Full wwPDB EM Validation Report ⓘ

Jun 25, 2025 – 01:56 pm BST

PDB ID	:	6FKI / pdb_00006fki
EMDB ID	:	EMD-4272
Title	:	Chloroplast F1Fo conformation 3
Authors	:	Hahn, A.; Vonck, J.; Mills, D.J.; Meier, T.; Kuehlbrandt, W.
Deposited on	:	2018-01-24
Resolution	:	4.30 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:

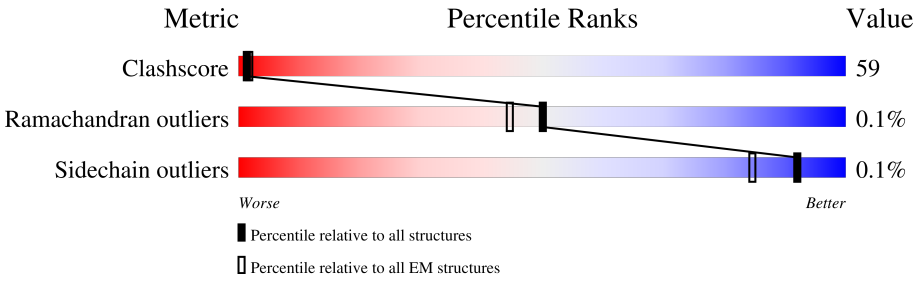
EMDB validation analysis	:	0.0.1.dev118
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.0rc1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

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 4.30 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	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	a	247	64% 38% 49% · 10%
2	b	184	51% 25% 61% •• 12%
3	d	257	16% 29% 39% · 30%
4	p	222	33% 16% 47% · 36%
5	e	134	28% 56% 42% ·
6	g	364	17% 47% 39% · 12%
7	G	81	65% 51% 47% ·
7	H	81	63% 52% 46% ·

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Mol	Chain	Length	Quality of chain
7	I	81	56% 53% 44%
7	J	81	53% 48% 49%
7	K	81	57% 52% 46%
7	L	81	60% 52% 46%
7	M	81	63% 49% 48%
7	N	81	64% 48% 49%
7	O	81	58% 48% 49%
7	P	81	43% 52% 46%
7	Q	81	57% 56% 42%
7	R	81	74% 53% 44%
7	S	81	69% 49% 48%
7	T	81	69% 53% 44%
8	A	507	11% 54% 44%
8	C	507	7% 58% 40%
8	E	507	5% 63% 35%
9	B	498	61% 33%
9	D	498	61% 34%
9	F	498	5% 64% 30%

2 Entry composition (i)

There are 12 unique types of molecules in this entry. The entry contains 39231 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 ATP synthase subunit a, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	a	223	1741	1172	268	299	2	0	0

- Molecule 2 is a protein called ATP synthase subunit b, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	b	161	1299	812	236	246	5	0	0

- Molecule 3 is a protein called ATP synthase delta chain, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	d	179	1383	876	229	277	1	0	0

- Molecule 4 is a protein called ATP synthase subunit b', chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	p	143	1124	713	182	224	5	0	0

- Molecule 5 is a protein called ATP synthase epsilon chain, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	e	131	1010	622	190	195	3	0	0

- Molecule 6 is a protein called ATP synthase gamma chain, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	g	321	2497	1574	429	482	12	0	0

- Molecule 7 is a protein called ATP synthase subunit c, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	S	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	N	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	O	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	P	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	Q	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	R	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	M	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	T	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	G	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	H	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	L	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	K	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	J	79	Total	C	N	O	S	0	0
			544	355	90	98	1		
7	I	79	Total	C	N	O	S	0	0
			544	355	90	98	1		

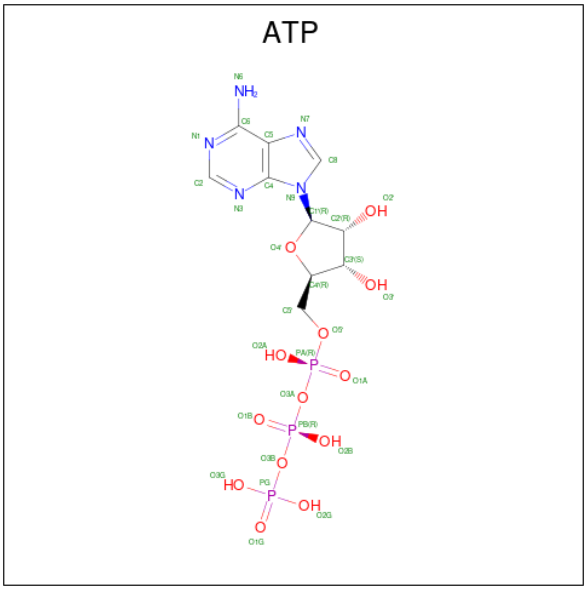
- Molecule 8 is a protein called ATP synthase subunit alpha, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	E	498	Total	C	N	O	S	0	0
			3827	2408	661	745	13		
8	A	501	Total	C	N	O	S	0	0
			3849	2422	666	748	13		
8	C	501	Total	C	N	O	S	0	0
			3851	2423	667	748	13		

- Molecule 9 is a protein called ATP synthase subunit beta, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	479	Total	C	N	O	S	0	0
			3627	2288	623	700	16		
9	B	478	Total	C	N	O	S	0	0
			3619	2282	622	699	16		
9	D	480	Total	C	N	O	S	0	0
			3636	2294	625	701	16		

- Molecule 10 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					AltConf
10	E	1	Total	C	N	O	P	0
			31	10	5	13	3	
10	A	1	Total	C	N	O	P	0
			31	10	5	13	3	
10	C	1	Total	C	N	O	P	0
			31	10	5	13	3	

- Molecule 11 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
11	E	1	Total	Mg	0
			1	1	
11	A	1	Total	Mg	0
			1	1	
11	B	1	Total	Mg	0
			1	1	
11	C	1	Total	Mg	0
			1	1	

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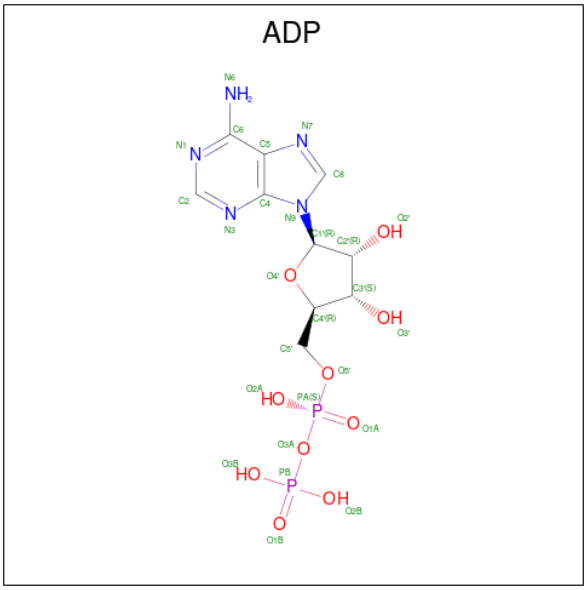
Mol	Chain	Residues	Atoms		AltConf
11	D	1	Total	Mg	0
			1	1	

- Molecule 12 is ADENOSINE-5'-DIPHOSPHATE (CCD ID: ADP) (formula: $C_{10}H_{15}N_5O_{10}P_2$).

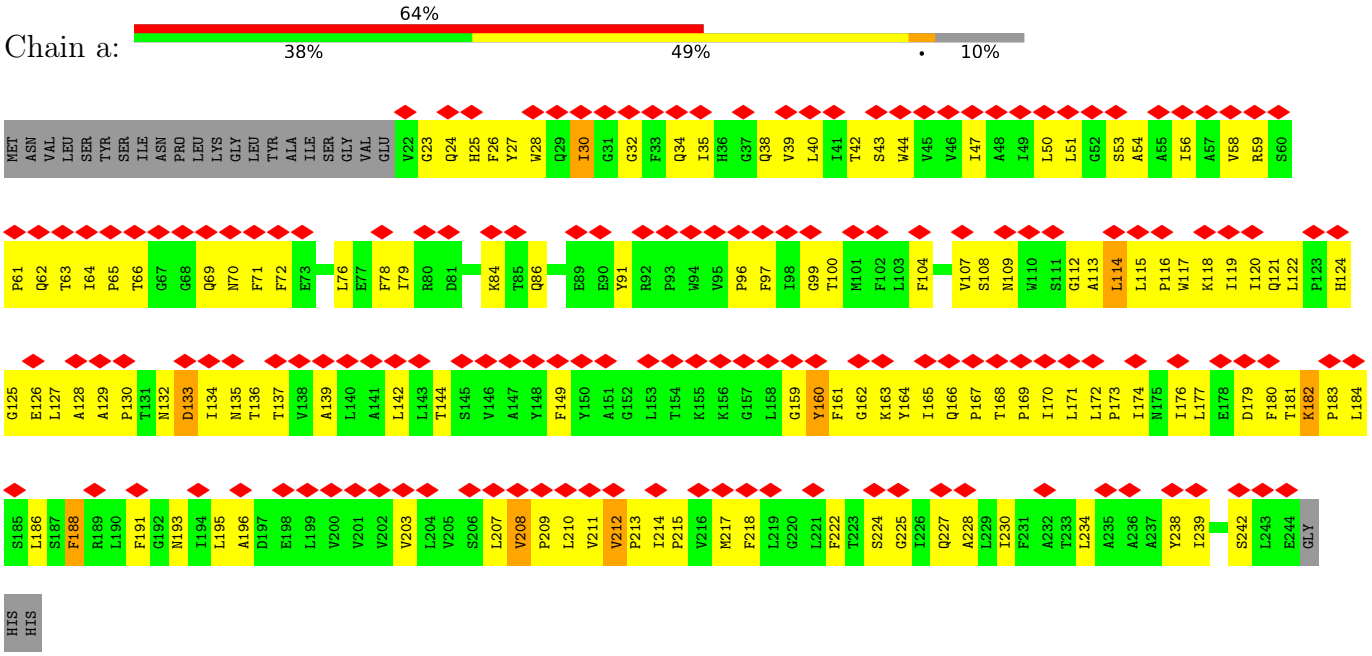


Mol	Chain	Residues	Atoms					AltConf
12	B	1	Total	C	N	O	P	0
			27	10	5	10	2	
12	D	1	Total	C	N	O	P	0
			27	10	5	10	2	

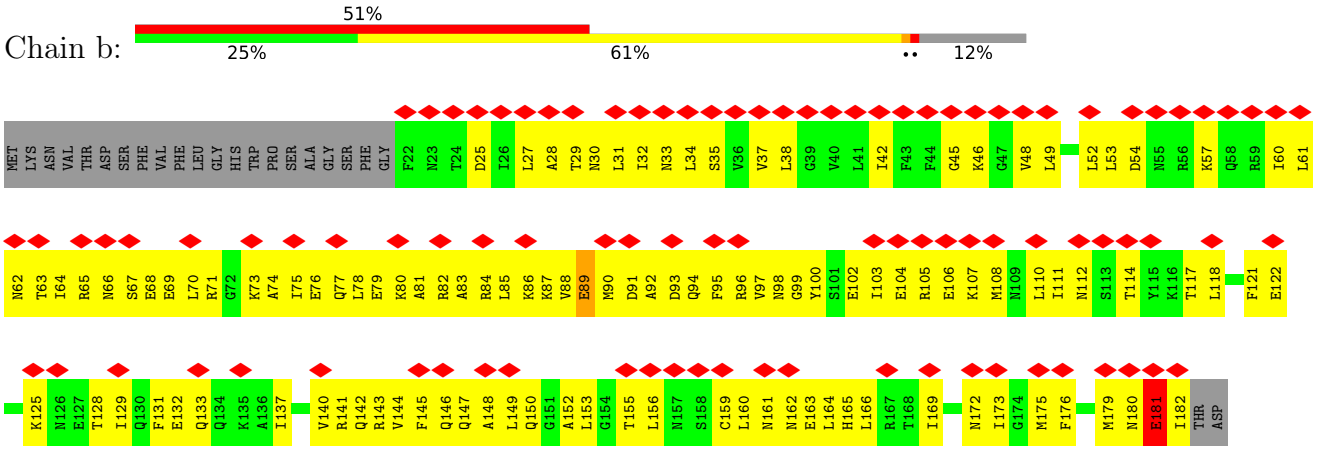
3 Residue-property plots (i)

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

• Molecule 1: ATP synthase subunit a, chloroplastic

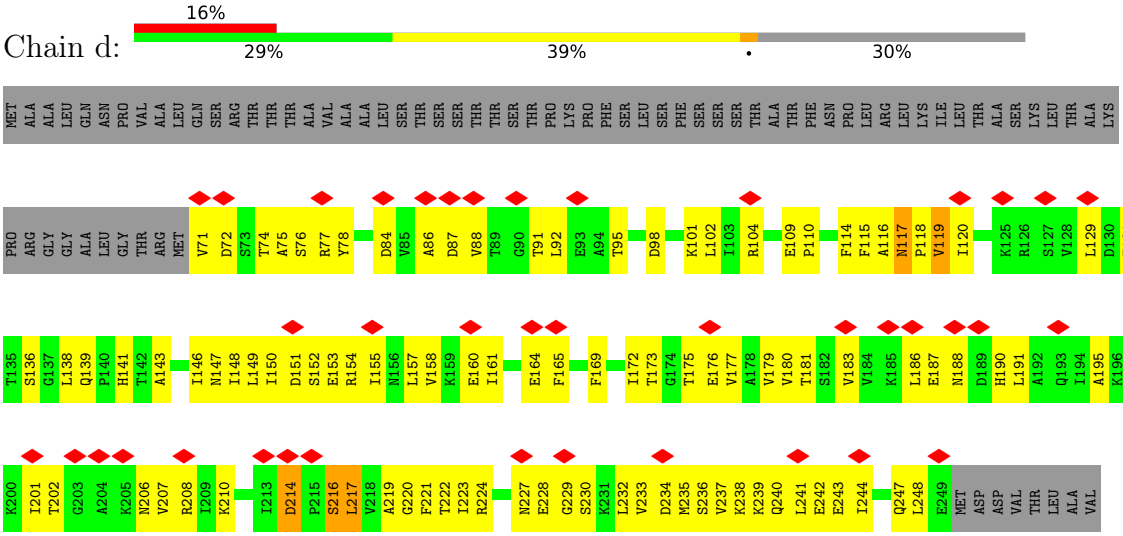


• Molecule 2: ATP synthase subunit b, chloroplastic



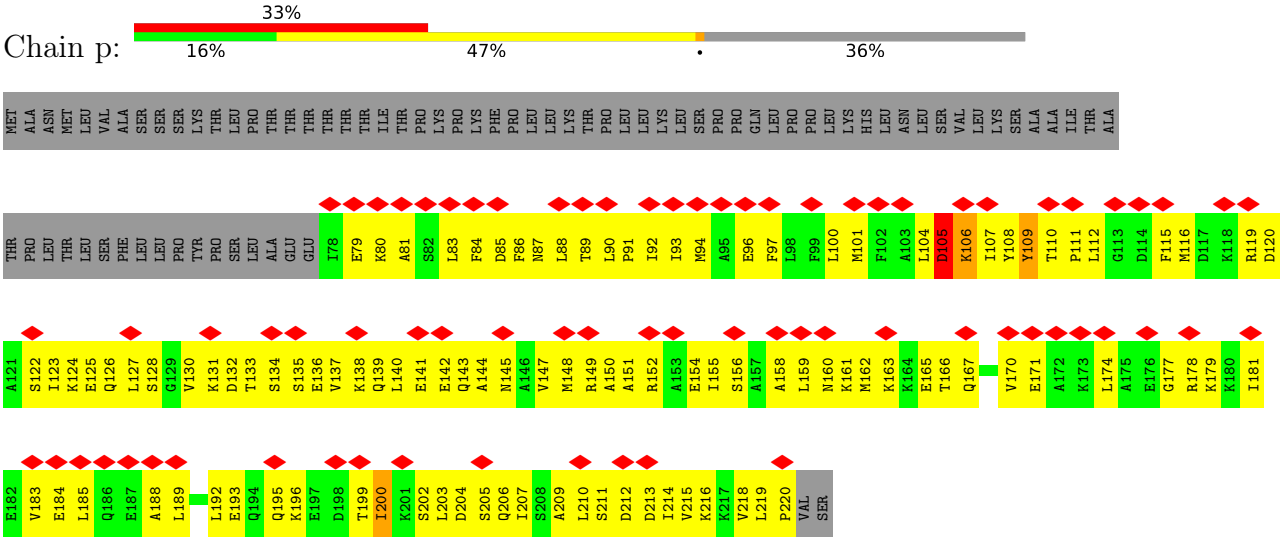
• Molecule 3: ATP synthase delta chain, chloroplastic

Chain d:



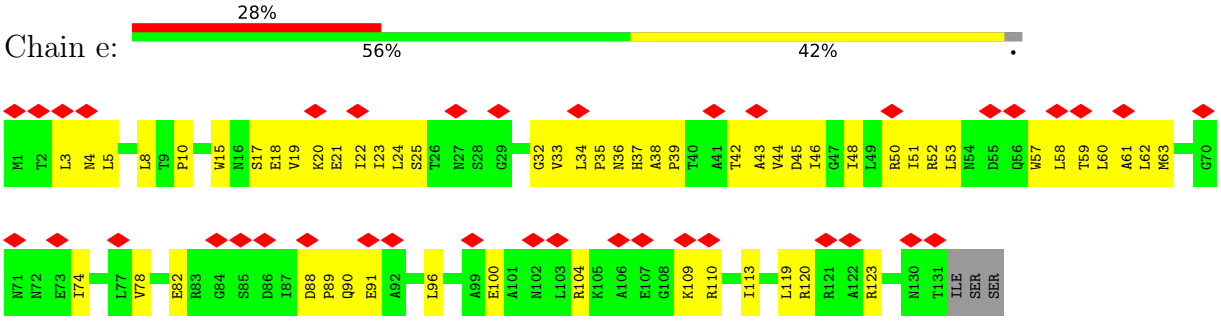
• Molecule 4: ATP synthase subunit b', chloroplastic

Chain p:



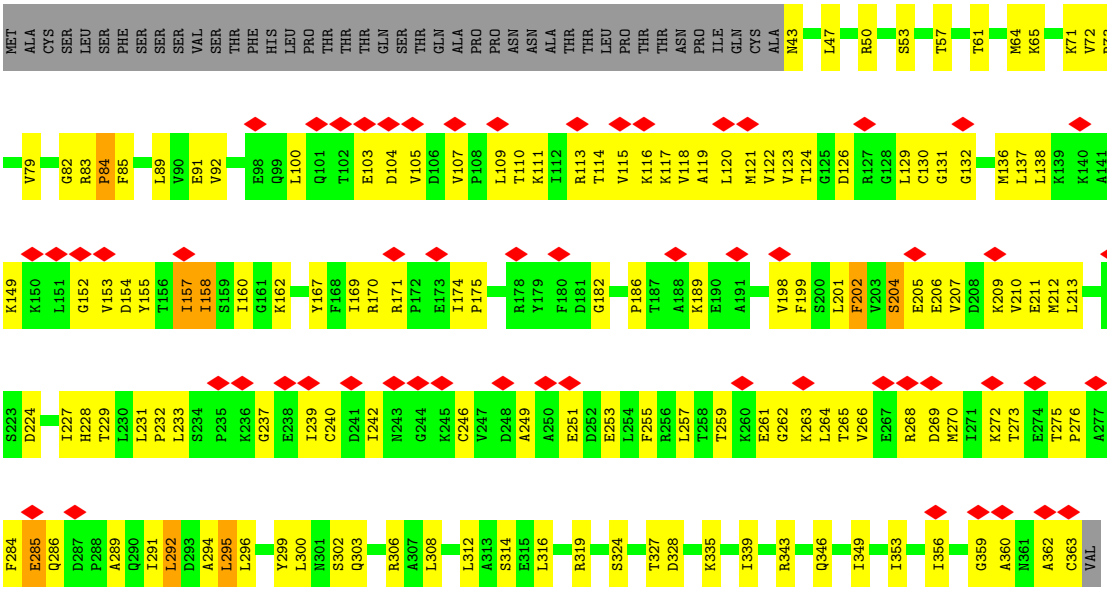
• Molecule 5: ATP synthase epsilon chain, chloroplastic

Chain e:

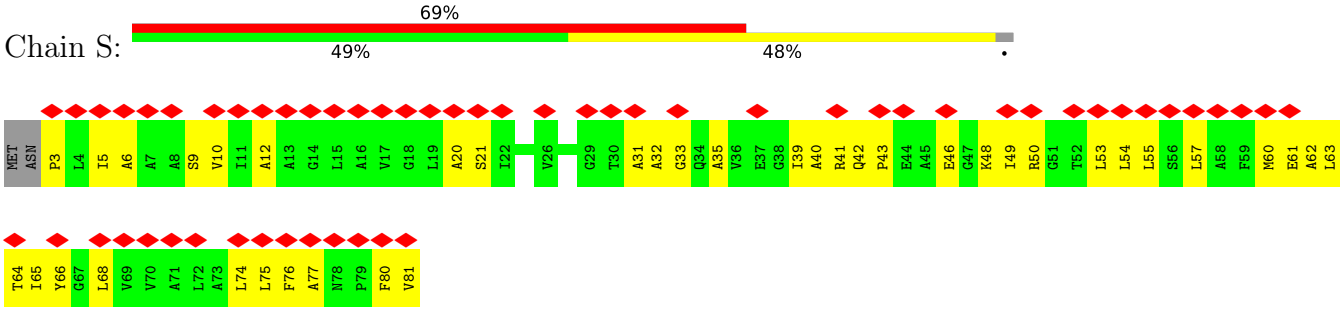


• Molecule 6: ATP synthase gamma chain, chloroplastic

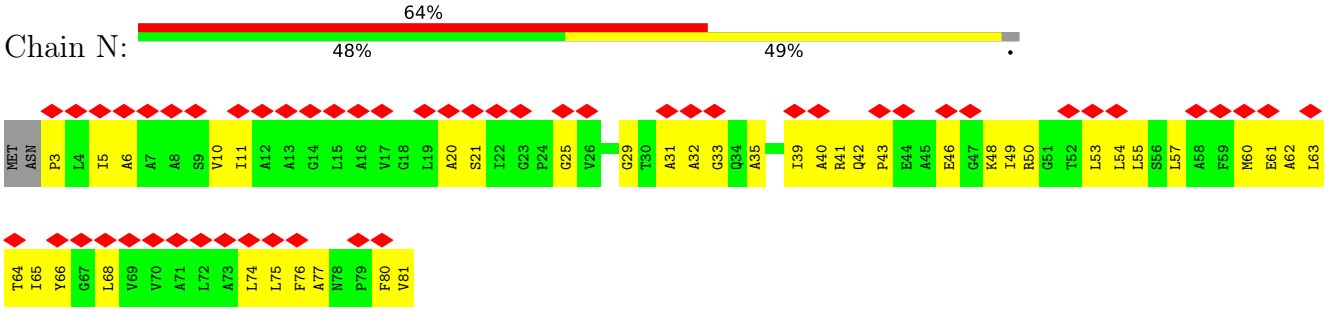
Chain g:



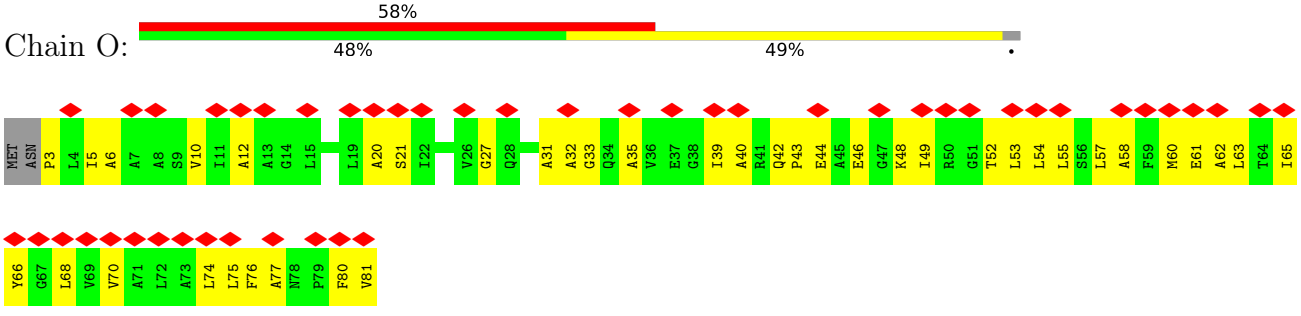
• Molecule 7: ATP synthase subunit c, chloroplastic



• Molecule 7: ATP synthase subunit c, chloroplastic

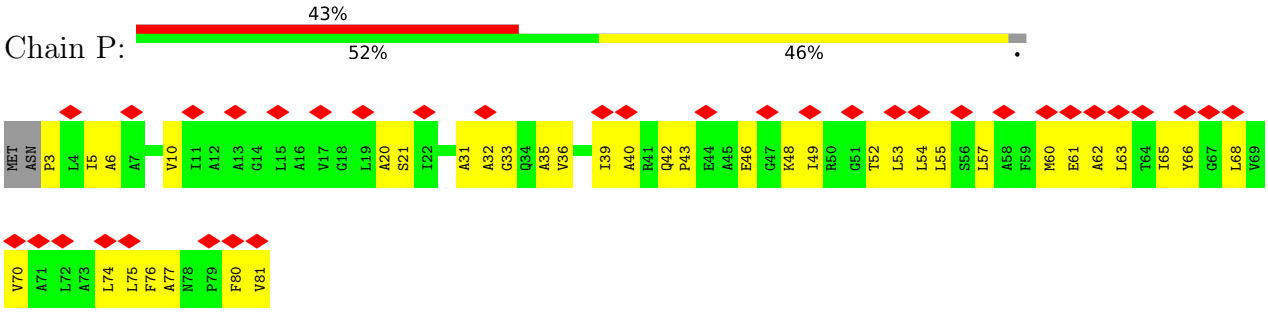


• Molecule 7: ATP synthase subunit c, chloroplastic



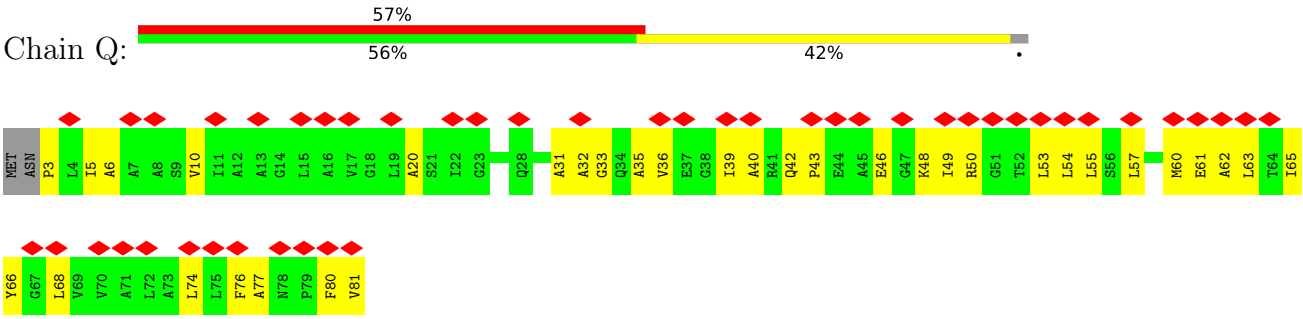
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain P:



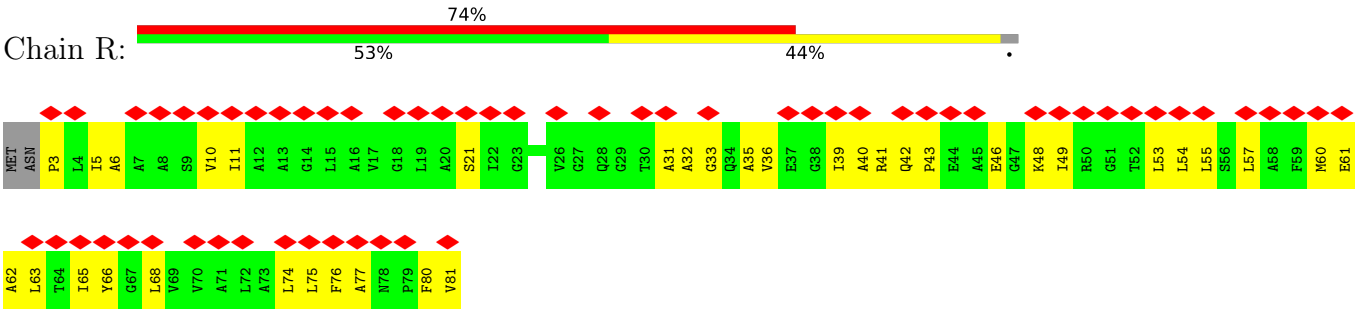
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain Q:



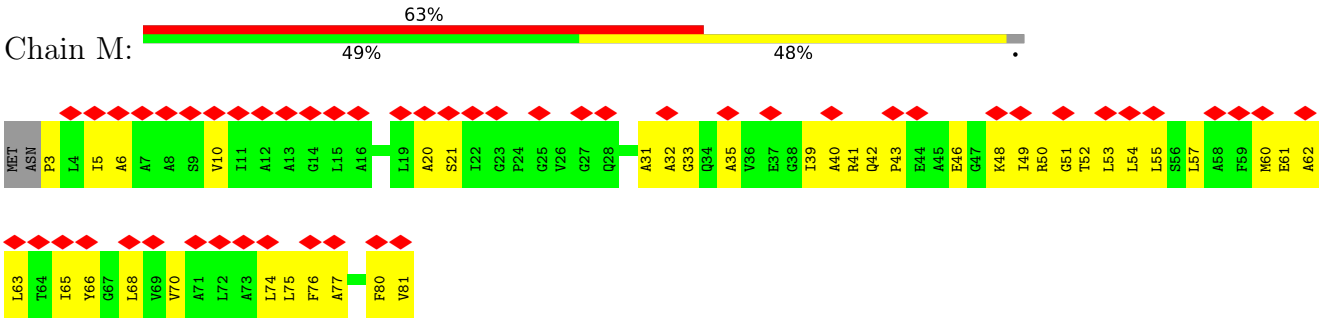
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain R:



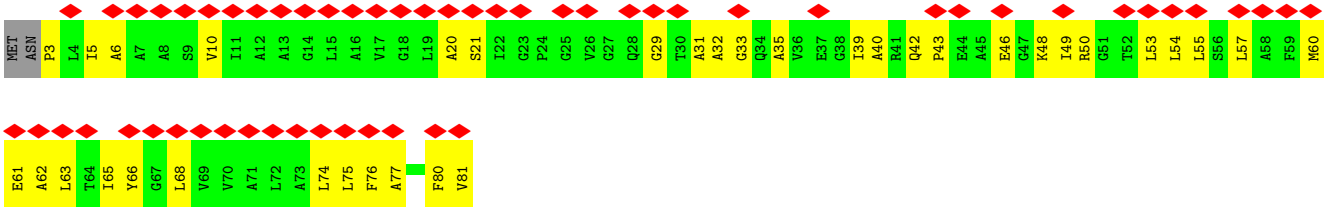
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain M:



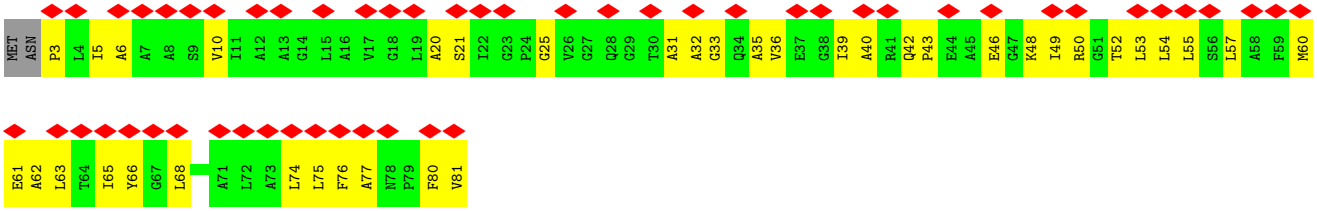
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain T:



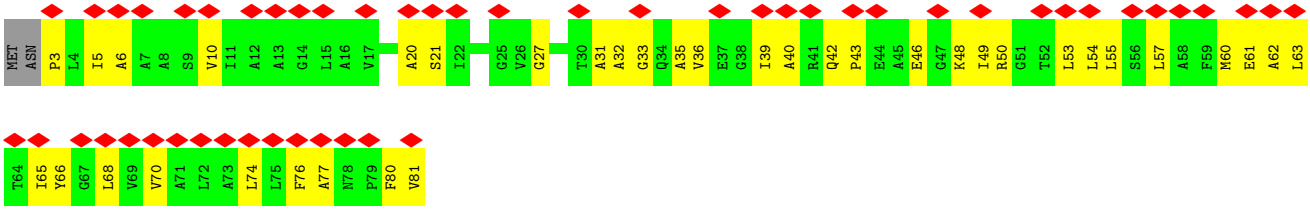
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain G:



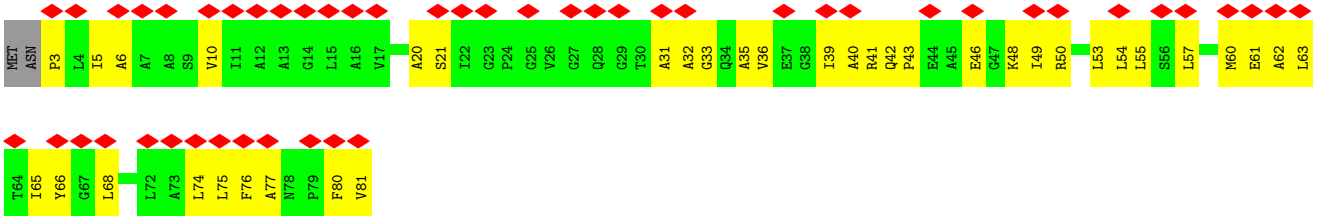
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain H:



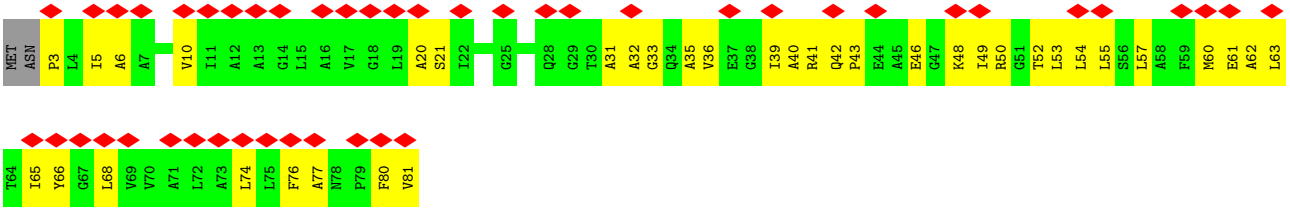
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain L:



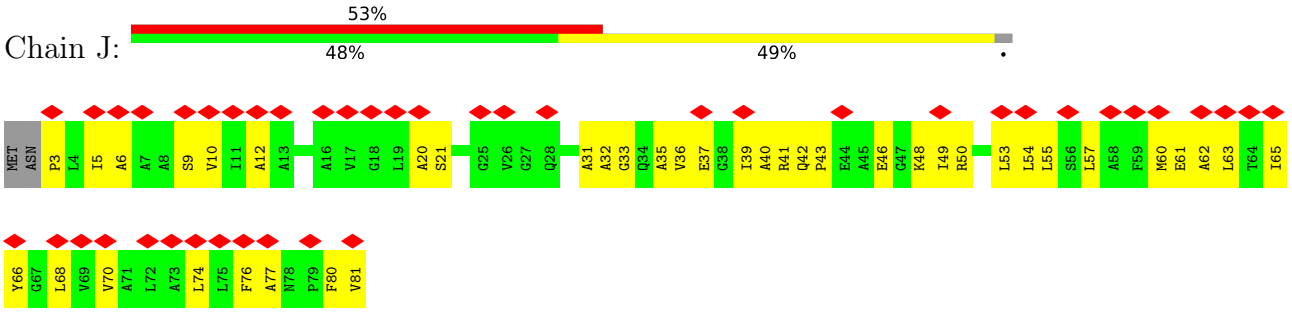
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain K:



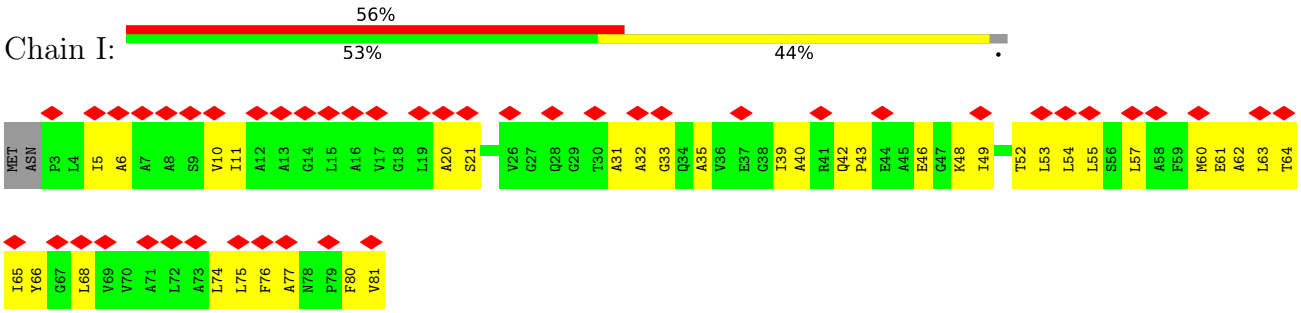
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain J:



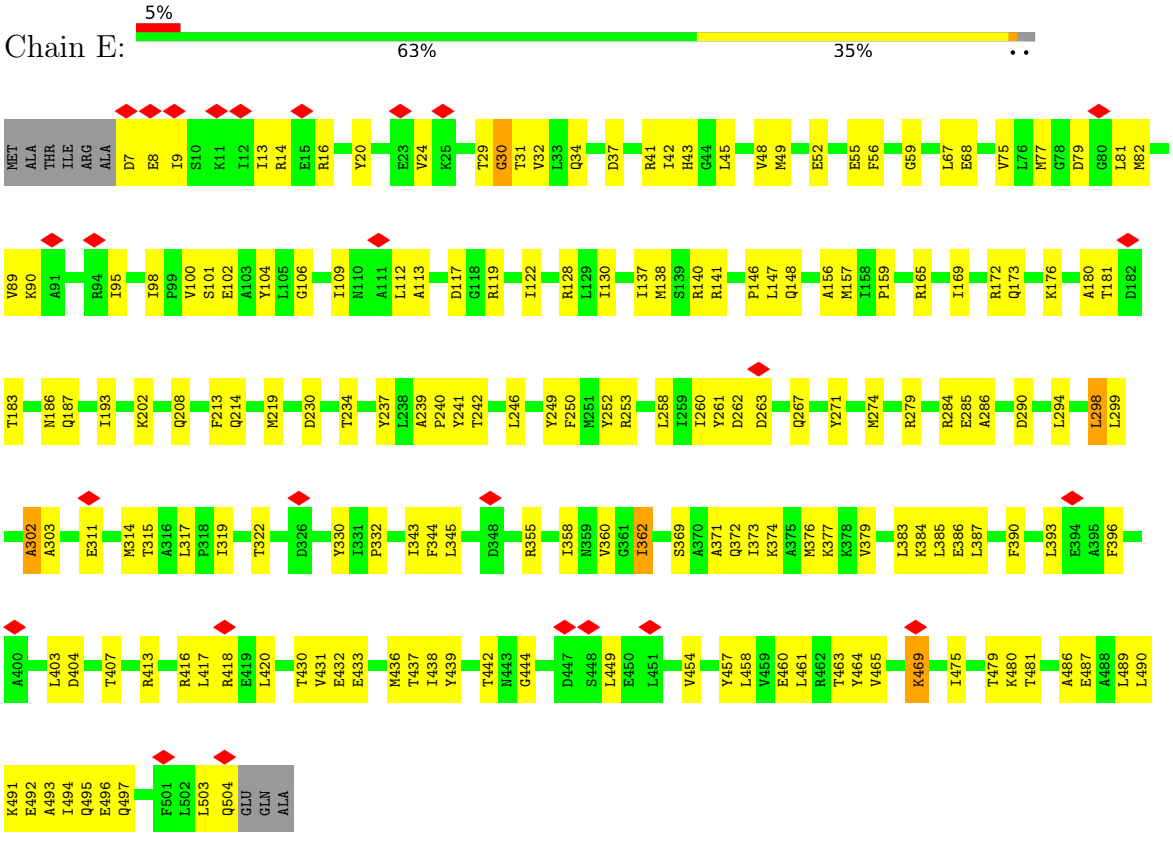
• Molecule 7: ATP synthase subunit c, chloroplastic

Chain I:

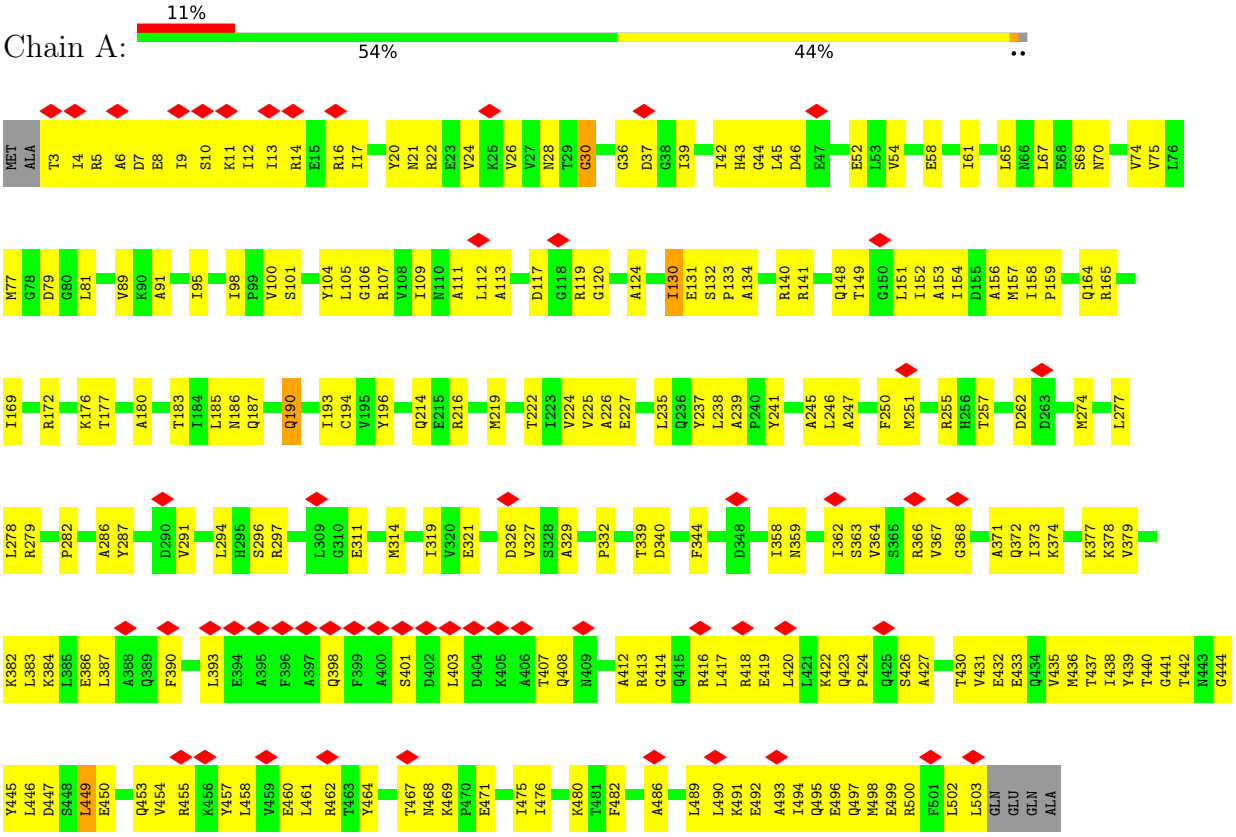


• Molecule 8: ATP synthase subunit alpha, chloroplastic

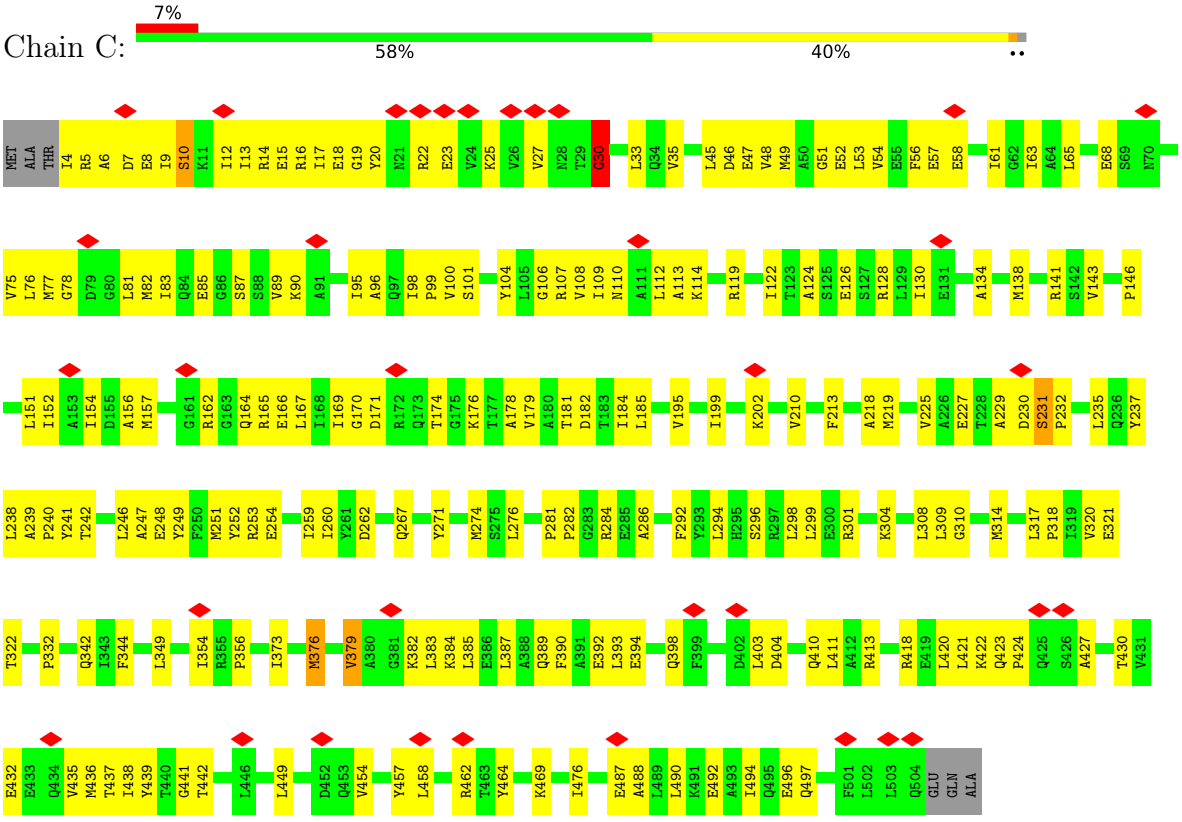
Chain E:



• Molecule 8: ATP synthase subunit alpha, chloroplastic

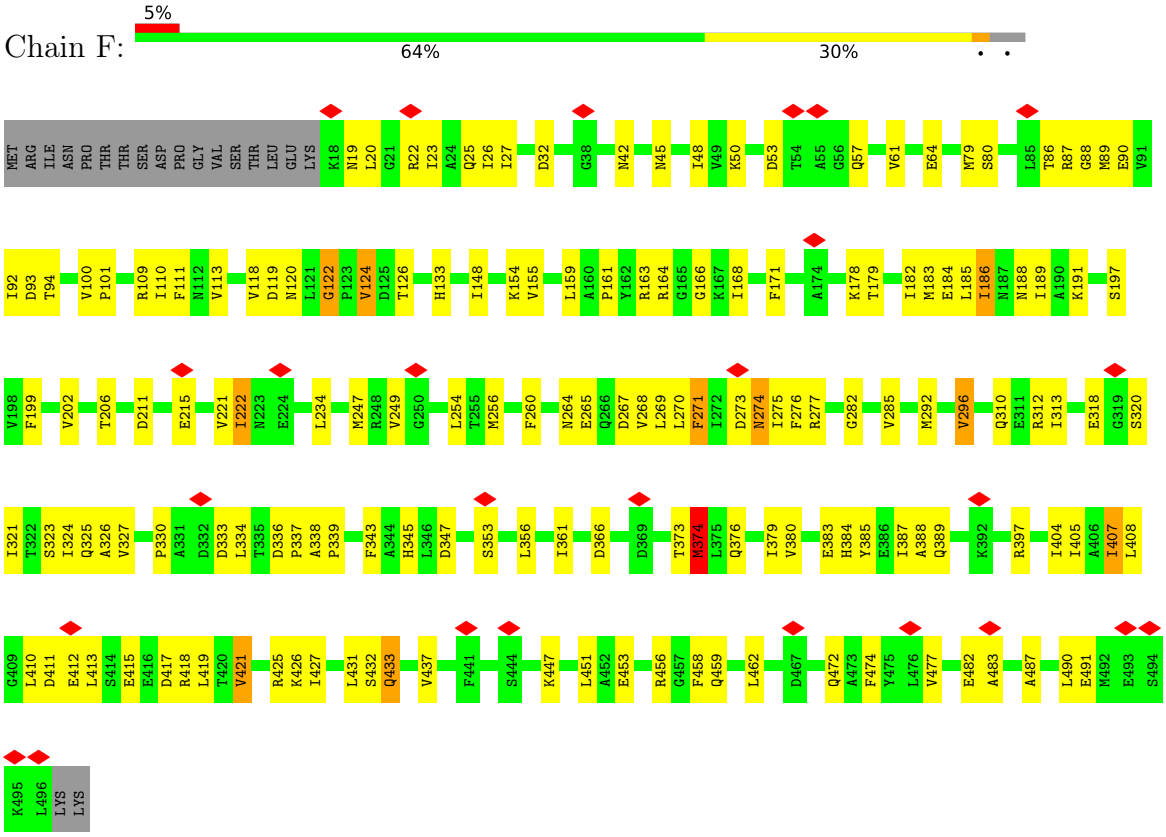


• Molecule 8: ATP synthase subunit alpha, chloroplastic



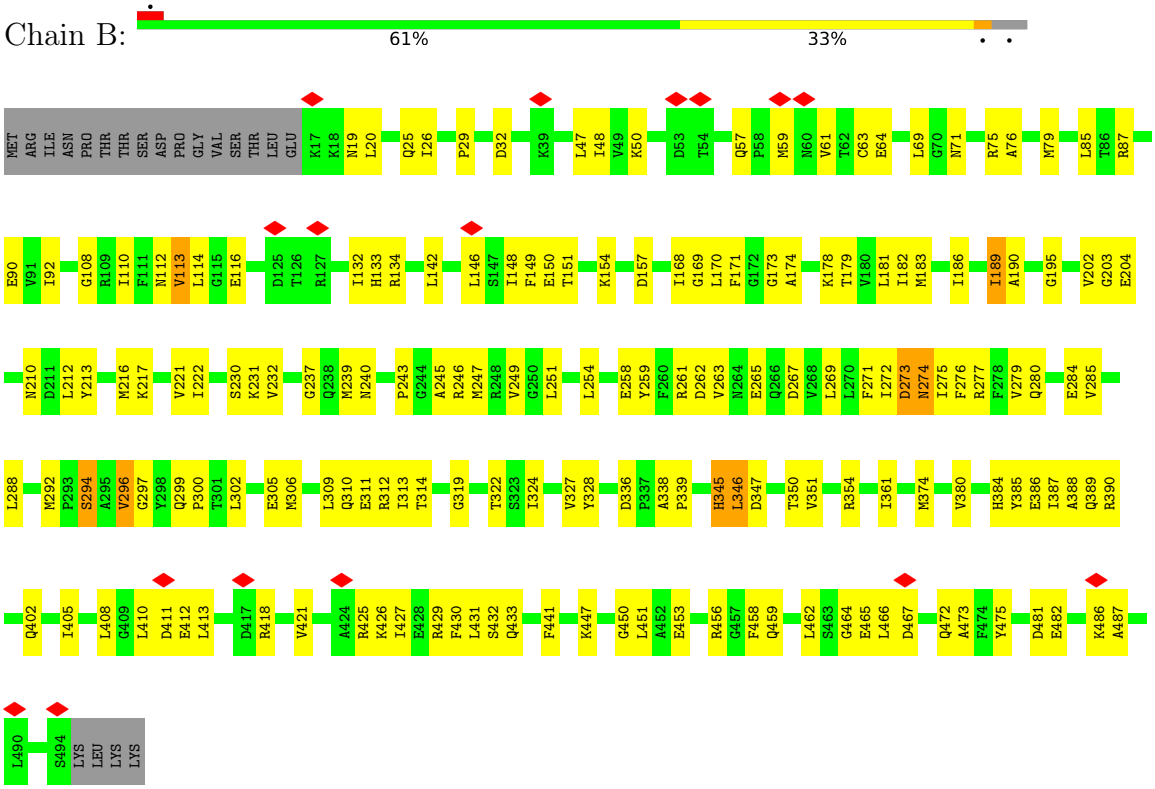
• Molecule 9: ATP synthase subunit beta, chloroplastic

Chain F:



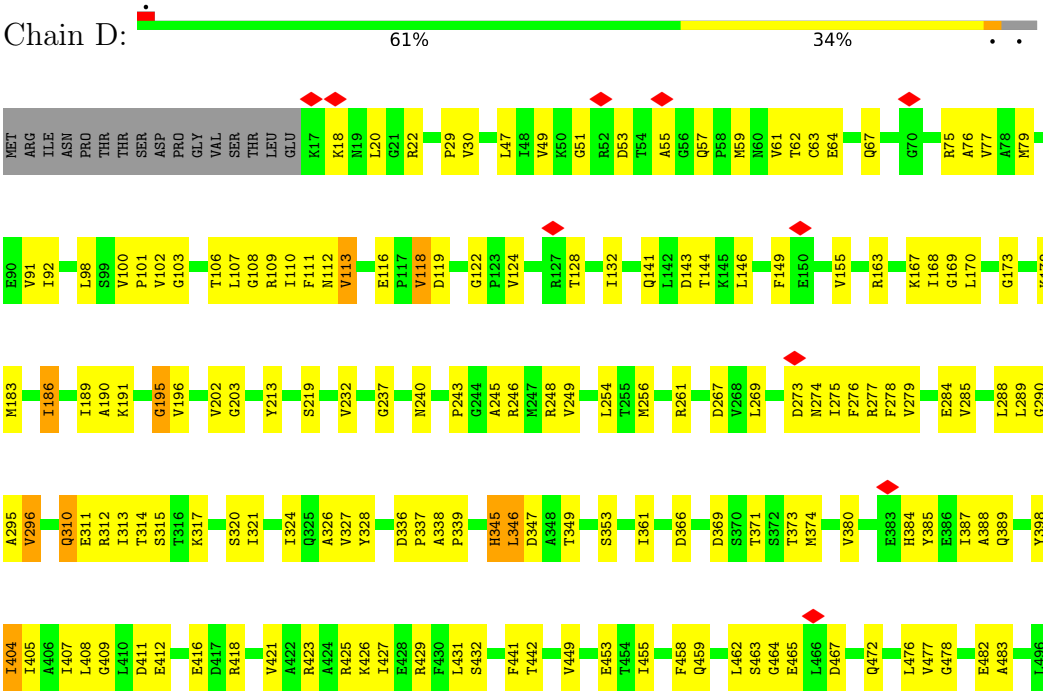
• Molecule 9: ATP synthase subunit beta, chloroplastic

Chain B:



• Molecule 9: ATP synthase subunit beta, chloroplastic

Chain D:


61%
34%
MET ARG ILE ASN PRO THR THR SER ASP PRO GLY VAL SER THR LEU GLU K17 K18 N19 L20 G21 R22 P29 V30 L47 T48 V49 K50 G51 R52 D53 T54 A55 G56 Q57 P58 M59 N60 V61 T62 C63 E64 Q67 G70 R75 A76 V77 A78 M79 L85 T86 R87 G88 M89
E90 V91 I92 L98 S99 V100 P101 V102 G103 T106 L107 G108 R109 I110 F111 N112 V113 E116 P117 V118 D119 G122 P123 V124 R127 T128 I132 Q141 L142 D143 T144 K145 L146 F149 E150 V155 R163 K167 I168 G169 L170 G173 K178 T179 V180 L181 I182
M183 I186 I189 A190 K191 G195 V196 V202 G203 Y213 S219 V232 G237 N240 P243 G244 A245 R246 M247 R248 V249 L254 T255 M256 R261 D267 V268 L269 D273 N274 I275 F276 R277 F278 V279 E284 V285 L288 L289 G290 R291 M292 P293 S294
A295 V296 Q310 E311 R312 I313 T314 S315 T316 K317 S320 I321 I324 Q325 A326 V327 Y328 D336 P337 A338 P339 H345 L346 D347 A348 T349 S353 I361 D366 D369 S370 T371 S372 T373 M374 V380 E383 H384 Y385 E386 I387 A388 Q389 Y398 L401 Q402 D403
I404 I405 A406 I407 L408 G409 L410 D411 E412 E416 D417 R418 V421 A422 R423 A424 R425 K426 I427 E428 R429 F430 L431 S432 F441 T442 V449 E453 T454 I455 F458 Q459 L462 S463 G464 E465 L466 D467 Q472 L476 V477 G478 E482 A483 L496 LYS LYS

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	14409	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	25	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	132953	Depositor
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	0.225	Depositor
Minimum map value	-0.142	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.013	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	368.55, 368.55, 368.55	wwPDB
Map dimensions	350, 350, 350	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.053, 1.053, 1.053	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	a	0.53	0/1792	1.14	19/2454 (0.8%)
2	b	0.44	0/1309	0.89	2/1754 (0.1%)
3	d	0.63	0/1399	1.00	7/1898 (0.4%)
4	p	0.62	1/1134 (0.1%)	0.98	6/1519 (0.4%)
5	e	0.47	0/1019	0.82	0/1381
6	g	0.76	1/2526 (0.0%)	0.94	8/3412 (0.2%)
7	G	0.59	0/551	1.00	2/750 (0.3%)
7	H	0.59	0/551	0.99	2/750 (0.3%)
7	I	0.58	0/551	1.00	2/750 (0.3%)
7	J	0.58	0/551	1.00	2/750 (0.3%)
7	K	0.58	0/551	1.00	2/750 (0.3%)
7	L	0.58	0/551	0.99	2/750 (0.3%)
7	M	0.58	0/551	0.99	2/750 (0.3%)
7	N	0.58	0/551	1.00	2/750 (0.3%)
7	O	0.58	0/551	1.00	2/750 (0.3%)
7	P	0.58	0/551	1.00	2/750 (0.3%)
7	Q	0.58	0/551	1.00	2/750 (0.3%)
7	R	0.58	0/551	1.00	2/750 (0.3%)
7	S	0.59	0/551	0.99	2/750 (0.3%)
7	T	0.58	0/551	0.99	2/750 (0.3%)
8	A	0.90	1/3898 (0.0%)	0.94	10/5274 (0.2%)
8	C	0.94	2/3900 (0.1%)	1.00	12/5276 (0.2%)
8	E	0.86	0/3876	0.93	6/5244 (0.1%)
9	B	0.79	1/3676 (0.0%)	0.92	11/4983 (0.2%)
9	D	0.82	0/3693	0.86	8/5005 (0.2%)
9	F	1.00	2/3684 (0.1%)	0.94	18/4994 (0.4%)
All	All	0.78	8/39620 (0.0%)	0.96	135/53694 (0.3%)

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
2	b	0	1
4	p	0	1
7	G	0	1
7	H	0	1
7	I	0	1
7	J	0	1
7	K	0	1
7	L	0	1
7	M	0	1
7	N	0	1
7	O	0	1
7	P	0	1
7	Q	0	1
7	R	0	1
7	S	0	1
7	T	0	1
8	A	0	2
8	C	0	3
8	E	0	2
9	D	0	1
All	All	0	24

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
9	F	276	PHE	C-N	-27.86	0.97	1.33
8	A	30	GLY	C-N	14.79	1.52	1.33
6	g	84	PRO	N-CD	12.76	1.65	1.47
4	p	105	ASP	C-N	-11.84	1.17	1.33
9	B	271	PHE	C-N	7.57	1.43	1.33
9	F	271	PHE	C-N	-7.27	1.23	1.33
8	C	30	GLY	C-N	6.36	1.42	1.33
8	C	296	SER	C-O	-5.15	1.18	1.24

All (135) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	a	212	VAL	CA-C-N	13.34	133.74	119.87
1	a	212	VAL	C-N-CA	13.34	133.74	119.87
8	C	30	GLY	CA-C-N	13.07	140.12	121.42
8	C	30	GLY	C-N-CA	13.07	140.12	121.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	b	181	GLU	O-C-N	-11.92	109.79	122.07
8	C	30	GLY	O-C-N	-10.54	109.00	122.70
8	A	30	GLY	O-C-N	10.49	133.32	123.57
1	a	208	VAL	CA-C-N	10.38	130.18	120.21
1	a	208	VAL	C-N-CA	10.38	130.18	120.21
9	B	189	ILE	N-CA-C	9.97	120.79	110.72
8	E	30	GLY	O-C-N	-9.87	109.87	122.70
1	a	30	ILE	N-CA-C	9.29	121.12	108.11
3	d	216	SER	N-CA-C	9.04	121.13	111.28
9	B	294	SER	N-CA-C	8.56	120.39	111.14
4	p	109	TYR	N-CA-C	8.49	120.16	111.07
9	B	190	ALA	N-CA-C	8.41	120.07	111.07
3	d	117	ASN	CA-C-N	8.21	128.16	119.05
3	d	117	ASN	C-N-CA	8.21	128.16	119.05
1	a	59	ARG	N-CA-C	7.94	119.94	111.28
9	F	191	LYS	N-CA-C	7.88	119.65	111.14
8	E	469	LYS	CA-C-N	7.79	127.85	119.28
8	E	469	LYS	C-N-CA	7.79	127.85	119.28
8	A	467	THR	N-CA-C	7.77	119.53	111.14
8	E	59	GLY	N-CA-C	7.73	125.65	115.36
9	F	271	PHE	O-C-N	-7.55	114.36	123.27
9	D	345	HIS	N-CA-C	7.50	119.46	111.28
8	A	21	ASN	N-CA-C	7.43	119.46	111.36
1	a	212	VAL	CB-CA-C	-7.29	106.63	114.35
1	a	188	PHE	N-CA-C	7.25	119.27	111.36
6	g	162	LYS	N-CA-C	7.24	119.25	111.36
3	d	116	ALA	N-CA-C	7.24	119.25	111.36
1	a	211	VAL	N-CA-C	7.22	117.98	110.62
9	B	273	ASP	CA-CB-CG	7.10	119.70	112.60
9	F	122	GLY	CA-C-N	7.06	127.03	119.76
9	F	122	GLY	C-N-CA	7.06	127.03	119.76
9	B	345	HIS	N-CA-C	7.03	119.02	111.36
6	g	285	GLU	N-CA-C	6.91	118.81	111.28
8	A	190	GLN	N-CA-C	6.70	118.94	110.24
8	A	371	ALA	N-CA-C	6.62	118.58	111.36
1	a	129	ALA	CA-C-N	6.56	126.00	118.85
1	a	129	ALA	C-N-CA	6.56	126.00	118.85
8	C	379	VAL	N-CA-C	6.55	116.69	110.53
9	F	285	VAL	N-CA-CB	6.53	120.38	110.58
8	C	113	ALA	N-CA-C	6.51	120.52	112.58
8	C	231	SER	CA-C-N	6.50	126.47	119.78
8	C	231	SER	C-N-CA	6.50	126.47	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	B	113	VAL	CB-CA-C	-6.50	103.37	112.14
1	a	210	LEU	N-CA-C	6.48	119.16	111.71
4	p	200	ILE	N-CA-C	-6.46	104.03	110.62
6	g	158	ILE	N-CA-C	-6.46	98.56	107.99
3	d	119	VAL	N-CA-C	6.45	117.20	110.62
3	d	214	ASP	CA-C-N	6.45	125.88	118.85
3	d	214	ASP	C-N-CA	6.45	125.88	118.85
7	P	76	PHE	CA-C-N	-6.43	113.34	122.41
7	P	76	PHE	C-N-CA	-6.43	113.34	122.41
7	G	76	PHE	CA-C-N	-6.40	113.38	122.41
7	G	76	PHE	C-N-CA	-6.40	113.38	122.41
7	M	76	PHE	CA-C-N	-6.40	113.39	122.41
7	M	76	PHE	C-N-CA	-6.40	113.39	122.41
7	I	76	PHE	CA-C-N	-6.40	113.39	122.41
7	I	76	PHE	C-N-CA	-6.40	113.39	122.41
7	R	76	PHE	CA-C-N	-6.39	113.40	122.41
7	R	76	PHE	C-N-CA	-6.39	113.40	122.41
7	K	76	PHE	CA-C-N	-6.39	113.40	122.41
7	K	76	PHE	C-N-CA	-6.39	113.40	122.41
7	O	76	PHE	CA-C-N	-6.37	113.42	122.41
7	O	76	PHE	C-N-CA	-6.37	113.42	122.41
7	L	76	PHE	CA-C-N	-6.37	113.43	122.41
7	L	76	PHE	C-N-CA	-6.37	113.43	122.41
7	N	76	PHE	CA-C-N	-6.37	113.43	122.41
7	N	76	PHE	C-N-CA	-6.37	113.43	122.41
7	H	76	PHE	CA-C-N	-6.36	113.44	122.41
7	H	76	PHE	C-N-CA	-6.36	113.44	122.41
7	Q	76	PHE	CA-C-N	-6.36	113.45	122.41
7	Q	76	PHE	C-N-CA	-6.36	113.45	122.41
7	T	76	PHE	CA-C-N	-6.35	113.46	122.41
7	T	76	PHE	C-N-CA	-6.35	113.46	122.41
7	J	76	PHE	CA-C-N	-6.35	113.46	122.41
7	J	76	PHE	C-N-CA	-6.35	113.46	122.41
7	S	76	PHE	CA-C-N	-6.33	113.48	122.41
7	S	76	PHE	C-N-CA	-6.33	113.48	122.41
9	D	113	VAL	CB-CA-C	-6.26	103.69	112.14
6	g	204	SER	N-CA-C	-6.26	101.68	110.50
9	D	346	LEU	N-CA-C	6.25	119.54	110.28
2	b	89	GLU	N-CA-C	-6.24	103.76	111.75
9	B	262	ASP	N-CA-C	6.21	118.12	111.36
9	B	346	LEU	N-CA-C	6.03	119.21	110.28
9	F	379	ILE	N-CA-C	6.02	117.05	111.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	A	11	LYS	N-CA-C	-5.99	105.63	113.12
9	F	124	VAL	N-CA-C	-5.94	99.75	108.54
9	D	186	ILE	CB-CA-C	-5.92	104.40	111.97
8	C	376	MET	N-CA-C	5.88	117.77	111.36
1	a	181	THR	N-CA-C	5.86	117.67	111.28
9	F	374	MET	N-CA-C	5.86	120.29	113.20
4	p	105	ASP	CA-C-N	-5.85	109.17	121.80
4	p	105	ASP	C-N-CA	-5.85	109.17	121.80
1	a	114	LEU	CA-C-N	-5.84	113.49	121.61
1	a	114	LEU	C-N-CA	-5.84	113.49	121.61
9	F	379	ILE	CB-CA-C	-5.80	104.32	111.92
6	g	263	LYS	N-CA-C	5.78	118.17	110.53
4	p	106	LYS	CA-C-N	-5.76	113.30	120.56
4	p	106	LYS	C-N-CA	-5.76	113.30	120.56
9	B	263	VAL	N-CA-C	5.74	116.75	111.81
1	a	160	TYR	N-CA-C	5.72	117.97	108.99
8	A	449	LEU	N-CA-C	5.69	118.09	110.35
9	D	118	VAL	N-CA-C	5.67	117.56	112.17
9	D	310	GLN	N-CA-C	5.66	117.53	111.36
8	E	362	ILE	N-CA-C	5.65	116.43	110.72
9	B	271	PHE	O-C-N	-5.57	116.44	123.01
8	C	179	VAL	CB-CA-C	-5.52	104.90	111.97
9	D	195	GLY	N-CA-C	5.46	120.21	111.64
9	F	271	PHE	CA-C-N	5.43	130.49	123.11
9	F	271	PHE	C-N-CA	5.43	130.49	123.11
9	F	274	ASN	CA-CB-CG	5.43	118.03	112.60
8	A	30	GLY	CA-C-N	-5.42	115.52	123.00
8	A	30	GLY	C-N-CA	-5.42	115.52	123.00
9	F	171	PHE	CA-C-N	-5.41	117.45	121.61
9	F	171	PHE	C-N-CA	-5.41	117.45	121.61
9	F	407	ILE	N-CA-C	5.40	116.18	110.72
8	E	302	ALA	N-CA-C	5.40	117.10	108.41
9	F	421	VAL	N-CA-C	-5.40	105.86	111.58
6	g	295	LEU	N-CA-C	5.35	117.11	111.28
9	F	186	ILE	CB-CA-C	-5.32	104.97	112.14
6	g	202	PHE	N-CA-C	5.29	117.13	111.36
8	C	298	LEU	N-CA-C	5.27	117.03	111.28
6	g	157	ILE	N-CA-C	5.22	115.48	108.17
1	a	182	LYS	CA-C-N	-5.19	113.35	119.84
1	a	182	LYS	C-N-CA	-5.19	113.35	119.84
8	C	108	VAL	N-CA-C	-5.16	102.08	108.89
8	C	15	GLU	N-CA-C	-5.15	105.66	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	D	404	ILE	N-CA-C	5.14	115.91	110.72
9	B	274	ASN	OD1-CG-ND2	5.11	127.71	122.60
1	a	133	ASP	N-CA-C	-5.07	102.78	110.28
9	F	222	ILE	N-CA-C	-5.06	101.09	108.17
8	A	130	ILE	N-CA-C	5.03	115.80	110.72

There are no chirality outliers.

