:42:ASP:HB3	8:O:56:ASN:HB3	1.87	0.56
2:E:204:LYS:O	2:E:376:ARG:NH1	2.38	0.56
3:F:152:SER:HB2	3:F:512:LEU:HD12	1.86	0.56
4:H:334:ARG:HH12	8:G:268:SER:CB	2.18	0.56
4:P:251:GLU:O	8:O:245:LYS:NZ	2.39	0.56
5:C:42:PRO:HB2	5:C:479:ILE:HD13	1.87	0.56
5:C:244:LEU:O	5:C:296:GLY:N	2.35	0.56
6:B:264:GLU:N	6:B:264:GLU:OE1	2.38	0.56
7:A:172:VAL:O	7:A:175:SER:OG	2.20	0.56
1:D:183:ARG:NE	1:D:187:GLU:OE2	2.38	0.56
2:M:250:LYS:HB3	2:M:252:PHE:CZ	2.41	0.56
2:M:380:GLN:N	3:N:93:GLU:OE1	2.37	0.56
3:N:297:VAL:HG22	3:N:323:MET:HB3	1.87	0.56
3:F:301:GLN:HA	3:F:328:ILE:HB	1.87	0.56
4:P:46:MET:HE3	7:I:517:LEU:C	2.25	0.56
5:K:126:ARG:NH2	6:J:174:GLY:HA3	2.20	0.56
5:C:66:LEU:HB3	5:C:80:VAL:HG13	1.86	0.56
8:O:8:PHE:HD1	8:O:534:HIS:HB2	1.70	0.56
8:G:489:ASP:HB2	8:G:496:ARG:HG2	1.87	0.56
1:L:94:LEU:HD12	1:L:523:MET:HG3	1.87	0.56
1:D:178:VAL:HG21	1:D:398:ALA:HA	1.87	0.56
3:F:486:GLN:OE1	3:F:486:GLN:N	2.38	0.56
4:P:208:ILE:N	4:P:211:ASP:OD2	2.33	0.56
4:P:382:GLU:HG2	4:P:383:ILE:N	2.20	0.56
5:K:22:LEU:O	5:K:26:ILE:HG12	2.05	0.56
6:B:22:PHE:O	6:B:523:GLN:HB2	2.05	0.56
7:A:160:VAL:HG12	7:A:386:GLN:HE22	1.70	0.56
8:G:8:PHE:HD1	8:G:534:HIS:HB2	1.70	0.56
3:F:122:LYS:HA	3:F:125:GLN:NE2	2.21	0.56
3:F:148:LEU:HA	3:F:151:MET:SD	2.45	0.56
3:F:309:LEU:HD23	3:F:326:LYS:HE2	1.87	0.56
4:H:382:GLU:HG2	4:H:383:ILE:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:507:LYS:NZ	8:G:203:ARG:HB3	2.21	0.56
4:P:217:GLY:HA3	4:P:363:ILE:O	2.05	0.56
6:J:152:LYS:NZ	6:J:406:LYS:HE3	2.20	0.56
2:M:22:GLU:CD	3:F:28:ASP:H	2.05	0.56
3:N:486:GLN:OE1	3:N:486:GLN:N	2.38	0.56
4:H:83:ILE:HD13	4:H:512:THR:OG1	2.05	0.56
6:J:70:ALA:HB2	6:J:101:THR:HG21	1.88	0.56
6:B:323:ARG:O	6:B:327:THR:HG23	2.06	0.56
7:I:146:GLU:HA	7:I:149:ILE:HD12	1.87	0.56
7:I:278:LYS:HE3	7:I:310:ILE:HD11	1.88	0.56
3:N:301:GLN:HA	3:N:328:ILE:HB	1.87	0.56
3:F:134:SER:HB3	3:F:527:ARG:HD2	1.88	0.56
5:C:71:VAL:HG11	5:C:76:ALA:HB3	1.86	0.56
6:B:133:GLU:OE2	6:B:137:ARG:NH2	2.38	0.56
7:A:278:LYS:HE3	7:A:310:ILE:HD11	1.88	0.56
1:D:94:LEU:HD12	1:D:523:MET:HG3	1.87	0.56
1:D:312:HIS:ND1	2:E:333:SER:N	2.54	0.56
2:M:379:THR:O	2:M:383:LEU:N	2.23	0.56
3:N:38:ILE:CD1	3:N:117:LEU:HD12	2.35	0.56
5:K:60:ASN:N	5:K:384:GLU:OE2	2.39	0.56
7:I:42:GLY:HA2	7:I:454:ASN:HD21	1.70	0.56
7:I:99:ILE:HD11	7:I:508:CYS:HA	1.86	0.56
8:G:467:LEU:HD11	8:G:488:LEU:HD22	1.88	0.56
2:E:380:GLN:N	3:F:93:GLU:OE1	2.36	0.55
3:F:119:SER:HB3	3:F:453:ALA:HB1	1.87	0.55
3:F:494:ASN:OD1	3:F:497:LYS:N	2.29	0.55
5:K:458:THR:H	8:G:111:LYS:HZ1	1.53	0.55
6:J:323:ARG:O	6:J:327:THR:HG23	2.06	0.55
6:B:70:ALA:HB2	6:B:101:THR:HG21	1.88	0.55
8:O:467:LEU:HD11	8:O:488:LEU:HD22	1.89	0.55
8:O:489:ASP:HB2	8:O:496:ARG:HG2	1.87	0.55
8:G:434:GLU:OE1	8:G:434:GLU:N	2.39	0.55
1:L:201:ARG:HG2	5:K:230:LYS:HZ1	1.71	0.55
1:D:38:ILE:HG21	1:D:121:GLU:HB2	1.88	0.55
1:D:119:GLU:OE1	1:D:450:ALA:HB1	2.06	0.55
1:D:357:GLY:H	1:D:376:GLN:HA	1.70	0.55
2:M:487:ASP:OD1	2:M:490:ILE:N	2.31	0.55
2:E:446:LEU:HB3	2:E:447:PRO:HD3	1.88	0.55
5:K:17:GLN:HA	5:K:518:GLU:HB3	1.87	0.55
5:C:17:GLN:HA	5:C:518:GLU:HB3	1.87	0.55
5:C:291:SER:OG	5:C:293:LEU:O	2.17	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:332:THR:H	6:B:303:HIS:CD2	2.24	0.55
6:J:215:SER:OG	6:J:378:ARG:N	2.36	0.55
6:J:523:GLN:HG2	7:I:45:LYS:HZ3	1.68	0.55
6:B:337:THR:O	6:B:339:PRO:HD3	2.07	0.55
7:I:32:ASP:HA	7:I:35:ARG:HD2	1.89	0.55
7:I:459:LEU:HD12	7:A:113:GLY:HA3	1.88	0.55
8:O:434:GLU:OE1	8:O:434:GLU:N	2.39	0.55
3:F:266:VAL:HB	8:G:252:VAL:HG22	1.87	0.55
4:H:266:ARG:NH2	8:G:258:GLU:HA	2.21	0.55
4:P:49:MET:HG2	7:I:518:VAL:HG21	1.87	0.55
6:J:296:LYS:CA	6:J:314:ARG:HH22	2.20	0.55
6:J:337:THR:O	6:J:339:PRO:HD3	2.07	0.55
6:B:468:TYR:O	6:B:472:GLN:NE2	2.31	0.55
8:O:176:VAL:HG11	8:O:399:VAL:HG11	1.87	0.55
8:O:427:ALA:HB1	8:O:435:GLN:HB2	1.89	0.55
1:L:38:ILE:HG21	1:L:121:GLU:HB2	1.88	0.55
2:E:282:ILE:HG12	2:E:335:PHE:CD2	2.41	0.55
3:N:122:LYS:HA	3:N:125:GLN:NE2	2.21	0.55
3:N:435:ARG:O	3:N:438:GLU:HG2	2.06	0.55
3:F:297:VAL:HG22	3:F:323:MET:HB3	1.87	0.55
5:C:16:SER:O	5:C:21:GLN:NE2	2.32	0.55
5:C:92:ASP:OD1	5:C:93:GLY:N	2.38	0.55
8:G:489:ASP:OD2	8:G:496:ARG:NE	2.36	0.55
1:L:94:LEU:CD1	1:L:523:MET:HG3	2.36	0.55
1:L:359:VAL:HG22	1:L:374:ILE:HG12	1.88	0.55
1:D:210:LYS:NZ	1:D:211:VAL:O	2.39	0.55
2:M:282:ILE:HG12	2:M:335:PHE:CD2	2.41	0.55
3:F:48:ILE:HD11	3:F:78:LEU:HD21	1.88	0.55
3:F:435:ARG:O	3:F:438:GLU:HG2	2.06	0.55
4:P:526:HIS:N	8:O:47:ASP:O	2.28	0.55
6:J:76:LEU:O	6:J:78:VAL:HG23	2.07	0.55
7:I:480:ASP:HB3	7:I:485:GLU:H	1.72	0.55
1:D:94:LEU:CD1	1:D:523:MET:HG3	2.36	0.55
8:O:293:ASP:OD1	8:O:294:ASP:N	2.39	0.55
8:O:323:SER:HA	8:O:367:THR:HB	1.88	0.55
8:G:118:ILE:HG23	8:G:522:ILE:HG12	1.88	0.55
1:L:20:LYS:HB3	5:K:72:VAL:HG21	1.89	0.55
1:L:295:THR:HG22	1:L:353:LEU:HD11	1.89	0.55
2:E:50:LYS:NZ	3:F:534:ASP:HB3	2.22	0.55
3:N:48:ILE:HD11	3:N:78:LEU:HD21	1.88	0.55
3:N:134:SER:HB3	3:N:527:ARG:HD2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:210:LEU:HD13	5:C:372:PHE:CE1	2.42	0.55
8:O:88:ASP:OD2	8:O:91:THR:OG1	2.13	0.55
1:L:210:LYS:HZ2	1:L:212:GLU:HB2	1.71	0.55
2:M:208:SER:N	2:M:211:ASP:OD2	2.39	0.55
2:E:208:SER:N	2:E:211:ASP:OD2	2.39	0.55
3:N:151:MET:HB2	3:N:489:LYS:CD	2.36	0.55
5:C:96:SER:O	5:C:100:LEU:HD23	2.07	0.55
5:C:126:ARG:NE	5:C:511:CYS:SG	2.78	0.55
8:G:208:SER:OG	8:G:378:ARG:N	2.38	0.55
8:G:293:ASP:OD1	8:G:294:ASP:N	2.39	0.55
1:D:236:HIS:H	1:D:239:MET:HE1	1.72	0.55
1:D:529:LYS:NZ	5:C:45:MET:HA	2.21	0.55
4:H:212:SER:OG	4:H:377:ARG:N	2.30	0.55
5:K:202:GLY:O	5:K:375:ARG:NH2	2.40	0.55
6:B:296:LYS:CA	6:B:314:ARG:HH22	2.20	0.55
7:I:206:LEU:HD11	7:I:372:VAL:HB	1.89	0.55
7:A:5:LYS:HZ1	7:A:12:GLU:HA	1.72	0.55
8:O:150:ASN:HA	8:O:153:LYS:HZ3	1.72	0.55
8:G:427:ALA:HB1	8:G:435:GLN:HB2	1.89	0.55
2:E:50:LYS:NZ	3:F:533:ASP:OD1	2.33	0.55
3:F:394:ASN:HB3	3:F:397:VAL:HG12	1.89	0.55
4:P:526:HIS:CE1	8:O:47:ASP:HB2	2.42	0.55
5:K:210:LEU:HD13	5:K:372:PHE:CE1	2.42	0.55
5:C:458:THR:N	8:O:111:LYS:NZ	2.49	0.55
7:I:317:LYS:N	7:I:320:ASN:OD1	2.40	0.55
8:O:295:MET:HA	8:O:295:MET:HE3	1.88	0.55
8:O:489:ASP:OD2	8:O:496:ARG:NE	2.36	0.55
3:N:105:GLY:O	3:N:109:VAL:N	2.30	0.54
5:C:60:ASN:N	5:C:384:GLU:OE2	2.39	0.54
8:O:208:SER:OG	8:O:378:ARG:N	2.38	0.54
1:L:178:VAL:HG21	1:L:398:ALA:HA	1.87	0.54
1:L:344:ARG:HG3	5:K:271:TRP:HZ3	1.72	0.54
4:H:36:ILE:HG13	4:H:37:ILE:HG12	1.88	0.54
4:H:340:GLU:OE1	4:H:340:GLU:N	2.39	0.54
4:P:399:ARG:HH22	8:O:355:ARG:HH22	1.53	0.54
7:I:179:ILE:HD11	7:I:191:ILE:HD11	1.89	0.54
7:I:190:MET:N	7:I:190:MET:SD	2.77	0.54
7:A:480:ASP:HB3	7:A:485:GLU:H	1.72	0.54
1:D:201:ARG:HG2	5:C:230:LYS:NZ	2.23	0.54
1:D:210:LYS:HZ2	1:D:212:GLU:HB2	1.72	0.54
2:M:51:ILE:HD11	3:N:532:ILE:HD13	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:235:ASN:HB2	3:N:324:VAL:HG12	1.90	0.54
4:H:193:ILE:HG21	8:G:227:LYS:HE2	1.88	0.54
4:P:521:ASP:OD2	8:O:43:LYS:HG3	2.06	0.54
5:C:243:GLU:OE1	5:C:245:GLU:N	2.41	0.54
6:B:405:ASP:O	6:B:406:LYS:HE2	2.07	0.54
7:I:19:ALA:HB3	7:I:519:ASP:O	2.08	0.54
7:A:19:ALA:HB3	7:A:519:ASP:O	2.08	0.54
8:O:118:ILE:HG23	8:O:522:ILE:HG12	1.88	0.54
8:G:150:ASN:HA	8:G:153:LYS:HZ3	1.72	0.54
8:G:323:SER:HA	8:G:367:THR:HB	1.88	0.54
6:B:163:LEU:O	6:B:166:THR:HG22	2.08	0.54
7:A:32:ASP:HA	7:A:35:ARG:HD2	1.88	0.54
7:A:317:LYS:N	7:A:320:ASN:OD1	2.40	0.54
3:N:50:THR:O	3:N:468:ASN:ND2	2.41	0.54
3:N:347:HIS:HD1	3:N:349:ASP:H	1.55	0.54
4:P:116:GLN:HE21	6:B:459:LYS:HA	1.72	0.54
5:C:167:LEU:HD21	5:C:381:PHE:CD1	2.43	0.54
6:J:176:GLU:OE1	6:J:176:GLU:N	2.40	0.54
6:J:224:LYS:C	6:J:225:LYS:HD3	2.28	0.54
6:J:405:ASP:O	6:J:406:LYS:HE2	2.07	0.54
6:B:76:LEU:O	6:B:78:VAL:HG23	2.07	0.54
6:B:224:LYS:C	6:B:225:LYS:HD3	2.27	0.54
7:A:196:MET:HE2	7:A:375:LEU:HD21	1.88	0.54
1:L:119:GLU:OE1	1:L:450:ALA:HB1	2.06	0.54
2:M:250:LYS:HB3	2:M:252:PHE:CE1	2.43	0.54
3:N:30:PRO:HB3	3:N:533:ASP:HB2	1.90	0.54
3:N:209:LYS:HB2	3:N:335:PHE:CZ	2.43	0.54
3:F:298:LEU:N	3:F:323:MET:O	2.34	0.54
4:H:351:GLU:OE1	4:H:353:LYS:HG3	2.08	0.54
4:H:383:ILE:O	4:H:387:VAL:HG23	2.08	0.54
4:P:36:ILE:HG13	4:P:37:ILE:HG12	1.88	0.54
4:P:340:GLU:OE1	4:P:340:GLU:N	2.39	0.54
4:P:351:GLU:OE1	4:P:353:LYS:HG3	2.08	0.54
5:K:243:GLU:OE1	5:K:245:GLU:N	2.41	0.54
7:I:172:VAL:O	7:I:175:SER:OG	2.20	0.54
1:D:295:THR:HG22	1:D:353:LEU:HD11	1.89	0.54
1:D:500:ASP:OD1	1:D:503:GLN:N	2.29	0.54
4:H:238:ILE:HG13	4:H:289:VAL:HB	1.89	0.54
4:P:11:SER:HB2	4:P:14:THR:OG1	2.08	0.54
4:P:47:MET:CE	4:P:61:ASN:HB2	2.38	0.54
4:P:383:ILE:O	4:P:387:VAL:HG23	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:246:LEU:HD22	5:C:271:TRP:CD1	2.42	0.54
7:I:298:ASP:OD1	7:I:300:PHE:N	2.37	0.54
8:O:35:SER:O	8:O:35:SER:OG	2.26	0.54
1:L:376:GLN:OE1	1:L:380:SER:OG	2.26	0.54
1:D:359:VAL:HG22	1:D:374:ILE:HG12	1.88	0.54
3:N:160:ARG:NH1	3:N:189:ASN:OD1	2.41	0.54
4:H:477:THR:HG22	4:H:490:MET:HB3	1.90	0.54
5:C:202:GLY:O	5:C:375:ARG:NH2	2.40	0.54
2:M:446:LEU:HB3	2:M:447:PRO:HD3	1.88	0.54
2:E:147:ASP:OD1	2:E:405:ARG:HB3	2.08	0.54
6:J:200:ASP:O	6:J:323:ARG:NH2	2.40	0.54
7:A:107:ASP:HA	7:A:110:ILE:HG12	1.90	0.54
8:O:89:GLY:O	8:O:92:SER:N	2.38	0.54
8:O:498:ASN:HB3	8:O:503:VAL:HB	1.90	0.54
1:L:525:ARG:NH2	5:K:167:LEU:O	2.40	0.54
1:D:420:TYR:HA	1:D:507:ILE:HA	1.89	0.54
2:M:147:ASP:OD1	2:M:405:ARG:HB3	2.08	0.54
2:E:177:ASP:OD1	2:E:177:ASP:N	2.40	0.54
3:N:394:ASN:HB3	3:N:397:VAL:HG12	1.89	0.54
4:H:196:LYS:NZ	4:H:395:MET:HG3	2.23	0.54
4:H:306:ARG:NH2	7:A:338:ASP:OD2	2.41	0.54
4:P:477:THR:HG22	4:P:490:MET:HB3	1.90	0.54
5:K:96:SER:O	5:K:100:LEU:HD23	2.07	0.54
5:C:116:LEU:HB3	5:C:430:LYS:HZ3	1.72	0.54
7:A:206:LEU:HD11	7:A:372:VAL:HB	1.89	0.54
8:G:105:ASP:O	8:G:109:LYS:N	2.25	0.54
8:G:300:PHE:CD1	8:G:307:ALA:HB2	2.43	0.54
8:G:498:ASN:HB3	8:G:503:VAL:HB	1.90	0.54
1:L:58:ASP:HB2	1:L:71:THR:O	2.08	0.53
2:M:71:LEU:HB3	2:M:85:VAL:HG22	1.90	0.53
3:F:55:LYS:HE2	3:F:495:VAL:HG13	1.91	0.53
3:F:67:ASP:OD1	3:F:68:VAL:N	2.41	0.53
3:F:209:LYS:HB2	3:F:335:PHE:CZ	2.43	0.53
5:K:70:ASP:OD1	5:K:70:ASP:N	2.41	0.53
5:C:118:PRO:HA	5:C:121:ILE:HD13	1.91	0.53
1:D:376:GLN:OE1	1:D:380:SER:OG	2.26	0.53
2:M:98:GLY:O	2:M:102:VAL:N	2.31	0.53
3:N:67:ASP:OD1	3:N:68:VAL:N	2.42	0.53
3:F:30:PRO:HB3	3:F:533:ASP:HB2	1.90	0.53
3:F:160:ARG:NH1	3:F:189:ASN:OD1	2.41	0.53
3:F:347:HIS:HD1	3:F:349:ASP:H	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:246:LEU:HD13	5:K:271:TRP:HE1	1.73	0.53
6:J:129:ILE:HG23	6:J:516:VAL:HG23	1.90	0.53
6:J:468:TYR:O	6:J:472:GLN:NE2	2.31	0.53
7:I:107:ASP:HA	7:I:110:ILE:HG12	1.90	0.53
7:I:196:MET:HE2	7:I:375:LEU:HD21	1.89	0.53
3:F:235:ASN:HB2	3:F:324:VAL:HG12	1.90	0.53
5:K:167:LEU:HD21	5:K:381:PHE:CD1	2.43	0.53
5:C:10:LYS:HE2	6:B:79:GLN:OE1	2.08	0.53
5:C:126:ARG:HH22	6:B:174:GLY:HA3	1.74	0.53
4:P:520:ASP:OD2	8:O:41:LEU:HB2	2.09	0.53
5:C:246:LEU:HD13	5:C:271:TRP:HE1	1.73	0.53
6:J:163:LEU:O	6:J:166:THR:HG22	2.08	0.53
6:B:200:ASP:O	6:B:323:ARG:NH2	2.40	0.53
1:L:59:LYS:HD3	2:M:519:ASN:HB3	1.90	0.53
2:E:204:LYS:NZ	2:E:354:ILE:O	2.31	0.53
4:H:11:SER:HB2	4:H:14:THR:OG1	2.08	0.53
5:C:32:ILE:HG13	5:C:76:ALA:HB1	1.91	0.53
6:B:118:LEU:O	6:B:121:ILE:HG22	2.09	0.53
6:B:129:ILE:HG23	6:B:516:VAL:HG23	1.90	0.53
6:B:416:GLU:HG2	6:B:448:ILE:HD12	1.91	0.53
7:I:266:PHE:HE2	7:I:270:ARG:NH1	2.06	0.53
1:L:59:LYS:HB2	1:L:77:ILE:HD12	1.90	0.53
2:E:250:LYS:HB3	2:E:252:PHE:CE1	2.43	0.53
3:N:330:ARG:O	3:N:333:ILE:HG22	2.09	0.53
5:K:200:VAL:HG11	5:K:375:ARG:HD2	1.91	0.53
5:K:224:GLY:O	5:K:227:MET:N	2.35	0.53
5:K:246:LEU:HD22	5:K:271:TRP:CD1	2.42	0.53
7:A:234:ASN:O	7:A:295:LYS:HD2	2.09	0.53
7:A:298:ASP:OD1	7:A:300:PHE:N	2.37	0.53
1:L:420:TYR:HA	1:L:507:ILE:HA	1.89	0.53
2:M:384:ASP:OD2	2:M:388:ARG:NH2	2.37	0.53
3:F:151:MET:HB2	3:F:489:LYS:CD	2.36	0.53
3:F:268:ASP:N	3:F:271:GLN:OE1	2.38	0.53
5:K:32:ILE:HG13	5:K:76:ALA:HB1	1.91	0.53
6:J:118:LEU:O	6:J:121:ILE:HG22	2.08	0.53
6:J:416:GLU:HG2	6:J:448:ILE:HD12	1.91	0.53
6:B:22:PHE:HB3	6:B:27:GLU:HG2	1.91	0.53
7:I:234:ASN:O	7:I:295:LYS:HD2	2.09	0.53
8:G:82:GLN:HG2	8:G:93:VAL:HG21	1.90	0.53
3:N:522:ALA:O	3:N:526:VAL:HG13	2.09	0.53
3:F:312:LEU:HD13	8:G:330:THR:HG21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:261:GLU:HB3	7:A:262:ALA:HB2	1.90	0.53
4:P:238:ILE:HG13	4:P:289:VAL:HB	1.89	0.53
5:K:92:ASP:OD1	5:K:93:GLY:N	2.38	0.53
5:K:487:ASN:HA	5:K:490:ALA:HB3	1.91	0.53
6:J:22:PHE:HB3	6:J:27:GLU:HG2	1.91	0.53
7:A:44:MET:SD	7:A:44:MET:N	2.81	0.53
7:A:266:PHE:HE2	7:A:270:ARG:NH1	2.06	0.53
8:O:183:ASP:HB3	8:O:187:GLN:HB2	1.91	0.53
8:G:136:LEU:HD12	8:G:137:ILE:H	1.73	0.53
2:E:71:LEU:HB3	2:E:85:VAL:HG22	1.90	0.53
3:N:55:LYS:HE2	3:N:495:VAL:HG13	1.91	0.53
3:N:254:SER:OG	3:N:308:ALA:O	2.25	0.53
5:K:163:LEU:O	5:K:165:SER:N	2.36	0.53
5:K:291:SER:OG	5:K:293:LEU:O	2.17	0.53
7:I:198:HIS:HE2	7:I:353:TYR:HH	1.57	0.53
7:A:179:ILE:HD11	7:A:191:ILE:HD11	1.89	0.53
8:O:300:PHE:CD1	8:O:307:ALA:HB2	2.43	0.53
1:L:218:ARG:NH2	2:M:501:ARG:HH12	2.06	0.53
1:L:402:LEU:O	1:L:406:LEU:HG	2.08	0.53
1:D:59:LYS:HB2	1:D:77:ILE:HD12	1.90	0.53
2:E:384:ASP:OD2	2:E:388:ARG:NH2	2.37	0.53
3:N:501:SER:OG	3:N:502:ASN:N	2.42	0.53
5:K:118:PRO:HA	5:K:121:ILE:HD13	1.91	0.53
5:K:210:LEU:HD13	5:K:372:PHE:HE1	1.74	0.53
6:J:351:TYR:HE1	6:J:353:SER:HB2	1.74	0.53
7:A:28:ARG:O	7:A:31:GLN:HG3	2.09	0.53
8:O:62:LEU:HB3	8:O:76:CYS:SG	2.49	0.53
8:O:432:SER:OG	8:O:434:GLU:OE1	2.12	0.53
8:G:183:ASP:HB3	8:G:187:GLN:HB2	1.91	0.53
1:D:58:ASP:HB2	1:D:71:THR:O	2.08	0.52
1:D:402:LEU:O	1:D:406:LEU:HG	2.08	0.52
4:H:47:MET:CE	4:H:61:ASN:HB2	2.38	0.52
4:P:196:LYS:NZ	4:P:395:MET:HG3	2.23	0.52
5:C:266:ILE:HD13	6:B:262:ALA:HA	1.91	0.52
7:I:5:LYS:NZ	7:I:11:ALA:O	2.41	0.52
7:I:364:GLU:HG3	7:I:365:LYS:HG3	1.91	0.52
1:L:210:LYS:NZ	1:L:211:VAL:O	2.39	0.52
2:E:318:ALA:O	2:E:322:ARG:HG3	2.09	0.52
3:F:330:ARG:O	3:F:333:ILE:HG22	2.09	0.52
5:C:243:GLU:HB3	5:C:293:LEU:HB3	1.91	0.52
6:B:113:GLU:O	6:B:116:GLU:HG3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:351:TYR:HE1	6:B:353:SER:HB2	1.74	0.52
8:O:235:ALA:O	8:O:286:ILE:HD12	2.10	0.52
1:D:520:ALA:O	1:D:524:VAL:HG22	2.10	0.52
2:M:177:ASP:OD1	2:M:177:ASP:N	2.40	0.52
3:F:394:ASN:OD1	3:F:395:LYS:N	2.43	0.52
3:F:501:SER:OG	3:F:502:ASN:N	2.42	0.52
4:H:264:PHE:CD2	7:A:263:GLU:HA	2.44	0.52
7:I:296:GLY:HA2	7:I:314:ARG:HB2	1.92	0.52
8:O:85:GLU:O	8:O:401:ARG:NH1	2.42	0.52
8:G:62:LEU:HB3	8:G:76:CYS:SG	2.50	0.52
8:G:85:GLU:O	8:G:401:ARG:NH1	2.42	0.52
1:D:87:ILE:H	1:D:87:ILE:HD12	1.74	0.52
2:M:318:ALA:O	2:M:322:ARG:HG3	2.09	0.52
3:N:204:ASP:OD1	3:N:205:LEU:N	2.43	0.52
3:F:204:ASP:OD1	3:F:205:LEU:N	2.43	0.52
5:K:389:LEU:O	5:K:393:ILE:HG12	2.10	0.52
5:C:70:ASP:OD1	5:C:70:ASP:N	2.40	0.52
6:J:83:ALA:O	6:J:87:VAL:HG23	2.09	0.52
6:J:93:GLN:HE22	6:J:100:GLY:HA3	1.75	0.52
7:A:139:VAL:HG12	7:A:141:ARG:HG2	1.92	0.52
8:O:136:LEU:HD12	8:O:137:ILE:H	1.73	0.52
3:N:201:THR:HG22	3:N:202:SER:N	2.19	0.52
3:N:259:ASP:OD2	3:N:260:MET:N	2.42	0.52
3:F:185:PRO:O	3:F:189:ASN:ND2	2.43	0.52
4:P:504:GLN:HE22	8:O:203:ARG:HG3	1.74	0.52
5:K:126:ARG:HH22	6:J:174:GLY:HA3	1.74	0.52
5:K:457:ALA:N	8:G:111:LYS:HZ3	2.06	0.52
5:C:337:LEU:HD21	5:C:342:LEU:HD21	1.91	0.52
6:J:113:GLU:O	6:J:116:GLU:HG3	2.09	0.52
7:I:5:LYS:HZ1	7:I:12:GLU:HA	1.75	0.52
1:L:520:ALA:O	1:L:524:VAL:HG22	2.10	0.52
4:P:248:LYS:O	8:O:264:ARG:NH1	2.43	0.52
5:C:163:LEU:O	5:C:165:SER:N	2.36	0.52
5:C:247:LYS:NZ	5:C:251:ASP:O	2.41	0.52
5:C:282:HIS:CE1	5:C:306:ARG:HD3	2.45	0.52
7:A:296:GLY:HA2	7:A:314:ARG:HB2	1.92	0.52
8:G:416:GLU:HB2	8:G:445:LEU:HG	1.92	0.52
6:J:22:PHE:CD1	6:J:27:GLU:HG2	2.45	0.52
6:J:156:ASP:OD2	6:J:158:ASP:N	2.43	0.52
8:O:82:GLN:HG2	8:O:93:VAL:HG21	1.90	0.52
8:G:200:ALA:O	8:G:378:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:198:ASP:OD1	1:L:381:ARG:NH1	2.43	0.52
4:P:507:LYS:NZ	8:O:203:ARG:HB3	2.25	0.52
5:C:200:VAL:HG11	5:C:375:ARG:HD2	1.91	0.52
5:C:210:LEU:HD13	5:C:372:PHE:HE1	1.75	0.52
8:G:241:LEU:HB3	8:G:296:CYS:SG	2.50	0.52
1:L:201:ARG:NE	5:K:230:LYS:HZ1	2.08	0.52
1:D:20:LYS:HB3	5:C:72:VAL:HG21	1.92	0.52
1:D:261:LYS:NZ	5:C:246:LEU:HB2	2.25	0.52
2:M:75:GLY:HA2	3:N:539:ARG:NH1	2.24	0.52
4:H:498:PRO:HB2	4:H:501:VAL:HG23	1.92	0.52
5:K:199:LYS:HD3	5:K:382:MET:HB3	1.92	0.52
5:K:243:GLU:HB3	5:K:293:LEU:HB3	1.92	0.52
7:A:364:GLU:HG3	7:A:365:LYS:HG3	1.91	0.52
8:O:96:ILE:O	8:O:100:LEU:HD23	2.10	0.52
8:G:96:ILE:O	8:G:100:LEU:HD23	2.10	0.52
1:L:176:LYS:HG2	1:L:401:SER:HB3	1.92	0.52
1:D:126:ARG:HB3	3:N:474:ILE:HD11	1.92	0.52
1:D:165:LEU:HD21	1:D:412:LEU:HD22	1.92	0.52
3:N:185:PRO:O	3:N:189:ASN:ND2	2.43	0.52
3:N:394:ASN:OD1	3:N:395:LYS:N	2.43	0.52
4:H:48:LYS:HE3	4:H:48:LYS:CA	2.40	0.52
5:K:331:GLN:OE1	6:J:303:HIS:NE2	2.37	0.52
6:J:239:ILE:HA	6:J:290:VAL:HG13	1.92	0.52
7:A:447:ILE:H	7:A:447:ILE:HD12	1.75	0.52
1:L:165:LEU:HD21	1:L:412:LEU:HD22	1.93	0.51
1:L:529:LYS:HZ1	5:K:45:MET:HA	1.73	0.51
2:M:50:LYS:HZ2	3:N:534:ASP:HB3	1.73	0.51
4:H:396:GLN:O	4:H:399:ARG:HG2	2.11	0.51
4:P:490:MET:CE	4:P:495:ILE:HB	2.40	0.51
5:K:337:LEU:HD21	5:K:342:LEU:HD21	1.91	0.51
6:J:175:ASN:O	6:J:179:LEU:HG	2.09	0.51
6:B:156:ASP:OD2	6:B:158:ASP:N	2.43	0.51
6:B:175:ASN:O	6:B:179:LEU:HG	2.09	0.51
7:I:198:HIS:CE1	7:I:199:LYS:HG3	2.45	0.51
7:A:198:HIS:CE1	7:A:199:LYS:HG3	2.45	0.51
8:G:341:GLU:HG3	8:G:343:ALA:H	1.74	0.51
3:N:138:GLN:O	3:N:141:LEU:HG	2.10	0.51
4:H:28:ASN:OD1	6:J:30:TYR:OH	2.22	0.51
4:H:44:LYS:NZ	7:A:117:ARG:HD3	2.24	0.51
4:H:181:LYS:O	4:H:184:GLN:NE2	2.44	0.51
4:P:48:LYS:HE3	4:P:48:LYS:CA	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:266:ARG:O	4:P:270:MET:HG2	2.10	0.51
6:J:82:ALA:O	6:J:85:MET:HB2	2.10	0.51
6:B:29:VAL:HG22	6:B:120:ARG:NH1	2.26	0.51
8:O:47:ASP:N	8:O:47:ASP:OD1	2.43	0.51
1:L:125:ASP:OD2	3:F:42:LYS:NZ	2.42	0.51
2:M:379:THR:HA	3:N:93:GLU:CD	2.30	0.51
3:F:178:GLN:HA	8:G:122:ARG:NH2	2.25	0.51
3:F:522:ALA:O	3:F:526:VAL:HG13	2.09	0.51
4:P:47:MET:HE2	4:P:61:ASN:HB2	1.92	0.51
5:C:389:LEU:O	5:C:393:ILE:HG12	2.10	0.51
5:C:487:ASN:HA	5:C:490:ALA:HB3	1.91	0.51
6:B:22:PHE:CD1	6:B:27:GLU:HG2	2.45	0.51
7:I:44:MET:SD	7:I:44:MET:N	2.81	0.51
7:A:181:LYS:O	7:A:182:GLN:HG3	2.11	0.51
8:O:261:ASP:OD1	8:O:262:GLN:N	2.43	0.51
8:G:47:ASP:N	8:G:47:ASP:OD1	2.43	0.51
8:G:261:ASP:OD1	8:G:262:GLN:N	2.43	0.51
1:L:201:ARG:HG2	5:K:230:LYS:NZ	2.26	0.51
3:F:50:THR:O	3:F:468:ASN:ND2	2.41	0.51
4:H:490:MET:CE	4:H:495:ILE:HB	2.40	0.51
4:P:136:THR:O	4:P:140:ILE:HG12	2.11	0.51
5:C:8:LEU:HG	5:C:9:LEU:HG	1.92	0.51
6:B:342:GLU:OE1	6:B:342:GLU:N	2.41	0.51
7:A:511:ILE:O	7:A:515:ILE:HG12	2.11	0.51
8:O:200:ALA:O	8:O:378:ARG:NH1	2.42	0.51
8:O:241:LEU:HB3	8:O:296:CYS:SG	2.50	0.51
8:G:35:SER:O	8:G:35:SER:OG	2.26	0.51
8:G:235:ALA:O	8:G:286:ILE:HD12	2.10	0.51
1:D:119:GLU:O	1:D:122:GLN:HB3	2.10	0.51
2:E:31:GLY:HA3	2:E:78:ASN:HD22	1.76	0.51
3:N:122:LYS:O	3:N:126:LYS:HB2	2.11	0.51
3:F:122:LYS:O	3:F:126:LYS:HB2	2.11	0.51
4:P:82:GLU:O	4:P:86:THR:HG23	2.10	0.51
4:P:498:PRO:HB2	4:P:501:VAL:HG23	1.92	0.51
6:J:382:ASP:HA	6:J:385:MET:HG2	1.93	0.51
7:I:14:ALA:HB3	7:I:19:ALA:HB2	1.92	0.51
8:O:341:GLU:HG3	8:O:343:ALA:H	1.74	0.51
1:L:119:GLU:O	1:L:122:GLN:HB3	2.10	0.51
1:D:405:ALA:O	1:D:408:VAL:HG12	2.11	0.51
4:H:82:GLU:O	4:H:86:THR:HG23	2.10	0.51
4:H:136:THR:O	4:H:140:ILE:HG12	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:507:LYS:HE2	8:G:204:SER:CB	2.30	0.51
4:P:118:HIS:CE1	8:O:41:LEU:HD21	2.45	0.51
5:K:161:THR:OG1	5:K:493:TRP:N	2.41	0.51
6:B:83:ALA:O	6:B:87:VAL:HG23	2.09	0.51
6:B:176:GLU:N	6:B:176:GLU:OE1	2.40	0.51
6:B:209:GLY:O	6:B:378:ARG:NH1	2.44	0.51
6:B:239:ILE:HA	6:B:290:VAL:HG13	1.92	0.51
6:B:319:TRP:O	6:B:323:ARG:HG2	2.10	0.51
7:I:28:ARG:O	7:I:31:GLN:HG3	2.09	0.51
7:I:139:VAL:HG12	7:I:141:ARG:HG2	1.92	0.51
7:A:42:GLY:HA2	7:A:454:ASN:ND2	2.26	0.51
8:O:8:PHE:CD1	8:O:534:HIS:HB2	2.45	0.51
1:D:125:ASP:OD1	3:N:49:ARG:NH1	2.44	0.51
4:P:44:LYS:HG3	4:P:455:CYS:HA	1.93	0.51
5:C:199:LYS:HD3	5:C:382:MET:HB3	1.92	0.51
6:J:167:SER:O	6:J:170:SER:OG	2.20	0.51
6:B:382:ASP:HA	6:B:385:MET:HG2	1.93	0.51
1:L:376:GLN:NE2	1:L:378:LYS:HB2	2.26	0.51
1:D:421:GLY:N	1:D:506:VAL:O	2.41	0.51
3:N:63:ASP:OD1	3:N:64:GLY:N	2.44	0.51
5:K:80:VAL:HG12	5:K:84:LYS:NZ	2.26	0.51
5:C:245:GLU:CD	5:C:246:LEU:H	2.14	0.51
6:J:220:GLY:HA3	6:J:363:PHE:O	2.11	0.51
7:A:120:THR:HG23	7:A:513:THR:OG1	2.11	0.51
8:O:416:GLU:HB2	8:O:445:LEU:HG	1.92	0.51
8:O:473:GLU:HA	8:O:476:VAL:HG12	1.93	0.51
8:G:8:PHE:CD1	8:G:534:HIS:HB2	2.45	0.51
1:L:218:ARG:CZ	2:M:501:ARG:HH12	2.23	0.51
1:L:419:VAL:O	1:L:508:GLU:N	2.44	0.51
1:D:176:LYS:HG2	1:D:401:SER:HB3	1.92	0.51
1:D:269:THR:OG1	1:D:273:ASP:OD2	2.27	0.51
1:D:508:GLU:OE1	1:D:509:THR:N	2.42	0.51
2:M:51:ILE:HG12	2:M:63:VAL:HG22	1.93	0.51
2:E:163:ALA:HB3	2:E:180:THR:HG23	1.93	0.51
