



Full wwPDB EM Validation Report ⓘ

Sep 16, 2026 – 03:01 pm BST

PDB ID : 9SKB / pdb_00009skb
EMDB ID : EMD-53699
Title : Model of M. pneumoniae 30S iT-TC (stable)
Authors : Dobbs, J.M.; Mahamid, J.
Deposited on : 2025-09-02
Resolution : 10.20 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

EMDB validation analysis : 0.0.1.dev133
MolProbity : 4-5-2 with Phenix2.0
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) : 2.50

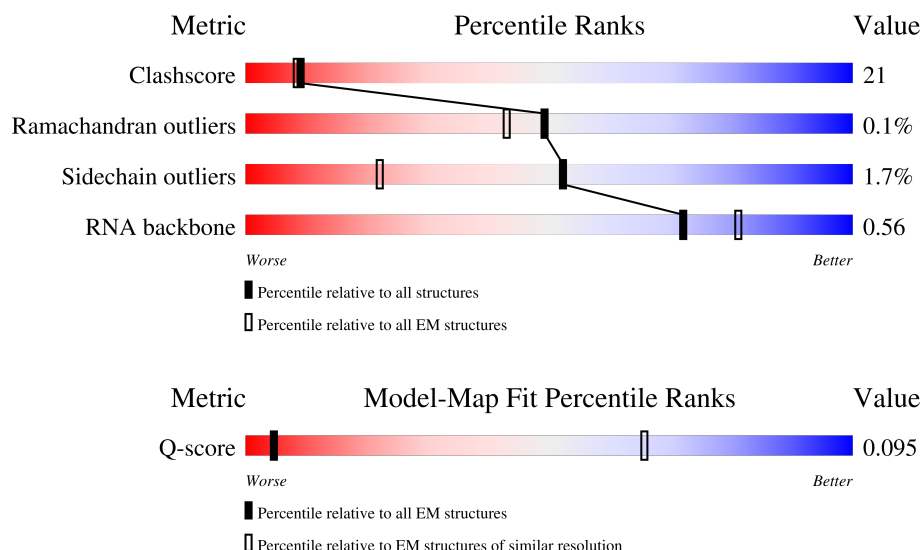
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 10.20 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.



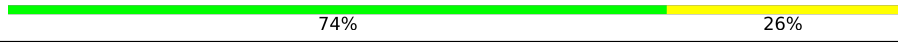
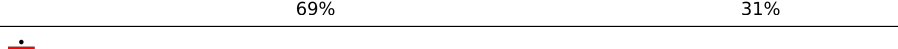
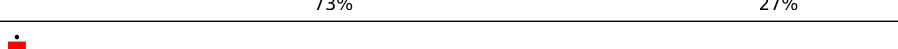
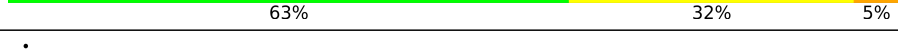
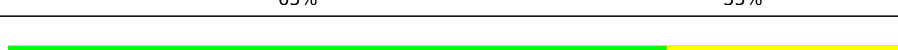
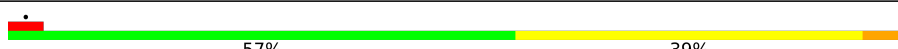
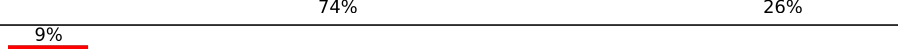
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	119 (9.70 - 10.70)

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

Mol	Chain	Length	Quality of chain
1	5	1505	
2	6	70	
3	A	249	

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Mol	Chain	Length	Quality of chain
4	B	215	
5	C	203	
6	D	153	
7	E	167	
8	F	154	
9	G	141	
10	H	128	
11	I	101	
12	J	114	
13	K	136	
14	L	118	
15	M	60	
16	N	83	
17	O	87	
18	P	83	
19	Q	65	
20	R	84	
21	S	77	
22	T	53	
23	U	65	
24	V	163	
25	W	1276	
26	X	327	
26	a	327	
27	Y	1391	

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Mol	Chain	Length	Quality of chain
28	Z	89	22% 73% 25% .
29	b	366	22% 67% 31% .
30	c	32	59% 38% .
31	d	32	56% 44%
32	e	160	14% 63% 34% ..

2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 86689 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 RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	5	1492	Total	C	N	O	P	0	0
			31932	14270	5790	10380	1492		

- Molecule 2 is a RNA chain called Initiator fMet-tRNA^{fMet}.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	6	70	Total	C	N	O	P	0	0
			1494	667	267	491	69		

- Molecule 3 is a protein called Small ribosomal subunit protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	249	Total	C	N	O	S	0	0
			1917	1224	331	355	7		

- Molecule 4 is a protein called Small ribosomal subunit protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B	215	Total	C	N	O	S	0	0
			1682	1063	308	306	5		

- Molecule 5 is a protein called Small ribosomal subunit protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	C	203	Total	C	N	O	S	0	0
			1605	1015	306	280	4		

- Molecule 6 is a protein called Small ribosomal subunit protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	D	153	Total	C	N	O	S	0	0
			1153	731	222	197	3		

- Molecule 7 is a protein called Small ribosomal subunit protein bS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	E	167	Total	C	N	O	S	0	0
			1211	762	219	229	1		

- Molecule 8 is a protein called Small ribosomal subunit protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	F	154	Total	C	N	O	S	0	0
			1231	777	234	215	5		

- Molecule 9 is a protein called Small ribosomal subunit protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	G	141	Total	C	N	O	S	0	0
			1103	720	192	189	2		

- Molecule 10 is a protein called Small ribosomal subunit protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	H	128	Total	C	N	O	S	0	0
			993	634	184	174	1		

- Molecule 11 is a protein called Small ribosomal subunit protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	I	101	Total	C	N	O	S	0	0
			803	518	141	143	1		

- Molecule 12 is a protein called Small ribosomal subunit protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	J	114	Total	C	N	O	S	0	0
			828	514	153	155	6		

- Molecule 13 is a protein called Small ribosomal subunit protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	K	136	Total	C	N	O	S	0	0
			1055	667	209	177	2		

- Molecule 14 is a protein called Small ribosomal subunit protein uS13.

Mol	Chain	Residues	Atoms				AltConf	Trace
14	L	118	Total	C	N	O	0	0
			922	576	186	160		

- Molecule 15 is a protein called Small ribosomal subunit protein uS14.

Mol	Chain	Residues	Atoms				AltConf	Trace
15	M	60	Total	C	N	O	S	0
			473	302	96	71	4	0

- Molecule 16 is a protein called Small ribosomal subunit protein uS15.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	N	83	Total	C	N	O		0
			673	428	125	120		0

- Molecule 17 is a protein called Small ribosomal subunit protein bS16.

Mol	Chain	Residues	Atoms				AltConf	Trace
17	O	87	Total	C	N	O	S	0
			690	445	128	115	2	0

- Molecule 18 is a protein called Small ribosomal subunit protein uS17.

Mol	Chain	Residues	Atoms				AltConf	Trace
18	P	83	Total	C	N	O		0
			675	425	135	115		0

- Molecule 19 is a protein called Small ribosomal subunit protein bS18.

Mol	Chain	Residues	Atoms				AltConf	Trace
19	Q	65	Total	C	N	O	S	0
			535	342	103	86	4	0

- Molecule 20 is a protein called Small ribosomal subunit protein uS19.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	R	84	Total	C	N	O	S	0
			654	419	119	114	2	0

- Molecule 21 is a protein called Small ribosomal subunit protein bS20.

Mol	Chain	Residues	Atoms				AltConf	Trace
21	S	77	Total	C	N	O	0	0
			629	383	135	111		

- Molecule 22 is a protein called Small ribosomal subunit protein bS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	T	53	Total	C	N	O	S	0	0
			439	275	93	70	1		

- Molecule 23 is a protein called Translation initiation factor IF-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	U	65	Total	C	N	O	S	0	0
			525	337	97	89	2		

- Molecule 24 is a protein called Translation initiation factor IF-3.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	V	163	Total	C	N	O	S	0	0
			1316	849	229	236	2		

- Molecule 25 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	W	1276	Total	C	N	O	S	0	0
			10085	6431	1752	1872	30		

- Molecule 26 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	X	308	Total	C	N	O	S	0	0
			2421	1550	407	454	10		
26	a	312	Total	C	N	O	S	0	0
			2452	1571	412	459	10		

- Molecule 27 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Y	1391	Total	C	N	O	S	0	0
			10948	6905	1892	2114	37		

- Molecule 28 is a protein called Probable DNA-directed RNA polymerase subunit delta.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Z	89	Total	C	N	O	S	0	0
			770	505	122	140	3		

- Molecule 29 is a protein called Transcription termination/antitermination protein NusA.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	b	366	Total	C	N	O	S	0	0
			2884	1834	479	562	9		

- Molecule 30 is a DNA chain called DNA chain A.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	c	32	Total	C	N	O	P	0	0
			663	317	124	190	32		

- Molecule 31 is a DNA chain called DNA chain B.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	d	32	Total	C	N	O	P	0	0
			649	313	110	194	32		

- Molecule 32 is a protein called Transcription termination/antitermination protein NusG.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	e	160	Total	C	N	O	S	0	0
			1277	821	220	233	3		

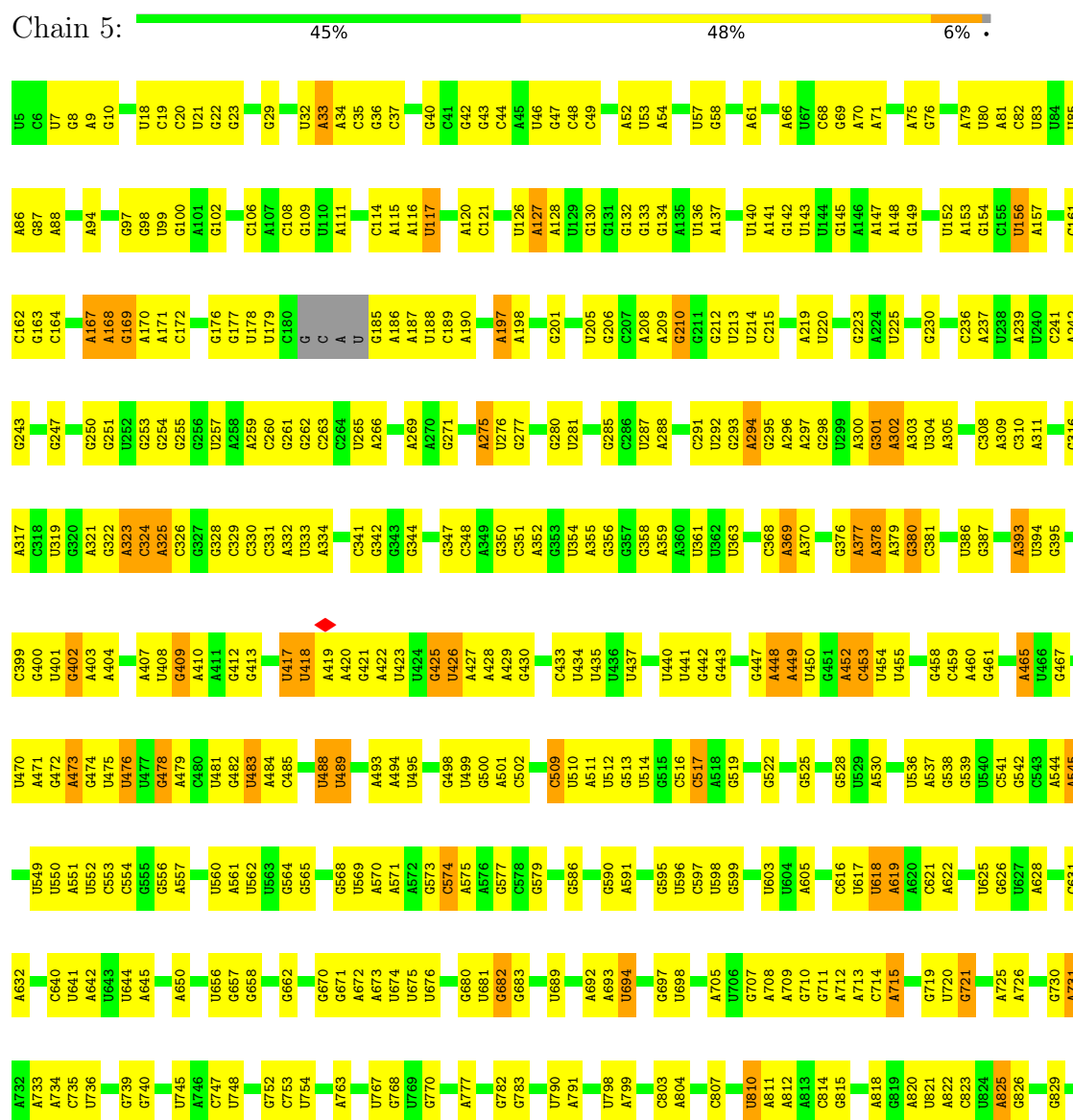
- Molecule 33 is ZINC ION (CCD ID: ZN) (formula: Zn).

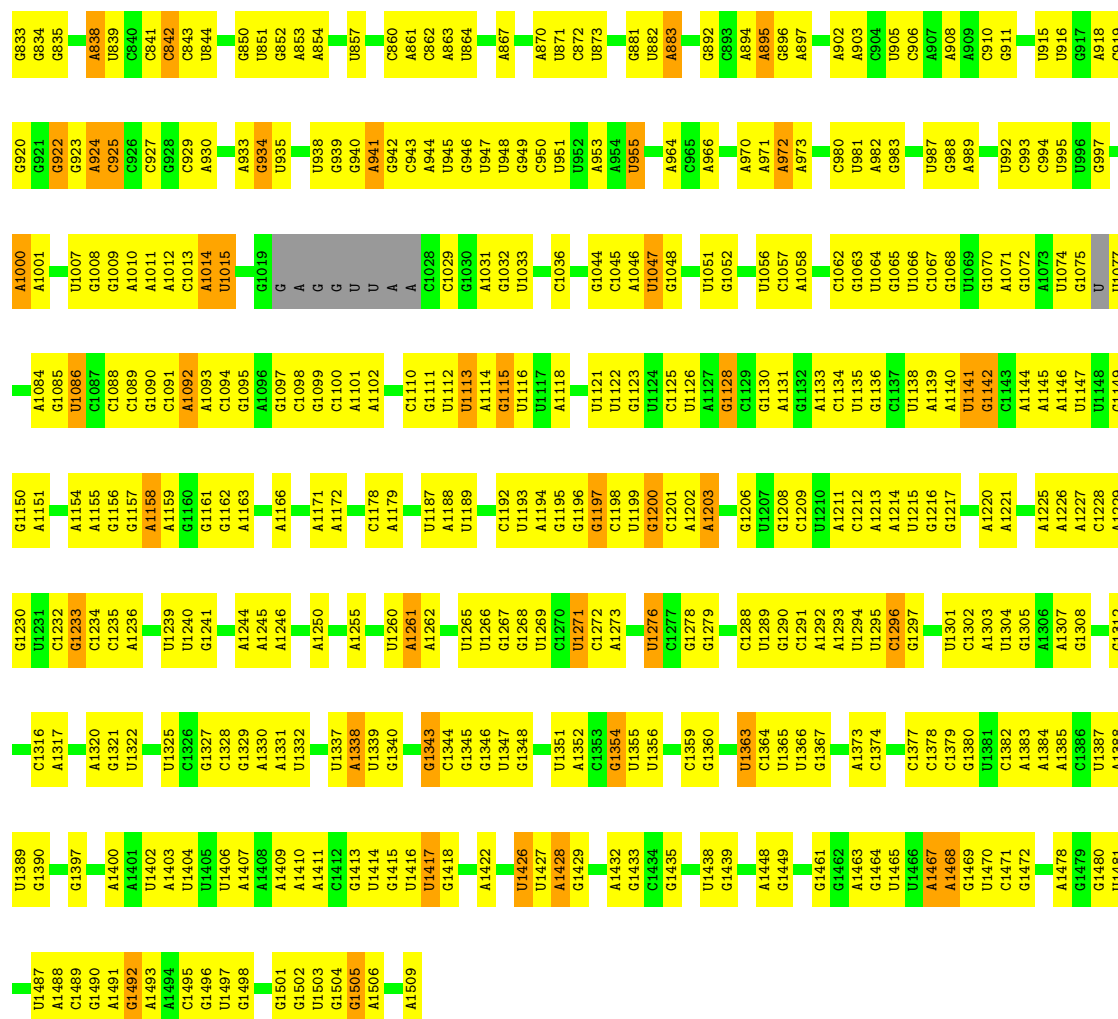
Mol	Chain	Residues	Atoms		AltConf
33	M	1	Total	Zn	0
			1	1	
33	Q	1	Total	Zn	0
			1	1	

3 Residue-property plots

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

• Molecule 1: 16S ribosomal RNA

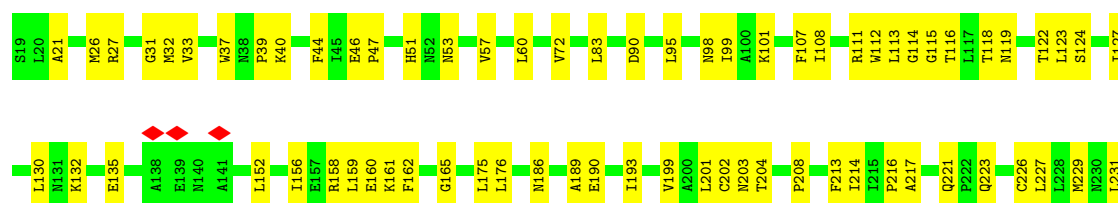




• Molecule 2: Initiator fMet-tRNAfMet

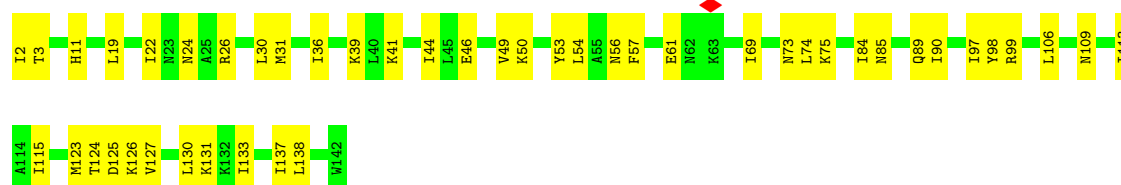


• Molecule 3: Small ribosomal subunit protein uS2

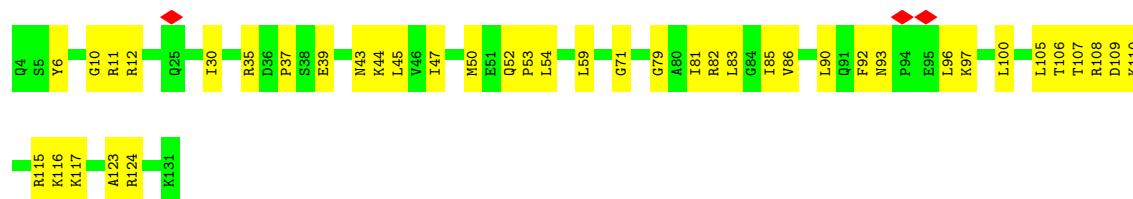




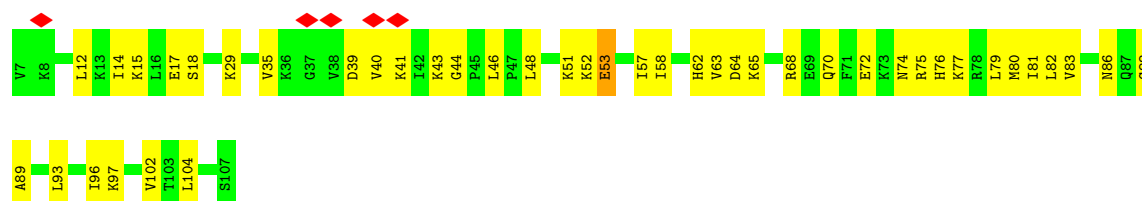
- Molecule 9: Small ribosomal subunit protein uS8



- Molecule 10: Small ribosomal subunit protein uS9



- Molecule 11: Small ribosomal subunit protein uS10

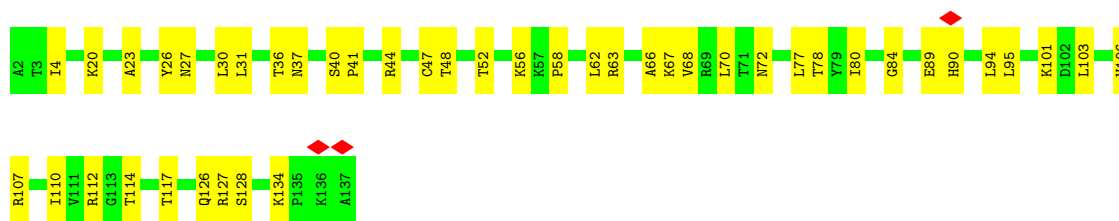


- Molecule 12: Small ribosomal subunit protein uS11

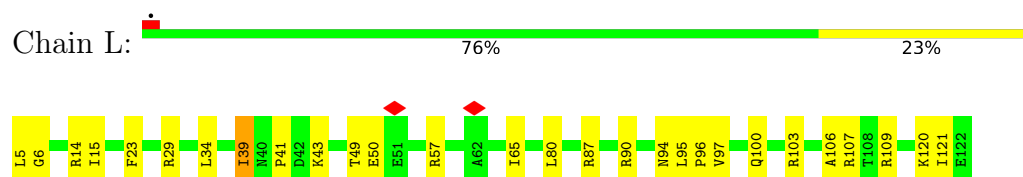


- Molecule 13: Small ribosomal subunit protein uS12

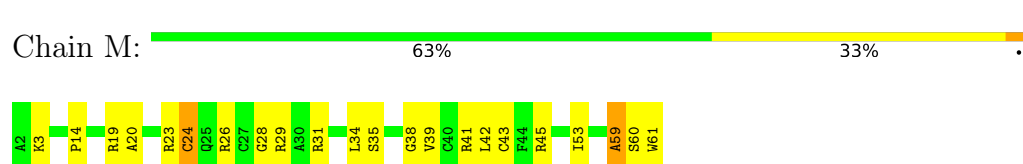




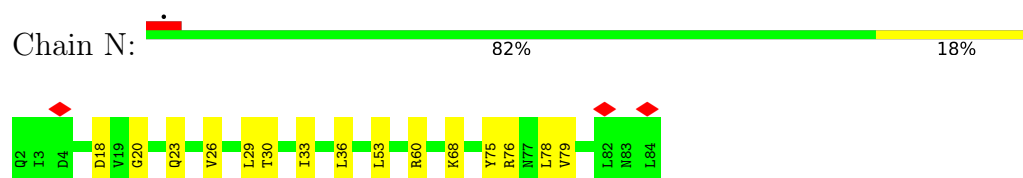
- Molecule 14: Small ribosomal subunit protein uS13



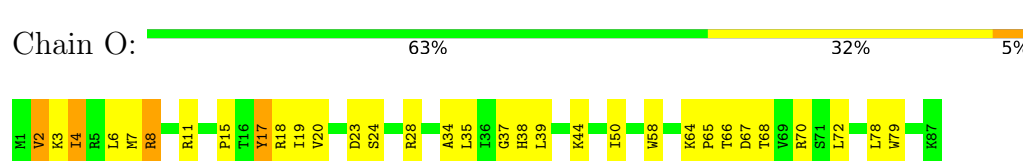
- Molecule 15: Small ribosomal subunit protein uS14



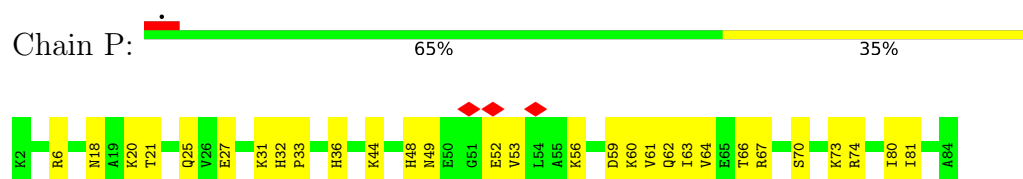
- Molecule 16: Small ribosomal subunit protein uS15



- Molecule 17: Small ribosomal subunit protein bS16



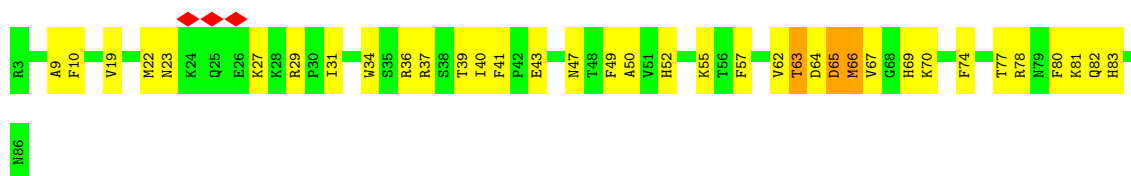
- Molecule 18: Small ribosomal subunit protein uS17



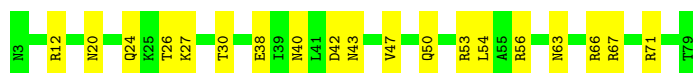
- Molecule 19: Small ribosomal subunit protein bS18



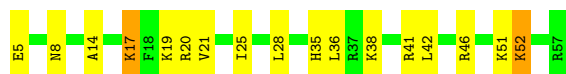
- Molecule 20: Small ribosomal subunit protein uS19



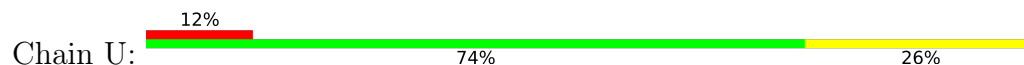
- Molecule 21: Small ribosomal subunit protein bS20



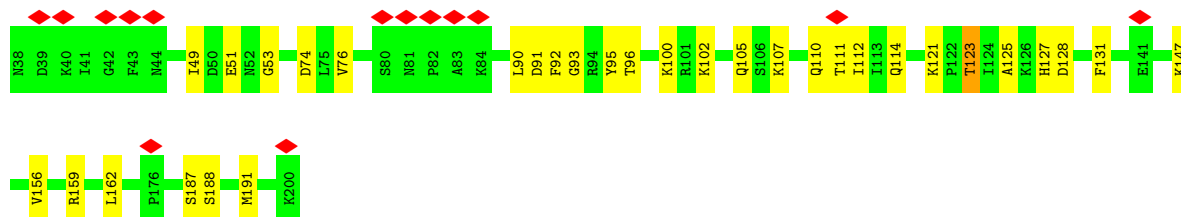
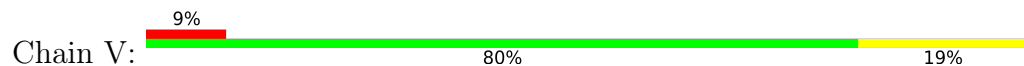
- Molecule 22: Small ribosomal subunit protein bS21



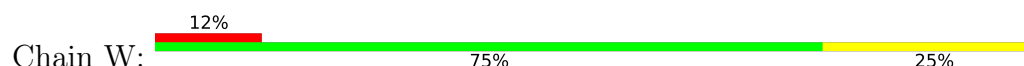
- Molecule 23: Translation initiation factor IF-1



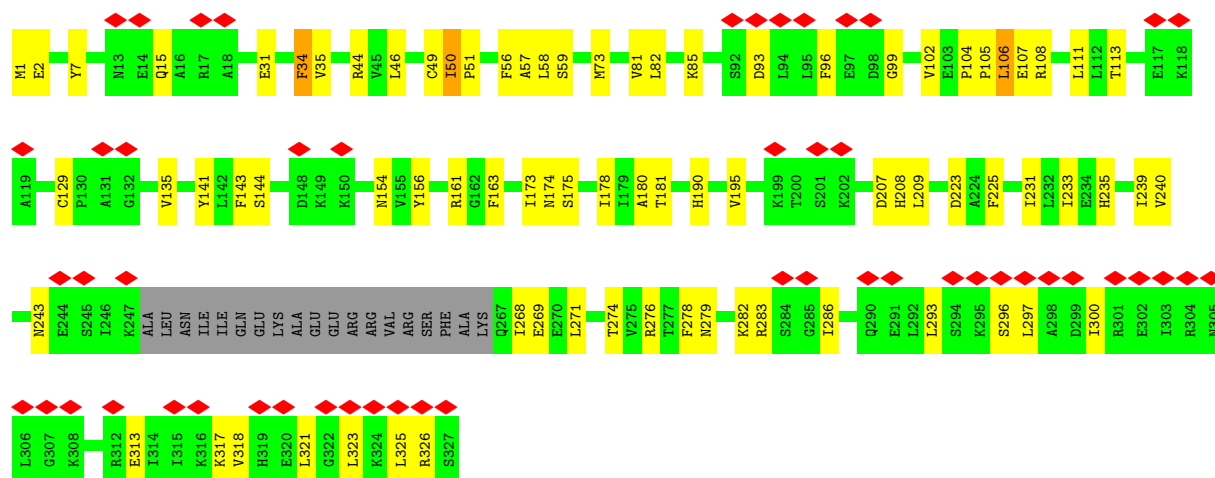
- Molecule 24: Translation initiation factor IF-3



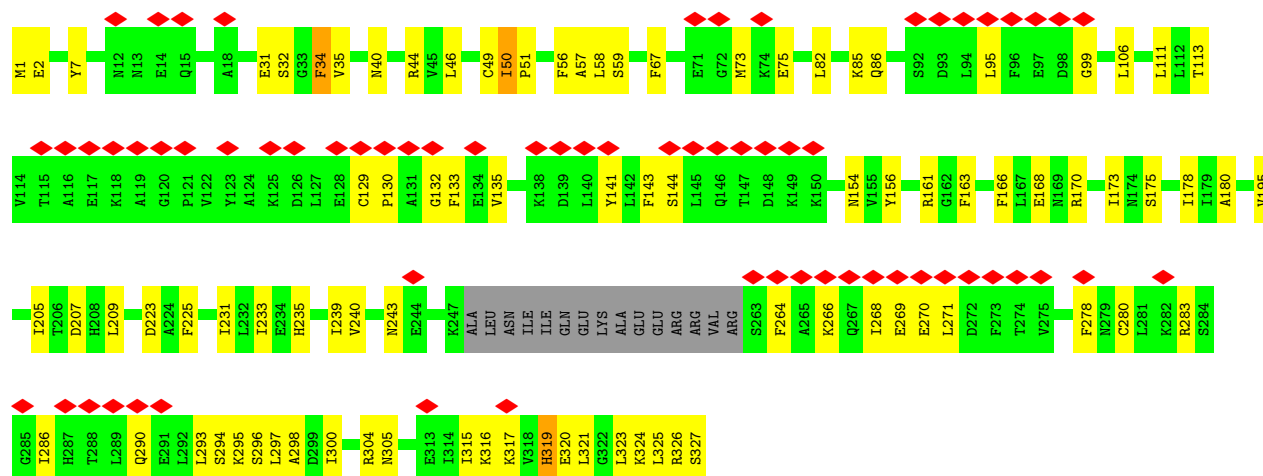
- Molecule 25: DNA-directed RNA polymerase subunit beta'



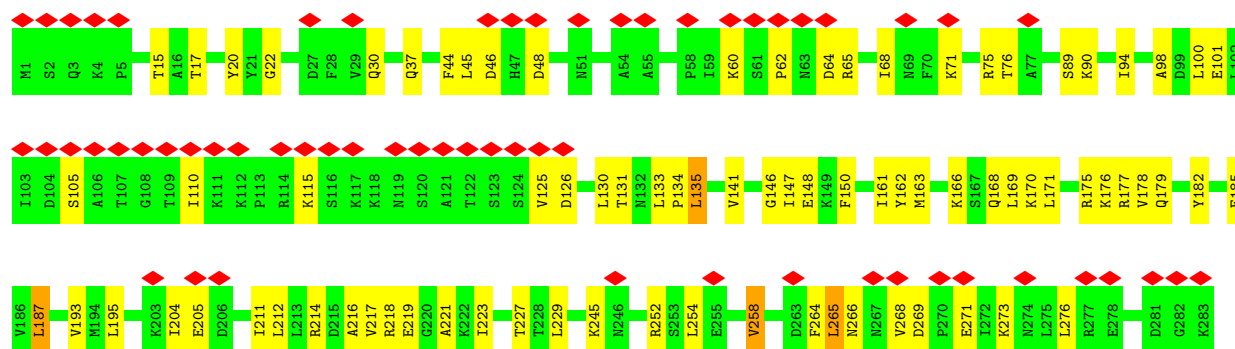




• Molecule 26: DNA-directed RNA polymerase subunit alpha



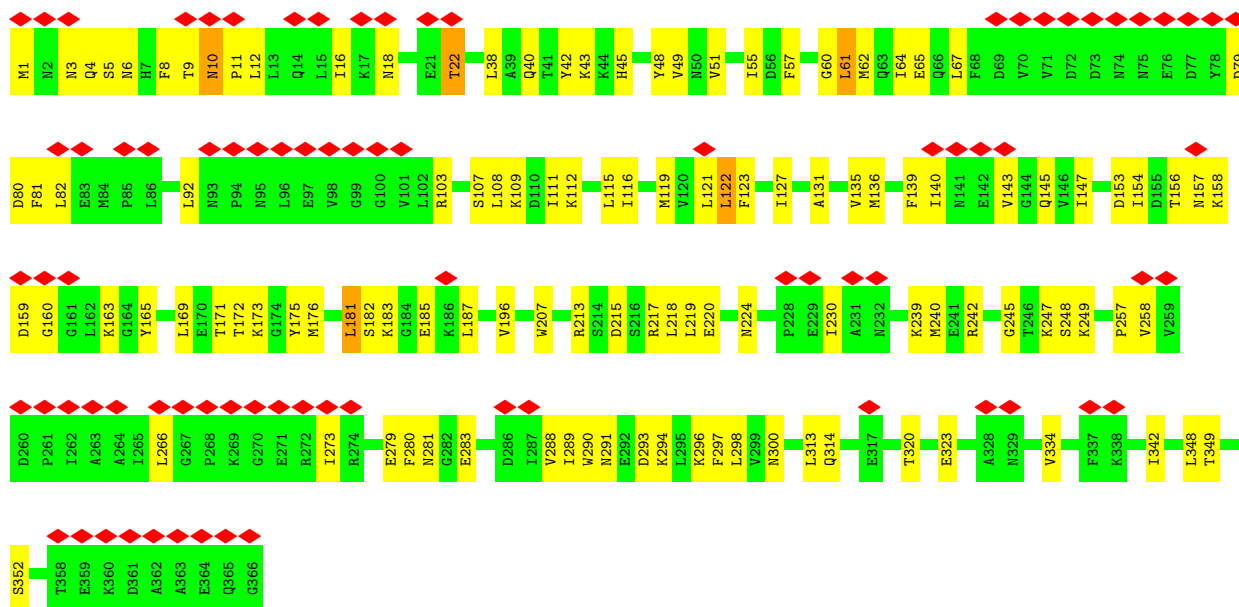
• Molecule 27: DNA-directed RNA polymerase subunit beta







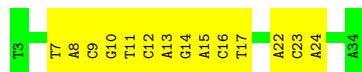
- Molecule 29: Transcription termination/antitermination protein NusA



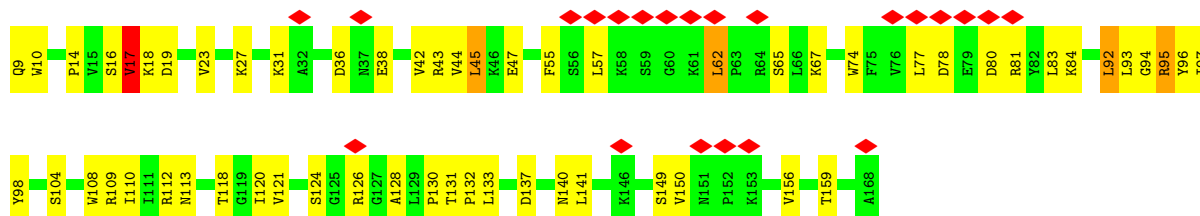
- Molecule 30: DNA chain A



- Molecule 31: DNA chain B



- Molecule 32: Transcription termination/antitermination protein NusG



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	1773	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 ($e^-/\text{\AA}^2$)	120	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.014	Depositor
Minimum map value	-0.004	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.00123	Depositor
Map size (Å)	600.0, 600.0, 600.0	wwPDB
Map dimensions	300, 300, 300	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.0, 2.0, 2.0	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section:
ZN

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	5	0.26	2/35753 (0.0%)	0.27	6/55734 (0.0%)
2	6	0.10	0/1670	0.29	0/2603
3	A	0.33	0/1951	0.67	5/2652 (0.2%)
4	B	0.14	0/1705	0.40	0/2304
5	C	0.15	0/1635	0.40	0/2202
6	D	0.15	0/1168	0.43	0/1568
7	E	0.16	0/1229	0.45	0/1670
8	F	0.15	0/1250	0.46	0/1682
9	G	0.16	0/1119	0.47	0/1508
10	H	0.17	0/1009	0.51	0/1354
11	I	0.24	0/814	0.56	0/1096
12	J	0.14	0/843	0.36	0/1136
13	K	0.23	0/1073	0.59	0/1445
14	L	0.32	0/933	0.64	0/1254
15	M	0.50	1/482 (0.2%)	0.84	1/643 (0.2%)
16	N	0.13	0/679	0.37	0/907
17	O	0.39	0/703	0.80	1/945 (0.1%)
18	P	0.14	0/684	0.40	0/913
19	Q	0.17	0/545	0.46	0/730
20	R	0.41	0/670	0.87	1/904 (0.1%)
21	S	0.15	0/631	0.42	0/838
22	T	0.45	0/442	0.86	0/582
23	U	0.71	0/531	1.07	0/709
24	V	0.68	0/1336	1.14	1/1793 (0.1%)
25	W	0.71	0/10259	1.06	2/13846 (0.0%)
26	X	0.68	0/2458	1.00	0/3313
26	a	0.69	0/2490	1.00	0/3355
27	Y	0.70	0/11124	1.06	0/15014
28	Z	0.69	0/792	1.05	0/1065
29	b	0.70	0/2922	1.01	0/3944
30	c	0.47	0/745	0.61	1/1149 (0.1%)
31	d	0.65	1/725 (0.1%)	0.75	2/1115 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
32	e	0.71	0/1298	1.00	0/1752
All	All	0.47	4/91668 (0.0%)	0.69	20/131725 (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
25	W	0	1
27	Y	0	1
All	All	0	2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	924	A	O3'-P	36.27	2.15	1.61
1	5	1363	U	O3'-P	24.57	1.98	1.61
31	d	22	DA	O3'-P	-15.36	1.38	1.61
15	M	60	SER	CA-CB	-6.62	1.47	1.53

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	924	A	OP2-P-O3'	-24.78	33.66	108.00
31	d	22	DA	P-O3'-C3'	14.74	142.31	120.20
1	5	1363	U	O3'-P-O5'	-14.33	82.50	104.00
3	A	259	PRO	N-CA-C	-13.91	83.81	112.47
1	5	924	A	OP1-P-O3'	12.87	146.60	108.00
1	5	924	A	P-O3'-C3'	12.41	138.82	120.20
1	5	1363	U	OP2-P-O3'	9.15	135.46	108.00
30	c	17	DT	P-O3'-C3'	8.55	133.02	120.20
31	d	22	DA	O3'-P-O5'	-8.27	91.60	104.00
25	W	1035	GLY	CA-C-N	6.00	128.91	121.83
25	W	1035	GLY	C-N-CA	6.00	128.91	121.83
24	V	114	GLN	OE1-CD-NE2	-5.92	116.68	122.60
15	M	59	ALA	N-CA-C	5.92	119.72	110.32
17	O	2	VAL	N-CA-C	-5.82	101.08	108.93
3	A	250	PRO	N-CA-C	5.78	124.38	112.47
3	A	252	GLU	N-CA-C	-5.52	104.03	111.54
1	5	1363	U	P-O3'-C3'	-5.51	111.93	120.20
3	A	253	GLU	N-CA-C	-5.51	100.94	108.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	A	243	PRO	CB-CA-C	-5.16	104.22	110.98
20	R	65	ASP	N-CA-C	-5.13	105.69	111.28

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
25	W	893	ARG	Sidechain
27	Y	858	TYR	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	5	31932	0	16039	727	0
2	6	1494	0	754	91	0
3	A	1917	0	1891	84	0
4	B	1682	0	1733	54	0
5	C	1605	0	1603	49	0
6	D	1153	0	1231	34	0
7	E	1211	0	1108	41	0
8	F	1231	0	1285	37	0
9	G	1103	0	1215	55	0
10	H	993	0	1023	32	0
11	I	803	0	876	31	0
12	J	828	0	855	26	0
13	K	1055	0	1124	32	0
14	L	922	0	957	32	0
15	M	473	0	505	15	0
16	N	673	0	730	11	0
17	O	690	0	726	37	0
18	P	675	0	728	19	0
19	Q	535	0	559	15	0
20	R	654	0	629	30	0
21	S	629	0	681	19	0
22	T	439	0	467	11	0
23	U	525	0	564	61	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	V	1316	0	1378	120	0
25	W	10085	0	10375	843	0
26	X	2421	0	2495	138	0
26	a	2452	0	2522	216	0
27	Y	10948	0	11063	1050	0
28	Z	770	0	738	54	0
29	b	2884	0	2937	451	0
30	c	663	0	361	78	0
31	d	649	0	364	101	0
32	e	1277	0	1328	89	0
33	M	1	0	0	0	0
33	Q	1	0	0	0	0
All	All	86689	0	70844	3231	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 21.