All (24) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
8	A	226	ALA	Peptide
8	A	262	ASP	Peptide
8	C	10	SER	Peptide
8	C	262	ASP	Peptide
8	C	30	GLY	Mainchain
9	D	273	ASP	Peptide
8	E	262	ASP	Peptide
8	E	30	GLY	Mainchain
7	G	77	ALA	Mainchain
7	H	77	ALA	Mainchain
7	I	77	ALA	Mainchain
7	J	77	ALA	Mainchain
7	K	77	ALA	Mainchain
7	L	77	ALA	Mainchain
7	M	77	ALA	Mainchain
7	N	77	ALA	Mainchain
7	O	77	ALA	Mainchain
7	P	77	ALA	Mainchain
7	Q	77	ALA	Mainchain
7	R	77	ALA	Mainchain
7	S	77	ALA	Mainchain
7	T	77	ALA	Mainchain
2	b	181	GLU	Mainchain
4	p	105	ASP	Mainchain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	a	1741	0	1781	606	0
2	b	1299	0	1310	912	0
3	d	1383	0	1406	357	0
4	p	1124	0	1145	922	0
5	e	1010	0	1040	150	0
6	g	2497	0	2585	398	0
7	G	544	0	581	113	0
7	H	544	0	581	111	0
7	I	544	0	581	110	0
7	J	544	0	581	112	0
7	K	544	0	581	105	0
7	L	544	0	581	118	0
7	M	544	0	581	121	0
7	N	544	0	581	120	0
7	O	544	0	581	119	0
7	P	544	0	581	106	0
7	Q	544	0	581	113	0
7	R	544	0	581	115	0
7	S	544	0	581	118	0
7	T	544	0	581	114	0
8	A	3849	0	3922	569	0
8	C	3851	0	3928	332	0
8	E	3827	0	3900	301	0
9	B	3619	0	3668	212	0
9	D	3636	0	3692	294	0
9	F	3627	0	3679	193	0
10	A	31	0	12	1	0
10	C	31	0	12	1	0
10	E	31	0	12	1	0
11	A	1	0	0	0	0
11	B	1	0	0	0	0
11	C	1	0	0	0	0
11	D	1	0	0	0	0
11	E	1	0	0	0	0
12	B	27	0	12	0	0
12	D	27	0	12	2	0
All	All	39231	0	40250	4676	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 59.

