Full wwPDB EM Validation Report

Jun 18, 2025 – 02:43 PM JST

PDB ID	:	9JYY / pdb_00009jyy
EMDB ID	:	EMD-61909
Title	:	core proteins of mature T7
Authors	:	Liu, H.R.; Chen, W.Y.
Deposited on	:	2024-10-13
Resolution	:	3.00 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:

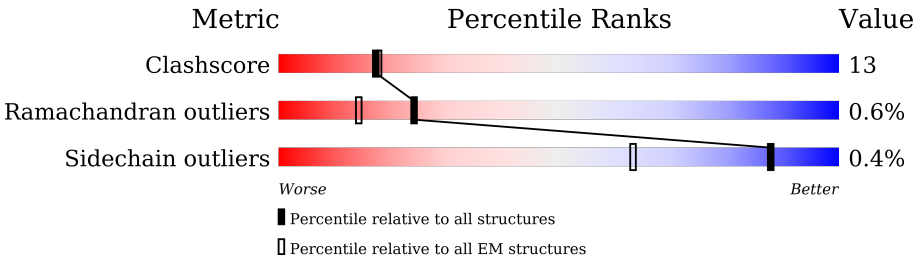
EMDB validation analysis	:	FAILED
MolProbity	:	4-5-2 with Phenix2.0rc1
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.44

1 Overall quality at a glance

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

The reported resolution of this entry is 3.00 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%

Mol	Chain	Length	Quality of chain
1	A	88	15% 5% 81%
1	B	88	13% 7% 81%
1	C	88	18% · 81%
1	D	88	13% 6% 82%
1	E	88	13% 6% 82%
1	F	88	16% · 82%
1	a	88	17% · 81%
1	b	88	14% 5% 82%
2	S	196	41% 16% 43%

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Mol	Chain	Length	Quality of chain
2	T	196	45% 11% 43%
2	c	196	42% 15% 43%
2	d	196	47% 10% 43%
2	e	196	43% 14% 43%
2	f	196	46% 10% 43%
2	g	196	42% 15% 43%
2	h	196	42% 14% 43%
3	G	747	62% 27% 10%
3	H	747	61% 29% 10%
3	M	747	60% 30% 10%
3	N	747	59% 31% 10%
3	O	747	60% 29% 10%
3	P	747	60% 29% 10%
3	Q	747	64% 26% 10%
3	R	747	59% 30% 10%
4	I	1318	64% 28% 7%
4	J	1318	64% 28% 7%
4	K	1318	63% 29% 7%
4	L	1318	64% 28% 7%

2 Entry composition (i)

There are 4 unique types of molecules in this entry. The entry contains 87740 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 Protein 6.7.

Mol	Chain	Residues	Atoms				AltConf	Trace
1	a	17	Total 116	C 66	N 17	O 33	0	0
1	b	16	Total 112	C 64	N 16	O 32	0	0
1	A	17	Total 116	C 66	N 17	O 33	0	0
1	D	16	Total 112	C 64	N 16	O 32	0	0
1	B	17	Total 116	C 66	N 17	O 33	0	0
1	E	16	Total 112	C 64	N 16	O 32	0	0
1	C	17	Total 116	C 66	N 17	O 33	0	0
1	F	16	Total 112	C 64	N 16	O 32	0	0

- Molecule 2 is a protein called Internal virion protein gp14.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	S	112	Total 843	C 513	N 160	O 165	S 5	0	0
2	T	111	Total 835	C 507	N 159	O 164	S 5	0	0
2	c	112	Total 843	C 513	N 160	O 165	S 5	0	0
2	d	111	Total 835	C 507	N 159	O 164	S 5	0	0
2	e	112	Total 843	C 513	N 160	O 165	S 5	0	0
2	f	111	Total 835	C 507	N 159	O 164	S 5	0	0
2	g	112	Total 843	C 513	N 160	O 165	S 5	0	0

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Mol	Chain	Residues	Atoms					AltConf	Trace
2	h	111	Total	C	N	O	S	0	0
			835	507	159	164	5		

- Molecule 3 is a protein called Internal virion protein gp15.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	M	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	N	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	O	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	P	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	Q	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	R	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	G	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		
3	H	671	Total	C	N	O	S	0	0
			5335	3300	940	1065	30		

- Molecule 4 is a protein called Peptidoglycan transglycosylase gp16.

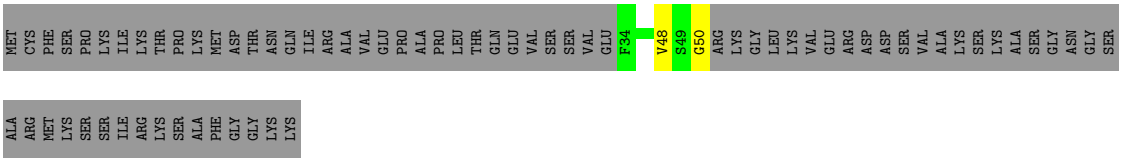
Mol	Chain	Residues	Atoms					AltConf	Trace
4	I	1223	Total	C	N	O	S	0	0
			9359	5853	1654	1805	47		
4	J	1223	Total	C	N	O	S	0	0
			9359	5853	1654	1805	47		
4	K	1223	Total	C	N	O	S	0	0
			9359	5853	1654	1805	47		
4	L	1223	Total	C	N	O	S	0	0
			9359	5853	1654	1805	47		

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. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

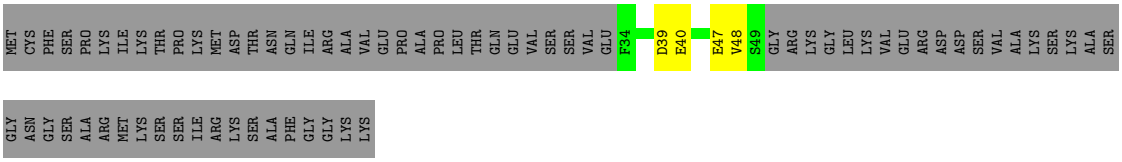
- Molecule 1: Protein 6.7

Chain a:



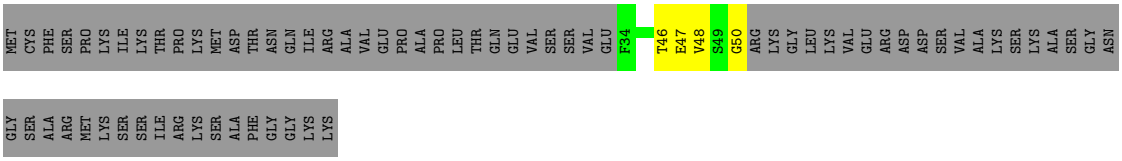
- Molecule 1: Protein 6.7

Chain b:



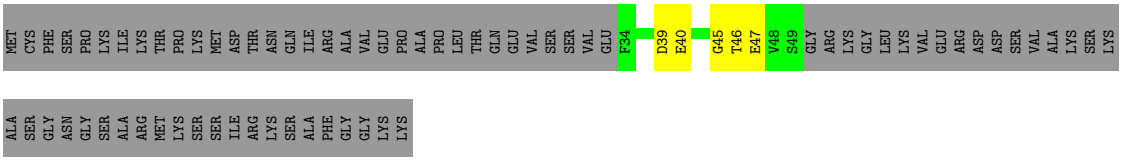
- Molecule 1: Protein 6.7

Chain A:



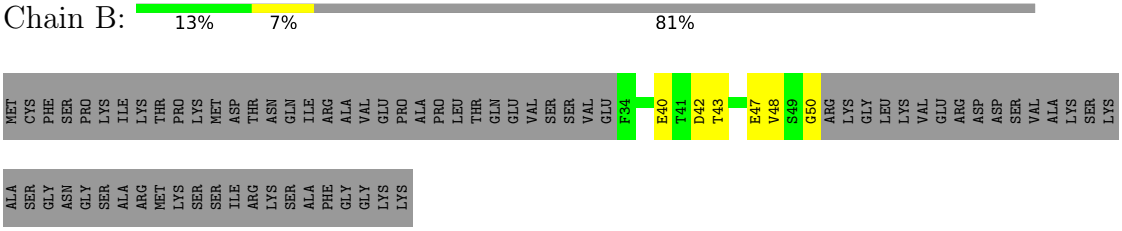
- Molecule 1: Protein 6.7

Chain D:



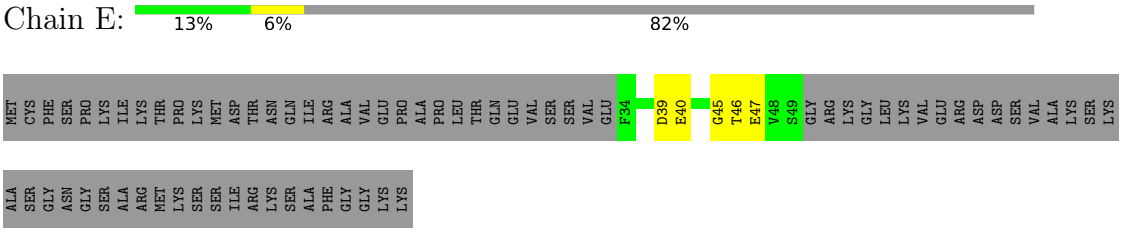
- Molecule 1: Protein 6.7

Chain B:



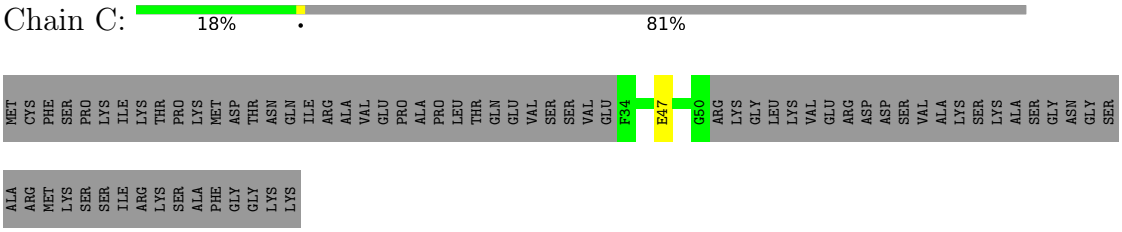
• Molecule 1: Protein 6.7

Chain E:



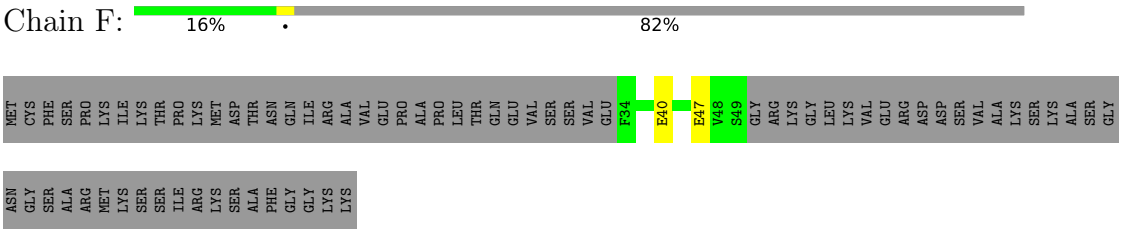
• Molecule 1: Protein 6.7

Chain C:



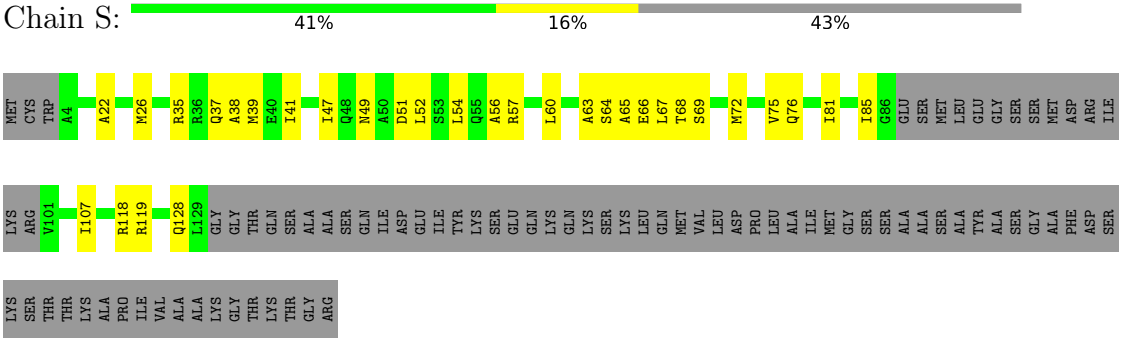
• Molecule 1: Protein 6.7

Chain F:



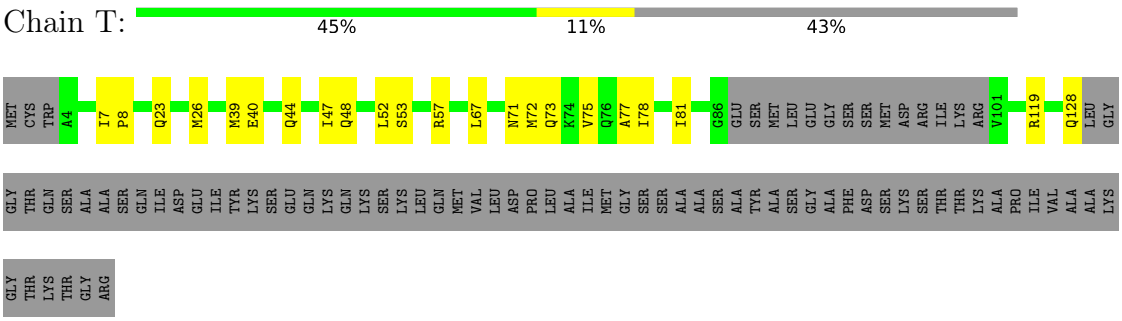
• Molecule 2: Internal virion protein gp14

Chain S:



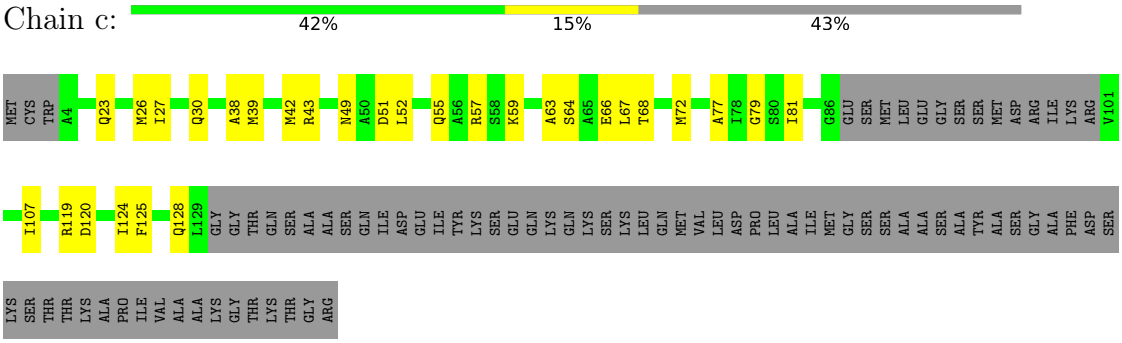
• Molecule 2: Internal virion protein gp14

Chain T:



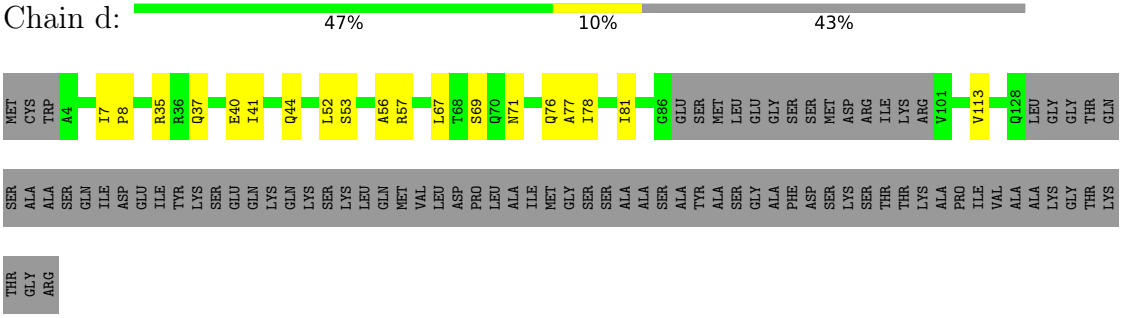
• Molecule 2: Internal virion protein gp14

Chain c:



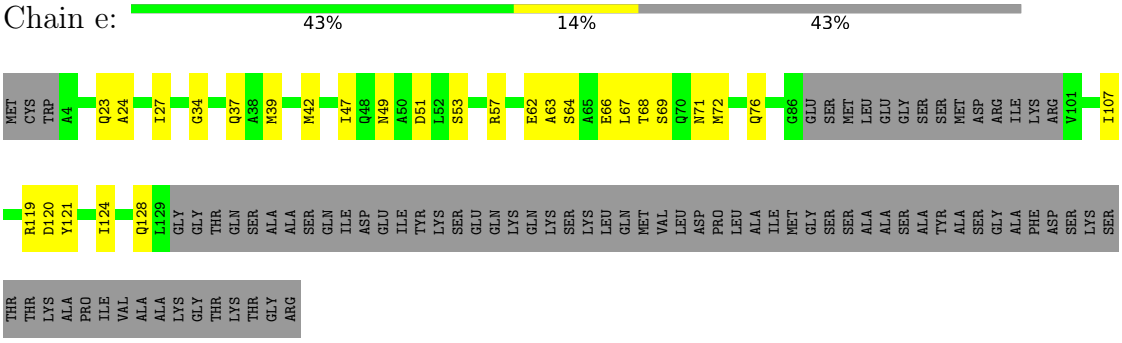
• Molecule 2: Internal virion protein gp14

Chain d:



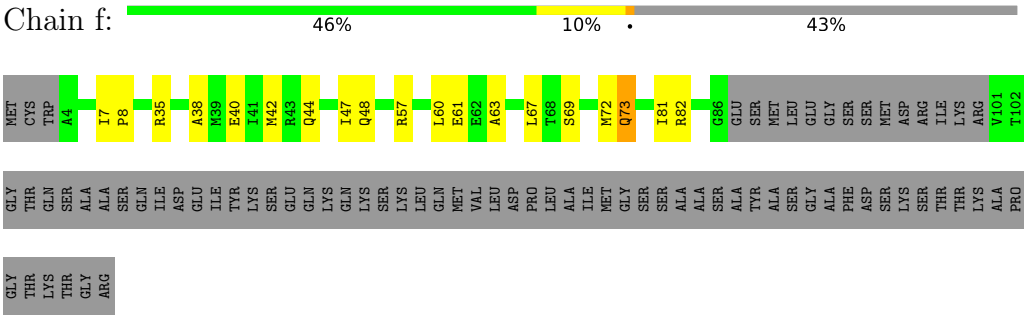
• Molecule 2: Internal virion protein gp14

Chain e:



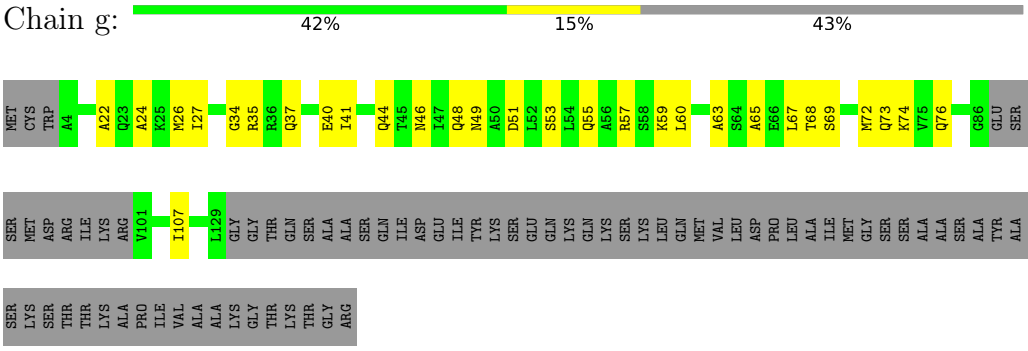
• Molecule 2: Internal virion protein gp14

Chain f:



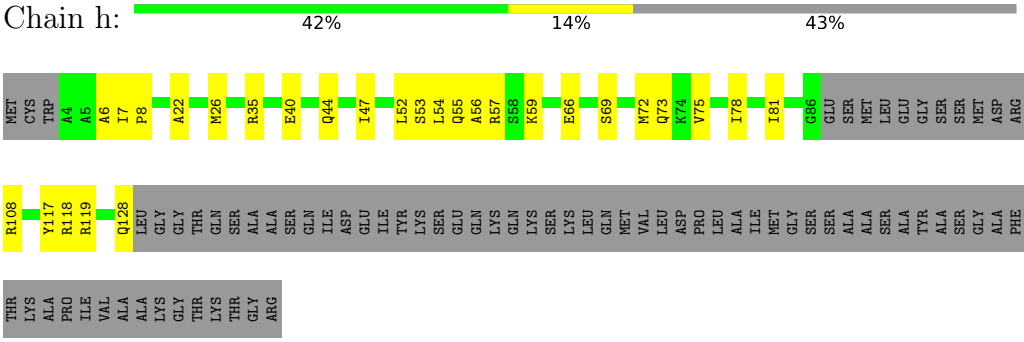
• Molecule 2: Internal virion protein gp14

Chain g:



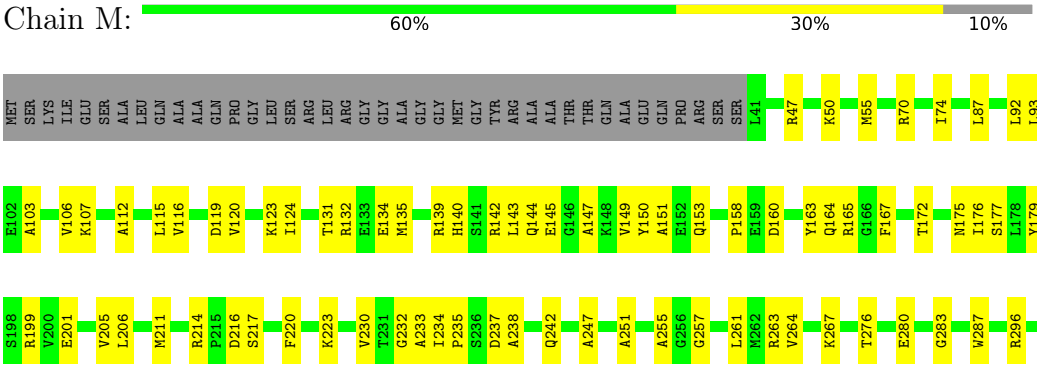
• Molecule 2: Internal virion protein gp14

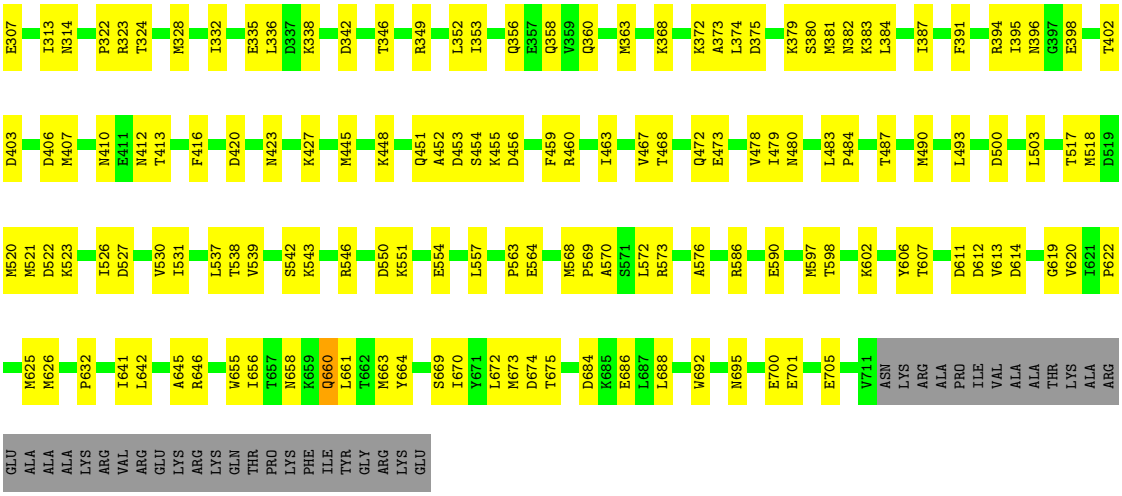
Chain h:



• Molecule 3: Internal virion protein gp15

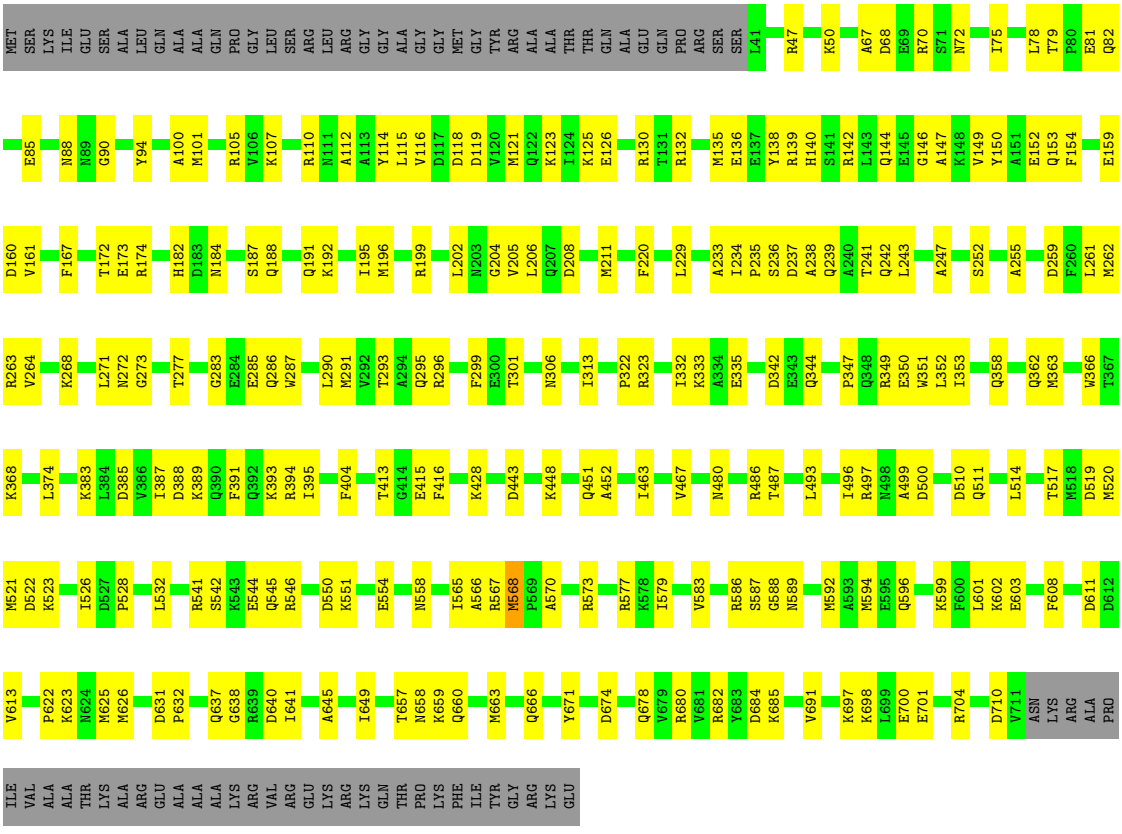
Chain M:





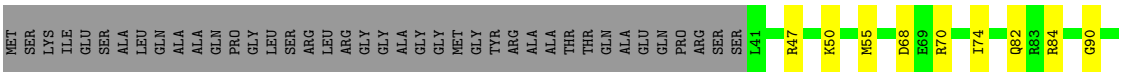
• Molecule 3: Internal virion protein gp15

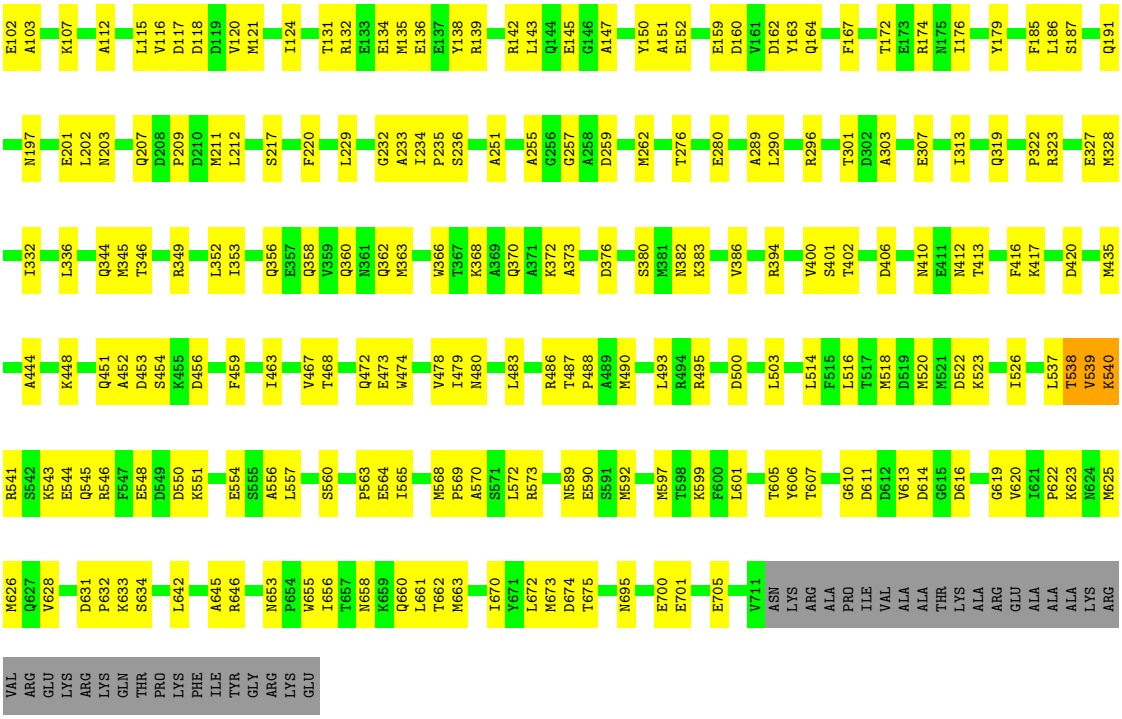
Chain N:



• Molecule 3: Internal virion protein gp15

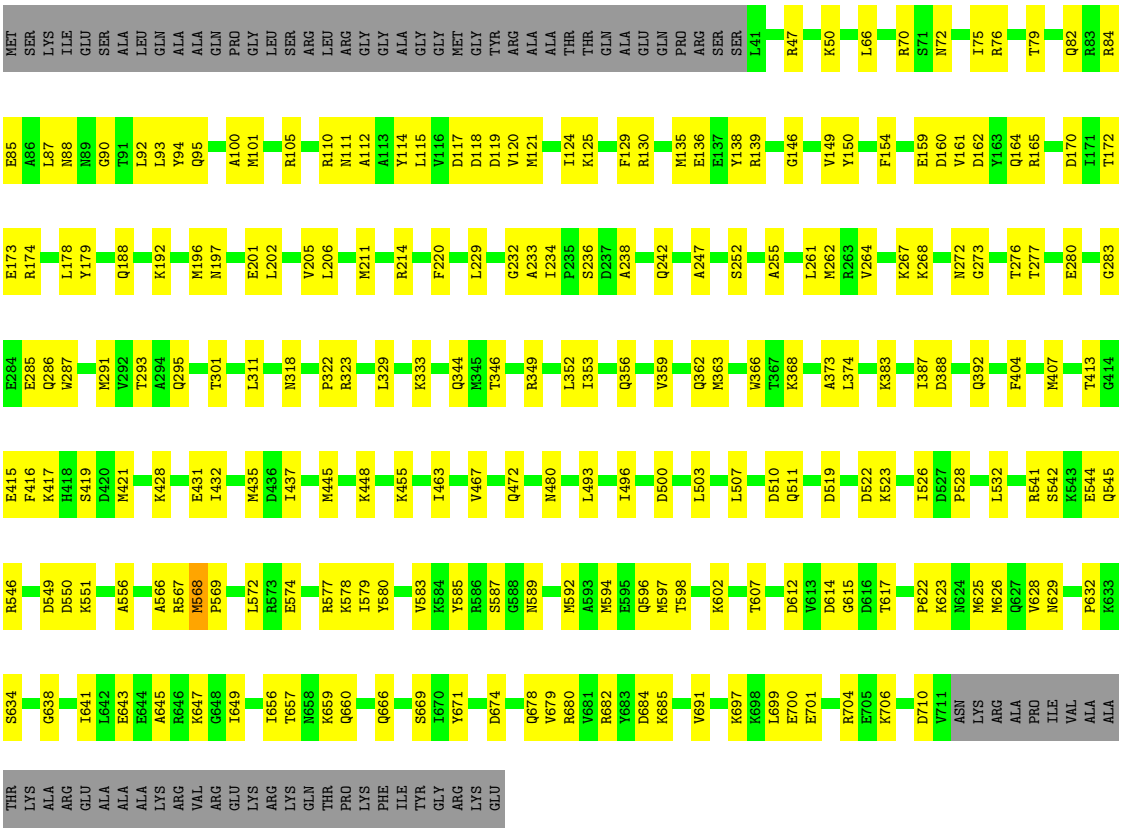
Chain O:





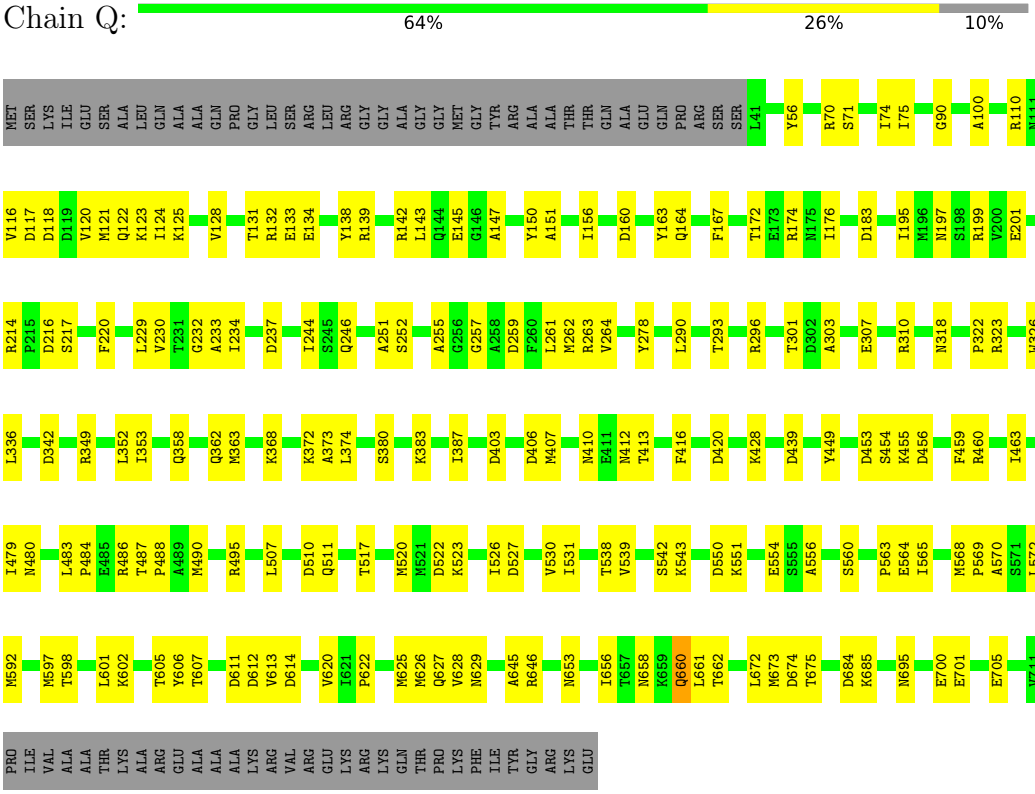
• Molecule 3: Internal virion protein gp15

