



Full wwPDB EM Validation Report ⓘ

Mar 7, 2026 – 01:58 AM UTC

PDB ID : 5T5H / pdb_00005t5h
EMDB ID : EMD-8361
Title : Structure and assembly model for the Trypanosoma cruzi 60S ribosomal subunit
Authors : Liu, Z.; Gutierrez-Vargas, C.; Wei, J.; Grassucci, R.A.; Ramesh, M.; Espina, N.; Sun, M.; Tutuncuoglu, B.; Madison-Antenucci, S.; Woolford Jr., J.L.; Tong, L.; Frank, J.
Deposited on : 2016-08-31
Resolution : 2.54 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:

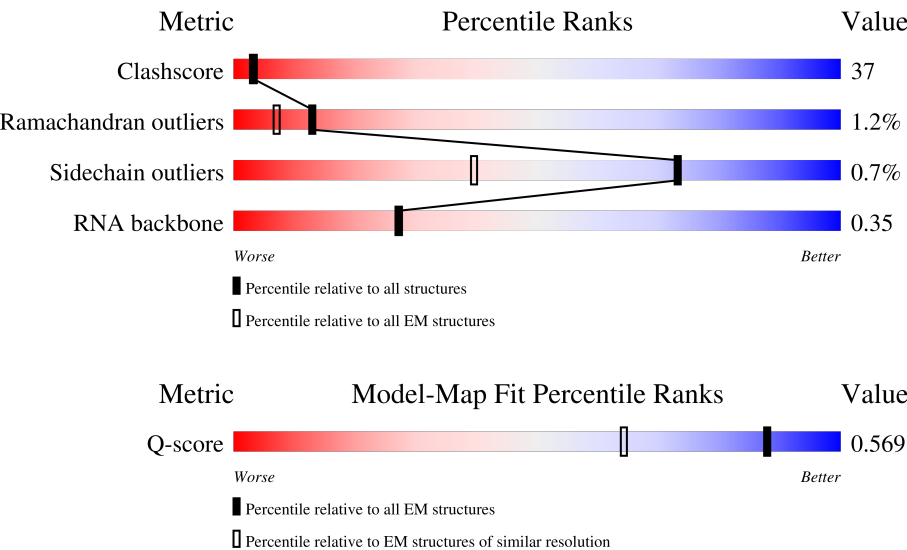
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

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 2.54 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.



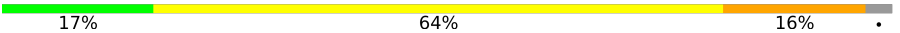
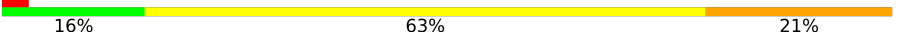
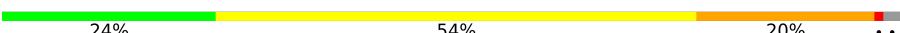
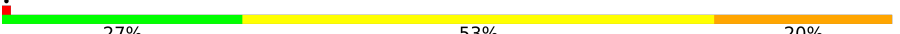
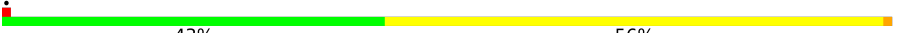
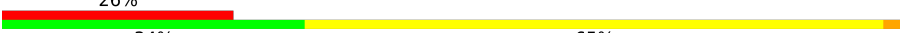
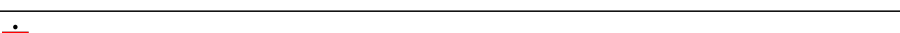
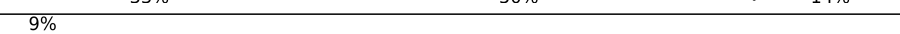
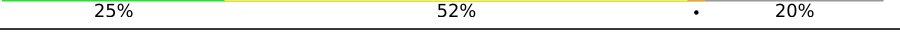
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	7403 (2.04 - 3.04)

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	A	1278	21% 54% 24%
2	B	941	5% 19% 57% 22%
3	C	169	15% 50% 19% 13%

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Mol	Chain	Length	Quality of chain
4	D	118	
5	E	146	
6	F	46	
7	G	123	
8	H	91	
9	I	192	
10	L	65	
11	N	205	
12	O	203	
13	P	149	
14	Q	203	
15	R	152	
16	S	177	
17	T	150	
18	U	146	
19	V	99	
20	W	127	
21	X	116	
22	Y	61	
23	Z	113	
24	a	132	
25	b	144	
26	c	125	
27	d	63	
28	e	245	

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Mol	Chain	Length	Quality of chain
29	f	397	
30	g	66	
31	h	169	
32	i	113	
33	j	104	
34	k	120	
35	l	136	
36	m	95	
37	n	81	
38	o	85	
39	p	58	
40	q	50	
41	r	337	
42	t	93	
43	u	254	
44	v	171	
45	w	215	
46	x	223	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
1	OMC	A	1053	-	-	X	-
1	OMC	A	919	-	-	X	-

2 Entry composition

There are 49 unique types of molecules in this entry. The entry contains 105124 atoms, of which 12 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 RNA LARGE SUBUNIT ALPHA.

Mol	Chain	Residues	Atoms						AltConf	Trace
1	A	1278	Total	C	H	N	O	P	0	0
			27453	12272	12	5035	8856	1278		

- Molecule 2 is a RNA chain called RNA LARGE SUBUNIT BETA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	941	Total	C	N	O	P	0	0
			20110	9007	3606	6556	941		

- Molecule 3 is a RNA chain called 5.8S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	147	Total	C	N	O	P	0	0
			3140	1408	557	1028	147		

- Molecule 4 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	114	Total	C	N	O	P	0	0
			2432	1084	435	799	114		

- Molecule 5 is a RNA chain called srRNA1.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	146	Total	C	N	O	P	0	0
			3110	1390	552	1022	146		

- Molecule 6 is a RNA chain called srRNA3.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	46	Total	C	N	O	P	0	0
			965	433	165	321	46		

- Molecule 7 is a RNA chain called srRNA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	121	Total	C	N	O	P	0	0
			2578	1150	455	852	121		

- Molecule 8 is a RNA chain called srRNA4.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	91	Total	C	N	O	P	0	0
			1946	867	354	634	91		

- Molecule 9 is a protein called 60S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	192	Total	C	N	O	S	0	0
			1515	951	308	250	6		

- Molecule 10 is a protein called 60S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	65	Total	C	N	O	S	0	0
			535	333	112	85	5		

- Molecule 11 is a protein called 60S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	N	172	Total	C	N	O	S	0	0
			1413	892	291	224	6		

- Molecule 12 is a protein called 60S ribosomal protein L13a.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	O	203	Total	C	N	O	S	0	1
			1642	1046	322	269	5		

- Molecule 13 is a protein called 40S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	P	149	Total	C	N	O	S	0	0
			1186	746	235	203	2		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
P	72	LYS	ARG	conflict	UNP Q4DQ35

- Molecule 14 is a protein called Ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	Q	203	Total	C	N	O	S	1	0
			1710	1076	365	263	6		

- Molecule 15 is a protein called 60S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	R	152	Total	C	N	O	S	0	0
			1226	768	243	205	10		

- Molecule 16 is a protein called 60S ribosomal protein L18a.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	S	177	Total	C	N	O	S	0	0
			1449	919	282	242	6		

- Molecule 17 is a protein called Ribosomal protein L19-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	T	150	Total	C	N	O	S	0	0
			1273	789	273	205	6		

- Molecule 18 is a protein called Ribosomal protein L21E (60S).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	U	126	Total	C	N	O	S	0	0
			1016	642	207	163	4		

- Molecule 19 is a protein called 60S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	V	85	Total	C	N	O	S	0	0
			730	481	127	120	2		

- Molecule 20 is a protein called 60S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	W	127	Total	C	N	O	S	0	0
			960	611	180	166	3		

- Molecule 21 is a protein called 60S ribosomal protein L23a.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	X	109	Total	C	N	O	S	0	0
			890	565	164	157	4		

- Molecule 22 is a protein called Ribosomal protein L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	Y	61	Total	C	N	O	S	0	0
			519	340	98	77	4		

- Molecule 23 is a protein called 60S ribosomal protein L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Z	113	Total	C	N	O	S	0	0
			919	571	195	150	3		

- Molecule 24 is a protein called Ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	a	105	Total	C	N	O	S	0	0
			877	565	175	135	2		

- Molecule 25 is a protein called 60S ribosomal protein L27A/L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	b	144	Total	C	N	O	S	0	0
			1135	720	226	185	4		

- Molecule 26 is a protein called 60S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	c	120	Total	C	N	O	S	0	0
			935	583	187	161	4		

- Molecule 27 is a protein called Ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	d	63	Total	C	N	O	S	0	0
			518	314	122	81	1		

- Molecule 28 is a protein called 60S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	e	245	Total	C	N	O	S	0	0
			1874	1170	379	314	11		

- Molecule 29 is a protein called Ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	f	397	Total	C	N	O	S	0	0
			3189	2010	630	537	12		

- Molecule 30 is a protein called 60S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	g	66	Total	C	N	O	S	0	0
			523	335	91	93	4		

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
g	91	VAL	ALA	conflict	UNP Q4DIC9
g	92	LEU	GLY	conflict	UNP Q4DIC9
g	93	SER	ASN	conflict	UNP Q4DIC9
g	94	ILE	ASN	conflict	UNP Q4DIC9
g	95	THR	LEU	conflict	UNP Q4DIC9
g	97	VAL	LEU	conflict	UNP Q4DIC9

- Molecule 31 is a protein called 60S ribosomal subunit protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	h	150	Total	C	N	O	S	0	0
			1064	671	208	183	2		

- Molecule 32 is a protein called 60S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	i	113	Total	C	N	O	S	0	0
			928	585	185	154	4		

- Molecule 33 is a protein called 60S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	j	104	Total	C	N	O	S	0	0
			863	532	191	137	3		

- Molecule 34 is a protein called 60S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	k	113	Total	C	N	O	S	0	0
			967	602	212	150	3		

- Molecule 35 is a protein called Ribosomal protein L35A.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	l	136	Total	C	N	O	S	0	0
			1057	662	217	174	4		

- Molecule 36 is a protein called Ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	m	95	Total	C	N	O	S	0	0
			757	474	159	121	3		

- Molecule 37 is a protein called Ribosomal protein L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	n	81	Total	C	N	O	S	0	0
			679	413	154	106	6		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
n	64	MET	CYS	conflict	UNP Q4DXW6

- Molecule 38 is a protein called 60S ribosomal protein L37a.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	o	85	Total	C	N	O	S	0	0
			669	413	141	108	7		

- Molecule 39 is a protein called Ribosomal protein L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	p	52	Total	C	N	O	S	0	0
			432	277	82	71	2		

- Molecule 40 is a protein called Ribosomal protein L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	q	50	Total	C	N	O	S	0	0
			456	297	98	61			

- Molecule 41 is a protein called 60S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	r	325	Total	C	N	O	S	0	0
			2513	1575	489	434	15		

- Molecule 42 is a protein called 60S ribosomal protein L44.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	t	93	Total	C	N	O	S	0	0
			763	486	149	123	5		

- Molecule 43 is a protein called 60S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	u	193	Total	C	N	O	S	0	0
			1541	982	292	262	5		

- Molecule 44 is a protein called 60S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	v	132	Total	C	N	O	S	0	0
			1037	661	194	179	3		

- Molecule 45 is a protein called 60S ribosomal protein L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	w	215	Total	C	N	O	S	0	0
			1749	1110	342	288	9		

- Molecule 46 is a protein called Ribosomal protein L7a-like protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	x	208	Total	C	N	O	S	0	0
			1690	1062	338	284	6		

- Molecule 47 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
47	A	57	Total	Mg	0
			57	57	
47	B	38	Total	Mg	0
			38	38	
47	C	2	Total	Mg	0
			2	2	
47	D	1	Total	Mg	0
			1	1	
47	E	1	Total	Mg	0
			1	1	
47	F	1	Total	Mg	0
			1	1	
47	G	1	Total	Mg	0
			1	1	
47	H	1	Total	Mg	0
			1	1	
47	R	1	Total	Mg	0
			1	1	
47	U	1	Total	Mg	0
			1	1	
47	q	1	Total	Mg	0
			1	1	

- Molecule 48 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
48	n	1	Total	Zn	0
			1	1	
48	o	1	Total	Zn	0
			1	1	
48	t	1	Total	Zn	0
			1	1	

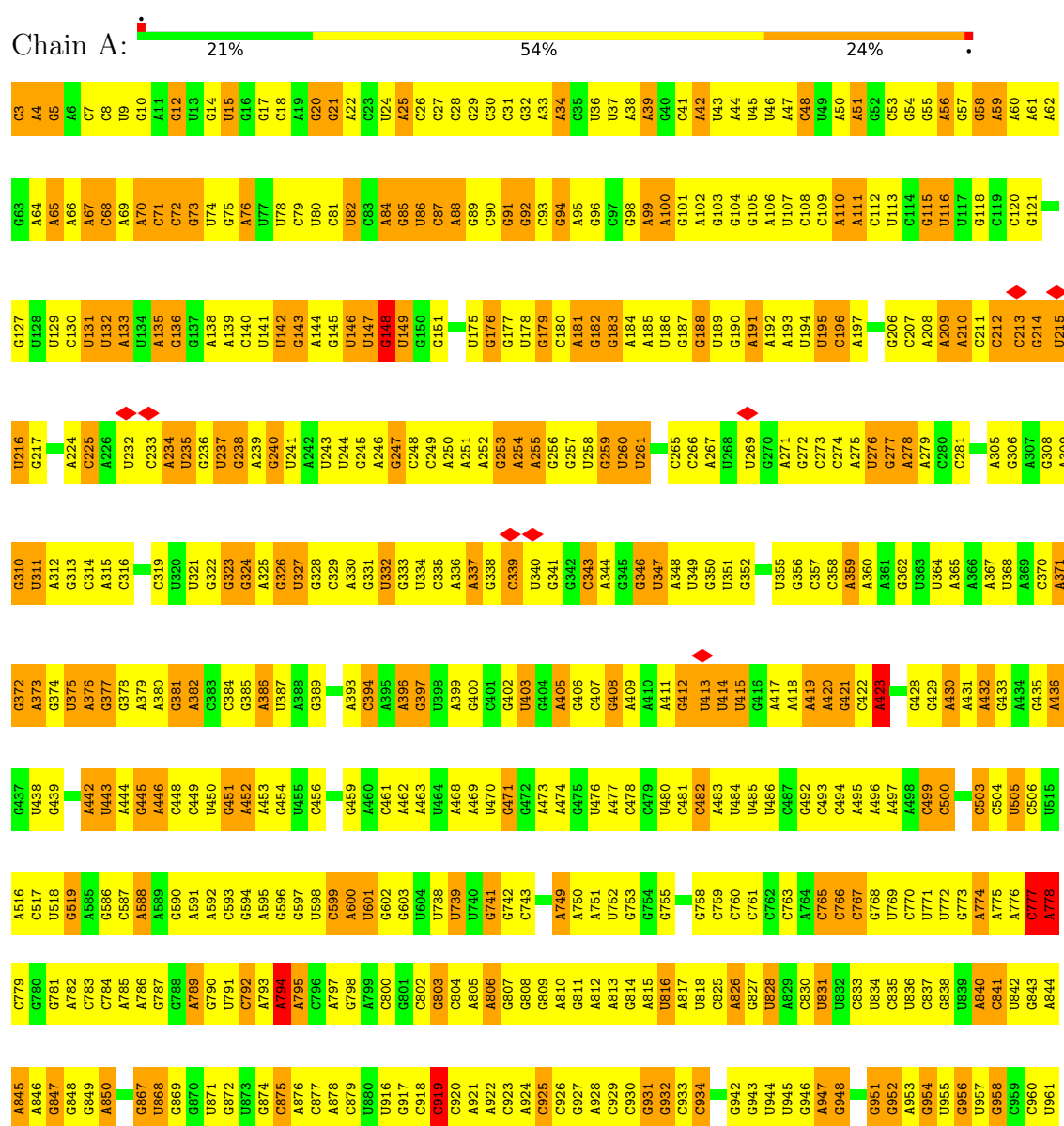
- Molecule 49 is water.

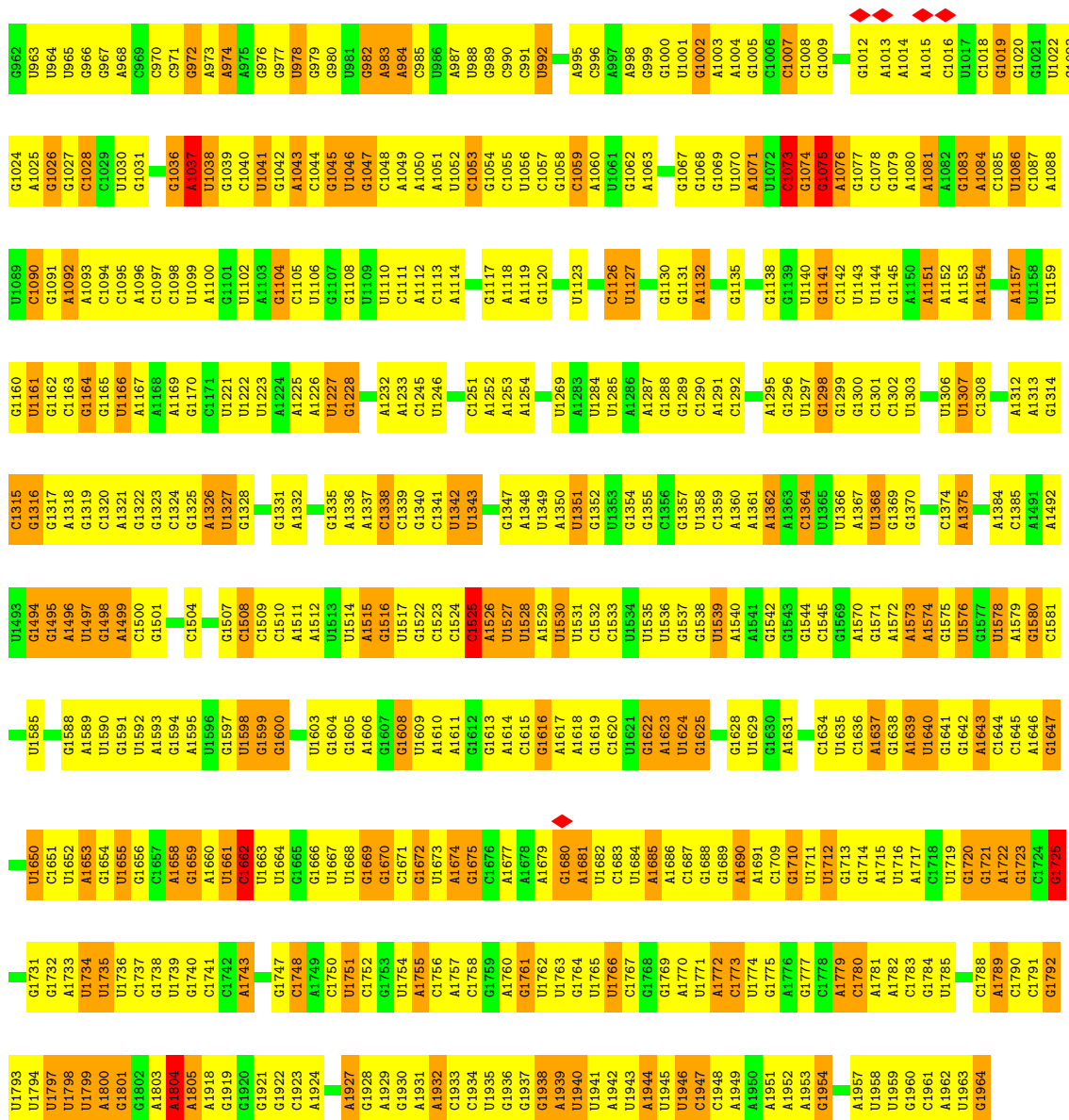
Mol	Chain	Residues	Atoms		AltConf
49	A	38	Total 38	O 38	0
49	B	26	Total 26	O 26	0
49	C	1	Total 1	O 1	0
49	E	1	Total 1	O 1	0
49	G	3	Total 3	O 3	0
49	H	2	Total 2	O 2	0
49	I	1	Total 1	O 1	0
49	R	1	Total 1	O 1	0
49	a	1	Total 1	O 1	0
49	b	1	Total 1	O 1	0
49	e	2	Total 2	O 2	0
49	f	1	Total 1	O 1	0
49	j	1	Total 1	O 1	0
49	k	1	Total 1	O 1	0
49	n	1	Total 1	O 1	0
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49	x	1	Total 1	O 1	0

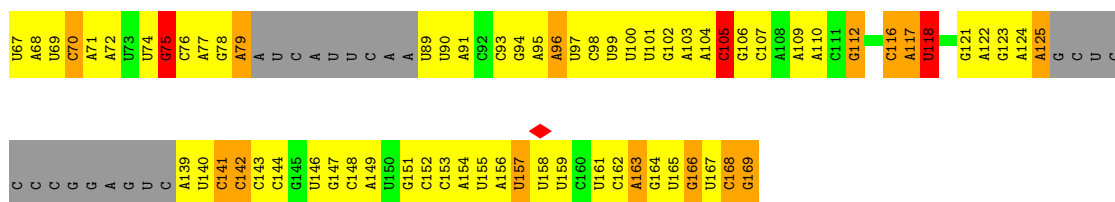
3 Residue-property plots

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: RNA LARGE SUBUNIT ALPHA

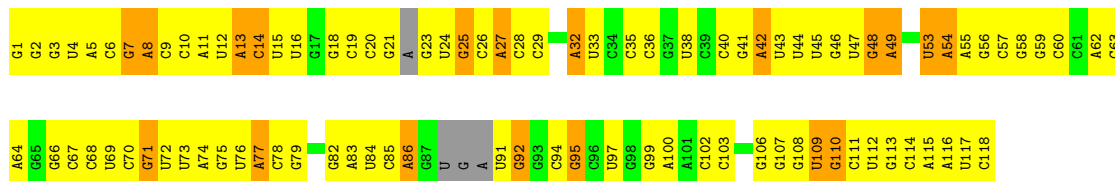






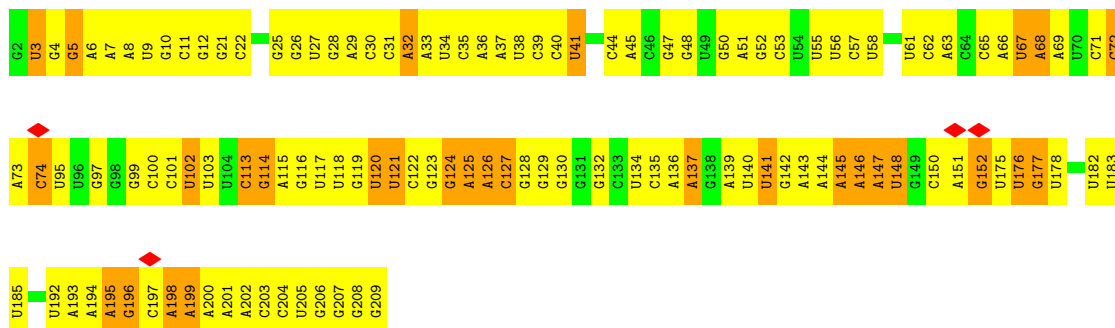
- Molecule 4: 5S rRNA

Chain D: 17% 64% 16%



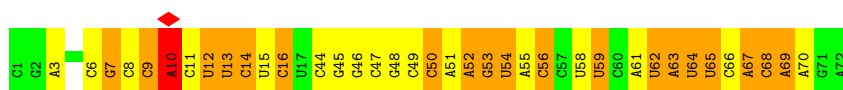
- Molecule 5: srRNA1

Chain E: 16% 63% 21%



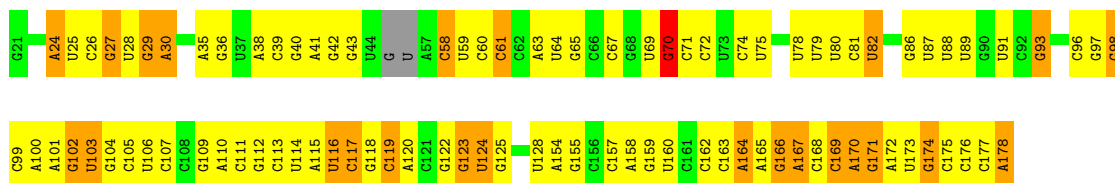
- Molecule 6: srRNA3

Chain F: 20% 37% 41%



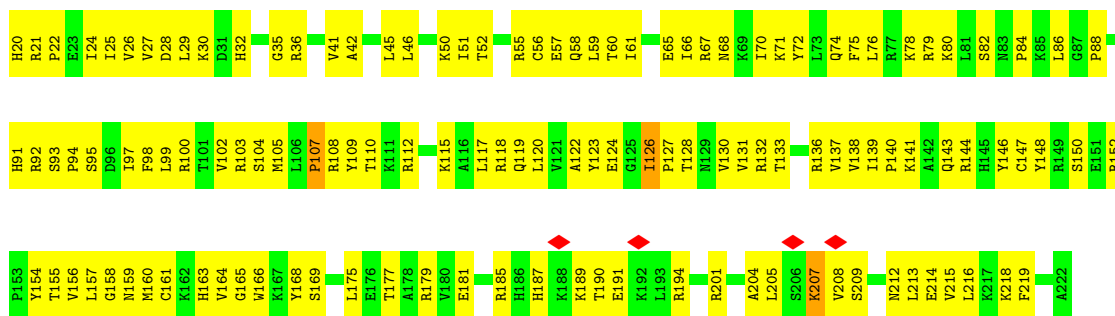
- Molecule 7: srRNA2

Chain G: 24% 54% 20%



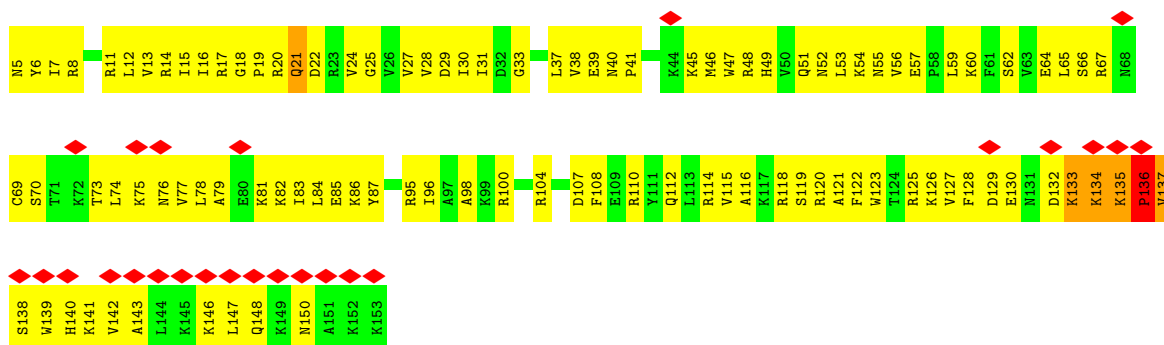
- Molecule 8: srRNA4

Chain O: 



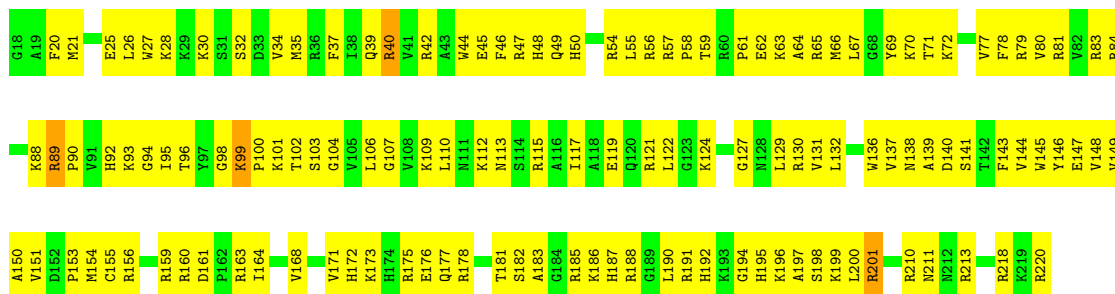
• Molecule 13: 40S ribosomal protein L14

Chain P: 



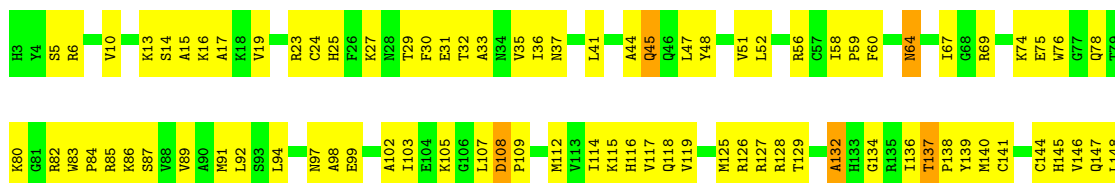
• Molecule 14: Ribosomal protein L15

Chain Q: 



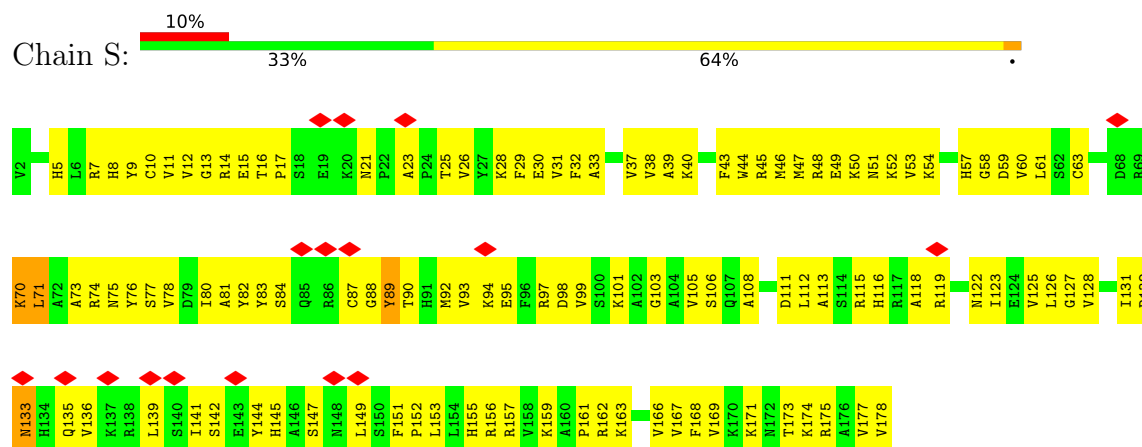
• Molecule 15: 60S ribosomal protein L17

Chain R: 

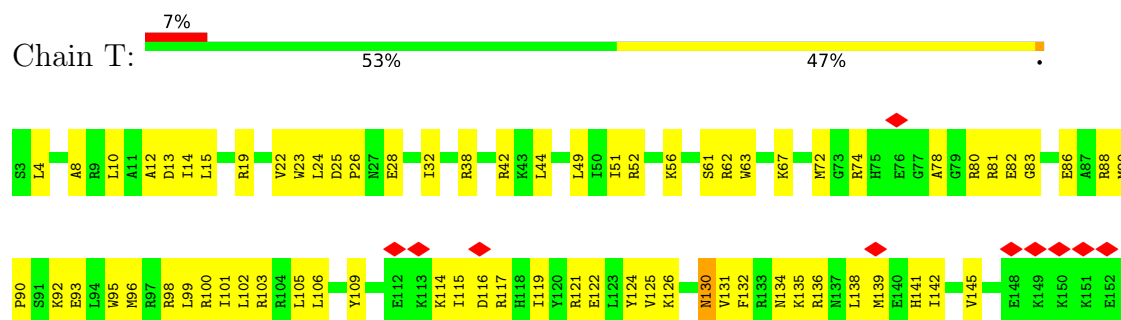


F149
M150
T151
Q152
P153
Q154

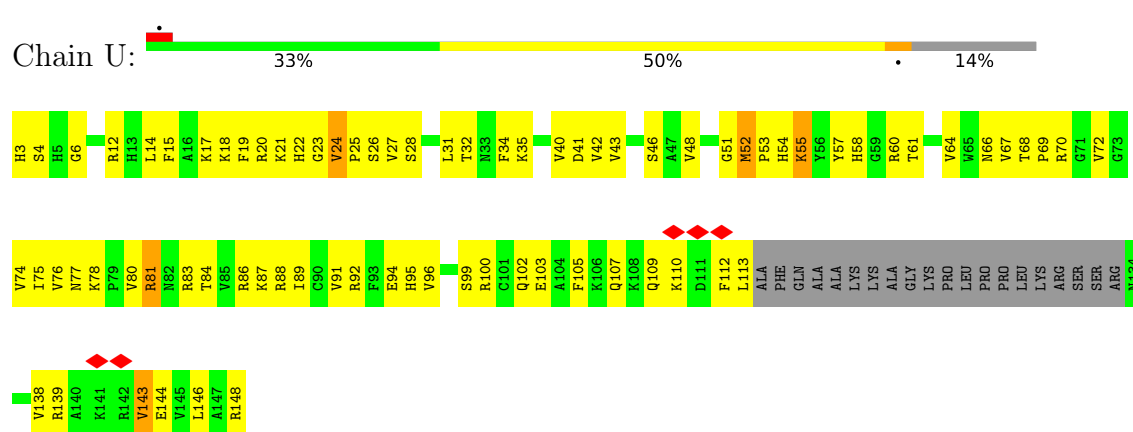
• Molecule 16: 60S ribosomal protein L18a



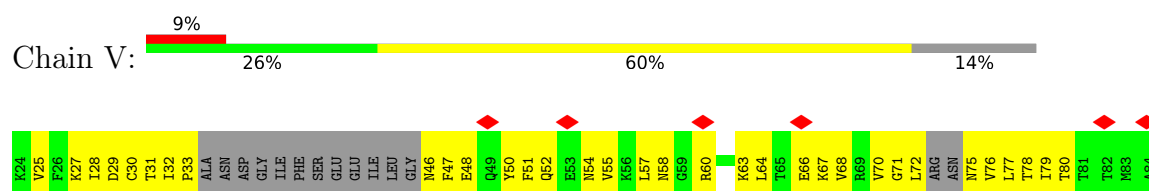
• Molecule 17: Ribosomal protein L19-like protein



• Molecule 18: Ribosomal protein L21E (60S)

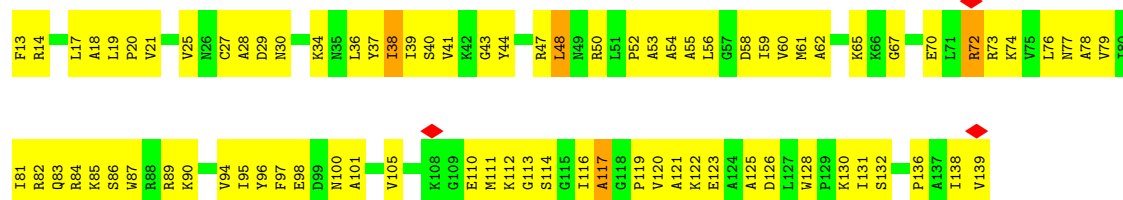
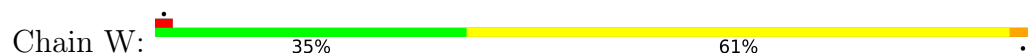


• Molecule 19: 60S ribosomal protein L22

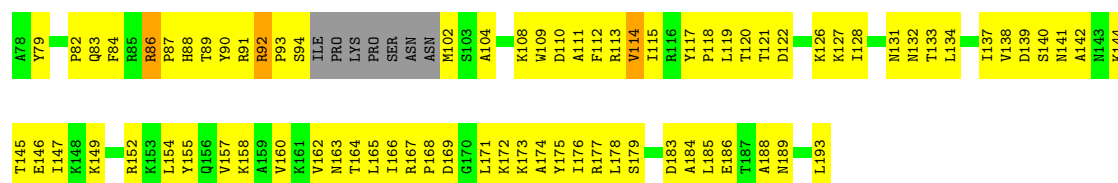




• Molecule 20: 60S ribosomal protein L23



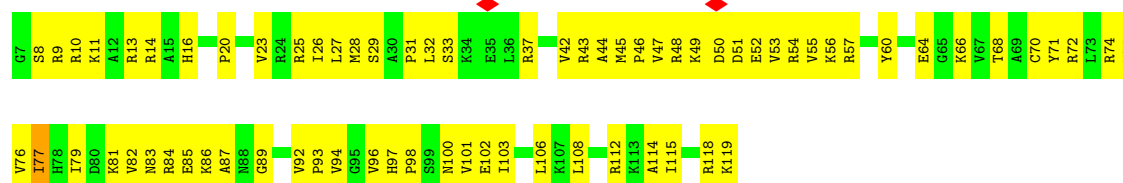
• Molecule 21: 60S ribosomal protein L23a



• Molecule 22: Ribosomal protein L24

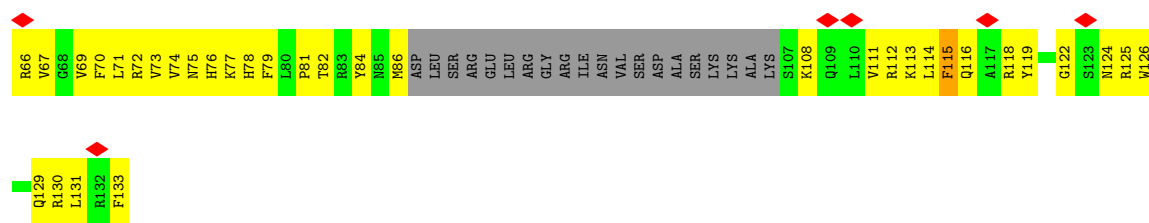


• Molecule 23: 60S ribosomal protein L26



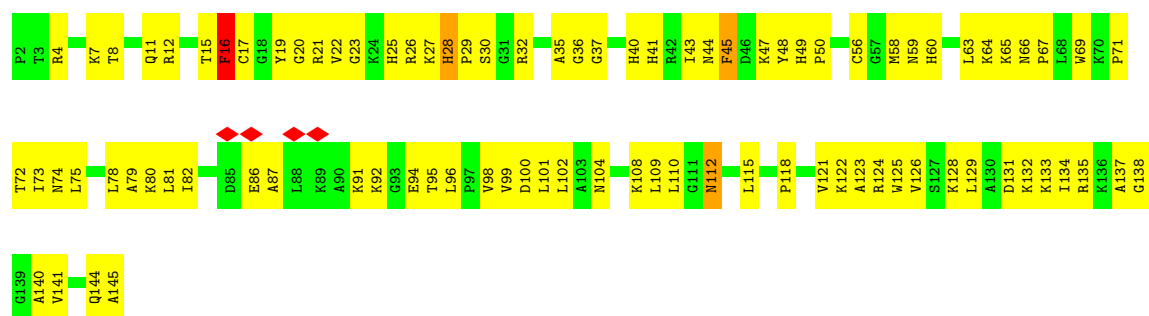
• Molecule 24: Ribosomal protein L27





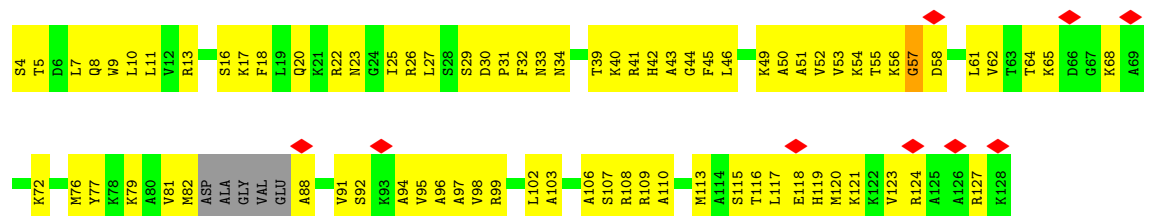
• Molecule 25: 60S ribosomal protein L27A/L29

Chain b: 38% 60%



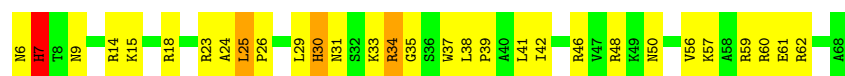
• Molecule 26: 60S ribosomal protein L28

Chain c: 7% 33% 62%



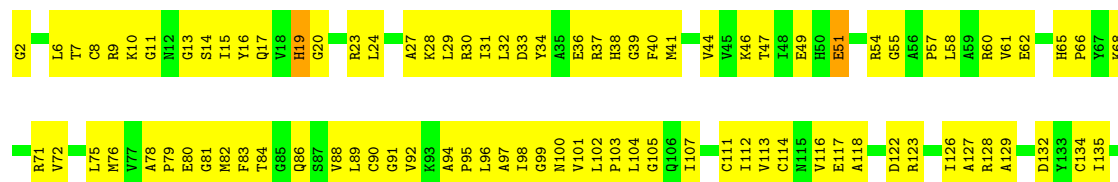
• Molecule 27: Ribosomal protein L29

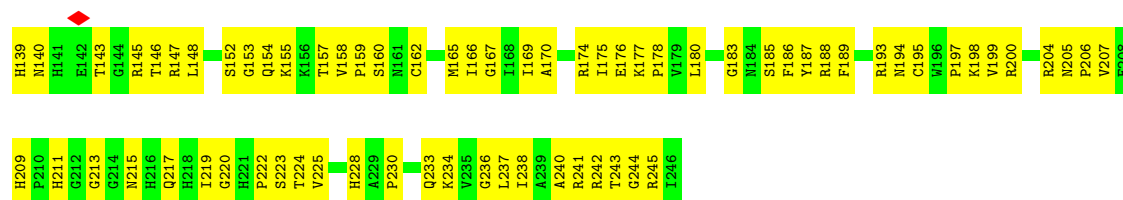
Chain d: 52% 41% 5%



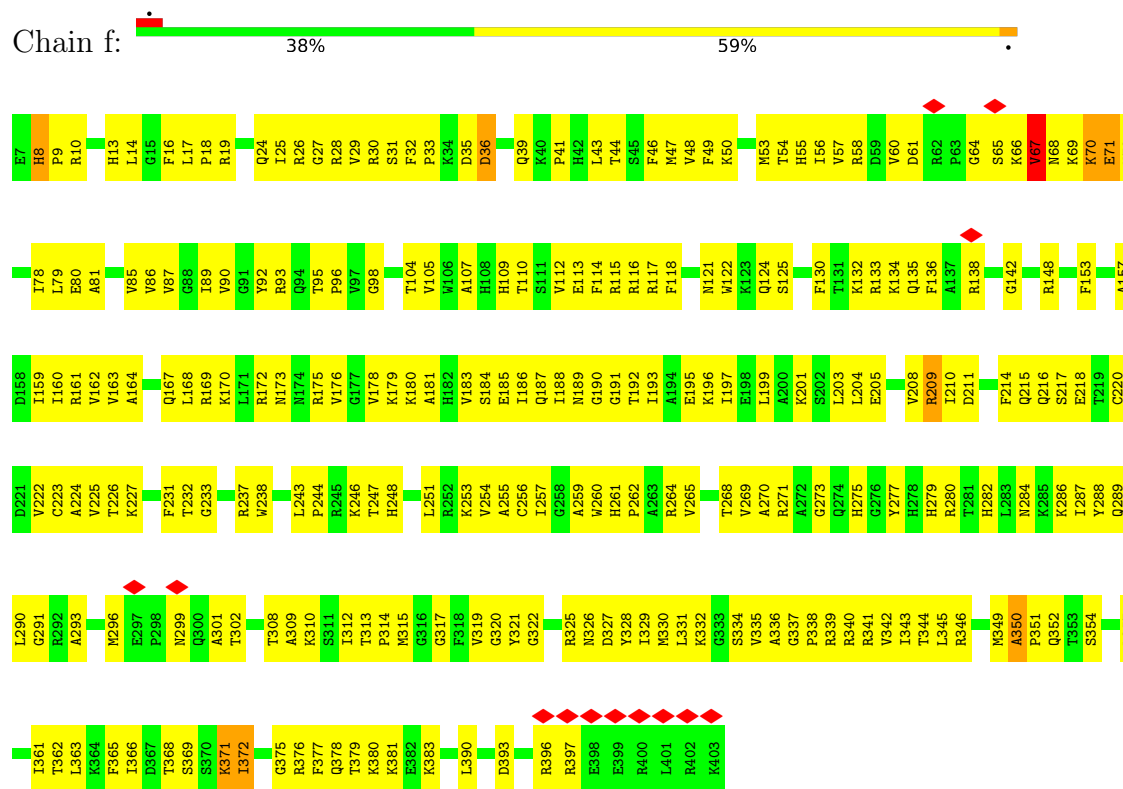
• Molecule 28: 60S ribosomal protein L2

Chain e: 35% 64%

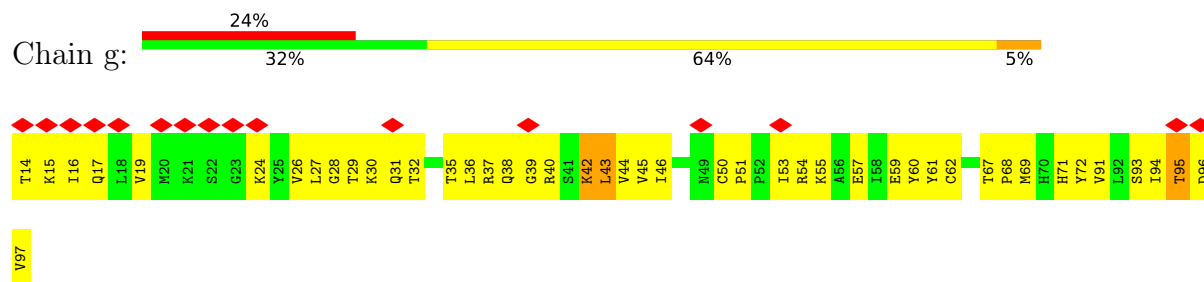




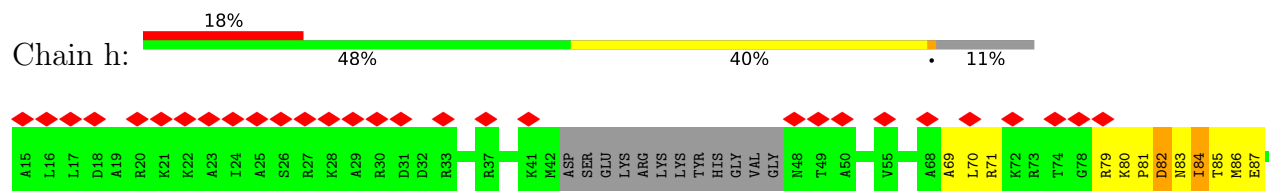
• Molecule 29: Ribosomal protein L13

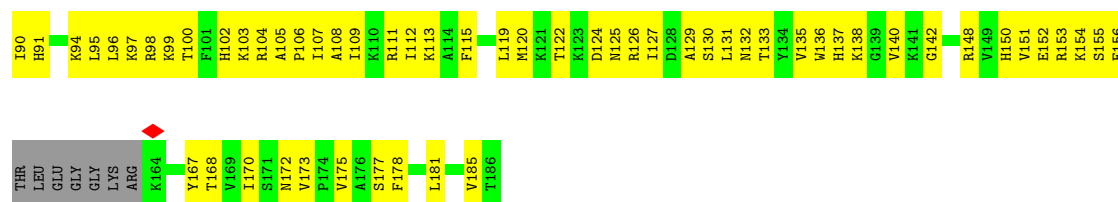


• Molecule 30: 60S ribosomal protein L30



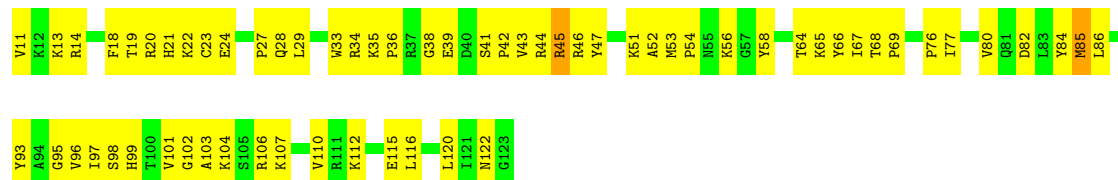
• Molecule 31: 60S ribosomal subunit protein L31





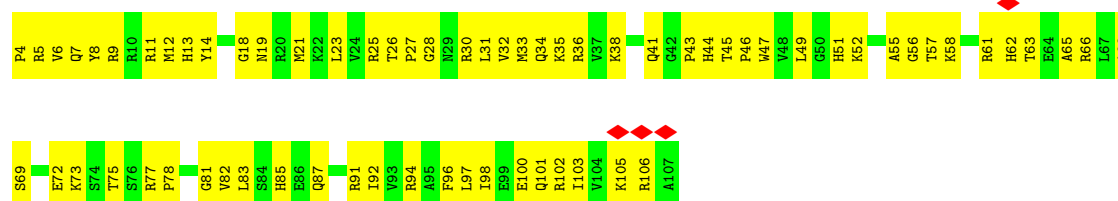
• Molecule 32: 60S ribosomal protein L32

Chain i: 44% 54%



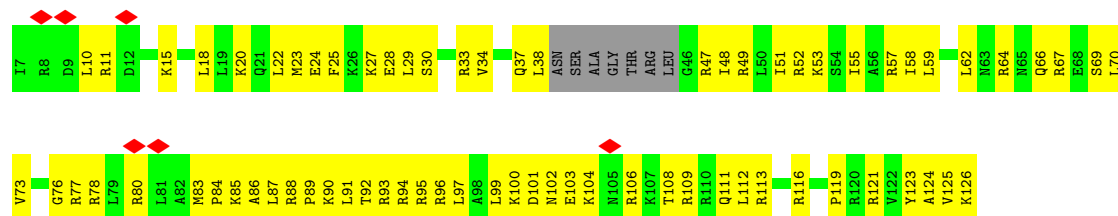
• Molecule 33: 60S ribosomal protein L34

Chain j: 35% 65%



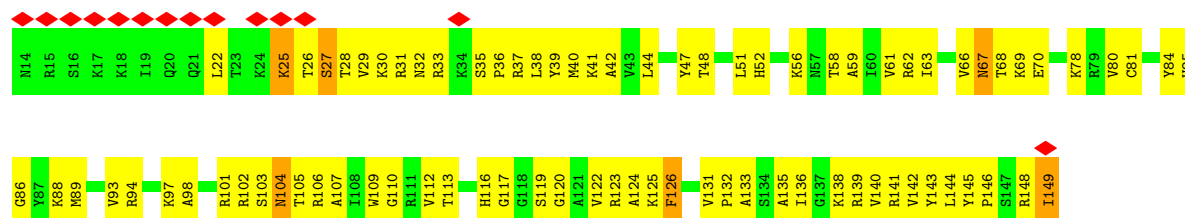
• Molecule 34: 60S ribosomal protein L35

Chain k: 5% 34% 60% 6%

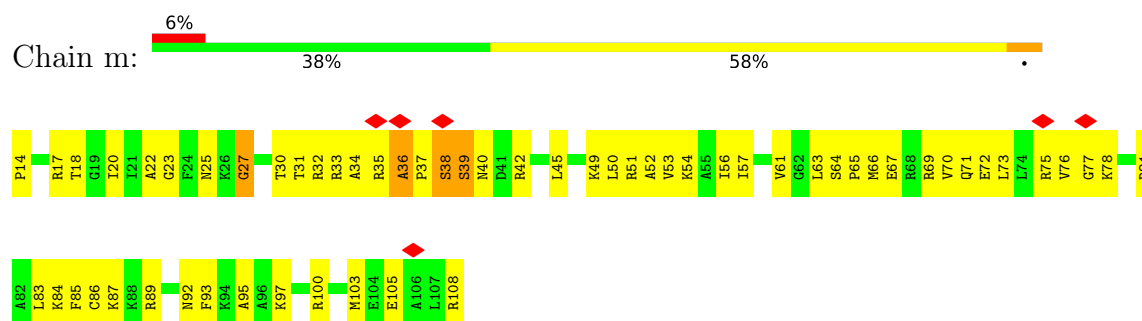


• Molecule 35: Ribosomal protein L35A

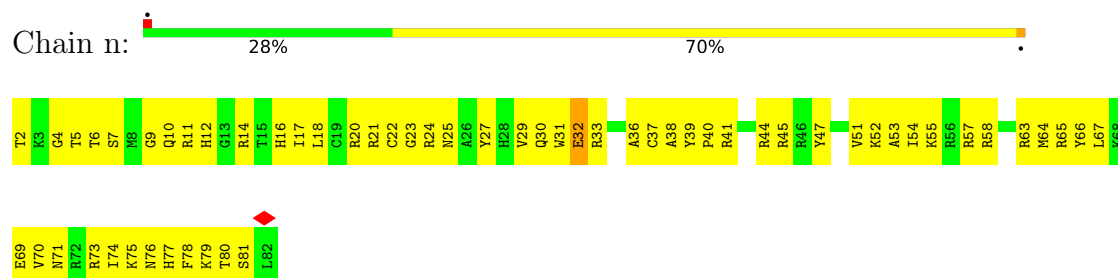
Chain l: 10% 40% 56%



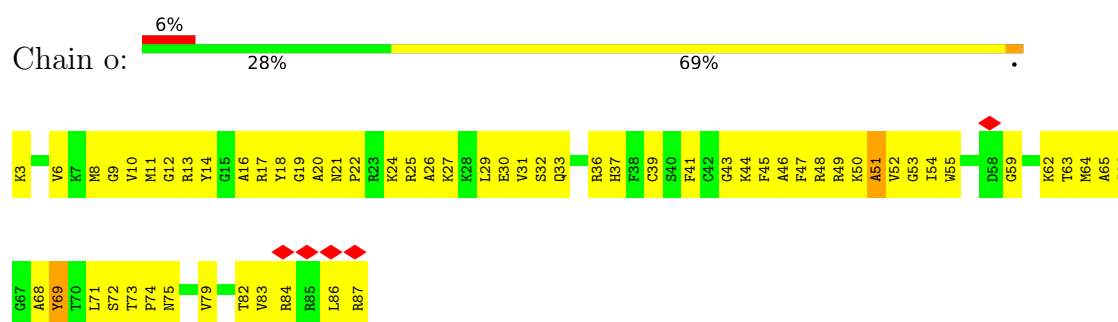
- Molecule 36: Ribosomal protein L36



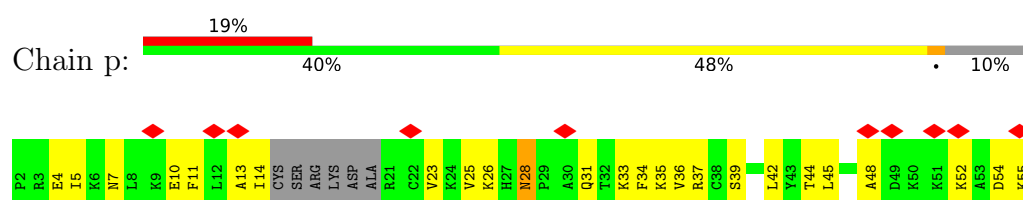
- Molecule 37: Ribosomal protein L37



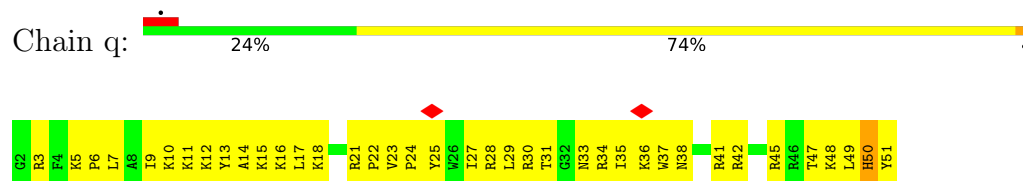
- Molecule 38: 60S ribosomal protein L37a



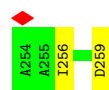
- Molecule 39: Ribosomal protein L38



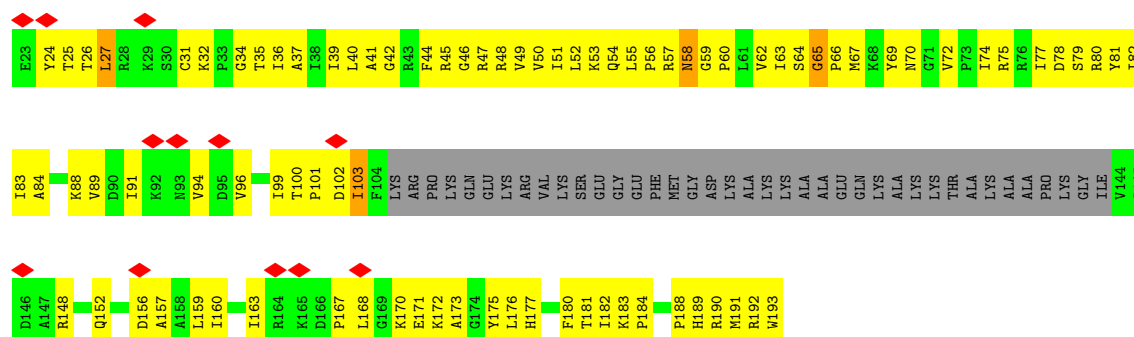
- Molecule 40: Ribosomal protein L39



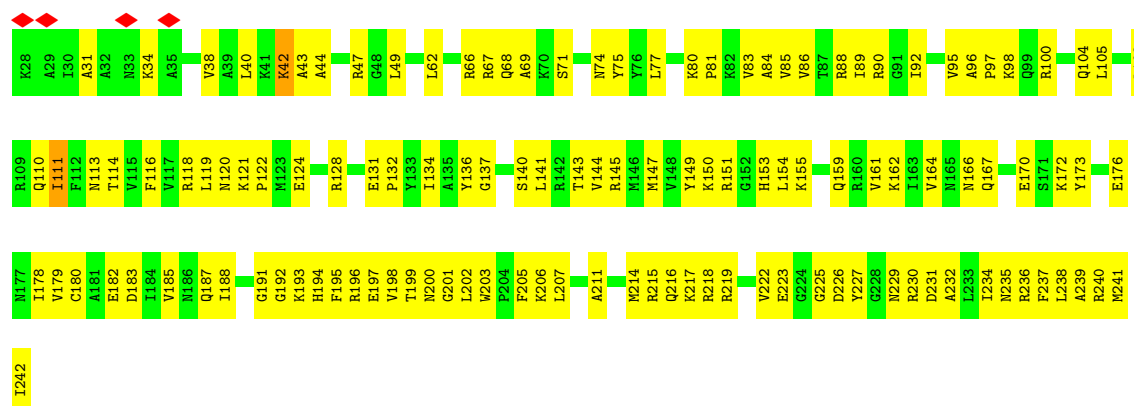
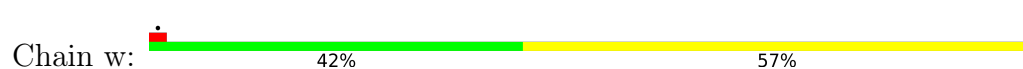
- Molecule 41: 60S ribosomal protein L4



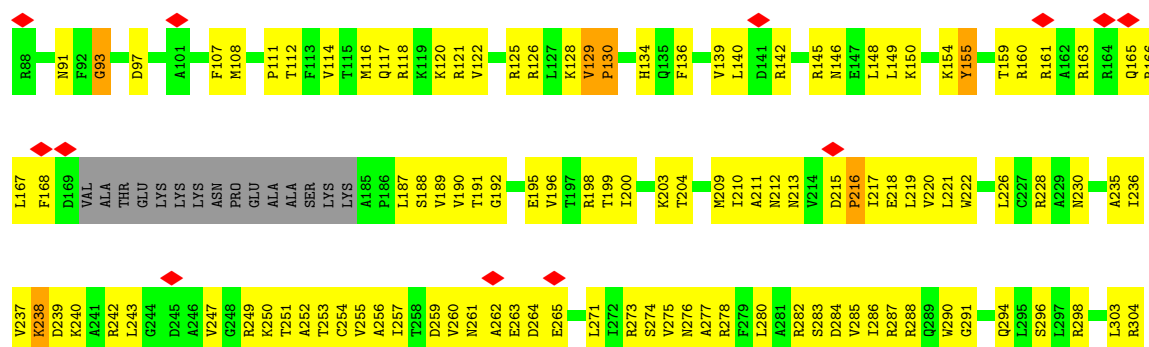
• Molecule 44: 60S ribosomal protein L6



• Molecule 45: 60S ribosomal protein L7



• Molecule 46: Ribosomal protein L7a-like protein



K305	K306	R307	A308	R309	N310
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4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	235000	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	27	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.816	Depositor
Minimum map value	-0.455	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.053	Depositor
Recommended contour level	0.07	Depositor
Map size (Å)	240.34999, 240.34999, 240.34999	wwPDB
Map dimensions	230, 230, 230	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.045, 1.045, 1.045	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 5MC, ZN, OMC, OMU, MG, 7MG, A2M, OMG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	A	0.63	2/29897 (0.0%)	0.47	4/46554 (0.0%)
2	B	0.56	0/21699	0.50	2/33776 (0.0%)
3	C	0.60	0/3306	0.44	0/5144
4	D	0.39	0/2715	0.38	0/4226
5	E	0.45	0/3472	0.39	0/5396
6	F	0.44	0/1074	0.53	1/1665 (0.1%)
7	G	0.59	0/2849	0.46	0/4431
8	H	0.55	0/2171	0.46	0/3374
9	I	0.87	0/1540	1.02	5/2058 (0.2%)
10	L	0.45	0/542	0.87	0/718
11	N	0.89	0/1442	1.02	6/1926 (0.3%)
12	O	0.87	0/1673	0.96	2/2244 (0.1%)
13	P	0.68	0/1204	0.97	2/1618 (0.1%)
14	Q	1.03	0/1752	1.24	11/2341 (0.5%)
15	R	0.93	0/1251	1.04	5/1678 (0.3%)
16	S	0.77	0/1484	0.94	4/1997 (0.2%)
17	T	0.76	0/1292	0.91	2/1711 (0.1%)
18	U	0.79	0/1037	0.98	4/1389 (0.3%)
19	V	0.54	0/742	0.86	0/986
20	W	0.85	0/977	0.94	1/1318 (0.1%)
21	X	0.85	0/905	1.01	4/1215 (0.3%)
22	Y	0.84	0/539	1.07	3/728 (0.4%)
23	Z	0.73	0/934	0.86	0/1249
24	a	0.55	0/895	0.86	1/1190 (0.1%)
25	b	0.93	1/1164 (0.1%)	1.05	6/1558 (0.4%)
26	c	0.72	0/946	0.95	2/1263 (0.2%)
27	d	0.82	0/527	1.07	4/703 (0.6%)
28	e	0.91	0/1915	0.99	7/2576 (0.3%)
29	f	0.92	0/3257	0.99	12/4376 (0.3%)
30	g	0.51	0/530	0.84	1/712 (0.1%)
31	h	0.81	0/1076	0.91	1/1450 (0.1%)
32	i	0.89	0/948	1.02	2/1265 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	j	0.77	0/879	0.93	0/1174
34	k	0.73	1/972 (0.1%)	0.89	0/1283
35	l	0.91	0/1079	1.06	6/1451 (0.4%)
36	m	0.73	0/767	0.94	1/1017 (0.1%)
37	n	1.01	0/692	1.07	2/921 (0.2%)
38	o	0.89	0/681	0.98	2/905 (0.2%)
39	p	0.56	0/437	0.93	2/579 (0.3%)
40	q	0.80	0/470	0.88	0/626
41	r	0.92	0/2560	0.96	7/3444 (0.2%)
42	t	0.74	0/777	1.00	4/1030 (0.4%)
43	u	0.65	0/1568	0.88	0/2104
44	v	0.66	0/1055	0.88	0/1420
45	w	0.87	0/1780	0.94	4/2384 (0.2%)
46	x	0.80	0/1715	1.03	8/2306 (0.3%)
All	All	0.69	4/111187 (0.0%)	0.70	128/163479 (0.1%)

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
14	Q	0	1
24	a	0	1
All	All	0	2

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	b	16	PHE	CA-C	-5.57	1.45	1.52
34	k	91	LEU	CA-C	-5.21	1.50	1.52
1	A	1804	A2M	O3'-P	5.05	1.61	1.56
1	A	974	A2M	O3'-P	5.02	1.61	1.56

All (128) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	Q	40[A]	ARG	CA-C-O	19.20	140.91	120.55
14	Q	40[B]	ARG	CA-C-O	19.20	140.91	120.55
14	Q	40[A]	ARG	N-CA-C	12.49	124.89	111.28
14	Q	40[B]	ARG	N-CA-C	12.49	124.89	111.28
14	Q	201	ARG	CA-C-N	-9.55	107.90	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	Q	201	ARG	C-N-CA	-9.55	107.90	119.84
42	t	12	CYS	CA-C-N	9.38	129.60	119.28
42	t	12	CYS	C-N-CA	9.38	129.60	119.28
11	N	24	LYS	N-CA-C	-9.10	92.64	108.20
14	Q	99	LYS	CA-C-N	8.82	128.99	119.28
14	Q	99	LYS	C-N-CA	8.82	128.99	119.28
11	N	22	SER	N-CA-C	8.80	120.95	111.36
12	O	126	ILE	CA-C-N	8.73	128.77	119.78
12	O	126	ILE	C-N-CA	8.73	128.77	119.78
9	I	102	ILE	CA-C-N	8.51	128.44	119.85
9	I	102	ILE	C-N-CA	8.51	128.44	119.85
1	A	1578	U	OP2-P-O3'	-8.38	82.87	108.00
1	A	1578	U	OP1-P-O3'	-8.22	83.34	108.00
25	b	16	PHE	N-CA-C	-8.00	96.21	109.24
18	U	52	MET	CA-C-N	7.96	127.98	119.78
18	U	52	MET	C-N-CA	7.96	127.98	119.78
11	N	60	ARG	CA-C-N	7.88	127.81	119.85
11	N	60	ARG	C-N-CA	7.88	127.81	119.85
46	x	129	VAL	CA-C-N	7.87	125.33	119.66
46	x	129	VAL	C-N-CA	7.87	125.33	119.66
2	B	1642	A	C4'-C3'-O3'	7.85	121.18	109.40
25	b	49	HIS	CA-C-N	7.68	127.58	119.05
25	b	49	HIS	C-N-CA	7.68	127.58	119.05
25	b	28	HIS	CA-C-N	7.52	127.55	119.28
25	b	28	HIS	C-N-CA	7.52	127.55	119.28
27	d	25	LEU	CA-C-N	7.51	127.52	119.78
27	d	25	LEU	C-N-CA	7.51	127.52	119.78
13	P	135	LYS	C-N-CD	7.49	137.07	120.60
41	r	315	GLN	CA-C-N	7.29	127.28	119.78
41	r	315	GLN	C-N-CA	7.29	127.28	119.78
22	Y	53	VAL	CA-C-N	7.28	127.29	119.28
22	Y	53	VAL	C-N-CA	7.28	127.29	119.28
35	l	104	ASN	N-CA-C	-7.18	104.40	113.02
41	r	273	LYS	CB-CA-C	-7.04	108.47	116.63
37	n	64	MET	N-CA-C	-6.95	101.80	111.52
6	F	10	A	C2'-C3'-O3'	6.88	119.83	109.50
42	t	51	GLY	N-CA-C	-6.78	103.43	111.36
28	e	78	ALA	CA-C-N	6.75	126.73	119.78
28	e	78	ALA	C-N-CA	6.75	126.73	119.78
29	f	337	GLY	CA-C-N	6.70	126.64	120.21
29	f	337	GLY	C-N-CA	6.70	126.64	120.21
15	R	137	THR	CA-C-N	6.65	126.63	119.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	R	137	THR	C-N-CA	6.65	126.63	119.78
46	x	238	LYS	N-CA-C	6.60	119.30	111.71
35	l	98	ALA	CA-C-N	6.44	126.37	119.28
35	l	98	ALA	C-N-CA	6.44	126.37	119.28
45	w	203	TRP	CA-C-N	-6.41	113.16	119.76
45	w	203	TRP	C-N-CA	-6.41	113.16	119.76
16	S	23	ALA	CA-C-N	6.39	126.37	119.78
16	S	23	ALA	C-N-CA	6.39	126.37	119.78
29	f	371	LYS	N-CA-C	-6.37	98.85	109.24
29	f	64	GLY	N-CA-C	-6.37	105.16	112.29
29	f	67	VAL	N-CA-C	6.34	118.19	112.17
21	X	92	ARG	CA-C-N	6.33	126.25	119.28
21	X	92	ARG	C-N-CA	6.33	126.25	119.28
21	X	86	ARG	CA-C-N	6.26	126.23	119.78
21	X	86	ARG	C-N-CA	6.26	126.23	119.78
41	r	58	GLY	N-CA-C	-6.25	107.65	115.08
27	d	7	HIS	N-CA-C	6.24	120.23	111.30
32	i	85	MET	N-CA-C	-6.23	105.64	113.18
35	l	35	SER	CA-C-N	6.22	126.13	119.85
35	l	35	SER	C-N-CA	6.22	126.13	119.85
14	Q	89	ARG	CA-C-N	6.15	127.53	119.84
14	Q	89	ARG	C-N-CA	6.15	127.53	119.84
39	p	28	ASN	CA-C-N	-6.01	113.57	119.76
39	p	28	ASN	C-N-CA	-6.01	113.57	119.76
29	f	317	GLY	N-CA-C	-6.01	103.00	112.61
1	A	1037	A	C2'-C3'-O3'	5.93	118.39	109.50
15	R	45	GLN	N-CA-C	-5.93	104.82	111.28
38	o	43	GLY	N-CA-C	-5.89	107.11	115.30
32	i	45	ARG	N-CA-C	-5.86	106.09	113.18
29	f	36	ASP	CA-C-N	5.72	125.58	119.28
29	f	36	ASP	C-N-CA	5.72	125.58	119.28
31	h	82	ASP	O-C-N	5.70	130.17	122.59
30	g	39	GLY	N-CA-C	-5.62	107.49	115.30
16	S	93	VAL	N-CA-C	5.59	112.19	106.21
9	I	5	LEU	N-CA-C	-5.58	105.07	113.89
1	A	148	G	C2'-C3'-O3'	5.57	117.85	109.50
29	f	350	ALA	CA-C-N	5.56	125.40	119.28
29	f	350	ALA	C-N-CA	5.56	125.40	119.28
41	r	198	ARG	N-CA-C	-5.55	104.76	112.03
36	m	27	GLY	N-CA-C	5.48	120.99	112.60
9	I	60	ALA	CA-C-N	5.47	125.38	119.85
9	I	60	ALA	C-N-CA	5.47	125.38	119.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	x	130	PRO	CA-C-N	5.46	125.29	119.28
46	x	130	PRO	C-N-CA	5.46	125.29	119.28
16	S	171	LYS	N-CA-C	5.46	118.15	111.82
41	r	97	GLY	N-CA-C	-5.39	108.19	115.36
14	Q	127	GLY	N-CA-C	-5.38	108.27	115.32
46	x	155	TYR	CA-C-N	5.37	125.29	119.76
46	x	155	TYR	C-N-CA	5.37	125.29	119.76
45	w	161	VAL	N-CA-C	5.33	115.53	107.80
25	b	37	GLY	N-CA-C	-5.30	107.75	114.16
42	t	50	TYR	N-CA-C	5.29	119.89	113.38
18	U	24	VAL	CA-C-N	5.24	125.18	119.78
18	U	24	VAL	C-N-CA	5.24	125.18	119.78
38	o	69	TYR	N-CA-C	-5.24	106.28	113.30
29	f	8	HIS	CA-C-N	-5.23	114.25	120.11
29	f	8	HIS	C-N-CA	-5.23	114.25	120.11
11	N	170	ALA	CA-C-N	5.22	125.12	119.85
11	N	170	ALA	C-N-CA	5.22	125.12	119.85
28	e	205	ASN	CA-C-N	5.22	125.02	119.28
28	e	205	ASN	C-N-CA	5.22	125.02	119.28
41	r	121	PHE	N-CA-C	-5.22	105.71	111.71
2	B	1642	A	C1'-C2'-O2'	5.21	119.62	111.80
20	W	72	ARG	N-CA-C	5.20	117.85	111.82
37	n	23	GLY	N-CA-C	-5.20	108.45	115.36
24	a	46	LYS	N-CA-C	-5.16	106.93	113.18
28	e	51	GLU	CA-C-N	-5.15	114.46	119.76
28	e	51	GLU	C-N-CA	-5.15	114.46	119.76
15	R	108	ASP	CA-C-N	5.12	124.92	119.28
15	R	108	ASP	C-N-CA	5.12	124.92	119.28
45	w	42	LYS	N-CA-C	-5.10	105.84	111.71
26	c	72	LYS	CA-C-N	5.08	124.87	119.28
26	c	72	LYS	C-N-CA	5.08	124.87	119.28
28	e	238	ILE	N-CA-C	5.06	115.38	107.99
27	d	35	GLY	N-CA-C	-5.06	108.34	115.32
13	P	136	PRO	CA-N-CD	-5.05	104.43	111.50
35	l	148	ARG	N-CA-C	-5.05	100.04	110.80
17	T	25	ASP	CA-C-N	5.05	124.83	119.28
17	T	25	ASP	C-N-CA	5.05	124.83	119.28
46	x	93	GLY	N-CA-C	-5.04	106.09	112.54
22	Y	46	ARG	N-CA-C	-5.01	107.12	113.18

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
14	Q	200	LEU	Peptide
24	a	115	PHE	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	27441	12	13883	1429	0
2	B	20110	0	10205	1014	0
3	C	3140	0	1600	182	0
4	D	2432	0	1234	145	0
5	E	3110	0	1574	166	0
6	F	965	0	497	82	0
7	G	2578	0	1309	118	0
8	H	1946	0	991	103	0
9	I	1515	0	1619	159	0
10	L	535	0	547	54	0
11	N	1413	0	1518	129	0
12	O	1642	0	1763	162	0
13	P	1186	0	1212	153	0
14	Q	1710	0	1798	175	0
15	R	1226	0	1276	127	0
16	S	1449	0	1489	180	0
17	T	1273	0	1361	113	0
18	U	1016	0	1056	123	0
19	V	730	0	781	72	0
20	W	960	0	1017	108	0
21	X	890	0	932	92	0
22	Y	519	0	519	64	0
23	Z	919	0	981	103	0
24	a	877	0	933	130	0
25	b	1135	0	1175	133	0
26	c	935	0	1003	120	0
27	d	518	0	541	41	0
28	e	1874	0	1938	208	0
29	f	3189	0	3322	376	0
30	g	523	0	565	81	0
31	h	1064	0	1012	106	0
32	i	928	0	971	67	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	j	863	0	912	99	0
34	k	967	0	1092	94	0
35	l	1057	0	1072	115	0
36	m	757	0	834	82	0
37	n	679	0	694	71	0
38	o	669	0	690	76	0
39	p	432	0	473	43	0
40	q	456	0	495	51	0
41	r	2513	0	2582	256	0
42	t	763	0	821	74	0
43	u	1541	0	1596	202	0
44	v	1037	0	1106	125	0
45	w	1749	0	1845	148	0
46	x	1690	0	1805	147	0
47	A	57	0	0	0	0
47	B	38	0	0	0	0
47	C	2	0	0	0	0
47	D	1	0	0	0	0
47	E	1	0	0	0	0
47	F	1	0	0	0	0
47	G	1	0	0	0	0
47	H	1	0	0	0	0
47	R	1	0	0	0	0
47	U	1	0	0	0	0
47	q	1	0	0	0	0
48	n	1	0	0	0	0
48	o	1	0	0	0	0
48	t	1	0	0	0	0
49	A	38	0	0	1	0
49	B	26	0	0	1	0
49	C	1	0	0	0	0
49	E	1	0	0	0	0
49	G	3	0	0	0	0
49	H	2	0	0	0	0
49	I	1	0	0	0	0
49	R	1	0	0	0	0
49	a	1	0	0	0	0
49	b	1	0	0	0	0
49	e	2	0	0	0	0
49	f	1	0	0	0	0
49	j	1	0	0	0	0
49	k	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	n	1	0	0	0	0
49	w	1	0	0	0	0
49	x	1	0	0	0	0
All	All	105112	12	76639	6473	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 37.