All (4676) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:51:LEU:CD2	4:p:100:LEU:CD1	1.75	1.64
8:A:13:ILE:CD1	8:A:16:ARG:HH22	1.09	1.63
1:a:161:PHE:HE1	1:a:163:LYS:CG	1.07	1.61
1:a:65:PRO:CB	1:a:70:ASN:HD21	0.96	1.61
1:a:24:GLN:HB3	4:p:84:PHE:CD2	1.32	1.60
1:a:161:PHE:CE1	1:a:163:LYS:CG	1.83	1.59
1:a:161:PHE:CZ	1:a:163:LYS:HD2	1.29	1.59
2:b:144:VAL:CG1	4:p:210:LEU:CD2	1.76	1.59
2:b:160:LEU:HD11	2:b:164:LEU:CA	1.13	1.59
2:b:144:VAL:CG1	4:p:210:LEU:HD23	1.17	1.59
1:a:119:ILE:CG2	2:b:28:ALA:HA	1.18	1.57
3:d:222:THR:CG2	3:d:234:ASP:HB2	1.23	1.57
1:a:119:ILE:HG23	2:b:28:ALA:CA	1.23	1.55
4:p:214:ILE:HA	8:A:17:ILE:CD1	1.13	1.55
5:e:21:GLU:HG2	5:e:34:LEU:CD2	1.35	1.55
1:a:161:PHE:CE1	1:a:163:LYS:HG3	1.41	1.55
4:p:195:GLN:CG	8:A:4:ILE:CD1	1.83	1.54
2:b:68:GLU:CG	4:p:126:GLN:HB3	1.14	1.54
2:b:141:ARG:CD	8:A:12:ILE:HG21	1.37	1.53
2:b:142:GLN:CD	3:d:248:LEU:HD23	1.25	1.52
1:a:134:ILE:HG23	1:a:191:PHE:CZ	1.42	1.52
2:b:133:GLN:CG	8:A:3:THR:HG22	1.39	1.51
2:b:165:HIS:CD2	3:d:219:ALA:HB1	1.45	1.51
2:b:88:VAL:CA	4:p:148:MET:HG3	1.05	1.51
8:C:77:MET:CE	8:C:112:LEU:HD21	1.37	1.51
2:b:103:ILE:CB	4:p:159:LEU:HA	1.14	1.50
2:b:82:ARG:HB3	4:p:140:LEU:CD2	1.01	1.49
2:b:103:ILE:HB	4:p:159:LEU:CA	1.15	1.49
2:b:176:PHE:CE1	3:d:233:VAL:CG2	1.90	1.48
1:a:115:LEU:CD2	2:b:38:LEU:HD13	1.40	1.48
2:b:88:VAL:CB	4:p:148:MET:HG3	1.38	1.48
2:b:82:ARG:CB	4:p:140:LEU:HD23	0.99	1.47
2:b:107:LYS:HA	4:p:166:THR:CG2	1.13	1.47
2:b:133:GLN:HG2	8:A:3:THR:CG2	1.45	1.47
1:a:135:ASN:HD21	4:p:86:PHE:CA	1.23	1.46
2:b:88:VAL:HA	4:p:148:MET:CG	0.99	1.46
6:g:281:ILE:HA	7:N:41:ARG:NH2	1.27	1.46
2:b:125:LYS:HD2	4:p:185:LEU:CD2	1.42	1.45
2:b:160:LEU:CD1	2:b:163:GLU:C	1.85	1.45
1:a:119:ILE:CD1	2:b:32:ILE:H	1.26	1.45
3:d:154:ARG:HH21	8:C:5:ARG:CZ	1.26	1.45
1:a:139:ALA:HB1	4:p:94:MET:SD	1.57	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:107:LYS:CA	4:p:166:THR:HG21	1.26	1.44
2:b:176:PHE:CE1	3:d:233:VAL:HG21	0.93	1.44
2:b:68:GLU:HB2	4:p:126:GLN:CB	1.38	1.44
1:a:124:HIS:NE2	4:p:79:GLU:CB	1.79	1.44
2:b:125:LYS:CD	4:p:185:LEU:CD2	1.91	1.44
1:a:104:PHE:HB2	4:p:97:PHE:CE1	1.52	1.43
1:a:222:PHE:CZ	7:Q:54:LEU:HD23	1.51	1.43
3:d:222:THR:HG22	3:d:234:ASP:CB	0.99	1.43
2:b:70:LEU:HD12	4:p:127:LEU:CD2	1.47	1.43
2:b:70:LEU:CD1	4:p:127:LEU:HD21	1.45	1.43
8:A:464:TYR:CE1	8:A:468:ASN:ND2	1.84	1.43
2:b:141:ARG:HD2	8:A:12:ILE:CG2	1.47	1.43
6:g:239:ILE:HD12	6:g:303:GLN:NE2	1.16	1.42
8:A:13:ILE:HD13	8:A:16:ARG:NH2	1.13	1.42
1:a:40:LEU:CG	4:p:89:THR:OG1	1.66	1.42
2:b:122:GLU:OE1	4:p:181:ILE:CG2	1.66	1.42
1:a:35:ILE:HG22	4:p:88:LEU:N	1.32	1.41
1:a:116:PRO:HD3	2:b:35:SER:N	1.34	1.41
1:a:124:HIS:NE2	4:p:79:GLU:HB3	1.24	1.41
2:b:70:LEU:N	4:p:130:VAL:CG1	1.79	1.41
2:b:77:GLN:CG	4:p:138:LYS:HG3	1.51	1.41
1:a:135:ASN:ND2	4:p:86:PHE:HA	1.12	1.40
6:g:103:GLU:CG	7:R:41:ARG:HE	1.30	1.40
8:E:344:PHE:CD2	8:E:362:ILE:HG21	1.52	1.40
1:a:63:THR:CA	4:p:119:ARG:HH11	1.32	1.40
8:A:214:GLN:NE2	8:A:219:MET:HG2	1.29	1.40
2:b:103:ILE:HD11	4:p:162:MET:N	1.34	1.39
9:B:20:LEU:CD1	9:B:90:GLU:OE2	1.70	1.38
2:b:85:LEU:O	4:p:147:VAL:CG1	1.72	1.38
2:b:144:VAL:HG21	8:A:9:ILE:CG2	1.52	1.38
6:g:113:ARG:NH1	6:g:205:GLU:HB3	1.37	1.38
2:b:68:GLU:CB	4:p:126:GLN:HB3	1.40	1.38
8:E:355:ARG:NH2	9:D:389:GLN:HE22	0.96	1.38
3:d:222:THR:CG2	3:d:234:ASP:CB	1.79	1.37
1:a:161:PHE:CZ	1:a:163:LYS:CD	2.07	1.36
8:A:464:TYR:HE1	8:A:468:ASN:ND2	1.16	1.36
2:b:82:ARG:CG	2:b:85:LEU:HD21	1.54	1.36
2:b:145:PHE:HB2	8:A:16:ARG:NH2	1.35	1.36
2:b:69:GLU:C	4:p:130:VAL:CG1	1.95	1.36
2:b:73:LYS:H	4:p:130:VAL:CG2	1.39	1.36
1:a:24:GLN:HB3	4:p:84:PHE:CE2	1.60	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:191:LYS:CE	9:D:219:SER:HB2	1.56	1.35
1:a:104:PHE:HB2	4:p:97:PHE:CZ	1.60	1.35
1:a:165:ILE:CG2	1:a:168:THR:O	1.75	1.35
1:a:208:VAL:CG2	1:a:209:PRO:HD2	1.55	1.35
1:a:119:ILE:HA	2:b:29:THR:N	1.38	1.34
2:b:70:LEU:CA	4:p:130:VAL:HG13	1.56	1.34
1:a:65:PRO:HB2	1:a:70:ASN:ND2	1.03	1.34
6:g:359:GLY:C	9:D:293:PRO:HD3	1.51	1.34
8:E:344:PHE:CD2	8:E:362:ILE:CG2	2.10	1.34
2:b:69:GLU:C	4:p:130:VAL:HG11	1.53	1.34
2:b:85:LEU:O	4:p:147:VAL:HG11	1.21	1.34
1:a:35:ILE:CG2	4:p:88:LEU:H	1.41	1.33
2:b:70:LEU:C	4:p:130:VAL:HG13	1.50	1.33
4:p:210:LEU:HD21	8:A:13:ILE:CG1	1.58	1.33
1:a:119:ILE:HG13	2:b:28:ALA:C	1.53	1.33
6:g:240:CYS:HB3	6:g:246:CYS:SG	1.69	1.33
6:g:261:GLU:HG3	9:F:397:ARG:NH2	1.41	1.33
2:b:103:ILE:HB	4:p:159:LEU:CB	1.56	1.32
9:F:50:LYS:HE2	9:F:92:ILE:CD1	1.59	1.32
1:a:51:LEU:CD2	4:p:100:LEU:HD12	1.40	1.32
4:p:214:ILE:CA	8:A:17:ILE:CD1	2.03	1.32
2:b:85:LEU:HD22	4:p:143:GLN:CG	1.36	1.32
2:b:125:LYS:CD	4:p:185:LEU:HD23	1.52	1.32
1:a:164:TYR:HD2	1:a:166:GLN:CG	1.40	1.31
5:e:34:LEU:HB2	7:L:42:GLN:NE2	1.46	1.31
5:e:119:LEU:HD11	5:e:123:ARG:NE	1.45	1.31
2:b:160:LEU:CG	2:b:164:LEU:H	1.43	1.31
6:g:240:CYS:CB	6:g:246:CYS:SG	2.18	1.31
2:b:133:GLN:CG	8:A:3:THR:CG2	2.01	1.30
1:a:43:SER:CB	4:p:93:ILE:HG12	1.60	1.30
1:a:230:ILE:HD11	7:Q:55:LEU:CD1	1.62	1.30
1:a:115:LEU:HD21	2:b:38:LEU:CD1	1.61	1.30
3:d:224:ARG:HH11	3:d:232:LEU:CD1	1.44	1.29
2:b:77:GLN:HB3	4:p:134:SER:O	1.22	1.29
3:d:224:ARG:NH1	3:d:232:LEU:CD1	1.95	1.29
1:a:119:ILE:CD1	2:b:32:ILE:N	1.93	1.29
1:a:134:ILE:CG2	1:a:191:PHE:CZ	2.14	1.29
1:a:161:PHE:CE1	1:a:163:LYS:CB	2.15	1.29
4:p:195:GLN:CG	8:A:4:ILE:HD11	1.47	1.28
8:A:214:GLN:NE2	8:A:219:MET:CG	1.97	1.28
5:e:21:GLU:CG	5:e:34:LEU:CD2	2.11	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:144:VAL:CG2	8:A:9:ILE:HG21	1.62	1.28
5:e:119:LEU:CD1	5:e:123:ARG:NE	1.95	1.28
8:E:169:ILE:CG2	8:E:344:PHE:CD1	2.16	1.28
1:a:40:LEU:CD2	4:p:89:THR:OG1	1.81	1.28
6:g:360:ALA:N	9:D:293:PRO:CD	1.95	1.28
1:a:134:ILE:CG2	1:a:191:PHE:CE2	2.16	1.27
2:b:82:ARG:O	2:b:85:LEU:HG	1.22	1.27
2:b:141:ARG:O	8:A:13:ILE:HD11	1.30	1.27
8:E:355:ARG:NH2	9:D:389:GLN:NE2	1.80	1.27
1:a:134:ILE:HG22	1:a:191:PHE:CD2	1.68	1.27
2:b:160:LEU:HD13	2:b:163:GLU:CA	1.63	1.27
3:d:228:GLU:OE1	8:A:43:HIS:NE2	1.65	1.27
2:b:88:VAL:HG22	4:p:148:MET:SD	1.73	1.27
2:b:103:ILE:HD13	4:p:158:ALA:O	1.33	1.27
2:b:160:LEU:HD13	2:b:163:GLU:C	1.53	1.27
1:a:119:ILE:CD1	2:b:32:ILE:HG12	1.65	1.26
1:a:51:LEU:CG	4:p:100:LEU:HD13	1.63	1.26
3:d:224:ARG:NH1	3:d:232:LEU:HD12	1.49	1.26
8:C:464:TYR:OH	8:C:496:GLU:OE1	1.53	1.26
1:a:51:LEU:CG	4:p:100:LEU:CD1	2.14	1.26
1:a:164:TYR:CD2	1:a:166:GLN:HG3	1.69	1.26
2:b:71:ARG:NH1	4:p:126:GLN:OE1	1.66	1.26
2:b:142:GLN:CD	3:d:248:LEU:CD2	2.09	1.26
4:p:212:ASP:O	4:p:215:VAL:HG12	1.17	1.25
8:E:37:ASP:OD2	9:D:291:ARG:NE	1.67	1.25
6:g:103:GLU:CG	7:R:41:ARG:NE	1.98	1.25
8:A:111:ALA:HB2	8:A:227:GLU:OE2	1.29	1.25
1:a:124:HIS:NE2	4:p:79:GLU:CA	1.87	1.25
6:g:261:GLU:CG	9:F:397:ARG:NH2	1.99	1.25
1:a:100:THR:HG21	4:p:101:MET:CG	1.68	1.24
5:e:34:LEU:HD12	7:K:43:PRO:CG	1.66	1.24
2:b:76:GLU:O	2:b:80:LYS:HG2	1.31	1.24
3:d:148:ILE:CD1	8:C:17:ILE:HA	1.65	1.24
1:a:40:LEU:HG	4:p:89:THR:OG1	1.07	1.24
6:g:359:GLY:CA	9:D:293:PRO:HG3	1.68	1.24
1:a:122:LEU:CD1	1:a:127:LEU:HD11	1.67	1.23
2:b:129:ILE:HG23	4:p:192:LEU:CD1	1.69	1.23
2:b:71:ARG:H	4:p:130:VAL:CG1	1.37	1.23
2:b:80:LYS:CB	4:p:137:VAL:HB	1.69	1.23
8:A:111:ALA:CB	8:A:227:GLU:OE2	1.87	1.23
2:b:103:ILE:CD1	4:p:162:MET:N	2.00	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:160:LEU:HG	2:b:164:LEU:CB	1.67	1.23
4:p:152:ARG:CD	8:A:503:LEU:HB2	1.67	1.23
2:b:68:GLU:CG	4:p:126:GLN:CB	2.11	1.23
6:g:137:LEU:HD11	6:g:213:LEU:CD1	1.69	1.23
6:g:360:ALA:HB1	9:D:292:MET:SD	1.79	1.23
2:b:82:ARG:HG3	2:b:85:LEU:CD2	1.68	1.23
6:g:123:VAL:CG1	6:g:308:LEU:HD23	1.67	1.23
2:b:176:PHE:CD1	3:d:233:VAL:HG21	1.74	1.22
8:A:13:ILE:CD1	8:A:16:ARG:NH2	1.77	1.22
2:b:73:LYS:N	4:p:130:VAL:HG23	1.55	1.22
2:b:144:VAL:HG12	4:p:210:LEU:CD2	1.44	1.22
3:d:233:VAL:CG1	8:A:26:VAL:HA	1.67	1.22
3:d:227:ASN:CB	8:A:46:ASP:OD2	1.87	1.22
4:p:193:GLU:HG3	4:p:196:LYS:CE	1.68	1.22
1:a:26:PHE:HB3	4:p:83:LEU:CA	1.69	1.21
2:b:107:LYS:C	4:p:166:THR:OG1	1.83	1.21
2:b:70:LEU:N	4:p:130:VAL:HG13	1.44	1.21
4:p:195:GLN:HG2	8:A:4:ILE:CD1	1.50	1.21
6:g:123:VAL:CG1	6:g:308:LEU:CD2	2.17	1.21
2:b:77:GLN:CD	4:p:138:LYS:HG3	1.58	1.20
8:E:208:GLN:NE2	9:D:144:THR:HG23	1.52	1.20
1:a:100:THR:CG2	4:p:101:MET:HG3	1.70	1.20
1:a:116:PRO:HD3	2:b:34:LEU:C	1.46	1.20
6:g:239:ILE:CD1	6:g:303:GLN:NE2	2.05	1.20
1:a:118:LYS:HB2	2:b:29:THR:O	1.41	1.20
1:a:164:TYR:CD2	1:a:166:GLN:CG	2.23	1.20
2:b:68:GLU:CB	4:p:126:GLN:CB	1.97	1.20
8:C:9:ILE:CG2	8:C:12:ILE:HD12	1.71	1.20
2:b:142:GLN:OE1	3:d:248:LEU:CD2	1.89	1.19
6:g:113:ARG:HH11	6:g:205:GLU:CB	1.55	1.19
1:a:118:LYS:O	2:b:29:THR:OG1	1.57	1.19
1:a:134:ILE:HD12	1:a:135:ASN:N	1.55	1.19
2:b:71:ARG:N	4:p:130:VAL:CG1	1.79	1.19
2:b:125:LYS:CB	4:p:185:LEU:HD22	1.73	1.19
2:b:160:LEU:HD12	2:b:160:LEU:O	1.42	1.19
2:b:81:ALA:N	4:p:140:LEU:HB2	1.54	1.19
2:b:144:VAL:CG1	8:A:13:ILE:HG13	1.70	1.19
3:d:242:GLU:HG2	8:A:20:TYR:OH	1.43	1.19
7:G:62:ALA:O	7:G:65:ILE:HG22	1.43	1.19
8:A:494:ILE:CG2	8:A:498:MET:HE2	1.70	1.19
2:b:80:LYS:C	4:p:140:LEU:HB2	1.66	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:152:ARG:HB3	8:A:503:LEU:CD2	1.71	1.19
7:J:62:ALA:O	7:J:65:ILE:HG22	1.43	1.19
7:M:62:ALA:O	7:M:65:ILE:HG22	1.43	1.19
9:B:411:ASP:CA	9:B:418:ARG:HH22	1.55	1.19
2:b:64:ILE:HD13	4:p:123:ILE:HG12	1.24	1.18
7:R:62:ALA:O	7:R:65:ILE:HG22	1.43	1.18
2:b:85:LEU:CD2	4:p:143:GLN:CG	2.09	1.18
2:b:88:VAL:HG21	4:p:145:ASN:CA	1.64	1.18
3:d:154:ARG:NH2	8:C:5:ARG:CZ	2.06	1.18
7:I:62:ALA:O	7:I:65:ILE:HG22	1.43	1.18
8:E:386:GLU:OE1	8:E:413:ARG:HD2	1.43	1.18
2:b:103:ILE:CG1	4:p:162:MET:HB2	1.72	1.18
7:S:62:ALA:O	7:S:65:ILE:HG22	1.43	1.18
8:E:355:ARG:HH22	9:D:389:GLN:NE2	1.37	1.18
4:p:213:ASP:OD2	8:A:14:ARG:HG2	1.42	1.18
2:b:64:ILE:HD11	4:p:120:ASP:HA	1.26	1.18
2:b:71:ARG:N	4:p:130:VAL:HG13	1.38	1.17
7:T:62:ALA:O	7:T:65:ILE:HG22	1.43	1.17
7:K:62:ALA:O	7:K:65:ILE:HG22	1.43	1.17
1:a:51:LEU:HD21	4:p:100:LEU:CD1	1.44	1.17
2:b:84:ARG:CB	4:p:141:GLU:HA	1.74	1.17
2:b:165:HIS:CD2	3:d:219:ALA:CB	2.10	1.17
6:g:359:GLY:C	9:D:293:PRO:CD	2.16	1.17
2:b:88:VAL:HB	4:p:147:VAL:HG12	1.22	1.17
2:b:141:ARG:CD	8:A:12:ILE:CG2	2.11	1.17
4:p:210:LEU:HD21	8:A:13:ILE:CB	1.74	1.17
5:e:21:GLU:CD	5:e:34:LEU:HD21	1.69	1.17
6:g:124:THR:HG22	6:g:137:LEU:CD2	1.75	1.17
7:Q:62:ALA:O	7:Q:65:ILE:HG22	1.43	1.17
7:L:62:ALA:O	7:L:65:ILE:HG22	1.43	1.17
1:a:115:LEU:CD2	2:b:38:LEU:CD1	2.20	1.17
2:b:103:ILE:CD1	4:p:162:MET:H	1.56	1.17
1:a:24:GLN:CB	4:p:84:PHE:CD2	2.28	1.16
6:g:360:ALA:CA	9:D:293:PRO:HD2	1.76	1.16
1:a:134:ILE:HG22	1:a:191:PHE:CG	1.80	1.16
2:b:144:VAL:HG11	4:p:210:LEU:CD2	1.54	1.16
3:d:222:THR:CG2	3:d:234:ASP:HB3	1.69	1.16
4:p:210:LEU:HD11	8:A:13:ILE:CG2	1.76	1.16
7:P:62:ALA:O	7:P:65:ILE:HG22	1.43	1.16
8:A:344:PHE:CD2	8:A:362:ILE:HG22	1.80	1.16
9:D:401:LEU:HD22	9:D:404:ILE:HD11	1.26	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:148:ILE:HD11	8:C:17:ILE:CA	1.74	1.16
1:a:208:VAL:CG2	1:a:209:PRO:CD	2.25	1.15
2:b:80:LYS:HB2	4:p:137:VAL:HB	1.19	1.15
7:O:62:ALA:O	7:O:65:ILE:HG22	1.43	1.15
7:H:62:ALA:O	7:H:65:ILE:HG22	1.43	1.15
9:F:100:VAL:CG1	9:F:256:MET:HE3	1.76	1.15
2:b:70:LEU:N	4:p:130:VAL:HG11	1.51	1.15
8:E:169:ILE:HG21	8:E:344:PHE:CD1	1.75	1.15
9:B:431:LEU:CD2	9:B:458:PHE:HZ	1.60	1.15
8:C:6:ALA:O	8:C:7:ASP:OD1	1.61	1.15
1:a:136:THR:N	4:p:90:LEU:HD22	1.60	1.15
6:g:73:ARG:HH11	9:F:412:GLU:CD	1.54	1.15
9:F:100:VAL:HG11	9:F:256:MET:HE3	1.27	1.15
1:a:26:PHE:CB	4:p:83:LEU:HA	1.33	1.15
1:a:51:LEU:HD23	4:p:100:LEU:CD1	1.76	1.15
2:b:137:ILE:HG13	8:A:5:ARG:HG2	1.16	1.15
2:b:61:LEU:HD11	2:b:65:ARG:HD2	1.20	1.15
2:b:67:SER:OG	4:p:124:LYS:O	1.64	1.15
8:E:386:GLU:OE1	8:E:413:ARG:CD	1.94	1.15
9:D:431:LEU:CD2	9:D:458:PHE:HZ	1.59	1.15
9:D:387:ILE:CD1	9:D:455:ILE:HG23	1.76	1.14
1:a:163:LYS:CE	1:a:179:ASP:OD2	1.94	1.14
4:p:214:ILE:HA	8:A:17:ILE:HD12	1.16	1.14
7:N:62:ALA:O	7:N:65:ILE:HG22	1.43	1.14
1:a:230:ILE:CD1	7:Q:55:LEU:HD11	1.77	1.14
6:g:123:VAL:HG13	6:g:308:LEU:CD2	1.78	1.14
9:B:20:LEU:HD13	9:B:90:GLU:OE2	1.46	1.14
8:C:9:ILE:HG22	8:C:12:ILE:HD12	1.21	1.14
1:a:51:LEU:HG	4:p:100:LEU:CD1	1.75	1.14
6:g:356:ILE:HG21	8:E:286:ALA:HB2	1.20	1.14
1:a:58:VAL:HG11	4:p:107:ILE:HG22	1.14	1.14
3:d:154:ARG:HH21	8:C:5:ARG:NH1	1.43	1.14
4:p:206:GLN:O	4:p:210:LEU:CB	1.96	1.14
8:E:82:MET:HE2	8:E:82:MET:HA	1.26	1.14
8:E:469:LYS:HD2	8:E:493:ALA:HB2	1.18	1.14
1:a:35:ILE:HG21	4:p:88:LEU:HB2	1.21	1.13
2:b:142:GLN:NE2	3:d:248:LEU:HA	1.61	1.13
1:a:40:LEU:HD21	4:p:89:THR:HA	1.26	1.13
2:b:64:ILE:HD13	4:p:123:ILE:CG1	1.76	1.13
2:b:83:ALA:N	4:p:140:LEU:HB3	1.44	1.13
4:p:210:LEU:CD2	8:A:13:ILE:HG13	1.78	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:299:GLN:NE2	9:B:305:GLU:OE1	1.80	1.13
1:a:119:ILE:CB	2:b:28:ALA:HA	1.77	1.13
2:b:78:LEU:O	4:p:140:LEU:HG	1.43	1.13
5:e:19:VAL:CG2	5:e:53:LEU:HB2	1.79	1.13
6:g:281:ILE:HD12	7:M:41:ARG:CG	1.77	1.13
1:a:39:VAL:HG21	1:a:133:ASP:OD2	1.44	1.13
8:E:37:ASP:OD1	9:D:291:ARG:NH2	1.81	1.13
9:D:411:ASP:HA	9:D:418:ARG:HH21	1.11	1.13
1:a:26:PHE:CB	4:p:83:LEU:CA	2.26	1.12
1:a:122:LEU:HD12	1:a:127:LEU:CD1	1.79	1.13
1:a:122:LEU:HD23	1:a:124:HIS:H	1.09	1.12
2:b:88:VAL:HB	4:p:147:VAL:CG1	1.79	1.13
2:b:125:LYS:CD	4:p:185:LEU:HD22	1.62	1.12
2:b:169:ILE:HG23	3:d:221:PHE:CE2	1.84	1.12
8:E:169:ILE:HG21	8:E:344:PHE:CE1	1.83	1.12
9:F:50:LYS:HE2	9:F:92:ILE:HD12	1.28	1.12
1:a:70:ASN:O	2:b:53:LEU:CD1	1.92	1.12
1:a:100:THR:HG21	4:p:101:MET:CB	1.80	1.12
4:p:152:ARG:HD3	8:A:503:LEU:HD22	1.32	1.12
4:p:195:GLN:HG3	8:A:4:ILE:CD1	1.59	1.12
4:p:210:LEU:HD11	8:A:13:ILE:CB	1.79	1.12
9:F:50:LYS:CE	9:F:92:ILE:CD1	2.27	1.12
8:A:492:GLU:O	8:A:496:GLU:HG2	1.48	1.12
9:D:387:ILE:HD13	9:D:455:ILE:HG23	1.23	1.12
1:a:43:SER:OG	4:p:93:ILE:HG12	1.44	1.12
2:b:74:ALA:N	4:p:130:VAL:O	1.82	1.12
1:a:115:LEU:HD23	2:b:38:LEU:HD13	1.28	1.12
4:p:212:ASP:O	4:p:215:VAL:CG1	1.97	1.12
6:g:103:GLU:HG3	7:R:41:ARG:HE	0.95	1.12
8:C:77:MET:CE	8:C:112:LEU:CD2	2.27	1.12
1:a:40:LEU:HG	4:p:89:THR:CB	1.78	1.11
2:b:129:ILE:CG2	4:p:192:LEU:HD11	1.80	1.11
3:d:233:VAL:HG12	8:A:26:VAL:HA	1.21	1.11
8:E:42:ILE:HD13	8:E:89:VAL:HG11	1.32	1.11
9:D:191:LYS:HE2	9:D:219:SER:HB2	1.25	1.11
2:b:114:THR:O	4:p:174:LEU:CD1	1.84	1.11
1:a:70:ASN:OD1	2:b:54:ASP:OD1	1.68	1.11
2:b:144:VAL:HG12	4:p:210:LEU:HD21	1.32	1.11
2:b:160:LEU:HD11	2:b:163:GLU:C	1.58	1.11
8:E:169:ILE:CG2	8:E:344:PHE:HD1	1.58	1.11
2:b:103:ILE:CG2	4:p:159:LEU:HA	1.78	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:160:LEU:HD13	2:b:163:GLU:CB	1.78	1.11
3:d:222:THR:HG22	3:d:234:ASP:HB3	1.25	1.11
9:D:112:ASN:HD22	9:D:116:GLU:HB2	1.07	1.11
9:D:431:LEU:HD23	9:D:458:PHE:CZ	1.83	1.11
1:a:70:ASN:O	2:b:53:LEU:CG	1.98	1.11
2:b:88:VAL:CG2	4:p:148:MET:HG3	1.79	1.11
2:b:117:THR:CG2	4:p:174:LEU:HD11	1.81	1.11
2:b:142:GLN:NE2	3:d:248:LEU:HD23	1.65	1.11
4:p:108:TYR:CE1	4:p:112:LEU:CD1	2.33	1.11
1:a:119:ILE:HD11	2:b:32:ILE:H	1.04	1.10
2:b:77:GLN:HG2	4:p:138:LYS:CG	1.79	1.10
2:b:82:ARG:HA	2:b:85:LEU:HD23	1.24	1.10
2:b:80:LYS:N	4:p:137:VAL:HA	1.66	1.10
2:b:81:ALA:HB3	4:p:140:LEU:N	1.65	1.10
8:C:77:MET:HE1	8:C:112:LEU:CD2	1.81	1.10
9:D:112:ASN:OD1	9:D:118:VAL:HG21	1.50	1.10
1:a:161:PHE:CZ	1:a:163:LYS:HB2	1.85	1.10
2:b:77:GLN:HG2	4:p:138:LYS:HG3	1.11	1.10
2:b:129:ILE:HG23	4:p:192:LEU:HD11	1.13	1.10
9:B:221:VAL:HG11	9:B:232:VAL:HG21	1.25	1.10
8:C:77:MET:HE1	8:C:112:LEU:HD21	1.23	1.10
9:D:112:ASN:ND2	9:D:116:GLU:HB2	1.65	1.10
1:a:116:PRO:CD	2:b:35:SER:N	2.12	1.10
2:b:62:ASN:O	2:b:66:ASN:ND2	1.84	1.10
2:b:103:ILE:CD1	4:p:158:ALA:O	1.99	1.10
1:a:51:LEU:HD23	4:p:100:LEU:HD11	1.30	1.10
2:b:68:GLU:HG3	4:p:126:GLN:HB3	1.18	1.10
4:p:199:THR:C	8:A:6:ALA:CB	2.23	1.10
8:A:494:ILE:HG22	8:A:498:MET:HE2	1.12	1.10
2:b:71:ARG:H	4:p:130:VAL:HG12	1.12	1.09
2:b:88:VAL:HG21	4:p:145:ASN:HA	1.12	1.09
2:b:107:LYS:CA	4:p:166:THR:CG2	1.92	1.09
2:b:117:THR:HG22	4:p:174:LEU:HD11	1.17	1.09
2:b:180:ASN:ND2	3:d:201:ILE:HG21	1.64	1.09
5:e:60:LEU:HD12	5:e:60:LEU:O	1.50	1.09
9:B:294:SER:O	8:C:286:ALA:CB	2.00	1.09
3:d:179:VAL:HG22	3:d:210:LYS:HB2	1.30	1.09
4:p:193:GLU:CG	4:p:196:LYS:HE2	1.82	1.09
5:e:19:VAL:HA	5:e:53:LEU:HD13	1.30	1.09
1:a:119:ILE:HD11	2:b:32:ILE:HG12	1.12	1.09
1:a:119:ILE:HD12	2:b:31:LEU:H	0.92	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:135:ASN:ND2	4:p:86:PHE:CD1	2.21	1.09
2:b:84:ARG:HB3	4:p:141:GLU:CA	1.83	1.09
2:b:125:LYS:HD3	4:p:185:LEU:CD2	1.77	1.09
6:g:124:THR:CG2	6:g:137:LEU:HD23	1.83	1.09
7:O:43:PRO:HG2	7:P:42:GLN:HE22	1.18	1.09
9:F:50:LYS:CE	9:F:92:ILE:HD11	1.82	1.09
9:B:431:LEU:HD23	9:B:458:PHE:HZ	1.11	1.09
1:a:43:SER:HB2	4:p:93:ILE:HG12	1.28	1.09
1:a:163:LYS:NZ	1:a:179:ASP:OD2	1.83	1.09
2:b:133:GLN:HG3	8:A:3:THR:HG22	1.17	1.09
8:A:383:LEU:HD22	8:A:438:ILE:HD12	1.33	1.09
9:D:431:LEU:CD2	9:D:458:PHE:CZ	2.33	1.09
1:a:119:ILE:HD11	2:b:32:ILE:CG1	1.82	1.09
1:a:119:ILE:HD12	2:b:31:LEU:N	1.66	1.09
1:a:134:ILE:HA	1:a:191:PHE:CD1	1.87	1.09
2:b:145:PHE:CE2	2:b:149:LEU:HD11	1.87	1.09
2:b:161:ASN:O	2:b:165:HIS:HB3	1.49	1.09
2:b:169:ILE:HG23	3:d:221:PHE:HE2	1.02	1.09
6:g:149:LYS:HE2	6:g:155:TYR:HE1	1.18	1.09
1:a:119:ILE:HB	2:b:31:LEU:HG	1.16	1.08
2:b:77:GLN:CD	4:p:138:LYS:CG	2.06	1.08
2:b:165:HIS:CG	3:d:219:ALA:HB1	1.87	1.08
4:p:193:GLU:HG3	4:p:196:LYS:HE2	1.13	1.08
8:C:138:MET:HG3	9:D:119:ASP:HA	1.31	1.08
1:a:230:ILE:HD11	7:Q:55:LEU:HD11	1.23	1.08
2:b:125:LYS:CA	4:p:185:LEU:HD22	1.83	1.08
2:b:141:ARG:HD3	8:A:12:ILE:HG21	1.16	1.08
5:e:96:LEU:HD11	5:e:123:ARG:HG2	1.32	1.08
6:g:119:ALA:HB2	6:g:207:VAL:HG11	1.27	1.08
9:B:410:LEU:O	9:B:418:ARG:NH2	1.86	1.08
8:C:27:VAL:CB	8:C:47:GLU:HB2	1.84	1.08
9:D:112:ASN:OD1	9:D:118:VAL:CG2	2.01	1.08
1:a:118:LYS:HA	2:b:30:ASN:OD1	1.27	1.08
2:b:88:VAL:HG11	4:p:145:ASN:O	1.50	1.08
6:g:281:ILE:HG21	7:M:41:ARG:HA	1.35	1.08
1:a:122:LEU:HD22	1:a:125:GLY:H	1.10	1.08
1:a:161:PHE:HZ	1:a:163:LYS:CD	1.52	1.08
1:a:208:VAL:HG22	1:a:209:PRO:HD2	1.18	1.08
2:b:73:LYS:N	4:p:130:VAL:CG2	2.14	1.08
2:b:75:ILE:O	4:p:137:VAL:HG13	1.54	1.08
6:g:261:GLU:HG3	9:F:397:ARG:CZ	1.82	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:24:GLN:HA	4:p:83:LEU:CD1	1.83	1.08
2:b:73:LYS:H	4:p:130:VAL:HG23	1.00	1.08
2:b:82:ARG:HA	2:b:85:LEU:CD2	1.83	1.08
4:p:210:LEU:CD1	8:A:13:ILE:HB	1.84	1.08
5:e:22:ILE:HG22	5:e:51:ILE:HG13	1.15	1.08
9:F:275:ILE:HG22	9:F:326:ALA:O	1.50	1.08
2:b:77:GLN:HB3	4:p:134:SER:C	1.78	1.07
2:b:133:GLN:O	2:b:137:ILE:HD12	1.52	1.07
2:b:144:VAL:HG11	4:p:210:LEU:HD22	1.36	1.07
2:b:161:ASN:O	2:b:165:HIS:CB	2.02	1.07
3:d:152:SER:C	3:d:153:GLU:OE1	1.97	1.07
4:p:195:GLN:CG	8:A:4:ILE:HD13	1.83	1.07
8:E:104:TYR:CD1	8:E:122:ILE:HD13	1.87	1.07
3:d:199:GLN:NE2	3:d:207:VAL:HG12	1.68	1.07
1:a:51:LEU:CD2	4:p:100:LEU:HD11	1.76	1.07
1:a:161:PHE:CE1	1:a:163:LYS:CD	2.31	1.07
6:g:359:GLY:HA3	9:D:293:PRO:HG3	1.19	1.07
8:C:27:VAL:HB	8:C:47:GLU:CB	1.85	1.07
9:D:431:LEU:HD23	9:D:458:PHE:HZ	0.93	1.07
1:a:24:GLN:HA	4:p:83:LEU:HD11	1.28	1.07
2:b:88:VAL:CA	4:p:148:MET:CG	1.80	1.07
2:b:160:LEU:CG	2:b:164:LEU:CB	2.33	1.07
4:p:192:LEU:HD13	8:A:3:THR:HG21	1.08	1.07
1:a:63:THR:CA	4:p:119:ARG:NH1	1.74	1.07
2:b:71:ARG:N	4:p:127:LEU:O	1.88	1.07
2:b:118:LEU:HD11	4:p:177:GLY:C	1.79	1.07
3:d:87:ASP:CG	3:d:172:ILE:HD11	1.80	1.07
3:d:227:ASN:HB2	8:A:46:ASP:OD2	0.91	1.07
5:e:22:ILE:HG22	5:e:51:ILE:CG1	1.84	1.07
6:g:251:GLU:OE2	6:g:270:MET:HB2	1.54	1.07
8:A:214:GLN:NE2	8:A:219:MET:CB	2.17	1.07
1:a:51:LEU:HG	4:p:100:LEU:HD13	1.07	1.06
2:b:137:ILE:CG1	8:A:5:ARG:HG2	1.84	1.06
3:d:247:GLN:HE22	8:A:13:ILE:HG23	1.14	1.06
8:A:433:GLU:OE1	8:A:462:ARG:HD3	1.53	1.06
1:a:116:PRO:HB3	2:b:34:LEU:H	1.18	1.06
1:a:193:ASN:ND2	1:a:227:GLN:HG3	1.69	1.06
6:g:103:GLU:HG3	7:R:41:ARG:NE	1.58	1.06
1:a:114:LEU:HD13	2:b:37:VAL:O	1.55	1.06
1:a:165:ILE:HG22	1:a:168:THR:O	1.51	1.06
1:a:104:PHE:CB	4:p:97:PHE:CE1	2.38	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:88:VAL:HG22	4:p:148:MET:CG	1.84	1.06
2:b:125:LYS:HB3	4:p:185:LEU:HB2	1.34	1.06
1:a:137:THR:HG21	1:a:191:PHE:HB2	1.35	1.06
2:b:141:ARG:HD2	8:A:12:ILE:HG22	1.26	1.06
6:g:356:ILE:CD1	9:D:295:ALA:HA	1.85	1.06
1:a:118:LYS:CA	2:b:30:ASN:OD1	1.99	1.05
2:b:144:VAL:HG13	4:p:210:LEU:HD23	1.28	1.05
4:p:192:LEU:HD22	8:A:3:THR:OG1	1.52	1.05
5:e:119:LEU:CD1	5:e:123:ARG:CZ	2.34	1.05
6:g:356:ILE:HD11	9:D:295:ALA:HA	1.12	1.05
8:A:98:ILE:HD13	8:A:245:ALA:HB3	1.37	1.05
2:b:69:GLU:CA	4:p:130:VAL:HG11	1.87	1.05
2:b:85:LEU:HD22	4:p:143:GLN:HG3	1.07	1.05
2:b:103:ILE:CD1	4:p:162:MET:HB2	1.86	1.05
4:p:214:ILE:CA	8:A:17:ILE:HD12	1.78	1.05
5:e:19:VAL:HG23	5:e:53:LEU:CB	1.85	1.05
8:A:359:ASN:ND2	8:A:362:ILE:HD12	1.70	1.05
2:b:83:ALA:H	4:p:140:LEU:CB	1.68	1.05
5:e:38:ALA:HB2	7:L:41:ARG:HA	1.07	1.05
8:A:382:LYS:HD3	8:A:442:THR:CG2	1.86	1.05
1:a:208:VAL:HG23	1:a:209:PRO:HD2	1.35	1.05
2:b:122:GLU:CD	4:p:181:ILE:HG23	1.80	1.05
4:p:213:ASP:OD2	8:A:14:ARG:HA	1.55	1.05
5:e:21:GLU:CG	5:e:34:LEU:HD21	1.81	1.05
6:g:103:GLU:HG2	7:R:41:ARG:HE	1.18	1.05
2:b:78:LEU:HD11	4:p:139:GLN:OE1	1.57	1.05
2:b:114:THR:O	4:p:174:LEU:HD11	1.46	1.04
9:B:431:LEU:CD2	9:B:458:PHE:CZ	2.39	1.04
1:a:65:PRO:CB	1:a:70:ASN:ND2	1.73	1.04
1:a:119:ILE:CG1	2:b:28:ALA:C	2.28	1.04
2:b:92:ALA:CB	4:p:147:VAL:O	2.04	1.04
2:b:132:GLU:HG3	4:p:189:LEU:HD22	1.35	1.04
7:M:48:LYS:HB3	7:L:46:GLU:OE1	1.57	1.04
8:C:77:MET:HE3	8:C:112:LEU:HD21	1.38	1.04
1:a:119:ILE:HG23	2:b:28:ALA:N	1.70	1.04
2:b:141:ARG:O	8:A:13:ILE:CD1	2.05	1.04
2:b:160:LEU:HG	2:b:164:LEU:HB3	1.38	1.04
2:b:160:LEU:HD12	2:b:164:LEU:N	1.38	1.04
6:g:118:VAL:HG11	6:g:148:LEU:CD1	1.86	1.04
1:a:139:ALA:HB1	4:p:94:MET:CE	1.87	1.04
1:a:161:PHE:CE1	1:a:163:LYS:HB2	1.81	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:174:ILE:HG21	7:O:58:ALA:HB1	1.39	1.04
5:e:38:ALA:HB3	7:L:41:ARG:HG3	1.07	1.04
9:D:20:LEU:CD2	9:D:92:ILE:HG22	1.88	1.04
1:a:163:LYS:HE2	1:a:179:ASP:OD2	1.56	1.03
1:a:208:VAL:HG22	1:a:209:PRO:CD	1.86	1.03
2:b:77:GLN:CB	4:p:134:SER:O	2.06	1.03
4:p:210:LEU:HD21	8:A:13:ILE:HG13	1.07	1.03
8:C:432:GLU:HG3	8:C:476:ILE:CG2	1.88	1.03
6:g:349:ILE:HD13	8:E:284:ARG:HH21	1.16	1.03
1:a:114:LEU:HB3	2:b:38:LEU:N	1.72	1.03
1:a:119:ILE:CA	2:b:29:THR:N	2.22	1.03
2:b:160:LEU:HG	2:b:164:LEU:HB2	1.38	1.03
3:d:224:ARG:HH11	3:d:232:LEU:HD12	1.01	1.03
9:F:100:VAL:CG1	9:F:256:MET:CE	2.36	1.03
9:B:411:ASP:HA	9:B:418:ARG:HH22	0.89	1.03
1:a:58:VAL:CG1	4:p:107:ILE:HG22	1.89	1.03
2:b:125:LYS:HA	4:p:185:LEU:HD22	1.37	1.03
2:b:142:GLN:HE22	3:d:248:LEU:HA	1.07	1.03
3:d:151:ASP:HB2	8:C:20:TYR:OH	1.58	1.03
1:a:64:ILE:CG2	2:b:57:LYS:HE2	1.89	1.02
1:a:165:ILE:HG23	1:a:168:THR:O	1.58	1.02
2:b:61:LEU:HD11	2:b:65:ARG:CD	1.87	1.02
2:b:88:VAL:CG2	4:p:148:MET:CG	2.35	1.02
2:b:114:THR:O	2:b:117:THR:HG22	1.58	1.02
2:b:129:ILE:HD11	4:p:188:ALA:CB	1.89	1.02
6:g:281:ILE:CA	7:N:41:ARG:NH2	2.22	1.02
6:g:360:ALA:N	9:D:293:PRO:HD2	1.66	1.02
8:A:386:GLU:OE2	8:A:442:THR:HG23	1.57	1.02
9:B:20:LEU:HD11	9:B:90:GLU:OE2	1.59	1.02
1:a:135:ASN:ND2	4:p:86:PHE:CA	1.97	1.02
2:b:103:ILE:CG1	4:p:163:LYS:N	2.22	1.02
1:a:70:ASN:O	2:b:53:LEU:HB3	1.58	1.02
2:b:68:GLU:CD	4:p:126:GLN:HB3	1.85	1.02
7:G:43:PRO:HG2	7:H:42:GLN:HE22	1.18	1.02
7:H:43:PRO:HG2	7:I:42:GLN:HE22	1.23	1.02
1:a:135:ASN:OD1	4:p:86:PHE:CG	2.12	1.02
2:b:77:GLN:CG	4:p:138:LYS:CG	2.28	1.02
9:B:411:ASP:HA	9:B:418:ARG:NH2	1.73	1.02
9:D:401:LEU:CD2	9:D:404:ILE:HD11	1.88	1.02
4:p:152:ARG:HG2	8:A:503:LEU:HB3	1.39	1.02
7:K:42:GLN:OE1	7:J:40:ALA:O	1.77	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:122:LEU:CD1	1:a:127:LEU:CD1	2.37	1.01
3:d:74:THR:HG21	8:C:4:ILE:HG22	1.39	1.01
1:a:134:ILE:CG2	1:a:191:PHE:CE1	2.43	1.01
1:a:184:LEU:HD23	1:a:188:PHE:HD2	1.24	1.01
2:b:103:ILE:HG12	4:p:162:MET:HB2	1.40	1.01
2:b:107:LYS:O	4:p:166:THR:OG1	1.68	1.01
2:b:160:LEU:CG	2:b:164:LEU:N	2.11	1.01
3:d:148:ILE:HD11	8:C:17:ILE:HA	1.02	1.01
4:p:152:ARG:HB3	8:A:503:LEU:HD23	1.02	1.01
6:g:123:VAL:HG11	6:g:308:LEU:HD23	1.02	1.01
9:B:237:GLY:HA3	9:B:249:VAL:HG21	1.42	1.01
8:C:430:THR:HG22	8:C:432:GLU:OE1	1.60	1.01
1:a:182:LYS:HD2	1:a:238:TYR:CE1	1.95	1.01
2:b:145:PHE:HE2	3:d:244:ILE:HA	1.20	1.01
4:p:152:ARG:NE	8:A:503:LEU:HB2	1.75	1.01
5:e:34:LEU:CD1	7:K:43:PRO:HG2	1.89	1.01
7:S:68:LEU:HD12	7:T:66:TYR:CG	1.95	1.01
9:B:20:LEU:CD2	9:B:92:ILE:HG12	1.91	1.01
1:a:35:ILE:CG2	4:p:88:LEU:HB2	1.91	1.01
1:a:114:LEU:HA	2:b:37:VAL:HB	1.38	1.01
2:b:144:VAL:CG2	8:A:9:ILE:CG2	2.31	1.01
7:S:43:PRO:CB	7:T:48:LYS:NZ	2.23	1.01
8:E:104:TYR:CE1	8:E:122:ILE:HD13	1.96	1.01
1:a:70:ASN:O	2:b:53:LEU:CB	2.09	1.01
1:a:134:ILE:HG22	1:a:191:PHE:CE2	1.88	1.01
2:b:118:LEU:CD1	4:p:177:GLY:C	2.33	1.01
3:d:154:ARG:HE	8:C:5:ARG:HH12	1.09	1.01
6:g:281:ILE:CD1	7:M:41:ARG:HG3	1.90	1.01
9:D:179:THR:O	9:D:182:ILE:HG22	1.60	1.01
2:b:176:PHE:CZ	3:d:233:VAL:HG21	1.94	1.00
3:d:74:THR:CG2	8:C:4:ILE:HG22	1.92	1.00
5:e:38:ALA:CB	7:L:41:ARG:HG3	1.91	1.00
6:g:149:LYS:HE2	6:g:155:TYR:CE1	1.95	1.00
8:E:344:PHE:CE2	8:E:362:ILE:CG2	2.43	1.00
8:C:237:TYR:CD1	8:C:271:TYR:HB2	1.96	1.00
4:p:214:ILE:CA	8:A:17:ILE:HD13	1.79	1.00
7:T:40:ALA:O	7:G:42:GLN:OE1	1.77	1.00
8:E:208:GLN:HE22	9:D:144:THR:CG2	1.74	1.00
2:b:71:ARG:HH11	4:p:126:GLN:HA	1.24	1.00
2:b:82:ARG:O	2:b:85:LEU:CG	2.09	1.00
2:b:103:ILE:HG12	4:p:162:MET:CB	1.90	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:B:447:LYS:NZ	9:B:482:GLU:OE2	1.93	1.00
4:p:206:GLN:O	4:p:210:LEU:N	1.95	1.00
9:F:110:ILE:HG22	9:F:118:VAL:CG2	1.90	1.00
3:d:131:GLU:C	8:E:13:ILE:HD11	1.85	1.00
4:p:196:LYS:O	4:p:199:THR:HG22	1.62	1.00
1:a:100:THR:HG21	4:p:101:MET:HB2	1.37	1.00
2:b:118:LEU:HD13	4:p:178:ARG:N	1.75	1.00
3:d:199:GLN:HE21	3:d:207:VAL:HG12	1.27	1.00
1:a:135:ASN:CG	4:p:86:PHE:CG	2.40	0.99
1:a:116:PRO:CD	2:b:34:LEU:C	2.33	0.99
2:b:103:ILE:CD1	4:p:162:MET:CA	2.40	0.99
2:b:144:VAL:HG21	8:A:9:ILE:HG21	1.00	0.99
7:G:40:ALA:O	7:H:42:GLN:OE1	1.80	0.99
1:a:63:THR:HA	4:p:119:ARG:NH1	1.14	0.99
2:b:103:ILE:HD11	4:p:162:MET:CA	1.93	0.99
4:p:192:LEU:HD13	8:A:3:THR:CG2	1.91	0.99
7:T:40:ALA:HB2	7:G:49:ILE:HD11	1.43	0.99
6:g:251:GLU:OE2	6:g:270:MET:CB	2.10	0.99
7:S:43:PRO:CB	7:T:48:LYS:HZ3	1.74	0.99
8:A:214:GLN:HE22	8:A:219:MET:CG	1.65	0.99
6:g:353:ILE:HD11	8:E:284:ARG:HG2	1.44	0.99
9:B:221:VAL:HG11	9:B:232:VAL:CG2	1.93	0.99
1:a:119:ILE:CB	2:b:31:LEU:HG	1.93	0.99
1:a:122:LEU:HD12	1:a:127:LEU:HD11	1.00	0.99
7:P:43:PRO:CB	7:Q:48:LYS:HZ3	1.76	0.99
8:E:344:PHE:CD2	8:E:362:ILE:HG22	1.95	0.99
1:a:24:GLN:NE2	1:a:195:LEU:HD11	1.77	0.99
1:a:116:PRO:CB	2:b:34:LEU:H	1.76	0.99
4:p:152:ARG:CB	8:A:503:LEU:HD23	1.92	0.99
6:g:118:VAL:HG11	6:g:148:LEU:HD11	1.44	0.99
9:B:221:VAL:CG1	9:B:232:VAL:CG2	2.40	0.99
1:a:134:ILE:HG23	1:a:191:PHE:CE2	1.91	0.98
7:O:40:ALA:O	7:P:42:GLN:OE1	1.81	0.98
1:a:115:LEU:HD21	2:b:38:LEU:HD13	1.03	0.98
2:b:144:VAL:HG12	8:A:13:ILE:HG13	1.43	0.98
7:T:43:PRO:CB	7:G:48:LYS:NZ	2.26	0.98
8:A:8:GLU:O	8:A:12:ILE:HG13	1.63	0.98
3:d:115:PHE:HB3	3:d:155:ILE:HD11	1.45	0.98
1:a:119:ILE:HB	2:b:31:LEU:CG	1.94	0.98
4:p:203:LEU:HD23	8:A:6:ALA:O	1.64	0.98
5:e:21:GLU:HG2	5:e:34:LEU:HD23	1.01	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:48:LYS:NZ	7:J:43:PRO:CB	2.27	0.98
8:E:469:LYS:CD	8:E:493:ALA:HB2	1.93	0.98
1:a:40:LEU:HD21	4:p:89:THR:CA	1.93	0.98
1:a:43:SER:OG	4:p:93:ILE:CG1	2.11	0.98
1:a:79:ILE:HD13	1:a:99:GLY:CA	1.93	0.98
6:g:362:ALA:HB1	8:C:281:PRO:HB3	1.45	0.98
7:S:40:ALA:O	7:T:42:GLN:OE1	1.81	0.98
7:H:40:ALA:O	7:I:42:GLN:OE1	1.81	0.98
9:F:387:ILE:HD11	9:F:458:PHE:HB2	1.41	0.98
8:A:28:ASN:HB2	8:A:91:ALA:HB3	1.42	0.98
3:d:186:LEU:HD11	3:d:191:LEU:CG	1.92	0.98
5:e:21:GLU:OE2	5:e:34:LEU:HD21	1.64	0.98
6:g:83:ARG:NH2	6:g:273:THR:CG2	2.27	0.98
6:g:148:LEU:O	6:g:152:GLY:N	1.96	0.98
2:b:70:LEU:HB3	4:p:131:LYS:HB2	1.44	0.98
8:C:392:GLU:CD	9:D:429:ARG:HH22	1.71	0.98
1:a:100:THR:CG2	4:p:101:MET:CG	2.34	0.98
4:p:108:TYR:CE1	4:p:112:LEU:HD12	1.99	0.98
6:g:261:GLU:CD	9:F:397:ARG:NH2	2.22	0.98
2:b:144:VAL:CG1	4:p:210:LEU:HD21	1.90	0.97
5:e:21:GLU:HG2	5:e:34:LEU:HD21	1.40	0.97
6:g:281:ILE:HD12	7:M:41:ARG:HG2	1.43	0.97
7:S:68:LEU:HD12	7:T:66:TYR:HB3	1.45	0.97
3:d:186:LEU:HD11	3:d:191:LEU:CD2	1.93	0.97
4:p:210:LEU:HD11	8:A:13:ILE:HG22	1.44	0.97
3:d:115:PHE:HB3	3:d:155:ILE:CD1	1.95	0.97
8:E:42:ILE:HD11	8:E:56:PHE:CZ	1.98	0.97
1:a:139:ALA:CB	4:p:94:MET:SD	2.52	0.97
6:g:221:VAL:HG11	8:A:401:SER:HB2	1.46	0.97
1:a:134:ILE:HG23	1:a:191:PHE:CE1	1.99	0.97
6:g:261:GLU:HG2	6:g:262:GLY:H	1.30	0.97
7:P:40:ALA:O	7:Q:42:GLN:OE1	1.80	0.97
9:B:294:SER:O	8:C:286:ALA:HB3	1.64	0.97
9:D:163:ARG:HD2	9:D:374:MET:HE3	1.45	0.97
8:E:355:ARG:CZ	9:D:389:GLN:HE22	1.77	0.97
2:b:64:ILE:CD1	4:p:123:ILE:CG1	2.33	0.97
5:e:38:ALA:HB2	7:L:41:ARG:CA	1.94	0.97
9:B:431:LEU:HD21	9:B:458:PHE:CZ	1.98	0.96
1:a:53:SER:O	1:a:56:ILE:HG22	1.65	0.96
2:b:84:ARG:HB3	4:p:141:GLU:HA	0.97	0.96
7:T:43:PRO:CB	7:G:48:LYS:HZ3	1.77	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:164:TYR:CD2	1:a:166:GLN:HG2	1.98	0.96
3:d:242:GLU:CG	8:A:20:TYR:OH	2.13	0.96
6:g:281:ILE:HB	7:M:41:ARG:HG3	1.45	0.96
8:A:159:PRO:HG2	8:A:368:GLY:O	1.63	0.96
2:b:76:GLU:O	2:b:80:LYS:CG	2.14	0.96
2:b:85:LEU:CD2	4:p:143:GLN:HG3	1.81	0.96
6:g:118:VAL:CG1	6:g:148:LEU:CD1	2.42	0.96
7:J:74:LEU:CD2	7:I:10:VAL:CG2	2.44	0.96
1:a:65:PRO:HB2	1:a:70:ASN:CG	1.90	0.96
1:a:119:ILE:CD1	2:b:31:LEU:H	1.77	0.96
1:a:214:ILE:HG13	1:a:215:PRO:HD3	1.47	0.96
2:b:67:SER:O	4:p:130:VAL:HG12	1.66	0.96
2:b:88:VAL:CB	4:p:148:MET:CG	2.21	0.96
5:e:119:LEU:HD11	5:e:123:ARG:CZ	1.91	0.96
8:A:382:LYS:CD	8:A:442:THR:HG21	1.94	0.96
1:a:100:THR:HG21	4:p:101:MET:HG3	1.22	0.96
2:b:118:LEU:HD11	4:p:177:GLY:O	1.64	0.96
4:p:108:TYR:CD1	4:p:112:LEU:HD12	2.00	0.96
2:b:107:LYS:CA	4:p:166:THR:OG1	2.07	0.96
4:p:192:LEU:CD1	8:A:3:THR:HG21	1.95	0.96
5:e:119:LEU:HD11	5:e:123:ARG:HE	0.99	0.96
7:P:43:PRO:CB	7:Q:48:LYS:NZ	2.27	0.96
8:E:344:PHE:HD2	8:E:362:ILE:CG2	1.63	0.96
6:g:359:GLY:HA3	9:D:293:PRO:CG	1.95	0.96
1:a:161:PHE:CE1	1:a:163:LYS:HD2	1.99	0.96
6:g:251:GLU:OE2	6:g:270:MET:SD	2.23	0.96
6:g:221:VAL:HG13	8:A:401:SER:OG	1.64	0.95
2:b:133:GLN:HG2	8:A:3:THR:HG23	1.48	0.95
6:g:356:ILE:HD11	9:D:295:ALA:CA	1.95	0.95
7:J:74:LEU:HD22	7:I:10:VAL:CG2	1.96	0.95
9:F:361:ILE:HG23	9:F:432:SER:HB3	1.44	0.95
1:a:222:PHE:HZ	7:Q:54:LEU:CD2	1.78	0.95
2:b:95:PHE:CD2	4:p:151:ALA:O	2.18	0.95
2:b:133:GLN:CG	8:A:3:THR:HG23	1.96	0.95
9:F:120:ASN:O	9:F:120:ASN:OD1	1.82	0.95
8:A:469:LYS:NZ	8:A:492:GLU:HB2	1.81	0.95
8:C:49:MET:SD	8:C:95:ILE:HD11	2.06	0.95
9:D:189:ILE:HG22	9:D:269:LEU:HD11	1.49	0.95
1:a:222:PHE:CZ	7:Q:54:LEU:CD2	2.47	0.95
3:d:195:ALA:O	3:d:199:GLN:HG3	1.66	0.95
3:d:228:GLU:CD	8:A:43:HIS:CE1	2.44	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:172:ARG:HB3	8:A:321:GLU:OE2	1.65	0.95
1:a:39:VAL:HG21	1:a:133:ASP:CG	1.89	0.95
3:d:186:LEU:HD11	3:d:191:LEU:HD21	1.48	0.95
7:Q:43:PRO:HG2	7:R:42:GLN:HE22	1.27	0.95
2:b:92:ALA:HB2	4:p:147:VAL:O	1.64	0.95
2:b:148:ALA:HA	4:p:211:SER:HA	1.46	0.95
8:E:208:GLN:HE22	9:D:144:THR:HG23	1.13	0.95
8:E:355:ARG:CZ	9:D:389:GLN:NE2	2.30	0.95
2:b:142:GLN:OE1	3:d:248:LEU:HD23	1.56	0.95
9:B:251:LEU:CD2	9:B:309:LEU:HD13	1.96	0.95
1:a:104:PHE:CB	4:p:97:PHE:CZ	2.49	0.95
1:a:122:LEU:HD22	1:a:125:GLY:N	1.81	0.95
2:b:68:GLU:HB2	4:p:126:GLN:HB2	0.96	0.95
2:b:81:ALA:CB	4:p:140:LEU:N	2.24	0.95
4:p:210:LEU:HD11	8:A:13:ILE:HB	1.41	0.95
2:b:125:LYS:CG	4:p:185:LEU:HD22	1.96	0.95
2:b:144:VAL:HG21	8:A:9:ILE:HG22	1.49	0.95
7:K:48:LYS:HZ3	7:J:43:PRO:CB	1.80	0.95
8:A:98:ILE:CD1	8:A:245:ALA:CB	2.45	0.95
9:B:347:ASP:OD1	8:C:202:LYS:NZ	2.00	0.95
8:C:392:GLU:CD	9:D:429:ARG:NH2	2.24	0.95
1:a:134:ILE:N	1:a:191:PHE:CE1	2.35	0.94
2:b:79:GLU:N	4:p:136:GLU:HG3	1.81	0.94
7:J:42:GLN:HE22	7:I:43:PRO:HG2	1.31	0.94
7:Q:40:ALA:O	7:R:42:GLN:OE1	1.85	0.94
8:A:98:ILE:CD1	8:A:245:ALA:HB3	1.96	0.94
8:E:169:ILE:HD11	8:E:322:THR:HG21	1.45	0.94
1:a:104:PHE:CD1	4:p:97:PHE:CD1	2.56	0.94
2:b:125:LYS:HB3	4:p:185:LEU:CB	1.96	0.94
3:d:224:ARG:NH1	3:d:232:LEU:HD13	1.78	0.94
6:g:281:ILE:HD12	7:M:41:ARG:HG3	1.45	0.94
2:b:73:LYS:H	4:p:130:VAL:HG22	1.32	0.94
4:p:195:GLN:HG3	8:A:4:ILE:HD13	1.37	0.94
7:M:66:TYR:HB3	7:L:68:LEU:HD13	1.48	0.94
8:C:165:ARG:HD3	8:C:299:LEU:O	1.67	0.94
2:b:64:ILE:CD1	4:p:123:ILE:HG13	1.98	0.94
4:p:152:ARG:HG2	8:A:503:LEU:CB	1.97	0.94
9:F:179:THR:HG21	9:F:215:GLU:OE1	1.68	0.94
1:a:65:PRO:HB3	1:a:70:ASN:ND2	1.82	0.94
2:b:165:HIS:HD2	3:d:219:ALA:HB1	1.32	0.94
5:e:22:ILE:CG1	5:e:33:VAL:HG21	1.98	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L:42:GLN:HE22	7:K:43:PRO:HG2	1.30	0.94
8:E:169:ILE:HG22	8:E:344:PHE:HD1	1.33	0.94
8:E:344:PHE:CE2	8:E:362:ILE:HG21	2.02	0.94
8:A:111:ALA:N	8:A:227:GLU:OE2	2.00	0.94
2:b:103:ILE:HD13	4:p:162:MET:H	1.31	0.94
5:e:37:HIS:CE1	7:L:41:ARG:HE	1.85	0.94
6:g:137:LEU:CD1	6:g:213:LEU:CD1	2.46	0.94
6:g:281:ILE:CB	7:M:41:ARG:HG3	1.97	0.94
2:b:160:LEU:HD13	2:b:163:GLU:HB2	1.49	0.94
2:b:173:ILE:HG12	3:d:221:PHE:HZ	1.32	0.94
3:d:148:ILE:CD1	8:C:17:ILE:CA	2.35	0.94
4:p:213:ASP:OD2	8:A:14:ARG:CG	2.15	0.94
2:b:60:ILE:O	2:b:63:THR:HG22	1.68	0.93
2:b:122:GLU:HA	4:p:181:ILE:CG2	1.98	0.93
3:d:227:ASN:HB2	8:A:46:ASP:CG	1.93	0.93
6:g:149:LYS:CE	6:g:155:TYR:HE1	1.79	0.93
8:A:159:PRO:CG	8:A:368:GLY:O	2.16	0.93
9:B:251:LEU:HD23	9:B:309:LEU:HD13	1.48	0.93
2:b:133:GLN:HG2	8:A:3:THR:CA	1.98	0.93
2:b:160:LEU:CG	2:b:164:LEU:HB2	1.96	0.93
6:g:281:ILE:HA	7:N:41:ARG:HH22	1.15	0.93
1:a:137:THR:HG21	1:a:191:PHE:CB	1.97	0.93
4:p:159:LEU:HD12	4:p:160:ASN:N	1.82	0.93
1:a:122:LEU:CD2	1:a:124:HIS:H	1.81	0.93
7:K:42:GLN:HE22	7:J:43:PRO:HG2	1.33	0.93
7:K:49:ILE:HD11	7:J:40:ALA:HB2	1.46	0.93
7:O:43:PRO:CB	7:P:48:LYS:HZ3	1.82	0.93
2:b:122:GLU:OE1	4:p:181:ILE:HG23	0.76	0.93
2:b:160:LEU:HD12	2:b:164:LEU:H	0.98	0.93
4:p:152:ARG:HD3	8:A:503:LEU:CD2	1.97	0.93
7:J:74:LEU:CD2	7:I:10:VAL:HG23	1.98	0.93
8:E:284:ARG:HH11	8:E:330:TYR:HD1	1.13	0.93
9:B:431:LEU:HD23	9:B:458:PHE:CZ	2.00	0.93
1:a:208:VAL:HG23	1:a:209:PRO:CD	1.96	0.93
6:g:123:VAL:HG11	6:g:308:LEU:CD2	1.84	0.93
8:A:109:ILE:HD11	8:A:113:ALA:HA	1.50	0.93
2:b:85:LEU:O	4:p:147:VAL:HG12	1.66	0.93
7:T:43:PRO:HG2	7:G:42:GLN:HE22	1.34	0.93
7:J:42:GLN:OE1	7:I:40:ALA:O	1.85	0.93
8:A:141:ARG:NH1	8:A:311:GLU:OE2	2.02	0.93
8:A:494:ILE:HG22	8:A:498:MET:CE	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:103:ILE:CG1	4:p:163:LYS:H	1.82	0.93
6:g:137:LEU:HD11	6:g:213:LEU:HD12	1.47	0.93
9:D:275:ILE:CG2	9:D:327:VAL:HG22	1.99	0.93
1:a:119:ILE:HG22	2:b:27:LEU:O	1.66	0.93
2:b:85:LEU:HD12	2:b:86:LYS:N	1.84	0.93
2:b:142:GLN:OE1	3:d:248:LEU:HD21	1.68	0.92
6:g:253:GLU:HB3	6:g:270:MET:HB3	1.52	0.92
8:C:157:MET:HB3	8:C:384:LYS:HD3	1.51	0.92
1:a:24:GLN:O	4:p:83:LEU:C	2.12	0.92
2:b:145:PHE:CE2	3:d:244:ILE:HA	2.04	0.92
4:p:193:GLU:O	4:p:196:LYS:HG2	1.69	0.92
6:g:261:GLU:OE2	9:F:397:ARG:NH2	2.02	0.92
9:F:50:LYS:CE	9:F:92:ILE:HD12	1.96	0.92
8:A:13:ILE:HD13	8:A:16:ARG:CZ	1.98	0.92
1:a:35:ILE:CG2	4:p:88:LEU:N	2.14	0.92
2:b:103:ILE:CB	4:p:159:LEU:CA	1.94	0.92
5:e:22:ILE:HG13	5:e:33:VAL:CG2	1.98	0.92
7:S:48:LYS:NZ	7:R:43:PRO:CB	2.33	0.92
8:C:54:VAL:CG1	8:C:89:VAL:HG22	1.99	0.92
1:a:119:ILE:HD12	2:b:32:ILE:H	1.32	0.92
1:a:164:TYR:HD2	1:a:166:GLN:HG3	0.76	0.92
9:B:294:SER:O	8:C:286:ALA:HB2	1.67	0.92
8:C:432:GLU:HG3	8:C:476:ILE:HG21	1.49	0.92
2:b:88:VAL:CB	4:p:147:VAL:CG1	2.43	0.92
7:S:43:PRO:HB2	7:T:48:LYS:NZ	1.84	0.92
7:O:46:GLU:OE1	7:P:48:LYS:HB3	1.68	0.92
1:a:119:ILE:CG2	2:b:27:LEU:O	2.04	0.92
2:b:103:ILE:HD13	4:p:162:MET:HB2	1.51	0.92
3:d:222:THR:HG21	3:d:234:ASP:CB	1.98	0.92
7:N:10:VAL:CG2	7:O:74:LEU:CD2	2.46	0.92
1:a:25:HIS:O	4:p:83:LEU:CB	2.17	0.92
1:a:64:ILE:HG23	2:b:57:LYS:HE2	1.50	0.92
1:a:135:ASN:ND2	4:p:86:PHE:CG	2.38	0.92
1:a:135:ASN:C	4:p:90:LEU:HD22	1.94	0.92
2:b:142:GLN:HE22	3:d:248:LEU:CA	1.83	0.92
3:d:154:ARG:NH2	8:C:5:ARG:NH1	2.14	0.92
1:a:119:ILE:CG1	2:b:32:ILE:HG12	1.98	0.92
2:b:103:ILE:CD1	4:p:162:MET:CB	2.46	0.92
2:b:107:LYS:HE3	4:p:166:THR:HA	1.51	0.92
1:a:122:LEU:O	2:b:25:ASP:OD2	1.87	0.92
4:p:210:LEU:CD2	8:A:13:ILE:CB	2.48	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:146:LEU:HD22	9:D:374:MET:HE1	1.49	0.92
1:a:119:ILE:HA	2:b:29:THR:H	0.98	0.92
6:g:221:VAL:CG2	8:A:398:GLN:O	2.17	0.92
1:a:24:GLN:O	4:p:83:LEU:O	1.88	0.91
2:b:160:LEU:CD1	2:b:164:LEU:CA	1.94	0.91
6:g:281:ILE:HA	7:N:41:ARG:HH21	1.14	0.91
2:b:80:LYS:H	4:p:137:VAL:CB	1.83	0.91
4:p:152:ARG:HD3	8:A:503:LEU:HB2	1.51	0.91
7:N:43:PRO:CB	7:O:48:LYS:HZ3	1.82	0.91
7:N:46:GLU:OE1	7:O:48:LYS:HB3	1.70	0.91
7:H:43:PRO:CB	7:I:48:LYS:HZ3	1.81	0.91
8:C:54:VAL:HG12	8:C:89:VAL:CG2	2.00	0.91
2:b:81:ALA:CB	4:p:139:GLN:C	2.44	0.91
6:g:73:ARG:NH1	9:F:412:GLU:CD	2.28	0.91
7:S:68:LEU:HD12	7:T:66:TYR:CB	1.99	0.91
7:N:40:ALA:HB2	7:O:49:ILE:HD11	1.53	0.91
1:a:40:LEU:HD23	4:p:89:THR:OG1	1.68	0.91
5:e:34:LEU:HD12	7:K:43:PRO:HG2	0.93	0.91
8:E:379:VAL:HG12	8:E:438:ILE:CG2	2.00	0.91
5:e:119:LEU:HD13	5:e:123:ARG:NE	1.84	0.91
6:g:239:ILE:HD12	6:g:303:GLN:HE21	1.19	0.91
7:O:10:VAL:CG2	7:P:74:LEU:CD2	2.47	0.91
7:G:43:PRO:HG2	7:H:42:GLN:NE2	1.86	0.91
5:e:22:ILE:CG2	5:e:51:ILE:HG13	2.01	0.91
6:g:53:SER:HB3	9:D:403:ASP:OD2	1.69	0.91
7:O:43:PRO:HG2	7:P:42:GLN:NE2	1.85	0.91
9:F:110:ILE:HG22	9:F:118:VAL:HG22	1.50	0.91
1:a:79:ILE:HD13	1:a:99:GLY:HA2	1.50	0.91
2:b:88:VAL:HA	4:p:148:MET:HG2	0.93	0.91
6:g:251:GLU:OE2	6:g:270:MET:CG	2.18	0.91
1:a:124:HIS:NE2	4:p:79:GLU:N	2.18	0.91
1:a:230:ILE:HD11	7:Q:55:LEU:HD13	1.50	0.91
4:p:195:GLN:CG	8:A:4:ILE:HD12	2.00	0.91
2:b:180:ASN:HB3	3:d:201:ILE:HG22	1.52	0.91
6:g:356:ILE:O	9:D:293:PRO:HG2	1.70	0.91
7:H:46:GLU:OE1	7:I:48:LYS:HB3	1.69	0.91
2:b:118:LEU:CD1	4:p:178:ARG:N	2.33	0.91
2:b:145:PHE:CB	8:A:16:ARG:NH2	2.30	0.91
5:e:19:VAL:HG23	5:e:53:LEU:HB2	0.93	0.91
7:P:43:PRO:HG2	7:Q:42:GLN:HE22	1.35	0.91
2:b:88:VAL:CG2	4:p:148:MET:SD	2.60	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:90:LEU:HB2	4:p:91:PRO:HD3	1.52	0.90
8:A:98:ILE:HD11	8:A:245:ALA:CB	2.01	0.90
8:C:248:GLU:OE2	8:C:301:ARG:NE	2.03	0.90
2:b:82:ARG:C	2:b:85:LEU:HG	1.94	0.90
3:d:186:LEU:CD1	3:d:191:LEU:HG	2.00	0.90
7:N:48:LYS:HZ3	7:M:43:PRO:CB	1.84	0.90
7:M:48:LYS:CB	7:L:46:GLU:OE1	2.19	0.90
8:A:109:ILE:HD11	8:A:113:ALA:CA	2.02	0.90
4:p:152:ARG:CD	8:A:503:LEU:CB	2.49	0.90
7:M:74:LEU:CD2	7:L:10:VAL:CG2	2.49	0.90
8:A:13:ILE:HD12	8:A:16:ARG:NH2	1.85	0.90
8:A:111:ALA:HB2	8:A:227:GLU:CD	1.96	0.90
1:a:134:ILE:HG22	1:a:191:PHE:CD1	2.06	0.90
2:b:103:ILE:CG1	4:p:162:MET:CB	2.48	0.90
2:b:160:LEU:CD1	2:b:164:LEU:CB	2.50	0.90
8:A:98:ILE:HD11	8:A:245:ALA:HB1	1.51	0.90
8:C:104:TYR:CD1	8:C:122:ILE:HD13	2.07	0.90
1:a:161:PHE:CZ	1:a:163:LYS:CG	2.40	0.90
9:F:447:LYS:NZ	9:F:482:GLU:OE2	2.03	0.90
4:p:195:GLN:HG3	8:A:4:ILE:HD12	1.53	0.90
7:M:74:LEU:CD2	7:L:10:VAL:HG23	2.02	0.90
8:A:382:LYS:HD3	8:A:442:THR:HG21	1.51	0.90
9:D:109:ARG:NH1	9:D:119:ASP:OD1	2.05	0.90
1:a:120:ILE:HG13	2:b:25:ASP:O	1.70	0.90
2:b:99:GLY:O	4:p:159:LEU:HB3	1.71	0.90
3:d:247:GLN:NE2	8:A:13:ILE:HA	1.87	0.90
2:b:82:ARG:CG	4:p:140:LEU:HD23	2.00	0.90
3:d:154:ARG:HE	8:C:5:ARG:NH1	1.68	0.90
7:N:10:VAL:CG2	7:O:74:LEU:HD22	2.01	0.90
1:a:119:ILE:HD13	2:b:32:ILE:N	1.83	0.90
2:b:82:ARG:HB3	4:p:140:LEU:CG	2.02	0.90
4:p:206:GLN:O	4:p:210:LEU:HB2	1.70	0.90
7:N:10:VAL:HG23	7:O:74:LEU:CD2	2.02	0.90
1:a:79:ILE:CD1	1:a:99:GLY:HA2	2.02	0.90
2:b:106:GLU:OE1	4:p:163:LYS:HD2	1.71	0.90
6:g:281:ILE:CD1	7:M:41:ARG:CG	2.48	0.90
7:S:40:ALA:HB2	7:T:49:ILE:HD11	1.54	0.90
7:G:10:VAL:CG2	7:H:74:LEU:CD2	2.50	0.90
1:a:135:ASN:OD1	4:p:86:PHE:CB	2.20	0.89
6:g:103:GLU:HG2	7:R:41:ARG:NE	1.72	0.89
6:g:119:ALA:CB	6:g:207:VAL:HG11	2.01	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:70:ASN:C	2:b:53:LEU:HB3	1.97	0.89
4:p:152:ARG:CD	8:A:503:LEU:HD22	2.01	0.89
2:b:78:LEU:HA	4:p:135:SER:O	1.72	0.89
3:d:243:GLU:CD	4:p:218:VAL:HG12	1.98	0.89
7:K:48:LYS:NZ	7:J:43:PRO:HB2	1.87	0.89
9:B:425:ARG:NH1	9:B:429:ARG:HH22	1.71	0.89
8:C:271:TYR:CD2	8:C:294:LEU:HD22	2.08	0.89
2:b:173:ILE:CG1	3:d:221:PHE:HZ	1.86	0.89
4:p:213:ASP:CG	8:A:14:ARG:HG2	1.96	0.89
1:a:118:LYS:CB	2:b:29:THR:O	2.20	0.89
1:a:124:HIS:CD2	4:p:79:GLU:HB3	2.05	0.89
2:b:125:LYS:O	4:p:185:LEU:CD1	2.21	0.89
5:e:96:LEU:HD11	5:e:123:ARG:CG	2.03	0.89
6:g:353:ILE:HD11	8:E:284:ARG:HA	1.54	0.89
8:E:140:ARG:HE	9:F:206:THR:CG2	1.85	0.89
4:p:199:THR:O	8:A:6:ALA:HB1	1.71	0.89
6:g:104:ASP:HA	7:S:41:ARG:NH2	1.88	0.89
2:b:133:GLN:HG3	8:A:3:THR:CG2	1.82	0.89
4:p:167:GLN:O	4:p:171:GLU:HB2	1.73	0.89
4:p:199:THR:HA	4:p:202:SER:OG	1.73	0.89
6:g:251:GLU:HB2	6:g:272:LYS:HG2	1.52	0.89
9:B:149:PHE:CZ	9:B:189:ILE:HD13	2.08	0.89
6:g:261:GLU:CD	9:F:397:ARG:HH21	1.81	0.89
6:g:343:ARG:NH2	8:A:326:ASP:HB2	1.87	0.89
3:d:132:ILE:N	8:E:13:ILE:HD11	1.88	0.89
5:e:22:ILE:CG1	5:e:33:VAL:CG2	2.52	0.88
6:g:137:LEU:CD1	6:g:213:LEU:HD13	2.02	0.88
6:g:359:GLY:O	9:D:293:PRO:HD3	1.72	0.88
7:T:43:PRO:HB2	7:G:48:LYS:NZ	1.86	0.88
9:D:431:LEU:HD21	9:D:458:PHE:CZ	2.06	0.88
1:a:54:ALA:CB	4:p:104:LEU:HD11	2.03	0.88
2:b:145:PHE:N	8:A:13:ILE:HD12	1.87	0.88
7:H:43:PRO:HG2	7:I:42:GLN:NE2	1.87	0.88
2:b:137:ILE:HG13	8:A:5:ARG:CG	2.03	0.88
8:E:460:GLU:O	8:E:463:THR:HG22	1.72	0.88
1:a:124:HIS:CE1	4:p:79:GLU:HB3	2.07	0.88
2:b:103:ILE:CD1	4:p:163:LYS:H	1.86	0.88
7:N:43:PRO:CB	7:O:48:LYS:NZ	2.37	0.88
2:b:103:ILE:HG13	4:p:163:LYS:N	1.87	0.88
2:b:180:ASN:CG	3:d:201:ILE:HG21	1.97	0.88
1:a:54:ALA:CB	4:p:104:LEU:CD1	2.52	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:48:LYS:NZ	7:I:43:PRO:CB	2.37	0.88
2:b:133:GLN:HG2	8:A:3:THR:CB	2.02	0.88
4:p:214:ILE:HA	8:A:17:ILE:HD13	0.90	0.88
6:g:103:GLU:HG3	7:R:41:ARG:CG	2.04	0.88
6:g:221:VAL:HG21	8:A:401:SER:HB3	1.52	0.88
9:B:149:PHE:HZ	9:B:189:ILE:HD13	1.37	0.88
2:b:84:ARG:CG	4:p:144:ALA:HB3	2.04	0.88
2:b:129:ILE:HD11	4:p:188:ALA:HB3	1.52	0.88
6:g:324:SER:O	6:g:327:THR:HG22	1.73	0.88
6:g:360:ALA:CA	9:D:293:PRO:CD	2.47	0.88
9:B:411:ASP:CA	9:B:418:ARG:NH2	2.30	0.88
2:b:107:LYS:CE	4:p:166:THR:HA	2.02	0.88
4:p:203:LEU:HD22	8:A:7:ASP:O	1.75	0.88
4:p:210:LEU:CD2	8:A:13:ILE:CG1	2.46	0.87
7:P:43:PRO:HB2	7:Q:48:LYS:NZ	1.90	0.87
1:a:62:GLN:O	4:p:119:ARG:NH1	2.06	0.87
4:p:219:LEU:HB2	4:p:220:PRO:HD2	1.55	0.87
9:F:50:LYS:HE3	9:F:92:ILE:HD11	1.56	0.87
2:b:125:LYS:HA	4:p:185:LEU:CD2	2.05	0.87
4:p:210:LEU:O	4:p:213:ASP:HB3	1.75	0.87
1:a:35:ILE:HG21	4:p:88:LEU:CB	2.04	0.87
1:a:47:ILE:HG13	4:p:96:GLU:HG2	1.57	0.87
1:a:212:VAL:HB	1:a:213:PRO:HD3	1.56	0.87
2:b:88:VAL:CG2	4:p:145:ASN:HA	2.02	0.87
6:g:356:ILE:CG2	8:E:286:ALA:HB2	2.03	0.87
6:g:363:CYS:HB3	9:D:290:GLY:O	1.75	0.87
7:M:48:LYS:CG	7:L:46:GLU:OE1	2.22	0.87
1:a:136:THR:N	4:p:90:LEU:CD2	2.36	0.87
4:p:203:LEU:HD22	8:A:7:ASP:C	1.98	0.87
6:g:239:ILE:HD12	6:g:303:GLN:HE22	1.28	0.87
7:S:68:LEU:CD1	7:T:66:TYR:CG	2.58	0.87
7:G:46:GLU:OE1	7:H:48:LYS:HB3	1.74	0.87
1:a:184:LEU:HD23	1:a:188:PHE:CD2	2.09	0.87
6:g:123:VAL:HG13	6:g:308:LEU:HD22	1.56	0.87
6:g:221:VAL:CG2	8:A:401:SER:HB3	2.04	0.87
7:M:74:LEU:HD22	7:L:10:VAL:CG2	2.02	0.87
7:M:80:PHE:CE2	7:L:81:VAL:HG21	2.09	0.87
9:D:275:ILE:HG22	9:D:327:VAL:HG22	1.57	0.87
1:a:53:SER:O	1:a:56:ILE:CG2	2.22	0.87
4:p:214:ILE:CB	8:A:17:ILE:HD12	2.03	0.87
7:O:10:VAL:HG23	7:P:74:LEU:CD2	2.05	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:144:ALA:O	4:p:147:VAL:HG12	1.73	0.87
1:a:135:ASN:HD21	4:p:86:PHE:CB	1.88	0.86
2:b:133:GLN:O	2:b:137:ILE:CD1	2.22	0.86
7:H:40:ALA:HB2	7:I:49:ILE:HD11	1.57	0.86
8:A:111:ALA:CA	8:A:227:GLU:OE2	2.22	0.86
2:b:103:ILE:HD13	4:p:162:MET:CB	2.04	0.86
7:Q:10:VAL:CG2	7:R:74:LEU:CD2	2.52	0.86
7:L:42:GLN:OE1	7:K:40:ALA:O	1.93	0.86
8:A:469:LYS:HD2	8:A:493:ALA:HB2	1.57	0.86
3:d:228:GLU:CD	8:A:43:HIS:NE2	2.32	0.86
9:D:113:VAL:HG22	9:D:249:VAL:HG13	1.57	0.86
1:a:161:PHE:CZ	1:a:163:LYS:CB	2.47	0.86
1:a:44:TRP:CD1	4:p:96:GLU:OE1	2.28	0.86
1:a:119:ILE:HD11	2:b:32:ILE:N	1.70	0.86
2:b:125:LYS:HD3	4:p:185:LEU:HD22	1.46	0.86
3:d:247:GLN:NE2	8:A:13:ILE:HD13	1.90	0.86
7:N:74:LEU:CD2	7:M:10:VAL:CG2	2.53	0.86
2:b:107:LYS:HA	4:p:166:THR:HG23	1.55	0.86
4:p:210:LEU:CD1	8:A:13:ILE:CG2	2.54	0.86
6:g:104:ASP:HA	7:S:41:ARG:HH21	1.41	0.86
7:Q:43:PRO:CB	7:R:48:LYS:NZ	2.38	0.86
7:K:48:LYS:HB3	7:J:46:GLU:OE1	1.75	0.86
8:C:77:MET:HE2	8:C:112:LEU:HD21	1.56	0.86
9:D:100:VAL:CG1	9:D:256:MET:HE3	2.06	0.86
1:a:24:GLN:C	4:p:83:LEU:HG	2.00	0.86
1:a:26:PHE:HB3	4:p:83:LEU:HA	0.86	0.86
1:a:100:THR:HB	4:p:97:PHE:CE2	2.09	0.86
1:a:214:ILE:CG1	1:a:215:PRO:HD3	2.05	0.86
2:b:92:ALA:HB3	4:p:147:VAL:O	1.73	0.86
2:b:141:ARG:CA	8:A:9:ILE:HD12	2.06	0.86
2:b:144:VAL:HG22	4:p:207:ILE:HD11	1.55	0.86
9:F:202:VAL:HG22	9:F:249:VAL:HG23	1.57	0.86
1:a:119:ILE:CG1	2:b:28:ALA:HA	2.04	0.86
2:b:125:LYS:HD2	4:p:185:LEU:HD23	0.88	0.86
6:g:221:VAL:CG2	8:A:401:SER:CB	2.53	0.86
9:B:410:LEU:C	9:B:418:ARG:NH2	2.33	0.86
9:D:338:ALA:HB3	9:D:339:PRO:HD3	1.57	0.86
1:a:70:ASN:C	2:b:53:LEU:CB	2.48	0.86
3:d:242:GLU:HG2	8:A:20:TYR:CZ	2.11	0.86
7:S:43:PRO:HG2	7:T:42:GLN:HE22	1.41	0.86
7:N:68:LEU:HD13	7:O:66:TYR:HB3	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:10:VAL:CG2	7:P:74:LEU:HD22	2.04	0.86
7:P:40:ALA:HB2	7:Q:49:ILE:HD11	1.57	0.86
1:a:119:ILE:CG2	2:b:28:ALA:CA	2.07	0.86
8:E:386:GLU:OE1	8:E:413:ARG:HD3	1.73	0.86
8:E:464:TYR:OH	8:E:496:GLU:OE1	1.94	0.86
8:A:432:GLU:O	8:A:435:VAL:HG12	1.76	0.86
1:a:118:LYS:CB	2:b:29:THR:C	2.47	0.85
6:g:359:GLY:CA	9:D:293:PRO:CG	2.53	0.85
7:N:48:LYS:HB3	7:M:46:GLU:OE1	1.76	0.85
7:Q:40:ALA:HB2	7:R:49:ILE:HD11	1.58	0.85
2:b:95:PHE:CD2	4:p:151:ALA:C	2.18	0.85
7:T:46:GLU:OE1	7:G:48:LYS:HB3	1.74	0.85
7:H:43:PRO:CB	7:I:48:LYS:NZ	2.38	0.85
8:E:344:PHE:HD2	8:E:362:ILE:HG21	0.90	0.85
8:E:355:ARG:HD3	10:E:600:ATP:C2	2.11	0.85
2:b:100:TYR:O	2:b:103:ILE:HG22	1.76	0.85
4:p:195:GLN:HG2	8:A:4:ILE:HD11	0.87	0.85
8:E:82:MET:HA	8:E:82:MET:CE	2.05	0.85
8:E:413:ARG:HH12	8:E:444:GLY:N	1.74	0.85
8:C:237:TYR:CE1	8:C:271:TYR:CD1	2.64	0.85
4:p:156:SER:O	4:p:159:LEU:HG	1.77	0.85
7:G:40:ALA:HB2	7:H:49:ILE:HD11	1.58	0.85
1:a:39:VAL:CG2	1:a:133:ASP:OD2	2.25	0.85
2:b:80:LYS:CG	4:p:137:VAL:HB	2.06	0.85
4:p:206:GLN:O	4:p:210:LEU:HB3	1.77	0.85
1:a:116:PRO:HB3	2:b:34:LEU:N	1.92	0.85
3:d:72:ASP:OD1	3:d:77:ARG:NE	2.09	0.85
4:p:127:LEU:O	4:p:130:VAL:HG12	1.75	0.85
6:g:360:ALA:HA	9:D:293:PRO:HD2	1.56	0.85
2:b:87:LYS:O	2:b:90:MET:HB3	1.76	0.85
5:e:19:VAL:CA	5:e:53:LEU:HD13	2.06	0.85
7:G:10:VAL:CG2	7:H:74:LEU:HD22	2.07	0.85
8:A:464:TYR:CD1	8:A:468:ASN:ND2	2.45	0.85
2:b:61:LEU:CD1	2:b:65:ARG:CD	2.55	0.85
5:e:38:ALA:HB3	7:L:41:ARG:CG	2.01	0.85
7:S:42:GLN:HE22	7:R:43:PRO:HG2	1.42	0.85
7:S:42:GLN:OE1	7:R:40:ALA:O	1.94	0.85
9:F:50:LYS:HD2	9:F:90:GLU:CD	2.02	0.85
2:b:176:PHE:CD1	3:d:233:VAL:CG2	2.44	0.84
1:a:193:ASN:ND2	1:a:227:GLN:CG	2.40	0.84
2:b:122:GLU:HA	4:p:181:ILE:HG21	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:136:SER:OG	3:d:138:LEU:HD21	1.76	0.84
1:a:24:GLN:CB	4:p:84:PHE:CE2	2.20	0.84
2:b:128:THR:HG22	4:p:189:LEU:HD21	1.56	0.84
7:N:48:LYS:NZ	7:M:43:PRO:CB	2.39	0.84
8:C:54:VAL:HG12	8:C:89:VAL:HG22	1.59	0.84
2:b:125:LYS:HB3	4:p:185:LEU:CG	2.06	0.84
2:b:125:LYS:O	4:p:185:LEU:HD13	1.76	0.84
7:S:74:LEU:CD2	7:R:10:VAL:CG2	2.55	0.84
7:N:46:GLU:OE1	7:O:48:LYS:CG	2.25	0.84
8:A:214:GLN:NE2	8:A:219:MET:HB3	1.92	0.84
1:a:134:ILE:CA	1:a:191:PHE:CE1	2.59	0.84
2:b:69:GLU:N	4:p:130:VAL:HG11	1.65	0.84
2:b:121:PHE:CZ	2:b:125:LYS:HE2	2.12	0.84
4:p:163:LYS:O	4:p:166:THR:HG22	1.78	0.84
6:g:129:LEU:HD23	9:B:412:GLU:CD	2.02	0.84
7:G:68:LEU:HD13	7:H:66:TYR:HB3	1.59	0.84
8:E:369:SER:O	8:E:377:LYS:HE2	1.77	0.84
8:C:104:TYR:CE1	8:C:122:ILE:HD13	2.12	0.84
3:d:76:SER:HA	3:d:164:GLU:HG2	1.59	0.84
6:g:104:ASP:CA	7:S:41:ARG:NH2	2.41	0.84
7:S:48:LYS:NZ	7:R:43:PRO:HB2	1.93	0.84
2:b:73:LYS:O	4:p:134:SER:HA	1.74	0.84
8:C:237:TYR:HD1	8:C:271:TYR:HB2	1.39	0.84
2:b:61:LEU:CD1	2:b:65:ARG:HD2	2.07	0.84
2:b:148:ALA:CA	4:p:211:SER:HA	2.08	0.84
3:d:152:SER:O	3:d:153:GLU:CD	2.20	0.84
7:O:40:ALA:HB2	7:P:49:ILE:HD11	1.60	0.84
7:J:48:LYS:HZ3	7:I:43:PRO:CB	1.90	0.84
1:a:137:THR:CG2	1:a:191:PHE:HB2	2.08	0.84
2:b:132:GLU:HG3	4:p:189:LEU:CD2	2.06	0.84
6:g:221:VAL:HG21	8:A:401:SER:CB	2.08	0.84
9:F:385:TYR:CE1	9:F:389:GLN:NE2	2.46	0.83
1:a:119:ILE:HD13	2:b:31:LEU:CD1	2.08	0.83
1:a:122:LEU:HD23	1:a:124:HIS:N	1.91	0.83
2:b:84:ARG:CB	4:p:144:ALA:HB3	1.89	0.83
3:d:235:MET:HE2	8:A:22:ARG:HH21	1.43	0.83
6:g:353:ILE:CD1	8:E:284:ARG:HA	2.07	0.83
7:H:10:VAL:CG2	7:I:74:LEU:CD2	2.56	0.83
9:F:336:ASP:OD1	9:F:337:PRO:HD2	1.79	0.83
1:a:54:ALA:HB1	4:p:104:LEU:CD1	2.08	0.83
1:a:119:ILE:HA	2:b:28:ALA:C	2.02	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:122:GLU:CA	4:p:181:ILE:HG21	2.08	0.83
2:b:125:LYS:CB	4:p:185:LEU:CD2	2.56	0.83
6:g:356:ILE:HG21	8:E:286:ALA:CB	2.05	0.83
1:a:119:ILE:HD13	2:b:31:LEU:CG	2.08	0.83
2:b:80:LYS:C	4:p:140:LEU:CB	2.49	0.83
2:b:148:ALA:CB	4:p:211:SER:HA	2.09	0.83
7:G:10:VAL:HG23	7:H:74:LEU:CD2	2.08	0.83
9:B:345:HIS:O	8:C:202:LYS:HD3	1.77	0.83
2:b:78:LEU:CD1	4:p:139:GLN:OE1	2.26	0.83
8:A:152:ILE:H	8:A:423:GLN:HE22	1.26	0.83
1:a:70:ASN:O	2:b:53:LEU:CD2	2.25	0.83
2:b:82:ARG:CA	4:p:140:LEU:HD23	2.08	0.83
2:b:107:LYS:N	4:p:166:THR:HG21	1.94	0.83
2:b:144:VAL:HG12	4:p:210:LEU:HD23	1.04	0.83
4:p:192:LEU:HD22	8:A:3:THR:CG2	2.08	0.83
6:g:202:PHE:CG	6:g:231:LEU:HD13	2.13	0.83
8:A:157:MET:SD	8:A:387:LEU:HD12	2.18	0.83
1:a:24:GLN:CA	4:p:83:LEU:CD1	2.56	0.83
1:a:65:PRO:CG	1:a:70:ASN:HD21	1.91	0.83
5:e:110:ARG:NH2	6:g:201:LEU:HD13	1.93	0.83
6:g:279:SER:OG	6:g:282:LEU:HB2	1.78	0.83
7:S:74:LEU:HD22	7:R:10:VAL:CG2	2.08	0.83
7:Q:43:PRO:CB	7:R:48:LYS:HZ3	1.91	0.83
8:A:214:GLN:HE21	8:A:219:MET:HG2	0.98	0.83
7:J:66:TYR:HB3	7:I:68:LEU:HD13	1.60	0.83
1:a:119:ILE:HG13	2:b:28:ALA:O	1.78	0.83
3:d:181:THR:O	3:d:221:PHE:CB	2.26	0.83
3:d:198:VAL:HA	3:d:201:ILE:HD11	1.59	0.83
4:p:195:GLN:CD	8:A:4:ILE:HD11	2.04	0.83
2:b:64:ILE:CD1	4:p:120:ASP:HA	2.07	0.83
2:b:125:LYS:C	4:p:185:LEU:HD13	2.03	0.83
7:S:43:PRO:HB3	7:T:48:LYS:NZ	1.94	0.83
8:E:37:ASP:CG	9:D:291:ARG:HH21	1.86	0.83
8:A:420:LEU:HD11	8:A:441:GLY:HA3	1.59	0.83
1:a:114:LEU:CA	2:b:37:VAL:HB	2.06	0.82
1:a:119:ILE:HD13	2:b:31:LEU:HD12	1.60	0.82
2:b:80:LYS:H	4:p:137:VAL:HA	1.44	0.82
2:b:82:ARG:CA	2:b:85:LEU:CD2	2.57	0.82
4:p:210:LEU:CD2	8:A:13:ILE:HB	2.08	0.82
7:Q:46:GLU:OE1	7:R:48:LYS:HB3	1.78	0.82
7:K:42:GLN:NE2	7:J:43:PRO:HG2	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:76:LEU:HD13	4:p:109:TYR:CD1	2.14	0.82
3:d:186:LEU:HD11	3:d:191:LEU:HG	1.61	0.82
6:g:292:LEU:HD12	6:g:292:LEU:O	1.79	0.82
8:E:37:ASP:CG	9:D:291:ARG:NH2	2.36	0.82
1:a:119:ILE:CG2	2:b:27:LEU:C	2.52	0.82
6:g:251:GLU:CG	6:g:272:LYS:HG2	2.09	0.82
1:a:114:LEU:HA	2:b:37:VAL:CB	2.01	0.82
1:a:119:ILE:CD1	2:b:31:LEU:HG	2.09	0.82
3:d:247:GLN:O	8:A:16:ARG:HD3	1.79	0.82
4:p:152:ARG:CG	8:A:503:LEU:CB	2.58	0.82
6:g:53:SER:CB	9:D:403:ASP:OD2	2.27	0.82
9:B:169:GLY:HA3	9:B:346:LEU:HD13	1.59	0.82
1:a:119:ILE:HD13	2:b:31:LEU:HG	1.61	0.82
1:a:119:ILE:HD11	2:b:32:ILE:CB	2.10	0.82
4:p:213:ASP:OD2	8:A:14:ARG:CA	2.28	0.82
5:e:34:LEU:HB2	7:L:42:GLN:HE22	1.43	0.82
7:O:68:LEU:HD13	7:P:66:TYR:HB3	1.60	0.82
7:Q:43:PRO:HG2	7:R:42:GLN:NE2	1.93	0.82
1:a:119:ILE:CG1	2:b:28:ALA:CA	2.57	0.82
7:J:80:PHE:CE2	7:I:81:VAL:HG21	2.14	0.82
9:B:20:LEU:HD13	9:B:90:GLU:CD	2.04	0.82
8:C:237:TYR:OH	8:C:294:LEU:HD13	1.80	0.82
1:a:35:ILE:CG2	4:p:88:LEU:CB	2.57	0.82
2:b:141:ARG:N	8:A:9:ILE:HD12	1.95	0.82
3:d:86:ALA:CB	3:d:95:THR:HG21	2.09	0.82
3:d:154:ARG:HH21	8:C:5:ARG:NE	1.77	0.82
7:N:81:VAL:HG21	7:O:80:PHE:CE2	2.15	0.82
1:a:39:VAL:HG11	1:a:133:ASP:OD2	1.80	0.81
1:a:164:TYR:CE2	1:a:166:GLN:HG2	2.13	0.81
1:a:135:ASN:OD1	4:p:86:PHE:HB3	1.79	0.81
4:p:192:LEU:CD2	8:A:3:THR:OG1	2.28	0.81
6:g:360:ALA:N	9:D:293:PRO:CG	2.42	0.81
7:N:74:LEU:CD2	7:M:10:VAL:HG23	2.10	0.81
7:J:62:ALA:C	7:J:65:ILE:HG22	2.05	0.81
8:A:154:ILE:CD1	8:A:358:ILE:HD11	2.10	0.81
1:a:25:HIS:O	4:p:83:LEU:HB3	1.80	0.81
1:a:70:ASN:O	2:b:53:LEU:HD22	1.80	0.81
1:a:122:LEU:HA	2:b:25:ASP:HB2	1.61	0.81
1:a:222:PHE:CE1	7:Q:54:LEU:HD23	2.15	0.81
2:b:48:VAL:O	2:b:52:LEU:HD13	1.81	0.81
2:b:68:GLU:CD	4:p:126:GLN:HG3	2.05	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:129:ILE:HD11	4:p:188:ALA:HB1	1.59	0.81
7:S:49:ILE:HD11	7:R:40:ALA:HB2	1.62	0.81
7:R:62:ALA:C	7:R:65:ILE:HG22	2.05	0.81
7:T:43:PRO:C	7:G:48:LYS:HZ3	1.89	0.81
7:J:48:LYS:HB3	7:I:46:GLU:OE1	1.81	0.81
9:F:387:ILE:HD11	9:F:458:PHE:CB	2.09	0.81
2:b:81:ALA:HB3	4:p:139:GLN:C	1.94	0.81
2:b:84:ARG:HG2	4:p:144:ALA:HB3	1.61	0.81
6:g:353:ILE:HD11	8:E:284:ARG:CG	2.10	0.81
7:S:74:LEU:CD2	7:R:10:VAL:HG23	2.10	0.81
7:M:74:LEU:HD21	7:L:10:VAL:HG23	1.61	0.81
7:T:43:PRO:HG2	7:G:42:GLN:NE2	1.94	0.81
1:a:54:ALA:HB1	4:p:104:LEU:HD11	1.60	0.81
1:a:134:ILE:CG2	1:a:191:PHE:CD2	2.47	0.81
6:g:221:VAL:HG21	8:A:398:GLN:O	1.80	0.81
8:E:42:ILE:HD11	8:E:56:PHE:CE1	2.16	0.81
9:B:20:LEU:HD22	9:B:92:ILE:HG12	1.60	0.81
1:a:124:HIS:CD2	4:p:80:LYS:O	2.33	0.81
7:S:64:THR:HG21	7:T:63:LEU:CD2	2.10	0.81
7:P:62:ALA:C	7:P:65:ILE:HG22	2.06	0.81
7:Q:62:ALA:C	7:Q:65:ILE:HG22	2.05	0.81
3:d:132:ILE:HA	8:E:13:ILE:CD1	2.10	0.81
4:p:87:ASN:OD1	4:p:89:THR:HG22	1.79	0.81
7:H:62:ALA:C	7:H:65:ILE:HG22	2.06	0.81
7:K:48:LYS:HZ3	7:J:43:PRO:C	1.88	0.81
9:F:50:LYS:HE2	9:F:92:ILE:HD11	1.45	0.81
9:D:53:ASP:HB3	9:D:59:MET:CE	2.10	0.81
2:b:85:LEU:HD23	4:p:143:GLN:CG	2.10	0.81
2:b:103:ILE:CG2	4:p:162:MET:HB2	2.11	0.81
4:p:167:GLN:O	4:p:171:GLU:CB	2.27	0.81
6:g:240:CYS:HB2	6:g:246:CYS:SG	2.20	0.81
7:O:46:GLU:OE1	7:P:48:LYS:CG	2.28	0.81
7:O:62:ALA:C	7:O:65:ILE:HG22	2.06	0.81
7:T:62:ALA:C	7:T:65:ILE:HG22	2.06	0.81
7:H:46:GLU:OE1	7:I:48:LYS:CG	2.28	0.81
8:E:106:GLY:HA2	8:E:219:MET:HE3	1.63	0.81
2:b:57:LYS:O	2:b:60:ILE:HG22	1.81	0.81
2:b:145:PHE:CA	8:A:13:ILE:HD12	2.10	0.81
2:b:147:GLN:OE1	4:p:207:ILE:CG2	2.29	0.81
5:e:46:ILE:HG22	5:e:63:MET:C	2.06	0.81
7:M:62:ALA:C	7:M:65:ILE:HG22	2.06	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:L:48:LYS:HB3	7:K:46:GLU:OE1	1.81	0.81
7:I:62:ALA:C	7:I:65:ILE:HG22	2.05	0.81
7:L:62:ALA:C	7:L:65:ILE:HG22	2.06	0.81
9:B:20:LEU:HD21	9:B:92:ILE:HG12	1.62	0.81
8:C:78:GLY:HA2	8:C:232:PRO:HG3	1.63	0.81
3:d:179:VAL:HG22	3:d:210:LYS:CB	2.10	0.80
8:A:193:ILE:O	8:A:193:ILE:HG22	1.77	0.80
1:a:112:GLY:HA2	1:a:128:ALA:O	1.81	0.80
2:b:161:ASN:O	2:b:165:HIS:HB2	1.80	0.80
3:d:177:VAL:HG11	3:d:210:LYS:HD2	1.62	0.80
4:p:152:ARG:CB	8:A:503:LEU:CD2	2.52	0.80
7:N:46:GLU:OE1	7:O:48:LYS:CB	2.29	0.80
7:G:62:ALA:C	7:G:65:ILE:HG22	2.06	0.80
1:a:139:ALA:CB	4:p:94:MET:CE	2.59	0.80
2:b:141:ARG:HA	8:A:9:ILE:HD12	1.63	0.80
5:e:50:ARG:HG2	5:e:59:THR:HG22	1.61	0.80
1:a:184:LEU:CD2	1:a:188:PHE:CD2	2.64	0.80
4:p:93:ILE:HD12	4:p:96:GLU:HB3	1.62	0.80
5:e:38:ALA:N	7:L:41:ARG:O	2.14	0.80
7:S:48:LYS:HZ2	7:R:43:PRO:CB	1.94	0.80
4:p:219:LEU:HD12	4:p:220:PRO:O	1.82	0.80
7:O:46:GLU:OE1	7:P:48:LYS:CB	2.29	0.80
7:H:46:GLU:OE1	7:I:48:LYS:CB	2.30	0.80
7:K:62:ALA:C	7:K:65:ILE:HG22	2.06	0.80
2:b:145:PHE:CZ	3:d:243:GLU:O	2.34	0.80
5:e:34:LEU:CB	7:L:42:GLN:NE2	2.39	0.80
6:g:359:GLY:C	9:D:293:PRO:CG	2.54	0.80
8:C:432:GLU:HG3	8:C:476:ILE:HG23	1.61	0.80
1:a:53:SER:C	1:a:56:ILE:HG22	2.05	0.80
3:d:242:GLU:CG	8:A:20:TYR:CZ	2.64	0.80
4:p:195:GLN:CD	8:A:4:ILE:CD1	2.55	0.80
4:p:212:ASP:C	4:p:215:VAL:HG12	2.07	0.80
6:g:281:ILE:CA	7:N:41:ARG:HH21	1.90	0.80
6:g:362:ALA:CB	8:C:281:PRO:HB3	2.12	0.80
7:N:74:LEU:HD22	7:M:10:VAL:CG2	2.10	0.80
2:b:80:LYS:HB2	4:p:137:VAL:CB	2.07	0.80
6:g:119:ALA:HB3	6:g:210:VAL:HG22	1.63	0.80
6:g:251:GLU:CB	6:g:272:LYS:HG2	2.12	0.80
7:S:62:ALA:C	7:S:65:ILE:HG22	2.06	0.80
7:L:49:ILE:HD11	7:K:40:ALA:HB2	1.62	0.80
4:p:159:LEU:O	4:p:163:LYS:N	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:N:62:ALA:C	7:N:65:ILE:HG22	2.06	0.80
8:A:492:GLU:O	8:A:496:GLU:CG	2.30	0.80
9:B:71:ASN:HD21	8:C:9:ILE:HA	1.47	0.80
9:B:245:ALA:O	9:B:249:VAL:HG23	1.82	0.80
1:a:35:ILE:HG22	4:p:88:LEU:CA	2.11	0.80
2:b:78:LEU:O	4:p:140:LEU:CG	2.28	0.80
7:O:43:PRO:CB	7:P:48:LYS:NZ	2.44	0.80
7:L:42:GLN:NE2	7:K:43:PRO:HG2	1.97	0.80
8:E:37:ASP:OD2	9:D:291:ARG:CZ	2.30	0.80
8:C:100:VAL:HG23	8:C:246:LEU:HD23	1.62	0.80
3:d:148:ILE:HG12	8:C:16:ARG:HG2	1.62	0.79
7:S:10:VAL:CG2	7:T:74:LEU:CD2	2.59	0.79
7:T:10:VAL:CG2	7:G:74:LEU:CD2	2.61	0.79
8:E:202:LYS:HD3	9:D:345:HIS:O	1.82	0.79
8:E:355:ARG:NH1	9:D:385:TYR:OH	2.15	0.79
1:a:34:GLN:O	4:p:87:ASN:CB	2.26	0.79
1:a:135:ASN:CG	4:p:86:PHE:HA	2.05	0.79
4:p:210:LEU:CD1	8:A:13:ILE:CB	2.52	0.79
7:N:10:VAL:HG23	7:O:74:LEU:HD21	1.63	0.79
8:A:98:ILE:HD13	8:A:245:ALA:CB	2.09	0.79
9:D:191:LYS:NZ	9:D:219:SER:HB2	1.97	0.79
2:b:71:ARG:O	4:p:133:THR:OG1	1.99	0.79
2:b:80:LYS:N	4:p:137:VAL:CA	2.45	0.79
3:d:180:VAL:HG22	3:d:223:ILE:HG22	1.63	0.79
6:g:132:GLY:O	6:g:136:MET:HG2	1.80	0.79
8:A:382:LYS:HD3	8:A:442:THR:HG22	1.63	0.79
9:B:311:GLU:HG3	8:C:230:ASP:HB3	1.64	0.79
2:b:125:LYS:CB	4:p:185:LEU:HB2	2.10	0.79
6:g:229:THR:HG23	6:g:229:THR:O	1.82	0.79
7:P:46:GLU:OE1	7:Q:48:LYS:HB3	1.80	0.79
7:Q:6:ALA:HB1	7:R:80:PHE:HD2	1.45	0.79
9:B:71:ASN:HD21	8:C:9:ILE:C	1.90	0.79
1:a:61:PRO:HB3	4:p:112:LEU:CD2	2.12	0.79
2:b:68:GLU:HG3	4:p:126:GLN:CB	1.92	0.79
2:b:73:LYS:O	4:p:134:SER:CA	2.28	0.79
3:d:72:ASP:N	8:A:70:ASN:HD21	1.80	0.79
3:d:181:THR:O	3:d:221:PHE:HB2	1.82	0.79
5:e:38:ALA:CB	7:L:41:ARG:HA	2.03	0.79
7:P:68:LEU:HD13	7:Q:66:TYR:HB3	1.65	0.79
8:C:439:TYR:CD2	8:C:490:LEU:HD23	2.17	0.79
9:D:100:VAL:HG11	9:D:256:MET:HE3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:114:LEU:HD13	2:b:37:VAL:C	2.08	0.79
2:b:147:GLN:OE1	4:p:207:ILE:HG23	1.83	0.79
6:g:137:LEU:HD11	6:g:213:LEU:HD13	1.57	0.79
7:M:48:LYS:HB3	7:L:46:GLU:CD	2.07	0.79
7:K:48:LYS:HZ2	7:J:43:PRO:HB2	1.48	0.79
8:E:104:TYR:CE1	8:E:122:ILE:CD1	2.66	0.79
8:A:494:ILE:CG2	8:A:498:MET:CE	2.57	0.79
1:a:135:ASN:OD1	4:p:86:PHE:CD2	2.36	0.79
2:b:75:ILE:CG1	4:p:132:ASP:C	2.42	0.79
2:b:103:ILE:HD11	4:p:163:LYS:H	1.46	0.79
2:b:144:VAL:HG11	8:A:13:ILE:HG13	1.63	0.79
3:d:222:THR:HG22	3:d:234:ASP:CA	2.09	0.79
6:g:362:ALA:HB1	8:C:281:PRO:CB	2.12	0.79
7:T:46:GLU:OE1	7:G:48:LYS:CG	2.31	0.79
7:K:48:LYS:CG	7:J:46:GLU:OE1	2.31	0.79
5:e:22:ILE:HG12	5:e:33:VAL:HG21	1.64	0.79
6:g:356:ILE:HD13	8:E:286:ALA:HB2	1.65	0.79
8:E:82:MET:HE2	8:E:82:MET:CA	2.12	0.79
8:E:302:ALA:HB2	8:E:314:MET:HE2	1.64	0.79
8:A:440:THR:HG22	8:A:494:ILE:HD11	1.65	0.79
1:a:116:PRO:CG	2:b:35:SER:H	1.95	0.79
3:d:148:ILE:CD1	8:C:17:ILE:HG12	2.13	0.79
3:d:228:GLU:OE1	8:A:43:HIS:CE1	2.35	0.79
4:p:152:ARG:HD3	8:A:503:LEU:CB	2.13	0.79
6:g:239:ILE:CD1	6:g:303:GLN:HE22	1.86	0.79
6:g:363:CYS:SG	9:D:291:ARG:O	2.41	0.79
7:J:49:ILE:HD11	7:I:40:ALA:HB2	1.65	0.79
9:D:478:GLY:N	9:D:482:GLU:OE1	2.15	0.79
8:E:104:TYR:HD1	8:E:122:ILE:HD13	1.42	0.78
8:C:237:TYR:HE1	8:C:294:LEU:CD2	1.96	0.78
2:b:75:ILE:O	4:p:137:VAL:CG1	2.30	0.78
3:d:169:PHE:O	3:d:172:ILE:HG22	1.83	0.78
6:g:103:GLU:HG2	7:R:41:ARG:CZ	2.12	0.78
9:D:191:LYS:HE3	9:D:219:SER:HB2	1.64	0.78
7:G:43:PRO:CB	7:H:48:LYS:HZ3	1.97	0.78
9:F:385:TYR:HE1	9:F:389:GLN:NE2	1.80	0.78
9:B:221:VAL:CG1	9:B:232:VAL:HG23	2.13	0.78
2:b:77:GLN:HB3	4:p:134:SER:CA	2.12	0.78
2:b:78:LEU:HG	4:p:139:GLN:HB2	1.62	0.78
7:N:49:ILE:HD11	7:M:40:ALA:HB2	1.65	0.78
7:P:43:PRO:HB3	7:Q:48:LYS:NZ	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:344:PHE:CD2	8:A:362:ILE:CG2	2.66	0.78
8:C:382:LYS:HG2	9:D:442:THR:O	1.84	0.78
1:a:134:ILE:CA	1:a:191:PHE:CD1	2.67	0.78
1:a:230:ILE:CD1	7:Q:55:LEU:CD1	2.44	0.78
3:d:235:MET:CE	3:d:239:LYS:HG2	2.13	0.78
2:b:160:LEU:HD13	2:b:164:LEU:H	1.01	0.78
5:e:34:LEU:CD1	7:K:43:PRO:HB2	2.14	0.78
6:g:240:CYS:HB3	6:g:246:CYS:CB	2.13	0.78
7:S:46:GLU:OE1	7:T:48:LYS:HB3	1.83	0.78
1:a:116:PRO:CG	2:b:35:SER:N	2.47	0.78
7:P:10:VAL:CG2	7:Q:74:LEU:CD2	2.60	0.78
8:A:109:ILE:CD1	8:A:113:ALA:HA	2.13	0.78
1:a:114:LEU:HB3	2:b:37:VAL:C	2.08	0.78
2:b:67:SER:OG	4:p:128:SER:N	2.17	0.78
6:g:91:GLU:HG3	6:g:276:PRO:HD2	1.64	0.78
7:L:48:LYS:NZ	7:K:43:PRO:CB	2.47	0.78
8:E:461:LEU:HD23	8:E:461:LEU:O	1.82	0.78
8:A:13:ILE:HD11	8:A:16:ARG:HH22	1.41	0.78
8:A:154:ILE:HD12	8:A:358:ILE:CD1	2.14	0.78
9:B:216:MET:HE2	9:B:232:VAL:HG11	1.66	0.78
3:d:132:ILE:CG1	8:E:13:ILE:HD13	2.14	0.78
7:T:43:PRO:HB3	7:G:48:LYS:HD2	1.65	0.78
9:F:383:GLU:OE2	9:F:459:GLN:NE2	2.16	0.78
8:C:104:TYR:CE1	8:C:122:ILE:HG21	2.18	0.78
2:b:70:LEU:CB	4:p:131:LYS:HB2	2.14	0.77
7:G:81:VAL:HG21	7:H:80:PHE:CE2	2.19	0.77
1:a:165:ILE:HG22	1:a:165:ILE:O	1.84	0.77
2:b:60:ILE:HG13	4:p:120:ASP:OD2	1.84	0.77
7:S:10:VAL:CG2	7:T:74:LEU:HD22	2.14	0.77
7:O:81:VAL:HG21	7:P:80:PHE:CE2	2.19	0.77
7:T:54:LEU:HD11	7:G:55:LEU:CD2	2.13	0.77
7:G:10:VAL:HG23	7:H:74:LEU:HD21	1.66	0.77
7:K:48:LYS:HD2	7:J:43:PRO:HB3	1.67	0.77
1:a:26:PHE:HB3	4:p:83:LEU:CB	2.14	0.77
1:a:104:PHE:CD1	4:p:97:PHE:CE1	2.71	0.77
7:S:48:LYS:HB3	7:R:46:GLU:OE1	1.84	0.77
1:a:100:THR:HB	4:p:97:PHE:HE2	1.47	0.77
1:a:118:LYS:HB2	2:b:29:THR:C	2.08	0.77
1:a:119:ILE:CA	2:b:29:THR:H	1.88	0.77
1:a:122:LEU:CD2	1:a:125:GLY:H	1.95	0.77
2:b:107:LYS:C	4:p:166:THR:HG1	1.79	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:136:SER:OG	3:d:138:LEU:CD2	2.32	0.77
7:S:64:THR:HG21	7:T:63:LEU:HD22	1.66	0.77
8:E:140:ARG:HE	9:F:206:THR:HG22	1.50	0.77
9:F:113:VAL:HG22	9:F:249:VAL:CG1	2.15	0.77
9:B:336:ASP:HB3	9:B:339:PRO:HD2	1.64	0.77
1:a:120:ILE:H	2:b:30:ASN:HB2	1.50	0.77
2:b:79:GLU:HG3	4:p:136:GLU:HG2	1.65	0.77
3:d:72:ASP:N	8:A:70:ASN:ND2	2.32	0.77
3:d:247:GLN:HE22	8:A:13:ILE:CG2	1.95	0.77
7:N:66:TYR:HB3	7:M:68:LEU:HD13	1.64	0.77
7:T:43:PRO:HB2	7:G:48:LYS:HZ2	1.49	0.77
4:p:152:ARG:CG	8:A:503:LEU:HB2	2.15	0.77
7:G:43:PRO:CB	7:H:48:LYS:NZ	2.46	0.77
7:J:42:GLN:NE2	7:I:43:PRO:HG2	2.00	0.77
9:B:402:GLN:HA	9:B:405:ILE:HG12	1.66	0.77
2:b:71:ARG:HB3	4:p:126:GLN:O	1.85	0.77
4:p:192:LEU:HD22	8:A:3:THR:CB	2.15	0.77
6:g:124:THR:HG22	6:g:137:LEU:HD23	0.88	0.77
7:O:10:VAL:HG23	7:P:74:LEU:HD21	1.65	0.77
2:b:88:VAL:HG11	4:p:145:ASN:C	2.10	0.77
5:e:34:LEU:HB2	7:L:42:GLN:HE21	1.47	0.77
7:K:48:LYS:CB	7:J:46:GLU:OE1	2.33	0.77
8:E:49:MET:HE3	8:E:95:ILE:HG23	1.67	0.77
1:a:118:LYS:NZ	1:a:126:GLU:HB2	2.00	0.77
3:d:195:ALA:O	3:d:207:VAL:HG11	1.84	0.77
6:g:111:LYS:HE3	6:g:113:ARG:CG	2.14	0.77
9:B:425:ARG:HH12	9:B:429:ARG:HH22	1.32	0.77
1:a:116:PRO:CA	2:b:34:LEU:H	1.97	0.77
3:d:148:ILE:HD11	8:C:17:ILE:N	1.98	0.77
6:g:221:VAL:CG1	8:A:401:SER:CB	2.63	0.77
7:J:74:LEU:HD21	7:I:10:VAL:HG23	1.63	0.77
9:B:212:LEU:HD12	9:B:212:LEU:O	1.84	0.77
9:B:296:VAL:HG12	9:B:297:GLY:H	1.50	0.77
1:a:195:LEU:HD22	4:p:84:PHE:HE1	1.49	0.76
2:b:103:ILE:HG13	4:p:163:LYS:H	1.46	0.76
8:E:379:VAL:CG1	8:E:438:ILE:HG22	2.14	0.76
2:b:141:ARG:HG2	8:A:9:ILE:CD1	2.15	0.76
1:a:171:LEU:O	1:a:171:LEU:HD23	1.84	0.76
5:e:36:ASN:O	7:L:43:PRO:HD2	1.86	0.76
8:A:382:LYS:CD	8:A:442:THR:CG2	2.58	0.76
8:A:494:ILE:HG23	8:A:498:MET:HE2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:191:LYS:CE	9:D:219:SER:CB	2.52	0.76
1:a:121:GLN:HG3	2:b:25:ASP:OD2	1.84	0.76
2:b:148:ALA:HA	4:p:211:SER:CA	2.15	0.76
4:p:210:LEU:HD21	8:A:13:ILE:CG2	2.16	0.76
6:g:117:LYS:HE3	6:g:154:ASP:OD2	1.85	0.76
6:g:221:VAL:CG1	8:A:401:SER:HB2	2.15	0.76
7:O:6:ALA:HB1	7:P:80:PHE:HD2	1.50	0.76
9:B:216:MET:HB3	9:B:222:ILE:HG12	1.68	0.76
9:B:311:GLU:CG	8:C:230:ASP:HB3	2.15	0.76
8:C:383:LEU:HD12	8:C:383:LEU:O	1.85	0.76
2:b:80:LYS:H	4:p:137:VAL:CA	1.98	0.76
4:p:149:ARG:HA	8:A:503:LEU:HD21	1.68	0.76
8:E:56:PHE:CD1	8:E:89:VAL:HB	2.21	0.76
1:a:79:ILE:HD13	1:a:99:GLY:HA3	1.64	0.76
2:b:103:ILE:HD11	4:p:163:LYS:N	1.99	0.76
2:b:144:VAL:HG22	4:p:207:ILE:CD1	2.14	0.76
6:g:103:GLU:HG3	7:R:41:ARG:CD	2.16	0.76
8:A:469:LYS:HZ1	8:A:492:GLU:HB2	1.48	0.76
3:d:154:ARG:NE	8:C:5:ARG:NH1	2.33	0.76
7:P:43:PRO:HG2	7:Q:42:GLN:NE2	2.00	0.76
9:B:221:VAL:O	9:B:230:SER:O	2.03	0.76
8:C:308:LEU:HD23	8:C:309:LEU:HD12	1.66	0.76
1:a:184:LEU:HD21	1:a:188:PHE:CE2	2.21	0.76
3:d:235:MET:HE3	3:d:239:LYS:HG2	1.68	0.76
4:p:193:GLU:HA	4:p:196:LYS:HE2	1.68	0.76
7:H:43:PRO:HB2	7:I:48:LYS:NZ	2.00	0.76
8:C:308:LEU:CD2	8:C:309:LEU:HD12	2.15	0.76
2:b:88:VAL:O	4:p:148:MET:HA	1.86	0.76
4:p:108:TYR:CD1	4:p:112:LEU:CD1	2.66	0.76
4:p:203:LEU:HD11	4:p:206:GLN:HB2	1.66	0.76
7:S:10:VAL:HG23	7:T:74:LEU:CD2	2.15	0.76
7:N:43:PRO:HB2	7:O:48:LYS:NZ	2.00	0.76
7:P:10:VAL:CG2	7:Q:74:LEU:HD22	2.16	0.76
7:T:46:GLU:OE1	7:G:48:LYS:CB	2.33	0.76
8:C:430:THR:CG2	8:C:432:GLU:OE1	2.33	0.76
1:a:134:ILE:O	1:a:137:THR:N	2.18	0.75
7:K:74:LEU:CD2	7:J:10:VAL:CG2	2.64	0.75
8:A:382:LYS:HB3	8:A:442:THR:HG21	1.67	0.75
3:d:198:VAL:O	3:d:202:THR:OG1	2.04	0.75
4:p:214:ILE:HG13	4:p:215:VAL:N	2.01	0.75
6:g:359:GLY:C	9:D:293:PRO:HG3	2.11	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:10:VAL:CG2	7:R:74:LEU:HD22	2.16	0.75
7:S:43:PRO:HB2	7:T:48:LYS:HZ2	1.49	0.75
7:T:43:PRO:HB3	7:G:48:LYS:NZ	2.01	0.75
7:H:10:VAL:HG23	7:I:74:LEU:CD2	2.16	0.75
9:F:22:ARG:NH1	9:F:90:GLU:HB3	2.00	0.75
9:F:148:ILE:HD13	9:F:451:LEU:HD11	1.68	0.75
9:B:20:LEU:HD13	9:B:90:GLU:CG	2.16	0.75
9:D:455:ILE:O	9:D:459:GLN:HG3	1.86	0.75
2:b:68:GLU:CD	4:p:126:GLN:CB	2.54	0.75
2:b:80:LYS:HG2	4:p:137:VAL:CG1	2.10	0.75
2:b:81:ALA:HB3	4:p:140:LEU:H	1.49	0.75
2:b:98:ASN:N	4:p:155:ILE:HD13	2.02	0.75
7:K:55:LEU:CD2	7:J:54:LEU:HD11	2.16	0.75
9:D:191:LYS:HE2	9:D:219:SER:CB	2.12	0.75
1:a:119:ILE:HG23	2:b:27:LEU:C	2.11	0.75
2:b:118:LEU:HD22	4:p:177:GLY:HA3	1.69	0.75
2:b:129:ILE:CD1	4:p:188:ALA:HB1	2.14	0.75
5:e:34:LEU:CD1	7:K:43:PRO:CG	2.57	0.75
6:g:261:GLU:CG	9:F:397:ARG:CZ	2.54	0.75
8:A:445:TYR:CD2	8:A:494:ILE:HG21	2.21	0.75
8:C:9:ILE:HG21	8:C:12:ILE:HD12	1.67	0.75
9:D:64:GLU:OE1	9:D:248:ARG:NE	2.19	0.75
6:g:91:GLU:CG	6:g:276:PRO:HD2	2.17	0.75
7:S:48:LYS:HZ2	7:R:43:PRO:HB2	1.48	0.75
1:a:134:ILE:HA	1:a:191:PHE:CE1	2.22	0.75
3:d:247:GLN:C	8:A:16:ARG:CD	2.51	0.75
7:Q:10:VAL:HG23	7:R:74:LEU:CD2	2.17	0.75
7:H:68:LEU:HD13	7:I:66:TYR:HB3	1.67	0.75
7:K:48:LYS:NZ	7:J:43:PRO:HB3	2.01	0.75
8:A:98:ILE:CD1	8:A:245:ALA:HB1	2.14	0.75
8:A:109:ILE:HD11	8:A:113:ALA:CB	2.16	0.75
8:E:214:GLN:HG3	8:E:219:MET:HG3	1.68	0.75
8:C:432:GLU:CG	8:C:476:ILE:CG2	2.65	0.75
5:e:34:LEU:HD12	7:K:43:PRO:CB	2.16	0.75
7:S:48:LYS:NZ	7:R:43:PRO:HB3	2.01	0.75
7:O:43:PRO:CG	7:P:42:GLN:HE22	1.98	0.75
8:E:390:PHE:CE2	8:E:418:ARG:HD2	2.22	0.75
1:a:135:ASN:C	4:p:90:LEU:CD2	2.60	0.74
3:d:198:VAL:HA	3:d:201:ILE:CD1	2.15	0.74
6:g:111:LYS:HE3	6:g:113:ARG:HG3	1.69	0.74
7:S:54:LEU:HD11	7:T:55:LEU:CD2	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:163:LYS:HE2	1:a:179:ASP:CG	2.12	0.74
2:b:82:ARG:CA	2:b:85:LEU:HD23	2.12	0.74
7:N:48:LYS:NZ	7:M:43:PRO:HB2	2.02	0.74
8:E:469:LYS:HE3	8:E:493:ALA:N	2.01	0.74
9:F:197:SER:HG	9:F:271:PHE:HE1	1.35	0.74
8:C:164:GLN:HG2	8:C:165:ARG:N	2.01	0.74
8:C:169:ILE:HG13	8:C:320:VAL:O	1.87	0.74
1:a:24:GLN:HB3	4:p:84:PHE:HD2	0.96	0.74
2:b:103:ILE:HB	4:p:159:LEU:HB2	1.63	0.74
2:b:169:ILE:CG2	3:d:221:PHE:HE2	1.93	0.74
6:g:261:GLU:HG2	6:g:262:GLY:N	2.02	0.74
7:G:46:GLU:OE1	7:H:48:LYS:CG	2.35	0.74
9:B:110:ILE:HD11	9:B:213:TYR:CD1	2.22	0.74
8:C:157:MET:SD	8:C:387:LEU:HD12	2.27	0.74
2:b:71:ARG:NE	4:p:125:GLU:O	2.20	0.74
2:b:79:GLU:CA	4:p:136:GLU:HG3	2.16	0.74
7:P:10:VAL:HG23	7:Q:74:LEU:CD2	2.16	0.74
7:H:6:ALA:HB1	7:I:80:PHE:HD2	1.52	0.74
8:E:104:TYR:HE1	8:E:122:ILE:CD1	2.00	0.74
8:A:13:ILE:HD13	8:A:16:ARG:HH22	0.62	0.74
9:B:361:ILE:HG23	9:B:432:SER:HB3	1.69	0.74
8:C:9:ILE:HG22	8:C:12:ILE:CD1	2.09	0.74
9:D:336:ASP:OD1	9:D:337:PRO:HD2	1.87	0.74
2:b:176:PHE:HE1	3:d:233:VAL:HG21	0.94	0.74
4:p:127:LEU:O	4:p:130:VAL:CG1	2.36	0.74
2:b:75:ILE:C	4:p:137:VAL:HG13	2.06	0.74
8:E:208:GLN:NE2	9:D:144:THR:CG2	2.37	0.74
1:a:124:HIS:HB3	4:p:80:LYS:O	1.87	0.74
2:b:78:LEU:CA	4:p:135:SER:O	2.28	0.74
6:g:118:VAL:HG11	6:g:148:LEU:HD13	1.70	0.74
7:P:46:GLU:OE1	7:Q:48:LYS:CG	2.36	0.74
9:F:183:MET:HE1	9:F:215:GLU:HB3	1.68	0.74
6:g:349:ILE:HD13	8:E:284:ARG:NH2	1.98	0.74
7:S:43:PRO:C	7:T:48:LYS:HZ3	1.96	0.74
7:N:54:LEU:HD11	7:O:55:LEU:CD2	2.17	0.74
7:N:80:PHE:CE2	7:M:81:VAL:HG21	2.23	0.74
7:P:81:VAL:HG21	7:Q:80:PHE:CE2	2.23	0.74
7:Q:43:PRO:HB2	7:R:48:LYS:NZ	2.01	0.74
7:L:48:LYS:HZ3	7:K:43:PRO:CB	2.01	0.74
7:K:66:TYR:HB3	7:J:68:LEU:HD13	1.70	0.74
9:D:143:ASP:OD2	9:D:315:SER:HB2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:70:ASN:HB3	2:b:53:LEU:HB3	1.68	0.74
6:g:113:ARG:NH1	6:g:205:GLU:CB	2.29	0.74
7:S:48:LYS:HZ3	7:R:43:PRO:CB	1.98	0.74
7:G:6:ALA:HB1	7:H:80:PHE:HD2	1.53	0.74
7:H:10:VAL:CG2	7:I:74:LEU:HD22	2.16	0.74
8:E:173:GLN:HG3	9:D:371:THR:HG21	1.68	0.74
