Full wwPDB EM Validation Report ⓘ

Nov 19, 2026 – 04:03 pm GMT

PDB ID	:	30ER / pdb_000030er
EMDB ID	:	EMD-57675
Title	:	Vaccinia Virus early-transcription machinery in resting-state (vRNAP-VETF dimer)
Authors	:	Arragain, B.; Schur, F.K.M.
Deposited on	:	2026-04-22
Resolution	:	7.60 Å(reported)
Based on initial models	:	7AMV, 8RQK

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

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

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

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

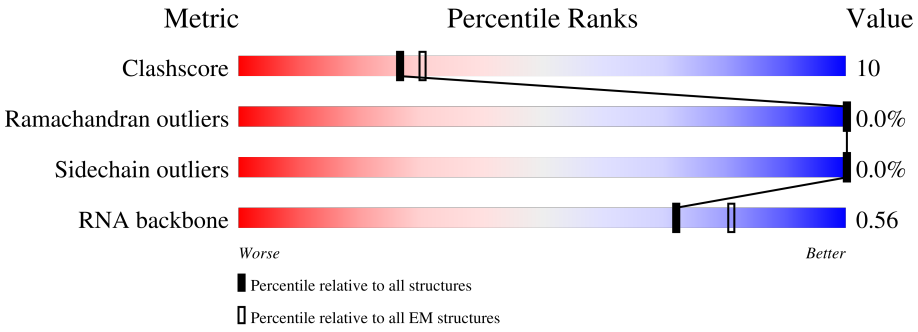
EMDB validation analysis	:	0.0.1.dev133
Mogul	:	1.8.4, CSD as541be (2020)
MolProbity	:	4-5-2 with Phenix2.2
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.51

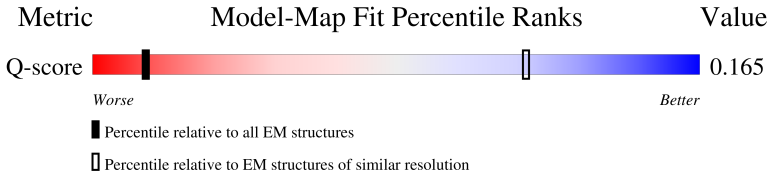
1 Overall quality at a glance

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

The reported resolution of this entry is 7.60 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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	389 (7.10 - 8.10)

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

Mol	Chain	Length	Quality of chain
1	A	1287	73% 26%
1	a	1287	73% 26%
2	B	1164	74% 23%

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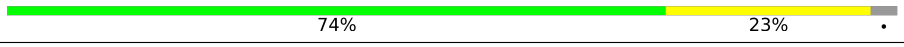
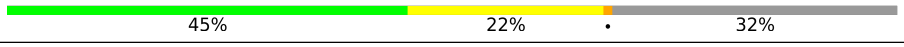
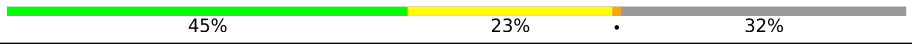
Mol	Chain	Length	Quality of chain
2	b	1164	
3	C	305	
3	c	305	
4	E	185	
4	e	185	
5	F	164	
5	f	164	
6	G	161	
6	g	161	
7	I	795	
7	i	795	
8	J	63	
8	j	63	
9	L	287	
9	l	287	
10	O	844	
10	o	844	
11	Q	129	
11	R	129	
11	q	129	
11	r	129	
12	S	259	
12	s	259	
13	W	637	
13	w	637	

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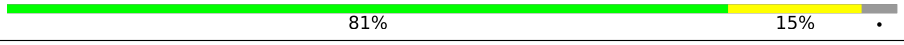
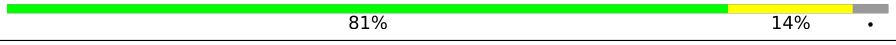
Mol	Chain	Length	Quality of chain
14	Y	631	
14	y	631	
15	V	710	
15	v	710	
16	U	72	
16	u	72	

2 Entry composition (i)

There are 18 unique types of molecules in this entry. The entry contains 124760 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 DNA-directed RNA polymerase 147 kDa polypeptide.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1279	Total	C	N	O	S	0	0
			10284	6617	1691	1929	47		
1	a	1279	Total	C	N	O	S	0	0
			10284	6617	1691	1929	47		

- Molecule 2 is a protein called DNA-directed RNA polymerase.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	1129	Total	C	N	O	S	0	0
			9092	5794	1554	1696	48		
2	b	1129	Total	C	N	O	S	0	0
			9092	5794	1554	1696	48		

- Molecule 3 is a protein called DNA-directed RNA polymerase 35 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	304	Total	C	N	O	S	0	0
			2481	1605	399	464	13		
3	c	304	Total	C	N	O	S	0	0
			2481	1605	399	464	13		

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	E	184	Total	C	N	O	S	0	0
			1495	966	248	276	5		
4	e	184	Total	C	N	O	S	0	0
			1495	966	248	276	5		

- Molecule 5 is a protein called DNA-directed RNA polymerase 19 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	F	111	Total	C	N	O	S	0	0
			919	588	158	170	3		
5	f	111	Total	C	N	O	S	0	0
			919	588	158	170	3		

- Molecule 6 is a protein called DNA-directed RNA polymerase 18 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	G	159	Total	C	N	O	S	0	0
			1242	784	205	247	6		
6	g	159	Total	C	N	O	S	0	0
			1242	784	205	247	6		

- Molecule 7 is a protein called RNA polymerase-associated transcription-specificity factor RAP94.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	773	Total	C	N	O	S	0	0
			6453	4217	1025	1191	20		
7	i	773	Total	C	N	O	S	0	0
			6453	4217	1025	1191	20		

- Molecule 8 is a protein called DNA-directed RNA polymerase 7 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	61	Total	C	N	O	S	0	0
			490	310	88	88	4		
8	j	61	Total	C	N	O	S	0	0
			490	310	88	88	4		

- Molecule 9 is a protein called Virus termination factor small subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	L	284	Total	C	N	O	S	0	0
			2320	1492	385	430	13		
9	l	284	Total	C	N	O	S	0	0
			2320	1492	385	430	13		

- Molecule 10 is a protein called mRNA-capping enzyme catalytic subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	O	844	Total	C	N	O	S	0	0
			6828	4393	1125	1291	19		

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Mol	Chain	Residues	Atoms					AltConf	Trace
10	o	844	Total	C	N	O	S	0	0
			6828	4393	1125	1291	19		

- Molecule 11 is a protein called Core protein OPG073.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	Q	124	Total	C	N	O	S	0	0
			1013	660	158	190	5		
11	R	129	Total	C	N	O	S	0	0
			1050	684	164	197	5		
11	q	124	Total	C	N	O	S	0	0
			1013	660	158	190	5		
11	r	129	Total	C	N	O	S	0	0
			1050	684	164	197	5		

- Molecule 12 is a protein called DNA-directed RNA polymerase 30 kDa polypeptide.

Mol	Chain	Residues	Atoms						AltConf	Trace
12	S	189	Total	C	N	O	P	S	0	0
			1533	951	248	326	3	5		
12	s	189	Total	C	N	O	P	S	0	0
			1533	951	248	326	3	5		

- Molecule 13 is a protein called Early transcription factor 70 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	W	620	Total	C	N	O	S	0	0
			5072	3272	831	946	23		
13	w	620	Total	C	N	O	S	0	0
			5072	3272	831	946	23		

- Molecule 14 is a protein called Nucleoside triphosphatase I.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	Y	605	Total	C	N	O	S	0	0
			4890	3134	834	897	25		
14	y	605	Total	C	N	O	S	0	0
			4890	3134	834	897	25		

- Molecule 15 is a protein called Early transcription factor 82 kDa subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	V	701	Total 5719	C 3692	N 936	O 1060	S 31	0	0
15	v	701	Total 5719	C 3692	N 936	O 1060	S 31	0	0

- Molecule 16 is a RNA chain called tRNA (72-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	U	70	Total 1492	C 667	N 262	O 493	P 70	0	0
16	u	70	Total 1492	C 667	N 262	O 493	P 70	0	0

- Molecule 17 is MAGNESIUM ION (CCD ID: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
17	A	1	Total 1	Mg 1	0
17	U	2	Total 2	Mg 2	0
17	a	1	Total 1	Mg 1	0
17	u	2	Total 2	Mg 2	0

- Molecule 18 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
18	A	2	Total 2	Zn 2	0
18	B	1	Total 1	Zn 1	0
18	I	1	Total 1	Zn 1	0
18	a	2	Total 2	Zn 2	0
18	b	1	Total 1	Zn 1	0
18	i	1	Total 1	Zn 1	0

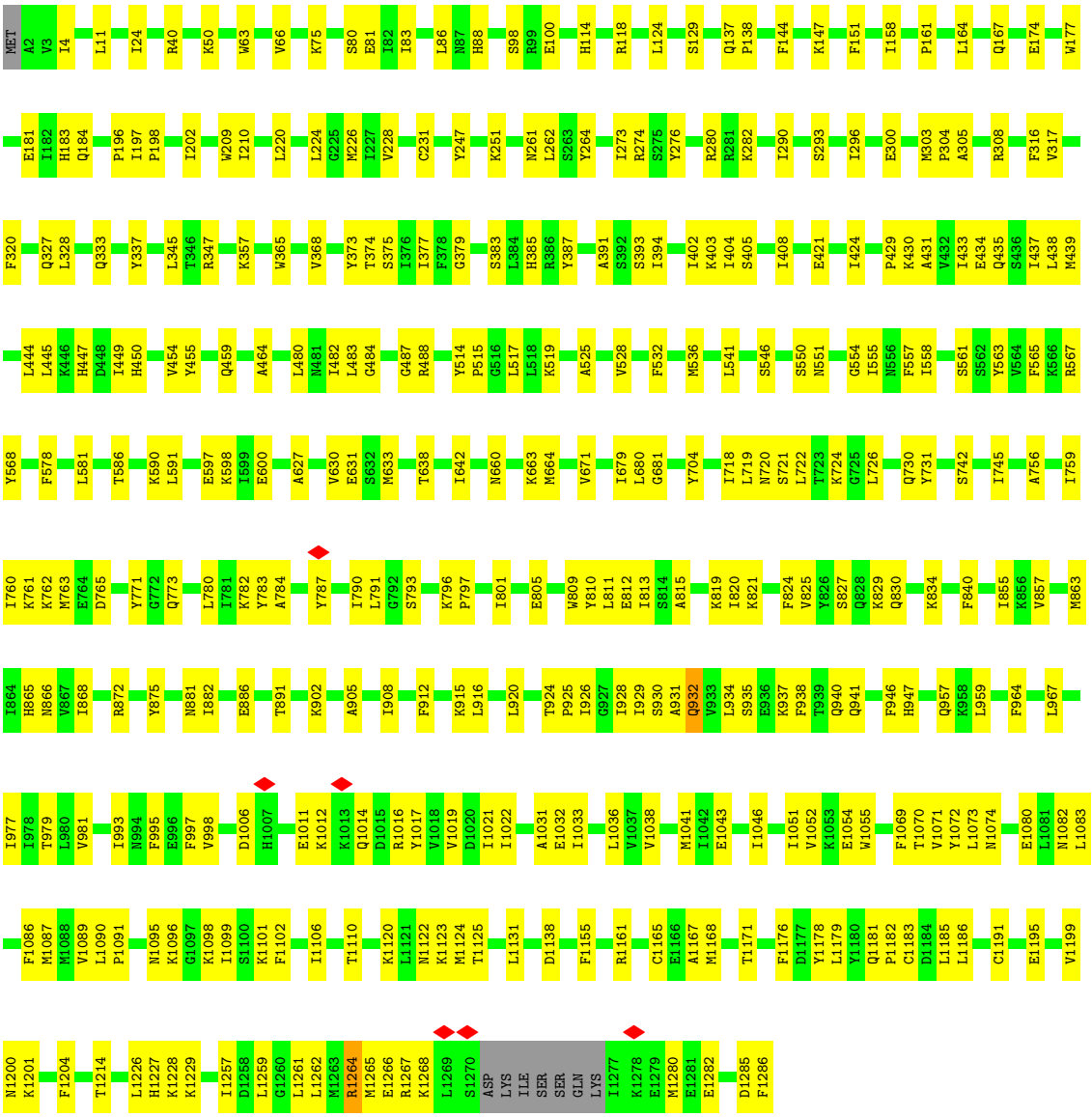
3 Residue-property plots (i)

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

- Molecule 1: DNA-directed RNA polymerase 147 kDa polypeptide

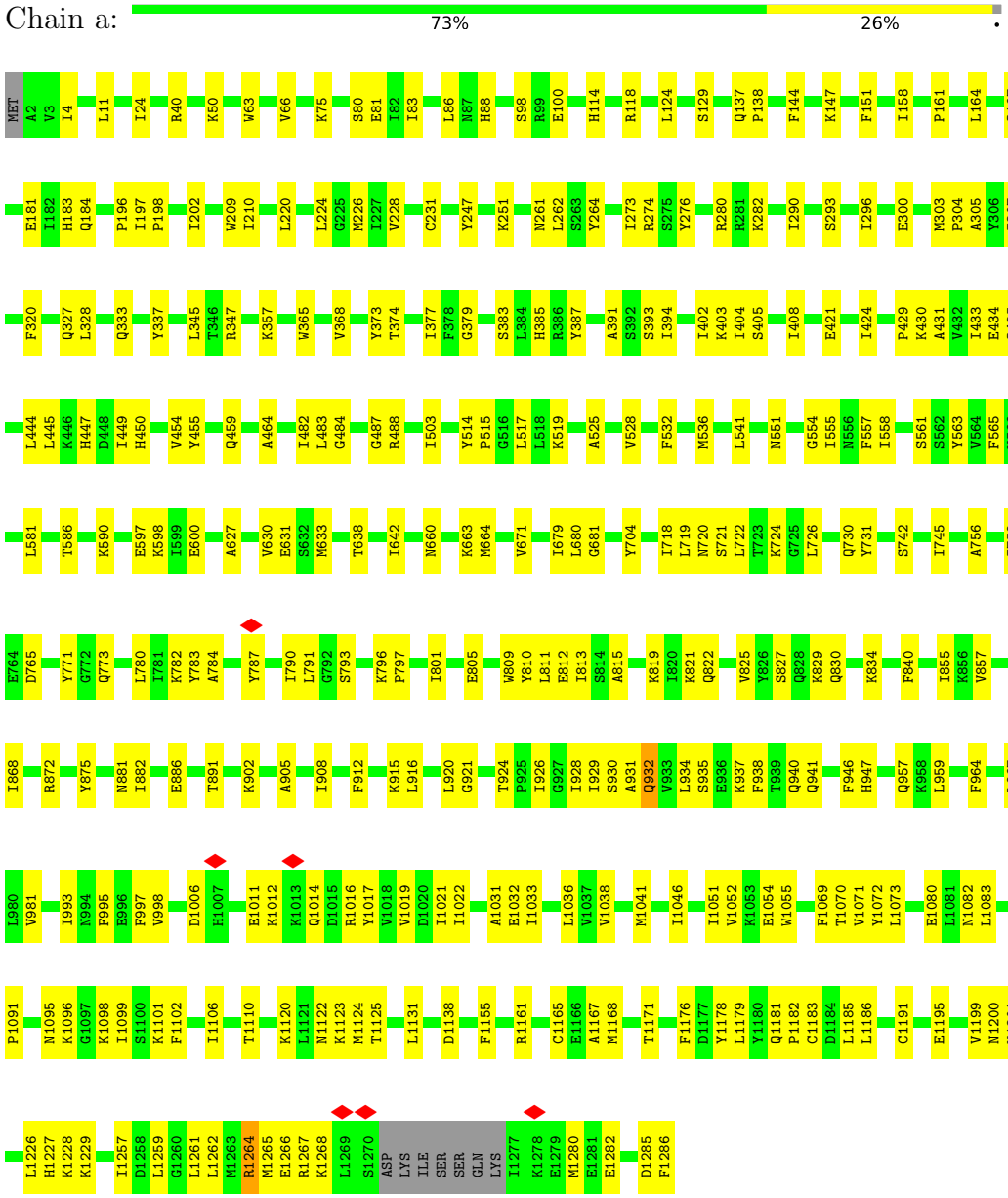
Chain A:





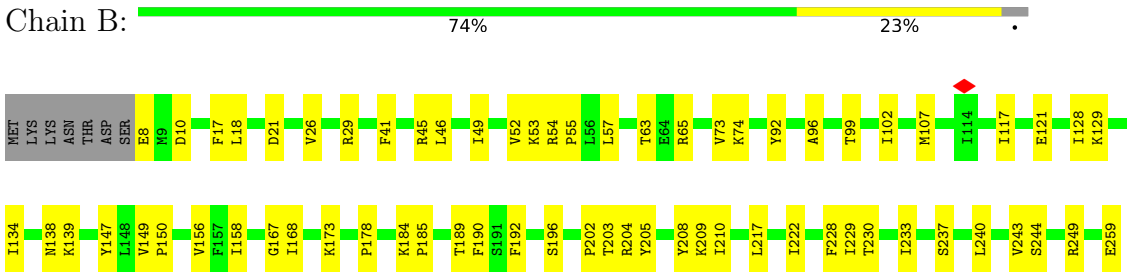
• Molecule 1: DNA-directed RNA polymerase 147 kDa polypeptide

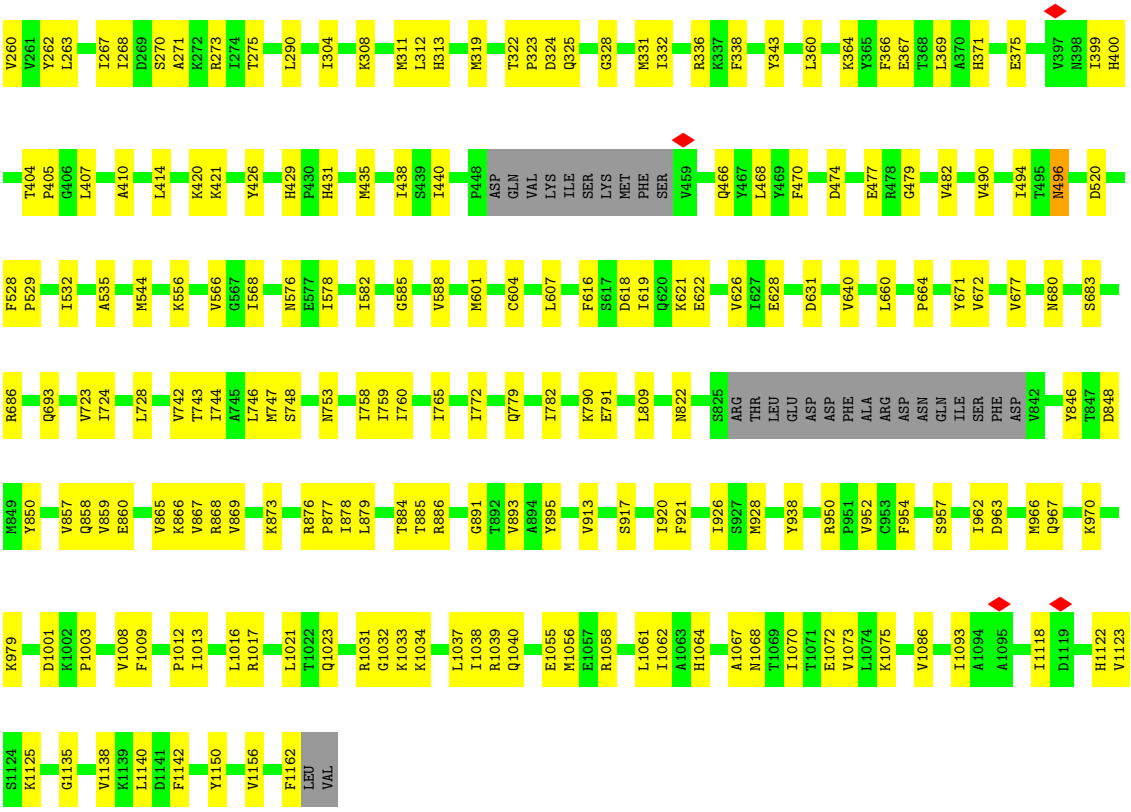
Chain a:



• Molecule 2: DNA-directed RNA polymerase

Chain B:

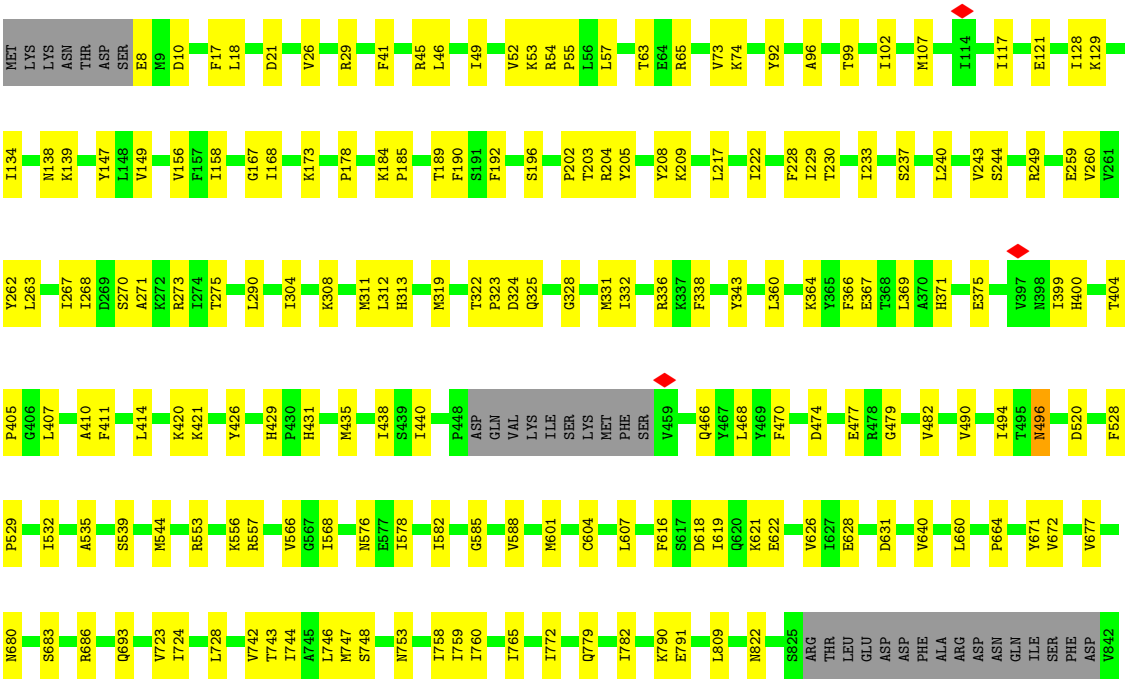


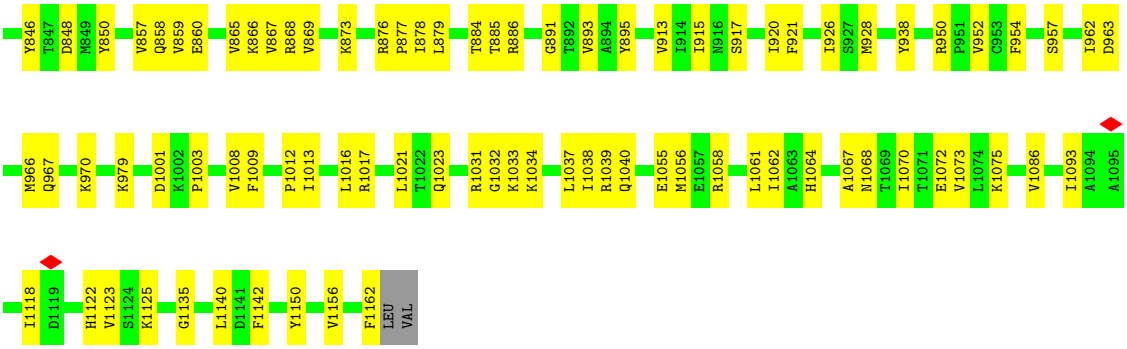


• Molecule 2: DNA-directed RNA polymerase

Chain b:



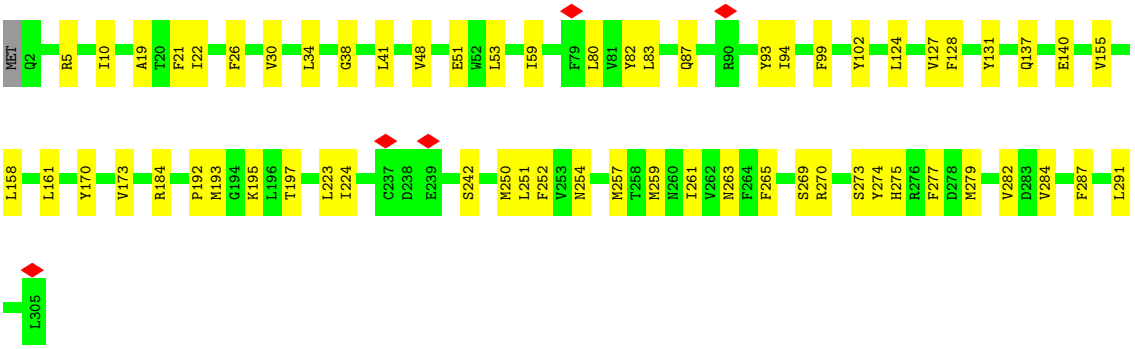




• Molecule 3: DNA-directed RNA polymerase 35 kDa subunit

Chain C:

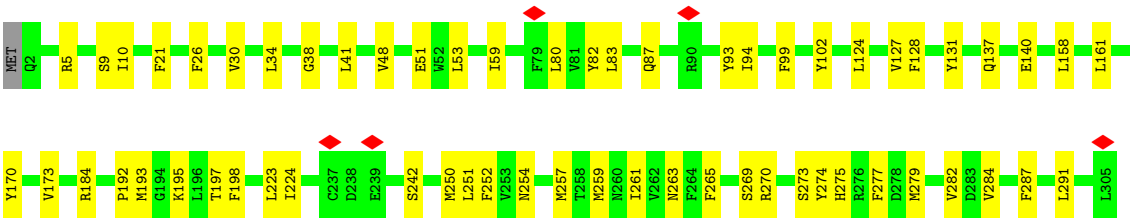




• Molecule 3: DNA-directed RNA polymerase 35 kDa subunit

Chain c:

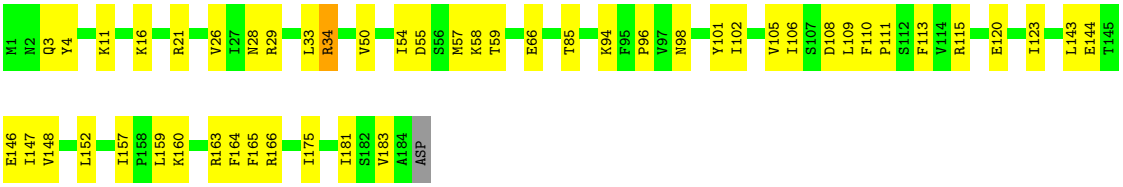




• Molecule 4: DNA-directed RNA polymerase subunit

Chain E:

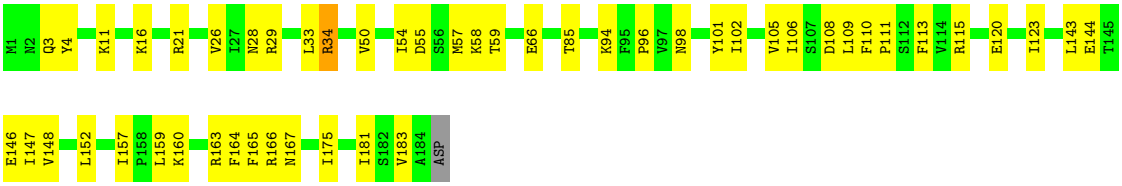




• Molecule 4: DNA-directed RNA polymerase subunit

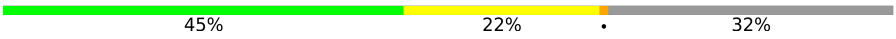
Chain e:

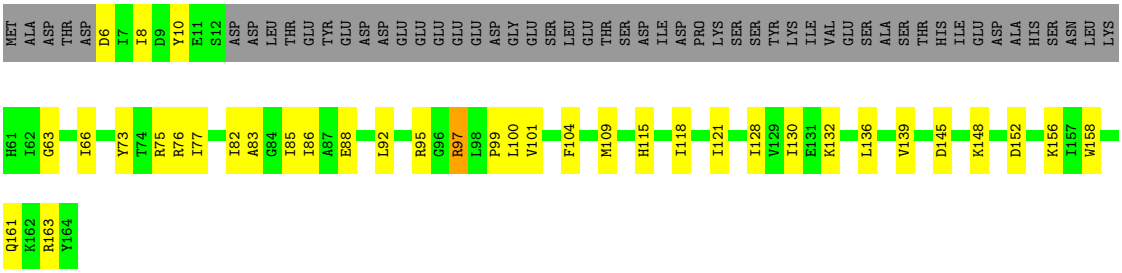




• Molecule 5: DNA-directed RNA polymerase 19 kDa subunit

Chain F:

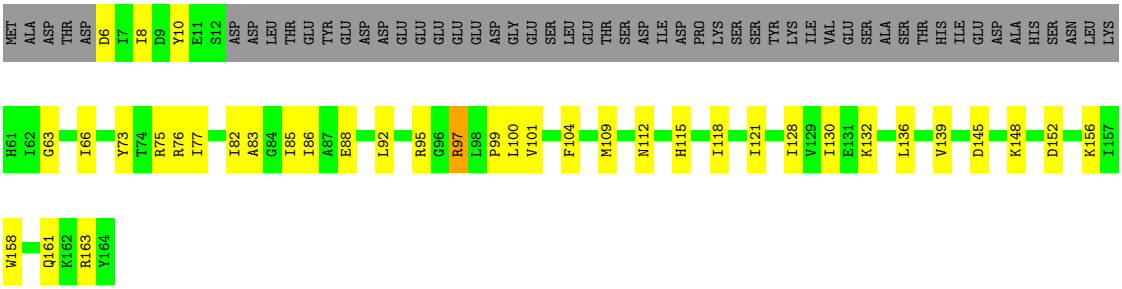




• Molecule 5: DNA-directed RNA polymerase 19 kDa subunit

Chain f:





• Molecule 6: DNA-directed RNA polymerase 18 kDa subunit

Chain G:



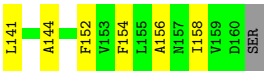


• Molecule 6: DNA-directed RNA polymerase 18 kDa subunit

Chain g:

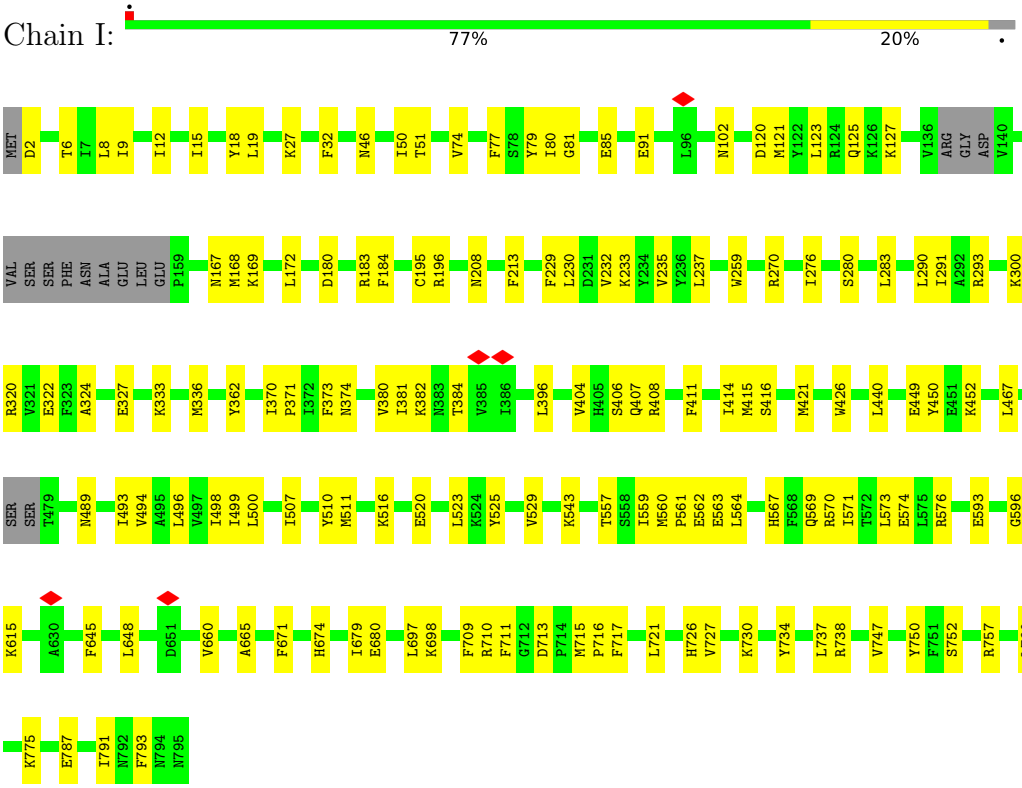






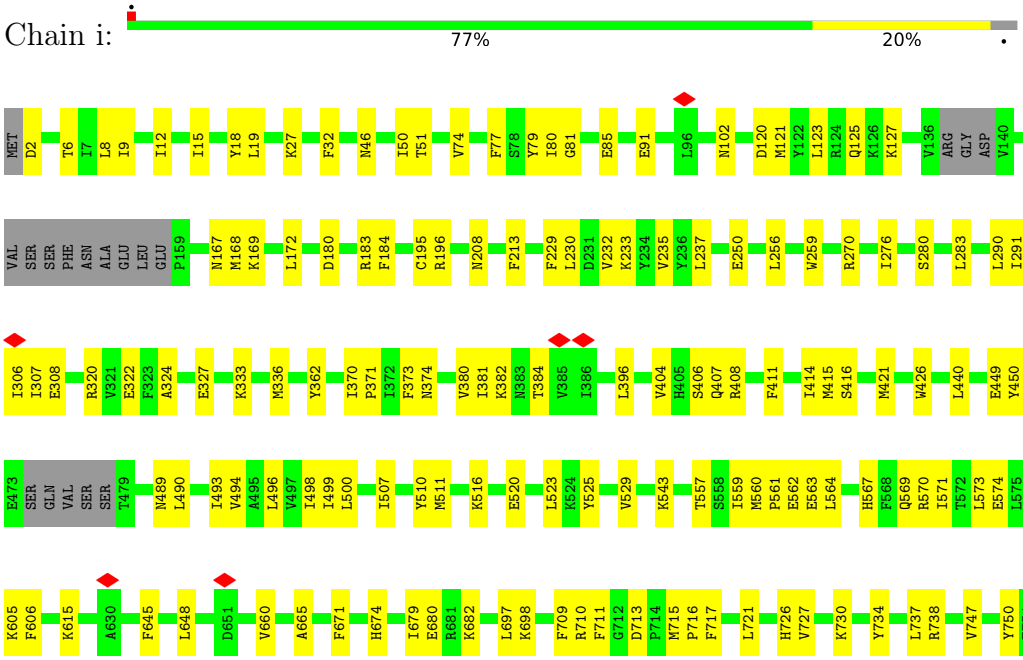
• Molecule 7: RNA polymerase-associated transcription-specificity factor RAP94

Chain I:



• Molecule 7: RNA polymerase-associated transcription-specificity factor RAP94

Chain i:

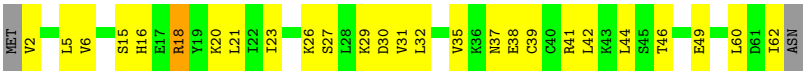




• Molecule 8: DNA-directed RNA polymerase 7 kDa subunit

Chain J:

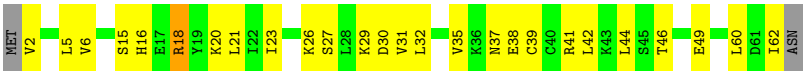




• Molecule 8: DNA-directed RNA polymerase 7 kDa subunit

Chain j:

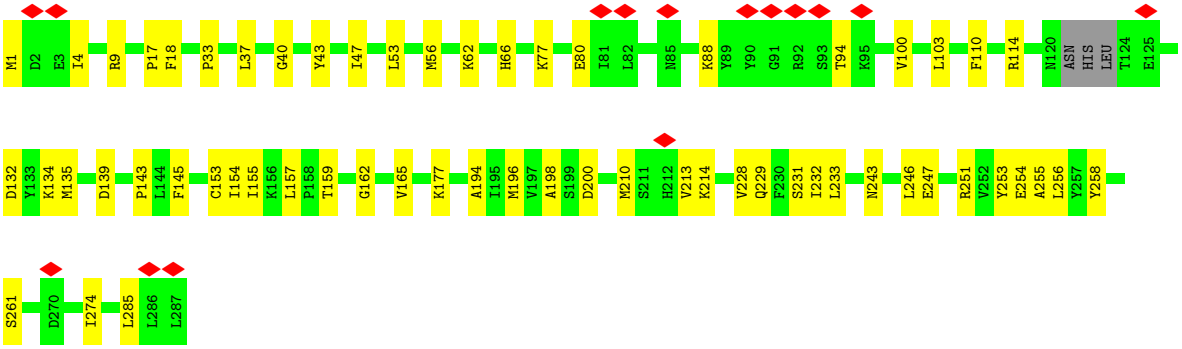




• Molecule 9: Virus termination factor small subunit

Chain L:

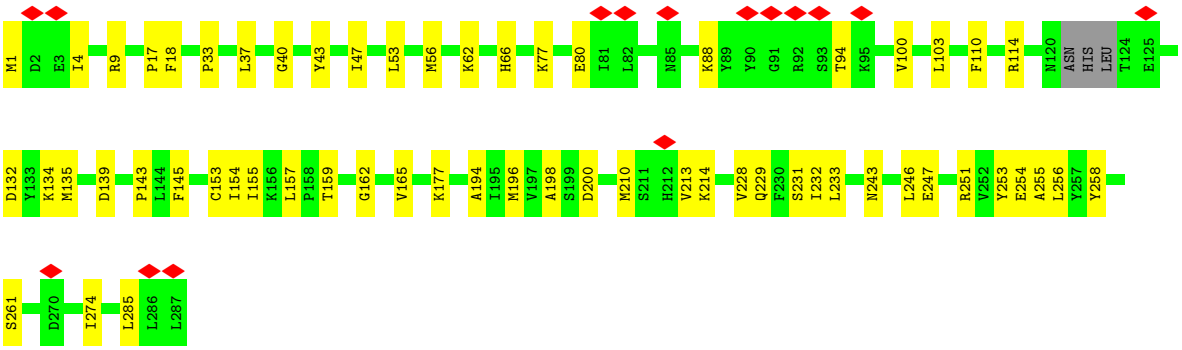




• Molecule 9: Virus termination factor small subunit

Chain l:

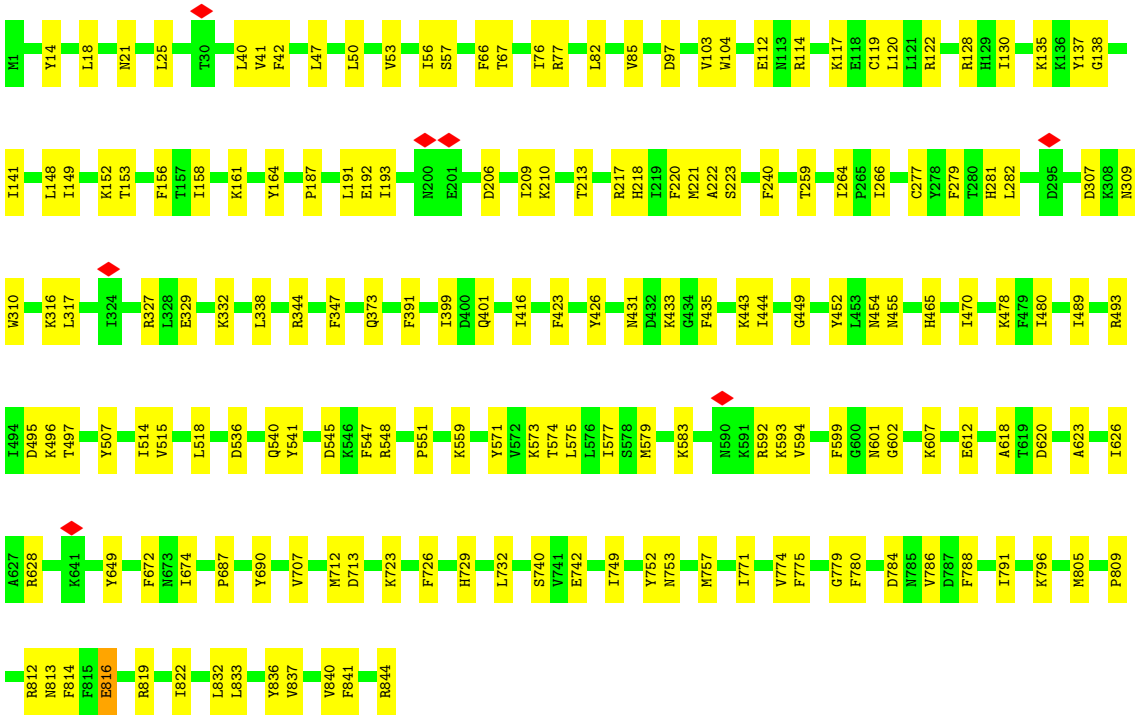




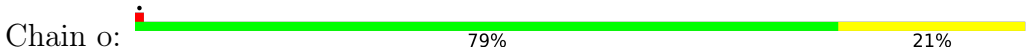
• Molecule 10: mRNA-capping enzyme catalytic subunit