3:N:108:SER:O	3:N:111:ILE:HG22	2.11	0.51
3:F:54:PRO:HB2	3:F:495:VAL:HG21	1.93	0.51
3:F:108:SER:O	3:F:111:ILE:HG22	2.11	0.51
4:P:22:VAL:HG12	4:P:26:ASN:HD21	1.76	0.51
5:K:171:GLN:HG3	5:K:205:LEU:HD11	1.93	0.51
6:J:415:THR:O	6:J:419:LEU:HD23	2.11	0.51
7:A:250:TYR:CE1	7:A:256:ARG:HB2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:18:ARG:O	8:G:22:VAL:HG23	2.11	0.51
1:D:391:ASN:ND2	1:D:393:MET:HB2	2.26	0.51
3:N:268:ASP:N	3:N:271:GLN:OE1	2.38	0.51
3:F:63:ASP:OD1	3:F:64:GLY:N	2.44	0.51
3:F:138:GLN:O	3:F:141:LEU:HG	2.10	0.51
3:F:184:SER:OG	3:F:185:PRO:HD3	2.11	0.51
4:H:44:LYS:HG3	4:H:455:CYS:HA	1.93	0.51
5:K:331:GLN:HA	6:J:303:HIS:CD2	2.46	0.51
5:K:380:GLN:HA	5:K:383:GLU:OE2	2.11	0.51
7:I:56:LEU:O	7:I:56:LEU:HD23	2.11	0.51
2:M:163:ALA:HB3	2:M:180:THR:HG23	1.93	0.50
4:H:115:GLN:CD	6:J:450:ARG:HH22	2.15	0.50
4:P:396:GLN:O	4:P:399:ARG:HG2	2.11	0.50
5:K:458:THR:H	8:G:111:LYS:NZ	2.09	0.50
5:C:380:GLN:HA	5:C:383:GLU:OE2	2.11	0.50
7:I:250:TYR:CE1	7:I:256:ARG:HB2	2.46	0.50
7:A:56:LEU:O	7:A:56:LEU:HD23	2.11	0.50
8:G:473:GLU:HA	8:G:476:VAL:HG12	1.93	0.50
1:L:87:ILE:H	1:L:87:ILE:HD12	1.75	0.50
1:L:391:ASN:ND2	1:L:393:MET:HB2	2.26	0.50
1:L:405:ALA:O	1:L:408:VAL:HG12	2.11	0.50
3:N:54:PRO:HB2	3:N:495:VAL:HG21	1.93	0.50
5:K:245:GLU:CD	5:K:246:LEU:H	2.14	0.50
5:C:80:VAL:HG12	5:C:84:LYS:NZ	2.26	0.50
5:C:224:GLY:O	5:C:227:MET:N	2.35	0.50
6:B:45:THR:O	6:B:455:ASN:ND2	2.43	0.50
6:B:82:ALA:O	6:B:85:MET:HB2	2.10	0.50
7:I:143:MET:SD	7:I:402:ILE:HA	2.51	0.50
7:I:511:ILE:O	7:I:515:ILE:HG12	2.11	0.50
1:D:229:ILE:HG12	1:D:371:MET:CE	2.42	0.50
2:M:31:GLY:HA3	2:M:78:ASN:HD22	1.76	0.50
2:E:226:VAL:O	2:E:228:GLN:HG3	2.11	0.50
3:N:183:LEU:O	3:N:186:MET:HB3	2.12	0.50
3:F:178:GLN:HA	8:G:122:ARG:CZ	2.41	0.50
3:F:254:SER:OG	3:F:308:ALA:O	2.25	0.50
4:H:266:ARG:O	4:H:270:MET:HG2	2.10	0.50
5:C:217:LYS:HA	5:C:358:TYR:CD1	2.47	0.50
6:J:73:LEU:HD12	6:J:87:VAL:HG22	1.93	0.50
6:J:319:TRP:O	6:J:323:ARG:HG2	2.10	0.50
6:B:27:GLU:OE1	6:B:27:GLU:N	2.38	0.50
6:B:198:ASN:HB2	6:B:201:ASN:ND2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:502:LEU:HG	6:B:506:TRP:CD1	2.47	0.50
7:I:350:VAL:HG22	7:I:363:ILE:HA	1.93	0.50
8:O:227:LYS:NZ	8:O:353:GLN:HG3	2.27	0.50
8:G:227:LYS:NZ	8:G:353:GLN:HG3	2.27	0.50
1:D:116:LEU:HA	1:D:454:ALA:HB1	1.93	0.50
2:M:295:LEU:HG	2:M:314:HIS:HD2	1.76	0.50
3:F:246:ILE:N	3:F:357:GLY:O	2.43	0.50
4:P:181:LYS:O	4:P:184:GLN:NE2	2.44	0.50
6:J:198:ASN:HB2	6:J:201:ASN:ND2	2.26	0.50
7:I:8:ASN:OD1	7:I:11:ALA:N	2.45	0.50
1:D:33:ALA:O	1:D:36:SER:OG	2.22	0.50
2:M:226:VAL:O	2:M:228:GLN:HG3	2.11	0.50
2:M:456:TYR:CE1	2:M:483:GLY:HA3	2.47	0.50
2:E:172:LEU:HD11	2:E:386:ALA:HA	1.93	0.50
3:F:269:TYR:CD2	8:G:266:ARG:NH1	2.79	0.50
6:J:45:THR:O	6:J:455:ASN:ND2	2.43	0.50
6:J:85:MET:SD	7:I:382:HIS:NE2	2.84	0.50
7:I:181:LYS:O	7:I:182:GLN:HG3	2.11	0.50
1:L:229:ILE:HG12	1:L:371:MET:CE	2.42	0.50
1:L:391:ASN:HB2	2:M:87:MET:HE1	1.93	0.50
1:D:152:SER:HB2	1:D:510:LEU:HD12	1.94	0.50
3:F:112:ILE:HD11	3:F:461:ILE:HD11	1.94	0.50
4:H:87:GLN:HG2	4:H:98:VAL:HG21	1.94	0.50
4:H:521:ASP:OD2	8:G:43:LYS:HG3	2.11	0.50
4:P:115:GLN:OE1	6:B:461:ASN:ND2	2.42	0.50
4:P:240:LEU:HD13	4:P:291:ILE:HB	1.94	0.50
5:K:282:HIS:CE1	5:K:306:ARG:HD3	2.45	0.50
5:C:171:GLN:HG3	5:C:205:LEU:HD11	1.93	0.50
6:J:29:VAL:HG22	6:J:120:ARG:NH1	2.26	0.50
6:J:502:LEU:HG	6:J:506:TRP:CD1	2.47	0.50
6:B:48:GLY:C	6:B:51:GLY:H	2.15	0.50
7:I:42:GLY:HA2	7:I:454:ASN:ND2	2.26	0.50
2:M:415:MET:HB3	2:M:469:HIS:ND1	2.27	0.50
2:M:505:LEU:O	2:M:509:GLU:HG2	2.12	0.50
2:E:51:ILE:HG12	2:E:63:VAL:HG22	1.93	0.50
2:E:156:ARG:NH2	2:E:185:GLU:OE2	2.44	0.50
3:F:183:LEU:O	3:F:186:MET:HB3	2.12	0.50
4:H:22:VAL:HG12	4:H:26:ASN:HD21	1.76	0.50
4:H:47:MET:HE2	4:H:61:ASN:HB2	1.93	0.50
4:H:240:LEU:HD13	4:H:291:ILE:HB	1.94	0.50
4:H:255:ASP:N	8:G:252:VAL:O	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:325:ARG:HB3	4:H:371:ALA:HB2	1.94	0.50
4:P:41:LEU:HD12	4:P:42:GLY:H	1.77	0.50
5:K:8:LEU:HG	5:K:9:LEU:HG	1.93	0.50
5:C:114:GLU:HB3	8:O:460:SER:OG	2.11	0.50
6:J:204:VAL:HG22	6:J:375:ILE:HD11	1.94	0.50
6:B:93:GLN:HE22	6:B:100:GLY:HA3	1.75	0.50
6:B:204:VAL:HG22	6:B:375:ILE:HD11	1.94	0.50
6:B:220:GLY:HA3	6:B:363:PHE:O	2.11	0.50
7:I:447:ILE:H	7:I:447:ILE:HD12	1.75	0.50
8:O:18:ARG:O	8:O:22:VAL:HG23	2.11	0.50
8:G:150:ASN:HA	8:G:153:LYS:NZ	2.27	0.50
1:D:442:THR:OG1	1:D:443:LEU:HD12	2.12	0.50
2:E:456:TYR:CE1	2:E:483:GLY:HA3	2.47	0.50
3:N:246:ILE:N	3:N:357:GLY:O	2.43	0.50
3:N:354:ASP:OD1	3:N:355:MET:N	2.45	0.50
3:F:72:ASN:HD22	3:F:174:LYS:HG3	1.77	0.50
4:H:237:ARG:H	4:H:288:ASP:HB2	1.77	0.50
4:P:145:ASP:OD2	4:P:148:ASP:N	2.28	0.50
6:J:118:LEU:HA	6:J:121:ILE:HG22	1.93	0.50
7:I:44:MET:HB3	7:I:58:LYS:HE3	1.94	0.50
8:G:286:ILE:HG21	8:G:300:PHE:CE1	2.47	0.50
8:G:477:ASN:HB2	8:G:483:LEU:HD13	1.92	0.50
1:L:152:SER:HB2	1:L:510:LEU:HD12	1.94	0.50
2:E:51:ILE:HB	3:F:535:VAL:HG22	1.94	0.50
2:E:259:ASP:HB2	2:E:263:LYS:NZ	2.27	0.50
7:A:8:ASN:OD1	7:A:11:ALA:N	2.44	0.50
7:A:14:ALA:HB3	7:A:19:ALA:HB2	1.92	0.50
7:A:350:VAL:HG22	7:A:363:ILE:HA	1.93	0.50
8:O:220:VAL:HG13	8:O:225:MET:CE	2.42	0.50
1:D:25:LYS:HE3	1:D:536:PRO:HG3	1.94	0.49
2:M:172:LEU:HD11	2:M:386:ALA:HA	1.93	0.49
2:E:295:LEU:HG	2:E:314:HIS:HD2	1.76	0.49
3:N:120:CYS:O	3:N:124:LEU:HD23	2.12	0.49
4:P:67:LEU:HB3	4:P:81:ILE:HD13	1.94	0.49
6:B:118:LEU:HA	6:B:121:ILE:HG22	1.93	0.49
8:O:467:LEU:HD11	8:O:488:LEU:HD13	1.93	0.49
1:L:236:HIS:HE2	2:M:331:ILE:HG13	1.77	0.49
1:D:155:VAL:HG21	1:D:412:LEU:HD21	1.94	0.49
1:D:201:ARG:NH1	5:C:231:LYS:HB2	2.28	0.49
2:M:65:ASN:HD22	2:M:170:LYS:HG3	1.77	0.49
2:E:415:MET:HB3	2:E:469:HIS:ND1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:156:ILE:HD11	4:H:398:CYS:HB2	1.94	0.49
4:P:237:ARG:H	4:P:288:ASP:HB2	1.77	0.49
6:J:209:GLY:O	6:J:378:ARG:NH1	2.44	0.49
6:B:44:ARG:HD3	6:B:454:GLU:OE1	2.12	0.49
7:I:120:THR:HG23	7:I:513:THR:OG1	2.11	0.49
7:I:142:GLU:OE1	7:I:142:GLU:N	2.45	0.49
8:G:505:GLU:OE2	8:G:510:LYS:NZ	2.39	0.49
1:L:421:GLY:N	1:L:506:VAL:O	2.41	0.49
2:M:156:ARG:NH2	2:M:185:GLU:OE2	2.44	0.49
3:N:72:ASN:HD22	3:N:174:LYS:HG3	1.77	0.49
4:H:41:LEU:HD12	4:H:42:GLY:H	1.77	0.49
4:P:87:GLN:HG2	4:P:98:VAL:HG21	1.94	0.49
5:K:287:LYS:HA	5:K:308:MET:HG3	1.94	0.49
5:C:287:LYS:HA	5:C:308:MET:HG3	1.94	0.49
6:J:378:ARG:HA	6:J:378:ARG:HH11	1.76	0.49
6:B:415:THR:O	6:B:419:LEU:HD23	2.11	0.49
8:O:105:ASP:O	8:O:109:LYS:N	2.25	0.49
1:D:271:VAL:HG22	2:E:266:GLU:OE1	2.12	0.49
1:D:419:VAL:O	1:D:508:GLU:N	2.44	0.49
2:E:112:GLU:O	2:E:115:SER:OG	2.20	0.49
3:N:258:THR:H	3:N:262:ASN:ND2	2.10	0.49
3:F:120:CYS:O	3:F:124:LEU:HD23	2.12	0.49
4:H:43:PRO:HG2	4:H:482:GLY:HA3	1.93	0.49
4:H:67:LEU:HB3	4:H:81:ILE:HD13	1.94	0.49
4:H:201:VAL:HG11	4:H:388:GLU:HB2	1.94	0.49
4:P:481:ASN:OD1	4:P:483:GLU:N	2.46	0.49
5:K:217:LYS:HA	5:K:358:TYR:CD1	2.47	0.49
5:C:412:ILE:O	5:C:416:LEU:HD23	2.12	0.49
6:B:73:LEU:HD12	6:B:87:VAL:HG22	1.93	0.49
8:O:150:ASN:HA	8:O:153:LYS:NZ	2.27	0.49
1:L:105:GLY:O	1:L:109:VAL:HG23	2.13	0.49
1:L:116:LEU:HD22	1:L:524:VAL:HG21	1.94	0.49
1:D:101:GLU:OE1	5:C:375:ARG:NH1	2.46	0.49
1:D:189:ALA:O	1:D:193:VAL:HG22	2.13	0.49
3:N:112:ILE:HD11	3:N:461:ILE:HD11	1.94	0.49
3:F:116:LEU:HD21	3:F:458:MET:HE2	1.94	0.49
4:H:115:GLN:OE1	6:J:461:ASN:ND2	2.43	0.49
4:P:229:MET:CG	4:P:310:THR:HA	2.40	0.49
5:K:247:LYS:NZ	5:K:251:ASP:O	2.41	0.49
5:C:161:THR:OG1	5:C:493:TRP:N	2.42	0.49
6:J:48:GLY:C	6:J:51:GLY:H	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:104:VAL:HA	6:B:107:PHE:HD1	1.77	0.49
6:B:167:SER:O	6:B:170:SER:OG	2.20	0.49
6:B:378:ARG:HA	6:B:378:ARG:HH11	1.76	0.49
7:A:143:MET:SD	7:A:402:ILE:HA	2.51	0.49
8:O:446:LEU:O	8:O:449:PRO:HD2	2.13	0.49
8:G:89:GLY:O	8:G:92:SER:N	2.38	0.49
1:L:27:ARG:NH1	1:L:532:ASP:OD2	2.45	0.49
1:L:116:LEU:HA	1:L:454:ALA:HB1	1.93	0.49
1:L:129:HIS:CG	1:L:130:PRO:HD2	2.48	0.49
1:L:530:ILE:HD11	5:K:48:LEU:HB3	1.93	0.49
1:D:267:ASP:OD2	1:D:267:ASP:N	2.45	0.49
2:M:259:ASP:HB2	2:M:263:LYS:NZ	2.27	0.49
2:M:444:ARG:O	2:M:447:PRO:HD2	2.13	0.49
4:P:43:PRO:HG2	4:P:482:GLY:HA3	1.93	0.49
4:P:264:PHE:CD2	7:I:263:GLU:HA	2.47	0.49
5:K:412:ILE:O	5:K:416:LEU:HD23	2.12	0.49
5:C:440:LYS:O	5:C:443:GLU:HG3	2.13	0.49
6:B:208:LEU:C	6:B:378:ARG:HH12	2.16	0.49
6:B:215:SER:OG	6:B:378:ARG:N	2.36	0.49
7:A:5:LYS:NZ	7:A:11:ALA:O	2.41	0.49
8:O:146:ASP:O	8:O:150:ASN:ND2	2.46	0.49
8:O:477:ASN:HB2	8:O:483:LEU:HD13	1.92	0.49
8:G:171:MET:HG2	8:G:210:LEU:HB2	1.94	0.49
8:G:380:ALA:H	8:G:384:MET:CE	2.26	0.49
1:L:25:LYS:HE3	1:L:536:PRO:HG3	1.94	0.49
1:D:357:GLY:HA3	1:D:377:CYS:SG	2.53	0.49
2:E:105:LEU:O	2:E:109:LEU:HD23	2.13	0.49
2:E:200:HIS:HB2	2:E:322:ARG:NE	2.27	0.49
3:N:184:SER:OG	3:N:185:PRO:HD3	2.11	0.49
3:F:354:ASP:OD1	3:F:355:MET:N	2.45	0.49
4:P:325:ARG:HB3	4:P:371:ALA:HB2	1.94	0.49
5:K:119:GLN:NE2	6:J:51:GLY:O	2.45	0.49
5:K:456:ASP:HA	8:G:111:LYS:HZ2	1.77	0.49
5:C:80:VAL:HG12	5:C:84:LYS:HZ3	1.78	0.49
8:O:519:GLU:O	8:O:523:THR:HG23	2.13	0.49
8:G:348:ALA:HB2	8:G:367:THR:HG22	1.94	0.49
1:L:155:VAL:HG21	1:L:412:LEU:HD21	1.94	0.49
1:L:201:ARG:HH12	5:K:231:LYS:HD2	1.78	0.49
1:L:357:GLY:HA3	1:L:377:CYS:SG	2.53	0.49
1:D:27:ARG:NH1	1:D:532:ASP:OD2	2.45	0.49
1:D:129:HIS:CG	1:D:130:PRO:HD2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:376:GLN:NE2	1:D:378:LYS:HB2	2.26	0.49
2:M:205:LEU:HD11	3:N:93:GLU:OE1	2.12	0.49
2:M:221:ASP:O	2:M:222:LYS:HD3	2.13	0.49
2:M:435:ALA:O	2:M:438:SER:OG	2.16	0.49
2:E:39:VAL:O	2:E:42:THR:HG22	2.13	0.49
2:E:95:VAL:HG11	2:E:499:VAL:HA	1.95	0.49
6:J:296:LYS:HA	6:J:314:ARG:NH1	2.27	0.49
6:J:307:LYS:HZ1	6:J:308:TYR:HE2	1.61	0.49
8:G:220:VAL:HG13	8:G:225:MET:CE	2.42	0.49
8:G:519:GLU:O	8:G:523:THR:HG23	2.13	0.49
1:D:105:GLY:O	1:D:109:VAL:HG23	2.13	0.49
1:D:116:LEU:HD22	1:D:524:VAL:HG21	1.94	0.49
1:D:218:ARG:N	1:D:221:ASP:OD2	2.40	0.49
2:M:414:GLU:OE1	2:M:414:GLU:N	2.32	0.49
4:H:227:PRO:HB3	7:A:322:GLU:OE1	2.13	0.49
5:K:135:LYS:O	5:K:139:ILE:HG12	2.13	0.49
6:B:200:ASP:CG	6:B:323:ARG:HH12	2.15	0.49
6:B:296:LYS:HA	6:B:314:ARG:NH1	2.27	0.49
8:G:446:LEU:O	8:G:449:PRO:HD2	2.13	0.49
8:G:467:LEU:HD11	8:G:488:LEU:HD13	1.93	0.49
1:D:86:GLN:OE1	5:C:56:ALA:HB2	2.13	0.49
4:H:351:GLU:CD	4:H:353:LYS:HG3	2.33	0.49
4:H:425:LYS:O	4:H:429:MET:HB2	2.13	0.49
4:P:162:THR:HB	4:P:163:LYS:HD2	1.95	0.49
5:K:198:LYS:HZ2	5:K:217:LYS:HG2	1.78	0.49
5:K:440:LYS:O	5:K:443:GLU:HG3	2.13	0.49
6:J:47:TYR:CE1	6:J:103:PHE:HE2	2.31	0.49
6:J:104:VAL:HA	6:J:107:PHE:HD1	1.77	0.49
6:J:208:LEU:C	6:J:378:ARG:HH12	2.16	0.49
6:B:142:ILE:HD11	6:B:419:LEU:HD13	1.95	0.49
8:O:453:ALA:O	8:O:457:ALA:N	2.46	0.49
1:L:189:ALA:O	1:L:193:VAL:HG22	2.13	0.48
1:L:246:ALA:O	1:L:248:ILE:HG12	2.13	0.48
2:E:98:GLY:O	2:E:102:VAL:N	2.31	0.48
2:E:127:ILE:HD12	2:E:512:GLU:HA	1.95	0.48
2:E:505:LEU:O	2:E:509:GLU:HG2	2.12	0.48
4:P:425:LYS:O	4:P:429:MET:HB2	2.13	0.48
5:K:90:VAL:HG21	5:K:498:VAL:HA	1.95	0.48
5:K:123:ARG:HD2	6:J:173:TYR:HE2	1.78	0.48
5:K:225:PHE:O	5:K:228:GLN:NE2	2.46	0.48
6:J:44:ARG:HD3	6:J:454:GLU:OE1	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:102:ASN:OD1	6:J:103:PHE:N	2.44	0.48
8:O:380:ALA:H	8:O:384:MET:CE	2.26	0.48
1:L:333:ILE:HD12	1:L:374:ILE:HD12	1.95	0.48
1:D:81:MET:HG2	1:D:83:VAL:HG13	1.95	0.48
1:D:134:ALA:HB1	1:D:525:ARG:HG2	1.95	0.48
1:D:471:ILE:HG12	3:N:126:LYS:NZ	2.28	0.48
3:F:163:LEU:O	3:F:166:SER:OG	2.28	0.48
3:F:258:THR:H	3:F:262:ASN:ND2	2.10	0.48
4:H:162:THR:HB	4:H:163:LYS:HD2	1.95	0.48
4:H:391:LEU:O	4:H:395:MET:HG2	2.13	0.48
4:P:156:ILE:HD11	4:P:398:CYS:HB2	1.95	0.48
4:P:246:GLU:OE1	4:P:246:GLU:N	2.46	0.48
4:P:391:LEU:O	4:P:395:MET:HG2	2.13	0.48
5:C:90:VAL:HG21	5:C:498:VAL:HA	1.96	0.48
6:J:26:GLU:HA	6:J:29:VAL:HG12	1.94	0.48
6:J:54:LYS:N	6:J:66:THR:O	2.42	0.48
6:J:406:LYS:HB3	6:J:407:ARG:HG3	1.96	0.48
6:B:102:ASN:OD1	6:B:103:PHE:N	2.44	0.48
7:I:218:HIS:CD2	7:I:220:ASP:HB2	2.48	0.48
7:A:142:GLU:OE1	7:A:142:GLU:N	2.45	0.48
8:O:348:ALA:HB2	8:O:367:THR:HG22	1.94	0.48
8:G:146:ASP:O	8:G:150:ASN:ND2	2.45	0.48
2:M:495:GLU:OE1	2:M:495:GLU:N	2.46	0.48
3:N:302:LYS:HE3	3:N:327:ASP:OD1	2.13	0.48
4:H:481:ASN:OD1	4:H:483:GLU:N	2.46	0.48
5:C:135:LYS:O	5:C:139:ILE:HG12	2.13	0.48
5:C:512:LEU:HD11	6:B:65:VAL:HG11	1.95	0.48
6:B:47:TYR:CE1	6:B:103:PHE:HE2	2.31	0.48
8:G:453:ALA:O	8:G:457:ALA:N	2.46	0.48
1:L:129:HIS:HE1	1:L:131:ILE:HG12	1.78	0.48
1:L:218:ARG:N	1:L:221:ASP:OD2	2.40	0.48
1:L:442:THR:OG1	1:L:443:LEU:HD12	2.12	0.48
1:L:529:LYS:NZ	5:K:44:GLY:O	2.46	0.48
1:D:45:ALA:HB2	1:D:114:GLY:HA3	1.96	0.48
1:D:246:ALA:O	1:D:248:ILE:HG12	2.13	0.48
1:D:291:GLN:NE2	1:D:346:SER:HA	2.29	0.48
2:E:217:GLY:HA3	2:E:362:PHE:O	2.13	0.48
2:E:272:LYS:HG3	3:F:347:HIS:CD2	2.48	0.48
3:N:268:ASP:HA	8:O:259:LYS:NZ	2.29	0.48
3:F:259:ASP:OD2	3:F:260:MET:N	2.42	0.48
3:F:269:TYR:CG	8:G:266:ARG:NH1	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:302:LYS:HE3	3:F:327:ASP:OD1	2.13	0.48
4:H:246:GLU:OE1	4:H:246:GLU:N	2.46	0.48
4:H:513:ALA:O	4:H:517:LEU:HD23	2.13	0.48
4:P:201:VAL:HG11	4:P:388:GLU:HB2	1.94	0.48
5:K:246:LEU:HD23	5:K:274:LEU:HG	1.96	0.48
5:C:208:SER:OG	5:C:375:ARG:N	2.46	0.48
5:C:246:LEU:HD23	5:C:274:LEU:HG	1.95	0.48
6:J:471:HIS:CE1	6:J:476:LYS:HA	2.48	0.48
6:B:334:PRO:HB2	7:A:300:PHE:CE2	2.49	0.48
7:A:44:MET:HB3	7:A:58:LYS:HE3	1.94	0.48
8:O:89:GLY:C	8:O:92:SER:H	2.16	0.48
8:O:128:ALA:O	8:O:132:ILE:HG12	2.14	0.48
1:L:45:ALA:HB2	1:L:114:GLY:HA3	1.96	0.48
1:L:134:ALA:HB1	1:L:525:ARG:CG	2.44	0.48
1:L:193:VAL:HG21	1:L:409:ILE:HG21	1.95	0.48
1:L:372:LEU:HD12	1:L:373:VAL:H	1.78	0.48
1:D:181:CYS:C	1:D:185:MET:HE1	2.34	0.48
1:D:261:LYS:HZ3	5:C:246:LEU:HB2	1.78	0.48
2:M:293:ARG:O	2:M:314:HIS:HA	2.13	0.48
2:E:293:ARG:O	2:E:314:HIS:HA	2.12	0.48
2:E:495:GLU:OE1	2:E:495:GLU:N	2.46	0.48
4:H:48:LYS:HA	4:H:48:LYS:CE	2.43	0.48
4:H:229:MET:CG	4:H:310:THR:HA	2.40	0.48
6:J:352:LEU:HD12	6:J:360:VAL:O	2.14	0.48
8:O:24:ALA:O	8:O:27:SER:OG	2.24	0.48
8:O:69:HIS:O	8:O:73:LYS:HG3	2.13	0.48
8:G:256:ASP:OD2	8:G:258:GLU:HB2	2.13	0.48
1:L:23:ASP:N	1:L:23:ASP:OD1	2.46	0.48
1:L:81:MET:HG2	1:L:83:VAL:HG13	1.95	0.48
1:L:269:THR:OG1	1:L:273:ASP:OD2	2.27	0.48
1:D:85:HIS:CE1	1:D:87:ILE:HB	2.49	0.48
2:M:39:VAL:O	2:M:42:THR:HG22	2.13	0.48
2:M:95:VAL:HG11	2:M:499:VAL:HA	1.95	0.48
2:M:158:ASP:O	2:M:162:ILE:HG12	2.13	0.48
2:M:200:HIS:HB2	2:M:322:ARG:NE	2.27	0.48
2:E:380:GLN:H	3:F:93:GLU:CD	2.17	0.48
4:P:86:THR:HG22	8:O:201:HIS:CD2	2.48	0.48
4:P:351:GLU:CD	4:P:353:LYS:HG3	2.33	0.48
5:K:198:LYS:NZ	5:K:217:LYS:HG2	2.28	0.48
5:C:225:PHE:O	5:C:228:GLN:NE2	2.46	0.48
6:J:200:ASP:CG	6:J:323:ARG:HH12	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:453:ALA:O	6:J:457:GLY:N	2.47	0.48
6:B:26:GLU:HA	6:B:29:VAL:HG12	1.94	0.48
6:B:471:HIS:CE1	6:B:476:LYS:HA	2.48	0.48
8:O:171:MET:HG2	8:O:210:LEU:HB2	1.94	0.48
8:O:256:ASP:OD2	8:O:258:GLU:HB2	2.13	0.48
8:O:456:ALA:HB1	8:O:458:GLN:HE22	1.79	0.48
1:L:170:LYS:HD3	1:L:182:HIS:CD2	2.49	0.48
2:M:105:LEU:O	2:M:109:LEU:HD23	2.13	0.48
2:M:127:ILE:HD12	2:M:512:GLU:HA	1.96	0.48
2:E:109:LEU:HD22	2:E:442:ALA:HB1	1.96	0.48
3:F:408:ALA:O	3:F:411:VAL:HG12	2.14	0.48
5:K:116:LEU:HB3	5:K:430:LYS:HZ3	1.79	0.48
5:K:208:SER:OG	5:K:375:ARG:N	2.46	0.48
5:K:521:LYS:HE2	6:J:57:ILE:HD11	1.96	0.48
5:C:156:GLU:HA	5:C:180:VAL:HG21	1.96	0.48
6:J:365:HIS:CD2	6:J:367:LYS:HB2	2.49	0.48
6:B:241:VAL:HB	6:B:332:ALA:HA	1.95	0.48
1:L:125:ASP:OD1	3:F:49:ARG:NH1	2.46	0.48
1:L:134:ALA:HB1	1:L:525:ARG:HG2	1.95	0.48
1:L:170:LYS:HD3	1:L:182:HIS:HD2	1.79	0.48
1:L:291:GLN:NE2	1:L:346:SER:HA	2.29	0.48
1:D:198:ASP:OD1	1:D:381:ARG:NH1	2.43	0.48
1:D:372:LEU:HD12	1:D:373:VAL:H	1.78	0.48
1:D:442:THR:OG1	1:D:443:LEU:N	2.46	0.48
2:E:158:ASP:O	2:E:162:ILE:HG12	2.13	0.48
4:P:196:LYS:HG2	4:P:399:ARG:NH2	2.29	0.48
4:P:513:ALA:O	4:P:517:LEU:HD23	2.13	0.48
5:K:156:GLU:HA	5:K:180:VAL:HG21	1.96	0.48
5:K:240:LEU:HD13	5:K:244:LEU:HD11	1.96	0.48
5:C:520:ILE:HB	6:B:56:VAL:HG22	1.94	0.48
6:B:406:LYS:HB3	6:B:407:ARG:HG3	1.95	0.48
8:O:278:ILE:HG22	8:O:279:LEU:HD22	1.96	0.48
8:O:475:GLN:HA	8:O:480:ARG:NH2	2.29	0.48
8:G:203:ARG:H	8:G:378:ARG:NH2	2.12	0.48
8:G:278:ILE:HG22	8:G:279:LEU:HD22	1.96	0.48
1:D:193:VAL:HG21	1:D:409:ILE:HG21	1.95	0.48
2:M:204:LYS:NZ	2:M:354:ILE:O	2.31	0.48
2:E:414:GLU:OE1	2:E:414:GLU:N	2.32	0.48
2:E:444:ARG:O	2:E:447:PRO:HD2	2.13	0.48
6:J:15:LEU:O	7:I:69:ILE:HA	2.14	0.48
8:O:168:PHE:HZ	8:O:205:GLN:HB2	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:O:265:GLN:HG3	8:O:269:ASP:OD2	2.13	0.48
8:G:232:ALA:HB1	8:G:348:ALA:H	1.79	0.48
8:G:265:GLN:HG3	8:G:269:ASP:OD2	2.13	0.48
1:L:267:ASP:OD2	1:L:267:ASP:N	2.45	0.48
1:D:344:ARG:HG3	5:C:271:TRP:HZ3	1.79	0.48
2:M:217:GLY:HA3	2:M:362:PHE:O	2.14	0.48
2:E:64:THR:HA	2:E:385:GLU:CD	2.35	0.48
2:E:108:GLU:OE2	2:E:445:MET:HG2	2.13	0.48
4:H:196:LYS:HG2	4:H:399:ARG:NH2	2.29	0.48
5:C:34:GLU:OE1	5:C:37:ARG:NH2	2.47	0.48
5:C:198:LYS:HZ2	5:C:217:LYS:HG2	1.79	0.48
5:C:198:LYS:NZ	5:C:217:LYS:HG2	2.28	0.48
6:J:241:VAL:HB	6:J:332:ALA:HA	1.95	0.48
6:B:200:ASP:OD1	6:B:323:ARG:NH1	2.40	0.48
6:B:352:LEU:HD12	6:B:360:VAL:O	2.14	0.48
6:B:365:HIS:CD2	6:B:367:LYS:HB2	2.49	0.48
6:B:525:ILE:HD12	7:A:67:MET:SD	2.54	0.48
7:A:440:PHE:CE1	7:A:444:LEU:HD11	2.49	0.48
1:L:131:ILE:HD11	1:L:529:LYS:HZ3	1.77	0.47
1:L:471:ILE:HG21	3:F:126:LYS:NZ	2.26	0.47
1:D:165:LEU:HD22	1:D:409:ILE:HG23	1.96	0.47
1:D:188:ILE:HA	1:D:224:LEU:HD23	1.96	0.47
1:D:333:ILE:HD12	1:D:374:ILE:HD12	1.95	0.47
3:F:38:ILE:HG21	3:F:121:THR:OG1	2.14	0.47
4:H:88:ASP:HB2	4:H:95:THR:HG21	1.96	0.47
4:H:278:LEU:HD22	4:H:335:PRO:HG2	1.96	0.47
5:K:240:LEU:O	5:K:291:SER:HA	2.15	0.47
5:C:21:GLN:HG2	5:C:518:GLU:HA	1.95	0.47
5:C:43:ARG:NH2	5:C:479:ILE:HB	2.29	0.47
6:J:506:TRP:O	6:J:510:LEU:HD23	2.14	0.47
8:G:456:ALA:HB1	8:G:458:GLN:HE22	1.79	0.47
1:L:312:HIS:O	1:L:315:LEU:N	2.47	0.47
1:D:134:ALA:HB1	1:D:525:ARG:CG	2.44	0.47
1:D:489:LEU:HA	1:D:499:ASN:O	2.14	0.47
1:D:527:ILE:O	1:D:530:ILE:HG22	2.14	0.47
2:M:19:GLU:OE1	2:M:19:GLU:N	2.48	0.47
2:M:108:GLU:OE2	2:M:445:MET:HG2	2.13	0.47
2:E:65:ASN:HD22	2:E:170:LYS:HG3	1.77	0.47
3:N:38:ILE:HG21	3:N:121:THR:OG1	2.14	0.47
3:F:108:SER:O	3:F:112:ILE:HG12	2.14	0.47
3:F:157:LEU:HD21	3:F:416:VAL:HA	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:91:VAL:HG11	4:P:501:VAL:HG13	1.96	0.47
5:K:460:ILE:O	5:K:464:LEU:HB2	2.14	0.47
6:J:107:PHE:CZ	6:J:448:ILE:HD11	2.49	0.47
8:O:203:ARG:H	8:O:378:ARG:NH2	2.12	0.47
8:O:411:GLY:O	8:O:498:ASN:ND2	2.47	0.47
1:D:129:HIS:HE1	1:D:131:ILE:HG12	1.78	0.47
1:D:170:LYS:HD3	1:D:182:HIS:HD2	1.79	0.47
2:E:351:GLU:OE2	2:E:360:ILE:HA	2.15	0.47
3:N:416:VAL:O	3:N:419:ARG:NH2	2.40	0.47
4:P:88:ASP:HB2	4:P:95:THR:HG21	1.96	0.47
4:P:271:GLU:O	4:P:275:ILE:HG12	2.14	0.47
4:P:278:LEU:HD22	4:P:335:PRO:HG2	1.96	0.47
5:K:43:ARG:NH2	5:K:479:ILE:HB	2.29	0.47
5:K:121:ILE:HA	5:K:434:LEU:HD13	1.96	0.47
5:C:17:GLN:HA	5:C:518:GLU:CB	2.44	0.47
6:J:69:ALA:O	6:J:72:ILE:HG22	2.14	0.47
6:J:142:ILE:HD11	6:J:419:LEU:HD13	1.95	0.47
6:B:107:PHE:CZ	6:B:448:ILE:HD11	2.49	0.47
7:A:318:ARG:HA	7:A:321:MET:HE1	1.96	0.47
8:G:128:ALA:O	8:G:132:ILE:HG12	2.14	0.47
8:G:435:GLN:OE1	8:G:435:GLN:N	2.39	0.47
1:L:293:LYS:NZ	1:L:317:ASN:HB3	2.29	0.47
1:D:170:LYS:HD3	1:D:182:HIS:CD2	2.49	0.47
1:D:293:LYS:NZ	1:D:317:ASN:HB3	2.29	0.47
1:D:312:HIS:O	1:D:315:LEU:N	2.47	0.47
2:M:379:THR:H	2:M:382:ILE:HB	1.80	0.47
2:E:19:GLU:OE1	2:E:19:GLU:N	2.48	0.47
2:E:510:ALA:O	2:E:514:ILE:HG12	2.14	0.47
3:N:157:LEU:HD21	3:N:416:VAL:HA	1.95	0.47
3:N:209:LYS:HD2	3:N:209:LYS:HA	1.75	0.47
3:F:106:THR:HA	3:F:109:VAL:HG12	1.97	0.47
3:F:257:LYS:HB2	3:F:306:ARG:HH11	1.80	0.47
4:H:271:GLU:O	4:H:275:ILE:HG12	2.14	0.47
4:P:112:PHE:HE1	4:P:436:PRO:N	2.13	0.47
5:C:240:LEU:HD13	5:C:244:LEU:HD11	1.96	0.47
5:C:460:ILE:O	5:C:464:LEU:HB2	2.14	0.47
6:B:223:PHE:HD2	6:B:225:LYS:HZ1	1.62	0.47
6:B:452:LEU:O	6:B:456:SER:HB3	2.14	0.47
7:A:119:ILE:H	7:A:119:ILE:HD12	1.80	0.47
8:O:275:ILE:HD12	8:O:300:PHE:CE2	2.49	0.47
8:G:475:GLN:HA	8:G:480:ARG:NH2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:529:ASP:OD2	8:G:529:ASP:N	2.46	0.47
1:L:37:HIS:ND1	1:L:87:ILE:HD13	2.30	0.47
1:L:83:VAL:HG23	1:L:89:LYS:HG3	1.95	0.47
1:L:165:LEU:HD22	1:L:409:ILE:HG23	1.96	0.47
4:H:91:VAL:HG11	4:H:501:VAL:HG13	1.96	0.47
4:H:237:ARG:O	4:H:289:VAL:N	2.48	0.47
4:H:436:PRO:O	4:H:440:VAL:HG23	2.14	0.47
4:P:33:ILE:HG21	4:P:80:MET:HG2	1.96	0.47
4:P:48:LYS:HA	4:P:48:LYS:CE	2.42	0.47
6:J:54:LYS:HG2	6:J:72:ILE:CD1	2.45	0.47
6:J:452:LEU:O	6:J:456:SER:HB3	2.14	0.47
6:B:54:LYS:HG2	6:B:72:ILE:CD1	2.45	0.47
6:B:251:THR:HG21	7:A:248:PHE:CZ	2.49	0.47
7:I:35:ARG:HH22	7:I:453:GLN:CD	2.18	0.47
7:I:440:PHE:CE1	7:I:444:LEU:HD11	2.49	0.47
7:A:161:HIS:HB3	7:A:163:GLU:HG3	1.95	0.47
