



## Full wwPDB EM Validation Report ⓘ

Nov 7, 2022 – 11:56 AM JST

PDB ID : 5H1S  
EMDB ID : EMD-9572  
Title : Structure of the large subunit of the chloro-ribosome  
Authors : Ahmed, T.; Yin, Z.; Bhushan, S.  
Deposited on : 2016-10-11  
Resolution : 3.50 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](mailto: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>.

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

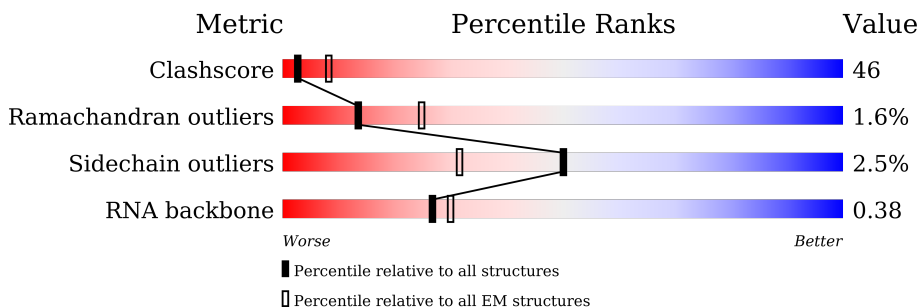
EMDB validation analysis : 0.0.1.dev43  
MolProbity : 4.02b-467  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
MapQ : 1.9.9  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.31.2

# 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 3.50 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.





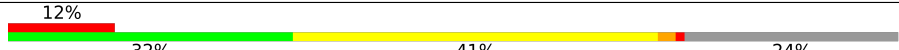
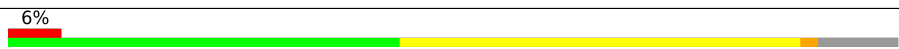
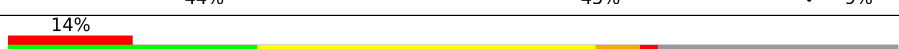
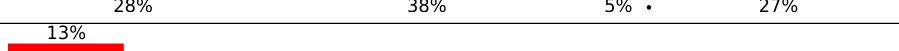
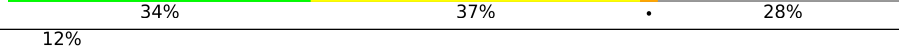
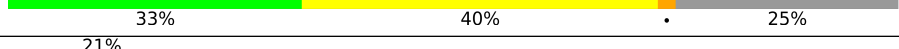
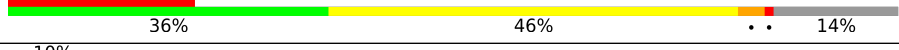
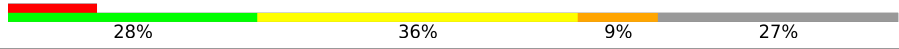

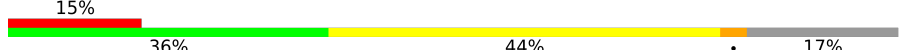
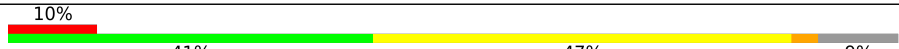


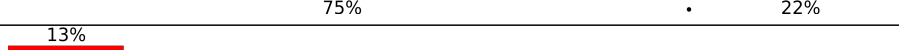

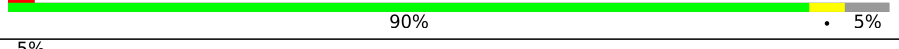
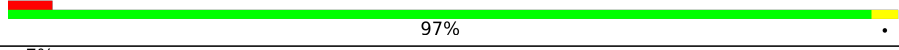





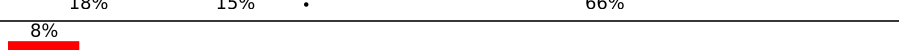
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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  $\geq 3$ , 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	2810	11% (red), 29% (green), 43% (yellow), 27% (orange), . (grey)
2	C	106	6% (red), 9% (green), 46% (yellow), 37% (orange), . . (grey)
3	B	121	. (red), 12% (green), 43% (yellow), 40% (orange), . . (grey)
4	L	191	. (red), 36% (green), 39% (yellow), . . (orange), 23% (grey)
5	M	121	17% (red), 54% (green), 46% (yellow)
6	N	192	9% (red), 31% (green), 51% (yellow), 9% (orange), . (red), 8% (grey)
7	O	135	16% (red), 44% (green), 54% (yellow), . . (grey)

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Mol	Chain	Length	Quality of chain
8	P	116	
9	Q	123	
10	R	156	
11	S	127	
12	T	201	
13	U	199	
14	V	122	
15	W	145	
16	X	137	
17	Y	77	
18	Z	109	
19	E	271	
20	b	56	
21	c	65	
22	d	60	
23	e	73	
24	f	37	
25	F	221	
26	G	243	
27	H	220	
28	I	182	
29	J	155	
30	g	142	
31	a	94	
32	h	116	

## 2 Entry composition [i](#)

There are 32 unique types of molecules in this entry. The entry contains 90825 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	2799	60117	26819	11134	19365	2799	0	0

- Molecule 2 is a RNA chain called Spinach chloroplast 4.5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	C	102	2187	977	403	705	102	0	0

- Molecule 3 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	B	117	2500	1116	452	815	117	0	0

- Molecule 4 is a protein called 50S ribosomal protein L13, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	L	147	1184	754	225	202	3	0	0

- Molecule 5 is a protein called 50S ribosomal protein L14, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	M	121	942	588	179	170	5	0	0

- Molecule 6 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	N	177	1342	836	264	236	6	0	0

- Molecule 7 is a protein called 50S ribosomal protein L16, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	O	134	1067	672	217	173	5	0	0

- Molecule 8 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	P	116	944	592	193	155	4	0	0

- Molecule 9 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	Q	120	947	589	183	170	5	0	0

- Molecule 10 is a protein called 50S ribosomal protein L19, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	R	118	953	610	186	156	1	0	0

- Molecule 11 is a protein called 50S ribosomal protein L20, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	S	115	996	633	208	153	2	0	0

- Molecule 12 is a protein called 50S ribosomal protein L21, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
12	T	147	1171	759	202	210	0	0

- Molecule 13 is a protein called 50S ribosomal protein L22, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	U	144	1149	731	210	200	8	0	0

- Molecule 14 is a protein called 50S ribosomal protein L23, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	V	92	Total	C	N	O	S	0	0
			740	477	129	132	2		

- Molecule 15 is a protein called 50S ribosomal protein L24, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	W	124	Total	C	N	O	S	0	0
			993	624	187	180	2		

- Molecule 16 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	X	100	Total	C	N	O	S	0	0
			810	511	159	140			

- Molecule 17 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Y	74	Total	C	N	O	S	0	0
			605	385	121	98	1		

- Molecule 18 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Z	90	Total	C	N	O	S	0	0
			754	470	150	131	3		

- Molecule 19 is a protein called 50S ribosomal protein L2, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	E	247	Total	C	N	O	S	0	0
			1904	1181	390	327	6		

- Molecule 20 is a protein called 50S ribosomal protein L32, chloroplastic.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	b	46	Total	C	N	O	0	0
			378	250	70	58		

- Molecule 21 is a protein called 50S ribosomal protein L33, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	c	51	Total	C	N	O	S	0	0
			415	258	83	70	4		

- Molecule 22 is a protein called 50S ribosomal protein L34, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	d	57	Total	C	N	O	S	0	0
			445	268	103	71	3		

- Molecule 23 is a protein called 50S ribosomal protein L35, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	e	69	Total	C	N	O	S	0	0
			563	353	119	90	1		

- Molecule 24 is a protein called 50S ribosomal protein L36, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	f	37	Total	C	N	O	S	0	0
			304	186	70	44	4		

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	F	212	Total	C	N	O	S	0	0
			1620	1025	295	289	11		

- Molecule 26 is a protein called 50S ribosomal protein L4, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	G	210	Total	C	N	O	S	0	0
			1655	1052	308	292	3		

- Molecule 27 is a protein called 50S ribosomal protein L5, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	H	175	Total	C	N	O	S	0	0
			1351	862	233	248	8		

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	I	173	Total	C	N	O	S	0	0
			1353	855	249	245	4		

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	J	53	Total	C	N	O	S	0	0
			423	280	74	68	1		

- Molecule 30 is a protein called 50S ribosomal protein 5 alpha, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	g	43	Total	C	N	O	S	0	0
			345	218	65	59	3		

- Molecule 31 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	a	38	Total	C	N	O	S	0	0
			300	187	49	62	2		

- Molecule 32 is a protein called 50S ribosomal protein 6, chloroplastic.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	h	46	Total	C	N	O	S	0	0
			368	237	71	59	1		



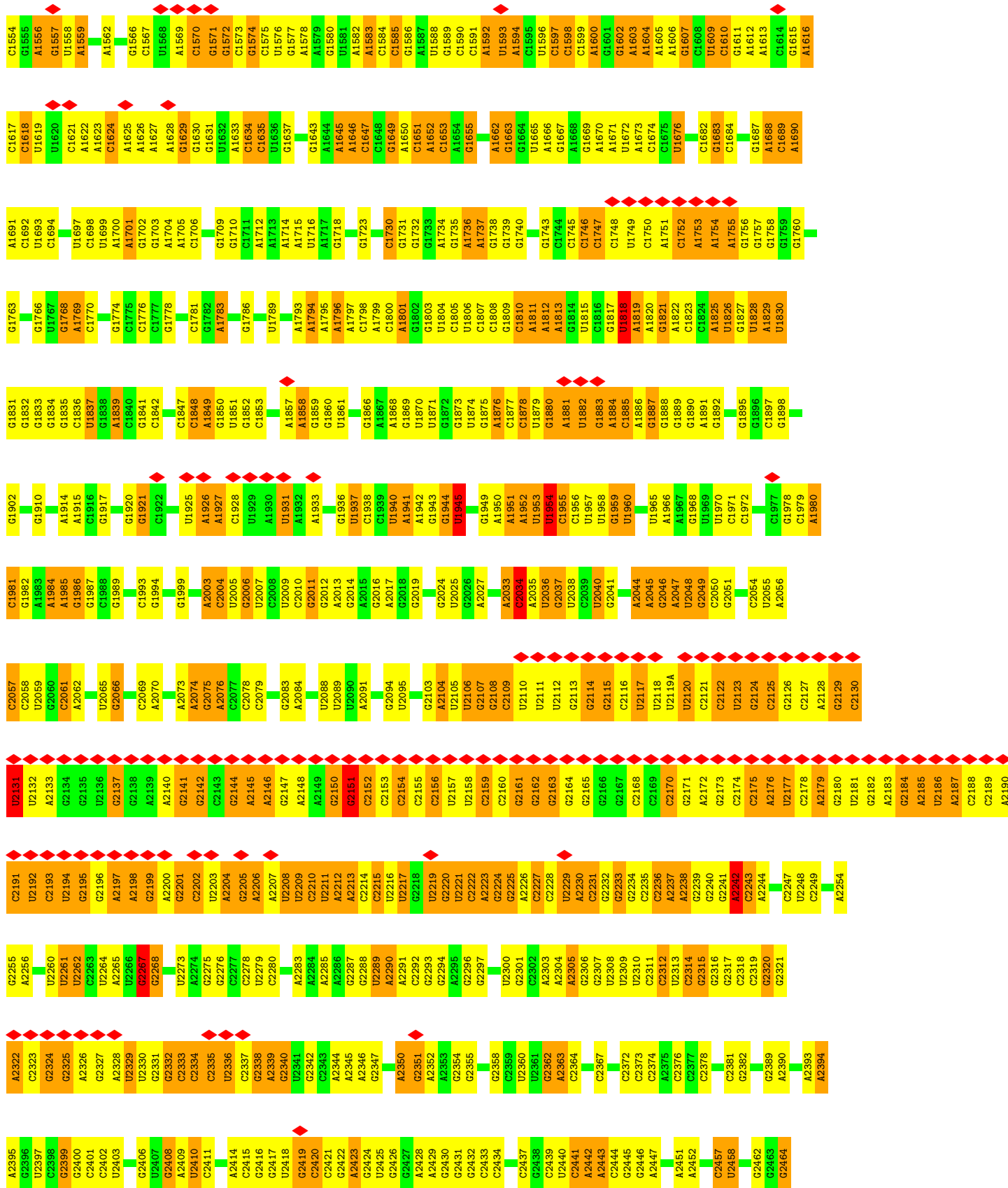
### 3 Residue-property plots i

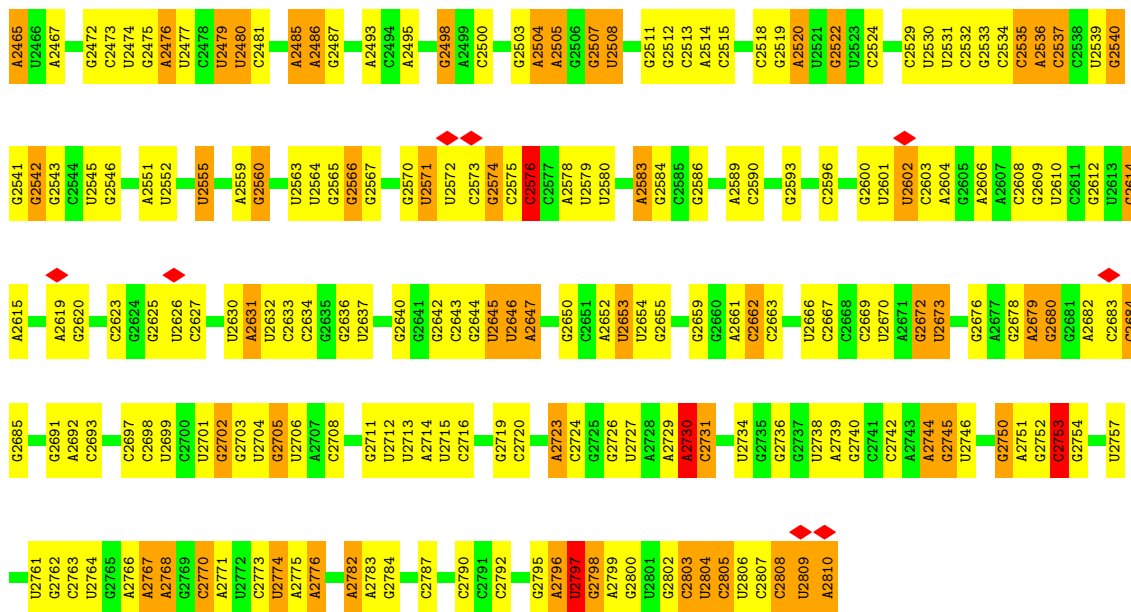
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

#### • Molecule 1: 23S rRNA

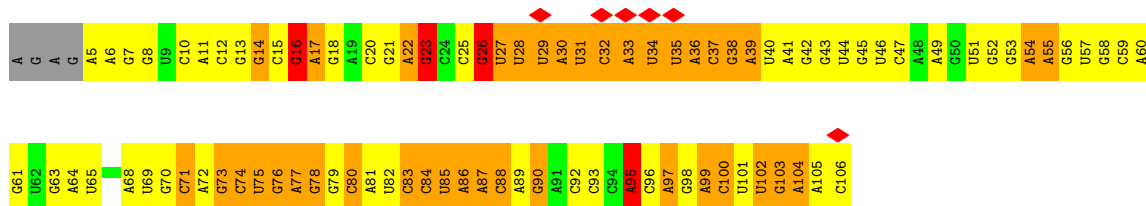




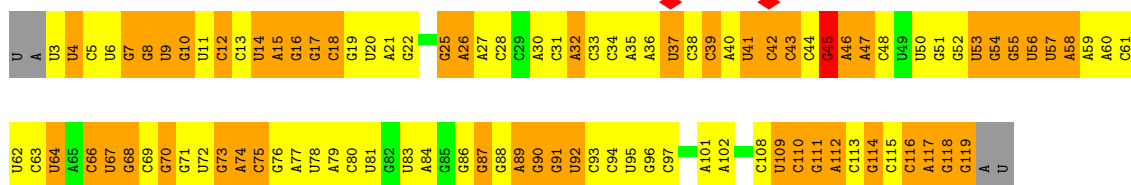




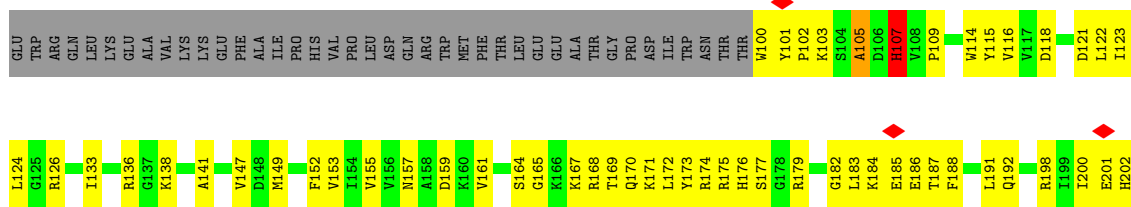
• Molecule 2: Spinach chloroplast 4.5S rRNA



• Molecule 3: 5S rRNA

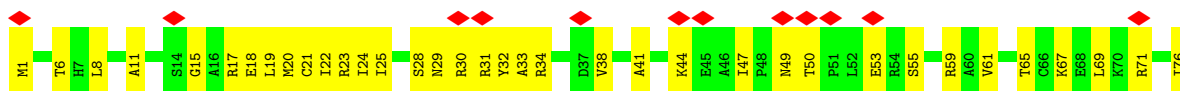


• Molecule 4: 50S ribosomal protein L13, chloroplastic

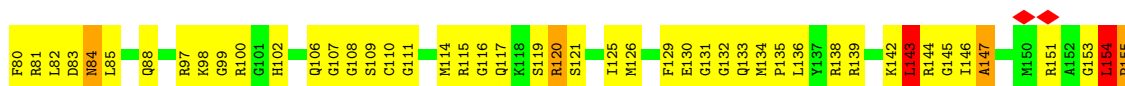




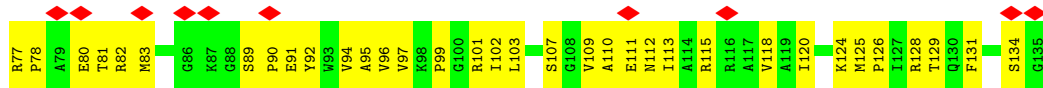
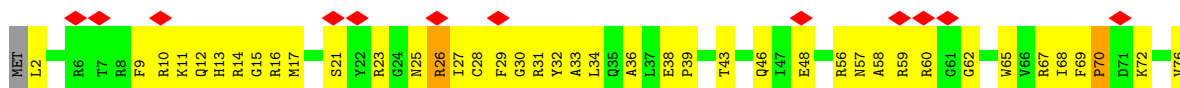
• Molecule 5: 50S ribosomal protein L14, chloroplastic



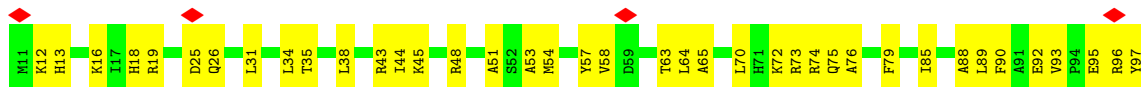
• Molecule 6: 50S ribosomal protein L15

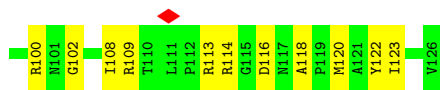


• Molecule 7: 50S ribosomal protein L16, chloroplastic

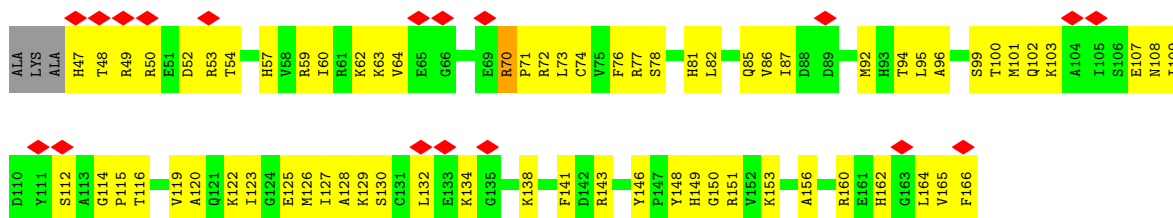


• Molecule 8: 50S ribosomal protein L17

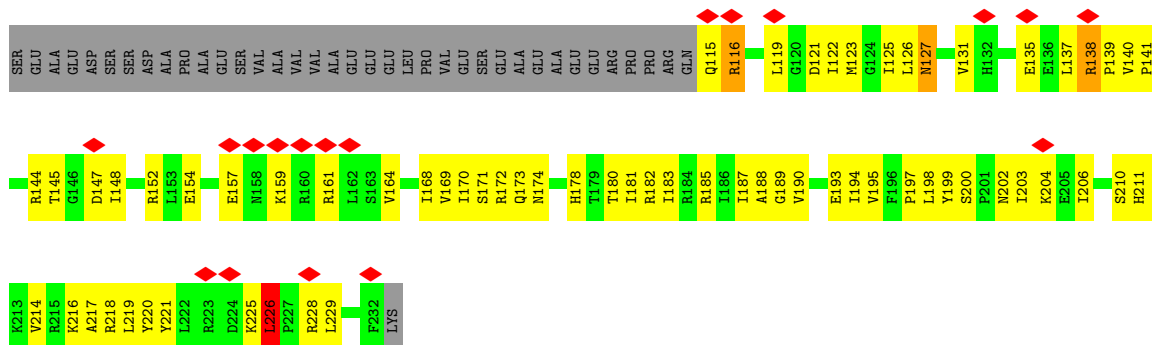




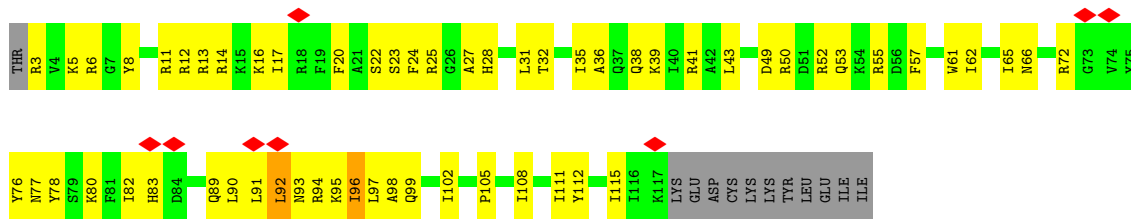
• Molecule 9: 50S ribosomal protein L18



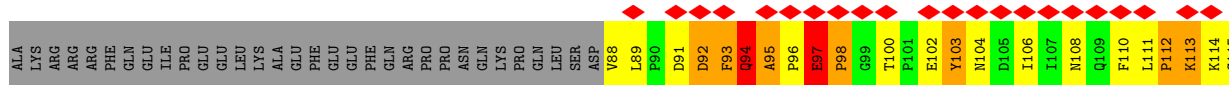
• Molecule 10: 50S ribosomal protein L19, chloroplastic

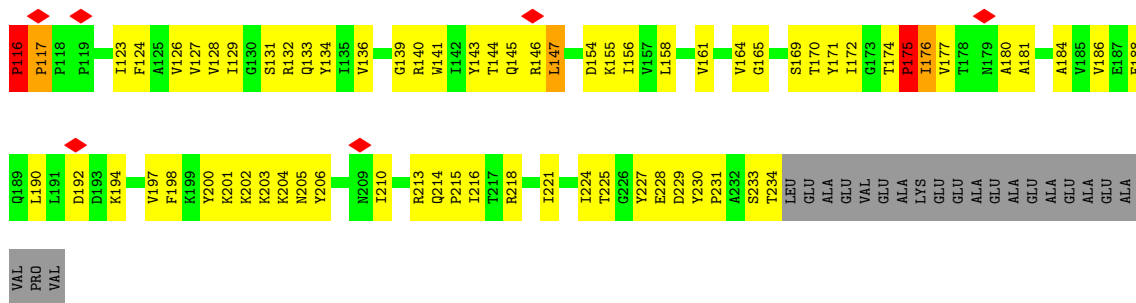


• Molecule 11: 50S ribosomal protein L20, chloroplastic

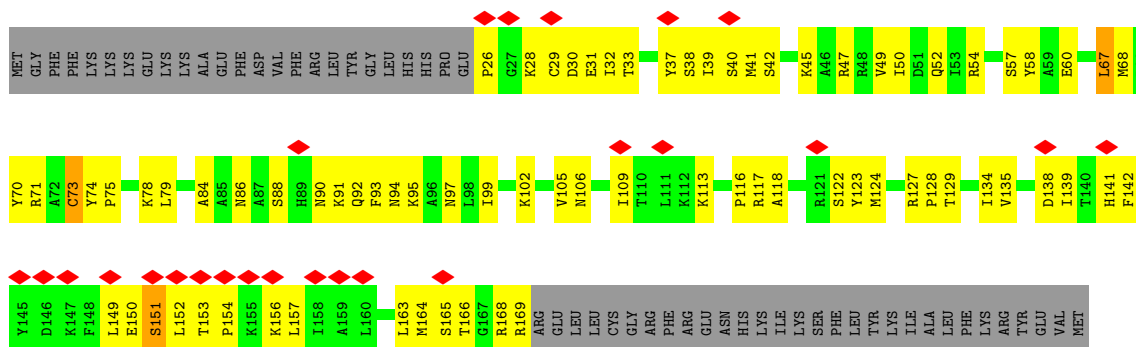


• Molecule 12: 50S ribosomal protein L21, chloroplastic

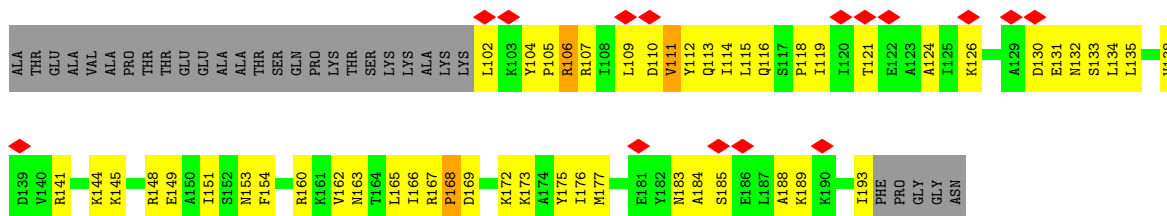




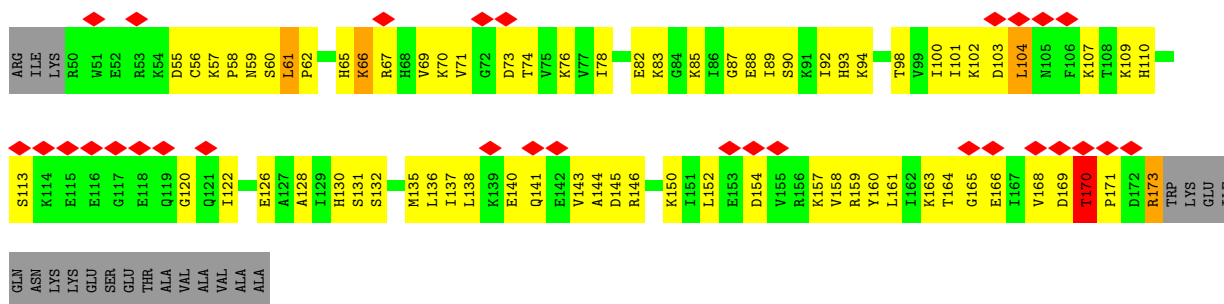
- Molecule 13: 50S ribosomal protein L22, chloroplastic



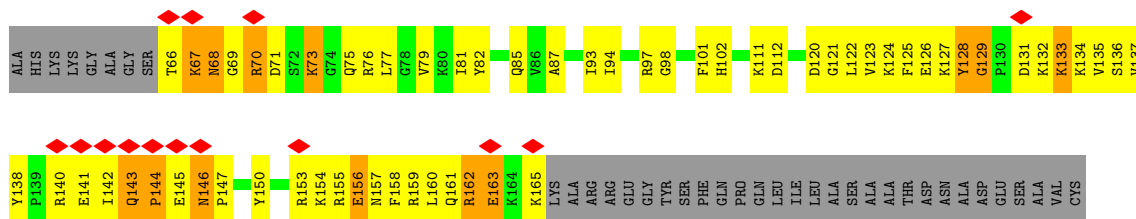
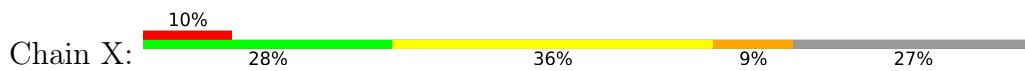
- Molecule 14: 50S ribosomal protein L23, chloroplastic



- Molecule 15: 50S ribosomal protein L24, chloroplastic



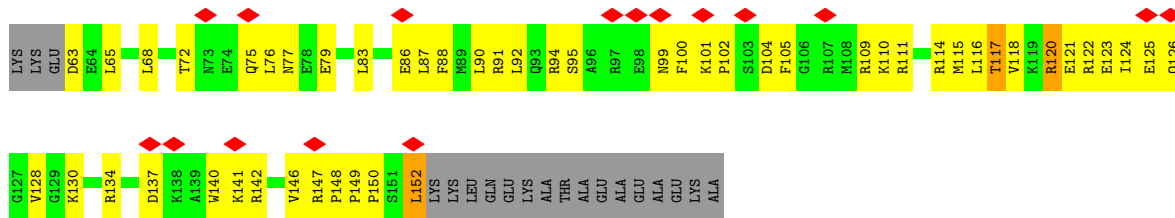
- Molecule 16: 50S ribosomal protein L27



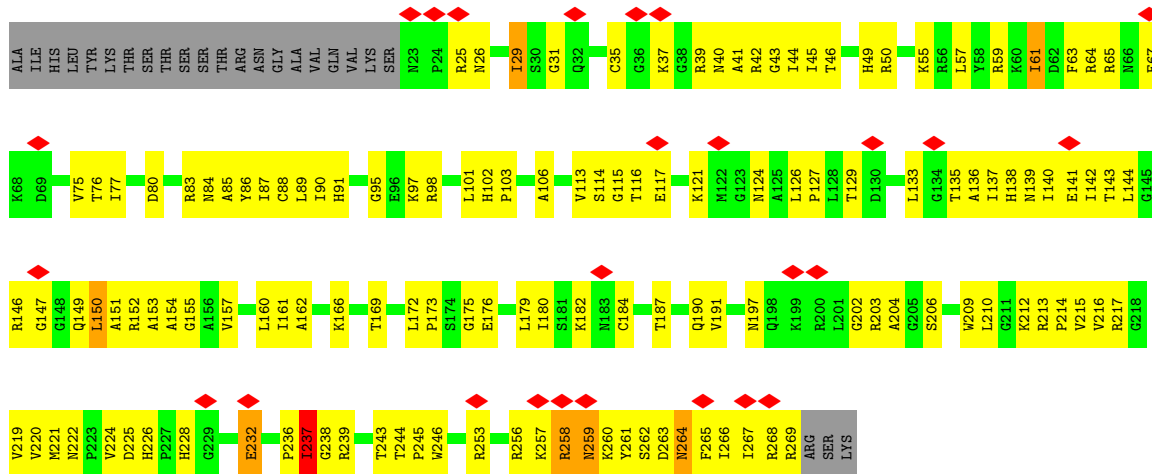
• Molecule 17: 50S ribosomal protein L28



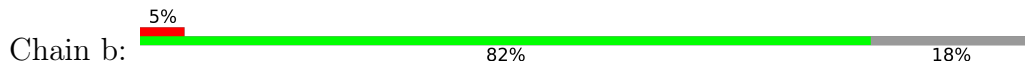
• Molecule 18: 50S ribosomal protein L29



• Molecule 19: 50S ribosomal protein L2, chloroplastic



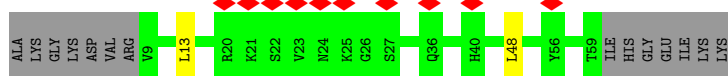
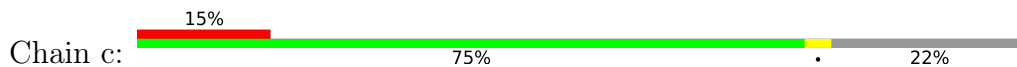
• Molecule 20: 50S ribosomal protein L32, chloroplastic



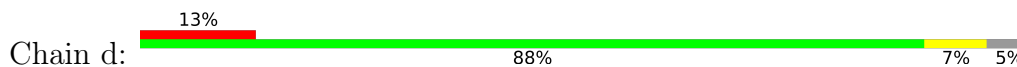




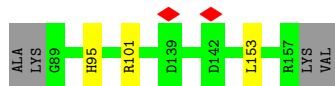
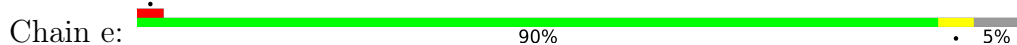
• Molecule 21: 50S ribosomal protein L33, chloroplastic



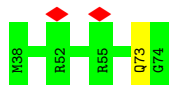
• Molecule 22: 50S ribosomal protein L34, chloroplastic



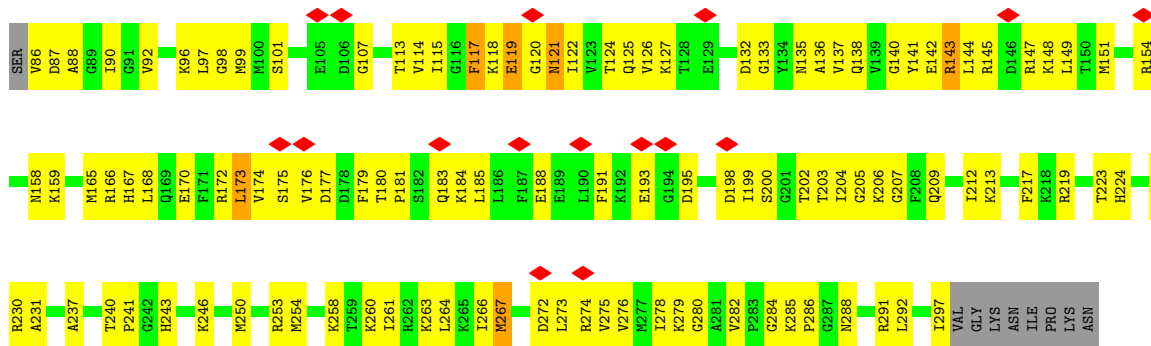
• Molecule 23: 50S ribosomal protein L35, chloroplastic



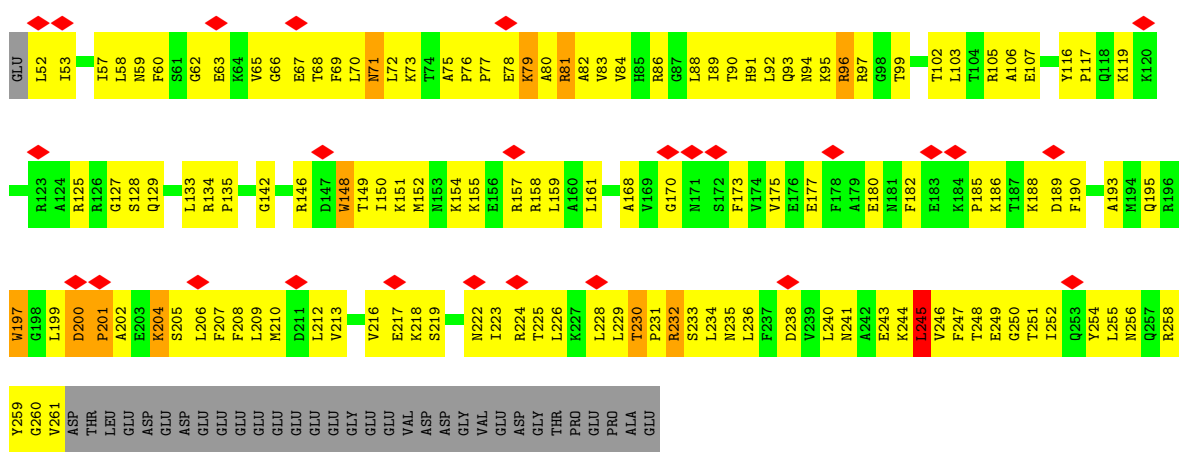
• Molecule 24: 50S ribosomal protein L36, chloroplastic



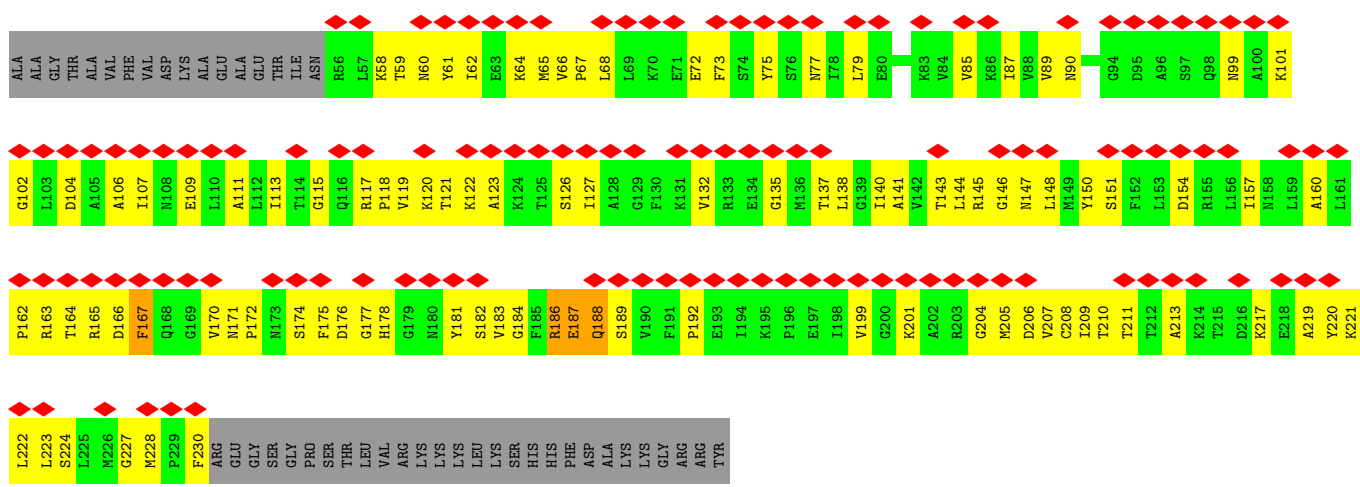
• Molecule 25: 50S ribosomal protein L3



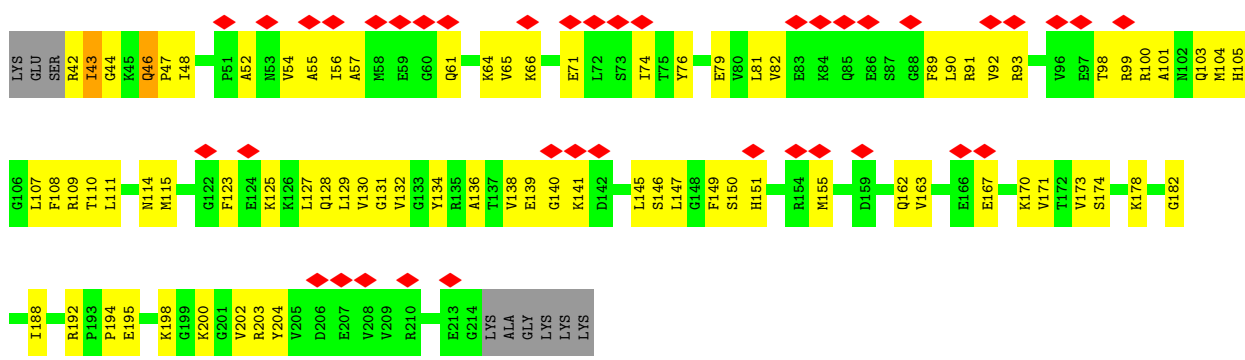
• Molecule 26: 50S ribosomal protein L4, chloroplastic



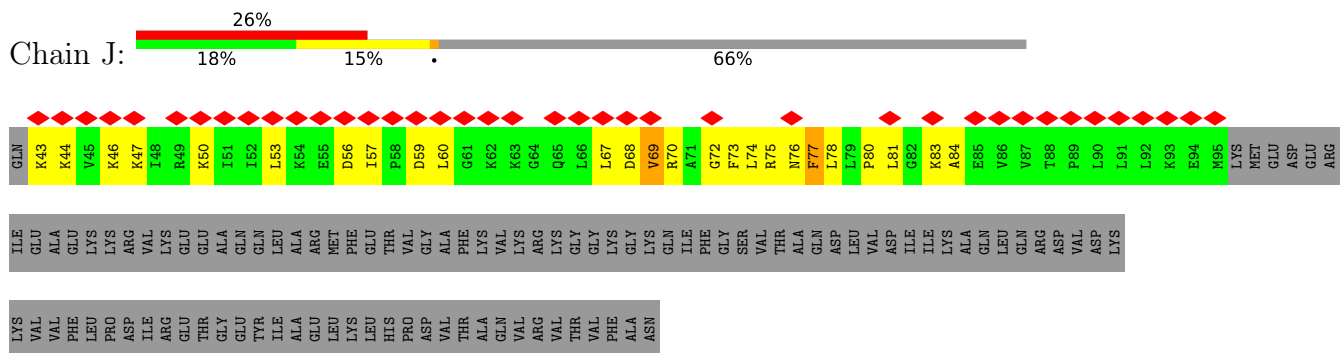
• Molecule 27: 50S ribosomal protein L5, chloroplastic



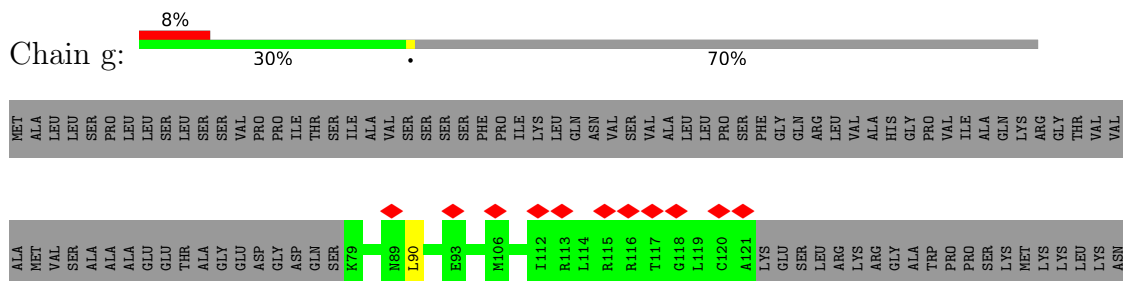
• Molecule 28: 50S ribosomal protein L6



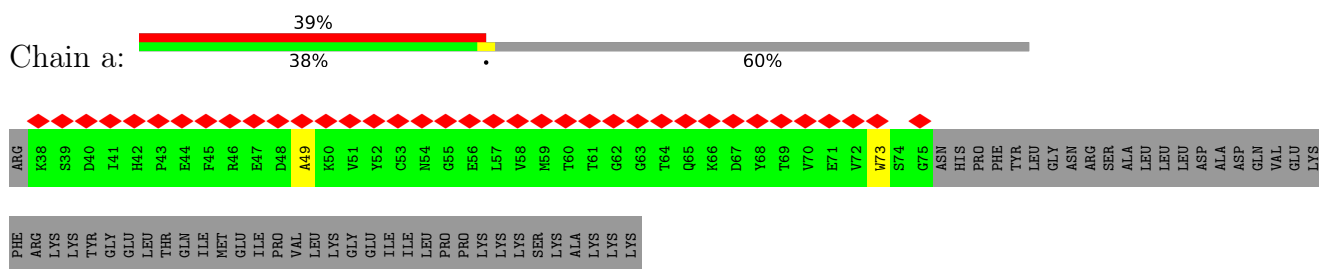
• Molecule 29: 50S ribosomal protein L9



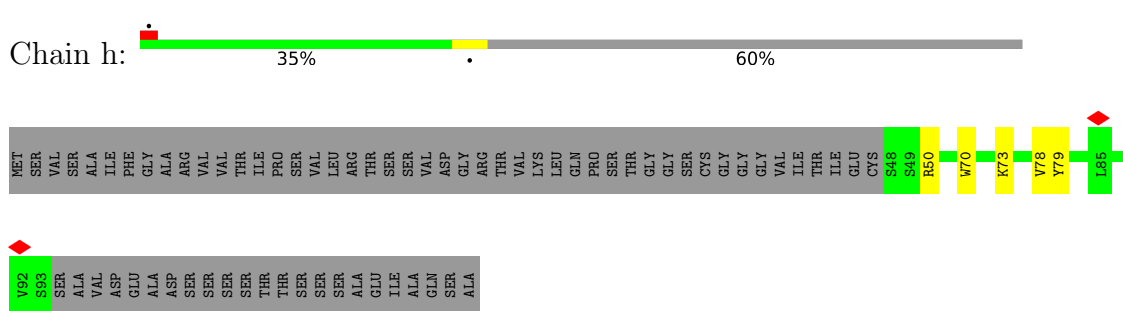
• Molecule 30: 50S ribosomal protein 5 alpha, chloroplastic



• Molecule 31: 50S ribosomal protein L31



• Molecule 32: 50S ribosomal protein 6, chloroplastic



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	174949	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TECNAI ARCTICA	Depositor
Voltage (kV)	200	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	26	Depositor
Minimum defocus (nm)	200	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	109375	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.928	Depositor
Minimum map value	-0.585	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.028	Depositor
Recommended contour level	0.132	Depositor
Map size ( $\text{\AA}$ )	399.36, 399.36, 399.36	wwPDB
Map dimensions	312, 312, 312	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.28, 1.28, 1.28	Depositor

## 5 Model quality i

### 5.1 Standard geometry i

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	0.80	18/67340 (0.0%)	0.94	109/105056 (0.1%)
2	C	3.05	9/2449 (0.4%)	1.30	26/3817 (0.7%)
3	B	0.78	0/2796	0.87	2/4357 (0.0%)
4	L	0.67	0/1212	0.68	1/1634 (0.1%)
5	M	0.60	0/951	0.69	1/1282 (0.1%)
6	N	0.40	0/1361	0.77	3/1806 (0.2%)
7	O	0.63	1/1089 (0.1%)	0.71	1/1461 (0.1%)
8	P	0.63	0/959	0.76	0/1280
9	Q	0.52	0/963	0.67	0/1293
10	R	0.61	0/967	0.79	2/1300 (0.2%)
11	S	0.77	0/1013	0.82	1/1351 (0.1%)
12	T	0.73	0/1199	0.88	3/1633 (0.2%)
13	U	0.60	1/1168 (0.1%)	0.69	0/1566
14	V	0.53	0/749	0.65	0/1006
15	W	0.49	0/1006	0.67	2/1343 (0.1%)
16	X	0.66	0/825	0.80	2/1099 (0.2%)
17	Y	0.65	0/615	0.78	2/819 (0.2%)
18	Z	0.52	0/762	0.71	0/1012
19	E	0.60	0/1938	0.78	1/2603 (0.0%)
20	b	0.72	0/387	0.65	0/513
21	c	0.55	0/422	0.85	1/564 (0.2%)
22	d	0.45	0/447	0.63	0/588
23	e	0.72	0/569	0.82	1/752 (0.1%)
24	f	0.57	0/306	0.78	0/403
25	F	0.66	0/1646	0.74	1/2201 (0.0%)
26	G	0.65	2/1687 (0.1%)	0.78	1/2271 (0.0%)
27	H	0.37	0/1372	0.60	0/1848
28	I	0.49	0/1374	0.63	1/1849 (0.1%)
29	J	0.33	0/427	0.65	0/568
30	g	0.44	0/345	0.85	1/455 (0.2%)
31	a	0.29	0/306	0.60	0/413
32	h	0.70	1/382 (0.3%)	0.81	2/520 (0.4%)
All	All	0.88	32/99032 (0.0%)	0.90	164/148663 (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
9	Q	0	1
10	R	0	1
11	S	0	3
13	U	0	1
19	E	0	3
24	f	0	1
25	F	0	1
26	G	0	2
27	H	0	1
32	h	0	2
All	All	0	16

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	95	A	N3-C4	76.76	1.80	1.34
2	C	95	A	C6-N1	71.09	1.85	1.35
2	C	95	A	C5-C4	50.90	1.74	1.38
2	C	95	A	C2-N3	47.29	1.76	1.33
2	C	95	A	N1-C2	47.04	1.76	1.34
2	C	95	A	C5-C6	42.75	1.79	1.41
32	h	70	TRP	CB-CG	-7.30	1.37	1.50
2	C	14	G	N9-C4	-6.91	1.32	1.38
1	A	2168	C	C1'-N1	6.58	1.58	1.48
1	A	2177	U	C1'-N1	6.53	1.58	1.48
1	A	2170	C	C1'-N1	6.40	1.58	1.48
1	A	2155	C	C1'-N1	6.20	1.58	1.48
1	A	2158	U	C1'-N1	6.05	1.57	1.48
1	A	2156	C	C1'-N1	5.95	1.57	1.48
1	A	2131	U	C1'-N1	5.92	1.57	1.48
1	A	2145	A	C1'-N9	-5.88	1.38	1.46
1	A	2179	A	C1'-N9	-5.86	1.38	1.46
1	A	2154	C	C1'-N1	5.77	1.57	1.48
2	C	14	G	N3-C4	-5.71	1.31	1.35
1	A	2152	C	C1'-N1	5.66	1.57	1.48
1	A	2130	C	C1'-N1	5.63	1.57	1.48
1	A	2144	G	C1'-N9	-5.51	1.39	1.46
1	A	794	A	N9-C4	-5.43	1.34	1.37
26	G	197	TRP	CB-CG	-5.40	1.40	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	G	148	TRP	CB-CG	-5.27	1.40	1.50
7	O	76	VAL	C-N	-5.24	1.22	1.34
1	A	2146	A	C1'-N9	-5.17	1.39	1.46
13	U	73	CYS	CB-SG	-5.13	1.73	1.81
1	A	2479	U	N3-C4	-5.10	1.33	1.38
1	A	2151	G	C1'-N9	-5.09	1.39	1.46
2	C	25	C	N1-C2	-5.07	1.35	1.40
1	A	2480	U	N3-C4	-5.05	1.33	1.38

All (164) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	95	A	N1-C2-N3	-28.24	115.18	129.30
2	C	95	A	C2-N3-C4	24.30	122.75	110.60
2	C	95	A	N7-C8-N9	14.45	121.03	113.80
6	N	196	LEU	C-N-CD	-14.44	88.83	120.60
2	C	95	A	C4-C5-N7	-13.30	104.05	110.70
12	T	116	PRO	C-N-CD	-11.72	94.82	120.60
2	C	14	G	N3-C4-N9	-11.20	119.28	126.00
6	N	154	LEU	C-N-CD	-11.17	96.03	120.60
2	C	95	A	N3-C4-N9	10.29	135.63	127.40
1	A	783	U	N1-C2-O2	9.16	129.22	122.80
2	C	95	A	C6-N1-C2	9.05	124.03	118.60
21	c	48	LEU	CA-CB-CG	-8.73	95.22	115.30
1	A	2479	U	C5-C4-O4	8.50	131.00	125.90
1	A	684	C	C2-N3-C4	-8.21	115.79	119.90
1	A	764	A	C5-N7-C8	-8.11	99.84	103.90
2	C	14	G	N3-C4-C5	8.01	132.60	128.60
2	C	95	A	N9-C4-C5	-8.00	102.60	105.80
1	A	1035	C	C2-N3-C4	-7.87	115.97	119.90
1	A	2730	A	N7-C8-N9	7.74	117.67	113.80
1	A	1335	C	C2-N1-C1'	7.63	127.20	118.80
1	A	818	U	C2-N3-C4	-7.62	122.43	127.00
2	C	95	A	N3-C4-C5	-7.51	121.55	126.80
1	A	2480	U	C5-C4-O4	7.45	130.37	125.90
1	A	2504	A	C6-N1-C2	-7.34	114.19	118.60
1	A	2504	A	N1-C2-N3	7.31	132.96	129.30
2	C	14	G	C5-C6-O6	7.26	132.96	128.60
1	A	1035	C	N1-C2-N3	7.16	124.21	119.20
1	A	1609	U	C5-C4-O4	7.12	130.17	125.90
1	A	1585	C	N3-C2-O2	-7.10	116.93	121.90
1	A	2312	C	C2-N3-C4	-7.08	116.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2753	C	N1-C2-O2	7.07	123.14	118.90
1	A	730	C	N3-C2-O2	-7.00	117.00	121.90
1	A	755	U	C5-C4-O4	-6.96	121.72	125.90
1	A	2034	C	C2-N3-C4	-6.93	116.43	119.90
2	C	95	A	C6-C5-N7	6.92	137.15	132.30
2	C	23	G	C6-C5-N7	-6.89	126.27	130.40
16	X	129	GLY	N-CA-C	-6.88	95.90	113.10
1	A	2480	U	C2-N1-C1'	6.86	125.93	117.70
1	A	2730	A	C8-N9-C4	-6.79	103.08	105.80
12	T	175	PRO	CA-N-CD	-6.76	102.03	111.50
2	C	14	G	N9-C4-C5	6.74	108.09	105.40
1	A	1444	A	N1-C2-N3	6.71	132.65	129.30
26	G	245	LEU	CA-CB-CG	6.58	130.45	115.30
30	g	90	LEU	CB-CG-CD2	-6.55	99.87	111.00
1	A	1035	C	N1-C2-O2	-6.49	115.01	118.90
5	M	49	ASN	C-N-CA	6.46	137.84	121.70
1	A	2505	A	C6-N1-C2	-6.43	114.74	118.60
1	A	1203	C	C2-N1-C1'	6.41	125.85	118.80
1	A	1444	A	C6-N1-C2	-6.39	114.77	118.60
1	A	764	A	N7-C8-N9	6.38	116.99	113.80
2	C	14	G	C2-N3-C4	-6.37	108.71	111.90
2	C	25	C	C2-N1-C1'	-6.26	111.91	118.80
1	A	1035	C	C6-N1-C1'	6.25	128.30	120.80
1	A	2217	U	C5-C4-O4	-6.20	122.18	125.90
2	C	23	G	C4-C5-N7	6.20	113.28	110.80
1	A	783	U	N3-C2-O2	-6.14	117.90	122.20
1	A	2457	C	C2-N1-C1'	6.14	125.55	118.80
3	B	45	G	P-O3'-C3'	6.11	127.03	119.70
1	A	538	C	O4'-C1'-N1	6.11	113.09	108.20
1	A	783	U	C2-N1-C1'	6.09	125.01	117.70
1	A	1335	C	C6-N1-C1'	-6.07	113.52	120.80
1	A	1655	G	C6-C5-N7	-6.06	126.77	130.40
1	A	1239	C	N1-C2-O2	6.04	122.52	118.90
1	A	135	C	N3-C2-O2	-6.04	117.67	121.90
1	A	2311	C	N3-C2-O2	-6.04	117.67	121.90
2	C	14	G	C8-N9-C1'	6.02	134.83	127.00
1	A	2753	C	C2-N1-C1'	6.01	125.41	118.80
2	C	14	G	C4-N9-C1'	-5.99	118.71	126.50
17	Y	73	ARG	NE-CZ-NH2	-5.97	117.31	120.30
1	A	544	G	C6-C5-N7	-5.92	126.85	130.40
1	A	2479	U	N3-C4-O4	-5.92	115.25	119.40
1	A	755	U	C2-N3-C4	-5.88	123.47	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	C	23	G	C4-N9-C1'	5.87	134.12	126.50
1	A	2753	C	C6-N1-C1'	-5.86	113.76	120.80
1	A	2480	U	N3-C4-O4	-5.77	115.36	119.40
1	A	2505	A	N1-C2-N3	5.77	132.19	129.30
32	h	70	TRP	CA-CB-CG	-5.76	102.76	113.70
19	E	101	LEU	C-N-CA	-5.72	107.41	121.70
1	A	1035	C	C2-N1-C1'	-5.72	112.51	118.80
1	A	1609	U	C2-N1-C1'	5.71	124.56	117.70
1	A	2034	C	C5-C4-N4	-5.70	116.21	120.20
1	A	1610	C	N1-C2-O2	5.69	122.32	118.90
23	e	101	ARG	NE-CZ-NH2	-5.67	117.47	120.30
2	C	25	C	N1-C2-O2	-5.65	115.51	118.90
2	C	23	G	C8-N9-C1'	-5.64	119.67	127.00
1	A	764	A	C8-N9-C4	-5.62	103.55	105.80
1	A	1347	U	N1-C2-O2	5.61	126.72	122.80
1	A	1960	U	N3-C2-O2	-5.60	118.28	122.20
1	A	1945	U	C2-N1-C1'	5.58	124.40	117.70
1	A	1203	C	N1-C2-O2	5.58	122.25	118.90
1	A	1655	G	C4-C5-N7	5.58	113.03	110.80
4	L	239	LEU	CA-CB-CG	5.56	128.08	115.30
2	C	90	G	C4-C5-N7	5.52	113.01	110.80
1	A	213	A	P-O3'-C3'	5.52	126.32	119.70
2	C	25	C	C6-N1-C1'	5.51	127.42	120.80
17	Y	98	LEU	CA-CB-CG	5.50	127.95	115.30
1	A	1818	U	N3-C2-O2	-5.46	118.38	122.20
1	A	2535	C	N1-C2-O2	5.46	122.17	118.90
1	A	1344	G	N3-C4-N9	5.44	129.26	126.00
1	A	2545	U	N1-C2-O2	5.43	126.60	122.80
1	A	404	U	N1-C2-O2	5.43	126.60	122.80
1	A	544	G	N3-C4-N9	5.42	129.25	126.00
1	A	794	A	C5-N7-C8	-5.40	101.20	103.90
1	A	2332	G	C5-C6-O6	5.38	131.83	128.60
1	A	2267	G	N3-C4-C5	5.35	131.28	128.60
1	A	1416	A	O4'-C1'-N9	5.35	112.48	108.20
1	A	135	C	N1-C2-O2	5.35	122.11	118.90
1	A	2311	C	N1-C2-O2	5.34	122.10	118.90
12	T	97	GLU	C-N-CD	5.34	139.62	128.40
1	A	1462	G	N1-C6-O6	-5.34	116.70	119.90
1	A	2457	C	N1-C2-O2	5.33	122.10	118.90
1	A	1610	C	N3-C2-O2	-5.30	118.19	121.90
1	A	544	G	C4-C5-N7	5.29	112.92	110.80
1	A	2797	U	C5-C4-O4	-5.29	122.72	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1462	G	C5-C6-O6	5.28	131.77	128.60
1	A	563	C	C2-N1-C1'	5.28	124.60	118.80
10	R	138	ARG	C-N-CD	5.28	139.48	128.40
1	A	2457	C	N3-C2-O2	-5.27	118.21	121.90
25	F	173	LEU	CA-CB-CG	5.27	127.42	115.30
1	A	1801	A	N1-C2-N3	5.26	131.93	129.30
1	A	2410	U	N3-C2-O2	-5.26	118.52	122.20
3	B	45	G	OP2-P-O3'	5.26	116.77	105.20
1	A	1610	C	C2-N1-C1'	5.26	124.58	118.80
2	C	26	G	C4-C5-N7	5.25	112.90	110.80
6	N	158	VAL	C-N-CD	5.24	139.41	128.40
1	A	1428	C	C2-N1-C1'	5.24	124.56	118.80
1	A	112	C	C2-N1-C1'	5.23	124.55	118.80
1	A	1287	G	P-O3'-C3'	5.22	125.97	119.70
2	C	16	G	P-O3'-C3'	5.21	125.96	119.70
1	A	2046	G	C4-N9-C1'	-5.20	119.74	126.50
1	A	2576	C	N3-C2-O2	-5.20	118.26	121.90
28	I	46	GLN	C-N-CD	5.19	139.29	128.40
1	A	1002	G	P-O3'-C3'	5.18	125.92	119.70
1	A	1585	C	N1-C2-N3	5.17	122.82	119.20
16	X	129	GLY	C-N-CD	5.17	139.25	128.40
1	A	1400	U	C2-N1-C1'	5.16	123.89	117.70
1	A	1266	G	N3-C4-N9	-5.15	122.91	126.00
1	A	1585	C	C6-N1-C2	-5.15	118.24	120.30
1	A	2535	C	C2-N1-C1'	5.14	124.46	118.80
1	A	1227	U	N1-C2-O2	5.14	126.40	122.80
32	h	50	ARG	C-N-CD	5.14	139.19	128.40
1	A	32	U	N3-C2-O2	-5.13	118.61	122.20
7	O	76	VAL	C-N-CA	5.13	134.53	121.70
1	A	696	A	N1-C6-N6	-5.12	115.53	118.60
1	A	675	U	N3-C2-O2	-5.11	118.62	122.20
1	A	1683	G	O4'-C1'-N9	5.10	112.28	108.20
15	W	170	THR	C-N-CD	5.10	139.12	128.40
1	A	2354	G	C6-C5-N7	-5.10	127.34	130.40
11	S	92	LEU	C-N-CA	-5.09	108.97	121.70
1	A	542	C	O4'-C1'-N1	5.09	112.27	108.20
1	A	544	G	N9-C4-C5	-5.08	103.37	105.40
10	R	226	LEU	CA-CB-CG	5.08	126.99	115.30
1	A	2354	G	N3-C4-N9	5.07	129.04	126.00
1	A	1334	U	C2-N1-C1'	5.07	123.78	117.70
15	W	61	LEU	C-N-CD	5.06	139.03	128.40
1	A	764	A	C4-C5-N7	5.06	113.23	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	2535	C	N3-C2-O2	-5.06	118.36	121.90
1	A	2242	A	P-O3'-C3'	5.05	125.76	119.70
1	A	2332	G	N1-C6-O6	-5.04	116.87	119.90
1	A	1452	A	C6-C5-N7	-5.04	128.77	132.30
1	A	795	U	P-O3'-C3'	5.04	125.74	119.70
1	A	1203	C	C6-N1-C1'	-5.03	114.76	120.80
1	A	1954	U	P-O3'-C3'	5.03	125.73	119.70
1	A	1400	U	C5-C6-N1	5.01	125.20	122.70

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
19	E	150	LEU	Peptide
19	E	29	ILE	Peptide
19	E	41	ALA	Peptide
25	F	267	MET	Peptide
26	G	200	ASP	Peptide
26	G	204	LYS	Peptide
27	H	167	PHE	Peptide
9	Q	70	ARG	Peptide
10	R	190	VAL	Peptide
11	S	24	PHE	Peptide
11	S	82	ILE	Peptide
11	S	96	ILE	Peptide
13	U	90	ASN	Peptide
24	f	73	GLN	Peptide
32	h	73	LYS	Peptide
32	h	78	VAL	Peptide

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	60117	0	30254	3962	0
2	C	2187	0	1099	306	0
3	B	2500	0	1263	331	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	L	1184	0	1221	135	0
5	M	942	0	996	51	0
6	N	1342	0	1413	392	0
7	O	1067	0	1120	103	0
8	P	944	0	1004	68	0
9	Q	947	0	966	87	0
10	R	953	0	1044	80	0
11	S	996	0	1060	122	0
12	T	1171	0	1216	216	0
13	U	1149	0	1220	98	0
14	V	740	0	795	103	0
15	W	993	0	1054	127	0
16	X	810	0	847	185	0
17	Y	605	0	652	51	0
18	Z	754	0	804	99	0
19	E	1904	0	1982	219	0
20	b	378	0	413	0	0
21	c	415	0	434	0	0
22	d	445	0	501	0	0
23	e	563	0	621	0	0
24	f	304	0	342	0	0
25	F	1620	0	1699	174	0
26	G	1655	0	1723	238	0
27	H	1351	0	1407	136	0
28	I	1353	0	1416	90	0
29	J	423	0	488	39	0
30	g	345	0	395	0	0
31	a	300	0	279	0	0
32	h	368	0	386	0	0
All	All	90825	0	60114	6418	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 46.