All (3231) 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)
2:6:57:C:C4	24:V:49:ILE:HD13	1.23	1.71
27:Y:999:PHE:CZ	29:b:108:LEU:HD23	1.23	1.70
27:Y:998:ILE:HG22	29:b:108:LEU:CD2	1.19	1.65
27:Y:999:PHE:CE1	29:b:108:LEU:HD23	1.28	1.64
29:b:290:TRP:HE1	29:b:293:ASP:CB	1.07	1.62
26:X:107:GLU:HG3	26:a:319:HIS:CD2	1.30	1.60
25:W:309:ILE:CD1	27:Y:1344:LYS:HG3	1.26	1.57
25:W:392:LEU:CD2	27:Y:1342:LEU:CD1	1.79	1.57
25:W:408:VAL:HG21	27:Y:1306:LEU:CD2	1.33	1.57
2:6:20:G:H22	24:V:53:GLY:CA	1.18	1.56
25:W:76:ILE:CD1	29:b:157:ASN:C	1.75	1.56
27:Y:956:ARG:HG3	26:a:296:SER:CB	1.34	1.56
25:W:398:LEU:CD2	27:Y:1342:LEU:CB	1.84	1.54
29:b:215:ASP:CG	29:b:217:ARG:NH2	1.68	1.51
27:Y:995:PHE:CE1	29:b:119:MET:SD	2.03	1.51
29:b:290:TRP:NE1	29:b:293:ASP:CB	1.72	1.50
29:b:290:TRP:CZ3	29:b:296:LYS:NZ	1.74	1.50
1:5:698:U:C2	24:V:93:GLY:HA2	1.47	1.49
25:W:398:LEU:HD23	27:Y:1342:LEU:CB	1.43	1.48
27:Y:998:ILE:CG2	29:b:62:MET:HE2	1.45	1.47
1:5:1063:G:N2	1:5:1095:G:H1'	1.23	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:306:PRO:CD	27:Y:1344:LYS:HD2	1.43	1.47
25:W:76:ILE:HD11	29:b:158:LYS:CA	1.42	1.46
27:Y:998:ILE:HG21	29:b:62:MET:CE	1.42	1.46
25:W:868:PHE:CD2	27:Y:658:PRO:HG3	1.52	1.45
27:Y:998:ILE:CG2	29:b:62:MET:CE	1.94	1.45
4:B:76:PHE:CD1	29:b:258:VAL:CG2	1.88	1.44
24:V:110:GLN:NE2	24:V:112:ILE:HG13	1.29	1.44
25:W:398:LEU:CD2	27:Y:1342:LEU:HB2	0.97	1.44
26:X:175:SER:H	26:a:324:LYS:NZ	1.05	1.43
27:Y:997:ALA:C	29:b:8:PHE:CE1	1.98	1.41
26:X:107:GLU:CG	26:a:319:HIS:CD2	2.01	1.41
26:X:175:SER:H	26:a:324:LYS:CE	1.27	1.41
27:Y:956:ARG:CG	26:a:296:SER:CB	1.97	1.41
27:Y:999:PHE:CE1	29:b:42:TYR:OH	1.68	1.41
25:W:95:VAL:HG13	27:Y:1371:LEU:CD1	0.94	1.41
25:W:409:ASP:N	27:Y:1310:LYS:HB3	1.16	1.40
25:W:392:LEU:CD2	27:Y:1342:LEU:HD12	1.35	1.40
2:6:57:C:N4	24:V:49:ILE:CD1	1.82	1.40
29:b:196:VAL:HG11	29:b:217:ARG:NH1	1.36	1.39
27:Y:1289:MET:HE3	31:d:15:DA:C5'	1.52	1.39
25:W:388:LEU:CD1	27:Y:1348:GLY:C	1.96	1.39
27:Y:998:ILE:HA	29:b:8:PHE:CZ	1.57	1.39
29:b:290:TRP:NE1	29:b:293:ASP:HB2	1.31	1.38
25:W:886:ALA:HA	31:d:14:DG:C8	1.57	1.38
2:6:20:G:N2	24:V:53:GLY:HA2	1.34	1.37
26:X:105:PRO:CG	26:a:320:GLU:HA	1.55	1.37
29:b:239:LYS:HZ3	29:b:294:LYS:CG	1.36	1.37
27:Y:956:ARG:HG3	26:a:296:SER:CA	1.54	1.37
27:Y:998:ILE:CG2	29:b:108:LEU:CD2	1.99	1.37
25:W:76:ILE:HD11	29:b:158:LYS:N	1.04	1.37
2:6:57:C:N4	24:V:49:ILE:HD13	1.04	1.36
25:W:409:ASP:H	27:Y:1310:LYS:CB	1.35	1.36
29:b:239:LYS:NZ	29:b:294:LYS:HG3	1.41	1.36
26:a:283:ARG:NH1	29:b:81:PHE:HB2	1.41	1.36
27:Y:998:ILE:CA	29:b:8:PHE:HZ	1.36	1.35
25:W:368:PHE:O	27:Y:1349:LEU:HD21	1.21	1.35
27:Y:999:PHE:CZ	29:b:108:LEU:CD2	2.09	1.33
27:Y:1002:SER:O	29:b:112:LYS:HG2	1.18	1.33
25:W:837:TYR:CZ	27:Y:649:HIS:CD2	2.16	1.33
25:W:368:PHE:CD1	27:Y:1349:LEU:HA	1.63	1.33
27:Y:994:LEU:CD1	29:b:12:LEU:CD1	2.07	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:994:LEU:CD1	29:b:12:LEU:HD11	1.58	1.32
1:5:1089:C:OP1	3:A:162:PHE:CE1	1.81	1.32
25:W:95:VAL:CG1	27:Y:1371:LEU:HD12	0.85	1.32
25:W:598:GLY:N	26:a:82:LEU:HD22	1.45	1.31
27:Y:216:ALA:C	30:c:20:DG:H2'	1.54	1.31
25:W:392:LEU:HD22	27:Y:1342:LEU:CD1	1.48	1.31
29:b:131:ALA:O	29:b:171:THR:CB	1.79	1.31
25:W:76:ILE:CG1	29:b:157:ASN:O	1.78	1.30
29:b:290:TRP:CD1	29:b:293:ASP:HB3	1.67	1.30
27:Y:956:ARG:CG	26:a:296:SER:HB3	1.53	1.29
27:Y:999:PHE:HB3	29:b:108:LEU:O	1.25	1.29
25:W:76:ILE:HG12	29:b:157:ASN:O	1.16	1.29
25:W:368:PHE:CA	27:Y:1349:LEU:HD23	1.61	1.29
25:W:380:LYS:HB3	31:d:23:DC:N1	1.47	1.29
27:Y:170:LYS:N	30:c:25:DC:H1'	1.46	1.29
24:V:110:GLN:NE2	24:V:112:ILE:CG1	1.96	1.29
25:W:837:TYR:OH	27:Y:649:HIS:CD2	1.86	1.29
25:W:409:ASP:O	27:Y:1310:LYS:HD3	1.21	1.28
27:Y:175:ARG:NH2	30:c:26:DT:C6	2.01	1.28
27:Y:356:ARG:NH1	32:e:113:ASN:HB2	1.46	1.28
25:W:92:GLU:O	27:Y:1371:LEU:HD11	1.24	1.28
29:b:131:ALA:O	29:b:171:THR:HB	1.23	1.28
25:W:309:ILE:CD1	27:Y:1344:LYS:CG	2.09	1.28
26:X:106:LEU:CB	26:a:319:HIS:HE1	1.46	1.28
25:W:876:LYS:HG3	25:W:1030:ARG:NH1	1.43	1.28
2:6:38:G:N2	24:V:191:MET:HE1	1.49	1.27
29:b:183:LYS:HD2	29:b:245:GLY:CA	1.63	1.27
25:W:313:ILE:HG23	27:Y:1269:LYS:CE	1.62	1.27
27:Y:1289:MET:SD	31:d:15:DA:C4'	2.22	1.27
26:X:175:SER:N	26:a:324:LYS:HZ3	1.31	1.26
25:W:77:LYS:HA	29:b:156:THR:CG2	1.50	1.26
25:W:76:ILE:CD1	29:b:158:LYS:N	1.86	1.26
25:W:408:VAL:HG12	27:Y:1306:LEU:O	1.36	1.26
25:W:391:ARG:CB	27:Y:1345:GLU:OE2	1.84	1.25
27:Y:956:ARG:CB	26:a:296:SER:HB3	1.66	1.25
29:b:196:VAL:HG11	29:b:217:ARG:CZ	1.65	1.25
25:W:876:LYS:CG	25:W:1030:ARG:NH1	1.99	1.25
25:W:408:VAL:CG2	27:Y:1306:LEU:CD2	2.14	1.25
27:Y:999:PHE:CE1	29:b:108:LEU:CD2	2.16	1.25
29:b:288:VAL:HG21	29:b:297:PHE:CD2	1.69	1.25
27:Y:956:ARG:CA	26:a:296:SER:HB3	1.67	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:6:38:G:H21	24:V:191:MET:CE	1.49	1.24
27:Y:998:ILE:O	29:b:108:LEU:CD1	1.83	1.24
25:W:408:VAL:HG11	27:Y:1306:LEU:CB	1.68	1.24
1:5:1089:C:OP1	3:A:162:PHE:HE1	1.13	1.24
27:Y:1287:GLY:HA3	31:d:16:DC:OP1	1.30	1.24
29:b:215:ASP:CB	29:b:217:ARG:NH2	2.01	1.23
25:W:31:TRP:CZ2	27:Y:1352:SER:OG	1.86	1.23
27:Y:175:ARG:NH2	30:c:26:DT:C2	2.07	1.23
27:Y:1289:MET:CE	31:d:15:DA:H5'	1.67	1.23
2:6:35:G:N2	14:L:120:LYS:HB3	1.51	1.22
25:W:119:PRO:HD3	31:d:10:DG:C4'	1.68	1.22
2:6:57:C:C4	24:V:49:ILE:CD1	2.16	1.22
9:G:126:LYS:O	28:Z:42:LYS:CD	1.64	1.22
2:6:17:U:H4'	24:V:102:LYS:CD	1.54	1.22
25:W:31:TRP:HH2	27:Y:1352:SER:CB	1.53	1.22
25:W:598:GLY:CA	26:a:82:LEU:HD22	1.70	1.22
26:X:174:ASN:HD22	26:a:324:LYS:N	1.11	1.22
1:5:1363:U:O3'	1:5:1364:C:P	1.98	1.22
25:W:305:ILE:HG21	27:Y:1344:LYS:O	1.32	1.22
25:W:890:TYR:CD1	31:d:13:DA:H4'	1.55	1.22
27:Y:998:ILE:CG2	29:b:108:LEU:HD22	1.64	1.22
25:W:306:PRO:CG	27:Y:1344:LYS:HE3	1.67	1.21
26:X:175:SER:N	26:a:324:LYS:NZ	1.76	1.21
29:b:135:VAL:CG2	29:b:171:THR:OG1	1.87	1.21
27:Y:1285:ARG:HB3	31:d:17:DT:P	1.73	1.21
25:W:76:ILE:HD11	29:b:157:ASN:C	1.45	1.21
25:W:95:VAL:HG13	27:Y:1371:LEU:CG	1.70	1.21
25:W:31:TRP:CH2	27:Y:1352:SER:CB	2.24	1.20
29:b:215:ASP:CG	29:b:217:ARG:CZ	2.14	1.20
25:W:313:ILE:CG2	27:Y:1269:LYS:HD2	1.69	1.20
27:Y:1289:MET:CE	31:d:14:DG:H2''	1.71	1.20
25:W:406:LYS:HD2	27:Y:1307:LEU:CA	1.71	1.20
27:Y:1289:MET:CG	31:d:15:DA:H4'	1.68	1.20
4:B:76:PHE:CD1	29:b:258:VAL:HG22	1.54	1.20
25:W:306:PRO:HD2	27:Y:1344:LYS:CD	1.71	1.20
25:W:77:LYS:NZ	29:b:153:ASP:OD1	1.75	1.20
27:Y:997:ALA:C	29:b:8:PHE:HE1	1.36	1.20
27:Y:999:PHE:CB	29:b:108:LEU:O	1.89	1.20
25:W:413:ARG:NH1	31:d:17:DT:H4'	1.51	1.19
25:W:837:TYR:CE1	27:Y:649:HIS:CD2	2.29	1.19
25:W:388:LEU:HD11	27:Y:1348:GLY:HA3	1.23	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:91:ASP:OD1	24:V:95:TYR:CB	1.69	1.19
26:X:105:PRO:HG3	26:a:320:GLU:CA	1.71	1.19
25:W:305:ILE:CG2	27:Y:1344:LYS:O	1.91	1.18
27:Y:998:ILE:C	29:b:108:LEU:HD13	1.67	1.18
25:W:309:ILE:HD12	27:Y:1344:LYS:CG	1.70	1.18
26:X:106:LEU:HB3	26:a:319:HIS:CE1	1.77	1.18
25:W:837:TYR:CE1	27:Y:649:HIS:NE2	2.12	1.18
25:W:313:ILE:HG23	27:Y:1269:LYS:CD	1.73	1.18
25:W:413:ARG:NH1	31:d:17:DT:C4'	2.07	1.18
29:b:290:TRP:CH2	29:b:296:LYS:NZ	1.95	1.17
1:5:698:U:C2	24:V:93:GLY:CA	2.28	1.17
25:W:77:LYS:CA	29:b:156:THR:HG21	1.73	1.17
25:W:100:MET:SD	27:Y:1347:GLN:OE1	2.03	1.17
27:Y:216:ALA:HB1	30:c:20:DG:C8	1.80	1.17
25:W:736:VAL:HG23	27:Y:1105:ILE:CG2	1.74	1.17
2:6:38:G:O2'	24:V:187:SER:OG	1.63	1.16
25:W:31:TRP:HZ2	27:Y:1352:SER:OG	1.19	1.16
25:W:76:ILE:HG23	29:b:156:THR:OG1	1.36	1.16
1:5:1075:G:OP1	1:5:1077:U:C4	1.98	1.16
27:Y:1289:MET:SD	31:d:15:DA:H4'	1.82	1.16
25:W:31:TRP:HH2	27:Y:1352:SER:CA	1.59	1.16
27:Y:634:GLY:HA2	30:c:24:DT:H71	1.23	1.16
27:Y:998:ILE:CA	29:b:8:PHE:CZ	2.22	1.16
25:W:388:LEU:CD1	27:Y:1348:GLY:CA	2.24	1.15
1:5:698:U:C5	24:V:96:THR:OG1	1.93	1.15
2:6:37:A:C2	24:V:188:SER:HB2	1.81	1.15
25:W:388:LEU:HD13	27:Y:1348:GLY:C	1.71	1.14
27:Y:814:LEU:HD23	27:Y:858:TYR:CZ	1.83	1.14
1:5:1063:G:N2	1:5:1095:G:C1'	2.10	1.14
26:X:106:LEU:CB	26:a:319:HIS:CE1	2.30	1.14
30:c:16:DG:H4'	32:e:16:SER:HB2	1.29	1.14
25:W:95:VAL:HG11	27:Y:1371:LEU:HD12	1.19	1.14
25:W:388:LEU:HD22	27:Y:1345:GLU:HA	1.30	1.14
25:W:402:ASN:HD22	27:Y:1273:GLN:NE2	1.44	1.14
30:c:17:DT:H5''	32:e:118:THR:HG22	1.14	1.14
25:W:94:ILE:HG22	27:Y:1371:LEU:CD2	1.78	1.13
27:Y:175:ARG:NH2	30:c:26:DT:C5	2.13	1.13
27:Y:998:ILE:O	29:b:108:LEU:HD13	1.37	1.13
25:W:306:PRO:HG2	27:Y:1344:LYS:CE	1.78	1.13
29:b:183:LYS:CD	29:b:245:GLY:HA2	1.77	1.13
2:6:17:U:OP2	24:V:102:LYS:HE2	1.49	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:368:PHE:CE1	27:Y:1348:GLY:O	2.01	1.13
27:Y:634:GLY:HA2	30:c:24:DT:C7	1.76	1.13
25:W:313:ILE:HG12	27:Y:1269:LYS:CD	1.76	1.13
26:X:279:ASN:OD1	29:b:314:GLN:OE1	1.67	1.13
25:W:313:ILE:HG23	27:Y:1269:LYS:NZ	1.64	1.12
27:Y:1289:MET:SD	31:d:15:DA:O4'	2.06	1.13
25:W:368:PHE:O	27:Y:1349:LEU:CD2	1.97	1.12
29:b:135:VAL:HG23	29:b:171:THR:OG1	0.96	1.12
25:W:380:LYS:CB	31:d:23:DC:C6	2.31	1.12
26:X:107:GLU:CD	26:a:319:HIS:CD2	2.25	1.12
25:W:75:LYS:NZ	29:b:153:ASP:OD2	1.80	1.12
1:5:1470:U:H1'	24:V:125:ALA:HB2	1.21	1.12
25:W:835:PHE:CZ	27:Y:647:ASP:HB2	1.84	1.12
27:Y:175:ARG:NH2	30:c:26:DT:C4	2.18	1.12
27:Y:997:ALA:C	29:b:8:PHE:CZ	2.28	1.12
25:W:306:PRO:CD	27:Y:1344:LYS:CD	2.24	1.12
25:W:368:PHE:HA	27:Y:1349:LEU:CD2	1.79	1.11
1:5:1467:A:C8	23:U:48:ARG:NH2	2.18	1.11
27:Y:998:ILE:HD13	29:b:62:MET:HE1	1.18	1.11
25:W:388:LEU:CD1	27:Y:1348:GLY:HA3	1.78	1.11
25:W:391:ARG:HB3	27:Y:1345:GLU:OE2	1.44	1.11
26:X:175:SER:N	26:a:324:LYS:HE2	1.49	1.11
2:6:57:C:N4	24:V:49:ILE:HG21	1.64	1.10
9:G:130:LEU:CB	28:Z:42:LYS:HG2	1.79	1.10
25:W:368:PHE:CA	27:Y:1349:LEU:CD2	2.28	1.10
25:W:400:ARG:NH2	25:W:1234:PHE:O	1.85	1.10
25:W:406:LYS:HD2	27:Y:1307:LEU:HA	1.33	1.10
4:B:76:PHE:CG	29:b:258:VAL:HG22	1.87	1.10
25:W:368:PHE:HE1	27:Y:1348:GLY:O	1.33	1.10
1:5:924:A:H2'	1:5:925:C:C5	1.86	1.10
26:X:174:ASN:ND2	26:a:324:LYS:N	1.93	1.10
27:Y:901:ASN:ND2	27:Y:1232:ARG:HH12	1.49	1.10
2:6:17:U:H4'	24:V:102:LYS:HD3	1.25	1.09
25:W:119:PRO:CD	31:d:10:DG:H4'	1.82	1.09
25:W:408:VAL:CB	27:Y:1306:LEU:HD23	1.82	1.09
27:Y:998:ILE:CG2	29:b:108:LEU:HD21	1.78	1.09
25:W:119:PRO:HD3	31:d:10:DG:H4'	1.17	1.09
25:W:349:PRO:HB3	32:e:137:ASP:OD2	1.51	1.09
25:W:890:TYR:CG	31:d:13:DA:H4'	1.79	1.09
27:Y:356:ARG:NH1	32:e:109:ARG:O	1.85	1.09
25:W:31:TRP:CH2	27:Y:1352:SER:HA	1.86	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:77:LYS:CA	29:b:156:THR:CG2	2.29	1.09
27:Y:175:ARG:NH2	30:c:26:DT:N1	1.99	1.09
25:W:890:TYR:CB	31:d:14:DG:H5'	1.81	1.08
25:W:76:ILE:HD13	29:b:157:ASN:C	1.58	1.08
29:b:196:VAL:CG1	29:b:217:ARG:NH1	2.15	1.08
25:W:388:LEU:HD11	27:Y:1348:GLY:CA	1.81	1.08
25:W:837:TYR:CD1	27:Y:523:ASP:OD2	2.07	1.08
26:a:304:ARG:NH1	29:b:48:TYR:CZ	2.22	1.08
29:b:139:PHE:CE2	29:b:147:ILE:HD11	1.89	1.08
1:5:1075:G:OP1	1:5:1077:U:C5	2.07	1.08
4:B:76:PHE:N	29:b:257:PRO:HG2	1.66	1.08
25:W:408:VAL:HG11	27:Y:1306:LEU:HB3	1.15	1.08
27:Y:170:LYS:H	30:c:25:DC:C1'	1.64	1.08
25:W:876:LYS:HG2	25:W:1030:ARG:HH11	1.19	1.07
27:Y:217:VAL:N	30:c:20:DG:H2'	1.68	1.07
27:Y:628:ILE:HD11	27:Y:673:LEU:HD12	1.34	1.07
25:W:736:VAL:HG23	27:Y:1105:ILE:HG22	1.09	1.07
27:Y:1287:GLY:CA	31:d:16:DC:OP1	2.01	1.07
32:e:108:TRP:HE1	32:e:112:ARG:CZ	1.67	1.07
1:5:1467:A:C8	23:U:48:ARG:CZ	2.22	1.07
25:W:391:ARG:HB2	27:Y:1345:GLU:OE2	1.55	1.07
25:W:407:ARG:O	27:Y:1311:SER:HB2	1.55	1.07
27:Y:356:ARG:HH11	32:e:113:ASN:CB	1.67	1.07
2:6:37:A:H2	24:V:188:SER:HB2	0.92	1.07
27:Y:1285:ARG:CB	31:d:17:DT:P	2.41	1.07
2:6:16:G:N2	2:6:49:C:H42	1.52	1.06
25:W:76:ILE:HD11	29:b:158:LYS:HA	1.37	1.06
2:6:35:G:H1'	14:L:121:ILE:HG22	1.34	1.06
25:W:306:PRO:HD3	27:Y:1344:LYS:HD2	1.32	1.06
29:b:239:LYS:HB2	29:b:293:ASP:N	1.70	1.06
25:W:408:VAL:CG2	27:Y:1306:LEU:HD22	1.81	1.06
26:X:173:ILE:HG22	26:a:324:LYS:NZ	1.71	1.06
27:Y:1001:GLU:H	29:b:109:LYS:HG2	1.14	1.06
2:6:16:G:H22	2:6:49:C:N4	1.54	1.06
25:W:1057:VAL:HG22	30:c:29:DC:H5''	1.38	1.06
4:B:76:PHE:N	29:b:257:PRO:CG	2.15	1.05
25:W:76:ILE:HG23	29:b:156:THR:CB	1.71	1.05
27:Y:998:ILE:CG2	29:b:108:LEU:CD1	2.34	1.05
27:Y:1002:SER:O	29:b:112:LYS:CG	2.03	1.05
2:6:35:G:N2	14:L:120:LYS:CB	2.18	1.05
25:W:398:LEU:HD21	27:Y:1342:LEU:HB2	1.15	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:216:ALA:CB	30:c:20:DG:C8	2.39	1.05
26:X:174:ASN:ND2	26:a:324:LYS:H	1.50	1.05
29:b:215:ASP:C	29:b:217:ARG:H	1.48	1.05
24:V:91:ASP:CB	24:V:95:TYR:HB2	1.81	1.05
27:Y:994:LEU:HD11	29:b:12:LEU:HD11	1.05	1.05
27:Y:998:ILE:HG21	29:b:62:MET:HE1	1.11	1.05
29:b:213:ARG:O	29:b:218:LEU:HB2	1.56	1.05
25:W:392:LEU:HD22	27:Y:1342:LEU:HD11	1.09	1.05
26:X:175:SER:N	26:a:324:LYS:CE	1.83	1.05
25:W:890:TYR:CE1	25:W:894:LYS:HE3	1.92	1.04
27:Y:217:VAL:CA	30:c:20:DG:H2''	1.74	1.04
27:Y:829:ASN:O	27:Y:848:LYS:CE	2.05	1.04
29:b:239:LYS:HZ3	29:b:294:LYS:HG3	0.88	1.04
30:c:17:DT:C5'	32:e:118:THR:HG22	1.87	1.04
26:a:283:ARG:HH11	29:b:81:PHE:HB2	0.92	1.04
25:W:380:LYS:HB3	31:d:23:DC:C6	1.67	1.04
25:W:890:TYR:HB2	31:d:14:DG:H5'	1.04	1.04
26:X:161:ARG:NH1	26:a:2:GLU:O	1.90	1.04
27:Y:998:ILE:HD13	29:b:62:MET:CE	1.86	1.04
24:V:110:GLN:HE21	24:V:112:ILE:CG1	1.59	1.04
25:W:599:THR:CG2	26:a:86:GLN:NE2	2.21	1.04
1:5:1013:C:N4	1:5:1014:A:N6	2.06	1.03
4:B:76:PHE:CD1	29:b:258:VAL:HG23	1.61	1.03
25:W:313:ILE:CG1	27:Y:1269:LYS:HD2	1.87	1.03
2:6:20:G:N2	24:V:53:GLY:CA	2.02	1.03
2:6:57:C:H41	24:V:49:ILE:HG21	0.89	1.03
25:W:406:LYS:HG3	27:Y:1307:LEU:CD2	1.88	1.03
29:b:183:LYS:HD2	29:b:245:GLY:HA2	1.08	1.03
26:X:279:ASN:CG	29:b:314:GLN:OE1	2.02	1.03
1:5:694:U:OP1	24:V:107:LYS:NZ	1.92	1.03
25:W:313:ILE:HG12	27:Y:1269:LYS:HD3	1.39	1.03
25:W:868:PHE:CD2	27:Y:658:PRO:CG	2.41	1.03
25:W:23:ALA:HB2	27:Y:1352:SER:CB	1.87	1.03
25:W:76:ILE:CG2	29:b:156:THR:OG1	2.05	1.03
26:X:107:GLU:OE1	26:a:319:HIS:HD2	1.41	1.03
27:Y:729:ILE:HG21	27:Y:734:ILE:HD11	1.39	1.03
27:Y:956:ARG:HG3	26:a:296:SER:HA	1.41	1.03
29:b:290:TRP:NE1	29:b:293:ASP:HB3	1.48	1.03
27:Y:998:ILE:HG22	29:b:108:LEU:CG	1.89	1.02
29:b:183:LYS:HD3	29:b:280:PHE:O	1.59	1.02
29:b:290:TRP:CE3	29:b:296:LYS:NZ	2.03	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:504:ILE:O	27:Y:1297:TYR:OH	1.77	1.02
27:Y:997:ALA:O	29:b:8:PHE:CE1	2.10	1.02
27:Y:997:ALA:CA	29:b:8:PHE:HE1	1.72	1.02
27:Y:998:ILE:N	29:b:8:PHE:CZ	2.26	1.02
25:W:76:ILE:CD1	29:b:158:LYS:CA	2.32	1.02
25:W:408:VAL:CG2	27:Y:1306:LEU:HD23	1.89	1.02
25:W:142:VAL:HG13	32:e:124:SER:HB3	1.40	1.02
25:W:23:ALA:HB2	27:Y:1352:SER:HB2	1.07	1.02
27:Y:216:ALA:C	30:c:20:DG:C2'	2.32	1.02
27:Y:953:ALA:O	26:a:326:ARG:HD3	1.60	1.02
27:Y:1289:MET:HG3	31:d:15:DA:H4'	1.37	1.02
25:W:368:PHE:HA	27:Y:1349:LEU:HD23	1.04	1.01
27:Y:217:VAL:HA	30:c:20:DG:H2''	1.41	1.01
27:Y:408:LEU:HD23	27:Y:410:CYS:O	1.59	1.01
27:Y:1001:GLU:N	29:b:109:LYS:HG2	1.74	1.01
29:b:215:ASP:OD2	29:b:217:ARG:NH2	1.93	1.01
1:5:924:A:H2'	1:5:925:C:C6	1.94	1.01
27:Y:956:ARG:HA	26:a:296:SER:HB3	1.39	1.01
25:W:380:LYS:HB3	31:d:23:DC:C2	1.90	1.01
25:W:464:ILE:HG21	27:Y:1325:VAL:CG1	1.91	1.01
27:Y:997:ALA:CB	29:b:8:PHE:CE1	2.43	1.01
25:W:306:PRO:HD2	27:Y:1344:LYS:HD2	1.02	1.01
29:b:183:LYS:NZ	29:b:245:GLY:O	1.93	1.01
25:W:309:ILE:HG23	27:Y:1341:LEU:CD1	1.89	1.00
25:W:464:ILE:CG2	27:Y:1325:VAL:CG1	2.38	1.00
27:Y:997:ALA:CB	29:b:8:PHE:HE1	1.73	1.00
29:b:1:MET:HE3	29:b:92:LEU:O	1.61	1.00
29:b:139:PHE:CZ	29:b:147:ILE:HD11	1.97	1.00
25:W:858:PHE:C	27:Y:1102:ILE:HD11	1.87	1.00
1:5:1383:A:C2	23:U:25:HIS:ND1	2.30	1.00
25:W:890:TYR:HB2	31:d:14:DG:C5'	1.91	1.00
27:Y:94:ILE:HG23	27:Y:135:LEU:HD12	1.43	1.00
9:G:130:LEU:HB3	28:Z:42:LYS:HG2	1.42	1.00
25:W:409:ASP:O	27:Y:1310:LYS:CD	2.10	1.00
27:Y:999:PHE:CA	29:b:108:LEU:HB3	1.92	1.00
1:5:1471:C:H4'	24:V:128:ASP:OD2	1.62	0.99
29:b:239:LYS:NZ	29:b:294:LYS:CG	2.09	0.99
27:Y:175:ARG:NH2	30:c:26:DT:N3	2.08	0.99
27:Y:999:PHE:HE1	29:b:42:TYR:OH	1.40	0.99
25:W:309:ILE:CG2	27:Y:1341:LEU:HD12	1.90	0.99
25:W:734:VAL:HG23	27:Y:1093:PRO:HB2	1.41	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1063:G:C8	1:5:1095:G:N2	2.20	0.99
9:G:126:LYS:O	28:Z:42:LYS:HD3	1.18	0.99
25:W:92:GLU:O	27:Y:1371:LEU:CD1	2.10	0.99
25:W:309:ILE:HG23	27:Y:1341:LEU:HD12	1.41	0.99
25:W:890:TYR:CD1	31:d:13:DA:C4'	2.42	0.99
29:b:291:ASN:H	29:b:296:LYS:CB	1.75	0.99
1:5:1471:C:H4'	24:V:128:ASP:CG	1.88	0.99
25:W:1057:VAL:CG2	30:c:29:DC:H5''	1.92	0.99
27:Y:217:VAL:CA	30:c:20:DG:C2'	2.39	0.99
29:b:131:ALA:C	29:b:171:THR:HB	1.85	0.99
29:b:290:TRP:CD2	29:b:296:LYS:HD2	1.97	0.99
25:W:408:VAL:HG12	27:Y:1306:LEU:C	1.86	0.99
25:W:837:TYR:OH	27:Y:649:HIS:HD2	1.37	0.99
29:b:290:TRP:CD1	29:b:293:ASP:CB	2.34	0.99
1:5:1469:G:C5'	23:U:26:GLY:HA2	1.93	0.98
23:U:55:LEU:HD12	24:V:159:ARG:NE	1.75	0.98
26:X:106:LEU:HB3	26:a:319:HIS:HE1	0.85	0.98
27:Y:999:PHE:CE2	29:b:108:LEU:CD2	2.45	0.98
27:Y:1289:MET:HE1	31:d:14:DG:H2''	1.45	0.98
27:Y:998:ILE:O	29:b:6:ASN:ND2	1.96	0.98
29:b:196:VAL:HG11	29:b:217:ARG:NH2	1.76	0.98
27:Y:258:VAL:HG12	27:Y:268:VAL:HG11	1.45	0.98
25:W:809:MET:SD	27:Y:1094:LEU:HD23	2.03	0.98
25:W:31:TRP:CH2	27:Y:1352:SER:HB2	1.99	0.98
29:b:239:LYS:CE	29:b:294:LYS:HG3	1.92	0.98
27:Y:956:ARG:CG	26:a:296:SER:HB2	1.91	0.98
25:W:79:ARG:HB3	29:b:160:GLY:HA3	1.43	0.97
29:b:111:ILE:HD13	29:b:119:MET:HE1	1.45	0.97
25:W:408:VAL:HG21	27:Y:1306:LEU:HD22	1.00	0.97
24:V:110:GLN:NE2	24:V:112:ILE:CD1	2.27	0.97
25:W:406:LYS:HD2	27:Y:1307:LEU:CB	1.95	0.97
27:Y:998:ILE:CD1	29:b:62:MET:HE1	1.93	0.97
2:6:38:G:N2	24:V:191:MET:CE	2.17	0.97
26:X:107:GLU:HG3	26:a:319:HIS:NE2	1.78	0.97
27:Y:163:MET:HE2	27:Y:514:ILE:HD12	1.45	0.97
25:W:398:LEU:CD2	27:Y:1342:LEU:CA	2.42	0.97
26:a:268:ILE:HD11	26:a:286:ILE:HG22	1.47	0.97
1:5:242:A:H62	1:5:277:G:H21	1.13	0.97
25:W:349:PRO:HG3	32:e:137:ASP:CG	1.89	0.97
1:5:1091:C:OP2	3:A:111:ARG:HD2	1.64	0.96
25:W:464:ILE:HG21	27:Y:1325:VAL:HG11	1.43	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:b:239:LYS:HZ3	29:b:294:LYS:CB	1.78	0.96
25:W:76:ILE:CD1	29:b:158:LYS:HA	1.93	0.96
1:5:1470:U:H1'	24:V:125:ALA:CB	1.95	0.96
25:W:464:ILE:HG23	27:Y:1325:VAL:HG13	1.47	0.96
27:Y:998:ILE:HA	29:b:8:PHE:HZ	0.80	0.96
27:Y:999:PHE:CE2	29:b:108:LEU:HD23	1.99	0.96
25:W:368:PHE:C	27:Y:1349:LEU:CD2	2.37	0.96
25:W:862:LEU:N	27:Y:772:GLU:O	1.97	0.96
27:Y:376:ARG:NH2	30:c:20:DG:N7	2.13	0.96
27:Y:956:ARG:HA	26:a:296:SER:CB	1.94	0.96
2:6:57:C:H42	24:V:49:ILE:CD1	1.71	0.96
25:W:388:LEU:HD13	27:Y:1349:LEU:N	1.80	0.96
27:Y:998:ILE:HG23	29:b:108:LEU:CD1	1.95	0.96
29:b:215:ASP:CB	29:b:217:ARG:HE	1.77	0.96
27:Y:956:ARG:CA	26:a:296:SER:CB	2.42	0.96
29:b:289:ILE:O	29:b:300:ASN:ND2	1.97	0.96
27:Y:998:ILE:HG23	29:b:108:LEU:HD11	1.43	0.96
25:W:864:ILE:HD13	27:Y:1200:PHE:CE2	2.00	0.96
25:W:388:LEU:HD13	27:Y:1348:GLY:CA	1.93	0.96
25:W:828:ARG:NH2	27:Y:775:ASP:OD1	1.99	0.96
27:Y:997:ALA:O	29:b:8:PHE:CZ	2.19	0.96
23:U:55:LEU:CD1	24:V:159:ARG:NE	2.28	0.95
25:W:94:ILE:HG22	27:Y:1371:LEU:HD23	1.47	0.95
26:X:268:ILE:HD11	26:X:286:ILE:HG22	1.49	0.95
27:Y:995:PHE:CD1	29:b:119:MET:SD	2.59	0.95
29:b:139:PHE:CE1	29:b:147:ILE:HG13	2.00	0.95
27:Y:997:ALA:HB1	29:b:8:PHE:CE1	2.01	0.95
26:a:283:ARG:HH11	29:b:81:PHE:CB	1.79	0.95
25:W:498:THR:HG21	27:Y:1293:ALA:HB2	1.48	0.95
27:Y:829:ASN:O	27:Y:848:LYS:HE3	1.66	0.95
1:5:1331:A:H61	1:5:1340:G:H1	1.02	0.95
25:W:309:ILE:HD13	27:Y:1344:LYS:CG	1.95	0.95
2:6:37:A:H2	24:V:188:SER:CB	1.79	0.95
1:5:242:A:H62	1:5:277:G:N2	1.64	0.95
27:Y:998:ILE:CA	29:b:108:LEU:HD13	1.97	0.95
25:W:886:ALA:CA	31:d:14:DG:C8	2.50	0.94
27:Y:1003:VAL:HG22	29:b:116:ILE:HD11	1.47	0.94
1:5:1064:U:N3	1:5:1094:C:N3	2.15	0.94
1:5:1467:A:H2'	23:U:48:ARG:NH2	1.77	0.94
29:b:196:VAL:CG1	29:b:217:ARG:HH12	1.75	0.94
27:Y:814:LEU:HD23	27:Y:858:TYR:OH	1.66	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1063:G:H22	1:5:1095:G:C1'	1.76	0.94
25:W:349:PRO:CB	32:e:137:ASP:OD2	2.16	0.94
2:6:35:G:H22	14:L:120:LYS:HB3	1.15	0.94
27:Y:567:GLY:HA3	32:e:31:LYS:HE2	1.48	0.94
1:5:136:U:H3	1:5:157:A:H62	1.10	0.93
27:Y:998:ILE:HG23	29:b:62:MET:HE2	0.95	0.93
25:W:406:LYS:HG3	27:Y:1307:LEU:HD22	1.47	0.93
27:Y:60:LYS:HD3	27:Y:64:ASP:OD1	1.68	0.93
27:Y:219:GLU:HG3	30:c:21:DC:N4	1.83	0.93
29:b:215:ASP:OD1	29:b:217:ARG:CZ	2.15	0.93
27:Y:999:PHE:HA	29:b:108:LEU:HB3	1.51	0.93
27:Y:995:PHE:CZ	29:b:119:MET:SD	2.61	0.93
24:V:110:GLN:HE22	24:V:112:ILE:HD11	1.33	0.93
25:W:392:LEU:HD23	27:Y:1342:LEU:CD1	1.96	0.93
27:Y:170:LYS:N	30:c:25:DC:C1'	2.28	0.93
27:Y:999:PHE:CD1	29:b:108:LEU:HD23	2.04	0.93
29:b:215:ASP:OD1	29:b:217:ARG:NE	2.02	0.93
24:V:91:ASP:CB	24:V:95:TYR:CB	2.42	0.93
29:b:182:SER:HB3	29:b:280:PHE:CE1	2.03	0.93
4:B:76:PHE:HD1	29:b:258:VAL:HG23	1.34	0.93
25:W:413:ARG:HH12	31:d:17:DT:C4'	1.71	0.93
25:W:306:PRO:CG	27:Y:1344:LYS:CE	2.40	0.92
25:W:687:VAL:HG11	25:W:802:ARG:HH22	1.31	0.92
2:6:57:C:H41	24:V:49:ILE:CG2	1.82	0.92
25:W:413:ARG:HH11	31:d:17:DT:H4'	1.28	0.92
26:X:99:GLY:O	26:a:1:MET:N	2.01	0.92
27:Y:1000:PRO:HD2	29:b:6:ASN:HD21	1.32	0.92
1:5:698:U:N3	24:V:93:GLY:HA2	1.85	0.92
2:6:35:G:H21	14:L:120:LYS:HA	1.34	0.92
27:Y:994:LEU:HD12	29:b:12:LEU:CD1	1.98	0.92
1:5:1063:G:H22	1:5:1095:G:H1'	1.17	0.92
24:V:110:GLN:HE21	24:V:112:ILE:HG13	0.79	0.92
2:6:35:G:H21	14:L:120:LYS:CA	1.83	0.92
25:W:408:VAL:CG1	27:Y:1306:LEU:HB3	1.98	0.92
25:W:368:PHE:C	27:Y:1349:LEU:HD21	1.95	0.92
25:W:837:TYR:HD1	27:Y:523:ASP:OD2	1.50	0.92
26:X:173:ILE:HG22	26:a:324:LYS:HZ2	1.31	0.92
27:Y:994:LEU:HD13	29:b:12:LEU:HD12	1.52	0.92
1:5:1470:U:H4'	24:V:123:THR:O	1.70	0.92
26:X:269:GLU:OE1	26:X:282:LYS:NZ	2.03	0.92
1:5:1013:C:N4	1:5:1014:A:H62	1.65	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:113:TRP:CZ3	27:Y:1351:LEU:HD11	2.05	0.92
25:W:392:LEU:CD2	27:Y:1342:LEU:HD13	1.99	0.92
29:b:196:VAL:HG11	29:b:217:ARG:HH12	1.10	0.92
25:W:23:ALA:CB	27:Y:1352:SER:HB2	1.99	0.91
25:W:889:GLY:HA3	31:d:14:DG:H1'	1.50	0.91
27:Y:169:LEU:HD13	27:Y:193:VAL:HG11	1.50	0.91
9:G:130:LEU:N	28:Z:42:LYS:HE2	1.84	0.91
29:b:215:ASP:HB3	29:b:217:ARG:HE	1.33	0.91
1:5:1090:G:H5''	3:A:111:ARG:CZ	2.00	0.91
25:W:313:ILE:HG23	27:Y:1269:LYS:HD2	1.38	0.91
25:W:388:LEU:HD12	27:Y:1348:GLY:C	1.92	0.91
25:W:388:LEU:HB2	27:Y:1349:LEU:HG	1.51	0.91
25:W:408:VAL:HB	27:Y:1306:LEU:HD23	1.52	0.91
26:X:271:LEU:O	26:X:317:LYS:HE2	1.70	0.91
25:W:76:ILE:CD1	29:b:157:ASN:O	1.99	0.91
25:W:100:MET:HB2	27:Y:1366:ASN:ND2	1.85	0.91
2:6:57:C:N3	24:V:49:ILE:HD13	1.86	0.91
25:W:313:ILE:CG1	27:Y:1269:LYS:CD	2.47	0.91
25:W:368:PHE:CD1	27:Y:1349:LEU:CA	2.54	0.91
29:b:291:ASN:H	29:b:296:LYS:HB3	1.33	0.91
25:W:94:ILE:HG21	27:Y:1370:ILE:HG22	1.53	0.91
25:W:95:VAL:CB	27:Y:1371:LEU:HD12	2.01	0.91
25:W:398:LEU:HD11	27:Y:1338:SER:O	1.70	0.91
2:6:7:U:H3	2:6:68:G:H1	0.91	0.91
25:W:427:VAL:HG21	25:W:493:LEU:HD11	1.48	0.91
1:5:1383:A:N1	23:U:25:HIS:ND1	2.19	0.90
29:b:1:MET:CE	29:b:92:LEU:O	2.19	0.90
1:5:698:U:O2	24:V:93:GLY:CA	2.19	0.90
25:W:597:PHE:C	26:a:82:LEU:HD22	1.94	0.90
27:Y:45:LEU:O	27:Y:75:ARG:NH2	2.04	0.90
27:Y:1289:MET:CE	31:d:15:DA:O4'	2.20	0.90
29:b:183:LYS:HG2	29:b:281:ASN:CB	2.01	0.90
25:W:31:TRP:O	27:Y:1366:ASN:ND2	2.04	0.90
25:W:402:ASN:HD22	27:Y:1273:GLN:HE22	1.16	0.90
32:e:23:VAL:HG21	32:e:44:VAL:HG23	1.53	0.90
25:W:775:LYS:HE3	25:W:845:ILE:HD13	1.53	0.90
25:W:440:PRO:HG3	27:Y:1324:ILE:HD13	1.49	0.90
27:Y:997:ALA:HB1	29:b:8:PHE:CD1	2.07	0.90
29:b:290:TRP:CG	29:b:296:LYS:HD2	2.07	0.90
30:c:19:DT:H2''	30:c:21:DC:H4'	1.54	0.90
25:W:368:PHE:CB	27:Y:1349:LEU:HD23	2.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:380:LYS:CB	31:d:23:DC:C2	2.52	0.90
26:X:7:TYR:OH	26:a:235:HIS:O	1.89	0.90
27:Y:170:LYS:H	30:c:25:DC:H1'	1.10	0.90
27:Y:729:ILE:CG2	27:Y:734:ILE:HD11	2.01	0.90
29:b:215:ASP:C	29:b:217:ARG:N	2.30	0.90
24:V:111:THR:O	24:V:112:ILE:N	2.04	0.90
25:W:598:GLY:N	26:a:82:LEU:CD2	2.34	0.90
27:Y:1289:MET:CE	31:d:15:DA:C5'	2.39	0.90
29:b:215:ASP:HB3	29:b:217:ARG:NE	1.86	0.90
26:X:107:GLU:N	26:a:319:HIS:CE1	2.40	0.89
29:b:131:ALA:O	29:b:171:THR:OG1	1.88	0.89
26:X:235:HIS:O	26:a:7:TYR:OH	1.91	0.89
4:B:76:PHE:CZ	29:b:257:PRO:O	2.09	0.89
23:U:58:ASP:OD2	24:V:159:ARG:NH2	2.06	0.89
25:W:313:ILE:CD1	27:Y:1269:LYS:HB2	2.03	0.89
27:Y:998:ILE:HG22	29:b:108:LEU:CD1	2.01	0.89
27:Y:998:ILE:O	29:b:108:LEU:CB	2.20	0.89
25:W:876:LYS:HG3	25:W:1030:ARG:HH12	1.06	0.89
26:X:107:GLU:OE1	26:a:319:HIS:CD2	2.23	0.89
25:W:388:LEU:CD2	27:Y:1345:GLU:HA	2.02	0.89
25:W:392:LEU:HD21	27:Y:1342:LEU:HD12	0.90	0.89
27:Y:567:GLY:HA3	32:e:31:LYS:CE	2.03	0.89
25:W:97:ARG:HD3	27:Y:1370:ILE:HD12	1.52	0.89
25:W:100:MET:HE1	27:Y:1347:GLN:HB3	1.54	0.89
25:W:388:LEU:HD22	27:Y:1345:GLU:CA	2.03	0.89
29:b:215:ASP:HB3	29:b:217:ARG:NH2	1.87	0.89
25:W:398:LEU:HD21	27:Y:1342:LEU:CB	1.78	0.89
1:5:1469:G:H5'	23:U:26:GLY:HA2	1.52	0.88
25:W:876:LYS:HG2	25:W:1030:ARG:NH1	1.81	0.88
25:W:94:ILE:HG22	27:Y:1371:LEU:CG	2.03	0.88
25:W:94:ILE:HD11	27:Y:1370:ILE:HD13	1.54	0.88
1:5:1066:U:O5'	1:5:1092:A:N1	1.86	0.88
25:W:303:PRO:HG2	27:Y:1347:GLN:O	1.74	0.88
25:W:388:LEU:CB	27:Y:1349:LEU:HG	2.03	0.88
25:W:488:ASP:HB3	25:W:551:ARG:HH22	1.37	0.88
25:W:309:ILE:HD13	27:Y:1344:LYS:HG3	1.51	0.88
25:W:867:TYR:OH	27:Y:779:ALA:CB	2.22	0.88
26:X:174:ASN:HD22	26:a:324:LYS:H	0.97	0.88
1:5:1063:G:N9	1:5:1095:G:N2	2.13	0.88
26:X:2:GLU:O	26:a:161:ARG:NH1	2.06	0.88
27:Y:402:ARG:HD3	27:Y:510:TYR:CE2	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:956:ARG:HG3	26:a:296:SER:HB3	1.21	0.88
1:5:833:G:H1	1:5:844:U:H3	1.20	0.88
27:Y:994:LEU:CD1	29:b:12:LEU:HD12	2.00	0.88
27:Y:999:PHE:CD1	29:b:108:LEU:CD2	2.57	0.88
1:5:1067:C:H5'	1:5:1092:A:N7	1.89	0.88
26:X:107:GLU:CD	26:a:319:HIS:HD2	1.70	0.88
2:6:57:C:H42	24:V:49:ILE:HD13	1.30	0.88
25:W:408:VAL:CG1	27:Y:1306:LEU:CB	2.52	0.88
25:W:100:MET:HB2	27:Y:1366:ASN:HD21	1.38	0.87
27:Y:956:ARG:HG2	26:a:296:SER:HB2	1.54	0.87
25:W:488:ASP:O	25:W:551:ARG:NH2	2.07	0.87
27:Y:1289:MET:CE	31:d:15:DA:C4'	2.53	0.87
25:W:31:TRP:CH2	27:Y:1352:SER:CA	2.43	0.87
24:V:74:ASP:OD2	24:V:92:PHE:HB2	1.73	0.87
24:V:91:ASP:OD1	24:V:95:TYR:HB3	0.95	0.87
25:W:867:TYR:OH	27:Y:779:ALA:HB2	1.74	0.87
27:Y:994:LEU:HD13	29:b:12:LEU:CD1	2.01	0.87
25:W:77:LYS:CE	29:b:153:ASP:OD1	2.23	0.87
27:Y:814:LEU:CD2	27:Y:858:TYR:CZ	2.58	0.87
25:W:95:VAL:CG1	27:Y:1371:LEU:CD1	1.80	0.87
25:W:94:ILE:CG2	27:Y:1371:LEU:HG	2.04	0.86
28:Z:5:TYR:CE2	28:Z:48:LEU:HD23	2.10	0.86
9:G:130:LEU:HB2	28:Z:42:LYS:HG2	1.58	0.86
27:Y:953:ALA:O	26:a:326:ARG:CD	2.24	0.86
29:b:249:LYS:CB	29:b:297:PHE:CE1	2.46	0.86
30:c:15:DT:H3'	32:e:95:ARG:HH22	1.39	0.86
1:5:1383:A:H2	23:U:25:HIS:HD1	1.17	0.86
2:6:38:G:H21	24:V:191:MET:HE1	0.71	0.86
26:X:108:ARG:HH21	26:a:316:LYS:CE	1.88	0.86
25:W:464:ILE:HD13	27:Y:1325:VAL:HG12	1.58	0.86
1:5:698:U:O2	24:V:93:GLY:HA3	1.75	0.86
29:b:249:LYS:HB2	29:b:297:PHE:CE1	2.10	0.85
32:e:78:ASP:OD1	32:e:81:ARG:HB2	1.75	0.85
25:W:100:MET:CE	27:Y:1347:GLN:OE1	2.23	0.85
25:W:889:GLY:HA3	31:d:14:DG:C1'	2.06	0.85
26:X:279:ASN:ND2	29:b:314:GLN:OE1	2.08	0.85
26:a:283:ARG:HD3	29:b:49:VAL:HG21	1.58	0.85
2:6:35:G:H1'	14:L:121:ILE:CG2	2.06	0.85
25:W:408:VAL:CG1	27:Y:1306:LEU:CA	2.55	0.85
25:W:410:TYR:OH	27:Y:1324:ILE:HD12	1.76	0.85
26:X:173:ILE:CG2	26:a:324:LYS:NZ	2.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:6:17:U:C4'	24:V:102:LYS:CD	2.49	0.85
27:Y:356:ARG:CZ	32:e:109:ARG:O	2.25	0.85
25:W:313:ILE:HD11	27:Y:1269:LYS:HB2	1.58	0.85
27:Y:998:ILE:CG2	29:b:108:LEU:HD13	2.06	0.85
29:b:135:VAL:HG23	29:b:171:THR:HG1	1.06	0.85
25:W:79:ARG:CB	29:b:160:GLY:HA3	2.05	0.85
29:b:196:VAL:CG1	29:b:217:ARG:CZ	2.54	0.85
25:W:498:THR:HG21	27:Y:1293:ALA:CB	2.07	0.85
25:W:738:ASP:OD1	27:Y:1225:LYS:NZ	2.10	0.84
1:5:242:A:N6	1:5:277:G:H21	1.74	0.84
25:W:736:VAL:CG2	27:Y:1105:ILE:HG22	2.01	0.84
25:W:859:LEU:N	27:Y:1102:ILE:HD11	1.91	0.84
32:e:108:TRP:NE1	32:e:112:ARG:CZ	2.39	0.84
25:W:410:TYR:HB2	27:Y:1310:LYS:HE2	1.59	0.84
29:b:183:LYS:HD2	29:b:245:GLY:HA3	1.57	0.84
25:W:905:ASN:ND2	25:W:989:ASN:O	2.09	0.84
26:X:82:LEU:HD13	27:Y:794:LYS:HE3	1.59	0.84
1:5:1013:C:C4	1:5:1014:A:N6	2.45	0.84
25:W:734:VAL:HG23	27:Y:1093:PRO:CB	2.08	0.84
27:Y:217:VAL:N	30:c:20:DG:C2'	2.40	0.84
25:W:392:LEU:HD21	27:Y:1342:LEU:CD1	1.75	0.84
25:W:488:ASP:HB3	25:W:551:ARG:NH2	1.93	0.83
32:e:43:ARG:NH1	32:e:159:THR:O	2.10	0.83
25:W:398:LEU:HD22	27:Y:1342:LEU:CA	2.06	0.83
25:W:835:PHE:CZ	27:Y:647:ASP:CB	2.60	0.83
27:Y:567:GLY:CA	32:e:31:LYS:HE2	2.08	0.83
29:b:215:ASP:CB	29:b:217:ARG:NE	2.39	0.83
1:5:1331:A:N6	1:5:1340:G:H1	1.75	0.83
25:W:368:PHE:HZ	27:Y:1350:ALA:HB2	1.44	0.83
25:W:408:VAL:HG11	27:Y:1306:LEU:CD2	2.07	0.83
29:b:135:VAL:CG2	29:b:171:THR:HG1	1.81	0.83
25:W:868:PHE:CE2	27:Y:658:PRO:HB3	2.13	0.83
29:b:215:ASP:CG	29:b:217:ARG:NE	2.36	0.83
1:5:1094:C:H5'	3:A:114:GLY:O	1.79	0.83
2:6:17:U:C4'	24:V:102:LYS:HD3	2.07	0.83
2:6:20:G:H22	24:V:53:GLY:HA3	1.38	0.83
25:W:398:LEU:HD23	27:Y:1342:LEU:CG	2.08	0.83
30:c:17:DT:H2''	30:c:18:DG:C8	2.14	0.83
24:V:110:GLN:HE22	24:V:112:ILE:CD1	1.89	0.83
25:W:1235:GLN:OE1	31:d:12:DC:H4'	1.78	0.83
27:Y:998:ILE:HG22	29:b:108:LEU:HD22	0.83	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:498:THR:CG2	27:Y:1293:ALA:HB2	2.09	0.83