All (6473) 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:B:1629:U:H3'	29:f:138:ARG:NH1	1.18	1.47
2:B:1629:U:C3'	29:f:138:ARG:NH1	1.89	1.34
2:B:1629:U:C5'	29:f:138:ARG:HH11	1.53	1.22
8:H:28:U:OP2	31:h:70:LEU:CA	1.90	1.17
2:B:1629:U:C3'	29:f:138:ARG:HH12	1.51	1.16
1:A:1570:A:H3'	26:c:108:ARG:HH22	1.09	1.14
2:B:1516:A2M:H5''	2:B:1517:G:H5'	1.28	1.12
28:e:58:LEU:HD23	28:e:75:LEU:HD21	1.32	1.11
13:P:123:TRP:O	13:P:127:VAL:HG23	1.50	1.11
8:H:28:U:P	31:h:70:LEU:CA	2.39	1.10
30:g:36:LEU:HD22	30:g:61:TYR:HB3	1.21	1.10
33:j:43:PRO:HG2	33:j:57:THR:HG21	1.22	1.09
9:l:29:LEU:HD13	41:r:282:LEU:HD21	1.35	1.09
41:r:100:MET:HE3	41:r:103:PRO:HA	1.13	1.08
30:g:94:ILE:HD12	30:g:97:VAL:HG11	1.18	1.08
6:F:50:C:H5'	13:P:118:ARG:HH12	1.19	1.07
17:T:115:ILE:HB	17:T:119:ILE:HD11	1.13	1.07
8:H:23:G:H4'	29:f:178:VAL:HG12	1.36	1.07
44:v:62:VAL:HG21	44:v:99:ILE:HG21	1.36	1.06
2:B:62:A:H3'	2:B:63:U:H5'	1.30	1.06
13:P:132:ASP:OD1	13:P:139:TRP:NE1	1.89	1.06
29:f:173:ASN:HB3	29:f:176:VAL:HG12	1.35	1.06
28:e:112:ILE:HG22	28:e:135:ILE:HG22	1.29	1.05
1:A:20:G:N2	3:C:149:A:N1	2.04	1.05
15:R:102:ALA:HB1	15:R:112:MET:HE3	1.33	1.05
2:B:1380:OMC:HM22	2:B:1381:A:H5'	1.37	1.05
14:Q:137:VAL:HG21	14:Q:147:GLU:HG3	1.34	1.05
6:F:9:C:O2'	6:F:10:A:H5''	1.55	1.05
34:k:20:LYS:HA	34:k:23:MET:HE3	1.39	1.05
34:k:33:ARG:HE	34:k:48:ILE:HD11	1.19	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:330:MET:HE1	29:f:363:LEU:HD21	1.38	1.04
34:k:10:LEU:HD11	34:k:58:ILE:HG12	1.40	1.04
2:B:1629:U:H5''	29:f:138:ARG:HH11	1.19	1.03
15:R:19:VAL:HG23	15:R:94:LEU:HD13	1.37	1.03
28:e:61:VAL:HG21	28:e:76:MET:HE3	1.36	1.03
2:B:1629:U:H3'	29:f:138:ARG:CZ	1.87	1.02
1:A:1679:A:H2'	2:B:62:A:H61	1.24	1.02
25:b:101:LEU:HD12	25:b:123:ALA:HB2	1.40	1.02
29:f:86:VAL:HG22	29:f:162:VAL:HG11	1.38	1.01
43:u:245:LEU:HA	43:u:248:MET:HE3	1.37	1.01
36:m:17:ARG:HD3	36:m:27:GLY:HA3	1.40	1.01
13:P:126:LYS:O	13:P:130:GLU:HG3	1.60	1.01
2:B:1647:G:O5'	29:f:169:ARG:NH2	1.92	1.01
13:P:12:LEU:HD23	13:P:59:LEU:HD12	1.42	1.01
1:A:442:A:H4'	1:A:443:U:H5'	1.43	1.01
2:B:755:OMG:HM21	2:B:757:U:H5''	1.42	1.01
29:f:86:VAL:HG13	29:f:162:VAL:HG13	1.42	1.01
16:S:173:THR:HG22	16:S:175:ARG:H	1.26	1.00
29:f:58:ARG:HH21	29:f:60:VAL:HG12	1.26	1.00
45:w:214:MET:HE1	45:w:217:LYS:HE2	1.41	1.00
15:R:30:PHE:HA	15:R:119:VAL:HG11	1.41	1.00
17:T:136:ARG:HA	17:T:139:MET:HB3	1.44	1.00
2:B:1593:A:P	29:f:148:ARG:HD3	2.02	0.99
8:H:28:U:OP1	31:h:70:LEU:N	1.95	0.99
29:f:134:LYS:NZ	29:f:138:ARG:NH2	2.11	0.99
31:h:80:LYS:NZ	31:h:185:VAL:HG11	1.76	0.98
29:f:338:PRO:HD2	29:f:341:ARG:HE	1.25	0.98
5:E:21:G:N7	5:E:208:G:N2	2.11	0.98
20:W:19:LEU:HD13	20:W:25:VAL:HG11	1.39	0.98
1:A:371:A:C8	11:N:25:GLY:O	2.17	0.98
2:B:1644:U:O4	29:f:326:ASN:HB3	1.63	0.97
30:g:46:ILE:HG13	30:g:69:MET:HE1	1.45	0.97
2:B:748:A:H2'	41:r:68:THR:HG21	1.42	0.97
2:B:1356:U:H5''	42:t:38:ARG:HB2	1.45	0.97
5:E:4:G:N7	24:a:16:ARG:NH1	2.13	0.97
29:f:363:LEU:HD23	29:f:366:ILE:HD11	1.45	0.97
1:A:755:G:HO2'	1:A:1623:A:HO2'	1.12	0.97
2:B:718:A:H3'	2:B:719:A:H5'	1.46	0.97
1:A:20:G:H1	3:C:149:A:H61	0.97	0.97
2:B:1629:U:C5'	29:f:138:ARG:NH1	2.27	0.97
2:B:1644:U:C5	29:f:326:ASN:ND2	2.33	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:46:LYS:HZ2	24:a:69:VAL:H	1.01	0.97
28:e:206:PRO:HG3	28:e:213:GLY:HA3	1.46	0.97
44:v:36:ILE:HD12	44:v:176:LEU:HD21	1.45	0.97
1:A:1670:G:N2	2:B:704:A:N7	2.13	0.97
1:A:308:G:H1'	14:Q:66:MET:HE3	1.46	0.97
1:A:1024:G:O6	49:A:2101:HOH:O	1.81	0.96
16:S:92:MET:HE2	16:S:94:LYS:HD2	1.47	0.96
28:e:105:GLY:HA3	28:e:160:SER:HB3	1.47	0.96
2:B:1601:U:OP1	12:O:189:LYS:HE2	1.64	0.96
15:R:107:LEU:HB3	15:R:112:MET:HE1	1.46	0.95
2:B:1601:U:OP1	12:O:189:LYS:CE	2.14	0.95
30:g:24:LYS:NZ	30:g:96:ASP:OD2	2.00	0.95
29:f:289:GLN:HG2	29:f:330:MET:HE2	1.48	0.95
1:A:10:G:H21	1:A:1801:G:H1	1.02	0.95
1:A:442:A:H4'	1:A:443:U:C5'	1.96	0.95
4:D:3:G:H22	4:D:116:A:H2	1.15	0.95
39:p:28:ASN:HB2	39:p:31:GLN:HB2	1.48	0.95
2:B:566:A:N1	2:B:571:U:N3	2.15	0.95
42:t:27:GLN:HG3	42:t:68:ILE:HD11	1.45	0.95
3:C:165:U:H3'	46:x:118:ARG:HH12	1.29	0.94
12:O:80:LYS:HD2	12:O:86:LEU:HD11	1.49	0.94
46:x:276:ASN:HB2	46:x:280:LEU:HB3	1.47	0.94
26:c:117:LEU:HA	26:c:120:MET:HE3	1.46	0.94
29:f:134:LYS:HZ3	29:f:138:ARG:NH2	1.65	0.94
20:W:13:PHE:HZ	29:f:67:VAL:HG22	1.29	0.94
22:Y:51:ARG:HH11	22:Y:51:ARG:HB2	1.28	0.94
1:A:1043:A2M:HM'2	1:A:1044:C:H5'	1.46	0.94
22:Y:50:PRO:HB2	22:Y:58:THR:HG21	1.49	0.94
26:c:55:THR:HG23	26:c:113:MET:HE3	1.50	0.94
4:D:59:G:H2'	4:D:60:C:H6	1.32	0.93
39:p:5:ILE:HD11	39:p:10:GLU:HB2	1.50	0.93
36:m:42:ARG:HG3	36:m:45:LEU:HD12	1.50	0.93
40:q:21:ARG:HG2	40:q:22:PRO:HD2	1.47	0.93
13:P:134:LYS:HD2	13:P:135:LYS:N	1.84	0.93
28:e:20:GLY:HA2	28:e:23:ARG:HG3	1.51	0.93
1:A:211:C:H42	26:c:79:LYS:HE3	1.32	0.93
2:B:882:G:H1	2:B:907:A:H61	0.97	0.93
8:H:26:C:H42	8:H:125:U:H2'	1.34	0.93
23:Z:28:MET:HG2	23:Z:98:PRO:HG3	1.48	0.93
9:I:180:ARG:HH21	25:b:56:CYS:HB3	1.34	0.92
18:U:80:VAL:HG11	18:U:83:ARG:HE	1.29	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:114:THR:HG21	45:w:147:MET:HE1	1.52	0.92
31:h:80:LYS:HZ1	31:h:185:VAL:HG11	1.34	0.92
33:j:43:PRO:HG2	33:j:57:THR:CG2	2.00	0.92
1:A:800:C:O2	1:A:958:OMG:N2	2.02	0.92
36:m:83:LEU:HD23	36:m:100:ARG:NH1	1.84	0.92
8:H:20:A:H2'	8:H:21:G:H5'	1.46	0.92
31:h:125:ASN:HD22	31:h:168:THR:HB	1.34	0.92
32:i:41:SER:HB3	32:i:44:ARG:HG2	1.50	0.92
1:A:1042:G:H1	1:A:1053:OMC:H5	1.14	0.92
20:W:19:LEU:HD21	20:W:100:ASN:ND2	1.84	0.92
31:h:122:THR:HG22	31:h:124:ASP:H	1.35	0.92
1:A:1529:A:H5'	45:w:111:ILE:HD13	1.51	0.91
2:B:484:A:HO2'	37:n:2:THR:N	1.68	0.91
15:R:23:ARG:NH1	15:R:125:MET:SD	2.43	0.91
1:A:120:C:H2'	1:A:121:G:H5'	1.51	0.91
1:A:486:U:H4'	1:A:492:G:H1'	1.52	0.91
5:E:74:C:N3	5:E:139:A:N6	2.19	0.91
36:m:18:THR:HG23	36:m:20:ILE:HG22	1.52	0.91
26:c:32:PHE:HA	26:c:52:VAL:HG21	1.52	0.91
1:A:209:A:H61	26:c:113:MET:HE1	1.35	0.91
4:D:73:U:O2	4:D:102:C:N4	2.03	0.91
31:h:95:LEU:HD21	31:h:111:ARG:CB	2.01	0.91
46:x:303:LEU:HD21	46:x:307:ARG:HE	1.34	0.91
1:A:7:C:O2	3:C:166:OMG:N2	2.04	0.90
2:B:547:G:H1'	28:e:222:PRO:HG2	1.50	0.90
36:m:14:PRO:HD3	36:m:34:ALA:HB2	1.53	0.90
45:w:62:LEU:HG	45:w:66:ARG:HH21	1.33	0.90
41:r:136:VAL:HG22	41:r:143:ILE:HD11	1.53	0.90
33:j:57:THR:HG23	33:j:73:LYS:HA	1.52	0.90
1:A:413:U:H4'	1:A:414:U:H5''	1.52	0.90
1:A:1673:U:H2'	1:A:1674:A2M:H8	1.54	0.90
5:E:124:G:H5''	5:E:126:A:H5'	1.54	0.90
20:W:13:PHE:CZ	29:f:67:VAL:HG22	2.06	0.90
41:r:316:PRO:HB2	41:r:325:LEU:HD12	1.54	0.90
1:A:310:G:H5''	14:Q:30:LYS:HE2	1.54	0.90
5:E:39:C:H42	5:E:182:U:H3	1.17	0.89
7:G:70:OMG:N2	7:G:119:C:O2	2.05	0.89
29:f:134:LYS:NZ	29:f:138:ARG:HH22	1.67	0.89
32:i:77:ILE:HD12	32:i:95:GLY:HA3	1.54	0.89
43:u:103:LEU:HD23	43:u:256:ILE:HD11	1.54	0.89
16:S:31:VAL:HG21	16:S:39:ALA:HB1	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:62:VAL:HG21	26:c:91:VAL:HG23	1.52	0.89
35:l:66:VAL:O	35:l:68:THR:N	2.06	0.89
2:B:1629:U:C4'	29:f:138:ARG:NH1	2.36	0.89
2:B:786:G:O6	2:B:853:C:N4	2.05	0.89
5:E:68:A:OP2	5:E:145:A:N6	2.04	0.89
16:S:77:SER:HB2	16:S:131:ILE:HD11	1.53	0.89
29:f:47:MET:HE3	29:f:342:VAL:HG22	1.55	0.89
15:R:129:THR:HA	15:R:139:TYR:CE2	2.07	0.89
1:A:1804:A2M:H62	21:X:89:THR:H	1.17	0.89
2:B:1149:A:H2'	2:B:1150:G:H5'	1.54	0.89
2:B:1210:OMG:N2	2:B:1368:C:O2	2.06	0.89
44:v:100:THR:H	44:v:103:ILE:HD13	1.38	0.89
2:B:461:U:H4'	2:B:462:A:H5''	1.53	0.88
16:S:77:SER:HB2	16:S:131:ILE:CD1	2.03	0.88
36:m:70:VAL:HB	36:m:103:MET:HE1	1.55	0.88
1:A:253:G:H4'	1:A:254:A:H3'	1.56	0.88
15:R:67:ILE:HG12	15:R:82:ARG:NH2	1.88	0.88
16:S:14:ARG:HH12	16:S:17:PRO:HG3	1.37	0.88
26:c:116:THR:HG22	26:c:120:MET:HE2	1.54	0.88
46:x:240:LYS:HB2	46:x:251:THR:HG23	1.54	0.88
46:x:126:ARG:HH21	46:x:296:SER:HA	1.37	0.88
43:u:63:GLN:HE21	43:u:74:VAL:HG11	1.36	0.88
30:g:36:LEU:CD2	30:g:61:TYR:HB3	2.02	0.88
29:f:60:VAL:CG2	29:f:67:VAL:O	2.22	0.88
40:q:27:ILE:O	40:q:33:ASN:ND2	2.06	0.88
46:x:210:ILE:HG23	46:x:220:VAL:HG11	1.55	0.88
2:B:1108:A:OP1	33:j:91:ARG:NH1	2.06	0.88
41:r:230:VAL:CG1	41:r:254:ALA:HB1	2.04	0.88
33:j:6:VAL:HG21	33:j:33:MET:HG3	1.55	0.87
35:l:149:ILE:HD12	44:v:83:ILE:HG23	1.54	0.87
46:x:190:VAL:HB	46:x:256:ALA:HB3	1.53	0.87
29:f:379:THR:HG22	29:f:381:LYS:H	1.37	0.87
43:u:55:ILE:HG21	43:u:164:ARG:HH21	1.39	0.87
17:T:115:ILE:CB	17:T:119:ILE:HD11	2.01	0.87
43:u:67:ALA:HA	43:u:72:ASP:HB3	1.55	0.87
45:w:44:ALA:HA	45:w:180:CYS:SG	2.13	0.87
16:S:142:SER:HA	16:S:145:HIS:CD2	2.09	0.87
46:x:235:ALA:HB2	46:x:275:VAL:HG13	1.54	0.87
1:A:1308:C:O2	1:A:1316:OMG:N2	2.08	0.87
20:W:122:LYS:N	20:W:139:VAL:OXT	2.07	0.87
28:e:147:ARG:HG2	28:e:157:THR:HG22	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1134:C:H2'	2:B:1135:G:O4'	1.74	0.87
4:D:7:G:H1	4:D:112:U:H3	1.14	0.87
25:b:19:TYR:HB3	25:b:25:HIS:HB2	1.57	0.87
33:j:6:VAL:HG11	33:j:23:LEU:HD21	1.54	0.87
2:B:101:G:H1	2:B:119:C:H42	1.23	0.86
17:T:32:ILE:HA	17:T:44:LEU:HD21	1.57	0.86
24:a:24:ILE:HG23	24:a:40:SER:HB3	1.55	0.86
26:c:55:THR:HG23	26:c:113:MET:CE	2.05	0.86
1:A:277:G:H22	37:n:77:HIS:HB2	1.40	0.86
18:U:15:PHE:O	18:U:46:SER:OG	1.91	0.86
28:e:15:ILE:HG22	28:e:194:ASN:HD22	1.38	0.86
1:A:1800:A:OP2	14:Q:50:HIS:NE2	2.08	0.86
15:R:33:ALA:HB1	15:R:117:VAL:HG11	1.58	0.86
15:R:129:THR:HG22	15:R:139:TYR:CZ	2.11	0.86
28:e:27:ALA:O	28:e:128:ARG:NH2	2.07	0.86
2:B:1183:G:H2'	2:B:1184:C:O4'	1.76	0.86
43:u:55:ILE:HD12	43:u:60:ILE:HG12	1.57	0.86
7:G:123:G:O2'	7:G:124:U:O5'	1.93	0.86
23:Z:49:LYS:NZ	23:Z:68:THR:O	2.08	0.86
30:g:50:CYS:SG	30:g:54:ARG:NH2	2.49	0.86
2:B:1644:U:O4	29:f:326:ASN:CB	2.24	0.86
16:S:167:VAL:H	16:S:178:VAL:HG22	1.41	0.86
30:g:94:ILE:CD1	30:g:97:VAL:HG11	2.03	0.86
4:D:116:A:H1'	43:u:79:TYR:HE2	1.41	0.85
29:f:168:LEU:HD13	29:f:178:VAL:HG23	1.57	0.85
3:C:28:C:H5''	11:N:32:ASN:HB3	1.58	0.85
10:L:27:ILE:HG12	10:L:131:MET:HA	1.57	0.85
1:A:30:C:H4'	14:Q:112:LYS:HE3	1.56	0.85
7:G:72:C:OP2	29:f:227:LYS:NZ	2.09	0.85
1:A:1680:G:H1'	7:G:102:G:C2	2.11	0.85
11:N:179:GLU:HG3	11:N:180:GLU:H	1.41	0.85
16:S:136:VAL:HG11	16:S:141:ILE:HD11	1.56	0.85
19:V:55:VAL:HG13	19:V:64:LEU:HD21	1.56	0.85
41:r:318:ASN:ND2	41:r:321:ARG:HB3	1.91	0.85
1:A:182:G:H3'	1:A:183:G:H5''	1.57	0.85
2:B:1652:A:O2'	2:B:1653:A:C8	2.29	0.85
6:F:68:C:OP1	35:l:101:ARG:NH2	2.10	0.85
6:F:9:C:O2'	6:F:10:A:C5'	2.24	0.85
17:T:4:LEU:HD13	17:T:24:LEU:CD2	2.06	0.85
29:f:265:VAL:HG13	29:f:269:VAL:HG11	1.57	0.85
36:m:17:ARG:HA	36:m:25:ASN:HB3	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:130:C:OP2	34:k:78:ARG:NH2	2.10	0.85
1:A:267:A:OP2	23:Z:43:ARG:NH2	2.10	0.85
2:B:131:G:N1	2:B:449:C:N3	2.25	0.85
10:L:156:CYS:SG	10:L:161:ARG:NH2	2.50	0.85
29:f:211:ASP:HA	29:f:290:LEU:HD13	1.58	0.85
1:A:1689:G:O2'	1:A:1691:A:N7	2.09	0.85
2:B:748:A:H5''	41:r:68:THR:HG22	1.58	0.85
15:R:36:ILE:HD12	15:R:44:ALA:HB1	1.58	0.85
15:R:48:TYR:HA	15:R:51:VAL:HG12	1.59	0.84
1:A:407:C:C2'	1:A:408:G:H5'	2.08	0.84
5:E:209:G:OP1	24:a:130:ARG:NH2	2.10	0.84
45:w:211:ALA:O	45:w:240:ARG:NH1	2.10	0.84
1:A:1071:A2M:H2	28:e:15:ILE:HD11	1.57	0.84
17:T:126:LYS:HB3	17:T:131:VAL:HG11	1.57	0.84
1:A:1002:G:O2'	1:A:1024:G:N2	2.10	0.84
36:m:93:PHE:CE2	36:m:97:LYS:HE3	2.13	0.84
31:h:86:MET:HG2	31:h:185:VAL:HG22	1.58	0.84
1:A:428:G:N2	1:A:431:A:OP2	2.11	0.84
3:C:124:A:H2'	3:C:125:A:C8	2.13	0.84
7:G:69:U:OP1	29:f:19:ARG:NH2	2.11	0.84
8:H:28:U:P	31:h:70:LEU:N	2.49	0.84
17:T:132:PHE:CD2	17:T:138:LEU:HD12	2.13	0.84
25:b:19:TYR:CB	25:b:25:HIS:HB2	2.07	0.84
29:f:121:ASN:ND2	29:f:124:GLN:OE1	2.10	0.84
8:H:28:U:P	31:h:70:LEU:H	1.99	0.84
9:I:154:GLU:HA	9:I:157:LYS:HE2	1.60	0.84
29:f:33:PRO:HD2	29:f:44:THR:HG21	1.60	0.84
30:g:26:VAL:CG1	30:g:93:SER:HB3	2.07	0.84
46:x:189:VAL:HG12	46:x:257:ILE:HD13	1.60	0.84
12:O:76:LEU:HD11	12:O:92:ARG:HH21	1.43	0.83
15:R:119:VAL:HG23	15:R:144:CYS:HB2	1.60	0.83
18:U:86:ARG:NH1	27:d:25:LEU:HB2	1.93	0.83
1:A:208:A:H5''	1:A:209:A:H5'	1.60	0.83
1:A:213:C:H2'	1:A:214:G:N2	1.93	0.83
1:A:516:A:H61	1:A:587:C:H42	1.21	0.83
28:e:118:ALA:HB2	28:e:126:ILE:HD11	1.57	0.83
38:o:73:THR:HG22	38:o:75:ASN:H	1.42	0.83
1:A:421:G:O2'	1:A:445:G:N2	2.11	0.83
2:B:718:A:H5''	2:B:719:A:H8	1.43	0.83
31:h:151:VAL:HG23	31:h:168:THR:CG2	2.08	0.83
35:l:44:LEU:HD11	35:l:59:ALA:HB1	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1687:C:O2	1:A:1710:OMG:N2	2.10	0.83
31:h:150:HIS:HB2	31:h:173:VAL:CG2	2.09	0.83
1:A:982:G:OP2	37:n:33:ARG:NH2	2.11	0.83
3:C:27:U:H5'	41:r:106:ILE:HD11	1.60	0.83
1:A:468:A:N1	2:B:708:C:O2'	2.10	0.83
1:A:1570:A:H3'	26:c:108:ARG:NH2	1.92	0.83
2:B:1223:C:OP2	10:L:148:ARG:NH2	2.11	0.83
3:C:123:G:H2'	3:C:124:A:C8	2.14	0.83
1:A:1785:U:O2	1:A:1789:A:N6	2.12	0.83
9:I:71:MET:CE	9:I:87:ALA:HB2	2.09	0.83
24:a:11:ILE:HD13	24:a:131:LEU:HD11	1.61	0.83
1:A:413:U:H4'	1:A:414:U:C5'	2.09	0.82
1:A:1953:A:H3'	1:A:1954:G:H5''	1.61	0.82
1:A:1571:G:OP2	26:c:108:ARG:NH1	2.12	0.82
28:e:117:GLU:HB2	28:e:122:ASP:OD1	1.77	0.82
29:f:338:PRO:HD2	29:f:341:ARG:NE	1.94	0.82
1:A:452:A:OP2	3:C:15:G:N2	2.12	0.82
1:A:1326:A:H5'	1:A:1592:U:H1'	1.61	0.82
2:B:904:U:H2'	2:B:905:G:C8	2.15	0.82
33:j:96:PHE:HD2	33:j:97:LEU:HD12	1.43	0.82
9:I:42:SER:HB2	9:I:139:THR:HG23	1.60	0.82
1:A:810:A:N6	1:A:834:U:O2	2.11	0.82
26:c:109:ARG:O	26:c:113:MET:HG2	1.80	0.82
1:A:1073:5MC:O2'	1:A:1076:A:N3	2.11	0.82
20:W:27:CYS:SG	20:W:36:LEU:HG	2.19	0.82
43:u:52:VAL:HA	43:u:153:ASP:HB3	1.60	0.82
45:w:38:VAL:O	45:w:42:LYS:HG2	1.79	0.82
1:A:407:C:H2'	1:A:408:G:H5'	1.60	0.82
2:B:886:C:H3'	2:B:887:G:H5'	1.58	0.82
29:f:192:THR:HG22	29:f:195:GLU:HG3	1.62	0.82
1:A:1019:G:H2'	1:A:1020:G:H5'	1.60	0.82
1:A:1245:C:H2'	1:A:1246:U:C6	2.14	0.82
6:F:53:G:H1'	6:F:55:A:N6	1.95	0.82
41:r:133:PRO:HA	41:r:136:VAL:HG12	1.60	0.81
5:E:6:A:N1	5:E:102:U:O2'	2.12	0.81
7:G:72:C:H5	7:G:115:A:H62	1.24	0.81
7:G:122:G:O2'	7:G:123:G:N2	2.13	0.81
9:I:175:ASN:HD22	9:I:178:LYS:HB2	1.44	0.81
10:L:20:VAL:HA	10:L:137:LEU:HG	1.61	0.81
21:X:102:MET:CE	34:k:87:LEU:HG	2.10	0.81
39:p:54:ASP:HA	39:p:57:GLU:HB3	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:26:VAL:HA	41:r:277:LEU:HD21	1.63	0.81
24:a:35:ARG:NH2	24:a:73:VAL:HG21	1.95	0.81
45:w:114:THR:CG2	45:w:147:MET:HE1	2.11	0.81
45:w:214:MET:HE1	45:w:217:LYS:CE	2.10	0.81
1:A:209:A:H61	26:c:113:MET:CE	1.94	0.81
1:A:1106:U:OP2	25:b:26:ARG:NH2	2.14	0.81
2:B:523:G:OP2	28:e:128:ARG:NH1	2.13	0.81
13:P:16:ILE:O	13:P:21:GLN:NE2	2.13	0.81
24:a:77:LYS:HB3	30:g:37:ARG:HH12	1.46	0.81
28:e:32:LEU:HD12	28:e:36:GLU:HG2	1.63	0.81
29:f:47:MET:SD	29:f:344:THR:OG1	2.39	0.81
42:t:6:LYS:HE2	42:t:94:ASN:HA	1.62	0.81
44:v:57:ARG:O	44:v:59:GLY:N	2.13	0.81
3:C:168:C:O2	46:x:242:ARG:NH2	2.14	0.81
26:c:115:SER:HA	26:c:118:GLU:HG2	1.61	0.81
2:B:1305:G:N2	2:B:1308:A:OP2	2.12	0.81
5:E:5:G:N2	5:E:8:A:OP2	2.10	0.81
6:F:67:A:OP1	44:v:45:ARG:NH2	2.14	0.81
7:G:27:G:OP2	29:f:26:ARG:NH2	2.13	0.81
8:H:20:A:C2'	8:H:21:G:H5'	2.10	0.81
23:Z:97:HIS:HB3	23:Z:100:ASN:HD22	1.46	0.81
2:B:1568:A:O2'	2:B:1569:A:OP1	1.98	0.81
44:v:49:VAL:HG11	44:v:63:ILE:HD13	1.62	0.81
1:A:20:G:H1	3:C:149:A:N6	1.78	0.81
2:B:720:C:H5	2:B:1393:G:H4'	1.46	0.81
4:D:59:G:H2'	4:D:60:C:C6	2.16	0.81
45:w:85:VAL:HG21	45:w:238:LEU:HD21	1.62	0.81
2:B:518:U:H5''	28:e:17:GLN:HE21	1.44	0.80
13:P:37:LEU:HD23	13:P:48:ARG:HD3	1.63	0.80
13:P:143:ALA:HB2	35:l:22:LEU:CB	2.11	0.80
20:W:47:ARG:HG2	20:W:48:LEU:H	1.46	0.80
21:X:144:LYS:HE3	21:X:163:ASN:HA	1.63	0.80
23:Z:74:ARG:HE	40:q:31:THR:HG21	1.45	0.80
29:f:330:MET:CE	29:f:363:LEU:HD21	2.10	0.80
41:r:181:ARG:NH2	41:r:204:ARG:O	2.14	0.80
2:B:634:OMG:N2	2:B:650:C:O2	2.13	0.80
12:O:102:VAL:HG11	12:O:120:LEU:CD2	2.10	0.80
1:A:373:A:O2'	37:n:58:ARG:NH2	2.14	0.80
1:A:1679:A:H2'	2:B:62:A:N6	1.97	0.80
1:A:1764:G:O6	33:j:11:ARG:NH2	2.14	0.80
2:B:1644:U:H5	29:f:326:ASN:ND2	1.77	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:165:U:H3'	46:x:118:ARG:NH1	1.97	0.80
15:R:125:MET:HB2	15:R:141:CYS:SG	2.21	0.80
23:Z:47:VAL:HG11	23:Z:77:ILE:CD1	2.11	0.80
29:f:79:LEU:HB2	29:f:329:ILE:CG2	2.11	0.80
30:g:38:GLN:OE1	30:g:40:ARG:NE	2.13	0.80
2:B:98:G:N2	17:T:78:ALA:O	2.12	0.80
3:C:29:C:OP1	11:N:36:GLN:NE2	2.15	0.80
16:S:153:LEU:HB3	16:S:156:ARG:HD3	1.64	0.80
22:Y:20:ARG:HB3	22:Y:32:VAL:CG2	2.11	0.80
29:f:47:MET:HE3	29:f:342:VAL:CG2	2.11	0.80
1:A:1163:C:C2'	1:A:1164:G:H5'	2.12	0.80
2:B:29:C:N4	15:R:134:GLY:O	2.11	0.80
14:Q:137:VAL:HG21	14:Q:147:GLU:CG	2.11	0.80
35:l:149:ILE:HG21	44:v:193:TRP:CE3	2.17	0.80
1:A:338:G:H22	36:m:54:LYS:HE2	1.46	0.80
32:i:14:ARG:HH12	32:i:52:ALA:HB3	1.46	0.80
22:Y:54:PRO:HA	22:Y:59:TYR:CD2	2.16	0.80
32:i:84:TYR:OH	32:i:112:LYS:NZ	2.13	0.80
43:u:170:LYS:HA	43:u:173:VAL:HG12	1.64	0.80
1:A:277:G:H2'	1:A:278:A:H8	1.46	0.80
1:A:413:U:OP2	40:q:34:ARG:NH2	2.13	0.80
14:Q:110:LEU:CD2	14:Q:117:ILE:HD11	2.12	0.80
1:A:148:G:O2'	1:A:149:U:OP2	1.98	0.80
5:E:6:A:C2	5:E:102:U:H4'	2.16	0.80
9:I:64:LEU:HD11	9:I:120:ILE:HD13	1.61	0.80
11:N:110:SER:HB2	36:m:30:THR:CG2	2.12	0.80
13:P:135:LYS:HG3	13:P:141:LYS:CB	2.12	0.80
26:c:91:VAL:HG11	26:c:110:ALA:HB1	1.64	0.80
29:f:217:SER:O	29:f:286:LYS:NZ	2.14	0.80
43:u:75:VAL:HG21	43:u:109:MET:HE1	1.60	0.80
2:B:460:U:OP1	22:Y:48:LYS:NZ	2.10	0.80
26:c:20:GLN:HG3	32:i:85:MET:CE	2.12	0.80
41:r:230:VAL:HG11	41:r:254:ALA:HB1	1.64	0.80
1:A:37:U:H4'	25:b:32:ARG:HG3	1.64	0.79
2:B:1246:G:H4'	43:u:7:VAL:HG11	1.65	0.79
9:I:154:GLU:HG2	9:I:157:LYS:CE	2.13	0.79
37:n:21:ARG:NH2	37:n:41:ARG:O	2.14	0.79
8:H:41:A:H1'	8:H:100:A:N6	1.97	0.79
45:w:84:ALA:HB2	45:w:119:LEU:HD11	1.63	0.79
2:B:867:U:H5''	28:e:31:ILE:HD12	1.63	0.79
5:E:144:A:OP1	39:p:35:LYS:HE2	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:S:126:LEU:CD2	18:U:148:ARG:HB2	2.12	0.79
16:S:131:ILE:HG22	16:S:132:PRO:O	1.82	0.79
20:W:56:LEU:HD21	20:W:121:ALA:HB1	1.65	0.79
42:t:6:LYS:CE	42:t:94:ASN:HA	2.12	0.79
4:D:5:A:H61	4:D:114:C:H42	1.29	0.79
6:F:66:C:H2'	6:F:67:A:O4'	1.82	0.79
12:O:67:ARG:HG2	12:O:71:LYS:HE3	1.63	0.79
20:W:83:GLN:HA	20:W:100:ASN:HB3	1.65	0.79
1:A:1076:A:OP1	14:Q:93:LYS:NZ	2.12	0.79
2:B:882:G:N2	2:B:886:C:OP1	2.15	0.79
37:n:31:TRP:O	37:n:33:ARG:N	2.15	0.79
40:q:6:PRO:HG2	40:q:9:ILE:HG12	1.62	0.79
1:A:493:C:O2	1:A:742:G:N2	2.12	0.79
2:B:860:U:OP1	2:B:1144:U:N3	2.16	0.79
8:H:41:A:O2'	8:H:42:U:O5'	2.01	0.79
9:I:131:ASP:OD2	41:r:282:LEU:HB3	1.82	0.79
24:a:22:ALA:HB1	24:a:42:ILE:HG23	1.62	0.79
29:f:110:THR:O	29:f:115:ARG:NH1	2.16	0.79
45:w:84:ALA:CB	45:w:119:LEU:HD11	2.13	0.79
2:B:1435:U:C2'	2:B:1436:C:H5'	2.13	0.79
7:G:112:G:OP1	29:f:339:ARG:NH2	2.16	0.79
18:U:31:LEU:HD11	43:u:37:VAL:CG2	2.12	0.79
29:f:60:VAL:HG23	29:f:67:VAL:O	1.82	0.79
6:F:52:A:N7	35:l:31:ARG:NH2	2.31	0.78
1:A:323:G:O2'	1:A:324:G:OP2	2.02	0.78
4:D:46:G:OP1	43:u:164:ARG:N	2.14	0.78
6:F:55:A:H2'	6:F:56:C:H5'	1.64	0.78
16:S:95:GLU:OE1	16:S:141:ILE:HG12	1.83	0.78
20:W:38:ILE:HG13	20:W:60:VAL:HG11	1.65	0.78
43:u:83:LEU:HB2	43:u:84:PRO:HD3	1.65	0.78
1:A:121:G:N7	46:x:198:ARG:NH2	2.31	0.78
1:A:1042:G:N1	1:A:1053:OMC:H5	1.80	0.78
2:B:1356:U:C5'	42:t:38:ARG:HB2	2.14	0.78
37:n:18:LEU:HD21	40:q:12:LYS:HE2	1.65	0.78
1:A:338:G:N2	36:m:54:LYS:HE2	1.97	0.78
1:A:1942:A:OP1	17:T:38:ARG:NH1	2.17	0.78
7:G:81:C:H4'	31:h:97:LYS:HG3	1.65	0.78
33:j:69:SER:O	33:j:73:LYS:NZ	2.16	0.78
34:k:76:GLY:O	34:k:80:ARG:HG3	1.82	0.78
14:Q:93:LYS:HB2	14:Q:95:ILE:HD12	1.65	0.78
25:b:101:LEU:HD12	25:b:123:ALA:CB	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:755:OMG:N2	2:B:1382:C:O2	2.12	0.78
18:U:68:THR:HG22	27:d:37:TRP:HB2	1.64	0.78
22:Y:51:ARG:HH11	22:Y:51:ARG:CB	1.96	0.78
5:E:34:U:H2'	5:E:35:C:C6	2.18	0.78
34:k:33:ARG:NE	34:k:48:ILE:HD11	1.98	0.78
2:B:1324:C:O2	2:B:1363:OMG:N2	2.17	0.78
12:O:94:PRO:HG3	12:O:161:CYS:SG	2.24	0.78
29:f:289:GLN:NE2	29:f:328:TYR:OH	2.16	0.78
46:x:155:TYR:OH	46:x:261:ASN:OD1	2.01	0.78
2:B:97:A:O2'	2:B:466:C:O2	2.02	0.78
3:C:154:A:P	14:Q:54:ARG:HH22	2.06	0.77
4:D:53:U:H5''	4:D:54:A:OP1	1.85	0.77
5:E:129:G:H2'	5:E:130:G:H8	1.49	0.77
29:f:58:ARG:O	29:f:71:GLU:HA	1.84	0.77
1:A:372:G:C6	37:n:51:VAL:HG11	2.19	0.77
27:d:25:LEU:HD13	27:d:30:HIS:HD2	1.49	0.77
28:e:28:LYS:HE2	28:e:123:ARG:HE	1.49	0.77
29:f:86:VAL:HG21	29:f:203:LEU:HD23	1.66	0.77
1:A:112:C:O2	1:A:362:G:N2	2.17	0.77
1:A:1599:G:O6	26:c:13:ARG:NH2	2.16	0.77
4:D:35:C:O4'	43:u:204:ARG:NH2	2.16	0.77
15:R:32:THR:HG22	15:R:91:MET:HG3	1.64	0.77
17:T:126:LYS:HB3	17:T:131:VAL:CG1	2.14	0.77
24:a:42:ILE:HD12	24:a:74:VAL:HB	1.67	0.77
33:j:82:VAL:HG12	33:j:83:LEU:HD12	1.67	0.77
1:A:1370:G:N2	1:A:1509:C:O2	2.16	0.77
2:B:883:U:H5'	2:B:886:C:H1'	1.64	0.77
29:f:10:ARG:NH2	29:f:268:THR:O	2.17	0.77
37:n:2:THR:HB	37:n:6:THR:CG2	2.15	0.77
44:v:49:VAL:CG1	44:v:63:ILE:HB	2.15	0.77
1:A:18:C:H4'	14:Q:154:MET:SD	2.23	0.77
2:B:1648:U:H2'	2:B:1649:A:H5''	1.66	0.77
8:H:111:C:OP1	29:f:325:ARG:NH2	2.18	0.77
29:f:50:LYS:HA	29:f:79:LEU:HD23	1.67	0.77
29:f:58:ARG:HD2	29:f:361:ILE:HG23	1.66	0.77
44:v:40:LEU:HD21	44:v:83:ILE:CD1	2.15	0.77
45:w:88:ARG:HD3	45:w:110:GLN:O	1.84	0.77
4:D:41:G:O2'	4:D:44:U:O4	2.02	0.77
5:E:35:C:N4	5:E:185:U:O4	2.17	0.77
1:A:39:A:N7	25:b:30:SER:HA	1.99	0.77
1:A:1688:G:H1	1:A:1709:C:H42	1.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1195:C:N4	2:B:1200:C:O2	2.15	0.77
11:N:85:LEU:HD11	11:N:102:VAL:HG22	1.65	0.77
45:w:132:PRO:HA	45:w:227:TYR:CG	2.19	0.77
1:A:972:OMG:N2	1:A:1105:C:O2	2.16	0.77
1:A:1791:C:O2'	1:A:1792:G:H5'	1.85	0.77
5:E:116:G:O6	17:T:121:ARG:NH2	2.18	0.77
26:c:51:ALA:CB	26:c:95:VAL:HG23	2.15	0.77
42:t:27:GLN:CG	42:t:68:ILE:HD11	2.14	0.77
16:S:47:MET:HB3	16:S:53:VAL:HG13	1.67	0.77
24:a:11:ILE:HG12	24:a:21:LYS:HD3	1.66	0.77
31:h:85:THR:HG22	31:h:152:GLU:HG2	1.67	0.77
2:B:524:U:H5''	28:e:132:ASP:OD2	1.83	0.77
2:B:719:A:O2'	2:B:720:C:OP2	2.01	0.77
8:H:44:A:H2'	8:H:45:G:O4'	1.84	0.77
11:N:2:PRO:O	25:b:44:ASN:ND2	2.18	0.77
15:R:23:ARG:NH1	15:R:141:CYS:SG	2.57	0.77
28:e:60:ARG:HE	28:e:75:LEU:HD12	1.49	0.77
5:E:113:C:O2	5:E:123:G:N2	2.14	0.76
27:d:46:ARG:O	27:d:50:ASN:ND2	2.18	0.76
29:f:261:HIS:HA	29:f:262:PRO:C	2.09	0.76
1:A:1374:C:O2'	12:O:152:ARG:NH1	2.15	0.76
13:P:126:LYS:O	13:P:130:GLU:CG	2.33	0.76
29:f:330:MET:HE1	29:f:363:LEU:CD2	2.12	0.76
43:u:86:PHE:CD2	43:u:256:ILE:HG22	2.20	0.76
2:B:1492:OMG:H5''	2:B:1493:U:OP2	1.86	0.76
11:N:130:LEU:HD11	34:k:121:ARG:HD2	1.65	0.76
41:r:171:LYS:CG	41:r:176:VAL:HG11	2.15	0.76
2:B:487:U:O2	2:B:1546:G:N2	2.17	0.76
9:I:135:MET:SD	41:r:290:ILE:HG23	2.26	0.76
15:R:129:THR:HA	15:R:139:TYR:HE2	1.47	0.76
35:l:68:THR:HG22	35:l:70:GLU:H	1.49	0.76
1:A:234:A:O2'	1:A:235:U:O4'	2.01	0.76
2:B:62:A:H3'	2:B:63:U:C5'	2.14	0.76
35:l:63:ILE:HB	35:l:66:VAL:HG21	1.67	0.76
44:v:171:GLU:O	44:v:175:TYR:N	2.18	0.76
2:B:1142:U:O3'	46:x:126:ARG:NH2	2.19	0.76
16:S:47:MET:HE3	16:S:53:VAL:HG11	1.68	0.76
17:T:13:ASP:OD2	17:T:38:ARG:NH2	2.13	0.76
29:f:86:VAL:HG21	29:f:203:LEU:CD2	2.16	0.76
30:g:24:LYS:HZ1	30:g:96:ASP:CG	1.92	0.76
37:n:38:ALA:HB2	37:n:45:ARG:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1120:G:OP1	27:d:15:LYS:NZ	2.18	0.76
1:A:1529:A:H5'	45:w:111:ILE:CD1	2.16	0.76
7:G:28:U:C2'	7:G:29:G:H5'	2.16	0.76
20:W:89:ARG:NH2	20:W:139:VAL:O	2.18	0.76
29:f:41:PRO:HA	29:f:190:GLY:HA3	1.68	0.76
1:A:506:C:O2	1:A:594:G:N2	2.17	0.76
1:A:777:OMC:H6	1:A:777:OMC:H5''	1.51	0.76
1:A:850:A:HO2'	1:A:929:C:HO2'	1.28	0.76
1:A:990:C:H5''	28:e:19:HIS:CD2	2.20	0.76
2:B:534:A:N6	2:B:665:U:O2	2.19	0.76
3:C:20:C:H2'	3:C:21:U:H5'	1.67	0.76
18:U:139:ARG:HG2	45:w:74:ASN:HD21	1.51	0.76
41:r:7:VAL:HG23	41:r:23:LEU:HD12	1.67	0.76
1:A:343:OMC:HM22	1:A:344:A:H5'	1.67	0.76
1:A:844:A:C2'	1:A:845:A:H5'	2.16	0.76
2:B:1501:C:OP1	20:W:61:MET:HE3	1.86	0.76
3:C:102:G:OP2	3:C:104:A:O2'	2.04	0.76
17:T:4:LEU:HD13	17:T:24:LEU:HD23	1.68	0.76
36:m:14:PRO:CD	36:m:34:ALA:HB2	2.15	0.76
43:u:55:ILE:CD1	43:u:60:ILE:HG12	2.15	0.76
1:A:14:G:H5''	21:X:94:SER:HB2	1.67	0.76
1:A:177:G:H2'	1:A:178:U:O4'	1.86	0.76
3:C:166:OMG:H2'	3:C:167:U:H5'	1.68	0.76
4:D:99:G:N7	16:S:54:LYS:NZ	2.33	0.76
9:I:187:ARG:NH1	9:I:189:ALA:HA	2.01	0.76
13:P:132:ASP:OD1	13:P:137:VAL:HG21	1.85	0.76
16:S:92:MET:HE2	16:S:94:LYS:CD	2.16	0.76
33:j:43:PRO:CG	33:j:57:THR:HG21	2.10	0.76
35:l:30:LYS:NZ	35:l:32:ASN:OD1	2.18	0.76
14:Q:27:TRP:NE1	46:x:218:GLU:OE1	2.19	0.75
9:I:187:ARG:HH12	9:I:189:ALA:HA	1.50	0.75
28:e:79:PRO:HD3	28:e:165:MET:SD	2.26	0.75
2:B:1593:A:OP2	29:f:148:ARG:HD3	1.86	0.75
5:E:196:G:H4'	5:E:197:C:O4'	1.84	0.75
30:g:24:LYS:NZ	30:g:96:ASP:CG	2.44	0.75
1:A:216:U:H2'	1:A:217:G:C8	2.21	0.75
1:A:1327:U:OP1	1:A:1591:G:O2'	2.05	0.75
2:B:886:C:H3'	2:B:887:G:C5'	2.14	0.75
1:A:979:G:N2	1:A:1095:C:O2	2.17	0.75
1:A:1157:A:OP1	45:w:98:LYS:NZ	2.18	0.75
2:B:522:U:OP1	28:e:54:ARG:NH2	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:Q:185:ARG:HG2	14:Q:188:ARG:HH11	1.50	0.75
36:m:50:LEU:O	36:m:54:LYS:HG3	1.86	0.75
41:r:316:PRO:HB3	41:r:322:ASN:ND2	2.01	0.75
1:A:277:G:H2'	1:A:278:A:C8	2.21	0.75
1:A:810:A:H62	1:A:834:U:H3	1.34	0.75
8:H:93:G:C2'	8:H:94:G:H5'	2.16	0.75
11:N:19:PRO:O	41:r:105:LYS:NZ	2.19	0.75
11:N:175:ARG:NH1	25:b:86:GLU:HB3	2.01	0.75
16:S:5:HIS:HB3	16:S:106:SER:HB2	1.67	0.75
20:W:19:LEU:HD13	20:W:25:VAL:CG1	2.14	0.75
23:Z:45:MET:SD	23:Z:46:PRO:HD2	2.26	0.75
30:g:94:ILE:HD12	30:g:97:VAL:CG1	2.11	0.75
2:B:134:C:H2'	2:B:135:A:O4'	1.86	0.75
23:Z:77:ILE:HG23	23:Z:96:VAL:HG13	1.67	0.75
28:e:79:PRO:HD2	28:e:82:MET:SD	2.25	0.75
9:I:3:VAL:HG22	45:w:110:GLN:HE21	1.51	0.75
17:T:115:ILE:HB	17:T:119:ILE:CD1	2.07	0.75
41:r:206:PRO:HB3	41:r:247:PHE:CD2	2.22	0.75
1:A:275:A:O2'	1:A:276:U:H5'	1.86	0.75
6:F:14:C:OP2	12:O:136:ARG:NH2	2.20	0.75
24:a:67:VAL:HG22	24:a:116:GLN:OE1	1.87	0.75
26:c:117:LEU:HD23	26:c:120:MET:HE3	1.69	0.75
1:A:433:G:H1'	15:R:97:ASN:HD21	1.52	0.74
2:B:1215:A:O2'	2:B:1216:A:H2'	1.87	0.74
16:S:44:TRP:CH2	16:S:58:GLY:HA3	2.22	0.74
1:A:185:A:N6	1:A:276:U:O4	2.19	0.74
1:A:452:A:N6	3:C:15:G:H1'	2.02	0.74
1:A:772:U:O2'	1:A:1336:A:N1	2.20	0.74
1:A:1610:A:H2	1:A:1646:A:N1	1.85	0.74
1:A:1651:C:H4'	41:r:41:THR:HG23	1.69	0.74
4:D:9:C:H2'	4:D:10:C:H5'	1.69	0.74
15:R:60:PHE:CE1	15:R:82:ARG:HB3	2.22	0.74
19:V:112:ARG:HD2	19:V:118:GLN:CD	2.11	0.74
1:A:503:C:O2	1:A:597:G:N2	2.15	0.74
1:A:783:C:O2	1:A:1666:G:N2	2.20	0.74
1:A:1340:G:OP1	45:w:90:ARG:NH2	2.19	0.74
2:B:1185:A:H5'	2:B:1186:U:H5''	1.70	0.74
10:L:137:LEU:HD22	10:L:168:TRP:CE2	2.22	0.74
29:f:288:TYR:CD1	29:f:361:ILE:HG21	2.22	0.74
1:A:1723:G:O2'	1:A:1725:7MG:OP2	2.03	0.74
2:B:1262:A:N6	43:u:28:THR:O	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1:A:H2'	3:C:2:A:H5'	1.69	0.74
10:L:154:VAL:HG23	10:L:159:ARG:HG2	1.69	0.74
1:A:84:A:H61	1:A:99:A:H3'	1.52	0.74
1:A:1041:U:OP2	29:f:246:LYS:NZ	2.21	0.74
1:A:1078:C:H5''	28:e:15:ILE:HG13	1.69	0.74
2:B:754:U:C2'	2:B:755:OMG:H5'	2.17	0.74
2:B:1644:U:C4	29:f:326:ASN:ND2	2.53	0.74
5:E:141:U:H2'	5:E:142:G:O4'	1.87	0.74
34:k:96:ARG:O	34:k:100:LYS:NZ	2.19	0.74
1:A:921:A:C2'	1:A:922:A:H5'	2.18	0.74
2:B:703:A:H4'	15:R:137:THR:HG21	1.69	0.74
2:B:1324:C:N3	2:B:1363:OMG:N1	2.27	0.74
1:A:971:C:OP1	41:r:99:ARG:NH2	2.20	0.74
1:A:1019:G:C2'	1:A:1020:G:H5'	2.17	0.74
1:A:1143:U:O4	9:I:13:ARG:NH1	2.20	0.74
5:E:3:U:O2	5:E:10:G:N1	2.17	0.74
13:P:51:GLN:OE1	13:P:55:ASN:ND2	2.18	0.74
23:Z:45:MET:HE1	23:Z:115:ILE:HG21	1.70	0.74
12:O:68:ASN:ND2	12:O:155:THR:OG1	2.20	0.74
29:f:226:THR:HG22	29:f:336:ALA:HB1	1.69	0.74
13:P:70:SER:O	13:P:73:THR:OG1	2.05	0.74
14:Q:20:PHE:CD1	14:Q:62:GLU:HB2	2.23	0.74
1:A:1762:U:OP2	21:X:173:LYS:NZ	2.15	0.74
6:F:53:G:H5''	13:P:122:PHE:CZ	2.23	0.74
8:H:30:C:O2	8:H:123:G:N2	2.14	0.74
17:T:105:LEU:HD22	17:T:138:LEU:CD2	2.18	0.74
23:Z:74:ARG:HE	40:q:31:THR:CG2	2.01	0.74
41:r:208:LEU:HD22	41:r:210:MET:HE2	1.70	0.74
43:u:103:LEU:CD2	43:u:256:ILE:HD11	2.18	0.74
1:A:7:C:H5''	46:x:250:LYS:HB2	1.70	0.73
1:A:12:G:H5''	21:X:86:ARG:HH11	1.53	0.73
1:A:182:G:C3'	1:A:183:G:H5''	2.18	0.73
1:A:1328:G:N2	1:A:1527:U:O2	2.19	0.73
7:G:59:U:C2'	7:G:60:C:H5'	2.18	0.73
16:S:74:ARG:HD2	16:S:76:TYR:OH	1.87	0.73
16:S:111:ASP:OD1	16:S:115:ARG:NH1	2.20	0.73
1:A:1624:U:H2'	1:A:1625:G:C8	2.21	0.73
2:B:1629:U:H3'	29:f:138:ARG:HH12	0.94	0.73
41:r:162:LYS:HB2	41:r:165:GLU:HG3	1.70	0.73
28:e:98:ILE:HD11	38:o:79:VAL:HG12	1.70	0.73
28:e:102:LEU:HD11	28:e:107:ILE:HG12	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:316:PRO:CB	41:r:325:LEU:HD12	2.17	0.73
1:A:463:A:O2'	1:A:758:G:H4'	1.89	0.73
1:A:773:G:H2'	2:B:718:A:N7	2.04	0.73
1:A:1681:A:N1	1:A:1716:U:O2'	2.21	0.73
2:B:867:U:C5'	28:e:31:ILE:HD12	2.19	0.73
20:W:47:ARG:HG2	20:W:48:LEU:N	2.02	0.73
38:o:21:ASN:HB3	38:o:22:PRO:HD3	1.68	0.73
1:A:399:A:N1	41:r:83:THR:HG22	2.04	0.73
2:B:1372:A:C8	42:t:56:PRO:HB3	2.23	0.73
3:C:76:C:H2'	3:C:77:A:O4'	1.89	0.73
7:G:71:C:H5'	29:f:336:ALA:HA	1.70	0.73
11:N:188:LYS:O	11:N:192:LYS:HG3	1.89	0.73
20:W:38:ILE:CG1	20:W:60:VAL:HG11	2.18	0.73
29:f:284:ASN:OD1	29:f:352:GLN:NE2	2.19	0.73
43:u:79:TYR:O	43:u:82:GLU:HG2	1.88	0.73
2:B:1156:U:O2	14:Q:141:SER:OG	2.06	0.73
2:B:1285:C:O2	2:B:1290:A:N6	2.20	0.73
8:H:68:G:N1	8:H:87:C:N3	2.28	0.73
13:P:41:PRO:HB2	13:P:75:LYS:HD3	1.70	0.73
22:Y:50:PRO:HB2	22:Y:58:THR:CG2	2.18	0.73
24:a:71:LEU:HD11	24:a:111:VAL:HG21	1.71	0.73
37:n:80:THR:HG22	37:n:81:SER:O	1.89	0.73
41:r:93:ASN:HA	41:r:99:ARG:O	1.88	0.73
1:A:1628:G:N2	1:A:1631:A:OP2	2.18	0.73
1:A:1932:A:OP1	33:j:63:THR:OG1	2.06	0.73
11:N:108:ASN:O	36:m:33:ARG:HD2	1.88	0.73
13:P:14:ARG:NH2	13:P:57:GLU:OE1	2.17	0.73
17:T:72:MET:O	17:T:74:ARG:NH1	2.22	0.73
31:h:95:LEU:HD21	31:h:111:ARG:HB2	1.68	0.73
44:v:77:ILE:HD13	44:v:82:ILE:HG21	1.70	0.73
1:A:370:C:H5''	1:A:371:A:H5''	1.68	0.73
2:B:1245:C:H2'	2:B:1246:G:O4'	1.88	0.73
17:T:15:LEU:HD12	17:T:22:VAL:HG12	1.70	0.73
18:U:107:GLN:NE2	18:U:110:LYS:HD3	2.04	0.73
26:c:20:GLN:HG3	32:i:85:MET:HE1	1.71	0.73
1:A:931:7MG:N1	1:A:945:U:O2	2.20	0.73
1:A:1153:A:OP1	27:d:23:ARG:NH2	2.22	0.73
2:B:1259:G:H5''	18:U:17:LYS:HG2	1.71	0.73
8:H:26:C:N4	8:H:125:U:H2'	2.04	0.73
15:R:126:ARG:HG2	15:R:140:MET:HE3	1.71	0.73
41:r:316:PRO:HD3	41:r:324:ARG:NH1	2.02	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1539:U:H1'	9:I:15:VAL:HG22	1.70	0.73
1:A:1544:G:N2	1:A:1581:C:O2	2.17	0.73
2:B:748:A:H5''	41:r:68:THR:CG2	2.19	0.73
7:G:59:U:H2'	7:G:60:C:H5'	1.71	0.73
14:Q:131:VAL:O	14:Q:175:ARG:NH1	2.21	0.73
23:Z:47:VAL:HG11	23:Z:77:ILE:HD12	1.71	0.73
35:l:116:HIS:HD2	35:l:123:ARG:HE	1.37	0.73
41:r:133:PRO:HA	41:r:136:VAL:CG1	2.18	0.73
6:F:13:U:H2'	12:O:132:ARG:HA	1.69	0.72
11:N:59:LEU:HD22	11:N:124:TYR:CG	2.24	0.72
15:R:129:THR:HG22	15:R:139:TYR:CE2	2.23	0.72
23:Z:77:ILE:HG22	23:Z:96:VAL:O	1.89	0.72
43:u:173:VAL:HG21	43:u:181:HIS:NE2	2.03	0.72
1:A:1108:G:H5''	1:A:1659:OMG:HM21	1.71	0.72
1:A:1580:G:OP1	26:c:26:ARG:NH1	2.22	0.72
2:B:1136:G:H5''	2:B:1137:A:H2'	1.70	0.72
20:W:30:ASN:ND2	20:W:114:SER:HB3	2.03	0.72
21:X:102:MET:HE1	34:k:87:LEU:HG	1.71	0.72
23:Z:51:ASP:HB2	23:Z:106:LEU:HA	1.71	0.72
29:f:209:ARG:HB3	29:f:211:ASP:OD1	1.89	0.72
2:B:738:C:O2'	29:f:271:ARG:NH2	2.22	0.72
12:O:65:GLU:OE2	12:O:163:HIS:ND1	2.22	0.72
24:a:77:LYS:HA	30:g:37:ARG:NH2	2.04	0.72
1:A:980:G:O2'	37:n:45:ARG:NH2	2.22	0.72
16:S:8:HIS:NE2	16:S:30:GLU:OE1	2.22	0.72
2:B:1215:A:O2'	2:B:1216:A:O5'	2.02	0.72
3:C:4:G:C2'	3:C:5:U:H5'	2.20	0.72
6:F:12:U:OP1	12:O:194:ARG:HD3	1.88	0.72
6:F:54:U:C4	13:P:115:VAL:HG23	2.24	0.72
39:p:25:VAL:HG22	39:p:34:PHE:HD1	1.54	0.72
43:u:182:ARG:NH1	43:u:184:ASN:OD1	2.21	0.72
1:A:1352:G:H4'	45:w:217:LYS:HE3	1.70	0.72
2:B:496:G:O2'	2:B:535:U:OP1	2.06	0.72
4:D:40:C:O2	10:L:78:ARG:NH1	2.23	0.72
8:H:25:A:OP2	29:f:116:ARG:NH2	2.23	0.72
18:U:27:VAL:HG21	43:u:33:ARG:HH11	1.55	0.72
25:b:75:LEU:HD22	25:b:115:LEU:HD13	1.71	0.72
29:f:14:LEU:HD11	29:f:268:THR:HG23	1.69	0.72
31:h:105:ALA:HB3	31:h:106:PRO:HD3	1.72	0.72
1:A:14:G:C2'	1:A:15:U:H5'	2.20	0.72
1:A:1680:G:OP1	2:B:62:A:N6	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:O:126:ILE:HG23	12:O:179:ARG:CD	2.20	0.72
29:f:288:TYR:OH	29:f:332:LYS:HD3	1.89	0.72
46:x:262:ALA:HA	46:x:265:GLU:HG2	1.71	0.72
1:A:233:C:H2'	1:A:234:A:H5'	1.72	0.72
15:R:19:VAL:CG2	15:R:94:LEU:HD13	2.19	0.72
33:j:45:THR:CG2	33:j:52:LYS:H	2.03	0.72
32:i:33:TRP:CH2	32:i:53:MET:HG2	2.24	0.72
43:u:107:ARG:NH2	43:u:175:GLY:O	2.22	0.72
1:A:920:C:O2	9:I:147:ARG:NH1	2.23	0.72
1:A:964:U:C5'	11:N:2:PRO:HD3	2.20	0.72
1:A:1002:G:H1'	1:A:1025:A:N6	2.05	0.72
1:A:1343:U:OP1	9:I:2:GLY:N	2.22	0.72
2:B:894:C:H2'	2:B:895:U:H6	1.54	0.72
7:G:75:U:H4'	20:W:94:VAL:HG11	1.72	0.72
2:B:454:A:H2'	2:B:455:A:C8	2.24	0.71
2:B:1502:U:O2'	2:B:1504:A:N7	2.19	0.71
8:H:121:A:H2'	8:H:122:U:C6	2.25	0.71
9:I:29:LEU:HD13	41:r:282:LEU:CD2	2.18	0.71
12:O:72:TYR:CD2	12:O:164:VAL:HG11	2.24	0.71
26:c:92:SER:HA	26:c:95:VAL:HG12	1.70	0.71
44:v:56:PRO:HD2	44:v:101:PRO:HG3	1.70	0.71
1:A:1325:G:OP2	1:A:1326:A:O2'	2.09	0.71
4:D:67:C:O2	4:D:108:G:N2	2.16	0.71
5:E:97:G:N2	5:E:135:C:O2	2.17	0.71
24:a:69:VAL:HG21	24:a:112:ARG:HA	1.71	0.71
25:b:92:LYS:HB2	25:b:138:GLY:HA3	1.72	0.71
31:h:86:MET:CG	31:h:185:VAL:HG22	2.19	0.71
3:C:77:A:H2'	3:C:78:G:O4'	1.91	0.71
16:S:166:VAL:HG23	16:S:178:VAL:HG23	1.72	0.71
20:W:98:GLU:OE1	22:Y:21:TYR:OH	2.08	0.71
30:g:26:VAL:CG2	30:g:31:GLN:HG3	2.20	0.71
31:h:80:LYS:HZ3	31:h:185:VAL:HG11	1.55	0.71
1:A:74:U:O2'	11:N:75:ARG:NH2	2.23	0.71
1:A:195:U:O2'	23:Z:57:ARG:NH2	2.23	0.71
13:P:41:PRO:CB	13:P:75:LYS:HD3	2.20	0.71
15:R:116:HIS:HE1	15:R:147:GLN:HE21	1.39	0.71
24:a:24:ILE:HD12	24:a:40:SER:CB	2.20	0.71
2:B:505:U:H2'	2:B:506:G:H5'	1.71	0.71
2:B:542:C:O2'	2:B:616:A:N3	2.23	0.71
27:d:29:LEU:O	27:d:31:ASN:N	2.23	0.71
28:e:61:VAL:CG2	28:e:76:MET:HE3	2.17	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:264:THR:HG22	41:r:265:PHE:N	2.04	0.71
44:v:77:ILE:HD13	44:v:82:ILE:CG2	2.19	0.71
1:A:474:A:N3	35:l:56:LYS:HE2	2.05	0.71
30:g:24:LYS:HE2	30:g:96:ASP:CG	2.15	0.71
30:g:24:LYS:CE	30:g:96:ASP:CG	2.63	0.71
1:A:951:G:N3	1:A:951:G:H2'	2.05	0.71
1:A:1725:7MG:N2	33:j:5:ARG:HE	1.89	0.71
2:B:132:G:H4'	17:T:101:ILE:HD13	1.72	0.71
2:B:1273:G:H4'	2:B:1274:A:O5'	1.90	0.71
8:H:93:G:H2'	8:H:94:G:H5'	1.73	0.71
12:O:95:SER:N	12:O:124:GLU:OE2	2.22	0.71
16:S:29:PHE:CE2	16:S:31:VAL:HG12	2.25	0.71
24:a:50:LYS:HB2	24:a:64:ARG:CG	2.20	0.71
2:B:749:G:O6	2:B:1390:A:N6	2.15	0.71
2:B:1593:A:OP1	29:f:148:ARG:HD3	1.86	0.71
4:D:13:A:H2	43:u:21:ARG:HB2	1.55	0.71
4:D:20:C:H2'	4:D:21:G:C8	2.26	0.71
21:X:102:MET:CE	34:k:86:ALA:HB3	2.20	0.71
39:p:5:ILE:HD11	39:p:10:GLU:CB	2.20	0.71
1:A:132:U:H3	1:A:178:U:H4'	1.55	0.71
1:A:875:C:OP2	1:A:919:OMC:N4	2.23	0.71
6:F:10:A:H4'	6:F:13:U:O4	1.90	0.71
26:c:65:LYS:HD3	26:c:77:TYR:CE1	2.26	0.71
1:A:503:C:H2'	1:A:504:C:C6	2.26	0.71
1:A:1362:A:H5'	35:l:116:HIS:CE1	2.26	0.71
3:C:78:G:H2'	3:C:79:A:H5'	1.72	0.71
19:V:29:ASP:HA	19:V:76:VAL:HG22	1.72	0.71
35:l:38:LEU:HD13	44:v:45:ARG:HB3	1.71	0.71
37:n:18:LEU:CD2	40:q:12:LYS:HE2	2.20	0.71
41:r:9:VAL:O	41:r:18:VAL:HG22	1.90	0.71
1:A:132:U:N3	1:A:178:U:H4'	2.05	0.70
1:A:145:G:OP1	14:Q:56:ARG:NH1	2.23	0.70
1:A:1606:A:OP1	41:r:193:GLY:HA3	1.91	0.70
32:i:33:TRP:HH2	32:i:53:MET:HG2	1.56	0.70
43:u:103:LEU:HD23	43:u:256:ILE:CD1	2.20	0.70
1:A:742:G:O2'	35:l:93:VAL:O	2.06	0.70
1:A:766:C:O2	1:A:781:G:N2	2.17	0.70
1:A:1684:U:H2'	1:A:1685:A:C8	2.26	0.70
2:B:551:U:H3	2:B:583:C:H42	1.39	0.70
4:D:13:A:OP2	4:D:66:G:N2	2.18	0.70
5:E:113:C:H2'	5:E:114:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:8:C:C2'	6:F:9:C:H5'	2.21	0.70
11:N:51:THR:HG21	11:N:54:ARG:NE	2.06	0.70
40:q:7:LEU:O	40:q:11:LYS:HG2	1.91	0.70
40:q:21:ARG:CG	40:q:22:PRO:HD2	2.20	0.70
46:x:165:GLN:HA	46:x:168:PHE:CE2	2.25	0.70
1:A:92:G:OP1	42:t:46:LYS:NZ	2.23	0.70
1:A:211:C:O2'	1:A:212:C:H5'	1.92	0.70
1:A:1669:G:N2	2:B:705:C:O2	2.16	0.70
16:S:119:ARG:HG2	16:S:122:ASN:ND2	2.05	0.70
26:c:116:THR:HG22	26:c:120:MET:CE	2.20	0.70
39:p:23:VAL:CG1	39:p:36:VAL:HG22	2.21	0.70
3:C:122:A:H2'	3:C:123:G:O4'	1.91	0.70
4:D:6:C:OP1	43:u:54:ARG:NE	2.21	0.70
15:R:59:PRO:HB2	15:R:78:GLN:HE22	1.55	0.70
15:R:137:THR:HB	15:R:138:PRO:HD2	1.72	0.70
33:j:82:VAL:HG12	33:j:83:LEU:CD1	2.22	0.70
35:l:40:MET:HB2	35:l:142:VAL:HG13	1.73	0.70
1:A:266:C:C2'	1:A:267:A:H5'	2.21	0.70
1:A:419:A:H4'	1:A:420:A:H5'	1.73	0.70
1:A:877:C:O2'	9:I:142:ASN:HA	1.90	0.70
1:A:1014:A:H2'	1:A:1015:A:O4'	1.91	0.70
13:P:135:LYS:HG3	13:P:141:LYS:HA	1.72	0.70
17:T:136:ARG:HA	17:T:139:MET:CB	2.19	0.70
19:V:60:ARG:HD3	19:V:63:LYS:NZ	2.05	0.70
40:q:28:ARG:HA	40:q:33:ASN:ND2	2.05	0.70
1:A:62:A:OP1	14:Q:188:ARG:NH1	2.25	0.70
1:A:792:OMC:HM22	1:A:793:A:O4'	1.90	0.70
1:A:1775:G:O6	1:A:1924:A:H2'	1.90	0.70
6:F:62:U:H4'	6:F:63:A:O5'	1.91	0.70
13:P:135:LYS:HG3	13:P:141:LYS:CA	2.21	0.70
17:T:4:LEU:HD13	17:T:24:LEU:HD22	1.74	0.70
24:a:86:MET:HE2	24:a:124:ASN:HD22	1.57	0.70
25:b:118:PRO:HG3	25:b:137:ALA:O	1.92	0.70
29:f:46:PHE:CD2	29:f:210:ILE:HG12	2.27	0.70
29:f:335:VAL:HG11	29:f:343:ILE:HD13	1.73	0.70
1:A:115:G:C2'	1:A:116:U:H5'	2.22	0.70
1:A:131:U:H3'	1:A:132:U:C5'	2.20	0.70
1:A:1364:C:OP2	16:S:162:ARG:NH1	2.20	0.70
1:A:1764:G:N2	1:A:1945:U:O2'	2.24	0.70
2:B:1363:OMG:H5''	42:t:66:LYS:HD2	1.73	0.70
12:O:79:ARG:HH11	12:O:84:PRO:HG3	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:Q:44:TRP:HA	14:Q:47:ARG:HH21	1.56	0.70
3:C:52:A:H62	40:q:27:ILE:HD13	1.57	0.70
28:e:58:LEU:HD23	28:e:75:LEU:CD2	2.18	0.70
45:w:179:VAL:N	45:w:183:ASP:OD2	2.17	0.70
1:A:266:C:O2'	1:A:267:A:H5'	1.92	0.70
1:A:1251:C:O4'	43:u:46:THR:HG21	1.91	0.70
2:B:498:U:O2'	2:B:499:U:H5'	1.92	0.70
2:B:564:OMG:HN1	2:B:573:C:H42	1.37	0.70
11:N:21:SER:OG	41:r:59:MET:CB	2.39	0.70
12:O:144:ARG:HG3	12:O:148:TYR:CD2	2.26	0.70
16:S:47:MET:HE3	16:S:53:VAL:CG1	2.21	0.70
16:S:131:ILE:HG23	16:S:132:PRO:HD2	1.74	0.70
25:b:72:THR:HG22	25:b:108:LYS:HB3	1.73	0.70
25:b:99:VAL:HG23	25:b:121:VAL:HA	1.73	0.70
1:A:65:A:H5''	1:A:358:C:OP1	1.92	0.70
1:A:115:G:H4'	14:Q:65:ARG:HG2	1.74	0.70
1:A:1051:A:OP2	37:n:4:GLY:HA3	1.90	0.70
1:A:1301:C:O2	1:A:1323:G:N2	2.14	0.70
14:Q:48:HIS:HB3	46:x:116:MET:HE3	1.74	0.70
20:W:56:LEU:HD21	20:W:121:ALA:CB	2.22	0.70
40:q:24:PRO:HD2	40:q:27:ILE:HD12	1.72	0.70
43:u:158:ARG:HG2	43:u:160:THR:HG23	1.73	0.70
2:B:1345:OMU:HM21	2:B:1347:A:N6	2.07	0.69
9:I:117:ARG:O	9:I:120:ILE:HG22	1.92	0.69
17:T:96:MET:CE	17:T:100:ARG:HH21	2.05	0.69
18:U:31:LEU:HD11	43:u:37:VAL:HG22	1.74	0.69
1:A:827:G:C2'	1:A:828:U:H5'	2.22	0.69
1:A:964:U:H5''	11:N:2:PRO:HD3	1.74	0.69
2:B:461:U:H4'	2:B:462:A:C5'	2.22	0.69
1:A:758:G:H2'	1:A:759:C:C6	2.28	0.69
1:A:1046:U:O2	2:B:703:A:O2'	2.06	0.69
6:F:7:G:C8	44:v:184:PRO:HG3	2.27	0.69
7:G:89:U:OP1	17:T:80:ARG:NH1	2.24	0.69
12:O:99:LEU:HA	12:O:102:VAL:HG12	1.74	0.69
29:f:112:VAL:O	29:f:116:ARG:HG2	1.91	0.69
30:g:54:ARG:HH12	30:g:91:VAL:HG23	1.58	0.69
2:B:1240:U:H2'	2:B:1241:C:H6	1.56	0.69
6:F:69:A:N6	35:l:39:TYR:OH	2.26	0.69
13:P:24:VAL:O	13:P:46:MET:HE2	1.92	0.69
15:R:102:ALA:CB	15:R:112:MET:HE3	2.18	0.69
36:m:83:LEU:HD13	36:m:93:PHE:CE1	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:49:VAL:HG12	44:v:63:ILE:HB	1.72	0.69
1:A:338:G:O6	14:Q:28:LYS:NZ	2.22	0.69
1:A:470:U:C2'	1:A:471:G:H5'	2.22	0.69
2:B:1439:U:O2'	2:B:1443:U:OP1	2.11	0.69
17:T:109:TYR:HD2	17:T:142:ILE:HD13	1.56	0.69
29:f:134:LYS:HZ1	29:f:138:ARG:NH2	1.88	0.69
29:f:209:ARG:NH2	29:f:296:MET:HE1	2.07	0.69
30:g:26:VAL:HG13	30:g:93:SER:HB3	1.72	0.69
32:i:14:ARG:HD3	32:i:18:PHE:CZ	2.27	0.69
36:m:17:ARG:HD3	36:m:27:GLY:CA	2.20	0.69
43:u:147:PRO:HB2	43:u:178:ALA:HB2	1.73	0.69
1:A:312:A:OP1	14:Q:186:LYS:HE3	1.92	0.69
10:L:138:GLY:HA2	10:L:160:VAL:HG21	1.74	0.69
20:W:125:ALA:HB2	20:W:138:ILE:HD12	1.75	0.69
27:d:57:LYS:O	27:d:61:GLU:HG2	1.91	0.69
29:f:193:ILE:O	29:f:197:ILE:HG12	1.93	0.69
32:i:106:ARG:NH1	32:i:122:ASN:O	2.25	0.69
2:B:719:A:N6	2:B:1437:C:H1'	2.08	0.69
7:G:123:G:HO2'	7:G:124:U:P	2.16	0.69
9:I:31:LYS:HD3	41:r:287:VAL:HG11	1.74	0.69
13:P:6:TYR:CE2	16:S:152:PRO:HD3	2.26	0.69
13:P:134:LYS:HD2	13:P:134:LYS:C	2.18	0.69
28:e:31:ILE:HD13	28:e:123:ARG:NH1	2.08	0.69
45:w:215:ARG:O	45:w:216:GLN:HG3	1.91	0.69
46:x:187:LEU:HD21	46:x:259:ASP:O	1.93	0.69
1:A:80:U:OP1	14:Q:213:ARG:NH2	2.26	0.69
1:A:974:A2M:HM'3	2:B:758:G:O2'	1.93	0.69
1:A:1003:A:OP1	38:o:3:LYS:HA	1.92	0.69
1:A:1071:A2M:H2	28:e:15:ILE:CD1	2.22	0.69
1:A:1573:A:O4'	26:c:39:THR:HG23	1.91	0.69
1:A:1771:U:H3'	1:A:1772:A:H5''	1.75	0.69
2:B:77:OMC:HM22	2:B:78:U:H5'	1.75	0.69
2:B:1156:U:H2'	2:B:1157:G:C8	2.28	0.69
2:B:1444:G:HO2'	2:B:1445:U:C5'	2.06	0.69
5:E:27:U:H3	5:E:202:A:H62	1.40	0.69
5:E:177:G:O2'	5:E:178:U:H5'	1.92	0.69
8:H:68:G:N2	8:H:87:C:O2	2.20	0.69
11:N:110:SER:HB2	36:m:30:THR:HG21	1.75	0.69
15:R:56:ARG:NH2	15:R:75:GLU:OE2	2.20	0.69
28:e:89:LEU:H	28:e:100:ASN:HD22	1.38	0.69
29:f:134:LYS:HZ1	29:f:138:ARG:HH22	1.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:803:G:P	41:r:32:ARG:HH12	2.15	0.69
2:B:17:U:H4'	40:q:3:ARG:HG2	1.75	0.69
2:B:1150:G:H4'	2:B:1152:C:C2	2.28	0.69
2:B:1356:U:H5''	42:t:38:ARG:CB	2.23	0.69
16:S:84:SER:N	16:S:87:CYS:O	2.24	0.69
18:U:35:LYS:HB3	43:u:44:PHE:CE1	2.28	0.69
23:Z:56:LYS:HD2	23:Z:102:GLU:OE1	1.93	0.69
25:b:126:VAL:HG11	25:b:141:VAL:HG11	1.73	0.69
43:u:162:GLY:HA2	43:u:187:PRO:HD3	1.74	0.69
1:A:95:A:C5	1:A:96:G:H1'	2.28	0.69
1:A:1085:C:C2'	1:A:1086:U:H5'	2.22	0.69
1:A:1358:U:O2'	12:O:105:MET:O	2.03	0.69
2:B:720:C:C5	2:B:1393:G:H4'	2.27	0.69
2:B:1240:U:O2'	2:B:1241:C:H5'	1.92	0.69
2:B:1560:U:C2'	2:B:1561:A:H5'	2.23	0.69
39:p:25:VAL:HG22	39:p:34:PHE:CD1	2.27	0.69
1:A:833:C:H2'	1:A:834:U:O4'	1.93	0.68
1:A:1949:A:H2'	21:X:177:ARG:HH21	1.58	0.68
11:N:110:SER:HB2	36:m:30:THR:HG22	1.75	0.68
21:X:117:TYR:CE1	21:X:137:ILE:HD13	2.28	0.68
29:f:224:ALA:CB	29:f:343:ILE:HG22	2.23	0.68
36:m:87:LYS:HD3	36:m:93:PHE:HD1	1.58	0.68
1:A:815:A:H2'	1:A:816:U:O4'	1.93	0.68
1:A:867:G:P	9:I:72:LYS:HE2	2.33	0.68
1:A:958:OMG:OP1	41:r:109:ARG:NH2	2.25	0.68
2:B:1644:U:O4	29:f:326:ASN:ND2	2.26	0.68
5:E:176:U:H2'	5:E:177:G:O4'	1.93	0.68
12:O:21:ARG:HE	12:O:24:ILE:HD12	1.57	0.68
25:b:108:LYS:HG2	25:b:109:LEU:N	2.06	0.68
28:e:118:ALA:HB2	28:e:126:ILE:CD1	2.23	0.68
29:f:79:LEU:HB2	29:f:329:ILE:HG22	1.75	0.68
46:x:278:ARG:O	46:x:282:ARG:HD3	1.92	0.68
1:A:308:G:C1'	14:Q:66:MET:HE3	2.23	0.68
1:A:1132:A:OP1	11:N:3:LYS:HD2	1.92	0.68
2:B:1350:A:H2'	2:B:1351:A:C8	2.28	0.68
23:Z:82:VAL:HG12	23:Z:94:VAL:CG1	2.23	0.68
29:f:216:GLN:NE2	29:f:361:ILE:O	2.25	0.68
41:r:257:LYS:O	41:r:261:ILE:HG12	1.93	0.68
42:t:7:LYS:HD3	42:t:22:SER:HB2	1.73	0.68
43:u:86:PHE:HD2	43:u:256:ILE:HG22	1.56	0.68
1:A:58:G:H4'	1:A:59:A:OP1	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:180:C:H5'	1:A:181:A:OP2	1.93	0.68
1:A:375:U:C2'	1:A:376:A:H5'	2.24	0.68
1:A:849:G:N7	25:b:108:LYS:HE3	2.09	0.68
1:A:1342:U:H5'	9:I:2:GLY:HA2	1.75	0.68
2:B:576:C:H3'	2:B:577:G:H5''	1.76	0.68
4:D:115:A:H2'	4:D:116:A:C8	2.28	0.68
5:E:33:A:O2'	5:E:34:U:H5'	1.93	0.68
5:E:124:G:C5'	5:E:126:A:H5'	2.23	0.68
6:F:53:G:O2'	6:F:54:U:O5'	2.10	0.68
11:N:114:MET:HG2	36:m:33:ARG:HH21	1.58	0.68
22:Y:7:GLU:CD	22:Y:33:LEU:HD22	2.18	0.68
28:e:60:ARG:HE	28:e:75:LEU:CD1	2.06	0.68
34:k:20:LYS:HA	34:k:23:MET:CE	2.21	0.68
1:A:1733:A:H2'	40:q:13:TYR:CD1	2.27	0.68
1:A:1791:C:C2'	1:A:1792:G:H5'	2.22	0.68
2:B:51:U:HO2'	2:B:464:G:HO2'	1.37	0.68
2:B:1138:7MG:O2'	2:B:1139:U:OP1	2.10	0.68
2:B:88:C:H5''	2:B:1493:U:OP1	1.93	0.68
2:B:701:G:H4'	15:R:139:TYR:CD1	2.29	0.68
2:B:1514:U:H1'	29:f:256:CYS:SG	2.34	0.68
3:C:167:U:H2'	3:C:168:C:O4'	1.94	0.68
4:D:45:U:H2'	4:D:46:G:C8	2.28	0.68
16:S:116:HIS:O	16:S:118:ALA:N	2.25	0.68
16:S:142:SER:HA	16:S:145:HIS:HD2	1.58	0.68
26:c:8:GLN:HB3	26:c:46:LEU:HD11	1.76	0.68
41:r:167:MET:SD	41:r:222:ILE:HD11	2.34	0.68
41:r:319:GLY:HA2	41:r:325:LEU:HD22	1.74	0.68
43:u:245:LEU:O	43:u:248:MET:HG2	1.94	0.68
1:A:494:C:N4	1:A:741:G:O6	2.17	0.68
1:A:1680:G:H5''	1:A:1681:A:OP2	1.94	0.68
2:B:72:G:OP1	29:f:251:LEU:N	2.27	0.68
9:I:64:LEU:HD21	9:I:102:ILE:HD13	1.74	0.68
10:L:106:GLY:HA3	10:L:160:VAL:HG12	1.76	0.68
13:P:29:ASP:OD2	16:S:73:ALA:HB3	1.93	0.68
2:B:681:G:O4'	2:B:683:OMC:N4	2.24	0.68
2:B:1112:A:H4'	2:B:1113:A:OP1	1.92	0.68
4:D:91:U:C2'	4:D:92:G:H5'	2.24	0.68
12:O:29:LEU:HD13	12:O:59:LEU:HD21	1.74	0.68
16:S:14:ARG:NH1	16:S:17:PRO:HG3	2.08	0.68
41:r:7:VAL:HG23	41:r:23:LEU:CD1	2.24	0.68
43:u:67:ALA:HA	43:u:72:ASP:CB	2.22	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:63:ILE:HG12	44:v:77:ILE:HG12	1.74	0.68
1:A:818:U:H2'	1:A:825:C:N3	2.09	0.68
1:A:1517:U:O4	13:P:45:LYS:HD3	1.94	0.68
2:B:1167:G:O2'	14:Q:95:ILE:HG12	1.94	0.68
2:B:1307:A:OP1	43:u:182:ARG:NE	2.25	0.68
5:E:9:U:H5''	33:j:75:THR:HG21	1.75	0.68
5:E:67:U:H1'	5:E:68:A:OP2	1.93	0.68
18:U:25:PRO:HG3	18:U:94:GLU:HG2	1.76	0.68
23:Z:28:MET:CG	23:Z:98:PRO:HG3	2.23	0.68
40:q:13:TYR:CE2	40:q:51:TYR:HB2	2.28	0.68
1:A:409:A:O2'	41:r:85:THR:HG23	1.94	0.68
2:B:530:A:H4'	28:e:236:GLY:HA2	1.76	0.68
2:B:656:U:H2'	2:B:657:7MG:H82	1.75	0.68
8:H:68:G:O6	8:H:87:C:N4	2.25	0.68
24:a:19:GLY:HA3	24:a:133:PHE:CZ	2.28	0.68
1:A:803:G:OP1	41:r:32:ARG:NH1	2.26	0.67
2:B:718:A:H3'	2:B:719:A:C5'	2.23	0.67
2:B:1243:C:O2'	2:B:1244:A:H5'	1.94	0.67
2:B:1287:A:C6	25:b:43:ILE:HD12	2.29	0.67
2:B:1287:A:C2	25:b:43:ILE:HG23	2.28	0.67
7:G:177:C:H5'	7:G:178:A:P	2.34	0.67
9:I:71:MET:HE3	9:I:87:ALA:HB2	1.74	0.67
17:T:109:TYR:CD2	17:T:142:ILE:HD13	2.29	0.67
20:W:122:LYS:NZ	20:W:126:ASP:OD2	2.20	0.67
21:X:178:LEU:HD12	21:X:184:ALA:HA	1.76	0.67
24:a:35:ARG:O	24:a:37:TYR:N	2.25	0.67
31:h:109:ILE:HG13	31:h:135:VAL:HG11	1.77	0.67
45:w:149:TYR:OH	45:w:182:GLU:OE2	2.11	0.67
45:w:214:MET:HE1	45:w:217:LYS:HB3	1.76	0.67
46:x:114:VAL:O	46:x:118:ARG:HG3	1.94	0.67
2:B:563:U:OP1	36:m:69:ARG:NH2	2.27	0.67
2:B:882:G:N2	2:B:907:A:N1	2.38	0.67
4:D:21:G:H1	4:D:57:C:H42	1.43	0.67
21:X:131:ASN:O	21:X:177:ARG:NH1	2.27	0.67
23:Z:79:ILE:HG22	23:Z:81:LYS:H	1.58	0.67
28:e:81:GLY:HA2	38:o:64:MET:SD	2.33	0.67
28:e:104:LEU:HD21	28:e:148:LEU:HD23	1.74	0.67
29:f:320:GLY:O	29:f:340:ARG:NH1	2.26	0.67
35:l:39:TYR:CD1	35:l:141:ARG:HB2	2.29	0.67
35:l:62:ARG:NH1	35:l:119:SER:OG	2.24	0.67
39:p:34:PHE:CD2	39:p:56:ILE:HD11	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:157:VAL:HG21	41:r:169:PHE:CZ	2.29	0.67
46:x:126:ARG:HG2	46:x:294:GLN:O	1.93	0.67
1:A:87:C:H5'	9:I:175:ASN:OD1	1.94	0.67
2:B:1506:A:O2'	2:B:1507:G:H5'	1.95	0.67
3:C:20:C:C2'	3:C:21:U:H5'	2.24	0.67
5:E:8:A:N1	5:E:132:G:O2'	2.24	0.67
13:P:59:LEU:HD13	13:P:87:TYR:CE1	2.30	0.67
16:S:136:VAL:HG11	16:S:141:ILE:CD1	2.23	0.67
23:Z:16:HIS:CD2	23:Z:27:LEU:HD21	2.29	0.67
29:f:27:GLY:HA2	29:f:279:HIS:CE1	2.29	0.67
29:f:287:ILE:HG23	29:f:329:ILE:HD11	1.77	0.67
37:n:52:LYS:NZ	41:r:60:ASN:OD1	2.28	0.67
41:r:32:ARG:N	41:r:125:SER:OG	2.27	0.67
45:w:88:ARG:NH2	45:w:92:ILE:HA	2.09	0.67
1:A:92:G:H5'	1:A:94:G:N7	2.09	0.67
2:B:135:A:H2'	2:B:136:A:H5'	1.77	0.67
3:C:57:C:C2'	3:C:58:G:H5'	2.23	0.67
21:X:166:ILE:HD13	40:q:7:LEU:HD11	1.75	0.67
24:a:38:GLY:HA3	24:a:76:HIS:NE2	2.09	0.67
26:c:4:SER:HB2	41:r:286:ASP:HB3	1.76	0.67
28:e:147:ARG:HG2	28:e:157:THR:CG2	2.24	0.67
41:r:171:LYS:HG3	41:r:176:VAL:HG11	1.75	0.67
43:u:63:GLN:HG2	43:u:74:VAL:HG13	1.77	0.67
1:A:12:G:H5''	21:X:86:ARG:NH1	2.09	0.67
1:A:743:C:OP1	35:l:97:LYS:HG2	1.93	0.67
2:B:1248:A:N3	2:B:1248:A:H2'	2.08	0.67
2:B:1326:U:OP1	42:t:34:ARG:HG2	1.95	0.67
9:I:188:ARG:HH22	9:I:191:ARG:HH11	1.42	0.67
14:Q:100:PRO:O	14:Q:103:SER:OG	2.10	0.67
16:S:173:THR:HG22	16:S:175:ARG:N	2.07	0.67
18:U:80:VAL:HG11	18:U:83:ARG:NE	2.08	0.67
22:Y:43:MET:HE3	22:Y:55:TRP:CZ2	2.30	0.67
26:c:95:VAL:HG11	26:c:106:ALA:HB3	1.76	0.67
29:f:167:GLN:OE1	29:f:170:LYS:HD3	1.94	0.67
29:f:310:LYS:HE2	29:f:368:THR:CB	2.23	0.67
42:t:23:PHE:HE1	42:t:74:CYS:HB3	1.58	0.67
1:A:1099:U:H3'	11:N:22:SER:OG	1.94	0.67
2:B:451:C:O2'	2:B:452:A:H5'	1.94	0.67
2:B:1322:U:O4	2:B:1364:G:N1	2.19	0.67
2:B:1444:G:H2'	2:B:1515:G:O6	1.94	0.67
13:P:20:ARG:HD3	13:P:46:MET:SD	2.35	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:247:THR:CG2	29:f:251:LEU:HD12	2.23	0.67
31:h:86:MET:SD	31:h:185:VAL:HG22	2.35	0.67
43:u:256:ILE:O	43:u:259:ASP:HB2	1.94	0.67
1:A:815:A:OP2	11:N:44:ARG:NH2	2.25	0.67
2:B:482:A2M:H2	2:B:489:A:N7	2.10	0.67
2:B:518:U:H4'	28:e:13:GLY:HA3	1.77	0.67
2:B:1107:7MG:O2'	24:a:133:PHE:O	2.07	0.67
4:D:102:C:H2'	4:D:103:C:H5'	1.76	0.67
10:L:106:GLY:CA	10:L:160:VAL:HG12	2.25	0.67
25:b:129:LEU:HG	25:b:133:LYS:HE2	1.75	0.67
29:f:302:THR:HG22	29:f:308:THR:O	1.95	0.67
40:q:16:LYS:HE2	40:q:49:LEU:HD21	1.75	0.67
41:r:332:PHE:CE1	45:w:49:LEU:HD13	2.28	0.67
42:t:4:TYR:OH	42:t:8:LYS:NZ	2.27	0.67
46:x:228:ARG:HD3	46:x:283:SER:HB2	1.76	0.67
2:B:1460:C:H42	2:B:1483:G:H1	1.42	0.67
2:B:1496:A:O2'	2:B:1497:C:H5'	1.95	0.67
2:B:1560:U:H2'	2:B:1561:A:H5'	1.77	0.67
5:E:145:A:OP2	5:E:147:A:N6	2.28	0.67
9:I:92:ASP:OD2	9:I:111:ARG:NH1	2.27	0.67
12:O:21:ARG:NH1	12:O:133:THR:OG1	2.28	0.67
13:P:139:TRP:HD1	13:P:140:HIS:N	1.93	0.67
14:Q:159:ARG:HE	34:k:99:LEU:HD23	1.59	0.67
16:S:46:MET:HE1	18:U:148:ARG:HD3	1.77	0.67
21:X:160:VAL:CG2	21:X:179:SER:HA	2.24	0.67
40:q:25:TYR:CE2	40:q:29:LEU:HD11	2.30	0.67
46:x:189:VAL:HG12	46:x:257:ILE:CD1	2.24	0.67
1:A:4:A:H2'	1:A:5:G:O4'	1.93	0.67
2:B:1309:G:H5'	18:U:70:ARG:HH21	1.60	0.67
2:B:1568:A:H5''	2:B:1575:A:OP2	1.94	0.67
24:a:24:ILE:HD12	24:a:40:SER:HB3	1.76	0.67
26:c:99:ARG:HE	26:c:102:LEU:HD22	1.60	0.67
33:j:57:THR:HG23	33:j:73:LYS:CA	2.24	0.67
35:l:48:THR:HB	35:l:58:THR:HG23	1.77	0.67
46:x:91:ASN:O	46:x:97:ASP:HB2	1.95	0.67
1:A:463:A:H61	3:C:4:G:H1	1.43	0.67
1:A:1367:A:OP2	16:S:159:LYS:HE3	1.95	0.67
1:A:1652:U:C5	25:b:4:ARG:HD3	2.30	0.67
1:A:1668:U:H2'	1:A:1669:G:C8	2.30	0.67
2:B:1203:C:H5''	2:B:1204:G:O5'	1.94	0.67
1:A:350:G:H22	2:B:1351:A:H2	1.40	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1301:C:N3	1:A:1323:G:N1	2.35	0.66
2:B:67:G:C2'	2:B:68:A:H5'	2.25	0.66
2:B:576:C:H2'	2:B:577:G:H4'	1.78	0.66
3:C:1:A:H3'	3:C:2:A:C2	2.30	0.66
4:D:94:C:OP1	16:S:45:ARG:NH2	2.27	0.66
8:H:4:C:H2'	8:H:5:G:O4'	1.95	0.66
18:U:28:SER:O	18:U:32:THR:HG23	1.94	0.66
28:e:28:LYS:HE2	28:e:123:ARG:NE	2.10	0.66
36:m:17:ARG:CD	36:m:27:GLY:HA3	2.22	0.66
1:A:274:C:H2'	1:A:275:A:C8	2.30	0.66
2:B:499:U:H5''	28:e:245:ARG:HA	1.77	0.66
12:O:156:VAL:HG13	12:O:159:ASN:CB	2.26	0.66
19:V:55:VAL:CG1	19:V:64:LEU:HD21	2.25	0.66
23:Z:108:LEU:HA	23:Z:112:ARG:HD2	1.77	0.66
29:f:92:TYR:OH	29:f:185:GLU:OE1	2.13	0.66
31:h:81:PRO:C	31:h:83:ASN:H	2.00	0.66
32:i:41:SER:HB3	32:i:44:ARG:CG	2.25	0.66
34:k:99:LEU:HD22	34:k:103:GLU:HG3	1.77	0.66
1:A:74:U:H5''	11:N:63:VAL:HB	1.77	0.66
1:A:789:A:H5''	41:r:101:PHE:CG	2.30	0.66
1:A:1067:G:H1'	1:A:1927:A:N6	2.09	0.66
1:A:1731:G:N1	2:B:20:U:O2	2.14	0.66
5:E:208:G:H2'	5:E:209:G:O4'	1.95	0.66
18:U:86:ARG:HH12	27:d:25:LEU:HB2	1.55	0.66
24:a:35:ARG:NH1	24:a:37:TYR:OH	2.29	0.66
29:f:90:VAL:HG22	29:f:104:THR:HG22	1.75	0.66
29:f:363:LEU:CD2	29:f:366:ILE:HD11	2.23	0.66
34:k:92:THR:OG1	34:k:95:ARG:HG2	1.95	0.66
1:A:769:U:OP1	25:b:21:ARG:NH1	2.23	0.66
2:B:869:A:O2'	46:x:107:PHE:O	2.07	0.66
2:B:1201:A:H2'	2:B:1202:A:C8	2.31	0.66
9:I:97:VAL:HG21	25:b:80:LYS:HG3	1.77	0.66
15:R:33:ALA:HB1	15:R:117:VAL:CG1	2.24	0.66
17:T:8:ALA:HB1	17:T:19:ARG:NE	2.10	0.66
29:f:161:ARG:HG2	29:f:187:GLN:HA	1.77	0.66
43:u:12:TYR:O	43:u:16:PHE:HB2	1.95	0.66
2:B:588:A:H5''	28:e:244:GLY:HA3	1.76	0.66
2:B:1213:C:O2'	2:B:1215:A:H1'	1.95	0.66
6:F:47:C:O2'	35:l:29:VAL:HG11	1.94	0.66
17:T:109:TYR:CD1	17:T:114:LYS:HD2	2.31	0.66
24:a:10:VAL:N	24:a:22:ALA:O	2.16	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:46:U:OP2	1:A:47:A:O2'	2.04	0.66
1:A:1374:C:H4'	1:A:1375:A:H5'	1.78	0.66
2:B:1516:A2M:H5''	2:B:1517:G:C5'	2.18	0.66
15:R:60:PHE:CZ	15:R:82:ARG:HB3	2.31	0.66
16:S:15:GLU:OE2	16:S:21:ASN:ND2	2.28	0.66
16:S:112:LEU:HD23	16:S:123:ILE:CD1	2.25	0.66
26:c:9:TRP:HA	26:c:46:LEU:HD21	1.78	0.66
41:r:136:VAL:HA	41:r:245:GLY:O	1.95	0.66
41:r:319:GLY:CA	41:r:325:LEU:HD22	2.26	0.66
43:u:204:ARG:HG3	43:u:209:HIS:CG	2.30	0.66
1:A:275:A:C2'	1:A:276:U:H5'	2.26	0.66
2:B:1203:C:H5''	2:B:1204:G:C5'	2.26	0.66
3:C:124:A:H2'	3:C:125:A:H8	1.57	0.66
11:N:170:ALA:HB1	11:N:171:PRO:HD2	1.77	0.66
16:S:84:SER:OG	16:S:87:CYS:N	2.29	0.66
29:f:335:VAL:HG11	29:f:343:ILE:CD1	2.26	0.66
1:A:926:C:H4'	27:d:48:ARG:NH1	2.11	0.66
2:B:1289:U:H2'	2:B:1290:A:O4'	1.96	0.66
14:Q:34:VAL:HA	46:x:130:PRO:HG2	1.77	0.66
20:W:90:LYS:O	29:f:72:VAL:HG13	1.96	0.66
20:W:111:MET:HB3	20:W:131:ILE:CD1	2.26	0.66
24:a:114:LEU:O	24:a:118:ARG:HB2	1.96	0.66
41:r:331:PRO:HG2	45:w:44:ALA:HB3	1.78	0.66
1:A:214:G:H4'	1:A:215:U:O5'	1.95	0.66
1:A:438:U:O3'	23:Z:84:ARG:NH2	2.28	0.66
1:A:450:U:C2'	1:A:451:G:H5'	2.25	0.66
1:A:1113:C:H2'	1:A:1114:A:H8	1.60	0.66
2:B:67:G:H22	2:B:694:A:N6	1.93	0.66
2:B:490:A:H1'	2:B:627:A2M:N6	2.11	0.66
2:B:531:C:O2'	2:B:660:U:OP2	2.11	0.66
2:B:901:C:H2'	2:B:902:U:C6	2.31	0.66
2:B:1493:U:H2'	2:B:1494:U:C6	2.30	0.66
5:E:95:U:H3	5:E:137:A:H61	1.42	0.66
6:F:51:A:O2'	6:F:52:A:H5''	1.96	0.66
10:L:108:PHE:HE1	10:L:168:TRP:HZ2	1.44	0.66
24:a:10:VAL:O	24:a:22:ALA:N	2.28	0.66
40:q:25:TYR:HE2	40:q:29:LEU:HD11	1.60	0.66
1:A:588:A:H61	16:S:63:CYS:HB2	1.60	0.66
2:B:1193:U:H2'	2:B:1201:A:H61	1.61	0.66
12:O:123:TYR:CG	12:O:127:PRO:HG2	2.31	0.66
24:a:11:ILE:HG21	24:a:131:LEU:HD11	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:35:ARG:CZ	24:a:73:VAL:HG21	2.25	0.66
26:c:39:THR:HG22	26:c:41:ARG:H	1.61	0.66
26:c:95:VAL:HG11	26:c:106:ALA:CB	2.26	0.66
31:h:107:ILE:O	31:h:111:ARG:HG2	1.95	0.66
32:i:19:THR:HG21	32:i:23:CYS:SG	2.36	0.66
36:m:34:ALA:O	36:m:35:ARG:HG2	1.96	0.66
1:A:1539:U:C1'	9:I:15:VAL:HG22	2.27	0.65
1:A:1953:A:H2'	1:A:1954:G:O4'	1.96	0.65
4:D:13:A:O2'	4:D:14:C:OP1	2.12	0.65
8:H:27:A:OP2	31:h:71:ARG:CB	2.44	0.65
14:Q:58:PRO:HG3	14:Q:77:VAL:HG21	1.78	0.65
16:S:40:LYS:NZ	45:w:231:ASP:OD2	2.26	0.65
44:v:36:ILE:HD13	44:v:50:VAL:HG22	1.77	0.65
1:A:1245:C:H2'	1:A:1246:U:H6	1.61	0.65
1:A:1570:A:O2'	1:A:1571:G:H5'	1.96	0.65
2:B:509:U:O2'	28:e:11:GLY:HA3	1.96	0.65
2:B:701:G:H4'	15:R:139:TYR:HD1	1.62	0.65
2:B:1444:G:O2'	2:B:1445:U:O5'	2.09	0.65
4:D:69:U:H2'	4:D:70:C:C6	2.31	0.65
8:H:45:G:H2'	8:H:46:C:C1'	2.26	0.65
18:U:19:PHE:CE2	18:U:20:ARG:HD3	2.31	0.65
23:Z:45:MET:HE1	23:Z:115:ILE:CG2	2.26	0.65
28:e:113:VAL:HG12	28:e:166:ILE:HD13	1.78	0.65
41:r:219:PHE:HB3	41:r:227:LEU:HD21	1.77	0.65
1:A:333:G:OP2	14:Q:84:ARG:NH2	2.28	0.65
1:A:782:A:H5'	2:B:707:A:H5''	1.78	0.65
2:B:538:C:O2'	2:B:658:A:N1	2.25	0.65
3:C:49:G:OP1	34:k:49:ARG:HB2	1.96	0.65
33:j:46:PRO:HG2	33:j:49:LEU:HD12	1.78	0.65
41:r:266:THR:C	41:r:276:MET:HE3	2.21	0.65
46:x:210:ILE:HG23	46:x:220:VAL:CG1	2.24	0.65
1:A:216:U:H2'	1:A:217:G:H8	1.61	0.65
1:A:1037:A:O2'	1:A:1038:U:OP2	2.11	0.65
2:B:67:G:O2'	2:B:68:A:H5'	1.97	0.65
5:E:140:U:H2'	5:E:141:U:H5'	1.78	0.65
24:a:4:LEU:O	24:a:27:ASN:ND2	2.30	0.65
29:f:173:ASN:HB3	29:f:176:VAL:CG1	2.18	0.65
45:w:69:ALA:HB1	45:w:74:ASN:O	1.97	0.65
1:A:867:G:H2'	1:A:867:G:N3	2.09	0.65
1:A:943:G:H2'	1:A:944:U:O4'	1.96	0.65
1:A:1498:G:O2'	2:B:726:U:O2'	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1748:C:OP1	15:R:127:ARG:NH1	2.26	0.65
11:N:81:THR:HG22	11:N:83:GLU:H	1.60	0.65
17:T:32:ILE:HA	17:T:44:LEU:CD2	2.27	0.65
19:V:50:TYR:OH	19:V:96:LYS:NZ	2.29	0.65
19:V:109:ILE:HG13	19:V:119:LEU:CD2	2.27	0.65
35:l:116:HIS:CD2	35:l:123:ARG:HE	2.15	0.65
42:t:10:MET:HB3	42:t:23:PHE:CD2	2.32	0.65
2:B:643:U:O2	2:B:1490:U:H5'	1.97	0.65
2:B:1444:G:H2'	2:B:1515:G:C6	2.32	0.65
12:O:205:LEU:HD23	13:P:120:ARG:HD2	1.78	0.65
14:Q:110:LEU:HD23	14:Q:117:ILE:HD11	1.79	0.65
15:R:107:LEU:CB	15:R:112:MET:HE1	2.24	0.65
20:W:29:ASP:OD1	20:W:113:GLY:HA3	1.97	0.65
24:a:43:ALA:CB	24:a:111:VAL:HG11	2.26	0.65
28:e:90:CYS:SG	28:e:101:VAL:HB	2.36	0.65
29:f:238:TRP:CD1	29:f:270:ALA:HB1	2.32	0.65
31:h:87:GLU:OE2	31:h:173:VAL:HG11	1.97	0.65
41:r:33:HIS:HE1	41:r:243:HIS:HA	1.61	0.65
43:u:170:LYS:HG2	43:u:201:HIS:CE1	2.31	0.65
1:A:816:U:OP2	11:N:41:ARG:NH1	2.29	0.65
1:A:1679:A:H5''	7:G:102:G:H1	1.61	0.65
2:B:624:5MC:C2'	2:B:625:A:H5''	2.27	0.65
2:B:1288:G:H5''	18:U:83:ARG:HH22	1.61	0.65
43:u:170:LYS:HA	43:u:173:VAL:CG1	2.27	0.65
46:x:235:ALA:HB2	46:x:275:VAL:CG1	2.26	0.65
5:E:147:A:O2'	5:E:148:U:OP1	2.15	0.65
6:F:69:A:H5'	44:v:45:ARG:CZ	2.26	0.65
26:c:50:ALA:HA	26:c:99:ARG:HD2	1.79	0.65
26:c:62:VAL:CG2	26:c:91:VAL:HG23	2.25	0.65
29:f:291:GLY:HA3	29:f:328:TYR:CE1	2.32	0.65
29:f:310:LYS:HE2	29:f:368:THR:OG1	1.96	0.65
30:g:51:PRO:HD2	30:g:54:ARG:HE	1.61	0.65
37:n:2:THR:HB	37:n:6:THR:HG21	1.78	0.65
41:r:158:GLN:HB2	41:r:215:GLY:CA	2.27	0.65
2:B:1232:A:H4'	10:L:109:GLY:HA3	1.79	0.65
3:C:124:A:O2'	3:C:139:A:N6	2.29	0.65
20:W:59:ILE:HD11	20:W:128:TRP:CH2	2.32	0.65
23:Z:97:HIS:HB3	23:Z:100:ASN:ND2	2.12	0.65
29:f:60:VAL:HG21	29:f:67:VAL:HB	1.78	0.65
35:l:131:VAL:HG23	35:l:132:PRO:HD2	1.79	0.65
38:o:82:THR:O	38:o:86:LEU:HD13	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:139:ARG:HD3	41:r:246:ARG:HA	1.79	0.65
43:u:245:LEU:HA	43:u:248:MET:CE	2.22	0.65
1:A:120:C:C2'	1:A:121:G:H5'	2.25	0.65
1:A:146:U:H5''	46:x:249:ARG:NH2	2.12	0.65
1:A:415:U:O2	1:A:419:A:N6	2.19	0.65
6:F:55:A:C2'	6:F:56:C:H5'	2.27	0.65
26:c:9:TRP:O	26:c:13:ARG:HB2	1.97	0.65
29:f:134:LYS:O	29:f:138:ARG:HG3	1.97	0.65
40:q:33:ASN:OD1	40:q:34:ARG:N	2.29	0.65
43:u:249:TYR:HA	43:u:252:ALA:HB3	1.79	0.65
2:B:100:U:H2'	2:B:101:G:C8	2.32	0.64
2:B:547:G:C1'	28:e:222:PRO:HG2	2.26	0.64
11:N:51:THR:HG21	11:N:54:ARG:CZ	2.27	0.64
14:Q:89:ARG:NH2	14:Q:104:GLY:O	2.30	0.64
18:U:40:VAL:HB	18:U:96:VAL:HG13	1.78	0.64
20:W:37:TYR:HB2	20:W:65:LYS:CG	2.27	0.64
31:h:151:VAL:HG23	31:h:168:THR:HG23	1.78	0.64
37:n:2:THR:HB	37:n:6:THR:HG23	1.78	0.64
42:t:47:GLN:OE1	42:t:54:THR:OG1	2.08	0.64
1:A:421:G:H2'	1:A:446:A:N6	2.12	0.64
1:A:1368:U:C5	13:P:18:GLY:HA2	2.32	0.64
14:Q:37:PHE:CZ	46:x:129:VAL:HG12	2.32	0.64
17:T:63:TRP:CH2	17:T:67:LYS:HD3	2.32	0.64
41:r:68:THR:HG22	41:r:69:GLY:H	1.62	0.64
45:w:153:HIS:CE1	45:w:162:LYS:HD3	2.32	0.64
1:A:435:G:C2'	1:A:436:A:H5'	2.27	0.64
4:D:46:G:O2'	4:D:47:U:H5'	1.97	0.64
26:c:9:TRP:CA	26:c:46:LEU:HD21	2.26	0.64
28:e:167:GLY:HA2	38:o:79:VAL:HG11	1.78	0.64
43:u:18:VAL:HG22	43:u:24:ARG:HH11	1.63	0.64
46:x:148:LEU:HD21	46:x:209:MET:HG2	1.77	0.64
1:A:1804:A2M:HM'3	21:X:91:ARG:HH11	1.61	0.64
2:B:1380:OMC:HM22	2:B:1381:A:C5'	2.22	0.64
6:F:13:U:H5'	6:F:14:C:C5'	2.28	0.64
12:O:80:LYS:CD	12:O:86:LEU:HD11	2.24	0.64
15:R:19:VAL:HG23	15:R:94:LEU:CD1	2.23	0.64
28:e:57:PRO:HB3	38:o:54:ILE:HD11	1.78	0.64
41:r:158:GLN:HB2	41:r:215:GLY:HA2	1.79	0.64
1:A:224:A:H2'	1:A:225:C:O4'	1.98	0.64
1:A:1342:U:OP1	45:w:111:ILE:HD11	1.97	0.64
1:A:1798:U:H5'	1:A:1799:U:OP2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1936:G:H5''	33:j:28:GLY:HA3	1.80	0.64
2:B:593:G:O2'	2:B:617:A:N1	2.27	0.64
2:B:740:G:N3	29:f:264:ARG:HA	2.13	0.64
3:C:6:G:H2'	3:C:7:OMU:H6	1.77	0.64
5:E:194:A:OP2	38:o:49:ARG:NH2	2.29	0.64
13:P:147:LEU:O	13:P:150:ASN:N	2.30	0.64
14:Q:171:VAL:O	14:Q:178:ARG:NH2	2.20	0.64
15:R:36:ILE:HD12	15:R:44:ALA:CB	2.26	0.64
15:R:52:LEU:CD1	15:R:85:ARG:HG3	2.28	0.64
16:S:7:ARG:HB2	16:S:9:TYR:CE2	2.32	0.64
17:T:115:ILE:HG21	17:T:142:ILE:HG23	1.79	0.64
24:a:43:ALA:HA	24:a:70:PHE:O	1.98	0.64
27:d:26:PRO:HD2	27:d:29:LEU:HD12	1.80	0.64
28:e:112:ILE:HG12	38:o:79:VAL:HG22	1.78	0.64
45:w:182:GLU:HA	45:w:185:VAL:HG22	1.80	0.64
1:A:209:A:N6	26:c:113:MET:HE1	2.10	0.64
1:A:874:G:H3'	1:A:919:OMC:N4	2.13	0.64
2:B:1149:A:C2'	2:B:1150:G:H5'	2.25	0.64
18:U:20:ARG:HD2	43:u:14:LYS:O	1.97	0.64
24:a:9:VAL:HA	24:a:23:VAL:HA	1.78	0.64
24:a:18:ALA:HB1	33:j:92:ILE:CD1	2.28	0.64
26:c:58:ASP:O	26:c:117:LEU:HD13	1.98	0.64
28:e:105:GLY:HA3	28:e:160:SER:CB	2.25	0.64
28:e:112:ILE:HD11	38:o:79:VAL:HG21	1.79	0.64
43:u:53:VAL:HG21	43:u:168:VAL:HG21	1.80	0.64
2:B:83:G:O2'	2:B:680:U:O4	2.12	0.64
2:B:1286:C:O2'	2:B:1287:A:H2'	1.98	0.64
2:B:1309:G:H5'	18:U:70:ARG:NH2	2.13	0.64
3:C:60:U:H5'	34:k:59:LEU:HD12	1.80	0.64
5:E:28:G:OP2	33:j:41:GLN:NE2	2.31	0.64
16:S:75:ASN:HD21	16:S:136:VAL:HG21	1.62	0.64
20:W:81:ILE:HB	20:W:120:VAL:HG13	1.78	0.64
22:Y:54:PRO:HA	22:Y:59:TYR:CG	2.32	0.64
29:f:293:ALA:HB3	29:f:296:MET:HE2	1.80	0.64
30:g:16:ILE:O	30:g:19:VAL:HB	1.97	0.64
32:i:68:THR:HG23	32:i:69:PRO:HD2	1.79	0.64
43:u:245:LEU:CA	43:u:248:MET:HE3	2.22	0.64
1:A:257:G:OP1	23:Z:13:ARG:NH1	2.30	0.64
1:A:442:A:H4'	1:A:443:U:O5'	1.98	0.64
1:A:1163:C:O2'	1:A:1164:G:H5'	1.98	0.64
1:A:1622:G:H4'	1:A:1623:A:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:453:G:O2'	2:B:454:A:H5'	1.98	0.64
2:B:482:A2M:H8	2:B:482:A2M:O5'	1.97	0.64
2:B:708:C:H2'	2:B:709:A:O4'	1.98	0.64
3:C:26:U:O2'	3:C:27:U:H5'	1.98	0.64
4:D:102:C:C2'	4:D:103:C:H5'	2.28	0.64
6:F:50:C:C5'	13:P:118:ARG:HH12	2.04	0.64
8:H:14:C:N4	29:f:176:VAL:HG23	2.12	0.64
9:I:49:HIS:O	9:I:53:LEU:HD13	1.98	0.64
11:N:21:SER:OG	41:r:59:MET:HB2	1.96	0.64
12:O:156:VAL:HG13	12:O:159:ASN:HB3	1.80	0.64
15:R:16:LYS:HG2	15:R:149:PHE:HB3	1.79	0.64
21:X:162:VAL:HG13	21:X:176:ILE:HG22	1.79	0.64
44:v:26:THR:OG1	44:v:58:ASN:ND2	2.31	0.64
46:x:155:TYR:OH	46:x:260:VAL:HG13	1.97	0.64
46:x:196:VAL:O	46:x:199:THR:HG22	1.97	0.64
1:A:473:A:H2'	1:A:474:A:O4'	1.98	0.64
1:A:474:A:H1'	35:l:56:LYS:HD3	1.78	0.64
1:A:1352:G:C5'	45:w:214:MET:HE2	2.28	0.64
2:B:698:A:P	15:R:82:ARG:HD2	2.38	0.64
3:C:5:U:C2'	3:C:6:G:H5'	2.28	0.64
5:E:41:U:OP1	33:j:25:ARG:NH2	2.31	0.64
7:G:58:C:C2'	7:G:59:U:H5'	2.28	0.64
13:P:132:ASP:CG	13:P:139:TRP:HE1	2.01	0.64
14:Q:172:HIS:HB3	14:Q:175:ARG:HD2	1.80	0.64
26:c:4:SER:CB	41:r:286:ASP:HB3	2.27	0.64
30:g:46:ILE:CG1	30:g:69:MET:HE1	2.25	0.64
32:i:39:GLU:O	32:i:45:ARG:HD2	1.98	0.64
33:j:4:PRO:HB2	33:j:31:LEU:HD23	1.80	0.64
33:j:8:TYR:HB2	33:j:13:HIS:CE1	2.32	0.64
36:m:14:PRO:CG	36:m:34:ALA:HB2	2.27	0.64
2:B:477:A:H2'	2:B:478:C:H5'	1.78	0.64
13:P:123:TRP:CZ3	13:P:126:LYS:HG2	2.33	0.64
14:Q:115:ARG:HG2	14:Q:146:TYR:CD1	2.33	0.64
20:W:29:ASP:OD1	20:W:30:ASN:N	2.29	0.64
20:W:111:MET:HB3	20:W:131:ILE:HD11	1.78	0.64
30:g:62:CYS:SG	30:g:69:MET:HB2	2.38	0.64
31:h:95:LEU:HD21	31:h:111:ARG:HB3	1.78	0.64
31:h:122:THR:HG22	31:h:124:ASP:N	2.09	0.64
6:F:54:U:N3	13:P:115:VAL:HG23	2.13	0.63
8:H:96:G:H2'	8:H:97:C:C6	2.33	0.63
8:H:109:G:OP2	29:f:175:ARG:NH2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:P:69:CYS:SG	13:P:73:THR:OG1	2.55	0.63
24:a:69:VAL:HG22	24:a:115:PHE:CE1	2.33	0.63
36:m:18:THR:CG2	36:m:20:ILE:HG22	2.26	0.63
36:m:69:ARG:O	36:m:72:GLU:HG2	1.98	0.63
41:r:264:THR:HG21	41:r:266:THR:HG22	1.80	0.63
45:w:194:HIS:HB3	45:w:197:GLU:HB3	1.80	0.63
1:A:850:A:H5''	25:b:112:ASN:HA	1.79	0.63
1:A:1526:A:H2'	1:A:1528:U:C5	2.33	0.63
1:A:1750:C:H2'	1:A:1752:C:C5	2.33	0.63
2:B:1217:G:C4'	2:B:1313:G:H21	2.11	0.63
4:D:113:G:H2'	4:D:114:C:C6	2.33	0.63
9:I:6:THR:OG1	45:w:104:GLN:NE2	2.31	0.63
11:N:187:TYR:CE2	25:b:128:LYS:HG2	2.33	0.63
15:R:59:PRO:HB2	15:R:78:GLN:NE2	2.14	0.63
16:S:92:MET:CE	16:S:94:LYS:HD2	2.27	0.63
44:v:34:GLY:CA	44:v:91:ILE:HG12	2.28	0.63
45:w:144:VAL:HG13	45:w:188:ILE:HD11	1.79	0.63
1:A:3:C:HO2'	1:A:4:A:H8	1.47	0.63
1:A:1081:A:C2	28:e:204:ARG:HG2	2.34	0.63
1:A:1792:G:H2'	1:A:1793:U:C6	2.32	0.63
2:B:132:G:H4'	17:T:101:ILE:CD1	2.29	0.63
2:B:1215:A:HO2'	2:B:1216:A:P	2.22	0.63
8:H:19:G:H1'	15:R:69:ARG:HD3	1.80	0.63
9:I:89:ILE:HG22	9:I:109:ALA:HB2	1.78	0.63
12:O:27:VAL:HG23	12:O:51:ILE:HG23	1.80	0.63
12:O:158:GLY:HA2	12:O:161:CYS:SG	2.38	0.63
13:P:5:ASN:ND2	13:P:60:LYS:HA	2.13	0.63
16:S:10:CYS:SG	16:S:28:LYS:HE3	2.39	0.63
20:W:18:ALA:CB	20:W:85:LYS:HB3	2.29	0.63
36:m:18:THR:HG23	36:m:20:ILE:CG2	2.27	0.63
1:A:80:U:H2'	1:A:81:C:C6	2.33	0.63
1:A:91:G:OP2	1:A:93:C:N4	2.29	0.63
1:A:102:A:H1'	25:b:66:ASN:ND2	2.14	0.63
1:A:130:C:H2'	1:A:131:U:C6	2.33	0.63
1:A:308:G:H1'	14:Q:66:MET:CE	2.26	0.63
2:B:1513:G:O2'	29:f:259:ALA:HB1	1.98	0.63
2:B:1517:G:C2	29:f:255:ALA:HB1	2.33	0.63
11:N:110:SER:CB	36:m:30:THR:HG21	2.28	0.63
14:Q:48:HIS:HB3	46:x:116:MET:CE	2.28	0.63
15:R:41:LEU:O	15:R:45:GLN:HG2	1.98	0.63
26:c:117:LEU:HD23	26:c:120:MET:CE	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:97:ALA:HB3	28:e:100:ASN:OD1	1.98	0.63
29:f:27:GLY:HA2	29:f:279:HIS:HE1	1.64	0.63
39:p:34:PHE:CE2	39:p:56:ILE:HD11	2.33	0.63
40:q:6:PRO:HG2	40:q:9:ILE:CG1	2.28	0.63
46:x:149:LEU:HD12	46:x:209:MET:HE1	1.80	0.63
1:A:24:U:HO2'	1:A:26:C:H41	1.44	0.63
1:A:376:A:H2'	1:A:377:G:O4'	1.99	0.63
1:A:1074:G:H2'	1:A:1093:A:H62	1.63	0.63
1:A:1610:A:H5'	26:c:17:LYS:HG3	1.80	0.63
5:E:125:A:OP2	30:g:29:THR:HG22	1.98	0.63
7:G:174:G:H5''	29:f:133:ARG:HG3	1.81	0.63
25:b:82:ILE:CG2	25:b:87:ALA:HB2	2.28	0.63
29:f:215:GLN:HG2	29:f:218:GLU:CD	2.23	0.63
43:u:55:ILE:HG21	43:u:164:ARG:NH2	2.12	0.63
1:A:921:A:H1'	9:I:147:ARG:HD2	1.81	0.63
1:A:1079:G:OP2	28:e:16:TYR:OH	2.16	0.63
1:A:1941:U:OP2	17:T:38:ARG:HG3	1.99	0.63
2:B:1240:U:H2'	2:B:1241:C:O4'	1.99	0.63
2:B:1263:A:O2'	2:B:1264:A:H2'	1.99	0.63
2:B:1297:G:OP1	18:U:70:ARG:N	2.32	0.63
6:F:13:U:O2'	6:F:14:C:OP2	2.11	0.63
11:N:60:ARG:HD3	11:N:101:ARG:HG3	1.80	0.63
13:P:5:ASN:HD21	13:P:59:LEU:C	2.07	0.63
16:S:75:ASN:ND2	16:S:145:HIS:HE1	1.97	0.63
25:b:7:LYS:O	25:b:11:GLN:HG2	1.98	0.63
35:l:145:TYR:HA	35:l:146:PRO:C	2.24	0.63
41:r:316:PRO:HD3	41:r:324:ARG:HH12	1.61	0.63
1:A:133:A:H5''	34:k:77:ARG:HE	1.64	0.63
1:A:310:G:OP1	14:Q:63:LYS:HE2	1.98	0.63
1:A:1570:A:C3'	26:c:108:ARG:HH22	1.99	0.63
2:B:1173:G:N1	2:B:1186:U:O2	2.20	0.63
2:B:1193:U:H2'	2:B:1201:A:N6	2.13	0.63
3:C:37:U:OP2	34:k:93:ARG:HD3	1.99	0.63
4:D:70:C:H2'	4:D:71:G:H8	1.64	0.63
24:a:44:GLY:O	24:a:69:VAL:HA	1.99	0.63
29:f:369:SER:OG	29:f:378:GLN:OE1	2.14	0.63
33:j:18:GLY:HA2	33:j:38:LYS:HD3	1.81	0.63
33:j:98:ILE:O	33:j:101:GLN:HG2	1.98	0.63
35:l:149:ILE:HD12	44:v:83:ILE:CG2	2.27	0.63
1:A:371:A:H8	11:N:25:GLY:O	1.77	0.63
1:A:782:A:H5''	2:B:707:A:H4'	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1014:A:C2	1:A:1015:A:H1'	2.34	0.63
1:A:1646:A:C2'	1:A:1647:G:H5'	2.27	0.63
2:B:1509:G:C2'	2:B:1510:A:H5'	2.29	0.63
4:D:14:C:H5'	43:u:24:ARG:NE	2.14	0.63
4:D:41:G:O2'	4:D:42:A:OP2	2.17	0.63
4:D:47:U:OP2	43:u:164:ARG:HD3	1.99	0.63
10:L:154:VAL:CG2	10:L:159:ARG:HG2	2.28	0.63
14:Q:84:ARG:HG2	14:Q:144:VAL:HG13	1.81	0.63
21:X:160:VAL:HG23	21:X:179:SER:HA	1.81	0.63
24:a:115:PHE:HA	24:a:118:ARG:HB3	1.81	0.63
43:u:204:ARG:HA	43:u:209:HIS:HB2	1.81	0.63
45:w:154:LEU:HD23	45:w:202:LEU:HD23	1.81	0.63
46:x:145:ARG:NH2	46:x:146:ASN:OD1	2.32	0.63
1:A:1096:A:H2'	1:A:1097:C:O4'	1.99	0.63
1:A:1636:C:OP2	32:i:99:HIS:ND1	2.24	0.63
2:B:883:U:H4'	2:B:884:U:C5'	2.29	0.63
8:H:101:A:H2'	8:H:102:C:O4'	1.98	0.63
29:f:191:GLY:HA3	29:f:195:GLU:OE1	1.98	0.63
41:r:75:ILE:HD12	41:r:76:PRO:HD2	1.79	0.63
43:u:61:ILE:HG23	43:u:79:TYR:CE1	2.34	0.63
1:A:944:U:H5''	27:d:34:ARG:HH12	1.63	0.62
1:A:1516:G:OP1	1:A:1517:U:O2'	2.04	0.62
2:B:572:U:H2'	2:B:573:C:C6	2.34	0.62
11:N:129:VAL:CG2	34:k:124:ALA:HB3	2.29	0.62
11:N:179:GLU:HG3	11:N:180:GLU:N	2.12	0.62
17:T:98:ARG:NH1	17:T:130:ASN:HB2	2.13	0.62
26:c:34:ASN:HD21	26:c:52:VAL:HA	1.64	0.62
28:e:104:LEU:HG	28:e:146:THR:HG21	1.81	0.62
41:r:171:LYS:HG2	41:r:176:VAL:HG11	1.80	0.62
43:u:146:PHE:N	43:u:147:PRO:HD2	2.14	0.62
1:A:81:C:H2'	1:A:82:U:O4'	1.98	0.62
1:A:934:C:O2'	2:B:1278:A:H4'	1.99	0.62
1:A:1113:C:H2'	1:A:1114:A:C8	2.33	0.62
2:B:1356:U:OP2	42:t:34:ARG:NH2	2.32	0.62
6:F:8:C:O2'	6:F:9:C:H5'	1.99	0.62
6:F:50:C:H5'	13:P:118:ARG:NH1	2.04	0.62
9:I:108:CYS:HB2	9:I:128:LEU:HD11	1.81	0.62
11:N:175:ARG:HH11	25:b:86:GLU:HB3	1.64	0.62
31:h:80:LYS:HZ1	31:h:185:VAL:CG1	2.09	0.62
39:p:23:VAL:HG11	39:p:36:VAL:HG22	1.80	0.62
41:r:136:VAL:HG22	41:r:143:ILE:CD1	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:27:LEU:CD1	44:v:31:CYS:HB2	2.29	0.62
44:v:49:VAL:HG11	44:v:63:ILE:CD1	2.28	0.62
1:A:92:G:O5'	1:A:93:C:H5''	1.99	0.62
1:A:103:G:OP1	11:N:75:ARG:NE	2.32	0.62
1:A:373:A:N1	3:C:34:U:H5	1.97	0.62
2:B:454:A:H2'	2:B:455:A:H8	1.64	0.62
2:B:502:U:P	28:e:241:ARG:HH22	2.23	0.62
2:B:775:G:H2'	2:B:776:G:C8	2.34	0.62
2:B:1330:G:H2'	2:B:1330:G:N3	2.14	0.62
9:I:180:ARG:NH2	25:b:56:CYS:HB3	2.12	0.62
15:R:91:MET:HE1	15:R:146:VAL:HG11	1.80	0.62
29:f:79:LEU:HD13	29:f:343:ILE:HD11	1.80	0.62
41:r:264:THR:HG22	41:r:265:PHE:H	1.64	0.62
1:A:272:G:H2'	1:A:273:C:O4'	1.99	0.62
1:A:1083:G:H5'	1:A:1084:A:OP1	1.99	0.62
1:A:1735:U:H5	2:B:18:A:N1	1.96	0.62
1:A:1773:C:H4'	5:E:201:A:H1'	1.80	0.62
2:B:109:U:H1'	38:o:20:ALA:HB2	1.80	0.62
2:B:1541:A:H3'	2:B:1541:A:N3	2.15	0.62
2:B:1629:U:O5'	29:f:138:ARG:NH1	2.33	0.62
5:E:146:A:OP1	39:p:35:LYS:NZ	2.24	0.62
9:I:138:PRO:HB2	41:r:299:VAL:HG21	1.80	0.62
13:P:22:ASP:OD2	13:P:100:ARG:HD2	1.99	0.62
13:P:30:ILE:HG13	16:S:149:LEU:HD11	1.80	0.62
17:T:126:LYS:O	17:T:131:VAL:HG12	1.99	0.62
23:Z:92:VAL:HG23	23:Z:93:PRO:HD2	1.82	0.62
26:c:92:SER:HA	26:c:95:VAL:CG1	2.28	0.62
45:w:132:PRO:HA	45:w:227:TYR:CD2	2.34	0.62
1:A:518:U:OP2	45:w:67:ARG:NH2	2.31	0.62
1:A:1368:U:OP1	13:P:17:ARG:NH2	2.32	0.62
2:B:131:G:O6	2:B:449:C:N4	2.19	0.62
2:B:663:A:C2'	2:B:664:U:H5'	2.30	0.62
2:B:691:A2M:C8	2:B:691:A2M:H3'	2.29	0.62
2:B:1555:C:H2'	2:B:1556:U:C6	2.34	0.62
5:E:62:C:H2'	5:E:63:A:C8	2.33	0.62
5:E:182:U:C2'	5:E:183:U:H5'	2.29	0.62
13:P:133:LYS:HD3	13:P:134:LYS:N	2.15	0.62
24:a:19:GLY:HA3	24:a:133:PHE:HZ	1.63	0.62
32:i:103:ALA:O	32:i:107:LYS:HG3	1.99	0.62
1:A:1688:G:N2	1:A:1709:C:N3	2.35	0.62
2:B:8:U:C2'	2:B:9:G:H5'	2.28	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:672:A:O2'	2:B:673:U:H5'	2.00	0.62
3:C:49:G:H5'	34:k:48:ILE:HG21	1.81	0.62
4:D:114:C:H4'	43:u:73:GLU:OE1	2.00	0.62
13:P:29:ASP:OD1	13:P:67:ARG:HB3	1.99	0.62
18:U:48:VAL:HG21	18:U:94:GLU:HG2	1.80	0.62
18:U:109:GLN:O	18:U:113:LEU:HD13	1.99	0.62
23:Z:92:VAL:CG2	23:Z:93:PRO:HD2	2.30	0.62
24:a:49:PRO:HG3	24:a:67:VAL:HG12	1.81	0.62
29:f:86:VAL:HG13	29:f:162:VAL:CG1	2.25	0.62
32:i:97:ILE:CG2	32:i:101:VAL:HG21	2.29	0.62
41:r:192:ARG:NH1	41:r:195:MET:SD	2.69	0.62
1:A:215:U:O2	1:A:215:U:H2'	1.99	0.62
1:A:1945:U:H5	33:j:9:ARG:HB3	1.64	0.62
2:B:770:A:H5'	14:Q:106:LEU:CD1	2.30	0.62
2:B:1217:G:O6	2:B:1271:U:N3	2.20	0.62
2:B:1649:A:H2'	2:B:1650:C:C6	2.35	0.62
8:H:24:A:O2'	8:H:25:A:H5'	1.99	0.62
12:O:115:LYS:O	12:O:118:ARG:HG2	1.99	0.62
17:T:88:ARG:O	17:T:89:MET:HG2	1.99	0.62
24:a:23:VAL:HG21	24:a:86:MET:HB3	1.81	0.62
25:b:108:LYS:HG2	25:b:109:LEU:H	1.63	0.62
25:b:131:ASP:O	25:b:135:ARG:HG3	1.98	0.62
37:n:2:THR:O	37:n:7:SER:OG	2.08	0.62
41:r:261:ILE:O	41:r:269:SER:HB2	1.99	0.62
1:A:142:U:C1'	1:A:143:G:H5''	2.30	0.62
2:B:1186:U:O2'	2:B:1368:C:OP2	2.13	0.62
10:L:166:MET:O	10:L:170:GLU:HG3	2.00	0.62
12:O:128:THR:HA	12:O:131:VAL:HG12	1.82	0.62
36:m:57:ILE:O	36:m:61:VAL:HG22	1.99	0.62
41:r:75:ILE:CD1	41:r:76:PRO:HD2	2.29	0.62
45:w:237:PHE:CZ	45:w:241:MET:HE3	2.35	0.62
1:A:1571:G:O2'	1:A:1572:A:H5'	2.00	0.62
2:B:1486:U:H2'	2:B:1487:G:C8	2.35	0.62
7:G:103:U:H3'	7:G:104:G:H5''	1.82	0.62
14:Q:32:SER:HB2	36:m:61:VAL:HB	1.80	0.62
20:W:125:ALA:CB	20:W:138:ILE:HD12	2.29	0.62
28:e:129:ALA:HB3	28:e:132:ASP:OD2	2.00	0.62
46:x:253:THR:HG23	46:x:254:CYS:SG	2.39	0.62
1:A:31:C:H2'	1:A:32:G:O4'	2.00	0.62
1:A:208:A:C5'	1:A:209:A:H5'	2.30	0.62
1:A:831:U:H5''	41:r:273:LYS:HD3	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:88:U:H2'	7:G:89:U:C6	2.34	0.62
8:H:20:A:OP1	15:R:74:LYS:HE3	2.00	0.62
9:I:42:SER:CB	9:I:139:THR:HG23	2.28	0.62
16:S:44:TRP:HH2	16:S:58:GLY:HA3	1.65	0.62
21:X:115:ILE:HA	21:X:138:VAL:HG23	1.82	0.62
33:j:102:ARG:HD2	33:j:105:LYS:CE	2.30	0.62
1:A:450:U:H2'	1:A:451:G:H5'	1.81	0.61
1:A:463:A:N6	3:C:4:G:H1	1.98	0.61
2:B:904:U:H2'	2:B:905:G:H8	1.65	0.61
2:B:1326:U:OP1	42:t:34:ARG:NH1	2.32	0.61
3:C:47:C:H1'	3:C:61:A:H2'	1.82	0.61
4:D:75:G:H5''	16:S:48:ARG:O	2.00	0.61
5:E:134:U:O2'	33:j:55:ALA:O	2.13	0.61
9:I:2:GLY:O	45:w:110:GLN:HG2	2.00	0.61
10:L:138:GLY:HA2	10:L:160:VAL:CG2	2.30	0.61
20:W:117:ALA:O	20:W:136:PRO:HG3	2.00	0.61
23:Z:77:ILE:CG2	23:Z:96:VAL:HG13	2.28	0.61
24:a:50:LYS:HB2	24:a:64:ARG:HG3	1.82	0.61
24:a:58:LYS:O	24:a:61:ILE:HG12	2.00	0.61
28:e:200:ARG:HH12	28:e:217:GLN:NE2	1.98	0.61
29:f:265:VAL:HG11	29:f:271:ARG:NH1	2.15	0.61
31:h:113:LYS:HE3	31:h:127:ILE:HD12	1.80	0.61
1:A:184:A:C2'	1:A:185:A:H5'	2.29	0.61
2:B:1287:A:N1	25:b:43:ILE:HD12	2.15	0.61
3:C:74:U:O4	23:Z:71:TYR:HA	2.00	0.61
11:N:51:THR:HG22	11:N:54:ARG:HB3	1.82	0.61
18:U:84:THR:OG1	27:d:24:ALA:N	2.33	0.61
23:Z:114:ALA:O	23:Z:118:ARG:HG2	1.98	0.61
29:f:188:ILE:O	29:f:196:LYS:HD2	2.00	0.61
29:f:237:ARG:HD3	29:f:238:TRP:NE1	2.15	0.61
30:g:14:THR:HG23	30:g:15:LYS:N	2.15	0.61
41:r:230:VAL:HG13	41:r:254:ALA:HB1	1.79	0.61
44:v:27:LEU:HD21	44:v:79:SER:HB3	1.81	0.61
46:x:216:PRO:HG2	46:x:219:LEU:HG	1.82	0.61
1:A:191:A:OP1	23:Z:119:LYS:HG3	1.99	0.61
1:A:844:A:H2'	1:A:845:A:H5'	1.82	0.61
1:A:1070:U:H2'	1:A:1071:A2M:H8	1.82	0.61
1:A:1499:A:H2'	1:A:1500:C:O4'	1.99	0.61
1:A:1573:A:OP2	26:c:41:ARG:NH1	2.33	0.61
1:A:1614:A:N6	1:A:1643:A:O2'	2.32	0.61
1:A:1762:U:OP1	21:X:175:TYR:OH	2.17	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1561:A:N3	15:R:69:ARG:NH2	2.46	0.61
5:E:177:G:C2'	5:E:178:U:H5'	2.29	0.61
19:V:72:LEU:HD12	19:V:77:LEU:HD23	1.82	0.61
20:W:18:ALA:HB2	20:W:85:LYS:HB3	1.82	0.61
24:a:45:MET:CE	24:a:48:TYR:HA	2.30	0.61
29:f:79:LEU:HB2	29:f:329:ILE:HG23	1.82	0.61
1:A:211:C:H42	26:c:79:LYS:CE	2.10	0.61
1:A:393:A:H3'	1:A:394:C:H5''	1.82	0.61
2:B:453:G:C2'	2:B:454:A:H5'	2.31	0.61
3:C:34:U:O2'	34:k:94:ARG:NH1	2.30	0.61
16:S:78:VAL:HG12	16:S:80:ILE:HG13	1.83	0.61
21:X:185:LEU:O	21:X:189:ASN:ND2	2.30	0.61
24:a:46:LYS:NZ	24:a:69:VAL:H	1.87	0.61
26:c:50:ALA:HA	26:c:99:ARG:CD	2.30	0.61
28:e:76:MET:SD	28:e:165:MET:HE1	2.40	0.61
29:f:95:THR:OG1	29:f:98:GLY:O	2.19	0.61
1:A:104:G:O2'	1:A:833:C:O2	2.19	0.61
1:A:184:A:O2'	1:A:185:A:H5'	2.01	0.61
1:A:461:C:H2'	1:A:462:A:C8	2.35	0.61
1:A:1015:A:H2'	1:A:1016:C:H5'	1.81	0.61
2:B:906:C:H5'	2:B:907:A:OP2	2.00	0.61
2:B:1601:U:OP1	12:O:189:LYS:NZ	2.34	0.61
3:C:166:OMG:HM22	3:C:167:U:H5'	1.82	0.61
6:F:6:C:O2'	35:l:37:ARG:HD3	2.00	0.61
9:I:154:GLU:HG2	9:I:157:LYS:HE3	1.81	0.61
12:O:139:ILE:HG12	16:S:168:PHE:CE1	2.35	0.61
16:S:157:ARG:HG3	16:S:157:ARG:O	2.00	0.61
23:Z:20:PRO:HD2	23:Z:23:VAL:CG2	2.31	0.61
23:Z:33:SER:HA	23:Z:102:GLU:OE2	2.01	0.61
28:e:180:LEU:HD22	38:o:18:TYR:HB3	1.82	0.61
30:g:59:GLU:OE1	30:g:69:MET:HE2	2.00	0.61
44:v:52:LEU:CD1	44:v:64:SER:HB3	2.31	0.61
1:A:1106:U:O2'	2:B:748:A:N1	2.33	0.61
1:A:1495:G:H4'	1:A:1496:A:O5'	2.01	0.61
2:B:1504:A:H5''	2:B:1505:C:OP2	1.99	0.61
3:C:58:G:O6	37:n:63:ARG:NH1	2.33	0.61
6:F:12:U:HO2'	6:F:13:U:P	2.23	0.61
6:F:49:C:OP2	13:P:118:ARG:HD3	2.00	0.61
16:S:173:THR:HG22	16:S:174:LYS:N	2.16	0.61
29:f:339:ARG:O	29:f:340:ARG:HG2	1.99	0.61
33:j:58:LYS:HE2	33:j:72:GLU:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:131:VAL:CG2	35:l:132:PRO:HD2	2.30	0.61
38:o:83:VAL:O	38:o:87:ARG:HG3	2.00	0.61
42:t:25:VAL:HG22	42:t:72:LEU:CD2	2.30	0.61
1:A:769:U:H2'	1:A:770:C:C6	2.36	0.61
1:A:1599:G:H3'	1:A:1599:G:N3	2.15	0.61
2:B:100:U:O2'	2:B:101:G:H5'	2.01	0.61
2:B:1492:OMG:H3'	2:B:1493:U:H5''	1.82	0.61
4:D:28:C:H2'	4:D:29:C:H5'	1.82	0.61
4:D:70:C:H2'	4:D:71:G:C8	2.35	0.61
6:F:50:C:OP1	13:P:114:ARG:NH1	2.28	0.61
13:P:110:ARG:O	13:P:114:ARG:HG3	2.00	0.61
16:S:94:LYS:HE2	16:S:111:ASP:OD2	2.00	0.61
18:U:17:LYS:HB2	18:U:22:HIS:ND1	2.14	0.61
20:W:20:PRO:HA	20:W:53:ALA:HA	1.83	0.61
28:e:92:VAL:HG23	28:e:103:PRO:HG2	1.82	0.61
31:h:96:LEU:HD21	31:h:107:ILE:HG13	1.82	0.61
33:j:96:PHE:CD2	33:j:97:LEU:HD12	2.30	0.61
2:B:745:A:O2'	2:B:746:G:H5'	2.01	0.61
2:B:883:U:H5'	2:B:886:C:C1'	2.31	0.61
2:B:1386:G:H4'	2:B:1387:A:C5'	2.30	0.61
2:B:1643:C:H6	2:B:1643:C:H5''	1.66	0.61
3:C:89:U:H2'	3:C:90:U:C6	2.35	0.61
6:F:63:A:H4'	6:F:64:U:OP2	1.99	0.61
14:Q:20:PHE:HD1	14:Q:62:GLU:HB2	1.65	0.61
17:T:15:LEU:O	17:T:52:ARG:NH1	2.33	0.61
19:V:48:GLU:HA	19:V:77:LEU:HD21	1.82	0.61
31:h:137:HIS:CE1	31:h:138:LYS:HG3	2.36	0.61
35:l:149:ILE:HG21	44:v:193:TRP:CZ3	2.35	0.61
39:p:52:LYS:HA	39:p:55:LYS:CB	2.31	0.61
40:q:42:ARG:HD2	40:q:49:LEU:HG	1.83	0.61
1:A:1005:G:H1'	5:E:120:U:O2'	2.01	0.61
2:B:28:G:O2'	37:n:5:THR:HG22	2.01	0.61
2:B:124:G:H2'	2:B:125:C:O4'	2.01	0.61
2:B:753:C:H2'	2:B:754:U:H6	1.66	0.61
2:B:1529:OMC:HM22	2:B:1530:C:O4'	2.01	0.61
3:C:164:G:OP1	21:X:79:TYR:OH	2.06	0.61
4:D:13:A:C2	43:u:21:ARG:HB2	2.34	0.61
4:D:72:U:H2'	4:D:73:U:O4'	2.00	0.61
8:H:24:A:H2'	8:H:25:A:O4'	2.01	0.61
8:H:41:A:H1'	8:H:100:A:H62	1.64	0.61
9:I:175:ASN:ND2	9:I:178:LYS:HB2	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:R:52:LEU:HD11	15:R:85:ARG:HG3	1.82	0.61
29:f:310:LYS:HE2	29:f:368:THR:HB	1.81	0.61
32:i:102:GLY:O	32:i:106:ARG:HG3	2.00	0.61
37:n:9:GLY:O	37:n:12:HIS:NE2	2.33	0.61
45:w:155:LYS:HE2	45:w:200:ASN:O	1.99	0.61
1:A:67:A:N6	1:A:356:G:O2'	2.26	0.61
1:A:373:A:C2	3:C:34:U:H5	2.19	0.61
1:A:1013:A:H2'	1:A:1014:A:C8	2.36	0.61
1:A:1142:C:C2'	1:A:1143:U:H5'	2.31	0.61
1:A:1364:C:OP1	1:A:1366:U:H5'	2.00	0.61
2:B:532:U:C5	28:e:200:ARG:HD3	2.36	0.61
2:B:1462:A:O2'	2:B:1463:G:H5'	2.01	0.61
14:Q:25:GLU:HG3	14:Q:28:LYS:HD2	1.83	0.61
19:V:57:LEU:HD12	19:V:58:ASN:N	2.16	0.61
28:e:29:LEU:O	28:e:123:ARG:NH1	2.34	0.61
29:f:201:LYS:HA	29:f:204:LEU:HB2	1.81	0.61
36:m:70:VAL:CB	36:m:103:MET:HE1	2.30	0.61
41:r:48:ARG:HH21	41:r:110:TRP:HA	1.65	0.61
46:x:150:LYS:O	46:x:154:LYS:HG3	2.01	0.61
3:C:49:G:H5'	34:k:48:ILE:CG2	2.31	0.60
4:D:66:G:H5'	43:u:10:LYS:HG3	1.82	0.60
5:E:129:G:H2'	5:E:130:G:C8	2.32	0.60
5:E:175:U:H2'	5:E:176:U:C6	2.36	0.60
7:G:102:G:OP1	7:G:104:G:H4'	2.00	0.60
13:P:5:ASN:ND2	13:P:59:LEU:O	2.34	0.60
20:W:41:VAL:HG21	20:W:54:ALA:N	2.15	0.60
23:Z:47:VAL:HG11	23:Z:77:ILE:HD11	1.82	0.60
25:b:66:ASN:N	25:b:67:PRO:HD2	2.15	0.60
29:f:315:MET:HE3	29:f:380:LYS:HA	1.82	0.60
41:r:75:ILE:HG12	41:r:95:CYS:SG	2.41	0.60
42:t:23:PHE:CE1	42:t:74:CYS:HB3	2.36	0.60
43:u:22:ARG:HG2	43:u:28:THR:HG22	1.82	0.60
44:v:172:LYS:HA	44:v:175:TYR:HB3	1.82	0.60
1:A:332:U:H2'	1:A:333:G:H8	1.66	0.60
1:A:1364:C:H5''	35:l:119:SER:HB2	1.83	0.60
2:B:8:U:O2'	2:B:9:G:H5'	2.00	0.60
7:G:170:A:O2'	7:G:171:G:O5'	2.12	0.60
11:N:60:ARG:CD	11:N:101:ARG:HG3	2.30	0.60
11:N:85:LEU:HD23	11:N:121:LEU:HD13	1.83	0.60
12:O:190:THR:OG1	12:O:194:ARG:NH1	2.34	0.60
29:f:289:GLN:HG2	29:f:330:MET:CE	2.26	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:68:THR:HG22	41:r:69:GLY:N	2.16	0.60
45:w:100:ARG:O	45:w:104:GLN:HG3	2.01	0.60
1:A:767:C:OP2	32:i:42:PRO:HG3	2.00	0.60
1:A:1579:A:C2	26:c:25:ILE:HD11	2.37	0.60
2:B:866:A:H2'	2:B:867:U:O4'	2.00	0.60
16:S:105:VAL:CG2	16:S:128:VAL:HG21	2.32	0.60
21:X:169:ASP:O	40:q:14:ALA:HB1	2.01	0.60
24:a:71:LEU:HD11	24:a:111:VAL:CG2	2.31	0.60
43:u:25:GLU:HG2	43:u:27:LYS:HG3	1.83	0.60
1:A:831:U:OP1	41:r:273:LYS:HG2	2.02	0.60
1:A:1301:C:O2'	1:A:1337:A:N1	2.28	0.60
2:B:51:U:O2'	2:B:464:G:O2'	2.09	0.60
2:B:69:A:O4'	8:H:17:A:H5'	2.01	0.60
2:B:1495:C:C2'	2:B:1496:A:H5'	2.30	0.60
2:B:1496:A:H2'	2:B:1497:C:O4'	2.01	0.60
2:B:1524:U:H5'	2:B:1525:U:OP1	2.02	0.60
6:F:13:U:H5'	6:F:14:C:H5'	1.82	0.60
7:G:174:G:OP1	29:f:133:ARG:HD3	2.02	0.60
11:N:181:GLU:HB3	25:b:140:ALA:HB1	1.83	0.60
13:P:7:ILE:HD13	13:P:53:LEU:HD22	1.84	0.60
19:V:46:ASN:O	19:V:50:TYR:N	2.33	0.60
20:W:59:ILE:HD11	20:W:128:TRP:HH2	1.66	0.60
21:X:142:ALA:O	21:X:172:LYS:NZ	2.35	0.60
22:Y:16:GLY:HA3	29:f:55:HIS:NE2	2.16	0.60
32:i:68:THR:CG2	32:i:69:PRO:HD2	2.31	0.60
1:A:1669:G:H2'	1:A:1670:G:O4'	2.01	0.60
2:B:883:U:O2	46:x:142:ARG:HD3	2.02	0.60
2:B:1456:U:H2'	2:B:1481:A:N7	2.16	0.60
4:D:54:A:H2'	4:D:55:A:O4'	2.02	0.60
4:D:110:G:H2'	4:D:111:C:C6	2.36	0.60
13:P:134:LYS:HE2	13:P:135:LYS:O	2.00	0.60
13:P:137:VAL:HG11	13:P:139:TRP:CE2	2.36	0.60
15:R:119:VAL:CG2	15:R:144:CYS:HB2	2.30	0.60
28:e:28:LYS:CE	28:e:123:ARG:HE	2.15	0.60
1:A:25:A:N3	1:A:370:C:O2'	2.34	0.60
1:A:504:C:H2'	1:A:505:U:C6	2.36	0.60
1:A:1530:U:H5''	45:w:206:LYS:HB3	1.83	0.60
1:A:1609:U:H4'	41:r:139:ARG:O	2.02	0.60
1:A:1616:G:H1'	1:A:1643:A:N6	2.17	0.60
1:A:1644:C:H5'	41:r:194:LYS:HZ2	1.65	0.60
2:B:126:U:O3'	8:H:65:G:N2	2.25	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:882:G:O2'	2:B:883:U:OP2	2.19	0.60
3:C:57:C:O2'	3:C:58:G:H5'	2.02	0.60
10:L:21:LYS:HE2	10:L:142:GLU:HB2	1.83	0.60
14:Q:182:SER:OG	14:Q:191:ARG:NH2	2.29	0.60
33:j:83:LEU:HD21	33:j:91:ARG:HE	1.67	0.60
35:l:81:CYS:HB3	35:l:141:ARG:HG3	1.83	0.60
1:A:468:A:C2	2:B:709:A:H4'	2.36	0.60
2:B:1360:A:OP2	9:I:184:SER:OG	2.19	0.60
3:C:166:OMG:C2'	3:C:167:U:H5'	2.32	0.60
14:Q:119:GLU:OE1	14:Q:181:THR:OG1	2.13	0.60
16:S:71:LEU:O	16:S:71:LEU:HD23	2.01	0.60
20:W:56:LEU:HD11	20:W:121:ALA:HB3	1.83	0.60
22:Y:27:LEU:O	22:Y:29:THR:N	2.32	0.60
29:f:80:GLU:OE1	29:f:321:TYR:OH	2.13	0.60
29:f:204:LEU:O	29:f:204:LEU:HD23	2.01	0.60
44:v:34:GLY:HA2	44:v:91:ILE:HG12	1.82	0.60
1:A:115:G:H2'	1:A:116:U:H5'	1.82	0.60
1:A:393:A:H4'	1:A:394:C:OP2	2.02	0.60
1:A:1251:C:C1'	43:u:46:THR:HG21	2.30	0.60
1:A:1535:U:O2'	32:i:56:LYS:O	2.14	0.60
2:B:6:A:H2'	2:B:7:C:H5'	1.84	0.60
6:F:52:A:N6	35:l:29:VAL:O	2.28	0.60
13:P:15:ILE:CD1	13:P:51:GLN:HG3	2.32	0.60
16:S:9:TYR:HB2	16:S:31:VAL:CG2	2.30	0.60
16:S:80:ILE:CD1	16:S:108:ALA:HB1	2.32	0.60
19:V:60:ARG:HH11	19:V:63:LYS:HZ2	1.50	0.60
20:W:86:SER:HB3	20:W:96:TYR:HB3	1.84	0.60
24:a:77:LYS:HA	30:g:37:ARG:HH22	1.65	0.60
26:c:53:VAL:O	26:c:113:MET:HG3	2.02	0.60
28:e:147:ARG:CG	28:e:157:THR:HG22	2.31	0.60
28:e:177:LYS:HA	38:o:29:LEU:HD12	1.82	0.60
43:u:50:ARG:CG	43:u:153:ASP:HB2	2.32	0.60
1:A:14:G:H2'	1:A:15:U:H5'	1.84	0.60
1:A:142:U:H1'	1:A:143:G:H5''	1.83	0.60
1:A:809:G:H2'	1:A:810:A:O4'	2.02	0.60
2:B:497:G:O2'	2:B:589:A:N1	2.35	0.60
2:B:1111:C:H5''	2:B:1112:A:OP2	2.02	0.60
2:B:1163:U:H2'	2:B:1164:G:O4'	2.02	0.60
2:B:1271:U:H2'	2:B:1272:U:C6	2.37	0.60
3:C:1:A:C2'	3:C:2:A:H5'	2.32	0.60
4:D:76:U:C2'	4:D:77:A:H5'	2.30	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:91:U:O2'	4:D:92:G:H5'	2.01	0.60
14:Q:156:ARG:HH21	14:Q:160:ARG:CZ	2.15	0.60
18:U:32:THR:O	43:u:41:LYS:NZ	2.21	0.60
26:c:52:VAL:HG12	26:c:54:LYS:HG3	1.84	0.60
29:f:86:VAL:CG2	29:f:162:VAL:HG11	2.23	0.60
41:r:133:PRO:CA	41:r:136:VAL:HG12	2.31	0.60
1:A:249:C:C2'	1:A:250:A:H5'	2.31	0.60
1:A:1719:U:C2'	1:A:1720:G:H5'	2.32	0.60
1:A:1722:A:H4'	1:A:1723:G:OP2	2.01	0.60
2:B:9:G:H2'	2:B:10:C:C6	2.37	0.60
2:B:131:G:N2	2:B:449:C:O2	2.22	0.60
7:G:116:U:O2'	20:W:14:ARG:NH2	2.35	0.60
12:O:150:SER:HB2	16:S:155:HIS:CE1	2.37	0.60
16:S:136:VAL:HG11	16:S:141:ILE:CG1	2.30	0.60
19:V:52:GLN:HA	19:V:64:LEU:HD11	1.84	0.60
29:f:343:ILE:HG13	29:f:343:ILE:O	2.02	0.60
31:h:120:MET:HB3	31:h:153:ARG:CD	2.32	0.60
35:l:63:ILE:HB	35:l:66:VAL:CG2	2.31	0.60
35:l:113:THR:N	35:l:123:ARG:O	2.31	0.60
43:u:252:ALA:O	43:u:256:ILE:HG23	2.02	0.60
44:v:40:LEU:HD21	44:v:83:ILE:HD11	1.84	0.60
1:A:766:C:HO2'	1:A:767:C:P	2.25	0.59
1:A:1144:U:H1'	1:A:1151:A:H62	1.67	0.59
1:A:1357:G:O2'	1:A:1358:U:H5'	2.02	0.59
2:B:1288:G:C5'	18:U:83:ARG:HH22	2.15	0.59
2:B:1447:G:H2'	2:B:1448:G:O4'	2.03	0.59
3:C:43:A2M:H4'	37:n:22:CYS:O	2.02	0.59
3:C:89:U:H2'	3:C:90:U:H6	1.67	0.59
5:E:115:A:N6	5:E:121:U:O4	2.20	0.59
13:P:7:ILE:HG22	16:S:151:PHE:O	2.01	0.59
14:Q:25:GLU:HG2	36:m:54:LYS:HG2	1.84	0.59
14:Q:154:MET:HE1	34:k:97:LEU:CD2	2.32	0.59
14:Q:182:SER:O	14:Q:191:ARG:NH2	2.35	0.59
21:X:127:LYS:HB3	21:X:133:THR:HB	1.83	0.59
21:X:165:LEU:HD11	21:X:173:LYS:HE2	1.83	0.59
22:Y:51:ARG:HH11	22:Y:51:ARG:CG	2.13	0.59
29:f:112:VAL:HG13	29:f:122:TRP:CZ2	2.37	0.59
29:f:176:VAL:HG13	29:f:176:VAL:O	2.02	0.59
31:h:99:LYS:HB2	31:h:104:ARG:HD3	1.84	0.59
31:h:102:HIS:C	31:h:140:VAL:HG11	2.26	0.59
36:m:92:ASN:HB2	36:m:95:ALA:HB3	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:153:VAL:HG11	41:r:169:PHE:CE1	2.37	0.59
43:u:53:VAL:CG1	43:u:165:VAL:HG13	2.32	0.59
44:v:49:VAL:HG11	44:v:63:ILE:HB	1.83	0.59
1:A:373:A:H2'	1:A:374:G:O4'	2.01	0.59
1:A:418:A:H2'	1:A:419:A:H5'	1.84	0.59
2:B:76:A:H2'	2:B:77:OMC:O4'	2.02	0.59
5:E:192:U:O2	5:E:195:A:N6	2.35	0.59
7:G:91:U:OP2	17:T:62:ARG:NH1	2.29	0.59
12:O:57:GLU:HG3	12:O:58:GLN:HG2	1.83	0.59
18:U:26:SER:OG	18:U:27:VAL:N	2.35	0.59
21:X:183:ASP:OD2	21:X:186:GLU:HG2	2.02	0.59
24:a:22:ALA:HB1	24:a:42:ILE:CG2	2.31	0.59
26:c:51:ALA:HB3	26:c:95:VAL:HG23	1.85	0.59
34:k:88:ARG:HG2	34:k:89:PRO:HD2	1.83	0.59
36:m:63:LEU:HD22	36:m:67:GLU:CD	2.26	0.59
43:u:196:LEU:HD23	43:u:197:ASN:N	2.16	0.59
1:A:452:A:O5'	1:A:452:A:H8	1.85	0.59
1:A:1661:U:O4	41:r:68:THR:HG23	2.02	0.59
1:A:1735:U:C5	2:B:18:A:N1	2.69	0.59
2:B:784:A:H2'	2:B:785:G:O4'	2.02	0.59
3:C:69:U:H2'	3:C:70:C:O4'	2.02	0.59
4:D:116:A:H1'	43:u:79:TYR:CE2	2.31	0.59
5:E:29:A:H4'	5:E:30:C:H5'	1.83	0.59
5:E:47:G:OP2	19:V:86:ARG:NH2	2.35	0.59
9:I:162:ALA:O	25:b:50:PRO:HD3	2.02	0.59
16:S:125:VAL:HG22	16:S:127:GLY:H	1.66	0.59
17:T:138:LEU:HD21	17:T:142:ILE:HD11	1.85	0.59
20:W:83:GLN:HA	20:W:100:ASN:CB	2.32	0.59
20:W:98:GLU:HB2	22:Y:23:PRO:HA	1.84	0.59
29:f:363:LEU:HD23	29:f:366:ILE:CD1	2.28	0.59
30:g:28:GLY:O	30:g:32:THR:HG23	2.02	0.59
37:n:14:ARG:NH2	37:n:25:ASN:OD1	2.35	0.59
1:A:1340:G:O2'	1:A:1341:C:H5'	2.02	0.59
1:A:1737:C:H2'	1:A:1738:G:C8	2.38	0.59
2:B:570:G:H22	2:B:1354:C:C4'	2.15	0.59
2:B:1518:C:O2'	2:B:1519:U:H5'	2.02	0.59
2:B:1557:A:H2'	2:B:1558:C:O4'	2.02	0.59
3:C:116:C:C2'	3:C:117:A:H5'	2.32	0.59
16:S:166:VAL:HG23	16:S:178:VAL:CG2	2.32	0.59
24:a:77:LYS:CB	30:g:37:ARG:HH12	2.14	0.59
25:b:22:VAL:HG22	25:b:23:GLY:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:224:ALA:HB2	29:f:343:ILE:HG22	1.83	0.59
29:f:287:ILE:CG2	29:f:329:ILE:HD11	2.32	0.59
41:r:78:ILE:HG13	41:r:90:ALA:HB2	1.83	0.59
1:A:38:A:H5''	25:b:35:ALA:HB2	1.83	0.59
1:A:482:C:O2	1:A:753:G:N2	2.19	0.59
1:A:926:C:O2'	27:d:48:ARG:NH1	2.35	0.59
2:B:500:U:H5''	28:e:242:ARG:O	2.02	0.59
2:B:1222:G:H2'	2:B:1223:C:O4'	2.03	0.59
2:B:1517:G:N3	29:f:255:ALA:HB1	2.17	0.59
5:E:3:U:H2'	5:E:4:G:H8	1.67	0.59
12:O:26:VAL:HG12	12:O:52:THR:HB	1.83	0.59
12:O:30:LYS:HD3	12:O:55:ARG:NH2	2.17	0.59
12:O:123:TYR:CD1	12:O:127:PRO:HG2	2.38	0.59
16:S:75:ASN:HD22	16:S:145:HIS:HE1	1.50	0.59
28:e:83:PHE:HA	38:o:63:THR:O	2.02	0.59
30:g:94:ILE:O	30:g:94:ILE:HG13	2.01	0.59
41:r:204:ARG:NH1	41:r:226:ASP:OD2	2.35	0.59
1:A:921:A:H2'	1:A:922:A:H5'	1.83	0.59
1:A:1110:U:O2'	25:b:12:ARG:HG3	2.02	0.59
2:B:462:A:O2'	7:G:105:C:O2	2.18	0.59
2:B:1593:A:OP1	29:f:148:ARG:CD	2.50	0.59
5:E:209:G:P	24:a:130:ARG:HH22	2.26	0.59
9:I:97:VAL:HG11	25:b:80:LYS:HG3	1.85	0.59
10:L:77:VAL:HG12	10:L:78:ARG:N	2.16	0.59
10:L:144:VAL:HG22	10:L:152:SER:HB2	1.84	0.59
16:S:78:VAL:HG12	16:S:80:ILE:CG1	2.32	0.59
28:e:80:GLU:HG3	38:o:66:GLY:HA2	1.84	0.59
34:k:58:ILE:O	34:k:62:LEU:HB2	2.02	0.59
45:w:121:LYS:N	45:w:122:PRO:HD2	2.17	0.59
1:A:402:G:N2	1:A:405:A:OP2	2.29	0.59
1:A:758:G:H2'	1:A:759:C:H6	1.67	0.59
1:A:1153:A:C2'	1:A:1154:A:H5'	2.32	0.59
2:B:641:A:C2	20:W:39:ILE:HG23	2.37	0.59
4:D:28:C:OP1	10:L:143:ARG:NH2	2.35	0.59
11:N:46:LEU:HD23	11:N:46:LEU:O	2.03	0.59
14:Q:156:ARG:HE	14:Q:160:ARG:HE	1.49	0.59
16:S:74:ARG:HG3	16:S:76:TYR:CE2	2.37	0.59
17:T:90:PRO:HD2	17:T:93:GLU:OE1	2.03	0.59
17:T:109:TYR:OH	17:T:139:MET:SD	2.60	0.59
24:a:70:PHE:HA	24:a:108:LYS:NZ	2.18	0.59
29:f:310:LYS:CE	29:f:368:THR:HB	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:q:9:ILE:HD12	40:q:51:TYR:HB3	1.84	0.59
43:u:170:LYS:CA	43:u:173:VAL:HG12	2.31	0.59
43:u:173:VAL:HG21	43:u:181:HIS:CD2	2.37	0.59
44:v:173:ALA:O	44:v:177:HIS:ND1	2.36	0.59
1:A:33:A:H2'	1:A:34:A:O4'	2.02	0.59
1:A:423:A2M:N3	1:A:423:A2M:H2'	2.16	0.59
2:B:1211:U:OP1	42:t:65:THR:OG1	2.21	0.59
2:B:1390:A:H2'	2:B:1391:C:H5'	1.84	0.59
4:D:12:U:OP2	4:D:67:C:O2'	2.21	0.59
7:G:162:C:OP2	29:f:30:ARG:HG3	2.03	0.59
28:e:13:GLY:O	28:e:17:GLN:HG3	2.03	0.59
28:e:225:VAL:HG11	28:e:234:LYS:HA	1.84	0.59
30:g:36:LEU:HD21	30:g:61:TYR:O	2.03	0.59
33:j:6:VAL:HG11	33:j:23:LEU:CD2	2.31	0.59
35:l:133:ALA:O	35:l:136:ILE:HG22	2.03	0.59
1:A:1760:A:H5'	21:X:121:THR:HG22	1.85	0.59
2:B:752:C:H2'	2:B:753:C:C6	2.38	0.59
3:C:142:C:H2'	3:C:143:C:C6	2.37	0.59
5:E:62:C:H2'	5:E:63:A:H8	1.66	0.59
13:P:7:ILE:HD13	13:P:53:LEU:CD2	2.33	0.59
14:Q:54:ARG:HG2	14:Q:55:LEU:N	2.18	0.59
14:Q:192:HIS:O	14:Q:201:ARG:NH1	2.36	0.59
17:T:106:LEU:HD21	17:T:138:LEU:HD11	1.84	0.59
18:U:17:LYS:HB2	18:U:22:HIS:CE1	2.38	0.59
24:a:11:ILE:HG21	24:a:131:LEU:CD1	2.31	0.59
24:a:38:GLY:HA3	24:a:76:HIS:CD2	2.38	0.59
25:b:19:TYR:CG	25:b:25:HIS:HB2	2.37	0.59
29:f:61:ASP:HA	29:f:68:ASN:OD1	2.03	0.59
35:l:81:CYS:HB3	35:l:141:ARG:CG	2.33	0.59
41:r:170:LEU:C	41:r:176:VAL:HG13	2.28	0.59
42:t:9:THR:HA	42:t:21:LYS:O	2.02	0.59
43:u:245:LEU:HG	43:u:248:MET:HE3	1.84	0.59
46:x:155:TYR:CD1	46:x:187:LEU:HD22	2.38	0.59
1:A:1093:A:H2'	1:A:1094:C:O4'	2.03	0.59
1:A:1164:G:N3	2:B:1196:A:H2'	2.17	0.59
1:A:1313:A:O2'	2:B:1395:C:O2'	2.20	0.59
2:B:542:C:H2'	2:B:588:A:H61	1.67	0.59
8:H:27:A:OP1	31:h:69:ALA:CB	2.51	0.59
12:O:126:ILE:HD11	12:O:130:VAL:HG12	1.83	0.59
29:f:331:LEU:HD11	29:f:335:VAL:CG2	2.33	0.59
33:j:58:LYS:CE	33:j:72:GLU:HB3	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:194:LYS:HA	41:r:199:ARG:HA	1.85	0.59
43:u:21:ARG:HA	43:u:24:ARG:CZ	2.32	0.59
43:u:53:VAL:CG2	43:u:168:VAL:HG21	2.33	0.59
43:u:148:PHE:CD2	43:u:177:LEU:HD22	2.37	0.59
45:w:89:ILE:HD11	45:w:237:PHE:HZ	1.68	0.59
1:A:9:U:H2'	1:A:10:G:O4'	2.03	0.58
1:A:148:G:H5''	14:Q:71:THR:HG21	1.85	0.58
2:B:718:A:C3'	2:B:719:A:H5'	2.28	0.58
2:B:1226:A:O2'	2:B:1250:A:OP1	2.16	0.58
2:B:1258:C:H2'	2:B:1259:G:O4'	2.02	0.58
5:E:103:U:H3	5:E:129:G:H1	1.50	0.58
5:E:205:U:H2'	5:E:206:G:O4'	2.03	0.58
6:F:3:A:H1'	35:l:104:ASN:OD1	2.03	0.58
16:S:46:MET:CE	18:U:148:ARG:HD3	2.33	0.58
16:S:144:TYR:HA	16:S:149:LEU:HD22	1.85	0.58
19:V:32:ILE:HB	19:V:33:PRO:HD3	1.84	0.58
20:W:119:PRO:HD3	22:Y:26:PHE:CE2	2.38	0.58
21:X:115:ILE:HD12	21:X:154:LEU:HD12	1.85	0.58
23:Z:98:PRO:O	23:Z:101:VAL:HG22	2.03	0.58
24:a:23:VAL:CG2	24:a:86:MET:HB3	2.32	0.58
29:f:226:THR:O	29:f:277:TYR:HA	2.03	0.58
29:f:270:ALA:O	29:f:271:ARG:HD2	2.02	0.58
33:j:100:GLU:O	33:j:103:ILE:HG22	2.02	0.58
35:l:116:HIS:HD2	35:l:123:ARG:NE	2.01	0.58
41:r:206:PRO:HB3	41:r:247:PHE:HD2	1.67	0.58
1:A:356:G:H2'	1:A:357:C:O4'	2.03	0.58
1:A:430:A:H2'	1:A:431:A:C8	2.38	0.58
1:A:1071:A2M:OP2	37:n:30:GLN:NE2	2.35	0.58
1:A:1782:A:H61	1:A:1793:U:H3	1.50	0.58
6:F:53:G:O6	35:l:33:ARG:NH2	2.36	0.58
12:O:26:VAL:HG23	12:O:26:VAL:O	2.02	0.58
12:O:28:ASP:OD1	12:O:55:ARG:HD3	2.02	0.58
13:P:28:VAL:CG2	13:P:39:GLU:HB3	2.32	0.58
17:T:95:TRP:HZ3	17:T:130:ASN:HB3	1.67	0.58
20:W:56:LEU:HD11	20:W:121:ALA:CB	2.33	0.58
21:X:166:ILE:HA	21:X:172:LYS:HA	1.85	0.58
41:r:264:THR:CG2	41:r:266:THR:HG22	2.33	0.58
41:r:269:SER:OG	41:r:272:LYS:HB2	2.02	0.58
45:w:47:ARG:NH1	45:w:183:ASP:OD2	2.36	0.58
45:w:144:VAL:HG13	45:w:188:ILE:CD1	2.33	0.58
1:A:1012:G:N2	1:A:1015:A:OP2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1390:A:C2'	2:B:1391:C:H5'	2.32	0.58
3:C:95:A:OP1	37:n:80:THR:HG23	2.04	0.58
5:E:52:G:O2'	5:E:53:C:H5'	2.02	0.58
6:F:53:G:H5''	13:P:122:PHE:CE2	2.39	0.58
8:H:93:G:H2'	8:H:94:G:C5'	2.33	0.58
9:I:92:ASP:CG	9:I:111:ARG:HH11	2.11	0.58
12:O:150:SER:HB2	16:S:155:HIS:NE2	2.18	0.58
15:R:5:SER:H	15:R:147:GLN:HE22	1.50	0.58
18:U:42:VAL:HG21	18:U:89:ILE:HD11	1.84	0.58
26:c:32:PHE:HA	26:c:52:VAL:CG2	2.30	0.58
29:f:89:ILE:CD1	29:f:204:LEU:HD12	2.33	0.58
43:u:244:GLU:OE1	43:u:244:GLU:N	2.36	0.58
46:x:243:LEU:HD22	46:x:255:VAL:CG2	2.34	0.58
1:A:755:G:H21	1:A:1623:A:H8	1.50	0.58
1:A:1232:A:O2'	18:U:102:GLN:HG2	2.03	0.58
1:A:1545:C:N4	1:A:1575:G:O6	2.19	0.58
2:B:870:A:N6	28:e:68:LYS:HZ2	2.02	0.58
2:B:1648:U:C2'	2:B:1649:A:H5''	2.33	0.58
3:C:71:A:H3'	23:Z:48:ARG:HG3	1.86	0.58
4:D:9:C:C2'	4:D:10:C:H5'	2.32	0.58
9:I:3:VAL:CG2	45:w:110:GLN:HE21	2.15	0.58
30:g:40:ARG:NH1	30:g:95:THR:HG21	2.18	0.58
44:v:78:ASP:HB3	44:v:81:TYR:HD2	1.69	0.58
1:A:505:U:O2'	1:A:506:C:H5'	2.03	0.58
1:A:1312:A:H2'	1:A:1313:A:C8	2.38	0.58
1:A:1734:U:H4'	1:A:1735:U:O5'	2.04	0.58
1:A:1936:G:H5''	33:j:28:GLY:CA	2.33	0.58
2:B:495:A:N6	2:B:533:G:H1'	2.18	0.58
6:F:49:C:OP1	35:l:33:ARG:NE	2.32	0.58
6:F:66:C:H4'	44:v:41:ALA:HB1	1.86	0.58
7:G:71:C:H1'	29:f:334:SER:CB	2.34	0.58
9:I:188:ARG:HH22	9:I:191:ARG:NH1	2.01	0.58
24:a:9:VAL:CG1	24:a:84:TYR:HB2	2.34	0.58
24:a:23:VAL:HG21	24:a:86:MET:SD	2.44	0.58
25:b:81:LEU:HD22	25:b:104:ASN:CG	2.28	0.58
30:g:42:LYS:O	30:g:43:LEU:HB2	2.02	0.58
1:A:505:U:C2'	1:A:506:C:H5'	2.34	0.58
1:A:1152:A:O4'	27:d:26:PRO:HG3	2.04	0.58
1:A:1594:G:O2'	1:A:1595:A:H5'	2.03	0.58
1:A:1944:A:O2'	1:A:1946:U:OP2	2.20	0.58
2:B:99:A:H4'	17:T:83:GLY:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:546:U:O3'	2:B:764:G:N2	2.36	0.58
2:B:1516:A2M:H8	2:B:1516:A2M:O5'	2.03	0.58
9:I:48:VAL:O	9:I:52:LEU:HB2	2.04	0.58
14:Q:56:ARG:HG3	14:Q:57:ARG:HG3	1.86	0.58
16:S:50:LYS:NZ	18:U:148:ARG:HD2	2.18	0.58
25:b:131:ASP:HA	25:b:134:ILE:HG22	1.84	0.58
29:f:211:ASP:HA	29:f:290:LEU:CD1	2.33	0.58
29:f:354:SER:HB3	29:f:357:LEU:HG	1.86	0.58
36:m:87:LYS:HD3	36:m:93:PHE:CD1	2.38	0.58
1:A:1073:5MC:H2'	1:A:1074:G:C8	2.38	0.58
1:A:1331:G:OP1	35:l:51:LEU:HB2	2.04	0.58
1:A:1350:A:H2'	1:A:1351:U:O4'	2.03	0.58
2:B:687:A:O2'	7:G:114:U:O2'	2.22	0.58
2:B:691:A2M:H5''	31:h:100:THR:HG23	1.84	0.58
3:C:52:A:N1	40:q:35:ILE:HD13	2.19	0.58
4:D:3:G:O2'	4:D:4:U:H5'	2.04	0.58
6:F:61:A:C6	44:v:67:MET:HE1	2.39	0.58
13:P:33:GLY:O	13:P:53:LEU:HD12	2.03	0.58
13:P:73:THR:O	13:P:76:ASN:HB3	2.04	0.58
19:V:31:THR:HG22	19:V:75:ASN:HB2	1.85	0.58
29:f:371:LYS:N	29:f:371:LYS:HD2	2.19	0.58
33:j:30:ARG:NH1	33:j:32:VAL:HG21	2.17	0.58
43:u:97:ALA:O	43:u:101:THR:HG23	2.04	0.58
45:w:187:GLN:HG3	45:w:198:VAL:HG21	1.86	0.58
1:A:842:U:OP1	1:A:947:A:O2'	2.16	0.58
1:A:1165:G:N2	1:A:1166:U:O4	2.29	0.58
1:A:1962:A:O2'	1:A:1963:U:H5'	2.04	0.58
2:B:865:A:O2'	2:B:866:A:H5'	2.04	0.58
6:F:67:A:HO2'	6:F:68:C:P	2.27	0.58