All (6418) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2351:G:C4	9:Q:64:VAL:HG21	1.27	1.61
2:C:95:A:C5	2:C:95:A:C6	1.79	1.59
16:X:128:TYR:CB	16:X:134:LYS:CD	1.78	1.58
11:S:91:LEU:CD1	12:T:175:PRO:HB3	1.30	1.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:274:G:C6	1:A:433:C:C6	1.94	1.54
16:X:128:TYR:HB3	16:X:134:LYS:CG	1.33	1.52
2:C:95:A:C2	2:C:95:A:N1	1.76	1.51
12:T:171:TYR:CE2	12:T:231:PRO:HB3	1.40	1.51
2:C:95:A:C2	2:C:95:A:N3	1.76	1.51
12:T:170:THR:H	12:T:233:SER:CB	1.20	1.51
16:X:128:TYR:HB2	16:X:134:LYS:CD	1.05	1.50
1:A:2351:G:C4	9:Q:64:VAL:CG2	1.95	1.47
1:A:2213:A:N6	1:A:2241:G:H21	0.98	1.47
2:C:95:A:N3	2:C:95:A:C4	1.80	1.46
2:C:95:A:C6	2:C:95:A:N1	1.85	1.45
1:A:983:G:N2	7:O:82:ARG:CZ	1.80	1.43
10:R:123:MET:CE	25:F:97:LEU:O	1.64	1.43
1:A:983:G:N2	7:O:82:ARG:NH2	1.63	1.42
1:A:330:U:C2	26:G:218:LYS:HE2	1.52	1.42
1:A:133:A:N6	1:A:162:A:C2	1.77	1.41
1:A:135:C:C5	1:A:161:G:O6	1.74	1.41
1:A:2213:A:N6	1:A:2241:G:N2	1.66	1.41
1:A:274:G:O6	1:A:433:C:C3'	1.67	1.40
16:X:128:TYR:CB	16:X:134:LYS:CG	1.93	1.40
1:A:1527:G:N1	1:A:1539:C:N3	1.70	1.40
1:A:2279:U:OP2	16:X:73:LYS:CG	1.67	1.39
1:A:639:A:N6	6:N:201:LEU:HD13	1.34	1.38
1:A:2351:G:N9	9:Q:64:VAL:HG21	1.35	1.38
14:V:116:GLN:HA	18:Z:91:ARG:NH2	1.31	1.38
12:T:170:THR:N	12:T:233:SER:HB3	1.06	1.37
6:N:165:ILE:HG13	6:N:206:LEU:CA	1.45	1.37
2:C:30:A:N6	2:C:83:C:O2'	1.56	1.36
6:N:156:LYS:NZ	6:N:215:ARG:NH1	1.68	1.36
1:A:983:G:C2	7:O:82:ARG:NH2	1.92	1.36
1:A:1263:G:N2	6:N:83:ASP:OD2	1.58	1.35
1:A:2322:A:N3	27:H:186:ARG:NH1	1.74	1.35
6:N:81:ARG:NH1	26:G:243:GLU:HB2	1.39	1.35
1:A:44:G:N7	1:A:200:G:O2'	1.58	1.35
1:A:540:A:P	4:L:212:ARG:HH11	1.48	1.35
1:A:1002:G:H5'	12:T:201:LYS:NZ	1.38	1.35
3:B:41:U:C2'	3:B:46:A:H61	1.39	1.35
28:I:46:GLN:OE1	28:I:109:ARG:CG	1.71	1.35
6:N:159:PRO:HB3	6:N:187:ILE:CD1	1.54	1.34
1:A:1236:A:N6	1:A:1253:G:H1	1.21	1.34
16:X:128:TYR:CB	16:X:134:LYS:HD3	1.44	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:V:109:LEU:CD1	14:V:141:ARG:O	1.75	1.33
1:A:1528:U:O2	1:A:1538:G:N2	1.61	1.33
12:T:169:SER:HB2	12:T:233:SER:OG	1.27	1.33
1:A:329:C:C2'	26:G:222:ASN:ND2	1.92	1.32
1:A:2213:A:C2	1:A:2214:C:C2	2.17	1.32
12:T:108:ASN:O	12:T:112:PRO:HD3	1.23	1.32
1:A:639:A:C6	6:N:201:LEU:HD13	1.62	1.32
1:A:111:U:OP2	18:Z:134:ARG:NH1	1.62	1.31
1:A:2113:G:H22	1:A:2204:A:N6	1.25	1.31
1:A:330:U:N3	26:G:218:LYS:NZ	1.76	1.31
1:A:355:A:C8	1:A:356:A:C8	2.19	1.30
14:V:109:LEU:HD11	14:V:141:ARG:O	1.23	1.30
1:A:82:G:OP2	15:W:157:LYS:CE	1.79	1.30
3:B:17:G:N2	3:B:70:G:H1'	1.47	1.30
1:A:234:C:C6	6:N:142:LYS:NZ	2.00	1.30
1:A:1751:A:C2	1:A:1753:A:C8	2.20	1.29
25:F:142:GLU:OE2	25:F:167:HIS:CE1	1.84	1.29
1:A:330:U:N3	26:G:218:LYS:CE	1.95	1.29
3:B:16:G:O6	3:B:111:G:C2	1.85	1.29
16:X:128:TYR:CB	16:X:134:LYS:HG3	1.54	1.29
1:A:983:G:N2	7:O:82:ARG:NH1	1.78	1.29
12:T:96:PRO:C	12:T:98:PRO:HD3	1.50	1.29
1:A:2109:C:C5	1:A:2110:U:C2	2.20	1.28
11:S:91:LEU:CD1	12:T:175:PRO:CB	2.11	1.28
1:A:983:G:N3	7:O:82:ARG:NH2	1.81	1.28
1:A:1023:C:O2	4:L:102:PRO:HD3	1.13	1.28
1:A:2154:C:N3	1:A:2165:G:N2	1.82	1.26
1:A:330:U:O2	26:G:218:LYS:HE2	1.30	1.26
1:A:1169:A:OP1	4:L:245:ARG:NH2	1.67	1.26
1:A:2107:G:OP1	29:J:72:GLY:HA3	1.33	1.26
1:A:822:U:C5	1:A:1272:A:C2	2.23	1.26
4:L:175:ARG:HH22	4:L:184:LYS:NZ	1.31	1.25
6:N:160:ILE:HG21	6:N:203:GLU:OE2	1.22	1.25
1:A:2120:U:O4	1:A:2197:A:N1	1.69	1.25
6:N:160:ILE:CG2	6:N:203:GLU:OE2	1.83	1.25
6:N:205:GLU:OE1	6:N:224:LYS:CD	1.82	1.25
1:A:279:A:N7	1:A:379:C:N4	1.83	1.25
28:I:46:GLN:OE1	28:I:109:ARG:HG3	1.13	1.25
1:A:843:C:H4'	6:N:125:ILE:CD1	1.67	1.24
25:F:117:PHE:HA	25:F:141:TYR:OH	1.35	1.24
1:A:1830:U:C4	19:E:197:ASN:ND2	2.06	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2124:G:N2	1:A:2194:U:O2	1.69	1.24
6:N:205:GLU:OE1	6:N:224:LYS:HD2	1.15	1.24
1:A:330:U:C2	26:G:218:LYS:CE	2.18	1.24
26:G:70:LEU:CD1	26:G:256:ASN:OD1	1.85	1.24
1:A:822:U:H2'	6:N:100:ARG:O	1.27	1.23
1:A:2116:C:N3	1:A:2201:G:N2	1.84	1.23
1:A:932:A:C4'	16:X:85:GLN:HE22	1.51	1.23
1:A:1023:C:O2	4:L:102:PRO:CD	1.87	1.22
2:C:30:A:N1	2:C:83:C:H2'	1.53	1.22
1:A:981:G:OP2	7:O:16:ARG:HD3	1.34	1.22
1:A:274:G:N1	1:A:433:C:C5	2.08	1.22
1:A:540:A:OP1	4:L:212:ARG:NH1	1.71	1.22
1:A:279:A:N6	1:A:379:C:H42	1.38	1.22
1:A:329:C:O2	26:G:222:ASN:ND2	1.70	1.22
1:A:2011:G:O5'	25:F:219:ARG:NH2	1.73	1.22
1:A:2322:A:C4	27:H:186:ARG:NH1	2.07	1.21
26:G:73:LYS:CA	26:G:261:VAL:O	1.88	1.21
16:X:126:GLU:O	16:X:133:LYS:O	1.57	1.21
1:A:1521:G:C8	1:A:1543:G:N2	2.09	1.20
1:A:2322:A:N6	27:H:204:GLY:HA3	1.55	1.20
16:X:128:TYR:CE2	16:X:132:LYS:HB2	1.76	1.20
1:A:1211:G:C5'	6:N:111:GLY:HA2	1.71	1.20
1:A:2804:U:OP1	25:F:159:LYS:HG3	1.39	1.20
1:A:1196:A:N6	1:A:1201:A:H61	1.38	1.20
1:A:1023:C:N3	4:L:102:PRO:HD2	1.57	1.19
1:A:2213:A:C5	1:A:2242:A:N1	2.09	1.19
12:T:171:TYR:HD2	12:T:231:PRO:HA	1.06	1.19
1:A:1224:U:H1'	6:N:83:ASP:OD1	1.38	1.19
1:A:1499:G:N2	1:A:1546:C:N3	1.89	1.19
1:A:2233:G:H2'	1:A:2234:G:C8	1.76	1.19
28:I:48:ILE:HG12	28:I:90:LEU:O	1.37	1.19
1:A:913:G:H2'	1:A:914:A:H8	1.04	1.19
6:N:159:PRO:CD	6:N:199:LYS:O	1.92	1.18
1:A:1211:G:H5''	6:N:111:GLY:CA	1.73	1.18
1:A:1751:A:H2	1:A:1753:A:C8	1.57	1.18
1:A:60:U:O2'	18:Z:94:ARG:NH1	1.74	1.18
1:A:881:U:O2	1:A:915:G:N2	1.76	1.18
1:A:1532:G:N2	1:A:1611:G:N3	1.90	1.18
1:A:384:G:O2'	1:A:412:G:O6	1.60	1.18
1:A:888:C:N4	1:A:908:A:H2	1.42	1.18
1:A:2684:C:H5	28:I:150:SER:HB3	1.06	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:79:G:O2'	1:A:355:A:C2	1.95	1.17
1:A:2121:C:N4	1:A:2196:G:N2	1.93	1.17
6:N:159:PRO:CB	6:N:187:ILE:HD11	1.74	1.17
26:G:70:LEU:HD12	26:G:256:ASN:OD1	1.40	1.17
26:G:73:LYS:HA	26:G:261:VAL:O	1.41	1.17
1:A:1196:A:H61	1:A:1201:A:N6	1.41	1.16
29:J:76:ASN:O	29:J:80:PRO:HD2	1.42	1.16
1:A:2075:G:OP2	26:G:119:LYS:CE	1.93	1.16
1:A:2684:C:C5	28:I:150:SER:HB3	1.81	1.16
16:X:128:TYR:CD2	16:X:132:LYS:HB2	1.78	1.16
1:A:1159:G:C5	4:L:176:HIS:CE1	2.34	1.16
1:A:2129:G:O2'	1:A:2180:G:N2	1.78	1.16
1:A:2767:A:OP2	28:I:42:ARG:O	1.64	1.16
1:A:329:C:H2'	26:G:222:ASN:ND2	1.56	1.15
1:A:1521:G:N2	1:A:1544:A:N1	1.94	1.15
10:R:123:MET:HE2	25:F:97:LEU:O	1.44	1.15
1:A:279:A:N7	1:A:379:C:C4	2.14	1.15
1:A:609:G:H5''	26:G:79:LYS:HD2	1.23	1.15
1:A:2156:C:O2	1:A:2164:G:N2	1.79	1.15
6:N:165:ILE:HG21	6:N:205:GLU:O	1.46	1.15
1:A:49:G:O2'	18:Z:130:LYS:HD2	1.45	1.15
1:A:93:A:O2'	18:Z:102:PRO:CG	1.93	1.15
1:A:2279:U:OP2	16:X:73:LYS:HG3	0.99	1.15
3:B:6:U:C2	3:B:118:G:N2	2.15	1.15
3:B:91:G:H22	7:O:38:GLU:CG	1.59	1.15
1:A:93:A:O2'	18:Z:102:PRO:HG2	0.99	1.14
1:A:624:A:C4	1:A:625:C:C5	2.34	1.14
1:A:853:G:O6	1:A:965:G:O6	1.65	1.14
1:A:2351:G:C5	9:Q:64:VAL:CG2	2.27	1.14
3:B:17:G:H22	3:B:70:G:C1'	1.58	1.14
2:C:77:A:H1'	8:P:16:LYS:HB2	1.17	1.14
3:B:35:A:C2	3:B:51:G:C2	2.35	1.14
1:A:75:C:OP1	18:Z:110:LYS:NZ	1.81	1.14
1:A:290:A:H2'	1:A:291:G:H8	1.11	1.14
1:A:384:G:OP2	17:Y:131:LYS:HE3	1.47	1.14
1:A:1002:G:C5'	12:T:201:LYS:NZ	2.08	1.14
1:A:1159:G:C4	4:L:176:HIS:CE1	2.36	1.14
1:A:1596:U:C2'	1:A:1597:C:H5'	1.77	1.14
1:A:1159:G:C5	4:L:176:HIS:HE1	1.66	1.14
14:V:116:GLN:CA	18:Z:91:ARG:HH22	1.60	1.14
1:A:135:C:H5	1:A:161:G:O6	1.15	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:104:A:C2	2:C:105:A:C5	2.36	1.13
1:A:355:A:H2'	1:A:356:A:H5'	1.23	1.13
1:A:274:G:C2	1:A:433:C:C5	2.35	1.13
1:A:368:U:C2	1:A:369:U:C5	2.37	1.13
1:A:2798:G:C6	4:L:201:GLU:OE2	2.01	1.13
1:A:2798:G:O6	4:L:201:GLU:OE2	1.66	1.13
6:N:81:ARG:NH1	26:G:243:GLU:CB	2.10	1.13
1:A:83:A:N6	1:A:98:G:N7	1.96	1.13
1:A:2095:U:OP1	17:Y:87:ARG:NH1	1.79	1.13
25:F:144:LEU:HD11	25:F:166:ARG:CZ	1.77	1.12
6:N:162:LEU:CD1	6:N:203:GLU:OE1	1.98	1.12
12:T:108:ASN:O	12:T:112:PRO:CD	1.97	1.12
1:A:289:A:H2'	1:A:290:A:H8	1.10	1.12
1:A:381:C:O2	1:A:416:C:C5	2.03	1.12
1:A:1507:G:N2	1:A:1515:G:OP2	1.81	1.12
1:A:2109:C:H5	1:A:2110:U:C2	1.61	1.12
1:A:48:A:N1	1:A:162:A:N7	1.66	1.12
1:A:857:G:N2	1:A:961:G:C4	2.16	1.12
1:A:1525:G:N2	1:A:1541:U:C2	2.16	1.12
1:A:609:G:H5''	26:G:79:LYS:CD	1.79	1.12
1:A:740:G:O6	19:E:204:ALA:HB3	1.50	1.12
1:A:234:C:C5	6:N:142:LYS:NZ	2.18	1.11
6:N:159:PRO:HD2	6:N:199:LYS:O	1.41	1.11
14:V:114:ILE:HG23	14:V:115:LEU:HD12	1.31	1.11
15:W:59:ASN:O	15:W:60:SER:OG	1.66	1.11
1:A:1475:U:H1'	8:P:70:LEU:CD1	1.81	1.11
6:N:202:GLY:N	6:N:221:ALA:HB2	1.63	1.11
28:I:48:ILE:HD11	28:I:109:ARG:NH2	1.65	1.11
1:A:276:G:N2	1:A:416:C:O2'	1.82	1.11
1:A:1811:A:OP1	19:E:146:ARG:NH2	1.82	1.11
28:I:48:ILE:HD11	28:I:109:ARG:HH21	0.94	1.11
1:A:133:A:N6	1:A:162:A:N1	1.98	1.10
1:A:2279:U:OP2	16:X:73:LYS:CB	1.99	1.10
3:B:92:U:OP2	7:O:16:ARG:NH2	1.84	1.10
1:A:313:A:C2	1:A:323:G:N1	2.20	1.10
1:A:356:A:H2'	1:A:357:G:H8	1.16	1.10
1:A:1002:G:C5'	12:T:201:LYS:HZ1	1.63	1.10
1:A:2113:G:N2	1:A:2204:A:N1	1.97	1.10
3:B:16:G:O6	3:B:111:G:N3	1.83	1.10
3:B:91:G:N1	7:O:38:GLU:OE2	1.84	1.10
1:A:140:G:C6	1:A:155:A:N1	2.18	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:857:G:N2	1:A:961:G:N3	1.98	1.10
1:A:1885:C:N4	6:N:253:ALA:HB2	1.66	1.10
6:N:202:GLY:HA2	6:N:221:ALA:CA	1.81	1.10
1:A:279:A:H62	1:A:379:C:N4	1.50	1.10
26:G:193:ALA:O	26:G:197:TRP:HB2	1.48	1.10
19:E:237:ILE:HD11	19:E:239:ARG:HB2	1.15	1.10
1:A:639:A:C5	6:N:201:LEU:CD1	2.35	1.09
6:N:143:LEU:HG	6:N:146:ILE:HD11	1.13	1.09
1:A:1702:G:O2'	5:M:6:THR:HG22	1.50	1.09
6:N:162:LEU:HD12	6:N:203:GLU:OE1	1.52	1.09
14:V:104:TYR:HD1	18:Z:142:ARG:HD2	1.05	1.09
1:A:2107:G:OP1	29:J:72:GLY:CA	1.99	1.09
6:N:200:ILE:HD11	6:N:212:ILE:HG21	1.34	1.09
6:N:202:GLY:CA	6:N:221:ALA:HB2	1.83	1.09
12:T:171:TYR:CE2	12:T:231:PRO:CB	2.34	1.09
1:A:857:G:N3	1:A:961:G:C2	2.21	1.09
1:A:903:G:H2'	1:A:904:U:H5''	1.31	1.09
1:A:1885:C:C4	6:N:253:ALA:HB2	1.88	1.09
1:A:2211:U:C5	1:A:2241:G:C6	2.39	1.09
6:N:156:LYS:HZ1	6:N:215:ARG:NH1	1.30	1.09
1:A:368:U:C2	1:A:369:U:H5	1.71	1.09
2:C:36:A:H2	25:F:274:ARG:CZ	1.65	1.09
11:S:91:LEU:HD11	12:T:175:PRO:CB	1.75	1.09
3:B:41:U:C2'	3:B:46:A:N6	2.14	1.08
6:N:156:LYS:NZ	6:N:215:ARG:HH11	1.37	1.08
10:R:123:MET:HE1	25:F:97:LEU:O	1.27	1.08
1:A:932:A:C4'	16:X:85:GLN:NE2	2.15	1.08
1:A:2279:U:P	16:X:73:LYS:HG3	1.94	1.08
3:B:8:G:OP2	9:Q:76:PHE:CZ	2.05	1.08
1:A:2157:U:C2	1:A:2163:G:N2	2.21	1.08
16:X:128:TYR:HB2	16:X:134:LYS:HD2	1.09	1.08
1:A:356:A:H2'	1:A:357:G:C8	1.89	1.08
1:A:639:A:N7	6:N:201:LEU:CD1	2.15	1.08
1:A:2120:U:O4	1:A:2197:A:C2	2.06	1.08
16:X:122:LEU:HD11	16:X:140:ARG:CG	1.70	1.08
17:Y:124:LYS:O	17:Y:128:THR:HG23	1.53	1.08
1:A:504:G:H4'	13:U:37:TYR:HB2	1.35	1.08
1:A:858:G:H2'	1:A:859:A:H8	1.17	1.08
1:A:2320:G:H2'	1:A:2321:G:C8	1.89	1.08
16:X:77:LEU:HD11	16:X:97:ARG:NH1	1.66	1.08
2:C:37:C:C2	25:F:143:ARG:NH2	2.22	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:81:ARG:O	6:N:84:ASN:ND2	1.88	1.07
1:A:274:G:C6	1:A:433:C:H6	1.45	1.07
1:A:330:U:C4	26:G:218:LYS:NZ	2.18	1.07
2:C:104:A:C2	2:C:105:A:C6	2.43	1.07
16:X:122:LEU:CD1	16:X:140:ARG:HG3	1.79	1.07
1:A:274:G:O6	1:A:433:C:H3'	0.89	1.07
1:A:289:A:H2'	1:A:290:A:C8	1.89	1.07
1:A:290:A:H2'	1:A:291:G:C8	1.89	1.07
1:A:2113:G:N2	1:A:2204:A:H61	1.49	1.07
1:A:2322:A:C6	27:H:204:GLY:HA3	1.90	1.07
15:W:170:THR:HG22	15:W:171:PRO:HD3	1.32	1.07
1:A:416:C:O2	1:A:418:G:C5	2.07	1.07
1:A:669:C:H2'	1:A:670:A:C8	1.89	1.07
1:A:856:U:C6	1:A:962:G:N2	1.95	1.07
2:C:40:U:C4	2:C:87:A:N6	2.21	1.07
4:L:105:ALA:HB3	4:L:147:VAL:HG21	1.35	1.07
6:N:165:ILE:CG1	6:N:206:LEU:HA	1.71	1.07
15:W:173:ARG:HH21	15:W:173:ARG:HB3	1.14	1.07
18:Z:76:LEU:CD1	18:Z:115:MET:HE3	1.83	1.07
1:A:292:C:H2'	1:A:293:G:C8	1.90	1.07
1:A:624:A:C4	1:A:625:C:C6	2.42	1.07
1:A:1521:G:C5	1:A:1543:G:N2	2.23	1.07
1:A:2109:C:C5	1:A:2110:U:N3	2.22	1.07
6:N:102:HIS:NE2	12:T:205:ASN:ND2	2.02	1.07
26:G:254:TYR:OH	26:G:258:ARG:NE	1.86	1.07
1:A:853:G:C6	1:A:965:G:C6	2.43	1.06
6:N:165:ILE:CD1	6:N:207:SER:H	1.66	1.06
1:A:822:U:C2'	6:N:100:ARG:O	2.03	1.06
1:A:1746:C:O2'	1:A:1747:C:H5'	1.53	1.06
2:C:104:A:H2'	2:C:105:A:C8	1.90	1.06
16:X:128:TYR:CG	16:X:134:LYS:HG3	1.89	1.06
1:A:83:A:N7	1:A:98:G:O6	1.89	1.06
1:A:313:A:H2	1:A:323:G:N1	1.50	1.06
1:A:1482:C:H2'	1:A:1483:G:C8	1.89	1.06
1:A:1499:G:H1	1:A:1546:C:N4	1.51	1.06
1:A:2186:U:OP2	1:A:2188:C:C5	2.07	1.06
3:B:87:G:O2'	3:B:88:G:H5'	1.55	1.06
1:A:545:U:O2'	11:S:49:ASP:OD2	1.71	1.06
1:A:890:G:H2'	1:A:891:G:H8	1.20	1.06
1:A:44:G:O2'	1:A:200:G:C8	2.09	1.06
1:A:160:A:C2	1:A:161:G:N7	2.24	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:274:G:C6	1:A:433:C:C5	2.40	1.06
1:A:388:C:N4	1:A:410:G:H1	1.54	1.06
1:A:887:G:N2	1:A:909:A:N1	2.02	1.06
1:A:1521:G:N7	1:A:1543:G:N2	2.03	1.06
6:N:154:LEU:N	6:N:155:PRO:CD	2.19	1.06
1:A:913:G:H2'	1:A:914:A:C8	1.91	1.05
1:A:2500:C:N3	7:O:124:LYS:NZ	2.04	1.05
19:E:226:HIS:CE1	19:E:228:HIS:HD2	1.74	1.05
29:J:76:ASN:O	29:J:80:PRO:CD	2.03	1.05
1:A:883:C:H2'	1:A:884:G:C8	1.90	1.05
11:S:91:LEU:HG	12:T:175:PRO:CA	1.85	1.05
14:V:104:TYR:CD1	18:Z:142:ARG:HD2	1.90	1.05
1:A:82:G:OP2	15:W:157:LYS:HE2	1.54	1.05
1:A:141:C:N3	1:A:153:G:N1	2.03	1.05
1:A:1479:U:H4'	1:A:1480:A:H5''	1.33	1.05
1:A:1887:G:H2'	1:A:1888:G:C8	1.91	1.05
2:C:53:G:H22	10:R:144:ARG:NH1	1.55	1.05
4:L:217:LEU:HD12	4:L:218:PHE:N	1.72	1.05
6:N:154:LEU:H	6:N:155:PRO:CD	1.69	1.05
1:A:1269:G:N7	11:S:3:ARG:N	2.03	1.04
1:A:2075:G:OP2	26:G:119:LYS:HE3	1.56	1.04
1:A:2806:U:O2'	2:C:5:A:N3	1.89	1.04
3:B:41:U:O2'	3:B:46:A:N6	1.90	1.04
27:H:188:GLN:HE21	27:H:188:GLN:HA	1.17	1.04
1:A:2211:U:H5	1:A:2241:G:C6	1.73	1.04
14:V:106:ARG:O	14:V:107:ARG:HG2	1.55	1.04
1:A:234:C:H6	6:N:142:LYS:NZ	1.43	1.04
1:A:1159:G:C4	4:L:176:HIS:ND1	2.24	1.04
1:A:2322:A:C2	27:H:186:ARG:NH1	2.25	1.04
3:B:41:U:H2'	3:B:46:A:N6	1.73	1.04
6:N:176:VAL:HG12	6:N:177:SER:H	1.20	1.04
1:A:858:G:C2'	1:A:859:A:H5'	1.85	1.04
1:A:1539:C:H2'	1:A:1540:C:C6	1.92	1.04
1:A:2233:G:H2'	1:A:2234:G:H8	1.09	1.04
2:C:40:U:H2'	2:C:41:A:C8	1.92	1.04
16:X:128:TYR:CE2	16:X:132:LYS:CB	2.41	1.04
18:Z:76:LEU:HD12	18:Z:115:MET:CE	1.86	1.04
28:I:48:ILE:CG1	28:I:90:LEU:O	2.03	1.04
1:A:255:A:OP2	1:A:271:G:N2	1.88	1.03
1:A:2809:U:H2'	1:A:2810:A:H4'	1.05	1.03
6:N:158:VAL:HG11	6:N:201:LEU:HD21	1.36	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:329:C:H2'	26:G:222:ASN:HD22	0.87	1.03
2:C:37:C:N3	25:F:143:ARG:NH2	2.06	1.03
3:B:39:C:N4	3:B:45:G:H1	1.56	1.03
1:A:912:C:H2'	1:A:913:G:C8	1.92	1.03
1:A:1596:U:O2'	1:A:1597:C:H5'	1.56	1.03
1:A:1600:A:C2	19:E:209:TRP:CZ3	2.47	1.03
1:A:2304:A:N6	1:A:2363:A:H62	1.56	1.03
1:A:898:G:C8	1:A:899:A:N7	2.25	1.03
1:A:1529:A:N1	1:A:1537:U:N3	2.06	1.03
1:A:1829:A:H4'	1:A:1830:U:C5'	1.89	1.03
10:R:141:PRO:HD2	10:R:206:ILE:HD11	1.40	1.03
1:A:279:A:C5	1:A:379:C:N4	2.27	1.02
1:A:1879:U:O4	6:N:252:ARG:NH2	1.92	1.02
1:A:2213:A:C2	1:A:2242:A:C2	2.47	1.02
1:A:5:A:H2'	1:A:6:A:C8	1.94	1.02
1:A:96:C:H2'	1:A:97:A:C8	1.95	1.02
1:A:152:G:C2	1:A:153:G:C8	2.47	1.02
1:A:912:C:H2'	1:A:913:G:H8	1.20	1.02
1:A:1083:G:N2	1:A:1132:C:N3	2.06	1.02
1:A:1635:C:H4'	14:V:106:ARG:NH2	1.73	1.02
1:A:2351:G:C4	9:Q:64:VAL:HG22	1.95	1.02
1:A:2479:U:O4	1:A:2505:A:N1	1.92	1.02
3:B:91:G:N2	7:O:38:GLU:HG3	1.74	1.02
1:A:1178:G:C1'	11:S:83:HIS:NE2	2.23	1.02
6:N:202:GLY:HA2	6:N:221:ALA:CB	1.90	1.02
1:A:1361:U:O4	14:V:168:PRO:HB3	1.58	1.02
1:A:1745:C:C4	1:A:1746:C:N4	2.28	1.02
3:B:35:A:C2	3:B:51:G:N3	2.28	1.02
1:A:259:C:H2'	1:A:260:G:H8	1.25	1.01
1:A:2075:G:OP2	26:G:119:LYS:HE2	1.56	1.01
1:A:2322:A:C6	27:H:204:GLY:CA	2.43	1.01
6:N:197:PRO:HB3	6:N:215:ARG:HD2	1.40	1.01
1:A:1808:C:H2'	1:A:1829:A:H61	1.22	1.01
1:A:2154:C:N4	1:A:2165:G:H22	1.58	1.01
6:N:211:GLN:HA	6:N:231:SER:O	1.60	1.01
1:A:139:U:N3	1:A:140:G:N7	2.09	1.01
1:A:1689:C:H41	8:P:19:ARG:NE	1.55	1.01
11:S:91:LEU:HG	12:T:175:PRO:CB	1.90	1.01
19:E:213:ARG:HD3	19:E:214:PRO:HD2	1.43	1.01
1:A:1023:C:C2	4:L:102:PRO:CD	2.44	1.01
1:A:1516:G:H3'	1:A:1517:G:H5''	1.39	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1751:A:C2	1:A:1753:A:N7	2.27	1.01
1:A:2074:A:H62	26:G:125:ARG:HH22	1.05	1.01
1:A:133:A:N6	1:A:162:A:H2	1.26	1.01
1:A:276:G:N2	1:A:416:C:HO2'	1.58	1.01
1:A:2328:A:O4'	27:H:127:ILE:CD1	2.09	1.01
1:A:2731:C:OP1	8:P:25:ASP:OD2	1.79	1.01
6:N:205:GLU:CD	6:N:224:LYS:HD2	1.80	1.01
19:E:258:ARG:C	19:E:259:ASN:HD22	1.64	1.01
1:A:853:G:C6	1:A:965:G:O6	2.14	1.00
1:A:1830:U:N3	19:E:197:ASN:ND2	2.08	1.00
2:C:53:G:H8	2:C:70:G:H21	1.01	1.00
1:A:60:U:O2'	18:Z:94:ARG:CZ	1.94	1.00
1:A:883:C:O4'	7:O:65:TRP:HZ3	1.45	1.00
1:A:1076:A:N1	1:A:1139:A:O2'	1.93	1.00
1:A:2393:A:H2	9:Q:166:PHE:CZ	1.78	1.00
1:A:2809:U:C2'	1:A:2810:A:H4'	1.90	1.00
6:N:159:PRO:HB3	6:N:187:ILE:HD11	1.04	1.00
12:T:96:PRO:C	12:T:98:PRO:CD	2.29	1.00
1:A:278:G:N2	1:A:380:C:N3	2.10	1.00
1:A:843:C:H4'	6:N:125:ILE:HD11	1.39	1.00
1:A:1393:U:O2'	1:A:2230:A:H2'	1.61	1.00
1:A:1529:A:C2	1:A:1537:U:C2	2.50	1.00
2:C:30:A:N1	2:C:83:C:C2'	2.25	1.00
19:E:265:PHE:CD1	19:E:266:ILE:HG13	1.97	1.00
1:A:1248:G:OP1	11:S:13:ARG:NH2	1.93	1.00
1:A:1472:A:N6	1:A:1479:U:C4	2.30	1.00
1:A:2480:U:O4	1:A:2504:A:N1	1.95	1.00
11:S:91:LEU:CG	12:T:175:PRO:CB	2.40	1.00
1:A:626:C:C6	1:A:627:C:C5	2.49	1.00
16:X:121:GLY:HA3	16:X:138:TYR:O	1.61	1.00
1:A:295:C:H2'	1:A:296:G:H8	1.23	1.00
1:A:2798:G:N1	4:L:201:GLU:OE2	1.94	1.00
10:R:116:ARG:CZ	10:R:116:ARG:HA	1.91	1.00
1:A:648:G:N7	6:N:199:LYS:HE2	1.76	1.00
6:N:172:GLU:HA	6:N:210:LEU:CD2	1.92	0.99
12:T:171:TYR:HD2	12:T:231:PRO:CA	1.76	0.99
1:A:1023:C:C2	4:L:102:PRO:HD2	1.96	0.99
1:A:1470:A:C2	1:A:1482:C:N3	2.30	0.99
15:W:161:LEU:CD1	15:W:168:VAL:CG2	2.40	0.99
1:A:274:G:O6	1:A:433:C:C6	2.15	0.99
1:A:1475:U:H1'	8:P:70:LEU:HD13	1.42	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1812:A:H2'	1:A:1813:A:C8	1.98	0.99
1:A:629:C:OP1	26:G:158:ARG:NE	1.95	0.99
13:U:149:LEU:HD23	13:U:149:LEU:H	1.25	0.99
14:V:116:GLN:CA	18:Z:91:ARG:NH2	2.23	0.99
1:A:2189:C:H2'	1:A:2190:A:C8	1.98	0.99
12:T:171:TYR:CD2	12:T:231:PRO:HA	1.97	0.99
1:A:259:C:H2'	1:A:260:G:C8	1.98	0.99
1:A:639:A:N6	6:N:201:LEU:CD1	2.26	0.99
2:C:40:U:N3	2:C:87:A:C6	2.31	0.99
1:A:540:A:P	4:L:212:ARG:NH1	2.32	0.99
1:A:329:C:C2'	26:G:222:ASN:HD22	1.60	0.99
6:N:165:ILE:HG13	6:N:206:LEU:HA	1.00	0.99
1:A:2739:A:C2	2:C:77:A:N6	2.31	0.99
2:C:38:G:OP2	25:F:144:LEU:HD22	1.63	0.99
1:A:102:U:H2'	1:A:103:C:H5'	1.42	0.99
1:A:139:U:C2	1:A:140:G:C8	2.51	0.99
1:A:143:G:H2'	1:A:144:A:H5'	1.42	0.98
1:A:1211:G:OP1	6:N:109:SER:OG	1.79	0.98
1:A:1470:A:C2	1:A:1482:C:O2	2.16	0.98
1:A:2191:C:H2'	1:A:2192:U:H5'	1.45	0.98
2:C:33:A:H1'	2:C:34:U:H5'	1.44	0.98
4:L:175:ARG:NH2	4:L:184:LYS:HD3	1.78	0.98
16:X:131:ASP:OD1	16:X:132:LYS:NZ	1.94	0.98
6:N:205:GLU:OE2	6:N:224:LYS:CE	2.12	0.98
12:T:169:SER:HB2	12:T:233:SER:CB	1.93	0.98
1:A:1886:A:H2'	1:A:1887:G:H5'	1.45	0.98
1:A:2219:U:H3'	1:A:2220:G:C5'	1.92	0.98
6:N:154:LEU:N	6:N:155:PRO:HD3	1.78	0.98
2:C:40:U:H2'	2:C:41:A:H8	1.27	0.98
2:C:40:U:O4	2:C:87:A:N6	1.95	0.98
1:A:932:A:O4'	16:X:85:GLN:NE2	1.93	0.98
1:A:267:C:H2'	1:A:268:G:H8	1.26	0.98
1:A:317:G:H21	1:A:338:G:H21	1.08	0.98
1:A:330:U:H3	26:G:218:LYS:CE	1.67	0.98
1:A:609:G:C5'	26:G:79:LYS:HD2	1.93	0.98
1:A:82:G:OP2	15:W:157:LYS:HE3	1.62	0.98
1:A:1444:A:N1	1:A:1609:U:O4	1.97	0.98
1:A:582:A:OP2	12:T:203:LYS:NZ	1.96	0.98
1:A:1479:U:H4'	1:A:1480:A:C5'	1.93	0.98
1:A:1876:A:H3'	1:A:1877:C:H6	1.28	0.98
1:A:145:A:H3'	1:A:146:U:H5''	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:639:A:C6	6:N:201:LEU:CD1	2.47	0.98
1:A:934:A:H1'	1:A:935:U:C5'	1.93	0.98
1:A:274:G:N1	1:A:433:C:C6	2.28	0.97
1:A:1522:A:H2'	1:A:1523:A:H8	1.29	0.97
1:A:144:A:H62	1:A:150:U:H3	1.10	0.97
1:A:330:U:C2	26:G:218:LYS:NZ	2.26	0.97
1:A:1083:G:H1	1:A:1132:C:H42	1.11	0.97
11:S:91:LEU:HG	12:T:175:PRO:CG	1.93	0.97
12:T:171:TYR:CD2	12:T:231:PRO:HB3	1.99	0.97
1:A:822:U:C5	1:A:1272:A:N1	2.32	0.97
1:A:857:G:N3	1:A:961:G:N2	2.12	0.97
1:A:861:A:N6	1:A:935:U:O4	1.96	0.97
1:A:1800:C:O2'	19:E:204:ALA:HB1	1.63	0.97
1:A:2213:A:C2	1:A:2242:A:H2	1.80	0.97
2:C:33:A:H1'	2:C:34:U:C5'	1.93	0.97
1:A:2116:C:H2'	1:A:2117:U:H5'	1.46	0.97
1:A:2215:C:O2'	1:A:2216:U:H5'	1.64	0.97
1:A:2304:A:C6	1:A:2363:A:N6	2.33	0.97
1:A:2213:A:H61	1:A:2241:G:H21	1.11	0.97
2:C:36:A:C2	25:F:274:ARG:NH1	2.33	0.97
4:L:175:ARG:HH21	4:L:184:LYS:HD3	1.26	0.97
18:Z:118:VAL:CG1	18:Z:122:ARG:NH2	2.26	0.97
1:A:911:U:H2'	1:A:912:C:C6	1.99	0.97
1:A:1829:A:H4'	1:A:1830:U:H5'	1.46	0.97
1:A:1885:C:C5	6:N:253:ALA:HB2	2.00	0.97
1:A:2129:G:H2'	1:A:2131:U:H5	1.27	0.96
1:A:2205:G:H2'	1:A:2206:A:H8	1.29	0.96
4:L:175:ARG:NH2	4:L:184:LYS:NZ	2.13	0.96
1:A:624:A:N9	1:A:625:C:H5	1.62	0.96
1:A:856:U:H6	1:A:962:G:N2	1.22	0.96
12:T:169:SER:HA	12:T:233:SER:HB2	1.44	0.96
2:C:36:A:C2	25:F:274:ARG:CZ	2.48	0.96
16:X:128:TYR:HB3	16:X:134:LYS:HG3	0.99	0.96
1:A:616:U:OP2	26:G:155:LYS:NZ	1.98	0.96
1:A:1526:G:N2	1:A:1540:C:O2	1.97	0.96
1:A:1691:A:N6	1:A:2019:G:N3	2.14	0.96
1:A:2304:A:C5	1:A:2363:A:N6	2.34	0.96
4:L:105:ALA:CB	4:L:147:VAL:HG21	1.94	0.96
1:A:639:A:H62	6:N:201:LEU:HD13	1.22	0.96
1:A:2432:G:O3'	6:N:145:GLY:HA2	1.65	0.96
1:A:624:A:C5	1:A:625:C:C5	2.52	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1178:G:H1'	11:S:83:HIS:NE2	1.80	0.96
1:A:2328:A:O4'	27:H:127:ILE:HD11	1.65	0.96
12:T:113:LYS:HA	12:T:113:LYS:HZ3	1.27	0.96
15:W:159:ARG:CB	15:W:168:VAL:HB	1.95	0.96
1:A:44:G:C8	1:A:200:G:H2'	2.00	0.96
1:A:524:A:O2'	11:S:11:ARG:NH2	1.97	0.96
1:A:140:G:N1	1:A:154:C:N3	2.14	0.96
12:T:113:LYS:HA	12:T:113:LYS:NZ	1.79	0.96
1:A:2723:A:O2'	8:P:74:ARG:HD3	1.65	0.96
1:A:159:A:H1'	1:A:160:A:OP1	1.64	0.95
1:A:351:C:H2'	1:A:352:C:C6	2.01	0.95
1:A:639:A:C5	6:N:201:LEU:HD13	1.98	0.95
1:A:888:C:N4	1:A:908:A:C2	2.24	0.95
1:A:1881:A:N7	6:N:255:GLU:OE1	1.99	0.95
1:A:2186:U:P	1:A:2188:C:H41	1.88	0.95
1:A:83:A:N6	1:A:98:G:C5	2.32	0.95
1:A:329:C:C1'	26:G:222:ASN:HD21	1.79	0.95
14:V:109:LEU:HD12	14:V:141:ARG:O	1.66	0.95
1:A:1470:A:C2	1:A:1482:C:C2	2.54	0.95
11:S:91:LEU:CG	12:T:175:PRO:HA	1.95	0.95
1:A:2129:G:H1'	1:A:2180:G:N2	1.80	0.95
1:A:2186:U:OP1	1:A:2188:C:N4	1.97	0.95
3:B:5:C:O2	3:B:119:G:N1	1.97	0.95
3:B:42:C:OP1	3:B:44:C:H5	1.48	0.95
3:B:91:G:H22	7:O:38:GLU:HG3	1.25	0.95
1:A:1879:U:C4	6:N:252:ARG:NH2	2.33	0.95
3:B:10:G:OP1	9:Q:63:LYS:HD2	1.67	0.95
29:J:76:ASN:O	29:J:80:PRO:CG	2.13	0.95
1:A:152:G:N3	1:A:153:G:C8	2.35	0.95
1:A:256:A:H8	1:A:380:C:O2'	1.48	0.95
6:N:202:GLY:HA2	6:N:221:ALA:HB2	1.47	0.95
7:O:26:ARG:HG3	7:O:27:ILE:H	1.31	0.95
1:A:276:G:H22	1:A:416:C:HO2'	0.99	0.95
1:A:822:U:O2'	1:A:1271:G:O2'	1.85	0.95
2:C:54:A:OP2	2:C:70:G:N2	2.00	0.95
1:A:140:G:O6	1:A:154:C:N4	1.99	0.95
1:A:636:C:H2'	1:A:637:G:H8	1.29	0.95
1:A:2698:C:OP1	25:F:285:LYS:CE	2.15	0.94
1:A:1525:G:N2	1:A:1541:U:O2	2.00	0.94
1:A:2579:U:O2'	5:M:23:ARG:NH1	1.99	0.94
1:A:1041:G:N2	1:A:1177:U:O2	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1080:C:H3'	1:A:1081:C:H5''	1.47	0.94
6:N:175:GLU:O	6:N:213:LYS:NZ	2.00	0.94
28:I:48:ILE:CD1	28:I:109:ARG:HH21	1.80	0.94
1:A:83:A:C2	1:A:100:G:N2	2.34	0.94
15:W:166:GLU:OE1	15:W:166:GLU:N	2.01	0.94
16:X:128:TYR:HB3	16:X:134:LYS:CB	1.96	0.94
1:A:1532:G:H1'	1:A:1611:G:O2'	1.67	0.94
1:A:46:C:H2'	1:A:47:G:H5'	1.46	0.94
1:A:857:G:C2	1:A:961:G:C2	2.56	0.94
1:A:1024:A:O2'	11:S:94:ARG:HD2	1.68	0.94
12:T:96:PRO:HB2	12:T:98:PRO:HD3	1.45	0.94
1:A:330:U:N3	26:G:218:LYS:HE2	1.72	0.94
1:A:2113:G:N2	1:A:2204:A:N6	2.08	0.94
1:A:2191:C:C2'	1:A:2192:U:H5'	1.96	0.94
1:A:2129:G:H2'	1:A:2131:U:C5	2.03	0.94
1:A:2213:A:N1	1:A:2214:C:C2	2.35	0.94
1:A:2646:U:O2'	1:A:2647:A:O5'	1.85	0.94
16:X:122:LEU:HG	16:X:140:ARG:CB	1.98	0.94
18:Z:118:VAL:CG1	18:Z:122:ARG:HH21	1.81	0.94
1:A:250:A:H4'	1:A:251:G:OP1	1.64	0.94
1:A:539:A:OP2	4:L:215:ARG:NH1	2.01	0.94
1:A:1499:G:N2	1:A:1546:C:C2	2.34	0.94
25:F:142:GLU:OE2	25:F:167:HIS:ND1	2.01	0.94
1:A:1187:G:N3	12:T:131:SER:OG	1.99	0.93
1:A:161:G:O2'	1:A:162:A:O5'	1.85	0.93
1:A:213:A:H3'	6:N:239:LYS:O	1.69	0.93
1:A:880:U:H2'	1:A:881:U:H5'	1.49	0.93
1:A:2351:G:C5	9:Q:64:VAL:HG22	2.00	0.93
12:T:170:THR:N	12:T:233:SER:CB	1.94	0.93
18:Z:76:LEU:HD12	18:Z:115:MET:HE3	1.40	0.93
1:A:158:C:C5	1:A:159:A:N7	2.37	0.93
1:A:2320:G:H4'	27:H:175:PHE:HA	1.47	0.93
3:B:30:A:H2'	3:B:31:C:H6	1.29	0.93
6:N:253:ALA:O	6:N:255:GLU:N	2.02	0.93
12:T:169:SER:CA	12:T:233:SER:HB2	1.98	0.93
1:A:1504:C:H2'	1:A:1505:C:C6	2.03	0.93
1:A:2114:G:C6	1:A:2204:A:N1	2.37	0.93
1:A:2129:G:C2'	1:A:2131:U:H5	1.82	0.93
1:A:2213:A:C2	1:A:2214:C:N1	2.37	0.93
1:A:388:C:N4	1:A:410:G:N1	2.15	0.93
1:A:2213:A:C6	1:A:2242:A:C2	2.57	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:205:GLU:OE2	6:N:224:LYS:HE3	1.66	0.93
15:W:57:LYS:HA	15:W:61:LEU:O	1.69	0.93
6:N:160:ILE:HG12	6:N:201:LEU:HD12	1.50	0.93
16:X:128:TYR:CD2	16:X:132:LYS:CB	2.52	0.93
1:A:279:A:N6	1:A:379:C:N4	2.12	0.93
1:A:368:U:H2'	1:A:369:U:H6	1.31	0.93
1:A:1178:G:O4'	11:S:83:HIS:NE2	2.01	0.93
15:W:141:GLN:CG	15:W:166:GLU:OE2	2.17	0.93
1:A:1471:A:H2	1:A:1481:U:H3	1.16	0.93
1:A:2206:A:H2'	1:A:2207:A:C8	2.03	0.93
1:A:2322:A:C1'	27:H:186:ARG:CD	2.37	0.93
1:A:1876:A:H3'	1:A:1877:C:C6	2.02	0.92
3:B:7:G:N1	3:B:117:A:C2	2.37	0.92
16:X:153:ARG:HG2	16:X:153:ARG:HH11	1.32	0.92
1:A:416:C:O2	1:A:418:G:C4	2.22	0.92
1:A:2107:G:C5	1:A:2242:A:C8	2.56	0.92
1:A:2213:A:N1	1:A:2214:C:N3	2.17	0.92
6:N:143:LEU:CG	6:N:146:ILE:HD11	1.99	0.92
6:N:182:LYS:HE2	6:N:189:PRO:CG	1.99	0.92
12:T:197:VAL:HG23	12:T:210:ILE:HG13	1.50	0.92
1:A:890:G:H2'	1:A:891:G:C8	2.04	0.92
1:A:2213:A:H2	1:A:2214:C:C2	1.72	0.92
13:U:138:ASP:OD1	13:U:139:ILE:N	2.01	0.92
1:A:102:U:C2'	1:A:103:C:H5'	2.00	0.92
1:A:901:C:H2'	1:A:902:G:C4'	1.99	0.92
28:I:48:ILE:HG13	28:I:90:LEU:HB2	1.51	0.92
1:A:983:G:N2	7:O:82:ARG:HH12	1.53	0.92
1:A:1689:C:C5'	8:P:12:LYS:HE2	2.00	0.92
1:A:276:G:O6	1:A:433:C:N4	2.02	0.92
2:C:104:A:H2'	2:C:105:A:H8	1.29	0.92
11:S:91:LEU:HG	12:T:175:PRO:HA	1.47	0.92
11:S:91:LEU:CG	12:T:175:PRO:HB3	2.00	0.92
16:X:133:LYS:HE2	16:X:133:LYS:HA	1.49	0.92
16:X:143:GLN:C	16:X:145:GLU:OE1	2.08	0.92
1:A:44:G:C8	1:A:200:G:C2'	2.52	0.92
1:A:1178:G:O4'	11:S:83:HIS:CD2	2.23	0.92
1:A:2316:G:H1	1:A:2334:C:H42	1.14	0.92
12:T:174:THR:O	12:T:176:ILE:N	2.02	0.92
13:U:151:SER:O	13:U:152:LEU:HD23	1.68	0.92
1:A:609:G:H5''	26:G:79:LYS:CE	2.00	0.92
1:A:860:C:H2'	1:A:861:A:H8	1.35	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2764:U:O4	1:A:2774:U:O4	1.87	0.92
12:T:96:PRO:O	12:T:98:PRO:CD	2.17	0.92
1:A:93:A:HO2'	18:Z:102:PRO:HG2	1.13	0.92
1:A:858:G:H2'	1:A:859:A:H5'	1.49	0.92
1:A:1470:A:N1	1:A:1482:C:N3	2.17	0.92
1:A:2318:C:H2'	1:A:2319:C:C6	2.04	0.92
12:T:171:TYR:HE2	12:T:231:PRO:CB	1.73	0.92
1:A:295:C:H2'	1:A:296:G:C8	2.03	0.91
1:A:1833:G:OP1	19:E:50:ARG:NH1	2.03	0.91
1:A:2247:C:H1'	17:Y:102:ASN:HB3	1.50	0.91
12:T:169:SER:CB	12:T:233:SER:OG	2.18	0.91
1:A:2116:C:H42	1:A:2201:G:H1	1.07	0.91
1:A:2219:U:HO2'	1:A:2229:U:H3	1.10	0.91
1:A:44:G:O2'	1:A:200:G:N7	1.99	0.91
1:A:131:C:N4	14:V:104:TYR:CD2	2.38	0.91
25:F:145:ARG:HH21	25:F:145:ARG:HG3	1.33	0.91
1:A:874:G:OP2	7:O:23:ARG:NH2	2.03	0.91
1:A:1482:C:H2'	1:A:1483:G:H8	1.29	0.91
1:A:96:C:H2'	1:A:97:A:H8	1.31	0.91
1:A:822:U:C6	1:A:1272:A:C2	2.58	0.91
1:A:2114:G:O6	1:A:2204:A:C6	2.24	0.91
1:A:2322:A:H61	27:H:204:GLY:HA3	1.30	0.91
25:F:142:GLU:OE2	25:F:167:HIS:HE1	1.42	0.91
1:A:2151:G:C6	1:A:2152:C:N4	2.39	0.91
11:S:14:ARG:HD3	11:S:32:THR:HG21	1.52	0.91
12:T:91:ASP:HB2	13:U:142:PHE:CZ	2.05	0.91
1:A:47:G:N2	1:A:162:A:OP2	2.03	0.91
1:A:639:A:N7	6:N:201:LEU:HD12	1.86	0.91
6:N:154:LEU:H	6:N:155:PRO:HD2	1.33	0.91
13:U:153:THR:O	13:U:157:LEU:HG	1.69	0.91
1:A:387:G:H3'	1:A:388:C:H5''	1.52	0.91
1:A:2320:G:H2'	1:A:2321:G:H8	1.28	0.91
1:A:946:A:N6	1:A:950:A:H61	1.68	0.90
16:X:128:TYR:CA	16:X:134:LYS:HD3	2.01	0.90
1:A:381:C:O2	1:A:416:C:H5	1.45	0.90
1:A:951:C:H2'	1:A:952:A:C8	2.05	0.90
1:A:1159:G:N7	4:L:176:HIS:HE1	1.69	0.90
1:A:1278:U:O2'	26:G:135:PRO:HD3	1.71	0.90
3:B:35:A:C2	3:B:51:G:C4	2.60	0.90
1:A:1002:G:H5'	12:T:201:LYS:HZ1	0.77	0.90
1:A:2220:G:N2	1:A:2236:C:O2	2.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2236:C:H2'	1:A:2237:A:H5''	1.51	0.90
15:W:170:THR:CG2	15:W:171:PRO:HD3	2.01	0.90
1:A:243:U:O2	6:N:194:ARG:NH1	2.04	0.90
1:A:2213:A:C4	1:A:2242:A:N1	2.39	0.90
2:C:40:U:C2	2:C:87:A:N1	2.39	0.90
1:A:377:G:O2'	1:A:378:A:O5'	1.89	0.90
6:N:165:ILE:HD11	6:N:207:SER:H	1.37	0.90
15:W:109:LYS:O	15:W:122:ILE:HG23	1.70	0.90
1:A:135:C:C5	1:A:161:G:C6	2.60	0.90
3:B:36:A:C6	3:B:45:G:C5	2.59	0.90
16:X:122:LEU:HD11	16:X:140:ARG:HG3	0.91	0.90
1:A:919:A:H62	7:O:12:GLN:HA	1.35	0.90
1:A:44:G:H3'	1:A:45:A:C5'	2.02	0.90
1:A:624:A:C8	1:A:625:C:H5	1.90	0.90
1:A:2809:U:H2'	1:A:2810:A:C4'	2.00	0.90
12:T:96:PRO:HB2	12:T:98:PRO:CD	2.01	0.90
1:A:355:A:C2'	1:A:356:A:H5'	2.00	0.90
1:A:843:C:H4'	6:N:125:ILE:HD13	1.51	0.90
1:A:2117:U:O2	1:A:2200:A:N1	2.05	0.90
1:A:2124:G:N2	1:A:2194:U:C2	2.38	0.90
6:N:202:GLY:HA2	6:N:221:ALA:HA	1.52	0.90
15:W:173:ARG:HB3	15:W:173:ARG:NH2	1.86	0.90
1:A:599:C:H2'	1:A:600:A:H8	1.37	0.89
1:A:960:A:N1	16:X:154:LYS:NZ	2.19	0.89
3:B:36:A:N6	3:B:45:G:C8	2.41	0.89
1:A:260:G:C6	1:A:268:G:N1	2.40	0.89
1:A:902:G:H2'	1:A:903:G:H5''	1.51	0.89
2:C:104:A:N1	2:C:105:A:N6	2.20	0.89
1:A:416:C:O2	1:A:418:G:C6	2.24	0.89
1:A:2647:A:H61	1:A:2806:U:H3	1.12	0.89
6:N:159:PRO:HD3	6:N:199:LYS:O	1.69	0.89
12:T:88:VAL:O	12:T:89:LEU:HD23	1.73	0.89
1:A:1522:A:H2'	1:A:1523:A:C8	2.07	0.89
1:A:2213:A:N1	1:A:2242:A:C2	2.40	0.89
4:L:175:ARG:HH22	4:L:184:LYS:HZ1	1.14	0.89
12:T:96:PRO:CB	12:T:98:PRO:HD3	2.01	0.89
1:A:2647:A:N6	1:A:2806:U:H3	1.69	0.89
3:B:36:A:N6	3:B:45:G:C5	2.41	0.89
1:A:1024:A:OP2	12:T:132:ARG:HD2	1.71	0.89
1:A:1534:A:H2'	1:A:1535:A:H5''	1.52	0.89
1:A:2330:U:O4'	27:H:90:ASN:ND2	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:16:G:O6	3:B:111:G:N2	2.05	0.89
11:S:91:LEU:CG	12:T:175:PRO:CA	2.48	0.89
12:T:91:ASP:CB	13:U:142:PHE:CZ	2.56	0.89
1:A:368:U:H2'	1:A:369:U:C6	2.07	0.89
1:A:624:A:N3	1:A:625:C:H6	1.69	0.89
1:A:2117:U:H2'	1:A:2118:U:C6	2.06	0.89
1:A:131:C:H5	14:V:104:TYR:CE2	1.90	0.89
1:A:160:A:N3	1:A:161:G:N7	2.21	0.89
1:A:1690:A:H5''	1:A:1690:A:N3	1.87	0.89
2:C:28:U:H1'	2:C:30:A:C8	2.07	0.89
6:N:106:GLN:O	6:N:110:CYS:HA	1.73	0.89
1:A:1532:G:N3	1:A:1611:G:H1'	1.87	0.89
6:N:195:ARG:O	6:N:197:PRO:HD3	1.73	0.89
1:A:285:A:O2'	1:A:286:U:OP1	1.90	0.88
1:A:981:G:OP2	7:O:16:ARG:CD	2.19	0.88
1:A:636:C:H2'	1:A:637:G:C8	2.08	0.88
1:A:1083:G:H1	1:A:1132:C:N4	1.71	0.88
1:A:1756:G:H2'	1:A:1757:G:H8	1.38	0.88
1:A:2114:G:O6	1:A:2204:A:N6	2.07	0.88
14:V:115:LEU:O	18:Z:91:ARG:NH2	2.06	0.88
15:W:67:ARG:HB3	15:W:67:ARG:NH1	1.88	0.88
26:G:234:LEU:HD23	26:G:235:ASN:N	1.89	0.88
1:A:329:C:C1'	26:G:222:ASN:ND2	2.35	0.88
1:A:2121:C:C4	1:A:2196:G:N2	2.41	0.88
13:U:150:GLU:O	13:U:152:LEU:N	2.06	0.88
1:A:291:G:O2'	1:A:292:C:H5'	1.74	0.88
1:A:1756:G:H2'	1:A:1757:G:C8	2.08	0.88
12:T:88:VAL:HG12	12:T:89:LEU:H	1.35	0.88
25:F:122:ILE:CG2	25:F:183:GLN:HA	2.03	0.88
1:A:858:G:H2'	1:A:859:A:C8	2.07	0.88
1:A:2213:A:C6	1:A:2242:A:N1	2.41	0.88
6:N:156:LYS:HZ3	6:N:215:ARG:HH11	0.91	0.88
1:A:1449:C:N4	1:A:1604:A:OP2	2.06	0.88
6:N:82:LEU:HD23	26:G:240:LEU:CD2	2.03	0.88
16:X:101:PHE:CD1	16:X:133:LYS:HB3	2.08	0.88
1:A:151:G:H2'	1:A:152:G:H8	1.38	0.88
1:A:274:G:N7	1:A:433:C:H5''	1.87	0.88
1:A:795:U:H5'	19:E:222:ASN:OD1	1.74	0.88
1:A:1545:G:C8	1:A:1546:C:H5	1.92	0.88
1:A:1689:C:N4	8:P:19:ARG:NE	2.20	0.88
1:A:2113:G:H22	1:A:2204:A:H61	0.89	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:8:G:N2	3:B:116:C:C2	2.41	0.88
1:A:2324:G:N2	1:A:2328:A:C8	2.42	0.88
12:T:174:THR:HG23	12:T:175:PRO:HD2	1.54	0.88
16:X:145:GLU:OE1	16:X:145:GLU:N	2.06	0.88
25:F:117:PHE:O	25:F:274:ARG:NH2	2.06	0.88
1:A:265:A:H5''	1:A:266:A:C8	2.09	0.88
1:A:495:A:O4'	15:W:110:HIS:HB3	1.74	0.88
1:A:1651:C:OP2	1:A:1653:C:N4	2.05	0.88
6:N:198:LEU:HD22	6:N:214:ALA:HB1	1.54	0.88
18:Z:118:VAL:HG12	18:Z:122:ARG:NH2	1.89	0.88
26:G:75:ALA:HB2	26:G:159:LEU:HD21	1.55	0.88
1:A:295:C:O2'	1:A:296:G:H5'	1.74	0.88
16:X:128:TYR:HB2	16:X:134:LYS:HD3	0.90	0.88
28:I:46:GLN:OE1	28:I:109:ARG:CD	2.22	0.88
1:A:626:C:C5	1:A:627:C:C4	2.61	0.87
1:A:2351:G:C8	9:Q:64:VAL:HG21	2.08	0.87
6:N:210:LEU:N	6:N:230:CYS:HB2	1.89	0.87
15:W:161:LEU:HD12	15:W:168:VAL:HG23	1.54	0.87
1:A:121:G:H2'	1:A:122:U:H5'	1.53	0.87
1:A:910:A:O2'	1:A:911:U:H5'	1.74	0.87
1:A:1603:A:H5'	19:E:55:LYS:CD	2.02	0.87
1:A:1634:C:H5''	14:V:145:LYS:NZ	1.89	0.87
1:A:2205:G:H2'	1:A:2206:A:C8	2.07	0.87
1:A:2213:A:H62	1:A:2241:G:N2	1.68	0.87
28:I:91:ARG:HA	28:I:109:ARG:HH22	1.38	0.87
1:A:858:G:O2'	1:A:859:A:H5'	1.74	0.87
1:A:891:G:O2'	1:A:892:C:H5'	1.74	0.87
1:A:495:A:H1'	15:W:122:ILE:HG12	1.57	0.87
1:A:2322:A:N1	27:H:204:GLY:CA	2.37	0.87
11:S:91:LEU:CD1	12:T:175:PRO:CA	2.52	0.87
12:T:103:TYR:CD2	12:T:106:ILE:HD12	2.09	0.87
16:X:122:LEU:O	16:X:137:VAL:HA	1.72	0.87
19:E:226:HIS:CE1	19:E:228:HIS:CD2	2.60	0.87
1:A:363:C:H2'	1:A:364:U:C6	2.08	0.87
1:A:1472:A:N6	1:A:1479:U:C5	2.42	0.87
1:A:1474:A:O2'	1:A:1475:U:OP1	1.92	0.87
1:A:1689:C:OP1	2:C:18:G:N1	2.06	0.87
4:L:175:ARG:HH22	4:L:184:LYS:HZ2	1.23	0.87
25:F:135:ASN:HD22	25:F:175:SER:HA	1.38	0.87
1:A:44:G:H8	1:A:200:G:H2'	1.40	0.87
1:A:49:G:O2'	18:Z:130:LYS:CD	2.23	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:287:A:H2'	1:A:288:C:C6	2.09	0.87
3:B:93:C:O2'	3:B:94:C:H5'	1.74	0.87
1:A:381:C:O2	1:A:416:C:N4	2.08	0.87
1:A:823:C:HO2'	1:A:1247:A:HO2'	1.04	0.87
1:A:2331:G:N2	27:H:182:SER:OG	2.06	0.87
1:A:292:C:H2'	1:A:293:G:H8	1.34	0.87
1:A:1219:U:O2	11:S:5:LYS:CE	2.23	0.87
1:A:1755:A:H2'	1:A:1756:G:H8	1.40	0.87
1:A:2322:A:O2'	1:A:2323:C:H5'	1.74	0.87
1:A:279:A:N7	1:A:379:C:C5	2.42	0.86
1:A:2117:U:O2	1:A:2200:A:C2	2.28	0.86
3:B:34:C:O2	3:B:52:G:C2	2.27	0.86
17:Y:87:ARG:HB3	17:Y:97:ARG:HE	1.40	0.86
27:H:106:ALA:HB1	27:H:140:ILE:HG21	1.57	0.86
1:A:103:C:O2'	1:A:104:C:H5'	1.74	0.86
1:A:143:G:C2'	1:A:144:A:H5'	2.05	0.86
1:A:553:G:H1	1:A:561:C:H42	1.23	0.86
25:F:144:LEU:CD1	25:F:166:ARG:HB2	2.04	0.86
1:A:2121:C:N4	1:A:2196:G:H22	1.72	0.86
28:I:42:ARG:HG3	28:I:44:GLY:H	1.37	0.86
1:A:909:A:H2'	1:A:910:A:C8	2.09	0.86
1:A:913:G:O2'	1:A:914:A:H5'	1.75	0.86
1:A:2109:C:H3'	1:A:2110:U:C5	2.09	0.86
2:C:85:U:O2'	2:C:86:A:H5'	1.76	0.86
6:N:159:PRO:CB	6:N:187:ILE:CD1	2.43	0.86
15:W:85:LYS:HD3	15:W:104:LEU:HD13	1.57	0.86
26:G:80:ALA:O	26:G:84:VAL:HG12	1.75	0.86
1:A:274:G:C2	1:A:433:C:H5	1.84	0.86
1:A:649:A:H5''	6:N:203:GLU:HB2	1.56	0.86
16:X:101:PHE:CD1	16:X:133:LYS:CB	2.59	0.86
16:X:101:PHE:CE1	16:X:133:LYS:CG	2.59	0.86
28:I:130:VAL:HG12	28:I:200:LYS:HG3	1.56	0.86
1:A:1529:A:N1	1:A:1537:U:C4	2.43	0.86
2:C:75:U:H3'	2:C:76:G:H5'	1.55	0.86
15:W:161:LEU:HD12	15:W:168:VAL:CG2	2.04	0.86
19:E:245:PRO:HG2	19:E:246:TRP:CE3	2.10	0.86
25:F:144:LEU:CD1	25:F:166:ARG:CZ	2.52	0.86
1:A:1829:A:OP1	19:E:151:ALA:HA	1.76	0.86
2:C:81:A:O2'	2:C:82:U:H5'	1.74	0.86
1:A:2154:C:C4	1:A:2165:G:N2	2.33	0.86
1:A:883:C:O4'	7:O:65:TRP:CZ3	2.29	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:72:A:H2'	2:C:73:G:H5'	1.57	0.86
6:N:182:LYS:HE2	6:N:189:PRO:HG2	1.57	0.86
12:T:96:PRO:CA	12:T:98:PRO:HD3	2.05	0.86
1:A:1:U:O2'	1:A:2:U:H5'	1.75	0.86
1:A:639:A:H62	6:N:201:LEU:CD1	1.87	0.86
1:A:2708:C:HO2'	2:C:75:U:HO2'	0.94	0.86
1:A:1287:G:O6	13:U:42:SER:OG	1.93	0.85
1:A:1529:A:C2	1:A:1537:U:N3	2.44	0.85
1:A:1751:A:N3	1:A:1753:A:N7	2.24	0.85
1:A:1879:U:C2	1:A:1887:G:N2	2.44	0.85
4:L:177:SER:OG	4:L:182:GLY:HA3	1.76	0.85
1:A:671:C:H5''	26:G:150:ILE:HG23	1.57	0.85
1:A:856:U:O2'	1:A:857:G:OP1	1.94	0.85
1:A:1499:G:H1	1:A:1546:C:H42	0.89	0.85
2:C:103:G:O2'	2:C:104:A:H5'	1.76	0.85
17:Y:87:ARG:HD2	17:Y:97:ARG:HD3	1.57	0.85
1:A:890:G:O2'	1:A:891:G:H5'	1.76	0.85
1:A:898:G:C8	1:A:899:A:C8	2.64	0.85
4:L:100:TRP:CE3	4:L:101:TYR:HB2	2.10	0.85
5:M:15:GLY:HA3	5:M:50:THR:HG21	1.57	0.85
1:A:83:A:N3	1:A:101:A:N6	2.24	0.85
1:A:274:G:N7	1:A:433:C:C5'	2.39	0.85
1:A:855:C:H2'	1:A:856:U:O4'	1.75	0.85
1:A:1811:A:C6	19:E:261:TYR:OH	2.29	0.85
1:A:1887:G:H2'	1:A:1888:G:H8	1.41	0.85
12:T:123:ILE:HD11	12:T:227:TYR:CE1	2.11	0.85
1:A:6:A:O2'	1:A:7:C:H5'	1.74	0.85
1:A:119:A:H5'	1:A:133:A:OP2	1.77	0.85
1:A:270:G:H2'	1:A:271:G:H5'	1.56	0.85
1:A:670:A:H2'	1:A:671:C:C6	2.12	0.85
1:A:1039:A:C2	1:A:1178:G:C6	2.64	0.85
1:A:1812:A:O2'	1:A:1813:A:H5'	1.77	0.85
3:B:34:C:C2	3:B:52:G:C2	2.63	0.85
10:R:127:ASN:O	10:R:131:VAL:HG23	1.75	0.85
1:A:903:G:H2'	1:A:904:U:C5'	2.07	0.85
1:A:1224:U:C1'	6:N:83:ASP:OD1	2.25	0.85
1:A:1885:C:N4	6:N:253:ALA:CB	2.39	0.85
1:A:2234:G:O2'	1:A:2235:C:H5'	1.76	0.85
1:A:2647:A:C4	2:C:98:G:C2	2.65	0.85
1:A:2684:C:C5	28:I:150:SER:CB	2.59	0.85
2:C:31:U:C2	2:C:38:G:N7	2.44	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:T:171:TYR:CD2	12:T:231:PRO:CA	2.57	0.85
1:A:1882:U:C5	1:A:1883:G:C5	2.65	0.85
3:B:35:A:H2	3:B:51:G:C4	1.94	0.85
12:T:169:SER:CA	12:T:233:SER:CB	2.54	0.85
1:A:3:C:O2'	1:A:4:A:H5'	1.76	0.85
1:A:622:G:H1'	1:A:628:A:H61	1.39	0.85
1:A:1159:G:C8	4:L:176:HIS:CE1	2.65	0.85
15:W:70:LYS:O	15:W:89:ILE:HD11	1.76	0.85
15:W:161:LEU:HD11	15:W:168:VAL:HG22	1.58	0.85
1:A:152:G:C2	1:A:153:G:N7	2.45	0.85
1:A:345:C:O2'	1:A:346:A:H5'	1.77	0.85
1:A:911:U:O2'	1:A:912:C:H5'	1.77	0.85
6:N:165:ILE:HD11	6:N:207:SER:OG	1.75	0.85
1:A:49:G:HO2'	18:Z:130:LYS:HD2	1.40	0.85
1:A:914:A:C2'	1:A:915:G:H5'	2.06	0.85
1:A:1516:G:N7	1:A:1517:G:C8	2.45	0.85
1:A:1527:G:O6	1:A:1539:C:N4	2.09	0.85
1:A:2151:G:O6	1:A:2152:C:N4	2.10	0.85
2:C:49:A:C6	2:C:76:G:N2	2.45	0.85
2:C:102:U:H2'	2:C:103:G:H5'	1.56	0.85
6:N:158:VAL:CG1	6:N:201:LEU:HG	2.06	0.85
15:W:159:ARG:HB2	15:W:168:VAL:HB	1.58	0.85
1:A:280:G:H22	1:A:376:U:H3	1.25	0.84
1:A:287:A:C2	1:A:288:C:N3	2.45	0.84
1:A:1535:A:C8	19:E:95:GLY:HA3	2.12	0.84
1:A:1596:U:H2'	1:A:1597:C:H5'	1.56	0.84
1:A:2767:A:O2'	28:I:103:GLN:OE1	1.93	0.84
2:C:102:U:C2'	2:C:103:G:H5'	2.07	0.84
3:B:32:A:C2'	3:B:33:C:H5'	2.06	0.84
4:L:102:PRO:HA	11:S:99:GLN:HE22	1.40	0.84
6:N:210:LEU:H	6:N:230:CYS:HB2	1.42	0.84
15:W:58:PRO:HD2	15:W:61:LEU:O	1.75	0.84
1:A:274:G:C5	1:A:433:C:C6	2.65	0.84
1:A:877:C:H2'	1:A:878:U:C6	2.11	0.84