1:a:70:ASN:HB3	2:b:53:LEU:CB	2.18	0.73
2:b:82:ARG:CA	4:p:140:LEU:CD2	2.61	0.73
7:N:74:LEU:HD21	7:M:10:VAL:HG23	1.70	0.73
8:E:137:ILE:HD13	9:F:110:ILE:HD13	1.70	0.73
1:a:35:ILE:CG2	4:p:88:LEU:CA	2.64	0.73
2:b:122:GLU:HB2	4:p:181:ILE:HD12	1.70	0.73
4:p:108:TYR:CE1	4:p:112:LEU:HD11	2.21	0.73
4:p:219:LEU:CD1	4:p:220:PRO:O	2.36	0.73
8:A:153:ALA:HB3	8:A:358:ILE:HD12	1.68	0.73
8:A:185:LEU:HD13	8:A:216:ARG:HD2	1.70	0.73
8:A:494:ILE:O	8:A:498:MET:HG3	1.88	0.73
5:e:19:VAL:HG21	5:e:51:ILE:HG12	1.70	0.73
6:g:253:GLU:HB2	6:g:269:ASP:C	2.14	0.73
7:J:48:LYS:NZ	7:I:43:PRO:HB3	2.02	0.73
8:E:9:ILE:O	8:E:14:ARG:NH1	2.21	0.73
9:F:101:PRO:CB	9:F:126:THR:HG21	2.18	0.73
8:A:416:ARG:NH2	8:A:447:ASP:O	2.21	0.73
9:D:20:LEU:HD22	9:D:92:ILE:HG22	1.70	0.73
1:a:104:PHE:CG	4:p:97:PHE:CE1	2.77	0.73
2:b:82:ARG:CB	4:p:140:LEU:CD2	1.92	0.73
2:b:107:LYS:HE3	4:p:166:THR:CA	2.17	0.73
2:b:145:PHE:N	8:A:13:ILE:CD1	2.51	0.73
2:b:145:PHE:CD2	2:b:149:LEU:HD11	2.22	0.73
3:d:243:GLU:OE2	4:p:218:VAL:HG12	1.87	0.73
5:e:22:ILE:HG13	5:e:33:VAL:HG22	1.69	0.73
8:E:49:MET:HE3	8:E:95:ILE:CG2	2.18	0.73
1:a:135:ASN:ND2	4:p:86:PHE:CB	2.48	0.73
6:g:221:VAL:CG1	8:A:401:SER:OG	2.36	0.73
8:E:379:VAL:CG1	8:E:438:ILE:CG2	2.65	0.73
8:A:140:ARG:HB2	9:B:210:ASN:HD22	1.53	0.73
8:C:237:TYR:CE1	8:C:271:TYR:CG	2.76	0.73
1:a:124:HIS:CD2	4:p:79:GLU:CB	2.60	0.73
1:a:230:ILE:CG1	7:Q:55:LEU:HD11	2.18	0.73
2:b:173:ILE:CG1	3:d:221:PHE:CZ	2.71	0.73
3:d:235:MET:SD	8:A:24:VAL:HG12	2.29	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:152:ARG:HD3	8:A:503:LEU:CG	2.18	0.73
8:A:362:ILE:HG22	8:A:362:ILE:O	1.88	0.73
1:a:34:GLN:O	4:p:87:ASN:HB2	1.78	0.73
1:a:40:LEU:CD2	4:p:89:THR:CB	2.66	0.73
3:d:114:PHE:CD1	3:d:120:ILE:HD13	2.24	0.73
7:N:48:LYS:CG	7:M:46:GLU:OE1	2.36	0.73
9:F:110:ILE:CG2	9:F:118:VAL:CG2	2.65	0.73
1:a:165:ILE:HG22	1:a:168:THR:C	2.13	0.73
2:b:67:SER:O	4:p:130:VAL:CG1	2.37	0.73
2:b:103:ILE:CD1	4:p:163:LYS:N	2.50	0.73
2:b:141:ARG:HB3	8:A:16:ARG:NH1	2.03	0.73
6:g:360:ALA:CB	9:D:292:MET:HB3	2.18	0.73
7:S:55:LEU:CD2	7:R:54:LEU:HD11	2.18	0.73
7:H:54:LEU:HD11	7:I:55:LEU:CD2	2.19	0.73
4:p:210:LEU:CG	8:A:13:ILE:HG21	2.19	0.73
8:A:152:ILE:H	8:A:423:GLN:NE2	1.87	0.73
1:a:100:THR:HG23	4:p:101:MET:HG3	1.65	0.73
2:b:141:ARG:CG	8:A:12:ILE:HG21	2.17	0.73
4:p:206:GLN:O	4:p:210:LEU:CA	2.36	0.73
6:g:346:GLN:NE2	9:F:333:ASP:OD2	2.22	0.72
6:g:353:ILE:HD11	8:E:284:ARG:CA	2.19	0.72
7:N:43:PRO:C	7:O:48:LYS:HZ3	1.96	0.72
7:T:10:VAL:HG23	7:G:74:LEU:CD2	2.19	0.72
9:F:405:ILE:HG12	9:F:413:LEU:HD11	1.71	0.72
1:a:122:LEU:HA	2:b:25:ASP:CB	2.19	0.72
2:b:61:LEU:HD13	2:b:61:LEU:C	2.14	0.72
2:b:68:GLU:CD	4:p:126:GLN:CG	2.62	0.72
2:b:79:GLU:HG3	4:p:136:GLU:CG	2.18	0.72
2:b:82:ARG:CB	2:b:85:LEU:HD21	2.19	0.72
3:d:148:ILE:HD12	8:C:17:ILE:HG12	1.70	0.72
4:p:150:ALA:O	4:p:154:GLU:HG3	1.89	0.72
7:M:80:PHE:HD2	7:L:6:ALA:HB1	1.53	0.72
7:G:46:GLU:OE1	7:H:48:LYS:CB	2.37	0.72
8:A:214:GLN:HE21	8:A:219:MET:CG	1.80	0.72
2:b:180:ASN:CG	3:d:201:ILE:CG2	2.62	0.72
3:d:151:ASP:HB2	8:C:20:TYR:HH	1.53	0.72
3:d:183:VAL:HG22	3:d:214:ASP:O	1.90	0.72
5:e:22:ILE:HD11	5:e:74:ILE:HD13	1.71	0.72
7:N:6:ALA:HB1	7:O:80:PHE:HD2	1.54	0.72
7:G:43:PRO:CG	7:H:42:GLN:HE22	1.98	0.72
7:J:48:LYS:NZ	7:I:43:PRO:HB2	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:149:PHE:HE2	9:D:189:ILE:CD1	2.01	0.72
1:a:134:ILE:N	1:a:191:PHE:HE1	1.85	0.72
2:b:80:LYS:H	4:p:137:VAL:CG1	2.01	0.72
7:S:43:PRO:HB3	7:T:48:LYS:HD2	1.71	0.72
7:Q:46:GLU:OE1	7:R:48:LYS:CG	2.37	0.72
9:D:401:LEU:HD22	9:D:404:ILE:CD1	2.13	0.72
1:a:214:ILE:HG13	1:a:215:PRO:CD	2.20	0.72
8:E:98:ILE:HD13	8:E:242:THR:HG23	1.69	0.72
9:B:71:ASN:HD21	8:C:9:ILE:CA	2.02	0.72
1:a:115:LEU:HD21	2:b:38:LEU:HD11	1.69	0.72
2:b:83:ALA:H	4:p:140:LEU:HB3	0.73	0.72
4:p:196:LYS:HD2	8:A:5:ARG:HH22	1.53	0.72
7:K:62:ALA:O	7:K:65:ILE:CG2	2.33	0.72
8:A:419:GLU:OE2	8:A:422:LYS:HD2	1.88	0.72
2:b:176:PHE:CE1	3:d:233:VAL:CB	2.73	0.72
7:S:81:VAL:HG21	7:T:80:PHE:CE2	2.25	0.72
7:O:54:LEU:HD11	7:P:55:LEU:CD2	2.20	0.72
8:A:214:GLN:HE22	8:A:219:MET:CB	1.90	0.72
6:g:118:VAL:CG1	6:g:148:LEU:HD13	2.20	0.72
8:E:489:LEU:O	8:E:489:LEU:HD23	1.88	0.72
8:C:54:VAL:CG1	8:C:89:VAL:CG2	2.63	0.72
1:a:28:TRP:HB2	1:a:34:GLN:HB2	1.71	0.72
7:P:43:PRO:C	7:Q:48:LYS:HZ3	1.97	0.72
9:F:25:GLN:HG2	9:F:32:ASP:HB2	1.72	0.72
2:b:144:VAL:CB	8:A:13:ILE:HG13	2.20	0.72
8:E:379:VAL:HG12	8:E:438:ILE:HG22	1.70	0.72
8:C:469:LYS:NZ	8:C:492:GLU:HB2	2.05	0.72
2:b:118:LEU:CD1	4:p:178:ARG:HA	2.20	0.71
6:g:360:ALA:HA	9:D:293:PRO:CD	2.15	0.71
7:M:55:LEU:CD2	7:L:54:LEU:HD11	2.19	0.71
9:B:221:VAL:CG1	9:B:232:VAL:HG21	2.03	0.71
2:b:95:PHE:O	4:p:155:ILE:HG21	1.90	0.71
3:d:148:ILE:HD12	8:C:17:ILE:HA	1.69	0.71
7:P:54:LEU:HD11	7:Q:55:LEU:CD2	2.19	0.71
8:A:416:ARG:CZ	8:A:447:ASP:O	2.37	0.71
1:a:117:TRP:O	1:a:120:ILE:HG22	1.90	0.71
3:d:119:VAL:HG21	8:E:24:VAL:HG11	1.71	0.71
5:e:119:LEU:HD11	5:e:123:ARG:NH2	2.04	0.71
7:O:62:ALA:O	7:O:65:ILE:CG2	2.33	0.71
7:H:43:PRO:CG	7:I:42:GLN:HE22	2.02	0.71
8:E:492:GLU:O	8:E:495:GLN:HG2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:111:ALA:HB3	8:A:235:LEU:HD22	1.72	0.71
8:A:154:ILE:HD12	8:A:358:ILE:HD11	1.72	0.71
9:B:311:GLU:CB	8:C:230:ASP:HB3	2.21	0.71
1:a:86:GLN:NE2	1:a:86:GLN:HA	2.05	0.71
1:a:118:LYS:NZ	1:a:126:GLU:CB	2.54	0.71
7:S:43:PRO:HG2	7:T:42:GLN:NE2	2.05	0.71
7:N:80:PHE:HD2	7:M:6:ALA:HB1	1.55	0.71
7:T:68:LEU:HD13	7:G:66:TYR:HB3	1.71	0.71
9:D:143:ASP:O	9:D:143:ASP:OD1	2.08	0.71
1:a:118:LYS:C	2:b:30:ASN:OD1	2.21	0.71
2:b:152:ALA:HB2	4:p:214:ILE:CD1	2.20	0.71
2:b:172:ASN:CG	3:d:235:MET:HB2	2.16	0.71
7:N:48:LYS:CB	7:M:46:GLU:OE1	2.38	0.71
7:M:49:ILE:HD11	7:L:40:ALA:HB2	1.71	0.71
7:T:10:VAL:CG2	7:G:74:LEU:HD22	2.18	0.71
1:a:116:PRO:HB3	2:b:32:ILE:C	2.15	0.71
7:Q:43:PRO:HB3	7:R:48:LYS:NZ	2.06	0.71
1:a:122:LEU:HD13	1:a:127:LEU:CD1	2.20	0.71
2:b:125:LYS:O	4:p:185:LEU:HD11	1.90	0.71
9:D:401:LEU:CD2	9:D:404:ILE:CD1	2.67	0.71
2:b:98:ASN:H	4:p:155:ILE:HD13	1.54	0.71
2:b:125:LYS:HB3	4:p:185:LEU:HD22	1.71	0.71
7:J:48:LYS:CG	7:I:46:GLU:OE1	2.39	0.71
2:b:152:ALA:HB2	4:p:214:ILE:HD11	1.71	0.71
3:d:247:GLN:NE2	8:A:13:ILE:CD1	2.49	0.71
4:p:193:GLU:CA	4:p:196:LYS:HE2	2.20	0.71
4:p:193:GLU:CB	4:p:196:LYS:HE2	2.20	0.71
5:e:22:ILE:HG12	5:e:33:VAL:CG2	2.21	0.71
5:e:34:LEU:HD11	7:K:43:PRO:HB2	1.72	0.71
7:H:43:PRO:C	7:I:48:LYS:HZ3	1.98	0.71
8:E:469:LYS:HD3	8:E:489:LEU:HD23	1.73	0.71
4:p:214:ILE:O	8:A:17:ILE:HD11	1.91	0.71
5:e:119:LEU:CD1	5:e:123:ARG:HE	1.73	0.71
6:g:110:THR:HG23	6:g:296:LEU:CD1	2.20	0.71
6:g:222:LYS:HE2	6:g:224:ASP:OD2	1.89	0.71
9:F:109:ARG:NH2	9:F:122:GLY:O	2.24	0.71
8:A:424:PRO:HB3	8:A:455:ARG:NH1	2.06	0.71
1:a:119:ILE:HG13	2:b:29:THR:N	2.05	0.70
1:a:134:ILE:CG2	1:a:191:PHE:CD1	2.71	0.70
1:a:225:GLY:O	1:a:228:ALA:HB3	1.90	0.70
6:g:300:LEU:HD23	6:g:300:LEU:C	2.14	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S:46:GLU:OE1	7:T:48:LYS:CG	2.39	0.70
7:T:43:PRO:HB3	7:G:48:LYS:CD	2.21	0.70
7:L:66:TYR:HB3	7:K:68:LEU:HD13	1.73	0.70
8:A:390:PHE:CD1	8:A:414:GLY:HA3	2.26	0.70
8:A:471:GLU:HB2	8:A:489:LEU:HD11	1.73	0.70
1:a:40:LEU:CG	4:p:89:THR:CB	2.51	0.70
1:a:96:PRO:HB2	4:p:101:MET:SD	2.31	0.70
2:b:118:LEU:CD1	4:p:178:ARG:CA	2.69	0.70
3:d:98:ASP:OD2	3:d:139:GLN:N	2.25	0.70
6:g:221:VAL:HG11	8:A:401:SER:CB	2.21	0.70
6:g:239:ILE:CG1	6:g:303:GLN:HE22	2.04	0.70
8:E:77:MET:HE2	8:E:112:LEU:HD21	1.73	0.70
8:C:27:VAL:HG23	8:C:47:GLU:OE1	1.91	0.70
1:a:35:ILE:HB	4:p:89:THR:H	1.54	0.70
2:b:160:LEU:CD2	2:b:164:LEU:HB2	2.21	0.70
8:E:230:ASP:HB3	9:D:311:GLU:CG	2.21	0.70
9:B:48:ILE:HG21	9:B:59:MET:HE2	1.73	0.70
2:b:67:SER:CB	4:p:124:LYS:O	2.39	0.70
6:g:129:LEU:HA	9:B:412:GLU:OE2	1.92	0.70
8:A:157:MET:HA	8:A:384:LYS:HE2	1.73	0.70
2:b:103:ILE:CB	4:p:159:LEU:CB	2.49	0.70
2:b:141:ARG:HB3	8:A:16:ARG:HH12	1.54	0.70
6:g:103:GLU:HG2	7:R:41:ARG:NH2	2.06	0.70
7:S:62:ALA:O	7:S:65:ILE:CG2	2.33	0.70
2:b:141:ARG:HG2	8:A:9:ILE:HD13	1.74	0.70
8:A:28:ASN:HB2	8:A:91:ALA:CB	2.18	0.70
8:A:134:ALA:HB3	9:B:240:ASN:HD22	1.55	0.70
9:D:20:LEU:HD21	9:D:92:ILE:HG22	1.71	0.70
7:S:66:TYR:HB3	7:R:68:LEU:HD13	1.73	0.70
7:P:46:GLU:OE1	7:Q:48:LYS:CB	2.39	0.70
1:a:124:HIS:HD2	4:p:80:LYS:O	1.73	0.70
2:b:160:LEU:CD1	2:b:160:LEU:O	2.32	0.70
6:g:109:LEU:HD21	6:g:199:PHE:CD1	2.26	0.70
7:S:43:PRO:HB3	7:T:48:LYS:CD	2.22	0.70
2:b:103:ILE:HD13	4:p:162:MET:N	1.96	0.70
4:p:88:LEU:O	4:p:92:ILE:HG12	1.92	0.70
7:H:10:VAL:HG23	7:I:74:LEU:HD21	1.72	0.70
8:A:65:LEU:HD12	8:A:75:VAL:CG2	2.22	0.70
1:a:134:ILE:HD12	1:a:135:ASN:CA	2.21	0.70
6:g:117:LYS:HG3	6:g:154:ASP:O	1.92	0.70
8:E:302:ALA:HB1	8:E:314:MET:HG2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:433:GLU:OE1	8:A:462:ARG:CD	2.37	0.70
1:a:116:PRO:HG3	2:b:35:SER:H	1.54	0.69
1:a:132:ASN:O	1:a:191:PHE:CE1	2.45	0.69
1:a:195:LEU:HD21	4:p:84:PHE:CZ	2.26	0.69
2:b:61:LEU:CD1	2:b:65:ARG:HD3	2.22	0.69
5:e:19:VAL:HA	5:e:53:LEU:CD1	2.17	0.69
5:e:37:HIS:HE1	7:L:41:ARG:HE	1.39	0.69
6:g:104:ASP:CB	7:S:41:ARG:NH2	2.55	0.69
8:C:392:GLU:OE2	9:D:429:ARG:NH1	2.25	0.69
6:g:363:CYS:HB2	8:E:279:ARG:HH12	1.55	0.69
7:S:80:PHE:CE2	7:R:81:VAL:HG21	2.27	0.69
7:H:81:VAL:HG21	7:I:80:PHE:CE2	2.27	0.69
7:J:80:PHE:HD2	7:I:6:ALA:HB1	1.57	0.69
8:E:449:LEU:CD1	8:E:457:TYR:CD2	2.75	0.69
1:a:27:TYR:HB3	1:a:124:HIS:HB2	1.73	0.69
4:p:199:THR:C	8:A:6:ALA:HB1	2.04	0.69
7:Q:10:VAL:HG23	7:R:74:LEU:HD21	1.74	0.69
8:E:9:ILE:HG23	8:E:13:ILE:CG2	2.22	0.69
8:E:439:TYR:OH	8:E:487:GLU:OE2	2.06	0.69
8:E:469:LYS:HD3	8:E:489:LEU:CD2	2.23	0.69
9:F:100:VAL:CG1	9:F:256:MET:HE2	2.23	0.69
9:F:124:VAL:HG12	9:F:126:THR:HG22	1.74	0.69
9:F:268:VAL:HB	9:F:321:ILE:HG22	1.73	0.69
2:b:88:VAL:C	4:p:148:MET:N	2.47	0.69
2:b:144:VAL:HG13	4:p:207:ILE:HD13	1.74	0.69
6:g:222:LYS:HE2	6:g:224:ASP:CG	2.16	0.69
7:P:43:PRO:HB3	7:Q:48:LYS:HD2	1.74	0.69
7:Q:46:GLU:OE1	7:R:48:LYS:CB	2.39	0.69
7:K:74:LEU:CD2	7:J:10:VAL:HG23	2.23	0.69
8:A:469:LYS:HZ3	8:A:492:GLU:HB2	1.55	0.69
7:P:10:VAL:HG23	7:Q:74:LEU:HD21	1.74	0.69
8:E:230:ASP:HB3	9:D:311:GLU:HG3	1.73	0.69
8:E:449:LEU:HD11	8:E:457:TYR:CD2	2.27	0.69
1:a:58:VAL:HG11	4:p:107:ILE:CG2	2.09	0.69
2:b:165:HIS:HD2	3:d:219:ALA:CB	1.85	0.69
5:e:4:ASN:HB2	5:e:18:GLU:HG2	1.75	0.69
7:P:43:PRO:HB2	7:Q:48:LYS:HZ2	1.55	0.69
2:b:122:GLU:CA	4:p:181:ILE:CG2	2.68	0.69
3:d:239:LYS:HG2	8:A:22:ARG:HD2	1.75	0.69
4:p:108:TYR:HE1	4:p:112:LEU:CD1	2.02	0.69
7:N:55:LEU:CD2	7:M:54:LEU:HD11	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:48:LYS:HD3	7:L:46:GLU:OE1	1.92	0.69
7:K:48:LYS:CD	7:J:43:PRO:HB3	2.22	0.69
9:D:149:PHE:HE2	9:D:189:ILE:HD11	1.58	0.69
9:D:361:ILE:HG23	9:D:432:SER:HB3	1.74	0.69
1:a:134:ILE:HD12	1:a:134:ILE:C	2.17	0.69
1:a:222:PHE:HZ	7:Q:54:LEU:HD23	0.95	0.69
2:b:175:MET:HB3	8:A:24:VAL:HG22	1.74	0.69
7:J:55:LEU:CD2	7:I:54:LEU:HD11	2.23	0.69
8:A:329:ALA:HB3	8:A:332:PRO:HD2	1.75	0.69
8:C:439:TYR:CD2	8:C:490:LEU:CD2	2.75	0.69
2:b:71:ARG:HA	4:p:132:ASP:N	2.06	0.69
3:d:247:GLN:O	8:A:16:ARG:CD	2.41	0.69
6:g:50:ARG:HG2	6:g:50:ARG:HH11	1.56	0.69
7:M:48:LYS:HZ3	7:L:43:PRO:C	2.00	0.69
7:J:62:ALA:O	7:J:65:ILE:CG2	2.33	0.69
8:E:302:ALA:CB	8:E:314:MET:HG2	2.23	0.69
8:A:495:GLN:OE1	8:A:498:MET:HE3	1.93	0.69
8:C:138:MET:CG	9:D:119:ASP:HA	2.15	0.69
7:T:62:ALA:O	7:T:65:ILE:CG2	2.33	0.69
9:F:338:ALA:HB3	9:F:339:PRO:HD3	1.73	0.69
3:d:91:THR:O	3:d:95:THR:HG22	1.92	0.68
9:F:113:VAL:HG22	9:F:249:VAL:HG13	1.75	0.68
8:A:105:LEU:HD21	8:A:193:ILE:HG23	1.75	0.68
9:D:111:PHE:HE1	9:D:124:VAL:HG21	1.57	0.68
1:a:23:GLY:O	4:p:83:LEU:HD21	1.92	0.68
1:a:182:LYS:CD	1:a:238:TYR:CE1	2.74	0.68
6:g:353:ILE:CG1	8:E:284:ARG:HA	2.23	0.68
7:N:43:PRO:HB3	7:O:48:LYS:NZ	2.07	0.68
7:M:55:LEU:HD23	7:L:54:LEU:HD11	1.75	0.68
8:A:154:ILE:CD1	8:A:358:ILE:CD1	2.71	0.68
9:D:261:ARG:NH1	9:D:314:THR:O	2.26	0.68
1:a:79:ILE:CD1	1:a:99:GLY:CA	2.64	0.68
2:b:80:LYS:H	4:p:137:VAL:HG12	1.56	0.68
2:b:118:LEU:CD2	4:p:177:GLY:HA3	2.23	0.68
5:e:21:GLU:OE2	5:e:34:LEU:CD2	2.39	0.68
5:e:34:LEU:CD1	7:K:43:PRO:CB	2.70	0.68
6:g:117:LYS:HA	6:g:153:VAL:O	1.92	0.68
6:g:222:LYS:HE2	6:g:224:ASP:OD1	1.93	0.68
7:N:48:LYS:NZ	7:M:43:PRO:HB3	2.06	0.68
7:O:43:PRO:HB2	7:P:48:LYS:NZ	2.07	0.68
7:M:48:LYS:NZ	7:L:43:PRO:CB	2.57	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:379:VAL:HG12	8:E:438:ILE:HG21	1.74	0.68
8:A:42:ILE:HD13	8:A:89:VAL:HG11	1.76	0.68
2:b:92:ALA:HB2	4:p:148:MET:C	2.18	0.68
3:d:177:VAL:HG11	3:d:210:LYS:CD	2.23	0.68
6:g:121:MET:HE3	6:g:160:ILE:HD11	1.74	0.68
7:Q:68:LEU:HD13	7:R:66:TYR:HB3	1.76	0.68
8:A:214:GLN:HE22	8:A:219:MET:HB3	1.55	0.68
8:A:327:VAL:HG21	8:A:344:PHE:HE1	1.57	0.68
8:C:260:ILE:CD1	8:C:317:LEU:HD12	2.23	0.68
1:a:24:GLN:HA	4:p:83:LEU:CG	2.22	0.68
3:d:233:VAL:HG12	8:A:26:VAL:CA	2.14	0.68
6:g:104:ASP:HB2	7:S:41:ARG:NH2	2.09	0.68
6:g:137:LEU:HD12	6:g:213:LEU:HD13	1.76	0.68
7:Q:43:PRO:C	7:R:48:LYS:HZ3	2.01	0.68
8:E:169:ILE:HD11	8:E:322:THR:CG2	2.22	0.68
8:E:469:LYS:HE3	8:E:493:ALA:CA	2.24	0.68
9:F:189:ILE:HD11	9:F:267:ASP:O	1.94	0.68
9:F:447:LYS:HZ3	9:F:482:GLU:CD	2.00	0.68
8:A:152:ILE:N	8:A:423:GLN:HE22	1.90	0.68
8:C:169:ILE:HD11	8:C:322:THR:CG2	2.24	0.68
1:a:119:ILE:HG12	2:b:32:ILE:HG12	1.75	0.68
2:b:79:GLU:C	4:p:137:VAL:HA	2.18	0.68
2:b:103:ILE:HG12	4:p:162:MET:C	2.18	0.68
6:g:284:PHE:HD1	6:g:291:ILE:CD1	2.06	0.68
1:a:139:ALA:CB	4:p:94:MET:HE2	2.23	0.68
1:a:193:ASN:HD22	1:a:227:GLN:HG3	1.54	0.68
8:E:100:VAL:HG23	8:E:246:LEU:HD23	1.76	0.68
1:a:24:GLN:C	4:p:83:LEU:CG	2.67	0.68
2:b:125:LYS:HD2	4:p:185:LEU:CG	2.22	0.68
2:b:176:PHE:HE1	3:d:233:VAL:CG2	1.60	0.68
5:e:119:LEU:CD1	5:e:123:ARG:NH2	2.57	0.68
6:g:85:PHE:CE1	6:g:302:SER:OG	2.45	0.68
1:a:24:GLN:CB	4:p:84:PHE:HD2	1.84	0.68
6:g:251:GLU:HG3	6:g:272:LYS:HG2	1.75	0.68
7:H:43:PRO:HB3	7:I:48:LYS:NZ	2.09	0.68
7:K:74:LEU:HD22	7:J:10:VAL:CG2	2.23	0.68
9:F:275:ILE:HG21	9:F:327:VAL:HG22	1.74	0.68
6:g:353:ILE:CD1	8:E:284:ARG:HG2	2.23	0.68
7:L:48:LYS:NZ	7:K:43:PRO:HB2	2.08	0.68
8:E:237:TYR:CE1	8:E:294:LEU:HD11	2.28	0.68
1:a:119:ILE:CB	2:b:28:ALA:CA	2.54	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:182:LYS:HD2	1:a:238:TYR:CD1	2.27	0.67
2:b:125:LYS:CA	4:p:185:LEU:CD2	2.67	0.67
6:g:83:ARG:NH2	6:g:273:THR:HG21	2.07	0.67
6:g:253:GLU:HB3	6:g:270:MET:CB	2.24	0.67
7:S:46:GLU:OE1	7:T:48:LYS:CB	2.43	0.67
3:d:132:ILE:CA	8:E:13:ILE:CD1	2.72	0.67
6:g:115:VAL:O	6:g:115:VAL:HG12	1.92	0.67
6:g:118:VAL:CG1	6:g:148:LEU:HD11	2.18	0.67
7:R:62:ALA:O	7:R:65:ILE:CG2	2.33	0.67
8:E:490:LEU:C	8:E:490:LEU:HD23	2.19	0.67
9:F:347:ASP:O	9:F:373:THR:HG23	1.94	0.67
8:A:416:ARG:CD	8:A:447:ASP:HA	2.24	0.67
8:C:227:GLU:HG3	8:C:239:ALA:HB2	1.76	0.67
1:a:64:ILE:CG2	2:b:57:LYS:CE	2.69	0.67
8:A:109:ILE:CG1	8:A:113:ALA:HA	2.23	0.67
8:A:159:PRO:HG3	8:A:368:GLY:O	1.92	0.67
9:B:195:GLY:HA3	9:B:267:ASP:O	1.94	0.67
2:b:114:THR:O	2:b:117:THR:CG2	2.41	0.67
2:b:114:THR:C	2:b:117:THR:HG22	2.19	0.67
4:p:210:LEU:O	4:p:213:ASP:CB	2.41	0.67
9:F:22:ARG:HH12	9:F:90:GLU:HB3	1.59	0.67
8:A:216:ARG:CZ	8:A:426:SER:OG	2.41	0.67
1:a:116:PRO:HG3	2:b:35:SER:CB	2.23	0.67
1:a:195:LEU:HD22	4:p:84:PHE:CE1	2.30	0.67
1:a:217:MET:HE1	2:b:33:ASN:HD21	1.58	0.67
2:b:80:LYS:N	4:p:137:VAL:CB	2.57	0.67
7:J:48:LYS:CB	7:I:46:GLU:OE1	2.42	0.67
9:F:100:VAL:HG12	9:F:256:MET:HE2	1.76	0.67
9:F:310:GLN:HE22	9:F:325:GLN:HE22	1.43	0.67
1:a:120:ILE:N	2:b:30:ASN:HB2	2.10	0.67
2:b:92:ALA:H	4:p:148:MET:HA	1.59	0.67
7:Q:62:ALA:O	7:Q:65:ILE:CG2	2.33	0.67
8:E:373:ILE:HG13	8:E:376:MET:H	1.58	0.67
1:a:25:HIS:N	4:p:83:LEU:HG	2.08	0.67
1:a:35:ILE:HG22	4:p:88:LEU:H	0.56	0.67
1:a:62:GLN:OE1	1:a:66:THR:HB	1.94	0.67
1:a:137:THR:HG21	1:a:191:PHE:CA	2.24	0.67
2:b:114:THR:O	4:p:174:LEU:CG	2.42	0.67
3:d:233:VAL:HG11	8:A:26:VAL:HA	1.71	0.67
5:e:4:ASN:HB2	5:e:18:GLU:CD	2.20	0.67
6:g:123:VAL:HG22	6:g:160:ILE:HD12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:284:PHE:CD1	6:g:291:ILE:HD12	2.30	0.67
7:Q:54:LEU:HD11	7:R:55:LEU:CD2	2.25	0.67
7:M:62:ALA:O	7:M:65:ILE:CG2	2.34	0.67
3:d:71:VAL:N	8:A:69:SER:O	2.28	0.67
8:E:490:LEU:HD23	8:E:490:LEU:O	1.93	0.67
1:a:122:LEU:CA	2:b:25:ASP:CB	2.63	0.67
2:b:60:ILE:CD1	4:p:120:ASP:OD2	2.43	0.67
3:d:152:SER:C	3:d:153:GLU:CD	2.63	0.67
3:d:224:ARG:CZ	3:d:232:LEU:HD12	2.24	0.67
3:d:235:MET:HE3	3:d:239:LYS:CG	2.25	0.67
4:p:203:LEU:HG	4:p:203:LEU:O	1.95	0.67
7:S:10:VAL:HG23	7:T:74:LEU:HD21	1.75	0.67
7:S:42:GLN:NE2	7:R:43:PRO:HG2	2.09	0.67
9:F:101:PRO:HB3	9:F:126:THR:HG21	1.77	0.67
9:B:71:ASN:ND2	8:C:9:ILE:HA	2.09	0.67
1:a:135:ASN:CG	4:p:86:PHE:CB	2.66	0.67
2:b:128:THR:HG21	4:p:189:LEU:HD11	1.77	0.67
8:E:355:ARG:NH1	9:D:389:GLN:NE2	2.41	0.67
1:a:70:ASN:O	2:b:53:LEU:HD13	1.34	0.66
1:a:116:PRO:HG3	2:b:35:SER:HB2	1.76	0.66
2:b:75:ILE:HD11	4:p:132:ASP:OD2	1.94	0.66
3:d:154:ARG:CZ	8:C:5:ARG:NH1	2.58	0.66
4:p:127:LEU:C	4:p:130:VAL:HG12	2.20	0.66
5:e:109:LYS:O	5:e:113:ILE:HG12	1.95	0.66
6:g:281:ILE:CG1	7:M:41:ARG:HG3	2.24	0.66
7:R:62:ALA:O	7:R:65:ILE:N	2.29	0.66
7:M:62:ALA:O	7:M:65:ILE:N	2.28	0.66
7:H:62:ALA:O	7:H:65:ILE:N	2.29	0.66
7:L:62:ALA:O	7:L:65:ILE:CG2	2.33	0.66
1:a:161:PHE:HE1	1:a:163:LYS:HG3	0.51	0.66
7:S:74:LEU:HD21	7:R:10:VAL:HG23	1.77	0.66
7:N:46:GLU:OE1	7:O:48:LYS:HG2	1.95	0.66
7:J:62:ALA:O	7:J:65:ILE:N	2.29	0.66
7:I:62:ALA:O	7:I:65:ILE:CG2	2.33	0.66
8:A:464:TYR:HE1	8:A:468:ASN:HD21	1.32	0.66
9:B:410:LEU:HD23	9:B:413:LEU:HD12	1.77	0.66
8:C:435:VAL:HG21	8:C:476:ILE:HD11	1.76	0.66
1:a:43:SER:HB2	4:p:93:ILE:CG1	2.15	0.66
6:g:343:ARG:NH2	8:A:326:ASP:CB	2.57	0.66
8:A:238:LEU:HG	8:A:238:LEU:O	1.93	0.66
8:A:296:SER:HB2	9:B:239:MET:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:430:THR:HG22	8:A:432:GLU:OE1	1.95	0.66
8:C:184:ILE:HD11	8:C:260:ILE:HG13	1.78	0.66
9:D:64:GLU:OE1	9:D:248:ARG:NH2	2.29	0.66
2:b:75:ILE:HG13	4:p:132:ASP:C	1.70	0.66
2:b:79:GLU:N	4:p:137:VAL:HA	2.03	0.66
3:d:86:ALA:HB1	3:d:95:THR:HG21	1.77	0.66
3:d:119:VAL:CG2	8:E:24:VAL:HG11	2.24	0.66
7:N:62:ALA:O	7:N:65:ILE:N	2.28	0.66
7:T:6:ALA:HB1	7:G:80:PHE:HD2	1.61	0.66
7:L:74:LEU:CD2	7:K:10:VAL:CG2	2.73	0.66
7:K:48:LYS:HZ2	7:J:43:PRO:CB	2.02	0.66
8:A:39:ILE:CD1	8:A:278:LEU:HD21	2.25	0.66
9:B:112:ASN:HD22	9:B:116:GLU:HB2	1.60	0.66
9:D:53:ASP:HB3	9:D:59:MET:HE3	1.76	0.66
1:a:76:LEU:HD13	4:p:109:TYR:HD1	1.60	0.66
2:b:160:LEU:CD1	2:b:164:LEU:H	0.10	0.66
2:b:160:LEU:HB2	2:b:163:GLU:HB2	1.78	0.66
7:N:62:ALA:O	7:N:65:ILE:CG2	2.33	0.66
7:O:46:GLU:CD	7:P:48:LYS:HB3	2.20	0.66
7:T:81:VAL:HG21	7:G:80:PHE:CE2	2.30	0.66
1:a:122:LEU:CA	2:b:25:ASP:HB2	2.25	0.66
2:b:77:GLN:O	2:b:80:LYS:HB2	1.95	0.66
2:b:175:MET:HB3	8:A:24:VAL:CG2	2.25	0.66
4:p:210:LEU:HG	8:A:13:ILE:HG21	1.78	0.66
7:Q:10:VAL:CG2	7:R:74:LEU:HD21	2.26	0.66
7:G:62:ALA:O	7:G:65:ILE:N	2.29	0.66
7:L:62:ALA:O	7:L:65:ILE:N	2.29	0.66
1:a:61:PRO:HB3	4:p:112:LEU:HD21	1.78	0.66
3:d:222:THR:HG23	3:d:234:ASP:HB2	1.60	0.66
3:d:233:VAL:CG1	8:A:26:VAL:CA	2.60	0.66
7:S:48:LYS:HD2	7:R:43:PRO:HB3	1.77	0.66
7:S:62:ALA:O	7:S:65:ILE:N	2.28	0.66
7:P:62:ALA:O	7:P:65:ILE:N	2.28	0.66
7:K:80:PHE:CE2	7:J:81:VAL:HG21	2.30	0.66
8:A:344:PHE:CE2	8:A:362:ILE:HG22	2.30	0.66
8:C:237:TYR:CE1	8:C:294:LEU:HD21	2.31	0.66
1:a:135:ASN:CG	4:p:86:PHE:CD1	2.71	0.66
3:d:119:VAL:HG21	8:E:24:VAL:CG1	2.25	0.66
4:p:193:GLU:O	4:p:196:LYS:CG	2.44	0.66
6:g:356:ILE:O	9:D:293:PRO:CG	2.43	0.66
7:P:43:PRO:CB	7:Q:48:LYS:HZ2	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:T:33:GLY:HA3	7:G:31:ALA:HA	1.77	0.66
7:H:62:ALA:O	7:H:65:ILE:CG2	2.33	0.66
3:d:242:GLU:HG3	8:A:20:TYR:CZ	2.31	0.66
7:T:40:ALA:CB	7:G:49:ILE:HD11	2.23	0.66
7:T:62:ALA:O	7:T:65:ILE:N	2.28	0.66
8:A:157:MET:HG2	8:A:384:LYS:HG2	1.77	0.66
9:D:111:PHE:CE1	9:D:124:VAL:HG21	2.31	0.66
2:b:79:GLU:N	4:p:136:GLU:CG	2.58	0.66
3:d:148:ILE:CD1	8:C:17:ILE:CG1	2.74	0.66
3:d:152:SER:O	3:d:153:GLU:OE1	2.14	0.66
4:p:212:ASP:OD1	4:p:215:VAL:HG11	1.96	0.66
7:P:62:ALA:O	7:P:65:ILE:CG2	2.33	0.66
9:B:296:VAL:HG12	9:B:297:GLY:N	2.10	0.66
9:B:311:GLU:HG3	8:C:230:ASP:CB	2.26	0.66
1:a:62:GLN:C	4:p:119:ARG:NH1	2.54	0.65
1:a:134:ILE:CD1	1:a:135:ASN:N	2.47	0.65
6:g:107:VAL:HG11	6:g:296:LEU:HD12	1.77	0.65
6:g:363:CYS:HB3	9:D:290:GLY:C	2.20	0.65
8:E:469:LYS:HB3	8:E:489:LEU:HD21	1.77	0.65
2:b:160:LEU:CD1	2:b:164:LEU:N	0.78	0.65
3:d:148:ILE:HG23	8:C:16:ARG:CD	2.25	0.65
4:p:199:THR:O	8:A:6:ALA:CB	2.36	0.65
8:E:284:ARG:NH1	8:E:330:TYR:HD1	1.91	0.65
2:b:121:PHE:CZ	2:b:125:LYS:CE	2.79	0.65
3:d:148:ILE:HG23	8:C:16:ARG:HD2	1.77	0.65
5:e:119:LEU:HD12	5:e:123:ARG:CZ	2.25	0.65
6:g:356:ILE:HD13	8:E:286:ALA:CB	2.25	0.65
7:S:43:PRO:CB	7:T:48:LYS:HZ2	2.00	0.65
7:G:43:PRO:HB2	7:H:48:LYS:NZ	2.11	0.65
8:A:464:TYR:CD2	8:A:497:GLN:HB2	2.31	0.65
9:B:275:ILE:HD13	9:B:306:MET:HE1	1.76	0.65
8:C:30:GLY:HA3	8:C:45:LEU:HG	1.79	0.65
4:p:107:ILE:O	4:p:111:PRO:HG2	1.96	0.65
7:N:46:GLU:CD	7:O:48:LYS:HB3	2.21	0.65
7:Q:6:ALA:HB1	7:R:80:PHE:CD2	2.30	0.65
8:E:237:TYR:HE1	8:E:294:LEU:HD11	1.61	0.65
3:d:114:PHE:HD1	3:d:120:ILE:HD13	1.60	0.65
3:d:222:THR:CB	3:d:234:ASP:HB3	2.27	0.65
5:e:60:LEU:O	5:e:60:LEU:CD1	2.36	0.65
6:g:83:ARG:HH22	6:g:273:THR:CG2	2.09	0.65
6:g:149:LYS:NZ	6:g:155:TYR:HE1	1.93	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:Q:43:PRO:CG	7:R:42:GLN:HE22	2.07	0.65
7:K:48:LYS:HG2	7:J:46:GLU:OE1	1.96	0.65
8:E:109:ILE:HD12	8:E:113:ALA:HA	1.77	0.65
8:A:109:ILE:HG23	8:A:225:VAL:HA	1.77	0.65
9:D:411:ASP:HA	9:D:418:ARG:NH2	1.97	0.65
3:d:132:ILE:N	8:E:13:ILE:CD1	2.60	0.65
4:p:210:LEU:CD1	8:A:13:ILE:HG22	2.24	0.65
7:T:46:GLU:OE1	7:G:48:LYS:HG2	1.96	0.65
7:K:42:GLN:HE22	7:J:43:PRO:CG	2.09	0.65
7:I:62:ALA:O	7:I:65:ILE:N	2.28	0.65
9:B:71:ASN:ND2	8:C:9:ILE:C	2.54	0.65
5:e:3:LEU:HD23	5:e:35:PRO:HA	1.78	0.65
6:g:221:VAL:HG23	8:A:398:GLN:O	1.93	0.65
2:b:88:VAL:C	2:b:90:MET:N	2.53	0.65
3:d:87:ASP:CB	3:d:172:ILE:HD11	2.26	0.65
5:e:96:LEU:HD13	5:e:123:ARG:HA	1.78	0.65
7:O:42:GLN:HE21	7:O:44:GLU:HB3	1.62	0.65
9:B:113:VAL:HG22	9:B:249:VAL:HG22	1.79	0.65
8:C:166:GLU:O	8:C:318:PRO:HD2	1.96	0.65
7:K:80:PHE:HD2	7:J:6:ALA:HB1	1.62	0.65
1:a:149:PHE:HZ	1:a:163:LYS:NZ	1.95	0.65
2:b:107:LYS:CE	4:p:166:THR:CA	2.73	0.65
4:p:152:ARG:NH2	8:A:502:LEU:HB3	2.12	0.65
7:H:43:PRO:HB3	7:I:48:LYS:HD2	1.78	0.65
8:A:436:MET:HG3	8:A:490:LEU:CD1	2.27	0.65
9:D:261:ARG:HD3	9:D:321:ILE:CD1	2.27	0.65
1:a:134:ILE:N	4:p:86:PHE:CZ	2.61	0.64
2:b:71:ARG:NH1	4:p:126:GLN:HA	2.04	0.64
5:e:91:GLU:N	5:e:91:GLU:OE1	2.30	0.64
6:g:57:THR:O	6:g:61:THR:HG23	1.97	0.64
7:K:62:ALA:O	7:K:65:ILE:N	2.28	0.64
8:A:497:GLN:HA	8:A:497:GLN:NE2	2.12	0.64
9:B:338:ALA:HB3	9:B:339:PRO:HD3	1.79	0.64
1:a:63:THR:N	4:p:119:ARG:NH1	2.45	0.64
6:g:83:ARG:HH22	6:g:273:THR:HG23	1.62	0.64
7:P:43:PRO:HB3	7:Q:48:LYS:CD	2.27	0.64
7:T:10:VAL:HG23	7:G:74:LEU:HD21	1.78	0.64
8:E:430:THR:HG22	8:E:432:GLU:OE1	1.97	0.64
8:A:154:ILE:HD11	8:A:358:ILE:HD11	1.79	0.64
8:C:12:ILE:HD11	8:C:33:LEU:HD21	1.78	0.64
1:a:51:LEU:HD21	4:p:100:LEU:HD12	0.68	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:82:ARG:CG	2:b:85:LEU:CD2	2.48	0.64
6:g:360:ALA:CB	9:D:293:PRO:HD2	2.27	0.64
7:O:43:PRO:CG	7:P:42:GLN:NE2	2.59	0.64
7:O:43:PRO:HB3	7:P:48:LYS:NZ	2.12	0.64
7:T:43:PRO:CA	7:G:48:LYS:HZ3	2.11	0.64
8:C:130:ILE:HG23	8:C:241:TYR:HB3	1.80	0.64
2:b:125:LYS:HB3	4:p:185:LEU:CD2	2.23	0.64
2:b:133:GLN:HG2	8:A:3:THR:HA	1.80	0.64
7:M:48:LYS:CD	7:L:46:GLU:OE1	2.45	0.64
7:G:10:VAL:CG2	7:H:74:LEU:HD21	2.25	0.64
9:B:20:LEU:HD12	9:B:90:GLU:OE2	1.92	0.64
9:B:64:GLU:OE2	9:B:133:HIS:NE2	2.30	0.64
8:C:181:THR:HG23	8:C:213:PHE:CE1	2.33	0.64
1:a:126:GLU:CD	4:p:83:LEU:CD2	2.71	0.64
2:b:88:VAL:CB	4:p:147:VAL:HG13	1.94	0.64
3:d:109:GLU:N	3:d:110:PRO:HD2	2.13	0.64
3:d:201:ILE:HG13	3:d:202:THR:N	2.12	0.64
4:p:210:LEU:CG	8:A:13:ILE:CG2	2.74	0.64
6:g:202:PHE:CB	6:g:231:LEU:HD13	2.28	0.64
8:C:308:LEU:HD22	8:C:309:LEU:CD1	2.28	0.64
3:d:197:GLY:O	3:d:201:ILE:HG12	1.97	0.64
7:T:43:PRO:CB	7:G:48:LYS:HZ2	2.04	0.64
8:A:495:GLN:OE1	8:A:498:MET:CE	2.46	0.64
9:B:216:MET:CB	9:B:222:ILE:HG12	2.27	0.64
8:C:14:ARG:O	8:C:18:GLU:HG3	1.98	0.64
8:C:251:MET:HE3	8:C:252:TYR:CE1	2.32	0.64
9:D:167:LYS:NZ	9:D:310:GLN:OE1	2.31	0.64
9:D:387:ILE:HD13	9:D:455:ILE:CG2	2.15	0.64
1:a:124:HIS:CD2	4:p:79:GLU:OE1	2.51	0.64
2:b:159:CYS:HB3	2:b:164:LEU:HD23	1.80	0.64
3:d:198:VAL:HA	3:d:201:ILE:CG1	2.27	0.64
4:p:90:LEU:HB2	4:p:91:PRO:CD	2.26	0.64
5:e:42:THR:HG22	6:g:285:GLU:HB2	1.79	0.64
6:g:281:ILE:HD13	7:M:41:ARG:O	1.97	0.64
7:H:46:GLU:OE1	7:I:48:LYS:HG2	1.98	0.64
7:K:31:ALA:HA	7:J:33:GLY:HA3	1.80	0.64
8:A:446:LEU:HD13	8:A:454:VAL:HG13	1.80	0.64
8:A:469:LYS:NZ	8:A:492:GLU:CB	2.59	0.64
9:D:423:ARG:HH21	9:D:464:GLY:HA3	1.62	0.64
1:a:35:ILE:HB	4:p:89:THR:N	2.12	0.64
2:b:148:ALA:O	4:p:214:ILE:HD11	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:148:ILE:CD1	8:C:17:ILE:N	2.60	0.64
7:N:48:LYS:HZ3	7:M:43:PRO:C	2.06	0.64
7:O:62:ALA:O	7:O:65:ILE:N	2.29	0.64
7:G:62:ALA:O	7:G:65:ILE:CG2	2.33	0.64
8:A:475:ILE:HG21	8:A:486:ALA:HB2	1.79	0.64
9:D:67:GLN:HE21	9:D:75:ARG:HD2	1.63	0.64
1:a:119:ILE:HD11	2:b:32:ILE:CA	2.27	0.64
1:a:135:ASN:ND2	4:p:85:ASP:O	2.31	0.64
6:g:144:ARG:NH2	6:g:242:ILE:HD12	2.13	0.64
6:g:360:ALA:HA	9:D:292:MET:CB	2.28	0.64
7:H:46:GLU:CD	7:I:48:LYS:HB3	2.23	0.64
8:C:75:VAL:HG11	8:C:274:MET:HE3	1.80	0.64
9:D:62:THR:HG21	9:D:98:LEU:HD21	1.79	0.64
1:a:118:LYS:HZ2	1:a:126:GLU:HB2	1.62	0.64
1:a:119:ILE:HG23	2:b:28:ALA:CB	2.22	0.64
2:b:160:LEU:CD1	2:b:163:GLU:HB2	2.24	0.64
3:d:132:ILE:HG12	8:E:13:ILE:HD13	1.79	0.64
5:e:25:SER:O	5:e:44:VAL:HG23	1.97	0.64
7:G:43:PRO:HB3	7:H:48:LYS:NZ	2.12	0.64
8:E:9:ILE:CG2	8:E:14:ARG:HG3	2.27	0.64
8:C:164:GLN:HG2	8:C:165:ARG:H	1.62	0.64
1:a:40:LEU:CD2	4:p:89:THR:CA	2.73	0.63
1:a:44:TRP:NE1	4:p:96:GLU:OE1	2.29	0.63
2:b:74:ALA:CB	4:p:130:VAL:O	2.46	0.63
2:b:144:VAL:HG23	8:A:9:ILE:HG21	1.71	0.63
3:d:177:VAL:CG1	3:d:210:LYS:HD2	2.27	0.63
6:g:251:GLU:HG3	6:g:272:LYS:CG	2.28	0.63
7:O:43:PRO:C	7:P:48:LYS:HZ3	2.05	0.63
7:L:48:LYS:NZ	7:K:43:PRO:HB3	2.12	0.63
8:E:461:LEU:HD23	8:E:461:LEU:C	2.23	0.63
8:C:54:VAL:HG13	8:C:90:LYS:O	1.97	0.63
9:D:53:ASP:HB3	9:D:59:MET:HE2	1.80	0.63
2:b:60:ILE:CG1	4:p:120:ASP:OD2	2.45	0.63
2:b:95:PHE:O	4:p:155:ILE:CG2	2.32	0.63
2:b:125:LYS:HB3	4:p:185:LEU:HD13	1.78	0.63
2:b:180:ASN:CB	3:d:201:ILE:HG22	2.26	0.63
3:d:154:ARG:NH2	8:C:8:GLU:OE2	2.32	0.63
4:p:126:GLN:OE1	4:p:126:GLN:HA	1.96	0.63
4:p:192:LEU:HD22	8:A:3:THR:HG23	1.81	0.63
6:g:83:ARG:NH2	6:g:273:THR:HG23	2.11	0.63
2:b:71:ARG:HA	4:p:132:ASP:H	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:N:43:PRO:HB3	7:O:48:LYS:HD2	1.79	0.63
7:G:33:GLY:HA3	7:H:31:ALA:HA	1.81	0.63
9:F:385:TYR:HE1	9:F:389:GLN:HE21	1.36	0.63
9:D:411:ASP:CA	9:D:418:ARG:HH21	2.02	0.63
7:S:48:LYS:CD	7:R:43:PRO:HB3	2.28	0.63
8:A:104:TYR:HE2	8:A:109:ILE:HD12	1.63	0.63
8:A:432:GLU:O	8:A:435:VAL:CG1	2.46	0.63
1:a:116:PRO:CB	2:b:34:LEU:N	2.56	0.63
2:b:169:ILE:HG12	3:d:220:GLY:HA2	1.80	0.63
4:p:85:ASP:C	4:p:86:PHE:HD1	2.06	0.63
6:g:280:PRO:C	7:N:41:ARG:HH21	2.07	0.63
7:N:54:LEU:HD11	7:O:55:LEU:HD23	1.79	0.63
9:F:408:LEU:O	9:F:412:GLU:HB2	1.99	0.63
1:a:184:LEU:CD2	1:a:188:PHE:CE2	2.82	0.63
2:b:88:VAL:HA	4:p:148:MET:CB	2.15	0.63
4:p:177:GLY:O	4:p:181:ILE:HG12	1.99	0.63
7:M:80:PHE:CE2	7:L:81:VAL:CG2	2.80	0.63
8:E:100:VAL:HG23	8:E:246:LEU:CD2	2.29	0.63
8:E:345:LEU:HD21	8:E:358:ILE:HD13	1.79	0.63
9:F:384:HIS:O	9:F:387:ILE:HG22	1.98	0.63
1:a:53:SER:HA	1:a:56:ILE:HG22	1.79	0.63
1:a:121:GLN:CB	2:b:25:ASP:OD1	2.47	0.63
2:b:103:ILE:CG1	4:p:162:MET:C	2.72	0.63
5:e:19:VAL:HG11	5:e:51:ILE:HD11	1.81	0.63
7:S:48:LYS:HZ3	7:R:43:PRO:C	2.06	0.63
7:S:68:LEU:CD1	7:T:66:TYR:CD1	2.82	0.63
9:F:100:VAL:HG12	9:F:256:MET:CE	2.24	0.63
9:D:100:VAL:CG1	9:D:256:MET:CE	2.76	0.63
1:a:116:PRO:HD3	2:b:35:SER:CA	2.27	0.63
7:G:43:PRO:C	7:H:48:LYS:HZ3	2.07	0.63
9:B:20:LEU:HD22	9:B:92:ILE:CG1	2.29	0.63
1:a:119:ILE:HB	2:b:31:LEU:CD2	2.28	0.63
2:b:125:LYS:HB3	4:p:185:LEU:CD1	2.28	0.63
3:d:115:PHE:CB	3:d:155:ILE:HD11	2.27	0.63
3:d:217:LEU:HD23	3:d:236:SER:OG	1.99	0.63
7:O:54:LEU:HD11	7:P:55:LEU:HD23	1.81	0.63
7:K:74:LEU:HD21	7:J:10:VAL:HG23	1.78	0.63
9:F:296:VAL:O	9:F:296:VAL:HG12	1.99	0.63
8:A:382:LYS:CB	8:A:442:THR:HG21	2.29	0.63
8:C:176:LYS:HE3	10:C:601:ATP:O1B	1.99	0.63
1:a:30:ILE:CG2	1:a:32:GLY:H	2.12	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:K:48:LYS:HZ3	7:J:43:PRO:CA	2.12	0.62
8:C:35:VAL:HG21	8:C:83:ILE:CG2	2.28	0.62
8:C:260:ILE:HD12	8:C:317:LEU:HD12	1.81	0.62
1:a:118:LYS:O	2:b:29:THR:CB	2.47	0.62
2:b:122:GLU:OE1	4:p:181:ILE:CB	2.46	0.62
3:d:195:ALA:HB1	3:d:207:VAL:CG1	2.29	0.62
6:g:79:VAL:CG1	6:g:306:ARG:HH22	2.11	0.62
1:a:195:LEU:CD2	4:p:84:PHE:CE1	2.82	0.62
7:J:48:LYS:HZ2	7:I:43:PRO:CB	2.10	0.62
8:E:77:MET:CE	8:E:112:LEU:HD21	2.30	0.62
8:C:100:VAL:HG23	8:C:246:LEU:CD2	2.30	0.62
2:b:176:PHE:HE1	3:d:233:VAL:CB	2.10	0.62
3:d:131:GLU:OE2	8:E:16:ARG:NH1	2.31	0.62
5:e:24:LEU:CD1	5:e:25:SER:O	2.48	0.62
6:g:123:VAL:CG1	6:g:308:LEU:HD22	2.18	0.62
9:D:132:ILE:O	9:D:312:ARG:NH1	2.31	0.62
1:a:70:ASN:CG	2:b:54:ASP:OD1	2.40	0.62
2:b:146:GLN:HA	2:b:149:LEU:HD12	1.81	0.62
6:g:72:VAL:HG12	6:g:257:LEU:CD2	2.28	0.62
7:Q:43:PRO:HB2	7:R:48:LYS:HZ2	1.61	0.62
7:Q:62:ALA:O	7:Q:65:ILE:N	2.29	0.62
7:M:80:PHE:CZ	7:L:81:VAL:CG2	2.82	0.62
7:J:48:LYS:HZ3	7:I:43:PRO:C	2.06	0.62
9:F:336:ASP:HB3	9:F:339:PRO:HD2	1.80	0.62
8:C:48:VAL:HG22	8:C:49:MET:N	2.15	0.62
8:C:152:ILE:HG22	8:C:423:GLN:HE21	1.62	0.62
7:T:54:LEU:HD11	7:G:55:LEU:HD23	1.80	0.62
8:E:55:GLU:HG3	8:E:55:GLU:O	1.99	0.62
9:D:254:LEU:HD13	9:D:313:ILE:HG12	1.81	0.62
9:D:296:VAL:HG12	9:D:296:VAL:O	1.99	0.62
1:a:100:THR:HG23	4:p:101:MET:CG	2.24	0.62
2:b:78:LEU:N	4:p:134:SER:O	2.32	0.62
2:b:81:ALA:HB1	4:p:139:GLN:C	2.25	0.62
3:d:228:GLU:OE2	8:A:43:HIS:CE1	2.51	0.62
9:B:132:ILE:O	9:B:312:ARG:NH1	2.29	0.62
9:B:204:GLU:OE2	9:B:274:ASN:HB2	2.00	0.62
1:a:24:GLN:CA	4:p:83:LEU:HG	2.30	0.62
1:a:133:ASP:OD1	1:a:133:ASP:O	2.18	0.62
2:b:69:GLU:CG	2:b:73:LYS:HE3	2.29	0.62
2:b:73:LYS:N	4:p:130:VAL:HG22	2.00	0.62
2:b:148:ALA:HA	4:p:211:SER:CB	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:177:VAL:HG11	3:d:210:LYS:CE	2.30	0.62
3:d:247:GLN:NE2	8:A:13:ILE:CA	2.62	0.62
5:e:119:LEU:HD13	5:e:123:ARG:CD	2.29	0.62
7:S:6:ALA:HB1	7:T:80:PHE:HD2	1.64	0.62
7:S:48:LYS:CG	7:R:46:GLU:OE1	2.48	0.62
7:Q:43:PRO:HB3	7:R:48:LYS:HD2	1.80	0.62
7:J:42:GLN:HE22	7:I:43:PRO:CG	2.10	0.62
1:a:39:VAL:CG2	1:a:133:ASP:CG	2.71	0.62
2:b:133:GLN:CB	8:A:3:THR:HG22	2.23	0.62
3:d:152:SER:CA	3:d:153:GLU:OE1	2.48	0.62
4:p:193:GLU:C	4:p:196:LYS:HG2	2.24	0.62
6:g:53:SER:HB2	9:D:403:ASP:CG	2.25	0.62
8:A:436:MET:HG3	8:A:490:LEU:HD11	1.80	0.62
9:B:29:PRO:HD2	9:B:288:LEU:HD13	1.82	0.62
9:B:426:LYS:NZ	9:B:467:ASP:HA	2.15	0.62
8:C:110:ASN:HB2	8:C:114:LYS:O	1.99	0.62
4:p:210:LEU:HD21	8:A:13:ILE:HG21	1.82	0.62
7:S:61:GLU:O	7:S:64:THR:HG22	2.00	0.62
7:N:33:GLY:HA3	7:O:31:ALA:HA	1.81	0.62
8:E:355:ARG:HH22	9:D:389:GLN:HE22	0.62	0.62
9:B:410:LEU:HD21	9:B:421:VAL:HG11	1.81	0.62
9:D:47:LEU:HB2	9:D:63:CYS:HB2	1.82	0.62
1:a:35:ILE:CB	4:p:88:LEU:H	2.13	0.61
2:b:78:LEU:N	4:p:135:SER:C	2.49	0.61
2:b:176:PHE:HE1	3:d:233:VAL:CG1	2.13	0.61
6:g:71:LYS:HB3	6:g:316:LEU:HD13	1.82	0.61
7:S:48:LYS:CB	7:R:46:GLU:OE1	2.48	0.61
7:O:46:GLU:OE1	7:P:48:LYS:HG2	2.00	0.61
7:H:54:LEU:HD11	7:I:55:LEU:HD23	1.82	0.61
8:E:34:GLN:HE21	8:E:41:ARG:HG3	1.65	0.61
8:E:284:ARG:NH1	8:E:330:TYR:HB2	2.15	0.61
8:A:379:VAL:HG12	8:A:438:ILE:CG2	2.30	0.61
9:B:179:THR:O	9:B:182:ILE:HG22	2.00	0.61
8:C:164:GLN:CG	8:C:165:ARG:N	2.63	0.61
9:D:275:ILE:HG21	9:D:327:VAL:HG22	1.81	0.61
4:p:192:LEU:HD22	8:A:3:THR:HG1	1.65	0.61
6:g:126:ASP:OD1	6:g:182:GLY:HA3	1.99	0.61
7:P:6:ALA:HB1	7:Q:80:PHE:HD2	1.63	0.61
7:L:31:ALA:HA	7:K:33:GLY:HA3	1.81	0.61
7:J:80:PHE:CE2	7:I:81:VAL:CG2	2.83	0.61
8:E:438:ILE:O	8:E:442:THR:HG23	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:387:ILE:CD1	9:F:458:PHE:HB2	2.25	0.61
8:A:367:VAL:O	8:A:367:VAL:HG23	1.99	0.61
9:B:50:LYS:HD3	9:B:59:MET:HE3	1.81	0.61
2:b:92:ALA:HA	4:p:152:ARG:H	1.65	0.61
2:b:140:VAL:O	2:b:144:VAL:HG23	1.99	0.61
3:d:148:ILE:CG1	8:C:16:ARG:HG2	2.31	0.61
6:g:144:ARG:CZ	6:g:242:ILE:HD12	2.30	0.61
6:g:253:GLU:O	6:g:253:GLU:HG2	2.00	0.61
7:J:74:LEU:HD22	7:I:10:VAL:HG22	1.80	0.61
8:A:327:VAL:HG12	8:A:327:VAL:O	1.99	0.61
8:C:98:ILE:HD12	8:C:242:THR:HG23	1.82	0.61
8:C:104:TYR:CD2	8:C:246:LEU:HD21	2.35	0.61
8:C:385:LEU:HD23	9:D:476:LEU:HD11	1.82	0.61
9:D:179:THR:O	9:D:182:ILE:CG2	2.44	0.61
2:b:77:GLN:CB	4:p:134:SER:HA	2.30	0.61
7:H:43:PRO:CG	7:I:42:GLN:NE2	2.62	0.61
7:L:48:LYS:CB	7:K:46:GLU:OE1	2.48	0.61
8:C:231:SER:HB2	8:C:232:PRO:HD2	1.83	0.61
8:C:413:ARG:NH1	8:C:442:THR:O	2.33	0.61
1:a:119:ILE:CD1	2:b:31:LEU:C	2.71	0.61
2:b:92:ALA:HA	4:p:152:ARG:N	2.14	0.61
6:g:110:THR:HG23	6:g:296:LEU:HD13	1.81	0.61
8:E:169:ILE:HG23	8:E:344:PHE:CD1	2.26	0.61
9:F:426:LYS:HD3	9:F:474:PHE:HE2	1.64	0.61
8:C:143:VAL:HG13	8:C:162:ARG:O	2.00	0.61
8:C:237:TYR:CE1	8:C:294:LEU:CD2	2.81	0.61
2:b:42:ILE:HG23	2:b:46:LYS:HE3	1.82	0.61
2:b:92:ALA:HB2	4:p:148:MET:O	2.00	0.61
3:d:224:ARG:HH12	3:d:232:LEU:HD13	1.59	0.61
4:p:203:LEU:HD22	8:A:7:ASP:CA	2.31	0.61
7:K:55:LEU:HD23	7:J:54:LEU:HD11	1.82	0.61
8:A:39:ILE:HD13	8:A:278:LEU:HD21	1.81	0.61
9:B:261:ARG:NH1	9:B:314:THR:O	2.33	0.61
9:B:426:LYS:HZ3	9:B:467:ASP:HA	1.64	0.61
8:C:389:GLN:OE1	8:C:389:GLN:HA	2.00	0.61
1:a:27:TYR:CZ	1:a:122:LEU:HD11	2.08	0.61
1:a:39:VAL:CG1	1:a:133:ASP:OD2	2.48	0.61
2:b:172:ASN:ND2	3:d:235:MET:O	2.33	0.61
3:d:175:THR:O	3:d:176:GLU:OE1	2.18	0.61
7:S:43:PRO:CA	7:T:48:LYS:HZ3	2.13	0.61
7:O:43:PRO:HB3	7:P:48:LYS:HZ3	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:48:LYS:HG2	7:L:46:GLU:OE1	2.01	0.61
2:b:81:ALA:N	4:p:141:GLU:HG3	2.16	0.61
2:b:118:LEU:HD13	4:p:177:GLY:C	2.11	0.61
6:g:73:ARG:NH1	9:F:412:GLU:OE2	2.33	0.61
7:N:43:PRO:HB2	7:O:48:LYS:HZ2	1.66	0.61
9:F:42:ASN:OD1	9:F:45:ASN:ND2	2.34	0.61
8:C:151:LEU:HD22	8:C:356:PRO:HG3	1.82	0.61
1:a:184:LEU:HD21	1:a:188:PHE:HE2	1.63	0.61
2:b:77:GLN:HB3	4:p:134:SER:HA	1.82	0.61
6:g:269:ASP:OD1	6:g:269:ASP:O	2.18	0.61
6:g:281:ILE:HB	7:M:41:ARG:CG	2.25	0.61
7:J:48:LYS:HZ2	7:I:43:PRO:HB2	1.64	0.61
8:E:130:ILE:HG23	8:E:241:TYR:HB3	1.82	0.61
8:A:237:TYR:CD2	8:A:274:MET:HE1	2.35	0.61
9:B:254:LEU:HD21	9:B:312:ARG:HB2	1.82	0.61
9:D:30:VAL:HG22	9:D:77:VAL:HG22	1.82	0.61
1:a:58:VAL:CG1	4:p:107:ILE:CG2	2.74	0.61
1:a:193:ASN:HD22	1:a:227:GLN:CD	2.08	0.61
2:b:145:PHE:HZ	3:d:243:GLU:C	2.09	0.61
3:d:115:PHE:HB3	3:d:155:ILE:HD13	1.79	0.61
5:e:21:GLU:CG	5:e:34:LEU:HD22	2.24	0.61
6:g:103:GLU:HG2	7:R:41:ARG:HH21	1.66	0.61
7:S:80:PHE:HD2	7:R:6:ALA:HB1	1.66	0.61
7:M:48:LYS:HZ3	7:L:43:PRO:CB	2.14	0.61
8:E:9:ILE:CG2	8:E:13:ILE:HG22	2.31	0.61
8:A:42:ILE:CD1	8:A:89:VAL:HG11	2.31	0.61
8:C:420:LEU:HD23	8:C:458:LEU:HD11	1.82	0.61
1:a:116:PRO:HG3	2:b:35:SER:N	2.13	0.60
1:a:121:GLN:HG3	2:b:25:ASP:CG	2.25	0.60
2:b:68:GLU:OE1	4:p:126:GLN:HG3	2.00	0.60
2:b:74:ALA:HB3	4:p:130:VAL:O	2.01	0.60
2:b:79:GLU:CG	4:p:136:GLU:HG2	2.30	0.60
3:d:154:ARG:NH2	8:C:5:ARG:NE	2.44	0.60
5:e:4:ASN:HB2	5:e:18:GLU:CG	2.31	0.60
7:Q:81:VAL:HG21	7:R:80:PHE:CE2	2.35	0.60
8:E:202:LYS:NZ	9:D:347:ASP:OD1	2.33	0.60
9:F:183:MET:HE1	9:F:215:GLU:CB	2.31	0.60
8:A:104:TYR:HE2	8:A:109:ILE:CD1	2.13	0.60
1:a:119:ILE:CD1	2:b:32:ILE:CG1	2.54	0.60
1:a:119:ILE:CG1	2:b:31:LEU:HG	2.31	0.60
2:b:95:PHE:HZ	4:p:156:SER:HB2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:141:ARG:O	8:A:16:ARG:NH2	2.34	0.60
3:d:235:MET:HG3	8:A:24:VAL:HG11	1.82	0.60
6:g:111:LYS:HE3	6:g:113:ARG:HG2	1.82	0.60
7:T:43:PRO:CG	7:G:42:GLN:HE22	2.10	0.60
8:E:45:LEU:O	9:F:87:ARG:NH2	2.34	0.60
8:E:75:VAL:HG12	8:E:234:THR:OG1	2.00	0.60
1:a:118:LYS:HZ2	1:a:126:GLU:CB	2.14	0.60
4:p:203:LEU:HD22	8:A:7:ASP:HA	1.83	0.60
5:e:60:LEU:HD12	5:e:60:LEU:C	2.22	0.60
6:g:221:VAL:HG22	8:A:401:SER:CB	2.30	0.60
6:g:356:ILE:CD1	9:D:295:ALA:CA	2.69	0.60
6:g:356:ILE:HG12	9:D:294:SER:O	2.01	0.60
7:G:46:GLU:CD	7:H:48:LYS:HB3	2.25	0.60
7:G:54:LEU:HD11	7:H:55:LEU:CD2	2.31	0.60
8:C:35:VAL:HG21	8:C:83:ILE:HG21	1.83	0.60
1:a:121:GLN:HB3	2:b:25:ASP:OD1	2.00	0.60
4:p:214:ILE:C	8:A:17:ILE:CD1	2.73	0.60
7:P:43:PRO:CA	7:Q:48:LYS:HZ3	2.14	0.60
7:L:74:LEU:HD22	7:K:10:VAL:CG2	2.32	0.60
8:C:469:LYS:HZ3	8:C:492:GLU:HB2	1.64	0.60
1:a:119:ILE:HD13	2:b:31:LEU:C	2.27	0.60
2:b:67:SER:HB3	4:p:124:LYS:HA	1.82	0.60
6:g:327:THR:HG23	6:g:328:ASP:N	2.15	0.60
7:S:46:GLU:OE1	7:T:48:LYS:HG2	2.02	0.60
7:N:48:LYS:HD2	7:M:43:PRO:HB3	1.84	0.60
8:E:469:LYS:CE	8:E:493:ALA:HB2	2.32	0.60
9:F:292:MET:HE3	8:A:279:ARG:HG3	1.84	0.60
8:A:65:LEU:HD12	8:A:75:VAL:HG21	1.83	0.60
8:C:237:TYR:HE1	8:C:294:LEU:HD21	1.65	0.60
1:a:86:GLN:HA	1:a:86:GLN:HE21	1.67	0.60
1:a:165:ILE:HG21	1:a:169:PRO:C	2.27	0.60
2:b:80:LYS:C	4:p:141:GLU:HG3	2.27	0.60
2:b:82:ARG:HG3	2:b:85:LEU:HD21	0.71	0.60
2:b:91:ASP:C	4:p:151:ALA:CB	2.64	0.60
4:p:127:LEU:HA	4:p:130:VAL:HG12	1.81	0.60
6:g:363:CYS:CB	9:D:290:GLY:O	2.49	0.60
7:G:43:PRO:CG	7:H:42:GLN:NE2	2.60	0.60
8:E:343:ILE:CG2	8:E:358:ILE:HD12	2.31	0.60
9:F:100:VAL:HG13	9:F:256:MET:CE	2.29	0.60
1:a:58:VAL:CG1	4:p:108:TYR:HA	2.31	0.60
2:b:64:ILE:HD11	4:p:120:ASP:CA	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:83:ALA:N	4:p:140:LEU:CB	2.33	0.60
6:g:360:ALA:HA	9:D:292:MET:HA	1.82	0.60
7:O:33:GLY:HA3	7:P:31:ALA:HA	1.84	0.60
7:K:49:ILE:HD11	7:J:40:ALA:CB	2.25	0.60
8:E:260:ILE:HD13	8:E:317:LEU:HB2	1.83	0.60
8:E:479:THR:HG22	8:E:481:THR:HB	1.84	0.60
8:A:439:TYR:OH	8:A:491:LYS:HE2	2.02	0.60
9:B:456:ARG:NH2	9:B:481:ASP:OD1	2.34	0.60
9:D:421:VAL:O	9:D:425:ARG:HG2	2.02	0.60
1:a:40:LEU:HG	4:p:89:THR:HB	1.77	0.60
1:a:118:LYS:O	2:b:30:ASN:OD1	2.19	0.60
2:b:81:ALA:HA	4:p:141:GLU:HG3	1.83	0.60
2:b:107:LYS:HA	4:p:166:THR:HG21	0.61	0.60
4:p:210:LEU:CD2	8:A:13:ILE:HG21	2.32	0.60
6:g:100:LEU:HD11	6:g:105:VAL:HG21	1.82	0.60
8:A:190:GLN:OE1	8:A:190:GLN:N	2.23	0.60
9:B:408:LEU:HD13	9:B:412:GLU:HG3	1.83	0.60
1:a:58:VAL:HA	4:p:112:LEU:HD11	1.84	0.60
1:a:64:ILE:HG22	2:b:57:LYS:HE2	1.82	0.60
1:a:137:THR:CB	1:a:191:PHE:HB2	2.31	0.60
1:a:212:VAL:N	1:a:213:PRO:CD	2.64	0.60
9:F:407:ILE:HG22	9:F:408:LEU:HD23	1.83	0.60
8:A:39:ILE:O	8:A:39:ILE:HG23	2.02	0.60
9:D:336:ASP:HB3	9:D:339:PRO:HD2	1.84	0.60
2:b:60:ILE:O	2:b:63:THR:CG2	2.47	0.60
3:d:148:ILE:HG13	8:C:20:TYR:CD2	2.36	0.60
7:M:66:TYR:CG	7:L:68:LEU:HD22	2.37	0.60
7:L:80:PHE:CE2	7:K:81:VAL:HG21	2.37	0.60
8:E:157:MET:HG2	8:E:384:LYS:HG2	1.84	0.60
8:A:9:ILE:HD13	8:A:12:ILE:HD12	1.83	0.60
8:C:104:TYR:CE2	8:C:246:LEU:HD21	2.37	0.60
9:D:385:TYR:O	9:D:389:GLN:HG2	2.02	0.60
4:p:152:ARG:HB3	8:A:503:LEU:HD22	1.79	0.59
5:e:4:ASN:CB	5:e:18:GLU:CD	2.75	0.59
7:Q:43:PRO:CB	7:R:48:LYS:HZ2	2.11	0.59
7:L:74:LEU:CD2	7:K:10:VAL:HG23	2.32	0.59
8:E:157:MET:SD	8:E:387:LEU:HD12	2.42	0.59
8:A:378:LYS:HD3	8:A:482:PHE:HB3	1.84	0.59
8:A:445:TYR:CE2	8:A:494:ILE:HG21	2.36	0.59
8:A:446:LEU:HD22	8:A:449:LEU:HD12	1.83	0.59
8:C:164:GLN:CG	8:C:165:ARG:H	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:24:GLN:C	4:p:83:LEU:CD1	2.74	0.59
1:a:40:LEU:HD21	4:p:89:THR:CB	2.31	0.59
1:a:133:ASP:C	1:a:191:PHE:HE1	2.10	0.59
1:a:193:ASN:HD22	1:a:227:GLN:CG	2.10	0.59
2:b:60:ILE:HD11	4:p:120:ASP:OD2	2.02	0.59
2:b:78:LEU:O	4:p:140:LEU:N	2.29	0.59
3:d:224:ARG:HG2	3:d:232:LEU:HD12	1.83	0.59
3:d:242:GLU:CG	8:A:20:TYR:CE1	2.84	0.59
4:p:214:ILE:HG13	4:p:215:VAL:H	1.63	0.59
5:e:34:LEU:HD12	7:L:42:GLN:HE22	1.66	0.59
6:g:353:ILE:HG12	8:E:284:ARG:HA	1.83	0.59
7:P:46:GLU:OE1	7:Q:48:LYS:HG2	2.01	0.59
8:E:42:ILE:HD11	8:E:56:PHE:HZ	1.61	0.59
8:A:106:GLY:HA2	8:A:219:MET:HG3	1.83	0.59
8:A:469:LYS:HZ1	8:A:492:GLU:CB	2.14	0.59
9:B:112:ASN:HB3	9:B:114:LEU:H	1.67	0.59
9:B:425:ARG:HB3	9:B:429:ARG:HH12	1.67	0.59
8:A:104:TYR:CE2	8:A:109:ILE:HD12	2.37	0.59
1:a:144:THR:HG21	1:a:186:LEU:HD21	1.84	0.59
2:b:77:GLN:HG2	4:p:138:LYS:N	2.17	0.59
2:b:95:PHE:HB3	4:p:151:ALA:C	2.18	0.59
4:p:213:ASP:OD2	8:A:14:ARG:CB	2.50	0.59
6:g:124:THR:CG2	6:g:137:LEU:CD2	2.61	0.59
7:Q:33:GLY:HA3	7:R:31:ALA:HA	1.85	0.59
8:E:413:ARG:HH12	8:E:444:GLY:H	1.49	0.59
8:A:373:ILE:O	8:A:377:LYS:HG3	2.02	0.59
8:C:237:TYR:HE1	8:C:294:LEU:HD22	1.64	0.59
9:D:449:VAL:HG13	9:D:453:GLU:OE1	2.01	0.59
1:a:172:LEU:N	1:a:173:PRO:HD2	2.18	0.59
2:b:60:ILE:HD11	4:p:120:ASP:HB2	1.83	0.59
7:G:46:GLU:OE1	7:H:48:LYS:HD3	2.01	0.59
7:J:74:LEU:HD21	7:I:75:LEU:HD21	1.85	0.59
8:A:382:LYS:HD2	8:A:442:THR:HG21	1.82	0.59
2:b:128:THR:O	2:b:132:GLU:HG2	2.02	0.59
5:e:96:LEU:CD1	5:e:123:ARG:CG	2.80	0.59
6:g:53:SER:CB	9:D:403:ASP:CG	2.75	0.59
7:O:46:GLU:OE1	7:P:48:LYS:HD3	2.02	0.59
8:A:22:ARG:HG2	8:A:22:ARG:O	2.03	0.59
2:b:77:GLN:CG	4:p:138:LYS:HG2	2.28	0.59
2:b:144:VAL:CB	8:A:9:ILE:CG2	2.80	0.59
4:p:179:LYS:O	4:p:179:LYS:HD3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:253:GLU:HA	6:g:270:MET:HA	1.84	0.59
9:B:148:ILE:HD12	9:B:380:VAL:HG12	1.84	0.59
8:C:27:VAL:HB	8:C:47:GLU:HB2	0.88	0.59
9:D:22:ARG:NH1	9:D:88:GLY:O	2.36	0.59
6:g:231:LEU:HD21	6:g:300:LEU:HD12	1.83	0.59
9:F:405:ILE:HD11	9:F:421:VAL:HG21	1.84	0.59
8:C:392:GLU:OE1	9:D:429:ARG:NH2	2.35	0.59
1:a:53:SER:CA	1:a:56:ILE:HG22	2.32	0.59
1:a:212:VAL:CB	1:a:213:PRO:HD3	2.21	0.59
5:e:110:ARG:HD2	6:g:206:GLU:OE2	2.03	0.59
7:O:5:ILE:H	7:O:5:ILE:HD12	1.68	0.59
7:L:48:LYS:HD2	7:K:43:PRO:HB3	1.85	0.59
8:E:104:TYR:CE1	8:E:122:ILE:HG21	2.38	0.59
8:E:141:ARG:NH1	8:E:311:GLU:OE2	2.35	0.59
8:E:383:LEU:CD1	8:E:417:LEU:HD22	2.33	0.59
8:A:495:GLN:OE1	8:A:495:GLN:HA	2.03	0.59
9:B:134:ARG:NE	9:B:258:GLU:OE2	2.31	0.59
9:B:216:MET:CE	9:B:232:VAL:HG11	2.32	0.59
9:B:272:ILE:HG21	9:B:275:ILE:CG2	2.33	0.59
9:B:272:ILE:HG21	9:B:275:ILE:HG22	1.85	0.59
9:B:453:GLU:OE1	9:B:453:GLU:HA	2.03	0.59
2:b:145:PHE:H	8:A:13:ILE:CD1	2.15	0.59
4:p:122:SER:O	4:p:126:GLN:HG2	2.02	0.59
6:g:292:LEU:HD12	6:g:292:LEU:C	2.27	0.59
7:P:5:ILE:H	7:P:5:ILE:HD12	1.68	0.59
7:P:54:LEU:HD11	7:Q:55:LEU:HD23	1.85	0.59
7:K:5:ILE:H	7:K:5:ILE:HD12	1.68	0.59
9:B:410:LEU:HD23	9:B:413:LEU:CD1	2.33	0.59
1:a:70:ASN:CB	2:b:53:LEU:HB3	2.33	0.58
2:b:80:LYS:CA	4:p:137:VAL:HB	2.33	0.58
2:b:91:ASP:HB3	4:p:148:MET:HG2	1.84	0.58
7:O:43:PRO:HB3	7:P:48:LYS:HD2	1.84	0.58
7:H:5:ILE:H	7:H:5:ILE:HD12	1.68	0.58
9:B:169:GLY:HA3	9:B:346:LEU:CD1	2.29	0.58
1:a:24:GLN:CA	4:p:83:LEU:HD11	2.16	0.58
1:a:40:LEU:CD2	4:p:92:ILE:HB	2.34	0.58
1:a:116:PRO:CA	2:b:34:LEU:N	2.62	0.58
2:b:141:ARG:N	8:A:9:ILE:CD1	2.65	0.58
3:d:87:ASP:HB2	3:d:172:ILE:CD1	2.33	0.58
3:d:132:ILE:HA	8:E:13:ILE:HD13	1.83	0.58
5:e:110:ARG:HH21	6:g:201:LEU:HD13	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:N:5:ILE:H	7:N:5:ILE:HD12	1.68	0.58
7:N:81:VAL:CG2	7:O:80:PHE:CE2	2.86	0.58
7:M:32:ALA:HA	7:M:53:LEU:HD11	1.85	0.58
7:J:5:ILE:HD12	7:J:5:ILE:H	1.68	0.58
9:F:50:LYS:HD2	9:F:90:GLU:OE2	2.03	0.58
9:D:427:ILE:HD11	9:D:462:LEU:HD21	1.85	0.58
1:a:135:ASN:CG	4:p:86:PHE:CA	2.73	0.58
2:b:103:ILE:CB	4:p:162:MET:HB2	2.33	0.58
2:b:103:ILE:HD11	4:p:162:MET:C	2.28	0.58
6:g:227:ILE:HG23	6:g:242:ILE:HG12	1.85	0.58
7:S:31:ALA:HA	7:R:33:GLY:HA3	1.84	0.58
9:F:110:ILE:CG2	9:F:118:VAL:HG23	2.31	0.58
8:A:107:ARG:NH1	8:A:120:GLY:O	2.35	0.58
9:B:243:PRO:HB3	9:B:284:GLU:OE1	2.03	0.58
8:C:134:ALA:HB3	9:D:240:ASN:HD22	1.67	0.58
8:C:394:GLU:O	8:C:398:GLN:NE2	2.36	0.58
8:C:432:GLU:CG	8:C:476:ILE:HG21	2.26	0.58
9:D:102:VAL:HG23	9:D:128:THR:CG2	2.33	0.58
2:b:80:LYS:H	4:p:137:VAL:HB	1.65	0.58
2:b:180:ASN:ND2	3:d:201:ILE:CG2	2.54	0.58
3:d:84:ASP:O	3:d:88:VAL:HG23	2.04	0.58
5:e:100:GLU:CG	5:e:119:LEU:HD21	2.33	0.58
6:g:217:PHE:HB2	6:g:314:SER:OG	2.02	0.58
6:g:281:ILE:HG21	7:M:41:ARG:CA	2.24	0.58
7:O:10:VAL:CG2	7:P:74:LEU:HD21	2.25	0.58
2:b:107:LYS:HE3	4:p:166:THR:N	2.18	0.58
7:P:43:PRO:CG	7:Q:42:GLN:HE22	2.12	0.58
7:T:5:ILE:H	7:T:5:ILE:HD12	1.68	0.58
8:A:416:ARG:HD3	8:A:446:LEU:O	2.03	0.58
2:b:64:ILE:HD13	4:p:119:ARG:O	2.03	0.58
2:b:77:GLN:H	4:p:134:SER:HA	1.67	0.58
2:b:81:ALA:HB1	4:p:142:GLU:H	1.67	0.58
5:e:96:LEU:HD13	5:e:123:ARG:CA	2.33	0.58
6:g:121:MET:CE	6:g:160:ILE:HD11	2.33	0.58
9:B:216:MET:HE3	9:B:221:VAL:HG11	1.85	0.58
9:B:387:ILE:HD12	9:B:459:GLN:HG3	1.85	0.58
9:D:313:ILE:O	9:D:313:ILE:HG22	2.04	0.58
1:a:54:ALA:O	1:a:58:VAL:HG23	2.04	0.58
2:b:82:ARG:CB	2:b:85:LEU:CD2	2.80	0.58
2:b:82:ARG:HA	2:b:85:LEU:CG	2.34	0.58
3:d:75:ALA:CB	3:d:160:GLU:HG2	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:e:51:ILE:HG23	5:e:51:ILE:O	2.03	0.58
6:g:217:PHE:O	6:g:268:ARG:HD2	2.02	0.58
6:g:251:GLU:CG	6:g:272:LYS:CG	2.81	0.58
7:S:55:LEU:HD23	7:R:54:LEU:HD11	1.86	0.58
7:J:74:LEU:HD21	7:I:10:VAL:CG2	2.26	0.58
9:F:178:LYS:NZ	9:F:182:ILE:HD11	2.19	0.58
8:A:131:GLU:OE2	8:A:297:ARG:NH2	2.37	0.58
9:D:407:ILE:HG22	9:D:408:LEU:HD23	1.85	0.58
3:d:129:LEU:HD22	3:d:150:ILE:HD12	1.85	0.58
5:e:60:LEU:HB2	5:e:82:GLU:O	2.03	0.58
6:g:229:THR:HG22	6:g:240:CYS:O	2.04	0.58
7:S:54:LEU:HD11	7:T:55:LEU:HD23	1.85	0.58
7:H:32:ALA:HA	7:H:53:LEU:HD11	1.86	0.58
8:E:183:THR:O	8:E:187:GLN:OE1	2.21	0.58
8:C:170:GLY:HA3	8:C:174:THR:HG21	1.86	0.58
8:C:292:PHE:HE1	9:D:246:ARG:NH1	2.02	0.58
1:a:97:PHE:HA	4:p:101:MET:HE2	1.84	0.58
1:a:120:ILE:CG1	2:b:25:ASP:O	2.48	0.58
1:a:136:THR:CA	4:p:90:LEU:HD22	2.32	0.58
2:b:133:GLN:HG2	8:A:3:THR:N	2.18	0.58
2:b:141:ARG:HD3	8:A:12:ILE:CG2	2.03	0.58
3:d:227:ASN:OD1	8:A:46:ASP:HB3	2.03	0.58
7:N:43:PRO:CA	7:O:48:LYS:HZ3	2.16	0.58
7:R:5:ILE:HD12	7:R:5:ILE:H	1.69	0.58
7:G:32:ALA:HA	7:G:53:LEU:HD11	1.86	0.58
7:K:32:ALA:HA	7:K:53:LEU:HD11	1.85	0.58
8:C:104:TYR:CE1	8:C:122:ILE:CD1	2.86	0.58
1:a:121:GLN:CG	2:b:25:ASP:OD2	2.51	0.58
1:a:165:ILE:HG21	1:a:169:PRO:CA	2.33	0.58
2:b:103:ILE:HD12	4:p:158:ALA:O	1.99	0.58
2:b:145:PHE:CD2	2:b:149:LEU:CD1	2.87	0.58
3:d:175:THR:HG22	3:d:206:ASN:HB3	1.86	0.58
7:S:32:ALA:HA	7:S:53:LEU:HD11	1.86	0.58
7:N:32:ALA:HA	7:N:53:LEU:HD11	1.85	0.58
7:L:74:LEU:HD21	7:K:10:VAL:HG23	1.86	0.58
8:E:465:VAL:HG22	8:E:493:ALA:HB1	1.86	0.58
8:E:489:LEU:HD23	8:E:489:LEU:C	2.27	0.58
8:A:45:LEU:O	9:B:87:ARG:NH2	2.37	0.58
1:a:149:PHE:HZ	1:a:163:LYS:HZ2	1.49	0.57
1:a:208:VAL:HG22	1:a:209:PRO:N	2.18	0.57
5:e:46:ILE:HG22	5:e:63:MET:O	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:H:33:GLY:HA3	7:I:31:ALA:HA	1.86	0.57
7:H:43:PRO:HB2	7:I:48:LYS:HZ2	1.68	0.57
8:E:379:VAL:HG11	8:E:438:ILE:HB	1.84	0.57
9:B:384:HIS:O	9:B:387:ILE:HG22	2.04	0.57
2:b:88:VAL:O	2:b:89:GLU:C	2.46	0.57
4:p:152:ARG:CG	8:A:503:LEU:CD2	2.81	0.57
6:g:221:VAL:HG22	8:A:401:SER:HB3	1.84	0.57
7:N:10:VAL:HG22	7:O:74:LEU:HD22	1.85	0.57
7:P:32:ALA:HA	7:P:53:LEU:HD11	1.85	0.57
7:L:5:ILE:H	7:L:5:ILE:HD12	1.68	0.57
7:K:42:GLN:NE2	7:J:43:PRO:CG	2.67	0.57
7:J:32:ALA:HA	7:J:53:LEU:HD11	1.85	0.57
9:B:203:GLY:O	9:B:277:ARG:HG3	2.05	0.57
3:d:180:VAL:HG13	3:d:223:ILE:HG22	1.85	0.57
4:p:199:THR:HG23	4:p:200:ILE:N	2.19	0.57
6:g:280:PRO:HG2	7:N:42:GLN:NE2	2.20	0.57
7:O:32:ALA:HA	7:O:53:LEU:HD11	1.86	0.57
7:J:80:PHE:CZ	7:I:81:VAL:CG2	2.87	0.57
8:E:344:PHE:CE2	8:E:362:ILE:HG22	2.28	0.57
8:C:9:ILE:O	8:C:9:ILE:HG12	2.03	0.57
1:a:132:ASN:O	1:a:191:PHE:HE1	1.87	0.57
1:a:134:ILE:HD12	1:a:135:ASN:H	1.60	0.57
1:a:139:ALA:HB1	4:p:94:MET:HE2	1.77	0.57
3:d:242:GLU:HG2	8:A:20:TYR:CE1	2.38	0.57
6:g:229:THR:O	6:g:229:THR:CG2	2.50	0.57
7:N:46:GLU:OE1	7:O:48:LYS:HD3	2.04	0.57
7:T:32:ALA:HA	7:T:53:LEU:HD11	1.85	0.57
1:a:53:SER:HA	1:a:56:ILE:CG2	2.34	0.57
1:a:119:ILE:CB	2:b:28:ALA:C	2.78	0.57
2:b:103:ILE:HG12	4:p:162:MET:CA	2.34	0.57
2:b:144:VAL:HB	8:A:13:ILE:CG1	2.35	0.57
3:d:177:VAL:CG1	3:d:210:LYS:CD	2.83	0.57
3:d:186:LEU:C	3:d:186:LEU:HD12	2.30	0.57
7:L:32:ALA:HA	7:L:53:LEU:HD11	1.85	0.57
8:E:9:ILE:HD12	8:E:9:ILE:N	2.20	0.57
8:A:419:GLU:OE2	8:A:422:LYS:CE	2.52	0.57
9:D:274:ASN:ND2	9:D:276:PHE:HB3	2.20	0.57
1:a:195:LEU:HD11	4:p:84:PHE:CZ	2.40	0.57
2:b:70:LEU:HB2	4:p:127:LEU:CD2	2.33	0.57
6:g:89:LEU:HD21	6:g:299:TYR:HA	1.86	0.57
7:Q:5:ILE:H	7:Q:5:ILE:HD12	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:469:LYS:NZ	8:A:493:ALA:N	2.52	0.57
8:C:12:ILE:CD1	8:C:33:LEU:HD21	2.34	0.57
2:b:74:ALA:CA	4:p:130:VAL:O	2.52	0.57
4:p:204:ASP:O	4:p:207:ILE:HB	2.04	0.57
5:e:82:GLU:OE2	6:g:189:LYS:NZ	2.35	0.57
6:g:73:ARG:HH11	9:F:412:GLU:CG	2.17	0.57
6:g:360:ALA:HB2	9:D:292:MET:HB3	1.87	0.57
8:A:216:ARG:HH21	8:A:216:ARG:HG3	1.70	0.57
8:C:104:TYR:HD2	8:C:246:LEU:CD2	2.18	0.57
1:a:30:ILE:HG22	1:a:32:GLY:H	1.70	0.57
1:a:180:PHE:O	1:a:183:PRO:HD2	2.04	0.57
2:b:117:THR:CG2	4:p:174:LEU:HD21	2.34	0.57
2:b:131:PHE:HE1	8:A:119:ARG:C	2.12	0.57
2:b:145:PHE:HB2	8:A:13:ILE:HD12	1.86	0.57
3:d:148:ILE:HD11	8:C:16:ARG:C	2.30	0.57
6:g:362:ALA:HB1	8:C:281:PRO:CA	2.35	0.57
7:G:5:ILE:H	7:G:5:ILE:HD12	1.68	0.57
7:L:48:LYS:HZ2	7:K:43:PRO:CB	2.18	0.57
8:A:157:MET:HA	8:A:384:LYS:CE	2.34	0.57
8:A:374:LYS:HB2	8:A:480:LYS:O	2.05	0.57
8:C:98:ILE:CD1	8:C:242:THR:HG23	2.35	0.57
1:a:43:SER:OG	4:p:93:ILE:CB	2.53	0.57
1:a:119:ILE:HA	2:b:28:ALA:CA	2.34	0.57
2:b:96:ARG:HA	4:p:155:ILE:N	2.06	0.57
2:b:152:ALA:CB	4:p:214:ILE:HD11	2.33	0.57
3:d:195:ALA:HB1	3:d:207:VAL:HG13	1.87	0.57
7:S:5:ILE:H	7:S:5:ILE:HD12	1.69	0.57
7:H:10:VAL:CG2	7:I:74:LEU:HD21	2.29	0.57
7:H:43:PRO:HB3	7:I:48:LYS:CD	2.35	0.57
8:E:475:ILE:HG21	8:E:486:ALA:HB2	1.86	0.57
9:D:143:ASP:OD1	9:D:315:SER:OG	2.23	0.57
9:D:179:THR:C	9:D:182:ILE:HG22	2.27	0.57
3:d:132:ILE:HG13	8:E:13:ILE:HD13	1.87	0.57
3:d:148:ILE:HD13	8:C:17:ILE:HG12	1.85	0.57
6:g:50:ARG:HG2	6:g:50:ARG:NH1	2.20	0.57
7:N:81:VAL:CG2	7:O:80:PHE:CZ	2.88	0.57
7:M:5:ILE:HD12	7:M:5:ILE:H	1.68	0.57
8:E:284:ARG:NH1	8:E:330:TYR:CD1	2.66	0.57
9:F:50:LYS:NZ	9:F:92:ILE:HD12	2.19	0.57
8:C:240:PRO:HG3	8:C:267:GLN:CD	2.30	0.57
2:b:144:VAL:HB	8:A:13:ILE:HD11	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:198:VAL:HA	3:d:201:ILE:HG12	1.87	0.56
6:g:167:TYR:OH	6:g:171:ARG:NH2	2.38	0.56
7:S:33:GLY:HA3	7:T:31:ALA:HA	1.86	0.56
7:R:62:ALA:CA	7:R:65:ILE:HG22	2.35	0.56
7:T:46:GLU:CD	7:G:48:LYS:HB3	2.30	0.56
7:L:80:PHE:HD2	7:K:6:ALA:HB1	1.70	0.56
9:F:185:LEU:HD13	9:F:324:ILE:HD13	1.86	0.56
8:A:419:GLU:OE2	8:A:419:GLU:HA	2.03	0.56
8:A:432:GLU:C	8:A:435:VAL:HG12	2.30	0.56
9:B:71:ASN:H	8:C:9:ILE:HG13	1.70	0.56
8:C:9:ILE:HD11	8:C:85:GLU:OE2	2.04	0.56
8:C:247:ALA:HB3	8:C:314:MET:HE3	1.86	0.56
8:C:308:LEU:CD2	8:C:309:LEU:CD1	2.82	0.56
1:a:115:LEU:HD23	2:b:38:LEU:CD1	2.13	0.56
2:b:103:ILE:CG1	4:p:162:MET:CA	2.82	0.56
2:b:125:LYS:HD2	4:p:185:LEU:CB	2.35	0.56
2:b:180:ASN:HB3	3:d:201:ILE:CG2	2.30	0.56
7:G:62:ALA:CA	7:G:65:ILE:HG22	2.36	0.56
7:J:55:LEU:HD23	7:I:54:LEU:HD11	1.86	0.56
9:F:184:GLU:HG3	9:F:188:ASN:ND2	2.20	0.56
8:A:435:VAL:HG13	8:A:436:MET:N	2.19	0.56
9:B:221:VAL:HG13	9:B:232:VAL:HG23	1.84	0.56
1:a:165:ILE:CG2	1:a:169:PRO:HA	2.35	0.56
1:a:165:ILE:HG21	1:a:169:PRO:HA	1.86	0.56
2:b:70:LEU:H	4:p:130:VAL:HG11	1.60	0.56
2:b:122:GLU:OE1	4:p:181:ILE:HD12	2.05	0.56
2:b:176:PHE:HE1	3:d:233:VAL:HG11	1.68	0.56
3:d:91:THR:OG1	3:d:141:HIS:HE1	1.86	0.56
4:p:196:LYS:O	4:p:199:THR:CG2	2.46	0.56
6:g:261:GLU:HG3	9:F:397:ARG:HH22	1.56	0.56
6:g:284:PHE:HD1	6:g:291:ILE:HD12	1.69	0.56
7:S:40:ALA:CB	7:T:49:ILE:HD11	2.33	0.56
7:Q:32:ALA:HA	7:Q:53:LEU:HD11	1.85	0.56
7:Q:46:GLU:OE1	7:R:48:LYS:HG2	2.05	0.56
7:R:32:ALA:HA	7:R:53:LEU:HD11	1.86	0.56
7:T:43:PRO:CG	7:G:42:GLN:NE2	2.67	0.56
7:I:32:ALA:HA	7:I:53:LEU:HD11	1.86	0.56
9:B:50:LYS:NZ	9:B:92:ILE:HD12	2.20	0.56
9:B:402:GLN:HA	9:B:405:ILE:CG1	2.35	0.56
8:C:169:ILE:HD11	8:C:322:THR:HG21	1.87	0.56
1:a:120:ILE:HG22	2:b:30:ASN:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:145:PHE:HE2	2:b:149:LEU:HD11	1.62	0.56
2:b:160:LEU:CG	2:b:164:LEU:HB3	2.16	0.56
7:N:55:LEU:HD23	7:M:54:LEU:HD11	1.86	0.56
7:T:62:ALA:CA	7:T:65:ILE:HG22	2.36	0.56
7:L:62:ALA:CA	7:L:65:ILE:HG22	2.36	0.56
7:J:62:ALA:CA	7:J:65:ILE:HG22	2.36	0.56
8:A:61:ILE:HG22	8:A:77:MET:CE	2.35	0.56
8:A:109:ILE:HD11	8:A:113:ALA:HB1	1.85	0.56
8:A:362:ILE:CG2	8:A:362:ILE:O	2.52	0.56
8:A:446:LEU:HD21	8:A:457:TYR:CD2	2.40	0.56
8:C:181:THR:HG23	8:C:213:PHE:HE1	1.70	0.56
9:D:144:THR:O	9:D:144:THR:HG22	2.04	0.56
9:D:155:VAL:HG22	9:D:431:LEU:HB3	1.86	0.56
2:b:80:LYS:HG2	4:p:137:VAL:CB	2.36	0.56
2:b:131:PHE:CE1	8:A:119:ARG:C	2.84	0.56
4:p:219:LEU:HD12	4:p:219:LEU:C	2.31	0.56
6:g:343:ARG:HH21	8:A:326:ASP:HB2	1.71	0.56
7:S:74:LEU:HD21	7:R:75:LEU:HD21	1.88	0.56
7:N:48:LYS:HG2	7:M:46:GLU:OE1	2.06	0.56
7:L:48:LYS:CG	7:K:46:GLU:OE1	2.53	0.56
7:K:48:LYS:HB3	7:J:46:GLU:CD	2.30	0.56
8:E:140:ARG:HE	9:F:206:THR:HG21	1.66	0.56
8:E:487:GLU:O	8:E:491:LYS:HG3	2.06	0.56
9:F:336:ASP:OD1	9:F:337:PRO:CD	2.52	0.56
9:F:487:ALA:O	9:F:491:GLU:HG3	2.04	0.56
1:a:35:ILE:HG22	4:p:88:LEU:CB	2.31	0.56
1:a:184:LEU:CD2	1:a:188:PHE:HD2	1.97	0.56
3:d:132:ILE:CA	8:E:13:ILE:HD13	2.36	0.56
4:p:195:GLN:NE2	8:A:4:ILE:HD12	2.21	0.56
5:e:22:ILE:HG22	5:e:51:ILE:CD1	2.34	0.56
7:N:48:LYS:HB3	7:M:46:GLU:CD	2.29	0.56
8:E:9:ILE:HG22	8:E:14:ARG:HG3	1.87	0.56
8:A:131:GLU:CD	8:A:297:ARG:NH2	2.64	0.56
8:A:430:THR:CG2	8:A:432:GLU:OE1	2.53	0.56
9:B:247:MET:SD	9:B:285:VAL:HG21	2.46	0.56
8:C:165:ARG:CD	8:C:299:LEU:O	2.49	0.56
8:C:237:TYR:CE1	8:C:294:LEU:CD1	2.88	0.56
1:a:24:GLN:C	4:p:83:LEU:HD12	2.30	0.56
2:b:129:ILE:CD1	4:p:188:ALA:CB	2.72	0.56
3:d:76:SER:CA	3:d:164:GLU:HG2	2.33	0.56
3:d:148:ILE:HG12	8:C:16:ARG:CG	2.33	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:25:GLN:HE21	9:F:27:ILE:HD12	1.70	0.56
8:A:77:MET:SD	8:A:238:LEU:HD22	2.46	0.56
8:A:461:LEU:C	8:A:461:LEU:HD23	2.31	0.56
8:C:156:ALA:HB2	8:C:438:ILE:HD11	1.88	0.56
8:C:449:LEU:HD11	8:C:454:VAL:HG22	1.86	0.56
6:g:349:ILE:CD1	8:E:284:ARG:HH21	2.04	0.56
7:S:62:ALA:CA	7:S:65:ILE:HG22	2.35	0.56
7:Q:43:PRO:HB3	7:R:48:LYS:CD	2.36	0.56
7:H:43:PRO:CA	7:I:48:LYS:HZ3	2.18	0.56
9:D:86:THR:H	9:D:89:MET:HE2	1.70	0.56
1:a:195:LEU:HD21	4:p:84:PHE:HZ	1.70	0.56
6:g:85:PHE:HE1	6:g:302:SER:OG	1.87	0.56
8:E:159:PRO:HB2	8:E:371:ALA:HB3	1.86	0.56
8:A:98:ILE:HG13	8:A:98:ILE:O	2.05	0.56
8:A:359:ASN:ND2	8:A:362:ILE:CD1	2.57	0.56
1:a:54:ALA:CB	4:p:104:LEU:HD13	2.34	0.56
1:a:161:PHE:HZ	1:a:163:LYS:HD2	0.78	0.56
2:b:79:GLU:CG	4:p:136:GLU:CG	2.84	0.56
7:P:62:ALA:CA	7:P:65:ILE:HG22	2.35	0.56
7:M:74:LEU:HD21	7:L:75:LEU:HD21	1.87	0.56
7:J:48:LYS:HD2	7:I:43:PRO:HB3	1.87	0.56
8:E:267:GLN:NE2	8:E:294:LEU:HD21	2.21	0.56
8:E:497:GLN:OE1	8:E:497:GLN:HA	2.05	0.56
9:B:71:ASN:H	8:C:9:ILE:CD1	2.19	0.56
9:B:150:GLU:OE2	9:B:450:GLY:HA2	2.05	0.56
8:C:104:TYR:HD1	8:C:122:ILE:HD13	1.63	0.56
9:D:102:VAL:HG23	9:D:128:THR:HG21	1.87	0.56
9:D:169:GLY:HA3	9:D:346:LEU:HD13	1.88	0.56
1:a:64:ILE:HG22	2:b:57:LYS:CE	2.36	0.55
1:a:134:ILE:N	4:p:86:PHE:CE1	2.74	0.55
3:d:176:GLU:OE1	3:d:176:GLU:HA	2.06	0.55
4:p:152:ARG:CB	8:A:503:LEU:HD22	2.33	0.55
4:p:159:LEU:HD12	4:p:159:LEU:C	2.30	0.55
5:e:52:ARG:HG2	5:e:57:TRP:HB3	1.87	0.55
5:e:62:LEU:C	5:e:62:LEU:HD12	2.31	0.55
7:Q:46:GLU:CD	7:R:48:LYS:HB3	2.31	0.55
7:M:62:ALA:CA	7:M:65:ILE:HG22	2.36	0.55
7:H:62:ALA:CA	7:H:65:ILE:HG22	2.35	0.55
8:E:37:ASP:CG	9:D:291:ARG:CZ	2.78	0.55
8:A:65:LEU:HD12	8:A:75:VAL:HG23	1.86	0.55
8:C:488:ALA:O	8:C:492:GLU:HG3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:135:ASN:N	4:p:86:PHE:CZ	2.73	0.55
7:G:39:ILE:HG13	7:G:49:ILE:HG21	1.89	0.55
7:I:62:ALA:CA	7:I:65:ILE:HG22	2.36	0.55
9:B:168:ILE:HD12	9:B:324:ILE:HG12	1.87	0.55
8:C:19:GLY:O	8:C:22:ARG:HB3	2.06	0.55
8:C:78:GLY:CA	8:C:232:PRO:HG3	2.34	0.55
1:a:35:ILE:HD12	1:a:40:LEU:HD11	1.88	0.55
1:a:118:LYS:O	2:b:29:THR:CA	2.52	0.55
4:p:209:ALA:HB1	8:A:14:ARG:NH2	2.21	0.55
6:g:104:ASP:OD1	6:g:104:ASP:O	2.23	0.55
6:g:343:ARG:CZ	8:A:326:ASP:CG	2.80	0.55
7:Q:62:ALA:CA	7:Q:65:ILE:HG22	2.35	0.55
7:M:74:LEU:HD21	7:L:10:VAL:CG2	2.26	0.55
7:K:62:ALA:CA	7:K:65:ILE:HG22	2.36	0.55
8:E:147:LEU:HD21	8:E:258:LEU:HD13	1.88	0.55
9:F:23:ILE:HG21	9:F:26:ILE:HD11	1.89	0.55
4:p:83:LEU:HD12	4:p:84:PHE:CD2	2.41	0.55
7:O:39:ILE:HG13	7:O:49:ILE:HG21	1.89	0.55
7:I:39:ILE:HG13	7:I:49:ILE:HG21	1.89	0.55
8:E:52:GLU:HA	8:E:95:ILE:HG22	1.88	0.55
8:E:463:THR:HG23	8:E:464:TYR:N	2.20	0.55
8:C:241:TYR:OH	8:C:294:LEU:HD12	2.07	0.55
2:b:129:ILE:HG23	4:p:192:LEU:HD13	1.79	0.55
6:g:149:LYS:HZ3	6:g:155:TYR:HE1	1.51	0.55
6:g:202:PHE:CZ	6:g:232:PRO:HG3	2.41	0.55
7:N:62:ALA:CA	7:N:65:ILE:HG22	2.36	0.55
7:O:10:VAL:HG22	7:P:74:LEU:HD22	1.87	0.55
8:E:29:THR:HG22	8:E:90:LYS:HB3	1.89	0.55
8:A:164:GLN:CD	8:A:367:VAL:HG22	2.32	0.55
9:B:79:MET:CE	9:B:113:VAL:HG11	2.35	0.55
2:b:78:LEU:C	4:p:140:LEU:HG	2.17	0.55
2:b:118:LEU:HD12	4:p:178:ARG:HA	1.89	0.55
2:b:145:PHE:CB	8:A:13:ILE:HD12	2.36	0.55
3:d:74:THR:HG23	8:C:4:ILE:HG22	1.86	0.55
4:p:203:LEU:HG	4:p:206:GLN:HB3	1.89	0.55
6:g:114:THR:HG23	6:g:116:LYS:HG3	1.88	0.55
6:g:129:LEU:HD23	9:B:412:GLU:OE1	2.07	0.55
6:g:280:PRO:HG2	7:N:42:GLN:HE22	1.71	0.55
7:N:74:LEU:HD21	7:M:10:VAL:CG2	2.30	0.55
7:Q:39:ILE:HG13	7:Q:49:ILE:HG21	1.89	0.55
7:H:43:PRO:HB3	7:I:48:LYS:HZ3	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:101:PRO:HB3	9:F:126:THR:CG2	2.36	0.55
8:C:30:GLY:O	8:C:89:VAL:HG12	2.05	0.55
8:C:77:MET:HE3	8:C:112:LEU:CD2	2.17	0.55
8:C:138:MET:SD	9:D:213:TYR:CE2	3.00	0.55
1:a:166:GLN:N	1:a:167:PRO:HD2	2.21	0.55
2:b:74:ALA:HB1	4:p:135:SER:H	1.70	0.55
2:b:103:ILE:HG12	4:p:163:LYS:N	2.12	0.55
2:b:147:GLN:CD	4:p:207:ILE:CG2	2.80	0.55
7:M:48:LYS:NZ	7:L:43:PRO:HB2	2.21	0.55
9:B:259:TYR:C	9:B:259:TYR:CD1	2.85	0.55
8:C:199:ILE:HG12	8:C:240:PRO:HD3	1.89	0.55
8:C:393:LEU:C	8:C:393:LEU:HD12	2.31	0.55
8:C:420:LEU:CD2	8:C:458:LEU:HD11	2.37	0.55
8:C:490:LEU:O	8:C:494:ILE:HG13	2.06	0.55
9:D:416:GLU:HA	9:D:416:GLU:OE1	2.06	0.55
2:b:91:ASP:HB3	4:p:148:MET:CB	2.37	0.55
5:e:58:LEU:C	5:e:58:LEU:HD12	2.31	0.55
5:e:62:LEU:HB2	5:e:78:VAL:HG21	1.87	0.55
6:g:103:GLU:HG3	7:R:41:ARG:HG3	1.85	0.55
7:S:74:LEU:HD22	7:R:10:VAL:HG22	1.88	0.55
7:N:43:PRO:HB3	7:O:48:LYS:CD	2.37	0.55
7:J:39:ILE:HG13	7:J:49:ILE:HG21	1.89	0.55
8:E:9:ILE:HG23	8:E:13:ILE:HG22	1.88	0.55
9:F:101:PRO:HB2	9:F:126:THR:HG21	1.87	0.55
9:B:171:PHE:HB2	9:B:351:VAL:HA	1.88	0.55
1:a:25:HIS:HA	4:p:83:LEU:O	2.07	0.55
1:a:58:VAL:HG11	4:p:108:TYR:HA	1.89	0.55
1:a:119:ILE:HG12	2:b:28:ALA:HA	1.89	0.55
1:a:234:LEU:HG	1:a:238:TYR:CE2	2.41	0.55
2:b:81:ALA:CA	4:p:141:GLU:HG3	2.37	0.55
3:d:217:LEU:HA	3:d:237:VAL:HG23	1.89	0.55
4:p:203:LEU:CD2	8:A:7:ASP:C	2.76	0.55
7:N:43:PRO:CB	7:O:48:LYS:HZ2	2.18	0.55
8:A:37:ASP:HB3	8:A:277:LEU:HB3	1.87	0.55
8:A:457:TYR:OH	8:A:498:MET:HG2	2.07	0.55
1:a:117:TRP:O	1:a:120:ILE:CG2	2.54	0.55
2:b:61:LEU:HD13	2:b:65:ARG:HD3	1.89	0.55
2:b:80:LYS:N	4:p:137:VAL:HB	2.21	0.55
2:b:172:ASN:CG	3:d:235:MET:CB	2.80	0.55
3:d:148:ILE:HD13	8:C:17:ILE:CG1	2.37	0.55
4:p:193:GLU:HA	4:p:196:LYS:CE	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:72:VAL:HG12	6:g:257:LEU:HD21	1.88	0.55
6:g:261:GLU:CG	6:g:262:GLY:H	2.04	0.55
7:N:39:ILE:HG13	7:N:49:ILE:HG21	1.89	0.55
7:O:46:GLU:OE1	7:P:48:LYS:CD	2.54	0.55
7:O:62:ALA:CA	7:O:65:ILE:HG22	2.36	0.55
9:B:50:LYS:HE2	9:B:92:ILE:HD12	1.89	0.55
1:a:168:THR:HG22	1:a:170:ILE:H	1.72	0.54
2:b:96:ARG:HD2	4:p:154:GLU:OE1	2.07	0.54
4:p:127:LEU:HA	4:p:130:VAL:CG1	2.37	0.54
4:p:152:ARG:CD	8:A:503:LEU:CD2	2.71	0.54
6:g:105:VAL:HG22	6:g:289:ALA:HB2	1.89	0.54
7:N:48:LYS:HZ2	7:M:43:PRO:HB2	1.69	0.54
7:G:54:LEU:HD11	7:H:55:LEU:HD23	1.89	0.54
8:E:156:ALA:HA	8:E:376:MET:HE2	1.89	0.54
8:E:345:LEU:CD2	8:E:358:ILE:HD13	2.37	0.54
9:F:154:LYS:NZ	9:F:477:VAL:O	2.36	0.54
9:D:195:GLY:HA3	9:D:267:ASP:O	2.07	0.54
9:D:261:ARG:HD3	9:D:321:ILE:HG13	1.89	0.54
1:a:118:LYS:HZ1	1:a:126:GLU:CB	2.18	0.54
2:b:79:GLU:N	4:p:137:VAL:CA	2.47	0.54
4:p:144:ALA:C	4:p:147:VAL:HG12	2.32	0.54
6:g:261:GLU:CG	9:F:397:ARG:HH21	1.99	0.54
7:T:39:ILE:HG13	7:T:49:ILE:HG21	1.89	0.54
7:G:43:PRO:HB3	7:H:48:LYS:HD2	1.89	0.54
7:J:48:LYS:HB3	7:I:46:GLU:CD	2.32	0.54
8:A:287:TYR:HB3	8:A:291:VAL:HG21	1.89	0.54
9:B:212:LEU:HD12	9:B:212:LEU:C	2.32	0.54
9:B:387:ILE:HG23	9:B:388:ALA:N	2.23	0.54
8:C:437:THR:HG23	8:C:458:LEU:HD13	1.90	0.54
1:a:38:GLN:HG3	1:a:39:VAL:HG23	1.89	0.54
1:a:54:ALA:HB3	4:p:104:LEU:HD13	1.89	0.54
1:a:195:LEU:CD2	4:p:84:PHE:CZ	2.90	0.54
4:p:210:LEU:CG	8:A:13:ILE:HB	2.35	0.54
5:e:39:PRO:O	7:M:41:ARG:NH2	2.41	0.54
6:g:113:ARG:HH11	6:g:205:GLU:HB3	0.62	0.54
7:Q:43:PRO:CG	7:R:42:GLN:NE2	2.68	0.54
7:L:55:LEU:CD2	7:K:54:LEU:HD11	2.37	0.54
9:F:275:ILE:CG2	9:F:327:VAL:HG22	2.37	0.54
8:A:419:GLU:OE2	8:A:422:LYS:CD	2.55	0.54
8:C:449:LEU:HD11	8:C:454:VAL:CG2	2.37	0.54
3:d:165:PHE:C	3:d:165:PHE:CD1	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:195:GLN:CD	8:A:4:ILE:HD12	2.30	0.54
7:H:46:GLU:OE1	7:I:48:LYS:HD3	2.08	0.54
9:F:330:PRO:HD2	9:F:339:PRO:CG	2.37	0.54
8:A:61:ILE:O	8:A:77:MET:HB2	2.06	0.54
8:A:450:GLU:HB2	8:A:453:GLN:CD	2.33	0.54
9:B:472:GLN:O	9:B:486:LYS:HE2	2.07	0.54
9:D:203:GLY:O	9:D:277:ARG:HG3	2.06	0.54
1:a:78:PHE:CD1	1:a:78:PHE:C	2.85	0.54
2:b:68:GLU:HG3	4:p:126:GLN:CA	2.37	0.54
2:b:131:PHE:HE1	8:A:119:ARG:O	1.91	0.54
3:d:86:ALA:HB2	3:d:95:THR:HG21	1.89	0.54
5:e:119:LEU:O	5:e:123:ARG:HG3	2.07	0.54
7:L:39:ILE:HG13	7:L:49:ILE:HG21	1.89	0.54
7:L:48:LYS:HZ2	7:K:43:PRO:HB2	1.70	0.54
7:J:48:LYS:HG2	7:I:46:GLU:OE1	2.07	0.54
9:D:85:LEU:HD22	9:D:89:MET:HE1	1.90	0.54
9:D:401:LEU:HD23	9:D:404:ILE:HD11	1.84	0.54
3:d:148:ILE:CD1	8:C:16:ARG:HG2	2.37	0.54
6:g:109:LEU:HD11	6:g:199:PHE:CD1	2.42	0.54
6:g:149:LYS:CE	6:g:155:TYR:CE1	2.69	0.54
7:O:81:VAL:CG2	7:P:80:PHE:CZ	2.90	0.54
7:G:46:GLU:OE1	7:H:48:LYS:HG2	2.08	0.54
7:L:48:LYS:HZ3	7:K:43:PRO:C	2.16	0.54
7:J:31:ALA:HA	7:I:33:GLY:HA3	1.88	0.54
9:F:179:THR:CG2	9:F:215:GLU:OE1	2.50	0.54
8:C:195:VAL:HB	8:C:259:ILE:HG13	1.90	0.54
1:a:51:LEU:HG	4:p:100:LEU:HD11	1.80	0.54
1:a:134:ILE:O	1:a:135:ASN:C	2.51	0.54
2:b:79:GLU:HA	4:p:136:GLU:HG3	1.89	0.54
2:b:117:THR:CG2	4:p:174:LEU:CD1	2.72	0.54
6:g:359:GLY:N	9:D:293:PRO:HG3	2.20	0.54
7:N:46:GLU:OE1	7:O:48:LYS:CD	2.55	0.54
8:E:9:ILE:HB	8:E:14:ARG:CZ	2.38	0.54
1:a:24:GLN:CA	4:p:83:LEU:CG	2.84	0.54
2:b:69:GLU:HG2	2:b:73:LYS:HE3	1.89	0.54
2:b:88:VAL:C	4:p:147:VAL:C	2.75	0.54
2:b:122:GLU:CD	4:p:181:ILE:HD12	2.32	0.54
3:d:243:GLU:OE2	4:p:218:VAL:CG1	2.56	0.54
4:p:203:LEU:CD1	4:p:206:GLN:HB2	2.35	0.54
4:p:214:ILE:CG2	8:A:17:ILE:HD12	2.37	0.54
6:g:85:PHE:C	6:g:85:PHE:CD1	2.85	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:N:21:SER:OG	7:O:20:ALA:HA	2.08	0.54
7:G:43:PRO:HB2	7:H:48:LYS:HZ2	1.73	0.54
9:F:387:ILE:HG23	9:F:388:ALA:N	2.23	0.54
8:A:101:SER:HB3	8:A:124:ALA:HA	1.90	0.54
8:A:105:LEU:HD21	8:A:193:ILE:CG2	2.38	0.54
8:A:157:MET:SD	8:A:387:LEU:CD1	2.95	0.54
8:C:53:LEU:HD22	8:C:61:ILE:HG22	1.89	0.54
9:D:149:PHE:CE2	9:D:189:ILE:CD1	2.89	0.54
1:a:112:GLY:CA	1:a:128:ALA:O	2.54	0.54
2:b:100:TYR:O	2:b:103:ILE:CG2	2.53	0.54
2:b:103:ILE:CD1	4:p:158:ALA:C	2.80	0.54
2:b:145:PHE:CE2	2:b:149:LEU:CD1	2.77	0.54
3:d:243:GLU:CD	4:p:218:VAL:CG1	2.77	0.54
4:p:210:LEU:CD2	8:A:13:ILE:CG2	2.83	0.54
7:M:39:ILE:HG13	7:M:49:ILE:HG21	1.89	0.54
9:D:107:LEU:HD21	9:D:196:VAL:HG11	1.89	0.54
9:D:149:PHE:CE2	9:D:189:ILE:HD13	2.43	0.54
1:a:134:ILE:HG22	1:a:191:PHE:CE1	2.23	0.54
2:b:144:VAL:HB	8:A:13:ILE:HG13	1.89	0.54
3:d:195:ALA:O	3:d:199:GLN:CG	2.50	0.54
5:e:3:LEU:C	5:e:3:LEU:HD12	2.32	0.54
6:g:202:PHE:CD1	6:g:202:PHE:C	2.86	0.54
6:g:362:ALA:CB	8:C:281:PRO:CB	2.81	0.54
7:P:39:ILE:HG13	7:P:49:ILE:HG21	1.89	0.54
8:A:420:LEU:CD2	8:A:458:LEU:HD11	2.38	0.54
8:C:82:MET:HE2	8:C:82:MET:HA	1.90	0.54
9:D:347:ASP:O	9:D:373:THR:HG23	2.07	0.54
2:b:141:ARG:CG	8:A:9:ILE:CD1	2.85	0.53
2:b:146:GLN:O	2:b:149:LEU:HB2	2.08	0.53
2:b:160:LEU:HD21	2:b:164:LEU:HB2	1.91	0.53
3:d:186:LEU:CD1	3:d:191:LEU:HD21	2.32	0.53
4:p:212:ASP:OD1	4:p:215:VAL:CG1	2.55	0.53
6:g:83:ARG:HH21	6:g:273:THR:CG2	2.19	0.53
6:g:360:ALA:HA	9:D:292:MET:CA	2.37	0.53
7:N:10:VAL:CG2	7:O:74:LEU:HD21	2.25	0.53
7:N:48:LYS:HD3	7:M:46:GLU:OE1	2.08	0.53
7:L:57:LEU:O	7:L:61:GLU:N	2.35	0.53
8:E:479:THR:HG22	8:E:481:THR:CB	2.39	0.53
8:A:169:ILE:HD11	8:A:332:PRO:HB3	1.89	0.53
9:D:118:VAL:O	9:D:118:VAL:HG12	2.08	0.53
1:a:35:ILE:CB	4:p:88:LEU:N	2.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:P:46:GLU:CD	7:Q:48:LYS:HB3	2.34	0.53
7:L:42:GLN:HE22	7:K:43:PRO:CG	2.13	0.53
7:J:20:ALA:HA	7:I:21:SER:OG	2.08	0.53
9:F:48:ILE:CD1	9:F:94:THR:CG2	2.86	0.53
9:B:47:LEU:HB2	9:B:63:CYS:HB2	1.90	0.53
9:B:113:VAL:HG21	9:B:245:ALA:HB1	1.90	0.53
8:C:237:TYR:CE1	8:C:294:LEU:HD11	2.43	0.53
8:C:432:GLU:CG	8:C:476:ILE:HG23	2.32	0.53
1:a:195:LEU:HD11	4:p:84:PHE:HZ	1.69	0.53
2:b:156:LEU:HD21	4:p:219:LEU:HD23	1.89	0.53
3:d:148:ILE:CG2	8:C:16:ARG:HD2	2.38	0.53
3:d:186:LEU:CD1	3:d:191:LEU:CD2	2.77	0.53
6:g:363:CYS:HG	9:D:291:ARG:C	2.08	0.53
7:K:74:LEU:HD21	7:J:10:VAL:CG2	2.37	0.53
9:F:48:ILE:CD1	9:F:94:THR:HG21	2.38	0.53
8:C:104:TYR:CD1	8:C:122:ILE:HG21	2.43	0.53
8:C:457:TYR:HE1	8:C:497:GLN:HG3	1.73	0.53
9:D:55:ALA:HB3	9:D:57:GLN:HG2	1.89	0.53
1:a:76:LEU:HD13	4:p:109:TYR:CE1	2.43	0.53
2:b:180:ASN:CB	3:d:201:ILE:CG2	2.86	0.53
7:S:39:ILE:HG13	7:S:49:ILE:HG21	1.89	0.53
7:P:57:LEU:O	7:P:61:GLU:N	2.35	0.53
7:R:39:ILE:HG13	7:R:49:ILE:HG21	1.89	0.53
7:H:39:ILE:HG13	7:H:49:ILE:HG21	1.89	0.53
7:H:57:LEU:O	7:H:61:GLU:N	2.35	0.53
9:F:48:ILE:HD11	9:F:94:THR:HG21	1.90	0.53
9:F:50:LYS:HD2	9:F:90:GLU:CG	2.36	0.53
9:F:86:THR:H	9:F:89:MET:HE2	1.73	0.53
8:A:98:ILE:HG23	8:A:130:ILE:CG1	2.39	0.53
8:A:251:MET:HE2	8:A:314:MET:HB2	1.90	0.53
9:B:433:GLN:NE2	9:B:447:LYS:O	2.40	0.53
9:D:107:LEU:HD21	9:D:196:VAL:CG1	2.39	0.53
9:D:243:PRO:HB2	9:D:285:VAL:HG13	1.91	0.53
3:d:177:VAL:CG1	3:d:210:LYS:HE3	2.39	0.53
7:S:43:PRO:CG	7:T:42:GLN:HE22	2.17	0.53
7:M:70:VAL:HG13	7:L:75:LEU:HD11	1.91	0.53
7:K:39:ILE:HG13	7:K:49:ILE:HG21	1.89	0.53
8:E:169:ILE:HG22	8:E:344:PHE:CD1	2.17	0.53
8:C:176:LYS:HZ3	8:C:321:GLU:HB3	1.73	0.53
1:a:64:ILE:HG22	2:b:57:LYS:NZ	2.22	0.53
2:b:152:ALA:CB	4:p:214:ILE:CD1	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:160:LEU:HD13	2:b:163:GLU:N	2.20	0.53
5:e:18:GLU:O	5:e:53:LEU:HD22	2.09	0.53
6:g:353:ILE:HD11	8:E:284:ARG:CB	2.38	0.53
7:N:75:LEU:HD21	7:O:74:LEU:HD21	1.90	0.53
7:M:31:ALA:HA	7:L:33:GLY:HA3	1.90	0.53
8:A:495:GLN:O	8:A:499:GLU:HG2	2.09	0.53
9:D:146:LEU:HD23	9:D:163:ARG:HE	1.73	0.53
2:b:145:PHE:HB2	8:A:13:ILE:CD1	2.38	0.53
4:p:152:ARG:HH21	8:A:500:ARG:C	2.16	0.53
4:p:193:GLU:HG3	4:p:196:LYS:NZ	2.21	0.53
6:g:281:ILE:CD1	7:M:41:ARG:HG2	2.23	0.53
8:E:284:ARG:NH1	8:E:330:TYR:CB	2.72	0.53
8:A:39:ILE:HD13	8:A:278:LEU:CD2	2.38	0.53
8:A:416:ARG:HD2	8:A:447:ASP:HA	1.90	0.53
1:a:165:ILE:CG2	1:a:168:THR:C	2.71	0.53
2:b:118:LEU:HD11	4:p:181:ILE:HG12	1.90	0.53
2:b:173:ILE:HG12	3:d:221:PHE:CZ	2.25	0.53
2:b:181:GLU:O	2:b:182:ILE:C	2.51	0.53
3:d:172:ILE:HG23	3:d:173:THR:N	2.22	0.53
4:p:150:ALA:O	4:p:154:GLU:CG	2.55	0.53
6:g:109:LEU:HD21	6:g:199:PHE:HD1	1.71	0.53
6:g:264:LEU:HD21	9:F:408:LEU:HD11	1.91	0.53
7:N:48:LYS:CD	7:M:43:PRO:HB3	2.38	0.53
8:E:479:THR:CG2	8:E:481:THR:HB	2.39	0.53
8:C:58:GLU:HG3	8:C:82:MET:HB3	1.91	0.53
3:d:176:GLU:HG3	3:d:202:THR:HG21	1.90	0.53
4:p:179:LYS:HD3	4:p:179:LYS:C	2.33	0.53
6:g:356:ILE:CG1	9:D:295:ALA:HA	2.39	0.53
7:J:48:LYS:HD3	7:I:46:GLU:OE1	2.08	0.53
9:F:111:PHE:CZ	9:F:124:VAL:HG21	2.44	0.53
8:C:56:PHE:CE1	8:C:76:LEU:CD2	2.92	0.53
8:C:237:TYR:CZ	8:C:294:LEU:CD1	2.92	0.53
9:D:112:ASN:ND2	9:D:116:GLU:CB	2.56	0.53
9:D:254:LEU:CD1	9:D:313:ILE:HG12	2.39	0.53
2:b:107:LYS:HE3	4:p:165:GLU:C	2.34	0.53
2:b:129:ILE:HG21	4:p:192:LEU:HD11	1.82	0.53
2:b:145:PHE:HZ	3:d:243:GLU:O	1.88	0.53
5:e:37:HIS:CE1	7:L:41:ARG:NE	2.69	0.53
7:M:48:LYS:HZ2	7:L:43:PRO:CB	2.22	0.53
7:L:48:LYS:CD	7:K:43:PRO:HB3	2.39	0.53
7:K:57:LEU:HD23	7:K:57:LEU:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:J:48:LYS:CD	7:I:43:PRO:HB3	2.39	0.53
9:F:431:LEU:HD23	9:F:458:PHE:HZ	1.74	0.53
9:D:401:LEU:HD23	9:D:404:ILE:CD1	2.39	0.53
1:a:159:GLY:O	1:a:160:TYR:CG	2.62	0.52
3:d:152:SER:HA	3:d:153:GLU:OE1	2.09	0.52
3:d:222:THR:CG2	3:d:234:ASP:CG	2.75	0.52
5:e:24:LEU:HD12	5:e:25:SER:O	2.08	0.52
7:N:31:ALA:HA	7:M:33:GLY:HA3	1.90	0.52
7:N:57:LEU:N	7:N:57:LEU:HD23	2.24	0.52
7:P:33:GLY:HA3	7:Q:31:ALA:HA	1.89	0.52
7:G:46:GLU:OE1	7:H:48:LYS:CD	2.57	0.52
7:H:6:ALA:HB1	7:I:80:PHE:CD2	2.39	0.52
8:E:104:TYR:HE1	8:E:122:ILE:HD12	1.73	0.52
8:E:355:ARG:HH22	9:D:389:GLN:CD	2.10	0.52
8:E:469:LYS:HD2	8:E:493:ALA:CB	2.13	0.52
9:F:155:VAL:HG22	9:F:431:LEU:HB3	1.91	0.52
9:F:270:LEU:O	9:F:323:SER:HA	2.09	0.52
9:B:50:LYS:CE	9:B:92:ILE:HD12	2.39	0.52
9:B:411:ASP:N	9:B:418:ARG:NH2	2.57	0.52