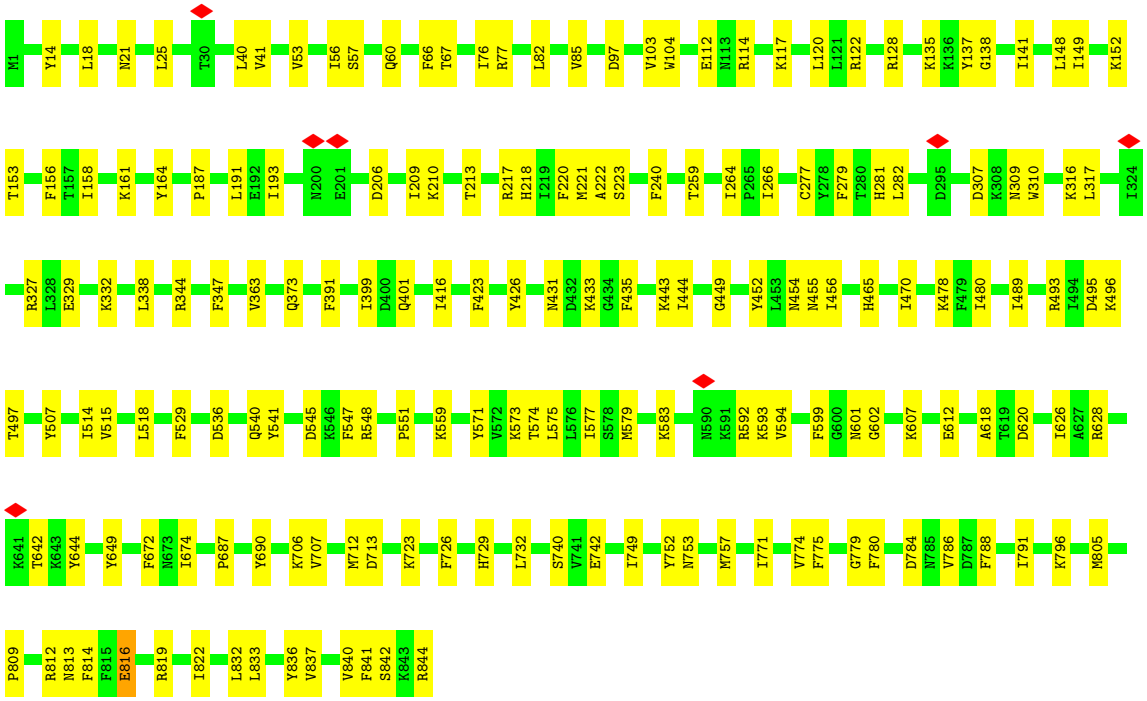
Chain O:





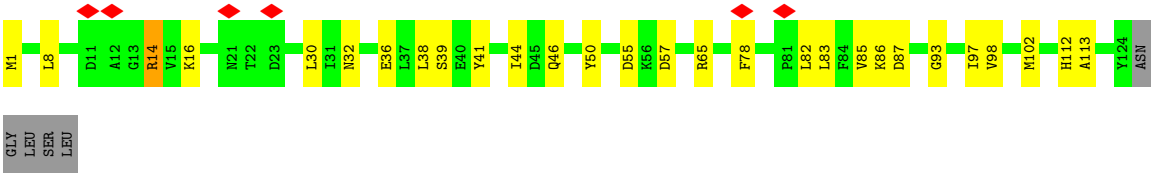
• Molecule 10: mRNA-capping enzyme catalytic subunit



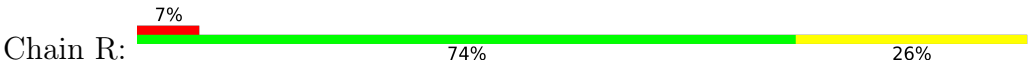


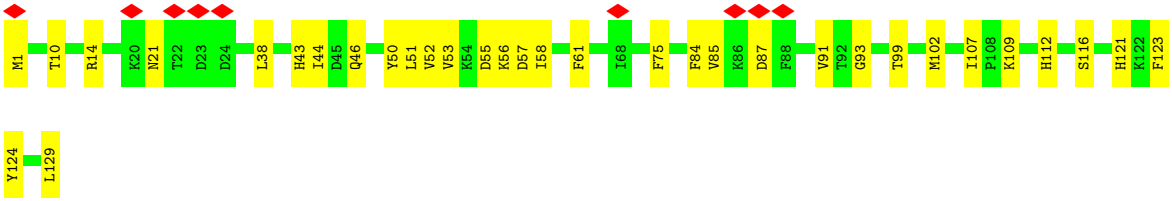
• Molecule 11: Core protein OPG073



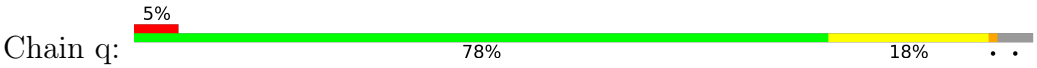


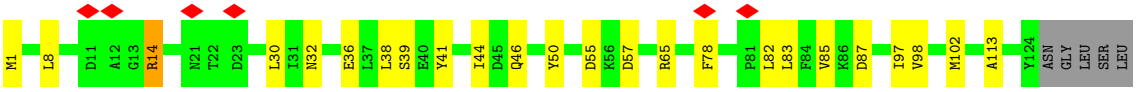
• Molecule 11: Core protein OPG073



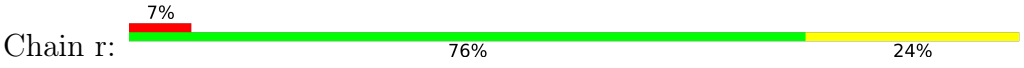


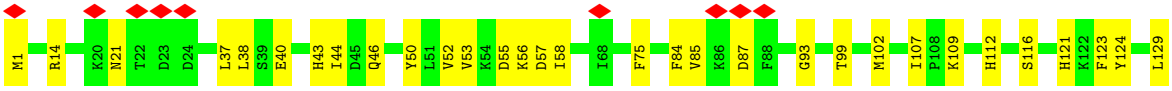
• Molecule 11: Core protein OPG073





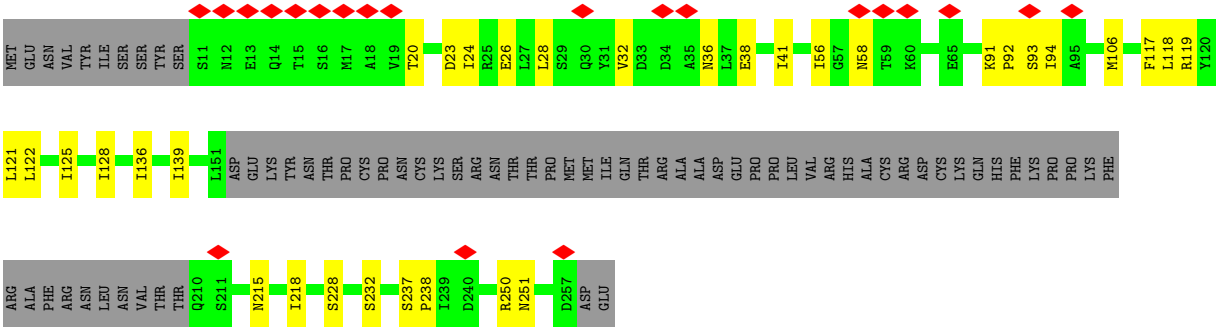
• Molecule 11: Core protein OPG073





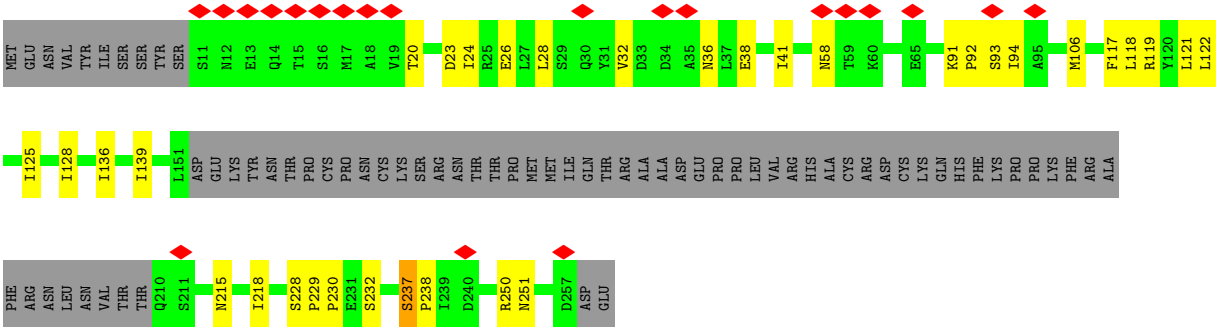
• Molecule 12: DNA-directed RNA polymerase 30 kDa polypeptide





• Molecule 12: DNA-directed RNA polymerase 30 kDa polypeptide

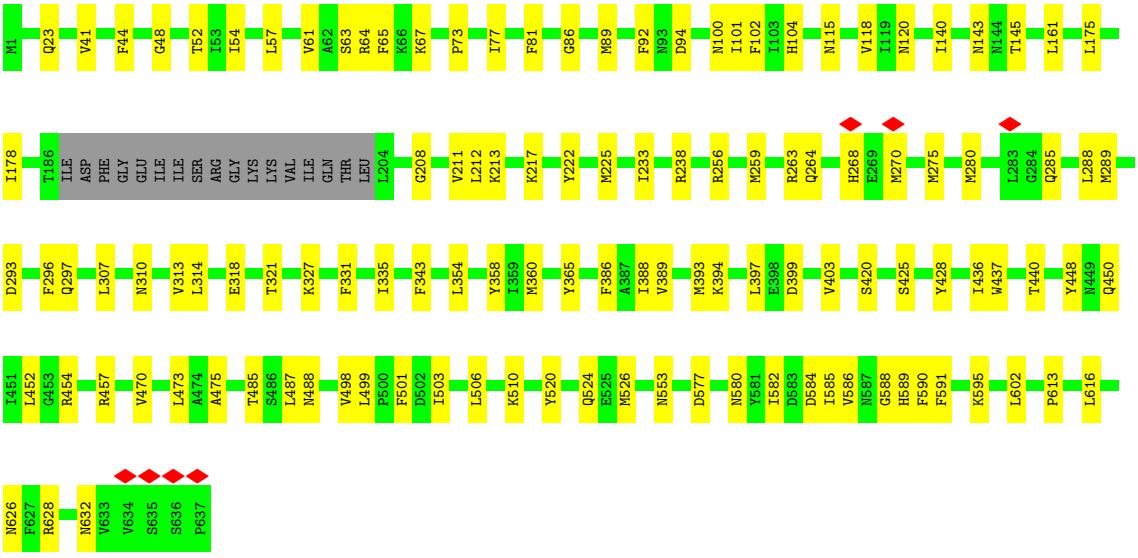




• Molecule 13: Early transcription factor 70 kDa subunit

Chain W:

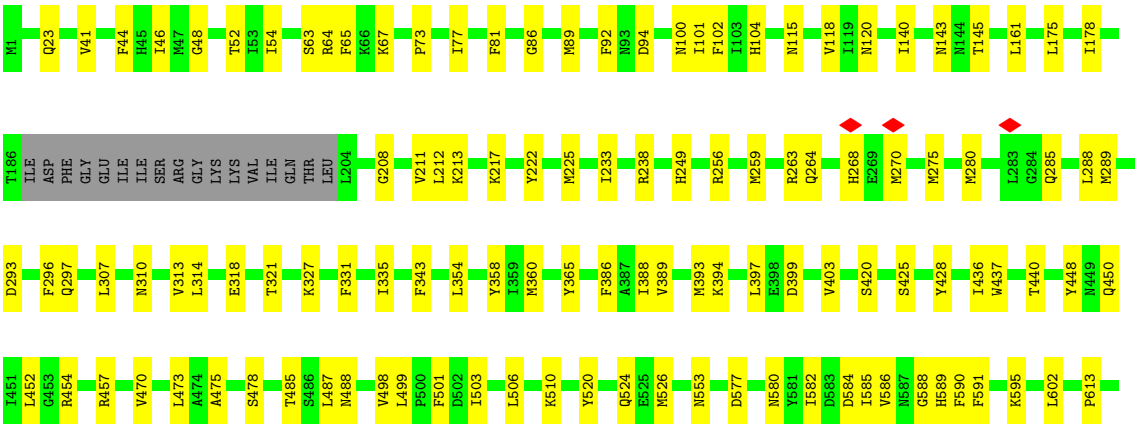


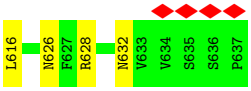


• Molecule 13: Early transcription factor 70 kDa subunit

Chain w:



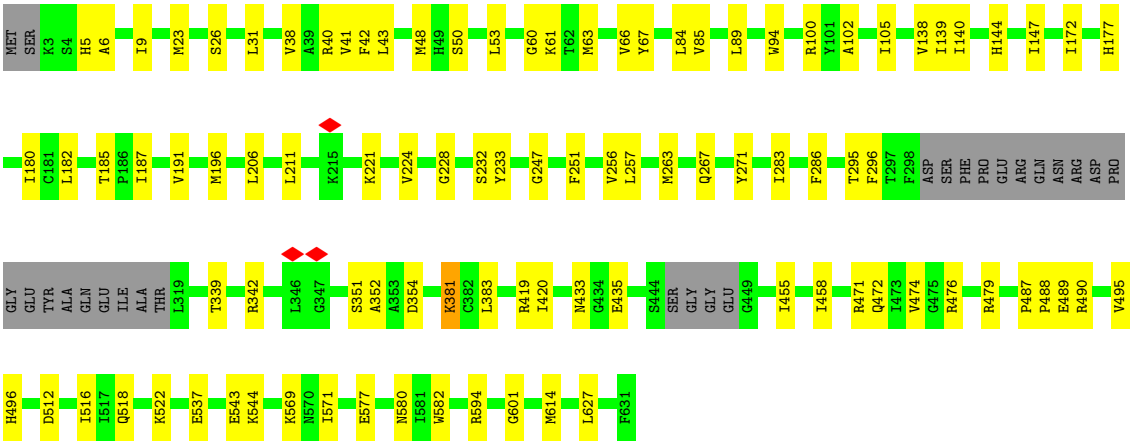




• Molecule 14: Nucleoside triphosphatase I

Chain Y:

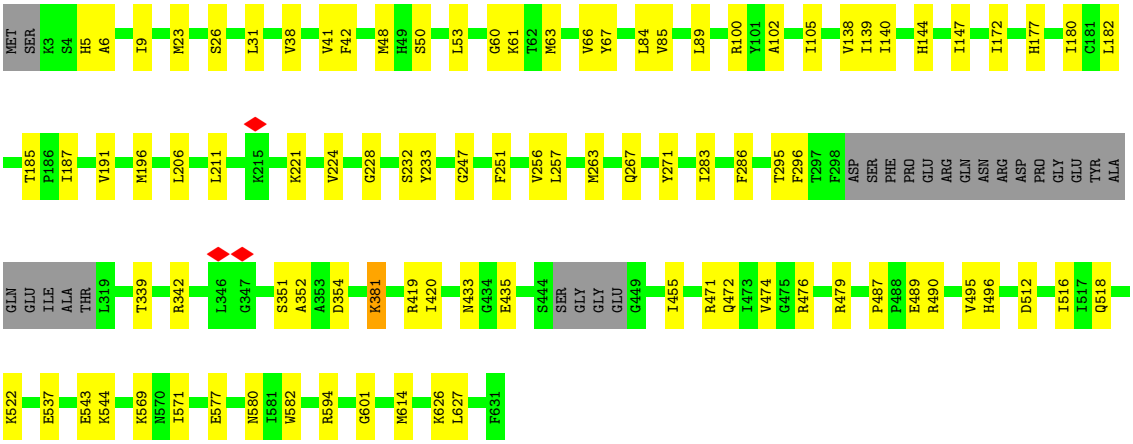




• Molecule 14: Nucleoside triphosphatase I

Chain y:

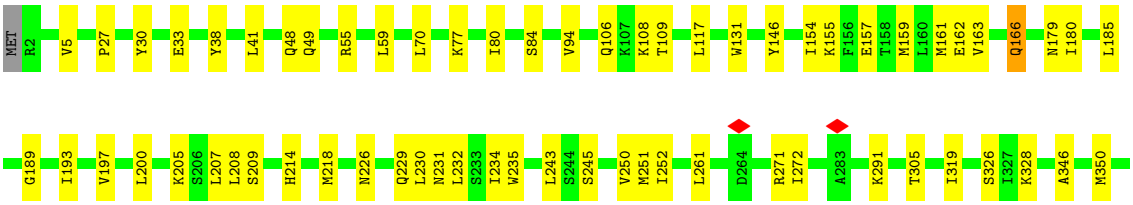




• Molecule 15: Early transcription factor 82 kDa subunit

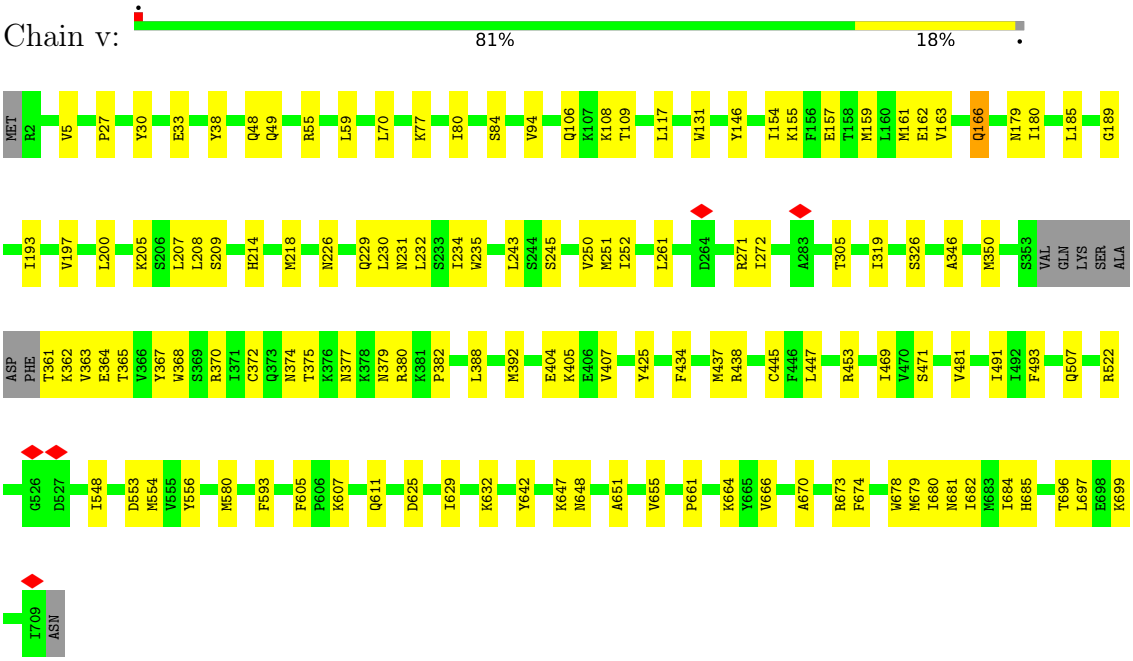
Chain V:



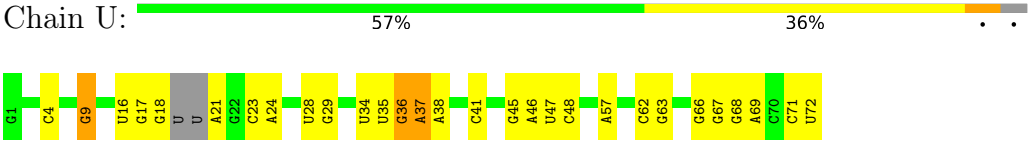




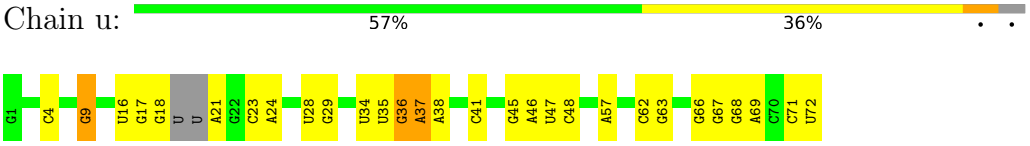
• Molecule 15: Early transcription factor 82 kDa subunit



• Molecule 16: tRNA (72-MER)



• Molecule 16: tRNA (72-MER)



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C2	Depositor
Number of subtomograms used	8622	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 ($e^-/Å^2$)	166	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.025	Depositor
Minimum map value	-0.010	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.004	Depositor
Map size (Å)	641.248, 641.248, 641.248	wwPDB
Map dimensions	232, 232, 232	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.764, 2.764, 2.764	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

Bond lengths and bond angles in the following residue types are not validated in this section: OMC, 1MA, ZN, MG, SEP

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	0.20	0/10492	0.50	3/14178 (0.0%)
1	a	0.20	0/10492	0.50	3/14178 (0.0%)
2	B	0.18	0/9282	0.48	0/12539
2	b	0.18	0/9282	0.48	0/12539
3	C	0.19	0/2536	0.48	0/3435
3	c	0.19	0/2536	0.48	0/3435
4	E	0.19	0/1522	0.48	0/2069
4	e	0.19	0/1522	0.48	0/2069
5	F	0.26	0/934	0.57	0/1252
5	f	0.26	0/934	0.57	0/1252
6	G	0.17	0/1262	0.44	0/1713
6	g	0.17	0/1262	0.44	0/1713
7	I	0.19	0/6598	0.46	0/8929
7	i	0.19	0/6598	0.46	0/8929
8	J	0.26	0/494	0.65	0/663
8	j	0.26	0/494	0.65	0/663
9	L	0.15	0/2365	0.37	0/3189
9	l	0.15	0/2365	0.37	0/3189
10	O	0.17	0/6969	0.45	1/9428 (0.0%)
10	o	0.17	0/6969	0.45	1/9428 (0.0%)
11	Q	0.22	0/1035	0.53	1/1402 (0.1%)
11	R	0.17	0/1072	0.45	0/1452
11	q	0.22	0/1035	0.53	1/1402 (0.1%)
11	r	0.17	0/1072	0.45	0/1452
12	S	0.18	0/1526	0.47	0/2053
12	s	0.18	0/1526	0.47	0/2053
13	W	0.17	0/5184	0.42	0/7018
13	w	0.17	0/5184	0.42	0/7018
14	Y	0.15	0/4985	0.41	0/6714
14	y	0.15	0/4985	0.41	0/6714
15	V	0.17	0/5839	0.42	0/7898
15	v	0.17	0/5839	0.42	0/7898

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
16	U	0.20	0/1616	0.67	0/2514
16	u	0.20	0/1616	0.67	0/2514
All	All	0.18	0/127422	0.47	10/172892 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
4	E	0	1
4	e	0	1
5	F	0	1
5	f	0	1
8	J	0	1
8	j	0	1
14	Y	0	1
14	y	0	1
15	V	0	1
15	v	0	1
All	All	0	10

There are no bond length outliers.

All (10) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	A	1264	ARG	CA-CB-CG	6.98	128.07	114.10
1	a	1264	ARG	CA-CB-CG	6.98	128.07	114.10
1	A	459	GLN	CB-CA-C	-6.00	109.67	116.63
1	a	459	GLN	CB-CA-C	-6.00	109.67	116.63
11	Q	14	ARG	CG-CD-NE	-5.64	99.59	112.00
11	q	14	ARG	CG-CD-NE	-5.64	99.59	112.00
10	O	816	GLU	N-CA-CB	5.31	118.50	110.28
10	o	816	GLU	N-CA-CB	5.31	118.50	110.28
1	A	932	GLN	N-CA-CB	5.28	118.35	110.22
1	a	932	GLN	N-CA-CB	5.28	118.35	110.22

There are no chirality outliers.

All (10) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
4	E	34	ARG	Sidechain
5	F	97	ARG	Sidechain
8	J	18	ARG	Sidechain
15	V	271	ARG	Sidechain
14	Y	381	LYS	Peptide
4	e	34	ARG	Sidechain
5	f	97	ARG	Sidechain
8	j	18	ARG	Sidechain
15	v	271	ARG	Sidechain
14	y	381	LYS	Peptide

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	10284	0	10393	323	0
1	a	10284	0	10393	320	0
2	B	9092	0	9144	212	0
2	b	9092	0	9144	211	0
3	C	2481	0	2472	59	0
3	c	2481	0	2472	57	0
4	E	1495	0	1548	54	0
4	e	1495	0	1548	54	0
5	F	919	0	930	52	0
5	f	919	0	930	54	0
6	G	1242	0	1224	44	0
6	g	1242	0	1224	43	0
7	I	6453	0	6509	130	0
7	i	6453	0	6509	133	0
8	J	490	0	529	33	0
8	j	490	0	529	32	0
9	L	2320	0	2363	40	0
9	l	2320	0	2363	40	0
10	O	6828	0	6895	130	0
10	o	6828	0	6895	132	0
11	Q	1013	0	998	22	0
11	R	1050	0	1043	27	0
11	q	1013	0	998	20	0
11	r	1050	0	1043	26	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	S	1533	0	1476	27	0
12	s	1533	0	1476	28	0
13	W	5072	0	5059	105	0
13	w	5072	0	5059	103	0
14	Y	4890	0	4944	58	0
14	y	4890	0	4944	55	0
15	V	5719	0	5761	86	0
15	v	5719	0	5761	84	0
16	U	1492	0	757	12	0
16	u	1492	0	757	12	0
17	A	1	0	0	0	0
17	U	2	0	0	0	0
17	a	1	0	0	0	0
17	u	2	0	0	0	0
18	A	2	0	0	0	0
18	B	1	0	0	0	0
18	I	1	0	0	0	0
18	a	2	0	0	0	0
18	b	1	0	0	0	0
18	i	1	0	0	0	0
All	All	124760	0	124090	2476	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 10.