Chain P:



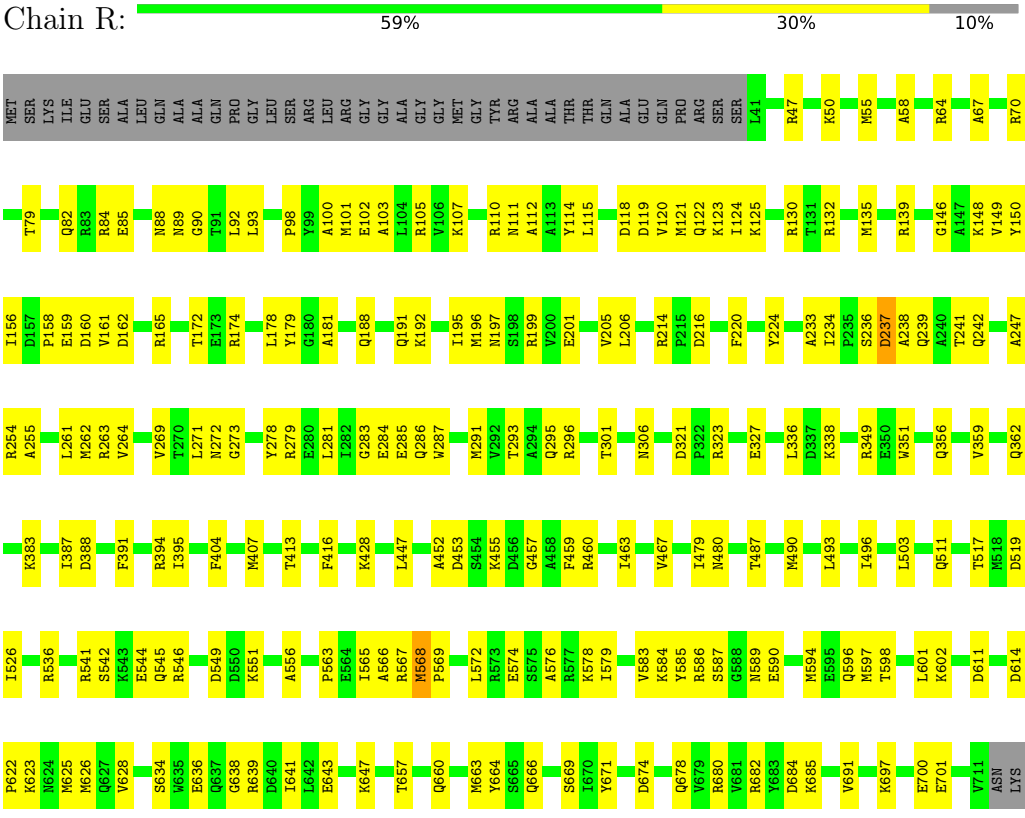
• Molecule 3: Internal virion protein gp15

Chain Q:



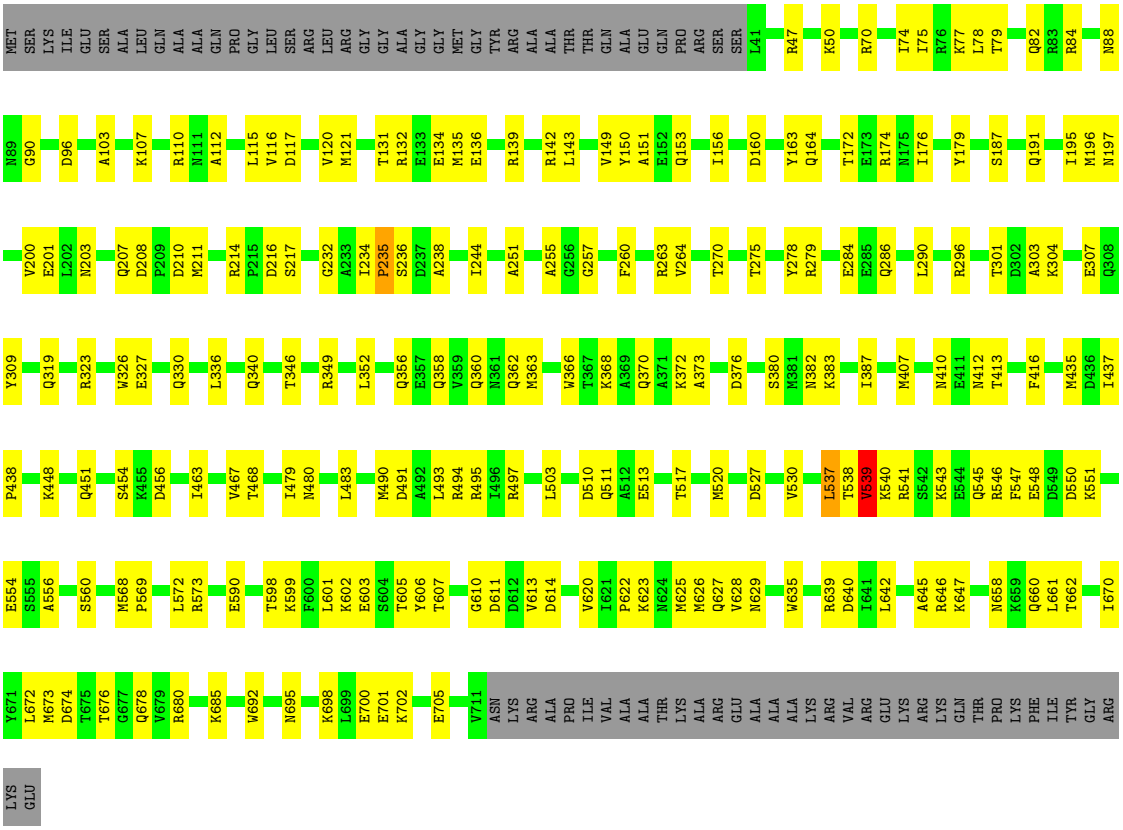
• Molecule 3: Internal virion protein gp15

Chain R:



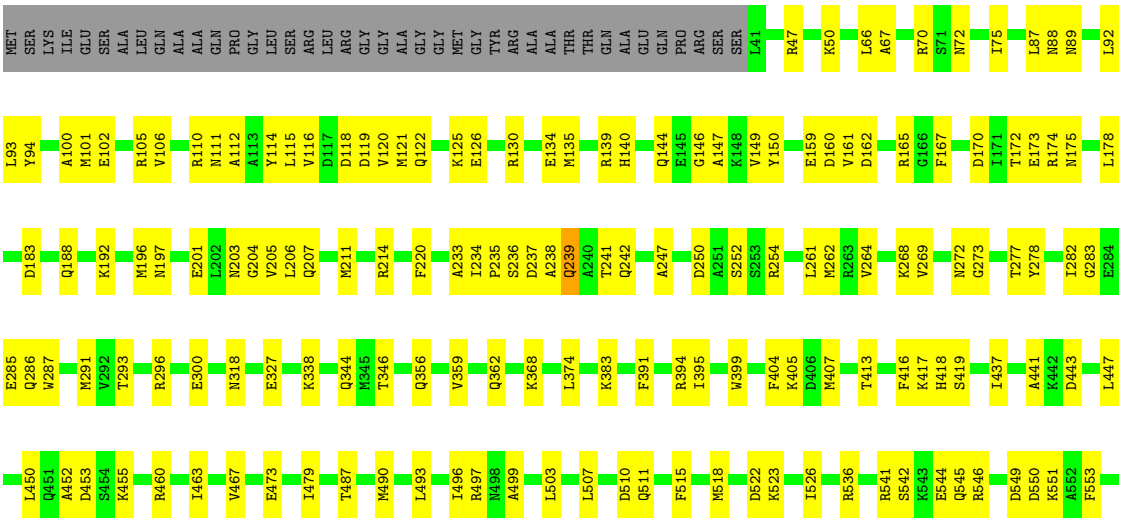
• Molecule 3: Internal virion protein gp15

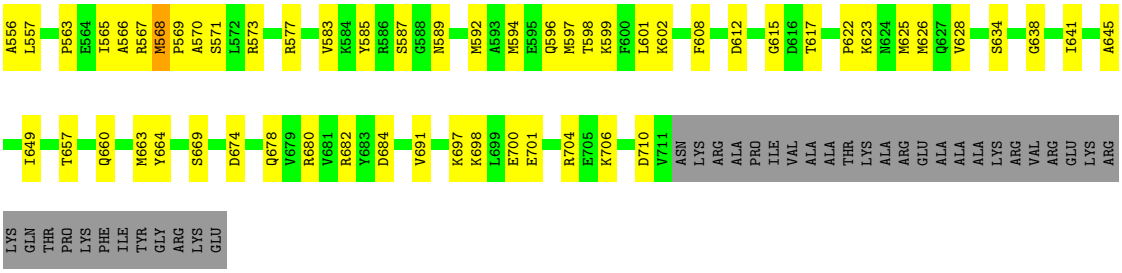
Chain G:



• Molecule 3: Internal virion protein gp15

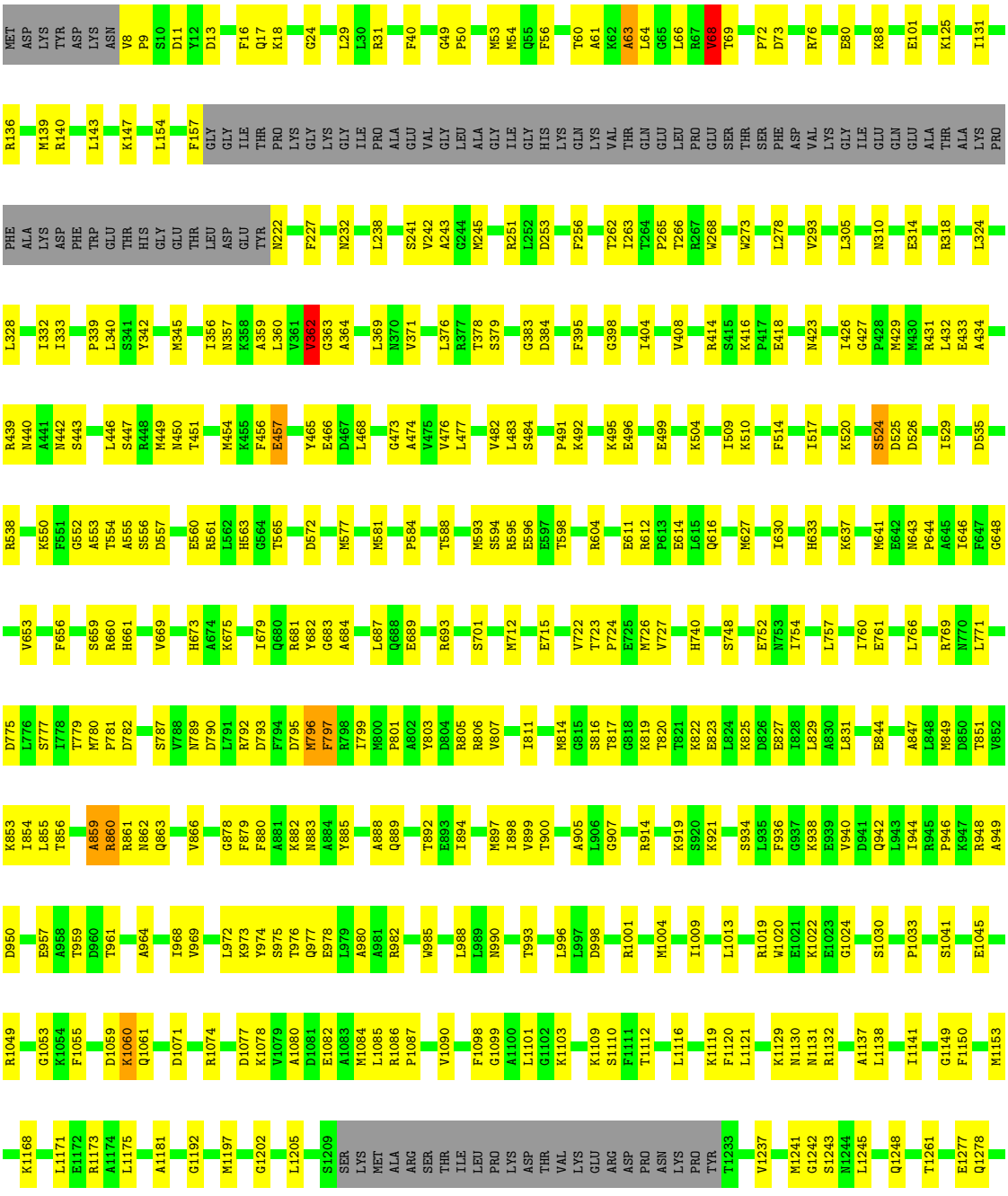
Chain H:

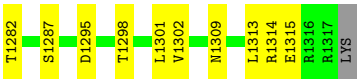




• Molecule 4: Peptidoglycan transglycosylase gp16

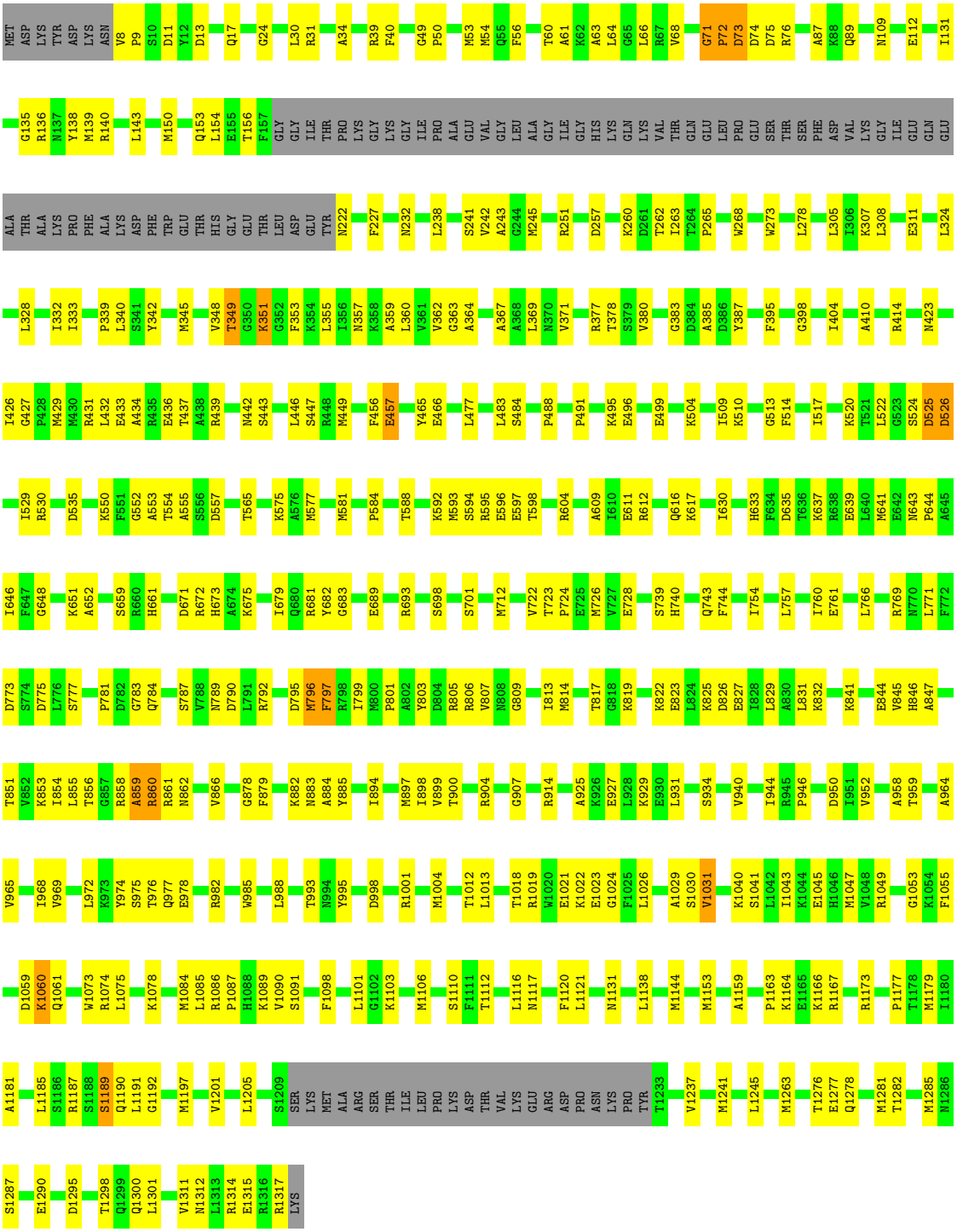
Chain I:





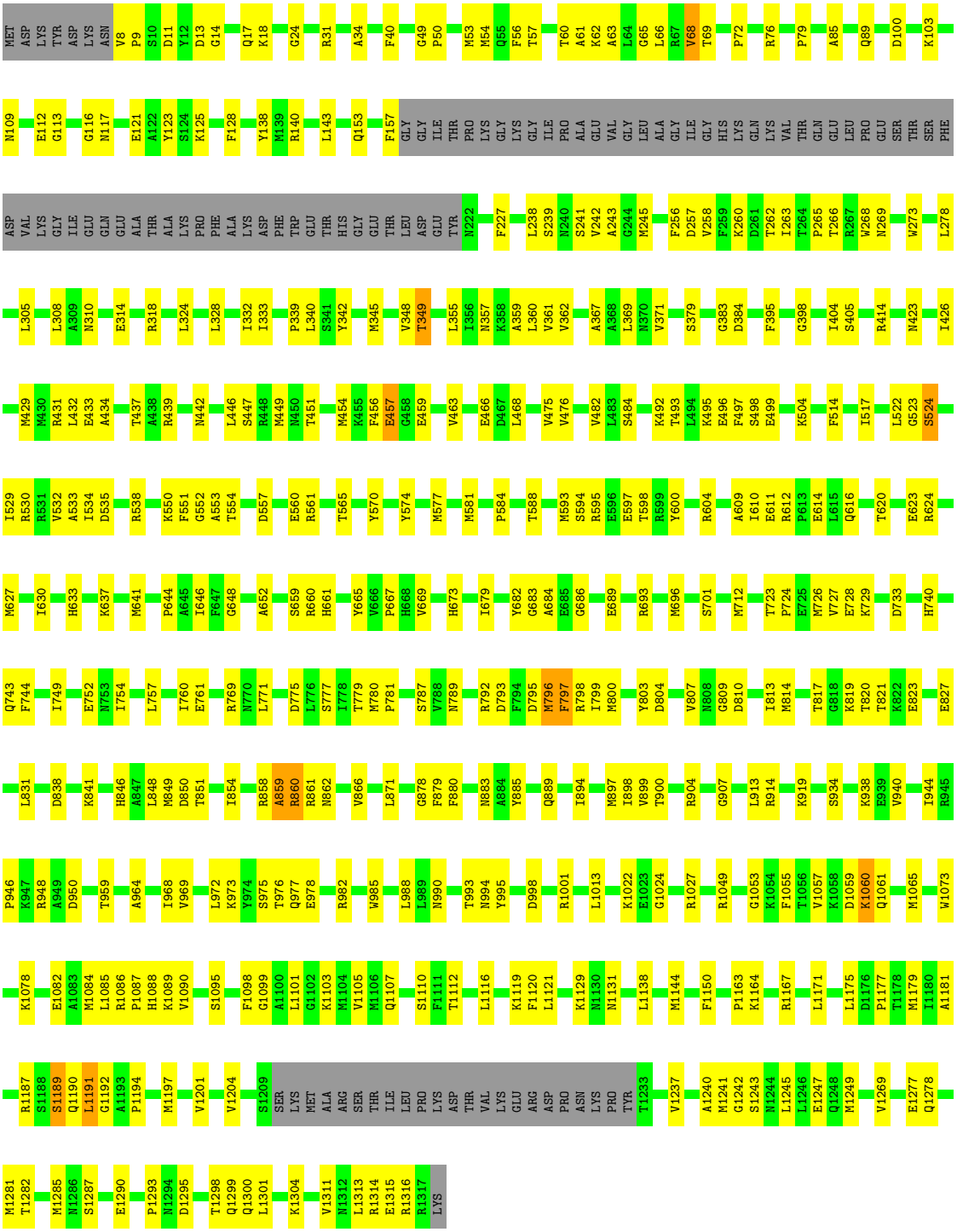
• Molecule 4: Peptidoglycan transglycosylase gp16

Chain J:



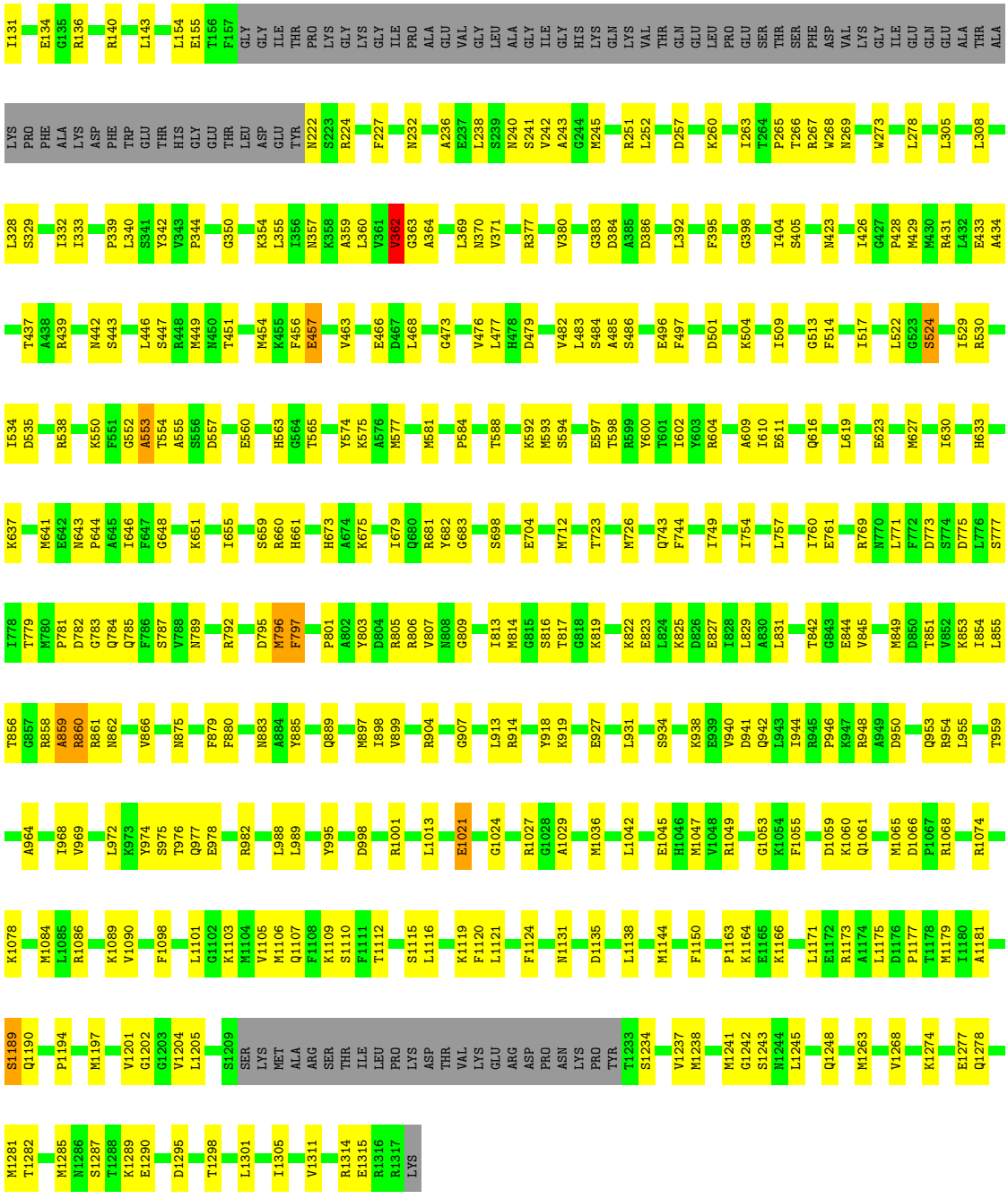
• Molecule 4: Peptidoglycan transglycosylase gp16

Chain K:



• Molecule 4: Peptidoglycan transglycosylase gp16

Chain L:


I131 E134 G135 R136 R140 L143 L154 E155 T156 F157 GLY GLY ILE THR PRO LYS GLY LYS GLY ILE PRO ALA GLU VAL GLY LEU ALA GLY ILE GLY HIS LYS GLN LYS VAL THR GLN GLU LEU PRO GLU SER THR SER PHE ASP VAL LYS GLY ILE GLU GLN GLU ALA THR ALA
LYS PRO PHE ALA LYS ASP PHE TRP GLU THR HIS GLY GLU THR LEU ASP GLU TYR N222 S223 R224 F227 N232 A236 E237 L238 S239 N240 S241 V242 A243 G244 M245 R251 L252 D257 K260 I263 T264 P265 T266 R267 W268 N269 W273 L278 L305 L308
L328 S329 I332 I333 P339 L340 S341 Y342 V343 P344 G350 K354 L355 I356 N357 K358 A359 L360 V361 V362 G363 A364 L369 N370 V371 R377 V380 G383 D384 A385 D386 L392 F395 G398 I404 S405 N423 I426 G427 P428 M429 M430 R431 L432 E433 A434
T437 A438 R439 N442 S443 L446 S447 R448 M449 N450 T451 M454 K455 F456 E457 V463 E466 D467 L468 G473 V476 L477 H478 D479 V482 L483 S484 A485 S486 E496 F497 D501 K504 I509 G513 F514 I517 L522 G523 S524 I529 R530
I534 D535 R538 K550 F551 G552 A553 T554 A555 S556 D557 E560 H563 G564 T565 Y574 K575 A576 M577 M581 P584 T588 K592 M593 S594 E597 T598 R599 Y600 T601 I602 Y603 R604 A609 I610 E611 Q616 L619 E623 M627 I630 H633
K637 M641 E642 N643 P644 A645 I646 F647 G648 K651 I655 S659 R660 H661 H673 A674 K675 I679 Q680 R681 Y682 G683 S698 E704 M712 T723 M726 Q743 F744 I749 I754 L757 I760 E761 R769 N770 L771 F772 D773 S774 D775 L776 S777
I778 T779 M780 P781 D782 G783 Q784 Q785 F786 S787 V788 N789 R792 D795 M796 F797 P801 A802 Y803 D804 R805 R806 V807 N808 G809 I813 M814 G815 S816 T817 G818 K819 K822 E823 L824 K825 D826 E827 I828 L829 A830 L831 T842 G843 E844 V845 M849 D850 T851 V852 K853 I854 L855
T856 G857 R858 A859 R860 R861 N862 V866 N875 P879 F880 N883 A884 Y885 Q889 M897 I898 V899 R904 G907 L913 R914 Y918 K919 E927 L931 S934 K938 E939 V940 D941 Q942 L943 I944 R945 P946 K947 R948 A949 D950 Q953 R954 L955 T959
A964 I968 V969 L972 K973 Y974 S975 T976 Q977 E978 R982 L988 L989 Y995 D998 R1001 L1013 E1021 G1024 R1027 G1028 A1029 M1036 L1042 E1045 H1046 M1047 V1048 R1049 G1053 K1054 F1055 D1059 K1060 Q1061 M1065 D1066 P1067 R1068 R1074
K1078 M1084 L1085 R1086 K1089 V1090 F1098 L1101 G1102 K1103 M1104 V1105 M1106 Q1107 F1108 K1109 S1110 F1111 T1112 S1115 L1116 K1119 F1120 L1121 F1124 N1131 D1135 L1138 M1144 F1150 P1163 K1164 E1165 K1166 L1171 E1172 R1173 A1174 L1175 D1176 P1177 T1178 M1179 I1180 A1181
S1189 Q1190 P1194 M1197 V1201 G1202 G1203 V1204 L1205 S1209 SER LYS MET ALA ARG SER THR ILE LEU PRO LYS ASP THR VAL LYS GLU ARG ASP PRO ASN LYS PRO TYR T1233 S1234 V1237 M1238 M1241 G1242 S1243 N1244 L1245 Q1248 M1263 V1268 K1274 E1277 Q1278
M1281 T1282 M1285 N1286 S1287 T1288 K1289 E1290 D1295 T1298 L1301 I1305 V1311 R1314 E1315 R1316 R1317 LYS

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	45731	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	35	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.14	0/116	0.33	0/155
1	B	0.18	0/116	0.38	0/155
1	C	0.14	0/116	0.34	0/155
1	D	0.21	0/112	0.42	0/150
1	E	0.21	0/112	0.43	0/150
1	F	0.20	0/112	0.46	0/150
1	a	0.18	0/116	0.31	0/155
1	b	0.20	0/112	0.41	0/150
2	S	0.21	0/846	0.42	0/1135
2	T	0.21	0/838	0.41	0/1124
2	c	0.19	0/846	0.42	0/1135
2	d	0.19	0/838	0.37	0/1124
2	e	0.18	0/846	0.39	0/1135
2	f	0.25	0/838	0.47	1/1124 (0.1%)
2	g	0.19	0/846	0.40	0/1135
2	h	0.18	0/838	0.38	0/1124
3	G	0.28	0/5415	0.52	5/7291 (0.1%)
3	H	0.27	0/5415	0.48	2/7291 (0.0%)
3	M	0.29	0/5415	0.53	6/7291 (0.1%)
3	N	0.28	0/5415	0.47	1/7291 (0.0%)
3	O	0.28	0/5415	0.50	5/7291 (0.1%)
3	P	0.27	0/5415	0.45	0/7291
3	Q	0.29	0/5415	0.52	5/7291 (0.1%)
3	R	0.27	0/5415	0.45	0/7291
4	I	0.29	0/9514	0.52	5/12824 (0.0%)
4	J	0.29	0/9514	0.54	11/12824 (0.1%)
4	K	0.29	0/9514	0.53	6/12824 (0.0%)
4	L	0.30	0/9514	0.55	11/12824 (0.1%)
All	All	0.28	0/89024	0.50	58/119880 (0.0%)

There are no bond length outliers.

All (58) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	Q	538	THR	N-CA-C	12.31	124.70	111.28
3	M	538	THR	N-CA-C	11.54	123.85	111.28
3	O	540	LYS	N-CA-C	10.10	122.29	111.28
3	G	540	LYS	N-CA-C	9.92	122.10	111.28
3	M	537	LEU	N-CA-C	9.13	121.00	111.14
4	L	72	PRO	N-CA-C	-9.10	102.83	114.03
4	L	524	SER	N-CA-C	8.81	120.89	111.28
3	M	542	SER	N-CA-C	8.40	123.12	108.75
4	I	525	ASP	N-CA-C	8.32	122.86	111.54
3	G	236	SER	N-CA-C	8.24	121.86	110.24
3	Q	542	SER	N-CA-C	8.16	122.70	108.75
3	G	539	VAL	N-CA-C	-7.80	103.66	111.77
4	I	524	SER	N-CA-C	7.55	120.95	108.49
4	K	348	VAL	N-CA-C	7.54	119.11	108.93
4	K	65	GLY	N-CA-C	7.50	121.73	112.73
3	Q	237	ASP	N-CA-C	-7.49	103.11	111.28
4	L	238	LEU	N-CA-C	7.44	119.47	111.36
4	L	797	PHE	N-CA-C	-7.36	104.27	113.55
3	O	538	THR	N-CA-C	7.34	121.06	109.39
4	J	72	PRO	N-CA-C	-7.33	105.02	114.03
4	I	73	ASP	N-CA-C	6.93	120.24	108.67
4	K	349	THR	N-CA-C	-6.86	98.21	109.40
3	N	451	GLN	N-CA-C	-6.83	101.52	110.53
3	G	538	THR	N-CA-C	6.74	119.62	108.49
4	I	68	VAL	N-CA-C	-6.68	106.62	113.10
3	O	539	VAL	N-CA-C	-6.67	104.84	111.77
4	J	525	ASP	N-CA-C	6.48	118.85	108.41
2	f	48	GLN	N-CA-C	6.42	118.84	110.43
4	J	353	PHE	N-CA-C	6.38	119.62	108.52
3	M	342	ASP	N-CA-C	6.37	118.30	111.36
4	L	1189	SER	N-CA-C	6.31	118.16	111.28
4	L	71	GLY	CA-C-N	-6.18	113.44	119.87
4	L	71	GLY	C-N-CA	-6.18	113.44	119.87
3	O	235	PRO	N-CA-C	6.18	121.03	111.21
4	K	1189	SER	N-CA-C	6.12	117.95	111.28
4	J	797	PHE	N-CA-C	-5.95	105.02	112.93
4	K	797	PHE	N-CA-C	-5.92	105.06	112.93
4	I	797	PHE	N-CA-C	-5.92	105.06	112.93
4	J	349	THR	N-CA-C	-5.88	100.32	109.72
4	J	71	GLY	CA-C-N	-5.85	113.78	119.87
4	J	71	GLY	C-N-CA	-5.85	113.78	119.87
4	L	553	ALA	CA-C-N	5.67	132.37	121.54
4	L	553	ALA	C-N-CA	5.67	132.37	121.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	Q	342	ASP	N-CA-C	5.60	117.38	111.28
3	H	235	PRO	N-CA-C	5.57	121.44	113.47
4	L	1164	LYS	N-CA-C	5.52	122.55	110.80
3	Q	230	VAL	N-CA-C	5.48	116.21	110.62
3	M	237	ASP	N-CA-C	-5.44	105.45	111.71
4	J	348	VAL	N-CA-C	5.39	115.95	108.84
3	O	236	SER	N-CA-C	5.34	123.97	113.29
4	K	1191	LEU	N-CA-C	5.28	120.08	111.37
3	M	230	VAL	N-CA-C	5.25	115.98	110.62
3	H	237	ASP	N-CA-C	-5.23	105.05	111.75
4	J	1189	SER	N-CA-C	5.21	116.95	111.28
3	G	238	ALA	N-CA-C	5.20	116.95	111.28
4	J	74	ASP	N-CA-C	-5.17	106.93	113.18
4	J	73	ASP	CB-CA-C	-5.14	110.67	116.63
4	L	73	ASP	CB-CA-C	-5.14	110.67	116.63

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	116	0	91	4	0
1	B	116	0	91	4	0
1	C	116	0	91	1	0
1	D	112	0	88	5	0
1	E	112	0	88	6	0
1	F	112	0	88	3	0
1	a	116	0	91	1	0
1	b	112	0	88	5	0
2	S	843	0	852	29	0
2	T	835	0	841	22	0
2	c	843	0	852	22	0
2	d	835	0	841	18	0
2	e	843	0	852	21	0
2	f	835	0	841	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	g	843	0	852	22	0
2	h	835	0	841	23	0
3	G	5335	0	5232	164	0
3	H	5335	0	5232	164	0
3	M	5335	0	5232	168	0
3	N	5335	0	5232	188	0
3	O	5335	0	5232	170	0
3	P	5335	0	5232	186	0
3	Q	5335	0	5232	143	0
3	R	5335	0	5232	183	0
4	I	9359	0	9352	280	0
4	J	9359	0	9352	275	0
4	K	9359	0	9352	274	0
4	L	9359	0	9352	283	0
All	All	87740	0	86752	2346	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 13.