1:A:934:A:H1'	1:A:935:U:H5'	1.57	0.84
1:A:1080:C:H2'	1:A:1081:C:O4'	1.78	0.84
1:A:2121:C:N4	1:A:2197:A:C2	2.45	0.84
3:B:7:G:O6	3:B:117:A:N1	2.09	0.84
1:A:279:A:C6	1:A:379:C:N4	2.45	0.84
1:A:2113:G:N2	1:A:2204:A:C6	2.34	0.84
1:A:2219:U:H3'	1:A:2220:G:H5'	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2579:U:O2	5:M:23:ARG:NH2	2.10	0.84
1:A:252:C:O2'	1:A:253:C:H5'	1.76	0.84
1:A:1538:G:O2'	1:A:1539:C:H5'	1.77	0.84
1:A:1809:G:N7	19:E:172:LEU:HD13	1.93	0.84
2:C:38:G:N2	25:F:145:ARG:NH2	2.16	0.84
3:B:42:C:OP1	3:B:44:C:C5	2.29	0.84
6:N:158:VAL:CG1	6:N:201:LEU:HD21	2.06	0.84
16:X:67:LYS:HA	16:X:67:LYS:HZ2	1.40	0.84
19:E:226:HIS:ND1	19:E:228:HIS:HD2	1.75	0.84
28:I:46:GLN:HB3	28:I:109:ARG:CD	2.08	0.84
1:A:313:A:N1	1:A:323:G:O6	2.09	0.84
1:A:1021:A:H1'	12:T:214:GLN:HE21	1.40	0.84
1:A:1039:A:N1	1:A:1178:G:C6	2.45	0.84
1:A:1211:G:H5''	6:N:111:GLY:HA2	0.87	0.84
1:A:1470:A:H2	1:A:1482:C:O2	1.61	0.84
1:A:2049:G:H5'	1:A:2050:C:H5	1.41	0.84
2:C:32:C:H1'	2:C:33:A:C5'	2.07	0.84
4:L:171:LYS:NZ	4:L:173:TYR:OH	2.11	0.84
14:V:104:TYR:HD1	18:Z:142:ARG:CD	1.90	0.84
16:X:134:LYS:NZ	16:X:134:LYS:HB3	1.91	0.84
1:A:267:C:H2'	1:A:268:G:C8	2.12	0.84
1:A:1471:A:O2'	1:A:1472:A:OP1	1.95	0.84
1:A:2202:C:H2'	1:A:2203:U:C6	2.12	0.84
3:B:37:U:O2'	3:B:38:C:H5'	1.76	0.84
12:T:116:PRO:HD2	12:T:117:PRO:HD3	1.58	0.84
13:U:79:LEU:HD22	13:U:134:ILE:HD12	1.58	0.84
3:B:30:A:H2'	3:B:31:C:C6	2.12	0.84
5:M:24:ILE:HG21	5:M:33:ALA:HB2	1.58	0.84
16:X:143:GLN:O	16:X:145:GLU:N	2.09	0.84
1:A:530:U:H5''	13:U:54:ARG:HH22	1.43	0.84
1:A:1552:U:H2'	1:A:1553:U:C6	2.13	0.84
3:B:91:G:C2	7:O:38:GLU:OE2	2.30	0.84
6:N:197:PRO:CB	6:N:215:ARG:HD2	2.06	0.84
1:A:75:C:P	18:Z:110:LYS:HZ1	2.00	0.84
1:A:1023:C:C2	4:L:102:PRO:HD3	2.09	0.84
11:S:91:LEU:HD12	12:T:175:PRO:CA	2.06	0.84
1:A:83:A:C5	1:A:98:G:C6	2.66	0.84
1:A:2739:A:N1	2:C:77:A:N6	2.26	0.84
6:N:235:LEU:HD12	6:N:236:PRO:HD2	1.59	0.84
1:A:131:C:C5	14:V:104:TYR:CE2	2.65	0.83
1:A:350:G:O2'	1:A:351:C:H5'	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:902:G:C2'	1:A:903:G:H5''	2.07	0.83
1:A:946:A:N6	1:A:950:A:N6	2.26	0.83
1:A:1080:C:C3'	1:A:1081:C:H5''	2.07	0.83
1:A:1238:G:N2	1:A:1252:C:N3	2.26	0.83
1:A:2119(A):U:H3	1:A:2199:G:H1	1.21	0.83
2:C:38:G:H22	25:F:145:ARG:NH2	1.32	0.83
6:N:201:LEU:C	6:N:221:ALA:HB2	1.99	0.83
1:A:342:G:O2'	1:A:343:U:H5'	1.77	0.83
1:A:2124:G:C2	1:A:2194:U:O2	2.29	0.83
2:C:17:A:OP2	8:P:13:HIS:NE2	2.11	0.83
1:A:151:G:O2'	1:A:152:G:H5'	1.79	0.83
1:A:1219:U:O2	11:S:5:LYS:HE2	1.77	0.83
1:A:288:C:O2'	1:A:289:A:H5'	1.78	0.83
1:A:2188:C:O2'	1:A:2189:C:H5'	1.79	0.83
1:A:290:A:O2'	1:A:291:G:H5'	1.77	0.83
1:A:318:A:N6	1:A:339:A:N6	2.26	0.83
1:A:883:C:H2'	1:A:884:G:H8	1.43	0.83
1:A:919:A:N6	7:O:12:GLN:HA	1.92	0.83
1:A:1361:U:O4	14:V:168:PRO:CB	2.27	0.83
1:A:1470:A:H2	1:A:1482:C:C2	1.95	0.83
1:A:1504:C:H2'	1:A:1505:C:C5	2.13	0.83
1:A:2236:C:C2'	1:A:2237:A:H5''	2.08	0.83
1:A:2659:G:H5'	4:L:179:ARG:NH2	1.94	0.83
3:B:86:G:O2'	3:B:87:G:H5'	1.79	0.83
6:N:129:PHE:CE2	6:N:131:GLY:HA2	2.12	0.83
1:A:344:C:O2'	1:A:345:C:H5'	1.77	0.83
6:N:158:VAL:HG11	6:N:201:LEU:CD2	2.08	0.83
1:A:2393:A:C2	9:Q:166:PHE:CZ	2.66	0.83
2:C:77:A:C1'	8:P:16:LYS:HB2	2.04	0.83
12:T:177:VAL:HA	12:T:230:TYR:OH	1.78	0.83
14:V:109:LEU:HD11	14:V:141:ARG:CB	2.09	0.83
1:A:133:A:H2'	1:A:134:A:C8	2.13	0.83
1:A:1483:G:H2'	1:A:1484:G:H8	1.44	0.83
2:C:53:G:N2	10:R:144:ARG:NH1	2.26	0.83
6:N:175:GLU:HB3	6:N:213:LYS:HZ1	1.43	0.83
10:R:137:LEU:HD12	10:R:137:LEU:O	1.78	0.83
1:A:144:A:N6	1:A:150:U:H3	1.76	0.83
1:A:289:A:O2'	1:A:290:A:H5'	1.78	0.83
1:A:302:C:O2'	1:A:303:U:H5'	1.78	0.83
1:A:914:A:O2'	1:A:915:G:H5'	1.78	0.83
1:A:121:G:C2'	1:A:122:U:H5'	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:253:C:O2	1:A:437:G:C2	2.31	0.82
1:A:702:C:P	19:E:213:ARG:NH1	2.52	0.82
1:A:880:U:C2'	1:A:881:U:H5'	2.09	0.82
1:A:2318:C:O2'	1:A:2319:C:H5'	1.79	0.82
2:C:35:U:O2'	2:C:36:A:OP1	1.96	0.82
3:B:34:C:O2	3:B:52:G:N3	2.11	0.82
4:L:172:LEU:CD2	4:L:185:GLU:OE2	2.27	0.82
1:A:44:G:N7	1:A:200:G:C2'	2.42	0.82
1:A:181:A:N7	6:N:117:GLN:NE2	2.28	0.82
1:A:345:C:H2'	1:A:346:A:C8	2.14	0.82
1:A:1485:U:HO2'	1:A:1580:G:HO2'	1.25	0.82
1:A:2328:A:C4'	27:H:127:ILE:HD11	2.09	0.82
3:B:15:A:O2'	3:B:16:G:H5''	1.78	0.82
3:B:32:A:O2'	3:B:33:C:H5'	1.78	0.82
1:A:160:A:H2	1:A:161:G:N7	1.75	0.82
1:A:256:A:H8	1:A:380:C:HO2'	0.82	0.82
1:A:390:U:O2'	1:A:391:G:H5'	1.79	0.82
1:A:1536:A:H5''	1:A:1536:A:N3	1.93	0.82
1:A:1754:A:C8	1:A:1755:A:C8	2.67	0.82
1:A:2108:G:N3	1:A:2108:G:H5'	1.94	0.82
1:A:2154:C:H42	1:A:2165:G:H1	1.28	0.82
3:B:36:A:N6	3:B:45:G:N7	2.27	0.82
6:N:205:GLU:CD	6:N:224:LYS:CE	2.47	0.82
12:T:171:TYR:CD2	12:T:231:PRO:CB	2.59	0.82
1:A:139:U:C2	1:A:140:G:N7	2.47	0.82
1:A:861:A:O2'	1:A:862:U:H5'	1.80	0.82
1:A:1573:C:H2'	1:A:1574:G:H8	1.44	0.82
1:A:2764:U:O4	1:A:2774:U:C4	2.32	0.82
10:R:122:ILE:O	10:R:125:ILE:HG22	1.78	0.82
1:A:329:C:C2	26:G:222:ASN:ND2	2.48	0.82
1:A:329:C:H1'	26:G:222:ASN:HD21	1.42	0.82
1:A:671:C:O2'	1:A:672:U:H5'	1.80	0.82
1:A:1545:G:C8	1:A:1546:C:C5	2.68	0.82
4:L:173:TYR:HD1	4:L:202:HIS:HD1	1.26	0.82
7:O:70:PRO:HA	7:O:95:ALA:HB2	1.61	0.82
10:R:123:MET:HE3	25:F:98:GLY:HA3	1.62	0.82
18:Z:76:LEU:HD11	18:Z:115:MET:HE3	1.60	0.82
19:E:232:GLU:N	19:E:232:GLU:OE1	2.12	0.82
1:A:1545:G:H2'	1:A:1546:C:H6	1.42	0.82
16:X:101:PHE:HD1	16:X:133:LYS:HB3	1.43	0.82
1:A:2129:G:C1'	1:A:2180:G:H21	1.91	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2804:U:OP1	25:F:159:LYS:CG	2.25	0.82
2:C:30:A:C6	2:C:83:C:O2'	2.33	0.82
15:W:56:CYS:O	15:W:62:PRO:HA	1.79	0.82
15:W:70:LYS:N	15:W:73:ASP:OD2	2.12	0.82
1:A:3:C:H2'	1:A:4:A:H8	1.42	0.82
1:A:83:A:C6	1:A:98:G:C6	2.67	0.82
1:A:626:C:C5	1:A:627:C:C5	2.68	0.82
1:A:1536:A:C2	1:A:1537:U:H5	1.98	0.82
1:A:1810:C:H4'	1:A:1811:A:C5'	2.09	0.82
1:A:1886:A:C2'	1:A:1887:G:H5'	2.09	0.82
1:A:2116:C:N4	1:A:2201:G:H22	1.78	0.82
1:A:2202:C:O2'	1:A:2203:U:H5'	1.80	0.82
12:T:170:THR:HG23	12:T:172:ILE:CD1	2.10	0.82
14:V:109:LEU:HD11	14:V:141:ARG:C	1.99	0.82
1:A:1521:G:C4	1:A:1543:G:N2	2.47	0.82
1:A:2730:A:H8	1:A:2731:C:H5''	1.45	0.82
26:G:73:LYS:N	26:G:261:VAL:O	2.13	0.82
1:A:1809:G:OP1	19:E:256:ARG:NH1	2.11	0.81
1:A:912:C:O2'	1:A:913:G:H5'	1.79	0.81
1:A:2103:G:C2'	1:A:2104:A:H5'	2.11	0.81
1:A:2234:G:C2'	1:A:2235:C:H5'	2.09	0.81
13:U:154:PRO:HA	13:U:157:LEU:HD12	1.61	0.81
25:F:117:PHE:HA	25:F:141:TYR:HH	1.42	0.81
1:A:1135:A:O2'	1:A:1136:U:H5'	1.80	0.81
1:A:1689:C:H41	8:P:19:ARG:HE	1.26	0.81
1:A:2109:C:C6	1:A:2110:U:C6	2.67	0.81
1:A:2114:G:C6	1:A:2204:A:C6	2.68	0.81
1:A:2227:C:O2'	1:A:2228:C:H5'	1.80	0.81
1:A:2288:G:OP1	16:X:76:ARG:HA	1.79	0.81
6:N:81:ARG:CZ	26:G:243:GLU:HB2	2.09	0.81
29:J:76:ASN:O	29:J:80:PRO:HG2	1.79	0.81
1:A:253:C:O2	1:A:437:G:N2	2.13	0.81
1:A:355:A:N7	1:A:356:A:C8	2.48	0.81
1:A:823:C:O2'	1:A:1247:A:O2'	1.86	0.81
1:A:1547:C:C2'	1:A:1548:A:H5'	2.11	0.81
1:A:2322:A:C6	27:H:204:GLY:HA2	2.14	0.81
3:B:91:G:H22	7:O:38:GLU:CD	1.83	0.81
6:N:198:LEU:HD23	6:N:199:LYS:N	1.95	0.81
1:A:856:U:O4	1:A:962:G:O6	1.99	0.81
1:A:2325:G:O6	1:A:2328:A:N6	2.12	0.81
11:S:91:LEU:HD12	12:T:175:PRO:CB	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2:U:O2'	1:A:3:C:H5'	1.81	0.81
1:A:357:G:O2'	1:A:358:C:H5'	1.80	0.81
1:A:1501:G:O3'	1:A:1502:A:H4'	1.80	0.81
1:A:381:C:O2	1:A:416:C:C4	2.33	0.81
1:A:2698:C:OP1	25:F:285:LYS:HD3	1.81	0.81
27:H:175:PHE:HD1	27:H:183:VAL:HG13	1.45	0.81
1:A:361:C:H2'	1:A:362:A:H8	1.43	0.81
1:A:862:U:O2'	1:A:863:C:H5'	1.79	0.81
1:A:917:C:O2'	1:A:918:A:H5'	1.81	0.81
1:A:1651:C:C6	13:U:116:PRO:HG3	2.15	0.81
1:A:2150:G:N1	1:A:2151:G:C2	2.49	0.81
6:N:159:PRO:HB3	6:N:187:ILE:HD13	1.63	0.81
6:N:224:LYS:HB2	6:N:224:LYS:NZ	1.96	0.81
26:G:208:PHE:CB	26:G:229:LEU:HB2	2.11	0.81
1:A:101:A:C6	1:A:102:U:C4	2.67	0.81
1:A:1516:G:C5	1:A:1517:G:C8	2.69	0.81
1:A:1547:C:O2'	1:A:1548:A:H5'	1.81	0.81
1:A:1650:A:P	1:A:1650:A:H8	2.04	0.81
1:A:861:A:C2'	1:A:862:U:H5'	2.11	0.81
6:N:156:LYS:HZ3	6:N:215:ARG:NH1	1.47	0.81
1:A:829:G:N1	1:A:1209:U:OP2	2.14	0.80
1:A:955:G:H2'	1:A:956:G:H5'	1.62	0.80
1:A:1472:A:N6	1:A:1479:U:O4	2.14	0.80
1:A:1745:C:H2'	1:A:1746:C:C6	2.15	0.80
1:A:1879:U:H2'	1:A:1880:G:C8	2.16	0.80
2:C:78:G:O2'	2:C:79:G:H5'	1.79	0.80
2:C:103:G:H2'	2:C:104:A:H8	1.43	0.80
1:A:293:G:C2	1:A:294:U:C4	2.69	0.80
1:A:629:C:H5'	26:G:258:ARG:HH22	1.46	0.80
1:A:1090:U:H3	1:A:1104:C:H42	1.27	0.80
1:A:2107:G:C6	1:A:2242:A:H8	1.99	0.80
19:E:176:GLU:HA	19:E:268:ARG:HB2	1.62	0.80
1:A:337:U:O2	1:A:341:A:N6	2.15	0.80
1:A:932:A:H4'	16:X:85:GLN:NE2	1.94	0.80
1:A:1751:A:C2	1:A:1753:A:H8	1.98	0.80
1:A:1755:A:H2'	1:A:1756:G:C8	2.17	0.80
1:A:1879:U:O2	1:A:1887:G:N2	2.14	0.80
1:A:262:G:H21	1:A:265:A:P	2.04	0.80
1:A:901:C:H2'	1:A:902:G:O4'	1.82	0.80
6:N:158:VAL:CG1	6:N:201:LEU:CG	2.59	0.80
1:A:111:U:P	18:Z:134:ARG:HH11	2.05	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:942:U:H2'	1:A:943:C:O4'	1.81	0.80
1:A:1483:G:H2'	1:A:1484:G:C8	2.15	0.80
1:A:274:G:O6	1:A:433:C:C4'	2.29	0.80
1:A:1879:U:C5	6:N:252:ARG:NH1	2.50	0.80
3:B:35:A:N1	3:B:51:G:N1	2.29	0.80
4:L:175:ARG:NH2	4:L:184:LYS:CE	2.45	0.80
1:A:635:C:O2'	1:A:636:C:H5'	1.82	0.80
1:A:1526:G:H2'	1:A:1527:G:O4'	1.80	0.80
1:A:2192:U:O2'	1:A:2193:C:O4'	1.99	0.80
1:A:2647:A:C8	2:C:98:G:C4	2.70	0.80
14:V:104:TYR:CD1	18:Z:142:ARG:CD	2.65	0.80
1:A:355:A:H2'	1:A:356:A:C5'	2.11	0.80
3:B:67:U:C4	3:B:109:U:C5	2.69	0.80
4:L:175:ARG:NH2	4:L:184:LYS:CD	2.45	0.80
12:T:177:VAL:CA	12:T:230:TYR:OH	2.29	0.80
26:G:193:ALA:O	26:G:197:TRP:CB	2.30	0.80
1:A:329:C:O2'	26:G:222:ASN:ND2	2.13	0.80
1:A:1745:C:O2'	1:A:1746:C:H5'	1.82	0.80
1:A:2154:C:N4	1:A:2165:G:N2	2.28	0.80
6:N:158:VAL:CG1	6:N:201:LEU:CD2	2.60	0.80
15:W:161:LEU:CD1	15:W:168:VAL:HG23	2.08	0.80
16:X:101:PHE:CE1	16:X:133:LYS:HG2	2.17	0.80
25:F:223:THR:HG22	25:F:224:HIS:H	1.45	0.80
1:A:389:A:C6	1:A:410:G:N1	2.50	0.80
1:A:624:A:C8	1:A:625:C:C5	2.69	0.80
1:A:1347:U:O4	1:A:1683:G:O2'	1.99	0.80
1:A:2074:A:N6	26:G:125:ARG:HH22	1.80	0.80
1:A:2653:U:H5'	25:F:170:GLU:OE2	1.82	0.80
2:C:104:A:O2'	2:C:105:A:H5'	1.81	0.80
10:R:123:MET:CE	25:F:97:LEU:C	2.49	0.80
16:X:122:LEU:HG	16:X:140:ARG:HB2	1.64	0.80
1:A:355:A:C8	1:A:356:A:N9	2.49	0.79
1:A:1745:C:N4	1:A:1746:C:N4	2.29	0.79
1:A:2753:C:H42	1:A:2787:C:H42	1.29	0.79
1:A:274:G:C5	1:A:433:C:H6	1.99	0.79
1:A:2156:C:C2	1:A:2164:G:N2	2.46	0.79
6:N:158:VAL:HG12	6:N:201:LEU:HG	1.63	0.79
12:T:169:SER:CB	12:T:233:SER:CB	2.59	0.79
1:A:80:G:H2'	1:A:81:G:C8	2.17	0.79
1:A:310:A:N1	1:A:342:G:O2'	2.14	0.79
1:A:878:U:O2'	1:A:879:G:H5'	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1811:A:C5	19:E:261:TYR:OH	2.35	0.79
1:A:2116:C:C2'	1:A:2117:U:H5'	2.12	0.79
1:A:2337:C:H5'	1:A:2350:A:N6	1.96	0.79
2:C:76:G:H3'	2:C:76:G:OP2	1.82	0.79
3:B:26:A:C2	3:B:27:A:C8	2.71	0.79
16:X:159:ARG:O	16:X:162:ARG:HG3	1.81	0.79
1:A:1751:A:H3'	1:A:1752:C:C4'	2.13	0.79
1:A:2157:U:H3	1:A:2162:G:H1	1.30	0.79
1:A:2643:C:O2'	1:A:2644:G:H5'	1.83	0.79
2:C:105:A:O2'	2:C:106:C:H5'	1.82	0.79
6:N:165:ILE:HG13	6:N:206:LEU:C	2.03	0.79
13:U:117:ARG:HD2	13:U:123:TYR:HE2	1.46	0.79
1:A:3:C:H2'	1:A:4:A:C8	2.17	0.79
5:M:17:ARG:HH11	5:M:47:ILE:HG12	1.48	0.79
6:N:165:ILE:CD1	6:N:207:SER:N	2.45	0.79
26:G:67:GLU:OE2	26:G:69:PHE:HB3	1.83	0.79
1:A:616:U:P	26:G:155:LYS:NZ	2.56	0.79
1:A:702:C:O5'	19:E:213:ARG:NH1	2.16	0.79
1:A:2247:C:H1'	17:Y:102:ASN:CB	2.12	0.79
2:C:38:G:H22	25:F:145:ARG:HH21	1.27	0.79
1:A:1885:C:H41	6:N:253:ALA:HB2	1.43	0.79
2:C:26:G:H2'	2:C:27:U:H5'	1.65	0.79
15:W:152:LEU:HD12	15:W:154:ASP:H	1.47	0.79
1:A:853:G:N1	1:A:965:G:C6	2.51	0.79
1:A:1832:G:OP1	19:E:212:LYS:NZ	2.14	0.79
28:I:46:GLN:HB3	28:I:109:ARG:HD2	1.65	0.79
1:A:294:U:H2'	1:A:295:C:C2	2.17	0.79
1:A:369:U:O2'	1:A:370:A:OP1	1.98	0.79
1:A:543:A:N6	1:A:2034:C:O2'	2.16	0.79
10:R:173:GLN:HB2	10:R:180:THR:HG22	1.64	0.79
25:F:117:PHE:CA	25:F:141:TYR:OH	2.26	0.79
1:A:639:A:N7	6:N:201:LEU:HD11	1.98	0.79
1:A:2109:C:H3'	1:A:2110:U:C6	2.17	0.79
1:A:2803:C:O2'	1:A:2804:U:O5'	2.01	0.79
2:C:84:C:O2'	2:C:85:U:H5'	1.82	0.79
6:N:143:LEU:HG	6:N:146:ILE:CD1	2.05	0.79
1:A:822:U:C6	1:A:1272:A:N3	2.51	0.78
1:A:1237:C:P	11:S:11:ARG:HH21	2.07	0.78
4:L:107:HIS:ND1	4:L:107:HIS:O	2.16	0.78
25:F:98:GLY:H	25:F:286:PRO:HB3	1.48	0.78
1:A:1830:U:C2	19:E:197:ASN:ND2	2.51	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1878:C:N4	1:A:1887:G:O6	2.16	0.78
16:X:153:ARG:HG2	16:X:153:ARG:NH1	1.97	0.78
1:A:935:U:O2'	1:A:936:A:O5'	2.01	0.78
1:A:2196:G:H2'	1:A:2197:A:C8	2.19	0.78
1:A:2433:C:OP1	6:N:145:GLY:N	2.17	0.78
6:N:106:GLN:OE1	6:N:106:GLN:N	2.17	0.78
6:N:160:ILE:HG22	6:N:203:GLU:OE2	1.82	0.78
6:N:189:PRO:HB3	6:N:196:LEU:HD21	1.65	0.78
26:G:204:LYS:H	26:G:225:THR:HB	1.46	0.78
1:A:133:A:C6	1:A:162:A:H2	2.00	0.78
1:A:1879:U:N3	1:A:1887:G:N1	2.30	0.78
1:A:2319:C:O2'	1:A:2320:G:H5'	1.84	0.78
3:B:91:G:N2	7:O:38:GLU:OE2	2.17	0.78
1:A:2129:G:C2'	1:A:2131:U:C5	2.63	0.78
1:A:2393:A:H2	9:Q:166:PHE:HZ	1.29	0.78
1:A:2684:C:H5	28:I:150:SER:CB	1.92	0.78
1:A:2752:G:H3'	1:A:2753:C:H4'	1.66	0.78
14:V:114:ILE:HG23	14:V:115:LEU:CD1	2.12	0.78
1:A:262:G:N2	1:A:265:A:OP2	2.17	0.78
1:A:296:G:H2'	1:A:297:U:C6	2.18	0.78
1:A:382:G:H3'	1:A:435:A:N7	1.97	0.78
1:A:883:C:C4'	7:O:65:TRP:CZ3	2.67	0.78
1:A:955:G:C2'	1:A:956:G:H5'	2.13	0.78
1:A:1479:U:H5''	1:A:1480:A:OP1	1.83	0.78
1:A:2320:G:O2'	1:A:2321:G:H5'	1.83	0.78
3:B:87:G:C2	3:B:93:C:O2	2.36	0.78
12:T:113:LYS:HA	12:T:113:LYS:CE	2.14	0.78
16:X:127:LYS:HA	16:X:132:LYS:O	1.83	0.78
1:A:394:G:N2	1:A:405:C:N3	2.31	0.78
3:B:8:G:OP2	9:Q:76:PHE:CE2	2.36	0.78
15:W:141:GLN:HG2	15:W:166:GLU:OE2	1.80	0.78
26:G:226:LEU:HD12	26:G:226:LEU:O	1.84	0.78
1:A:98:G:H4'	1:A:99:A:H5''	1.63	0.78
1:A:387:G:H5'	1:A:388:C:OP2	1.84	0.78
1:A:913:G:C4	1:A:914:A:N7	2.52	0.78
1:A:1235:A:N6	1:A:1254:U:O4	2.17	0.78
1:A:1754:A:N7	1:A:1755:A:N7	2.31	0.78
1:A:2219:U:O2'	1:A:2229:U:N3	2.04	0.78
3:B:68:G:N2	3:B:69:C:O2	2.17	0.78
13:U:33:THR:HG22	13:U:135:VAL:HG22	1.64	0.78
1:A:140:G:C6	1:A:155:A:C6	2.71	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:330:U:O2	26:G:218:LYS:CE	2.21	0.78
1:A:1153:G:C6	1:A:1154:A:N7	2.51	0.78
1:A:1161:A:O2'	1:A:1162:C:OP1	2.01	0.78
1:A:1522:A:N3	1:A:1523:A:C8	2.52	0.78
16:X:67:LYS:H	16:X:67:LYS:HD2	1.49	0.78
1:A:60:U:O3'	18:Z:94:ARG:NH1	2.01	0.77
1:A:140:G:H2'	1:A:141:C:H5'	1.65	0.77
1:A:152:G:C4	1:A:153:G:N7	2.52	0.77
1:A:621:G:H2'	1:A:622:G:H5'	1.66	0.77
1:A:634:G:O2'	1:A:635:C:H5'	1.84	0.77
1:A:1136:U:O2'	1:A:1137:C:H5'	1.84	0.77
1:A:1394:A:H5'	1:A:2230:A:H1'	1.65	0.77
1:A:2129:G:H1'	1:A:2180:G:H21	1.44	0.77
4:L:100:TRP:CZ3	4:L:101:TYR:HB2	2.19	0.77
1:A:133:A:N7	1:A:134:A:N6	2.31	0.77
1:A:669:C:H2'	1:A:670:A:H8	1.43	0.77
1:A:1178:G:C4'	11:S:83:HIS:HD2	1.97	0.77
1:A:1472:A:C6	1:A:1479:U:O4	2.37	0.77
1:A:1603:A:H5'	19:E:55:LYS:HD3	1.64	0.77
2:C:12:C:H5''	8:P:109:ARG:HH22	1.49	0.77
3:B:3:U:O2'	3:B:4:U:O5'	2.02	0.77
26:G:254:TYR:CZ	26:G:258:ARG:NE	2.44	0.77
1:A:137:U:C2	1:A:157:G:N2	2.50	0.77
1:A:1164:G:O2'	1:A:1165:G:H5'	1.83	0.77
1:A:1524:G:O2'	1:A:1525:G:H5'	1.85	0.77
1:A:2214:C:O2'	1:A:2215:C:H5'	1.85	0.77
1:A:2304:A:N6	1:A:2363:A:N6	2.32	0.77
1:A:2317:G:O6	1:A:2333:C:N3	2.18	0.77
1:A:2351:G:N9	9:Q:64:VAL:CG2	2.29	0.77
3:B:5:C:O2'	3:B:6:U:H5'	1.84	0.77
27:H:184:GLY:HA2	27:H:207:VAL:O	1.83	0.77
2:C:80:C:C5'	10:R:121:ASP:OD1	2.32	0.77
3:B:41:U:C5'	3:B:42:C:H5''	2.15	0.77
6:N:117:GLN:OE1	6:N:125:ILE:HG12	1.83	0.77
1:A:293:G:O2'	1:A:294:U:H5'	1.84	0.77
1:A:1162:C:O2'	1:A:1163:G:OP1	2.03	0.77
1:A:1537:U:H2'	1:A:1538:G:C8	2.20	0.77
1:A:1545:G:N7	1:A:1546:C:H5	1.80	0.77
1:A:1551:G:O2'	1:A:1552:U:H5'	1.85	0.77
1:A:1926:A:N6	1:A:1931:U:N3	2.32	0.77
2:C:32:C:H1'	2:C:33:A:H5'	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:823:C:O2'	1:A:824:U:H5'	1.84	0.77
1:A:1519:A:C2	1:A:1520:A:N7	2.53	0.77
1:A:1634:C:H5''	14:V:145:LYS:HZ1	1.50	0.77
1:A:1689:C:O2'	1:A:1690:A:O5'	2.00	0.77
1:A:2103:G:H2'	1:A:2104:A:H5'	1.66	0.77
1:A:2107:G:C5	1:A:2242:A:H8	2.02	0.77
1:A:2112:U:H2'	1:A:2113:G:C8	2.19	0.77
1:A:2210:C:O2'	1:A:2211:U:OP1	2.01	0.77
1:A:2322:A:C4	27:H:186:ARG:CZ	2.67	0.77
3:B:41:U:HO2'	3:B:46:A:N6	1.80	0.77
6:N:172:GLU:HA	6:N:210:LEU:HD21	1.67	0.77
1:A:83:A:C6	1:A:98:G:C5	2.72	0.77
1:A:140:G:C5	1:A:155:A:N1	2.52	0.77
1:A:1039:A:OP1	11:S:77:ASN:HB3	1.85	0.77
1:A:2154:C:H42	1:A:2165:G:N2	1.83	0.77
1:A:2320:G:N2	1:A:2330:U:O2	2.17	0.77
12:T:147:LEU:HD13	12:T:215:PRO:HB2	1.67	0.77
1:A:136:U:C2	1:A:160:A:N1	2.53	0.77
1:A:161:G:H4'	1:A:162:A:OP1	1.83	0.77
1:A:1528:U:H2'	1:A:1529:A:C8	2.20	0.77
1:A:2653:U:H4'	25:F:170:GLU:OE2	1.85	0.77
6:N:156:LYS:HZ1	6:N:215:ARG:HH12	0.80	0.77
19:E:267:ILE:HG22	19:E:269:ARG:HB2	1.65	0.77
1:A:1689:C:N4	8:P:19:ARG:HE	1.81	0.77
1:A:2189:C:H2'	1:A:2190:A:H8	1.47	0.77
2:C:22:A:H3'	2:C:23:G:H5''	1.67	0.77
11:S:91:LEU:HD11	12:T:175:PRO:HB3	0.78	0.77
1:A:1361:U:C4	14:V:168:PRO:HD3	2.20	0.77
7:O:30:GLY:HA2	7:O:107:SER:HB3	1.66	0.77
26:G:200:ASP:O	26:G:202:ALA:N	2.13	0.77
1:A:648:G:N1	6:N:158:VAL:HG21	2.00	0.76
1:A:2109:C:C4	1:A:2110:U:N3	2.53	0.76
7:O:43:THR:OG1	7:O:46:GLN:OE1	2.03	0.76
16:X:128:TYR:HD2	16:X:132:LYS:HB2	1.49	0.76
1:A:7:C:H2'	1:A:8:G:O4'	1.85	0.76
1:A:1751:A:H3'	1:A:1752:C:H4'	1.67	0.76
2:C:36:A:H2	25:F:274:ARG:NH1	1.72	0.76
2:C:104:A:N1	2:C:105:A:C6	2.52	0.76
4:L:175:ARG:HH22	4:L:184:LYS:CE	1.97	0.76
19:E:142:ILE:HA	19:E:180:ILE:HD11	1.66	0.76
1:A:283:C:O2	1:A:372:G:N2	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:352:C:O2'	1:A:353:G:H5'	1.86	0.76
1:A:639:A:C5	6:N:201:LEU:HD11	2.19	0.76
1:A:903:G:C2'	1:A:904:U:H5''	2.14	0.76
1:A:1527:G:H3'	1:A:1528:U:C5	2.20	0.76
1:A:2393:A:C2	9:Q:166:PHE:CE2	2.73	0.76
3:B:32:A:N6	3:B:55:G:C6	2.53	0.76
16:X:128:TYR:HE2	16:X:132:LYS:HB2	1.47	0.76
1:A:495:A:H1'	15:W:122:ILE:CG1	2.15	0.76
1:A:1808:C:O2'	1:A:1812:A:H1'	1.85	0.76
1:A:2224:G:H5''	1:A:2225:G:C5'	2.16	0.76
3:B:7:G:C6	3:B:117:A:C2	2.73	0.76
6:N:176:VAL:O	6:N:177:SER:OG	2.02	0.76
9:Q:72:ARG:NH1	9:Q:87:ILE:HD11	2.00	0.76
12:T:96:PRO:O	12:T:98:PRO:N	2.19	0.76
18:Z:94:ARG:HG2	18:Z:101:LYS:HE3	1.66	0.76
1:A:140:G:C6	1:A:155:A:C2	2.72	0.76
1:A:495:A:O2'	15:W:120:GLY:O	2.02	0.76
1:A:1810:C:H4'	1:A:1811:A:O5'	1.86	0.76
6:N:165:ILE:HD11	6:N:207:SER:N	2.00	0.76
6:N:225:LEU:HG	6:N:230:CYS:SG	2.25	0.76
12:T:181:ALA:HB3	12:T:225:THR:CG2	2.16	0.76
25:F:284:GLY:HA3	25:F:288:ASN:HD21	1.50	0.76
1:A:278:G:H2'	1:A:279:A:H5''	1.67	0.76
1:A:317:G:H21	1:A:338:G:N2	1.81	0.76
1:A:1689:C:H5'	8:P:12:LYS:HE2	1.67	0.76
16:X:133:LYS:HE2	16:X:133:LYS:CA	2.15	0.76
1:A:432:G:H2'	1:A:433:C:O4'	1.84	0.76
1:A:1164:G:C2'	1:A:1165:G:H5'	2.14	0.76
1:A:83:A:C5	1:A:98:G:O6	2.38	0.76
1:A:624:A:N3	1:A:625:C:C6	2.48	0.76
3:B:86:G:C2	3:B:87:G:N7	2.54	0.76
6:N:209:LYS:CA	6:N:230:CYS:HB3	2.16	0.76
6:N:243:LYS:HE3	6:N:245:SER:OG	1.85	0.76
7:O:68:ILE:HG21	7:O:101:ARG:HE	1.50	0.76
1:A:46:C:C2'	1:A:47:G:H5'	2.16	0.76
1:A:2186:U:P	1:A:2188:C:C5	2.78	0.76
1:A:2698:C:OP1	25:F:285:LYS:CD	2.34	0.76
6:N:102:HIS:CE1	12:T:205:ASN:HD22	2.02	0.76
6:N:165:ILE:CB	6:N:206:LEU:HA	2.16	0.76
10:R:116:ARG:HA	10:R:116:ARG:NE	2.00	0.76
14:V:132:ASN:HA	14:V:184:ALA:HB2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:276:G:H4'	1:A:277:G:OP1	1.84	0.76
1:A:277:G:O6	1:A:381:C:N4	2.18	0.76
1:A:280:G:N2	1:A:376:U:H3	1.84	0.76
1:A:969:A:C6	1:A:970:G:C6	2.73	0.76
1:A:1268:A:C2	11:S:5:LYS:NZ	2.53	0.76
1:A:1472:A:C6	1:A:1479:U:C4	2.74	0.76
1:A:2011:G:C5'	25:F:219:ARG:NH2	2.48	0.76
1:A:2104:A:O2'	1:A:2105:U:H5'	1.85	0.76
1:A:2322:A:N6	27:H:204:GLY:CA	2.40	0.76
4:L:171:LYS:C	4:L:172:LEU:HD12	2.06	0.76
6:N:210:LEU:H	6:N:230:CYS:CB	1.99	0.76
1:A:158:C:H41	1:A:159:A:H62	1.32	0.75
1:A:858:G:C4	1:A:859:A:N7	2.53	0.75
1:A:2156:C:O2	1:A:2164:G:C2	2.39	0.75
1:A:2647:A:C4	2:C:98:G:N2	2.54	0.75
6:N:143:LEU:CD2	6:N:146:ILE:HG12	2.16	0.75
6:N:175:GLU:HB3	6:N:213:LYS:NZ	2.00	0.75
12:T:116:PRO:CD	12:T:117:PRO:HD3	2.16	0.75
26:G:79:LYS:O	26:G:83:VAL:HG23	1.84	0.75
27:H:115:GLY:HA3	27:H:148:LEU:HD23	1.68	0.75
1:A:263:A:N3	1:A:263:A:H5''	2.01	0.75
1:A:1178:G:C4'	11:S:83:HIS:CD2	2.69	0.75
4:L:100:TRP:HE3	4:L:101:TYR:HD2	1.33	0.75
17:Y:129:ILE:HD12	17:Y:130:GLU:N	2.01	0.75
1:A:279:A:N3	1:A:279:A:H5'	2.01	0.75
1:A:668:U:H2'	1:A:669:C:C6	2.22	0.75
1:A:869:G:H21	1:A:2285:A:H2	1.34	0.75
1:A:2211:U:O4	1:A:2241:G:C4	2.40	0.75
1:A:2223:A:H2'	1:A:2224:G:C8	2.20	0.75
2:C:77:A:H1'	8:P:16:LYS:CB	2.10	0.75
3:B:35:A:N1	3:B:51:G:C2	2.54	0.75
6:N:81:ARG:HH11	26:G:243:GLU:CB	1.96	0.75
1:A:902:G:C6	1:A:903:G:N7	2.54	0.75
1:A:1586:G:N2	1:A:1586:G:OP2	2.19	0.75
1:A:2337:C:H5'	1:A:2350:A:C6	2.21	0.75
3:B:86:G:C2	3:B:87:G:C8	2.75	0.75
6:N:168:ALA:HB3	6:N:186:ILE:HD11	1.67	0.75
6:N:209:LYS:HA	6:N:230:CYS:HB3	1.66	0.75
11:S:91:LEU:HD12	12:T:175:PRO:C	2.07	0.75
1:A:352:C:C2'	1:A:353:G:H5'	2.16	0.75
1:A:1745:C:N3	1:A:1746:C:C4	2.54	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1809:G:N7	19:E:172:LEU:CD1	2.50	0.75
1:A:1830:U:C5	19:E:197:ASN:ND2	2.39	0.75
3:B:35:A:N1	3:B:51:G:C6	2.54	0.75
16:X:122:LEU:CD1	16:X:140:ARG:CG	2.42	0.75
1:A:2409:A:C2	1:A:2441:C:N4	2.55	0.75
18:Z:152:LEU:O	18:Z:152:LEU:HD22	1.85	0.75
1:A:670:A:O2'	1:A:671:C:H5'	1.87	0.75
1:A:1268:A:H2	11:S:5:LYS:NZ	1.84	0.75
1:A:1475:U:C1'	8:P:70:LEU:HD13	2.14	0.75
1:A:1552:U:O2'	1:A:1553:U:H5'	1.85	0.75
3:B:16:G:C6	3:B:111:G:N3	2.53	0.75
8:P:25:ASP:OD1	8:P:26:GLN:N	2.17	0.75
1:A:2186:U:P	1:A:2188:C:H5	2.10	0.75
1:A:2237:A:H5''	1:A:2237:A:N3	2.01	0.75
1:A:280:G:N1	1:A:376:U:O4	2.19	0.75
1:A:649:A:OP1	6:N:202:GLY:N	2.20	0.75
1:A:670:A:H4'	26:G:151:LYS:O	1.86	0.75
1:A:900:G:O2'	1:A:901:C:H5''	1.86	0.75
1:A:1530:G:N3	1:A:1530:G:H2'	2.02	0.75
6:N:197:PRO:CB	6:N:215:ARG:CD	2.65	0.75
6:N:209:LYS:HB2	6:N:230:CYS:HA	1.69	0.75
25:F:122:ILE:HG22	25:F:183:GLN:HA	1.67	0.75
1:A:335:G:H2'	1:A:336:G:C8	2.22	0.74
1:A:415:U:H5''	1:A:416:C:OP1	1.87	0.74
1:A:615:G:H1'	1:A:668:U:O2'	1.87	0.74
1:A:624:A:C4	1:A:625:C:H5	1.93	0.74
1:A:1789:U:OP2	1:A:1794:A:N6	2.20	0.74
1:A:2109:C:C5	1:A:2110:U:C4	2.74	0.74
1:A:2186:U:OP2	1:A:2188:C:H5	1.69	0.74
6:N:205:GLU:CD	6:N:224:LYS:CD	2.46	0.74
18:Z:122:ARG:HA	18:Z:125:GLU:OE1	1.87	0.74
1:A:857:G:H1'	1:A:961:G:H22	1.51	0.74
1:A:902:G:C3'	1:A:903:G:H5''	2.16	0.74
1:A:2117:U:O2'	1:A:2118:U:H5'	1.86	0.74
1:A:2129:G:C1'	1:A:2180:G:N2	2.51	0.74
1:A:208:A:H1'	1:A:433:C:O2'	1.87	0.74
1:A:504:G:H4'	13:U:37:TYR:CB	2.15	0.74
1:A:1178:G:H4'	11:S:83:HIS:HD2	1.51	0.74
1:A:2186:U:P	1:A:2188:C:N4	2.60	0.74
1:A:278:G:C2'	1:A:279:A:H5''	2.18	0.74
1:A:2224:G:H5''	1:A:2225:G:H5''	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:143:LEU:HD21	6:N:146:ILE:HG12	1.69	0.74
16:X:128:TYR:CE2	16:X:132:LYS:HG2	2.22	0.74
1:A:2221:U:H5'	1:A:2222:C:OP2	1.88	0.74
15:W:161:LEU:CD1	15:W:168:VAL:HG22	2.13	0.74
29:J:69:VAL:HG23	29:J:70:ARG:H	1.52	0.74
1:A:381:C:C2	1:A:416:C:C5	2.76	0.74
1:A:612:U:C2'	1:A:613:U:H5''	2.17	0.74
1:A:1178:G:C1'	11:S:83:HIS:CD2	2.71	0.74
1:A:2236:C:C3'	1:A:2237:A:H5''	2.17	0.74
1:A:2129:G:C2'	1:A:2180:G:H21	2.01	0.74
1:A:2322:A:C4	27:H:186:ARG:CD	2.49	0.74
26:G:254:TYR:OH	26:G:258:ARG:CZ	2.35	0.74
29:J:56:ASP:O	29:J:83:LYS:NZ	2.19	0.74
1:A:1667:G:N1	1:A:1670:A:OP2	2.19	0.74
1:A:1809:G:C5	19:E:172:LEU:HD13	2.23	0.74
1:A:2211:U:H5	1:A:2241:G:O6	1.71	0.74
1:A:2321:G:H5'	27:H:175:PHE:HB3	1.68	0.74
1:A:2764:U:C4	1:A:2774:U:O4	2.41	0.74
2:C:41:A:N6	2:C:86:A:N1	2.36	0.74
2:C:88:C:O2'	2:C:89:A:H5'	1.87	0.74
6:N:116:GLY:O	6:N:120:ARG:HG2	1.86	0.74
1:A:795:U:C5'	19:E:222:ASN:OD1	2.35	0.74
1:A:1472:A:C5	1:A:1479:U:O4	2.41	0.74
27:H:170:VAL:H	27:H:230:PHE:HB3	1.53	0.74
1:A:636:C:O2'	1:A:637:G:H5'	1.88	0.73
1:A:822:U:H5	1:A:1272:A:N1	1.85	0.73
1:A:2137:G:N2	1:A:2190:A:C6	2.56	0.73
12:T:123:ILE:CD1	12:T:227:TYR:CE1	2.70	0.73
14:V:110:ASP:O	14:V:111:VAL:HG22	1.88	0.73
1:A:288:C:H2'	1:A:289:A:H8	1.51	0.73
1:A:1139:A:H3'	1:A:1139:A:N3	2.03	0.73
1:A:1635:C:H4'	14:V:106:ARG:HH22	1.50	0.73
1:A:2213:A:C2	1:A:2214:C:N3	2.55	0.73
1:A:2798:G:H1	4:L:201:GLU:CD	1.91	0.73
12:T:88:VAL:HG12	12:T:89:LEU:N	2.03	0.73
19:E:137:ILE:HD13	19:E:160:LEU:HD13	1.69	0.73
1:A:345:C:H2'	1:A:346:A:H8	1.52	0.73
1:A:1159:G:C8	4:L:176:HIS:HE1	2.05	0.73
1:A:1730:C:O2'	1:A:1731:G:N2	2.21	0.73
1:A:2338:G:O2'	1:A:2339:A:OP1	2.06	0.73
2:C:30:A:H3'	2:C:30:A:N3	2.03	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:67:U:O4	3:B:109:U:C5	2.41	0.73
6:N:224:LYS:HB2	6:N:224:LYS:HZ2	1.52	0.73
1:A:886:U:H2'	1:A:887:G:H1'	1.69	0.73
1:A:1189:G:H21	12:T:214:GLN:HE22	1.32	0.73
1:A:1533:A:H2'	1:A:1534:A:N3	2.03	0.73
1:A:1588:U:O2	1:A:1670:A:N7	2.21	0.73
1:A:133:A:H2'	1:A:134:A:H8	1.50	0.73
1:A:292:C:O2'	1:A:293:G:H5'	1.89	0.73
1:A:1028:A:OP2	1:A:1181:G:N1	2.18	0.73
1:A:1379:C:N4	1:A:1393:U:OP2	2.22	0.73
1:A:1534:A:H2'	1:A:1535:A:C5'	2.18	0.73
1:A:2195:G:H2'	1:A:2196:G:C8	2.22	0.73
1:A:373:C:H2'	1:A:374:U:C6	2.24	0.73
1:A:609:G:H5''	26:G:79:LYS:HE3	1.69	0.73
1:A:860:C:H2'	1:A:861:A:C8	2.21	0.73
1:A:1023:C:N3	4:L:102:PRO:CD	2.44	0.73
1:A:1690:A:OP1	1:A:1690:A:H4'	1.87	0.73
1:A:1836:C:H5''	19:E:219:VAL:HG23	1.69	0.73
1:A:2316:G:H1	1:A:2334:C:N4	1.86	0.73
1:A:2752:G:O6	25:F:297:ILE:O	2.06	0.73
2:C:85:U:H2'	2:C:86:A:H8	1.51	0.73
10:R:197:PRO:HG2	10:R:200:SER:HB2	1.71	0.73
16:X:66:THR:OG1	16:X:67:LYS:HE2	1.89	0.73
1:A:140:G:N2	1:A:154:C:O2	2.16	0.73
1:A:288:C:C2'	1:A:289:A:H5'	2.19	0.73
1:A:1159:G:N9	4:L:176:HIS:CE1	2.56	0.73
1:A:1444:A:N1	1:A:1609:U:C4	2.56	0.73
1:A:1651:C:C6	13:U:116:PRO:CG	2.71	0.73
12:T:169:SER:C	12:T:233:SER:HB3	2.04	0.73
1:A:612:U:O2'	1:A:613:U:H5''	1.88	0.73
1:A:1082:A:O2'	1:A:1083:G:H5'	1.89	0.73
1:A:1474:A:H4'	1:A:1475:U:OP2	1.86	0.73
1:A:1754:A:C8	1:A:1755:A:N7	2.57	0.73
1:A:1833:G:P	19:E:50:ARG:HH12	2.10	0.73
1:A:2105:U:OP2	1:A:2106:U:O2'	2.06	0.73
1:A:2646:U:H4'	1:A:2647:A:OP1	1.88	0.73
27:H:163:ARG:NH2	27:H:192:PRO:HD3	2.04	0.73
1:A:234:C:H5	6:N:142:LYS:NZ	1.86	0.73
1:A:1082:A:H2'	1:A:1083:G:C8	2.24	0.73
1:A:1197:A:OP1	16:X:165:LYS:HB2	1.89	0.73
1:A:2647:A:N9	2:C:98:G:C2	2.57	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:101:PHE:CD1	16:X:133:LYS:CG	2.72	0.73
1:A:888:C:H3'	1:A:889:G:C8	2.23	0.73
13:U:153:THR:HB	13:U:156:LYS:HB2	1.70	0.73
1:A:1550:U:H2'	1:A:1551:G:H5'	1.71	0.72
1:A:253:C:C2	1:A:437:G:N2	2.56	0.72
1:A:626:C:H3'	1:A:627:C:C6	2.24	0.72
1:A:1047:U:OP1	1:A:1063:U:O2'	2.05	0.72
1:A:1161:A:C8	1:A:2040:U:O2'	2.42	0.72
1:A:1528:U:H2'	1:A:1529:A:H8	1.52	0.72
1:A:1806:U:H2'	1:A:1807:C:H6	1.53	0.72
1:A:270:G:H2'	1:A:271:G:C5'	2.18	0.72
1:A:1501:G:H1'	1:A:1502:A:OP1	1.89	0.72
14:V:116:GLN:HA	18:Z:91:ARG:CZ	2.18	0.72
19:E:245:PRO:HG2	19:E:246:TRP:CZ3	2.24	0.72
28:I:198:LYS:HG3	28:I:200:LYS:HB3	1.71	0.72
1:A:93:A:C2'	18:Z:102:PRO:HG2	2.16	0.72
1:A:139:U:C4	1:A:140:G:N7	2.58	0.72
1:A:936:A:H2'	1:A:937:U:O4'	1.89	0.72
1:A:1002:G:H5''	12:T:201:LYS:NZ	2.04	0.72
6:N:81:ARG:HH12	26:G:243:GLU:CG	2.02	0.72
17:Y:129:ILE:O	17:Y:133:GLY:N	2.22	0.72
19:E:157:VAL:HG22	19:E:190:GLN:HB2	1.70	0.72
19:E:237:ILE:CD1	19:E:239:ARG:HB2	2.08	0.72
29:J:57:ILE:HG22	29:J:59:ASP:H	1.55	0.72
1:A:937:U:O2'	1:A:938:G:H5''	1.90	0.72
1:A:1651:C:O2'	1:A:1652:A:OP1	2.08	0.72
1:A:2117:U:C2	1:A:2200:A:N1	2.56	0.72
3:B:36:A:H2	3:B:50:U:O2	1.72	0.72
6:N:175:GLU:C	6:N:213:LYS:HZ3	1.92	0.72
1:A:140:G:C5	1:A:155:A:C2	2.77	0.72
1:A:257:A:H3'	1:A:258:C:C5	2.24	0.72
1:A:410:G:H5''	1:A:2104:A:O4'	1.89	0.72
1:A:627:C:O2'	1:A:628:A:OP1	2.08	0.72
1:A:1090:U:H3	1:A:1104:C:N4	1.88	0.72
1:A:2192:U:O2'	1:A:2193:C:OP1	2.08	0.72
3:B:6:U:N3	3:B:118:G:N2	2.37	0.72
3:B:14:U:H5'	3:B:15:A:C8	2.24	0.72
1:A:317:G:N2	1:A:338:G:H21	1.84	0.72
1:A:884:G:H2'	1:A:885:G:H5'	1.72	0.72
1:A:1877:C:H2'	1:A:1878:C:H5''	1.72	0.72
1:A:1921:G:O6	1:A:1938:C:N4	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2321:G:O2'	27:H:186:ARG:HB2	1.90	0.72
3:B:66:C:C5	3:B:110:C:C4	2.77	0.72
6:N:154:LEU:H	6:N:155:PRO:HD3	1.42	0.72
1:A:702:C:O2'	19:E:39:ARG:HD3	1.88	0.72
1:A:2216:U:O2'	1:A:2217:U:H5'	1.88	0.72
1:A:2220:G:C5	1:A:2221:U:C5	2.78	0.72
1:A:2321:G:C5'	27:H:175:PHE:HB3	2.20	0.72
1:A:2579:U:H1'	5:M:23:ARG:NH1	2.03	0.72
1:A:2698:C:OP1	25:F:285:LYS:HE3	1.89	0.72
11:S:8:TYR:HE1	11:S:12:ARG:HE	1.37	0.72
12:T:170:THR:HG23	12:T:172:ILE:HD13	1.72	0.72
19:E:29:ILE:O	19:E:31:GLY:N	2.22	0.72
19:E:39:ARG:HB2	19:E:45:ILE:HD13	1.70	0.72
1:A:363:C:H2'	1:A:364:U:C5	2.23	0.72
1:A:377:G:HO2'	1:A:378:A:P	2.13	0.72
1:A:704:A:O2'	1:A:1374:A:N3	2.20	0.72
1:A:889:G:H2'	1:A:890:G:C8	2.25	0.72
1:A:1516:G:C3'	1:A:1517:G:H5''	2.19	0.72
2:C:103:G:C2'	2:C:104:A:H5'	2.20	0.72
12:T:116:PRO:N	12:T:117:PRO:CD	2.53	0.72
19:E:206:SER:HA	19:E:209:TRP:HD1	1.54	0.72
25:F:209:GLN:HE21	25:F:213:LYS:HE2	1.55	0.72
1:A:277:G:C2	1:A:278:G:N7	2.58	0.72
1:A:284:A:H1'	1:A:285:A:OP1	1.89	0.72
2:C:30:A:N6	2:C:83:C:C2'	2.53	0.72
6:N:117:GLN:OE1	6:N:125:ILE:CG1	2.38	0.72
27:H:171:ASN:HB3	27:H:174:SER:HB2	1.72	0.72
1:A:1039:A:N1	1:A:1178:G:O6	2.23	0.71
1:A:1475:U:O2'	8:P:70:LEU:HD13	1.88	0.71
1:A:1532:G:O2'	1:A:1611:G:H4'	1.89	0.71
1:A:1603:A:H2'	1:A:1604:A:C8	2.24	0.71
1:A:1746:C:C2'	1:A:1747:C:H5'	2.19	0.71
1:A:1496:A:C8	1:A:1497:A:C2	2.78	0.71
1:A:1548:A:O2'	1:A:1591:C:H4'	1.90	0.71
1:A:2192:U:H2'	1:A:2193:C:C6	2.24	0.71
3:B:25:G:H4'	3:B:26:A:N7	2.05	0.71
3:B:70:G:O2'	3:B:71:G:H5'	1.89	0.71
16:X:128:TYR:CE2	16:X:132:LYS:CG	2.73	0.71
29:J:73:PHE:CE2	29:J:78:LEU:HD21	2.25	0.71
1:A:151:G:C4	1:A:152:G:C8	2.78	0.71
1:A:290:A:C2	1:A:291:G:C5	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2324:G:C2	1:A:2328:A:C8	2.78	0.71
6:N:209:LYS:HB2	6:N:230:CYS:CA	2.19	0.71
28:I:48:ILE:HG13	28:I:90:LEU:CB	2.20	0.71
1:A:553:G:H1	1:A:561:C:N4	1.87	0.71
1:A:583:G:N1	1:A:2045:A:OP1	2.20	0.71
1:A:635:C:H2'	1:A:636:C:C6	2.25	0.71
1:A:1021:A:H1'	12:T:214:GLN:NE2	2.06	0.71
1:A:2212:A:O2'	1:A:2213:A:OP1	2.07	0.71
2:C:29:U:H1'	2:C:30:A:OP1	1.88	0.71
3:B:26:A:C2	3:B:27:A:C5	2.77	0.71
6:N:212:ILE:N	6:N:212:ILE:HD12	2.06	0.71
1:A:1:U:H2'	1:A:2:U:C6	2.25	0.71
1:A:234:C:H6	6:N:142:LYS:HZ1	0.74	0.71
1:A:278:G:N2	1:A:380:C:C2	2.59	0.71
1:A:361:C:H2'	1:A:362:A:C8	2.25	0.71
1:A:382:G:H3'	1:A:435:A:C5	2.24	0.71
1:A:858:G:O2'	1:A:859:A:C5'	2.38	0.71
1:A:1234:A:H62	1:A:1256:G:H22	1.38	0.71
1:A:2154:C:N4	1:A:2165:G:H1	1.88	0.71
2:C:72:A:C2'	2:C:73:G:H5'	2.20	0.71
3:B:63:C:O2'	3:B:64:U:H5'	1.90	0.71
3:B:118:G:O2'	3:B:119:G:OP1	2.08	0.71
1:A:255:A:OP2	1:A:271:G:C2	2.44	0.71
1:A:609:G:C4'	26:G:79:LYS:HD2	2.19	0.71
1:A:2107:G:H2'	1:A:2108:G:H5''	1.73	0.71
1:A:2120:U:C4	1:A:2197:A:C2	2.79	0.71
2:C:77:A:O2'	8:P:16:LYS:HG3	1.90	0.71
12:T:127:VAL:HG12	12:T:161:VAL:HG22	1.73	0.71
1:A:158:C:C4	1:A:159:A:N7	2.59	0.71
1:A:298:G:H2'	1:A:299:C:H6	1.56	0.71
1:A:313:A:N1	1:A:323:G:C6	2.59	0.71
1:A:318:A:H62	1:A:339:A:N6	1.87	0.71
1:A:621:G:C2'	1:A:622:G:H5'	2.21	0.71
2:C:103:G:N3	2:C:104:A:C8	2.58	0.71
3:B:45:G:O2'	3:B:46:A:OP2	2.08	0.71
3:B:92:U:H2'	3:B:93:C:C6	2.25	0.71
12:T:96:PRO:O	12:T:98:PRO:HD3	1.81	0.71
15:W:161:LEU:HD11	15:W:168:VAL:CG2	2.14	0.71
19:E:265:PHE:CE1	19:E:266:ILE:HD11	2.26	0.71
1:A:351:C:H2'	1:A:352:C:C5	2.25	0.71
1:A:843:C:C4'	6:N:125:ILE:CD1	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1538:G:H2'	1:A:1539:C:C6	2.24	0.71
1:A:2739:A:C6	2:C:77:A:N6	2.59	0.71
1:A:2770:C:H2'	1:A:2771:A:H5'	1.71	0.71
18:Z:152:LEU:HD13	18:Z:152:LEU:N	2.05	0.71
26:G:73:LYS:CB	26:G:261:VAL:O	2.38	0.71
27:H:145:ARG:HG2	27:H:146:GLY:H	1.55	0.71
1:A:1035:C:O3'	4:L:209:PRO:HB3	1.91	0.71
1:A:1809:G:OP1	19:E:256:ARG:HD3	1.91	0.71
2:C:53:G:H22	10:R:144:ARG:HH12	1.36	0.71
6:N:81:ARG:NH1	26:G:243:GLU:CG	2.53	0.71
14:V:160:ARG:NH2	14:V:177:MET:SD	2.63	0.71
17:Y:92:ASN:OD1	17:Y:94:LYS:NZ	2.23	0.71
1:A:548:G:HO2'	1:A:549:A:P	2.14	0.71
1:A:983:G:H22	7:O:82:ARG:NH1	1.85	0.71
1:A:1755:A:N3	1:A:1756:G:C8	2.59	0.71
1:A:2103:G:O2'	1:A:2104:A:H5'	1.91	0.71
1:A:2273:U:HO2'	16:X:66:THR:N	1.89	0.71
19:E:142:ILE:HG22	19:E:149:GLN:HG3	1.73	0.71
1:A:289:A:N1	1:A:369:U:C2	2.59	0.70
1:A:2137:G:N2	1:A:2190:A:C2	2.59	0.70
1:A:2807:C:C5	2:C:97:A:C2	2.79	0.70
4:L:208:LEU:HD22	4:L:217:LEU:HD11	1.72	0.70
1:A:1521:G:C2	1:A:1544:A:N1	2.58	0.70
16:X:121:GLY:CA	16:X:138:TYR:O	2.37	0.70
1:A:29:A:OP2	11:S:6:ARG:NH2	2.24	0.70
1:A:1885:C:N4	6:N:253:ALA:CA	2.54	0.70
1:A:1886:A:H61	6:N:252:ARG:HH22	1.39	0.70
1:A:2647:A:C8	2:C:98:G:C2	2.78	0.70
3:B:32:A:C6	3:B:55:G:N1	2.60	0.70
4:L:172:LEU:HG	4:L:187:THR:HG22	1.73	0.70
1:A:335:G:C6	1:A:346:A:N1	2.59	0.70
1:A:530:U:H5''	13:U:54:ARG:NH2	2.07	0.70
1:A:1082:A:H2'	1:A:1083:G:H8	1.56	0.70
1:A:1755:A:C2	1:A:1756:G:C4	2.79	0.70
3:B:91:G:N2	7:O:38:GLU:CG	2.36	0.70
6:N:156:LYS:NZ	6:N:215:ARG:HH12	1.56	0.70
6:N:176:VAL:HG12	6:N:177:SER:N	2.01	0.70
6:N:205:GLU:CD	6:N:224:LYS:HE2	2.11	0.70
1:A:2116:C:C4	1:A:2201:G:N2	2.43	0.70
12:T:171:TYR:C	12:T:172:ILE:HD12	2.11	0.70
15:W:70:LYS:HB2	15:W:70:LYS:NZ	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:F:144:LEU:HD11	25:F:166:ARG:HB2	1.73	0.70
1:A:2770:C:C2'	1:A:2771:A:H5'	2.22	0.70
7:O:97:VAL:HG23	7:O:101:ARG:HD3	1.73	0.70
12:T:136:VAL:HG21	12:T:221:ILE:HG13	1.73	0.70
16:X:162:ARG:CZ	16:X:162:ARG:HB2	2.22	0.70
1:A:75:C:O2'	18:Z:117:THR:HG21	1.92	0.70
1:A:886:U:O3'	1:A:887:G:O4'	2.08	0.70
1:A:2107:G:OP1	29:J:72:GLY:N	2.25	0.70
2:C:40:U:C2	2:C:87:A:C2	2.79	0.70
1:A:943:C:H4'	1:A:943:C:OP1	1.90	0.70
1:A:2351:G:C8	9:Q:64:VAL:CG2	2.71	0.70
1:A:2522:G:N2	1:A:2627:C:O2	2.25	0.70
2:C:30:A:C6	2:C:83:C:C2'	2.74	0.70
3:B:26:A:C2	3:B:27:A:N7	2.60	0.70
6:N:177:SER:HB3	6:N:213:LYS:HG3	1.74	0.70
6:N:205:GLU:OE1	6:N:224:LYS:CG	2.40	0.70
29:J:76:ASN:C	29:J:80:PRO:HD2	2.10	0.70
1:A:89:A:OP1	15:W:55:ASP:OD2	2.09	0.70
1:A:127:C:O2'	1:A:128:U:H5'	1.92	0.70
1:A:140:G:O6	1:A:155:A:C6	2.45	0.70
1:A:379:C:O2'	1:A:380:C:OP1	2.09	0.70
1:A:2409:A:N1	1:A:2441:C:N3	2.40	0.70
4:L:175:ARG:HH21	4:L:184:LYS:CD	2.01	0.70
6:N:165:ILE:HG23	6:N:166:GLU:CD	2.12	0.70
14:V:167:ARG:HG3	14:V:168:PRO:HD2	1.72	0.70
25:F:151:MET:SD	25:F:154:ARG:NH1	2.64	0.70
1:A:740:G:OP2	19:E:203:ARG:HD3	1.91	0.70
1:A:2236:C:C5	1:A:2237:A:C2	2.80	0.70
3:B:40:A:C2	3:B:45:G:C2	2.80	0.70
6:N:151:ARG:HA	6:N:151:ARG:HH11	1.55	0.70
1:A:297:U:C2'	1:A:298:G:H5'	2.20	0.69
1:A:332:G:N2	1:A:342:G:H1'	2.07	0.69
1:A:2644:G:O2'	1:A:2799:A:N1	2.22	0.69
2:C:80:C:H5'	10:R:121:ASP:OD1	1.93	0.69
12:T:174:THR:CG2	12:T:175:PRO:HD2	2.21	0.69
12:T:188:GLU:OE1	12:T:188:GLU:N	2.26	0.69
1:A:382:G:H1'	1:A:383:A:OP1	1.92	0.69
1:A:384:G:OP2	17:Y:131:LYS:CE	2.34	0.69
1:A:910:A:C2'	1:A:911:U:H5'	2.22	0.69
1:A:1521:G:N9	1:A:1543:G:N2	2.39	0.69
1:A:1926:A:N6	1:A:1931:U:C2	2.60	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2393:A:H2	9:Q:166:PHE:CE2	2.09	0.69
1:A:137:U:N3	1:A:157:G:N1	2.06	0.69
1:A:254:U:H2'	1:A:255:A:H5'	1.74	0.69
1:A:286:U:H2'	1:A:287:A:C8	2.27	0.69
1:A:287:A:C2	1:A:288:C:C2	2.80	0.69
1:A:356:A:C2	1:A:357:G:C5	2.80	0.69
1:A:889:G:H2'	1:A:890:G:H8	1.57	0.69
1:A:945:A:H2'	1:A:945:A:N3	2.05	0.69
1:A:2109:C:C6	1:A:2110:U:C5	2.80	0.69
1:A:2219:U:H4'	1:A:2229:U:N3	2.07	0.69
1:A:2230:A:H2'	1:A:2230:A:N3	2.05	0.69
3:B:86:G:N1	3:B:87:G:C5	2.60	0.69
6:N:81:ARG:HH11	26:G:243:GLU:CA	2.05	0.69
1:A:291:G:H2'	1:A:292:C:C6	2.27	0.69
1:A:624:A:H3'	1:A:625:C:C5	2.27	0.69
1:A:2227:C:C5	1:A:2228:C:C4	2.81	0.69
3:B:86:G:C2	3:B:87:G:C5	2.81	0.69
11:S:52:ARG:HG2	11:S:55:ARG:HH11	1.56	0.69
1:A:296:G:O2'	1:A:297:U:H5'	1.92	0.69
1:A:624:A:C2	1:A:625:C:C6	2.80	0.69
1:A:2655:G:O2'	1:A:2796:A:N6	2.26	0.69
1:A:2215:C:C2'	1:A:2216:U:H5'	2.22	0.69
1:A:2730:A:C8	1:A:2731:C:H5''	2.27	0.69
3:B:12:C:O2	3:B:112:A:H2	1.75	0.69
3:B:34:C:C2	3:B:52:G:N2	2.61	0.69
6:N:135:PRO:HD2	6:N:138:ARG:HB2	1.74	0.69
12:T:103:TYR:HD2	12:T:106:ILE:HD12	1.58	0.69
25:F:229:HIS:O	25:F:231:ALA:N	2.26	0.69
1:A:32:U:O4	1:A:458:G:O2'	2.07	0.69
1:A:2203:U:H2'	1:A:2204:A:O4'	1.92	0.69
3:B:110:C:O2'	3:B:111:G:OP2	2.07	0.69
15:W:71:VAL:HA	15:W:89:ILE:HD11	1.74	0.69
19:E:264:ASN:O	19:E:264:ASN:ND2	2.26	0.69
26:G:129:GLN:CD	26:G:134:ARG:HH22	1.95	0.69
1:A:137:U:O2	1:A:157:G:N2	2.26	0.69
1:A:1159:G:N3	4:L:176:HIS:ND1	2.37	0.69
1:A:1426:U:H2'	1:A:1427:A:H8	1.56	0.69
1:A:2107:G:C2'	1:A:2108:G:H5''	2.21	0.69
1:A:2280:C:OP2	16:X:73:LYS:HE3	1.92	0.69
6:N:182:LYS:HE2	6:N:189:PRO:HG3	1.75	0.69
10:R:137:LEU:HG	10:R:138:ARG:HG3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:T:116:PRO:HD2	12:T:117:PRO:CD	2.22	0.69
19:E:176:GLU:HG2	19:E:267:ILE:O	1.92	0.69
1:A:279:A:N3	1:A:279:A:H3'	2.08	0.69
1:A:385:U:O2'	1:A:386:A:H5'	1.93	0.69
1:A:898:G:N9	1:A:899:A:N7	2.40	0.69
1:A:1475:U:C4'	8:P:73:ARG:HH21	2.06	0.69
1:A:2011:G:C5'	25:F:219:ARG:HH21	2.05	0.69
1:A:2810:A:H3'	1:A:2810:A:N3	2.08	0.69
1:A:38:C:O2	26:G:97:ARG:NH1	2.25	0.69
1:A:793:A:C2	19:E:221:MET:HG2	2.26	0.69
1:A:899:A:C4	1:A:900:G:C8	2.81	0.69
1:A:1532:G:N2	1:A:1611:G:C2	2.61	0.69
1:A:1703:G:N2	1:A:2006:G:OP2	2.18	0.69
1:A:2213:A:N6	1:A:2241:G:C2	2.59	0.69
17:Y:124:LYS:O	17:Y:128:THR:CG2	2.38	0.69
28:I:48:ILE:O	28:I:89:PHE:CD1	2.45	0.69
1:A:253:C:C2	1:A:437:G:C2	2.81	0.68
1:A:879:G:N2	1:A:880:U:O2	2.26	0.68
1:A:946:A:H62	1:A:950:A:N6	1.88	0.68
1:A:1535:A:N3	1:A:1535:A:H3'	2.08	0.68
1:A:1951:A:O2'	1:A:1952:A:OP1	2.10	0.68
1:A:2213:A:C5	1:A:2242:A:C2	2.80	0.68
1:A:2213:A:H61	1:A:2241:G:N2	1.69	0.68
6:N:143:LEU:HD23	6:N:143:LEU:N	2.06	0.68
25:F:99:MET:HG2	25:F:113:THR:HG22	1.73	0.68
25:F:140:GLY:HA3	25:F:165:MET:SD	2.33	0.68
1:A:136:U:N3	1:A:160:A:N1	2.14	0.68
1:A:257:A:N7	1:A:258:C:N4	2.41	0.68
1:A:342:G:C2'	1:A:343:U:H5'	2.22	0.68
1:A:362:A:H2'	1:A:363:C:C6	2.28	0.68
1:A:854:A:N1	1:A:964:C:N3	2.41	0.68
1:A:1521:G:N1	1:A:1544:A:C2	2.61	0.68
1:A:2116:C:N4	1:A:2201:G:H1	1.88	0.68
12:T:170:THR:O	12:T:233:SER:N	2.26	0.68
25:F:144:LEU:HD11	25:F:166:ARG:NE	2.08	0.68