8:C:292:PHE:CE1	9:D:246:ARG:NH1	2.76	0.52
8:C:432:GLU:HA	8:C:476:ILE:HD13	1.90	0.52
9:D:336:ASP:OD1	9:D:337:PRO:CD	2.55	0.52
2:b:64:ILE:O	4:p:123:ILE:O	2.27	0.52
7:O:6:ALA:HB1	7:P:80:PHE:CD2	2.38	0.52
9:F:274:ASN:OD1	9:F:277:ARG:HG3	2.10	0.52
8:C:237:TYR:CD1	8:C:271:TYR:CB	2.84	0.52
9:D:53:ASP:CB	9:D:59:MET:CE	2.86	0.52
9:D:102:VAL:CG2	9:D:128:THR:CG2	2.86	0.52
1:a:119:ILE:CA	2:b:28:ALA:C	2.75	0.52
1:a:230:ILE:HG13	7:Q:55:LEU:HD11	1.90	0.52
2:b:133:GLN:CA	8:A:3:THR:HG22	2.39	0.52
3:d:87:ASP:HB2	3:d:172:ILE:HD11	1.91	0.52
5:e:22:ILE:HA	5:e:51:ILE:HA	1.92	0.52
6:g:237:GLY:O	6:g:249:ALA:HB2	2.10	0.52
7:Q:10:VAL:HG22	7:R:74:LEU:CD2	2.38	0.52
9:F:79:MET:HE3	9:F:113:VAL:HG11	1.91	0.52
1:a:119:ILE:CA	2:b:28:ALA:CA	2.87	0.52
1:a:124:HIS:CB	4:p:80:LYS:O	2.56	0.52
1:a:230:ILE:CG1	7:Q:55:LEU:CD1	2.85	0.52
2:b:80:LYS:CG	4:p:137:VAL:CB	2.84	0.52
2:b:103:ILE:HG21	4:p:159:LEU:HA	1.79	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:187:GLU:N	3:d:187:GLU:OE2	2.42	0.52
5:e:19:VAL:C	5:e:53:LEU:HD13	2.34	0.52
7:L:57:LEU:N	7:L:57:LEU:HD23	2.24	0.52
9:F:453:GLU:OE1	9:F:456:ARG:NH2	2.25	0.52
8:A:67:LEU:HD12	9:B:26:ILE:HD13	1.92	0.52
9:B:411:ASP:C	9:B:418:ARG:NH2	2.67	0.52
8:C:237:TYR:CE1	8:C:271:TYR:HB2	2.42	0.52
9:D:75:ARG:HD3	9:D:289:LEU:HD23	1.91	0.52
9:D:141:GLN:O	9:D:317:LYS:HG3	2.09	0.52
3:d:92:LEU:HD21	3:d:172:ILE:HD13	1.90	0.52
3:d:224:ARG:CD	3:d:232:LEU:HD12	2.39	0.52
4:p:193:GLU:HA	4:p:196:LYS:HG2	1.90	0.52
5:e:8:LEU:HD13	6:g:85:PHE:HB2	1.92	0.52
5:e:24:LEU:HD13	5:e:25:SER:O	2.08	0.52
6:g:72:VAL:HG23	6:g:316:LEU:HB3	1.92	0.52
6:g:362:ALA:HB1	8:C:281:PRO:HA	1.91	0.52
7:S:57:LEU:HD23	7:S:57:LEU:N	2.24	0.52
7:P:57:LEU:HD23	7:P:57:LEU:N	2.24	0.52
7:Q:46:GLU:OE1	7:R:48:LYS:HD3	2.09	0.52
7:Q:54:LEU:HD11	7:R:55:LEU:HD23	1.90	0.52
7:Q:57:LEU:N	7:Q:57:LEU:HD23	2.24	0.52
9:F:50:LYS:HE2	9:F:92:ILE:CG1	2.34	0.52
9:F:384:HIS:C	9:F:384:HIS:CD2	2.87	0.52
8:A:193:ILE:O	8:A:193:ILE:CG2	2.49	0.52
3:d:175:THR:O	3:d:176:GLU:CD	2.52	0.52
3:d:220:GLY:H	3:d:236:SER:HB2	1.75	0.52
7:M:48:LYS:HZ2	7:L:43:PRO:HB2	1.75	0.52
7:T:57:LEU:N	7:T:57:LEU:HD23	2.24	0.52
7:J:57:LEU:N	7:J:57:LEU:HD23	2.24	0.52
7:I:57:LEU:N	7:I:57:LEU:HD23	2.24	0.52
9:B:292:MET:HE1	8:C:282:PRO:HD3	1.91	0.52
9:B:411:ASP:N	9:B:418:ARG:HH22	2.05	0.52
1:a:119:ILE:CD1	2:b:31:LEU:N	2.50	0.52
2:b:137:ILE:HA	8:A:5:ARG:HB3	1.91	0.52
4:p:101:MET:O	4:p:105:ASP:HB2	2.10	0.52
7:T:57:LEU:O	7:T:61:GLU:N	2.35	0.52
8:E:9:ILE:HG23	8:E:13:ILE:HG21	1.91	0.52
8:E:290:ASP:O	8:E:294:LEU:N	2.36	0.52
2:b:160:LEU:CD1	2:b:163:GLU:CB	2.69	0.52
6:g:83:ARG:N	6:g:84:PRO:HD2	2.25	0.52
7:O:3:PRO:HD2	7:O:5:ILE:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:3:PRO:HD2	7:M:5:ILE:HD12	1.92	0.52
9:F:64:GLU:OE2	9:F:133:HIS:NE2	2.43	0.52
9:D:423:ARG:NH2	9:D:464:GLY:HA3	2.24	0.52
1:a:24:GLN:O	4:p:83:LEU:HD12	2.09	0.52
2:b:70:LEU:HB3	4:p:131:LYS:CB	2.29	0.52
2:b:111:ILE:HG13	2:b:112:ASN:N	2.24	0.52
2:b:145:PHE:CZ	3:d:243:GLU:C	2.84	0.52
4:p:108:TYR:HE1	4:p:112:LEU:HD11	1.65	0.52
4:p:192:LEU:CD2	8:A:3:THR:CG2	2.84	0.52
4:p:195:GLN:HG2	8:A:4:ILE:HD13	1.58	0.52
4:p:196:LYS:C	4:p:199:THR:HG22	2.32	0.52
6:g:209:LYS:HA	6:g:231:LEU:O	2.10	0.52
7:P:10:VAL:CG2	7:Q:74:LEU:HD21	2.35	0.52
7:R:3:PRO:HD2	7:R:5:ILE:HD12	1.92	0.52
7:G:3:PRO:HD2	7:G:5:ILE:HD12	1.92	0.52
8:E:420:LEU:CD2	8:E:458:LEU:HD11	2.39	0.52
9:B:71:ASN:ND2	8:C:9:ILE:O	2.43	0.52
9:B:306:MET:HE3	9:B:310:GLN:CG	2.40	0.52
2:b:122:GLU:CG	4:p:181:ILE:HD12	2.39	0.52
4:p:110:THR:HB	4:p:111:PRO:HD3	1.91	0.52
5:e:100:GLU:HG2	5:e:119:LEU:HD21	1.91	0.52
6:g:110:THR:CG2	6:g:296:LEU:CD1	2.86	0.52
7:N:3:PRO:HD2	7:N:5:ILE:HD12	1.92	0.52
8:A:497:GLN:NE2	8:A:497:GLN:CA	2.73	0.52
9:B:157:ASP:HB3	9:B:451:LEU:HD13	1.92	0.52
8:C:13:ILE:O	8:C:17:ILE:HG13	2.10	0.52
2:b:96:ARG:O	4:p:155:ILE:HG23	2.09	0.51
6:g:123:VAL:HG13	6:g:308:LEU:HD21	1.82	0.51
7:M:57:LEU:O	7:M:61:GLU:N	2.35	0.51
7:H:40:ALA:CB	7:I:49:ILE:HD11	2.37	0.51
7:H:57:LEU:HD23	7:H:57:LEU:N	2.24	0.51
9:F:427:ILE:HD11	9:F:462:LEU:HD21	1.92	0.51
9:B:189:ILE:HG22	9:B:269:LEU:HD11	1.91	0.51
9:B:294:SER:HB3	9:B:300:PRO:HA	1.92	0.51
8:C:104:TYR:CD2	8:C:246:LEU:CD2	2.93	0.51
4:p:196:LYS:CD	8:A:5:ARG:HH22	2.22	0.51
7:H:3:PRO:HD2	7:H:5:ILE:HD12	1.92	0.51
9:F:164:ARG:NH1	9:F:320:SER:HB3	2.26	0.51
1:a:27:TYR:OH	1:a:122:LEU:CD1	2.58	0.51
2:b:70:LEU:HD12	4:p:127:LEU:CG	2.35	0.51
2:b:122:GLU:N	4:p:181:ILE:HG21	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:217:LEU:HA	3:d:237:VAL:CG2	2.40	0.51
7:S:20:ALA:HA	7:R:21:SER:OG	2.10	0.51
7:O:57:LEU:N	7:O:57:LEU:HD23	2.24	0.51
7:P:3:PRO:HD2	7:P:5:ILE:HD12	1.92	0.51
7:Q:40:ALA:CB	7:R:49:ILE:HD11	2.37	0.51
7:H:46:GLU:OE1	7:I:48:LYS:CD	2.58	0.51
9:F:25:GLN:HE21	9:F:27:ILE:CD1	2.23	0.51
9:F:353:SER:HB2	9:F:366:ASP:HB2	1.93	0.51
9:B:221:VAL:HG12	9:B:232:VAL:HB	1.93	0.51
9:B:237:GLY:CA	9:B:249:VAL:HG21	2.29	0.51
1:a:174:ILE:CG2	7:O:58:ALA:HB1	2.25	0.51
1:a:184:LEU:HD21	1:a:188:PHE:CD2	2.41	0.51
6:g:169:ILE:HG23	6:g:170:ARG:N	2.25	0.51
6:g:281:ILE:CA	7:N:41:ARG:HH22	2.04	0.51
9:F:120:ASN:O	9:F:120:ASN:CG	2.51	0.51
8:A:412:ALA:HB1	8:A:416:ARG:HH12	1.74	0.51
8:A:424:PRO:CB	8:A:455:ARG:NH1	2.73	0.51
9:B:169:GLY:CA	9:B:346:LEU:HD13	2.34	0.51
1:a:208:VAL:HG21	1:a:212:VAL:HG21	1.92	0.51
2:b:144:VAL:HB	8:A:13:ILE:CD1	2.41	0.51
2:b:175:MET:CB	8:A:24:VAL:HG21	2.40	0.51
4:p:167:GLN:O	4:p:171:GLU:HB3	2.10	0.51
6:g:327:THR:CG2	6:g:328:ASP:N	2.74	0.51
7:G:43:PRO:CB	7:H:48:LYS:HZ2	2.21	0.51
8:E:37:ASP:OD2	9:D:291:ARG:NH2	2.42	0.51
8:E:284:ARG:HH12	8:E:330:TYR:HA	1.76	0.51
8:A:327:VAL:HG21	8:A:344:PHE:CE1	2.41	0.51
9:D:202:VAL:HG22	9:D:249:VAL:HG23	1.93	0.51
1:a:70:ASN:CB	2:b:53:LEU:CB	2.88	0.51
2:b:57:LYS:O	2:b:60:ILE:CG2	2.56	0.51
4:p:127:LEU:CA	4:p:130:VAL:HG12	2.36	0.51
6:g:360:ALA:CB	9:D:292:MET:SD	2.74	0.51
7:N:48:LYS:HZ3	7:M:43:PRO:CA	2.24	0.51
7:T:3:PRO:HD2	7:T:5:ILE:HD12	1.92	0.51
7:G:57:LEU:N	7:G:57:LEU:HD23	2.24	0.51
7:G:81:VAL:CG2	7:H:80:PHE:CZ	2.94	0.51
8:E:67:LEU:O	9:F:25:GLN:HB2	2.10	0.51
8:C:383:LEU:HD12	8:C:383:LEU:C	2.35	0.51
1:a:65:PRO:HB2	1:a:70:ASN:HD21	0.34	0.51
1:a:119:ILE:HG22	2:b:27:LEU:C	2.29	0.51
2:b:122:GLU:CB	4:p:181:ILE:HD12	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:188:ASN:HD22	3:d:188:ASN:N	2.09	0.51
4:p:206:GLN:HE21	4:p:210:LEU:HB2	1.76	0.51
7:O:43:PRO:CA	7:P:48:LYS:HZ3	2.22	0.51
7:R:57:LEU:N	7:R:57:LEU:HD23	2.24	0.51
7:G:81:VAL:CG2	7:H:80:PHE:CE2	2.92	0.51
7:L:3:PRO:HD2	7:L:5:ILE:HD12	1.92	0.51
9:F:334:LEU:HD22	9:F:343:PHE:HE2	1.76	0.51
9:F:361:ILE:HG23	9:F:432:SER:CB	2.31	0.51
8:A:359:ASN:HD22	8:A:362:ILE:HD12	1.64	0.51
2:b:114:THR:O	4:p:174:LEU:HG	2.10	0.51
2:b:125:LYS:HG3	4:p:181:ILE:HG22	1.91	0.51
2:b:142:GLN:O	2:b:143:ARG:C	2.52	0.51
3:d:224:ARG:CG	3:d:232:LEU:HD12	2.41	0.51
3:d:228:GLU:OE2	8:A:43:HIS:HE1	1.93	0.51
5:e:23:ILE:HG23	5:e:50:ARG:HB2	1.93	0.51
8:E:159:PRO:HB3	8:E:372:GLN:HG3	1.93	0.51
8:A:436:MET:O	8:A:440:THR:HG23	2.11	0.51
9:D:168:ILE:HD12	9:D:324:ILE:HG12	1.93	0.51
1:a:214:ILE:HG12	1:a:215:PRO:HD3	1.89	0.51
2:b:88:VAL:CA	4:p:148:MET:HG2	1.89	0.51
6:g:71:LYS:CB	6:g:316:LEU:HD13	2.41	0.51
7:N:68:LEU:HD22	7:O:66:TYR:CG	2.46	0.51
7:M:48:LYS:NZ	7:L:43:PRO:HB3	2.24	0.51
8:E:104:TYR:CD1	8:E:122:ILE:HG21	2.46	0.51
8:A:24:VAL:HG23	8:A:24:VAL:O	2.11	0.51
8:A:165:ARG:HB3	8:A:339:THR:HG23	1.92	0.51
8:C:394:GLU:OE1	8:C:418:ARG:NH2	2.39	0.51
2:b:79:GLU:N	4:p:136:GLU:CB	2.73	0.51
3:d:177:VAL:HA	3:d:208:ARG:O	2.11	0.51
3:d:181:THR:O	3:d:221:PHE:CA	2.58	0.51
6:g:155:TYR:HE2	6:g:174:ILE:HG23	1.76	0.51
7:N:43:PRO:HB3	7:O:48:LYS:HZ3	1.69	0.51
7:O:35:ALA:CB	7:O:53:LEU:HD13	2.41	0.51
7:O:81:VAL:CG2	7:P:80:PHE:CE2	2.92	0.51
7:M:57:LEU:N	7:M:57:LEU:HD23	2.24	0.51
7:M:74:LEU:HD22	7:L:10:VAL:HG22	1.92	0.51
8:E:430:THR:HG22	8:E:431:VAL:N	2.26	0.51
9:F:163:ARG:HG2	9:F:374:MET:HG3	1.92	0.51
8:A:413:ARG:NH2	8:A:444:GLY:HA3	2.26	0.51
8:C:237:TYR:CZ	8:C:294:LEU:HD13	2.44	0.51
1:a:121:GLN:HB2	2:b:27:LEU:HB2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:88:VAL:CA	4:p:148:MET:CA	2.87	0.50
3:d:75:ALA:HB1	3:d:160:GLU:HG2	1.93	0.50
4:p:214:ILE:C	8:A:17:ILE:HD11	2.36	0.50
5:e:8:LEU:HD12	5:e:8:LEU:O	2.10	0.50
5:e:100:GLU:HG3	5:e:119:LEU:HD21	1.94	0.50
7:S:3:PRO:HD2	7:S:5:ILE:HD12	1.92	0.50
7:Q:3:PRO:HD2	7:Q:5:ILE:HD12	1.92	0.50
8:E:176:LYS:HD2	8:E:319:ILE:CG2	2.41	0.50
9:F:336:ASP:HB3	9:F:339:PRO:CD	2.41	0.50
8:A:177:THR:OG1	10:A:600:ATP:O2B	2.28	0.50
9:B:69:LEU:HD11	9:B:75:ARG:HB2	1.93	0.50
9:B:113:VAL:HG22	9:B:249:VAL:CG2	2.40	0.50
1:a:51:LEU:CG	4:p:100:LEU:HD11	2.16	0.50
1:a:63:THR:HA	4:p:119:ARG:HH11	0.44	0.50
1:a:121:GLN:HG3	2:b:25:ASP:OD1	2.11	0.50
6:g:202:PHE:CE2	6:g:231:LEU:HB3	2.46	0.50
7:Q:35:ALA:CB	7:Q:53:LEU:HD13	2.41	0.50
7:Q:57:LEU:O	7:Q:61:GLU:N	2.35	0.50
7:M:35:ALA:CB	7:M:53:LEU:HD13	2.41	0.50
8:E:172:ARG:NH2	9:D:369:ASP:OD1	2.44	0.50
8:A:20:TYR:CE2	8:A:22:ARG:HB2	2.47	0.50
8:A:216:ARG:HG3	8:A:216:ARG:NH2	2.26	0.50
9:D:64:GLU:OE1	9:D:248:ARG:CZ	2.59	0.50
9:D:109:ARG:NH1	9:D:119:ASP:CG	2.69	0.50
9:D:182:ILE:HG23	9:D:183:MET:N	2.26	0.50
1:a:70:ASN:CA	2:b:53:LEU:HB3	2.41	0.50
1:a:135:ASN:HD21	4:p:86:PHE:N	2.00	0.50
2:b:45:GLY:O	2:b:49:LEU:CB	2.59	0.50
2:b:103:ILE:HD11	4:p:161:LYS:C	2.23	0.50
2:b:144:VAL:HG11	8:A:9:ILE:HG22	1.92	0.50
3:d:157:LEU:HD12	3:d:157:LEU:O	2.12	0.50
3:d:179:VAL:HA	3:d:210:LYS:O	2.11	0.50
4:p:219:LEU:HB2	4:p:220:PRO:CD	2.35	0.50
6:g:122:VAL:HG13	6:g:213:LEU:HD11	1.93	0.50
6:g:360:ALA:HA	9:D:292:MET:HB3	1.93	0.50
7:P:81:VAL:CG2	7:Q:80:PHE:CE2	2.94	0.50
7:M:35:ALA:HA	7:L:36:VAL:HG11	1.93	0.50
7:H:35:ALA:CB	7:H:53:LEU:HD13	2.41	0.50
7:K:35:ALA:CB	7:K:53:LEU:HD13	2.41	0.50
8:A:432:GLU:HG3	8:A:476:ILE:HB	1.92	0.50
8:C:271:TYR:CD2	8:C:294:LEU:CD2	2.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:119:ILE:CD1	2:b:31:LEU:CA	2.90	0.50
1:a:124:HIS:CE1	4:p:79:GLU:N	2.80	0.50
2:b:85:LEU:CD1	2:b:86:LYS:N	2.68	0.50
2:b:122:GLU:OE2	4:p:184:GLU:OE1	2.29	0.50
8:E:383:LEU:HD13	8:E:417:LEU:HD22	1.93	0.50
8:A:65:LEU:CD1	8:A:75:VAL:HG21	2.41	0.50
8:C:100:VAL:CG2	8:C:246:LEU:HD23	2.35	0.50
9:D:102:VAL:HG22	9:D:128:THR:HG22	1.93	0.50
9:D:109:ARG:NH2	9:D:122:GLY:O	2.43	0.50
9:D:146:LEU:CD2	9:D:163:ARG:HE	2.25	0.50
9:D:401:LEU:HA	9:D:404:ILE:HG12	1.93	0.50
1:a:40:LEU:HD21	4:p:92:ILE:HB	1.94	0.50
2:b:88:VAL:N	4:p:148:MET:HG3	2.06	0.50
3:d:247:GLN:C	8:A:16:ARG:HD3	2.30	0.50
4:p:214:ILE:HG22	8:A:17:ILE:HD12	1.93	0.50
6:g:174:ILE:HG22	6:g:175:PRO:O	2.11	0.50
6:g:257:LEU:O	6:g:257:LEU:HD12	2.11	0.50
7:R:35:ALA:CB	7:R:53:LEU:HD13	2.41	0.50
7:G:21:SER:OG	7:H:20:ALA:HA	2.10	0.50
8:A:383:LEU:HD22	8:A:438:ILE:CD1	2.22	0.50
8:A:419:GLU:OE2	8:A:422:LYS:NZ	2.43	0.50
8:C:167:LEU:HA	8:C:318:PRO:HD2	1.93	0.50
8:C:259:ILE:HG23	8:C:259:ILE:O	2.12	0.50
9:D:168:ILE:HB	9:D:324:ILE:HA	1.93	0.50
3:d:151:ASP:CB	8:C:20:TYR:OH	2.46	0.50
4:p:152:ARG:CG	8:A:503:LEU:HB3	2.23	0.50
6:g:253:GLU:HB2	6:g:269:ASP:O	2.12	0.50
7:T:35:ALA:CB	7:T:53:LEU:HD13	2.41	0.50
8:E:202:LYS:CD	9:D:345:HIS:O	2.55	0.50
8:A:131:GLU:OE1	8:A:297:ARG:NH2	2.45	0.50
8:A:382:LYS:HB3	8:A:442:THR:CG2	2.38	0.50
9:D:61:VAL:O	9:D:61:VAL:HG23	2.11	0.50
9:D:110:ILE:HD11	9:D:213:TYR:CD1	2.47	0.50
1:a:53:SER:O	1:a:56:ILE:HG23	2.06	0.50
1:a:100:THR:CG2	4:p:101:MET:HB2	2.25	0.50
1:a:124:HIS:CE1	4:p:79:GLU:H	2.29	0.50
1:a:124:HIS:CG	4:p:80:LYS:O	2.65	0.50
2:b:70:LEU:HB2	4:p:127:LEU:HD23	1.94	0.50
3:d:74:THR:HG23	8:C:4:ILE:N	2.26	0.50
3:d:119:VAL:CG1	8:E:31:THR:OG1	2.59	0.50
3:d:198:VAL:O	3:d:202:THR:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:p:203:LEU:HD21	8:A:10:SER:H	1.75	0.50
5:e:119:LEU:HD11	5:e:123:ARG:HH21	1.76	0.50
7:K:3:PRO:HD2	7:K:5:ILE:HD12	1.92	0.50
8:E:404:ASP:N	8:E:404:ASP:OD1	2.42	0.50
9:F:20:LEU:HD21	9:F:92:ILE:HG12	1.93	0.50
9:B:71:ASN:ND2	8:C:9:ILE:CA	2.69	0.50
8:C:164:GLN:NE2	8:C:166:GLU:OE1	2.45	0.50
8:C:247:ALA:HB3	8:C:314:MET:CE	2.41	0.50
8:C:410:GLN:HE22	9:D:472:GLN:HG3	1.77	0.50
2:b:87:LYS:O	2:b:90:MET:CB	2.53	0.50
2:b:91:ASP:CB	4:p:148:MET:HG2	2.42	0.50
6:g:261:GLU:CG	6:g:262:GLY:N	2.69	0.50
7:O:43:PRO:HB3	7:P:48:LYS:CD	2.42	0.50
7:J:3:PRO:HD2	7:J:5:ILE:HD12	1.92	0.50
7:I:35:ALA:CB	7:I:53:LEU:HD13	2.41	0.50
8:E:165:ARG:HD3	8:E:299:LEU:O	2.12	0.50
8:A:185:LEU:CD1	8:A:426:SER:OG	2.60	0.50
9:B:251:LEU:CD2	9:B:309:LEU:CD1	2.81	0.50
1:a:79:ILE:HD11	1:a:99:GLY:HA2	1.88	0.50
1:a:208:VAL:HG23	1:a:209:PRO:HD3	1.85	0.50
4:p:87:ASN:OD1	4:p:89:THR:N	2.29	0.50
5:e:19:VAL:HG21	5:e:51:ILE:CG1	2.39	0.50
7:N:48:LYS:HZ2	7:M:43:PRO:CB	2.20	0.50
8:E:285:GLU:O	9:D:295:ALA:HB2	2.12	0.50
8:C:251:MET:CE	8:C:252:TYR:CE1	2.94	0.50
8:C:254:GLU:HG2	8:C:310:GLY:HA3	1.93	0.50
3:d:217:LEU:HD23	3:d:236:SER:HG	1.76	0.49
3:d:235:MET:CG	8:A:24:VAL:HG11	2.42	0.49
4:p:179:LYS:C	4:p:179:LYS:CD	2.85	0.49
7:G:35:ALA:CB	7:G:53:LEU:HD13	2.42	0.49
7:L:35:ALA:CB	7:L:53:LEU:HD13	2.41	0.49
8:E:169:ILE:HG13	8:E:322:THR:HG23	1.93	0.49
8:A:100:VAL:HG23	8:A:246:LEU:HD23	1.94	0.49
8:C:22:ARG:HG3	8:C:23:GLU:N	2.26	0.49
8:C:239:ALA:N	8:C:240:PRO:HD2	2.26	0.49
9:D:113:VAL:HG22	9:D:249:VAL:CG1	2.37	0.49
9:D:173:GLY:O	9:D:178:LYS:NZ	2.45	0.49
1:a:159:GLY:O	1:a:160:TYR:CD2	2.65	0.49
3:d:195:ALA:C	3:d:207:VAL:HG11	2.38	0.49
5:e:15:TRP:NE1	5:e:17:SER:O	2.45	0.49
6:g:72:VAL:CG1	6:g:257:LEU:CD2	2.91	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:285:GLU:OE1	6:g:285:GLU:HA	2.12	0.49
7:S:57:LEU:O	7:S:61:GLU:N	2.35	0.49
7:N:10:VAL:HG22	7:O:74:LEU:CD2	2.40	0.49
7:T:10:VAL:CG2	7:G:74:LEU:HD21	2.35	0.49
8:E:489:LEU:CD2	8:E:489:LEU:C	2.85	0.49
2:b:88:VAL:O	2:b:90:MET:N	2.44	0.49
2:b:91:ASP:C	4:p:151:ALA:HB3	2.19	0.49
2:b:140:VAL:HG11	8:A:6:ALA:HA	1.93	0.49
3:d:129:LEU:HD23	3:d:147:ASN:OD1	2.11	0.49
6:g:107:VAL:CG1	6:g:296:LEU:HD12	2.42	0.49
6:g:110:THR:CG2	6:g:296:LEU:HD13	2.42	0.49
7:S:81:VAL:CG2	7:T:80:PHE:CE2	2.95	0.49
7:N:35:ALA:CB	7:N:53:LEU:HD13	2.41	0.49
8:E:208:GLN:HE22	9:D:144:THR:HG22	1.72	0.49
9:F:50:LYS:HD2	9:F:90:GLU:HG3	1.93	0.49
9:F:110:ILE:HB	9:F:119:ASP:HB3	1.94	0.49
9:F:433:GLN:NE2	9:F:447:LYS:O	2.46	0.49
9:D:189:ILE:CG2	9:D:269:LEU:HD11	2.33	0.49
1:a:119:ILE:HD12	2:b:31:LEU:CA	2.41	0.49
7:N:57:LEU:O	7:N:61:GLU:N	2.35	0.49
7:M:48:LYS:HD2	7:L:43:PRO:HB3	1.93	0.49
9:F:385:TYR:O	9:F:389:GLN:HG2	2.13	0.49
9:B:170:LEU:HD22	9:B:181:LEU:HD23	1.94	0.49
8:C:104:TYR:HD2	8:C:246:LEU:HD22	1.77	0.49
9:D:398:TYR:OH	9:D:425:ARG:HD3	2.12	0.49
2:b:103:ILE:CB	4:p:159:LEU:HB2	2.33	0.49
3:d:222:THR:HG22	3:d:234:ASP:HB2	0.49	0.49
5:e:58:LEU:HD12	5:e:58:LEU:O	2.11	0.49
8:A:58:GLU:OE1	8:A:58:GLU:HA	2.11	0.49
9:B:71:ASN:N	8:C:9:ILE:HG13	2.27	0.49
1:a:27:TYR:CZ	1:a:122:LEU:CD1	2.69	0.49
4:p:199:THR:CG2	4:p:200:ILE:N	2.76	0.49
5:e:5:LEU:CD2	5:e:51:ILE:HD12	2.42	0.49
6:g:227:ILE:CG2	6:g:242:ILE:CD1	2.89	0.49
7:S:35:ALA:CB	7:S:53:LEU:HD13	2.41	0.49
7:N:80:PHE:CZ	7:M:81:VAL:CG2	2.95	0.49
8:E:463:THR:CG2	8:E:464:TYR:N	2.76	0.49
9:F:124:VAL:HG12	9:F:126:THR:CG2	2.41	0.49
9:F:163:ARG:HG2	9:F:374:MET:CG	2.43	0.49
9:F:168:ILE:HB	9:F:324:ILE:HA	1.93	0.49
9:F:211:ASP:O	9:F:215:GLU:HG3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:366:ARG:HD2	9:B:441:PHE:HE1	1.77	0.49
3:d:119:VAL:CG1	8:E:43:HIS:CD2	2.96	0.49
3:d:186:LEU:HD11	3:d:191:LEU:CD1	2.40	0.49
4:p:199:THR:HG21	8:A:6:ALA:H	1.78	0.49
5:e:45:ASP:OD2	5:e:120:ARG:NH2	2.46	0.49
7:S:48:LYS:HZ2	7:R:43:PRO:HB3	1.65	0.49
8:E:173:GLN:CG	9:D:371:THR:HG21	2.42	0.49
8:E:376:MET:HE1	8:E:438:ILE:HD12	1.93	0.49
8:A:469:LYS:HZ2	8:A:492:GLU:C	2.21	0.49
8:A:469:LYS:HZ2	8:A:493:ALA:N	2.11	0.49
8:C:98:ILE:HG22	8:C:128:ARG:O	2.12	0.49
8:C:104:TYR:HE1	8:C:122:ILE:CD1	2.25	0.49
1:a:139:ALA:HB2	4:p:94:MET:HE2	1.94	0.49
2:b:61:LEU:HD13	2:b:61:LEU:O	2.13	0.49
2:b:91:ASP:O	4:p:151:ALA:CB	2.60	0.49
3:d:228:GLU:HG3	8:A:44:GLY:HA2	1.94	0.49
6:g:103:GLU:CB	7:R:41:ARG:HG3	2.43	0.49
6:g:280:PRO:O	7:N:41:ARG:NH2	2.45	0.49
7:S:75:LEU:HD21	7:T:74:LEU:HD21	1.95	0.49
7:P:35:ALA:CB	7:P:53:LEU:HD13	2.42	0.49
7:J:35:ALA:CB	7:J:53:LEU:HD13	2.41	0.49
7:J:66:TYR:CG	7:I:68:LEU:HD22	2.48	0.49
8:E:176:LYS:HD2	8:E:319:ILE:HG23	1.95	0.49
9:F:199:PHE:HB3	9:F:234:LEU:HD23	1.94	0.49
8:C:176:LYS:NZ	8:C:321:GLU:HB3	2.27	0.49
9:D:404:ILE:HG13	9:D:405:ILE:N	2.28	0.49
2:b:77:GLN:CG	4:p:134:SER:O	2.60	0.49
2:b:103:ILE:HG21	4:p:162:MET:HB2	1.89	0.49
6:g:239:ILE:HG23	6:g:239:ILE:O	2.12	0.49
6:g:356:ILE:HG23	9:D:293:PRO:O	2.13	0.49
7:I:57:LEU:O	7:I:61:GLU:N	2.35	0.49
8:E:68:GLU:O	9:F:87:ARG:NH1	2.46	0.49
8:A:79:ASP:HB3	8:A:81:LEU:HG	1.95	0.49
8:A:214:GLN:HE22	8:A:219:MET:HG2	1.29	0.49
8:A:420:LEU:HD23	8:A:458:LEU:CD1	2.43	0.49
9:B:425:ARG:HH12	9:B:429:ARG:NH2	2.06	0.49
9:D:387:ILE:HD11	9:D:455:ILE:HG23	1.84	0.49
2:b:61:LEU:O	2:b:61:LEU:HD22	2.13	0.49
2:b:114:THR:HA	2:b:117:THR:HG22	1.94	0.49
3:d:148:ILE:HG23	8:C:16:ARG:HD3	1.95	0.49
3:d:198:VAL:CA	3:d:201:ILE:HG12	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:e:38:ALA:HB1	7:M:41:ARG:CZ	2.43	0.49
6:g:72:VAL:HG22	6:g:316:LEU:HB2	1.95	0.49
7:Q:43:PRO:CA	7:R:48:LYS:HZ3	2.26	0.49
8:A:158:ILE:HG12	8:A:363:SER:HB2	1.94	0.49
8:A:424:PRO:HB3	8:A:455:ARG:HH11	1.78	0.49
8:C:45:LEU:O	9:D:87:ARG:NH2	2.41	0.49
8:C:107:ARG:HD2	8:C:119:ARG:NH1	2.28	0.49
8:C:138:MET:HE1	9:D:213:TYR:CE2	2.48	0.49
2:b:95:PHE:CZ	4:p:156:SER:HB2	2.46	0.48
3:d:181:THR:HG21	3:d:214:ASP:OD2	2.13	0.48
5:e:32:GLY:O	7:K:41:ARG:O	2.30	0.48
6:g:202:PHE:CB	6:g:231:LEU:CD1	2.91	0.48
7:O:57:LEU:O	7:O:61:GLU:N	2.35	0.48
8:E:461:LEU:C	8:E:461:LEU:CD2	2.85	0.48
9:F:50:LYS:CD	9:F:90:GLU:OE2	2.60	0.48
9:D:102:VAL:CG2	9:D:128:THR:HG22	2.43	0.48
2:b:78:LEU:HA	4:p:139:GLN:H	1.77	0.48
2:b:118:LEU:HD13	4:p:178:ARG:CA	2.40	0.48
6:g:79:VAL:CG1	6:g:306:ARG:NH2	2.76	0.48
6:g:211:GLU:HB2	6:g:228:HIS:O	2.13	0.48
7:S:74:LEU:HD21	7:R:10:VAL:CG2	2.37	0.48
8:E:101:SER:OG	8:E:102:GLU:N	2.46	0.48
9:F:254:LEU:HD21	9:F:312:ARG:HB2	1.94	0.48
8:A:54:VAL:O	8:A:54:VAL:HG23	2.12	0.48
8:A:109:ILE:CG2	8:A:225:VAL:HA	2.41	0.48
8:A:430:THR:HG22	8:A:431:VAL:N	2.28	0.48
8:C:420:LEU:HD11	8:C:441:GLY:HA3	1.95	0.48
9:D:441:PHE:CD1	12:D:600:ADP:H2'	2.47	0.48
1:a:118:LYS:NZ	1:a:126:GLU:HB3	2.29	0.48
8:E:490:LEU:C	8:E:490:LEU:CD2	2.85	0.48
8:A:98:ILE:HG23	8:A:130:ILE:HG12	1.96	0.48
8:A:100:VAL:HG23	8:A:246:LEU:CD2	2.43	0.48
8:A:445:TYR:HD2	8:A:494:ILE:HG21	1.72	0.48
9:B:79:MET:HE3	9:B:113:VAL:HG11	1.96	0.48
8:C:232:PRO:HG2	8:C:235:LEU:HG	1.94	0.48
2:b:88:VAL:C	4:p:148:MET:CA	2.86	0.48
2:b:117:THR:HG23	4:p:174:LEU:HD21	1.94	0.48
2:b:145:PHE:H	8:A:13:ILE:HD11	1.78	0.48
3:d:186:LEU:HD12	3:d:186:LEU:O	2.13	0.48
4:p:193:GLU:HA	4:p:196:LYS:CD	2.44	0.48
6:g:123:VAL:HG22	6:g:308:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:S:80:PHE:CE2	7:R:81:VAL:CG2	2.95	0.48
7:N:80:PHE:CE2	7:M:81:VAL:CG2	2.94	0.48
8:E:156:ALA:O	8:E:372:GLN:NE2	2.46	0.48
8:E:214:GLN:HG3	8:E:219:MET:CG	2.42	0.48
9:B:61:VAL:HG11	9:B:85:LEU:HD11	1.96	0.48
1:a:84:LYS:HA	1:a:91:TYR:HB3	1.96	0.48
7:N:74:LEU:HD22	7:M:10:VAL:HG22	1.93	0.48
7:M:20:ALA:HA	7:L:21:SER:OG	2.13	0.48
8:E:416:ARG:HG3	8:E:454:VAL:HG21	1.95	0.48
8:A:148:GLN:O	8:A:186:ASN:ND2	2.46	0.48
8:A:329:ALA:HB3	8:A:332:PRO:CD	2.44	0.48
8:A:497:GLN:HA	8:A:497:GLN:HE21	1.79	0.48
2:b:84:ARG:HB3	4:p:141:GLU:C	2.37	0.48
6:g:231:LEU:HD23	6:g:233:LEU:HD12	1.96	0.48
7:Q:10:VAL:HG22	7:R:74:LEU:HD22	1.91	0.48
9:F:163:ARG:HB2	9:F:166:GLY:HA3	1.95	0.48
8:A:344:PHE:CD2	8:A:362:ILE:O	2.67	0.48
1:a:104:PHE:O	1:a:108:SER:OG	2.27	0.48
1:a:165:ILE:CG2	1:a:169:PRO:CA	2.92	0.48
2:b:88:VAL:HG22	4:p:148:MET:CB	2.43	0.48
2:b:91:ASP:HB3	4:p:148:MET:CG	2.43	0.48
5:e:96:LEU:HD13	5:e:123:ARG:N	2.29	0.48
6:g:240:CYS:HB3	6:g:246:CYS:HA	1.96	0.48
8:A:432:GLU:HA	8:A:435:VAL:HG12	1.95	0.48
9:B:464:GLY:O	9:B:465:GLU:C	2.56	0.48
9:D:113:VAL:HG21	9:D:245:ALA:HB1	1.95	0.48
1:a:44:TRP:CD1	4:p:96:GLU:CD	2.91	0.48
2:b:147:GLN:HA	2:b:150:GLN:CD	2.38	0.48
3:d:74:THR:HB	3:d:154:ARG:NH1	2.28	0.48
4:p:159:LEU:CD1	4:p:160:ASN:N	2.68	0.48
7:O:43:PRO:HB2	7:P:48:LYS:HZ2	1.79	0.48
7:O:68:LEU:HD22	7:P:66:TYR:CG	2.49	0.48
7:J:12:ALA:HB2	7:I:11:ILE:HA	1.95	0.48
8:E:48:VAL:HG22	8:E:49:MET:N	2.27	0.48
8:A:464:TYR:HD2	8:A:497:GLN:HB2	1.78	0.48
9:B:146:LEU:HD22	9:B:374:MET:HE1	1.95	0.48
9:B:251:LEU:HD23	9:B:309:LEU:CD1	2.33	0.48
8:C:4:ILE:O	8:C:4:ILE:HG12	2.13	0.48
8:C:151:LEU:HB2	8:C:154:ILE:HD13	1.96	0.48
1:a:100:THR:CG2	4:p:101:MET:CB	2.71	0.48
1:a:122:LEU:HB3	1:a:125:GLY:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:98:ASN:O	2:b:102:GLU:HG2	2.14	0.48
2:b:103:ILE:CA	4:p:159:LEU:HB2	2.44	0.48
7:P:43:PRO:CG	7:Q:42:GLN:NE2	2.73	0.48
9:F:313:ILE:HG21	9:F:323:SER:HB3	1.95	0.48
8:A:52:GLU:HA	8:A:95:ILE:HA	1.96	0.48
8:A:403:LEU:HB3	8:A:408:GLN:HB2	1.95	0.48
9:B:50:LYS:HZ3	9:B:92:ILE:HD12	1.78	0.48
8:C:404:ASP:N	8:C:404:ASP:OD1	2.44	0.48
1:a:24:GLN:NE2	1:a:195:LEU:CD1	2.65	0.48
2:b:77:GLN:CG	4:p:137:VAL:HG23	2.32	0.48
6:g:138:LEU:HD13	6:g:167:TYR:CD1	2.49	0.48
6:g:356:ILE:HD11	9:D:295:ALA:CB	2.44	0.48
7:N:80:PHE:CD2	7:M:6:ALA:HB1	2.43	0.48
9:F:426:LYS:HG2	9:F:474:PHE:CD2	2.48	0.48
8:A:107:ARG:NH2	8:A:117:ASP:OD2	2.45	0.48
8:A:457:TYR:OH	8:A:498:MET:CG	2.61	0.48
1:a:116:PRO:HB3	2:b:33:ASN:N	2.27	0.47
1:a:130:PRO:O	1:a:133:ASP:OD1	2.32	0.47
1:a:137:THR:HG21	1:a:191:PHE:HA	1.94	0.47
2:b:85:LEU:HD12	2:b:85:LEU:C	2.39	0.47
2:b:114:THR:CA	2:b:117:THR:HG22	2.44	0.47
4:p:215:VAL:HG13	4:p:216:LYS:N	2.28	0.47
6:g:240:CYS:HB3	6:g:246:CYS:CA	2.43	0.47
6:g:335:LYS:O	6:g:339:ILE:HG12	2.14	0.47
7:L:49:ILE:HD11	7:K:40:ALA:CB	2.39	0.47
9:F:124:VAL:CG1	9:F:126:THR:HG22	2.42	0.47
8:A:413:ARG:CZ	8:A:444:GLY:CA	2.92	0.47
9:D:51:GLY:O	9:D:59:MET:O	2.31	0.47
3:d:235:MET:HE1	3:d:239:LYS:HG2	1.93	0.47
7:G:10:VAL:HG22	7:H:74:LEU:HD22	1.91	0.47
8:E:503:LEU:O	8:E:504:GLN:HG2	2.14	0.47
9:B:19:ASN:N	9:B:19:ASN:OD1	2.45	0.47
8:C:101:SER:HB3	8:C:124:ALA:HA	1.96	0.47
1:a:50:LEU:HD21	1:a:107:VAL:HG21	1.96	0.47
2:b:71:ARG:HB2	4:p:127:LEU:C	2.39	0.47
3:d:98:ASP:OD2	3:d:139:GLN:HG2	2.14	0.47
3:d:216:SER:O	3:d:217:LEU:O	2.32	0.47
4:p:196:LYS:HD2	8:A:5:ARG:NH2	2.27	0.47
5:e:20:LYS:HG3	5:e:53:LEU:HD12	1.96	0.47
6:g:209:LYS:O	6:g:209:LYS:HG2	2.14	0.47
7:O:75:LEU:HD21	7:P:74:LEU:HD21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:148:ILE:HD11	9:F:161:PRO:HB3	1.96	0.47
8:A:36:GLY:O	8:A:39:ILE:HG22	2.14	0.47
1:a:130:PRO:O	1:a:136:THR:OG1	2.26	0.47
1:a:203:VAL:O	1:a:207:LEU:HD13	2.14	0.47
2:b:71:ARG:CB	4:p:127:LEU:O	2.62	0.47
6:g:360:ALA:HB2	9:D:293:PRO:HD2	1.95	0.47
7:S:48:LYS:HG2	7:R:46:GLU:OE1	2.13	0.47
7:O:21:SER:OG	7:P:20:ALA:HA	2.13	0.47
9:F:411:ASP:O	9:F:418:ARG:NH2	2.47	0.47
8:A:153:ALA:HB3	8:A:358:ILE:CD1	2.41	0.47
8:A:413:ARG:NH2	8:A:444:GLY:CA	2.76	0.47
1:a:109:ASN:HB3	1:a:224:SER:HB3	1.96	0.47
1:a:114:LEU:CD1	2:b:37:VAL:C	2.83	0.47
1:a:116:PRO:HA	2:b:34:LEU:H	1.79	0.47
2:b:45:GLY:O	2:b:49:LEU:HB2	2.14	0.47
2:b:68:GLU:O	4:p:126:GLN:O	2.32	0.47
6:g:222:LYS:CE	6:g:224:ASP:OD1	2.61	0.47
6:g:359:GLY:HA3	9:D:293:PRO:CB	2.43	0.47
7:N:48:LYS:CD	7:M:46:GLU:OE1	2.62	0.47
7:M:48:LYS:O	7:L:46:GLU:OE2	2.32	0.47
7:L:55:LEU:HD23	7:K:54:LEU:HD11	1.97	0.47
8:E:68:GLU:HA	9:F:25:GLN:HB2	1.97	0.47
8:E:147:LEU:HD22	8:E:315:THR:HG21	1.95	0.47
8:E:430:THR:HG22	8:E:431:VAL:H	1.80	0.47
9:D:274:ASN:HD21	9:D:328:TYR:CB	2.27	0.47
2:b:96:ARG:O	4:p:155:ILE:CG2	2.59	0.47
3:d:148:ILE:HD12	8:C:17:ILE:CG1	2.41	0.47
8:E:48:VAL:HG23	8:E:52:GLU:OE1	2.14	0.47
8:E:302:ALA:HB2	8:E:314:MET:CE	2.40	0.47
9:F:179:THR:HG22	9:F:183:MET:HE3	1.97	0.47
8:C:146:PRO:HG2	8:C:373:ILE:HG23	1.96	0.47
1:a:120:ILE:HG22	2:b:30:ASN:CB	2.44	0.47
1:a:173:PRO:O	1:a:177:LEU:HG	2.14	0.47
2:b:77:GLN:CB	4:p:134:SER:CA	2.86	0.47
2:b:153:LEU:HD13	3:d:240:GLN:HE22	1.80	0.47
2:b:160:LEU:CG	2:b:163:GLU:HB2	2.45	0.47
3:d:181:THR:O	3:d:221:PHE:HA	2.14	0.47
4:p:193:GLU:CA	4:p:196:LYS:HG2	2.45	0.47
4:p:206:GLN:HE21	4:p:210:LEU:HD13	1.79	0.47
5:e:62:LEU:HD13	5:e:78:VAL:HG21	1.96	0.47
6:g:79:VAL:HG13	6:g:306:ARG:NH2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:221:VAL:HG21	8:A:401:SER:HB2	1.94	0.47
6:g:360:ALA:H	9:D:293:PRO:CG	2.26	0.47
7:S:10:VAL:CG2	7:T:74:LEU:HD21	2.36	0.47
7:N:53:LEU:CD2	7:O:52:THR:CG2	2.93	0.47
7:N:74:LEU:HD21	7:M:75:LEU:HD21	1.97	0.47
8:E:42:ILE:CD1	8:E:89:VAL:HG11	2.23	0.47
8:E:156:ALA:HB2	8:E:438:ILE:HD11	1.96	0.47
9:F:163:ARG:HG2	9:F:374:MET:SD	2.54	0.47
9:F:330:PRO:HD2	9:F:339:PRO:HG3	1.97	0.47
8:C:210:VAL:HG13	8:C:219:MET:HE3	1.97	0.47
8:C:247:ALA:CB	8:C:314:MET:HE3	2.44	0.47
2:b:75:ILE:HD12	4:p:133:THR:HG23	1.43	0.47
2:b:91:ASP:HB2	4:p:148:MET:HE3	1.96	0.47
2:b:122:GLU:HB2	4:p:181:ILE:CD1	2.42	0.47
3:d:177:VAL:CG1	3:d:210:LYS:CE	2.93	0.47
5:e:100:GLU:O	5:e:104:ARG:HG3	2.15	0.47
6:g:132:GLY:O	6:g:136:MET:CG	2.57	0.47
7:P:75:LEU:HD21	7:Q:74:LEU:HD21	1.97	0.47
7:T:21:SER:OG	7:G:20:ALA:HA	2.14	0.47
8:E:263:ASP:OD1	8:E:319:ILE:HG22	2.15	0.47
8:E:284:ARG:HH12	8:E:330:TYR:CA	2.27	0.47
8:A:469:LYS:NZ	8:A:492:GLU:C	2.73	0.47
8:C:171:ASP:O	8:C:176:LYS:HE2	2.15	0.47
8:C:227:GLU:CG	8:C:239:ALA:HB2	2.43	0.47
8:C:392:GLU:CG	9:D:429:ARG:HH22	2.26	0.47
9:D:101:PRO:O	9:D:256:MET:HE2	2.14	0.47
1:a:50:LEU:HB3	4:p:100:LEU:HD21	1.96	0.47
2:b:88:VAL:CA	4:p:148:MET:CB	2.75	0.47
3:d:195:ALA:HB1	3:d:207:VAL:HG11	1.97	0.47
5:e:5:LEU:HD22	5:e:22:ILE:HG21	1.96	0.47
5:e:91:GLU:N	5:e:91:GLU:CD	2.72	0.47
6:g:82:GLY:C	6:g:84:PRO:HD2	2.40	0.47
6:g:138:LEU:HD13	6:g:167:TYR:CG	2.49	0.47
7:S:46:GLU:CD	7:T:48:LYS:HB3	2.38	0.47
8:E:461:LEU:HA	8:E:497:GLN:HG2	1.96	0.47
8:A:154:ILE:HD12	8:A:358:ILE:HD13	1.93	0.47
9:B:269:LEU:HD23	9:B:322:THR:HB	1.97	0.47
2:b:94:GLN:O	4:p:155:ILE:CD1	2.62	0.47
5:e:19:VAL:HG22	5:e:52:ARG:O	2.15	0.47
6:g:107:VAL:HG21	6:g:292:LEU:HG	1.97	0.47
6:g:121:MET:HA	6:g:158:ILE:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:251:GLU:CD	6:g:270:MET:SD	2.97	0.47
8:E:56:PHE:CE1	8:E:89:VAL:HB	2.50	0.47
8:E:214:GLN:CG	8:E:219:MET:HG3	2.42	0.47
8:C:53:LEU:HD22	8:C:61:ILE:CG2	2.45	0.47
1:a:28:TRP:CB	1:a:34:GLN:HB2	2.43	0.46
2:b:125:LYS:CB	4:p:185:LEU:HD13	2.44	0.46
2:b:148:ALA:HB2	4:p:211:SER:HA	1.92	0.46
4:p:214:ILE:CG1	4:p:215:VAL:N	2.76	0.46
6:g:360:ALA:CA	9:D:292:MET:HB3	2.44	0.46
7:L:42:GLN:NE2	7:K:43:PRO:CG	2.74	0.46
7:J:57:LEU:O	7:J:61:GLU:N	2.35	0.46
8:E:137:ILE:HG23	8:E:138:MET:HG2	1.97	0.46
8:E:249:TYR:OH	8:E:253:ARG:NH1	2.48	0.46
8:E:437:THR:HG23	8:E:458:LEU:HD13	1.97	0.46
9:F:19:ASN:HB2	9:F:93:ASP:HB3	1.97	0.46
9:B:71:ASN:H	8:C:9:ILE:CG1	2.27	0.46
8:C:27:VAL:CG2	8:C:47:GLU:OE1	2.62	0.46
8:C:424:PRO:HG2	8:C:427:ALA:CB	2.45	0.46
5:e:34:LEU:HB3	5:e:35:PRO:CD	2.45	0.46
8:E:343:ILE:HG22	8:E:358:ILE:HD12	1.98	0.46
8:E:403:LEU:HD13	8:E:407:THR:CG2	2.45	0.46
9:F:265:GLU:HG2	9:F:318:GLU:HB3	1.96	0.46
8:A:393:LEU:HD22	8:A:407:THR:HG23	1.97	0.46
9:B:247:MET:CE	9:B:285:VAL:HG21	2.45	0.46
8:C:284:ARG:HH21	9:D:296:VAL:HG12	1.81	0.46
8:C:379:VAL:HG12	8:C:438:ILE:HG22	1.97	0.46
9:D:143:ASP:OD2	9:D:315:SER:CB	2.61	0.46
1:a:239:ILE:O	1:a:242:SER:OG	2.27	0.46
2:b:122:GLU:CB	4:p:181:ILE:HG23	2.45	0.46
3:d:75:ALA:CB	3:d:160:GLU:CG	2.92	0.46
5:e:43:ALA:HB1	6:g:294:ALA:CB	2.45	0.46
6:g:83:ARG:N	6:g:84:PRO:CD	2.77	0.46
7:P:46:GLU:OE1	7:Q:48:LYS:HD3	2.15	0.46
7:Q:46:GLU:OE1	7:R:48:LYS:CD	2.63	0.46
7:L:48:LYS:HD3	7:K:46:GLU:OE1	2.16	0.46
8:E:393:LEU:HD22	8:E:396:PHE:CD2	2.51	0.46
8:A:109:ILE:CG2	8:A:225:VAL:HG22	2.45	0.46
9:B:50:LYS:HE2	9:B:92:ILE:CD1	2.44	0.46
9:B:280:GLN:O	9:B:284:GLU:HG3	2.14	0.46
8:C:51:GLY:O	8:C:95:ILE:HG23	2.14	0.46
8:C:349:LEU:HD22	8:C:354:ILE:HD12	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:261:ARG:HD3	9:D:321:ILE:CG1	2.46	0.46
5:e:20:LYS:N	5:e:53:LEU:HD13	2.30	0.46
6:g:227:ILE:HG23	6:g:242:ILE:CD1	2.46	0.46
7:H:43:PRO:CB	7:I:48:LYS:HZ2	2.23	0.46
8:E:239:ALA:N	8:E:240:PRO:HD2	2.31	0.46
9:B:174:ALA:O	9:B:354:ARG:NH2	2.48	0.46
9:D:288:LEU:HD23	9:D:288:LEU:HA	1.70	0.46
9:D:398:TYR:CZ	9:D:425:ARG:HD3	2.51	0.46
1:a:121:GLN:CG	2:b:25:ASP:OD1	2.62	0.46
2:b:103:ILE:CG2	4:p:162:MET:CB	2.90	0.46
3:d:74:THR:HB	3:d:154:ARG:HH12	1.80	0.46
3:d:109:GLU:N	3:d:110:PRO:CD	2.76	0.46
3:d:148:ILE:CG1	8:C:20:TYR:CD2	2.98	0.46
3:d:155:ILE:HA	3:d:158:VAL:HG23	1.96	0.46
7:R:57:LEU:O	7:R:61:GLU:N	2.35	0.46
8:E:165:ARG:CD	8:E:299:LEU:HB3	2.45	0.46
8:E:379:VAL:CG1	8:E:438:ILE:HB	2.46	0.46
9:F:376:GLN:O	9:F:380:VAL:HG22	2.15	0.46
8:C:27:VAL:HG12	8:C:46:ASP:HB2	1.97	0.46
8:C:56:PHE:CZ	8:C:76:LEU:HD21	2.51	0.46
8:C:185:LEU:HD23	8:C:218:ALA:HB2	1.97	0.46
9:D:407:ILE:HG22	9:D:408:LEU:CD2	2.45	0.46
1:a:72:PHE:CB	4:p:108:TYR:OH	2.64	0.46
2:b:79:GLU:HB2	4:p:137:VAL:HG12	1.97	0.46
2:b:122:GLU:CB	4:p:181:ILE:CG2	2.93	0.46
2:b:147:GLN:O	2:b:150:GLN:N	2.49	0.46
4:p:214:ILE:HB	4:p:218:VAL:HG13	1.98	0.46
6:g:120:LEU:O	6:g:157:ILE:HA	2.16	0.46
6:g:144:ARG:HA	6:g:144:ARG:HD2	1.40	0.46
6:g:240:CYS:CB	6:g:246:CYS:HG	1.96	0.46
7:S:21:SER:OG	7:T:20:ALA:HA	2.16	0.46
8:E:140:ARG:NH1	8:E:303:ALA:HB3	2.31	0.46
9:F:20:LEU:CD2	9:F:92:ILE:HG12	2.46	0.46
9:B:237:GLY:H	9:B:249:VAL:HG11	1.80	0.46
9:B:292:MET:CE	8:C:276:LEU:HD23	2.46	0.46
9:B:462:LEU:HD23	9:B:462:LEU:HA	1.78	0.46
8:C:82:MET:HE2	8:C:82:MET:N	2.30	0.46
8:C:354:ILE:HG12	8:C:422:LYS:HE2	1.97	0.46
1:a:72:PHE:HB3	4:p:108:TYR:CE2	2.50	0.46
1:a:114:LEU:CG	2:b:37:VAL:C	2.89	0.46
1:a:134:ILE:HG21	1:a:191:PHE:CE2	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:70:LEU:HB2	4:p:127:LEU:O	2.15	0.46
2:b:78:LEU:N	4:p:138:LYS:H	2.14	0.46
2:b:117:THR:HG23	2:b:118:LEU:N	2.31	0.46
2:b:125:LYS:HD2	4:p:185:LEU:HB3	1.97	0.46
2:b:172:ASN:HB3	3:d:235:MET:HB2	1.98	0.46
3:d:177:VAL:HG13	3:d:210:LYS:HE3	1.98	0.46
8:E:469:LYS:CE	8:E:493:ALA:CA	2.92	0.46
9:B:313:ILE:HG22	9:B:313:ILE:O	2.15	0.46
9:B:345:HIS:HE1	8:C:229:ALA:HB1	1.81	0.46
8:C:63:ILE:HD11	8:C:238:LEU:HD11	1.96	0.46
8:C:152:ILE:HG22	8:C:423:GLN:NE2	2.30	0.46
8:C:439:TYR:CD2	8:C:490:LEU:HD21	2.51	0.46
1:a:51:LEU:CD1	4:p:100:LEU:HD13	2.38	0.46
1:a:104:PHE:HD1	4:p:97:PHE:CE1	2.32	0.46
3:d:74:THR:CG2	3:d:154:ARG:HH12	2.29	0.46
4:p:106:LYS:O	4:p:111:PRO:CD	2.64	0.46
5:e:21:GLU:O	5:e:52:ARG:O	2.34	0.46
6:g:103:GLU:CB	7:R:41:ARG:NE	2.74	0.46
6:g:186:PRO:HD3	6:g:312:LEU:CD2	2.46	0.46
6:g:202:PHE:HZ	6:g:232:PRO:HG3	1.79	0.46
7:H:81:VAL:CG2	7:I:80:PHE:CZ	2.99	0.46
7:J:48:LYS:HZ3	7:I:43:PRO:CA	2.27	0.46
7:J:48:LYS:CD	7:I:46:GLU:OE1	2.62	0.46
8:E:29:THR:HG22	8:E:90:LYS:CB	2.45	0.46
8:A:494:ILE:C	8:A:498:MET:HE2	2.40	0.46
8:C:152:ILE:H	8:C:423:GLN:NE2	2.13	0.46
9:D:261:ARG:HD3	9:D:321:ILE:HD11	1.98	0.46
1:a:71:PHE:HE1	2:b:49:LEU:HD13	1.21	0.46
1:a:104:PHE:CG	4:p:97:PHE:CD1	3.00	0.46
4:p:85:ASP:O	4:p:86:PHE:HD1	1.99	0.46
4:p:112:LEU:O	4:p:116:MET:HG2	2.16	0.46
5:e:42:THR:HG22	6:g:285:GLU:CB	2.46	0.46
6:g:360:ALA:O	9:D:292:MET:HG2	2.15	0.46
8:E:385:LEU:HD23	8:E:385:LEU:N	2.31	0.46
9:F:22:ARG:HD2	9:F:88:GLY:O	2.15	0.46
9:F:426:LYS:HG2	9:F:474:PHE:HD2	1.81	0.46
2:b:82:ARG:CG	4:p:140:LEU:CD2	2.78	0.46
2:b:160:LEU:HD22	2:b:163:GLU:CB	2.46	0.46
3:d:119:VAL:HG11	8:E:31:THR:OG1	2.16	0.46
3:d:230:SER:OG	8:A:45:LEU:HA	2.16	0.46
8:E:193:ILE:CD1	8:E:250:PHE:CD1	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:355:ARG:HH12	9:D:389:GLN:NE2	2.11	0.46
8:A:193:ILE:CD1	8:A:250:PHE:CD1	2.99	0.46
9:D:274:ASN:HB3	9:D:277:ARG:HG2	1.97	0.46
2:b:71:ARG:HB2	4:p:127:LEU:O	2.16	0.45
2:b:84:ARG:HD3	4:p:141:GLU:HB3	1.97	0.45
4:p:152:ARG:CG	8:A:503:LEU:HD22	2.45	0.45
6:g:300:LEU:C	6:g:300:LEU:CD2	2.85	0.45
7:K:57:LEU:O	7:K:61:GLU:N	2.35	0.45
8:A:193:ILE:HD13	8:A:250:PHE:CD1	2.51	0.45
9:B:108:GLY:HA2	9:B:222:ILE:HD12	1.98	0.45
8:C:271:TYR:CG	8:C:294:LEU:HD22	2.51	0.45
9:D:261:ARG:HH11	9:D:321:ILE:HD12	1.81	0.45
1:a:114:LEU:N	2:b:37:VAL:HG11	2.28	0.45
2:b:81:ALA:N	4:p:140:LEU:CB	2.44	0.45
2:b:149:LEU:HA	4:p:214:ILE:CD1	2.46	0.45
2:b:176:PHE:CE2	2:b:180:ASN:ND2	2.73	0.45
3:d:72:ASP:H	8:A:70:ASN:ND2	2.14	0.45
5:e:38:ALA:CB	7:L:41:ARG:CG	2.74	0.45
7:R:62:ALA:HA	7:R:65:ILE:CG2	2.47	0.45
9:F:273:ASP:HA	9:F:274:ASN:HA	1.64	0.45
8:A:109:ILE:HG12	8:A:113:ALA:HA	1.95	0.45
8:A:446:LEU:HD21	8:A:457:TYR:CE2	2.51	0.45
9:B:50:LYS:O	9:B:57:GLN:NE2	2.49	0.45
8:C:48:VAL:CG2	8:C:49:MET:N	2.79	0.45
8:C:109:ILE:CD1	8:C:246:LEU:HD11	2.46	0.45
2:b:33:ASN:OD1	2:b:33:ASN:O	2.35	0.45
2:b:78:LEU:C	4:p:136:GLU:HG3	2.39	0.45
2:b:88:VAL:O	2:b:91:ASP:N	2.50	0.45
2:b:107:LYS:NZ	4:p:165:GLU:HG2	2.32	0.45
3:d:136:SER:OG	3:d:138:LEU:HD23	2.15	0.45
4:p:166:THR:HG23	4:p:167:GLN:N	2.30	0.45
4:p:203:LEU:CD2	8:A:7:ASP:O	2.57	0.45
7:P:81:VAL:CG2	7:Q:80:PHE:CZ	2.99	0.45
7:G:43:PRO:HB3	7:H:48:LYS:CD	2.46	0.45
8:E:279:ARG:HA	9:D:292:MET:HE2	1.98	0.45
9:F:336:ASP:O	9:F:339:PRO:HD2	2.17	0.45
9:F:384:HIS:O	9:F:384:HIS:HD2	1.99	0.45
8:A:190:GLN:H	8:A:190:GLN:CD	2.15	0.45
9:B:25:GLN:HB2	9:B:32:ASP:HB2	1.99	0.45
8:C:141:ARG:HD3	8:C:304:LYS:HE3	1.98	0.45
9:D:254:LEU:HD21	9:D:312:ARG:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:24:GLN:O	4:p:84:PHE:HD2	1.99	0.45
1:a:215:PRO:O	1:a:218:PHE:HB2	2.17	0.45
4:p:108:TYR:CE1	4:p:112:LEU:HD13	2.43	0.45
8:E:390:PHE:HE2	8:E:418:ARG:HD2	1.76	0.45
9:F:260:PHE:HD1	9:F:264:ASN:HD22	1.63	0.45
8:A:30:GLY:O	8:A:89:VAL:N	2.39	0.45
8:A:180:ALA:HB2	8:A:319:ILE:HD11	1.97	0.45
8:C:393:LEU:HD12	8:C:411:LEU:HD21	1.98	0.45
2:b:160:LEU:CD1	2:b:164:LEU:HB3	2.42	0.45
3:d:114:PHE:CE1	3:d:120:ILE:HG21	2.52	0.45
4:p:209:ALA:C	8:A:14:ARG:NH2	2.75	0.45
5:e:24:LEU:HD12	5:e:24:LEU:C	2.41	0.45
6:g:148:LEU:N	6:g:148:LEU:HD23	2.31	0.45
7:S:62:ALA:HA	7:S:65:ILE:CG2	2.47	0.45
7:P:62:ALA:HA	7:P:65:ILE:CG2	2.47	0.45
7:T:62:ALA:HA	7:T:65:ILE:CG2	2.47	0.45
7:G:75:LEU:HD21	7:H:74:LEU:HD21	1.99	0.45
7:L:74:LEU:HD21	7:K:10:VAL:CG2	2.44	0.45
8:E:32:VAL:HG22	8:E:56:PHE:CE1	2.51	0.45
8:A:42:ILE:HD12	8:A:74:VAL:HG21	1.97	0.45
8:A:149:THR:C	8:A:186:ASN:HD22	2.24	0.45
8:A:176:LYS:HD2	8:A:319:ILE:HG23	1.99	0.45
8:C:57:GLU:OE1	8:C:87:SER:HB2	2.16	0.45
2:b:85:LEU:HD12	2:b:86:LYS:CA	2.47	0.45
2:b:85:LEU:N	4:p:140:LEU:O	2.33	0.45
2:b:88:VAL:CG2	4:p:148:MET:CB	2.94	0.45
2:b:131:PHE:CZ	8:A:119:ARG:HA	2.51	0.45
2:b:132:GLU:CG	4:p:189:LEU:HD22	2.25	0.45
2:b:147:GLN:OE1	4:p:207:ILE:HG21	2.11	0.45
2:b:160:LEU:CB	2:b:163:GLU:HB2	2.44	0.45
2:b:173:ILE:HG13	3:d:221:PHE:CZ	2.50	0.45
4:p:193:GLU:HG3	4:p:196:LYS:HE3	1.83	0.45
6:g:227:ILE:HG21	6:g:242:ILE:CD1	2.47	0.45
7:S:43:PRO:HB3	7:T:48:LYS:CE	2.46	0.45
7:G:62:ALA:HA	7:G:65:ILE:CG2	2.47	0.45
7:G:68:LEU:HD22	7:H:66:TYR:CG	2.51	0.45
7:J:80:PHE:CD2	7:I:6:ALA:HB1	2.46	0.45
8:E:322:THR:HG22	8:E:332:PRO:HG2	1.99	0.45
8:E:360:VAL:O	8:E:360:VAL:HG22	2.17	0.45
8:A:156:ALA:O	8:A:372:GLN:NE2	2.49	0.45
8:C:169:ILE:HD11	8:C:322:THR:HG23	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:161:PHE:CE1	1:a:163:LYS:N	2.81	0.45
1:a:164:TYR:CE2	1:a:166:GLN:HA	2.52	0.45
1:a:195:LEU:CD1	4:p:84:PHE:CZ	3.00	0.45
2:b:92:ALA:N	4:p:148:MET:HA	2.30	0.45
2:b:118:LEU:O	2:b:121:PHE:HB3	2.16	0.45
2:b:121:PHE:CE2	2:b:125:LYS:HE2	2.51	0.45
3:d:186:LEU:CD1	3:d:191:LEU:CG	2.64	0.45
3:d:187:GLU:HB2	3:d:190:HIS:CE1	2.52	0.45
6:g:158:ILE:CD1	6:g:198:VAL:HG22	2.47	0.45
7:I:62:ALA:HA	7:I:65:ILE:CG2	2.47	0.45
8:E:146:PRO:HB2	8:E:148:GLN:HE21	1.81	0.45
8:E:302:ALA:HB1	8:E:314:MET:O	2.17	0.45
8:A:416:ARG:NE	8:A:447:ASP:HA	2.32	0.45
8:A:420:LEU:HD23	8:A:458:LEU:HD11	1.97	0.45
9:B:173:GLY:O	9:B:178:LYS:NZ	2.50	0.45
9:B:427:ILE:HD11	9:B:462:LEU:HD21	1.99	0.45
8:C:68:GLU:O	9:D:87:ARG:NH1	2.49	0.45
1:a:172:LEU:HD11	1:a:176:ILE:HD11	1.98	0.45
2:b:128:THR:HB	4:p:185:LEU:HD11	1.98	0.45
2:b:142:GLN:OE1	3:d:248:LEU:CG	2.61	0.45
7:T:33:GLY:CA	7:G:31:ALA:HA	2.47	0.45
8:E:128:ARG:HH22	8:E:252:TYR:HE2	1.65	0.45
9:F:384:HIS:O	9:F:384:HIS:CD2	2.70	0.45
9:F:405:ILE:HD13	9:F:410:LEU:HD21	1.97	0.45
8:C:99:PRO:O	8:C:104:TYR:OH	2.31	0.45
1:a:50:LEU:CB	4:p:100:LEU:HD21	2.47	0.45
2:b:110:LEU:HD22	4:p:167:GLN:HG2	1.25	0.45
3:d:71:VAL:HA	8:A:69:SER:C	2.42	0.45
4:p:192:LEU:CD1	8:A:3:THR:CG2	2.72	0.45
4:p:203:LEU:CD2	8:A:6:ALA:O	2.51	0.45
6:g:231:LEU:HD23	6:g:233:LEU:CD1	2.47	0.45
6:g:255:PHE:O	6:g:255:PHE:CD1	2.70	0.45
7:L:48:LYS:HB3	7:K:46:GLU:CD	2.40	0.45
7:J:80:PHE:CZ	7:I:81:VAL:HG22	2.52	0.45
9:D:170:LEU:HB2	9:D:326:ALA:HA	1.99	0.45
1:a:72:PHE:HB3	4:p:108:TYR:HE2	1.82	0.45
1:a:124:HIS:CD2	4:p:79:GLU:CD	2.95	0.45
7:K:62:ALA:HA	7:K:65:ILE:CG2	2.47	0.45
7:J:37:GLU:OE2	7:J:41:ARG:NH2	2.50	0.45
8:E:147:LEU:CD2	8:E:258:LEU:HD13	2.47	0.45
9:F:53:ASP:OD2	9:F:57:GLN:NE2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:C:449:LEU:C	8:C:449:LEU:HD12	2.42	0.45
8:C:457:TYR:CD1	8:C:457:TYR:O	2.70	0.45
9:D:346:LEU:HD12	9:D:349:THR:HG22	1.98	0.45
1:a:39:VAL:CB	1:a:133:ASP:OD2	2.65	0.44
1:a:65:PRO:O	2:b:57:LYS:NZ	2.38	0.44
2:b:88:VAL:O	4:p:148:MET:CA	2.60	0.44
3:d:169:PHE:O	3:d:169:PHE:CD1	2.70	0.44
3:d:233:VAL:HG11	8:A:26:VAL:CA	2.40	0.44
4:p:152:ARG:CZ	8:A:502:LEU:HB3	2.47	0.44
7:N:53:LEU:CD2	7:O:52:THR:HG23	2.47	0.44
7:O:62:ALA:HA	7:O:65:ILE:CG2	2.47	0.44
7:P:40:ALA:CB	7:Q:49:ILE:HD11	2.37	0.44
7:M:80:PHE:CD2	7:L:6:ALA:HB1	2.43	0.44
7:G:6:ALA:HB1	7:H:80:PHE:CD2	2.42	0.44
7:L:62:ALA:HA	7:L:65:ILE:CG2	2.47	0.44
8:A:247:ALA:CB	8:A:314:MET:SD	3.05	0.44
8:A:471:GLU:CB	8:A:489:LEU:HD11	2.46	0.44
9:B:134:ARG:HE	9:B:258:GLU:CD	2.22	0.44
8:C:109:ILE:HD11	8:C:225:VAL:HG22	1.99	0.44
8:C:390:PHE:CD1	8:C:390:PHE:O	2.70	0.44
9:D:18:LYS:O	9:D:18:LYS:HG2	2.17	0.44
1:a:65:PRO:CG	1:a:70:ASN:ND2	2.64	0.44
1:a:133:ASP:C	1:a:191:PHE:CE1	2.89	0.44
2:b:70:LEU:O	2:b:74:ALA:CB	2.64	0.44
2:b:172:ASN:CB	3:d:235:MET:HB2	2.47	0.44
3:d:148:ILE:CD1	8:C:17:ILE:CB	2.95	0.44
4:p:128:SER:O	4:p:132:ASP:N	2.40	0.44
6:g:103:GLU:CG	7:R:41:ARG:HG3	2.48	0.44
6:g:213:LEU:HD12	6:g:213:LEU:C	2.43	0.44
7:M:51:GLY:C	7:L:50:ARG:NH2	2.76	0.44
8:E:181:THR:HG23	8:E:213:PHE:HE1	1.82	0.44
9:F:183:MET:HB3	9:F:437:VAL:HG11	1.98	0.44
9:B:274:ASN:HB3	9:B:277:ARG:HG2	1.99	0.44
8:C:227:GLU:OE1	8:C:227:GLU:HA	2.16	0.44
9:D:477:VAL:HG21	9:D:483:ALA:HB2	1.98	0.44
3:d:133:ILE:HD13	3:d:143:ALA:HB1	1.98	0.44
3:d:235:MET:CG	8:A:24:VAL:CG1	2.95	0.44
6:g:123:VAL:CG2	6:g:308:LEU:HD21	2.48	0.44
7:S:12:ALA:HB2	7:R:11:ILE:HA	2.00	0.44
7:M:80:PHE:CZ	7:L:81:VAL:HG22	2.51	0.44
8:E:82:MET:CE	8:E:82:MET:CA	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:106:GLY:CA	8:E:219:MET:HE3	2.41	0.44
8:E:271:TYR:CD1	8:E:294:LEU:CD1	3.01	0.44
8:E:302:ALA:HB2	8:E:314:MET:HG2	1.97	0.44
9:F:23:ILE:HG21	9:F:26:ILE:CD1	2.47	0.44
8:A:105:LEU:CD2	8:A:193:ILE:HG23	2.45	0.44
8:A:435:VAL:CG1	8:A:436:MET:N	2.80	0.44
9:B:279:VAL:HG13	9:B:302:LEU:CD1	2.48	0.44
9:B:299:GLN:O	9:B:299:GLN:HG2	2.16	0.44
9:B:311:GLU:HB2	8:C:230:ASP:HB3	1.97	0.44
1:a:144:THR:HG21	1:a:186:LEU:CD2	2.46	0.44
6:g:275:THR:O	6:g:275:THR:OG1	2.34	0.44
7:N:62:ALA:HA	7:N:65:ILE:CG2	2.47	0.44
7:J:70:VAL:HG13	7:I:75:LEU:HD11	2.00	0.44
7:J:74:LEU:CD2	7:I:10:VAL:HG22	2.37	0.44
7:J:74:LEU:HD22	7:I:10:VAL:HG21	1.92	0.44
8:A:390:PHE:CD2	8:A:418:ARG:NH2	2.80	0.44
9:B:29:PRO:HD2	9:B:288:LEU:CD1	2.47	0.44
9:D:237:GLY:HA3	9:D:249:VAL:HG21	1.98	0.44
1:a:134:ILE:C	1:a:134:ILE:CD1	2.85	0.44
2:b:78:LEU:N	4:p:138:LYS:N	2.63	0.44
3:d:102:LEU:HD22	3:d:146:ILE:HD11	2.00	0.44
3:d:157:LEU:HD12	3:d:161:ILE:CD1	2.48	0.44
6:g:281:ILE:N	7:N:41:ARG:HH21	2.14	0.44
7:S:43:PRO:HB3	7:T:48:LYS:HZ3	1.65	0.44
7:N:75:LEU:HD11	7:O:70:VAL:HG13	1.98	0.44
7:Q:62:ALA:HA	7:Q:65:ILE:CG2	2.47	0.44
7:T:53:LEU:CD2	7:G:52:THR:HG23	2.48	0.44
7:H:62:ALA:HA	7:H:65:ILE:CG2	2.47	0.44
7:K:48:LYS:HD3	7:J:46:GLU:OE1	2.17	0.44
9:F:310:GLN:HE21	9:F:345:HIS:HB3	1.82	0.44
8:A:77:MET:HB3	8:A:112:LEU:HD21	2.00	0.44
8:C:106:GLY:HA2	8:C:219:MET:HG3	1.98	0.44
8:C:322:THR:HG22	8:C:332:PRO:CG	2.47	0.44
9:D:180:VAL:HG23	12:D:600:ADP:O1A	2.18	0.44
9:D:380:VAL:HB	9:D:384:HIS:HD1	1.82	0.44
1:a:168:THR:CG2	1:a:170:ILE:HG12	2.47	0.44
3:d:165:PHE:CE1	3:d:169:PHE:HB2	2.53	0.44
6:g:85:PHE:CD1	6:g:85:PHE:O	2.71	0.44
6:g:122:VAL:HG23	6:g:157:ILE:HG23	1.98	0.44
7:M:52:THR:CG2	7:L:53:LEU:CD2	2.95	0.44
7:G:57:LEU:O	7:G:61:GLU:N	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:95:ILE:O	8:E:95:ILE:HG13	2.17	0.44
8:E:299:LEU:HD23	8:E:299:LEU:HA	1.77	0.44
9:F:425:ARG:HG2	9:F:425:ARG:NH1	2.32	0.44
8:C:25:LYS:HB3	8:C:27:VAL:HG13	1.98	0.44
8:C:322:THR:HG22	8:C:332:PRO:HG2	1.99	0.44
9:D:118:VAL:O	9:D:118:VAL:CG1	2.66	0.44
9:D:426:LYS:NZ	9:D:467:ASP:HA	2.32	0.44
1:a:161:PHE:CD1	1:a:162:GLY:N	2.85	0.44
2:b:144:VAL:CG2	8:A:9:ILE:HG22	2.27	0.44
3:d:157:LEU:CD1	3:d:161:ILE:HD11	2.48	0.44
5:e:22:ILE:CG2	5:e:51:ILE:CD1	2.95	0.44
7:L:31:ALA:HA	7:K:33:GLY:CA	2.45	0.44
7:J:42:GLN:NE2	7:I:43:PRO:CG	2.73	0.44
8:A:390:PHE:CE1	8:A:414:GLY:HA3	2.51	0.44
1:a:34:GLN:O	4:p:87:ASN:HB3	2.14	0.44
1:a:114:LEU:CD1	2:b:37:VAL:O	2.44	0.44
1:a:135:ASN:ND2	4:p:86:PHE:HD1	2.02	0.44
2:b:61:LEU:CD1	2:b:61:LEU:C	2.86	0.44
2:b:82:ARG:O	2:b:85:LEU:CD1	2.62	0.44
2:b:122:GLU:OE1	4:p:181:ILE:CD1	2.65	0.44
2:b:176:PHE:CD1	3:d:233:VAL:CB	3.00	0.44
7:S:9:SER:CB	7:R:10:VAL:HG21	2.48	0.44
7:S:64:THR:CG2	7:T:63:LEU:HD22	2.44	0.44
7:T:43:PRO:HB3	7:G:48:LYS:CE	2.48	0.44
8:E:169:ILE:HG23	8:E:344:PHE:HA	1.98	0.44
8:E:457:TYR:O	8:E:457:TYR:CD1	2.71	0.44
8:A:247:ALA:HB3	8:A:314:MET:SD	2.57	0.44
2:b:60:ILE:C	2:b:63:THR:HG22	2.40	0.44
2:b:64:ILE:HD12	4:p:123:ILE:HG13	1.89	0.44
3:d:199:GLN:CD	3:d:207:VAL:HG12	2.39	0.44
3:d:224:ARG:NH2	3:d:229:GLY:O	2.50	0.44
5:e:52:ARG:HA	5:e:57:TRP:HB3	2.00	0.44
6:g:109:LEU:HA	6:g:109:LEU:HD23	1.75	0.44
6:g:253:GLU:HB3	6:g:270:MET:CA	2.48	0.44
7:O:62:ALA:O	7:O:63:LEU:C	2.61	0.44
7:H:62:ALA:O	7:H:63:LEU:C	2.61	0.44
7:J:62:ALA:O	7:J:63:LEU:C	2.61	0.44
8:E:117:ASP:OD2	8:E:119:ARG:HD3	2.17	0.44
8:E:157:MET:HA	8:E:384:LYS:HE2	2.00	0.44
9:F:178:LYS:O	9:F:182:ILE:HG13	2.18	0.44
8:A:424:PRO:HG2	8:A:427:ALA:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:A:450:GLU:HB2	8:A:453:GLN:CG	2.48	0.44
9:B:475:TYR:O	9:B:486:LYS:NZ	2.49	0.44
8:C:96:ALA:HB1	8:C:130:ILE:HD12	2.00	0.44
2:b:70:LEU:CG	4:p:127:LEU:HD21	2.36	0.43
2:b:95:PHE:HZ	4:p:156:SER:CB	2.30	0.43
2:b:142:GLN:NE2	3:d:248:LEU:CD2	2.58	0.43
2:b:160:LEU:HD22	2:b:163:GLU:HB3	1.98	0.43
4:p:107:ILE:O	4:p:111:PRO:CG	2.64	0.43
4:p:166:THR:O	4:p:170:VAL:HB	2.18	0.43
5:e:90:GLN:C	5:e:90:GLN:CD	2.85	0.43
7:J:62:ALA:HA	7:J:65:ILE:CG2	2.47	0.43
7:I:5:ILE:HG22	7:I:81:VAL:HG13	2.00	0.43
8:A:424:PRO:HB3	8:A:455:ARG:HH12	1.83	0.43
8:A:494:ILE:O	8:A:498:MET:CG	2.63	0.43
1:a:26:PHE:C	4:p:85:ASP:OD2	2.61	0.43
1:a:62:GLN:C	4:p:115:PHE:HE2	2.26	0.43
1:a:117:TRP:HA	2:b:31:LEU:HB3	1.99	0.43
2:b:75:ILE:HG12	4:p:132:ASP:C	2.38	0.43
2:b:84:ARG:HB2	4:p:141:GLU:HA	1.87	0.43
2:b:88:VAL:C	2:b:90:MET:H	2.24	0.43
2:b:100:TYR:C	2:b:103:ILE:HG22	2.41	0.43
2:b:176:PHE:CE1	3:d:233:VAL:HG11	2.52	0.43
3:d:102:LEU:CD2	3:d:146:ILE:HD11	2.48	0.43
5:e:119:LEU:HD12	5:e:123:ARG:NH2	2.29	0.43
6:g:121:MET:HB3	6:g:158:ILE:HB	2.00	0.43
6:g:259:THR:CG2	9:F:404:ILE:HG21	2.48	0.43
7:S:48:LYS:HB3	7:R:46:GLU:CD	2.42	0.43
7:S:64:THR:HG21	7:T:63:LEU:HD23	1.96	0.43
7:K:48:LYS:CD	7:J:46:GLU:OE1	2.66	0.43
7:K:62:ALA:O	7:K:63:LEU:C	2.61	0.43
8:E:376:MET:CE	8:E:438:ILE:HD12	2.48	0.43
9:B:50:LYS:CE	9:B:92:ILE:CD1	2.96	0.43
9:B:148:ILE:HG12	9:B:149:PHE:H	1.82	0.43
9:B:170:LEU:HD23	9:B:350:THR:HB	1.99	0.43
9:B:275:ILE:CG1	9:B:327:VAL:HG22	2.48	0.43
9:B:336:ASP:HB3	9:B:339:PRO:CD	2.43	0.43
9:B:464:GLY:C	9:B:466:LEU:N	2.75	0.43
9:B:473:ALA:HB1	9:B:487:ALA:HB2	1.99	0.43
8:C:184:ILE:HD11	8:C:260:ILE:CG1	2.46	0.43
9:D:79:MET:HE3	9:D:113:VAL:HG11	1.99	0.43
3:d:101:LYS:HE2	3:d:101:LYS:HB2	1.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:188:ASN:N	3:d:188:ASN:ND2	2.66	0.43
3:d:222:THR:HB	3:d:234:ASP:HB3	2.01	0.43
4:p:107:ILE:O	4:p:111:PRO:HD2	2.18	0.43
4:p:127:LEU:C	4:p:127:LEU:HD23	2.44	0.43
5:e:38:ALA:HA	7:M:42:GLN:NE2	2.33	0.43
7:Q:62:ALA:O	7:Q:63:LEU:C	2.61	0.43
7:M:62:ALA:HA	7:M:65:ILE:CG2	2.47	0.43
7:T:62:ALA:O	7:T:63:LEU:C	2.61	0.43
7:I:62:ALA:O	7:I:63:LEU:C	2.61	0.43
9:F:330:PRO:CD	9:F:339:PRO:HG3	2.48	0.43
9:D:423:ARG:HH21	9:D:464:GLY:CA	2.29	0.43
1:a:116:PRO:HA	2:b:34:LEU:N	2.32	0.43
2:b:160:LEU:HD12	2:b:160:LEU:C	2.34	0.43
4:p:214:ILE:HB	4:p:218:VAL:CG1	2.49	0.43
6:g:104:ASP:HB2	7:S:41:ARG:CZ	2.47	0.43
6:g:279:SER:HA	6:g:280:PRO:HD3	1.86	0.43
7:N:20:ALA:HA	7:M:21:SER:OG	2.18	0.43
8:E:140:ARG:NE	9:F:206:THR:HG21	2.32	0.43
9:F:353:SER:HB3	9:F:356:LEU:HD13	2.00	0.43
8:A:379:VAL:HG12	8:A:438:ILE:HG22	2.00	0.43
8:A:413:ARG:CZ	8:A:444:GLY:N	2.82	0.43
9:B:48:ILE:CG2	9:B:59:MET:HE2	2.45	0.43
9:B:217:LYS:HA	9:B:222:ILE:O	2.17	0.43
8:C:392:GLU:OE2	9:D:429:ARG:CZ	2.66	0.43
8:C:424:PRO:HG2	8:C:427:ALA:HB3	2.00	0.43
1:a:35:ILE:HG21	4:p:88:LEU:CA	2.42	0.43
2:b:82:ARG:CA	2:b:85:LEU:HG	2.46	0.43
5:e:10:PRO:HD3	6:g:85:PHE:CE2	2.53	0.43
6:g:130:CYS:HA	6:g:319:ARG:HA	2.01	0.43
6:g:186:PRO:HD3	6:g:312:LEU:HD22	2.00	0.43
6:g:360:ALA:CA	9:D:293:PRO:HD3	2.37	0.43
7:S:3:PRO:HD2	7:S:5:ILE:CD1	2.49	0.43
7:S:10:VAL:HG22	7:T:74:LEU:HD22	1.98	0.43
7:N:3:PRO:HD2	7:N:5:ILE:CD1	2.49	0.43
7:N:33:GLY:CA	7:O:31:ALA:HA	2.49	0.43
7:M:3:PRO:HD2	7:M:5:ILE:CD1	2.49	0.43
7:M:74:LEU:HD22	7:L:10:VAL:HG21	1.92	0.43
7:H:3:PRO:HD2	7:H:5:ILE:CD1	2.49	0.43
7:J:9:SER:CB	7:I:10:VAL:HG21	2.49	0.43
8:E:180:ALA:HB1	8:E:260:ILE:HG21	1.99	0.43
8:E:393:LEU:HD22	8:E:396:PHE:CE2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:425:ARG:HG2	9:F:425:ARG:HH11	1.82	0.43
8:A:227:GLU:HG3	8:A:239:ALA:HB2	2.01	0.43
8:A:379:VAL:HG12	8:A:438:ILE:HG21	1.99	0.43
9:B:345:HIS:HE1	8:C:229:ALA:CB	2.31	0.43
9:D:387:ILE:HD11	9:D:455:ILE:HG12	2.00	0.43
9:D:401:LEU:O	9:D:404:ILE:HG12	2.19	0.43
1:a:193:ASN:ND2	1:a:227:GLN:CD	2.74	0.43
2:b:77:GLN:HG2	4:p:138:LYS:CA	2.48	0.43
3:d:183:VAL:CG2	3:d:214:ASP:O	2.63	0.43
3:d:241:LEU:HA	3:d:241:LEU:HD23	1.77	0.43
4:p:193:GLU:CG	4:p:196:LYS:CE	2.58	0.43
7:O:53:LEU:CD2	7:P:52:THR:CG2	2.97	0.43
7:J:3:PRO:HD2	7:J:5:ILE:CD1	2.49	0.43
8:A:154:ILE:CD1	8:A:358:ILE:HD13	2.48	0.43
8:A:183:THR:O	8:A:187:GLN:HG2	2.18	0.43
8:C:237:TYR:CZ	8:C:294:LEU:HD11	2.53	0.43
1:a:42:THR:HG23	1:a:117:TRP:HZ3	1.83	0.43
1:a:113:ALA:C	2:b:34:LEU:CD1	2.83	0.43
1:a:119:ILE:HG12	2:b:28:ALA:CA	2.42	0.43
1:a:165:ILE:HG21	1:a:169:PRO:O	2.18	0.43
2:b:48:VAL:HG22	2:b:52:LEU:HD13	2.00	0.43
2:b:75:ILE:CD1	4:p:132:ASP:OD2	2.63	0.43
2:b:131:PHE:CE1	8:A:119:ARG:HA	2.54	0.43
2:b:175:MET:O	2:b:179:MET:HG2	2.19	0.43
7:S:55:LEU:HD21	7:R:54:LEU:HD11	1.99	0.43
7:S:81:VAL:CG2	7:T:80:PHE:CZ	3.01	0.43
7:P:3:PRO:HD2	7:P:5:ILE:CD1	2.49	0.43
7:T:3:PRO:HD2	7:T:5:ILE:CD1	2.49	0.43
7:G:3:PRO:HD2	7:G:5:ILE:CD1	2.49	0.43
7:G:75:LEU:HD11	7:H:70:VAL:HG13	2.00	0.43
8:A:148:GLN:HG3	8:A:431:VAL:CG2	2.48	0.43
8:A:469:LYS:HZ3	8:A:493:ALA:N	2.16	0.43
8:C:82:MET:HE2	8:C:82:MET:CA	2.48	0.43
1:a:208:VAL:CG2	1:a:209:PRO:HD3	2.38	0.43
2:b:179:MET:HG3	8:A:24:VAL:HG23	2.01	0.43
3:d:117:ASN:HA	3:d:118:PRO:HD3	1.65	0.43
3:d:198:VAL:C	3:d:201:ILE:HG12	2.44	0.43
3:d:233:VAL:O	3:d:233:VAL:HG23	2.18	0.43
3:d:247:GLN:HA	8:A:16:ARG:CG	2.19	0.43
4:p:179:LYS:HD3	4:p:183:VAL:HG23	1.99	0.43
6:g:53:SER:HB3	9:D:403:ASP:CG	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:253:GLU:CA	6:g:270:MET:HA	2.49	0.43
7:S:80:PHE:CZ	7:R:81:VAL:CG2	3.01	0.43
7:N:10:VAL:HG21	7:O:74:LEU:HD22	1.93	0.43
7:R:62:ALA:O	7:R:63:LEU:C	2.61	0.43
7:M:62:ALA:O	7:M:63:LEU:C	2.61	0.43
7:M:66:TYR:CD1	7:L:68:LEU:HD22	2.54	0.43
7:L:57:LEU:HD23	7:L:60:MET:HE3	2.01	0.43
8:E:237:TYR:CD2	8:E:274:MET:HE1	2.54	0.43
8:E:387:LEU:HD23	8:E:387:LEU:HA	1.65	0.43
8:E:490:LEU:HD23	8:E:494:ILE:HG13	2.01	0.43
8:C:48:VAL:CG2	8:C:52:GLU:HB3	2.49	0.43
8:C:439:TYR:HB3	8:C:490:LEU:HD21	2.00	0.43
9:D:267:ASP:OD1	9:D:267:ASP:N	2.47	0.43
1:a:30:ILE:HG23	1:a:32:GLY:H	1.83	0.43
4:p:100:LEU:O	4:p:104:LEU:HB3	2.18	0.43
4:p:112:LEU:HD23	4:p:112:LEU:HA	1.87	0.43
4:p:192:LEU:CD2	8:A:3:THR:HG23	2.47	0.43
4:p:210:LEU:HD13	8:A:13:ILE:HB	1.87	0.43
4:p:214:ILE:HB	8:A:17:ILE:HD12	1.94	0.43
6:g:118:VAL:HG12	6:g:148:LEU:HD13	2.00	0.43
7:P:62:ALA:O	7:P:63:LEU:C	2.61	0.43
7:R:3:PRO:HD2	7:R:5:ILE:CD1	2.49	0.43
7:T:57:LEU:HD23	7:T:60:MET:HE3	2.01	0.43
7:G:43:PRO:CA	7:H:48:LYS:HZ3	2.32	0.43
7:K:3:PRO:HD2	7:K:5:ILE:CD1	2.49	0.43
7:J:57:LEU:HD23	7:J:60:MET:HE3	2.01	0.43
9:F:269:LEU:HD13	9:F:271:PHE:CZ	2.54	0.43
9:B:386:GLU:O	9:B:390:ARG:HG3	2.19	0.43
8:C:151:LEU:HD12	8:C:154:ILE:HD13	2.00	0.43
8:C:237:TYR:HE1	8:C:271:TYR:CG	2.34	0.43
9:D:408:LEU:HB3	9:D:412:GLU:HG3	1.99	0.43
1:a:116:PRO:HG2	2:b:31:LEU:HB2	2.01	0.43
5:e:110:ARG:CD	6:g:206:GLU:OE2	2.67	0.43
6:g:265:THR:OG1	6:g:266:VAL:N	2.52	0.43
7:P:46:GLU:OE1	7:Q:48:LYS:CD	2.66	0.43
7:R:57:LEU:HD23	7:R:60:MET:HE3	2.01	0.43
8:E:261:TYR:CZ	8:E:298:LEU:HD11	2.54	0.43
9:F:178:LYS:HZ2	9:F:182:ILE:HD11	1.84	0.43
9:F:474:PHE:CD1	9:F:483:ALA:HB1	2.54	0.43
8:C:249:TYR:CD1	8:C:249:TYR:C	2.96	0.43
9:D:108:GLY:N	9:D:232:VAL:O	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:126:GLU:O	1:a:126:GLU:HG2	2.19	0.42
1:a:172:LEU:N	1:a:173:PRO:CD	2.82	0.42
2:b:96:ARG:HA	4:p:155:ILE:H	1.80	0.42
2:b:117:THR:HG21	4:p:174:LEU:HD11	1.89	0.42
2:b:125:LYS:CB	4:p:185:LEU:CB	2.81	0.42
3:d:78:TYR:HE1	8:C:8:GLU:OE1	2.02	0.42
3:d:129:LEU:HD22	3:d:150:ILE:CD1	2.48	0.42
4:p:159:LEU:HD12	4:p:160:ASN:CA	2.47	0.42
5:e:22:ILE:HG13	5:e:33:VAL:HG21	1.70	0.42
7:N:6:ALA:HB1	7:O:80:PHE:CD2	2.43	0.42
7:O:81:VAL:HG21	7:P:80:PHE:CZ	2.53	0.42
7:Q:3:PRO:HD2	7:Q:5:ILE:CD1	2.49	0.42
7:M:55:LEU:HD21	7:L:54:LEU:CG	2.47	0.42
7:L:20:ALA:HA	7:K:21:SER:OG	2.18	0.42
7:L:63:LEU:HD21	7:K:61:GLU:OE1	2.19	0.42
8:A:359:ASN:O	8:A:363:SER:OG	2.32	0.42
9:B:202:VAL:N	9:B:273:ASP:O	2.45	0.42
9:B:296:VAL:CG1	9:B:297:GLY:N	2.80	0.42
9:D:186:ILE:O	9:D:190:ALA:CB	2.67	0.42
1:a:27:TYR:OH	1:a:122:LEU:HD11	2.18	0.42
1:a:196:ALA:HB1	7:Q:65:ILE:HD11	2.01	0.42
3:d:148:ILE:HA	8:C:20:TYR:CE2	2.54	0.42
5:e:43:ALA:O	6:g:286:GLN:NE2	2.52	0.42
7:S:49:ILE:HD11	7:R:40:ALA:CB	2.39	0.42
7:T:46:GLU:OE1	7:G:48:LYS:HD3	2.19	0.42
7:H:81:VAL:CG2	7:I:80:PHE:CE2	3.01	0.42
8:A:196:TYR:HD2	8:A:224:VAL:HG13	1.84	0.42
8:A:379:VAL:HG21	8:A:435:VAL:HG23	2.00	0.42
9:B:261:ARG:O	9:B:265:GLU:HA	2.19	0.42
1:a:79:ILE:CD1	1:a:99:GLY:HA3	2.41	0.42
2:b:89:GLU:O	2:b:93:ASP:CG	2.62	0.42
3:d:119:VAL:HG11	8:E:43:HIS:HD2	1.85	0.42
7:N:48:LYS:HZ3	7:M:43:PRO:HB3	1.68	0.42
7:N:49:ILE:HD11	7:M:40:ALA:CB	2.44	0.42
7:N:66:TYR:CG	7:M:68:LEU:HD22	2.53	0.42
7:O:3:PRO:HD2	7:O:5:ILE:CD1	2.49	0.42
7:K:20:ALA:HA	7:J:21:SER:OG	2.19	0.42
7:K:48:LYS:CE	7:J:43:PRO:HB3	2.49	0.42
9:F:178:LYS:HZ3	9:F:182:ILE:HD11	1.81	0.42
9:F:186:ILE:HG21	9:F:221:VAL:HG11	2.01	0.42
8:A:107:ARG:NH2	8:A:117:ASP:OD1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:64:GLU:O	9:D:76:ALA:HA	2.19	0.42
9:D:261:ARG:NH1	9:D:321:ILE:HD12	2.34	0.42
2:b:92:ALA:CB	4:p:148:MET:O	2.67	0.42
2:b:107:LYS:CD	4:p:166:THR:N	2.81	0.42
2:b:133:GLN:O	2:b:137:ILE:CG1	2.66	0.42
5:e:8:LEU:HD12	6:g:85:PHE:HD2	1.84	0.42
6:g:83:ARG:HH21	6:g:273:THR:HG22	1.83	0.42
7:N:39:ILE:CG1	7:N:49:ILE:HG21	2.50	0.42
7:T:46:GLU:OE1	7:G:48:LYS:CD	2.67	0.42
7:T:53:LEU:CD2	7:G:52:THR:CG2	2.97	0.42
8:E:374:LYS:HB2	8:E:480:LYS:O	2.18	0.42
9:D:463:SER:OG	9:D:465:GLU:HG3	2.20	0.42
1:a:72:PHE:CD2	4:p:108:TYR:CE2	3.07	0.42
1:a:134:ILE:HD12	1:a:135:ASN:HA	2.01	0.42
2:b:67:SER:CB	4:p:124:LYS:HA	2.47	0.42
2:b:82:ARG:C	4:p:140:LEU:HD22	2.44	0.42
2:b:103:ILE:HD12	4:p:158:ALA:C	2.44	0.42
2:b:155:THR:O	2:b:159:CYS:SG	2.75	0.42
2:b:165:HIS:CB	3:d:219:ALA:HB1	2.44	0.42
3:d:114:PHE:CE1	8:E:20:TYR:CD2	3.07	0.42
5:e:50:ARG:HG2	5:e:59:THR:CG2	2.41	0.42
6:g:131:GLY:HA2	9:B:411:ASP:OD2	2.19	0.42
7:O:75:LEU:HD11	7:P:70:VAL:HG13	2.01	0.42
7:Q:39:ILE:CG1	7:Q:49:ILE:HG21	2.49	0.42
7:G:33:GLY:CA	7:H:31:ALA:HA	2.47	0.42
7:L:3:PRO:HD2	7:L:5:ILE:CD1	2.49	0.42
8:A:164:GLN:CD	8:A:367:VAL:CG2	2.92	0.42
8:A:241:TYR:OH	8:A:294:LEU:O	2.38	0.42
8:A:379:VAL:HG21	8:A:435:VAL:CG2	2.49	0.42
9:B:251:LEU:HD21	9:B:309:LEU:HD13	1.93	0.42
9:B:385:TYR:OH	9:B:389:GLN:NE2	2.52	0.42
8:C:106:GLY:HA2	8:C:219:MET:O	2.20	0.42
9:D:191:LYS:NZ	9:D:219:SER:CB	2.75	0.42
1:a:24:GLN:CA	4:p:83:LEU:HD12	2.45	0.42
1:a:166:GLN:N	1:a:167:PRO:CD	2.82	0.42
4:p:199:THR:CG2	8:A:6:ALA:H	2.32	0.42
5:e:52:ARG:CG	5:e:57:TRP:HB3	2.50	0.42
6:g:259:THR:HG21	9:F:404:ILE:HG21	2.01	0.42
7:N:11:ILE:HA	7:O:12:ALA:HB2	2.02	0.42
7:O:57:LEU:HD23	7:O:60:MET:HE3	2.01	0.42
7:P:21:SER:OG	7:Q:20:ALA:HA	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:R:39:ILE:CG1	7:R:49:ILE:HG21	2.50	0.42
7:G:57:LEU:HD23	7:G:60:MET:HE3	2.01	0.42
7:K:52:THR:HG23	7:J:53:LEU:CD2	2.50	0.42
7:I:57:LEU:HD23	7:I:60:MET:HE3	2.01	0.42
8:E:230:ASP:CB	9:D:311:GLU:HG3	2.46	0.42
8:E:413:ARG:NH1	8:E:444:GLY:H	2.17	0.42
9:D:57:GLN:HA	9:D:57:GLN:OE1	2.19	0.42
9:D:405:ILE:O	9:D:409:GLY:N	2.53	0.42
2:b:147:GLN:O	2:b:148:ALA:C	2.62	0.42
3:d:148:ILE:CG1	8:C:20:TYR:HD2	2.33	0.42
3:d:169:PHE:CD1	3:d:169:PHE:C	2.96	0.42
4:p:87:ASN:OD1	4:p:89:THR:CG2	2.61	0.42
5:e:62:LEU:HD12	5:e:62:LEU:O	2.20	0.42
6:g:43:ASN:O	6:g:47:LEU:HG	2.20	0.42
7:N:48:LYS:HZ3	7:M:43:PRO:HB2	1.69	0.42
7:T:6:ALA:HB1	7:G:80:PHE:CD2	2.48	0.42
7:G:10:VAL:HG21	7:H:74:LEU:HD22	1.96	0.42
7:G:39:ILE:CG1	7:G:49:ILE:HG21	2.50	0.42
7:H:10:VAL:HG22	7:I:74:LEU:CD2	2.47	0.42
7:H:39:ILE:CG1	7:H:49:ILE:HG21	2.50	0.42
7:I:39:ILE:CG1	7:I:49:ILE:HG21	2.50	0.42
9:F:48:ILE:HD12	9:F:94:THR:CG2	2.48	0.42
9:F:124:VAL:CG1	9:F:126:THR:CG2	2.98	0.42
8:A:39:ILE:HD12	8:A:278:LEU:HD21	1.97	0.42
8:A:132:SER:HB2	8:A:133:PRO:HD2	2.01	0.42
8:A:185:LEU:HA	8:A:185:LEU:HD23	1.78	0.42
8:A:247:ALA:HB1	8:A:257:THR:HG21	2.01	0.42
8:A:340:ASP:O	8:A:366:ARG:HB2	2.20	0.42
8:C:109:ILE:HD11	8:C:246:LEU:CD1	2.50	0.42
8:C:240:PRO:HG2	8:C:267:GLN:NE2	2.34	0.42
9:D:387:ILE:HG13	9:D:388:ALA:N	2.33	0.42
2:b:82:ARG:C	4:p:140:LEU:CD2	2.93	0.42
3:d:77:ARG:NH2	8:C:8:GLU:O	2.53	0.42
7:P:57:LEU:HD23	7:P:60:MET:HE3	2.01	0.42
7:Q:57:LEU:HD23	7:Q:60:MET:HE3	2.01	0.42
7:M:39:ILE:CG1	7:M:49:ILE:HG21	2.50	0.42
8:E:439:TYR:CZ	8:E:487:GLU:HG3	2.55	0.42
8:A:420:LEU:CD2	8:A:458:LEU:CD1	2.97	0.42
8:C:387:LEU:HD11	8:C:421:LEU:HD11	2.02	0.42
9:D:338:ALA:CB	9:D:339:PRO:HD3	2.37	0.42
2:b:91:ASP:HB3	4:p:148:MET:HB3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:234:ASP:OD1	3:d:238:LYS:HD2	2.20	0.42
3:d:235:MET:CE	8:A:22:ARG:HH21	2.25	0.42
4:p:144:ALA:HA	4:p:147:VAL:HG12	2.02	0.42
4:p:210:LEU:CD1	8:A:14:ARG:HG3	2.49	0.42
5:e:62:LEU:C	5:e:63:MET:HE2	2.44	0.42
6:g:65:LYS:HD3	6:g:324:SER:HB2	2.02	0.42
6:g:212:MET:HE3	6:g:212:MET:HB2	1.78	0.42
7:N:53:LEU:HD23	7:O:52:THR:HG23	2.01	0.42
7:P:39:ILE:CG1	7:P:49:ILE:HG21	2.50	0.42
7:T:29:GLY:O	7:G:31:ALA:HB2	2.19	0.42
7:K:80:PHE:CD2	7:J:6:ALA:HB1	2.49	0.42
8:E:7:ASP:OD1	8:E:8:GLU:N	2.53	0.42
8:E:117:ASP:OD1	8:E:117:ASP:N	2.49	0.42
8:C:10:SER:O	8:C:10:SER:OG	2.38	0.42
9:D:182:ILE:CG2	9:D:183:MET:N	2.83	0.42
1:a:124:HIS:HB3	4:p:81:ALA:O	2.19	0.42
1:a:230:ILE:HD11	7:Q:55:LEU:CD2	2.49	0.42
2:b:80:LYS:N	4:p:137:VAL:HG12	2.29	0.42
2:b:160:LEU:HD11	2:b:164:LEU:N	0.39	0.42
7:S:57:LEU:HD23	7:S:60:MET:HE3	2.01	0.42
7:N:62:ALA:O	7:N:63:LEU:C	2.61	0.42
7:L:39:ILE:CG1	7:L:49:ILE:HG21	2.49	0.42
7:K:57:LEU:HD23	7:K:60:MET:HE3	2.01	0.42
8:E:148:GLN:O	8:E:186:ASN:ND2	2.49	0.42
8:A:282:PRO:HB2	8:A:286:ALA:HA	2.02	0.42
8:A:495:GLN:O	8:A:499:GLU:CG	2.68	0.42
9:B:221:VAL:HG12	9:B:232:VAL:CB	2.49	0.42
9:B:261:ARG:HG3	9:B:319:GLY:HA3	2.02	0.42
8:C:387:LEU:HD23	8:C:387:LEU:HA	1.83	0.42
8:C:392:GLU:OE2	9:D:429:ARG:NH2	2.49	0.42
3:d:149:LEU:HD13	3:d:158:VAL:HG22	2.01	0.41
3:d:198:VAL:O	3:d:202:THR:N	2.44	0.41
6:g:363:CYS:HB3	9:D:290:GLY:CA	2.50	0.41
9:F:417:ASP:O	9:F:421:VAL:HG23	2.19	0.41
8:C:81:LEU:C	8:C:82:MET:HE2	2.45	0.41
8:C:138:MET:HE1	9:D:213:TYR:HE2	1.85	0.41
9:D:49:VAL:HG22	9:D:91:VAL:HG22	2.01	0.41
9:D:353:SER:HB2	9:D:366:ASP:HB2	2.02	0.41
2:b:88:VAL:N	4:p:147:VAL:CG1	2.75	0.41
2:b:105:ARG:O	2:b:108:MET:HB2	2.19	0.41
2:b:149:LEU:HD21	3:d:244:ILE:HG13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:86:ALA:HB1	3:d:95:THR:CG2	2.48	0.41
5:e:4:ASN:HB2	5:e:18:GLU:OE2	2.19	0.41
6:g:64:MET:SD	9:D:408:LEU:HD13	2.60	0.41
6:g:72:VAL:CG2	6:g:316:LEU:HB2	2.50	0.41
7:O:39:ILE:CG1	7:O:49:ILE:HG21	2.50	0.41
7:T:43:PRO:C	7:G:48:LYS:NZ	2.71	0.41
7:T:75:LEU:HD21	7:G:74:LEU:HD21	2.02	0.41
9:F:61:VAL:HG13	9:F:80:SER:HB2	2.01	0.41
9:F:334:LEU:HD22	9:F:343:PHE:CE2	2.56	0.41
9:F:387:ILE:CG2	9:F:388:ALA:N	2.83	0.41
9:F:405:ILE:HD11	9:F:421:VAL:CG2	2.47	0.41
8:A:420:LEU:HD22	8:A:437:THR:CG2	2.50	0.41
9:B:154:LYS:NZ	9:B:430:PHE:O	2.51	0.41
9:B:183:MET:HE1	9:B:212:LEU:HD22	2.02	0.41
8:C:237:TYR:CZ	8:C:271:TYR:CD1	3.06	0.41
8:C:457:TYR:CD1	8:C:457:TYR:C	2.94	0.41
9:D:167:LYS:CE	9:D:310:GLN:OE1	2.67	0.41
9:D:202:VAL:HG11	9:D:278:PHE:HB2	2.03	0.41
1:a:42:THR:HG23	1:a:117:TRP:CZ3	2.55	0.41
1:a:119:ILE:N	2:b:31:LEU:N	2.65	0.41
2:b:70:LEU:C	4:p:130:VAL:HG22	2.45	0.41
2:b:104:GLU:O	2:b:108:MET:HG3	2.20	0.41
2:b:122:GLU:HA	4:p:181:ILE:HG23	1.91	0.41
2:b:160:LEU:CD2	2:b:164:LEU:N	2.79	0.41
6:g:221:VAL:HG22	8:A:401:SER:OG	2.20	0.41
7:S:46:GLU:OE1	7:T:48:LYS:HD3	2.20	0.41
7:S:62:ALA:O	7:S:63:LEU:C	2.61	0.41
7:N:29:GLY:O	7:O:31:ALA:HB2	2.20	0.41
7:O:40:ALA:CB	7:P:49:ILE:HD11	2.41	0.41
7:M:57:LEU:HD23	7:M:60:MET:HE3	2.01	0.41
7:L:62:ALA:O	7:L:63:LEU:C	2.61	0.41
7:K:52:THR:CG2	7:J:53:LEU:CD2	2.99	0.41
8:E:246:LEU:HD23	8:E:246:LEU:HA	1.79	0.41
8:A:140:ARG:HB2	9:B:210:ASN:ND2	2.28	0.41
9:B:387:ILE:CG2	9:B:388:ALA:N	2.82	0.41
9:B:412:GLU:O	9:B:413:LEU:C	2.64	0.41
8:C:170:GLY:O	8:C:321:GLU:HA	2.21	0.41
8:C:436:MET:CE	8:C:462:ARG:HA	2.50	0.41
2:b:31:LEU:HD12	2:b:32:ILE:HD13	2.03	0.41
2:b:133:GLN:CG	8:A:3:THR:HA	2.47	0.41
2:b:149:LEU:CD2	3:d:244:ILE:CG1	2.99	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:149:LEU:HD22	3:d:244:ILE:CG1	2.50	0.41
2:b:155:THR:O	2:b:159:CYS:N	2.53	0.41
5:e:88:ASP:HA	5:e:89:PRO:HD3	1.95	0.41
6:g:121:MET:HE3	6:g:121:MET:HB2	1.85	0.41
7:R:62:ALA:HA	7:R:65:ILE:HG22	2.03	0.41
9:B:63:CYS:HB3	9:B:76:ALA:HB1	2.03	0.41
9:B:402:GLN:HG2	9:B:405:ILE:HD11	2.02	0.41
2:b:92:ALA:CA	4:p:148:MET:O	2.67	0.41
2:b:162:ASN:O	2:b:166:LEU:CB	2.69	0.41
3:d:92:LEU:HD11	3:d:172:ILE:CD1	2.50	0.41
3:d:239:LYS:HE2	8:A:22:ARG:NH2	2.35	0.41
4:p:203:LEU:CD2	8:A:7:ASP:HA	2.49	0.41
6:g:232:PRO:O	6:g:233:LEU:C	2.63	0.41
7:T:39:ILE:CG1	7:T:49:ILE:HG21	2.50	0.41
7:G:62:ALA:O	7:G:63:LEU:C	2.61	0.41
7:H:53:LEU:CD2	7:I:52:THR:CG2	2.99	0.41
7:J:50:ARG:HG2	7:J:54:LEU:HD13	2.03	0.41
8:E:469:LYS:CE	8:E:493:ALA:HA	2.51	0.41
9:B:168:ILE:HB	9:B:324:ILE:HA	2.03	0.41
9:B:276:PHE:HB3	9:B:328:TYR:HB3	2.03	0.41
8:C:237:TYR:CE1	8:C:271:TYR:CB	3.03	0.41
8:C:376:MET:O	8:C:376:MET:HG3	2.20	0.41
9:D:64:GLU:CD	9:D:248:ARG:HE	2.25	0.41
9:D:168:ILE:CD1	9:D:324:ILE:HG12	2.51	0.41
7:S:43:PRO:CG	7:T:42:GLN:NE2	2.77	0.41
7:Q:81:VAL:CG2	7:R:80:PHE:CZ	3.04	0.41
7:K:31:ALA:HA	7:J:33:GLY:CA	2.49	0.41
7:J:39:ILE:CG1	7:J:49:ILE:HG21	2.49	0.41
8:E:379:VAL:CG1	8:E:438:ILE:CB	2.97	0.41
9:F:119:ASP:O	9:F:120:ASN:HB3	2.19	0.41
9:F:405:ILE:CG1	9:F:413:LEU:HD11	2.47	0.41
8:A:495:GLN:HA	8:A:498:MET:HE3	2.03	0.41
9:B:151:THR:HG22	9:B:189:ILE:HD11	2.02	0.41
9:B:182:ILE:O	9:B:186:ILE:HG13	2.21	0.41
9:B:251:LEU:HD23	9:B:251:LEU:N	2.34	0.41
9:D:29:PRO:HD2	9:D:288:LEU:CD1	2.51	0.41
2:b:60:ILE:HD11	4:p:120:ASP:CB	2.49	0.41
4:p:147:VAL:HG13	4:p:148:MET:N	2.34	0.41
6:g:129:LEU:HD23	9:B:412:GLU:OE2	2.18	0.41
6:g:363:CYS:HB3	9:D:290:GLY:HA2	2.02	0.41
7:N:57:LEU:HD23	7:N:60:MET:HE3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:P:68:LEU:HD22	7:Q:66:TYR:CG	2.55	0.41
7:M:65:ILE:HD12	7:M:68:LEU:HD23	2.03	0.41
7:G:10:VAL:HG22	7:H:74:LEU:CD2	2.43	0.41
7:H:57:LEU:HD23	7:H:60:MET:HE3	2.01	0.41
8:E:29:THR:HA	8:E:89:VAL:O	2.20	0.41
8:E:90:LYS:HG3	8:E:90:LYS:O	2.19	0.41
8:A:344:PHE:HD2	8:A:362:ILE:O	2.04	0.41
8:C:126:GLU:OE2	8:C:253:ARG:NH2	2.54	0.41
8:C:342:GLN:HG3	8:C:344:PHE:CE2	2.55	0.41
9:D:112:ASN:CG	9:D:118:VAL:CG2	2.87	0.41
3:d:172:ILE:CG2	3:d:173:THR:N	2.83	0.41
4:p:87:ASN:OD1	4:p:87:ASN:C	2.64	0.41
5:e:51:ILE:O	5:e:51:ILE:CG2	2.67	0.41
6:g:253:GLU:OE1	6:g:253:GLU:N	2.53	0.41
6:g:253:GLU:CB	6:g:270:MET:CA	2.99	0.41
7:N:25:GLY:O	7:O:27:GLY:HA3	2.21	0.41
7:N:50:ARG:HG2	7:N:54:LEU:HD13	2.03	0.41
7:O:42:GLN:NE2	7:O:44:GLU:HB3	2.32	0.41
7:P:62:ALA:HA	7:P:65:ILE:HG22	2.03	0.41
7:R:65:ILE:HD12	7:R:68:LEU:HD23	2.03	0.41
7:M:31:ALA:HA	7:L:33:GLY:CA	2.51	0.41
7:M:52:THR:HG23	7:L:53:LEU:HD23	2.02	0.41
8:E:230:ASP:HB3	9:D:311:GLU:CB	2.51	0.41
8:E:433:GLU:HA	8:E:436:MET:HE3	2.02	0.41
9:F:163:ARG:CG	9:F:374:MET:HG3	2.51	0.41
8:A:151:LEU:N	8:A:151:LEU:HD12	2.36	0.41
8:C:439:TYR:OH	8:C:487:GLU:OE2	2.36	0.41
9:D:61:VAL:HG21	9:D:85:LEU:HD11	2.03	0.41
9:D:267:ASP:HA	9:D:320:SER:O	2.21	0.41
1:a:43:SER:OG	4:p:93:ILE:CD1	2.68	0.41
1:a:69:GLN:NE2	4:p:112:LEU:HD22	2.36	0.41
1:a:117:TRP:C	1:a:120:ILE:HG22	2.44	0.41
1:a:124:HIS:HD2	4:p:80:LYS:C	2.29	0.41
2:b:85:LEU:HD13	4:p:143:GLN:HB3	1.99	0.41
3:d:77:ARG:HG2	8:C:8:GLU:O	2.20	0.41
3:d:119:VAL:HG11	8:E:43:HIS:CD2	2.56	0.41
3:d:129:LEU:CD2	3:d:147:ASN:OD1	2.69	0.41
3:d:222:THR:HG21	3:d:234:ASP:CG	2.42	0.41
3:d:241:LEU:HD23	3:d:244:ILE:HD12	2.02	0.41
5:e:110:ARG:HB3	6:g:204:SER:OG	2.21	0.41
6:g:71:LYS:HB3	6:g:316:LEU:CD1	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:92:VAL:HG12	6:g:295:LEU:HD11	2.03	0.41
6:g:206:GLU:HG3	6:g:207:VAL:HG23	2.02	0.41
6:g:360:ALA:HB1	9:D:292:MET:CG	2.48	0.41
7:O:44:GLU:O	7:O:44:GLU:CD	2.63	0.41
7:Q:50:ARG:HG2	7:Q:54:LEU:HD13	2.03	0.41
7:M:50:ARG:HG2	7:M:54:LEU:HD13	2.03	0.41
7:M:55:LEU:HD21	7:L:54:LEU:HG	2.03	0.41
7:G:25:GLY:O	7:H:27:GLY:HA3	2.20	0.41
7:G:50:ARG:HG2	7:G:54:LEU:HD13	2.03	0.41
7:G:62:ALA:HA	7:G:65:ILE:HG22	2.03	0.41
7:G:81:VAL:HG21	7:H:80:PHE:CZ	2.56	0.41
7:L:65:ILE:HD12	7:L:68:LEU:HD23	2.03	0.41
7:K:32:ALA:O	7:K:36:VAL:HG23	2.21	0.41
9:F:415:GLU:O	9:F:419:LEU:HG	2.21	0.41
8:A:436:MET:HG3	8:A:490:LEU:HD13	1.99	0.41
8:A:439:TYR:CD2	8:A:490:LEU:HD23	2.56	0.41
8:A:460:GLU:OE1	8:A:460:GLU:HA	2.21	0.41
9:B:142:LEU:HD21	9:B:314:THR:HG21	2.02	0.41
9:B:231:LYS:O	9:B:232:VAL:HG23	2.21	0.41
1:a:70:ASN:HB3	2:b:53:LEU:C	2.45	0.41
2:b:96:ARG:HB2	4:p:154:GLU:HB2	2.03	0.41
3:d:132:ILE:HG12	8:E:13:ILE:HG21	2.03	0.41
5:e:48:ILE:HA	5:e:61:ALA:HA	2.02	0.41
6:g:123:VAL:CG2	6:g:308:LEU:CD2	2.98	0.41
7:N:40:ALA:CB	7:O:49:ILE:HD11	2.35	0.41
7:N:64:THR:HG22	7:O:66:TYR:HD2	1.86	0.41
7:O:10:VAL:HG21	7:P:74:LEU:HD22	1.95	0.41
7:O:62:ALA:HA	7:O:65:ILE:HG22	2.03	0.41
7:P:65:ILE:HD12	7:P:68:LEU:HD23	2.03	0.41
7:T:50:ARG:HG2	7:T:54:LEU:HD13	2.03	0.41
7:K:39:ILE:CG1	7:K:49:ILE:HG21	2.50	0.41
7:J:32:ALA:O	7:J:36:VAL:HG23	2.21	0.41
9:B:149:PHE:CZ	9:B:189:ILE:CD1	2.92	0.41
9:B:246:ARG:NH2	9:B:284:GLU:OE1	2.53	0.41
9:B:292:MET:HE2	8:C:276:LEU:HD23	2.03	0.41
8:C:178:ALA:O	8:C:182:ASP:CG	2.63	0.41
8:C:432:GLU:H	8:C:432:GLU:CD	2.28	0.41
9:D:79:MET:HE1	9:D:248:ARG:HG3	2.02	0.41
1:a:136:THR:H	4:p:90:LEU:CD2	2.29	0.40
2:b:87:LYS:O	2:b:90:MET:N	2.53	0.40
3:d:104:ARG:NH1	8:E:7:ASP:HB3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:d:119:VAL:HG23	8:E:24:VAL:HG11	2.02	0.40
3:d:199:GLN:HE21	3:d:207:VAL:N	2.19	0.40
6:g:227:ILE:CG2	6:g:242:ILE:HD11	2.51	0.40
7:N:54:LEU:CG	7:O:55:LEU:HD21	2.51	0.40
7:T:54:LEU:HD11	7:G:55:LEU:HD21	1.99	0.40
7:H:10:VAL:HG22	7:I:74:LEU:HD22	1.97	0.40
7:H:50:ARG:HG2	7:H:54:LEU:HD13	2.03	0.40
7:K:50:ARG:HG2	7:K:54:LEU:HD13	2.03	0.40
7:J:62:ALA:HA	7:J:65:ILE:HG22	2.03	0.40
7:J:66:TYR:HD2	7:I:64:THR:HG22	1.86	0.40
8:E:322:THR:HG22	8:E:332:PRO:CG	2.51	0.40
8:E:403:LEU:HD13	8:E:407:THR:HG21	2.03	0.40
9:F:48:ILE:HD12	9:F:94:THR:HG22	2.02	0.40
9:F:477:VAL:HG21	9:F:483:ALA:HB2	2.03	0.40
8:A:104:TYR:CE2	8:A:109:ILE:CD1	2.99	0.40
8:A:176:LYS:HD2	8:A:319:ILE:CG2	2.51	0.40
8:A:227:GLU:CG	8:A:239:ALA:HB2	2.52	0.40
8:A:416:ARG:NE	8:A:447:ASP:O	2.54	0.40
9:D:246:ARG:NH2	9:D:284:GLU:OE1	2.54	0.40
9:D:427:ILE:HD11	9:D:462:LEU:CD2	2.49	0.40
1:a:122:LEU:HD13	1:a:125:GLY:O	2.22	0.40
3:d:201:ILE:HG13	3:d:202:THR:H	1.86	0.40
3:d:222:THR:CB	3:d:234:ASP:CB	2.81	0.40
7:S:42:GLN:HE22	7:R:43:PRO:CG	2.22	0.40
7:S:62:ALA:HA	7:S:65:ILE:HG22	2.03	0.40
7:N:65:ILE:HD12	7:N:68:LEU:HD23	2.03	0.40
7:R:32:ALA:O	7:R:36:VAL:HG23	2.21	0.40
7:M:51:GLY:C	7:L:50:ARG:HH21	2.28	0.40
7:T:65:ILE:HD12	7:T:68:LEU:HD23	2.03	0.40
7:H:21:SER:OG	7:I:20:ALA:HA	2.21	0.40
7:J:65:ILE:HD12	7:J:68:LEU:HD23	2.03	0.40
9:F:247:MET:SD	9:F:282:GLY:HA2	2.60	0.40
8:A:194:CYS:O	8:A:222:THR:HA	2.21	0.40
8:C:22:ARG:CG	8:C:23:GLU:N	2.84	0.40
1:a:142:LEU:HD23	1:a:142:LEU:HA	1.90	0.40
1:a:212:VAL:N	1:a:213:PRO:HD2	2.36	0.40
2:b:103:ILE:HG13	4:p:163:LYS:CA	2.51	0.40
2:b:169:ILE:HG23	3:d:221:PHE:CD2	2.49	0.40
5:e:4:ASN:HB3	5:e:18:GLU:CD	2.44	0.40
6:g:85:PHE:CE1	6:g:89:LEU:HD22	2.57	0.40
7:S:54:LEU:HD11	7:T:55:LEU:HD21	2.00	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:P:32:ALA:O	7:P:36:VAL:HG23	2.21	0.40
7:Q:32:ALA:O	7:Q:36:VAL:HG23	2.21	0.40
7:G:32:ALA:O	7:G:36:VAL:HG23	2.21	0.40
7:H:3:PRO:HA	7:I:5:ILE:HD11	2.03	0.40
7:K:80:PHE:CE2	7:J:81:VAL:CG2	3.04	0.40
7:I:62:ALA:HA	7:I:65:ILE:HG22	2.03	0.40
8:E:137:ILE:HG23	8:E:138:MET:N	2.37	0.40
8:A:417:LEU:HD23	8:A:417:LEU:HA	1.79	0.40
8:A:432:GLU:CA	8:A:435:VAL:HG12	2.51	0.40
8:C:65:LEU:HD23	8:C:65:LEU:HA	1.94	0.40
1:a:164:TYR:CE2	1:a:166:GLN:CG	2.79	0.40
2:b:71:ARG:O	4:p:133:THR:CB	2.68	0.40
2:b:71:ARG:HG3	4:p:132:ASP:HB3	2.03	0.40
2:b:97:VAL:H	4:p:155:ILE:HD11	1.30	0.40
2:b:149:LEU:CD2	3:d:244:ILE:HG13	2.52	0.40
3:d:180:VAL:HG13	3:d:223:ILE:CG2	2.49	0.40
3:d:222:THR:HG21	3:d:234:ASP:HB3	1.74	0.40
4:p:90:LEU:CB	4:p:91:PRO:CD	2.96	0.40
4:p:205:SER:O	4:p:206:GLN:C	2.64	0.40
7:S:74:LEU:CD2	7:R:10:VAL:HG22	2.45	0.40
7:N:62:ALA:HA	7:N:65:ILE:HG22	2.03	0.40
7:H:32:ALA:O	7:H:36:VAL:HG23	2.21	0.40
7:H:68:LEU:HD22	7:I:66:TYR:CG	2.57	0.40
7:L:32:ALA:O	7:L:36:VAL:HG23	2.21	0.40
7:I:65:ILE:HD12	7:I:68:LEU:HD23	2.03	0.40
8:A:250:PHE:HB3	8:A:255:ARG:HB2	2.04	0.40
8:C:403:LEU:C	8:C:403:LEU:HD12	2.47	0.40
9:D:103:GLY:O	9:D:106:THR:OG1	2.32	0.40
3:d:74:THR:CG2	8:C:4:ILE:N	2.85	0.40
6:g:227:ILE:HG21	6:g:242:ILE:HD11	2.03	0.40
7:S:35:ALA:HB2	7:S:53:LEU:HD13	2.04	0.40
7:S:39:ILE:CG1	7:S:49:ILE:HG21	2.50	0.40
7:S:50:ARG:HG2	7:S:54:LEU:HD13	2.03	0.40
7:G:35:ALA:HB2	7:G:53:LEU:HD13	2.04	0.40
8:E:79:ASP:HB3	8:E:81:LEU:HG	2.03	0.40
8:E:469:LYS:CE	8:E:493:ALA:CB	3.00	0.40
9:F:159:LEU:HA	9:F:159:LEU:HD23	1.91	0.40
9:F:321:ILE:HD13	9:F:321:ILE:HG21	1.83	0.40
9:F:472:GLN:O	9:F:490:LEU:HD11	2.22	0.40
8:A:364:VAL:O	8:A:364:VAL:HG23	2.21	0.40
9:B:216:MET:HE3	9:B:221:VAL:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:D:401:LEU:O	9:D:404:ILE:CG1	2.70	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	a	221/247 (90%)	211 (96%)	10 (4%)	0	100	100
2	b	157/184 (85%)	151 (96%)	6 (4%)	0	100	100
3	d	177/257 (69%)	170 (96%)	6 (3%)	1 (1%)	22	59
4	p	141/222 (64%)	130 (92%)	11 (8%)	0	100	100
5	e	129/134 (96%)	122 (95%)	7 (5%)	0	100	100
6	g	319/364 (88%)	306 (96%)	13 (4%)	0	100	100
7	G	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	H	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	I	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	J	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	K	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	L	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	M	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	N	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	O	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	P	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	Q	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	R	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
7	S	77/81 (95%)	74 (96%)	3 (4%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
7	T	77/81 (95%)	74 (96%)	3 (4%)	0	100	100
8	A	499/507 (98%)	485 (97%)	14 (3%)	0	100	100
8	C	499/507 (98%)	478 (96%)	21 (4%)	0	100	100
8	E	496/507 (98%)	483 (97%)	13 (3%)	0	100	100
9	B	476/498 (96%)	444 (93%)	31 (6%)	1 (0%)	44	78
9	D	478/498 (96%)	463 (97%)	14 (3%)	1 (0%)	44	78
9	F	477/498 (96%)	463 (97%)	13 (3%)	1 (0%)	44	78
All	All	5147/5557 (93%)	4942 (96%)	201 (4%)	4 (0%)	50	83