All (2476) 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)
8:J:26:LYS:HZ1	8:J:31:VAL:HG13	1.21	1.01
8:j:26:LYS:HZ1	8:j:31:VAL:HG13	1.29	0.98
5:f:97:ARG:HH12	6:g:19:LEU:H	1.07	0.97
5:F:97:ARG:HH12	6:G:19:LEU:H	1.07	0.95
2:b:809:LEU:HD21	8:j:60:LEU:HD21	1.48	0.95
2:B:809:LEU:HD21	8:J:60:LEU:HD21	1.48	0.94
1:A:1264:ARG:HH12	7:I:307:ILE:H	1.17	0.92
1:a:763:MET:HE1	1:a:928:ILE:HA	1.54	0.90
3:c:80:LEU:HB3	3:c:102:TYR:HB2	1.55	0.89
15:v:469:ILE:HG13	15:v:471:SER:H	1.37	0.88
3:C:80:LEU:HB3	3:C:102:TYR:HB2	1.55	0.88
5:f:97:ARG:NH1	6:g:19:LEU:H	1.71	0.88
1:A:763:MET:HE1	1:A:928:ILE:HA	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:V:469:ILE:HG13	15:V:471:SER:H	1.37	0.87
5:F:97:ARG:NH1	6:G:19:LEU:H	1.71	0.87
9:L:258:TYR:HA	10:O:805:MET:HE1	1.54	0.87
1:a:81:GLU:HG2	1:a:1226:LEU:HD11	1.57	0.87
1:a:1264:ARG:HH12	7:i:307:ILE:H	1.17	0.87
9:l:258:TYR:HA	10:o:805:MET:HE1	1.54	0.87
1:a:1262:LEU:HD22	6:g:19:LEU:HG	1.56	0.86
1:A:1262:LEU:HD22	6:G:19:LEU:HG	1.56	0.86
8:J:5:LEU:HG	8:J:6:VAL:HG13	1.57	0.86
8:j:5:LEU:HG	8:j:6:VAL:HG13	1.57	0.85
1:A:81:GLU:HG2	1:A:1226:LEU:HD11	1.57	0.85
1:a:276:TYR:HE2	2:b:1123:VAL:HG21	1.41	0.85
1:A:276:TYR:HE2	2:B:1123:VAL:HG21	1.41	0.85
3:c:124:LEU:H	8:j:18:ARG:HH12	1.23	0.85
1:A:1168:MET:HE3	1:A:1183:CYS:HB2	1.58	0.85
3:c:124:LEU:H	8:j:18:ARG:NH1	1.76	0.84
3:C:124:LEU:H	8:J:18:ARG:NH1	1.76	0.84
1:a:1280:MET:HE1	10:o:218:HIS:HB3	1.58	0.83
4:e:29:ARG:HH22	4:e:108:ASP:HA	1.43	0.83
1:a:1168:MET:HE3	1:a:1183:CYS:HB2	1.58	0.83
10:O:626:ILE:HG12	10:O:649:TYR:HE2	1.42	0.83
10:o:626:ILE:HG12	10:o:649:TYR:HE2	1.42	0.83
1:A:1264:ARG:NH2	7:I:307:ILE:HG13	1.94	0.83
3:C:124:LEU:H	8:J:18:ARG:HH12	1.23	0.82
1:A:1280:MET:HE1	10:O:218:HIS:HB3	1.58	0.82
4:E:29:ARG:HH22	4:E:108:ASP:HA	1.43	0.82
5:f:95:ARG:HH12	6:g:17:HIS:HB3	1.42	0.82
1:A:782:LYS:HD3	1:A:784:ALA:H	1.44	0.82
5:F:95:ARG:HH12	6:G:17:HIS:HB3	1.42	0.82
1:a:1264:ARG:NH2	7:i:307:ILE:HG13	1.94	0.81
2:B:17:PHE:HD1	2:B:18:LEU:HD12	1.46	0.81
1:a:383:SER:H	2:b:1056:MET:HE3	1.46	0.81
1:a:782:LYS:HD3	1:a:784:ALA:H	1.44	0.81
1:A:383:SER:H	2:B:1056:MET:HE3	1.46	0.81
2:B:202:PRO:HG2	2:B:204:ARG:HH12	1.47	0.80
3:c:259:MET:HE3	3:c:263:ASN:HD21	1.47	0.80
3:C:259:MET:HE3	3:C:263:ASN:HD21	1.47	0.79
2:b:208:TYR:HB3	2:b:222:ILE:HD11	1.64	0.79
7:i:679:ILE:HG13	7:i:680:GLU:H	1.48	0.79
13:w:275:MET:HE2	13:w:501:PHE:CG	2.18	0.79
2:b:202:PRO:HG2	2:b:204:ARG:HH12	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:17:PHE:HD1	2:b:18:LEU:HD12	1.46	0.79
13:W:275:MET:HE2	13:W:501:PHE:CG	2.18	0.79
1:a:483:LEU:HD13	1:a:487:GLY:HA3	1.65	0.79
1:a:578:PHE:H	2:b:1009:PHE:HZ	1.30	0.79
8:j:15:SER:HA	8:j:18:ARG:HE	1.48	0.78
5:F:97:ARG:HA	5:F:97:ARG:NE	1.97	0.78
5:f:97:ARG:HA	5:f:97:ARG:NE	1.97	0.78
2:B:208:TYR:HB3	2:B:222:ILE:HD11	1.64	0.78
7:I:679:ILE:HG13	7:I:680:GLU:H	1.48	0.78
8:J:15:SER:HA	8:J:18:ARG:HE	1.48	0.77
6:G:110:ARG:H	7:I:102:ASN:HD22	1.31	0.77
11:R:46:GLN:HE22	11:R:107:ILE:HB	1.49	0.77
5:f:97:ARG:HH12	6:g:19:LEU:N	1.83	0.77
1:A:578:PHE:H	2:B:1009:PHE:HZ	1.30	0.77
6:g:110:ARG:H	7:i:102:ASN:HD22	1.31	0.77
1:A:483:LEU:HD13	1:A:487:GLY:HA3	1.65	0.76
7:i:615:LYS:O	7:i:615:LYS:HD2	1.85	0.76
11:R:99:THR:H	11:R:102:MET:HB3	1.50	0.76
11:r:46:GLN:HE22	11:r:107:ILE:HB	1.49	0.76
11:r:99:THR:H	11:r:102:MET:HB3	1.50	0.75
7:I:615:LYS:HD2	7:I:615:LYS:O	1.85	0.75
1:a:855:ILE:HD11	1:a:902:LYS:HE3	1.68	0.75
3:c:21:PHE:HE2	3:c:257:MET:HG3	1.52	0.75
1:A:320:PHE:HA	5:F:109:MET:HE1	1.69	0.75
3:C:21:PHE:HE2	3:C:257:MET:HG3	1.52	0.75
1:A:855:ILE:HD11	1:A:902:LYS:HE3	1.68	0.74
2:B:41:PHE:HA	2:B:45:ARG:HG2	1.69	0.74
5:F:97:ARG:HH12	6:G:19:LEU:N	1.83	0.74
11:Q:14:ARG:CZ	11:Q:82:LEU:HG	2.18	0.74
3:c:251:LEU:HD21	3:c:277:PHE:HB3	1.69	0.74
3:C:251:LEU:HD21	3:C:277:PHE:HB3	1.69	0.74
10:O:266:ILE:HD11	10:O:277:CYS:HB2	1.70	0.74
15:V:362:LYS:HE2	15:V:365:THR:H	1.51	0.74
15:v:362:LYS:HE2	15:v:365:THR:H	1.51	0.74
7:i:721:LEU:HD12	7:i:727:VAL:HG22	1.70	0.73
8:J:18:ARG:HB3	8:J:44:LEU:HD11	1.71	0.73
11:q:14:ARG:CZ	11:q:82:LEU:HG	2.18	0.73
1:a:83:ILE:HG23	1:a:86:LEU:HD12	1.71	0.73
2:b:41:PHE:HA	2:b:45:ARG:HG2	1.69	0.73
14:y:61:LYS:HD3	14:y:182:LEU:HD12	1.70	0.73
14:Y:601:GLY:HA2	14:Y:614:MET:HE3	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:j:38:GLU:HA	8:j:41:ARG:HE	1.53	0.73
1:A:83:ILE:HG23	1:A:86:LEU:HD12	1.71	0.73
8:J:38:GLU:HA	8:J:41:ARG:HE	1.53	0.73
1:a:320:PHE:HA	5:f:109:MET:HE1	1.69	0.73
14:y:601:GLY:HA2	14:y:614:MET:HE3	1.71	0.73
2:B:782:ILE:HD11	2:B:822:ASN:HA	1.70	0.72
2:b:782:ILE:HD11	2:b:822:ASN:HA	1.70	0.72
1:a:282:LYS:HE2	2:b:1073:VAL:HG13	1.71	0.72
3:c:270:ARG:HG2	3:c:273:SER:HB3	1.71	0.72
6:g:99:ILE:HB	6:g:106:CYS:HB3	1.72	0.72
6:G:99:ILE:HB	6:G:106:CYS:HB3	1.72	0.72
7:I:721:LEU:HD12	7:I:727:VAL:HG22	1.70	0.72
14:Y:102:ALA:HB1	14:Y:105:ILE:HD13	1.72	0.72
8:j:18:ARG:HB3	8:j:44:LEU:HD11	1.71	0.72
13:W:293:ASP:HA	4:e:34:ARG:NH2	2.05	0.72
10:o:266:ILE:HD11	10:o:277:CYS:HB2	1.70	0.72
14:y:102:ALA:HB1	14:y:105:ILE:HD13	1.72	0.71
1:A:328:LEU:HB3	1:A:333:GLN:HE21	1.55	0.71
1:a:328:LEU:HB3	1:a:333:GLN:HE21	1.55	0.71
8:j:26:LYS:NZ	8:j:31:VAL:HG13	2.04	0.71
14:Y:61:LYS:HD3	14:Y:182:LEU:HD12	1.70	0.71
2:b:304:ILE:HG22	2:b:308:LYS:HZ3	1.56	0.71
2:B:228:PHE:HA	2:B:311:MET:HE1	1.71	0.71
2:b:228:PHE:HA	2:b:311:MET:HE1	1.71	0.71
3:C:270:ARG:HG2	3:C:273:SER:HB3	1.71	0.70
2:b:760:ILE:HD13	2:b:893:VAL:HG13	1.74	0.70
1:a:83:ILE:HA	1:a:86:LEU:HG	1.73	0.70
1:a:435:GLN:HA	1:a:439:MET:HE2	1.74	0.70
3:c:192:PRO:HG2	3:c:195:LYS:HE3	1.72	0.70
1:A:282:LYS:HE2	2:B:1073:VAL:HG13	1.71	0.70
4:E:34:ARG:NH2	13:w:293:ASP:HA	2.05	0.70
2:B:760:ILE:HD13	2:B:893:VAL:HG13	1.74	0.70
2:B:1031:ARG:HE	2:B:1032:GLY:H	1.40	0.70
3:C:192:PRO:HG2	3:C:195:LYS:HE3	1.72	0.70
4:E:144:GLU:H	4:E:183:VAL:HG23	1.56	0.70
10:O:480:ILE:HG21	10:O:496:LYS:HB2	1.73	0.70
1:A:83:ILE:HA	1:A:86:LEU:HG	1.73	0.70
4:e:144:GLU:H	4:e:183:VAL:HG23	1.56	0.70
1:A:83:ILE:HB	5:F:10:TYR:CE1	2.27	0.70
1:A:435:GLN:HA	1:A:439:MET:HE2	1.74	0.70
2:b:217:LEU:HD22	2:b:270:SER:HB2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:I:77:PHE:HA	7:I:80:ILE:HG22	1.74	0.69
2:B:217:LEU:HD22	2:B:270:SER:HB2	1.74	0.69
2:B:369:LEU:HD13	2:B:414:LEU:HD23	1.74	0.69
10:o:480:ILE:HG21	10:o:496:LYS:HB2	1.73	0.69
1:A:4:ILE:HG21	2:B:1140:LEU:HD12	1.75	0.69
15:V:481:VAL:HG11	15:V:522:ARG:HA	1.75	0.69
2:b:1031:ARG:HE	2:b:1032:GLY:H	1.40	0.69
1:a:404:ILE:HB	1:a:408:ILE:HD11	1.74	0.69
8:J:26:LYS:NZ	8:J:30:ASP:HB2	2.08	0.69
8:J:26:LYS:NZ	8:J:31:VAL:HG13	2.04	0.69
1:a:4:ILE:HG21	2:b:1140:LEU:HD12	1.75	0.69
1:a:83:ILE:HB	5:f:10:TYR:CE1	2.27	0.69
2:b:369:LEU:HD13	2:b:414:LEU:HD23	1.74	0.69
10:o:444:ILE:HD11	10:o:489:ILE:HD13	1.74	0.69
9:L:132:ASP:HB3	9:L:135:MET:HE2	1.73	0.69
15:v:392:MET:HE2	15:v:407:VAL:HG12	1.75	0.69
8:j:15:SER:HA	8:j:18:ARG:NE	2.07	0.69
15:V:392:MET:HE2	15:V:407:VAL:HG12	1.75	0.68
7:i:77:PHE:HA	7:i:80:ILE:HG22	1.74	0.68
8:j:26:LYS:HZ3	8:j:30:ASP:HB2	1.57	0.68
7:i:449:GLU:HA	7:i:452:LYS:HE2	1.76	0.68
8:j:26:LYS:NZ	8:j:30:ASP:HB2	2.08	0.68
1:A:1264:ARG:CZ	7:I:307:ILE:HG13	2.23	0.68
7:I:449:GLU:HA	7:I:452:LYS:HE2	1.76	0.68
1:a:1264:ARG:CZ	7:i:307:ILE:HG13	2.23	0.68
8:J:15:SER:HA	8:J:18:ARG:NE	2.07	0.68
1:A:293:SER:HB2	1:A:403:LYS:HB3	1.76	0.68
4:E:29:ARG:HH12	4:E:108:ASP:H	1.40	0.68
9:l:132:ASP:HB3	9:l:135:MET:HE2	1.73	0.68
15:v:481:VAL:HG11	15:v:522:ARG:HA	1.75	0.68
4:e:29:ARG:HH12	4:e:108:ASP:H	1.40	0.68
1:a:834:LYS:HD3	12:s:215:ASN:HD22	1.59	0.68
5:f:97:ARG:HA	5:f:97:ARG:HE	1.57	0.68
1:A:404:ILE:HB	1:A:408:ILE:HD11	1.74	0.68
5:f:95:ARG:HD2	6:g:16:PRO:HB2	1.76	0.67
1:A:1264:ARG:HH12	7:I:307:ILE:N	1.92	0.67
2:b:304:ILE:HG22	2:b:308:LYS:NZ	2.09	0.67
2:B:304:ILE:HG22	2:B:308:LYS:NZ	2.09	0.67
1:a:293:SER:HB2	1:a:403:LYS:HB3	1.76	0.67
2:b:566:VAL:HG12	2:b:582:ILE:HD13	1.77	0.67
5:F:95:ARG:HD2	6:G:16:PRO:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:746:LEU:O	2:B:747:MET:HE2	1.95	0.67
10:O:444:ILE:HD11	10:O:489:ILE:HD13	1.74	0.67
1:A:834:LYS:HD3	12:S:215:ASN:HD22	1.59	0.66
1:a:1286:PHE:C	10:o:310:TRP:HE1	2.04	0.66
1:A:720:ASN:HB2	1:A:726:LEU:HD13	1.77	0.66
2:B:566:VAL:HG12	2:B:582:ILE:HD13	1.77	0.66
13:W:297:GLN:HA	4:e:33:LEU:HD21	1.76	0.66
14:Y:172:ILE:HG23	14:Y:177:HIS:HB2	1.78	0.66
2:b:746:LEU:O	2:b:747:MET:HE2	1.95	0.66
2:B:677:VAL:HG22	2:B:886:ARG:HD3	1.78	0.66
10:O:317:LEU:H	10:O:327:ARG:HH12	1.41	0.66
13:W:48:GLY:H	13:W:225:MET:HE2	1.61	0.66
7:i:665:ALA:HB2	7:i:679:ILE:HG22	1.77	0.66
1:A:1286:PHE:C	10:O:310:TRP:HE1	2.04	0.66
4:E:33:LEU:HD21	13:w:297:GLN:HA	1.76	0.66
7:i:237:LEU:HD22	7:i:259:TRP:HZ3	1.61	0.66
10:O:548:ARG:HH22	10:O:551:PRO:HD3	1.61	0.65
3:C:124:LEU:N	8:J:18:ARG:HH12	1.92	0.65
10:O:114:ARG:HH22	10:O:117:LYS:HG3	1.61	0.65
10:o:317:LEU:H	10:o:327:ARG:HH12	1.41	0.65
7:i:567:HIS:HA	7:i:570:ARG:HG2	1.78	0.65
13:w:48:GLY:H	13:w:225:MET:HE2	1.61	0.65
1:a:720:ASN:HB2	1:a:726:LEU:HD13	1.77	0.65
10:o:784:ASP:HB3	10:o:840:VAL:HB	1.78	0.65
13:w:499:LEU:HD23	13:w:503:ILE:HG21	1.79	0.65
5:F:97:ARG:HA	5:F:97:ARG:HE	1.57	0.65
7:I:237:LEU:HD22	7:I:259:TRP:HZ3	1.61	0.65
13:W:499:LEU:HD23	13:W:503:ILE:HG21	1.79	0.65
2:b:950:ARG:NH1	7:i:604:LEU:HA	2.11	0.65
7:i:411:PHE:HA	7:i:414:ILE:HG22	1.78	0.65
6:G:19:LEU:HA	6:G:23:ILE:HD13	1.79	0.65
7:I:567:HIS:HA	7:I:570:ARG:HG2	1.78	0.65
10:o:114:ARG:HH22	10:o:117:LYS:HG3	1.61	0.65
1:A:1036:LEU:HD23	12:S:119:ARG:HE	1.62	0.65
2:B:950:ARG:NH1	7:I:604:LEU:HA	2.11	0.65
14:y:172:ILE:HG23	14:y:177:HIS:HB2	1.78	0.65
3:c:93:TYR:HB2	3:c:124:LEU:CD1	2.27	0.65
6:g:19:LEU:HA	6:g:23:ILE:HD13	1.79	0.65
1:A:276:TYR:CE2	2:B:1123:VAL:HG21	2.29	0.64
7:I:679:ILE:HG13	7:I:680:GLU:N	2.12	0.64
1:a:276:TYR:CE2	2:b:1123:VAL:HG11	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:189:THR:HG23	2:b:209:LYS:HG3	1.80	0.64
3:c:124:LEU:N	8:j:18:ARG:HH12	1.92	0.64
10:O:784:ASP:HB3	10:O:840:VAL:HB	1.78	0.64
7:I:665:ALA:HB2	7:I:679:ILE:HG22	1.77	0.64
2:B:49:ILE:HD11	2:B:367:GLU:HG2	1.80	0.64
1:a:1036:LEU:HD23	12:s:119:ARG:HE	1.62	0.64
1:A:276:TYR:CE2	2:B:1123:VAL:HG11	2.32	0.64
10:O:120:LEU:HB2	10:O:122:ARG:NH1	2.13	0.64
1:a:1264:ARG:HH12	7:i:307:ILE:N	1.92	0.64
2:b:677:VAL:HG22	2:b:886:ARG:HD3	1.78	0.64
2:b:49:ILE:HD11	2:b:367:GLU:HG2	1.80	0.64
10:o:548:ARG:HH22	10:o:551:PRO:HD3	1.61	0.64
2:B:189:THR:HG23	2:B:209:LYS:HG3	1.80	0.64
10:o:493:ARG:HG2	10:o:496:LYS:HG2	1.79	0.64
12:s:122:LEU:HA	12:s:125:ILE:HD12	1.80	0.64
3:C:93:TYR:HB2	3:C:124:LEU:CD1	2.27	0.64
7:I:411:PHE:HA	7:I:414:ILE:HG22	1.78	0.64
10:o:713:ASP:HB2	10:o:837:VAL:HG11	1.80	0.64
2:B:640:VAL:HG22	2:B:660:LEU:HB2	1.79	0.64
9:L:177:LYS:HE2	9:L:200:ASP:HB3	1.79	0.64
7:i:450:TYR:HE1	7:i:559:ILE:HG12	1.63	0.64
7:i:679:ILE:HG13	7:i:680:GLU:N	2.12	0.64
9:l:62:LYS:HE2	9:l:110:PHE:CE2	2.33	0.64
10:o:120:LEU:HB2	10:o:122:ARG:NH1	2.13	0.64
9:L:62:LYS:HE2	9:L:110:PHE:CE2	2.33	0.63
8:j:35:VAL:HG12	8:j:37:ASN:H	1.62	0.63
10:O:493:ARG:HG2	10:O:496:LYS:HG2	1.80	0.63
8:J:35:VAL:HG12	8:J:37:ASN:H	1.62	0.63
2:b:1055:GLU:HB2	2:b:1058:ARG:HH21	1.63	0.63
5:f:121:ILE:HD11	5:f:139:VAL:HG21	1.80	0.63
12:S:122:LEU:HA	12:S:125:ILE:HD12	1.80	0.63
1:a:83:ILE:HB	5:f:10:TYR:HE1	1.63	0.63
9:l:177:LYS:HE2	9:l:200:ASP:HB3	1.79	0.63
14:y:147:ILE:HD11	14:y:196:MET:HB2	1.81	0.63
3:C:34:LEU:HD21	3:C:184:ARG:HD3	1.81	0.63
7:I:450:TYR:HE1	7:I:559:ILE:HG12	1.63	0.63
9:L:196:MET:HE1	9:L:198:ALA:HB2	1.81	0.63
13:W:296:PHE:HD1	4:e:34:ARG:NH1	1.97	0.63
2:b:640:VAL:HG22	2:b:660:LEU:HB2	1.79	0.63
9:l:62:LYS:HE2	9:l:110:PHE:HE2	1.64	0.63
1:A:24:ILE:HD13	1:A:197:ILE:HG13	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:357:LYS:HE3	7:i:324:ALA:HB3	1.80	0.63
1:a:834:LYS:NZ	12:s:215:ASN:HB2	2.14	0.63
10:O:713:ASP:HB2	10:O:837:VAL:HG11	1.80	0.63
14:Y:147:ILE:HD11	14:Y:196:MET:HB2	1.81	0.63
10:o:753:ASN:H	10:o:757:MET:HE2	1.64	0.63
1:A:276:TYR:CE1	2:B:1038:ILE:HD12	2.34	0.62
1:A:834:LYS:NZ	12:S:215:ASN:HB2	2.14	0.62
2:B:759:ILE:HD12	2:B:895:TYR:HB3	1.81	0.62
5:F:121:ILE:HD11	5:F:139:VAL:HG21	1.80	0.62
1:a:276:TYR:CE1	2:b:1038:ILE:HD12	2.34	0.62
2:B:1055:GLU:HB2	2:B:1058:ARG:HH21	1.63	0.62
10:O:740:SER:HB3	10:O:752:TYR:HB3	1.81	0.62
1:a:600:GLU:HG2	7:i:615:LYS:HE3	1.81	0.62
1:a:1122:ASN:HB3	1:a:1124:MET:HE3	1.81	0.62
9:l:43:TYR:O	9:l:47:ILE:HB	1.99	0.62
1:A:357:LYS:HE3	7:I:324:ALA:HB3	1.80	0.62
1:A:1122:ASN:HB3	1:A:1124:MET:HE3	1.81	0.62
10:O:599:PHE:CE2	10:O:602:GLY:HA2	2.34	0.62
1:a:276:TYR:CE2	2:b:1123:VAL:HG21	2.29	0.62
1:a:827:SER:O	1:a:830:GLN:HG2	2.00	0.62
3:c:34:LEU:HD21	3:c:184:ARG:HD3	1.81	0.62
4:E:34:ARG:NH1	13:w:296:PHE:HD1	1.97	0.62
4:E:54:ILE:HD13	13:w:354:LEU:HD23	1.82	0.62
1:A:328:LEU:HB3	1:A:333:GLN:NE2	2.15	0.62
1:A:827:SER:O	1:A:830:GLN:HG2	2.00	0.62
9:L:62:LYS:HE2	9:L:110:PHE:HE2	1.64	0.62
13:W:613:PRO:HB3	15:V:685:HIS:CE1	2.35	0.62
15:V:346:ALA:O	15:V:350:MET:HG2	2.00	0.62
13:w:327:LYS:HE3	13:w:475:ALA:HB2	1.81	0.62
2:B:249:ARG:HH21	2:B:268:ILE:HB	1.65	0.62
3:C:124:LEU:HD11	3:C:127:VAL:HG22	1.82	0.62
10:o:599:PHE:CE2	10:o:602:GLY:HA2	2.34	0.62
1:A:83:ILE:HB	5:F:10:TYR:HE1	1.63	0.62
3:C:195:LYS:HD2	3:C:195:LYS:O	2.00	0.62
10:O:753:ASN:H	10:O:757:MET:HE2	1.64	0.62
11:R:99:THR:N	11:R:102:MET:HB3	2.14	0.62
13:W:217:LYS:HA	13:W:526:MET:HE1	1.81	0.62
13:W:296:PHE:CZ	13:W:354:LEU:HD21	2.35	0.62
2:b:759:ILE:HD12	2:b:895:TYR:HB3	1.81	0.62
13:w:296:PHE:CZ	13:w:354:LEU:HD21	2.35	0.62
10:o:309:ASN:HA	10:o:344:ARG:HE	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:740:SER:HB3	10:o:752:TYR:HB3	1.81	0.62
11:q:14:ARG:HH22	11:q:83:LEU:N	1.98	0.62
9:l:196:MET:HE1	9:l:198:ALA:HB2	1.81	0.62
1:A:1285:ASP:HA	10:O:221:MET:SD	2.40	0.62
11:Q:14:ARG:HH22	11:Q:83:LEU:N	1.98	0.62
1:a:1285:ASP:HA	10:o:221:MET:SD	2.40	0.62
2:b:249:ARG:HH21	2:b:268:ILE:HB	1.65	0.62
9:l:4:ILE:HD11	9:l:255:ALA:HA	1.82	0.62
4:E:21:ARG:HH22	13:w:394:LYS:HG2	1.65	0.61
1:A:1265:MET:HE3	1:A:1266:GLU:O	2.01	0.61
10:O:309:ASN:HA	10:O:344:ARG:HE	1.65	0.61
3:c:128:PHE:HB3	3:c:137:GLN:NE2	2.15	0.61
11:r:99:THR:N	11:r:102:MET:HB3	2.14	0.61
1:a:24:ILE:HD13	1:a:197:ILE:HG13	1.81	0.61
7:I:320:ARG:HG2	7:I:322:GLU:OE1	2.00	0.61
13:W:354:LEU:HD23	4:e:54:ILE:HD13	1.82	0.61
15:V:434:PHE:HA	15:V:437:MET:HG3	1.82	0.61
3:c:195:LYS:HD2	3:c:195:LYS:O	2.00	0.61
1:A:161:PRO:HG2	1:A:164:LEU:HG	1.83	0.61
13:W:268:HIS:CE1	13:W:270:MET:HG2	2.36	0.61
1:A:261:ASN:H	1:A:264:TYR:HB2	1.65	0.61
1:A:600:GLU:HG2	7:I:615:LYS:HE3	1.81	0.61
9:L:4:ILE:HD11	9:L:255:ALA:HA	1.82	0.61
9:L:43:TYR:O	9:L:47:ILE:HB	1.99	0.61
13:W:394:LYS:HG2	4:e:21:ARG:HH22	1.65	0.61
2:B:328:GLY:O	2:B:332:ILE:HD12	2.00	0.61
13:W:264:GLN:HE21	1:a:811:LEU:HB2	1.66	0.61
13:W:327:LYS:HE3	13:W:475:ALA:HB2	1.81	0.61
1:a:328:LEU:HB3	1:a:333:GLN:NE2	2.15	0.61
7:i:320:ARG:HG2	7:i:322:GLU:OE1	2.00	0.61
7:i:645:PHE:HZ	7:i:761:GLU:HB3	1.66	0.61
13:w:217:LYS:HA	13:w:526:MET:HE1	1.81	0.61
1:A:811:LEU:HB2	13:w:264:GLN:HE21	1.66	0.61
4:e:29:ARG:NH2	4:e:108:ASP:HA	2.15	0.61
10:o:41:VAL:HB	10:o:122:ARG:HH12	1.66	0.61
13:w:613:PRO:HB3	15:v:685:HIS:CE1	2.35	0.61
1:a:261:ASN:H	1:a:264:TYR:HB2	1.65	0.61
5:f:161:GLN:HG3	5:f:163:ARG:HG2	1.83	0.61
6:g:44:MET:HG3	6:g:46:LYS:HE3	1.83	0.61
1:A:408:ILE:HG22	1:A:455:TYR:CE1	2.36	0.60
7:I:645:PHE:HZ	7:I:761:GLU:HB3	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:Q:14:ARG:NH2	11:Q:82:LEU:HG	2.16	0.60
1:a:1176:PHE:HB3	1:a:1179:LEU:HD12	1.83	0.60
3:c:124:LEU:HD11	3:c:127:VAL:HG22	1.82	0.60
15:v:680:ILE:O	15:v:684:ILE:HG13	2.00	0.60
2:B:859:VAL:HB	8:J:62:ILE:HA	1.84	0.60
3:C:128:PHE:HB3	3:C:137:GLN:NE2	2.15	0.60
5:F:161:GLN:HG3	5:F:163:ARG:HG2	1.83	0.60
15:V:680:ILE:O	15:V:684:ILE:HG13	2.00	0.60
1:a:408:ILE:HG22	1:a:455:TYR:CE1	2.36	0.60
15:v:346:ALA:O	15:v:350:MET:HG2	2.00	0.60
1:A:941:GLN:HE21	1:A:946:PHE:HD2	1.50	0.60
2:b:809:LEU:CD2	8:j:60:LEU:HD21	2.29	0.60
7:i:648:LEU:HD13	7:i:775:LYS:HE2	1.84	0.60
14:y:206:LEU:HD21	14:y:211:LEU:HD21	1.84	0.60
2:B:271:ALA:O	2:B:275:THR:HG23	2.02	0.60
12:S:32:VAL:HG23	12:S:128:ILE:HG21	1.83	0.60
2:b:859:VAL:HB	8:j:62:ILE:HA	1.84	0.60
12:s:32:VAL:HG23	12:s:128:ILE:HG21	1.83	0.60
6:G:44:MET:HG3	6:G:46:LYS:HE3	1.83	0.60
1:a:782:LYS:NZ	1:a:787:TYR:HA	2.16	0.60
10:O:41:VAL:HB	10:O:122:ARG:HH12	1.66	0.60
2:b:328:GLY:O	2:b:332:ILE:HD12	2.00	0.60
3:c:250:MET:HE3	3:c:274:TYR:HB3	1.84	0.60
5:f:77:ILE:HD11	5:f:82:ILE:HG23	1.83	0.60
11:q:14:ARG:NH2	11:q:82:LEU:HG	2.16	0.60
1:A:1176:PHE:HB3	1:A:1179:LEU:HD12	1.83	0.60
4:E:85:THR:HG21	4:E:94:LYS:HB3	1.83	0.60
15:v:434:PHE:HA	15:v:437:MET:HG3	1.82	0.60
7:I:6:THR:HA	7:I:9:ILE:HG12	1.83	0.60
1:a:161:PRO:HG2	1:a:164:LEU:HG	1.83	0.60
2:b:271:ALA:O	2:b:275:THR:HG23	2.02	0.60
15:v:580:MET:HG3	15:v:593:PHE:HB3	1.83	0.60
1:A:88:HIS:CE1	1:A:124:LEU:HG	2.37	0.60
4:e:85:THR:HG21	4:e:94:LYS:HB3	1.83	0.60
13:w:268:HIS:CE1	13:w:270:MET:HG2	2.36	0.60
3:C:250:MET:HE3	3:C:274:TYR:HB3	1.84	0.59
5:F:95:ARG:O	5:F:95:ARG:HD3	2.02	0.59
13:W:270:MET:HA	13:W:501:PHE:CE2	2.37	0.59
13:w:360:MET:HG2	13:w:365:TYR:HB2	1.84	0.59
1:a:941:GLN:HE21	1:a:946:PHE:HD2	1.50	0.59
1:A:995:PHE:HD1	1:A:1098:LYS:HD3	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:77:ILE:HD11	5:F:82:ILE:HG23	1.83	0.59
6:G:106:CYS:SG	6:G:156:ALA:HB3	2.42	0.59
7:I:557:THR:HA	7:I:560:MET:HE3	1.84	0.59
2:b:319:MET:HB3	2:b:322:THR:HB	1.84	0.59
13:w:270:MET:HA	13:w:501:PHE:CE2	2.37	0.59
2:B:319:MET:HB3	2:B:322:THR:HB	1.84	0.59
7:I:450:TYR:CE1	7:I:559:ILE:HG12	2.37	0.59
10:O:496:LYS:HA	10:O:496:LYS:HE3	1.83	0.59
1:a:995:PHE:HD1	1:a:1098:LYS:HD3	1.68	0.59
1:a:1265:MET:HE3	1:a:1266:GLU:O	2.00	0.59
7:i:450:TYR:CE1	7:i:559:ILE:HG12	2.37	0.59
7:i:489:ASN:O	7:i:493:ILE:HD12	2.02	0.59
7:i:557:THR:HA	7:i:560:MET:HE3	1.84	0.59
1:A:782:LYS:NZ	1:A:787:TYR:HA	2.16	0.59
1:A:1087:MET:HA	1:A:1090:LEU:HG	1.84	0.59
14:Y:206:LEU:HD21	14:Y:211:LEU:HD21	1.84	0.59
10:o:496:LYS:HA	10:o:496:LYS:HE3	1.83	0.59
7:I:489:ASN:O	7:I:493:ILE:HD12	2.02	0.59
15:V:580:MET:HG3	15:V:593:PHE:HB3	1.83	0.59
2:b:742:VAL:HG23	2:b:744:ILE:HD11	1.85	0.59
6:g:106:CYS:SG	6:g:156:ALA:HB3	2.42	0.59
11:r:58:ILE:HG21	11:r:123:PHE:CZ	2.37	0.59
1:A:1280:MET:HE2	10:O:56:ILE:HG21	1.85	0.59
7:I:648:LEU:HD13	7:I:775:LYS:HE2	1.84	0.59
11:R:58:ILE:HG21	11:R:123:PHE:CZ	2.37	0.59
5:f:95:ARG:NH1	6:g:17:HIS:HB3	2.17	0.59
5:F:95:ARG:NH1	6:G:17:HIS:HB3	2.17	0.59
1:a:88:HIS:CE1	1:a:124:LEU:HG	2.37	0.59
2:b:405:PRO:HB2	2:b:407:LEU:HD23	1.85	0.58
7:i:440:LEU:HB3	7:i:467:LEU:HD21	1.84	0.58
2:B:1003:PRO:HD3	3:C:193:MET:HE1	1.85	0.58
13:W:360:MET:HG2	13:W:365:TYR:HB2	1.84	0.58
15:V:437:MET:SD	15:V:438:ARG:HB2	2.43	0.58
3:c:93:TYR:HB2	3:c:124:LEU:HD13	1.83	0.58
5:f:95:ARG:O	5:f:95:ARG:HD3	2.02	0.58
7:i:6:THR:HA	7:i:9:ILE:HG12	1.83	0.58
10:o:206:ASP:HB2	10:o:210:LYS:NZ	2.18	0.58
15:v:367:TYR:HB2	15:v:370:ARG:HG3	1.85	0.58
3:C:93:TYR:HB2	3:C:124:LEU:HD13	1.83	0.58
15:V:553:ASP:O	15:V:554:MET:HE2	2.03	0.58
13:w:73:PRO:HD2	13:w:77:ILE:HG21	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:O:206:ASP:HB2	10:O:210:LYS:NZ	2.18	0.58
7:i:167:ASN:OD1	7:i:169:LYS:HG2	2.03	0.58
2:B:405:PRO:HB2	2:B:407:LEU:HD23	1.85	0.58
6:G:110:ARG:H	7:I:102:ASN:ND2	2.00	0.58
7:I:711:PHE:CE2	7:I:737:LEU:HB2	2.38	0.58
15:V:367:TYR:HB2	15:V:370:ARG:HG3	1.85	0.58
7:i:715:MET:HE3	7:i:717:PHE:HB2	1.86	0.58
15:v:437:MET:SD	15:v:438:ARG:HB2	2.43	0.58
1:a:821:LYS:HD2	1:a:821:LYS:O	2.03	0.58
7:i:711:PHE:CE2	7:i:737:LEU:HB2	2.38	0.58
15:v:553:ASP:O	15:v:554:MET:HE2	2.03	0.58
1:A:821:LYS:HD2	1:A:821:LYS:O	2.03	0.58
4:E:29:ARG:NH2	4:E:108:ASP:HA	2.15	0.58
7:I:167:ASN:OD1	7:I:169:LYS:HG2	2.03	0.58
3:C:251:LEU:O	3:C:274:TYR:HA	2.04	0.58
14:Y:472:GLN:NE2	14:Y:476:ARG:HD2	2.19	0.58
1:a:327:GLN:NE2	1:a:328:LEU:HG	2.18	0.58
1:A:273:ILE:HG13	1:A:274:ARG:N	2.18	0.58
1:A:327:GLN:NE2	1:A:328:LEU:HG	2.18	0.58
1:A:773:GLN:HB3	1:A:780:LEU:HD11	1.86	0.58
2:B:1037:LEU:HG	2:B:1038:ILE:HG23	1.86	0.58
7:I:440:LEU:HB3	7:I:467:LEU:HD21	1.84	0.58
1:A:930:SER:HB3	1:A:1182:PRO:HB3	1.86	0.57
2:B:809:LEU:CD2	8:J:60:LEU:HD21	2.29	0.57
15:V:205:LYS:HB2	15:V:235:TRP:HB2	1.86	0.57
1:a:993:ILE:HD11	1:a:1033:ILE:HG22	1.85	0.57
1:a:1280:MET:HE2	10:o:56:ILE:HG21	1.85	0.57
7:I:327:GLU:OE2	10:O:416:ILE:HG22	2.04	0.57
1:a:718:ILE:HA	1:a:730:GLN:HE21	1.69	0.57
7:i:327:GLU:OE2	10:o:416:ILE:HG22	2.04	0.57
1:A:1264:ARG:HH22	7:I:307:ILE:HG13	1.69	0.57
2:B:217:LEU:HD21	2:B:267:ILE:HA	1.87	0.57
2:B:742:VAL:HG23	2:B:744:ILE:HD11	1.85	0.57
14:Y:84:LEU:HD23	14:Y:138:VAL:HG13	1.86	0.57
1:a:773:GLN:HB3	1:a:780:LEU:HD11	1.86	0.57
15:V:208:LEU:HD13	15:V:232:LEU:HB2	1.85	0.57
1:a:273:ILE:HG13	1:a:274:ARG:N	2.18	0.57
2:b:496:ASN:C	2:b:496:ASN:HD22	2.12	0.57
1:A:993:ILE:HD11	1:A:1033:ILE:HG22	1.85	0.57
5:F:130:ILE:HG22	5:F:132:LYS:HE3	1.87	0.57
15:v:208:LEU:HD13	15:v:232:LEU:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:I:715:MET:HE3	7:I:717:PHE:HB2	1.86	0.57
3:c:251:LEU:O	3:c:274:TYR:HA	2.04	0.57
3:c:259:MET:HE3	3:c:263:ASN:ND2	2.18	0.57
14:y:31:LEU:HG	14:y:63:MET:HE1	1.85	0.57
1:A:681:GLY:O	1:A:721:SER:HB3	2.05	0.57
7:I:415:MET:HB2	7:I:426:TRP:HZ3	1.70	0.57
1:a:930:SER:HB3	1:a:1182:PRO:HB3	1.86	0.57
5:f:109:MET:O	5:f:109:MET:HE3	2.04	0.57
14:y:84:LEU:HD23	14:y:138:VAL:HG13	1.86	0.57
14:y:472:GLN:NE2	14:y:476:ARG:HD2	2.19	0.57
10:O:329:GLU:HA	10:O:332:LYS:HG2	1.87	0.57
2:b:263:LEU:HD23	2:b:343:TYR:OH	2.05	0.57
2:b:1003:PRO:HD3	3:c:193:MET:HE1	1.85	0.57
5:F:109:MET:O	5:F:109:MET:HE3	2.04	0.57
14:Y:31:LEU:HG	14:Y:63:MET:HE1	1.85	0.57
1:A:198:PRO:HB2	1:A:202:ILE:HD11	1.87	0.57
1:a:1087:MET:HA	1:a:1090:LEU:HG	1.84	0.57
10:o:329:GLU:HA	10:o:332:LYS:HG2	1.87	0.57
1:a:374:THR:HA	5:f:163:ARG:HH22	1.70	0.56
1:a:377:ILE:HD12	1:a:391:ALA:HB2	1.87	0.56
2:b:938:TYR:HE1	2:b:950:ARG:O	1.88	0.56
4:e:164:PHE:HB3	4:e:166:ARG:NH1	2.20	0.56
15:v:205:LYS:HB2	15:v:235:TRP:HB2	1.86	0.56
13:W:73:PRO:HD2	13:W:77:ILE:HG21	1.85	0.56
1:a:681:GLY:O	1:a:721:SER:HB3	2.05	0.56
2:b:217:LEU:HD21	2:b:267:ILE:HA	1.87	0.56
2:b:222:ILE:HG23	2:b:228:PHE:CE2	2.40	0.56
1:A:718:ILE:HA	1:A:730:GLN:HE21	1.69	0.56
1:A:771:TYR:HB2	1:A:773:GLN:OE1	2.05	0.56
3:C:251:LEU:CD2	3:C:277:PHE:HB3	2.35	0.56
1:a:198:PRO:HB2	1:a:202:ILE:HD11	1.87	0.56
1:a:771:TYR:HB2	1:a:773:GLN:OE1	2.05	0.56
1:a:1264:ARG:HH22	7:i:307:ILE:HG13	1.69	0.56
10:o:82:LEU:O	10:o:85:VAL:HG12	2.05	0.56
1:A:377:ILE:HD12	1:A:391:ALA:HB2	1.87	0.56
1:A:812:GLU:OE2	13:w:264:GLN:HG3	2.05	0.56
13:W:577:ASP:HA	13:W:580:ASN:ND2	2.20	0.56
3:C:252:PHE:CE2	3:C:254:ASN:HB2	2.41	0.56
10:O:729:HIS:CE1	10:O:732:LEU:HD13	2.41	0.56
3:c:252:PHE:CE2	3:c:254:ASN:HB2	2.41	0.56
5:f:130:ILE:HG22	5:f:132:LYS:HE3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:273:ILE:HG13	1:A:274:ARG:H	1.70	0.56
2:B:222:ILE:HG23	2:B:228:PHE:CE2	2.40	0.56
11:R:14:ARG:HG3	11:R:84:PHE:HA	1.88	0.56
2:b:967:GLN:O	2:b:970:LYS:HG3	2.05	0.56
7:i:415:MET:HB2	7:i:426:TRP:HZ3	1.70	0.56
13:W:264:GLN:HG3	1:a:812:GLU:OE2	2.05	0.56
1:a:273:ILE:HG13	1:a:274:ARG:H	1.70	0.56
4:E:164:PHE:HB3	4:E:166:ARG:NH1	2.20	0.56
10:O:82:LEU:O	10:O:85:VAL:HG12	2.05	0.56
2:b:1034:LYS:HD3	2:b:1039:ARG:HA	1.88	0.56
2:b:1037:LEU:HG	2:b:1038:ILE:HG23	1.86	0.56
10:o:729:HIS:CE1	10:o:732:LEU:HD13	2.41	0.56
7:I:499:ILE:HD11	7:I:507:ILE:HD11	1.88	0.56
2:b:1001:ASP:HB3	3:c:192:PRO:HA	1.87	0.56
3:c:252:PHE:HB2	3:c:274:TYR:CE1	2.41	0.56
4:e:50:VAL:HG12	4:e:59:THR:H	1.71	0.56
7:i:499:ILE:HD11	7:i:507:ILE:HD11	1.88	0.56
8:j:31:VAL:O	8:j:35:VAL:HG23	2.05	0.56
11:q:38:LEU:HB3	11:q:44:ILE:HD11	1.88	0.56
3:C:252:PHE:HB2	3:C:274:TYR:CE1	2.41	0.55
13:w:280:MET:HE3	13:w:440:THR:HG22	1.87	0.55
13:w:577:ASP:HA	13:w:580:ASN:ND2	2.20	0.55
8:J:31:VAL:O	8:J:35:VAL:HG23	2.05	0.55
3:c:5:ARG:HD3	8:j:16:HIS:CD2	2.41	0.55
1:A:484:GLY:HA2	3:C:270:ARG:NH2	2.21	0.55
1:A:1131:LEU:HD21	4:E:102:ILE:HD11	1.87	0.55
2:B:967:GLN:O	2:B:970:LYS:HG3	2.05	0.55
3:C:5:ARG:HD3	8:J:16:HIS:CD2	2.41	0.55
10:O:813:ASN:HA	10:O:816:GLU:OE1	2.06	0.55
13:W:280:MET:HE3	13:W:440:THR:HG22	1.87	0.55
2:b:52:VAL:HG23	2:b:53:LYS:H	1.72	0.55
1:A:374:THR:HA	5:F:163:ARG:HH22	1.70	0.55
2:B:938:TYR:HE1	2:B:950:ARG:O	1.88	0.55
1:a:1131:LEU:HD21	4:e:102:ILE:HD11	1.87	0.55
10:o:137:TYR:HA	15:v:388:LEU:HD21	1.87	0.55
1:a:80:SER:HA	5:f:10:TYR:OH	2.07	0.55
1:a:454:VAL:HG23	1:a:455:TYR:CD2	2.41	0.55
1:a:484:GLY:HA2	3:c:270:ARG:NH2	2.21	0.55
1:a:721:SER:H	1:a:724:LYS:HE3	1.72	0.55
2:B:746:LEU:HD23	2:B:1009:PHE:HD2	1.72	0.55
2:B:1061:LEU:HD11	2:B:1070:ILE:HD13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:U:21:A:H61	16:U:46:A:H2'	1.72	0.55
2:b:369:LEU:HD11	2:b:410:ALA:HB1	1.87	0.55
10:o:626:ILE:HG12	10:o:649:TYR:CE2	2.33	0.55
13:w:628:ARG:O	13:w:632:ASN:HB3	2.07	0.55
1:A:762:LYS:HE3	1:A:1199:VAL:HA	1.88	0.55
1:A:863:MET:HE3	1:A:863:MET:HA	1.88	0.55
2:B:263:LEU:HD23	2:B:343:TYR:OH	2.05	0.55
2:B:369:LEU:HD11	2:B:410:ALA:HB1	1.87	0.55
5:F:145:ASP:O	5:F:148:LYS:HG3	2.07	0.55
10:O:431:ASN:ND2	10:O:507:TYR:H	2.04	0.55
13:W:585:ILE:HG23	13:W:588:GLY:H	1.71	0.55
2:b:18:LEU:HA	2:b:29:ARG:HG2	1.89	0.55
5:f:97:ARG:NH1	6:g:19:LEU:N	2.49	0.55
16:u:21:A:H61	16:u:46:A:H2'	1.72	0.55
1:A:430:LYS:HB3	2:B:1068:ASN:ND2	2.22	0.55
2:B:52:VAL:HG23	2:B:53:LYS:H	1.72	0.55
10:O:148:LEU:HD13	10:O:161:LYS:HD2	1.88	0.55
6:g:110:ARG:H	7:i:102:ASN:ND2	2.00	0.55
10:o:813:ASN:HA	10:o:816:GLU:OE1	2.06	0.55
2:B:1034:LYS:HD3	2:B:1039:ARG:HA	1.88	0.55
3:c:251:LEU:CD2	3:c:277:PHE:HB3	2.35	0.55
11:r:14:ARG:HG3	11:r:84:PHE:HA	1.88	0.55
1:A:454:VAL:HG23	1:A:455:TYR:CD2	2.41	0.55
1:A:863:MET:HE2	2:B:1162:PHE:HE1	1.72	0.55
10:O:137:TYR:HA	15:V:388:LEU:HD21	1.87	0.55
15:V:425:TYR:HA	15:V:447:LEU:HA	1.88	0.55
7:i:415:MET:HB2	7:i:426:TRP:CZ3	2.42	0.55
13:w:585:ILE:HG23	13:w:588:GLY:H	1.71	0.55
1:A:11:LEU:HD21	1:A:75:LYS:HZ2	1.72	0.54
2:B:18:LEU:HA	2:B:29:ARG:HG2	1.89	0.54
2:B:1001:ASP:HB3	3:C:192:PRO:HA	1.87	0.54
10:O:164:TYR:CE1	10:O:187:PRO:HB3	2.42	0.54
1:a:220:LEU:HD12	1:a:247:TYR:CZ	2.43	0.54
15:v:272:ILE:H	15:v:272:ILE:HD12	1.73	0.54
1:A:1110:THR:HA	1:A:1120:LYS:HA	1.90	0.54
3:C:158:LEU:HD13	3:C:161:LEU:HB2	1.89	0.54
7:I:384:THR:HB	12:S:238:PRO:HG2	1.88	0.54
13:W:77:ILE:HG23	13:W:81:PHE:HE1	1.72	0.54
15:V:272:ILE:H	15:V:272:ILE:HD12	1.73	0.54
1:a:333:GLN:OE1	1:a:368:VAL:HB	2.08	0.54
1:a:863:MET:HE3	1:a:863:MET:HA	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:82:ILE:O	5:f:86:ILE:HG12	2.07	0.54
7:i:384:THR:HB	12:s:238:PRO:HG2	1.88	0.54
9:l:18:PHE:HB2	9:l:177:LYS:HA	1.89	0.54
15:v:425:TYR:HA	15:v:447:LEU:HA	1.88	0.54
1:A:935:SER:HA	1:A:938:PHE:CZ	2.42	0.54
2:B:243:VAL:HG23	2:B:244:SER:H	1.72	0.54
13:W:628:ARG:O	13:W:632:ASN:HB3	2.07	0.54
2:b:1061:LEU:HD11	2:b:1070:ILE:HD13	1.88	0.54
7:i:371:PRO:HA	7:i:374:ASN:ND2	2.23	0.54
4:E:50:VAL:HG12	4:E:59:THR:H	1.71	0.54
10:O:583:LYS:HA	10:O:592:ARG:HH12	1.72	0.54
1:a:863:MET:HE2	2:b:1162:PHE:HE1	1.72	0.54
2:b:55:PRO:HA	2:b:65:ARG:NH1	2.23	0.54
15:v:507:GLN:H	15:v:507:GLN:CD	2.16	0.54
1:A:80:SER:HA	5:F:10:TYR:OH	2.07	0.54
7:I:371:PRO:HA	7:I:374:ASN:ND2	2.23	0.54
15:V:507:GLN:H	15:V:507:GLN:CD	2.16	0.54
1:a:1257:ILE:HB	6:g:61:ILE:HD11	1.89	0.54
2:b:243:VAL:HG23	2:b:244:SER:H	1.72	0.54
8:j:38:GLU:HB3	8:j:41:ARG:HH21	1.72	0.54
10:o:148:LEU:HD13	10:o:161:LYS:HD2	1.88	0.54
7:I:415:MET:HB2	7:I:426:TRP:CZ3	2.42	0.54
9:L:62:LYS:HB3	9:L:66:HIS:NE2	2.23	0.54
1:a:430:LYS:HB3	2:b:1068:ASN:ND2	2.22	0.54
1:a:810:TYR:HA	1:a:813:ILE:HG22	1.90	0.54
4:e:98:ASN:HA	4:e:101:TYR:CE2	2.43	0.54
10:o:164:TYR:CE1	10:o:187:PRO:HB3	2.42	0.54
10:o:431:ASN:ND2	10:o:507:TYR:H	2.04	0.54
10:o:583:LYS:HA	10:o:592:ARG:HH12	1.72	0.54
1:A:810:TYR:HA	1:A:813:ILE:HG22	1.90	0.54
1:A:1038:VAL:O	1:A:1041:MET:HB3	2.08	0.54
4:E:98:ASN:HA	4:E:101:TYR:CE2	2.43	0.54
9:L:18:PHE:HB2	9:L:177:LYS:HA	1.89	0.54
1:a:11:LEU:HD21	1:a:75:LYS:HZ2	1.72	0.54
2:b:55:PRO:HB3	2:b:65:ARG:HD2	1.90	0.54
2:b:746:LEU:HD23	2:b:1009:PHE:HD2	1.72	0.54
2:b:1021:LEU:HD23	2:b:1023:GLN:H	1.72	0.54
3:c:158:LEU:HD13	3:c:161:LEU:HB2	1.89	0.54
5:f:145:ASP:O	5:f:148:LYS:HG3	2.07	0.54
1:A:721:SER:H	1:A:724:LYS:HE3	1.71	0.54
15:V:629:ILE:O	15:V:632:LYS:HG2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:762:LYS:HE3	1:a:1199:VAL:HA	1.88	0.54
2:b:743:THR:HA	2:b:1012:PRO:HA	1.90	0.54
2:b:857:VAL:HG12	2:b:869:VAL:HG22	1.90	0.54
2:B:55:PRO:HA	2:B:65:ARG:NH1	2.23	0.54
12:S:38:GLU:HA	12:S:41:ILE:HG22	1.90	0.54
13:W:343:PHE:HB3	13:W:436:ILE:HD12	1.90	0.54
1:a:761:LYS:HE2	1:a:1214:THR:HG22	1.90	0.54
13:w:77:ILE:HG23	13:w:81:PHE:HE1	1.72	0.54
15:v:629:ILE:O	15:v:632:LYS:HG2	2.08	0.54
1:A:726:LEU:HB2	1:A:731:TYR:CZ	2.43	0.54
1:A:1257:ILE:HB	6:G:61:ILE:HD11	1.89	0.54
3:C:83:LEU:HD13	3:C:99:PHE:HE1	1.73	0.54
5:F:152:ASP:C	5:F:156:LYS:HZ3	2.15	0.54
11:Q:38:LEU:HB3	11:Q:44:ILE:HD11	1.88	0.54
11:R:50:TYR:HB2	11:R:102:MET:SD	2.48	0.54
9:l:261:SER:HB2	10:o:805:MET:HE3	1.90	0.54
10:o:775:PHE:HB3	10:o:780:PHE:HB2	1.91	0.54
13:w:343:PHE:HB3	13:w:436:ILE:HD12	1.90	0.54
1:A:251:LYS:HE2	1:A:251:LYS:HA	1.90	0.53
2:B:860:GLU:O	2:B:865:VAL:HA	2.09	0.53
2:B:1021:LEU:HD23	2:B:1023:GLN:H	1.72	0.53
5:F:82:ILE:O	5:F:86:ILE:HG12	2.07	0.53
3:c:41:LEU:HD12	3:c:140:GLU:HG2	1.90	0.53
9:l:62:LYS:HB3	9:l:66:HIS:NE2	2.23	0.53
2:B:857:VAL:HG12	2:B:869:VAL:HG22	1.90	0.53
3:C:259:MET:HE3	3:C:263:ASN:ND2	2.18	0.53
8:J:38:GLU:HB3	8:J:41:ARG:HH21	1.72	0.53
15:v:48:GLN:OE1	15:v:49:GLN:HG3	2.09	0.53
1:A:761:LYS:HE2	1:A:1214:THR:HG22	1.90	0.53
2:B:55:PRO:HB3	2:B:65:ARG:HD2	1.90	0.53
1:a:251:LYS:HA	1:a:251:LYS:HE2	1.90	0.53
1:a:935:SER:HA	1:a:938:PHE:CZ	2.42	0.53
3:c:170:TYR:HA	3:c:173:VAL:HG22	1.90	0.53
11:R:52:VAL:HG12	11:R:58:ILE:HD11	1.91	0.53
1:a:726:LEU:HB2	1:a:731:TYR:CZ	2.43	0.53
10:o:433:LYS:HG3	10:o:435:PHE:HD2	1.74	0.53
1:A:220:LEU:HD12	1:A:247:TYR:CZ	2.43	0.53
1:A:912:PHE:O	1:A:915:LYS:HG2	2.08	0.53
7:I:604:LEU:HG	7:I:606:PHE:HE1	1.74	0.53
10:O:626:ILE:HG12	10:O:649:TYR:CE2	2.33	0.53
13:W:293:ASP:HA	4:e:34:ARG:HH22	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:Y:63:MET:HA	14:Y:66:VAL:HG12	1.91	0.53
15:V:180:ILE:HG12	15:V:251:MET:HG3	1.91	0.53
1:a:209:TRP:HE3	7:i:380:VAL:O	1.92	0.53
10:O:120:LEU:HB2	10:O:122:ARG:HH11	1.73	0.53
1:a:408:ILE:HG22	1:a:455:TYR:HE1	1.73	0.53
1:a:790:ILE:HD11	1:a:916:LEU:HD23	1.89	0.53
1:a:912:PHE:CE2	1:a:916:LEU:HD11	2.44	0.53
1:a:1110:THR:HA	1:a:1120:LYS:HA	1.90	0.53
2:b:860:GLU:O	2:b:865:VAL:HA	2.09	0.53
3:c:83:LEU:HD13	3:c:99:PHE:HE1	1.73	0.53
7:i:604:LEU:HG	7:i:606:PHE:HE1	1.74	0.53
15:v:180:ILE:HG12	15:v:251:MET:HG3	1.91	0.53
1:A:209:TRP:HE3	7:I:380:VAL:O	1.92	0.53
2:B:723:VAL:HA	2:B:952:VAL:HG23	1.91	0.53
2:B:878:ILE:HG22	2:B:879:LEU:H	1.74	0.53
9:L:261:SER:HB2	10:O:805:MET:HE3	1.90	0.53
15:V:197:VAL:HA	15:V:200:LEU:HG	1.91	0.53
1:a:912:PHE:O	1:a:915:LYS:HG2	2.08	0.53
2:b:723:VAL:HA	2:b:952:VAL:HG23	1.91	0.53
11:r:52:VAL:HG12	11:r:58:ILE:HD11	1.91	0.53
14:y:283:ILE:HG13	14:y:286:PHE:H	1.74	0.53
15:v:380:ARG:HA	15:v:445:CYS:HB2	1.91	0.53
1:A:790:ILE:HD11	1:A:916:LEU:HD23	1.89	0.53
10:O:775:PHE:HB3	10:O:780:PHE:HB2	1.91	0.53
1:a:80:SER:HA	5:f:10:TYR:CZ	2.44	0.53
4:e:144:GLU:H	4:e:183:VAL:CG2	2.22	0.53
6:g:90:ASN:HB2	6:g:100:GLN:NE2	2.24	0.53
15:v:197:VAL:HA	15:v:200:LEU:HG	1.91	0.53
16:u:9:G:H1'	16:u:45:G:H2'	1.90	0.53
1:A:80:SER:HA	5:F:10:TYR:CZ	2.44	0.53
1:A:333:GLN:OE1	1:A:368:VAL:HB	2.08	0.53
1:A:1083:LEU:O	1:A:1087:MET:HG3	2.09	0.53
2:B:743:THR:HA	2:B:1012:PRO:HA	1.90	0.53
5:F:99:PRO:HG2	5:F:104:PHE:CE2	2.44	0.53
3:c:26:PHE:O	3:c:30:VAL:HG22	2.09	0.53
2:B:328:GLY:O	2:B:331:MET:HG3	2.09	0.53
10:O:809:PRO:HA	10:O:812:ARG:HB2	1.90	0.53
5:f:99:PRO:HG2	5:f:104:PHE:CE2	2.44	0.53
14:y:256:VAL:HA	14:y:495:VAL:HG22	1.91	0.53
3:C:26:PHE:O	3:C:30:VAL:HG22	2.09	0.52
3:C:170:TYR:HA	3:C:173:VAL:HG22	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:G:90:ASN:HB2	6:G:100:GLN:HE22	1.74	0.52
14:Y:283:ILE:HG13	14:Y:286:PHE:H	1.74	0.52
1:a:276:TYR:CZ	2:b:1123:VAL:HG11	2.44	0.52
1:a:1038:VAL:O	1:a:1041:MET:HB3	2.08	0.52
4:e:111:PRO:HA	4:e:166:ARG:HH22	1.74	0.52
13:w:233:ILE:HG23	13:w:470:VAL:HG21	1.90	0.52
1:A:183:HIS:CD2	1:A:1227:HIS:HA	2.44	0.52
1:A:756:ALA:O	1:A:760:ILE:HG12	2.10	0.52
7:I:12:ILE:HA	7:I:15:ILE:HG22	1.91	0.52
1:a:290:ILE:HD11	1:a:421:GLU:HB3	1.92	0.52
1:a:385:HIS:CE1	1:a:387:TYR:HB2	2.44	0.52
1:a:586:THR:HG22	1:a:590:LYS:NZ	2.24	0.52
1:a:1080:GLU:HG2	2:b:273:ARG:HH22	1.75	0.52
12:s:38:GLU:HA	12:s:41:ILE:HG22	1.90	0.52
15:v:661:PRO:HA	15:v:664:LYS:HE2	1.91	0.52
1:A:385:HIS:CE1	1:A:387:TYR:HB2	2.44	0.52
1:A:408:ILE:HG22	1:A:455:TYR:HE1	1.73	0.52
1:A:1080:GLU:HG2	2:B:273:ARG:HH22	1.75	0.52
3:C:41:LEU:HD12	3:C:140:GLU:HG2	1.90	0.52
15:V:48:GLN:OE1	15:V:49:GLN:HG3	2.09	0.52
6:g:90:ASN:HB2	6:g:100:GLN:HE22	1.74	0.52
1:A:290:ILE:HD11	1:A:421:GLU:HB3	1.92	0.52
1:A:429:PRO:O	1:A:433:ILE:HG12	2.10	0.52
10:O:433:LYS:HG3	10:O:435:PHE:HD2	1.74	0.52
16:U:9:G:H1'	16:U:45:G:H2'	1.90	0.52
2:b:328:GLY:O	2:b:331:MET:HG3	2.09	0.52
10:o:120:LEU:HB2	10:o:122:ARG:HH11	1.73	0.52
11:r:50:TYR:HB2	11:r:102:MET:SD	2.48	0.52
13:w:115:ASN:HB3	13:w:118:VAL:O	2.10	0.52
14:y:419:ARG:HG2	14:y:420:ILE:HD12	1.92	0.52
15:v:548:ILE:HD12	15:v:556:TYR:O	2.09	0.52
1:A:276:TYR:CZ	2:B:1123:VAL:HG11	2.44	0.52
11:R:1:MET:HE1	11:R:21:ASN:HB2	1.92	0.52
2:b:747:MET:HE3	2:b:1008:VAL:HA	1.90	0.52
4:e:148:VAL:HG12	4:e:152:LEU:HD23	1.92	0.52
10:o:809:PRO:HA	10:o:812:ARG:HB2	1.90	0.52
11:q:78:PHE:CZ	11:q:102:MET:HE1	2.44	0.52
1:A:514:TYR:O	1:A:519:LYS:HE2	2.09	0.52
2:B:178:PRO:HB3	2:B:192:PHE:HB3	1.92	0.52
14:Y:256:VAL:HA	14:Y:495:VAL:HG22	1.91	0.52
15:V:548:ILE:HD12	15:V:556:TYR:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:514:TYR:O	1:a:519:LYS:HE2	2.09	0.52
2:B:680:ASN:HD21	2:B:957:SER:HA	1.73	0.52
6:G:90:ASN:HB2	6:G:100:GLN:NE2	2.24	0.52
10:O:545:ASP:O	10:O:548:ARG:HG2	2.09	0.52
13:W:498:VAL:HG23	13:W:499:LEU:HD12	1.92	0.52
14:Y:187:ILE:HD11	14:Y:191:VAL:HA	1.92	0.52
14:Y:295:THR:HG23	14:Y:296:PHE:CD1	2.44	0.52
14:Y:419:ARG:HG2	14:Y:420:ILE:HD12	1.92	0.52
1:a:429:PRO:O	1:a:433:ILE:HG12	2.10	0.52
2:b:178:PRO:HB3	2:b:192:PHE:HB3	1.92	0.52
11:r:46:GLN:NE2	11:r:107:ILE:HB	2.23	0.52
1:A:912:PHE:CE2	1:A:916:LEU:HD11	2.44	0.52
5:F:95:ARG:NH2	6:G:15:GLU:HB3	2.25	0.52
7:I:408:ARG:NH2	7:I:411:PHE:HB2	2.25	0.52
1:a:834:LYS:HZ1	12:s:215:ASN:HB2	1.75	0.52
9:L:100:VAL:HG22	9:L:154:ILE:HB	1.92	0.52
2:b:680:ASN:HD21	2:b:957:SER:HA	1.73	0.52
2:B:304:ILE:HG22	2:B:308:LYS:HZ1	1.72	0.52
4:E:111:PRO:HA	4:E:166:ARG:HH22	1.74	0.52
4:E:148:VAL:HG12	4:E:152:LEU:HD23	1.92	0.52
11:Q:78:PHE:CZ	11:Q:102:MET:HE1	2.44	0.52
1:a:183:HIS:CD2	1:a:1227:HIS:HA	2.44	0.52
1:a:756:ALA:O	1:a:760:ILE:HG12	2.09	0.52
14:y:543:GLU:HG2	14:y:544:LYS:N	2.25	0.52
1:A:586:THR:HG22	1:A:590:LYS:NZ	2.24	0.51
1:A:931:ALA:HA	1:A:934:LEU:HG	1.92	0.51
4:E:147:ILE:H	4:E:147:ILE:HD12	1.76	0.51
6:G:43:LYS:HG2	6:G:76:TYR:CD1	2.45	0.51
8:J:26:LYS:HZ2	8:J:30:ASP:HB2	1.75	0.51
14:Y:543:GLU:HG2	14:Y:544:LYS:N	2.25	0.51
15:V:234:ILE:HB	15:V:243:LEU:HB2	1.92	0.51
15:V:380:ARG:HA	15:V:445:CYS:HB2	1.91	0.51
15:V:661:PRO:HA	15:V:664:LYS:HE2	1.91	0.51
9:l:9:ARG:HH21	9:l:285:LEU:HA	1.75	0.51
11:q:14:ARG:HH22	11:q:83:LEU:C	2.18	0.51
15:v:106:GLN:OE1	15:v:109:THR:HG23	2.10	0.51
2:B:747:MET:HE3	2:B:1008:VAL:HA	1.90	0.51
13:W:233:ILE:HG23	13:W:470:VAL:HG21	1.90	0.51
2:b:319:MET:HE1	2:b:535:ALA:HA	1.92	0.51
3:c:83:LEU:HD13	3:c:99:PHE:CE1	2.45	0.51
5:f:95:ARG:NH2	6:g:15:GLU:HB3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:r:56:LYS:O	11:r:56:LYS:HD2	2.10	0.51
13:w:498:VAL:HG23	13:w:499:LEU:HD12	1.92	0.51
14:y:295:THR:HG23	14:y:296:PHE:CD1	2.44	0.51
15:v:234:ILE:HB	15:v:243:LEU:HB2	1.92	0.51
1:A:1036:LEU:HD23	12:S:119:ARG:NE	2.26	0.51
11:R:56:LYS:HD2	11:R:56:LYS:O	2.10	0.51
15:V:106:GLN:OE1	15:V:109:THR:HG23	2.10	0.51
1:a:1282:GLU:HA	10:o:218:HIS:NE2	2.25	0.51
8:j:42:LEU:O	8:j:46:THR:HG22	2.11	0.51
14:y:63:MET:HA	14:y:66:VAL:HG12	1.91	0.51
15:v:84:SER:HA	15:v:131:TRP:CD1	2.45	0.51
15:v:207:LEU:HD11	15:v:218:MET:HB3	1.92	0.51
14:Y:263:MET:HE3	14:Y:267:GLN:HG2	1.93	0.51
15:V:84:SER:HA	15:V:131:TRP:CD1	2.45	0.51
1:a:941:GLN:NE2	1:a:947:HIS:CD2	2.78	0.51
1:a:997:PHE:HA	1:a:1096:LYS:O	2.11	0.51
1:a:1036:LEU:HD23	12:s:119:ARG:NE	2.26	0.51
2:b:878:ILE:HG22	2:b:879:LEU:H	1.74	0.51
7:i:408:ARG:NH2	7:i:411:PHE:HB2	2.25	0.51
12:s:136:ILE:O	12:s:139:ILE:HG12	2.11	0.51
2:B:54:ARG:NH2	2:B:202:PRO:HG3	2.25	0.51
2:B:205:TYR:HE2	12:S:251:ASN:HD22	1.59	0.51
3:C:83:LEU:HD13	3:C:99:PHE:CE1	2.45	0.51
9:L:9:ARG:HH21	9:L:285:LEU:HA	1.75	0.51
2:b:205:TYR:HE2	12:s:251:ASN:HD22	1.59	0.51
14:y:187:ILE:HD11	14:y:191:VAL:HA	1.92	0.51
1:A:941:GLN:NE2	1:A:947:HIS:CD2	2.78	0.51
1:A:997:PHE:HA	1:A:1096:LYS:O	2.11	0.51
1:A:1264:ARG:NH1	7:I:307:ILE:H	1.98	0.51
2:B:229:ILE:HG21	2:B:290:LEU:HB3	1.93	0.51
8:J:42:LEU:O	8:J:46:THR:HG22	2.11	0.51
9:L:135:MET:HE3	9:L:159:THR:OG1	2.11	0.51
12:S:136:ILE:O	12:S:139:ILE:HG12	2.11	0.51
13:W:115:ASN:HB3	13:W:118:VAL:O	2.10	0.51
6:g:139:ALA:HB2	6:g:158:ILE:HD13	1.93	0.51
7:i:12:ILE:HA	7:i:15:ILE:HG22	1.91	0.51
13:w:238:ARG:NH1	13:w:485:THR:H	2.09	0.51
14:y:263:MET:HE3	14:y:267:GLN:HG2	1.93	0.51
2:B:950:ARG:HD2	2:B:950:ARG:C	2.35	0.51
8:J:26:LYS:HD2	8:J:27:SER:O	2.10	0.51
1:a:1266:GLU:CA	6:g:21:LEU:HD12	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:520:ASP:CG	2:b:544:MET:HE1	2.35	0.51