7:A:218:HIS:CD2	7:A:220:ASP:HB2	2.48	0.47
8:O:529:ASP:OD2	8:O:529:ASP:N	2.46	0.47
8:G:69:HIS:O	8:G:73:LYS:HG3	2.13	0.47
8:G:168:PHE:HZ	8:G:205:GLN:HB2	1.79	0.47
8:G:275:ILE:HD12	8:G:300:PHE:CE2	2.49	0.47
1:L:188:ILE:HA	1:L:224:LEU:HD23	1.96	0.47
1:L:442:THR:OG1	1:L:443:LEU:N	2.46	0.47
2:M:109:LEU:HD22	2:M:442:ALA:HB1	1.96	0.47
2:M:227:ASN:OD1	3:N:343:LYS:HG3	2.15	0.47
2:E:221:ASP:O	2:E:222:LYS:HD3	2.13	0.47
4:P:460:ILE:O	4:P:464:THR:HG23	2.15	0.47
5:K:17:GLN:HA	5:K:518:GLU:CB	2.44	0.47
6:J:71:THR:OG1	6:J:390:ARG:HD3	2.15	0.47
6:J:245:PRO:HB3	6:J:296:LYS:H	1.79	0.47
6:B:211:GLY:CA	6:B:379:GLY:HA2	2.40	0.47
6:B:245:PRO:HB3	6:B:296:LYS:H	1.79	0.47
7:I:378:GLY:HA3	7:I:384:LEU:HD21	1.96	0.47
1:L:489:LEU:HA	1:L:499:ASN:O	2.14	0.47
1:L:508:GLU:OE1	1:L:509:THR:N	2.42	0.47
1:D:23:ASP:N	1:D:23:ASP:OD1	2.46	0.47
1:D:201:ARG:HG2	5:C:230:LYS:HZ2	1.79	0.47
1:D:312:HIS:C	1:D:312:HIS:CD2	2.88	0.47
2:M:61:LEU:HD22	3:N:86:PRO:HB3	1.96	0.47
2:M:172:LEU:HD23	2:M:179:PHE:CE1	2.49	0.47
2:M:237:ILE:N	2:M:344:GLY:O	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:221:ASP:HA	2:E:359:LEU:HD22	1.96	0.47
4:H:526:HIS:ND1	8:G:47:ASP:HB2	2.30	0.47
4:P:194:ASP:OD1	4:P:399:ARG:NH1	2.48	0.47
4:P:276:GLN:O	4:P:279:CYS:N	2.48	0.47
5:K:21:GLN:HG2	5:K:518:GLU:HA	1.95	0.47
5:C:121:ILE:HA	5:C:434:LEU:HD13	1.96	0.47
5:C:240:LEU:O	5:C:291:SER:HA	2.15	0.47
5:C:457:ALA:N	8:O:111:LYS:HZ3	2.13	0.47
6:J:99:ASP:OD1	6:J:171:LYS:NZ	2.46	0.47
6:J:342:GLU:N	6:J:342:GLU:OE1	2.41	0.47
6:B:69:ALA:HB3	6:B:101:THR:OG1	2.15	0.47
6:B:134:ILE:HG13	6:B:137:ARG:NH1	2.30	0.47
6:B:347:CYS:HA	6:B:365:HIS:CE1	2.50	0.47
6:B:453:ALA:O	6:B:457:GLY:N	2.46	0.47
6:B:506:TRP:O	6:B:510:LEU:HD23	2.15	0.47
7:I:161:HIS:HB3	7:I:163:GLU:HG3	1.96	0.47
7:A:378:GLY:HA3	7:A:384:LEU:HD21	1.96	0.47
7:A:447:ILE:O	7:A:451:LEU:HG	2.15	0.47
8:O:232:ALA:HB1	8:O:348:ALA:H	1.79	0.47
8:G:183:ASP:C	8:G:185:ARG:H	2.11	0.47
1:L:271:VAL:HG22	2:M:266:GLU:OE1	2.15	0.47
1:D:37:HIS:ND1	1:D:87:ILE:HD13	2.30	0.47
1:D:440:CYS:SG	1:D:445:GLN:HA	2.55	0.47
2:M:221:ASP:HA	2:M:359:LEU:HD22	1.96	0.47
2:E:97:ASP:CG	2:E:98:GLY:H	2.17	0.47
2:E:155:PHE:O	2:E:159:LEU:HD23	2.15	0.47
2:E:172:LEU:HD23	2:E:179:PHE:CE1	2.49	0.47
2:E:380:GLN:O	2:E:384:ASP:HB2	2.15	0.47
4:H:112:PHE:HE1	4:H:436:PRO:N	2.13	0.47
4:H:115:GLN:CD	6:J:450:ARG:HH12	2.18	0.47
4:H:118:HIS:CE1	4:H:120:THR:HG23	2.50	0.47
5:K:34:GLU:OE1	5:K:37:ARG:NH2	2.47	0.47
6:J:123:LEU:HD11	6:J:436:TYR:HB2	1.97	0.47
6:B:123:LEU:HD11	6:B:436:TYR:HB2	1.97	0.47
8:O:286:ILE:HG21	8:O:300:PHE:CE1	2.47	0.47
8:G:89:GLY:C	8:G:92:SER:H	2.16	0.47
1:L:312:HIS:ND1	2:M:333:SER:N	2.63	0.47
1:L:527:ILE:O	1:L:530:ILE:HG22	2.15	0.47
2:M:37:ASP:HA	2:M:40:LYS:HG3	1.97	0.47
2:M:495:GLU:HG3	2:M:500:LYS:HE2	1.97	0.47
2:E:22:GLU:CD	3:N:28:ASP:H	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:129:HIS:CG	3:N:130:PRO:HD2	2.50	0.47
3:N:257:LYS:HB2	3:N:306:ARG:HH11	1.80	0.47
3:N:408:ALA:O	3:N:411:VAL:HG12	2.14	0.47
3:F:286:LEU:O	3:F:290:ILE:HG12	2.15	0.47
6:B:54:LYS:N	6:B:66:THR:O	2.42	0.47
7:I:119:ILE:H	7:I:119:ILE:HD12	1.80	0.47
7:I:152:ALA:HB3	7:I:169:THR:HG23	1.97	0.47
8:G:56:ASN:ND2	8:G:159:LYS:HD2	2.30	0.47
8:G:181:TYR:HB3	8:G:189:ARG:O	2.15	0.47
8:G:451:THR:HA	8:G:454:VAL:HG12	1.97	0.47
1:L:163:GLU:HA	1:L:166:ILE:HB	1.96	0.47
2:M:38:LEU:HD11	3:N:536:VAL:HG21	1.97	0.47
2:M:155:PHE:O	2:M:159:LEU:HD23	2.15	0.47
2:M:510:ALA:O	2:M:514:ILE:HG12	2.14	0.47
2:E:237:ILE:N	2:E:344:GLY:O	2.37	0.47
4:H:48:LYS:HZ3	7:A:520:GLU:CD	2.19	0.47
4:P:118:HIS:CE1	4:P:120:THR:HG23	2.50	0.47
4:P:447:ILE:HB	4:P:448:PRO:HD3	1.97	0.47
5:K:461:LEU:HD21	5:K:465:ARG:CZ	2.45	0.47
6:B:69:ALA:O	6:B:72:ILE:HG22	2.14	0.47
6:B:208:LEU:HD23	6:B:208:LEU:H	1.80	0.47
8:O:435:GLN:OE1	8:O:435:GLN:N	2.39	0.47
1:L:364:PHE:HZ	1:L:368:LYS:HZ3	1.62	0.46
1:D:83:VAL:HG23	1:D:89:LYS:HG3	1.95	0.46
1:D:351:GLU:OE1	1:D:351:GLU:N	2.34	0.46
2:M:50:LYS:HZ1	3:N:534:ASP:HB3	1.77	0.46
2:M:64:THR:HA	2:M:385:GLU:CD	2.35	0.46
3:N:108:SER:O	3:N:112:ILE:HG12	2.15	0.46
3:F:249:ILE:HD13	3:F:298:LEU:HD12	1.97	0.46
3:F:416:VAL:O	3:F:419:ARG:NH2	2.40	0.46
4:H:279:CYS:O	4:H:283:ILE:HG23	2.15	0.46
5:C:461:LEU:HD21	5:C:465:ARG:CZ	2.45	0.46
6:B:71:THR:OG1	6:B:390:ARG:HD3	2.15	0.46
7:I:231:LEU:HB3	7:I:291:VAL:HG22	1.97	0.46
7:A:152:ALA:HB3	7:A:169:THR:HG23	1.96	0.46
8:O:118:ILE:HD12	8:O:522:ILE:HA	1.97	0.46
8:O:181:TYR:HB3	8:O:189:ARG:O	2.14	0.46
1:L:312:HIS:C	1:L:312:HIS:CD2	2.88	0.46
2:E:127:ILE:HD11	2:E:515:LEU:HB2	1.97	0.46
2:E:131:ARG:NH1	2:E:512:GLU:OE2	2.49	0.46
3:F:94:LEU:HD21	3:F:109:VAL:HG22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:276:GLN:HG3	4:H:303:TYR:CE1	2.50	0.46
4:P:237:ARG:O	4:P:289:VAL:N	2.48	0.46
4:P:436:PRO:O	4:P:440:VAL:HG23	2.14	0.46
5:C:21:GLN:NE2	5:C:519:THR:OG1	2.49	0.46
5:C:297:ASP:O	5:C:301:GLN:NE2	2.28	0.46
6:J:69:ALA:O	6:J:73:LEU:HD23	2.15	0.46
6:J:299:ASP:O	6:J:302:LEU:HG	2.15	0.46
6:J:347:CYS:HA	6:J:365:HIS:CE1	2.50	0.46
6:B:416:GLU:CD	6:B:416:GLU:N	2.69	0.46
6:B:416:GLU:N	6:B:416:GLU:OE2	2.48	0.46
7:I:84:GLN:OE1	7:I:503:GLN:HG3	2.15	0.46
1:L:105:GLY:H	1:L:107:THR:HG22	1.79	0.46
1:L:440:CYS:SG	1:L:445:GLN:HA	2.55	0.46
1:D:59:LYS:NZ	2:E:518:ASP:OD1	2.44	0.46
2:M:127:ILE:HD11	2:M:515:LEU:HB2	1.97	0.46
2:E:379:THR:H	2:E:382:ILE:HB	1.80	0.46
3:N:505:GLU:OE1	3:N:505:GLU:N	2.49	0.46
3:F:129:HIS:CG	3:F:130:PRO:HD2	2.50	0.46
4:H:33:ILE:HG21	4:H:80:MET:HG2	1.96	0.46
4:H:186:GLU:H	4:H:370:LYS:HZ3	1.62	0.46
4:H:447:ILE:HB	4:H:448:PRO:HD3	1.97	0.46
4:H:460:ILE:O	4:H:464:THR:HG23	2.15	0.46
4:P:55:GLY:HA2	6:B:6:PRO:CG	2.46	0.46
4:P:518:ARG:HD3	8:O:160:ILE:HD12	1.96	0.46
5:K:187:ASP:HA	5:K:188:ASP:HA	1.63	0.46
6:J:513:ASN:ND2	7:I:379:PRO:HG3	2.31	0.46
7:A:118:ILE:HG21	7:A:432:ARG:HB3	1.97	0.46
8:O:183:ASP:C	8:O:185:ARG:H	2.11	0.46
8:G:143:LEU:CD2	8:G:146:ASP:H	2.29	0.46
1:L:181:CYS:C	1:L:185:MET:HE1	2.36	0.46
1:D:105:GLY:H	1:D:107:THR:HG22	1.79	0.46
2:M:131:ARG:NH1	2:M:512:GLU:OE2	2.48	0.46
2:M:171:LEU:H	2:M:171:LEU:HD12	1.80	0.46
3:N:194:VAL:HG11	3:N:208:ILE:HD11	1.98	0.46
3:N:249:ILE:HD13	3:N:298:LEU:HD12	1.97	0.46
3:F:194:VAL:HG11	3:F:208:ILE:HD11	1.98	0.46
4:H:215:LEU:O	4:H:217:GLY:N	2.48	0.46
5:K:10:LYS:HD3	5:K:10:LYS:HA	1.64	0.46
6:J:416:GLU:N	6:J:416:GLU:OE2	2.49	0.46
7:A:35:ARG:HH22	7:A:453:GLN:CD	2.18	0.46
7:A:231:LEU:HB3	7:A:291:VAL:HG22	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:O:220:VAL:HG13	8:O:225:MET:HE2	1.98	0.46
8:O:440:GLU:OE1	8:O:440:GLU:HA	2.16	0.46
8:O:451:THR:HA	8:O:454:VAL:HG12	1.97	0.46
8:G:173:VAL:HA	8:G:176:VAL:HG12	1.97	0.46
1:D:18:ILE:HG22	1:D:19:ILE:HG12	1.98	0.46
2:M:97:ASP:CG	2:M:98:GLY:H	2.17	0.46
2:M:351:GLU:OE2	2:M:360:ILE:HA	2.15	0.46
2:E:170:LYS:HG2	2:E:389:SER:HB3	1.98	0.46
2:E:279:VAL:HG21	2:E:303:LEU:HD12	1.98	0.46
3:N:94:LEU:HD21	3:N:109:VAL:HG22	1.96	0.46
3:N:106:THR:HA	3:N:109:VAL:HG12	1.97	0.46
3:N:182:LEU:O	3:N:185:PRO:HD2	2.15	0.46
4:H:93:ASP:CG	4:H:94:GLY:H	2.19	0.46
4:H:359:TYR:O	4:H:360:PHE:HD1	1.99	0.46
4:P:276:GLN:HG3	4:P:303:TYR:CE1	2.50	0.46
5:K:199:LYS:HB3	5:K:382:MET:HB3	1.98	0.46
6:B:104:VAL:HG23	6:B:511:ALA:HB2	1.98	0.46
7:I:118:ILE:HG21	7:I:432:ARG:HB3	1.97	0.46
7:I:126:ALA:HB2	7:I:437:VAL:HG22	1.97	0.46
7:I:503:GLN:NE2	7:I:503:GLN:O	2.45	0.46
7:A:126:ALA:HB2	7:A:437:VAL:HG22	1.96	0.46
8:O:270:ILE:O	8:O:273:GLU:HG3	2.16	0.46
1:L:19:ILE:HD13	5:K:71:VAL:HA	1.97	0.46
1:L:519:LEU:O	1:L:523:MET:HG2	2.16	0.46
1:D:163:GLU:HA	1:D:166:ILE:HB	1.96	0.46
2:E:37:ASP:HA	2:E:40:LYS:HG3	1.97	0.46
3:N:307:ASP:N	3:N:307:ASP:OD1	2.49	0.46
5:C:297:ASP:OD1	5:C:298:VAL:N	2.49	0.46
6:J:134:ILE:HG13	6:J:137:ARG:NH1	2.30	0.46
6:J:208:LEU:HD23	6:J:208:LEU:H	1.80	0.46
6:J:217:VAL:HG22	6:J:375:ILE:HG22	1.98	0.46
6:B:138:LYS:HG2	6:B:426:TYR:CD2	2.51	0.46
6:B:299:ASP:O	6:B:302:LEU:HG	2.15	0.46
6:B:475:ASN:O	6:B:478:VAL:HG12	2.15	0.46
7:I:266:PHE:HE2	7:I:270:ARG:CZ	2.29	0.46
8:O:173:VAL:HA	8:O:176:VAL:HG12	1.97	0.46
8:G:82:GLN:OE1	8:G:82:GLN:HA	2.16	0.46
8:G:311:VAL:HG13	8:G:316:LEU:HD23	1.98	0.46
1:D:33:ALA:O	1:D:37:HIS:CD2	2.68	0.46
1:D:236:HIS:HE2	2:E:331:ILE:HG13	1.81	0.46
2:M:242:THR:O	2:M:292:ASN:ND2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:279:VAL:HG21	2:M:303:LEU:HD12	1.98	0.46
3:N:178:GLN:HE22	8:O:519:GLU:HG2	1.81	0.46
3:N:249:ILE:HD13	3:N:298:LEU:CD1	2.45	0.46
3:F:201:THR:HG22	3:F:202:SER:N	2.19	0.46
4:H:194:ASP:OD1	4:H:399:ARG:NH1	2.48	0.46
4:P:237:ARG:N	4:P:288:ASP:OD2	2.49	0.46
5:K:447:ARG:NH1	8:G:110:GLN:OE1	2.48	0.46
6:J:9:PRO:HG3	7:A:12:GLU:OE1	2.15	0.46
6:J:475:ASN:O	6:J:478:VAL:HG12	2.15	0.46
6:B:92:MET:HE2	7:A:379:PRO:O	2.15	0.46
6:B:251:THR:HG22	6:B:253:THR:H	1.81	0.46
7:A:84:GLN:OE1	7:A:503:GLN:HG3	2.15	0.46
8:O:171:MET:SD	8:O:375:ILE:HD13	2.56	0.46
8:O:505:GLU:OE2	8:O:510:LYS:NZ	2.39	0.46
8:G:118:ILE:HD12	8:G:522:ILE:HA	1.97	0.46
8:G:160:ILE:HG21	8:G:387:GLU:OE2	2.16	0.46
8:G:234:ILE:HA	8:G:285:VAL:HB	1.97	0.46
8:G:241:LEU:HB2	8:G:292:ILE:HD13	1.98	0.46
1:L:59:LYS:HZ3	2:M:519:ASN:CB	2.29	0.46
1:L:265:LYS:HG3	2:M:255:ARG:CZ	2.46	0.46
1:D:501:MET:HB3	1:D:506:VAL:HB	1.98	0.46
2:E:61:LEU:HD22	3:F:86:PRO:HB3	1.97	0.46
2:E:171:LEU:H	2:E:171:LEU:HD12	1.80	0.46
4:H:276:GLN:O	4:H:279:CYS:N	2.48	0.46
5:C:80:VAL:C	5:C:84:LYS:HZ3	2.19	0.46
5:C:381:PHE:O	5:C:385:THR:OG1	2.17	0.46
6:J:69:ALA:HB3	6:J:101:THR:OG1	2.15	0.46
6:J:104:VAL:HG23	6:J:511:ALA:HB2	1.98	0.46
7:A:58:LYS:HE3	7:A:58:LYS:HB2	1.72	0.46
8:G:196:ASN:HB2	8:G:214:TYR:CE1	2.51	0.46
8:G:510:LYS:HD3	8:G:510:LYS:HA	1.70	0.46
1:L:33:ALA:O	1:L:37:HIS:CD2	2.68	0.46
1:L:501:MET:HB3	1:L:506:VAL:HB	1.98	0.46
1:D:266:LEU:HB2	2:E:254:SER:OG	2.16	0.46
2:M:302:GLN:HE22	3:N:345:VAL:C	2.19	0.46
2:E:495:GLU:HG3	2:E:500:LYS:HE2	1.97	0.46
3:N:429:GLU:HG2	3:N:461:ILE:HD12	1.97	0.46
3:F:249:ILE:HD13	3:F:298:LEU:CD1	2.46	0.46
3:F:505:GLU:OE1	3:F:505:GLU:N	2.49	0.46
4:H:385:SER:O	4:H:388:GLU:HG3	2.16	0.46
4:P:44:LYS:CE	7:I:117:ARG:HD3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:93:ASP:CG	4:P:94:GLY:H	2.19	0.46
5:C:163:LEU:HD21	5:C:392:ALA:HB2	1.98	0.46
6:J:416:GLU:N	6:J:416:GLU:CD	2.69	0.46
6:J:520:ARG:NH1	7:I:161:HIS:CD2	2.84	0.46
6:B:69:ALA:O	6:B:73:LEU:HD23	2.15	0.46
7:A:199:LYS:HB3	7:A:199:LYS:HE2	1.75	0.46
7:A:255:GLU:O	7:A:259:LEU:HD23	2.16	0.46
8:O:143:LEU:CD2	8:O:146:ASP:H	2.29	0.46
8:O:241:LEU:HB2	8:O:292:ILE:HD13	1.98	0.46
8:G:56:ASN:ND2	8:G:159:LYS:HA	2.30	0.46
1:D:519:LEU:O	1:D:523:MET:HG2	2.16	0.46
3:N:97:ALA:O	3:N:100:ILE:HG22	2.16	0.46
3:F:97:ALA:O	3:F:100:ILE:HG22	2.16	0.46
4:P:130:LEU:HD22	4:P:510:VAL:HG21	1.98	0.46
5:K:21:GLN:NE2	5:K:519:THR:OG1	2.49	0.46
5:K:163:LEU:HD21	5:K:392:ALA:HB2	1.98	0.46
5:K:236:LYS:HB2	5:K:286:ALA:HA	1.97	0.46
6:B:217:VAL:HG22	6:B:375:ILE:HG22	1.98	0.46
6:B:275:LEU:HD21	7:A:253:ALA:HB1	1.98	0.46
6:B:443:GLU:OE2	6:B:446:GLU:HG2	2.16	0.46
7:I:255:GLU:O	7:I:259:LEU:HD23	2.16	0.46
8:O:82:GLN:OE1	8:O:82:GLN:HA	2.16	0.46
8:O:160:ILE:HG21	8:O:387:GLU:OE2	2.16	0.46
8:O:182:THR:O	8:O:185:ARG:NH1	2.49	0.46
8:O:311:VAL:HG13	8:O:316:LEU:HD23	1.98	0.46
8:O:476:VAL:O	8:O:480:ARG:NE	2.49	0.46
8:G:182:THR:O	8:G:185:ARG:NH1	2.49	0.46
8:G:411:GLY:O	8:G:498:ASN:ND2	2.47	0.46
1:L:18:ILE:HG22	1:L:19:ILE:HG12	1.98	0.45
2:E:304:PHE:O	2:E:308:GLY:N	2.49	0.45
2:E:375:LEU:HD23	2:E:375:LEU:HA	1.65	0.45
3:N:439:TYR:O	3:N:442:THR:OG1	2.29	0.45
3:N:504:LEU:O	3:N:507:LEU:HD23	2.16	0.45
4:P:433:GLU:C	4:P:436:PRO:HD2	2.37	0.45
6:B:251:THR:HG23	7:A:263:GLU:OE1	2.16	0.45
7:I:61:ASN:ND2	7:I:85:ASP:OD1	2.48	0.45
7:A:88:THR:OG1	7:A:500:VAL:HG22	2.16	0.45
7:A:123:PHE:CE2	7:A:440:PHE:HB2	2.51	0.45
7:A:160:VAL:HB	7:A:164:LEU:HD23	1.98	0.45
7:A:175:SER:O	7:A:179:ILE:HG13	2.16	0.45
7:A:266:PHE:HE2	7:A:270:ARG:CZ	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:O:42:ASP:CB	8:O:56:ASN:HB3	2.46	0.45
8:O:56:ASN:ND2	8:O:159:LYS:HD2	2.30	0.45
8:O:275:ILE:HG23	8:O:300:PHE:HE2	1.81	0.45
1:D:61:MET:HE1	2:E:521:ILE:HB	1.98	0.45
2:E:242:THR:O	2:E:292:ASN:ND2	2.49	0.45
3:N:421:LEU:HD11	3:N:509:VAL:HB	1.99	0.45
3:F:112:ILE:HD11	3:F:461:ILE:CD1	2.46	0.45
3:F:429:GLU:HG2	3:F:461:ILE:HD12	1.97	0.45
4:H:145:ASP:OD2	4:H:148:ASP:N	2.28	0.45
4:H:156:ILE:O	4:H:160:ILE:HG12	2.17	0.45
4:P:51:LEU:HD21	7:I:72:PRO:HB3	1.98	0.45
4:P:382:GLU:OE2	7:I:76:LEU:HG	2.16	0.45
5:C:236:LYS:HB2	5:C:286:ALA:HA	1.97	0.45
7:I:177:LEU:HD23	7:I:180:LYS:HZ1	1.80	0.45
7:A:21:ALA:HA	7:A:24:ILE:HG22	1.99	0.45
8:O:145:ARG:NH2	8:O:174:ASP:OD1	2.49	0.45
8:G:171:MET:SD	8:G:375:ILE:HD13	2.56	0.45
1:L:201:ARG:HE	5:K:230:LYS:HZ1	1.63	0.45
1:D:418:VAL:HG12	1:D:509:THR:HA	1.97	0.45
3:N:112:ILE:HD11	3:N:461:ILE:CD1	2.46	0.45
3:N:286:LEU:O	3:N:290:ILE:HG12	2.15	0.45
3:N:296:ASN:O	3:N:323:MET:N	2.46	0.45
3:N:343:LYS:HB3	3:N:355:MET:SD	2.57	0.45
3:F:182:LEU:O	3:F:185:PRO:HD2	2.15	0.45
3:F:504:LEU:O	3:F:507:LEU:HD23	2.17	0.45
4:P:156:ILE:O	4:P:160:ILE:HG12	2.17	0.45
6:B:499:ASP:OD1	6:B:499:ASP:N	2.49	0.45
7:I:123:PHE:CE2	7:I:440:PHE:HB2	2.51	0.45
7:I:204:THR:HG23	7:I:375:LEU:O	2.17	0.45
7:A:133:PHE:O	7:A:136:GLU:HG3	2.17	0.45
8:G:42:ASP:CB	8:G:56:ASN:HB3	2.46	0.45
8:G:270:ILE:O	8:G:273:GLU:HG3	2.16	0.45
2:M:380:GLN:O	2:M:384:ASP:HB2	2.15	0.45
3:F:191:VAL:HA	3:F:194:VAL:HG12	1.98	0.45
5:K:121:ILE:H	5:K:121:ILE:HD12	1.81	0.45
6:J:144:PRO:HG3	6:J:501:TYR:OH	2.17	0.45
6:J:251:THR:HG22	6:J:253:THR:H	1.81	0.45
6:J:477:ASN:O	6:J:492:MET:N	2.48	0.45
6:J:505:TYR:OH	6:J:509:LYS:NZ	2.39	0.45
7:A:224:ARG:HG3	7:A:351:TYR:HB3	1.98	0.45
8:G:497:ASP:OD2	8:G:500:GLN:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:309:GLU:OE1	2:E:334:THR:HG23	2.17	0.45
2:M:304:PHE:O	2:M:308:GLY:N	2.49	0.45
2:M:499:VAL:O	2:M:503:VAL:HG23	2.17	0.45
2:E:112:GLU:CD	2:E:438:SER:HB2	2.36	0.45
3:N:275:VAL:O	3:N:279:GLU:OE1	2.35	0.45
3:F:517:SER:O	3:F:521:LEU:HD23	2.17	0.45
4:H:433:GLU:C	4:H:436:PRO:HD2	2.37	0.45
4:P:279:CYS:O	4:P:283:ILE:HG23	2.15	0.45
5:K:504:THR:O	5:K:507:SER:OG	2.29	0.45
5:C:199:LYS:HB3	5:C:382:MET:HB3	1.98	0.45
6:J:27:GLU:OE1	6:J:27:GLU:N	2.38	0.45
6:J:45:THR:C	6:J:455:ASN:HD21	2.19	0.45
6:J:107:PHE:CE2	6:J:448:ILE:HD11	2.52	0.45
6:J:443:GLU:OE2	6:J:446:GLU:HG2	2.16	0.45
6:B:144:PRO:HG3	6:B:501:TYR:OH	2.17	0.45
6:B:177:VAL:HG12	6:B:181:LYS:HZ2	1.80	0.45
7:I:133:PHE:O	7:I:136:GLU:HG3	2.17	0.45
7:I:447:ILE:O	7:I:451:LEU:HG	2.15	0.45
8:O:497:ASP:OD2	8:O:500:GLN:HB2	2.17	0.45
8:G:275:ILE:HG23	8:G:300:PHE:HE2	1.81	0.45
1:L:358:LEU:O	1:L:375:GLU:N	2.49	0.45
2:E:165:THR:HG21	2:E:494:THR:H	1.82	0.45
3:N:97:ALA:HA	3:N:100:ILE:HG22	1.99	0.45
3:F:195:ILE:HA	3:F:203:VAL:HG21	1.98	0.45
3:F:201:THR:CG2	3:F:202:SER:H	2.22	0.45
4:H:238:ILE:HA	4:H:289:VAL:HB	1.97	0.45
4:H:238:ILE:H	4:H:344:GLY:HA3	1.81	0.45
4:P:213:CYS:SG	4:P:214:VAL:N	2.90	0.45
5:K:402:ASN:ND2	5:K:497:MET:SD	2.90	0.45
5:K:522:ASN:HB2	6:J:59:HIS:HA	1.98	0.45
5:C:302:TYR:HB3	5:C:306:ARG:NH2	2.32	0.45
6:J:100:GLY:HA2	6:J:103:PHE:CG	2.52	0.45
6:J:200:ASP:OD1	6:J:323:ARG:NH1	2.40	0.45
6:B:107:PHE:CE2	6:B:448:ILE:HD11	2.52	0.45
7:I:175:SER:O	7:I:179:ILE:HG13	2.16	0.45
7:A:91:GLY:O	7:A:95:ASN:ND2	2.50	0.45
8:O:480:ARG:HB3	8:O:484:LYS:HB2	1.99	0.45
8:G:145:ARG:NH2	8:G:174:ASP:OD1	2.50	0.45
8:G:476:VAL:O	8:G:480:ARG:NE	2.49	0.45
1:L:85:HIS:CE1	1:L:87:ILE:HB	2.49	0.45
1:L:231:ASP:HA	1:L:371:MET:SD	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:529:LYS:HZ1	5:C:45:MET:HA	1.82	0.45
2:E:499:VAL:O	2:E:503:VAL:HG23	2.17	0.45
3:N:431:GLU:OE1	3:N:484:HIS:NE2	2.49	0.45
3:N:517:SER:O	3:N:521:LEU:HD23	2.17	0.45
3:F:421:LEU:HD11	3:F:509:VAL:HB	1.99	0.45
4:P:238:ILE:HA	4:P:289:VAL:HB	1.97	0.45
4:P:238:ILE:H	4:P:344:GLY:HA3	1.81	0.45
5:C:121:ILE:H	5:C:121:ILE:HD12	1.81	0.45
6:J:201:ASN:HB3	6:J:372:ILE:HG22	1.98	0.45
6:B:201:ASN:HB3	6:B:372:ILE:HG22	1.98	0.45
6:B:335:ARG:HD2	7:A:300:PHE:CE2	2.52	0.45
6:B:424:THR:O	6:B:427:GLY:N	2.49	0.45
7:A:57:THR:OG1	7:A:58:LYS:N	2.50	0.45
8:O:196:ASN:HB2	8:O:214:TYR:CE1	2.51	0.45
8:O:203:ARG:HD3	8:O:207:GLU:CD	2.37	0.45
8:O:234:ILE:HA	8:O:285:VAL:HB	1.97	0.45
8:G:138:VAL:HG12	8:G:140:THR:H	1.82	0.45
1:D:60:MET:HE2	2:E:517:VAL:HG11	1.98	0.45
2:M:165:THR:HG21	2:M:494:THR:H	1.82	0.45
2:M:170:LYS:HG2	2:M:389:SER:HB3	1.98	0.45
3:N:191:VAL:HA	3:N:194:VAL:HG12	1.98	0.45
3:F:276:LEU:HA	3:F:279:GLU:OE2	2.17	0.45
3:F:343:LYS:HB3	3:F:355:MET:SD	2.57	0.45
4:H:213:CYS:SG	4:H:214:VAL:N	2.90	0.45
4:H:228:ARG:HH22	7:A:331:VAL:HG13	1.81	0.45
5:K:302:TYR:HB3	5:K:306:ARG:NH2	2.32	0.45
6:B:55:MET:HA	6:B:64:PHE:O	2.17	0.45
6:B:100:GLY:HA2	6:B:103:PHE:CG	2.52	0.45
6:B:521:VAL:HG21	7:A:46:MET:SD	2.57	0.45
7:A:90:ASP:CG	7:A:91:GLY:H	2.20	0.45
8:O:99:GLU:HG2	8:O:447:VAL:HB	1.98	0.45
8:G:480:ARG:HB3	8:G:484:LYS:HB2	1.99	0.45
1:L:84:ASP:O	1:L:89:LYS:NZ	2.41	0.45
1:L:91:MET:O	1:L:94:LEU:HB3	2.17	0.45
1:D:312:HIS:CD2	1:D:316:GLN:HG2	2.52	0.45
1:D:529:LYS:HZ1	5:C:44:GLY:C	2.18	0.45
2:E:305:GLY:C	2:E:308:GLY:H	2.21	0.45
3:N:72:ASN:ND2	3:N:173:SER:O	2.50	0.45
3:F:97:ALA:HA	3:F:100:ILE:HG22	1.99	0.45
3:F:277:ARG:HA	3:F:280:ARG:CZ	2.47	0.45
4:H:91:VAL:HG11	4:H:501:VAL:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:253:GLN:OE1	8:G:251:GLN:NE2	2.50	0.45
5:C:402:ASN:ND2	5:C:497:MET:SD	2.90	0.45
6:J:99:ASP:OD1	6:J:102:ASN:ND2	2.50	0.45
6:J:204:VAL:HG11	6:J:389:GLU:HB2	1.99	0.45
6:J:205:CYS:SG	6:J:376:VAL:HA	2.56	0.45
6:J:224:LYS:HB2	6:J:224:LYS:HE2	1.79	0.45
6:B:45:THR:C	6:B:455:ASN:HD21	2.19	0.45
6:B:99:ASP:OD1	6:B:171:LYS:NZ	2.46	0.45
7:I:88:THR:OG1	7:I:500:VAL:HG22	2.16	0.45
8:G:440:GLU:OE1	8:G:440:GLU:HA	2.16	0.45
1:L:201:ARG:NH1	5:K:231:LYS:HB2	2.32	0.45
1:L:418:VAL:HG12	1:L:509:THR:HA	1.97	0.45
1:D:131:ILE:HG21	5:C:43:ARG:HG2	1.98	0.45
1:D:265:LYS:NZ	2:E:255:ARG:HE	2.14	0.45
3:F:72:ASN:ND2	3:F:173:SER:O	2.50	0.45
4:H:48:LYS:NZ	7:A:520:GLU:H	2.15	0.45
4:H:130:LEU:HD22	4:H:510:VAL:HG21	1.98	0.45
5:K:116:LEU:HD22	5:K:430:LYS:HZ1	1.82	0.45
5:K:297:ASP:OD1	5:K:298:VAL:N	2.49	0.45
6:B:33:ILE:HD13	6:B:112:LEU:HD12	1.99	0.45
7:I:224:ARG:HG3	7:I:351:TYR:HB3	1.98	0.45
7:I:238:GLU:HA	7:I:298:ASP:HB2	1.98	0.45
7:A:297:ILE:HG12	7:A:314:ARG:HB3	1.99	0.45
1:L:347:GLU:OE1	5:K:302:TYR:OH	2.35	0.44
1:D:231:ASP:HA	1:D:371:MET:SD	2.57	0.44
1:D:236:HIS:H	1:D:239:MET:HE2	1.82	0.44
2:M:261:THR:CG2	3:N:278:GLU:HB3	2.46	0.44
3:N:54:PRO:HA	3:N:172:ASN:O	2.18	0.44
4:P:41:LEU:HD13	4:P:96:THR:HB	1.98	0.44
5:K:91:GLY:O	5:K:94:THR:HG23	2.17	0.44
5:C:187:ASP:HA	5:C:188:ASP:HA	1.63	0.44
6:J:55:MET:HA	6:J:64:PHE:O	2.17	0.44
6:J:138:LYS:HG2	6:J:426:TYR:CD2	2.51	0.44
6:B:100:GLY:HA2	6:B:103:PHE:CD1	2.52	0.44
6:B:166:THR:HG23	6:B:167:SER:N	2.33	0.44
7:I:21:ALA:HA	7:I:24:ILE:HG22	1.99	0.44
7:I:297:ILE:HG12	7:I:314:ARG:HB3	1.99	0.44
8:G:24:ALA:O	8:G:27:SER:OG	2.24	0.44
8:G:89:GLY:O	8:G:93:VAL:HG23	2.17	0.44
8:G:237:LEU:HD11	8:G:239:PHE:HB3	1.99	0.44
1:D:192:ALA:O	1:D:196:VAL:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:278:LYS:HE2	2:M:278:LYS:HA	2.00	0.44
3:N:430:ILE:HD13	3:N:480:LEU:CD2	2.48	0.44
3:F:123:LEU:HD11	3:F:450:CYS:HA	1.98	0.44
4:P:417:ALA:HA	4:P:420:HIS:CD2	2.52	0.44
5:C:91:GLY:O	5:C:94:THR:HG23	2.17	0.44
5:C:281:ILE:HD13	5:C:281:ILE:HA	1.80	0.44
7:I:77:ILE:O	7:I:80:VAL:HG12	2.18	0.44
7:I:160:VAL:HB	7:I:164:LEU:HD23	1.98	0.44
7:A:135:GLU:O	7:A:138:LYS:HG2	2.17	0.44
7:A:480:ASP:OD2	7:A:483:THR:OG1	2.22	0.44
8:O:138:VAL:HG12	8:O:140:THR:H	1.82	0.44
8:O:194:SER:HA	8:O:318:ARG:NH1	2.30	0.44
8:G:99:GLU:HG2	8:G:447:VAL:HB	1.98	0.44
8:G:144:GLY:O	8:G:148:LEU:HG	2.17	0.44
8:G:385:CYS:SG	8:G:386:ASP:N	2.91	0.44
1:L:88:ALA:O	1:L:92:VAL:HG23	2.17	0.44
1:D:131:ILE:HD11	1:D:529:LYS:HZ3	1.83	0.44
2:M:112:GLU:CD	2:M:438:SER:HB2	2.36	0.44
2:M:279:VAL:O	2:M:283:LEU:HG	2.16	0.44
2:E:278:LYS:HE2	2:E:278:LYS:HA	2.00	0.44
4:P:50:LEU:HD13	7:I:522:MET:SD	2.56	0.44
4:P:91:VAL:HG11	4:P:501:VAL:HA	1.98	0.44
4:P:359:TYR:O	4:P:360:PHE:HD1	1.99	0.44
5:K:338:SER:O	5:K:342:LEU:HD23	2.18	0.44
6:B:99:ASP:OD1	6:B:102:ASN:ND2	2.50	0.44
6:B:505:TYR:OH	6:B:509:LYS:NZ	2.39	0.44
7:I:57:THR:OG1	7:I:58:LYS:N	2.50	0.44
7:I:90:ASP:CG	7:I:91:GLY:H	2.20	0.44
7:I:279:ARG:HH12	7:I:280:LYS:HG3	1.82	0.44
7:A:279:ARG:HH12	7:A:280:LYS:HG3	1.82	0.44
7:A:440:PHE:O	7:A:444:LEU:HG	2.17	0.44
7:A:517:LEU:HD23	7:A:517:LEU:HA	1.80	0.44
8:G:20:GLN:HE21	8:G:69:HIS:CD2	2.36	0.44
1:L:17:LEU:O	5:K:73:HIS:HB2	2.18	0.44
1:D:405:ALA:O	1:D:409:ILE:HG12	2.17	0.44
2:M:258:VAL:HG23	3:N:264:ILE:HD13	1.99	0.44
2:E:279:VAL:O	2:E:283:LEU:HG	2.16	0.44
3:N:271:GLN:O	3:N:275:VAL:HG23	2.18	0.44
3:F:24:TYR:CE2	3:F:26:ASP:HA	2.52	0.44
3:F:307:ASP:N	3:F:307:ASP:OD1	2.49	0.44