16:S:166:VAL:HG11	16:S:169:VAL:CG1	2.34	0.58
29:f:254:VAL:HG23	29:f:257:ILE:HG22	1.86	0.58
29:f:345:LEU:HD12	29:f:345:LEU:O	2.04	0.58
43:u:60:ILE:CD1	43:u:98:ALA:HB2	2.34	0.58
1:A:133:A:H2	1:A:176:G:N3	2.02	0.58
1:A:1593:A:O3'	25:b:20:GLY:HA2	2.04	0.58
2:B:1184:C:O2'	2:B:1185:A:H5''	2.03	0.58
2:B:1225:C:OP2	2:B:1246:G:N1	2.28	0.58
10:L:145:ALA:HA	10:L:152:SER:O	2.04	0.58
16:S:10:CYS:SG	16:S:28:LYS:HG3	2.43	0.58
19:V:66:GLU:OE2	19:V:67:LYS:HE3	2.04	0.58
29:f:153:PHE:HB3	29:f:197:ILE:HD11	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:192:THR:CG2	29:f:195:GLU:HG3	2.30	0.58
29:f:302:THR:HG21	29:f:309:ALA:HA	1.85	0.58
34:k:112:LEU:HG	34:k:116:ARG:NH1	2.19	0.58
39:p:37:ARG:HH11	39:p:42:LEU:HB2	1.69	0.58
39:p:52:LYS:HA	39:p:55:LYS:HB2	1.84	0.58
41:r:219:PHE:O	41:r:222:ILE:HG22	2.03	0.58
1:A:503:C:H2'	1:A:504:C:H6	1.68	0.58
1:A:998:A:O2'	2:B:47:A:N3	2.37	0.58
1:A:1687:C:N3	1:A:1710:OMG:N1	2.47	0.58
1:A:1799:U:O2'	46:x:112:THR:OG1	2.20	0.58
2:B:41:A:H1'	33:j:5:ARG:HD3	1.86	0.58
2:B:494:U:H2'	2:B:495:A:C4	2.39	0.58
2:B:1509:G:O2'	2:B:1510:A:H5'	2.04	0.58
8:H:15:A:O2'	8:H:16:A:H5'	2.04	0.58
18:U:31:LEU:HD11	43:u:37:VAL:HG21	1.84	0.58
20:W:18:ALA:HB2	20:W:83:GLN:NE2	2.19	0.58
20:W:125:ALA:O	20:W:132:SER:HB3	2.03	0.58
25:b:82:ILE:HG22	25:b:87:ALA:HB2	1.84	0.58
33:j:96:PHE:O	33:j:100:GLU:HG2	2.04	0.58
41:r:166:ALA:O	41:r:170:LEU:HD13	2.03	0.58
42:t:10:MET:HB3	42:t:23:PHE:CE2	2.39	0.58
45:w:40:LEU:HD13	45:w:167:GLN:NE2	2.19	0.58
46:x:213:ASN:ND2	46:x:239:ASP:OD1	2.25	0.58
1:A:33:A:N3	1:A:977:G:O2'	2.37	0.57
1:A:599:C:H4'	1:A:600:A:O5'	2.03	0.57
1:A:1159:U:O2'	1:A:1160:G:H5'	2.04	0.57
2:B:1107:7MG:H82	33:j:94:ARG:CD	2.34	0.57
7:G:169:C:H5'	7:G:170:A:OP1	2.04	0.57
8:H:26:C:H4'	8:H:27:A:O5'	2.03	0.57
8:H:87:C:H2'	8:H:88:C:O4'	2.04	0.57
9:I:44:PHE:CB	9:I:140:GLY:HA3	2.34	0.57
9:I:97:VAL:HG21	25:b:80:LYS:CG	2.34	0.57
10:L:147:ARG:O	10:L:151:THR:OG1	2.18	0.57
16:S:43:PHE:O	16:S:47:MET:HG2	2.04	0.57
18:U:70:ARG:NE	43:u:38:LEU:HD21	2.18	0.57
19:V:72:LEU:HA	19:V:76:VAL:O	2.03	0.57
30:g:50:CYS:HA	30:g:54:ARG:HH21	1.68	0.57
31:h:81:PRO:O	31:h:83:ASN:N	2.30	0.57
33:j:21:MET:SD	33:j:35:LYS:HA	2.44	0.57
33:j:47:TRP:HA	33:j:51:HIS:HB2	1.86	0.57
36:m:83:LEU:C	36:m:83:LEU:HD12	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:35:THR:OG1	44:v:51:ILE:HD12	2.04	0.57
1:A:849:G:C2	25:b:110:LEU:HD11	2.40	0.57
2:B:529:A:O2'	28:e:236:GLY:O	2.21	0.57
2:B:1153:A:H4'	2:B:1154:U:OP1	2.03	0.57
5:E:146:A:C5'	39:p:26:LYS:HE2	2.34	0.57
7:G:28:U:O2'	7:G:29:G:H5'	2.04	0.57
12:O:131:VAL:HG23	12:O:136:ARG:NH2	2.18	0.57
12:O:201:ARG:HG2	13:P:120:ARG:NH2	2.19	0.57
13:P:5:ASN:HD22	13:P:60:LYS:HA	1.69	0.57
18:U:27:VAL:CG1	18:U:31:LEU:HD13	2.34	0.57
20:W:37:TYR:HB2	20:W:65:LYS:HG3	1.86	0.57
24:a:10:VAL:HG22	24:a:22:ALA:O	2.04	0.57
29:f:254:VAL:CG2	29:f:257:ILE:HG22	2.34	0.57
41:r:114:ILE:HB	41:r:119:LYS:HD2	1.86	0.57
46:x:296:SER:HB2	46:x:298:ARG:HG2	1.86	0.57
1:A:232:U:H2'	1:A:233:C:O4'	2.04	0.57
1:A:1052:U:H2'	1:A:1053:OMC:O2	2.03	0.57
1:A:1099:U:O5'	11:N:22:SER:OG	2.15	0.57
1:A:1375:A:H2'	12:O:67:ARG:HH12	1.69	0.57
1:A:1375:A:H2'	1:A:1375:A:N3	2.18	0.57
1:A:1949:A:H2'	21:X:177:ARG:NH2	2.17	0.57
2:B:543:OMC:N4	2:B:587:U:H2'	2.19	0.57
2:B:883:U:O4	46:x:238:LYS:HG2	2.04	0.57
2:B:1288:G:H5''	18:U:83:ARG:HH12	1.69	0.57
2:B:1500:A:O2'	20:W:40:SER:HB3	2.04	0.57
2:B:1556:U:H2'	2:B:1557:A:C8	2.38	0.57
7:G:159:G:H2'	7:G:160:U:O4'	2.04	0.57
34:k:85:LYS:HB3	34:k:88:ARG:NH1	2.19	0.57
41:r:170:LEU:HD21	41:r:225:LEU:HD22	1.86	0.57
42:t:10:MET:SD	42:t:83:ASN:ND2	2.77	0.57
43:u:22:ARG:HG2	43:u:28:THR:CG2	2.34	0.57
44:v:48:ARG:O	44:v:70:ASN:ND2	2.38	0.57
45:w:114:THR:HB	45:w:205:PHE:HB2	1.86	0.57
1:A:28:C:H4'	1:A:61:A:H4'	1.86	0.57
1:A:116:U:H4'	14:Q:20:PHE:CD2	2.40	0.57
1:A:254:A:H1'	1:A:255:A:OP2	2.04	0.57
1:A:1027:G:H5'	1:A:1028:C:H5''	1.84	0.57
1:A:1123:U:O2'	2:B:1287:A:N7	2.34	0.57
1:A:1291:A:O2'	1:A:1292:C:H5'	2.04	0.57
2:B:1347:A:N6	25:b:60:HIS:HA	2.19	0.57
4:D:109:U:O2'	4:D:110:G:OP2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:48:G:OP2	19:V:86:ARG:HG3	2.03	0.57
5:E:147:A:H62	39:p:35:LYS:NZ	2.02	0.57
8:H:106:G:N3	31:h:94:LYS:HA	2.19	0.57
9:I:108:CYS:HB2	9:I:128:LEU:CD1	2.34	0.57
16:S:78:VAL:HG22	16:S:128:VAL:HG13	1.86	0.57
20:W:86:SER:CB	20:W:96:TYR:HB3	2.34	0.57
26:c:49:LYS:O	26:c:99:ARG:HD2	2.05	0.57
29:f:86:VAL:HG22	29:f:162:VAL:CG1	2.25	0.57
41:r:7:VAL:N	41:r:21:CYS:O	2.37	0.57
41:r:25:ALA:O	41:r:28:THR:OG1	2.22	0.57
42:t:6:LYS:HG3	42:t:94:ASN:HA	1.87	0.57
43:u:183:PRO:HB3	43:u:196:LEU:HD12	1.87	0.57
1:A:461:C:H2'	1:A:462:A:H8	1.69	0.57
1:A:1316:OMG:H2'	1:A:1317:G:H5'	1.86	0.57
3:C:122:A:C2'	3:C:123:G:H5'	2.35	0.57
4:D:82:G:N2	45:w:223:GLU:OE2	2.37	0.57
5:E:147:A:HO2'	5:E:148:U:P	2.27	0.57
9:I:172:PHE:HB3	11:N:7:ALA:HB2	1.85	0.57
11:N:98:ILE:HD11	11:N:100:ILE:HD12	1.85	0.57
13:P:139:TRP:CD1	13:P:140:HIS:N	2.73	0.57
14:Q:185:ARG:HG2	14:Q:188:ARG:NH1	2.18	0.57
14:Q:186:LYS:HD3	14:Q:191:ARG:HD2	1.86	0.57
16:S:153:LEU:HD23	16:S:156:ARG:NH2	2.20	0.57
19:V:48:GLU:HG3	19:V:72:LEU:HD11	1.86	0.57
20:W:119:PRO:HD3	22:Y:26:PHE:CD2	2.38	0.57
29:f:26:ARG:O	29:f:47:MET:HE1	2.04	0.57
31:h:102:HIS:HA	31:h:140:VAL:HG11	1.87	0.57
31:h:103:LYS:O	31:h:107:ILE:HG12	2.04	0.57
31:h:109:ILE:HG23	31:h:127:ILE:CD1	2.34	0.57
33:j:68:ALA:HB1	33:j:72:GLU:OE1	2.04	0.57
33:j:77:ARG:NH1	33:j:85:HIS:HB3	2.20	0.57
1:A:328:G:H2'	1:A:329:C:O4'	2.05	0.57
1:A:516:A:H61	1:A:587:C:N4	1.98	0.57
1:A:1608:G:OP1	41:r:204:ARG:NE	2.28	0.57
2:B:582:G:H2'	2:B:583:C:O4'	2.04	0.57
2:B:1111:C:N4	5:E:208:G:O2'	2.38	0.57
2:B:1326:U:H3	2:B:1361:OMG:HN1	1.51	0.57
3:C:30:U:O2'	3:C:31:A:H5'	2.05	0.57
9:I:188:ARG:NH2	9:I:191:ARG:HD2	2.20	0.57
25:b:16:PHE:CZ	25:b:21:ARG:HG3	2.39	0.57
28:e:54:ARG:CD	28:e:58:LEU:HD11	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:368:THR:O	29:f:368:THR:HG22	2.03	0.57
34:k:11:ARG:HH21	34:k:64:ARG:HH12	1.50	0.57
41:r:66:TRP:O	41:r:70:ARG:HD3	2.04	0.57
1:A:44:A:OP2	14:Q:101:LYS:HD2	2.04	0.57
1:A:789:A:H5'	41:r:101:PHE:HB2	1.87	0.57
1:A:794:A2M:C8	1:A:794:A2M:H3'	2.35	0.57
1:A:921:A:H2'	1:A:922:A:O4'	2.04	0.57
2:B:6:A:C2'	2:B:7:C:H5'	2.35	0.57
2:B:1347:A:H62	25:b:60:HIS:HA	1.70	0.57
3:C:26:U:O2'	41:r:106:ILE:HD11	2.04	0.57
5:E:7:A:OP1	24:a:72:ARG:NH2	2.37	0.57
12:O:42:ALA:O	12:O:46:LEU:HD13	2.03	0.57
12:O:126:ILE:HG23	12:O:179:ARG:NE	2.18	0.57
13:P:83:ILE:HD13	13:P:86:LYS:NZ	2.19	0.57
24:a:9:VAL:HG13	24:a:82:THR:OG1	2.04	0.57
29:f:19:ARG:HB2	29:f:237:ARG:HH21	1.70	0.57
29:f:116:ARG:HD2	29:f:122:TRP:CG	2.39	0.57
46:x:129:VAL:HG22	46:x:291:GLY:C	2.30	0.57
46:x:228:ARG:CD	46:x:283:SER:HB2	2.34	0.57
1:A:278:A:H2'	1:A:279:A:H5'	1.86	0.57
1:A:413:U:P	40:q:34:ARG:HH12	2.27	0.57
1:A:1514:U:O4	1:A:1522:G:H1'	2.05	0.57
2:B:62:A:H2'	2:B:62:A:N3	2.20	0.57
2:B:570:G:N2	2:B:1354:C:O4'	2.38	0.57
2:B:1323:C:H2'	2:B:1324:C:O4'	2.05	0.57
2:B:1435:U:O2'	2:B:1436:C:H5'	2.04	0.57
14:Q:154:MET:HE1	34:k:97:LEU:HG	1.85	0.57
36:m:76:VAL:C	36:m:78:LYS:H	2.13	0.57
41:r:158:GLN:HB3	41:r:210:MET:SD	2.44	0.57
43:u:249:TYR:HA	43:u:252:ALA:CB	2.33	0.57
44:v:48:ARG:NH1	44:v:180:PHE:HB2	2.20	0.57
1:A:332:U:H2'	1:A:333:G:C8	2.39	0.57
1:A:591:A:O2'	41:r:340:VAL:HG11	2.04	0.57
1:A:845:A:H2'	1:A:846:A:C8	2.40	0.57
1:A:944:U:OP1	27:d:34:ARG:NH1	2.36	0.57
1:A:1570:A:O5'	26:c:108:ARG:NH2	2.37	0.57
3:C:27:U:C5'	41:r:106:ILE:HD11	2.34	0.57
8:H:25:A:OP1	29:f:179:LYS:NZ	2.29	0.57
13:P:81:LYS:HB3	13:P:86:LYS:HZ1	1.69	0.57
17:T:10:LEU:O	17:T:14:ILE:HG12	2.05	0.57
18:U:34:PHE:O	18:U:67:VAL:HG11	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:V:60:ARG:HD3	19:V:63:LYS:HZ2	1.68	0.57
25:b:95:THR:C	25:b:96:LEU:HD12	2.30	0.57
29:f:58:ARG:CD	29:f:361:ILE:HG23	2.33	0.57
1:A:1120:G:H1'	1:A:1298:G:H5''	1.87	0.57
1:A:1585:U:O2	45:w:159:GLN:NE2	2.38	0.57
1:A:1781:A:H2'	1:A:1782:A:O4'	2.05	0.57
2:B:117:A:H2'	2:B:118:G:H5'	1.85	0.57
2:B:490:A:H1'	2:B:627:A2M:H62	1.68	0.57
2:B:754:U:O2'	2:B:755:OMG:H5'	2.05	0.57
2:B:898:G:H1'	46:x:273:ARG:O	2.05	0.57
2:B:1545:U:C2'	2:B:1546:G:H5'	2.35	0.57
2:B:1579:A:H2'	2:B:1580:A:C8	2.39	0.57
4:D:44:U:H2'	4:D:45:U:H6	1.70	0.57
7:G:35:A:N1	7:G:67:C:O2'	2.34	0.57
8:H:36:C:O2'	8:H:37:U:H5'	2.04	0.57
9:I:39:ARG:NH2	41:r:300:LEU:HD23	2.20	0.57
18:U:70:ARG:CZ	43:u:38:LEU:HD21	2.35	0.57
28:e:15:ILE:CG2	28:e:194:ASN:HD22	2.15	0.57
29:f:29:VAL:HG23	29:f:344:THR:HG21	1.87	0.57
29:f:56:ILE:HG22	29:f:366:ILE:HA	1.87	0.57
37:n:73:ARG:HB3	37:n:78:PHE:CD1	2.39	0.57
41:r:265:PHE:O	41:r:276:MET:HE2	2.04	0.57
43:u:208:LEU:HD12	43:u:246:GLU:OE2	2.05	0.57
44:v:24:TYR:CE2	44:v:26:THR:HG23	2.40	0.57
44:v:156:ASP:OD1	44:v:157:ALA:N	2.37	0.57
1:A:48:C:OP1	11:N:15:LYS:HE2	2.05	0.56
1:A:66:A:H2'	1:A:343:OMC:HM23	1.87	0.56
1:A:278:A:C2'	1:A:279:A:H5'	2.35	0.56
1:A:413:U:C4'	1:A:414:U:H5''	2.30	0.56
2:B:898:G:C8	46:x:277:ALA:HB2	2.40	0.56
2:B:1493:U:H2'	2:B:1494:U:H6	1.70	0.56
13:P:12:LEU:CD2	13:P:59:LEU:HD12	2.28	0.56
13:P:83:ILE:HA	13:P:86:LYS:HE3	1.87	0.56
13:P:119:SER:O	13:P:123:TRP:HD1	1.88	0.56
23:Z:77:ILE:HG23	23:Z:77:ILE:O	2.04	0.56
24:a:113:LYS:HA	24:a:116:GLN:HB3	1.88	0.56
24:a:122:GLY:HA3	24:a:125:ARG:HE	1.70	0.56
26:c:53:VAL:HG21	26:c:110:ALA:HB2	1.86	0.56
28:e:92:VAL:HA	28:e:103:PRO:CD	2.35	0.56
32:i:33:TRP:O	32:i:34:ARG:NH1	2.38	0.56
34:k:101:ASP:HA	34:k:104:LYS:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:x:211:ALA:HB2	46:x:243:LEU:HD12	1.86	0.56
1:A:47:A:H4'	1:A:48:C:H5'	1.86	0.56
1:A:413:U:O5'	40:q:34:ARG:NH1	2.36	0.56
1:A:805:A:OP2	9:I:113:SER:HA	2.06	0.56
1:A:983:A:N6	1:A:1077:G:O2'	2.39	0.56
2:B:34:G:N2	37:n:5:THR:O	2.36	0.56
2:B:628:U:O4'	2:B:1530:C:O2'	2.20	0.56
7:G:72:C:H5'	29:f:53:MET:SD	2.45	0.56
8:H:28:U:OP2	31:h:70:LEU:N	2.38	0.56
10:L:155:GLY:O	10:L:159:ARG:HG3	2.06	0.56
11:N:121:LEU:O	11:N:125:MET:HG2	2.04	0.56
13:P:28:VAL:HG23	13:P:39:GLU:HB3	1.87	0.56
13:P:143:ALA:CB	35:l:22:LEU:CB	2.83	0.56
19:V:30:CYS:O	19:V:33:PRO:HD2	2.05	0.56
20:W:17:LEU:HD13	20:W:53:ALA:HB3	1.87	0.56
41:r:157:VAL:HG21	41:r:169:PHE:CE2	2.39	0.56
1:A:94:G:H2'	1:A:95:A:C8	2.40	0.56
1:A:355:U:O2'	1:A:356:G:H5'	2.04	0.56
1:A:588:A:H61	16:S:63:CYS:CB	2.18	0.56
1:A:868:U:H5'	1:A:869:G:H5''	1.87	0.56
1:A:995:A:H2'	1:A:996:C:C6	2.40	0.56
1:A:1530:U:OP1	45:w:206:LYS:HE3	2.06	0.56
1:A:1763:U:OP2	1:A:1943:U:O2'	2.18	0.56
2:B:91:C:H3'	2:B:92:A:C8	2.39	0.56
2:B:1275:U:H4'	42:t:10:MET:SD	2.45	0.56
2:B:1329:C:O2'	2:B:1330:G:H5'	2.04	0.56
3:C:77:A:C2	3:C:78:G:H1'	2.39	0.56
4:D:44:U:H2'	4:D:45:U:C6	2.40	0.56
7:G:38:A:H2'	7:G:39:C:C6	2.40	0.56
7:G:125:G:H1	7:G:157:C:H42	1.51	0.56
13:P:12:LEU:HD13	13:P:83:ILE:HG22	1.86	0.56
15:R:13:LYS:HA	15:R:107:LEU:HD21	1.86	0.56
15:R:59:PRO:HB3	15:R:76:TRP:CG	2.40	0.56
17:T:4:LEU:HD12	17:T:4:LEU:O	2.06	0.56
20:W:41:VAL:HG21	20:W:53:ALA:C	2.31	0.56
20:W:83:GLN:HG2	20:W:85:LYS:O	2.05	0.56
20:W:94:VAL:HG13	22:Y:19:ARG:HB3	1.84	0.56
23:Z:32:LEU:HD21	23:Z:45:MET:HB3	1.88	0.56
24:a:46:LYS:HG2	24:a:69:VAL:N	2.20	0.56
25:b:129:LEU:O	25:b:133:LYS:HG3	2.06	0.56
26:c:8:GLN:CB	26:c:46:LEU:HD11	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:55:THR:HG22	26:c:117:LEU:HD11	1.88	0.56
28:e:31:ILE:HD13	28:e:123:ARG:CZ	2.35	0.56
28:e:32:LEU:CD1	28:e:36:GLU:HG2	2.34	0.56
30:g:69:MET:HE3	30:g:71:HIS:CD2	2.39	0.56
31:h:120:MET:HB3	31:h:153:ARG:HD3	1.87	0.56
32:i:84:TYR:CE1	32:i:116:LEU:HD11	2.40	0.56
32:i:97:ILE:HG22	32:i:101:VAL:HG21	1.88	0.56
33:j:41:GLN:HG3	33:j:44:HIS:CE1	2.40	0.56
34:k:29:LEU:HD11	34:k:48:ILE:HG13	1.86	0.56
34:k:34:VAL:O	34:k:38:LEU:HD13	2.06	0.56
38:o:14:TYR:O	38:o:17:ARG:HG2	2.06	0.56
41:r:288:THR:HA	41:r:291:MET:HE3	1.87	0.56
43:u:169:MET:HE3	43:u:186:PHE:HE1	1.70	0.56
44:v:189:HIS:HE1	44:v:190:ARG:NH2	2.03	0.56
1:A:243:U:H2'	1:A:244:U:O4'	2.04	0.56
1:A:518:U:H2'	1:A:519:G:C8	2.40	0.56
1:A:988:U:H4'	1:A:1079:G:H5'	1.86	0.56
1:A:1722:A:H5''	2:B:41:A:C6	2.40	0.56
2:B:470:G:O2'	2:B:471:A:H5'	2.05	0.56
2:B:532:U:C2'	2:B:533:G:H5'	2.36	0.56
2:B:719:A:H62	2:B:1437:C:H1'	1.69	0.56
2:B:878:A:N3	2:B:878:A:H2'	2.19	0.56
2:B:1454:C:H2'	2:B:1455:C:H6	1.69	0.56
9:I:65:SER:HB2	9:I:96:ASP:HB3	1.87	0.56
13:P:25:GLY:HA2	13:P:40:ASN:HB2	1.88	0.56
24:a:86:MET:CE	24:a:124:ASN:HD22	2.17	0.56
25:b:124:ARG:HG2	25:b:145:ALA:HA	1.86	0.56
29:f:379:THR:HG22	29:f:381:LYS:N	2.13	0.56
39:p:35:LYS:HB3	39:p:42:LEU:HD11	1.88	0.56
44:v:52:LEU:HD11	44:v:159:LEU:HD22	1.86	0.56
45:w:85:VAL:HG13	45:w:85:VAL:O	2.05	0.56
45:w:96:ALA:HB1	45:w:97:PRO:HD2	1.88	0.56
1:A:587:C:OP1	16:S:7:ARG:NH1	2.36	0.56
1:A:1364:C:O2	12:O:141:LYS:NZ	2.37	0.56
1:A:1571:G:H2'	1:A:1572:A:O4'	2.05	0.56
1:A:1792:G:H2'	1:A:1793:U:H6	1.70	0.56
2:B:462:A:H8	7:G:86:G:H21	1.52	0.56
2:B:1240:U:C2'	2:B:1241:C:H5'	2.36	0.56
7:G:128:U:N3	7:G:154:A:N1	2.44	0.56
8:H:41:A:HO2'	8:H:42:U:P	2.29	0.56
16:S:14:ARG:HD3	16:S:61:LEU:HD11	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:T:105:LEU:HD21	17:T:109:TYR:CE2	2.41	0.56
21:X:160:VAL:HG23	21:X:179:SER:CA	2.36	0.56
24:a:24:ILE:HD13	24:a:42:ILE:HG12	1.86	0.56
28:e:152:SER:O	28:e:154:GLN:N	2.38	0.56
33:j:45:THR:OG1	33:j:87:GLN:NE2	2.39	0.56
1:A:328:G:OP1	14:Q:196:LYS:HD3	2.05	0.56
1:A:370:C:H5'	1:A:371:A:C2	2.41	0.56
1:A:516:A:H2'	1:A:517:C:O4'	2.05	0.56
1:A:751:A:H2'	1:A:752:U:C6	2.41	0.56
1:A:1683:C:O2'	31:h:132:ASN:OD1	2.24	0.56
2:B:9:G:H2'	2:B:10:C:H6	1.70	0.56
2:B:10:C:C2'	2:B:11:A:H5'	2.35	0.56
2:B:458:G:O2'	2:B:459:C:H5'	2.06	0.56
2:B:1183:G:H1'	2:B:1185:A:H61	1.71	0.56
5:E:135:C:H2'	5:E:136:A:C8	2.41	0.56
6:F:15:U:C2'	6:F:16:C:H5'	2.35	0.56
8:H:37:U:H4'	29:f:315:MET:HB3	1.88	0.56
12:O:59:LEU:O	12:O:157:LEU:N	2.37	0.56
16:S:46:MET:HE2	18:U:148:ARG:HG2	1.87	0.56
18:U:64:VAL:HG13	18:U:72:VAL:HG13	1.87	0.56
18:U:80:VAL:CG1	18:U:83:ARG:HE	2.11	0.56
43:u:169:MET:HE3	43:u:186:PHE:CE1	2.41	0.56
45:w:219:ARG:HB2	45:w:225:GLY:HA3	1.86	0.56
1:A:827:G:OP1	14:Q:218:ARG:NH1	2.36	0.56
2:B:616:A:H2'	2:B:617:A:O4'	2.05	0.56
2:B:649:A:C2'	2:B:650:C:H5'	2.35	0.56
2:B:740:G:O2'	29:f:259:ALA:O	2.24	0.56
4:D:84:U:O2'	45:w:218:ARG:NH1	2.39	0.56
15:R:36:ILE:CG2	15:R:114:ILE:HG13	2.36	0.56
24:a:50:LYS:HB2	24:a:64:ARG:HG2	1.86	0.56
29:f:78:ILE:HD13	29:f:330:MET:HG3	1.88	0.56
30:g:14:THR:O	30:g:17:GLN:HG2	2.06	0.56
32:i:45:ARG:C	32:i:46:ARG:HG2	2.31	0.56
35:l:29:VAL:HG12	35:l:30:LYS:O	2.06	0.56
38:o:27:LYS:O	38:o:31:VAL:HG13	2.06	0.56
41:r:143:ILE:HG22	41:r:143:ILE:O	2.04	0.56
43:u:170:LYS:HG2	43:u:201:HIS:HE1	1.70	0.56
44:v:27:LEU:HD11	44:v:31:CYS:HB2	1.88	0.56
45:w:86:VAL:HG13	45:w:134:ILE:HD12	1.88	0.56
45:w:120:ASN:HB3	45:w:122:PRO:HD2	1.87	0.56
46:x:122:VAL:HG13	46:x:126:ARG:NH1	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:C:OP2	41:r:321:ARG:NH2	2.39	0.56
1:A:827:G:H2'	1:A:828:U:H5'	1.88	0.56
1:A:1012:G:H2'	1:A:1014:A:OP2	2.05	0.56
1:A:1359:C:OP2	1:A:1360:A:O2'	2.19	0.56
1:A:1593:A:H2'	1:A:1594:G:H5'	1.87	0.56
2:B:644:U:C3'	2:B:645:A:H5'	2.35	0.56
5:E:25:G:O3'	33:j:46:PRO:HB3	2.04	0.56
5:E:56:U:OP1	19:V:100:LYS:NZ	2.39	0.56
7:G:79:U:H1'	7:G:81:C:OP1	2.05	0.56
7:G:115:A:N3	7:G:117:C:O2'	2.37	0.56
7:G:162:C:OP1	29:f:279:HIS:HD2	1.87	0.56
8:H:123:G:H2'	8:H:124:C:C6	2.41	0.56
13:P:17:ARG:HG3	16:S:161:PRO:HA	1.87	0.56
17:T:142:ILE:HA	17:T:145:VAL:HG12	1.88	0.56
25:b:131:ASP:OD1	25:b:132:LYS:N	2.39	0.56
28:e:116:VAL:HG21	28:e:134:CYS:SG	2.46	0.56
38:o:73:THR:HG22	38:o:75:ASN:N	2.17	0.56
1:A:470:U:H2'	1:A:471:G:O4'	2.05	0.56
2:B:99:A:O2'	2:B:100:U:H5'	2.06	0.56
2:B:1187:A:H2'	2:B:1188:U:O4'	2.06	0.56
2:B:1496:A:C2'	2:B:1497:C:H5'	2.35	0.56
5:E:182:U:O2'	5:E:183:U:H5'	2.06	0.56
13:P:15:ILE:HD12	13:P:51:GLN:HG3	1.88	0.56
17:T:141:HIS:O	17:T:145:VAL:N	2.37	0.56
18:U:92:ARG:HG2	18:U:94:GLU:OE1	2.06	0.56
21:X:178:LEU:HD12	21:X:184:ALA:CA	2.35	0.56
34:k:88:ARG:CG	34:k:89:PRO:HD2	2.35	0.56
37:n:39:TYR:CD1	37:n:40:PRO:HA	2.40	0.56
38:o:39:CYS:SG	38:o:41:PHE:HB2	2.45	0.56
43:u:67:ALA:O	43:u:68:LYS:HD2	2.06	0.56
43:u:84:PRO:HG3	43:u:92:LEU:HD11	1.87	0.56
44:v:31:CYS:SG	44:v:84:ALA:HB2	2.45	0.56
1:A:777:OMC:H5''	1:A:777:OMC:C6	2.39	0.56
2:B:24:C:H1'	2:B:31:U:C1'	2.35	0.56
3:C:62:A:N3	3:C:62:A:H5''	2.21	0.56
4:D:32:A:H2'	4:D:41:G:O6	2.06	0.56
9:I:39:ARG:CZ	41:r:300:LEU:HD23	2.36	0.56
16:S:80:ILE:HD11	16:S:108:ALA:HB1	1.88	0.56
25:b:108:LYS:HA	25:b:125:TRP:HB2	1.87	0.56
29:f:90:VAL:HG22	29:f:104:THR:CG2	2.36	0.56
42:t:2:VAL:HG11	42:t:88:THR:HG21	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:150:LYS:O	45:w:162:LYS:HE2	2.06	0.56
1:A:233:C:C2'	1:A:234:A:H5'	2.35	0.55
1:A:435:G:H2'	1:A:436:A:H5'	1.88	0.55
1:A:1295:A:H2'	1:A:1296:G:C8	2.41	0.55
2:B:532:U:OP2	28:e:200:ARG:HD2	2.06	0.55
2:B:1107:7MG:O4'	33:j:94:ARG:HD2	2.05	0.55
3:C:159:U:H2'	3:C:159:U:O2	2.06	0.55
9:I:29:LEU:HD11	9:I:130:PHE:HB2	1.88	0.55
12:O:102:VAL:HG11	12:O:120:LEU:HD21	1.84	0.55
12:O:140:PRO:HA	12:O:143:GLN:HG2	1.86	0.55
25:b:11:GLN:NE2	25:b:17:CYS:HB3	2.21	0.55
28:e:19:HIS:CE1	28:e:193:ARG:HA	2.42	0.55
28:e:122:ASP:O	28:e:123:ARG:HB2	2.05	0.55
30:g:43:LEU:HB3	30:g:94:ILE:HG12	1.88	0.55
33:j:45:THR:OG1	33:j:46:PRO:HD2	2.06	0.55
33:j:45:THR:HG23	33:j:52:LYS:H	1.70	0.55
41:r:100:MET:HE3	41:r:103:PRO:CA	2.09	0.55
1:A:389:G:H2'	3:C:24:G:O2'	2.06	0.55
2:B:1506:A:H2'	2:B:1507:G:C8	2.41	0.55
8:H:111:C:O2'	8:H:112:U:H5''	2.05	0.55
8:H:131:A:C2'	8:H:132:C:H5'	2.37	0.55
9:I:86:ILE:O	9:I:144:PHE:N	2.35	0.55
11:N:24:LYS:HB2	11:N:24:LYS:NZ	2.21	0.55
13:P:8:ARG:NH2	13:P:62:SER:OG	2.40	0.55
16:S:131:ILE:HG23	16:S:135:GLN:HB2	1.89	0.55
18:U:27:VAL:HG12	18:U:31:LEU:HD13	1.87	0.55
19:V:87:LYS:HG2	19:V:117:TYR:OH	2.06	0.55
25:b:28:HIS:CD2	25:b:32:ARG:HD3	2.41	0.55
28:e:177:LYS:HB2	38:o:29:LEU:HD13	1.87	0.55
29:f:210:ILE:HG23	29:f:214:PHE:HD2	1.71	0.55
30:g:53:ILE:HG21	33:j:94:ARG:CZ	2.35	0.55
35:l:116:HIS:HB2	35:l:123:ARG:HG3	1.88	0.55
39:p:5:ILE:HD11	39:p:11:PHE:N	2.21	0.55
43:u:247:GLY:O	43:u:251:LYS:HD3	2.06	0.55
45:w:95:VAL:O	45:w:100:ARG:NH1	2.39	0.55
1:A:371:A:N3	1:A:371:A:H2'	2.21	0.55
1:A:916:U:O2'	1:A:917:G:H5'	2.06	0.55
5:E:117:U:H2'	5:E:119:G:OP2	2.07	0.55
11:N:185:ASN:HD21	11:N:188:LYS:HD2	1.69	0.55
13:P:14:ARG:HD2	13:P:96:ILE:HD13	1.87	0.55
14:Q:138:ASN:OD1	14:Q:139:ALA:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:U:43:VAL:HG23	18:U:58:HIS:CE1	2.41	0.55
22:Y:53:VAL:HG23	22:Y:56:THR:CG2	2.36	0.55
23:Z:29:SER:HA	23:Z:46:PRO:HA	1.87	0.55
26:c:52:VAL:CG1	26:c:54:LYS:HG3	2.36	0.55
29:f:33:PRO:HD2	29:f:44:THR:CG2	2.33	0.55
31:h:151:VAL:HG23	31:h:168:THR:HG21	1.85	0.55
44:v:56:PRO:CD	44:v:101:PRO:HG3	2.35	0.55
45:w:68:GLN:O	45:w:71:SER:OG	2.20	0.55
1:A:41:C:O2'	1:A:42:A:H5'	2.06	0.55
1:A:266:C:H5'	23:Z:31:PRO:HD3	1.88	0.55
1:A:1288:G:N7	9:I:13:ARG:NH2	2.54	0.55
1:A:1681:A:C6	31:h:140:VAL:HG23	2.41	0.55
2:B:55:C:H2'	2:B:56:U:H5'	1.88	0.55
2:B:1185:A:H5'	2:B:1186:U:C5'	2.36	0.55
5:E:126:A:H1'	5:E:127:C:OP2	2.07	0.55
5:E:150:C:H2'	5:E:151:A:C8	2.41	0.55
8:H:5:G:OP1	29:f:125:SER:HB2	2.05	0.55
16:S:126:LEU:HD22	18:U:148:ARG:HB2	1.89	0.55
17:T:109:TYR:CD2	17:T:142:ILE:HG21	2.41	0.55
19:V:52:GLN:HB2	19:V:64:LEU:HD12	1.88	0.55
21:X:104:ALA:HA	34:k:66:GLN:OE1	2.06	0.55
24:a:115:PHE:HA	24:a:118:ARG:CB	2.36	0.55
26:c:18:PHE:HA	26:c:29:SER:OG	2.07	0.55
28:e:140:ASN:CG	28:e:143:THR:HG22	2.30	0.55
29:f:237:ARG:HG3	29:f:275:HIS:HB2	1.87	0.55
36:m:36:ALA:H	36:m:37:PRO:CD	2.19	0.55
44:v:100:THR:OG1	44:v:102:ASP:OD1	2.16	0.55
45:w:62:LEU:CG	45:w:66:ARG:HH21	2.14	0.55
2:B:1393:G:O2'	2:B:1394:G:H5'	2.07	0.55
12:O:107:PRO:HG2	12:O:112:ARG:NH2	2.22	0.55
13:P:12:LEU:HD13	13:P:83:ILE:CG2	2.36	0.55
16:S:149:LEU:HD12	16:S:149:LEU:O	2.06	0.55
17:T:15:LEU:HD13	17:T:52:ARG:HB2	1.88	0.55
17:T:116:ASP:OD1	17:T:117:ARG:N	2.40	0.55
18:U:27:VAL:HG21	43:u:33:ARG:NH1	2.21	0.55
24:a:69:VAL:HG22	24:a:115:PHE:HE1	1.71	0.55
38:o:21:ASN:ND2	38:o:25:ARG:HH12	2.05	0.55
38:o:49:ARG:HG3	38:o:54:ILE:O	2.07	0.55
41:r:134:ALA:O	41:r:138:SER:HB2	2.06	0.55
1:A:810:A:N6	1:A:834:U:C2	2.75	0.55
1:A:1495:G:C4	12:O:78:LYS:HD3	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1511:A:H2'	1:A:1512:A:O4'	2.07	0.55
1:A:1689:G:C2	1:A:1691:A:H3'	2.41	0.55
1:A:1740:G:H2'	1:A:1741:C:O4'	2.07	0.55
2:B:498:U:C2'	2:B:499:U:H5'	2.37	0.55
2:B:532:U:H5	28:e:200:ARG:HD3	1.71	0.55
2:B:547:G:H1'	28:e:222:PRO:CG	2.31	0.55
2:B:630:C:H3'	2:B:631:C:C6	2.41	0.55
2:B:883:U:N3	46:x:142:ARG:HB3	2.22	0.55
2:B:1107:7MG:O2'	2:B:1108:A:OP1	2.23	0.55
2:B:1306:A:H1'	43:u:166:PHE:HE1	1.72	0.55
2:B:1572:G:H4'	2:B:1573:C:C6	2.42	0.55
5:E:99:G:H2'	5:E:100:C:O4'	2.06	0.55
12:O:107:PRO:HB2	12:O:110:THR:CG2	2.36	0.55
12:O:175:LEU:HD11	29:f:96:PRO:HD3	1.88	0.55
13:P:66:SER:O	13:P:69:CYS:HB2	2.07	0.55
16:S:163:LYS:CG	44:v:190:ARG:HE	2.20	0.55
25:b:112:ASN:O	25:b:133:LYS:HE3	2.07	0.55
39:p:5:ILE:CD1	39:p:10:GLU:HB2	2.31	0.55
45:w:183:ASP:O	45:w:187:GLN:HG2	2.06	0.55
1:A:413:U:H5''	1:A:414:U:O5'	2.07	0.55
1:A:1326:A:H5'	1:A:1592:U:C1'	2.35	0.55
1:A:1748:C:P	15:R:127:ARG:HH12	2.30	0.55
2:B:775:G:H2'	2:B:776:G:H8	1.71	0.55
2:B:1105:C:O2'	38:o:62:LYS:NZ	2.29	0.55
6:F:46:G:H4'	12:O:201:ARG:NH1	2.21	0.55
15:R:102:ALA:HB1	15:R:112:MET:CE	2.22	0.55
16:S:40:LYS:HE2	16:S:63:CYS:SG	2.47	0.55
21:X:84:PHE:CD2	46:x:111:PRO:HG3	2.42	0.55
21:X:109:TRP:HH2	21:X:141:ASN:HB2	1.71	0.55
21:X:169:ASP:OD1	40:q:18:LYS:HD3	2.06	0.55
22:Y:57:ARG:CZ	22:Y:61:ARG:HH21	2.19	0.55
23:Z:25:ARG:HB3	23:Z:72:ARG:CZ	2.37	0.55
26:c:49:LYS:HA	26:c:65:LYS:O	2.06	0.55
28:e:183:GLY:O	28:e:186:PHE:HB3	2.07	0.55
29:f:135:GLN:OE1	29:f:138:ARG:NH1	2.40	0.55
31:h:131:LEU:HD22	31:h:170:ILE:HG22	1.88	0.55
35:l:47:TYR:CE2	35:l:56:LYS:HG3	2.42	0.55
44:v:188:PRO:HA	44:v:191:MET:SD	2.46	0.55
1:A:21:G:H1'	3:C:103:A:N3	2.22	0.55
1:A:1537:G:O2'	1:A:1538:G:H5'	2.07	0.55
1:A:1747:G:H4'	15:R:127:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1798:U:H2'	1:A:1800:A:C5'	2.37	0.55
2:B:1539:A:N7	28:e:215:ASN:ND2	2.55	0.55
2:B:1644:U:O4	29:f:326:ASN:CG	2.49	0.55
3:C:153:C:O2'	3:C:154:A:H5'	2.07	0.55
6:F:14:C:P	12:O:136:ARG:HH22	2.29	0.55
8:H:42:U:O2'	8:H:98:U:O2	2.22	0.55
30:g:69:MET:HE3	30:g:71:HIS:HD2	1.71	0.55
35:l:93:VAL:HG12	35:l:94:ARG:HG3	1.88	0.55
36:m:52:ALA:O	36:m:56:ILE:HG12	2.07	0.55
43:u:196:LEU:HD21	43:u:201:HIS:HB2	1.88	0.55
44:v:39:ILE:HB	44:v:44:PHE:O	2.07	0.55
1:A:945:U:P	27:d:34:ARG:HH22	2.29	0.55
1:A:1130:G:O2'	25:b:29:PRO:O	2.22	0.55
2:B:499:U:H5''	28:e:244:GLY:O	2.06	0.55
8:H:93:G:O2'	8:H:94:G:H5'	2.06	0.55
13:P:74:LEU:O	13:P:78:LEU:HG	2.06	0.55
25:b:73:ILE:O	25:b:109:LEU:HD12	2.06	0.55
26:c:95:VAL:HG21	26:c:106:ALA:CB	2.37	0.55
29:f:176:VAL:HG22	29:f:178:VAL:HG22	1.89	0.55
30:g:36:LEU:O	30:g:36:LEU:HD23	2.06	0.55
33:j:61:ARG:HD3	33:j:63:THR:HG21	1.89	0.55
36:m:105:GLU:O	36:m:108:ARG:N	2.33	0.55
46:x:210:ILE:CG2	46:x:220:VAL:HG11	2.33	0.55
46:x:215:ASP:HB3	46:x:216:PRO:CD	2.37	0.55
1:A:190:G:OP1	23:Z:118:ARG:NH1	2.40	0.55
1:A:371:A:O2'	11:N:24:LYS:HE2	2.06	0.55
1:A:1646:A:H2'	1:A:1647:G:H5'	1.88	0.55
1:A:1804:A2M:H4'	1:A:1805:A:O5'	2.07	0.55
2:B:1145:U:H2'	2:B:1146:U:H6	1.72	0.55
2:B:1229:G:O2'	2:B:1230:G:H5'	2.07	0.55
2:B:1287:A:OP2	2:B:1288:G:N2	2.38	0.55
2:B:1643:C:H42	2:B:1647:G:H1	1.55	0.55
3:C:8:C:C2'	3:C:9:G:H5'	2.37	0.55
7:G:65:G:OP1	20:W:14:ARG:HD3	2.06	0.55
12:O:80:LYS:HD2	12:O:86:LEU:CD1	2.30	0.55
12:O:99:LEU:HA	12:O:102:VAL:CG1	2.36	0.55
13:P:139:TRP:CB	35:l:25:LYS:HG2	2.37	0.55
14:Q:80:VAL:HG21	14:Q:122:LEU:HB2	1.89	0.55
15:R:30:PHE:HA	15:R:119:VAL:CG1	2.25	0.55
15:R:60:PHE:CE2	15:R:82:ARG:HG2	2.42	0.55
15:R:129:THR:CA	15:R:139:TYR:CE2	2.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:62:GLU:HG2	28:e:71:ARG:HG2	1.89	0.55
29:f:36:ASP:OD2	29:f:39:GLN:HG2	2.07	0.55
29:f:350:ALA:HB1	29:f:351:PRO:HD2	1.88	0.55
35:l:86:GLY:HA3	35:l:106:ARG:NH1	2.21	0.55
40:q:21:ARG:HG2	40:q:22:PRO:CD	2.29	0.55
44:v:44:PHE:HE2	44:v:75:ARG:HH11	1.53	0.55
1:A:88:A:H2'	1:A:89:G:O4'	2.07	0.54
1:A:100:A:H5''	14:Q:198:SER:HB2	1.89	0.54
1:A:588:A:OP2	45:w:236:ARG:NH1	2.39	0.54
1:A:967:G:H2'	1:A:968:A:N7	2.21	0.54
1:A:968:A:OP1	25:b:27:LYS:NZ	2.40	0.54
1:A:1037:A:O2'	1:A:1038:U:P	2.65	0.54
1:A:1931:A:OP1	33:j:63:THR:HB	2.07	0.54
2:B:488:A:H4'	2:B:489:A:O5'	2.07	0.54
2:B:520:U:H4'	2:B:521:A:O5'	2.07	0.54
2:B:635:U:H2'	2:B:636:C:C6	2.42	0.54
2:B:1135:G:H3'	2:B:1136:G:H8	1.71	0.54
2:B:1145:U:H2'	2:B:1146:U:C6	2.41	0.54
2:B:1478:C:H2'	2:B:1479:U:C6	2.42	0.54
2:B:1525:U:OP2	2:B:1547:G:N2	2.35	0.54
2:B:1642:A:N6	2:B:1649:A:C4	2.75	0.54
5:E:11:C:O2'	5:E:12:G:H5'	2.07	0.54
11:N:174:PRO:O	25:b:98:VAL:HG12	2.07	0.54
12:O:82:SER:OG	29:f:264:ARG:NE	2.40	0.54
12:O:107:PRO:HB2	12:O:110:THR:HG22	1.89	0.54
14:Q:154:MET:CE	34:k:97:LEU:HG	2.36	0.54
14:Q:159:ARG:HD2	14:Q:168:VAL:HG21	1.89	0.54
15:R:98:ALA:CB	15:R:150:MET:HE3	2.37	0.54
18:U:14:LEU:HD11	18:U:58:HIS:HD2	1.72	0.54
33:j:102:ARG:HD2	33:j:105:LYS:HE2	1.89	0.54
38:o:73:THR:HG23	38:o:74:PRO:HD2	1.90	0.54
41:r:136:VAL:HG13	41:r:143:ILE:CD1	2.37	0.54
41:r:315:GLN:OE1	41:r:315:GLN:N	2.40	0.54
41:r:316:PRO:HG2	41:r:325:LEU:HD12	1.89	0.54
45:w:231:ASP:CG	45:w:232:ALA:H	2.15	0.54
1:A:847:G:H4'	11:N:198:ARG:NH1	2.21	0.54
1:A:924:A:H5''	27:d:30:HIS:CE1	2.42	0.54
1:A:1046:U:O2	1:A:1046:U:H2'	2.07	0.54
1:A:1161:U:H4'	18:U:100:ARG:HB2	1.89	0.54
1:A:1524:C:O2'	1:A:1525:5MC:H5'	2.07	0.54
2:B:739:G:OP1	29:f:253:LYS:HD3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1296:C:H3'	2:B:1297:G:H5''	1.89	0.54
5:E:183:U:H2'	5:E:184:C:C6	2.42	0.54
8:H:131:A:O2'	8:H:132:C:H5'	2.08	0.54
14:Q:161:ASP:OD2	14:Q:164:ILE:HG22	2.07	0.54
15:R:51:VAL:HG21	15:R:58:ILE:HG12	1.89	0.54
17:T:4:LEU:CD1	17:T:24:LEU:HD22	2.36	0.54
21:X:167:ARG:HB3	21:X:168:PRO:HD2	1.88	0.54
24:a:18:ALA:HB1	33:j:92:ILE:HD13	1.89	0.54
26:c:91:VAL:HG11	26:c:110:ALA:CB	2.34	0.54
26:c:121:LYS:HG2	26:c:124:ARG:HH12	1.73	0.54
28:e:57:PRO:HB3	38:o:54:ILE:CD1	2.36	0.54
32:i:19:THR:CG2	32:i:23:CYS:SG	2.96	0.54
41:r:209:VAL:HG23	41:r:248:VAL:HG13	1.90	0.54
1:A:805:A:O2'	1:A:953:A:N1	2.32	0.54
1:A:877:C:H4'	9:I:140:GLY:O	2.07	0.54
1:A:916:U:C2'	1:A:917:G:H5'	2.38	0.54
1:A:934:C:O2	2:B:1278:A:O2'	2.25	0.54
1:A:1599:G:H5'	1:A:1600:G:OP1	2.06	0.54
1:A:1689:G:N2	1:A:1691:A:H3'	2.22	0.54
1:A:1805:A:H2'	1:A:1805:A:OP2	2.08	0.54
2:B:522:U:C2'	2:B:523:G:H5'	2.37	0.54
2:B:753:C:H2'	2:B:754:U:C6	2.41	0.54
4:D:3:G:N2	4:D:116:A:H2	1.96	0.54
7:G:70:OMG:OP1	29:f:280:ARG:NH2	2.40	0.54
12:O:191:GLU:OE1	12:O:194:ARG:NH2	2.38	0.54
24:a:6:PRO:HB3	24:a:25:VAL:O	2.07	0.54
25:b:99:VAL:CG2	25:b:121:VAL:HA	2.37	0.54
31:h:90:ILE:HG12	31:h:115:PHE:CE1	2.43	0.54
44:v:40:LEU:HD21	44:v:83:ILE:HD12	1.87	0.54
44:v:96:VAL:HB	44:v:99:ILE:HD13	1.89	0.54
46:x:126:ARG:HH21	46:x:296:SER:CA	2.15	0.54
46:x:273:ARG:O	46:x:277:ALA:HB2	2.06	0.54
1:A:130:C:P	34:k:78:ARG:HH22	2.31	0.54
1:A:146:U:O2'	46:x:192:GLY:HA2	2.07	0.54
1:A:151:G:OP1	14:Q:163:ARG:NH2	2.31	0.54
1:A:337:A:N1	1:A:359:A:N6	2.54	0.54
1:A:1352:G:H4'	45:w:214:MET:HE2	1.88	0.54
1:A:1369:G:OP2	1:A:1369:G:H4'	2.08	0.54
1:A:1636:C:C2'	1:A:1637:A:H5'	2.37	0.54
1:A:1937:G:O2'	1:A:1938:G:H3'	2.07	0.54
2:B:705:C:O2'	2:B:706:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:781:G:H4'	14:Q:40[B]:ARG:HH22	1.72	0.54
2:B:1166:G:H5'	28:e:233:GLN:HB2	1.89	0.54
5:E:201:A:C2'	5:E:202:A:H5'	2.37	0.54
14:Q:172:HIS:HB3	14:Q:175:ARG:CD	2.37	0.54
22:Y:20:ARG:HB3	22:Y:32:VAL:HG22	1.89	0.54
24:a:22:ALA:CB	24:a:42:ILE:HG23	2.36	0.54
29:f:164:ALA:HB3	29:f:186:ILE:HD12	1.89	0.54
35:l:39:TYR:HB3	35:l:143:TYR:CD1	2.42	0.54
1:A:232:U:O2'	1:A:233:C:H5'	2.07	0.54
1:A:367:A:H5''	1:A:368:U:OP2	2.08	0.54
1:A:1226:A:N3	4:D:79:G:O2'	2.38	0.54
1:A:1370:G:N1	1:A:1509:C:N3	2.38	0.54
1:A:1918:A:H1'	21:X:83:GLN:NE2	2.22	0.54
2:B:647:A:O2'	2:B:648:G:H5'	2.08	0.54
4:D:6:C:H4'	43:u:52:VAL:HG21	1.89	0.54
12:O:79:ARG:NH1	12:O:84:PRO:HG3	2.21	0.54
12:O:100:ARG:HA	12:O:103:ARG:HG2	1.88	0.54
13:P:11:ARG:HD3	13:P:62:SER:HB3	1.89	0.54
16:S:7:ARG:HB2	16:S:9:TYR:HE2	1.72	0.54
17:T:135:LYS:O	17:T:139:MET:N	2.38	0.54
20:W:47:ARG:HB3	20:W:50:ARG:NH1	2.22	0.54
24:a:4:LEU:HD13	24:a:76:HIS:ND1	2.22	0.54
27:d:6:ASN:C	27:d:7:HIS:CD2	2.85	0.54
29:f:92:TYR:HE1	29:f:161:ARG:HD2	1.73	0.54
1:A:504:C:H2'	1:A:505:U:H6	1.73	0.54
2:B:1383:A:H2'	2:B:1384:G:O4'	2.07	0.54
3:C:1:A:H3'	3:C:2:A:H2	1.73	0.54
3:C:156:A:H4'	3:C:157:U:OP2	2.06	0.54
3:C:164:G:O2'	46:x:117:GLN:NE2	2.41	0.54
6:F:62:U:H4'	6:F:63:A:H3'	1.88	0.54
8:H:24:A:C2'	8:H:25:A:H5'	2.37	0.54
17:T:12:ALA:HA	17:T:22:VAL:HG11	1.90	0.54
18:U:24:VAL:HB	18:U:25:PRO:HD2	1.90	0.54
19:V:110:LEU:O	19:V:117:TYR:HA	2.07	0.54
22:Y:53:VAL:HG23	22:Y:56:THR:HG23	1.89	0.54
26:c:32:PHE:O	26:c:52:VAL:HG22	2.08	0.54
43:u:169:MET:O	43:u:173:VAL:N	2.31	0.54
45:w:40:LEU:HD21	45:w:166:ASN:HB3	1.88	0.54
46:x:148:LEU:HD13	46:x:271:LEU:HD21	1.88	0.54
1:A:5:G:H22	46:x:242:ARG:NH2	2.05	0.54
1:A:249:C:O2'	1:A:250:A:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:413:U:C4'	1:A:414:U:C5'	2.85	0.54
1:A:782:A:H5'	2:B:707:A:C5'	2.38	0.54
1:A:1610:A:C2	1:A:1646:A:N6	2.72	0.54
1:A:1677:A:H1'	2:B:693:U:O5'	2.08	0.54
2:B:711:U:H3	2:B:728:A2M:C2	2.21	0.54
2:B:1450:U:H1'	29:f:255:ALA:HB3	1.88	0.54
6:F:56:C:OP1	44:v:170:LYS:NZ	2.39	0.54
18:U:139:ARG:HA	45:w:74:ASN:ND2	2.22	0.54
19:V:47:PHE:O	19:V:77:LEU:HD11	2.08	0.54
21:X:90:TYR:HE2	21:X:92:ARG:HG3	1.72	0.54
23:Z:82:VAL:HG12	23:Z:94:VAL:HG13	1.89	0.54
29:f:105:VAL:HG23	29:f:105:VAL:O	2.08	0.54
39:p:11:PHE:O	39:p:14:ILE:HG22	2.07	0.54
41:r:185:SER:HB2	41:r:203:ARG:HG3	1.88	0.54
46:x:200:ILE:HG21	46:x:226:LEU:HG	1.90	0.54
1:A:102:A:H1'	25:b:66:ASN:HD21	1.73	0.54
1:A:840:A:H4'	1:A:841:C:OP1	2.07	0.54
1:A:1104:G:H22	1:A:1127:OMU:H5''	1.72	0.54
1:A:1680:G:N1	7:G:101:A:OP1	2.28	0.54
2:B:1516:A2M:H1'	2:B:1551:U:C4	2.43	0.54
11:N:62:GLN:OE1	11:N:169:PRO:HD2	2.08	0.54
15:R:36:ILE:HG22	15:R:114:ILE:HG13	1.89	0.54
25:b:63:LEU:CD2	25:b:65:LYS:HG3	2.38	0.54
29:f:265:VAL:HG11	29:f:271:ARG:HH11	1.72	0.54
31:h:96:LEU:HD11	31:h:108:ALA:HB2	1.90	0.54
37:n:55:LYS:HA	37:n:58:ARG:HD2	1.90	0.54
45:w:131:GLU:O	45:w:227:TYR:HB2	2.07	0.54
1:A:1319:G:O2'	1:A:1320:C:H5'	2.07	0.54
2:B:770:A:H5'	14:Q:106:LEU:HD11	1.89	0.54
2:B:852:G:H1'	2:B:853:C:P	2.47	0.54
4:D:13:A:H5''	4:D:110:G:OP2	2.08	0.54
4:D:111:C:H2'	4:D:112:U:C6	2.43	0.54
5:E:39:C:H2'	5:E:40:C:O4'	2.08	0.54
5:E:101:C:H2'	5:E:102:U:O4'	2.08	0.54
8:H:18:C:O2	15:R:69:ARG:HD2	2.08	0.54
12:O:102:VAL:HG11	12:O:120:LEU:HD23	1.89	0.54
43:u:148:PHE:HD2	43:u:177:LEU:HD22	1.72	0.54
45:w:88:ARG:HB2	45:w:108:LEU:HB3	1.90	0.54
45:w:111:ILE:H	45:w:111:ILE:HD12	1.71	0.54
1:A:442:A:C4'	1:A:443:U:H5'	2.29	0.54
1:A:842:U:H5''	1:A:946:G:H1'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1539:U:O2'	9:I:15:VAL:HG22	2.07	0.54
2:B:688:G:H5''	7:G:113:C:O2'	2.08	0.54
2:B:701:G:OP2	15:R:25:HIS:NE2	2.39	0.54
2:B:1282:U:O2'	18:U:88:ARG:O	2.24	0.54
4:D:53:U:H4'	4:D:54:A:H8	1.72	0.54
7:G:24:A:H2'	7:G:25:U:C6	2.43	0.54
18:U:100:ARG:NE	18:U:103:GLU:OE1	2.41	0.54
24:a:77:LYS:HA	30:g:37:ARG:CZ	2.38	0.54
26:c:96:ALA:HB2	26:c:103:ALA:HB2	1.90	0.54
27:d:7:HIS:CD2	27:d:7:HIS:N	2.76	0.54
27:d:38:LEU:HD12	27:d:41:LEU:HD23	1.90	0.54
29:f:10:ARG:HE	29:f:268:THR:CG2	2.22	0.54
42:t:6:LYS:HG3	42:t:94:ASN:CA	2.38	0.54
1:A:419:A:H4'	1:A:420:A:OP1	2.06	0.53
1:A:1368:U:C6	13:P:18:GLY:HA2	2.43	0.53
2:B:100:U:H2'	2:B:101:G:H8	1.71	0.53
2:B:624:5MC:H2'	2:B:625:A:H5''	1.89	0.53
2:B:1214:U:H4'	2:B:1215:A:O4'	2.08	0.53
3:C:116:C:O2'	3:C:117:A:H5'	2.09	0.53
4:D:76:U:H2'	4:D:77:A:H5'	1.88	0.53
6:F:47:C:O2'	6:F:48:G:H5'	2.08	0.53
13:P:107:ASP:HB2	44:v:193:TRP:CD1	2.43	0.53
25:b:108:LYS:HD2	25:b:110:LEU:HD21	1.90	0.53
29:f:116:ARG:HD2	29:f:122:TRP:CD2	2.43	0.53
29:f:163:VAL:HG22	29:f:185:GLU:HG2	1.90	0.53
29:f:244:PRO:O	29:f:247:THR:HG22	2.06	0.53
1:A:101:G:H2'	1:A:102:A:O4'	2.07	0.53
1:A:339:C:C5	36:m:51:ARG:HD3	2.43	0.53
1:A:955:U:H2'	1:A:956:G:C8	2.42	0.53
1:A:1613:G:O2'	1:A:1643:A:N1	2.38	0.53
1:A:1645:C:N4	41:r:187:GLU:HG3	2.23	0.53
6:F:61:A:C5	44:v:67:MET:HE1	2.42	0.53
10:L:167:HIS:O	10:L:170:GLU:HB2	2.08	0.53
13:P:128:PHE:O	13:P:132:ASP:N	2.41	0.53
15:R:27:LYS:O	15:R:31:GLU:HG2	2.08	0.53
26:c:51:ALA:HB1	26:c:95:VAL:HG23	1.90	0.53
29:f:50:LYS:HA	29:f:79:LEU:CD2	2.37	0.53
34:k:85:LYS:HE2	34:k:88:ARG:HH12	1.74	0.53
42:t:6:LYS:CG	42:t:94:ASN:HA	2.37	0.53
43:u:84:PRO:CG	43:u:92:LEU:HD11	2.38	0.53
44:v:52:LEU:HD11	44:v:64:SER:HB3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:62:LEU:HG	45:w:66:ARG:NH2	2.12	0.53
1:A:71:C:H1'	11:N:66:PRO:O	2.08	0.53
1:A:121:G:O2'	46:x:195:GLU:OE2	2.16	0.53
2:B:21:OMC:O3'	2:B:21:OMC:HM22	2.08	0.53
2:B:104:U:O2'	2:B:116:A:N7	2.34	0.53
2:B:705:C:H2'	2:B:706:G:O4'	2.08	0.53
4:D:45:U:H2'	4:D:46:G:H8	1.70	0.53
5:E:29:A:H4'	5:E:30:C:C5'	2.38	0.53
5:E:123:G:H4'	5:E:127:C:H5'	1.90	0.53
6:F:45:G:O2'	6:F:46:G:H5'	2.08	0.53
7:G:24:A:H2'	7:G:25:U:H6	1.73	0.53
11:N:33:GLN:N	11:N:34:PRO:HD2	2.23	0.53
12:O:137:VAL:HG11	16:S:177:VAL:HG11	1.89	0.53
12:O:138:VAL:HG13	12:O:143:GLN:NE2	2.23	0.53
14:Q:45:GLU:OE2	14:Q:49:GLN:NE2	2.41	0.53
14:Q:110:LEU:HD21	14:Q:117:ILE:HD11	1.88	0.53
18:U:69:PRO:HB3	43:u:40:ASP:CG	2.33	0.53
19:V:112:ARG:HB2	19:V:118:GLN:HG2	1.89	0.53
22:Y:3:THR:HG22	22:Y:14:HIS:ND1	2.22	0.53
24:a:7:GLY:C	24:a:23:VAL:HG13	2.34	0.53
24:a:44:GLY:HA3	24:a:70:PHE:CZ	2.44	0.53
28:e:57:PRO:HG3	38:o:53:GLY:O	2.08	0.53
34:k:92:THR:HG23	37:n:78:PHE:CZ	2.44	0.53
41:r:316:PRO:CG	41:r:325:LEU:HD12	2.38	0.53
46:x:165:GLN:HA	46:x:168:PHE:HE2	1.70	0.53
1:A:942:G:O2'	1:A:943:G:H5'	2.08	0.53
1:A:1004:A:H5'	38:o:9:GLY:C	2.34	0.53
1:A:1037:A:HO2'	1:A:1038:U:P	2.31	0.53
2:B:460:U:H5'	22:Y:46:ARG:HD3	1.90	0.53
2:B:527:C:H2'	2:B:528:A:C8	2.43	0.53
2:B:714:A:H2'	2:B:715:G:O4'	2.09	0.53
2:B:1313:G:C2'	2:B:1314:G:H5'	2.38	0.53
9:I:35:PHE:CE1	9:I:39:ARG:HG3	2.43	0.53
10:L:26:ASN:O	10:L:132:ASP:N	2.40	0.53
11:N:185:ASN:HA	25:b:135:ARG:NH1	2.23	0.53
11:N:199:PHE:O	11:N:203:ARG:HG3	2.08	0.53
16:S:95:GLU:CD	16:S:141:ILE:HG12	2.33	0.53
18:U:57:TYR:OH	18:U:87:LYS:HE2	2.09	0.53
24:a:21:LYS:NZ	24:a:129:GLN:O	2.33	0.53
28:e:39:GLY:H	28:e:92:VAL:HG12	1.73	0.53
30:g:14:THR:HG23	30:g:15:LYS:H	1.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:h:86:MET:HG2	31:h:185:VAL:HG13	1.89	0.53
37:n:69:GLU:O	37:n:73:ARG:HG2	2.08	0.53
38:o:33:GLN:HG3	38:o:49:ARG:HH21	1.73	0.53
1:A:69:A:C2'	1:A:70:A:H5'	2.38	0.53
1:A:372:G:C6	37:n:51:VAL:CG1	2.90	0.53
1:A:494:C:H2'	1:A:495:A:O4'	2.08	0.53
1:A:1042:G:C2	1:A:1053:OMC:H5	2.25	0.53
1:A:1085:C:H5''	2:B:484:A:N7	2.23	0.53
1:A:1117:G:N1	1:A:1592:U:OP2	2.28	0.53
1:A:1935:U:OP1	33:j:34:GLN:NE2	2.33	0.53
2:B:1136:G:H5'	2:B:1137:A:OP2	2.09	0.53
5:E:192:U:O2	5:E:195:A:C6	2.62	0.53
14:Q:65:ARG:HH11	14:Q:71:THR:HG23	1.73	0.53
15:R:35:VAL:HG21	15:R:58:ILE:HG23	1.90	0.53
22:Y:46:ARG:HB2	22:Y:48:LYS:HG2	1.91	0.53
24:a:116:GLN:O	24:a:119:TYR:HB3	2.07	0.53
28:e:107:ILE:HD13	28:e:113:VAL:HG11	1.89	0.53
29:f:43:LEU:N	29:f:43:LEU:HD12	2.24	0.53
29:f:112:VAL:HG22	29:f:115:ARG:NH2	2.24	0.53
30:g:16:ILE:HA	30:g:19:VAL:CG2	2.38	0.53
30:g:35:THR:HG22	30:g:40:ARG:NH2	2.24	0.53
31:h:150:HIS:HB2	31:h:173:VAL:HG23	1.86	0.53
37:n:27:TYR:OH	37:n:32:GLU:HB3	2.09	0.53
43:u:10:LYS:O	43:u:14:LYS:HG2	2.09	0.53
46:x:215:ASP:HB3	46:x:216:PRO:HD3	1.91	0.53
1:A:400:G:H21	41:r:83:THR:HG23	1.74	0.53
1:A:463:A:N1	3:C:4:G:N2	2.52	0.53
1:A:784:C:OP1	32:i:27:PRO:HD2	2.08	0.53
1:A:1629:U:O2'	32:i:54:PRO:HB3	2.09	0.53
1:A:1804:A2M:N6	21:X:88:HIS:HA	2.24	0.53
8:H:16:A:O2'	8:H:18:C:OP2	2.17	0.53
11:N:78:ARG:O	11:N:103:ASP:HB2	2.09	0.53
11:N:82:VAL:HG12	11:N:86:LYS:HE2	1.90	0.53
11:N:200:PHE:O	11:N:204:ARG:HG3	2.08	0.53
13:P:107:ASP:HB2	44:v:193:TRP:HA	1.90	0.53
15:R:85:ARG:O	15:R:89:VAL:HG13	2.07	0.53
24:a:7:GLY:O	24:a:86:MET:N	2.34	0.53
25:b:63:LEU:HD21	25:b:65:LYS:HG2	1.89	0.53
26:c:61:LEU:HD11	26:c:79:LYS:HB3	1.91	0.53
29:f:114:PHE:HA	29:f:181:ALA:HB3	1.91	0.53
30:g:29:THR:HA	30:g:32:THR:OG1	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:h:125:ASN:ND2	31:h:168:THR:HB	2.15	0.53
35:l:119:SER:OG	35:l:120:GLY:N	2.41	0.53
1:A:8:C:OP1	14:Q:56:ARG:NH2	2.41	0.53
1:A:1767:C:O2'	33:j:11:ARG:HG2	2.08	0.53
1:A:1943:U:O2	1:A:1943:U:H3'	2.08	0.53
2:B:477:A:OP1	2:B:533:G:O2'	2.23	0.53
2:B:490:A:H62	2:B:1545:U:C4'	2.21	0.53
2:B:1240:U:H2'	2:B:1241:C:C6	2.40	0.53
4:D:11:A:O2'	4:D:12:U:H3'	2.08	0.53
4:D:38:U:N3	4:D:41:G:OP2	2.33	0.53
9:I:154:GLU:HG2	9:I:157:LYS:HE2	1.89	0.53
13:P:41:PRO:HB3	13:P:75:LYS:HD3	1.91	0.53
20:W:82:ARG:NH1	20:W:119:PRO:O	2.40	0.53
21:X:110:ASP:O	21:X:114:VAL:HG23	2.08	0.53
22:Y:43:MET:HE3	22:Y:55:TRP:CH2	2.44	0.53
26:c:98:VAL:HG13	26:c:99:ARG:H	1.74	0.53
28:e:92:VAL:HA	28:e:103:PRO:CG	2.39	0.53
29:f:183:VAL:O	29:f:184:SER:OG	2.27	0.53
29:f:291:GLY:O	29:f:327:ASP:HA	2.09	0.53
29:f:293:ALA:HB3	29:f:296:MET:CE	2.39	0.53
35:l:103:SER:HB3	35:l:105:THR:H	1.74	0.53
37:n:17:ILE:HG12	37:n:29:VAL:CG1	2.39	0.53
37:n:74:ILE:HG13	37:n:75:LYS:N	2.24	0.53
44:v:24:TYR:HE2	44:v:26:THR:HG23	1.73	0.53
1:A:53:C:C2'	1:A:54:G:H5'	2.39	0.53
1:A:1001:U:H2'	1:A:1002:G:O4'	2.09	0.53
1:A:1105:C:OP1	1:A:1130:G:H5'	2.09	0.53
1:A:1539:U:O2	9:I:14:VAL:HA	2.09	0.53
1:A:1669:G:C2'	1:A:1670:G:H5'	2.39	0.53
1:A:1721:G:C2	33:j:5:ARG:NH1	2.77	0.53
2:B:590:A:OP1	28:e:243:THR:HB	2.08	0.53
2:B:1269:G:H2'	2:B:1270:C:C6	2.43	0.53
2:B:1556:U:H2'	2:B:1557:A:H8	1.74	0.53
2:B:1641:U:O2'	2:B:1642:A:H2'	2.09	0.53
2:B:1644:U:H5	29:f:326:ASN:HD21	1.53	0.53
4:D:85:C:H2'	4:D:86:A:C8	2.44	0.53
9:I:44:PHE:CG	9:I:140:GLY:HA3	2.43	0.53
13:P:104:ARG:HD3	44:v:192:ARG:NH2	2.23	0.53
14:Q:113:ASN:HD22	14:Q:183:ALA:HB1	1.74	0.53
25:b:11:GLN:HE21	25:b:17:CYS:HB3	1.74	0.53
28:e:102:LEU:HD11	28:e:107:ILE:CG1	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:27:GLY:CA	29:f:279:HIS:HE1	2.22	0.53
35:l:141:ARG:HG3	35:l:141:ARG:O	2.09	0.53
43:u:75:VAL:CG2	43:u:109:MET:HE1	2.35	0.53
43:u:208:LEU:HB2	43:u:246:GLU:OE2	2.08	0.53
46:x:260:VAL:HG12	46:x:261:ASN:O	2.08	0.53
1:A:351:U:H2'	1:A:352:G:C8	2.44	0.53
1:A:596:G:O2'	1:A:597:G:H5'	2.09	0.53
1:A:970:C:H4'	41:r:93:ASN:ND2	2.23	0.53
1:A:998:A:H2'	1:A:999:G:O4'	2.09	0.53
1:A:1144:U:H2'	1:A:1145:G:O4'	2.08	0.53
1:A:1650:U:O2'	1:A:1651:C:H5'	2.09	0.53
1:A:1765:U:H5'	2:B:13:A:OP2	2.08	0.53
2:B:1107:7MG:H82	33:j:94:ARG:HD3	1.91	0.53
2:B:1481:A:H4'	2:B:1482:G:H8	1.73	0.53
3:C:28:C:H5''	11:N:32:ASN:CB	2.35	0.53
4:D:7:G:OP1	43:u:33:ARG:NE	2.40	0.53
5:E:50:G:H4'	5:E:152:G:H4'	1.91	0.53
6:F:12:U:O2'	6:F:13:U:OP1	2.20	0.53
14:Q:65:ARG:NH1	14:Q:71:THR:HG23	2.24	0.53
16:S:29:PHE:CE2	16:S:31:VAL:CG1	2.92	0.53
22:Y:45:MET:HA	22:Y:45:MET:HE2	1.91	0.53
26:c:30:ASP:OD2	26:c:45:PHE:HD1	1.91	0.53
29:f:109:HIS:HB2	29:f:205:GLU:OE2	2.08	0.53
30:g:16:ILE:HA	30:g:19:VAL:HG23	1.90	0.53
41:r:27:PHE:HE2	41:r:255:PHE:CE1	2.26	0.53
41:r:129:ALA:CB	41:r:244:VAL:HB	2.38	0.53
46:x:260:VAL:CG1	46:x:264:ASP:HB2	2.39	0.53
1:A:76:A:H5'	11:N:105:ARG:NH2	2.23	0.53
1:A:400:G:OP1	40:q:47:THR:HG21	2.09	0.53
1:A:1509:C:C2'	1:A:1510:C:H5'	2.39	0.53
1:A:1719:U:H2'	1:A:1720:G:H5'	1.91	0.53
1:A:1721:G:O2'	2:B:42:A:OP2	2.26	0.53
1:A:1785:U:H5''	14:Q:83:ARG:HE	1.74	0.53
2:B:761:U:H5''	28:e:207:VAL:HG12	1.91	0.53
2:B:865:A:H2'	2:B:866:A:C8	2.43	0.53
2:B:1511:A:H8	2:B:1511:A:OP2	1.91	0.53
3:C:151:G:H2'	3:C:152:C:O4'	2.09	0.53
13:P:39:GLU:OE1	13:P:48:ARG:N	2.42	0.53
15:R:36:ILE:HG13	15:R:48:TYR:OH	2.09	0.53
24:a:39:HIS:ND1	24:a:39:HIS:O	2.42	0.53
29:f:237:ARG:HD3	29:f:238:TRP:HE1	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:299:ASN:HB2	29:f:302:THR:HG21	1.91	0.53
29:f:368:THR:H	29:f:378:GLN:HE22	1.56	0.53
31:h:81:PRO:C	31:h:83:ASN:N	2.65	0.53
31:h:178:PHE:HA	31:h:181:LEU:HD12	1.89	0.53
37:n:70:VAL:O	37:n:74:ILE:HG23	2.09	0.53
38:o:50:LYS:O	38:o:51:ALA:HB2	2.09	0.53
43:u:78:ALA:CB	43:u:105:VAL:HB	2.39	0.53
43:u:204:ARG:HG3	43:u:209:HIS:HB2	1.91	0.53
44:v:188:PRO:O	44:v:191:MET:HB2	2.09	0.53
45:w:232:ALA:O	45:w:235:ASN:ND2	2.40	0.53
1:A:372:G:OP2	41:r:55:ARG:NH2	2.42	0.52
1:A:953:A:H4'	1:A:954:G:H5'	1.90	0.52
1:A:1315:C:H4'	2:B:1435:U:O2'	2.08	0.52
1:A:1779:A:O2'	1:A:1780:C:O5'	2.17	0.52
2:B:19:C:O2'	2:B:25:A:N1	2.38	0.52
2:B:502:U:OP1	28:e:241:ARG:NH2	2.41	0.52
2:B:875:C:H2'	2:B:912:C:C5	2.44	0.52
2:B:1484:G:OP1	29:f:9:PRO:HB3	2.09	0.52
3:C:4:G:H2'	3:C:5:U:H5'	1.90	0.52
3:C:154:A:O2'	3:C:155:U:H5'	2.08	0.52
8:H:28:U:OP1	31:h:70:LEU:CA	2.49	0.52
9:I:180:ARG:HH21	25:b:56:CYS:CB	2.15	0.52
13:P:64:GLU:OE1	13:P:81:LYS:HE3	2.09	0.52
16:S:136:VAL:CG1	16:S:141:ILE:HD11	2.33	0.52
19:V:51:PHE:CE1	19:V:93:LEU:HD12	2.44	0.52
22:Y:14:HIS:HB3	22:Y:15:PRO:HD2	1.91	0.52
23:Z:86:LYS:HG2	23:Z:87:ALA:H	1.73	0.52
29:f:232:THR:OG1	29:f:275:HIS:HB3	2.09	0.52
29:f:265:VAL:HG13	29:f:269:VAL:CG1	2.37	0.52
29:f:265:VAL:CG1	29:f:269:VAL:HG11	2.34	0.52
31:h:119:LEU:HD12	31:h:119:LEU:N	2.24	0.52
33:j:4:PRO:HB2	33:j:31:LEU:CD2	2.39	0.52
34:k:108:THR:HG22	34:k:111:GLN:HG3	1.90	0.52
35:l:44:LEU:CD1	35:l:59:ALA:HB1	2.35	0.52
35:l:67:ASN:OD1	44:v:190:ARG:NH1	2.37	0.52
1:A:38:A:H5''	25:b:35:ALA:CB	2.39	0.52
1:A:90:C:C2'	1:A:91:G:H5'	2.39	0.52
1:A:452:A:H2'	1:A:453:A:O4'	2.09	0.52
1:A:797:A:H2'	1:A:798:G:C8	2.45	0.52
1:A:1610:A:OP2	41:r:181:ARG:NH1	2.42	0.52
1:A:1918:A:C2	1:A:1919:G:HI'	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:682:U:H2'	2:B:683:OMC:O4'	2.09	0.52
2:B:755:OMG:N1	2:B:1382:C:N3	2.51	0.52
2:B:871:G:OP2	28:e:37:ARG:NH2	2.41	0.52
2:B:1177:G:C8	2:B:1435:U:H5''	2.45	0.52
2:B:1629:U:H5''	29:f:138:ARG:NH1	2.04	0.52
3:C:100:U:H2'	3:C:101:U:O4'	2.08	0.52
4:D:53:U:H4'	4:D:54:A:C8	2.44	0.52
12:O:72:TYR:O	12:O:75:PHE:HB3	2.09	0.52
17:T:96:MET:HE3	17:T:100:ARG:HH21	1.74	0.52
21:X:155:TYR:O	21:X:157:VAL:HG13	2.09	0.52
41:r:12:ALA:HB1	41:r:169:PHE:CD1	2.44	0.52
43:u:22:ARG:O	43:u:28:THR:HG22	2.09	0.52
43:u:248:MET:O	43:u:252:ALA:HB2	2.09	0.52
1:A:1719:U:C3'	1:A:1720:G:H5'	2.39	0.52
2:B:1113:A:H61	2:B:1136:G:C2'	2.21	0.52
3:C:62:A:H4'	3:C:63:G:O5'	2.10	0.52
6:F:13:U:C2'	12:O:132:ARG:HA	2.39	0.52
7:G:70:OMG:N1	7:G:119:C:N3	2.45	0.52
7:G:158:A:C2'	7:G:159:G:H5'	2.39	0.52
9:I:97:VAL:HG13	25:b:79:ALA:HB3	1.90	0.52
9:I:108:CYS:SG	9:I:133:LEU:HB2	2.49	0.52
11:N:61:PRO:HG2	11:N:77:GLY:HA3	1.92	0.52
11:N:91:ASN:HB3	11:N:94:PHE:HB3	1.90	0.52
12:O:156:VAL:HG13	12:O:159:ASN:HB2	1.91	0.52
13:P:135:LYS:N	13:P:135:LYS:HD2	2.24	0.52
14:Q:26:LEU:HD21	46:x:221:LEU:HD23	1.91	0.52
19:V:27:LYS:HG2	19:V:78:THR:HG22	1.91	0.52
20:W:30:ASN:HB3	20:W:114:SER:H	1.74	0.52
28:e:20:GLY:HA2	28:e:23:ARG:CG	2.33	0.52
29:f:26:ARG:NH1	29:f:28:ARG:HB3	2.25	0.52
29:f:116:ARG:HB2	29:f:180:LYS:HA	1.91	0.52
41:r:6:SER:HG	41:r:20:THR:HG1	1.38	0.52
42:t:27:GLN:CD	42:t:68:ILE:HD11	2.33	0.52
43:u:106:ALA:O	43:u:110:LEU:HD13	2.09	0.52
46:x:148:LEU:CD1	46:x:271:LEU:HD21	2.39	0.52
1:A:146:U:O2'	46:x:192:GLY:CA	2.58	0.52
1:A:196:C:H3'	1:A:196:C:OP2	2.08	0.52
1:A:766:C:H5''	2:B:723:A:C2	2.44	0.52
1:A:876:A:H4'	9:I:47:LEU:HD12	1.90	0.52
1:A:1342:U:C5'	9:I:2:GLY:HA2	2.38	0.52
1:A:1352:G:H4'	45:w:214:MET:CE	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1365:U:OP2	42:t:63:LYS:HG2	2.09	0.52
3:C:15:G:O2'	3:C:16:A:H8	1.92	0.52
8:H:45:G:H2'	8:H:46:C:O4'	2.09	0.52
13:P:6:TYR:HE2	16:S:152:PRO:HD3	1.71	0.52
18:U:43:VAL:HG13	18:U:43:VAL:O	2.08	0.52
23:Z:79:ILE:HB	23:Z:82:VAL:HB	1.90	0.52
24:a:10:VAL:HG11	24:a:79:PHE:CE1	2.44	0.52
32:i:77:ILE:HD12	32:i:95:GLY:CA	2.35	0.52
41:r:222:ILE:HG23	41:r:222:ILE:O	2.10	0.52
1:A:24:U:O2'	1:A:26:C:N4	2.23	0.52
1:A:110:A:H4'	1:A:111:A:OP1	2.09	0.52
1:A:129:U:O2'	1:A:130:C:H5'	2.09	0.52
1:A:595:A:O2'	1:A:596:G:H5'	2.09	0.52
1:A:1092:A:N6	28:e:2:GLY:O	2.35	0.52
1:A:1328:G:H5'	32:i:47:TYR:CD1	2.44	0.52
1:A:1624:U:H2'	1:A:1625:G:N9	2.24	0.52
2:B:15:C:OP1	21:X:172:LYS:NZ	2.37	0.52
2:B:24:C:H1'	2:B:31:U:H1'	1.92	0.52
3:C:59:A:OP2	3:C:97:U:O2'	2.16	0.52
8:H:124:C:H2'	8:H:125:U:O4'	2.10	0.52
9:I:172:PHE:HE2	11:N:5:LYS:HE3	1.74	0.52
12:O:160:MET:HG3	12:O:161:CYS:N	2.24	0.52
15:R:48:TYR:HA	15:R:51:VAL:CG1	2.35	0.52
16:S:25:THR:HG21	18:U:144:GLU:OE1	2.09	0.52
17:T:95:TRP:CZ3	17:T:130:ASN:HB3	2.43	0.52
23:Z:106:LEU:HD13	23:Z:112:ARG:HD3	1.90	0.52
25:b:100:ASP:HB2	25:b:122:LYS:HE2	1.92	0.52
29:f:81:ALA:CB	29:f:210:ILE:HD11	2.39	0.52
33:j:83:LEU:HD21	33:j:91:ARG:NE	2.24	0.52
1:A:109:C:N3	11:N:54:ARG:NH1	2.58	0.52
1:A:178:U:C3'	1:A:179:G:H5''	2.40	0.52
1:A:1046:U:H4'	15:R:132:ALA:CB	2.40	0.52
1:A:1163:C:H2'	1:A:1164:G:H5'	1.92	0.52
2:B:547:G:C2'	2:B:548:C:H5'	2.40	0.52
2:B:911:U:O2	2:B:911:U:H2'	2.10	0.52
2:B:1362:A:H5''	42:t:67:LYS:HD2	1.91	0.52
2:B:1568:A:HO2'	2:B:1569:A:P	2.29	0.52
5:E:32:A:C2	5:E:33:A:H1'	2.44	0.52
8:H:107:A:H4'	8:H:108:G:O5'	2.10	0.52
8:H:109:G:O2'	8:H:110:C:H5'	2.09	0.52
8:H:129:G:H2'	8:H:130:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:O:138:VAL:CG1	12:O:143:GLN:NE2	2.73	0.52
14:Q:32:SER:CB	36:m:61:VAL:HB	2.40	0.52
14:Q:79:ARG:HB2	14:Q:147:GLU:HG2	1.91	0.52
15:R:102:ALA:O	15:R:107:LEU:HB2	2.09	0.52
16:S:77:SER:CB	16:S:131:ILE:HD11	2.32	0.52
18:U:138:VAL:O	18:U:138:VAL:HG23	2.09	0.52
23:Z:85:GLU:OE2	23:Z:89:GLY:HA2	2.10	0.52
28:e:14:SER:OG	28:e:15:ILE:N	2.36	0.52
28:e:112:ILE:HG22	28:e:135:ILE:CG2	2.21	0.52
30:g:43:LEU:HD23	30:g:44:VAL:N	2.25	0.52
33:j:61:ARG:HB3	33:j:63:THR:HG22	1.92	0.52
35:l:31:ARG:HH11	35:l:33:ARG:CZ	2.22	0.52
36:m:72:GLU:HG3	36:m:73:LEU:HD12	1.92	0.52
41:r:263:GLY:O	41:r:277:LEU:HD13	2.09	0.52
44:v:192:ARG:O	44:v:193:TRP:HB2	2.09	0.52
1:A:452:A:O2'	1:A:453:A:H5'	2.10	0.52
1:A:925:C:H4'	27:d:31:ASN:OD1	2.09	0.52
1:A:1027:G:H5'	1:A:1028:C:C5'	2.40	0.52
1:A:1599:G:H4'	1:A:1600:G:O5'	2.09	0.52
1:A:1760:A:H5'	21:X:121:THR:CG2	2.40	0.52
2:B:672:A:C2'	2:B:673:U:H5'	2.40	0.52
2:B:1516:A2M:C5'	2:B:1517:G:H5'	2.21	0.52
3:C:38:U:O2	34:k:90:LYS:HB2	2.10	0.52
3:C:43:A2M:H1'	37:n:21:ARG:O	2.09	0.52
7:G:27:G:P	29:f:26:ARG:HH22	2.32	0.52
7:G:71:C:H1'	29:f:334:SER:HB2	1.91	0.52
7:G:176:C:O2'	8:H:3:A:N3	2.40	0.52
14:Q:42:ARG:O	14:Q:46:PHE:N	2.37	0.52
24:a:46:LYS:HZ2	24:a:69:VAL:N	1.87	0.52
25:b:75:LEU:HD12	25:b:133:LYS:HD2	1.92	0.52
29:f:78:ILE:CD1	29:f:330:MET:HG3	2.40	0.52
30:g:51:PRO:HG2	30:g:54:ARG:HB3	1.91	0.52
30:g:96:ASP:O	30:g:97:VAL:HB	2.10	0.52
31:h:108:ALA:O	31:h:112:ILE:HG13	2.09	0.52
31:h:150:HIS:NE2	31:h:152:GLU:OE2	2.43	0.52
41:r:99:ARG:HG2	41:r:100:MET:O	2.09	0.52
41:r:153:VAL:HG11	41:r:169:PHE:CZ	2.45	0.52
41:r:169:PHE:CD2	41:r:170:LEU:HD12	2.44	0.52
43:u:50:ARG:HH11	43:u:153:ASP:CG	2.16	0.52
43:u:154:VAL:HG22	43:u:165:VAL:HG11	1.90	0.52
45:w:43:ALA:O	45:w:47:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:231:ASP:OD1	45:w:232:ALA:N	2.43	0.52
1:A:373:A:N1	3:C:34:U:C5	2.77	0.52
1:A:766:C:O2'	1:A:767:C:OP1	2.26	0.52
1:A:778:A2M:H2'	1:A:779:C:C6	2.45	0.52
1:A:830:C:OP1	41:r:272:LYS:NZ	2.41	0.52
7:G:109:G:H5'	8:H:40:C:OP1	2.10	0.52
8:H:28:U:OP2	31:h:70:LEU:C	2.52	0.52
19:V:118:GLN:HE21	19:V:120:LYS:NZ	2.08	0.52
20:W:128:TRP:HB3	20:W:131:ILE:HG12	1.91	0.52
26:c:5:THR:HG22	26:c:40:LYS:HE2	1.91	0.52
29:f:193:ILE:HD13	29:f:196:LYS:CE	2.40	0.52
34:k:108:THR:HG22	34:k:111:GLN:CG	2.40	0.52
1:A:59:A:H2'	1:A:60:A:O4'	2.10	0.52
1:A:85:G:H4'	1:A:86:U:H5'	1.92	0.52
1:A:87:C:H5''	1:A:88:A:OP2	2.10	0.52
1:A:439:G:P	23:Z:84:ARG:HH22	2.33	0.52
1:A:977:G:C2'	1:A:978:U:H5'	2.39	0.52
1:A:991:C:H2'	1:A:992:U:O4'	2.08	0.52
1:A:1030:U:H2'	1:A:1031:G:O4'	2.09	0.52
1:A:1940:U:H2'	1:A:1942:A:OP2	2.09	0.52
2:B:576:C:H2'	2:B:577:G:C4'	2.39	0.52
2:B:861:A:C2'	2:B:862:U:H5'	2.39	0.52
2:B:1175:C:C2'	2:B:1176:U:H5'	2.39	0.52
5:E:121:U:C2'	5:E:122:C:H5'	2.40	0.52
9:I:32:LEU:C	9:I:32:LEU:HD23	2.35	0.52
11:N:85:LEU:HD23	11:N:121:LEU:CD1	2.39	0.52
13:P:40:ASN:OD1	13:P:84:LEU:HD11	2.10	0.52
14:Q:154:MET:HE1	34:k:97:LEU:CG	2.40	0.52
15:R:5:SER:H	15:R:147:GLN:NE2	2.08	0.52
21:X:93:PRO:O	21:X:94:SER:HB3	2.09	0.52
26:c:56:LYS:HB2	26:c:61:LEU:HB2	1.91	0.52
28:e:147:ARG:NH2	28:e:155:LYS:HG2	2.25	0.52
29:f:321:TYR:HD1	29:f:340:ARG:HB3	1.74	0.52
35:l:86:GLY:HA3	35:l:106:ARG:CZ	2.40	0.52
36:m:66:MET:HE3	36:m:86:CYS:HA	1.92	0.52
41:r:316:PRO:HB2	41:r:325:LEU:CD1	2.35	0.52
45:w:120:ASN:O	45:w:124:GLU:HG3	2.10	0.52
1:A:112:C:C2'	1:A:113:U:H5'	2.40	0.52
1:A:207:C:OP1	32:i:80:VAL:HG21	2.10	0.52
1:A:470:U:H2'	1:A:471:G:H5'	1.91	0.52
1:A:807:G:C2'	1:A:808:G:H5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1100:A:N6	41:r:99:ARG:HD2	2.25	0.52
1:A:1316:OMG:C2'	1:A:1317:G:H5'	2.40	0.52
2:B:65:G:O2'	2:B:66:A:H5'	2.10	0.52
2:B:1455:C:C2'	2:B:1456:U:H5'	2.40	0.52
2:B:1541:A:H5''	2:B:1542:G:C5'	2.40	0.52
3:C:78:G:C2'	3:C:79:A:H5'	2.39	0.52
4:D:53:U:H4'	4:D:54:A:O5'	2.09	0.52
5:E:207:G:H2'	5:E:208:G:O4'	2.10	0.52
8:H:26:C:O5'	8:H:26:C:H6	1.92	0.52
17:T:106:LEU:HD23	17:T:142:ILE:HD11	1.92	0.52
17:T:138:LEU:HD21	17:T:142:ILE:CD1	2.40	0.52
19:V:71:GLY:O	19:V:77:LEU:HA	2.10	0.52
25:b:69:TRP:CZ2	25:b:71:PRO:HG3	2.45	0.52
28:e:82:MET:HA	28:e:86:GLN:OE1	2.10	0.52
29:f:46:PHE:HE1	29:f:208:VAL:O	1.92	0.52
30:g:40:ARG:HB3	30:g:95:THR:HG22	1.92	0.52
38:o:84:ARG:HA	38:o:87:ARG:HD3	1.91	0.52
41:r:75:ILE:HD12	41:r:76:PRO:CD	2.39	0.52
43:u:46:THR:CG2	43:u:47:PRO:HD2	2.39	0.52
45:w:140:SER:N	45:w:235:ASN:OD1	2.33	0.52
1:A:984:A:O2'	37:n:11:ARG:HB2	2.10	0.51
1:A:1367:A:H2	1:A:1511:A:C2	2.28	0.51
1:A:1495:G:H5'	12:O:78:LYS:HE3	1.92	0.51
2:B:35:G:O2'	37:n:10:GLN:NE2	2.43	0.51
2:B:111:G:C8	38:o:16:ALA:HA	2.46	0.51
2:B:489:A:O2'	2:B:490:A:H2'	2.10	0.51
2:B:492:C:OP1	28:e:200:ARG:NH2	2.42	0.51
2:B:571:U:H2'	2:B:572:U:C6	2.45	0.51
2:B:1376:U:H2'	2:B:1377:U:C6	2.45	0.51
2:B:1452:U:H2'	2:B:1453:U:O4'	2.10	0.51
4:D:15:U:O2'	4:D:16:U:H5'	2.10	0.51
5:E:62:C:O2'	5:E:63:A:H5'	2.10	0.51
5:E:140:U:C2'	5:E:141:U:H5'	2.40	0.51
5:E:194:A:C5'	38:o:52:VAL:HB	2.40	0.51
8:H:99:G:H3'	8:H:99:G:N3	2.25	0.51
11:N:82:VAL:O	11:N:86:LYS:HG3	2.09	0.51
12:O:27:VAL:HA	12:O:137:VAL:HG23	1.91	0.51
17:T:99:LEU:O	17:T:103:ARG:HG3	2.10	0.51
24:a:45:MET:CE	24:a:49:PRO:HD3	2.40	0.51
28:e:54:ARG:NE	28:e:58:LEU:HD11	2.25	0.51
29:f:92:TYR:HB2	29:f:159:ILE:HB	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:192:THR:HG22	29:f:195:GLU:CG	2.36	0.51
31:h:155:SER:O	31:h:156:GLU:HB3	2.10	0.51
46:x:129:VAL:HG23	46:x:134:HIS:HB2	1.92	0.51
1:A:476:U:H2'	1:A:477:A:C8	2.45	0.51
1:A:1013:A:H2'	1:A:1014:A:O4'	2.09	0.51
1:A:1117:G:O2'	1:A:1593:A:N6	2.43	0.51
1:A:1733:A:H2'	40:q:13:TYR:CE1	2.45	0.51
2:B:684:C:H2'	2:B:685:C:C5	2.45	0.51
3:C:65:G:O2'	34:k:64:ARG:NH2	2.43	0.51
3:C:123:G:H2'	3:C:124:A:H8	1.70	0.51
4:D:29:C:H5''	10:L:140:ARG:HD3	1.92	0.51
4:D:46:G:OP1	43:u:164:ARG:HG3	2.10	0.51
4:D:83:A:H4'	45:w:218:ARG:HB2	1.92	0.51
5:E:193:A:O2'	5:E:195:A:H2'	2.10	0.51
12:O:213:LEU:HD23	12:O:213:LEU:O	2.10	0.51
16:S:26:VAL:O	18:U:143:VAL:HA	2.11	0.51
29:f:17:LEU:HA	29:f:18:PRO:C	2.35	0.51
34:k:10:LEU:HD11	34:k:58:ILE:CG1	2.25	0.51
37:n:51:VAL:O	37:n:55:LYS:HG2	2.10	0.51
41:r:58:GLY:HA2	41:r:97:GLY:O	2.11	0.51
43:u:184:ASN:HA	43:u:189:TYR:CD2	2.45	0.51
45:w:85:VAL:CG2	45:w:238:LEU:HD21	2.38	0.51
1:A:51:A:H1'	1:A:978:U:O2'	2.10	0.51
1:A:145:G:H2'	46:x:249:ARG:HH22	1.75	0.51
1:A:803:G:O4'	41:r:118:GLN:NE2	2.41	0.51
1:A:809:G:H2'	1:A:810:A:C1'	2.39	0.51
1:A:919:OMC:HM21	9:I:144:PHE:HE1	1.75	0.51
1:A:1002:G:H1'	1:A:1025:A:H62	1.73	0.51
1:A:1059:C:H4'	2:B:480:G:OP1	2.10	0.51
1:A:1571:G:C2'	1:A:1572:A:H5'	2.39	0.51
1:A:1662:OMC:HM22	1:A:1663:U:H5'	1.92	0.51
1:A:1716:U:H2'	1:A:1717:A:O4'	2.10	0.51
1:A:1944:A:N1	1:A:1947:C:H1'	2.25	0.51
2:B:748:A:C2'	41:r:68:THR:HG21	2.28	0.51
2:B:1177:G:O2'	2:B:1435:U:OP1	2.28	0.51
2:B:1301:C:H2'	2:B:1302:U:O4'	2.11	0.51
2:B:1435:U:H2'	2:B:1436:C:H5'	1.90	0.51
2:B:1514:U:H1'	29:f:256:CYS:HG	1.74	0.51
3:C:5:U:O2'	3:C:6:G:H5'	2.11	0.51
14:Q:21:MET:SD	36:m:53:VAL:HG21	2.50	0.51
16:S:92:MET:HE2	16:S:94:LYS:CG	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:74:VAL:HG12	24:a:75:ASN:O	2.09	0.51
26:c:115:SER:CA	26:c:118:GLU:HG2	2.35	0.51
28:e:88:VAL:C	28:e:89:LEU:HD12	2.35	0.51
28:e:129:ALA:O	28:e:132:ASP:HB2	2.10	0.51
28:e:223:SER:O	28:e:237:LEU:N	2.42	0.51
32:i:101:VAL:HG23	32:i:106:ARG:CG	2.40	0.51
43:u:170:LYS:HD3	43:u:186:PHE:CZ	2.46	0.51
1:A:120:C:H2'	1:A:121:G:C5'	2.34	0.51
1:A:749:A:H2'	1:A:750:A:C8	2.45	0.51
1:A:988:U:C4'	1:A:1079:G:H5'	2.39	0.51
1:A:1798:U:H2'	1:A:1800:A:H5''	1.92	0.51
3:C:2:A:H2'	3:C:3:C:O4'	2.10	0.51
4:D:28:C:O2'	4:D:54:A:N1	2.41	0.51
4:D:44:U:O2'	4:D:45:U:H5'	2.11	0.51
4:D:106:G:H2'	4:D:107:G:O4'	2.11	0.51
7:G:79:U:O3'	7:G:80:U:H3'	2.10	0.51
9:I:96:ASP:OD2	9:I:98:ARG:NH2	2.42	0.51
9:I:131:ASP:OD1	41:r:282:LEU:HD22	2.10	0.51
11:N:78:ARG:O	11:N:78:ARG:HG2	2.10	0.51
11:N:129:VAL:HG23	34:k:124:ALA:HB3	1.92	0.51
12:O:131:VAL:HG23	12:O:136:ARG:HH21	1.76	0.51
16:S:131:ILE:CG2	16:S:135:GLN:HB2	2.41	0.51
18:U:80:VAL:HG12	18:U:83:ARG:HG3	1.93	0.51
24:a:20:LYS:HD2	24:a:45:MET:O	2.10	0.51
28:e:112:ILE:CG1	38:o:79:VAL:HG22	2.40	0.51
28:e:237:LEU:HD23	28:e:243:THR:HG22	1.92	0.51
29:f:220:CYS:SG	29:f:331:LEU:HD22	2.50	0.51
35:l:149:ILE:HD12	44:v:83:ILE:HG12	1.91	0.51
36:m:83:LEU:HD23	36:m:100:ARG:HH12	1.69	0.51
45:w:47:ARG:NH2	45:w:176:GLU:O	2.43	0.51
1:A:185:A:H2'	1:A:186:U:O4'	2.10	0.51
1:A:1623:A:H5'	1:A:1624:U:P	2.50	0.51
1:A:1964:G:N7	2:B:6:A:N6	2.58	0.51
2:B:635:U:H2'	2:B:636:C:H6	1.74	0.51
2:B:861:A:H2'	2:B:862:U:H5'	1.92	0.51
2:B:908:C:O2'	2:B:909:C:H5'	2.11	0.51
2:B:1307:A:H5'	43:u:181:HIS:HA	1.93	0.51
2:B:1313:G:H2'	2:B:1314:G:H5'	1.92	0.51
7:G:177:C:H5'	7:G:178:A:O5'	2.10	0.51
11:N:114:MET:HG2	36:m:33:ARG:NH2	2.23	0.51
12:O:99:LEU:CD1	12:O:122:ALA:HB2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:P:133:LYS:CD	13:P:134:LYS:N	2.73	0.51
28:e:177:LYS:NZ	38:o:33:GLN:OE1	2.37	0.51
35:l:101:ARG:O	35:l:101:ARG:HG2	2.10	0.51
41:r:188:ILE:HD13	41:r:200:TYR:CE1	2.45	0.51
1:A:310:G:H5''	14:Q:30:LYS:CE	2.35	0.51
1:A:932:G:N2	1:A:945:U:H1'	2.25	0.51
2:B:78:U:O2'	7:G:78:U:OP1	2.18	0.51
2:B:883:U:H4'	2:B:884:U:H5''	1.92	0.51
2:B:1143:G:H2'	46:x:122:VAL:CG2	2.40	0.51
2:B:1299:G:C2'	2:B:1300:A:H5'	2.40	0.51
3:C:5:U:H2'	3:C:6:G:H5'	1.93	0.51
3:C:152:C:H2'	3:C:153:C:C6	2.45	0.51
5:E:201:A:H2'	5:E:202:A:O4'	2.11	0.51
7:G:116:U:O2'	7:G:118:G:OP2	2.26	0.51
16:S:70:LYS:HG3	16:S:71:LEU:N	2.26	0.51
24:a:41:LEU:C	24:a:42:ILE:HG13	2.36	0.51
36:m:64:SER:OG	36:m:65:PRO:HD2	2.10	0.51
45:w:214:MET:CE	45:w:217:LYS:HB3	2.40	0.51
1:A:206:G:H2'	1:A:207:C:C6	2.46	0.51
1:A:414:U:OP1	40:q:34:ARG:NH1	2.44	0.51
1:A:933:C:H2'	1:A:934:C:O4'	2.10	0.51
1:A:944:U:C5'	27:d:34:ARG:HH12	2.24	0.51
1:A:1045:7MG:C2	2:B:1550:U:H5''	2.46	0.51
1:A:1939:A:H1'	1:A:1944:A:N6	2.26	0.51
2:B:1445:U:H5''	2:B:1515:G:O6	2.10	0.51
2:B:1517:G:OP2	2:B:1517:G:H4'	2.10	0.51
3:C:31:A:C3'	3:C:32:U:H5''	2.40	0.51
4:D:24:U:H1'	4:D:118:C:H1'	1.90	0.51
6:F:46:G:H2'	6:F:47:C:O4'	2.11	0.51
9:I:3:VAL:HG12	9:I:4:ASP:O	2.11	0.51
12:O:76:LEU:HD11	12:O:92:ARG:NH2	2.20	0.51
15:R:32:THR:CG2	15:R:91:MET:HG3	2.38	0.51
22:Y:39:LYS:O	22:Y:43:MET:HB2	2.11	0.51
23:Z:28:MET:SD	23:Z:75:TRP:HA	2.51	0.51
24:a:32:SER:HB3	24:a:35:ARG:HB2	1.92	0.51
25:b:91:LYS:HD2	25:b:94:GLU:CD	2.36	0.51
29:f:24:GLN:HE22	29:f:26:ARG:NH2	2.09	0.51
31:h:120:MET:HB3	31:h:153:ARG:CG	2.40	0.51
33:j:61:ARG:HD3	33:j:63:THR:CG2	2.40	0.51
36:m:93:PHE:CD2	36:m:97:LYS:HE3	2.46	0.51
41:r:133:PRO:O	41:r:137:MET:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:146:U:H5''	46:x:249:ARG:HH21	1.76	0.51
1:A:1140:U:H2'	1:A:1141:G:O4'	2.11	0.51
1:A:1593:A:C2'	1:A:1594:G:H5'	2.41	0.51
1:A:1610:A:OP2	41:r:203:ARG:HD3	2.11	0.51
2:B:1220:G:O2'	2:B:1221:A:H5'	2.10	0.51
2:B:1517:G:OP1	2:B:1552:A:N6	2.33	0.51
3:C:63:G:O2'	34:k:53:LYS:HE3	2.11	0.51
3:C:68:A:H2'	3:C:69:U:O4'	2.11	0.51
5:E:117:U:OP2	17:T:124:TYR:OH	2.24	0.51
11:N:42:ARG:O	11:N:46:LEU:HB2	2.10	0.51
12:O:67:ARG:O	12:O:71:LYS:HG3	2.11	0.51
12:O:72:TYR:CE2	12:O:164:VAL:HG11	2.45	0.51
12:O:218:LYS:O	12:O:219:PHE:HB2	2.10	0.51
13:P:135:LYS:HE3	13:P:140:HIS:C	2.35	0.51
13:P:139:TRP:HB2	35:l:25:LYS:HG2	1.92	0.51
15:R:47:LEU:HD11	15:R:76:TRP:CZ2	2.46	0.51
16:S:112:LEU:HD23	16:S:123:ILE:HG12	1.93	0.51
22:Y:42:ALA:O	22:Y:46:ARG:HG3	2.11	0.51
24:a:9:VAL:HG11	24:a:84:TYR:HB2	1.93	0.51
25:b:109:LEU:HD22	25:b:121:VAL:HG11	1.92	0.51
41:r:318:ASN:HD21	41:r:321:ARG:HB3	1.75	0.51
43:u:53:VAL:HG13	43:u:165:VAL:HG13	1.93	0.51
43:u:110:LEU:CD1	43:u:177:LEU:HD23	2.41	0.51
44:v:91:ILE:O	44:v:91:ILE:HD12	2.10	0.51
45:w:226:ASP:OD1	45:w:230:ARG:NH2	2.44	0.51
1:A:758:G:O2'	1:A:759:C:H5'	2.11	0.51
1:A:871:U:O2'	1:A:872:G:H5'	2.10	0.51
1:A:1313:A:C6	1:A:1315:C:H1'	2.46	0.51
1:A:1747:G:C8	15:R:139:TYR:CE2	2.98	0.51
2:B:98:G:O2'	17:T:82:GLU:O	2.27	0.51
2:B:493:A:C2'	2:B:494:U:H5'	2.41	0.51
2:B:654:C:OP1	2:B:655:A:O2'	2.19	0.51
2:B:1644:U:O2'	29:f:170:LYS:HE2	2.11	0.51
3:C:4:G:O2'	3:C:5:U:H5'	2.11	0.51
5:E:4:G:OP2	24:a:16:ARG:NH2	2.42	0.51
5:E:26:G:H4'	33:j:44:HIS:O	2.11	0.51
14:Q:34:VAL:HG13	14:Q:35:MET:N	2.26	0.51
26:c:42:HIS:O	26:c:44:GLY:N	2.43	0.51
26:c:98:VAL:HG13	26:c:99:ARG:N	2.26	0.51
29:f:92:TYR:CE1	29:f:161:ARG:HD2	2.45	0.51
35:l:48:THR:CB	35:l:58:THR:HG23	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:62:ARG:HH12	35:l:120:GLY:H	1.58	0.51
1:A:42:A:H4'	2:B:1169:OMG:HM21	1.92	0.51
1:A:44:A:P	14:Q:101:LYS:HD2	2.51	0.51
1:A:146:U:OP2	46:x:249:ARG:NH2	2.35	0.51
1:A:184:A:H2'	1:A:185:A:C5'	2.41	0.51
1:A:208:A:H3'	1:A:209:A:C5'	2.41	0.51
1:A:413:U:P	40:q:34:ARG:HH22	2.34	0.51
1:A:985:C:H5'	37:n:11:ARG:HB3	1.93	0.51
1:A:1291:A:H2'	1:A:1292:C:C6	2.45	0.51
1:A:1357:G:N2	12:O:105:MET:HE2	2.26	0.51
1:A:1369:G:N2	1:A:1510:C:O2	2.19	0.51
1:A:1721:G:N3	2:B:41:A:O2'	2.42	0.51
2:B:490:A:H62	2:B:1545:U:H4'	1.76	0.51
2:B:524:U:O2'	28:e:152:SER:HB3	2.11	0.51
2:B:1267:U:C2'	2:B:1268:U:H5'	2.40	0.51
4:D:18:G:H3'	4:D:19:C:H6	1.75	0.51
7:G:172:A:O2'	29:f:104:THR:HG23	2.10	0.51
15:R:29:THR:HA	15:R:87:SER:OG	2.11	0.51
16:S:29:PHE:HB2	18:U:146:LEU:HB3	1.92	0.51
16:S:144:TYR:HA	16:S:149:LEU:CD2	2.41	0.51
18:U:68:THR:HB	18:U:69:PRO:CD	2.41	0.51
18:U:70:ARG:NH1	43:u:40:ASP:HA	2.27	0.51
18:U:139:ARG:HG2	45:w:74:ASN:ND2	2.24	0.51
21:X:138:VAL:HG21	21:X:147:ILE:HG12	1.93	0.51
28:e:80:GLU:HG3	38:o:66:GLY:CA	2.40	0.51
30:g:26:VAL:HG13	30:g:32:THR:HG22	1.93	0.51
32:i:19:THR:HG22	32:i:20:ARG:N	2.26	0.51
41:r:171:LYS:HG2	41:r:176:VAL:HG21	1.93	0.51
45:w:116:PHE:CE2	45:w:188:ILE:HD12	2.46	0.51
1:A:7:C:H2'	1:A:8:C:H6	1.76	0.50
1:A:249:C:H2'	1:A:250:A:H5'	1.93	0.50
1:A:253:G:H2'	41:r:221:ASN:OD1	2.11	0.50
1:A:349:U:O2	2:B:569:G:N2	2.43	0.50
1:A:439:G:H5'	23:Z:84:ARG:HH12	1.76	0.50
1:A:451:G:H1'	1:A:452:A:OP2	2.11	0.50
1:A:492:G:H2'	1:A:492:G:N3	2.26	0.50
1:A:741:G:H2'	1:A:742:G:H8	1.76	0.50
1:A:805:A:OP2	9:I:111:ARG:NH2	2.44	0.50
1:A:1347:G:H1	1:A:1531:U:H3	1.57	0.50
1:A:1652:U:O2'	1:A:1653:A:H5'	2.11	0.50
1:A:1779:A:H2	1:A:1921:G:H1	1.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:757:U:H3	2:B:1381:A:H2	1.58	0.50
2:B:1106:U:H3'	2:B:1107:7MG:C5'	2.41	0.50
2:B:1477:G:H2'	2:B:1478:C:H6	1.74	0.50
2:B:1642:A:H1'	2:B:1643:C:OP1	2.11	0.50
3:C:15:G:O2'	3:C:16:A:O5'	2.29	0.50
6:F:58:U:O4	44:v:177:HIS:NE2	2.39	0.50
11:N:127:LYS:O	34:k:126:LYS:HG2	2.11	0.50
12:O:86:LEU:C	12:O:86:LEU:HD12	2.36	0.50
12:O:181:GLU:O	12:O:185:ARG:HG3	2.11	0.50
12:O:214:GLU:O	12:O:218:LYS:HG2	2.11	0.50
13:P:6:TYR:O	13:P:11:ARG:NE	2.40	0.50
13:P:15:ILE:HD13	13:P:56:VAL:HG12	1.92	0.50
16:S:59:ASP:OD2	45:w:77:LEU:HD21	2.11	0.50
23:Z:106:LEU:HD11	23:Z:108:LEU:HD21	1.93	0.50
28:e:65:HIS:HB2	28:e:72:VAL:HG23	1.93	0.50
30:g:26:VAL:HG23	30:g:31:GLN:NE2	2.27	0.50
30:g:26:VAL:HG22	30:g:27:LEU:N	2.26	0.50
44:v:40:LEU:HD11	44:v:83:ILE:HG13	1.94	0.50
1:A:34:A:C5'	14:Q:98:GLY:HA3	2.41	0.50
1:A:135:A:O2'	1:A:136:G:O5'	2.29	0.50
1:A:258:U:O2'	23:Z:100:ASN:ND2	2.43	0.50
1:A:375:U:O2'	1:A:376:A:H5'	2.11	0.50
1:A:384:C:OP2	41:r:196:ARG:NH1	2.42	0.50
1:A:418:A:C2'	1:A:419:A:H5'	2.40	0.50
1:A:776:A:H4'	1:A:777:OMC:OP2	2.11	0.50
1:A:922:A:H2'	1:A:923:C:C6	2.46	0.50
1:A:952:G:N3	1:A:952:G:H2'	2.26	0.50
1:A:1047:G:H2'	1:A:1049:A:N7	2.26	0.50
1:A:1711:U:O2'	1:A:1712:U:H5'	2.10	0.50
2:B:460:U:H5'	22:Y:46:ARG:NE	2.25	0.50
2:B:1227:G:O2'	2:B:1228:U:H5'	2.10	0.50
2:B:1453:U:OP1	29:f:268:THR:HG21	2.11	0.50
4:D:56:G:H2'	4:D:57:C:H5'	1.93	0.50
16:S:126:LEU:HD21	18:U:148:ARG:HB2	1.94	0.50
18:U:14:LEU:HD11	18:U:58:HIS:CD2	2.46	0.50
19:V:47:PHE:HB2	19:V:97:PHE:CZ	2.45	0.50
22:Y:20:ARG:HB3	22:Y:32:VAL:HG21	1.92	0.50
24:a:21:LYS:HG2	24:a:48:TYR:OH	2.10	0.50
24:a:48:TYR:CD1	24:a:130:ARG:HB3	2.46	0.50
28:e:58:LEU:CD2	28:e:75:LEU:HD21	2.22	0.50
29:f:162:VAL:O	29:f:185:GLU:HA	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:112:VAL:HG13	35:l:122:VAL:HB	1.93	0.50
41:r:114:ILE:CG2	41:r:119:LYS:HG3	2.41	0.50
43:u:147:PRO:CB	43:u:178:ALA:HB2	2.41	0.50
44:v:32:LYS:O	44:v:35:THR:HG23	2.11	0.50
45:w:150:LYS:HD3	45:w:242:ILE:HG22	1.94	0.50
1:A:387:U:O2	1:A:1664:U:H1'	2.11	0.50
1:A:394:C:N3	1:A:412:G:H5'	2.27	0.50
1:A:449:C:C2'	1:A:450:U:H5'	2.41	0.50
1:A:1361:A:O3'	35:l:116:HIS:HE1	1.95	0.50
1:A:1659:OMG:C8	1:A:1659:OMG:HM23	2.45	0.50
2:B:698:A:H5''	15:R:83:TRP:O	2.11	0.50
2:B:1217:G:H5'	2:B:1314:G:H1'	1.92	0.50
7:G:80:U:O4'	7:G:82:U:H5''	2.11	0.50
9:I:47:LEU:O	9:I:51:ARG:HG3	2.11	0.50
9:I:188:ARG:HH22	9:I:191:ARG:HD2	1.74	0.50
13:P:65:LEU:HD23	13:P:66:SER:N	2.26	0.50
15:R:119:VAL:HA	15:R:145:HIS:O	2.11	0.50
18:U:41:ASP:OD1	18:U:99:SER:OG	2.28	0.50
20:W:110:GLU:HA	20:W:130:LYS:HD2	1.94	0.50
26:c:64:THR:HG23	26:c:98:VAL:HG11	1.93	0.50
26:c:94:ALA:O	26:c:97:ALA:HB3	2.12	0.50
28:e:185:SER:HA	28:e:188:ARG:HG2	1.94	0.50
34:k:10:LEU:O	34:k:18:LEU:HD21	2.12	0.50
34:k:29:LEU:CD1	34:k:48:ILE:HG13	2.41	0.50
34:k:92:THR:HG23	37:n:78:PHE:HZ	1.76	0.50
38:o:21:ASN:O	38:o:24:LYS:HB3	2.12	0.50
38:o:50:LYS:O	38:o:51:ALA:CB	2.59	0.50
46:x:203:LYS:HG2	46:x:230:ASN:HB3	1.93	0.50
46:x:222:TRP:HZ3	46:x:226:LEU:HD23	1.77	0.50
1:A:141:U:OP1	46:x:161:ARG:NH2	2.38	0.50
1:A:178:U:H2'	1:A:179:G:H5''	1.94	0.50
1:A:378:G:C2'	1:A:379:A:H5'	2.41	0.50
1:A:1040:C:H4'	2:B:92:A:H5'	1.93	0.50
1:A:1358:U:H2'	1:A:1359:C:O4'	2.11	0.50
2:B:1355:A:O2'	2:B:1356:U:H5'	2.11	0.50
3:C:109:A:H2'	37:n:20:ARG:NH2	2.26	0.50
4:D:97:U:H4'	45:w:128:ARG:HD3	1.92	0.50
12:O:72:TYR:OH	12:O:91:HIS:O	2.28	0.50
13:P:147:LEU:O	13:P:148:GLN:C	2.51	0.50
28:e:159:PRO:HD2	28:e:162:CYS:SG	2.51	0.50
28:e:178:PRO:HG2	38:o:26:ALA:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:k:22:LEU:HD11	34:k:55:ILE:HG23	1.94	0.50
42:t:18:LYS:HG2	42:t:18:LYS:O	2.11	0.50
45:w:110:GLN:N	45:w:113:ASN:OD1	2.41	0.50
1:A:324:G:O6	1:A:346:G:H1'	2.12	0.50
1:A:867:G:C5'	9:I:72:LYS:HE2	2.42	0.50
1:A:874:G:O2'	1:A:921:A:N6	2.45	0.50
1:A:1075:OMG:N2	14:Q:92:HIS:CD2	2.80	0.50
1:A:1961:C:O2'	3:C:139:A:N3	2.36	0.50
2:B:1167:G:O2'	2:B:1168:A:H5'	2.12	0.50
2:B:1482:G:H3'	2:B:1483:G:C8	2.47	0.50
6:F:65:U:O2	44:v:78:ASP:HB2	2.11	0.50
7:G:119:C:H2'	7:G:120:A:C8	2.46	0.50
13:P:107:ASP:H	44:v:193:TRP:HA	1.76	0.50
16:S:52:LYS:O	16:S:52:LYS:HG2	2.11	0.50
17:T:4:LEU:HD22	17:T:32:ILE:CG2	2.42	0.50
21:X:169:ASP:C	40:q:14:ALA:HB1	2.36	0.50
22:Y:11:PHE:HB3	29:f:376:ARG:HD2	1.93	0.50
24:a:49:PRO:CG	24:a:67:VAL:HG12	2.41	0.50
25:b:63:LEU:HD21	25:b:65:LYS:CG	2.42	0.50
28:e:40:PHE:HA	28:e:91:GLY:HA3	1.94	0.50
43:u:31:GLN:HA	43:u:34:ARG:NH2	2.27	0.50
44:v:27:LEU:CD2	44:v:79:SER:HB3	2.41	0.50
1:A:804:C:O2	1:A:808:G:H4'	2.11	0.50
1:A:1126:C:H2'	2:B:756:U:C2	2.47	0.50
1:A:1170:G:C5'	4:D:102:C:H1'	2.42	0.50
2:B:562:G:H2'	2:B:563:U:C6	2.47	0.50
2:B:653:G:O2'	2:B:656:U:OP2	2.29	0.50
2:B:1135:G:H3'	2:B:1136:G:C8	2.47	0.50
9:I:89:ILE:CG2	9:I:109:ALA:HB2	2.42	0.50
9:I:158:HIS:CD2	9:I:170:LYS:HB3	2.47	0.50
12:O:92:ARG:HD3	12:O:165:GLY:HA3	1.94	0.50
13:P:129:ASP:O	13:P:132:ASP:HB3	2.12	0.50
21:X:119:LEU:HD13	21:X:137:ILE:CD1	2.41	0.50
28:e:47:THR:HA	28:e:84:THR:HG22	1.92	0.50
34:k:112:LEU:HG	34:k:116:ARG:HH12	1.76	0.50
35:l:144:LEU:HD11	44:v:182:ILE:HD11	1.93	0.50
44:v:102:ASP:OD1	44:v:103:ILE:HD12	2.12	0.50
1:A:429:G:C8	1:A:1690:A:H1'	2.47	0.50
1:A:1290:C:O2'	1:A:1291:A:H5'	2.12	0.50
2:B:123:G:N2	2:B:124:G:H1'	2.26	0.50
2:B:498:U:H5''	28:e:245:ARG:NH1	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1276:U:H2'	2:B:1277:A:O4'	2.11	0.50
3:C:60:U:H5'	34:k:59:LEU:CD1	2.41	0.50
5:E:147:A:H62	39:p:35:LYS:HZ3	1.59	0.50
14:Q:59:THR:OG1	14:Q:147:GLU:OE2	2.20	0.50
15:R:17:ALA:HB2	15:R:98:ALA:HB2	1.93	0.50
17:T:95:TRP:CZ2	17:T:99:LEU:HD22	2.47	0.50
19:V:87:LYS:HZ1	19:V:116:THR:N	2.10	0.50
29:f:58:ARG:NH1	29:f:361:ILE:HD12	2.26	0.50
30:g:46:ILE:CD1	30:g:91:VAL:HG22	2.42	0.50
31:h:120:MET:HA	31:h:153:ARG:HE	1.75	0.50
33:j:6:VAL:CG2	33:j:33:MET:HG3	2.34	0.50
33:j:45:THR:HG22	33:j:52:LYS:H	1.76	0.50
43:u:53:VAL:HG11	43:u:165:VAL:HG13	1.94	0.50
46:x:134:HIS:ND1	46:x:291:GLY:HA3	2.27	0.50
1:A:1666:G:O2'	1:A:1667:U:H5'	2.11	0.50
2:B:513:A:OP1	14:Q:88:LYS:NZ	2.45	0.50
2:B:532:U:H2'	2:B:533:G:H5'	1.92	0.50
2:B:1260:U:OP1	18:U:23:GLY:N	2.43	0.50
2:B:1647:G:C5'	29:f:169:ARG:HH22	2.25	0.50
3:C:25:C:O2'	41:r:52:ALA:O	2.25	0.50
3:C:56:G:H2'	3:C:57:C:O4'	2.11	0.50
5:E:197:C:H5'	5:E:198:A:OP1	2.12	0.50
6:F:53:G:O6	13:P:118:ARG:NH1	2.44	0.50
11:N:51:THR:CG2	11:N:54:ARG:HB3	2.42	0.50
11:N:85:LEU:CD1	11:N:102:VAL:HG22	2.37	0.50
14:Q:153:PRO:O	14:Q:159:ARG:HD3	2.12	0.50
15:R:59:PRO:HB3	15:R:76:TRP:CB	2.42	0.50
18:U:70:ARG:HH12	43:u:40:ASP:HA	1.76	0.50
18:U:143:VAL:O	18:U:143:VAL:HG13	2.11	0.50
25:b:131:ASP:C	25:b:134:ILE:HG22	2.37	0.50
26:c:4:SER:O	26:c:8:GLN:HG3	2.12	0.50
26:c:16:SER:HB2	41:r:138:SER:OG	2.11	0.50
29:f:338:PRO:CD	29:f:341:ARG:HH21	2.25	0.50
41:r:27:PHE:HE2	41:r:255:PHE:HE1	1.59	0.50
41:r:336:GLU:O	41:r:339:MET:HB3	2.12	0.50
42:t:43:TYR:O	42:t:47:GLN:HG2	2.11	0.50
43:u:46:THR:HG22	43:u:47:PRO:HD2	1.94	0.50
1:A:206:G:H2'	1:A:207:C:H6	1.76	0.50
1:A:944:U:H2'	1:A:945:U:C6	2.47	0.50
1:A:1757:A:H2'	1:A:1758:C:C6	2.46	0.50
1:A:1953:A:H3'	1:A:1954:G:C5'	2.37	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:877:A:O4'	46:x:304:ARG:NH1	2.45	0.50
2:B:1372:A:OP2	2:B:1372:A:H3'	2.12	0.50
2:B:1564:U:O2'	2:B:1565:G:O4'	2.30	0.50
5:E:176:U:H2'	5:E:177:G:C8	2.46	0.50
7:G:41:A:N1	7:G:61:C:N3	2.60	0.50
14:Q:78:PHE:O	14:Q:147:GLU:HA	2.12	0.50
14:Q:186:LYS:HD3	14:Q:191:ARG:CD	2.42	0.50
22:Y:57:ARG:NE	22:Y:61:ARG:HE	2.10	0.50
28:e:174:ARG:HG2	38:o:52:VAL:HG21	1.93	0.50
35:l:47:TYR:CZ	35:l:56:LYS:HG3	2.47	0.50
35:l:67:ASN:OD1	35:l:68:THR:N	2.45	0.50
43:u:81:HIS:O	43:u:84:PRO:HD2	2.11	0.50
1:A:347:U:P	1:A:347:U:H3'	2.52	0.49
1:A:376:A:H4'	37:n:75:LYS:HD3	1.94	0.49
1:A:463:A:HO2'	1:A:758:G:H4'	1.77	0.49
2:B:703:A:H5'	15:R:137:THR:HB	1.93	0.49
5:E:26:G:O2'	33:j:43:PRO:HA	2.12	0.49
5:E:139:A:H2'	5:E:140:U:O4'	2.12	0.49
6:F:66:C:H4'	44:v:41:ALA:CB	2.41	0.49
7:G:111:C:H2'	7:G:112:G:O4'	2.12	0.49
9:I:161:ALA:HB1	25:b:47:LYS:O	2.12	0.49
10:L:137:LEU:O	10:L:160:VAL:HG21	2.11	0.49
11:N:187:TYR:O	11:N:191:LYS:N	2.43	0.49
14:Q:93:LYS:HB2	14:Q:95:ILE:CD1	2.39	0.49
15:R:67:ILE:HG23	15:R:82:ARG:HH21	1.77	0.49
16:S:50:LYS:HZ3	18:U:148:ARG:HD2	1.75	0.49
16:S:98:ASP:OD2	16:S:103:GLY:HA3	2.12	0.49
20:W:84:ARG:H	20:W:100:ASN:HB3	1.77	0.49
21:X:109:TRP:CH2	21:X:141:ASN:HB2	2.47	0.49
21:X:132:ASN:HA	21:X:184:ALA:HB3	1.93	0.49
25:b:102:LEU:HD21	25:b:124:ARG:NE	2.27	0.49
26:c:117:LEU:CA	26:c:120:MET:HE3	2.29	0.49
31:h:84:ILE:HD11	31:h:153:ARG:CZ	2.42	0.49
31:h:148:ARG:O	31:h:173:VAL:HB	2.11	0.49
36:m:20:ILE:HG12	36:m:22:ALA:H	1.76	0.49
1:A:189:U:O3'	23:Z:118:ARG:NH1	2.45	0.49
1:A:192:A:H2'	1:A:193:A:O4'	2.12	0.49
2:B:690:U:H2'	2:B:691:A2M:C8	2.42	0.49
4:D:28:C:C2'	4:D:29:C:H5'	2.42	0.49
5:E:71:C:O2'	5:E:72:C:H5'	2.11	0.49
8:H:111:C:H4'	8:H:112:U:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:36:LEU:O	9:I:40:THR:OG1	2.18	0.49
13:P:13:VAL:HB	13:P:56:VAL:HB	1.94	0.49
16:S:31:VAL:HG21	16:S:39:ALA:CB	2.35	0.49
16:S:38:VAL:HG22	45:w:222:VAL:HA	1.95	0.49
17:T:14:ILE:HD12	17:T:42:ARG:HG2	1.93	0.49
19:V:91:LYS:HB2	19:V:117:TYR:CE1	2.47	0.49
24:a:39:HIS:HA	24:a:74:VAL:O	2.11	0.49
24:a:45:MET:HE3	24:a:48:TYR:HA	1.94	0.49
29:f:25:ILE:HG13	29:f:341:ARG:HH11	1.77	0.49
30:g:46:ILE:HD12	30:g:91:VAL:HG22	1.94	0.49
38:o:49:ARG:HH11	38:o:51:ALA:C	2.19	0.49
43:u:18:VAL:HG22	43:u:24:ARG:NH1	2.24	0.49
1:A:339:C:C4	36:m:51:ARG:HD3	2.47	0.49
1:A:379:A:H2'	1:A:380:A:O4'	2.12	0.49
1:A:1666:G:C2'	1:A:1667:U:H5'	2.42	0.49
2:B:1355:A:H5''	42:t:36:TYR:O	2.12	0.49
2:B:1387:A:H3'	2:B:1388:U:H2'	1.93	0.49
4:D:7:G:H5''	43:u:22:ARG:HD3	1.94	0.49
5:E:36:A:H2'	5:E:37:A:C8	2.48	0.49
16:S:74:ARG:O	16:S:97:ARG:HG3	2.11	0.49
17:T:24:LEU:HD12	17:T:24:LEU:N	2.27	0.49
21:X:164:THR:HG22	21:X:174:ALA:HB2	1.94	0.49
29:f:31:SER:O	29:f:346:ARG:NH1	2.45	0.49
29:f:49:PHE:HZ	29:f:168:LEU:HD21	1.77	0.49
30:g:36:LEU:HD21	30:g:61:TYR:C	2.38	0.49
43:u:110:LEU:HD11	43:u:177:LEU:HD23	1.92	0.49
44:v:65:GLY:HA2	44:v:72:VAL:HB	1.93	0.49
46:x:263:GLU:OE1	46:x:263:GLU:N	2.42	0.49
1:A:30:C:C4'	14:Q:112:LYS:HE3	2.37	0.49
1:A:776:A:O2'	1:A:777:OMC:HM22	2.12	0.49
1:A:979:G:N1	1:A:1095:C:N3	2.43	0.49
2:B:109:U:C1'	38:o:20:ALA:HB2	2.42	0.49
2:B:477:A:H2'	2:B:478:C:C5'	2.42	0.49
2:B:1192:U:O2'	2:B:1193:U:H5'	2.12	0.49
5:E:118:U:O4'	17:T:96:MET:HG2	2.13	0.49
7:G:87:U:H2'	7:G:88:U:C6	2.47	0.49
8:H:92:A:H2'	8:H:93:G:O4'	2.13	0.49
15:R:13:LYS:HE2	15:R:154:GLN:OE1	2.12	0.49
23:Z:54:ARG:HB3	23:Z:64:GLU:HG2	1.94	0.49
24:a:43:ALA:HB1	24:a:111:VAL:HG11	1.91	0.49
28:e:105:GLY:HA2	28:e:139:HIS:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:44:THR:O	29:f:44:THR:HG22	2.12	0.49
29:f:223:CYS:HA	29:f:280:ARG:O	2.12	0.49
44:v:27:LEU:HD11	44:v:31:CYS:CB	2.42	0.49
45:w:110:GLN:HB2	45:w:113:ASN:OD1	2.13	0.49
45:w:131:GLU:N	45:w:132:PRO:HD2	2.27	0.49
1:A:348:A:H61	2:B:1353:U:H3	1.61	0.49
1:A:421:G:OP1	1:A:421:G:H4'	2.12	0.49
1:A:807:G:O2'	1:A:808:G:H5'	2.13	0.49
1:A:1083:G:N1	28:e:207:VAL:HG11	2.28	0.49
1:A:1618:A:N3	3:C:18:G:O2'	2.40	0.49
2:B:8:U:H5''	39:p:39:SER:OG	2.12	0.49
2:B:562:G:O2'	2:B:563:U:H5'	2.12	0.49
2:B:679:C:H2'	2:B:680:U:C6	2.47	0.49
2:B:764:G:H5'	2:B:1165:G:N2	2.27	0.49
2:B:781:G:H2'	2:B:782:U:O4'	2.12	0.49
5:E:4:G:C2'	5:E:5:G:H5'	2.43	0.49
5:E:101:C:C2'	5:E:102:U:H5'	2.43	0.49
9:I:16:ARG:NE	9:I:53:LEU:O	2.38	0.49
18:U:75:ILE:HG12	18:U:88:ARG:CD	2.41	0.49
19:V:88:LYS:HA	19:V:117:TYR:OH	2.12	0.49
23:Z:82:VAL:HG12	23:Z:94:VAL:HG12	1.91	0.49
24:a:35:ARG:C	24:a:37:TYR:H	2.15	0.49
24:a:69:VAL:O	24:a:108:LYS:NZ	2.41	0.49
33:j:21:MET:HG3	33:j:33:MET:HE2	1.95	0.49
33:j:103:ILE:O	33:j:106:ARG:HG2	2.12	0.49
36:m:69:ARG:HD3	36:m:85:PHE:CZ	2.47	0.49
43:u:55:ILE:CG2	43:u:164:ARG:HH21	2.19	0.49
44:v:55:LEU:HD21	44:v:62:VAL:CG1	2.42	0.49
1:A:18:C:H5'	14:Q:154:MET:SD	2.53	0.49
1:A:36:U:O3'	1:A:1102:U:H4'	2.12	0.49
1:A:65:A:H3'	1:A:358:C:H5''	1.94	0.49
1:A:98:G:N7	11:N:12:HIS:NE2	2.60	0.49
1:A:138:A:H2'	1:A:139:A:C8	2.48	0.49
1:A:311:U:O2'	1:A:360:A:H1'	2.12	0.49
1:A:422:C:O2'	1:A:436:A:N1	2.38	0.49
1:A:453:A:H61	3:C:14:G:H1'	1.77	0.49
1:A:972:OMG:N1	1:A:1105:C:N3	2.48	0.49
1:A:1367:A:OP1	13:P:17:ARG:NH1	2.45	0.49
1:A:1689:G:H1'	1:A:1751:U:O2	2.13	0.49
1:A:1774:U:O2'	1:A:1775:G:H5'	2.13	0.49
2:B:1106:U:H3'	2:B:1107:7MG:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3:C:H2'	3:C:4:G:O4'	2.12	0.49
4:D:47:U:H2'	4:D:48:G:O4'	2.13	0.49
7:G:103:U:C3'	7:G:104:G:H5''	2.43	0.49
11:N:175:ARG:HB2	25:b:96:LEU:O	2.13	0.49
13:P:38:VAL:O	13:P:48:ARG:HA	2.12	0.49
13:P:49:HIS:CD2	13:P:51:GLN:HG2	2.47	0.49
18:U:40:VAL:O	18:U:61:THR:HG23	2.11	0.49
20:W:94:VAL:HG13	22:Y:19:ARG:CB	2.43	0.49
20:W:110:GLU:HG2	20:W:130:LYS:CE	2.43	0.49
24:a:82:THR:HA	30:g:60:TYR:OH	2.13	0.49
28:e:98:ILE:HD13	28:e:166:ILE:HG22	1.93	0.49
29:f:338:PRO:HD3	29:f:341:ARG:HH21	1.77	0.49
31:h:175:VAL:HG22	31:h:177:SER:H	1.76	0.49
32:i:106:ARG:O	32:i:110:VAL:HG23	2.13	0.49
37:n:33:ARG:HA	37:n:39:TYR:O	2.12	0.49
41:r:36:VAL:HG11	41:r:244:VAL:HG12	1.94	0.49
41:r:142:LYS:HG2	41:r:181:ARG:HD3	1.95	0.49
42:t:2:VAL:CG1	42:t:88:THR:HG21	2.43	0.49
43:u:78:ALA:HB3	43:u:105:VAL:HB	1.94	0.49
43:u:245:LEU:HG	43:u:248:MET:CE	2.43	0.49
45:w:173:TYR:OH	45:w:198:VAL:O	2.26	0.49
1:A:213:C:H5'	1:A:214:G:OP2	2.12	0.49
1:A:319:C:H41	1:A:326:G:H22	1.60	0.49
1:A:497:A:H4'	44:v:78:ASP:OD2	2.12	0.49
2:B:109:U:O2	38:o:19:GLY:HA2	2.12	0.49
2:B:499:U:O2'	2:B:500:U:H5'	2.13	0.49
2:B:539:U:H1'	2:B:661:G:N2	2.28	0.49
2:B:712:C:H2'	2:B:713:A:C8	2.48	0.49
2:B:1647:G:P	29:f:169:ARG:HH21	2.36	0.49
5:E:71:C:C2'	5:E:72:C:H5'	2.43	0.49
24:a:42:ILE:HD12	24:a:74:VAL:CB	2.38	0.49
26:c:76:MET:HE3	26:c:77:TYR:CE2	2.48	0.49
29:f:287:ILE:HG23	29:f:329:ILE:CD1	2.42	0.49
29:f:290:LEU:HD23	29:f:329:ILE:HD12	1.94	0.49
35:l:26:THR:O	35:l:27:SER:CB	2.58	0.49
38:o:32:SER:O	38:o:37:HIS:NE2	2.28	0.49
45:w:114:THR:OG1	45:w:207:LEU:HD22	2.12	0.49
1:A:921:A:O2'	1:A:922:A:H5'	2.13	0.49
1:A:1253:A:O2'	1:A:1254:A:H5'	2.12	0.49
1:A:1588:G:O2'	1:A:1589:A:H5'	2.12	0.49
1:A:1666:G:H2'	1:A:1667:U:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1785:U:O2'	2:B:513:A:H1'	2.13	0.49
2:B:493:A:OP1	28:e:199:VAL:HA	2.13	0.49
2:B:754:U:H2'	2:B:755:OMG:H5'	1.94	0.49
2:B:1298:A:C2'	2:B:1299:G:H5'	2.43	0.49
4:D:2:G:H1	4:D:117:U:H3	1.60	0.49
7:G:58:C:H2'	7:G:59:U:H5'	1.95	0.49
11:N:193:ASN:O	36:m:23:GLY:HA2	2.12	0.49
12:O:99:LEU:CA	12:O:102:VAL:HG12	2.42	0.49
13:P:45:LYS:HA	13:P:47:TRP:CZ3	2.47	0.49
14:Q:154:MET:HE1	34:k:97:LEU:HD23	1.95	0.49
16:S:88:GLY:O	16:S:89:TYR:HB2	2.13	0.49
23:Z:48:ARG:HG2	23:Z:49:LYS:N	2.28	0.49
27:d:6:ASN:C	27:d:7:HIS:HD2	2.20	0.49
29:f:153:PHE:O	29:f:157:ALA:HB3	2.13	0.49
40:q:13:TYR:CZ	40:q:51:TYR:HB2	2.48	0.49
40:q:24:PRO:CD	40:q:27:ILE:HD12	2.42	0.49
1:A:428:G:N2	1:A:430:A:H3'	2.27	0.49
1:A:982:G:OP1	37:n:16:HIS:NE2	2.32	0.49
1:A:1319:G:C2'	1:A:1320:C:H5'	2.43	0.49
1:A:1511:A:H4'	16:S:5:HIS:CD2	2.48	0.49
1:A:1801:G:H1'	21:X:86:ARG:HB3	1.94	0.49
2:B:99:A:C2'	2:B:100:U:H5'	2.43	0.49
2:B:451:C:C2'	2:B:452:A:H5'	2.42	0.49
2:B:718:A:H5''	2:B:719:A:C8	2.33	0.49
2:B:722:G:H2'	2:B:723:A:C8	2.48	0.49
2:B:761:U:H5''	28:e:207:VAL:CG1	2.43	0.49
3:C:103:A:OP2	3:C:104:A:H2'	2.12	0.49
6:F:47:C:O3'	13:P:125:ARG:NH2	2.45	0.49
17:T:28:GLU:OE1	17:T:49:LEU:HG	2.13	0.49
19:V:27:LYS:HE3	19:V:116:THR:HG22	1.95	0.49
21:X:102:MET:SD	34:k:67:ARG:NH2	2.86	0.49
29:f:10:ARG:HE	29:f:268:THR:HG22	1.78	0.49
29:f:54:THR:HG22	29:f:371:LYS:HE2	1.95	0.49
29:f:209:ARG:HG2	29:f:209:ARG:HH11	1.77	0.49
29:f:290:LEU:HD21	29:f:329:ILE:HD13	1.94	0.49
32:i:11:VAL:HG23	32:i:11:VAL:O	2.13	0.49
34:k:52:ARG:HH21	34:k:53:LYS:NZ	2.11	0.49
34:k:103:GLU:HA	34:k:106:ARG:HG2	1.95	0.49
41:r:271:VAL:HG23	41:r:272:LYS:HG3	1.95	0.49
45:w:111:ILE:O	45:w:113:ASN:N	2.42	0.49
46:x:210:ILE:H	46:x:210:ILE:HD12	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:836:U:H2'	1:A:837:C:C6	2.48	0.49
1:A:850:A:N1	1:A:948:G:O2'	2.41	0.49
1:A:1008:C:H2'	1:A:1009:G:O4'	2.13	0.49
1:A:1087:C:OP1	1:A:1090:C:N4	2.37	0.49
2:B:73:OMU:HM23	2:B:73:OMU:H1'	1.54	0.49
2:B:705:C:C2'	2:B:706:G:H5'	2.43	0.49
2:B:778:U:H2'	2:B:779:C:O4'	2.12	0.49
2:B:1282:U:OP2	9:I:188:ARG:NH1	2.45	0.49
2:B:1506:A:H2'	2:B:1507:G:H8	1.77	0.49
3:C:94:G:OP1	37:n:73:ARG:HD2	2.12	0.49
4:D:77:A:H2'	4:D:78:C:O4'	2.13	0.49
4:D:84:U:C2'	45:w:218:ARG:NH1	2.76	0.49
5:E:9:U:OP1	33:j:55:ALA:HB3	2.13	0.49
5:E:136:A:H2'	5:E:137:A:O4'	2.13	0.49
5:E:145:A:H4'	5:E:146:A:O5'	2.13	0.49
6:F:58:U:C2'	6:F:59:U:H5''	2.42	0.49
11:N:133:MET:SD	34:k:121:ARG:HG3	2.52	0.49
12:O:30:LYS:HA	12:O:58:GLN:HB2	1.93	0.49
14:Q:45:GLU:HG3	46:x:120:LYS:HD3	1.95	0.49
14:Q:47:ARG:HD3	14:Q:140:ASP:OD2	2.13	0.49
16:S:163:LYS:HG3	44:v:190:ARG:HE	1.78	0.49
18:U:64:VAL:HG12	18:U:66:ASN:H	1.78	0.49
21:X:128:ILE:HG23	21:X:184:ALA:O	2.13	0.49
25:b:102:LEU:HG	25:b:144:GLN:HE21	1.78	0.49
31:h:86:MET:HG2	31:h:185:VAL:CG2	2.37	0.49
31:h:125:ASN:HD22	31:h:168:THR:CB	2.16	0.49
31:h:154:LYS:HD2	31:h:167:TYR:CE2	2.48	0.49
32:i:64:THR:HA	32:i:67:ILE:HD12	1.94	0.49
45:w:180:CYS:HB2	45:w:183:ASP:H	1.78	0.49
45:w:238:LEU:O	45:w:242:ILE:HG13	2.13	0.49
46:x:148:LEU:HD13	46:x:271:LEU:CD2	2.43	0.49
46:x:191:THR:HG21	46:x:247:VAL:HG11	1.95	0.49
1:A:494:C:N3	1:A:741:G:N1	2.49	0.48
1:A:1085:C:H2'	1:A:1086:U:H5'	1.95	0.48
1:A:1918:A:H1'	21:X:83:GLN:HE22	1.78	0.48
1:A:1943:U:H4'	2:B:18:A:H4'	1.95	0.48
2:B:476:A:H2'	2:B:477:A:O3'	2.13	0.48
2:B:1362:A:H5'	42:t:84:VAL:CG1	2.43	0.48
4:D:18:G:H3'	4:D:19:C:C6	2.48	0.48
9:I:44:PHE:HZ	9:I:133:LEU:HD21	1.77	0.48
9:I:120:ILE:HG21	9:I:127:CYS:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:190:PHE:CB	27:d:34:ARG:HH21	2.26	0.48
12:O:139:ILE:HG12	16:S:168:PHE:CD1	2.48	0.48
12:O:146:TYR:OH	16:S:159:LYS:HD3	2.13	0.48
12:O:219:PHE:C	13:P:98:ALA:HB1	2.38	0.48
16:S:76:TYR:O	16:S:95:GLU:HG2	2.12	0.48
20:W:96:TYR:CE2	22:Y:21:TYR:HD1	2.31	0.48
30:g:67:THR:HG23	30:g:68:PRO:HD2	1.95	0.48
33:j:56:GLY:HA3	33:j:75:THR:CG2	2.43	0.48
36:m:83:LEU:HD12	36:m:84:LYS:N	2.28	0.48
1:A:131:U:C5'	1:A:132:U:H5'	2.42	0.48
1:A:133:A:C5'	34:k:77:ARG:HE	2.26	0.48
1:A:421:G:H1'	1:A:445:G:N2	2.28	0.48
1:A:1501:G:O3'	12:O:35:GLY:HA3	2.13	0.48
1:A:1638:G:H5'	1:A:1639:A:OP1	2.12	0.48
1:A:1652:U:C5	25:b:4:ARG:NH1	2.81	0.48
2:B:501:G:H2'	2:B:502:U:O4'	2.14	0.48
2:B:1347:A:N6	25:b:59:ASN:O	2.46	0.48
4:D:55:A:C2'	4:D:56:G:H5'	2.43	0.48
5:E:61:U:H5''	17:T:61:SER:HB3	1.95	0.48
7:G:74:C:O2'	22:Y:16:GLY:O	2.25	0.48
13:P:37:LEU:HD21	16:S:71:LEU:O	2.14	0.48
17:T:98:ARG:NH1	17:T:130:ASN:CB	2.76	0.48
17:T:99:LEU:HD21	17:T:103:ARG:NH2	2.27	0.48
19:V:51:PHE:CE2	19:V:79:ILE:HG12	2.48	0.48
20:W:44:TYR:CE1	20:W:52:PRO:HA	2.48	0.48
22:Y:43:MET:HE3	22:Y:55:TRP:HZ2	1.77	0.48
29:f:54:THR:HG22	29:f:371:LYS:HZ3	1.78	0.48
30:g:67:THR:HG22	30:g:68:PRO:O	2.13	0.48
37:n:37:CYS:O	37:n:38:ALA:HB3	2.12	0.48
41:r:288:THR:HA	41:r:291:MET:CE	2.42	0.48
42:t:8:LYS:O	42:t:23:PHE:N	2.44	0.48
43:u:39:GLN:HB3	43:u:48:LYS:HD2	1.95	0.48
44:v:36:ILE:HG21	44:v:175:TYR:CE2	2.48	0.48
1:A:112:C:O2'	1:A:113:U:H5'	2.13	0.48
1:A:384:C:N4	1:A:385:G:C6	2.81	0.48
1:A:774:A:H1'	1:A:776:A:OP2	2.12	0.48
1:A:1068:G:H2'	1:A:1069:G:O4'	2.12	0.48
1:A:1945:U:C5	33:j:9:ARG:HB3	2.47	0.48
2:B:7:C:H2'	2:B:8:U:O4'	2.13	0.48
2:B:91:C:H3'	2:B:92:A:H8	1.77	0.48
2:B:547:G:O2'	2:B:548:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:551:U:H3	2:B:583:C:N4	2.06	0.48
2:B:647:A:C2'	2:B:648:G:H5'	2.43	0.48
2:B:883:U:H4'	2:B:884:U:O5'	2.13	0.48
4:D:1:G:H2'	4:D:2:G:H8	1.78	0.48
6:F:48:G:H2'	6:F:49:C:O2	2.13	0.48
7:G:97:G:H2'	7:G:98:G:O4'	2.12	0.48
9:I:92:ASP:OD1	9:I:111:ARG:HB3	2.13	0.48
16:S:37:VAL:HG22	45:w:231:ASP:HB3	1.95	0.48
18:U:74:VAL:HG12	18:U:76:VAL:HG23	1.94	0.48
19:V:51:PHE:CZ	19:V:79:ILE:HG12	2.48	0.48
19:V:109:ILE:HG13	19:V:119:LEU:HD22	1.95	0.48
20:W:34:LYS:HG2	20:W:67:GLY:HA2	1.94	0.48
20:W:72:ARG:HG3	20:W:73:ARG:HG3	1.95	0.48
24:a:32:SER:HB3	24:a:35:ARG:H	1.78	0.48
25:b:22:VAL:CG2	25:b:23:GLY:N	2.76	0.48
25:b:131:ASP:CA	25:b:134:ILE:HG22	2.43	0.48
28:e:30:ARG:NH1	28:e:33:ASP:OD2	2.47	0.48
28:e:195:CYS:SG	28:e:198:LYS:NZ	2.65	0.48
28:e:230:PRO:O	28:e:233:GLN:HB3	2.14	0.48
29:f:13:HIS:HB3	29:f:16:PHE:HD2	1.77	0.48
30:g:53:ILE:HG21	33:j:94:ARG:NH1	2.28	0.48
39:p:54:ASP:HA	39:p:57:GLU:CB	2.39	0.48
41:r:78:ILE:O	41:r:87:GLY:N	2.37	0.48
41:r:287:VAL:HG22	41:r:291:MET:HE2	1.96	0.48
42:t:2:VAL:O	42:t:2:VAL:HG13	2.13	0.48
43:u:208:LEU:C	43:u:208:LEU:HD23	2.38	0.48
46:x:155:TYR:HB3	46:x:188:SER:HA	1.94	0.48
1:A:74:U:C5'	11:N:63:VAL:HB	2.42	0.48
1:A:789:A:C5'	41:r:101:PHE:HB2	2.44	0.48
1:A:1080:A:H2	2:B:480:G:N3	2.10	0.48
1:A:1170:G:H5''	4:D:102:C:H1'	1.94	0.48
2:B:505:U:H5'	2:B:1154:U:H6	1.78	0.48
2:B:679:C:H2'	2:B:680:U:C1'	2.43	0.48
2:B:711:U:O2	2:B:728:A2M:H2	2.13	0.48
2:B:1455:C:O2'	2:B:1456:U:H5'	2.13	0.48
3:C:19:A:C2'	3:C:20:C:H5'	2.43	0.48
3:C:141:C:C2'	3:C:142:C:H5'	2.43	0.48
4:D:6:C:OP1	10:L:149:ARG:NH2	2.45	0.48
4:D:11:A:O2'	4:D:13:A:OP2	2.17	0.48
7:G:82:U:H3'	7:G:82:U:O2	2.12	0.48
9:I:144:PHE:CE2	9:I:146:LEU:HD21	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:Q:64:ALA:O	14:Q:69:TYR:HB3	2.13	0.48
16:S:77:SER:HB2	16:S:131:ILE:HD12	1.91	0.48
18:U:54:HIS:O	18:U:55:LYS:HB2	2.13	0.48
23:Z:71:TYR:HB3	23:Z:76:VAL:HG23	1.95	0.48
24:a:45:MET:HE1	24:a:49:PRO:HD3	1.96	0.48
26:c:119:HIS:O	26:c:123:VAL:HG23	2.13	0.48
28:e:33:ASP:OD2	28:e:66:PRO:HG3	2.13	0.48
28:e:92:VAL:HA	28:e:103:PRO:HD3	1.94	0.48
29:f:89:ILE:HD11	29:f:204:LEU:HD12	1.93	0.48
32:i:28:GLN:HG3	32:i:29:LEU:N	2.28	0.48
34:k:108:THR:HG22	34:k:111:GLN:CD	2.39	0.48
36:m:73:LEU:CD2	36:m:81:ARG:HG3	2.43	0.48
44:v:36:ILE:CD1	44:v:50:VAL:HG22	2.43	0.48
1:A:325:A:O4'	42:t:41:ARG:HD2	2.12	0.48
1:A:1284:U:H2'	1:A:1285:U:O4'	2.14	0.48
1:A:1289:G:O2'	1:A:1290:C:H5'	2.13	0.48
1:A:1797:U:C2'	1:A:1798:U:O5'	2.62	0.48
1:A:1944:A:C2	1:A:1947:C:H1'	2.49	0.48
2:B:61:C:H2'	2:B:62:A:O4'	2.14	0.48
2:B:852:G:H1'	2:B:853:C:O5'	2.14	0.48
2:B:1275:U:H4'	42:t:10:MET:HE2	1.95	0.48
2:B:1288:G:O6	18:U:78:LYS:HD3	2.13	0.48
3:C:112:G:H3'	3:C:112:G:N3	2.28	0.48
3:C:165:U:C3'	46:x:118:ARG:HH12	2.14	0.48
6:F:15:U:O2'	6:F:16:C:H5'	2.13	0.48
6:F:51:A:OP1	6:F:53:G:N2	2.41	0.48
8:H:5:G:H2'	8:H:6:U:C6	2.48	0.48
8:H:106:G:O2'	31:h:94:LYS:O	2.26	0.48
12:O:108:ARG:HG3	12:O:109:TYR:CE1	2.49	0.48
12:O:146:TYR:O	16:S:157:ARG:NH2	2.47	0.48
14:Q:67:LEU:O	14:Q:132:LEU:HD22	2.13	0.48
17:T:98:ARG:O	17:T:102:LEU:HG	2.13	0.48
20:W:58:ASP:O	20:W:79:VAL:HA	2.12	0.48
21:X:178:LEU:CD1	21:X:184:ALA:HA	2.42	0.48
25:b:134:ILE:HG21	25:b:141:VAL:HG23	1.96	0.48
29:f:58:ARG:NH2	29:f:60:VAL:HG12	2.11	0.48
29:f:122:TRP:O	29:f:125:SER:OG	2.30	0.48
31:h:85:THR:CG2	31:h:152:GLU:HG2	2.39	0.48
31:h:109:ILE:HD12	31:h:136:TRP:HE1	1.77	0.48
37:n:71:ASN:O	37:n:74:ILE:HG12	2.13	0.48
41:r:230:VAL:HG11	41:r:254:ALA:CB	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:136:TYR:CZ	45:w:229:ASN:HB2	2.48	0.48
46:x:243:LEU:HB3	46:x:252:ALA:HB3	1.96	0.48
1:A:459:G:O4'	15:R:6:ARG:HD3	2.14	0.48
1:A:462:A:H2'	1:A:463:A:O4'	2.14	0.48
1:A:600:A:H4'	1:A:601:U:H5'	1.96	0.48
2:B:65:G:C2'	2:B:66:A:H5'	2.44	0.48
2:B:500:U:H4'	28:e:240:ALA:HB1	1.95	0.48
2:B:1107:7MG:HO2'	24:a:133:PHE:C	2.12	0.48
4:D:23:G:H2'	4:D:24:U:C6	2.48	0.48
10:L:139:ARG:HD2	10:L:158:HIS:O	2.13	0.48
12:O:175:LEU:HD12	29:f:96:PRO:HG3	1.96	0.48
13:P:67:ARG:HD3	16:S:147:SER:HA	1.94	0.48
13:P:135:LYS:CB	13:P:136:PRO:HA	2.44	0.48
14:Q:156:ARG:O	14:Q:156:ARG:HG2	2.12	0.48
18:U:70:ARG:NH1	43:u:40:ASP:OD1	2.46	0.48
20:W:96:TYR:CE2	22:Y:21:TYR:CD1	3.01	0.48
23:Z:60:TYR:CE2	23:Z:94:VAL:HG11	2.49	0.48
29:f:265:VAL:CG1	29:f:269:VAL:CG1	2.92	0.48
30:g:19:VAL:HG13	30:g:97:VAL:HG21	1.94	0.48
31:h:112:ILE:HG21	31:h:131:LEU:HD21	1.95	0.48
31:h:126:ARG:N	31:h:168:THR:O	2.46	0.48
31:h:151:VAL:CG2	31:h:168:THR:CG2	2.89	0.48
36:m:76:VAL:HG12	36:m:77:GLY:N	2.29	0.48
41:r:264:THR:CG2	41:r:265:PHE:N	2.73	0.48
1:A:57:G:H4'	14:Q:171:VAL:HG22	1.95	0.48
1:A:188:G:H2'	1:A:189:U:C6	2.49	0.48
1:A:593:C:O2'	1:A:594:G:H5'	2.13	0.48
2:B:631:C:OP2	2:B:632:U:O2'	2.25	0.48
4:D:26:C:OP2	43:u:58:ARG:HB3	2.14	0.48
8:H:64:U:H5''	8:H:65:G:OP2	2.14	0.48
12:O:177:THR:O	12:O:181:GLU:HG2	2.12	0.48
14:Q:107:GLY:O	14:Q:109:LYS:HD2	2.14	0.48
17:T:23:TRP:N	17:T:51:ILE:O	2.44	0.48
23:Z:47:VAL:HG12	23:Z:48:ARG:N	2.28	0.48
24:a:41:LEU:HD12	24:a:72:ARG:O	2.13	0.48
26:c:33:ASN:OD1	26:c:42:HIS:HB3	2.14	0.48
29:f:134:LYS:HZ3	29:f:138:ARG:HH22	1.35	0.48
33:j:57:THR:HG23	33:j:73:LYS:C	2.39	0.48
35:l:145:TYR:CE2	44:v:41:ALA:HB2	2.48	0.48
37:n:38:ALA:CB	37:n:45:ARG:HB2	2.41	0.48
43:u:61:ILE:HG23	43:u:79:TYR:CD1	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:v:49:VAL:HG13	44:v:64:SER:O	2.13	0.48
46:x:284:ASP:OD1	46:x:285:VAL:N	2.47	0.48
1:A:847:G:H2'	1:A:848:G:O4'	2.13	0.48
1:A:1042:G:N2	1:A:1053:OMC:H5	2.12	0.48
1:A:1361:A:O2'	1:A:1524:C:H4'	2.14	0.48
1:A:1367:A:H2	1:A:1511:A:H2	1.62	0.48
2:B:131:G:O6	2:B:448:A:N6	2.47	0.48
2:B:728:A2M:HM'1	12:O:88:PRO:HD3	1.94	0.48
2:B:1308:A:C5	2:B:1309:G:H1'	2.49	0.48
11:N:102:VAL:HG12	11:N:103:ASP:N	2.29	0.48
12:O:98:PHE:O	12:O:102:VAL:HG12	2.13	0.48
14:Q:84:ARG:CG	14:Q:144:VAL:HG13	2.44	0.48
14:Q:159:ARG:HB3	34:k:103:GLU:OE1	2.14	0.48
18:U:14:LEU:CD2	18:U:55:LYS:HG3	2.43	0.48
20:W:82:ARG:HB2	20:W:97:PHE:CG	2.49	0.48
20:W:112:LYS:O	20:W:112:LYS:HG2	2.13	0.48
25:b:36:GLY:O	25:b:41:HIS:HB2	2.14	0.48
28:e:211:HIS:CD2	28:e:219:ILE:HG23	2.49	0.48
29:f:118:PHE:CE2	29:f:130:PHE:HE2	2.32	0.48
39:p:7:ASN:HB2	39:p:10:GLU:OE1	2.14	0.48
1:A:141:U:H5'	1:A:142:U:OP1	2.14	0.48
1:A:245:G:O2'	1:A:246:A:H5'	2.14	0.48
1:A:1750:C:H2'	1:A:1752:C:C4	2.49	0.48
1:A:1964:G:N3	1:A:1964:G:H5''	2.29	0.48
2:B:477:A:H61	38:o:18:TYR:HA	1.79	0.48
2:B:1143:G:C8	46:x:122:VAL:HG22	2.48	0.48
2:B:1454:C:H2'	2:B:1455:C:C6	2.47	0.48
3:C:165:U:H5''	3:C:166:OMG:OP1	2.14	0.48
5:E:22:C:H42	5:E:207:G:H1	1.62	0.48
6:F:45:G:P	16:S:173:THR:HG23	2.54	0.48
6:F:67:A:C4	35:l:93:VAL:HG11	2.49	0.48
12:O:29:LEU:HB3	12:O:59:LEU:HD21	1.96	0.48
12:O:187:HIS:O	12:O:194:ARG:NH2	2.31	0.48
21:X:118:PRO:CD	34:k:34:VAL:HG22	2.44	0.48
28:e:31:ILE:HD13	28:e:123:ARG:HD2	1.96	0.48
31:h:129:ALA:O	31:h:133:THR:HG23	2.13	0.48
36:m:18:THR:HG22	36:m:25:ASN:O	2.13	0.48
40:q:45:ARG:HG3	40:q:45:ARG:O	2.13	0.48
44:v:46:GLY:O	44:v:180:PHE:N	2.34	0.48
46:x:210:ILE:CG2	46:x:220:VAL:CG1	2.92	0.48
1:A:34:A:H5''	14:Q:98:GLY:CA	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72:C:H4'	1:A:73:G:OP2	2.14	0.48
1:A:452:A:H61	3:C:15:G:H1'	1.79	0.48
1:A:741:G:H2'	1:A:742:G:C8	2.49	0.48
1:A:768:G:C2'	1:A:769:U:H5'	2.43	0.48
1:A:1142:C:O2'	1:A:1143:U:H5'	2.14	0.48
2:B:489:A:C2'	2:B:490:A:H2'	2.44	0.48
2:B:655:A:N3	2:B:1531:G:O2'	2.38	0.48
2:B:1494:U:H2'	2:B:1495:C:H5'	1.96	0.48
2:B:1649:A:C8	2:B:1649:A:H5'	2.49	0.48
3:C:154:A:C2'	3:C:155:U:H5'	2.44	0.48
7:G:28:U:H2'	7:G:29:G:H5'	1.94	0.48
9:I:105:LEU:O	9:I:125:GLY:HA3	2.13	0.48
10:L:135:VAL:HG12	10:L:137:LEU:HD12	1.95	0.48
13:P:54:LYS:O	16:S:156:ARG:NH1	2.47	0.48
16:S:16:THR:HG22	16:S:57:HIS:O	2.14	0.48
16:S:75:ASN:ND2	16:S:136:VAL:HG21	2.29	0.48
21:X:140:SER:HA	21:X:172:LYS:HB2	1.94	0.48
22:Y:35:PHE:CE2	22:Y:41:PHE:HD1	2.31	0.48
22:Y:37:ARG:HH22	29:f:376:ARG:HH11	1.62	0.48
28:e:30:ARG:CZ	28:e:41:MET:HG3	2.44	0.48
28:e:60:ARG:NE	28:e:75:LEU:HD12	2.24	0.48
32:i:65:LYS:O	32:i:66:TYR:HB2	2.14	0.48
35:l:68:THR:HG22	35:l:69:LYS:N	2.28	0.48
42:t:6:LYS:NZ	42:t:94:ASN:HA	2.28	0.48
44:v:48:ARG:HH12	44:v:180:PHE:HB2	1.78	0.48
1:A:31:C:OP1	14:Q:110:LEU:HD12	2.14	0.47
1:A:118:G:OP1	36:m:49:LYS:HE3	2.14	0.47
1:A:184:A:H2'	1:A:185:A:H5'	1.94	0.47
1:A:325:A:N1	2:B:1354:C:O2'	2.40	0.47
1:A:350:G:H1'	2:B:568:A:N3	2.28	0.47
1:A:951:G:N3	1:A:951:G:C2'	2.77	0.47
1:A:1340:G:C2'	1:A:1341:C:H5'	2.44	0.47
1:A:1652:U:C4	25:b:4:ARG:HD3	2.49	0.47
2:B:510:C:H5'	28:e:8:CYS:O	2.14	0.47
2:B:1190:U:O4	18:U:3:HIS:HE1	1.97	0.47
2:B:1444:G:H22	2:B:1549:U:H3	1.62	0.47
2:B:1462:A:C2'	2:B:1463:G:H5'	2.43	0.47
3:C:147:G:C2'	3:C:148:C:H5'	2.44	0.47
5:E:65:C:H5''	5:E:66:A:H5'	1.96	0.47
11:N:189:PHE:CE2	36:m:20:ILE:HD12	2.48	0.47
12:O:212:ASN:O	12:O:216:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:R:128:ARG:NH2	15:R:136:ILE:HD13	2.29	0.47
15:R:129:THR:HG22	15:R:139:TYR:CE1	2.48	0.47
16:S:83:TYR:HD1	16:S:88:GLY:O	1.98	0.47
16:S:166:VAL:HG11	16:S:169:VAL:HG11	1.95	0.47
23:Z:20:PRO:HD2	23:Z:23:VAL:HG21	1.96	0.47
29:f:371:LYS:O	29:f:372:ILE:HG13	2.13	0.47
30:g:24:LYS:HB2	30:g:96:ASP:HB2	1.96	0.47
35:l:37:ARG:NH1	35:l:39:TYR:O	2.46	0.47
39:p:54:ASP:O	39:p:58:ARG:HG2	2.14	0.47
41:r:21:CYS:SG	41:r:252:LYS:NZ	2.86	0.47
41:r:326:ARG:HE	41:r:333:GLN:CD	2.22	0.47
42:t:10:MET:HE1	42:t:83:ASN:HD21	1.78	0.47
1:A:175:U:H2'	1:A:176:G:C8	2.50	0.47
1:A:310:G:H5'	14:Q:136:TRP:CE3	2.49	0.47
1:A:349:U:H1'	2:B:569:G:H21	1.79	0.47
1:A:1348:A:OP1	35:l:125:LYS:NZ	2.21	0.47
1:A:1658:A:O4'	32:i:28:GLN:NE2	2.47	0.47
2:B:132:G:O2'	2:B:133:G:H5'	2.14	0.47
2:B:619:G:N2	2:B:620:U:O4	2.30	0.47
2:B:771:G:O2'	2:B:772:U:H5'	2.14	0.47
2:B:907:A:H5''	2:B:908:C:OP2	2.14	0.47
2:B:1297:G:OP1	18:U:70:ARG:HB2	2.14	0.47
2:B:1460:C:N4	2:B:1483:G:H1	2.09	0.47
5:E:143:A:H4'	39:p:4:GLU:HG3	1.96	0.47
7:G:42:G:H2'	7:G:43:G:C8	2.50	0.47
8:H:100:A:OP2	29:f:390:LEU:HD13	2.14	0.47
9:I:158:HIS:HD2	9:I:170:LYS:O	1.97	0.47
11:N:28:LYS:HB2	14:Q:213:ARG:HD2	1.95	0.47
26:c:92:SER:CA	26:c:95:VAL:HG12	2.41	0.47
29:f:24:GLN:HE22	29:f:26:ARG:HH21	1.61	0.47
29:f:312:ILE:HD12	29:f:366:ILE:HG21	1.96	0.47
34:k:109:ARG:NH2	34:k:113:ARG:HH21	2.11	0.47
38:o:47:PHE:CD2	38:o:71:LEU:HD11	2.48	0.47
41:r:319:GLY:HA3	41:r:325:LEU:HD22	1.97	0.47
43:u:159:THR:HB	43:u:166:PHE:HZ	1.79	0.47
44:v:188:PRO:HA	44:v:191:MET:CG	2.44	0.47
1:A:1805:A:H3'	1:A:1805:A:OP1	2.14	0.47
2:B:460:U:H5'	22:Y:46:ARG:CD	2.44	0.47
3:C:50:C:N4	3:C:75:OMG:HN1	2.12	0.47
4:D:13:A:HO2'	4:D:14:C:P	2.35	0.47
5:E:195:A:O4'	28:e:187:TYR:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:41:A:O2'	8:H:42:U:P	2.71	0.47
11:N:65:CYS:HB2	11:N:70:HIS:O	2.13	0.47
14:Q:115:ARG:CG	14:Q:146:TYR:CE1	2.98	0.47
19:V:51:PHE:CE2	19:V:70:VAL:HG11	2.50	0.47
22:Y:57:ARG:HE	22:Y:61:ARG:HE	1.62	0.47
23:Z:55:VAL:HA	23:Z:101:VAL:HG12	1.96	0.47
24:a:43:ALA:HB2	24:a:111:VAL:HG11	1.94	0.47
25:b:47:LYS:NZ	25:b:48:TYR:OH	2.45	0.47
28:e:224:THR:HA	28:e:237:LEU:O	2.14	0.47
38:o:29:LEU:HD22	38:o:69:TYR:CD2	2.49	0.47
41:r:11:SER:HB2	41:r:18:VAL:HG13	1.96	0.47
41:r:136:VAL:HG13	41:r:143:ILE:HD12	1.95	0.47
1:A:1056:U:H2'	1:A:1057:C:O4'	2.14	0.47
1:A:1369:G:H5'	13:P:52:ASN:HD22	1.78	0.47
1:A:1509:C:O2'	1:A:1510:C:H5'	2.15	0.47
1:A:1923:C:O2'	1:A:1924:A:H5'	2.15	0.47
2:B:506:G:H2'	2:B:507:C:C6	2.50	0.47
2:B:1160:A:H2'	2:B:1161:G:C8	2.49	0.47
2:B:1189:C:OP1	18:U:6:GLY:HA2	2.14	0.47
2:B:1458:A:H2'	2:B:1480:A:H61	1.79	0.47
2:B:1536:G:C5'	28:e:220:GLY:HA3	2.45	0.47
3:C:15:G:HO2'	3:C:16:A:P	2.37	0.47
5:E:95:U:H3	5:E:137:A:N6	2.11	0.47
9:I:65:SER:HB2	9:I:96:ASP:CB	2.44	0.47
14:Q:81:ARG:HD2	14:Q:143:PHE:CD1	2.50	0.47
14:Q:115:ARG:HG2	14:Q:146:TYR:CE1	2.50	0.47
15:R:98:ALA:O	15:R:102:ALA:N	2.42	0.47
28:e:89:LEU:HD22	28:e:95:PRO:CG	2.44	0.47
33:j:45:THR:HG22	33:j:52:LYS:O	2.14	0.47
34:k:100:LYS:O	34:k:104:LYS:N	2.46	0.47
36:m:66:MET:CE	36:m:89:ARG:HB2	2.45	0.47
42:t:7:LYS:CD	42:t:22:SER:HB2	2.43	0.47
1:A:211:C:O2'	1:A:212:C:OP2	2.24	0.47
1:A:234:A:H2'	1:A:235:U:C6	2.50	0.47
1:A:351:U:H2'	1:A:352:G:H8	1.77	0.47
1:A:378:G:O2'	1:A:379:A:H5'	2.13	0.47
1:A:417:A:H2'	1:A:418:A:C8	2.50	0.47
1:A:759:C:H2'	1:A:760:C:C6	2.49	0.47
1:A:781:G:H2'	2:B:707:A:C4'	2.44	0.47
1:A:850:A:H5'	25:b:129:LEU:HD23	1.95	0.47
1:A:1306:U:H2'	1:A:1307:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1340:G:H2'	1:A:1341:C:O4'	2.13	0.47
1:A:1803:A:H4'	1:A:1804:A2M:OP2	2.12	0.47
2:B:95:A:H2	2:B:468:G:C8	2.32	0.47
2:B:103:G:H2'	2:B:104:U:O4'	2.14	0.47
2:B:460:U:H5'	22:Y:46:ARG:HE	1.78	0.47
2:B:574:A:H2'	2:B:575:C:H6	1.78	0.47
2:B:681:G:C1'	2:B:683:OMC:HN42	2.26	0.47
2:B:1643:C:H5'	2:B:1644:U:OP2	2.14	0.47
4:D:24:U:O2'	4:D:118:C:O4'	2.32	0.47
8:H:15:A:C2'	8:H:16:A:H5'	2.44	0.47
8:H:105:U:O2	8:H:108:G:H5'	2.14	0.47
10:L:138:GLY:HA3	10:L:142:GLU:OE2	2.15	0.47
15:R:10:VAL:HG11	15:R:13:LYS:HD3	1.96	0.47
15:R:31:GLU:OE1	15:R:60:PHE:HA	2.15	0.47
20:W:110:GLU:HG2	20:W:130:LYS:NZ	2.30	0.47
21:X:120:THR:HG22	21:X:120:THR:O	2.14	0.47
22:Y:27:LEU:C	22:Y:29:THR:N	2.73	0.47
22:Y:51:ARG:CG	22:Y:51:ARG:NH1	2.73	0.47
26:c:53:VAL:O	26:c:53:VAL:HG22	2.15	0.47
26:c:92:SER:HB2	26:c:107:SER:HB2	1.95	0.47
29:f:31:SER:O	29:f:349:MET:HE1	2.14	0.47
29:f:48:VAL:CG1	29:f:210:ILE:HD11	2.44	0.47
29:f:89:ILE:HB	29:f:105:VAL:HG22	1.96	0.47
42:t:7:LYS:HD3	42:t:22:SER:CB	2.43	0.47
46:x:262:ALA:HA	46:x:265:GLU:CG	2.44	0.47
1:A:26:C:N4	1:A:56:A:N6	2.63	0.47
1:A:110:A:N1	1:A:364:U:O2'	2.46	0.47
1:A:146:U:H5''	46:x:249:ARG:CZ	2.45	0.47
1:A:250:A:N6	41:r:167:MET:HG3	2.30	0.47
1:A:1664:U:OP1	41:r:88:ALA:HA	2.15	0.47
1:A:1773:C:H2'	1:A:1774:U:O4'	2.15	0.47
1:A:1922:G:O2'	1:A:1923:C:H5'	2.14	0.47
2:B:638:U:H3	2:B:646:G:H1	1.61	0.47
2:B:684:C:OP2	2:B:685:C:O2'	2.30	0.47
2:B:1254:C:H4'	2:B:1255:A:OP1	2.15	0.47
2:B:1393:G:C2'	2:B:1394:G:H5'	2.44	0.47
2:B:1508:G:C2'	2:B:1509:G:H5'	2.44	0.47
4:D:42:A:H5''	10:L:78:ARG:HD2	1.96	0.47
7:G:26:C:H5'	29:f:183:VAL:HG13	1.97	0.47
7:G:40:G:H2'	7:G:41:A:C8	2.50	0.47
12:O:139:ILE:HG12	16:S:168:PHE:HE1	1.76	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:P:49:HIS:CD2	13:P:51:GLN:HE21	2.31	0.47
15:R:116:HIS:O	15:R:148:LEU:HA	2.13	0.47
16:S:33:ALA:HB3	16:S:39:ALA:HB2	1.96	0.47
21:X:165:LEU:O	21:X:173:LYS:N	2.32	0.47
25:b:95:THR:O	25:b:96:LEU:HD12	2.15	0.47
29:f:199:LEU:O	29:f:203:LEU:HB3	2.14	0.47
41:r:290:ILE:O	41:r:293:SER:OG	2.27	0.47
43:u:46:THR:CG2	43:u:47:PRO:CD	2.92	0.47
45:w:86:VAL:HA	45:w:136:TYR:HB3	1.96	0.47
1:A:151:G:P	14:Q:163:ARG:HH22	2.37	0.47
1:A:208:A:H2'	1:A:214:G:O6	2.15	0.47
1:A:419:A:H4'	1:A:420:A:C5'	2.43	0.47
1:A:439:G:C5'	23:Z:84:ARG:HH12	2.27	0.47
1:A:794:A2M:H3'	1:A:794:A2M:H8	1.97	0.47
1:A:958:OMG:H4'	41:r:42:ASN:HD21	1.79	0.47
1:A:977:G:O2'	1:A:978:U:H5'	2.15	0.47
1:A:1030:U:C2'	1:A:1031:G:H5'	2.45	0.47
1:A:1085:C:O2'	1:A:1086:U:H5'	2.14	0.47
1:A:1532:C:H2'	1:A:1533:C:C6	2.50	0.47
1:A:1605:G:H5'	41:r:192:ARG:HB3	1.96	0.47
1:A:1669:G:O2'	1:A:1670:G:H5'	2.15	0.47
1:A:1770:A:C2'	1:A:1771:U:H5'	2.45	0.47
1:A:1800:A:O2'	1:A:1801:G:OP2	2.25	0.47
2:B:498:U:H2'	2:B:499:U:H6	1.79	0.47
2:B:511:C:O2'	2:B:513:A:N7	2.40	0.47