25:W:513:ASP:OD2	26:a:205:ILE:HD11	1.79	0.82
25:W:602:GLU:OE1	26:a:85:LYS:HD3	1.78	0.82
25:W:862:LEU:O	27:Y:772:GLU:HB2	1.78	0.82
27:Y:1289:MET:CE	31:d:14:DG:C2'	2.56	0.82
29:b:215:ASP:HB3	29:b:217:ARG:CZ	2.09	0.82
2:6:35:G:N2	14:L:120:LYS:CA	2.40	0.82
27:Y:999:PHE:HA	29:b:108:LEU:CB	2.09	0.82
29:b:183:LYS:CD	29:b:245:GLY:CA	2.48	0.82
25:W:515:LYS:HB3	27:Y:1259:ILE:HD12	1.61	0.82
27:Y:1289:MET:HE1	31:d:14:DG:C2'	2.09	0.82
25:W:408:VAL:CB	27:Y:1306:LEU:CD2	2.53	0.82
7:E:89:ASN:OD1	7:E:90:LEU:N	2.12	0.82
25:W:98:GLU:HB2	27:Y:1368:VAL:O	1.78	0.82
27:Y:729:ILE:HG21	27:Y:734:ILE:CD1	2.09	0.82
29:b:290:TRP:CE2	29:b:296:LYS:HD2	2.15	0.82
1:5:1064:U:N3	1:5:1094:C:C2	2.46	0.82
1:5:1382:C:O2'	24:V:127:HIS:HB2	1.80	0.82
25:W:890:TYR:OH	31:d:12:DC:O3'	1.98	0.82
27:Y:355:LEU:HD12	27:Y:372:LEU:HD22	1.62	0.82
25:W:409:ASP:HB2	27:Y:1310:LYS:HA	1.62	0.82
25:W:513:ASP:OD2	26:a:205:ILE:CD1	2.28	0.82
25:W:1095:ARG:NH1	28:Z:78:PHE:CE2	2.48	0.82
2:6:35:G:C1'	14:L:121:ILE:HG22	2.10	0.82
25:W:66:TYR:CE2	29:b:158:LYS:HA	2.12	0.82
25:W:142:VAL:HG13	32:e:124:SER:CB	2.08	0.82
25:W:313:ILE:CB	27:Y:1269:LYS:HD2	2.08	0.82
25:W:407:ARG:O	27:Y:1311:SER:CB	2.27	0.82
25:W:837:TYR:CE1	27:Y:523:ASP:OD2	2.31	0.82
27:Y:394:SER:HA	27:Y:489:ILE:HD11	1.60	0.82
27:Y:1285:ARG:HB3	31:d:17:DT:OP2	1.79	0.82
25:W:392:LEU:HD11	27:Y:1346:LEU:CD2	2.10	0.81
25:W:409:ASP:HB2	27:Y:1310:LYS:HG2	1.63	0.81
27:Y:169:LEU:HD23	30:c:25:DC:N3	1.95	0.81
27:Y:218:ARG:HH22	32:e:126:ARG:HG2	1.45	0.81
27:Y:1289:MET:HG3	31:d:15:DA:C4'	2.10	0.81
25:W:97:ARG:HD3	27:Y:1370:ILE:CD1	2.10	0.81
25:W:406:LYS:CG	27:Y:1307:LEU:HD23	2.10	0.81
27:Y:176:LYS:HE3	31:d:9:DC:C5	2.14	0.81
27:Y:995:PHE:HE1	29:b:38:LEU:CD2	1.92	0.81
25:W:409:ASP:N	27:Y:1310:LYS:CB	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:599:THR:HG22	26:a:86:GLN:NE2	1.95	0.81
25:W:611:LYS:NZ	26:a:168:GLU:OE1	2.14	0.81
26:a:296:SER:HA	26:a:326:ARG:O	1.80	0.81
2:6:17:U:OP2	24:V:102:LYS:CE	2.28	0.81
25:W:94:ILE:HG22	27:Y:1371:LEU:HG	1.62	0.81
25:W:313:ILE:CG2	27:Y:1269:LYS:NZ	2.42	0.81
25:W:890:TYR:CG	31:d:13:DA:C4'	2.59	0.81
26:a:283:ARG:NH1	29:b:81:PHE:CB	2.36	0.81
2:6:16:G:H22	2:6:49:C:H42	0.82	0.81
6:D:137:TYR:OH	6:D:203:LEU:O	1.98	0.81
27:Y:953:ALA:HA	26:a:294:SER:O	1.79	0.81
30:c:16:DG:C4'	32:e:16:SER:HB2	2.09	0.81
1:5:1468:A:H2'	23:U:26:GLY:C	2.05	0.81
27:Y:1289:MET:HE3	31:d:15:DA:C4'	2.08	0.81
29:b:139:PHE:CZ	29:b:147:ILE:CD1	2.62	0.81
25:W:893:ARG:NH2	27:Y:1288:GLU:OE1	2.14	0.81
27:Y:1000:PRO:CD	29:b:6:ASN:HD21	1.94	0.81
2:6:38:G:C2'	24:V:187:SER:HG	1.92	0.81
25:W:121:PRO:HD3	30:c:32:DA:H5''	1.63	0.81
26:a:264:PHE:HB3	26:a:290:GLN:HB2	1.63	0.81
26:a:271:LEU:O	26:a:317:LYS:HE2	1.79	0.81
1:5:1467:A:N1	23:U:45:GLY:CA	2.43	0.80
25:W:464:ILE:HG23	27:Y:1325:VAL:CG1	2.07	0.80
25:W:1057:VAL:HG13	30:c:29:DC:C5'	2.08	0.80
27:Y:170:LYS:NZ	30:c:25:DC:O5'	2.13	0.80
27:Y:1289:MET:HE3	31:d:15:DA:H5'	0.83	0.80
29:b:239:LYS:CB	29:b:293:ASP:N	2.43	0.80
23:U:55:LEU:HD12	24:V:159:ARG:HE	1.46	0.80
25:W:368:PHE:CZ	27:Y:1350:ALA:HB2	2.17	0.80
1:5:1467:A:N1	23:U:45:GLY:HA2	1.97	0.80
1:5:1469:G:N7	23:U:25:HIS:CE1	2.50	0.80
26:a:283:ARG:NH2	29:b:79:ASP:OD2	2.15	0.80
29:b:196:VAL:HG21	29:b:217:ARG:CZ	2.11	0.80
25:W:1213:ASN:HD21	28:Z:58:GLU:HG2	1.44	0.80
27:Y:412:LEU:HD13	27:Y:471:LEU:HD11	1.63	0.80
29:b:111:ILE:CD1	29:b:119:MET:HE1	2.11	0.80
1:5:1138:U:H3	1:5:1149:G:H1	1.28	0.80
25:W:408:VAL:C	27:Y:1310:LYS:HB3	2.05	0.80
27:Y:264:PHE:HZ	27:Y:342:ARG:HG2	1.47	0.80
29:b:183:LYS:HG2	29:b:281:ASN:HB2	1.64	0.80
25:W:406:LYS:CG	27:Y:1307:LEU:CD2	2.58	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1383:A:N1	23:U:25:HIS:CE1	2.50	0.80
2:6:35:G:H21	14:L:120:LYS:CB	1.87	0.80
17:O:8:ARG:HB2	17:O:28:ARG:NH1	1.97	0.80
27:Y:141:VAL:HG11	27:Y:613:LEU:HD22	1.61	0.80
29:b:143:VAL:C	29:b:145:GLN:HG2	2.06	0.80
3:A:223:GLN:HE22	3:A:256:ILE:HB	1.46	0.80
2:6:57:C:N3	24:V:49:ILE:CD1	2.44	0.79
25:W:865:ASN:OD1	27:Y:653:TYR:HE2	1.66	0.79
25:W:868:PHE:CE2	27:Y:658:PRO:HG3	2.17	0.79
25:W:923:THR:OG1	25:W:1106:ARG:NH2	2.15	0.79
1:5:528:G:C8	23:U:49:MET:HE2	2.17	0.79
32:e:55:PHE:HB3	32:e:62:LEU:HD12	1.63	0.79
7:E:107:LEU:HD13	19:Q:46:ILE:HD11	1.63	0.79
25:W:94:ILE:CG1	27:Y:1370:ILE:CD1	2.60	0.79
25:W:504:ILE:O	27:Y:1297:TYR:CZ	2.35	0.79
1:5:1074:U:N3	1:5:1093:A:N7	1.98	0.79
25:W:391:ARG:CB	27:Y:1345:GLU:CD	2.54	0.79
25:W:98:GLU:CB	27:Y:1368:VAL:O	2.31	0.79
25:W:306:PRO:HG2	27:Y:1344:LYS:HE3	0.86	0.79
25:W:865:ASN:OD1	27:Y:653:TYR:CE2	2.36	0.79
29:b:183:LYS:HG2	29:b:281:ASN:HB3	1.63	0.79
3:A:130:LEU:HD12	3:A:159:LEU:HB3	1.65	0.78
29:b:290:TRP:CD2	29:b:296:LYS:NZ	2.47	0.78
27:Y:216:ALA:O	30:c:20:DG:C2'	2.22	0.78
25:W:95:VAL:HG13	27:Y:1371:LEU:HD11	1.54	0.78
27:Y:288:ARG:HB3	27:Y:298:ARG:NH2	1.97	0.78
25:W:77:LYS:HA	29:b:156:THR:HG21	0.79	0.78
27:Y:998:ILE:O	29:b:108:LEU:HD12	1.84	0.78
29:b:182:SER:HB3	29:b:280:PHE:HE1	1.44	0.78
25:W:1235:GLN:HB2	31:d:12:DC:H5''	1.66	0.78
25:W:1057:VAL:CG1	30:c:29:DC:H5''	2.14	0.78
26:X:190:HIS:HE1	27:Y:1083:ASP:O	1.67	0.78
27:Y:258:VAL:CG1	27:Y:268:VAL:HG11	2.13	0.78
25:W:409:ASP:H	27:Y:1310:LYS:CA	1.97	0.78
30:c:19:DT:C2'	30:c:21:DC:H4'	2.13	0.78
1:5:1092:A:OP2	3:A:186:ASN:ND2	2.17	0.78
25:W:404:LEU:O	27:Y:1291:VAL:HG21	1.83	0.78
27:Y:444:ILE:HG22	27:Y:446:PHE:CD1	2.19	0.78
1:5:1088:C:O3'	3:A:161:LYS:NZ	2.17	0.77
27:Y:999:PHE:CE2	29:b:108:LEU:HD22	2.19	0.77
25:W:392:LEU:CD1	27:Y:1346:LEU:CD2	2.62	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:392:LEU:CD1	27:Y:1346:LEU:HD21	2.15	0.77
25:W:410:TYR:OH	27:Y:1324:ILE:CD1	2.32	0.77
29:b:5:SER:HB2	29:b:61:LEU:CD2	2.13	0.77
25:W:599:THR:HG23	26:a:86:GLN:HE21	1.49	0.77
27:Y:998:ILE:N	29:b:8:PHE:CE1	2.51	0.77
1:5:1469:G:C5	23:U:25:HIS:CE1	2.72	0.77
3:A:254:ILE:HG22	3:A:254:ILE:O	1.84	0.77
25:W:872:TYR:CD1	27:Y:648:VAL:HB	2.19	0.77
29:b:290:TRP:CD2	29:b:296:LYS:CD	2.68	0.77
25:W:669:LYS:HE3	25:W:670:PHE:CZ	2.19	0.77
32:e:44:VAL:HG22	32:e:97:ILE:HG22	1.66	0.77
2:6:20:G:C2	24:V:53:GLY:HA2	2.19	0.77
25:W:119:PRO:HD3	31:d:10:DG:O4'	1.84	0.77
25:W:406:LYS:HG3	27:Y:1307:LEU:HD23	1.66	0.77
27:Y:901:ASN:HD21	27:Y:1232:ARG:HH12	1.29	0.77
28:Z:5:TYR:CE2	28:Z:48:LEU:CD2	2.68	0.77
11:I:63:VAL:HG23	11:I:64:ASP:H	1.50	0.77
27:Y:169:LEU:C	30:c:25:DC:H1'	2.09	0.77
25:W:408:VAL:HG12	27:Y:1306:LEU:CA	2.15	0.77
25:W:76:ILE:HD13	29:b:157:ASN:CA	2.15	0.76
25:W:408:VAL:HG21	27:Y:1306:LEU:HD21	1.60	0.76
28:Z:5:TYR:HE2	28:Z:48:LEU:HD23	1.50	0.76
23:U:56:PRO:HB2	24:V:162:LEU:HD21	1.66	0.76
25:W:440:PRO:CG	27:Y:1324:ILE:HD13	2.15	0.76
25:W:598:GLY:CA	26:a:82:LEU:CD2	2.60	0.76
2:6:57:C:H42	24:V:49:ILE:HD12	1.50	0.76
11:I:57:ILE:HG23	15:M:41:ARG:HB2	1.66	0.76
25:W:313:ILE:HG23	27:Y:1269:LYS:HZ2	1.50	0.76
1:5:528:G:C8	23:U:49:MET:CE	2.68	0.76
1:5:1063:G:C2	1:5:1095:G:H1'	2.17	0.76
1:5:1330:A:H2'	1:5:1331:A:H8	1.50	0.76
25:W:77:LYS:CB	29:b:156:THR:HG23	2.16	0.76
29:b:111:ILE:HD13	29:b:119:MET:CE	2.15	0.76
29:b:183:LYS:HE2	29:b:281:ASN:HB3	1.67	0.76
3:A:199:VAL:HG12	3:A:213:PHE:HB2	1.68	0.76
10:H:52:GLN:HE21	10:H:82:ARG:HD2	1.50	0.76
25:W:31:TRP:HH2	27:Y:1352:SER:HB2	1.40	0.76
25:W:305:ILE:HG21	27:Y:1344:LYS:C	2.09	0.76
25:W:368:PHE:CZ	27:Y:1350:ALA:CB	2.68	0.76
25:W:392:LEU:HD13	27:Y:1346:LEU:HD21	1.66	0.76
25:W:406:LYS:O	27:Y:1286:PHE:HB3	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:5:TYR:OH	28:Z:51:ARG:HB2	1.86	0.76
25:W:309:ILE:CG2	27:Y:1341:LEU:CD1	2.58	0.76
25:W:859:LEU:HA	27:Y:1102:ILE:CD1	2.16	0.76
27:Y:374:CYS:CB	27:Y:459:VAL:CG1	2.63	0.76
1:5:1067:C:OP2	1:5:1092:A:N6	2.19	0.76
26:X:105:PRO:CB	26:a:320:GLU:HA	2.15	0.76
3:A:27:ARG:NH1	3:A:223:GLN:CD	2.44	0.76
7:E:65:ASP:OD2	7:E:66:ASN:N	2.18	0.76
25:W:1236:ASP:OD1	31:d:11:DT:H4'	1.86	0.76
26:X:293:LEU:HD11	26:X:323:LEU:HD13	1.68	0.76
24:V:91:ASP:HB3	24:V:95:TYR:HB2	1.68	0.75
27:Y:618:PRO:HA	27:Y:814:LEU:HD12	1.66	0.75
1:5:1089:C:P	3:A:162:PHE:CE1	2.80	0.75
25:W:1057:VAL:HG13	30:c:29:DC:H5''	1.67	0.75
23:U:55:LEU:HD13	24:V:159:ARG:HD2	1.68	0.75
27:Y:185:GLU:HG2	27:Y:195:LEU:HD21	1.66	0.75
32:e:47:GLU:HB2	32:e:92:LEU:HD12	1.67	0.75
25:W:599:THR:CG2	26:a:86:GLN:HE21	1.96	0.75
29:b:247:LYS:HE2	29:b:348:LEU:HD11	1.66	0.75
26:X:106:LEU:C	26:a:319:HIS:CE1	2.64	0.75
1:5:924:A:C2'	1:5:925:C:C6	2.68	0.75
1:5:1468:A:C2	23:U:27:ASP:O	2.39	0.75
25:W:31:TRP:CZ2	27:Y:1352:SER:CB	2.64	0.75
25:W:111:HIS:NE2	27:Y:1349:LEU:O	2.18	0.75
25:W:868:PHE:CE2	27:Y:658:PRO:CG	2.69	0.75
26:X:173:ILE:HG22	26:a:324:LYS:HZ1	1.50	0.75
25:W:597:PHE:C	26:a:82:LEU:CD2	2.58	0.75
25:W:835:PHE:HB2	25:W:837:TYR:CE2	2.22	0.75
27:Y:408:LEU:HD12	27:Y:427:LEU:HD11	1.68	0.75
27:Y:1002:SER:OG	29:b:108:LEU:O	2.05	0.75
27:Y:999:PHE:CE1	29:b:108:LEU:CG	2.69	0.75
26:X:276:ARG:NH1	29:b:323:GLU:OE1	2.20	0.74
27:Y:1287:GLY:HA3	31:d:16:DC:P	2.27	0.74
27:Y:46:ASP:HA	27:Y:75:ARG:HH22	1.51	0.74
27:Y:218:ARG:NH2	32:e:126:ARG:HG2	2.03	0.74
25:W:309:ILE:HG23	27:Y:1341:LEU:HD13	1.69	0.74
25:W:402:ASN:HD22	27:Y:1273:GLN:CD	1.95	0.74
27:Y:412:LEU:HD13	27:Y:471:LEU:CD1	2.17	0.74
27:Y:995:PHE:CE1	29:b:38:LEU:HD21	2.21	0.74
29:b:288:VAL:HB	29:b:300:ASN:HD22	1.52	0.74
27:Y:428:VAL:HG23	27:Y:431:GLU:OE2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:136:U:H3	1:5:157:A:N6	1.85	0.74
25:W:1212:ILE:CD1	28:Z:88:MET:HB3	2.18	0.74
25:W:119:PRO:CD	31:d:10:DG:C4'	2.52	0.74
25:W:313:ILE:CG2	27:Y:1269:LYS:CD	2.41	0.74
25:W:895:LEU:HD22	25:W:1165:ILE:HD13	1.70	0.74
27:Y:999:PHE:CG	29:b:108:LEU:O	2.09	0.74
1:5:1469:G:O4'	23:U:26:GLY:N	2.19	0.74
9:G:130:LEU:H	28:Z:42:LYS:CD	2.01	0.74
25:W:305:ILE:HB	27:Y:1344:LYS:HB3	1.68	0.74
25:W:306:PRO:CD	27:Y:1344:LYS:CE	2.64	0.74
25:W:388:LEU:CD1	27:Y:1349:LEU:N	2.43	0.74
26:X:107:GLU:CD	26:a:319:HIS:CG	2.66	0.74
27:Y:998:ILE:CD1	29:b:62:MET:CE	2.59	0.74
1:5:1471:C:C4'	24:V:128:ASP:CG	2.61	0.74
23:U:43:LEU:HD21	23:U:54:ILE:HD12	1.69	0.74
27:Y:998:ILE:HD13	29:b:62:MET:SD	2.27	0.74
29:b:176:MET:HE1	29:b:187:LEU:HD11	1.68	0.74
32:e:108:TRP:HE1	32:e:112:ARG:NH2	1.85	0.74
25:W:402:ASN:ND2	27:Y:1273:GLN:NE2	2.30	0.74
27:Y:402:ARG:HD3	27:Y:510:TYR:CD2	2.23	0.74
27:Y:901:ASN:ND2	27:Y:1232:ARG:NH1	2.31	0.74
1:5:1470:U:C1'	24:V:125:ALA:HB2	2.10	0.74
25:W:1057:VAL:CG1	30:c:29:DC:C5'	2.65	0.74
29:b:5:SER:HB2	29:b:61:LEU:HD21	1.70	0.74
29:b:45:HIS:HB3	29:b:115:LEU:HD21	1.67	0.74
29:b:290:TRP:CD1	29:b:296:LYS:HD2	2.23	0.74
1:5:1432:A:H2'	1:5:1433:G:H8	1.53	0.73
25:W:313:ILE:CG2	27:Y:1269:LYS:HZ2	2.01	0.73
25:W:338:ARG:NH2	32:e:94:GLY:O	2.21	0.73
25:W:406:LYS:CD	27:Y:1307:LEU:HA	2.14	0.73
26:X:276:ARG:CZ	29:b:323:GLU:OE1	2.36	0.73
29:b:290:TRP:CZ2	29:b:296:LYS:NZ	2.38	0.73
2:6:35:G:C1'	14:L:121:ILE:CG2	2.67	0.73
1:5:1067:C:H5'	1:5:1092:A:C8	2.22	0.73
1:5:1089:C:OP1	3:A:161:LYS:CE	2.36	0.73
1:5:1382:C:O2'	24:V:127:HIS:CB	2.37	0.73
25:W:309:ILE:HD12	27:Y:1344:LYS:HG3	0.74	0.73
29:b:131:ALA:CA	29:b:171:THR:HB	2.19	0.73
8:F:68:VAL:HG21	8:F:103:ILE:HD11	1.71	0.73
25:W:368:PHE:CE1	27:Y:1349:LEU:HA	2.22	0.73
1:5:257:U:OP2	21:S:67:ARG:NH2	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:6:20:G:H22	24:V:53:GLY:HA2	0.57	0.73
27:Y:814:LEU:CD2	27:Y:858:TYR:CE2	2.72	0.73
1:5:1046:A:N3	4:B:159:ARG:NH2	2.37	0.73
25:W:313:ILE:HA	27:Y:1269:LYS:HZ3	1.52	0.73
1:5:517:C:O4'	23:U:73:ARG:NH1	2.22	0.73
26:X:107:GLU:CG	26:a:319:HIS:CG	2.69	0.73
27:Y:1289:MET:HE3	31:d:14:DG:H2''	1.66	0.73
27:Y:613:LEU:HD23	27:Y:615:HIS:NE2	2.03	0.73
27:Y:998:ILE:HG21	29:b:108:LEU:HD21	1.68	0.73
1:5:640:C:OP1	9:G:39:LYS:NZ	2.22	0.73
27:Y:216:ALA:HB1	30:c:20:DG:H8	1.51	0.73
27:Y:998:ILE:N	29:b:8:PHE:HZ	1.69	0.73
27:Y:999:PHE:CD2	29:b:108:LEU:HD22	2.24	0.73
1:5:767:U:H1'	1:5:894:A:H2	1.52	0.72
25:W:388:LEU:HD11	27:Y:1348:GLY:C	2.01	0.72
30:c:15:DT:H3'	32:e:95:ARG:NH2	2.04	0.72
27:Y:131:THR:HG21	27:Y:600:ILE:HD12	1.70	0.72
27:Y:217:VAL:HA	30:c:20:DG:C2'	2.11	0.72
27:Y:356:ARG:NH1	32:e:113:ASN:CB	2.36	0.72
27:Y:1289:MET:HG3	31:d:15:DA:C5'	2.20	0.72
29:b:288:VAL:HG21	29:b:297:PHE:CE2	2.23	0.72
25:W:305:ILE:HG22	27:Y:1344:LYS:O	1.88	0.72
29:b:288:VAL:HG21	29:b:297:PHE:HD2	1.46	0.72
27:Y:673:LEU:HD23	27:Y:677:ALA:HB3	1.72	0.72
2:6:20:G:N2	24:V:53:GLY:HA3	1.97	0.72
27:Y:995:PHE:HE1	29:b:119:MET:SD	2.02	0.72
1:5:733:A:OP1	19:Q:88:LYS:NZ	2.22	0.72
25:W:113:TRP:CZ3	27:Y:1351:LEU:CD1	2.73	0.72
3:A:32:MET:SD	3:A:203:ASN:ND2	2.62	0.72
17:O:65:PRO:HB2	17:O:70:ARG:HH22	1.53	0.72
25:W:368:PHE:CD1	27:Y:1348:GLY:O	2.41	0.72
25:W:408:VAL:HG11	27:Y:1306:LEU:CA	2.18	0.72
29:b:135:VAL:HG21	29:b:172:THR:HG22	1.71	0.72
13:K:127:ARG:HD2	13:K:134:LYS:HA	1.70	0.72
25:W:1095:ARG:CZ	28:Z:78:PHE:CZ	2.72	0.72
27:Y:613:LEU:HD23	27:Y:615:HIS:HE2	1.54	0.72
25:W:79:ARG:HB3	29:b:160:GLY:CA	2.20	0.72
29:b:239:LYS:HD2	29:b:293:ASP:HA	1.70	0.72
1:5:1438:U:H2'	1:5:1439:G:H8	1.55	0.72
2:6:57:C:N4	24:V:49:ILE:CG2	2.49	0.72
8:F:66:GLY:HA2	8:F:69:MET:HE2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:94:ILE:HG12	27:Y:1370:ILE:CD1	2.20	0.72
26:X:173:ILE:CG2	26:a:324:LYS:HZ1	2.03	0.72
29:b:290:TRP:HE1	29:b:293:ASP:HB2	0.55	0.72
1:5:230:G:O3'	18:P:74:ARG:NH2	2.23	0.71
1:5:733:A:H2'	1:5:734:A:H8	1.52	0.71
9:G:31:MET:SD	9:G:73:ASN:ND2	2.63	0.71
25:W:406:LYS:HD2	27:Y:1307:LEU:HB3	1.71	0.71
32:e:108:TRP:NE1	32:e:112:ARG:NE	2.37	0.71
27:Y:216:ALA:HB3	30:c:20:DG:C8	2.25	0.71
27:Y:998:ILE:CG1	29:b:62:MET:CE	2.68	0.71
25:W:868:PHE:HD2	27:Y:658:PRO:HG3	0.98	0.71
25:W:771:ASP:HB3	25:W:845:ILE:HD12	1.71	0.71
26:X:106:LEU:HB2	26:a:319:HIS:CE1	2.26	0.71
29:b:242:ARG:HG3	29:b:248:SER:OG	1.90	0.71
1:5:1384:A:H2'	1:5:1385:A:H8	1.55	0.71
25:W:406:LYS:CD	27:Y:1307:LEU:O	2.38	0.71
25:W:1133:ALA:HB1	25:W:1137:ARG:HD3	1.72	0.71
25:W:890:TYR:CA	31:d:14:DG:H5'	2.20	0.71
20:R:23:ASN:ND2	20:R:43:GLU:OE2	2.24	0.71
27:Y:168:GLN:O	30:c:25:DC:C2'	2.38	0.71
27:Y:1003:VAL:HG13	29:b:116:ILE:CD1	2.21	0.71
29:b:290:TRP:CE2	29:b:296:LYS:NZ	2.59	0.71
32:e:108:TRP:CZ3	32:e:130:PRO:HB3	2.26	0.71
29:b:139:PHE:CE1	29:b:147:ILE:CG1	2.74	0.71
17:O:70:ARG:HE	17:O:79:TRP:HE1	1.37	0.70
25:W:306:PRO:HD2	27:Y:1344:LYS:CG	2.20	0.70
25:W:886:ALA:HA	31:d:14:DG:N7	2.04	0.70
27:Y:94:ILE:CG2	27:Y:135:LEU:HD12	2.21	0.70
27:Y:1003:VAL:CG2	29:b:116:ILE:HD11	2.21	0.70
1:5:358:G:N2	1:5:361:U:OP2	2.24	0.70
1:5:1058:A:N1	1:5:1099:G:O2'	2.23	0.70
1:5:1363:U:O3'	1:5:1364:C:H5'	1.91	0.70
27:Y:1126:CYS:O	27:Y:1154:LYS:HE2	1.90	0.70
25:W:837:TYR:HE1	27:Y:649:HIS:CD2	2.07	0.70
26:X:108:ARG:NH2	26:a:316:LYS:CE	2.54	0.70
1:5:550:U:H2'	1:5:551:A:H8	1.55	0.70
1:5:1013:C:H42	1:5:1014:A:N6	1.90	0.70
25:W:679:ARG:NH2	26:a:166:PHE:CE2	2.60	0.70
3:A:221:GLN:NE2	3:A:264:ALA:HA	2.06	0.70
26:X:106:LEU:CA	26:a:319:HIS:CE1	2.74	0.70
27:Y:628:ILE:HD11	27:Y:673:LEU:CD1	2.18	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:108:ARG:HH21	26:a:316:LYS:HE3	1.57	0.70
27:Y:185:GLU:HG2	27:Y:195:LEU:CD2	2.21	0.70
1:5:1402:U:H2'	1:5:1403:A:H8	1.56	0.70
25:W:79:ARG:CB	29:b:160:GLY:CA	2.69	0.70
29:b:182:SER:CB	29:b:280:PHE:HE1	2.05	0.70
1:5:1012:A:O2'	1:5:1192:C:O2'	2.09	0.70
3:A:227:LEU:HG	3:A:246:PHE:CE1	2.26	0.70
25:W:835:PHE:CE1	27:Y:644:ASP:O	2.45	0.70
26:X:173:ILE:CG2	26:a:324:LYS:HZ2	2.03	0.70
27:Y:265:LEU:HD11	27:Y:335:MET:HE3	1.73	0.70
27:Y:999:PHE:CE2	29:b:111:ILE:HD12	2.27	0.70
27:Y:1285:ARG:CB	31:d:17:DT:OP2	2.37	0.70
29:b:135:VAL:N	29:b:171:THR:OG1	2.24	0.70
1:5:1074:U:N3	1:5:1093:A:C5	2.60	0.69
26:X:105:PRO:CB	26:a:320:GLU:CA	2.70	0.69
29:b:8:PHE:O	29:b:60:GLY:HA3	1.91	0.69
23:U:55:LEU:HD13	24:V:159:ARG:CD	2.21	0.69
23:U:58:ASP:CG	24:V:159:ARG:NH2	2.50	0.69
25:W:408:VAL:CG1	27:Y:1306:LEU:CD2	2.69	0.69
25:W:864:ILE:CD1	27:Y:1200:PHE:CE2	2.74	0.69
27:Y:952:ASP:CB	26:a:295:LYS:HD3	2.21	0.69
29:b:183:LYS:O	29:b:279:GLU:O	2.10	0.69
29:b:291:ASN:H	29:b:296:LYS:CG	1.79	0.69
1:5:102:G:N2	1:5:309:A:O2'	2.26	0.69
27:Y:374:CYS:CB	27:Y:459:VAL:HG11	2.22	0.69
30:c:16:DG:H4'	32:e:16:SER:CB	2.17	0.69
24:V:91:ASP:CA	24:V:95:TYR:HB2	1.93	0.69
1:5:21:U:OP2	6:D:185:ARG:NH1	2.26	0.69
1:5:807:C:O2'	1:5:894:A:N6	2.26	0.69
27:Y:999:PHE:CB	29:b:108:LEU:C	2.65	0.69
27:Y:1000:PRO:CD	29:b:6:ASN:ND2	2.54	0.69
27:Y:561:ALA:HB1	27:Y:585:LEU:HD11	1.74	0.69
27:Y:956:ARG:CG	26:a:296:SER:HA	2.21	0.69
27:Y:956:ARG:HA	26:a:296:SER:OG	1.93	0.69
27:Y:998:ILE:CD1	29:b:62:MET:SD	2.81	0.69
1:5:902:A:H2'	1:5:903:A:H8	1.57	0.69
9:G:127:VAL:HB	28:Z:42:LYS:H	1.58	0.69
10:H:93:ASN:HB3	10:H:96:LEU:HD23	1.75	0.69
29:b:247:LYS:HE2	29:b:348:LEU:CD1	2.22	0.69
1:5:403:A:H5''	5:C:111:ARG:HG3	1.74	0.69
1:5:1075:G:OP1	1:5:1077:U:C6	2.45	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:119:PRO:N	31:d:10:DG:H4'	2.07	0.69
27:Y:390:ARG:CD	27:Y:496:ASN:O	2.41	0.69
32:e:57:LEU:HD12	32:e:80:ASP:HA	1.75	0.69
17:O:6:LEU:HG	17:O:19:ILE:CD1	2.21	0.69
27:Y:998:ILE:O	29:b:108:LEU:HB2	1.92	0.69
30:c:17:DT:H4'	30:c:18:DG:OP1	1.92	0.69
7:E:92:ARG:NH2	19:Q:51:ILE:O	2.26	0.68
25:W:621:SER:HB2	26:a:82:LEU:CD1	2.23	0.68
25:W:736:VAL:CG2	27:Y:1105:ILE:CG2	2.63	0.68
27:Y:998:ILE:CG2	29:b:62:MET:HE1	1.84	0.68
27:Y:998:ILE:HA	29:b:8:PHE:CE2	2.24	0.68
25:W:392:LEU:HD11	27:Y:1346:LEU:HD23	1.74	0.68
29:b:131:ALA:HA	29:b:171:THR:HB	1.74	0.68
1:5:1467:A:H8	23:U:48:ARG:HH22	1.39	0.68
25:W:409:ASP:CB	27:Y:1310:LYS:HA	2.23	0.68
29:b:196:VAL:CG1	29:b:217:ARG:NH2	2.52	0.68
25:W:828:ARG:NH1	25:W:870:SER:HB2	2.09	0.68
27:Y:374:CYS:HB2	27:Y:459:VAL:CG1	2.24	0.68
28:Z:64:TYR:HB3	28:Z:88:MET:HE1	1.74	0.68
26:a:283:ARG:HD3	29:b:49:VAL:CG2	2.23	0.68
19:Q:53:LEU:HD21	19:Q:92:ARG:HG2	1.76	0.68
26:a:73:MET:HE3	26:a:143:PHE:CD2	2.28	0.68
29:b:248:SER:OG	29:b:283:GLU:OE1	2.10	0.68
1:5:1469:G:O5'	23:U:26:GLY:HA2	1.93	0.68
20:R:40:ILE:HD11	20:R:66:MET:HE1	1.74	0.68
25:W:408:VAL:CG1	27:Y:1306:LEU:C	2.65	0.68
25:W:884:LYS:HG2	25:W:1029:MET:HG3	1.75	0.68
27:Y:170:LYS:NZ	30:c:25:DC:C5'	2.57	0.68
32:e:27:LYS:HE3	32:e:42:VAL:O	1.92	0.68
25:W:598:GLY:HA2	26:a:82:LEU:HD22	1.69	0.68
25:W:598:GLY:HA2	26:a:82:LEU:HD13	1.75	0.68
1:5:189:C:H2'	1:5:190:A:H8	1.59	0.68
1:5:1090:G:H5''	3:A:111:ARG:NH2	2.09	0.68
25:W:79:ARG:HH22	29:b:159:ASP:CG	1.98	0.68
27:Y:176:LYS:HD2	31:d:8:DA:H2'	1.75	0.68
1:5:1417:U:H2'	1:5:1418:G:H8	1.59	0.68
12:J:109:ILE:HD11	22:T:28:LEU:HD22	1.75	0.68
25:W:876:LYS:CG	25:W:1030:ARG:HH11	1.77	0.68
25:W:878:MET:HE1	27:Y:780:LEU:HD22	1.76	0.68
29:b:239:LYS:HD3	29:b:294:LYS:N	2.08	0.67
2:6:16:G:N1	2:6:49:C:N3	2.38	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:388:LEU:HB2	27:Y:1349:LEU:CG	2.25	0.67
25:W:859:LEU:CA	27:Y:1102:ILE:HD11	2.25	0.67
9:G:126:LYS:HD3	28:Z:43:GLN:N	2.06	0.67
27:Y:269:ASP:OD2	27:Y:342:ARG:NE	2.21	0.67
28:Z:13:LYS:HE2	28:Z:17:GLU:OE1	1.95	0.67
1:5:1010:A:C6	20:R:34:TRP:HZ3	2.13	0.67
25:W:118:LEU:C	31:d:10:DG:H4'	2.18	0.67
25:W:406:LYS:HZ3	27:Y:1336:PRO:CG	2.07	0.67
25:W:868:PHE:CE2	27:Y:658:PRO:CB	2.77	0.67
25:W:408:VAL:CG1	27:Y:1306:LEU:O	2.30	0.67
27:Y:995:PHE:HE1	29:b:38:LEU:HD21	1.56	0.67
27:Y:1002:SER:N	29:b:109:LYS:HA	2.10	0.67
29:b:165:TYR:HE2	29:b:181:LEU:HD11	1.59	0.67
25:W:884:LYS:CG	25:W:1029:MET:HG3	2.25	0.67
27:Y:945:ARG:HH22	26:a:298:ALA:CB	2.07	0.67
27:Y:998:ILE:O	29:b:108:LEU:CG	2.42	0.67
9:G:130:LEU:N	28:Z:42:LYS:CE	2.58	0.67
25:W:77:LYS:HB3	29:b:156:THR:HG23	1.76	0.67
27:Y:1001:GLU:CA	29:b:109:LYS:HG2	2.13	0.67
1:5:698:U:O4	24:V:92:PHE:CE1	2.48	0.67
25:W:1069:GLU:HB2	25:W:1095:ARG:NH1	2.10	0.67
27:Y:638:ARG:HH21	27:Y:666:ASN:ND2	1.92	0.67
27:Y:999:PHE:HB3	29:b:108:LEU:C	2.17	0.67
29:b:175:TYR:HB2	29:b:207:TRP:HB3	1.76	0.67
1:5:1089:C:OP1	3:A:161:LYS:HE2	1.95	0.67
25:W:77:LYS:CB	29:b:156:THR:CG2	2.73	0.67
25:W:128:LEU:HD23	25:W:248:ILE:HD11	1.75	0.67
25:W:389:THR:N	27:Y:1349:LEU:HD11	2.09	0.67
1:5:488:U:H1'	5:C:147:LYS:HE2	1.77	0.66
1:5:1128:G:OP1	11:I:76:HIS:ND1	2.26	0.66
25:W:94:ILE:HG23	27:Y:1371:LEU:HG	1.74	0.66
25:W:406:LYS:CG	27:Y:1307:LEU:HD22	2.24	0.66
27:Y:214:ARG:NH2	30:c:22:DA:C6	2.63	0.66
1:5:1110:C:H2'	1:5:1111:G:H8	1.59	0.66
1:5:1150:G:H2'	1:5:1151:A:H8	1.60	0.66
25:W:75:LYS:CD	29:b:153:ASP:OD2	2.44	0.66
27:Y:376:ARG:NH2	30:c:20:DG:C8	2.55	0.66
29:b:289:ILE:C	29:b:300:ASN:HD21	2.01	0.66
1:5:169:G:N2	1:5:219:A:O2'	2.29	0.66
1:5:331:C:H2'	1:5:332:A:H8	1.60	0.66
1:5:1075:G:OP1	1:5:1077:U:N3	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1322:U:H4'	10:H:124:ARG:HG3	1.76	0.66
5:C:94:GLU:HG2	5:C:182:PRO:HG3	1.78	0.66
29:b:9:THR:C	29:b:11:PRO:HD2	2.19	0.66
29:b:196:VAL:HG11	29:b:217:ARG:HH22	1.56	0.66
1:5:179:U:H3	1:5:187:A:H2	1.43	0.66
1:5:1363:U:C3'	1:5:1364:C:P	2.83	0.66
3:A:27:ARG:HH12	3:A:223:GLN:NE2	1.94	0.66
25:W:77:LYS:HE3	25:W:78:TYR:CZ	2.31	0.66
25:W:100:MET:HE2	27:Y:1347:GLN:CD	2.20	0.66
27:Y:1305:GLU:OE1	27:Y:1310:LYS:HE3	1.96	0.66
25:W:94:ILE:CD1	27:Y:1370:ILE:HD13	2.22	0.66
25:W:1234:PHE:CD1	25:W:1235:GLN:HG2	2.31	0.66
26:X:174:ASN:C	26:a:324:LYS:HZ3	1.99	0.66
29:b:165:TYR:CE2	29:b:181:LEU:HD11	2.30	0.66
29:b:215:ASP:C	29:b:217:ARG:HE	2.04	0.66
13:K:56:LYS:HG3	13:K:58:PRO:HD2	1.76	0.66
26:X:300:ILE:HD12	26:X:325:LEU:HD13	1.77	0.66
27:Y:219:GLU:HG3	30:c:21:DC:H42	1.58	0.66
26:a:268:ILE:CD1	26:a:286:ILE:HG22	2.22	0.66
29:b:139:PHE:CE1	29:b:147:ILE:CD1	2.79	0.66
1:5:369:A:O2'	1:5:448:A:N7	2.29	0.66
25:W:1235:GLN:HB2	31:d:12:DC:C5'	2.25	0.66
25:W:368:PHE:CE1	27:Y:1349:LEU:CA	2.79	0.66
27:Y:1000:PRO:HD2	29:b:6:ASN:ND2	2.10	0.66
29:b:139:PHE:CE2	29:b:147:ILE:CD1	2.73	0.66
3:A:95:LEU:HD11	3:A:226:CYS:HA	1.78	0.66
10:H:50:MET:HE3	10:H:81:ILE:HD12	1.76	0.66
27:Y:956:ARG:O	26:a:296:SER:CB	2.44	0.66
27:Y:999:PHE:CZ	29:b:42:TYR:OH	2.30	0.66
1:5:803:C:H2'	1:5:804:A:H8	1.61	0.65
8:F:110:ARG:NH1	8:F:122:GLU:OE1	2.28	0.65
27:Y:374:CYS:HB3	27:Y:459:VAL:CG1	2.26	0.65
27:Y:412:LEU:CD1	27:Y:471:LEU:CD1	2.74	0.65
25:W:687:VAL:HG11	25:W:802:ARG:NH2	2.08	0.65
23:U:58:ASP:CG	24:V:159:ARG:HH22	2.02	0.65
25:W:368:PHE:CB	27:Y:1349:LEU:CD2	2.70	0.65
25:W:402:ASN:HB3	27:Y:1338:SER:CB	2.26	0.65
25:W:408:VAL:HG11	27:Y:1306:LEU:CG	2.25	0.65
25:W:409:ASP:CA	27:Y:1310:LYS:HB3	2.23	0.65
27:Y:952:ASP:CB	26:a:295:LYS:CD	2.74	0.65
1:5:9:A:N6	5:C:198:GLU:O	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1332:U:OP1	15:M:35:SER:OG	2.15	0.65
26:X:105:PRO:HG3	26:a:320:GLU:HA	0.75	0.65
27:Y:998:ILE:HG23	29:b:62:MET:CE	1.82	0.65
29:b:183:LYS:O	29:b:280:PHE:HA	1.96	0.65
13:K:52:THR:OG1	23:U:71:LEU:HD12	1.95	0.65
16:N:36:LEU:HB3	16:N:53:LEU:HD13	1.79	0.65
1:5:733:A:OP1	19:Q:92:ARG:NH1	2.30	0.65
1:5:1066:U:O5'	1:5:1092:A:N6	2.10	0.65
3:A:247:ALA:C	3:A:249:LYS:H	2.04	0.65
25:W:890:TYR:OH	31:d:12:DC:H2''	1.96	0.65
1:5:255:G:OP2	21:S:71:ARG:NH1	2.30	0.65
1:5:1086:U:OP1	1:5:1099:G:N2	2.30	0.65
25:W:862:LEU:O	27:Y:772:GLU:CB	2.43	0.65
19:Q:73:ARG:NE	19:Q:78:ASN:O	2.30	0.65
25:W:368:PHE:CG	27:Y:1349:LEU:HA	2.29	0.65
25:W:406:LYS:CB	27:Y:1307:LEU:HD23	2.27	0.65
26:X:107:GLU:CD	26:a:319:HIS:CB	2.69	0.65
3:A:227:LEU:O	3:A:231:LEU:HD12	1.97	0.65
12:J:29:ASP:OD1	12:J:30:PRO:HD2	1.96	0.65
25:W:890:TYR:CE1	25:W:894:LYS:CE	2.76	0.65
1:5:44:C:H4'	17:O:11:ARG:HD2	1.79	0.64
1:5:76:G:N2	1:5:79:A:OP2	2.30	0.64
3:A:246:PHE:CZ	3:A:254:ILE:HG23	2.31	0.64
9:G:115:ILE:HB	9:G:138:LEU:HB2	1.79	0.64
9:G:131:LYS:H	28:Z:42:LYS:HE2	1.61	0.64
25:W:398:LEU:HD23	27:Y:1342:LEU:HB2	0.65	0.64
25:W:406:LYS:HD3	27:Y:1307:LEU:O	1.95	0.64
25:W:1212:ILE:HD11	28:Z:88:MET:HB3	1.78	0.64
26:X:1:MET:N	26:a:99:GLY:O	2.20	0.64
27:Y:390:ARG:HD3	27:Y:496:ASN:O	1.95	0.64
17:O:8:ARG:HB2	17:O:28:ARG:HH12	1.61	0.64
27:Y:444:ILE:CG2	27:Y:446:PHE:CD1	2.80	0.64
14:L:34:LEU:HA	14:L:39:ILE:HD12	1.79	0.64
25:W:820:ASN:ND2	27:Y:1098:SER:HA	2.11	0.64
32:e:10:TRP:HB3	32:e:133:LEU:HD12	1.79	0.64
2:6:20:G:O6	24:V:51:GLU:O	2.16	0.64
25:W:501:ARG:O	27:Y:1297:TYR:CE2	2.51	0.64
25:W:897:ASP:OD2	25:W:1234:PHE:CD2	2.51	0.64
29:b:8:PHE:N	29:b:60:GLY:O	2.30	0.64
1:5:1089:C:P	3:A:162:PHE:CZ	2.91	0.64
5:C:151:ILE:HG22	5:C:153:ILE:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:356:ARG:CZ	32:e:109:ARG:C	2.62	0.64
27:Y:907:ASP:OD2	27:Y:1099:ARG:NH2	2.27	0.64
3:A:221:GLN:HE22	3:A:264:ALA:HA	1.60	0.64
25:W:402:ASN:HB3	27:Y:1338:SER:HB3	1.78	0.64
25:W:504:ILE:HB	27:Y:1297:TYR:HE2	1.63	0.64
29:b:183:LYS:HB3	29:b:280:PHE:C	2.22	0.64
1:5:710:G:H2'	1:5:711:G:C8	2.32	0.64
1:5:1068:G:N2	1:5:1071:A:OP2	2.23	0.64
11:I:48:LEU:HB2	11:I:77:LYS:HB3	1.80	0.64
25:W:94:ILE:HG23	27:Y:1371:LEU:N	2.13	0.64
25:W:398:LEU:HD22	27:Y:1342:LEU:HA	1.78	0.64
25:W:1266:ILE:HD11	27:Y:1298:GLY:HA2	1.79	0.64
27:Y:307:LEU:HD12	27:Y:334:LEU:HD13	1.78	0.64
27:Y:341:GLU:OE1	27:Y:368:SER:OG	2.15	0.64
1:5:1089:C:OP2	3:A:162:PHE:CZ	2.51	0.64
28:Z:53:TYR:CE1	28:Z:57:LEU:HD12	2.33	0.64
9:G:130:LEU:HB3	28:Z:42:LYS:CG	2.23	0.64
26:X:276:ARG:HD2	29:b:323:GLU:OE1	1.98	0.64
2:6:38:G:O2'	24:V:187:SER:CB	2.37	0.64
17:O:6:LEU:HG	17:O:19:ILE:HD13	1.79	0.64
25:W:906:HIS:HB2	25:W:987:ARG:HE	1.63	0.64
1:5:943:C:H2'	1:5:944:A:H8	1.63	0.63
11:I:86:ASN:O	11:I:89:ALA:N	2.26	0.63
25:W:598:GLY:HA3	26:a:82:LEU:HB3	1.80	0.63
1:5:1467:A:N1	23:U:45:GLY:HA3	2.12	0.63
25:W:859:LEU:HA	27:Y:1102:ILE:HD12	1.80	0.63
9:G:125:ASP:OD1	9:G:126:LYS:N	2.32	0.63
26:X:269:GLU:HG3	26:X:278:PHE:CE2	2.33	0.63
1:5:359:A:N6	13:K:40:SER:OG	2.32	0.63
1:5:1089:C:P	3:A:161:LYS:NZ	2.72	0.63
4:B:159:ARG:HD3	4:B:196:TYR:HB3	1.81	0.63
25:W:742:TYR:HE1	25:W:745:LYS:HB3	1.64	0.63
25:W:837:TYR:CZ	27:Y:649:HIS:HD2	1.91	0.63
1:5:259:A:OP1	21:S:67:ARG:NH1	2.32	0.63
27:Y:363:GLU:HG2	27:Y:379:ARG:NH1	2.13	0.63
27:Y:952:ASP:HB2	26:a:295:LYS:CE	2.27	0.63
1:5:206:G:N2	1:5:209:A:OP2	2.32	0.63
2:6:39:A:H4'	24:V:147:LYS:NZ	2.13	0.63
25:W:113:TRP:CE3	27:Y:1351:LEU:HD11	2.34	0.63
27:Y:988:VAL:HG12	27:Y:992:GLU:OE2	1.99	0.63
27:Y:1149:LEU:HD11	27:Y:1181:LEU:HD23	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:737:PHE:HB2	27:Y:1223:HIS:HB3	1.79	0.63
27:Y:1002:SER:H	29:b:109:LYS:HA	1.62	0.63
32:e:108:TRP:HZ3	32:e:130:PRO:HB3	1.64	0.63
1:5:1467:A:H61	23:U:45:GLY:H	1.47	0.63
25:W:19:LYS:HE3	25:W:1248:THR:HG22	1.80	0.63
25:W:1132:VAL:O	28:Z:73:ARG:NH1	2.28	0.63
27:Y:342:ARG:HH11	27:Y:345:LYS:HD3	1.63	0.63
27:Y:376:ARG:CZ	30:c:20:DG:N7	2.61	0.63
27:Y:661:THR:O	27:Y:780:LEU:HD11	1.99	0.63
27:Y:999:PHE:CZ	29:b:42:TYR:CE2	2.86	0.63
1:5:542:G:OP1	5:C:58:GLN:NE2	2.32	0.62
1:5:1497:U:OP1	12:J:121:ARG:NH2	2.32	0.62
6:D:67:GLU:HB2	6:D:172:LEU:HD11	1.81	0.62
6:D:70:ILE:HG22	6:D:92:VAL:HG12	1.81	0.62
25:W:406:LYS:HB2	27:Y:1307:LEU:HD23	1.79	0.62
27:Y:168:GLN:O	30:c:25:DC:C1'	2.47	0.62
27:Y:999:PHE:CD2	29:b:108:LEU:CD2	2.81	0.62
18:P:21:THR:HA	18:P:48:HIS:HA	1.81	0.62
27:Y:205:GLU:O	27:Y:252:ARG:CZ	2.47	0.62
27:Y:614:ASP:H	27:Y:624:ASN:HD22	1.47	0.62
27:Y:952:ASP:HB2	26:a:295:LYS:HD3	1.81	0.62
1:5:133:G:H2'	1:5:134:G:C8	2.35	0.62
1:5:449:A:H5''	17:O:44:LYS:HE3	1.81	0.62
5:C:168:GLU:OE1	25:W:30:ASN:OD1	2.17	0.62
15:M:23:ARG:NH2	15:M:28:GLY:O	2.31	0.62
25:W:406:LYS:CE	27:Y:1307:LEU:HB3	2.28	0.62
26:X:268:ILE:CD1	26:X:286:ILE:HG22	2.24	0.62
26:a:283:ARG:NH1	29:b:79:ASP:OD1	2.32	0.62
1:5:250:G:OP1	18:P:70:SER:OG	2.17	0.62
1:5:460:A:N1	1:5:467:G:O6	2.32	0.62
1:5:1225:A:H4'	10:H:71:GLY:HA2	1.79	0.62
1:5:1471:C:C4'	24:V:128:ASP:OD2	2.42	0.62
7:E:49:ILE:HG23	7:E:50:LYS:H	1.64	0.62
15:M:3:LYS:HD2	15:M:28:GLY:HA3	1.81	0.62
26:a:293:LEU:HD11	26:a:323:LEU:HD13	1.81	0.62
1:5:834:G:H2'	1:5:835:G:C8	2.34	0.62
15:M:26:ARG:HH11	15:M:43:CYS:HB3	1.62	0.62
25:W:408:VAL:CG1	27:Y:1306:LEU:HA	2.27	0.62
25:W:890:TYR:CB	31:d:14:DG:C5'	2.66	0.62
29:b:183:LYS:CD	29:b:280:PHE:O	2.43	0.62
4:B:76:PHE:CD1	29:b:257:PRO:HG2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:859:LEU:HA	27:Y:1102:ILE:HD11	1.82	0.62
26:X:113:THR:HG22	26:X:154:ASN:OD1	1.99	0.62
27:Y:227:THR:HG21	27:Y:254:LEU:HG	1.82	0.62
1:5:619:A:O2'	5:C:73:ARG:NE	2.26	0.62
1:5:1383:A:H2	23:U:25:HIS:ND1	1.82	0.62
20:R:34:TRP:HD1	20:R:52:HIS:HB2	1.65	0.62
25:W:100:MET:HE1	27:Y:1347:GLN:CB	2.28	0.62
25:W:349:PRO:CG	32:e:137:ASP:CG	2.69	0.62
25:W:406:LYS:HZ3	27:Y:1336:PRO:HG2	1.65	0.62
25:W:1235:GLN:CB	31:d:12:DC:H5''	2.29	0.62
25:W:1260:VAL:HG21	27:Y:1295:GLU:OE1	1.99	0.62
1:5:80:U:H2'	1:5:81:A:H8	1.63	0.62
1:5:1214:A:H2'	1:5:1272:C:H41	1.65	0.62
4:B:21:ARG:NH2	4:B:59:GLU:OE1	2.33	0.62
27:Y:90:LYS:NZ	27:Y:1034:GLU:HB3	2.15	0.62
29:b:143:VAL:C	29:b:145:GLN:CG	2.43	0.62
1:5:376:G:O2'	1:5:378:A:N6	2.30	0.62
1:5:896:G:H2'	1:5:897:A:H8	1.65	0.62
1:5:1154:A:H4'	10:H:107:THR:HA	1.82	0.62
1:5:1225:A:H2'	1:5:1226:A:C8	2.35	0.62
5:C:14:LEU:O	5:C:59:ARG:NH2	2.33	0.62
8:F:145:GLU:HA	8:F:148:LYS:HB2	1.81	0.62
16:N:23:GLN:HG3	16:N:78:LEU:HD22	1.82	0.62
25:W:94:ILE:CG2	27:Y:1371:LEU:N	2.63	0.62
25:W:313:ILE:HG21	27:Y:1269:LYS:HD2	1.77	0.62
25:W:858:PHE:CD2	27:Y:1100:MET:HB3	2.34	0.62
25:W:1207:MET:HB2	28:Z:68:ARG:HH21	1.65	0.62
27:Y:264:PHE:CZ	27:Y:342:ARG:HG2	2.34	0.62
27:Y:998:ILE:C	29:b:108:LEU:HB3	2.25	0.62
32:e:31:LYS:HA	32:e:36:ASP:OD1	2.00	0.62
1:5:945:U:H2'	1:5:946:G:H8	1.65	0.62
1:5:1276:U:H3	14:L:14:ARG:HH11	1.46	0.62