3:F:533:ASP:OD1	3:F:534:ASP:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:428:GLU:HA	6:J:435:GLN:OE1	2.18	0.44
6:B:205:CYS:SG	6:B:376:VAL:HA	2.56	0.44
6:B:275:LEU:HD21	7:A:253:ALA:CB	2.47	0.44
7:I:289:PHE:HB3	7:I:310:ILE:HD12	2.00	0.44
7:I:374:LEU:HA	7:I:374:LEU:HD23	1.67	0.44
7:I:504:LEU:HD12	7:I:505:LEU:N	2.33	0.44
7:A:77:ILE:O	7:A:80:VAL:HG12	2.17	0.44
8:G:203:ARG:HD3	8:G:207:GLU:CD	2.37	0.44
1:L:309:GLU:OE1	2:M:334:THR:HG23	2.17	0.44
1:L:312:HIS:CD2	1:L:316:GLN:HG2	2.52	0.44
1:D:88:ALA:O	1:D:92:VAL:HG23	2.18	0.44
1:D:196:VAL:HG23	1:D:204:VAL:HG21	1.99	0.44
1:D:309:GLU:OE1	2:E:333:SER:HB3	2.17	0.44
1:D:358:LEU:O	1:D:375:GLU:N	2.49	0.44
2:M:231:ARG:NE	2:M:233:GLU:OE1	2.51	0.44
2:M:305:GLY:C	2:M:308:GLY:H	2.21	0.44
2:E:108:GLU:OE1	2:E:111:ARG:NH1	2.49	0.44
3:N:116:LEU:HD21	3:N:458:MET:HE2	1.99	0.44
3:N:123:LEU:HD11	3:N:450:CYS:HA	1.98	0.44
3:N:529:ILE:HA	3:N:532:ILE:HD12	2.00	0.44
3:F:121:THR:O	3:F:124:LEU:N	2.50	0.44
4:H:366:CYS:HB3	4:H:369:PRO:HB3	1.99	0.44
4:P:42:GLY:O	4:P:162:THR:HG23	2.18	0.44
5:K:519:THR:HG22	6:J:55:MET:SD	2.58	0.44
6:J:100:GLY:HA2	6:J:103:PHE:CD1	2.52	0.44
6:J:251:THR:HG23	7:I:263:GLU:OE1	2.16	0.44
7:I:440:PHE:O	7:I:444:LEU:HG	2.17	0.44
7:A:238:GLU:HA	7:A:298:ASP:HB2	1.99	0.44
7:A:294:GLN:O	7:A:315:ARG:HA	2.17	0.44
8:O:89:GLY:O	8:O:93:VAL:HG23	2.17	0.44
8:O:144:GLY:O	8:O:148:LEU:HG	2.17	0.44
8:O:225:MET:HE1	8:O:307:ALA:O	2.18	0.44
1:D:91:MET:O	1:D:94:LEU:HB3	2.17	0.44
1:D:109:VAL:HG22	1:D:516:GLN:CG	2.47	0.44
1:D:331:GLU:OE2	5:C:223:ALA:HA	2.17	0.44
2:M:498:GLN:HG3	2:M:501:ARG:NH2	2.33	0.44
2:E:237:ILE:HD11	2:E:346:CYS:SG	2.58	0.44
2:E:244:MET:HB2	2:E:296:ILE:HA	2.00	0.44
3:N:116:LEU:HD21	3:N:458:MET:CE	2.48	0.44
3:N:195:ILE:HA	3:N:203:VAL:HG21	1.98	0.44
3:N:276:LEU:HD13	3:N:279:GLU:OE2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:277:ARG:HA	3:N:280:ARG:CZ	2.47	0.44
3:F:276:LEU:HD13	3:F:279:GLU:OE2	2.17	0.44
3:F:431:GLU:OE1	3:F:484:HIS:NE2	2.49	0.44
3:F:529:ILE:HA	3:F:532:ILE:HD12	2.00	0.44
4:H:94:GLY:O	4:H:98:VAL:HG23	2.18	0.44
4:P:34:ALA:O	4:P:38:ARG:HG3	2.17	0.44
5:C:456:ASP:HA	8:O:111:LYS:HZ2	1.82	0.44
6:J:24:GLY:C	6:J:26:GLU:H	2.21	0.44
6:B:24:GLY:C	6:B:26:GLU:H	2.21	0.44
7:I:179:ILE:HG12	7:I:190:MET:HG3	2.00	0.44
7:I:326:LEU:HD12	7:I:370:ARG:HB2	2.00	0.44
7:A:179:ILE:O	7:A:370:ARG:NH1	2.51	0.44
7:A:227:ASP:O	7:A:288:GLY:N	2.45	0.44
7:A:326:LEU:HD12	7:A:370:ARG:HB2	2.00	0.44
7:A:443:ALA:O	7:A:446:ILE:HG12	2.18	0.44
1:L:471:ILE:HG12	3:F:126:LYS:NZ	2.32	0.44
2:E:25:ARG:HB3	2:E:29:PHE:CE2	2.53	0.44
2:E:231:ARG:NE	2:E:233:GLU:OE1	2.51	0.44
3:N:24:TYR:CE2	3:N:26:ASP:HA	2.53	0.44
3:N:121:THR:O	3:N:124:LEU:N	2.50	0.44
3:N:533:ASP:OD1	3:N:534:ASP:N	2.51	0.44
3:F:54:PRO:HA	3:F:172:ASN:O	2.18	0.44
4:H:222:LYS:HD3	4:H:222:LYS:HA	1.82	0.44
4:H:417:ALA:HA	4:H:420:HIS:CD2	2.52	0.44
4:P:215:LEU:O	4:P:217:GLY:N	2.48	0.44
5:C:295:ILE:HD13	5:C:295:ILE:HA	1.90	0.44
5:C:383:GLU:HB3	5:C:387:ARG:NH1	2.33	0.44
6:J:166:THR:HG23	6:J:167:SER:N	2.33	0.44
6:B:204:VAL:HG11	6:B:389:GLU:HB2	1.99	0.44
6:B:494:GLU:OE1	6:B:494:GLU:N	2.37	0.44
6:B:521:VAL:HG11	7:A:46:MET:HG2	1.99	0.44
7:I:68:GLN:O	7:I:69:ILE:HD13	2.17	0.44
7:I:443:ALA:O	7:I:446:ILE:HG12	2.18	0.44
8:O:237:LEU:HD11	8:O:239:PHE:HB3	1.99	0.44
8:G:208:SER:HG	8:G:378:ARG:H	1.65	0.44
1:L:405:ALA:O	1:L:409:ILE:HG12	2.17	0.44
2:M:45:PRO:HA	2:M:168:SER:O	2.18	0.44
2:M:112:GLU:O	2:M:115:SER:OG	2.20	0.44
2:E:498:GLN:HG3	2:E:501:ARG:NH2	2.33	0.44
3:N:148:LEU:O	3:N:151:MET:HG2	2.18	0.44
3:F:123:LEU:CA	3:F:126:LYS:HB3	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:271:GLN:O	3:F:275:VAL:HG23	2.18	0.44
3:F:349:ASP:OD1	3:F:349:ASP:N	2.51	0.44
4:H:41:LEU:HD13	4:H:96:THR:HB	1.99	0.44
4:H:46:MET:HE3	7:A:517:LEU:C	2.38	0.44
4:H:195:ILE:HG22	4:H:197:LYS:H	1.82	0.44
4:P:385:SER:O	4:P:388:GLU:HG3	2.16	0.44
4:P:425:LYS:O	4:P:429:MET:CB	2.66	0.44
6:J:14:MET:SD	6:J:14:MET:N	2.91	0.44
7:A:289:PHE:HB3	7:A:310:ILE:HD12	2.00	0.44
7:A:374:LEU:HD23	7:A:374:LEU:HA	1.67	0.44
8:O:20:GLN:HE21	8:O:69:HIS:CD2	2.36	0.44
8:O:56:ASN:ND2	8:O:159:LYS:HA	2.30	0.44
8:O:204:SER:OG	8:O:205:GLN:N	2.51	0.44
8:G:176:VAL:HA	8:G:179:ILE:HG22	2.00	0.44
1:L:138:GLU:OE1	1:L:142:ARG:HD2	2.18	0.44
1:L:192:ALA:O	1:L:196:VAL:HG22	2.17	0.44
1:L:196:VAL:HG23	1:L:204:VAL:HG21	1.99	0.44
1:L:285:PHE:HE2	1:L:309:GLU:HB2	1.83	0.44
1:D:302:CYS:SG	1:D:323:ARG:HA	2.58	0.44
1:D:303:GLN:HA	1:D:330:ILE:HD11	1.99	0.44
2:M:240:ALA:HA	2:M:332:ALA:H	1.83	0.44
2:M:333:SER:O	2:M:334:THR:OG1	2.34	0.44
2:E:45:PRO:HA	2:E:168:SER:O	2.18	0.44
2:E:157:GLN:O	2:E:160:MET:HG3	2.18	0.44
3:F:141:LEU:HB3	3:F:523:THR:HG21	2.00	0.44
3:F:275:VAL:O	3:F:279:GLU:OE1	2.35	0.44
4:H:34:ALA:O	4:H:38:ARG:HG3	2.17	0.44
5:K:34:GLU:OE2	5:K:37:ARG:HD2	2.18	0.44
6:J:413:GLY:O	6:J:417:ILE:HG12	2.18	0.44
6:B:14:MET:SD	6:B:14:MET:N	2.91	0.44
7:A:477:VAL:HG11	7:A:486:PRO:HB3	1.99	0.44
8:G:194:SER:HA	8:G:318:ARG:NH1	2.30	0.44
8:G:426:TYR:O	8:G:429:SER:OG	2.21	0.44
1:D:68:VAL:HG13	1:D:393:MET:SD	2.58	0.43
1:D:269:THR:HG22	2:E:257:ARG:O	2.18	0.43
1:D:372:LEU:HD12	1:D:373:VAL:N	2.33	0.43
2:M:237:ILE:HD11	2:M:346:CYS:SG	2.58	0.43
3:N:276:LEU:HA	3:N:279:GLU:OE2	2.17	0.43
4:H:118:HIS:HE1	4:H:120:THR:HG23	1.83	0.43
4:H:208:ILE:HG12	7:A:506:HIS:ND1	2.30	0.43
4:H:268:LEU:HD23	7:A:266:PHE:CG	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:94:GLY:O	4:P:98:VAL:HG23	2.18	0.43
4:P:228:ARG:HD3	4:P:228:ARG:HA	1.77	0.43
5:C:93:GLY:HA2	5:C:96:SER:HB3	2.00	0.43
6:J:159:GLU:O	6:J:163:LEU:HG	2.18	0.43
6:J:405:ASP:OD1	6:J:405:ASP:N	2.50	0.43
7:I:252:SER:OG	7:I:255:GLU:HG2	2.18	0.43
7:I:366:CYS:O	7:I:369:PRO:HD3	2.18	0.43
7:A:179:ILE:HG12	7:A:190:MET:HG3	2.00	0.43
7:A:204:THR:HG23	7:A:375:LEU:O	2.17	0.43
8:O:313:LYS:HG2	8:O:317:LYS:HE3	2.00	0.43
8:O:385:CYS:SG	8:O:386:ASP:N	2.91	0.43
8:G:214:TYR:CD2	8:G:319:ILE:HD11	2.53	0.43
1:L:167:GLN:O	1:L:171:THR:HG23	2.17	0.43
2:M:272:LYS:HG3	3:N:347:HIS:CD2	2.53	0.43
3:N:163:LEU:O	3:N:166:SER:OG	2.28	0.43
3:F:194:VAL:HA	3:F:384:LYS:O	2.19	0.43
4:P:222:LYS:HA	4:P:222:LYS:HD3	1.82	0.43
5:K:93:GLY:HA2	5:K:96:SER:HB3	2.00	0.43
5:K:269:ALA:O	5:K:273:ILE:HG12	2.18	0.43
5:K:383:GLU:HB3	5:K:387:ARG:NH1	2.33	0.43
6:J:33:ILE:HD13	6:J:112:LEU:HD12	1.99	0.43
6:J:421:LYS:NZ	6:J:472:GLN:HA	2.33	0.43
6:B:428:GLU:HA	6:B:435:GLN:OE1	2.18	0.43
7:I:135:GLU:O	7:I:138:LYS:HG2	2.17	0.43
7:I:477:VAL:HG11	7:I:486:PRO:HB3	1.99	0.43
8:O:180:LYS:HA	8:O:190:TYR:CD1	2.53	0.43
8:O:386:ASP:HA	8:O:389:GLU:HG3	2.00	0.43
8:G:198:LEU:HD21	8:G:217:ASN:HB2	2.00	0.43
8:G:272:LYS:HB3	8:G:272:LYS:HE2	1.70	0.43
1:L:302:CYS:SG	1:L:323:ARG:HA	2.58	0.43
1:L:391:ASN:OD1	1:L:392:LYS:N	2.51	0.43
1:D:167:GLN:O	1:D:171:THR:HG23	2.17	0.43
2:M:108:GLU:OE1	2:M:111:ARG:NH1	2.49	0.43
2:E:235:ALA:HA	2:E:288:ASN:HD21	1.84	0.43
3:N:194:VAL:HA	3:N:384:LYS:O	2.19	0.43
3:N:412:ILE:O	3:N:416:VAL:HG23	2.18	0.43
3:F:244:ALA:HA	3:F:296:ASN:ND2	2.32	0.43
4:H:50:LEU:O	4:H:57:ILE:HD12	2.18	0.43
4:H:447:ILE:HD12	4:H:447:ILE:H	1.83	0.43
4:P:504:GLN:OE1	8:O:203:ARG:HA	2.18	0.43
5:K:277:LYS:HG2	5:K:334:VAL:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:J:424:THR:O	6:J:427:GLY:N	2.49	0.43
6:B:245:PRO:HB3	6:B:296:LYS:N	2.33	0.43
8:O:168:PHE:CZ	8:O:205:GLN:HB2	2.53	0.43
8:G:181:TYR:HA	8:G:370:ARG:HH22	1.84	0.43
1:L:68:VAL:HG13	1:L:393:MET:SD	2.58	0.43
1:L:456:GLU:O	1:L:459:PRO:HD2	2.18	0.43
1:D:13:GLY:HA3	8:O:27:SER:HB3	1.99	0.43
1:D:522:GLN:NE2	5:C:205:LEU:HG	2.33	0.43
2:M:71:LEU:HA	2:M:74:ILE:HG22	2.00	0.43
2:M:130:TRP:CZ3	2:M:511:ALA:HB1	2.54	0.43
2:E:155:PHE:CZ	2:E:159:LEU:HD21	2.54	0.43
3:N:44:VAL:HG21	3:N:88:ALA:CB	2.49	0.43
4:P:115:GLN:CD	6:B:450:ARG:HH22	2.21	0.43
4:P:129:ALA:O	4:P:133:MET:HG3	2.18	0.43
4:P:276:GLN:O	4:P:280:GLU:OE1	2.36	0.43
6:B:405:ASP:OD1	6:B:405:ASP:N	2.50	0.43
6:B:520:ARG:HH21	6:B:520:ARG:HG2	1.84	0.43
7:A:252:SER:OG	7:A:255:GLU:HG2	2.18	0.43
7:A:503:GLN:NE2	7:A:503:GLN:O	2.45	0.43
8:O:198:LEU:HD21	8:O:217:ASN:HB2	2.01	0.43
1:L:266:LEU:HD22	5:K:257:VAL:O	2.18	0.43
1:L:351:GLU:OE1	1:L:351:GLU:N	2.34	0.43
1:D:99:ASP:HB2	1:D:106:THR:HG21	2.00	0.43
2:M:25:ARG:NH2	3:F:24:TYR:OH	2.48	0.43
2:M:25:ARG:HB3	2:M:29:PHE:CE2	2.53	0.43
2:M:176:LYS:O	2:M:180:THR:OG1	2.23	0.43
2:E:189:ARG:HH11	2:E:371:CYS:HB3	1.83	0.43
2:E:209:LEU:HA	2:E:376:ARG:O	2.18	0.43
2:E:240:ALA:HA	2:E:332:ALA:H	1.83	0.43
3:N:141:LEU:HB3	3:N:523:THR:HG21	2.00	0.43
3:F:116:LEU:HD21	3:F:458:MET:CE	2.48	0.43
4:H:96:THR:HG21	4:H:163:LYS:NZ	2.34	0.43
4:P:130:LEU:HA	4:P:133:MET:HE3	2.00	0.43
4:P:163:LYS:HB3	4:P:390:ASN:HD21	1.83	0.43
4:P:459:THR:HG21	6:B:122:GLY:HA3	1.99	0.43
5:C:277:LYS:HG2	5:C:334:VAL:HG21	2.01	0.43
5:C:338:SER:O	5:C:342:LEU:HD23	2.18	0.43
5:C:458:THR:O	5:C:462:ASN:ND2	2.51	0.43
6:J:197:PHE:HD1	6:J:403:THR:HG21	1.84	0.43
6:B:421:LYS:NZ	6:B:472:GLN:HA	2.33	0.43
6:B:473:GLU:OE1	6:B:473:GLU:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:B:477:ASN:O	6:B:492:MET:N	2.48	0.43
7:A:195:GLU:OE1	7:A:195:GLU:N	2.51	0.43
7:A:366:CYS:O	7:A:369:PRO:HD3	2.18	0.43
7:A:445:LEU:O	7:A:448:PRO:HD2	2.18	0.43
8:O:227:LYS:HZ1	8:O:353:GLN:HG3	1.83	0.43
8:G:313:LYS:HG2	8:G:317:LYS:HE3	2.00	0.43
8:G:492:ASN:HB3	8:G:494:LYS:NZ	2.34	0.43
1:L:372:LEU:HD12	1:L:373:VAL:N	2.33	0.43
1:L:532:ASP:HB3	5:K:47:LYS:HD2	2.01	0.43
1:D:138:GLU:OE1	1:D:142:ARG:HD2	2.18	0.43
1:D:163:GLU:HA	1:D:166:ILE:H	1.83	0.43
2:E:75:GLY:HA2	3:F:539:ARG:NH1	2.34	0.43
2:E:106:ALA:O	2:E:110:LEU:HD23	2.19	0.43
2:E:130:TRP:CZ3	2:E:511:ALA:HB1	2.54	0.43
3:N:72:ASN:HB3	3:N:174:LYS:HG3	2.00	0.43
3:F:44:VAL:HG21	3:F:88:ALA:CB	2.49	0.43
3:F:102:ALA:HA	3:F:414:CYS:SG	2.59	0.43
4:H:61:ASN:O	4:H:61:ASN:ND2	2.51	0.43
4:H:220:ILE:HD11	4:H:323:ILE:HD11	2.01	0.43
4:H:251:GLU:OE1	8:G:245:LYS:HD2	2.19	0.43
4:H:254:THR:HA	8:G:252:VAL:HB	2.01	0.43
6:J:494:GLU:OE1	6:J:494:GLU:N	2.37	0.43
6:J:508:ILE:HD13	6:J:508:ILE:HA	1.90	0.43
6:J:520:ARG:HH21	6:J:520:ARG:HG2	1.84	0.43
6:B:159:GLU:O	6:B:163:LEU:HG	2.18	0.43
6:B:290:VAL:HG23	6:B:311:MET:HB3	2.00	0.43
6:B:413:GLY:O	6:B:417:ILE:HG12	2.18	0.43
7:I:195:GLU:OE1	7:I:195:GLU:N	2.51	0.43
7:I:217:ARG:HA	7:I:217:ARG:HD3	1.88	0.43
7:I:445:LEU:O	7:I:448:PRO:HD2	2.18	0.43
7:A:44:MET:HG3	7:A:56:LEU:HD23	1.99	0.43
7:A:278:LYS:O	7:A:282:CYS:N	2.39	0.43
8:G:37:GLY:O	8:G:40:GLY:N	2.37	0.43
2:M:116:LEU:HD13	2:M:116:LEU:HA	1.87	0.43
2:M:209:LEU:HA	2:M:376:ARG:O	2.18	0.43
2:M:249:ILE:C	2:M:250:LYS:HD3	2.39	0.43
3:N:238:ILE:HD13	3:N:238:ILE:HA	1.93	0.43
3:N:349:ASP:OD1	3:N:349:ASP:N	2.51	0.43
3:F:148:LEU:O	3:F:151:MET:HG2	2.18	0.43
3:F:412:ILE:O	3:F:416:VAL:HG23	2.18	0.43
4:H:42:GLY:O	4:H:162:THR:HG23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:163:LYS:HB3	4:H:390:ASN:HD21	1.83	0.43
4:H:237:ARG:N	4:H:288:ASP:OD2	2.49	0.43
4:H:247:TYR:HD2	7:A:243:GLU:CD	2.22	0.43
4:P:195:ILE:HG22	4:P:197:LYS:H	1.82	0.43
6:J:290:VAL:HG23	6:J:311:MET:HB3	2.00	0.43
7:I:85:ASP:OD2	7:I:89:GLY:HA2	2.18	0.43
7:I:447:ILE:HB	7:I:448:PRO:HD3	2.00	0.43
8:O:272:LYS:HE2	8:O:272:LYS:HB3	1.70	0.43
8:O:354:GLU:O	8:O:361:LEU:HD23	2.19	0.43
8:O:382:ASP:HA	8:O:385:CYS:SG	2.59	0.43
8:O:397:CYS:O	8:O:401:ARG:HG2	2.19	0.43
8:G:386:ASP:HA	8:G:389:GLU:HG3	2.00	0.43
1:L:303:GLN:HA	1:L:330:ILE:HD11	1.99	0.43
1:L:366:THR:HB	2:M:93:ASP:O	2.19	0.43
1:D:86:GLN:O	1:D:89:LYS:HB2	2.18	0.43
1:D:147:HIS:HA	1:D:150:LYS:NZ	2.33	0.43
2:M:235:ALA:HA	2:M:288:ASN:HD21	1.84	0.43
2:M:380:GLN:H	3:N:93:GLU:CD	2.21	0.43
2:E:59:ALA:HB3	3:F:89:ARG:CZ	2.49	0.43
2:E:279:VAL:O	2:E:282:ILE:HB	2.19	0.43
3:F:51:SER:OG	3:F:72:ASN:OD1	2.20	0.43
3:F:63:ASP:N	3:F:67:ASP:O	2.41	0.43
3:F:171:LEU:HD21	3:F:408:ALA:HB2	2.01	0.43
3:F:273:ASP:OD1	3:F:274:ARG:N	2.52	0.43
5:K:458:THR:O	5:K:462:ASN:ND2	2.51	0.43
5:C:319:LEU:HA	5:C:319:LEU:HD12	1.78	0.43
6:J:101:THR:OG1	6:J:102:ASN:N	2.52	0.43
6:J:418:GLU:HB2	6:J:471:HIS:NE2	2.33	0.43
7:I:30:LEU:HD12	7:I:30:LEU:HA	1.89	0.43
7:I:117:ARG:O	7:I:120:THR:HB	2.19	0.43
7:I:179:ILE:O	7:I:370:ARG:NH1	2.51	0.43
8:G:180:LYS:HA	8:G:190:TYR:CD1	2.53	0.43
8:G:397:CYS:O	8:G:401:ARG:HG2	2.19	0.43
1:D:285:PHE:HE2	1:D:309:GLU:HB2	1.83	0.43
2:M:157:GLN:O	2:M:160:MET:HG3	2.18	0.43
2:M:172:LEU:H	2:M:172:LEU:HD12	1.84	0.43
2:M:174:HIS:HB2	3:N:527:ARG:CZ	2.48	0.43
3:N:152:SER:OG	3:N:153:ARG:N	2.51	0.43
3:N:171:LEU:HD21	3:N:408:ALA:HB2	2.01	0.43
3:N:297:VAL:HG13	3:N:323:MET:CG	2.48	0.43
3:F:240:ARG:HD2	8:G:184:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:297:VAL:HG13	3:F:323:MET:CG	2.48	0.43
4:H:208:ILE:CG1	7:A:506:HIS:HD1	2.31	0.43
4:H:425:LYS:O	4:H:429:MET:CB	2.66	0.43
4:P:265:THR:HG21	7:I:265:LYS:HE3	2.01	0.43
6:J:312:LEU:HD23	6:J:312:LEU:HA	1.76	0.43
6:J:521:VAL:HG11	7:I:46:MET:SD	2.59	0.43
6:B:177:VAL:HG12	6:B:181:LYS:NZ	2.34	0.43
6:B:296:LYS:HA	6:B:314:ARG:NH2	2.33	0.43
7:I:44:MET:HG3	7:I:56:LEU:HD23	1.99	0.43
7:I:207:ILE:HD11	7:I:364:GLU:OE1	2.19	0.43
7:A:68:GLN:O	7:A:69:ILE:HD13	2.18	0.43
7:A:504:LEU:HD12	7:A:505:LEU:N	2.33	0.43
8:O:208:SER:HG	8:O:378:ARG:H	1.62	0.43
8:G:333:ASN:ND2	8:G:335:GLU:H	2.17	0.43
1:L:33:ALA:O	1:L:36:SER:OG	2.22	0.43
1:L:128:ILE:HD12	1:L:443:LEU:HD23	2.01	0.43
1:D:128:ILE:HD12	1:D:443:LEU:HD23	2.01	0.43
1:D:391:ASN:OD1	1:D:392:LYS:N	2.51	0.43
2:M:244:MET:HB2	2:M:296:ILE:HA	2.00	0.43
2:M:257:ARG:HG3	3:N:265:VAL:HB	2.00	0.43
3:N:102:ALA:HA	3:N:414:CYS:SG	2.59	0.43
3:F:152:SER:OG	3:F:153:ARG:N	2.51	0.43
4:P:50:LEU:O	4:P:57:ILE:HD12	2.18	0.43
4:P:366:CYS:HB3	4:P:369:PRO:HB3	1.99	0.43
4:P:376:LEU:HB3	4:P:384:LEU:HD12	2.01	0.43
4:P:415:GLU:HG3	4:P:444:LEU:HD11	2.01	0.43
5:C:269:ALA:O	5:C:273:ILE:HG12	2.19	0.43
5:C:457:ALA:N	8:O:111:LYS:NZ	2.67	0.43
6:J:245:PRO:HB3	6:J:296:LYS:N	2.33	0.43
6:B:280:VAL:HG21	6:B:304:TYR:CB	2.46	0.43
6:B:418:GLU:HB2	6:B:471:HIS:NE2	2.34	0.43
7:A:85:ASP:OD2	7:A:89:GLY:HA2	2.18	0.43
7:A:447:ILE:HB	7:A:448:PRO:HD3	2.00	0.43
8:O:216:LEU:HB2	8:O:362:ILE:HB	2.01	0.43
8:O:333:ASN:ND2	8:O:335:GLU:H	2.17	0.43
8:O:492:ASN:HB3	8:O:494:LYS:NZ	2.34	0.43
8:G:168:PHE:CZ	8:G:205:GLN:HB2	2.53	0.43
1:L:109:VAL:HG22	1:L:516:GLN:CG	2.47	0.42
1:D:456:GLU:O	1:D:459:PRO:HD2	2.18	0.42
2:E:67:GLY:HA2	2:E:70:ILE:HD12	2.01	0.42
3:N:60:MET:O	3:N:61:ILE:HD13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:273:ASP:OD1	3:N:274:ARG:N	2.52	0.42
3:N:472:ASN:O	3:N:476:THR:OG1	2.34	0.42
3:F:421:LEU:HD21	3:F:509:VAL:HG21	2.01	0.42
5:K:110:PRO:O	5:K:113:GLU:HB2	2.19	0.42
5:C:34:GLU:OE2	5:C:37:ARG:HD2	2.18	0.42
6:J:275:LEU:O	6:J:279:GLN:HG2	2.19	0.42
6:J:499:ASP:OD1	6:J:499:ASP:N	2.49	0.42
6:B:124:SER:O	6:B:128:VAL:HG23	2.19	0.42
7:I:199:LYS:HB3	7:I:199:LYS:HE2	1.75	0.42
7:A:200:SER:OG	7:A:201:GLU:N	2.52	0.42
8:O:181:TYR:HA	8:O:370:ARG:HH22	1.84	0.42
8:O:214:TYR:CD2	8:O:319:ILE:HD11	2.53	0.42
8:O:419:LEU:HD23	8:O:419:LEU:HA	1.87	0.42
8:G:21:ASN:HD21	8:G:527:ILE:HG21	1.84	0.42
1:L:67:ASP:HA	2:M:82:LYS:HZ2	1.84	0.42
1:L:147:HIS:HA	1:L:150:LYS:NZ	2.33	0.42
1:L:163:GLU:HA	1:L:166:ILE:H	1.83	0.42
1:L:210:LYS:NZ	1:L:212:GLU:HB2	2.34	0.42
1:D:440:CYS:O	1:D:441:PRO:O	2.37	0.42
2:M:171:LEU:O	3:N:527:ARG:NH1	2.52	0.42
2:E:249:ILE:C	2:E:250:LYS:HD3	2.39	0.42
3:N:235:ASN:HD21	3:N:318:ASN:HA	1.84	0.42
3:N:421:LEU:HD21	3:N:509:VAL:HG21	2.01	0.42
4:H:11:SER:OG	8:G:66:GLU:O	2.33	0.42
4:H:130:LEU:HA	4:H:133:MET:HE3	2.01	0.42
4:H:150:ASP:OD1	4:H:150:ASP:N	2.52	0.42
4:H:354:LYS:HZ2	4:H:358:GLU:C	2.22	0.42
4:H:424:GLU:HG2	4:H:427:LYS:HZ1	1.84	0.42
7:I:234:ASN:CB	7:I:294:GLN:HB3	2.49	0.42
7:A:234:ASN:CB	7:A:294:GLN:HB3	2.49	0.42
8:O:447:VAL:HA	8:O:450:ASN:HD22	1.85	0.42
8:G:225:MET:HE1	8:G:307:ALA:O	2.19	0.42
8:G:341:GLU:OE2	8:G:342:ALA:N	2.52	0.42
8:G:382:ASP:HA	8:G:385:CYS:SG	2.59	0.42
1:L:99:ASP:HB2	1:L:106:THR:HG21	2.00	0.42
1:D:13:GLY:HA2	8:O:23:MET:CE	2.49	0.42
1:D:327:GLY:O	1:D:331:GLU:OE1	2.36	0.42
1:D:443:LEU:HD12	1:D:443:LEU:H	1.84	0.42
2:E:174:HIS:HB2	3:F:527:ARG:NH1	2.33	0.42
3:N:297:VAL:HA	3:N:323:MET:HB3	2.02	0.42
3:N:368:ASN:HB3	3:N:371:GLY:HA3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:250:GLN:HB3	3:F:301:GLN:HE21	1.84	0.42
3:F:368:ASN:HB3	3:F:371:GLY:HA3	2.02	0.42
3:F:432:LEU:HD23	3:F:458:MET:HG3	2.01	0.42
4:H:276:GLN:O	4:H:280:GLU:OE1	2.36	0.42
4:H:349:LEU:CD2	4:H:351:GLU:HB2	2.49	0.42
4:P:118:HIS:HE1	4:P:120:THR:HG23	1.83	0.42
6:B:58:ASN:OD1	6:B:61:GLU:N	2.53	0.42
7:I:200:SER:OG	7:I:201:GLU:N	2.52	0.42
7:I:227:ASP:O	7:I:288:GLY:N	2.45	0.42
7:A:117:ARG:O	7:A:120:THR:HB	2.19	0.42
7:A:429:VAL:HG23	7:A:431:GLY:H	1.84	0.42
8:O:21:ASN:HD21	8:O:527:ILE:HG21	1.84	0.42
8:O:46:VAL:HA	8:O:52:VAL:HG12	2.02	0.42
8:O:74:VAL:HG11	8:O:524:ILE:HD11	2.01	0.42
8:G:48:ASP:OD1	8:G:49:ILE:HG12	2.20	0.42
8:G:272:LYS:HG3	8:G:299:TYR:CE1	2.54	0.42
2:E:456:TYR:CD1	2:E:483:GLY:HA3	2.54	0.42
3:F:243:LYS:HD3	3:F:243:LYS:HA	1.72	0.42
4:H:11:SER:HA	8:G:68:GLU:OE1	2.19	0.42
4:H:36:ILE:O	4:H:37:ILE:HD13	2.20	0.42
4:P:286:LYS:N	4:P:287:PRO:HD3	2.35	0.42
4:P:447:ILE:HD12	4:P:447:ILE:H	1.84	0.42
5:C:110:PRO:O	5:C:113:GLU:HB2	2.19	0.42
5:C:167:LEU:HD21	5:C:381:PHE:CE1	2.55	0.42
6:J:47:TYR:CZ	6:J:103:PHE:HE2	2.38	0.42
6:B:24:GLY:O	6:B:25:LEU:HB3	2.19	0.42
7:I:60:GLY:HA2	7:I:63:LEU:HD13	2.01	0.42
7:I:318:ARG:HA	7:I:321:MET:HE1	2.01	0.42
8:O:176:VAL:HA	8:O:179:ILE:HG22	2.00	0.42
8:G:74:VAL:HG11	8:G:524:ILE:HD11	2.01	0.42
8:G:225:MET:CE	8:G:307:ALA:H	2.30	0.42
8:G:335:GLU:CD	8:G:337:GLU:H	2.23	0.42
1:L:145:ILE:HG13	1:L:146:GLU:N	2.34	0.42
1:L:443:LEU:HD12	1:L:443:LEU:H	1.85	0.42
1:D:260:PRO:HD3	5:C:267:VAL:HB	2.00	0.42
2:E:42:THR:HA	2:E:48:MET:O	2.20	0.42
2:E:172:LEU:H	2:E:172:LEU:HD12	1.84	0.42
3:N:142:GLU:O	3:N:145:ILE:HG22	2.19	0.42
3:F:72:ASN:HB3	3:F:174:LYS:HG3	2.00	0.42
3:F:142:GLU:O	3:F:145:ILE:HG22	2.19	0.42
4:H:223:ASP:OD1	4:H:224:VAL:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:220:ILE:HD11	4:P:323:ILE:HD11	2.00	0.42
4:P:349:LEU:CD2	4:P:351:GLU:HB2	2.49	0.42
5:K:445:ILE:HB	5:K:446:PRO:HD3	2.02	0.42
5:C:27:SER:O	5:C:31:VAL:HG23	2.20	0.42
6:J:124:SER:O	6:J:128:VAL:HG23	2.19	0.42
7:I:294:GLN:O	7:I:315:ARG:HA	2.18	0.42
7:I:429:VAL:HG23	7:I:431:GLY:H	1.84	0.42
8:O:421:ILE:HG13	8:O:422:TYR:N	2.34	0.42
8:G:55:THR:HG1	8:G:390:ARG:HH11	1.67	0.42
8:G:354:GLU:O	8:G:361:LEU:HD23	2.19	0.42
2:M:106:ALA:O	2:M:110:LEU:HD23	2.19	0.42
2:M:189:ARG:HH11	2:M:371:CYS:HB3	1.83	0.42
2:M:278:LYS:O	2:M:282:ILE:HG13	2.20	0.42
2:E:295:LEU:HD23	2:E:314:HIS:HB2	2.02	0.42
3:F:60:MET:O	3:F:61:ILE:HD13	2.19	0.42
4:H:144:VAL:HG21	4:H:151:MET:HG2	2.01	0.42
4:H:196:LYS:HZ1	4:H:395:MET:HG3	1.85	0.42
5:K:32:ILE:HD13	5:K:32:ILE:HA	1.94	0.42
6:B:197:PHE:HD1	6:B:403:THR:HG21	1.83	0.42
7:A:461:GLU:OE2	7:A:462:THR:HG23	2.20	0.42
7:A:520:GLU:OE1	7:A:520:GLU:N	2.53	0.42
8:G:46:VAL:HA	8:G:52:VAL:HG12	2.02	0.42
8:G:192:VAL:C	8:G:194:SER:H	2.22	0.42
8:G:421:ILE:HG13	8:G:422:TYR:N	2.35	0.42
8:G:447:VAL:HA	8:G:450:ASN:HD22	1.85	0.42
1:L:344:ARG:CZ	5:K:271:TRP:HE3	2.33	0.42
1:D:145:ILE:HG13	1:D:146:GLU:N	2.34	0.42
2:M:155:PHE:CZ	2:M:159:LEU:HD21	2.54	0.42
2:M:272:LYS:HG3	3:N:347:HIS:HD2	1.84	0.42
2:E:278:LYS:O	2:E:282:ILE:HG13	2.20	0.42
3:F:296:ASN:O	3:F:323:MET:N	2.46	0.42
4:H:129:ALA:O	4:H:133:MET:HG3	2.18	0.42
4:H:338:LEU:HD12	4:H:338:LEU:HA	1.80	0.42
6:J:280:VAL:HG21	6:J:304:TYR:CB	2.46	0.42
6:J:473:GLU:OE1	6:J:473:GLU:N	2.52	0.42
6:J:528:LYS:HA	6:J:529:PRO:HD3	1.87	0.42
6:B:47:TYR:CZ	6:B:103:PHE:HE2	2.38	0.42
6:B:101:THR:OG1	6:B:102:ASN:N	2.52	0.42
7:I:459:LEU:HD12	7:A:112:GLU:O	2.18	0.42
7:A:239:TYR:CG	7:A:240:GLU:N	2.87	0.42
8:G:59:ALA:HB2	8:G:90:THR:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:361:LEU:HD23	8:G:361:LEU:H	1.85	0.42
8:G:474:ALA:O	8:G:480:ARG:HD2	2.20	0.42
8:G:498:ASN:HA	8:G:501:ALA:HB3	2.01	0.42
1:L:86:GLN:O	1:L:89:LYS:HB2	2.18	0.42
1:L:210:LYS:HD2	1:L:210:LYS:HA	1.84	0.42
1:D:426:GLU:OE1	1:D:426:GLU:N	2.46	0.42
2:M:67:GLY:HA2	2:M:70:ILE:HD12	2.01	0.42
2:M:295:LEU:HD23	2:M:314:HIS:HB2	2.02	0.42
2:M:386:ALA:O	2:M:390:LEU:HD23	2.20	0.42
3:N:44:VAL:HG21	3:N:88:ALA:HB2	2.02	0.42
3:N:104:ASP:CG	3:N:105:GLY:H	2.23	0.42
4:P:96:THR:HG21	4:P:163:LYS:NZ	2.34	0.42
4:P:435:TRP:HB2	4:P:436:PRO:HD3	2.02	0.42
5:K:157:LYS:HA	5:K:160:MET:HB2	2.02	0.42
5:C:445:ILE:HB	5:C:446:PRO:HD3	2.02	0.42
6:B:20:LYS:HB2	6:B:526:MET:HB3	2.02	0.42
6:B:59:HIS:CE1	6:B:60:LEU:HG	2.55	0.42
7:I:461:GLU:OE2	7:I:462:THR:HG23	2.20	0.42
8:O:59:ALA:HB2	8:O:90:THR:HG21	2.01	0.42
8:O:237:LEU:HD23	8:O:241:LEU:HD21	2.00	0.42
8:O:341:GLU:OE2	8:O:342:ALA:N	2.53	0.42
8:O:361:LEU:HD23	8:O:361:LEU:H	1.85	0.42
1:L:200:GLU:CD	1:L:200:GLU:H	2.23	0.42