All (2346) 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)
4:J:64:LEU:HD11	4:J:89:GLN:OE1	1.44	1.17
3:P:79:THR:H	3:P:82:GLN:HE21	1.14	0.95
4:K:669:VAL:HG11	4:K:799:ILE:HD12	1.49	0.95
4:I:669:VAL:HG11	4:I:799:ILE:HD12	1.51	0.91
2:f:42:MET:HG3	3:R:196:MET:HE3	1.54	0.89
3:N:678:GLN:NE2	4:J:449:MET:SD	2.47	0.88
3:O:590:GLU:H	3:P:541:ARG:HG3	1.36	0.88
3:R:678:GLN:HE21	4:L:449:MET:HE1	1.37	0.88
4:L:1314:ARG:HG3	4:L:1315:GLU:H	1.40	0.87
3:Q:590:GLU:H	3:R:541:ARG:HG3	1.39	0.87
3:P:678:GLN:NE2	4:K:449:MET:SD	2.48	0.87
4:K:993:THR:HG23	4:K:1085:LEU:HD21	1.56	0.87
3:M:590:GLU:H	3:N:541:ARG:HG3	1.40	0.86
4:K:398:GLY:HA3	4:K:429:MET:HE3	1.57	0.86
3:G:383:LYS:HB3	3:G:413:THR:HG23	1.61	0.83
4:K:904:ARG:HH22	4:K:1314:ARG:HD3	1.42	0.83
4:J:1314:ARG:HG3	4:J:1315:GLU:H	1.44	0.83
3:M:695:ASN:ND2	4:J:245:MET:SD	2.53	0.82
4:K:959:THR:HG21	4:K:1078:LYS:HE2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:383:LYS:HB3	3:H:413:THR:HG23	1.63	0.81
3:R:404:PHE:HA	3:R:407:MET:HG3	1.63	0.80
4:L:1090:VAL:HG11	4:L:1110:SER:HB2	1.63	0.80
4:I:861:ARG:HH21	4:I:1205:LEU:HD11	1.46	0.80
3:Q:383:LYS:HB3	3:Q:413:THR:HG23	1.64	0.79
4:L:263:ILE:HD11	4:L:1116:LEU:HD22	1.63	0.79
3:P:404:PHE:HA	3:P:407:MET:HG3	1.62	0.79
3:R:383:LYS:HB3	3:R:413:THR:HG23	1.63	0.79
3:P:383:LYS:HB3	3:P:413:THR:HG23	1.65	0.78
3:G:590:GLU:H	3:H:541:ARG:HG3	1.47	0.78
3:H:563:PRO:HB3	3:H:617:THR:HG21	1.66	0.78
3:M:551:LYS:HD2	4:J:308:LEU:HD11	1.65	0.78
4:J:263:ILE:HD11	4:J:1116:LEU:HD22	1.66	0.78
4:J:976:THR:O	4:J:977:GLN:HG2	1.84	0.78
3:M:383:LYS:HB3	3:M:413:THR:HG23	1.65	0.78
3:R:125:LYS:HZ3	3:R:178:LEU:HD12	1.46	0.78
3:G:695:ASN:ND2	4:I:245:MET:SD	2.57	0.78
4:I:1090:VAL:HG11	4:I:1110:SER:HB2	1.64	0.77
3:O:383:LYS:HB3	3:O:413:THR:HG23	1.66	0.77
3:R:569:PRO:HG2	3:R:572:LEU:HD13	1.66	0.77
3:H:125:LYS:NZ	3:H:135:MET:SD	2.57	0.77
3:G:647:LYS:HD2	3:H:405:LYS:HG3	1.67	0.77
3:H:678:GLN:NE2	4:I:449:MET:SD	2.57	0.77
4:J:681:ARG:HH21	4:J:682:TYR:HE2	1.31	0.76
4:I:959:THR:HG21	4:I:1078:LYS:HE2	1.67	0.76
3:N:383:LYS:HB3	3:N:413:THR:HG23	1.66	0.76
4:J:968:ILE:HG13	4:J:969:VAL:HG23	1.69	0.75
4:K:241:SER:O	4:K:243:ALA:N	2.20	0.75
3:Q:483:LEU:HD12	3:Q:484:PRO:HD2	1.69	0.75
4:J:377:ARG:NH2	4:K:978:GLU:OE2	2.20	0.75
3:M:568:MET:HE3	3:M:573:ARG:HA	1.67	0.75
3:M:520:MET:HB3	3:M:526:ILE:HD11	1.69	0.75
3:G:360:GLN:NE2	3:H:285:GLU:OE2	2.20	0.74
3:R:563:PRO:HB3	3:R:617:THR:HG21	1.68	0.74
3:M:557:LEU:HD11	3:M:597:MET:HE1	1.69	0.74
4:L:959:THR:HG21	4:L:1078:LYS:HE2	1.70	0.73
4:K:595:ARG:HG2	4:K:1192:GLY:HA3	1.69	0.73
3:P:710:ASP:OD2	3:R:295:GLN:NE2	2.20	0.73
3:R:201:GLU:OE1	3:G:110:ARG:NH2	2.21	0.73
4:L:355:LEU:HD21	4:L:433:GLU:HG3	1.70	0.73
4:I:369:LEU:HD21	4:J:24:GLY:H	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:241:SER:O	4:L:243:ALA:N	2.21	0.73
4:L:456:PHE:O	4:L:457:GLU:HG3	1.89	0.73
4:L:38:SER:HB2	4:L:41:VAL:HG12	1.70	0.73
3:H:118:ASP:OD1	3:H:139:ARG:NH1	2.21	0.73
3:O:360:GLN:NE2	3:P:285:GLU:OE1	2.22	0.73
4:I:416:LYS:HZ2	4:I:418:GLU:H	1.37	0.72
3:O:520:MET:HB3	3:O:526:ILE:HD11	1.71	0.72
3:P:125:LYS:HZ1	3:P:178:LEU:HB3	1.53	0.72
4:L:1045:GLU:OE2	4:L:1068:ARG:NH2	2.21	0.72
3:R:214:ARG:O	3:R:263:ARG:NH2	2.23	0.72
4:I:1314:ARG:HG2	4:I:1315:GLU:H	1.54	0.72
3:G:214:ARG:HE	3:G:216:ASP:HB2	1.55	0.72
2:T:73:GLN:NE2	3:N:204:GLY:O	2.22	0.72
3:N:160:ASP:OD1	3:N:161:VAL:N	2.23	0.72
3:P:550:ASP:OD1	3:P:577:ARG:NH2	2.22	0.72
3:G:200:VAL:HG11	3:H:111:ASN:HD21	1.53	0.72
4:L:998:ASP:OD1	4:L:1001:ARG:NH2	2.23	0.72
4:K:611:GLU:OE1	4:K:792:ARG:NH1	2.20	0.72
4:J:241:SER:O	4:J:243:ALA:N	2.23	0.71
3:P:85:GLU:HA	3:P:88:ASN:HD21	1.55	0.71
2:d:78:ILE:HG12	3:P:211:MET:HE1	1.71	0.71
3:R:130:ARG:HH21	3:G:156:ILE:HG12	1.55	0.71
4:I:978:GLU:HA	4:L:371:VAL:HB	1.71	0.71
4:K:369:LEU:HD11	4:L:24:GLY:H	1.55	0.71
3:Q:661:LEU:HD23	3:Q:672:LEU:HD11	1.73	0.71
4:I:968:ILE:HG13	4:I:969:VAL:HG23	1.73	0.71
4:J:442:ASN:O	4:J:882:LYS:NZ	2.24	0.71
4:K:1247:GLU:HB3	4:K:1249:MET:HE3	1.72	0.71
3:Q:142:ARG:NH1	3:Q:145:GLU:OE2	2.23	0.71
3:O:551:LYS:HD2	4:K:308:LEU:HD11	1.72	0.71
3:O:589:ASN:HD22	3:O:592:MET:HG3	1.54	0.71
3:O:229:LEU:HD23	3:P:84:ARG:HH21	1.56	0.71
3:R:85:GLU:HA	3:R:88:ASN:HD21	1.56	0.71
3:R:542:SER:HB2	3:R:545:GLN:HB2	1.73	0.71
3:M:622:PRO:HB2	3:M:625:MET:HG3	1.73	0.70
3:Q:551:LYS:HD2	4:L:308:LEU:HD11	1.73	0.70
4:I:241:SER:O	4:I:243:ALA:N	2.23	0.70
4:J:611:GLU:OE1	4:J:792:ARG:NH1	2.24	0.70
4:J:1241:MET:O	4:J:1245:LEU:HG	1.92	0.70
4:K:257:ASP:HB3	4:K:260:LYS:HB2	1.73	0.70
4:I:611:GLU:OE1	4:I:792:ARG:NH1	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:553:ALA:O	4:L:554:THR:HG22	1.90	0.70
4:L:611:GLU:OE1	4:L:792:ARG:NH1	2.24	0.70
4:L:968:ILE:HG13	4:L:969:VAL:HG23	1.74	0.70
3:Q:520:MET:HB3	3:Q:526:ILE:HD11	1.72	0.70
3:P:682:ARG:HH22	3:P:684:ASP:HB2	1.57	0.69
4:I:456:PHE:O	4:I:457:GLU:HG3	1.92	0.69
4:J:819:LYS:HB3	4:J:823:GLU:HB2	1.74	0.69
2:S:49:ASN:OD1	3:H:338:LYS:NZ	2.25	0.69
3:P:671:TYR:CE1	3:P:682:ARG:HG3	2.27	0.69
4:K:1090:VAL:HG11	4:K:1110:SER:HB2	1.74	0.69
3:N:517:THR:OG1	3:N:586:ARG:NH2	2.25	0.69
3:Q:455:LYS:HD3	3:Q:460:ARG:HH11	1.58	0.69
1:D:39:ASP:OD2	3:O:323:ARG:NH2	2.25	0.69
3:H:262:MET:HE2	3:H:262:MET:HA	1.73	0.69
4:I:143:LEU:HD21	4:I:154:LEU:HD23	1.74	0.69
4:J:907:GLY:O	4:J:914:ARG:HB3	1.92	0.69
4:I:757:LEU:HD11	4:I:849:MET:HG3	1.74	0.69
4:L:552:GLY:HA2	4:L:648:GLY:HA3	1.74	0.69
1:C:47:GLU:OE1	3:R:362:GLN:NE2	2.26	0.69
2:f:57:ARG:HH22	3:Q:327:GLU:HB3	1.57	0.69
3:O:568:MET:HE2	3:O:601:LEU:HD11	1.74	0.69
4:L:1059:ASP:O	4:L:1061:GLN:N	2.26	0.69
3:G:661:LEU:HD23	3:G:672:LEU:HD11	1.74	0.68
4:I:1116:LEU:HA	4:I:1121:LEU:HD23	1.75	0.68
2:g:74:LYS:NZ	3:G:210:ASP:OD2	2.26	0.68
4:K:1059:ASP:O	4:K:1061:GLN:N	2.25	0.68
4:L:819:LYS:HB3	4:L:823:GLU:HB2	1.72	0.68
4:J:40:PHE:HA	4:J:53:MET:HE1	1.74	0.68
3:N:671:TYR:CE1	3:N:682:ARG:HG3	2.29	0.68
4:J:456:PHE:O	4:J:457:GLU:HG3	1.94	0.68
3:P:118:ASP:OD1	3:P:139:ARG:NH1	2.26	0.68
4:J:959:THR:HG21	4:J:1078:LYS:HE2	1.75	0.68
4:L:57:THR:HG23	4:L:74:ASP:HB3	1.76	0.68
4:K:968:ILE:HG13	4:K:969:VAL:HG23	1.75	0.68
4:K:1237:VAL:HG22	4:L:968:ILE:HG21	1.76	0.68
2:e:107:ILE:HD11	3:R:172:THR:HG23	1.76	0.67
2:h:73:GLN:NE2	3:H:204:GLY:O	2.27	0.67
3:M:661:LEU:HD23	3:M:672:LEU:HD11	1.77	0.67
4:K:612:ARG:NH2	4:K:614:GLU:OE2	2.26	0.67
3:N:79:THR:H	3:N:82:GLN:HE21	1.40	0.67
3:R:479:ILE:O	3:R:536:ARG:NH1	2.28	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:103:ALA:O	3:O:107:LYS:HG3	1.95	0.67
4:J:1116:LEU:HA	4:J:1121:LEU:HD23	1.77	0.67
3:Q:622:PRO:HB2	3:Q:625:MET:HG3	1.77	0.67
4:I:819:LYS:HB3	4:I:823:GLU:HB2	1.76	0.67
4:J:257:ASP:HB3	4:J:260:LYS:HB2	1.75	0.67
4:J:64:LEU:CD1	4:J:89:GLN:OE1	2.34	0.67
4:K:729:LYS:NZ	4:K:733:ASP:OD2	2.27	0.67
4:K:757:LEU:HD11	4:K:849:MET:HG2	1.77	0.67
3:N:85:GLU:HA	3:N:88:ASN:ND2	2.10	0.67
3:H:542:SER:HB2	3:H:545:GLN:HB2	1.77	0.67
4:J:131:ILE:O	4:J:136:ARG:NH2	2.28	0.67
3:N:710:ASP:OD2	3:P:295:GLN:NE2	2.28	0.66
4:I:1241:MET:O	4:I:1245:LEU:HG	1.94	0.66
4:L:463:VAL:HG22	4:L:875:ASN:HD22	1.60	0.66
3:G:569:PRO:HG2	3:G:572:LEU:HD12	1.76	0.66
4:J:681:ARG:NH2	4:J:784:GLN:OE1	2.28	0.66
2:d:71:ASN:ND2	3:Q:118:ASP:OD1	2.29	0.66
3:G:279:ARG:NH1	3:G:284:GLU:OE2	2.29	0.66
3:P:404:PHE:HB2	3:P:416:PHE:HB3	1.78	0.66
4:L:496:GLU:OE1	4:L:1173:ARG:NH1	2.28	0.66
3:R:541:ARG:HB3	3:R:546:ARG:HH11	1.60	0.66
4:I:442:ASN:O	4:I:882:LYS:NZ	2.28	0.66
3:R:413:THR:HG21	3:R:416:PHE:CE2	2.31	0.65
3:N:195:ILE:HD12	3:N:239:GLN:HG2	1.77	0.65
3:R:121:MET:HE2	3:R:139:ARG:HB2	1.79	0.65
3:H:394:ARG:HE	3:H:399:TRP:HZ3	1.44	0.65
3:H:404:PHE:HB2	3:H:416:PHE:HB3	1.78	0.65
4:I:550:LYS:HG2	4:I:552:GLY:H	1.60	0.65
3:N:85:GLU:HA	3:N:88:ASN:HD21	1.61	0.65
3:P:201:GLU:OE1	3:Q:110:ARG:NH2	2.30	0.65
4:I:371:VAL:HB	4:J:978:GLU:HA	1.79	0.65
4:L:819:LYS:NZ	4:L:827:GLU:OE1	2.29	0.65
4:I:318:ARG:HG2	4:I:318:ARG:HH11	1.61	0.65
4:K:1237:VAL:O	4:K:1241:MET:HG2	1.96	0.65
3:N:255:ALA:HB2	3:N:301:THR:HG21	1.78	0.65
4:I:310:ASN:O	4:I:314:GLU:HG2	1.96	0.65
4:K:265:PRO:HG3	4:K:988:LEU:HD11	1.79	0.65
4:L:222:ASN:N	4:L:232:ASN:OD1	2.30	0.65
3:R:447:LEU:HD12	3:R:503:LEU:HD23	1.78	0.64
4:K:1049:ARG:HH12	4:K:1053:GLY:HA2	1.62	0.64
4:L:560:GLU:HG3	4:L:1204:VAL:HG21	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:606:TYR:HB3	3:Q:626:MET:HE1	1.79	0.64
3:G:622:PRO:HB2	3:G:625:MET:HG3	1.80	0.64
3:G:680:ARG:HD2	4:I:256:PHE:HB2	1.78	0.64
4:J:675:LYS:O	4:J:679:ILE:HG12	1.98	0.64
3:M:606:TYR:HB3	3:M:626:MET:HE1	1.78	0.64
4:I:795:ASP:O	4:I:797:PHE:N	2.31	0.64
4:J:931:LEU:HD22	4:J:1153:MET:HG2	1.79	0.64
4:I:29:LEU:HD22	4:I:101:GLU:OE1	1.98	0.64
4:L:795:ASP:O	4:L:797:PHE:N	2.31	0.64
4:K:795:ASP:O	4:K:797:PHE:N	2.31	0.64
3:M:197:ASN:HD22	3:N:107:LYS:HB2	1.63	0.64
3:H:568:MET:HE2	3:H:601:LEU:HD11	1.80	0.64
4:K:310:ASN:O	4:K:314:GLU:HG2	1.98	0.64
3:O:344:GLN:HG3	3:O:345:MET:HG3	1.80	0.63
4:I:757:LEU:HD22	4:I:760:ILE:HD13	1.80	0.63
3:M:522:ASP:OD1	3:M:523:LYS:N	2.30	0.63
3:R:387:ILE:HA	3:R:407:MET:HE1	1.80	0.63
4:I:934:SER:HB2	4:I:1101:LEU:HB2	1.80	0.63
4:K:40:PHE:HA	4:K:53:MET:HE1	1.79	0.63
4:L:456:PHE:HA	4:L:466:GLU:HG2	1.79	0.63
3:N:413:THR:HG21	3:N:416:PHE:CE2	2.33	0.63
4:J:364:ALA:HA	4:J:443:SER:HB3	1.81	0.63
2:S:22:ALA:O	2:S:26:MET:HG2	1.98	0.63
4:K:263:ILE:HD11	4:K:1116:LEU:HD22	1.79	0.63
4:L:13:ASP:OD1	4:L:31:ARG:NH1	2.31	0.63
4:I:398:GLY:HA3	4:I:429:MET:SD	2.39	0.63
4:I:1059:ASP:O	4:I:1061:GLN:N	2.32	0.63
4:J:555:ALA:HB1	4:J:855:LEU:HD21	1.79	0.63
4:J:1059:ASP:O	4:J:1061:GLN:N	2.31	0.63
3:H:233:ALA:O	3:H:234:ILE:C	2.42	0.63
3:H:522:ASP:OD1	3:H:523:LYS:N	2.32	0.63
4:J:371:VAL:HB	4:K:978:GLU:HA	1.79	0.63
4:K:345:MET:HG2	4:K:1300:GLN:OE1	1.98	0.63
3:N:550:ASP:OD1	3:N:577:ARG:NH2	2.23	0.63
3:Q:214:ARG:HE	3:Q:216:ASP:HB2	1.63	0.63
4:I:357:ASN:ND2	4:I:433:GLU:OE1	2.32	0.63
4:J:1049:ARG:HH12	4:J:1053:GLY:HA2	1.64	0.63
3:P:323:ARG:HA	3:P:363:MET:HE1	1.80	0.63
3:Q:233:ALA:O	3:Q:234:ILE:C	2.41	0.63
4:L:995:TYR:HE1	4:L:1189:SER:HB2	1.63	0.63
4:L:1049:ARG:HH12	4:L:1053:GLY:HA2	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:385:ASP:OD1	3:N:389:LYS:HE3	1.99	0.63
3:R:700:GLU:HG2	3:G:368:LYS:HB3	1.80	0.63
4:K:60:THR:HA	4:K:63:ALA:HB2	1.81	0.63
4:L:988:LEU:HD22	4:L:1131:ASN:HD22	1.63	0.63
3:N:520:MET:HG2	3:N:526:ILE:HD12	1.81	0.62
3:N:700:GLU:HG2	3:O:368:LYS:HB3	1.80	0.62
4:K:550:LYS:HG2	4:K:552:GLY:H	1.64	0.62
3:N:388:ASP:OD1	3:N:428:LYS:NZ	2.32	0.62
3:N:657:THR:HB	3:N:660:GLN:HG3	1.81	0.62
3:G:234:ILE:O	3:G:235:PRO:C	2.41	0.62
3:G:568:MET:HE2	3:G:601:LEU:HD11	1.80	0.62
4:J:1237:VAL:O	4:J:1241:MET:HG2	1.99	0.62
3:G:70:ARG:O	3:G:74:ILE:HD12	1.99	0.62
4:J:13:ASP:OD1	4:J:31:ARG:NH1	2.32	0.62
4:K:371:VAL:HB	4:L:978:GLU:HA	1.82	0.62
4:L:577:MET:O	4:L:581:MET:HG3	1.97	0.62
3:Q:199:ARG:NH1	3:Q:246:GLN:OE1	2.27	0.62
4:I:64:LEU:HG	4:L:479:ASP:HA	1.80	0.62
4:J:222:ASN:N	4:J:232:ASN:OD1	2.31	0.62
4:L:550:LYS:HG2	4:L:552:GLY:H	1.64	0.62
3:N:599:LYS:HE3	3:O:472:GLN:OE1	1.99	0.62
3:O:569:PRO:HG2	3:O:572:LEU:HD12	1.80	0.62
3:Q:605:THR:HG22	3:Q:622:PRO:HA	1.82	0.62
4:I:988:LEU:HD23	4:I:1131:ASN:HD22	1.64	0.62
4:J:550:LYS:HG2	4:J:552:GLY:H	1.63	0.62
4:L:976:THR:O	4:L:977:GLN:HG2	1.99	0.62
4:J:988:LEU:HD22	4:J:1131:ASN:HD22	1.65	0.62
4:J:993:THR:HG23	4:J:1085:LEU:HD21	1.80	0.62
4:K:754:ILE:HA	4:K:858:ARG:HH11	1.64	0.62
3:N:295:GLN:NE2	3:H:710:ASP:OD2	2.33	0.62
3:P:541:ARG:HB3	3:P:546:ARG:HH11	1.63	0.62
3:Q:517:THR:HG23	3:Q:531:ILE:HG21	1.80	0.62
3:R:517:THR:OG1	3:R:586:ARG:NH2	2.32	0.62
4:K:907:GLY:O	4:K:914:ARG:HB3	1.98	0.62
3:M:517:THR:HA	3:M:520:MET:HE2	1.80	0.62
3:O:203:ASN:O	3:O:207:GLN:HB2	1.99	0.62
3:R:636:GLU:OE1	3:R:639:ARG:NH2	2.32	0.62
4:I:324:LEU:HD23	4:I:345:MET:HE3	1.82	0.62
3:P:93:LEU:HD13	3:P:95:GLN:HE21	1.64	0.62
4:I:449:MET:HE2	4:I:468:LEU:HD21	1.82	0.62
4:J:739:SER:OG	4:J:740:HIS:ND1	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:372:LYS:HE3	3:O:376:ASP:OD1	2.00	0.62
3:P:657:THR:HB	3:P:660:GLN:HG3	1.81	0.62
3:G:79:THR:H	3:G:82:GLN:HE21	1.45	0.62
4:I:40:PHE:HA	4:I:53:MET:HE1	1.82	0.62
4:I:555:ALA:HB1	4:I:855:LEU:HD21	1.82	0.62
3:P:522:ASP:OD1	3:P:523:LYS:N	2.33	0.61
3:H:188:GLN:O	3:H:192:LYS:HG3	1.99	0.61
4:J:262:THR:HG22	4:J:263:ILE:HG13	1.82	0.61
4:I:1049:ARG:HH12	4:I:1053:GLY:HA2	1.65	0.61
4:L:675:LYS:O	4:L:679:ILE:HG12	2.00	0.61
3:O:55:MET:HA	3:O:55:MET:HE3	1.82	0.61
3:P:388:ASP:OD1	3:P:428:LYS:NZ	2.33	0.61
3:R:85:GLU:HA	3:R:88:ASN:ND2	2.15	0.61
3:H:443:ASP:HB3	3:H:499:ALA:HB2	1.82	0.61
4:I:456:PHE:HA	4:I:466:GLU:HG2	1.81	0.61
4:J:307:LYS:NZ	4:J:311:GLU:OE1	2.33	0.61
3:R:568:MET:HE3	3:R:601:LEU:HD11	1.82	0.61
4:J:593:MET:HE3	4:J:598:THR:HG22	1.83	0.61
3:P:162:ASP:OD1	3:P:165:ARG:NH2	2.33	0.61
4:K:976:THR:O	4:K:977:GLN:HG2	2.00	0.61
3:Q:517:THR:HA	3:Q:520:MET:HE2	1.80	0.61
4:L:131:ILE:O	4:L:136:ARG:NH2	2.33	0.61
3:O:646:ARG:HG3	3:O:661:LEU:HD12	1.82	0.61
3:P:112:ALA:HB2	3:P:150:TYR:HD2	1.65	0.61
3:P:255:ALA:HB1	3:P:301:THR:HG21	1.83	0.61
4:L:1163:PRO:HB2	4:L:1166:LYS:HZ1	1.66	0.61
3:M:641:ILE:HD11	4:J:245:MET:HE2	1.83	0.61
3:Q:568:MET:HE2	3:Q:601:LEU:HD11	1.83	0.61
3:G:606:TYR:HB3	3:G:626:MET:HE1	1.81	0.61
4:J:998:ASP:OD1	4:J:1001:ARG:NH2	2.33	0.61
2:e:119:ARG:NH1	3:G:90:GLY:O	2.31	0.61
3:O:526:ILE:HA	3:P:480:ASN:HD21	1.66	0.61
3:G:692:TRP:CD1	4:I:245:MET:HE1	2.35	0.61
3:M:543:LYS:HE3	3:H:551:LYS:HZ3	1.66	0.61
3:G:187:SER:O	3:G:191:GLN:HG3	2.01	0.61
4:J:265:PRO:HG3	4:J:988:LEU:HD11	1.83	0.61
4:J:904:ARG:HB3	4:J:1311:VAL:HG13	1.83	0.61
4:L:265:PRO:HG3	4:L:988:LEU:HD11	1.83	0.61
4:L:328:LEU:HD13	4:L:332:ILE:HD13	1.82	0.61
3:P:85:GLU:HA	3:P:88:ASN:ND2	2.16	0.60
4:I:526:ASP:HB3	4:I:529:ILE:HB	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:328:LEU:HD13	4:J:332:ILE:HD13	1.82	0.60
4:K:360:LEU:HA	4:K:446:LEU:HD12	1.82	0.60
1:F:47:GLU:OE1	3:G:362:GLN:NE2	2.24	0.60
3:M:701:GLU:O	3:M:705:GLU:HG2	2.01	0.60
3:N:500:ASP:OD1	3:N:632:PRO:HB3	2.01	0.60
3:G:692:TRP:HD1	4:I:245:MET:HE1	1.65	0.60
4:I:681:ARG:HH12	4:L:1243:SER:HB2	1.65	0.60
4:J:552:GLY:HA2	4:J:648:GLY:HA3	1.83	0.60
2:f:35:ARG:HH21	3:G:115:LEU:HD22	1.66	0.60
3:M:214:ARG:HE	3:M:216:ASP:HB2	1.66	0.60
3:O:605:THR:HG22	3:O:622:PRO:HA	1.83	0.60
3:Q:138:TYR:O	3:Q:142:ARG:HG2	2.00	0.60
3:Q:526:ILE:HA	3:R:480:ASN:HD21	1.66	0.60
3:R:490:MET:HE1	3:R:521:MET:HE1	1.82	0.60
3:R:671:TYR:CE1	3:R:682:ARG:HG3	2.36	0.60
3:G:172:THR:O	3:G:176:ILE:HG13	2.01	0.60
4:J:795:ASP:O	4:J:797:PHE:N	2.34	0.60
4:K:995:TYR:HE1	4:K:1189:SER:HB2	1.66	0.60
3:P:542:SER:HB2	3:P:545:GLN:HB2	1.81	0.60
3:G:599:LYS:NZ	3:G:603:GLU:OE2	2.34	0.60
3:Q:522:ASP:OD1	3:Q:523:LYS:N	2.33	0.60
4:I:509:ILE:HD11	4:I:854:ILE:HG12	1.82	0.60
4:J:596:GLU:HA	4:J:1192:GLY:HA2	1.82	0.60
4:J:1089:LYS:NZ	4:J:1091:SER:OG	2.23	0.60
4:L:934:SER:HB2	4:L:1101:LEU:HB2	1.82	0.60
3:R:522:ASP:OD1	3:R:523:LYS:N	2.32	0.60
3:R:678:GLN:NE2	4:L:449:MET:HE1	2.12	0.60
4:K:1190:GLN:HG2	4:K:1290:GLU:HB3	1.82	0.60
3:M:468:THR:HG21	3:H:602:LYS:HE3	1.84	0.60
3:N:542:SER:HB2	3:N:545:GLN:HB2	1.82	0.60
3:O:233:ALA:O	3:O:234:ILE:C	2.45	0.60
4:I:612:ARG:NH2	4:I:614:GLU:OE2	2.34	0.60
4:I:723:THR:HG23	4:I:726:MET:H	1.66	0.60
4:J:641:MET:HE1	4:J:766:LEU:HD21	1.83	0.60
4:J:934:SER:HB2	4:J:1101:LEU:HB2	1.82	0.60
4:J:1163:PRO:HG2	4:J:1166:LYS:HE2	1.82	0.60
2:S:52:LEU:O	2:S:57:ARG:NH1	2.33	0.60
3:Q:569:PRO:HG2	3:Q:572:LEU:HD12	1.83	0.60
3:N:541:ARG:HB3	3:N:546:ARG:HH11	1.67	0.60
3:P:262:MET:HE2	3:P:262:MET:HA	1.84	0.60
4:I:673:HIS:CD2	4:I:946:PRO:HA	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1041:SER:O	4:J:1045:GLU:HG3	2.00	0.60
2:g:73:GLN:NE2	3:G:208:ASP:OD2	2.30	0.60
2:h:72:MET:HE3	2:h:75:VAL:HG11	1.83	0.60
3:M:352:LEU:O	3:M:356:GLN:HG2	2.02	0.60
3:H:119:ASP:OD1	3:H:120:VAL:N	2.35	0.60
3:O:522:ASP:OD1	3:O:523:LYS:N	2.34	0.59
4:I:131:ILE:O	4:I:136:ARG:NH2	2.35	0.59
4:J:754:ILE:HA	4:J:858:ARG:HH11	1.67	0.59
3:M:692:TRP:CD1	4:J:245:MET:HE1	2.37	0.59
3:M:692:TRP:HD1	4:J:245:MET:HE1	1.67	0.59
3:N:404:PHE:HB2	3:N:416:PHE:HB3	1.84	0.59
4:L:907:GLY:O	4:L:914:ARG:HB3	2.00	0.59
3:M:242:GLN:NE2	3:H:327:GLU:OE2	2.35	0.59
3:R:541:ARG:HD2	3:R:546:ARG:HD3	1.83	0.59
3:H:467:VAL:HG12	3:H:511:GLN:HG3	1.83	0.59
3:O:642:LEU:HD21	3:O:670:ILE:HD13	1.85	0.59
3:H:622:PRO:HG2	3:H:625:MET:HE3	1.84	0.59
4:I:577:MET:O	4:I:581:MET:HG2	2.02	0.59
3:H:268:LYS:HA	3:H:277:THR:HA	1.83	0.59
4:I:524:SER:HB2	4:I:844:GLU:OE1	2.02	0.59
4:I:1137:ALA:O	4:I:1141:ILE:HG12	2.03	0.59
4:J:517:ILE:HG21	4:J:851:THR:OG1	2.03	0.59
4:K:13:ASP:OD1	4:K:31:ARG:NH1	2.32	0.59
2:c:72:MET:SD	3:P:118:ASP:HB3	2.43	0.59
3:M:384:LEU:HD21	3:M:427:LYS:HE2	1.84	0.59
3:M:473:GLU:OE2	3:M:487:THR:HA	2.03	0.59
3:P:669:SER:HB3	3:P:682:ARG:HH11	1.66	0.59
3:R:261:LEU:HA	3:R:264:VAL:HG22	1.83	0.59
3:H:87:LEU:HD11	3:H:94:TYR:HD1	1.67	0.59
4:I:222:ASN:N	4:I:232:ASN:OD1	2.36	0.59
3:P:417:LYS:NZ	3:P:419:SER:HB2	2.18	0.59
4:I:998:ASP:OD1	4:I:1001:ARG:NH2	2.33	0.59
4:L:1013:LEU:HD23	4:L:1049:ARG:HB2	1.83	0.59
3:M:642:LEU:HD21	3:M:670:ILE:HD13	1.85	0.59
3:O:599:LYS:NZ	3:P:472:GLN:OE1	2.36	0.59
3:R:50:LYS:NZ	3:R:159:GLU:OE2	2.35	0.59
3:R:255:ALA:HB2	3:R:301:THR:HG21	1.85	0.59
3:H:479:ILE:O	3:H:536:ARG:NH1	2.35	0.59
3:O:662:THR:HG23	4:K:1119:LYS:HE3	1.85	0.59
3:P:421:MET:HA	3:P:421:MET:HE3	1.85	0.59
3:P:522:ASP:OD1	3:P:523:LYS:HG2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:622:PRO:HG2	3:P:625:MET:HE3	1.83	0.59
3:R:404:PHE:HB2	3:R:416:PHE:HB3	1.85	0.59
3:R:517:THR:HG22	3:R:521:MET:HE2	1.83	0.59
3:R:657:THR:HB	3:R:660:GLN:OE1	2.03	0.59
4:K:998:ASP:OD1	4:K:1001:ARG:NH2	2.35	0.59
3:O:611:ASP:N	3:O:658:ASN:HD21	2.00	0.59
4:L:757:LEU:HD22	4:L:760:ILE:HD13	1.85	0.59
4:L:1116:LEU:HA	4:L:1121:LEU:HD23	1.85	0.59
4:J:1317:ARG:H	4:J:1317:ARG:HD3	1.68	0.58
4:K:560:GLU:HG3	4:K:1204:VAL:HG21	1.84	0.58
4:L:574:TYR:OH	4:L:1290:GLU:OE2	2.20	0.58
3:M:387:ILE:HG12	3:M:407:MET:SD	2.43	0.58
3:M:472:GLN:OE1	3:H:599:LYS:HE3	2.02	0.58
3:N:306:ASN:HD21	3:N:351:TRP:HZ3	1.51	0.58
3:N:522:ASP:OD1	3:N:523:LYS:N	2.36	0.58
3:P:544:GLU:OE2	4:K:318:ARG:NH2	2.32	0.58
4:I:60:THR:HA	4:I:63:ALA:HB2	1.84	0.58
2:e:39:MET:HA	2:e:39:MET:HE2	1.84	0.58
3:R:214:ARG:HG2	3:R:216:ASP:H	1.67	0.58
3:H:130:ARG:N	3:H:134:GLU:OE2	2.35	0.58
4:I:416:LYS:NZ	4:I:418:GLU:H	1.99	0.58
4:I:825:LYS:O	4:I:829:LEU:HG	2.04	0.58
4:L:1237:VAL:O	4:L:1241:MET:HG2	2.03	0.58
3:N:184:ASN:O	3:N:188:GLN:HG2	2.03	0.58
3:O:380:SER:HA	3:O:383:LYS:HG2	1.85	0.58
3:O:622:PRO:HB2	3:O:625:MET:HG3	1.86	0.58
3:R:363:MET:HG2	3:G:286:GLN:HA	1.85	0.58
4:K:551:PHE:CD1	4:L:781:PRO:HD3	2.39	0.58
2:S:107:ILE:HD11	3:N:172:THR:HG23	1.86	0.58
3:H:196:MET:HE2	3:H:196:MET:HA	1.86	0.58
4:L:757:LEU:HD11	4:L:849:MET:HG3	1.85	0.58
2:g:107:ILE:HD11	3:H:172:THR:HG23	1.85	0.58
3:O:473:GLU:OE2	3:O:487:THR:HA	2.04	0.58
3:O:633:LYS:O	3:O:633:LYS:HD3	2.03	0.58
3:P:387:ILE:HA	3:P:407:MET:HE1	1.84	0.58
3:G:131:THR:HG22	3:G:134:GLU:HG3	1.85	0.58
3:G:255:ALA:HB2	3:G:301:THR:HG21	1.86	0.58
3:G:605:THR:HG22	3:G:622:PRO:HA	1.86	0.58
3:H:417:LYS:NZ	3:H:419:SER:HB2	2.19	0.58
3:H:549:ASP:OD2	3:H:585:TYR:OH	2.20	0.58
3:P:684:ASP:OD1	3:P:685:LYS:N	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:364:ALA:HA	4:I:443:SER:HB3	1.85	0.58
4:K:819:LYS:HB3	4:K:823:GLU:HB2	1.86	0.58
2:T:47:ILE:HA	2:T:52:LEU:HD21	1.85	0.58
3:M:455:LYS:HA	3:M:460:ARG:HG3	1.86	0.58
3:Q:387:ILE:HG12	3:Q:407:MET:SD	2.43	0.58
3:R:453:ASP:HB3	3:R:457:GLY:HA3	1.85	0.58
3:H:487:THR:HB	3:H:490:MET:HB2	1.86	0.58
4:K:333:ILE:HD11	4:K:426:ILE:HG13	1.86	0.58
4:K:463:VAL:HG11	4:K:871:LEU:HD21	1.86	0.58
1:E:40:GLU:OE1	3:Q:373:ALA:HB2	2.04	0.58
3:M:526:ILE:HA	3:N:480:ASN:HD21	1.68	0.58
3:P:413:THR:HG21	3:P:416:PHE:CE2	2.38	0.58
3:R:262:MET:HE2	3:R:262:MET:HA	1.85	0.58
4:J:592:LYS:HG2	4:J:593:MET:HG3	1.84	0.58
4:J:595:ARG:HG2	4:J:1192:GLY:HA3	1.85	0.58
4:J:681:ARG:NH1	4:J:784:GLN:HE22	2.02	0.58
4:K:439:ARG:NH1	4:K:883:ASN:OD1	2.36	0.58
3:N:622:PRO:HG2	3:N:625:MET:HE3	1.86	0.58
3:Q:259:ASP:HA	3:Q:262:MET:HE3	1.85	0.58
4:I:616:GLN:HG2	4:I:627:MET:HE2	1.86	0.58
4:I:988:LEU:CD2	4:I:1131:ASN:HD22	2.17	0.58
4:K:495:LYS:O	4:K:499:GLU:HG2	2.04	0.58
4:L:682:TYR:CE1	4:L:781:PRO:HD2	2.39	0.58
4:J:866:VAL:HG23	4:J:1201:VAL:HG23	1.86	0.57
4:J:899:VAL:HG13	4:J:1181:ALA:HB1	1.86	0.57
4:K:328:LEU:HD13	4:K:332:ILE:HD13	1.86	0.57
2:c:107:ILE:HD11	3:P:172:THR:HG23	1.85	0.57
2:d:35:ARG:HH21	3:Q:115:LEU:HD22	1.69	0.57
3:M:692:TRP:HA	4:J:245:MET:HE3	1.85	0.57
3:H:550:ASP:OD1	3:H:577:ARG:NH2	2.31	0.57
4:I:24:GLY:H	4:L:369:LEU:HD21	1.66	0.57
4:J:495:LYS:O	4:J:499:GLU:HG2	2.04	0.57
3:N:443:ASP:HB3	3:N:499:ALA:HB2	1.87	0.57
3:O:628:VAL:O	3:O:634:SER:OG	2.21	0.57
3:P:598:THR:HG22	3:P:602:LYS:HE2	1.85	0.57
3:Q:428:LYS:HE2	3:Q:449:TYR:CZ	2.39	0.57
3:G:363:MET:SD	3:H:286:GLN:HG3	2.44	0.57
3:G:692:TRP:HA	4:I:245:MET:HE3	1.86	0.57
3:H:125:LYS:HE3	3:H:178:LEU:HB3	1.87	0.57
3:H:413:THR:HG21	3:H:416:PHE:CE2	2.40	0.57
4:I:754:ILE:HD12	4:I:853:LYS:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:332:ILE:HG21	4:K:395:PHE:CD1	2.40	0.57
4:L:62:LYS:O	4:L:63:ALA:C	2.48	0.57
4:L:1190:GLN:HG2	4:L:1290:GLU:HB3	1.86	0.57
2:T:47:ILE:HD13	3:N:192:LYS:HA	1.87	0.57
4:L:1295:ASP:HB3	4:L:1298:THR:HG22	1.85	0.57
3:R:149:VAL:O	3:R:153:GLN:HG2	2.05	0.57
3:R:587:SER:HB3	3:G:479:ILE:HG12	1.87	0.57
4:K:985:TRP:O	4:K:993:THR:OG1	2.22	0.57
3:N:285:GLU:H	3:N:285:GLU:CD	2.13	0.57
3:O:363:MET:HG2	3:P:286:GLN:HA	1.87	0.57
4:I:682:TYR:OH	4:I:782:ASP:N	2.38	0.57
4:I:888:ALA:O	4:I:892:THR:HG23	2.05	0.57
4:I:1241:MET:SD	4:J:958:ALA:HB1	2.44	0.57
4:J:1190:GLN:HG2	4:J:1290:GLU:HB3	1.86	0.57
3:M:149:VAL:O	3:M:153:GLN:HG2	2.05	0.57
3:P:285:GLU:CD	3:P:285:GLU:H	2.12	0.57
3:R:261:LEU:HB3	3:R:291:MET:HE1	1.86	0.57
4:I:779:THR:HG21	4:L:538:ARG:HH12	1.70	0.57
4:K:593:MET:HE3	4:K:598:THR:HG22	1.85	0.57
4:L:555:ALA:HB1	4:L:855:LEU:HD21	1.87	0.57
1:A:48:VAL:O	3:N:358:GLN:NE2	2.38	0.57
3:M:493:LEU:HG	3:M:518:MET:HE1	1.87	0.57
3:P:374:LEU:HD13	3:Q:296:ARG:HA	1.86	0.57
4:L:723:THR:HG23	4:L:726:MET:H	1.70	0.57
3:M:201:GLU:OE1	3:N:110:ARG:NH1	2.37	0.56
3:O:358:GLN:O	3:O:362:GLN:HG3	2.05	0.56
3:O:556:ALA:O	3:O:560:SER:OG	2.22	0.56
4:I:1071:ASP:OD1	4:I:1074:ARG:NH2	2.38	0.56
4:L:538:ARG:NH1	4:L:557:ASP:OD2	2.38	0.56
3:H:88:ASN:OD1	3:H:89:ASN:N	2.38	0.56
2:h:55:GLN:O	2:h:59:LYS:HG3	2.05	0.56
3:M:478:VAL:HG21	3:H:592:MET:HE3	1.86	0.56
3:N:187:SER:O	3:N:191:GLN:HG3	2.05	0.56
3:P:160:ASP:O	3:P:164:GLN:HG2	2.06	0.56
4:I:332:ILE:HG21	4:I:395:PHE:CD1	2.40	0.56
4:K:689:GLU:OE2	4:K:693:ARG:NH2	2.38	0.56
4:K:1243:SER:OG	4:L:784:GLN:NE2	2.37	0.56
4:L:121:GLU:HG2	4:L:125:LYS:HE3	1.87	0.56
4:L:140:ARG:HA	4:L:143:LEU:HG	1.87	0.56
4:L:524:SER:OG	4:L:530:ARG:HG3	2.05	0.56
2:T:77:ALA:O	2:T:81:ILE:HG13	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:72:ASN:HA	3:H:75:ILE:HG22	1.88	0.56
2:e:64:SER:O	2:e:68:THR:HG23	2.05	0.56
3:O:520:MET:HE3	3:O:526:ILE:HD11	1.86	0.56
2:c:119:ARG:NH1	3:Q:90:GLY:O	2.31	0.56
3:P:79:THR:N	3:P:82:GLN:HE21	1.95	0.56
3:P:333:LYS:HG3	3:P:352:LEU:HD21	1.87	0.56
3:G:645:ALA:HA	4:I:227:PHE:HE2	1.70	0.56
3:H:542:SER:O	3:H:544:GLU:N	2.39	0.56
4:I:495:LYS:O	4:I:499:GLU:HG2	2.05	0.56
3:M:517:THR:HG23	3:M:531:ILE:HG21	1.88	0.56
3:M:569:PRO:HG2	3:M:572:LEU:HD12	1.87	0.56
3:M:645:ALA:HA	4:J:227:PHE:HE2	1.70	0.56
3:N:592:MET:HE1	3:O:474:TRP:CD1	2.40	0.56
3:G:47:ARG:HA	3:G:50:LYS:HE2	1.86	0.56
4:I:899:VAL:HG13	4:I:1181:ALA:HB1	1.88	0.56
4:L:1061:GLN:HE22	4:L:1065:MET:HE3	1.71	0.56
3:M:394:ARG:NH1	3:M:402:THR:OG1	2.38	0.56
3:M:598:THR:O	3:M:602:LYS:HG3	2.06	0.56
3:Q:151:ALA:HB2	3:Q:163:TYR:CZ	2.41	0.56
3:R:285:GLU:CD	3:R:285:GLU:H	2.14	0.56
4:I:968:ILE:HG21	4:L:1237:VAL:HG22	1.88	0.56
4:L:593:MET:HB2	4:L:597:GLU:HB3	1.86	0.56
4:L:1241:MET:O	4:L:1245:LEU:HG	2.06	0.56
3:Q:358:GLN:O	3:Q:362:GLN:HG3	2.05	0.56
3:G:214:ARG:O	3:G:263:ARG:NH2	2.39	0.56
4:I:1004:MET:HA	4:I:1004:MET:HE3	1.87	0.56
3:O:613:VAL:HG23	3:O:614:ASP:H	1.71	0.56
3:H:570:ALA:HA	3:H:573:ARG:HG2	1.87	0.56
3:M:500:ASP:OD1	3:M:632:PRO:HB3	2.05	0.55
3:O:313:ILE:HD13	3:O:332:ILE:HD13	1.89	0.55
3:P:117:ASP:O	3:P:121:MET:HG2	2.05	0.55
3:P:549:ASP:OD2	3:P:585:TYR:OH	2.24	0.55
3:R:589:ASN:HA	3:G:539:VAL:CG2	2.36	0.55
4:I:1243:SER:CB	4:J:784:GLN:HE21	2.19	0.55
4:J:333:ILE:HD11	4:J:426:ILE:HG13	1.88	0.55
3:P:541:ARG:HD2	3:P:546:ARG:HD3	1.87	0.55
3:R:123:LYS:HA	3:R:123:LYS:HE2	1.88	0.55
3:G:372:LYS:NZ	3:G:376:ASP:OD1	2.20	0.55
4:I:328:LEU:HD13	4:I:332:ILE:HD13	1.88	0.55
4:L:1120:PHE:HE2	4:L:1301:LEU:HD23	1.71	0.55
3:H:359:VAL:HA	3:H:362:GLN:HG3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1120:PHE:HE2	4:I:1301:LEU:HD23	1.71	0.55
4:J:1031:VAL:HG11	4:J:1075:LEU:HD13	1.89	0.55
4:K:723:THR:HG22	4:K:726:MET:HG3	1.87	0.55
4:K:899:VAL:HG13	4:K:1181:ALA:HB1	1.88	0.55
3:O:435:MET:HE1	3:P:318:ASN:HD22	1.71	0.55
3:G:387:ILE:HG12	3:G:407:MET:SD	2.47	0.55
4:I:1019:ARG:HA	4:I:1022:LYS:NZ	2.22	0.55
4:K:1277:GLU:HG2	4:L:974:TYR:CD1	2.42	0.55
4:I:976:THR:O	4:I:977:GLN:HG2	2.06	0.55
4:J:398:GLY:HA3	4:J:429:MET:SD	2.47	0.55
3:M:381:MET:HE2	3:N:299:PHE:HZ	1.71	0.55
3:P:264:VAL:HA	3:P:267:LYS:HG3	1.87	0.55
3:P:510:ASP:OD1	3:P:511:GLN:HG2	2.07	0.55
3:P:542:SER:O	3:P:544:GLU:N	2.38	0.55
4:J:822:LYS:NZ	4:J:826:ASP:OD2	2.39	0.55
4:J:1295:ASP:HB3	4:J:1298:THR:HG22	1.88	0.55
4:L:434:ALA:HB3	4:L:447:SER:HB3	1.89	0.55
4:L:604:ARG:NH1	4:L:950:ASP:OD2	2.39	0.55
3:M:296:ARG:HA	3:H:374:LEU:HD13	1.87	0.55
3:N:599:LYS:HZ3	3:N:603:GLU:CD	2.15	0.55
3:O:120:VAL:HG21	3:O:139:ARG:HG3	1.88	0.55
3:G:149:VAL:O	3:G:153:GLN:HG2	2.06	0.55
4:I:360:LEU:HA	4:I:446:LEU:HD12	1.88	0.55
4:J:761:GLU:OE1	4:J:825:LYS:NZ	2.40	0.55
4:J:925:ALA:O	4:J:929:LYS:HG2	2.07	0.55
1:D:47:GLU:OE1	3:O:362:GLN:NE2	2.25	0.55
3:Q:172:THR:O	3:Q:176:ILE:HG12	2.06	0.55
3:R:391:PHE:O	3:R:395:ILE:HG12	2.07	0.55
4:J:150:MET:SD	4:J:153:GLN:NE2	2.80	0.55
4:J:1023:GLU:HA	4:J:1026:LEU:HD12	1.89	0.55
4:K:577:MET:O	4:K:581:MET:HG2	2.06	0.55
4:K:1197:MET:HG2	4:K:1287:SER:HB2	1.89	0.55
2:e:69:SER:OG	3:R:119:ASP:OD1	2.25	0.55
3:M:356:GLN:O	3:M:360:GLN:HG2	2.05	0.55
3:P:170:ASP:OD1	3:P:173:GLU:HG3	2.06	0.55
3:R:160:ASP:OD1	3:R:161:VAL:N	2.40	0.55
3:G:132:ARG:HD2	3:G:179:TYR:CD1	2.41	0.55
4:I:1242:GLY:HA2	4:I:1245:LEU:HD12	1.87	0.55
4:J:604:ARG:NH1	4:J:950:ASP:OD2	2.40	0.55
4:J:952:VAL:HG23	4:J:1073:TRP:HH2	1.72	0.55
4:J:995:TYR:HE1	4:J:1189:SER:HB2	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1090:VAL:HG11	4:J:1110:SER:HA	1.89	0.55
4:K:359:ALA:O	4:K:360:LEU:HB2	2.07	0.55
4:K:1120:PHE:HE2	4:K:1301:LEU:HD23	1.71	0.55
4:K:1281:MET:O	4:K:1285:MET:HG2	2.07	0.55
4:I:333:ILE:HD11	4:I:426:ILE:HG13	1.89	0.55
4:J:30:LEU:HD11	4:J:87:ALA:HB2	1.87	0.55
4:K:517:ILE:HG21	4:K:851:THR:OG1	2.07	0.55
4:L:360:LEU:HA	4:L:446:LEU:HD12	1.87	0.55
4:L:509:ILE:HD11	4:L:854:ILE:HG12	1.89	0.55
3:N:261:LEU:HA	3:N:264:VAL:HG22	1.88	0.54
3:N:541:ARG:HD2	3:N:546:ARG:HD3	1.88	0.54
3:P:261:LEU:HA	3:P:264:VAL:HG22	1.89	0.54
3:G:550:ASP:O	3:G:554:GLU:HG2	2.07	0.54
3:G:642:LEU:HD21	3:G:670:ILE:HD13	1.89	0.54
3:H:285:GLU:CD	3:H:285:GLU:H	2.15	0.54
4:I:529:ILE:HD13	4:I:831:LEU:HD13	1.88	0.54
4:I:907:GLY:O	4:I:914:ARG:HB3	2.07	0.54
3:M:313:ILE:HD13	3:M:332:ILE:HD13	1.89	0.54
3:N:542:SER:O	3:N:544:GLU:N	2.40	0.54
3:G:662:THR:HG23	4:I:1119:LYS:HE3	1.88	0.54
3:H:162:ASP:OD1	3:H:165:ARG:NH1	2.41	0.54
4:J:359:ALA:O	4:J:360:LEU:HB2	2.08	0.54
4:K:1295:ASP:HB3	4:K:1298:THR:HG22	1.88	0.54
3:N:666:GLN:HB2	3:N:671:TYR:HE2	1.72	0.54
3:Q:363:MET:HE3	3:R:286:GLN:HB2	1.90	0.54
4:J:1021:GLU:OE2	4:J:1040:LYS:HE2	2.07	0.54
4:L:332:ILE:HG21	4:L:395:PHE:CD1	2.42	0.54
1:E:46:THR:O	3:P:392:GLN:NE2	2.40	0.54
3:M:235:PRO:HB3	3:N:94:TYR:CE1	2.43	0.54
3:G:451:GLN:HG2	3:G:503:LEU:HD11	1.88	0.54
4:L:357:ASN:ND2	4:L:433:GLU:OE2	2.41	0.54
3:P:82:GLN:HA	3:P:85:GLU:HG3	1.89	0.54
3:P:467:VAL:HG12	3:P:511:GLN:HG3	1.90	0.54
3:R:374:LEU:HD13	3:G:296:ARG:HA	1.90	0.54
3:M:70:ARG:O	3:M:74:ILE:HG12	2.08	0.54
3:O:323:ARG:O	3:O:327:GLU:HG3	2.07	0.54
3:O:538:THR:HA	3:O:540:LYS:HE3	1.90	0.54
3:P:47:ARG:HA	3:P:50:LYS:HE2	1.89	0.54
3:R:233:ALA:O	3:R:234:ILE:C	2.50	0.54
3:G:556:ALA:O	3:G:560:SER:OG	2.24	0.54
4:I:1197:MET:HG2	4:I:1287:SER:HB2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:360:LEU:HA	4:J:446:LEU:HD12	1.88	0.54
4:J:535:ASP:HB3	4:J:817:THR:HG22	1.90	0.54
4:J:1281:MET:O	4:J:1285:MET:HG2	2.08	0.54
4:K:757:LEU:HD22	4:K:760:ILE:HD13	1.90	0.54
2:T:72:MET:HE3	3:O:121:MET:HB2	1.89	0.54
3:N:349:ARG:O	3:N:353:ILE:HD12	2.08	0.54
3:Q:71:SER:O	3:Q:75:ILE:HG12	2.08	0.54
4:J:345:MET:HE2	4:J:1300:GLN:HB2	1.90	0.54
4:J:577:MET:O	4:J:581:MET:HG2	2.06	0.54
4:K:451:THR:HA	4:K:454:MET:HE3	1.88	0.54
4:K:850:ASP:O	4:K:854:ILE:HG13	2.08	0.54
4:L:224:ARG:HG3	4:L:252:LEU:HD11	1.89	0.54
4:L:456:PHE:N	4:L:466:GLU:OE2	2.41	0.54
4:L:866:VAL:HG13	4:L:1201:VAL:HG23	1.90	0.54
1:b:39:ASP:OD2	3:M:323:ARG:NH2	2.40	0.54
3:N:323:ARG:HA	3:N:363:MET:HE1	1.88	0.54
3:H:47:ARG:HA	3:H:50:LYS:HE2	1.90	0.54
4:I:775:ASP:OD1	4:I:789:ASN:ND2	2.41	0.54
4:K:514:PHE:HE1	4:K:851:THR:HG23	1.72	0.54
4:L:581:MET:HG2	4:L:602:ILE:HD12	1.90	0.54
3:O:346:THR:HG23	3:O:349:ARG:H	1.73	0.54
4:I:637:LYS:O	4:I:641:MET:HG3	2.08	0.54
4:K:11:ASP:O	4:K:1024:GLY:HA3	2.08	0.54
4:K:495:LYS:O	4:K:498:SER:OG	2.20	0.54
4:L:989:LEU:HA	4:L:1135:ASP:HB2	1.89	0.54
2:h:22:ALA:O	2:h:26:MET:HG2	2.08	0.54
3:R:520:MET:HB3	3:R:526:ILE:HD12	1.90	0.54
4:J:11:ASP:O	4:J:1024:GLY:HA3	2.07	0.54
4:J:682:TYR:CE1	4:J:781:PRO:HD2	2.43	0.54
3:N:283:GLY:O	3:N:287:TRP:N	2.36	0.53
3:R:89:ASN:OD1	3:R:90:GLY:N	2.40	0.53
3:H:211:MET:O	3:H:214:ARG:HG3	2.08	0.53
3:H:344:GLN:HG2	3:H:346:THR:HG23	1.91	0.53
4:L:866:VAL:HG11	4:L:1197:MET:HE3	1.89	0.53
4:K:434:ALA:HB3	4:K:447:SER:HB3	1.89	0.53
3:M:55:MET:HA	3:M:55:MET:HE3	1.90	0.53
3:M:322:PRO:HB2	3:M:363:MET:HE2	1.90	0.53
3:O:201:GLU:OE1	3:P:110:ARG:NH1	2.41	0.53
3:O:701:GLU:O	3:O:705:GLU:HG2	2.08	0.53
3:R:252:SER:HB2	3:R:293:THR:HG23	1.90	0.53
3:G:435:MET:HE1	3:H:318:ASN:HD22	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:261:LEU:HA	3:H:264:VAL:HG22	1.90	0.53
4:I:644:PRO:HG2	4:I:814:MET:HG2	1.89	0.53
4:J:524:SER:HB3	4:J:844:GLU:OE1	2.09	0.53
4:J:898:ILE:HG22	4:J:1144:MET:HE1	1.89	0.53
4:K:266:THR:HG23	4:K:269:ASN:H	1.73	0.53
1:A:48:VAL:HG12	1:A:50:GLY:H	1.72	0.53
3:M:611:ASP:N	3:M:658:ASN:HD21	2.05	0.53
3:N:322:PRO:HG2	3:N:366:TRP:HB2	1.90	0.53
3:P:417:LYS:HZ3	3:P:419:SER:HB2	1.72	0.53
3:P:435:MET:HE1	3:Q:318:ASN:HD22	1.73	0.53
3:R:79:THR:OG1	3:R:82:GLN:OE1	2.26	0.53
4:K:964:ALA:O	4:K:968:ILE:HG12	2.08	0.53
3:P:344:GLN:HG2	3:P:346:THR:HG23	1.90	0.53
3:H:493:LEU:HA	3:H:496:ILE:HG22	1.91	0.53
4:I:496:GLU:OE2	4:I:1173:ARG:NH1	2.41	0.53
4:I:1084:MET:O	4:I:1109:LYS:NZ	2.33	0.53
4:J:514:PHE:HE1	4:J:851:THR:HG23	1.74	0.53
4:L:885:TYR:O	4:L:889:GLN:HG3	2.08	0.53
4:L:1281:MET:O	4:L:1285:MET:HG2	2.08	0.53
3:O:255:ALA:HB2	3:O:301:THR:HG21	1.91	0.53
3:O:349:ARG:O	3:O:353:ILE:HG12	2.08	0.53
3:P:551:LYS:HZ3	3:Q:543:LYS:HE3	1.74	0.53
3:H:447:LEU:HA	3:H:450:LEU:HG	1.91	0.53
4:K:258:VAL:HG12	4:K:1088:HIS:HB3	1.91	0.53
2:T:40:GLU:O	2:T:44:GLN:HG2	2.07	0.53
2:g:37:GLN:O	2:g:41:ILE:HG13	2.08	0.53
3:M:276:THR:HB	3:M:280:GLU:HB2	1.91	0.53
3:N:125:LYS:HZ1	3:N:135:MET:HG3	1.73	0.53
3:N:568:MET:HE2	3:N:601:LEU:HD11	1.91	0.53
3:P:682:ARG:NH2	3:P:684:ASP:HB2	2.24	0.53
4:I:641:MET:HE1	4:I:766:LEU:HD21	1.89	0.53
4:K:79:PRO:HD2	4:K:1027:ARG:HH22	1.73	0.53
4:L:899:VAL:HG13	4:L:1181:ALA:HB1	1.90	0.53
3:M:255:ALA:HB2	3:M:301:THR:HG21	1.90	0.53
3:R:542:SER:O	3:R:544:GLU:N	2.41	0.53
4:I:456:PHE:N	4:I:466:GLU:OE2	2.42	0.53
4:J:369:LEU:HD21	4:K:24:GLY:H	1.74	0.53
4:L:364:ALA:HA	4:L:443:SER:HB3	1.90	0.53
4:L:643:ASN:O	4:L:646:ILE:HG13	2.09	0.53
3:M:214:ARG:O	3:M:263:ARG:NH2	2.42	0.53
3:Q:483:LEU:HD11	3:Q:490:MET:HE1	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:346:THR:HG23	3:G:349:ARG:H	1.72	0.53
4:I:712:MET:HE2	4:I:771:LEU:HD12	1.91	0.53
4:J:801:PRO:O	4:J:805:ARG:HG3	2.09	0.53
3:O:597:MET:HE3	3:O:601:LEU:HD11	1.91	0.53
3:O:606:TYR:HB3	3:O:626:MET:HE1	1.90	0.53
3:P:135:MET:HE1	3:P:179:TYR:CE1	2.44	0.53
3:P:569:PRO:HG2	3:P:572:LEU:HD13	1.91	0.53
3:P:666:GLN:HB2	3:P:671:TYR:HE2	1.74	0.53
4:I:359:ALA:O	4:I:360:LEU:HB2	2.09	0.53
4:L:380:VAL:HB	4:L:575:LYS:HD2	1.91	0.53
4:L:529:ILE:HD13	4:L:831:LEU:HD23	1.91	0.53
2:c:77:ALA:O	2:c:81:ILE:HG13	2.10	0.52
3:N:123:LYS:O	3:N:126:GLU:HG3	2.09	0.52
3:P:659:LYS:HG2	4:K:362:VAL:HG22	1.91	0.52
3:Q:598:THR:O	3:Q:602:LYS:HG3	2.09	0.52
3:R:684:ASP:OD1	3:R:685:LYS:N	2.42	0.52
3:G:84:ARG:O	3:G:88:ASN:ND2	2.41	0.52
3:G:112:ALA:HB2	3:G:150:TYR:CD2	2.44	0.52
4:I:641:MET:HG2	4:I:811:ILE:HD11	1.91	0.52
4:J:897:MET:HA	4:J:900:THR:HG22	1.91	0.52
4:L:439:ARG:NH1	4:L:883:ASN:OD1	2.42	0.52
4:L:661:HIS:HB3	4:L:769:ARG:HH21	1.73	0.52
3:N:583:VAL:HG11	3:N:596:GLN:HG3	1.90	0.52
3:O:138:TYR:O	3:O:142:ARG:HG2	2.08	0.52
3:Q:211:MET:O	3:Q:217:SER:HB2	2.09	0.52
3:Q:684:ASP:OD1	3:Q:684:ASP:N	2.38	0.52
4:I:514:PHE:HE1	4:I:851:THR:HG23	1.74	0.52
4:I:563:HIS:NE2	4:I:1202:GLY:O	2.33	0.52
4:I:1295:ASP:HB3	4:I:1298:THR:HG22	1.91	0.52
4:J:434:ALA:HB3	4:J:447:SER:HB3	1.92	0.52
4:K:456:PHE:N	4:K:466:GLU:OE2	2.41	0.52
4:K:682:TYR:HB3	4:K:686:GLY:HA3	1.91	0.52
4:L:914:ARG:O	4:L:919:LYS:HG3	2.09	0.52
2:T:71:ASN:HB2	3:O:118:ASP:OD1	2.09	0.52
2:g:68:THR:HG22	3:G:200:VAL:HG13	1.90	0.52
3:Q:229:LEU:HD23	3:R:84:ARG:HH21	1.74	0.52
3:R:72:ASN:HA	3:R:75:ILE:HG22	1.92	0.52
4:I:827:GLU:O	4:I:831:LEU:HG	2.08	0.52
4:J:496:GLU:HG2	4:J:1179:MET:HE3	1.92	0.52
4:L:428:PRO:HB2	4:L:897:MET:HE2	1.90	0.52
4:L:975:SER:HB3	4:L:978:GLU:HG3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:e:53:SER:O	2:e:57:ARG:HG3	2.10	0.52
3:M:448:LYS:HB3	3:M:448:LYS:HZ2	1.75	0.52
3:M:479:ILE:HG12	3:H:587:SER:HB3	1.90	0.52
3:P:583:VAL:HG11	3:P:596:GLN:HG3	1.90	0.52
3:H:139:ARG:NH2	3:H:175:ASN:OD1	2.43	0.52
4:I:669:VAL:HG13	4:I:793:ASP:HB3	1.91	0.52
4:K:1240:ALA:O	4:K:1243:SER:OG	2.24	0.52
4:L:8:VAL:HG12	4:L:31:ARG:HH21	1.75	0.52
4:L:359:ALA:O	4:L:360:LEU:HB2	2.09	0.52
2:T:128:GLN:HG2	3:P:82:GLN:OE1	2.10	0.52
2:h:53:SER:O	2:h:57:ARG:HG2	2.10	0.52
3:M:132:ARG:HD2	3:M:179:TYR:CD1	2.45	0.52
3:M:211:MET:O	3:M:217:SER:HB2	2.09	0.52
3:M:641:ILE:HG21	3:M:688:LEU:HD11	1.92	0.52
3:N:206:LEU:HD12	3:N:247:ALA:HB1	1.92	0.52
3:N:510:ASP:OD1	3:N:511:GLN:HG2	2.09	0.52
3:G:614:ASP:OD1	3:H:455:LYS:NZ	2.42	0.52
4:I:140:ARG:HA	4:I:143:LEU:HG	1.90	0.52
4:I:434:ALA:HB3	4:I:447:SER:HB3	1.92	0.52
4:K:34:ALA:HB2	4:K:54:MET:HE1	1.90	0.52
4:K:496:GLU:HG2	4:K:1179:MET:HE3	1.92	0.52
4:K:661:HIS:HB3	4:K:769:ARG:HH21	1.75	0.52
4:K:810:ASP:OD1	4:K:821:THR:OG1	2.26	0.52
4:L:80:GLU:HG3	4:L:1027:ARG:HE	1.74	0.52
2:S:119:ARG:NH1	3:O:90:GLY:O	2.37	0.52
3:P:587:SER:O	3:P:589:ASN:N	2.42	0.52
3:R:197:ASN:O	3:R:201:GLU:HG2	2.10	0.52
3:G:132:ARG:HD2	3:G:179:TYR:HD1	1.75	0.52
3:G:201:GLU:OE1	3:H:110:ARG:NH1	2.40	0.52
3:H:121:MET:HE2	3:H:139:ARG:HB2	1.92	0.52
3:H:697:LYS:O	3:H:701:GLU:HG2	2.09	0.52