5:f:152:ASP:C	5:f:156:LYS:HZ3	2.19	0.51
13:w:285:GLN:HG3	13:w:289:MET:HE1	1.92	0.51
14:y:518:GLN:O	14:y:522:LYS:HG2	2.11	0.51
7:I:233:LYS:HB2	16:U:41:C:H5'	1.92	0.51
7:I:713:ASP:HB3	7:I:730:LYS:HD3	1.93	0.51
10:O:82:LEU:HD11	10:O:455:ASN:HD22	1.76	0.51
13:W:285:GLN:HG3	13:W:289:MET:HE1	1.92	0.51
14:Y:518:GLN:O	14:Y:522:LYS:HG2	2.11	0.51
1:a:941:GLN:HG2	1:a:946:PHE:CD2	2.46	0.51
1:a:1083:LEU:O	1:a:1087:MET:HG3	2.09	0.51
3:c:242:SER:HA	3:c:252:PHE:CD2	2.46	0.51
4:e:147:ILE:H	4:e:147:ILE:HD12	1.76	0.51
9:l:157:LEU:HD21	9:l:194:ALA:HB3	1.93	0.51
11:r:1:MET:HE1	11:r:21:ASN:HB2	1.92	0.51
13:w:428:TYR:CE2	13:w:454:ARG:HG3	2.46	0.51
1:A:825:VAL:HG12	1:A:829:LYS:HA	1.91	0.51
5:F:158:TRP:HA	5:F:161:GLN:HG2	1.93	0.51
9:L:228:VAL:HG22	9:L:229:GLN:H	1.75	0.51
11:Q:14:ARG:HH22	11:Q:83:LEU:C	2.18	0.51
13:W:102:PHE:HB3	13:W:104:HIS:NE2	2.26	0.51
13:W:428:TYR:CE2	13:W:454:ARG:HG3	2.46	0.51
1:a:825:VAL:HG12	1:a:829:LYS:HA	1.91	0.51
2:b:54:ARG:NH2	2:b:202:PRO:HG3	2.25	0.51
2:b:950:ARG:HD2	2:b:950:ARG:C	2.35	0.51
2:b:950:ARG:HH12	7:i:604:LEU:HA	1.75	0.51
6:g:43:LYS:HG2	6:g:76:TYR:CD1	2.45	0.51
8:j:26:LYS:HD2	8:j:27:SER:O	2.10	0.51
1:A:941:GLN:HG2	1:A:946:PHE:CD2	2.46	0.51
2:B:96:ALA:HB3	2:B:128:ILE:HB	1.93	0.51
13:W:238:ARG:NH1	13:W:485:THR:H	2.09	0.51
1:a:977:ILE:HD11	1:a:1125:THR:HG22	1.93	0.51
7:i:91:GLU:OE1	14:y:571:ILE:HG13	2.11	0.51
9:l:100:VAL:HG22	9:l:154:ILE:HB	1.92	0.51
9:l:232:ILE:HG23	9:l:233:LEU:HG	1.93	0.51
11:R:46:GLN:NE2	11:R:107:ILE:HB	2.23	0.50
15:V:207:LEU:HD11	15:V:218:MET:HB3	1.92	0.50
1:a:280:ARG:HB2	2:b:1040:GLN:OE1	2.12	0.50
1:a:679:ILE:HG22	1:a:680:LEU:HD12	1.93	0.50
7:i:233:LYS:HB2	16:u:41:C:H5'	1.92	0.50
1:A:98:SER:HB2	1:A:100:GLU:OE1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:445:LEU:HD12	1:A:551:ASN:HB3	1.93	0.50
1:A:1266:GLU:CA	6:G:21:LEU:HD12	2.41	0.50
2:B:520:ASP:CG	2:B:544:MET:HE1	2.35	0.50
10:O:221:MET:SD	10:O:221:MET:O	2.70	0.50
15:V:611:GLN:HB3	15:V:625:ASP:OD2	2.11	0.50
1:a:868:ILE:HG21	1:a:886:GLU:HG3	1.94	0.50
2:b:173:LYS:HD3	2:b:420:LYS:NZ	2.27	0.50
7:i:327:GLU:OE1	7:i:327:GLU:N	2.44	0.50
1:A:147:LYS:NZ	5:F:6:ASP:HA	2.27	0.50
1:A:391:ALA:HB3	1:A:435:GLN:HE21	1.76	0.50
2:B:319:MET:HE1	2:B:535:ALA:HA	1.92	0.50
5:F:95:ARG:HH12	6:G:17:HIS:CB	2.20	0.50
15:V:305:THR:HG23	15:v:108:LYS:HE2	1.94	0.50
1:a:1181:GLN:H	1:a:1181:GLN:CD	2.20	0.50
3:c:279:MET:O	3:c:282:VAL:HG22	2.11	0.50
7:i:713:ASP:HB3	7:i:730:LYS:HD3	1.93	0.50
10:o:545:ASP:O	10:o:548:ARG:HG2	2.09	0.50
1:A:317:VAL:HG12	1:A:317:VAL:O	2.12	0.50
3:C:279:MET:O	3:C:282:VAL:HG22	2.11	0.50
7:I:709:PHE:C	7:I:710:ARG:HD2	2.37	0.50
13:W:77:ILE:O	13:W:81:PHE:HD1	1.95	0.50
15:V:70:LEU:HD11	15:V:80:ILE:HD12	1.93	0.50
1:a:931:ALA:HA	1:a:934:LEU:HG	1.92	0.50
1:a:941:GLN:HG2	1:a:946:PHE:HD2	1.77	0.50
13:w:140:ILE:HG23	13:w:145:THR:HB	1.94	0.50
1:A:872:ARG:HH12	1:A:881:ASN:HA	1.76	0.50
7:I:91:GLU:OE1	14:Y:571:ILE:HG13	2.11	0.50
7:I:322:GLU:CD	7:I:322:GLU:H	2.20	0.50
9:L:243:ASN:O	9:L:247:GLU:HG2	2.12	0.50
2:b:360:LEU:HA	2:b:364:LYS:HE3	1.94	0.50
6:g:99:ILE:HG12	6:g:108:LEU:HD11	1.94	0.50
13:w:77:ILE:O	13:w:81:PHE:HD1	1.95	0.50
13:w:102:PHE:HB3	13:w:104:HIS:NE2	2.26	0.50
15:v:611:GLN:HB3	15:v:625:ASP:OD2	2.11	0.50
1:A:464:ALA:HB1	1:A:568:TYR:HD2	1.77	0.50
7:I:85:GLU:HA	14:Y:577:GLU:HA	1.94	0.50
7:I:750:TYR:CZ	7:I:752:SER:HB3	2.47	0.50
10:O:138:GLY:O	10:O:141:ILE:HG22	2.11	0.50
1:a:144:PHE:HB3	5:f:8:ILE:HD12	1.93	0.50
1:a:872:ARG:HH12	1:a:881:ASN:HA	1.76	0.50
1:a:1259:LEU:HD23	1:a:1259:LEU:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:i:750:TYR:CZ	7:i:752:SER:HB3	2.47	0.50
9:l:228:VAL:HG22	9:l:229:GLN:H	1.75	0.50
1:A:83:ILE:HD11	1:A:151:PHE:CD1	2.46	0.50
1:A:1282:GLU:HA	10:O:218:HIS:NE2	2.25	0.50
2:B:173:LYS:HD3	2:B:420:LYS:NZ	2.27	0.50
2:B:950:ARG:HH12	7:I:604:LEU:HA	1.75	0.50
13:W:63:SER:OG	13:W:101:ILE:HD11	2.12	0.50
13:W:140:ILE:HG23	13:W:145:THR:HB	1.94	0.50
2:b:229:ILE:HG21	2:b:290:LEU:HB3	1.93	0.50
7:i:520:GLU:O	7:i:523:LEU:HD22	2.12	0.50
7:i:721:LEU:HD11	7:i:760:LEU:HD21	1.94	0.50
11:r:58:ILE:HG21	11:r:123:PHE:HZ	1.75	0.50
1:A:377:ILE:CD1	1:A:391:ALA:HB2	2.42	0.50
2:B:479:GLY:O	2:B:482:VAL:HG13	2.12	0.50
5:F:82:ILE:HA	5:F:85:ILE:HG22	1.94	0.50
9:L:103:LEU:HD21	9:L:139:ASP:HB3	1.94	0.50
1:a:98:SER:HB2	1:a:100:GLU:OE1	2.11	0.50
7:i:85:GLU:HA	14:y:577:GLU:HA	1.94	0.50
7:i:414:ILE:HD13	7:i:498:ILE:HG12	1.94	0.50
9:l:210:MET:O	9:l:214:LYS:HG2	2.11	0.50
1:A:782:LYS:HZ2	1:A:787:TYR:HA	1.76	0.50
1:A:941:GLN:HG2	1:A:946:PHE:HD2	1.77	0.50
1:A:998:VAL:HB	1:A:1096:LYS:HE3	1.94	0.50
9:L:157:LEU:HD21	9:L:194:ALA:HB3	1.93	0.50
10:O:593:LYS:HG3	10:O:672:PHE:HA	1.94	0.50
1:a:147:LYS:NZ	5:f:6:ASP:HA	2.27	0.50
10:o:138:GLY:O	10:o:141:ILE:HG22	2.11	0.50
1:A:144:PHE:HB3	5:F:8:ILE:HD12	1.93	0.49
1:A:280:ARG:HB2	2:B:1040:GLN:OE1	2.11	0.49
6:G:99:ILE:HG12	6:G:108:LEU:HD11	1.94	0.49
7:I:414:ILE:HD13	7:I:498:ILE:HG12	1.94	0.49
7:I:494:VAL:O	7:I:498:ILE:HG13	2.12	0.49
10:O:338:LEU:HD23	10:O:338:LEU:O	2.12	0.49
1:a:1264:ARG:NH1	7:i:307:ILE:H	1.98	0.49
13:w:63:SER:OG	13:w:101:ILE:HD11	2.12	0.49
1:A:1181:GLN:H	1:A:1181:GLN:CD	2.20	0.49
2:B:57:LEU:O	2:B:65:ARG:HG3	2.12	0.49
7:I:721:LEU:HD11	7:I:760:LEU:HD21	1.94	0.49
10:O:316:LYS:HA	10:O:327:ARG:NH1	2.27	0.49
15:V:179:ASN:OD1	15:V:252:ILE:HB	2.12	0.49
1:a:83:ILE:HD11	1:a:151:PHE:CD1	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:391:ALA:HB3	1:a:435:GLN:HE21	1.76	0.49
1:a:408:ILE:HA	1:a:455:TYR:HE1	1.78	0.49
2:b:371:HIS:HD2	12:s:250:ARG:NE	2.10	0.49
9:l:135:MET:HE3	9:l:159:THR:OG1	2.11	0.49
10:o:338:LEU:O	10:o:338:LEU:HD23	2.12	0.49
2:B:41:PHE:CZ	2:B:366:PHE:HB3	2.48	0.49
2:B:360:LEU:HA	2:B:364:LYS:HE3	1.94	0.49
2:B:744:ILE:HD13	2:B:1013:ILE:HG22	1.95	0.49
2:B:917:SER:O	2:B:920:ILE:HG12	2.12	0.49
4:E:34:ARG:HH22	13:w:293:ASP:HA	1.73	0.49
13:W:590:PHE:O	13:W:602:LEU:HG	2.13	0.49
1:a:445:LEU:HD12	1:a:551:ASN:HB3	1.93	0.49
5:f:158:TRP:HA	5:f:161:GLN:HG2	1.93	0.49
7:i:730:LYS:NZ	7:i:734:TYR:CE1	2.81	0.49
10:o:707:VAL:O	10:o:840:VAL:HA	2.12	0.49
11:q:97:ILE:O	11:q:102:MET:HE3	2.13	0.49
15:v:226:ASN:HD21	15:v:231:ASN:HB3	1.77	0.49
1:A:1259:LEU:HD23	1:A:1259:LEU:H	1.77	0.49
4:E:144:GLU:H	4:E:183:VAL:CG2	2.22	0.49
6:G:139:ALA:HB2	6:G:158:ILE:HD13	1.93	0.49
7:I:520:GLU:O	7:I:523:LEU:HD22	2.12	0.49
10:O:206:ASP:HB2	10:O:210:LYS:HZ3	1.76	0.49
10:O:729:HIS:HE1	10:O:732:LEU:HD13	1.77	0.49
10:o:221:MET:SD	10:o:221:MET:O	2.70	0.49
1:A:782:LYS:NZ	1:A:784:ALA:HB3	2.28	0.49
2:B:429:HIS:CE1	2:B:431:HIS:HA	2.48	0.49
10:O:57:SER:HB2	10:O:149:ILE:HD11	1.94	0.49
10:O:707:VAL:O	10:O:840:VAL:HA	2.12	0.49
11:Q:78:PHE:HZ	11:Q:102:MET:HE1	1.77	0.49
1:a:317:VAL:O	1:a:317:VAL:HG12	2.12	0.49
1:a:377:ILE:CD1	1:a:391:ALA:HB2	2.42	0.49
1:a:464:ALA:HB1	1:a:568:TYR:HD2	1.77	0.49
2:b:57:LEU:O	2:b:65:ARG:HG3	2.12	0.49
2:b:758:ILE:HD11	2:b:891:GLY:HA3	1.95	0.49
5:f:82:ILE:HA	5:f:85:ILE:HG22	1.94	0.49
6:g:32:TYR:HA	6:g:36:LEU:HB2	1.93	0.49
9:l:103:LEU:HD21	9:l:139:ASP:HB3	1.94	0.49
11:q:78:PHE:HZ	11:q:102:MET:HE1	1.77	0.49
13:w:394:LYS:HA	13:w:397:LEU:CD1	2.43	0.49
13:w:616:LEU:HD23	15:v:681:ASN:OD1	2.13	0.49
1:A:977:ILE:HD11	1:A:1125:THR:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:124:LEU:O	8:J:18:ARG:NH1	2.46	0.49
6:G:9:TYR:HB3	6:G:69:ASN:HB3	1.94	0.49
9:L:210:MET:O	9:L:214:LYS:HG2	2.11	0.49
9:L:232:ILE:HG23	9:L:233:LEU:HG	1.93	0.49
9:L:251:ARG:O	9:L:254:GLU:HG2	2.12	0.49
10:O:620:ASP:HB3	10:O:649:TYR:OH	2.13	0.49
13:W:394:LYS:HA	13:W:397:LEU:CD1	2.43	0.49
15:V:226:ASN:HD21	15:V:231:ASN:HB3	1.77	0.49
1:a:405:SER:O	1:a:408:ILE:HG12	2.13	0.49
2:b:92:TYR:HB3	2:b:158:ILE:HB	1.94	0.49
2:b:917:SER:O	2:b:920:ILE:HG12	2.12	0.49
9:l:40:GLY:HA3	9:l:246:LEU:HD21	1.94	0.49
10:o:316:LYS:HA	10:o:327:ARG:NH1	2.27	0.49
13:w:590:PHE:O	13:w:602:LEU:HG	2.13	0.49
1:A:868:ILE:HG21	1:A:886:GLU:HG3	1.94	0.49
6:G:32:TYR:HA	6:G:36:LEU:HB2	1.93	0.49
7:I:569:GLN:O	7:I:573:LEU:HG	2.13	0.49
9:L:77:LYS:O	9:L:80:GLU:HG2	2.12	0.49
11:Q:97:ILE:O	11:Q:102:MET:HE3	2.13	0.49
13:W:360:MET:HE1	13:W:386:PHE:HB3	1.94	0.49
15:V:108:LYS:HE2	15:v:305:THR:HG23	1.94	0.49
1:a:296:ILE:HG23	1:a:300:GLU:HB2	1.94	0.49
2:b:96:ALA:HB3	2:b:128:ILE:HB	1.93	0.49
7:i:494:VAL:O	7:i:498:ILE:HG13	2.12	0.49
15:v:179:ASN:OD1	15:v:252:ILE:HB	2.12	0.49
15:v:193:ILE:O	15:v:197:VAL:HG13	2.13	0.49
15:v:375:THR:HG23	15:v:377:ASN:H	1.77	0.49
1:A:679:ILE:HG22	1:A:680:LEU:HD12	1.93	0.49
7:I:327:GLU:N	7:I:327:GLU:OE1	2.44	0.49
10:O:495:ASP:OD2	10:O:496:LYS:HD2	2.12	0.49
15:V:108:LYS:HE2	15:v:305:THR:N	2.28	0.49
1:a:1267:ARG:HH22	6:g:22:ASP:HB2	1.76	0.49
2:b:243:VAL:HG23	2:b:244:SER:N	2.28	0.49
2:b:479:GLY:O	2:b:482:VAL:HG13	2.12	0.49
4:e:143:LEU:HD23	4:e:181:ILE:HD11	1.94	0.49
6:g:101:CYS:HB2	6:g:104:LEU:HB3	1.95	0.49
10:o:82:LEU:HD11	10:o:455:ASN:HD22	1.76	0.49
15:v:70:LEU:HD11	15:v:80:ILE:HD12	1.93	0.49
2:B:243:VAL:HG23	2:B:244:SER:N	2.28	0.49
2:B:371:HIS:HD2	12:S:250:ARG:NE	2.10	0.49
11:R:53:VAL:O	11:R:58:ILE:HD12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:679:ILE:HA	1:a:722:LEU:HB3	1.93	0.49
2:b:429:HIS:CE1	2:b:431:HIS:HA	2.48	0.49
7:i:322:GLU:CD	7:i:322:GLU:H	2.20	0.49
9:l:243:ASN:O	9:l:247:GLU:HG2	2.12	0.49
10:o:14:TYR:O	10:o:18:LEU:HD23	2.13	0.49
2:B:420:LYS:HD2	2:B:421:LYS:N	2.28	0.49
15:V:375:THR:HG23	15:V:377:ASN:H	1.77	0.49
1:a:782:LYS:NZ	1:a:784:ALA:HB3	2.28	0.49
1:a:998:VAL:HB	1:a:1096:LYS:HE3	1.94	0.49
2:b:147:TYR:CE2	2:b:149:VAL:HG22	2.48	0.49
1:A:679:ILE:HA	1:A:722:LEU:HB3	1.93	0.48
7:I:698:LYS:HA	7:I:793:PHE:CE2	2.48	0.48
9:L:40:GLY:HA3	9:L:246:LEU:HD21	1.94	0.48
14:Y:512:ASP:O	14:Y:516:ILE:HG12	2.12	0.48
15:V:159:MET:C	15:V:350:MET:HE1	2.38	0.48
15:V:305:THR:N	15:v:108:LYS:HE2	2.28	0.48
2:b:217:LEU:HD11	2:b:267:ILE:HG22	1.95	0.48
2:b:790:LYS:HG3	2:b:791:GLU:H	1.78	0.48
10:o:495:ASP:OD2	10:o:496:LYS:HD2	2.12	0.48
10:o:574:THR:HB	10:o:607:LYS:HD2	1.95	0.48
10:o:729:HIS:HE1	10:o:732:LEU:HD13	1.77	0.48
10:o:786:VAL:HG13	10:o:791:ILE:HD11	1.95	0.48
14:y:512:ASP:O	14:y:516:ILE:HG12	2.12	0.48
14:y:543:GLU:HG2	14:y:544:LYS:H	1.77	0.48
1:A:226:MET:HE1	7:I:396:LEU:HD22	1.95	0.48
1:A:1014:GLN:HG2	1:A:1016:ARG:HG2	1.95	0.48
2:B:496:ASN:O	2:B:496:ASN:ND2	2.40	0.48
3:C:242:SER:HA	3:C:252:PHE:CD2	2.46	0.48
10:O:103:VAL:HG13	10:O:128:ARG:HH11	1.79	0.48
10:O:574:THR:HB	10:O:607:LYS:HD2	1.95	0.48
2:b:884:THR:HB	2:b:1016:LEU:HD11	1.95	0.48
6:g:9:TYR:HB3	6:g:69:ASN:HB3	1.94	0.48
9:l:77:LYS:O	9:l:80:GLU:HG2	2.12	0.48
1:A:405:SER:O	1:A:408:ILE:HG12	2.13	0.48
1:A:408:ILE:HA	1:A:455:TYR:HE1	1.78	0.48
2:B:92:TYR:HB3	2:B:158:ILE:HB	1.94	0.48
4:E:55:ASP:HB3	4:E:57:MET:HE2	1.96	0.48
7:I:730:LYS:NZ	7:I:734:TYR:CE1	2.81	0.48
14:Y:247:GLY:HA2	14:Y:251:PHE:O	2.13	0.48
14:Y:543:GLU:HG2	14:Y:544:LYS:H	1.77	0.48
2:b:420:LYS:HD2	2:b:421:LYS:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:593:LYS:HG3	10:o:672:PHE:HA	1.94	0.48
10:o:726:PHE:CD1	10:o:832:LEU:HD21	2.49	0.48
11:r:43:HIS:CE1	11:r:109:LYS:HE2	2.48	0.48
11:r:53:VAL:O	11:r:58:ILE:HD12	2.13	0.48
13:w:175:LEU:HD21	13:w:212:LEU:HD21	1.96	0.48
13:w:526:MET:HG3	13:w:526:MET:O	2.13	0.48
1:A:840:PHE:HB3	1:A:915:LYS:NZ	2.28	0.48
1:A:937:LYS:HA	1:A:940:GLN:NE2	2.28	0.48
1:A:979:THR:HA	1:A:1125:THR:HA	1.95	0.48
2:B:217:LEU:HD11	2:B:267:ILE:HG22	1.95	0.48
2:B:240:LEU:HB3	2:B:324:ASP:HB2	1.96	0.48
6:G:51:ARG:O	6:G:52:GLU:HG3	2.13	0.48
10:O:14:TYR:O	10:O:18:LEU:HD23	2.13	0.48
10:O:67:THR:HG22	10:O:77:ARG:HG2	1.95	0.48
1:a:912:PHE:O	1:a:916:LEU:HG	2.13	0.48
1:a:937:LYS:HA	1:a:940:GLN:NE2	2.28	0.48
2:b:41:PHE:CZ	2:b:366:PHE:HB3	2.48	0.48
2:b:41:PHE:HD1	2:b:45:ARG:HD2	1.78	0.48
3:c:124:LEU:O	8:j:18:ARG:NH1	2.46	0.48
7:i:709:PHE:C	7:i:710:ARG:HD2	2.37	0.48
14:y:5:HIS:CD2	14:y:228:GLY:HA3	2.48	0.48
15:v:94:VAL:HG13	15:v:109:THR:HA	1.96	0.48
1:A:1267:ARG:HH22	6:G:22:ASP:HB2	1.76	0.48
2:B:147:TYR:CE2	2:B:149:VAL:HG22	2.48	0.48
2:B:259:GLU:HA	2:B:262:TYR:CD2	2.48	0.48
2:B:790:LYS:HG3	2:B:791:GLU:H	1.78	0.48
2:B:878:ILE:HG22	2:B:879:LEU:N	2.29	0.48
7:I:493:ILE:HA	7:I:496:LEU:HG	1.96	0.48
15:V:193:ILE:O	15:V:197:VAL:HG13	2.13	0.48
2:b:259:GLU:HA	2:b:262:TYR:CD2	2.48	0.48
7:i:569:GLN:O	7:i:573:LEU:HG	2.13	0.48
7:i:698:LYS:HA	7:i:793:PHE:CE2	2.48	0.48
9:l:251:ARG:O	9:l:254:GLU:HG2	2.12	0.48
15:v:77:LYS:HD3	15:v:146:TYR:OH	2.13	0.48
15:v:159:MET:C	15:v:350:MET:HE1	2.38	0.48
15:v:163:VAL:O	15:v:166:GLN:HG3	2.13	0.48
1:A:1017:TYR:HB2	1:A:1073:LEU:HB2	1.96	0.48
1:A:1087:MET:HE1	2:B:262:TYR:CG	2.49	0.48
4:E:143:LEU:HD23	4:E:181:ILE:HD11	1.94	0.48
11:R:43:HIS:CE1	11:R:109:LYS:HE2	2.48	0.48
13:W:140:ILE:HA	13:W:143:ASN:HD21	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:W:616:LEU:HD23	15:V:681:ASN:OD1	2.13	0.48
14:Y:5:HIS:CD2	14:Y:228:GLY:HA3	2.48	0.48
15:V:655:VAL:HG12	15:V:697:LEU:HD11	1.96	0.48
1:a:840:PHE:HB3	1:a:915:LYS:NZ	2.28	0.48
2:b:744:ILE:HD13	2:b:1013:ILE:HG22	1.95	0.48
13:w:213:LYS:O	13:w:217:LYS:HE2	2.14	0.48
13:w:360:MET:HE1	13:w:386:PHE:HB3	1.94	0.48
1:A:759:ILE:HG13	1:A:760:ILE:N	2.29	0.48
1:A:959:LEU:HG	1:A:1171:THR:HA	1.96	0.48
1:a:1014:GLN:HG2	1:a:1016:ARG:HG2	1.95	0.48
1:a:1017:TYR:HB2	1:a:1073:LEU:HB2	1.96	0.48
2:B:758:ILE:HD11	2:B:891:GLY:HA3	1.95	0.48
6:G:101:CYS:HB2	6:G:104:LEU:HB3	1.95	0.48
15:V:163:VAL:O	15:V:166:GLN:HG3	2.13	0.48
1:a:979:THR:HA	1:a:1125:THR:HA	1.95	0.48
7:i:493:ILE:HA	7:i:496:LEU:HG	1.96	0.48
1:A:528:VAL:HA	1:A:532:PHE:CD2	2.48	0.48
2:B:532:ILE:HG13	2:B:532:ILE:O	2.14	0.48
2:B:790:LYS:HG3	2:B:791:GLU:N	2.29	0.48
2:B:884:THR:HB	2:B:1016:LEU:HD11	1.95	0.48
2:B:884:THR:O	2:B:1016:LEU:HG	2.13	0.48
13:W:526:MET:HG3	13:W:526:MET:O	2.13	0.48
2:b:779:GLN:HA	2:b:867:VAL:O	2.14	0.48
2:b:884:THR:O	2:b:1016:LEU:HG	2.13	0.48
5:f:115:HIS:HA	5:f:118:ILE:HG22	1.96	0.48
10:o:57:SER:HB2	10:o:149:ILE:HD11	1.94	0.48
10:o:103:VAL:HG13	10:o:128:ARG:HH11	1.79	0.48
10:o:620:ASP:HB3	10:o:649:TYR:OH	2.13	0.48
14:y:26:SER:HB2	14:y:100:ARG:HA	1.96	0.48
15:v:678:TRP:O	15:v:682:ILE:HG12	2.14	0.48
1:A:1286:PHE:HB2	10:O:221:MET:SD	2.54	0.48
2:B:8:GLU:CD	7:I:606:PHE:HB2	2.39	0.48
4:E:120:GLU:HA	4:E:123:ILE:HD12	1.96	0.48
10:O:813:ASN:HA	10:O:816:GLU:CD	2.39	0.48
13:W:296:PHE:HB2	4:e:34:ARG:HH11	1.79	0.48
15:V:77:LYS:HD3	15:V:146:TYR:OH	2.13	0.48
1:a:722:LEU:HG	2:b:926:ILE:HD12	1.96	0.48
1:a:759:ILE:HG13	1:a:760:ILE:N	2.29	0.48
4:e:55:ASP:HB3	4:e:57:MET:HE2	1.96	0.48
6:g:51:ARG:O	6:g:52:GLU:HG3	2.13	0.48
13:w:589:HIS:HA	13:w:602:LEU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:83:ILE:CB	5:F:10:TYR:HE1	2.26	0.47
1:A:912:PHE:O	1:A:916:LEU:HG	2.13	0.47
2:B:474:ASP:OD2	2:B:672:VAL:HG11	2.14	0.47
11:R:121:HIS:CD2	11:R:129:LEU:HB2	2.49	0.47
12:S:20:THR:O	12:S:24:ILE:HG12	2.13	0.47
1:a:528:VAL:HA	1:a:532:PHE:CD2	2.48	0.47
1:a:928:ILE:O	1:a:932:GLN:OE1	2.32	0.47
1:a:1090:LEU:HB2	1:a:1091:PRO:HD3	1.96	0.47
13:w:285:GLN:O	13:w:289:MET:HE3	2.14	0.47
14:y:85:VAL:HB	14:y:89:LEU:HD11	1.96	0.47
1:A:578:PHE:N	2:B:1009:PHE:HZ	2.07	0.47
13:W:175:LEU:HD21	13:W:212:LEU:HD21	1.96	0.47
14:Y:233:TYR:HB3	14:Y:537:GLU:OE1	2.14	0.47
15:V:30:TYR:HE1	13:w:115:ASN:ND2	2.12	0.47
1:a:782:LYS:HZ2	1:a:787:TYR:HA	1.78	0.47
1:a:1051:ILE:HD12	1:a:1082:ASN:HB3	1.96	0.47
1:a:1052:VAL:HG21	1:a:1055:TRP:HB3	1.96	0.47
1:a:1087:MET:HE1	2:b:262:TYR:CG	2.49	0.47
12:s:41:ILE:HG13	12:s:117:PHE:HZ	1.79	0.47
13:w:140:ILE:HA	13:w:143:ASN:HD21	1.79	0.47
14:y:247:GLY:HA2	14:y:251:PHE:O	2.13	0.47
1:A:209:TRP:CD1	1:A:210:ILE:HG12	2.49	0.47
1:A:1051:ILE:HD12	1:A:1082:ASN:HB3	1.96	0.47
2:B:41:PHE:HD1	2:B:45:ARG:HD2	1.78	0.47
11:R:58:ILE:HG21	11:R:123:PHE:HZ	1.75	0.47
15:V:94:VAL:HG13	15:V:109:THR:HA	1.96	0.47
2:b:8:GLU:CD	7:i:606:PHE:HB2	2.39	0.47
10:o:67:THR:HG22	10:o:77:ARG:HG2	1.95	0.47
10:o:158:ILE:HG23	10:o:191:LEU:HD11	1.96	0.47
10:o:164:TYR:OH	10:o:478:LYS:HD2	2.14	0.47
1:A:1021:ILE:CG2	1:A:1069:PHE:HB2	2.45	0.47
1:A:1090:LEU:HB2	1:A:1091:PRO:HD3	1.96	0.47
2:B:779:GLN:HA	2:B:867:VAL:O	2.14	0.47
3:C:259:MET:HE1	3:C:269:SER:O	2.15	0.47
10:O:158:ILE:HG23	10:O:191:LEU:HD11	1.96	0.47
10:O:726:PHE:CD1	10:O:832:LEU:HD21	2.49	0.47
11:Q:46:GLN:HA	11:Q:65:ARG:HG3	1.94	0.47
13:W:313:VAL:HG23	13:W:358:TYR:CE1	2.49	0.47
14:Y:85:VAL:HB	14:Y:89:LEU:HD11	1.96	0.47
2:b:240:LEU:HB3	2:b:324:ASP:HB2	1.96	0.47
7:i:125:GLN:HG3	7:i:127:LYS:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:115:HIS:HA	5:F:118:ILE:HG22	1.96	0.47
13:W:307:LEU:HD11	13:W:314:LEU:HD12	1.96	0.47
2:b:134:ILE:HD13	2:b:156:VAL:HG23	1.96	0.47
2:b:790:LYS:HG3	2:b:791:GLU:N	2.29	0.47
4:e:29:ARG:HH12	4:e:108:ASP:N	2.11	0.47
10:o:813:ASN:HA	10:o:816:GLU:CD	2.39	0.47
11:q:46:GLN:HA	11:q:65:ARG:HG3	1.94	0.47
12:s:20:THR:O	12:s:24:ILE:HG12	2.13	0.47
15:v:388:LEU:HD23	15:v:388:LEU:H	1.79	0.47
1:A:1052:VAL:HG21	1:A:1055:TRP:HB3	1.96	0.47
9:L:37:LEU:HD12	10:O:579:MET:HE2	1.97	0.47
10:O:583:LYS:NZ	10:O:612:GLU:HG2	2.29	0.47
10:O:786:VAL:HG13	10:O:791:ILE:HD11	1.95	0.47
2:b:41:PHE:CZ	2:b:46:LEU:HD21	2.50	0.47
2:b:400:HIS:HD2	7:i:416:SER:OG	1.97	0.47
10:o:571:TYR:O	10:o:575:LEU:HD23	2.15	0.47
15:v:655:VAL:HG12	15:v:697:LEU:HD11	1.96	0.47
1:A:296:ILE:HG23	1:A:300:GLU:HB2	1.94	0.47
1:A:872:ARG:HH12	1:A:882:ILE:H	1.63	0.47
2:B:138:ASN:O	2:B:139:LYS:HE2	2.15	0.47
4:E:16:LYS:HB3	4:E:16:LYS:HE3	1.79	0.47
4:E:28:ASN:HA	4:E:110:PHE:CE2	2.49	0.47
4:E:34:ARG:HH11	13:w:296:PHE:HB2	1.79	0.47
7:I:543:LYS:HA	7:I:543:LYS:HE2	1.96	0.47
7:I:787:GLU:O	7:I:791:ILE:HG12	2.15	0.47
14:Y:26:SER:HB2	14:Y:100:ARG:HA	1.96	0.47
1:a:209:TRP:CD1	1:a:210:ILE:HG12	2.49	0.47
1:a:226:MET:HE1	7:i:396:LEU:HD22	1.95	0.47
1:a:1165:CYS:HA	1:a:1168:MET:HE2	1.97	0.47
1:a:1286:PHE:HB2	10:o:221:MET:SD	2.54	0.47
2:b:168:ILE:HG22	2:b:440:ILE:O	2.15	0.47
2:b:474:ASP:OD2	2:b:672:VAL:HG11	2.14	0.47
2:b:532:ILE:HG13	2:b:532:ILE:O	2.14	0.47
2:b:878:ILE:HG22	2:b:879:LEU:N	2.29	0.47
4:e:28:ASN:HA	4:e:110:PHE:CE2	2.49	0.47
7:i:787:GLU:O	7:i:791:ILE:HG12	2.15	0.47
11:r:38:LEU:HB3	11:r:44:ILE:HD11	1.97	0.47
11:r:121:HIS:CD2	11:r:129:LEU:HB2	2.49	0.47
13:w:553:ASN:HA	13:w:595:LYS:HE3	1.97	0.47
14:y:53:LEU:HB2	14:y:182:LEU:HD13	1.96	0.47
14:y:233:TYR:HB3	14:y:537:GLU:OE1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:v:159:MET:O	15:v:162:GLU:HG2	2.15	0.47
1:A:488:ARG:HD2	3:C:274:TYR:CE2	2.50	0.47
2:B:41:PHE:CZ	2:B:46:LEU:HD21	2.50	0.47
3:C:38:GLY:HA3	3:C:53:LEU:HD22	1.97	0.47
4:E:57:MET:HG3	13:w:393:MET:SD	2.55	0.47
11:R:38:LEU:HB3	11:R:44:ILE:HD11	1.97	0.47
13:W:115:ASN:ND2	15:v:30:TYR:HE1	2.12	0.47
13:W:589:HIS:HA	13:W:602:LEU:O	2.14	0.47
14:Y:53:LEU:HB2	14:Y:182:LEU:HD13	1.96	0.47
1:a:1106:ILE:HG23	1:a:1124:MET:HE1	1.97	0.47
7:i:543:LYS:HE2	7:i:543:LYS:HA	1.96	0.47
10:o:583:LYS:NZ	10:o:612:GLU:HG2	2.29	0.47
13:w:217:LYS:HA	13:w:526:MET:CE	2.45	0.47
1:A:924:THR:O	1:A:926:ILE:HD12	2.15	0.47
1:A:928:ILE:O	1:A:932:GLN:OE1	2.32	0.47
1:A:1041:MET:HE1	1:A:1095:ASN:C	2.40	0.47
1:A:1098:LYS:HZ1	12:S:56:ILE:HG23	1.80	0.47
1:A:1131:LEU:O	1:A:1131:LEU:HD23	2.14	0.47
2:B:168:ILE:HG22	2:B:440:ILE:O	2.15	0.47
2:B:400:HIS:HD2	7:I:416:SER:OG	1.97	0.47
2:B:1118:ILE:HD11	2:B:1142:PHE:CZ	2.50	0.47
13:W:213:LYS:O	13:W:217:LYS:HE2	2.14	0.47
15:V:388:LEU:HD23	15:V:388:LEU:H	1.79	0.47
1:a:959:LEU:HG	1:a:1171:THR:HA	1.96	0.47
1:a:1021:ILE:CG2	1:a:1069:PHE:HB2	2.45	0.47
1:a:1031:ALA:O	1:a:1033:ILE:HG23	2.15	0.47
2:b:496:ASN:O	2:b:496:ASN:ND2	2.40	0.47
3:c:265:PHE:HE2	3:c:287:PHE:CE2	2.33	0.47
13:w:313:VAL:HG23	13:w:358:TYR:CE1	2.49	0.47
15:v:33:GLU:HA	15:v:38:TYR:CD2	2.50	0.47
10:O:729:HIS:ND1	10:O:732:LEU:HD22	2.30	0.47
1:a:872:ARG:HH12	1:a:882:ILE:H	1.63	0.47
2:b:568:ILE:HD11	2:b:578:ILE:HD11	1.97	0.47
2:b:1118:ILE:HD11	2:b:1142:PHE:CZ	2.50	0.47
4:e:120:GLU:HA	4:e:123:ILE:HD12	1.96	0.47
7:i:660:VAL:HG22	7:i:697:LEU:HA	1.96	0.47
10:o:729:HIS:ND1	10:o:732:LEU:HD22	2.30	0.47
10:o:771:ILE:HA	10:o:774:VAL:HG12	1.97	0.47
2:B:304:ILE:HG22	2:B:308:LYS:HZ3	1.76	0.46
13:W:285:GLN:O	13:W:289:MET:HE3	2.14	0.46
14:Y:582:TRP:HB2	14:Y:627:LEU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:138:ASN:O	2:b:139:LYS:HE2	2.15	0.46
7:i:183:ARG:HD2	7:i:184:PHE:N	2.30	0.46
14:y:582:TRP:HB2	14:y:627:LEU:O	2.15	0.46
1:A:1200:ASN:C	1:A:1201:LYS:HD2	2.41	0.46
2:B:134:ILE:HD13	2:B:156:VAL:HG23	1.96	0.46
2:B:860:GLU:HB2	2:B:866:LYS:HG2	1.97	0.46
7:I:125:GLN:HG3	7:I:127:LYS:H	1.79	0.46
8:J:5:LEU:HD23	8:J:5:LEU:H	1.79	0.46
14:Y:48:MET:HE3	14:Y:50:SER:O	2.16	0.46
2:B:1156:VAL:HG21	5:F:75:ARG:HG3	1.98	0.46
7:I:698:LYS:HA	7:I:793:PHE:HE2	1.80	0.46
8:J:20:LYS:O	8:J:21:LEU:HB2	2.16	0.46
12:S:41:ILE:HG13	12:S:117:PHE:HZ	1.79	0.46
15:V:678:TRP:O	15:V:682:ILE:HG12	2.14	0.46
1:a:638:THR:O	1:a:642:ILE:HG12	2.16	0.46
1:a:763:MET:HE2	1:a:931:ALA:HB2	1.96	0.46
1:a:1131:LEU:O	1:a:1131:LEU:HD23	2.14	0.46
2:b:202:PRO:HG2	2:b:204:ARG:NH1	2.24	0.46
3:c:124:LEU:HD22	8:j:23:ILE:HD11	1.96	0.46
1:A:722:LEU:HG	2:B:926:ILE:HD12	1.96	0.46
1:A:805:GLU:HA	1:A:810:TYR:CG	2.51	0.46
1:A:929:ILE:HA	1:A:932:GLN:OE1	2.15	0.46
1:A:1106:ILE:HG23	1:A:1124:MET:HE1	1.97	0.46
2:B:371:HIS:O	2:B:375:GLU:OE1	2.33	0.46
3:C:124:LEU:HD22	8:J:23:ILE:HD11	1.96	0.46
6:G:54:VAL:HG12	7:I:300:LYS:HA	1.98	0.46
10:O:164:TYR:OH	10:O:478:LYS:HD2	2.14	0.46
10:O:571:TYR:O	10:O:575:LEU:HD23	2.15	0.46
15:V:605:PHE:CE2	15:V:607:LYS:HB3	2.50	0.46
1:a:1041:MET:HE1	1:a:1095:ASN:C	2.40	0.46
2:b:184:LYS:HG3	2:b:185:PRO:HD2	1.97	0.46
2:b:371:HIS:O	2:b:375:GLU:OE1	2.33	0.46
3:c:259:MET:HE1	3:c:269:SER:O	2.15	0.46
6:g:141:LEU:HD13	6:g:154:PHE:HB3	1.97	0.46
10:o:480:ILE:HG22	10:o:497:THR:OG1	2.16	0.46
15:v:245:SER:HB2	15:v:250:VAL:HG23	1.97	0.46
1:A:1101:LYS:HE2	1:A:1102:PHE:CZ	2.50	0.46
2:B:184:LYS:HG3	2:B:185:PRO:HD2	1.97	0.46
9:L:132:ASP:OD1	9:L:134:LYS:HE3	2.16	0.46
10:O:307:ASP:C	10:O:309:ASN:H	2.23	0.46
13:W:115:ASN:HD22	13:W:120:ASN:HB3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:Y:351:SER:HB3	14:Y:354:ASP:HB2	1.98	0.46
1:a:83:ILE:CB	5:f:10:TYR:HE1	2.26	0.46
1:a:387:TYR:HE1	1:a:444:LEU:HB3	1.81	0.46
1:a:997:PHE:CE1	1:a:1095:ASN:HB2	2.51	0.46
2:b:1150:TYR:HA	5:f:136:LEU:HD11	1.97	0.46
7:i:764:PHE:CE2	7:i:768:LEU:HD11	2.51	0.46
8:j:5:LEU:HD23	8:j:5:LEU:H	1.79	0.46
10:o:307:ASP:C	10:o:309:ASN:H	2.23	0.46
12:s:91:LYS:HE3	12:s:92:PRO:HD2	1.98	0.46
13:w:584:ASP:C	13:w:586:VAL:H	2.23	0.46
14:y:48:MET:HE3	14:y:50:SER:O	2.16	0.46
1:A:387:TYR:HE1	1:A:444:LEU:HB3	1.81	0.46
1:A:763:MET:HE2	1:A:931:ALA:HB2	1.96	0.46
2:B:568:ILE:HD11	2:B:578:ILE:HD11	1.97	0.46
4:E:85:THR:O	4:E:96:PRO:HA	2.15	0.46
13:W:52:THR:HG23	13:W:81:PHE:CE2	2.50	0.46
15:V:666:VAL:HG11	15:V:674:PHE:CE2	2.51	0.46
1:a:488:ARG:HD2	3:c:274:TYR:CE2	2.50	0.46
1:a:805:GLU:HA	1:a:810:TYR:CG	2.51	0.46
1:a:935:SER:HA	1:a:938:PHE:CE2	2.51	0.46
5:f:88:GLU:O	5:f:92:LEU:HD23	2.16	0.46
6:g:54:VAL:HG12	7:i:300:LYS:HA	1.98	0.46
13:w:115:ASN:HD22	13:w:120:ASN:HB3	1.81	0.46
14:y:53:LEU:HD13	14:y:232:SER:HB3	1.98	0.46
5:F:88:GLU:O	5:F:92:LEU:HD23	2.16	0.46
5:F:130:ILE:CG2	5:F:132:LYS:HE3	2.46	0.46
6:G:141:LEU:HD13	6:G:154:PHE:HB3	1.97	0.46
7:I:183:ARG:HD2	7:I:184:PHE:N	2.30	0.46
7:I:764:PHE:CE2	7:I:768:LEU:HD11	2.51	0.46
10:O:426:TYR:CZ	10:O:489:ILE:HD11	2.51	0.46
10:O:480:ILE:HG22	10:O:497:THR:OG1	2.16	0.46
10:O:571:TYR:HD1	10:O:814:PHE:CZ	2.34	0.46
10:O:771:ILE:HA	10:O:774:VAL:HG12	1.97	0.46
11:R:75:PHE:HA	11:R:123:PHE:CD2	2.51	0.46
13:W:259:MET:HG3	13:W:263:ARG:NH2	2.31	0.46
15:V:159:MET:O	15:V:162:GLU:HG2	2.15	0.46
1:a:1266:GLU:HA	6:g:21:LEU:HD12	1.97	0.46
7:i:698:LYS:HA	7:i:793:PHE:HE2	1.80	0.46
1:A:280:ARG:HD3	2:B:1040:GLN:NE2	2.31	0.46
2:B:228:PHE:HD2	2:B:230:THR:H	1.63	0.46
12:S:91:LYS:HE3	12:S:92:PRO:HD2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:W:393:MET:SD	4:e:57:MET:HG3	2.55	0.46
15:V:33:GLU:HA	15:V:38:TYR:CD2	2.50	0.46
15:V:670:ALA:O	15:V:673:ARG:HD3	2.16	0.46
1:a:276:TYR:CZ	2:b:1038:ILE:HB	2.51	0.46
1:a:1101:LYS:HE2	1:a:1102:PHE:CZ	2.50	0.46
5:f:97:ARG:HE	5:f:97:ARG:CA	2.26	0.46
9:l:37:LEU:HD12	10:o:579:MET:HE2	1.97	0.46
10:o:240:PHE:O	10:o:391:PHE:HA	2.16	0.46
11:q:1:MET:HE1	11:q:30:LEU:CB	2.46	0.46
13:w:52:THR:HG23	13:w:81:PHE:CE2	2.50	0.46
13:w:389:VAL:HB	13:w:420:SER:HA	1.98	0.46
2:B:496:ASN:C	2:B:496:ASN:HD22	2.12	0.46
6:G:46:LYS:HE2	6:G:46:LYS:HA	1.98	0.46
7:I:2:ASP:HA	7:I:46:ASN:OD1	2.16	0.46
10:O:259:THR:HB	10:O:373:GLN:HG3	1.98	0.46
11:Q:1:MET:HE1	11:Q:30:LEU:CB	2.46	0.46
13:W:584:ASP:C	13:W:586:VAL:H	2.23	0.46
1:a:1138:ASP:HB2	4:e:4:TYR:CE1	2.51	0.46
1:a:1200:ASN:C	1:a:1201:LYS:HD2	2.41	0.46
2:b:196:SER:HB2	2:b:203:THR:HG23	1.98	0.46
2:b:618:ASP:HA	2:b:621:LYS:HG2	1.98	0.46
3:c:38:GLY:HA3	3:c:53:LEU:HD22	1.97	0.46
4:e:85:THR:O	4:e:96:PRO:HA	2.15	0.46
10:o:426:TYR:CZ	10:o:489:ILE:HD11	2.51	0.46
10:o:571:TYR:HD1	10:o:814:PHE:CZ	2.34	0.46
1:A:80:SER:HA	5:F:10:TYR:CE2	2.51	0.46
1:A:1264:ARG:NH1	7:I:307:ILE:HG13	2.30	0.46
2:B:1058:ARG:O	2:B:1062:ILE:HG12	2.16	0.46
5:F:97:ARG:HE	5:F:97:ARG:CA	2.26	0.46
7:I:660:VAL:HG22	7:I:697:LEU:HA	1.96	0.46
13:W:77:ILE:HG23	13:W:81:PHE:CE1	2.51	0.46
13:W:589:HIS:N	13:W:602:LEU:HB2	2.31	0.46
15:V:214:HIS:O	15:V:647:LYS:HD2	2.16	0.46
1:a:83:ILE:HB	5:f:10:TYR:OH	2.16	0.46
1:a:224:LEU:HG	1:a:247:TYR:CE1	2.51	0.46
1:a:290:ILE:HD12	1:a:402:ILE:HB	1.98	0.46
1:a:719:LEU:HD23	1:a:730:GLN:HE22	1.80	0.46
1:a:815:ALA:O	1:a:819:LYS:HG2	2.16	0.46
2:b:860:GLU:HB2	2:b:866:LYS:HG2	1.97	0.46
2:b:1058:ARG:O	2:b:1062:ILE:HG12	2.16	0.46
13:w:77:ILE:HG23	13:w:81:PHE:CE1	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:v:108:LYS:HE3	15:v:108:LYS:HB3	1.73	0.46
1:A:276:TYR:CZ	2:B:1038:ILE:HB	2.51	0.45
1:A:719:LEU:HD23	1:A:730:GLN:HE22	1.80	0.45
2:B:1150:TYR:HA	5:F:136:LEU:HD11	1.97	0.45
7:I:121:MET:HB3	7:I:235:VAL:HG21	1.98	0.45
13:W:553:ASN:HA	13:W:595:LYS:HE3	1.97	0.45
14:Y:257:LEU:HD12	14:Y:496:HIS:CE1	2.51	0.45
2:b:228:PHE:HD2	2:b:230:THR:H	1.63	0.45
9:l:4:ILE:HD13	9:l:254:GLU:HG3	1.98	0.45
13:w:67:LYS:HA	13:w:100:ASN:HB3	1.98	0.45
15:v:491:ILE:HD12	15:v:491:ILE:H	1.81	0.45
15:v:666:VAL:HG11	15:v:674:PHE:CE2	2.51	0.45
15:v:670:ALA:O	15:v:673:ARG:HD3	2.16	0.45
1:A:638:THR:O	1:A:642:ILE:HG12	2.16	0.45
1:A:815:ALA:O	1:A:819:LYS:HG2	2.16	0.45
1:A:957:GLN:HE22	1:A:977:ILE:HG12	1.82	0.45
1:A:1165:CYS:HA	1:A:1168:MET:HE2	1.97	0.45
3:C:265:PHE:HE2	3:C:287:PHE:CE2	2.33	0.45
9:L:4:ILE:HD13	9:L:254:GLU:HG3	1.98	0.45
10:O:433:LYS:HG3	10:O:435:PHE:CD2	2.51	0.45
10:O:548:ARG:O	10:O:548:ARG:HG3	2.16	0.45
1:a:834:LYS:HE3	1:a:834:LYS:HB3	1.72	0.45
1:a:929:ILE:HA	1:a:932:GLN:OE1	2.15	0.45
1:a:1264:ARG:NH1	7:i:307:ILE:HG13	2.30	0.45
2:b:1086:VAL:HA	2:b:1093:ILE:HD12	1.98	0.45
2:b:1156:VAL:HG21	5:f:75:ARG:HG3	1.98	0.45
9:l:132:ASP:OD1	9:l:134:LYS:HE3	2.16	0.45
10:o:206:ASP:HB2	10:o:210:LYS:HZ3	1.82	0.45
14:y:351:SER:HB3	14:y:354:ASP:HB2	1.98	0.45
15:v:214:HIS:O	15:v:647:LYS:HD2	2.16	0.45
15:v:605:PHE:CE2	15:v:607:LYS:HB3	2.50	0.45
13:W:425:SER:O	13:W:428:TYR:HB3	2.16	0.45
15:V:245:SER:HB2	15:V:250:VAL:HG23	1.97	0.45
1:a:164:LEU:HD23	7:i:195:CYS:SG	2.57	0.45
1:a:280:ARG:CZ	1:a:282:LYS:HE3	2.46	0.45
6:g:46:LYS:HE2	6:g:46:LYS:HA	1.98	0.45
10:o:213:THR:O	10:o:217:ARG:HG3	2.17	0.45
10:o:279:PHE:HB2	10:o:282:LEU:HD23	1.98	0.45
11:r:75:PHE:HA	11:r:123:PHE:CE2	2.51	0.45
13:w:307:LEU:HD11	13:w:314:LEU:HD12	1.96	0.45
13:w:425:SER:O	13:w:428:TYR:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:y:257:LEU:HD12	14:y:496:HIS:CE1	2.51	0.45
1:A:1161:ARG:HD3	1:A:1191:CYS:SG	2.56	0.45
4:E:21:ARG:NH2	13:w:394:LYS:H	2.15	0.45
7:I:291:ILE:HA	7:I:293:ARG:NH2	2.32	0.45
10:O:465:HIS:HB2	10:O:470:ILE:HB	1.98	0.45
13:W:275:MET:HE2	13:W:501:PHE:CD2	2.52	0.45
1:a:328:LEU:HD22	1:a:333:GLN:HG2	1.98	0.45
7:i:2:ASP:HA	7:i:46:ASN:OD1	2.16	0.45
10:o:465:HIS:HB2	10:o:470:ILE:HB	1.98	0.45
11:q:50:TYR:CD1	11:q:102:MET:HG3	2.51	0.45
11:r:75:PHE:HA	11:r:123:PHE:CD2	2.51	0.45
14:y:487:PRO:HG2	14:y:490:ARG:NH2	2.32	0.45
1:A:280:ARG:CZ	1:A:282:LYS:HE3	2.46	0.45
1:A:997:PHE:CE1	1:A:1095:ASN:HB2	2.51	0.45
2:B:979:LYS:HE2	2:B:979:LYS:HB2	1.85	0.45
7:I:280:SER:HB3	7:I:283:LEU:HB3	1.99	0.45
10:O:213:THR:O	10:O:217:ARG:HG3	2.17	0.45
11:Q:50:TYR:CD1	11:Q:102:MET:HG3	2.51	0.45
11:R:75:PHE:HA	11:R:123:PHE:CE2	2.51	0.45
13:W:217:LYS:HA	13:W:526:MET:CE	2.45	0.45
1:a:934:LEU:HD22	1:a:1186:LEU:HD11	1.98	0.45
1:a:1098:LYS:HA	12:s:58:ASN:OD1	2.17	0.45
7:i:8:LEU:HD23	7:i:74:VAL:HA	1.99	0.45
7:i:710:ARG:HG2	7:i:716:PRO:HB3	1.99	0.45
10:o:423:PHE:CD2	10:o:443:LYS:HE3	2.52	0.45
10:o:788:PHE:HB3	10:o:833:LEU:HD12	1.98	0.45
14:y:580:ASN:HB3	14:y:594:ARG:HD2	1.99	0.45
1:A:164:LEU:HD23	7:I:195:CYS:SG	2.57	0.45
1:A:209:TRP:CH2	7:I:382:LYS:HB2	2.52	0.45
1:A:373:TYR:HA	1:A:393:SER:OG	2.17	0.45
1:A:1138:ASP:HB2	4:E:4:TYR:CE1	2.51	0.45
1:A:1266:GLU:HA	6:G:21:LEU:HD12	1.97	0.45
5:F:63:GLY:HA2	5:F:66:ILE:HG12	1.98	0.45
13:W:450:GLN:O	13:W:454:ARG:HG2	2.16	0.45
14:Y:6:ALA:HA	14:Y:9:ILE:HG12	1.99	0.45
14:Y:60:GLY:O	14:Y:63:MET:HG3	2.17	0.45
15:V:200:LEU:HD11	15:V:261:LEU:HD11	1.99	0.45
1:a:280:ARG:HD3	2:b:1040:GLN:NE2	2.31	0.45
1:a:882:ILE:O	1:a:882:ILE:HG22	2.16	0.45
2:b:876:ARG:O	2:b:878:ILE:HG12	2.17	0.45
8:j:20:LYS:O	8:j:21:LEU:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:217:ARG:HG2	10:o:223:SER:HA	1.98	0.45
13:w:589:HIS:N	13:w:602:LEU:HB2	2.31	0.45
1:A:290:ILE:HD12	1:A:402:ILE:HB	1.98	0.45
2:B:196:SER:HB2	2:B:203:THR:HG23	1.98	0.45
10:O:788:PHE:HB3	10:O:833:LEU:HD12	1.98	0.45
13:W:394:LYS:N	4:e:21:ARG:NH2	2.65	0.45
15:V:250:VAL:HG13	15:V:252:ILE:HD11	1.99	0.45
1:a:1019:VAL:HB	1:a:1071:VAL:HB	1.99	0.45
1:a:1182:PRO:O	1:a:1185:LEU:HG	2.17	0.45
2:b:404:THR:HB	7:i:415:MET:HE1	1.98	0.45
2:b:477:GLU:HA	2:b:482:VAL:HG12	1.97	0.45
5:f:130:ILE:CG2	5:f:132:LYS:HE3	2.46	0.45
7:i:121:MET:HB3	7:i:235:VAL:HG21	1.98	0.45
7:i:208:ASN:HB2	7:i:229:PHE:CE1	2.52	0.45
10:o:76:ILE:HG22	10:o:104:TRP:CE3	2.52	0.45
10:o:594:VAL:HG22	10:o:674:ILE:HB	1.99	0.45
14:y:6:ALA:HA	14:y:9:ILE:HG12	1.99	0.45
14:y:60:GLY:O	14:y:63:MET:HG3	2.17	0.45
1:A:224:LEU:HG	1:A:247:TYR:CE1	2.51	0.45
1:A:935:SER:HA	1:A:938:PHE:CE2	2.51	0.45
1:A:1016:ARG:HE	12:S:94:ILE:HD12	1.82	0.45
3:C:94:ILE:HD11	3:C:128:PHE:CE1	2.52	0.45
5:F:73:TYR:O	5:F:76:ARG:HG2	2.16	0.45
11:Q:32:ASN:O	11:Q:36:GLU:OE1	2.35	0.45
12:S:24:ILE:O	12:S:28:LEU:HD23	2.17	0.45
1:a:1036:LEU:HD12	1:a:1036:LEU:H	1.82	0.45
2:b:323:PRO:HB2	2:b:325:GLN:HG2	1.98	0.45
9:l:1:MET:HE2	9:l:1:MET:HA	1.98	0.45
11:q:113:ALA:HA	11:r:107:ILE:HG12	1.99	0.45
13:w:259:MET:HG3	13:w:263:ARG:NH2	2.31	0.45
1:A:83:ILE:HB	5:F:10:TYR:OH	2.16	0.45
1:A:801:ILE:HD12	1:A:891:THR:HB	1.98	0.45
1:A:997:PHE:CE1	1:A:1099:ILE:HG12	2.52	0.45
2:B:747:MET:SD	2:B:1008:VAL:HG22	2.57	0.45
3:C:269:SER:HA	3:C:275:HIS:CE1	2.52	0.45
4:E:29:ARG:HD3	4:E:106:ILE:HA	1.99	0.45
7:I:8:LEU:HD23	7:I:74:VAL:HA	1.99	0.45
10:O:712:MET:HE1	10:O:836:TYR:CG	2.52	0.45
13:W:394:LYS:H	4:e:21:ARG:NH2	2.15	0.45
13:W:506:LEU:O	13:W:510:LYS:HG2	2.17	0.45
14:Y:580:ASN:HB3	14:Y:594:ARG:HD2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:924:THR:O	1:a:926:ILE:HD12	2.15	0.45
1:a:1265:MET:HG3	6:g:21:LEU:HD11	1.99	0.45
5:f:101:VAL:HG23	5:f:104:PHE:HB2	1.99	0.45
7:i:421:MET:HE1	7:i:510:TYR:HD2	1.82	0.45
10:o:548:ARG:O	10:o:548:ARG:HG3	2.16	0.45
13:w:506:LEU:O	13:w:510:LYS:HG2	2.17	0.45
1:A:1019:VAL:HB	1:A:1071:VAL:HB	1.99	0.45
2:B:404:THR:HB	7:I:415:MET:HE1	1.98	0.45
2:B:477:GLU:HA	2:B:482:VAL:HG12	1.97	0.45
7:I:208:ASN:HB2	7:I:229:PHE:CE1	2.52	0.45
9:L:1:MET:HE2	9:L:1:MET:HA	1.98	0.45
11:Q:98:VAL:HG11	11:R:116:SER:OG	2.17	0.45
12:S:106:MET:HA	12:S:118:LEU:HD13	1.98	0.45
13:W:389:VAL:HB	13:W:420:SER:HA	1.98	0.45
14:Y:53:LEU:HD13	14:Y:232:SER:HB3	1.98	0.45
1:a:875:TYR:CE2	1:a:916:LEU:HD13	2.51	0.45
2:b:63:THR:O	2:b:107:MET:HG2	2.17	0.45
3:c:269:SER:HA	3:c:275:HIS:CE1	2.52	0.45
6:g:38:ARG:N	6:g:38:ARG:HD2	2.32	0.45
9:l:53:LEU:HA	9:l:56:MET:HE2	1.99	0.45
10:o:712:MET:HE1	10:o:836:TYR:CG	2.52	0.45
11:q:98:VAL:HG11	11:r:116:SER:OG	2.17	0.45
13:w:450:GLN:O	13:w:454:ARG:HG2	2.16	0.45
15:v:250:VAL:HG13	15:v:252:ILE:HD11	1.99	0.45
1:A:316:PHE:CD1	1:A:365:TRP:HB3	2.52	0.44
1:A:435:GLN:HG2	1:A:439:MET:HB2	2.00	0.44
1:A:875:TYR:CE2	1:A:916:LEU:HD13	2.51	0.44
1:A:882:ILE:O	1:A:882:ILE:HG22	2.16	0.44
1:A:1031:ALA:O	1:A:1033:ILE:HG23	2.15	0.44
10:O:217:ARG:HG2	10:O:223:SER:HA	1.98	0.44
13:W:288:LEU:CD1	1:a:811:LEU:HD13	2.47	0.44
15:V:404:GLU:OE1	15:V:405:LYS:HG2	2.17	0.44
15:V:491:ILE:HD12	15:V:491:ILE:H	1.81	0.44
1:a:80:SER:HA	5:f:10:TYR:CE2	2.51	0.44
1:a:209:TRP:CH2	7:i:382:LYS:HB2	2.52	0.44
1:a:1086:PHE:CE2	1:a:1090:LEU:HD21	2.53	0.44
5:f:118:ILE:O	5:f:121:ILE:HG22	2.17	0.44
10:o:220:PHE:O	10:o:221:MET:HB3	2.17	0.44
13:w:102:PHE:HB3	13:w:104:HIS:HE2	1.82	0.44
1:A:834:LYS:HZ1	12:S:215:ASN:HB2	1.81	0.44
4:E:57:MET:HE3	13:w:393:MET:SD	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:O:76:ILE:HG22	10:O:104:TRP:CE3	2.52	0.44
10:O:279:PHE:HB2	10:O:282:LEU:HD23	1.98	0.44
13:W:67:LYS:HA	13:W:100:ASN:HB3	1.98	0.44
13:W:331:PHE:CE2	13:W:335:ILE:HD13	2.53	0.44
1:a:1161:ARG:HD3	1:a:1191:CYS:SG	2.56	0.44
2:b:17:PHE:CD1	2:b:18:LEU:HD12	2.37	0.44
10:o:221:MET:HE3	10:o:222:ALA:HB2	1.99	0.44
10:o:259:THR:HB	10:o:373:GLN:HG3	1.98	0.44
12:s:106:MET:HA	12:s:118:LEU:HD13	1.98	0.44
1:A:718:ILE:HA	1:A:730:GLN:NE2	2.31	0.44
1:A:981:VAL:HG22	1:A:1123:LYS:HA	1.99	0.44
1:A:1098:LYS:HA	12:S:58:ASN:OD1	2.17	0.44
5:F:85:ILE:HG13	5:F:128:ILE:HG21	1.98	0.44
7:I:710:ARG:HG2	7:I:716:PRO:HB3	1.99	0.44
10:O:726:PHE:CG	10:O:832:LEU:HD21	2.52	0.44
13:W:393:MET:SD	4:e:57:MET:HE3	2.57	0.44
14:Y:487:PRO:HG2	14:Y:490:ARG:NH2	2.32	0.44
2:b:21:ASP:HB3	2:b:26:VAL:HB	1.99	0.44
2:b:747:MET:SD	2:b:1008:VAL:HG22	2.57	0.44
3:c:59:ILE:HD13	8:j:5:LEU:HD13	2.00	0.44
5:f:85:ILE:HG13	5:f:128:ILE:HG21	1.98	0.44
6:g:34:THR:HG23	6:g:35:TYR:CD2	2.53	0.44
9:l:88:LYS:HE3	9:l:94:THR:O	2.18	0.44
1:A:209:TRP:CE3	7:I:381:ILE:HA	2.52	0.44
1:A:437:ILE:HG13	1:A:438:LEU:N	2.33	0.44
1:A:809:TRP:CZ2	1:A:857:VAL:HG12	2.52	0.44
2:B:21:ASP:HB3	2:B:26:VAL:HB	1.99	0.44
14:Y:38:VAL:HA	14:Y:41:VAL:HG22	1.99	0.44
14:Y:139:ILE:HD11	14:Y:182:LEU:HD23	1.99	0.44
1:a:316:PHE:CD1	1:a:365:TRP:HB3	2.52	0.44
1:a:374:THR:HB	1:a:394:ILE:HD12	1.99	0.44
2:b:99:THR:HG23	2:b:121:GLU:HG3	1.99	0.44
3:c:94:ILE:HD11	3:c:128:PHE:CE1	2.52	0.44
1:A:771:TYR:HA	5:F:73:TYR:CE2	2.53	0.44
1:A:934:LEU:HD22	1:A:1186:LEU:HD11	1.98	0.44
2:B:260:VAL:HG22	2:B:343:TYR:CD1	2.53	0.44
2:B:618:ASP:HA	2:B:621:LYS:HG2	1.98	0.44
2:B:723:VAL:HG13	2:B:954:PHE:HB3	1.99	0.44
2:B:876:ARG:O	2:B:878:ILE:HG12	2.17	0.44
4:E:29:ARG:NH1	4:E:108:ASP:H	2.12	0.44
10:O:220:PHE:O	10:O:221:MET:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:O:240:PHE:O	10:O:391:PHE:HA	2.16	0.44
10:O:423:PHE:CD2	10:O:443:LYS:HE3	2.52	0.44
13:W:393:MET:HE1	4:e:57:MET:HE3	2.00	0.44
1:a:209:TRP:CE3	7:i:381:ILE:HA	2.52	0.44
1:a:373:TYR:HA	1:a:393:SER:OG	2.17	0.44
1:a:957:GLN:HE22	1:a:977:ILE:HG12	1.82	0.44
2:b:857:VAL:HA	2:b:868:ARG:O	2.17	0.44
7:i:291:ILE:HA	7:i:293:ARG:NH2	2.32	0.44
10:o:559:LYS:NZ	10:o:601:ASN:HB2	2.32	0.44
11:q:32:ASN:O	11:q:36:GLU:OE1	2.35	0.44
13:w:331:PHE:CE2	13:w:335:ILE:HD13	2.53	0.44
15:v:185:LEU:HD12	15:v:189:GLY:HA3	1.98	0.44
1:A:328:LEU:HD22	1:A:333:GLN:HG2	1.98	0.44
1:A:374:THR:HB	1:A:394:ILE:HD12	1.99	0.44
1:A:1265:MET:HG3	6:G:21:LEU:HD11	1.99	0.44
2:B:323:PRO:HB2	2:B:325:GLN:HG2	1.98	0.44
3:C:158:LEU:HD12	3:C:158:LEU:O	2.18	0.44
5:F:118:ILE:O	5:F:121:ILE:HG22	2.17	0.44
9:L:88:LYS:HE3	9:L:94:THR:O	2.18	0.44
2:b:147:TYR:CE2	7:i:593:GLU:HB2	2.53	0.44
3:c:82:TYR:CE1	3:c:161:LEU:HD21	2.52	0.44
5:f:73:TYR:O	5:f:76:ARG:HG2	2.16	0.44
7:i:697:LEU:HD23	7:i:697:LEU:H	1.83	0.44
10:o:433:LYS:HG3	10:o:435:PHE:CD2	2.51	0.44
10:o:628:ARG:HD3	10:o:628:ARG:HA	1.78	0.44
10:o:796:LYS:HG2	10:o:822:ILE:HD11	2.00	0.44
12:s:23:ASP:O	12:s:26:GLU:HG3	2.18	0.44
12:s:24:ILE:O	12:s:28:LEU:HD23	2.17	0.44
1:A:337:TYR:O	1:A:345:LEU:HD12	2.18	0.44
1:A:435:GLN:CA	1:A:439:MET:HE2	2.46	0.44
2:B:147:TYR:CE2	7:I:593:GLU:HB2	2.53	0.44
2:B:846:TYR:CE1	2:B:848:ASP:HB2	2.53	0.44
3:C:82:TYR:CE1	3:C:161:LEU:HD21	2.52	0.44
6:G:38:ARG:HD2	6:G:38:ARG:N	2.32	0.44
7:I:91:GLU:OE2	14:Y:569:LYS:HG3	2.18	0.44
10:O:112:GLU:HG2	10:O:122:ARG:HG3	2.00	0.44
13:W:626:ASN:CG	15:V:554:MET:HE1	2.43	0.44
1:a:771:TYR:HA	5:f:73:TYR:CE2	2.53	0.44
2:b:616:PHE:HA	2:b:619:ILE:HD12	2.00	0.44
2:b:723:VAL:HG13	2:b:954:PHE:HB3	1.99	0.44
7:i:280:SER:HB3	7:i:283:LEU:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:i:738:ARG:NH2	7:i:747:VAL:HA	2.33	0.44
10:o:112:GLU:HG2	10:o:122:ARG:HG3	2.00	0.44
10:o:618:ALA:HB3	10:o:649:TYR:HD1	1.82	0.44
14:y:23:MET:HE1	14:y:67:TYR:HA	1.99	0.44
15:v:200:LEU:HD11	15:v:261:LEU:HD11	1.99	0.44
1:A:811:LEU:HD13	13:w:288:LEU:CD1	2.47	0.44
1:A:1046:ILE:HD12	1:A:1055:TRP:HB2	2.00	0.44
2:B:63:THR:O	2:B:107:MET:HG2	2.17	0.44
2:B:748:SER:HA	2:B:753:ASN:HD21	1.82	0.44
2:B:858:GLN:O	2:B:867:VAL:HA	2.18	0.44
7:I:421:MET:HE1	7:I:510:TYR:HD2	1.82	0.44
10:O:559:LYS:NZ	10:O:601:ASN:HB2	2.32	0.44
11:Q:113:ALA:HA	11:R:107:ILE:HG12	1.99	0.44
12:S:36:ASN:O	12:S:36:ASN:OD1	2.36	0.44
13:W:23:GLN:HG2	13:W:54:ILE:HD11	2.00	0.44
13:W:102:PHE:HB3	13:W:104:HIS:HE2	1.82	0.44
15:V:651:ALA:HA	15:V:679:MET:HE2	1.99	0.44
1:a:40:ARG:HA	1:a:50:LYS:HB2	2.00	0.44
1:a:1016:ARG:HE	12:s:94:ILE:HD12	1.82	0.44