1:L:265:LYS:O	2:M:255:ARG:NH2	2.53	0.42
1:L:327:GLY:O	1:L:331:GLU:OE1	2.36	0.42
1:D:210:LYS:NZ	1:D:212:GLU:HB2	2.35	0.42
3:F:104:ASP:CG	3:F:105:GLY:H	2.24	0.42
3:F:297:VAL:HA	3:F:323:MET:HB3	2.02	0.42
4:H:116:GLN:NE2	6:J:459:LYS:HA	2.32	0.42
4:H:286:LYS:N	4:H:287:PRO:HD3	2.35	0.42
4:H:412:GLY:O	4:H:415:GLU:HB2	2.20	0.42
5:K:14:ASP:HB3	5:K:521:LYS:CG	2.50	0.42
5:K:167:LEU:HD21	5:K:381:PHE:CE1	2.55	0.42
5:K:350:GLU:HB2	5:K:358:TYR:O	2.20	0.42
5:C:196:GLY:O	5:C:197:ILE:HD13	2.20	0.42
5:C:350:GLU:HB2	5:C:358:TYR:O	2.20	0.42
5:C:415:GLU:N	5:C:468:HIS:HE1	2.18	0.42
6:J:59:HIS:CE1	6:J:60:LEU:HG	2.55	0.42
6:J:84:LYS:O	6:J:88:MET:HG3	2.20	0.42
6:J:251:THR:HG21	7:I:248:PHE:CZ	2.54	0.42
6:J:417:ILE:HD11	6:J:449:PRO:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:I:102:LEU:HD22	7:I:512:ALA:HB1	2.01	0.42
7:A:45:LYS:N	7:A:57:THR:O	2.36	0.42
1:L:323:ARG:HG2	1:L:324:TRP:CD1	2.55	0.42
1:D:129:HIS:CE1	1:D:131:ILE:HG12	2.54	0.42
2:M:42:THR:HA	2:M:48:MET:O	2.20	0.42
2:M:233:GLU:N	2:M:233:GLU:OE2	2.53	0.42
2:M:456:TYR:CD1	2:M:483:GLY:HA3	2.54	0.42
2:E:71:LEU:HA	2:E:74:ILE:HG22	2.00	0.42
2:E:247:ASP:O	2:E:249:ILE:HG23	2.20	0.42
3:N:113:ALA:O	3:N:117:LEU:HD23	2.20	0.42
3:F:148:LEU:HD13	3:F:151:MET:SD	2.60	0.42
3:F:235:ASN:HD21	3:F:318:ASN:HA	1.84	0.42
4:H:299:LEU:O	4:H:302:HIS:HB3	2.20	0.42
4:H:376:LEU:HB3	4:H:384:LEU:HD12	2.00	0.42
5:K:174:PHE:C	5:K:178:MET:HE1	2.41	0.42
5:K:415:GLU:N	5:K:468:HIS:HE1	2.18	0.42
5:C:43:ARG:HH12	5:C:480:ASN:HA	1.85	0.42
5:C:300:THR:HG23	5:C:310:CYS:SG	2.60	0.42
6:J:406:LYS:HA	6:J:406:LYS:HD3	1.82	0.42
6:B:417:ILE:HD11	6:B:449:PRO:HG3	2.02	0.42
7:A:214:HIS:CE1	7:A:313:LEU:HB3	2.55	0.42
8:O:47:ASP:OD2	8:O:51:ASP:HB3	2.20	0.42
8:O:498:ASN:HA	8:O:501:ALA:HB3	2.01	0.42
8:G:216:LEU:HB2	8:G:362:ILE:HB	2.01	0.42
8:G:237:LEU:HD23	8:G:241:LEU:HD21	2.00	0.42
8:G:480:ARG:C	8:G:483:LEU:H	2.24	0.42
1:L:73:ASP:O	1:L:76:THR:OG1	2.29	0.41
1:L:245:ASP:OD2	1:L:247:LYS:HG2	2.20	0.41
1:L:418:VAL:HA	1:L:510:LEU:H	1.85	0.41
1:L:426:GLU:OE1	1:L:426:GLU:N	2.46	0.41
1:D:210:LYS:HD2	1:D:210:LYS:HA	1.83	0.41
1:D:439:LYS:C	1:D:441:PRO:HD3	2.40	0.41
2:M:255:ARG:HD3	2:M:257:ARG:NH1	2.35	0.41
2:E:281:ARG:NH2	2:E:336:ASP:OD1	2.53	0.41
3:N:432:LEU:HD23	3:N:458:MET:HG3	2.01	0.41
3:F:213:LYS:HA	3:F:213:LYS:HD2	1.70	0.41
3:F:430:ILE:HD13	3:F:480:LEU:CD2	2.48	0.41
4:H:27:ILE:HD13	4:H:27:ILE:HA	1.83	0.41
4:H:93:ASP:OD1	4:H:94:GLY:N	2.53	0.41
4:H:123:ILE:HD12	4:H:514:VAL:HA	2.02	0.41
4:H:416:MET:HG3	4:H:466:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:93:ASP:OD1	4:P:94:GLY:N	2.53	0.41
4:P:123:ILE:HD12	4:P:514:VAL:HA	2.02	0.41
4:P:150:ASP:N	4:P:150:ASP:OD1	2.52	0.41
5:K:27:SER:O	5:K:31:VAL:HG23	2.20	0.41
5:K:518:GLU:N	5:K:518:GLU:OE2	2.52	0.41
6:J:6:PRO:O	6:J:8:ALA:N	2.53	0.41
6:J:58:ASN:OD1	6:J:61:GLU:N	2.53	0.41
7:I:45:LYS:N	7:I:57:THR:O	2.36	0.41
7:I:214:HIS:CE1	7:I:313:LEU:HB3	2.55	0.41
8:O:48:ASP:OD1	8:O:49:ILE:HG12	2.20	0.41
8:G:286:ILE:HG22	8:G:306:MET:O	2.20	0.41
1:L:335:ILE:HD11	1:L:381:ARG:HB2	2.03	0.41
1:D:160:LYS:HB3	1:D:160:LYS:HE3	1.79	0.41
2:M:247:ASP:O	2:M:249:ILE:HG23	2.20	0.41
2:M:348:LEU:HD23	2:M:349:ILE:N	2.35	0.41
2:M:353:MET:HG2	2:M:357:ASP:C	2.41	0.41
2:M:375:LEU:HA	2:M:375:LEU:HD23	1.65	0.41
3:F:44:VAL:HG21	3:F:88:ALA:HB2	2.02	0.41
3:F:123:LEU:HA	3:F:123:LEU:HD23	1.84	0.41
4:H:331:ILE:HB	8:G:298:LYS:NZ	2.36	0.41
4:P:137:LEU:HD23	4:P:137:LEU:HA	1.82	0.41
4:P:144:VAL:HG21	4:P:151:MET:HG2	2.01	0.41
5:K:152:ARG:HA	5:K:155:LEU:HD12	2.02	0.41
5:K:383:GLU:HB3	5:K:387:ARG:HH12	1.85	0.41
5:K:467:ARG:CZ	5:K:471:GLY:HA3	2.51	0.41
5:K:518:GLU:OE1	6:J:54:LYS:HE2	2.20	0.41
5:C:157:LYS:HA	5:C:160:MET:HB2	2.02	0.41
5:C:518:GLU:N	5:C:518:GLU:OE2	2.52	0.41
6:J:520:ARG:NH1	7:I:161:HIS:NE2	2.68	0.41
7:A:391:VAL:O	7:A:395:LEU:HD23	2.21	0.41
8:O:272:LYS:HG3	8:O:299:TYR:CE1	2.54	0.41
8:O:452:LEU:HA	8:O:452:LEU:HD23	1.80	0.41
8:O:474:ALA:O	8:O:480:ARG:HD2	2.20	0.41
8:G:37:GLY:O	8:G:39:VAL:N	2.53	0.41
8:G:204:SER:OG	8:G:205:GLN:N	2.51	0.41
1:L:270:SER:OG	1:L:271:VAL:N	2.53	0.41
1:D:341:ILE:HD12	5:C:301:GLN:OE1	2.19	0.41
2:M:178:HIS:O	2:M:182:LEU:HD23	2.20	0.41
2:M:417:MET:O	2:M:421:VAL:HG23	2.20	0.41
2:E:348:LEU:HD23	2:E:349:ILE:N	2.35	0.41
4:P:115:GLN:CD	6:B:450:ARG:HH12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:P:416:MET:HG3	4:P:466:LEU:HD11	2.02	0.41
5:K:300:THR:HG23	5:K:310:CYS:SG	2.60	0.41
5:C:274:LEU:HD13	5:C:274:LEU:HA	1.94	0.41
6:J:25:LEU:HD11	6:J:119:LEU:HD21	2.02	0.41
6:J:157:ILE:HG22	6:J:188:VAL:HG11	2.02	0.41
6:J:330:ALA:HB1	6:J:343:GLU:O	2.20	0.41
7:I:289:PHE:HB3	7:I:310:ILE:HG23	2.02	0.41
7:I:293:ASN:ND2	7:I:296:GLY:O	2.53	0.41
7:A:207:ILE:HD11	7:A:364:GLU:OE1	2.19	0.41
7:A:478:GLY:O	7:A:487:MET:N	2.52	0.41
7:A:522:MET:SD	7:A:522:MET:C	2.99	0.41
8:O:37:GLY:O	8:O:39:VAL:N	2.53	0.41
8:O:432:SER:O	8:O:435:GLN:NE2	2.53	0.41
1:L:129:HIS:CE1	1:L:131:ILE:HG12	2.54	0.41
1:L:225:ILE:O	1:L:227:GLY:N	2.53	0.41
1:L:344:ARG:HG3	5:K:271:TRP:CZ3	2.52	0.41
1:L:440:CYS:O	1:L:441:PRO:O	2.37	0.41
1:D:73:ASP:O	1:D:76:THR:OG1	2.28	0.41
1:D:335:ILE:HD11	1:D:381:ARG:HB2	2.03	0.41
2:M:267:ILE:HD13	2:M:267:ILE:HA	1.87	0.41
2:E:417:MET:O	2:E:421:VAL:HG23	2.20	0.41
2:E:438:SER:OG	2:E:439:TYR:N	2.54	0.41
3:N:275:VAL:O	3:N:278:GLU:N	2.52	0.41
3:F:275:VAL:O	3:F:278:GLU:N	2.52	0.41
4:H:256:ILE:HG13	8:G:254:ILE:HB	2.02	0.41
4:H:415:GLU:HG3	4:H:444:LEU:HD11	2.01	0.41
4:P:20:ARG:HH12	4:P:113:LEU:C	2.21	0.41
4:P:36:ILE:O	4:P:37:ILE:HD13	2.20	0.41
4:P:186:GLU:H	4:P:370:LYS:HZ3	1.66	0.41
4:P:375:LEU:HD12	4:P:375:LEU:HA	1.85	0.41
4:P:376:LEU:HD23	4:P:376:LEU:HA	1.68	0.41
5:K:494:GLU:HG3	5:K:495:PRO:HD2	2.03	0.41
5:C:200:VAL:CG1	5:C:375:ARG:HD2	2.50	0.41
6:J:177:VAL:HG12	6:J:181:LYS:HZ2	1.85	0.41
6:J:211:GLY:CA	6:J:379:GLY:HA2	2.40	0.41
6:J:410:PRO:HA	6:J:498:LEU:HD13	2.03	0.41
6:B:23:SER:HA	6:B:523:GLN:CB	2.50	0.41
6:B:84:LYS:O	6:B:88:MET:HG3	2.20	0.41
6:B:275:LEU:O	6:B:279:GLN:HG2	2.19	0.41
7:A:30:LEU:HD12	7:A:30:LEU:HA	1.89	0.41
8:O:286:ILE:HG22	8:O:306:MET:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:420:SER:HA	8:G:442:ALA:HB1	2.03	0.41
1:L:104:ASP:OD1	1:L:107:THR:HB	2.20	0.41
1:L:439:LYS:C	1:L:441:PRO:HD3	2.40	0.41
1:L:525:ARG:HH21	5:K:167:LEU:HD12	1.84	0.41
1:D:104:ASP:OD1	1:D:107:THR:HB	2.21	0.41
1:D:138:GLU:O	1:D:142:ARG:HG3	2.20	0.41
1:D:225:ILE:O	1:D:227:GLY:N	2.53	0.41
1:D:265:LYS:HZ2	2:E:255:ARG:HE	1.68	0.41
1:D:376:GLN:NE2	1:D:378:LYS:H	2.18	0.41
2:E:162:ILE:O	2:E:165:THR:OG1	2.36	0.41
3:N:148:LEU:HD13	3:N:151:MET:SD	2.60	0.41
3:F:268:ASP:HA	8:G:259:LYS:NZ	2.35	0.41
3:F:374:LEU:HD13	3:F:374:LEU:HA	1.91	0.41
4:H:15:LYS:HG2	4:H:16:ARG:N	2.35	0.41
4:H:497:GLU:N	4:H:497:GLU:OE2	2.54	0.41
4:P:141:SER:OG	4:P:142:ILE:N	2.53	0.41
4:P:299:LEU:O	4:P:302:HIS:HB3	2.20	0.41
4:P:424:GLU:HG2	4:P:427:LYS:HZ3	1.86	0.41
5:K:43:ARG:HH12	5:K:480:ASN:HA	1.85	0.41
6:J:152:LYS:HZ2	6:J:406:LYS:HE3	1.84	0.41
6:J:406:LYS:HG3	6:J:407:ARG:H	1.86	0.41
6:B:6:PRO:O	6:B:8:ALA:N	2.53	0.41
6:B:25:LEU:HD11	6:B:119:LEU:HD21	2.03	0.41
6:B:297:VAL:HG23	6:B:314:ARG:NH2	2.35	0.41
7:I:522:MET:SD	7:I:522:MET:C	2.99	0.41
7:A:60:GLY:HA2	7:A:63:LEU:HD13	2.01	0.41
7:A:277:LEU:HD22	7:A:339:LEU:HD11	2.02	0.41
8:O:507:THR:H	8:O:507:THR:HG23	1.68	0.41
1:L:171:THR:HG21	1:L:507:ILE:HG12	2.02	0.41
1:L:255:PHE:HB2	1:L:306:PHE:HD1	1.86	0.41
1:D:171:THR:HG21	1:D:507:ILE:HG12	2.02	0.41
1:D:250:ILE:C	1:D:251:LEU:HD12	2.41	0.41
1:D:266:LEU:HD21	5:C:263:TYR:HB2	2.02	0.41
2:M:172:LEU:HD23	2:M:179:PHE:CZ	2.55	0.41
2:M:279:VAL:O	2:M:282:ILE:HB	2.19	0.41
2:M:408:TYR:HE2	2:M:489:ALA:HA	1.85	0.41
2:E:31:GLY:HA3	2:E:78:ASN:ND2	2.36	0.41
2:E:386:ALA:O	2:E:390:LEU:HD23	2.20	0.41
3:N:51:SER:OG	3:N:72:ASN:OD1	2.20	0.41
3:N:71:THR:HA	3:N:400:GLU:CD	2.41	0.41
3:N:250:GLN:HB3	3:N:301:GLN:HE21	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:374:LEU:HD13	3:N:374:LEU:HA	1.91	0.41
4:H:435:TRP:HB2	4:H:436:PRO:HD3	2.02	0.41
5:K:375:ARG:HH21	5:K:375:ARG:HA	1.86	0.41
5:C:14:ASP:HB3	5:C:521:LYS:CG	2.50	0.41
6:J:127:GLU:HA	6:J:130:GLU:OE1	2.21	0.41
6:J:177:VAL:HG12	6:J:181:LYS:NZ	2.34	0.41
6:B:22:PHE:CG	6:B:27:GLU:HG2	2.56	0.41
6:B:352:LEU:HD21	6:B:359:GLN:NE2	2.36	0.41
7:I:304:ALA:HA	7:I:307:LYS:HZ3	1.85	0.41
8:O:86:VAL:HG21	8:O:509:VAL:HA	2.02	0.41
8:O:420:SER:HA	8:O:442:ALA:HB1	2.03	0.41
1:L:159:ILE:HG22	1:L:160:LYS:N	2.36	0.41
1:D:184:GLN:O	1:D:188:ILE:HG13	2.20	0.41
1:D:200:GLU:H	1:D:200:GLU:CD	2.23	0.41
1:D:418:VAL:HA	1:D:510:LEU:H	1.85	0.41
2:M:323:LEU:HA	2:M:326:VAL:HG12	2.03	0.41
2:E:162:ILE:HD12	2:E:495:GLU:HA	2.03	0.41
2:E:205:LEU:HD11	3:F:93:GLU:OE1	2.20	0.41
2:E:233:GLU:N	2:E:233:GLU:OE2	2.53	0.41
2:E:353:MET:HG2	2:E:357:ASP:C	2.41	0.41
3:N:88:ALA:O	3:N:92:VAL:HG23	2.21	0.41
3:F:58:ASP:OD1	8:G:526:ARG:HB3	2.21	0.41
3:F:443:LEU:O	3:F:448:SER:HB3	2.20	0.41
4:H:459:THR:HG21	6:J:122:GLY:HA3	2.01	0.41
4:P:50:LEU:CD1	7:I:522:MET:SD	3.09	0.41
4:P:61:ASN:O	4:P:61:ASN:ND2	2.51	0.41
5:K:86:GLN:HG2	5:K:97:VAL:HG21	2.03	0.41
5:C:163:LEU:HD13	5:C:163:LEU:HA	1.94	0.41
5:C:298:VAL:HA	5:C:301:GLN:HG2	2.03	0.41
6:J:22:PHE:CG	6:J:27:GLU:HG2	2.56	0.41
6:B:73:LEU:HB3	6:B:87:VAL:HG13	2.03	0.41
6:B:203:ARG:HA	6:B:203:ARG:HD3	1.92	0.41
7:I:239:TYR:CG	7:I:240:GLU:N	2.87	0.41
7:A:56:LEU:O	7:A:386:GLN:HG3	2.20	0.41
7:A:289:PHE:HB3	7:A:310:ILE:HG23	2.02	0.41
8:O:192:VAL:C	8:O:194:SER:H	2.22	0.41
8:O:412:GLY:O	8:O:488:LEU:HB3	2.21	0.41
8:G:47:ASP:OD2	8:G:51:ASP:HB3	2.20	0.41
1:L:61:MET:HE1	2:M:521:ILE:HB	2.01	0.41
1:L:376:GLN:NE2	1:L:378:LYS:H	2.18	0.41
2:M:205:LEU:HD13	2:M:205:LEU:HA	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:408:TYR:HE2	2:E:489:ALA:HA	1.85	0.41
3:N:248:LEU:HA	3:N:299:LEU:HB2	2.03	0.41
3:N:443:LEU:O	3:N:448:SER:HB3	2.20	0.41
4:P:412:GLY:O	4:P:415:GLU:HB2	2.20	0.41
5:K:200:VAL:CG1	5:K:375:ARG:HD2	2.50	0.41
5:C:75:ALA:O	5:C:78:THR:OG1	2.22	0.41
5:C:152:ARG:HA	5:C:155:LEU:HD12	2.02	0.41
5:C:450:CYS:HB2	5:C:457:ALA:HB2	2.03	0.41
6:J:23:SER:HA	6:J:523:GLN:CB	2.50	0.41
6:J:24:GLY:O	6:J:25:LEU:HB3	2.19	0.41
6:B:54:LYS:HG3	6:B:55:MET:N	2.36	0.41
6:B:127:GLU:HA	6:B:130:GLU:OE1	2.21	0.41
6:B:330:ALA:HB1	6:B:343:GLU:O	2.20	0.41
6:B:410:PRO:HA	6:B:498:LEU:HD13	2.03	0.41
6:B:515:ALA:O	6:B:519:LEU:HD23	2.21	0.41
7:I:138:LYS:HD3	7:I:498:TYR:CE1	2.56	0.41
7:I:391:VAL:O	7:I:395:LEU:HD23	2.21	0.41
7:I:446:ILE:O	7:I:450:VAL:HG22	2.21	0.41
7:I:478:GLY:O	7:I:487:MET:N	2.52	0.41
8:G:86:VAL:HG21	8:G:509:VAL:HA	2.02	0.41
1:L:73:ASP:O	1:L:77:ILE:HG12	2.21	0.41
1:L:138:GLU:O	1:L:142:ARG:HG3	2.20	0.41
1:L:160:LYS:HB3	1:L:160:LYS:HE3	1.79	0.41
1:L:184:GLN:O	1:L:188:ILE:HG13	2.20	0.41
1:L:206:PHE:N	1:L:206:PHE:CD2	2.89	0.41
1:L:366:THR:HG21	2:M:94:GLU:O	2.21	0.41
1:L:451:PHE:HZ	1:L:517:ILE:HD11	1.86	0.41
1:D:295:THR:HG21	1:D:348:LEU:HG	2.03	0.41
1:D:531:ASP:HB2	5:C:45:MET:HE2	2.03	0.41
2:M:19:GLU:HB2	2:M:520:ILE:HG12	2.03	0.41
2:M:38:LEU:O	2:M:38:LEU:HD12	2.21	0.41
2:M:117:ILE:HD13	2:M:117:ILE:HA	1.84	0.41
2:M:162:ILE:HD12	2:M:495:GLU:HA	2.03	0.41
2:M:261:THR:HA	2:M:264:VAL:HG12	2.03	0.41
2:M:281:ARG:NH2	2:M:336:ASP:OD1	2.53	0.41
2:E:255:ARG:HD3	2:E:257:ARG:NH1	2.35	0.41
2:E:261:THR:HA	2:E:264:VAL:HG12	2.03	0.41
2:E:261:THR:O	2:E:264:VAL:HG12	2.21	0.41
2:E:272:LYS:HG3	3:F:347:HIS:HD2	1.85	0.41
3:N:163:LEU:HD23	3:N:415:LEU:HD23	2.03	0.41
3:N:250:GLN:HE21	3:N:333:ILE:HD11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:269:TYR:HA	8:O:266:ARG:HH12	1.86	0.41
3:F:163:LEU:HD23	3:F:415:LEU:HD23	2.03	0.41
4:H:20:ARG:HH12	4:H:113:LEU:C	2.21	0.41
4:H:330:ARG:NE	4:H:342:ASP:OD1	2.47	0.41
4:H:359:TYR:O	4:H:360:PHE:CD1	2.74	0.41
4:P:27:ILE:HA	4:P:27:ILE:HD13	1.83	0.41
4:P:53:PRO:HG3	7:I:525:GLY:HA3	2.02	0.41
4:P:114:GLU:C	4:P:116:GLN:H	2.24	0.41
4:P:338:LEU:HD12	4:P:338:LEU:HA	1.80	0.41
4:P:497:GLU:OE2	4:P:497:GLU:N	2.54	0.41
5:K:240:LEU:HD11	5:K:281:ILE:HD11	2.03	0.41
5:K:445:ILE:HD13	5:K:445:ILE:HA	1.91	0.41
5:K:450:CYS:HB2	5:K:457:ALA:HB2	2.03	0.41
5:C:223:ALA:HB3	5:C:301:GLN:NE2	2.35	0.41
5:C:494:GLU:HG3	5:C:495:PRO:HD2	2.02	0.41
6:J:95:GLN:HE22	7:I:355:LEU:HD11	1.86	0.41
6:J:101:THR:H	6:J:101:THR:HG23	1.66	0.41
6:J:416:GLU:OE1	6:J:504:LYS:NZ	2.46	0.41
6:B:11:PHE:HB2	6:B:14:MET:SD	2.60	0.41
7:I:319:ARG:O	7:I:323:ARG:HG3	2.21	0.41
7:I:520:GLU:OE1	7:I:520:GLU:N	2.53	0.41
7:A:61:ASN:ND2	7:A:85:ASP:OD1	2.48	0.41
7:A:102:LEU:HD22	7:A:512:ALA:HB1	2.02	0.41
7:A:204:THR:HA	7:A:377:LYS:HG3	2.03	0.41
7:A:319:ARG:O	7:A:323:ARG:HG3	2.21	0.41
8:O:233:LYS:HA	8:O:233:LYS:HD3	1.87	0.41
8:G:139:ASN:HD21	8:G:406:LYS:HE2	1.86	0.41
1:L:257:PRO:HA	1:L:258:PRO:HD3	1.97	0.41
1:D:130:PRO:HA	1:D:133:ILE:HD12	2.03	0.41
1:D:245:ASP:OD2	1:D:247:LYS:HG2	2.21	0.41
2:M:59:ALA:O	3:N:89:ARG:NH2	2.54	0.41
3:N:318:ASN:O	3:N:321:LYS:HD2	2.21	0.41
3:F:113:ALA:O	3:F:117:LEU:HD23	2.20	0.41
4:H:220:ILE:HD13	4:H:220:ILE:HA	1.87	0.41
4:P:223:ASP:OD1	4:P:224:VAL:N	2.51	0.41
5:K:223:ALA:HB3	5:K:301:GLN:NE2	2.35	0.41
5:C:504:THR:O	5:C:507:SER:OG	2.29	0.41
6:J:20:LYS:HB2	6:J:526:MET:HB3	2.02	0.41
6:J:73:LEU:HB3	6:J:87:VAL:HG13	2.03	0.41
7:I:277:LEU:HD22	7:I:339:LEU:HD11	2.02	0.41
7:A:138:LYS:HD3	7:A:498:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:A:473:SER:OG	7:A:475:GLN:OE1	2.35	0.41
1:L:248:ILE:HD12	1:L:299:LEU:HD22	2.03	0.40
1:L:250:ILE:C	1:L:251:LEU:HD12	2.41	0.40
1:D:159:ILE:HG22	1:D:160:LYS:N	2.36	0.40
1:D:255:PHE:HB2	1:D:306:PHE:HD1	1.86	0.40
1:D:299:LEU:HG	1:D:320:PRO:O	2.21	0.40
1:D:323:ARG:HG2	1:D:324:TRP:CD1	2.55	0.40
1:D:327:GLY:O	1:D:330:ILE:HB	2.21	0.40
2:M:438:SER:OG	2:M:439:TYR:N	2.54	0.40
2:E:178:HIS:O	2:E:182:LEU:HD23	2.20	0.40
2:E:288:ASN:C	2:E:309:VAL:HG13	2.42	0.40
2:E:305:GLY:HA3	3:F:343:LYS:NZ	2.36	0.40
3:N:213:LYS:HD2	3:N:213:LYS:HA	1.69	0.40
4:H:266:ARG:HA	4:H:269:GLN:OE1	2.20	0.40
4:P:266:ARG:HA	4:P:269:GLN:OE1	2.20	0.40
4:P:359:TYR:O	4:P:360:PHE:CD1	2.74	0.40
4:P:407:LEU:HD23	4:P:496:TRP:HB3	2.03	0.40
5:K:157:LYS:O	5:K:160:MET:HB2	2.21	0.40
5:K:297:ASP:O	5:K:301:GLN:NE2	2.28	0.40
5:K:298:VAL:HA	5:K:301:GLN:HG2	2.03	0.40
5:C:42:PRO:HA	5:C:164:SER:O	2.21	0.40
5:C:126:ARG:NH2	6:B:174:GLY:HA3	2.35	0.40
5:C:195:ILE:HG13	5:C:195:ILE:O	2.20	0.40
6:J:54:LYS:HG3	6:J:55:MET:N	2.36	0.40
6:J:297:VAL:HG23	6:J:314:ARG:NH2	2.35	0.40
6:B:352:LEU:HD21	6:B:359:GLN:HE22	1.85	0.40
7:I:446:ILE:HD13	7:I:446:ILE:HA	1.82	0.40
7:A:177:LEU:HD23	7:A:180:LYS:HZ1	1.87	0.40
8:O:139:ASN:HD21	8:O:406:LYS:HE2	1.86	0.40
8:O:225:MET:CE	8:O:307:ALA:H	2.30	0.40
8:O:480:ARG:HD3	8:O:483:LEU:HB2	2.02	0.40
8:O:489:ASP:CG	8:O:496:ARG:HE	2.22	0.40
8:O:510:LYS:HD3	8:O:510:LYS:HA	1.70	0.40
8:G:452:LEU:HD23	8:G:452:LEU:HA	1.80	0.40
8:G:489:ASP:CG	8:G:496:ARG:HE	2.22	0.40
1:D:21:ASP:O	1:D:25:LYS:HG2	2.21	0.40
2:M:59:ALA:HB3	3:N:89:ARG:CZ	2.52	0.40
2:M:113:ALA:HB2	2:M:130:TRP:CH2	2.56	0.40
2:M:290:PHE:O	2:M:311:ALA:HA	2.21	0.40
2:M:299:TYR:CZ	2:M:303:LEU:HD11	2.57	0.40
2:E:113:ALA:HB2	2:E:130:TRP:CH2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:78:LEU:O	3:F:81:MET:HB2	2.22	0.40
3:F:248:LEU:HA	3:F:299:LEU:HB2	2.03	0.40
3:F:523:THR:O	3:F:526:VAL:HG22	2.21	0.40
3:F:529:ILE:HD13	3:F:532:ILE:HD12	2.04	0.40
4:H:407:LEU:HD23	4:H:496:TRP:HB3	2.03	0.40
4:P:21:LYS:HD2	4:P:21:LYS:HA	1.96	0.40
4:P:293:GLU:OE2	4:P:317:LYS:HG3	2.22	0.40
4:P:330:ARG:NE	4:P:342:ASP:OD1	2.47	0.40
4:P:383:ILE:HD12	4:P:383:ILE:H	1.87	0.40
5:C:475:TYR:HE1	5:C:486:ASP:HB2	1.87	0.40
6:J:6:PRO:C	6:J:7:LYS:HG2	2.42	0.40
6:J:11:PHE:HB2	6:J:14:MET:SD	2.60	0.40
6:J:352:LEU:HD21	6:J:359:GLN:HE22	1.85	0.40
6:B:6:PRO:O	6:B:7:LYS:HG2	2.21	0.40
6:B:157:ILE:HG22	6:B:188:VAL:HG11	2.02	0.40
6:B:347:CYS:SG	6:B:348:ASP:N	2.94	0.40
6:B:521:VAL:HG11	7:A:46:MET:SD	2.62	0.40
7:I:56:LEU:O	7:I:386:GLN:HG3	2.20	0.40
7:I:177:LEU:HD23	7:I:177:LEU:HA	1.87	0.40
7:A:164:LEU:HD21	7:A:387:ILE:HD12	2.03	0.40
8:O:480:ARG:C	8:O:483:LEU:H	2.24	0.40
8:G:148:LEU:HD23	8:G:148:LEU:HA	1.85	0.40
8:G:480:ARG:HD3	8:G:483:LEU:HB2	2.02	0.40
1:L:364:PHE:CG	1:L:365:GLY:N	2.90	0.40
1:D:94:LEU:HD22	1:D:110:VAL:HG12	2.04	0.40
1:D:364:PHE:CG	1:D:365:GLY:N	2.90	0.40
2:M:419:HIS:CE1	2:M:470:SER:HA	2.57	0.40
2:E:19:GLU:HB2	2:E:520:ILE:HG12	2.04	0.40
2:E:172:LEU:HD23	2:E:179:PHE:CZ	2.55	0.40
2:E:379:THR:HA	3:F:93:GLU:CD	2.41	0.40
3:F:88:ALA:O	3:F:92:VAL:HG23	2.21	0.40
4:H:141:SER:OG	4:H:142:ILE:N	2.53	0.40
4:P:37:ILE:HG13	4:P:67:LEU:HD21	2.03	0.40
4:P:251:GLU:OE2	4:P:252:SER:HB3	2.21	0.40
4:P:399:ARG:NH2	8:O:355:ARG:NH2	2.68	0.40
5:K:196:GLY:O	5:K:197:ILE:HD13	2.20	0.40
5:K:475:TYR:HE1	5:K:486:ASP:HB2	1.87	0.40
6:J:67:ASN:OD1	6:J:171:LYS:HA	2.21	0.40
6:B:168:ILE:HG21	6:B:179:LEU:HB2	2.03	0.40
6:B:224:LYS:HB2	6:B:224:LYS:HE2	1.79	0.40
6:B:481:ASP:OD2	6:B:490:LYS:HE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:O:477:ASN:C	8:O:480:ARG:HE	2.25	0.40
8:O:502:GLY:HA2	8:O:504:PHE:CE2	2.56	0.40
1:L:299:LEU:HG	1:L:320:PRO:O	2.21	0.40
1:L:420:TYR:CD1	1:L:507:ILE:HG22	2.57	0.40
1:L:529:LYS:HA	1:L:529:LYS:HD2	1.85	0.40
1:D:73:ASP:O	1:D:77:ILE:HG12	2.21	0.40
1:D:214:LYS:HA	1:D:214:LYS:HD2	1.81	0.40
1:D:270:SER:OG	1:D:271:VAL:N	2.53	0.40
1:D:288:MET:SD	1:D:289:ILE:HG12	2.62	0.40
1:D:420:TYR:CD1	1:D:507:ILE:HG22	2.57	0.40
1:D:523:MET:CE	5:C:381:PHE:CE2	3.03	0.40
1:D:527:ILE:HD13	1:D:527:ILE:HA	1.87	0.40
2:M:259:ASP:HB2	2:M:263:LYS:HZ1	1.86	0.40
2:E:38:LEU:HD12	2:E:38:LEU:O	2.21	0.40
2:E:141:LEU:HG	2:E:497:PHE:HE1	1.86	0.40
2:E:213:TYR:CZ	2:E:374:VAL:HG21	2.57	0.40
2:E:290:PHE:O	2:E:311:ALA:HA	2.21	0.40
2:E:299:TYR:CZ	2:E:303:LEU:HD11	2.57	0.40
3:N:58:ASP:OD1	8:O:526:ARG:NE	2.50	0.40
3:N:123:LEU:CA	3:N:126:LYS:HB3	2.40	0.40
3:F:171:LEU:O	3:F:173:SER:N	2.50	0.40
3:F:318:ASN:O	3:F:321:LYS:HD2	2.21	0.40
4:H:46:MET:HE3	7:A:517:LEU:O	2.22	0.40
4:H:236:PRO:HD2	4:H:347:ALA:O	2.22	0.40
4:P:15:LYS:HG2	4:P:16:ARG:N	2.35	0.40
4:P:86:THR:HG21	8:O:380:ALA:O	2.21	0.40
5:C:10:LYS:HD3	5:C:10:LYS:HA	1.64	0.40
5:C:467:ARG:CZ	5:C:471:GLY:HA3	2.51	0.40
7:I:144:ASP:HB3	7:I:147:THR:OG1	2.22	0.40
7:I:204:THR:HA	7:I:377:LYS:HG3	2.03	0.40
7:A:482:ASN:OD1	7:A:483:THR:HG23	2.22	0.40
8:O:214:TYR:HA	8:O:374:SER:OG	2.22	0.40
8:O:426:TYR:O	8:O:429:SER:OG	2.21	0.40
8:O:477:ASN:O	8:O:479:GLU:N	2.54	0.40
8:G:100:LEU:HD13	8:G:444:SER:OG	2.22	0.40
8:G:233:LYS:HA	8:G:233:LYS:HD3	1.87	0.40
8:G:275:ILE:HD12	8:G:300:PHE:HE2	1.87	0.40
8:G:321:LYS:HD3	8:G:321:LYS:HA	1.85	0.40
1:L:94:LEU:HD22	1:L:110:VAL:HG12	2.03	0.40
1:L:288:MET:SD	1:L:289:ILE:HG12	2.62	0.40
1:L:463:SER:HB2	1:L:470:PRO:HA	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:451:PHE:HZ	1:D:517:ILE:HD11	1.86	0.40
2:M:288:ASN:C	2:M:309:VAL:HG13	2.42	0.40
2:M:305:GLY:HA3	3:N:343:LYS:NZ	2.37	0.40
2:E:275:MET:O	2:E:279:VAL:HG23	2.22	0.40
2:E:323:LEU:HA	2:E:326:VAL:HG12	2.03	0.40
3:N:392:GLY:O	3:N:398:ILE:HD11	2.22	0.40
3:N:523:THR:O	3:N:526:VAL:HG22	2.21	0.40
3:N:529:ILE:HD13	3:N:532:ILE:HD12	2.04	0.40
3:F:71:THR:HA	3:F:400:GLU:CD	2.41	0.40
3:F:266:VAL:HG12	8:G:252:VAL:HG13	2.04	0.40
4:H:183:VAL:O	4:H:184:GLN:HG3	2.22	0.40
4:H:375:LEU:HD12	4:H:375:LEU:HA	1.85	0.40
4:H:383:ILE:HD12	4:H:383:ILE:H	1.87	0.40
4:P:226:HIS:ND1	4:P:227:PRO:HD2	2.37	0.40
4:P:507:LYS:HZ2	8:O:203:ARG:HB3	1.86	0.40
5:K:42:PRO:HA	5:K:164:SER:O	2.21	0.40
5:K:374:LEU:HA	5:K:374:LEU:HD12	1.85	0.40
6:J:525:ILE:HD12	7:I:47:LEU:HD12	2.04	0.40
6:B:406:LYS:HG3	6:B:407:ARG:H	1.86	0.40
7:I:58:LYS:HE3	7:I:58:LYS:HB2	1.72	0.40
7:I:77:ILE:HA	7:I:80:VAL:HG12	2.03	0.40
7:I:378:GLY:HA3	7:I:384:LEU:CD2	2.51	0.40
7:A:278:LYS:HE3	7:A:310:ILE:CD1	2.51	0.40
8:O:243:LYS:H	8:O:243:LYS:HG2	1.66	0.40
8:G:286:ILE:O	8:G:287:LEU:HD23	2.22	0.40
8:G:294:ASP:HA	8:G:297:LEU:HD12	2.04	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	D	525/541 (97%)	484 (92%)	38 (7%)	3 (1%)	25	65
1	L	525/541 (97%)	484 (92%)	38 (7%)	3 (1%)	25	65
2	E	516/535 (96%)	477 (92%)	39 (8%)	0	100	100
2	M	516/535 (96%)	477 (92%)	39 (8%)	0	100	100
3	F	516/539 (96%)	473 (92%)	42 (8%)	1 (0%)	47	81
3	N	516/539 (96%)	473 (92%)	42 (8%)	1 (0%)	47	81
4	H	519/545 (95%)	481 (93%)	37 (7%)	1 (0%)	47	81
4	P	519/545 (95%)	481 (93%)	37 (7%)	1 (0%)	47	81
5	C	520/543 (96%)	490 (94%)	30 (6%)	0	100	100
5	K	520/543 (96%)	490 (94%)	30 (6%)	0	100	100
6	B	522/548 (95%)	478 (92%)	44 (8%)	0	100	100
6	J	522/548 (95%)	478 (92%)	44 (8%)	0	100	100
7	A	523/531 (98%)	484 (92%)	39 (8%)	0	100	100
7	I	523/531 (98%)	484 (92%)	39 (8%)	0	100	100
8	G	530/556 (95%)	484 (91%)	44 (8%)	2 (0%)	34	72
8	O	530/556 (95%)	484 (91%)	44 (8%)	2 (0%)	34	72
All	All	8342/8676 (96%)	7702 (92%)	626 (8%)	14 (0%)	50	81