4:I:985:TRP:O	4:I:993:THR:OG1	2.23	0.52
4:I:1248:GLN:HG3	4:J:790:ASP:HA	1.92	0.52
4:J:661:HIS:HB3	4:J:769:ARG:HH21	1.74	0.52
4:L:405:SER:OG	4:L:423:ASN:OD1	2.24	0.52
3:N:592:MET:HE3	3:O:478:VAL:HG21	1.89	0.52
3:O:514:LEU:O	3:O:518:MET:HG3	2.10	0.52
3:P:322:PRO:HG2	3:P:366:TRP:HB2	1.92	0.52
3:R:338:LYS:NZ	3:H:88:ASN:O	2.38	0.52
3:R:622:PRO:HG2	3:R:625:MET:HE3	1.90	0.52
3:G:673:MET:HB3	3:G:680:ARG:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:669:SER:HB3	3:H:682:ARG:HH11	1.74	0.52
4:J:66:LEU:C	4:J:68:VAL:H	2.18	0.52
4:K:604:ARG:NH1	4:K:950:ASP:OD2	2.43	0.52
4:K:1116:LEU:HA	4:K:1121:LEU:HD23	1.92	0.52
4:K:1293:PRO:HD2	4:K:1299:GLN:NE2	2.25	0.52
3:Q:214:ARG:O	3:Q:263:ARG:NH2	2.43	0.52
3:Q:439:ASP:OD2	3:Q:495:ARG:NH1	2.43	0.52
3:Q:473:GLU:HG2	3:Q:490:MET:HE2	1.92	0.52
3:G:358:GLN:O	3:G:362:GLN:HG3	2.09	0.52
3:H:556:ALA:HB1	3:H:594:MET:HE3	1.91	0.52
4:K:777:SER:HB3	4:K:787:SER:HB3	1.91	0.52
4:L:594:SER:O	4:L:598:THR:HG23	2.10	0.52
2:S:69:SER:HB2	3:N:115:LEU:HA	1.92	0.52
2:T:47:ILE:HG12	2:T:48:GLN:HE21	1.74	0.52
2:c:64:SER:O	2:c:68:THR:HG23	2.10	0.52
3:M:206:LEU:HD22	3:M:247:ALA:HB1	1.92	0.52
3:M:391:PHE:O	3:M:395:ILE:HG13	2.09	0.52
3:O:336:LEU:HD12	3:O:352:LEU:HD22	1.91	0.52
3:R:47:ARG:HA	3:R:50:LYS:HE2	1.92	0.52
3:R:383:LYS:O	3:R:387:ILE:HG13	2.10	0.52
4:J:827:GLU:O	4:J:831:LEU:HG	2.10	0.52
4:K:535:ASP:HB3	4:K:817:THR:HG22	1.92	0.52
4:K:552:GLY:HA2	4:K:648:GLY:HA3	1.91	0.52
2:d:53:SER:O	2:d:57:ARG:HG2	2.10	0.52
3:M:112:ALA:HB2	3:M:150:TYR:CD1	2.45	0.52
3:G:251:ALA:O	3:G:257:GLY:HA3	2.09	0.52
3:G:598:THR:O	3:G:602:LYS:HG3	2.09	0.52
4:I:801:PRO:O	4:I:805:ARG:HG3	2.09	0.52
4:J:825:LYS:O	4:J:829:LEU:HG	2.10	0.52
4:J:904:ARG:NH2	4:J:1177:PRO:HG2	2.25	0.52
2:S:39:MET:HE1	3:N:154:PHE:CE1	2.45	0.51
2:g:57:ARG:NH2	3:R:327:GLU:OE2	2.42	0.51
3:M:646:ARG:HG3	3:M:661:LEU:HD22	1.89	0.51
3:R:680:ARG:NH1	4:L:423:ASN:HD22	2.07	0.51
3:G:700:GLU:HB3	3:H:368:LYS:HB3	1.91	0.51
4:K:669:VAL:HG13	4:K:793:ASP:HB3	1.92	0.51
4:L:1197:MET:SD	4:L:1287:SER:HB2	2.50	0.51
3:P:519:ASP:OD1	3:P:523:LYS:HG3	2.10	0.51
3:Q:160:ASP:O	3:Q:164:GLN:HG2	2.10	0.51
4:I:905:ALA:O	4:I:1309:ASN:ND2	2.42	0.51
4:J:689:GLU:OE2	4:J:693:ARG:NE	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:722:VAL:HG13	4:J:726:MET:HE2	1.92	0.51
4:L:1074:ARG:O	4:L:1078:LYS:HG2	2.10	0.51
3:M:232:GLY:HA3	3:N:100:ALA:HB2	1.92	0.51
3:Q:645:ALA:HA	4:L:227:PHE:HE2	1.76	0.51
3:R:206:LEU:HD12	3:R:247:ALA:HB1	1.92	0.51
3:H:682:ARG:HH12	3:H:684:ASP:HB2	1.75	0.51
4:I:701:SER:HB2	4:L:646:ILE:HG12	1.93	0.51
4:I:978:GLU:OE1	4:L:377:ARG:NH2	2.43	0.51
4:K:846:HIS:HA	4:K:849:MET:HE3	1.92	0.51
2:T:81:ILE:HA	3:N:220:PHE:CD1	2.46	0.51
2:c:55:GLN:HG3	2:c:59:LYS:HE2	1.91	0.51
3:N:146:GLY:HA2	3:N:149:VAL:HG12	1.93	0.51
3:N:233:ALA:O	3:N:234:ILE:C	2.53	0.51
3:G:680:ARG:HB2	4:I:253:ASP:HB3	1.93	0.51
4:I:451:THR:HA	4:I:454:MET:HE3	1.90	0.51
4:J:643:ASN:O	4:J:646:ILE:HG13	2.11	0.51
4:K:262:THR:HG22	4:K:263:ILE:HG13	1.92	0.51
4:K:894:ILE:O	4:K:898:ILE:HG13	2.10	0.51
2:d:113:VAL:HG11	3:Q:176:ILE:HD12	1.92	0.51
2:h:35:ARG:NH1	2:h:66:GLU:O	2.41	0.51
4:I:604:ARG:NH1	4:I:950:ASP:OD2	2.43	0.51
4:I:863:GLN:O	4:I:866:VAL:HG22	2.10	0.51
4:K:405:SER:OG	4:K:423:ASN:OD1	2.24	0.51
1:A:46:THR:HG23	3:M:445:MET:HE3	1.91	0.51
2:g:65:ALA:O	2:g:68:THR:OG1	2.28	0.51
3:P:160:ASP:OD1	3:P:161:VAL:N	2.42	0.51
3:P:262:MET:HE3	3:P:291:MET:HE2	1.92	0.51
3:H:510:ASP:OD1	3:H:511:GLN:N	2.43	0.51
4:I:894:ILE:O	4:I:898:ILE:HG13	2.11	0.51
4:I:1099:GLY:O	4:I:1103:LYS:HG2	2.11	0.51
4:K:476:VAL:HA	4:K:482:VAL:HA	1.91	0.51
4:L:898:ILE:HG22	4:L:1144:MET:HE1	1.92	0.51
4:L:1163:PRO:HB2	4:L:1166:LYS:NZ	2.24	0.51
3:M:47:ARG:HA	3:M:50:LYS:HE2	1.93	0.51
3:M:380:SER:HA	3:M:383:LYS:HE2	1.93	0.51
3:O:661:LEU:HD13	3:O:672:LEU:HD11	1.92	0.51
3:Q:112:ALA:HB2	3:Q:150:TYR:CD2	2.45	0.51
4:K:432:LEU:HD22	4:K:897:MET:HE1	1.93	0.51
4:L:143:LEU:HD21	4:L:154:LEU:HD23	1.91	0.51
3:O:132:ARG:HD2	3:O:179:TYR:CD1	2.46	0.51
3:R:321:ASP:OD1	3:R:321:ASP:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:538:ARG:NH1	4:L:783:GLY:HA2	2.26	0.51
4:K:827:GLU:O	4:K:831:LEU:HG	2.10	0.51
4:K:897:MET:HA	4:K:900:THR:HG22	1.92	0.51
4:L:431:ARG:NH2	4:L:484:SER:HB3	2.25	0.51
2:T:52:LEU:HB2	2:T:57:ARG:HD3	1.93	0.51
3:M:420:ASP:OD1	3:M:420:ASP:N	2.41	0.51
3:N:608:PHE:CG	3:N:663:MET:HE1	2.46	0.51
3:N:680:ARG:NH1	4:J:423:ASN:HD22	2.08	0.51
3:O:563:PRO:HG2	3:O:564:GLU:OE2	2.11	0.51
3:Q:374:LEU:HD13	3:R:296:ARG:HA	1.93	0.51
3:Q:646:ARG:HG3	3:Q:661:LEU:HD22	1.92	0.51
3:R:101:MET:O	3:R:105:ARG:HG3	2.10	0.51
3:H:587:SER:O	3:H:589:ASN:N	2.42	0.51
4:I:553:ALA:O	4:I:557:ASP:HB2	2.11	0.51
4:I:897:MET:HA	4:I:900:THR:HG22	1.93	0.51
4:I:1112:THR:HG23	4:I:1138:LEU:HD13	1.93	0.51
4:L:1112:THR:HG23	4:L:1138:LEU:HD13	1.93	0.51
3:N:130:ARG:NH2	3:O:152:GLU:OE2	2.44	0.51
3:P:699:LEU:HB3	3:Q:372:LYS:HE2	1.92	0.51
4:K:814:MET:HE1	4:K:820:THR:HG22	1.91	0.51
2:S:39:MET:HE1	3:N:154:PHE:HE1	1.75	0.50
2:c:26:MET:O	2:c:30:GLN:HG2	2.11	0.50
2:c:52:LEU:O	2:c:57:ARG:NH1	2.42	0.50
3:M:103:ALA:O	3:M:107:LYS:HG3	2.10	0.50
3:M:526:ILE:HA	3:N:480:ASN:ND2	2.26	0.50
3:O:453:ASP:OD2	3:O:459:PHE:HB2	2.10	0.50
3:Q:197:ASN:O	3:Q:201:GLU:HG2	2.11	0.50
3:H:238:ALA:O	3:H:242:GLN:HG2	2.11	0.50
4:I:431:ARG:NH2	4:I:484:SER:HB3	2.27	0.50
4:K:100:ASP:OD2	4:K:123:TYR:OH	2.23	0.50
3:M:233:ALA:O	3:M:234:ILE:C	2.53	0.50
3:H:565:ILE:HD12	3:H:597:MET:HE2	1.92	0.50
4:J:581:MET:HE1	4:J:595:ARG:HG3	1.93	0.50
4:J:775:ASP:OD1	4:J:789:ASN:ND2	2.44	0.50
4:J:1164:LYS:HA	4:J:1167:ARG:HD2	1.93	0.50
4:L:473:GLY:HA3	4:L:485:ALA:HB2	1.93	0.50
1:E:45:GLY:HA2	3:P:448:LYS:NZ	2.27	0.50
3:N:118:ASP:OD2	3:N:174:ARG:HD2	2.11	0.50
3:Q:139:ARG:O	3:Q:143:LEU:HG	2.12	0.50
3:G:527:ASP:HB3	3:G:530:VAL:HG22	1.93	0.50
3:H:391:PHE:O	3:H:395:ILE:HG12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:1030:SER:HB2	4:I:1074:ARG:NH1	2.26	0.50
4:I:1098:PHE:O	4:I:1103:LYS:NZ	2.44	0.50
4:J:34:ALA:HB2	4:J:54:MET:HE1	1.93	0.50
3:M:324:THR:O	3:M:328:MET:HG3	2.11	0.50
3:Q:121:MET:HG3	3:Q:125:LYS:HE2	1.92	0.50
3:Q:252:SER:HB2	3:Q:293:THR:HG23	1.93	0.50
3:G:303:ALA:O	3:G:307:GLU:HG2	2.12	0.50
4:K:679:ILE:HG12	4:K:683:GLY:O	2.11	0.50
2:d:71:ASN:ND2	3:Q:122:GLN:HB2	2.26	0.50
2:f:81:ILE:HA	3:R:220:PHE:CD1	2.47	0.50
2:h:73:GLN:HE21	3:H:204:GLY:HA2	1.77	0.50
3:P:500:ASP:OD1	3:P:632:PRO:HB3	2.12	0.50
3:P:556:ALA:HB1	3:P:594:MET:HE3	1.93	0.50
3:R:467:VAL:HG12	3:R:511:GLN:HG3	1.92	0.50
4:I:595:ARG:HG2	4:I:1192:GLY:HA3	1.94	0.50
4:I:1278:GLN:O	4:I:1282:THR:HG22	2.12	0.50
4:K:1084:MET:HG2	4:K:1098:PHE:CZ	2.46	0.50
2:g:53:SER:O	2:g:57:ARG:HG3	2.12	0.50
3:P:125:LYS:NZ	3:P:178:LEU:O	2.40	0.50
4:K:456:PHE:HA	4:K:466:GLU:HG2	1.93	0.50
4:K:712:MET:HE2	4:K:771:LEU:HD12	1.92	0.50
4:K:988:LEU:HD22	4:K:1131:ASN:HD22	1.75	0.50
4:L:964:ALA:O	4:L:968:ILE:HG12	2.11	0.50
3:N:684:ASP:OD1	3:N:685:LYS:N	2.44	0.50
3:P:136:GLU:OE1	3:Q:56:TYR:OH	2.30	0.50
3:P:233:ALA:O	3:P:234:ILE:C	2.53	0.50
3:R:67:ALA:O	3:R:70:ARG:HG2	2.11	0.50
3:R:388:ASP:OD1	3:R:428:LYS:NZ	2.45	0.50
3:G:117:ASP:OD2	3:G:174:ARG:NH1	2.33	0.50
3:G:646:ARG:HG3	3:G:661:LEU:HD22	1.93	0.50
3:H:66:LEU:HG	3:H:70:ARG:NH1	2.26	0.50
4:J:985:TRP:O	4:J:993:THR:OG1	2.25	0.50
4:L:637:LYS:O	4:L:641:MET:HE3	2.11	0.50
2:T:67:LEU:HD12	3:N:196:MET:SD	2.52	0.50
3:M:563:PRO:HG2	3:M:564:GLU:OE1	2.12	0.50
3:R:191:GLN:O	3:R:195:ILE:HG12	2.11	0.50
3:H:118:ASP:OD2	3:H:174:ARG:HD2	2.12	0.50
4:I:1277:GLU:HG2	4:J:974:TYR:CD1	2.47	0.50
4:J:1012:THR:HG22	4:J:1040:LYS:HD3	1.94	0.50
4:L:11:ASP:O	4:L:1024:GLY:HA3	2.12	0.50
4:L:825:LYS:O	4:L:829:LEU:HG	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:131:THR:HG22	3:M:134:GLU:HG3	1.94	0.50
3:M:349:ARG:O	3:M:353:ILE:HG12	2.12	0.50
3:R:125:LYS:NZ	3:R:181:ALA:HB3	2.27	0.50
3:H:583:VAL:HG11	3:H:596:GLN:HG3	1.94	0.50
3:H:608:PHE:CG	3:H:663:MET:HE1	2.47	0.50
4:I:643:ASN:O	4:I:646:ILE:HG13	2.12	0.50
4:K:273:TRP:HB2	4:K:278:LEU:HG	1.94	0.50
4:L:1278:GLN:O	4:L:1282:THR:HG22	2.11	0.50
1:D:40:GLU:OE1	3:O:373:ALA:HB2	2.11	0.49
3:P:503:LEU:O	3:P:507:LEU:HG	2.12	0.49
4:K:1112:THR:HG23	4:K:1138:LEU:HD13	1.94	0.49
4:L:8:VAL:HB	4:L:9:PRO:HD3	1.94	0.49
2:e:128:GLN:HB3	3:G:82:GLN:OE1	2.12	0.49
3:M:346:THR:HG23	3:M:349:ARG:H	1.77	0.49
3:N:112:ALA:HB2	3:N:150:TYR:HD2	1.76	0.49
3:N:517:THR:HG22	3:N:521:MET:HE2	1.94	0.49
3:O:132:ARG:HD2	3:O:179:TYR:HD1	1.77	0.49
3:O:401:SER:OG	3:O:406:ASP:OD2	2.26	0.49
3:R:262:MET:HE3	3:R:291:MET:SD	2.51	0.49
3:R:271:LEU:HG	3:R:272:ASN:H	1.77	0.49
3:R:574:GLU:O	3:R:578:LYS:HG3	2.12	0.49
3:R:626:MET:O	3:R:638:GLY:HA3	2.12	0.49
3:H:404:PHE:HA	3:H:407:MET:HG2	1.94	0.49
4:I:561:ARG:O	4:I:565:THR:HG23	2.12	0.49
4:I:968:ILE:CG2	4:L:1237:VAL:HG22	2.43	0.49
4:K:898:ILE:HG22	4:K:1144:MET:HE1	1.94	0.49
4:L:273:TRP:HB2	4:L:278:LEU:HG	1.94	0.49
2:S:57:ARG:HH21	3:M:242:GLN:NE2	2.10	0.49
2:d:40:GLU:O	2:d:44:GLN:HG2	2.12	0.49
3:M:151:ALA:HB2	3:M:163:TYR:CZ	2.47	0.49
3:N:132:ARG:O	3:N:136:GLU:HG2	2.11	0.49
3:Q:556:ALA:O	3:Q:560:SER:OG	2.26	0.49
3:R:272:ASN:OD1	3:R:273:GLY:N	2.45	0.49
3:G:232:GLY:HA3	3:H:100:ALA:HB2	1.94	0.49
3:H:112:ALA:HB2	3:H:150:TYR:CD2	2.47	0.49
3:H:160:ASP:OD1	3:H:161:VAL:N	2.45	0.49
4:I:1013:LEU:HD23	4:I:1049:ARG:HB2	1.94	0.49
3:N:626:MET:O	3:N:638:GLY:HA3	2.12	0.49
3:P:72:ASN:HB3	3:P:76:ARG:HH21	1.78	0.49
3:H:680:ARG:NH1	4:I:423:ASN:HD22	2.10	0.49
4:J:1197:MET:SD	4:J:1287:SER:HB2	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:633:HIS:CD2	4:K:800:MET:HE2	2.46	0.49
4:K:866:VAL:HG13	4:K:1201:VAL:HG23	1.95	0.49
4:K:904:ARG:HB3	4:K:1311:VAL:HG13	1.94	0.49
4:K:940:VAL:O	4:K:944:ILE:HG12	2.11	0.49
1:b:40:GLU:OE1	3:M:373:ALA:HB2	2.12	0.49
2:e:63:ALA:O	2:e:67:LEU:HD23	2.12	0.49
3:M:454:SER:C	3:M:456:ASP:H	2.20	0.49
3:O:526:ILE:HA	3:P:480:ASN:ND2	2.27	0.49
3:O:564:GLU:H	3:O:564:GLU:CD	2.19	0.49
3:P:130:ARG:HB3	3:Q:156:ILE:HD11	1.94	0.49
3:Q:336:LEU:HD12	3:Q:352:LEU:HD22	1.93	0.49
3:R:643:GLU:O	3:R:647:LYS:HG2	2.12	0.49
3:H:645:ALA:O	3:H:649:ILE:HG12	2.12	0.49
3:H:674:ASP:OD1	3:H:674:ASP:N	2.45	0.49
4:I:140:ARG:NH2	4:I:157:PHE:O	2.37	0.49
4:J:612:ARG:HD3	4:J:775:ASP:OD2	2.12	0.49
4:K:431:ARG:NH2	4:K:484:SER:HB3	2.27	0.49
4:K:1278:GLN:O	4:K:1282:THR:HG22	2.12	0.49
4:L:633:HIS:O	4:L:637:LYS:HG2	2.13	0.49
4:L:809:GLY:HA3	4:L:856:THR:HA	1.93	0.49
3:M:570:ALA:O	3:M:573:ARG:HB2	2.12	0.49
3:O:47:ARG:HA	3:O:50:LYS:HE2	1.94	0.49
3:O:550:ASP:O	3:O:554:GLU:HG2	2.12	0.49
3:R:589:ASN:HA	3:G:539:VAL:HG22	1.92	0.49
3:R:602:LYS:HE3	3:G:468:THR:HG21	1.95	0.49
3:G:639:ARG:HH12	3:H:418:HIS:HB3	1.77	0.49
4:I:416:LYS:HZ2	4:I:418:GLU:N	2.07	0.49
4:I:972:LEU:HD13	4:L:1277:GLU:HA	1.93	0.49
4:J:673:HIS:ND1	4:J:946:PRO:HA	2.28	0.49
4:L:17:GLN:HG3	4:L:1086:ARG:HG2	1.94	0.49
2:c:77:ALA:HB3	3:O:211:MET:HE3	1.95	0.49
2:h:72:MET:HE1	3:M:177:SER:OG	2.13	0.49
3:M:95:GLN:HA	3:M:101:MET:HE2	1.94	0.49
3:M:368:LYS:HZ2	3:H:704:ARG:HD3	1.78	0.49
3:M:453:ASP:OD2	3:M:459:PHE:HB2	2.13	0.49
3:N:112:ALA:HB2	3:N:150:TYR:CD2	2.47	0.49
3:H:205:VAL:HG12	3:H:206:LEU:HD23	1.94	0.49
4:I:101:GLU:HG3	4:I:147:LYS:H	1.78	0.49
4:I:593:MET:HE3	4:I:598:THR:HG22	1.94	0.49
4:J:866:VAL:HG21	4:J:1197:MET:HE3	1.94	0.49
4:J:1112:THR:HG23	4:J:1138:LEU:HD13	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:712:MET:HE2	4:L:771:LEU:HD12	1.95	0.49
4:L:1021:GLU:HG2	4:L:1036:MET:HE3	1.95	0.49
2:c:39:MET:HE1	3:P:154:PHE:HE1	1.77	0.49
3:O:383:LYS:HA	3:O:386:VAL:HG12	1.93	0.49
3:R:224:TYR:OH	3:G:107:LYS:NZ	2.46	0.49
3:G:139:ARG:O	3:G:143:LEU:HG	2.13	0.49
3:G:270:THR:HG23	3:G:275:THR:HG22	1.94	0.49
3:G:380:SER:HA	3:G:383:LYS:HG2	1.93	0.49
4:I:54:MET:HB2	4:I:56:PHE:CE1	2.48	0.49
4:I:416:LYS:NZ	4:I:418:GLU:OE1	2.46	0.49
4:I:556:SER:O	4:I:560:GLU:HG3	2.13	0.49
4:J:584:PRO:HA	4:J:588:THR:HG23	1.94	0.49
1:E:39:ASP:OD2	3:Q:323:ARG:NH2	2.46	0.49
3:N:238:ALA:O	3:N:242:GLN:HG2	2.13	0.49
3:O:645:ALA:HA	4:K:227:PHE:HE2	1.78	0.49
3:P:121:MET:O	3:P:125:LYS:HG3	2.13	0.49
3:P:674:ASP:OD1	3:P:674:ASP:N	2.44	0.49
4:I:1004:MET:HE1	4:I:1020:TRP:NE1	2.28	0.49
4:J:594:SER:O	4:J:598:THR:HG23	2.12	0.49
2:e:62:GLU:O	2:e:66:GLU:HG3	2.13	0.49
2:f:128:GLN:OE1	2:f:128:GLN:N	2.44	0.49
3:G:383:LYS:HB2	3:G:416:PHE:CE1	2.47	0.49
4:K:561:ARG:HH22	4:L:779:THR:HG21	1.77	0.49
4:K:633:HIS:O	4:K:637:LYS:HG2	2.13	0.49
4:L:584:PRO:HA	4:L:588:THR:HG23	1.95	0.49
4:L:1171:LEU:HD22	4:L:1175:LEU:HD12	1.95	0.49
3:M:374:LEU:HD13	3:N:296:ARG:HA	1.94	0.48
3:M:483:LEU:HD12	3:M:484:PRO:HD2	1.93	0.48
3:M:673:MET:HG2	3:M:674:ASP:O	2.13	0.48
3:N:47:ARG:HA	3:N:50:LYS:HE2	1.94	0.48
3:N:394:ARG:CG	3:N:452:ALA:HB1	2.43	0.48
3:O:568:MET:SD	3:O:573:ARG:HA	2.53	0.48
3:Q:563:PRO:HG2	3:Q:564:GLU:OE2	2.13	0.48
3:Q:611:ASP:N	3:Q:658:ASN:HD21	2.12	0.48
3:R:587:SER:O	3:R:589:ASN:N	2.43	0.48
3:R:700:GLU:HG3	3:G:372:LYS:HB2	1.95	0.48
3:H:455:LYS:HG2	3:H:455:LYS:O	2.12	0.48
3:H:541:ARG:HD2	3:H:546:ARG:HE	1.78	0.48
4:I:54:MET:HE2	4:I:54:MET:HA	1.95	0.48
4:L:442:ASN:OD1	4:L:442:ASN:O	2.31	0.48
4:L:904:ARG:HB3	4:L:1311:VAL:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:1084:MET:HE1	4:L:1105:VAL:HG13	1.95	0.48
2:h:54:LEU:HD11	3:G:319:GLN:OE1	2.13	0.48
2:h:69:SER:HB3	3:M:115:LEU:HD23	1.95	0.48
3:G:413:THR:HG21	3:G:416:PHE:CE2	2.48	0.48
3:H:453:ASP:HB2	3:H:460:ARG:HD3	1.94	0.48
4:K:414:ARG:HG2	4:K:414:ARG:HH11	1.78	0.48
4:K:497:PHE:HZ	4:K:1187:ARG:HH12	1.60	0.48
1:D:46:THR:HG23	3:N:448:LYS:HE3	1.95	0.48
2:S:37:GLN:HE22	2:S:41:ILE:HD11	1.78	0.48
3:M:500:ASP:OD2	3:M:503:LEU:HB3	2.13	0.48
3:N:125:LYS:NZ	3:N:182:HIS:HB2	2.28	0.48
3:N:510:ASP:OD1	3:N:511:GLN:N	2.46	0.48
3:O:132:ARG:O	3:O:136:GLU:HG3	2.13	0.48
3:O:147:ALA:HB2	3:O:167:PHE:CZ	2.48	0.48
3:G:116:VAL:O	3:G:120:VAL:HG23	2.13	0.48
3:H:541:ARG:HB3	3:H:546:ARG:HE	1.77	0.48
4:J:442:ASN:O	4:J:442:ASN:OD1	2.31	0.48
4:J:832:LYS:HE3	4:J:846:HIS:CE1	2.48	0.48
4:L:795:ASP:O	4:L:796:MET:C	2.56	0.48
2:f:82:ARG:NH2	2:f:103:GLU:OE2	2.47	0.48
2:g:60:LEU:HD12	3:G:196:MET:HE1	1.96	0.48
3:P:146:GLY:HA2	3:P:149:VAL:HG12	1.94	0.48
3:P:455:LYS:HG2	3:P:455:LYS:O	2.12	0.48
3:Q:323:ARG:NH1	3:R:293:THR:HG21	2.29	0.48
3:G:211:MET:O	3:G:217:SER:HB3	2.12	0.48
3:H:205:VAL:HG21	3:H:220:PHE:CZ	2.48	0.48
3:H:283:GLY:O	3:H:287:TRP:N	2.37	0.48
4:J:712:MET:HE3	4:J:712:MET:HB3	1.73	0.48
4:J:894:ILE:O	4:J:898:ILE:HG13	2.14	0.48
4:K:637:LYS:O	4:K:641:MET:HE3	2.14	0.48
4:K:914:ARG:O	4:K:919:LYS:HG3	2.13	0.48
4:K:1241:MET:O	4:K:1245:LEU:HG	2.12	0.48
3:N:645:ALA:O	3:N:649:ILE:HG12	2.13	0.48
3:O:380:SER:HA	3:O:383:LYS:HE2	1.95	0.48
3:P:283:GLY:O	3:P:287:TRP:N	2.42	0.48
4:I:379:SER:H	4:I:1282:THR:HB	1.79	0.48
4:J:140:ARG:HA	4:J:143:LEU:HG	1.95	0.48
4:K:553:ALA:O	4:K:557:ASP:HB2	2.13	0.48
4:L:398:GLY:HA3	4:L:429:MET:SD	2.53	0.48
4:L:806:ARG:NH1	4:L:856:THR:OG1	2.46	0.48
2:e:72:MET:SD	3:R:118:ASP:HB3	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:g:55:GLN:HG3	2:g:59:LYS:HE2	1.95	0.48
2:h:81:ILE:HA	3:H:220:PHE:CD1	2.49	0.48
3:M:172:THR:O	3:M:176:ILE:HG12	2.13	0.48
3:O:251:ALA:O	3:O:257:GLY:HA3	2.14	0.48
3:P:432:ILE:HG23	3:P:445:MET:HE3	1.96	0.48
3:G:382:ASN:ND2	3:G:412:ASN:HB3	2.29	0.48
4:J:273:TRP:HB2	4:J:278:LEU:HG	1.94	0.48
4:L:266:THR:HG23	4:L:269:ASN:H	1.78	0.48
3:M:197:ASN:O	3:M:201:GLU:HG2	2.13	0.48
3:M:518:MET:HA	3:M:521:MET:HG2	1.96	0.48
3:M:660:GLN:HA	3:M:675:THR:HG23	1.95	0.48
3:P:669:SER:HB3	3:P:682:ARG:NH1	2.28	0.48
3:Q:380:SER:HA	3:Q:383:LYS:HG2	1.95	0.48
3:R:146:GLY:HA2	3:R:149:VAL:HG12	1.95	0.48
3:G:132:ARG:O	3:G:136:GLU:HG3	2.13	0.48
4:I:681:ARG:HH22	4:L:1243:SER:HA	1.77	0.48
4:J:380:VAL:CG2	4:J:575:LYS:HG3	2.43	0.48
4:J:679:ILE:O	4:J:683:GLY:HA2	2.12	0.48
3:M:211:MET:O	3:M:214:ARG:HG2	2.14	0.48
3:M:480:ASN:HD21	3:H:526:ILE:HA	1.77	0.48
3:N:82:GLN:HA	3:N:85:GLU:HG3	1.96	0.48
3:P:238:ALA:O	3:P:242:GLN:HG2	2.14	0.48
3:P:252:SER:HB2	3:P:293:THR:HG23	1.96	0.48
3:P:349:ARG:O	3:P:353:ILE:HD12	2.13	0.48
3:Q:70:ARG:O	3:Q:74:ILE:HG12	2.14	0.48
3:G:200:VAL:HG11	3:H:111:ASN:ND2	2.24	0.48
3:H:170:ASP:OD1	3:H:173:GLU:HG3	2.13	0.48
4:I:975:SER:HB3	4:I:978:GLU:OE2	2.14	0.48
4:J:414:ARG:HG2	4:J:414:ARG:HH11	1.79	0.48
4:K:11:ASP:CG	4:K:1022:LYS:HB3	2.38	0.48
4:K:112:GLU:HA	4:K:116:GLY:HA3	1.94	0.48
4:K:355:LEU:HD21	4:K:433:GLU:HG3	1.95	0.48
4:K:594:SER:O	4:K:598:THR:HG23	2.14	0.48
4:L:1314:ARG:HG3	4:L:1315:GLU:N	2.19	0.48
3:M:487:THR:HG23	3:M:490:MET:HE3	1.96	0.48
3:N:587:SER:O	3:N:589:ASN:N	2.46	0.48
3:Q:413:THR:HG21	3:Q:416:PHE:CE1	2.48	0.48
3:R:674:ASP:OD1	3:R:674:ASP:N	2.45	0.48
3:H:497:ARG:HE	3:H:518:MET:HE3	1.77	0.48
4:I:11:ASP:CG	4:I:1022:LYS:HB3	2.39	0.48
4:J:1019:ARG:HA	4:J:1022:LYS:NZ	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:386:ASP:N	4:L:386:ASP:OD1	2.45	0.48
4:L:1090:VAL:HG22	4:L:1109:LYS:HD3	1.95	0.48
2:h:119:ARG:NH1	3:N:90:GLY:O	2.27	0.48
3:M:160:ASP:O	3:M:164:GLN:HG2	2.13	0.48
3:N:657:THR:HG22	3:N:659:LYS:H	1.79	0.48
3:R:132:ARG:HD2	3:R:179:TYR:CD2	2.49	0.48
3:G:568:MET:SD	3:G:573:ARG:HA	2.54	0.48
3:H:641:ILE:HD13	3:H:691:VAL:HG23	1.96	0.48
4:I:581:MET:HE1	4:I:595:ARG:HG3	1.96	0.48
4:J:513:GLY:O	4:J:517:ILE:HG12	2.14	0.48
4:J:520:LYS:HD2	4:J:847:ALA:HB2	1.96	0.48
4:L:806:ARG:HA	4:L:806:ARG:HD2	1.73	0.48
1:B:42:ASP:OD1	1:B:43:THR:N	2.46	0.47
3:N:599:LYS:HE3	3:O:472:GLN:CD	2.39	0.47
3:P:50:LYS:NZ	3:P:159:GLU:OE2	2.48	0.47
3:Q:453:ASP:OD2	3:Q:459:PHE:HB2	2.13	0.47
3:H:417:LYS:HZ3	3:H:419:SER:HB2	1.79	0.47
4:J:1277:GLU:HA	4:K:972:LEU:HD13	1.95	0.47
4:K:743:GLN:HG3	4:K:744:PHE:CD1	2.49	0.47
2:e:42:MET:HE1	3:R:154:PHE:CE1	2.49	0.47
3:M:382:ASN:ND2	3:M:412:ASN:HB3	2.29	0.47
3:M:613:VAL:HG23	3:M:614:ASP:H	1.78	0.47
3:N:374:LEU:HD13	3:O:296:ARG:HA	1.96	0.47
3:O:116:VAL:HG11	3:O:143:LEU:HA	1.95	0.47
3:P:467:VAL:HG22	3:P:493:LEU:HD13	1.96	0.47
3:Q:132:ARG:NH2	3:Q:183:ASP:OD1	2.41	0.47
3:Q:701:GLU:O	3:Q:705:GLU:HG2	2.13	0.47
3:R:250:ASP:O	3:R:254:ARG:HG2	2.14	0.47
3:G:483:LEU:HD11	3:G:490:MET:HE1	1.95	0.47
4:I:333:ILE:HG22	4:I:433:GLU:OE2	2.12	0.47
3:M:303:ALA:O	3:M:307:GLU:HG2	2.14	0.47
3:N:467:VAL:HG22	3:N:493:LEU:HD13	1.95	0.47
3:N:497:ARG:NH2	3:N:519:ASP:OD1	2.44	0.47
3:N:631:ASP:OD1	3:N:632:PRO:HD2	2.14	0.47
3:R:98:PRO:O	3:R:102:GLU:HG3	2.14	0.47
3:R:697:LYS:O	3:R:701:GLU:HG2	2.14	0.47
3:G:160:ASP:O	3:G:164:GLN:HG2	2.14	0.47
4:I:633:HIS:O	4:I:637:LYS:HG2	2.15	0.47
4:I:679:ILE:HG12	4:I:683:GLY:O	2.13	0.47
2:S:35:ARG:NH1	3:N:116:VAL:HG13	2.30	0.47
3:M:517:THR:OG1	3:M:586:ARG:NH2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:172:THR:O	3:O:176:ILE:HG12	2.15	0.47
3:H:197:ASN:O	3:H:201:GLU:HG2	2.14	0.47
3:H:522:ASP:OD1	3:H:523:LYS:HG2	2.14	0.47
4:I:376:LEU:HG	4:I:378:THR:HG23	1.95	0.47
4:I:974:TYR:CD1	4:L:1277:GLU:HG2	2.49	0.47
4:J:777:SER:HB3	4:J:787:SER:HB3	1.95	0.47
4:J:1030:SER:HB2	4:J:1074:ARG:NH1	2.29	0.47
4:K:593:MET:HB3	4:K:597:GLU:HB3	1.95	0.47
4:K:1237:VAL:HG22	4:L:968:ILE:CG2	2.43	0.47
3:M:93:LEU:HD21	3:H:183:ASP:OD1	2.13	0.47
3:N:79:THR:H	3:N:82:GLN:NE2	2.10	0.47
3:O:394:ARG:HD3	3:O:452:ALA:O	2.14	0.47
3:G:191:GLN:O	3:G:195:ILE:HG13	2.15	0.47
4:J:363:GLY:O	4:J:443:SER:HB3	2.13	0.47
4:J:550:LYS:HD3	4:J:554:THR:HG22	1.97	0.47
4:J:1084:MET:HG2	4:J:1098:PHE:CZ	2.49	0.47
4:J:1278:GLN:O	4:J:1282:THR:HG22	2.14	0.47
4:K:990:ASN:O	4:K:994:ASN:ND2	2.48	0.47
3:M:283:GLY:O	3:M:287:TRP:N	2.41	0.47
3:N:394:ARG:HG3	3:N:452:ALA:HB1	1.97	0.47
3:O:70:ARG:O	3:O:74:ILE:HG12	2.15	0.47
3:R:576:ALA:HB1	3:R:597:MET:HE3	1.95	0.47
3:H:463:ILE:O	3:H:467:VAL:HG23	2.15	0.47
4:I:806:ARG:HA	4:I:806:ARG:HD2	1.74	0.47
4:I:1149:GLY:O	4:I:1153:MET:HG3	2.15	0.47
4:J:630:ILE:HD13	4:J:796:MET:HE3	1.96	0.47
4:K:866:VAL:HG11	4:K:1197:MET:CE	2.45	0.47
4:K:988:LEU:CD2	4:K:1131:ASN:HD22	2.28	0.47
4:L:777:SER:HB3	4:L:787:SER:HB2	1.96	0.47
4:L:779:THR:HG22	4:L:785:GLN:HG2	1.95	0.47
2:f:60:LEU:HD12	3:R:196:MET:HE1	1.95	0.47
3:M:238:ALA:O	3:M:242:GLN:HG2	2.14	0.47
3:M:655:TRP:CZ3	3:M:656:ILE:HG12	2.50	0.47
3:N:125:LYS:NZ	3:N:135:MET:HG3	2.29	0.47
3:N:199:ARG:HH11	3:N:243:LEU:HD13	1.78	0.47
3:N:641:ILE:HD13	3:N:691:VAL:HG23	1.96	0.47
3:O:386:VAL:HG11	3:O:416:PHE:HZ	1.79	0.47
3:O:541:ARG:HH22	3:O:544:GLU:HB3	1.79	0.47
3:P:641:ILE:HD13	3:P:691:VAL:HG23	1.96	0.47
3:R:551:LYS:HZ3	3:G:543:LYS:CG	2.28	0.47
3:R:598:THR:HG22	3:R:602:LYS:NZ	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:547:PHE:O	3:G:551:LYS:HG2	2.15	0.47
3:H:612:ASP:OD1	3:H:615:GLY:HA2	2.14	0.47
4:I:383:GLY:O	4:I:384:ASP:HB2	2.15	0.47
4:I:661:HIS:HB3	4:I:769:ARG:HH21	1.80	0.47
4:J:8:VAL:HB	4:J:9:PRO:HD3	1.96	0.47
4:K:609:ALA:HB1	4:K:616:GLN:HG2	1.97	0.47
4:K:724:PRO:HA	4:K:727:VAL:HG12	1.97	0.47
2:f:61:GLU:HA	3:R:199:ARG:NH2	2.30	0.47
2:h:52:LEU:HB3	2:h:56:ALA:HB3	1.97	0.47
3:N:78:LEU:HA	3:N:82:GLN:HE21	1.80	0.47
3:N:493:LEU:HA	3:N:496:ILE:HG22	1.96	0.47
3:O:102:GLU:HG3	3:O:162:ASP:CG	2.40	0.47
3:Q:628:VAL:O	3:Q:629:ASN:OD1	2.33	0.47
3:R:115:LEU:O	3:R:119:ASP:HB2	2.15	0.47
3:R:323:ARG:HH11	3:G:290:LEU:HD23	1.79	0.47
3:G:203:ASN:O	3:G:207:GLN:HB2	2.14	0.47
3:G:517:THR:HA	3:G:520:MET:HE2	1.95	0.47
3:G:543:LYS:HA	3:G:546:ARG:HB2	1.97	0.47
4:I:13:ASP:OD1	4:I:31:ARG:NH1	2.47	0.47
4:I:1277:GLU:HA	4:J:972:LEU:HD13	1.96	0.47
4:L:63:ALA:O	4:L:64:LEU:HB2	2.15	0.47
2:T:53:SER:O	2:T:57:ARG:HG2	2.14	0.47
3:M:261:LEU:HA	3:M:264:VAL:HG12	1.97	0.47
3:N:238:ALA:O	3:N:241:THR:OG1	2.33	0.47
3:N:526:ILE:HA	3:O:480:ASN:HD21	1.80	0.47
3:Q:255:ALA:HB2	3:Q:301:THR:HG21	1.97	0.47
3:Q:607:THR:HG23	3:Q:620:VAL:HG22	1.96	0.47
3:R:526:ILE:HA	3:G:480:ASN:HD21	1.80	0.47
4:I:679:ILE:O	4:I:683:GLY:HA2	2.13	0.47
4:I:964:ALA:O	4:I:968:ILE:HG12	2.15	0.47
4:J:806:ARG:NH1	4:J:856:THR:OG1	2.48	0.47
2:S:26:MET:HE1	2:h:6:ALA:N	2.30	0.47
2:e:39:MET:HE3	2:e:67:LEU:HD21	1.98	0.47
3:P:72:ASN:HA	3:P:75:ILE:HG22	1.95	0.47
3:P:437:ILE:CD1	3:P:445:MET:HE2	2.45	0.47
3:Q:303:ALA:O	3:Q:307:GLU:HG2	2.15	0.47
3:R:269:VAL:HG11	3:R:281:LEU:HD22	1.97	0.47
3:H:657:THR:HB	3:H:660:GLN:HG3	1.97	0.47
4:I:408:VAL:HB	4:I:1313:LEU:HD21	1.96	0.47
4:I:616:GLN:HG2	4:I:627:MET:CE	2.45	0.47
4:K:442:ASN:O	4:K:442:ASN:OD1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:1084:MET:HE2	4:K:1084:MET:HB3	1.61	0.47
3:M:87:LEU:HB2	3:M:92:LEU:HD23	1.96	0.46
3:M:139:ARG:NH2	3:M:175:ASN:OD1	2.48	0.46
3:M:147:ALA:HB2	3:M:167:PHE:CZ	2.50	0.46
3:M:336:LEU:HD12	3:M:352:LEU:HD22	1.98	0.46
3:M:413:THR:HG21	3:M:416:PHE:CE2	2.49	0.46
3:M:520:MET:HB3	3:M:526:ILE:CD1	2.43	0.46
3:N:383:LYS:O	3:N:387:ILE:HG13	2.14	0.46
3:P:276:THR:OG1	3:P:280:GLU:OE1	2.33	0.46
3:R:238:ALA:O	3:R:242:GLN:HG2	2.15	0.46
3:G:151:ALA:HB2	3:G:163:TYR:CZ	2.50	0.46
3:H:66:LEU:HG	3:H:70:ARG:HH12	1.79	0.46
3:H:626:MET:O	3:H:638:GLY:HA3	2.16	0.46
4:I:572:ASP:OD2	4:I:1261:THR:HG22	2.15	0.46
4:J:496:GLU:OE1	4:J:1173:ARG:HG2	2.15	0.46
4:K:880:PHE:HB2	4:L:974:TYR:CZ	2.50	0.46
4:L:630:ILE:HD13	4:L:796:MET:HE3	1.97	0.46
2:T:39:MET:HE2	2:T:67:LEU:HD21	1.98	0.46
3:O:570:ALA:O	3:O:573:ARG:HB2	2.15	0.46
3:P:121:MET:HE1	3:P:138:TYR:CD2	2.50	0.46
3:Q:473:GLU:OE2	3:Q:487:THR:HA	2.16	0.46
3:R:584:LYS:HD3	3:R:590:GLU:CG	2.46	0.46
3:R:641:ILE:HD13	3:R:691:VAL:HG23	1.96	0.46
3:G:674:ASP:OD1	3:G:674:ASP:N	2.49	0.46
4:I:1171:LEU:HD22	4:I:1175:LEU:HD12	1.98	0.46
4:J:60:THR:HA	4:J:63:ALA:HB3	1.98	0.46
4:L:517:ILE:HG21	4:L:851:THR:OG1	2.16	0.46
4:L:1013:LEU:HD22	4:L:1055:PHE:CE1	2.50	0.46
2:S:72:MET:O	2:S:76:GLN:HG2	2.14	0.46
3:M:375:ASP:OD2	3:M:379:LYS:HE3	2.15	0.46
3:N:674:ASP:OD1	3:N:674:ASP:N	2.44	0.46
3:O:139:ARG:O	3:O:143:LEU:HG	2.15	0.46
3:O:151:ALA:HB2	3:O:163:TYR:CZ	2.51	0.46
3:Q:349:ARG:O	3:Q:353:ILE:HG12	2.14	0.46
3:R:162:ASP:OD1	3:R:165:ARG:NH2	2.49	0.46
3:R:556:ALA:HB1	3:R:594:MET:HE3	1.97	0.46
3:G:117:ASP:OD2	3:G:174:ARG:HD2	2.16	0.46
4:I:724:PRO:HA	4:I:727:VAL:HG12	1.97	0.46
4:J:525:ASP:HA	4:J:530:ARG:HH12	1.80	0.46
4:J:1314:ARG:HG3	4:J:1315:GLU:N	2.23	0.46
4:K:109:ASN:HB2	4:K:138:TYR:CE2	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:551:PHE:HD1	4:L:781:PRO:HD3	1.80	0.46
4:L:592:LYS:HG2	4:L:593:MET:HE2	1.96	0.46
2:S:57:ARG:HH21	3:M:242:GLN:HE22	1.64	0.46
2:d:67:LEU:HD22	3:P:196:MET:SD	2.55	0.46
3:O:276:THR:HB	3:O:280:GLU:HB2	1.97	0.46
3:O:500:ASP:HB2	3:O:632:PRO:HG3	1.97	0.46
3:Q:526:ILE:HA	3:R:480:ASN:ND2	2.28	0.46
3:R:520:MET:HE1	3:R:586:ARG:HE	1.81	0.46
3:G:635:TRP:HZ3	3:G:639:ARG:HD3	1.79	0.46
3:H:236:SER:HB3	3:H:239:GLN:H	1.80	0.46
4:I:439:ARG:NH1	4:I:883:ASN:OD1	2.48	0.46
4:J:712:MET:HE2	4:J:771:LEU:HD12	1.97	0.46
4:K:140:ARG:NH2	4:K:157:PHE:O	2.47	0.46
4:L:496:GLU:HG2	4:L:1179:MET:HE3	1.97	0.46
4:L:1013:LEU:HD22	4:L:1055:PHE:HE1	1.80	0.46
2:S:75:VAL:HG13	3:N:173:GLU:OE1	2.15	0.46
2:d:77:ALA:HB3	3:P:211:MET:HE3	1.98	0.46
2:f:7:ILE:HB	2:f:8:PRO:HD3	1.97	0.46
2:g:24:ALA:O	2:g:27:ILE:HG12	2.16	0.46
2:h:40:GLU:O	2:h:44:GLN:HG2	2.15	0.46
3:N:565:ILE:HD13	3:N:601:LEU:HD12	1.98	0.46
3:N:570:ALA:HA	3:N:573:ARG:HB2	1.97	0.46
3:O:394:ARG:NH2	3:O:400:VAL:O	2.49	0.46
3:P:700:GLU:HG2	3:Q:372:LYS:HD3	1.97	0.46
3:Q:653:ASN:HB2	3:Q:656:ILE:HD12	1.98	0.46
3:G:611:ASP:N	3:G:658:ASN:HD21	2.13	0.46
3:H:206:LEU:HD12	3:H:247:ALA:HB1	1.98	0.46
4:I:11:ASP:O	4:I:1024:GLY:HA3	2.15	0.46
4:I:517:ILE:HG21	4:I:851:THR:OG1	2.15	0.46
4:K:50:PRO:HB3	4:K:57:THR:H	1.81	0.46
4:L:801:PRO:O	4:L:805:ARG:HG3	2.15	0.46
2:S:65:ALA:O	2:S:68:THR:OG1	2.31	0.46
3:N:67:ALA:O	3:N:70:ARG:HG2	2.15	0.46
3:N:332:ILE:O	3:N:335:GLU:HG3	2.16	0.46
4:I:885:TYR:O	4:I:889:GLN:HG3	2.16	0.46
4:J:465:TYR:CD2	4:J:491:PRO:HB2	2.51	0.46
4:J:796:MET:HA	4:J:799:ILE:HB	1.96	0.46
4:J:1098:PHE:HE2	4:J:1106:MET:HE2	1.80	0.46
4:K:630:ILE:HD13	4:K:796:MET:HE3	1.97	0.46
2:S:75:VAL:HG12	3:N:114:TYR:CE1	2.51	0.46
3:N:237:ASP:HB3	3:N:271:LEU:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:541:ARG:HB3	3:N:546:ARG:NH1	2.31	0.46
3:P:115:LEU:O	3:P:119:ASP:HB2	2.15	0.46
3:P:272:ASN:OD1	3:P:273:GLY:N	2.48	0.46
3:G:260:PHE:O	3:G:264:VAL:HG12	2.16	0.46
3:G:467:VAL:HG22	3:G:493:LEU:HD13	1.98	0.46
3:G:698:LYS:O	3:G:702:LYS:HG2	2.15	0.46
4:I:49:GLY:N	4:I:50:PRO:HD2	2.31	0.46
4:I:878:GLY:HA2	4:I:885:TYR:CG	2.51	0.46
4:J:432:LEU:HD22	4:J:897:MET:HE1	1.98	0.46
4:J:477:LEU:HD11	4:J:483:LEU:HD11	1.97	0.46
4:J:553:ALA:O	4:J:557:ASP:HB2	2.16	0.46
4:J:832:LYS:HE3	4:J:846:HIS:HE1	1.81	0.46
4:L:383:GLY:O	4:L:384:ASP:HB2	2.15	0.46
4:L:451:THR:HA	4:L:454:MET:HE3	1.96	0.46
2:c:81:ILE:HG23	3:O:220:PHE:HB2	1.98	0.46
2:f:38:ALA:HB1	2:f:63:ALA:HA	1.97	0.46
3:N:697:LYS:O	3:N:701:GLU:HG2	2.16	0.46
3:P:129:PHE:HZ	3:P:138:TYR:CD2	2.34	0.46
3:P:680:ARG:CZ	4:K:423:ASN:HD22	2.29	0.46
3:R:549:ASP:OD2	3:R:585:TYR:OH	2.28	0.46
3:G:366:TRP:O	3:G:370:GLN:HG2	2.16	0.46
3:G:627:GLN:HA	3:G:635:TRP:HA	1.97	0.46
4:I:136:ARG:HA	4:I:139:MET:HE2	1.98	0.46
4:I:795:ASP:O	4:I:796:MET:C	2.58	0.46
4:J:633:HIS:O	4:J:637:LYS:HG2	2.15	0.46
4:L:449:MET:HE2	4:L:468:LEU:HD21	1.98	0.46
1:a:48:VAL:HG12	1:a:50:GLY:H	1.80	0.46
2:d:81:ILE:HA	3:P:220:PHE:CD1	2.51	0.46
2:g:35:ARG:NH1	3:H:116:VAL:HA	2.30	0.46
3:N:208:ASP:HB2	3:N:211:MET:HB2	1.97	0.46
3:N:323:ARG:HH11	3:O:290:LEU:HD23	1.80	0.46
3:O:352:LEU:O	3:O:356:GLN:HG2	2.16	0.46
3:Q:592:MET:SD	3:R:479:ILE:HD11	2.56	0.46
3:G:352:LEU:O	3:G:356:GLN:HG2	2.16	0.46
4:I:660:ARG:NH2	4:I:715:GLU:OE1	2.49	0.46
4:J:509:ILE:HD11	4:J:854:ILE:HG12	1.98	0.46
4:J:940:VAL:O	4:J:944:ILE:HG12	2.15	0.46
4:K:684:ALA:HB1	4:K:740:HIS:NE2	2.31	0.46
4:L:340:LEU:HD11	4:L:404:ILE:HG13	1.97	0.46
4:L:775:ASP:OD1	4:L:789:ASN:ND2	2.48	0.46
2:S:128:GLN:HG2	3:O:82:GLN:HG2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:347:PRO:HA	3:N:350:GLU:HG2	1.98	0.46
3:N:587:SER:HB3	3:O:479:ILE:HG12	1.98	0.46
3:O:382:ASN:ND2	3:O:412:ASN:HB3	2.31	0.46
3:O:413:THR:HG21	3:O:416:PHE:CZ	2.51	0.46
3:R:238:ALA:O	3:R:241:THR:OG1	2.32	0.46
4:J:262:THR:OG1	4:J:1117:ASN:OD1	2.29	0.46
3:R:583:VAL:HG11	3:R:596:GLN:HG3	1.98	0.45
3:R:621:ILE:HD11	3:R:663:MET:HB3	1.98	0.45
3:G:607:THR:HG23	3:G:620:VAL:HG22	1.97	0.45
3:H:101:MET:O	3:H:105:ARG:HG3	2.16	0.45
3:H:680:ARG:CZ	4:I:423:ASN:HD22	2.30	0.45
4:I:550:LYS:HD3	4:I:554:THR:HG22	1.98	0.45
4:I:978:GLU:O	4:L:370:ASN:HB3	2.16	0.45
4:J:743:GLN:HG3	4:J:744:PHE:CD1	2.52	0.45
4:J:832:LYS:CE	4:J:846:HIS:HE1	2.27	0.45
4:K:140:ARG:HA	4:K:143:LEU:HG	1.98	0.45
4:K:838:ASP:HB2	4:K:841:LYS:HB2	1.98	0.45
4:L:54:MET:HE2	4:L:54:MET:HA	1.97	0.45
4:L:673:HIS:ND1	4:L:946:PRO:HA	2.31	0.45
3:M:106:VAL:HG21	3:M:165:ARG:HH21	1.80	0.45
3:N:50:LYS:NZ	3:N:159:GLU:OE2	2.49	0.45
3:O:112:ALA:HB2	3:O:150:TYR:CD2	2.51	0.45
3:O:356:GLN:O	3:O:360:GLN:HG2	2.17	0.45
3:P:197:ASN:O	3:P:201:GLU:HG2	2.16	0.45
3:R:306:ASN:OD1	3:R:351:TRP:HZ3	1.99	0.45
3:G:628:VAL:O	3:G:629:ASN:OD1	2.33	0.45
4:J:698:SER:OG	4:J:773:ASP:HB2	2.16	0.45
4:L:760:ILE:HG13	4:L:761:GLU:N	2.32	0.45
1:b:47:GLU:HB3	3:M:358:GLN:OE1	2.17	0.45
3:O:516:LEU:O	3:O:520:MET:HG3	2.16	0.45
3:P:626:MET:O	3:P:638:GLY:HA3	2.16	0.45
3:Q:662:THR:HG22	4:L:1119:LYS:NZ	2.30	0.45
3:H:473:GLU:OE1	3:H:487:THR:HA	2.15	0.45
4:I:820:THR:OG1	4:I:823:GLU:HG3	2.16	0.45
4:J:238:LEU:HD23	4:J:238:LEU:HA	1.78	0.45
4:J:644:PRO:HG2	4:J:814:MET:HG2	1.97	0.45
4:K:14:GLY:O	4:K:18:LYS:HG3	2.15	0.45
4:K:367:ALA:HB2	4:L:265:PRO:HB2	1.98	0.45
4:K:795:ASP:O	4:K:796:MET:C	2.58	0.45
4:L:1084:MET:HE2	4:L:1084:MET:HB3	1.69	0.45
2:f:40:GLU:O	2:f:44:GLN:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:700:GLU:HB3	3:N:368:LYS:HB3	1.99	0.45
3:P:493:LEU:HA	3:P:496:ILE:HG22	1.97	0.45
3:Q:550:ASP:O	3:Q:554:GLU:HG2	2.15	0.45
3:Q:564:GLU:H	3:Q:564:GLU:CD	2.24	0.45
3:R:121:MET:HE3	3:R:135:MET:HG2	1.99	0.45
3:R:125:LYS:HB3	3:R:125:LYS:HE2	1.45	0.45
3:R:664:TYR:OH	4:L:426:ILE:HD11	2.17	0.45
4:I:520:LYS:HD2	4:I:847:ALA:HB2	1.99	0.45
4:I:630:ILE:HD13	4:I:796:MET:HE3	1.98	0.45
4:I:641:MET:HE3	4:I:656:PHE:CD1	2.51	0.45
4:J:975:SER:O	4:J:978:GLU:HB2	2.16	0.45
4:J:1084:MET:HE2	4:J:1084:MET:HB3	1.74	0.45
4:J:1120:PHE:HE2	4:J:1301:LEU:HD23	1.80	0.45
4:K:1311:VAL:HG12	4:K:1313:LEU:HD22	1.97	0.45
4:L:476:VAL:HA	4:L:482:VAL:HA	1.99	0.45
4:L:600:TYR:CE2	4:L:948:ARG:HG2	2.51	0.45
2:S:118:ARG:NH2	3:O:68:ASP:HA	2.32	0.45
3:M:135:MET:HE1	3:M:179:TYR:CD1	2.52	0.45
3:N:188:GLN:O	3:N:192:LYS:HG3	2.17	0.45
3:Q:454:SER:C	3:Q:456:ASP:H	2.25	0.45
3:Q:520:MET:HB3	3:Q:526:ILE:CD1	2.44	0.45
3:R:205:VAL:HG12	3:R:206:LEU:HD23	1.99	0.45
3:R:669:SER:CB	3:R:682:ARG:HE	2.30	0.45
3:G:74:ILE:HA	3:G:77:LYS:HD2	1.98	0.45
3:G:454:SER:C	3:G:456:ASP:H	2.24	0.45
4:I:53:MET:HG3	4:I:54:MET:HE3	1.98	0.45
4:I:442:ASN:O	4:I:442:ASN:OD1	2.35	0.45
4:J:143:LEU:HD21	4:J:154:LEU:HD23	1.98	0.45
4:K:383:GLY:O	4:K:384:ASP:HB2	2.17	0.45
4:K:859:ALA:O	4:K:860:ARG:HB3	2.17	0.45
4:K:1099:GLY:O	4:K:1103:LYS:HG3	2.16	0.45
2:c:63:ALA:O	2:c:67:LEU:HD23	2.16	0.45
3:M:372:LYS:HB2	3:H:700:GLU:HG2	1.98	0.45
3:N:205:VAL:HG11	3:N:220:PHE:CE2	2.52	0.45
3:N:551:LYS:HZ3	3:O:543:LYS:HG3	1.81	0.45
3:O:700:GLU:HB3	3:P:368:LYS:HB3	1.97	0.45
3:P:205:VAL:HG21	3:P:220:PHE:CZ	2.51	0.45
3:P:645:ALA:O	3:P:649:ILE:HG12	2.16	0.45
3:R:261:LEU:CB	3:R:291:MET:HE1	2.47	0.45
3:R:628:VAL:HG22	3:R:634:SER:HB2	1.99	0.45
3:H:67:ALA:HA	3:H:70:ARG:CZ	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:476:VAL:HA	4:I:482:VAL:HA	1.98	0.45
4:I:594:SER:O	4:I:598:THR:HG23	2.15	0.45
4:J:54:MET:HB2	4:J:56:PHE:CE1	2.52	0.45
4:J:332:ILE:HG21	4:J:395:PHE:CD1	2.52	0.45
4:J:439:ARG:NH1	4:J:883:ASN:OD1	2.50	0.45
4:J:964:ALA:O	4:J:968:ILE:HG12	2.17	0.45
4:K:637:LYS:C	4:K:641:MET:HE3	2.41	0.45
4:K:1013:LEU:HD12	4:K:1055:PHE:CE1	2.51	0.45
4:L:940:VAL:O	4:L:944:ILE:HG12	2.17	0.45
2:S:60:LEU:HD12	3:M:196:MET:HE1	1.99	0.45
3:N:140:HIS:O	3:N:144:GLN:HG3	2.16	0.45
3:N:272:ASN:OD1	3:N:273:GLY:N	2.50	0.45
3:P:697:LYS:O	3:P:701:GLU:HG2	2.16	0.45
3:R:103:ALA:O	3:R:107:LYS:HG3	2.17	0.45
3:H:147:ALA:HB2	3:H:167:PHE:CZ	2.52	0.45
3:H:356:GLN:HA	3:H:359:VAL:HG12	1.97	0.45
4:I:17:GLN:HG3	4:I:1086:ARG:HG2	1.97	0.45
4:J:49:GLY:N	4:J:50:PRO:HD2	2.32	0.45
4:J:377:ARG:HG2	4:J:884:ALA:HB2	1.98	0.45
4:K:8:VAL:HG12	4:K:31:ARG:HH21	1.81	0.45
4:K:644:PRO:HG2	4:K:814:MET:HG2	1.98	0.45
4:L:609:ALA:HB1	4:L:616:GLN:HG2	1.99	0.45
4:L:953:GLN:OE1	4:L:954:ARG:NH2	2.49	0.45
1:A:47:GLU:CD	3:N:362:GLN:HE21	2.25	0.45
2:S:49:ASN:C	2:S:51:ASP:H	2.25	0.45
2:e:121:TYR:OH	3:G:96:ASP:OD2	2.27	0.45
3:N:366:TRP:HD1	3:O:289:ALA:HB1	1.81	0.45
3:O:557:LEU:HD22	3:O:573:ARG:HH21	1.81	0.45
3:R:55:MET:HE1	3:R:58:ALA:HB3	1.99	0.45
4:J:757:LEU:HD22	4:J:760:ILE:HD13	1.99	0.45
4:K:62:LYS:O	4:K:63:ALA:C	2.59	0.45
4:L:329:SER:OG	4:L:354:LYS:O	2.30	0.45
2:S:47:ILE:HD12	3:M:195:ILE:HD12	1.99	0.45
2:c:125:PHE:HD1	2:c:128:GLN:NE2	2.15	0.45
3:M:251:ALA:O	3:M:257:GLY:HA3	2.17	0.45
3:M:472:GLN:CD	3:H:599:LYS:HE3	2.41	0.45
3:M:543:LYS:HA	3:M:546:ARG:HB2	1.97	0.45
3:N:125:LYS:HD3	3:N:182:HIS:N	2.32	0.45
3:O:142:ARG:NE	3:O:145:GLU:OE2	2.50	0.45
3:O:420:ASP:OD1	3:O:420:ASP:N	2.46	0.45
3:Q:307:GLU:HA	3:Q:310:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:R:541:ARG:HB3	3:R:546:ARG:NH1	2.29	0.45
3:H:238:ALA:O	3:H:241:THR:HG22	2.17	0.45
3:H:252:SER:HB2	3:H:293:THR:HG23	1.97	0.45
4:I:1131:ASN:OD1	4:I:1132:ARG:N	2.50	0.45
4:J:11:ASP:CG	4:J:1022:LYS:HB3	2.42	0.45
4:K:449:MET:HE3	4:K:468:LEU:HD21	1.99	0.45
4:K:1103:LYS:O	4:K:1107:GLN:HG3	2.17	0.45
4:L:357:ASN:H	4:L:437:THR:HG23	1.81	0.45
4:L:698:SER:OG	4:L:773:ASP:HB2	2.17	0.45
4:L:1084:MET:HG2	4:L:1098:PHE:CZ	2.52	0.45
2:g:107:ILE:HD11	3:H:172:THR:CG2	2.47	0.45
3:O:451:GLN:HG2	3:O:503:LEU:HD21	1.99	0.45
3:H:272:ASN:OD1	3:H:273:GLY:N	2.49	0.45
3:H:503:LEU:O	3:H:507:LEU:HG	2.16	0.45
4:I:339:PRO:O	4:I:342:TYR:HB2	2.18	0.45
4:I:646:ILE:HG12	4:J:701:SER:HB2	1.98	0.45
4:J:339:PRO:O	4:J:342:TYR:HB2	2.17	0.45
4:J:878:GLY:HA2	4:J:885:TYR:CG	2.52	0.45
4:K:8:VAL:HB	4:K:9:PRO:HD3	1.98	0.45
4:L:463:VAL:HG22	4:L:875:ASN:ND2	2.29	0.45
4:L:530:ARG:O	4:L:534:ILE:HG13	2.17	0.45
4:L:679:ILE:O	4:L:683:GLY:HA2	2.17	0.45
3:P:587:SER:HB3	3:Q:479:ILE:HG12	1.99	0.44
4:I:54:MET:HB2	4:I:56:PHE:CD1	2.53	0.44
4:K:673:HIS:ND1	4:K:946:PRO:HA	2.32	0.44
4:K:938:LYS:HD2	4:K:1150:PHE:CE1	2.52	0.44
4:L:110:GLN:NE2	4:L:134:GLU:OE1	2.49	0.44
4:L:1242:GLY:HA2	4:L:1245:LEU:HD12	1.98	0.44
2:S:81:ILE:O	2:S:85:ILE:HG12	2.17	0.44
2:T:119:ARG:NH1	3:P:90:GLY:O	2.36	0.44
2:e:47:ILE:HD12	3:Q:195:ILE:HD12	2.00	0.44
3:M:550:ASP:O	3:M:554:GLU:HG2	2.17	0.44
3:O:159:GLU:N	3:O:159:GLU:OE2	2.51	0.44
3:O:197:ASN:O	3:O:201:GLU:HG2	2.17	0.44
3:O:463:ILE:O	3:O:467:VAL:HG23	2.17	0.44
3:P:92:LEU:HD12	3:P:93:LEU:N	2.32	0.44
3:P:101:MET:O	3:P:105:ARG:HG3	2.17	0.44
3:R:487:THR:HB	3:R:490:MET:HB2	1.98	0.44
3:H:394:ARG:HG3	3:H:452:ALA:HB1	1.99	0.44
4:J:410:ALA:O	4:J:414:ARG:HG3	2.18	0.44
4:J:431:ARG:NH2	4:J:484:SER:HB3	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:861:ARG:O	4:J:862:ASN:HB2	2.17	0.44
4:K:17:GLN:HG3	4:K:1086:ARG:HG2	2.00	0.44
4:K:1057:VAL:HG11	4:K:1060:LYS:HD3	1.99	0.44
4:L:581:MET:HE1	4:L:1194:PRO:HD3	1.99	0.44
4:L:1177:PRO:HD2	4:L:1314:ARG:HH22	1.81	0.44
1:b:48:VAL:HG13	3:M:314:ASN:HD21	1.81	0.44