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	d	217	LEU
9	B	296	VAL
9	F	296	VAL
9	D	296	VAL

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	a	187/207 (90%)	187 (100%)	0	100	100
2	b	142/161 (88%)	142 (100%)	0	100	100
3	d	156/220 (71%)	156 (100%)	0	100	100
4	p	124/197 (63%)	124 (100%)	0	100	100
5	e	109/112 (97%)	109 (100%)	0	100	100
6	g	276/315 (88%)	275 (100%)	1 (0%)	89	91
7	G	51/53 (96%)	51 (100%)	0	100	100
7	H	51/53 (96%)	51 (100%)	0	100	100
7	I	51/53 (96%)	51 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
7	J	51/53 (96%)	51 (100%)	0	100 100
7	K	51/53 (96%)	51 (100%)	0	100 100
7	L	51/53 (96%)	51 (100%)	0	100 100
7	M	51/53 (96%)	51 (100%)	0	100 100
7	N	51/53 (96%)	51 (100%)	0	100 100
7	O	51/53 (96%)	51 (100%)	0	100 100
7	P	51/53 (96%)	51 (100%)	0	100 100
7	Q	51/53 (96%)	51 (100%)	0	100 100
7	R	51/53 (96%)	51 (100%)	0	100 100
7	S	51/53 (96%)	51 (100%)	0	100 100
7	T	51/53 (96%)	51 (100%)	0	100 100
8	A	410/414 (99%)	410 (100%)	0	100 100
8	C	410/414 (99%)	410 (100%)	0	100 100
8	E	408/414 (99%)	407 (100%)	1 (0%)	92 93
9	B	389/408 (95%)	389 (100%)	0	100 100
9	D	391/408 (96%)	390 (100%)	1 (0%)	91 92
9	F	390/408 (96%)	387 (99%)	3 (1%)	79 85
All	All	4106/4420 (93%)	4100 (100%)	6 (0%)	92 95