2:B:657:7MG:O3'	2:B:658:A:C4'	2.63	0.47
2:B:777:C:H2'	2:B:778:U:O4'	2.14	0.47
2:B:1245:C:H2'	2:B:1246:G:C5'	2.44	0.47
2:B:1275:U:O2	42:t:11:TYR:HB3	2.14	0.47
2:B:1319:C:N3	42:t:63:LYS:HE3	2.29	0.47
2:B:1443:U:H5	2:B:1511:A:H2	1.62	0.47
2:B:1652:A:O2'	2:B:1653:A:H8	1.85	0.47
3:C:39:G:H1'	3:C:104:A:N1	2.30	0.47
4:D:67:C:O5'	4:D:67:C:H6	1.98	0.47
5:E:33:A:C2'	5:E:34:U:H5'	2.44	0.47
5:E:72:C:H2'	5:E:73:A:C8	2.49	0.47
5:E:115:A:OP2	17:T:121:ARG:HD3	2.14	0.47
5:E:126:A:N6	30:g:31:GLN:HG2	2.30	0.47
9:I:61:PRO:O	9:I:148:GLY:HA3	2.15	0.47
9:I:77:TRP:HH2	27:d:62:ARG:CB	2.27	0.47
10:L:106:GLY:HA3	10:L:160:VAL:CG1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:N:41:ARG:O	11:N:45:LEU:HD13	2.14	0.47
11:N:130:LEU:CD1	34:k:121:ARG:HD2	2.42	0.47
11:N:196:ALA:O	11:N:200:PHE:HB2	2.14	0.47
12:O:204:ALA:HA	12:O:207:LYS:HG2	1.97	0.47
13:P:134:LYS:HD2	13:P:135:LYS:O	2.14	0.47
14:Q:69:TYR:HB2	14:Q:149:VAL:HG11	1.97	0.47
16:S:95:GLU:OE1	16:S:141:ILE:HG21	2.15	0.47
20:W:116:ILE:HD11	20:W:131:ILE:HG23	1.96	0.47
21:X:119:LEU:HD13	21:X:137:ILE:HD11	1.97	0.47
26:c:22:ARG:HB3	32:i:76:PRO:HG2	1.96	0.47
26:c:115:SER:HA	26:c:118:GLU:CG	2.37	0.47
28:e:30:ARG:HH12	28:e:33:ASP:HB2	1.80	0.47
28:e:147:ARG:HH22	28:e:155:LYS:HG2	1.80	0.47
33:j:69:SER:HB2	33:j:72:GLU:HG3	1.95	0.47
36:m:69:ARG:HG3	36:m:72:GLU:OE2	2.14	0.47
39:p:11:PHE:HE1	39:p:36:VAL:HG23	1.80	0.47
39:p:23:VAL:HG12	39:p:36:VAL:HG22	1.95	0.47
41:r:31:ILE:CD1	41:r:128:ALA:HB3	2.44	0.47
41:r:136:VAL:CG2	41:r:143:ILE:HD11	2.35	0.47
41:r:219:PHE:C	41:r:222:ILE:HG22	2.39	0.47
46:x:121:ARG:O	46:x:125:ARG:HG3	2.15	0.47
46:x:148:LEU:CD2	46:x:209:MET:HE3	2.45	0.47
1:A:247:G:H2'	1:A:248:C:C5'	2.44	0.47
1:A:451:G:OP1	1:A:1640:U:O2'	2.30	0.47
1:A:878:A:O2'	1:A:879:C:H5'	2.15	0.47
1:A:918:C:H2'	1:A:919:OMC:H4'	1.97	0.47
1:A:956:G:H2'	1:A:957:U:O4'	2.15	0.47
1:A:1328:G:H5'	32:i:47:TYR:CE1	2.49	0.47
1:A:1495:G:OP1	12:O:78:LYS:HE3	2.15	0.47
1:A:1636:C:O2'	1:A:1637:A:H5'	2.15	0.47
1:A:1664:U:O2'	41:r:96:ARG:HD2	2.15	0.47
2:B:126:U:OP2	17:T:74:ARG:NE	2.33	0.47
2:B:742:G:C6	2:B:744:A:H1'	2.50	0.47
3:C:122:A:O2'	3:C:123:G:H5'	2.14	0.47
4:D:95:G:OP1	16:S:45:ARG:HD2	2.15	0.47
5:E:3:U:H2'	5:E:4:G:C8	2.48	0.47
10:L:106:GLY:HA2	10:L:160:VAL:HG12	1.95	0.47
12:O:61:ILE:N	12:O:155:THR:O	2.46	0.47
14:Q:117:ILE:O	14:Q:121:ARG:HG3	2.15	0.47
15:R:24:CYS:SG	15:R:86:LYS:HG2	2.55	0.47
17:T:132:PHE:CE2	17:T:138:LEU:HD12	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:U:80:VAL:HG13	18:U:81:ARG:N	2.29	0.47
20:W:122:LYS:HA	20:W:138:ILE:CG2	2.45	0.47
23:Z:37:ARG:HG3	23:Z:42:VAL:O	2.15	0.47
25:b:122:LYS:HG2	25:b:144:GLN:OE1	2.15	0.47
25:b:126:VAL:CG1	25:b:141:VAL:HG11	2.43	0.47
26:c:95:VAL:HG21	26:c:106:ALA:HB2	1.95	0.47
32:i:77:ILE:CD1	32:i:95:GLY:HA3	2.36	0.47
32:i:101:VAL:HG23	32:i:106:ARG:HD2	1.97	0.47
43:u:78:ALA:HA	43:u:82:GLU:OE2	2.14	0.47
44:v:55:LEU:HD12	44:v:60:PRO:HG2	1.97	0.47
45:w:137:GLY:HA3	45:w:231:ASP:O	2.15	0.47
1:A:323:G:O6	14:Q:199:LYS:HG2	2.15	0.47
1:A:483:A:H2'	1:A:484:U:O4'	2.14	0.47
1:A:1157:A:O2'	45:w:122:PRO:O	2.29	0.47
1:A:1509:C:O2'	16:S:113:ALA:O	2.22	0.47
1:A:1682:U:H2'	1:A:1683:C:C6	2.50	0.47
1:A:1772:A:H8	1:A:1772:A:OP1	1.98	0.47
2:B:539:U:O4	2:B:589:A:N6	2.48	0.47
2:B:651:G:OP2	2:B:651:G:N2	2.35	0.47
2:B:745:A:C2'	2:B:746:G:H5'	2.45	0.47
2:B:880:G:O2'	2:B:881:G:H5'	2.15	0.47
2:B:1308:A:N7	2:B:1309:G:H1'	2.30	0.47
2:B:1453:U:P	29:f:268:THR:HG21	2.55	0.47
2:B:1540:C:H4'	2:B:1541:A:N1	2.30	0.47
3:C:41:A:OP1	37:n:66:TYR:N	2.41	0.47
5:E:113:C:H4'	5:E:114:G:OP1	2.14	0.47
5:E:203:C:H2'	5:E:204:C:H6	1.80	0.47
8:H:131:A:H2'	8:H:132:C:O4'	2.14	0.47
13:P:13:VAL:HG13	13:P:27:VAL:HG23	1.96	0.47
14:Q:93:LYS:HE2	14:Q:95:ILE:CD1	2.45	0.47
16:S:47:MET:SD	18:U:146:LEU:HD22	2.55	0.47
20:W:21:VAL:HA	20:W:38:ILE:HG22	1.96	0.47
23:Z:28:MET:HE3	23:Z:70:CYS:SG	2.55	0.47
25:b:131:ASP:HA	25:b:134:ILE:CG2	2.44	0.47
43:u:107:ARG:O	43:u:111:THR:OG1	2.29	0.47
1:A:350:G:H5'	2:B:569:G:O2'	2.16	0.47
1:A:919:OMC:HM21	9:I:144:PHE:CE1	2.50	0.47
1:A:1008:C:H5'	17:T:125:VAL:O	2.15	0.47
1:A:1022:U:H2'	1:A:1023:G:O4'	2.15	0.47
1:A:1112:A:H61	1:A:1598:U:H3	1.62	0.47
2:B:120:A:H2'	2:B:121:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:460:U:O2	7:G:107:C:H1'	2.15	0.47
2:B:489:A:H2'	2:B:490:A:H2'	1.96	0.47
2:B:576:C:H3'	2:B:577:G:C5'	2.45	0.47
2:B:590:A:O4'	28:e:243:THR:HG21	2.15	0.47
2:B:1282:U:H4'	18:U:88:ARG:HB2	1.96	0.47
2:B:1296:C:C3'	2:B:1297:G:H5''	2.44	0.47
2:B:1308:A:C2	43:u:35:GLN:HB2	2.50	0.47
7:G:71:C:O2'	7:G:72:C:H5'	2.14	0.47
7:G:98:G:H2'	7:G:99:C:O4'	2.15	0.47
12:O:29:LEU:HD12	12:O:56:CYS:SG	2.55	0.47
23:Z:106:LEU:HD12	23:Z:106:LEU:O	2.15	0.47
25:b:82:ILE:HG21	25:b:87:ALA:HB2	1.96	0.47
29:f:81:ALA:CB	29:f:210:ILE:CD1	2.92	0.47
31:h:86:MET:HE2	31:h:185:VAL:HG21	1.96	0.47
32:i:96:VAL:HG13	32:i:96:VAL:O	2.15	0.47
38:o:36:ARG:HG2	38:o:48:ARG:HG2	1.96	0.47
41:r:55:ARG:CZ	41:r:56:LEU:HD23	2.45	0.47
41:r:191:GLY:O	41:r:194:LYS:HE3	2.14	0.47
41:r:209:VAL:HG22	41:r:228:ALA:HB3	1.96	0.47
44:v:156:ASP:O	44:v:160:ILE:HB	2.15	0.47
1:A:38:A:H2	1:A:43:U:O4	1.98	0.46
1:A:260:U:H4'	1:A:261:U:OP2	2.15	0.46
1:A:348:A:C2	2:B:1354:C:H1'	2.50	0.46
1:A:381:G:C3'	1:A:382:A:H5''	2.46	0.46
1:A:504:C:O5'	41:r:321:ARG:NH2	2.48	0.46
1:A:1053:OMC:HM23	1:A:1053:OMC:H1'	1.53	0.46
1:A:1152:A:O2'	1:A:1288:G:O2'	2.33	0.46
1:A:1251:C:H1'	43:u:46:THR:HG21	1.95	0.46
2:B:17:U:OP1	40:q:5:LYS:HE3	2.15	0.46
2:B:117:A:C2'	2:B:118:G:H5'	2.44	0.46
2:B:477:A:C2'	2:B:478:C:H5'	2.45	0.46
2:B:567:G:N1	2:B:570:G:OP2	2.41	0.46
2:B:1180:G:H2'	2:B:1181:C:C5'	2.45	0.46
3:C:50:C:H42	3:C:75:OMG:HN1	1.63	0.46
3:C:57:C:H2'	3:C:58:G:H5'	1.98	0.46
10:L:172:THR:HG22	10:L:172:THR:O	2.15	0.46
12:O:36:ARG:HD2	12:O:147:CYS:SG	2.55	0.46
18:U:75:ILE:CG2	18:U:86:ARG:HG2	2.45	0.46
21:X:132:ASN:OD1	21:X:184:ALA:N	2.48	0.46
23:Z:28:MET:CG	23:Z:98:PRO:CG	2.92	0.46
24:a:45:MET:HG3	24:a:48:TYR:CE2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:b:121:VAL:O	25:b:141:VAL:HA	2.15	0.46
29:f:362:THR:O	29:f:362:THR:HG23	2.15	0.46
1:A:413:U:H5''	1:A:414:U:C5'	2.45	0.46
1:A:413:U:C5'	1:A:414:U:H5''	2.44	0.46
1:A:837:C:O2'	1:A:955:U:OP1	2.24	0.46
1:A:1610:A:H2'	1:A:1611:A:O4'	2.16	0.46
1:A:1714:G:N2	31:h:132:ASN:HD22	2.13	0.46
1:A:1735:U:H5'	1:A:1755:A:OP1	2.15	0.46
2:B:765:A:H2'	2:B:766:C:C6	2.51	0.46
2:B:1478:C:H2'	2:B:1479:U:O4'	2.16	0.46
2:B:1543:G:C2'	2:B:1544:U:H5'	2.45	0.46
2:B:1642:A:H2'	2:B:1642:A:N3	2.29	0.46
3:C:46:G:P	40:q:15:LYS:HD3	2.55	0.46
5:E:126:A:N7	30:g:30:LYS:HB3	2.30	0.46
12:O:215:VAL:HG11	13:P:112:GLN:O	2.16	0.46
14:Q:155:CYS:O	14:Q:159:ARG:HG2	2.15	0.46
17:T:96:MET:HE2	17:T:100:ARG:HH21	1.78	0.46
20:W:70:GLU:O	20:W:74:LYS:NZ	2.48	0.46
21:X:109:TRP:CZ2	21:X:113:ARG:NH1	2.82	0.46
22:Y:57:ARG:O	22:Y:61:ARG:HG3	2.15	0.46
28:e:27:ALA:HA	28:e:75:LEU:HD23	1.96	0.46
34:k:10:LEU:CD2	34:k:57:ARG:HB3	2.45	0.46
34:k:85:LYS:HB3	34:k:88:ARG:HH12	1.80	0.46
34:k:112:LEU:O	34:k:116:ARG:HG3	2.14	0.46
35:l:56:LYS:NZ	35:l:133:ALA:HB2	2.31	0.46
39:p:10:GLU:OE1	39:p:10:GLU:N	2.37	0.46
41:r:336:GLU:HG3	41:r:339:MET:HE2	1.96	0.46
1:A:74:U:H5'	11:N:64:ASN:O	2.15	0.46
1:A:415:U:H4'	1:A:449:C:H5'	1.96	0.46
1:A:592:A:H2'	1:A:593:C:C6	2.50	0.46
1:A:1628:G:H5'	32:i:66:TYR:CD1	2.50	0.46
2:B:11:A:H2'	2:B:12:G:O4'	2.15	0.46
2:B:662:G:H2'	2:B:663:A:O4'	2.15	0.46
4:D:46:G:C2'	4:D:47:U:H5'	2.46	0.46
4:D:57:C:H2'	4:D:58:G:C8	2.50	0.46
7:G:93:G:O2'	17:T:61:SER:OG	2.28	0.46
9:I:39:ARG:HB3	41:r:300:LEU:HG	1.97	0.46
10:L:154:VAL:HG23	10:L:159:ARG:CG	2.43	0.46
11:N:90:ILE:HD11	11:N:125:MET:HG3	1.96	0.46
12:O:164:VAL:O	12:O:164:VAL:HG12	2.13	0.46
15:R:48:TYR:HB2	15:R:92:LEU:HD21	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:W:48:LEU:HB2	29:f:8:HIS:HB3	1.98	0.46
22:Y:14:HIS:HB2	22:Y:17:HIS:HD2	1.80	0.46
23:Z:28:MET:HE1	23:Z:72:ARG:HA	1.97	0.46
23:Z:31:PRO:HA	23:Z:44:ALA:HA	1.96	0.46
28:e:15:ILE:HG22	28:e:194:ASN:ND2	2.20	0.46
31:h:91:HIS:O	31:h:94:LYS:HG2	2.16	0.46
41:r:54:ASN:OD1	41:r:55:ARG:N	2.48	0.46
1:A:32:G:OP1	14:Q:89:ARG:HD3	2.16	0.46
1:A:235:U:O2'	1:A:236:G:H5'	2.15	0.46
1:A:330:A:H2'	1:A:331:G:C8	2.51	0.46
1:A:406:G:H8	1:A:406:G:OP2	1.98	0.46
1:A:476:U:H2'	1:A:477:A:H8	1.80	0.46
1:A:592:A:H2'	1:A:593:C:H6	1.80	0.46
1:A:928:A:H2'	1:A:929:C:O4'	2.16	0.46
1:A:1169:A:C2'	1:A:1170:G:H5'	2.46	0.46
1:A:1949:A:N1	21:X:160:VAL:HG11	2.31	0.46
1:A:1960:G:O2'	3:C:140:U:O2'	2.16	0.46
1:A:1963:U:H3	2:B:7:C:H42	1.64	0.46
2:B:710:G:H1	2:B:742:G:H21	1.62	0.46
2:B:771:G:H2'	2:B:772:U:H6	1.81	0.46
2:B:775:G:O2'	2:B:776:G:H5'	2.15	0.46
2:B:1110:C:H2'	2:B:1111:C:H6	1.79	0.46
2:B:1366:G:H2'	42:t:62:ALA:HB2	1.98	0.46
2:B:1395:C:H2'	2:B:1396:U:O4'	2.15	0.46
2:B:1518:C:C2'	2:B:1519:U:H5'	2.45	0.46
5:E:143:A:O3'	39:p:44:THR:HG21	2.16	0.46
8:H:92:A:H2'	8:H:93:G:H5'	1.97	0.46
19:V:112:ARG:HD2	19:V:118:GLN:NE2	2.29	0.46
23:Z:55:VAL:HG22	23:Z:101:VAL:HG12	1.96	0.46
23:Z:106:LEU:HD12	23:Z:106:LEU:C	2.40	0.46
24:a:11:ILE:HD11	24:a:126:TRP:HH2	1.80	0.46
25:b:27:LYS:C	25:b:29:PRO:HD3	2.40	0.46
29:f:160:ILE:CD1	29:f:197:ILE:HD11	2.46	0.46
29:f:254:VAL:HG23	29:f:257:ILE:CG2	2.45	0.46
32:i:98:SER:O	32:i:101:VAL:HG22	2.15	0.46
43:u:50:ARG:N	43:u:65:VAL:O	2.44	0.46
1:A:142:U:O4'	1:A:143:G:H5''	2.16	0.46
1:A:450:U:O4	1:A:451:G:N1	2.49	0.46
1:A:1049:A:O2'	1:A:1051:A:H5''	2.14	0.46
1:A:1052:U:OP1	37:n:6:THR:HG21	2.14	0.46
2:B:588:A:H5''	28:e:244:GLY:CA	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:750:A:H5'	2:B:751:C:OP2	2.15	0.46
2:B:862:U:O2'	2:B:863:C:H5'	2.16	0.46
2:B:1458:A:H2	2:B:1460:C:H41	1.64	0.46
2:B:1513:G:N2	29:f:256:CYS:SG	2.88	0.46
3:C:143:C:O2'	3:C:144:C:H5'	2.16	0.46
5:E:32:A:C2'	5:E:33:A:H5'	2.46	0.46
5:E:101:C:O2'	5:E:102:U:H5'	2.16	0.46
9:I:31:LYS:HD3	41:r:287:VAL:CG1	2.44	0.46
9:I:71:MET:HE1	9:I:87:ALA:HB2	1.96	0.46
13:P:6:TYR:CD2	16:S:152:PRO:HD3	2.49	0.46
13:P:28:VAL:HG11	13:P:48:ARG:CZ	2.45	0.46
15:R:51:VAL:O	15:R:51:VAL:HG22	2.15	0.46
18:U:27:VAL:HG11	43:u:33:ARG:HH12	1.81	0.46
20:W:97:PHE:HZ	20:W:139:VAL:HG23	1.79	0.46
28:e:47:THR:HG23	28:e:49:GLU:OE2	2.15	0.46
28:e:204:ARG:HH11	28:e:209:HIS:HD2	1.62	0.46
29:f:90:VAL:HG23	29:f:163:VAL:HG23	1.96	0.46
32:i:97:ILE:HD11	32:i:120:LEU:HD13	1.97	0.46
33:j:6:VAL:HG22	33:j:7:GLN:N	2.30	0.46
33:j:26:THR:HB	33:j:27:PRO:HD2	1.97	0.46
43:u:82:GLU:O	43:u:85:GLN:HB2	2.16	0.46
44:v:77:ILE:HD13	44:v:82:ILE:HG23	1.95	0.46
45:w:188:ILE:HG22	45:w:199:THR:CG2	2.46	0.46
46:x:243:LEU:HD22	46:x:255:VAL:HG23	1.96	0.46
1:A:421:G:OP2	23:Z:87:ALA:HB2	2.16	0.46
1:A:1539:U:OP2	1:A:1540:A:H5''	2.16	0.46
1:A:1622:G:H1	1:A:1636:C:H42	1.63	0.46
1:A:1754:U:H6	40:q:45:ARG:HH21	1.62	0.46
2:B:542:C:H2'	2:B:588:A:N6	2.30	0.46
2:B:874:A:OP1	46:x:305:LYS:NZ	2.44	0.46
2:B:1149:A:H2'	2:B:1150:G:C5'	2.37	0.46
2:B:1242:U:H2'	2:B:1243:C:C6	2.51	0.46
2:B:1576:G:O6	12:O:119:GLN:HA	2.16	0.46
3:C:44:A:C2'	3:C:45:C:H5'	2.45	0.46
4:D:42:A:H5''	10:L:78:ARG:CD	2.46	0.46
5:E:115:A:H4'	5:E:128:G:H4'	1.97	0.46
9:I:129:THR:H	9:I:132:GLN:NE2	2.13	0.46
12:O:70:ILE:O	12:O:74:GLN:HG3	2.16	0.46
14:Q:176:GLU:HG2	14:Q:177:GLN:N	2.31	0.46
20:W:47:ARG:HB3	20:W:50:ARG:HH11	1.79	0.46
20:W:47:ARG:CB	20:W:50:ARG:NH1	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:b:74:ASN:OD1	25:b:112:ASN:HB2	2.15	0.46
29:f:87:VAL:HG22	29:f:163:VAL:O	2.15	0.46
43:u:36:MET:HE1	43:u:151:ILE:HG13	1.96	0.46
43:u:192:GLU:O	43:u:193:LYS:HB2	2.16	0.46
1:A:254:A:N3	1:A:255:A:N7	2.64	0.46
1:A:384:C:OP2	41:r:196:ARG:NH2	2.48	0.46
1:A:452:A:C2'	1:A:453:A:H5'	2.46	0.46
1:A:500:C:C2	1:A:603:G:N2	2.84	0.46
1:A:849:G:C5	25:b:110:LEU:HD21	2.50	0.46
1:A:1002:G:C2'	1:A:1024:G:H22	2.28	0.46
1:A:1007:C:H2'	1:A:1008:C:C6	2.51	0.46
1:A:1291:A:H2'	1:A:1292:C:H6	1.79	0.46
1:A:1512:A:O2'	1:A:1515:A:H2	1.98	0.46
2:B:127:C:P	8:H:65:G:H21	2.38	0.46
2:B:498:U:H2'	2:B:499:U:C6	2.50	0.46
2:B:505:U:O2'	2:B:506:G:OP1	2.26	0.46
2:B:593:G:H2'	2:B:594:C:O4'	2.16	0.46
2:B:625:A:H2'	2:B:634:OMG:O6	2.16	0.46
2:B:1186:U:H4'	2:B:1187:A:OP1	2.14	0.46
2:B:1379:C:H2'	2:B:1380:OMC:O5'	2.15	0.46
7:G:169:C:O2'	7:G:171:G:OP1	2.34	0.46
8:H:37:U:H5''	29:f:315:MET:HE2	1.97	0.46
10:L:23:LEU:HB3	10:L:77:VAL:HB	1.96	0.46
13:P:17:ARG:HH12	16:S:159:LYS:HE2	1.80	0.46
13:P:107:ASP:HA	13:P:110:ARG:NH2	2.31	0.46
15:R:129:THR:OG1	15:R:137:THR:O	2.29	0.46
26:c:9:TRP:HB2	26:c:46:LEU:HD21	1.98	0.46
29:f:25:ILE:HG13	29:f:341:ARG:NH1	2.30	0.46
32:i:21:HIS:CE1	32:i:22:LYS:HG3	2.51	0.46
34:k:25:PHE:O	34:k:29:LEU:N	2.42	0.46
37:n:51:VAL:HG22	37:n:55:LYS:HG2	1.98	0.46
41:r:96:ARG:C	41:r:98:GLY:H	2.21	0.46
41:r:219:PHE:HD1	41:r:225:LEU:HD21	1.81	0.46
43:u:52:VAL:HG12	43:u:63:GLN:O	2.16	0.46
43:u:159:THR:HB	43:u:166:PHE:CZ	2.51	0.46
44:v:52:LEU:HD22	44:v:74:ILE:HD13	1.97	0.46
1:A:211:C:O2'	1:A:212:C:H6	1.99	0.46
1:A:277:G:C2	37:n:79:LYS:HB3	2.50	0.46
1:A:311:U:H2'	1:A:312:A:C8	2.51	0.46
1:A:742:G:O4'	6:F:67:A:N6	2.48	0.46
1:A:800:C:OP1	9:I:55:SER:OG	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1681:A:C6	31:h:140:VAL:CG2	2.98	0.46
2:B:668:U:C2'	2:B:669:G:H5'	2.46	0.46
5:E:124:G:H2'	5:E:124:G:N3	2.30	0.46
8:H:110:C:H4'	29:f:322:GLY:HA2	1.98	0.46
12:O:218:LYS:HE2	12:O:219:PHE:CE2	2.50	0.46
13:P:16:ILE:HG22	13:P:17:ARG:N	2.31	0.46
15:R:91:MET:HE2	15:R:91:MET:HA	1.97	0.46
21:X:160:VAL:HG21	21:X:179:SER:HA	1.97	0.46
23:Z:45:MET:HE1	23:Z:115:ILE:CB	2.45	0.46
35:l:126:PHE:N	35:l:126:PHE:HD1	2.14	0.46
38:o:33:GLN:CD	38:o:49:ARG:HH21	2.24	0.46
39:p:11:PHE:CE1	39:p:36:VAL:HG23	2.51	0.46
39:p:37:ARG:HD2	39:p:37:ARG:HA	1.74	0.46
41:r:158:GLN:HB2	41:r:215:GLY:HA3	1.97	0.46
44:v:25:THR:HG22	44:v:27:LEU:H	1.81	0.46
1:A:136:G:OP2	14:Q:160:ARG:NH1	2.48	0.46
1:A:791:U:H2'	1:A:792:OMC:C6	2.51	0.46
1:A:1131:G:H21	25:b:40:HIS:C	2.24	0.46
1:A:1670:G:N2	2:B:704:A:H62	2.12	0.46
2:B:513:A:H2'	2:B:514:G:N3	2.31	0.46
2:B:574:A:H2'	2:B:575:C:C6	2.51	0.46
2:B:1159:C:C2'	2:B:1160:A:H5'	2.45	0.46
2:B:1275:U:H4'	42:t:10:MET:CE	2.46	0.46
2:B:1288:G:H5''	18:U:83:ARG:NH2	2.29	0.46
3:C:60:U:C5	3:C:97:U:H4'	2.51	0.46
4:D:1:G:H2'	4:D:2:G:C8	2.51	0.46
4:D:29:C:O3'	10:L:140:ARG:NH2	2.49	0.46
5:E:205:U:O2'	33:j:81:GLY:HA3	2.16	0.46
7:G:170:A:H4'	7:G:171:G:O5'	2.15	0.46
10:L:77:VAL:O	10:L:78:ARG:HB3	2.16	0.46
10:L:108:PHE:HE1	10:L:168:TRP:CZ2	2.28	0.46
11:N:36:GLN:OE1	11:N:39:ARG:NE	2.40	0.46
12:O:66:ILE:O	12:O:70:ILE:HG12	2.16	0.46
12:O:209:SER:O	12:O:213:LEU:HB2	2.16	0.46
14:Q:81:ARG:HD2	14:Q:143:PHE:CG	2.51	0.46
14:Q:188:ARG:NH1	14:Q:190:LEU:HD12	2.31	0.46
21:X:146:GLU:OE2	21:X:149:LYS:NZ	2.40	0.46
22:Y:27:LEU:C	22:Y:29:THR:H	2.22	0.46
24:a:7:GLY:HA2	24:a:23:VAL:CG1	2.46	0.46
28:e:97:ALA:HA	38:o:83:VAL:HG11	1.96	0.46
33:j:61:ARG:CG	33:j:63:THR:HG22	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:31:ARG:NH1	35:l:33:ARG:CZ	2.79	0.46
41:r:178:ASP:OD1	41:r:181:ARG:NE	2.37	0.46
46:x:199:THR:HA	46:x:204:THR:HG22	1.98	0.46
1:A:28:C:O2'	14:Q:178:ARG:O	2.30	0.46
1:A:41:C:C2'	1:A:42:A:H5'	2.45	0.46
1:A:375:U:H2'	1:A:376:A:H5'	1.97	0.46
1:A:409:A:O2'	41:r:84:SER:HB2	2.16	0.46
1:A:446:A:H1'	1:A:448:C:C4	2.51	0.46
1:A:503:C:OP1	41:r:317:THR:N	2.39	0.46
1:A:1000:G:OP1	17:T:86:GLU:HB3	2.16	0.46
2:B:627:A2M:HM'2	2:B:628:U:C6	2.51	0.46
2:B:876:C:H3'	2:B:877:A:H5'	1.97	0.46
3:C:69:U:H2'	3:C:70:C:C1'	2.46	0.46
4:D:48:G:C6	4:D:49:A:C6	3.04	0.46
5:E:115:A:OP2	17:T:121:ARG:CD	2.64	0.46
9:I:28:LEU:HD23	41:r:285:THR:O	2.16	0.46
9:I:190:PHE:CE2	27:d:34:ARG:HG2	2.52	0.46
10:L:149:ARG:HG2	10:L:150:LYS:HG3	1.97	0.46
14:Q:89:ARG:NH2	14:Q:102:THR:O	2.49	0.46
14:Q:210:ARG:HA	14:Q:213:ARG:HH21	1.79	0.46
16:S:139:LEU:O	16:S:142:SER:OG	2.32	0.46
17:T:89:MET:HA	17:T:90:PRO:HD3	1.81	0.46
17:T:109:TYR:CE2	17:T:142:ILE:HG21	2.51	0.46
18:U:139:ARG:CG	45:w:74:ASN:HD21	2.25	0.46
21:X:122:ASP:O	21:X:126:LYS:HG3	2.15	0.46
22:Y:51:ARG:HB2	22:Y:51:ARG:NH1	2.12	0.46
24:a:49:PRO:HG3	24:a:67:VAL:CG1	2.45	0.46
31:h:130:SER:OG	31:h:172:ASN:HB3	2.16	0.46
39:p:31:GLN:OE1	39:p:33:LYS:NZ	2.49	0.46
46:x:220:VAL:HG12	46:x:220:VAL:O	2.16	0.46
1:A:71:C:H5'	11:N:68:VAL:CG1	2.46	0.45
1:A:142:U:H4'	1:A:143:G:O5'	2.14	0.45
1:A:209:A:N6	26:c:55:THR:OG1	2.43	0.45
1:A:236:G:H5''	1:A:237:U:OP1	2.16	0.45
1:A:1132:A:O2'	25:b:44:ASN:HB2	2.16	0.45
1:A:1321:A:O2'	1:A:1322:G:H5'	2.16	0.45
2:B:1329:C:N4	2:B:1330:G:O6	2.49	0.45
2:B:1495:C:O2'	2:B:1496:A:H5'	2.16	0.45
8:H:15:A:H2'	8:H:16:A:O4'	2.16	0.45
14:Q:151:VAL:HG21	14:Q:164:ILE:HD11	1.98	0.45
14:Q:192:HIS:O	14:Q:197:ALA:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:S:14:ARG:HH21	45:w:77:LEU:CD2	2.29	0.45
23:Z:8:SER:OG	23:Z:11:LYS:HD2	2.15	0.45
23:Z:86:LYS:HG2	23:Z:87:ALA:N	2.30	0.45
24:a:9:VAL:HG12	24:a:84:TYR:C	2.41	0.45
24:a:70:PHE:HA	24:a:108:LYS:HZ2	1.81	0.45
25:b:131:ASP:O	25:b:134:ILE:HG22	2.15	0.45
29:f:247:THR:HG21	29:f:251:LEU:HA	1.97	0.45
29:f:393:ASP:HA	29:f:396:ARG:HB3	1.98	0.45
35:l:26:THR:O	35:l:27:SER:HB3	2.16	0.45
35:l:41:LYS:HB3	35:l:139:ARG:NH1	2.31	0.45
38:o:44:LYS:HG2	38:o:45:PHE:O	2.16	0.45
42:t:72:LEU:O	42:t:80:ILE:HA	2.16	0.45
43:u:52:VAL:HG13	43:u:63:GLN:HB3	1.96	0.45
43:u:99:TYR:CG	43:u:205:ILE:HG23	2.51	0.45
45:w:237:PHE:CZ	45:w:241:MET:CE	2.99	0.45
1:A:210:A:N7	1:A:211:C:N4	2.64	0.45
1:A:768:G:H2'	1:A:769:U:H5'	1.97	0.45
1:A:1044:C:O2'	1:A:1047:G:O2'	2.10	0.45
1:A:1500:C:O2'	12:O:104:SER:HB2	2.15	0.45
2:B:55:C:C2'	2:B:56:U:H5'	2.46	0.45
2:B:1515:G:O2'	2:B:1518:C:OP2	2.29	0.45
2:B:1649:A:H5'	2:B:1649:A:H8	1.80	0.45
6:F:45:G:H2'	6:F:46:G:C8	2.52	0.45
7:G:80:U:O2	31:h:98:ARG:HA	2.16	0.45
8:H:92:A:C2'	8:H:93:G:H5'	2.46	0.45
9:I:131:ASP:CG	41:r:282:LEU:HD22	2.41	0.45
13:P:83:ILE:HD13	13:P:86:LYS:CE	2.46	0.45
19:V:57:LEU:CD1	19:V:58:ASN:HD22	2.29	0.45
21:X:152:ARG:HH22	21:X:158:LYS:HD2	1.81	0.45
28:e:51:GLU:OE1	28:e:54:ARG:NE	2.35	0.45
32:i:36:PRO:HG2	32:i:43:VAL:HG12	1.99	0.45
32:i:85:MET:C	32:i:86:LEU:HD12	2.41	0.45
36:m:36:ALA:N	36:m:37:PRO:CD	2.78	0.45
41:r:192:ARG:O	41:r:192:ARG:HG3	2.15	0.45
41:r:264:THR:HG22	41:r:266:THR:H	1.81	0.45
42:t:53:GLN:NE2	42:t:57:ILE:HD11	2.31	0.45
43:u:245:LEU:CG	43:u:248:MET:HE3	2.47	0.45
44:v:94:VAL:HG21	44:v:159:LEU:HA	1.98	0.45
46:x:240:LYS:CB	46:x:251:THR:HG23	2.37	0.45
46:x:247:VAL:O	46:x:247:VAL:HG12	2.15	0.45
1:A:132:U:H2'	1:A:133:A:OP1	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:274:C:O5'	1:A:274:C:H6	1.99	0.45
1:A:921:A:H2'	1:A:922:A:C5'	2.46	0.45
1:A:1135:G:H21	27:d:15:LYS:HZ2	1.64	0.45
2:B:668:U:O2'	2:B:669:G:H5'	2.16	0.45
2:B:739:G:O2'	2:B:740:G:P	2.74	0.45
2:B:1377:U:O3'	2:B:1378:A:H3'	2.17	0.45
2:B:1452:U:O3'	29:f:268:THR:HG21	2.16	0.45
4:D:110:G:H2'	4:D:111:C:O4'	2.16	0.45
5:E:209:G:P	24:a:130:ARG:NH2	2.87	0.45
6:F:13:U:H6	6:F:13:U:H5''	1.81	0.45
8:H:30:C:H2'	8:H:31:A:O4'	2.16	0.45
12:O:25:ILE:O	12:O:25:ILE:HG13	2.16	0.45
12:O:29:LEU:HB3	12:O:59:LEU:CD2	2.46	0.45
13:P:52:ASN:OD1	13:P:53:LEU:N	2.50	0.45
19:V:52:GLN:HB3	19:V:70:VAL:HG21	1.97	0.45
23:Z:28:MET:CE	23:Z:70:CYS:SG	3.04	0.45
24:a:21:LYS:N	24:a:48:TYR:OH	2.38	0.45
29:f:49:PHE:CZ	29:f:168:LEU:HD21	2.51	0.45
36:m:14:PRO:HD3	36:m:34:ALA:CB	2.36	0.45
44:v:78:ASP:OD2	44:v:80:ARG:HB2	2.16	0.45
1:A:50:A:H2'	1:A:51:A:O4'	2.16	0.45
1:A:129:U:H2'	1:A:130:C:O4'	2.16	0.45
1:A:210:A:H2'	1:A:210:A:N3	2.32	0.45
1:A:212:C:HO2'	1:A:213:C:H6	1.61	0.45
1:A:321:U:O2	1:A:323:G:H3'	2.16	0.45
1:A:450:U:C3'	1:A:451:G:H5'	2.47	0.45
1:A:1048:C:H1'	2:B:33:A:C8	2.51	0.45
1:A:1338:C:H1'	1:A:1385:C:O2	2.17	0.45
1:A:1496:A:N6	2:B:713:A:N3	2.64	0.45
1:A:1529:A:H2'	1:A:1530:U:C6	2.51	0.45
1:A:1652:U:C2'	1:A:1653:A:H5'	2.46	0.45
1:A:1922:G:H2'	1:A:1923:C:O4'	2.16	0.45
2:B:116:A:H2'	2:B:117:A:H5'	1.98	0.45
2:B:1366:G:H2'	42:t:62:ALA:CB	2.46	0.45
2:B:1492:OMG:H3'	2:B:1493:U:C5'	2.45	0.45
2:B:1503:G:O5'	2:B:1503:G:H8	1.99	0.45
5:E:36:A:H62	5:E:184:C:H42	1.63	0.45
5:E:121:U:OP1	38:o:36:ARG:NH2	2.49	0.45
7:G:63:A:C2'	7:G:64:U:H5'	2.46	0.45
7:G:96:C:H2'	7:G:97:G:O4'	2.17	0.45
7:G:122:G:HO2'	7:G:123:G:H22	1.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:100:ALA:O	9:I:119:ARG:NH1	2.50	0.45
12:O:124:GLU:HG3	12:O:166:TRP:CZ2	2.52	0.45
21:X:102:MET:HE3	34:k:86:ALA:HB3	1.97	0.45
24:a:4:LEU:HD13	24:a:76:HIS:CE1	2.52	0.45
24:a:10:VAL:HG11	24:a:79:PHE:CD1	2.51	0.45
25:b:64:LYS:O	25:b:67:PRO:HG2	2.16	0.45
29:f:90:VAL:HG13	29:f:104:THR:HG22	1.99	0.45
31:h:86:MET:HE2	31:h:185:VAL:CG2	2.46	0.45
36:m:71:GLN:O	36:m:75:ARG:HG2	2.17	0.45
43:u:196:LEU:HD23	43:u:197:ASN:C	2.41	0.45
45:w:83:VAL:HA	45:w:118:ARG:HA	1.98	0.45
45:w:153:HIS:ND1	45:w:162:LYS:HA	2.31	0.45
1:A:7:C:O2'	1:A:8:C:H5'	2.17	0.45
1:A:920:C:C2	9:I:147:ARG:NH1	2.85	0.45
1:A:1057:C:H2'	1:A:1058:G:H8	1.80	0.45
1:A:1252:A:H4'	43:u:146:PHE:C	2.42	0.45
1:A:1323:G:H2'	1:A:1324:C:C6	2.52	0.45
1:A:1803:A:C3'	1:A:1804:A2M:H5''	2.46	0.45
2:B:1247:U:O4	43:u:19:LYS:NZ	2.48	0.45
2:B:1326:U:O2	2:B:1361:OMG:N2	2.47	0.45
2:B:1495:C:H2'	2:B:1496:A:H5'	1.98	0.45
2:B:1564:U:H2'	2:B:1565:G:H8	1.82	0.45
3:C:112:G:C4	40:q:7:LEU:HD23	2.52	0.45
5:E:52:G:OP2	19:V:104:ARG:NH2	2.49	0.45
5:E:115:A:OP1	17:T:117:ARG:HG3	2.17	0.45
7:G:41:A:H61	7:G:61:C:N4	2.15	0.45
18:U:40:VAL:HB	18:U:96:VAL:CG1	2.45	0.45
18:U:91:VAL:HG12	18:U:92:ARG:O	2.17	0.45
18:U:91:VAL:HG13	18:U:95:HIS:HB2	1.99	0.45
18:U:146:LEU:HG	18:U:146:LEU:O	2.17	0.45
19:V:60:ARG:NH1	19:V:63:LYS:HZ2	2.13	0.45
23:Z:53:VAL:CG2	23:Z:101:VAL:HB	2.46	0.45
28:e:89:LEU:H	28:e:100:ASN:ND2	2.10	0.45
30:g:40:ARG:HB3	30:g:95:THR:CG2	2.47	0.45
30:g:45:VAL:HG13	30:g:72:TYR:HB2	1.97	0.45
34:k:108:THR:CG2	34:k:111:GLN:HG3	2.46	0.45
35:l:126:PHE:N	35:l:126:PHE:CD1	2.83	0.45
45:w:151:ARG:NE	45:w:242:ILE:O	2.41	0.45
1:A:393:A:C3'	1:A:394:C:H5''	2.47	0.45
1:A:518:U:H1'	1:A:586:G:N2	2.32	0.45
1:A:804:C:H3'	9:I:111:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:964:U:H5'	11:N:2:PRO:HD3	1.96	0.45
1:A:1042:G:H22	1:A:1053:OMC:H5	1.61	0.45
1:A:1120:G:O2'	1:A:1299:G:H5'	2.16	0.45
1:A:1170:G:H1	1:A:1221:U:H3	1.64	0.45
1:A:1619:G:H2'	1:A:1620:C:O4'	2.16	0.45
1:A:1715:A:H4'	31:h:133:THR:HG22	1.99	0.45
2:B:498:U:O2'	2:B:589:A:O2'	2.17	0.45
2:B:684:C:H3'	2:B:685:C:H2'	1.98	0.45
2:B:735:A:H5''	15:R:80:LYS:HE2	1.99	0.45
2:B:1220:G:H2'	2:B:1221:A:C8	2.51	0.45
6:F:13:U:HO2'	6:F:14:C:P	2.35	0.45
7:G:72:C:H5	7:G:115:A:N6	2.03	0.45
9:I:135:MET:HE3	41:r:295:GLU:OE1	2.17	0.45
11:N:58:ALA:HB1	11:N:99:GLY:O	2.16	0.45
11:N:112:GLU:HB2	36:m:30:THR:HG23	1.99	0.45
11:N:184:LYS:HZ2	11:N:186:VAL:HG12	1.82	0.45
19:V:86:ARG:HD3	19:V:88:LYS:HG2	1.99	0.45
19:V:95:LYS:HD2	19:V:104:ARG:HE	1.82	0.45
31:h:102:HIS:CA	31:h:140:VAL:HG11	2.46	0.45
34:k:101:ASP:OD1	34:k:102:ASN:N	2.49	0.45
38:o:52:VAL:HG23	38:o:68:ALA:HB1	1.98	0.45
41:r:149:VAL:HA	41:r:150:PRO:C	2.42	0.45
41:r:208:LEU:HD23	41:r:209:VAL:N	2.32	0.45
43:u:64:VAL:HG12	43:u:75:VAL:CG1	2.46	0.45
43:u:83:LEU:N	43:u:84:PRO:CD	2.80	0.45
44:v:46:GLY:HA2	44:v:180:PHE:HB3	1.97	0.45
44:v:47:ARG:HD2	44:v:70:ASN:HB2	1.98	0.45
46:x:305:LYS:HA	46:x:308:ALA:HB3	1.99	0.45
1:A:445:G:H5''	1:A:448:C:O2'	2.17	0.45
1:A:738:U:C2'	1:A:739:U:H5'	2.47	0.45
1:A:809:G:H2'	1:A:810:A:H1'	1.99	0.45
1:A:874:G:H3'	1:A:919:OMC:HN42	1.82	0.45
1:A:1057:C:H2'	1:A:1058:G:C8	2.51	0.45
1:A:1119:A:H1'	1:A:1297:U:O2'	2.16	0.45
1:A:1666:G:O2'	3:C:14:G:H4'	2.17	0.45
2:B:1382:C:H2'	2:B:1383:A:C8	2.52	0.45
2:B:1447:G:O2'	2:B:1493:U:O2'	2.31	0.45
2:B:1533:C:C2'	2:B:1534:G:H5'	2.47	0.45
2:B:1561:A:O2'	8:H:19:G:N7	2.45	0.45
3:C:72:A:OP2	23:Z:49:LYS:HG3	2.16	0.45
4:D:13:A:OP1	4:D:109:U:O2'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:77:A:H61	4:D:99:G:C2'	2.29	0.45
7:G:43:G:H8	7:G:43:G:O5'	2.00	0.45
8:H:20:A:H2'	8:H:21:G:C5'	2.33	0.45
13:P:12:LEU:O	13:P:59:LEU:HB2	2.17	0.45
14:Q:54:ARG:HB2	14:Q:78:PHE:CE1	2.52	0.45
15:R:150:MET:HG3	15:R:150:MET:O	2.17	0.45
16:S:11:VAL:HG13	16:S:60:VAL:CG2	2.46	0.45
22:Y:8:PHE:CE2	22:Y:53:VAL:HG21	2.52	0.45
26:c:30:ASP:OD1	26:c:31:PRO:HD2	2.16	0.45
29:f:193:ILE:HD13	29:f:196:LYS:HE2	1.98	0.45
29:f:350:ALA:HB3	29:f:352:GLN:HE21	1.82	0.45
39:p:52:LYS:HA	39:p:55:LYS:HB3	1.97	0.45
41:r:54:ASN:HB3	41:r:57:SER:OG	2.17	0.45
45:w:84:ALA:HB3	45:w:119:LEU:HD11	1.97	0.45
46:x:112:THR:O	46:x:116:MET:HG2	2.17	0.45
46:x:148:LEU:CB	46:x:271:LEU:HD21	2.46	0.45
1:A:315:A:O2'	1:A:316:C:H5'	2.16	0.45
1:A:504:C:P	41:r:321:ARG:NH2	2.90	0.45
1:A:811:G:H2'	1:A:812:A:C8	2.52	0.45
1:A:868:U:O2'	1:A:951:G:N2	2.49	0.45
1:A:1610:A:C2	1:A:1646:A:N1	2.76	0.45
1:A:1804:A2M:HM'3	21:X:91:ARG:NH1	2.29	0.45
2:B:1300:A:O2'	2:B:1301:C:H5'	2.17	0.45
5:E:32:A:H2'	5:E:33:A:H5'	1.99	0.45
5:E:128:G:H2'	5:E:128:G:N3	2.32	0.45
9:I:153:ARG:O	9:I:156:VAL:HG22	2.17	0.45
12:O:21:ARG:CG	12:O:22:PRO:HD2	2.46	0.45
12:O:126:ILE:CD1	12:O:130:VAL:HG12	2.47	0.45
16:S:32:PHE:HD2	16:S:125:VAL:HG11	1.82	0.45
18:U:43:VAL:HG23	18:U:58:HIS:HE1	1.82	0.45
20:W:25:VAL:HB	20:W:100:ASN:O	2.17	0.45
20:W:95:ILE:HG13	22:Y:20:ARG:HB2	1.99	0.45
28:e:114:CYS:HB2	28:e:169:ILE:HG12	1.99	0.45
32:i:24:GLU:OE2	32:i:51:LYS:NZ	2.45	0.45
39:p:52:LYS:O	39:p:55:LYS:HB3	2.16	0.45
43:u:55:ILE:HG21	43:u:164:ARG:HE	1.82	0.45
46:x:148:LEU:HG	46:x:209:MET:SD	2.57	0.45
46:x:213:ASN:OD1	46:x:239:ASP:HA	2.16	0.45
1:A:29:G:H5''	14:Q:188:ARG:HD3	1.98	0.45
1:A:73:G:OP1	11:N:110:SER:OG	2.20	0.45
1:A:127:G:OP2	14:Q:156:ARG:NH1	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:355:U:C2'	1:A:356:G:H5'	2.46	0.45
1:A:752:U:C2'	1:A:753:G:H5'	2.47	0.45
1:A:794:A2M:OP1	14:Q:220:ARG:NH1	2.49	0.45
1:A:1342:U:H5'	9:I:2:GLY:CA	2.42	0.45
1:A:1931:A:OP2	33:j:61:ARG:NH2	2.50	0.45
2:B:627:A2M:H8	2:B:627:A2M:H2'	1.80	0.45
2:B:691:A2M:HM'3	2:B:691:A2M:H1'	1.63	0.45
5:E:68:A:H2'	5:E:69:A:C8	2.52	0.45
8:H:37:U:OP2	29:f:383:LYS:NZ	2.42	0.45
11:N:130:LEU:HD21	34:k:121:ARG:HH11	1.82	0.45
15:R:116:HIS:CE1	15:R:147:GLN:HE21	2.28	0.45
16:S:173:THR:CG2	16:S:174:LYS:N	2.80	0.45
18:U:77:ASN:OD1	18:U:86:ARG:HG3	2.17	0.45
21:X:109:TRP:CE2	21:X:113:ARG:NH1	2.85	0.45
23:Z:103:ILE:HG21	23:Z:106:LEU:HB3	1.98	0.45
24:a:66:ARG:HD2	24:a:112:ARG:NH2	2.31	0.45
28:e:34:TYR:CE1	28:e:38:HIS:CD2	3.05	0.45
28:e:44:VAL:HG23	28:e:46:LYS:HD3	1.99	0.45
29:f:86:VAL:HG21	29:f:203:LEU:HD21	1.94	0.45
29:f:107:ALA:HA	29:f:204:LEU:CD2	2.47	0.45
32:i:41:SER:O	32:i:45:ARG:HG3	2.17	0.45
43:u:66:GLN:O	43:u:72:ASP:HB2	2.16	0.45
44:v:42:GLY:O	44:v:45:ARG:NH1	2.50	0.45
45:w:85:VAL:HG11	45:w:238:LEU:CD2	2.47	0.45
46:x:136:PHE:HA	46:x:236:ILE:HD13	1.98	0.45
46:x:148:LEU:HD23	46:x:209:MET:HE3	1.99	0.45
1:A:26:C:H42	1:A:56:A:N6	2.15	0.45
1:A:1492:A:H1'	2:B:1455:C:H1'	1.98	0.45
1:A:1507:G:O2'	1:A:1508:C:H5'	2.17	0.45
1:A:1616:G:C1'	1:A:1643:A:N6	2.79	0.45
1:A:1798:U:H2'	1:A:1800:A:H5'	1.99	0.45
1:A:1799:U:H5'	1:A:1800:A:OP1	2.17	0.45
2:B:131:G:OP1	17:T:136:ARG:NE	2.42	0.45
2:B:725:U:O5'	2:B:725:U:H6	2.00	0.45
2:B:870:A:N7	21:X:82:PRO:HG3	2.32	0.45
4:D:49:A:OP2	4:D:49:A:H8	2.00	0.45
8:H:41:A:O2'	8:H:42:U:O4'	2.35	0.45
10:L:77:VAL:CG1	10:L:78:ARG:N	2.80	0.45
13:P:67:ARG:NH1	16:S:144:TYR:O	2.34	0.45
15:R:48:TYR:CA	15:R:51:VAL:HG12	2.38	0.45
22:Y:6:CYS:SG	22:Y:35:PHE:HA	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Y:27:LEU:HG	22:Y:29:THR:HB	1.98	0.45
24:a:42:ILE:HD11	24:a:79:PHE:CE2	2.51	0.45
25:b:45:PHE:N	25:b:45:PHE:CD1	2.85	0.45
26:c:32:PHE:CA	26:c:52:VAL:HG21	2.34	0.45
28:e:80:GLU:OE2	38:o:72:SER:HA	2.17	0.45
30:g:36:LEU:HD11	30:g:62:CYS:HA	1.99	0.45
35:l:81:CYS:SG	35:l:107:ALA:HB1	2.57	0.45
41:r:31:ILE:CD1	41:r:128:ALA:CB	2.95	0.45
43:u:53:VAL:HG21	43:u:168:VAL:CG2	2.45	0.45
43:u:204:ARG:HG3	43:u:209:HIS:CB	2.47	0.45
44:v:57:ARG:CZ	44:v:57:ARG:HB2	2.47	0.45
45:w:170:GLU:OE1	45:w:179:VAL:HG22	2.16	0.45
46:x:126:ARG:NH2	46:x:296:SER:HA	2.18	0.45
1:A:50:A:C2'	1:A:51:A:H5'	2.46	0.44
1:A:188:G:H2'	1:A:189:U:H6	1.81	0.44
1:A:239:A:H2'	1:A:240:G:H5''	2.00	0.44
1:A:478:C:OP1	35:l:88:LYS:HG2	2.17	0.44
1:A:601:U:O2'	1:A:602:G:H5'	2.17	0.44
1:A:957:U:H2'	1:A:958:OMG:H8	1.82	0.44
1:A:1338:C:O2'	1:A:1384:A:N1	2.46	0.44
2:B:458:G:H2'	2:B:459:C:O2	2.17	0.44
2:B:530:A:H5'	28:e:236:GLY:H	1.82	0.44
2:B:702:A:O2'	15:R:129:THR:HG21	2.17	0.44
2:B:787:C:H6	2:B:787:C:O5'	2.00	0.44
2:B:1229:G:H2'	2:B:1230:G:H8	1.82	0.44
2:B:1511:A:OP1	29:f:260:TRP:HB2	2.17	0.44
3:C:8:C:O2'	3:C:9:G:H5'	2.17	0.44
3:C:146:U:O2'	3:C:147:G:H5'	2.17	0.44
7:G:166:G:H4'	7:G:167:A:O5'	2.16	0.44
9:I:44:PHE:CZ	9:I:133:LEU:HD21	2.52	0.44
12:O:212:ASN:HB3	13:P:116:ALA:CB	2.47	0.44
20:W:86:SER:HA	20:W:96:TYR:HB3	1.99	0.44
22:Y:8:PHE:CE2	22:Y:43:MET:HG2	2.52	0.44
27:d:9:ASN:O	27:d:9:ASN:ND2	2.50	0.44
29:f:41:PRO:HB2	29:f:199:LEU:CD1	2.48	0.44
30:g:54:ARG:HH12	30:g:91:VAL:CG2	2.27	0.44
33:j:19:ASN:HA	33:j:35:LYS:HE3	2.00	0.44
34:k:69:SER:O	34:k:73:VAL:HG23	2.17	0.44
34:k:119:PRO:O	34:k:121:ARG:N	2.50	0.44
40:q:36:LYS:HB3	40:q:37:TRP:CE3	2.52	0.44
40:q:38:ASN:HB3	40:q:41:ARG:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:12:ALA:HB1	41:r:169:PHE:HD1	1.82	0.44
41:r:32:ARG:HD3	41:r:121:PHE:CE1	2.52	0.44
41:r:153:VAL:CG1	41:r:154:GLU:N	2.80	0.44
41:r:193:GLY:O	41:r:198:ARG:HB2	2.16	0.44
42:t:27:GLN:NE2	42:t:68:ILE:CD1	2.79	0.44
43:u:75:VAL:HG13	43:u:76:MET:N	2.31	0.44
43:u:204:ARG:NH1	43:u:209:HIS:NE2	2.65	0.44
44:v:27:LEU:HB2	44:v:54:GLN:HE22	1.81	0.44
44:v:49:VAL:HG13	44:v:64:SER:C	2.42	0.44
46:x:240:LYS:HB2	46:x:251:THR:CG2	2.38	0.44
1:A:24:U:H5''	1:A:25:A:OP1	2.17	0.44
1:A:105:G:O2'	1:A:813:A:H4'	2.18	0.44
1:A:214:G:H1'	1:A:215:U:OP2	2.17	0.44
1:A:421:G:C2'	1:A:446:A:N6	2.81	0.44
1:A:1118:A:H5''	1:A:1326:A:N1	2.32	0.44
1:A:1152:A:N1	27:d:25:LEU:HD23	2.32	0.44
1:A:1618:A:C2'	1:A:1619:G:H5'	2.47	0.44
1:A:1640:U:H2'	1:A:1641:G:O4'	2.17	0.44
1:A:1709:C:H2'	1:A:1710:OMG:H8	1.82	0.44
1:A:1711:U:C2'	1:A:1712:U:H5'	2.47	0.44
1:A:1921:G:C2'	1:A:1922:G:H5'	2.46	0.44
2:B:67:G:H22	2:B:694:A:H61	1.64	0.44
2:B:698:A:OP2	15:R:82:ARG:HD2	2.17	0.44
3:C:147:G:O2'	3:C:148:C:H5'	2.17	0.44
8:H:106:G:H1'	31:h:94:LYS:HA	1.99	0.44
8:H:121:A:H2'	8:H:122:U:H6	1.80	0.44
10:L:137:LEU:HD22	10:L:168:TRP:CD2	2.52	0.44
12:O:60:THR:HG21	12:O:144:ARG:HD3	1.99	0.44
13:P:129:ASP:HA	13:P:132:ASP:HB2	1.99	0.44
14:Q:201:ARG:HA	14:Q:201:ARG:HD2	1.65	0.44
16:S:119:ARG:HH21	16:S:122:ASN:HD21	1.65	0.44
18:U:52:MET:HA	18:U:53:PRO:HD3	1.71	0.44
18:U:75:ILE:HG12	18:U:88:ARG:HD3	1.97	0.44
23:Z:85:GLU:CG	23:Z:89:GLY:HA2	2.47	0.44
24:a:21:LYS:HD2	24:a:126:TRP:CZ3	2.51	0.44
25:b:45:PHE:N	25:b:45:PHE:HD1	2.14	0.44
25:b:78:LEU:HD13	25:b:121:VAL:CG2	2.47	0.44
29:f:35:ASP:HB2	29:f:189:ASN:HD22	1.82	0.44
29:f:290:LEU:HD23	29:f:329:ILE:CD1	2.47	0.44
29:f:301:ALA:HA	29:f:366:ILE:HG13	1.98	0.44
35:l:135:ALA:O	35:l:138:LYS:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:u:61:ILE:HG23	43:u:79:TYR:HE1	1.82	0.44
43:u:186:PHE:HB2	43:u:196:LEU:HD11	1.99	0.44
46:x:159:THR:HG22	46:x:160:ARG:N	2.32	0.44
1:A:17:G:N2	3:C:153:C:C2	2.85	0.44
1:A:34:A:H5''	14:Q:98:GLY:HA3	1.98	0.44
1:A:139:A:H2'	1:A:140:C:O4'	2.16	0.44
1:A:970:C:H4'	41:r:93:ASN:HD21	1.83	0.44
1:A:1331:G:O2'	1:A:1332:A:H5'	2.17	0.44
2:B:87:U:H6	2:B:87:U:O5'	2.01	0.44
2:B:546:U:O4	49:B:1801:HOH:O	2.18	0.44
2:B:635:U:O2'	2:B:636:C:H5'	2.17	0.44
2:B:773:C:H2'	2:B:774:U:H6	1.82	0.44
2:B:1197:C:O2	18:U:60:ARG:NH2	2.29	0.44
2:B:1366:G:OP2	2:B:1367:U:O2'	2.26	0.44
2:B:1449:OMC:HM21	29:f:244:PRO:CD	2.47	0.44
3:C:153:C:OP1	14:Q:54:ARG:HD2	2.17	0.44
4:D:109:U:O2'	4:D:110:G:P	2.75	0.44
9:I:55:SER:HB2	9:I:58:ASN:HD22	1.83	0.44
9:I:108:CYS:HA	9:I:128:LEU:O	2.17	0.44
15:R:35:VAL:CG2	15:R:59:PRO:HD2	2.48	0.44
18:U:139:ARG:HA	45:w:74:ASN:HD21	1.81	0.44
19:V:68:VAL:O	19:V:68:VAL:HG12	2.17	0.44
20:W:17:LEU:HA	20:W:55:ALA:HB2	1.99	0.44
25:b:99:VAL:HG23	25:b:99:VAL:O	2.17	0.44
26:c:53:VAL:HG13	26:c:109:ARG:HG2	1.99	0.44
29:f:47:MET:HE3	29:f:342:VAL:HG21	1.96	0.44
36:m:83:LEU:HD23	36:m:100:ARG:CZ	2.44	0.44
41:r:171:LYS:N	41:r:176:VAL:HG13	2.32	0.44
41:r:336:GLU:HG3	41:r:339:MET:CE	2.48	0.44
44:v:103:ILE:O	44:v:148:ARG:NH2	2.50	0.44
46:x:163:ARG:O	46:x:167:LEU:HG	2.17	0.44
46:x:243:LEU:HD22	46:x:255:VAL:HG21	2.00	0.44
1:A:147:U:H3'	1:A:148:G:C5'	2.47	0.44
1:A:224:A:C2'	1:A:225:C:H5'	2.48	0.44
2:B:569:G:H8	2:B:569:G:OP2	1.99	0.44
2:B:663:A:H2'	2:B:664:U:H5'	1.98	0.44
2:B:680:U:H2'	2:B:681:G:H5'	2.00	0.44
2:B:1289:U:C2'	2:B:1290:A:H5'	2.47	0.44
2:B:1306:A:H2'	2:B:1307:A:O4'	2.17	0.44
3:C:27:U:H5''	41:r:106:ILE:HG12	1.99	0.44
4:D:24:U:H5''	4:D:25:G:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:50:G:O2'	5:E:51:A:H5'	2.16	0.44
5:E:184:C:H4'	33:j:36:ARG:NH1	2.32	0.44
5:E:199:A:H2'	5:E:200:A:C8	2.53	0.44
6:F:47:C:H5''	13:P:121:ALA:HB1	2.00	0.44
9:I:26:ILE:HD13	41:r:281:MET:SD	2.58	0.44
9:I:51:ARG:HG2	9:I:51:ARG:HH11	1.81	0.44
12:O:32:HIS:CE1	12:O:139:ILE:H	2.36	0.44
12:O:103:ARG:HB3	12:O:117:LEU:HD22	1.99	0.44
12:O:219:PHE:O	13:P:98:ALA:HB1	2.18	0.44
16:S:112:LEU:HD12	16:S:112:LEU:HA	1.72	0.44
21:X:82:PRO:O	46:x:108:MET:HA	2.17	0.44
21:X:86:ARG:HA	21:X:87:PRO:HD3	1.74	0.44
21:X:92:ARG:HA	21:X:93:PRO:HD3	1.76	0.44
22:Y:57:ARG:HG2	22:Y:61:ARG:HG3	1.98	0.44
25:b:19:TYR:CD1	25:b:25:HIS:CD2	3.05	0.44
26:c:49:LYS:C	26:c:99:ARG:HD2	2.43	0.44
31:h:84:ILE:H	31:h:84:ILE:HD12	1.83	0.44
31:h:102:HIS:HA	31:h:140:VAL:CG1	2.46	0.44
31:h:120:MET:HB3	31:h:153:ARG:HG3	1.99	0.44
34:k:90:LYS:HE3	37:n:66:TYR:OH	2.17	0.44
36:m:33:ARG:HG2	36:m:35:ARG:HG2	2.00	0.44
41:r:153:VAL:O	41:r:252:LYS:N	2.48	0.44
45:w:80:LYS:HB3	45:w:81:PRO:HD2	1.99	0.44
45:w:191:GLY:O	45:w:195:PHE:HB2	2.18	0.44
46:x:148:LEU:HB2	46:x:271:LEU:HD21	1.98	0.44
1:A:18:C:C4'	14:Q:154:MET:SD	3.02	0.44
1:A:266:C:OP1	23:Z:44:ALA:HB2	2.18	0.44
1:A:790:G:H4'	1:A:791:U:H6	1.83	0.44
1:A:1039:G:O2'	2:B:92:A:OP1	2.34	0.44
1:A:1316:OMG:HM23	2:B:1177:G:C6	2.52	0.44
1:A:1680:G:N2	31:h:102:HIS:NE2	2.65	0.44
1:A:1771:U:C3'	1:A:1772:A:H5''	2.46	0.44
2:B:656:U:O5'	2:B:656:U:H6	2.00	0.44
2:B:1361:OMG:HM23	2:B:1361:OMG:H1'	1.46	0.44
2:B:1502:U:OP1	20:W:43:GLY:N	2.48	0.44
5:E:134:U:H2'	5:E:135:C:C6	2.53	0.44
5:E:146:A:H4'	39:p:26:LYS:HE2	2.00	0.44
10:L:20:VAL:CA	10:L:137:LEU:HG	2.39	0.44
10:L:139:ARG:HH12	10:L:160:VAL:HA	1.82	0.44
17:T:98:ARG:O	17:T:98:ARG:HG2	2.17	0.44
19:V:108:ARG:NH1	19:V:122:PHE:HA	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:Y:51:ARG:HA	22:Y:58:THR:HG23	1.99	0.44
29:f:290:LEU:CD2	29:f:329:ILE:HD13	2.48	0.44
33:j:77:ARG:CG	33:j:78:PRO:HD2	2.46	0.44
41:r:8:SER:HB3	41:r:17:VAL:HG11	1.99	0.44
43:u:183:PRO:HB3	43:u:196:LEU:CD1	2.48	0.44
46:x:283:SER:O	46:x:287:ARG:HG3	2.18	0.44
1:A:146:U:H5'	1:A:147:U:P	2.58	0.44
1:A:1312:A:N3	2:B:1396:U:O2'	2.50	0.44
1:A:1528:U:H2'	1:A:1529:A:C8	2.52	0.44
1:A:1782:A:H2'	1:A:1783:C:O4'	2.17	0.44
2:B:503:G:N7	28:e:152:SER:OG	2.51	0.44
2:B:785:G:O6	2:B:786:G:C6	2.70	0.44
2:B:870:A:N6	28:e:68:LYS:NZ	2.65	0.44
2:B:1257:G:H5''	18:U:12:ARG:NH1	2.33	0.44
2:B:1484:G:H2'	2:B:1485:U:O4'	2.17	0.44
2:B:1530:C:H2'	2:B:1531:G:C8	2.53	0.44
2:B:1574:G:H4'	2:B:1575:A:H5''	2.00	0.44
3:C:49:G:H8	3:C:49:G:O5'	2.00	0.44
5:E:9:U:H5''	33:j:75:THR:CG2	2.45	0.44
7:G:41:A:N6	7:G:61:C:H42	2.15	0.44
9:I:73:ARG:CZ	27:d:59:ARG:NH1	2.81	0.44
13:P:7:ILE:HG21	16:S:153:LEU:HD11	1.99	0.44
13:P:108:PHE:HD1	44:v:175:TYR:CG	2.36	0.44
16:S:14:ARG:HH21	45:w:77:LEU:HD23	1.82	0.44
16:S:74:ARG:HD2	16:S:76:TYR:CZ	2.52	0.44
17:T:10:LEU:HD22	17:T:38:ARG:HG2	1.99	0.44
20:W:94:VAL:CG1	22:Y:19:ARG:HB3	2.47	0.44
21:X:102:MET:HE1	34:k:86:ALA:HB3	1.99	0.44
21:X:188:ALA:O	21:X:193:LEU:HB2	2.17	0.44
23:Z:45:MET:CE	23:Z:115:ILE:HG21	2.45	0.44
26:c:20:GLN:HB2	26:c:27:LEU:O	2.17	0.44
26:c:82:MET:HE1	26:c:94:ALA:CB	2.48	0.44
28:e:47:THR:HA	28:e:84:THR:CG2	2.47	0.44
29:f:43:LEU:HD11	29:f:199:LEU:HD21	2.00	0.44
29:f:320:GLY:HA3	29:f:339:ARG:HD2	2.00	0.44
29:f:371:LYS:O	29:f:372:ILE:CB	2.66	0.44
30:g:37:ARG:HG2	30:g:61:TYR:HE2	1.82	0.44
36:m:105:GLU:C	36:m:108:ARG:H	2.24	0.44
37:n:36:ALA:O	37:n:45:ARG:HD3	2.18	0.44
41:r:230:VAL:HG11	41:r:254:ALA:O	2.18	0.44
1:A:7:C:N3	3:C:166:OMG:N1	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:468:A:N3	2:B:709:A:H4'	2.33	0.44
1:A:1054:G:H2'	1:A:1055:C:C6	2.53	0.44
1:A:1616:G:C1'	1:A:1643:A:H61	2.31	0.44
1:A:1721:G:C4	33:j:5:ARG:NH1	2.86	0.44
2:B:21:OMC:H4'	2:B:22:A:N3	2.33	0.44
2:B:515:U:H5''	2:B:516:G:OP2	2.17	0.44
3:C:96:A:C2'	3:C:97:U:H5'	2.48	0.44
4:D:6:C:C5'	43:u:52:VAL:HG21	2.47	0.44
5:E:50:G:O6	19:V:88:LYS:NZ	2.46	0.44
7:G:63:A:H2'	7:G:64:U:O4'	2.17	0.44
7:G:119:C:H2'	7:G:120:A:H8	1.83	0.44
9:I:85:PRO:HA	9:I:142:ASN:O	2.18	0.44
9:I:139:THR:HG22	9:I:140:GLY:N	2.32	0.44
12:O:124:GLU:HG3	12:O:166:TRP:HZ2	1.82	0.44
15:R:128:ARG:HE	15:R:136:ILE:HG21	1.81	0.44
28:e:145:ARG:NH2	28:e:157:THR:O	2.50	0.44
29:f:56:ILE:CG2	29:f:366:ILE:HD13	2.48	0.44
41:r:40:HIS:ND1	41:r:236:LEU:HD23	2.33	0.44
43:u:249:TYR:O	43:u:252:ALA:HB3	2.18	0.44
45:w:188:ILE:HG22	45:w:199:THR:HG22	1.99	0.44
46:x:139:VAL:HG22	46:x:140:LEU:N	2.33	0.44
1:A:144:A:H2'	1:A:145:G:C5'	2.48	0.44
1:A:386:A:N1	1:A:393:A:O2'	2.46	0.44
1:A:452:A:H62	3:C:15:G:H1'	1.81	0.44
1:A:1023:G:C6	1:A:1024:G:N1	2.86	0.44
1:A:1036:G:C2'	1:A:1037:A:H5'	2.48	0.44
1:A:1494:G:O6	2:B:712:C:O2'	2.36	0.44
1:A:1511:A:O2'	1:A:1512:A:H5'	2.18	0.44
1:A:1712:U:H5''	17:T:4:LEU:CD1	2.48	0.44
1:A:1760:A:C2'	1:A:1761:G:H5'	2.48	0.44
2:B:69:A:OP2	8:H:107:A:N6	2.50	0.44
2:B:709:A:C2'	2:B:710:G:H5'	2.47	0.44
2:B:1273:G:H8	2:B:1311:A:H2'	1.82	0.44
4:D:116:A:C2'	4:D:117:U:H5'	2.48	0.44
5:E:127:C:H2'	5:E:128:G:O4'	2.16	0.44
7:G:124:U:OP2	7:G:124:U:H6	2.00	0.44
9:I:3:VAL:HG22	45:w:110:GLN:NE2	2.27	0.44
9:I:25:TYR:O	9:I:29:LEU:HB2	2.18	0.44
9:I:66:ARG:CZ	9:I:70:CYS:SG	3.06	0.44
11:N:184:LYS:NZ	11:N:186:VAL:HG12	2.33	0.44
12:O:93:SER:O	12:O:97:ILE:HG13	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:O:94:PRO:HD2	12:O:124:GLU:CD	2.43	0.44
20:W:28:ALA:CB	20:W:81:ILE:HD11	2.47	0.44
21:X:147:ILE:CD1	21:X:164:THR:HG21	2.47	0.44
26:c:68:LYS:HD2	26:c:68:LYS:N	2.32	0.44
28:e:185:SER:O	28:e:189:PHE:HD2	2.01	0.44
36:m:14:PRO:HG3	36:m:34:ALA:HB2	1.98	0.44
36:m:38:SER:OG	36:m:39:SER:N	2.44	0.44
43:u:63:GLN:HG3	43:u:77:ALA:HB2	1.99	0.44
43:u:65:VAL:HG13	43:u:73:GLU:O	2.18	0.44
44:v:69:TYR:CD1	44:v:177:HIS:CE1	3.06	0.44
45:w:113:ASN:HA	45:w:205:PHE:O	2.18	0.44
1:A:27:C:H2'	1:A:28:C:C6	2.53	0.44
1:A:92:G:OP1	1:A:92:G:H4'	2.17	0.44
1:A:239:A:H1'	1:A:259:G:N3	2.33	0.44
1:A:324:G:OP2	1:A:326:G:H4'	2.17	0.44
1:A:406:G:N7	37:n:24:ARG:NH2	2.66	0.44
1:A:590:G:H2'	1:A:591:A:O4'	2.17	0.44
1:A:1733:A:C2'	40:q:13:TYR:CD1	3.01	0.44
2:B:1299:G:O2'	2:B:1300:A:H5'	2.18	0.44
3:C:121:G:H2'	3:C:122:A:C8	2.53	0.44
5:E:115:A:C2'	5:E:116:G:H5'	2.48	0.44
7:G:39:C:O2'	7:G:40:G:H5'	2.18	0.44
7:G:115:A:O2'	7:G:117:C:H2'	2.18	0.44
11:N:186:VAL:HG23	25:b:126:VAL:HG21	1.99	0.44
12:O:27:VAL:HA	12:O:137:VAL:CG2	2.48	0.44
14:Q:99:LYS:HA	14:Q:100:PRO:HD3	1.76	0.44
23:Z:118:ARG:HG3	23:Z:118:ARG:O	2.18	0.44
25:b:101:LEU:CD1	25:b:123:ALA:HB2	2.29	0.44
30:g:36:LEU:HD23	30:g:36:LEU:C	2.43	0.44
31:h:99:LYS:HB2	31:h:104:ARG:CD	2.48	0.44
35:l:67:ASN:CG	44:v:190:ARG:HH12	2.22	0.44
38:o:29:LEU:HD22	38:o:69:TYR:HD2	1.83	0.44
44:v:34:GLY:HA3	44:v:91:ILE:HG12	1.99	0.44
45:w:31:ALA:O	45:w:34:LYS:HB2	2.18	0.44
46:x:128:LYS:HE3	46:x:290:TRP:CZ3	2.53	0.44
1:A:107:U:O4'	1:A:367:A:H1'	2.17	0.43
1:A:260:U:O2'	1:A:261:U:O2	2.31	0.43
1:A:347:U:H3'	1:A:347:U:OP1	2.17	0.43
1:A:372:G:C5	37:n:51:VAL:HG11	2.52	0.43
1:A:791:U:OP1	25:b:8:THR:OG1	2.34	0.43
1:A:794:A2M:OP1	41:r:109:ARG:HD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1615:C:O2'	32:i:104:LYS:HB2	2.18	0.43
2:B:68:A:H4'	2:B:69:A:OP1	2.15	0.43
2:B:89:G:O6	29:f:246:LYS:HE3	2.18	0.43
4:D:68:C:O2'	4:D:69:U:H5'	2.18	0.43
4:D:84:U:H2'	45:w:218:ARG:NH1	2.33	0.43
11:N:127:LYS:HB3	34:k:125:VAL:HG13	1.99	0.43
12:O:24:ILE:HG23	12:O:50:LYS:O	2.18	0.43
14:Q:188:ARG:HH11	14:Q:190:LEU:HD12	1.83	0.43
16:S:29:PHE:HB3	16:S:43:PHE:HD1	1.82	0.43
17:T:92:LYS:O	17:T:96:MET:HG3	2.18	0.43
18:U:107:GLN:O	18:U:110:LYS:HB3	2.18	0.43
23:Z:9:ARG:NH1	41:r:199:ARG:NH1	2.66	0.43
23:Z:83:ASN:HB2	23:Z:92:VAL:O	2.19	0.43
26:c:50:ALA:HA	26:c:99:ARG:HD3	2.00	0.43
29:f:286:LYS:NZ	29:f:357:LEU:O	2.51	0.43
29:f:314:PRO:HG2	29:f:371:LYS:HD3	2.00	0.43
29:f:339:ARG:O	29:f:340:ARG:CG	2.65	0.43
35:l:47:TYR:OH	35:l:131:VAL:O	2.27	0.43
42:t:36:TYR:O	42:t:41:ARG:NH1	2.51	0.43
43:u:147:PRO:CG	43:u:178:ALA:HB2	2.48	0.43
45:w:40:LEU:HD13	45:w:167:GLN:CD	2.43	0.43
46:x:209:MET:HE2	46:x:243:LEU:HD21	1.99	0.43
1:A:313:G:H2'	1:A:314:C:O4'	2.18	0.43
1:A:335:C:H4'	36:m:89:ARG:O	2.18	0.43
1:A:793:A:O3'	14:Q:220:ARG:NH1	2.51	0.43
1:A:794:A2M:HM'2	1:A:795:A:O4'	2.18	0.43
1:A:868:U:O2'	9:I:69:VAL:HG11	2.18	0.43
1:A:948:G:OP1	9:I:157:LYS:HD2	2.18	0.43
1:A:1023:G:OP1	17:T:92:LYS:NZ	2.51	0.43
1:A:1079:G:N7	28:e:9:ARG:NH2	2.67	0.43
1:A:1110:U:C2	25:b:12:ARG:HD2	2.52	0.43
1:A:1604:G:C6	1:A:1653:A:C2	3.06	0.43
1:A:1740:G:C2	1:A:1741:C:HI'	2.53	0.43
1:A:1794:U:H6	1:A:1794:U:O5'	2.01	0.43
2:B:1174:G:H2'	2:B:1175:C:C6	2.54	0.43
2:B:1643:C:H6	2:B:1643:C:C5'	2.29	0.43
3:C:105:OMC:H5'	3:C:107:C:OP2	2.18	0.43
4:D:13:A:H5''	4:D:109:U:HO2'	1.83	0.43
7:G:38:A:H2'	7:G:39:C:H6	1.82	0.43
7:G:41:A:H61	7:G:61:C:H42	1.66	0.43
9:I:114:LYS:O	9:I:118:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:L:106:GLY:HA2	10:L:165:ALA:HB2	2.00	0.43
12:O:166:TRP:CZ3	12:O:169:SER:HA	2.53	0.43
12:O:175:LEU:CD1	29:f:96:PRO:HG3	2.48	0.43
13:P:76:ASN:O	13:P:79:ALA:HB3	2.18	0.43
14:Q:164:ILE:O	14:Q:164:ILE:HG13	2.18	0.43
15:R:15:ALA:HB2	15:R:102:ALA:HA	2.00	0.43
15:R:129:THR:OG1	15:R:137:THR:N	2.51	0.43
19:V:48:GLU:HG3	19:V:72:LEU:CD1	2.46	0.43
19:V:86:ARG:CD	19:V:88:LYS:HG2	2.47	0.43
20:W:81:ILE:HG12	20:W:101:ALA:O	2.18	0.43
25:b:30:SER:HB2	25:b:40:HIS:HE1	1.83	0.43
25:b:75:LEU:HB3	25:b:115:LEU:HB2	2.00	0.43
26:c:23:ASN:ND2	32:i:76:PRO:HD3	2.34	0.43
26:c:88:ALA:O	26:c:91:VAL:HG12	2.19	0.43
29:f:85:VAL:HG23	29:f:167:GLN:NE2	2.33	0.43
35:l:110:GLY:CA	35:l:126:PHE:HA	2.49	0.43
42:t:68:ILE:HG23	42:t:68:ILE:O	2.18	0.43
43:u:60:ILE:HD13	43:u:98:ALA:HB2	2.00	0.43
43:u:83:LEU:O	43:u:86:PHE:N	2.42	0.43
44:v:35:THR:HA	44:v:88:LYS:CB	2.49	0.43
1:A:45:U:H2'	1:A:46:U:O4'	2.18	0.43
1:A:131:U:H3'	1:A:132:U:H5''	1.99	0.43
1:A:408:G:O2'	1:A:409:A:O4'	2.30	0.43
1:A:806:A:N7	1:A:952:G:O2'	2.40	0.43
1:A:842:U:H2'	1:A:843:G:C8	2.53	0.43
1:A:1071:A2M:C2	28:e:15:ILE:HD11	2.38	0.43
1:A:1315:C:HO2'	2:B:1435:U:H4'	1.83	0.43
1:A:1352:G:C4'	45:w:214:MET:HE2	2.49	0.43
1:A:1538:G:O2'	1:A:1540:A:O5'	2.34	0.43
2:B:529:A:H5''	28:e:7:THR:CG2	2.48	0.43
2:B:1268:U:H2'	2:B:1269:G:C8	2.53	0.43
2:B:1643:C:N4	2:B:1647:G:H1	2.16	0.43
4:D:47:U:OP1	43:u:94:ASN:HB2	2.18	0.43
5:E:182:U:H2'	5:E:183:U:H5'	2.00	0.43
7:G:100:A:O2'	7:G:101:A:H5'	2.18	0.43
12:O:205:LEU:O	12:O:213:LEU:HD12	2.18	0.43
19:V:72:LEU:CD1	19:V:77:LEU:HD23	2.48	0.43
20:W:62:ALA:O	20:W:76:LEU:HB2	2.18	0.43
20:W:81:ILE:HD12	20:W:120:VAL:HG22	2.00	0.43
24:a:77:LYS:HG3	24:a:78:HIS:CD2	2.53	0.43
26:c:81:VAL:HG12	26:c:82:MET:N	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:c:127:ARG:NH2	32:i:115:GLU:OE2	2.50	0.43
27:d:14:ARG:O	27:d:18:ARG:HG2	2.18	0.43
29:f:33:PRO:HA	29:f:349:MET:HE2	1.98	0.43
29:f:214:PHE:CE2	29:f:345:LEU:HD12	2.52	0.43
29:f:288:TYR:CZ	29:f:332:LYS:HB2	2.53	0.43
38:o:52:VAL:O	38:o:54:ILE:HD12	2.18	0.43
39:p:56:ILE:O	39:p:59:SER:HB2	2.17	0.43
41:r:31:ILE:HD13	41:r:128:ALA:HB3	2.00	0.43
43:u:21:ARG:HA	43:u:24:ARG:NH2	2.34	0.43
43:u:52:VAL:CA	43:u:153:ASP:HB3	2.39	0.43
46:x:166:ARG:NH2	46:x:167:LEU:HD21	2.34	0.43
1:A:210:A:N3	41:r:144:GLU:HG2	2.33	0.43
1:A:305:A:H2'	1:A:306:G:O4'	2.18	0.43
1:A:431:A:C5	1:A:432:A:H1'	2.53	0.43
1:A:1025:A:O2'	1:A:1026:G:H5'	2.18	0.43
1:A:1712:U:H5''	17:T:4:LEU:HD12	2.00	0.43
2:B:93:A:H2'	2:B:94:A:O4'	2.19	0.43
2:B:477:A:N6	38:o:18:TYR:HA	2.34	0.43
2:B:766:C:H2'	2:B:767:OMU:H6	1.99	0.43
3:C:22:U:H4'	23:Z:14:ARG:HB2	2.00	0.43
15:R:98:ALA:HB3	15:R:150:MET:HE3	1.99	0.43
15:R:151:THR:HG22	15:R:152:GLN:N	2.33	0.43
16:S:9:TYR:HB2	16:S:31:VAL:HG23	1.99	0.43
17:T:119:ILE:O	17:T:122:GLU:HB3	2.19	0.43
18:U:109:GLN:HA	18:U:112:PHE:HB3	2.00	0.43
28:e:54:ARG:HD2	28:e:58:LEU:CD1	2.49	0.43
28:e:62:GLU:HG2	28:e:71:ARG:HD3	2.00	0.43
34:k:37:GLN:C	34:k:38:LEU:HD12	2.43	0.43
35:l:38:LEU:CD2	44:v:40:LEU:HA	2.49	0.43
35:l:68:THR:CG2	35:l:69:LYS:N	2.81	0.43
42:t:10:MET:HE1	42:t:83:ASN:ND2	2.33	0.43
42:t:65:THR:CG2	42:t:89:LYS:HG2	2.47	0.43
44:v:65:GLY:CA	44:v:72:VAL:HB	2.49	0.43
46:x:91:ASN:OD1	46:x:93:GLY:N	2.47	0.43
46:x:271:LEU:O	46:x:275:VAL:HG23	2.18	0.43
1:A:195:U:OP1	1:A:196:C:H5''	2.18	0.43
1:A:771:U:O5'	1:A:771:U:H6	2.01	0.43
1:A:804:C:H3'	9:I:111:ARG:NH2	2.33	0.43
1:A:989:G:H1'	28:e:15:ILE:HG23	2.00	0.43
1:A:1570:A:C2'	1:A:1571:G:H5'	2.49	0.43
1:A:1934:C:H2'	1:A:1935:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:10:C:O2'	2:B:11:A:H5'	2.19	0.43
2:B:1529:OMC:HM22	2:B:1530:C:C4'	2.47	0.43
3:C:169:G:OP1	46:x:145:ARG:NH1	2.51	0.43
4:D:43:U:OP1	10:L:143:ARG:HG3	2.17	0.43
6:F:44:C:C5	13:P:95:ARG:HD2	2.54	0.43
9:I:158:HIS:O	11:N:5:LYS:NZ	2.48	0.43
12:O:99:LEU:CD1	12:O:122:ALA:CB	2.96	0.43
14:Q:44:TRP:HA	14:Q:47:ARG:NH2	2.29	0.43
14:Q:172:HIS:HB3	14:Q:175:ARG:CG	2.47	0.43
15:R:99:GLU:O	15:R:103:ILE:HG13	2.19	0.43
15:R:151:THR:HG22	15:R:152:GLN:O	2.19	0.43
20:W:36:LEU:HD13	20:W:78:ALA:CB	2.48	0.43
20:W:77:ASN:HB2	20:W:105:VAL:O	2.18	0.43
22:Y:30:LYS:HB2	22:Y:30:LYS:HE2	1.80	0.43
23:Z:60:TYR:CZ	23:Z:94:VAL:HG11	2.53	0.43
24:a:112:ARG:O	24:a:116:GLN:HB2	2.19	0.43
34:k:30:SER:O	34:k:33:ARG:HB2	2.18	0.43
41:r:219:PHE:HD1	41:r:225:LEU:CD2	2.31	0.43
41:r:264:THR:CG2	41:r:265:PHE:H	2.32	0.43
42:t:28:TYR:HB3	42:t:69:VAL:HB	1.99	0.43
45:w:47:ARG:HB2	45:w:180:CYS:SG	2.59	0.43
46:x:249:ARG:HD3	46:x:251:THR:O	2.18	0.43
1:A:10:G:O2'	1:A:1801:G:O6	2.34	0.43
1:A:18:C:C5'	14:Q:154:MET:SD	3.07	0.43
1:A:814:G:OP1	11:N:44:ARG:NH1	2.47	0.43
2:B:55:C:O3'	17:T:56:LYS:HB3	2.18	0.43
2:B:1288:G:H5''	18:U:83:ARG:NH1	2.34	0.43
2:B:1357:A:O4'	25:b:58:MET:HG2	2.19	0.43
3:C:46:G:O2'	3:C:61:A:N1	2.46	0.43
3:C:104:A:H1'	3:C:105:OMC:HM23	2.00	0.43
5:E:203:C:H2'	5:E:204:C:C6	2.54	0.43
8:H:42:U:H1'	8:H:100:A:C4	2.53	0.43
13:P:81:LYS:O	13:P:86:LYS:HE2	2.18	0.43
14:Q:95:ILE:HG22	14:Q:96:THR:N	2.32	0.43
14:Q:197:ALA:O	14:Q:201:ARG:HB2	2.19	0.43
16:S:51:ASN:C	16:S:53:VAL:H	2.27	0.43
16:S:81:ALA:HB2	16:S:126:LEU:HD11	1.99	0.43
16:S:141:ILE:HD12	16:S:145:HIS:NE2	2.33	0.43
17:T:102:LEU:HD21	17:T:134:ASN:O	2.19	0.43
17:T:136:ARG:CA	17:T:139:MET:HB3	2.31	0.43
19:V:109:ILE:H	19:V:109:ILE:HD12	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:W:87:TRP:O	20:W:94:VAL:HA	2.19	0.43
21:X:166:ILE:HG12	40:q:10:LYS:NZ	2.34	0.43
28:e:62:GLU:OE2	28:e:71:ARG:HD2	2.19	0.43
29:f:393:ASP:O	29:f:397:ARG:N	2.25	0.43
32:i:68:THR:CG2	32:i:69:PRO:CD	2.95	0.43
34:k:83:MET:HG2	34:k:84:PRO:O	2.19	0.43
42:t:12:CYS:HA	42:t:13:PRO:HD2	1.64	0.43
45:w:119:LEU:HD12	45:w:119:LEU:N	2.33	0.43
1:A:209:A:N6	26:c:55:THR:H	2.16	0.43
1:A:960:C:H2'	1:A:961:U:O4'	2.19	0.43
1:A:1098:C:H3'	1:A:1099:U:H2'	2.00	0.43
1:A:1617:A:N3	1:A:1644:C:O2'	2.51	0.43
1:A:1645:C:H42	41:r:187:GLU:HG3	1.83	0.43
1:A:1685:A:O2'	1:A:1686:A:H5'	2.18	0.43
2:B:504:A:OP1	2:B:505:U:H5	2.02	0.43
2:B:673:U:H2'	2:B:674:U:C6	2.54	0.43
2:B:709:A:O2'	2:B:710:G:H5'	2.18	0.43
2:B:761:U:C2'	2:B:762:U:H5'	2.49	0.43
2:B:1180:G:H2'	2:B:1181:C:H5'	2.01	0.43
2:B:1259:G:O2'	2:B:1264:A:N1	2.41	0.43
2:B:1262:A:OP2	43:u:23:ARG:NE	2.46	0.43
8:H:41:A:O2'	8:H:42:U:H6	2.02	0.43
9:I:27:LYS:HB2	26:c:10:LEU:HD21	1.99	0.43
11:N:79:GLY:HA2	11:N:101:ARG:HB2	2.00	0.43
12:O:208:VAL:HG12	13:P:123:TRP:NE1	2.34	0.43
20:W:87:TRP:NE1	20:W:123:GLU:OE2	2.51	0.43
23:Z:51:ASP:CB	23:Z:106:LEU:HA	2.43	0.43
28:e:31:ILE:O	28:e:33:ASP:N	2.52	0.43
32:i:36:PRO:HG2	32:i:43:VAL:CG1	2.48	0.43
34:k:20:LYS:HD2	34:k:23:MET:HE3	2.00	0.43
36:m:17:ARG:CZ	36:m:32:ARG:HD2	2.48	0.43
36:m:93:PHE:CE2	36:m:97:LYS:CE	2.96	0.43
1:A:249:C:H2'	1:A:250:A:C5'	2.48	0.43
1:A:453:A:N6	3:C:14:G:H1'	2.34	0.43
1:A:1027:G:O2'	1:A:1062:G:H4'	2.19	0.43
1:A:1071:A2M:HM'3	1:A:1071:A2M:H1'	1.63	0.43
1:A:1167:A:N3	4:D:78:C:O2'	2.51	0.43
1:A:1623:A:H2	3:C:8:C:C4'	2.32	0.43
1:A:1681:A:H4'	1:A:1682:U:O5'	2.19	0.43
2:B:469:G:O2'	2:B:470:G:H5'	2.19	0.43
2:B:493:A:H2'	2:B:494:U:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1257:G:H5''	18:U:12:ARG:HH12	1.84	0.43
2:B:1267:U:H2'	2:B:1268:U:H5'	2.01	0.43
3:C:44:A:H61	37:n:65:ARG:HH22	1.67	0.43
3:C:155:U:O2'	3:C:156:A:H5'	2.18	0.43
5:E:121:U:H2'	5:E:122:C:O4'	2.18	0.43
6:F:8:C:H2'	6:F:9:C:H5'	2.00	0.43
6:F:47:C:HO2'	35:l:29:VAL:HG11	1.83	0.43
11:N:61:PRO:CD	11:N:79:GLY:H	2.32	0.43
15:R:6:ARG:HE	15:R:116:HIS:HD2	1.66	0.43
15:R:35:VAL:CG2	15:R:58:ILE:HG23	2.48	0.43
15:R:118:GLN:OE1	15:R:147:GLN:NE2	2.51	0.43
16:S:12:VAL:HG11	45:w:75:TYR:CE2	2.54	0.43
16:S:99:VAL:O	16:S:99:VAL:HG12	2.19	0.43
23:Z:50:ASP:OD1	23:Z:66:LYS:NZ	2.44	0.43
23:Z:53:VAL:HG21	23:Z:101:VAL:HG21	2.01	0.43
28:e:102:LEU:CD1	28:e:107:ILE:CG1	2.97	0.43
31:h:82:ASP:HA	31:h:153:ARG:HH12	1.84	0.43
32:i:14:ARG:NH1	32:i:52:ALA:HB3	2.25	0.43
44:v:66:PRO:HG2	44:v:69:TYR:CD2	2.53	0.43
45:w:143:THR:HG21	45:w:238:LEU:HD23	2.01	0.43
1:A:78:U:H2'	1:A:79:C:O4'	2.19	0.43
1:A:106:A:H5''	1:A:814:G:H5'	2.01	0.43
1:A:329:C:O3'	14:Q:187:HIS:HA	2.19	0.43
1:A:480:U:H1'	1:A:755:G:N2	2.33	0.43
1:A:752:U:O2'	1:A:753:G:H5'	2.19	0.43
1:A:1110:U:P	25:b:15:THR:HA	2.59	0.43
2:B:82:G:H2'	2:B:83:G:O4'	2.19	0.43
2:B:763:U:C2'	2:B:764:G:H5''	2.48	0.43
2:B:909:C:H2'	2:B:910:G:C8	2.54	0.43
2:B:1435:U:C3'	2:B:1436:C:H5'	2.48	0.43
2:B:1458:A:C2'	2:B:1480:A:H61	2.32	0.43
2:B:1518:C:H5''	29:f:248:HIS:HB3	2.00	0.43
2:B:1642:A:N3	2:B:1642:A:C2'	2.82	0.43
3:C:45:C:H2'	3:C:46:G:O4'	2.19	0.43
4:D:27:A:O5'	43:u:57:ASN:ND2	2.52	0.43
6:F:49:C:C5	13:P:114:ARG:HD2	2.53	0.43
13:P:73:THR:O	13:P:77:VAL:HG23	2.19	0.43
13:P:125:ARG:HE	35:l:29:VAL:HG21	1.83	0.43
15:R:48:TYR:CE2	15:R:91:MET:HB3	2.53	0.43
16:S:119:ARG:NH2	16:S:122:ASN:HD21	2.16	0.43
21:X:108:LYS:HE2	21:X:108:LYS:HB2	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:e:114:CYS:HB3	28:e:167:GLY:O	2.19	0.43
28:e:176:GLU:HG2	38:o:29:LEU:HD11	2.01	0.43
29:f:81:ALA:HB1	29:f:210:ILE:HD11	2.00	0.43
31:h:119:LEU:C	31:h:120:MET:HE2	2.43	0.43
36:m:71:GLN:HG3	36:m:103:MET:CE	2.49	0.43
37:n:53:ALA:O	37:n:57:ARG:HG2	2.19	0.43
38:o:49:ARG:NH1	38:o:52:VAL:HA	2.33	0.43
38:o:55:TRP:HD1	38:o:65:ALA:O	2.02	0.43
41:r:209:VAL:HG12	41:r:230:VAL:HG13	2.01	0.43
44:v:89:VAL:HG21	44:v:163:ILE:HG12	2.00	0.43
45:w:173:TYR:CD2	45:w:178:ILE:HG21	2.53	0.43
46:x:215:ASP:CB	46:x:216:PRO:CD	2.97	0.43
46:x:217:ILE:O	46:x:221:LEU:N	2.52	0.43
46:x:282:ARG:O	46:x:285:VAL:N	2.51	0.43
1:A:766:C:O2'	1:A:767:C:P	2.74	0.43
1:A:983:A:H4'	1:A:984:A:H5'	2.00	0.43
1:A:1078:C:H2'	1:A:1079:G:C8	2.54	0.43
1:A:1523:C:O2'	35:l:117:GLY:HA2	2.19	0.43
1:A:1921:G:O2'	1:A:1922:G:H5'	2.18	0.43
2:B:1175:C:O2'	2:B:1176:U:H5'	2.19	0.43
2:B:1282:U:H2'	2:B:1283:U:C6	2.53	0.43
2:B:1379:C:H2'	2:B:1380:OMC:H4'	1.99	0.43
2:B:1649:A:H8	2:B:1649:A:C5'	2.32	0.43
2:B:1650:C:O5'	2:B:1650:C:H6	2.02	0.43
9:I:32:LEU:HD21	9:I:36:LEU:HD22	2.00	0.43
9:I:172:PHE:O	9:I:173:THR:HG23	2.19	0.43
12:O:205:LEU:CD2	13:P:120:ARG:HD2	2.46	0.43
14:Q:66:MET:HB3	14:Q:66:MET:HE2	1.81	0.43
14:Q:143:PHE:HB2	14:Q:145:TRP:CH2	2.54	0.43
15:R:64:ASN:O	15:R:67:ILE:HD12	2.18	0.43
18:U:14:LEU:HD23	18:U:55:LYS:HG3	2.00	0.43
18:U:91:VAL:HG11	18:U:96:VAL:HG23	2.01	0.43
24:a:41:LEU:HG	24:a:42:ILE:N	2.32	0.43
24:a:62:GLN:O	24:a:66:ARG:NH1	2.52	0.43
26:c:113:MET:O	26:c:117:LEU:HG	2.19	0.43
28:e:28:LYS:O	28:e:76:MET:HB3	2.19	0.43
28:e:61:VAL:HG11	28:e:88:VAL:HG21	1.99	0.43
29:f:288:TYR:CE1	29:f:361:ILE:HG21	2.53	0.43
30:g:26:VAL:HG21	30:g:31:GLN:HG3	1.99	0.43
44:v:52:LEU:HD13	44:v:64:SER:HB3	2.01	0.43
1:A:95:A:C4	1:A:96:G:H1'	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:G:H1'	1:A:271:A:H61	1.84	0.42
1:A:210:A:H2'	41:r:144:GLU:HG2	2.01	0.42
1:A:459:G:OP1	15:R:37:ASN:ND2	2.52	0.42
1:A:587:C:O2'	1:A:588:A:H2'	2.19	0.42
1:A:778:A2M:HM'2	1:A:779:C:O4'	2.19	0.42
1:A:921:A:P	9:I:66:ARG:HH21	2.42	0.42
1:A:1622:G:O2'	1:A:1624:U:OP2	2.37	0.42
1:A:1958:U:H2'	1:A:1959:U:C6	2.53	0.42
2:B:466:C:O5'	2:B:466:C:H6	2.02	0.42
2:B:853:C:C4	2:B:854:U:C4	3.06	0.42
2:B:868:G:O6	28:e:68:LYS:NZ	2.51	0.42
2:B:1136:G:H3'	2:B:1137:A:C8	2.54	0.42
2:B:1541:A:H5''	2:B:1542:G:H5'	2.02	0.42
2:B:1556:U:O2'	2:B:1557:A:H5'	2.19	0.42
3:C:18:G:H2'	3:C:19:A:C8	2.54	0.42
4:D:10:C:HO2'	43:u:20:TYR:HD1	1.67	0.42
5:E:135:C:O2'	5:E:136:A:H5'	2.19	0.42
5:E:176:U:H2'	5:E:177:G:H8	1.84	0.42
7:G:163:C:H2'	7:G:164:A:O4'	2.19	0.42
9:I:139:THR:C	9:I:141:LYS:H	2.27	0.42
12:O:137:VAL:HA	16:S:169:VAL:O	2.18	0.42
16:S:101:LYS:O	16:S:105:VAL:HG23	2.18	0.42
25:b:124:ARG:NE	25:b:145:ALA:O	2.46	0.42
28:e:62:GLU:CG	28:e:71:ARG:HG2	2.49	0.42
28:e:104:LEU:HD23	28:e:158:VAL:HG23	2.01	0.42
29:f:48:VAL:HG11	29:f:210:ILE:HD11	2.01	0.42
31:h:125:ASN:HB3	31:h:170:ILE:HD11	2.01	0.42
32:i:44:ARG:HA	32:i:53:MET:CE	2.49	0.42
38:o:33:GLN:NE2	38:o:49:ARG:NH2	2.67	0.42
41:r:40:HIS:CE1	41:r:236:LEU:HD23	2.54	0.42
43:u:83:LEU:HD12	43:u:92:LEU:HD22	2.01	0.42
45:w:141:LEU:O	45:w:145:ARG:HG2	2.17	0.42
46:x:148:LEU:HG	46:x:209:MET:CE	2.49	0.42
1:A:596:G:H2'	1:A:597:G:C8	2.54	0.42
1:A:958:OMG:HM23	1:A:958:OMG:H1'	1.82	0.42
1:A:1018:C:H2'	1:A:1019:G:H5''	2.01	0.42
1:A:1252:A:H2'	1:A:1253:A:C8	2.54	0.42
1:A:1597:G:H2'	1:A:1598:U:O4'	2.18	0.42
1:A:1629:U:H5'	32:i:58:TYR:O	2.20	0.42
1:A:1672:G:N7	15:R:27:LYS:HB2	2.34	0.42
1:A:1713:G:H4'	17:T:26:PRO:HD3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1723:G:C8	1:A:1725:7MG:H82	2.54	0.42
1:A:1773:C:H2'	1:A:1774:U:C6	2.53	0.42
1:A:1961:C:H2'	1:A:1962:A:O4'	2.19	0.42
2:B:38:C:H2'	2:B:39:C:C6	2.55	0.42
2:B:532:U:O2'	2:B:533:G:H5'	2.19	0.42
2:B:1153:A:O2'	2:B:1154:U:O5'	2.25	0.42
2:B:1345:OMU:HM23	2:B:1345:OMU:H1'	1.90	0.42
2:B:1516:A2M:C8	2:B:1516:A2M:H3'	2.49	0.42
9:I:120:ILE:CG2	9:I:121:THR:HG23	2.49	0.42
11:N:32:ASN:O	11:N:36:GLN:HG2	2.18	0.42
14:Q:61:PRO:HG2	46:x:219:LEU:HD21	2.02	0.42
16:S:112:LEU:HD23	16:S:123:ILE:HD13	1.98	0.42
18:U:48:VAL:HG21	18:U:94:GLU:CG	2.48	0.42
25:b:102:LEU:HG	25:b:144:GLN:NE2	2.34	0.42
26:c:53:VAL:HG21	26:c:110:ALA:CB	2.48	0.42
28:e:6:LEU:O	28:e:10:LYS:HG3	2.19	0.42
28:e:107:ILE:O	28:e:139:HIS:NE2	2.47	0.42
33:j:46:PRO:CG	33:j:49:LEU:HD12	2.47	0.42
35:l:80:VAL:HG22	35:l:140:VAL:CG1	2.48	0.42
37:n:37:CYS:SG	37:n:39:TYR:HB2	2.58	0.42
41:r:63:ALA:HB3	41:r:91:PHE:CE2	2.54	0.42
41:r:206:PRO:HB3	41:r:247:PHE:CE2	2.53	0.42
42:t:7:LYS:CG	42:t:22:SER:HB2	2.49	0.42
43:u:101:THR:O	43:u:104:LEU:HB3	2.20	0.42
44:v:37:ALA:HB1	44:v:82:ILE:HD13	2.01	0.42
1:A:413:U:H5''	1:A:414:U:H5''	2.00	0.42
1:A:499:C:H2'	1:A:500:C:C6	2.53	0.42
1:A:847:G:N2	1:A:931:7MG:O3'	2.53	0.42
1:A:924:A:C2'	1:A:925:C:H5'	2.49	0.42
1:A:1153:A:O2'	1:A:1154:A:H5'	2.19	0.42
1:A:1285:U:H1'	45:w:105:LEU:HD22	2.01	0.42
1:A:1578:U:O2	1:A:1599:G:H2'	2.20	0.42
1:A:1689:G:C2'	1:A:1691:A:N7	2.82	0.42
1:A:1938:G:H5''	1:A:1939:A:N7	2.35	0.42
2:B:95:A:H2	2:B:468:G:H8	1.68	0.42
2:B:127:C:H2'	2:B:128:U:C6	2.54	0.42
2:B:690:U:H2'	2:B:691:A2M:H8	2.02	0.42
2:B:896:G:H4'	2:B:897:C:OP2	2.18	0.42
2:B:1301:C:H4'	42:t:18:LYS:O	2.20	0.42
2:B:1326:U:H5''	42:t:32:LYS:O	2.18	0.42
2:B:1444:G:H4'	2:B:1445:U:OP1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:9:C:OP2	18:U:26:SER:OG	2.34	0.42
7:G:40:G:H2'	7:G:41:A:H8	1.84	0.42
7:G:91:U:P	17:T:62:ARG:HH22	2.42	0.42
7:G:122:G:O3'	7:G:123:G:N2	2.53	0.42
12:O:24:ILE:HG22	12:O:25:ILE:N	2.34	0.42
14:Q:92:HIS:C	14:Q:94:GLY:H	2.27	0.42
16:S:13:GLY:HA2	16:S:61:LEU:HG	2.01	0.42
16:S:173:THR:HG22	16:S:174:LYS:H	1.82	0.42
19:V:120:LYS:HB3	19:V:121:TYR:H	1.49	0.42
21:X:119:LEU:HA	21:X:119:LEU:HD12	1.83	0.42
26:c:32:PHE:CE2	26:c:77:TYR:CZ	3.08	0.42
35:l:38:LEU:HD23	44:v:40:LEU:HA	2.00	0.42
46:x:145:ARG:HG2	46:x:149:LEU:HD13	2.02	0.42
1:A:7:C:H2'	1:A:8:C:C6	2.53	0.42
1:A:22:A:OP1	37:n:44:ARG:N	2.50	0.42
1:A:484:U:H2'	1:A:485:U:C6	2.55	0.42
1:A:597:G:H2'	1:A:598:U:O4'	2.18	0.42
1:A:806:A:N1	1:A:838:G:O2'	2.44	0.42
1:A:1008:C:N3	1:A:1019:G:O6	2.52	0.42
1:A:1046:U:O3'	15:R:132:ALA:HB2	2.20	0.42
1:A:1051:A:OP1	37:n:5:THR:HG23	2.19	0.42
1:A:1233:A:H4'	18:U:105:PHE:CD1	2.55	0.42
1:A:1688:G:H1	1:A:1709:C:N4	2.07	0.42
2:B:756:U:H5'	2:B:757:U:OP1	2.19	0.42
2:B:858:C:H2'	2:B:859:U:C6	2.54	0.42
2:B:869:A:OP1	21:X:83:GLN:HB3	2.20	0.42
2:B:911:U:O2	2:B:911:U:C2'	2.67	0.42
2:B:1183:G:H1'	2:B:1185:A:N6	2.35	0.42
2:B:1217:G:C5'	2:B:1314:G:H1'	2.49	0.42
2:B:1386:G:H4'	2:B:1387:A:O5'	2.19	0.42
2:B:1509:G:H2'	2:B:1510:A:H5'	2.01	0.42
2:B:1557:A:O2'	29:f:264:ARG:HB2	2.19	0.42
2:B:1579:A:OP1	29:f:93:ARG:NH2	2.52	0.42
3:C:17:U:H2'	3:C:18:G:C8	2.54	0.42
4:D:36:C:C5'	43:u:161:THR:HB	2.49	0.42
5:E:44:C:H2'	5:E:45:A:C8	2.54	0.42
5:E:143:A:H4'	39:p:44:THR:HG21	2.01	0.42
6:F:62:U:C5'	6:F:63:A:H3'	2.49	0.42
7:G:175:C:OP1	29:f:132:LYS:N	2.51	0.42
8:H:19:G:H5''	8:H:19:G:N3	2.35	0.42
9:I:28:LEU:CD1	26:c:10:LEU:CD2	2.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:N:197:VAL:HG21	36:m:23:GLY:O	2.19	0.42
12:O:218:LYS:O	12:O:219:PHE:CB	2.67	0.42
20:W:97:PHE:CZ	20:W:139:VAL:HG23	2.54	0.42
25:b:108:LYS:HD2	25:b:110:LEU:CD2	2.48	0.42
28:e:27:ALA:HB2	28:e:58:LEU:HD21	2.01	0.42
33:j:12:MET:CE	33:j:14:TYR:HB2	2.50	0.42
33:j:62:HIS:HA	33:j:65:ALA:HB3	2.00	0.42
35:l:103:SER:HB2	35:l:105:THR:HB	2.00	0.42
38:o:8:MET:HE2	38:o:12:GLY:HA2	2.01	0.42
42:t:14:ASP:OD1	42:t:15:ALA:N	2.52	0.42
43:u:50:ARG:HG2	43:u:153:ASP:HB2	2.00	0.42
1:A:7:C:H4'	46:x:250:LYS:O	2.19	0.42
1:A:53:C:O2'	1:A:54:G:H5'	2.19	0.42
1:A:182:G:C2'	1:A:183:G:H5''	2.49	0.42
1:A:305:A:OP2	36:m:42:ARG:NH2	2.53	0.42
1:A:867:G:N3	1:A:867:G:C2'	2.82	0.42
1:A:1634:C:H2'	1:A:1635:U:H6	1.85	0.42
2:B:13:A:H4'	21:X:145:THR:HG23	2.01	0.42
2:B:747:A:O3'	41:r:69:GLY:HA2	2.19	0.42
2:B:882:G:H21	2:B:886:C:P	2.43	0.42
2:B:1362:A:H5'	42:t:84:VAL:HG11	2.00	0.42
2:B:1629:U:O5'	29:f:138:ARG:CZ	2.67	0.42
4:D:21:G:H1	4:D:57:C:N4	2.13	0.42
5:E:28:G:H2'	5:E:200:A:N6	2.35	0.42
8:H:128:G:H2'	8:H:128:G:N3	2.35	0.42
9:I:117:ARG:O	9:I:121:THR:HG23	2.19	0.42
12:O:42:ALA:HB2	12:O:102:VAL:HG23	2.01	0.42
12:O:138:VAL:CG1	12:O:143:GLN:HE21	2.31	0.42
14:Q:130:ARG:HH21	14:Q:173:LYS:HG2	1.85	0.42
17:T:56:LYS:HE2	17:T:56:LYS:HB2	1.87	0.42
17:T:122:GLU:O	17:T:126:LYS:HD3	2.20	0.42
21:X:111:ALA:O	21:X:154:LEU:HD11	2.19	0.42
22:Y:8:PHE:CZ	22:Y:53:VAL:HG21	2.55	0.42
24:a:35:ARG:C	24:a:37:TYR:N	2.76	0.42
26:c:57:GLY:O	26:c:58:ASP:HB3	2.19	0.42
29:f:136:PHE:CE2	29:f:142:GLY:HA2	2.55	0.42
29:f:199:LEU:HD23	29:f:199:LEU:C	2.45	0.42
35:l:48:THR:HB	35:l:58:THR:CG2	2.48	0.42
41:r:189:ARG:NE	41:r:198:ARG:HB3	2.34	0.42
41:r:211:PRO:HD3	41:r:251:THR:OG1	2.19	0.42
43:u:9:ASN:O	43:u:12:TYR:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:147:MET:HE3	45:w:207:LEU:HD11	2.01	0.42
1:A:483:A:H2'	1:A:484:U:C6	2.55	0.42
1:A:781:G:H2'	2:B:707:A:H4'	2.02	0.42
1:A:1090:C:C2	1:A:1093:A:H5'	2.54	0.42
1:A:1516:G:OP1	13:P:19:PRO:HG2	2.19	0.42
1:A:1660:A:H5''	1:A:1661:U:H5''	2.02	0.42
2:B:58:G:H3'	2:B:59:U:H5''	2.01	0.42
2:B:587:U:HO2'	28:e:243:THR:H	1.62	0.42
2:B:693:U:H2'	2:B:694:A:O4'	2.19	0.42
2:B:788:G:O6	2:B:789:A:N6	2.52	0.42
2:B:894:C:O2'	2:B:895:U:H5'	2.19	0.42
2:B:1191:G:H5''	18:U:12:ARG:HB2	2.01	0.42
2:B:1502:U:H2'	2:B:1504:A:OP2	2.20	0.42
2:B:1529:OMC:HM22	2:B:1530:C:H5'	2.01	0.42
2:B:1629:U:H3'	29:f:138:ARG:NH2	2.32	0.42
2:B:1642:A:H3'	2:B:1642:A:OP2	2.19	0.42
4:D:36:C:H5''	43:u:161:THR:HB	2.02	0.42
5:E:33:A:H2'	5:E:34:U:O4'	2.19	0.42
7:G:125:G:H1	7:G:157:C:N4	2.16	0.42
10:L:27:ILE:HG12	10:L:131:MET:CA	2.38	0.42
16:S:51:ASN:HB2	16:S:53:VAL:HG12	2.00	0.42
16:S:112:LEU:HD23	16:S:123:ILE:CG1	2.48	0.42
19:V:25:VAL:HG22	19:V:80:THR:HA	2.01	0.42
20:W:13:PHE:CZ	29:f:67:VAL:CG2	2.92	0.42
21:X:112:PHE:CE1	34:k:27:LYS:HA	2.55	0.42
24:a:15:GLY:O	33:j:77:ARG:HG3	2.19	0.42
28:e:126:ILE:HG22	28:e:127:ALA:N	2.34	0.42
29:f:46:PHE:HD2	29:f:48:VAL:HG13	1.85	0.42
29:f:60:VAL:HG22	29:f:70:LYS:O	2.20	0.42
33:j:49:LEU:HB3	33:j:87:GLN:NE2	2.35	0.42
35:l:124:ALA:CB	35:l:126:PHE:HE1	2.32	0.42
37:n:47:TYR:O	37:n:54:ILE:HD11	2.19	0.42
1:A:326:G:C4	42:t:45:ARG:NH1	2.86	0.42
1:A:784:C:H2'	1:A:785:A:C8	2.54	0.42
1:A:1138:G:O2'	1:A:1595:A:H1'	2.20	0.42
1:A:1144:U:H6	1:A:1144:U:H5''	1.85	0.42
1:A:1296:G:H2'	1:A:1297:U:O4'	2.19	0.42
1:A:1659:OMG:H4'	1:A:1660:A:OP2	2.20	0.42
2:B:532:U:H2'	2:B:533:G:C5'	2.49	0.42
2:B:908:C:C2'	2:B:909:C:H5'	2.49	0.42
2:B:1157:G:O2'	2:B:1158:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:63:A:O2'	7:G:64:U:H5'	2.20	0.42
7:G:71:C:C1'	29:f:334:SER:HB2	2.49	0.42
9:I:88:VAL:HG21	9:I:133:LEU:HD21	2.02	0.42
10:L:139:ARG:HH22	10:L:164:GLU:CD	2.28	0.42
14:Q:54:ARG:CG	14:Q:55:LEU:N	2.83	0.42
14:Q:70:LYS:O	14:Q:72:LYS:N	2.52	0.42
14:Q:191:ARG:HG2	14:Q:191:ARG:HH11	1.85	0.42
15:R:59:PRO:HG3	15:R:76:TRP:CD2	2.55	0.42
18:U:35:LYS:HB3	43:u:44:PHE:HE1	1.80	0.42
18:U:48:VAL:HG11	18:U:92:ARG:HD3	2.02	0.42
23:Z:25:ARG:NH1	23:Z:26:ILE:HD11	2.34	0.42
23:Z:53:VAL:HG22	23:Z:54:ARG:N	2.35	0.42
23:Z:53:VAL:HG22	23:Z:101:VAL:HB	2.01	0.42
24:a:11:ILE:HD12	33:j:96:PHE:CD1	2.55	0.42
29:f:41:PRO:HB2	29:f:199:LEU:HD13	2.01	0.42
29:f:57:VAL:HG13	29:f:71:GLU:HB2	2.01	0.42
29:f:243:LEU:HB3	29:f:244:PRO:HD2	2.02	0.42
29:f:280:ARG:HB3	29:f:282:HIS:CE1	2.55	0.42
35:l:58:THR:HG23	35:l:58:THR:O	2.18	0.42
39:p:10:GLU:O	39:p:13:ALA:HB3	2.19	0.42
39:p:11:PHE:CG	39:p:45:LEU:HD22	2.55	0.42
45:w:230:ARG:HD2	45:w:234:ILE:HA	2.02	0.42
1:A:106:A:C2'	1:A:107:U:H5'	2.49	0.42
1:A:178:U:C2'	1:A:179:G:H5''	2.49	0.42
1:A:250:A:O2'	1:A:252:A:OP2	2.33	0.42
1:A:411:A:C3'	1:A:412:G:H5''	2.50	0.42
1:A:930:C:C4	1:A:931:7MG:CM7	3.03	0.42
1:A:1292:C:H5''	9:I:159:PHE:CD1	2.55	0.42
1:A:1354:G:H2'	1:A:1355:G:O4'	2.20	0.42
1:A:1631:A:H4'	32:i:34:ARG:HH12	1.83	0.42
1:A:1660:A:H5''	1:A:1661:U:C5'	2.50	0.42
1:A:1788:C:O2'	14:Q:124:LYS:NZ	2.53	0.42
2:B:852:G:C1'	2:B:853:C:P	3.07	0.42
2:B:854:U:O2'	2:B:855:U:P	2.78	0.42
2:B:1165:G:H2'	2:B:1165:G:N3	2.34	0.42
2:B:1256:A:H2'	2:B:1257:G:C8	2.54	0.42
3:C:95:A:H2'	3:C:96:A:O4'	2.18	0.42
4:D:3:G:H1'	4:D:24:U:H3	1.85	0.42
4:D:106:G:O2'	4:D:107:G:H5'	2.20	0.42
5:E:57:C:C2'	5:E:58:U:H5'	2.50	0.42
10:L:138:GLY:HA3	10:L:142:GLU:CD	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:T:96:MET:O	17:T:100:ARG:HG3	2.20	0.42
19:V:98:LEU:HD22	19:V:103:LEU:HB2	2.00	0.42
23:Z:55:VAL:HB	23:Z:60:TYR:O	2.20	0.42
23:Z:74:ARG:HB2	23:Z:76:VAL:HG22	2.00	0.42
29:f:48:VAL:HG23	29:f:343:ILE:CG1	2.50	0.42
29:f:313:THR:HA	29:f:314:PRO:HD3	1.93	0.42
34:k:53:LYS:O	34:k:57:ARG:HG3	2.20	0.42
35:l:84:TYR:CD2	35:l:85:HIS:N	2.88	0.42
35:l:124:ALA:HB3	35:l:126:PHE:HE1	1.85	0.42
35:l:146:PRO:HB2	44:v:80:ARG:HD2	2.00	0.42
41:r:133:PRO:C	41:r:136:VAL:HG12	2.45	0.42
41:r:143:ILE:HG23	41:r:146:VAL:HG21	2.02	0.42
1:A:39:A:C5	25:b:30:SER:HA	2.53	0.42
1:A:44:A:O2'	1:A:95:A:N1	2.39	0.42
1:A:109:C:O2'	11:N:96:PRO:O	2.24	0.42
1:A:181:A:N7	1:A:182:G:C8	2.87	0.42
1:A:802:C:C2'	1:A:803:G:H5'	2.49	0.42
1:A:1070:U:H2'	1:A:1071:A2M:C8	2.49	0.42
1:A:1142:C:H2'	1:A:1143:U:O4'	2.20	0.42
1:A:1357:G:H22	12:O:105:MET:HE2	1.84	0.42
1:A:1928:G:H2'	1:A:1928:G:N3	2.35	0.42
1:A:1963:U:H2'	1:A:1964:G:O4'	2.20	0.42
2:B:718:A:C5'	2:B:719:A:H8	2.22	0.42
2:B:738:C:H1'	29:f:271:ARG:HH21	1.85	0.42
2:B:1145:U:C3'	2:B:1145:U:C6	3.03	0.42
2:B:1190:U:O2'	2:B:1256:A:H1'	2.19	0.42
2:B:1508:G:O2'	2:B:1509:G:H5'	2.20	0.42
4:D:10:C:C4'	4:D:13:A:H61	2.33	0.42
5:E:32:A:H2'	5:E:33:A:O4'	2.20	0.42
5:E:203:C:O3'	33:j:66:ARG:HG2	2.20	0.42
9:I:103:PRO:O	9:I:105:LEU:N	2.52	0.42
11:N:94:PHE:O	11:N:97:THR:OG1	2.36	0.42
12:O:78:LYS:O	12:O:88:PRO:HG2	2.20	0.42
12:O:215:VAL:O	12:O:215:VAL:HG12	2.20	0.42
13:P:137:VAL:HG11	13:P:139:TRP:NE1	2.34	0.42
16:S:50:LYS:HD2	18:U:146:LEU:CD1	2.50	0.42
16:S:92:MET:HE2	16:S:94:LYS:HG3	2.02	0.42
19:V:86:ARG:HG2	19:V:88:LYS:HG2	2.01	0.42
20:W:41:VAL:HG22	20:W:54:ALA:HB2	2.02	0.42
23:Z:52:GLU:HA	23:Z:66:LYS:HA	2.02	0.42
23:Z:54:ARG:HA	23:Z:64:GLU:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:23:VAL:HG21	24:a:86:MET:CB	2.49	0.42
29:f:26:ARG:HA	29:f:342:VAL:HG13	2.01	0.42
29:f:216:GLN:C	29:f:218:GLU:H	2.28	0.42
29:f:288:TYR:CE1	29:f:361:ILE:HG13	2.55	0.42
34:k:66:GLN:O	34:k:70:LEU:HD13	2.20	0.42
41:r:153:VAL:HG12	41:r:154:GLU:N	2.34	0.42
43:u:60:ILE:HG22	43:u:61:ILE:N	2.35	0.42
44:v:167:PRO:O	44:v:168:LEU:HB2	2.19	0.42
46:x:136:PHE:CD2	46:x:217:ILE:HD11	2.54	0.42
1:A:75:G:H3'	11:N:78:ARG:HD3	2.00	0.42
1:A:405:A:C8	1:A:406:G:H1'	2.55	0.42
1:A:600:A:H4'	1:A:601:U:C5'	2.50	0.42
1:A:818:U:H3'	1:A:825:C:H42	1.85	0.42
1:A:1120:G:H1'	1:A:1298:G:C5'	2.49	0.42
1:A:1743:A:H61	1:A:1756:C:H4'	1.85	0.42
2:B:529:A:H5''	28:e:7:THR:HG22	2.01	0.42
2:B:621:A:H2'	2:B:622:G:O4'	2.20	0.42
2:B:1138:7MG:O5'	2:B:1138:7MG:H81	2.20	0.42
2:B:1326:U:P	42:t:34:ARG:NH1	2.93	0.42
2:B:1386:G:HO2'	2:B:1439:U:H5	1.66	0.42
2:B:1629:U:C5'	29:f:138:ARG:CD	2.93	0.42
3:C:23:G:N7	23:Z:10:ARG:NE	2.68	0.42
3:C:51:A:N3	3:C:51:A:H2'	2.35	0.42
3:C:91:A:H5'	23:Z:20:PRO:HB3	2.00	0.42
3:C:93:C:O3'	37:n:76:ASN:ND2	2.53	0.42
4:D:8:A:OP1	43:u:30:TYR:HE1	2.02	0.42
5:E:118:U:OP1	17:T:100:ARG:NH1	2.53	0.42
7:G:75:U:C4'	20:W:94:VAL:HG11	2.47	0.42
7:G:175:C:OP1	29:f:132:LYS:HB2	2.20	0.42
17:T:109:TYR:CE1	17:T:114:LYS:HD2	2.55	0.42
19:V:60:ARG:HD3	19:V:63:LYS:HZ1	1.79	0.42
19:V:77:LEU:O	19:V:79:ILE:HD12	2.19	0.42
20:W:47:ARG:CG	20:W:48:LEU:N	2.80	0.42
23:Z:49:LYS:O	23:Z:50:ASP:HB2	2.19	0.42
28:e:111:CYS:SG	38:o:86:LEU:HD21	2.59	0.42
29:f:46:PHE:CE2	29:f:210:ILE:CG1	3.03	0.42
29:f:160:ILE:HD11	29:f:197:ILE:HD11	2.00	0.42
29:f:224:ALA:HB2	29:f:343:ILE:CG2	2.49	0.42
29:f:290:LEU:CD2	29:f:329:ILE:CD1	2.98	0.42
31:h:138:LYS:HB2	31:h:142:GLY:O	2.20	0.42
33:j:41:GLN:CG	33:j:44:HIS:CE1	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:o:36:ARG:HG2	38:o:48:ARG:CG	2.50	0.42
41:r:11:SER:HB2	41:r:18:VAL:CG1	2.50	0.42
44:v:53:LYS:HD2	44:v:96:VAL:HG23	2.01	0.42
44:v:55:LEU:HD21	44:v:62:VAL:HG13	2.02	0.42
44:v:57:ARG:C	44:v:59:GLY:N	2.77	0.42
45:w:47:ARG:HG3	45:w:180:CYS:SG	2.60	0.42
45:w:172:LYS:HZ2	45:w:201:GLY:HA3	1.85	0.42
1:A:267:A:H4'	23:Z:27:LEU:HA	2.02	0.41
1:A:358:C:C5	36:m:40:ASN:HB3	2.55	0.41
1:A:761:C:H5''	12:O:112:ARG:HB2	2.02	0.41
1:A:1079:G:H2'	1:A:1081:A:N7	2.35	0.41
1:A:1170:G:H4'	4:D:102:C:O2'	2.19	0.41
1:A:1367:A:P	16:S:159:LYS:HE3	2.59	0.41
1:A:1572:A:OP1	26:c:42:HIS:NE2	2.52	0.41
1:A:1574:A:H4'	1:A:1575:G:O5'	2.20	0.41
1:A:1595:A:OP1	25:b:7:LYS:NZ	2.45	0.41
1:A:1634:C:H2'	1:A:1635:U:C6	2.55	0.41
1:A:1748:C:O2'	2:B:699:G:O2'	2.33	0.41
1:A:1938:G:H4'	1:A:1939:A:OP2	2.18	0.41
2:B:689:U:O2'	2:B:690:U:H5'	2.20	0.41
2:B:763:U:H2'	2:B:764:G:H5''	2.02	0.41
2:B:1190:U:H2'	2:B:1191:G:C8	2.55	0.41
2:B:1373:U:H4'	2:B:1374:A:OP1	2.19	0.41
2:B:1444:G:HO2'	2:B:1445:U:P	2.39	0.41
2:B:1579:A:O2'	2:B:1580:A:H5'	2.19	0.41
3:C:26:U:C2'	3:C:27:U:H5'	2.50	0.41
4:D:27:A:H2'	4:D:28:C:C6	2.54	0.41
4:D:56:G:C2'	4:D:57:C:H5'	2.49	0.41
5:E:31:C:H4'	5:E:32:A:OP1	2.20	0.41
5:E:203:C:H2'	5:E:204:C:O4'	2.20	0.41
8:H:36:C:H2'	8:H:37:U:C6	2.55	0.41
9:I:175:ASN:HB3	9:I:178:LYS:HB2	2.01	0.41
11:N:52:PHE:N	11:N:53:PRO:HD2	2.35	0.41
12:O:208:VAL:HG22	12:O:208:VAL:O	2.20	0.41
17:T:115:ILE:HG21	17:T:142:ILE:CG2	2.48	0.41
18:U:51:GLY:HA3	18:U:92:ARG:HB2	2.01	0.41
20:W:86:SER:CA	20:W:96:TYR:HB3	2.50	0.41
25:b:78:LEU:CD1	25:b:121:VAL:HG21	2.50	0.41
27:d:38:LEU:HB3	27:d:39:PRO:HD3	2.02	0.41
31:h:104:ARG:HB2	31:h:140:VAL:O	2.20	0.41
33:j:47:TRP:CE3	33:j:51:HIS:CG	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:l:78:LYS:HB3	35:l:143:TYR:O	2.20	0.41
35:l:103:SER:CB	35:l:105:THR:H	2.33	0.41
36:m:30:THR:HG22	36:m:31:THR:N	2.36	0.41
40:q:48:LYS:HB3	40:q:50:HIS:CE1	2.54	0.41
45:w:193:LYS:HG3	45:w:194:HIS:CE1	2.55	0.41
1:A:95:A:H8	1:A:95:A:O5'	2.03	0.41
1:A:257:G:C2'	1:A:258:U:H5'	2.50	0.41
1:A:469:A:H2'	1:A:470:U:C5'	2.50	0.41
1:A:785:A:C6	1:A:786:A:C6	3.09	0.41
1:A:844:A:O2'	1:A:845:A:H5'	2.19	0.41
1:A:849:G:OP1	25:b:128:LYS:N	2.42	0.41
1:A:978:U:H2'	1:A:979:G:O4'	2.20	0.41
1:A:1027:G:N7	28:e:183:GLY:N	2.62	0.41
1:A:1037:A:O2'	1:A:1038:U:C5	2.74	0.41
1:A:1302:C:H2'	1:A:1303:U:O4'	2.20	0.41
1:A:1597:G:C2'	1:A:1598:U:H5'	2.50	0.41
2:B:530:A:C4'	28:e:236:GLY:HA2	2.47	0.41
2:B:1163:U:C2'	2:B:1164:G:H5'	2.50	0.41
2:B:1282:U:O2'	2:B:1283:U:H5'	2.20	0.41
2:B:1300:A:C2'	2:B:1301:C:H5'	2.50	0.41
2:B:1350:A:O3'	11:N:201:GLY:HA3	2.20	0.41
2:B:1394:G:O2'	2:B:1395:C:H5'	2.20	0.41
2:B:1449:OMC:HM21	29:f:244:PRO:HD3	2.00	0.41
5:E:102:U:OP1	24:a:77:LYS:HE2	2.19	0.41
6:F:52:A:N1	35:l:28:THR:HB	2.34	0.41
6:F:58:U:H2'	6:F:59:U:H5''	2.02	0.41
6:F:68:C:P	35:l:101:ARG:NH2	2.93	0.41
7:G:107:C:O2'	22:Y:46:ARG:NH2	2.52	0.41
8:H:109:G:O2'	29:f:319:VAL:HA	2.20	0.41
10:L:156:CYS:N	10:L:157:PRO:CD	2.83	0.41
10:L:161:ARG:O	10:L:164:GLU:HB2	2.20	0.41
11:N:95:ALA:HB1	11:N:100:ILE:HB	2.02	0.41
12:O:94:PRO:HD3	12:O:166:TRP:CD2	2.54	0.41
13:P:82:LYS:C	13:P:86:LYS:HE2	2.45	0.41
15:R:14:SER:O	15:R:105:LYS:HE2	2.20	0.41
15:R:36:ILE:HG22	15:R:36:ILE:O	2.19	0.41
15:R:36:ILE:CG1	15:R:48:TYR:OH	2.67	0.41
16:S:108:ALA:O	16:S:112:LEU:HB2	2.20	0.41
21:X:134:LEU:HD21	21:X:188:ALA:HB2	2.01	0.41
24:a:77:LYS:CA	30:g:37:ARG:HH12	2.33	0.41
25:b:28:HIS:N	25:b:29:PRO:HD3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:f:27:GLY:C	29:f:279:HIS:HE1	2.27	0.41
29:f:54:THR:HG22	29:f:371:LYS:NZ	2.34	0.41
29:f:85:VAL:CG2	29:f:167:GLN:NE2	2.83	0.41
29:f:214:PHE:CE2	29:f:345:LEU:CD1	3.03	0.41
31:h:85:THR:HG22	31:h:152:GLU:CG	2.45	0.41
32:i:38:GLY:O	32:i:44:ARG:HD3	2.20	0.41
35:l:29:VAL:HG12	35:l:30:LYS:N	2.34	0.41
35:l:37:ARG:HB2	35:l:39:TYR:CE2	2.56	0.41
35:l:39:TYR:HB3	35:l:143:TYR:CE1	2.55	0.41
37:n:67:LEU:HA	37:n:70:VAL:HG12	2.02	0.41
39:p:26:LYS:HE3	39:p:28:ASN:OD1	2.20	0.41
41:r:151:LEU:HD21	41:r:173:ILE:HB	2.02	0.41
41:r:297:ARG:HA	41:r:300:LEU:HD13	2.02	0.41
42:t:68:ILE:HG23	42:t:85:LEU:HB2	2.01	0.41
1:A:34:A:H5'	14:Q:98:GLY:HA3	2.02	0.41
1:A:48:C:OP1	11:N:15:LYS:CE	2.67	0.41
1:A:50:A:O2'	1:A:51:A:H5'	2.21	0.41
1:A:194:U:O2'	1:A:195:U:H4'	2.20	0.41
1:A:396:A:H1'	1:A:397:G:OP2	2.20	0.41
1:A:399:A:H2'	1:A:400:G:O4'	2.19	0.41
1:A:1374:C:O2	12:O:152:ARG:NH2	2.53	0.41
1:A:1646:A:H8	1:A:1646:A:O5'	2.04	0.41
1:A:1766:U:O2	1:A:1933:C:H5'	2.20	0.41
1:A:1947:C:H5'	21:X:163:ASN:HD21	1.85	0.41
2:B:58:G:C3'	2:B:59:U:H5''	2.50	0.41
2:B:771:G:H2'	2:B:772:U:O4'	2.19	0.41
2:B:864:G:O2'	2:B:865:A:H5'	2.19	0.41
2:B:898:G:C8	46:x:277:ALA:CB	3.02	0.41
2:B:1282:U:H2'	2:B:1283:U:H6	1.85	0.41
2:B:1283:U:O2'	2:B:1284:U:H5'	2.20	0.41
3:C:23:G:H2'	3:C:24:G:O4'	2.20	0.41
3:C:27:U:H2'	3:C:28:C:O4'	2.20	0.41
3:C:67:U:H2'	3:C:68:A:C8	2.56	0.41
5:E:34:U:H2'	5:E:35:C:H6	1.76	0.41
9:I:77:TRP:HH2	27:d:62:ARG:HB3	1.85	0.41
11:N:20:CYS:O	41:r:55:ARG:HG2	2.21	0.41
14:Q:131:VAL:HA	14:Q:150:ALA:HA	2.02	0.41
14:Q:172:HIS:HB3	14:Q:175:ARG:HG3	2.02	0.41
15:R:60:PHE:N	15:R:60:PHE:CD1	2.88	0.41
16:S:177:VAL:O	16:S:178:VAL:C	2.64	0.41
17:T:98:ARG:HH12	17:T:130:ASN:HD22	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:W:34:LYS:HG2	20:W:67:GLY:CA	2.50	0.41
20:W:59:ILE:HD11	20:W:128:TRP:CZ2	2.54	0.41
26:c:25:ILE:HD13	32:i:93:TYR:CE1	2.55	0.41
26:c:95:VAL:HG11	26:c:106:ALA:HB1	2.02	0.41
29:f:79:LEU:HD22	29:f:343:ILE:HD11	2.03	0.41
37:n:67:LEU:HA	37:n:67:LEU:HD12	1.80	0.41
39:p:4:GLU:HG2	39:p:44:THR:HG23	2.02	0.41
40:q:48:LYS:HB2	40:q:50:HIS:NE2	2.35	0.41
41:r:8:SER:HB3	41:r:17:VAL:CG1	2.50	0.41
41:r:12:ALA:CB	41:r:169:PHE:CD1	3.04	0.41
41:r:96:ARG:C	41:r:98:GLY:N	2.78	0.41
41:r:182:VAL:HG11	41:r:224:GLY:HA2	2.02	0.41
41:r:329:LEU:HA	45:w:166:ASN:HD21	1.86	0.41
43:u:186:PHE:HD2	43:u:196:LEU:CD1	2.33	0.41
44:v:183:LYS:HB2	44:v:184:PRO:HD2	2.01	0.41
1:A:343:OMC:HM22	1:A:344:A:C5'	2.43	0.41
1:A:419:A:C4'	1:A:420:A:H5'	2.44	0.41
1:A:1316:OMG:H2'	1:A:1317:G:C5'	2.50	0.41
1:A:1731:G:H2'	1:A:1732:G:O4'	2.20	0.41
2:B:111:G:OP2	38:o:6:VAL:N	2.40	0.41
2:B:122:U:H1'	17:T:78:ALA:HB3	2.02	0.41
2:B:574:A:O2'	2:B:575:C:H5'	2.21	0.41
2:B:719:A:HO2'	2:B:720:C:P	2.37	0.41
2:B:767:OMU:H2'	2:B:768:C:O4'	2.20	0.41
2:B:767:OMU:CM2	42:t:52:GLY:HA3	2.51	0.41
2:B:1267:U:O2'	2:B:1268:U:H5'	2.20	0.41
2:B:1315:C:H2'	2:B:1316:C:O4'	2.21	0.41
2:B:1355:A:H4'	42:t:41:ARG:HH12	1.85	0.41
2:B:1576:G:N2	12:O:52:THR:OG1	2.50	0.41
4:D:82:G:C6	4:D:83:A:C6	3.08	0.41
9:I:77:TRP:CH2	27:d:62:ARG:HB3	2.55	0.41
11:N:112:GLU:CB	36:m:30:THR:HG23	2.50	0.41
12:O:107:PRO:CB	12:O:110:THR:HG22	2.50	0.41
13:P:82:LYS:HB3	13:P:85:GLU:HB3	2.01	0.41
13:P:135:LYS:CG	13:P:141:LYS:HA	2.45	0.41
17:T:109:TYR:CB	17:T:115:ILE:HG12	2.51	0.41
18:U:18:LYS:HE2	18:U:21:LYS:HD3	2.02	0.41
19:V:94:THR:O	19:V:97:PHE:HB3	2.20	0.41
24:a:22:ALA:CB	24:a:42:ILE:CG2	2.96	0.41
24:a:26:GLN:OE1	24:a:41:LEU:HD22	2.20	0.41
24:a:42:ILE:HD12	24:a:74:VAL:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:a:81:PRO:O	30:g:60:TYR:HE2	2.02	0.41
28:e:36:GLU:HA	28:e:91:GLY:HA2	2.02	0.41
28:e:96:LEU:HD13	38:o:86:LEU:HD23	2.02	0.41
30:g:50:CYS:HA	30:g:54:ARG:NH2	2.35	0.41
31:h:109:ILE:HG23	31:h:127:ILE:HD13	2.00	0.41
31:h:173:VAL:O	31:h:173:VAL:HG12	2.21	0.41
35:l:42:ALA:HB1	35:l:61:VAL:CG1	2.50	0.41
44:v:56:PRO:HG2	44:v:101:PRO:CG	2.50	0.41
46:x:212:ASN:HB2	46:x:237:VAL:O	2.20	0.41
1:A:129:U:C2'	1:A:130:C:H5'	2.50	0.41
1:A:232:U:C2'	1:A:233:C:H5'	2.50	0.41
1:A:247:G:C2'	1:A:248:C:H5'	2.51	0.41
1:A:257:G:O2'	1:A:258:U:H5'	2.21	0.41
1:A:394:C:N3	1:A:412:G:C5'	2.82	0.41
1:A:428:G:N2	1:A:431:A:C8	2.84	0.41
1:A:970:C:H5'	41:r:101:PHE:CE1	2.55	0.41
1:A:1298:G:N3	1:A:1298:G:H2'	2.34	0.41
1:A:1539:U:H1'	9:I:15:VAL:CG2	2.46	0.41
1:A:1594:G:OP1	25:b:20:GLY:N	2.50	0.41
1:A:1623:A:H5'	1:A:1624:U:OP2	2.21	0.41
1:A:1939:A:H1'	1:A:1944:A:H62	1.85	0.41
2:B:1106:U:H5'	33:j:94:ARG:NH1	2.35	0.41
2:B:1291:C:O5'	2:B:1291:C:H6	2.03	0.41
2:B:1345:OMU:H1'	25:b:58:MET:SD	2.61	0.41
3:C:96:A:H2'	3:C:97:U:H5'	2.02	0.41
9:I:62:ILE:HB	9:I:89:ILE:HD12	2.03	0.41
11:N:55:PRO:HD2	34:k:123:TYR:CE2	2.55	0.41
12:O:82:SER:CB	29:f:264:ARG:HE	2.32	0.41
15:R:115:LYS:HB2	15:R:149:PHE:CE1	2.55	0.41
16:S:50:LYS:HD2	18:U:146:LEU:HD12	2.02	0.41
16:S:132:PRO:O	16:S:133:ASN:C	2.64	0.41
16:S:136:VAL:HG21	16:S:141:ILE:HD11	2.03	0.41
19:V:51:PHE:HE2	19:V:70:VAL:HG11	1.86	0.41
19:V:103:LEU:O	19:V:106:TRP:N	2.49	0.41
27:d:38:LEU:HG	27:d:42:ILE:CD1	2.51	0.41
28:e:19:HIS:ND1	28:e:193:ARG:HA	2.35	0.41
29:f:25:ILE:CG1	29:f:341:ARG:HH11	2.33	0.41
29:f:114:PHE:O	29:f:117:ARG:HB3	2.19	0.41
29:f:224:ALA:HB1	29:f:343:ILE:HG22	1.99	0.41
35:l:110:GLY:HA2	35:l:126:PHE:HA	2.02	0.41
35:l:142:VAL:HG13	35:l:142:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:r:106:ILE:HD12	41:r:106:ILE:HA	1.76	0.41
44:v:27:LEU:HB2	44:v:54:GLN:NE2	2.36	0.41
45:w:231:ASP:CG	45:w:232:ALA:N	2.78	0.41
1:A:71:C:H5'	11:N:68:VAL:HG12	2.03	0.41
1:A:435:G:H2'	1:A:436:A:O4'	2.20	0.41
1:A:452:A:H5'	1:A:1620:C:O2'	2.20	0.41
1:A:1074:G:H2'	1:A:1093:A:N6	2.32	0.41
1:A:1348:A:C2'	1:A:1349:U:H5'	2.51	0.41
1:A:1375:A:N3	12:O:67:ARG:NH1	2.69	0.41
1:A:1535:U:H2'	1:A:1536:U:C6	2.55	0.41
1:A:1603:U:O2	1:A:1655:U:H1'	2.21	0.41
1:A:1642:G:O2'	1:A:1643:A:OP2	2.38	0.41
1:A:1801:G:C8	46:x:111:PRO:HB3	2.55	0.41
2:B:6:A:N3	2:B:6:A:H5'	2.36	0.41
2:B:462:A:H1'	7:G:106:U:H1'	2.02	0.41
2:B:498:U:H2'	2:B:499:U:O4'	2.21	0.41
2:B:525:C:O4'	28:e:175:ILE:HD13	2.21	0.41
2:B:576:C:C2'	2:B:577:G:H4'	2.49	0.41
2:B:630:C:H3'	2:B:631:C:H6	1.85	0.41
2:B:785:G:C6	2:B:786:G:C6	3.09	0.41
2:B:1214:U:OP2	42:t:2:VAL:HG23	2.20	0.41
2:B:1285:C:H3'	2:B:1286:C:O2	2.20	0.41
2:B:1435:U:H2'	2:B:1436:C:O4'	2.21	0.41
2:B:1548:U:C3'	2:B:1549:U:H5'	2.50	0.41
3:C:118:OMU:HM23	3:C:118:OMU:H1'	1.86	0.41
4:D:27:A:OP2	43:u:57:ASN:N	2.49	0.41
5:E:200:A:H2'	5:E:201:A:C8	2.56	0.41
8:H:26:C:H1'	8:H:27:A:OP2	2.21	0.41
8:H:92:A:H2'	8:H:93:G:C5'	2.50	0.41
9:I:23:ASN:HB3	9:I:26:ILE:HG12	2.01	0.41
9:I:29:LEU:HD11	9:I:130:PHE:CB	2.49	0.41
10:L:165:ALA:O	10:L:168:TRP:NE1	2.53	0.41
12:O:131:VAL:HG22	12:O:132:ARG:N	2.35	0.41
13:P:12:LEU:HD23	13:P:12:LEU:O	2.20	0.41
13:P:17:ARG:HA	13:P:21:GLN:HE22	1.85	0.41
14:Q:161:ASP:HB3	14:Q:164:ILE:HG22	2.02	0.41
18:U:25:PRO:HG3	18:U:94:GLU:CG	2.48	0.41
24:a:71:LEU:C	24:a:72:ARG:HG3	2.46	0.41
28:e:55:GLY:HA3	28:e:174:ARG:NE	2.35	0.41
29:f:89:ILE:HG22	29:f:90:VAL:N	2.34	0.41
30:g:45:VAL:O	30:g:46:ILE:HD13	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:h:131:LEU:CD2	31:h:170:ILE:HG22	2.49	0.41
34:k:38:LEU:HD12	34:k:38:LEU:N	2.36	0.41
35:l:80:VAL:CG2	35:l:140:VAL:CG1	2.98	0.41
38:o:36:ARG:HA	38:o:47:PHE:O	2.21	0.41
40:q:13:TYR:O	40:q:17:LEU:HB2	2.21	0.41
43:u:244:GLU:HG2	43:u:245:LEU:HD12	2.02	0.41
1:A:67:A:O3'	14:Q:194:GLY:HA3	2.21	0.41
1:A:333:G:H2'	1:A:334:U:O4'	2.21	0.41
1:A:372:G:C8	41:r:55:ARG:NH2	2.89	0.41
1:A:411:A:H2'	1:A:412:G:H5''	2.03	0.41
1:A:588:A:N6	16:S:63:CYS:HB2	2.31	0.41
1:A:850:A:OP1	25:b:129:LEU:HB3	2.21	0.41
1:A:930:C:C4	1:A:931:7MG:HM73	2.56	0.41
1:A:1141:G:C2'	1:A:1142:C:H5'	2.50	0.41
1:A:1225:A:H5''	2:B:1196:A:N1	2.36	0.41
1:A:1685:A:H2'	1:A:1686:A:C8	2.55	0.41
1:A:1930:G:OP2	33:j:38:LYS:NZ	2.53	0.41
2:B:38:C:H2'	2:B:39:C:H6	1.86	0.41
2:B:47:A:OP1	17:T:88:ARG:NH1	2.54	0.41
2:B:474:C:C2	2:B:672:A:C2	3.09	0.41
2:B:674:U:H2'	2:B:675:C:O4'	2.20	0.41
2:B:771:G:N2	28:e:228:HIS:O	2.47	0.41
2:B:873:G:O2'	2:B:874:A:H5'	2.21	0.41
2:B:890:U:O5'	2:B:890:U:H6	2.04	0.41
2:B:1169:OMG:H2'	2:B:1170:U:O4'	2.19	0.41
2:B:1286:C:H3'	2:B:1288:G:H21	1.86	0.41
2:B:1295:U:O3'	18:U:51:GLY:HA2	2.21	0.41
4:D:5:A:H61	4:D:114:C:N4	2.07	0.41
9:I:84:ALA:HB1	9:I:85:PRO:HD2	2.03	0.41
12:O:41:VAL:O	12:O:45:LEU:HG	2.20	0.41
12:O:107:PRO:HG2	12:O:112:ARG:HH21	1.85	0.41
13:P:134:LYS:C	13:P:134:LYS:CD	2.85	0.41
19:V:112:ARG:HD2	19:V:118:GLN:OE1	2.19	0.41
22:Y:14:HIS:HB3	22:Y:15:PRO:CD	2.50	0.41
29:f:369:SER:HA	29:f:377:PHE:O	2.20	0.41
31:h:96:LEU:CD2	31:h:107:ILE:HG13	2.48	0.41
38:o:71:LEU:HD23	38:o:71:LEU:C	2.46	0.41
42:t:4:TYR:CZ	42:t:8:LYS:HD2	2.55	0.41
43:u:88:ILE:O	43:u:92:LEU:HD21	2.21	0.41
43:u:99:TYR:O	43:u:171:GLY:HA3	2.20	0.41
44:v:52:LEU:HB2	44:v:62:VAL:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:w:131:GLU:HG3	45:w:132:PRO:HD3	2.03	0.41
46:x:215:ASP:CB	46:x:216:PRO:HD3	2.51	0.41
1:A:131:U:H5'	1:A:132:U:H5'	2.02	0.41
1:A:196:C:O2'	1:A:197:A:H5'	2.21	0.41
1:A:324:G:O2'	42:t:38:ARG:NH1	2.52	0.41
1:A:343:OMC:CM2	1:A:344:A:H5'	2.44	0.41
1:A:445:G:H1'	1:A:446:A:OP2	2.20	0.41
1:A:449:C:H2'	1:A:450:U:H5'	2.03	0.41
1:A:758:G:H2'	1:A:759:C:O4'	2.21	0.41
1:A:765:C:H4'	1:A:766:C:OP1	2.21	0.41
1:A:802:C:OP1	9:I:21:SER:OG	2.35	0.41
1:A:834:U:H2'	1:A:835:C:C6	2.55	0.41
1:A:1080:A:C2	2:B:480:G:N3	2.89	0.41
1:A:1110:U:O2	1:A:1656:G:H2'	2.21	0.41
1:A:1285:U:OP2	45:w:196:ARG:NE	2.54	0.41
2:B:98:G:P	2:B:115:G:H22	2.43	0.41
2:B:480:G:N2	2:B:493:A:H1'	2.35	0.41
2:B:498:U:H5''	28:e:245:ARG:HH11	1.84	0.41
2:B:634:OMG:H1'	2:B:634:OMG:HM23	1.68	0.41
2:B:668:U:H2'	2:B:669:G:H5'	2.03	0.41
2:B:728:A2M:HM'3	2:B:728:A2M:H1'	1.51	0.41
2:B:1105:C:N4	30:g:50:CYS:O	2.54	0.41
2:B:1273:G:H5'	2:B:1275:U:C6	2.55	0.41
2:B:1541:A:H5''	2:B:1542:G:H5''	2.02	0.41
3:C:71:A:H4'	3:C:72:A:O5'	2.21	0.41
3:C:161:U:O2	21:X:89:THR:HB	2.21	0.41
4:D:25:G:H2'	4:D:26:C:O4'	2.21	0.41
4:D:55:A:H2'	4:D:56:G:H5'	2.02	0.41
7:G:172:A:H2'	7:G:173:U:O4'	2.21	0.41
9:I:158:HIS:HD2	9:I:170:LYS:HB3	1.85	0.41
10:L:131:MET:HE3	10:L:133:PHE:CZ	2.56	0.41
13:P:49:HIS:NE2	13:P:51:GLN:HG2	2.36	0.41
14:Q:27:TRP:CH2	14:Q:39:GLN:NE2	2.88	0.41
14:Q:130:ARG:NH2	14:Q:173:LYS:HG2	2.35	0.41
16:S:82:TYR:CE2	16:S:90:THR:HB	2.56	0.41
17:T:80:ARG:HG3	17:T:80:ARG:O	2.20	0.41
18:U:80:VAL:HG12	18:U:83:ARG:O	2.20	0.41
19:V:32:ILE:HB	19:V:33:PRO:CD	2.49	0.41
21:X:139:ASP:OD1	21:X:140:SER:N	2.54	0.41
23:Z:48:ARG:HD2	23:Z:112:ARG:HH21	1.85	0.41
29:f:32:PHE:HB2	29:f:187:GLN:OE1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:h:133:THR:O	31:h:137:HIS:HB3	2.21	0.41
33:j:8:TYR:HB2	33:j:13:HIS:ND1	2.36	0.41
38:o:8:MET:HE2	38:o:11:MET:O	2.21	0.41
38:o:26:ALA:O	38:o:30:GLU:HB2	2.21	0.41
42:t:27:GLN:NE2	42:t:68:ILE:HD11	2.36	0.41
43:u:46:THR:HG22	43:u:47:PRO:CD	2.51	0.41
1:A:37:U:H2'	1:A:38:A:O4'	2.21	0.41
1:A:58:G:C4'	1:A:59:A:H4'	2.51	0.41
1:A:72:C:H5''	36:m:17:ARG:HD2	2.03	0.41
1:A:74:U:O3'	11:N:75:ARG:NH2	2.49	0.41
1:A:99:A:OP1	14:Q:211:ASN:HB3	2.21	0.41
1:A:131:U:N3	1:A:135:A:C2	2.86	0.41
1:A:238:G:N2	1:A:417:A:C8	2.89	0.41
1:A:247:G:H2'	1:A:248:C:H5'	2.03	0.41
1:A:321:U:H1'	1:A:327:U:O2	2.21	0.41
1:A:407:C:C3'	1:A:408:G:H5'	2.51	0.41
1:A:499:C:O2'	1:A:500:C:H5'	2.20	0.41
1:A:763:C:H5''	35:l:52:HIS:O	2.20	0.41
1:A:784:C:OP1	32:i:28:GLN:HG2	2.21	0.41
1:A:875:C:H3'	1:A:876:A:H8	1.86	0.41
1:A:875:C:H2'	9:I:47:LEU:HD11	2.01	0.41
1:A:982:G:H5'	37:n:16:HIS:CE1	2.56	0.41
1:A:1288:G:H2'	1:A:1289:G:O4'	2.21	0.41
1:A:1536:U:O2'	1:A:1537:G:H5'	2.21	0.41
1:A:1574:A:C2	9:I:35:PHE:HD1	2.39	0.41
1:A:1622:G:H1	1:A:1636:C:N4	2.19	0.41
1:A:1670:G:H21	2:B:704:A:H62	1.69	0.41
1:A:1721:G:N3	33:j:5:ARG:NH1	2.69	0.41
1:A:1735:U:H5''	1:A:1736:U:OP2	2.19	0.41
1:A:1738:G:H2'	1:A:1739:U:C6	2.56	0.41
1:A:1783:C:H2'	1:A:1784:G:O4'	2.21	0.41
1:A:1797:U:O2'	1:A:1798:U:O5'	2.38	0.41
1:A:1957:A:H2'	1:A:1958:U:O4'	2.21	0.41
1:A:1959:U:O2'	1:A:1960:G:H5'	2.21	0.41
2:B:52:G:H2'	2:B:53:C:O4'	2.20	0.41
2:B:85:A:H2'	2:B:85:A:N3	2.36	0.41
2:B:98:G:OP1	2:B:115:G:N1	2.54	0.41
2:B:103:G:C2'	2:B:117:A:H61	2.34	0.41
2:B:117:A:OP1	2:B:467:G:N2	2.51	0.41
2:B:493:A:O3'	28:e:197:PRO:HB3	2.21	0.41
2:B:570:G:N2	2:B:1354:C:C4'	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:709:A:H1'	2:B:722:G:N2	2.36	0.41
2:B:780:U:C5	2:B:1151:A:O3'	2.73	0.41
2:B:1168:A:O2'	2:B:1169:OMG:H5'	2.21	0.41
2:B:1169:OMG:HM23	2:B:1169:OMG:H1'	1.83	0.41
2:B:1273:G:H5'	2:B:1275:U:C5	2.55	0.41
2:B:1629:U:O2'	2:B:1630:U:C6	2.66	0.41
2:B:1646:G:H4'	2:B:1647:G:O4'	2.21	0.41
3:C:96:A:O5'	34:k:67:ARG:NE	2.54	0.41
3:C:102:G:H4'	37:n:21:ARG:HG2	2.02	0.41
4:D:5:A:N6	4:D:114:C:H42	2.07	0.41
4:D:26:C:H2'	4:D:27:A:O4'	2.21	0.41
6:F:67:A:O2'	6:F:68:C:P	2.77	0.41
8:H:27:A:H5'	31:h:69:ALA:HB1	2.03	0.41
8:H:35:G:C2'	8:H:36:C:H5'	2.51	0.41
9:I:172:PHE:CE2	11:N:5:LYS:HE3	2.56	0.41
9:I:192:HIS:HE1	27:d:34:ARG:O	2.03	0.41
11:N:118:ILE:HG13	11:N:119:GLN:N	2.36	0.41
11:N:129:VAL:HG23	11:N:129:VAL:O	2.21	0.41
11:N:181:GLU:HB3	25:b:140:ALA:CB	2.48	0.41
14:Q:89:ARG:HG3	14:Q:90:PRO:HD2	2.03	0.41
15:R:103:ILE:HG13	15:R:109:PRO:HG3	2.02	0.41
16:S:29:PHE:HB3	16:S:43:PHE:CD1	2.56	0.41
16:S:61:LEU:HD23	45:w:77:LEU:HD13	2.02	0.41
20:W:38:ILE:HG12	20:W:60:VAL:HG11	1.96	0.41
20:W:44:TYR:CD2	20:W:52:PRO:HB3	2.55	0.41
20:W:55:ALA:N	20:W:58:ASP:OD2	2.45	0.41
22:Y:26:PHE:C	22:Y:26:PHE:CD1	2.98	0.41
24:a:25:VAL:HG12	24:a:26:GLN:N	2.35	0.41
26:c:81:VAL:CG1	26:c:82:MET:N	2.84	0.41
27:d:56:VAL:O	27:d:60:ARG:HG3	2.21	0.41
28:e:24:LEU:HD22	28:e:60:ARG:NH2	2.36	0.41
28:e:126:ILE:CG2	28:e:127:ALA:N	2.84	0.41
29:f:113:GLU:O	29:f:181:ALA:N	2.48	0.41
29:f:210:ILE:CG2	29:f:214:PHE:HD2	2.34	0.41
29:f:216:GLN:HG2	29:f:217:SER:N	2.35	0.41
29:f:350:ALA:O	29:f:352:GLN:HG2	2.20	0.41
30:g:46:ILE:HG21	30:g:55:LYS:HG3	2.01	0.41
30:g:57:GLU:OE1	30:g:57:GLU:HA	2.20	0.41
31:h:136:TRP:CZ3	31:h:140:VAL:HG22	2.55	0.41
34:k:24:GLU:O	34:k:28:GLU:HG2	2.21	0.41
34:k:52:ARG:HH21	34:k:53:LYS:HZ3	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:k:77:ARG:HA	34:k:80:ARG:HD2	2.03	0.41
37:n:36:ALA:O	37:n:45:ARG:HB3	2.21	0.41
38:o:10:VAL:O	38:o:13:ARG:HG2	2.21	0.41
41:r:6:SER:HA	41:r:22:PRO:HA	2.02	0.41
41:r:101:PHE:O	41:r:103:PRO:HD3	2.21	0.41
41:r:164:LYS:HA	41:r:167:MET:HB2	2.02	0.41
41:r:183:ASN:OD1	41:r:223:PHE:HD2	2.04	0.41
43:u:83:LEU:HB2	43:u:92:LEU:HD22	2.02	0.41
45:w:89:ILE:HG12	45:w:226:ASP:OD2	2.20	0.41
45:w:131:GLU:HA	45:w:134:ILE:HG12	2.02	0.41
46:x:148:LEU:HA	46:x:271:LEU:HD21	2.03	0.41
46:x:155:TYR:CZ	46:x:260:VAL:HG13	2.56	0.41
46:x:166:ARG:HH22	46:x:167:LEU:HD21	1.86	0.41
46:x:271:LEU:HA	46:x:274:SER:OG	2.20	0.41
1:A:148:G:H3'	14:Q:65:ARG:NH1	2.36	0.41
1:A:212:C:O2'	1:A:213:C:H6	2.03	0.41
1:A:389:G:O2'	3:C:24:G:N3	2.46	0.41
1:A:394:C:N3	1:A:411:A:H2'	2.36	0.41
1:A:403:U:O2	1:A:982:G:H4'	2.21	0.41
1:A:412:G:HO2'	1:A:414:U:H5	1.68	0.41
1:A:1059:C:H2'	1:A:1060:A:O4'	2.20	0.41
1:A:1284:U:OP1	45:w:118:ARG:NH1	2.30	0.41
1:A:1364:C:O2	1:A:1364:C:H2'	2.21	0.41
1:A:1720:G:H5''	1:A:1723:G:C4'	2.50	0.41
2:B:512:A:C2'	2:B:513:A:H5'	2.50	0.41
2:B:543:OMC:O2	2:B:590:A:N6	2.54	0.41
2:B:656:U:C2'	2:B:657:7MG:O5'	2.68	0.41
2:B:1144:U:OP1	3:C:165:U:H5	2.04	0.41
2:B:1191:G:C2'	2:B:1192:U:H5'	2.50	0.41
2:B:1203:C:H5''	2:B:1204:G:H5''	2.00	0.41
2:B:1313:G:O2'	2:B:1314:G:H5'	2.21	0.41
2:B:1447:G:HO2'	2:B:1493:U:HO2'	1.67	0.41
3:C:29:C:H2'	3:C:30:U:H6	1.86	0.41
4:D:14:C:H4'	43:u:18:VAL:HG23	2.02	0.41
6:F:49:C:C5	13:P:114:ARG:CD	3.04	0.41
7:G:28:U:H2'	7:G:29:G:O4'	2.20	0.41
13:P:139:TRP:CD1	13:P:140:HIS:H	2.39	0.41
20:W:105:VAL:HG23	20:W:110:GLU:O	2.21	0.41
26:c:7:LEU:O	26:c:11:LEU:HD13	2.20	0.41
28:e:94:ALA:HB3	28:e:102:LEU:HB3	2.02	0.41
30:g:26:VAL:HG12	30:g:93:SER:HB3	1.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:i:95:GLY:O	32:i:120:LEU:HA	2.21	0.41
35:l:36:PRO:HB3	44:v:181:THR:OG1	2.21	0.41
35:l:89:MET:HE2	35:l:102:ARG:O	2.21	0.41
36:m:92:ASN:HB2	36:m:95:ALA:CB	2.49	0.41
41:r:219:PHE:CB	41:r:227:LEU:HD21	2.46	0.41
43:u:37:VAL:HG23	43:u:67:ALA:CB	2.51	0.41
43:u:40:ASP:HB3	43:u:42:THR:HG22	2.02	0.41
43:u:99:TYR:CE1	43:u:103:LEU:HD13	2.56	0.41
43:u:249:TYR:C	43:u:252:ALA:H	2.29	0.41
44:v:26:THR:H	44:v:58:ASN:ND2	2.17	0.41
46:x:286:ILE:C	46:x:288:ARG:H	2.29	0.41
1:A:68:C:OP1	14:Q:195:HIS:HD2	2.04	0.40
1:A:85:G:O6	11:N:12:HIS:HB2	2.21	0.40
1:A:452:A:C2	3:C:16:A:HI'	2.56	0.40
1:A:778:A2M:O4'	2:B:1439:U:H5''	2.21	0.40
1:A:919:OMC:HM23	1:A:919:OMC:HI'	1.80	0.40
1:A:1594:G:H2'	1:A:1595:A:C8	2.57	0.40
2:B:8:U:H2'	2:B:9:G:H8	1.85	0.40
2:B:58:G:H2'	2:B:59:U:O4'	2.21	0.40
2:B:1198:G:C2'	2:B:1199:A:H5'	2.51	0.40
2:B:1257:G:H2'	2:B:1258:C:O4'	2.21	0.40
2:B:1566:G:H2'	7:G:168:C:N4	2.35	0.40
3:C:72:A:P	23:Z:49:LYS:HG3	2.60	0.40
4:D:25:G:O2'	4:D:26:C:H5'	2.21	0.40
5:E:57:C:H2'	5:E:58:U:H5'	2.02	0.40
9:I:190:PHE:HB2	27:d:34:ARG:HH21	1.86	0.40
12:O:144:ARG:NH1	12:O:154:TYR:CZ	2.89	0.40
13:P:107:ASP:N	44:v:193:TRP:HA	2.35	0.40
14:Q:129:LEU:O	14:Q:130:ARG:HG3	2.21	0.40
17:T:14:ILE:HD12	17:T:42:ARG:CG	2.51	0.40
17:T:138:LEU:HD23	17:T:138:LEU:C	2.46	0.40
19:V:51:PHE:HE1	19:V:90:PHE:HD1	1.68	0.40
19:V:112:ARG:HG2	19:V:112:ARG:O	2.21	0.40
20:W:111:MET:SD	20:W:131:ILE:HD13	2.61	0.40
22:Y:27:LEU:O	22:Y:28:SER:CB	2.70	0.40
26:c:9:TRP:CB	26:c:46:LEU:HD21	2.51	0.40
26:c:22:ARG:HH12	32:i:82:ASP:CG	2.29	0.40
27:d:38:LEU:HG	27:d:42:ILE:HD11	2.03	0.40
28:e:79:PRO:HG3	28:e:99:GLY:HA2	2.03	0.40
29:f:48:VAL:HG23	29:f:343:ILE:HG13	2.03	0.40
29:f:232:THR:HG22	29:f:233:GLY:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:o:14:TYR:CD1	38:o:18:TYR:HE2	2.38	0.40
42:t:68:ILE:CG2	42:t:85:LEU:HB2	2.52	0.40
1:A:26:C:N4	1:A:56:A:H61	2.19	0.40
1:A:319:C:N4	1:A:326:G:N2	2.69	0.40
1:A:826:A:H4'	11:N:34:PRO:HB2	2.03	0.40
1:A:952:G:H1	9:I:96:ASP:HA	1.87	0.40
1:A:1048:C:H2'	1:A:1049:A:H8	1.85	0.40
1:A:1507:G:H2'	1:A:1508:C:H6	1.86	0.40
1:A:1515:A:HO2'	1:A:1516:G:C5'	2.31	0.40
2:B:456:C:H2'	2:B:457:U:O4'	2.20	0.40
2:B:1254:C:O2	2:B:1318:G:N1	2.48	0.40
2:B:1291:C:H2'	2:B:1292:G:O4'	2.21	0.40
2:B:1347:A:C5	25:b:60:HIS:CD2	3.10	0.40
2:B:1482:G:H3'	2:B:1483:G:H8	1.87	0.40
2:B:1515:G:H5'	2:B:1517:G:N7	2.37	0.40
2:B:1519:U:C5	2:B:1520:G:C6	3.09	0.40
2:B:1536:G:H5''	28:e:220:GLY:HA3	2.04	0.40
3:C:52:A:C2	40:q:23:VAL:HG22	2.56	0.40
5:E:34:U:O2'	5:E:35:C:H5'	2.21	0.40
7:G:173:U:H2'	7:G:174:G:H8	1.86	0.40
15:R:41:LEU:HD22	15:R:150:MET:SD	2.62	0.40
15:R:60:PHE:HZ	15:R:84:PRO:HG3	1.86	0.40
16:S:11:VAL:HG13	16:S:60:VAL:HG23	2.03	0.40
17:T:81:ARG:HG2	17:T:88:ARG:CZ	2.52	0.40
17:T:115:ILE:CG2	17:T:142:ILE:HG23	2.47	0.40
19:V:28:ILE:O	19:V:76:VAL:HA	2.20	0.40
19:V:52:GLN:HB2	19:V:64:LEU:CD1	2.50	0.40
23:Z:31:PRO:HA	23:Z:44:ALA:CB	2.51	0.40
29:f:222:VAL:HG11	29:f:335:VAL:HG13	2.03	0.40
29:f:354:SER:HB3	29:f:357:LEU:CG	2.49	0.40
31:h:105:ALA:HB2	31:h:140:VAL:HA	2.02	0.40
35:l:63:ILE:HG12	35:l:142:VAL:HG11	2.03	0.40
41:r:216:THR:OG1	41:r:227:LEU:HD13	2.22	0.40
41:r:294:GLU:O	41:r:298:ARG:HG3	2.22	0.40
45:w:235:ASN:O	45:w:239:ALA:HB2	2.21	0.40
46:x:149:LEU:HD12	46:x:209:MET:CE	2.49	0.40
1:A:33:A:OP1	14:Q:102:THR:HB	2.22	0.40
1:A:190:G:P	23:Z:118:ARG:NH1	2.95	0.40
1:A:348:A:N6	2:B:1353:U:H3	2.18	0.40
1:A:375:U:H4'	37:n:71:ASN:ND2	2.37	0.40
1:A:1079:G:O2'	1:A:1081:A:OP1	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1576:U:H1'	9:I:17:HIS:CD2	2.56	0.40
1:A:1576:U:H1'	9:I:17:HIS:NE2	2.37	0.40
1:A:1578:U:C4	26:c:26:ARG:NH2	2.90	0.40
1:A:1940:U:O2	1:A:1942:A:H8	2.04	0.40
1:A:1948:C:H3'	1:A:1949:A:C8	2.56	0.40
2:B:884:U:O2	2:B:884:U:H2'	2.22	0.40
2:B:1273:G:H4'	2:B:1274:A:C5'	2.52	0.40
3:C:27:U:H4'	11:N:31:LEU:HD13	2.03	0.40
3:C:41:A:N6	3:C:102:G:H1'	2.36	0.40
3:C:75:OMG:C8	40:q:30:ARG:HG2	2.56	0.40
4:D:14:C:H5'	43:u:24:ARG:CD	2.52	0.40
4:D:116:A:H2'	4:D:117:U:H5'	2.02	0.40
5:E:118:U:O2	17:T:92:LYS:NZ	2.49	0.40
7:G:86:G:H2'	7:G:87:U:O4'	2.21	0.40
11:N:90:ILE:HG22	11:N:91:ASN:N	2.37	0.40
12:O:144:ARG:HG3	12:O:148:TYR:CE2	2.57	0.40
18:U:89:ILE:O	18:U:89:ILE:HG13	2.20	0.40
26:c:25:ILE:HG22	26:c:26:ARG:N	2.37	0.40
26:c:53:VAL:O	26:c:53:VAL:HG13	2.22	0.40
29:f:86:VAL:HB	29:f:203:LEU:O	2.20	0.40
29:f:231:PHE:CD2	29:f:273:GLY:HA2	2.56	0.40
29:f:368:THR:O	29:f:368:THR:CG2	2.67	0.40
34:k:52:ARG:HE	34:k:53:LYS:NZ	2.19	0.40
38:o:31:VAL:HG23	38:o:32:SER:N	2.35	0.40
38:o:62:LYS:HB2	38:o:62:LYS:HE2	1.84	0.40
41:r:52:ALA:HA	41:r:104:THR:OG1	2.21	0.40
41:r:94:MET:H	41:r:94:MET:HG2	1.74	0.40
41:r:139:ARG:HD2	41:r:245:GLY:C	2.46	0.40
43:u:27:LYS:HB3	43:u:27:LYS:HE3	1.90	0.40
43:u:60:ILE:CG2	43:u:61:ILE:N	2.84	0.40
43:u:109:MET:HE2	43:u:148:PHE:CZ	2.56	0.40
44:v:67:MET:HB2	44:v:152:GLN:HE22	1.85	0.40
1:A:33:A:OP1	1:A:33:A:H4'	2.21	0.40
1:A:1228:G:N2	2:B:1197:C:O4'	2.55	0.40
1:A:1570:A:C8	26:c:108:ARG:NH2	2.89	0.40
1:A:1750:C:O2'	1:A:1751:U:H2'	2.20	0.40
2:B:129:G:H2'	2:B:130:A:O4'	2.21	0.40
2:B:481:U:H2'	2:B:482:A2M:C8	2.50	0.40
2:B:650:C:C2'	2:B:651:G:H5'	2.51	0.40
2:B:703:A:C4'	15:R:137:THR:HG21	2.44	0.40
2:B:722:G:C6	2:B:723:A:N6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1176:U:C1'	2:B:1203:C:N4	2.84	0.40
7:G:30:A:OP1	12:O:168:TYR:OH	2.27	0.40
13:P:142:VAL:O	13:P:146:LYS:CB	2.70	0.40
15:R:35:VAL:HG21	15:R:58:ILE:HD12	2.02	0.40
21:X:152:ARG:NH2	21:X:158:LYS:CG	2.84	0.40
24:a:11:ILE:HD11	24:a:126:TRP:CH2	2.56	0.40
28:e:170:ALA:CB	38:o:65:ALA:HB1	2.51	0.40
29:f:225:VAL:CG2	29:f:341:ARG:HD3	2.52	0.40
29:f:247:THR:HG22	29:f:251:LEU:HD12	2.02	0.40
30:g:50:CYS:HB3	30:g:55:LYS:HB2	2.03	0.40
31:h:86:MET:SD	31:h:120:MET:HE1	2.62	0.40
34:k:47:ARG:HG2	34:k:51:ILE:HG12	2.04	0.40
43:u:19:LYS:O	43:u:24:ARG:NH1	2.55	0.40
1:A:191:A:O2'	1:A:192:A:H5'	2.22	0.40
1:A:453:A:H2'	1:A:454:G:O4'	2.21	0.40
1:A:1315:C:O2'	2:B:1435:U:H4'	2.20	0.40
1:A:1664:U:H4'	41:r:96:ARG:HD3	2.03	0.40
2:B:591:C:H2'	2:B:592:G:O4'	2.21	0.40
2:B:688:G:HO2'	7:G:78:U:C2'	2.28	0.40
2:B:1169:OMG:CM2	14:Q:100:PRO:HD3	2.51	0.40
2:B:1289:U:O2'	2:B:1290:A:H5'	2.21	0.40
2:B:1575:A:O2'	12:O:20:HIS:HD2	2.04	0.40
3:C:168:C:H5'	46:x:238:LYS:HE2	2.03	0.40
5:E:114:G:H5''	17:T:121:ARG:HG3	2.04	0.40
5:E:119:G:OP1	17:T:103:ARG:NH2	2.55	0.40
6:F:68:C:OP2	35:l:109:TRP:NE1	2.41	0.40
7:G:173:U:H2'	7:G:174:G:C8	2.56	0.40
8:H:106:G:H2'	8:H:108:G:OP1	2.22	0.40
9:I:39:ARG:NH1	41:r:300:LEU:HD23	2.36	0.40
9:I:190:PHE:HB3	27:d:34:ARG:HH21	1.87	0.40
11:N:111:GLU:OE1	36:m:33:ARG:NH2	2.55	0.40
14:Q:40[A]:ARG:HH11	14:Q:40[A]:ARG:HG2	1.87	0.40
14:Q:148:VAL:HG12	14:Q:149:VAL:N	2.37	0.40
15:R:108:ASP:HA	15:R:109:PRO:HD3	1.88	0.40
16:S:25:THR:HG22	16:S:26:VAL:O	2.21	0.40
16:S:45:ARG:O	16:S:49:GLU:HG2	2.22	0.40
16:S:47:MET:CE	16:S:53:VAL:HG11	2.43	0.40
16:S:95:GLU:CD	16:S:95:GLU:C	2.89	0.40
19:V:50:TYR:O	19:V:54:ASN:HB2	2.22	0.40
19:V:95:LYS:HG3	19:V:109:ILE:HD13	2.04	0.40
20:W:30:ASN:HD22	20:W:114:SER:HB3	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:X:171:LEU:N	21:X:171:LEU:HD12	2.37	0.40
25:b:102:LEU:HD21	25:b:124:ARG:CZ	2.51	0.40
29:f:168:LEU:HD23	29:f:168:LEU:HA	1.84	0.40
30:g:32:THR:HG21	30:g:91:VAL:HG12	2.04	0.40
32:i:35:LYS:HA	32:i:36:PRO:HD3	1.87	0.40
46:x:228:ARG:NE	46:x:283:SER:HB2	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	I	190/192 (99%)	177 (93%)	11 (6%)	2 (1%)	11	15
10	L	57/65 (88%)	51 (90%)	5 (9%)	1 (2%)	6	7
11	N	168/205 (82%)	154 (92%)	12 (7%)	2 (1%)	10	13
12	O	201/203 (99%)	191 (95%)	8 (4%)	2 (1%)	12	17
13	P	147/149 (99%)	133 (90%)	11 (8%)	3 (2%)	6	6
14	Q	202/203 (100%)	188 (93%)	14 (7%)	0	100	100
15	R	150/152 (99%)	138 (92%)	10 (7%)	2 (1%)	9	12
16	S	175/177 (99%)	158 (90%)	13 (7%)	4 (2%)	5	4
17	T	148/150 (99%)	144 (97%)	3 (2%)	1 (1%)	18	25
18	U	122/146 (84%)	111 (91%)	7 (6%)	4 (3%)	3	2
19	V	79/99 (80%)	70 (89%)	9 (11%)	0	100	100
20	W	125/127 (98%)	120 (96%)	3 (2%)	2 (2%)	7	9
21	X	105/116 (90%)	101 (96%)	3 (3%)	1 (1%)	12	17
22	Y	59/61 (97%)	57 (97%)	2 (3%)	0	100	100
23	Z	111/113 (98%)	100 (90%)	10 (9%)	1 (1%)	14	20