17:O:39:LEU:HD22	17:O:72:LEU:HD11	1.82	0.62
25:W:1069:GLU:OE2	25:W:1095:ARG:NH1	2.26	0.62
29:b:291:ASN:N	29:b:296:LYS:HB3	2.08	0.62
1:5:271:G:O3'	18:P:18:ASN:ND2	2.32	0.61
1:5:319:U:H3	1:5:323:A:H62	1.48	0.61
25:W:737:PHE:CD2	27:Y:1223:HIS:C	2.77	0.61
1:5:1448:A:H2'	1:5:1449:G:C8	2.35	0.61
8:F:115:MET:HA	8:F:118:LYS:HG2	1.81	0.61
25:W:338:ARG:NH2	32:e:93:LEU:O	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:409:ASP:HB2	27:Y:1310:LYS:CA	2.29	0.61
25:W:880:ASP:OD2	25:W:1030:ARG:HD2	2.00	0.61
1:5:671:G:H2'	1:5:672:A:H8	1.63	0.61
1:5:1063:G:H21	1:5:1095:G:H1'	1.49	0.61
1:5:1363:U:O3'	1:5:1364:C:C5'	2.49	0.61
18:P:20:LYS:O	18:P:49:ASN:N	2.32	0.61
24:V:91:ASP:OD1	24:V:92:PHE:O	2.17	0.61
25:W:388:LEU:HB3	27:Y:1349:LEU:HG	1.82	0.61
27:Y:100:LEU:HD13	27:Y:591:ILE:CD1	2.30	0.61
29:b:5:SER:HB2	29:b:61:LEU:HD23	1.82	0.61
29:b:220:GLU:HB2	29:b:240:MET:HE1	1.81	0.61
25:W:406:LYS:NZ	27:Y:1336:PRO:CG	2.63	0.61
1:5:440:U:H3	1:5:489:U:H3	1.48	0.61
1:5:460:A:H2'	1:5:461:G:H8	1.65	0.61
8:F:112:GLU:HB2	8:F:117:GLU:HG3	1.81	0.61
25:W:388:LEU:HD22	27:Y:1345:GLU:O	2.01	0.61
25:W:737:PHE:HZ	27:Y:1212:MET:SD	2.23	0.61
10:H:90:LEU:HD23	10:H:97:LYS:HD3	1.83	0.61
25:W:15:ILE:HG23	27:Y:1356:ILE:O	2.01	0.61
1:5:293:G:N2	1:5:296:A:OP2	2.32	0.61
1:5:821:U:H2'	1:5:822:A:H8	1.64	0.61
2:6:35:G:N2	14:L:120:LYS:HA	2.07	0.61
27:Y:956:ARG:C	26:a:296:SER:CB	2.74	0.61
27:Y:1095:GLY:O	27:Y:1099:ARG:HD2	2.00	0.61
29:b:239:LYS:NZ	29:b:294:LYS:CD	2.63	0.61
32:e:65:SER:OG	32:e:67:LYS:HG3	2.01	0.61
1:5:941:A:H2'	1:5:942:G:H8	1.64	0.61
11:I:46:LEU:HB3	11:I:79:LEU:HB3	1.82	0.61
25:W:368:PHE:CE1	27:Y:1349:LEU:C	2.78	0.61
25:W:737:PHE:HD2	27:Y:1223:HIS:O	1.84	0.61
26:X:107:GLU:OE2	26:a:319:HIS:CB	2.49	0.61
27:Y:998:ILE:C	29:b:108:LEU:CD1	2.52	0.61
27:Y:998:ILE:CG1	29:b:62:MET:HE1	2.30	0.61
27:Y:1285:ARG:HB2	31:d:17:DT:P	2.37	0.61
1:5:57:U:H2'	1:5:58:G:H8	1.66	0.61
1:5:1115:G:N2	1:5:1116:U:O4	2.33	0.61
4:B:192:ALA:HB3	4:B:199:ILE:HB	1.83	0.61
25:W:75:LYS:CE	29:b:153:ASP:OD2	2.48	0.61
25:W:94:ILE:HD11	27:Y:1370:ILE:CD1	2.27	0.61
1:5:1330:A:H2'	1:5:1331:A:C8	2.32	0.60
7:E:152:PRO:HA	9:G:56:ASN:HD21	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:392:LEU:HD23	27:Y:1342:LEU:HD13	1.71	0.60
25:W:402:ASN:ND2	27:Y:1273:GLN:HE22	1.94	0.60
25:W:835:PHE:CE2	27:Y:647:ASP:HB3	2.35	0.60
25:W:867:TYR:OH	27:Y:779:ALA:HB3	2.01	0.60
27:Y:65:ARG:HB3	27:Y:562:ASP:OD1	2.01	0.60
29:b:196:VAL:HG21	29:b:217:ARG:NE	2.16	0.60
32:e:149:SER:HB2	32:e:156:VAL:HG23	1.82	0.60
1:5:541:C:OP1	5:C:10:ARG:NH1	2.34	0.60
7:E:4:ASN:HB2	7:E:88:ILE:HB	1.81	0.60
21:S:42:ASP:OD2	21:S:43:ASN:N	2.34	0.60
25:W:94:ILE:CG2	27:Y:1371:LEU:HD23	2.29	0.60
26:X:107:GLU:CD	26:a:319:HIS:HB2	2.25	0.60
26:a:304:ARG:O	29:b:81:PHE:CZ	2.54	0.60
1:5:670:G:H2'	1:5:671:G:C8	2.36	0.60
1:5:916:U:O2	6:D:79:THR:OG1	2.20	0.60
9:G:130:LEU:H	28:Z:42:LYS:CE	2.14	0.60
25:W:406:LYS:HD2	27:Y:1307:LEU:C	2.26	0.60
25:W:409:ASP:HB2	27:Y:1310:LYS:CG	2.30	0.60
25:W:464:ILE:CG2	27:Y:1325:VAL:HG11	2.14	0.60
27:Y:863:LEU:CD1	27:Y:878:ASP:OD2	2.49	0.60
3:A:111:ARG:HD3	3:A:112:TRP:N	2.14	0.60
26:X:269:GLU:HG3	26:X:278:PHE:HE2	1.64	0.60
27:Y:1135:LEU:HD23	27:Y:1146:LEU:HD22	1.83	0.60
1:5:403:A:H2'	1:5:404:A:H8	1.67	0.60
27:Y:30:GLN:HG3	27:Y:676:PHE:CE1	2.36	0.60
27:Y:998:ILE:C	29:b:6:ASN:HD22	2.09	0.60
14:L:34:LEU:HD21	14:L:41:PRO:HB3	1.84	0.60
1:5:733:A:H2'	1:5:734:A:C8	2.36	0.60
1:5:823:C:O2	9:G:24:ASN:ND2	2.35	0.60
1:5:953:A:C2	20:R:55:LYS:HB2	2.37	0.60
1:5:1501:G:H2'	1:5:1502:G:H8	1.67	0.60
2:6:38:G:N2	24:V:191:MET:HE2	2.13	0.60
9:G:49:VAL:HG13	9:G:50:LYS:HD3	1.83	0.60
29:b:182:SER:HB3	29:b:280:PHE:CD1	2.36	0.60
1:5:407:A:H61	1:5:427:A:H62	1.49	0.60
25:W:338:ARG:NH2	32:e:94:GLY:C	2.60	0.60
25:W:837:TYR:CZ	27:Y:649:HIS:NE2	2.53	0.60
27:Y:952:ASP:HB3	26:a:295:LYS:HD3	1.82	0.60
27:Y:997:ALA:HB1	29:b:8:PHE:HD1	1.66	0.60
1:5:711:G:H2'	1:5:712:A:H8	1.67	0.60
1:5:922:G:H1	1:5:1365:U:H3	1.47	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:933:A:H4'	8:F:94:ARG:HH11	1.66	0.60
3:A:227:LEU:HG	3:A:246:PHE:CZ	2.37	0.60
8:F:93:ASP:OD1	8:F:94:ARG:N	2.35	0.60
1:5:453:C:H2'	1:5:454:U:C6	2.36	0.59
2:6:57:C:C4	24:V:49:ILE:HG21	2.36	0.59
3:A:246:PHE:CE2	3:A:254:ILE:HA	2.36	0.59
20:R:27:LYS:O	20:R:29:ARG:NH1	2.35	0.59
25:W:100:MET:CE	27:Y:1347:GLN:CD	2.75	0.59
25:W:858:PHE:O	27:Y:1102:ILE:HD11	2.02	0.59
25:W:890:TYR:HE2	31:d:13:DA:OP1	1.84	0.59
25:W:1236:ASP:OD1	31:d:11:DT:C4'	2.50	0.59
27:Y:796:TYR:HA	27:Y:883:ASN:HD22	1.66	0.59
1:5:1166:A:OP2	4:B:3:GLN:NE2	2.34	0.59
1:5:1468:A:H2	23:U:27:ASP:O	1.85	0.59
25:W:669:LYS:HE3	25:W:670:PHE:CE2	2.37	0.59
27:Y:271:GLU:OE2	27:Y:342:ARG:NH1	2.35	0.59
26:a:304:ARG:NH1	29:b:48:TYR:CE2	2.67	0.59
1:5:619:A:HO2'	5:C:73:ARG:HE	1.47	0.59
1:5:711:G:H2'	1:5:712:A:C8	2.36	0.59
1:5:1064:U:C4	1:5:1093:A:N1	2.70	0.59
1:5:1467:A:O2'	23:U:48:ARG:CZ	2.42	0.59
4:B:133:LEU:HD13	4:B:160:LEU:HD22	1.84	0.59
8:F:73:GLU:OE1	8:F:94:ARG:NH2	2.35	0.59
25:W:94:ILE:CG2	27:Y:1371:LEU:CG	2.70	0.59
25:W:501:ARG:O	27:Y:1297:TYR:CZ	2.56	0.59
25:W:809:MET:SD	27:Y:1094:LEU:CD2	2.87	0.59
26:a:304:ARG:NH1	29:b:48:TYR:CE1	2.70	0.59
29:b:219:LEU:HD23	29:b:240:MET:SD	2.42	0.59
1:5:212:G:O2'	1:5:465:A:N6	2.35	0.59
1:5:400:G:OP1	5:C:114:ARG:NH2	2.32	0.59
27:Y:288:ARG:HB3	27:Y:298:ARG:HH22	1.66	0.59
27:Y:539:ILE:HG22	27:Y:543:LEU:HD12	1.85	0.59
12:J:28:SER:HA	12:J:34:VAL:HA	1.82	0.59
25:W:542:LEU:HD13	27:Y:1330:PHE:CZ	2.38	0.59
25:W:835:PHE:CE2	27:Y:647:ASP:CB	2.85	0.59
25:W:1235:GLN:OE1	31:d:12:DC:C4'	2.51	0.59
27:Y:169:LEU:HD11	27:Y:187:LEU:CD1	2.32	0.59
25:W:406:LYS:NZ	27:Y:1336:PRO:HG2	2.17	0.59
25:W:408:VAL:CG1	27:Y:1306:LEU:HD23	2.32	0.59
25:W:862:LEU:H	27:Y:772:GLU:C	2.02	0.59
29:b:136:MET:O	29:b:140:ILE:HB	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:682:G:O2'	1:5:683:G:O4'	2.17	0.59
9:G:130:LEU:HD22	28:Z:45:GLU:HB2	1.85	0.59
27:Y:998:ILE:HG21	29:b:108:LEU:CD2	2.19	0.59
1:5:22:G:H2'	1:5:23:G:H8	1.67	0.59
13:K:84:GLY:O	13:K:112:ARG:NH1	2.35	0.59
25:W:406:LYS:CD	27:Y:1307:LEU:HB3	2.32	0.59
25:W:770:ASP:OD2	25:W:847:LYS:NZ	2.36	0.59
30:c:16:DG:C5'	32:e:16:SER:HB2	2.32	0.59
1:5:251:G:OP1	18:P:73:LYS:NZ	2.35	0.59
13:K:94:LEU:HB3	13:K:114:THR:HG21	1.85	0.59
25:W:504:ILE:O	27:Y:1297:TYR:CE2	2.55	0.59
27:Y:131:THR:HG21	27:Y:600:ILE:CD1	2.32	0.59
27:Y:995:PHE:CE1	29:b:38:LEU:CD2	2.78	0.59
1:5:857:U:OP1	6:D:143:ARG:NH1	2.36	0.59
1:5:1472:G:H1'	1:5:1493:A:H2	1.67	0.59
3:A:32:MET:HE3	3:A:33:VAL:HG22	1.83	0.59
7:E:35:LEU:HB3	7:E:62:PHE:HB3	1.84	0.59
13:K:63:ARG:HG3	13:K:103:LEU:HD11	1.85	0.59
25:W:1216:PHE:CE1	25:W:1224:LYS:NZ	2.70	0.59
26:X:49:CYS:HG	26:a:34:PHE:HE2	1.50	0.59
27:Y:71:LYS:HE3	27:Y:101:GLU:OE2	2.02	0.59
27:Y:863:LEU:CD1	27:Y:878:ASP:CG	2.76	0.59
27:Y:1001:GLU:CB	29:b:109:LYS:HB3	2.31	0.59
26:a:35:VAL:HG21	26:a:207:ASP:HB3	1.85	0.59
1:5:1193:U:H2'	1:5:1194:A:C8	2.38	0.58
3:A:254:ILE:O	3:A:254:ILE:CG2	2.50	0.58
10:H:52:GLN:HG3	10:H:53:PRO:HD3	1.85	0.58
10:H:106:THR:O	10:H:107:THR:OG1	2.18	0.58
25:W:737:PHE:CD2	27:Y:1223:HIS:O	2.56	0.58
27:Y:100:LEU:HD13	27:Y:591:ILE:HD11	1.85	0.58
27:Y:953:ALA:O	26:a:326:ARG:NE	2.24	0.58
26:a:141:TYR:OH	26:a:144:SER:HB2	2.03	0.58
1:5:698:U:O2'	24:V:93:GLY:C	2.45	0.58
1:5:698:U:O2'	24:V:93:GLY:O	2.21	0.58
3:A:229:MET:HE2	3:A:229:MET:HA	1.85	0.58
25:W:391:ARG:HB3	27:Y:1345:GLU:CD	2.22	0.58
25:W:890:TYR:N	31:d:14:DG:C4'	2.66	0.58
26:X:105:PRO:HB3	26:a:320:GLU:CA	2.34	0.58
27:Y:89:SER:HA	27:Y:146:GLY:HA3	1.85	0.58
4:B:171:TYR:HB3	4:B:173:GLU:OE2	2.03	0.58
25:W:100:MET:CE	27:Y:1347:GLN:HB3	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:835:PHE:CZ	27:Y:644:ASP:O	2.57	0.58
27:Y:171:LEU:HD13	27:Y:212:LEU:CD2	2.33	0.58
27:Y:659:ILE:O	27:Y:780:LEU:CD1	2.51	0.58
1:5:1000:A:O2'	1:5:1029:C:O2'	2.22	0.58
25:W:94:ILE:CG2	27:Y:1370:ILE:HG22	2.26	0.58
25:W:309:ILE:CD1	27:Y:1344:LYS:HG2	2.28	0.58
30:c:25:DC:H3'	30:c:26:DT:C5'	2.33	0.58
4:B:176:MET:SD	4:B:206:ASN:HB2	2.42	0.58
27:Y:585:LEU:CD2	27:Y:590:LEU:HD21	2.34	0.58
25:W:100:MET:SD	25:W:306:PRO:HD3	2.43	0.58
29:b:239:LYS:CD	29:b:294:LYS:H	2.16	0.58
32:e:108:TRP:NE1	32:e:112:ARG:NH2	2.49	0.58
1:5:712:A:H2'	1:5:713:A:C8	2.38	0.58
2:6:29:C:H2'	2:6:30:G:H8	1.69	0.58
4:B:150:ASN:HB2	4:B:206:ASN:HB3	1.86	0.58
25:W:368:PHE:HB3	27:Y:1349:LEU:CD2	2.33	0.58
25:W:606:ALA:HB2	26:a:163:PHE:CZ	2.38	0.58
25:W:889:GLY:C	31:d:14:DG:H4'	2.29	0.58
27:Y:182:TYR:CD1	27:Y:514:ILE:HG22	2.39	0.58
16:N:68:LYS:HG2	16:N:75:TYR:CZ	2.39	0.58
25:W:1235:GLN:OE1	31:d:12:DC:C5'	2.52	0.58
27:Y:636:ILE:HD13	27:Y:645:ILE:HG21	1.85	0.58
26:a:175:SER:OG	26:a:178:ILE:HD12	2.02	0.58
1:5:1467:A:N3	23:U:48:ARG:HD2	2.18	0.58
11:I:14:ILE:HD11	11:I:104:LEU:HD13	1.85	0.58
11:I:43:LYS:HD2	11:I:81:ILE:HD11	1.84	0.58
25:W:95:VAL:HG12	27:Y:1369:SER:OG	2.04	0.58
25:W:313:ILE:CD1	27:Y:1269:LYS:HD2	2.34	0.58
26:X:296:SER:HA	26:X:326:ARG:O	2.04	0.58
1:5:94:A:N6	1:5:322:G:N7	2.52	0.58
1:5:951:U:O2	1:5:1200:G:C2	2.57	0.58
25:W:429:ILE:HD11	25:W:491:VAL:HG21	1.85	0.58
25:W:488:ASP:C	25:W:551:ARG:HH21	2.12	0.58
27:Y:68:ILE:HD12	27:Y:554:LEU:HD21	1.85	0.58
27:Y:356:ARG:HH11	32:e:113:ASN:HB2	0.71	0.58
27:Y:999:PHE:CG	29:b:108:LEU:CD2	2.87	0.58
29:b:183:LYS:CG	29:b:281:ASN:HB3	2.33	0.58
1:5:197:A:O2'	21:S:56:ARG:NH1	2.36	0.57
1:5:409:G:H22	1:5:426:U:P	2.27	0.57
1:5:1031:A:H2'	1:5:1032:G:C8	2.39	0.57
6:D:162:ALA:HB3	6:D:167:ARG:HG3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:26:ARG:HH11	15:M:43:CYS:CB	2.17	0.57
25:W:408:VAL:HG11	27:Y:1306:LEU:HD22	1.87	0.57
25:W:884:LYS:NZ	25:W:1028:THR:HA	2.19	0.57
26:X:34:PHE:HE2	26:a:49:CYS:HG	1.51	0.57
26:X:105:PRO:CG	26:a:320:GLU:CA	2.48	0.57
26:X:107:GLU:H	26:a:319:HIS:CG	2.22	0.57
27:Y:956:ARG:O	26:a:296:SER:HB2	2.04	0.57
1:5:698:U:C6	24:V:96:THR:OG1	2.52	0.57
1:5:1064:U:O4	1:5:1093:A:N1	2.37	0.57
25:W:142:VAL:CG1	32:e:124:SER:HB3	2.25	0.57
25:W:142:VAL:CG1	32:e:124:SER:CB	2.82	0.57
25:W:309:ILE:HD13	27:Y:1344:LYS:CB	2.34	0.57
25:W:859:LEU:CA	27:Y:1102:ILE:CD1	2.82	0.57
1:5:42:G:H2'	1:5:43:G:H8	1.70	0.57
1:5:412:G:H2'	1:5:413:G:H8	1.69	0.57
1:5:1432:A:H5''	21:S:26:THR:HG23	1.86	0.57
1:5:1469:G:H5'	23:U:26:GLY:CA	2.32	0.57
6:D:208:VAL:HA	6:D:211:LEU:HG	1.86	0.57
26:X:107:GLU:OE1	26:a:315:ILE:HG22	2.04	0.57
27:Y:829:ASN:O	27:Y:848:LYS:NZ	2.37	0.57
27:Y:851:ARG:NH1	27:Y:855:ASN:OD1	2.38	0.57
29:b:135:VAL:HG22	29:b:169:LEU:O	2.04	0.57
17:O:34:ALA:HB3	17:O:58:TRP:HE1	1.68	0.57
1:5:213:U:H2'	1:5:214:U:C6	2.40	0.57
17:O:50:ILE:HD11	17:O:78:LEU:HD21	1.85	0.57
25:W:118:LEU:O	31:d:10:DG:H4'	2.04	0.57
27:Y:44:PHE:HA	27:Y:48:ASP:HB2	1.85	0.57
27:Y:640:ASP:OD1	30:c:26:DT:H5'	2.05	0.57
1:5:1130:G:H2'	1:5:1131:A:H8	1.70	0.57
1:5:1162:G:H5'	10:H:117:LYS:HZ2	1.69	0.57
10:H:35:ARG:NH1	10:H:39:GLU:OE1	2.34	0.57
25:W:897:ASP:OD2	25:W:1234:PHE:HD2	1.87	0.57
27:Y:450:ILE:HD11	27:Y:505:ILE:HD12	1.86	0.57
1:5:1065:G:H2'	1:5:1092:A:C2	2.40	0.57
1:5:1241:G:N2	1:5:1244:A:OP2	2.28	0.57
1:5:1467:A:N6	23:U:45:GLY:N	2.53	0.57
22:T:42:LEU:O	22:T:46:ARG:HG3	2.04	0.57
25:W:501:ARG:CZ	25:W:563:LEU:HD21	2.35	0.57
25:W:598:GLY:CA	26:a:82:LEU:HB3	2.34	0.57
27:Y:381:ARG:NH2	27:Y:551:GLU:OE2	2.38	0.57
27:Y:945:ARG:HH12	26:a:298:ALA:HB1	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:956:ARG:CG	26:a:296:SER:CA	2.50	0.57
1:5:376:G:HO2'	1:5:378:A:H62	1.51	0.57
2:6:38:G:H1'	24:V:188:SER:HB3	1.87	0.57
4:B:45:PHE:O	4:B:49:ARG:NH2	2.38	0.57
25:W:781:TRP:CD2	25:W:853:PRO:HG3	2.40	0.57
25:W:885:THR:HG22	31:d:14:DG:C2	2.40	0.57
26:X:46:LEU:HD23	26:X:50:ILE:HD11	1.87	0.57
26:X:240:VAL:HG21	26:a:233:ILE:HD12	1.86	0.57
1:5:68:C:H2'	1:5:69:G:C8	2.40	0.57
3:A:227:LEU:HG	3:A:246:PHE:HE1	1.70	0.57
25:W:392:LEU:CD1	27:Y:1346:LEU:HD23	2.33	0.57
25:W:554:LEU:HD21	27:Y:1297:TYR:HB3	1.86	0.57
25:W:584:THR:HG21	25:W:691:PHE:CD2	2.39	0.57
27:Y:177:ARG:NH1	27:Y:221:ALA:H	2.03	0.57
27:Y:794:LYS:O	27:Y:891:GLN:NE2	2.33	0.57
27:Y:999:PHE:N	29:b:108:LEU:HB3	2.18	0.57
27:Y:1122:LEU:HD21	27:Y:1149:LEU:CD2	2.35	0.57
1:5:1113:U:H2'	1:5:1114:A:C8	2.40	0.56
2:6:57:C:N4	24:V:49:ILE:HD12	2.00	0.56
4:B:29:GLN:HE22	4:B:33:TRP:NE1	2.02	0.56
10:H:43:ASN:C	10:H:44:LYS:HD2	2.30	0.56
20:R:34:TRP:CD1	20:R:52:HIS:HB2	2.40	0.56
25:W:94:ILE:CG1	27:Y:1370:ILE:HD13	2.35	0.56
25:W:409:ASP:CG	27:Y:1310:LYS:HA	2.29	0.56
25:W:602:GLU:CD	26:a:85:LYS:HD3	2.29	0.56
27:Y:692:ILE:HD11	27:Y:753:ILE:HB	1.87	0.56
29:b:49:VAL:HG21	29:b:81:PHE:HB3	1.87	0.56
27:Y:419:LEU:HD21	27:Y:422:LYS:HG3	1.88	0.56
27:Y:997:ALA:CB	29:b:8:PHE:CD1	2.81	0.56
26:a:305:ASN:HB3	29:b:80:ASP:HB3	1.87	0.56
1:5:111:A:OP1	1:5:603:U:O2'	2.19	0.56
1:5:448:A:N6	1:5:478:G:OP2	2.30	0.56
1:5:483:U:H2'	1:5:484:A:C8	2.40	0.56
1:5:1071:A:H5''	6:D:76:ILE:HD12	1.86	0.56
5:C:88:ASN:OD1	5:C:91:ARG:NH1	2.29	0.56
19:Q:40:TYR:CE2	19:Q:42:ARG:HB3	2.41	0.56
25:W:313:ILE:CD1	27:Y:1269:LYS:CB	2.80	0.56
27:Y:245:LYS:NZ	27:Y:472:ASP:OD2	2.39	0.56
27:Y:571:ASN:HB3	27:Y:577:ILE:HD11	1.87	0.56
27:Y:998:ILE:HG21	29:b:62:MET:HE3	1.69	0.56
27:Y:998:ILE:CB	29:b:62:MET:CE	2.81	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:176:G:H2'	1:5:177:G:C8	2.40	0.56
1:5:409:G:H21	1:5:425:G:H1'	1.70	0.56
1:5:1144:A:H2'	1:5:1145:A:C8	2.39	0.56
13:K:56:LYS:NZ	13:K:101:LYS:O	2.36	0.56
25:W:398:LEU:CD2	27:Y:1342:LEU:N	2.67	0.56
25:W:398:LEU:HD23	27:Y:1342:LEU:CD1	2.35	0.56
25:W:443:ILE:HG21	27:Y:1325:VAL:HG13	1.87	0.56
25:W:599:THR:HG23	26:a:86:GLN:NE2	2.08	0.56
27:Y:170:LYS:HZ2	30:c:25:DC:H5'	1.69	0.56
10:H:81:ILE:O	10:H:85:ILE:HG12	2.05	0.56
25:W:586:GLU:HG2	25:W:639:THR:HG21	1.88	0.56
1:5:510:U:H2'	1:5:511:A:H8	1.71	0.56
1:5:658:G:H5''	7:E:97:LEU:HD13	1.87	0.56
2:6:7:U:H2'	2:6:8:G:C8	2.40	0.56
10:H:12:ARG:HD3	10:H:79:GLY:HA3	1.88	0.56
25:W:858:PHE:CE2	27:Y:1100:MET:HB3	2.39	0.56
27:Y:999:PHE:CZ	29:b:42:TYR:HE2	2.23	0.56
29:b:176:MET:HE1	29:b:187:LEU:CD1	2.35	0.56
1:5:941:A:H2'	1:5:942:G:C8	2.40	0.56
1:5:1110:C:OP2	10:H:11:ARG:NH1	2.38	0.56
13:K:68:VAL:HG11	13:K:95:LEU:HD11	1.88	0.56
14:L:80:LEU:HD11	14:L:87:ARG:HE	1.71	0.56
20:R:66:MET:SD	20:R:74:PHE:HZ	2.29	0.56
25:W:94:ILE:CG1	27:Y:1370:ILE:HD12	2.35	0.56
25:W:388:LEU:HD22	27:Y:1345:GLU:C	2.31	0.56
28:Z:9:ILE:HG13	28:Z:55:ASP:HB3	1.87	0.56
1:5:1261:A:H2'	1:5:1262:A:C8	2.41	0.56
1:5:1290:G:N1	1:5:1293:A:OP2	2.37	0.56
1:5:1294:U:H2'	1:5:1295:U:C6	2.41	0.56
3:A:203:ASN:OD1	3:A:204:THR:N	2.33	0.56
20:R:66:MET:C	20:R:66:MET:HE2	2.31	0.56
25:W:835:PHE:HE2	27:Y:648:VAL:O	1.89	0.56
26:a:113:THR:HG22	26:a:154:ASN:OD1	2.05	0.56
1:5:376:G:N2	1:5:379:A:OP2	2.39	0.56
9:G:53:TYR:HB3	9:G:84:ILE:HD11	1.88	0.56
14:L:90:ARG:HG3	14:L:97:VAL:HG22	1.88	0.56
25:W:406:LYS:CD	27:Y:1307:LEU:CA	2.64	0.56
27:Y:390:ARG:HD2	27:Y:496:ASN:O	2.05	0.56
25:W:77:LYS:HB3	29:b:154:ILE:O	2.06	0.56
27:Y:115:LYS:HG2	27:Y:126:ASP:OD1	2.06	0.56
27:Y:211:ILE:HD13	27:Y:229:LEU:HD22	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:715:ALA:HB2	27:Y:750:ILE:HD13	1.88	0.56
26:a:268:ILE:HD12	26:a:286:ILE:O	2.05	0.56
29:b:43:LYS:HA	29:b:48:TYR:O	2.06	0.56
32:e:17:VAL:HG12	32:e:18:LYS:H	1.71	0.56
1:5:658:G:O2'	1:5:834:G:OP1	2.24	0.55
1:5:697:G:C6	24:V:100:LYS:HD3	2.40	0.55
7:E:49:ILE:HG21	7:E:83:LEU:HD23	1.86	0.55
8:F:125:ASP:HB3	8:F:130:THR:OG1	2.05	0.55
9:G:98:TYR:C	9:G:99:ARG:HD2	2.31	0.55
25:W:464:ILE:CD1	27:Y:1325:VAL:HG12	2.34	0.55
27:Y:175:ARG:CZ	30:c:26:DT:C6	2.83	0.55
27:Y:638:ARG:HH21	27:Y:666:ASN:HD21	1.53	0.55
27:Y:814:LEU:HD21	27:Y:858:TYR:CE2	2.41	0.55
27:Y:972:GLU:CD	27:Y:1015:HIS:HD1	2.13	0.55
27:Y:1001:GLU:H	29:b:109:LYS:CG	2.03	0.55
32:e:38:GLU:OE2	32:e:104:SER:OG	2.23	0.55
1:5:80:U:H2'	1:5:81:A:C8	2.41	0.55
1:5:421:G:H2'	1:5:422:A:H8	1.71	0.55
27:Y:356:ARG:HD2	32:e:113:ASN:HD22	1.70	0.55
1:5:152:U:H2'	1:5:153:A:C8	2.41	0.55
1:5:265:U:H2'	1:5:266:A:C8	2.41	0.55
1:5:333:U:H2'	1:5:334:A:H8	1.71	0.55
1:5:1288:C:H2'	1:5:1289:U:C6	2.41	0.55
3:A:119:ASN:OD1	3:A:122:THR:OG1	2.25	0.55
4:B:184:ASP:HB2	4:B:210:ILE:HB	1.88	0.55
9:G:130:LEU:H	28:Z:42:LYS:HE2	1.66	0.55
25:W:587:ARG:NH1	25:W:803:ASP:OD2	2.39	0.55
25:W:835:PHE:HE1	27:Y:644:ASP:O	1.88	0.55
27:Y:403:ILE:HD12	27:Y:427:LEU:HD13	1.88	0.55
29:b:45:HIS:CB	29:b:115:LEU:HD21	2.37	0.55
3:A:40:LYS:HD3	3:A:208:PRO:HD2	1.88	0.55
5:C:58:GLN:OE1	5:C:61:GLN:NE2	2.39	0.55
25:W:864:ILE:HD11	27:Y:761:VAL:HG13	1.88	0.55
25:W:890:TYR:CA	31:d:14:DG:C5'	2.84	0.55
27:Y:1340:LYS:NZ	27:Y:1370:ILE:CG1	2.70	0.55
1:5:359:A:C6	13:K:41:PRO:HD2	2.42	0.55
1:5:1468:A:H2'	23:U:27:ASP:N	2.20	0.55
16:N:75:TYR:O	16:N:79:VAL:HG13	2.06	0.55
25:W:1213:ASN:ND2	28:Z:58:GLU:HG2	2.19	0.55
27:Y:398:ARG:NH2	27:Y:494:ASP:OD2	2.40	0.55
1:5:176:G:O6	1:5:190:A:N6	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1471:C:OP1	24:V:121:LYS:HD2	2.06	0.55
25:W:368:PHE:CE2	27:Y:1350:ALA:HB3	2.42	0.55
25:W:409:ASP:C	27:Y:1310:LYS:HD3	2.20	0.55
25:W:864:ILE:HD13	27:Y:1200:PHE:HE2	1.62	0.55
26:X:107:GLU:CG	26:a:319:HIS:HD2	1.80	0.55
27:Y:829:ASN:O	27:Y:848:LYS:HE2	2.03	0.55
27:Y:907:ASP:CG	27:Y:1099:ARG:HH22	2.15	0.55
27:Y:952:ASP:HB2	26:a:295:LYS:CD	2.34	0.55
29:b:239:LYS:HZ1	29:b:294:LYS:CD	2.19	0.55
1:5:35:C:H2'	1:5:36:G:H8	1.72	0.55
1:5:473:A:H2'	1:5:474:G:C8	2.40	0.55
7:E:39:TYR:HD2	7:E:41:GLY:H	1.55	0.55
25:W:95:VAL:HA	27:Y:1369:SER:OG	2.06	0.55
27:Y:307:LEU:CD1	27:Y:334:LEU:HD13	2.36	0.55
29:b:239:LYS:CD	29:b:294:LYS:N	2.70	0.55
1:5:253:G:O6	1:5:266:A:N6	2.40	0.55
1:5:499:U:H2'	1:5:500:G:C8	2.42	0.55
25:W:607:TYR:CE2	25:W:614:LEU:HG	2.41	0.55
25:W:1095:ARG:NH1	28:Z:78:PHE:CZ	2.74	0.55
26:X:15:GLN:NE2	27:Y:1160:ARG:HG2	2.21	0.55
26:X:163:PHE:HB2	27:Y:917:LYS:HE2	1.87	0.55
27:Y:953:ALA:CA	26:a:294:SER:O	2.53	0.55
27:Y:1136:SER:HB2	27:Y:1143:GLN:OE1	2.07	0.55
30:c:17:DT:C5'	32:e:118:THR:CG2	2.76	0.55
1:5:354:U:H2'	1:5:355:A:C8	2.42	0.55
1:5:400:G:O5'	5:C:118:ASN:ND2	2.40	0.55
1:5:927:C:H41	8:F:2:ARG:CZ	2.20	0.55
1:5:951:U:C2	1:5:1200:G:N1	2.75	0.55
1:5:1010:A:H2'	1:5:1011:A:C8	2.42	0.55
25:W:1095:ARG:NH2	28:Z:78:PHE:CZ	2.75	0.55
26:X:107:GLU:N	26:a:319:HIS:ND1	2.40	0.55
1:5:945:U:H2'	1:5:946:G:C8	2.42	0.55
9:G:130:LEU:H	28:Z:42:LYS:CG	2.20	0.55
25:W:306:PRO:HD3	27:Y:1344:LYS:CD	2.14	0.55
25:W:775:LYS:HE3	25:W:845:ILE:CD1	2.32	0.55
29:b:8:PHE:O	29:b:60:GLY:CA	2.54	0.55
25:W:837:TYR:CE1	27:Y:649:HIS:HD2	2.07	0.54
27:Y:148:GLU:OE2	27:Y:615:HIS:CE1	2.60	0.54
27:Y:628:ILE:CD1	27:Y:673:LEU:HD12	2.22	0.54
27:Y:943:ILE:HD13	27:Y:1043:ILE:CD1	2.37	0.54
1:5:616:C:H5'	1:5:617:U:H5''	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:662:G:O6	1:5:721:G:O6	2.25	0.54
1:5:1094:C:H5''	3:A:113:LEU:O	2.07	0.54
9:G:106:LEU:HD13	9:G:109:ASN:HA	1.89	0.54
23:U:55:LEU:CD1	24:V:159:ARG:CD	2.84	0.54
26:X:233:ILE:HD12	26:a:240:VAL:HG21	1.88	0.54
27:Y:709:GLU:HG3	27:Y:714:ILE:CD1	2.37	0.54
27:Y:952:ASP:HB3	26:a:295:LYS:CD	2.37	0.54
27:Y:1289:MET:SD	31:d:15:DA:C1'	2.96	0.54
10:H:10:GLY:HA2	10:H:83:LEU:HD22	1.89	0.54
25:W:313:ILE:HD13	27:Y:1269:LYS:HB2	1.87	0.54
25:W:530:ASP:HB3	27:Y:906:GLU:OE2	2.07	0.54
25:W:599:THR:CG2	26:a:86:GLN:CD	2.81	0.54
27:Y:1235:LEU:HD21	26:a:44:ARG:HH12	1.72	0.54
29:b:290:TRP:CE2	29:b:296:LYS:CD	2.89	0.54
5:C:49:GLY:O	5:C:53:GLN:HG3	2.08	0.54
7:E:110:GLN:NE2	7:E:114:LYS:HE2	2.23	0.54
9:G:90:ILE:HG22	9:G:97:ILE:HG21	1.90	0.54
25:W:77:LYS:CD	29:b:153:ASP:OD1	2.55	0.54
25:W:1236:ASP:OD1	31:d:11:DT:O3'	2.24	0.54
26:X:268:ILE:HD12	26:X:286:ILE:O	2.07	0.54
27:Y:169:LEU:HD23	30:c:25:DC:C2	2.41	0.54
27:Y:825:LYS:HE3	27:Y:835:GLU:OE2	2.08	0.54
27:Y:999:PHE:HZ	29:b:42:TYR:HE2	1.53	0.54
1:5:18:U:H2'	1:5:19:C:C6	2.42	0.54
1:5:308:C:H2'	1:5:309:A:C8	2.43	0.54
1:5:442:G:H2'	1:5:443:G:C8	2.43	0.54
10:H:54:LEU:HB3	10:H:59:LEU:HA	1.89	0.54
11:I:97:LYS:HD2	11:I:97:LYS:O	2.07	0.54
18:P:31:LYS:HE2	18:P:36:HIS:HA	1.89	0.54
25:W:100:MET:CB	27:Y:1366:ASN:ND2	2.58	0.54
26:X:271:LEU:HD22	26:X:321:LEU:HD11	1.89	0.54
27:Y:998:ILE:C	29:b:108:LEU:CB	2.81	0.54
29:b:139:PHE:CZ	29:b:147:ILE:CG1	2.90	0.54
1:5:316:G:H2'	1:5:317:A:C8	2.43	0.54
1:5:1089:C:P	3:A:161:LYS:HZ3	2.30	0.54
1:5:1432:A:H2'	1:5:1433:G:C8	2.40	0.54
9:G:123:MET:SD	9:G:127:VAL:HG13	2.48	0.54
26:X:35:VAL:HG21	26:X:207:ASP:CB	2.38	0.54
26:X:283:ARG:CZ	29:b:313:LEU:O	2.56	0.54
29:b:157:ASN:OD1	29:b:163:LYS:HB2	2.07	0.54
1:5:927:C:H41	8:F:2:ARG:NH1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:992:U:H2'	1:5:993:C:H6	1.72	0.54
1:5:1102:A:N1	4:B:180:THR:HG22	2.23	0.54
2:6:5:C:O2	2:6:70:G:N2	2.37	0.54
13:K:48:THR:OG1	13:K:67:LYS:O	2.23	0.54
25:W:554:LEU:CD2	27:Y:1297:TYR:CG	2.90	0.54
27:Y:1160:ARG:HD2	27:Y:1176:ASP:OD1	2.08	0.54
1:5:821:U:O2	9:G:11:HIS:NE2	2.41	0.54
1:5:1345:G:H2'	1:5:1346:G:H8	1.71	0.54
13:K:27:ASN:OD1	13:K:36:THR:OG1	2.24	0.54
25:W:434:ILE:HD12	25:W:511:ILE:HG12	1.88	0.54
26:X:223:ASP:OD1	26:a:243:ASN:ND2	2.41	0.54
32:e:140:ASN:OD1	32:e:150:VAL:HG21	2.07	0.54
1:5:1138:U:H2'	1:5:1139:A:H8	1.72	0.54
1:5:1161:G:O3'	10:H:117:LYS:NZ	2.39	0.54
6:D:165:ALA:HB1	6:D:192:ILE:HD11	1.90	0.54
8:F:20:THR:O	8:F:23:THR:OG1	2.20	0.54
23:U:43:LEU:HD21	23:U:54:ILE:CD1	2.37	0.54
25:W:79:ARG:NH2	29:b:159:ASP:CG	2.59	0.54
1:5:57:U:H2'	1:5:58:G:C8	2.43	0.53
1:5:386:U:H2'	1:5:387:G:H8	1.74	0.53
1:5:1064:U:OP2	6:D:117:LYS:NZ	2.41	0.53
2:6:44:U:H2'	2:6:45:G:C8	2.43	0.53
11:I:51:LYS:HG2	11:I:75:ARG:HH11	1.73	0.53
12:J:13:ILE:HG13	12:J:76:LYS:HB2	1.90	0.53
13:K:126:GLN:O	13:K:128:SER:N	2.41	0.53
25:W:349:PRO:HG3	32:e:137:ASP:CB	2.38	0.53
25:W:913:LYS:NZ	28:Z:55:ASP:OD1	2.30	0.53
27:Y:406:LYS:HE3	27:Y:518:ILE:HG12	1.90	0.53
27:Y:1000:PRO:HD3	29:b:6:ASN:ND2	2.23	0.53
29:b:135:VAL:CB	29:b:171:THR:OG1	2.55	0.53
6:D:75:ARG:HD3	6:D:86:MET:HE3	1.89	0.53
25:W:488:ASP:C	25:W:551:ARG:NH2	2.65	0.53
25:W:488:ASP:CB	25:W:551:ARG:NH2	2.70	0.53
25:W:1233:SER:OG	25:W:1257:LYS:HE2	2.09	0.53
1:5:509:C:H1'	5:C:38:HIS:HE1	1.72	0.53
1:5:1316:C:H2'	1:5:1317:A:C8	2.43	0.53
1:5:1467:A:C2	23:U:48:ARG:HD2	2.44	0.53
10:H:30:ILE:HG13	10:H:37:PRO:HG3	1.88	0.53
11:I:17:GLU:HB3	11:I:77:LYS:HG3	1.90	0.53
25:W:21:SER:HB3	25:W:1248:THR:HG23	1.89	0.53
25:W:335:ARG:NH1	25:W:359:LEU:HD13	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:738:ASP:CG	27:Y:1225:LYS:NZ	2.66	0.53
26:X:34:PHE:HE2	26:a:49:CYS:SG	2.30	0.53
29:b:183:LYS:HB3	29:b:280:PHE:CA	2.38	0.53
1:5:70:A:H2'	1:5:71:A:H8	1.74	0.53
1:5:152:U:H2'	1:5:153:A:H8	1.74	0.53
1:5:403:A:H2'	1:5:404:A:C8	2.42	0.53
1:5:892:G:N2	1:5:895:A:OP2	2.41	0.53
1:5:1497:U:H2'	1:5:1498:G:H8	1.74	0.53
10:H:83:LEU:HA	10:H:86:VAL:HG22	1.90	0.53
25:W:162:PHE:CE1	25:W:163:LYS:HE3	2.43	0.53
26:X:107:GLU:OE2	26:a:319:HIS:HB2	2.07	0.53
27:Y:479:ASN:HB3	27:Y:481:ASP:OD1	2.08	0.53
1:5:8:G:N7	6:D:152:LYS:NZ	2.38	0.53
1:5:1089:C:OP1	3:A:161:LYS:NZ	2.42	0.53
1:5:1406:U:O4	1:5:1407:A:N6	2.41	0.53
3:A:156:ILE:O	3:A:160:GLU:HG2	2.08	0.53
3:A:247:ALA:C	3:A:249:LYS:N	2.65	0.53
25:W:192:ILE:O	25:W:195:ARG:HG3	2.07	0.53
25:W:884:LYS:HE2	25:W:1029:MET:HG3	1.91	0.53
26:X:141:TYR:OH	26:X:144:SER:HB2	2.08	0.53
1:5:22:G:H2'	1:5:23:G:C8	2.44	0.53
1:5:1199:U:O2'	1:5:1296:C:OP1	2.26	0.53
1:5:1490:G:H2'	1:5:1491:A:C8	2.43	0.53
8:F:129:ASN:HA	8:F:134:ILE:HG13	1.91	0.53
25:W:95:VAL:CG1	27:Y:1371:LEU:HB2	2.39	0.53
25:W:1253:LEU:HD13	25:W:1262:ILE:HD13	1.91	0.53
27:Y:30:GLN:HG3	27:Y:676:PHE:HE1	1.73	0.53
27:Y:394:SER:HA	27:Y:489:ILE:CD1	2.34	0.53
26:a:300:ILE:HD12	26:a:325:LEU:HD13	1.90	0.53
1:5:333:U:H2'	1:5:334:A:C8	2.44	0.53
1:5:442:G:H2'	1:5:443:G:H8	1.74	0.53
1:5:561:A:O2'	1:5:564:G:O3'	2.27	0.53
1:5:1094:C:O2'	3:A:122:THR:OG1	2.26	0.53
1:5:1467:A:H61	23:U:45:GLY:N	2.05	0.53
6:D:101:ILE:HD11	6:D:173:ALA:HA	1.89	0.53
20:R:50:ALA:HB1	20:R:57:PHE:HB3	1.89	0.53
20:R:63:THR:C	20:R:65:ASP:H	2.15	0.53
21:S:12:ARG:HH21	21:S:12:ARG:HG3	1.73	0.53
25:W:392:LEU:CD2	27:Y:1342:LEU:HD11	1.85	0.53
25:W:586:GLU:HG2	25:W:639:THR:CG2	2.38	0.53
25:W:737:PHE:CZ	27:Y:1212:MET:SD	3.02	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:374:CYS:HB2	27:Y:459:VAL:HG13	1.91	0.53
29:b:239:LYS:NZ	29:b:294:LYS:CB	2.60	0.53
29:b:288:VAL:CG2	29:b:297:PHE:CD2	2.65	0.53
1:5:1329:G:H2'	1:5:1330:A:H8	1.74	0.53
25:W:313:ILE:CG2	27:Y:1269:LYS:CE	2.58	0.53
25:W:401:HIS:ND1	27:Y:1285:ARG:NH2	2.57	0.53
27:Y:76:THR:HG22	27:Y:125:VAL:HG21	1.91	0.53
29:b:43:LYS:HG3	29:b:49:VAL:HA	1.91	0.53
29:b:49:VAL:CG2	29:b:81:PHE:HB3	2.38	0.53
29:b:183:LYS:CE	29:b:281:ASN:HB3	2.37	0.53
1:5:951:U:N3	1:5:1200:G:N1	2.57	0.53
4:B:46:VAL:HA	4:B:49:ARG:HH22	1.74	0.53
9:G:22:ILE:HG12	9:G:74:LEU:HD21	1.90	0.53
19:Q:42:ARG:HH22	19:Q:59:ALA:HB1	1.73	0.53
25:W:409:ASP:N	27:Y:1310:LYS:O	2.42	0.53
27:Y:216:ALA:CB	30:c:20:DG:N7	2.72	0.53
27:Y:1001:GLU:HB2	29:b:109:LYS:CB	1.70	0.53
27:Y:1081:LEU:HD21	27:Y:1243:LEU:HD21	1.91	0.53
29:b:40:GLN:OE1	29:b:122:LEU:HD21	2.08	0.53
29:b:196:VAL:CG1	29:b:217:ARG:HH22	2.19	0.53
1:5:698:U:HO2'	24:V:93:GLY:C	2.16	0.52
1:5:1343:G:H5''	10:H:116:LYS:HB3	1.92	0.52
4:B:37:ASP:OD1	4:B:38:GLU:N	2.43	0.52
4:B:112:PRO:HG2	4:B:113:MET:HE2	1.92	0.52
10:H:44:LYS:O	10:H:47:ILE:HG22	2.09	0.52
25:W:409:ASP:HB2	27:Y:1310:LYS:CB	2.39	0.52
25:W:734:VAL:CG2	27:Y:1093:PRO:HB2	2.27	0.52
26:X:111:LEU:HD21	26:X:156:TYR:CE1	2.45	0.52
26:X:190:HIS:CE1	27:Y:1083:ASP:O	2.56	0.52
26:X:283:ARG:NH2	29:b:313:LEU:O	2.41	0.52
27:Y:627:ARG:HD3	27:Y:670:ILE:CG2	2.39	0.52
27:Y:1118:ALA:HB1	27:Y:1191:LEU:O	2.10	0.52
29:b:183:LYS:HB3	29:b:280:PHE:O	2.09	0.52
1:5:838:A:N6	7:E:125:PRO:O	2.40	0.52
1:5:1212:C:H3'	1:5:1213:A:H5'	1.91	0.52
1:5:1226:A:N3	1:5:1344:C:O2'	2.38	0.52
1:5:1492:G:C5	24:V:131:PHE:CD1	2.97	0.52
13:K:66:ALA:HB2	13:K:80:ILE:HD11	1.91	0.52
18:P:62:GLN:NE2	18:P:63:ILE:O	2.42	0.52
24:V:76:VAL:HG21	24:V:90:LEU:HD11	1.92	0.52
25:W:736:VAL:HG23	27:Y:1105:ILE:HG21	1.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:206:G:O2'	1:5:209:A:N6	2.43	0.52
4:B:33:TRP:CD1	4:B:60:ARG:HH21	2.27	0.52
6:D:152:LYS:HB3	6:D:179:TYR:HB2	1.92	0.52
17:O:7:MET:O	17:O:17:TYR:HA	2.09	0.52
25:W:19:LYS:HE3	25:W:1248:THR:CG2	2.40	0.52
27:Y:998:ILE:HA	29:b:108:LEU:HD13	1.86	0.52
29:b:290:TRP:HE1	29:b:293:ASP:CG	2.02	0.52
1:5:386:U:H2'	1:5:387:G:C8	2.44	0.52
25:W:64:LYS:HD2	25:W:67:GLU:OE2	2.09	0.52
25:W:398:LEU:HD21	27:Y:1338:SER:O	2.09	0.52
27:Y:169:LEU:CD2	30:c:25:DC:N3	2.72	0.52
1:5:698:U:C4	24:V:96:THR:OG1	2.43	0.52
1:5:920:G:O2'	1:5:922:G:OP1	2.24	0.52
1:5:1245:A:H2'	1:5:1246:A:C8	2.45	0.52
1:5:1467:A:O2'	23:U:48:ARG:NE	2.41	0.52
25:W:309:ILE:CD1	27:Y:1344:LYS:CB	2.87	0.52
27:Y:1002:SER:N	29:b:109:LYS:CA	2.72	0.52
28:Z:5:TYR:OH	28:Z:48:LEU:HA	2.09	0.52
1:5:735:C:OP1	7:E:89:ASN:ND2	2.43	0.52
1:5:882:U:H3'	1:5:883:A:H8	1.75	0.52
1:5:1013:C:H42	1:5:1014:A:H61	1.57	0.52
2:6:16:G:H4'	2:6:17:U:OP1	2.09	0.52
3:A:27:ARG:NH1	3:A:223:GLN:NE2	2.56	0.52
6:D:68:GLU:HG3	6:D:94:VAL:HG22	1.90	0.52
15:M:24:CYS:HB2	15:M:39:VAL:HA	1.92	0.52
25:W:98:GLU:HB3	27:Y:1368:VAL:O	2.07	0.52
25:W:413:ARG:HH11	31:d:17:DT:C4'	1.98	0.52
26:X:108:ARG:NH2	26:a:316:LYS:HE2	2.23	0.52
27:Y:219:GLU:HG3	30:c:21:DC:H41	1.72	0.52
2:6:16:G:O2'	2:6:17:U:O5'	2.26	0.52
7:E:97:LEU:HB3	7:E:100:ILE:HG22	1.90	0.52
14:L:5:LEU:HD21	14:L:57:ARG:HD2	1.91	0.52
25:W:427:VAL:HG21	25:W:493:LEU:CD1	2.32	0.52
27:Y:618:PRO:HA	27:Y:814:LEU:CD1	2.39	0.52
20:R:66:MET:CE	20:R:74:PHE:HZ	2.22	0.52
25:W:753:ASP:OD2	25:W:855:LYS:NZ	2.43	0.52
25:W:837:TYR:OH	27:Y:649:HIS:CG	2.56	0.52
27:Y:659:ILE:O	27:Y:780:LEU:HD13	2.09	0.52
27:Y:1003:VAL:HG13	29:b:116:ILE:HD12	1.92	0.52
28:Z:5:TYR:HE2	28:Z:48:LEU:CD2	2.15	0.52
29:b:139:PHE:CZ	29:b:147:ILE:HG13	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:b:224:ASN:OD1	29:b:230:ILE:HG22	2.10	0.52
32:e:78:ASP:OD2	32:e:81:ARG:NH2	2.37	0.52
1:5:1009:G:N2	1:5:1012:A:OP2	2.37	0.52
1:5:1067:C:C5'	1:5:1092:A:N7	2.68	0.52
3:A:37:TRP:CZ3	3:A:39:PRO:HA	2.45	0.52
7:E:2:GLN:HE21	7:E:90:LEU:HA	1.75	0.52
9:G:130:LEU:H	28:Z:42:LYS:HG2	1.74	0.52
14:L:15:ILE:HG13	14:L:43:LYS:O	2.09	0.52
25:W:413:ARG:NH1	31:d:17:DT:C5'	2.72	0.52
25:W:983:ILE:HG21	25:W:1139:ARG:HD3	1.91	0.52
26:X:34:PHE:CE2	26:a:49:CYS:SG	3.03	0.52
2:6:2:G:H2'	2:6:3:G:C8	2.45	0.52
11:I:35:VAL:HG21	11:I:82:LEU:HD11	1.91	0.52
25:W:67:GLU:HG2	25:W:74:LYS:HG2	1.92	0.52
27:Y:998:ILE:CG2	29:b:108:LEU:CG	2.68	0.52
1:5:621:C:H2'	1:5:622:A:H8	1.74	0.51
3:A:130:LEU:HB2	3:A:159:LEU:HD13	1.92	0.51
20:R:9:ALA:HB1	20:R:41:PHE:HE1	1.73	0.51
27:Y:356:ARG:HH12	32:e:113:ASN:H	1.58	0.51
26:a:35:VAL:HG21	26:a:207:ASP:CB	2.40	0.51
26:a:173:ILE:HD12	26:a:180:ALA:HB2	1.92	0.51
26:a:269:GLU:HG3	26:a:278:PHE:HE2	1.76	0.51
1:5:399:C:H5''	5:C:132:PRO:HD2	1.91	0.51
1:5:918:A:O2'	1:5:1374:C:OP2	2.26	0.51
1:5:949:G:H21	1:5:1202:A:H62	1.57	0.51
23:U:20:ILE:CD1	23:U:54:ILE:CG2	2.88	0.51
25:W:76:ILE:HD13	29:b:156:THR:O	2.10	0.51
27:Y:999:PHE:CZ	29:b:42:TYR:CZ	2.98	0.51
1:5:573:G:H4'	1:5:574:C:H5''	1.93	0.51
1:5:598:U:H2'	1:5:599:G:H8	1.76	0.51
1:5:1402:U:H2'	1:5:1403:A:C8	2.41	0.51
3:A:201:LEU:HD12	3:A:217:ALA:HB3	1.91	0.51
18:P:25:GLN:HB2	18:P:44:LYS:HE3	1.92	0.51