2:c:57:ARG:HG3	2:c:57:ARG:HH11	1.82	0.44
2:g:34:GLY:O	2:g:37:GLN:HG3	2.17	0.44
2:g:69:SER:HB3	3:H:115:LEU:HA	1.99	0.44
3:M:120:VAL:O	3:M:124:ILE:HG13	2.18	0.44
3:O:187:SER:O	3:O:191:GLN:HG3	2.18	0.44
3:Q:251:ALA:O	3:Q:257:GLY:HA3	2.17	0.44
4:I:293:VAL:HG12	4:I:1130:ASN:HD22	1.82	0.44
4:I:940:VAL:O	4:I:944:ILE:HG12	2.18	0.44
4:J:339:PRO:HA	4:J:342:TYR:CD1	2.52	0.44
4:K:1277:GLU:HA	4:L:972:LEU:HD13	1.99	0.44
4:L:761:GLU:HG3	4:L:822:LYS:HG3	1.99	0.44
2:c:49:ASN:C	2:c:51:ASP:H	2.24	0.44
2:f:47:ILE:HD13	3:R:192:LYS:HA	1.99	0.44
3:O:673:MET:HG2	3:O:674:ASP:O	2.17	0.44
3:P:643:GLU:O	3:P:647:LYS:HG2	2.18	0.44
3:Q:123:LYS:HD3	3:Q:128:VAL:HG21	2.00	0.44
3:R:566:ALA:O	3:R:568:MET:N	2.50	0.44
3:H:122:GLN:O	3:H:126:GLU:HG2	2.18	0.44
3:H:553:PHE:CZ	3:H:557:LEU:HD11	2.53	0.44
4:I:416:LYS:HD2	4:I:416:LYS:HA	1.76	0.44
4:I:777:SER:HB3	4:I:787:SER:HB2	1.98	0.44
4:J:345:MET:HG2	4:J:1300:GLN:OE1	2.17	0.44
4:K:809:GLY:O	4:K:813:ILE:HG12	2.17	0.44
4:K:885:TYR:CZ	4:K:889:GLN:NE2	2.85	0.44
4:K:975:SER:HB3	4:K:978:GLU:HG3	1.98	0.44
4:L:49:GLY:N	4:L:50:PRO:HD2	2.33	0.44
4:L:514:PHE:HE1	4:L:851:THR:HG23	1.81	0.44
4:L:659:SER:O	4:L:660:ARG:HB2	2.17	0.44
2:S:38:ALA:HB2	2:S:66:GLU:OE1	2.18	0.44
2:e:76:GLN:HG2	3:R:114:TYR:CD2	2.52	0.44
2:e:120:ASP:O	2:e:124:ILE:HG13	2.18	0.44
3:M:576:ALA:HB1	3:M:597:MET:HE3	1.99	0.44
3:N:152:GLU:OE2	3:N:153:GLN:NE2	2.50	0.44
3:N:463:ILE:O	3:N:467:VAL:HG23	2.17	0.44
3:N:554:GLU:OE2	3:N:558:ASN:ND2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:211:MET:O	3:P:214:ARG:HG3	2.17	0.44
3:Q:232:GLY:HA3	3:R:100:ALA:HB2	1.99	0.44
3:R:551:LYS:HZ3	3:G:543:LYS:HG3	1.82	0.44
3:G:211:MET:O	3:G:214:ARG:HG2	2.17	0.44
3:G:326:TRP:O	3:G:330:GLN:HG2	2.18	0.44
3:G:336:LEU:HB3	3:G:349:ARG:HH12	1.82	0.44
3:G:510:ASP:OD2	3:G:511:GLN:NE2	2.50	0.44
3:H:623:LYS:HE3	3:H:623:LYS:HB2	1.88	0.44
4:I:18:LYS:HD2	4:I:1082:GLU:OE2	2.18	0.44
4:I:362:VAL:HB	4:I:363:GLY:H	1.62	0.44
4:I:627:MET:HE3	4:I:627:MET:HB3	1.81	0.44
4:J:367:ALA:HB2	4:K:265:PRO:HB2	1.99	0.44
4:J:646:ILE:HG12	4:K:701:SER:HB2	1.99	0.44
4:J:795:ASP:O	4:J:796:MET:C	2.59	0.44
4:K:278:LEU:HD23	4:K:278:LEU:HA	1.84	0.44
4:K:339:PRO:HA	4:K:342:TYR:CD1	2.53	0.44
4:L:65:GLY:C	4:L:67:ARG:H	2.26	0.44
4:L:809:GLY:O	4:L:813:ILE:HG12	2.17	0.44
4:L:1042:LEU:HD13	4:L:1066:ASP:OD2	2.18	0.44
2:T:72:MET:SD	3:O:117:ASP:HB3	2.57	0.44
3:N:205:VAL:HG12	3:N:206:LEU:HD23	2.00	0.44
3:N:391:PHE:O	3:N:395:ILE:HG13	2.17	0.44
3:N:415:GLU:HG2	4:J:241:SER:HB2	1.99	0.44
3:O:131:THR:HG22	3:O:134:GLU:HG3	1.99	0.44
3:P:118:ASP:OD2	3:P:174:ARG:HD2	2.17	0.44
3:Q:673:MET:HG2	3:Q:674:ASP:O	2.17	0.44
3:G:545:GLN:HA	3:G:548:GLU:OE1	2.17	0.44
4:J:496:GLU:CG	4:J:1179:MET:HE3	2.47	0.44
4:L:477:LEU:HD11	4:L:483:LEU:HD11	2.00	0.44
4:L:1115:SER:HB3	4:L:1305:ILE:HG12	1.98	0.44
2:c:39:MET:O	2:c:43:ARG:HG3	2.18	0.44
2:e:34:GLY:O	2:e:37:GLN:HG3	2.18	0.44
3:M:383:LYS:O	3:M:387:ILE:HG13	2.18	0.44
3:M:463:ILE:O	3:M:467:VAL:HG23	2.18	0.44
3:N:202:LEU:HA	3:N:202:LEU:HD23	1.80	0.44
3:P:463:ILE:O	3:P:467:VAL:HG23	2.17	0.44
3:P:657:THR:HG22	3:P:659:LYS:H	1.83	0.44
3:Q:420:ASP:N	3:Q:420:ASP:OD1	2.43	0.44
3:H:698:LYS:HB2	3:H:698:LYS:HE2	1.72	0.44
4:I:1013:LEU:HB3	4:I:1049:ARG:HD3	2.00	0.44
4:K:49:GLY:N	4:K:50:PRO:HD2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:577:MET:HE3	4:L:577:MET:HB3	1.76	0.44
1:E:45:GLY:HA2	3:P:448:LYS:HZ3	1.83	0.44
2:h:78:ILE:HD12	2:h:78:ILE:HA	1.87	0.44
3:M:448:LYS:HB3	3:M:448:LYS:NZ	2.33	0.44
3:N:637:GLN:O	3:N:641:ILE:HG13	2.17	0.44
3:P:526:ILE:HA	3:Q:480:ASN:HD21	1.82	0.44
3:Q:322:PRO:HB2	3:Q:363:MET:SD	2.58	0.44
3:Q:428:LYS:O	3:Q:428:LYS:HG3	2.17	0.44
3:Q:486:ARG:HG3	3:Q:488:PRO:HD3	2.00	0.44
3:R:269:VAL:HB	3:R:278:TYR:CZ	2.53	0.44
3:G:568:MET:HG2	3:G:573:ARG:HG2	2.00	0.44
3:G:613:VAL:CG1	4:I:414:ARG:HE	2.31	0.44
3:H:450:LEU:O	3:H:460:ARG:NE	2.51	0.44
4:J:724:PRO:O	4:J:728:GLU:HG3	2.17	0.44
4:J:761:GLU:CD	4:J:822:LYS:HG3	2.43	0.44
4:J:1276:THR:HG22	4:K:973:LYS:HB3	1.98	0.44
4:K:593:MET:HE3	4:K:593:MET:HB2	1.83	0.44
4:L:513:GLY:O	4:L:517:ILE:HG12	2.17	0.44
4:L:938:LYS:HD2	4:L:1150:PHE:CE1	2.53	0.44
4:L:1084:MET:HE1	4:L:1105:VAL:CG1	2.47	0.44
1:F:40:GLU:OE1	3:G:373:ALA:HB2	2.17	0.44
2:d:52:LEU:HB3	2:d:56:ALA:HB3	2.00	0.44
2:f:72:MET:SD	3:G:121:MET:HE2	2.57	0.44
2:h:78:ILE:HB	3:H:211:MET:HE1	1.99	0.44
3:O:102:GLU:HG3	3:O:162:ASP:OD2	2.17	0.44
3:O:616:ASP:OD1	3:O:616:ASP:N	2.51	0.44
3:Q:147:ALA:HB2	3:Q:167:PHE:CZ	2.53	0.44
3:G:410:ASN:C	3:G:412:ASN:H	2.24	0.44
3:G:541:ARG:HD2	3:G:541:ARG:HA	1.74	0.44
3:H:437:ILE:HD12	3:H:441:ALA:HB3	2.00	0.44
4:I:268:TRP:CD2	4:I:305:LEU:HD22	2.53	0.44
4:I:449:MET:HE3	4:I:449:MET:HB3	1.83	0.44
4:I:641:MET:SD	4:I:807:VAL:HB	2.57	0.44
4:J:109:ASN:HB2	4:J:138:TYR:CE2	2.53	0.44
4:J:278:LEU:HD23	4:J:278:LEU:HA	1.83	0.44
4:J:593:MET:HB3	4:J:597:GLU:OE1	2.17	0.44
4:J:1030:SER:HB2	4:J:1074:ARG:HH12	1.83	0.44
4:K:9:PRO:HB3	4:K:13:ASP:OD2	2.18	0.44
4:K:581:MET:HE1	4:K:595:ARG:HG3	2.00	0.44
4:L:395:PHE:CD1	4:L:429:MET:HE1	2.53	0.44
3:N:101:MET:O	3:N:105:ARG:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:O:543:LYS:H	3:O:546:ARG:HG3	1.83	0.43
3:H:146:GLY:HA2	3:H:149:VAL:HG22	1.99	0.43
4:I:880:PHE:HB2	4:J:974:TYR:CZ	2.53	0.43
4:I:936:PHE:HE2	4:I:1009:ILE:HG21	1.83	0.43
4:I:1013:LEU:HD22	4:I:1055:PHE:CE1	2.53	0.43
4:J:1029:ALA:HB3	4:J:1031:VAL:HG12	2.00	0.43
4:K:532:VAL:HG12	4:K:848:LEU:HD11	2.00	0.43
4:K:627:MET:HE3	4:K:627:MET:HB3	1.90	0.43
4:L:354:LYS:HB3	4:L:354:LYS:HE2	1.62	0.43
4:L:743:GLN:HG3	4:L:744:PHE:CD1	2.53	0.43
3:N:138:TYR:CE1	3:N:142:ARG:HG3	2.53	0.43
3:O:117:ASP:OD2	3:O:174:ARG:HD2	2.17	0.43
3:O:160:ASP:OD1	3:O:160:ASP:N	2.51	0.43
3:O:322:PRO:HB2	3:O:363:MET:SD	2.58	0.43
3:O:483:LEU:HD11	3:O:490:MET:HE1	2.00	0.43
3:O:655:TRP:CZ3	3:O:656:ILE:HG13	2.53	0.43
3:P:323:ARG:HH11	3:Q:290:LEU:HD23	1.83	0.43
3:R:149:VAL:O	3:R:152:GLU:HG3	2.18	0.43
4:I:278:LEU:HD23	4:I:278:LEU:HA	1.82	0.43
4:I:552:GLY:HA2	4:I:648:GLY:HA3	1.99	0.43
4:K:379:SER:H	4:K:1282:THR:HB	1.83	0.43
4:K:523:GLY:O	4:K:524:SER:HB3	2.17	0.43
4:K:878:GLY:HA2	4:K:885:TYR:CG	2.53	0.43
4:K:1061:GLN:OE1	4:K:1065:MET:HE3	2.18	0.43
4:L:339:PRO:HA	4:L:342:TYR:CD1	2.53	0.43
3:N:306:ASN:ND2	3:N:351:TRP:HZ3	2.13	0.43
3:O:631:ASP:O	3:O:634:SER:OG	2.36	0.43
3:P:202:LEU:HD23	3:P:202:LEU:HA	1.82	0.43
3:R:120:VAL:O	3:R:124:ILE:HG12	2.18	0.43
3:G:103:ALA:O	3:G:107:LYS:HG3	2.19	0.43
3:H:112:ALA:HB2	3:H:150:TYR:HD2	1.80	0.43
4:I:432:LEU:HD22	4:I:897:MET:HE1	2.01	0.43
4:I:659:SER:C	4:I:661:HIS:H	2.27	0.43
4:I:790:ASP:O	4:I:948:ARG:NH1	2.49	0.43
4:J:488:PRO:HB3	4:J:1185:LEU:HD13	2.00	0.43
4:J:526:ASP:HB3	4:J:529:ILE:HB	1.99	0.43
4:K:18:LYS:HD2	4:K:1082:GLU:OE2	2.18	0.43
4:K:414:ARG:HG2	4:K:414:ARG:NH1	2.33	0.43
4:K:553:ALA:O	4:K:554:THR:OG1	2.31	0.43
4:L:40:PHE:HA	4:L:53:MET:HE1	2.00	0.43
4:L:563:HIS:NE2	4:L:1202:GLY:O	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:859:ALA:O	4:L:860:ARG:HB3	2.17	0.43
2:e:23:GLN:O	2:e:27:ILE:HG23	2.18	0.43
2:f:67:LEU:O	3:G:115:LEU:HD21	2.18	0.43
3:M:116:VAL:HG11	3:M:143:LEU:HD23	2.00	0.43
3:O:120:VAL:O	3:O:124:ILE:HG13	2.18	0.43
3:O:410:ASN:C	3:O:412:ASN:H	2.25	0.43
3:P:580:TYR:HB2	3:P:597:MET:HE2	1.99	0.43
3:R:195:ILE:CD1	3:R:239:GLN:HG2	2.48	0.43
3:R:205:VAL:HG11	3:R:220:PHE:CE2	2.53	0.43
3:G:463:ILE:O	3:G:467:VAL:HG23	2.18	0.43
3:H:568:MET:SD	3:H:573:ARG:HD2	2.59	0.43
4:K:561:ARG:O	4:K:565:THR:HG23	2.19	0.43
4:L:39:ARG:HA	4:L:39:ARG:HD3	1.68	0.43
4:L:339:PRO:O	4:L:342:TYR:HB2	2.18	0.43
4:L:627:MET:HE3	4:L:627:MET:HB3	1.80	0.43
4:L:651:LYS:HG3	4:L:651:LYS:O	2.19	0.43
4:L:754:ILE:HB	4:L:853:LYS:HD3	2.00	0.43
4:L:1013:LEU:HD11	4:L:1047:MET:HB2	1.99	0.43
4:L:1090:VAL:CG2	4:L:1109:LYS:HD3	2.48	0.43
2:T:128:GLN:N	2:T:128:GLN:OE1	2.52	0.43
2:h:128:GLN:OE1	2:h:128:GLN:N	2.52	0.43
3:M:142:ARG:NE	3:M:145:GLU:OE2	2.51	0.43
3:M:381:MET:HE2	3:N:299:PHE:CZ	2.53	0.43
3:N:125:LYS:HZ2	3:N:182:HIS:HB2	1.82	0.43
3:P:435:MET:HE1	3:Q:318:ASN:ND2	2.33	0.43
3:P:510:ASP:OD1	3:P:511:GLN:N	2.51	0.43
3:Q:410:ASN:C	3:Q:412:ASN:H	2.27	0.43
3:Q:695:ASN:ND2	4:L:245:MET:HE2	2.34	0.43
3:Q:700:GLU:HB3	3:R:368:LYS:HB3	2.00	0.43
3:R:453:ASP:C	3:R:455:LYS:H	2.26	0.43
3:G:435:MET:HB3	3:G:437:ILE:HG23	2.01	0.43
4:I:468:LEU:HD12	4:I:474:ALA:O	2.18	0.43
4:K:610:ILE:HG13	4:K:627:MET:HG2	1.99	0.43
4:K:1300:GLN:O	4:K:1304:LYS:HG2	2.18	0.43
4:K:1315:GLU:HG3	4:K:1316:ARG:HG2	2.00	0.43
4:L:565:THR:HG22	4:L:1263:MET:HE1	2.00	0.43
4:L:712:MET:HE3	4:L:712:MET:HB3	1.73	0.43
3:M:394:ARG:NH2	3:M:452:ALA:O	2.52	0.43
3:M:686:GLU:HB3	4:J:156:THR:HG21	2.01	0.43
3:N:205:VAL:HG21	3:N:220:PHE:CZ	2.53	0.43
3:N:594:MET:HE2	3:N:594:MET:HA	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:437:ILE:HD11	3:P:445:MET:HE2	2.00	0.43
3:R:519:ASP:OD1	3:R:523:LYS:HE2	2.17	0.43
3:H:50:LYS:NZ	3:H:159:GLU:OE2	2.52	0.43
3:H:205:VAL:HG11	3:H:220:PHE:CE2	2.54	0.43
4:I:363:GLY:O	4:I:443:SER:HB3	2.19	0.43
4:I:921:LYS:HA	4:I:1168:LYS:HZ3	1.82	0.43
4:J:1018:THR:HG22	4:J:1021:GLU:HG2	1.99	0.43
4:K:339:PRO:O	4:K:342:TYR:HB2	2.18	0.43
4:K:459:GLU:HG2	4:K:463:VAL:C	2.43	0.43
4:L:553:ALA:O	4:L:557:ASP:HB2	2.18	0.43
3:M:140:HIS:O	3:M:144:GLN:HG2	2.19	0.43
3:M:363:MET:SD	3:N:286:GLN:HA	2.58	0.43
3:M:423:ASN:HB3	3:M:427:LYS:NZ	2.33	0.43
3:M:451:GLN:HE21	3:M:503:LEU:HD22	1.84	0.43
3:O:454:SER:C	3:O:456:ASP:H	2.25	0.43
3:Q:568:MET:SD	3:Q:573:ARG:HA	2.59	0.43
3:H:568:MET:HE2	3:H:601:LEU:CD1	2.45	0.43
4:I:659:SER:O	4:I:660:ARG:HB2	2.17	0.43
4:I:1080:ALA:O	4:I:1084:MET:HB2	2.19	0.43
4:J:340:LEU:HD11	4:J:404:ILE:HG13	2.01	0.43
4:K:861:ARG:O	4:K:862:ASN:HB2	2.18	0.43
4:K:1163:PRO:O	4:K:1167:ARG:HG3	2.18	0.43
4:L:155:GLU:OE1	4:L:251:ARG:HD2	2.18	0.43
4:L:266:THR:OG1	4:L:267:ARG:N	2.52	0.43
4:L:858:ARG:HD3	4:L:858:ARG:HA	1.75	0.43
3:M:403:ASP:HB3	3:M:406:ASP:OD2	2.18	0.43
3:O:486:ARG:HG3	3:O:488:PRO:HD3	2.00	0.43
3:O:695:ASN:ND2	4:K:245:MET:HE2	2.33	0.43
3:H:565:ILE:HD13	3:H:601:LEU:HD12	2.01	0.43
4:I:80:GLU:OE1	4:I:961:THR:HB	2.19	0.43
4:I:473:GLY:HA2	4:I:492:LYS:NZ	2.33	0.43
4:I:681:ARG:NH2	4:L:1243:SER:HA	2.34	0.43
4:J:609:ALA:HB1	4:J:616:GLN:HG2	1.99	0.43
4:K:128:PHE:HE2	4:K:153:GLN:HB3	1.82	0.43
4:L:395:PHE:HD1	4:L:429:MET:HE1	1.84	0.43
2:d:67:LEU:O	3:Q:115:LEU:HD21	2.19	0.43
2:h:118:ARG:NH2	3:N:68:ASP:OD1	2.52	0.43
3:N:467:VAL:HG12	3:N:511:GLN:HG3	2.01	0.43
3:N:566:ALA:O	3:N:568:MET:N	2.52	0.43
3:O:614:ASP:OD1	3:P:455:LYS:NZ	2.51	0.43
3:P:431:GLU:O	3:P:435:MET:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:201:GLU:OE1	3:R:110:ARG:NH1	2.41	0.43
4:I:712:MET:HE3	4:I:712:MET:HB3	1.80	0.43
4:I:780:MET:HE3	4:I:780:MET:HB3	1.84	0.43
4:J:552:GLY:O	4:K:779:THR:OG1	2.36	0.43
4:L:344:PRO:HB3	4:L:1124:PHE:HD1	1.83	0.43
3:M:267:LYS:HZ2	3:M:267:LYS:HG3	1.66	0.43
3:N:229:LEU:HD22	3:O:84:ARG:NH2	2.34	0.43
3:O:518:MET:HE2	3:O:518:MET:HB3	1.94	0.43
3:O:653:ASN:HB2	3:O:656:ILE:HD12	2.01	0.43
3:O:660:GLN:HA	3:O:675:THR:HG23	1.99	0.43
3:P:205:VAL:HG12	3:P:206:LEU:HD23	2.01	0.43
3:P:706:LYS:HD2	3:P:706:LYS:HA	1.79	0.43
3:Q:261:LEU:HA	3:Q:264:VAL:HG12	2.00	0.43
3:Q:507:LEU:HD23	3:Q:507:LEU:HA	1.87	0.43
3:Q:627:GLN:O	3:Q:685:LYS:HE3	2.18	0.43
3:R:152:GLU:OE2	3:R:153:GLN:NE2	2.51	0.43
3:R:279:ARG:NH2	3:R:284:GLU:OE2	2.51	0.43
4:I:265:PRO:HG3	4:I:988:LEU:HD11	2.00	0.43
4:I:273:TRP:HB2	4:I:278:LEU:HG	2.00	0.43
4:I:465:TYR:CD2	4:I:491:PRO:HB2	2.54	0.43
4:I:555:ALA:N	4:I:816:SER:HB3	2.34	0.43
4:I:604:ARG:HH11	4:L:1248:GLN:HG2	1.82	0.43
4:I:996:LEU:HB2	4:I:1085:LEU:HD11	2.01	0.43
4:I:1129:LYS:HA	4:I:1129:LYS:HD3	1.86	0.43
4:I:1141:ILE:HD11	4:I:1302:VAL:HG22	2.01	0.43
4:J:1060:LYS:HE3	4:J:1060:LYS:HB2	1.84	0.43
4:K:796:MET:HA	4:K:800:MET:H	1.84	0.43
4:K:798:ARG:H	4:K:798:ARG:HG2	1.61	0.43
4:L:28:ASP:OD2	4:L:1089:LYS:HE3	2.19	0.43
4:L:362:VAL:HB	4:L:363:GLY:H	1.66	0.43
4:L:913:LEU:HD22	4:L:918:TYR:CE1	2.54	0.43
3:O:467:VAL:HG22	3:O:493:LEU:HD13	2.01	0.42
3:P:268:LYS:HA	3:P:277:THR:HA	2.01	0.42
3:P:541:ARG:HB3	3:P:546:ARG:NH1	2.31	0.42
3:P:566:ALA:O	3:P:568:MET:N	2.52	0.42
3:R:112:ALA:HB2	3:R:150:TYR:CD1	2.54	0.42
3:R:283:GLY:O	3:R:287:TRP:N	2.46	0.42
3:G:309:TYR:OH	3:G:336:LEU:HD11	2.19	0.42
3:G:491:ASP:OD1	3:G:494:ARG:NH1	2.52	0.42
3:G:627:GLN:O	3:G:685:LYS:HE3	2.18	0.42
4:I:72:PRO:CB	4:I:76:ARG:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:760:ILE:HG13	4:I:761:GLU:N	2.34	0.42
4:I:1001:ARG:NE	4:I:1077:ASP:OD2	2.49	0.42
4:I:1243:SER:HB3	4:J:784:GLN:NE2	2.34	0.42
4:L:96:LYS:HB3	4:L:96:LYS:HE2	1.82	0.42
2:T:75:VAL:HA	2:T:78:ILE:HG22	2.01	0.42
3:M:612:ASP:HB2	3:M:658:ASN:HD22	1.84	0.42
3:N:623:LYS:HE3	3:N:623:LYS:HB2	1.89	0.42
3:O:495:ARG:HE	3:O:495:ARG:HB3	1.69	0.42
3:O:623:LYS:HE3	3:O:623:LYS:HB2	1.88	0.42
3:Q:116:VAL:HG11	3:Q:143:LEU:HA	2.01	0.42
3:Q:211:MET:O	3:Q:214:ARG:HG2	2.18	0.42
3:Q:510:ASP:OD2	3:Q:511:GLN:NE2	2.44	0.42
3:R:363:MET:HE2	3:R:363:MET:HB2	1.93	0.42
3:R:493:LEU:HA	3:R:496:ILE:HG22	2.01	0.42
3:R:666:GLN:HB2	3:R:671:TYR:HE2	1.84	0.42
3:G:380:SER:HA	3:G:383:LYS:HE2	2.01	0.42
3:H:203:ASN:O	3:H:207:GLN:HG3	2.19	0.42
3:H:282:ILE:HG23	3:H:286:GLN:OE1	2.19	0.42
4:I:675:LYS:HG3	4:I:687:LEU:CD2	2.50	0.42
4:I:803:TYR:O	4:I:807:VAL:HG22	2.19	0.42
4:I:861:ARG:O	4:I:862:ASN:HB2	2.18	0.42
4:I:919:LYS:HG2	4:I:921:LYS:H	1.84	0.42
4:I:957:GLU:HG2	4:I:980:ALA:CB	2.49	0.42
4:J:809:GLY:O	4:J:813:ILE:HG12	2.19	0.42
4:J:1012:THR:OG1	4:J:1043:ILE:HG21	2.19	0.42
4:J:1159:ALA:O	4:J:1167:ARG:HG2	2.18	0.42
4:K:456:PHE:O	4:K:457:GLU:HB2	2.19	0.42
4:L:257:ASP:HB3	4:L:260:LYS:HB3	2.01	0.42
4:L:565:THR:HG21	4:L:1268:VAL:HG13	2.00	0.42
4:L:644:PRO:HG2	4:L:814:MET:HG2	2.01	0.42
4:L:760:ILE:HD11	4:L:825:LYS:HG3	2.02	0.42
2:S:64:SER:O	2:S:68:THR:HG23	2.18	0.42
2:c:23:GLN:O	2:c:27:ILE:HG23	2.19	0.42
2:g:22:ALA:O	2:g:26:MET:HG2	2.19	0.42
2:g:40:GLU:O	2:g:44:GLN:HG2	2.18	0.42
3:M:119:ASP:O	3:M:123:LYS:HG2	2.19	0.42
3:M:607:THR:HG23	3:M:620:VAL:HG22	2.02	0.42
3:N:72:ASN:HA	3:N:75:ILE:HG22	2.01	0.42
3:N:640:ASP:OD2	3:O:417:LYS:HB3	2.19	0.42
3:P:356:GLN:O	3:P:359:VAL:HG12	2.19	0.42
3:Q:131:THR:HG22	3:Q:134:GLU:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:Q:428:LYS:HE2	3:Q:449:TYR:CE2	2.54	0.42
3:Q:613:VAL:HG23	3:Q:614:ASP:H	1.84	0.42
3:G:197:ASN:O	3:G:201:GLU:HG2	2.19	0.42
3:G:680:ARG:NH1	4:I:253:ASP:OD2	2.53	0.42
3:H:269:VAL:HB	3:H:278:TYR:CZ	2.54	0.42
4:J:1163:PRO:O	4:J:1167:ARG:HG3	2.18	0.42
4:K:340:LEU:HD11	4:K:404:ILE:HG13	2.00	0.42
4:K:362:VAL:HG23	4:K:446:LEU:HD11	2.01	0.42
4:K:624:ARG:HA	4:K:624:ARG:HD2	1.87	0.42
4:L:333:ILE:HG22	4:L:433:GLU:OE1	2.18	0.42
4:L:350:GLY:HA2	4:L:392:LEU:HD23	2.01	0.42
4:L:659:SER:C	4:L:661:HIS:H	2.26	0.42
3:M:674:ASP:OD1	3:M:674:ASP:N	2.44	0.42
3:P:115:LEU:HD12	3:P:119:ASP:OD2	2.20	0.42
3:P:229:LEU:HG	3:P:234:ILE:HD11	2.02	0.42
3:P:232:GLY:HA3	3:Q:100:ALA:HB2	2.01	0.42
3:P:656:ILE:HD11	3:P:679:VAL:HG21	2.00	0.42
3:Q:326:TRP:O	3:Q:330:GLN:HG2	2.20	0.42
3:R:271:LEU:HG	3:R:272:ASN:N	2.34	0.42
3:R:394:ARG:HG2	3:R:452:ALA:HB1	2.00	0.42
4:I:879:PHE:CE2	4:J:68:VAL:HG11	2.54	0.42
4:J:268:TRP:CD2	4:J:305:LEU:HD22	2.54	0.42
4:J:526:ASP:H	4:J:530:ARG:NH1	2.16	0.42
4:J:927:GLU:O	4:J:931:LEU:HG	2.19	0.42
4:K:522:LEU:HG	4:K:533:ALA:HB1	2.01	0.42
4:K:819:LYS:HE3	4:K:827:GLU:OE2	2.19	0.42
4:K:1171:LEU:HD22	4:K:1175:LEU:HD12	2.00	0.42
4:L:529:ILE:HG21	4:L:844:GLU:OE2	2.19	0.42
4:L:641:MET:HG2	4:L:655:ILE:HG13	2.01	0.42
4:L:1289:LYS:HE2	4:L:1289:LYS:HB2	1.88	0.42
2:S:52:LEU:HB3	2:S:56:ALA:HB3	2.01	0.42
2:d:37:GLN:O	2:d:41:ILE:HG13	2.19	0.42
3:N:252:SER:HB2	3:N:293:THR:HG23	2.00	0.42
3:O:232:GLY:HA3	3:P:100:ALA:HB2	2.00	0.42
3:P:66:LEU:O	3:P:70:ARG:HG2	2.18	0.42
3:P:680:ARG:NH1	4:K:423:ASN:HD22	2.18	0.42
3:Q:660:GLN:HA	3:Q:675:THR:HG23	2.01	0.42
4:J:355:LEU:HD21	4:J:433:GLU:HG3	2.00	0.42
4:J:525:ASP:HA	4:J:530:ARG:NH1	2.34	0.42
4:J:652:ALA:HB1	4:J:814:MET:HG3	2.00	0.42
4:K:72:PRO:HB3	4:K:76:ARG:HE	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:324:LEU:CD1	4:K:342:TYR:HE2	2.32	0.42
4:K:357:ASN:H	4:K:437:THR:HG23	1.84	0.42
4:K:529:ILE:HD13	4:K:831:LEU:HD13	2.01	0.42
4:K:570:TYR:OH	4:K:804:ASP:OD2	2.30	0.42
4:K:749:ILE:HA	4:K:752:GLU:CD	2.44	0.42
4:L:704:GLU:OE1	4:L:704:GLU:N	2.31	0.42
4:L:803:TYR:O	4:L:807:VAL:HG22	2.20	0.42
4:L:861:ARG:HH21	4:L:1205:LEU:HD11	1.83	0.42
4:L:1042:LEU:HA	4:L:1045:GLU:HG2	2.02	0.42
1:B:47:GLU:CD	3:P:362:GLN:HE21	2.27	0.42
2:c:120:ASP:O	2:c:124:ILE:HG13	2.20	0.42
2:e:71:ASN:HB3	3:R:122:GLN:HG2	2.02	0.42
2:h:75:VAL:HA	2:h:78:ILE:HG22	2.02	0.42
3:M:205:VAL:HG11	3:M:220:PHE:CE2	2.53	0.42
3:M:614:ASP:N	3:M:614:ASP:OD1	2.52	0.42
3:N:121:MET:HE1	3:N:139:ARG:HA	2.01	0.42
3:N:195:ILE:HD11	3:N:235:PRO:HD2	2.00	0.42
3:P:574:GLU:O	3:P:578:LYS:HG3	2.19	0.42
3:P:577:ARG:O	3:P:577:ARG:HD2	2.20	0.42
3:P:628:VAL:HG22	3:P:634:SER:HB2	2.01	0.42
3:R:148:LYS:HA	3:R:158:PRO:HG3	2.01	0.42
3:R:394:ARG:CG	3:R:452:ALA:HB1	2.49	0.42
3:R:455:LYS:HA	3:R:460:ARG:HD2	2.00	0.42
3:G:244:ILE:HD13	3:G:278:TYR:HE1	1.85	0.42
4:I:8:VAL:HB	4:I:9:PRO:HD3	2.00	0.42
4:I:509:ILE:HD13	4:I:859:ALA:HB1	2.02	0.42
4:J:496:GLU:OE1	4:J:1173:ARG:NH1	2.51	0.42
4:J:641:MET:HE1	4:J:766:LEU:CD2	2.49	0.42
4:L:842:THR:HA	4:L:845:VAL:HG22	2.01	0.42
2:c:107:ILE:HD11	3:P:172:THR:CG2	2.50	0.42
3:N:389:LYS:O	3:N:393:LYS:HG3	2.20	0.42
3:O:135:MET:HE3	3:O:135:MET:HB3	1.85	0.42
3:P:415:GLU:HG2	4:K:241:SER:HB2	2.02	0.42
3:P:612:ASP:OD1	3:P:615:GLY:HA2	2.20	0.42
3:Q:117:ASP:OD2	3:Q:174:ARG:HD2	2.20	0.42
3:Q:403:ASP:HB3	3:Q:406:ASP:OD2	2.19	0.42
3:Q:455:LYS:HD3	3:Q:460:ARG:NH1	2.30	0.42
3:R:156:ILE:H	3:R:156:ILE:HD12	1.84	0.42
3:R:237:ASP:O	3:R:241:THR:HG23	2.18	0.42
3:R:616:ASP:OD1	3:R:616:ASP:N	2.51	0.42
3:H:443:ASP:O	3:H:447:LEU:HD23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:553:PHE:CD2	3:H:577:ARG:HD3	2.55	0.42
4:I:340:LEU:HD11	4:I:404:ILE:HG13	2.02	0.42
4:J:11:ASP:OD2	4:J:1022:LYS:HB3	2.19	0.42
4:J:324:LEU:CD1	4:J:342:TYR:HE2	2.32	0.42
4:J:671:ASP:OD1	4:J:672:ARG:N	2.51	0.42
4:J:1013:LEU:HD12	4:J:1055:PHE:CE1	2.55	0.42
4:K:600:TYR:CE2	4:K:948:ARG:HG2	2.55	0.42
4:K:652:ALA:HB1	4:K:814:MET:HG3	2.02	0.42
4:K:1245:LEU:HD13	4:L:955:LEU:HG	2.01	0.42
4:L:681:ARG:NH2	4:L:782:ASP:OD2	2.52	0.42
4:L:817:THR:HB	4:L:819:LYS:HE3	2.01	0.42
1:E:47:GLU:HB3	3:Q:358:GLN:OE1	2.20	0.42
3:M:410:ASN:C	3:M:412:ASN:H	2.26	0.42
3:N:114:TYR:CD1	3:N:174:ARG:HD3	2.55	0.42
3:N:602:LYS:HE3	3:O:468:THR:HG21	2.02	0.42
3:P:623:LYS:HE3	3:P:623:LYS:HB2	1.91	0.42
3:Q:612:ASP:HB2	3:Q:658:ASN:HD22	1.85	0.42
3:H:236:SER:C	3:H:238:ALA:N	2.76	0.42
4:I:684:ALA:HB1	4:I:740:HIS:NE2	2.35	0.42
4:I:938:LYS:O	4:I:942:GLN:HG2	2.19	0.42
4:J:1013:LEU:HD11	4:J:1047:MET:HB2	2.01	0.42
4:K:682:TYR:CE1	4:K:781:PRO:HD2	2.55	0.42
4:L:749:ILE:HD11	4:L:1061:GLN:HG2	2.00	0.42
2:c:38:ALA:HB2	2:c:66:GLU:OE1	2.20	0.42
2:c:42:MET:HE1	3:P:154:PHE:CE1	2.55	0.42
2:d:76:GLN:HG2	3:Q:114:TYR:CG	2.55	0.42
2:g:46:ASN:OD1	2:g:48:GLN:N	2.40	0.42
3:O:319:GLN:NE2	3:O:328:MET:HE1	2.35	0.42
3:O:545:GLN:HG2	3:O:548:GLU:OE1	2.20	0.42
3:O:607:THR:HG23	3:O:620:VAL:HG22	2.02	0.42
3:R:623:LYS:HE3	3:R:623:LYS:HB2	1.91	0.42
4:I:510:LYS:HA	4:I:510:LYS:HD2	1.86	0.42
4:I:748:SER:O	4:I:752:GLU:HG3	2.20	0.42
4:K:803:TYR:O	4:K:807:VAL:HG22	2.20	0.42
4:K:934:SER:HB3	4:K:1101:LEU:HB2	2.01	0.42
4:K:1095:SER:O	4:K:1103:LYS:HG2	2.20	0.42
4:K:1121:LEU:HD12	4:K:1121:LEU:HA	1.92	0.42
4:K:1164:LYS:HA	4:K:1167:ARG:HD2	2.00	0.42
4:L:754:ILE:HA	4:L:858:ARG:HH11	1.84	0.42
2:d:76:GLN:HG2	3:Q:114:TYR:CD2	2.55	0.42
3:N:268:LYS:HA	3:N:277:THR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:N:358:GLN:O	3:N:362:GLN:HG3	2.19	0.42
3:N:486:ARG:O	3:N:487:THR:C	2.63	0.42
3:O:435:MET:HG3	3:P:311:LEU:HD11	2.01	0.42
3:O:613:VAL:HG23	3:O:614:ASP:N	2.32	0.42
3:P:114:TYR:CD1	3:P:174:ARG:HD3	2.55	0.42
3:P:120:VAL:O	3:P:124:ILE:HG12	2.20	0.42
3:P:188:GLN:O	3:P:192:LYS:HG3	2.19	0.42
3:P:589:ASN:ND2	3:P:592:MET:HG2	2.34	0.42
3:R:70:ARG:O	3:R:74:ILE:HG12	2.20	0.42
3:R:459:PHE:O	3:R:463:ILE:HG12	2.20	0.42
3:G:623:LYS:HE3	3:G:623:LYS:HB2	1.92	0.42
3:H:92:LEU:HD12	3:H:93:LEU:N	2.34	0.42
4:I:262:THR:HG22	4:I:263:ILE:HG12	2.01	0.42
4:J:71:GLY:C	4:J:73:ASP:N	2.74	0.42
4:J:378:THR:OG1	4:J:380:VAL:HG12	2.19	0.42
4:J:577:MET:HE3	4:J:577:MET:HB3	1.90	0.42
4:K:50:PRO:HA	4:K:57:THR:OG1	2.20	0.42
4:K:85:ALA:O	4:K:89:GLN:HG3	2.20	0.42
4:K:574:TYR:CD1	4:K:1194:PRO:HG2	2.55	0.42
4:K:659:SER:O	4:K:660:ARG:HB2	2.20	0.42
2:T:67:LEU:O	3:O:115:LEU:HD21	2.20	0.41
2:c:79:GLY:HA3	3:P:110:ARG:HH21	1.84	0.41
3:M:158:PRO:HG2	3:M:160:ASP:CG	2.44	0.41
3:M:323:ARG:HH11	3:N:290:LEU:HD23	1.85	0.41
3:N:147:ALA:HB2	3:N:167:PHE:CZ	2.55	0.41
3:N:528:PRO:O	3:N:532:LEU:HB2	2.20	0.41
3:O:259:ASP:HA	3:O:262:MET:HE3	2.02	0.41
3:O:303:ALA:O	3:O:307:GLU:HG2	2.20	0.41
3:O:413:THR:HG21	3:O:416:PHE:CE2	2.54	0.41
3:P:614:ASP:O	3:P:615:GLY:C	2.63	0.41
3:Q:244:ILE:HD13	3:Q:278:TYR:HE1	1.85	0.41
3:Q:592:MET:HE1	3:R:479:ILE:HD11	2.01	0.41
3:G:639:ARG:HG2	3:G:639:ARG:HH11	1.84	0.41
3:G:639:ARG:NH1	3:G:640:ASP:OD1	2.53	0.41
3:H:262:MET:HE3	3:H:291:MET:SD	2.59	0.41
4:I:974:TYR:CZ	4:L:880:PHE:HB2	2.55	0.41
4:K:268:TRP:CD2	4:K:305:LEU:HD22	2.55	0.41
4:K:641:MET:HE1	4:K:803:TYR:OH	2.19	0.41
4:K:646:ILE:HG12	4:K:1269:VAL:HG21	2.02	0.41
4:L:362:VAL:HG21	4:L:446:LEU:HD21	2.02	0.41
3:M:197:ASN:ND2	3:N:107:LYS:HB2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:669:SER:OG	3:M:684:ASP:OD1	2.37	0.41
3:N:342:ASP:HB2	3:N:344:GLN:HE22	1.85	0.41
3:O:568:MET:SD	3:O:573:ARG:HG2	2.60	0.41
3:O:619:GLY:HA3	3:O:663:MET:HB2	2.02	0.41
3:P:87:LEU:HD11	3:P:94:TYR:HD1	1.86	0.41
3:Q:570:ALA:O	3:Q:573:ARG:HB2	2.20	0.41
3:R:118:ASP:OD2	3:R:174:ARG:HD2	2.19	0.41
3:R:680:ARG:CZ	4:L:423:ASN:HD22	2.32	0.41
4:I:596:GLU:HG2	4:I:949:ALA:HB2	2.01	0.41
4:J:357:ASN:H	4:J:437:THR:HG23	1.85	0.41
4:K:493:THR:HA	4:K:1179:MET:HE1	2.02	0.41
4:L:1029:ALA:HB2	4:L:1078:LYS:HB2	2.01	0.41
4:L:1061:GLN:NE2	4:L:1065:MET:HE3	2.33	0.41
4:L:1078:LYS:HB3	4:L:1078:LYS:HE3	1.91	0.41
2:d:69:SER:HB3	3:Q:115:LEU:HD23	2.02	0.41
3:M:413:THR:HG21	3:M:416:PHE:CZ	2.55	0.41
3:M:619:GLY:HA3	3:M:663:MET:HB2	2.02	0.41
3:M:673:MET:HG2	3:M:674:ASP:N	2.36	0.41
3:N:511:GLN:HB3	3:N:514:LEU:HB3	2.02	0.41
3:R:356:GLN:O	3:R:359:VAL:HG12	2.20	0.41
3:R:565:ILE:HD13	3:R:601:LEU:HD12	2.02	0.41
3:H:296:ARG:O	3:H:300:GLU:HG2	2.20	0.41
4:I:356:ILE:HG12	4:I:440:ASN:HB2	2.02	0.41
4:I:722:VAL:HG13	4:I:726:MET:HE2	2.03	0.41
4:J:251:ARG:HA	4:J:251:ARG:HD3	1.88	0.41
4:J:529:ILE:HD13	4:J:831:LEU:HD13	2.02	0.41
4:J:841:LYS:O	4:J:845:VAL:HG13	2.20	0.41
4:J:861:ARG:HH21	4:J:1205:LEU:HD11	1.85	0.41
4:K:944:ILE:HD12	4:K:1073:TRP:HB2	2.02	0.41
4:L:938:LYS:O	4:L:942:GLN:HG2	2.21	0.41
4:L:1241:MET:C	4:L:1243:SER:N	2.78	0.41
3:O:202:LEU:HA	3:O:202:LEU:HD12	1.78	0.41
3:O:444:ALA:O	3:O:448:LYS:HG3	2.21	0.41
3:Q:323:ARG:HH12	3:R:293:THR:HG21	1.84	0.41
3:R:336:LEU:HD23	3:R:349:ARG:NH1	2.36	0.41
3:H:493:LEU:HD21	3:H:515:PHE:HE1	1.85	0.41
3:H:566:ALA:O	3:H:568:MET:N	2.54	0.41
4:I:653:VAL:O	4:I:653:VAL:HG13	2.21	0.41
4:J:553:ALA:O	4:J:554:THR:OG1	2.34	0.41
4:J:565:THR:HG22	4:J:1263:MET:HE1	2.03	0.41
4:J:651:LYS:HE3	4:J:651:LYS:HB3	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:806:ARG:HD2	4:J:806:ARG:HA	1.82	0.41
4:J:1237:VAL:HG22	4:K:968:ILE:CG2	2.50	0.41
4:K:324:LEU:HD11	4:K:342:TYR:HE2	1.86	0.41
4:K:1084:MET:HE1	4:K:1105:VAL:CG2	2.51	0.41
4:K:1242:GLY:HA2	4:K:1245:LEU:HG	2.02	0.41
4:L:555:ALA:N	4:L:816:SER:HB3	2.35	0.41
4:L:822:LYS:HE3	4:L:822:LYS:HB3	1.83	0.41
3:N:259:ASP:HB3	3:N:263:ARG:HH12	1.86	0.41
3:O:185:PHE:CD2	3:O:186:LEU:HD12	2.56	0.41
3:Q:383:LYS:HB2	3:Q:416:PHE:CE2	2.56	0.41
3:R:188:GLN:O	3:R:192:LYS:HG3	2.21	0.41
3:H:598:THR:HG22	3:H:602:LYS:NZ	2.35	0.41
4:I:88:LYS:HB3	4:I:88:LYS:HE2	1.77	0.41
4:I:859:ALA:O	4:I:860:ARG:HB3	2.20	0.41
4:I:1019:ARG:HA	4:I:1022:LYS:HZ3	1.84	0.41
4:I:1237:VAL:HG22	4:J:968:ILE:CG2	2.50	0.41
4:J:387:TYR:HD1	4:J:1285:MET:HE1	1.86	0.41
4:J:456:PHE:HA	4:J:466:GLU:HB2	2.02	0.41
4:J:723:THR:HG23	4:J:726:MET:H	1.86	0.41
4:J:904:ARG:HD2	4:J:1312:ASN:HB2	2.02	0.41
4:J:1086:ARG:N	4:J:1087:PRO:HD2	2.35	0.41
4:K:550:LYS:HD3	4:K:554:THR:HG22	2.02	0.41
2:f:69:SER:HB3	3:G:115:LEU:HD23	2.02	0.41
2:f:69:SER:O	2:f:73:GLN:HB2	2.19	0.41
3:N:579:ILE:O	3:N:583:VAL:HG23	2.20	0.41
3:P:528:PRO:O	3:P:532:LEU:HB2	2.21	0.41
3:P:607:THR:HG23	3:P:617:THR:HG23	2.02	0.41
3:Q:527:ASP:O	3:Q:530:VAL:HG22	2.21	0.41
3:G:448:LYS:NZ	3:G:448:LYS:HB3	2.35	0.41
3:G:676:THR:OG1	3:G:678:GLN:HG3	2.20	0.41
4:I:938:LYS:HD2	4:I:1150:PHE:CE1	2.56	0.41
4:J:66:LEU:C	4:J:68:VAL:N	2.78	0.41
4:J:517:ILE:HG23	4:J:847:ALA:HB1	2.01	0.41
4:J:1098:PHE:O	4:J:1103:LYS:HE2	2.21	0.41
4:L:71:GLY:C	4:L:73:ASP:N	2.74	0.41
2:d:7:ILE:HB	2:d:8:PRO:HD3	2.01	0.41
3:N:79:THR:N	3:N:82:GLN:HE21	2.12	0.41
3:O:160:ASP:O	3:O:164:GLN:HG2	2.21	0.41
3:O:565:ILE:HG23	3:O:597:MET:HE1	2.02	0.41
3:P:178:LEU:HD23	3:P:178:LEU:HA	1.94	0.41
3:R:195:ILE:HD12	3:R:239:GLN:HG2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:323:ARG:O	3:G:327:GLU:HG3	2.20	0.41
3:G:493:LEU:O	3:G:497:ARG:HB2	2.20	0.41
4:K:113:GLY:N	4:K:117:ASN:OD1	2.53	0.41
4:K:475:VAL:HG11	4:K:492:LYS:HB2	2.02	0.41
4:K:760:ILE:HG13	4:K:761:GLU:N	2.34	0.41
4:K:775:ASP:OD1	4:K:789:ASN:ND2	2.53	0.41
4:L:54:MET:HB2	4:L:56:PHE:CD1	2.55	0.41
4:L:941:ASP:OD2	4:L:1001:ARG:NH1	2.53	0.41
2:d:71:ASN:HD21	3:Q:122:GLN:HB2	1.86	0.41
3:N:149:VAL:O	3:N:152:GLU:HG3	2.21	0.41
3:N:568:MET:HE2	3:N:601:LEU:CD1	2.51	0.41
3:N:698:LYS:HB2	3:N:698:LYS:HE2	1.75	0.41
3:G:368:LYS:HZ2	3:G:368:LYS:HG3	1.67	0.41
4:I:251:ARG:HA	4:I:251:ARG:HD3	1.88	0.41
4:I:682:TYR:CE1	4:I:781:PRO:HD2	2.56	0.41
4:I:761:GLU:CD	4:I:822:LYS:HG3	2.46	0.41
4:I:1086:ARG:N	4:I:1087:PRO:HD2	2.35	0.41
4:J:1021:GLU:O	4:J:1026:LEU:HD11	2.21	0.41
4:K:121:GLU:HG2	4:K:125:LYS:HE3	2.02	0.41
4:K:679:ILE:O	4:K:683:GLY:HA2	2.20	0.41
4:L:344:PRO:HB3	4:L:1124:PHE:CD1	2.56	0.41
4:L:610:ILE:HG13	4:L:627:MET:HG2	2.03	0.41
1:B:48:VAL:HG12	1:B:50:GLY:H	1.86	0.41
2:T:23:GLN:HA	2:T:26:MET:HE2	2.02	0.41
2:h:108:ARG:NH2	2:h:117:TYR:OH	2.54	0.41
3:M:383:LYS:HB2	3:M:416:PHE:CE1	2.56	0.41
3:M:527:ASP:O	3:M:530:VAL:HG22	2.20	0.41
3:M:543:LYS:H	3:M:546:ARG:HG3	1.84	0.41
3:N:114:TYR:O	3:N:118:ASP:HB2	2.20	0.41
3:N:115:LEU:HG	3:N:116:VAL:N	2.34	0.41
3:N:118:ASP:OD1	3:N:139:ARG:NH1	2.53	0.41
3:N:195:ILE:CD1	3:N:239:GLN:HG2	2.45	0.41
3:N:262:MET:HE3	3:N:291:MET:HE2	2.03	0.41
3:N:682:ARG:HH12	3:N:684:ASP:HB2	1.86	0.41
3:O:209:PRO:HA	3:O:212:LEU:HD12	2.03	0.41
3:O:394:ARG:HD2	3:O:402:THR:HG21	2.03	0.41
3:P:329:LEU:HD23	3:P:329:LEU:HA	1.88	0.41
3:Q:205:VAL:HG11	3:Q:220:PHE:CE2	2.56	0.41
3:Q:307:GLU:HA	3:Q:310:ARG:HH12	1.86	0.41
3:R:92:LEU:HD12	3:R:93:LEU:N	2.35	0.41
3:R:614:ASP:O	3:R:615:GLY:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:142:ARG:HD2	3:G:142:ARG:N	2.36	0.41
3:G:210:ASP:OD1	3:G:211:MET:N	2.54	0.41
3:G:495:ARG:HE	3:G:495:ARG:HB3	1.58	0.41
3:G:513:GLU:O	3:G:517:THR:HG23	2.20	0.41
3:H:569:PRO:C	3:H:571:SER:H	2.29	0.41
3:H:664:TYR:OH	4:I:426:ILE:HD11	2.21	0.41
4:I:535:ASP:HB3	4:I:817:THR:HG22	2.03	0.41
4:I:806:ARG:NH1	4:I:856:THR:OG1	2.54	0.41
4:I:1060:LYS:HE3	4:I:1060:LYS:HB2	1.86	0.41
4:J:39:ARG:HA	4:J:39:ARG:HD3	1.71	0.41
4:J:72:PRO:HB2	4:J:76:ARG:O	2.20	0.41
4:J:635:ASP:O	4:J:639:GLU:HG3	2.20	0.41
4:J:754:ILE:HB	4:J:853:LYS:HD3	2.03	0.41
4:J:859:ALA:O	4:J:860:ARG:HB3	2.21	0.41
4:J:879:PHE:HE2	4:K:68:VAL:HG11	1.86	0.41
4:K:238:LEU:HA	4:K:238:LEU:HD23	1.73	0.41
4:K:584:PRO:HA	4:K:588:THR:HG23	2.03	0.41
4:K:780:MET:HE3	4:K:780:MET:HB3	1.93	0.41
4:K:904:ARG:NH2	4:K:1177:PRO:HG2	2.36	0.41
4:L:268:TRP:CD2	4:L:305:LEU:HD22	2.55	0.41
4:L:619:LEU:HD22	4:L:623:GLU:HB3	2.03	0.41
4:L:861:ARG:O	4:L:862:ASN:HB2	2.20	0.41
4:L:1084:MET:HE3	4:L:1106:MET:HG2	2.02	0.41
4:L:1103:LYS:O	4:L:1107:GLN:HG3	2.20	0.41
2:S:63:ALA:O	2:S:67:LEU:HD23	2.20	0.41
2:e:24:ALA:O	2:e:27:ILE:HG12	2.21	0.41
3:M:223:LYS:HE3	3:M:223:LYS:HB3	1.83	0.41
3:N:333:LYS:HB2	3:N:352:LEU:HD21	2.02	0.41
3:N:611:ASP:HB3	4:K:125:LYS:HE2	2.03	0.41
3:O:211:MET:O	3:O:217:SER:HB3	2.21	0.41
3:O:366:TRP:O	3:O:370:GLN:HG2	2.21	0.41
3:P:383:LYS:O	3:P:387:ILE:HG13	2.21	0.41
3:Q:463:ILE:O	3:Q:467:VAL:HG23	2.20	0.41
3:R:579:ILE:O	3:R:583:VAL:HG23	2.21	0.41
3:R:611:ASP:HB3	4:I:125:LYS:HE2	2.03	0.41
3:G:304:LYS:HE2	3:G:304:LYS:HB3	1.81	0.41
4:I:760:ILE:HD11	4:I:825:LYS:HG3	2.02	0.41
4:I:1004:MET:HE1	4:I:1020:TRP:HE1	1.85	0.41
4:I:1041:SER:O	4:I:1045:GLU:HG2	2.20	0.41
4:J:617:LYS:HB3	4:J:617:LYS:HE3	1.88	0.41
4:K:103:LYS:HD3	4:K:123:TYR:CD1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:535:ASP:HB3	4:L:817:THR:HG22	2.02	0.41
4:L:1171:LEU:HA	4:L:1171:LEU:HD23	1.82	0.41
1:B:40:GLU:OE1	3:P:373:ALA:HB1	2.20	0.40
2:T:7:ILE:HB	2:T:8:PRO:HD3	2.02	0.40
2:e:49:ASN:C	2:e:51:ASP:H	2.29	0.40
2:g:76:GLN:HG2	3:H:114:TYR:CD1	2.55	0.40
3:M:557:LEU:HD22	3:M:573:ARG:HH21	1.86	0.40
3:M:664:TYR:HE1	3:M:673:MET:HE2	1.86	0.40
3:Q:565:ILE:HD13	3:Q:597:MET:HE1	2.03	0.40
3:G:75:ILE:O	3:G:78:LEU:HB3	2.21	0.40
3:G:356:GLN:O	3:G:360:GLN:HG2	2.21	0.40
4:I:266:THR:HG21	4:I:1129:LYS:HG3	2.03	0.40
4:J:510:LYS:HA	4:J:510:LYS:HD2	1.88	0.40
4:J:809:GLY:HA3	4:J:856:THR:HA	2.03	0.40
4:K:256:PHE:O	4:K:1089:LYS:NZ	2.48	0.40
4:K:665:TYR:CZ	4:K:667:PRO:HA	2.56	0.40
4:K:757:LEU:HD22	4:K:760:ILE:HG21	2.03	0.40
4:K:879:PHE:HE2	4:L:68:VAL:HG11	1.86	0.40
4:K:968:ILE:HG13	4:K:969:VAL:N	2.36	0.40
4:K:1086:ARG:N	4:K:1087:PRO:HD2	2.36	0.40
4:K:1277:GLU:HG2	4:L:974:TYR:CE1	2.56	0.40
4:L:814:MET:O	4:L:814:MET:HG3	2.21	0.40
2:S:118:ARG:HH22	3:O:68:ASP:HA	1.85	0.40
2:T:73:GLN:HE22	3:N:208:ASP:CG	2.29	0.40
2:g:49:ASN:C	2:g:51:ASP:H	2.29	0.40
3:M:335:GLU:HA	3:M:338:LYS:HE2	2.03	0.40
3:M:396:ASN:HB2	3:M:398:GLU:OE1	2.22	0.40
3:N:313:ILE:HD13	3:N:332:ILE:HD13	2.02	0.40
3:N:588:GLY:O	3:O:539:VAL:HG22	2.21	0.40
3:N:704:ARG:HD3	3:O:368:LYS:HG2	2.02	0.40
3:P:435:MET:SD	3:P:445:MET:HE1	2.61	0.40
3:P:628:VAL:HG23	3:P:629:ASN:HD22	1.86	0.40
3:P:704:ARG:HD3	3:Q:368:LYS:HG3	2.02	0.40
3:Q:120:VAL:O	3:Q:124:ILE:HG13	2.21	0.40
3:Q:133:GLU:OE2	3:R:64:ARG:NH2	2.38	0.40
3:Q:142:ARG:HH11	3:Q:142:ARG:HA	1.86	0.40
3:G:135:MET:HE1	3:G:179:TYR:CD1	2.56	0.40
3:G:197:ASN:N	3:G:197:ASN:HD22	2.19	0.40
3:H:628:VAL:HG22	3:H:634:SER:HB2	2.04	0.40
3:H:706:LYS:HA	3:H:706:LYS:HD2	1.85	0.40
4:I:238:LEU:HD23	4:I:238:LEU:HA	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:I:450:ASN:HD21	4:J:112:GLU:HG2	1.86	0.40
4:I:584:PRO:HA	4:I:588:THR:HG23	2.03	0.40
4:J:17:GLN:HG3	4:J:1086:ARG:HG2	2.03	0.40
4:J:965:VAL:HA	4:J:968:ILE:HG12	2.03	0.40
4:L:497:PHE:O	4:L:501:ASP:HB2	2.21	0.40
1:b:48:VAL:HG13	3:M:314:ASN:ND2	2.36	0.40
2:g:63:ALA:O	2:g:67:LEU:HD23	2.21	0.40
2:h:7:ILE:HB	2:h:8:PRO:HD3	2.03	0.40
2:h:47:ILE:HA	2:h:52:LEU:HD21	2.03	0.40
3:M:467:VAL:HG22	3:M:493:LEU:HD13	2.04	0.40
3:N:81:GLU:HG2	3:N:82:GLN:N	2.35	0.40
3:N:682:ARG:HH22	3:N:684:ASP:HB2	1.86	0.40
3:O:673:MET:HE2	3:O:673:MET:HB3	2.01	0.40
3:G:610:GLY:C	3:G:658:ASN:HD21	2.29	0.40
3:G:701:GLU:O	3:G:705:GLU:HG2	2.22	0.40
3:H:250:ASP:O	3:H:254:ARG:HB2	2.21	0.40
3:H:594:MET:O	3:H:598:THR:OG1	2.32	0.40
4:I:68:VAL:HG11	4:L:879:PHE:HE2	1.86	0.40
4:I:427:GLY:O	4:I:431:ARG:HG3	2.22	0.40
4:I:689:GLU:OE1	4:I:693:ARG:NH2	2.54	0.40
4:I:996:LEU:CB	4:I:1085:LEU:HD11	2.50	0.40
4:J:355:LEU:HD23	4:J:436:GLU:HB3	2.01	0.40
4:J:659:SER:C	4:J:661:HIS:H	2.30	0.40
4:K:362:VAL:CG2	4:K:446:LEU:HD11	2.51	0.40
4:K:1129:LYS:HA	4:K:1129:LYS:HD3	1.87	0.40
1:D:45:GLY:O	1:D:47:GLU:HG3	2.21	0.40
1:F:40:GLU:CD	3:G:373:ALA:HB2	2.46	0.40
2:S:54:LEU:HD11	3:G:438:PRO:HD3	2.02	0.40
2:g:72:MET:HE3	2:g:72:MET:HB3	1.94	0.40
3:M:195:ILE:HG23	3:M:199:ARG:HH21	1.85	0.40
3:N:658:ASN:OD1	3:N:659:LYS:N	2.54	0.40
3:P:579:ILE:O	3:P:583:VAL:HG23	2.22	0.40
3:P:671:TYR:HE1	3:P:682:ARG:HG3	1.85	0.40
3:R:125:LYS:HZ1	3:R:181:ALA:HB3	1.86	0.40
3:R:463:ILE:O	3:R:467:VAL:HG23	2.21	0.40
3:G:606:TYR:CZ	3:G:639:ARG:HD2	2.56	0.40
3:G:625:MET:HE2	3:G:625:MET:HB3	2.01	0.40
4:I:477:LEU:HD11	4:I:483:LEU:HD11	2.04	0.40
4:I:641:MET:HE3	4:I:656:PHE:HD1	1.86	0.40
4:I:825:LYS:HD3	4:I:829:LEU:HD11	2.04	0.40
4:I:973:LYS:HA	4:L:1274:LYS:NZ	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:383:GLY:C	4:J:385:ALA:H	2.30	0.40
4:J:803:TYR:O	4:J:807:VAL:HG22	2.21	0.40
4:J:1004:MET:HE3	4:J:1084:MET:SD	2.61	0.40
3:M:322:PRO:HB2	3:M:363:MET:CE	2.51	0.40
3:O:601:LEU:O	3:O:605:THR:OG1	2.30	0.40
3:O:610:GLY:C	3:O:658:ASN:HD21	2.30	0.40
3:P:121:MET:HE1	3:P:138:TYR:CE2	2.57	0.40
3:P:206:LEU:HD12	3:P:247:ALA:HB1	2.03	0.40
3:R:467:VAL:CG1	3:R:511:GLN:HG3	2.52	0.40
3:G:78:LEU:CD1	3:G:82:GLN:HG3	2.51	0.40
3:G:639:ARG:NH1	3:H:418:HIS:HB3	2.36	0.40
3:H:102:GLU:O	3:H:106:VAL:HG23	2.21	0.40
3:H:121:MET:O	3:H:125:LYS:HG3	2.22	0.40
3:H:140:HIS:NE2	3:H:144:GLN:OE1	2.54	0.40
4:I:16:PHE:HE2	4:I:40:PHE:HE1	1.69	0.40
4:I:538:ARG:HH11	4:J:783:GLY:HA2	1.85	0.40
4:J:135:GLY:O	4:J:139:MET:HG3	2.21	0.40
4:J:427:GLY:O	4:J:431:ARG:HG3	2.22	0.40
4:K:54:MET:HB2	4:K:56:PHE:CE1	2.57	0.40
4:K:238:LEU:HB3	4:K:239:SER:H	1.78	0.40
4:K:357:ASN:O	4:K:361:VAL:HG23	2.21	0.40
4:K:530:ARG:O	4:K:534:ILE:HG13	2.22	0.40
4:K:620:THR:HG1	4:K:623:GLU:HG3	1.87	0.40
4:K:696:MET:HE2	4:K:728:GLU:HG2	2.04	0.40
4:K:820:THR:OG1	4:K:823:GLU:HG3	2.21	0.40
4:K:913:LEU:HD12	4:K:913:LEU:HA	1.90	0.40
4:L:363:GLY:O	4:L:443:SER:HB3	2.22	0.40
4:L:485:ALA:O	4:L:486:SER:OG	2.33	0.40
4:L:927:GLU:O	4:L:931:LEU:HG	2.21	0.40
4:L:1234:SER:O	4:L:1238:MET:HG2	2.21	0.40
4:L:1241:MET:O	4:L:1243:SER:N	2.54	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	15/88 (17%)	15 (100%)	0	0	100	100
1	B	15/88 (17%)	15 (100%)	0	0	100	100
1	C	15/88 (17%)	15 (100%)	0	0	100	100
1	D	14/88 (16%)	14 (100%)	0	0	100	100
1	E	14/88 (16%)	14 (100%)	0	0	100	100
1	F	14/88 (16%)	14 (100%)	0	0	100	100
1	a	15/88 (17%)	15 (100%)	0	0	100	100
1	b	14/88 (16%)	14 (100%)	0	0	100	100
2	S	108/196 (55%)	106 (98%)	2 (2%)	0	100	100
2	T	107/196 (55%)	104 (97%)	3 (3%)	0	100	100
2	c	108/196 (55%)	104 (96%)	4 (4%)	0	100	100
2	d	107/196 (55%)	105 (98%)	2 (2%)	0	100	100
2	e	108/196 (55%)	105 (97%)	3 (3%)	0	100	100
2	f	107/196 (55%)	106 (99%)	1 (1%)	0	100	100
2	g	108/196 (55%)	106 (98%)	2 (2%)	0	100	100
2	h	107/196 (55%)	105 (98%)	2 (2%)	0	100	100
3	G	669/747 (90%)	642 (96%)	25 (4%)	2 (0%)	37	70
3	H	669/747 (90%)	636 (95%)	31 (5%)	2 (0%)	37	70
3	M	669/747 (90%)	642 (96%)	27 (4%)	0	100	100
3	N	669/747 (90%)	642 (96%)	24 (4%)	3 (0%)	30	66
3	O	669/747 (90%)	634 (95%)	34 (5%)	1 (0%)	48	81
3	P	669/747 (90%)	641 (96%)	25 (4%)	3 (0%)	30	66
3	Q	669/747 (90%)	640 (96%)	29 (4%)	0	100	100
3	R	669/747 (90%)	634 (95%)	31 (5%)	4 (1%)	22	57
4	I	1217/1318 (92%)	1118 (92%)	86 (7%)	13 (1%)	12	44
4	J	1217/1318 (92%)	1120 (92%)	85 (7%)	12 (1%)	13	46
4	K	1217/1318 (92%)	1112 (91%)	95 (8%)	10 (1%)	16	51
4	L	1217/1318 (92%)	1119 (92%)	84 (7%)	14 (1%)	11	41
All	All	11196/13520 (83%)	10537 (94%)	595 (5%)	64 (1%)	24	57