27:H:89:VAL:HG22	27:H:207:VAL:HG22	1.75	0.68
1:A:100:G:O2'	1:A:101:A:OP2	2.11	0.68
1:A:368:U:N3	1:A:369:U:C5	2.61	0.68
1:A:1401:G:O2'	1:A:1603:A:N6	2.24	0.68
1:A:1532:G:H2'	1:A:1533:A:H5'	1.76	0.68
1:A:2129:G:HO2'	1:A:2131:U:H5	1.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2292:C:H1'	16:X:67:LYS:HD3	1.75	0.68
1:A:2652:A:O2'	25:F:170:GLU:OE1	2.09	0.68
1:A:2655:G:P	25:F:172:ARG:HH22	2.16	0.68
6:N:102:HIS:CD2	12:T:205:ASN:ND2	2.61	0.68
6:N:205:GLU:OE1	6:N:224:LYS:CE	2.41	0.68
12:T:169:SER:C	12:T:233:SER:CB	2.61	0.68
16:X:161:GLN:OE1	16:X:161:GLN:HA	1.94	0.68
16:X:162:ARG:HG2	16:X:162:ARG:HH11	1.58	0.68
1:A:883:C:H4'	7:O:65:TRP:CZ3	2.27	0.68
1:A:1531:A:O2'	1:A:1532:G:OP1	2.08	0.68
4:L:168:ARG:NH2	4:L:192:GLN:OE1	2.27	0.68
6:N:198:LEU:HD22	6:N:214:ALA:CB	2.23	0.68
1:A:143:G:N2	1:A:2224:G:N1	2.42	0.68
1:A:858:G:C4	1:A:859:A:C8	2.82	0.68
1:A:1167:C:OP2	4:L:167:LYS:NZ	2.26	0.68
1:A:2331:G:N2	27:H:182:SER:HG	1.90	0.68
1:A:2338:G:H3'	1:A:2338:G:N3	2.08	0.68
3:B:35:A:H8	3:B:35:A:P	2.16	0.68
1:A:256:A:O2'	1:A:257:A:OP1	2.12	0.68
1:A:263:A:N3	1:A:263:A:H3'	2.08	0.68
1:A:389:A:H2'	1:A:390:U:C6	2.28	0.68
1:A:1294:A:OP2	1:A:1682:C:N4	2.27	0.68
1:A:1449:C:H5	19:E:25:ARG:HH21	1.41	0.68
1:A:1499:G:C2	1:A:1546:C:N3	2.61	0.68
1:A:1525:G:O2'	1:A:1526:G:H5'	1.93	0.68
1:A:2653:U:H5'	25:F:170:GLU:CD	2.14	0.68
12:T:170:THR:CG2	12:T:172:ILE:HD11	2.23	0.68
15:W:67:ARG:NH2	15:W:92:ILE:CG1	2.54	0.68
1:A:812:G:C8	26:G:106:ALA:HB2	2.28	0.68
1:A:854:A:H2'	1:A:855:C:H5'	1.75	0.68
1:A:1531:A:N3	1:A:1531:A:H2'	2.07	0.68
1:A:2074:A:H62	26:G:125:ARG:NH2	1.85	0.68
1:A:2322:A:O4'	27:H:186:ARG:CD	2.40	0.68
2:C:40:U:C4	2:C:87:A:C6	2.81	0.68
3:B:86:G:N3	3:B:87:G:C8	2.61	0.68
4:L:213:LEU:C	4:L:213:LEU:HD13	2.14	0.68
13:U:163:LEU:HD23	13:U:163:LEU:C	2.14	0.68
25:F:145:ARG:HG3	25:F:145:ARG:NH2	2.09	0.68
29:J:75:ARG:O	29:J:80:PRO:HD3	1.93	0.68
1:A:255:A:OP2	1:A:271:G:N1	2.26	0.68
1:A:318:A:N3	1:A:338:G:O2'	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:616:U:P	26:G:155:LYS:HZ3	2.17	0.68
1:A:902:G:H3'	1:A:903:G:H5''	1.76	0.68
1:A:1263:G:N2	6:N:83:ASP:CG	2.45	0.68
1:A:1806:U:H2'	1:A:1807:C:C6	2.29	0.68
1:A:2213:A:H2	1:A:2214:C:N1	1.79	0.68
3:B:26:A:N3	3:B:27:A:C8	2.62	0.68
3:B:32:A:C6	3:B:55:G:C6	2.82	0.68
18:Z:99:ASN:OD1	18:Z:101:LYS:NZ	2.27	0.68
27:H:119:VAL:N	27:H:141:ALA:O	2.26	0.68
28:I:46:GLN:HB3	28:I:109:ARG:NE	2.09	0.68
1:A:914:A:H2'	1:A:915:G:H5'	1.76	0.68
1:A:1362:G:H1'	14:V:163:ASN:HB3	1.74	0.68
1:A:1539:C:O2'	1:A:1540:C:H5'	1.93	0.68
1:A:2117:U:H3	1:A:2200:A:N6	1.92	0.68
1:A:2322:A:C1'	27:H:186:ARG:HD3	2.21	0.68
2:C:102:U:O2'	2:C:103:G:H5'	1.94	0.68
15:W:67:ARG:HD3	15:W:131:SER:OG	1.92	0.68
18:Z:101:LYS:O	18:Z:105:PHE:N	2.27	0.68
27:H:186:ARG:NH2	27:H:204:GLY:HA2	2.08	0.68
1:A:60:U:C2'	18:Z:94:ARG:NH1	2.56	0.68
1:A:352:C:H2'	1:A:353:G:H5'	1.75	0.68
1:A:355:A:N7	1:A:356:A:N9	2.40	0.68
1:A:1394:A:C5'	1:A:2230:A:H1'	2.23	0.68
1:A:1600:A:C2	19:E:209:TRP:CH2	2.82	0.68
1:A:2351:G:N3	9:Q:64:VAL:CG2	2.55	0.68
1:A:1497:A:H61	1:A:1547:C:N4	1.91	0.67
1:A:1745:C:C2	1:A:1746:C:C5	2.83	0.67
16:X:67:LYS:HD2	16:X:67:LYS:N	2.09	0.67
1:A:208:A:O2'	1:A:432:G:H1'	1.94	0.67
1:A:362:A:O2'	1:A:363:C:H5'	1.95	0.67
1:A:876:A:H2'	1:A:877:C:H5'	1.76	0.67
1:A:966:G:O2'	1:A:967:C:H5'	1.95	0.67
1:A:1236:A:N6	1:A:1253:G:N1	2.02	0.67
1:A:1273:G:OP2	11:S:14:ARG:NH2	2.27	0.67
1:A:1528:U:H3	1:A:1538:G:H1	1.42	0.67
1:A:2233:G:C2	1:A:2234:G:C5	2.82	0.67
1:A:2237:A:C2'	1:A:2238:A:H5'	2.24	0.67
1:A:2360:U:HO2'	1:A:2390:A:HO2'	1.41	0.67
12:T:177:VAL:HB	12:T:230:TYR:OH	1.93	0.67
14:V:109:LEU:CD1	14:V:141:ARG:C	2.61	0.67
1:A:5:A:O2'	1:A:6:A:O4'	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:276:G:C6	1:A:433:C:N4	2.62	0.67
1:A:988:A:N6	7:O:82:ARG:HH11	1.92	0.67
1:A:2119(A):U:H3	1:A:2199:G:H22	1.42	0.67
1:A:2320:G:H1	1:A:2330:U:H3	1.41	0.67
1:A:2324:G:H4'	1:A:2325:G:H5''	1.75	0.67
2:C:8:G:N1	2:C:92:C:N3	2.34	0.67
3:B:8:G:O6	3:B:115:C:N4	2.28	0.67
3:B:25:G:C5	3:B:57:U:C4	2.82	0.67
11:S:91:LEU:CG	12:T:175:PRO:CG	2.67	0.67
1:A:137:U:N3	1:A:157:G:N2	2.41	0.67
1:A:274:G:C5	1:A:433:C:C5	2.82	0.67
1:A:1545:G:N7	1:A:1546:C:C5	2.61	0.67
1:A:2108:G:O6	1:A:2210:C:N4	2.28	0.67
1:A:2123:U:H6	1:A:2123:U:O5'	1.77	0.67
1:A:2207:A:H2'	1:A:2208:U:C1'	2.25	0.67
25:F:144:LEU:HD12	25:F:166:ARG:HB2	1.76	0.67
28:I:46:GLN:OE1	28:I:109:ARG:HG2	1.90	0.67
1:A:9:A:H1'	2:C:99:A:C6	2.29	0.67
1:A:141:C:N3	1:A:153:G:C2	2.44	0.67
1:A:919:A:H2'	1:A:920:A:H5'	1.75	0.67
1:A:1136:U:C2'	1:A:1137:C:H5'	2.24	0.67
3:B:27:A:O2'	3:B:28:C:H5'	1.95	0.67
3:B:41:U:H5''	3:B:42:C:H5''	1.76	0.67
18:Z:120:ARG:O	18:Z:124:ILE:HG13	1.95	0.67
1:A:75:C:N3	1:A:108:G:O6	2.26	0.67
1:A:161:G:N2	1:A:162:A:N3	2.43	0.67
1:A:268:G:C6	1:A:269:G:C6	2.82	0.67
1:A:1535:A:H8	19:E:95:GLY:HA3	1.54	0.67
1:A:1536:A:N3	1:A:1536:A:H3'	2.09	0.67
1:A:1755:A:C2	1:A:1756:G:C5	2.83	0.67
11:S:91:LEU:CB	12:T:175:PRO:HA	2.23	0.67
1:A:277:G:H3'	1:A:277:G:N3	2.10	0.67
1:A:320:U:H1'	1:A:341:A:N9	2.10	0.67
1:A:644:A:OP1	6:N:151:ARG:NH1	2.28	0.67
1:A:891:G:C2	1:A:892:C:C2	2.82	0.67
1:A:1179:C:O5'	1:A:1179:C:H6	1.78	0.67
1:A:1238:G:H2'	1:A:1239:C:C5	2.30	0.67
16:X:122:LEU:CG	16:X:140:ARG:CB	2.72	0.67
19:E:259:ASN:HD22	19:E:259:ASN:N	1.91	0.67
1:A:857:G:H1'	1:A:961:G:N2	2.10	0.67
1:A:863:C:O5'	1:A:863:C:H6	1.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:879:G:C2	1:A:880:U:C2	2.82	0.67
1:A:1080:C:H2'	1:A:1081:C:C4'	2.24	0.67
1:A:1526:G:C2	1:A:1540:C:O2	2.47	0.67
1:A:1830:U:H5'	1:A:1831:G:N7	2.09	0.67
1:A:1878:C:H2'	1:A:1879:U:C6	2.28	0.67
1:A:2231:C:H3'	1:A:2232:G:H8	1.59	0.67
1:A:2345:A:H2'	1:A:2346:A:C8	2.30	0.67
3:B:87:G:N1	3:B:93:C:N3	2.42	0.67
28:I:46:GLN:OE1	28:I:109:ARG:HD2	1.94	0.67
1:A:152:G:C5	1:A:153:G:N7	2.63	0.67
1:A:545:U:C2'	11:S:49:ASP:OD2	2.43	0.67
1:A:1521:G:OP2	1:A:1541:U:OP2	2.13	0.67
1:A:2433:C:P	6:N:145:GLY:HA2	2.35	0.67
10:R:131:VAL:HG13	10:R:199:TYR:CE2	2.29	0.67
10:R:148:ILE:HD12	10:R:210:SER:HB2	1.77	0.67
1:A:1522:A:C2	1:A:1523:A:C5	2.83	0.67
1:A:1746:C:HO2'	1:A:1747:C:H5'	1.59	0.67
1:A:2108:G:N3	1:A:2108:G:H3'	2.09	0.67
1:A:2322:A:C4	27:H:186:ARG:HD2	1.65	0.67
1:A:2480:U:C4	1:A:2504:A:N1	2.62	0.67
27:H:186:ARG:O	27:H:187:GLU:HB2	1.94	0.67
28:I:48:ILE:HG13	28:I:90:LEU:C	2.14	0.67
1:A:524:A:H1'	11:S:11:ARG:NH2	2.09	0.66
3:B:68:G:C2	3:B:69:C:C2	2.83	0.66
6:N:175:GLU:C	6:N:213:LYS:NZ	2.48	0.66
11:S:91:LEU:HG	12:T:175:PRO:CD	2.24	0.66
15:W:67:ARG:NE	15:W:131:SER:OG	2.28	0.66
17:Y:129:ILE:HD12	17:Y:129:ILE:C	2.16	0.66
19:E:237:ILE:HG23	19:E:238:GLY:H	1.59	0.66
1:A:82:G:OP2	15:W:157:LYS:NZ	2.28	0.66
1:A:127:C:O5'	1:A:127:C:H6	1.78	0.66
1:A:160:A:H8	1:A:160:A:OP2	1.78	0.66
1:A:1153:G:H3'	1:A:1154:A:H5''	1.77	0.66
1:A:1882:U:C5	1:A:1883:G:N7	2.63	0.66
10:R:138:ARG:HH12	10:R:199:TYR:HA	1.60	0.66
16:X:156:GLU:OE1	16:X:157:ASN:N	2.28	0.66
1:A:976:C:O2	1:A:1012:G:O2'	2.13	0.66
1:A:1602:G:H4'	19:E:55:LYS:HB2	1.76	0.66
1:A:2330:U:C4'	27:H:90:ASN:HD22	2.08	0.66
1:A:2393:A:C2	9:Q:166:PHE:HZ	2.10	0.66
1:A:2421:C:O5'	1:A:2421:C:H6	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2647:A:C8	2:C:98:G:C5	2.84	0.66
3:B:26:A:N1	3:B:27:A:C5	2.63	0.66
12:T:170:THR:CA	12:T:233:SER:HB3	2.20	0.66
1:A:111:U:P	18:Z:134:ARG:NH1	2.67	0.66
1:A:298:G:C2	1:A:299:C:C4	2.83	0.66
1:A:368:U:N1	1:A:369:U:H5	1.91	0.66
1:A:902:G:C6	1:A:903:G:C8	2.84	0.66
1:A:942:U:O5'	1:A:942:U:H6	1.78	0.66
1:A:1361:U:O4	14:V:168:PRO:CG	2.43	0.66
1:A:1525:G:N2	1:A:1541:U:N3	2.44	0.66
1:A:2740:G:O2'	8:P:13:HIS:O	2.13	0.66
1:A:2764:U:H3	1:A:2776:A:N6	1.92	0.66
2:C:40:U:N3	2:C:87:A:N6	2.40	0.66
3:B:8:G:O2'	3:B:9:U:O5'	2.13	0.66
6:N:144:ARG:C	6:N:146:ILE:HD12	2.16	0.66
26:G:208:PHE:HB3	26:G:229:LEU:HB2	1.76	0.66
1:A:298:G:C2	1:A:299:C:C5	2.84	0.66
1:A:524:A:C2'	11:S:11:ARG:HH22	2.09	0.66
1:A:1361:U:O4	14:V:168:PRO:HD3	1.95	0.66
1:A:2157:U:C2	1:A:2163:G:C2	2.83	0.66
1:A:2312:C:O2	1:A:2355:G:N2	2.29	0.66
2:C:104:A:N3	2:C:105:A:N7	2.42	0.66
6:N:195:ARG:NE	6:N:195:ARG:HA	2.09	0.66
6:N:197:PRO:HB2	6:N:215:ARG:CD	2.26	0.66
10:R:187:ILE:HG22	10:R:188:ALA:H	1.60	0.66
12:T:93:PHE:O	12:T:94:GLN:HB2	1.96	0.66
12:T:177:VAL:CB	12:T:230:TYR:OH	2.43	0.66
13:U:32:ILE:HD11	13:U:93:PHE:HE2	1.61	0.66
15:W:159:ARG:HB3	15:W:168:VAL:HB	1.77	0.66
16:X:128:TYR:HE2	16:X:132:LYS:CG	2.08	0.66
25:F:121:ASN:HD22	25:F:121:ASN:N	1.93	0.66
1:A:318:A:N6	1:A:339:A:H62	1.90	0.66
1:A:1810:C:H4'	1:A:1811:A:H5'	1.76	0.66
1:A:1815:U:O2	19:E:46:THR:OG1	2.12	0.66
1:A:1878:C:O2'	1:A:1879:U:H5'	1.95	0.66
1:A:2322:A:O4'	27:H:186:ARG:HD3	1.95	0.66
1:A:2336:U:H6	1:A:2336:U:O5'	1.79	0.66
1:A:2479:U:C4	1:A:2505:A:N1	2.63	0.66
3:B:5:C:O5'	3:B:5:C:H6	1.79	0.66
15:W:89:ILE:HG22	15:W:101:ILE:HG22	1.77	0.66
15:W:141:GLN:HG3	15:W:166:GLU:OE2	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:F:87:ASP:OD1	25:F:88:ALA:N	2.29	0.66
1:A:266:A:H2'	1:A:267:C:C6	2.31	0.66
1:A:389:A:N6	1:A:410:G:C6	2.64	0.66
1:A:824:U:H2'	1:A:825:C:H6	1.60	0.66
1:A:2220:G:C6	1:A:2221:U:C4	2.84	0.66
1:A:629:C:O5'	1:A:629:C:H6	1.78	0.66
1:A:857:G:C2	1:A:961:G:N3	2.60	0.66
1:A:1600:A:N3	19:E:209:TRP:CZ3	2.64	0.66
1:A:2141:G:O2'	1:A:2142:G:O4'	2.13	0.66
1:A:2188:C:O5'	1:A:2188:C:H6	1.79	0.66
2:C:80:C:H2'	2:C:81:A:C8	2.31	0.66
2:C:101:U:H5'	2:C:102:U:OP2	1.94	0.66
3:B:93:C:O5'	3:B:93:C:H6	1.79	0.66
4:L:100:TRP:HE3	4:L:101:TYR:CD2	2.12	0.66
12:T:169:SER:CB	12:T:233:SER:HB2	2.22	0.66
12:T:201:LYS:HG2	12:T:206:TYR:HE2	1.59	0.66
27:H:175:PHE:HD1	27:H:183:VAL:CG1	2.09	0.66
1:A:60:U:C2'	18:Z:94:ARG:HH12	2.08	0.66
1:A:258:C:H6	1:A:258:C:O5'	1.79	0.66
1:A:294:U:H2'	1:A:295:C:C1'	2.26	0.66
1:A:475:G:N2	1:A:478:A:OP2	2.28	0.66
1:A:1220:U:O2	11:S:3:ARG:NH2	2.29	0.66
1:A:1519:A:C2	1:A:1520:A:C5	2.84	0.66
1:A:1582:A:H2'	1:A:1583:A:C8	2.31	0.66
1:A:2315:G:N2	1:A:2338:G:N7	2.44	0.66
1:A:2320:G:C4'	27:H:175:PHE:HA	2.21	0.66
3:B:25:G:C8	3:B:57:U:C5	2.83	0.66
3:B:87:G:C2	3:B:93:C:C2	2.84	0.66
1:A:1393:U:O2'	1:A:2230:A:C2'	2.43	0.66
1:A:1886:A:H61	6:N:252:ARG:NH2	1.94	0.66
1:A:2529:C:H5''	25:F:217:PHE:HD1	1.60	0.66
6:N:212:ILE:HG22	6:N:214:ALA:H	1.60	0.66
7:O:77:ARG:NH1	7:O:78:PRO:O	2.29	0.66
19:E:80:ASP:HB2	19:E:87:ILE:HG12	1.78	0.66
1:A:1538:G:H8	1:A:1538:G:O5'	1.79	0.65
1:A:1544:A:H2'	1:A:1545:G:O4'	1.96	0.65
1:A:2103:G:O6	1:A:2104:A:N6	2.30	0.65
3:B:40:A:O2'	3:B:47:A:N1	2.29	0.65
6:N:88:GLN:HG3	26:G:82:ALA:HB2	1.78	0.65
7:O:39:PRO:HB3	7:O:99:PRO:HD3	1.76	0.65
19:E:226:HIS:ND1	19:E:228:HIS:CD2	2.63	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:206:A:H1'	1:A:218:A:H1'	1.77	0.65
1:A:1160:A:C8	4:L:174:ARG:HD2	2.31	0.65
1:A:1635:C:H4'	14:V:106:ARG:HH21	1.58	0.65
6:N:197:PRO:HB2	6:N:215:ARG:HD3	1.78	0.65
28:I:44:GLY:HA2	28:I:105:HIS:ND1	2.11	0.65
1:A:71:A:C2	18:Z:117:THR:HG23	2.30	0.65
1:A:166:A:H2'	1:A:167:A:C8	2.31	0.65
1:A:336:G:C2'	1:A:337:U:H5'	2.26	0.65
1:A:853:G:H1	1:A:964:C:H42	1.44	0.65
1:A:886:U:O5'	1:A:886:U:H6	1.79	0.65
1:A:1479:U:C4'	1:A:1480:A:H5''	2.20	0.65
1:A:1505:C:H6	1:A:1505:C:O5'	1.78	0.65
1:A:2107:G:C6	1:A:2242:A:C8	2.81	0.65
1:A:2337:C:H6	1:A:2337:C:O5'	1.78	0.65
6:N:197:PRO:HB3	6:N:215:ARG:CD	2.18	0.65
14:V:115:LEU:HD21	14:V:151:ILE:HD11	1.79	0.65
1:A:374:U:O5'	1:A:374:U:H6	1.80	0.65
1:A:843:C:C4'	6:N:125:ILE:HD11	2.20	0.65
1:A:1407:C:H2'	1:A:1408:A:H8	1.62	0.65
1:A:1524:G:N1	1:A:1525:G:C6	2.64	0.65
1:A:1756:G:C2	1:A:1757:G:C5	2.84	0.65
1:A:2157:U:N3	1:A:2163:G:C2	2.64	0.65
1:A:2486:A:O2'	7:O:56:ARG:NE	2.29	0.65
3:B:36:A:C6	3:B:45:G:C6	2.83	0.65
3:B:38:C:O5'	3:B:38:C:H6	1.79	0.65
11:S:92:LEU:O	11:S:94:ARG:HG2	1.95	0.65
1:A:2:U:H2'	1:A:3:C:C6	2.32	0.65
1:A:300:U:O5'	1:A:300:U:H6	1.80	0.65
1:A:330:U:H3	26:G:218:LYS:HE3	1.58	0.65
1:A:669:C:O2'	1:A:670:A:H5'	1.97	0.65
1:A:899:A:H1'	1:A:900:G:O5'	1.96	0.65
1:A:1875:G:H8	1:A:1875:G:O5'	1.79	0.65
1:A:2310:U:OP1	9:Q:62:LYS:NZ	2.29	0.65
1:A:2643:C:O5'	1:A:2643:C:H6	1.79	0.65
2:C:12:C:H5''	8:P:109:ARG:NH2	2.10	0.65
2:C:84:C:O5'	2:C:84:C:H6	1.79	0.65
9:Q:73:LEU:HA	9:Q:85:GLN:O	1.96	0.65
13:U:117:ARG:HD2	13:U:123:TYR:CE2	2.31	0.65
19:E:175:GLY:O	19:E:268:ARG:HB3	1.94	0.65
1:A:1540:C:O5'	1:A:1540:C:H6	1.79	0.65
4:L:172:LEU:HD12	4:L:172:LEU:N	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:V:162:VAL:HG12	14:V:176:ILE:HG22	1.79	0.65
26:G:71:ASN:HD22	26:G:72:LEU:N	1.95	0.65
27:H:58:LYS:O	27:H:62:ILE:HG12	1.96	0.65
1:A:352:C:O5'	1:A:352:C:H6	1.79	0.65
1:A:861:A:H2'	1:A:862:U:H5'	1.77	0.65
1:A:885:G:H2'	1:A:886:U:C6	2.31	0.65
1:A:917:C:O5'	1:A:917:C:H6	1.79	0.65
1:A:1495:C:C4	1:A:1548:A:N6	2.64	0.65
1:A:1808:C:H2'	1:A:1829:A:N6	2.05	0.65
1:A:2807:C:H42	2:C:98:G:H1	1.45	0.65
2:C:80:C:H2'	2:C:81:A:H8	1.62	0.65
3:B:8:G:N2	3:B:116:C:O2	2.30	0.65
3:B:43:C:H2'	3:B:44:C:C6	2.32	0.65
16:X:128:TYR:HA	16:X:134:LYS:HD3	1.77	0.65
1:A:218:A:H61	1:A:441:A:H61	1.43	0.65
1:A:887:G:H1	1:A:909:A:H61	1.42	0.65
1:A:2109:C:C5	1:A:2110:U:N1	2.64	0.65
1:A:2110:U:H6	1:A:2110:U:O5'	1.80	0.65
1:A:2593:G:O2'	1:A:2596:C:OP2	2.14	0.65
6:N:172:GLU:O	6:N:172:GLU:HG2	1.97	0.65
14:V:144:LYS:O	14:V:148:ARG:CB	2.44	0.65
19:E:267:ILE:CG2	19:E:269:ARG:HB2	2.27	0.65
25:F:198:ASP:OD1	25:F:263:LYS:N	2.30	0.65
26:G:59:ASN:OD1	26:G:62:GLY:N	2.26	0.65
1:A:626:C:H3'	1:A:627:C:C5	2.32	0.65
1:A:635:C:O5'	1:A:635:C:H6	1.78	0.65
1:A:1307:A:C6	1:A:1350:U:N3	2.64	0.65
1:A:2105:U:O5'	1:A:2105:U:H6	1.79	0.65
2:C:31:U:O2	2:C:38:G:N7	2.30	0.65
3:B:7:G:O6	3:B:117:A:C2	2.49	0.65
3:B:30:A:OP2	9:Q:78:SER:OG	2.14	0.65
3:B:35:A:H2'	3:B:36:A:C8	2.32	0.65
6:N:146:ILE:HD12	6:N:146:ILE:N	2.12	0.65
14:V:121:THR:HG23	14:V:124:ALA:H	1.61	0.65
25:F:199:ILE:HD11	25:F:282:VAL:HB	1.79	0.65
1:A:287:A:H2'	1:A:288:C:C5	2.32	0.65
1:A:988:A:H61	7:O:82:ARG:HH11	1.45	0.65
1:A:1926:A:N7	1:A:1931:U:O4	2.29	0.65
1:A:2113:G:O2'	1:A:2114:G:H5'	1.97	0.65
1:A:2213:A:C5	1:A:2242:A:C6	2.85	0.65
1:A:2322:A:H2'	1:A:2323:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:82:U:O5'	2:C:82:U:H6	1.79	0.65
3:B:8:G:C2	3:B:116:C:O2	2.50	0.65
11:S:91:LEU:CD2	12:T:175:PRO:HG3	2.27	0.65
13:U:57:SER:OG	13:U:60:GLU:OE1	2.11	0.65
1:A:274:G:C4	1:A:433:C:H5	2.15	0.64
1:A:363:C:O5'	1:A:363:C:H6	1.79	0.64
1:A:382:G:H4'	1:A:383:A:OP2	1.96	0.64
1:A:1161:A:H1'	1:A:1162:C:P	2.36	0.64
2:C:85:U:H2'	2:C:86:A:C8	2.32	0.64
3:B:32:A:H2'	3:B:33:C:H5'	1.77	0.64
7:O:91:GLU:CD	7:O:92:TYR:H	1.99	0.64
16:X:101:PHE:CD1	16:X:133:LYS:HG2	2.32	0.64
27:H:188:GLN:HA	27:H:188:GLN:NE2	2.00	0.64
28:I:81:LEU:O	28:I:93:ARG:N	2.24	0.64
1:A:98:G:H4'	1:A:99:A:C5'	2.27	0.64
1:A:102:U:H2'	1:A:103:C:C5'	2.22	0.64
1:A:276:G:C2	1:A:416:C:O2'	2.48	0.64
1:A:648:G:H1	6:N:158:VAL:HG21	1.61	0.64
1:A:1528:U:O5'	1:A:1528:U:H6	1.80	0.64
1:A:1879:U:C4	6:N:252:ARG:NH1	2.64	0.64
1:A:2141:G:O2'	1:A:2142:G:O5'	2.16	0.64
1:A:2316:G:N2	1:A:2334:C:N3	2.39	0.64
4:L:173:TYR:HD1	4:L:202:HIS:ND1	1.94	0.64
6:N:198:LEU:HD23	6:N:198:LEU:C	2.16	0.64
25:F:121:ASN:ND2	25:F:141:TYR:HD1	1.95	0.64
26:G:59:ASN:ND2	26:G:63:GLU:OE2	2.30	0.64
1:A:83:A:N6	1:A:98:G:C6	2.65	0.64
1:A:385:U:O5'	1:A:385:U:H6	1.80	0.64
1:A:560:A:O2'	1:A:561:C:OP1	2.13	0.64
1:A:858:G:C5	1:A:859:A:N7	2.65	0.64
1:A:934:A:H1'	1:A:935:U:O5'	1.97	0.64
1:A:937:U:H2'	1:A:938:G:H5'	1.80	0.64
1:A:1394:A:H5'	1:A:2230:A:C1'	2.27	0.64
1:A:1497:A:H3'	1:A:1498:G:H8	1.60	0.64
1:A:1545:G:C5	1:A:1546:C:C5	2.85	0.64
1:A:1702:G:HO2'	5:M:6:THR:HG22	1.62	0.64
1:A:1866:G:H5''	29:J:43:LYS:HG3	1.79	0.64
1:A:1879:U:C4	6:N:252:ARG:CZ	2.80	0.64
1:A:2393:A:H1'	9:Q:160:ARG:HH12	1.62	0.64
3:B:38:C:H3'	3:B:39:C:O4'	1.97	0.64
28:I:129:LEU:HG	28:I:202:VAL:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:297:U:O2'	1:A:298:G:H5'	1.98	0.64
1:A:853:G:N1	1:A:965:G:C5	2.65	0.64
1:A:854:A:C2'	1:A:855:C:H5'	2.27	0.64
1:A:1553:U:O5'	1:A:1553:U:H6	1.81	0.64
1:A:1763:G:N2	1:A:1766:G:OP2	2.31	0.64
1:A:1879:U:O5'	1:A:1879:U:H6	1.80	0.64
2:C:32:C:H1'	2:C:33:A:O5'	1.97	0.64
2:C:41:A:O2'	2:C:42:G:H5'	1.97	0.64
6:N:162:LEU:HD11	6:N:203:GLU:OE1	1.96	0.64
6:N:171:LYS:O	6:N:172:GLU:HB3	1.97	0.64
15:W:76:LYS:HE2	15:W:137:ILE:HD11	1.79	0.64
18:Z:76:LEU:HD12	18:Z:115:MET:HE1	1.79	0.64
26:G:81:ARG:HB2	26:G:81:ARG:NH2	2.13	0.64
1:A:389:A:N6	1:A:410:G:N1	2.45	0.64
1:A:1345:G:O2'	1:A:1347:U:OP2	2.12	0.64
1:A:1751:A:N6	1:A:1754:A:N7	2.45	0.64
1:A:2186:U:OP2	1:A:2188:C:C4	2.50	0.64
1:A:2319:C:N3	1:A:2332:G:N1	2.45	0.64
3:B:4:U:C5	3:B:5:C:C4	2.86	0.64
3:B:41:U:O2'	3:B:46:A:C6	2.49	0.64
3:B:90:G:C6	3:B:91:G:C6	2.86	0.64
17:Y:138:ALA:O	17:Y:142:GLY:N	2.27	0.64
19:E:155:GLY:H	19:E:191:VAL:HG13	1.61	0.64
26:G:234:LEU:HD23	26:G:234:LEU:C	2.17	0.64
1:A:9:A:H1'	2:C:99:A:N1	2.13	0.64
1:A:89:A:OP1	15:W:55:ASP:CG	2.36	0.64
1:A:131:C:C5	14:V:104:TYR:CZ	2.85	0.64
1:A:135:C:C6	1:A:161:G:C6	2.85	0.64
1:A:318:A:C6	1:A:339:A:C6	2.85	0.64
1:A:616:U:P	26:G:155:LYS:HZ1	2.18	0.64
1:A:911:U:H2'	1:A:912:C:C5	2.33	0.64
1:A:1308:A:C8	8:P:113:ARG:NH2	2.65	0.64
1:A:1618:C:OP1	1:A:1621:C:N4	2.21	0.64
1:A:1634:C:H5''	14:V:145:LYS:HZ3	1.62	0.64
1:A:1811:A:N3	1:A:1811:A:H2'	2.10	0.64
1:A:1828:U:O2'	1:A:1829:A:OP2	2.13	0.64
3:B:87:G:H2'	3:B:88:G:C8	2.32	0.64
6:N:82:LEU:HD22	26:G:88:LEU:HD11	1.77	0.64
19:E:61:ILE:HD11	19:E:63:PHE:CZ	2.33	0.64
1:A:44:G:H3'	1:A:45:A:H5''	1.77	0.64
1:A:131:C:N4	14:V:104:TYR:CG	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:267:C:O5'	1:A:267:C:H6	1.79	0.64
1:A:354:A:H2'	1:A:356:A:H62	1.60	0.64
1:A:682:C:H5	1:A:820:G:H1	1.46	0.64
1:A:1248:G:N7	11:S:16:LYS:NZ	2.46	0.64
1:A:1385:G:O2'	1:A:1818:U:O4	2.14	0.64
1:A:2238:A:N3	1:A:2239:G:C8	2.66	0.64
1:A:2351:G:H4'	9:Q:57:HIS:CE1	2.33	0.64
12:T:154:ASP:OD1	12:T:155:LYS:N	2.30	0.64
1:A:78:C:O2'	1:A:355:A:H1'	1.98	0.64
1:A:373:C:O5'	1:A:373:C:H6	1.81	0.64
1:A:590:C:O2'	11:S:31:LEU:HD11	1.98	0.64
1:A:626:C:H6	1:A:626:C:O5'	1.79	0.64
1:A:822:U:C4	1:A:1272:A:C2	2.85	0.64
1:A:895:C:H3'	1:A:896:G:H8	1.62	0.64
1:A:999:C:OP2	1:A:1002:G:N2	2.30	0.64
1:A:1497:A:H3'	1:A:1498:G:C8	2.33	0.64
1:A:2205:G:O2'	1:A:2206:A:H5'	1.98	0.64
3:B:36:A:C2	3:B:50:U:O2	2.50	0.64
5:M:28:SER:HA	5:M:30:ARG:NH2	2.13	0.64
7:O:31:ARG:NH2	7:O:32:TYR:OH	2.30	0.64
13:U:149:LEU:HD23	13:U:149:LEU:N	2.06	0.64
1:A:23:G:H2'	1:A:24:U:C6	2.32	0.64
1:A:152:G:C6	1:A:153:G:N7	2.66	0.64
1:A:1189:G:N2	12:T:214:GLN:HE22	1.95	0.64
1:A:1499:G:N1	1:A:1546:C:N4	2.27	0.64
1:A:1747:C:O2'	1:A:1748:C:H5'	1.97	0.64
1:A:1880:G:H8	1:A:1880:G:O5'	1.81	0.64
1:A:2114:G:H2'	1:A:2115:G:C8	2.33	0.64
1:A:2212:A:H8	1:A:2212:A:O5'	1.81	0.64
1:A:2213:A:O2'	17:Y:106:LYS:NZ	2.31	0.64
1:A:2219:U:C3'	1:A:2220:G:C5'	2.75	0.64
1:A:2411:C:H5''	6:N:142:LYS:HE3	1.78	0.64
6:N:159:PRO:HB2	6:N:187:ILE:HD11	1.78	0.64
1:A:420:A:C4	1:A:432:G:N2	2.66	0.64
1:A:624:A:C2	1:A:625:C:H6	2.16	0.64
1:A:759:G:OP2	13:U:117:ARG:HD3	1.97	0.64
1:A:877:C:O2'	1:A:878:U:H5'	1.98	0.64
1:A:916:G:H4'	1:A:916:G:OP1	1.97	0.64
1:A:1600:A:N1	19:E:209:TRP:CH2	2.66	0.64
1:A:2213:A:C4	1:A:2242:A:C2	2.85	0.64
1:A:2267:G:H1	7:O:82:ARG:CZ	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:173:TYR:O	4:L:186:GLU:HB3	1.98	0.64
4:L:201:GLU:HG3	4:L:218:PHE:HZ	1.62	0.64
4:L:208:LEU:HD22	4:L:217:LEU:CD1	2.28	0.64
6:N:82:LEU:HD23	26:G:240:LEU:HD23	1.79	0.64
6:N:209:LYS:CB	6:N:230:CYS:HB3	2.28	0.64
10:R:123:MET:HE3	25:F:98:GLY:CA	2.28	0.64
15:W:67:ARG:CD	15:W:131:SER:OG	2.46	0.64
26:G:70:LEU:HD13	26:G:256:ASN:OD1	1.94	0.64
1:A:258:C:O2'	1:A:259:C:H5'	1.98	0.63
1:A:543:A:O2'	1:A:2035:A:N6	2.31	0.63
1:A:891:G:C2'	1:A:892:C:H5'	2.28	0.63
1:A:919:A:C2'	1:A:920:A:H5'	2.28	0.63
1:A:1474:A:H2'	1:A:1474:A:N3	2.13	0.63
1:A:2232:G:C2	1:A:2233:G:N7	2.66	0.63
1:A:2330:U:H4'	27:H:90:ASN:HD22	1.60	0.63
1:A:2790:C:H5''	25:F:260:LYS:HG3	1.80	0.63
6:N:196:LEU:HD12	6:N:196:LEU:O	1.98	0.63
14:V:116:GLN:HA	18:Z:91:ARG:HH22	0.68	0.63
15:W:67:ARG:HB3	15:W:67:ARG:HH11	1.60	0.63
15:W:67:ARG:HD3	15:W:131:SER:CB	2.28	0.63
28:I:66:LYS:HA	28:I:71:GLU:HG2	1.80	0.63
1:A:114:C:O2'	1:A:124:A:N3	2.24	0.63
1:A:261:U:H2'	1:A:262:G:H5'	1.80	0.63
1:A:1515:G:P	1:A:1515:G:H8	2.21	0.63
1:A:1532:G:C2'	1:A:1533:A:H5'	2.28	0.63
11:S:49:ASP:OD1	11:S:52:ARG:NH1	2.31	0.63
26:G:79:LYS:HB2	26:G:79:LYS:NZ	2.13	0.63
26:G:228:LEU:O	26:G:229:LEU:HD23	1.98	0.63
1:A:287:A:H8	1:A:287:A:O5'	1.81	0.63
1:A:1902:G:N2	1:A:1902:G:OP2	2.29	0.63
2:C:21:G:H3'	2:C:22:A:H5''	1.81	0.63
2:C:41:A:C6	2:C:86:A:N1	2.67	0.63
2:C:71:C:O2'	2:C:72:A:N7	2.30	0.63
14:V:133:SER:HA	14:V:176:ILE:O	1.98	0.63
15:W:67:ARG:HD2	15:W:69:VAL:HB	1.80	0.63
16:X:162:ARG:HH11	16:X:162:ARG:CG	2.12	0.63
19:E:65:ARG:HD3	19:E:114:SER:HB3	1.80	0.63
25:F:132:ASP:OD1	25:F:133:GLY:N	2.30	0.63
1:A:260:G:N1	1:A:268:G:C6	2.66	0.63
1:A:573:G:O3'	11:S:41:ARG:NH2	2.31	0.63
1:A:1535:A:N3	1:A:1535:A:H5'	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2211:U:C5	1:A:2241:G:N1	2.67	0.63
2:C:74:C:OP1	8:P:72:LYS:NZ	2.24	0.63
10:R:123:MET:HE2	25:F:97:LEU:C	2.14	0.63
1:A:643:A:OP1	6:N:144:ARG:HD2	1.98	0.63
1:A:888:C:H41	1:A:908:A:H2	0.70	0.63
1:A:909:A:O5'	1:A:909:A:H8	1.81	0.63
1:A:1828:U:HO2'	1:A:1829:A:P	2.21	0.63
1:A:2224:G:O2'	1:A:2225:G:OP2	2.10	0.63
2:C:33:A:H1'	2:C:34:U:O5'	1.97	0.63
3:B:92:U:OP2	7:O:16:ARG:CZ	2.46	0.63
1:A:351:C:O2'	1:A:352:C:H5'	1.98	0.63
1:A:381:C:C2	1:A:416:C:H5	2.15	0.63
1:A:1450:G:H2'	1:A:1451:G:H8	1.64	0.63
1:A:1472:A:H4'	1:A:1473:G:H5''	1.80	0.63
1:A:1475:U:O2	8:P:70:LEU:HD11	1.98	0.63
1:A:1751:A:N7	1:A:1754:A:N6	2.46	0.63
10:R:115:GLN:O	10:R:116:ARG:HB2	1.97	0.63
12:T:116:PRO:CD	12:T:117:PRO:CD	2.76	0.63
12:T:170:THR:CG2	12:T:172:ILE:CD1	2.77	0.63
16:X:79:VAL:HG22	16:X:94:ILE:HD12	1.81	0.63
25:F:119:GLU:HG3	25:F:143:ARG:HB3	1.80	0.63
28:I:82:VAL:HB	28:I:92:VAL:HG12	1.80	0.63
1:A:716:A:N6	1:A:737:G:H1'	2.14	0.63
1:A:2120:U:C4	1:A:2197:A:H2	2.16	0.63
1:A:2190:A:H2'	1:A:2191:C:C1'	2.28	0.63
1:A:2275:G:O2'	1:A:2444:C:OP2	2.16	0.63
4:L:172:LEU:HD23	4:L:185:GLU:OE2	1.97	0.63
16:X:127:LYS:HE3	16:X:133:LYS:HZ1	1.64	0.63
16:X:143:GLN:O	16:X:144:PRO:C	2.34	0.63
1:A:274:G:O6	1:A:433:C:C5'	2.47	0.63
1:A:298:G:N3	1:A:299:C:C5	2.67	0.63
1:A:341:A:H8	1:A:341:A:O5'	1.81	0.63
1:A:1161:A:C8	1:A:2040:U:H4'	2.34	0.63
2:C:37:C:O2	25:F:143:ARG:NH2	2.23	0.63
6:N:165:ILE:HD12	6:N:207:SER:H	1.61	0.63
9:Q:115:PRO:HB2	9:Q:151:ARG:CZ	2.29	0.63
1:A:278:G:C3'	1:A:279:A:H5''	2.27	0.63
1:A:910:A:C2	1:A:911:U:C2	2.86	0.63
1:A:927:A:N3	3:B:81:U:O2'	2.32	0.63
1:A:1603:A:H2'	1:A:1604:A:H8	1.63	0.63
1:A:1699:U:O2	1:A:2011:G:O6	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2129:G:O2'	1:A:2131:U:H5	1.81	0.63
1:A:2207:A:C2	1:A:2208:U:N3	2.67	0.63
1:A:2211:U:H2'	1:A:2212:A:C8	2.34	0.63
1:A:2647:A:N9	2:C:98:G:N3	2.46	0.63
2:C:44:U:H5''	8:P:63:THR:HG21	1.79	0.63
2:C:49:A:N6	2:C:76:G:N2	2.46	0.63
13:U:68:MET:HB3	13:U:73:CYS:SG	2.39	0.63
15:W:60:SER:O	15:W:61:LEU:HD23	1.98	0.63
15:W:109:LYS:O	15:W:122:ILE:CG2	2.46	0.63
16:X:67:LYS:HA	16:X:67:LYS:NZ	2.13	0.63
1:A:553:G:H3'	1:A:554:G:H5''	1.80	0.62
1:A:919:A:N3	7:O:13:HIS:CE1	2.67	0.62
1:A:1002:G:H5'	12:T:201:LYS:HZ2	1.59	0.62
1:A:1881:A:H8	1:A:1881:A:O5'	1.81	0.62
4:L:217:LEU:HD12	4:L:217:LEU:C	2.19	0.62
6:N:167:VAL:HG12	6:N:168:ALA:H	1.63	0.62
6:N:195:ARG:O	6:N:195:ARG:HD3	1.99	0.62
7:O:97:VAL:HG21	7:O:103:LEU:HD21	1.81	0.62
9:Q:49:ARG:HB2	9:Q:52:ASP:HB2	1.79	0.62
1:A:254:U:H5''	1:A:272:U:O4	1.98	0.62
1:A:2112:U:H6	1:A:2112:U:O5'	1.82	0.62
1:A:2123:U:C2	1:A:2195:G:N2	2.67	0.62
2:C:33:A:C1'	2:C:34:U:H5'	2.25	0.62
28:I:167:GLU:HB3	28:I:170:LYS:HG2	1.80	0.62
1:A:1391:C:O2'	1:A:1821:G:O2'	2.18	0.62
1:A:2238:A:C2	1:A:2239:G:C5	2.88	0.62
1:A:2409:A:H2	1:A:2441:C:N4	1.95	0.62
1:A:2691:G:O3'	5:M:29:ASN:HB3	1.98	0.62
6:N:97:ARG:NH1	6:N:100:ARG:CD	2.62	0.62
29:J:78:LEU:HB3	29:J:84:ALA:HB3	1.81	0.62
1:A:355:A:N7	1:A:356:A:C4	2.67	0.62
1:A:896:G:N3	1:A:896:G:H2'	2.14	0.62
1:A:2197:A:O5'	1:A:2197:A:H8	1.82	0.62
1:A:2351:G:C6	9:Q:64:VAL:HG22	2.35	0.62
2:C:68:A:O2'	2:C:69:U:H5'	1.99	0.62
10:R:147:ASP:OD1	10:R:211:HIS:ND1	2.27	0.62
14:V:144:LYS:O	14:V:148:ARG:HB2	1.99	0.62
19:E:237:ILE:HD11	19:E:239:ARG:CB	2.10	0.62
28:I:127:LEU:HA	28:I:204:TYR:HA	1.80	0.62
1:A:364:U:O5'	1:A:364:U:H6	1.80	0.62
1:A:983:G:N2	1:A:2267:G:H1	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:41:U:C5	3:B:44:C:OP2	2.52	0.62
1:A:156:G:N2	1:A:157:G:H1'	2.13	0.62
1:A:289:A:C2	1:A:369:U:H1'	2.33	0.62
1:A:313:A:H2	1:A:323:G:H1	0.70	0.62
1:A:853:G:H1	1:A:964:C:N4	1.97	0.62
1:A:901:C:H2'	1:A:902:G:H4'	1.81	0.62
1:A:917:C:C2'	1:A:918:A:H5'	2.28	0.62
1:A:1798:C:H5''	19:E:220:VAL:HG11	1.82	0.62
1:A:1809:G:N2	1:A:1829:A:OP2	2.31	0.62
1:A:2659:G:C5'	4:L:179:ARG:NH2	2.63	0.62
3:B:5:C:H2'	3:B:6:U:C6	2.34	0.62
3:B:87:G:H2'	3:B:88:G:H8	1.64	0.62
7:O:115:ARG:HG2	7:O:131:PHE:CZ	2.34	0.62
8:P:92:GLU:OE2	8:P:96:ARG:NE	2.22	0.62
13:U:40:SER:OG	13:U:127:ARG:NH1	2.33	0.62
16:X:142:ILE:HG22	16:X:143:GLN:H	1.64	0.62
1:A:415:U:O5'	1:A:415:U:H6	1.82	0.62
1:A:824:U:H2'	1:A:825:C:C6	2.35	0.62
1:A:859:A:O2'	1:A:860:C:H5'	2.00	0.62
1:A:1688:A:H8	1:A:1688:A:O5'	1.81	0.62
1:A:2529:C:H5''	25:F:217:PHE:CD1	2.35	0.62
9:Q:116:THR:H	9:Q:119:VAL:HG22	1.64	0.62
16:X:101:PHE:CE1	16:X:133:LYS:HG3	2.33	0.62
1:A:152:G:C4	1:A:153:G:C8	2.87	0.62
1:A:274:G:N7	1:A:433:C:H5'	2.14	0.62
1:A:357:G:C2'	1:A:358:C:H5'	2.29	0.62
1:A:599:C:H2'	1:A:600:A:C8	2.26	0.62
1:A:909:A:H2'	1:A:910:A:H8	1.64	0.62
1:A:2227:C:C2'	1:A:2228:C:H5'	2.29	0.62
1:A:2642:G:C5	1:A:2643:C:N3	2.68	0.62
6:N:82:LEU:HD23	26:G:240:LEU:HD22	1.78	0.62
9:Q:82:LEU:HD11	9:Q:115:PRO:HB3	1.81	0.62
12:T:116:PRO:O	12:T:117:PRO:O	2.18	0.62
16:X:66:THR:O	16:X:68:ASN:OD1	2.18	0.62
1:A:90:A:H2'	1:A:91:A:C8	2.34	0.62
1:A:226:A:H1'	1:A:228:U:C6	2.35	0.62
1:A:320:U:O2'	1:A:321:G:OP1	2.17	0.62
1:A:919:A:O2'	1:A:920:A:H5'	1.99	0.62
1:A:1496:A:C2	1:A:1497:A:H1'	2.35	0.62
1:A:1498:G:C6	1:A:1499:G:C6	2.88	0.62
1:A:1547:C:H2'	1:A:1548:A:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1950:A:H2	1:A:1957:U:H3	1.48	0.62
1:A:2125:C:N3	1:A:2159:C:O2	2.33	0.62
1:A:2647:A:C1'	2:C:98:G:N3	2.62	0.62
1:A:2808:C:OP1	1:A:2808:C:H4'	1.98	0.62
6:N:136:LEU:HD23	6:N:139:ARG:NH1	2.13	0.62
14:V:106:ARG:O	14:V:107:ARG:CG	2.41	0.62
25:F:237:ALA:HB3	25:F:241:PRO:HG3	1.81	0.62
26:G:204:LYS:N	26:G:225:THR:HB	2.15	0.62
26:G:206:LEU:HD11	26:G:229:LEU:HD12	1.81	0.62
1:A:390:U:O5'	1:A:390:U:H6	1.80	0.62
1:A:898:G:H2'	1:A:899:A:C8	2.35	0.62
1:A:1002:G:H5''	12:T:201:LYS:HZ3	1.64	0.62
1:A:2234:G:H2'	1:A:2235:C:H5'	1.81	0.62
13:U:30:ASP:OD1	13:U:138:ASP:O	2.18	0.62
19:E:261:TYR:O	19:E:262:SER:OG	2.14	0.62
28:I:48:ILE:HG13	28:I:90:LEU:CA	2.30	0.62
1:A:50:G:O2'	1:A:117:A:N6	2.32	0.61
1:A:329:C:O2	26:G:222:ASN:CG	2.36	0.61
1:A:389:A:O2'	1:A:390:U:H5'	2.00	0.61
1:A:886:U:H2'	1:A:887:G:C1'	2.29	0.61
1:A:950:A:H5'	1:A:951:C:OP2	2.00	0.61
1:A:1057:A:OP1	7:O:128:ARG:NH1	2.32	0.61
1:A:1701:A:H1'	5:M:1:MET:HG2	1.80	0.61
1:A:1860:G:H2'	1:A:1861:U:C6	2.35	0.61
1:A:2129:G:C2'	1:A:2180:G:N2	2.59	0.61
2:C:61:G:N2	2:C:64:A:OP2	2.32	0.61
4:L:213:LEU:HD13	4:L:213:LEU:O	1.99	0.61
9:Q:108:ASN:OD1	9:Q:109:ILE:N	2.30	0.61
13:U:152:LEU:O	13:U:153:THR:OG1	2.16	0.61
18:Z:125:GLU:HG2	18:Z:126:GLN:N	2.15	0.61
28:I:61:GLN:HA	28:I:76:TYR:CD2	2.35	0.61
1:A:898:G:C4	1:A:899:A:N7	2.68	0.61
1:A:1479:U:H4'	1:A:1480:A:O5'	1.99	0.61
1:A:2121:C:H42	1:A:2196:G:N2	1.96	0.61
2:C:8:G:N2	2:C:92:C:O2	2.20	0.61
2:C:49:A:N6	2:C:76:G:H22	1.98	0.61
3:B:46:A:H8	27:H:145:ARG:HH11	1.47	0.61
15:W:82:GLU:HG3	15:W:104:LEU:HD11	1.81	0.61
18:Z:120:ARG:HH11	18:Z:120:ARG:CG	2.13	0.61
1:A:4:A:H2'	1:A:5:A:C8	2.35	0.61
1:A:17:C:O2'	1:A:564:U:OP1	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:553:G:N2	1:A:562:C:C2	2.68	0.61
1:A:1161:A:O5'	1:A:1162:C:N4	2.33	0.61
1:A:1211:G:P	6:N:109:SER:OG	2.58	0.61
1:A:1268:A:H2	11:S:5:LYS:HZ2	1.47	0.61
1:A:1888:G:C6	1:A:1889:G:C5	2.88	0.61
1:A:2279:U:OP2	16:X:73:LYS:HB3	1.99	0.61
2:C:104:A:N3	2:C:105:A:C5	2.68	0.61
3:B:93:C:C2'	3:B:94:C:H5'	2.30	0.61
3:B:117:A:H8	3:B:117:A:O5'	1.83	0.61
4:L:167:LYS:O	4:L:170:GLN:N	2.33	0.61
6:N:144:ARG:O	6:N:146:ILE:HD12	2.00	0.61
8:P:44:ILE:HG22	8:P:123:ILE:HB	1.81	0.61
12:T:200:TYR:HB2	12:T:206:TYR:O	2.01	0.61
19:E:237:ILE:C	19:E:237:ILE:HD12	2.19	0.61
26:G:79:LYS:HB2	26:G:79:LYS:HZ3	1.66	0.61
26:G:255:LEU:CD1	26:G:259:TYR:CE2	2.82	0.61
1:A:306:G:OP1	15:W:66:LYS:NZ	2.33	0.61
1:A:471:U:OP2	1:A:481:G:N1	2.28	0.61
1:A:1137:C:H3'	1:A:1138:G:C8	2.35	0.61
1:A:1161:A:O2'	1:A:2041:G:H5'	1.99	0.61
1:A:1197:A:OP1	16:X:165:LYS:HD3	2.00	0.61
1:A:1499:G:O5'	1:A:1499:G:H8	1.83	0.61
1:A:1888:G:H8	1:A:1888:G:O5'	1.83	0.61
1:A:2267:G:O6	7:O:82:ARG:NH2	2.30	0.61
1:A:2331:G:N3	27:H:182:SER:CB	2.64	0.61
2:C:36:A:N3	25:F:274:ARG:NH1	2.49	0.61
2:C:85:U:C2'	2:C:86:A:H5'	2.29	0.61
4:L:159:ASP:O	4:L:192:GLN:NE2	2.22	0.61
6:N:151:ARG:HA	6:N:151:ARG:NH1	2.16	0.61
11:S:91:LEU:HG	12:T:175:PRO:HG3	1.78	0.61
12:T:124:PHE:HB3	12:T:165:GLY:O	2.01	0.61
13:U:165:SER:O	13:U:166:THR:OG1	2.16	0.61
1:A:284:A:H1'	1:A:285:A:P	2.41	0.61
1:A:386:A:H2'	1:A:387:G:O4'	2.01	0.61
1:A:564:U:OP1	11:S:23:SER:HB3	2.01	0.61
1:A:966:G:H2'	1:A:967:C:C6	2.35	0.61
1:A:1829:A:O2'	19:E:173:PRO:O	2.16	0.61
1:A:2672:G:N2	1:A:2682:A:OP2	2.32	0.61
1:A:2711:G:H2'	1:A:2712:U:O4'	2.00	0.61
6:N:153:GLY:O	6:N:154:LEU:HG	2.00	0.61
26:G:57:ILE:HD13	26:G:66:GLY:HA3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:G:255:LEU:CD1	26:G:259:TYR:HE2	2.14	0.61
28:I:98:THR:HG23	28:I:101:ALA:H	1.65	0.61
1:A:3:C:HO2'	1:A:4:A:H5'	1.62	0.61
1:A:624:A:C5	1:A:625:C:C6	2.83	0.61
1:A:932:A:C5'	16:X:85:GLN:NE2	2.62	0.61
1:A:1153:G:C5	1:A:1154:A:N7	2.68	0.61
1:A:1168:U:H4'	1:A:1169:A:O4'	2.00	0.61
1:A:1516:G:N7	1:A:1517:G:H8	1.98	0.61
1:A:2206:A:O2'	1:A:2207:A:H5'	1.99	0.61
1:A:2213:A:C2	1:A:2214:C:C6	2.89	0.61
6:N:209:LYS:HB2	6:N:230:CYS:CB	2.31	0.61
6:N:210:LEU:N	6:N:230:CYS:CB	2.59	0.61
12:T:194:LYS:HG2	12:T:213:ARG:HD3	1.83	0.61
28:I:195:GLU:HB2	28:I:198:LYS:HB3	1.83	0.61
1:A:622:G:H22	1:A:627:C:H3'	1.65	0.61
1:A:920:A:H2	1:A:2294:G:N3	1.98	0.61
1:A:1137:C:H2'	1:A:1138:G:C8	2.36	0.61
1:A:1270:C:N4	6:N:97:ARG:HD3	2.16	0.61
1:A:1501:G:H1'	1:A:1502:A:P	2.41	0.61
1:A:2103:G:C5	1:A:2104:A:N7	2.69	0.61
1:A:2229:U:O4	19:E:64:ARG:NH1	2.33	0.61
1:A:2580:U:H5'	5:M:30:ARG:NH1	2.15	0.61
2:C:75:U:C3'	2:C:76:G:H5'	2.30	0.61
2:C:80:C:O2'	2:C:81:A:H5'	2.01	0.61
3:B:37:U:HO2'	3:B:38:C:H5'	1.65	0.61
5:M:93:PRO:HG3	5:M:113:ILE:HD13	1.82	0.61
6:N:192:ARG:HB3	6:N:195:ARG:HB3	1.83	0.61
15:W:70:LYS:C	15:W:89:ILE:HD11	2.21	0.61
19:E:141:GLU:HB2	19:E:184:CYS:HB3	1.83	0.61
1:A:888:C:H3'	1:A:889:G:H8	1.66	0.61
1:A:1376:G:OP1	19:E:35:CYS:SG	2.57	0.61
1:A:1688:A:H5''	1:A:1689:C:OP2	2.01	0.61
1:A:1885:C:C4	6:N:253:ALA:CB	2.75	0.61
3:B:8:G:H2'	3:B:9:U:C6	2.35	0.61
19:E:257:LYS:HE3	19:E:260:LYS:HD2	1.81	0.61
1:A:260:G:N1	1:A:268:G:N1	2.47	0.61
1:A:370:A:H4'	1:A:371:U:OP1	2.01	0.61
1:A:383:A:HO2'	17:Y:131:LYS:HE3	1.65	0.61
1:A:628:A:O2'	1:A:629:C:H5'	1.99	0.61
1:A:1516:G:H2'	1:A:1517:G:O4'	2.01	0.61
1:A:2074:A:N7	26:G:125:ARG:NH2	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:26:G:C6	2:C:27:U:C4	2.89	0.61
3:B:34:C:H2'	3:B:35:A:C8	2.36	0.61
3:B:86:G:C2'	3:B:87:G:H5'	2.30	0.61
6:N:126:MET:O	6:N:129:PHE:HB3	2.00	0.61
16:X:66:THR:C	16:X:67:LYS:HZ3	2.04	0.61
16:X:134:LYS:HB3	16:X:134:LYS:HZ3	1.63	0.61
18:Z:152:LEU:HD13	18:Z:152:LEU:H	1.64	0.61
1:A:892:C:O2'	1:A:893:C:H5'	2.01	0.61
1:A:1522:A:N6	1:A:1544:A:H1'	2.16	0.61
1:A:1873:G:O2'	1:A:1874:U:H5'	2.01	0.61
2:C:28:U:O2'	2:C:30:A:OP2	2.19	0.61
2:C:31:U:O2'	2:C:32:C:H5'	2.01	0.61
2:C:37:C:H3'	2:C:38:G:H5'	1.83	0.61
2:C:73:G:H2'	2:C:74:C:C6	2.35	0.61
3:B:35:A:H8	3:B:35:A:O5'	1.83	0.61
9:Q:96:ALA:HB2	9:Q:134:LYS:HE3	1.83	0.61
10:R:170:ILE:HB	10:R:182:ARG:HG3	1.82	0.61
12:T:91:ASP:OD2	13:U:142:PHE:HZ	1.83	0.61
15:W:170:THR:HB	15:W:171:PRO:CD	2.30	0.61
1:A:248:G:O2'	1:A:441:A:N3	2.31	0.60
1:A:268:G:N1	1:A:269:G:N1	2.49	0.60
1:A:294:U:H2'	1:A:295:C:N1	2.15	0.60
1:A:887:G:O6	1:A:908:A:N6	2.31	0.60
1:A:1194:G:C6	1:A:1204:A:N1	2.68	0.60
1:A:2647:A:C5	2:C:98:G:C2	2.89	0.60
1:A:2767:A:H5''	1:A:2768:A:H2'	1.81	0.60
2:C:30:A:C6	2:C:83:C:C2	2.89	0.60
2:C:75:U:H2'	2:C:76:G:C5'	2.31	0.60
3:B:87:G:N1	3:B:93:C:C2	2.69	0.60
12:T:128:VAL:HG22	12:T:133:GLN:HG2	1.83	0.60
26:G:86:ARG:HE	26:G:152:MET:HE1	1.66	0.60
1:A:119:A:H1'	1:A:132:G:C2	2.37	0.60
1:A:434:A:N6	1:A:435:A:N6	2.48	0.60
1:A:624:A:N9	1:A:625:C:C5	2.46	0.60
1:A:661:G:C2'	1:A:662:C:H5'	2.32	0.60
1:A:898:G:C5	1:A:899:A:N7	2.69	0.60
1:A:1451:G:N2	1:A:1598:C:O2	2.34	0.60
1:A:2103:G:H2'	1:A:2104:A:C5'	2.31	0.60
1:A:2752:G:C6	25:F:297:ILE:O	2.53	0.60
2:C:80:C:O5'	10:R:121:ASP:OD1	2.19	0.60
3:B:42:C:OP2	3:B:43:C:N4	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:77:LEU:HD11	16:X:97:ARG:HH11	1.59	0.60
26:G:129:GLN:CD	26:G:134:ARG:NH2	2.53	0.60
26:G:251:THR:O	26:G:255:LEU:HB2	2.01	0.60
1:A:671:C:C5'	26:G:150:ILE:HG23	2.28	0.60
1:A:1078:A:H3'	1:A:1079:G:H8	1.66	0.60
1:A:1091:G:O6	1:A:1103:C:N3	2.34	0.60
1:A:1136:U:H2'	1:A:1137:C:H5'	1.84	0.60
1:A:1476:G:O2'	1:A:1477:G:H5'	2.01	0.60
1:A:2288:G:OP1	16:X:76:ARG:CA	2.49	0.60
1:A:2322:A:N1	27:H:204:GLY:HA2	2.11	0.60
1:A:2322:A:N1	27:H:204:GLY:HA3	2.06	0.60
6:N:134:MET:HE3	6:N:138:ARG:HB3	1.82	0.60
1:A:156:G:H8	1:A:156:G:O5'	1.84	0.60
1:A:257:A:C8	1:A:258:C:C4	2.90	0.60
1:A:661:G:O2'	1:A:662:C:H5'	2.00	0.60
1:A:1507:G:N2	1:A:1515:G:P	2.74	0.60
1:A:1521:G:C2	1:A:1544:A:C2	2.89	0.60
1:A:2201:G:H8	1:A:2201:G:O5'	1.85	0.60
1:A:2318:C:H2'	1:A:2319:C:H6	1.63	0.60
3:B:43:C:OP2	27:H:117:ARG:NH2	2.34	0.60
6:N:81:ARG:HH11	26:G:243:GLU:HA	1.65	0.60
6:N:168:ALA:HB1	6:N:184:LYS:HE3	1.84	0.60
10:R:182:ARG:HA	10:R:194:ILE:O	2.01	0.60
26:G:146:ARG:HG3	26:G:148:TRP:CE3	2.36	0.60
1:A:291:G:C2'	1:A:292:C:H5'	2.31	0.60
1:A:322:C:H2'	1:A:323:G:H8	1.66	0.60
1:A:855:C:N3	1:A:856:U:C5	2.70	0.60
1:A:884:G:C2'	1:A:885:G:H5'	2.32	0.60
1:A:1321:A:H4'	1:A:1322:A:H5''	1.84	0.60
1:A:1825:A:H5''	19:E:37:LYS:NZ	2.16	0.60
1:A:2201:G:O2'	1:A:2202:C:H5'	2.01	0.60
1:A:2393:A:N3	9:Q:166:PHE:HE2	2.00	0.60
16:X:128:TYR:HB3	16:X:134:LYS:HB2	1.80	0.60
1:A:133:A:C5	1:A:134:A:C5	2.89	0.60
1:A:434:A:C6	1:A:435:A:N6	2.70	0.60
1:A:495:A:C4	15:W:122:ILE:HD11	2.36	0.60
1:A:2137:G:N2	1:A:2190:A:C5	2.69	0.60
1:A:2330:U:C4'	27:H:90:ASN:ND2	2.63	0.60
2:C:29:U:H1'	2:C:30:A:P	2.41	0.60
6:N:211:GLN:C	6:N:212:ILE:HD12	2.21	0.60
8:P:34:LEU:HB3	8:P:54:MET:HE3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:V:109:LEU:HD11	14:V:141:ARG:HB3	1.82	0.60
14:V:126:LYS:O	14:V:130:ASP:HB2	2.02	0.60
26:G:250:GLY:O	26:G:254:TYR:HB3	2.01	0.60
1:A:276:G:H1	1:A:416:C:HO2'	1.47	0.60
1:A:1175:U:O5'	1:A:1175:U:H6	1.84	0.60
1:A:2464:G:H4'	1:A:2465:A:O5'	2.00	0.60
3:B:36:A:N6	3:B:45:G:C4	2.68	0.60
6:N:165:ILE:HG13	6:N:207:SER:N	2.16	0.60
8:P:18:HIS:HD2	8:P:53:ALA:HB2	1.66	0.60
9:Q:49:ARG:HG3	9:Q:53:ARG:HG3	1.84	0.60
1:A:82:G:N1	1:A:100:G:C4	2.69	0.60
1:A:127:C:H2'	1:A:128:U:C6	2.36	0.60
1:A:579:U:H5''	1:A:832:A:C2	2.37	0.60
1:A:633:A:H2'	1:A:634:G:H5'	1.83	0.60
1:A:893:C:H2'	1:A:894:G:C1'	2.32	0.60
1:A:898:G:N7	1:A:899:A:N7	2.48	0.60
1:A:1428:C:H5	1:A:1631:G:H1	1.47	0.60
1:A:1809:G:C6	19:E:172:LEU:HD13	2.37	0.60
1:A:2212:A:H2'	1:A:2213:A:C8	2.37	0.60
1:A:2288:G:OP1	16:X:75:GLN:O	2.19	0.60
6:N:154:LEU:O	6:N:156:LYS:N	2.34	0.60
13:U:153:THR:C	13:U:157:LEU:HG	2.22	0.60
25:F:174:VAL:O	25:F:176:VAL:N	2.35	0.60
28:I:76:TYR:HD1	28:I:108:PHE:CZ	2.18	0.60
1:A:152:G:N1	1:A:153:G:N7	2.50	0.60
1:A:294:U:C5	1:A:295:C:N3	2.70	0.60
1:A:364:U:H2'	1:A:365:A:C8	2.37	0.60
1:A:614:G:C6	1:A:637:G:N1	2.70	0.60
1:A:2119(A):U:H3	1:A:2199:G:N2	2.00	0.60
1:A:2194:U:OP2	1:A:2195:G:OP2	2.19	0.60
3:B:70:G:H2'	3:B:71:G:H8	1.65	0.60
7:O:91:GLU:OE1	7:O:92:TYR:N	2.31	0.60
18:Z:137:ASP:O	18:Z:141:LYS:HG2	2.00	0.60
29:J:60:LEU:HB2	29:J:67:LEU:HD22	1.81	0.60
1:A:159:A:H4'	1:A:160:A:OP2	2.01	0.60
1:A:161:G:HO2'	1:A:162:A:C5'	2.13	0.60
1:A:899:A:O2'	1:A:900:G:O5'	2.20	0.60
1:A:1164:G:H2'	1:A:1165:G:H5'	1.83	0.60
1:A:1195:U:O2'	1:A:1196:A:O5'	2.20	0.60
1:A:1830:U:C6	19:E:197:ASN:ND2	2.69	0.60
3:B:7:G:N1	3:B:117:A:H2	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:M:32:TYR:OH	5:M:34:ARG:HD3	2.02	0.60
1:A:103:C:O5'	1:A:103:C:H6	1.84	0.59
1:A:163:G:C6	1:A:164:A:C6	2.90	0.59
1:A:2229:U:C5	19:E:64:ARG:NH1	2.70	0.59
1:A:2708:C:O2'	2:C:75:U:O2'	1.85	0.59
2:C:37:C:HO2'	2:C:38:G:P	2.24	0.59
16:X:142:ILE:HG22	16:X:143:GLN:N	2.16	0.59
26:G:208:PHE:HB2	26:G:229:LEU:HB2	1.83	0.59
27:H:73:PHE:HB3	27:H:75:TYR:CE2	2.37	0.59
1:A:48:A:N1	1:A:162:A:C8	2.62	0.59
1:A:570:C:H1'	11:S:52:ARG:CZ	2.32	0.59
1:A:623:A:O2'	1:A:624:A:OP1	2.20	0.59
1:A:702:C:P	19:E:213:ARG:HH12	2.19	0.59
1:A:702:C:O2'	19:E:39:ARG:CD	2.50	0.59
1:A:857:G:N2	1:A:961:G:C2	2.62	0.59
1:A:2115:G:H8	1:A:2115:G:O5'	1.83	0.59
1:A:2224:G:H4'	1:A:2225:G:OP2	2.02	0.59
3:B:8:G:C2	3:B:116:C:C2	2.90	0.59
6:N:102:HIS:CE1	12:T:205:ASN:ND2	2.66	0.59
11:S:91:LEU:CG	12:T:175:PRO:HG3	2.31	0.59
1:A:143:G:C3'	1:A:144:A:H5'	2.31	0.59
1:A:1047:U:H3	1:A:1169:A:H62	1.48	0.59
1:A:1085:A:N1	1:A:1109:U:O4	2.35	0.59
1:A:1567:C:O2	1:A:1572:G:N1	2.35	0.59
1:A:2061:C:H2'	1:A:2062:A:H8	1.65	0.59
1:A:2118:U:O5'	1:A:2118:U:H6	1.85	0.59
1:A:2310:U:H5'	9:Q:143:ARG:NH1	2.17	0.59
15:W:113:SER:HB2	15:W:120:GLY:H	1.67	0.59
26:G:77:PRO:O	26:G:78:GLU:HB3	2.00	0.59
1:A:140:G:H2'	1:A:141:C:C5'	2.31	0.59
1:A:141:C:H2'	1:A:142:U:O4'	2.02	0.59
1:A:362:A:C2	1:A:363:C:N3	2.71	0.59
1:A:504:G:H5'	13:U:37:TYR:CD1	2.37	0.59
1:A:822:U:C3'	6:N:100:ARG:O	2.49	0.59
1:A:836:G:O2'	6:N:133:GLN:HG2	2.01	0.59
1:A:840:A:N7	1:A:2265:A:H5'	2.17	0.59
1:A:868:G:N2	1:A:929:A:N1	2.51	0.59
1:A:1136:U:H6	1:A:1136:U:O5'	1.86	0.59
1:A:2075:G:P	26:G:119:LYS:HE2	2.43	0.59