25:W:388:LEU:CD1	27:Y:1348:GLY:O	2.52	0.51
25:W:388:LEU:HD12	27:Y:1348:GLY:O	2.08	0.51
27:Y:94:ILE:CG2	27:Y:135:LEU:CD1	2.87	0.51
1:5:46:U:H2'	1:5:47:G:H8	1.75	0.51
1:5:70:A:H2'	1:5:71:A:C8	2.45	0.51
9:G:41:LYS:HA	9:G:44:ILE:HG22	1.92	0.51
21:S:38:GLU:OE1	21:S:40:ASN:ND2	2.42	0.51
25:W:95:VAL:HG12	27:Y:1371:LEU:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:595:ILE:HD12	25:W:612:VAL:HG22	1.93	0.51
26:X:73:MET:HE3	26:X:143:PHE:CD2	2.46	0.51
29:b:139:PHE:CD1	29:b:147:ILE:HD12	2.45	0.51
1:5:821:U:H2'	1:5:822:A:C8	2.45	0.51
1:5:1469:G:C5	23:U:25:HIS:HE1	2.26	0.51
25:W:835:PHE:CE2	27:Y:648:VAL:O	2.63	0.51
25:W:1118:LYS:HE2	25:W:1124:ILE:HG13	1.93	0.51
26:X:31:GLU:OE1	26:a:161:ARG:NH2	2.43	0.51
26:X:163:PHE:CB	27:Y:917:LYS:HE2	2.41	0.51
27:Y:770:PHE:HB3	27:Y:773:ASN:HD22	1.76	0.51
27:Y:956:ARG:HG2	26:a:327:SER:C	2.35	0.51
1:5:8:G:N3	1:5:294:A:N6	2.58	0.51
1:5:556:G:OP2	1:5:557:A:O2'	2.25	0.51
2:6:17:U:P	24:V:102:LYS:HD3	2.51	0.51
17:O:70:ARG:CZ	17:O:70:ARG:HA	2.40	0.51
23:U:39:VAL:HG21	23:U:64:PHE:HZ	1.75	0.51
25:W:94:ILE:HG12	27:Y:1370:ILE:HD12	1.90	0.51
26:a:35:VAL:CG1	26:a:195:VAL:HG22	2.40	0.51
26:a:129:CYS:SG	26:a:135:VAL:HG23	2.51	0.51
1:5:239:A:N6	1:5:277:G:N3	2.59	0.51
1:5:950:C:O2	20:R:83:HIS:HE1	1.94	0.51
1:5:951:U:C2	1:5:1200:G:C2	2.99	0.51
2:6:16:G:OP1	24:V:105:GLN:HG3	2.10	0.51
11:I:62:HIS:CE1	11:I:63:VAL:HG22	2.45	0.51
11:I:63:VAL:O	11:I:65:LYS:N	2.43	0.51
25:W:342:ILE:CD1	25:W:356:GLU:HG3	2.40	0.51
25:W:393:LYS:HE3	25:W:1238:LYS:HB2	1.92	0.51
29:b:55:ILE:HG12	29:b:62:MET:HG3	1.92	0.51
29:b:290:TRP:CE2	29:b:296:LYS:CE	2.94	0.51
2:6:18:C:H41	24:V:95:TYR:HD2	1.57	0.51
2:6:57:C:N3	24:V:49:ILE:HD11	2.25	0.51
11:I:39:ASP:OD1	11:I:40:VAL:N	2.44	0.51
21:S:20:ASN:O	21:S:24:GLN:HG2	2.10	0.51
25:W:47:LEU:HD21	25:W:320:PHE:HZ	1.75	0.51
25:W:309:ILE:HD11	27:Y:1344:LYS:HG3	1.66	0.51
29:b:139:PHE:CG	29:b:147:ILE:HD12	2.46	0.51
1:5:919:C:H2'	1:5:920:G:H8	1.76	0.51
25:W:79:ARG:NH2	29:b:159:ASP:OD1	2.44	0.51
25:W:94:ILE:CG2	27:Y:1370:ILE:CG2	2.89	0.51
25:W:872:TYR:CE1	27:Y:648:VAL:HG12	2.46	0.51
26:X:161:ARG:NH2	26:a:31:GLU:OE1	2.37	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1100:C:C2	1:5:1101:A:C8	2.98	0.51
1:5:1332:U:H3	1:5:1338:A:N6	2.08	0.51
1:5:1379:C:H2'	1:5:1380:G:C8	2.46	0.51
27:Y:101:GLU:HG2	27:Y:110:ILE:HG23	1.93	0.51
29:b:290:TRP:NE1	29:b:296:LYS:HD2	2.26	0.51
1:5:881:G:N1	1:5:905:U:N3	2.58	0.50
2:6:35:G:N9	14:L:121:ILE:CG2	2.74	0.50
4:B:24:ALA:HB3	4:B:30:THR:HG22	1.92	0.50
7:E:74:ARG:HH11	7:E:74:ARG:HG3	1.77	0.50
25:W:310:ARG:HD2	25:W:326:ASN:OD1	2.12	0.50
25:W:542:LEU:HG	27:Y:1305:GLU:OE1	2.11	0.50
25:W:875:ARG:HG3	27:Y:667:ILE:HD11	1.92	0.50
26:X:49:CYS:SG	26:a:34:PHE:HE2	2.34	0.50
1:5:1070:G:O2'	1:5:1071:A:O4'	2.22	0.50
1:5:1501:G:H2'	1:5:1502:G:C8	2.46	0.50
15:M:14:PRO:HG3	15:M:20:ALA:HB2	1.94	0.50
25:W:602:GLU:OE1	26:a:85:LYS:NZ	2.37	0.50
27:Y:37:GLN:HG3	27:Y:150:PHE:CZ	2.46	0.50
1:5:79:A:C5	1:5:80:U:H1'	2.46	0.50
1:5:905:U:H2'	1:5:906:C:C6	2.46	0.50
1:5:973:A:O2'	1:5:1296:C:N3	2.39	0.50
1:5:1139:A:H2'	1:5:1140:A:H8	1.75	0.50
1:5:1417:U:H3	1:5:1435:G:H22	1.59	0.50
25:W:679:ARG:HH12	26:a:170:ARG:HH22	1.59	0.50
25:W:742:TYR:CE1	25:W:745:LYS:HB3	2.45	0.50
25:W:893:ARG:HG3	27:Y:1292:TRP:CZ2	2.45	0.50
26:X:243:ASN:ND2	26:a:223:ASP:OD1	2.44	0.50
27:Y:998:ILE:O	29:b:108:LEU:HB3	2.07	0.50
27:Y:1018:ASP:O	27:Y:1049:GLN:HG2	2.11	0.50
28:Z:53:TYR:CE1	28:Z:57:LEU:CD1	2.95	0.50
1:5:474:G:H2'	1:5:475:U:C6	2.47	0.50
1:5:510:U:H2'	1:5:511:A:C8	2.45	0.50
1:5:1066:U:O2	1:5:1092:A:H1'	2.12	0.50
1:5:1384:A:H2'	1:5:1385:A:C8	2.41	0.50
3:A:115:GLY:O	3:A:119:ASN:ND2	2.44	0.50
25:W:118:LEU:CB	31:d:10:DG:H5''	2.42	0.50
25:W:402:ASN:ND2	27:Y:1273:GLN:CD	2.64	0.50
27:Y:999:PHE:HZ	29:b:42:TYR:CE2	2.28	0.50
32:e:74:TRP:CZ2	32:e:84:LYS:HD2	2.47	0.50
1:5:308:C:H2'	1:5:309:A:H8	1.76	0.50
1:5:426:U:H5'	5:C:8:PHE:CD2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:889:GLY:HA3	31:d:14:DG:O4'	2.11	0.50
27:Y:170:LYS:HZ2	30:c:25:DC:C5'	2.24	0.50
29:b:5:SER:CB	29:b:61:LEU:HD21	2.40	0.50
1:5:852:G:N1	1:5:864:U:OP2	2.39	0.50
4:B:34:LEU:HD11	15:M:53:ILE:HG13	1.94	0.50
7:E:37:THR:HG22	7:E:37:THR:O	2.12	0.50
15:M:29:ARG:HG2	15:M:31:ARG:H	1.76	0.50
25:W:398:LEU:HD21	27:Y:1342:LEU:N	2.27	0.50
27:Y:450:ILE:CD1	27:Y:505:ILE:HD12	2.40	0.50
29:b:183:LYS:NZ	29:b:245:GLY:C	2.68	0.50
1:5:511:A:H2'	1:5:512:U:C6	2.47	0.50
1:5:631:C:H2'	1:5:632:A:C8	2.47	0.50
1:5:681:U:O2'	12:J:34:VAL:O	2.28	0.50
1:5:1196:G:H5''	1:5:1295:U:O2	2.12	0.50
3:A:90:ASP:N	3:A:90:ASP:OD1	2.44	0.50
18:P:61:VAL:HG12	18:P:80:ILE:HG13	1.94	0.50
20:R:63:THR:C	20:R:65:ASP:N	2.67	0.50
25:W:33:GLU:HG3	25:W:99:ARG:HE	1.75	0.50
25:W:309:ILE:HG21	27:Y:1344:LYS:HB2	1.92	0.50
26:a:111:LEU:HD21	26:a:156:TYR:CE1	2.47	0.50
1:5:99:U:H2'	1:5:100:G:C8	2.47	0.50
1:5:447:G:OP2	1:5:448:A:O2'	2.29	0.50
25:W:405:GLY:HA2	27:Y:1291:VAL:HG21	1.94	0.50
27:Y:563:GLY:HA2	27:Y:566:ARG:HG3	1.94	0.50
27:Y:570:ILE:CG2	27:Y:574:GLY:HA2	2.41	0.50
27:Y:1262:ARG:HD2	27:Y:1281:ASN:O	2.12	0.50
1:5:33:A:H2'	1:5:34:A:C8	2.47	0.50
1:5:259:A:H2'	1:5:260:C:C6	2.47	0.50
3:A:189:ALA:O	3:A:193:ILE:HG12	2.12	0.50
25:W:312:ILE:HG12	25:W:322:THR:HG22	1.94	0.50
25:W:391:ARG:HB2	27:Y:1345:GLU:CD	2.29	0.50
25:W:497:PRO:HG3	31:d:14:DG:N2	2.26	0.50
25:W:602:GLU:OE1	26:a:85:LYS:CD	2.56	0.50
27:Y:636:ILE:CD1	27:Y:645:ILE:HG21	2.42	0.50
27:Y:1003:VAL:CG1	29:b:116:ILE:CD1	2.89	0.50
1:5:18:U:H2'	1:5:19:C:H6	1.77	0.49
1:5:46:U:H2'	1:5:47:G:C8	2.47	0.49
1:5:205:U:H3	1:5:210:G:H1	1.59	0.49
25:W:113:TRP:CD1	25:W:1238:LYS:HE3	2.47	0.49
27:Y:381:ARG:HH22	27:Y:551:GLU:CD	2.20	0.49
27:Y:913:GLU:CD	27:Y:917:LYS:HE3	2.36	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:933:CYS:SG	27:Y:941:GLU:O	2.70	0.49
29:b:291:ASN:HB3	29:b:296:LYS:HG2	1.93	0.49
12:J:14:ILE:HG13	12:J:27:ALA:HA	1.95	0.49
17:O:23:ASP:OD1	17:O:24:SER:N	2.44	0.49
27:Y:614:ASP:HA	27:Y:854:GLN:NE2	2.27	0.49
26:a:271:LEU:HD22	26:a:321:LEU:HD11	1.94	0.49
1:5:853:A:H2'	1:5:854:A:C8	2.46	0.49
1:5:1463:A:H2'	1:5:1464:G:C8	2.48	0.49
1:5:1472:G:H1'	1:5:1493:A:C2	2.48	0.49
8:F:15:PRO:HD2	10:H:45:LEU:HB2	1.93	0.49
10:H:43:ASN:O	10:H:44:LYS:HD2	2.12	0.49
25:W:368:PHE:CE1	27:Y:1348:GLY:C	2.88	0.49
25:W:875:ARG:CZ	27:Y:661:THR:HG21	2.42	0.49
27:Y:945:ARG:HH22	26:a:298:ALA:HB1	1.75	0.49
29:b:48:TYR:HB3	29:b:51:VAL:CG2	2.43	0.49
29:b:239:LYS:HE2	29:b:294:LYS:HG3	1.89	0.49
1:5:164:C:OP2	21:S:53:ARG:NH2	2.45	0.49
7:E:42:LEU:HB2	7:E:56:HIS:CE1	2.47	0.49
21:S:24:GLN:HB3	21:S:54:LEU:HD21	1.95	0.49
25:W:1210:ILE:CD1	28:Z:64:TYR:CZ	2.95	0.49
32:e:74:TRP:CZ3	32:e:84:LYS:HB2	2.48	0.49
1:5:1492:G:C6	24:V:131:PHE:CE1	3.00	0.49
13:K:110:ILE:HG21	13:K:117:THR:HG21	1.94	0.49
25:W:167:ASP:O	25:W:173:SER:HA	2.11	0.49
25:W:192:ILE:HA	25:W:200:TYR:CE2	2.48	0.49
25:W:490:PRO:HD2	25:W:547:VAL:HG13	1.95	0.49
25:W:1043:LEU:HD21	25:W:1122:GLY:HA2	1.94	0.49
27:Y:1051:ARG:HH11	27:Y:1254:MET:HE3	1.78	0.49
26:a:269:GLU:HG3	26:a:278:PHE:CE2	2.47	0.49
1:5:924:A:H2'	1:5:925:C:H5	1.62	0.49
1:5:1363:U:H3'	1:5:1364:C:P	2.52	0.49
4:B:88:ILE:O	4:B:92:ILE:HG12	2.12	0.49
9:G:46:GLU:O	9:G:50:LYS:HG2	2.13	0.49
16:N:29:LEU:O	16:N:33:ILE:HG12	2.11	0.49
27:Y:94:ILE:HG23	27:Y:135:LEU:CD1	2.28	0.49
27:Y:807:LYS:HE3	27:Y:811:ASP:OD2	2.11	0.49
1:5:331:C:H2'	1:5:332:A:C8	2.44	0.49
1:5:354:U:H2'	1:5:355:A:H8	1.77	0.49
1:5:409:G:N2	1:5:425:G:O3'	2.45	0.49
1:5:621:C:H2'	1:5:622:A:C8	2.47	0.49
1:5:1225:A:H2	1:5:1345:G:H1'	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1278:G:N2	1:5:1308:G:C6	2.80	0.49
1:5:1467:A:C4	23:U:48:ARG:HD2	2.48	0.49
2:6:16:G:O6	2:6:49:C:O2	2.29	0.49
4:B:17:ASN:OD1	4:B:18:TRP:N	2.46	0.49
6:D:127:HIS:NE2	6:D:196:MET:SD	2.83	0.49
25:W:406:LYS:CD	27:Y:1307:LEU:CD2	2.90	0.49
25:W:906:HIS:HD2	25:W:987:ARG:NH2	2.10	0.49
25:W:986:GLU:HA	25:W:1192:HIS:CE1	2.48	0.49
26:X:105:PRO:HB3	26:a:320:GLU:C	2.38	0.49
27:Y:65:ARG:HA	27:Y:105:SER:OG	2.12	0.49
27:Y:166:LYS:HE3	27:Y:178:VAL:HG11	1.94	0.49
1:5:66:A:N7	1:5:377:A:N6	2.61	0.49
1:5:644:U:H2'	1:5:645:A:H8	1.77	0.49
4:B:60:ARG:HH12	4:B:96:ILE:HD11	1.77	0.49
5:C:168:GLU:HG3	25:W:30:ASN:ND2	2.27	0.49
5:C:184:ARG:NH1	5:C:191:ILE:O	2.45	0.49
8:F:23:THR:O	8:F:26:ILE:HG22	2.12	0.49
25:W:47:LEU:HD21	25:W:320:PHE:CZ	2.47	0.49
25:W:95:VAL:CG1	27:Y:1371:LEU:CB	2.91	0.49
25:W:835:PHE:HB2	25:W:837:TYR:CZ	2.47	0.49
26:X:231:ILE:HG22	26:a:34:PHE:HZ	1.78	0.49
27:Y:567:GLY:HA2	32:e:31:LYS:HE2	1.92	0.49
32:e:108:TRP:CZ3	32:e:120:ILE:HD12	2.48	0.49
1:5:590:G:H1	1:5:644:U:H3	1.59	0.49
1:5:697:G:C6	24:V:100:LYS:CD	2.96	0.49
1:5:770:G:O6	1:5:804:A:N6	2.45	0.49
1:5:918:A:H2'	1:5:919:C:C6	2.48	0.49
1:5:1301:U:H2'	1:5:1302:C:C6	2.48	0.49
2:6:39:A:H4'	24:V:147:LYS:HZ2	1.78	0.49
25:W:821:PHE:HB3	25:W:825:PHE:CZ	2.48	0.49
25:W:867:TYR:HE2	27:Y:774:ASP:O	1.94	0.49
25:W:1211:ALA:O	28:Z:57:LEU:CD2	2.61	0.49
25:W:1213:ASN:HD21	28:Z:58:GLU:CG	2.22	0.49
27:Y:161:ILE:HG13	27:Y:393:VAL:HG22	1.95	0.49
27:Y:994:LEU:HD12	29:b:12:LEU:HD13	1.87	0.49
1:5:924:A:C2'	1:5:925:C:H6	2.24	0.49
25:W:368:PHE:HB3	27:Y:1349:LEU:HD22	1.94	0.49
25:W:504:ILE:HB	27:Y:1297:TYR:CE2	2.46	0.49
25:W:876:LYS:CG	25:W:1030:ARG:HH12	1.86	0.49
27:Y:162:TYR:HA	27:Y:522:ASP:OD2	2.12	0.49
27:Y:863:LEU:HD11	27:Y:878:ASP:OD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:b:290:TRP:CD1	29:b:293:ASP:N	2.80	0.49
1:5:1196:G:H5'	20:R:36:ARG:HH12	1.78	0.48
12:J:103:ILE:HG22	22:T:8:ASN:HB2	1.95	0.48
20:R:66:MET:SD	20:R:74:PHE:CZ	3.06	0.48
25:W:31:TRP:HZ2	27:Y:1352:SER:HG	0.53	0.48
25:W:349:PRO:CG	32:e:137:ASP:OD2	2.60	0.48
25:W:1207:MET:HB2	28:Z:68:ARG:NH2	2.25	0.48
26:X:175:SER:OG	26:X:178:ILE:HD12	2.13	0.48
1:5:386:U:H4'	17:O:28:ARG:HH21	1.79	0.48
1:5:537:A:H2'	1:5:538:G:C8	2.47	0.48
1:5:1229:A:H2'	1:5:1230:G:C8	2.48	0.48
1:5:1304:U:H4'	14:L:23:PHE:CE1	2.48	0.48
3:A:247:ALA:O	3:A:249:LYS:N	2.46	0.48
10:H:6:TYR:HE2	10:H:92:PHE:HD1	1.61	0.48
25:W:554:LEU:HD23	27:Y:1297:TYR:CD1	2.47	0.48
25:W:861:GLY:N	27:Y:773:ASN:OD1	2.47	0.48
27:Y:653:TYR:CE1	27:Y:737:ARG:NH2	2.82	0.48
32:e:108:TRP:CZ3	32:e:130:PRO:HG3	2.48	0.48
1:5:433:C:H4'	5:C:152:PRO:HD2	1.96	0.48
1:5:433:C:H2'	1:5:434:U:C6	2.49	0.48
9:G:54:LEU:HA	9:G:75:LYS:H	1.78	0.48
20:R:40:ILE:HD11	20:R:66:MET:CE	2.41	0.48
25:W:398:LEU:HD21	27:Y:1342:LEU:H	1.77	0.48
25:W:520:HIS:NE2	25:W:717:GLU:OE1	2.46	0.48
26:a:266:LYS:HG2	26:a:270:GLU:OE2	2.13	0.48
1:5:1245:A:H2'	1:5:1246:A:H8	1.78	0.48
1:5:1438:U:H2'	1:5:1439:G:C8	2.43	0.48
1:5:1467:A:H2'	23:U:27:ASP:OD2	2.13	0.48
11:I:62:HIS:ND1	11:I:63:VAL:HG22	2.29	0.48
25:W:169:ALA:HB1	32:e:128:ALA:HA	1.96	0.48
25:W:368:PHE:CZ	27:Y:1349:LEU:C	2.92	0.48
25:W:513:ASP:OD2	26:a:205:ILE:HD13	2.10	0.48
26:X:129:CYS:SG	26:X:135:VAL:HG23	2.53	0.48
27:Y:141:VAL:HG11	27:Y:613:LEU:CD2	2.39	0.48
27:Y:169:LEU:HD11	27:Y:187:LEU:HD12	1.95	0.48
27:Y:171:LEU:HD12	27:Y:195:LEU:HD12	1.94	0.48
32:e:55:PHE:CB	32:e:62:LEU:HD12	2.37	0.48
1:5:553:C:H2'	1:5:554:C:C6	2.49	0.48
1:5:577:G:H5'	1:5:725:A:H1'	1.94	0.48
1:5:681:U:O2	12:J:34:VAL:HG22	2.13	0.48
1:5:934:G:H2'	1:5:935:U:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1051:U:H2'	1:5:1052:G:H8	1.78	0.48
1:5:1359:C:H2'	1:5:1360:G:H8	1.78	0.48
1:5:1467:A:N6	23:U:45:GLY:H	2.11	0.48
25:W:398:LEU:HD22	27:Y:1342:LEU:N	2.29	0.48
25:W:488:ASP:CA	25:W:551:ARG:HH21	2.26	0.48
25:W:893:ARG:CZ	27:Y:1288:GLU:OE1	2.62	0.48
27:Y:219:GLU:CG	30:c:21:DC:N4	2.67	0.48
27:Y:824:VAL:HG11	27:Y:827:VAL:CG2	2.44	0.48
27:Y:1213:ASP:OD1	27:Y:1219:PRO:HD2	2.13	0.48
30:c:17:DT:H5''	32:e:118:THR:CG2	2.09	0.48
1:5:108:C:H2'	1:5:109:G:H8	1.77	0.48
1:5:955:U:H5	20:R:78:ARG:HD3	1.78	0.48
27:Y:673:LEU:CD2	27:Y:677:ALA:HB3	2.42	0.48
30:c:17:DT:C2'	30:c:18:DG:C8	2.92	0.48
1:5:305:A:O2'	1:5:605:A:N1	2.43	0.48
1:5:763:A:N7	1:5:810:U:O4	2.47	0.48
1:5:948:U:O4	14:L:103:ARG:NH2	2.46	0.48
26:X:276:ARG:CD	29:b:323:GLU:OE1	2.61	0.48
27:Y:998:ILE:CB	29:b:108:LEU:HD13	2.44	0.48
1:5:386:U:O3'	17:O:28:ARG:NH2	2.46	0.48
1:5:596:U:H2'	1:5:597:C:C6	2.48	0.48
3:A:253:GLU:C	3:A:255:GLN:N	2.71	0.48
3:A:253:GLU:C	3:A:255:GLN:H	2.21	0.48
25:W:368:PHE:CZ	27:Y:1350:ALA:HB3	2.48	0.48
27:Y:709:GLU:HG3	27:Y:714:ILE:HD11	1.94	0.48
27:Y:998:ILE:CB	29:b:62:MET:HE1	2.40	0.48
27:Y:1289:MET:HG3	31:d:15:DA:H5''	1.94	0.48
1:5:161:C:H2'	1:5:162:C:C6	2.49	0.48
1:5:1157:G:H4'	1:5:1158:A:H5'	1.95	0.48
7:E:8:LEU:HB3	7:E:83:LEU:HB2	1.96	0.48
17:O:15:PRO:HB2	17:O:17:TYR:CE1	2.48	0.48
26:X:35:VAL:HG21	26:X:207:ASP:HB3	1.95	0.48
26:X:44:ARG:NH1	27:Y:1077:ASP:OD1	2.46	0.48
27:Y:1126:CYS:SG	27:Y:1153:LEU:HD23	2.54	0.48
27:Y:1340:LYS:NZ	27:Y:1370:ILE:HG13	2.29	0.48
29:b:196:VAL:CG2	29:b:217:ARG:CZ	2.87	0.48
29:b:239:LYS:HD2	29:b:293:ASP:CA	2.39	0.48
1:5:376:G:HO2'	1:5:378:A:N6	2.12	0.48
1:5:1064:U:N3	1:5:1093:A:C2	2.82	0.48
1:5:1271:U:O2'	8:F:113:LYS:NZ	2.47	0.48
20:R:66:MET:HE3	20:R:74:PHE:HZ	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:986:GLU:OE2	28:Z:51:ARG:NH2	2.47	0.48
26:X:318:VAL:HG12	26:X:323:LEU:O	2.14	0.48
27:Y:168:GLN:HG3	27:Y:524:ILE:HD13	1.95	0.48
27:Y:171:LEU:CD1	27:Y:212:LEU:CD2	2.91	0.48
31:d:11:DT:H2'	31:d:12:DC:C6	2.49	0.48
1:5:116:A:H5'	18:P:67:ARG:HH22	1.79	0.47
1:5:324:C:H4'	1:5:325:A:H5''	1.96	0.47
1:5:1063:G:N2	1:5:1095:G:N9	2.57	0.47
4:B:65:VAL:HG21	4:B:96:ILE:HD11	1.95	0.47
8:F:25:ILE:O	8:F:29:ILE:HG12	2.14	0.47
25:W:663:GLU:HB3	25:W:702:LEU:HD11	1.95	0.47
25:W:864:ILE:HA	27:Y:1200:PHE:CZ	2.49	0.47
27:Y:475:VAL:HG13	27:Y:516:SER:HB3	1.95	0.47
32:e:9:GLN:OE1	32:e:132:PRO:HG3	2.13	0.47
1:5:513:G:H2'	1:5:514:U:H6	1.79	0.47
1:5:545:A:OP2	5:C:1:MET:N	2.45	0.47
5:C:138:PRO:HA	5:C:178:TYR:HD2	1.79	0.47
12:J:104:ASN:HD21	12:J:106:LYS:NZ	2.11	0.47
25:W:94:ILE:CG2	27:Y:1370:ILE:HB	2.44	0.47
25:W:118:LEU:HB3	31:d:10:DG:C5'	2.44	0.47
25:W:388:LEU:HB3	27:Y:1345:GLU:O	2.14	0.47
26:X:239:ILE:HG23	26:a:225:PHE:CE1	2.49	0.47
27:Y:211:ILE:HD13	27:Y:229:LEU:CD2	2.44	0.47
27:Y:999:PHE:HB3	27:Y:1002:SER:OG	2.14	0.47
27:Y:1284:GLN:OE1	31:d:17:DT:H5''	2.14	0.47
1:5:709:A:H2'	1:5:710:G:C8	2.49	0.47
5:C:168:GLU:HG3	25:W:30:ASN:CG	2.39	0.47
9:G:49:VAL:HG11	9:G:57:PHE:HE1	1.79	0.47
14:L:100:GLN:OE1	14:L:100:GLN:N	2.46	0.47
20:R:22:MET:HG3	20:R:31:ILE:HG21	1.96	0.47
21:S:24:GLN:HA	21:S:27:LYS:HZ2	1.79	0.47
25:W:893:ARG:NH1	27:Y:1288:GLU:OE2	2.47	0.47
27:Y:90:LYS:CE	27:Y:1034:GLU:O	2.63	0.47
27:Y:659:ILE:O	27:Y:780:LEU:HD12	2.15	0.47
27:Y:1082:GLU:OE1	27:Y:1227:LYS:HD3	2.14	0.47
1:5:242:A:N6	1:5:277:G:N2	2.41	0.47
1:5:557:A:OP2	6:D:181:LYS:NZ	2.47	0.47
1:5:1208:G:H2'	1:5:1209:C:C6	2.49	0.47
7:E:7:LEU:HB2	7:E:58:TYR:HB2	1.97	0.47
14:L:94:ASN:ND2	14:L:109:ARG:O	2.48	0.47
25:W:309:ILE:HD13	27:Y:1344:LYS:HB2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:542:LEU:HD12	27:Y:1305:GLU:CD	2.39	0.47
25:W:827:MET:HE2	25:W:829:GLY:HA2	1.95	0.47
25:W:886:ALA:CA	31:d:14:DG:N7	2.71	0.47
25:W:1228:PHE:CE1	25:W:1251:ASP:HB2	2.50	0.47
27:Y:627:ARG:HD3	27:Y:670:ILE:HG21	1.97	0.47
27:Y:1001:GLU:C	29:b:109:LYS:HB3	2.40	0.47
27:Y:1157:ILE:HG12	27:Y:1172:LEU:HD11	1.96	0.47
32:e:77:LEU:CD1	32:e:83:LEU:HB2	2.44	0.47
1:5:1133:A:N7	1:5:1155:A:N6	2.63	0.47
1:5:1426:U:O2'	1:5:1428:A:N6	2.47	0.47
3:A:44:PHE:HE2	3:A:214:ILE:HG21	1.79	0.47
4:B:116:ALA:HB2	4:B:205:ILE:HG22	1.97	0.47
5:C:10:ARG:O	5:C:14:LEU:HB2	2.15	0.47
25:W:76:ILE:CG2	29:b:156:THR:N	2.77	0.47
25:W:542:LEU:HB2	27:Y:1305:GLU:OE2	2.15	0.47
25:W:890:TYR:CD1	25:W:894:LYS:HE3	2.47	0.47
27:Y:785:MET:CE	27:Y:1064:GLY:HA2	2.44	0.47
27:Y:950:VAL:HB	27:Y:955:LYS:HE3	1.95	0.47
27:Y:1051:ARG:HH11	27:Y:1254:MET:CE	2.27	0.47
1:5:251:G:H4'	18:P:20:LYS:HD3	1.96	0.47
1:5:536:U:H2'	1:5:537:A:C8	2.49	0.47
1:5:553:C:H2'	1:5:554:C:H6	1.79	0.47
1:5:1065:G:H2'	1:5:1066:U:C6	2.49	0.47
1:5:1464:G:H2'	1:5:1465:U:C6	2.48	0.47
7:E:100:ILE:O	7:E:103:LYS:HG2	2.14	0.47
8:F:75:ARG:HH11	8:F:88:THR:HG21	1.78	0.47
19:Q:40:TYR:HE2	19:Q:42:ARG:HB3	1.78	0.47
25:W:77:LYS:HD3	29:b:153:ASP:OD1	2.15	0.47
25:W:599:THR:HG21	26:a:86:GLN:CD	2.38	0.47
29:b:266:LEU:HD23	29:b:273:ILE:HG21	1.96	0.47
1:5:225:U:O2'	17:O:23:ASP:OD2	2.31	0.47
1:5:625:U:H2'	1:5:626:G:C8	2.49	0.47
1:5:689:U:H3	12:J:48:SER:HB3	1.80	0.47
1:5:707:G:H2'	1:5:708:A:H8	1.80	0.47
1:5:1203:A:P	14:L:107:ARG:HH22	2.38	0.47
1:5:1351:U:H2'	1:5:1352:A:C8	2.50	0.47
6:D:161:ILE:HD11	6:D:179:TYR:HD1	1.79	0.47
8:F:87:PRO:HD2	8:F:151:ALA:HB2	1.96	0.47
15:M:34:LEU:O	15:M:38:GLY:N	2.46	0.47
17:O:65:PRO:HB2	17:O:70:ARG:NH2	2.27	0.47
19:Q:94:ARG:HB3	19:Q:101:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:17:LYS:HD2	22:T:17:LYS:HA	1.42	0.47
23:U:53:ARG:NH1	24:V:156:VAL:HG23	2.30	0.47
25:W:351:ILE:HD11	32:e:131:THR:HB	1.97	0.47
25:W:500:HIS:CE1	25:W:502:LEU:HB2	2.50	0.47
25:W:670:PHE:CE1	25:W:688:LEU:HD11	2.50	0.47
25:W:687:VAL:CG1	25:W:802:ARG:HH22	2.16	0.47
25:W:806:ILE:HA	25:W:809:MET:HE3	1.95	0.47
26:X:49:CYS:SG	26:a:34:PHE:CE2	3.07	0.47
26:X:274:THR:HG23	26:X:313:GLU:OE1	2.14	0.47
27:Y:90:LYS:HZ1	27:Y:1034:GLU:HB3	1.79	0.47
27:Y:717:ILE:HG22	27:Y:754:ASP:HB2	1.96	0.47
27:Y:723:ILE:CG2	27:Y:727:ASN:HA	2.45	0.47
27:Y:953:ALA:C	26:a:326:ARG:HD3	2.35	0.47
29:b:67:LEU:HD23	29:b:103:ARG:HG2	1.97	0.47
1:5:37:C:O2'	1:5:499:U:OP1	2.32	0.47
1:5:132:G:H2'	1:5:133:G:H8	1.80	0.47
1:5:319:U:O4	1:5:323:A:N7	2.48	0.47
1:5:435:U:O2'	1:5:437:U:O4	2.31	0.47
1:5:872:C:H2'	1:5:873:U:C6	2.50	0.47
2:6:6:U:H2'	2:6:7:U:H6	1.80	0.47
17:O:66:THR:HG22	17:O:67:ASP:H	1.79	0.47
25:W:408:VAL:HG12	27:Y:1306:LEU:HA	1.93	0.47
27:Y:147:ILE:HG21	27:Y:612:PHE:CE1	2.50	0.47
27:Y:363:GLU:HG2	27:Y:379:ARG:CZ	2.44	0.47
27:Y:419:LEU:HD21	27:Y:422:LYS:CG	2.44	0.47
27:Y:905:TYR:CE1	27:Y:906:GLU:HG3	2.50	0.47
26:a:57:ALA:HB2	26:a:173:ILE:HD11	1.96	0.47
32:e:14:PRO:HD3	32:e:121:VAL:HG23	1.96	0.47
1:5:544:A:P	5:C:69:LYS:HZ3	2.38	0.47
1:5:1389:U:H2'	1:5:1390:G:H8	1.78	0.47
7:E:8:LEU:HD23	7:E:84:ARG:HB2	1.96	0.47
12:J:104:ASN:HD21	12:J:106:LYS:HZ3	1.63	0.47
16:N:26:VAL:O	16:N:30:THR:HG23	2.15	0.47
22:T:52:LYS:HA	22:T:52:LYS:HD2	1.50	0.47
26:X:35:VAL:HG13	26:X:209:LEU:HB2	1.96	0.47
27:Y:1289:MET:HE3	31:d:14:DG:C2'	2.36	0.47
29:b:298:LEU:HA	29:b:349:THR:HG21	1.97	0.47
1:5:992:U:H2'	1:5:993:C:C6	2.50	0.47
1:5:1487:U:H2'	1:5:1488:A:C8	2.50	0.47
11:I:62:HIS:CG	11:I:63:VAL:H	2.33	0.47
25:W:313:ILE:HG23	27:Y:1269:LYS:HE3	1.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:1176:THR:HG21	25:W:1212:ILE:CD1	2.44	0.47
26:X:1:MET:HG3	26:a:51:PRO:HG3	1.96	0.47
1:5:145:G:N2	1:5:147:A:H3'	2.30	0.46
1:5:1292:A:H1'	20:R:37:ARG:HE	1.80	0.46
3:A:246:PHE:CZ	3:A:256:ILE:HD11	2.50	0.46
6:D:154:ALA:HB1	6:D:158:THR:HG21	1.97	0.46
11:I:12:LEU:HB3	11:I:82:LEU:HB2	1.97	0.46
19:Q:67:TYR:CZ	22:T:5:GLU:HA	2.50	0.46
25:W:100:MET:HE2	27:Y:1347:GLN:OE1	2.08	0.46
25:W:313:ILE:CB	27:Y:1269:LYS:CD	2.81	0.46
27:Y:179:GLN:NE2	27:Y:212:LEU:HD13	2.30	0.46
1:5:380:G:H2'	1:5:381:C:C6	2.50	0.46
1:5:692:A:H2'	1:5:693:A:C8	2.51	0.46
1:5:1066:U:H1'	1:5:1092:A:C1'	2.27	0.46
4:B:76:PHE:CA	29:b:257:PRO:HG2	2.43	0.46
25:W:112:ILE:HD12	25:W:365:ASP:HB3	1.96	0.46
25:W:986:GLU:HA	25:W:1192:HIS:HE1	1.80	0.46
27:Y:356:ARG:NH1	32:e:110:ILE:O	2.41	0.46
27:Y:999:PHE:CE1	29:b:42:TYR:CZ	2.89	0.46
1:5:132:G:H2'	1:5:133:G:C8	2.50	0.46
1:5:236:C:H2'	1:5:237:A:C8	2.50	0.46
1:5:470:U:H2'	1:5:471:A:H8	1.80	0.46
1:5:972:A:H2'	1:5:973:A:H5''	1.96	0.46
6:D:91:LEU:HD13	6:D:105:ILE:HB	1.95	0.46
11:I:70:GLN:HG3	15:M:59:ALA:HB2	1.97	0.46
23:U:39:VAL:HG21	23:U:64:PHE:CZ	2.50	0.46
24:V:110:GLN:NE2	24:V:112:ILE:HD11	2.02	0.46
25:W:125:SER:HB2	25:W:130:ILE:O	2.15	0.46
25:W:314:GLN:HE21	25:W:318:ALA:HA	1.80	0.46
25:W:735:SER:HB2	27:Y:1242:SER:HB2	1.97	0.46
25:W:828:ARG:NH1	25:W:870:SER:CB	2.76	0.46
25:W:889:GLY:C	31:d:14:DG:C4'	2.88	0.46
29:b:123:PHE:CZ	29:b:127:ILE:HD11	2.51	0.46
1:5:116:A:O2'	1:5:117:U:H5''	2.15	0.46
1:5:147:A:H2'	1:5:148:A:C8	2.50	0.46
1:5:924:A:O2'	1:5:925:C:C6	2.68	0.46
3:A:83:LEU:HD21	3:A:108:ILE:HD12	1.98	0.46
4:B:176:MET:HG3	4:B:178:LEU:HD12	1.96	0.46
8:F:110:ARG:HG2	8:F:111:HIS:H	1.81	0.46
8:F:141:HIS:CE1	8:F:145:GLU:OE2	2.69	0.46
17:O:18:ARG:HA	17:O:38:HIS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:95:VAL:CB	27:Y:1371:LEU:CD1	2.78	0.46
25:W:992:CYS:SG	25:W:995:CYS:SG	3.13	0.46
25:W:1033:HIS:ND1	25:W:1041:ASN:HB3	2.31	0.46
26:a:35:VAL:HG11	26:a:195:VAL:HG22	1.97	0.46
26:a:35:VAL:HG13	26:a:209:LEU:HB2	1.97	0.46
1:5:294:A:N1	1:5:295:G:N2	2.64	0.46
1:5:905:U:OP2	13:K:107:ARG:NH1	2.48	0.46
1:5:924:A:H2	1:5:1363:U:H3	1.58	0.46
7:E:112:ARG:HD2	7:E:112:ARG:O	2.16	0.46
19:Q:65:SER:OG	19:Q:69:LYS:O	2.26	0.46
25:W:134:GLU:HB3	25:W:165:VAL:HG21	1.97	0.46
25:W:409:ASP:CB	27:Y:1310:LYS:HG2	2.40	0.46
27:Y:90:LYS:HZ2	27:Y:1034:GLU:HB3	1.80	0.46
27:Y:374:CYS:HB3	27:Y:459:VAL:HG11	1.92	0.46
27:Y:413:HIS:CE1	27:Y:419:LEU:HD12	2.50	0.46
27:Y:525:ASP:HA	27:Y:530:LYS:HE3	1.96	0.46
1:5:259:A:H2'	1:5:260:C:H6	1.80	0.46
1:5:369:A:C2	1:5:370:A:C8	3.04	0.46
1:5:1009:G:H21	1:5:1012:A:H2	1.64	0.46
5:C:151:ILE:HB	5:C:154:VAL:HG12	1.97	0.46
25:W:460:ILE:HG22	25:W:470:MET:HE1	1.97	0.46
25:W:862:LEU:O	27:Y:1200:PHE:CD1	2.69	0.46
25:W:868:PHE:CD2	27:Y:658:PRO:CB	2.99	0.46
27:Y:1289:MET:CG	31:d:15:DA:C5'	2.89	0.46
1:5:120:A:H2'	1:5:121:C:C6	2.50	0.46
1:5:1201:C:N4	14:L:103:ARG:HG3	2.31	0.46
1:5:1216:G:H2'	1:5:1217:G:H8	1.79	0.46
7:E:11:GLY:HA2	7:E:55:ALA:HA	1.98	0.46
8:F:48:LEU:HD22	8:F:120:ALA:HB1	1.97	0.46
8:F:49:ILE:HD11	8:F:123:ILE:HG21	1.97	0.46
11:I:14:ILE:HG23	11:I:80:MET:HB2	1.98	0.46
25:W:890:TYR:N	31:d:14:DG:H4'	2.30	0.46
25:W:1057:VAL:HG22	30:c:29:DC:C5'	2.28	0.46
26:X:1:MET:HE3	26:a:51:PRO:HD3	1.98	0.46
27:Y:176:LYS:HD3	31:d:7:DT:H2''	1.97	0.46
32:e:94:GLY:O	32:e:95:ARG:HG3	2.16	0.46
1:5:499:U:H2'	1:5:500:G:H8	1.81	0.46
1:5:511:A:H2'	1:5:512:U:H6	1.81	0.46
1:5:631:C:H2'	1:5:632:A:H8	1.79	0.46
1:5:1468:A:H2'	23:U:26:GLY:CA	2.46	0.46
3:A:227:LEU:HD23	3:A:231:LEU:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:E:130:VAL:N	7:E:131:PRO:HD3	2.31	0.46
10:H:6:TYR:CE2	10:H:92:PHE:HD1	2.34	0.46
13:K:80:ILE:HG12	13:K:110:ILE:HD13	1.97	0.46
22:T:36:LEU:HD23	22:T:41:ARG:HH11	1.80	0.46
25:W:609:ALA:CB	26:a:163:PHE:HB3	2.46	0.46
25:W:831:MET:HE3	25:W:854:ILE:HD12	1.97	0.46
25:W:890:TYR:N	31:d:14:DG:H5'	2.29	0.46
1:5:441:U:H2'	1:5:442:G:C8	2.50	0.46
1:5:881:G:N1	1:5:905:U:C2	2.83	0.46
1:5:1110:C:H2'	1:5:1111:G:C8	2.47	0.46
1:5:1136:G:O6	1:5:1157:G:O6	2.33	0.46
9:G:26:ARG:HH22	9:G:85:ASN:C	2.22	0.46
25:W:299:LEU:CD1	25:W:368:PHE:HE2	2.29	0.46
27:Y:945:ARG:HH22	26:a:298:ALA:HB3	1.80	0.46
29:b:139:PHE:CD2	29:b:147:ILE:CD1	2.99	0.46
1:5:980:C:N4	1:5:1196:G:O6	2.49	0.46
3:A:264:ALA:N	3:A:265:PRO:HD2	2.32	0.46
4:B:59:GLU:HB2	4:B:66:ASP:HB2	1.98	0.46
4:B:87:LYS:O	4:B:90:LYS:HG3	2.15	0.46
24:V:74:ASP:OD2	24:V:92:PHE:CB	2.55	0.46
24:V:91:ASP:OD1	24:V:92:PHE:C	2.58	0.46
25:W:31:TRP:CH2	27:Y:1352:SER:HG	1.73	0.46
25:W:351:ILE:CD1	32:e:131:THR:HB	2.46	0.46
25:W:501:ARG:HG2	25:W:563:LEU:CD1	2.46	0.46
25:W:501:ARG:HG2	25:W:563:LEU:HD11	1.97	0.46
27:Y:1149:LEU:HD11	27:Y:1181:LEU:CD2	2.45	0.46
1:5:310:C:H2'	1:5:311:A:C8	2.50	0.45
1:5:1146:A:H2'	1:5:1147:U:C6	2.51	0.45
1:5:1325:U:O2'	8:F:32:ASP:OD1	2.32	0.45
7:E:49:ILE:HD11	7:E:84:ARG:NH2	2.30	0.45
13:K:23:ALA:HB1	13:K:70:LEU:HD11	1.97	0.45
26:X:173:ILE:HD12	26:X:180:ALA:HB2	1.98	0.45
27:Y:30:GLN:CG	27:Y:676:PHE:HE1	2.29	0.45
26:a:283:ARG:CD	29:b:49:VAL:HG21	2.40	0.45
1:5:137:A:N7	1:5:157:A:N6	2.64	0.45
1:5:300:A:H2'	1:5:301:G:O4'	2.16	0.45
1:5:712:A:H2'	1:5:713:A:H8	1.77	0.45
1:5:1415:G:H2'	1:5:1416:U:C6	2.51	0.45
6:D:163:GLY:O	6:D:167:ARG:HB2	2.15	0.45
10:H:96:LEU:HB3	10:H:100:LEU:HD23	1.98	0.45
11:I:29:LYS:HD2	11:I:29:LYS:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:14:PRO:HB2	15:M:19:ARG:HB3	1.97	0.45
25:W:118:LEU:HB3	31:d:10:DG:H5''	1.96	0.45
25:W:313:ILE:CA	27:Y:1269:LYS:HZ3	2.26	0.45
25:W:406:LYS:CD	27:Y:1307:LEU:CB	2.80	0.45
25:W:596:ILE:CD1	26:a:67:PHE:CE1	2.99	0.45
25:W:893:ARG:HG3	27:Y:1292:TRP:CH2	2.51	0.45
27:Y:363:GLU:CG	27:Y:379:ARG:NH1	2.78	0.45
27:Y:634:GLY:CA	30:c:24:DT:C7	2.69	0.45
29:b:183:LYS:CD	29:b:281:ASN:HB3	2.46	0.45
1:5:214:U:H2'	1:5:215:C:C6	2.51	0.45
1:5:287:U:H2'	1:5:288:A:C8	2.52	0.45
1:5:715:A:P	12:J:112:ASN:HD21	2.39	0.45
1:5:1266:U:H2'	1:5:1267:G:C8	2.51	0.45
15:M:41:ARG:HG3	15:M:42:LEU:N	2.31	0.45
17:O:6:LEU:HD22	17:O:17:TYR:HD2	1.81	0.45
17:O:67:ASP:OD1	17:O:68:THR:N	2.49	0.45
25:W:77:LYS:HD3	29:b:154:ILE:O	2.16	0.45
25:W:890:TYR:CE1	31:d:13:DA:O4'	2.65	0.45
25:W:1079:THR:HG22	25:W:1084:GLN:HG2	1.97	0.45
1:5:35:C:H2'	1:5:36:G:C8	2.51	0.45
1:5:260:C:H2'	1:5:261:G:O4'	2.16	0.45
1:5:537:A:H2'	1:5:538:G:H8	1.80	0.45
1:5:1220:A:H2'	1:5:1221:A:C8	2.51	0.45
1:5:1266:U:H2'	1:5:1267:G:H8	1.81	0.45
20:R:39:THR:HG22	20:R:70:LYS:HD3	1.97	0.45
25:W:408:VAL:CA	27:Y:1310:LYS:HB3	2.46	0.45
25:W:875:ARG:NE	27:Y:661:THR:HG21	2.31	0.45
27:Y:655:ARG:NH2	27:Y:709:GLU:OE2	2.46	0.45
26:a:283:ARG:NH2	29:b:82:LEU:CD1	2.79	0.45
29:b:291:ASN:N	29:b:296:LYS:CG	2.41	0.45
31:d:23:DC:H2''	31:d:24:DA:C8	2.51	0.45
1:5:98:G:H2'	1:5:99:U:H6	1.81	0.45
1:5:499:U:OP1	13:K:127:ARG:NH2	2.49	0.45
1:5:1197:G:H2'	1:5:1198:C:C6	2.51	0.45
1:5:1496:G:H2'	1:5:1497:U:C6	2.51	0.45
2:6:38:G:H1'	24:V:188:SER:CB	2.47	0.45
17:O:6:LEU:CD1	17:O:68:THR:HB	2.47	0.45
18:P:52:GLU:HG3	18:P:53:VAL:HG13	1.97	0.45
25:W:733:THR:OG1	27:Y:897:PHE:O	2.28	0.45
27:Y:614:ASP:HA	27:Y:854:GLN:HE22	1.82	0.45
27:Y:848:LYS:HD3	27:Y:859:ASN:OD1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:53:U:H2'	1:5:54:A:C8	2.51	0.45
1:5:176:G:C6	1:5:190:A:C6	3.05	0.45
1:5:500:G:H2'	1:5:501:A:C8	2.52	0.45
1:5:568:G:H2'	1:5:569:U:C6	2.52	0.45
1:5:915:U:H2'	1:5:916:U:C6	2.51	0.45
3:A:226:CYS:SG	3:A:256:ILE:HD13	2.57	0.45
4:B:146:LYS:HE2	4:B:146:LYS:HB3	1.70	0.45
18:P:25:GLN:NE2	18:P:27:GLU:OE1	2.50	0.45
22:T:38:LYS:HB2	22:T:38:LYS:HE3	1.72	0.45
26:X:44:ARG:NH1	27:Y:1232:ARG:HA	2.32	0.45
26:X:57:ALA:HB2	26:X:173:ILE:HD11	1.98	0.45
27:Y:409:ALA:O	27:Y:423:LYS:HE3	2.17	0.45
1:5:171:A:H2'	1:5:172:C:C6	2.51	0.45
1:5:798:U:H2'	1:5:799:A:H8	1.82	0.45
1:5:1265:U:H5''	10:H:44:LYS:NZ	2.32	0.45
4:B:7:SER:OG	4:B:11:ARG:NH2	2.50	0.45
5:C:78:VAL:O	5:C:81:GLN:NE2	2.47	0.45
17:O:6:LEU:HD23	17:O:17:TYR:HB2	1.99	0.45
25:W:184:ILE:HD12	25:W:210:LEU:CD1	2.47	0.45
25:W:313:ILE:HD11	27:Y:1269:LYS:CB	2.39	0.45
25:W:583:LEU:O	25:W:641:GLY:HA3	2.17	0.45
1:5:137:A:H62	1:5:156:U:H3	1.63	0.45
1:5:329:C:H2'	1:5:330:C:H6	1.81	0.45
1:5:561:A:H2'	1:5:565:G:C8	2.52	0.45
1:5:1347:U:H2'	1:5:1348:G:O4'	2.16	0.45
1:5:1414:U:H2'	1:5:1415:G:C8	2.52	0.45
7:E:71:ASP:HA	7:E:74:ARG:NE	2.32	0.45
25:W:76:ILE:CG2	29:b:156:THR:H	2.30	0.45
25:W:781:TRP:CE3	25:W:853:PRO:HG3	2.52	0.45
27:Y:98:ALA:HB2	27:Y:130:LEU:HD11	1.98	0.45
27:Y:634:GLY:CA	30:c:24:DT:H71	2.17	0.45
27:Y:1160:ARG:NH1	27:Y:1176:ASP:OD2	2.50	0.45
29:b:131:ALA:HA	29:b:171:THR:CB	2.46	0.45
2:6:39:A:H4'	24:V:147:LYS:HZ1	1.82	0.45
2:6:43:G:H3'	2:6:44:U:H5''	1.99	0.45
13:K:77:LEU:HB3	13:K:106:VAL:HG22	1.99	0.45
17:O:4:ILE:HA	17:O:20:VAL:O	2.17	0.45
26:X:276:ARG:HG3	29:b:313:LEU:HD22	1.99	0.45
27:Y:816:MET:HB3	27:Y:877:ALA:HB3	1.99	0.45
1:5:656:U:H2'	1:5:657:G:C8	2.52	0.45
1:5:980:C:N3	1:5:1196:G:N1	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1272:C:N3	8:F:113:LYS:HD2	2.32	0.45
1:5:1329:G:H2'	1:5:1330:A:C8	2.51	0.45
3:A:98:ASN:HA	3:A:101:LYS:HG2	1.99	0.45
3:A:202:CYS:O	3:A:216:PRO:HA	2.16	0.45
6:D:209:ALA:HB1	6:D:215:ASN:HA	1.99	0.45
7:E:5:ILE:O	7:E:59:ARG:HA	2.17	0.45
7:E:26:GLN:HE22	7:E:35:LEU:HD11	1.81	0.45
17:O:4:ILE:H	17:O:4:ILE:HG12	1.47	0.45
17:O:15:PRO:CB	17:O:17:TYR:HE1	2.29	0.45
25:W:164:GLU:OE1	25:W:179:LYS:NZ	2.49	0.45
25:W:355:ASN:ND2	32:e:96:TYR:OH	2.50	0.45
25:W:1126:ILE:HG23	25:W:1138:VAL:HG13	1.99	0.45
1:5:297:A:H2'	1:5:298:G:H8	1.82	0.44
1:5:528:G:N7	23:U:49:MET:SD	2.90	0.44
1:5:924:A:O2'	1:5:925:C:H6	1.99	0.44
1:5:1062:C:O2	1:5:1063:G:C8	2.71	0.44
1:5:1162:G:H2'	1:5:1163:A:C8	2.52	0.44
1:5:1178:C:H2'	1:5:1179:A:C8	2.52	0.44
2:6:17:U:OP2	24:V:102:LYS:CD	2.65	0.44
8:F:110:ARG:HG2	8:F:111:HIS:N	2.32	0.44
17:O:15:PRO:HB2	17:O:17:TYR:HE1	1.82	0.44
17:O:17:TYR:N	17:O:17:TYR:CD1	2.86	0.44
25:W:864:ILE:N	27:Y:1200:PHE:CD1	2.85	0.44
26:X:276:ARG:NE	29:b:323:GLU:OE1	2.50	0.44
27:Y:408:LEU:HD13	27:Y:427:LEU:HD21	1.97	0.44
27:Y:999:PHE:CZ	29:b:64:ILE:CD1	3.01	0.44
1:5:280:G:H2'	1:5:281:U:C6	2.53	0.44
1:5:923:G:O6	1:5:924:A:N6	2.49	0.44
1:5:1202:A:C8	20:R:83:HIS:CD2	3.05	0.44
1:5:1491:A:H2'	1:5:1493:A:OP2	2.17	0.44
6:D:188:PRO:O	6:D:192:ILE:HG12	2.16	0.44
8:F:26:ILE:HD11	8:F:39:GLN:HA	1.99	0.44
12:J:115:LYS:HD2	22:T:35:HIS:CE1	2.51	0.44
25:W:57:GLU:OE2	25:W:69:ALA:HB2	2.17	0.44
25:W:402:ASN:CB	27:Y:1338:SER:HB3	2.46	0.44
27:Y:1001:GLU:N	29:b:109:LYS:HE2	2.32	0.44
29:b:173:LYS:HB2	29:b:207:TRP:HZ3	1.83	0.44
1:5:833:G:O6	1:5:844:U:O4	2.35	0.44
1:5:1115:G:O2'	1:5:1116:U:H6	2.00	0.44
1:5:1492:G:H2'	1:5:1493:A:C8	2.53	0.44