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	a	99/132 (75%)	92 (93%)	5 (5%)	2 (2%)	6	6
25	b	142/144 (99%)	130 (92%)	11 (8%)	1 (1%)	18	25
26	c	116/125 (93%)	108 (93%)	6 (5%)	2 (2%)	7	8
27	d	61/63 (97%)	56 (92%)	2 (3%)	3 (5%)	1	1
28	e	243/245 (99%)	225 (93%)	16 (7%)	2 (1%)	16	22
29	f	395/397 (100%)	372 (94%)	19 (5%)	4 (1%)	12	17
30	g	62/66 (94%)	59 (95%)	2 (3%)	1 (2%)	7	9
31	h	140/169 (83%)	133 (95%)	7 (5%)	0	100	100
32	i	111/113 (98%)	108 (97%)	2 (2%)	1 (1%)	14	20
33	j	102/104 (98%)	98 (96%)	4 (4%)	0	100	100
34	k	109/120 (91%)	105 (96%)	3 (3%)	1 (1%)	14	20
35	l	134/136 (98%)	123 (92%)	9 (7%)	2 (2%)	8	10
36	m	93/95 (98%)	87 (94%)	3 (3%)	3 (3%)	3	2
37	n	79/81 (98%)	71 (90%)	7 (9%)	1 (1%)	9	12
38	o	83/85 (98%)	76 (92%)	4 (5%)	3 (4%)	2	1
39	p	48/58 (83%)	44 (92%)	3 (6%)	1 (2%)	5	5
40	q	48/50 (96%)	43 (90%)	4 (8%)	1 (2%)	5	5
41	r	321/337 (95%)	309 (96%)	10 (3%)	2 (1%)	21	29
42	t	91/93 (98%)	86 (94%)	4 (4%)	1 (1%)	11	15
43	u	187/254 (74%)	176 (94%)	9 (5%)	2 (1%)	11	15
44	v	128/171 (75%)	119 (93%)	7 (6%)	2 (2%)	7	9
45	w	213/215 (99%)	194 (91%)	16 (8%)	3 (1%)	9	11
46	x	204/223 (92%)	196 (96%)	7 (3%)	1 (0%)	24	34
All	All	5248/5634 (93%)	4903 (93%)	281 (5%)	64 (1%)	13	13