6:N:202:GLY:CA	6:N:221:ALA:CB	2.58	0.59
12:T:97:GLU:O	12:T:97:GLU:HG2	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:U:149:LEU:H	13:U:149:LEU:CD2	2.06	0.59
1:A:140:G:C4	1:A:155:A:C2	2.91	0.59
1:A:279:A:C8	1:A:379:C:C5	2.91	0.59
1:A:293:G:N1	1:A:294:U:O4	2.34	0.59
1:A:354:A:H8	1:A:354:A:O5'	1.86	0.59
1:A:897:A:N3	1:A:897:A:H2'	2.17	0.59
1:A:920:A:C8	7:O:9:PHE:CE2	2.91	0.59
1:A:1179:C:H2'	1:A:1180:C:H6	1.66	0.59
1:A:1448:A:H4'	1:A:1449:C:O4'	2.02	0.59
1:A:1522:A:N3	1:A:1523:A:N7	2.50	0.59
1:A:1745:C:H2'	1:A:1746:C:H6	1.64	0.59
1:A:2713:U:O4	1:A:2714:A:N6	2.36	0.59
2:C:41:A:H61	2:C:86:A:N6	2.00	0.59
2:C:84:C:H2'	2:C:85:U:C6	2.37	0.59
3:B:14:U:O2'	3:B:15:A:OP1	2.21	0.59
14:V:167:ARG:CG	14:V:168:PRO:HD2	2.33	0.59
28:I:134:TYR:HD1	28:I:147:LEU:HA	1.68	0.59
1:A:43:A:H8	1:A:43:A:OP2	1.84	0.59
1:A:685:G:OP1	26:G:105:ARG:NH2	2.33	0.59
1:A:1237:C:OP1	11:S:11:ARG:NH2	2.35	0.59
1:A:2049:G:H5'	1:A:2050:C:C5	2.31	0.59
1:A:2761:U:OP2	1:A:2773:C:N4	2.35	0.59
2:C:52:G:N2	2:C:71:C:O2'	2.34	0.59
14:V:109:LEU:O	14:V:110:ASP:HB3	2.02	0.59
15:W:113:SER:CB	15:W:120:GLY:H	2.16	0.59
19:E:265:PHE:CE1	19:E:266:ILE:CD1	2.85	0.59
26:G:204:LYS:HA	26:G:225:THR:O	2.02	0.59
1:A:82:G:C6	1:A:100:G:C5	2.91	0.59
1:A:255:A:P	1:A:271:G:H22	2.21	0.59
1:A:355:A:H8	1:A:356:A:O4'	1.85	0.59
1:A:820:G:C5	1:A:821:U:C4	2.91	0.59
1:A:952:A:O5'	1:A:952:A:H8	1.86	0.59
1:A:1750:C:H6	1:A:1750:C:O5'	1.85	0.59
2:C:37:C:O2'	2:C:38:G:OP1	2.17	0.59
5:M:20:MET:O	5:M:41:ALA:HA	2.03	0.59
6:N:156:LYS:CE	6:N:215:ARG:HH11	2.16	0.59
1:A:6:A:C2'	1:A:7:C:H5'	2.32	0.59
1:A:1192:A:H2'	1:A:1193:U:C6	2.37	0.59
1:A:1426:U:H2'	1:A:1427:A:C8	2.36	0.59
1:A:1497:A:N6	1:A:1547:C:H42	2.01	0.59
1:A:2230:A:C2	1:A:2231:C:N4	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:97:ARG:HH11	6:N:100:ARG:HE	1.49	0.59
6:N:162:LEU:CG	6:N:203:GLU:OE1	2.50	0.59
13:U:151:SER:C	13:U:152:LEU:HD23	2.23	0.59
14:V:109:LEU:HD11	14:V:141:ARG:HB2	1.84	0.59
19:E:39:ARG:HE	19:E:45:ILE:HD11	1.68	0.59
19:E:239:ARG:HH21	19:E:243:THR:HG21	1.68	0.59
26:G:254:TYR:OH	26:G:258:ARG:NH1	2.36	0.59
27:H:150:TYR:O	27:H:154:ASP:HB2	2.03	0.59
1:A:362:A:C2	1:A:363:C:C2	2.90	0.59
1:A:823:C:C2	1:A:1271:G:C2	2.91	0.59
1:A:1361:U:OP1	14:V:175:TYR:OH	2.21	0.59
1:A:1450:G:H2'	1:A:1451:G:C8	2.38	0.59
1:A:1689:C:H41	8:P:19:ARG:CD	2.15	0.59
1:A:2744:A:O2'	1:A:2745:G:OP1	2.21	0.59
2:C:79:G:O2'	10:R:121:ASP:OD1	2.21	0.59
3:B:66:C:N4	3:B:110:C:C2	2.71	0.59
11:S:105:PRO:O	11:S:108:ILE:HG22	2.03	0.59
14:V:102:LEU:HB3	18:Z:142:ARG:NH2	2.18	0.59
19:E:85:ALA:HB2	19:E:154:ALA:HA	1.85	0.59
25:F:86:VAL:N	25:F:172:ARG:HH11	2.00	0.59
25:F:180:THR:H	25:F:184:LYS:HD2	1.68	0.59
29:J:57:ILE:HG21	29:J:60:LEU:HG	1.85	0.59
1:A:294:U:C6	1:A:295:C:N3	2.71	0.59
1:A:1088:U:C4	1:A:1116:A:N7	2.71	0.59
1:A:1516:G:H3'	1:A:1517:G:C5'	2.24	0.59
1:A:1885:C:H41	6:N:253:ALA:CB	2.10	0.59
2:C:36:A:O2'	2:C:37:C:OP1	2.20	0.59
3:B:25:G:C4	3:B:57:U:C4	2.91	0.59
3:B:67:U:C4	3:B:109:U:H5	2.19	0.59
11:S:28:HIS:HD2	11:S:38:GLN:CD	2.05	0.59
13:U:154:PRO:HA	13:U:157:LEU:CD1	2.32	0.59
16:X:67:LYS:HZ2	16:X:67:LYS:CA	2.13	0.59
16:X:128:TYR:HE2	16:X:132:LYS:HG2	1.64	0.59
28:I:48:ILE:CG1	28:I:90:LEU:C	2.70	0.59
1:A:46:C:H2'	1:A:47:G:C5'	2.25	0.58
1:A:75:C:P	18:Z:110:LYS:NZ	2.70	0.58
1:A:288:C:H2'	1:A:289:A:H5'	1.84	0.58
1:A:887:G:H22	1:A:909:A:N6	2.00	0.58
1:A:1430:C:H2'	1:A:1431:C:H6	1.68	0.58
1:A:1830:U:H4'	1:A:1831:G:N7	2.17	0.58
1:A:2565:G:H4'	5:M:31:ARG:NH2	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:94:A:H1'	18:Z:102:PRO:HB2	1.85	0.58
1:A:291:G:C2	1:A:292:C:C2	2.92	0.58
1:A:332:G:O2'	26:G:224:ARG:NH2	2.36	0.58
1:A:371:U:H4'	1:A:372:G:OP1	2.01	0.58
1:A:548:G:O2'	1:A:549:A:O5'	2.15	0.58
1:A:552:G:O5'	1:A:552:G:H8	1.86	0.58
1:A:644:A:OP1	6:N:151:ARG:HA	2.02	0.58
1:A:881:U:H4'	7:O:69:PHE:CD2	2.38	0.58
1:A:983:G:C2	7:O:82:ARG:NH1	2.64	0.58
1:A:2228:C:O5'	1:A:2228:C:H6	1.85	0.58
1:A:2345:A:H2'	1:A:2346:A:H8	1.68	0.58
1:A:2647:A:N6	1:A:2806:U:N3	2.31	0.58
6:N:225:LEU:HD23	6:N:232:VAL:CG2	2.33	0.58
16:X:144:PRO:O	16:X:146:ASN:ND2	2.36	0.58
25:F:121:ASN:ND2	25:F:141:TYR:CD1	2.71	0.58
28:I:44:GLY:CA	28:I:105:HIS:ND1	2.66	0.58
28:I:48:ILE:HB	28:I:90:LEU:H	1.67	0.58
1:A:235:G:O6	1:A:398:G:N2	2.34	0.58
1:A:322:C:H2'	1:A:323:G:C8	2.39	0.58
1:A:332:G:H21	1:A:342:G:H1'	1.67	0.58
1:A:379:C:H4'	1:A:380:C:OP1	2.02	0.58
1:A:902:G:H3'	1:A:903:G:C5'	2.33	0.58
1:A:1573:C:H2'	1:A:1574:G:C8	2.33	0.58
1:A:1584:C:H2'	1:A:1585:C:C6	2.38	0.58
1:A:2196:G:O5'	1:A:2196:G:H8	1.84	0.58
2:C:84:C:H1'	8:P:102:GLY:O	2.03	0.58
1:A:159:A:C1'	1:A:160:A:OP1	2.48	0.58
1:A:299:C:H2'	1:A:300:U:H5'	1.86	0.58
1:A:1515:G:P	1:A:1515:G:C8	2.96	0.58
3:B:36:A:C5	3:B:45:G:C6	2.92	0.58
6:N:197:PRO:O	6:N:198:LEU:HB3	2.02	0.58
1:A:3:C:O5'	1:A:3:C:H6	1.86	0.58
1:A:636:C:C2	1:A:637:G:N7	2.72	0.58
1:A:899:A:N3	1:A:900:G:C8	2.72	0.58
1:A:2108:G:N7	1:A:2210:C:N3	2.52	0.58
1:A:2125:C:O2	1:A:2161:G:N2	2.37	0.58
1:A:2190:A:H2'	1:A:2191:C:H1'	1.85	0.58
1:A:2325:G:H2'	1:A:2325:G:N3	2.18	0.58
1:A:2559:A:H4'	1:A:2560:G:H5'	1.85	0.58
4:L:122:LEU:HD22	4:L:246:ILE:HG22	1.86	0.58
12:T:181:ALA:O	12:T:225:THR:HG22	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:V:111:VAL:HG23	18:Z:146:VAL:HG22	1.84	0.58
19:E:40:ASN:ND2	19:E:43:GLY:O	2.36	0.58
19:E:113:VAL:O	19:E:124:ASN:HB2	2.03	0.58
1:A:71:A:O4'	18:Z:116:LEU:HD12	2.03	0.58
1:A:79:G:O2'	1:A:355:A:H2	1.77	0.58
1:A:110:U:OP2	18:Z:130:LYS:HE2	2.04	0.58
1:A:140:G:O6	1:A:155:A:N6	2.37	0.58
1:A:274:G:C5	1:A:433:C:H5''	2.39	0.58
1:A:283:C:O2'	1:A:284:A:H5'	2.02	0.58
1:A:890:G:C2	1:A:891:G:C5	2.91	0.58
1:A:1507:G:H21	1:A:1515:G:P	2.26	0.58
1:A:1519:A:N1	1:A:1520:A:C5	2.71	0.58
1:A:1751:A:N3	1:A:1751:A:H2'	2.17	0.58
1:A:2137:G:N2	1:A:2190:A:N1	2.51	0.58
1:A:2219:U:H1'	19:E:64:ARG:NH2	2.19	0.58
1:A:2351:G:C1'	9:Q:64:VAL:HG21	2.30	0.58
3:B:89:A:C6	3:B:90:G:C5	2.92	0.58
5:M:61:VAL:O	5:M:84:ALA:HA	2.03	0.58
6:N:97:ARG:NH1	6:N:100:ARG:HD2	2.19	0.58
6:N:158:VAL:HG11	6:N:201:LEU:CG	2.31	0.58
6:N:167:VAL:HG12	6:N:168:ALA:N	2.19	0.58
17:Y:87:ARG:HB3	17:Y:97:ARG:NE	2.16	0.58
26:G:75:ALA:HB2	26:G:159:LEU:CD2	2.29	0.58
27:H:87:ILE:HD11	27:H:144:LEU:HD11	1.84	0.58
29:J:76:ASN:HA	29:J:80:PRO:HG2	1.86	0.58
1:A:101:A:H2'	1:A:102:U:H5'	1.86	0.58
1:A:1088:U:O4	1:A:1116:A:N7	2.37	0.58
1:A:1174:G:H2'	1:A:1175:U:C6	2.38	0.58
1:A:1551:G:C2'	1:A:1552:U:H5'	2.33	0.58
1:A:2211:U:C5	1:A:2241:G:O6	2.51	0.58
1:A:2223:A:C2'	1:A:2224:G:C8	2.87	0.58
27:H:172:PRO:HG3	27:H:220:TYR:CZ	2.38	0.58
1:A:49:G:O2'	18:Z:130:LYS:CE	2.51	0.58
1:A:318:A:C5	1:A:339:A:C6	2.92	0.58
1:A:373:C:O2'	1:A:374:U:O4'	2.15	0.58
1:A:389:A:C5	1:A:390:U:C4	2.92	0.58
1:A:740:G:C5	19:E:203:ARG:O	2.57	0.58
1:A:885:G:O2'	1:A:886:U:H5'	2.02	0.58
1:A:1500:U:OP2	1:A:1501:G:H5''	2.04	0.58
1:A:2752:G:H8	1:A:2753:C:H4'	1.68	0.58
3:B:8:G:N1	3:B:116:C:N3	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:80:PHE:CD1	6:N:85:LEU:HD21	2.38	0.58
13:U:74:TYR:HB3	13:U:75:PRO:HD3	1.85	0.58
26:G:206:LEU:HD11	26:G:229:LEU:CD1	2.33	0.58
26:G:207:PHE:HA	26:G:246:VAL:HG22	1.85	0.58
1:A:32:U:O2'	1:A:33:A:N3	2.33	0.58
1:A:137:U:N3	1:A:157:G:C2	2.63	0.58
1:A:139:U:H2'	1:A:140:G:H8	1.68	0.58
1:A:266:A:H2'	1:A:267:C:C5	2.38	0.58
1:A:381:C:HO2'	1:A:416:C:H41	1.50	0.58
1:A:986:U:O4	7:O:17:MET:HE3	2.04	0.58
1:A:1069:U:O2	1:A:1142:G:O6	2.22	0.58
1:A:2200:A:H2'	1:A:2200:A:N3	2.17	0.58
1:A:2207:A:O3'	1:A:2208:U:O4'	2.22	0.58
1:A:2237:A:H2'	1:A:2238:A:H5'	1.84	0.58
1:A:2317:G:N1	1:A:2333:C:O2	2.34	0.58
14:V:113:GLN:O	14:V:113:GLN:HG2	2.04	0.58
19:E:161:ILE:HB	19:E:169:THR:O	2.04	0.58
25:F:115:ILE:HB	25:F:276:VAL:HB	1.86	0.58
27:H:147:ASN:HA	27:H:150:TYR:HD2	1.68	0.58
1:A:71:A:C2	18:Z:117:THR:CG2	2.87	0.58
1:A:128:U:H2'	1:A:129:U:O4'	2.03	0.58
1:A:133:A:C2'	1:A:134:A:C8	2.86	0.58
1:A:269:G:H8	1:A:269:G:O5'	1.86	0.58
1:A:611:C:O2'	1:A:612:U:H5'	2.04	0.58
1:A:1334:U:O2'	1:A:1335:C:OP1	2.21	0.58
1:A:1502:A:H2'	1:A:1502:A:N3	2.19	0.58
1:A:2340:G:O5'	1:A:2340:G:H8	1.86	0.58
1:A:2643:C:H2'	1:A:2644:G:C8	2.39	0.58
1:A:2763:C:O2'	28:I:182:GLY:HA3	2.03	0.58
3:B:11:U:O5'	3:B:11:U:H6	1.86	0.58
3:B:89:A:H8	3:B:89:A:O5'	1.87	0.58
3:B:92:U:O2'	3:B:93:C:H5'	2.04	0.58
4:L:155:VAL:HG11	4:L:200:ILE:HD13	1.86	0.58
25:F:159:LYS:HD3	25:F:159:LYS:C	2.24	0.58
25:F:199:ILE:HG12	25:F:261:ILE:HG22	1.85	0.58
1:A:19:U:H2'	1:A:20:A:H8	1.68	0.57
1:A:47:G:N1	1:A:162:A:OP2	2.37	0.57
1:A:267:C:O2'	1:A:268:G:H5'	2.04	0.57
1:A:554:G:H5''	1:A:554:G:N3	2.19	0.57
1:A:1056:A:H2'	1:A:1057:A:C8	2.39	0.57
1:A:1078:A:H3'	1:A:1079:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1087:G:H1	1:A:1107:C:H42	1.51	0.57
1:A:1472:A:N7	1:A:1479:U:O4	2.37	0.57
1:A:1519:A:C2	1:A:1520:A:C8	2.91	0.57
1:A:1623:A:H2'	1:A:1624:C:C6	2.39	0.57
1:A:2129:G:O2'	1:A:2131:U:C5	2.55	0.57
1:A:2192:U:H4'	1:A:2193:C:OP1	2.04	0.57
1:A:2647:A:O4'	2:C:98:G:H1'	2.03	0.57
1:A:2662:C:H4'	1:A:2750:G:H2'	1.86	0.57
2:C:32:C:H1'	2:C:33:A:P	2.44	0.57
2:C:38:G:OP2	25:F:144:LEU:CD2	2.46	0.57
12:T:143:TYR:HD1	12:T:216:ILE:HD12	1.69	0.57
1:A:158:C:H41	1:A:159:A:N6	2.01	0.57
1:A:823:C:C2	1:A:1271:G:N1	2.72	0.57
1:A:1159:G:O6	1:A:2038:U:O2'	2.22	0.57
1:A:1236:A:N6	1:A:1253:G:C6	2.69	0.57
1:A:1361:U:O4	14:V:168:PRO:CD	2.52	0.57
1:A:1810:C:H5'	19:E:142:ILE:CD1	2.34	0.57
1:A:2219:U:C6	1:A:2220:G:H5'	2.39	0.57
5:M:65:THR:HA	5:M:82:ASN:HD22	1.68	0.57
6:N:162:LEU:O	6:N:166:GLU:HG2	2.05	0.57
25:F:200:SER:HB2	25:F:291:ARG:HB2	1.84	0.57
1:A:137:U:H3	1:A:157:G:H1	0.62	0.57
1:A:143:G:H2'	1:A:144:A:C5'	2.27	0.57
1:A:150:U:H3'	1:A:151:G:C8	2.39	0.57
1:A:554:G:OP1	1:A:554:G:H4'	2.03	0.57
1:A:1267:A:H2'	1:A:1268:A:O4'	2.03	0.57
1:A:1809:G:N2	1:A:1828:U:O2'	2.37	0.57
1:A:2151:G:C5	1:A:2152:C:C5	2.92	0.57
1:A:2206:A:H2'	1:A:2207:A:H8	1.62	0.57
9:Q:77:ARG:HG2	9:Q:146:TYR:CE2	2.39	0.57
18:Z:118:VAL:HG11	18:Z:122:ARG:NH2	2.18	0.57
1:A:143:G:H1'	1:A:2224:G:H1'	1.86	0.57
1:A:320:U:H1'	1:A:341:A:C8	2.39	0.57
1:A:822:U:C6	1:A:1272:A:C4	2.92	0.57
1:A:830:A:OP2	1:A:1208:G:N2	2.23	0.57
1:A:864:U:H2'	1:A:865:A:H8	1.70	0.57
1:A:920:A:N7	7:O:9:PHE:CD2	2.72	0.57
1:A:938:G:C2'	1:A:939:A:H5'	2.34	0.57
1:A:1233:G:O2'	1:A:1258:A:N1	2.37	0.57
1:A:1516:G:H2'	1:A:1517:G:C4'	2.34	0.57
1:A:1553:U:H2'	1:A:1554:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1853:C:OP1	19:E:253:ARG:NH1	2.38	0.57
1:A:2344:A:H2'	1:A:2345:A:C8	2.39	0.57
1:A:2351:G:H4'	9:Q:57:HIS:NE2	2.19	0.57
2:C:74:C:H4'	8:P:75:GLN:HE22	1.69	0.57
3:B:34:C:N3	3:B:52:G:C2	2.72	0.57
15:W:67:ARG:HD3	15:W:131:SER:HB3	1.87	0.57
26:G:129:GLN:CG	26:G:134:ARG:NH2	2.67	0.57
1:A:130:U:H5''	1:A:130:U:O2	2.04	0.57
1:A:274:G:O6	1:A:433:C:H6	1.62	0.57
1:A:336:G:H2'	1:A:337:U:H5'	1.85	0.57
1:A:893:C:H2'	1:A:894:G:H1'	1.86	0.57
1:A:1017:G:O2'	1:A:1018:A:O5'	2.21	0.57
1:A:1830:U:C2	19:E:197:ASN:CG	2.78	0.57
1:A:2475:G:H1'	1:A:2476:A:N7	2.19	0.57
4:L:118:ASP:OD1	4:L:157:ASN:ND2	2.35	0.57
10:R:159:LYS:H	10:R:161:ARG:NH1	2.02	0.57
16:X:75:GLN:CD	16:X:76:ARG:H	2.08	0.57
1:A:42:G:O6	1:A:43:A:N6	2.38	0.57
1:A:912:C:C2	1:A:913:G:N7	2.72	0.57
1:A:1291:C:H5''	1:A:1292:G:H5'	1.87	0.57
1:A:1529:A:C6	1:A:1537:U:N3	2.69	0.57
1:A:1533:A:H2'	1:A:1534:A:C4	2.39	0.57
1:A:1545:G:H2'	1:A:1546:C:C6	2.33	0.57
1:A:2328:A:O4'	27:H:127:ILE:HD12	1.98	0.57
2:C:72:A:H2'	2:C:73:G:C5'	2.32	0.57
3:B:88:G:N2	3:B:92:U:C2	2.73	0.57
6:N:82:LEU:CD2	26:G:240:LEU:CD2	2.81	0.57
28:I:127:LEU:HB2	28:I:171:VAL:HB	1.85	0.57
1:A:47:G:C2	1:A:162:A:OP2	2.58	0.57
1:A:297:U:O5'	1:A:297:U:H6	1.87	0.57
1:A:302:C:C2'	1:A:303:U:H5'	2.35	0.57
1:A:308:G:N2	1:A:350:G:O6	2.38	0.57
1:A:611:C:H2'	1:A:612:U:C6	2.40	0.57
1:A:622:G:H1'	1:A:628:A:N6	2.16	0.57
1:A:671:C:C2'	1:A:672:U:H5'	2.33	0.57
1:A:1495:C:C5	1:A:1548:A:N6	2.73	0.57
1:A:1754:A:N7	1:A:1755:A:C5	2.72	0.57
1:A:2201:G:C2	1:A:2202:C:C4	2.93	0.57
1:A:2205:G:C6	1:A:2206:A:N6	2.73	0.57
1:A:2223:A:H2'	1:A:2224:G:N7	2.20	0.57
3:B:52:G:OP1	9:Q:112:SER:OG	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:89:A:N6	3:B:90:G:C6	2.73	0.57
6:N:205:GLU:OE2	6:N:224:LYS:CD	2.50	0.57
11:S:91:LEU:HD21	12:T:175:PRO:HG3	1.85	0.57
12:T:228:GLU:O	12:T:231:PRO:HD3	2.04	0.57
1:A:291:G:N2	1:A:292:C:C2	2.73	0.57
1:A:612:U:H2'	1:A:613:U:H5''	1.86	0.57
1:A:629:C:OP1	26:G:158:ARG:CZ	2.52	0.57
1:A:1497:A:H61	1:A:1547:C:H42	1.52	0.57
1:A:1882:U:C6	1:A:1883:G:N7	2.73	0.57
1:A:2150:G:C2	1:A:2151:G:C2	2.93	0.57
1:A:2215:C:H2'	1:A:2216:U:C6	2.40	0.57
1:A:2642:G:H2'	1:A:2643:C:C6	2.40	0.57
2:C:75:U:H3'	2:C:76:G:C5'	2.33	0.57
3:B:39:C:H42	3:B:45:G:H1	1.46	0.57
3:B:91:G:O5'	3:B:91:G:H8	1.88	0.57
19:E:83:ARG:HG3	19:E:84:ASN:H	1.68	0.57
19:E:116:THR:HA	19:E:127:PRO:HD2	1.86	0.57
1:A:71:A:C8	18:Z:116:LEU:CD1	2.88	0.57
1:A:589:G:H2'	1:A:590:C:C6	2.40	0.57
1:A:860:C:H6	1:A:860:C:O5'	1.88	0.57
1:A:874:G:H2'	1:A:875:C:C6	2.40	0.57
1:A:964:C:C4	1:A:965:G:N7	2.73	0.57
1:A:1540:C:O2'	1:A:1541:U:H5'	2.04	0.57
1:A:2214:C:H2'	1:A:2215:C:C6	2.39	0.57
1:A:2475:G:OP2	1:A:2475:G:N2	2.36	0.57
2:C:33:A:H1'	2:C:34:U:P	2.45	0.57
2:C:79:G:HO2'	10:R:121:ASP:CG	2.07	0.57
3:B:69:C:C5	3:B:70:G:N7	2.73	0.57
6:N:201:LEU:C	6:N:221:ALA:CB	2.73	0.57
18:Z:72:THR:OG1	18:Z:75:GLN:OE1	2.22	0.57
18:Z:150:PRO:O	18:Z:152:LEU:HD12	2.05	0.57
26:G:206:LEU:O	26:G:245:LEU:HA	2.05	0.57
27:H:120:LYS:HB2	27:H:137:THR:HG21	1.87	0.57
1:A:410:G:C2	1:A:411:U:N3	2.72	0.57
1:A:899:A:H1'	1:A:900:G:P	2.44	0.57
1:A:899:A:HO2'	1:A:900:G:C5'	2.18	0.57
1:A:934:A:H1'	1:A:935:U:P	2.45	0.57
1:A:949:A:N6	1:A:950:A:C2	2.73	0.57
1:A:951:C:C4	1:A:952:A:N6	2.73	0.57
1:A:1531:A:H4'	1:A:1532:G:OP1	2.05	0.57
1:A:1650:A:P	1:A:1650:A:C8	2.94	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2078:C:O2'	1:A:2268:G:N2	2.37	0.57
2:C:104:A:C2	2:C:105:A:N7	2.73	0.57
3:B:43:C:H2'	3:B:44:C:H6	1.70	0.57
6:N:175:GLU:HA	6:N:175:GLU:OE2	2.05	0.57
6:N:237:GLY:O	6:N:238:ARG:HG3	2.05	0.57
12:T:123:ILE:HG12	12:T:224:ILE:HD12	1.87	0.57
17:Y:126:LEU:O	17:Y:129:ILE:HG13	2.05	0.57
18:Z:120:ARG:HH11	18:Z:120:ARG:HG2	1.68	0.57
19:E:75:VAL:O	19:E:76:THR:OG1	2.21	0.57
19:E:237:ILE:CD1	19:E:239:ARG:H	2.18	0.57
1:A:253:C:N3	1:A:437:G:N1	2.52	0.56
1:A:257:A:C8	1:A:258:C:N4	2.73	0.56
1:A:882:U:C4	1:A:883:C:N4	2.73	0.56
1:A:897:A:H8	1:A:897:A:OP2	1.88	0.56
1:A:1622:A:H2'	1:A:1623:A:C8	2.40	0.56
1:A:2107:G:N2	1:A:2108:G:C5	2.73	0.56
1:A:2119(A):U:OP1	1:A:2119(A):U:H4'	2.05	0.56
1:A:2137:G:C2	1:A:2190:A:N1	2.73	0.56
1:A:2215:C:HO2'	1:A:2216:U:H5'	1.70	0.56
1:A:2261:U:O2'	1:A:2262:U:OP1	2.23	0.56
3:B:38:C:C5	3:B:39:C:C2	2.93	0.56
26:G:93:GLN:NE2	26:G:150:ILE:HD11	2.20	0.56
1:A:356:A:O2'	1:A:357:G:H5'	2.05	0.56
1:A:389:A:C2	1:A:390:U:C2	2.92	0.56
1:A:668:U:H2'	1:A:669:C:C5	2.39	0.56
1:A:725:U:O2'	1:A:727:A:N7	2.34	0.56
1:A:822:U:H5	1:A:1272:A:C6	2.23	0.56
1:A:910:A:H8	1:A:910:A:O5'	1.88	0.56
1:A:1307:A:C6	1:A:1350:U:C4	2.93	0.56
1:A:2231:C:H3'	1:A:2232:G:C8	2.40	0.56
3:B:6:U:O5'	3:B:6:U:H6	1.88	0.56
5:M:53:GLU:OE1	5:M:53:GLU:N	2.38	0.56
11:S:111:ILE:HD13	12:T:172:ILE:HG12	1.85	0.56
12:T:181:ALA:HB3	12:T:225:THR:HG22	1.85	0.56
1:A:60:U:HO2'	18:Z:94:ARG:NH1	2.00	0.56
1:A:81:G:O2'	1:A:82:G:OP1	2.20	0.56
1:A:151:G:N3	1:A:152:G:C8	2.73	0.56
1:A:274:G:N3	1:A:433:C:H5	2.00	0.56
1:A:332:G:H5'	1:A:333:A:OP1	2.06	0.56
1:A:431:U:C2'	1:A:432:G:H5'	2.35	0.56
1:A:489:A:H2'	1:A:490:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:627:C:H4'	1:A:628:A:OP1	2.05	0.56
1:A:840:A:N7	1:A:2264:U:O2'	2.38	0.56
1:A:887:G:H2'	1:A:888:C:C6	2.40	0.56
1:A:911:U:H2'	1:A:912:C:H6	1.65	0.56
1:A:1002:G:C5'	12:T:201:LYS:HZ3	2.09	0.56
1:A:1134:G:H8	1:A:1134:G:O5'	1.88	0.56
1:A:1394:A:H5'	1:A:2230:A:C2'	2.35	0.56
1:A:1481:U:C4	1:A:1482:C:N4	2.73	0.56
1:A:1524:G:N2	1:A:1525:G:C2	2.74	0.56
1:A:2107:G:N7	1:A:2242:A:C8	2.73	0.56
1:A:2194:U:P	1:A:2195:G:OP2	2.63	0.56
1:A:2215:C:N3	1:A:2240:G:C2	2.73	0.56
1:A:2224:G:C5'	1:A:2225:G:H5''	2.34	0.56
1:A:2338:G:N2	1:A:2339:A:C8	2.73	0.56
1:A:2563:U:O2'	1:A:2583:A:O2'	2.19	0.56
1:A:2645:U:H3'	1:A:2646:U:C5'	2.36	0.56
2:C:32:C:O2'	2:C:33:A:O5'	2.22	0.56
3:B:4:U:C5	3:B:5:C:N4	2.73	0.56
6:N:144:ARG:N	6:N:146:ILE:HD11	2.20	0.56
9:Q:138:LYS:HA	9:Q:165:VAL:O	2.06	0.56
12:T:172:ILE:HD12	12:T:172:ILE:N	2.20	0.56
14:V:144:LYS:NZ	14:V:162:VAL:O	2.36	0.56
16:X:127:LYS:HB3	16:X:129:GLY:O	2.05	0.56
26:G:255:LEU:HD12	26:G:259:TYR:CD2	2.40	0.56
28:I:82:VAL:HA	28:I:92:VAL:HA	1.87	0.56
1:A:668:U:C4	1:A:669:C:N4	2.73	0.56
1:A:1238:G:H2'	1:A:1239:C:H5	1.69	0.56
1:A:2227:C:C6	1:A:2228:C:C5	2.94	0.56
4:L:239:LEU:HD22	4:L:240:PRO:HD2	1.88	0.56
10:R:138:ARG:NH1	10:R:199:TYR:HA	2.20	0.56
12:T:116:PRO:N	12:T:117:PRO:HD3	2.21	0.56
16:X:125:PHE:CD1	16:X:135:VAL:HG22	2.41	0.56
16:X:163:GLU:HA	16:X:163:GLU:OE1	2.06	0.56
28:I:132:VAL:O	28:I:134:TYR:N	2.29	0.56
1:A:120:G:H2'	1:A:121:G:C8	2.41	0.56
1:A:151:G:H2'	1:A:152:G:C8	2.29	0.56
1:A:165:C:H5''	1:A:166:A:OP1	2.05	0.56
1:A:219:U:H5	1:A:442:A:N1	2.04	0.56
1:A:289:A:H2	1:A:369:U:H1'	1.70	0.56
1:A:823:C:O2	1:A:1271:G:C2	2.58	0.56
1:A:1501:G:C1'	1:A:1502:A:P	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1504:C:C4	1:A:1505:C:N4	2.73	0.56
1:A:1754:A:N7	1:A:1755:A:C8	2.70	0.56
1:A:1873:G:C2'	1:A:1874:U:H5'	2.36	0.56
1:A:2608:C:H2'	1:A:2609:G:H8	1.68	0.56
3:B:14:U:H5'	3:B:15:A:N7	2.21	0.56
3:B:41:U:O2'	3:B:46:A:N1	2.39	0.56
4:L:152:PHE:HE1	4:L:220:HIS:CD2	2.23	0.56
6:N:84:ASN:HD22	6:N:85:LEU:H	1.53	0.56
6:N:97:ARG:HH11	6:N:100:ARG:NE	2.04	0.56
6:N:129:PHE:CE2	6:N:131:GLY:CA	2.85	0.56
6:N:210:LEU:O	6:N:230:CYS:HB2	2.05	0.56
15:W:65:HIS:O	15:W:66:LYS:HB2	2.04	0.56
19:E:176:GLU:CG	19:E:267:ILE:O	2.53	0.56
19:E:258:ARG:HA	19:E:258:ARG:NE	2.20	0.56
26:G:95:LYS:O	26:G:96:ARG:O	2.23	0.56
1:A:166:A:OP2	1:A:167:A:OP2	2.24	0.56
1:A:288:C:H2'	1:A:289:A:C8	2.37	0.56
1:A:548:G:O2'	1:A:549:A:H8	1.88	0.56
1:A:609:G:OP1	26:G:79:LYS:HE3	2.05	0.56
1:A:1064:A:H3'	1:A:1065:G:H5''	1.86	0.56
1:A:1353:A:H2	1:A:1645:A:HO2'	1.53	0.56
1:A:1475:U:C2'	8:P:70:LEU:HD13	2.35	0.56
1:A:2201:G:C2	1:A:2202:C:N4	2.73	0.56
1:A:2318:C:H2'	1:A:2319:C:C5	2.41	0.56
8:P:35:THR:HG21	8:P:79:PHE:HE2	1.70	0.56
12:T:128:VAL:O	12:T:129:ILE:HD13	2.05	0.56
15:W:143:VAL:HG21	15:W:163:LYS:HZ3	1.70	0.56
1:A:614:G:N1	1:A:637:G:C6	2.73	0.56
1:A:669:C:HO2'	1:A:670:A:H5'	1.71	0.56
1:A:859:A:C6	1:A:860:C:C4	2.94	0.56
1:A:986:U:O4	7:O:17:MET:CE	2.54	0.56
1:A:988:A:N6	7:O:82:ARG:NH1	2.53	0.56
1:A:1079:G:C6	1:A:1080:C:N4	2.73	0.56
1:A:1522:A:C4	1:A:1523:A:N7	2.74	0.56
1:A:1649:G:H3'	1:A:1650:A:C5'	2.35	0.56
1:A:2109:C:C4	1:A:2110:U:C4	2.93	0.56
3:B:118:G:H4'	3:B:119:G:OP1	2.04	0.56
4:L:100:TRP:CE3	4:L:101:TYR:CB	2.86	0.56
4:L:115:TYR:HB3	4:L:239:LEU:HB2	1.88	0.56
4:L:171:LYS:NZ	4:L:173:TYR:CZ	2.73	0.56
6:N:165:ILE:CD1	6:N:207:SER:OG	2.51	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:T:91:ASP:HB2	13:U:142:PHE:CE1	2.41	0.56
12:T:154:ASP:HB3	12:T:186:VAL:HB	1.88	0.56
1:A:151:G:C2'	1:A:152:G:H5'	2.36	0.56
1:A:1287:G:HO2'	1:A:1288:U:P	2.29	0.56
1:A:1336:C:H2'	1:A:1337:U:H6	1.71	0.56
1:A:1542:C:H4'	1:A:1543:G:H5'	1.88	0.56
1:A:2212:A:N3	29:J:76:ASN:HB2	2.20	0.56
2:C:13:G:OP1	8:P:48:ARG:NH1	2.39	0.56
2:C:26:G:H8	2:C:87:A:C2	2.24	0.56
2:C:40:U:C2'	2:C:41:A:H8	2.12	0.56
3:B:7:G:C1'	3:B:8:G:OP1	2.53	0.56
3:B:110:C:H4'	3:B:111:G:OP2	2.06	0.56
6:N:189:PRO:O	6:N:193:GLU:HG2	2.05	0.56
25:F:117:PHE:N	25:F:117:PHE:CD2	2.73	0.56
25:F:272:ASP:OD1	25:F:273:LEU:N	2.38	0.56
29:J:74:LEU:HA	29:J:78:LEU:HB2	1.88	0.56
1:A:140:G:C2'	1:A:141:C:H5'	2.36	0.56
1:A:185:U:H4'	17:Y:92:ASN:O	2.06	0.56
1:A:643:A:OP1	6:N:144:ARG:CD	2.53	0.56
1:A:1475:U:C4'	8:P:73:ARG:NH2	2.69	0.56
1:A:1745:C:C4	1:A:1746:C:C4	2.90	0.56
1:A:1954:U:H5'	1:A:1955:C:OP1	2.05	0.56
2:C:103:G:H2'	2:C:104:A:C8	2.34	0.56
3:B:25:G:C6	3:B:57:U:C2	2.94	0.56
6:N:154:LEU:O	6:N:155:PRO:C	2.44	0.56
26:G:129:GLN:CG	26:G:134:ARG:HH21	2.19	0.56
26:G:230:THR:HG23	26:G:233:SER:H	1.70	0.56
1:A:133:A:C8	1:A:134:A:N7	2.73	0.56
1:A:287:A:N3	1:A:288:C:C2	2.74	0.56
1:A:351:C:O5'	1:A:351:C:H6	1.89	0.56
1:A:702:C:OP1	19:E:213:ARG:NH1	2.37	0.56
1:A:823:C:O2	1:A:1271:G:N1	2.39	0.56
1:A:878:U:C2'	1:A:879:G:H5'	2.35	0.56
1:A:1307:A:N1	1:A:1350:U:C4	2.74	0.56
1:A:2107:G:C5	1:A:2242:A:N7	2.74	0.56
1:A:2129:G:HO2'	1:A:2180:G:N2	2.02	0.56
1:A:2213:A:H2'	1:A:2213:A:N3	2.20	0.56
1:A:2730:A:H2'	1:A:2731:C:H5''	1.86	0.56
3:B:7:G:C6	3:B:117:A:H2	2.24	0.56
11:S:50:ARG:O	11:S:53:GLN:HG2	2.05	0.56
18:Z:118:VAL:HG13	18:Z:122:ARG:HH21	1.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:G:146:ARG:HG3	26:G:148:TRP:CZ3	2.41	0.56
26:G:260:GLY:O	26:G:261:VAL:HG22	2.06	0.56
1:A:143:G:N2	1:A:2224:G:C6	2.74	0.55
1:A:158:C:N4	1:A:159:A:H62	2.02	0.55
1:A:337:U:H4'	15:W:130:HIS:CD2	2.41	0.55
1:A:913:G:C6	1:A:914:A:N6	2.74	0.55
1:A:1161:A:C1'	1:A:1162:C:P	2.94	0.55
1:A:1500:U:H3'	1:A:1500:U:H6	1.72	0.55
1:A:2238:A:C2	1:A:2239:G:N7	2.74	0.55
1:A:2421:C:C2	1:A:2431:G:N2	2.74	0.55
3:B:7:G:H1'	3:B:8:G:OP1	2.05	0.55
5:M:112:LYS:HE3	5:M:116:LEU:HD11	1.88	0.55
6:N:189:PRO:CB	6:N:196:LEU:HD21	2.36	0.55
13:U:105:VAL:O	13:U:106:ASN:ND2	2.38	0.55
16:X:73:LYS:HD3	16:X:73:LYS:N	2.21	0.55
1:A:137:U:H3	1:A:157:G:N2	2.04	0.55
1:A:160:A:H8	1:A:160:A:P	2.29	0.55
1:A:937:U:H2'	1:A:937:U:O2	2.06	0.55
1:A:1248:G:OP1	11:S:13:ARG:CZ	2.54	0.55
1:A:1308:A:OP1	8:P:114:ARG:O	2.24	0.55
1:A:1673:A:H2'	1:A:1674:C:C6	2.41	0.55
16:X:159:ARG:HA	16:X:162:ARG:HG2	1.88	0.55
1:A:364:U:H2'	1:A:365:A:H8	1.72	0.55
1:A:682:C:H2'	1:A:683:C:H6	1.71	0.55
1:A:857:G:O6	16:X:154:LYS:HD2	2.07	0.55
1:A:2199:G:H8	1:A:2199:G:OP2	1.89	0.55
1:A:2579:U:O2	5:M:23:ARG:CZ	2.54	0.55
1:A:2653:U:C5'	25:F:170:GLU:OE2	2.52	0.55
2:C:29:U:C1'	2:C:30:A:P	2.94	0.55
2:C:105:A:H2'	2:C:106:C:C6	2.42	0.55
3:B:31:C:C2	3:B:32:A:N7	2.74	0.55
5:M:25:ILE:HB	5:M:38:VAL:HG23	1.88	0.55
7:O:57:ASN:HD22	7:O:120:ILE:HD12	1.69	0.55
10:R:214:VAL:HG11	10:R:219:LEU:HD11	1.87	0.55
14:V:109:LEU:CD1	14:V:141:ARG:HB2	2.37	0.55
1:A:628:A:H2'	1:A:629:C:C6	2.40	0.55
1:A:950:A:C5	1:A:951:C:N3	2.75	0.55
1:A:1099:G:H1'	1:A:1117:G:H2'	1.89	0.55
1:A:1318:C:O2'	1:A:1323:A:N1	2.40	0.55
1:A:1521:G:N2	1:A:1544:A:C2	2.73	0.55
1:A:1596:U:H2'	1:A:1597:C:C5'	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1745:C:C2'	1:A:1746:C:H5'	2.36	0.55
1:A:1749:U:H3	1:A:1756:G:N2	2.04	0.55
1:A:1750:C:H42	1:A:1755:A:N6	2.04	0.55
1:A:1886:A:N6	6:N:252:ARG:NH2	2.53	0.55
1:A:2113:G:H1	1:A:2204:A:H61	1.54	0.55
1:A:2123:U:O2	1:A:2195:G:N2	2.39	0.55
1:A:2212:A:H4'	1:A:2213:A:OP1	2.06	0.55
1:A:2233:G:N1	1:A:2234:G:C6	2.75	0.55
2:C:52:G:H8	10:R:217:ALA:HB2	1.72	0.55
2:C:52:G:C8	10:R:217:ALA:HB2	2.42	0.55
2:C:75:U:H2'	2:C:75:U:O2	2.07	0.55
2:C:80:C:O5'	2:C:80:C:H6	1.90	0.55
3:B:7:G:H1'	3:B:8:G:P	2.47	0.55
10:R:123:MET:CE	25:F:98:GLY:CA	2.84	0.55
12:T:188:GLU:OE2	12:T:218:ARG:NH1	2.40	0.55
26:G:73:LYS:HB2	26:G:261:VAL:O	2.06	0.55
1:A:101:A:C2'	1:A:102:U:H5'	2.35	0.55
1:A:150:U:H2'	1:A:150:U:O2	2.07	0.55
1:A:256:A:H4'	1:A:256:A:OP1	2.05	0.55
1:A:259:C:H6	1:A:259:C:O5'	1.89	0.55
1:A:261:U:C2'	1:A:262:G:H5'	2.36	0.55
1:A:434:A:C6	1:A:435:A:C6	2.94	0.55
1:A:606:A:H2'	1:A:607:G:H8	1.72	0.55
1:A:806:C:H2'	1:A:807:C:C6	2.42	0.55
1:A:816:G:H1'	6:N:117:GLN:HE21	1.70	0.55
1:A:910:A:H2'	1:A:911:U:C6	2.42	0.55
1:A:1036:U:O2'	1:A:1037:A:O5'	2.18	0.55
1:A:2187:A:O2'	1:A:2188:C:H5'	2.06	0.55
1:A:2227:C:C5	1:A:2228:C:N4	2.74	0.55
1:A:2736:G:OP1	10:R:220:TYR:HD2	1.88	0.55
3:B:68:G:N2	3:B:69:C:C2	2.73	0.55
6:N:178:LEU:HD11	6:N:196:LEU:HD13	1.88	0.55
7:O:125:MET:HG3	7:O:126:PRO:HD2	1.88	0.55
10:R:154:GLU:HB2	10:R:204:LYS:HD3	1.89	0.55
12:T:156:ILE:HB	12:T:184:ALA:HB3	1.87	0.55
14:V:145:LYS:HD3	14:V:148:ARG:HH11	1.70	0.55
19:E:264:ASN:HD22	19:E:264:ASN:C	2.10	0.55
26:G:249:GLU:OE1	26:G:249:GLU:N	2.39	0.55
27:H:87:ILE:HG22	27:H:209:ILE:HG12	1.89	0.55
28:I:48:ILE:O	28:I:89:PHE:HA	2.06	0.55
28:I:134:TYR:HA	28:I:146:SER:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:284:A:C1'	1:A:285:A:P	2.94	0.55
1:A:348:U:O2	1:A:348:U:H2'	2.06	0.55
1:A:863:C:O2'	1:A:864:U:H5'	2.07	0.55
1:A:891:G:N2	1:A:892:C:C2	2.75	0.55
1:A:1836:C:H5''	19:E:219:VAL:CG2	2.35	0.55
1:A:2227:C:H2'	1:A:2228:C:C6	2.41	0.55
1:A:2807:C:OP1	1:A:2807:C:H4'	2.07	0.55
10:R:137:LEU:HD12	10:R:137:LEU:C	2.26	0.55
1:A:103:C:H2'	1:A:104:C:C6	2.42	0.55
1:A:416:C:O2	1:A:418:G:C2	2.59	0.55
1:A:504:G:C5'	13:U:37:TYR:CD1	2.90	0.55
1:A:670:A:H2'	1:A:671:C:C5	2.41	0.55
1:A:1468:C:O2'	1:A:1578:A:N3	2.31	0.55
1:A:1651:C:H4'	1:A:1652:A:OP1	2.04	0.55
1:A:1822:A:C6	1:A:1823:C:N4	2.75	0.55
1:A:2331:G:C2	27:H:182:SER:OG	2.58	0.55
1:A:2647:A:N7	2:C:98:G:C6	2.75	0.55
2:C:103:G:C2	2:C:104:A:C8	2.94	0.55
6:N:225:LEU:HD23	6:N:232:VAL:HG22	1.88	0.55
11:S:89:GLN:O	12:T:174:THR:HA	2.06	0.55
16:X:141:GLU:C	16:X:142:ILE:HG13	2.26	0.55
27:H:58:LYS:O	27:H:61:TYR:HB3	2.06	0.55
1:A:734:G:H2'	1:A:735:U:C6	2.42	0.55
1:A:1169:A:H5'	4:L:245:ARG:CZ	2.37	0.55
1:A:2267:G:H1	7:O:82:ARG:NH2	2.04	0.55
1:A:2806:U:H4'	2:C:6:A:O4'	2.07	0.55
7:O:89:SER:N	7:O:90:PRO:HD2	2.21	0.55
12:T:103:TYR:CD2	12:T:106:ILE:CD1	2.85	0.55
18:Z:137:ASP:OD1	18:Z:141:LYS:HG2	2.06	0.55
26:G:129:GLN:HG2	26:G:134:ARG:HH21	1.72	0.55
1:A:129:U:H2'	1:A:129:U:O2	2.07	0.55
1:A:140:G:C2	1:A:155:A:C2	2.95	0.55
1:A:335:G:N2	1:A:345:C:O2	2.37	0.55
1:A:967:C:O5'	1:A:967:C:H6	1.90	0.55
1:A:1020:C:H2'	1:A:1021:A:H8	1.72	0.55
1:A:1137:C:H3'	1:A:1138:G:H8	1.71	0.55
1:A:1317:C:OP1	1:A:2726:G:O2'	2.20	0.55
1:A:1651:C:C6	13:U:116:PRO:HG2	2.41	0.55
1:A:1704:A:N3	1:A:1706:C:N4	2.55	0.55
1:A:1799:A:H2'	1:A:1800:C:O4'	2.07	0.55
1:A:2109:C:C6	1:A:2110:U:N1	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2207:A:H8	1:A:2207:A:O5'	1.90	0.55
1:A:2229:U:O4	19:E:64:ARG:NH2	2.40	0.55
1:A:2267:G:N1	7:O:82:ARG:CZ	2.70	0.55
4:L:100:TRP:CE3	4:L:101:TYR:N	2.75	0.55
14:V:106:ARG:C	14:V:107:ARG:HG2	2.25	0.55
19:E:39:ARG:HG3	19:E:40:ASN:CG	2.27	0.55
25:F:144:LEU:CD1	25:F:166:ARG:NH1	2.70	0.55
1:A:274:G:C4	1:A:433:C:C5	2.95	0.55
1:A:458:G:H5''	1:A:459:A:OP1	2.07	0.55
1:A:871:A:H2'	1:A:872:A:O4'	2.07	0.55
1:A:1536:A:C2	1:A:1537:U:C5	2.87	0.55
1:A:1650:A:H8	1:A:1650:A:O5'	1.89	0.55
1:A:1876:A:H5''	1:A:1877:C:OP2	2.06	0.55
1:A:1882:U:C6	1:A:1883:G:C8	2.95	0.55
1:A:2278:C:N4	16:X:71:ASP:HB3	2.21	0.55
1:A:2310:U:H5'	9:Q:143:ARG:HH11	1.71	0.55
1:A:2799:A:H5''	1:A:2800:G:H5'	1.87	0.55
2:C:26:G:C6	2:C:27:U:N3	2.75	0.55
2:C:28:U:O2	2:C:28:U:H2'	2.07	0.55
2:C:28:U:C1'	2:C:30:A:C8	2.86	0.55
6:N:160:ILE:HG22	6:N:203:GLU:O	2.07	0.55
16:X:162:ARG:HD3	16:X:163:GLU:OE1	2.07	0.55
26:G:152:MET:HB3	26:G:157:ARG:NH2	2.22	0.55
26:G:205:SER:OG	26:G:226:LEU:HB3	2.07	0.55
29:J:69:VAL:HG21	29:J:78:LEU:CD1	2.37	0.55
1:A:42:G:H1	1:A:448:C:H42	1.54	0.54
1:A:208:A:C1'	1:A:433:C:O2'	2.53	0.54
1:A:626:C:C3'	1:A:627:C:H6	2.20	0.54
1:A:626:C:H2'	1:A:627:C:H6	1.72	0.54
1:A:1443:G:H22	1:A:1610:C:H5	1.54	0.54
1:A:1878:C:N3	1:A:1887:G:N1	2.55	0.54
1:A:2212:A:H2'	1:A:2213:A:H8	1.71	0.54
2:C:78:G:C2	2:C:79:G:N7	2.75	0.54
4:L:172:LEU:HD23	4:L:185:GLU:CD	2.28	0.54
6:N:143:LEU:CD2	6:N:146:ILE:CG1	2.86	0.54
15:W:164:THR:CB	15:W:166:GLU:OE1	2.55	0.54
1:A:175:A:OP2	1:A:190:G:N2	2.31	0.54
1:A:434:A:H8	1:A:434:A:O5'	1.90	0.54
1:A:901:C:H3'	1:A:901:C:H6	1.72	0.54
1:A:1161:A:N7	1:A:2040:U:H4'	2.21	0.54
1:A:1175:U:O2'	1:A:1176:C:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2003:A:O2'	1:A:2004:C:OP1	2.24	0.54
3:B:27:A:H2'	3:B:28:C:H6	1.72	0.54
3:B:47:A:H5'	3:B:48:C:OP2	2.06	0.54
6:N:97:ARG:NH1	6:N:100:ARG:HG3	2.22	0.54
11:S:43:LEU:HB3	12:T:198:PHE:HB3	1.89	0.54
14:V:118:PRO:HD2	18:Z:95:SER:OG	2.08	0.54
16:X:143:GLN:C	16:X:145:GLU:N	2.60	0.54
1:A:48:A:C2	1:A:162:A:N7	2.65	0.54
1:A:143:G:N2	1:A:2223:A:C2	2.76	0.54
1:A:793:A:H4'	1:A:794:A:O5'	2.07	0.54
1:A:859:A:C5	1:A:860:C:C4	2.95	0.54
1:A:981:G:H2'	1:A:982:G:H5''	1.88	0.54
1:A:1036:U:HO2'	1:A:1037:A:P	2.30	0.54
1:A:1196:A:H61	1:A:1201:A:H61	0.66	0.54
1:A:1571:G:H5''	1:A:1572:G:C8	2.42	0.54
1:A:1748:C:H3'	1:A:1748:C:H6	1.72	0.54
1:A:1825:A:O2'	1:A:1826:U:H4'	2.08	0.54
2:C:81:A:C2'	2:C:82:U:H5'	2.37	0.54
8:P:43:ARG:HA	8:P:123:ILE:O	2.07	0.54
11:S:91:LEU:HB2	12:T:175:PRO:HA	1.88	0.54
12:T:93:PHE:CD2	12:T:93:PHE:N	2.73	0.54
15:W:67:ARG:HB3	15:W:67:ARG:CZ	2.37	0.54
1:A:137:U:C4	1:A:157:G:N1	2.66	0.54
1:A:213:A:C3'	6:N:239:LYS:O	2.51	0.54
1:A:887:G:H22	1:A:909:A:H61	1.55	0.54
1:A:1361:U:C5	14:V:168:PRO:HD3	2.42	0.54
1:A:2190:A:H2'	1:A:2191:C:O4'	2.07	0.54
1:A:2647:A:C8	2:C:98:G:N3	2.76	0.54
1:A:2676:G:N2	1:A:2678:G:H3'	2.22	0.54
6:N:154:LEU:N	6:N:155:PRO:HD2	2.00	0.54
6:N:165:ILE:CG1	6:N:207:SER:N	2.70	0.54
8:P:44:ILE:O	8:P:122:TYR:HA	2.08	0.54
13:U:168:ARG:O	13:U:169:ARG:HB2	2.06	0.54
17:Y:125:ALA:O	17:Y:129:ILE:HG23	2.07	0.54
19:E:226:HIS:HE1	19:E:228:HIS:CD2	2.21	0.54
25:F:179:PHE:HA	25:F:184:LYS:NZ	2.23	0.54
26:G:86:ARG:NE	26:G:152:MET:HE1	2.21	0.54
26:G:251:THR:O	26:G:255:LEU:CB	2.56	0.54
1:A:27:A:H61	1:A:523:G:H1'	1.72	0.54
1:A:103:C:HO2'	1:A:104:C:H5'	1.72	0.54
1:A:153:G:N2	1:A:154:C:C2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:504:G:C4'	13:U:37:TYR:HB2	2.23	0.54
1:A:1504:C:O2'	1:A:1505:C:H5'	2.07	0.54
1:A:1515:G:H2'	1:A:1515:G:N3	2.22	0.54
1:A:1603:A:O2'	1:A:1604:A:O5'	2.23	0.54
1:A:1687:G:C6	1:A:1688:A:C2	2.96	0.54
1:A:2224:G:H5''	1:A:2225:G:H5'	1.86	0.54
2:C:41:A:HO2'	2:C:42:G:H5'	1.72	0.54
3:B:25:G:C5	3:B:57:U:N3	2.76	0.54
3:B:32:A:C5	3:B:55:G:C2	2.95	0.54
6:N:157:TYR:HB2	6:N:196:LEU:CD2	2.38	0.54
6:N:200:ILE:HD12	6:N:217:PHE:CD1	2.42	0.54
12:T:156:ILE:HG13	12:T:186:VAL:HG23	1.90	0.54
12:T:174:THR:CG2	12:T:175:PRO:CD	2.85	0.54
13:U:84:ALA:HB1	13:U:95:LYS:HE3	1.88	0.54
15:W:70:LYS:O	15:W:89:ILE:CD1	2.52	0.54
16:X:66:THR:OG1	16:X:67:LYS:CE	2.54	0.54
16:X:123:VAL:HA	16:X:136:SER:O	2.06	0.54
16:X:133:LYS:HA	16:X:133:LYS:CE	2.32	0.54
1:A:169:C:H2'	1:A:170:U:H6	1.73	0.54
1:A:171:G:H2'	1:A:172:G:H8	1.72	0.54
1:A:317:G:N2	1:A:489:A:N7	2.54	0.54
1:A:817:C:O3'	1:A:841:G:N2	2.40	0.54
1:A:822:U:C5	1:A:1272:A:C6	2.96	0.54
1:A:951:C:C2'	1:A:952:A:C8	2.87	0.54
1:A:1495:C:C4	1:A:1548:A:C6	2.96	0.54
1:A:1980:A:H1'	1:A:2610:U:H5'	1.90	0.54
1:A:2219:U:H1'	19:E:64:ARG:HH22	1.72	0.54
1:A:2242:A:O2'	1:A:2243:C:OP2	2.24	0.54
1:A:2320:G:H4'	27:H:175:PHE:CA	2.30	0.54
6:N:82:LEU:CD2	26:G:240:LEU:HD22	2.36	0.54
15:W:82:GLU:OE1	15:W:82:GLU:N	2.25	0.54
27:H:89:VAL:HA	27:H:206:ASP:O	2.07	0.54
27:H:123:ALA:HB3	27:H:135:GLY:H	1.73	0.54
28:I:57:ALA:HB3	28:I:64:LYS:O	2.08	0.54
1:A:1056:A:H2'	1:A:1057:A:H8	1.72	0.54
1:A:1196:A:N6	1:A:1201:A:N6	2.21	0.54
1:A:1522:A:C6	1:A:1544:A:N3	2.73	0.54
1:A:1634:C:C5'	14:V:145:LYS:HZ3	2.21	0.54
1:A:1634:C:C5'	14:V:145:LYS:NZ	2.68	0.54
1:A:2221:U:O2	1:A:2221:U:H2'	2.07	0.54
1:A:2393:A:C2	9:Q:166:PHE:HE2	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2608:C:H2'	1:A:2609:G:C8	2.42	0.54
1:A:2684:C:C6	28:I:150:SER:OG	2.60	0.54
2:C:35:U:O2	2:C:35:U:H2'	2.07	0.54
2:C:99:A:H2'	2:C:100:C:H5'	1.90	0.54
4:L:116:VAL:HG23	4:L:236:PRO:HB2	1.90	0.54
4:L:172:LEU:HD21	4:L:185:GLU:OE2	2.06	0.54
6:N:99:GLY:HA2	6:N:107:GLY:HA2	1.90	0.54
12:T:141:TRP:HE3	12:T:218:ARG:HG2	1.73	0.54
16:X:69:GLY:O	16:X:70:ARG:HB3	2.08	0.54
1:A:610:G:OP1	26:G:79:LYS:HG2	2.08	0.54
1:A:1534:A:C3'	1:A:1535:A:C5'	2.86	0.54
1:A:1830:U:H5'	1:A:1831:G:C8	2.42	0.54
1:A:1936:G:H2'	1:A:1937:U:C6	2.43	0.54
1:A:2636:G:H5''	25:F:246:LYS:HB3	1.90	0.54
1:A:2644:G:N2	1:A:2795:G:OP2	2.41	0.54
2:C:88:C:C2'	2:C:89:A:H5'	2.38	0.54
3:B:34:C:O5'	3:B:34:C:H6	1.91	0.54
4:L:204:VAL:HG21	4:L:221:LEU:HD22	1.89	0.54
6:N:168:ALA:HB1	6:N:184:LYS:CE	2.38	0.54
6:N:172:GLU:HA	6:N:210:LEU:HD23	1.82	0.54
15:W:170:THR:CB	15:W:171:PRO:CD	2.85	0.54
28:I:43:ILE:O	28:I:43:ILE:HG22	2.07	0.54
1:A:410:G:C6	1:A:411:U:O4	2.61	0.54
1:A:635:C:OP2	6:N:190:SER:OG	2.18	0.54
1:A:910:A:HO2'	1:A:911:U:H5'	1.71	0.54
1:A:1432:U:H2'	1:A:1433:U:C6	2.43	0.54
1:A:1885:C:O2'	1:A:1886:A:O4'	2.21	0.54
1:A:2188:C:C2'	1:A:2189:C:H5'	2.38	0.54
10:R:135:GLU:O	10:R:138:ARG:O	2.25	0.54
11:S:8:TYR:HE1	11:S:12:ARG:NE	2.04	0.54
12:T:91:ASP:O	12:T:92:ASP:HB2	2.08	0.54
15:W:70:LYS:HE3	15:W:159:ARG:NE	2.23	0.54
19:E:245:PRO:CG	19:E:246:TRP:CZ3	2.90	0.54
25:F:212:ILE:HG21	25:F:230:ARG:NH1	2.22	0.54
26:G:209:LEU:HD12	26:G:248:THR:HG21	1.89	0.54
28:I:55:ALA:HB3	28:I:66:LYS:HB2	1.89	0.54
1:A:152:G:N3	1:A:153:G:N7	2.52	0.54
1:A:242:A:H2	6:N:194:ARG:NH2	2.06	0.54
1:A:268:G:N2	1:A:269:G:C2	2.76	0.54
1:A:671:C:O5'	1:A:671:C:H6	1.90	0.54
1:A:856:U:H6	1:A:962:G:H22	0.59	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:890:G:C4	1:A:891:G:N7	2.76	0.54
1:A:896:G:H21	1:A:897:A:H4'	1.71	0.54
1:A:1444:A:C2	1:A:1609:U:H5	2.26	0.54
1:A:1847:C:O2'	1:A:1941:A:H1'	2.08	0.54
1:A:2504:A:H2'	1:A:2505:A:C8	2.43	0.54
1:A:2684:C:H6	28:I:150:SER:H	1.55	0.54
2:C:28:U:HO2'	2:C:30:A:P	2.31	0.54
3:B:38:C:C4	3:B:39:C:C2	2.96	0.54
25:F:154:ARG:HG2	25:F:158:ASN:OD1	2.08	0.54
26:G:102:THR:HG21	26:G:142:GLY:HA3	1.90	0.54
1:A:16:G:O2'	11:S:25:ARG:HG3	2.07	0.53
1:A:145:A:H3'	1:A:146:U:C5'	2.28	0.53
1:A:856:U:C4	1:A:962:G:O6	2.42	0.53
1:A:1160:A:OP1	4:L:183:LEU:HD22	2.08	0.53
1:A:1432:U:H2'	1:A:1433:U:H6	1.74	0.53
1:A:1691:A:H8	1:A:1691:A:O5'	1.91	0.53
1:A:1804:U:H2'	1:A:1805:C:H6	1.73	0.53
1:A:1827:G:H5''	19:E:83:ARG:HE	1.72	0.53
1:A:1829:A:C4'	1:A:1830:U:H5'	2.30	0.53
1:A:1876:A:H8	1:A:1876:A:O5'	1.91	0.53
1:A:2209:U:H2'	1:A:2210:C:C6	2.43	0.53
7:O:10:ARG:NH2	7:O:90:PRO:HD3	2.22	0.53
26:G:175:VAL:HG23	26:G:246:VAL:HG12	1.90	0.53
1:A:299:C:H2'	1:A:299:C:O2	2.08	0.53
1:A:367:C:O2	1:A:367:C:H2'	2.08	0.53
1:A:731:U:O4	1:A:732:A:N6	2.40	0.53
1:A:790:U:H2'	1:A:791:G:O4'	2.08	0.53
1:A:804:A:O2'	1:A:805:A:OP2	2.21	0.53
1:A:884:G:N1	1:A:913:G:C6	2.76	0.53
1:A:934:A:C1'	1:A:935:U:H5'	2.34	0.53
1:A:1081:C:C2	1:A:1135:A:N1	2.76	0.53
1:A:1393:U:HO2'	1:A:2230:A:H2'	1.67	0.53
1:A:1534:A:H3'	1:A:1535:A:H5'	1.88	0.53
1:A:2236:C:O5'	1:A:2236:C:H6	1.90	0.53
3:B:57:U:O2'	3:B:58:A:OP2	2.26	0.53
6:N:213:LYS:O	6:N:235:LEU:HB2	2.07	0.53
16:X:122:LEU:CG	16:X:140:ARG:HB2	2.37	0.53
19:E:67:GLU:O	19:E:114:SER:OG	2.27	0.53
19:E:142:ILE:HG23	19:E:143:THR:HG22	1.88	0.53
19:E:237:ILE:HG13	19:E:239:ARG:H	1.72	0.53
25:F:96:LYS:NZ	25:F:284:GLY:O	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:H:90:ASN:O	27:H:205:MET:HA	2.07	0.53
27:H:122:LYS:HG3	27:H:135:GLY:O	2.08	0.53
28:I:76:TYR:CD1	28:I:108:PHE:CZ	2.96	0.53
1:A:6:A:H8	1:A:6:A:O5'	1.92	0.53
1:A:140:G:N1	1:A:155:A:C2	2.76	0.53
1:A:199:G:H2'	1:A:200:G:C8	2.42	0.53
1:A:627:C:O2	1:A:627:C:H2'	2.08	0.53
1:A:903:G:H4'	1:A:903:G:OP1	2.08	0.53
1:A:1003:A:OP2	1:A:1003:A:H8	1.91	0.53
1:A:1161:A:H1'	1:A:1162:C:OP2	2.09	0.53
1:A:1197:A:OP1	16:X:165:LYS:CG	2.57	0.53
1:A:1224:U:H3	1:A:1263:G:H1	1.57	0.53
1:A:1336:C:H2'	1:A:1337:U:C6	2.44	0.53
1:A:1522:A:C2	1:A:1523:A:N7	2.76	0.53
1:A:1603:A:H5'	19:E:55:LYS:HD2	1.88	0.53
1:A:2205:G:C4	1:A:2206:A:N7	2.76	0.53
3:B:7:G:H1'	3:B:8:G:C5'	2.37	0.53
4:L:175:ARG:NH2	4:L:184:LYS:HZ2	1.89	0.53
25:F:119:GLU:HG3	25:F:143:ARG:CB	2.38	0.53
28:I:48:ILE:O	28:I:89:PHE:HD1	1.86	0.53
1:A:13:A:O2'	1:A:14:A:O4'	2.26	0.53
1:A:260:G:C6	1:A:268:G:C6	2.96	0.53
1:A:339:A:H4'	1:A:340:A:OP1	2.08	0.53
1:A:420:A:C2	1:A:432:G:C2	2.96	0.53
1:A:860:C:O2'	1:A:861:A:H5'	2.08	0.53
1:A:888:C:O2	1:A:888:C:H2'	2.08	0.53
1:A:1200:A:H3'	1:A:1201:A:H8	1.73	0.53
1:A:1399:A:H2'	1:A:1401:G:N7	2.24	0.53
1:A:1519:A:N1	1:A:1520:A:N7	2.56	0.53
1:A:1546:C:O2	1:A:1546:C:H2'	2.08	0.53
1:A:2214:C:H6	1:A:2214:C:O5'	1.92	0.53
1:A:2336:U:P	1:A:2336:U:H3'	2.49	0.53
1:A:2373:C:H4'	16:X:76:ARG:HD2	1.91	0.53
3:B:13:C:H1'	3:B:111:G:H22	1.73	0.53
12:T:177:VAL:HG23	12:T:177:VAL:O	2.07	0.53
15:W:138:LEU:HG	15:W:140:GLU:H	1.74	0.53
25:F:144:LEU:HD13	25:F:166:ARG:NH1	2.22	0.53
26:G:250:GLY:O	26:G:254:TYR:CB	2.56	0.53
28:I:42:ARG:O	28:I:43:ILE:HB	2.09	0.53
1:A:97:A:OP1	18:Z:63:ASP:HB3	2.08	0.53
1:A:98:G:C2	1:A:100:G:N2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:122:U:O2'	1:A:123:C:H5''	2.08	0.53
1:A:288:C:O5'	1:A:288:C:H6	1.91	0.53
1:A:297:U:H2'	1:A:298:G:H5'	1.89	0.53
1:A:411:U:OP2	17:Y:127:LYS:HE3	2.08	0.53
1:A:1066:G:N2	1:A:1146:U:O2	2.41	0.53
1:A:1454:G:H1	1:A:1594:A:H62	1.56	0.53
1:A:1481:U:C5	1:A:1482:C:N4	2.76	0.53
1:A:1552:U:H2'	1:A:1553:U:H6	1.72	0.53
1:A:1966:A:OP2	5:M:55:SER:OG	2.16	0.53
1:A:2335:C:O3'	1:A:2336:U:H3'	2.09	0.53
1:A:2612:G:N2	1:A:2615:A:OP2	2.42	0.53
10:R:203:ILE:O	10:R:203:ILE:HG13	2.08	0.53
14:V:144:LYS:O	14:V:148:ARG:HB3	2.08	0.53
18:Z:86:GLU:O	18:Z:90:LEU:HG	2.08	0.53
1:A:121:G:H8	1:A:121:G:O5'	1.91	0.53
1:A:133:A:C5	1:A:134:A:C6	2.96	0.53
1:A:154:C:N4	1:A:155:A:C6	2.77	0.53
1:A:426:C:O2'	1:A:1874:U:H1'	2.08	0.53
1:A:567:C:OP2	4:L:212:ARG:NH2	2.40	0.53
1:A:843:C:C5'	6:N:125:ILE:HD11	2.38	0.53
1:A:887:G:N2	1:A:909:A:C6	2.74	0.53
1:A:1145:C:H2'	1:A:1146:U:C6	2.42	0.53
1:A:1881:A:N7	6:N:255:GLU:CD	2.62	0.53
1:A:2033:A:H3'	1:A:2034:C:H5''	1.89	0.53
1:A:2106:U:H4'	1:A:2107:G:O5'	2.07	0.53
1:A:2186:U:H4'	1:A:2187:A:H5'	1.90	0.53
1:A:2647:A:C8	2:C:98:G:C6	2.97	0.53
2:C:75:U:C3'	2:C:76:G:C5'	2.86	0.53
3:B:31:C:O2	3:B:31:C:H2'	2.08	0.53
3:B:66:C:O2	3:B:66:C:H2'	2.08	0.53
10:R:144:ARG:O	10:R:145:THR:C	2.47	0.53
12:T:91:ASP:OD2	13:U:142:PHE:CZ	2.61	0.53
18:Z:123:GLU:HG2	18:Z:128:VAL:HG21	1.91	0.53
25:F:119:GLU:OE1	25:F:119:GLU:HA	2.09	0.53
26:G:148:TRP:O	26:G:149:THR:OG1	2.25	0.53
1:A:44:G:C8	1:A:200:G:N9	2.77	0.53
1:A:153:G:H4'	1:A:154:C:OP1	2.09	0.53
1:A:576:U:O2'	1:A:820:G:OP2	2.23	0.53
1:A:613:U:H3'	1:A:613:U:H6	1.73	0.53
1:A:1334:U:OP2	1:A:1335:C:N4	2.38	0.53
1:A:1534:A:C2'	1:A:1535:A:C5'	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2116:C:N4	1:A:2201:G:N2	2.52	0.53
1:A:2207:A:H2'	1:A:2208:U:N1	2.24	0.53