3:A:152:LEU:O	3:A:156:ILE:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:3:LYS:HB2	8:F:3:LYS:HE3	1.81	0.44
9:G:46:GLU:HG2	9:G:50:LYS:NZ	2.32	0.44
9:G:126:LYS:HG3	28:Z:42:LYS:HB2	1.99	0.44
9:G:130:LEU:HB2	28:Z:42:LYS:HA	1.99	0.44
9:G:130:LEU:CD2	28:Z:45:GLU:HB2	2.46	0.44
9:G:131:LYS:O	9:G:133:ILE:HG12	2.17	0.44
20:R:47:ASN:O	20:R:62:VAL:HG22	2.18	0.44
25:W:257:LEU:HB3	25:W:281:LEU:HD12	1.99	0.44
25:W:407:ARG:NH1	27:Y:1283:GLY:O	2.50	0.44
27:Y:1001:GLU:CA	29:b:109:LYS:CG	2.53	0.44
29:b:289:ILE:N	29:b:300:ASN:ND2	2.64	0.44
1:5:407:A:N6	1:5:427:A:H62	2.15	0.44
1:5:919:C:H2'	1:5:920:G:C8	2.53	0.44
1:5:1066:U:O2	1:5:1092:A:C1'	2.66	0.44
1:5:1226:A:H2'	1:5:1227:A:C8	2.52	0.44
1:5:1355:U:C2	8:F:2:ARG:HG3	2.53	0.44
6:D:135:SER:HB2	6:D:177:ASP:OD1	2.17	0.44
11:I:15:LYS:HE3	11:I:77:LYS:HD3	2.00	0.44
25:W:368:PHE:CZ	27:Y:1350:ALA:N	2.86	0.44
25:W:409:ASP:OD2	27:Y:1310:LYS:HA	2.17	0.44
25:W:884:LYS:HZ3	25:W:1028:THR:HA	1.81	0.44
25:W:1130:LEU:HD22	25:W:1215:VAL:HG23	1.98	0.44
26:X:34:PHE:HZ	26:a:231:ILE:HG22	1.82	0.44
27:Y:76:THR:CG2	27:Y:125:VAL:HG21	2.48	0.44
1:5:201:G:H1	1:5:214:U:H3	1.65	0.44
1:5:291:C:H2'	1:5:292:U:C6	2.53	0.44
1:5:309:A:H2'	1:5:310:C:C6	2.53	0.44
1:5:641:U:H2'	1:5:642:A:H8	1.83	0.44
17:O:6:LEU:CD2	17:O:17:TYR:HD2	2.31	0.44
17:O:37:GLY:HA3	17:O:50:ILE:HA	1.99	0.44
25:W:95:VAL:CG1	27:Y:1371:LEU:CG	2.57	0.44
25:W:596:ILE:CD1	26:a:67:PHE:HE1	2.30	0.44
26:a:283:ARG:HH12	29:b:79:ASP:CG	2.25	0.44
30:c:15:DT:C3'	32:e:95:ARG:NH2	2.76	0.44
1:5:29:G:O2'	1:5:292:U:OP1	2.32	0.44
1:5:42:G:H2'	1:5:43:G:C8	2.51	0.44
1:5:98:G:H2'	1:5:99:U:C6	2.53	0.44
1:5:499:U:OP2	13:K:127:ARG:NH1	2.48	0.44
1:5:747:C:O2	16:N:20:GLY:HA3	2.17	0.44
1:5:1136:G:H1	1:5:1151:A:N6	2.15	0.44
2:6:29:C:H2'	2:6:30:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:116:THR:HA	3:A:123:LEU:HD22	1.99	0.44
4:B:76:PHE:H	29:b:257:PRO:CG	2.19	0.44
4:B:83:LYS:HB2	4:B:83:LYS:HE3	1.84	0.44
4:B:92:ILE:HA	4:B:95:ILE:HG22	2.00	0.44
10:H:52:GLN:HE22	10:H:105:LEU:HD22	1.83	0.44
27:Y:17:THR:H	27:Y:1140:ASN:HD21	1.65	0.44
27:Y:374:CYS:HB3	27:Y:459:VAL:HG12	2.00	0.44
27:Y:465:SER:HB2	27:Y:500:THR:HB	2.00	0.44
29:b:43:LYS:HE3	29:b:49:VAL:HG13	2.00	0.44
1:5:735:C:H2'	1:5:736:U:C6	2.53	0.44
1:5:782:G:H2'	1:5:783:G:H8	1.82	0.44
1:5:1471:C:H4'	24:V:128:ASP:OD1	2.15	0.44
4:B:114:LEU:HD13	4:B:207:ARG:HD2	1.99	0.44
5:C:144:LEU:HD23	5:C:149:ILE:HG13	2.00	0.44
8:F:130:THR:O	8:F:134:ILE:HB	2.18	0.44
9:G:124:THR:HB	9:G:127:VAL:HG12	2.00	0.44
11:I:41:LYS:HB2	11:I:83:VAL:HG11	1.99	0.44
23:U:53:ARG:HH11	24:V:156:VAL:HG23	1.81	0.44
25:W:305:ILE:CG2	27:Y:1344:LYS:C	2.77	0.44
25:W:313:ILE:HD13	27:Y:1269:LYS:HD2	1.99	0.44
25:W:389:THR:CA	27:Y:1349:LEU:HD11	2.48	0.44
25:W:835:PHE:HZ	27:Y:647:ASP:HB2	1.68	0.44
25:W:867:TYR:CE2	27:Y:774:ASP:O	2.71	0.44
27:Y:163:MET:HG3	27:Y:510:TYR:CD1	2.53	0.44
27:Y:395:ARG:O	27:Y:401:GLU:HG3	2.17	0.44
29:b:239:LYS:HZ1	29:b:294:LYS:HD2	1.82	0.44
1:5:421:G:H2'	1:5:422:A:C8	2.51	0.44
1:5:672:A:H1'	12:J:111:HIS:CE1	2.53	0.44
1:5:1065:G:H2'	1:5:1066:U:H6	1.83	0.44
1:5:1413:G:H1	1:5:1438:U:H3	1.66	0.44
2:6:6:U:H2'	2:6:7:U:C6	2.53	0.44
2:6:57:C:C5	24:V:49:ILE:HG21	2.52	0.44
7:E:71:ASP:N	7:E:71:ASP:OD1	2.50	0.44
25:W:599:THR:HG21	26:a:86:GLN:NE2	2.27	0.44
27:Y:392:LYS:NZ	27:Y:529:ASN:HA	2.33	0.44
27:Y:723:ILE:HG22	27:Y:727:ASN:HA	1.98	0.44
27:Y:999:PHE:HZ	29:b:64:ILE:CD1	2.31	0.44
29:b:183:LYS:HB3	29:b:280:PHE:HA	1.99	0.44
30:c:19:DT:C2'	30:c:21:DC:C4'	2.92	0.44
1:5:454:U:H2'	1:5:455:U:H6	1.83	0.44
1:5:1066:U:H1'	1:5:1092:A:H1'	1.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:6:57:C:N4	24:V:49:ILE:CG1	2.74	0.44
5:C:57:LYS:HE3	5:C:200:TYR:OH	2.17	0.44
8:F:149:ALA:HB3	12:J:54:TYR:HB2	2.00	0.44
10:H:116:LYS:HA	10:H:123:ALA:HB2	2.00	0.44
25:W:226:ILE:HG22	25:W:232:PHE:HB3	1.99	0.44
25:W:313:ILE:HG22	27:Y:1269:LYS:HZ2	1.82	0.44
25:W:349:PRO:CA	32:e:137:ASP:OD2	2.66	0.44
25:W:530:ASP:CB	27:Y:906:GLU:OE2	2.66	0.44
25:W:872:TYR:HD1	27:Y:648:VAL:HB	1.77	0.44
26:X:35:VAL:HG21	26:X:207:ASP:HB2	2.00	0.44
27:Y:141:VAL:CG1	27:Y:613:LEU:HD22	2.42	0.44
27:Y:404:TYR:HA	27:Y:432:ILE:HD11	1.99	0.44
27:Y:1126:CYS:O	27:Y:1154:LYS:CE	2.64	0.44
29:b:45:HIS:CB	29:b:115:LEU:CD2	2.96	0.44
1:5:400:G:P	5:C:118:ASN:HD22	2.41	0.43
1:5:1220:A:H2'	1:5:1221:A:H8	1.83	0.43
7:E:107:LEU:O	7:E:111:LYS:HG3	2.18	0.43
22:T:21:VAL:O	22:T:25:ILE:HG12	2.18	0.43
25:W:135:VAL:HG12	25:W:139:LEU:HD12	1.99	0.43
26:X:107:GLU:OE2	26:a:316:LYS:HA	2.18	0.43
26:X:283:ARG:NH1	29:b:313:LEU:O	2.50	0.43
27:Y:354:SER:N	30:c:20:DG:C4	2.83	0.43
26:a:95:LEU:HD11	26:a:132:GLY:HA3	2.00	0.43
1:5:259:A:C8	1:5:260:C:H5	2.36	0.43
1:5:394:U:H2'	1:5:395:G:H8	1.83	0.43
1:5:538:G:H2'	1:5:539:G:C8	2.54	0.43
1:5:862:C:H2'	1:5:863:A:O4'	2.17	0.43
3:A:124:SER:HA	3:A:127:ILE:HG12	1.99	0.43
3:A:246:PHE:CE2	3:A:256:ILE:HD11	2.53	0.43
4:B:180:THR:OG1	4:B:183:ALA:HB2	2.18	0.43
10:H:109:ASP:C	10:H:110:LYS:HG3	2.43	0.43
21:S:43:ASN:O	21:S:47:VAL:HG23	2.19	0.43
25:W:890:TYR:HH	31:d:13:DA:P	2.41	0.43
25:W:1219:ASP:HB3	25:W:1235:GLN:HE22	1.82	0.43
27:Y:945:ARG:NH1	26:a:298:ALA:HB1	2.32	0.43
27:Y:998:ILE:HG12	29:b:8:PHE:CE2	2.54	0.43
27:Y:1340:LYS:NZ	27:Y:1370:ILE:HG12	2.32	0.43
26:a:283:ARG:HH22	29:b:82:LEU:HD12	1.83	0.43
1:5:126:U:H2'	1:5:127:A:H8	1.83	0.43
1:5:287:U:H2'	1:5:288:A:H8	1.83	0.43
1:5:400:G:P	5:C:114:ARG:HH22	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:541:C:H5'	5:C:13:ARG:NE	2.33	0.43
1:5:618:U:O2'	1:5:619:A:O4'	2.32	0.43
1:5:777:A:H5''	12:J:118:LYS:HD2	2.01	0.43
1:5:1194:A:H2'	1:5:1195:G:C8	2.53	0.43
1:5:1488:A:H2'	1:5:1489:C:C6	2.54	0.43
12:J:86:LYS:O	12:J:90:ILE:HG12	2.18	0.43
18:P:60:LYS:HZ1	18:P:81:ILE:HG21	1.83	0.43
20:R:10:PHE:CE1	20:R:37:ARG:HD3	2.52	0.43
25:W:621:SER:HB2	26:a:82:LEU:HD13	1.96	0.43
25:W:737:PHE:HB2	27:Y:1223:HIS:O	2.18	0.43
27:Y:15:THR:HG21	27:Y:863:LEU:HD23	1.99	0.43
27:Y:385:LEU:O	27:Y:389:GLY:HA3	2.19	0.43
32:e:74:TRP:CH2	32:e:84:LYS:HD2	2.53	0.43
1:5:671:G:H2'	1:5:672:A:C8	2.51	0.43
1:5:707:G:H2'	1:5:708:A:C8	2.53	0.43
1:5:753:C:H2'	1:5:754:U:C6	2.53	0.43
1:5:982:A:H2'	1:5:983:G:C8	2.54	0.43
1:5:1051:U:OP1	15:M:45:ARG:NH1	2.51	0.43
3:A:115:GLY:HA2	3:A:118:THR:HG22	2.00	0.43
5:C:145:LYS:HG2	5:C:145:LYS:O	2.18	0.43
7:E:14:SER:H	7:E:17:GLN:NE2	2.16	0.43
9:G:30:LEU:HD23	9:G:30:LEU:HA	1.88	0.43
11:I:52:LYS:HE2	11:I:74:ASN:ND2	2.33	0.43
25:W:464:ILE:HD11	27:Y:1326:LYS:HG2	2.00	0.43
25:W:576:MET:SD	25:W:720:LYS:HG3	2.58	0.43
25:W:835:PHE:CB	25:W:837:TYR:CZ	3.02	0.43
27:Y:177:ARG:NH1	27:Y:221:ALA:O	2.51	0.43
29:b:183:LYS:NZ	29:b:245:GLY:CA	2.82	0.43
1:5:378:A:O2'	1:5:379:A:O4'	2.18	0.43
1:5:1111:G:H2'	1:5:1112:U:H6	1.84	0.43
1:5:1338:A:H1'	1:5:1340:G:C8	2.53	0.43
18:P:6:ARG:HG3	18:P:64:VAL:HG23	2.00	0.43
25:W:66:TYR:HE2	29:b:158:LYS:HG2	1.83	0.43
25:W:269:VAL:HG11	25:W:273:LYS:HD3	2.01	0.43
25:W:406:LYS:CD	27:Y:1307:LEU:C	2.89	0.43
25:W:582:TYR:OH	27:Y:1238:GLU:OE2	2.32	0.43
26:X:225:PHE:CE1	26:a:239:ILE:HG23	2.54	0.43
26:X:300:ILE:HD11	26:X:325:LEU:HD22	2.01	0.43
27:Y:824:VAL:CG1	27:Y:827:VAL:HG23	2.49	0.43
27:Y:1079:PRO:HB2	27:Y:1228:LEU:HD21	2.00	0.43
1:5:82:C:C2	1:5:83:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:168:A:O2'	1:5:169:G:OP1	2.33	0.43
1:5:528:G:C8	23:U:49:MET:SD	3.12	0.43
1:5:842:C:H2'	1:5:843:C:C6	2.53	0.43
1:5:850:G:H2'	1:5:851:U:C6	2.53	0.43
1:5:1303:A:H5'	14:L:29:ARG:HH21	1.83	0.43
4:B:165:ILE:O	4:B:167:ARG:N	2.45	0.43
5:C:2:LYS:HG3	5:C:2:LYS:O	2.18	0.43
9:G:130:LEU:H	28:Z:42:LYS:HD3	1.82	0.43
9:G:131:LYS:N	28:Z:42:LYS:HE2	2.32	0.43
12:J:29:ASP:HB2	12:J:35:LEU:HD21	2.00	0.43
13:K:4:ILE:H	13:K:4:ILE:HD12	1.84	0.43
13:K:70:LEU:HB2	13:K:72:ASN:OD1	2.18	0.43
21:S:27:LYS:HG3	21:S:50:GLN:NE2	2.33	0.43
25:W:399:PHE:HA	25:W:403:LEU:HD12	2.00	0.43
25:W:542:LEU:CD1	27:Y:1330:PHE:CZ	3.01	0.43
27:Y:62:PRO:HG2	27:Y:559:THR:HG23	2.00	0.43
27:Y:943:ILE:HD13	27:Y:1043:ILE:HD12	1.99	0.43
29:b:290:TRP:CZ2	29:b:296:LYS:CE	3.00	0.43
1:5:662:G:H1'	1:5:730:G:H5'	2.01	0.43
1:5:1138:U:H2'	1:5:1139:A:C8	2.53	0.43
13:K:89:GLU:O	13:K:90:HIS:HB2	2.19	0.43
25:W:579:GLY:HA3	25:W:723:GLY:O	2.19	0.43
25:W:595:ILE:HG12	26:a:166:PHE:CE1	2.54	0.43
27:Y:100:LEU:CD1	27:Y:591:ILE:CD1	2.97	0.43
27:Y:607:HIS:HE1	27:Y:609:LEU:HD12	1.83	0.43
27:Y:911:ILE:HB	27:Y:915:LEU:HD12	2.00	0.43
27:Y:945:ARG:NH2	26:a:298:ALA:CB	2.80	0.43
32:e:108:TRP:CE3	32:e:120:ILE:HD12	2.54	0.43
1:5:1139:A:H2'	1:5:1140:A:C8	2.54	0.43
1:5:1193:U:H2'	1:5:1194:A:H8	1.80	0.43
6:D:101:ILE:HD11	6:D:173:ALA:CA	2.49	0.43
7:E:152:PRO:HA	9:G:56:ASN:ND2	2.33	0.43
12:J:98:LEU:HD12	12:J:98:LEU:HA	1.92	0.43
18:P:56:LYS:N	18:P:59:ASP:OD2	2.52	0.43
25:W:398:LEU:HD23	27:Y:1342:LEU:HD13	1.99	0.43
25:W:444:HIS:ND1	27:Y:1327:GLY:HA3	2.33	0.43
25:W:611:LYS:HE3	26:a:163:PHE:O	2.19	0.43
25:W:835:PHE:HE2	27:Y:648:VAL:C	2.26	0.43
29:b:175:TYR:HB2	29:b:207:TRP:CB	2.44	0.43
1:5:425:G:OP2	5:C:9:LYS:HD3	2.18	0.43
1:5:426:U:H5'	5:C:8:PHE:HD2	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1066:U:H2'	1:5:1067:C:H6	1.83	0.43
1:5:1140:A:C2'	1:5:1141:U:H5'	2.49	0.43
1:5:1229:A:OP1	11:I:53:GLU:HB3	2.19	0.43
2:6:20:G:H5'	2:6:21:U:C5	2.53	0.43
2:6:57:C:C5	24:V:49:ILE:CG2	3.01	0.43
10:H:108:ARG:NH2	10:H:110:LYS:H	2.16	0.43
19:Q:103:LYS:HD3	19:Q:103:LYS:HA	1.80	0.43
25:W:188:PHE:CE2	25:W:204:LYS:HB2	2.54	0.43
25:W:595:ILE:HG12	26:a:166:PHE:HE1	1.84	0.43
25:W:621:SER:HB2	26:a:82:LEU:HD12	1.98	0.43
27:Y:998:ILE:CG1	29:b:8:PHE:CZ	3.01	0.43
26:a:300:ILE:HD11	26:a:325:LEU:HD22	2.01	0.43
29:b:290:TRP:CG	29:b:296:LYS:CD	2.92	0.43
1:5:675:U:H2'	1:5:676:U:C6	2.53	0.43
1:5:825:A:N3	3:A:39:PRO:HG2	2.34	0.43
1:5:943:C:H2'	1:5:944:A:C8	2.49	0.43
1:5:1088:C:OP1	3:A:158:ARG:HG2	2.19	0.43
4:B:140:SER:O	4:B:143:LYS:HG2	2.19	0.43
6:D:197:ASP:C	6:D:201:LYS:HZ2	2.27	0.43
7:E:39:TYR:HB2	7:E:58:TYR:CD2	2.54	0.43
25:W:611:LYS:NZ	26:a:168:GLU:CD	2.75	0.43
25:W:648:VAL:HG21	25:W:722:LEU:CD1	2.49	0.43
27:Y:212:LEU:HD12	27:Y:223:ILE:HG12	2.01	0.43
27:Y:1051:ARG:NH1	27:Y:1254:MET:HE3	2.34	0.43
1:5:87:G:H2'	1:5:88:A:H8	1.84	0.42
1:5:369:A:H61	1:5:387:G:H1'	1.84	0.42
1:5:484:A:H2'	1:5:485:C:O4'	2.19	0.42
1:5:924:A:C2	1:5:1363:U:N3	2.85	0.42
1:5:1047:U:H4'	4:B:165:ILE:HD12	2.01	0.42
1:5:1415:G:H2'	1:5:1416:U:H6	1.83	0.42
1:5:1492:G:C6	24:V:131:PHE:CD1	3.07	0.42
6:D:87:ARG:HG3	6:D:109:LEU:HD22	2.01	0.42
17:O:6:LEU:HB3	17:O:17:TYR:HB3	2.01	0.42
21:S:27:LYS:HE2	21:S:50:GLN:HE22	1.83	0.42
25:W:75:LYS:HD2	29:b:153:ASP:OD2	2.16	0.42
25:W:443:ILE:CD1	27:Y:1325:VAL:HG22	2.49	0.42
25:W:862:LEU:O	27:Y:1200:PHE:HD1	2.02	0.42
25:W:872:TYR:CE1	27:Y:648:VAL:CG1	3.02	0.42
25:W:1227:SER:HB2	25:W:1258:GLU:OE1	2.19	0.42
27:Y:1119:LYS:NZ	27:Y:1174:ASN:OD1	2.50	0.42
29:b:183:LYS:HD3	29:b:245:GLY:HA2	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:108:C:H2'	1:5:109:G:C8	2.54	0.42
1:5:178:U:H2'	1:5:179:U:C6	2.53	0.42
1:5:185:G:H2'	1:5:186:A:C8	2.54	0.42
1:5:402:G:H21	5:C:115:GLN:HE22	1.66	0.42
1:5:409:G:H1'	1:5:425:G:H21	1.84	0.42
2:6:20:G:H1	24:V:53:GLY:N	2.17	0.42
5:C:60:MET:HE2	5:C:93:LEU:HG	2.00	0.42
6:D:161:ILE:HD11	6:D:179:TYR:CD1	2.54	0.42
17:O:64:LYS:HD3	17:O:64:LYS:HA	1.73	0.42
25:W:440:PRO:HG3	27:Y:1324:ILE:CD1	2.35	0.42
27:Y:943:ILE:HD13	27:Y:1043:ILE:HD11	1.99	0.42
27:Y:1118:ALA:CB	27:Y:1191:LEU:O	2.67	0.42
1:5:137:A:H2'	1:5:137:A:N3	2.34	0.42
1:5:321:A:H2'	1:5:322:G:O4'	2.19	0.42
1:5:359:A:H5''	13:K:44:ARG:HD3	2.00	0.42
14:L:65:ILE:HD12	14:L:65:ILE:H	1.83	0.42
19:Q:90:LEU:O	19:Q:94:ARG:HG3	2.19	0.42
22:T:8:ASN:HA	22:T:14:ALA:CB	2.49	0.42
25:W:488:ASP:CA	25:W:551:ARG:NH2	2.82	0.42
25:W:573:THR:H	25:W:576:MET:HE3	1.85	0.42
27:Y:567:GLY:HA3	32:e:31:LYS:CD	2.49	0.42
27:Y:641:PRO:HD2	30:c:26:DT:H5'	1.73	0.42
26:a:46:LEU:HD23	26:a:50:ILE:HD11	2.01	0.42
26:a:73:MET:HE3	26:a:143:PHE:CG	2.54	0.42
29:b:16:ILE:HD12	29:b:57:PHE:HE1	1.84	0.42
32:e:78:ASP:OD1	32:e:81:ARG:CB	2.58	0.42
1:5:475:U:H3'	1:5:476:U:H5''	2.01	0.42
1:5:498:G:H2'	1:5:499:U:C6	2.55	0.42
1:5:943:C:OP1	14:L:106:ALA:HA	2.19	0.42
1:5:1382:C:O2'	24:V:127:HIS:CG	2.72	0.42
25:W:890:TYR:OH	31:d:12:DC:C2'	2.65	0.42
26:X:51:PRO:HG3	26:a:1:MET:SD	2.60	0.42
27:Y:998:ILE:HG22	29:b:108:LEU:HD13	1.83	0.42
26:a:32:SER:HA	26:a:207:ASP:OD2	2.19	0.42
1:5:498:G:H2'	1:5:499:U:H6	1.85	0.42
1:5:825:A:H2'	1:5:826:G:O4'	2.19	0.42
1:5:860:C:C4	1:5:861:A:H1'	2.55	0.42
1:5:938:U:H2'	1:5:939:G:H8	1.85	0.42
1:5:1390:G:C6	1:5:1461:G:C6	3.07	0.42
8:F:144:ALA:C	8:F:146:ALA:H	2.27	0.42
12:J:45:PHE:HE1	12:J:58:ILE:HD11	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:24:GLN:O	21:S:27:LYS:HG2	2.20	0.42
25:W:861:GLY:CA	27:Y:773:ASN:OD1	2.67	0.42
25:W:872:TYR:CE1	27:Y:648:VAL:HB	2.52	0.42
25:W:890:TYR:CE2	31:d:13:DA:OP1	2.70	0.42
27:Y:524:ILE:O	27:Y:530:LYS:HE3	2.19	0.42
1:5:99:U:H2'	1:5:100:G:H8	1.84	0.42
1:5:120:A:C4	1:5:321:A:N1	2.88	0.42
1:5:536:U:H2'	1:5:537:A:H8	1.82	0.42
1:5:1467:A:C6	23:U:45:GLY:CA	3.01	0.42
3:A:21:ALA:HB2	3:A:231:LEU:HD21	2.01	0.42
8:F:114:THR:HG22	8:F:116:LEU:H	1.83	0.42
9:G:26:ARG:NH2	9:G:85:ASN:O	2.45	0.42
9:G:113:ILE:HG23	9:G:124:THR:HG23	2.02	0.42
12:J:62:LYS:O	12:J:66:THR:HG22	2.20	0.42
13:K:30:LEU:C	13:K:31:LEU:HD23	2.43	0.42
25:W:123:LYS:NZ	25:W:1243:ASP:OD1	2.53	0.42
25:W:1143:ILE:HG13	25:W:1166:ILE:CD1	2.50	0.42
26:X:85:LYS:NZ	27:Y:919:ASP:OD2	2.52	0.42
26:X:108:ARG:NH2	26:a:316:LYS:NZ	2.67	0.42
27:Y:20:TYR:CE1	27:Y:22:GLY:HA3	2.55	0.42
27:Y:304:TYR:CE2	27:Y:335:MET:HE2	2.54	0.42
29:b:249:LYS:HB2	29:b:297:PHE:HE1	1.72	0.42
1:5:429:A:C4	1:5:430:G:C8	3.08	0.42
1:5:478:G:H21	1:5:479:A:H61	1.67	0.42
1:5:698:U:O4	24:V:96:THR:HG21	2.18	0.42
1:5:820:A:H2'	1:5:821:U:H6	1.84	0.42
1:5:940:G:H2'	1:5:940:G:N3	2.34	0.42
1:5:1007:U:H2'	1:5:1008:G:C8	2.54	0.42
1:5:1265:U:H2'	1:5:1266:U:C6	2.54	0.42
1:5:1409:A:H2'	1:5:1410:A:C8	2.55	0.42
1:5:1416:U:H2'	1:5:1417:U:C6	2.55	0.42
1:5:1502:G:H2'	1:5:1503:U:C6	2.55	0.42
3:A:95:LEU:O	3:A:99:ILE:HG12	2.20	0.42
6:D:162:ALA:HB1	6:D:166:ILE:HB	2.01	0.42
8:F:26:ILE:HD12	8:F:26:ILE:HA	1.91	0.42
25:W:349:PRO:HG3	32:e:137:ASP:HB3	2.02	0.42
25:W:391:ARG:NH1	27:Y:1341:LEU:HD11	2.35	0.42
25:W:1235:GLN:O	25:W:1240:ILE:HD12	2.19	0.42
27:Y:168:GLN:O	30:c:25:DC:H2''	2.17	0.42
27:Y:1122:LEU:HD21	27:Y:1149:LEU:HD23	2.01	0.42
1:5:1304:U:H2'	1:5:1305:G:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1328:C:H2'	1:5:1329:G:H8	1.84	0.42
2:6:35:G:N9	14:L:121:ILE:HG22	2.35	0.42
4:B:60:ARG:HA	4:B:64:THR:O	2.19	0.42
11:I:58:ILE:HG22	11:I:68:ARG:HE	1.84	0.42
13:K:47:CYS:HA	13:K:68:VAL:HA	2.02	0.42
18:P:32:HIS:CG	18:P:33:PRO:HD2	2.55	0.42
20:R:31:ILE:HD11	20:R:49:PHE:CE1	2.55	0.42
25:W:1211:ALA:H	28:Z:57:LEU:HD21	1.84	0.42
26:a:130:PRO:HG2	26:a:133:PHE:CD2	2.54	0.42
29:b:10:ASN:N	29:b:11:PRO:HD2	2.35	0.42
29:b:320:THR:O	29:b:352:SER:OG	2.33	0.42
1:5:501:A:H2'	1:5:502:C:C6	2.55	0.42
1:5:674:U:H3	1:5:710:G:H22	1.68	0.42
1:5:1233:G:H2'	1:5:1234:C:C6	2.55	0.42
3:A:256:ILE:HG22	3:A:257:GLU:O	2.19	0.42
4:B:112:PRO:O	4:B:118:ILE:HD11	2.20	0.42
25:W:94:ILE:HG13	27:Y:1370:ILE:CD1	2.46	0.42
25:W:745:LYS:NZ	25:W:860:GLU:OE2	2.46	0.42
25:W:861:GLY:HA2	27:Y:772:GLU:O	2.20	0.42
25:W:894:LYS:NZ	25:W:1219:ASP:OD2	2.52	0.42
26:X:35:VAL:CG1	26:X:195:VAL:HG22	2.50	0.42
27:Y:767:LEU:HD21	27:Y:808:ILE:HD12	2.01	0.42
1:5:20:C:H2'	1:5:21:U:H6	1.85	0.42
1:5:137:A:N7	1:5:156:U:O4	2.53	0.42
1:5:142:G:H2'	1:5:143:U:C6	2.54	0.42
1:5:254:G:H2'	1:5:255:G:H8	1.85	0.42
1:5:483:U:H2'	1:5:484:A:H8	1.83	0.42
1:5:673:A:H2'	1:5:674:U:H6	1.85	0.42
1:5:1288:C:H2'	1:5:1289:U:H6	1.84	0.42
3:A:31:GLY:HA2	3:A:53:ASN:HB3	2.02	0.42
7:E:145:ARG:N	9:G:61:GLU:O	2.51	0.42
12:J:54:TYR:O	12:J:58:ILE:HG23	2.20	0.42
12:J:104:ASN:OD1	12:J:105:GLU:N	2.52	0.42
13:K:44:ARG:HA	13:K:94:LEU:HA	2.02	0.42
25:W:380:LYS:HB2	31:d:23:DC:C6	2.40	0.42
25:W:408:VAL:CG1	27:Y:1306:LEU:HD22	2.42	0.42
25:W:612:VAL:HG11	25:W:640:VAL:HG21	2.02	0.42
29:b:131:ALA:C	29:b:171:THR:C	2.86	0.42
29:b:215:ASP:CA	29:b:217:ARG:HE	2.28	0.42
1:5:8:G:C4	1:5:294:A:C6	3.08	0.41
1:5:97:G:H21	1:5:350:G:H5'	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:838:A:H61	7:E:125:PRO:HA	1.85	0.41
1:5:1156:G:H1'	1:5:1157:G:C5	2.55	0.41
1:5:1273:A:H2'	1:5:1273:A:N3	2.34	0.41
3:A:112:TRP:CD1	3:A:114:GLY:H	2.37	0.41
4:B:156:VAL:HG22	4:B:201:VAL:HG12	2.02	0.41
18:P:66:THR:HG23	18:P:67:ARG:O	2.20	0.41
25:W:60:PHE:CD1	25:W:307:PRO:HD3	2.55	0.41
25:W:410:TYR:CZ	27:Y:1324:ILE:CD1	3.03	0.41
26:X:93:ASP:HA	26:X:96:PHE:CD2	2.55	0.41
27:Y:1122:LEU:HD11	27:Y:1149:LEU:HD23	2.02	0.41
26:a:280:CYS:SG	29:b:81:PHE:HE2	2.43	0.41
30:c:26:DT:OP1	30:c:26:DT:H3'	2.20	0.41
32:e:93:LEU:HD11	32:e:98:TYR:OH	2.19	0.41
1:5:302:A:N6	1:5:303:A:N1	2.68	0.41
1:5:410:A:N6	1:5:428:A:H1'	2.35	0.41
1:5:458:G:H2'	1:5:459:C:C6	2.55	0.41
1:5:675:U:H2'	1:5:676:U:H6	1.85	0.41
1:5:1075:G:OP1	1:5:1077:U:C2	2.72	0.41
3:A:72:VAL:HG12	3:A:175:LEU:HD21	2.01	0.41
3:A:107:PHE:CE1	3:A:165:GLY:HA2	2.55	0.41
5:C:168:GLU:CD	25:W:30:ASN:OD1	2.62	0.41
7:E:49:ILE:HG23	7:E:50:LYS:N	2.30	0.41
13:K:78:THR:HG21	13:K:95:LEU:HD22	2.01	0.41
20:R:66:MET:CE	20:R:74:PHE:CZ	3.03	0.41
25:W:598:GLY:HA3	26:a:82:LEU:HD22	1.85	0.41
25:W:862:LEU:N	27:Y:772:GLU:HB2	2.35	0.41
25:W:895:LEU:HD23	25:W:1218:ILE:HG21	2.02	0.41
26:X:81:VAL:HG13	26:X:181:THR:HG22	2.01	0.41
26:X:108:ARG:HH21	26:a:316:LYS:NZ	2.16	0.41
27:Y:266:ASN:O	27:Y:273:LYS:NZ	2.50	0.41
27:Y:349:HIS:CE1	32:e:109:ARG:NH2	2.88	0.41
27:Y:1233:THR:HA	26:a:40:ASN:ND2	2.35	0.41
29:b:136:MET:HG2	29:b:140:ILE:HD12	2.02	0.41
1:5:140:U:H2'	1:5:141:A:C8	2.55	0.41
1:5:1403:A:C6	1:5:1448:A:N1	2.89	0.41
1:5:1410:A:H2'	1:5:1411:A:C8	2.55	0.41
1:5:1410:A:H2'	1:5:1411:A:H8	1.84	0.41
1:5:1448:A:O2'	1:5:1449:G:O4'	2.30	0.41
1:5:1471:C:H2'	1:5:1472:G:C8	2.55	0.41
3:A:51:HIS:C	3:A:53:ASN:H	2.28	0.41
3:A:115:GLY:N	3:A:190:GLU:OE2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:76:PHE:CE2	29:b:257:PRO:O	2.69	0.41
5:C:75:PHE:HA	5:C:78:VAL:HG12	2.01	0.41
9:G:99:ARG:HG2	9:G:137:ILE:HD12	2.01	0.41
13:K:26:TYR:HA	13:K:37:ASN:HA	2.01	0.41
25:W:232:PHE:CE1	25:W:234:VAL:HG13	2.55	0.41
25:W:884:LYS:HG3	25:W:1029:MET:HE2	2.02	0.41
29:b:290:TRP:CD2	29:b:296:LYS:CE	3.03	0.41
32:e:108:TRP:CZ3	32:e:130:PRO:CB	2.99	0.41
1:5:417:U:O2'	1:5:418:U:H5''	2.20	0.41
1:5:1136:G:H1	1:5:1151:A:H61	1.68	0.41
1:5:1265:U:H2'	1:5:1266:U:H6	1.86	0.41
1:5:1354:G:H2'	1:5:1355:U:C6	2.55	0.41
1:5:1377:C:H2'	1:5:1378:C:O4'	2.19	0.41
1:5:1469:G:C8	23:U:25:HIS:CE1	3.08	0.41
1:5:1471:C:H1'	1:5:1492:G:H22	1.85	0.41
4:B:50:ASN:ND2	29:b:258:VAL:HG13	2.36	0.41
4:B:159:ARG:HG3	4:B:165:ILE:HD11	2.02	0.41
6:D:120:LYS:O	6:D:124:ASN:HB2	2.21	0.41
8:F:131:GLY:HA2	8:F:135:LYS:HB2	2.03	0.41
9:G:36:ILE:HD13	9:G:69:ILE:HG22	2.02	0.41
9:G:106:LEU:HD12	9:G:106:LEU:O	2.20	0.41
16:N:18:ASP:OD1	16:N:18:ASP:N	2.46	0.41
25:W:94:ILE:HG23	27:Y:1371:LEU:H	1.85	0.41
25:W:748:TYR:OH	25:W:791:GLU:OE1	2.24	0.41
27:Y:409:ALA:HA	27:Y:474:TYR:CE2	2.55	0.41
29:b:213:ARG:O	29:b:218:LEU:CB	2.48	0.41
1:5:708:A:H2'	1:5:709:A:C8	2.54	0.41
1:5:1047:U:H2'	1:5:1048:G:H8	1.85	0.41
1:5:1366:U:H2'	1:5:1367:G:C8	2.56	0.41
3:A:252:GLU:O	3:A:253:GLU:HG3	2.20	0.41
7:E:86:LEU:HD21	7:E:88:ILE:HD11	2.03	0.41
9:G:19:LEU:HD12	9:G:89:GLN:HB3	2.02	0.41
14:L:6:GLY:HA2	14:L:57:ARG:NH1	2.35	0.41
16:N:76:ARG:HA	16:N:76:ARG:CZ	2.51	0.41
25:W:1069:GLU:HB2	25:W:1095:ARG:HH12	1.85	0.41
27:Y:626:ARG:NH2	27:Y:674:ALA:O	2.53	0.41
27:Y:689:TYR:HB3	27:Y:752:TYR:HB3	2.03	0.41
27:Y:997:ALA:HB3	29:b:8:PHE:CE1	2.45	0.41
29:b:65:GLU:OE2	29:b:103:ARG:HD3	2.20	0.41
32:e:45:LEU:HD12	32:e:98:TYR:CE2	2.56	0.41
32:e:108:TRP:CZ3	32:e:130:PRO:CG	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:549:U:H2'	1:5:550:U:C6	2.56	0.41
1:5:597:C:H2'	1:5:598:U:C6	2.55	0.41
1:5:680:G:C6	1:5:705:A:C6	3.09	0.41
1:5:747:C:H2'	1:5:748:U:C6	2.56	0.41
1:5:767:U:H2'	1:5:768:G:H8	1.85	0.41
1:5:980:C:H2'	1:5:981:U:C6	2.55	0.41
1:5:1066:U:H2'	1:5:1067:C:C6	2.55	0.41
1:5:1111:G:H2'	1:5:1112:U:C6	2.56	0.41
1:5:1417:U:H3	1:5:1435:G:H1	1.67	0.41
1:5:1497:U:H2'	1:5:1498:G:C8	2.54	0.41
3:A:132:LYS:O	3:A:135:GLU:HG3	2.20	0.41
9:G:2:ILE:HG22	9:G:3:THR:HG23	2.01	0.41
11:I:18:SER:HB2	11:I:102:VAL:HA	2.03	0.41
25:W:409:ASP:H	27:Y:1310:LYS:C	2.29	0.41
25:W:868:PHE:HE2	27:Y:658:PRO:HD3	1.85	0.41
26:X:56:PHE:CE1	26:X:156:TYR:HB3	2.55	0.41
27:Y:30:GLN:HG3	27:Y:676:PHE:CD1	2.55	0.41
27:Y:1141:GLN:OE1	27:Y:1142:PRO:HD2	2.21	0.41
28:Z:64:TYR:CE1	28:Z:66:GLY:HA2	2.56	0.41
29:b:4:GLN:OE1	29:b:107:SER:HB2	2.20	0.41
1:5:167:A:O2'	1:5:169:G:O6	2.29	0.41
1:5:331:C:C2	1:5:332:A:C8	3.08	0.41
1:5:512:U:H2'	1:5:513:G:H8	1.86	0.41
1:5:1141:U:O2'	1:5:1142:G:H8	2.03	0.41
1:5:1489:C:H2'	1:5:1490:G:C8	2.55	0.41
3:A:175:LEU:HD12	3:A:176:LEU:N	2.36	0.41
17:O:70:ARG:HA	17:O:70:ARG:NE	2.36	0.41
25:W:553:ILE:CD1	25:W:1270:THR:HG23	2.51	0.41
25:W:806:ILE:HG22	25:W:821:PHE:CE1	2.55	0.41
25:W:864:ILE:HA	27:Y:1200:PHE:CE1	2.56	0.41
27:Y:150:PHE:CE1	27:Y:625:LYS:HA	2.56	0.41
27:Y:1162:LEU:HD13	27:Y:1168:ALA:HA	2.03	0.41
1:5:509:C:H1'	5:C:38:HIS:CE1	2.54	0.41
1:5:947:U:H2'	1:5:948:U:H6	1.86	0.41
1:5:1351:U:H5'	8:F:101:ARG:HH11	1.86	0.41
2:6:11:G:N2	2:6:27:A:H1'	2.36	0.41
2:6:20:G:H5'	2:6:21:U:H5	1.85	0.41
3:A:21:ALA:O	3:A:26:MET:HE1	2.21	0.41
3:A:57:VAL:HG23	3:A:60:LEU:HB3	2.03	0.41
6:D:203:LEU:HD23	6:D:203:LEU:H	1.86	0.41
17:O:18:ARG:NH2	17:O:35:LEU:HD11	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:19:VAL:HG23	20:R:47:ASN:HD21	1.85	0.41
20:R:81:LYS:O	20:R:82:GLN:C	2.63	0.41
21:S:27:LYS:HA	21:S:30:THR:HG22	2.03	0.41
25:W:76:ILE:HG22	29:b:156:THR:H	1.86	0.41
25:W:368:PHE:CE1	27:Y:1350:ALA:N	2.89	0.41
25:W:413:ARG:HH11	31:d:17:DT:C5'	2.31	0.41
27:Y:998:ILE:HG12	29:b:62:MET:CE	2.47	0.41
27:Y:999:PHE:CG	29:b:108:LEU:HD22	2.52	0.41
29:b:42:TYR:CE2	29:b:111:ILE:HD11	2.56	0.41
29:b:173:LYS:HB2	29:b:207:TRP:CZ3	2.56	0.41
1:5:53:U:H2'	1:5:54:A:H8	1.86	0.41
1:5:134:G:H21	1:5:1422:A:H2	1.67	0.41
1:5:275:A:H5''	1:5:276:U:H3'	2.02	0.41
1:5:410:A:H62	1:5:428:A:H1'	1.85	0.41
1:5:517:C:H4'	23:U:73:ARG:CZ	2.51	0.41
1:5:940:G:H5'	1:5:1312:G:O6	2.21	0.41
1:5:945:U:H3	1:5:1206:G:H1	1.68	0.41
1:5:994:C:H2'	1:5:995:U:C6	2.56	0.41
1:5:1239:U:H2'	1:5:1240:U:H6	1.86	0.41
1:5:1307:A:H2'	1:5:1308:G:O4'	2.20	0.41
3:A:46:GLU:HB2	3:A:47:PRO:HD2	2.03	0.41
11:I:63:VAL:HG23	11:I:64:ASP:N	2.26	0.41
11:I:86:ASN:O	11:I:88:GLY:N	2.53	0.41
11:I:93:LEU:O	11:I:96:ILE:HG23	2.20	0.41
12:J:12:GLY:HA2	12:J:30:PRO:HD3	2.03	0.41
12:J:23:THR:HG21	12:J:56:ALA:HA	2.02	0.41
14:L:95:LEU:HG	14:L:96:PRO:HD2	2.03	0.41
17:O:6:LEU:HD11	17:O:68:THR:HB	2.02	0.41
25:W:94:ILE:HG23	27:Y:1370:ILE:HB	2.03	0.41
25:W:95:VAL:HG22	27:Y:1371:LEU:HD11	2.02	0.41
25:W:406:LYS:NZ	27:Y:1307:LEU:HB3	2.36	0.41
25:W:554:LEU:CD2	27:Y:1297:TYR:CD1	3.03	0.41
25:W:589:GLY:N	25:W:593:GLU:OE2	2.49	0.41
25:W:649:LEU:HB3	25:W:653:ILE:CD1	2.51	0.41
25:W:834:SER:HB3	27:Y:647:ASP:HB3	2.02	0.41
25:W:863:THR:C	27:Y:1200:PHE:CD1	2.99	0.41
27:Y:907:ASP:OD1	27:Y:1099:ARG:NH1	2.40	0.41
27:Y:926:ILE:HG12	27:Y:1048:VAL:HG22	2.03	0.41
27:Y:929:TYR:HB3	27:Y:1011:LEU:HD21	2.03	0.41
27:Y:1002:SER:N	29:b:109:LYS:CB	2.84	0.41
27:Y:1340:LYS:HZ2	27:Y:1370:ILE:CG1	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:5:TYR:CZ	28:Z:48:LEU:HD23	2.53	0.41
26:a:75:GLU:OE1	26:a:141:TYR:OH	2.36	0.41
29:b:239:LYS:NZ	29:b:294:LYS:HB2	2.32	0.41
29:b:334:VAL:HG12	29:b:342:ILE:HD13	2.03	0.41
32:e:108:TRP:CD1	32:e:112:ARG:NH2	2.89	0.41
1:5:187:A:H2'	1:5:188:U:C6	2.55	0.41
1:5:350:G:H2'	1:5:351:C:C6	2.56	0.41
1:5:401:U:OP1	1:5:402:G:O2'	2.37	0.41
1:5:422:A:H2'	1:5:423:U:C6	2.56	0.41
1:5:714:C:O2'	1:5:731:A:O4'	2.32	0.41
1:5:734:A:H2'	1:5:735:C:C6	2.56	0.41
1:5:739:G:H2'	1:5:740:G:H8	1.86	0.41
1:5:1014:A:H2'	1:5:1015:U:O4'	2.21	0.41
1:5:1227:A:H2'	1:5:1228:C:C6	2.56	0.41
1:5:1387:U:H2'	1:5:1388:A:C8	2.56	0.41
5:C:94:GLU:OE2	5:C:103:ARG:NE	2.45	0.41
7:E:151:LYS:HA	7:E:152:PRO:HD2	1.94	0.41
13:K:20:LYS:HD2	13:K:20:LYS:HA	1.80	0.41
19:Q:53:LEU:HD11	19:Q:92:ARG:HG2	2.03	0.41
25:W:490:PRO:HG3	25:W:551:ARG:HG3	2.03	0.41
25:W:867:TYR:CE1	27:Y:659:ILE:HD11	2.56	0.41
25:W:1181:SER:HB2	25:W:1197:LEU:HD21	2.02	0.41
26:X:174:ASN:C	26:a:324:LYS:NZ	2.51	0.41
27:Y:348:VAL:HG13	27:Y:353:ILE:HB	2.03	0.41
28:Z:76:MET:HE1	28:Z:84:ILE:HD12	2.02	0.41
26:a:56:PHE:CE1	26:a:156:TYR:HB3	2.56	0.41
1:5:142:G:H2'	1:5:143:U:H6	1.86	0.40
1:5:1058:A:H2'	1:5:1084:A:H4'	2.03	0.40
1:5:1114:A:H4'	11:I:44:GLY:HA3	2.03	0.40
2:6:7:U:O4	2:6:68:G:O6	2.39	0.40
16:N:30:THR:HG22	16:N:60:ARG:NH2	2.35	0.40
25:W:92:GLU:OE2	27:Y:1371:LEU:HD23	2.21	0.40
25:W:141:PHE:HA	25:W:236:ILE:HD11	2.03	0.40
27:Y:134:PRO:HG2	27:Y:604:PHE:CD2	2.56	0.40
27:Y:356:ARG:NH1	32:e:113:ASN:H	2.18	0.40
29:b:288:VAL:CG2	29:b:297:PHE:CE2	2.98	0.40
1:5:552:U:C2	1:5:553:C:C5	3.09	0.40
1:5:590:G:H2'	1:5:591:A:C8	2.55	0.40
1:5:1268:G:H2'	1:5:1269:U:C6	2.56	0.40
1:5:1495:C:H2'	1:5:1496:G:C8	2.56	0.40
2:6:30:G:H2'	2:6:31:G:H8	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:110:GLN:CD	24:V:112:ILE:HG13	2.22	0.40
25:W:100:MET:CB	27:Y:1366:ASN:HD21	2.18	0.40
26:X:44:ARG:HH11	27:Y:1232:ARG:HA	1.86	0.40
26:X:106:LEU:N	26:a:319:HIS:ND1	2.69	0.40
27:Y:45:LEU:HD21	27:Y:133:LEU:HD23	2.03	0.40
27:Y:566:ARG:HH22	27:Y:582:LYS:HG2	1.85	0.40
27:Y:653:TYR:CD1	27:Y:737:ARG:NH2	2.89	0.40
29:b:67:LEU:CD2	29:b:103:ARG:HG2	2.51	0.40
29:b:185:GLU:OE1	29:b:213:ARG:NE	2.54	0.40
1:5:393:A:N7	1:5:545:A:O2'	2.43	0.40
1:5:822:A:H1'	9:G:11:HIS:HB2	2.03	0.40
1:5:870:A:H2'	1:5:871:U:C6	2.57	0.40
1:5:1198:C:H5''	1:5:1199:U:H5''	2.02	0.40
1:5:1471:C:C5'	24:V:128:ASP:OD2	2.70	0.40
5:C:97:LEU:HB2	5:C:134:ILE:HB	2.04	0.40
5:C:104:MET:HE1	5:C:167:VAL:HB	2.03	0.40
13:K:62:LEU:HD12	13:K:62:LEU:HA	1.92	0.40
16:N:30:THR:HG22	16:N:60:ARG:HH21	1.87	0.40
21:S:63:ASN:C	21:S:63:ASN:HD22	2.29	0.40
25:W:775:LYS:HE2	25:W:1035:GLY:O	2.21	0.40
25:W:834:SER:HB3	27:Y:647:ASP:CG	2.47	0.40
25:W:1247:LYS:HE3	25:W:1249:GLN:OE1	2.20	0.40
26:X:102:VAL:O	26:X:104:PRO:HD3	2.22	0.40
28:Z:27:PHE:CE2	28:Z:53:TYR:HD2	2.39	0.40
29:b:18:ASN:O	29:b:22:THR:OG1	2.38	0.40
1:5:171:A:O3'	21:S:66:ARG:NE	2.54	0.40
1:5:304:U:H2'	1:5:305:A:C8	2.56	0.40
1:5:452:A:N3	1:5:452:A:H2'	2.35	0.40
1:5:725:A:H2'	1:5:726:A:C8	2.56	0.40
1:5:1097:G:H2'	1:5:1098:C:H6	1.86	0.40
1:5:1505:G:H2'	1:5:1506:A:C8	2.56	0.40
4:B:61:THR:O	4:B:64:THR:HG22	2.22	0.40
5:C:99:ASN:C	5:C:99:ASN:HD22	2.28	0.40
5:C:194:SER:O	5:C:198:GLU:HG2	2.22	0.40
6:D:166:ILE:O	6:D:170:ILE:HG12	2.22	0.40
6:D:177:ASP:OD1	6:D:177:ASP:O	2.39	0.40
7:E:5:ILE:HG12	7:E:87:ILE:HD13	2.03	0.40
25:W:19:LYS:CE	25:W:1248:THR:CG2	3.00	0.40
25:W:745:LYS:HZ1	25:W:860:GLU:CD	2.29	0.40
25:W:884:LYS:HE2	25:W:1029:MET:N	2.36	0.40
29:b:196:VAL:CB	29:b:217:ARG:CZ	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:355:A:H2'	1:5:356:G:C8	2.56	0.40
1:5:472:G:H2'	1:5:473:A:H8	1.86	0.40
1:5:1236:A:C8	1:5:1250:A:N6	2.89	0.40
2:6:5:C:H2'	2:6:6:U:C6	2.56	0.40
5:C:145:LYS:HD3	5:C:147:LYS:HB3	2.03	0.40
25:W:956:PRO:HG2	25:W:959:SER:OG	2.21	0.40
27:Y:265:LEU:HD23	27:Y:276:LEU:CD1	2.52	0.40
27:Y:265:LEU:HD23	27:Y:276:LEU:HD11	2.04	0.40
27:Y:640:ASP:OD1	27:Y:641:PRO:HD2	2.21	0.40
27:Y:819:PRO:HD3	27:Y:844:LEU:HD11	2.04	0.40
27:Y:1002:SER:C	29:b:111:ILE:O	2.65	0.40
27:Y:1375:GLY:HA3	29:b:159:ASP:OD2	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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	
3	A	247/249 (99%)	227 (92%)	18 (7%)	2 (1%)	16	54
4	B	213/215 (99%)	202 (95%)	11 (5%)	0	100	100
5	C	201/203 (99%)	186 (92%)	15 (8%)	0	100	100
6	D	151/153 (99%)	141 (93%)	10 (7%)	0	100	100
7	E	165/167 (99%)	145 (88%)	20 (12%)	0	100	100
8	F	152/154 (99%)	135 (89%)	17 (11%)	0	100	100
9	G	139/141 (99%)	126 (91%)	13 (9%)	0	100	100
10	H	126/128 (98%)	109 (86%)	17 (14%)	0	100	100
11	I	99/101 (98%)	87 (88%)	12 (12%)	0	100	100
12	J	112/114 (98%)	106 (95%)	6 (5%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
13	K	134/136 (98%)	117 (87%)	17 (13%)	0	100	100
14	L	116/118 (98%)	107 (92%)	9 (8%)	0	100	100
15	M	58/60 (97%)	55 (95%)	3 (5%)	0	100	100
16	N	81/83 (98%)	79 (98%)	2 (2%)	0	100	100
17	O	85/87 (98%)	75 (88%)	10 (12%)	0	100	100
18	P	81/83 (98%)	72 (89%)	9 (11%)	0	100	100
19	Q	63/65 (97%)	57 (90%)	6 (10%)	0	100	100
20	R	82/84 (98%)	75 (92%)	7 (8%)	0	100	100
21	S	75/77 (97%)	72 (96%)	3 (4%)	0	100	100
22	T	51/53 (96%)	45 (88%)	6 (12%)	0	100	100
23	U	63/65 (97%)	62 (98%)	1 (2%)	0	100	100
24	V	157/163 (96%)	155 (99%)	2 (1%)	0	100	100
25	W	1274/1276 (100%)	1252 (98%)	21 (2%)	1 (0%)	48	83
26	X	304/327 (93%)	301 (99%)	3 (1%)	0	100	100
26	a	308/327 (94%)	305 (99%)	3 (1%)	0	100	100
27	Y	1389/1391 (100%)	1355 (98%)	33 (2%)	1 (0%)	48	83
28	Z	87/89 (98%)	85 (98%)	2 (2%)	0	100	100
29	b	358/366 (98%)	350 (98%)	6 (2%)	2 (1%)	21	59
32	e	158/160 (99%)	155 (98%)	1 (1%)	2 (1%)	9	42
All	All	6529/6635 (98%)	6238 (96%)	283 (4%)	8 (0%)	49	83