3:c:158:LEU:HD12	3:c:158:LEU:O	2.18	0.44
3:c:284:VAL:HA	3:c:287:PHE:HD2	1.83	0.44
7:i:276:ILE:H	7:i:276:ILE:HD12	1.82	0.44
10:o:726:PHE:CG	10:o:832:LEU:HD21	2.52	0.44
14:y:476:ARG:HA	14:y:479:ARG:HH21	1.83	0.44
15:v:209:SER:HB3	15:v:226:ASN:HD22	1.83	0.44
1:A:1182:PRO:O	1:A:1185:LEU:HG	2.17	0.44
1:A:1286:PHE:N	10:O:221:MET:SD	2.91	0.44
2:B:1086:VAL:HA	2:B:1093:ILE:HD12	1.98	0.44
4:E:21:ARG:NH2	13:w:394:LYS:N	2.65	0.44
4:E:57:MET:HE3	13:w:393:MET:HE1	2.00	0.44
7:I:276:ILE:H	7:I:276:ILE:HD12	1.82	0.44
1:a:184:GLN:HE21	1:a:1228:LYS:HB3	1.83	0.44
1:a:303:MET:HA	1:a:304:PRO:HD3	1.76	0.44
1:a:600:GLU:HG2	7:i:615:LYS:CE	2.47	0.44
1:a:865:HIS:O	1:a:868:ILE:HG12	2.18	0.44
2:b:938:TYR:CE1	2:b:950:ARG:O	2.71	0.44
4:e:3:GLN:CD	4:e:3:GLN:H	2.26	0.44
5:f:63:GLY:HA2	5:f:66:ILE:HG12	1.98	0.44
13:w:487:LEU:HD23	13:w:488:ASN:N	2.33	0.44
1:A:763:MET:SD	1:A:763:MET:O	2.76	0.43
1:A:1031:ALA:O	1:A:1032:GLU:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:PHE:CE2	1:A:1090:LEU:HD21	2.53	0.43
1:A:1155:PHE:CE1	4:E:109:LEU:HB2	2.53	0.43
2:B:99:THR:HG23	2:B:121:GLU:HG3	1.99	0.43
2:B:222:ILE:O	2:B:230:THR:HA	2.18	0.43
2:B:857:VAL:HA	2:B:868:ARG:O	2.17	0.43
2:B:962:ILE:H	2:B:962:ILE:HD12	1.83	0.43
5:F:97:ARG:NH1	6:G:19:LEU:N	2.49	0.43
6:G:34:THR:HG23	6:G:35:TYR:CD2	2.53	0.43
6:G:44:MET:HB2	6:G:152:PHE:CZ	2.53	0.43
7:I:697:LEU:HD23	7:I:697:LEU:H	1.83	0.43
9:L:17:PRO:HB3	14:Y:352:ALA:HB1	2.00	0.43
9:L:53:LEU:HA	9:L:56:MET:HE2	1.99	0.43
1:a:63:TRP:CZ3	1:a:196:PRO:HB2	2.53	0.43
1:a:431:ALA:HB2	2:b:1072:GLU:OE1	2.18	0.43
1:a:801:ILE:HD12	1:a:891:THR:HB	1.98	0.43
1:a:809:TRP:CZ2	1:a:857:VAL:HG12	2.53	0.43
1:a:863:MET:HE3	1:a:866:ASN:HB2	2.00	0.43
2:b:52:VAL:HG23	2:b:53:LYS:N	2.33	0.43
2:b:222:ILE:O	2:b:230:THR:HA	2.18	0.43
4:e:29:ARG:NH1	4:e:108:ASP:H	2.12	0.43
4:e:29:ARG:HD3	4:e:106:ILE:HA	1.99	0.43
8:j:26:LYS:HD2	8:j:27:SER:N	2.34	0.43
13:w:275:MET:HE2	13:w:501:PHE:CD2	2.52	0.43
13:w:388:ILE:O	13:w:393:MET:HE1	2.18	0.43
1:A:660:ASN:O	1:A:663:LYS:HG2	2.18	0.43
1:A:763:MET:HE3	1:A:763:MET:HB3	1.90	0.43
1:A:1261:LEU:HD23	5:F:100:LEU:HD13	2.00	0.43
2:B:222:ILE:HG21	2:B:233:ILE:HD13	2.00	0.43
3:C:59:ILE:HD13	8:J:5:LEU:CD1	2.48	0.43
10:O:66:PHE:HB3	10:O:141:ILE:HD11	2.00	0.43
13:W:436:ILE:HG22	13:W:470:VAL:HA	2.00	0.43
16:U:23:C:H2'	16:U:24:A:C8	2.53	0.43
1:a:247:TYR:CE2	1:a:262:LEU:HD21	2.53	0.43
1:a:1286:PHE:N	10:o:221:MET:SD	2.91	0.43
2:b:102:ILE:HG23	2:b:117:ILE:HB	2.00	0.43
2:b:147:TYR:HE2	2:b:149:VAL:HG22	1.83	0.43
2:b:920:ILE:HG13	2:b:921:PHE:N	2.33	0.43
2:b:962:ILE:H	2:b:962:ILE:HD12	1.83	0.43
3:c:128:PHE:HB3	3:c:137:GLN:HE22	1.83	0.43
1:A:247:TYR:CE2	1:A:262:LEU:HD21	2.53	0.43
2:B:529:PRO:HD2	2:B:576:ASN:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:136:LEU:HD23	5:F:136:LEU:H	1.83	0.43
7:I:79:TYR:OH	10:O:723:LYS:HE2	2.18	0.43
10:O:618:ALA:HB3	10:O:649:TYR:HD1	1.82	0.43
14:Y:476:ARG:HA	14:Y:479:ARG:HH21	1.83	0.43
15:V:185:LEU:HD12	15:V:189:GLY:HA3	1.98	0.43
1:a:181:GLU:HG3	1:a:181:GLU:O	2.18	0.43
1:a:484:GLY:HA2	3:c:270:ARG:HH22	1.83	0.43
1:a:1261:LEU:HD23	5:f:100:LEU:HD13	2.00	0.43
2:b:529:PRO:HD2	2:b:576:ASN:O	2.18	0.43
2:b:858:GLN:O	2:b:867:VAL:HA	2.18	0.43
7:i:570:ARG:O	7:i:574:GLU:OE1	2.37	0.43
9:l:145:PHE:CE1	9:l:213:VAL:HG11	2.53	0.43
10:o:66:PHE:HB3	10:o:141:ILE:HD11	2.00	0.43
10:o:401:GLN:C	10:o:480:ILE:HD12	2.44	0.43
16:u:23:C:H2'	16:u:24:A:C8	2.53	0.43
5:F:97:ARG:NE	5:F:97:ARG:CA	2.73	0.43
5:F:101:VAL:HG23	5:F:104:PHE:HB2	1.99	0.43
7:I:738:ARG:NH2	7:I:747:VAL:HA	2.33	0.43
9:L:145:PHE:CE1	9:L:213:VAL:HG11	2.53	0.43
10:O:594:VAL:HG22	10:O:674:ILE:HB	1.99	0.43
10:O:628:ARG:HD3	10:O:628:ARG:HA	1.78	0.43
13:W:64:ARG:C	13:W:65:PHE:CD1	2.97	0.43
13:W:238:ARG:HH12	13:W:485:THR:H	1.66	0.43
1:a:83:ILE:HD11	1:a:151:PHE:CE1	2.53	0.43
1:a:1264:ARG:HH22	7:i:306:ILE:C	2.27	0.43
4:e:143:LEU:HB2	4:e:146:GLU:OE2	2.19	0.43
7:i:406:SER:HB2	7:i:472:PHE:CD2	2.53	0.43
9:l:33:PRO:HD3	9:l:231:SER:HA	2.00	0.43
10:o:399:ILE:HB	10:o:514:ILE:HD12	2.00	0.43
14:y:38:VAL:HA	14:y:41:VAL:HG22	1.99	0.43
14:y:626:LYS:HE2	14:y:626:LYS:HB2	1.78	0.43
15:v:651:ALA:HA	15:v:679:MET:HE2	1.99	0.43
1:A:431:ALA:HB2	2:B:1072:GLU:OE1	2.18	0.43
1:A:865:HIS:O	1:A:868:ILE:HG12	2.18	0.43
3:C:48:VAL:O	3:C:51:GLU:HG3	2.19	0.43
8:J:26:LYS:HZ3	8:J:30:ASP:HB2	1.81	0.43
10:O:18:LEU:HD21	10:O:40:LEU:HD22	2.00	0.43
10:O:796:LYS:HG2	10:O:822:ILE:HD11	2.00	0.43
13:W:520:TYR:O	13:W:524:GLN:OE1	2.37	0.43
15:V:159:MET:HA	15:V:162:GLU:CD	2.43	0.43
1:a:449:ILE:HG23	1:a:450:HIS:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:627:ALA:O	1:a:631:GLU:OE1	2.37	0.43
1:a:997:PHE:CE1	1:a:1099:ILE:HG12	2.52	0.43
1:a:1155:PHE:CE1	4:e:109:LEU:HB2	2.53	0.43
2:b:621:LYS:HG3	2:b:622:GLU:HG3	2.01	0.43
2:b:1061:LEU:HA	2:b:1064:HIS:ND1	2.34	0.43
6:g:30:ALA:O	6:g:34:THR:HG22	2.18	0.43
7:i:370:ILE:HG21	7:i:373:PHE:HD2	1.83	0.43
1:A:184:GLN:HE21	1:A:1228:LYS:HB3	1.83	0.43
1:A:449:ILE:HG23	1:A:450:HIS:N	2.34	0.43
2:B:10:ASP:OD2	2:B:664:PRO:HD3	2.18	0.43
2:B:102:ILE:HG23	2:B:117:ILE:HB	2.00	0.43
2:B:621:LYS:HG3	2:B:622:GLU:HG3	2.01	0.43
2:B:772:ILE:HG12	2:B:1017:ARG:NH1	2.34	0.43
4:E:3:GLN:H	4:E:3:GLN:CD	2.26	0.43
6:G:30:ALA:O	6:G:34:THR:HG22	2.18	0.43
7:I:270:ARG:NH1	7:I:290:LEU:HA	2.33	0.43
7:I:406:SER:HB2	7:I:472:PHE:CD2	2.53	0.43
8:J:29:LYS:HA	8:J:32:LEU:HG	2.01	0.43
10:O:401:GLN:C	10:O:480:ILE:HD12	2.44	0.43
15:V:209:SER:HB3	15:V:226:ASN:HD22	1.83	0.43
16:U:23:C:H2'	16:U:24:A:H8	1.84	0.43
1:a:337:TYR:O	1:a:345:LEU:HD12	2.18	0.43
1:a:437:ILE:HG13	1:a:438:LEU:N	2.33	0.43
1:a:660:ASN:O	1:a:663:LYS:HG2	2.18	0.43
1:a:763:MET:SD	1:a:763:MET:O	2.76	0.43
1:a:998:VAL:HB	1:a:1096:LYS:HG2	2.01	0.43
1:a:1046:ILE:HD12	1:a:1055:TRP:HB2	2.00	0.43
2:b:693:GLN:NE2	2:b:884:THR:HG21	2.34	0.43
2:b:963:ASP:O	2:b:966:MET:HG2	2.19	0.43
3:c:48:VAL:O	3:c:51:GLU:HG3	2.19	0.43
3:c:223:LEU:HD11	3:c:291:LEU:HD13	2.00	0.43
5:f:136:LEU:HD23	5:f:136:LEU:H	1.83	0.43
7:i:123:LEU:HD21	7:i:213:PHE:HB2	2.01	0.43
7:i:180:ASP:O	7:i:183:ARG:HG3	2.18	0.43
7:i:604:LEU:HG	7:i:606:PHE:CE1	2.54	0.43
10:o:206:ASP:HB2	10:o:210:LYS:HZ1	1.84	0.43
16:u:23:C:H2'	16:u:24:A:H8	1.84	0.43
1:A:1268:LYS:HD3	7:I:308:GLU:HB3	2.00	0.43
2:B:129:LYS:HD2	2:B:129:LYS:O	2.19	0.43
2:B:528:PHE:CE1	2:B:576:ASN:HB2	2.53	0.43
2:B:809:LEU:HD23	2:B:809:LEU:HA	1.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:82:ILE:HG13	5:F:83:ALA:N	2.34	0.43
9:L:33:PRO:HD3	9:L:231:SER:HA	2.00	0.43
10:O:452:TYR:CZ	10:O:454:ASN:HA	2.54	0.43
11:R:93:GLY:HA2	11:R:112:HIS:HB3	2.01	0.43
16:U:9:G:N3	16:U:45:G:H2'	2.34	0.43
1:a:303:MET:HE1	1:a:308:ARG:CG	2.49	0.43
1:a:718:ILE:HA	1:a:730:GLN:NE2	2.31	0.43
2:b:260:VAL:HG22	2:b:343:TYR:CD1	2.53	0.43
2:b:528:PHE:CE1	2:b:576:ASN:HB2	2.53	0.43
2:b:748:SER:HA	2:b:753:ASN:HD21	1.82	0.43
7:i:79:TYR:OH	10:o:723:LYS:HE2	2.18	0.43
10:o:515:VAL:HA	10:o:518:LEU:HG	2.01	0.43
12:s:36:ASN:OD1	12:s:36:ASN:O	2.36	0.43
13:w:436:ILE:HG22	13:w:470:VAL:HA	2.00	0.43
13:w:626:ASN:CG	15:v:554:MET:HE1	2.43	0.43
15:v:159:MET:HA	15:v:162:GLU:CD	2.43	0.43
1:A:445:LEU:HD11	1:A:555:ILE:HB	2.00	0.43
1:A:554:GLY:O	1:A:558:ILE:HG12	2.19	0.43
1:A:718:ILE:HG12	1:A:730:GLN:HG2	2.01	0.43
1:A:773:GLN:HG3	1:A:783:TYR:O	2.19	0.43
1:A:998:VAL:HB	1:A:1096:LYS:HG2	2.01	0.43
2:B:1061:LEU:HA	2:B:1064:HIS:ND1	2.34	0.43
6:G:43:LYS:HE3	6:G:76:TYR:CG	2.54	0.43
7:I:570:ARG:O	7:I:574:GLU:OE1	2.37	0.43
12:S:23:ASP:O	12:S:26:GLU:HG3	2.18	0.43
15:V:154:ILE:O	15:V:157:GLU:HG3	2.19	0.43
1:a:981:VAL:HG22	1:a:1123:LYS:HA	1.99	0.43
2:b:490:VAL:HA	2:b:671:TYR:CE1	2.54	0.43
3:c:59:ILE:HD13	8:j:5:LEU:CD1	2.48	0.43
4:e:159:LEU:HG	4:e:160:LYS:N	2.34	0.43
5:f:95:ARG:HH12	6:g:17:HIS:CB	2.20	0.43
6:g:140:VAL:O	6:g:156:ALA:HB1	2.19	0.43
9:l:153:CYS:HB3	9:l:198:ALA:HB3	2.01	0.43
13:w:23:GLN:HG2	13:w:54:ILE:HD11	2.00	0.43
15:v:319:ILE:HB	15:v:326:SER:OG	2.19	0.43
15:v:404:GLU:OE1	15:v:405:LYS:HG2	2.17	0.43
1:A:158:ILE:HG21	7:I:172:LEU:HG	2.01	0.43
1:A:600:GLU:HG2	7:I:615:LYS:CE	2.47	0.43
1:A:863:MET:HE3	1:A:866:ASN:HB2	2.00	0.43
2:B:52:VAL:HG23	2:B:53:LYS:N	2.33	0.43
2:B:601:MET:SD	2:B:626:VAL:HG13	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:O:779:GLY:HA2	10:O:844:ARG:CZ	2.49	0.43
13:W:388:ILE:O	13:W:393:MET:HE1	2.18	0.43
14:Y:23:MET:HE1	14:Y:67:TYR:HA	1.99	0.43
1:a:435:GLN:HG2	1:a:439:MET:HB2	2.00	0.43
1:a:773:GLN:HG3	1:a:783:TYR:O	2.19	0.43
2:b:10:ASP:OD2	2:b:664:PRO:HD3	2.18	0.43
2:b:222:ILE:HG21	2:b:233:ILE:HD13	2.00	0.43
3:c:261:ILE:HA	3:c:287:PHE:CZ	2.54	0.43
6:g:44:MET:HB2	6:g:152:PHE:CZ	2.53	0.43
13:w:343:PHE:CE1	13:w:420:SER:HB2	2.54	0.43
15:v:453:ARG:CZ	15:v:453:ARG:HA	2.49	0.43
1:A:83:ILE:HD11	1:A:151:PHE:CE1	2.53	0.43
1:A:1036:LEU:H	1:A:1036:LEU:HD12	1.82	0.43
2:B:167:GLY:HA3	2:B:426:TYR:CD1	2.54	0.43
2:B:490:VAL:HA	2:B:671:TYR:CE1	2.54	0.43
2:B:693:GLN:NE2	2:B:884:THR:HG21	2.34	0.43
4:E:159:LEU:HG	4:E:160:LYS:N	2.34	0.43
7:I:19:LEU:HD12	7:I:27:LYS:HD2	2.00	0.43
7:I:561:PRO:HD2	7:I:564:LEU:HD12	2.01	0.43
7:I:573:LEU:HD23	7:I:576:ARG:HH12	1.84	0.43
7:I:721:LEU:HD13	7:I:726:HIS:ND1	2.34	0.43
10:O:221:MET:HE3	10:O:222:ALA:HB2	1.99	0.43
13:W:394:LYS:HG2	4:e:21:ARG:NH2	2.32	0.43
2:b:588:VAL:HG12	2:b:631:ASP:HB3	2.01	0.43
7:i:573:LEU:HD23	7:i:576:ARG:HH12	1.84	0.43
14:y:42:PHE:CZ	14:y:180:ILE:HD11	2.54	0.43
2:B:616:PHE:HA	2:B:619:ILE:HD12	2.00	0.42
2:B:920:ILE:HG13	2:B:921:PHE:N	2.33	0.42
3:C:59:ILE:HD13	8:J:5:LEU:HD13	2.00	0.42
3:C:261:ILE:HA	3:C:287:PHE:CZ	2.54	0.42
3:C:284:VAL:HA	3:C:287:PHE:HD2	1.83	0.42
6:G:140:VAL:O	6:G:156:ALA:HB1	2.19	0.42
7:I:333:LYS:O	7:I:336:MET:HG3	2.19	0.42
8:J:26:LYS:HD2	8:J:27:SER:N	2.34	0.42
11:Q:14:ARG:HH22	11:Q:82:LEU:C	2.27	0.42
15:V:493:PHE:CE1	15:V:553:ASP:HA	2.54	0.42
16:U:36:G:H2'	16:U:37:A:H5'	2.01	0.42
1:a:158:ILE:HG21	7:i:172:LEU:HG	2.01	0.42
1:a:1006:ASP:HB2	1:a:1022:ILE:HB	2.01	0.42
3:c:10:ILE:O	3:c:197:THR:HA	2.19	0.42
7:i:270:ARG:NH1	7:i:290:LEU:HA	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:q:8:LEU:HD11	11:q:41:TYR:CZ	2.54	0.42
13:w:64:ARG:C	13:w:65:PHE:CD1	2.97	0.42
13:w:437:TRP:HE3	13:w:473:LEU:HD21	1.84	0.42
1:A:63:TRP:CZ3	1:A:196:PRO:HB2	2.53	0.42
1:A:181:GLU:HG3	1:A:181:GLU:O	2.18	0.42
1:A:1264:ARG:HH22	7:I:306:ILE:C	2.27	0.42
8:J:2:VAL:N	8:J:49:GLU:HG3	2.34	0.42
10:O:309:ASN:HA	10:O:344:ARG:NE	2.32	0.42
12:S:117:PHE:CE2	12:S:121:LEU:HD11	2.54	0.42
13:W:41:VAL:O	13:W:161:LEU:HD12	2.19	0.42
13:W:454:ARG:HA	13:W:457:ARG:HH21	1.83	0.42
15:V:453:ARG:CZ	15:V:453:ARG:HA	2.49	0.42
1:a:174:GLU:HA	1:a:177:TRP:CD1	2.54	0.42
1:a:578:PHE:CD1	1:a:581:LEU:HB2	2.54	0.42
1:a:664:MET:HE1	1:a:671:VAL:HG23	2.01	0.42
2:b:73:VAL:C	2:b:74:LYS:HD3	2.44	0.42
2:b:772:ILE:HG12	2:b:1017:ARG:NH1	2.34	0.42
2:b:846:TYR:CE1	2:b:848:ASP:HB2	2.53	0.42
7:i:496:LEU:O	7:i:500:LEU:HG	2.19	0.42
9:l:17:PRO:HB3	14:y:352:ALA:HB1	2.00	0.42
13:w:448:TYR:CE2	13:w:452:LEU:HD11	2.54	0.42
13:w:454:ARG:HA	13:w:457:ARG:HH21	1.83	0.42
14:y:381:LYS:HB2	14:y:455:ILE:HA	2.01	0.42
1:A:303:MET:HE1	1:A:308:ARG:CG	2.49	0.42
1:A:1006:ASP:HB2	1:A:1022:ILE:HB	2.01	0.42
2:B:147:TYR:HE2	2:B:149:VAL:HG22	1.83	0.42
3:C:223:LEU:HD11	3:C:291:LEU:HD13	2.00	0.42
6:G:84:ILE:HG13	6:G:140:VAL:HG23	2.01	0.42
7:I:180:ASP:O	7:I:183:ARG:HG3	2.18	0.42
10:O:18:LEU:HD11	10:O:40:LEU:HB2	2.01	0.42
10:O:161:LYS:HZ1	10:O:192:GLU:HG2	1.85	0.42
10:O:515:VAL:HA	10:O:518:LEU:HG	2.01	0.42
13:W:256:ARG:O	13:W:259:MET:HG2	2.19	0.42
13:W:437:TRP:HE3	13:W:473:LEU:HD21	1.84	0.42
13:W:448:TYR:CE2	13:W:452:LEU:HD11	2.54	0.42
14:Y:381:LYS:HB2	14:Y:455:ILE:HA	2.01	0.42
15:V:55:ARG:HA	15:V:161:MET:SD	2.59	0.42
15:V:374:ASN:HB2	15:V:379:ASN:HA	2.01	0.42
2:b:129:LYS:HD2	2:b:129:LYS:O	2.19	0.42
2:b:167:GLY:HA3	2:b:426:TYR:CD1	2.54	0.42
4:e:85:THR:CG2	4:e:94:LYS:HB3	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:f:82:ILE:HG13	5:f:83:ALA:N	2.34	0.42
6:g:84:ILE:HG13	6:g:140:VAL:HG23	2.01	0.42
7:i:237:LEU:HD22	7:i:259:TRP:CZ3	2.49	0.42
8:j:29:LYS:HA	8:j:32:LEU:HG	2.01	0.42
12:s:117:PHE:CE2	12:s:121:LEU:HD11	2.54	0.42
1:A:174:GLU:HA	1:A:177:TRP:CD1	2.54	0.42
1:A:726:LEU:HB2	1:A:731:TYR:CE2	2.54	0.42
3:C:26:PHE:CE1	3:C:30:VAL:HG21	2.55	0.42
7:I:370:ILE:HG21	7:I:373:PHE:HD2	1.83	0.42
9:L:9:ARG:NH2	9:L:285:LEU:HA	2.35	0.42
10:O:399:ILE:HB	10:O:514:ILE:HD12	2.00	0.42
11:R:123:PHE:O	11:R:124:TYR:CG	2.73	0.42
13:W:343:PHE:CE1	13:W:420:SER:HB2	2.54	0.42
1:a:408:ILE:HA	1:a:455:TYR:CE1	2.54	0.42
1:a:1268:LYS:HG3	7:i:308:GLU:OE1	2.20	0.42
6:g:10:LEU:HD12	6:g:35:TYR:CE2	2.54	0.42
6:g:43:LYS:HE3	6:g:76:TYR:CG	2.54	0.42
7:i:91:GLU:OE2	14:y:569:LYS:HG3	2.18	0.42
7:i:721:LEU:HD13	7:i:726:HIS:ND1	2.34	0.42
10:o:452:TYR:CZ	10:o:454:ASN:HA	2.54	0.42
13:w:238:ARG:HH12	13:w:485:THR:H	1.66	0.42
13:w:520:TYR:O	13:w:524:GLN:OE1	2.37	0.42
14:y:139:ILE:HD11	14:y:182:LEU:HD23	1.99	0.42
14:y:433:ASN:HB2	14:y:435:GLU:OE1	2.19	0.42
15:v:372:CYS:SG	15:v:382:PRO:HD3	2.60	0.42
16:u:9:G:N3	16:u:45:G:H2'	2.34	0.42
1:A:578:PHE:N	2:B:1009:PHE:CZ	2.84	0.42
1:A:1054:GLU:HB3	12:S:94:ILE:HD11	2.01	0.42
2:B:588:VAL:HG12	2:B:631:ASP:HB3	2.01	0.42
4:E:11:LYS:HD3	4:E:105:VAL:HG11	2.02	0.42
4:E:21:ARG:HD2	4:E:21:ARG:HA	1.81	0.42
4:E:29:ARG:HH12	4:E:108:ASP:N	2.11	0.42
6:G:10:LEU:HD12	6:G:35:TYR:CE2	2.54	0.42
7:I:496:LEU:O	7:I:500:LEU:HG	2.19	0.42
10:O:742:GLU:O	10:O:749:ILE:HG13	2.20	0.42
13:W:487:LEU:HD23	13:W:488:ASN:N	2.33	0.42
14:Y:144:HIS:HA	14:Y:147:ILE:HG22	2.02	0.42
1:a:4:ILE:HG21	2:b:1140:LEU:CD1	2.48	0.42
1:a:483:LEU:HD13	1:a:487:GLY:CA	2.44	0.42
1:a:514:TYR:CD1	1:a:515:PRO:HD2	2.55	0.42
1:a:726:LEU:HB2	1:a:731:TYR:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:850:TYR:CD1	2:b:873:LYS:HG2	2.54	0.42
4:e:111:PRO:C	4:e:166:ARG:HH22	2.28	0.42
7:i:80:ILE:HG13	7:i:81:GLY:N	2.34	0.42
7:i:561:PRO:HD2	7:i:564:LEU:HD12	2.01	0.42
8:j:39:CYS:O	8:j:42:LEU:HG	2.20	0.42
9:l:9:ARG:NH2	9:l:285:LEU:HA	2.35	0.42
9:l:162:GLY:O	9:l:165:VAL:HG12	2.20	0.42
10:o:541:TYR:HA	10:o:547:PHE:CD2	2.55	0.42
10:o:779:GLY:HA2	10:o:844:ARG:CZ	2.49	0.42
11:r:93:GLY:HA2	11:r:112:HIS:HB3	2.01	0.42
13:w:582:ILE:O	13:w:585:ILE:HG22	2.20	0.42
1:A:1086:PHE:HA	1:A:1089:VAL:HG22	2.02	0.42
1:A:1138:ASP:HB2	4:E:4:TYR:CZ	2.55	0.42
2:B:237:SER:OG	2:B:331:MET:HG2	2.19	0.42
2:B:494:ILE:HD11	2:B:585:GLY:HA2	2.01	0.42
4:E:115:ARG:NH1	4:E:157:ILE:HG22	2.34	0.42
4:E:143:LEU:HB2	4:E:146:GLU:OE2	2.19	0.42
8:J:39:CYS:O	8:J:42:LEU:HG	2.20	0.42
9:L:162:GLY:O	9:L:165:VAL:HG12	2.20	0.42
10:O:42:PHE:HE1	10:O:119:CYS:HG	1.65	0.42
13:W:86:GLY:O	13:W:89:MET:HG3	2.20	0.42
1:a:83:ILE:HB	5:f:10:TYR:CZ	2.55	0.42
1:a:995:PHE:HE1	1:a:1098:LYS:NZ	2.18	0.42
1:a:1031:ALA:O	1:a:1032:GLU:HG3	2.19	0.42
1:a:1086:PHE:HA	1:a:1089:VAL:HG22	2.02	0.42
1:a:1227:HIS:HB2	1:a:1229:LYS:HG2	2.02	0.42
3:c:26:PHE:CE1	3:c:30:VAL:HG21	2.55	0.42
9:l:228:VAL:HG22	9:l:229:GLN:N	2.34	0.42
9:l:274:ILE:H	9:l:274:ILE:HD12	1.84	0.42
14:y:144:HIS:HA	14:y:147:ILE:HG22	2.02	0.42
15:v:363:VAL:HG12	15:v:364:GLU:OE1	2.19	0.42
1:A:83:ILE:HB	5:F:10:TYR:CZ	2.55	0.42
1:A:627:ALA:O	1:A:631:GLU:OE1	2.37	0.42
1:A:664:MET:HE1	1:A:671:VAL:HG23	2.01	0.42
2:B:336:ARG:HH12	2:B:576:ASN:HD21	1.67	0.42
4:E:111:PRO:HG2	4:E:113:PHE:CD1	2.55	0.42
7:I:562:GLU:HG2	7:I:563:GLU:N	2.34	0.42
15:V:155:LYS:O	15:V:159:MET:HE3	2.20	0.42
15:V:363:VAL:HG12	15:V:364:GLU:OE1	2.19	0.42
16:U:66:G:H2'	16:U:67:G:C8	2.54	0.42
1:a:383:SER:H	2:b:1056:MET:CE	2.26	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:a:482:ILE:HD11	1:a:568:TYR:HB2	2.02	0.42
1:a:763:MET:O	1:a:765:ASP:N	2.53	0.42
7:i:562:GLU:HG2	7:i:563:GLU:N	2.34	0.42
8:j:2:VAL:N	8:j:49:GLU:HG3	2.34	0.42
10:o:53:VAL:HA	10:o:56:ILE:HG12	2.01	0.42
10:o:156:PHE:HB3	10:o:193:ILE:HG23	2.01	0.42
10:o:264:ILE:HG12	10:o:281:HIS:ND1	2.35	0.42
10:o:317:LEU:H	10:o:327:ARG:NH1	2.12	0.42
11:q:14:ARG:HH22	11:q:82:LEU:C	2.27	0.42
11:q:14:ARG:NH2	11:q:83:LEU:C	2.77	0.42
11:r:55:ASP:C	11:r:57:ASP:H	2.28	0.42
12:s:229:PRO:HA	12:s:230:PRO:HD3	1.93	0.42
13:w:92:PHE:CE2	13:w:94:ASP:HB3	2.55	0.42
13:w:175:LEU:HA	13:w:178:ILE:HD12	2.02	0.42
13:w:256:ARG:O	13:w:259:MET:HG2	2.19	0.42
1:A:303:MET:HA	1:A:304:PRO:HD3	1.76	0.42
1:A:379:GLY:C	1:A:421:GLU:HG3	2.45	0.42
1:A:630:VAL:O	1:A:633:MET:HG2	2.20	0.42
1:A:1268:LYS:HG3	7:I:308:GLU:OE1	2.20	0.42
2:B:556:LYS:HE3	2:B:628:GLU:CD	2.44	0.42
2:B:963:ASP:O	2:B:966:MET:HG2	2.19	0.42
2:B:1067:ALA:O	2:B:1070:ILE:HG22	2.20	0.42
7:I:80:ILE:HG13	7:I:81:GLY:N	2.34	0.42
10:O:264:ILE:HG12	10:O:281:HIS:ND1	2.35	0.42
14:Y:339:THR:HA	14:Y:342:ARG:HG2	2.01	0.42
14:Y:433:ASN:HB2	14:Y:435:GLU:OE1	2.19	0.42
1:a:435:GLN:CA	1:a:439:MET:HE2	2.46	0.42
2:b:601:MET:SD	2:b:626:VAL:HG13	2.59	0.42
2:b:758:ILE:HG23	2:b:913:VAL:HG13	2.02	0.42
2:b:1118:ILE:HD11	2:b:1142:PHE:CE1	2.55	0.42
2:b:1122:HIS:O	2:b:1125:LYS:HB2	2.20	0.42
4:e:166:ARG:HA	4:e:166:ARG:NE	2.34	0.42
7:i:19:LEU:HD12	7:i:27:LYS:HD2	2.00	0.42
14:y:185:THR:O	14:y:185:THR:HG23	2.20	0.42
1:A:167:GLN:HB3	7:I:196:ARG:CZ	2.50	0.42
1:A:447:HIS:CE1	1:A:449:ILE:HG22	2.55	0.42
1:A:484:GLY:HA2	3:C:270:ARG:HH22	1.83	0.42
1:A:536:MET:O	12:S:218:ILE:HD11	2.19	0.42
1:A:1167:ALA:O	1:A:1171:THR:HG23	2.20	0.42
2:B:850:TYR:CD1	2:B:873:LYS:HG2	2.54	0.42
2:B:950:ARG:NH2	7:I:605:LYS:O	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:E:166:ARG:HA	4:E:166:ARG:NE	2.34	0.42
7:I:604:LEU:HG	7:I:606:PHE:CE1	2.54	0.42
10:O:40:LEU:HD12	10:O:120:LEU:O	2.19	0.42
10:O:156:PHE:HB3	10:O:193:ILE:HG23	2.01	0.42
10:O:541:TYR:HA	10:O:547:PHE:CD2	2.55	0.42
11:R:1:MET:HG2	11:R:1:MET:O	2.20	0.42
1:a:357:LYS:HE2	1:a:357:LYS:HA	2.01	0.42
1:a:445:LEU:HD11	1:a:555:ILE:HB	2.00	0.42
1:a:541:LEU:HD23	1:a:557:PHE:CZ	2.55	0.42
1:a:554:GLY:O	1:a:558:ILE:HG12	2.19	0.42
2:b:556:LYS:HE3	2:b:628:GLU:CD	2.44	0.42
4:e:26:VAL:HG13	4:e:165:PHE:HE2	1.85	0.42
10:o:97:ASP:HA	10:o:135:LYS:HE2	2.02	0.42
13:w:86:GLY:O	13:w:89:MET:HG3	2.20	0.42
1:A:83:ILE:HD13	1:A:83:ILE:HG21	1.88	0.42
1:A:408:ILE:HA	1:A:455:TYR:CE1	2.54	0.42
1:A:434:GLU:OE1	2:B:1068:ASN:OD1	2.37	0.42
1:A:514:TYR:CD1	1:A:515:PRO:HD2	2.55	0.42
1:A:1178:TYR:CE1	12:S:218:ILE:HG22	2.55	0.42
2:B:73:VAL:C	2:B:74:LYS:HD3	2.44	0.42
2:B:1037:LEU:HD23	2:B:1038:ILE:HG12	2.02	0.42
2:B:1118:ILE:HD11	2:B:1142:PHE:CE1	2.55	0.42
2:B:1122:HIS:O	2:B:1125:LYS:HB2	2.20	0.42
4:E:26:VAL:HG13	4:E:165:PHE:HE2	1.85	0.42
7:I:123:LEU:HD21	7:I:213:PHE:HB2	2.01	0.42
9:L:114:ARG:HG2	9:L:114:ARG:HH11	1.85	0.42
9:L:274:ILE:HD12	9:L:274:ILE:H	1.84	0.42
11:Q:14:ARG:NH2	11:Q:83:LEU:C	2.77	0.42
11:Q:85:VAL:HG22	11:Q:87:ASP:H	1.84	0.42
14:Y:42:PHE:CZ	14:Y:180:ILE:HD11	2.54	0.42
15:V:648:ASN:C	15:V:648:ASN:HD22	2.28	0.42
1:a:24:ILE:HB	1:a:66:VAL:HG22	2.02	0.42
1:a:387:TYR:CE1	1:a:444:LEU:HB3	2.55	0.42
1:a:704:TYR:OH	2:b:468:LEU:HD21	2.20	0.42
1:a:1138:ASP:HB2	4:e:4:TYR:CZ	2.55	0.42
2:b:724:ILE:HA	2:b:728:LEU:HD12	2.02	0.42
4:e:111:PRO:HG2	4:e:113:PHE:CD1	2.55	0.42
5:f:118:ILE:HA	5:f:121:ILE:HG22	2.02	0.42
7:i:18:TYR:CD2	7:i:32:PHE:HD1	2.38	0.42
10:o:18:LEU:HD21	10:o:40:LEU:HD22	2.00	0.42
10:o:742:GLU:O	10:o:749:ILE:HG13	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:r:123:PHE:O	11:r:124:TYR:CG	2.73	0.42
15:v:154:ILE:O	15:v:157:GLU:HG3	2.19	0.42
16:u:68:G:H2'	16:u:69:A:C8	2.55	0.42
1:A:40:ARG:HA	1:A:50:LYS:HB2	2.00	0.41
1:A:377:ILE:HG22	1:A:424:ILE:O	2.20	0.41
1:A:719:LEU:HG	1:A:720:ASN:OD1	2.20	0.41
1:A:995:PHE:HE1	1:A:1098:LYS:NZ	2.18	0.41
2:B:857:VAL:HG12	2:B:869:VAL:HG13	2.02	0.41
7:I:511:MET:SD	7:I:516:LYS:HB2	2.60	0.41
9:L:153:CYS:HB3	9:L:198:ALA:HB3	2.01	0.41
10:O:97:ASP:HA	10:O:135:LYS:HE2	2.02	0.41
10:O:338:LEU:HD22	10:O:347:PHE:CD2	2.55	0.41
13:W:44:PHE:O	13:W:222:TYR:HA	2.20	0.41
15:V:328:LYS:HE3	15:V:328:LYS:HB3	1.86	0.41
16:U:68:G:H2'	16:U:69:A:H8	1.85	0.41
1:a:379:GLY:C	1:a:421:GLU:HG3	2.45	0.41
1:a:434:GLU:OE1	2:b:1068:ASN:OD1	2.37	0.41
1:a:1054:GLU:HB3	12:s:94:ILE:HD11	2.01	0.41
1:a:1268:LYS:HD3	7:i:308:GLU:HB3	2.00	0.41
2:b:1058:ARG:CZ	2:b:1058:ARG:HB2	2.50	0.41
4:e:115:ARG:NH1	4:e:157:ILE:HG22	2.34	0.41
7:i:525:TYR:O	7:i:529:VAL:HG23	2.20	0.41
7:i:721:LEU:HD22	7:i:726:HIS:CE1	2.55	0.41
13:w:175:LEU:HD12	13:w:178:ILE:HD12	2.02	0.41
15:v:55:ARG:HA	15:v:161:MET:SD	2.59	0.41
15:v:155:LYS:O	15:v:159:MET:HG2	2.20	0.41
1:A:385:HIS:HA	1:A:932:GLN:HG3	2.02	0.41
1:A:578:PHE:CD1	1:A:581:LEU:HB2	2.54	0.41
1:A:763:MET:O	1:A:765:ASP:N	2.53	0.41
2:B:724:ILE:HA	2:B:728:LEU:HD12	2.02	0.41
2:B:758:ILE:HG23	2:B:913:VAL:HG13	2.02	0.41
2:B:884:THR:HG22	2:B:885:THR:O	2.20	0.41
3:C:87:GLN:HG3	3:C:131:TYR:CE2	2.55	0.41
7:I:18:TYR:CD2	7:I:32:PHE:HD1	2.38	0.41
7:I:507:ILE:H	7:I:507:ILE:HD12	1.85	0.41
7:I:525:TYR:O	7:I:529:VAL:HG23	2.20	0.41
10:O:752:TYR:HA	10:O:757:MET:CE	2.51	0.41
11:Q:39:SER:HA	11:Q:44:ILE:HG12	2.03	0.41
1:a:385:HIS:HA	1:a:932:GLN:HG3	2.02	0.41
1:a:563:TYR:CZ	1:a:567:ARG:HD2	2.55	0.41
4:e:16:LYS:HE3	4:e:16:LYS:HB3	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:40:LEU:HD12	10:o:120:LEU:O	2.19	0.41
10:o:60:GLN:OE1	10:o:456:ILE:HG23	2.20	0.41
11:q:85:VAL:HG22	11:q:87:ASP:H	1.84	0.41
1:A:114:HIS:O	1:A:118:ARG:HG2	2.20	0.41
1:A:742:SER:HA	1:A:745:ILE:HG12	2.03	0.41
1:A:1041:MET:SD	1:A:1096:LYS:HB3	2.61	0.41
2:B:1058:ARG:CZ	2:B:1058:ARG:HB2	2.50	0.41
7:I:120:ASP:O	7:I:121:MET:HE2	2.20	0.41
13:W:92:PHE:CE2	13:W:94:ASP:HB3	2.55	0.41
13:W:310:ASN:O	13:W:313:VAL:HG12	2.20	0.41
14:Y:84:LEU:O	14:Y:140:ILE:HD12	2.20	0.41
15:V:319:ILE:HB	15:V:326:SER:OG	2.19	0.41
1:a:147:LYS:HZ3	5:f:6:ASP:HA	1.85	0.41
1:a:536:MET:O	12:s:218:ILE:HD11	2.19	0.41
1:a:660:ASN:HA	1:a:663:LYS:HE3	2.02	0.41
2:b:312:LEU:HD12	2:b:313:HIS:N	2.35	0.41
2:b:884:THR:HG22	2:b:885:THR:O	2.20	0.41
2:b:950:ARG:NH2	7:i:605:LYS:O	2.53	0.41
10:o:21:ASN:O	10:o:25:LEU:HG	2.20	0.41
10:o:152:LYS:HG2	10:o:153:THR:O	2.21	0.41
10:o:752:TYR:HA	10:o:757:MET:CE	2.51	0.41
16:u:62:C:H2'	16:u:63:G:C8	2.56	0.41
1:A:24:ILE:HB	1:A:66:VAL:HG22	2.02	0.41
1:A:591:LEU:HD13	1:A:591:LEU:HA	1.93	0.41
2:B:312:LEU:HD12	2:B:313:HIS:N	2.35	0.41
7:I:18:TYR:CG	7:I:32:PHE:HD1	2.39	0.41
10:O:21:ASN:O	10:O:25:LEU:HG	2.20	0.41
10:O:626:ILE:HA	10:O:649:TYR:CE2	2.56	0.41
13:W:296:PHE:CE2	13:W:354:LEU:HD21	2.56	0.41
15:V:59:LEU:HG	15:V:117:LEU:HD23	2.03	0.41
15:V:155:LYS:O	15:V:159:MET:HG2	2.20	0.41
1:a:305:ALA:HA	1:a:308:ARG:NE	2.35	0.41
1:a:630:VAL:O	1:a:633:MET:HG2	2.20	0.41
2:b:336:ARG:HH12	2:b:576:ASN:HD21	1.67	0.41
2:b:747:MET:HG2	2:b:1008:VAL:HG13	2.02	0.41
7:i:333:LYS:O	7:i:336:MET:HG3	2.19	0.41
7:i:507:ILE:H	7:i:507:ILE:HD12	1.85	0.41
7:i:511:MET:SD	7:i:516:LYS:HB2	2.60	0.41
7:i:757:ARG:O	7:i:760:LEU:HG	2.20	0.41
9:l:114:ARG:HG2	9:l:114:ARG:HH11	1.85	0.41
10:o:338:LEU:HD22	10:o:347:PHE:CD2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:536:ASP:O	10:o:540:GLN:OE1	2.39	0.41
10:o:819:ARG:O	10:o:822:ILE:HG22	2.20	0.41
13:w:44:PHE:O	13:w:222:TYR:HA	2.20	0.41
16:u:36:G:H2'	16:u:37:A:H5'	2.01	0.41
16:u:66:G:H2'	16:u:67:G:C8	2.54	0.41
16:u:68:G:H2'	16:u:69:A:H8	1.85	0.41
1:A:11:LEU:HD12	2:B:1135:GLY:O	2.21	0.41
1:A:174:GLU:HG3	1:A:177:TRP:CZ2	2.55	0.41
1:A:357:LYS:HE2	1:A:357:LYS:HA	2.01	0.41
1:A:563:TYR:CZ	1:A:567:ARG:HD2	2.55	0.41
1:A:964:PHE:O	1:A:967:LEU:HG	2.20	0.41
4:E:111:PRO:C	4:E:166:ARG:HH22	2.28	0.41
9:L:228:VAL:HG22	9:L:229:GLN:N	2.35	0.41
10:O:819:ARG:O	10:O:822:ILE:HG22	2.20	0.41
13:W:394:LYS:CG	4:e:21:ARG:HH22	2.31	0.41
14:Y:489:GLU:H	14:Y:489:GLU:CD	2.29	0.41
1:a:875:TYR:CD2	1:a:916:LEU:HD13	2.56	0.41
4:e:58:LYS:HE3	4:e:58:LYS:HB3	1.88	0.41
7:i:80:ILE:HG13	7:i:81:GLY:H	1.85	0.41
9:l:143:PRO:HG2	9:l:155:ILE:HD11	2.03	0.41
11:r:52:VAL:CG1	11:r:58:ILE:HD11	2.50	0.41
12:s:237:SEP:HA	12:s:238:PRO:HD3	1.87	0.41
15:v:5:VAL:HG11	15:v:27:PRO:HG2	2.03	0.41
1:A:387:TYR:CE1	1:A:444:LEU:HB3	2.55	0.41
1:A:561:SER:O	1:A:565:PHE:CD2	2.74	0.41
1:A:790:ILE:C	1:A:920:LEU:HD22	2.46	0.41
3:C:10:ILE:O	3:C:197:THR:HA	2.19	0.41
4:E:66:GLU:HG3	4:E:85:THR:HA	2.03	0.41
10:O:156:PHE:HB3	10:O:193:ILE:CG2	2.51	0.41
11:Q:8:LEU:HD11	11:Q:41:TYR:CZ	2.54	0.41
11:Q:16:LYS:HG2	11:Q:86:LYS:HZ1	1.85	0.41
11:R:55:ASP:C	11:R:57:ASP:H	2.28	0.41
13:W:399:ASP:O	13:W:403:VAL:HG23	2.21	0.41
15:V:157:GLU:O	15:V:161:MET:HG3	2.21	0.41
15:V:361:THR:HA	15:V:368:TRP:CE3	2.56	0.41
15:V:372:CYS:SG	15:V:382:PRO:HD3	2.60	0.41
1:a:377:ILE:HG22	1:a:424:ILE:O	2.20	0.41
1:a:718:ILE:HG12	1:a:730:GLN:HG2	2.01	0.41
1:a:742:SER:HA	1:a:745:ILE:HG12	2.03	0.41
1:a:790:ILE:C	1:a:920:LEU:HD22	2.46	0.41
1:a:1195:GLU:HB3	1:a:1204:PHE:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:b:237:SER:OG	2:b:331:MET:HG2	2.19	0.41
2:b:411:PHE:O	2:b:414:LEU:HG	2.21	0.41
2:b:466:GLN:HG3	2:b:470:PHE:CD2	2.56	0.41
3:c:87:GLN:HG3	3:c:131:TYR:CE2	2.55	0.41
7:i:680:GLU:C	7:i:682:LYS:H	2.28	0.41
10:o:18:LEU:HD11	10:o:40:LEU:HB2	2.01	0.41
10:o:480:ILE:HG21	10:o:496:LYS:CB	2.48	0.41
10:o:687:PRO:HA	10:o:690:TYR:CD2	2.55	0.41
10:o:740:SER:HB3	10:o:752:TYR:O	2.21	0.41
10:o:775:PHE:HD2	10:o:841:PHE:CD2	2.39	0.41
11:q:55:ASP:C	11:q:57:ASP:H	2.28	0.41
14:y:84:LEU:O	14:y:140:ILE:HD12	2.20	0.41
14:y:489:GLU:H	14:y:489:GLU:CD	2.29	0.41
15:v:157:GLU:O	15:v:161:MET:HG3	2.21	0.41
1:A:586:THR:HG22	1:A:590:LYS:HZ1	1.85	0.41
1:A:664:MET:HE1	1:A:671:VAL:CG2	2.51	0.41
1:A:704:TYR:OH	2:B:468:LEU:HD21	2.20	0.41
1:A:791:LEU:HA	1:A:920:LEU:HD13	2.03	0.41
2:B:134:ILE:HD11	2:B:158:ILE:HG12	2.03	0.41
2:B:1033:LYS:HE2	2:B:1033:LYS:HA	2.03	0.41
4:E:21:ARG:NH2	13:w:394:LYS:HG2	2.32	0.41
6:G:144:ALA:HA	6:G:154:PHE:CD2	2.56	0.41
10:O:573:LYS:O	10:O:577:ILE:HG12	2.21	0.41
11:R:52:VAL:CG1	11:R:58:ILE:HD11	2.50	0.41
13:W:175:LEU:HD12	13:W:178:ILE:HD12	2.02	0.41
13:W:296:PHE:CD1	4:e:34:ARG:NH1	2.84	0.41
15:V:5:VAL:HG11	15:V:27:PRO:HG2	2.03	0.41
15:V:291:LYS:HE3	15:V:291:LYS:HB3	1.90	0.41
1:a:129:SER:HA	1:a:138:PRO:HA	2.03	0.41
1:a:137:GLN:CG	7:i:168:MET:HE1	2.51	0.41
1:a:517:LEU:HD13	1:a:525:ALA:HB2	2.03	0.41
1:a:763:MET:HE3	1:a:763:MET:HB3	1.90	0.41
1:a:964:PHE:O	1:a:967:LEU:HG	2.20	0.41
1:a:1178:TYR:CE1	12:s:218:ILE:HG22	2.55	0.41
2:b:604:CYS:SG	2:b:607:LEU:HB2	2.61	0.41
2:b:857:VAL:HG22	8:j:60:LEU:CD1	2.51	0.41
11:r:1:MET:HG2	11:r:1:MET:O	2.20	0.41
13:w:591:PHE:N	15:v:642:TYR:OH	2.54	0.41
14:y:263:MET:HE1	14:y:271:TYR:HB2	2.02	0.41
15:v:374:ASN:HB2	15:v:379:ASN:HA	2.01	0.41
1:A:228:VAL:HA	1:A:231:CYS:SG	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:796:LYS:HD2	1:A:797:PRO:HD2	2.02	0.41
1:A:834:LYS:HD2	1:A:834:LYS:C	2.46	0.41
1:A:1054:GLU:OE1	12:S:93:SER:HB2	2.20	0.41
2:B:233:ILE:HG13	2:B:331:MET:HE3	2.03	0.41
2:B:858:GLN:HB3	2:B:868:ARG:HD3	2.02	0.41
2:B:1072:GLU:O	2:B:1075:LYS:HG3	2.21	0.41
4:E:21:ARG:HH22	13:w:394:LYS:CG	2.31	0.41
6:G:110:ARG:N	7:I:102:ASN:HD22	2.08	0.41
7:I:80:ILE:HG13	7:I:81:GLY:H	1.85	0.41
7:I:757:ARG:O	7:I:760:LEU:HG	2.20	0.41
9:L:143:PRO:HG2	9:L:155:ILE:HD11	2.03	0.41
10:O:53:VAL:HA	10:O:56:ILE:HG12	2.01	0.41
10:O:152:LYS:HG2	10:O:153:THR:O	2.21	0.41
10:O:536:ASP:O	10:O:540:GLN:OE1	2.39	0.41
10:O:740:SER:HB3	10:O:752:TYR:O	2.21	0.41
11:R:85:VAL:HG22	11:R:87:ASP:H	1.86	0.41
13:W:318:GLU:HA	13:W:321:THR:HG22	2.03	0.41
16:U:62:C:H2'	16:U:63:G:C8	2.56	0.41
1:a:174:GLU:HG3	1:a:177:TRP:CZ2	2.55	0.41
1:a:304:PRO:HD3	1:a:402:ILE:HD13	2.03	0.41
1:a:447:HIS:CE1	1:a:449:ILE:HG22	2.55	0.41
1:a:578:PHE:N	2:b:1009:PHE:HZ	2.07	0.41
1:a:719:LEU:HG	1:a:720:ASN:OD1	2.20	0.41
2:b:399:ILE:HG22	2:b:400:HIS:N	2.36	0.41
2:b:494:ILE:HD11	2:b:585:GLY:HA2	2.01	0.41
2:b:1067:ALA:O	2:b:1070:ILE:HG22	2.20	0.41
3:c:223:LEU:HD12	3:c:224:ILE:N	2.36	0.41
4:e:11:LYS:HD3	4:e:105:VAL:HG11	2.02	0.41
4:e:163:ARG:CZ	4:e:175:ILE:HG23	2.51	0.41
13:w:41:VAL:O	13:w:161:LEU:HD12	2.19	0.41
13:w:310:ASN:O	13:w:313:VAL:HG12	2.20	0.41
14:y:339:THR:HA	14:y:342:ARG:HG2	2.01	0.41
1:A:347:ARG:HB2	7:I:362:TYR:CE2	2.56	0.41
1:A:482:ILE:HD11	1:A:568:TYR:HB2	2.02	0.41
1:A:517:LEU:HD13	1:A:525:ALA:HB2	2.03	0.41
1:A:541:LEU:HD23	1:A:557:PHE:CZ	2.55	0.41
1:A:660:ASN:HA	1:A:663:LYS:HE3	2.02	0.41
1:A:924:THR:HA	1:A:925:PRO:HD3	1.90	0.41
1:A:1011:GLU:O	1:A:1012:LYS:HE2	2.21	0.41
1:A:1070:THR:HG22	1:A:1072:TYR:CE1	2.56	0.41
1:A:1195:GLU:HB3	1:A:1204:PHE:CZ	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:435:MET:O	2:B:438:ILE:HG22	2.21	0.41
2:B:466:GLN:HG3	2:B:470:PHE:CD2	2.56	0.41
2:B:604:CYS:SG	2:B:607:LEU:HB2	2.61	0.41
2:B:683:SER:HB2	2:B:686:ARG:HG2	2.03	0.41
2:B:746:LEU:HB3	2:B:1009:PHE:HB2	2.03	0.41
2:B:746:LEU:HD22	2:B:928:MET:HE1	2.02	0.41
2:B:747:MET:HG2	2:B:1008:VAL:HG13	2.02	0.41
2:B:765:ILE:HD11	2:B:877:PRO:HD2	2.03	0.41
2:B:938:TYR:CE1	2:B:950:ARG:O	2.71	0.41
3:C:155:VAL:O	3:C:158:LEU:HG	2.21	0.41
3:C:223:LEU:HD12	3:C:224:ILE:N	2.36	0.41
4:E:34:ARG:NH1	13:w:296:PHE:CD1	2.84	0.41
4:E:163:ARG:CZ	4:E:175:ILE:HG23	2.51	0.41
7:I:571:ILE:HA	7:I:574:GLU:CD	2.46	0.41
7:I:671:PHE:HB2	7:I:674:HIS:O	2.21	0.41
7:I:721:LEU:HD22	7:I:726:HIS:CE1	2.55	0.41
10:O:206:ASP:O	10:O:209:ILE:HG22	2.21	0.41
10:O:317:LEU:H	10:O:327:ARG:NH1	2.12	0.41
10:O:687:PRO:HA	10:O:690:TYR:CD2	2.55	0.41
10:O:775:PHE:HD2	10:O:841:PHE:CD2	2.39	0.41
13:W:582:ILE:O	13:W:585:ILE:HG22	2.20	0.41
13:W:589:HIS:O	15:V:642:TYR:HE1	2.03	0.41
14:Y:40:ARG:HA	14:Y:43:LEU:HD23	2.03	0.41
14:Y:185:THR:O	14:Y:185:THR:HG23	2.20	0.41
15:V:38:TYR:O	15:V:41:LEU:HG	2.21	0.41
15:V:362:LYS:HE2	15:V:365:THR:N	2.27	0.41
16:U:28:U:H2'	16:U:29:G:C8	2.56	0.41
16:U:68:G:H2'	16:U:69:A:C8	2.55	0.41
1:a:11:LEU:HD12	2:b:1135:GLY:O	2.21	0.41
1:a:167:GLN:HB3	7:i:196:ARG:CZ	2.50	0.41
1:a:503:ILE:HD12	1:a:503:ILE:H	1.86	0.41
1:a:791:LEU:HA	1:a:920:LEU:HD13	2.03	0.41
1:a:921:GLY:HA2	5:f:76:ARG:HH12	1.86	0.41
2:b:858:GLN:HB3	2:b:868:ARG:HD3	2.02	0.41
2:b:1033:LYS:HE2	2:b:1033:LYS:HA	2.03	0.41
2:b:1037:LEU:HD23	2:b:1038:ILE:HG12	2.02	0.41
4:e:66:GLU:HG3	4:e:85:THR:HA	2.03	0.41
5:f:112:ASN:HB3	5:f:115:HIS:ND1	2.36	0.41
10:o:209:ILE:HD12	10:o:209:ILE:HA	1.93	0.41
10:o:309:ASN:HA	10:o:344:ARG:NE	2.32	0.41
10:o:573:LYS:O	10:o:577:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:o:626:ILE:HA	10:o:649:TYR:CE2	2.56	0.41
10:o:706:LYS:NZ	10:o:842:SER:HB3	2.36	0.41
11:q:39:SER:HA	11:q:44:ILE:HG12	2.03	0.41
14:y:471:ARG:HA	14:y:474:VAL:HG22	2.03	0.41
15:v:155:LYS:O	15:v:159:MET:HE3	2.20	0.41
15:v:229:GLN:HG2	15:v:230:LEU:N	2.36	0.41
15:v:493:PHE:CE1	15:v:553:ASP:HA	2.55	0.41
1:A:137:GLN:CG	7:I:168:MET:HE1	2.51	0.41
1:A:791:LEU:HD23	1:A:793:SER:H	1.86	0.41
1:A:855:ILE:HD11	1:A:902:LYS:HB3	2.03	0.41
1:A:1054:GLU:HG2	1:A:1074:ASN:HB3	2.03	0.41
13:W:175:LEU:HA	13:W:178:ILE:HD12	2.02	0.41
14:Y:487:PRO:HA	14:Y:488:PRO:HD3	1.96	0.41
1:a:114:HIS:O	1:a:118:ARG:HG2	2.20	0.41
1:a:228:VAL:HA	1:a:231:CYS:SG	2.61	0.41
1:a:1011:GLU:O	1:a:1012:LYS:HE2	2.21	0.41
1:a:1167:ALA:O	1:a:1171:THR:HG23	2.20	0.41
2:b:190:PHE:HB2	2:b:338:PHE:CD1	2.56	0.41
2:b:496:ASN:C	2:b:496:ASN:ND2	2.77	0.41
2:b:683:SER:HB2	2:b:686:ARG:HG2	2.03	0.41
2:b:765:ILE:HD11	2:b:877:PRO:HD2	2.03	0.41
13:w:208:GLY:O	13:w:211:VAL:HG12	2.21	0.41
13:w:296:PHE:CE2	13:w:354:LEU:HD21	2.56	0.41
7:I:50:ILE:HG13	7:I:51:THR:N	2.37	0.40
7:I:230:LEU:HB3	7:I:232:VAL:HG23	2.02	0.40
11:R:10:THR:HG22	11:R:91:VAL:HA	2.03	0.40
13:W:577:ASP:HA	13:W:580:ASN:HD21	1.86	0.40
1:a:796:LYS:HD2	1:a:797:PRO:HD2	2.02	0.40
2:b:528:PHE:O	2:b:539:SER:HA	2.21	0.40
2:b:746:LEU:HD22	2:b:928:MET:HE1	2.02	0.40
2:b:979:LYS:HE2	2:b:979:LYS:HB2	1.85	0.40
2:b:1072:GLU:O	2:b:1075:LYS:HG3	2.21	0.40
7:i:18:TYR:CG	7:i:32:PHE:HD1	2.39	0.40
7:i:120:ASP:O	7:i:121:MET:HE2	2.20	0.40
7:i:230:LEU:HB3	7:i:232:VAL:HG23	2.02	0.40
10:o:206:ASP:O	10:o:209:ILE:HG22	2.21	0.40
14:y:221:LYS:HA	14:y:224:VAL:HG12	2.02	0.40
1:A:546:SER:HA	1:A:550:SER:O	2.21	0.40
2:B:150:PRO:HG3	7:I:596:GLY:CA	2.52	0.40
2:B:857:VAL:HG22	8:J:60:LEU:CD1	2.51	0.40
3:C:87:GLN:HB3	3:C:137:GLN:CG	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:265:PHE:CE2	3:C:282:VAL:HA	2.56	0.40
4:E:85:THR:CG2	4:E:94:LYS:HB3	2.48	0.40
6:G:141:LEU:HA	6:G:156:ALA:HB2	2.03	0.40
13:W:57:LEU:O	13:W:61:VAL:HG23	2.21	0.40
13:W:208:GLY:O	13:W:211:VAL:HG12	2.21	0.40
13:W:591:PHE:N	15:V:642:TYR:OH	2.54	0.40
14:Y:89:LEU:CD1	14:Y:94:TRP:HE1	2.34	0.40
1:a:183:HIS:CG	1:a:1227:HIS:HA	2.56	0.40
1:a:347:ARG:HB2	7:i:362:TYR:CE2	2.56	0.40
1:a:834:LYS:C	1:a:834:LYS:HD2	2.46	0.40
1:a:1054:GLU:OE1	12:s:93:SER:HB2	2.20	0.40
2:b:746:LEU:HD12	2:b:915:ILE:HG23	2.03	0.40
7:i:50:ILE:HG13	7:i:51:THR:N	2.37	0.40
7:i:570:ARG:HG3	7:i:571:ILE:N	2.37	0.40
7:i:571:ILE:HA	7:i:574:GLU:CD	2.46	0.40
9:l:253:TYR:HA	9:l:256:LEU:HD12	2.02	0.40
10:o:642:THR:HB	10:o:644:TYR:CE2	2.56	0.40
15:v:59:LEU:HG	15:v:117:LEU:HD23	2.03	0.40
15:v:648:ASN:C	15:v:648:ASN:HD22	2.28	0.40
16:u:28:U:H2'	16:u:29:G:C8	2.56	0.40
1:A:129:SER:HA	1:A:138:PRO:HA	2.03	0.40
1:A:305:ALA:HA	1:A:308:ARG:NE	2.35	0.40
1:A:875:TYR:CD2	1:A:916:LEU:HD13	2.56	0.40
1:A:1043:GLU:O	1:A:1046:ILE:HG12	2.21	0.40
2:B:190:PHE:HB3	2:B:210:ILE:HG12	2.03	0.40
2:B:496:ASN:ND2	2:B:496:ASN:C	2.77	0.40
5:F:118:ILE:HA	5:F:121:ILE:HG22	2.02	0.40
10:O:128:ARG:HH12	10:O:130:ILE:HG12	1.87	0.40
11:R:51:LEU:HB3	11:R:61:PHE:HB2	2.03	0.40
13:W:288:LEU:HD13	13:W:288:LEU:HA	1.90	0.40
14:Y:263:MET:HE1	14:Y:271:TYR:HB2	2.02	0.40
14:Y:383:LEU:O	14:Y:458:ILE:HA	2.21	0.40
14:Y:471:ARG:HA	14:Y:474:VAL:HG22	2.03	0.40
15:V:229:GLN:HG2	15:V:230:LEU:N	2.36	0.40
1:a:597:GLU:OE2	1:a:598:LYS:HG2	2.21	0.40
1:a:822:GLN:OE1	4:e:167:ASN:HA	2.21	0.40
1:a:905:ALA:HA	1:a:908:ILE:HG12	2.04	0.40
1:a:1041:MET:SD	1:a:1096:LYS:HB3	2.61	0.40
1:a:1070:THR:HG22	1:a:1072:TYR:CE1	2.56	0.40
2:b:553:ARG:O	2:b:557:ARG:HG3	2.22	0.40
3:c:9:SER:HA	3:c:198:PHE:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:g:141:LEU:HA	6:g:156:ALA:HB2	2.03	0.40
6:g:144:ALA:HA	6:g:154:PHE:CD2	2.56	0.40
10:o:363:VAL:HG21	10:o:529:PHE:CZ	2.56	0.40
11:r:85:VAL:HG22	11:r:87:ASP:H	1.86	0.40
13:w:46:ILE:HD12	13:w:46:ILE:HG23	1.86	0.40
13:w:318:GLU:HA	13:w:321:THR:HG22	2.03	0.40
13:w:589:HIS:O	15:v:642:TYR:HE1	2.03	0.40
15:v:361:THR:HA	15:v:368:TRP:CE3	2.56	0.40
15:v:696:THR:HG23	15:v:699:LYS:HE3	2.02	0.40
1:A:597:GLU:OE2	1:A:598:LYS:HG2	2.21	0.40
1:A:905:ALA:HA	1:A:908:ILE:HG12	2.04	0.40
1:A:1227:HIS:HB2	1:A:1229:LYS:HG2	2.02	0.40
2:B:190:PHE:HB2	2:B:338:PHE:CD1	2.56	0.40
2:B:399:ILE:HG22	2:B:400:HIS:N	2.36	0.40
3:C:19:ALA:O	3:C:22:ILE:HG22	2.21	0.40
4:E:58:LYS:HB3	4:E:58:LYS:HE3	1.88	0.40
7:I:404:VAL:O	7:I:407:GLN:OE1	2.40	0.40
10:O:47:LEU:HA	10:O:50:LEU:HD23	2.04	0.40
10:O:623:ALA:HA	10:O:626:ILE:HD12	2.04	0.40
14:Y:221:LYS:HA	14:Y:224:VAL:HG12	2.02	0.40
2:b:1021:LEU:HD23	2:b:1023:GLN:N	2.36	0.40
2:b:1058:ARG:HA	2:b:1061:LEU:HG	2.03	0.40
7:i:490:LEU:O	7:i:494:VAL:HG23	2.22	0.40
11:r:37:LEU:O	11:r:40:GLU:HG3	2.22	0.40
13:w:249:HIS:HB2	13:w:478:SER:HA	2.04	0.40
13:w:399:ASP:O	13:w:403:VAL:HG23	2.21	0.40
1:A:375:SER:HB2	1:A:435:GLN:OE1	2.21	0.40
1:A:480:LEU:HD22	3:C:275:HIS:CE1	2.57	0.40
1:A:820:ILE:HG22	1:A:824:PHE:CZ	2.57	0.40
2:B:1021:LEU:HD23	2:B:1023:GLN:N	2.36	0.40
2:B:1138:VAL:HG12	2:B:1140:LEU:HD22	2.04	0.40
9:L:253:TYR:HA	9:L:256:LEU:HD12	2.02	0.40
11:Q:55:ASP:C	11:Q:57:ASP:H	2.28	0.40
11:Q:93:GLY:HA2	11:Q:112:HIS:HB3	2.03	0.40
13:W:52:THR:HG23	13:W:81:PHE:CD2	2.57	0.40
1:a:303:MET:SD	1:a:307:ILE:HB	2.62	0.40
1:a:561:SER:O	1:a:565:PHE:CD2	2.74	0.40
1:a:791:LEU:HD23	1:a:793:SER:H	1.86	0.40
2:b:435:MET:O	2:b:438:ILE:HG22	2.21	0.40
3:c:87:GLN:HB3	3:c:137:GLN:CG	2.51	0.40
7:i:250:GLU:HG2	7:i:256:LEU:HD12	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:i:404:VAL:O	7:i:407:GLN:OE1	2.40	0.40
7:i:671:PHE:HB2	7:i:674:HIS:O	2.21	0.40
10:o:156:PHE:HB3	10:o:193:ILE:CG2	2.51	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	1275/1287 (99%)	1204 (94%)	71 (6%)	0	100	100
1	a	1275/1287 (99%)	1204 (94%)	71 (6%)	0	100	100
2	B	1123/1164 (96%)	1069 (95%)	54 (5%)	0	100	100
2	b	1123/1164 (96%)	1069 (95%)	54 (5%)	0	100	100
3	C	302/305 (99%)	289 (96%)	13 (4%)	0	100	100
3	c	302/305 (99%)	289 (96%)	13 (4%)	0	100	100
4	E	182/185 (98%)	176 (97%)	6 (3%)	0	100	100
4	e	182/185 (98%)	176 (97%)	6 (3%)	0	100	100
5	F	107/164 (65%)	102 (95%)	5 (5%)	0	100	100
5	f	107/164 (65%)	102 (95%)	5 (5%)	0	100	100
6	G	157/161 (98%)	152 (97%)	5 (3%)	0	100	100
6	g	157/161 (98%)	152 (97%)	5 (3%)	0	100	100
7	I	765/795 (96%)	728 (95%)	37 (5%)	0	100	100
7	i	765/795 (96%)	728 (95%)	37 (5%)	0	100	100
8	J	59/63 (94%)	55 (93%)	4 (7%)	0	100	100
8	j	59/63 (94%)	55 (93%)	4 (7%)	0	100	100
9	L	280/287 (98%)	272 (97%)	8 (3%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	l	280/287 (98%)	272 (97%)	8 (3%)	0	100	100
10	O	842/844 (100%)	812 (96%)	29 (3%)	1 (0%)	48	83
10	o	842/844 (100%)	812 (96%)	29 (3%)	1 (0%)	48	83
11	Q	122/129 (95%)	116 (95%)	6 (5%)	0	100	100
11	R	127/129 (98%)	121 (95%)	6 (5%)	0	100	100
11	q	122/129 (95%)	116 (95%)	6 (5%)	0	100	100
11	r	127/129 (98%)	121 (95%)	6 (5%)	0	100	100
12	S	182/259 (70%)	172 (94%)	10 (6%)	0	100	100
12	s	182/259 (70%)	172 (94%)	10 (6%)	0	100	100
13	W	616/637 (97%)	591 (96%)	25 (4%)	0	100	100
13	w	616/637 (97%)	591 (96%)	25 (4%)	0	100	100
14	Y	599/631 (95%)	578 (96%)	21 (4%)	0	100	100
14	y	599/631 (95%)	578 (96%)	21 (4%)	0	100	100
15	V	697/710 (98%)	671 (96%)	26 (4%)	0	100	100
15	v	697/710 (98%)	671 (96%)	26 (4%)	0	100	100
All	All	14870/15500 (96%)	14216 (96%)	652 (4%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
10	O	449	GLY
10	o	449	GLY