All (64) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
9	I	142	ASN
11	N	66	PRO
11	N	174	PRO
13	P	21	GLN
15	R	132	ALA
16	S	70	LYS

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Mol	Chain	Res	Type
18	U	55	LYS
18	U	81	ARG
18	U	143	VAL
25	b	112	ASN
29	f	372	ILE
35	l	67	ASN
36	m	36	ALA
37	n	32	GLU
38	o	51	ALA
44	v	58	ASN
45	w	111	ILE
16	S	71	LEU
17	T	130	ASN
20	W	48	LEU
28	e	19	HIS
28	e	153	GLY
29	f	172	ARG
34	k	15	LYS
35	l	27	SER
36	m	39	SER
38	o	46	ALA
39	p	48	ALA
40	q	50	HIS
41	r	217	ARG
45	w	192	GLY
9	I	104	ALA
10	L	158	HIS
15	R	64	ASN
16	S	89	TYR
20	W	117	ALA
27	d	30	HIS
41	r	101	PHE
12	O	207	LYS
16	S	133	ASN
18	U	4	SER
21	X	114	VAL
27	d	33	LYS
29	f	365	PHE
24	a	36	PRO
26	c	43	ALA
27	d	34	ARG
29	f	375	GLY

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Mol	Chain	Res	Type
30	g	43	LEU
36	m	38	SER
42	t	52	GLY
43	u	193	LYS
32	i	13	LYS
45	w	164	VAL
46	x	216	PRO
12	O	107	PRO
43	u	45	GLY
13	P	31	ILE
24	a	25	VAL
44	v	65	GLY
23	Z	77	ILE
26	c	57	GLY
38	o	59	GLY
13	P	136	PRO