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
32	e	95	ARG
3	A	250	PRO
25	W	1035	GLY
27	Y	582	LYS
3	A	254	ILE
29	b	3	ASN
29	b	10	ASN
32	e	17	VAL

5.3.2 Protein sidechains ⓘ

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	
3	A	200/220 (91%)	197 (98%)	3 (2%)	57	72
4	B	176/180 (98%)	175 (99%)	1 (1%)	78	83
5	C	164/181 (91%)	164 (100%)	0	100	100
6	D	117/123 (95%)	117 (100%)	0	100	100
7	E	107/150 (71%)	107 (100%)	0	100	100
8	F	128/131 (98%)	128 (100%)	0	100	100
9	G	121/123 (98%)	121 (100%)	0	100	100
10	H	101/111 (91%)	100 (99%)	1 (1%)	68	78
11	I	93/95 (98%)	91 (98%)	2 (2%)	45	64
12	J	91/91 (100%)	91 (100%)	0	100	100
13	K	111/117 (95%)	111 (100%)	0	100	100
14	L	92/100 (92%)	89 (97%)	3 (3%)	33	55
15	M	47/47 (100%)	45 (96%)	2 (4%)	26	47
16	N	76/76 (100%)	76 (100%)	0	100	100
17	O	71/76 (93%)	66 (93%)	5 (7%)	14	35
18	P	73/73 (100%)	73 (100%)	0	100	100
19	Q	56/56 (100%)	56 (100%)	0	100	100
20	R	66/74 (89%)	59 (89%)	7 (11%)	6	21
21	S	70/70 (100%)	70 (100%)	0	100	100
22	T	43/49 (88%)	38 (88%)	5 (12%)	5	18
23	U	57/57 (100%)	57 (100%)	0	100	100
24	V	145/145 (100%)	144 (99%)	1 (1%)	76	81
25	W	1113/1113 (100%)	1100 (99%)	13 (1%)	63	75
26	X	269/285 (94%)	262 (97%)	7 (3%)	40	62
26	a	272/285 (95%)	265 (97%)	7 (3%)	40	62
27	Y	1213/1213 (100%)	1188 (98%)	25 (2%)	47	65

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	Z	83/83 (100%)	79 (95%)	4 (5%)	23	44
29	b	327/327 (100%)	322 (98%)	5 (2%)	57	72
32	e	140/140 (100%)	134 (96%)	6 (4%)	26	47
All	All	5622/5791 (97%)	5525 (98%)	97 (2%)	52	69

All (97) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	A	251	ASP
3	A	257	GLU
3	A	258	ILE
4	B	29	GLN
10	H	115	ARG
11	I	53	GLU
11	I	72	GLU
14	L	39	ILE
14	L	49	THR
14	L	50	GLU
15	M	24	CYS
15	M	61	TRP
17	O	2	VAL
17	O	3	LYS
17	O	4	ILE
17	O	8	ARG
17	O	17	TYR
20	R	63	THR
20	R	64	ASP
20	R	66	MET
20	R	67	VAL
20	R	69	HIS
20	R	77	THR
20	R	80	PHE
22	T	17	LYS
22	T	19	LYS
22	T	20	ARG
22	T	51	LYS
22	T	52	LYS
24	V	123	THR
25	W	174	LEU
25	W	192	ILE
25	W	219	LEU

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Mol	Chain	Res	Type
25	W	268	SER
25	W	281	LEU
25	W	493	LEU
25	W	757	LEU
25	W	843	SER
25	W	937	VAL
25	W	1092	VAL
25	W	1197	LEU
25	W	1218	ILE
25	W	1278	LEU
26	X	34	PHE
26	X	50	ILE
26	X	58	LEU
26	X	59	SER
26	X	106	LEU
26	X	208	HIS
26	X	297	LEU
27	Y	135	LEU
27	Y	187	LEU
27	Y	204	ILE
27	Y	258	VAL
27	Y	265	LEU
27	Y	284	THR
27	Y	310	GLU
27	Y	314	LEU
27	Y	334	LEU
27	Y	355	LEU
27	Y	408	LEU
27	Y	428	VAL
27	Y	446	PHE
27	Y	459	VAL
27	Y	514	ILE
27	Y	554	LEU
27	Y	585	LEU
27	Y	673	LEU
27	Y	863	LEU
27	Y	988	VAL
27	Y	1037	ASP
27	Y	1137	THR
27	Y	1149	LEU
27	Y	1179	LEU
27	Y	1386	PHE

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Mol	Chain	Res	Type
28	Z	5	TYR
28	Z	8	LEU
28	Z	10	SER
28	Z	57	LEU
26	a	34	PHE
26	a	50	ILE
26	a	58	LEU
26	a	59	SER
26	a	106	LEU
26	a	297	LEU
26	a	319	HIS
29	b	22	THR
29	b	61	LEU
29	b	121	LEU
29	b	122	LEU
29	b	181	LEU
32	e	17	VAL
32	e	19	ASP
32	e	45	LEU
32	e	62	LEU
32	e	92	LEU
32	e	141	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (74) such sidechains are listed below:

Mol	Chain	Res	Type
3	A	131	ASN
3	A	137	GLN
3	A	223	GLN
4	B	29	GLN
4	B	86	GLN
4	B	125	ASN
4	B	150	ASN
5	C	55	GLN
6	D	156	GLN
7	E	25	GLN
7	E	56	HIS
7	E	67	GLN
9	G	56	ASN
10	H	52	GLN
12	J	104	ASN
12	J	112	ASN

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Mol	Chain	Res	Type
16	N	13	GLN
18	P	18	ASN
18	P	62	GLN
21	S	24	GLN
21	S	50	GLN
24	V	105	GLN
24	V	109	ASN
24	V	110	GLN
25	W	137	GLN
25	W	143	ASN
25	W	296	ASN
25	W	314	GLN
25	W	355	ASN
25	W	402	ASN
25	W	500	HIS
25	W	820	ASN
25	W	906	HIS
25	W	968	GLN
25	W	1018	GLN
25	W	1082	ASN
25	W	1128	GLN
25	W	1153	GLN
25	W	1190	HIS
25	W	1192	HIS
25	W	1213	ASN
26	X	146	GLN
26	X	174	ASN
26	X	190	HIS
27	Y	47	HIS
27	Y	63	ASN
27	Y	132	ASN
27	Y	179	GLN
27	Y	210	GLN
27	Y	349	HIS
27	Y	413	HIS
27	Y	477	ASN
27	Y	624	ASN
27	Y	652	GLN
27	Y	841	GLN
27	Y	842	HIS
27	Y	883	ASN
27	Y	901	ASN

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Mol	Chain	Res	Type
27	Y	1033	ASN
27	Y	1054	GLN
27	Y	1115	HIS
27	Y	1140	ASN
27	Y	1192	HIS
27	Y	1253	HIS
27	Y	1273	GLN
26	a	40	ASN
26	a	86	GLN
26	a	184	ASN
26	a	287	HIS
26	a	319	HIS
29	b	6	ASN
29	b	7	HIS
29	b	300	ASN
32	e	113	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	5	1488/1505 (98%)	232 (15%)	5 (0%)
2	6	69/70 (98%)	13 (18%)	1 (1%)
All	All	1557/1575 (98%)	245 (15%)	6 (0%)

All (245) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	5	7	U
1	5	10	G
1	5	32	U
1	5	33	A
1	5	40	G
1	5	48	C
1	5	49	C
1	5	52	A
1	5	61	A
1	5	75	A
1	5	85	U
1	5	86	A
1	5	106	C
1	5	114	C

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Mol	Chain	Res	Type
1	5	115	A
1	5	117	U
1	5	127	A
1	5	128	A
1	5	130	G
1	5	149	G
1	5	154	G
1	5	156	U
1	5	163	G
1	5	167	A
1	5	168	A
1	5	169	G
1	5	170	A
1	5	197	A
1	5	198	A
1	5	208	A
1	5	210	G
1	5	220	U
1	5	223	G
1	5	241	C
1	5	243	G
1	5	247	G
1	5	262	G
1	5	263	C
1	5	269	A
1	5	275	A
1	5	285	G
1	5	294	A
1	5	301	G
1	5	302	A
1	5	323	A
1	5	324	C
1	5	325	A
1	5	326	C
1	5	328	G
1	5	341	C
1	5	342	G
1	5	344	G
1	5	347	G
1	5	348	C
1	5	352	A
1	5	363	U

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Mol	Chain	Res	Type
1	5	368	C
1	5	369	A
1	5	377	A
1	5	378	A
1	5	380	G
1	5	393	A
1	5	402	G
1	5	408	U
1	5	409	G
1	5	417	U
1	5	418	U
1	5	420	A
1	5	425	G
1	5	426	U
1	5	448	A
1	5	449	A
1	5	450	U
1	5	452	A
1	5	453	C
1	5	465	A
1	5	473	A
1	5	476	U
1	5	478	G
1	5	481	U
1	5	482	G
1	5	483	U
1	5	488	U
1	5	489	U
1	5	493	A
1	5	494	A
1	5	495	U
1	5	509	C
1	5	516	C
1	5	517	C
1	5	519	G
1	5	522	G
1	5	525	G
1	5	530	A
1	5	545	A
1	5	560	U
1	5	562	U
1	5	570	A

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Mol	Chain	Res	Type
1	5	571	A
1	5	574	C
1	5	575	A
1	5	579	G
1	5	586	G
1	5	595	G
1	5	618	U
1	5	619	A
1	5	628	A
1	5	650	A
1	5	682	G
1	5	694	U
1	5	715	A
1	5	719	G
1	5	720	U
1	5	721	G
1	5	731	A
1	5	745	U
1	5	752	G
1	5	790	U
1	5	791	A
1	5	810	U
1	5	811	A
1	5	812	A
1	5	814	C
1	5	815	G
1	5	818	A
1	5	825	A
1	5	829	G
1	5	838	A
1	5	839	U
1	5	841	C
1	5	842	C
1	5	867	A
1	5	883	A
1	5	895	A
1	5	908	A
1	5	910	C
1	5	911	G
1	5	922	G
1	5	925	C
1	5	929	C

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Mol	Chain	Res	Type
1	5	930	A
1	5	934	G
1	5	941	A
1	5	955	U
1	5	964	A
1	5	966	A
1	5	970	A
1	5	971	A
1	5	972	A
1	5	987	U
1	5	988	G
1	5	989	A
1	5	997	G
1	5	1000	A
1	5	1001	A
1	5	1014	A
1	5	1015	U
1	5	1033	U
1	5	1036	C
1	5	1044	G
1	5	1045	C
1	5	1047	U
1	5	1056	U
1	5	1057	C
1	5	1072	G
1	5	1085	G
1	5	1086	U
1	5	1092	A
1	5	1113	U
1	5	1115	G
1	5	1118	A
1	5	1121	U
1	5	1122	U
1	5	1123	G
1	5	1125	C
1	5	1126	U
1	5	1128	G
1	5	1134	C
1	5	1135	U
1	5	1141	U
1	5	1142	G
1	5	1158	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	5	1159	A
1	5	1171	A
1	5	1172	A
1	5	1187	U
1	5	1188	A
1	5	1189	U
1	5	1197	G
1	5	1200	G
1	5	1203	A
1	5	1211	A
1	5	1215	U
1	5	1232	C
1	5	1233	G
1	5	1235	C
1	5	1255	A
1	5	1260	U
1	5	1261	A
1	5	1271	U
1	5	1276	U
1	5	1279	G
1	5	1291	C
1	5	1296	C
1	5	1297	G
1	5	1320	A
1	5	1321	G
1	5	1327	G
1	5	1337	U
1	5	1338	A
1	5	1339	U
1	5	1343	G
1	5	1354	G
1	5	1356	U
1	5	1373	A
1	5	1397	G
1	5	1400	A
1	5	1404	U
1	5	1417	U
1	5	1426	U
1	5	1427	U
1	5	1428	A
1	5	1429	G
1	5	1467	A

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
1	5	1468	A
1	5	1478	A
1	5	1480	G
1	5	1481	U
1	5	1492	G
1	5	1504	G
1	5	1505	G
1	5	1509	A
2	6	3	G
2	6	17	U
2	6	18	C
2	6	19	G
2	6	20	G
2	6	22	A
2	6	43	G
2	6	44	U
2	6	49	C
2	6	54	G
2	6	57	C
2	6	58	G
2	6	71	A

All (6) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	5	168	A
1	5	419	A
1	5	481	U
1	5	838	A
1	5	1338	A
2	6	16	G

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 2 ligands modelled in this entry, 2 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 [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
29	b	3
1	5	3
24	V	2
31	d	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	b	292:GLU	C	293:ASP	N	8.91
1	b	143:VAL	C	144:GLY	N	6.10
1	V	91:ASP	C	92:PHE	N	4.18
1	V	111:THR	C	112:ILE	N	3.16
1	b	215:ASP	C	216:SER	N	3.12
1	5	1062:C	O3'	1063:G	P	2.88
1	5	924:A	O3'	925:C	P	2.15
1	5	1363:U	O3'	1364:C	P	1.98
1	d	22:DA	O3'	23:DC	P	1.38

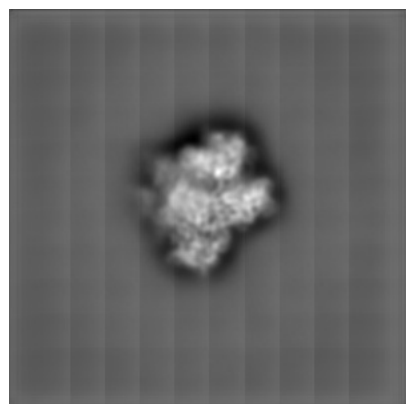
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-53699. These allow visual inspection of the internal detail of the map and identification of artifacts.