All (64) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	I	61	ALA
4	I	63	ALA
4	I	504	LYS
4	I	1060	LYS
4	J	61	ALA
4	J	242	VAL
4	J	504	LYS
4	J	1060	LYS
4	K	61	ALA
4	K	242	VAL
4	K	504	LYS
4	K	524	SER
4	K	1060	LYS
4	L	61	ALA
4	L	242	VAL
4	L	504	LYS
4	L	1060	LYS
3	R	237	ASP
4	I	362	VAL
4	I	796	MET
4	I	860	ARG
4	J	362	VAL
4	J	526	ASP
4	J	796	MET
4	J	860	ARG
4	K	796	MET
4	K	860	ARG
4	L	362	VAL
4	L	796	MET
4	L	860	ARG
3	N	567	ARG
3	P	567	ARG
3	R	567	ARG
3	G	235	PRO
4	J	351	LYS
4	L	64	LEU
4	L	236	ALA
4	L	457	GLU
3	O	537	LEU
3	P	236	SER
3	R	236	SER
3	G	537	LEU
3	H	567	ARG

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Mol	Chain	Res	Type
4	I	457	GLU
4	I	982	ARG
4	J	457	GLU
4	J	982	ARG
4	K	982	ARG
4	L	65	GLY
4	L	982	ARG
3	N	236	SER
3	R	568	MET
4	I	66	LEU
4	I	859	ALA
4	J	859	ALA
4	K	457	GLU
4	L	63	ALA
4	L	859	ALA
3	P	568	MET
4	I	242	VAL
4	K	859	ALA
3	N	568	MET
3	H	568	MET
4	I	1033	PRO