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	L	441	PRO
1	L	442	THR
1	L	443	LEU
1	D	441	PRO
1	D	442	THR
1	D	443	LEU
8	O	184	ILE
8	G	184	ILE
3	N	489	LYS
3	F	489	LYS
4	H	13	ASN
4	P	13	ASN
8	O	358	ASP
8	G	358	ASP

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	D	445/456 (98%)	444 (100%)	1 (0%)	93	96
1	L	445/456 (98%)	444 (100%)	1 (0%)	93	96
2	E	412/427 (96%)	412 (100%)	0	100	100
2	M	412/427 (96%)	412 (100%)	0	100	100
3	F	441/452 (98%)	441 (100%)	0	100	100
3	N	441/452 (98%)	441 (100%)	0	100	100
4	H	452/469 (96%)	451 (100%)	1 (0%)	93	96
4	P	452/469 (96%)	451 (100%)	1 (0%)	93	96
5	C	429/443 (97%)	428 (100%)	1 (0%)	93	96
5	K	429/443 (97%)	428 (100%)	1 (0%)	93	96
6	B	433/452 (96%)	432 (100%)	1 (0%)	93	96
6	J	433/452 (96%)	432 (100%)	1 (0%)	93	96
7	A	438/442 (99%)	438 (100%)	0	100	100
7	I	438/442 (99%)	438 (100%)	0	100	100
8	G	444/463 (96%)	443 (100%)	1 (0%)	93	96
8	O	444/463 (96%)	443 (100%)	1 (0%)	93	96
All	All	6988/7208 (97%)	6978 (100%)	10 (0%)	93	96