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
6	g	292	LEU
8	E	298	LEU
9	F	222	ILE
9	F	374	MET
9	F	433	GLN
9	D	279	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (72) such sidechains are listed below:

Mol	Chain	Res	Type
1	a	34	GLN
1	a	70	ASN
1	a	86	GLN

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Mol	Chain	Res	Type
1	a	193	ASN
2	b	33	ASN
2	b	133	GLN
2	b	161	ASN
3	d	141	HIS
3	d	188	ASN
3	d	190	HIS
3	d	199	GLN
3	d	240	GLN
4	p	167	GLN
4	p	195	GLN
5	e	27	ASN
6	g	56	ASN
6	g	81	ASN
6	g	228	HIS
6	g	301	ASN
6	g	303	GLN
7	S	42	GLN
7	N	42	GLN
7	O	42	GLN
7	P	42	GLN
7	Q	42	GLN
7	R	42	GLN
7	M	42	GLN
7	T	42	GLN
7	G	42	GLN
7	H	42	GLN
7	L	42	GLN
7	K	42	GLN
7	J	42	GLN
7	I	42	GLN
8	E	34	GLN
8	E	43	HIS
8	E	148	GLN
8	E	208	GLN
9	F	25	GLN
9	F	120	ASN
9	F	264	ASN
9	F	280	GLN
9	F	310	GLN
9	F	384	HIS
8	A	28	ASN

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Mol	Chain	Res	Type
8	A	34	GLN
8	A	66	ASN
8	A	148	GLN
8	A	186	ASN
8	A	187	GLN
8	A	188	GLN
8	A	201	GLN
8	A	214	GLN
8	A	256	HIS
8	A	409	ASN
8	A	423	GLN
8	A	497	GLN
9	B	71	ASN
9	B	112	ASN
9	B	210	ASN
9	B	238	GLN
9	B	345	HIS
9	B	389	GLN
8	C	187	GLN
8	C	267	GLN
8	C	408	GLN
8	C	409	ASN
8	C	423	GLN
9	D	60	ASN
9	D	67	GLN
9	D	72	ASN
9	D	389	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 10 ligands modelled in this entry, 5 are monoatomic - leaving 5 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
10	ATP	C	601	11	26,33,33	0.95	1 (3%)	31,52,52	1.52	6 (19%)
12	ADP	D	600	11	24,29,29	1.32	3 (12%)	29,45,45	1.48	4 (13%)
12	ADP	B	501	11	24,29,29	1.08	1 (4%)	29,45,45	1.48	4 (13%)
10	ATP	A	600	11	26,33,33	1.07	1 (3%)	31,52,52	1.36	4 (12%)
10	ATP	E	600	11	26,33,33	1.19	2 (7%)	31,52,52	1.56	8 (25%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
10	ATP	C	601	11	-	0/18/38/38	0/3/3/3
12	ADP	D	600	11	-	5/12/32/32	0/3/3/3
12	ADP	B	501	11	-	5/12/32/32	0/3/3/3
10	ATP	A	600	11	-	3/18/38/38	0/3/3/3
10	ATP	E	600	11	-	4/18/38/38	0/3/3/3

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	D	600	ADP	C2'-C1'	-2.72	1.49	1.53
10	E	600	ATP	C2'-C1'	-2.61	1.49	1.53
12	B	501	ADP	C2'-C1'	-2.35	1.50	1.53
12	D	600	ADP	PB-O3B	-2.23	1.46	1.54
10	C	601	ATP	C2'-C1'	-2.13	1.50	1.53
12	D	600	ADP	O4'-C4'	-2.06	1.40	1.45
10	A	600	ATP	C5-C4	2.06	1.46	1.40
10	E	600	ATP	PG-O2G	-2.04	1.47	1.54

All (26) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	E	600	ATP	N3-C2-N1	-3.93	122.53	128.68
12	D	600	ADP	N3-C2-N1	-3.87	122.63	128.68
10	A	600	ATP	N3-C2-N1	-3.49	123.22	128.68
10	C	601	ATP	N3-C2-N1	-3.44	123.30	128.68
12	B	501	ADP	C3'-C2'-C1'	3.30	105.94	100.98
12	B	501	ADP	N3-C2-N1	-3.25	123.60	128.68
12	B	501	ADP	PA-O3A-PB	-3.24	121.69	132.83
10	E	600	ATP	C4-C5-N7	-3.18	106.08	109.40
10	C	601	ATP	C4-C5-N7	-2.66	106.62	109.40
10	A	600	ATP	O2B-PB-O1B	2.59	125.05	112.24
10	E	600	ATP	C2-N1-C6	2.53	123.09	118.75
10	C	601	ATP	C2-N1-C6	2.53	123.09	118.75
12	D	600	ADP	C4-C5-N7	-2.51	106.79	109.40
10	C	601	ATP	C3'-C2'-C1'	2.42	104.63	100.98
10	E	600	ATP	C3'-C2'-C1'	2.42	104.62	100.98
12	B	501	ADP	C4-C5-N7	-2.39	106.91	109.40
12	D	600	ADP	C2-N1-C6	2.33	122.75	118.75
12	D	600	ADP	O3B-PB-O2B	2.26	116.28	107.64
10	C	601	ATP	PB-O3B-PG	-2.25	125.12	132.83
10	A	600	ATP	C2-N1-C6	2.24	122.58	118.75
10	C	601	ATP	C1'-N9-C4	-2.19	122.79	126.64
10	E	600	ATP	O2B-PB-O1B	2.17	122.98	112.24
10	E	600	ATP	PB-O3B-PG	-2.11	125.59	132.83
10	E	600	ATP	C5'-C4'-C3'	-2.07	107.43	115.18
10	A	600	ATP	O4'-C1'-C2'	-2.04	103.95	106.93
10	E	600	ATP	O3B-PG-O1G	-2.00	100.09	111.19

There are no chirality outliers.