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	13/73 (18%)	13 (100%)	0	100	100
1	B	13/73 (18%)	13 (100%)	0	100	100
1	C	13/73 (18%)	13 (100%)	0	100	100
1	D	13/73 (18%)	13 (100%)	0	100	100
1	E	13/73 (18%)	13 (100%)	0	100	100
1	F	13/73 (18%)	13 (100%)	0	100	100
1	a	13/73 (18%)	13 (100%)	0	100	100
1	b	13/73 (18%)	13 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	S	83/149 (56%)	83 (100%)	0	100 100
2	T	82/149 (55%)	82 (100%)	0	100 100
2	c	83/149 (56%)	83 (100%)	0	100 100
2	d	82/149 (55%)	82 (100%)	0	100 100
2	e	83/149 (56%)	83 (100%)	0	100 100
2	f	82/149 (55%)	81 (99%)	1 (1%)	67 86
2	g	83/149 (56%)	83 (100%)	0	100 100
2	h	82/149 (55%)	82 (100%)	0	100 100
3	G	569/624 (91%)	565 (99%)	4 (1%)	81 91
3	H	569/624 (91%)	568 (100%)	1 (0%)	92 97
3	M	569/624 (91%)	567 (100%)	2 (0%)	89 95
3	N	569/624 (91%)	567 (100%)	2 (0%)	89 95
3	O	569/624 (91%)	569 (100%)	0	100 100
3	P	569/624 (91%)	568 (100%)	1 (0%)	92 97
3	Q	569/624 (91%)	567 (100%)	2 (0%)	89 95
3	R	569/624 (91%)	568 (100%)	1 (0%)	92 97
4	I	979/1059 (92%)	975 (100%)	4 (0%)	89 95
4	J	979/1059 (92%)	972 (99%)	7 (1%)	81 91
4	K	979/1059 (92%)	974 (100%)	5 (0%)	86 94
4	L	979/1059 (92%)	975 (100%)	4 (0%)	89 95
All	All	9232/11004 (84%)	9198 (100%)	34 (0%)	88 95