1:A:2475:G:O2'	1:A:2477:U:O4	2.26	0.53
1:A:2647:A:C5	2:C:98:G:N1	2.77	0.53
3:B:11:U:O4'	9:Q:92:MET:SD	2.67	0.53
4:L:224:TYR:OH	4:L:231:HIS:NE2	2.28	0.53
1:A:822:U:H3	6:N:100:ARG:NH2	2.07	0.53
1:A:884:G:C2	1:A:913:G:N1	2.77	0.53
1:A:937:U:C2'	1:A:938:G:C5'	2.87	0.53
1:A:1879:U:H2'	1:A:1880:G:N7	2.24	0.53
1:A:2207:A:H2'	1:A:2208:U:C2	2.44	0.53
1:A:2542:G:H1	1:A:2555:U:H3	1.57	0.53
1:A:2650:G:H1	1:A:2803:C:N4	2.05	0.53
2:C:103:G:C4	2:C:104:A:C8	2.96	0.53
3:B:5:C:N3	3:B:119:G:O6	2.42	0.53
3:B:7:G:N3	3:B:8:G:H5'	2.24	0.53
3:B:118:G:O2'	3:B:119:G:H5'	2.09	0.53
12:T:136:VAL:CG2	12:T:221:ILE:HG13	2.38	0.53
25:F:213:LYS:HE3	25:F:254:MET:HE3	1.90	0.53
1:A:160:A:C2	1:A:161:G:C5	2.95	0.53
1:A:885:G:C5	1:A:886:U:C4	2.96	0.53
1:A:1197:A:OP1	16:X:165:LYS:CB	2.57	0.53
1:A:1496:A:N7	1:A:1497:A:C2	2.77	0.53
1:A:1596:U:C2'	1:A:1597:C:C5'	2.70	0.53
2:C:75:U:H2'	2:C:76:G:H5''	1.89	0.53
2:C:78:G:C2'	2:C:79:G:H5'	2.38	0.53
3:B:25:G:N7	3:B:57:U:C5	2.76	0.53
19:E:64:ARG:HG3	19:E:147:GLY:HA2	1.91	0.53
19:E:133:LEU:HD22	19:E:162:ALA:HA	1.90	0.53
29:J:77:PHE:O	29:J:81:LEU:HB2	2.09	0.53
1:A:420:A:C5	1:A:432:G:N2	2.77	0.53
1:A:877:C:H2'	1:A:878:U:H6	1.71	0.53
1:A:950:A:C6	1:A:951:C:N3	2.76	0.53
1:A:2228:C:H4'	1:A:2230:A:OP1	2.09	0.53
1:A:2233:G:C4	1:A:2234:G:N7	2.77	0.53
1:A:2394:A:H2'	1:A:2395:A:C8	2.44	0.53
1:A:2684:C:C6	28:I:150:SER:CB	2.92	0.53
2:C:103:G:C4	2:C:104:A:N7	2.77	0.53
3:B:10:G:OP1	9:Q:63:LYS:CD	2.49	0.53
6:N:88:GLN:HE22	26:G:79:LYS:NZ	2.07	0.53
11:S:5:LYS:HG3	11:S:5:LYS:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:S:93:ASN:HB2	11:S:97:LEU:HD23	1.90	0.53
14:V:111:VAL:O	14:V:114:ILE:HG22	2.09	0.53
28:I:104:MET:HA	28:I:107:LEU:HB3	1.91	0.53
1:A:270:G:C2'	1:A:271:G:H5'	2.34	0.52
1:A:381:C:O2	1:A:381:C:O2'	2.26	0.52
1:A:389:A:N6	1:A:410:G:H1	2.06	0.52
1:A:581:A:O2'	1:A:583:G:H8	1.91	0.52
1:A:602:A:H2'	1:A:603:G:H8	1.72	0.52
1:A:824:U:O4'	1:A:1247:A:H1'	2.09	0.52
1:A:869:G:N2	1:A:2285:A:H2	2.05	0.52
1:A:984:G:N7	7:O:14:ARG:NH1	2.57	0.52
1:A:1413:A:H2'	1:A:1414:A:C8	2.44	0.52
1:A:1541:U:O5'	1:A:1541:U:H6	1.92	0.52
1:A:1877:C:H2'	1:A:1877:C:O2	2.08	0.52
1:A:2036:U:H4'	1:A:2037:G:OP1	2.09	0.52
1:A:2209:U:C4	1:A:2210:C:N4	2.73	0.52
1:A:2211:U:C4	1:A:2241:G:C6	2.97	0.52
2:C:56:G:H2'	2:C:57:U:C6	2.44	0.52
6:N:146:ILE:O	6:N:147:ALA:HB2	2.09	0.52
10:R:226:LEU:HD13	10:R:226:LEU:H	1.72	0.52
15:W:78:ILE:O	15:W:83:LYS:HG3	2.08	0.52
19:E:37:LYS:HE3	19:E:50:ARG:HD3	1.90	0.52
26:G:204:LYS:HA	26:G:225:THR:HB	1.90	0.52
26:G:226:LEU:HD12	26:G:226:LEU:C	2.30	0.52
1:A:625:C:O2	1:A:625:C:H2'	2.08	0.52
1:A:740:G:O6	19:E:204:ALA:CB	2.39	0.52
1:A:841:G:N3	1:A:841:G:H2'	2.24	0.52
1:A:906:C:O5'	1:A:906:C:H6	1.91	0.52
1:A:1164:G:O5'	1:A:1164:G:H8	1.91	0.52
1:A:1344:G:H5''	13:U:113:LYS:HE2	1.90	0.52
1:A:2203:U:O5'	1:A:2203:U:H6	1.91	0.52
1:A:2324:G:C2	1:A:2328:A:N7	2.77	0.52
1:A:2631:A:H8	1:A:2631:A:OP1	1.93	0.52
1:A:2647:A:H1'	2:C:98:G:N3	2.24	0.52
1:A:2654:U:H5''	25:F:172:ARG:NH2	2.24	0.52
2:C:31:U:O2	2:C:31:U:H2'	2.08	0.52
6:N:165:ILE:CG1	6:N:207:SER:H	2.19	0.52
15:W:67:ARG:CZ	15:W:67:ARG:CB	2.87	0.52
15:W:70:LYS:HE3	15:W:159:ARG:HE	1.74	0.52
25:F:135:ASN:HD21	25:F:177:ASP:H	1.57	0.52
26:G:230:THR:OG1	26:G:231:PRO:HD2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:H:189:SER:HB2	27:H:205:MET:HE1	1.90	0.52
28:I:61:GLN:HA	28:I:76:TYR:HD2	1.74	0.52
1:A:71:A:C8	18:Z:116:LEU:HD12	2.44	0.52
1:A:116:A:O2'	1:A:163:G:OP1	2.26	0.52
1:A:545:U:H2'	1:A:546:G:C8	2.44	0.52
1:A:597:C:O2'	6:N:98:LYS:HD2	2.10	0.52
1:A:690:U:H2'	1:A:691:G:H8	1.74	0.52
1:A:902:G:H2'	1:A:903:G:C5'	2.32	0.52
1:A:1080:C:C3'	1:A:1081:C:C5'	2.86	0.52
1:A:1176:C:H2'	1:A:1177:U:O4'	2.09	0.52
1:A:1407:C:H2'	1:A:1408:A:C8	2.41	0.52
1:A:1534:A:H3'	1:A:1535:A:C5'	2.39	0.52
1:A:1633:A:H5''	1:A:1634:C:OP1	2.10	0.52
1:A:1691:A:C6	1:A:1692:C:C2	2.97	0.52
1:A:1800:C:H2'	1:A:1801:A:C8	2.44	0.52
1:A:2116:C:H2'	1:A:2116:C:O2	2.08	0.52
1:A:2229:U:C4	19:E:64:ARG:NH1	2.78	0.52
1:A:2339:A:H2'	1:A:2340:G:O4'	2.08	0.52
1:A:2420:C:O2	1:A:2420:C:H2'	2.08	0.52
1:A:2475:G:H8	1:A:2476:A:H62	1.56	0.52
2:C:85:U:HO2'	2:C:86:A:H5'	1.72	0.52
3:B:45:G:H1'	3:B:48:C:H42	1.74	0.52
6:N:176:VAL:CG1	6:N:177:SER:H	2.03	0.52
10:R:212:ARG:NH2	10:R:229:LEU:O	2.29	0.52
1:A:77:U:H2'	1:A:78:C:C6	2.45	0.52
1:A:276:G:C5	1:A:433:C:N4	2.78	0.52
1:A:997:G:H2'	1:A:998:U:C6	2.43	0.52
1:A:1527:G:C2	1:A:1539:C:N3	2.40	0.52
1:A:1651:C:C5	13:U:116:PRO:CG	2.92	0.52
1:A:1801:A:O2'	19:E:202:GLY:HA2	2.08	0.52
1:A:2113:G:H8	1:A:2113:G:O5'	1.92	0.52
1:A:2137:G:N2	1:A:2190:A:C4	2.77	0.52
1:A:2807:C:N4	2:C:98:G:H1	2.06	0.52
6:N:157:TYR:HD1	6:N:158:VAL:N	2.08	0.52
9:Q:47:HIS:ND1	9:Q:48:THR:HG23	2.24	0.52
11:S:76:TYR:O	11:S:77:ASN:ND2	2.43	0.52
12:T:96:PRO:C	12:T:98:PRO:N	2.63	0.52
12:T:113:LYS:HA	12:T:113:LYS:HE2	1.91	0.52
12:T:145:GLN:O	12:T:147:LEU:N	2.42	0.52
12:T:177:VAL:HG23	12:T:180:ALA:HB2	1.91	0.52
16:X:67:LYS:N	16:X:67:LYS:CD	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:101:PHE:HB3	16:X:135:VAL:HG23	1.92	0.52
1:A:98:G:H5'	1:A:99:A:O5'	2.09	0.52
1:A:101:A:C4	1:A:102:U:C5	2.97	0.52
1:A:256:A:C8	1:A:380:C:O2'	2.39	0.52
1:A:319:G:C4	1:A:339:A:C2	2.98	0.52
1:A:358:C:H2'	1:A:359:A:H8	1.74	0.52
1:A:858:G:N3	1:A:859:A:C8	2.77	0.52
1:A:2338:G:N3	1:A:2338:G:C2'	2.73	0.52
1:A:2672:G:O2'	1:A:2673:U:O5'	2.26	0.52
3:B:86:G:C4	3:B:87:G:N7	2.78	0.52
6:N:143:LEU:CD2	6:N:143:LEU:N	2.73	0.52
6:N:144:ARG:N	6:N:146:ILE:CD1	2.73	0.52
17:Y:101:VAL:HG23	17:Y:103:LEU:HD12	1.90	0.52
17:Y:129:ILE:CD1	17:Y:130:GLU:N	2.73	0.52
27:H:175:PHE:CD1	27:H:183:VAL:CG1	2.91	0.52
1:A:902:G:C3'	1:A:903:G:C5'	2.86	0.52
1:A:922:U:O5'	1:A:922:U:H6	1.93	0.52
1:A:1530:G:N3	1:A:1530:G:C2'	2.73	0.52
1:A:1534:A:N3	1:A:1534:A:H5''	2.25	0.52
1:A:1801:A:H2	1:A:1839:A:HO2'	1.55	0.52
1:A:1829:A:OP1	19:E:152:ARG:N	2.42	0.52
1:A:1866:G:C5'	29:J:43:LYS:HG3	2.39	0.52
1:A:2238:A:C4	1:A:2239:G:C8	2.97	0.52
1:A:2319:C:C2'	1:A:2320:G:H5'	2.39	0.52
1:A:2652:A:H2'	1:A:2653:U:O4'	2.10	0.52
3:B:17:G:H22	3:B:70:G:H1'	0.62	0.52
9:Q:49:ARG:CG	9:Q:53:ARG:HG3	2.39	0.52
13:U:141:HIS:ND1	13:U:141:HIS:O	2.43	0.52
19:E:140:ILE:HD11	19:E:150:LEU:HB2	1.91	0.52
26:G:206:LEU:HD13	26:G:207:PHE:N	2.24	0.52
29:J:77:PHE:CD1	29:J:81:LEU:HD12	2.44	0.52
1:A:82:G:P	15:W:157:LYS:NZ	2.82	0.52
1:A:268:G:N1	1:A:269:G:C6	2.78	0.52
1:A:298:G:C4	1:A:299:C:C5	2.97	0.52
1:A:355:A:H3'	1:A:356:A:H8	1.74	0.52
1:A:874:G:P	7:O:23:ARG:HH22	2.29	0.52
1:A:890:G:N3	1:A:891:G:N7	2.58	0.52
1:A:891:G:H2'	1:A:892:C:C6	2.44	0.52
1:A:895:C:O5'	1:A:895:C:H6	1.93	0.52
1:A:1056:A:N3	1:A:2503:G:O2'	2.32	0.52
1:A:1180:C:H5'	11:S:78:TYR:HE2	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1444:A:C2	1:A:1609:U:C5	2.97	0.52
1:A:2204:A:H2'	1:A:2205:G:H5'	1.92	0.52
1:A:2320:G:C6	1:A:2331:G:C6	2.98	0.52
1:A:2329:U:O3'	27:H:121:THR:HG21	2.09	0.52
3:B:13:C:O2	3:B:111:G:N1	2.41	0.52
8:P:88:ALA:O	8:P:92:GLU:HB2	2.10	0.52
12:T:172:ILE:CD1	12:T:172:ILE:N	2.73	0.52
15:W:164:THR:HB	15:W:166:GLU:OE1	2.09	0.52
16:X:67:LYS:NZ	16:X:67:LYS:CA	2.73	0.52
16:X:101:PHE:HA	16:X:133:LYS:HB2	1.91	0.52
16:X:162:ARG:NH1	16:X:162:ARG:CB	2.73	0.52
19:E:258:ARG:NE	19:E:258:ARG:CA	2.73	0.52
1:A:624:A:N7	1:A:625:C:C5	2.78	0.52
1:A:626:C:C2'	1:A:627:C:H6	2.23	0.52
1:A:1624:C:H2'	1:A:1625:A:C8	2.45	0.52
1:A:1651:C:O2	1:A:1651:C:H2'	2.09	0.52
1:A:1810:C:H1'	1:A:1811:A:OP2	2.09	0.52
1:A:1926:A:O2'	1:A:1927:A:H5'	2.10	0.52
1:A:2207:A:H5''	1:A:2208:U:OP2	2.10	0.52
1:A:2210:C:H2'	1:A:2210:C:O2	2.08	0.52
1:A:2319:C:HO2'	1:A:2320:G:H5'	1.71	0.52
4:L:208:LEU:HD13	4:L:217:LEU:HD11	1.90	0.52
10:R:202:ASN:HD21	25:F:107:GLY:HA3	1.73	0.52
13:U:42:SER:HA	13:U:128:PRO:HG2	1.92	0.52
16:X:73:LYS:HD3	16:X:73:LYS:H	1.74	0.52
16:X:153:ARG:HH11	16:X:153:ARG:CG	2.12	0.52
19:E:175:GLY:O	19:E:268:ARG:O	2.27	0.52
27:H:61:TYR:HE1	27:H:222:LEU:HD11	1.75	0.52
1:A:279:A:H62	1:A:379:C:H42	0.65	0.52
1:A:289:A:N1	1:A:369:U:O2	2.43	0.52
1:A:333:A:C6	1:A:334:U:C2	2.98	0.52
1:A:529:G:O5'	13:U:47:ARG:NH2	2.43	0.52
1:A:822:U:N3	6:N:100:ARG:NH2	2.58	0.52
1:A:823:C:N3	1:A:1271:G:C6	2.78	0.52
1:A:836:G:H2'	1:A:837:U:O4'	2.10	0.52
1:A:855:C:C4	1:A:856:U:C4	2.98	0.52
1:A:932:A:H5'	16:X:85:GLN:NE2	2.25	0.52
1:A:1139:A:N3	1:A:1139:A:C3'	2.73	0.52
1:A:1311:C:H2'	1:A:1312:A:H8	1.74	0.52
1:A:1536:A:N3	1:A:1536:A:C3'	2.73	0.52
1:A:1877:C:C2'	1:A:1878:C:H5''	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2347:G:H21	16:X:98:GLY:CA	2.22	0.52
3:B:53:U:C2	3:B:54:G:H1'	2.45	0.52
3:B:66:C:C4	3:B:110:C:N3	2.78	0.52
6:N:212:ILE:N	6:N:212:ILE:CD1	2.73	0.52
15:W:70:LYS:HB2	15:W:70:LYS:HZ2	1.75	0.52
16:X:145:GLU:H	16:X:145:GLU:CD	1.95	0.52
26:G:57:ILE:HB	26:G:65:VAL:O	2.10	0.52
1:A:19:U:H2'	1:A:20:A:C8	2.44	0.52
1:A:27:A:N6	1:A:523:G:H1'	2.25	0.52
1:A:128:U:O5'	1:A:128:U:H6	1.93	0.52
1:A:279:A:N3	1:A:279:A:C3'	2.73	0.52
1:A:457:C:H2'	1:A:458:G:O4'	2.10	0.52
1:A:670:A:H5''	26:G:151:LYS:HE3	1.90	0.52
1:A:1112:A:N3	1:A:1133:U:O2'	2.40	0.52
1:A:1635:C:C4'	14:V:106:ARG:NH2	2.62	0.52
1:A:1650:A:N1	13:U:116:PRO:HB3	2.25	0.52
1:A:2736:G:H1'	2:C:51:U:H5''	1.92	0.52
1:A:2739:A:C2	2:C:77:A:C6	2.98	0.52
2:C:30:A:N3	2:C:30:A:C3'	2.73	0.52
3:B:87:G:O2'	3:B:88:G:C5'	2.43	0.52
9:Q:50:ARG:O	9:Q:54:THR:CB	2.58	0.52
1:A:61:U:O4	1:A:92:U:O2	2.28	0.51
1:A:263:A:N3	1:A:263:A:C3'	2.73	0.51
1:A:277:G:N3	1:A:277:G:C5'	2.73	0.51
1:A:350:G:C2'	1:A:351:C:H5'	2.41	0.51
1:A:1064:A:H3'	1:A:1065:G:C5'	2.41	0.51
1:A:1488:A:H2'	1:A:1489:A:C8	2.44	0.51
1:A:1848:C:H4'	1:A:1849:A:O5'	2.09	0.51
1:A:2198:A:O5'	1:A:2198:A:H8	1.93	0.51
1:A:2753:C:N4	1:A:2787:C:H42	2.03	0.51
1:A:2810:A:N3	1:A:2810:A:C3'	2.73	0.51
2:C:102:U:H2'	2:C:103:G:C5'	2.34	0.51
3:B:19:G:H2'	3:B:20:U:C6	2.45	0.51
3:B:36:A:C5	3:B:45:G:C5	2.98	0.51
3:B:86:G:H2'	3:B:87:G:H8	1.74	0.51
13:U:47:ARG:HA	13:U:50:ILE:HG22	1.90	0.51
16:X:143:GLN:O	16:X:145:GLU:OE1	2.28	0.51
26:G:202:ALA:C	26:G:225:THR:HG21	2.30	0.51
27:H:221:LYS:HD2	27:H:224:SER:HB2	1.92	0.51
29:J:43:LYS:HG2	29:J:44:LYS:HG2	1.92	0.51
1:A:320:U:H1'	1:A:341:A:C4	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:350:G:H2'	1:A:351:C:C6	2.45	0.51
1:A:539:A:C6	1:A:2056:A:C5	2.99	0.51
1:A:554:G:N3	1:A:554:G:C5'	2.73	0.51
1:A:614:G:C2	1:A:615:G:C5	2.99	0.51
1:A:941:C:O2	1:A:956:G:C2	2.63	0.51
1:A:1179:C:H2'	1:A:1180:C:C6	2.45	0.51
1:A:1501:G:OP1	1:A:1501:G:H4'	2.10	0.51
1:A:1835:G:H2'	1:A:1836:C:C6	2.44	0.51
1:A:2108:G:N3	1:A:2108:G:C3'	2.73	0.51
1:A:2211:U:O2'	1:A:2212:A:OP1	2.28	0.51
1:A:2423:A:OP2	1:A:2428:A:N6	2.41	0.51
3:B:46:A:P	27:H:145:ARG:HH12	2.33	0.51
4:L:172:LEU:N	4:L:172:LEU:CD1	2.73	0.51
9:Q:120:ALA:HA	9:Q:123:ILE:HG22	1.91	0.51
16:X:132:LYS:CD	16:X:132:LYS:N	2.73	0.51
25:F:124:THR:O	25:F:125:GLN:HB2	2.09	0.51
1:A:133:A:H61	1:A:162:A:H2	0.53	0.51
1:A:274:G:C5	1:A:433:C:C5'	2.94	0.51
1:A:560:A:C6	1:A:561:C:C4	2.99	0.51
1:A:634:G:H2'	1:A:635:C:C6	2.45	0.51
1:A:858:G:C6	1:A:859:A:C6	2.98	0.51
1:A:884:G:N1	1:A:913:G:N1	2.58	0.51
1:A:1021:A:OP1	11:S:50:ARG:NH1	2.33	0.51
1:A:1162:C:O2	1:A:1162:C:H2'	2.08	0.51
1:A:1189:G:H1'	12:T:145:GLN:NE2	2.25	0.51
1:A:1535:A:C5'	1:A:1535:A:N3	2.73	0.51
1:A:1562:A:C4	1:A:1578:A:N6	2.79	0.51
1:A:2061:C:H2'	1:A:2062:A:C8	2.44	0.51
1:A:2393:A:N3	9:Q:166:PHE:CE2	2.79	0.51
2:C:26:G:H8	2:C:87:A:H2	1.57	0.51
2:C:104:A:C6	2:C:105:A:N6	2.78	0.51
3:B:70:G:H2'	3:B:71:G:C8	2.43	0.51
5:M:88:ASP:OD1	5:M:89:GLN:N	2.43	0.51
16:X:133:LYS:HE2	16:X:133:LYS:N	2.25	0.51
19:E:228:HIS:CE1	19:E:237:ILE:HD13	2.45	0.51
26:G:236:LEU:HD21	26:G:240:LEU:HD13	1.92	0.51
26:G:243:GLU:OE1	26:G:244:LYS:N	2.43	0.51
27:H:87:ILE:HA	27:H:208:CYS:O	2.10	0.51
1:A:101:A:C2	1:A:102:U:C2	2.99	0.51
1:A:383:A:O2'	1:A:384:G:OP2	2.26	0.51
1:A:919:A:H2'	1:A:920:A:C5'	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1137:C:C3'	1:A:1138:G:H8	2.24	0.51
1:A:1444:A:N1	1:A:1609:U:C5	2.78	0.51
1:A:1575:C:H2'	1:A:1576:U:C6	2.45	0.51
1:A:1635:C:OP1	14:V:144:LYS:HG3	2.09	0.51
1:A:1810:C:C4'	1:A:1811:A:H5'	2.40	0.51
1:A:1847:C:O2'	1:A:1941:A:N3	2.35	0.51
1:A:2416:G:H2'	1:A:2417:G:C8	2.46	0.51
1:A:2433:C:OP1	6:N:145:GLY:CA	2.58	0.51
2:C:99:A:C3'	2:C:100:C:H5'	2.40	0.51
3:B:90:G:H4'	3:B:90:G:OP1	2.10	0.51
6:N:130:GLU:OE2	6:N:139:ARG:NH2	2.43	0.51
7:O:110:ALA:HB3	7:O:113:ILE:HD13	1.91	0.51
10:R:171:SER:HB3	10:R:218:ARG:HG3	1.92	0.51
11:S:65:ILE:HB	11:S:98:ALA:HB2	1.93	0.51
15:W:67:ARG:HH22	15:W:94:LYS:HA	1.76	0.51
27:H:178:HIS:CD2	27:H:181:TYR:HA	2.45	0.51
1:A:569:G:H21	11:S:52:ARG:HH22	1.59	0.51
1:A:626:C:H3'	1:A:627:C:H6	1.69	0.51
1:A:740:G:C6	19:E:203:ARG:O	2.64	0.51
1:A:1307:A:N6	1:A:1310:C:O2	2.43	0.51
1:A:1694:C:OP1	25:F:229:HIS:HE1	1.94	0.51
1:A:1886:A:C2'	1:A:1887:G:C5'	2.86	0.51
1:A:2322:A:H5''	27:H:186:ARG:CB	2.40	0.51
1:A:2445:G:H21	6:N:139:ARG:CZ	2.23	0.51
6:N:115:ARG:O	6:N:119:SER:HB3	2.10	0.51
6:N:136:LEU:CD2	6:N:139:ARG:NH1	2.73	0.51
25:F:144:LEU:HD11	25:F:166:ARG:NH2	2.21	0.51
26:G:79:LYS:NZ	26:G:79:LYS:CB	2.73	0.51
1:A:347:G:C4	1:A:348:U:C5	2.98	0.51
1:A:820:G:C6	1:A:821:U:C4	2.98	0.51
1:A:957:U:C5	1:A:958:C:N4	2.79	0.51
1:A:1522:A:C2	1:A:1523:A:C8	2.98	0.51
1:A:2123:U:N3	1:A:2194:U:N3	2.59	0.51
1:A:2322:A:H5''	27:H:186:ARG:HG3	1.93	0.51
1:A:2645:U:O5'	1:A:2645:U:H6	1.94	0.51
1:A:2810:A:N3	1:A:2810:A:C5'	2.73	0.51
2:C:38:G:N2	25:F:145:ARG:HH21	1.95	0.51
3:B:37:U:C2'	3:B:38:C:H5'	2.40	0.51
3:B:92:U:O5'	3:B:92:U:H6	1.93	0.51
6:N:165:ILE:HG21	6:N:206:LEU:HA	1.93	0.51
6:N:202:GLY:HA2	6:N:221:ALA:N	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:90:A:O2'	1:A:91:A:O5'	2.28	0.51
1:A:124:A:O2'	1:A:125:A:H5'	2.11	0.51
1:A:144:A:N7	1:A:150:U:O4	2.44	0.51
1:A:218:A:H61	1:A:441:A:N6	2.08	0.51
1:A:355:A:N9	1:A:356:A:C8	2.76	0.51
1:A:670:A:H8	1:A:670:A:O5'	1.92	0.51
1:A:728:A:H2'	1:A:729:A:O4'	2.11	0.51
1:A:1002:G:H4'	1:A:1003:A:O5'	2.11	0.51
1:A:1159:G:N7	4:L:176:HIS:CE1	2.58	0.51
1:A:1457:G:O2'	1:A:1496:A:N1	2.44	0.51
1:A:1477:G:O5'	1:A:1477:G:H8	1.94	0.51
1:A:1760:G:N3	2:C:64:A:H2	2.09	0.51
1:A:2157:U:N3	1:A:2163:G:N2	2.57	0.51
1:A:2362:G:H4'	1:A:2363:A:O5'	2.11	0.51
1:A:2692:A:H2'	1:A:2693:C:O4'	2.10	0.51
4:L:100:TRP:CG	4:L:101:TYR:N	2.75	0.51
16:X:133:LYS:N	16:X:133:LYS:HD2	2.26	0.51
1:A:320:U:C1'	1:A:341:A:C4	2.94	0.51
1:A:416:C:O2	1:A:418:G:N1	2.43	0.51
1:A:1083:G:N2	1:A:1132:C:C2	2.78	0.51
1:A:1187:G:H21	12:T:131:SER:HB2	1.74	0.51
1:A:1194:G:C2	1:A:1204:A:C2	2.99	0.51
1:A:1199:A:H2'	1:A:1200:A:O4'	2.10	0.51
1:A:1263:G:N2	6:N:83:ASP:HB3	2.26	0.51
1:A:2047:A:O2'	1:A:2048:U:OP1	2.28	0.51
4:L:133:ILE:HD11	4:L:138:LYS:HD3	1.92	0.51
14:V:154:PHE:CZ	18:Z:149:PRO:HD3	2.46	0.51
15:W:145:ASP:OD1	15:W:146:ARG:N	2.41	0.51
18:Z:118:VAL:HG12	18:Z:122:ARG:HH21	1.56	0.51
27:H:107:ILE:O	27:H:111:ALA:CB	2.59	0.51
1:A:71:A:N6	1:A:109:A:O2'	2.41	0.51
1:A:84:G:P	15:W:71:VAL:HG22	2.51	0.51
1:A:102:U:O2'	1:A:103:C:H5'	2.10	0.51
1:A:274:G:C2'	1:A:275:U:OP2	2.58	0.51
1:A:277:G:N3	1:A:277:G:C3'	2.73	0.51
1:A:355:A:H3'	1:A:356:A:C8	2.46	0.51
1:A:388:C:H42	1:A:411:U:H3	1.58	0.51
1:A:863:C:H2'	1:A:864:U:C6	2.46	0.51
1:A:1076:A:H61	1:A:1139:A:C1'	2.23	0.51
1:A:1387:A:OP1	17:Y:72:ARG:HG2	2.10	0.51
1:A:1488:A:H2'	1:A:1489:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1597:C:H2'	1:A:1598:C:O4'	2.11	0.51
1:A:1879:U:C2	1:A:1887:G:C2	2.99	0.51
1:A:2109:C:H3'	1:A:2110:U:H5	1.70	0.51
1:A:2198:A:H2'	1:A:2199:G:C8	2.46	0.51
1:A:2338:G:N3	1:A:2338:G:C3'	2.73	0.51
10:R:127:ASN:C	10:R:127:ASN:HD22	2.15	0.51
12:T:88:VAL:CG1	12:T:89:LEU:H	2.14	0.51
12:T:180:ALA:HA	12:T:225:THR:O	2.11	0.51
27:H:186:ARG:CZ	27:H:204:GLY:HA2	2.41	0.51
1:A:161:G:O2'	1:A:162:A:O4'	2.29	0.51
1:A:345:C:O5'	1:A:345:C:H6	1.94	0.51
1:A:525:A:H2'	1:A:526:A:C8	2.46	0.51
1:A:1272:A:O2'	1:A:1274:A:OP2	2.20	0.51
1:A:2095:U:H5''	17:Y:87:ARG:HH11	1.76	0.51
1:A:2288:G:H2'	1:A:2289:U:C6	2.46	0.51
1:A:2290:A:H2'	1:A:2291:A:C8	2.46	0.51
2:C:88:C:O5'	2:C:88:C:H6	1.93	0.51
3:B:46:A:C4	3:B:47:A:C8	2.99	0.51
12:T:170:THR:HG21	12:T:172:ILE:HD11	1.93	0.51
15:W:57:LYS:HZ2	15:W:62:PRO:N	2.09	0.51
19:E:49:HIS:HB2	19:E:213:ARG:HB3	1.92	0.51
19:E:172:LEU:HD11	19:E:176:GLU:OE1	2.11	0.51
25:F:174:VAL:O	25:F:176:VAL:HG22	2.11	0.51
1:A:420:A:C6	1:A:432:G:N1	2.79	0.50
1:A:504:G:H4'	13:U:37:TYR:CG	2.45	0.50
1:A:1081:C:O2	1:A:1135:A:C2	2.64	0.50
1:A:1197:A:H1'	1:A:1198:A:N7	2.25	0.50
1:A:1263:G:C2	6:N:83:ASP:OD2	2.51	0.50
1:A:1535:A:N3	1:A:1535:A:C3'	2.73	0.50
1:A:2213:A:N3	1:A:2242:A:C2	2.79	0.50
1:A:2410:U:H5'	6:N:139:ARG:O	2.10	0.50
1:A:2578:A:H2'	1:A:2579:U:O4'	2.11	0.50
3:B:33:C:C4	3:B:34:C:N4	2.79	0.50
6:N:175:GLU:HB3	6:N:213:LYS:CE	2.41	0.50
12:T:100:THR:HG21	13:U:150:GLU:OE2	2.10	0.50
15:W:58:PRO:CD	15:W:61:LEU:O	2.55	0.50
26:G:129:GLN:NE2	26:G:134:ARG:HH22	2.09	0.50
1:A:4:A:C6	1:A:5:A:N6	2.78	0.50
1:A:343:U:OP1	1:A:344:C:N4	2.44	0.50
1:A:937:U:C2'	1:A:938:G:H5''	2.40	0.50
1:A:1590:C:N3	1:A:1591:C:N4	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1971:C:H2'	1:A:1972:C:C6	2.47	0.50
1:A:2764:U:O4	1:A:2774:U:C5	2.64	0.50
7:O:27:ILE:HD13	7:O:134:SER:HA	1.93	0.50
13:U:153:THR:O	13:U:157:LEU:N	2.34	0.50
14:V:185:SER:O	14:V:189:LYS:HG3	2.11	0.50
15:W:67:ARG:NH2	15:W:94:LYS:HA	2.26	0.50
16:X:68:ASN:OD1	16:X:68:ASN:N	2.45	0.50
16:X:102:HIS:CE1	16:X:132:LYS:HG3	2.46	0.50
26:G:73:LYS:HA	26:G:261:VAL:C	2.25	0.50
1:A:276:G:N1	1:A:416:C:O2'	2.42	0.50
1:A:626:C:C6	1:A:627:C:C6	2.99	0.50
1:A:1178:G:O2'	11:S:83:HIS:CD2	2.65	0.50
1:A:1211:G:P	6:N:109:SER:HG	2.17	0.50
1:A:1256:G:H3'	1:A:1257:G:C8	2.46	0.50
1:A:1287:G:N2	1:A:2027:A:OP2	2.41	0.50
4:L:186:GLU:HG3	4:L:191:LEU:HD11	1.94	0.50
13:U:32:ILE:HD11	13:U:93:PHE:CE2	2.42	0.50
13:U:50:ILE:HG21	13:U:105:VAL:HG23	1.93	0.50
18:Z:152:LEU:N	18:Z:152:LEU:CD1	2.73	0.50
26:G:83:VAL:HG11	26:G:159:LEU:CD2	2.41	0.50
1:A:42:G:C6	1:A:43:A:N6	2.79	0.50
1:A:348:U:O2'	1:A:349:A:H5'	2.11	0.50
1:A:855:C:N4	1:A:856:U:C4	2.79	0.50
1:A:2107:G:N2	1:A:2108:G:N7	2.59	0.50
1:A:2417:G:H8	1:A:2417:G:O5'	1.94	0.50
3:B:87:G:C6	3:B:93:C:N3	2.80	0.50
4:L:115:TYR:HB2	4:L:153:VAL:HG12	1.93	0.50
6:N:144:ARG:H	6:N:146:ILE:HD11	1.77	0.50
6:N:194:ARG:HG3	6:N:195:ARG:N	2.26	0.50
14:V:167:ARG:O	14:V:169:ASP:N	2.45	0.50
16:X:82:TYR:O	16:X:85:GLN:HG2	2.11	0.50
16:X:93:ILE:HD12	16:X:123:VAL:HG11	1.93	0.50
16:X:140:ARG:O	16:X:140:ARG:HG2	2.12	0.50
28:I:110:THR:O	28:I:114:ASN:ND2	2.45	0.50
1:A:205:G:N3	1:A:218:A:H2	2.10	0.50
1:A:291:G:C2	1:A:292:C:N3	2.80	0.50
1:A:389:A:N6	1:A:410:G:O6	2.45	0.50
1:A:626:C:H2'	1:A:627:C:C6	2.46	0.50
1:A:648:G:C6	6:N:158:VAL:HG21	2.46	0.50
1:A:1158:U:O4	25:F:240:THR:O	2.30	0.50
1:A:1876:A:H62	1:A:1889:G:H21	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2066:G:N3	25:F:243:HIS:HA	2.27	0.50
1:A:2075:G:O2'	1:A:2076:A:O5'	2.28	0.50
4:L:172:LEU:HA	4:L:186:GLU:O	2.11	0.50
5:M:1:MET:HA	5:M:32:TYR:CD1	2.47	0.50
6:N:84:ASN:HD22	6:N:85:LEU:N	2.09	0.50
6:N:165:ILE:CG2	6:N:206:LEU:HA	2.41	0.50
12:T:126:VAL:HA	12:T:134:TYR:O	2.12	0.50
17:Y:103:LEU:HD23	17:Y:120:ARG:HG2	1.93	0.50
27:H:166:ASP:OD1	27:H:167:PHE:N	2.45	0.50
1:A:152:G:N3	1:A:153:G:H8	2.06	0.50
1:A:169:C:H2'	1:A:170:U:C6	2.47	0.50
1:A:279:A:N3	1:A:279:A:C5'	2.73	0.50
1:A:287:A:N3	1:A:288:C:N3	2.59	0.50
1:A:919:A:N3	7:O:13:HIS:HE1	2.09	0.50
1:A:1081:C:N3	1:A:1135:A:N6	2.60	0.50
1:A:1651:C:C5	13:U:116:PRO:HG2	2.47	0.50
1:A:1879:U:C6	6:N:252:ARG:NH1	2.79	0.50
1:A:1926:A:N6	1:A:1931:U:H3	2.08	0.50
1:A:2213:A:H2'	1:A:2214:C:O5'	2.11	0.50
1:A:2374:C:O2'	1:A:2376:C:OP2	2.15	0.50
2:C:32:C:C1'	2:C:33:A:P	3.00	0.50
2:C:41:A:H61	2:C:86:A:H61	1.60	0.50
3:B:36:A:C6	3:B:45:G:N7	2.74	0.50
6:N:205:GLU:OE2	6:N:224:LYS:HD2	2.12	0.50
15:W:71:VAL:CA	15:W:89:ILE:HD11	2.40	0.50
19:E:63:PHE:CE1	19:E:152:ARG:HD2	2.46	0.50
19:E:139:ASN:OD1	19:E:140:ILE:N	2.45	0.50
26:G:90:THR:O	26:G:94:ASN:HB2	2.12	0.50
1:A:606:A:H2'	1:A:607:G:C8	2.47	0.50
1:A:854:A:C2	1:A:964:C:N3	2.80	0.50
1:A:913:G:N3	1:A:914:A:C8	2.79	0.50
1:A:1745:C:N3	1:A:1746:C:N4	2.51	0.50
1:A:1881:A:O2'	1:A:1882:U:OP1	2.17	0.50
1:A:2103:G:C2'	1:A:2104:A:C5'	2.85	0.50
1:A:2513:C:H2'	1:A:2514:A:O4'	2.12	0.50
2:C:37:C:H3'	2:C:38:G:C5'	2.41	0.50
2:C:40:U:O2	2:C:87:A:C2	2.64	0.50
3:B:7:G:H1'	3:B:8:G:H5'	1.93	0.50
3:B:32:A:N6	3:B:55:G:O6	2.44	0.50
3:B:110:C:H3'	3:B:110:C:H6	1.77	0.50
12:T:96:PRO:O	12:T:98:PRO:CG	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:T:192:ASP:HB3	12:T:216:ILE:HD13	1.93	0.50
26:G:255:LEU:HD12	26:G:259:TYR:CE2	2.46	0.50
27:H:223:LEU:HB3	27:H:228:MET:HB2	1.92	0.50
1:A:414:A:H2'	1:A:415:U:O4'	2.12	0.50
1:A:878:U:H2'	1:A:879:G:H8	1.77	0.50
1:A:913:G:N3	1:A:914:A:N7	2.59	0.50
1:A:944:C:H3'	1:A:944:C:H6	1.76	0.50
1:A:945:A:N3	1:A:945:A:C2'	2.74	0.50
1:A:1194:G:N1	1:A:1204:A:C2	2.80	0.50
1:A:1245:U:O2'	12:T:210:ILE:HG22	2.11	0.50
1:A:1748:C:O2'	1:A:1749:U:O5'	2.28	0.50
1:A:1801:A:C2	1:A:1839:A:H4'	2.47	0.50
1:A:2088:U:HO2'	1:A:2614:G:HO2'	1.51	0.50
1:A:2238:A:H2'	1:A:2239:G:H8	1.77	0.50
3:B:5:C:O2	3:B:119:G:C6	2.64	0.50
12:T:129:ILE:HD11	12:T:158:LEU:HD22	1.94	0.50
13:U:102:LYS:HG2	13:U:135:VAL:HB	1.94	0.50
14:V:105:PRO:O	14:V:107:ARG:N	2.45	0.50
1:A:642:G:N2	1:A:645:A:OP2	2.43	0.50
1:A:685:G:H4'	26:G:125:ARG:O	2.12	0.50
1:A:957:U:C4	1:A:958:C:N4	2.80	0.50
1:A:2109:C:C6	1:A:2110:U:C4	3.00	0.50
1:A:2322:A:C5	27:H:186:ARG:CZ	2.95	0.50
2:C:53:G:H8	2:C:70:G:N2	1.87	0.50
7:O:56:ARG:O	7:O:59:ARG:HB2	2.12	0.50
15:W:113:SER:OG	15:W:120:GLY:HA2	2.11	0.50
27:H:211:THR:HG22	27:H:213:ALA:H	1.76	0.50
1:A:311:U:OP2	15:W:146:ARG:NH1	2.44	0.49
1:A:525:A:H2'	1:A:526:A:H8	1.77	0.49
1:A:540:A:OP2	4:L:212:ARG:NE	2.40	0.49
1:A:907:C:O5'	1:A:907:C:H6	1.94	0.49
1:A:1532:G:O2'	1:A:1611:G:C4'	2.60	0.49
1:A:1566:G:H2'	1:A:1567:C:H6	1.77	0.49
1:A:1980:A:O2'	1:A:1981:C:O5'	2.29	0.49
1:A:2318:C:O5'	1:A:2318:C:H6	1.94	0.49
1:A:2401:C:OP1	16:X:111:LYS:HE3	2.12	0.49
3:B:72:U:H2'	3:B:73:G:C8	2.47	0.49
3:B:88:G:H8	3:B:88:G:O5'	1.95	0.49
7:O:69:PHE:CD1	7:O:70:PRO:HD2	2.47	0.49
9:Q:103:LYS:NZ	9:Q:107:GLU:HB3	2.27	0.49
12:T:91:ASP:CB	13:U:142:PHE:HZ	2.21	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:143:GLN:HA	16:X:145:GLU:OE1	2.12	0.49
29:J:53:LEU:HD22	29:J:57:ILE:HD11	1.94	0.49
1:A:71:A:C8	18:Z:116:LEU:HD13	2.46	0.49
1:A:355:A:C8	1:A:356:A:C1'	2.95	0.49
1:A:374:U:H2'	1:A:375:C:C2	2.46	0.49
1:A:688:C:O2'	1:A:2084:A:O2'	2.20	0.49
1:A:705:U:OP1	19:E:55:LYS:HE2	2.12	0.49
1:A:1268:A:H2	11:S:5:LYS:HZ1	1.56	0.49
1:A:1650:A:C2	13:U:116:PRO:HB3	2.46	0.49
1:A:2006:G:N2	1:A:2009:U:H5	2.10	0.49
1:A:2570:G:C2	1:A:2571:U:H1'	2.47	0.49
11:S:52:ARG:CG	11:S:55:ARG:HH11	2.24	0.49
12:T:95:ALA:H	12:T:96:PRO:CD	2.25	0.49
15:W:101:ILE:HD11	15:W:104:LEU:HB2	1.94	0.49
15:W:113:SER:H	15:W:120:GLY:HA2	1.76	0.49
26:G:186:LYS:O	26:G:188:LYS:N	2.46	0.49
28:I:74:ILE:HD12	28:I:115:MET:SD	2.52	0.49
1:A:278:G:C3'	1:A:279:A:C5'	2.89	0.49
1:A:377:G:O2'	1:A:378:A:O4'	2.29	0.49
1:A:854:A:C2	1:A:964:C:C2	3.00	0.49
1:A:934:A:C1'	1:A:935:U:P	3.00	0.49
1:A:956:G:H2'	1:A:957:U:H5''	1.93	0.49
1:A:977:G:O6	1:A:978:A:N6	2.46	0.49
1:A:1469:G:C6	1:A:1483:G:N1	2.81	0.49
1:A:1496:A:N6	1:A:1549:A:C6	2.80	0.49
1:A:1885:C:C5	6:N:253:ALA:CB	2.85	0.49
2:C:10:C:C2	2:C:11:A:C8	3.01	0.49
3:B:3:U:C2	3:B:4:U:C4	3.01	0.49
6:N:84:ASN:ND2	6:N:85:LEU:N	2.60	0.49
7:O:26:ARG:HG3	7:O:27:ILE:N	2.12	0.49
12:T:102:GLU:HA	12:T:102:GLU:OE1	2.12	0.49
12:T:110:PHE:C	12:T:110:PHE:CD1	2.85	0.49
25:F:119:GLU:CD	25:F:120:GLY:H	2.15	0.49
28:I:134:TYR:CD1	28:I:147:LEU:HA	2.47	0.49
1:A:77:U:H2'	1:A:78:C:H6	1.77	0.49
1:A:83:A:C2	1:A:101:A:N6	2.80	0.49
1:A:145:A:H8	1:A:145:A:O5'	1.96	0.49
1:A:154:C:N4	1:A:155:A:N6	2.60	0.49
1:A:158:C:N4	1:A:159:A:N6	2.60	0.49
1:A:329:C:C5	26:G:188:LYS:HD3	2.47	0.49
1:A:368:U:H6	1:A:368:U:O5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:375:C:O5'	1:A:375:C:H6	1.96	0.49
1:A:918:A:C6	1:A:921:C:C2	3.00	0.49
1:A:941:C:C5	1:A:942:U:C4	3.00	0.49
1:A:1136:U:C4	1:A:1137:C:N4	2.81	0.49
1:A:1550:U:C2'	1:A:1551:G:H5'	2.40	0.49
1:A:1693:U:H2'	1:A:1694:C:H6	1.77	0.49
1:A:1745:C:C2	1:A:1746:C:C4	3.00	0.49
1:A:1781:C:O2'	1:A:1796:A:H1'	2.12	0.49
1:A:1810:C:O2'	19:E:149:GLN:NE2	2.45	0.49
1:A:1834:G:O2'	19:E:244:THR:HG22	2.13	0.49
1:A:2151:G:C5	1:A:2152:C:N4	2.80	0.49
1:A:2318:C:C4	1:A:2319:C:N4	2.80	0.49
1:A:2771:A:H8	1:A:2771:A:O5'	1.95	0.49
2:C:31:U:O2'	2:C:32:C:H2'	2.12	0.49
13:U:37:TYR:CG	13:U:38:SER:N	2.80	0.49
15:W:100:ILE:O	15:W:100:ILE:HG13	2.11	0.49
29:J:77:PHE:CE1	29:J:81:LEU:CD1	2.95	0.49
1:A:160:A:P	1:A:160:A:C8	3.05	0.49
1:A:162:A:O2'	1:A:163:G:OP2	2.27	0.49
1:A:533:G:HO2'	1:A:552:G:HO2'	1.61	0.49
1:A:560:A:C2	1:A:561:C:C2	3.00	0.49
1:A:958:C:O5'	1:A:958:C:H6	1.95	0.49
1:A:1287:G:O2'	1:A:1288:U:OP2	2.23	0.49
1:A:2123:U:H5''	1:A:2124:G:OP2	2.12	0.49
1:A:2150:G:C6	1:A:2151:G:N1	2.80	0.49
1:A:2220:G:C6	1:A:2221:U:C5	3.01	0.49
1:A:2237:A:N3	1:A:2237:A:C5'	2.73	0.49
1:A:2322:A:C4	27:H:186:ARG:NE	2.80	0.49
2:C:97:A:H4'	2:C:97:A:OP1	2.12	0.49
12:T:97:GLU:N	12:T:98:PRO:HD3	2.20	0.49
14:V:106:ARG:C	14:V:107:ARG:CG	2.79	0.49
15:W:89:ILE:HA	15:W:101:ILE:HA	1.94	0.49
19:E:39:ARG:HG3	19:E:40:ASN:ND2	2.27	0.49
19:E:89:LEU:HD23	19:E:90:ILE:N	2.28	0.49
28:I:98:THR:CG2	28:I:101:ALA:H	2.24	0.49
1:A:41:A:N6	1:A:42:G:C6	2.81	0.49
1:A:335:G:N1	1:A:346:A:C6	2.81	0.49
1:A:493:G:HO2'	1:A:494:A:P	2.36	0.49
1:A:589:G:H2'	1:A:590:C:H6	1.78	0.49
1:A:696:A:O2'	1:A:699:U:O4	2.25	0.49
1:A:953:G:H2'	1:A:954:G:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1527:G:C6	1:A:1539:C:N4	2.76	0.49
1:A:1874:U:O2'	1:A:1875:G:H5'	2.12	0.49
1:A:1966:A:H5'	5:M:55:SER:HB3	1.95	0.49
1:A:2238:A:C2	1:A:2239:G:C8	3.00	0.49
2:C:58:G:H2'	2:C:59:C:H6	1.78	0.49
4:L:209:PRO:O	4:L:214:GLY:HA3	2.12	0.49
6:N:97:ARG:HH11	6:N:100:ARG:CD	2.24	0.49
6:N:209:LYS:HB2	6:N:230:CYS:HB3	1.90	0.49
1:A:388:C:N4	1:A:410:G:C6	2.80	0.49
1:A:651:U:H2'	1:A:652:C:C6	2.47	0.49
1:A:1176:C:O5'	1:A:1176:C:H6	1.96	0.49
1:A:1263:G:N2	6:N:83:ASP:CB	2.75	0.49
1:A:2016:G:O6	1:A:2017:A:N6	2.46	0.49
5:M:105:GLU:O	5:M:108:GLN:HG2	2.13	0.49
12:T:103:TYR:O	12:T:104:ASN:HB2	2.13	0.49
12:T:201:LYS:HG2	12:T:206:TYR:CE2	2.42	0.49
13:U:38:SER:HB3	13:U:129:THR:HB	1.95	0.49
19:E:29:ILE:HG22	19:E:57:LEU:HD23	1.94	0.49
19:E:113:VAL:HG22	19:E:114:SER:O	2.13	0.49
1:A:313:A:H2	1:A:323:G:C2	2.23	0.49
1:A:344:C:H2'	1:A:345:C:C6	2.47	0.49
1:A:543:A:H61	1:A:2034:C:H1'	1.76	0.49
1:A:899:A:C1'	1:A:900:G:P	3.00	0.49
1:A:1259:C:H2'	1:A:1260:G:O4'	2.13	0.49
1:A:1778:G:C6	1:A:1999:G:C6	3.01	0.49
1:A:1879:U:N3	1:A:1887:G:C2	2.80	0.49
1:A:2088:U:O2'	1:A:2614:G:O2'	2.22	0.49
1:A:2279:U:OP2	16:X:73:LYS:HB2	2.04	0.49
1:A:2308:U:H3	1:A:2358:G:H1	1.61	0.49
1:A:2389:G:H2'	1:A:2390:A:H8	1.76	0.49
1:A:2647:A:N7	2:C:98:G:N1	2.60	0.49
2:C:33:A:C1'	2:C:34:U:P	3.00	0.49
2:C:36:A:HO2'	2:C:37:C:P	2.35	0.49
2:C:41:A:N6	2:C:86:A:C6	2.81	0.49
2:C:103:G:H2'	2:C:104:A:H5'	1.94	0.49
3:B:35:A:P	3:B:35:A:C8	3.04	0.49
6:N:251:ALA:O	6:N:254:ASP:HB2	2.13	0.49
9:Q:70:ARG:HB3	9:Q:71:PRO:CD	2.42	0.49
9:Q:129:LYS:HA	9:Q:132:LEU:HB3	1.94	0.49
12:T:230:TYR:O	12:T:230:TYR:HD1	1.95	0.49
16:X:67:LYS:N	16:X:67:LYS:NZ	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:162:ARG:CG	16:X:162:ARG:NH1	2.72	0.49
19:E:75:VAL:HG21	19:E:91:HIS:CE1	2.48	0.49
25:F:138:GLN:HE21	25:F:168:LEU:HG	1.78	0.49
27:H:60:ASN:O	27:H:64:LYS:HG2	2.13	0.49
1:A:150:U:C4	1:A:151:G:C6	3.01	0.49
1:A:152:G:N1	1:A:153:G:C5	2.81	0.49
1:A:824:U:H4'	1:A:1246:G:O2'	2.12	0.49
1:A:1091:G:N1	1:A:1103:C:O2	2.37	0.49
1:A:1629:G:H2'	1:A:1630:G:C8	2.48	0.49
1:A:1689:C:H5''	8:P:12:LYS:HE2	1.91	0.49
1:A:1965:U:N3	1:A:1968:G:OP2	2.33	0.49
1:A:2055:U:O4	1:A:2056:A:N6	2.46	0.49
1:A:2150:G:H1	1:A:2151:G:N2	2.11	0.49
1:A:2650:G:H1	1:A:2803:C:H42	1.60	0.49
6:N:82:LEU:HD22	26:G:88:LEU:CD1	2.42	0.49
11:S:61:TRP:O	11:S:65:ILE:HG22	2.12	0.49
14:V:109:LEU:HD21	14:V:141:ARG:HD2	1.95	0.49
14:V:167:ARG:NH2	14:V:173:LYS:HB2	2.28	0.49
19:E:140:ILE:CG1	19:E:150:LEU:HB2	2.42	0.49
25:F:195:ASP:HA	25:F:266:ILE:HG22	1.94	0.49
26:G:195:GLN:HA	26:G:200:ASP:HB2	1.93	0.49
26:G:254:TYR:HH	26:G:258:ARG:NE	2.04	0.49
1:A:140:G:C2'	1:A:141:C:C5'	2.91	0.49
1:A:270:G:H8	1:A:270:G:O5'	1.96	0.49
1:A:290:A:N3	1:A:291:G:N7	2.60	0.49
1:A:689:C:H2'	1:A:690:U:C6	2.48	0.49
1:A:1237:C:H42	1:A:1238:G:N2	2.09	0.49
1:A:1498:G:H2'	1:A:1499:G:C8	2.48	0.49
3:B:40:A:H8	3:B:40:A:O5'	1.96	0.49
15:W:103:ASP:HA	15:W:126:GLU:OE2	2.12	0.49
1:A:11:G:H2'	1:A:12:A:O4'	2.13	0.48
1:A:214:A:H1'	6:N:238:ARG:HH21	1.78	0.48
1:A:335:G:H2'	1:A:336:G:H8	1.71	0.48
1:A:381:C:H3'	1:A:381:C:OP2	2.12	0.48
1:A:898:G:N1	1:A:899:A:N6	2.61	0.48
1:A:1070:G:C2	1:A:1142:G:C5	3.01	0.48
1:A:1099:G:O6	1:A:1119:G:O6	2.31	0.48
1:A:1362:G:H4'	14:V:165:LEU:HB3	1.94	0.48
1:A:1504:C:H2'	1:A:1505:C:H6	1.71	0.48
1:A:1747:C:N3	1:A:1758:G:N1	2.61	0.48
1:A:1891:A:H2'	1:A:1892:G:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2137:G:C2	1:A:2190:A:C6	3.00	0.48
3:B:6:U:N3	3:B:118:G:C2	2.81	0.48
17:Y:107:ARG:HG2	17:Y:116:PHE:HB3	1.94	0.48
18:Z:88:PHE:C	18:Z:88:PHE:CD2	2.85	0.48
25:F:121:ASN:N	25:F:121:ASN:ND2	2.60	0.48
26:G:207:PHE:HD2	26:G:228:LEU:HD23	1.78	0.48
28:I:99:ARG:O	28:I:103:GLN:HG2	2.13	0.48
1:A:70:A:N3	1:A:72:A:N6	2.61	0.48
1:A:291:G:HO2'	1:A:292:C:H5'	1.73	0.48
1:A:366:G:OP2	1:A:366:G:H8	1.96	0.48
1:A:533:G:H2'	1:A:534:C:C6	2.48	0.48
1:A:1163:G:H2'	1:A:1164:G:C8	2.49	0.48
1:A:1438:G:H22	1:A:1616:A:H62	1.61	0.48
1:A:1718:G:P	1:A:1735:G:H22	2.35	0.48
1:A:2210:C:H4'	1:A:2211:U:OP1	2.13	0.48
1:A:2211:U:O4	1:A:2241:G:C5	2.66	0.48
1:A:2215:C:N3	1:A:2240:G:N2	2.61	0.48
1:A:2575:C:O2'	1:A:2576:C:N3	2.46	0.48
2:C:16:G:H4'	8:P:13:HIS:CD2	2.48	0.48
3:B:112:A:C2'	3:B:113:C:O5'	2.61	0.48
4:L:164:SER:OG	4:L:165:GLY:N	2.47	0.48
6:N:158:VAL:HG13	6:N:201:LEU:CD2	2.43	0.48
10:R:221:TYR:O	10:R:225:LYS:HG2	2.13	0.48
1:A:101:A:N1	1:A:102:U:C4	2.81	0.48
1:A:265:A:C5'	1:A:266:A:C8	2.92	0.48
1:A:277:G:N3	1:A:277:G:H5''	2.28	0.48
1:A:296:G:H2'	1:A:297:U:C5	2.48	0.48
1:A:459:A:O2'	1:A:485:G:N7	2.31	0.48
1:A:560:A:N6	1:A:561:C:N4	2.60	0.48
1:A:635:C:H2'	1:A:636:C:H6	1.78	0.48
1:A:1386:A:OP2	17:Y:73:ARG:HG3	2.13	0.48
1:A:1575:C:H2'	1:A:1576:U:H6	1.78	0.48
1:A:1592:A:H4'	1:A:1593:U:O5'	2.13	0.48
1:A:1600:A:C2	19:E:209:TRP:HZ3	2.22	0.48
1:A:2192:U:H2'	1:A:2193:C:N1	2.28	0.48
1:A:2260:U:H2'	1:A:2261:U:C6	2.48	0.48
1:A:2723:A:O2'	8:P:74:ARG:CD	2.50	0.48
2:C:34:U:O2	2:C:34:U:O2'	2.28	0.48
2:C:106:C:O5'	2:C:106:C:H6	1.95	0.48
3:B:8:G:O2'	3:B:9:U:O4'	2.31	0.48
28:I:128:GLN:HA	28:I:170:LYS:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:143:G:C2	1:A:2224:G:C2	3.02	0.48
1:A:268:G:C2	1:A:269:G:C2	3.01	0.48
1:A:358:C:O2'	1:A:359:A:O5'	2.30	0.48
1:A:477:G:O2'	1:A:694:U:O2'	2.27	0.48
1:A:663:A:H2'	1:A:664:A:H5'	1.94	0.48
1:A:837:U:O2'	6:N:132:GLY:HA3	2.13	0.48
1:A:895:C:H3'	1:A:896:G:C8	2.46	0.48
1:A:932:A:C5'	16:X:85:GLN:HE22	2.20	0.48
1:A:962:G:H4'	1:A:962:G:OP1	2.13	0.48
1:A:1757:G:H8	1:A:1757:G:O5'	1.97	0.48
1:A:1810:C:H5'	19:E:142:ILE:HD12	1.94	0.48
1:A:2213:A:C2	1:A:2214:C:C4	3.00	0.48
1:A:2320:G:O6	1:A:2331:G:O6	2.31	0.48
15:W:164:THR:OG1	15:W:166:GLU:OE1	2.28	0.48
16:X:143:GLN:CA	16:X:145:GLU:OE1	2.61	0.48
26:G:60:PHE:CZ	26:G:180:GLU:HA	2.49	0.48
1:A:42:G:C6	1:A:43:A:C6	3.02	0.48
1:A:71:A:H61	1:A:109:A:HO2'	1.58	0.48
1:A:93:A:HO2'	18:Z:102:PRO:CG	2.02	0.48
1:A:101:A:C6	1:A:102:U:O4	2.66	0.48
1:A:133:A:N7	1:A:134:A:C6	2.81	0.48
1:A:226:A:O2'	1:A:227:G:O5'	2.28	0.48
1:A:598:U:H2'	1:A:599:C:C6	2.48	0.48
1:A:1268:A:O2'	1:A:1269:G:H5'	2.13	0.48
1:A:1548:A:O2'	1:A:1591:C:C4'	2.60	0.48
1:A:1558:U:H2'	1:A:1559:A:O4'	2.12	0.48
1:A:1971:C:H2'	1:A:1972:C:H6	1.77	0.48
1:A:2176:A:H5''	1:A:2185:A:H2'	1.95	0.48
1:A:2227:C:HO2'	1:A:2228:C:H5'	1.73	0.48
1:A:2321:G:H5''	27:H:175:PHE:HB3	1.93	0.48
1:A:2606:A:N1	1:A:2623:C:N4	2.62	0.48
1:A:2715:U:H2'	1:A:2716:C:C6	2.48	0.48
2:C:101:U:C5'	2:C:102:U:OP2	2.61	0.48
3:B:60:A:H2'	3:B:61:C:H6	1.78	0.48
5:M:69:LEU:H	5:M:76:ILE:HG23	1.79	0.48
15:W:87:GLY:HA3	15:W:101:ILE:HD13	1.95	0.48
17:Y:82:SER:HB3	17:Y:100:PHE:HB3	1.96	0.48
17:Y:87:ARG:HG2	17:Y:95:THR:OG1	2.13	0.48
19:E:65:ARG:CD	19:E:114:SER:HB3	2.43	0.48
19:E:135:THR:HG22	19:E:136:ALA:H	1.79	0.48
1:A:318:A:C6	1:A:339:A:N6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:423:G:O2'	1:A:2423:A:N7	2.41	0.48
1:A:531:A:P	13:U:54:ARG:HH12	2.36	0.48
1:A:605:C:H2'	1:A:606:A:C8	2.48	0.48
1:A:656:A:HO2'	1:A:657:U:H5	1.61	0.48
1:A:680:G:H2'	1:A:680:G:N3	2.28	0.48
1:A:715:G:H1'	1:A:738:A:N6	2.28	0.48
1:A:793:A:N3	19:E:221:MET:HG2	2.29	0.48
1:A:1122:U:N3	1:A:1125:U:OP2	2.41	0.48
1:A:1169:A:H5'	4:L:245:ARG:NH2	2.27	0.48
1:A:1809:G:N7	19:E:172:LEU:HD11	2.29	0.48
1:A:1914:A:H1'	1:A:1984:A:H2'	1.96	0.48
1:A:2267:G:C6	7:O:82:ARG:NH2	2.81	0.48
1:A:2301:G:O2'	1:A:2305:A:N6	2.47	0.48
1:A:2320:G:O2'	27:H:175:PHE:CB	2.62	0.48
2:C:58:G:C6	2:C:68:A:C6	3.02	0.48
2:C:79:G:O2'	10:R:121:ASP:CG	2.52	0.48
16:X:87:ALA:O	16:X:120:ASP:HA	2.14	0.48
16:X:127:LYS:HE3	16:X:133:LYS:NZ	2.27	0.48
18:Z:79:GLU:OE2	18:Z:111:ARG:NH1	2.46	0.48
1:A:88:A:H5'	15:W:57:LYS:HZ3	1.78	0.48
1:A:583:G:C6	1:A:2044:A:H3'	2.48	0.48
1:A:626:C:C5	1:A:627:C:N4	2.81	0.48
1:A:994:A:H4'	1:A:2288:G:H22	1.77	0.48
1:A:1085:A:H2'	1:A:1086:G:H8	1.79	0.48
1:A:1524:G:C6	1:A:1525:G:C6	3.01	0.48
1:A:1885:C:H41	6:N:253:ALA:N	2.12	0.48
1:A:2199:G:C5	1:A:2200:A:C8	3.01	0.48
1:A:2304:A:C5	1:A:2306:G:C8	3.01	0.48
1:A:2507:G:O2'	1:A:2508:U:O5'	2.27	0.48
2:C:13:G:H21	2:C:40:U:C1'	2.26	0.48
3:B:12:C:N3	3:B:112:A:N1	2.62	0.48
3:B:60:A:H2'	3:B:61:C:C6	2.49	0.48
5:M:19:LEU:HD13	5:M:41:ALA:CB	2.44	0.48
6:N:175:GLU:CB	6:N:213:LYS:HZ1	2.19	0.48
11:S:72:ARG:HG3	11:S:112:TYR:CE2	2.48	0.48
14:V:167:ARG:HH21	14:V:173:LYS:HB2	1.78	0.48
18:Z:120:ARG:CG	18:Z:120:ARG:NH1	2.72	0.48
26:G:60:PHE:HZ	26:G:180:GLU:HA	1.77	0.48
26:G:96:ARG:HB2	26:G:148:TRP:NE1	2.29	0.48
1:A:857:G:C2	1:A:961:G:C4	3.00	0.48
1:A:913:G:C2	1:A:914:A:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1287:G:O2'	1:A:1288:U:P	2.72	0.48
1:A:1469:G:C6	1:A:1483:G:C6	3.02	0.48
1:A:1605:A:H2'	1:A:1606:A:H8	1.79	0.48
1:A:2324:G:N2	1:A:2328:A:C2'	2.77	0.48
1:A:2330:U:C1'	27:H:90:ASN:HD21	2.27	0.48
1:A:2335:C:H3'	1:A:2335:C:H6	1.78	0.48
1:A:2479:U:H5	1:A:2505:A:H2	1.60	0.48
1:A:2486:A:H2'	1:A:2487:G:O4'	2.13	0.48
7:O:28:CYS:HB2	7:O:67:ARG:NH1	2.29	0.48
10:R:226:LEU:HD23	10:R:228:ARG:HB2	1.96	0.48
16:X:134:LYS:HB3	16:X:134:LYS:HZ2	1.73	0.48
16:X:157:ASN:O	16:X:158:PHE:C	2.51	0.48
26:G:57:ILE:HD11	26:G:68:THR:HG23	1.96	0.48
1:A:454:G:N3	26:G:99:THR:OG1	2.45	0.48
1:A:853:G:O2'	1:A:854:A:O5'	2.25	0.48
1:A:863:C:H2'	1:A:864:U:H6	1.79	0.48
1:A:950:A:C5	1:A:951:C:C2	3.01	0.48
1:A:1012:G:H5''	1:A:1013:C:OP2	2.14	0.48
1:A:1437:G:H2'	1:A:1438:G:H5''	1.96	0.48
1:A:1482:C:H3'	1:A:1482:C:H6	1.79	0.48
1:A:1524:G:H8	1:A:1524:G:O5'	1.96	0.48
1:A:1799:A:H5''	19:E:216:VAL:HA	1.96	0.48
1:A:2433:C:OP1	6:N:145:GLY:HA2	2.14	0.48
2:C:40:U:O5'	2:C:40:U:H6	1.97	0.48
2:C:68:A:H2'	2:C:69:U:C6	2.49	0.48
3:B:7:G:C1'	3:B:8:G:P	3.01	0.48
3:B:7:G:C4'	3:B:8:G:OP1	2.61	0.48
3:B:94:C:H2'	3:B:95:U:H6	1.79	0.48
10:R:172:ARG:NH2	10:R:174:ASN:HB3	2.29	0.48
11:S:72:ARG:HG3	11:S:112:TYR:CZ	2.49	0.48
15:W:85:LYS:HD3	15:W:104:LEU:CD1	2.38	0.48
26:G:199:LEU:C	26:G:201:PRO:HD3	2.34	0.48
1:A:320:U:O2	1:A:340:A:H2'	2.14	0.48
1:A:884:G:H8	1:A:884:G:O5'	1.97	0.48
1:A:938:G:H2'	1:A:939:A:H5'	1.94	0.48
1:A:1307:A:C2	1:A:1350:U:C4	3.02	0.48
1:A:1576:U:H2'	1:A:1577:G:O4'	2.14	0.48
2:C:33:A:C2'	2:C:33:A:N3	2.76	0.48
6:N:205:GLU:OE1	6:N:205:GLU:HA	2.14	0.48
15:W:113:SER:HB2	15:W:120:GLY:N	2.29	0.48
15:W:170:THR:CG2	15:W:171:PRO:CD	2.85	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:H:175:PHE:CD1	27:H:183:VAL:HG13	2.37	0.48
1:A:76:U:H2'	1:A:77:U:H6	1.79	0.47
1:A:389:A:C6	1:A:390:U:N3	2.81	0.47
1:A:431:U:H2'	1:A:432:G:H5'	1.95	0.47
1:A:614:G:H2'	1:A:615:G:C8	2.49	0.47
1:A:616:U:H3	1:A:634:G:H1	1.62	0.47
1:A:878:U:H2'	1:A:879:G:C8	2.49	0.47
1:A:1674:C:O2	1:A:2715:U:O2'	2.30	0.47
1:A:2187:A:H2'	1:A:2188:C:O4'	2.15	0.47
1:A:2247:C:H5''	17:Y:100:PHE:CE1	2.49	0.47
2:C:102:U:C2'	2:C:103:G:C5'	2.88	0.47
3:B:26:A:N3	3:B:26:A:H2'	2.28	0.47
3:B:86:G:N1	3:B:87:G:C6	2.82	0.47
6:N:81:ARG:HH11	26:G:243:GLU:HB2	1.51	0.47
9:Q:115:PRO:HB2	9:Q:151:ARG:NE	2.29	0.47
9:Q:125:GLU:OE1	9:Q:162:HIS:NE2	2.43	0.47
9:Q:156:ALA:O	9:Q:160:ARG:HG3	2.14	0.47
16:X:128:TYR:CD2	16:X:132:LYS:HB3	2.46	0.47
26:G:182:PHE:HE2	26:G:190:PHE:HD1	1.61	0.47
1:A:16:G:H2'	1:A:17:C:C6	2.49	0.47
1:A:182:A:H2	1:A:2451:A:H62	1.61	0.47
1:A:293:G:N1	1:A:294:U:C4	2.82	0.47
1:A:384:G:O2'	1:A:412:G:C6	2.51	0.47
1:A:649:A:OP1	6:N:202:GLY:CA	2.61	0.47
1:A:659:G:H2'	1:A:660:G:O4'	2.13	0.47
1:A:1196:A:H4'	1:A:1197:A:OP1	2.13	0.47
1:A:1497:A:N6	1:A:1547:C:N4	2.57	0.47
1:A:1752:C:H3'	1:A:1752:C:H6	1.79	0.47
1:A:2107:G:C4	1:A:2242:A:N7	2.81	0.47
1:A:2191:C:O2'	1:A:2192:U:H5'	2.13	0.47
1:A:2559:A:H5''	1:A:2560:G:OP1	2.15	0.47
2:C:88:C:H6	2:C:88:C:P	2.37	0.47
2:C:92:C:H2'	2:C:93:C:H6	1.79	0.47
5:M:100:GLY:HA2	10:R:188:ALA:HB3	1.97	0.47
14:V:138:VAL:HG23	14:V:172:LYS:HB3	1.96	0.47
16:X:77:LEU:HD11	16:X:97:ARG:CZ	2.41	0.47
16:X:122:LEU:HG	16:X:140:ARG:HB3	1.88	0.47
19:E:267:ILE:HG22	19:E:269:ARG:CB	2.39	0.47
26:G:133:LEU:N	26:G:133:LEU:HD12	2.29	0.47
1:A:76:U:H2'	1:A:77:U:C6	2.49	0.47
1:A:1055:A:C2	1:A:2505:A:H5'	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1234:A:N6	1:A:1256:G:H22	2.07	0.47
1:A:1524:G:C2'	1:A:1525:G:H5'	2.44	0.47
1:A:2213:A:N3	1:A:2242:A:H2	2.09	0.47
3:B:10:G:OP1	9:Q:59:ARG:NE	2.40	0.47
3:B:43:C:O2	27:H:143:THR:HB	2.14	0.47
3:B:46:A:O5'	27:H:145:ARG:NH1	2.48	0.47
3:B:86:G:N1	3:B:87:G:N7	2.61	0.47