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	
9	I	160/160 (100%)	160 (100%)	0	100	100
10	L	57/57 (100%)	57 (100%)	0	100	100
11	N	153/178 (86%)	150 (98%)	3 (2%)	48	67
12	O	175/175 (100%)	175 (100%)	0	100	100
13	P	119/131 (91%)	115 (97%)	4 (3%)	32	48
14	Q	177/176 (101%)	177 (100%)	0	100	100
15	R	131/131 (100%)	131 (100%)	0	100	100
16	S	158/158 (100%)	158 (100%)	0	100	100
17	T	134/134 (100%)	134 (100%)	0	100	100
18	U	108/123 (88%)	108 (100%)	0	100	100
19	V	79/90 (88%)	79 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
20	W	99/99 (100%)	98 (99%)	1 (1%)	68	80
21	X	96/103 (93%)	96 (100%)	0	100	100
22	Y	55/55 (100%)	52 (94%)	3 (6%)	19	29
23	Z	97/97 (100%)	97 (100%)	0	100	100
24	a	93/116 (80%)	93 (100%)	0	100	100
25	b	116/116 (100%)	114 (98%)	2 (2%)	53	72
26	c	99/102 (97%)	99 (100%)	0	100	100
27	d	52/52 (100%)	51 (98%)	1 (2%)	50	69
28	e	194/194 (100%)	194 (100%)	0	100	100
29	f	339/339 (100%)	332 (98%)	7 (2%)	47	66
30	g	62/62 (100%)	60 (97%)	2 (3%)	34	51
31	h	91/144 (63%)	89 (98%)	2 (2%)	45	64
32	i	100/100 (100%)	100 (100%)	0	100	100
33	j	90/90 (100%)	90 (100%)	0	100	100
34	k	103/108 (95%)	103 (100%)	0	100	100
35	l	102/112 (91%)	99 (97%)	3 (3%)	37	55
36	m	77/77 (100%)	77 (100%)	0	100	100
37	n	69/69 (100%)	69 (100%)	0	100	100
38	o	68/68 (100%)	68 (100%)	0	100	100
39	p	48/53 (91%)	48 (100%)	0	100	100
40	q	46/46 (100%)	46 (100%)	0	100	100
41	r	262/273 (96%)	262 (100%)	0	100	100
42	t	82/82 (100%)	82 (100%)	0	100	100
43	u	155/207 (75%)	155 (100%)	0	100	100
44	v	112/141 (79%)	110 (98%)	2 (2%)	51	70
45	w	180/180 (100%)	180 (100%)	0	100	100
46	x	182/194 (94%)	182 (100%)	0	100	100
All	All	4520/4792 (94%)	4490 (99%)	30 (1%)	73	85

All (30) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
11	N	20	CYS

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Mol	Chain	Res	Type
11	N	22	SER
11	N	24	LYS
13	P	133	LYS
13	P	134	LYS
13	P	137	VAL
13	P	138	SER
20	W	38	ILE
22	Y	28	SER
22	Y	30	LYS
22	Y	51	ARG
25	b	16	PHE
25	b	45	PHE
27	d	7	HIS
29	f	65	SER
29	f	66	LYS
29	f	67	VAL
29	f	69	LYS
29	f	70	LYS
29	f	71	GLU
29	f	209	ARG
30	g	42	LYS
30	g	95	THR
31	h	79	ARG
31	h	84	ILE
35	l	25	LYS
35	l	126	PHE
35	l	149	ILE
44	v	27	LEU
44	v	103	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (111) such sidechains are listed below:

Mol	Chain	Res	Type
9	I	49	HIS
9	I	168	HIS
10	L	146	HIS
10	L	167	HIS
11	N	6	ASN
11	N	23	GLN
12	O	20	HIS
12	O	68	ASN
12	O	119	GLN

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Mol	Chain	Res	Type
12	O	143	GLN
12	O	212	ASN
13	P	5	ASN
13	P	21	GLN
14	Q	39	GLN
14	Q	92	HIS
14	Q	113	ASN
14	Q	195	HIS
15	R	28	ASN
15	R	64	ASN
15	R	97	ASN
15	R	116	HIS
15	R	133	HIS
15	R	147	GLN
16	S	5	HIS
16	S	57	HIS
16	S	91	HIS
16	S	121	HIS
16	S	122	ASN
16	S	145	HIS
17	T	20	HIS
17	T	147	ASN
18	U	3	HIS
18	U	13	HIS
18	U	54	HIS
18	U	107	GLN
19	V	58	ASN
19	V	118	GLN
20	W	45	HIS
20	W	49	ASN
21	X	163	ASN
22	Y	10	HIS
22	Y	17	HIS
23	Z	97	HIS
23	Z	100	ASN
23	Z	110	HIS
24	a	124	ASN
25	b	11	GLN
25	b	49	HIS
25	b	60	HIS
25	b	104	ASN
26	c	34	ASN

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Mol	Chain	Res	Type
26	c	119	HIS
27	d	6	ASN
27	d	7	HIS
27	d	9	ASN
27	d	12	GLN
27	d	30	HIS
28	e	17	GLN
28	e	38	HIS
28	e	100	ASN
28	e	205	ASN
28	e	211	HIS
28	e	217	GLN
28	e	221	HIS
29	f	8	HIS
29	f	94	GLN
29	f	109	HIS
29	f	174	ASN
29	f	182	HIS
29	f	189	ASN
29	f	279	HIS
29	f	289	GLN
29	f	360	GLN
29	f	374	HIS
30	g	71	HIS
31	h	125	ASN
31	h	137	HIS
32	i	21	HIS
32	i	28	GLN
32	i	81	GLN
33	j	51	HIS
34	k	21	GLN
34	k	37	GLN
35	l	116	HIS
35	l	127	ASN
37	n	10	GLN
38	o	21	ASN
38	o	75	ASN
41	r	33	HIS
41	r	40	HIS
41	r	42	ASN
41	r	145	ASN
41	r	221	ASN

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Mol	Chain	Res	Type
41	r	315	GLN
42	t	27	GLN
42	t	59	HIS
42	t	83	ASN
43	u	63	GLN
44	v	58	ASN
44	v	189	HIS
45	w	33	ASN
45	w	64	HIS
45	w	104	GLN
45	w	110	GLN
45	w	120	ASN
45	w	125	ASN
45	w	157	ASN
45	w	159	GLN
45	w	177	ASN
45	w	194	HIS
46	x	117	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1249/1278 (97%)	348 (27%)	33 (2%)
2	B	925/941 (98%)	275 (29%)	18 (1%)
3	C	144/169 (85%)	39 (27%)	2 (1%)
4	D	111/118 (94%)	23 (20%)	4 (3%)
5	E	141/146 (96%)	30 (21%)	4 (2%)
6	F	44/46 (95%)	21 (47%)	7 (15%)
7	G	118/123 (95%)	29 (24%)	2 (1%)
8	H	86/91 (94%)	20 (23%)	3 (3%)
All	All	2818/2912 (96%)	785 (27%)	73 (2%)

All (785) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	4	A
1	A	5	G
1	A	12	G
1	A	15	U
1	A	20	G
1	A	21	G

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Mol	Chain	Res	Type
1	A	25	A
1	A	34	A
1	A	39	A
1	A	42	A
1	A	48	C
1	A	51	A
1	A	55	G
1	A	56	A
1	A	59	A
1	A	64	A
1	A	65	A
1	A	67	A
1	A	68	C
1	A	70	A
1	A	71	C
1	A	72	C
1	A	73	G
1	A	76	A
1	A	82	U
1	A	84	A
1	A	85	G
1	A	86	U
1	A	88	A
1	A	91	G
1	A	92	G
1	A	94	G
1	A	99	A
1	A	100	A
1	A	108	C
1	A	110	A
1	A	111	A
1	A	115	G
1	A	116	U
1	A	131	U
1	A	132	U
1	A	133	A
1	A	135	A
1	A	136	G
1	A	142	U
1	A	143	G
1	A	147	U
1	A	148	G

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Mol	Chain	Res	Type
1	A	149	U
1	A	176	G
1	A	179	G
1	A	181	A
1	A	182	G
1	A	183	G
1	A	187	G
1	A	188	G
1	A	191	A
1	A	195	U
1	A	196	C
1	A	209	A
1	A	210	A
1	A	212	C
1	A	213	C
1	A	214	G
1	A	215	U
1	A	216	U
1	A	225	C
1	A	234	A
1	A	235	U
1	A	237	U
1	A	238	G
1	A	240	G
1	A	241	U
1	A	247	G
1	A	251	A
1	A	253	G
1	A	254	A
1	A	255	A
1	A	256	G
1	A	259	G
1	A	260	U
1	A	261	U
1	A	265	C
1	A	269	U
1	A	276	U
1	A	277	G
1	A	278	A
1	A	281	C
1	A	309	A
1	A	310	G

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Mol	Chain	Res	Type
1	A	311	U
1	A	322	G
1	A	324	G
1	A	326	G
1	A	327	U
1	A	332	U
1	A	336	A
1	A	337	A
1	A	339	C
1	A	340	U
1	A	341	G
1	A	346	G
1	A	347	U
1	A	359	A
1	A	365	A
1	A	371	A
1	A	372	G
1	A	373	A
1	A	375	U
1	A	376	A
1	A	377	G
1	A	381	G
1	A	382	A
1	A	386	A
1	A	394	C
1	A	396	A
1	A	397	G
1	A	403	U
1	A	405	A
1	A	408	G
1	A	412	G
1	A	413	U
1	A	414	U
1	A	415	U
1	A	420	A
1	A	421	G
1	A	423	A2M
1	A	430	A
1	A	432	A
1	A	436	A
1	A	443	U
1	A	444	A

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Mol	Chain	Res	Type
1	A	446	A
1	A	451	G
1	A	452	A
1	A	456	C
1	A	471	G
1	A	481	C
1	A	482	C
1	A	496	A
1	A	499	C
1	A	500	C
1	A	503	C
1	A	505	U
1	A	519	G
1	A	588	A
1	A	600	A
1	A	601	U
1	A	739	U
1	A	741	G
1	A	749	A
1	A	765	C
1	A	766	C
1	A	767	C
1	A	774	A
1	A	777	OMC
1	A	778	A2M
1	A	787	G
1	A	789	A
1	A	794	A2M
1	A	795	A
1	A	803	G
1	A	806	A
1	A	816	U
1	A	817	A
1	A	826	A
1	A	828	U
1	A	831	U
1	A	840	A
1	A	841	C
1	A	845	A
1	A	847	G
1	A	850	A
1	A	867	G

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Mol	Chain	Res	Type
1	A	868	U
1	A	875	C
1	A	919	OMC
1	A	925	C
1	A	932	G
1	A	934	C
1	A	947	A
1	A	948	G
1	A	951	G
1	A	952	G
1	A	954	G
1	A	956	G
1	A	965	U
1	A	966	G
1	A	973	A
1	A	976	G
1	A	978	U
1	A	982	G
1	A	983	A
1	A	984	A
1	A	987	A
1	A	992	U
1	A	1002	G
1	A	1007	C
1	A	1019	G
1	A	1026	G
1	A	1028	C
1	A	1036	G
1	A	1037	A
1	A	1038	U
1	A	1041	U
1	A	1046	U
1	A	1047	G
1	A	1050	A
1	A	1059	C
1	A	1063	A
1	A	1073	5MC
1	A	1074	G
1	A	1075	OMG
1	A	1076	A
1	A	1081	A
1	A	1083	G

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Mol	Chain	Res	Type
1	A	1084	A
1	A	1086	U
1	A	1088	A
1	A	1090	C
1	A	1091	G
1	A	1092	A
1	A	1104	G
1	A	1111	C
1	A	1126	C
1	A	1132	A
1	A	1141	G
1	A	1151	A
1	A	1154	A
1	A	1157	A
1	A	1161	U
1	A	1162	G
1	A	1164	G
1	A	1166	U
1	A	1222	U
1	A	1223	U
1	A	1227	OMU
1	A	1228	G
1	A	1269	U
1	A	1287	A
1	A	1298	G
1	A	1300	G
1	A	1307	U
1	A	1314	G
1	A	1315	C
1	A	1318	A
1	A	1327	U
1	A	1335	G
1	A	1338	C
1	A	1339	C
1	A	1342	U
1	A	1343	U
1	A	1351	U
1	A	1362	A
1	A	1364	C
1	A	1368	U
1	A	1375	A
1	A	1494	G

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Mol	Chain	Res	Type
1	A	1495	G
1	A	1496	A
1	A	1497	OMU
1	A	1498	G
1	A	1499	A
1	A	1504	C
1	A	1508	C
1	A	1515	A
1	A	1516	G
1	A	1525	5MC
1	A	1526	A
1	A	1527	U
1	A	1528	U
1	A	1530	U
1	A	1539	U
1	A	1542	G
1	A	1573	A
1	A	1574	A
1	A	1576	U
1	A	1580	G
1	A	1590	U
1	A	1598	U
1	A	1599	G
1	A	1600	G
1	A	1608	G
1	A	1616	G
1	A	1623	A
1	A	1624	U
1	A	1625	G
1	A	1637	A
1	A	1639	A
1	A	1640	U
1	A	1643	A
1	A	1647	G
1	A	1650	U
1	A	1653	A
1	A	1654	G
1	A	1655	U
1	A	1658	A
1	A	1661	U
1	A	1662	OMC
1	A	1669	G

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Mol	Chain	Res	Type
1	A	1670	G
1	A	1671	C
1	A	1672	G
1	A	1675	OMG
1	A	1680	G
1	A	1681	A
1	A	1685	A
1	A	1690	A
1	A	1712	U
1	A	1720	G
1	A	1721	G
1	A	1722	A
1	A	1723	G
1	A	1725	7MG
1	A	1734	U
1	A	1735	U
1	A	1743	A
1	A	1748	C
1	A	1751	U
1	A	1755	A
1	A	1761	G
1	A	1766	U
1	A	1769	G
1	A	1772	A
1	A	1773	C
1	A	1777	G
1	A	1780	C
1	A	1789	A
1	A	1790	C
1	A	1792	G
1	A	1798	U
1	A	1799	U
1	A	1800	A
1	A	1801	G
1	A	1804	A2M
1	A	1805	A
1	A	1927	A
1	A	1929	A
1	A	1932	A
1	A	1939	A
1	A	1940	U
1	A	1944	A

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Mol	Chain	Res	Type
1	A	1946	U
1	A	1947	C
1	A	1951	A
1	A	1952	A
1	A	1954	G
1	A	1964	G
2	B	9	G
2	B	17	U
2	B	22	A
2	B	23	U
2	B	24	C
2	B	30	A
2	B	32	C
2	B	33	A
2	B	41	A
2	B	47	A
2	B	58	G
2	B	59	U
2	B	61	C
2	B	62	A
2	B	63	U
2	B	67	G
2	B	68	A
2	B	69	A
2	B	75	C
2	B	77	OMC
2	B	81	G
2	B	88	C
2	B	90	G
2	B	91	C
2	B	116	A
2	B	119	C
2	B	131	G
2	B	135	A
2	B	448	A
2	B	449	C
2	B	450	U
2	B	460	U
2	B	461	U
2	B	462	A
2	B	463	C
2	B	467	G

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Mol	Chain	Res	Type
2	B	468	G
2	B	477	A
2	B	480	G
2	B	486	U
2	B	488	A
2	B	490	A
2	B	491	A
2	B	499	U
2	B	504	A
2	B	505	U
2	B	506	G
2	B	512	A
2	B	516	G
2	B	521	A
2	B	539	U
2	B	540	G
2	B	541	C
2	B	543	OMC
2	B	548	C
2	B	569	G
2	B	577	G
2	B	590	A
2	B	617	A
2	B	618	G
2	B	619	G
2	B	627	A2M
2	B	628	U
2	B	630	C
2	B	632	U
2	B	634	OMG
2	B	645	A
2	B	650	C
2	B	652	C
2	B	653	G
2	B	654	C
2	B	657	7MG
2	B	658	A
2	B	659	A
2	B	660	U
2	B	661	G
2	B	664	U
2	B	670	A

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Mol	Chain	Res	Type
2	B	680	U
2	B	681	G
2	B	682	U
2	B	691	A2M
2	B	692	C
2	B	707	A
2	B	709	A
2	B	711	U
2	B	719	A
2	B	720	C
2	B	721	G
2	B	735	A
2	B	740	G
2	B	743	A
2	B	748	A
2	B	749	G
2	B	750	A
2	B	755	OMG
2	B	757	U
2	B	764	G
2	B	768	C
2	B	769	C
2	B	781	G
2	B	853	C
2	B	855	U
2	B	857	A
2	B	859	U
2	B	860	U
2	B	868	G
2	B	872	A
2	B	873	G
2	B	877	A
2	B	878	A
2	B	879	U
2	B	880	G
2	B	883	U
2	B	884	U
2	B	885	U
2	B	886	C
2	B	887	G
2	B	896	G
2	B	897	C

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Mol	Chain	Res	Type
2	B	905	G
2	B	907	A
2	B	908	C
2	B	911	U
2	B	1106	U
2	B	1108	A
2	B	1109	A
2	B	1112	A
2	B	1113	A
2	B	1135	G
2	B	1136	G
2	B	1137	A
2	B	1138	7MG
2	B	1139	U
2	B	1143	G
2	B	1144	U
2	B	1145	U
2	B	1146	U
2	B	1151	A
2	B	1153	A
2	B	1154	U
2	B	1165	G
2	B	1166	G
2	B	1169	OMG
2	B	1170	U
2	B	1173	G
2	B	1175	C
2	B	1178	G
2	B	1180	G
2	B	1185	A
2	B	1187	A
2	B	1207	G
2	B	1208	G
2	B	1210	OMG
2	B	1211	U
2	B	1216	A
2	B	1225	C
2	B	1241	C
2	B	1248	A
2	B	1249	G
2	B	1250	A
2	B	1253	A

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Mol	Chain	Res	Type
2	B	1255	A
2	B	1273	G
2	B	1274	A
2	B	1279	C
2	B	1280	G
2	B	1287	A
2	B	1288	G
2	B	1289	U
2	B	1293	A
2	B	1297	G
2	B	1302	U
2	B	1312	A
2	B	1313	G
2	B	1315	C
2	B	1347	A
2	B	1348	A
2	B	1350	A
2	B	1359	C
2	B	1363	OMG
2	B	1364	G
2	B	1366	G
2	B	1369	A
2	B	1370	G
2	B	1371	A
2	B	1372	A
2	B	1373	U
2	B	1374	A
2	B	1378	A
2	B	1380	OMC
2	B	1384	G
2	B	1387	A
2	B	1388	U
2	B	1389	A
2	B	1390	A
2	B	1436	C
2	B	1437	C
2	B	1441	G
2	B	1442	A
2	B	1445	U
2	B	1449	OMC
2	B	1453	U
2	B	1458	A

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Mol	Chain	Res	Type
2	B	1459	C
2	B	1481	A
2	B	1483	G
2	B	1487	G
2	B	1491	OMU
2	B	1492	OMG
2	B	1493	U
2	B	1503	G
2	B	1505	C
2	B	1506	A
2	B	1511	A
2	B	1512	C
2	B	1524	U
2	B	1525	U
2	B	1541	A
2	B	1546	G
2	B	1548	U
2	B	1549	U
2	B	1550	U
2	B	1553	C
2	B	1560	U
2	B	1561	A
2	B	1564	U
2	B	1565	G
2	B	1568	A
2	B	1569	A
2	B	1570	U
2	B	1573	C
2	B	1574	G
2	B	1575	A
2	B	1578	A
2	B	1592	A
2	B	1593	A
2	B	1594	A
2	B	1595	A
2	B	1602	U
2	B	1603	U
2	B	1604	U
2	B	1605	U
2	B	1606	U
2	B	1612	A
2	B	1613	A

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Mol	Chain	Res	Type
2	B	1614	A
2	B	1622	U
2	B	1623	U
2	B	1624	U
2	B	1625	U
2	B	1626	U
2	B	1627	U
2	B	1628	U
2	B	1629	U
2	B	1630	U
2	B	1631	U
2	B	1632	U
2	B	1633	U
2	B	1642	A
2	B	1643	C
2	B	1644	U
2	B	1646	G
2	B	1647	G
2	B	1648	U
2	B	1649	A
2	B	1650	C
2	B	1651	G
2	B	1652	A
2	B	1653	A
2	B	1654	A
2	B	1655	A
2	B	1656	A
2	B	1657	A
2	B	1658	A
3	C	7	OMU
3	C	9	G
3	C	16	A
3	C	20	C
3	C	22	U
3	C	23	G
3	C	31	A
3	C	32	U
3	C	34	U
3	C	38	U
3	C	45	C
3	C	49	G
3	C	58	G

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Mol	Chain	Res	Type
3	C	59	A
3	C	60	U
3	C	62	A
3	C	63	G
3	C	70	C
3	C	75	OMG
3	C	79	A
3	C	96	A
3	C	98	C
3	C	99	U
3	C	105	OMC
3	C	106	G
3	C	110	A
3	C	112	G
3	C	116	C
3	C	117	A
3	C	118	OMU
3	C	125	A
3	C	141	C
3	C	142	C
3	C	157	U
3	C	158	U
3	C	162	C
3	C	163	A2M
3	C	168	C
3	C	169	G
4	D	7	G
4	D	8	A
4	D	13	A
4	D	14	C
4	D	25	G
4	D	27	A
4	D	32	A
4	D	33	U
4	D	42	A
4	D	48	G
4	D	49	A
4	D	54	A
4	D	62	A
4	D	63	C
4	D	64	A
4	D	71	G

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Mol	Chain	Res	Type
4	D	74	A
4	D	77	A
4	D	86	A
4	D	92	G
4	D	95	G
4	D	100	A
4	D	110	G
5	E	3	U
5	E	5	G
5	E	32	A
5	E	38	U
5	E	41	U
5	E	55	U
5	E	67	U
5	E	68	A
5	E	72	C
5	E	74	C
5	E	102	U
5	E	114	G
5	E	120	U
5	E	121	U
5	E	124	G
5	E	125	A
5	E	127	C
5	E	137	A
5	E	141	U
5	E	145	A
5	E	146	A
5	E	147	A
5	E	148	U
5	E	152	G
5	E	176	U
5	E	177	G
5	E	195	A
5	E	196	G
5	E	198	A
5	E	199	A
6	F	7	G
6	F	9	C
6	F	10	A
6	F	11	C
6	F	12	U

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Mol	Chain	Res	Type
6	F	13	U
6	F	14	C
6	F	16	C
6	F	50	C
6	F	52	A
6	F	53	G
6	F	54	U
6	F	56	C
6	F	59	U
6	F	63	A
6	F	64	U
6	F	65	U
6	F	67	A
6	F	68	C
6	F	69	A
6	F	70	A
7	G	24	A
7	G	27	G
7	G	29	G
7	G	30	A
7	G	36	G
7	G	58	C
7	G	61	C
7	G	70	OMG
7	G	82	U
7	G	93	G
7	G	98	G
7	G	102	G
7	G	103	U
7	G	110	A
7	G	116	U
7	G	117	C
7	G	119	C
7	G	123	G
7	G	124	U
7	G	155	G
7	G	164	A
7	G	165	A
7	G	166	G
7	G	167	A
7	G	169	C
7	G	170	A

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Mol	Chain	Res	Type
7	G	171	G
7	G	174	G
7	G	178	A
8	H	13	C
8	H	14	C
8	H	23	G
8	H	26	C
8	H	27	A
8	H	28	U
8	H	32	U
8	H	38	G
8	H	42	U
8	H	46	C
8	H	65	G
8	H	88	C
8	H	95	C
8	H	99	G
8	H	105	U
8	H	107	A
8	H	108	G
8	H	109	G
8	H	112	U
8	H	122	U

All (73) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	3	C
1	A	4	A
1	A	20	G
1	A	58	G
1	A	87	C
1	A	110	A
1	A	132	U
1	A	142	U
1	A	146	U
1	A	148	G
1	A	214	G
1	A	254	A
1	A	323	G
1	A	394	C
1	A	396	A

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Mol	Chain	Res	Type
1	A	412	G
1	A	419	A
1	A	442	A
1	A	445	G
1	A	451	G
1	A	599	C
1	A	766	C
1	A	1037	A
1	A	1075	OMG
1	A	1083	G
1	A	1326	A
1	A	1515	A
1	A	1599	G
1	A	1622	G
1	A	1722	A
1	A	1779	A
1	A	1797	U
1	A	1938	G
2	B	68	A
2	B	719	A
2	B	739	G
2	B	852	G
2	B	854	U
2	B	884	U
2	B	1107	7MG
2	B	1112	A
2	B	1138	7MG
2	B	1153	A
2	B	1186	U
2	B	1215	A
2	B	1254	C
2	B	1273	G
2	B	1444	G
2	B	1568	A
2	B	1642	A
2	B	1649	A
3	C	15	G
3	C	105	OMC
4	D	13	A
4	D	32	A
4	D	53	U
4	D	109	U

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Mol	Chain	Res	Type
5	E	67	U
5	E	113	C
5	E	126	A
5	E	147	A
6	F	10	A
6	F	12	U
6	F	13	U
6	F	53	G
6	F	62	U
6	F	63	A
6	F	67	A
7	G	123	G
7	G	170	A
8	H	26	C
8	H	41	A
8	H	111	C

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
2	OMU	B	1491	2	19,22,23	2.17	4 (21%)	25,31,34	2.21	6 (24%)
1	OMC	A	777	2,1	19,22,23	2.36	6 (31%)	25,31,34	0.74	0
1	OMC	A	343	1	19,22,23	2.30	5 (26%)	25,31,34	0.88	0
1	OMU	A	1497	1	19,22,23	2.35	5 (26%)	25,31,34	2.30	7 (28%)
1	A2M	A	1674	2,1,47	22,25,26	3.55	8 (36%)	30,36,39	2.34	12 (40%)
2	7MG	B	1138	2	23,26,27	2.38	8 (34%)	27,39,42	2.23	8 (29%)
2	OMC	B	1449	2	19,22,23	2.24	6 (31%)	25,31,34	0.86	0
1	A2M	A	778	1	22,25,26	3.44	8 (36%)	30,36,39	2.23	12 (40%)
2	A2M	B	728	2	22,25,26	3.51	8 (36%)	30,36,39	2.57	12 (40%)
1	OMC	A	1662	1	19,22,23	2.19	6 (31%)	25,31,34	0.70	0

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
1	OMG	A	958	1	23,26,27	1.57	5 (21%)	32,38,41	3.03	14 (43%)
1	OMG	A	972	1	23,26,27	1.61	4 (17%)	32,38,41	2.95	15 (46%)
3	A2M	C	163	1,3	22,25,26	3.51	7 (31%)	30,36,39	2.24	9 (30%)
2	OMG	B	1361	2	23,26,27	1.58	4 (17%)	32,38,41	3.07	10 (31%)
1	A2M	A	423	1	22,25,26	3.42	7 (31%)	30,36,39	2.39	12 (40%)
2	A2M	B	627	2	22,25,26	3.36	8 (36%)	30,36,39	2.66	13 (43%)
2	7MG	B	1107	2	23,26,27	2.30	8 (34%)	27,39,42	2.24	9 (33%)
2	OMC	B	683	2	19,22,23	2.23	5 (26%)	25,31,34	0.84	0
2	OMC	B	21	1,2	19,22,23	2.32	5 (26%)	25,31,34	0.84	0
2	OMU	B	767	2	19,22,23	2.29	4 (21%)	25,31,34	1.87	4 (16%)
2	A2M	B	50	2,47	22,25,26	3.47	8 (36%)	30,36,39	2.42	11 (36%)
2	OMG	B	1210	2	23,26,27	1.59	5 (21%)	32,38,41	3.11	15 (46%)
1	OMC	A	919	1	19,22,23	2.41	5 (26%)	25,31,34	1.28	3 (12%)
2	A2M	B	1516	2,47	22,25,26	3.56	8 (36%)	30,36,39	2.30	9 (30%)
3	OMU	C	7	1,3	19,22,23	2.46	6 (31%)	25,31,34	1.93	4 (16%)
3	A2M	C	43	3	22,25,26	3.57	8 (36%)	30,36,39	2.32	10 (33%)
2	OMC	B	543	2	19,22,23	2.22	5 (26%)	25,31,34	0.71	0
2	A2M	B	691	2	22,25,26	3.53	8 (36%)	30,36,39	2.74	14 (46%)
1	OMU	A	963	1	19,22,23	2.40	5 (26%)	25,31,34	1.97	5 (20%)
1	OMG	A	1316	2,1	23,26,27	1.66	5 (21%)	32,38,41	3.12	14 (43%)
1	A2M	A	1071	1	22,25,26	3.65	8 (36%)	30,36,39	2.35	10 (33%)
1	OMG	A	1659	1	23,26,27	1.54	5 (21%)	32,38,41	3.01	11 (34%)
2	OMG	B	71	2	23,26,27	1.69	5 (21%)	32,38,41	3.07	15 (46%)
1	5MC	A	1525	1	19,22,23	2.55	6 (31%)	26,32,35	1.15	2 (7%)
2	OMG	B	755	2	23,26,27	1.62	5 (21%)	32,38,41	3.26	12 (37%)
1	7MG	A	1045	1	23,26,27	2.11	7 (30%)	27,39,42	2.06	8 (29%)
3	OMG	C	166	1,3	23,26,27	1.61	5 (21%)	32,38,41	3.13	14 (43%)
1	A2M	A	794	1	22,25,26	3.48	9 (40%)	30,36,39	2.83	16 (53%)
1	OMG	A	927	1	23,26,27	1.64	5 (21%)	32,38,41	3.14	11 (34%)
3	7MG	C	42	3	23,26,27	2.05	8 (34%)	27,39,42	2.31	9 (33%)
2	OMC	B	1529	2	19,22,23	2.19	5 (26%)	25,31,34	0.78	0
1	A2M	A	775	2,1	22,25,26	3.56	7 (31%)	30,36,39	2.49	12 (40%)
3	OMU	C	118	3	19,22,23	2.32	4 (21%)	25,31,34	2.04	5 (20%)
2	OMG	B	1363	2	23,26,27	1.69	5 (21%)	32,38,41	3.08	13 (40%)
3	OMG	C	75	3	23,26,27	1.63	5 (21%)	32,38,41	3.09	11 (34%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	OMG	B	1492	2	23,26,27	1.66	5 (21%)	32,38,41	3.21	9 (28%)
2	OMC	B	1380	2	19,22,23	2.29	5 (26%)	25,31,34	0.86	0
1	A2M	A	974	1	22,25,26	3.42	7 (31%)	30,36,39	2.50	12 (40%)
1	7MG	A	931	1	23,26,27	1.95	8 (34%)	27,39,42	2.12	10 (37%)
1	OMG	A	1710	1	23,26,27	1.67	4 (17%)	32,38,41	3.29	9 (28%)
2	OMC	B	77	2	19,22,23	2.39	6 (31%)	25,31,34	0.83	0
1	7MG	A	1725	2,1	23,26,27	2.06	8 (34%)	27,39,42	2.14	9 (33%)
1	OMU	A	1227	1	19,22,23	2.31	5 (26%)	25,31,34	1.93	4 (16%)
1	OMG	A	1675	2,1	23,26,27	1.54	5 (21%)	32,38,41	3.06	13 (40%)
1	OMU	A	1127	2,1	19,22,23	2.38	5 (26%)	25,31,34	1.79	6 (24%)
2	OMG	B	1169	2	23,26,27	1.59	5 (21%)	32,38,41	3.06	12 (37%)
1	OMC	A	1053	1	19,22,23	2.15	6 (31%)	25,31,34	1.60	5 (20%)
1	A2M	A	1804	1	22,25,26	3.43	9 (40%)	30,36,39	2.42	12 (40%)
1	OMG	A	1075	1	23,26,27	1.66	4 (17%)	32,38,41	3.62	10 (31%)
2	OMU	B	73	2	19,22,23	2.31	5 (26%)	25,31,34	1.81	5 (20%)
7	OMG	G	70	7	23,26,27	1.53	5 (21%)	32,38,41	3.01	14 (43%)
2	OMG	B	1385	2	23,26,27	1.63	6 (26%)	32,38,41	3.01	11 (34%)
1	5MC	A	1073	1	19,22,23	2.55	7 (36%)	26,32,35	1.28	3 (11%)
2	OMG	B	634	2	23,26,27	1.57	5 (21%)	32,38,41	3.18	12 (37%)
2	A2M	B	482	2	22,25,26	3.48	9 (40%)	30,36,39	2.37	11 (36%)
1	OMC	A	792	1	19,22,23	2.29	5 (26%)	25,31,34	0.81	1 (4%)
2	5MC	B	624	2	19,22,23	2.51	5 (26%)	26,32,35	1.30	4 (15%)
3	OMC	C	105	3,47	19,22,23	2.27	7 (36%)	25,31,34	1.13	1 (4%)
1	A2M	A	1043	1	22,25,26	3.54	8 (36%)	30,36,39	2.51	9 (30%)
2	7MG	B	657	2,47	23,26,27	2.11	8 (34%)	27,39,42	2.30	10 (37%)
2	OMG	B	564	2	23,26,27	1.68	4 (17%)	32,38,41	3.19	10 (31%)
2	OMU	B	1345	2	19,22,23	2.33	4 (21%)	25,31,34	1.93	5 (20%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMU	B	1491	2	-	0/9/27/28	0/2/2/2
1	OMC	A	777	2,1	-	2/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	OMC	A	343	1	-	0/9/27/28	0/2/2/2
1	OMU	A	1497	1	-	2/9/27/28	0/2/2/2
1	A2M	A	1674	2,1,47	-	0/9/27/28	0/3/3/3
2	7MG	B	1138	2	-	2/7/37/38	0/3/3/3
2	OMC	B	1449	2	-	0/9/27/28	0/2/2/2
1	A2M	A	778	1	-	3/9/27/28	0/3/3/3
2	A2M	B	728	2	-	1/9/27/28	0/3/3/3
1	OMC	A	1662	1	-	1/9/27/28	0/2/2/2
1	OMG	A	958	1	-	0/9/27/28	0/3/3/3
1	OMG	A	972	1	-	0/9/27/28	0/3/3/3
3	A2M	C	163	1,3	-	2/9/27/28	0/3/3/3
2	OMG	B	1361	2	-	2/9/27/28	0/3/3/3
1	A2M	A	423	1	-	2/9/27/28	0/3/3/3
2	A2M	B	627	2	-	3/9/27/28	0/3/3/3
2	7MG	B	1107	2	-	0/7/37/38	0/3/3/3
2	OMC	B	683	2	-	0/9/27/28	0/2/2/2
2	OMC	B	21	1,2	-	0/9/27/28	0/2/2/2
2	OMU	B	767	2	-	0/9/27/28	0/2/2/2
2	A2M	B	50	2,47	-	0/9/27/28	0/3/3/3
2	OMG	B	1210	2	-	2/9/27/28	0/3/3/3
1	OMC	A	919	1	-	5/9/27/28	0/2/2/2
2	A2M	B	1516	2,47	-	1/9/27/28	0/3/3/3
3	OMU	C	7	1,3	-	2/9/27/28	0/2/2/2
3	A2M	C	43	3	-	0/9/27/28	0/3/3/3
2	OMC	B	543	2	-	6/9/27/28	0/2/2/2
2	A2M	B	691	2	-	3/9/27/28	0/3/3/3
1	OMU	A	963	1	-	0/9/27/28	0/2/2/2
1	OMG	A	1316	2,1	-	0/9/27/28	0/3/3/3
1	A2M	A	1071	1	-	1/9/27/28	0/3/3/3
1	OMG	A	1659	1	-	0/9/27/28	0/3/3/3
2	OMG	B	71	2	-	0/9/27/28	0/3/3/3
1	5MC	A	1525	1	-	2/7/25/26	0/2/2/2
2	OMG	B	755	2	-	3/9/27/28	0/3/3/3
1	7MG	A	1045	1	-	0/7/37/38	0/3/3/3
3	OMG	C	166	1,3	-	0/9/27/28	0/3/3/3
1	A2M	A	794	1	-	2/9/27/28	0/3/3/3
1	OMG	A	927	1	-	0/9/27/28	0/3/3/3
3	7MG	C	42	3	-	0/7/37/38	0/3/3/3
2	OMC	B	1529	2	-	0/9/27/28	0/2/2/2

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	A2M	A	775	2,1	-	0/9/27/28	0/3/3/3
3	OMU	C	118	3	-	3/9/27/28	0/2/2/2
2	OMG	B	1363	2	-	0/9/27/28	0/3/3/3
3	OMG	C	75	3	-	2/9/27/28	0/3/3/3
2	OMG	B	1492	2	-	2/9/27/28	0/3/3/3
2	OMC	B	1380	2	-	3/9/27/28	0/2/2/2
1	A2M	A	974	1	-	0/9/27/28	0/3/3/3
1	7MG	A	931	1	-	0/7/37/38	0/3/3/3
1	OMG	A	1710	1	-	0/9/27/28	0/3/3/3
2	OMC	B	77	2	-	2/9/27/28	0/2/2/2
1	7MG	A	1725	2,1	-	2/7/37/38	0/3/3/3
1	OMU	A	1227	1	-	2/9/27/28	0/2/2/2
1	OMG	A	1675	2,1	-	1/9/27/28	0/3/3/3
1	OMU	A	1127	2,1	-	3/9/27/28	0/2/2/2
2	OMG	B	1169	2	-	2/9/27/28	0/3/3/3
1	OMC	A	1053	1	-	3/9/27/28	0/2/2/2
1	A2M	A	1804	1	-	3/9/27/28	0/3/3/3
1	OMG	A	1075	1	-	1/9/27/28	0/3/3/3
2	OMU	B	73	2	-	3/9/27/28	0/2/2/2
7	OMG	G	70	7	-	2/9/27/28	0/3/3/3
2	OMG	B	1385	2	-	0/9/27/28	0/3/3/3
1	5MC	A	1073	1	-	2/7/25/26	0/2/2/2
2	OMG	B	634	2	-	1/9/27/28	0/3/3/3
2	A2M	B	482	2	-	0/9/27/28	0/3/3/3
1	OMC	A	792	1	-	0/9/27/28	0/2/2/2
2	5MC	B	624	2	-	2/7/25/26	0/2/2/2
3	OMC	C	105	3,47	-	3/9/27/28	0/2/2/2
1	A2M	A	1043	1	-	0/9/27/28	0/3/3/3
2	7MG	B	657	2,47	-	2/7/37/38	0/3/3/3
2	OMG	B	564	2	-	2/9/27/28	0/3/3/3
2	OMU	B	1345	2	-	0/9/27/28	0/2/2/2

All (433) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1071	A2M	C2'-C1'	-10.45	1.27	1.53
3	C	43	A2M	C2'-C1'	-10.25	1.27	1.53
1	A	1043	A2M	C2'-C1'	-10.17	1.28	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	163	A2M	C2'-C1'	-10.16	1.28	1.53
2	B	1516	A2M	C2'-C1'	-10.14	1.28	1.53
1	A	1674	A2M	C2'-C1'	-10.08	1.28	1.53
1	A	794	A2M	C2'-C1'	-10.06	1.28	1.53
1	A	775	A2M	C2'-C1'	-10.06	1.28	1.53
2	B	728	A2M	C2'-C1'	-9.97	1.28	1.53
2	B	691	A2M	C2'-C1'	-9.89	1.28	1.53
2	B	50	A2M	C2'-C1'	-9.82	1.28	1.53
2	B	482	A2M	C2'-C1'	-9.76	1.29	1.53
1	A	778	A2M	C2'-C1'	-9.73	1.29	1.53
2	B	627	A2M	C2'-C1'	-9.65	1.29	1.53
1	A	974	A2M	C2'-C1'	-9.46	1.29	1.53
1	A	423	A2M	C2'-C1'	-9.42	1.29	1.53
1	A	1804	A2M	C2'-C1'	-9.41	1.29	1.53
1	A	794	A2M	O4'-C1'	8.46	1.61	1.42
2	B	691	A2M	O4'-C1'	8.40	1.61	1.42
2	B	1516	A2M	O4'-C1'	8.25	1.61	1.42
1	A	1804	A2M	O4'-C1'	8.18	1.60	1.42
1	A	775	A2M	O4'-C1'	8.11	1.60	1.42
1	A	423	A2M	O4'-C1'	8.07	1.60	1.42
1	A	1071	A2M	O4'-C1'	8.03	1.60	1.42
1	A	1674	A2M	O4'-C1'	7.96	1.60	1.42
3	C	43	A2M	O4'-C1'	7.91	1.60	1.42
1	A	778	A2M	O4'-C1'	7.88	1.60	1.42
2	B	50	A2M	O4'-C1'	7.87	1.60	1.42
1	A	1043	A2M	O4'-C1'	7.86	1.60	1.42
2	B	482	A2M	O4'-C1'	7.76	1.59	1.42
3	C	163	A2M	O4'-C1'	7.76	1.59	1.42
2	B	627	A2M	O4'-C1'	7.73	1.59	1.42
2	B	728	A2M	O4'-C1'	7.69	1.59	1.42
1	A	974	A2M	O4'-C1'	7.65	1.59	1.42
1	A	1525	5MC	C6-C5	7.29	1.46	1.34
1	A	1073	5MC	C6-C5	7.08	1.46	1.34
2	B	624	5MC	C6-C5	6.92	1.45	1.34
1	A	1071	A2M	O4'-C4'	-6.91	1.29	1.45
2	B	728	A2M	O4'-C4'	-6.88	1.29	1.45
1	A	1674	A2M	O4'-C4'	-6.78	1.29	1.45
1	A	974	A2M	O4'-C4'	-6.70	1.30	1.45
1	A	775	A2M	O4'-C4'	-6.69	1.30	1.45
2	B	482	A2M	O4'-C4'	-6.55	1.30	1.45
3	C	163	A2M	O4'-C4'	-6.52	1.30	1.45
3	C	43	A2M	O4'-C4'	-6.50	1.30	1.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1043	A2M	O4'-C4'	-6.48	1.30	1.45
2	B	50	A2M	O4'-C4'	-6.42	1.30	1.45
3	C	7	OMU	C2-N3	6.38	1.49	1.38
2	B	691	A2M	O4'-C4'	-6.38	1.30	1.45
1	A	963	OMU	C2-N3	6.38	1.49	1.38
2	B	1345	OMU	C2-N3	6.34	1.49	1.38
2	B	1516	A2M	O4'-C4'	-6.32	1.30	1.45
1	A	778	A2M	O4'-C4'	-6.31	1.31	1.45
1	A	1804	A2M	O4'-C4'	-6.27	1.31	1.45
3	C	118	OMU	C2-N3	6.21	1.48	1.38
2	B	627	A2M	O4'-C4'	-6.18	1.31	1.45
1	A	423	A2M	O4'-C4'	-6.14	1.31	1.45
1	A	1227	OMU	C2-N3	6.14	1.48	1.38
2	B	73	OMU	C2-N3	6.13	1.48	1.38
1	A	794	A2M	O4'-C4'	-6.11	1.31	1.45
1	A	1127	OMU	C2-N3	6.06	1.48	1.38
2	B	767	OMU	C2-N3	5.93	1.48	1.38
1	A	1497	OMU	C2-N3	5.80	1.48	1.38
1	A	963	OMU	O4-C4	-5.43	1.13	1.24
2	B	624	5MC	C4-N3	5.31	1.42	1.34
2	B	767	OMU	O4-C4	-5.28	1.14	1.24
2	B	1491	OMU	C2-N3	5.27	1.47	1.38
2	B	1345	OMU	O4-C4	-5.26	1.14	1.24
3	C	118	OMU	O4-C4	-5.14	1.14	1.24
2	B	73	OMU	O4-C4	-5.12	1.14	1.24
3	C	7	OMU	O4-C4	-5.09	1.14	1.24
2	B	1491	OMU	O4-C4	-5.02	1.14	1.24
2	B	77	OMC	C4-N4	5.02	1.46	1.33
1	A	343	OMC	C4-N4	5.01	1.46	1.33
1	A	1497	OMU	O4-C4	-5.00	1.14	1.24
1	A	777	OMC	C4-N4	4.98	1.46	1.33
2	B	543	OMC	C4-N4	4.97	1.45	1.33
1	A	1227	OMU	O4-C4	-4.96	1.14	1.24
1	A	919	OMC	C4-N4	4.96	1.45	1.33
3	C	105	OMC	C6-C5	4.94	1.46	1.35
2	B	1380	OMC	C4-N4	4.93	1.45	1.33
2	B	1138	7MG	C5-N7	4.92	1.41	1.35
3	C	105	OMC	C4-N4	4.88	1.45	1.33
1	A	343	OMC	C2-N3	4.88	1.46	1.36
2	B	77	OMC	C6-C5	4.88	1.46	1.35
1	A	1053	OMC	C4-N4	4.84	1.45	1.33
1	A	792	OMC	C4-N4	4.81	1.45	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1662	OMC	C4-N4	4.81	1.45	1.33
2	B	1138	7MG	C4-N3	4.81	1.45	1.34
1	A	1127	OMU	O4-C4	-4.80	1.15	1.24
2	B	1529	OMC	C4-N4	4.78	1.45	1.33
2	B	21	OMC	C2-N3	4.78	1.45	1.36
1	A	1497	OMU	C6-C5	4.77	1.46	1.35
3	C	7	OMU	C6-C5	4.77	1.46	1.35
2	B	1449	OMC	C4-N4	4.76	1.45	1.33
1	A	777	OMC	C2-N3	4.76	1.45	1.36
2	B	21	OMC	C4-N4	4.76	1.45	1.33
2	B	683	OMC	C4-N4	4.73	1.45	1.33
2	B	624	5MC	C2-N3	4.72	1.45	1.36
1	A	423	A2M	C6-N6	4.72	1.46	1.34
2	B	1107	7MG	C5-N7	4.71	1.41	1.35
1	A	919	OMC	C2-N3	4.70	1.45	1.36
2	B	77	OMC	C2-N3	4.69	1.45	1.36
1	A	919	OMC	C6-C5	4.68	1.45	1.35
2	B	1380	OMC	C6-C5	4.68	1.45	1.35
2	B	1380	OMC	C2-N3	4.66	1.45	1.36
2	B	564	OMG	C4-N3	4.64	1.44	1.34
2	B	1449	OMC	C6-C5	4.64	1.45	1.35
1	A	1525	5MC	C4-N3	4.63	1.41	1.34
2	B	657	7MG	C4-N3	4.63	1.44	1.34
1	A	1073	5MC	C4-N3	4.61	1.41	1.34
2	B	683	OMC	C6-C5	4.57	1.45	1.35
2	B	1345	OMU	C6-C5	4.56	1.45	1.35
1	A	777	OMC	C6-C5	4.56	1.45	1.35
1	A	792	OMC	C2-N3	4.55	1.45	1.36
2	B	1107	7MG	C4-N3	4.54	1.44	1.34
2	B	683	OMC	C2-N3	4.54	1.45	1.36
2	B	543	OMC	C6-C5	4.53	1.45	1.35
2	B	71	OMG	C4-N3	4.53	1.44	1.34
1	A	1227	OMU	C6-C5	4.52	1.45	1.35
1	A	1804	A2M	C6-N6	4.51	1.45	1.34
2	B	1529	OMC	C6-C5	4.51	1.45	1.35
2	B	1363	OMG	C4-N3	4.51	1.44	1.34
2	B	1138	7MG	C2-N3	4.51	1.44	1.33
2	B	1107	7MG	C8-N9	4.49	1.48	1.45
1	A	1045	7MG	C5-N7	4.48	1.41	1.35
2	B	1492	OMG	C4-N3	4.48	1.44	1.34
2	B	1516	A2M	C6-N6	4.47	1.45	1.34
1	A	1043	A2M	C6-N6	4.46	1.45	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1127	OMU	C6-C5	4.46	1.45	1.35
1	A	792	OMC	C6-C5	4.46	1.45	1.35
1	A	1073	5MC	C2-N3	4.45	1.45	1.36
2	B	627	A2M	C6-N6	4.45	1.45	1.34
2	B	543	OMC	C2-N3	4.45	1.45	1.36
1	A	974	A2M	C6-N6	4.44	1.45	1.34
1	A	343	OMC	C6-C5	4.44	1.45	1.35
1	A	794	A2M	C6-N6	4.44	1.45	1.34
1	A	963	OMU	C6-C5	4.44	1.45	1.35
1	A	775	A2M	C6-N6	4.43	1.45	1.34
2	B	657	7MG	C5-N7	4.43	1.41	1.35
2	B	1107	7MG	C2-N3	4.40	1.43	1.33
1	A	1525	5MC	C2-N3	4.40	1.45	1.36
2	B	767	OMU	C6-C5	4.40	1.45	1.35
2	B	1491	OMU	C6-C5	4.40	1.45	1.35
2	B	21	OMC	C6-C5	4.39	1.45	1.35
1	A	1075	OMG	C4-N3	4.37	1.44	1.34
1	A	1725	7MG	C4-N3	4.37	1.44	1.34
1	A	1045	7MG	C4-N3	4.36	1.44	1.34
1	A	1662	OMC	C6-C5	4.36	1.45	1.35
3	C	118	OMU	C6-C5	4.35	1.45	1.35
1	A	1710	OMG	C4-N3	4.35	1.44	1.34
1	A	972	OMG	C4-N3	4.34	1.44	1.34
2	B	1361	OMG	C4-N3	4.33	1.44	1.34
2	B	728	A2M	C6-N6	4.32	1.45	1.34
3	C	42	7MG	C4-N3	4.32	1.44	1.34
1	A	931	7MG	C4-N3	4.31	1.44	1.34
2	B	755	OMG	C4-N3	4.31	1.44	1.34
2	B	73	OMU	C6-C5	4.29	1.45	1.35
2	B	50	A2M	C6-N6	4.29	1.45	1.34
3	C	163	A2M	C6-N6	4.27	1.45	1.34
3	C	42	7MG	C5-N7	4.26	1.41	1.35
2	B	1138	7MG	C8-N9	4.24	1.48	1.45
2	B	691	A2M	C6-N6	4.23	1.45	1.34
1	A	1316	OMG	C4-N3	4.23	1.43	1.34
2	B	1529	OMC	C2-N3	4.20	1.44	1.36
3	C	75	OMG	C4-N3	4.20	1.43	1.34
2	B	657	7MG	C2-N3	4.19	1.43	1.33
2	B	634	OMG	C4-N3	4.19	1.43	1.34
2	B	1169	OMG	C4-N3	4.18	1.43	1.34
1	A	927	OMG	C4-N3	4.18	1.43	1.34
3	C	43	A2M	C6-N6	4.15	1.44	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1662	OMC	C2-N3	4.15	1.44	1.36
1	A	778	A2M	C6-N6	4.14	1.44	1.34
3	C	42	7MG	C2-N3	4.12	1.43	1.33
1	A	1071	A2M	C6-N6	4.10	1.44	1.34
2	B	482	A2M	C6-N6	4.09	1.44	1.34
3	C	166	OMG	C4-N3	4.08	1.43	1.34
2	B	1385	OMG	C4-N3	4.08	1.43	1.34
1	A	1725	7MG	C2-N3	4.07	1.43	1.33
1	A	1045	7MG	C2-N3	4.07	1.43	1.33
2	B	1449	OMC	C2-N3	4.06	1.44	1.36
1	A	919	OMC	C2-N1	4.05	1.48	1.40
1	A	777	OMC	C4-N3	4.05	1.42	1.34
2	B	1210	OMG	C4-N3	4.04	1.43	1.34
1	A	1053	OMC	C2-N3	4.03	1.44	1.36
1	A	931	7MG	C2-N3	4.00	1.42	1.33
1	A	958	OMG	C4-N3	3.99	1.43	1.34
3	C	105	OMC	C2-N3	3.98	1.44	1.36
1	A	1071	A2M	O3'-C3'	-3.96	1.33	1.43
1	A	1053	OMC	C2-N1	3.95	1.48	1.40
1	A	1674	A2M	C6-N6	3.93	1.44	1.34
2	B	77	OMC	C4-N3	3.88	1.42	1.34
2	B	21	OMC	C4-N3	3.87	1.42	1.34
1	A	775	A2M	O3'-C3'	-3.85	1.33	1.43
1	A	343	OMC	C4-N3	3.84	1.42	1.34
7	G	70	OMG	C4-N3	3.79	1.42	1.34
1	A	1659	OMG	C4-N3	3.78	1.42	1.34
2	B	1516	A2M	O3'-C3'	-3.78	1.33	1.43
2	B	1380	OMC	C4-N3	3.77	1.42	1.34
1	A	919	OMC	C4-N3	3.77	1.42	1.34
1	A	1043	A2M	O3'-C3'	-3.76	1.33	1.43
1	A	1053	OMC	C6-C5	3.76	1.43	1.35
1	A	1675	OMG	C4-N3	3.73	1.42	1.34
3	C	163	A2M	O3'-C3'	-3.70	1.33	1.43
1	A	1725	7MG	C5-N7	3.69	1.40	1.35
3	C	43	A2M	O3'-C3'	-3.69	1.33	1.43
3	C	75	OMG	C2-N2	3.68	1.42	1.34
2	B	1449	OMC	C4-N3	3.65	1.41	1.34
1	A	1725	7MG	C8-N9	3.64	1.48	1.45
1	A	1497	OMU	C2-N1	3.64	1.44	1.38
1	A	927	OMG	C2-N2	3.63	1.42	1.34
1	A	1662	OMC	C4-N3	3.60	1.41	1.34
1	A	792	OMC	C2-N1	3.60	1.47	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1363	OMG	C2-N2	3.59	1.42	1.34
1	A	792	OMC	C4-N3	3.57	1.41	1.34
3	C	105	OMC	C4-N3	3.56	1.41	1.34
1	A	931	7MG	C5-N7	3.54	1.40	1.35
1	A	1710	OMG	C2-N2	3.53	1.42	1.34
2	B	728	A2M	O3'-C3'	-3.52	1.34	1.43
2	B	564	OMG	C2-N3	3.49	1.41	1.33
2	B	564	OMG	C2-N2	3.48	1.42	1.34
2	B	1492	OMG	C2-N2	3.47	1.42	1.34
2	B	21	OMC	C2-N1	3.46	1.47	1.40
1	A	1710	OMG	C2-N3	3.46	1.41	1.33
2	B	1138	7MG	C2-N2	3.46	1.42	1.34
2	B	1529	OMC	C4-N3	3.44	1.41	1.34
1	A	423	A2M	O3'-C3'	-3.44	1.34	1.43
2	B	482	A2M	O3'-C3'	-3.43	1.34	1.43
1	A	1127	OMU	C2-N1	3.42	1.43	1.38
2	B	1449	OMC	C2-N1	3.40	1.47	1.40
1	A	1674	A2M	O3'-C3'	-3.39	1.34	1.43
2	B	77	OMC	C2-N1	3.39	1.47	1.40
2	B	543	OMC	C4-N3	3.39	1.41	1.34
2	B	1361	OMG	C2-N2	3.39	1.42	1.34
2	B	1385	OMG	C2-N2	3.37	1.42	1.34
1	A	1075	OMG	C2-N2	3.36	1.42	1.34
1	A	1075	OMG	C2-N3	3.35	1.41	1.33
1	A	972	OMG	C2-N2	3.34	1.42	1.34
2	B	1169	OMG	C2-N2	3.33	1.42	1.34
1	A	1073	5MC	C5-C4	3.32	1.46	1.44
1	A	1316	OMG	C2-N2	3.32	1.42	1.34
2	B	1363	OMG	C2-N3	3.32	1.41	1.33
1	A	1675	OMG	C2-N2	3.30	1.41	1.34
2	B	657	7MG	C2-N2	3.29	1.41	1.34
2	B	755	OMG	C2-N2	3.28	1.41	1.34
1	A	778	A2M	O3'-C3'	-3.26	1.34	1.43
2	B	683	OMC	C4-N3	3.25	1.41	1.34
3	C	7	OMU	C2-N1	3.25	1.43	1.38
2	B	1107	7MG	C2-N2	3.24	1.41	1.34
2	B	1492	OMG	C2-N3	3.24	1.41	1.33
1	A	1659	OMG	C2-N2	3.23	1.41	1.34
2	B	71	OMG	C2-N2	3.22	1.41	1.34
1	A	974	A2M	O3'-C3'	-3.21	1.35	1.43
3	C	166	OMG	C2-N2	3.21	1.41	1.34
2	B	634	OMG	C2-N2	3.19	1.41	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	50	A2M	O3'-C3'	-3.17	1.35	1.43
2	B	1138	7MG	C2-N1	3.15	1.45	1.37
7	G	70	OMG	C2-N2	3.14	1.41	1.34
1	A	1045	7MG	C2-N1	3.14	1.45	1.37
1	A	1804	A2M	O2'-C2'	3.13	1.50	1.42
1	A	958	OMG	C2-N2	3.11	1.41	1.34
1	A	1045	7MG	C8-N9	3.10	1.47	1.45
2	B	71	OMG	C2-N3	3.09	1.40	1.33
2	B	683	OMC	C2-N1	3.09	1.46	1.40
3	C	75	OMG	C2-N3	3.08	1.40	1.33
1	A	1316	OMG	C2-N3	3.08	1.40	1.33
1	A	1071	A2M	C5-C4	-3.01	1.33	1.39
1	A	1045	7MG	C2-N2	3.01	1.41	1.34
1	A	931	7MG	C2-N2	2.97	1.41	1.34
1	A	927	OMG	C2-N3	2.96	1.40	1.33
2	B	657	7MG	C2-N1	2.95	1.44	1.37
1	A	777	OMC	C2-N1	2.94	1.46	1.40
2	B	1210	OMG	C2-N2	2.94	1.41	1.34
1	A	963	OMU	C2-N1	2.93	1.43	1.38
1	A	1662	OMC	C2-N1	2.92	1.46	1.40
3	C	166	OMG	C2-N3	2.91	1.40	1.33
1	A	1725	7MG	C2-N1	2.91	1.44	1.37
2	B	1361	OMG	C2-N3	2.90	1.40	1.33
2	B	1107	7MG	C2-N1	2.90	1.44	1.37
2	B	691	A2M	C5-N7	-2.89	1.33	1.39
3	C	42	7MG	C2-N2	2.88	1.40	1.34
2	B	627	A2M	O3'-C3'	-2.87	1.35	1.43
2	B	1529	OMC	C2-N1	2.87	1.46	1.40
2	B	767	OMU	C2-N1	2.87	1.43	1.38
1	A	931	7MG	C8-N9	2.86	1.47	1.45
1	A	343	OMC	C2-N1	2.85	1.46	1.40
2	B	634	OMG	C2-N3	2.84	1.40	1.33
3	C	105	OMC	C2-N1	2.84	1.46	1.40
2	B	755	OMG	C2-N3	2.84	1.40	1.33
2	B	1380	OMC	C2-N1	2.84	1.46	1.40
3	C	118	OMU	C2-N1	2.83	1.42	1.38
2	B	691	A2M	O3'-C3'	-2.82	1.36	1.43
2	B	543	OMC	C2-N1	2.82	1.46	1.40
2	B	1107	7MG	C5-C6	2.82	1.50	1.43
1	A	423	A2M	O2'-C2'	2.80	1.49	1.42
2	B	728	A2M	O2'-C2'	2.77	1.49	1.42
1	A	1804	A2M	O3'-C3'	-2.74	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1725	7MG	C2-N2	2.74	1.40	1.34
3	C	42	7MG	C2-N1	2.74	1.44	1.37
2	B	50	A2M	C5-N7	-2.73	1.34	1.39
1	A	1045	7MG	C5-C6	2.73	1.50	1.43
1	A	1674	A2M	C5-N7	-2.73	1.34	1.39
1	A	1675	OMG	C2-N3	2.72	1.39	1.33
2	B	624	5MC	C2-N1	2.72	1.45	1.40
2	B	1138	7MG	C5-C6	2.71	1.50	1.43
3	C	42	7MG	C8-N9	2.71	1.47	1.45
2	B	50	A2M	O2'-C2'	2.70	1.49	1.42
2	B	1385	OMG	C2-N3	2.68	1.39	1.33
1	A	1043	A2M	C5-C4	-2.67	1.34	1.39
1	A	1659	OMG	C4-N9	-2.66	1.31	1.38
1	A	974	A2M	O2'-C2'	2.65	1.49	1.42
3	C	163	A2M	O2'-C2'	2.65	1.49	1.42
1	A	1674	A2M	O2'-C2'	2.65	1.49	1.42
1	A	1073	5MC	C2-N1	2.65	1.45	1.40
2	B	1210	OMG	C2-N3	2.64	1.39	1.33
1	A	1525	5MC	C5-C4	2.63	1.46	1.44
2	B	482	A2M	C5-N7	-2.63	1.34	1.39
1	A	1525	5MC	C4-N4	2.63	1.40	1.34
3	C	43	A2M	O2'-C2'	2.62	1.49	1.42
2	B	627	A2M	O2'-C2'	2.61	1.49	1.42
2	B	482	A2M	O2'-C2'	2.60	1.49	1.42
1	A	1075	OMG	C2-N1	2.60	1.43	1.37
1	A	1053	OMC	C4-N3	2.59	1.39	1.34
2	B	691	A2M	C5-C4	-2.59	1.34	1.39
1	A	794	A2M	O3'-C3'	-2.59	1.36	1.43
3	C	42	7MG	O6-C6	-2.58	1.18	1.23
2	B	1210	OMG	C4-N9	-2.58	1.31	1.38
2	B	1169	OMG	C2-N3	2.58	1.39	1.33
3	C	42	7MG	C5-C6	2.57	1.49	1.43
1	A	972	OMG	C2-N3	2.57	1.39	1.33
1	A	775	A2M	O2'-C2'	2.57	1.49	1.42
3	C	43	A2M	C5-C4	-2.56	1.34	1.39
1	A	974	A2M	C5-N7	-2.56	1.34	1.39
1	A	931	7MG	C2-N1	2.55	1.43	1.37
2	B	1516	A2M	O2'-C2'	2.54	1.48	1.42
1	A	1127	OMU	C4-N3	2.54	1.43	1.38
1	A	1043	A2M	O2'-C2'	2.53	1.48	1.42
2	B	1492	OMG	C2-N1	2.53	1.43	1.37
1	A	1675	OMG	C4-N9	-2.53	1.31	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	1227	OMU	C2-N1	2.53	1.42	1.38
2	B	564	OMG	C2-N1	2.52	1.43	1.37
1	A	1659	OMG	C2-N3	2.51	1.39	1.33
1	A	1043	A2M	C5-N7	-2.50	1.34	1.39
1	A	1674	A2M	C5-C4	-2.50	1.34	1.39
1	A	1073	5MC	C4-N4	2.50	1.40	1.34
2	B	73	OMU	C2-N1	2.49	1.42	1.38
1	A	1071	A2M	C5-N7	-2.46	1.34	1.39
1	A	1053	OMC	O2-C2	-2.46	1.19	1.23
1	A	778	A2M	C5-N7	-2.46	1.34	1.39
1	A	1071	A2M	O2'-C2'	2.46	1.48	1.42
1	A	1316	OMG	C2-N1	2.45	1.43	1.37
3	C	163	A2M	C5-N7	-2.45	1.34	1.39
2	B	482	A2M	C5-C4	-2.44	1.34	1.39
2	B	1385	OMG	C2-N1	2.42	1.43	1.37
1	A	931	7MG	O6-C6	-2.42	1.19	1.23
2	B	1516	A2M	C5-N7	-2.42	1.34	1.39
1	A	1710	OMG	C2-N1	2.42	1.43	1.37
2	B	73	OMU	C4-N3	2.41	1.42	1.38
1	A	958	OMG	C2-N3	2.40	1.39	1.33
2	B	624	5MC	C4-N4	2.40	1.40	1.34
3	C	43	A2M	C5-N7	-2.40	1.34	1.39
1	A	1725	7MG	C5-C6	2.40	1.49	1.43
1	A	1525	5MC	C2-N1	2.38	1.45	1.40
7	G	70	OMG	C4-N9	-2.38	1.32	1.38
3	C	7	OMU	C4-N3	2.38	1.42	1.38
2	B	691	A2M	O2'-C2'	2.38	1.48	1.42
1	A	1804	A2M	C5-N7	-2.37	1.34	1.39
3	C	75	OMG	C2-N1	2.36	1.43	1.37
2	B	657	7MG	O6-C6	-2.36	1.19	1.23
2	B	1361	OMG	C2-N1	2.35	1.43	1.37
1	A	1725	7MG	O6-C6	-2.35	1.19	1.23
2	B	657	7MG	C5-C6	2.35	1.49	1.43
2	B	1491	OMU	C2-N1	2.34	1.42	1.38
7	G	70	OMG	C2-N3	2.33	1.38	1.33
2	B	755	OMG	C4-N9	-2.33	1.32	1.38
1	A	972	OMG	C4-N9	-2.33	1.32	1.38
1	A	794	A2M	C5-C4	-2.31	1.35	1.39
1	A	794	A2M	C5-N7	-2.30	1.34	1.39
1	A	927	OMG	C2-N1	2.30	1.43	1.37
1	A	778	A2M	O2'-C2'	2.29	1.48	1.42
1	A	958	OMG	C4-N9	-2.29	1.32	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1363	OMG	C2-N1	2.29	1.43	1.37
2	B	728	A2M	C5-C4	-2.27	1.35	1.39
1	A	794	A2M	C8-N7	2.26	1.36	1.31
1	A	1227	OMU	C4-N3	2.26	1.42	1.38
2	B	71	OMG	C2-N1	2.25	1.43	1.37
1	A	1316	OMG	C4-N9	-2.25	1.32	1.38
2	B	1210	OMG	C2-N1	2.24	1.43	1.37
2	B	627	A2M	C5-N7	-2.22	1.35	1.39
1	A	794	A2M	O2'-C2'	2.22	1.48	1.42
2	B	728	A2M	C5-N7	-2.21	1.35	1.39
3	C	105	OMC	O2-C2	-2.21	1.19	1.23
1	A	778	A2M	C5-C4	-2.20	1.35	1.39
1	A	1659	OMG	C2-N1	2.19	1.42	1.37
2	B	634	OMG	C2-N1	2.19	1.42	1.37
1	A	1073	5MC	O2-C2	-2.19	1.19	1.23
2	B	71	OMG	C4-N9	-2.18	1.32	1.38
1	A	927	OMG	C4-N9	-2.18	1.32	1.38
2	B	50	A2M	C5-C4	-2.18	1.35	1.39
1	A	777	OMC	C6-N1	2.17	1.43	1.38
1	A	1662	OMC	O2-C2	-2.16	1.19	1.23
2	B	1385	OMG	C4-N9	-2.16	1.32	1.38
1	A	931	7MG	C5-C6	2.16	1.48	1.43
3	C	7	OMU	C6-N1	2.15	1.43	1.38
2	B	1169	OMG	C2-N1	2.13	1.42	1.37
2	B	1138	7MG	O6-C6	-2.13	1.19	1.23
2	B	755	OMG	C2-N1	2.12	1.42	1.37
3	C	75	OMG	C4-N9	-2.11	1.32	1.38
3	C	166	OMG	C2-N1	2.09	1.42	1.37
3	C	105	OMC	C6-N1	2.09	1.43	1.38
1	A	775	A2M	C5-N7	-2.09	1.35	1.39
2	B	1169	OMG	C4-N9	-2.08	1.32	1.38
1	A	958	OMG	C2-N1	2.08	1.42	1.37
1	A	423	A2M	C5-N7	-2.08	1.35	1.39
2	B	1492	OMG	C5-N7	-2.08	1.34	1.39
2	B	482	A2M	C8-N9	-2.08	1.34	1.37
3	C	166	OMG	C4-N9	-2.08	1.32	1.38
1	A	963	OMU	C4-N3	2.07	1.42	1.38
2	B	627	A2M	C5-C4	-2.06	1.35	1.39
2	B	657	7MG	C8-N9	2.06	1.47	1.45
2	B	1363	OMG	C4-N9	-2.03	1.32	1.38
2	B	1345	OMU	C4-N3	2.03	1.42	1.38
2	B	77	OMC	C6-N1	2.03	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1516	A2M	C5-C4	-2.03	1.35	1.39
1	A	1675	OMG	C2-N1	2.02	1.42	1.37
2	B	1449	OMC	C6-N1	2.02	1.42	1.38
2	B	1385	OMG	O6-C6	-2.02	1.19	1.23
1	A	1804	A2M	C5-C4	-2.01	1.35	1.39
7	G	70	OMG	C2-N1	2.01	1.42	1.37
2	B	1107	7MG	O6-C6	-2.01	1.19	1.23
2	B	634	OMG	C4-N9	-2.00	1.33	1.38
1	A	1497	OMU	C6-N1	2.00	1.42	1.38
1	A	1804	A2M	C8-N7	2.00	1.35	1.31