All (34) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	f	73	GLN
3	M	539	VAL
3	M	660	GLN
3	N	119	ASP
3	N	613	VAL
3	P	111	ASN
3	Q	539	VAL
3	Q	660	GLN
3	R	111	ASN
3	G	340	GLN

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Mol	Chain	Res	Type
3	G	537	LEU
3	G	539	VAL
3	G	660	GLN
3	H	239	GLN
4	I	68	VAL
4	I	69	THR
4	I	362	VAL
4	I	990	ASN
4	J	75	ASP
4	J	349	THR
4	J	351	LYS
4	J	522	LEU
4	J	1031	VAL
4	J	1187	ARG
4	J	1191	LEU
4	K	66	LEU
4	K	68	VAL
4	K	69	THR
4	K	349	THR
4	K	1191	LEU
4	L	240	ASN
4	L	362	VAL
4	L	522	LEU
4	L	1021	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (134) such sidechains are listed below:

Mol	Chain	Res	Type
2	T	44	GLN
2	T	48	GLN
2	T	73	GLN
2	c	30	GLN
2	c	55	GLN
2	c	76	GLN
2	e	44	GLN
2	f	30	GLN
2	f	44	GLN
2	f	71	ASN
2	g	71	ASN
2	g	76	GLN
3	M	88	ASN
3	M	140	HIS

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Mol	Chain	Res	Type
3	M	164	GLN
3	M	191	GLN
3	M	197	ASN
3	M	242	GLN
3	M	314	ASN
3	M	364	ASN
3	M	451	GLN
3	M	529	GLN
3	M	658	ASN
3	N	82	GLN
3	N	144	GLN
3	N	164	GLN
3	N	191	GLN
3	N	295	GLN
3	N	306	ASN
3	N	319	GLN
3	N	344	GLN
3	N	370	GLN
3	N	524	GLN
3	N	589	ASN
3	N	637	GLN
3	O	88	ASN
3	O	111	ASN
3	O	140	HIS
3	O	182	HIS
3	O	286	GLN
3	O	314	ASN
3	O	318	ASN
3	O	319	GLN
3	O	382	ASN
3	O	529	GLN
3	O	589	ASN
3	O	658	ASN
3	O	695	ASN
3	P	82	GLN
3	P	182	HIS
3	P	295	GLN
3	P	318	ASN
3	P	356	GLN
3	P	358	GLN
3	P	370	GLN
3	P	382	ASN

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Mol	Chain	Res	Type
3	P	524	GLN
3	Q	140	HIS
3	Q	144	GLN
3	Q	182	HIS
3	Q	191	GLN
3	Q	314	ASN
3	Q	426	ASN
3	Q	529	GLN
3	Q	627	GLN
3	Q	637	GLN
3	Q	658	ASN
3	Q	695	ASN
3	R	182	HIS
3	R	382	ASN
3	R	423	ASN
3	R	545	GLN
3	R	678	GLN
3	G	82	GLN
3	G	88	ASN
3	G	144	GLN
3	G	197	ASN
3	G	314	ASN
3	G	340	GLN
3	G	529	GLN
3	G	627	GLN
3	G	637	GLN
3	G	658	ASN
3	H	111	ASN
3	H	182	HIS
3	H	239	GLN
3	H	308	GLN
3	H	330	GLN
3	H	358	GLN
3	H	392	GLN
3	H	423	ASN
3	H	451	GLN
3	H	511	GLN
3	H	524	GLN
4	I	84	ASN
4	I	269	ASN
4	I	287	ASN
4	I	292	ASN

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Mol	Chain	Res	Type
4	I	423	ASN
4	I	440	ASN
4	I	450	ASN
4	I	717	HIS
4	I	932	HIS
4	I	953	GLN
4	I	977	GLN
4	I	990	ASN
4	I	1294	ASN
4	J	17	GLN
4	J	109	ASN
4	J	110	GLN
4	J	292	ASN
4	J	357	ASN
4	J	442	ASN
4	J	460	HIS
4	J	567	GLN
4	J	846	HIS
4	K	17	GLN
4	K	292	ASN
4	K	442	ASN
4	K	567	GLN
4	K	746	ASN
4	K	953	GLN
4	K	1061	GLN
4	L	17	GLN
4	L	109	ASN
4	L	240	ASN
4	L	292	ASN
4	L	450	ASN
4	L	567	GLN
4	L	846	HIS
4	L	875	ASN
4	L	977	GLN
4	L	994	ASN
4	L	1061	GLN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.