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	L	218	ARG
1	D	218	ARG
4	H	61	ASN
4	P	61	ASN
5	K	230	LYS
5	C	230	LYS
6	J	52	MET
6	B	52	MET

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Mol	Chain	Res	Type
8	O	247	LYS
8	G	247	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (34) such sidechains are listed below:

Mol	Chain	Res	Type
1	L	85	HIS
1	L	316	GLN
1	D	316	GLN
2	M	65	ASN
2	E	65	ASN
3	N	262	ASN
3	N	301	GLN
3	F	262	ASN
4	H	116	GLN
4	H	301	GLN
4	H	390	ASN
4	P	116	GLN
4	P	301	GLN
4	P	390	ASN
5	K	21	GLN
5	C	21	GLN
6	J	50	ASN
6	J	359	GLN
6	B	50	ASN
6	B	79	GLN
6	B	359	GLN
7	I	218	HIS
7	I	386	GLN
7	I	503	GLN
7	A	71	HIS
7	A	218	HIS
7	A	386	GLN
7	A	503	GLN
8	O	20	GLN
8	O	21	ASN
8	O	455	ASN
8	G	20	GLN
8	G	21	ASN
8	G	455	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

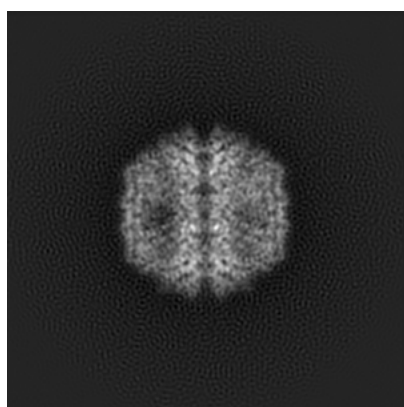
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-23522. These allow visual inspection of the internal detail of the map and identification of artifacts.