All (17) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	B	501	ADP	C5'-O5'-PA-O2A
12	D	600	ADP	C5'-O5'-PA-O1A
12	D	600	ADP	C5'-O5'-PA-O2A
12	B	501	ADP	O4'-C4'-C5'-O5'
12	B	501	ADP	C3'-C4'-C5'-O5'
10	A	600	ATP	PB-O3B-PG-O1G
10	A	600	ATP	PB-O3B-PG-O2G
12	B	501	ADP	C5'-O5'-PA-O3A
10	E	600	ATP	PG-O3B-PB-O2B
10	E	600	ATP	PA-O3A-PB-O2B

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Mol	Chain	Res	Type	Atoms
12	D	600	ADP	PB-O3A-PA-O2A
12	B	501	ADP	C5'-O5'-PA-O1A
12	D	600	ADP	O4'-C4'-C5'-O5'
10	E	600	ATP	PA-O3A-PB-O1B
10	A	600	ATP	PA-O3A-PB-O2B
12	D	600	ADP	C5'-O5'-PA-O3A
10	E	600	ATP	PG-O3B-PB-O1B

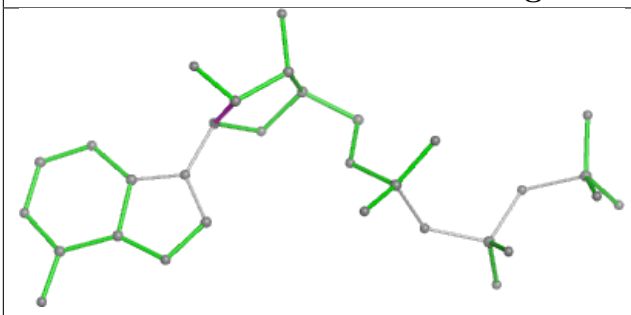
There are no ring outliers.

4 monomers are involved in 5 short contacts:

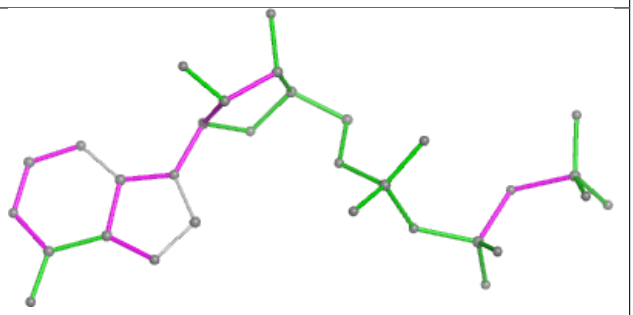
Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	C	601	ATP	1	0
12	D	600	ADP	2	0
10	A	600	ATP	1	0
10	E	600	ATP	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

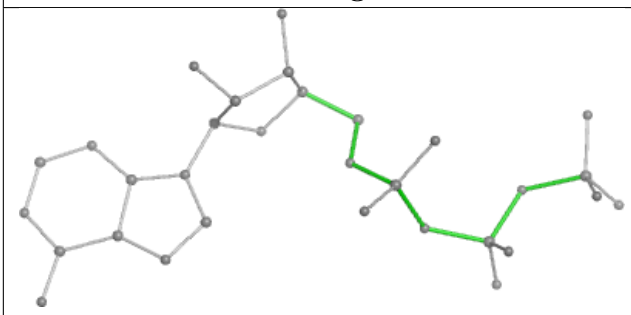
Ligand ATP C 601



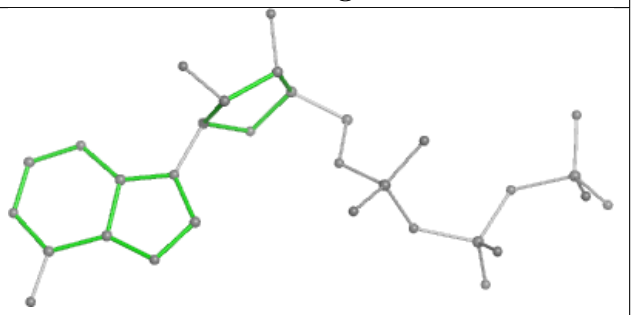
Bond lengths



Bond angles

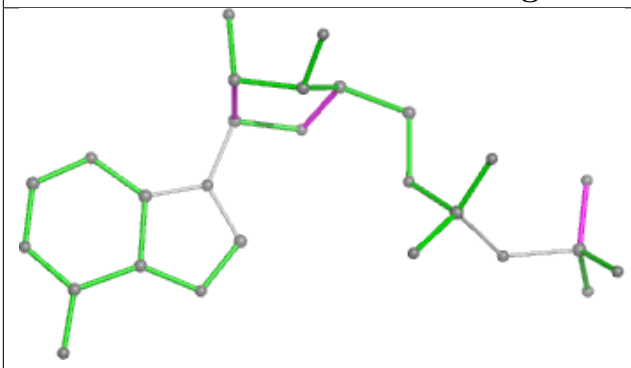


Torsions

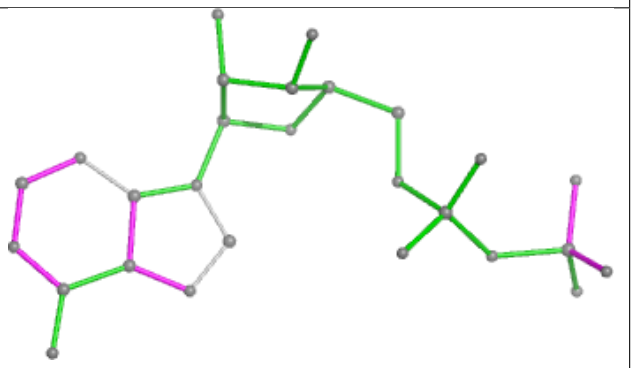


Rings

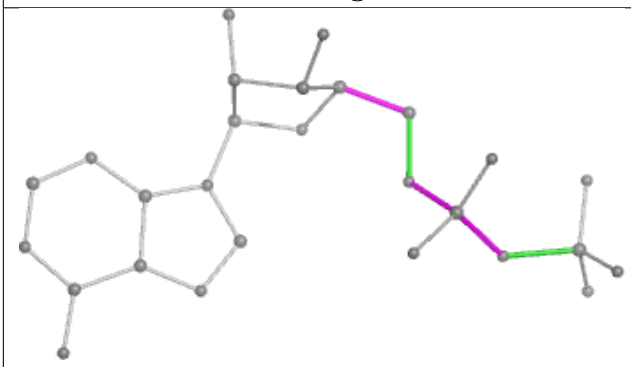
Ligand ADP D 600



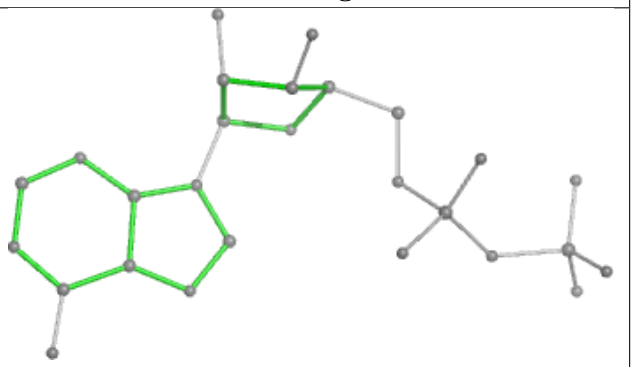
Bond lengths



Bond angles

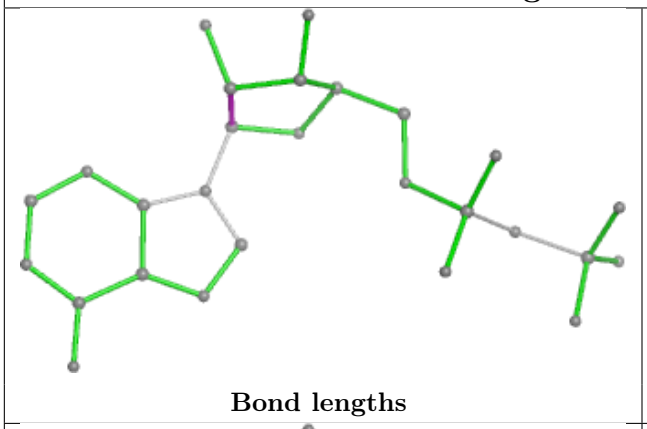


Torsions

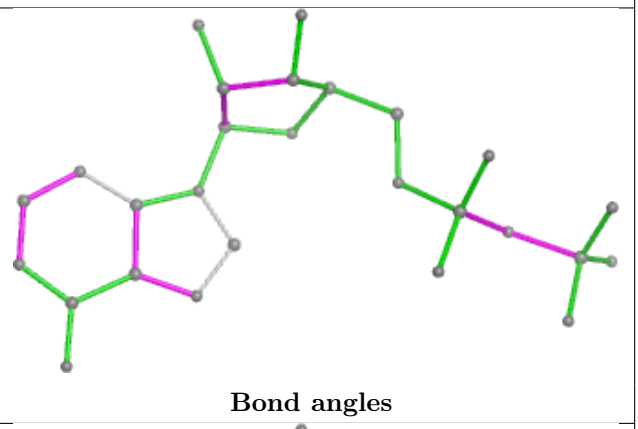


Rings

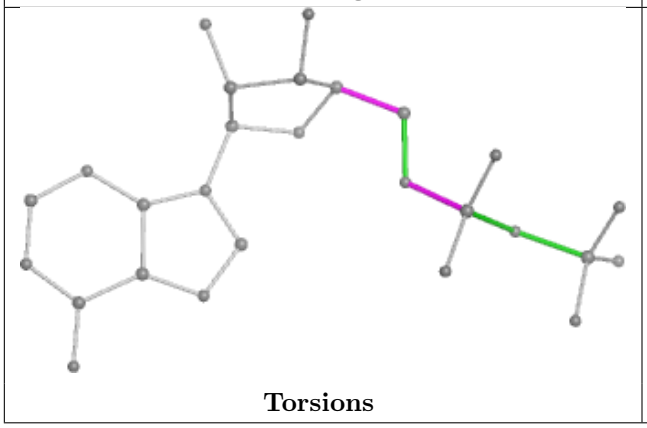
Ligand ADP B 501



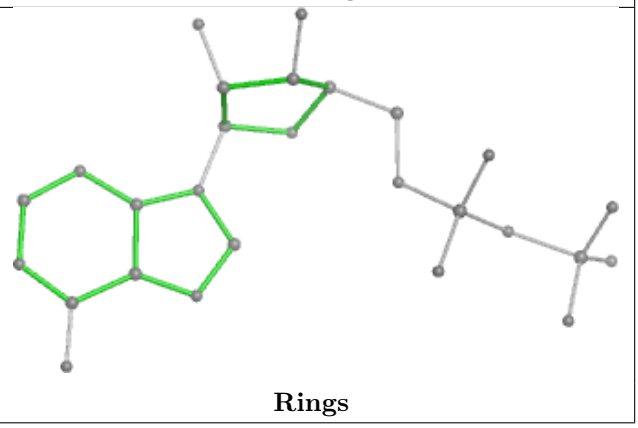
Bond lengths



Bond angles

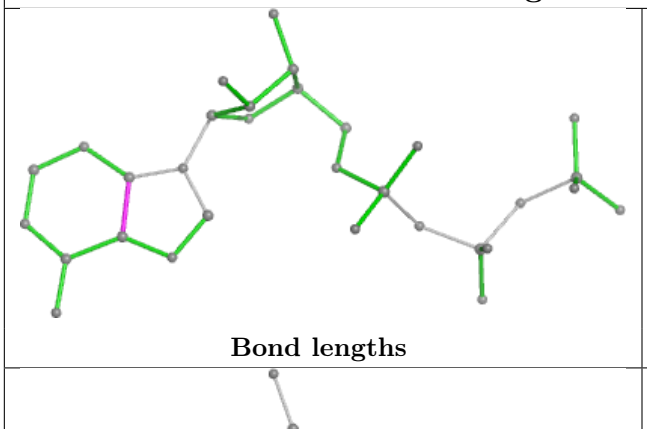


Torsions

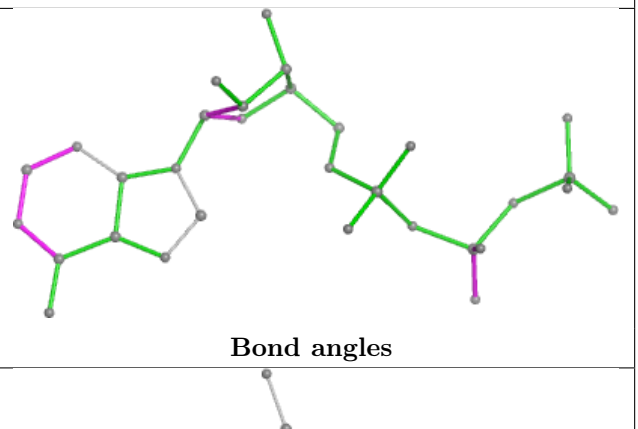


Rings

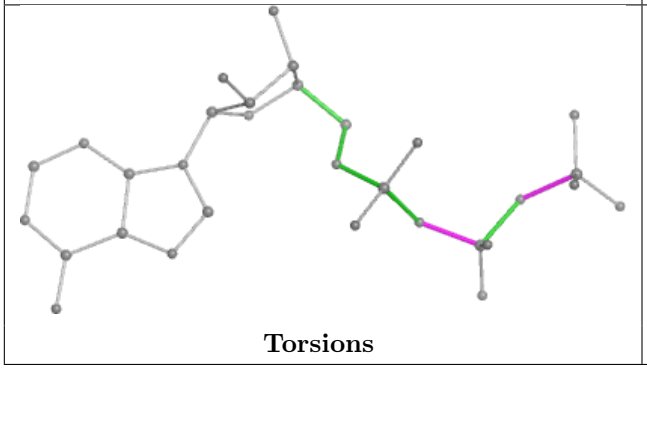
Ligand ATP A 600



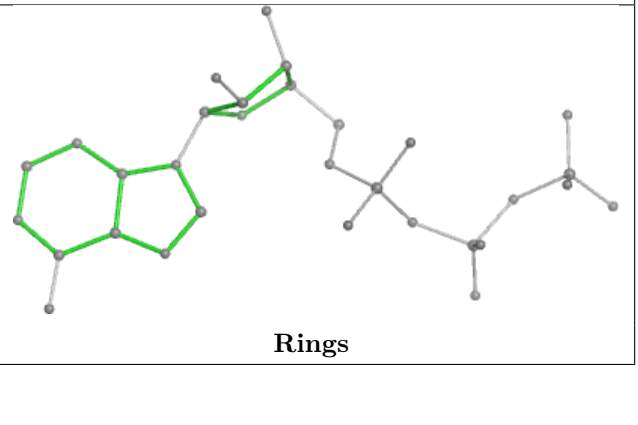
Bond lengths



Bond angles

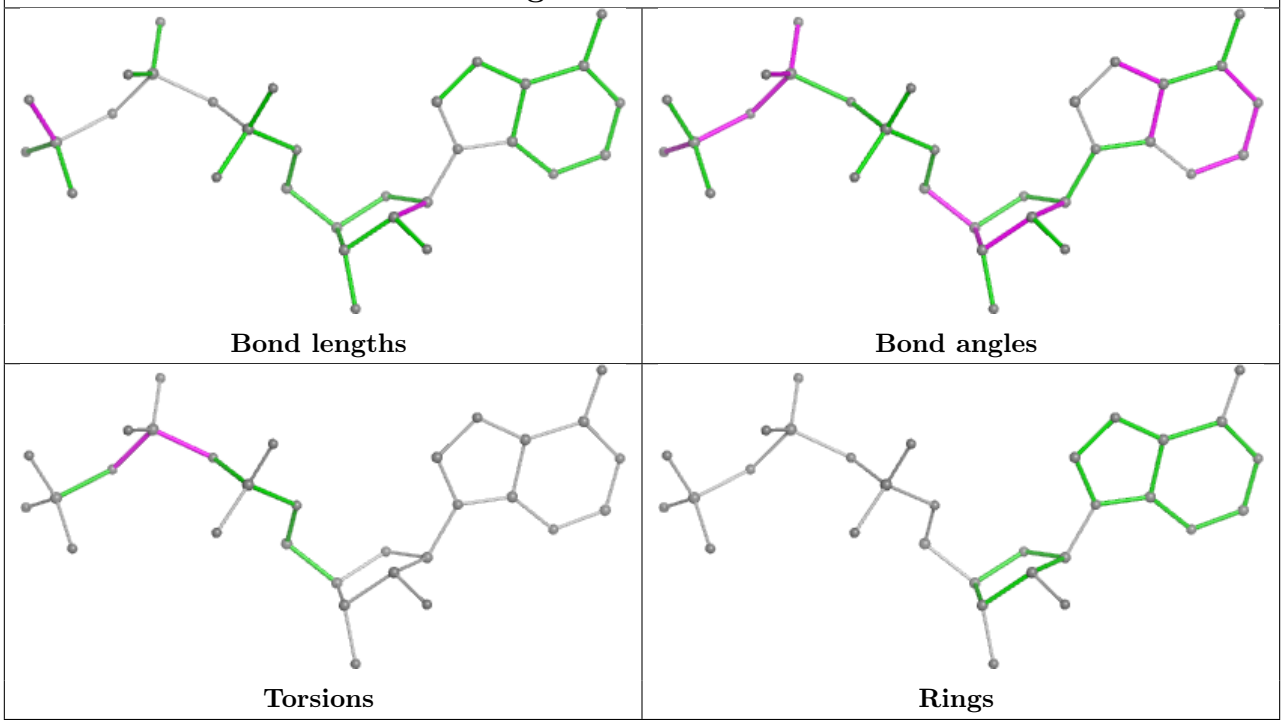


Torsions



Rings

Ligand ATP E 600



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	b	1
4	p	1
9	F	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	b	77:GLN	C	78:LEU	N	2.25
1	p	105:ASP	C	106:LYS	N	1.17
1	F	276:PHE	C	277:ARG	N	0.97

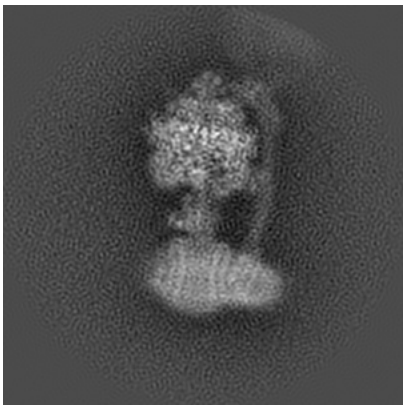
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-4272. These allow visual inspection of the internal detail of the map and identification of artifacts.

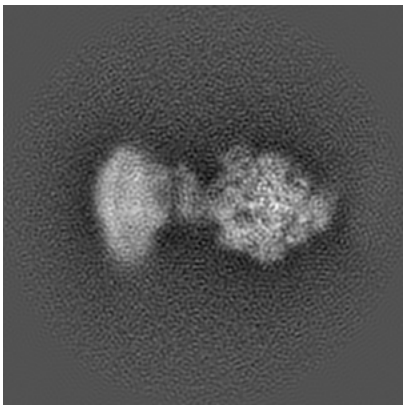
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

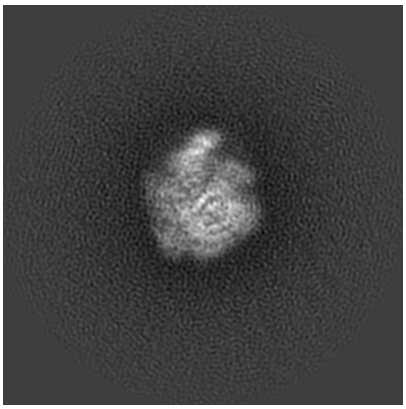
6.1.1 Primary map



X

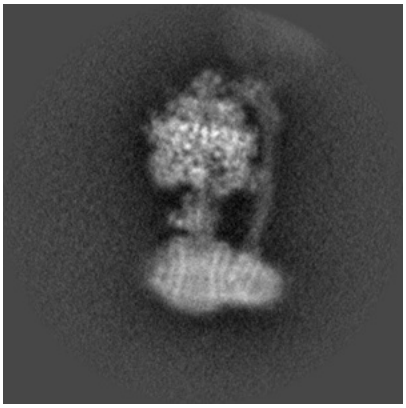


Y

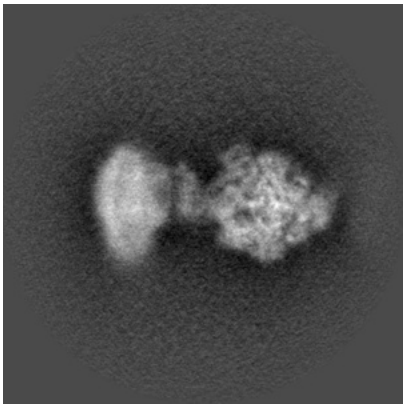


Z

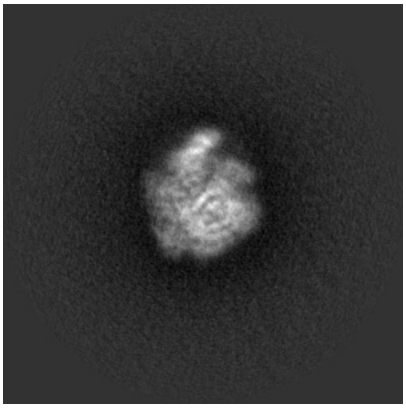
6.1.2 Raw map



X



Y

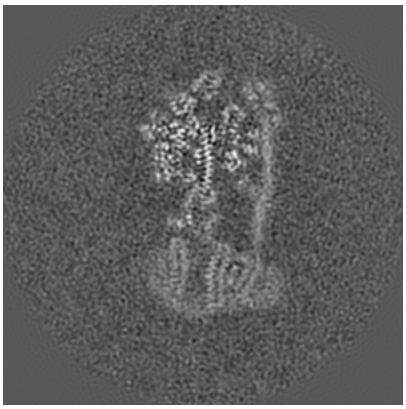


Z

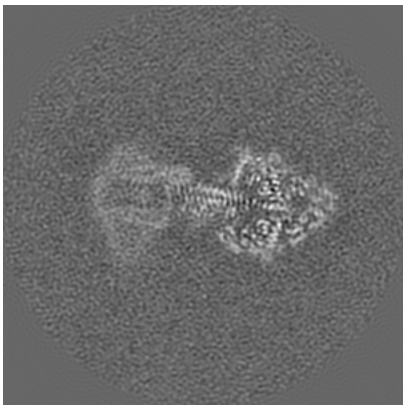
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

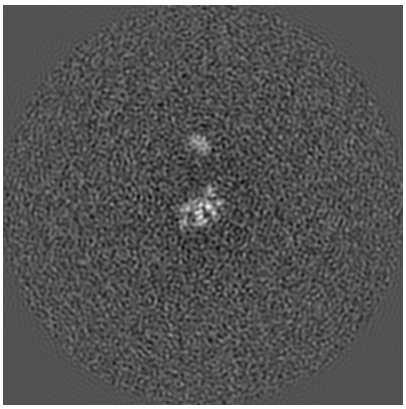
6.2.1 Primary map



X Index: 175

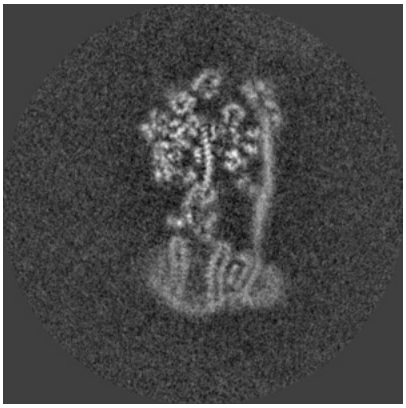


Y Index: 175

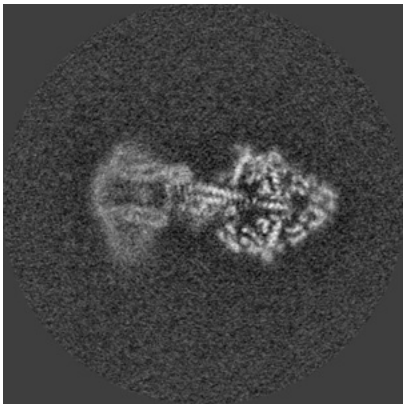


Z Index: 175

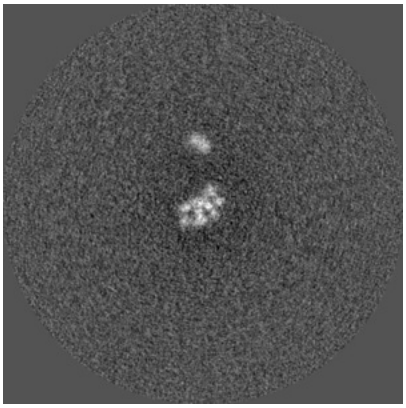
6.2.2 Raw map



X Index: 175



Y Index: 175

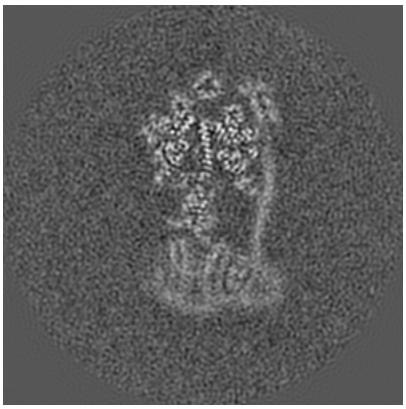


Z Index: 175

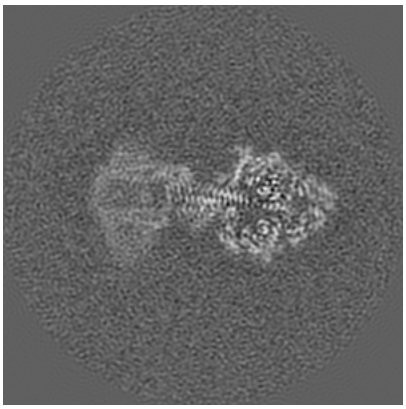
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

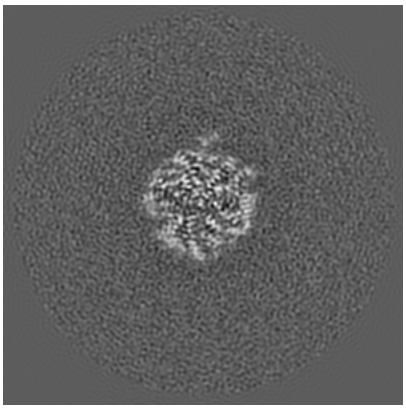
6.3.1 Primary map



X Index: 172

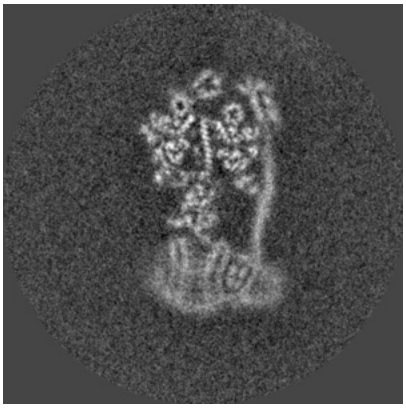


Y Index: 174

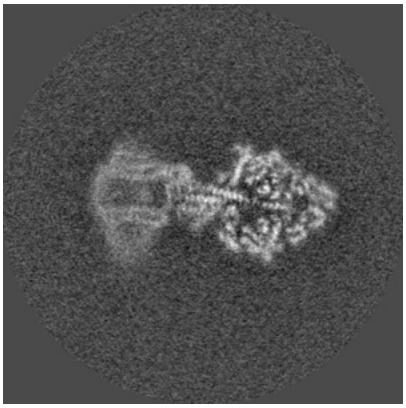


Z Index: 233

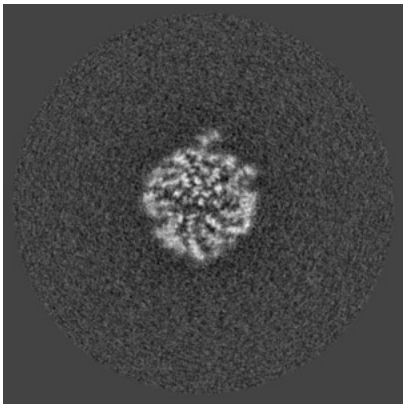
6.3.2 Raw map



X Index: 172



Y Index: 174

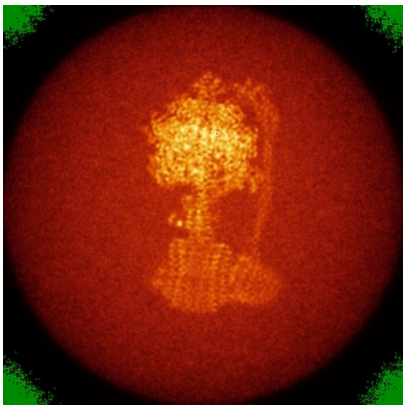


Z Index: 233

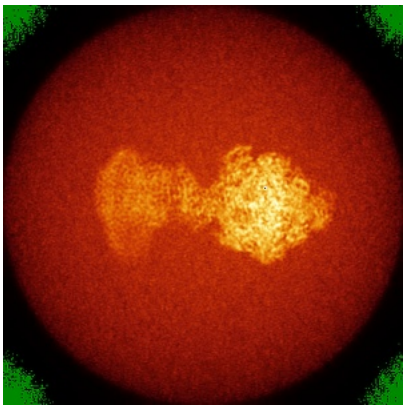
The images above show the largest variance slices of the map in three orthogonal directions.

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

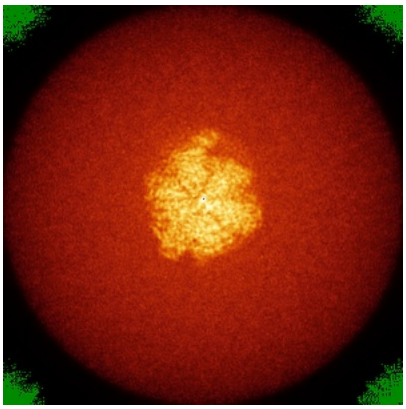
6.4.1 Primary map



X

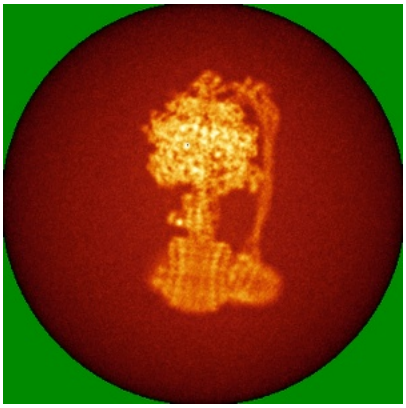


Y

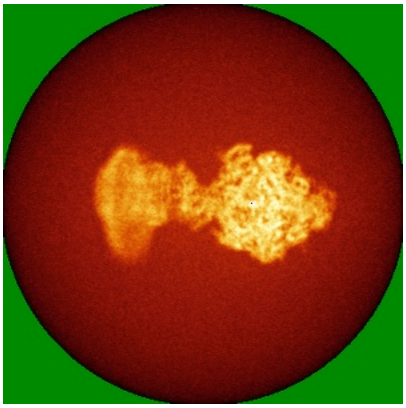


Z

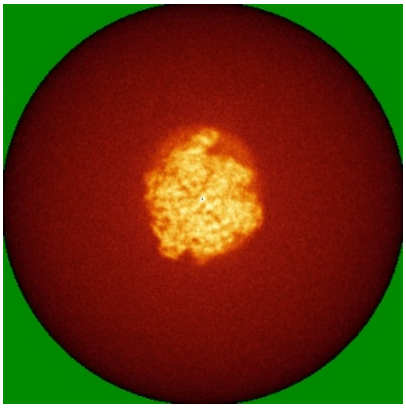
6.4.2 Raw map



X



Y

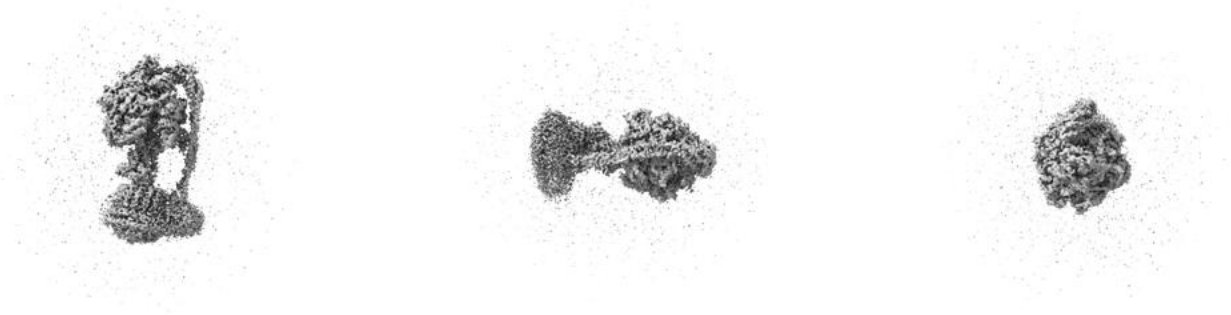


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map

X Y Z

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

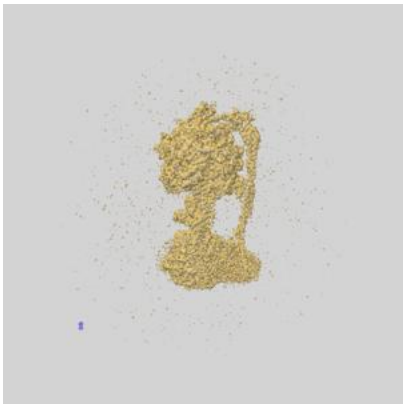
6.6 Mask visualisation (i)

This section shows the 3D surface view of the primary map at 50% transparency overlaid with the specified mask at 0% transparency

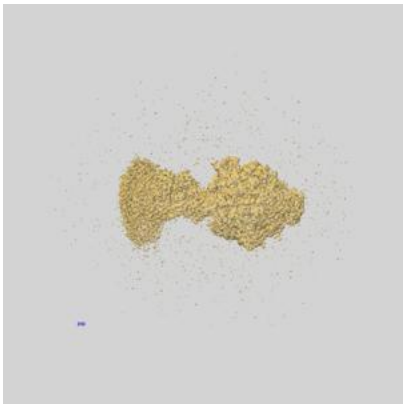
A mask typically either:

- Encompasses the whole structure
- Separates out a domain, a functional unit, a monomer or an area of interest from a larger structure

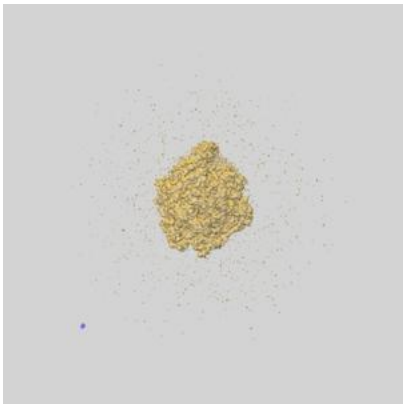
6.6.1 emd_4272_msk_1.map (i)



X



Y

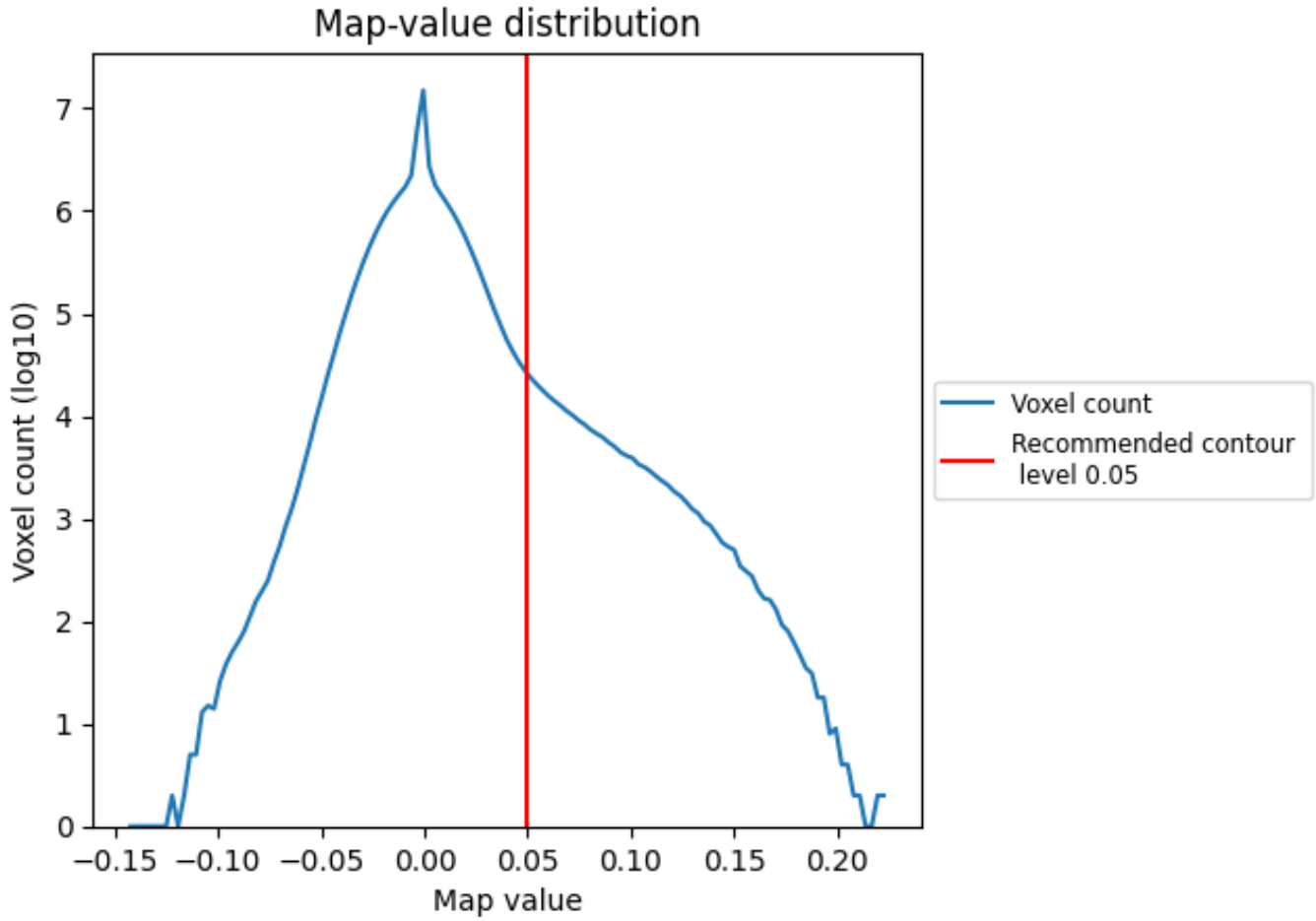


Z

7 Map analysis

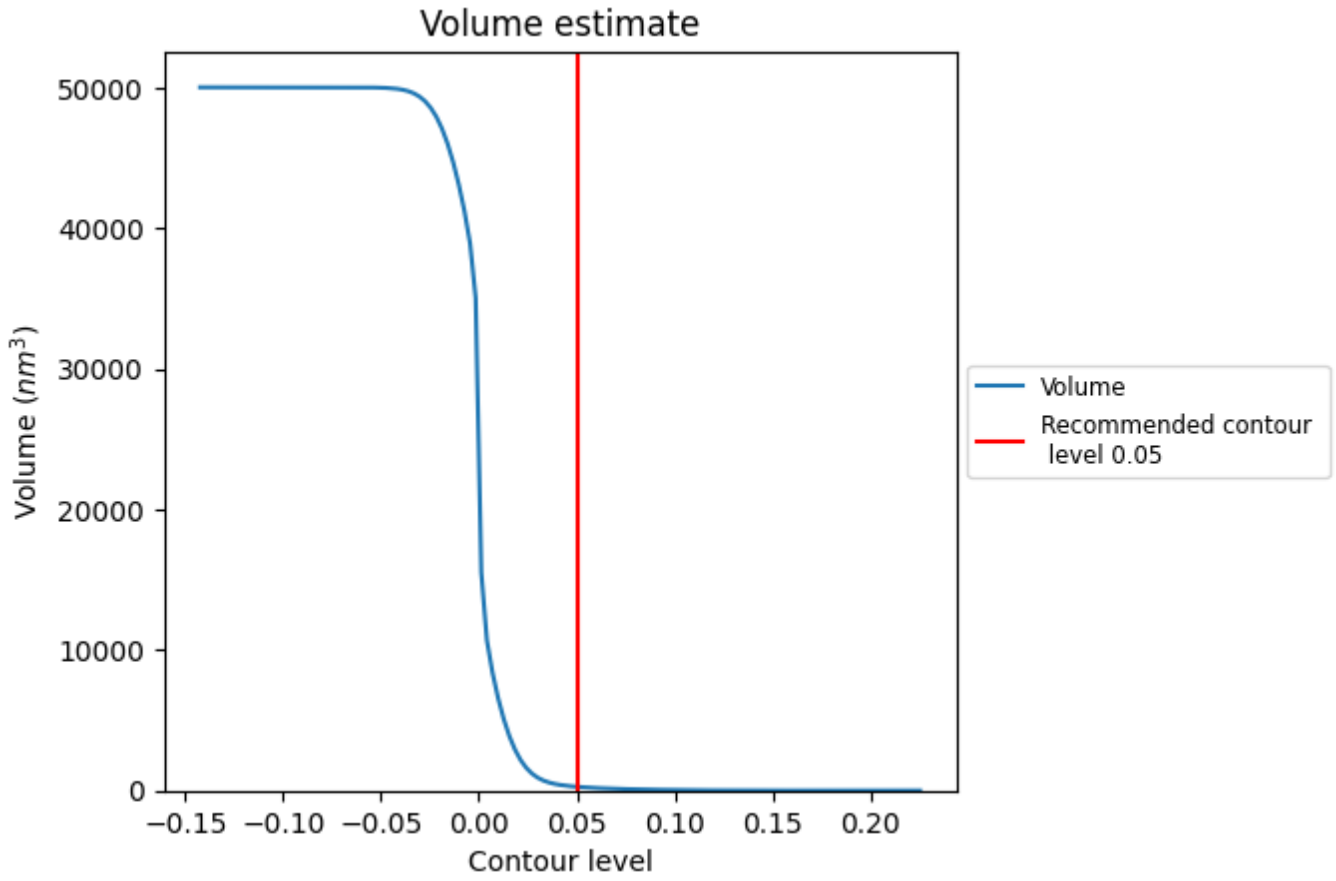
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

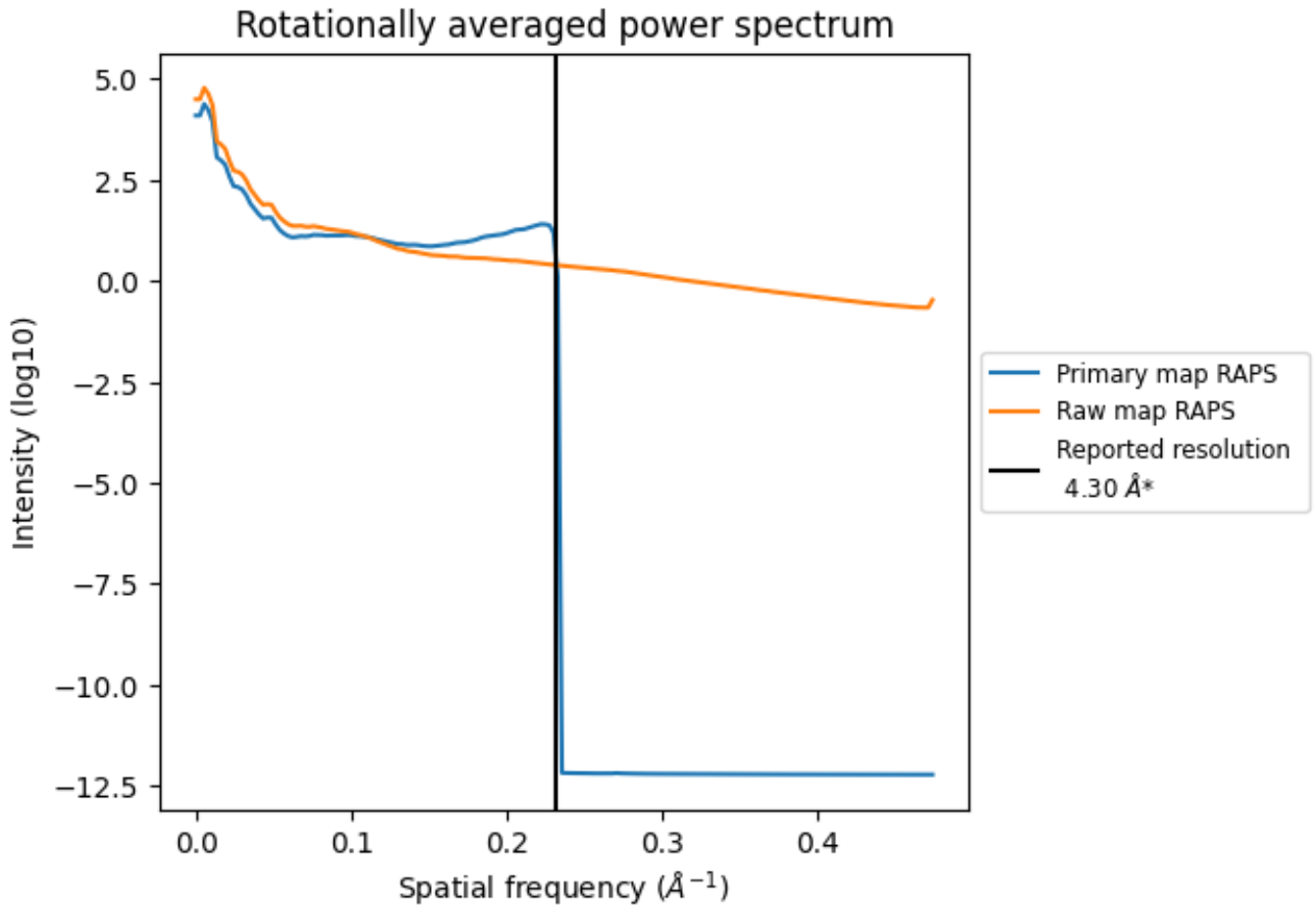
7.2 Volume estimate



The volume at the recommended contour level is 269 nm^3; this corresponds to an approximate mass of 243 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)

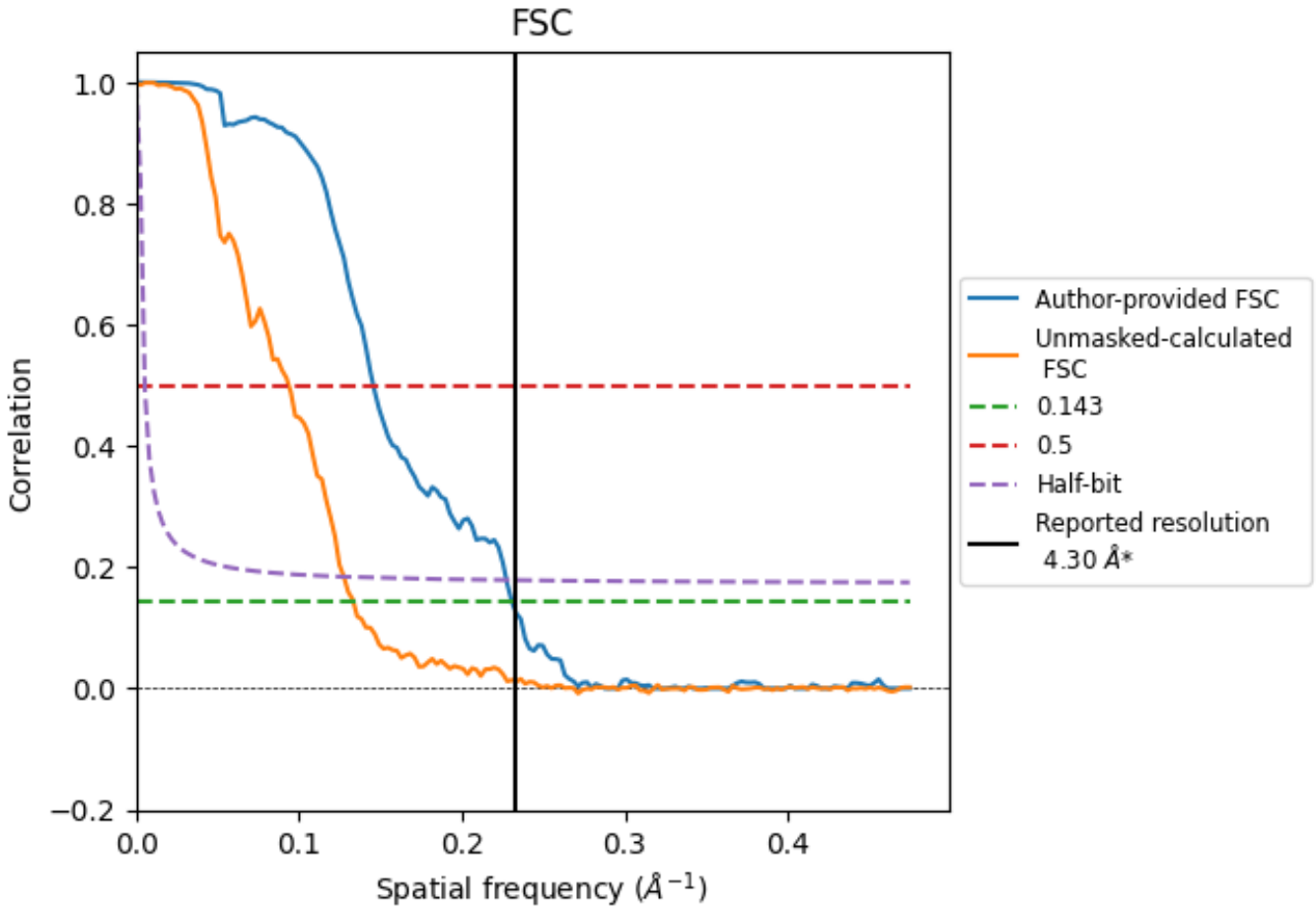


*Reported resolution corresponds to spatial frequency of 0.233 $Å^{-1}$

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.233 Å^{-1}

8.2 Resolution estimates (i)

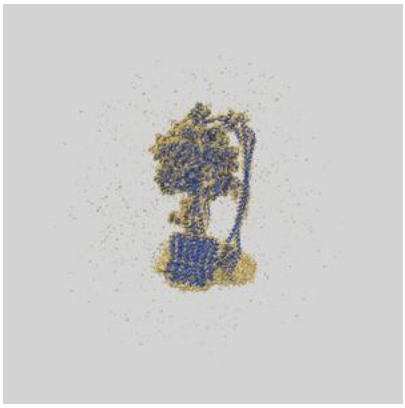
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.30	-	-
Author-provided FSC curve	4.33	6.87	4.40
Unmasked-calculated*	7.50	10.68	7.84

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 7.50 differs from the reported value 4.3 by more than 10 %

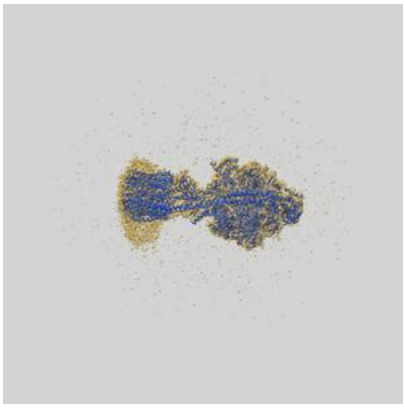
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-4272 and PDB model 6FKI. Per-residue inclusion information can be found in section 3 on page 8.

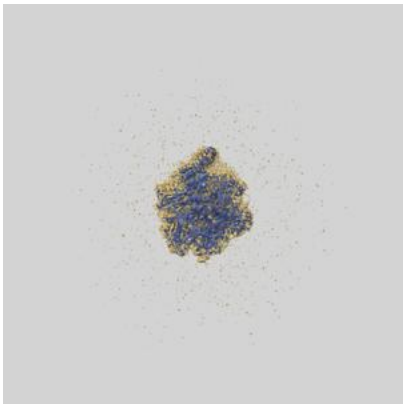
9.1 Map-model overlay



X



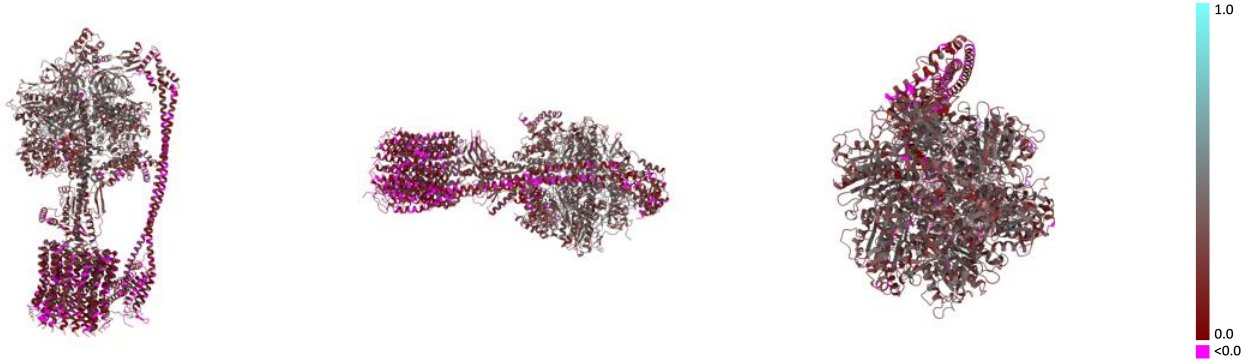
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.05 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.

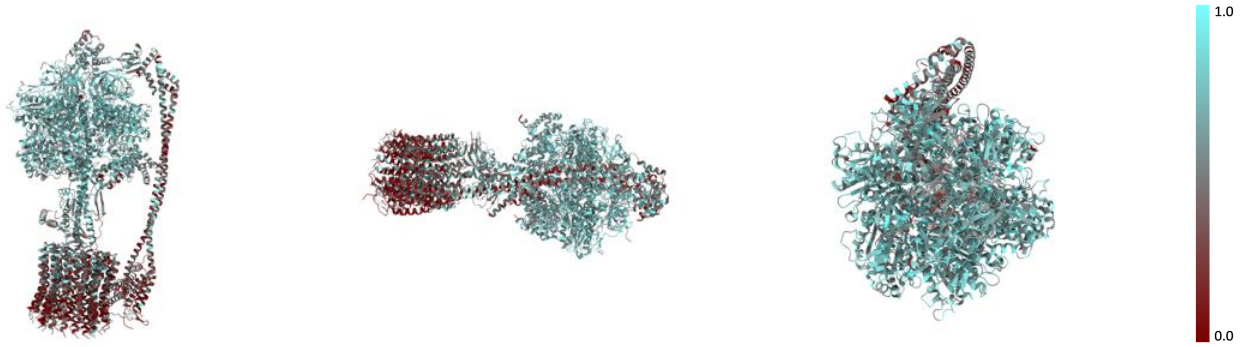
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

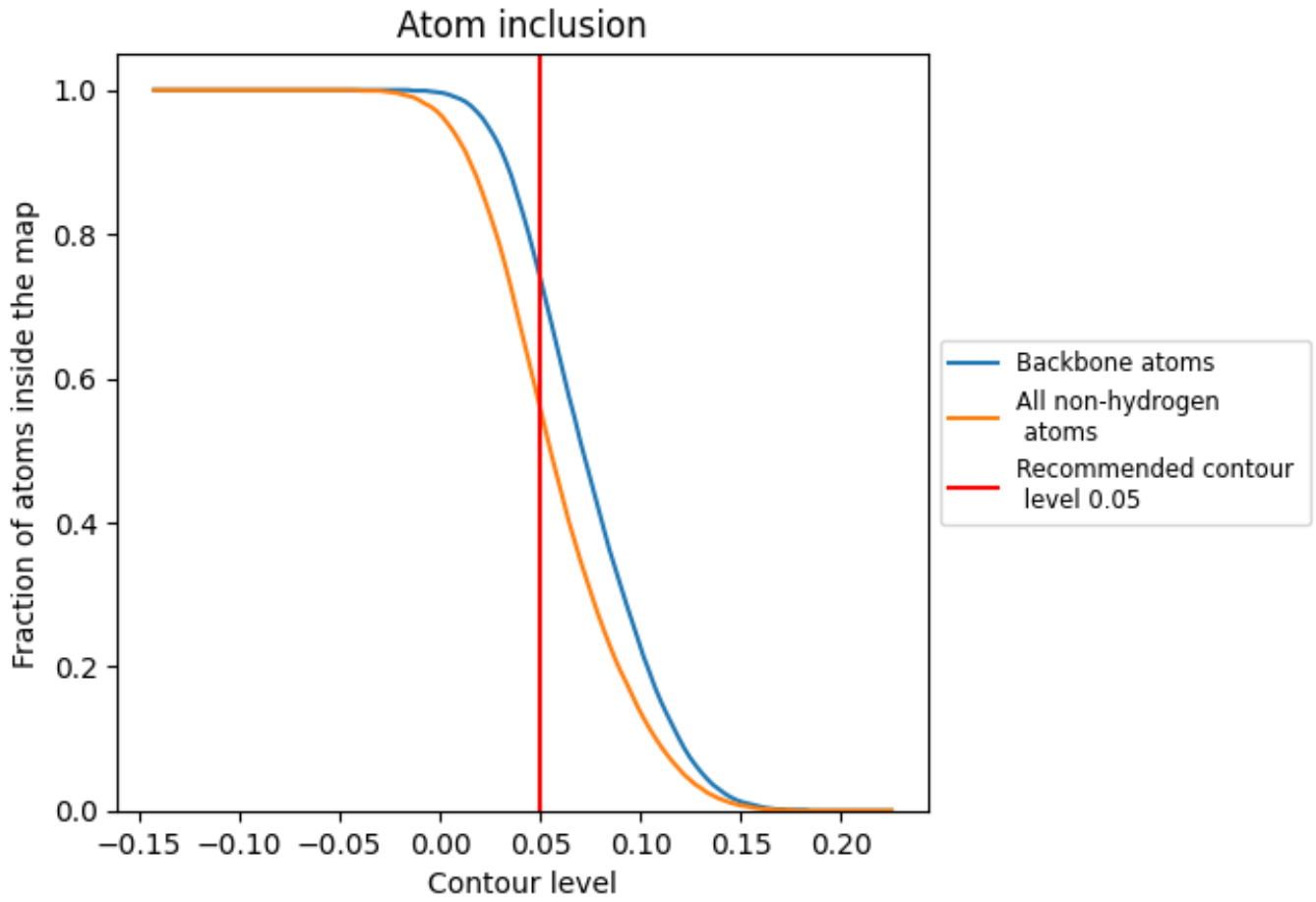
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion (i)



At the recommended contour level, 74% of all backbone atoms, 56% 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 (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5600	0.2530
A	0.6440	0.3040
B	0.6910	0.3370
C	0.6810	0.3170
D	0.7010	0.3390
E	0.6820	0.3290
F	0.6910	0.3440
G	0.3150	0.1020
H	0.3190	0.1190
I	0.3670	0.1480
J	0.3900	0.1260
K	0.3580	0.1500
L	0.3340	0.1390
M	0.3400	0.1560
N	0.3270	0.1300
O	0.3380	0.1450
P	0.3920	0.1470
Q	0.3340	0.0960
R	0.2410	0.1100
S	0.2650	0.1010
T	0.2670	0.1140
a	0.2850	0.0850
b	0.3610	0.0810
d	0.5470	0.2520
e	0.5370	0.1940
g	0.5880	0.2630
p	0.3650	0.0900