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	1150/1158 (99%)	1150 (100%)	0	100	100
1	a	1150/1158 (99%)	1150 (100%)	0	100	100
2	B	1030/1064 (97%)	1029 (100%)	1 (0%)	88	89

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	b	1030/1064 (97%)	1029 (100%)	1 (0%)	88	89
3	C	286/287 (100%)	286 (100%)	0	100	100
3	c	286/287 (100%)	286 (100%)	0	100	100
4	E	174/175 (99%)	174 (100%)	0	100	100
4	e	174/175 (99%)	174 (100%)	0	100	100
5	F	102/151 (68%)	102 (100%)	0	100	100
5	f	102/151 (68%)	102 (100%)	0	100	100
6	G	142/144 (99%)	142 (100%)	0	100	100
6	g	142/144 (99%)	142 (100%)	0	100	100
7	I	735/755 (97%)	735 (100%)	0	100	100
7	i	735/755 (97%)	735 (100%)	0	100	100
8	J	60/62 (97%)	60 (100%)	0	100	100
8	j	60/62 (97%)	60 (100%)	0	100	100
9	L	269/272 (99%)	269 (100%)	0	100	100
9	l	269/272 (99%)	269 (100%)	0	100	100
10	O	774/774 (100%)	774 (100%)	0	100	100
10	o	774/774 (100%)	774 (100%)	0	100	100
11	Q	116/121 (96%)	116 (100%)	0	100	100
11	R	121/121 (100%)	121 (100%)	0	100	100
11	q	116/121 (96%)	116 (100%)	0	100	100
11	r	121/121 (100%)	121 (100%)	0	100	100
12	S	172/238 (72%)	172 (100%)	0	100	100
12	s	172/238 (72%)	172 (100%)	0	100	100
13	W	580/595 (98%)	580 (100%)	0	100	100
13	w	580/595 (98%)	580 (100%)	0	100	100
14	Y	551/572 (96%)	551 (100%)	0	100	100
14	y	551/572 (96%)	551 (100%)	0	100	100
15	V	657/665 (99%)	656 (100%)	1 (0%)	87	87
15	v	657/665 (99%)	656 (100%)	1 (0%)	87	87
All	All	13838/14308 (97%)	13834 (100%)	4 (0%)	100	100