5:M:78:ARG:O	10:R:193:GLU:HB3	2.13	0.47
13:U:113:LYS:O	13:U:124:MET:HA	2.14	0.47
16:X:128:TYR:CG	16:X:134:LYS:CG	2.66	0.47
19:E:61:ILE:HD11	19:E:63:PHE:CE1	2.49	0.47
25:F:229:HIS:C	25:F:231:ALA:H	2.18	0.47
1:A:164:A:H8	1:A:164:A:O5'	1.97	0.47
1:A:295:C:C2'	1:A:296:G:H5'	2.43	0.47
1:A:455:A:N6	26:G:92:LEU:O	2.48	0.47
1:A:593:G:O6	1:A:1278:U:O2	2.33	0.47
1:A:761:A:OP2	13:U:118:ALA:HB2	2.14	0.47
1:A:1168:U:OP1	4:L:123:ILE:HD12	2.14	0.47
1:A:1662:A:O2'	1:A:1663:G:OP2	2.28	0.47
1:A:1755:A:C2	1:A:1756:G:C8	3.02	0.47
1:A:1841:G:C6	1:A:1989:G:N1	2.82	0.47
1:A:2117:U:H3	1:A:2200:A:H61	1.61	0.47
1:A:2191:C:C4	1:A:2192:U:C4	3.03	0.47
1:A:2193:C:N4	1:A:2194:U:O4	2.48	0.47
1:A:2230:A:N3	1:A:2230:A:C2'	2.77	0.47
1:A:2531:U:H2'	1:A:2532:C:C6	2.49	0.47
3:B:91:G:N2	7:O:38:GLU:CD	2.59	0.47
6:N:195:ARG:O	6:N:197:PRO:CD	2.56	0.47
7:O:25:ASN:HD22	7:O:101:ARG:HG3	1.79	0.47
7:O:72:LYS:HG2	7:O:94:VAL:O	2.14	0.47
14:V:111:VAL:CG2	14:V:112:TYR:N	2.78	0.47
15:W:71:VAL:HA	15:W:89:ILE:CD1	2.42	0.47
25:F:223:THR:HG22	25:F:224:HIS:N	2.22	0.47
27:H:85:VAL:HB	27:H:210:THR:OG1	2.15	0.47
29:J:73:PHE:CD2	29:J:78:LEU:HD11	2.50	0.47
1:A:115:G:OP2	1:A:117:A:O2'	2.23	0.47
1:A:119:A:C8	1:A:132:G:C6	3.02	0.47
1:A:241:A:H2'	1:A:242:A:C8	2.49	0.47
1:A:295:C:O5'	1:A:295:C:H6	1.97	0.47
1:A:369:U:O2'	1:A:369:U:O2	2.28	0.47
1:A:938:G:O2'	1:A:939:A:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1135:A:H2'	1:A:1136:U:C6	2.49	0.47
1:A:1144:U:H2'	1:A:1145:C:C6	2.49	0.47
1:A:1496:A:H62	1:A:1549:A:N6	2.12	0.47
1:A:1546:C:H2'	1:A:1547:C:H5'	1.97	0.47
1:A:2186:U:P	1:A:2188:C:C4	3.07	0.47
1:A:2315:G:N2	1:A:2338:G:C5	2.81	0.47
6:N:240:LYS:HG3	6:N:240:LYS:O	2.13	0.47
15:W:158:VAL:CG1	15:W:169:ASP:OD1	2.63	0.47
26:G:75:ALA:CB	26:G:159:LEU:HD21	2.37	0.47
1:A:101:A:N1	1:A:102:U:N3	2.62	0.47
1:A:318:A:C6	1:A:339:A:C5	3.02	0.47
1:A:420:A:C6	1:A:432:G:C2	3.03	0.47
1:A:506:G:H1'	13:U:86:ASN:OD1	2.14	0.47
1:A:560:A:N1	1:A:561:C:N3	2.62	0.47
1:A:614:G:H2'	1:A:615:G:H8	1.79	0.47
1:A:623:A:H3'	1:A:623:A:OP2	2.13	0.47
1:A:679:G:H5'	1:A:680:G:OP2	2.14	0.47
1:A:934:A:O2'	1:A:935:U:O5'	2.20	0.47
1:A:1520:A:C2	1:A:1521:G:H1'	2.50	0.47
1:A:1603:A:C5'	19:E:55:LYS:CD	2.86	0.47
1:A:1723:G:N2	1:A:1738:G:C6	2.83	0.47
1:A:2003:A:HO2'	1:A:2004:C:P	2.36	0.47
1:A:2602:U:O2'	1:A:2603:C:H5'	2.14	0.47
1:A:2672:G:HO2'	1:A:2673:U:P	2.37	0.47
7:O:33:ALA:HB1	7:O:102:ILE:HG23	1.96	0.47
11:S:36:ALA:O	11:S:39:LYS:HB3	2.15	0.47
11:S:91:LEU:HD12	12:T:175:PRO:O	2.13	0.47
15:W:74:THR:HG22	15:W:88:GLU:OE1	2.15	0.47
15:W:158:VAL:HG12	15:W:169:ASP:OD1	2.15	0.47
19:E:179:LEU:HG	19:E:263:ASP:O	2.14	0.47
28:I:163:VAL:HG12	28:I:173:VAL:HG22	1.95	0.47
1:A:43:A:C2	1:A:44:G:C2	3.02	0.47
1:A:97:A:H8	1:A:97:A:O5'	1.97	0.47
1:A:228:U:OP2	1:A:239:G:N1	2.47	0.47
1:A:270:G:C2'	1:A:271:G:C5'	2.91	0.47
1:A:344:C:O5'	1:A:344:C:H6	1.98	0.47
1:A:428:C:H2'	1:A:429:C:C6	2.49	0.47
1:A:554:G:O6	1:A:560:A:N1	2.48	0.47
1:A:723:G:H2'	1:A:724:G:N9	2.29	0.47
1:A:866:G:H2'	1:A:867:G:C8	2.50	0.47
1:A:902:G:C5	1:A:903:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:937:U:H2'	1:A:938:G:C5'	2.44	0.47
1:A:983:G:C2	7:O:82:ARG:CZ	2.64	0.47
1:A:1039:A:C2	1:A:1178:G:C5	3.01	0.47
1:A:1137:C:C3'	1:A:1138:G:C8	2.98	0.47
1:A:1237:C:N4	1:A:1238:G:C2	2.83	0.47
1:A:1437:G:C2	1:A:1618:C:H1'	2.50	0.47
1:A:1483:G:O2'	1:A:1484:G:H5'	2.15	0.47
1:A:1506:U:H3'	1:A:1507:G:O4'	2.14	0.47
1:A:1750:C:H42	1:A:1755:A:H61	1.61	0.47
1:A:1841:G:H2'	1:A:1842:C:C6	2.49	0.47
1:A:1882:U:C5	1:A:1883:G:C6	3.02	0.47
1:A:2114:G:C5	1:A:2204:A:N1	2.83	0.47
1:A:2330:U:C1'	27:H:90:ASN:ND2	2.77	0.47
1:A:2473:C:N4	1:A:2474:U:O4	2.47	0.47
1:A:2705:G:N1	1:A:2738:U:OP2	2.24	0.47
2:C:30:A:C2	2:C:83:C:C6	3.03	0.47
2:C:39:A:C5	2:C:83:C:C5	3.03	0.47
2:C:58:G:H2'	2:C:59:C:C6	2.50	0.47
3:B:25:G:C8	3:B:57:U:C4	3.02	0.47
3:B:69:C:H2'	3:B:70:G:H5'	1.97	0.47
6:N:129:PHE:CZ	6:N:131:GLY:HA2	2.47	0.47
6:N:202:GLY:CA	6:N:221:ALA:CA	2.73	0.47
9:Q:50:ARG:O	9:Q:54:THR:HB	2.14	0.47
9:Q:57:HIS:HD2	9:Q:60:ILE:HB	1.80	0.47
14:V:134:LEU:O	14:V:176:ILE:HG12	2.15	0.47
15:W:59:ASN:C	15:W:60:SER:OG	2.45	0.47
16:X:133:LYS:N	16:X:133:LYS:CD	2.77	0.47
26:G:212:LEU:HD11	26:G:217:GLU:HB2	1.97	0.47
28:I:138:VAL:HG12	28:I:140:GLY:H	1.79	0.47
29:J:46:LYS:HG2	29:J:47:LYS:H	1.79	0.47
1:A:155:A:H2'	1:A:156:G:C8	2.50	0.47
1:A:274:G:C6	1:A:433:C:C5'	2.97	0.47
1:A:287:A:C4	1:A:288:C:C4	3.02	0.47
1:A:334:U:H2'	1:A:335:G:H8	1.80	0.47
1:A:434:A:H2'	1:A:435:A:C8	2.50	0.47
1:A:626:C:C3'	1:A:627:C:C6	2.93	0.47
1:A:825:C:O2'	1:A:1245:U:O2	2.32	0.47
1:A:852:U:C2	1:A:853:G:N7	2.83	0.47
1:A:856:U:H5''	1:A:856:U:O2	2.14	0.47
1:A:869:G:C8	1:A:869:G:OP2	2.68	0.47
1:A:1429:C:C2'	1:A:1430:C:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2118:U:H2'	1:A:2119(A):U:O4'	2.14	0.47
1:A:2472:G:H2'	1:A:2473:C:H6	1.78	0.47
1:A:2666:U:H2'	1:A:2667:C:H6	1.80	0.47
3:B:8:G:OP2	9:Q:76:PHE:CE1	2.64	0.47
3:B:14:U:OP2	3:B:15:A:N6	2.48	0.47
4:L:147:VAL:HG23	4:L:149:MET:HG2	1.96	0.47
9:Q:128:ALA:O	9:Q:132:LEU:N	2.43	0.47
15:W:113:SER:N	15:W:120:GLY:HA2	2.30	0.47
16:X:162:ARG:HG3	16:X:163:GLU:N	2.30	0.47
19:E:172:LEU:HB2	19:E:173:PRO:HD2	1.97	0.47
28:I:136:ALA:HB2	28:I:145:LEU:HD23	1.96	0.47
1:A:9:A:C1'	2:C:99:A:C6	2.96	0.47
1:A:26:G:H1'	1:A:524:A:N6	2.30	0.47
1:A:87:G:O2'	15:W:57:LYS:NZ	2.24	0.47
1:A:262:G:C2	1:A:266:A:N6	2.83	0.47
1:A:410:G:C6	1:A:411:U:C4	3.03	0.47
1:A:1080:C:C2'	1:A:1081:C:H5''	2.44	0.47
1:A:1474:A:HO2'	1:A:1475:U:P	2.34	0.47
1:A:1482:C:O2'	1:A:1483:G:H5'	2.15	0.47
1:A:1496:A:H62	1:A:1548:A:H2	1.63	0.47
1:A:1532:G:O6	1:A:1612:A:H8	1.98	0.47
1:A:1650:A:H8	1:A:1650:A:OP2	1.98	0.47
1:A:2075:G:C8	1:A:2520:A:H1'	2.49	0.47
1:A:2170:C:N4	1:A:2171:G:O6	2.48	0.47
1:A:2351:G:C2	9:Q:64:VAL:HG22	2.49	0.47
1:A:2579:U:H1'	5:M:23:ARG:CZ	2.44	0.47
1:A:2672:G:O2'	1:A:2673:U:P	2.72	0.47
1:A:2691:G:H2'	1:A:2692:A:C8	2.50	0.47
3:B:35:A:H2'	3:B:36:A:N9	2.29	0.47
3:B:73:G:O2'	3:B:74:A:O4'	2.22	0.47
7:O:57:ASN:ND2	7:O:120:ILE:HD12	2.29	0.47
12:T:91:ASP:HB3	13:U:142:PHE:CZ	2.46	0.47
19:E:224:VAL:HG13	19:E:225:ASP:OD1	2.15	0.47
26:G:70:LEU:HD11	26:G:256:ASN:OD1	2.01	0.47
26:G:103:LEU:HD13	26:G:107:GLU:OE1	2.15	0.47
27:H:157:ILE:HG23	27:H:227:GLY:HA3	1.96	0.47
27:H:189:SER:HB2	27:H:205:MET:CE	2.44	0.47
1:A:143:G:C2'	1:A:144:A:C5'	2.86	0.47
1:A:290:A:N3	1:A:291:G:C8	2.83	0.47
1:A:881:U:O2	1:A:916:G:C6	2.68	0.47
1:A:969:A:N6	1:A:970:G:O6	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1039:A:C2	1:A:1178:G:N1	2.83	0.47
1:A:1081:C:O2	1:A:1135:A:N1	2.47	0.47
1:A:1718:G:OP2	1:A:1735:G:N2	2.40	0.47
1:A:2117:U:HO2'	1:A:2118:U:H5'	1.78	0.47
1:A:2233:G:C2'	1:A:2234:G:H8	2.01	0.47
6:N:143:LEU:HD21	6:N:146:ILE:CG1	2.41	0.47
6:N:162:LEU:HG	6:N:203:GLU:OE1	2.15	0.47
6:N:197:PRO:CB	6:N:215:ARG:HD3	2.38	0.47
12:T:123:ILE:CD1	12:T:227:TYR:HE1	2.24	0.47
25:F:179:PHE:HA	25:F:184:LYS:HZ3	1.80	0.47
27:H:188:GLN:HE21	27:H:188:GLN:CA	2.00	0.47
1:A:87:G:O6	1:A:88:A:N6	2.47	0.46
1:A:109:A:O3'	18:Z:120:ARG:NH1	2.48	0.46
1:A:836:G:N3	6:N:133:GLN:HG3	2.30	0.46
1:A:946:A:O2'	1:A:947:A:N7	2.48	0.46
1:A:1318:C:OP1	1:A:2727:U:H4'	2.14	0.46
1:A:1472:A:C4'	1:A:1473:G:H5''	2.46	0.46
1:A:1739:G:H2'	1:A:1740:G:H8	1.80	0.46
1:A:1986:G:C2	1:A:1987:G:N7	2.82	0.46
1:A:2336:U:O3'	1:A:2337:C:H5	1.98	0.46
9:Q:47:HIS:HB2	9:Q:53:ARG:NH2	2.29	0.46
14:V:102:LEU:HB3	18:Z:142:ARG:HH21	1.78	0.46
15:W:67:ARG:HH22	15:W:92:ILE:CG1	2.28	0.46
18:Z:87:LEU:O	18:Z:91:ARG:HG3	2.15	0.46
19:E:26:ASN:ND2	19:E:89:LEU:HD11	2.29	0.46
19:E:166:LYS:HA	19:E:182:LYS:HD3	1.97	0.46
19:E:265:PHE:CE1	19:E:266:ILE:HG13	2.44	0.46
26:G:207:PHE:O	26:G:228:LEU:HA	2.14	0.46
1:A:176:A:H2'	1:A:177:C:C6	2.50	0.46
1:A:350:G:O5'	1:A:350:G:H8	1.98	0.46
1:A:491:A:HO2'	1:A:493:G:H8	1.63	0.46
1:A:525:A:N3	1:A:591:C:O2'	2.46	0.46
1:A:538:C:O2'	1:A:539:A:C4	2.66	0.46
1:A:636:C:H6	1:A:636:C:O5'	1.98	0.46
1:A:874:G:O2'	1:A:875:C:H5'	2.15	0.46
1:A:1156:G:N2	1:A:2533:G:H21	2.13	0.46
1:A:1194:G:O2'	1:A:1195:U:H2'	2.15	0.46
1:A:1284:U:H2'	1:A:1285:G:C8	2.50	0.46
1:A:1341:C:O2'	1:A:1342:A:O5'	2.31	0.46
1:A:1516:G:C3'	1:A:1517:G:C5'	2.88	0.46
1:A:2248:U:H2'	1:A:2249:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2540:G:N2	1:A:2782:A:N3	2.63	0.46
2:C:72:A:O2'	2:C:73:G:H5'	2.15	0.46
14:V:131:GLU:HG2	14:V:131:GLU:O	2.14	0.46
16:X:67:LYS:N	16:X:67:LYS:HZ3	2.14	0.46
19:E:265:PHE:CD1	19:E:266:ILE:CG1	2.86	0.46
25:F:193:GLU:OE1	25:F:193:GLU:N	2.48	0.46
26:G:75:ALA:HB1	26:G:76:PRO:HD2	1.96	0.46
1:A:146:U:H3	1:A:148:C:H41	1.64	0.46
1:A:252:C:C2'	1:A:253:C:H5'	2.45	0.46
1:A:523:G:HO2'	1:A:524:A:P	2.38	0.46
1:A:682:C:C2	6:N:121:SER:HB3	2.51	0.46
1:A:821:U:H2'	6:N:108:GLY:CA	2.44	0.46
1:A:854:A:C2	1:A:964:C:O2	2.69	0.46
1:A:1081:C:H2'	1:A:1082:A:C8	2.50	0.46
1:A:1234:A:C8	1:A:1258:A:H2	2.33	0.46
1:A:1254:U:H4'	1:A:1255:U:OP1	2.14	0.46
1:A:1336:C:O2'	1:A:1413:A:N3	2.39	0.46
1:A:1427:A:H2'	1:A:1428:C:O2	2.16	0.46
1:A:1596:U:O2'	1:A:1597:C:C5'	2.45	0.46
1:A:1836:C:C5'	19:E:219:VAL:HG23	2.40	0.46
1:A:2108:G:N3	1:A:2108:G:C5'	2.73	0.46
1:A:2195:G:O2'	1:A:2196:G:H5'	2.15	0.46
1:A:2479:U:H5	1:A:2505:A:C2	2.33	0.46
1:A:2507:G:HO2'	1:A:2508:U:P	2.38	0.46
1:A:2637:U:H1'	25:F:250:MET:HB2	1.97	0.46
3:B:36:A:H2	3:B:50:U:C2	2.33	0.46
5:M:102:ILE:HD11	5:M:114:VAL:HA	1.96	0.46
6:N:195:ARG:NE	6:N:195:ARG:CA	2.73	0.46
11:S:22:SER:O	11:S:23:SER:OG	2.21	0.46
15:W:170:THR:CB	15:W:171:PRO:HD3	2.43	0.46
25:F:97:LEU:O	25:F:114:VAL:HB	2.16	0.46
25:F:135:ASN:ND2	25:F:175:SER:HA	2.18	0.46
26:G:79:LYS:HA	26:G:79:LYS:HZ2	1.80	0.46
28:I:48:ILE:CD1	28:I:109:ARG:NH2	2.54	0.46
1:A:288:C:N4	1:A:289:A:N6	2.63	0.46
1:A:618:A:H2'	1:A:619:A:C8	2.51	0.46
1:A:956:G:H2'	1:A:957:U:C5'	2.45	0.46
1:A:968:C:C3'	1:A:969:A:H5''	2.45	0.46
1:A:2106:U:N3	1:A:2243:C:OP2	2.45	0.46
1:A:2220:G:P	1:A:2221:U:OP2	2.73	0.46
1:A:2806:U:O2'	2:C:5:A:C2	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:30:A:N1	2:C:83:C:O2'	2.45	0.46
3:B:17:G:N1	3:B:70:G:C4	2.77	0.46
7:O:2:LEU:HD12	7:O:48:GLU:OE2	2.15	0.46
12:T:204:LYS:N	12:T:204:LYS:HD2	2.31	0.46
16:X:73:LYS:H	16:X:73:LYS:CD	2.27	0.46
16:X:81:ILE:CG2	16:X:85:GLN:HB2	2.45	0.46
16:X:143:GLN:N	16:X:144:PRO:HD2	2.30	0.46
18:Z:65:LEU:HB3	18:Z:68:LEU:HD13	1.97	0.46
19:E:121:LYS:HB3	19:E:124:ASN:HD21	1.80	0.46
26:G:154:LYS:O	26:G:158:ARG:HG2	2.15	0.46
26:G:185:PRO:HB2	26:G:219:SER:OG	2.15	0.46
1:A:44:G:C8	1:A:200:G:C4	3.03	0.46
1:A:118:U:H4'	1:A:119:A:O5'	2.15	0.46
1:A:224:G:N2	1:A:244:G:O6	2.49	0.46
1:A:334:U:H2'	1:A:335:G:C8	2.50	0.46
1:A:504:G:H4'	13:U:37:TYR:CD1	2.50	0.46
1:A:614:G:C6	1:A:637:G:C6	3.03	0.46
1:A:749:G:N2	1:A:770:G:C4	2.83	0.46
1:A:898:G:C6	1:A:899:A:N6	2.73	0.46
1:A:1162:C:H4'	1:A:1163:G:OP1	2.12	0.46
1:A:1596:U:HO2'	1:A:1597:C:H5'	1.73	0.46
1:A:1756:G:N3	1:A:1757:G:C8	2.84	0.46
1:A:2024:G:H5''	13:U:71:ARG:CB	2.45	0.46
1:A:2114:G:C6	1:A:2204:A:C2	3.02	0.46
1:A:2213:A:C2'	1:A:2214:C:O5'	2.64	0.46
1:A:2236:C:C5	1:A:2237:A:H2	2.31	0.46
1:A:2457:C:C5	1:A:2458:U:H1'	2.50	0.46
1:A:2541:G:H2'	1:A:2542:G:H5''	1.98	0.46
7:O:26:ARG:CG	7:O:27:ILE:H	2.15	0.46
7:O:31:ARG:HG3	7:O:134:SER:OG	2.16	0.46
13:U:139:ILE:O	13:U:139:ILE:HG23	2.15	0.46
17:Y:98:LEU:CD1	17:Y:100:PHE:HD2	2.28	0.46
25:F:119:GLU:CG	25:F:143:ARG:HB3	2.43	0.46
26:G:81:ARG:HB2	26:G:81:ARG:HH21	1.79	0.46
1:A:159:A:C4'	1:A:160:A:OP2	2.64	0.46
1:A:192:A:H2'	1:A:193:G:O4'	2.16	0.46
1:A:227:G:N2	1:A:239:G:H2'	2.31	0.46
1:A:553:G:H3'	1:A:554:G:C5'	2.44	0.46
1:A:919:A:C2'	1:A:920:A:C5'	2.92	0.46
1:A:1009:A:N1	1:A:2041:G:O2'	2.40	0.46
1:A:1187:G:N2	12:T:131:SER:HB2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1333:U:H5'	1:A:1334:U:H5	1.81	0.46
1:A:1592:A:H5'	1:A:1594:A:H5''	1.95	0.46
1:A:1835:G:H2'	1:A:1836:C:H6	1.80	0.46
1:A:2292:C:O2'	7:O:83:MET:HG3	2.14	0.46
1:A:2419:G:H4'	1:A:2420:C:OP1	2.15	0.46
10:R:123:MET:HE1	25:F:98:GLY:C	2.36	0.46
12:T:96:PRO:O	12:T:97:GLU:C	2.54	0.46
13:U:49:VAL:O	13:U:52:GLN:HB3	2.15	0.46
16:X:162:ARG:CZ	16:X:162:ARG:CB	2.89	0.46
19:E:117:GLU:OE1	19:E:117:GLU:N	2.48	0.46
19:E:144:LEU:HD12	19:E:184:CYS:SG	2.56	0.46
26:G:78:GLU:O	26:G:78:GLU:HG2	2.16	0.46
1:A:1:U:O5'	1:A:1:U:H6	1.99	0.46
1:A:46:C:C2'	1:A:47:G:C5'	2.88	0.46
1:A:211:A:H2'	1:A:214:A:H61	1.81	0.46
1:A:320:U:O4'	1:A:341:A:C4	2.69	0.46
1:A:380:C:H2'	1:A:381:C:O5'	2.16	0.46
1:A:623:A:HO2'	1:A:624:A:P	2.39	0.46
1:A:786:G:H4'	1:A:787:G:O5'	2.16	0.46
1:A:1475:U:O2	8:P:70:LEU:CD1	2.64	0.46
1:A:1567:C:N3	1:A:1572:G:O6	2.49	0.46
1:A:1629:G:H2'	1:A:1630:G:H8	1.81	0.46
1:A:1884:A:H2'	1:A:1885:C:O5'	2.16	0.46
1:A:2114:G:H2'	1:A:2115:G:H8	1.81	0.46
1:A:2122:C:N4	1:A:2195:G:N2	2.64	0.46
1:A:2273:U:O2'	16:X:66:THR:N	2.47	0.46
3:B:36:A:C5	3:B:45:G:O6	2.68	0.46
6:N:160:ILE:HA	6:N:201:LEU:HB2	1.98	0.46
11:S:89:GLN:O	12:T:175:PRO:HD2	2.16	0.46
12:T:91:ASP:CB	13:U:142:PHE:CE1	2.96	0.46
17:Y:144:ASP:OD1	17:Y:145:LEU:HG	2.16	0.46
19:E:26:ASN:HD21	19:E:89:LEU:HD11	1.78	0.46
19:E:245:PRO:HG2	19:E:246:TRP:CD2	2.49	0.46
25:F:173:LEU:HD23	25:F:174:VAL:O	2.15	0.46
26:G:182:PHE:CE2	26:G:190:PHE:HD1	2.34	0.46
26:G:208:PHE:HB2	26:G:229:LEU:O	2.16	0.46
27:H:217:LYS:O	27:H:221:LYS:N	2.28	0.46
1:A:159:A:C1'	1:A:160:A:P	3.04	0.46
1:A:188:U:H5''	1:A:189:A:H5''	1.96	0.46
1:A:253:C:O5'	1:A:253:C:H6	1.99	0.46
1:A:254:U:C2'	1:A:255:A:H5'	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:270:G:H2'	1:A:271:G:O5'	2.16	0.46
1:A:532:A:N6	1:A:533:G:O6	2.49	0.46
1:A:574:C:OP1	11:S:41:ARG:NH2	2.49	0.46
1:A:773:U:H4'	1:A:774:G:O5'	2.16	0.46
1:A:873:A:H2'	1:A:874:G:H5'	1.98	0.46
1:A:919:A:C4	7:O:13:HIS:CE1	3.04	0.46
1:A:1219:U:O2	11:S:5:LYS:NZ	2.49	0.46
1:A:1516:G:C8	1:A:1517:G:H8	2.33	0.46
1:A:1525:G:C2	1:A:1541:U:O2	2.68	0.46
1:A:1536:A:N3	1:A:1536:A:C5'	2.73	0.46
1:A:1570:C:H5'	1:A:1571:G:C2	2.51	0.46
1:A:2480:U:O4	1:A:2504:A:C6	2.65	0.46
2:C:31:U:N3	2:C:38:G:N7	2.63	0.46
2:C:42:G:C2	2:C:85:U:N3	2.83	0.46
3:B:38:C:H42	3:B:50:U:H1'	1.81	0.46
4:L:123:ILE:HD11	4:L:126:ARG:HD2	1.98	0.46
4:L:152:PHE:CE1	4:L:220:HIS:CD2	3.04	0.46
8:P:88:ALA:O	8:P:92:GLU:CB	2.64	0.46
10:R:168:ILE:O	10:R:183:ILE:HA	2.16	0.46
14:V:109:LEU:HD21	14:V:141:ARG:CD	2.46	0.46
15:W:150:LYS:HE3	15:W:160:TYR:CD2	2.51	0.46
16:X:142:ILE:O	16:X:143:GLN:HB2	2.15	0.46
26:G:57:ILE:HD11	26:G:68:THR:CG2	2.46	0.46
26:G:70:LEU:HD22	26:G:252:ILE:HD11	1.98	0.46
27:H:151:SER:O	27:H:154:ASP:HB3	2.15	0.46
27:H:188:GLN:HG3	27:H:188:GLN:O	2.15	0.46
28:I:65:VAL:O	28:I:71:GLU:HA	2.16	0.46
1:A:212:A:O2'	1:A:213:A:O5'	2.33	0.46
1:A:367:C:H3'	1:A:368:U:C6	2.50	0.46
1:A:1110:U:O2	1:A:1114:A:N1	2.49	0.46
1:A:1341:C:HO2'	1:A:1342:A:P	2.39	0.46
1:A:1385:G:H5''	17:Y:73:ARG:HD2	1.97	0.46
1:A:1479:U:H3'	1:A:1479:U:H6	1.81	0.46
1:A:1665:U:O4	1:A:1666:A:N6	2.49	0.46
1:A:1702:G:H2'	1:A:1703:G:H5'	1.98	0.46
1:A:2209:U:C6	1:A:2210:C:H5	2.33	0.46
1:A:2213:A:C6	1:A:2242:A:C6	3.03	0.46
1:A:2324:G:N2	1:A:2328:A:O2'	2.49	0.46
1:A:2669:C:H2'	1:A:2670:U:O4'	2.16	0.46
3:B:35:A:C6	3:B:51:G:N1	2.84	0.46
9:Q:60:ILE:O	9:Q:64:VAL:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:U:31:GLU:OE1	13:U:31:GLU:N	2.48	0.46
17:Y:98:LEU:HD12	17:Y:100:PHE:HD2	1.81	0.46
19:E:57:LEU:O	19:E:59:ARG:NH2	2.49	0.46
26:G:168:ALA:O	26:G:173:PHE:HB2	2.16	0.46
26:G:177:GLU:HG3	26:G:248:THR:HG22	1.98	0.46
1:A:268:G:C6	1:A:269:G:O6	2.69	0.46
1:A:306:G:N1	1:A:352:C:N3	2.63	0.46
1:A:493:G:O2'	1:A:518:A:N6	2.49	0.46
1:A:622:G:N2	1:A:627:C:H3'	2.31	0.46
1:A:1888:G:C4	1:A:1889:G:C8	3.04	0.46
1:A:2326:A:C6	1:A:2327:G:C6	3.04	0.46
1:A:2422:G:O2'	1:A:2429:A:N6	2.49	0.46
2:C:21:G:H3'	2:C:22:A:C5'	2.44	0.46
19:E:258:ARG:O	19:E:259:ASN:ND2	2.47	0.46
25:F:147:ARG:C	25:F:149:LEU:H	2.19	0.46
26:G:161:LEU:HD23	26:G:161:LEU:HA	1.76	0.46
27:H:189:SER:CB	27:H:205:MET:CE	2.94	0.46
1:A:70:A:H4'	1:A:71:A:H5''	1.97	0.45
1:A:83:A:C2	1:A:100:G:C2	3.04	0.45
1:A:90:A:O2'	1:A:91:A:O4'	2.27	0.45
1:A:133:A:C2'	1:A:134:A:H8	2.23	0.45
1:A:293:G:C6	1:A:294:U:O4	2.69	0.45
1:A:493:G:O2'	1:A:494:A:P	2.74	0.45
1:A:526:A:H2	1:A:1282:C:H1'	1.81	0.45
1:A:908:A:H2'	1:A:909:A:C8	2.50	0.45
1:A:1305:A:H2'	1:A:1306:G:O4'	2.16	0.45
1:A:1769:A:H2'	1:A:1770:C:H6	1.81	0.45
1:A:2123:U:C2	1:A:2194:U:N3	2.84	0.45
1:A:2211:U:H2'	1:A:2212:A:H8	1.78	0.45
1:A:2237:A:O2'	1:A:2238:A:H5'	2.15	0.45
1:A:2319:C:HO2'	27:H:177:GLY:C	2.19	0.45
1:A:2542:G:H2'	1:A:2543:G:H8	1.81	0.45
2:C:92:C:H2'	2:C:93:C:C6	2.51	0.45
2:C:99:A:C2'	2:C:100:C:H5'	2.45	0.45
3:B:6:U:C2	3:B:118:G:C2	2.99	0.45
3:B:31:C:O2	3:B:32:A:C8	2.70	0.45
3:B:31:C:H1'	3:B:58:A:H61	1.81	0.45
3:B:34:C:N3	3:B:52:G:N1	2.64	0.45
3:B:38:C:N4	3:B:39:C:N3	2.64	0.45
3:B:92:U:H2'	3:B:93:C:C5	2.50	0.45
4:L:114:TRP:HB3	4:L:236:PRO:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:L:136:ARG:NH1	4:L:209:PRO:HG3	2.32	0.45
6:N:156:LYS:CE	6:N:215:ARG:NH1	2.69	0.45
10:R:187:ILE:O	10:R:189:GLY:N	2.49	0.45
19:E:137:ILE:HG23	19:E:187:THR:O	2.16	0.45
25:F:145:ARG:NH2	25:F:145:ARG:CG	2.73	0.45
26:G:76:PRO:HG2	26:G:79:LYS:HB3	1.98	0.45
26:G:230:THR:CG2	26:G:233:SER:HB3	2.45	0.45
29:J:56:ASP:OD1	29:J:57:ILE:N	2.50	0.45
1:A:61:U:H5'	18:Z:94:ARG:HH12	1.81	0.45
1:A:100:G:HO2'	1:A:101:A:P	2.38	0.45
1:A:224:G:N2	1:A:244:G:C6	2.84	0.45
1:A:280:G:H2'	1:A:280:G:N3	2.31	0.45
1:A:292:C:C2'	1:A:293:G:H8	2.19	0.45
1:A:332:G:N2	1:A:342:G:C1'	2.78	0.45
1:A:651:U:H2'	1:A:652:C:H6	1.82	0.45
1:A:669:C:HO2'	1:A:670:A:C5'	2.29	0.45
1:A:939:A:H2'	1:A:940:C:O4'	2.16	0.45
1:A:1004:G:O6	1:A:1016:G:N2	2.49	0.45
1:A:1060:A:N1	1:A:1150:G:O6	2.50	0.45
1:A:1598:C:C5	1:A:1599:C:N4	2.84	0.45
1:A:2112:U:C2'	1:A:2113:G:C8	2.96	0.45
1:A:2752:G:C8	1:A:2753:C:H4'	2.50	0.45
2:C:17:A:OP1	25:F:205:GLY:N	2.48	0.45
2:C:17:A:P	8:P:13:HIS:HE2	2.38	0.45
2:C:103:G:C2	2:C:104:A:C5	3.04	0.45
3:B:31:C:N3	3:B:32:A:N7	2.64	0.45
3:B:108:C:O5'	3:B:108:C:H6	1.99	0.45
6:N:129:PHE:CE2	6:N:131:GLY:N	2.83	0.45
6:N:223:GLU:HA	6:N:223:GLU:OE2	2.16	0.45
13:U:29:CYS:HB3	13:U:91:LYS:HE2	1.98	0.45
16:X:143:GLN:N	16:X:144:PRO:CD	2.80	0.45
17:Y:129:ILE:HD12	17:Y:130:GLU:CA	2.46	0.45
19:E:77:ILE:O	19:E:77:ILE:HG13	2.16	0.45
25:F:96:LYS:O	25:F:97:LEU:HD12	2.16	0.45
1:A:151:G:H8	1:A:151:G:O5'	2.00	0.45
1:A:252:C:HO2'	1:A:253:C:H5'	1.80	0.45
1:A:263:A:N3	1:A:263:A:C5'	2.73	0.45
1:A:386:A:O5'	1:A:386:A:H8	1.99	0.45
1:A:859:A:H2'	1:A:860:C:C6	2.51	0.45
1:A:1002:G:H8	1:A:1018:A:H62	1.62	0.45
1:A:1075:G:N2	1:A:1139:A:N7	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1197:A:OP1	16:X:165:LYS:CD	2.65	0.45
1:A:1320:G:N1	1:A:1676:U:OP2	2.38	0.45
1:A:1467:C:H2'	1:A:1468:C:C6	2.52	0.45
1:A:1497:A:H2'	1:A:1498:G:OP1	2.17	0.45
1:A:1504:C:O5'	1:A:1504:C:H6	1.99	0.45
1:A:1540:C:H2'	1:A:1541:U:C6	2.51	0.45
1:A:2205:G:C6	1:A:2206:A:C6	3.04	0.45
1:A:2389:G:H2'	1:A:2390:A:C8	2.50	0.45
1:A:2579:U:C2'	5:M:23:ARG:NH1	2.78	0.45
1:A:2745:G:H2'	1:A:2746:U:O4'	2.16	0.45
6:N:162:LEU:O	6:N:166:GLU:HB2	2.16	0.45
10:R:122:ILE:HD13	10:R:122:ILE:N	2.31	0.45
14:V:154:PHE:CE1	18:Z:149:PRO:HD3	2.51	0.45
15:W:74:THR:OG1	15:W:137:ILE:O	2.33	0.45
16:X:93:ILE:O	16:X:94:ILE:HD13	2.16	0.45
25:F:136:ALA:HB2	25:F:172:ARG:HA	1.97	0.45
26:G:189:ASP:OD1	26:G:190:PHE:N	2.48	0.45
1:A:120:G:OP1	1:A:133:A:O2'	2.35	0.45
1:A:131:C:H4'	1:A:132:G:C4	2.51	0.45
1:A:161:G:HO2'	1:A:162:A:C4'	2.28	0.45
1:A:248:G:H2'	1:A:249:C:O4'	2.17	0.45
1:A:293:G:H22	1:A:365:A:H2	1.63	0.45
1:A:626:C:C2'	1:A:627:C:C6	2.99	0.45
1:A:690:U:H2'	1:A:691:G:C8	2.51	0.45
1:A:740:G:H5'	1:A:741:U:H5''	1.98	0.45
1:A:888:C:H2'	1:A:889:G:OP1	2.16	0.45
1:A:1522:A:N6	1:A:1544:A:N3	2.64	0.45
1:A:1532:G:H1'	1:A:1611:G:HO2'	1.77	0.45
1:A:1553:U:H2'	1:A:1554:C:H6	1.78	0.45
1:A:1650:A:N1	13:U:122:SER:OG	2.49	0.45
1:A:2322:A:C2'	1:A:2323:C:H5'	2.46	0.45
1:A:2536:A:H4'	1:A:2537:C:O5'	2.16	0.45
1:A:2633:C:H2'	1:A:2634:C:H6	1.82	0.45
2:C:33:A:O2'	2:C:34:U:O5'	2.20	0.45
2:C:86:A:H2'	2:C:87:A:O5'	2.16	0.45
3:B:43:C:O2'	3:B:44:C:O4'	2.29	0.45
6:N:143:LEU:HD23	6:N:146:ILE:HG12	1.97	0.45
7:O:112:ASN:OD1	7:O:113:ILE:N	2.49	0.45
11:S:31:LEU:HD12	11:S:31:LEU:HA	1.72	0.45
13:U:149:LEU:N	13:U:149:LEU:CD2	2.73	0.45
18:Z:79:GLU:O	18:Z:83:LEU:HG	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:G:116:TYR:HB2	26:G:117:PRO:HD2	1.97	0.45
27:H:172:PRO:O	27:H:176:ASP:HB2	2.17	0.45
27:H:175:PHE:O	27:H:183:VAL:HG13	2.17	0.45
1:A:69:G:HO2'	1:A:70:A:P	2.40	0.45
1:A:83:A:H2'	1:A:84:G:H4'	1.98	0.45
1:A:171:G:H2'	1:A:172:G:C8	2.51	0.45
1:A:234:C:H5	6:N:142:LYS:HZ2	1.56	0.45
1:A:361:C:H5''	1:A:361:C:H6	1.82	0.45
1:A:374:U:H2'	1:A:375:C:N1	2.32	0.45
1:A:553:G:H5'	1:A:554:G:OP2	2.17	0.45
1:A:836:G:O2'	6:N:133:GLN:CD	2.55	0.45
1:A:887:G:H2'	1:A:888:C:H6	1.79	0.45
1:A:1496:A:C5	1:A:1497:A:N3	2.84	0.45
1:A:1556:A:H5''	1:A:1557:G:OP1	2.16	0.45
1:A:2047:A:O2'	1:A:2048:U:P	2.75	0.45
1:A:2653:U:C4'	25:F:170:GLU:OE2	2.58	0.45
3:B:26:A:C2	3:B:27:A:C4	3.04	0.45
3:B:32:A:C6	3:B:55:G:C2	3.04	0.45
3:B:63:C:H2'	3:B:64:U:C6	2.51	0.45
12:T:116:PRO:HD2	12:T:117:PRO:N	2.31	0.45
16:X:128:TYR:HE2	16:X:132:LYS:CB	2.04	0.45
17:Y:144:ASP:OD1	17:Y:145:LEU:N	2.49	0.45
28:I:162:GLN:HG3	28:I:174:SER:HB2	1.97	0.45
1:A:261:U:H3	1:A:266:A:N6	2.15	0.45
1:A:863:C:O2	1:A:934:A:C2	2.70	0.45
1:A:951:C:H6	1:A:951:C:H5''	1.81	0.45
1:A:957:U:C4	1:A:958:C:C4	3.05	0.45
1:A:1363:A:H2	1:A:1417:U:HO2'	1.65	0.45
1:A:1459:U:C2	1:A:1460:A:C8	3.05	0.45
1:A:1590:C:C4	1:A:1591:C:N4	2.84	0.45
1:A:1808:C:C2	1:A:1829:A:C6	3.05	0.45
1:A:2190:A:H8	1:A:2190:A:O5'	1.98	0.45
1:A:2227:C:C5	1:A:2228:C:C5	3.05	0.45
1:A:2307:G:H2'	1:A:2308:U:C6	2.51	0.45
1:A:2480:U:H5	1:A:2504:A:C2	2.35	0.45
2:C:7:G:H2'	2:C:8:G:O4'	2.17	0.45
2:C:80:C:H4'	10:R:119:LEU:HD13	1.99	0.45
3:B:43:C:C6	27:H:119:VAL:HG22	2.51	0.45
4:L:136:ARG:HD3	4:L:209:PRO:HD3	1.98	0.45
7:O:32:TYR:OH	7:O:111:GLU:OE2	2.33	0.45
12:T:214:GLN:OE1	12:T:215:PRO:HD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:U:58:TYR:CE2	13:U:95:LYS:HD3	2.52	0.45
14:V:126:LYS:O	14:V:130:ASP:CB	2.65	0.45
25:F:266:ILE:HG13	25:F:267:MET:H	1.81	0.45
26:G:89:ILE:O	26:G:93:GLN:HB3	2.17	0.45
26:G:146:ARG:NH2	26:G:148:TRP:CE3	2.84	0.45
27:H:147:ASN:O	27:H:150:TYR:N	2.49	0.45
1:A:342:G:H2'	1:A:343:U:H5'	1.97	0.45
1:A:612:U:H6	1:A:612:U:O5'	1.99	0.45
1:A:890:G:C2	1:A:891:G:N7	2.85	0.45
1:A:913:G:C2'	1:A:914:A:H5'	2.46	0.45
1:A:920:A:N7	7:O:9:PHE:CE2	2.85	0.45
1:A:1137:C:C6	1:A:1138:G:N7	2.85	0.45
1:A:1299:U:H3	1:A:1313:A:H61	1.65	0.45
1:A:1337:U:H2'	1:A:1338:C:H6	1.81	0.45
1:A:1494:G:N2	1:A:1551:G:O6	2.50	0.45
1:A:1549:A:C6	1:A:1550:U:C2	3.05	0.45
1:A:1749:U:H6	1:A:1749:U:H5''	1.82	0.45
1:A:1868:A:H2'	1:A:1869:G:O4'	2.17	0.45
1:A:2480:U:H5	1:A:2504:A:H2	1.65	0.45
3:B:27:A:H2'	3:B:28:C:O4'	2.17	0.45
8:P:45:LYS:HG2	8:P:122:TYR:HD1	1.80	0.45
10:R:169:VAL:HG23	10:R:181:ILE:HG23	1.99	0.45
12:T:177:VAL:HB	12:T:230:TYR:HH	1.82	0.45
13:U:113:LYS:HB2	13:U:113:LYS:HE3	1.76	0.45
16:X:156:GLU:O	16:X:160:LEU:HG	2.17	0.45
19:E:76:THR:O	19:E:88:CYS:HA	2.17	0.45
26:G:71:ASN:ND2	26:G:72:LEU:N	2.63	0.45
27:H:68:LEU:O	27:H:72:GLU:HB2	2.17	0.45
28:I:155:MET:HG2	28:I:188:ILE:HD11	1.99	0.45
1:A:18:U:H2'	1:A:19:U:C6	2.52	0.45
1:A:82:G:N1	1:A:100:G:C5	2.85	0.45
1:A:101:A:C5	1:A:102:U:C4	3.04	0.45
1:A:103:C:C2'	1:A:104:C:H5'	2.46	0.45
1:A:658:A:H5''	1:A:659:G:OP2	2.16	0.45
1:A:767:A:H2'	1:A:768:G:O4'	2.17	0.45
1:A:1178:G:H4'	11:S:83:HIS:CD2	2.37	0.45
1:A:1197:A:H1'	1:A:1198:A:C8	2.52	0.45
1:A:1219:U:H2'	1:A:1220:U:C6	2.52	0.45
1:A:1502:A:H3'	1:A:1503:C:C5'	2.47	0.45
1:A:1533:A:C2'	1:A:1534:A:N3	2.78	0.45
1:A:1534:A:C2'	1:A:1535:A:H5''	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1795:A:HO2'	1:A:1796:A:H8	1.63	0.45
1:A:2201:G:C2'	1:A:2202:C:H5'	2.46	0.45
1:A:2201:G:N1	1:A:2202:C:N4	2.65	0.45
1:A:2329:U:O5'	1:A:2329:U:H6	1.99	0.45
1:A:2373:C:H2'	1:A:2374:C:O4'	2.17	0.45
1:A:2684:C:H2'	1:A:2685:G:O4'	2.16	0.45
1:A:2701:U:OP1	10:R:173:GLN:HG3	2.17	0.45
3:B:7:G:H1'	3:B:8:G:O5'	2.16	0.45
3:B:41:U:C3'	3:B:42:C:H5''	2.47	0.45
8:P:93:VAL:O	8:P:96:ARG:N	2.50	0.45
12:T:113:LYS:HE2	12:T:113:LYS:CA	2.46	0.45
12:T:230:TYR:O	12:T:230:TYR:CD1	2.70	0.45
19:E:175:GLY:O	19:E:268:ARG:CB	2.62	0.45
26:G:204:LYS:CA	26:G:225:THR:HB	2.47	0.45
27:H:147:ASN:HA	27:H:150:TYR:CD2	2.52	0.45
27:H:164:THR:HB	27:H:167:PHE:CZ	2.52	0.45
1:A:126:C:H6	1:A:126:C:H5''	1.82	0.45
1:A:161:G:N3	1:A:161:G:H2'	2.32	0.45
1:A:262:G:O2'	1:A:263:A:H5''	2.17	0.45
1:A:489:A:H2'	1:A:490:A:H8	1.79	0.45
1:A:611:C:C2'	1:A:612:U:H5'	2.47	0.45
1:A:636:C:HO2'	1:A:637:G:H5'	1.81	0.45
1:A:882:U:H5''	1:A:882:U:H6	1.82	0.45
1:A:1137:C:C2'	1:A:1138:G:C8	2.99	0.45
1:A:2209:U:H2'	1:A:2210:C:C5	2.52	0.45
1:A:2313:U:H5'	1:A:2314:C:OP1	2.16	0.45
1:A:2698:C:OP1	25:F:285:LYS:HE2	2.08	0.45
1:A:2744:A:N3	5:M:67:LYS:NZ	2.52	0.45
13:U:70:TYR:O	13:U:73:CYS:HB3	2.17	0.45
25:F:90:ILE:HD12	25:F:137:VAL:HG21	1.97	0.45
25:F:279:LYS:HG2	25:F:280:GLY:N	2.32	0.45
1:A:6:A:H2'	1:A:7:C:C6	2.52	0.45
1:A:376:U:O2'	1:A:377:G:OP2	2.27	0.45
1:A:380:C:N4	1:A:381:C:N4	2.64	0.45
1:A:394:G:H2'	1:A:395:C:O4'	2.17	0.45
1:A:950:A:C6	1:A:951:C:C2	3.05	0.45
1:A:1751:A:C2	1:A:1753:A:O5'	2.70	0.45
1:A:1885:C:N4	6:N:253:ALA:N	2.65	0.45
1:A:1888:G:C5	1:A:1889:G:N7	2.85	0.45
1:A:2024:G:H5''	13:U:71:ARG:HB3	1.99	0.45
1:A:2111:U:H6	1:A:2111:U:H5''	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2142:G:O2'	1:A:2188:C:O4'	2.34	0.45
1:A:2322:A:HO2'	1:A:2323:C:H5'	1.77	0.45
1:A:2472:G:H2'	1:A:2473:C:C6	2.52	0.45
1:A:2645:U:O5'	1:A:2645:U:C6	2.70	0.45
3:B:66:C:C5	3:B:110:C:N3	2.84	0.45
3:B:110:C:HO2'	3:B:111:G:P	2.36	0.45
10:R:147:ASP:O	10:R:169:VAL:HG12	2.17	0.45
11:S:27:ALA:HB1	11:S:31:LEU:HD23	1.98	0.45
11:S:111:ILE:O	11:S:115:ILE:HG12	2.16	0.45
14:V:104:TYR:CD1	18:Z:142:ARG:NE	2.85	0.45
14:V:105:PRO:C	14:V:107:ARG:N	2.71	0.45
18:Z:130:LYS:HD3	18:Z:134:ARG:NH2	2.32	0.45
19:E:49:HIS:CE1	19:E:215:VAL:HG12	2.51	0.45
19:E:75:VAL:HG21	19:E:91:HIS:HE1	1.81	0.45
19:E:135:THR:HB	19:E:137:ILE:HD11	1.99	0.45
27:H:163:ARG:CZ	27:H:192:PRO:HD3	2.46	0.45
1:A:160:A:C2	1:A:161:G:O6	2.71	0.44
1:A:210:C:H2'	1:A:211:A:O4'	2.17	0.44
1:A:276:G:C8	1:A:276:G:OP2	2.71	0.44
1:A:367:C:OP2	1:A:367:C:C6	2.70	0.44
1:A:371:U:C5	1:A:371:U:OP2	2.71	0.44
1:A:413:A:H2'	1:A:414:A:C8	2.52	0.44
1:A:640:G:H2'	1:A:641:C:C6	2.53	0.44
1:A:858:G:C6	1:A:859:A:C5	3.05	0.44
1:A:1020:C:H2'	1:A:1021:A:C8	2.50	0.44
1:A:1207:G:H2'	1:A:1208:G:O4'	2.17	0.44
1:A:1264:C:O2	6:N:83:ASP:O	2.35	0.44
1:A:1475:U:O4'	8:P:73:ARG:HD2	2.16	0.44
1:A:1495:C:N4	1:A:1548:A:C5	2.86	0.44
1:A:1515:G:H2'	1:A:1516:G:OP1	2.17	0.44
1:A:1804:U:H2'	1:A:1805:C:C6	2.52	0.44
1:A:2011:G:H5''	25:F:219:ARG:NH2	2.28	0.44
1:A:2109:C:H5'	1:A:2110:U:H5	1.82	0.44
1:A:2214:C:C6	1:A:2214:C:O5'	2.70	0.44
1:A:2267:G:N1	7:O:82:ARG:NH2	2.65	0.44
2:C:79:G:C2	2:C:80:C:C2	3.05	0.44
2:C:80:C:O5'	2:C:80:C:C6	2.70	0.44
3:B:118:G:C2	3:B:119:G:O6	2.70	0.44
4:L:177:SER:OG	4:L:182:GLY:CA	2.58	0.44
7:O:34:LEU:HD13	7:O:118:VAL:CG1	2.46	0.44
8:P:65:ALA:HB1	8:P:90:PHE:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:V:114:ILE:CG2	14:V:115:LEU:HD12	2.23	0.44
18:Z:137:ASP:OD1	18:Z:141:LYS:CG	2.65	0.44
25:F:143:ARG:HA	25:F:165:MET:HA	1.99	0.44
25:F:188:GLU:OE1	25:F:188:GLU:N	2.50	0.44
1:A:2:U:O5'	1:A:2:U:H6	2.00	0.44
1:A:84:G:OP2	15:W:71:VAL:HG22	2.17	0.44
1:A:145:A:O5'	1:A:145:A:C8	2.70	0.44
1:A:319:G:O2'	1:A:320:U:H3'	2.16	0.44
1:A:368:U:C4	1:A:369:U:O4	2.70	0.44
1:A:375:C:O5'	1:A:375:C:C6	2.70	0.44
1:A:416:C:C2	1:A:418:G:C4	3.02	0.44
1:A:428:C:H2'	1:A:429:C:H6	1.82	0.44
1:A:622:G:C8	1:A:622:G:OP2	2.70	0.44
1:A:640:G:H2'	1:A:641:C:H6	1.82	0.44
1:A:824:U:O2'	1:A:825:C:C5'	2.65	0.44
1:A:852:U:O2'	1:A:853:G:H5'	2.17	0.44
1:A:862:U:H2'	1:A:863:C:C6	2.52	0.44
1:A:944:C:C5	1:A:944:C:OP2	2.70	0.44
1:A:1155:A:N7	1:A:2505:A:O2'	2.47	0.44
1:A:1193:U:C2'	1:A:1194:G:H5'	2.47	0.44
1:A:1337:U:H2'	1:A:1338:C:C6	2.52	0.44
1:A:1472:A:O4'	1:A:1473:G:C8	2.71	0.44
1:A:1754:A:H2'	1:A:1755:A:O5'	2.16	0.44
1:A:2009:U:H5	1:A:2010:C:HO2'	1.64	0.44
1:A:2156:C:C2	1:A:2164:G:C2	3.03	0.44
1:A:2224:G:O3'	1:A:2225:G:C8	2.70	0.44
1:A:2236:C:O5'	1:A:2236:C:C6	2.70	0.44
1:A:2319:C:N3	1:A:2332:G:C6	2.85	0.44
1:A:2420:C:OP2	1:A:2420:C:C6	2.71	0.44
2:C:88:C:H2'	2:C:89:A:C8	2.53	0.44
3:B:18:C:C5	3:B:19:G:N7	2.85	0.44
3:B:88:G:N2	3:B:92:U:N3	2.65	0.44
6:N:255:GLU:C	6:N:256:TYR:CG	2.91	0.44
7:O:80:GLU:O	7:O:81:THR:OG1	2.24	0.44
9:Q:99:SER:C	9:Q:101:MET:H	2.19	0.44
12:T:95:ALA:N	12:T:96:PRO:CD	2.79	0.44
12:T:106:ILE:H	12:T:106:ILE:HG13	1.61	0.44
15:W:82:GLU:HG2	15:W:82:GLU:O	2.17	0.44
18:Z:123:GLU:HG2	18:Z:128:VAL:CG2	2.47	0.44
19:E:260:LYS:O	19:E:261:TYR:CD2	2.70	0.44
25:F:202:THR:HA	25:F:258:LYS:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:H:107:ILE:O	27:H:111:ALA:HB3	2.18	0.44
29:J:46:LYS:HG2	29:J:47:LYS:N	2.32	0.44
1:A:32:U:O4	1:A:459:A:N7	2.50	0.44
1:A:95:G:C6	1:A:96:C:C4	3.06	0.44
1:A:355:A:C8	1:A:356:A:H8	2.16	0.44
1:A:386:A:C2	1:A:413:A:C4	3.06	0.44
1:A:390:U:H2'	1:A:391:G:C8	2.53	0.44
1:A:760:A:H61	1:A:764:A:H8	1.63	0.44
1:A:917:C:H2'	1:A:918:A:H5'	1.99	0.44
1:A:922:U:O5'	1:A:922:U:C6	2.70	0.44
1:A:1008:A:N3	1:A:2051:G:O2'	2.40	0.44
1:A:1870:U:H2'	1:A:1871:U:H6	1.82	0.44
1:A:2113:G:C8	1:A:2113:G:O5'	2.70	0.44
1:A:2278:C:C2	1:A:2297:G:N2	2.86	0.44
1:A:2394:A:O2'	9:Q:166:PHE:O	2.36	0.44
2:C:80:C:C2'	2:C:81:A:H5'	2.48	0.44
4:L:217:LEU:HD12	4:L:218:PHE:CA	2.46	0.44
6:N:165:ILE:CG2	6:N:166:GLU:N	2.79	0.44
6:N:200:ILE:HB	6:N:217:PHE:HB3	1.99	0.44
6:N:255:GLU:O	6:N:256:TYR:CG	2.70	0.44
12:T:229:ASP:O	12:T:230:TYR:CG	2.70	0.44
17:Y:129:ILE:O	17:Y:133:GLY:O	2.35	0.44
29:J:77:PHE:CE1	29:J:81:LEU:HD11	2.51	0.44
1:A:44:G:C3'	1:A:45:A:C5'	2.86	0.44
1:A:131:C:C4	14:V:104:TYR:CD2	3.04	0.44
1:A:253:C:C2	1:A:254:U:O2	2.70	0.44
1:A:253:C:N3	1:A:437:G:C2	2.86	0.44
1:A:715:G:HO2'	1:A:716:A:P	2.40	0.44
1:A:919:A:N6	7:O:11:LYS:O	2.50	0.44
1:A:1050:G:O6	4:L:167:LYS:HE3	2.16	0.44
1:A:2103:G:H2'	1:A:2104:A:H8	1.83	0.44
1:A:2103:G:C4	1:A:2104:A:N7	2.86	0.44
1:A:2205:G:C2'	1:A:2206:A:H5'	2.47	0.44
1:A:2421:C:H2'	1:A:2422:G:O4'	2.18	0.44
1:A:2808:C:H3'	1:A:2808:C:H6	1.82	0.44
2:C:80:C:P	10:R:121:ASP:OD1	2.75	0.44
4:L:102:PRO:HA	11:S:99:GLN:NE2	2.21	0.44
5:M:59:ARG:O	5:M:87:ILE:HG22	2.18	0.44
8:P:51:ALA:HA	8:P:123:ILE:HD11	1.98	0.44
9:Q:123:ILE:O	9:Q:127:ILE:HG22	2.18	0.44
12:T:116:PRO:CD	12:T:117:PRO:N	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:U:154:PRO:HA	13:U:157:LEU:CG	2.47	0.44
15:W:70:LYS:HB2	15:W:70:LYS:HZ3	1.80	0.44
25:F:96:LYS:HD3	25:F:282:VAL:HG23	1.99	0.44
25:F:207:GLY:O	25:F:253:ARG:HA	2.18	0.44
26:G:52:LEU:HD13	26:G:71:ASN:ND2	2.32	0.44
26:G:79:LYS:HG3	26:G:83:VAL:HG23	1.99	0.44
26:G:152:MET:HB3	26:G:157:ARG:HH21	1.82	0.44
26:G:207:PHE:CD1	26:G:246:VAL:HG21	2.52	0.44
28:I:125:LYS:HB3	28:I:173:VAL:HB	1.98	0.44
29:J:43:LYS:HG2	29:J:44:LYS:HE2	1.99	0.44
1:A:139:U:O2	1:A:140:G:C8	2.67	0.44
1:A:145:A:C8	1:A:145:A:OP2	2.70	0.44
1:A:294:U:C2	1:A:295:C:O2	2.71	0.44
1:A:318:A:N6	1:A:339:A:C6	2.85	0.44
1:A:540:A:OP2	4:L:212:ARG:NH1	2.42	0.44
1:A:658:A:H2'	1:A:658:A:N3	2.32	0.44
1:A:703:C:H2'	1:A:704:A:H8	1.82	0.44
1:A:887:G:N2	1:A:909:A:H61	2.16	0.44
1:A:901:C:H2'	1:A:902:G:C5'	2.46	0.44
1:A:909:A:C8	1:A:909:A:OP2	2.70	0.44
1:A:948:U:C6	1:A:948:U:OP1	2.70	0.44
1:A:1264:C:H1'	6:N:83:ASP:O	2.17	0.44
1:A:1376:G:P	19:E:35:CYS:HG	2.41	0.44
1:A:1504:C:O5'	1:A:1504:C:C6	2.70	0.44
1:A:1694:C:OP1	25:F:229:HIS:CE1	2.70	0.44
1:A:1831:G:H5'	19:E:84:ASN:HD22	1.82	0.44
1:A:1874:U:O5'	1:A:1874:U:H6	2.01	0.44
1:A:2280:C:OP2	16:X:73:LYS:CE	2.63	0.44
1:A:2338:G:N3	1:A:2338:G:H2'	2.33	0.44
2:C:36:A:C2	25:F:274:ARG:NE	2.84	0.44
2:C:75:U:C2'	2:C:76:G:C5'	2.95	0.44
3:B:14:U:C5'	3:B:15:A:N7	2.81	0.44
11:S:89:GLN:HB2	12:T:174:THR:HG23	1.99	0.44
11:S:91:LEU:CD1	12:T:175:PRO:HA	2.35	0.44
12:T:139:GLY:N	12:T:221:ILE:O	2.50	0.44
16:X:132:LYS:N	16:X:132:LYS:HD2	2.32	0.44
17:Y:103:LEU:HA	17:Y:122:SER:HA	1.99	0.44
19:E:29:ILE:HG23	19:E:59:ARG:HG2	1.99	0.44
1:A:74:G:H22	1:A:109:A:H2	1.65	0.44
1:A:329:C:H4'	1:A:331:A:N7	2.32	0.44
1:A:389:A:C6	1:A:410:G:C6	3.03	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:393:G:C6	1:A:394:G:N2	2.85	0.44
1:A:433:C:H2'	1:A:434:A:OP2	2.17	0.44
1:A:631:G:H3'	1:A:632:G:H21	1.81	0.44
1:A:824:U:O2'	1:A:825:C:O4'	2.33	0.44
1:A:1084:G:N1	1:A:1130:C:OP2	2.37	0.44
1:A:1164:G:O5'	1:A:1164:G:C8	2.71	0.44
1:A:1170:A:N6	4:L:126:ARG:HA	2.33	0.44
1:A:1459:U:H2'	1:A:1460:A:H8	1.82	0.44
1:A:1748:C:C3'	1:A:1748:C:C6	3.01	0.44
1:A:2150:G:N1	1:A:2151:G:N2	2.66	0.44
1:A:2324:G:N2	1:A:2328:A:N9	2.66	0.44
1:A:2324:G:O4'	1:A:2325:G:C4	2.70	0.44
1:A:2485:A:N7	1:A:2498:G:C6	2.85	0.44
2:C:20:C:O5'	2:C:20:C:H6	2.01	0.44
2:C:30:A:C6	2:C:83:C:N1	2.86	0.44
3:B:14:U:HO2'	3:B:15:A:P	2.39	0.44
3:B:87:G:C2'	3:B:88:G:H5'	2.45	0.44
4:L:167:LYS:O	4:L:169:THR:N	2.50	0.44
6:N:170:PHE:HZ	6:N:181:LEU:HD23	1.83	0.44
10:R:172:ARG:NH1	10:R:174:ASN:HD22	2.16	0.44
15:W:165:GLY:N	15:W:166:GLU:OE1	2.50	0.44
19:E:237:ILE:CG1	19:E:239:ARG:H	2.30	0.44
25:F:127:LYS:HD2	25:F:132:ASP:OD2	2.16	0.44
26:G:127:GLY:O	26:G:128:SER:OG	2.26	0.44
1:A:16:G:H2'	1:A:17:C:H6	1.83	0.44
1:A:165:C:C6	1:A:165:C:O5'	2.70	0.44
1:A:861:A:C6	1:A:935:U:O4	2.69	0.44
1:A:941:C:C5	1:A:942:U:O4	2.70	0.44
1:A:1022:C:OP1	11:S:50:ARG:HD2	2.17	0.44
1:A:1475:U:HO2'	1:A:1476:G:C5'	2.31	0.44
1:A:1479:U:C5	1:A:1479:U:OP2	2.71	0.44
1:A:1524:G:N2	1:A:1525:G:N3	2.65	0.44
1:A:1882:U:C6	1:A:1882:U:O5'	2.71	0.44
1:A:2123:U:H5''	1:A:2124:G:P	2.57	0.44
1:A:2205:G:O6	1:A:2206:A:N6	2.50	0.44
1:A:2209:U:H3'	1:A:2210:C:C5	2.53	0.44
1:A:2216:U:O5'	1:A:2216:U:H6	2.00	0.44
1:A:2647:A:O4'	2:C:98:G:C1'	2.65	0.44
1:A:2764:U:H3	1:A:2776:A:H62	1.64	0.44
2:C:88:C:OP2	2:C:88:C:C6	2.70	0.44
3:B:25:G:C6	3:B:57:U:N3	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:36:A:C5	3:B:45:G:N7	2.85	0.44
3:B:96:G:H2'	3:B:97:C:C6	2.52	0.44
6:N:168:ALA:HB3	6:N:186:ILE:CD1	2.42	0.44
7:O:125:MET:CG	7:O:126:PRO:HD2	2.48	0.44
9:Q:86:VAL:O	9:Q:95:LEU:N	2.51	0.44
26:G:83:VAL:HG11	26:G:159:LEU:HD22	1.99	0.44
1:A:184:A:H5'	1:A:185:U:OP2	2.18	0.44
1:A:262:G:O2'	1:A:263:A:C2	2.71	0.44
1:A:295:C:O5'	1:A:295:C:C6	2.70	0.44
1:A:347:G:H2'	1:A:348:U:H6	1.83	0.44
1:A:383:A:O2'	17:Y:131:LYS:CE	2.66	0.44
1:A:415:U:O3'	1:A:416:C:C6	2.71	0.44
1:A:716:A:H62	1:A:737:G:H1'	1.81	0.44
1:A:733:A:H2'	1:A:734:G:C8	2.53	0.44
1:A:740:G:O2'	1:A:774:G:H4'	2.17	0.44
1:A:883:C:H4'	7:O:65:TRP:CH2	2.53	0.44
1:A:980:G:H1	1:A:993:C:H5	1.65	0.44
1:A:1062:G:H2'	1:A:1063:U:O4'	2.18	0.44
1:A:1073:G:H5''	1:A:1075:G:N3	2.33	0.44
1:A:1651:C:OP2	1:A:1653:C:C4	2.70	0.44
1:A:1954:U:O2'	1:A:1956:C:N4	2.46	0.44
1:A:2058:C:H2'	1:A:2059:U:O4'	2.18	0.44
1:A:2248:U:H2'	1:A:2249:C:C6	2.53	0.44
1:A:2336:U:O3'	1:A:2337:C:C5	2.71	0.44
1:A:2534:C:C4	1:A:2559:A:C6	3.06	0.44
1:A:2565:G:H2'	1:A:2566:G:O4'	2.18	0.44
2:C:39:A:C4	2:C:83:C:C4	3.05	0.44
2:C:79:G:N2	2:C:80:C:O2	2.50	0.44
3:B:61:C:C2	3:B:62:U:C5	3.05	0.44
6:N:162:LEU:O	6:N:166:GLU:CG	2.65	0.44
6:N:255:GLU:O	6:N:256:TYR:CD2	2.70	0.44
9:Q:50:ARG:O	9:Q:54:THR:OG1	2.31	0.44
9:Q:164:LEU:HD23	9:Q:164:LEU:HA	1.77	0.44
12:T:114:LYS:HG2	12:T:115:GLY:N	2.31	0.44
12:T:227:TYR:CD2	12:T:228:GLU:OE2	2.70	0.44
15:W:93:HIS:HB2	15:W:98:THR:OG1	2.17	0.44
15:W:113:SER:OG	15:W:120:GLY:CA	2.66	0.44
16:X:128:TYR:CD2	16:X:128:TYR:C	2.91	0.44
16:X:134:LYS:CB	16:X:134:LYS:NZ	2.73	0.44
25:F:122:ILE:HG12	25:F:185:LEU:HG	1.99	0.44
26:G:53:ILE:HG21	26:G:170:GLY:HA3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:I:92:VAL:HG22	28:I:109:ARG:CZ	2.47	0.44
1:A:354:A:H2'	1:A:355:A:OP2	2.18	0.44
1:A:404:U:O2	1:A:404:U:H2'	2.18	0.44
1:A:416:C:O4'	1:A:418:G:C8	2.71	0.44
1:A:495:A:N3	15:W:122:ILE:HD11	2.33	0.44
1:A:577:G:O6	12:T:203:LYS:HB3	2.18	0.44
1:A:851:U:H2'	1:A:852:U:C6	2.53	0.44
1:A:951:C:N4	1:A:952:A:N6	2.66	0.44
1:A:1289:A:H2'	1:A:1290:A:O4'	2.18	0.44
1:A:1476:G:H2'	1:A:1477:G:C8	2.53	0.44
1:A:1541:U:OP2	1:A:1541:U:C5	2.71	0.44
1:A:1582:A:H2'	1:A:1583:A:H8	1.76	0.44
1:A:1700:A:H2'	1:A:1700:A:N3	2.32	0.44
1:A:1837:U:OP2	19:E:217:ARG:HD2	2.18	0.44
1:A:2157:U:O2	1:A:2163:G:N2	2.46	0.44
1:A:2222:C:H2'	1:A:2223:A:C8	2.53	0.44
1:A:2320:G:C6	1:A:2331:G:O6	2.71	0.44
2:C:42:G:C4	2:C:43:G:C8	3.05	0.44
2:C:89:A:H8	2:C:89:A:O5'	2.01	0.44
3:B:35:A:C3'	3:B:36:A:C8	3.01	0.44
3:B:111:G:C2'	3:B:112:A:H5'	2.48	0.44
5:M:24:ILE:HD13	5:M:33:ALA:HB2	2.00	0.44
19:E:266:ILE:HG22	19:E:268:ARG:H	1.83	0.44
26:G:79:LYS:HZ2	26:G:79:LYS:CA	2.31	0.44
26:G:88:LEU:O	26:G:91:HIS:HB3	2.17	0.44
26:G:185:PRO:CG	26:G:218:LYS:HZ2	2.31	0.44
27:H:61:TYR:HA	27:H:65:MET:HG2	1.99	0.44
1:A:133:A:H3'	1:A:134:A:N7	2.33	0.43
1:A:198:A:H2'	1:A:199:G:C8	2.53	0.43
1:A:863:C:O2	1:A:934:A:N1	2.51	0.43
1:A:877:C:C4	1:A:878:U:O4	2.71	0.43
1:A:887:G:OP2	1:A:887:G:C8	2.70	0.43
1:A:1025:G:OP1	11:S:95:LYS:HD3	2.18	0.43
1:A:1307:A:N6	1:A:1310:C:C2	2.86	0.43
1:A:1480:A:H2	1:A:2720:C:HO2'	1.62	0.43
1:A:1714:A:C4	1:A:1715:A:C8	3.05	0.43
1:A:1959:G:H2'	1:A:1960:U:O2	2.18	0.43
1:A:2006:G:C6	1:A:2011:G:C6	3.06	0.43
1:A:2189:C:O2'	1:A:2190:A:H5'	2.18	0.43
1:A:2190:A:C2	1:A:2191:C:O2	2.71	0.43
1:A:2213:A:H2	1:A:2214:C:C1'	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2324:G:H4'	1:A:2325:G:O4'	2.17	0.43
1:A:2347:G:H21	16:X:98:GLY:HA2	1.81	0.43
2:C:73:G:C2	2:C:74:C:O2	2.71	0.43
2:C:104:A:N3	2:C:105:A:C8	2.86	0.43
3:B:92:U:O5'	3:B:92:U:C6	2.71	0.43
5:M:18:GLU:HG3	5:M:44:LYS:HB3	1.99	0.43
5:M:19:LEU:HD13	5:M:41:ALA:HB1	2.00	0.43
5:M:71:ARG:HH12	5:M:104:ARG:HH21	1.64	0.43
8:P:72:LYS:O	8:P:75:GLN:HB2	2.18	0.43
11:S:94:ARG:O	11:S:96:ILE:HG12	2.18	0.43
12:T:108:ASN:O	12:T:112:PRO:HD2	2.04	0.43
12:T:188:GLU:HG2	12:T:190:LEU:HD12	2.00	0.43
15:W:67:ARG:NH2	15:W:92:ILE:HG13	2.31	0.43