All (584) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1075	OMG	C1'-N9-C8	-13.01	89.78	126.73
1	A	1075	OMG	C1'-N9-C4	11.64	160.88	126.49
1	A	1710	OMG	C1'-N9-C8	-11.21	94.89	126.73
2	B	1492	OMG	C1'-N9-C8	-11.20	94.90	126.73
2	B	755	OMG	C1'-N9-C8	-11.01	95.45	126.73
2	B	564	OMG	C1'-N9-C8	-10.87	95.84	126.73
2	B	634	OMG	C1'-N9-C8	-10.86	95.89	126.73
2	B	1492	OMG	C1'-N9-C4	10.70	158.08	126.49
1	A	1710	OMG	C1'-N9-C4	10.64	157.91	126.49
1	A	927	OMG	C1'-N9-C8	-10.62	96.57	126.73
2	B	1361	OMG	C1'-N9-C8	-10.52	96.85	126.73
3	C	75	OMG	C1'-N9-C8	-10.35	97.31	126.73
3	C	166	OMG	C1'-N9-C8	-10.31	97.45	126.73
1	A	1675	OMG	C1'-N9-C8	-10.30	97.47	126.73
2	B	1169	OMG	C1'-N9-C8	-10.24	97.65	126.73
2	B	634	OMG	C1'-N9-C4	10.23	156.71	126.49
1	A	1316	OMG	C1'-N9-C8	-10.13	97.96	126.73
2	B	564	OMG	C1'-N9-C4	10.12	156.37	126.49
2	B	1210	OMG	C1'-N9-C8	-10.09	98.07	126.73
2	B	1385	OMG	C1'-N9-C8	-10.07	98.13	126.73
2	B	1363	OMG	C1'-N9-C8	-9.95	98.46	126.73
1	A	1659	OMG	C1'-N9-C8	-9.94	98.48	126.73
1	A	958	OMG	C1'-N9-C8	-9.80	98.90	126.73
2	B	755	OMG	C1'-N9-C4	9.65	155.00	126.49
1	A	927	OMG	C1'-N9-C4	9.65	155.00	126.49
2	B	1361	OMG	C1'-N9-C4	9.56	154.72	126.49
2	B	71	OMG	C1'-N9-C8	-9.56	99.58	126.73
3	C	75	OMG	C1'-N9-C4	9.51	154.58	126.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1169	OMG	C1'-N9-C4	9.50	154.56	126.49
3	C	166	OMG	C1'-N9-C4	9.49	154.52	126.49
7	G	70	OMG	C1'-N9-C8	-9.48	99.80	126.73
1	A	1675	OMG	C1'-N9-C4	9.38	154.20	126.49
1	A	972	OMG	C1'-N9-C8	-9.31	100.28	126.73
2	B	1385	OMG	C1'-N9-C4	9.31	153.99	126.49
1	A	1316	OMG	C1'-N9-C4	9.22	153.72	126.49
1	A	958	OMG	C1'-N9-C4	9.14	153.48	126.49
1	A	1659	OMG	C1'-N9-C4	8.97	152.98	126.49
2	B	1363	OMG	C1'-N9-C4	8.81	152.52	126.49
7	G	70	OMG	C1'-N9-C4	8.69	152.15	126.49
2	B	1210	OMG	C1'-N9-C4	8.66	152.05	126.49
2	B	71	OMG	C1'-N9-C4	8.53	151.69	126.49
1	A	972	OMG	C1'-N9-C4	8.14	150.52	126.49
2	B	1491	OMU	C4-N3-C2	-7.04	117.87	126.61
1	A	1043	A2M	N3-C2-N1	-6.54	118.68	128.58
2	B	691	A2M	N3-C2-N1	-6.33	119.00	128.58
3	C	118	OMU	C4-N3-C2	-6.31	118.78	126.61
2	B	1516	A2M	N3-C2-N1	-6.21	119.18	128.58
1	A	1227	OMU	C4-N3-C2	-6.13	119.00	126.61
1	A	1804	A2M	N3-C2-N1	-6.13	119.31	128.58
3	C	43	A2M	N3-C2-N1	-6.07	119.40	128.58
1	A	1497	OMU	C4-N3-C2	-6.05	119.11	126.61
2	B	482	A2M	N3-C2-N1	-6.04	119.43	128.58
3	C	7	OMU	C4-N3-C2	-5.95	119.23	126.61
1	A	794	A2M	N3-C2-N1	-5.94	119.59	128.58
1	A	963	OMU	C4-N3-C2	-5.85	119.35	126.61
1	A	1071	A2M	N3-C2-N1	-5.79	119.81	128.58
1	A	423	A2M	N3-C2-N1	-5.78	119.84	128.58
2	B	1345	OMU	C4-N3-C2	-5.75	119.47	126.61
1	A	1674	A2M	N3-C2-N1	-5.71	119.94	128.58
2	B	50	A2M	C5-C4-N3	-5.70	118.87	126.72
2	B	767	OMU	C4-N3-C2	-5.63	119.62	126.61
2	B	627	A2M	C5-C4-N3	-5.61	118.99	126.72
2	B	73	OMU	C4-N3-C2	-5.60	119.66	126.61
2	B	482	A2M	C5-C4-N3	-5.52	119.12	126.72
1	A	794	A2M	N6-C6-N1	-5.50	106.13	118.38
3	C	163	A2M	N3-C2-N1	-5.45	120.33	128.58
1	A	775	A2M	C5-C4-N3	-5.45	119.22	126.72
2	B	50	A2M	N3-C2-N1	-5.43	120.36	128.58
2	B	728	A2M	C5-C4-N3	-5.42	119.25	126.72
3	C	42	7MG	C5-C6-N1	5.38	120.41	110.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	775	A2M	N3-C2-N1	-5.38	120.44	128.58
2	B	657	7MG	C5-C6-N1	5.36	120.37	110.94
2	B	627	A2M	C2'-C1'-N9	-5.33	104.98	113.75
1	A	778	A2M	N3-C2-N1	-5.24	120.66	128.58
1	A	1043	A2M	N6-C6-N1	-5.22	106.75	118.38
2	B	627	A2M	N3-C2-N1	-5.21	120.70	128.58
2	B	1138	7MG	C5-C6-N1	5.15	120.00	110.94
1	A	1674	A2M	C5-C4-N3	-5.10	119.69	126.72
1	A	931	7MG	C5-C6-N1	5.07	119.87	110.94
1	A	974	A2M	C5-C4-N3	-5.05	119.76	126.72
2	B	691	A2M	N6-C6-N1	-5.04	107.14	118.38
2	B	1107	7MG	C5-C6-N1	5.04	119.81	110.94
1	A	1043	A2M	C5-C4-N3	-5.00	119.83	126.72
7	G	70	OMG	C2-N3-C4	4.98	120.88	112.30
1	A	974	A2M	N3-C2-N1	-4.97	121.05	128.58
2	B	728	A2M	N6-C6-N1	-4.90	107.45	118.38
2	B	482	A2M	N6-C6-N1	-4.90	107.46	118.38
2	B	728	A2M	N3-C2-N1	-4.89	121.18	128.58
1	A	423	A2M	C5-C4-N3	-4.88	120.00	126.72
1	A	778	A2M	C5-C4-N3	-4.86	120.03	126.72
3	C	42	7MG	C2-N3-C4	4.81	120.59	112.30
1	A	1071	A2M	N9-C8-N7	-4.81	107.11	113.94
1	A	1045	7MG	C5-C6-N1	4.79	119.37	110.94
2	B	657	7MG	C2-N3-C4	4.75	120.48	112.30
2	B	1138	7MG	C2-N3-C4	4.72	120.42	112.30
1	A	794	A2M	C5-C4-N3	-4.72	120.22	126.72
1	A	1497	OMU	N3-C2-N1	4.70	121.01	114.89
1	A	1804	A2M	N9-C8-N7	-4.67	107.31	113.94
2	B	1491	OMU	C5-C4-N3	4.66	121.33	114.80
2	B	1107	7MG	C2-N3-C4	4.63	120.27	112.30
2	B	71	OMG	C2-N3-C4	4.63	120.27	112.30
1	A	1710	OMG	C5-C4-N3	-4.62	121.03	128.39
2	B	627	A2M	N6-C6-N1	-4.61	108.10	118.38
1	A	1127	OMU	C4-N3-C2	-4.58	120.93	126.61
1	A	1725	7MG	C4-C5-N7	4.57	110.78	105.38
1	A	931	7MG	C2-N3-C4	4.56	120.16	112.30
2	B	1363	OMG	C2-N3-C4	4.56	120.15	112.30
3	C	163	A2M	C5-C4-N3	-4.55	120.45	126.72
1	A	927	OMG	C2-N3-C4	4.54	120.12	112.30
2	B	728	A2M	N9-C8-N7	-4.53	107.51	113.94
3	C	75	OMG	C2-N3-C4	4.52	120.09	112.30
1	A	1725	7MG	C5-C6-N1	4.52	118.90	110.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	564	OMG	C5-C4-N3	-4.49	121.24	128.39
1	A	423	A2M	N6-C6-N1	-4.49	108.37	118.38
2	B	691	A2M	C2'-C1'-N9	-4.49	106.37	113.75
3	C	43	A2M	N9-C8-N7	-4.47	107.59	113.94
2	B	657	7MG	C4-C5-N7	4.45	110.64	105.38
2	B	691	A2M	C5-C4-N3	-4.45	120.58	126.72
1	A	974	A2M	N6-C6-N1	-4.44	108.49	118.38
1	A	958	OMG	C2-N3-C4	4.43	119.93	112.30
3	C	163	A2M	N6-C6-N1	-4.43	108.52	118.38
1	A	1497	OMU	C1'-N1-C2	4.42	125.53	117.59
2	B	50	A2M	N6-C6-N1	-4.42	108.53	118.38
3	C	42	7MG	C5-C4-N3	-4.41	119.84	128.13
1	A	1710	OMG	C2-N3-C4	4.41	119.89	112.30
2	B	1516	A2M	N6-C6-N1	-4.40	108.57	118.38
1	A	1075	OMG	C5-C4-N3	-4.39	121.41	128.39
2	B	1491	OMU	N3-C2-N1	4.39	120.60	114.89
2	B	564	OMG	C2-N3-C4	4.37	119.83	112.30
2	B	50	A2M	N9-C8-N7	-4.37	107.73	113.94
2	B	1516	A2M	C5-C4-N3	-4.36	120.71	126.72
1	A	775	A2M	N9-C8-N7	-4.34	107.77	113.94
1	A	1316	OMG	C2-N3-C4	4.34	119.77	112.30
2	B	1385	OMG	C2-N3-C4	4.34	119.77	112.30
1	A	1071	A2M	C5-C4-N3	-4.32	120.76	126.72
2	B	728	A2M	N3-C4-N9	4.32	134.51	127.17
2	B	755	OMG	C2-N3-C4	4.31	119.73	112.30
1	A	1071	A2M	N6-C6-N1	-4.31	108.77	118.38
3	C	7	OMU	C5-C4-N3	4.29	120.81	114.80
1	A	1675	OMG	C2-N3-C4	4.28	119.68	112.30
2	B	1492	OMG	C2-N3-C4	4.28	119.67	112.30
1	A	1043	A2M	N9-C8-N7	-4.27	107.88	113.94
1	A	794	A2M	C5-C6-N6	4.26	133.84	123.29
1	A	1045	7MG	C2-N3-C4	4.25	119.62	112.30
1	A	1725	7MG	C2-N3-C4	4.25	119.62	112.30
2	B	634	OMG	C2-N3-C4	4.25	119.62	112.30
2	B	1363	OMG	C5-C4-N3	-4.22	121.67	128.39
2	B	1492	OMG	C5-C4-N3	-4.22	121.67	128.39
1	A	423	A2M	N9-C8-N7	-4.22	107.95	113.94
2	B	1169	OMG	C2-N3-C4	4.22	119.56	112.30
3	C	166	OMG	C2-N3-C4	4.22	119.56	112.30
1	A	1659	OMG	C2-N3-C4	4.20	119.53	112.30
1	A	1804	A2M	C5-C4-N3	-4.18	120.96	126.72
1	A	778	A2M	N9-C8-N7	-4.18	108.01	113.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1674	A2M	N6-C6-N1	-4.17	109.09	118.38
2	B	1210	OMG	N9-C8-N7	-4.16	105.69	113.40
1	A	1075	OMG	C2-N3-C4	4.15	119.44	112.30
1	A	775	A2M	N6-C6-N1	-4.14	109.15	118.38
1	A	1804	A2M	N6-C6-N1	-4.12	109.21	118.38
1	A	1674	A2M	N9-C8-N7	-4.10	108.11	113.94
3	C	163	A2M	N9-C8-N7	-4.10	108.12	113.94
3	C	42	7MG	C4-C5-N7	4.07	110.19	105.38
1	A	1227	OMU	N3-C2-N1	4.07	120.19	114.89
1	A	972	OMG	C2-N3-C4	4.07	119.31	112.30
3	C	118	OMU	N3-C2-N1	4.06	120.17	114.89
3	C	43	A2M	C5-C4-N3	-4.05	121.13	126.72
1	A	1127	OMU	C1'-N1-C2	4.05	124.87	117.59
1	A	931	7MG	C4-C5-N7	4.02	110.13	105.38
2	B	767	OMU	N3-C2-N1	4.02	120.12	114.89
2	B	1345	OMU	N3-C2-N1	4.02	120.12	114.89
3	C	166	OMG	C5-C4-N3	-4.01	122.01	128.39
1	A	794	A2M	N9-C8-N7	-4.00	108.26	113.94
2	B	634	OMG	C5-C4-N3	-3.97	122.07	128.39
1	A	1053	OMC	O2-C2-N3	-3.96	116.08	122.33
1	A	1725	7MG	C5-C4-N3	-3.96	120.70	128.13
1	A	1045	7MG	C4-C5-N7	3.96	110.05	105.38
2	B	755	OMG	N9-C8-N7	-3.96	106.06	113.40
3	C	75	OMG	C5-C4-N3	-3.95	122.10	128.39
2	B	1361	OMG	C2-N3-C4	3.94	119.09	112.30
1	A	963	OMU	C5-C4-N3	3.94	120.32	114.80
2	B	1138	7MG	C5-C4-N3	-3.93	120.75	128.13
2	B	1210	OMG	C2-N3-C4	3.90	119.02	112.30
1	A	1043	A2M	C5-C6-N6	3.88	132.89	123.29
1	A	1316	OMG	C5-C4-N3	-3.87	122.23	128.39
2	B	1363	OMG	N9-C8-N7	-3.86	106.24	113.40
2	B	627	A2M	N9-C8-N7	-3.86	108.47	113.94
2	B	1138	7MG	C4-C5-N7	3.85	109.93	105.38
2	B	1516	A2M	C2'-C1'-N9	-3.85	107.42	113.75
3	C	118	OMU	C5-C4-N3	3.83	120.17	114.80
2	B	1107	7MG	C5-C4-N3	-3.83	120.93	128.13
1	A	972	OMG	N9-C8-N7	-3.83	106.30	113.40
1	A	974	A2M	O4'-C1'-N9	3.82	115.42	108.09
2	B	691	A2M	N9-C8-N7	-3.81	108.53	113.94
3	C	43	A2M	N6-C6-N1	-3.81	109.90	118.38
2	B	1361	OMG	C5-C4-N3	-3.79	122.36	128.39
2	B	71	OMG	N9-C8-N7	-3.79	106.38	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	755	OMG	C5-C4-N3	-3.77	122.38	128.39
2	B	657	7MG	C5-C4-N3	-3.77	121.06	128.13
1	A	794	A2M	C2'-C1'-N9	-3.76	107.57	113.75
2	B	482	A2M	C2-N3-C4	3.75	121.00	111.83
1	A	1227	OMU	C5-C4-N3	3.75	120.06	114.80
2	B	1169	OMG	C5-C4-N3	-3.75	122.42	128.39
2	B	627	A2M	N3-C4-N9	3.74	133.52	127.17
1	A	927	OMG	C5-C4-N3	-3.72	122.46	128.39
1	A	963	OMU	N3-C2-N1	3.72	119.73	114.89
2	B	73	OMU	C5-C4-N3	3.72	120.00	114.80
2	B	50	A2M	N3-C4-N9	3.72	133.49	127.17
1	A	1497	OMU	C5-C4-N3	3.70	119.99	114.80
2	B	1345	OMU	C5-C4-N3	3.70	119.98	114.80
3	C	7	OMU	N3-C2-N1	3.70	119.71	114.89
1	A	794	A2M	O3'-C3'-C2'	3.70	121.54	111.19
2	B	71	OMG	C5-C4-N3	-3.70	122.51	128.39
2	B	1385	OMG	C5-C4-N3	-3.68	122.54	128.39
2	B	624	5MC	C1'-N1-C6	-3.68	115.10	121.15
1	A	794	A2M	O4'-C1'-N9	3.67	115.14	108.09
2	B	691	A2M	O3'-C3'-C2'	3.67	121.46	111.19
7	G	70	OMG	C5-C4-N3	-3.66	122.56	128.39
1	A	778	A2M	N6-C6-N1	-3.66	110.23	118.38
3	C	43	A2M	C2'-C1'-N9	-3.65	107.74	113.75
2	B	1107	7MG	C4-C5-N7	3.65	109.69	105.38
2	B	728	A2M	C5-C6-N6	3.65	132.32	123.29
1	A	1043	A2M	C2-N3-C4	3.64	120.73	111.83
1	A	1043	A2M	N3-C4-N9	3.64	133.35	127.17
1	A	958	OMG	C5-C4-N3	-3.63	122.61	128.39
1	A	963	OMU	O4-C4-C5	-3.62	118.92	125.16
2	B	767	OMU	C5-C4-N3	3.62	119.87	114.80
1	A	974	A2M	N9-C8-N7	-3.61	108.82	113.94
2	B	1107	7MG	C5-C4-N9	3.58	110.91	106.33
1	A	974	A2M	O4'-C4'-C3'	-3.56	98.09	105.15
2	B	657	7MG	O6-C6-C5	-3.55	118.90	127.62
7	G	70	OMG	N9-C8-N7	-3.53	106.86	113.40
1	A	1045	7MG	C5-C4-N3	-3.52	121.52	128.13
1	A	775	A2M	C2-N3-C4	3.47	120.31	111.83
2	B	1210	OMG	C5-C4-N3	-3.47	122.87	128.39
1	A	775	A2M	N3-C4-N9	3.47	133.07	127.17
1	A	794	A2M	C2-N3-C4	3.47	120.30	111.83
2	B	1516	A2M	N9-C8-N7	-3.46	109.02	113.94
1	A	1075	OMG	O6-C6-C5	-3.46	117.39	126.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1316	OMG	N9-C8-N7	-3.46	106.98	113.40
1	A	1659	OMG	N2-C2-N1	3.45	124.05	116.76
1	A	974	A2M	C5-C6-N6	3.45	131.82	123.29
1	A	1073	5MC	C5-C6-N1	-3.44	119.58	123.31
1	A	1710	OMG	C2-N1-C6	-3.44	118.87	125.11
2	B	482	A2M	C5-C6-N6	3.44	131.79	123.29
1	A	931	7MG	C5-C4-N3	-3.43	121.69	128.13
2	B	691	A2M	C5-C6-N6	3.42	131.75	123.29
1	A	1804	A2M	C5-C6-N6	3.41	131.74	123.29
1	A	919	OMC	O2-C2-N3	-3.41	116.95	122.33
2	B	627	A2M	C2-N3-C4	3.41	120.16	111.83
1	A	1053	OMC	C6-C5-C4	3.40	123.10	117.53
2	B	691	A2M	C2-N3-C4	3.39	120.12	111.83
2	B	50	A2M	C2-N3-C4	3.38	120.09	111.83
2	B	73	OMU	O4-C4-C5	-3.38	119.33	125.16
1	A	1675	OMG	C5-C4-N3	-3.38	123.01	128.39
1	A	423	A2M	C2-N3-C4	3.38	120.08	111.83
1	A	972	OMG	C2'-C1'-N9	-3.37	107.84	114.24
3	C	166	OMG	N9-C8-N7	-3.37	107.16	113.40
1	A	423	A2M	C5-C6-N6	3.35	131.58	123.29
2	B	1516	A2M	C5-C6-N6	3.32	131.51	123.29
1	A	974	A2M	N3-C4-N9	3.29	132.77	127.17
3	C	163	A2M	C5-C6-N6	3.29	131.42	123.29
2	B	1138	7MG	O6-C6-C5	-3.28	119.57	127.62
3	C	42	7MG	C2-N1-C6	-3.28	119.17	125.11
1	A	1071	A2M	C2-N3-C4	3.27	119.83	111.83
2	B	482	A2M	N3-C4-N9	3.27	132.73	127.17
2	B	627	A2M	C5-C6-N6	3.27	131.37	123.29
1	A	972	OMG	C5-C4-N3	-3.26	123.20	128.39
1	A	1075	OMG	C2-N1-C6	-3.26	119.20	125.11
1	A	1659	OMG	N9-C8-N7	-3.26	107.36	113.40
2	B	71	OMG	C6-C5-N7	3.25	136.21	130.29
2	B	755	OMG	C2-N1-C6	-3.25	119.22	125.11
1	A	775	A2M	C5-N7-C8	3.25	108.56	103.45
1	A	1674	A2M	N3-C4-N9	3.25	132.69	127.17
2	B	1210	OMG	C2-N1-C6	-3.24	119.23	125.11
1	A	1674	A2M	C2-N3-C4	3.24	119.75	111.83
2	B	50	A2M	C5-N7-C8	3.24	108.54	103.45
2	B	1516	A2M	C2-N3-C4	3.24	119.74	111.83
2	B	728	A2M	C2-N3-C4	3.23	119.73	111.83
1	A	1127	OMU	C5-C4-N3	3.23	119.33	114.80
1	A	1497	OMU	O2-C2-N3	-3.23	115.53	121.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	927	OMG	N9-C8-N7	-3.22	107.42	113.40
3	C	43	A2M	C2-N3-C4	3.22	119.69	111.83
1	A	931	7MG	O6-C6-C5	-3.21	119.75	127.62
2	B	1363	OMG	C2-N1-C6	-3.20	119.30	125.11
3	C	43	A2M	C4-N9-C8	3.19	109.08	105.74
1	A	958	OMG	N2-C2-N1	3.18	123.48	116.76
2	B	50	A2M	C5-C6-N6	3.17	131.13	123.29
1	A	1675	OMG	N9-C8-N7	-3.17	107.53	113.40
2	B	73	OMU	N3-C2-N1	3.16	119.01	114.89
2	B	691	A2M	O4'-C4'-C3'	-3.16	98.88	105.15
1	A	778	A2M	C2-N3-C4	3.16	119.54	111.83
1	A	1075	OMG	N9-C8-N7	-3.16	107.55	113.40
2	B	1138	7MG	C5-C4-N9	3.15	110.37	106.33
2	B	1345	OMU	O4-C4-C5	-3.15	119.73	125.16
2	B	728	A2M	C4-N9-C8	3.15	109.04	105.74
3	C	42	7MG	C5-C4-N9	3.14	110.36	106.33
2	B	71	OMG	C5-C6-N1	3.14	121.23	113.25
1	A	1071	A2M	C5-N7-C8	3.13	108.37	103.45
2	B	71	OMG	C2-N1-C6	-3.12	119.45	125.11
3	C	75	OMG	N9-C8-N7	-3.12	107.62	113.40
2	B	691	A2M	C3'-C2'-C1'	-3.12	96.84	102.81
2	B	482	A2M	N9-C8-N7	-3.10	109.53	113.94
1	A	1316	OMG	C2-N1-C6	-3.10	119.49	125.11
2	B	1361	OMG	N9-C8-N7	-3.10	107.66	113.40
1	A	1804	A2M	C2-N3-C4	3.08	119.35	111.83
3	C	163	A2M	C2-N3-C4	3.07	119.32	111.83
1	A	1804	A2M	C5-N7-C8	3.06	108.26	103.45
2	B	1516	A2M	N3-C4-N9	3.06	132.37	127.17
1	A	1071	A2M	C5-C6-N6	3.06	130.85	123.29
1	A	1127	OMU	N3-C2-N1	3.05	118.87	114.89
3	C	118	OMU	O4-C4-C5	-3.05	119.90	125.16
1	A	974	A2M	C4'-O4'-C1'	-3.04	102.74	109.47
7	G	70	OMG	C6-C5-N7	3.04	135.82	130.29
2	B	627	A2M	O4'-C1'-N9	3.04	113.92	108.09
2	B	1385	OMG	N9-C8-N7	-3.04	107.77	113.40
2	B	755	OMG	C5-C6-N1	3.04	120.98	113.25
1	A	958	OMG	N9-C8-N7	-3.04	107.77	113.40
3	C	7	OMU	O4-C4-C5	-3.03	119.93	125.16
1	A	1674	A2M	C5-C6-N6	3.01	130.73	123.29
1	A	775	A2M	C5-C6-N6	3.00	130.72	123.29
1	A	1659	OMG	C5-C4-N3	-3.00	123.62	128.39
1	A	1525	5MC	CM5-C5-C6	-2.99	118.80	122.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1491	OMU	O4-C4-C5	-2.99	120.01	125.16
2	B	564	OMG	C2-N1-C6	-2.98	119.70	125.11
2	B	1107	7MG	O6-C6-C5	-2.97	120.33	127.62
1	A	1045	7MG	O6-C6-C5	-2.96	120.35	127.62
2	B	728	A2M	C5-N7-C8	2.96	108.10	103.45
1	A	1725	7MG	O6-C6-C5	-2.96	120.36	127.62
2	B	1169	OMG	N9-C8-N7	-2.96	107.92	113.40
3	C	42	7MG	N9-C4-N3	2.96	129.79	125.46
1	A	974	A2M	C2-N3-C4	2.95	119.04	111.83
1	A	972	OMG	C6-C5-N7	2.95	135.66	130.29
1	A	1071	A2M	C4-N9-C8	2.95	108.83	105.74
2	B	1210	OMG	N2-C2-N1	2.95	122.98	116.76
1	A	778	A2M	N3-C4-N9	2.93	132.16	127.17
1	A	794	A2M	C5-C4-N9	2.93	109.00	105.81
2	B	1363	OMG	C5-C6-N1	2.92	120.70	113.25
1	A	1525	5MC	C5-C6-N1	-2.92	120.14	123.31
2	B	1361	OMG	C2-N1-C6	-2.90	119.84	125.11
2	B	564	OMG	N9-C8-N7	-2.90	108.02	113.40
1	A	1075	OMG	N9-C4-N3	2.89	131.73	125.95
2	B	1361	OMG	O6-C6-C5	-2.89	118.92	126.53
2	B	657	7MG	N9-C4-N3	2.88	129.68	125.46
1	A	775	A2M	C5'-C4'-C3'	-2.88	104.86	115.21
2	B	50	A2M	C6-C5-C4	2.87	121.10	117.18
1	A	919	OMC	C1'-N1-C2	2.86	124.76	118.44
3	C	166	OMG	C2-N1-C6	-2.86	119.93	125.11
1	A	1227	OMU	O4-C4-C5	-2.85	120.24	125.16
1	A	958	OMG	C2-N1-C6	-2.85	119.94	125.11
1	A	1674	A2M	C5-N7-C8	2.85	107.93	103.45
1	A	423	A2M	N3-C4-N9	2.85	132.01	127.17
7	G	70	OMG	N2-C2-N1	2.85	122.77	116.76
1	A	423	A2M	C5-N7-C8	2.85	107.92	103.45
1	A	1316	OMG	C2'-C1'-N9	-2.84	108.85	114.24
2	B	634	OMG	N2-C2-N1	2.84	122.75	116.76
1	A	1710	OMG	C5-C6-N1	2.83	120.45	113.25
2	B	755	OMG	O6-C6-C5	-2.81	119.11	126.53
1	A	972	OMG	C5-C6-N1	2.81	120.39	113.25
7	G	70	OMG	C5-C6-N1	2.80	120.38	113.25
1	A	972	OMG	C2-N1-C6	-2.80	120.04	125.11
1	A	1675	OMG	C2-N1-C6	-2.80	120.04	125.11
1	A	1659	OMG	O6-C6-C5	-2.79	119.16	126.53
2	B	1492	OMG	C2-N1-C6	-2.79	120.05	125.11
1	A	1075	OMG	C5-C6-N1	2.78	120.34	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1045	7MG	C2-N1-C6	-2.78	120.06	125.11
3	C	166	OMG	N2-C2-N1	2.78	122.63	116.76
3	C	166	OMG	O6-C6-C5	-2.78	119.19	126.53
1	A	1659	OMG	C2-N1-C6	-2.78	120.07	125.11
1	A	1316	OMG	N2-C2-N1	2.77	122.61	116.76
3	C	42	7MG	O6-C6-C5	-2.77	120.82	127.62
1	A	1053	OMC	C1'-N1-C2	2.77	124.56	118.44
1	A	1725	7MG	N9-C4-N3	2.77	129.52	125.46
2	B	1138	7MG	C2-N1-C6	-2.77	120.09	125.11
1	A	1675	OMG	N2-C2-N1	2.77	122.60	116.76
1	A	931	7MG	C5-C4-N9	2.76	109.86	106.33
1	A	794	A2M	O4'-C4'-C3'	-2.76	99.68	105.15
1	A	1316	OMG	O6-C6-C5	-2.75	119.26	126.53
2	B	1385	OMG	C2-N1-C6	-2.75	120.13	125.11
3	C	163	A2M	N3-C4-N9	2.75	131.84	127.17
1	A	1075	OMG	N2-C2-N1	2.75	122.56	116.76
1	A	1675	OMG	C5-C6-N1	2.74	120.23	113.25
2	B	728	A2M	C2'-C1'-N9	-2.74	109.24	113.75
1	A	778	A2M	C5-N7-C8	2.74	107.75	103.45
1	A	958	OMG	C5-C6-N1	2.74	120.22	113.25
3	C	43	A2M	N3-C4-N9	2.74	131.82	127.17
2	B	1210	OMG	C5-C6-N1	2.73	120.20	113.25
1	A	1316	OMG	C5-C6-N1	2.73	120.20	113.25
1	A	778	A2M	C5-C6-N6	2.73	130.04	123.29
2	B	1492	OMG	O6-C6-C5	-2.73	119.33	126.53
2	B	634	OMG	C2-N1-C6	-2.73	120.17	125.11
2	B	755	OMG	N2-C2-N1	2.72	122.51	116.76
1	A	775	A2M	C4-C5-N7	-2.72	107.47	110.58
1	A	1053	OMC	C5-C6-N1	-2.72	117.41	121.84
1	A	794	A2M	C5-N7-C8	2.72	107.72	103.45
3	C	163	A2M	C5-N7-C8	2.72	107.72	103.45
2	B	71	OMG	O6-C6-C5	-2.71	119.37	126.53
2	B	634	OMG	N9-C8-N7	-2.71	108.37	113.40
2	B	1385	OMG	C5-C6-N1	2.71	120.14	113.25
7	G	70	OMG	C2-N1-C6	-2.70	120.22	125.11
2	B	1169	OMG	C2-N1-C6	-2.69	120.23	125.11
3	C	75	OMG	O6-C6-C5	-2.69	119.42	126.53
1	A	1725	7MG	C5-C4-N9	2.69	109.78	106.33
2	B	657	7MG	C2-N1-C6	-2.69	120.23	125.11
3	C	75	OMG	N2-C2-N1	2.68	122.42	116.76
1	A	1043	A2M	C4-N9-C8	2.68	108.55	105.74
2	B	627	A2M	O4'-C1'-C2'	-2.68	101.98	106.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1659	OMG	C5-C6-N1	2.67	120.06	113.25
3	C	75	OMG	C2-N1-C6	-2.67	120.27	125.11
2	B	1210	OMG	O6-C6-C5	-2.67	119.49	126.53
1	A	927	OMG	C5-C6-N1	2.67	120.05	113.25
2	B	1169	OMG	C5-C6-N1	2.67	120.04	113.25
2	B	1107	7MG	C2-N1-C6	-2.67	120.28	125.11
2	B	767	OMU	O4-C4-C5	-2.66	120.58	125.16
2	B	71	OMG	C4-C5-N7	-2.66	106.46	110.67
1	A	1804	A2M	C4-N9-C8	2.65	108.53	105.74
1	A	1710	OMG	N9-C8-N7	-2.65	108.48	113.40
1	A	1127	OMU	O4-C4-C5	-2.65	120.59	125.16
3	C	43	A2M	C5-C6-N6	2.64	129.83	123.29
1	A	1045	7MG	C5-C4-N9	2.64	109.72	106.33
1	A	1043	A2M	C5-N7-C8	2.64	107.60	103.45
1	A	974	A2M	C6-C5-C4	2.63	120.77	117.18
1	A	775	A2M	C4-N9-C8	2.62	108.49	105.74
1	A	972	OMG	N2-C2-N1	2.62	122.29	116.76
1	A	958	OMG	C6-C5-N7	2.62	135.05	130.29
1	A	1073	5MC	CM5-C5-C6	-2.61	119.31	122.85
2	B	1385	OMG	N2-C2-N1	2.61	122.27	116.76
2	B	624	5MC	C5-C6-N1	-2.61	120.48	123.31
2	B	1210	OMG	C3'-C2'-C1'	-2.60	97.82	102.81
3	C	75	OMG	C5-C6-N1	2.60	119.88	113.25
1	A	974	A2M	C5-N7-C8	2.60	107.54	103.45
1	A	927	OMG	C2-N1-C6	-2.60	120.39	125.11
3	C	43	A2M	C5-N7-C8	2.59	107.52	103.45
2	B	1385	OMG	O6-C6-C5	-2.58	119.71	126.53
2	B	627	A2M	C5-N7-C8	2.57	107.50	103.45
2	B	728	A2M	C6-C5-C4	2.56	120.67	117.18
2	B	1361	OMG	C5-C6-N1	2.56	119.76	113.25
1	A	1073	5MC	C1'-N1-C6	-2.55	116.94	121.15
1	A	1497	OMU	C1'-N1-C6	-2.55	115.33	120.78
1	A	1710	OMG	O6-C6-C5	-2.55	119.81	126.53
1	A	1071	A2M	N3-C4-N9	2.55	131.50	127.17
7	G	70	OMG	N1-C2-N3	-2.55	118.66	123.32
2	B	1492	OMG	C5-C6-N1	2.54	119.73	113.25
2	B	564	OMG	O6-C6-C5	-2.54	119.81	126.53
1	A	1675	OMG	O6-C6-C5	-2.54	119.83	126.53
1	A	1725	7MG	C2-N1-C6	-2.54	120.51	125.11
1	A	927	OMG	N2-C2-N1	2.52	122.09	116.76
3	C	166	OMG	C5-C6-N1	2.52	119.67	113.25
2	B	634	OMG	C5-C6-N1	2.52	119.66	113.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	564	OMG	C5-C6-N1	2.52	119.66	113.25
2	B	1363	OMG	O6-C6-C5	-2.51	119.91	126.53
1	A	423	A2M	C2'-C1'-N9	-2.51	109.62	113.75
2	B	71	OMG	C8-N7-C5	2.51	108.73	104.26
1	A	1674	A2M	C6-C5-C4	2.51	120.60	117.18
2	B	755	OMG	C6-C5-N7	2.49	134.82	130.29
2	B	1210	OMG	C6-C5-N7	2.49	134.82	130.29
1	A	778	A2M	C6-C5-C4	2.48	120.57	117.18
1	A	1725	7MG	N9-C8-N7	2.48	106.88	103.37
2	B	1210	OMG	C8-N7-C5	2.48	108.67	104.26
2	B	1363	OMG	C8-N7-C5	2.48	108.67	104.26
1	A	931	7MG	C2-N1-C6	-2.47	120.62	125.11
1	A	1497	OMU	O4-C4-C5	-2.47	120.89	125.16
2	B	1169	OMG	N2-C2-N1	2.47	121.98	116.76
1	A	775	A2M	C6-C5-C4	2.47	120.55	117.18
1	A	1804	A2M	N3-C4-N9	2.46	131.36	127.17
2	B	1361	OMG	N2-C2-N1	2.46	121.96	116.76
1	A	1127	OMU	C1'-N1-C6	-2.46	115.52	120.78
3	C	75	OMG	C2'-C1'-N9	-2.45	109.59	114.24
2	B	728	A2M	O4'-C1'-N9	-2.45	103.39	108.09
1	A	1659	OMG	C6-C5-N7	2.44	134.74	130.29
7	G	70	OMG	C5-C4-N9	2.44	110.03	105.66
2	B	691	A2M	N3-C4-N9	2.44	131.32	127.17
1	A	927	OMG	N1-C2-N3	-2.43	118.87	123.32
2	B	627	A2M	C6-C5-C4	2.41	120.47	117.18
2	B	1169	OMG	O6-C6-C5	-2.39	120.21	126.53
1	A	1710	OMG	N2-C2-N1	2.39	121.81	116.76
7	G	70	OMG	C4-C5-N7	-2.39	106.88	110.67
2	B	634	OMG	O6-C6-C5	-2.39	120.24	126.53
7	G	70	OMG	O6-C6-C5	-2.38	120.26	126.53
2	B	691	A2M	C4-N9-C1'	-2.38	121.08	126.63
2	B	1492	OMG	N9-C8-N7	-2.37	109.00	113.40
2	B	1491	OMU	O2-C2-N1	-2.36	119.72	122.80
1	A	927	OMG	O6-C6-C5	-2.36	120.30	126.53
1	A	794	A2M	C4-C5-N7	-2.35	107.89	110.58
2	B	624	5MC	C1'-N1-C2	2.34	123.61	118.44
1	A	958	OMG	C5-C4-N9	2.33	109.83	105.66
2	B	1138	7MG	N9-C4-N3	2.33	128.87	125.46
1	A	778	A2M	C4-N9-C8	2.32	108.18	105.74
1	A	1675	OMG	C6-C5-N7	2.32	134.51	130.29
2	B	1492	OMG	N2-C2-N1	2.32	121.66	116.76
2	B	691	A2M	C5-N7-C8	2.31	107.09	103.45

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	755	OMG	C8-N7-C5	2.31	108.38	104.26
2	B	1169	OMG	C6-C5-N7	2.31	134.49	130.29
1	A	1071	A2M	C4-C5-N7	-2.30	107.95	110.58
2	B	71	OMG	C5-C4-N9	2.30	109.77	105.66
2	B	1363	OMG	N2-C2-N1	2.29	121.60	116.76
2	B	71	OMG	C2'-C1'-N9	-2.28	109.91	114.24
1	A	972	OMG	C8-N7-C5	2.28	108.33	104.26
2	B	1345	OMU	O2-C2-N1	-2.28	119.83	122.80
1	A	1675	OMG	C2'-C1'-N9	-2.28	109.91	114.24
1	A	1053	OMC	C1'-N1-C6	-2.27	115.93	120.78
2	B	1210	OMG	C4-C5-N7	-2.27	107.07	110.67
2	B	1210	OMG	O3'-C3'-C2'	-2.27	104.84	111.19
1	A	931	7MG	N1-C2-N3	-2.26	119.18	123.32
2	B	624	5MC	CM5-C5-C6	-2.26	119.80	122.85
2	B	657	7MG	C5-C4-N9	2.26	109.22	106.33
1	A	972	OMG	C4-C5-N7	-2.25	107.10	110.67
1	A	1045	7MG	N9-C4-N3	2.25	128.76	125.46
1	A	927	OMG	C6-C5-N7	2.25	134.39	130.29
1	A	958	OMG	C2'-C1'-N9	-2.25	109.97	114.24
1	A	792	OMC	O2-C2-N3	-2.25	118.78	122.33
3	C	166	OMG	C4-C5-N7	-2.25	107.11	110.67
1	A	963	OMU	C1'-N1-C2	2.25	121.63	117.59
2	B	71	OMG	N1-C2-N3	-2.25	119.21	123.32
2	B	482	A2M	C6-C5-C4	2.24	120.24	117.18
1	A	931	7MG	C6-C5-C4	-2.23	118.47	122.40
3	C	75	OMG	N1-C2-N3	-2.23	119.23	123.32
2	B	1385	OMG	N1-C2-N3	-2.22	119.25	123.32
2	B	1491	OMU	C5-C6-N1	-2.22	118.23	121.84
2	B	564	OMG	N2-C2-N1	2.22	121.44	116.76
1	A	1674	A2M	C4-N9-C8	2.22	108.06	105.74
3	C	166	OMG	C2'-C1'-N9	-2.21	110.05	114.24
2	B	50	A2M	C4-C5-N7	-2.21	108.06	110.58
3	C	163	A2M	C4-N9-C8	2.21	108.06	105.74
2	B	657	7MG	N1-C2-N3	-2.21	119.28	123.32
1	A	1316	OMG	C6-C5-N7	2.20	134.29	130.29
3	C	166	OMG	C8-N7-C5	2.20	108.18	104.26
7	G	70	OMG	C8-N7-C5	2.20	108.18	104.26
1	A	972	OMG	C5-C4-N9	2.19	109.58	105.66
1	A	1316	OMG	C4-C5-N7	-2.19	107.20	110.67
1	A	778	A2M	C2'-C1'-N9	-2.19	110.15	113.75
1	A	1316	OMG	C8-N7-C5	2.18	108.14	104.26
2	B	50	A2M	C4-N9-C8	2.18	108.03	105.74

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	657	7MG	C6-C5-C4	-2.18	118.57	122.40
1	A	958	OMG	O6-C6-C5	-2.17	120.80	126.53
2	B	1361	OMG	C2'-C1'-N9	-2.17	110.12	114.24
2	B	482	A2M	C2'-C1'-N9	-2.16	110.19	113.75
1	A	958	OMG	C4-C5-N7	-2.16	107.24	110.67
1	A	1804	A2M	C5'-C4'-C3'	-2.16	107.45	115.21
3	C	166	OMG	C5-C4-N9	2.15	109.51	105.66
2	B	482	A2M	C5-C4-N9	2.15	108.15	105.81
2	B	71	OMG	N2-C2-N1	2.15	121.29	116.76
1	A	423	A2M	C4-N9-C8	2.14	107.98	105.74
1	A	972	OMG	O6-C6-C5	-2.13	120.90	126.53
1	A	919	OMC	C1'-N1-C6	-2.13	116.22	120.78
1	A	423	A2M	C4-C5-N7	-2.12	108.16	110.58
1	A	794	A2M	N3-C4-N9	2.12	130.77	127.17
3	C	105	OMC	C1'-N1-C6	2.12	125.31	120.78
2	B	634	OMG	C4-C5-N7	-2.12	107.32	110.67
1	A	794	A2M	C4-N9-C1'	-2.11	121.69	126.63
1	A	1659	OMG	N1-C2-N3	-2.11	119.45	123.32
2	B	634	OMG	C6-C5-N7	2.11	134.13	130.29
2	B	1107	7MG	N9-C8-N7	2.11	106.36	103.37
1	A	1675	OMG	N1-C2-N3	-2.11	119.47	123.32
2	B	627	A2M	C4-N9-C8	2.10	107.94	105.74
2	B	691	A2M	C5-C4-N9	2.10	108.10	105.81
2	B	1385	OMG	C6-C5-N7	2.09	134.10	130.29
2	B	1516	A2M	C4-N9-C8	2.09	107.94	105.74
1	A	1674	A2M	C2'-C1'-N9	-2.09	110.31	113.75
1	A	972	OMG	CM2-O2'-C2'	-2.09	109.11	114.47
1	A	1316	OMG	C5-C4-N9	2.09	109.39	105.66
3	C	118	OMU	C2'-C1'-N1	-2.08	110.29	114.24
2	B	1169	OMG	C5-C4-N9	2.07	109.36	105.66
2	B	482	A2M	C5-N7-C8	2.07	106.70	103.45
1	A	794	A2M	C3'-C2'-C1'	-2.07	98.85	102.81
1	A	1804	A2M	C4-C5-N7	-2.07	108.22	110.58
1	A	1804	A2M	C3'-C2'-C1'	2.07	106.76	102.81
1	A	423	A2M	C6-C5-C4	2.06	120.00	117.18
2	B	755	OMG	C4-C5-N7	-2.06	107.41	110.67
3	C	42	7MG	N9-C8-N7	2.06	106.29	103.37
2	B	634	OMG	C5-C4-N9	2.06	109.34	105.66
2	B	1363	OMG	C4-C5-N7	-2.06	107.41	110.67
1	A	1675	OMG	CM2-O2'-C2'	-2.05	109.20	114.47
2	B	1107	7MG	C6-C5-C4	-2.05	118.79	122.40
1	A	778	A2M	C4-C5-N7	-2.04	108.24	110.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	1210	OMG	C8-N9-C4	2.04	109.86	106.03
2	B	1363	OMG	C6-C5-N7	2.04	134.01	130.29
3	C	166	OMG	C6-C5-N7	2.04	134.00	130.29
1	A	931	7MG	N9-C4-N3	2.04	128.45	125.46
1	A	958	OMG	N1-C2-N3	-2.03	119.60	123.32
2	B	1363	OMG	N1-C2-N3	-2.03	119.60	123.32
2	B	73	OMU	O2-C2-N1	-2.03	120.16	122.80
1	A	1674	A2M	C4-C5-N7	-2.02	108.27	110.58
2	B	564	OMG	C8-N7-C5	2.00	107.83	104.26
2	B	1169	OMG	C4-C5-N7	-2.00	107.50	110.67

There are no chirality outliers.

All (93) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	B	73	OMU	C1'-C2'-O2'-CM2
2	B	543	OMC	C2'-C1'-N1-C6
2	B	543	OMC	O4'-C4'-C5'-O5'
2	B	634	OMG	C1'-C2'-O2'-CM2
2	B	657	7MG	O4'-C4'-C5'-O5'
2	B	691	A2M	C1'-C2'-O2'-CM'
2	B	728	A2M	C1'-C2'-O2'-CM'
3	C	7	OMU	O4'-C4'-C5'-O5'
3	C	118	OMU	C1'-C2'-O2'-CM2
3	C	118	OMU	C3'-C4'-C5'-O5'
3	C	118	OMU	O4'-C4'-C5'-O5'
1	A	423	A2M	O4'-C4'-C5'-O5'
1	A	778	A2M	O4'-C4'-C5'-O5'
1	A	919	OMC	O4'-C1'-N1-C2
1	A	919	OMC	O4'-C1'-N1-C6
1	A	1053	OMC	O4'-C1'-N1-C2
1	A	1053	OMC	O4'-C1'-N1-C6
1	A	1053	OMC	C1'-C2'-O2'-CM2
1	A	1071	A2M	C1'-C2'-O2'-CM'
1	A	1073	5MC	O4'-C4'-C5'-O5'
1	A	1073	5MC	C3'-C4'-C5'-O5'
1	A	1227	OMU	C3'-C4'-C5'-O5'
1	A	1227	OMU	O4'-C4'-C5'-O5'
1	A	1497	OMU	O4'-C1'-N1-C2
1	A	1497	OMU	O4'-C1'-N1-C6
1	A	1725	7MG	O4'-C4'-C5'-O5'
1	A	1725	7MG	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
2	B	1361	OMG	C1'-C2'-O2'-CM2
2	B	1380	OMC	C3'-C4'-C5'-O5'
2	B	1380	OMC	O4'-C4'-C5'-O5'
2	B	1492	OMG	O4'-C4'-C5'-O5'
2	B	543	OMC	C2'-C1'-N1-C2
2	B	77	OMC	C3'-C4'-C5'-O5'
2	B	627	A2M	C3'-C4'-C5'-O5'
2	B	691	A2M	C3'-C4'-C5'-O5'
3	C	7	OMU	C3'-C4'-C5'-O5'
3	C	75	OMG	O4'-C4'-C5'-O5'
3	C	75	OMG	C3'-C4'-C5'-O5'
1	A	423	A2M	C3'-C4'-C5'-O5'
1	A	1525	5MC	C3'-C4'-C5'-O5'
2	B	564	OMG	C3'-C4'-C5'-O5'
2	B	1138	7MG	O4'-C4'-C5'-O5'
2	B	77	OMC	O4'-C4'-C5'-O5'
2	B	543	OMC	C3'-C4'-C5'-O5'
2	B	627	A2M	O4'-C4'-C5'-O5'
3	C	163	A2M	C3'-C4'-C5'-O5'
7	G	70	OMG	C3'-C4'-C5'-O5'
1	A	794	A2M	O4'-C4'-C5'-O5'
1	A	794	A2M	C3'-C4'-C5'-O5'
1	A	1804	A2M	O4'-C4'-C5'-O5'
2	B	657	7MG	C3'-C4'-C5'-O5'
1	A	778	A2M	C3'-C4'-C5'-O5'
1	A	1804	A2M	C3'-C4'-C5'-O5'
2	B	564	OMG	O4'-C4'-C5'-O5'
2	B	1492	OMG	C3'-C4'-C5'-O5'
3	C	163	A2M	O4'-C4'-C5'-O5'
1	A	1525	5MC	O4'-C4'-C5'-O5'
2	B	624	5MC	O4'-C4'-C5'-O5'
2	B	755	OMG	O4'-C4'-C5'-O5'
7	G	70	OMG	O4'-C4'-C5'-O5'
2	B	691	A2M	O4'-C4'-C5'-O5'
2	B	1138	7MG	C3'-C4'-C5'-O5'
2	B	755	OMG	C3'-C4'-C5'-O5'
1	A	919	OMC	C4'-C5'-O5'-P
2	B	1169	OMG	O4'-C4'-C5'-O5'
2	B	1169	OMG	C3'-C4'-C5'-O5'
2	B	1210	OMG	O4'-C4'-C5'-O5'
1	A	919	OMC	C1'-C2'-O2'-CM2
2	B	1210	OMG	C3'-C4'-C5'-O5'

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Mol	Chain	Res	Type	Atoms
2	B	73	OMU	C3'-C4'-C5'-O5'
1	A	1075	OMG	C2'-C1'-N9-C4
2	B	755	OMG	C3'-C2'-O2'-CM2
2	B	1516	A2M	C3'-C2'-O2'-CM'
1	A	1675	OMG	C4'-C5'-O5'-P
2	B	543	OMC	O4'-C1'-N1-C2
2	B	73	OMU	O4'-C4'-C5'-O5'
1	A	1127	OMU	O4'-C1'-N1-C6
2	B	543	OMC	O4'-C1'-N1-C6
3	C	105	OMC	C4'-C5'-O5'-P
3	C	105	OMC	C3'-C4'-C5'-O5'
1	A	1127	OMU	O4'-C1'-N1-C2
1	A	1804	A2M	C1'-C2'-O2'-CM'
1	A	778	A2M	C4'-C5'-O5'-P
2	B	1361	OMG	C3'-C4'-C5'-O5'
3	C	105	OMC	O4'-C4'-C5'-O5'
1	A	777	OMC	O4'-C4'-C5'-O5'
2	B	627	A2M	C4'-C5'-O5'-P
2	B	624	5MC	C3'-C4'-C5'-O5'
1	A	919	OMC	C3'-C4'-C5'-O5'
1	A	777	OMC	C4'-C5'-O5'-P
1	A	1127	OMU	C2'-C1'-N1-C2
1	A	1662	OMC	C2'-C1'-N1-C2
2	B	1380	OMC	C2'-C1'-N1-C2

There are no ring outliers.

60 monomers are involved in 187 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
1	A	777	OMC	4	0
1	A	343	OMC	4	0
1	A	1674	A2M	1	0
2	B	1138	7MG	2	0
2	B	1449	OMC	2	0
1	A	778	A2M	3	0
2	B	728	A2M	4	0
1	A	1662	OMC	1	0
1	A	958	OMG	5	0
1	A	972	OMG	2	0
2	B	1361	OMG	3	0
1	A	423	A2M	1	0
2	B	627	A2M	4	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	B	1107	7MG	8	0
2	B	683	OMC	3	0
2	B	21	OMC	2	0
2	B	767	OMU	3	0
2	B	1210	OMG	1	0
1	A	919	OMC	7	0
2	B	1516	A2M	6	0
3	C	7	OMU	1	0
3	C	43	A2M	2	0
2	B	543	OMC	2	0
2	B	691	A2M	5	0
1	A	1316	OMG	5	0
1	A	1071	A2M	7	0
1	A	1659	OMG	3	0
1	A	1525	5MC	1	0
2	B	755	OMG	6	0
1	A	1045	7MG	1	0
3	C	166	OMG	6	0
1	A	794	A2M	5	0
2	B	1529	OMC	3	0
3	C	118	OMU	1	0
2	B	1363	OMG	3	0
3	C	75	OMG	3	0
2	B	1492	OMG	3	0
2	B	1380	OMC	4	0
1	A	974	A2M	1	0
1	A	931	7MG	4	0
1	A	1710	OMG	3	0
2	B	77	OMC	2	0
1	A	1725	7MG	3	0
1	A	1127	OMU	1	0
2	B	1169	OMG	5	0
1	A	1053	OMC	7	0
1	A	1804	A2M	7	0
1	A	1075	OMG	1	0
2	B	73	OMU	1	0
7	G	70	OMG	3	0
1	A	1073	5MC	2	0
2	B	634	OMG	3	0
2	B	482	A2M	3	0
1	A	792	OMC	2	0
2	B	624	5MC	2	0

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Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	C	105	OMC	2	0
1	A	1043	A2M	1	0
2	B	657	7MG	3	0
2	B	564	OMG	1	0
2	B	1345	OMU	3	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 108 ligands modelled in this entry, 108 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
1	A	30
2	B	16
5	E	5
8	H	4
10	L	3
7	G	2
31	h	2

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Mol	Chain	Number of breaks
6	F	1
30	g	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	282:U	O3'	304:A	P	49.48
1	A	1269:U	O3'	1283:A	P	36.80
1	B	913:U	O3'	1105:C	P	35.79
1	A	1233:A	O3'	1245:C	P	34.48
1	A	154:A	O3'	175:U	P	29.48
1	B	551:U	O3'	562:G	P	29.28
1	A	1385:C	O3'	1491:A	P	24.19
1	E	12:G	O3'	21:G	P	24.03
1	E	104:U	O3'	113:C	P	23.15
1	A	1545:C	O3'	1569:G	P	22.63
1	L	78:ARG	C	105:THR	N	20.48
1	A	506:C	O3'	515:U	P	20.44
1	B	1113:A	O3'	1134:C	P	19.75
1	A	1805:A	O3'	1918:A	P	19.24
1	E	152:G	O3'	175:U	P	18.88
1	B	1595:A	O3'	1601:U	P	16.94
1	A	226:A	O3'	232:U	P	16.86
1	B	1633:U	O3'	1641:U	P	16.77
1	A	219:U	O3'	224:A	P	16.61
1	F	17:U	O3'	44:C	P	16.06
1	A	936:C	O3'	941:G	P	15.93
1	E	185:U	O3'	190:A	P	15.65
1	B	1232:A	O3'	1240:U	P	15.59
1	A	1171:C	O3'	1221:U	P	15.47
1	H	68:G	O3'	87:C	P	15.09
1	B	136:A	O3'	446:C	P	15.00
1	G	128:U	O3'	154:A	P	14.98
1	B	1465:G	O3'	1477:G	P	14.92
1	A	519:G	O3'	585:A	P	14.88
1	B	1614:A	O3'	1621:U	P	14.82
1	B	789:A	O3'	852:G	P	14.50
1	A	1517:U	O3'	1522:G	P	14.31
1	L	109:GLY	C	130:GLY	N	14.03
1	B	594:C	O3'	616:A	P	13.93
1	A	853:U	O3'	866:U	P	13.58
1	B	1397:U	O3'	1434:A	P	13.52
1	B	577:G	O3'	580:G	P	13.36

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	744:G	O3'	748:G	P	12.66
1	A	487:C	O3'	492:G	P	11.73
1	B	1581:A	O3'	1591:A	P	11.70
1	A	464:U	O3'	468:A	P	11.67
1	A	198:A	O3'	205:A	P	11.65
1	A	880:U	O3'	916:U	P	11.06
1	H	47:G	O3'	62:C	P	10.99
1	E	74:C	O3'	95:U	P	10.78
1	A	1691:A	O3'	1709:C	P	10.06
1	A	818:U	O3'	825:C	P	9.59
1	g	72:TYR	C	91:VAL	N	9.54
1	h	74:THR	C	78:GLY	N	9.37
1	H	125:U	O3'	128:G	P	8.75
1	A	1375:A	O3'	1380:C	P	7.78
1	A	1254:A	O3'	1263:G	P	7.61
1	A	604:U	O3'	738:U	P	7.07
1	A	1794:U	O3'	1797:U	P	6.68
1	A	446:A	O3'	448:C	P	5.86
1	A	1382:A	O3'	1384:A	P	5.70
1	H	112:U	O3'	120:C	P	5.37
1	B	1330:G	O3'	1343:U	P	5.26
1	B	1606:U	O3'	1611:A	P	5.09
1	h	56:ARG	C	64:GLY	N	4.76
1	L	27:ILE	C	73:VAL	N	4.66
1	A	1145:G	O3'	1150:A	P	3.85
1	A	1247:U	O3'	1249:G	P	3.62
1	G	177:C	O3'	178:A	P	3.32

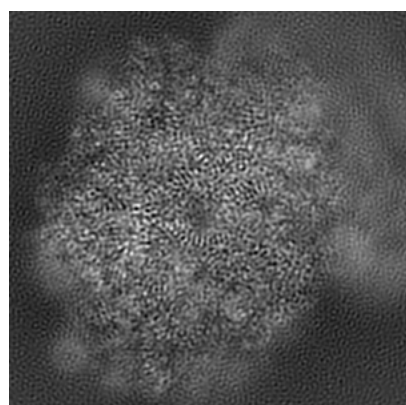
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8361. These allow visual inspection of the internal detail of the map and identification of artifacts.

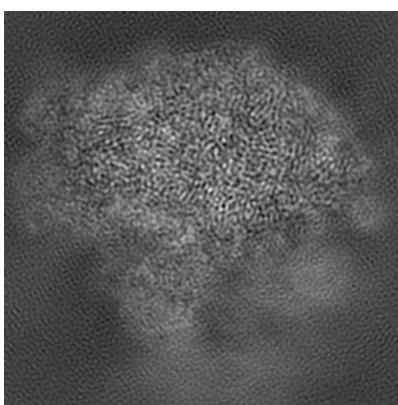
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

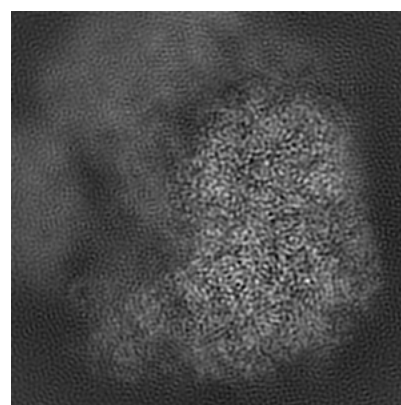
6.1.1 Primary map



X



Y

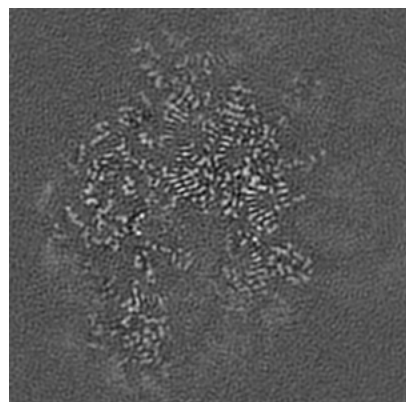


Z

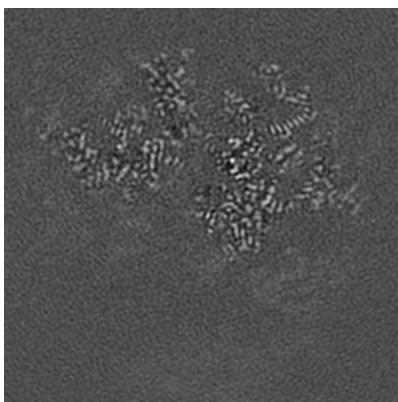
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

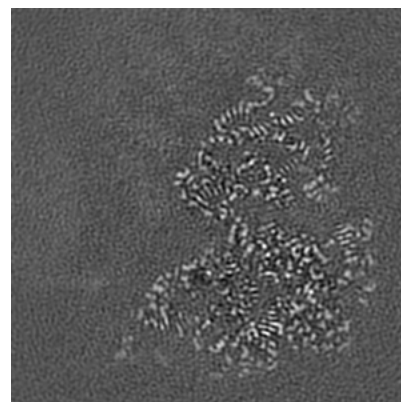
6.2.1 Primary map



X Index: 115



Y Index: 115

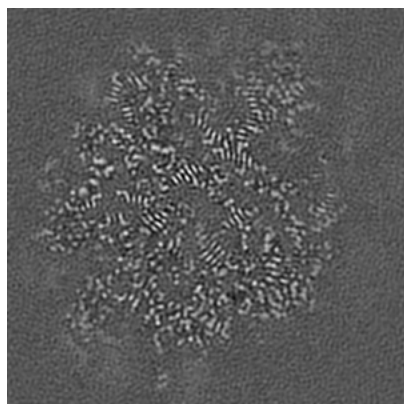


Z Index: 115

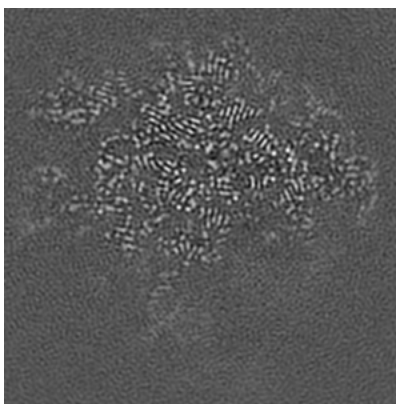
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

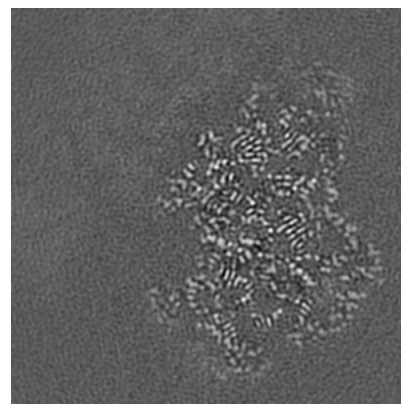
6.3.1 Primary map



X Index: 144



Y Index: 74

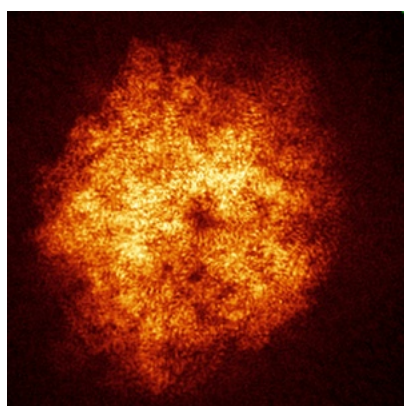


Z Index: 128

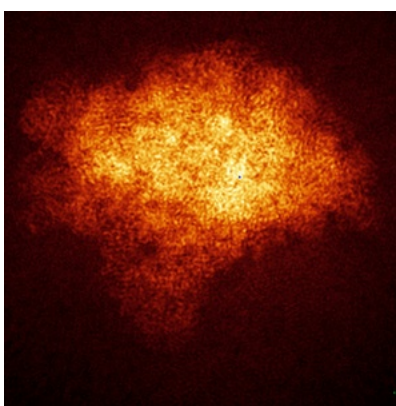
The images above show the largest variance slices of the map in three orthogonal directions.

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

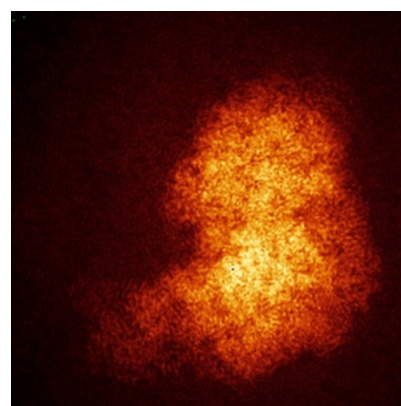
6.4.1 Primary map



X



Y

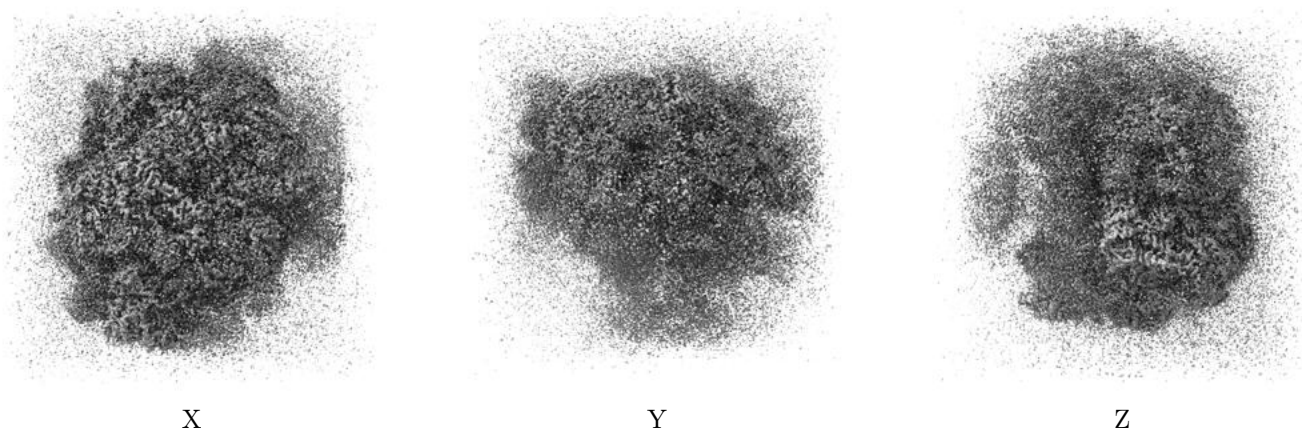


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.07. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

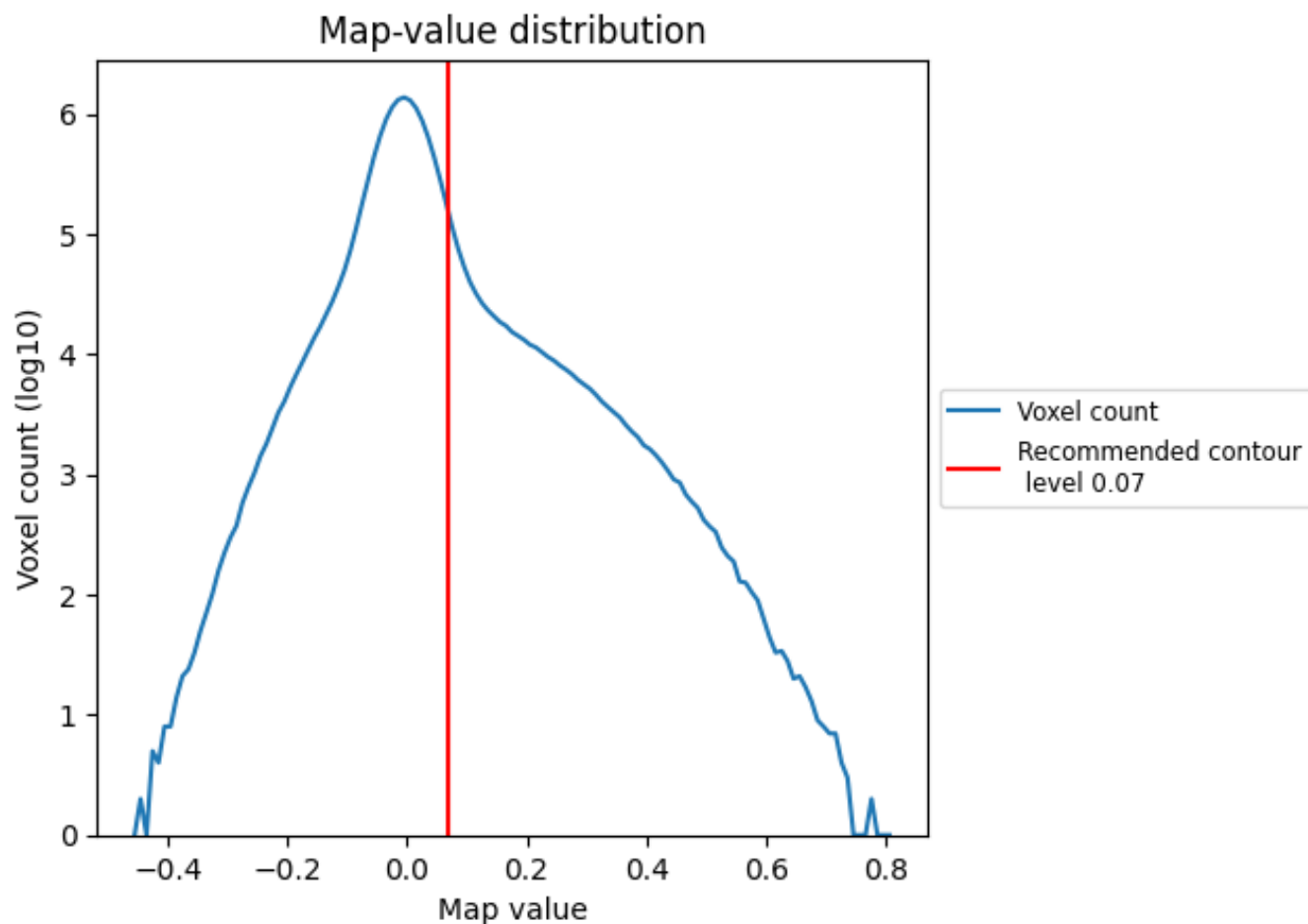
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

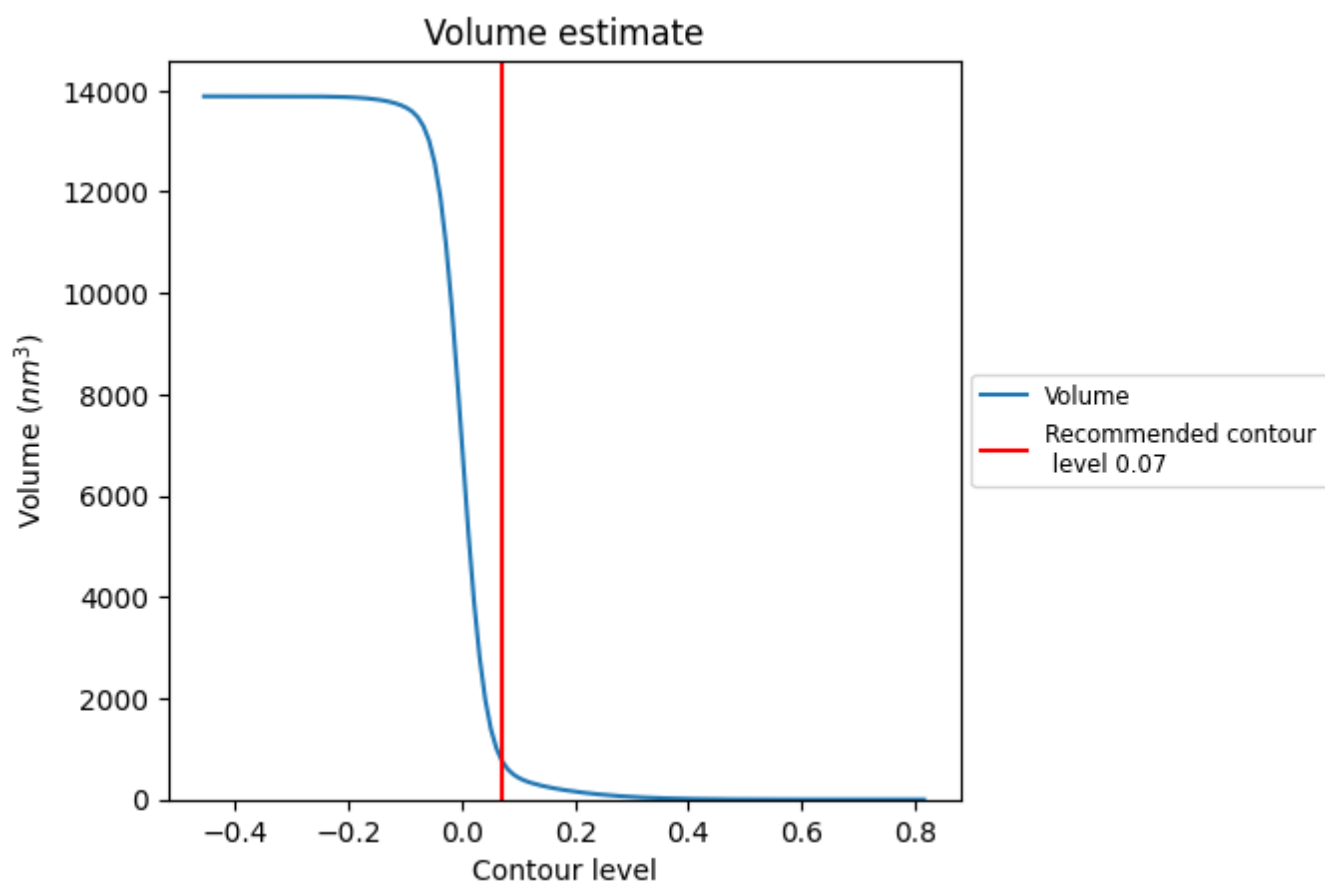
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

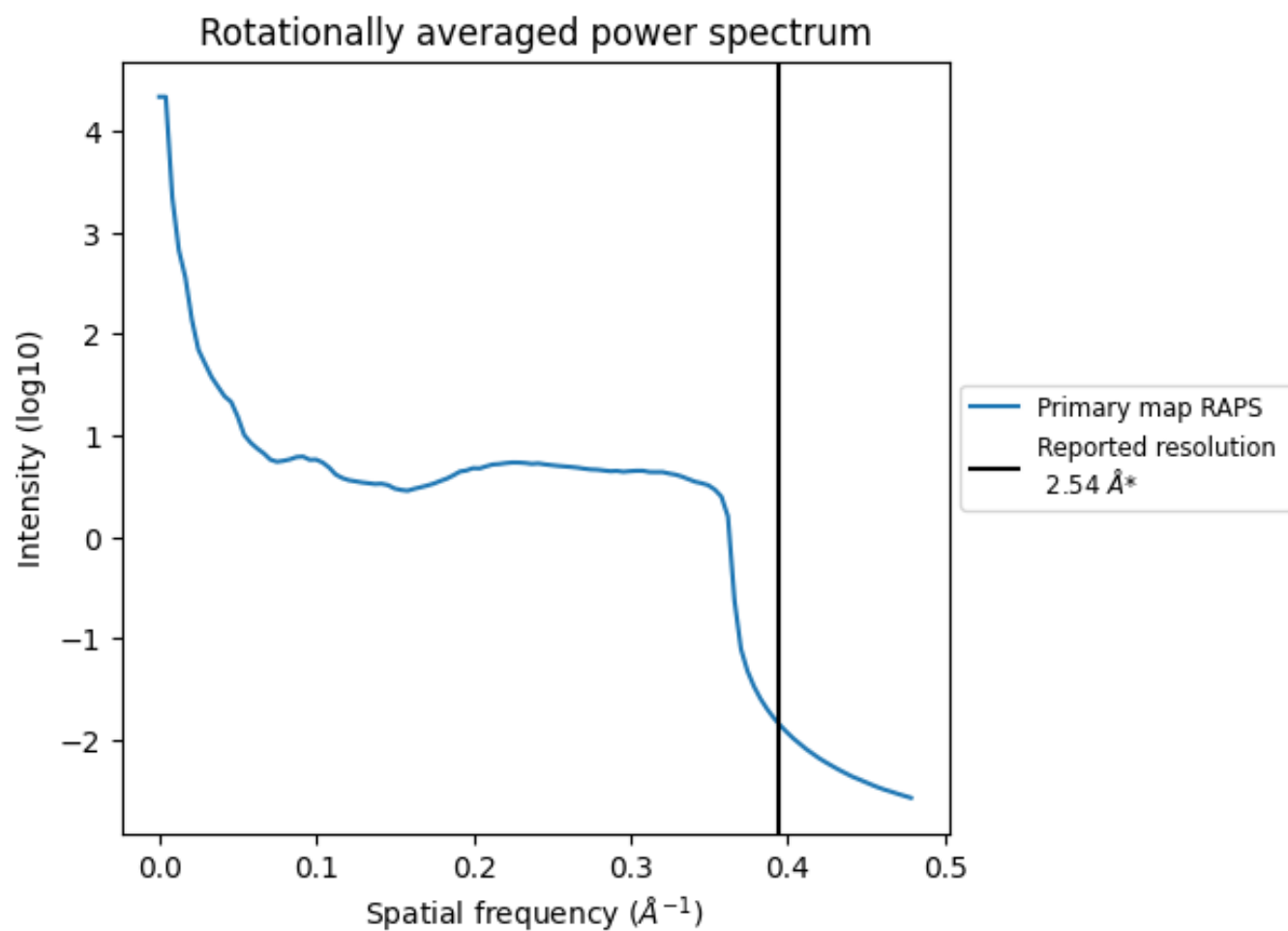
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 791 nm^3 ; this corresponds to an approximate mass of 715 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 0.394 Å⁻¹

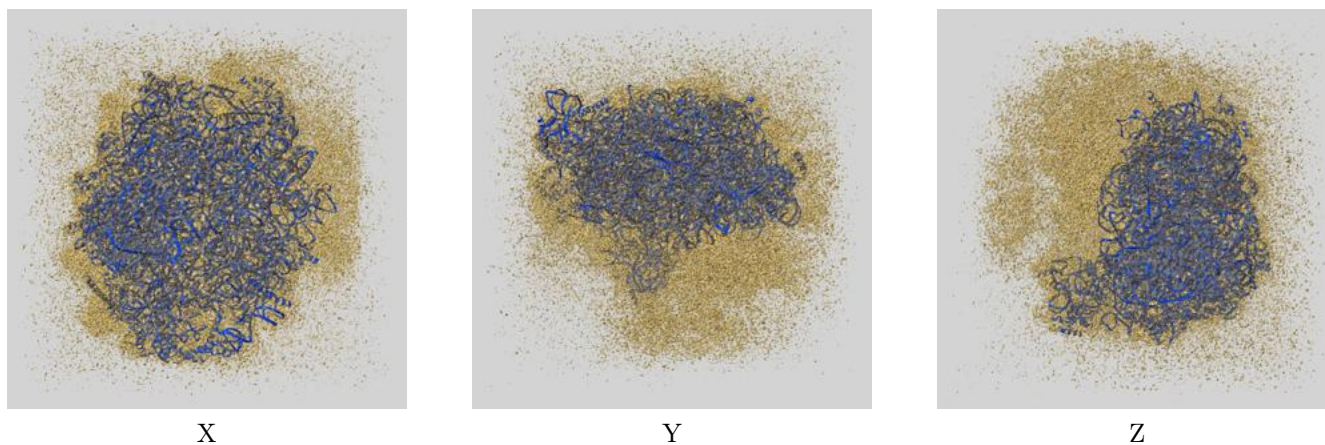
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

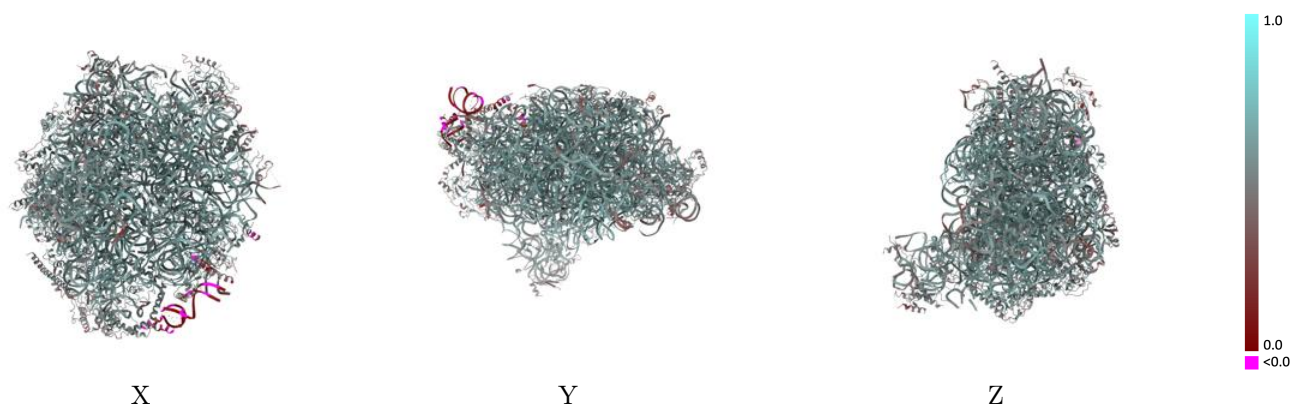
This section contains information regarding the fit between EMDB map EMD-8361 and PDB model 5T5H. Per-residue inclusion information can be found in [section 3](#) on [page 14](#).

9.1 Map-model overlay [i](#)



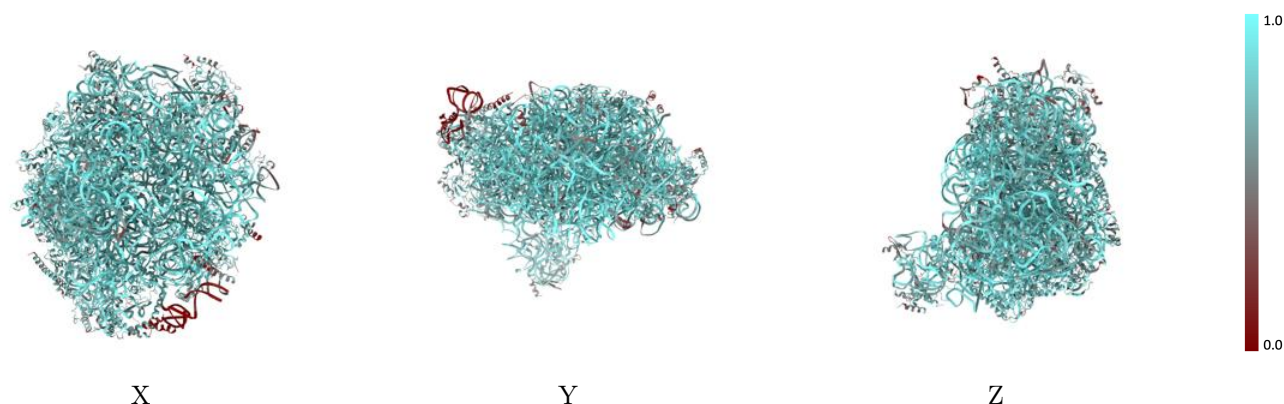
The images above show the 3D surface view of the map at the recommended contour level 0.07 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



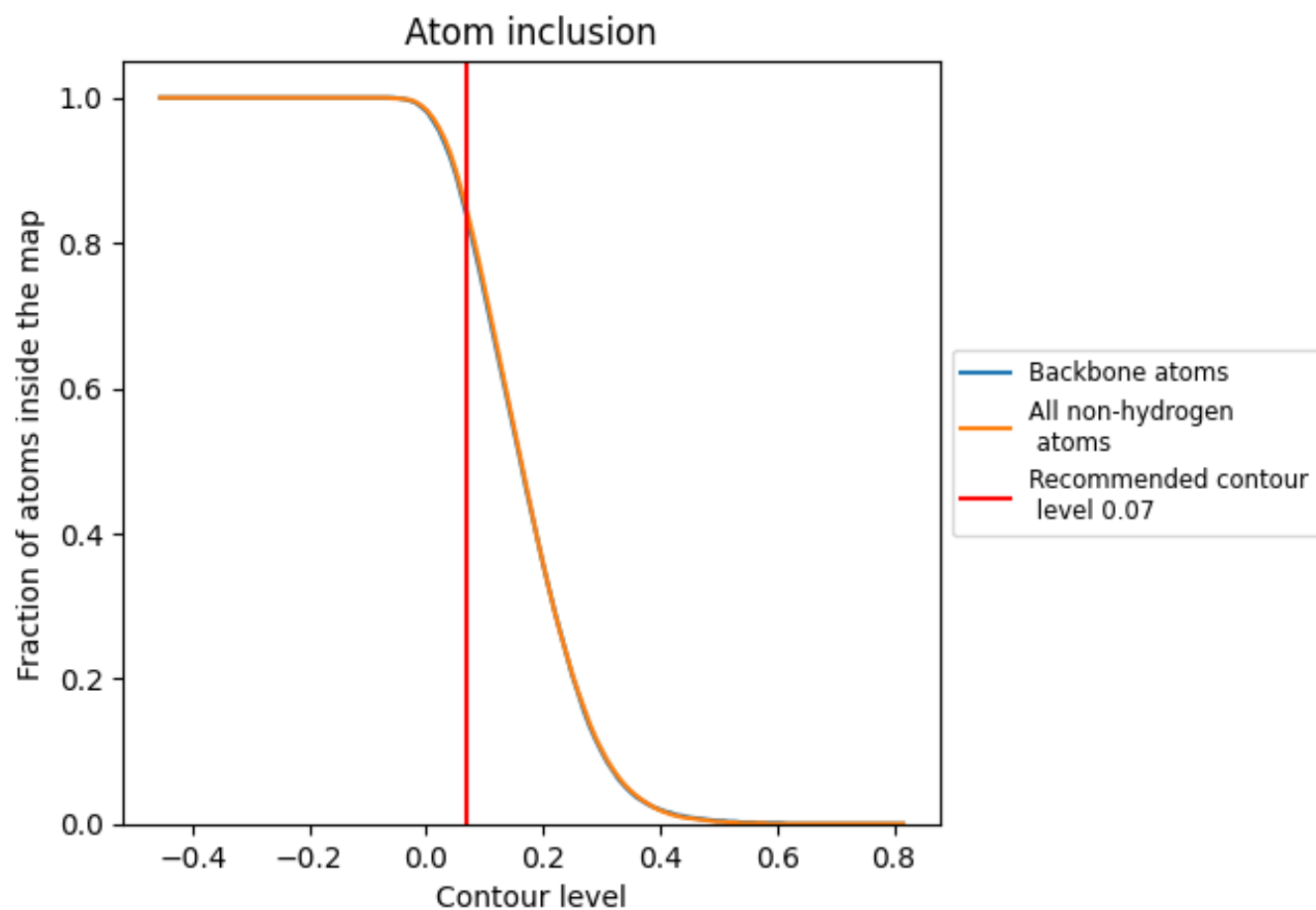
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.07).

9.4 Atom inclusion [i](#)



At the recommended contour level, 84% of all backbone atoms, 84% 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 (0.07) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8430	 0.5690
A	 0.9170	 0.6020
B	 0.8570	 0.5680
C	 0.9280	 0.6040
D	 0.8340	 0.5320
E	 0.8530	 0.5690
F	 0.8430	 0.5310
G	 0.9070	 0.5890
H	 0.8800	 0.5810
I	 0.8460	 0.5800
L	 0.5500	 0.4390
N	 0.8220	 0.5520
O	 0.8200	 0.5570
P	 0.6520	 0.4780
Q	 0.8980	 0.6060
R	 0.8590	 0.5870
S	 0.7320	 0.5270
T	 0.7400	 0.5390
U	 0.7960	 0.5600
V	 0.6440	 0.4670
W	 0.8090	 0.5480
X	 0.8180	 0.5700
Y	 0.7800	 0.5520
Z	 0.7660	 0.5280
a	 0.6640	 0.4860
b	 0.8540	 0.5800
c	 0.7230	 0.5200
d	 0.8190	 0.5680
e	 0.8790	 0.5990
f	 0.8160	 0.5600
g	 0.5300	 0.4320
h	 0.7160	 0.5060
i	 0.8670	 0.5970
j	 0.7890	 0.5600
k	 0.7560	 0.5150



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Chain	Atom inclusion	Q-score
l	 0.8190	 0.5670
m	 0.7610	 0.5160
n	 0.9020	 0.6160
o	 0.8030	 0.5680
p	 0.5950	 0.4730
q	 0.8450	 0.5900
r	 0.8330	 0.5730
t	 0.7510	 0.5290
u	 0.7020	 0.4910
v	 0.7330	 0.5140
w	 0.8270	 0.5810
x	 0.7630	 0.5270