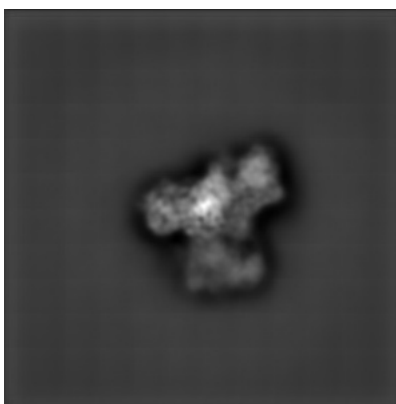
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

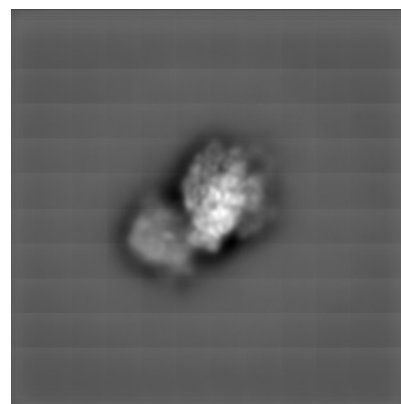
6.1.1 Primary map



X

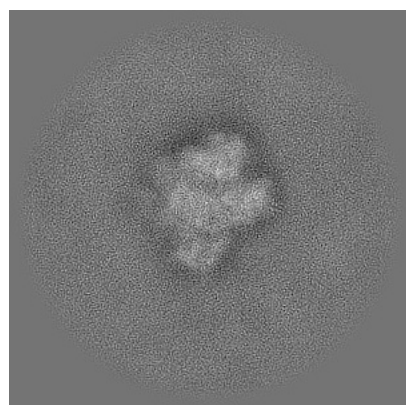


Y

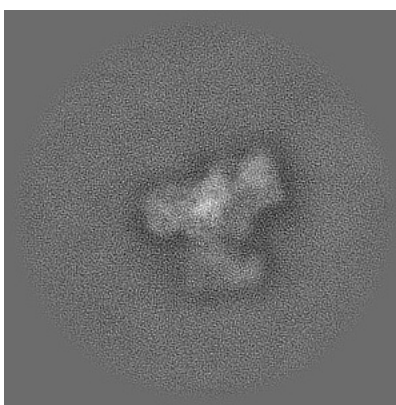


Z

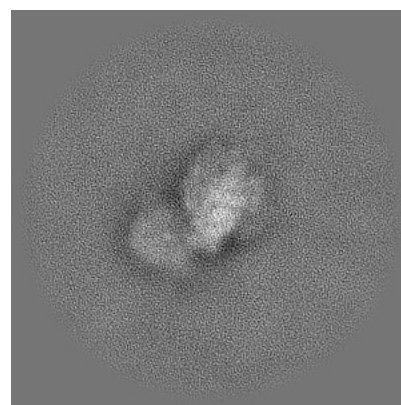
6.1.2 Raw map



X



Y

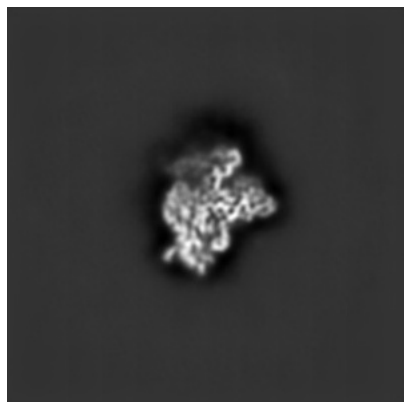


Z

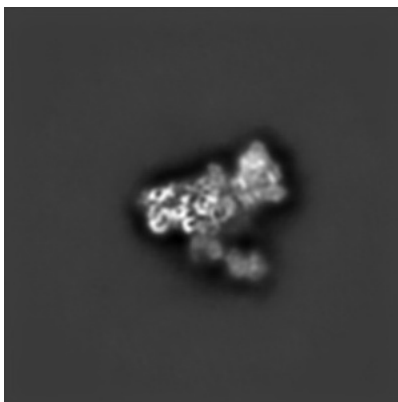
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

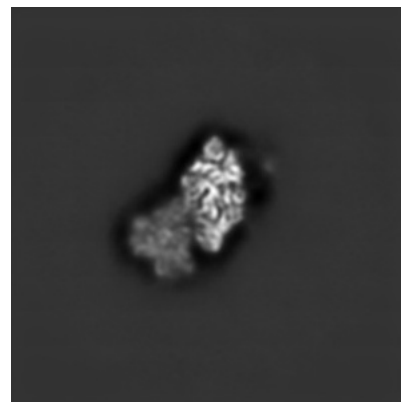
6.2.1 Primary map



X Index: 150

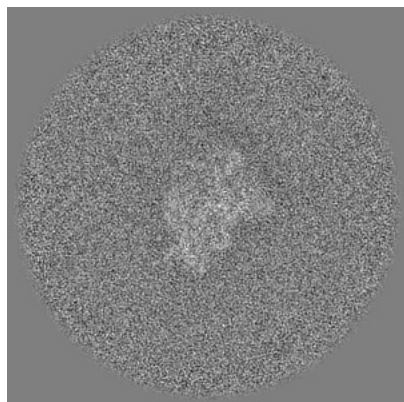


Y Index: 150

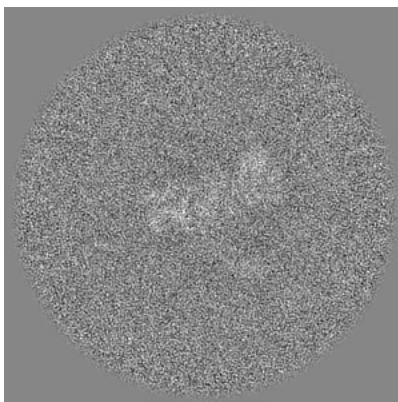


Z Index: 150

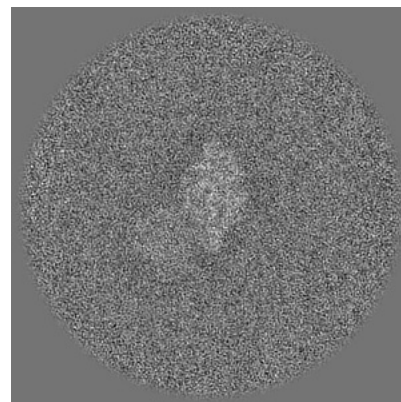
6.2.2 Raw map



X Index: 150



Y Index: 150

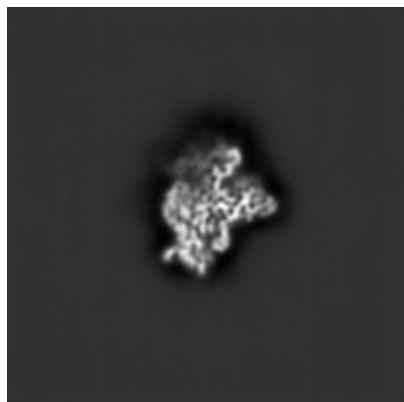


Z Index: 150

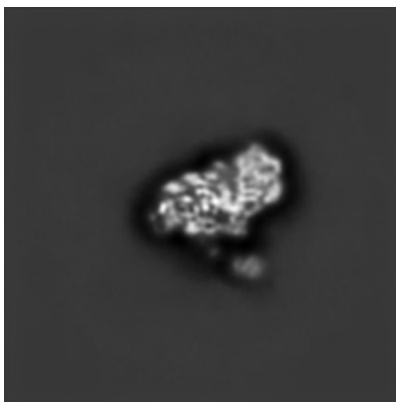
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

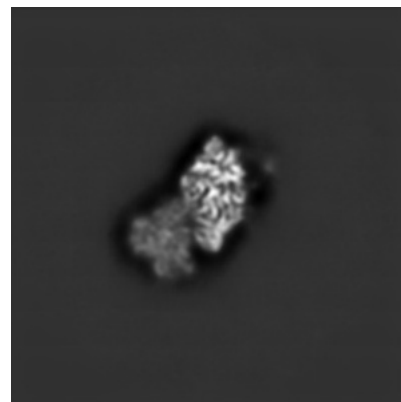
6.3.1 Primary map



X Index: 151

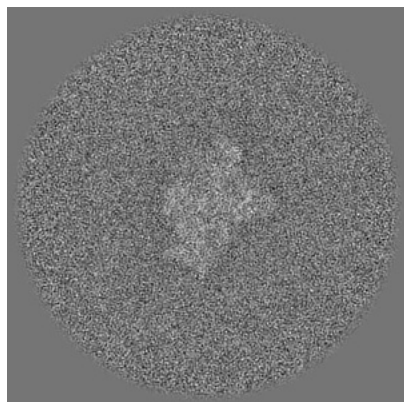


Y Index: 158

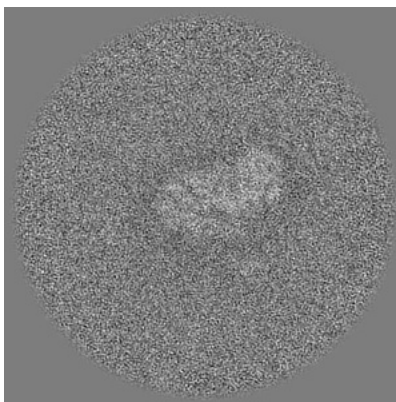


Z Index: 151

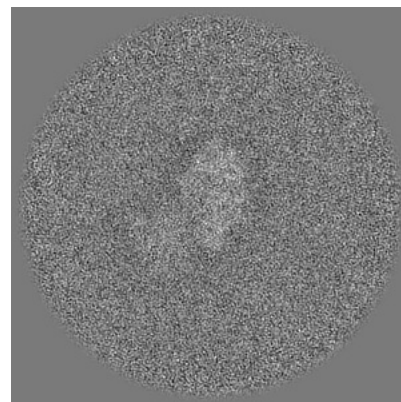
6.3.2 Raw map



X Index: 153



Y Index: 158

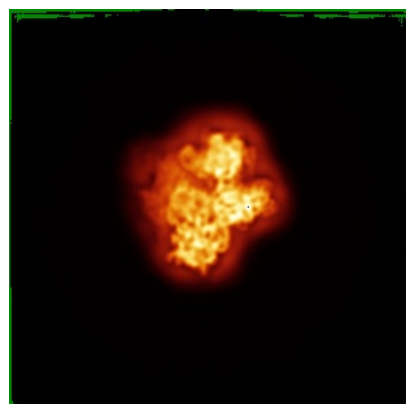


Z Index: 152

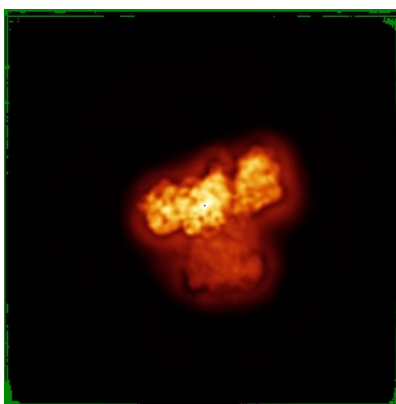
The images above show the largest variance slices of the map in three orthogonal directions.

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

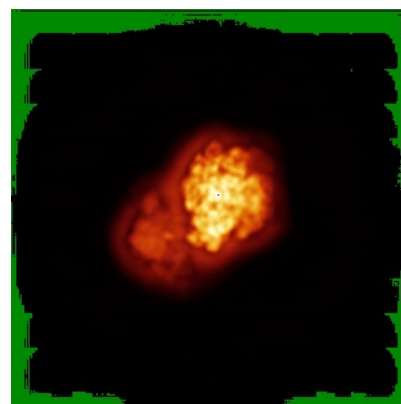
6.4.1 Primary map



X

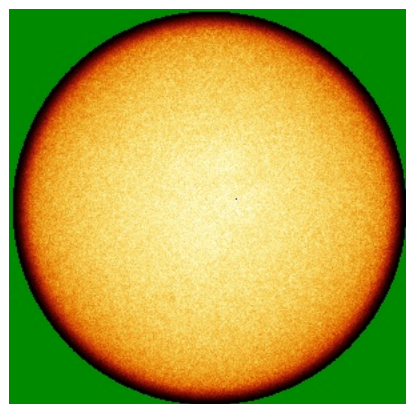


Y

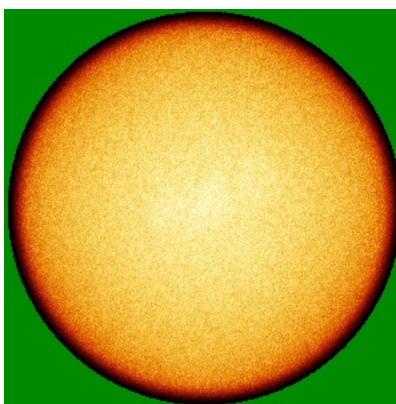


Z

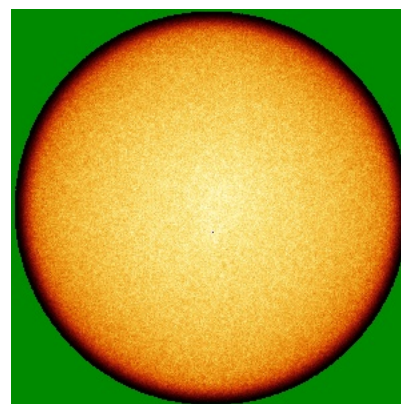
6.4.2 Raw map



X



Y

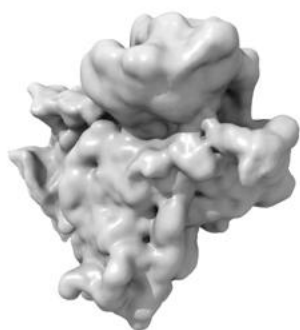


Z

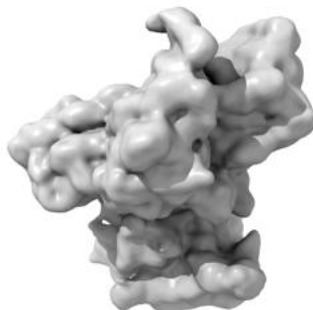
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

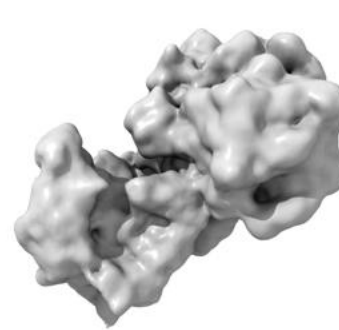
6.5.1 Primary map



X



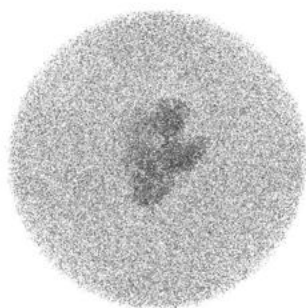
Y



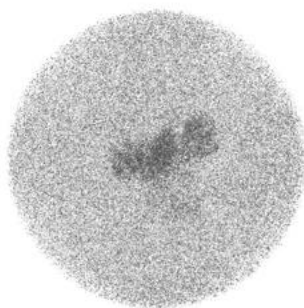
Z

The images above show the 3D surface view of the map at the recommended contour level 0.00123. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

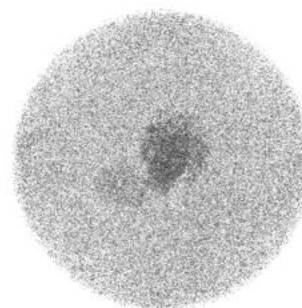
6.5.2 Raw map



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.

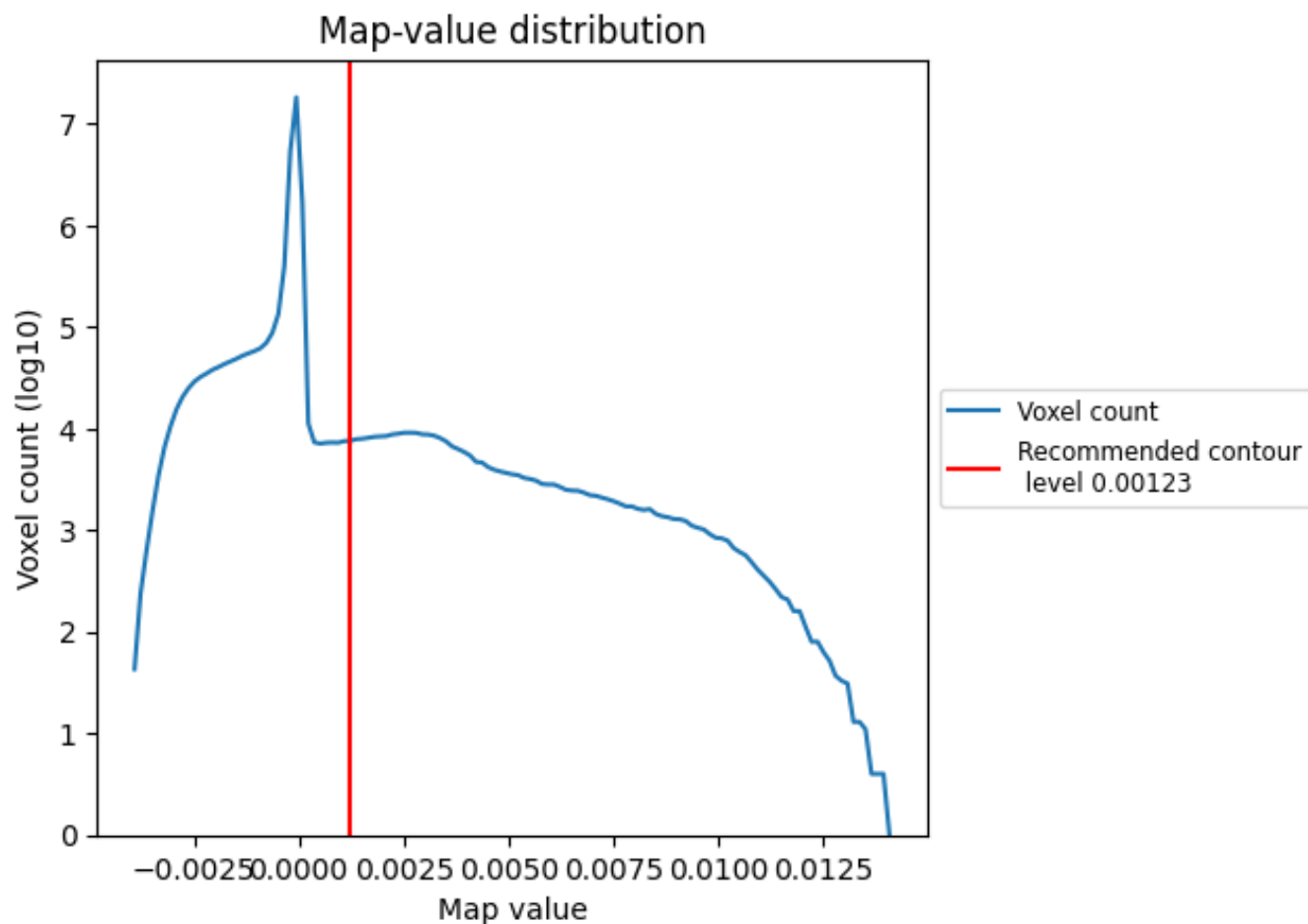
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

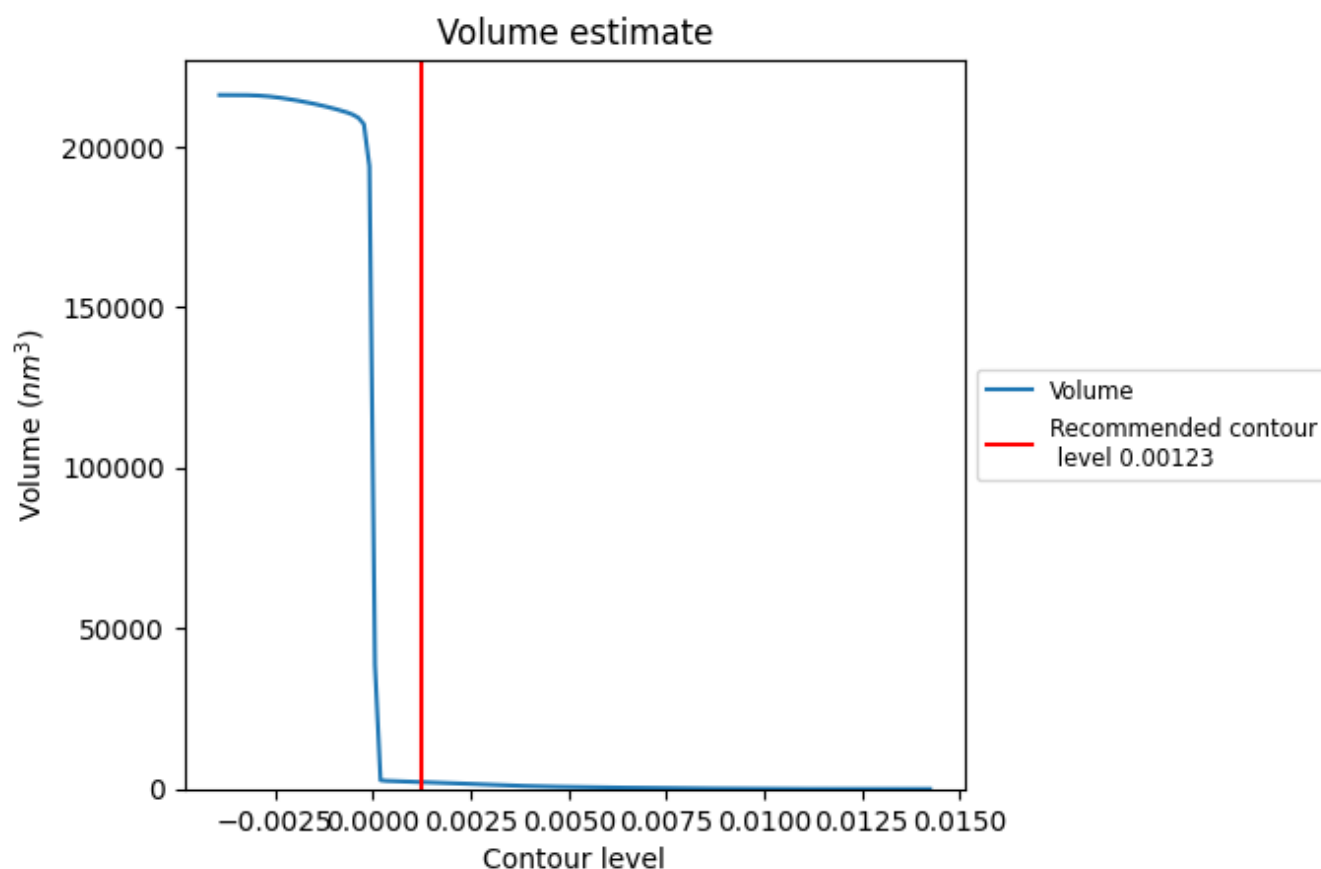
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

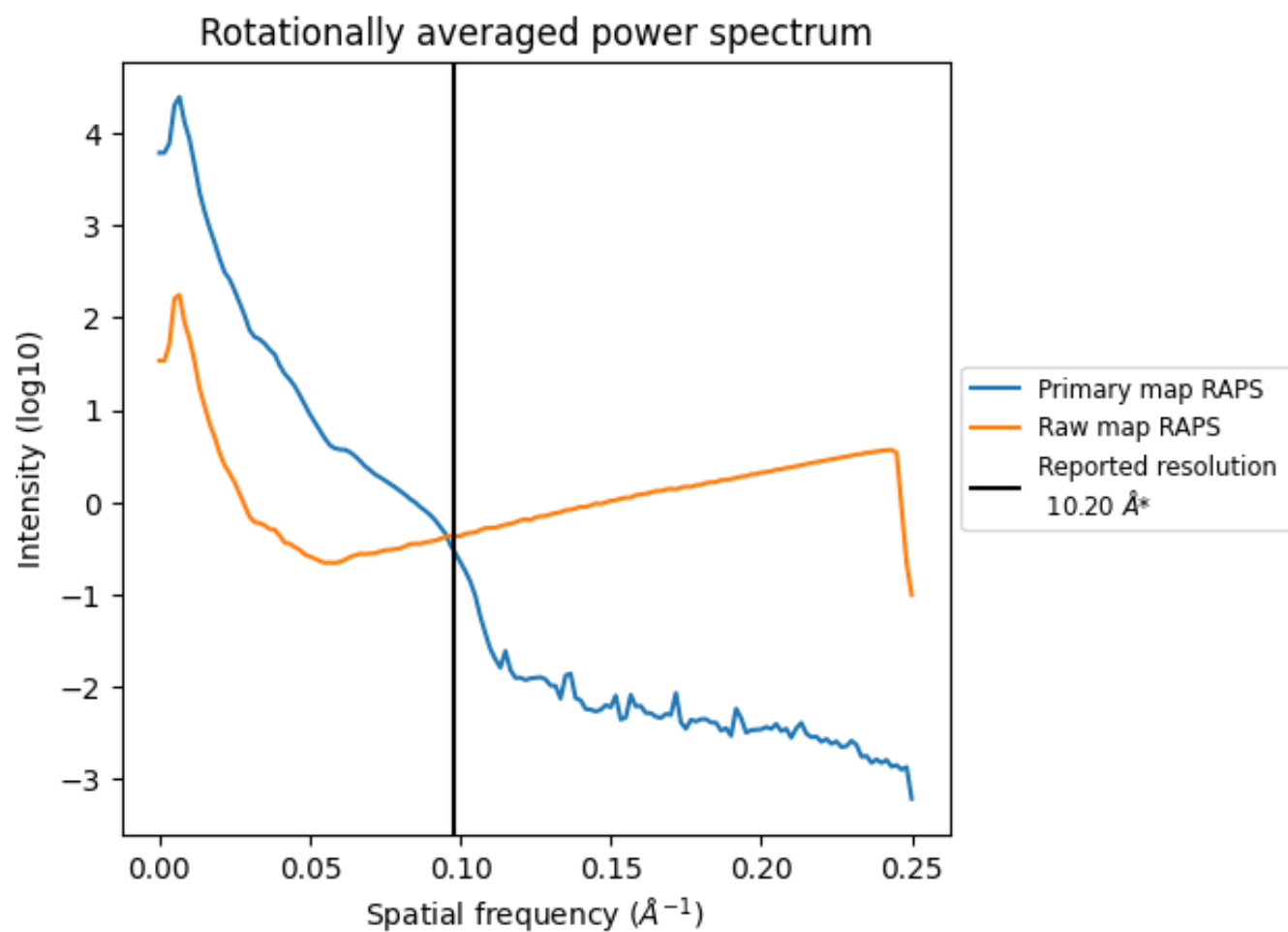
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2161 nm^3 ; this corresponds to an approximate mass of 1952 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 ⓘ

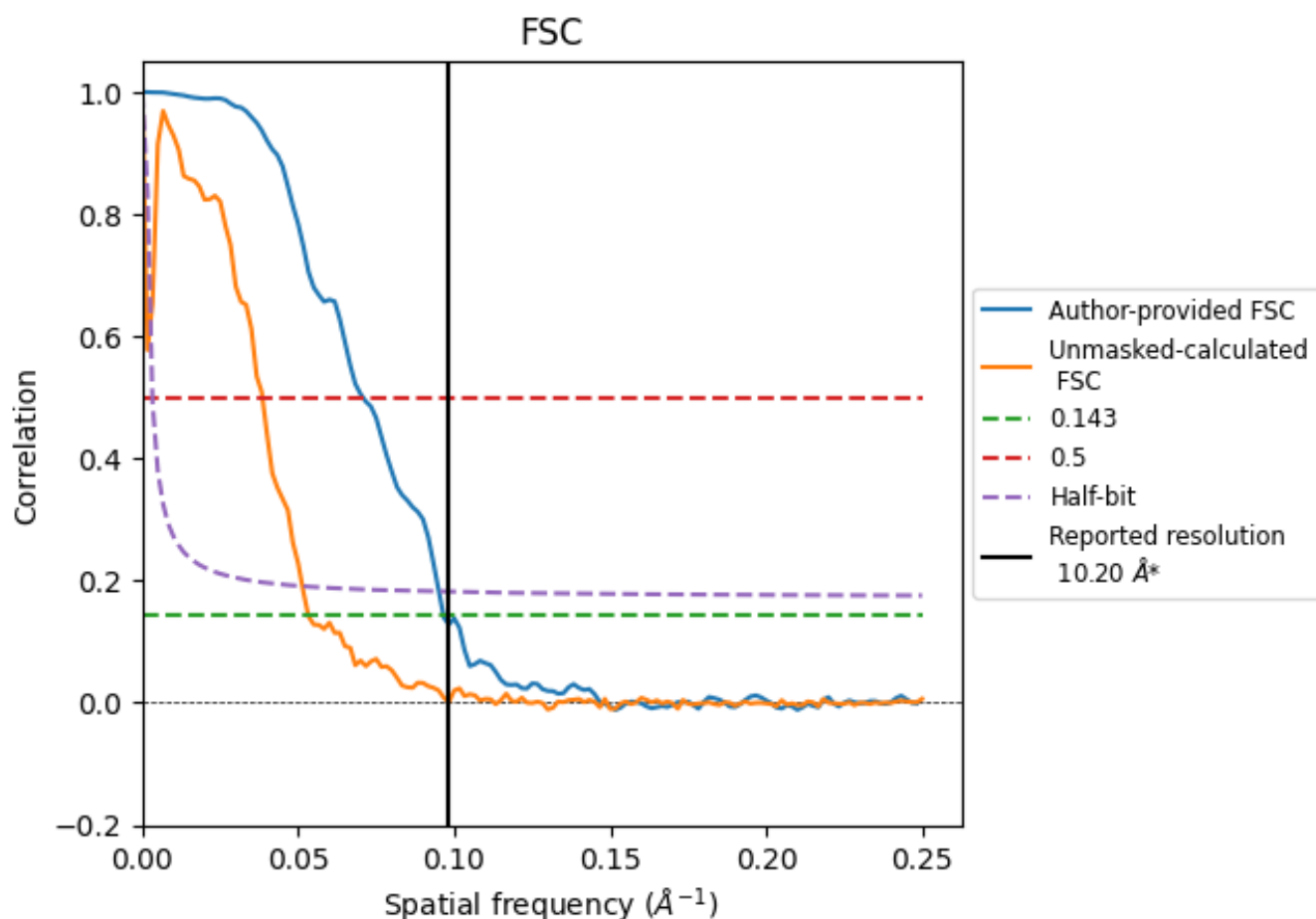


*Reported resolution corresponds to spatial frequency of 0.098 $\text{\AA}^{-1}$

8 Fourier-Shell correlation [i](#)

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 [i](#)



*Reported resolution corresponds to spatial frequency of 0.098 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

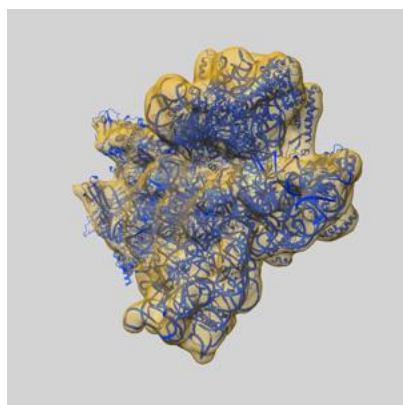
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	10.20	-	-
Author-provided FSC curve	10.36	14.14	10.52
Unmasked-calculated*	18.76	25.97	370.37

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 18.76 differs from the reported value 10.2 by more than 10 %

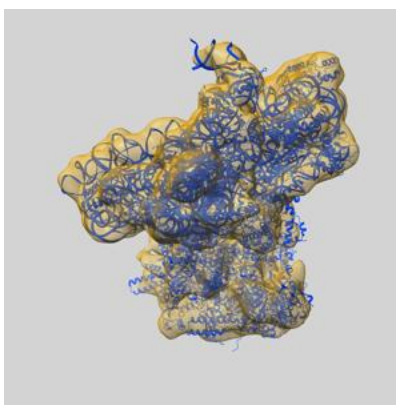
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-53699 and PDB model 9SKB. Per-residue inclusion information can be found in section 3 on page 10.

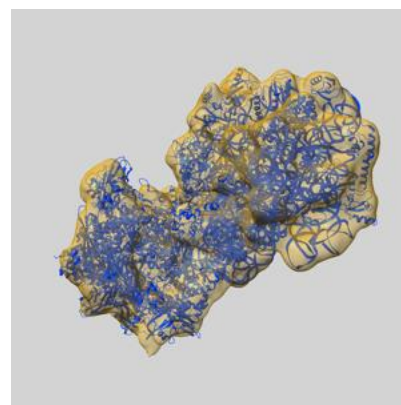
9.1 Map-model overlay [i](#)



X



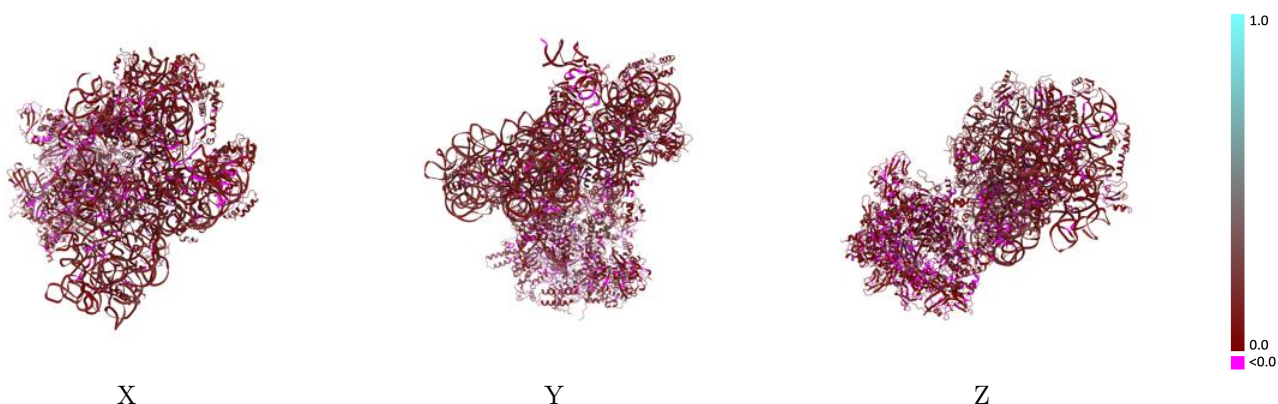
Y



Z

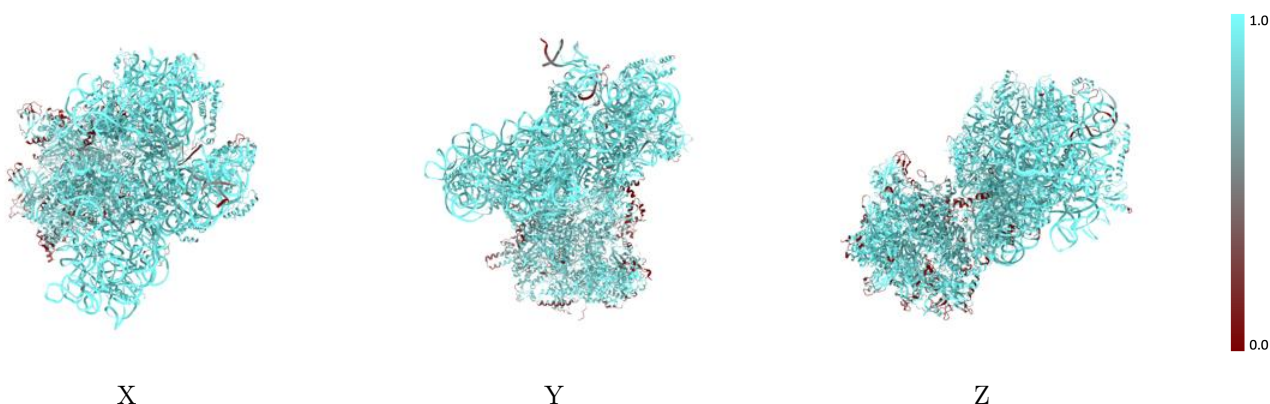
The images above show the 3D surface view of the map at the recommended contour level 0.00123 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



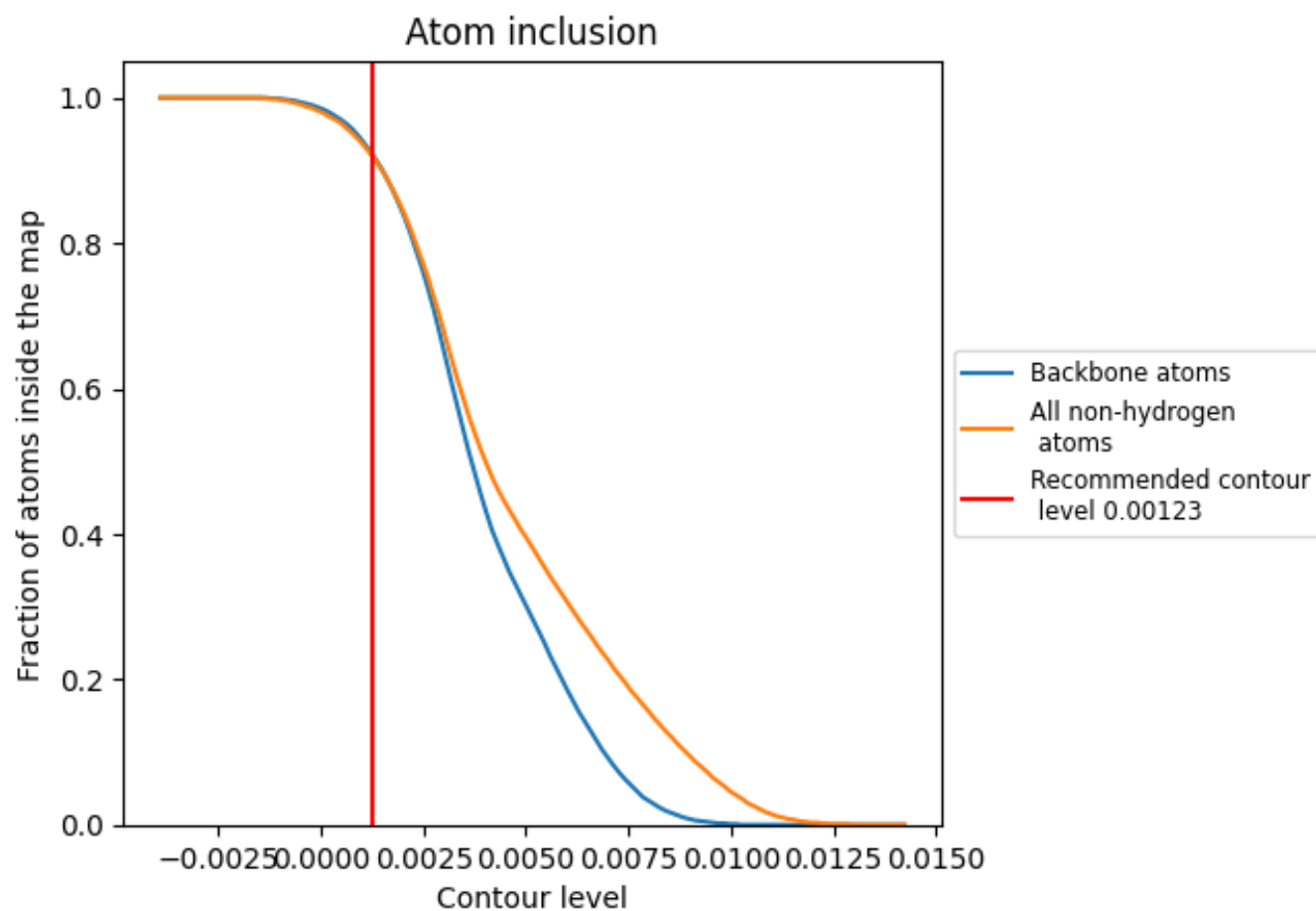
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.00123).

9.4 Atom inclusion [i](#)



At the recommended contour level, 92% of all backbone atoms, 92% 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 (0.00123) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9210	 0.0950
5	 0.9950	 0.1320
6	 0.7180	 0.0590
A	 0.9440	 0.1080
B	 0.9790	 0.0990
C	 0.9900	 0.0930
D	 0.9890	 0.0930
E	 0.9280	 0.1220
F	 0.9470	 0.0970
G	 0.9830	 0.0900
H	 0.9610	 0.0780
I	 0.9570	 0.0650
J	 0.9690	 0.0990
K	 0.9780	 0.0730
L	 0.9610	 0.0720
M	 0.9980	 0.0200
N	 0.9270	 0.0980
O	 0.9910	 0.0780
P	 0.9450	 0.0900
Q	 0.9880	 0.0940
R	 0.9390	 0.0680
S	 0.9900	 0.1170
T	 0.9500	 0.1410
U	 0.8290	 0.0670
V	 0.8720	 0.0970
W	 0.8490	 0.0630
X	 0.8010	 0.0770
Y	 0.8680	 0.0560
Z	 0.7150	 0.0570
a	 0.7440	 0.0620
b	 0.7390	 0.0460
c	 0.9820	 0.1110
d	 0.9570	 0.1130
e	 0.8140	 0.0600