All (4) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	496	ASN
15	V	166	GLN
2	b	496	ASN
15	v	166	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (137) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	62	HIS
1	A	72	HIS
1	A	256	ASN
1	A	481	ASN
1	A	660	ASN
1	A	853	ASN
1	A	892	HIS
1	A	941	GLN
1	A	947	HIS
1	A	1066	ASN
1	A	1117	GLN
1	A	1223	ASN
1	A	1227	HIS
1	A	1234	ASN
2	B	126	HIS
2	B	282	ASN
2	B	325	GLN
2	B	371	HIS
2	B	387	ASN
2	B	400	HIS
2	B	466	GLN
2	B	693	GLN
2	B	763	GLN
3	C	109	ASN
3	C	129	GLN
3	C	263	ASN
3	C	275	HIS
4	E	89	GLN
4	E	156	ASN
6	G	37	HIS
6	G	129	ASN
6	G	157	ASN
7	I	36	ASN
7	I	102	ASN
7	I	110	ASN

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Mol	Chain	Res	Type
7	I	489	ASN
7	I	664	ASN
8	J	16	HIS
8	J	47	GLN
9	L	229	GLN
9	L	260	HIS
10	O	325	ASN
10	O	431	ASN
10	O	673	ASN
10	O	731	ASN
11	R	43	HIS
11	R	46	GLN
11	R	73	ASN
11	R	121	HIS
12	S	36	ASN
12	S	251	ASN
13	W	115	ASN
13	W	264	GLN
13	W	268	HIS
13	W	285	GLN
14	Y	49	HIS
14	Y	145	ASN
14	Y	526	GLN
14	Y	570	ASN
14	Y	580	ASN
15	V	44	HIS
15	V	166	GLN
15	V	217	ASN
15	V	221	ASN
15	V	231	ASN
15	V	323	ASN
15	V	448	HIS
15	V	648	ASN
1	a	62	HIS
1	a	72	HIS
1	a	256	ASN
1	a	481	ASN
1	a	660	ASN
1	a	686	GLN
1	a	853	ASN
1	a	892	HIS
1	a	941	GLN

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Mol	Chain	Res	Type
1	a	947	HIS
1	a	1066	ASN
1	a	1117	GLN
1	a	1223	ASN
1	a	1227	HIS
1	a	1234	ASN
2	b	126	HIS
2	b	282	ASN
2	b	325	GLN
2	b	371	HIS
2	b	387	ASN
2	b	400	HIS
2	b	466	GLN
2	b	496	ASN
2	b	693	GLN
2	b	763	GLN
3	c	109	ASN
3	c	129	GLN
3	c	263	ASN
3	c	275	HIS
4	e	89	GLN
4	e	156	ASN
6	g	17	HIS
6	g	37	HIS
6	g	100	GLN
6	g	129	ASN
6	g	157	ASN
7	i	102	ASN
7	i	110	ASN
7	i	489	ASN
7	i	664	ASN
8	j	16	HIS
8	j	47	GLN
9	l	229	GLN
9	l	260	HIS
10	o	325	ASN
10	o	431	ASN
10	o	502	ASN
10	o	673	ASN
10	o	800	ASN
11	r	43	HIS
11	r	46	GLN

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Mol	Chain	Res	Type
11	r	73	ASN
11	r	121	HIS
12	s	36	ASN
12	s	251	ASN
13	w	115	ASN
13	w	264	GLN
13	w	268	HIS
13	w	285	GLN
14	y	145	ASN
14	y	526	GLN
14	y	570	ASN
14	y	580	ASN
15	v	44	HIS
15	v	166	GLN
15	v	217	ASN
15	v	221	ASN
15	v	448	HIS
15	v	648	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
16	U	68/72 (94%)	14 (20%)	0
16	u	68/72 (94%)	14 (20%)	0
All	All	136/144 (94%)	28 (20%)	0

All (28) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
16	U	4	C
16	U	9	G
16	U	16	U
16	U	17	G
16	U	18	G
16	U	34	U
16	U	35	U
16	U	36	G
16	U	37	A
16	U	38	A
16	U	47	U
16	U	48	C

Continued on next page...

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Mol	Chain	Res	Type
16	U	71	C
16	U	72	U
16	u	4	C
16	u	9	G
16	u	16	U
16	u	17	G
16	u	18	G
16	u	34	U
16	u	35	U
16	u	36	G
16	u	37	A
16	u	38	A
16	u	47	U
16	u	48	C
16	u	71	C
16	u	72	U

There are no RNA pucker outliers to report.

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

10 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
16	1MA	u	57	16	21,25,26	0.44	0	31,37,40	0.76	1 (3%)
12	SEP	S	228	12	8,9,10	1.59	1 (12%)	8,12,14	1.73	1 (12%)
12	SEP	S	237	12	8,9,10	1.58	1 (12%)	8,12,14	1.52	2 (25%)
16	1MA	U	57	16	21,25,26	0.44	0	31,37,40	0.76	1 (3%)
12	SEP	S	232	12	8,9,10	1.58	1 (12%)	8,12,14	1.60	2 (25%)
12	SEP	s	228	12	8,9,10	1.59	1 (12%)	8,12,14	1.73	1 (12%)
16	OMC	U	32	16	19,22,23	0.49	0	26,31,34	0.65	0
12	SEP	s	232	12	8,9,10	1.58	1 (12%)	8,12,14	1.60	2 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
12	SEP	s	237	12	8,9,10	1.58	1 (12%)	8,12,14	1.52	2 (25%)
16	OMC	u	32	16	19,22,23	0.49	0	26,31,34	0.65	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
16	1MA	u	57	16	-	1/7/25/26	0/3/3/3
12	SEP	S	228	12	-	5/5/8/10	-
12	SEP	S	237	12	-	1/5/8/10	-
16	1MA	U	57	16	-	1/7/25/26	0/3/3/3
12	SEP	S	232	12	-	3/5/8/10	-
12	SEP	s	228	12	-	5/5/8/10	-
16	OMC	U	32	16	-	0/9/27/28	0/2/2/2
12	SEP	s	232	12	-	3/5/8/10	-
12	SEP	s	237	12	-	1/5/8/10	-
16	OMC	u	32	16	-	0/9/27/28	0/2/2/2

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	S	228	SEP	P-O1P	3.48	1.61	1.50
12	s	228	SEP	P-O1P	3.48	1.61	1.50
12	S	237	SEP	P-O1P	3.41	1.61	1.50
12	s	237	SEP	P-O1P	3.41	1.61	1.50
12	S	232	SEP	P-O1P	3.38	1.61	1.50
12	s	232	SEP	P-O1P	3.38	1.61	1.50

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	S	228	SEP	OG-CB-CA	4.06	112.09	108.14
12	s	228	SEP	OG-CB-CA	4.06	112.09	108.14
12	s	232	SEP	P-OG-CB	-3.26	109.31	118.30
12	S	232	SEP	P-OG-CB	-3.26	109.31	118.30
12	s	237	SEP	P-OG-CB	-3.06	109.86	118.30
12	S	237	SEP	P-OG-CB	-3.06	109.86	118.30
12	S	232	SEP	OG-CB-CA	2.58	110.66	108.14
12	s	232	SEP	OG-CB-CA	2.58	110.66	108.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	s	237	SEP	OG-CB-CA	2.33	110.41	108.14
12	S	237	SEP	OG-CB-CA	2.33	110.41	108.14
16	U	57	1MA	N1-C6-N6	2.27	125.54	119.77
16	u	57	1MA	N1-C6-N6	2.27	125.54	119.77

There are no chirality outliers.