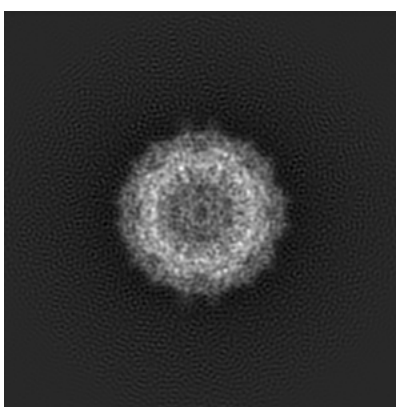
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

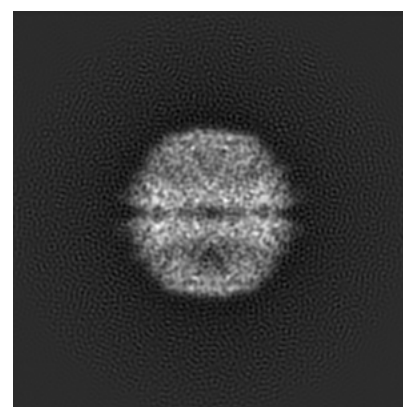
6.1.1 Primary map



X



Y

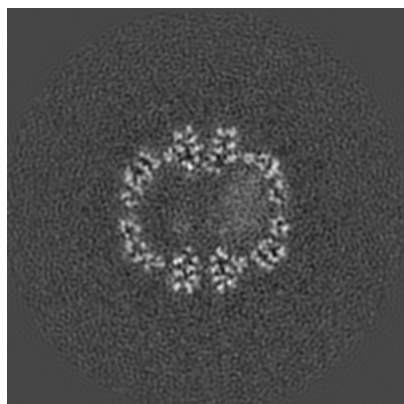


Z

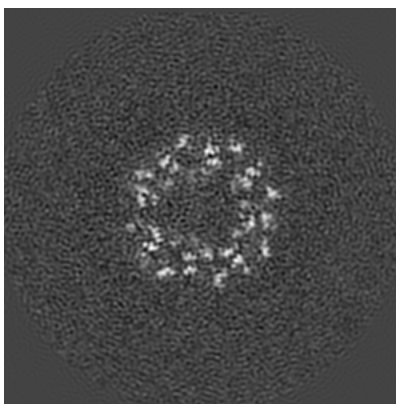
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

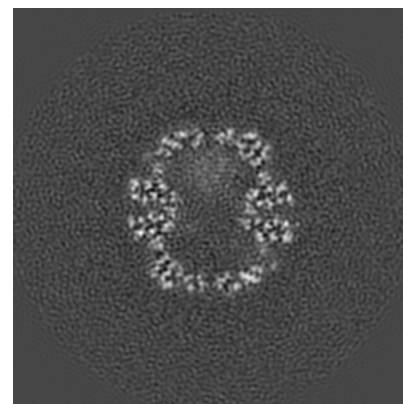
6.2.1 Primary map



X Index: 140



Y Index: 140

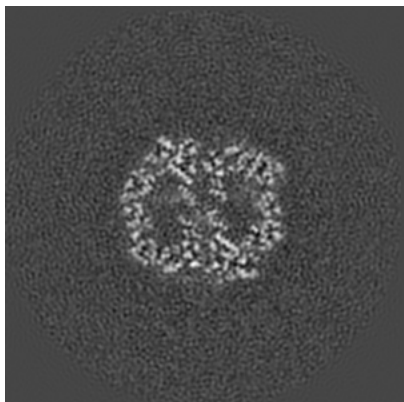


Z Index: 140

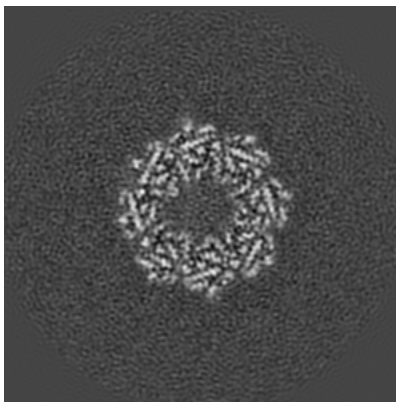
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

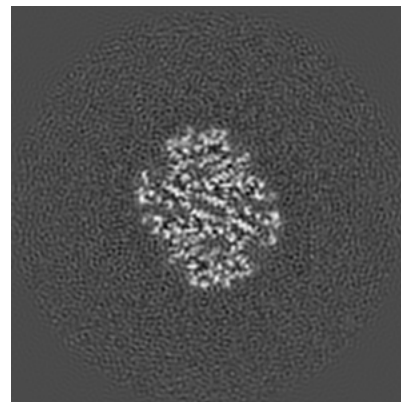
6.3.1 Primary map



X Index: 160



Y Index: 146

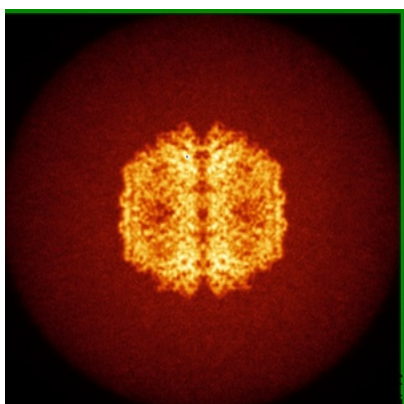


Z Index: 105

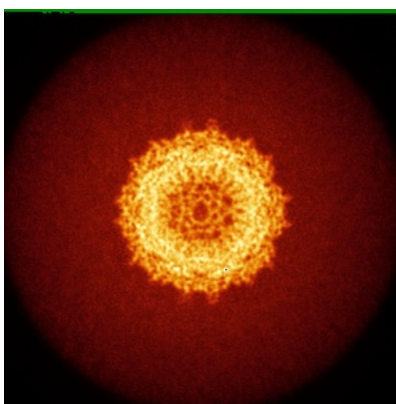
The images above show the largest variance slices of the map in three orthogonal directions.

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

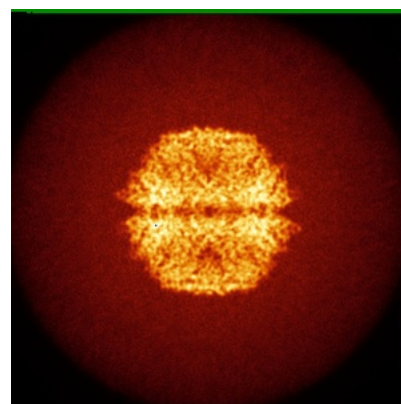
6.4.1 Primary map



X



Y

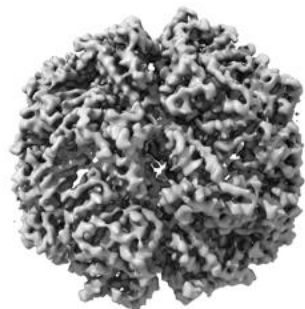


Z

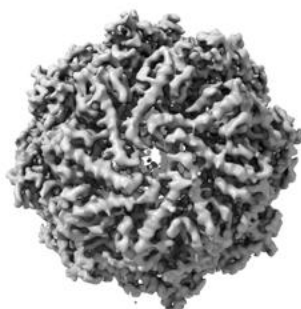
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

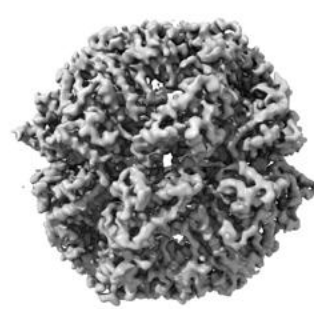
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.017. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

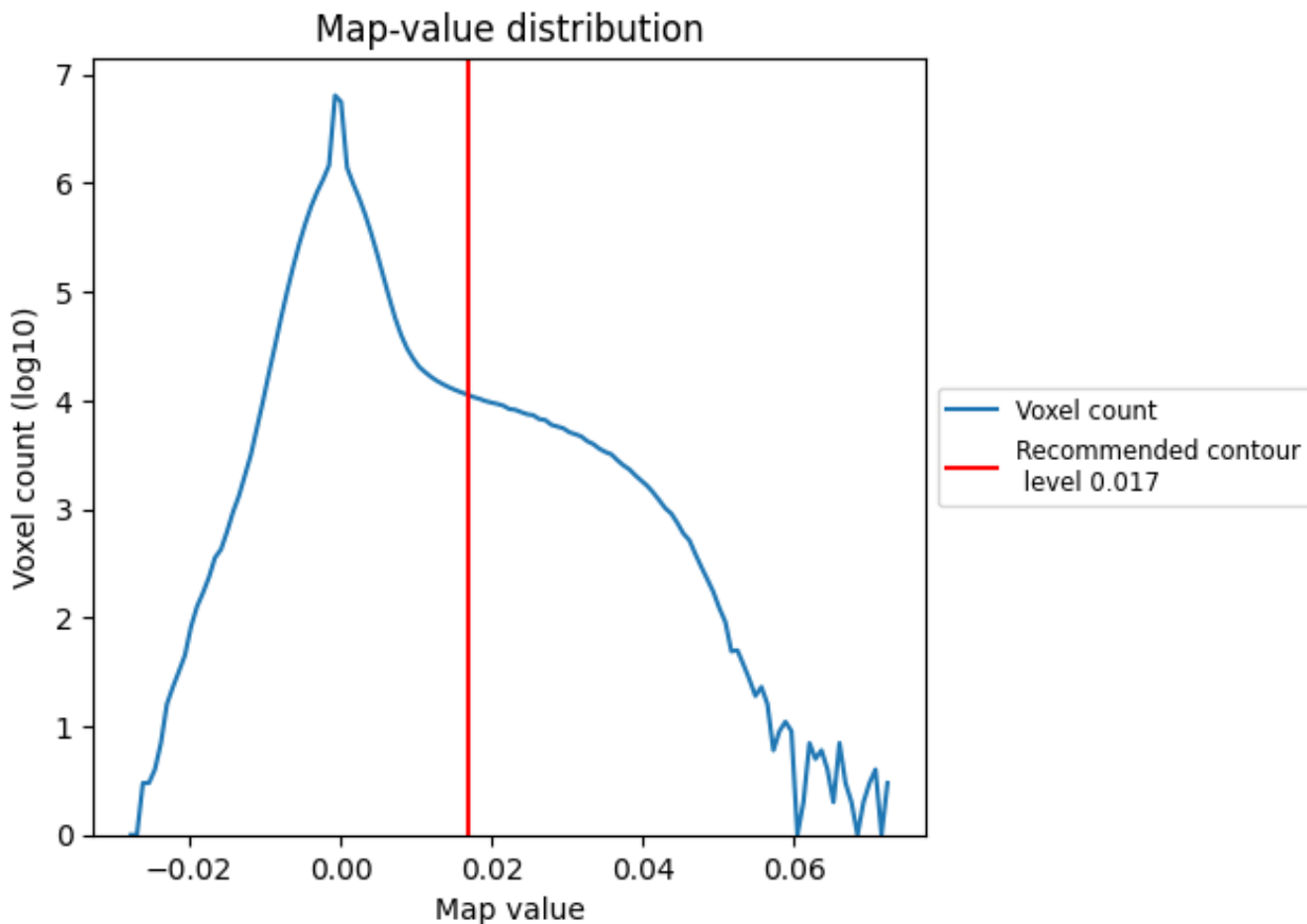
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

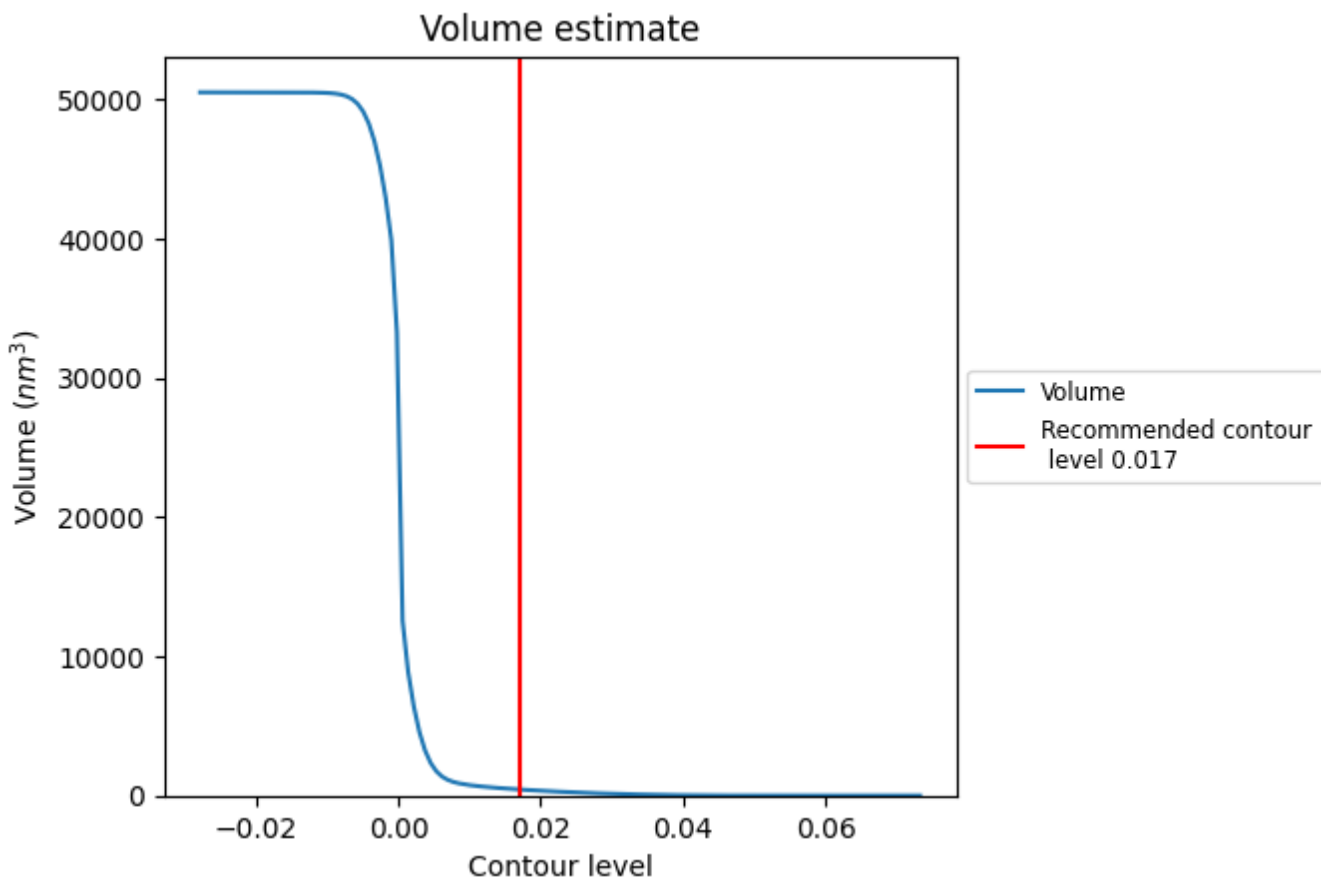
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

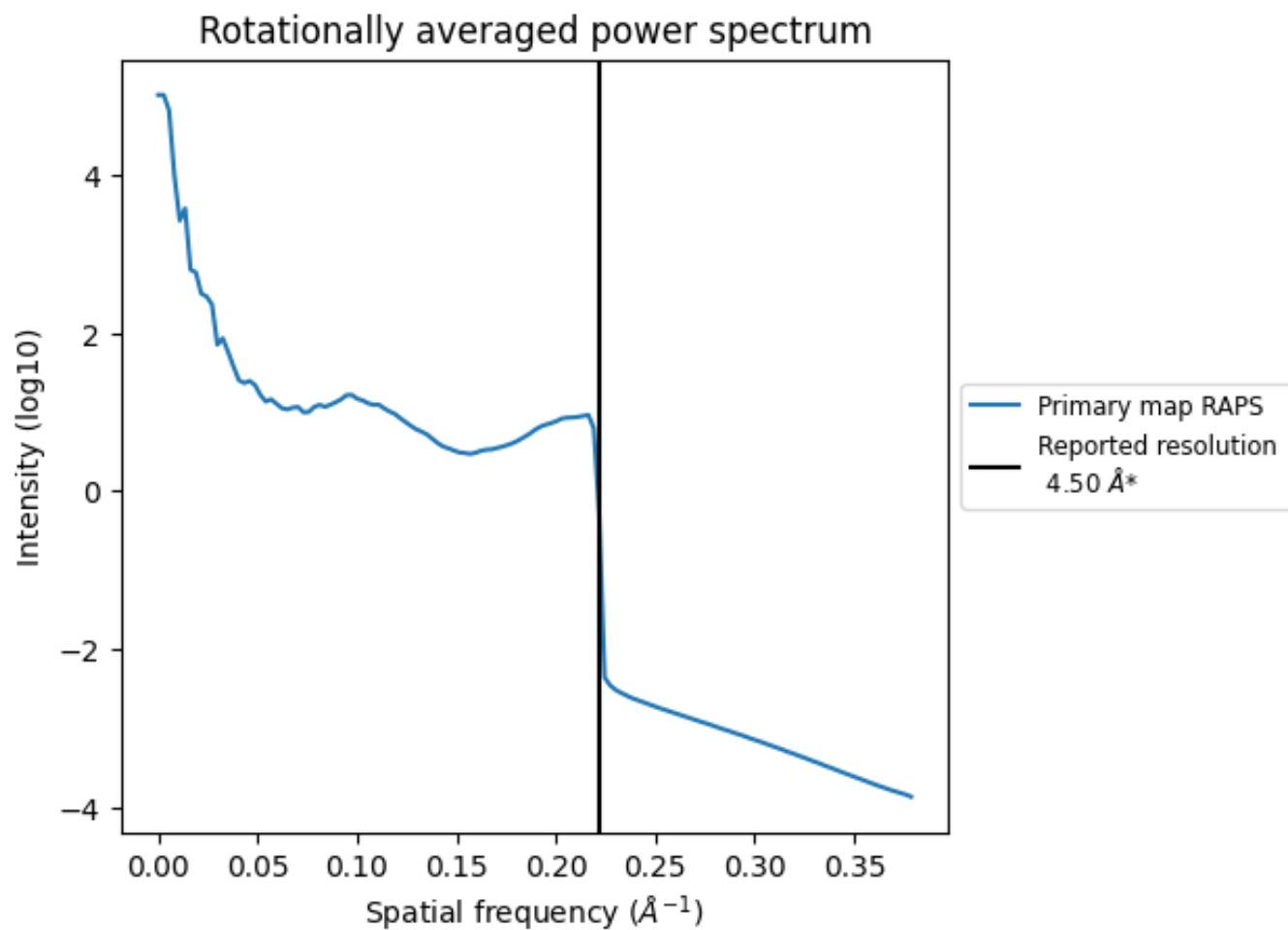
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 438 nm³; this corresponds to an approximate mass of 396 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 0.222 Å⁻¹

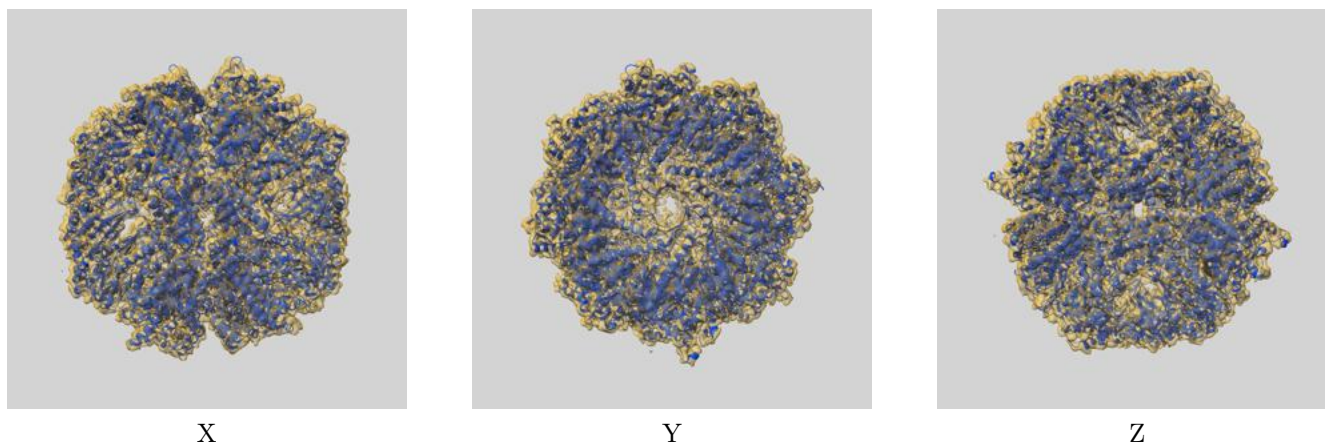
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

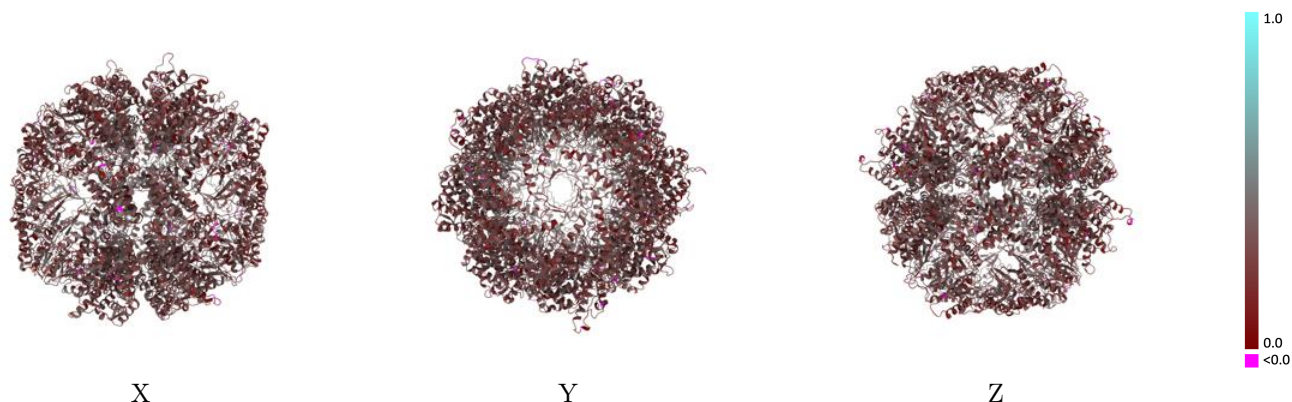
This section contains information regarding the fit between EMDB map EMD-23522 and PDB model 7LUM. Per-residue inclusion information can be found in section [3](#) on page [6](#).

9.1 Map-model overlay [i](#)



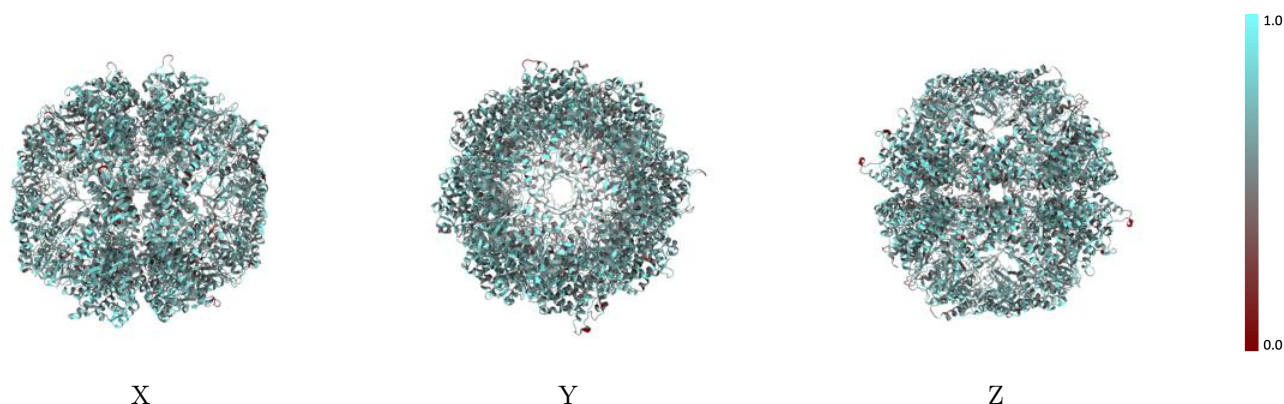
The images above show the 3D surface view of the map at the recommended contour level 0.017 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



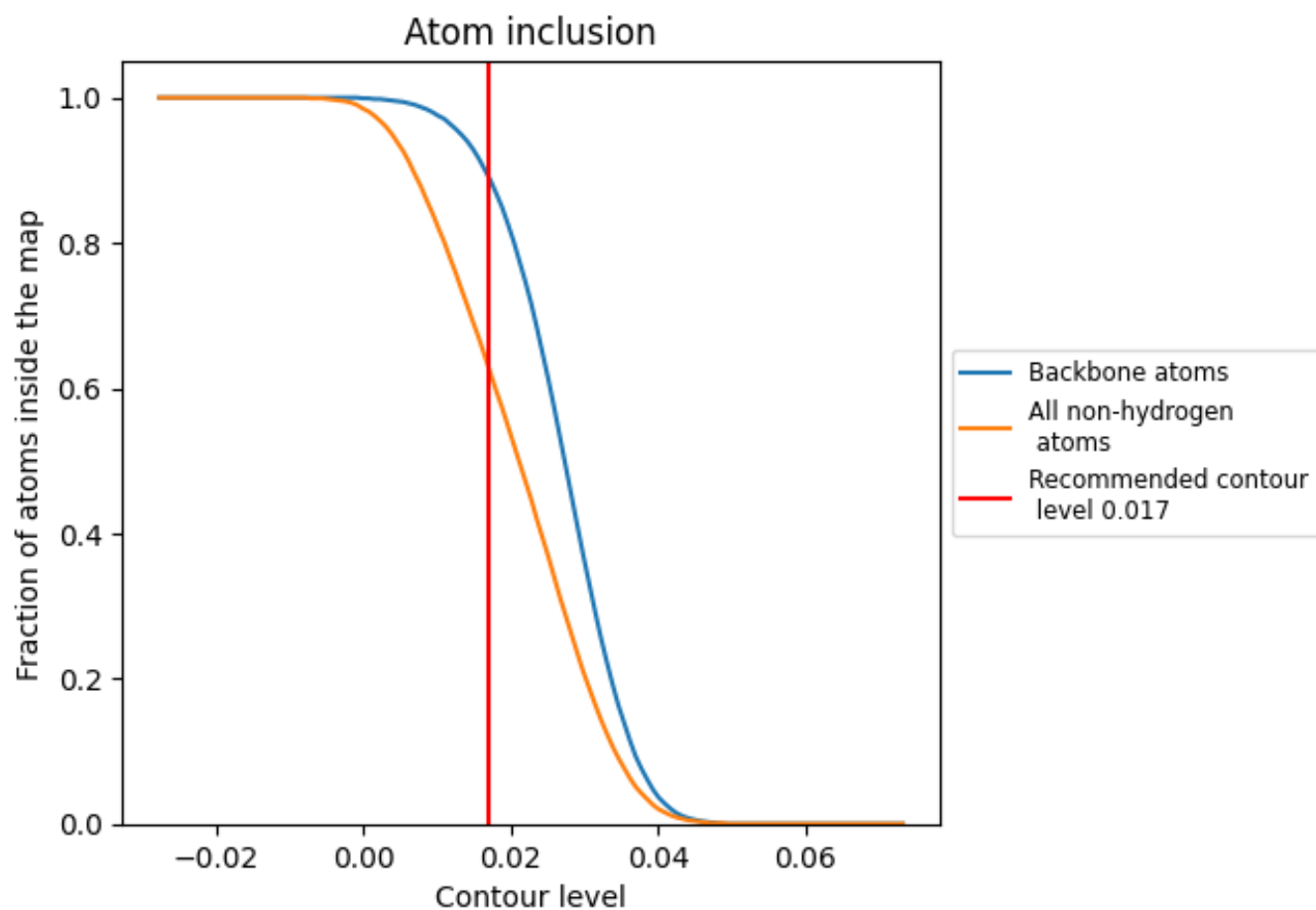
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.017).



































9.4 Atom inclusion [i](#)



At the recommended contour level, 89% of all backbone atoms, 63% 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 (0.017) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6270	 0.2910
A	 0.6130	 0.2740
B	 0.6180	 0.2730
C	 0.6180	 0.2920
D	 0.6270	 0.3010
E	 0.6370	 0.2910
F	 0.6290	 0.2950
G	 0.6240	 0.2920
H	 0.6270	 0.2910
I	 0.6170	 0.2860
J	 0.6420	 0.3020
K	 0.6280	 0.2940
L	 0.6260	 0.2880
M	 0.6480	 0.3130
N	 0.6330	 0.2990
O	 0.6160	 0.2830
P	 0.6260	 0.2870