All (20) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
12	S	228	SEP	N-CA-CB-OG
12	S	228	SEP	CB-OG-P-O1P
12	S	228	SEP	CB-OG-P-O3P
12	S	232	SEP	CB-OG-P-O1P
12	S	232	SEP	CB-OG-P-O2P
12	S	232	SEP	CB-OG-P-O3P
12	s	228	SEP	N-CA-CB-OG
12	s	228	SEP	CB-OG-P-O1P
12	s	228	SEP	CB-OG-P-O3P
12	s	232	SEP	CB-OG-P-O1P
12	s	232	SEP	CB-OG-P-O2P
12	s	232	SEP	CB-OG-P-O3P
12	S	228	SEP	CB-OG-P-O2P
12	s	228	SEP	CB-OG-P-O2P
12	S	228	SEP	CA-CB-OG-P
12	S	237	SEP	CA-CB-OG-P
12	s	228	SEP	CA-CB-OG-P
12	s	237	SEP	CA-CB-OG-P
16	U	57	1MA	C2'-C1'-N9-C8
16	u	57	1MA	C2'-C1'-N9-C8

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
12	s	237	SEP	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 14 ligands modelled in this entry, 14 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

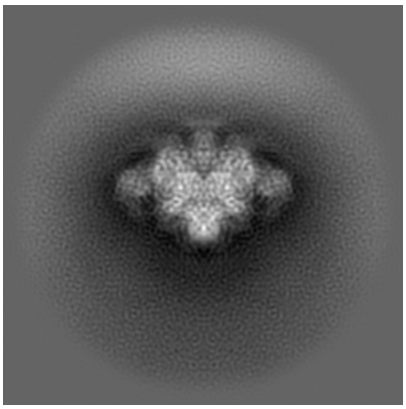
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-57675. These allow visual inspection of the internal detail of the map and identification of artifacts.

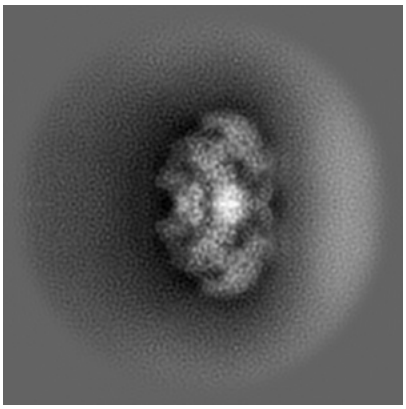
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

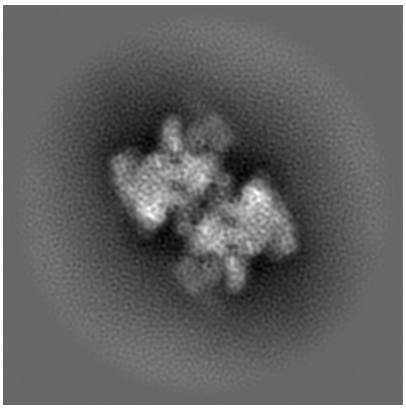
6.1.1 Primary map



X

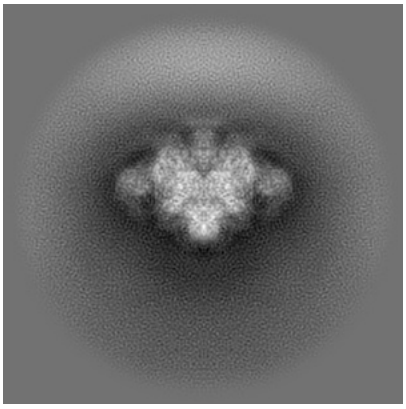


Y

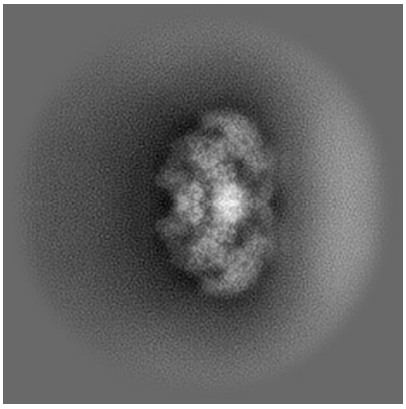


Z

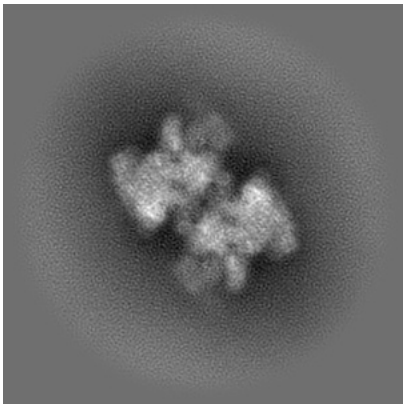
6.1.2 Raw map



X



Y

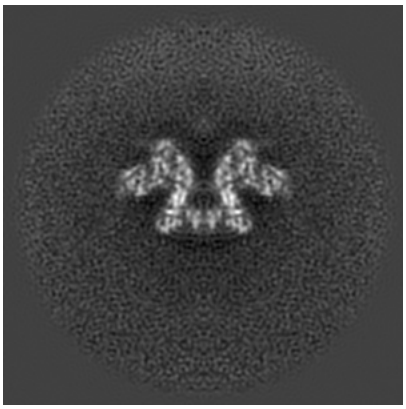


Z

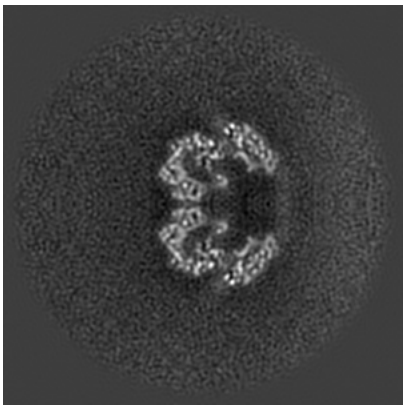
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

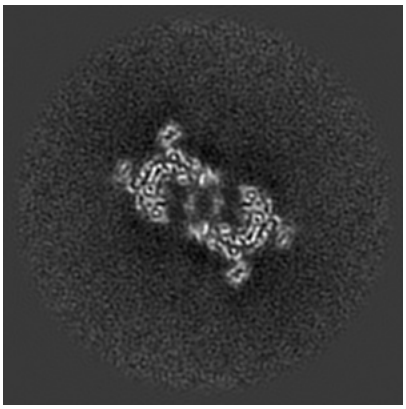
6.2.1 Primary map



X Index: 116

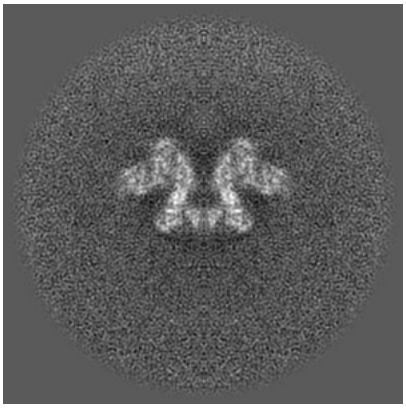


Y Index: 116

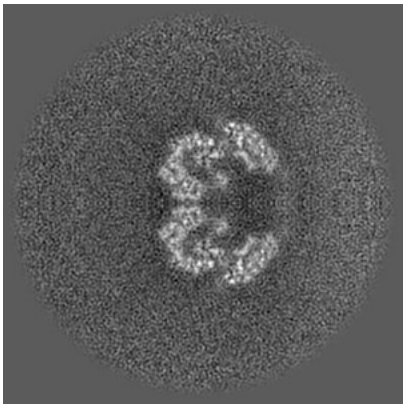


Z Index: 116

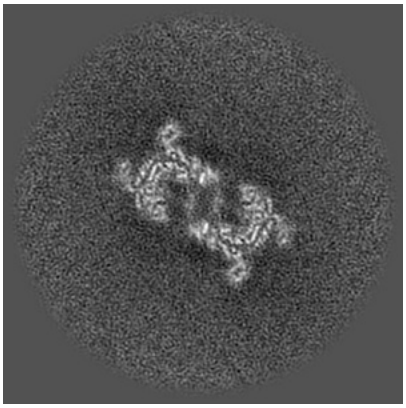
6.2.2 Raw map



X Index: 116



Y Index: 116

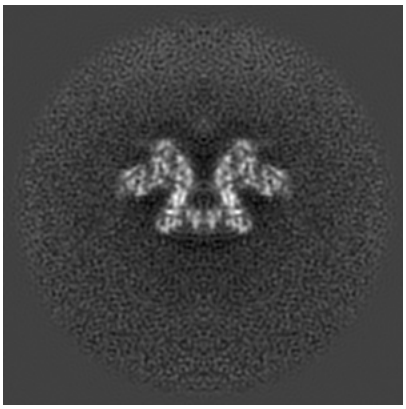


Z Index: 116

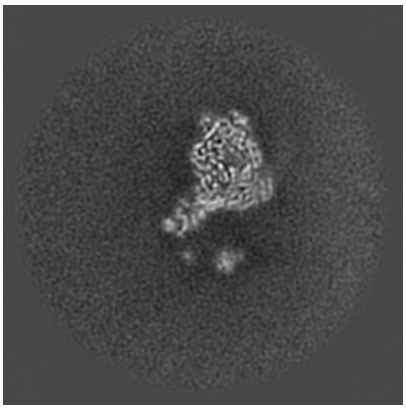
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

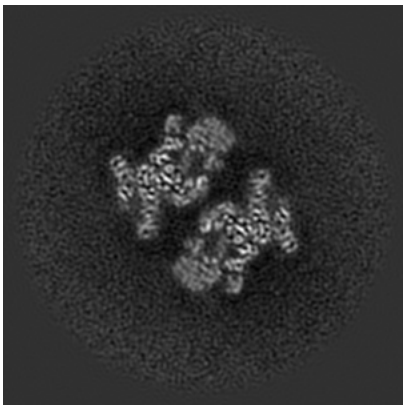
6.3.1 Primary map



X Index: 116

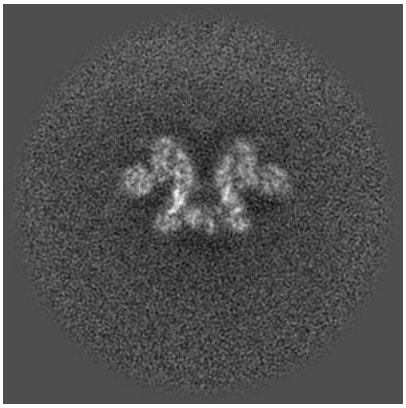


Y Index: 101

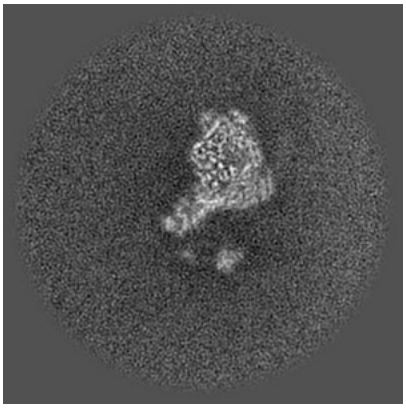


Z Index: 126

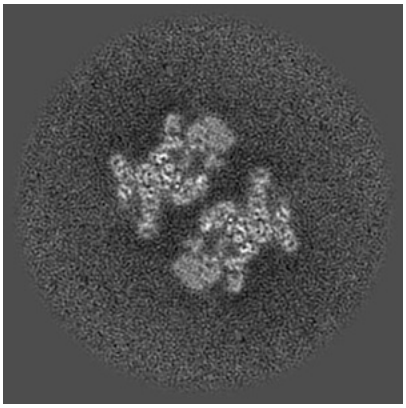
6.3.2 Raw map



X Index: 117



Y Index: 101

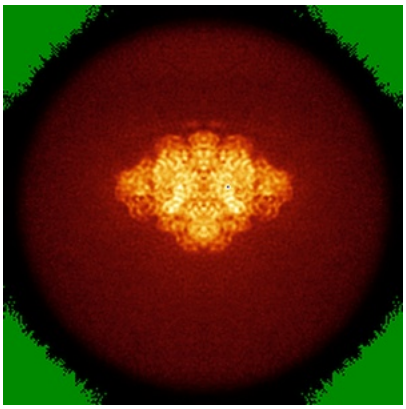


Z Index: 126

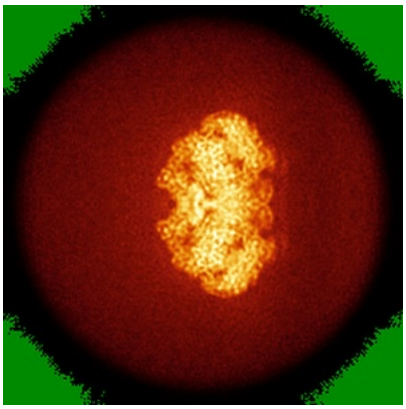
The images above show the largest variance slices of the map in three orthogonal directions.

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

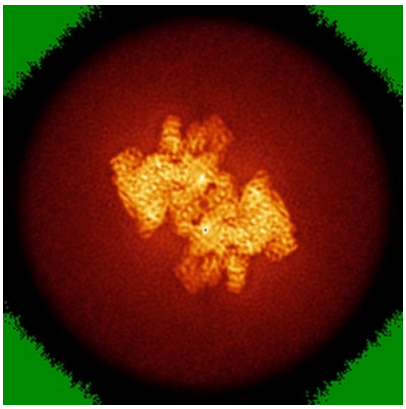
6.4.1 Primary map



X

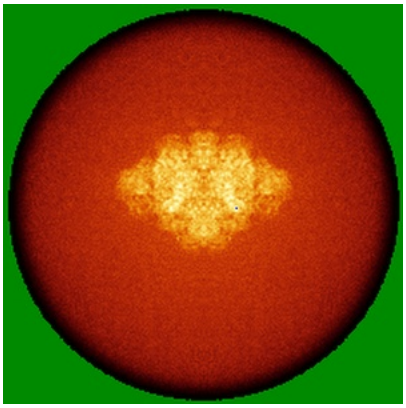


Y

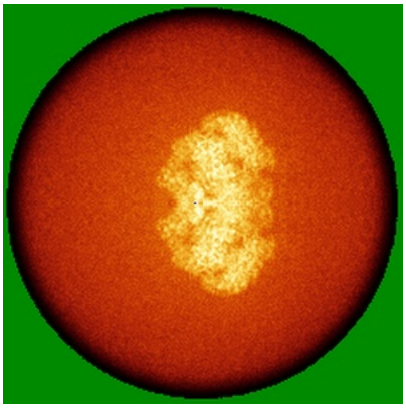


Z

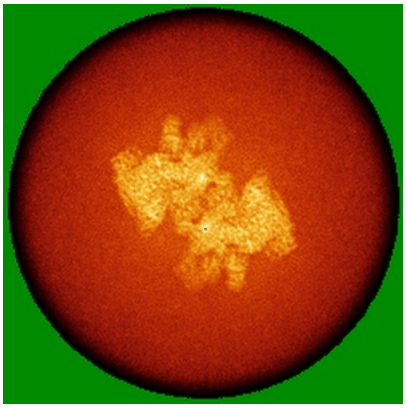
6.4.2 Raw map



X



Y



Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X



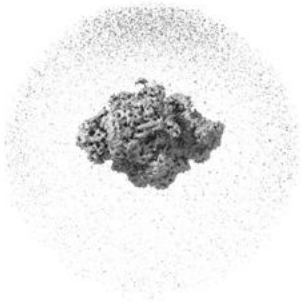
Y



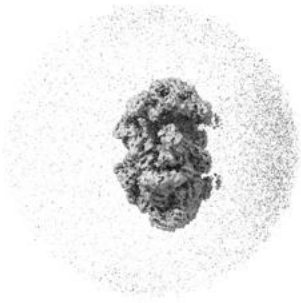
Z

The images above show the 3D surface view of the map at the recommended contour level 0.004. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

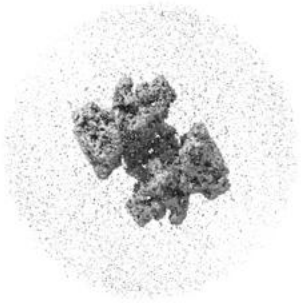
6.5.2 Raw map



X



Y



Z

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

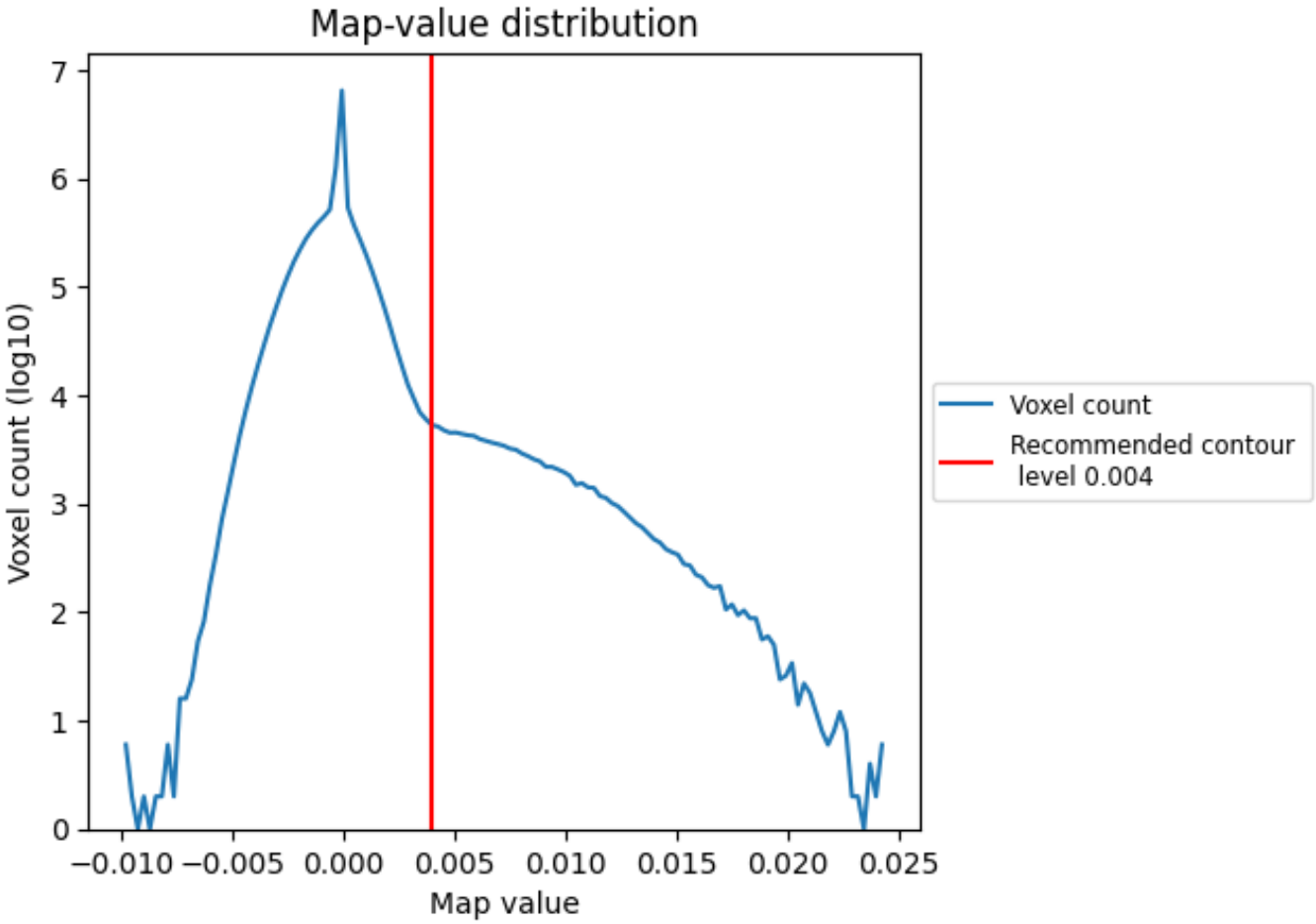
6.6 Mask visualisation (i)

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

7 Map analysis

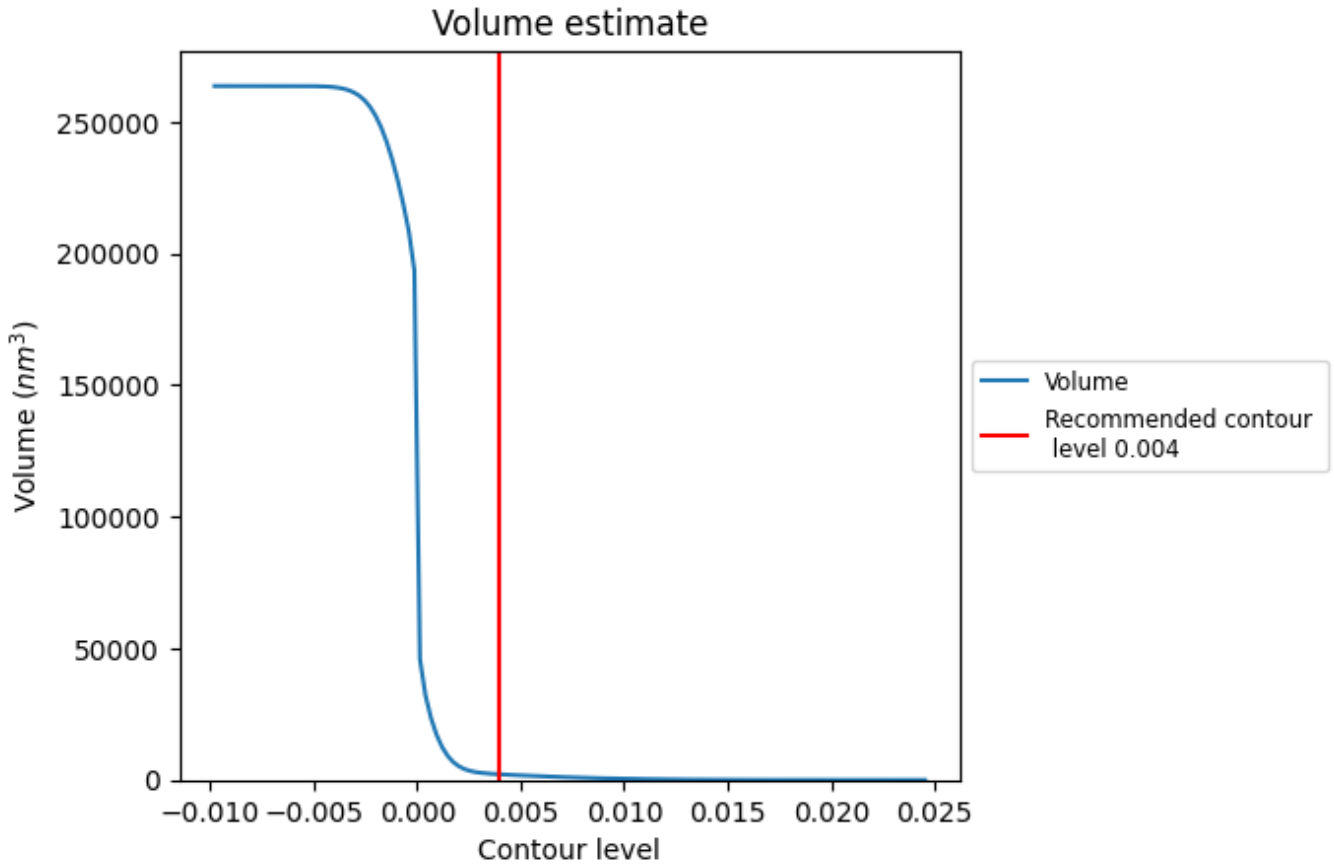
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

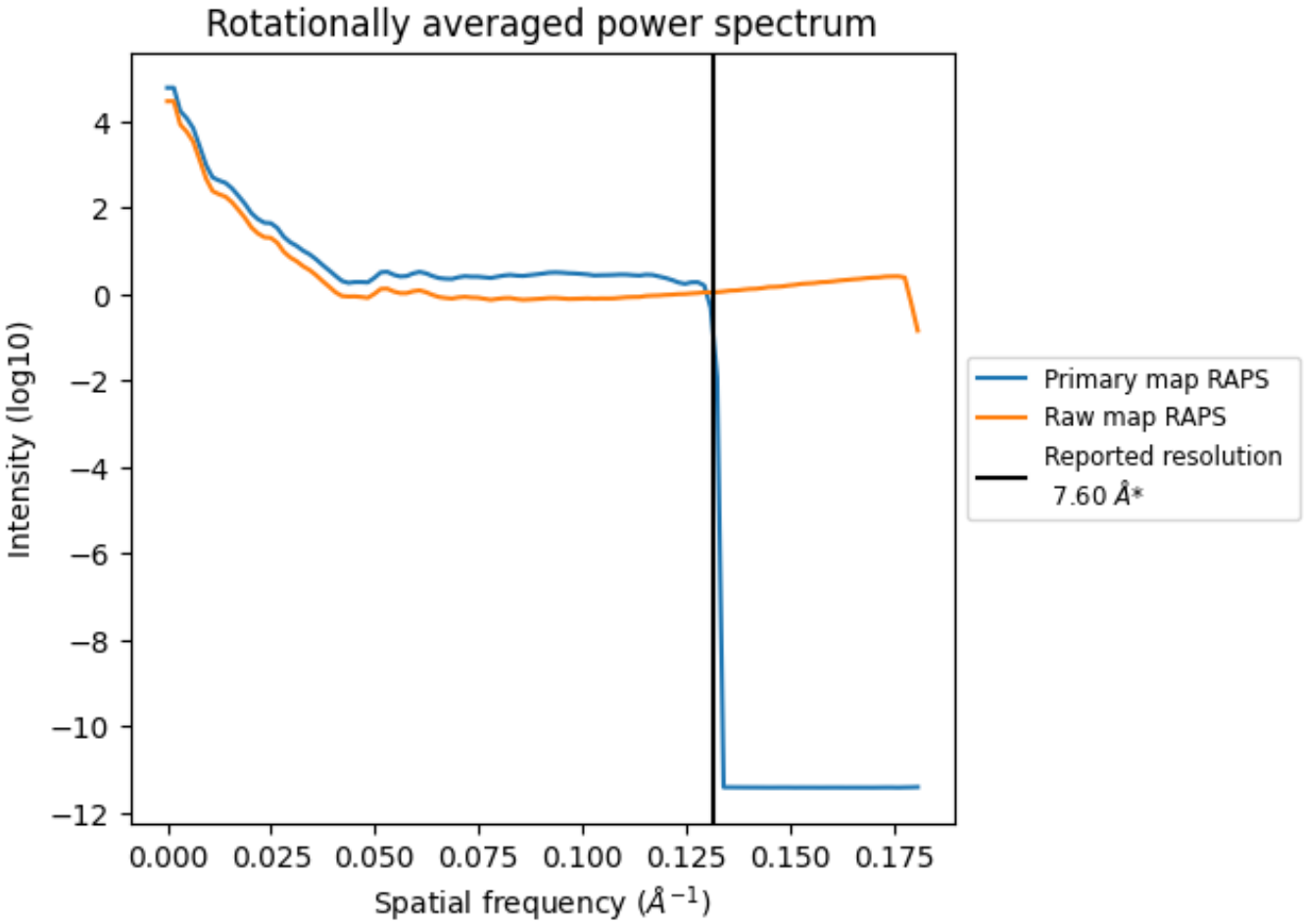
7.2 Volume estimate



The volume at the recommended contour level is 2138 nm^3; this corresponds to an approximate mass of 1931 kDa.

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

7.3 Rotationally averaged power spectrum (i)

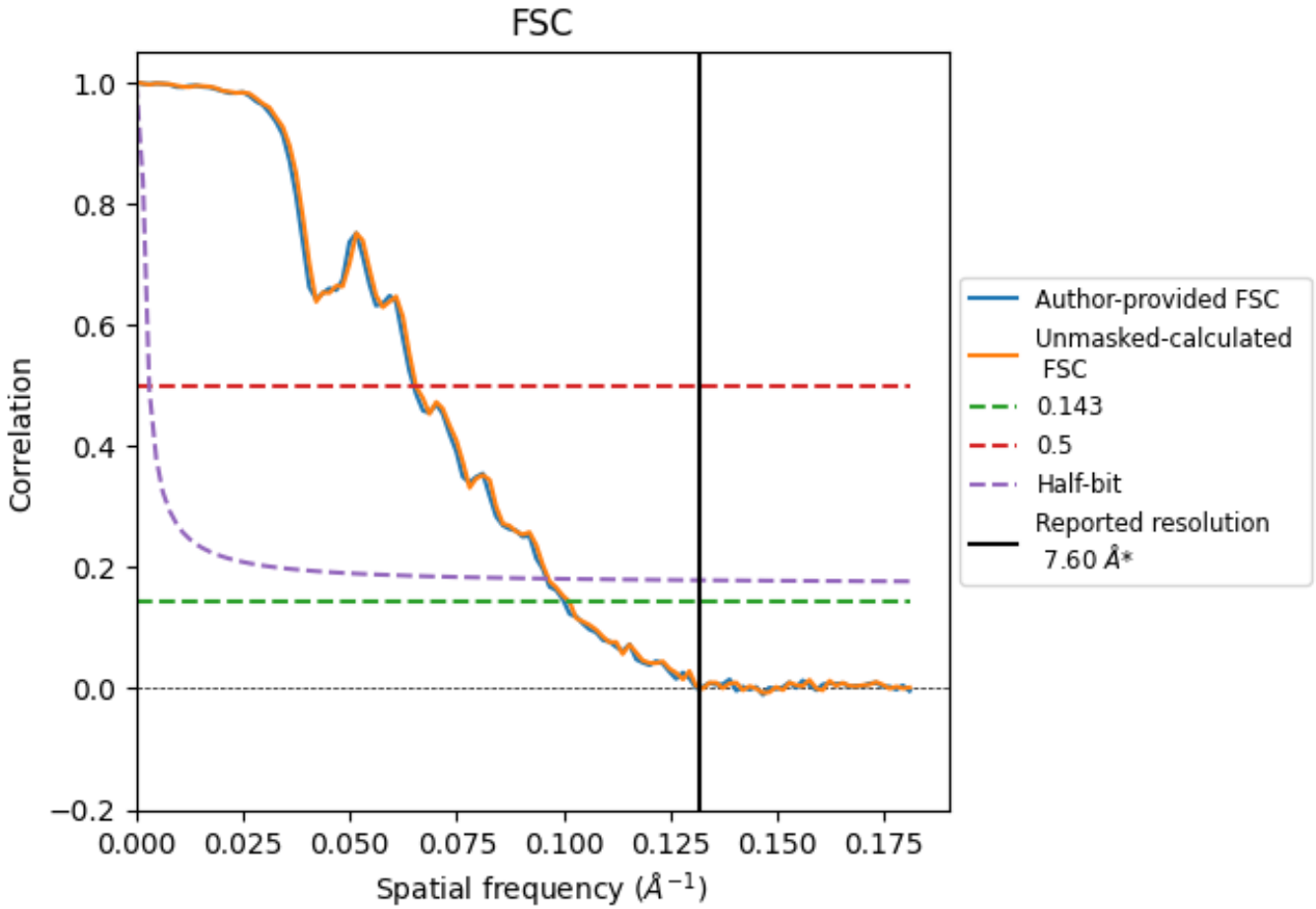


*Reported resolution corresponds to spatial frequency of 0.132 Å^{-1}

8 Fourier-Shell correlation

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

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.132 Å^{-1}

8.2 Resolution estimates (i)

Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	7.60	-	-
Author-provided FSC curve	9.99	15.41	10.42
Unmasked-calculated*	9.87	15.29	10.37

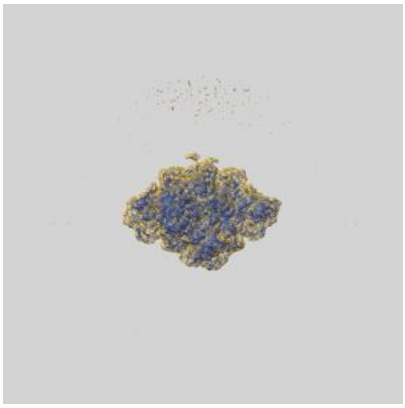
*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from author-provided FSC intersecting FSC 0.143 CUT-OFF 9.99 differs from the reported value 7.6 by more than 10 %

The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 9.87 differs from the reported value 7.6 by more than 10 %

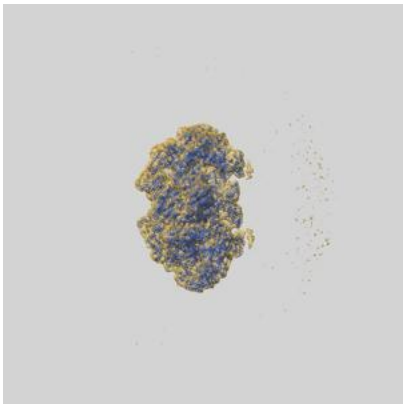
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-57675 and PDB model 30ER. Per-residue inclusion information can be found in section 3 on page 9.

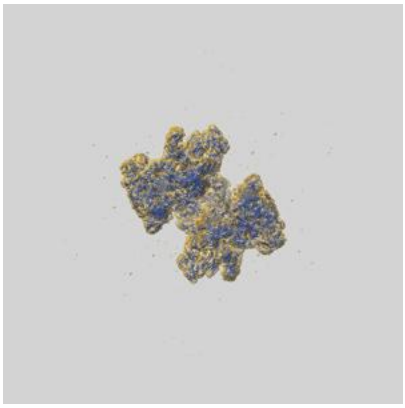
9.1 Map-model overlay



X



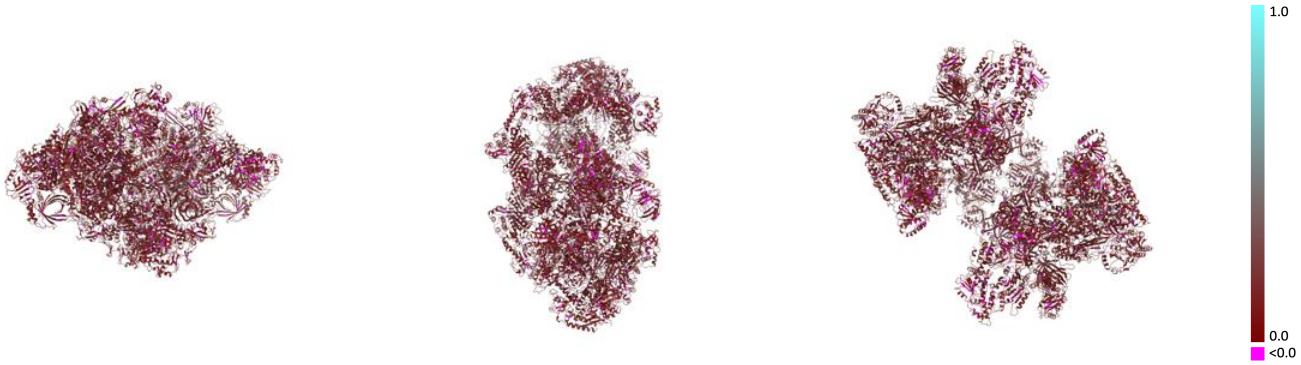
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.004 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

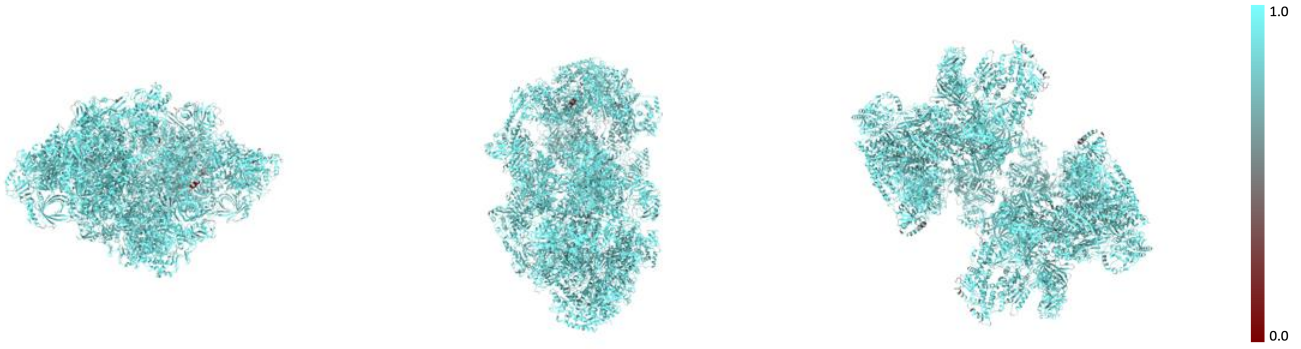
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

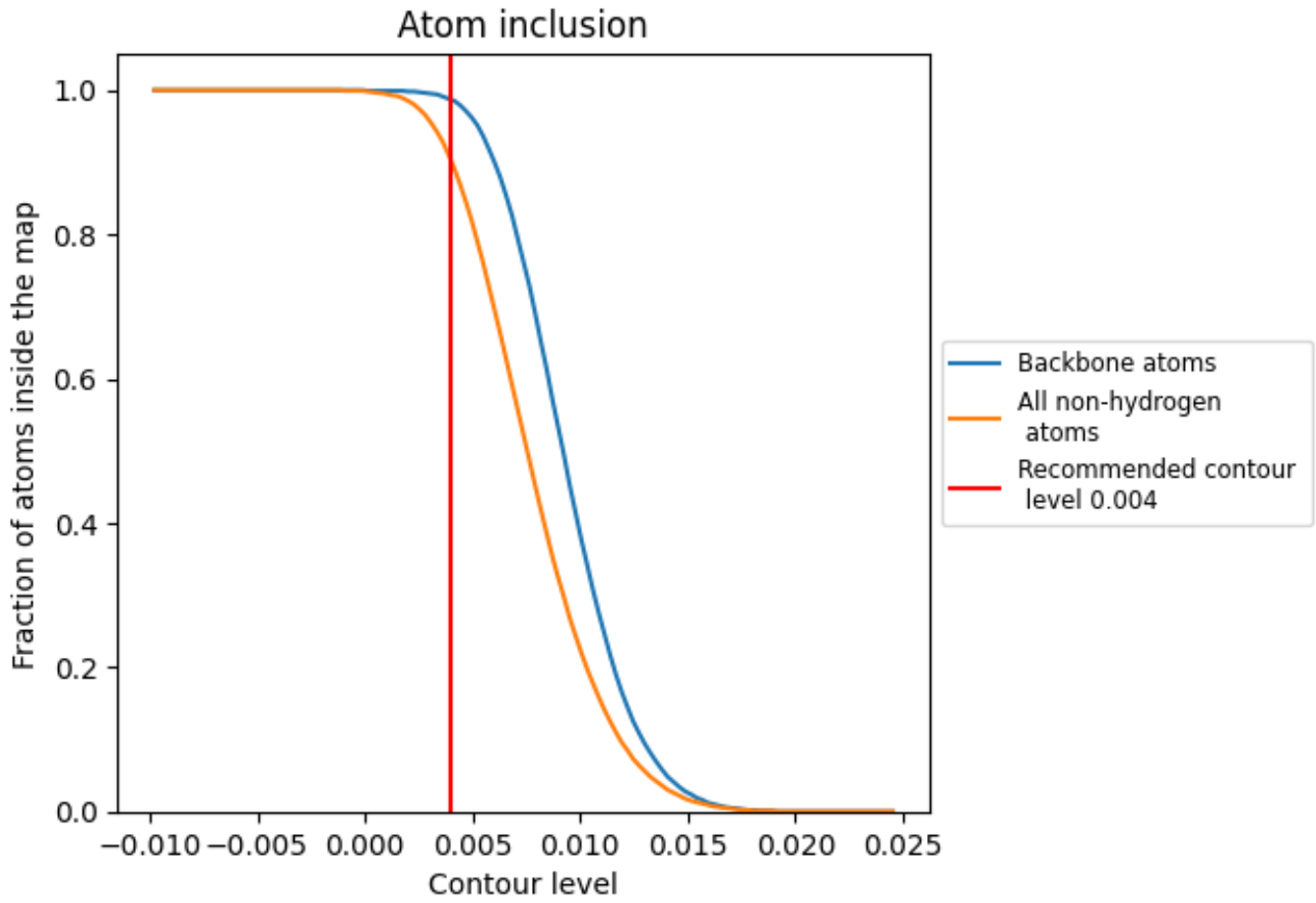
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.004).

9.4 Atom inclusion (i)



At the recommended contour level, 99% of all backbone atoms, 90% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.004) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9030	0.1650
A	0.8960	0.1680
B	0.9050	0.1680
C	0.9120	0.1640
E	0.9160	0.1710
F	0.8950	0.1840
G	0.9190	0.1770
I	0.9010	0.1690
J	0.9330	0.1660
L	0.8850	0.1250
O	0.9070	0.1640
Q	0.8760	0.1350
R	0.8580	0.1400
S	0.7960	0.1730
U	0.9980	0.1960
V	0.9080	0.1670
W	0.9040	0.1580
Y	0.9220	0.1620
a	0.8960	0.1690
b	0.9050	0.1680
c	0.9130	0.1640
e	0.9150	0.1730
f	0.8950	0.1820
g	0.9190	0.1780
i	0.9010	0.1700
j	0.9330	0.1700
l	0.8840	0.1260
o	0.9070	0.1650
q	0.8770	0.1310
r	0.8580	0.1380
s	0.7970	0.1720
u	0.9980	0.1940
v	0.9080	0.1670
w	0.9050	0.1590
y	0.9220	0.1600