15:W:69:VAL:CG1	15:W:89:ILE:HD13	2.48	0.43
19:E:161:ILE:HG22	19:E:162:ALA:H	1.83	0.43
19:E:265:PHE:CE1	19:E:266:ILE:CG1	3.01	0.43
25:F:135:ASN:HD21	25:F:177:ASP:HB3	1.83	0.43
25:F:261:ILE:HD12	25:F:261:ILE:HA	1.89	0.43
1:A:136:U:C2	1:A:160:A:C2	3.06	0.43
1:A:160:A:OP1	1:A:160:A:C8	2.70	0.43
1:A:163:G:C6	1:A:164:A:C5	3.06	0.43
1:A:252:C:H6	1:A:252:C:H5''	1.82	0.43
1:A:256:A:C8	1:A:381:C:OP1	2.71	0.43
1:A:265:A:H3'	1:A:266:A:C5'	2.48	0.43
1:A:318:A:H62	1:A:339:A:H62	1.57	0.43
1:A:723:G:H2'	1:A:724:G:C8	2.53	0.43
1:A:823:C:C2	1:A:1271:G:C6	3.06	0.43
1:A:901:C:C6	1:A:901:C:C3'	3.01	0.43
1:A:1187:G:N3	12:T:131:SER:CB	2.81	0.43
1:A:1200:A:H2'	1:A:1201:A:O4'	2.18	0.43
1:A:1451:G:C2	1:A:1598:C:O2	2.71	0.43
1:A:1603:A:C5'	19:E:55:LYS:HD3	2.41	0.43
1:A:1812:A:H2'	1:A:1813:A:H8	1.72	0.43
1:A:1879:U:C5	6:N:252:ARG:CZ	2.98	0.43
1:A:2151:G:C5	1:A:2152:C:H5	2.36	0.43
1:A:2175:C:H4'	1:A:2187:A:P	2.58	0.43
1:A:2219:U:C2'	1:A:2229:U:H3	2.26	0.43
1:A:2416:G:H2'	1:A:2417:G:H8	1.83	0.43
1:A:2579:U:C1'	5:M:23:ARG:NH1	2.78	0.43
3:B:26:A:N1	3:B:27:A:C6	2.86	0.43
4:L:210:LYS:HE2	4:L:210:LYS:HB2	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:77:ARG:HG2	7:O:78:PRO:O	2.18	0.43
9:Q:103:LYS:HB2	9:Q:126:MET:SD	2.58	0.43
10:R:216:LYS:HG3	10:R:217:ALA:H	1.84	0.43
15:W:130:HIS:CD2	15:W:132:SER:H	2.36	0.43
26:G:69:PHE:CD1	26:G:69:PHE:O	2.70	0.43
27:H:160:ALA:N	27:H:162:PRO:HD2	2.32	0.43
1:A:133:A:H3'	1:A:134:A:C8	2.53	0.43
1:A:333:A:H62	1:A:347:G:H21	1.65	0.43
1:A:355:A:C2'	1:A:356:A:C5'	2.85	0.43
1:A:357:G:H2'	1:A:358:C:H5'	2.01	0.43
1:A:614:G:N1	1:A:615:G:C6	2.86	0.43
1:A:649:A:OP1	6:N:202:GLY:HA3	2.19	0.43
1:A:888:C:H5'	1:A:889:G:C8	2.54	0.43
1:A:1444:A:C6	1:A:1609:U:O4	2.67	0.43
1:A:1480:A:N3	1:A:1480:A:C2'	2.82	0.43
1:A:1522:A:H62	1:A:1544:A:H1'	1.84	0.43
1:A:1603:A:O2'	1:A:1604:A:O4'	2.31	0.43
1:A:1812:A:C6	1:A:1813:A:N6	2.86	0.43
1:A:2291:A:O2'	1:A:2293:G:OP1	2.27	0.43
1:A:2647:A:N3	2:C:98:G:N2	2.66	0.43
2:C:43:G:H2'	2:C:44:U:H6	1.82	0.43
3:B:14:U:O2'	3:B:16:G:N2	2.50	0.43
3:B:30:A:C4	3:B:31:C:C5	3.06	0.43
4:L:141:ALA:O	11:S:102:ILE:HD12	2.18	0.43
7:O:29:PHE:H	7:O:67:ARG:NH1	2.16	0.43
7:O:62:GLY:HA3	7:O:109:VAL:HG23	1.99	0.43
9:Q:127:ILE:O	9:Q:130:SER:OG	2.25	0.43
9:Q:149:HIS:CG	9:Q:150:GLY:N	2.86	0.43
12:T:229:ASP:O	12:T:230:TYR:CD1	2.71	0.43
14:V:111:VAL:HG23	14:V:112:TYR:N	2.33	0.43
15:W:135:MET:SD	15:W:144:ALA:HB1	2.58	0.43
17:Y:75:CYS:HB3	17:Y:78:THR:O	2.18	0.43
25:F:118:LYS:N	25:F:141:TYR:OH	2.51	0.43
26:G:70:LEU:HD22	26:G:252:ILE:CD1	2.49	0.43
1:A:119:A:H2'	1:A:120:G:C8	2.53	0.43
1:A:213:A:O2'	1:A:214:A:OP2	2.28	0.43
1:A:278:G:H8	1:A:278:G:O5'	2.01	0.43
1:A:374:U:C5	1:A:374:U:OP2	2.71	0.43
1:A:488:G:N1	1:A:491:A:OP2	2.48	0.43
1:A:668:U:O5'	1:A:668:U:C6	2.71	0.43
1:A:791:G:H21	1:A:794:A:H62	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1523:A:H3'	1:A:1524:G:C8	2.54	0.43
1:A:1532:G:C6	1:A:1612:A:H8	2.36	0.43
1:A:1538:G:H2'	1:A:1539:C:C5	2.53	0.43
1:A:1751:A:N1	1:A:1753:A:P	2.91	0.43
1:A:1851:U:C2	1:A:1852:G:C8	3.06	0.43
1:A:1876:A:N6	1:A:1889:G:H21	2.16	0.43
1:A:2075:G:P	26:G:119:LYS:CE	3.01	0.43
1:A:2187:A:C2'	1:A:2188:C:H5'	2.48	0.43
1:A:2193:C:C4	1:A:2194:U:O4	2.71	0.43
1:A:2644:G:H8	1:A:2644:G:O5'	2.01	0.43
2:C:10:C:H2'	2:C:11:A:O4'	2.17	0.43
2:C:44:U:O2'	2:C:45:G:H5'	2.17	0.43
3:B:13:C:O2	3:B:111:G:C2	2.71	0.43
3:B:62:U:H2'	3:B:63:C:H6	1.84	0.43
10:R:185:ARG:HE	10:R:187:ILE:HD11	1.83	0.43
25:F:209:GLN:NE2	25:F:213:LYS:HE2	2.28	0.43
26:G:230:THR:HG23	26:G:233:SER:HB3	2.01	0.43
28:I:79:GLU:OE2	28:I:100:ARG:NH2	2.51	0.43
1:A:71:A:N6	1:A:109:A:HO2'	2.17	0.43
1:A:273:U:C6	1:A:273:U:O5'	2.71	0.43
1:A:273:U:H2'	1:A:274:G:O4'	2.19	0.43
1:A:949:A:C2	1:A:950:A:H1'	2.53	0.43
1:A:969:A:N6	1:A:970:G:C6	2.87	0.43
1:A:1172:C:O2'	1:A:1173:G:H8	2.00	0.43
1:A:1496:A:N6	1:A:1549:A:N6	2.65	0.43
1:A:1822:A:N1	1:A:1823:C:C4	2.87	0.43
1:A:1940:U:O3'	1:A:1941:A:H8	2.02	0.43
1:A:2103:G:C6	1:A:2104:A:C5	3.05	0.43
1:A:2287:G:C4	1:A:2288:G:C8	3.06	0.43
1:A:2642:G:C6	1:A:2643:C:N3	2.86	0.43
1:A:2647:A:C8	2:C:98:G:N1	2.87	0.43
3:B:35:A:H2'	3:B:36:A:C1'	2.48	0.43
4:L:107:HIS:O	4:L:107:HIS:CG	2.70	0.43
5:M:21:CYS:O	5:M:22:ILE:HD13	2.19	0.43
6:N:120:ARG:HG2	6:N:120:ARG:H	1.64	0.43
6:N:129:PHE:HE2	6:N:131:GLY:HA2	1.77	0.43
8:P:12:LYS:O	8:P:13:HIS:C	2.57	0.43
8:P:85:ILE:O	8:P:89:LEU:HB2	2.18	0.43
15:W:100:ILE:HG22	15:W:128:ALA:HA	1.99	0.43
16:X:73:LYS:HG2	16:X:75:GLN:H	1.84	0.43
16:X:141:GLU:C	16:X:142:ILE:CG1	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Y:129:ILE:HG22	17:Y:137:VAL:HG21	2.01	0.43
25:F:114:VAL:HG13	25:F:275:VAL:CG1	2.48	0.43
25:F:144:LEU:CD1	25:F:166:ARG:NE	2.76	0.43
1:A:218:A:N6	1:A:441:A:H61	2.12	0.43
1:A:538:C:C2	1:A:2797:U:C5	3.07	0.43
1:A:577:G:H8	1:A:577:G:O5'	2.01	0.43
1:A:671:C:H2'	1:A:672:U:C6	2.54	0.43
1:A:890:G:N3	1:A:891:G:C8	2.86	0.43
1:A:907:C:O5'	1:A:907:C:C6	2.70	0.43
1:A:1136:U:H2'	1:A:1137:C:C5'	2.47	0.43
1:A:1225:G:H22	1:A:1262:A:H61	1.65	0.43
1:A:1500:U:H2'	1:A:1501:G:OP1	2.18	0.43
1:A:1611:G:O2'	1:A:1612:A:O5'	2.37	0.43
1:A:1875:G:OP1	6:N:243:LYS:NZ	2.51	0.43
1:A:2123:U:H4'	1:A:2124:G:OP1	2.18	0.43
1:A:2215:C:H2'	1:A:2216:U:H5'	1.99	0.43
1:A:2315:G:C2	1:A:2338:G:C6	3.06	0.43
1:A:2479:U:H2'	1:A:2480:U:O4'	2.18	0.43
3:B:15:A:H2'	3:B:16:G:OP2	2.19	0.43
3:B:77:A:H2'	3:B:78:U:C6	2.54	0.43
6:N:225:LEU:HD23	6:N:232:VAL:HG21	2.00	0.43
7:O:36:ALA:HA	7:O:129:THR:HG22	2.00	0.43
8:P:93:VAL:O	8:P:95:GLU:N	2.52	0.43
9:Q:125:GLU:HG3	9:Q:129:LYS:HE3	2.01	0.43
14:V:149:GLU:OE2	14:V:153:ASN:ND2	2.51	0.43
25:F:125:GLN:HB3	25:F:138:GLN:HB3	2.00	0.43
27:H:59:THR:O	27:H:62:ILE:N	2.46	0.43
28:I:48:ILE:HB	28:I:90:LEU:N	2.31	0.43
1:A:165:C:O5'	1:A:165:C:H6	2.02	0.43
1:A:389:A:H2'	1:A:390:U:H6	1.79	0.43
1:A:624:A:N3	1:A:624:A:H2'	2.33	0.43
1:A:836:G:O2'	6:N:133:GLN:CG	2.65	0.43
1:A:869:G:O2'	1:A:870:U:P	2.75	0.43
1:A:950:A:C2	1:A:951:C:O2	2.71	0.43
1:A:965:G:C2	1:A:966:G:C8	3.07	0.43
1:A:1211:G:OP1	6:N:111:GLY:N	2.50	0.43
1:A:1461:G:H2'	1:A:1462:G:C8	2.54	0.43
1:A:1598:C:C4	1:A:1599:C:N4	2.87	0.43
1:A:1793:A:N1	1:A:2604:A:H2'	2.34	0.43
1:A:1819:A:H2'	1:A:1820:A:C8	2.54	0.43
1:A:1825:A:H5''	19:E:37:LYS:HZ2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1849:A:H2'	1:A:1849:A:N3	2.34	0.43
1:A:1887:G:O2'	1:A:1888:G:H5'	2.18	0.43
1:A:2025:U:OP2	13:U:45:LYS:HE3	2.18	0.43
1:A:2088:U:H2'	1:A:2089:U:C6	2.53	0.43
1:A:2120:U:C4	1:A:2198:A:H2	2.37	0.43
1:A:2228:C:H5''	1:A:2229:U:H5'	2.01	0.43
1:A:2536:A:H3'	1:A:2536:A:OP2	2.18	0.43
1:A:2752:G:C6	25:F:297:ILE:C	2.92	0.43
3:B:32:A:C5	3:B:55:G:N1	2.86	0.43
4:L:175:ARG:NH2	4:L:184:LYS:HZ1	1.96	0.43
8:P:31:LEU:HD13	8:P:57:TYR:CE2	2.52	0.43
8:P:93:VAL:C	8:P:95:GLU:N	2.72	0.43
14:V:109:LEU:HD11	14:V:141:ARG:CA	2.49	0.43
14:V:119:ILE:HD12	14:V:135:LEU:HB3	2.01	0.43
16:X:123:VAL:O	16:X:124:LYS:HD2	2.19	0.43
1:A:158:C:H6	1:A:158:C:H5''	1.83	0.43
1:A:1134:G:O5'	1:A:1134:G:C8	2.70	0.43
1:A:1547:C:O5'	1:A:1547:C:H6	2.01	0.43
1:A:1650:A:C8	1:A:1650:A:OP2	2.71	0.43
1:A:2103:G:C6	1:A:2104:A:C6	3.07	0.43
1:A:2213:A:N1	1:A:2214:C:C4	2.86	0.43
1:A:2213:A:N7	1:A:2242:A:N6	2.67	0.43
1:A:2339:A:H8	1:A:2339:A:O5'	2.02	0.43
1:A:2682:A:N3	1:A:2682:A:H2'	2.34	0.43
2:C:37:C:O2'	2:C:38:G:H5''	2.18	0.43
2:C:71:C:C2	10:R:144:ARG:NH2	2.87	0.43
2:C:84:C:H2'	2:C:85:U:H6	1.80	0.43
3:B:32:A:HO2'	3:B:33:C:H5'	1.83	0.43
3:B:34:C:C2'	3:B:35:A:C8	3.01	0.43
3:B:42:C:H2'	3:B:43:C:OP1	2.19	0.43
3:B:62:U:C2	3:B:63:C:C5	3.07	0.43
3:B:71:G:H2'	3:B:72:U:H6	1.83	0.43
3:B:80:C:H2'	3:B:81:U:O4'	2.19	0.43
6:N:165:ILE:HD13	6:N:165:ILE:O	2.18	0.43
13:U:163:LEU:C	13:U:163:LEU:CD2	2.85	0.43
16:X:81:ILE:HG23	16:X:85:GLN:HB2	2.00	0.43
18:Z:88:PHE:CE2	18:Z:92:LEU:HD13	2.54	0.43
25:F:266:ILE:HA	25:F:278:ILE:HD12	2.01	0.43
26:G:177:GLU:HB3	26:G:197:TRP:HZ2	1.84	0.43
27:H:90:ASN:ND2	27:H:206:ASP:HB2	2.33	0.43
1:A:5:A:H2'	1:A:6:A:H8	1.68	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:83:A:C2	1:A:101:A:N7	2.87	0.43
1:A:159:A:H1'	1:A:160:A:P	2.58	0.43
1:A:355:A:N7	1:A:356:A:C5	2.87	0.43
1:A:459:A:H4'	1:A:460:U:O5'	2.18	0.43
1:A:749:G:N2	1:A:770:G:C5	2.87	0.43
1:A:946:A:O2'	1:A:947:A:C8	2.70	0.43
1:A:1047:U:O2'	1:A:1049:A:H2	2.02	0.43
1:A:1269:G:C8	11:S:3:ARG:C	2.92	0.43
1:A:1524:G:C2	1:A:1525:G:C5	3.07	0.43
1:A:1671:A:H2'	1:A:1672:U:O4'	2.18	0.43
1:A:1739:G:H2'	1:A:1740:G:C8	2.54	0.43
1:A:1827:G:H5''	19:E:83:ARG:NE	2.34	0.43
1:A:2075:G:C8	1:A:2518:C:O2'	2.72	0.43
1:A:2180:G:O6	1:A:2184:G:O6	2.36	0.43
1:A:2202:C:C4	1:A:2203:U:O4	2.71	0.43
1:A:2242:A:O2'	1:A:2243:C:P	2.77	0.43
1:A:2654:U:C2	1:A:2800:G:C2	3.07	0.43
3:B:33:C:H6	3:B:33:C:O5'	2.01	0.43
4:L:201:GLU:HG3	4:L:218:PHE:CZ	2.48	0.43
4:L:213:LEU:C	4:L:213:LEU:CD1	2.85	0.43
4:L:217:LEU:CD1	4:L:217:LEU:C	2.85	0.43
4:L:238:ASP:OD1	4:L:238:ASP:N	2.50	0.43
6:N:162:LEU:HG	6:N:203:GLU:CD	2.39	0.43
7:O:58:ALA:O	7:O:60:ARG:N	2.52	0.43
8:P:45:LYS:HD3	8:P:120:MET:HE2	2.00	0.43
8:P:64:LEU:HD23	8:P:76:ALA:HB2	2.01	0.43
8:P:97:TYR:HD1	8:P:100:ARG:HG3	1.84	0.43
8:P:116:ASP:HB2	8:P:118:ALA:HB2	2.00	0.43
10:R:123:MET:SD	25:F:114:VAL:HG21	2.59	0.43
19:E:40:ASN:HA	19:E:44:ILE:O	2.19	0.43
25:F:92:VAL:HG22	25:F:191:PHE:HE2	1.83	0.43
28:I:194:PRO:HG3	28:I:203:ARG:HB3	2.00	0.43
1:A:341:A:N6	1:A:344:C:N3	2.67	0.43
1:A:470:G:O2'	1:A:481:G:O6	2.33	0.43
1:A:501:A:H2'	1:A:501:A:N3	2.34	0.43
1:A:517:G:O2'	1:A:518:A:P	2.77	0.43
1:A:572:U:H5''	1:A:573:G:OP2	2.18	0.43
1:A:821:U:H2'	6:N:108:GLY:HA2	2.00	0.43
1:A:1483:G:H8	1:A:1483:G:O5'	2.01	0.43
1:A:1841:G:C6	1:A:1842:C:N4	2.86	0.43
1:A:2035:A:C5	11:S:25:ARG:NH2	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2212:A:C2	29:J:77:PHE:HB2	2.54	0.43
1:A:2233:G:C6	1:A:2234:G:O6	2.72	0.43
1:A:2414:A:H2'	1:A:2415:C:C6	2.53	0.43
1:A:2433:C:H2'	1:A:2434:C:C6	2.53	0.43
1:A:2472:G:C4	1:A:2473:C:C5	3.07	0.43
2:C:51:U:H2'	2:C:52:G:O4'	2.18	0.43
2:C:73:G:C2	2:C:74:C:C2	3.07	0.43
3:B:16:G:O3'	3:B:17:G:O4'	2.37	0.43
3:B:18:C:H6	3:B:18:C:H5''	1.83	0.43
6:N:165:ILE:HG23	6:N:166:GLU:N	2.34	0.43
12:T:204:LYS:HD2	12:T:204:LYS:H	1.84	0.43
13:U:26:PRO:C	13:U:28:LYS:H	2.22	0.43
19:E:103:PRO:HG2	19:E:106:ALA:HB2	2.00	0.43
25:F:114:VAL:HA	25:F:276:VAL:O	2.19	0.43
25:F:199:ILE:HB	25:F:291:ARG:O	2.18	0.43
26:G:79:LYS:O	26:G:83:VAL:CG2	2.63	0.43
27:H:99:ASN:OD1	27:H:102:GLY:N	2.52	0.43
27:H:132:VAL:HG22	27:H:138:LEU:HD11	2.01	0.43
28:I:82:VAL:HA	28:I:91:ARG:O	2.18	0.43
1:A:391:G:C6	1:A:408:G:O6	2.72	0.42
1:A:609:G:C5'	26:G:79:LYS:CD	2.67	0.42
1:A:859:A:C4	1:A:860:C:C5	3.07	0.42
1:A:1009:A:H8	1:A:1010:C:C5	2.36	0.42
1:A:1307:A:N6	1:A:1350:U:N3	2.67	0.42
1:A:1478:U:H6	1:A:1478:U:H5''	1.84	0.42
1:A:1527:G:H3'	1:A:1528:U:C6	2.54	0.42
1:A:1527:G:H3'	1:A:1528:U:H5	1.76	0.42
1:A:1757:G:C8	1:A:1757:G:O5'	2.72	0.42
1:A:1852:G:H2'	1:A:1853:C:C6	2.54	0.42
1:A:1897:C:H2'	1:A:1898:G:O4'	2.19	0.42
1:A:2120:U:N3	1:A:2198:A:C2	2.87	0.42
1:A:2198:A:O5'	1:A:2198:A:C8	2.73	0.42
1:A:2229:U:O4	19:E:64:ARG:CZ	2.67	0.42
1:A:2308:U:H5'	1:A:2397:U:H1'	2.01	0.42
3:B:36:A:P	3:B:36:A:H8	2.42	0.42
6:N:143:LEU:HG	6:N:144:ARG:H	1.84	0.42
9:Q:74:CYS:SG	9:Q:85:GLN:HB2	2.59	0.42
11:S:90:LEU:O	11:S:92:LEU:N	2.48	0.42
15:W:140:GLU:OE1	15:W:141:GLN:HG2	2.19	0.42
25:F:159:LYS:C	25:F:159:LYS:CD	2.86	0.42
1:A:297:U:H2'	1:A:298:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:366:G:OP2	1:A:366:G:C8	2.72	0.42
1:A:387:G:C3'	1:A:388:C:H5''	2.38	0.42
1:A:524:A:C1'	11:S:11:ARG:HH22	2.31	0.42
1:A:609:G:H4'	26:G:79:LYS:HD2	1.99	0.42
1:A:610:G:P	26:G:79:LYS:HG2	2.59	0.42
1:A:881:U:C2	1:A:916:G:O6	2.71	0.42
1:A:903:G:C2'	1:A:904:U:C5'	2.86	0.42
1:A:1086:G:O6	1:A:1108:C:N3	2.52	0.42
1:A:1142:G:H2'	1:A:1143:C:O4'	2.20	0.42
1:A:1469:G:N1	1:A:1483:G:C6	2.87	0.42
1:A:1541:U:OP2	1:A:1541:U:H5	2.00	0.42
1:A:1603:A:H5'	19:E:55:LYS:CE	2.49	0.42
1:A:1850:G:C5	1:A:1851:U:C5	3.07	0.42
1:A:1870:U:H2'	1:A:1871:U:C6	2.54	0.42
1:A:1879:U:O2	1:A:1887:G:C2	2.71	0.42
1:A:2229:U:O2	1:A:2229:U:H5''	2.19	0.42
1:A:2278:C:H41	16:X:71:ASP:HB3	1.82	0.42
1:A:2381:C:H2'	1:A:2382:G:O4'	2.19	0.42
2:C:88:C:O5'	2:C:88:C:C6	2.70	0.42
3:B:10:G:C2	3:B:114:G:C2	3.07	0.42
3:B:56:U:H1'	27:H:79:LEU:HD21	2.01	0.42
3:B:118:G:OP1	9:Q:102:GLN:OE1	2.37	0.42
4:L:191:LEU:HD12	4:L:191:LEU:N	2.34	0.42
4:L:198:ARG:HA	4:L:201:GLU:HB3	2.01	0.42
4:L:204:VAL:O	4:L:208:LEU:HG	2.18	0.42
6:N:102:HIS:CD2	12:T:205:ASN:HD21	2.35	0.42
6:N:175:GLU:O	6:N:176:VAL:HB	2.19	0.42
7:O:91:GLU:OE1	7:O:92:TYR:CD2	2.72	0.42
8:P:43:ARG:HD2	8:P:122:TYR:CE2	2.53	0.42
9:Q:114:GLY:O	9:Q:119:VAL:HG21	2.18	0.42
12:T:143:TYR:CD1	12:T:216:ILE:HD12	2.51	0.42
12:T:144:THR:HG23	12:T:146:ARG:H	1.84	0.42
15:W:82:GLU:H	15:W:82:GLU:CD	2.12	0.42
15:W:90:SER:CB	15:W:102:LYS:HD3	2.49	0.42
19:E:29:ILE:C	19:E:31:GLY:H	2.15	0.42
25:F:199:ILE:CD1	25:F:282:VAL:HB	2.48	0.42
26:G:89:ILE:HD12	26:G:89:ILE:HA	1.72	0.42
26:G:234:LEU:C	26:G:234:LEU:CD2	2.85	0.42
29:J:50:LYS:HG2	29:J:68:ASP:OD1	2.18	0.42
1:A:138:C:C2	1:A:157:G:N2	2.88	0.42
1:A:226:A:HO2'	1:A:227:G:P	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:U:O2'	1:A:340:A:O2'	2.36	0.42
1:A:387:G:C6	1:A:388:C:N3	2.88	0.42
1:A:682:C:H2'	1:A:683:C:C6	2.54	0.42
1:A:787:G:O2'	1:A:788:G:P	2.77	0.42
1:A:856:U:O2	1:A:856:U:H3'	2.20	0.42
1:A:898:G:C2	1:A:899:A:N6	2.87	0.42
1:A:957:U:C2'	1:A:958:C:H5'	2.49	0.42
1:A:980:G:H2'	1:A:981:G:O4'	2.18	0.42
1:A:1081:C:N3	1:A:1135:A:C6	2.88	0.42
1:A:1533:A:H2'	1:A:1534:A:O4'	2.19	0.42
1:A:1821:G:H2'	1:A:1822:A:H8	1.84	0.42
1:A:2006:G:N1	1:A:2009:U:O4	2.52	0.42
1:A:2078:C:H2'	1:A:2079:C:H6	1.84	0.42
1:A:2215:C:C2'	1:A:2216:U:C5'	2.97	0.42
1:A:2321:G:O2'	27:H:186:ARG:CB	2.65	0.42
1:A:2697:C:H2'	1:A:2698:C:C6	2.54	0.42
2:C:33:A:N3	2:C:33:A:H2'	2.34	0.42
2:C:104:A:C4	2:C:105:A:N7	2.86	0.42
3:B:33:C:H2'	3:B:34:C:C6	2.54	0.42
3:B:56:U:O2'	27:H:77:ASN:OD1	2.26	0.42
3:B:119:G:OP1	9:Q:101:MET:HE2	2.20	0.42
4:L:124:LEU:HD13	4:L:161:VAL:HG11	2.01	0.42
6:N:135:PRO:O	6:N:139:ARG:HG3	2.18	0.42
9:Q:148:TYR:HE2	9:Q:153:LYS:HZ2	1.67	0.42
13:U:94:ASN:HB2	13:U:97:ASN:OD1	2.19	0.42
14:V:105:PRO:O	14:V:106:ARG:C	2.58	0.42
14:V:115:LEU:C	18:Z:91:ARG:HH22	2.22	0.42
14:V:119:ILE:HG22	14:V:121:THR:HG22	2.00	0.42
29:J:69:VAL:HG21	29:J:78:LEU:HD12	2.00	0.42
1:A:81:G:HO2'	1:A:82:G:P	2.38	0.42
1:A:101:A:C5	1:A:102:U:C5	3.07	0.42
1:A:121:G:O2'	1:A:122:U:H5'	2.19	0.42
1:A:379:C:H3'	1:A:379:C:O2	2.19	0.42
1:A:549:A:N6	1:A:565:G:O2'	2.52	0.42
1:A:913:G:C4	1:A:914:A:C8	3.07	0.42
1:A:1028:A:N6	1:A:1182:A:C8	2.87	0.42
1:A:1876:A:O5'	1:A:1876:A:C8	2.70	0.42
1:A:2055:U:H2'	1:A:2056:A:C8	2.54	0.42
1:A:2103:G:C6	1:A:2104:A:N6	2.87	0.42
1:A:2243:C:H2'	1:A:2244:A:O4'	2.20	0.42
3:B:86:G:C6	3:B:87:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:34:LEU:HD11	7:O:129:THR:OG1	2.19	0.42
13:U:57:SER:HA	13:U:99:ILE:HA	2.02	0.42
13:U:67:LEU:HD23	13:U:67:LEU:O	2.20	0.42
16:X:76:ARG:O	16:X:77:LEU:HD23	2.19	0.42
19:E:206:SER:HA	19:E:209:TRP:CD1	2.43	0.42
19:E:266:ILE:HG22	19:E:268:ARG:N	2.34	0.42
25:F:264:LEU:HD11	25:F:280:GLY:HA3	2.00	0.42
26:G:58:LEU:HA	26:G:63:GLU:O	2.19	0.42
26:G:238:ASP:OD1	26:G:238:ASP:N	2.52	0.42
27:H:101:LYS:HA	27:H:104:ASP:HB2	2.02	0.42
1:A:6:A:C8	1:A:6:A:O5'	2.70	0.42
1:A:130:U:O2	1:A:130:U:H3'	2.19	0.42
1:A:176:A:H2'	1:A:177:C:H6	1.85	0.42
1:A:274:G:O6	1:A:433:C:C2'	2.58	0.42
1:A:288:C:C6	1:A:288:C:O5'	2.70	0.42
1:A:337:U:H3	1:A:341:A:H62	1.67	0.42
1:A:605:C:H2'	1:A:606:A:H8	1.84	0.42
1:A:906:C:O5'	1:A:906:C:C6	2.70	0.42
1:A:1168:U:OP1	4:L:123:ILE:CD1	2.68	0.42
1:A:1444:A:O2'	1:A:1534:A:H1'	2.20	0.42
1:A:1524:G:HO2'	1:A:1525:G:H5'	1.82	0.42
1:A:1537:U:C4	1:A:1538:G:O6	2.72	0.42
1:A:2236:C:C3'	1:A:2237:A:C5'	2.93	0.42
2:C:37:C:C3'	2:C:38:G:C5'	2.98	0.42
9:Q:87:ILE:HG22	9:Q:94:THR:HG22	2.01	0.42
10:R:157:GLU:OE1	10:R:161:ARG:NH1	2.53	0.42
11:S:62:ILE:O	11:S:66:ASN:HB2	2.19	0.42
13:U:150:GLU:O	13:U:152:LEU:HG	2.19	0.42
19:E:42:ARG:HG2	19:E:43:GLY:H	1.84	0.42
25:F:119:GLU:OE1	25:F:120:GLY:N	2.42	0.42
1:A:144:A:O3'	1:A:145:A:O4'	2.36	0.42
1:A:319:G:C5	1:A:321:G:C6	3.07	0.42
1:A:420:A:N1	1:A:432:G:C2	2.88	0.42
1:A:591:C:C2	1:A:1281:G:N2	2.88	0.42
1:A:633:A:C2'	1:A:634:G:H5'	2.49	0.42
1:A:880:U:O2'	1:A:881:U:H5'	2.20	0.42
1:A:891:G:N2	1:A:892:C:O2	2.53	0.42
1:A:1429:C:H2'	1:A:1430:C:H5'	2.00	0.42
1:A:1500:U:C3'	1:A:1500:U:C6	3.02	0.42
1:A:1528:U:O2'	1:A:1529:A:H5'	2.19	0.42
1:A:1588:U:C2	1:A:1670:A:N7	2.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1697:U:C2	1:A:2014:G:N2	2.88	0.42
1:A:1812:A:C2'	1:A:1813:A:H5'	2.48	0.42
1:A:1828:U:H6	1:A:1828:U:O5'	2.03	0.42
3:B:17:G:C2	3:B:70:G:H1'	2.40	0.42
3:B:42:C:P	3:B:43:C:C5	3.13	0.42
4:L:121:ASP:O	4:L:122:LEU:HD23	2.20	0.42
4:L:203:ALA:O	4:L:207:MET:HG2	2.19	0.42
10:R:194:ILE:HG22	10:R:195:VAL:N	2.34	0.42
11:S:91:LEU:HD23	11:S:91:LEU:HA	1.86	0.42
12:T:233:SER:O	12:T:234:THR:HG23	2.18	0.42
16:X:67:LYS:O	16:X:69:GLY:N	2.47	0.42
16:X:75:GLN:OE1	16:X:76:ARG:N	2.47	0.42
18:Z:77:ASN:HD21	18:Z:140:TRP:HE1	1.66	0.42
19:E:42:ARG:NH2	19:E:44:ILE:HD13	2.34	0.42
19:E:140:ILE:HD13	19:E:180:ILE:HD13	2.02	0.42
25:F:119:GLU:CD	25:F:120:GLY:N	2.73	0.42
26:G:190:PHE:O	26:G:193:ALA:HB3	2.19	0.42
1:A:133:A:C6	1:A:162:A:C2	2.80	0.42
1:A:307:C:H2'	1:A:308:G:O4'	2.20	0.42
1:A:356:A:N3	1:A:357:G:C8	2.87	0.42
1:A:394:G:N2	1:A:405:C:C4	2.87	0.42
1:A:582:A:H5'	12:T:202:LYS:NZ	2.35	0.42
1:A:823:C:HO2'	1:A:824:U:H5'	1.80	0.42
1:A:845:C:C2	1:A:846:A:C8	3.07	0.42
1:A:878:U:H6	1:A:878:U:O5'	2.03	0.42
1:A:881:U:C2	1:A:916:G:C6	3.08	0.42
1:A:943:C:H6	1:A:943:C:H5''	1.85	0.42
1:A:964:C:C4	1:A:965:G:C8	3.07	0.42
1:A:1017:G:HO2'	1:A:1018:A:P	2.43	0.42
1:A:1070:G:C2	1:A:1071:C:C2	3.08	0.42
1:A:1637:G:OP1	14:V:166:ILE:HG21	2.19	0.42
1:A:1691:A:H62	1:A:2019:G:N2	2.16	0.42
1:A:1804:U:C2	1:A:1805:C:C5	3.08	0.42
1:A:1882:U:O5'	1:A:1882:U:H6	2.03	0.42
1:A:2211:U:O4	1:A:2241:G:N3	2.53	0.42
1:A:2233:G:C2	1:A:2234:G:C6	3.07	0.42
1:A:2485:A:N6	1:A:2498:G:C5	2.88	0.42
1:A:2565:G:H4'	5:M:31:ARG:HH22	1.84	0.42
1:A:2804:U:C4	1:A:2805:C:C5	3.08	0.42
2:C:63:G:O5'	2:C:63:G:H8	2.02	0.42
2:C:78:G:C2	2:C:79:G:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:75:C:H2'	3:B:76:G:O4'	2.20	0.42
6:N:97:ARG:NH1	6:N:100:ARG:CG	2.82	0.42
13:U:88:SER:O	13:U:92:GLN:HA	2.20	0.42
27:H:107:ILE:HA	27:H:118:PRO:HG3	2.00	0.42
1:A:131:C:C5	14:V:104:TYR:CD2	3.06	0.42
1:A:154:C:H5'	1:A:154:C:H6	1.85	0.42
1:A:167:A:H2'	1:A:168:C:H6	1.84	0.42
1:A:419:C:H2'	1:A:420:A:H8	1.84	0.42
1:A:524:A:C1'	11:S:11:ARG:NH2	2.80	0.42
1:A:1192:A:H2'	1:A:1193:U:H6	1.83	0.42
1:A:1526:G:H8	1:A:1526:G:O5'	2.01	0.42
1:A:1691:A:O5'	1:A:1691:A:C8	2.70	0.42
1:A:1805:C:H2'	1:A:1806:U:C6	2.53	0.42
1:A:2033:A:OP2	1:A:2033:A:H8	2.03	0.42
1:A:2425:U:N3	1:A:2426:G:N7	2.68	0.42
1:A:2600:G:H2'	1:A:2601:U:O4'	2.20	0.42
1:A:2678:G:H8	1:A:2678:G:OP2	2.03	0.42
2:C:74:C:H4'	8:P:75:GLN:NE2	2.34	0.42
3:B:79:A:H4'	7:O:21:SER:CB	2.50	0.42
5:M:8:LEU:HD12	5:M:8:LEU:N	2.34	0.42
5:M:11:ALA:O	5:M:99:PHE:N	2.34	0.42
6:N:157:TYR:HB2	6:N:196:LEU:HD22	2.01	0.42
8:P:38:LEU:HD22	8:P:58:VAL:HG21	2.02	0.42
16:X:120:ASP:OD1	16:X:120:ASP:N	2.53	0.42
25:F:142:GLU:O	25:F:144:LEU:HG	2.20	0.42
26:G:58:LEU:HA	26:G:58:LEU:HD13	1.93	0.42
27:H:181:TYR:CE1	27:H:219:ALA:HB3	2.55	0.42
28:I:52:ALA:O	28:I:54:VAL:HG23	2.20	0.42
1:A:106:G:H2'	1:A:107:A:O4'	2.20	0.42
1:A:253:C:H2'	1:A:254:U:O2	2.20	0.42
1:A:354:A:O2'	1:A:355:A:O5'	2.37	0.42
1:A:523:G:HO2'	1:A:524:A:H8	1.68	0.42
1:A:632:G:C8	1:A:634:G:O6	2.73	0.42
1:A:679:G:H2'	1:A:681:A:H62	1.84	0.42
1:A:1006:G:HO2'	1:A:1030:G:HO2'	1.64	0.42
1:A:1477:G:C2	1:A:1478:U:O2	2.73	0.42
1:A:1625:A:H3'	1:A:1626:A:C8	2.55	0.42
1:A:1852:G:H2'	1:A:1853:C:H6	1.85	0.42
1:A:2116:C:H42	1:A:2201:G:N2	2.17	0.42
1:A:2424:G:H2'	1:A:2425:U:C6	2.55	0.42
1:A:2442:A:H4'	1:A:2443:A:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2574:G:O2'	1:A:2575:C:H5'	2.19	0.42
3:B:110:C:C3'	3:B:110:C:C6	3.03	0.42
12:T:110:PHE:HD1	12:T:111:LEU:HD23	1.84	0.42
29:J:76:ASN:O	29:J:80:PRO:CB	2.65	0.42
1:A:208:A:H4'	1:A:432:G:O2'	2.20	0.42
1:A:275:U:H3'	1:A:275:U:O2	2.19	0.42
1:A:289:A:HO2'	1:A:290:A:H5'	1.81	0.42
1:A:306:G:H2'	1:A:307:C:C6	2.55	0.42
1:A:613:U:C3'	1:A:613:U:C6	3.02	0.42
1:A:689:C:H2'	1:A:690:U:H6	1.85	0.42
1:A:1531:A:N3	1:A:1531:A:C2'	2.79	0.42
1:A:1736:A:H2'	1:A:1737:A:H5'	2.02	0.42
1:A:1803:G:H2'	1:A:1804:U:C6	2.55	0.42
1:A:1885:C:N4	6:N:253:ALA:HA	2.32	0.42
1:A:2220:G:C4	1:A:2221:U:C6	3.08	0.42
1:A:2308:U:H2'	1:A:2309:U:C6	2.55	0.42
1:A:2322:A:C5	27:H:186:ARG:CD	2.88	0.42
4:L:168:ARG:HH22	4:L:192:GLN:CD	2.22	0.42
9:Q:122:LYS:O	9:Q:125:GLU:HB3	2.19	0.42
16:X:122:LEU:CD1	16:X:140:ARG:CB	2.98	0.42
19:E:172:LEU:C	19:E:172:LEU:HD12	2.40	0.42
19:E:258:ARG:HA	19:E:258:ARG:CZ	2.50	0.42
25:F:147:ARG:O	25:F:149:LEU:N	2.53	0.42
26:G:204:LYS:HZ1	26:G:241:ASN:HB3	1.85	0.42
28:I:123:PHE:CE1	28:I:178:LYS:HE3	2.55	0.42
1:A:127:C:H2'	1:A:128:U:H6	1.82	0.41
1:A:298:G:H2'	1:A:299:C:C6	2.46	0.41
1:A:497:C:H2'	1:A:498:C:C6	2.55	0.41
1:A:545:U:O2'	11:S:49:ASP:CG	2.53	0.41
1:A:944:C:C3'	1:A:944:C:C6	3.02	0.41
1:A:963:U:O5'	1:A:963:U:H6	2.03	0.41
1:A:1065:G:O2'	1:A:1066:G:H8	2.03	0.41
1:A:1506:U:H2'	1:A:1507:G:O4'	2.20	0.41
1:A:1524:G:O5'	1:A:1524:G:C8	2.73	0.41
1:A:1693:U:OP1	25:F:229:HIS:O	2.38	0.41
1:A:1877:C:N3	1:A:1878:C:C5	2.88	0.41
1:A:1878:C:C4	1:A:1879:U:O4	2.72	0.41
1:A:1985:A:H1'	19:E:236:PRO:HB3	2.02	0.41
1:A:2142:G:O2'	1:A:2188:C:C4'	2.68	0.41
3:B:14:U:H3'	3:B:15:A:C8	2.54	0.41
7:O:17:MET:SD	7:O:96:VAL:HG13	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:T:181:ALA:HB3	12:T:225:THR:HG21	1.99	0.41
16:X:145:GLU:C	16:X:146:ASN:ND2	2.73	0.41
19:E:259:ASN:N	19:E:259:ASN:ND2	2.60	0.41
1:A:226:A:H1'	1:A:228:U:C5	2.54	0.41
1:A:278:G:O5'	1:A:278:G:C8	2.73	0.41
1:A:671:C:C4	1:A:672:U:O4	2.73	0.41
1:A:879:G:C2	1:A:880:U:O2	2.73	0.41
1:A:919:A:N6	1:A:920:A:N6	2.68	0.41
1:A:1134:G:O2'	1:A:1135:A:H5'	2.20	0.41
1:A:1482:C:C3'	1:A:1482:C:C6	3.03	0.41
1:A:1650:A:C8	1:A:1650:A:O5'	2.71	0.41
1:A:1651:C:OP2	1:A:1653:C:C5	2.73	0.41
1:A:1693:U:H2'	1:A:1694:C:C6	2.56	0.41
1:A:2109:C:C5	1:A:2110:U:C6	3.05	0.41
1:A:2120:U:N3	1:A:2198:A:H2	2.18	0.41
1:A:2351:G:N3	9:Q:64:VAL:HG22	2.31	0.41
1:A:2479:U:C5	1:A:2505:A:C2	3.08	0.41
1:A:2524:C:C2	1:A:2600:G:C2	3.08	0.41
1:A:2798:G:N1	4:L:201:GLU:CD	2.61	0.41
2:C:78:G:H2'	2:C:79:G:H8	1.84	0.41
6:N:158:VAL:HG11	6:N:201:LEU:HD11	2.02	0.41
7:O:72:LYS:HB2	7:O:72:LYS:HE3	1.87	0.41
9:Q:100:THR:O	9:Q:100:THR:HG22	2.21	0.41
11:S:80:LYS:HG3	11:S:83:HIS:ND1	2.35	0.41
13:U:168:ARG:HD3	13:U:168:ARG:HA	1.62	0.41
14:V:131:GLU:O	14:V:132:ASN:HB2	2.20	0.41
19:E:115:GLY:O	19:E:127:PRO:HD3	2.20	0.41
26:G:97:ARG:O	26:G:99:THR:HG22	2.20	0.41
27:H:109:GLU:O	27:H:113:ILE:HD12	2.20	0.41
1:A:82:G:C6	1:A:100:G:C6	3.08	0.41
1:A:133:A:C4	1:A:134:A:N7	2.88	0.41
1:A:704:A:H2'	1:A:705:U:O4'	2.21	0.41
1:A:720:U:H2'	1:A:721:U:C6	2.55	0.41
1:A:822:U:O2	6:N:99:GLY:O	2.37	0.41
1:A:885:G:C2	1:A:886:U:C2	3.08	0.41
1:A:1471:A:HO2'	1:A:1472:A:P	2.30	0.41
1:A:1539:C:H2'	1:A:1540:C:H6	1.70	0.41
1:A:1600:A:H5''	19:E:210:LEU:CD2	2.50	0.41
1:A:1698:C:O2'	1:A:2704:U:H5''	2.20	0.41
1:A:1993:C:O2'	1:A:1994:G:H5'	2.20	0.41
1:A:2211:U:C4	1:A:2241:G:N1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2324:G:H4'	1:A:2325:G:C5'	2.46	0.41
1:A:2422:G:HO2'	1:A:2423:A:P	2.42	0.41
3:B:35:A:C2'	3:B:36:A:C8	3.01	0.41
3:B:57:U:H4'	3:B:58:A:O5'	2.19	0.41
3:B:89:A:O5'	3:B:89:A:C8	2.70	0.41
5:M:1:MET:SD	5:M:32:TYR:HD1	2.42	0.41
6:N:80:PHE:CD1	6:N:85:LEU:CD2	3.03	0.41
6:N:153:GLY:O	6:N:154:LEU:CB	2.68	0.41
9:Q:81:HIS:O	9:Q:82:LEU:HD12	2.21	0.41
10:R:152:ARG:HH21	10:R:164:VAL:HG22	1.85	0.41
11:S:32:THR:HA	11:S:35:ILE:CG1	2.50	0.41
11:S:52:ARG:CD	11:S:55:ARG:HH11	2.32	0.41
14:V:132:ASN:OD1	14:V:183:ASN:HA	2.20	0.41
19:E:153:ALA:O	19:E:191:VAL:HG11	2.20	0.41
26:G:52:LEU:HD22	26:G:71:ASN:HA	2.02	0.41
29:J:74:LEU:HA	29:J:78:LEU:HD12	2.03	0.41
1:A:95:G:OP1	18:Z:100:PHE:HE1	2.04	0.41
1:A:320:U:O4'	1:A:341:A:N3	2.53	0.41
1:A:381:C:N3	1:A:416:C:C5	2.88	0.41
1:A:393:G:N2	1:A:406:C:C2	2.88	0.41
1:A:795:U:H5''	19:E:222:ASN:OD1	2.17	0.41
1:A:873:A:C2'	1:A:874:G:H5'	2.50	0.41
1:A:891:G:C2	1:A:892:C:N3	2.88	0.41
1:A:1031:G:N2	1:A:1180:C:C2	2.89	0.41
1:A:1269:G:C8	11:S:3:ARG:HB3	2.54	0.41
1:A:1783:A:N7	1:A:1839:A:H1'	2.35	0.41
1:A:1830:U:C5'	1:A:1831:G:N7	2.82	0.41
1:A:1857:A:H4'	1:A:1858:A:C8	2.56	0.41
1:A:2335:C:C3'	1:A:2335:C:C6	3.03	0.41
1:A:2702:G:C2	1:A:2703:G:N7	2.89	0.41
2:C:53:G:H2'	2:C:70:G:N2	2.35	0.41
3:B:45:G:H1'	3:B:48:C:N4	2.35	0.41
3:B:111:G:H2'	3:B:112:A:H5'	2.02	0.41
6:N:162:LEU:O	6:N:166:GLU:CB	2.69	0.41
10:R:187:ILE:HD12	10:R:187:ILE:HG23	1.79	0.41
11:S:17:ILE:O	11:S:20:PHE:N	2.54	0.41
13:U:163:LEU:O	13:U:164:MET:SD	2.79	0.41
18:Z:120:ARG:HD2	18:Z:120:ARG:HA	1.58	0.41
19:E:83:ARG:HG3	19:E:84:ASN:N	2.34	0.41
19:E:129:THR:HG22	19:E:182:LYS:HB2	2.02	0.41
19:E:144:LEU:HD12	19:E:144:LEU:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:E:155:GLY:N	19:E:191:VAL:HG13	2.32	0.41
26:G:146:ARG:CZ	26:G:148:TRP:CE3	3.03	0.41
28:I:56:ILE:HG21	28:I:90:LEU:HD21	2.02	0.41
1:A:23:G:H2'	1:A:24:U:H6	1.83	0.41
1:A:229:A:H2'	1:A:230:G:O4'	2.20	0.41
1:A:236:A:H8	1:A:236:A:O5'	2.03	0.41
1:A:383:A:O2'	17:Y:131:LYS:NZ	2.52	0.41
1:A:539:A:H5'	4:L:212:ARG:NE	2.34	0.41
1:A:622:G:OP2	1:A:622:G:H8	2.02	0.41
1:A:634:G:OP1	6:N:190:SER:O	2.39	0.41
1:A:668:U:H3'	1:A:668:U:H6	1.85	0.41
1:A:856:U:O4	1:A:962:G:C6	2.61	0.41
1:A:964:C:H5''	1:A:964:C:H6	1.85	0.41
1:A:1036:U:HO2'	1:A:1037:A:H8	1.69	0.41
1:A:1076:A:H2'	1:A:1077:C:C6	2.54	0.41
1:A:1153:G:C5	1:A:1154:A:C8	3.08	0.41
1:A:1189:G:H1'	12:T:145:GLN:HE21	1.85	0.41
1:A:1669:G:C6	1:A:1671:A:C6	3.09	0.41
1:A:1808:C:C2	1:A:1829:A:N6	2.88	0.41
1:A:1949:G:H1'	1:A:1978:G:N2	2.36	0.41
1:A:2292:C:OP2	16:X:70:ARG:NE	2.53	0.41
1:A:2742:C:OP1	25:F:206:LYS:NZ	2.37	0.41
1:A:2804:U:OP1	25:F:159:LYS:CB	2.68	0.41
2:C:32:C:H1'	2:C:33:A:OP1	2.20	0.41
2:C:69:U:H6	2:C:69:U:O5'	2.03	0.41
2:C:84:C:C2'	2:C:85:U:H5'	2.50	0.41
3:B:11:U:O5'	3:B:11:U:C6	2.71	0.41
3:B:19:G:H2'	3:B:20:U:H6	1.85	0.41
3:B:36:A:C2	3:B:50:U:C2	3.09	0.41
3:B:39:C:H3'	3:B:40:A:C8	2.54	0.41
3:B:86:G:H2'	3:B:87:G:H5'	2.02	0.41
3:B:118:G:O2'	3:B:119:G:P	2.79	0.41
4:L:168:ARG:HA	4:L:188:PHE:HD2	1.86	0.41
5:M:69:LEU:O	5:M:76:ILE:HA	2.20	0.41
11:S:92:LEU:HD13	11:S:94:ARG:NH1	2.34	0.41
12:T:228:GLU:CD	12:T:228:GLU:N	2.73	0.41
13:U:39:ILE:O	13:U:41:MET:N	2.52	0.41
19:E:126:LEU:O	19:E:126:LEU:HD12	2.20	0.41
25:F:136:ALA:CB	25:F:172:ARG:HA	2.51	0.41
1:A:22:G:C4	1:A:529:G:N2	2.88	0.41
1:A:99:A:O5'	1:A:99:A:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:490:A:N3	15:W:107:LYS:HE3	2.35	0.41
1:A:751:C:H5'	1:A:1794:A:H2'	2.01	0.41
1:A:858:G:C6	1:A:859:A:N6	2.89	0.41
1:A:861:A:C2	1:A:862:U:C2	3.08	0.41
1:A:899:A:C2	1:A:900:G:C8	3.09	0.41
1:A:910:A:C8	1:A:910:A:O5'	2.70	0.41
1:A:1201:A:H2'	1:A:1202:A:H8	1.85	0.41
1:A:1311:C:H2'	1:A:1312:A:C8	2.53	0.41
1:A:1425:C:C2	1:A:1426:U:C5	3.08	0.41
1:A:1692:C:OP1	25:F:230:ARG:HD3	2.20	0.41
1:A:2176:A:OP1	1:A:2185:A:H2'	2.20	0.41
1:A:2223:A:N6	1:A:2233:G:N1	2.69	0.41
1:A:2247:C:H5''	17:Y:100:PHE:CD1	2.55	0.41
1:A:2430:G:H2'	1:A:2431:G:O4'	2.21	0.41
1:A:2654:U:C2	1:A:2800:G:N2	2.88	0.41
1:A:2806:U:H1'	2:C:5:A:H2	1.86	0.41
2:C:78:G:N3	2:C:79:G:C8	2.89	0.41
5:M:118:PRO:HG2	5:M:119:GLU:OE1	2.20	0.41
9:Q:128:ALA:HB1	9:Q:162:HIS:HB2	2.01	0.41
10:R:140:VAL:HG23	10:R:206:ILE:HG12	2.02	0.41
11:S:108:ILE:HA	11:S:108:ILE:HD12	1.85	0.41
15:W:67:ARG:HH22	15:W:92:ILE:HG12	1.86	0.41
16:X:162:ARG:HG3	16:X:163:GLU:H	1.86	0.41
26:G:210:MET:HG2	26:G:251:THR:HG23	2.02	0.41
28:I:198:LYS:HE2	28:I:200:LYS:HB3	2.03	0.41
1:A:143:G:N3	1:A:2224:G:C2	2.89	0.41
1:A:166:A:C2	1:A:446:U:H1'	2.55	0.41
1:A:493:G:O2'	1:A:494:A:OP2	2.39	0.41
1:A:501:A:H62	13:U:78:LYS:HZ2	1.68	0.41
1:A:899:A:H1'	1:A:900:G:OP1	2.21	0.41
1:A:1087:G:H1	1:A:1107:C:N4	2.15	0.41
1:A:1464:U:H2'	1:A:1465:A:O4'	2.20	0.41
1:A:1479:U:O2	1:A:2719:G:N2	2.54	0.41
1:A:2204:A:C2'	1:A:2205:G:H5'	2.50	0.41
1:A:2207:A:N3	1:A:2208:U:C2	2.89	0.41
1:A:2211:U:H6	1:A:2211:U:H5''	1.84	0.41
1:A:2403:U:H4'	16:X:112:ASP:HA	2.01	0.41
2:C:33:A:H1'	2:C:34:U:OP1	2.21	0.41
2:C:60:A:H2'	2:C:61:G:O4'	2.21	0.41
3:B:35:A:H3'	3:B:36:A:C8	2.55	0.41
3:B:90:G:H2'	3:B:91:G:O5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:R:126:LEU:HD23	10:R:126:LEU:HA	1.90	0.41
12:T:171:TYR:HE2	12:T:231:PRO:HB3	0.78	0.41
17:Y:129:ILE:CG1	17:Y:130:GLU:N	2.84	0.41
18:Z:68:LEU:HG	18:Z:115:MET:SD	2.61	0.41
25:F:126:VAL:HG12	25:F:181:PRO:HB3	2.03	0.41
25:F:203:THR:OG1	25:F:204:ILE:N	2.53	0.41
26:G:71:ASN:ND2	26:G:71:ASN:C	2.73	0.41
1:A:665:U:H2'	1:A:666:U:C5'	2.51	0.41
1:A:722:G:O6	1:A:732:A:C6	2.74	0.41
1:A:859:A:C6	1:A:860:C:N4	2.89	0.41
1:A:867:G:H2'	1:A:868:G:O4'	2.21	0.41
1:A:885:G:C6	1:A:886:U:N3	2.88	0.41
1:A:1082:A:C6	1:A:1134:G:C6	3.09	0.41
1:A:1307:A:N6	1:A:1350:U:C2	2.88	0.41
1:A:1750:C:O5'	1:A:1750:C:C6	2.71	0.41
1:A:1809:G:P	19:E:256:ARG:HD3	2.61	0.41
1:A:1886:A:C3'	1:A:1887:G:H5'	2.49	0.41
1:A:1888:G:O6	1:A:1889:G:C6	2.73	0.41
1:A:2012:G:H2'	1:A:2013:A:C8	2.55	0.41
1:A:2107:G:N2	1:A:2108:G:C8	2.89	0.41
1:A:2120:U:C4	1:A:2198:A:C2	3.09	0.41
1:A:2150:G:H22	1:A:2151:G:N2	2.19	0.41
1:A:2199:G:C6	1:A:2200:A:C8	3.08	0.41
1:A:2212:A:O2'	1:A:2213:A:P	2.79	0.41
1:A:2223:A:O3'	1:A:2224:G:H8	2.04	0.41
1:A:2227:C:H2'	1:A:2228:C:H5'	2.02	0.41
1:A:2242:A:H1'	1:A:2243:C:H5	1.86	0.41
1:A:2642:G:C4	1:A:2643:C:C2	3.09	0.41
2:C:13:G:H21	2:C:40:U:H1'	1.85	0.41
3:B:35:A:C8	3:B:35:A:O5'	2.70	0.41
6:N:198:LEU:HD23	6:N:199:LYS:CA	2.50	0.41
10:R:218:ARG:HD3	10:R:220:TYR:OH	2.20	0.41
11:S:57:PHE:HD1	11:S:57:PHE:HA	1.70	0.41
12:T:116:PRO:N	12:T:117:PRO:HD2	2.32	0.41
17:Y:82:SER:CB	17:Y:100:PHE:HB3	2.51	0.41
19:E:61:ILE:HG12	19:E:83:ARG:HH22	1.86	0.41
19:E:135:THR:HG22	19:E:136:ALA:N	2.35	0.41
27:H:157:ILE:HD13	27:H:227:GLY:H	1.86	0.41
28:I:74:ILE:HD12	28:I:115:MET:CG	2.51	0.41
28:I:139:GLU:O	28:I:141:LYS:N	2.52	0.41
1:A:17:C:C5'	11:S:25:ARG:HA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:44:G:C8	1:A:200:G:O2'	2.41	0.41
1:A:151:G:C4	1:A:152:G:N7	2.88	0.41
1:A:261:U:N3	1:A:266:A:N6	2.68	0.41
1:A:274:G:N3	1:A:276:G:C8	2.89	0.41
1:A:290:A:C2	1:A:291:G:N7	2.88	0.41
1:A:341:A:C6	1:A:344:C:C4	3.08	0.41
1:A:355:A:C5	1:A:356:A:C5	3.09	0.41
1:A:359:A:C6	1:A:360:U:O4	2.74	0.41
1:A:367:C:OP2	1:A:367:C:H6	2.03	0.41
1:A:384:G:O3'	1:A:385:U:C6	2.73	0.41
1:A:434:A:O5'	1:A:434:A:C8	2.70	0.41
1:A:501:A:H62	13:U:78:LYS:NZ	2.19	0.41
1:A:537:U:O2'	1:A:2057:C:O2'	2.30	0.41
1:A:627:C:O2'	1:A:628:A:P	2.79	0.41
1:A:897:A:OP2	1:A:897:A:C8	2.70	0.41
1:A:1049:A:H62	1:A:1168:U:H3	1.67	0.41
1:A:1257:G:H5''	1:A:1258:A:OP1	2.21	0.41
1:A:1337:U:C2	1:A:1338:C:C5	3.09	0.41
1:A:1461:G:N1	1:A:1586:G:N7	2.69	0.41
1:A:1474:A:O2'	1:A:1475:U:P	2.79	0.41
1:A:1495:C:N4	1:A:1548:A:C6	2.88	0.41
1:A:1607:G:H2'	1:A:1607:G:N3	2.36	0.41
1:A:1752:C:C3'	1:A:1752:C:C6	3.03	0.41
1:A:1756:G:C8	1:A:1756:G:O5'	2.74	0.41
1:A:1756:G:N2	1:A:1757:G:C4	2.88	0.41
1:A:1829:A:H1'	1:A:1830:U:OP2	2.21	0.41
1:A:1876:A:H62	1:A:1889:G:N2	2.19	0.41
1:A:1944:G:O2'	1:A:1945:U:O5'	2.36	0.41
1:A:1966:A:N6	5:M:22:ILE:HD12	2.36	0.41
1:A:2113:G:H1	1:A:2204:A:N6	2.17	0.41
1:A:2150:G:N1	1:A:2151:G:N1	2.69	0.41
1:A:2210:C:O2'	1:A:2211:U:P	2.79	0.41
1:A:2222:C:H2'	1:A:2223:A:N9	2.35	0.41
1:A:2229:U:H5	19:E:64:ARG:NH1	2.16	0.41
1:A:2320:G:C3'	27:H:175:PHE:HA	2.51	0.41
1:A:2808:C:C3'	1:A:2808:C:C6	3.04	0.41
2:C:75:U:O4	2:C:76:G:C6	2.74	0.41
2:C:88:C:H6	2:C:88:C:OP2	2.03	0.41
3:B:7:G:O4'	3:B:8:G:OP1	2.38	0.41
3:B:13:C:H1'	3:B:111:G:N2	2.36	0.41
3:B:14:U:O2'	3:B:15:A:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:36:A:N6	3:B:45:G:N9	2.68	0.41
3:B:38:C:C5	3:B:39:C:N3	2.89	0.41
4:L:103:LYS:HD3	11:S:102:ILE:HD13	2.01	0.41
4:L:176:HIS:CD2	4:L:177:SER:O	2.73	0.41
6:N:154:LEU:HD23	6:N:154:LEU:HA	1.94	0.41
9:Q:49:ARG:O	9:Q:53:ARG:N	2.52	0.41
16:X:75:GLN:CD	16:X:76:ARG:N	2.73	0.41
16:X:133:LYS:CE	16:X:133:LYS:N	2.84	0.41
17:Y:107:ARG:HA	17:Y:117:VAL:O	2.20	0.41
18:Z:105:PHE:HE2	18:Z:109:ARG:HE	1.67	0.41
19:E:42:ARG:O	19:E:44:ILE:N	2.54	0.41
25:F:154:ARG:O	25:F:158:ASN:CG	2.58	0.41
26:G:177:GLU:HB3	26:G:197:TRP:CZ2	2.56	0.41
26:G:213:VAL:O	26:G:216:VAL:HG22	2.21	0.41
27:H:199:VAL:HG12	27:H:201:LYS:H	1.86	0.41
27:H:217:LYS:HE3	27:H:217:LYS:HB3	1.86	0.41
29:J:70:ARG:HA	29:J:70:ARG:HD3	1.69	0.41
1:A:118:U:C5	1:A:133:A:C2	3.09	0.41
1:A:130:U:H2'	1:A:131:C:OP1	2.21	0.41
1:A:151:G:C8	1:A:151:G:O5'	2.73	0.41
1:A:165:C:H6	1:A:165:C:H3'	1.86	0.41
1:A:290:A:C2	1:A:291:G:C6	3.09	0.41
1:A:293:G:C2	1:A:366:G:C2	3.09	0.41
1:A:355:A:C8	1:A:356:A:O4'	2.70	0.41
1:A:389:A:C6	1:A:410:G:C2	3.09	0.41
1:A:668:U:O5'	1:A:668:U:H6	2.04	0.41
1:A:828:C:O2'	1:A:850:G:OP1	2.35	0.41
1:A:1269:G:H8	11:S:3:ARG:HB3	1.84	0.41
1:A:1453:G:N2	1:A:1596:U:C2	2.89	0.41
1:A:1549:A:C6	1:A:1550:U:O2	2.74	0.41
1:A:1558:U:H2'	1:A:1559:A:C8	2.56	0.41
1:A:1603:A:OP1	19:E:25:ARG:NH2	2.52	0.41
1:A:1829:A:OP1	19:E:151:ALA:CA	2.59	0.41
1:A:1848:C:H5'	1:A:1849:A:OP1	2.21	0.41
1:A:2320:G:O2'	27:H:175:PHE:HB2	2.21	0.41
1:A:2363:A:OP2	1:A:2399:G:H5'	2.21	0.41
1:A:2433:C:H2'	1:A:2434:C:H6	1.85	0.41
3:B:35:A:N1	3:B:51:G:C5	2.89	0.41
3:B:88:G:C2	3:B:90:G:H5'	2.56	0.41
3:B:94:C:H2'	3:B:95:U:C6	2.56	0.41
4:L:136:ARG:HD3	4:L:209:PRO:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:N:146:ILE:CD1	6:N:146:ILE:N	2.81	0.41
6:N:157:TYR:CD1	6:N:158:VAL:N	2.88	0.41
10:R:178:HIS:CD2	25:F:101:SER:HG	2.31	0.41
10:R:219:LEU:HD22	10:R:221:TYR:CE2	2.56	0.41
11:S:62:ILE:HD12	11:S:78:TYR:CZ	2.56	0.41
12:T:97:GLU:N	12:T:98:PRO:CD	2.81	0.41
12:T:123:ILE:HG23	12:T:224:ILE:HD12	2.02	0.41
15:W:136:LEU:O	15:W:144:ALA:HA	2.21	0.41
16:X:128:TYR:CD1	16:X:134:LYS:HD2	2.55	0.41
17:Y:82:SER:HA	17:Y:100:PHE:HA	2.02	0.41
17:Y:115:ARG:NH1	17:Y:145:LEU:HD21	2.36	0.41
18:Z:117:THR:O	18:Z:121:GLU:HG3	2.21	0.41
18:Z:118:VAL:HG11	18:Z:122:ARG:HH22	1.84	0.41
26:G:81:ARG:H	26:G:81:ARG:HD3	1.86	0.41
27:H:126:SER:OG	27:H:132:VAL:O	2.10	0.41
27:H:145:ARG:HG2	27:H:146:GLY:N	2.30	0.41
1:A:99:A:O5'	1:A:99:A:H8	2.04	0.40
1:A:150:U:C4	1:A:151:G:O6	2.74	0.40
1:A:274:G:H2'	1:A:275:U:OP2	2.22	0.40
1:A:288:C:N4	1:A:289:A:H62	2.19	0.40
1:A:291:G:C6	1:A:292:C:N4	2.89	0.40
1:A:600:A:H2'	1:A:601:U:C6	2.56	0.40
1:A:628:A:N7	1:A:629:C:C4	2.89	0.40
1:A:669:C:O5'	1:A:669:C:H6	2.04	0.40
1:A:715:G:H1'	1:A:738:A:H61	1.85	0.40
1:A:821:U:O2'	6:N:99:GLY:O	2.39	0.40
1:A:934:A:H1'	1:A:935:U:OP1	2.21	0.40
1:A:957:U:H2'	1:A:958:C:H5'	2.04	0.40
1:A:1270:C:N4	6:N:97:ARG:CD	2.84	0.40
1:A:1389:G:H2'	1:A:1390:G:H8	1.86	0.40
1:A:1497:A:N6	1:A:1547:C:C4	2.89	0.40
1:A:1646:A:H5'	1:A:1647:C:H5	1.86	0.40
1:A:1817:G:O2'	1:A:1819:A:N6	2.32	0.40
1:A:2128:A:OP2	1:A:2129:G:C6	2.73	0.40
1:A:2153:C:C2	1:A:2154:C:C5	3.08	0.40
1:A:2679:A:H3'	1:A:2680:G:O4'	2.22	0.40
1:A:2685:G:H1'	28:I:151:HIS:CE1	2.56	0.40
2:C:26:G:P	25:F:148:LYS:HD2	2.61	0.40
3:B:59:A:C6	3:B:60:A:C5	3.10	0.40
4:L:217:LEU:O	4:L:219:ASN:N	2.54	0.40
5:M:24:ILE:HG12	5:M:30:ARG:HG2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:108:ILE:O	8:P:122:TYR:HB3	2.20	0.40
9:Q:57:HIS:O	9:Q:60:ILE:N	2.53	0.40
14:V:188:ALA:HB1	14:V:193:ILE:HB	2.02	0.40
17:Y:83:ASN:N	17:Y:99:GLN:O	2.25	0.40
18:Z:147:ARG:HG2	18:Z:148:PRO:O	2.21	0.40
19:E:138:HIS:ND1	19:E:139:ASN:N	2.68	0.40
25:F:127:LYS:O	25:F:135:ASN:HA	2.21	0.40
27:H:164:THR:HG22	27:H:165:ARG:N	2.36	0.40
1:A:51:A:H2'	1:A:52:A:H8	1.86	0.40
1:A:156:G:O5'	1:A:156:G:C8	2.71	0.40
1:A:169:C:C2	1:A:170:U:C5	3.09	0.40
1:A:294:U:P	1:A:295:C:OP2	2.79	0.40
1:A:410:G:H2'	1:A:411:U:C6	2.55	0.40
1:A:568:C:H2'	1:A:569:G:H8	1.86	0.40
1:A:665:U:O2'	1:A:666:U:O5'	2.30	0.40
1:A:909:A:H8	1:A:909:A:P	2.43	0.40
1:A:1085:A:N1	1:A:1109:U:C4	2.88	0.40
1:A:1238:G:H2'	1:A:1239:C:C6	2.57	0.40
1:A:1519:A:N1	1:A:1520:A:C6	2.89	0.40
1:A:1524:G:C2	1:A:1525:G:C4	3.09	0.40
1:A:1689:C:C5'	8:P:12:LYS:CE	2.86	0.40
1:A:1798:C:H2'	1:A:1799:A:O4'	2.21	0.40
1:A:2121:C:H6	1:A:2121:C:H5''	1.86	0.40
1:A:2192:U:O2'	1:A:2193:C:P	2.79	0.40
1:A:2408:G:H4'	1:A:2408:G:OP1	2.22	0.40
1:A:2567:G:C6	1:A:2576:C:H5	2.40	0.40
2:C:32:C:O2	2:C:33:A:H2'	2.20	0.40
2:C:104:A:H2	2:C:105:A:C5	2.25	0.40
3:B:17:G:N1	3:B:70:G:N3	2.69	0.40
7:O:15:GLY:O	7:O:16:ARG:HB3	2.21	0.40
10:R:198:LEU:HD23	10:R:198:LEU:HA	1.88	0.40
12:T:91:ASP:CG	13:U:142:PHE:CZ	2.94	0.40
12:T:140:ARG:HD3	12:T:141:TRP:H	1.85	0.40
13:U:41:MET:CE	13:U:75:PRO:HG2	2.52	0.40
15:W:78:ILE:HG12	15:W:135:MET:HG3	2.03	0.40
15:W:170:THR:HG22	15:W:171:PRO:CD	2.25	0.40
18:Z:100:PHE:CE2	18:Z:104:ASP:HB2	2.56	0.40
19:E:39:ARG:NH1	19:E:40:ASN:HD21	2.19	0.40
19:E:97:LYS:O	19:E:98:ARG:HD3	2.21	0.40
25:F:200:SER:HB2	25:F:291:ARG:HD3	2.02	0.40
26:G:81:ARG:HH21	26:G:81:ARG:H	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:I:108:PHE:HA	28:I:111:LEU:HD12	2.02	0.40
1:A:94:A:H2'	1:A:95:G:O4'	2.21	0.40
1:A:142:U:O2	1:A:153:G:O6	2.38	0.40
1:A:308:G:H5''	1:A:309:A:OP1	2.21	0.40
1:A:319:G:O2'	1:A:320:U:O5'	2.22	0.40
1:A:415:U:O2'	1:A:416:C:C4	2.70	0.40
1:A:570:C:H1'	11:S:52:ARG:NH1	2.35	0.40
1:A:624:A:H2'	1:A:625:C:O5'	2.21	0.40
1:A:624:A:O2'	1:A:625:C:OP1	2.39	0.40
1:A:714:U:H2'	1:A:715:G:O4'	2.22	0.40
1:A:793:A:H2	19:E:225:ASP:OD2	2.04	0.40
1:A:946:A:H61	1:A:950:A:H61	1.58	0.40
1:A:1408:A:H5'	1:A:1488:A:H1'	2.02	0.40
1:A:1556:A:H4'	1:A:1558:U:H1'	2.03	0.40
1:A:1625:A:H3'	1:A:1626:A:H8	1.86	0.40
1:A:1635:C:C4'	14:V:106:ARG:HH21	2.32	0.40
1:A:1649:G:C3'	1:A:1650:A:C5'	2.99	0.40
1:A:1651:C:O2'	1:A:1652:A:P	2.79	0.40
1:A:1700:A:C2	1:A:1701:A:C4	3.10	0.40
1:A:2058:C:O5'	1:A:2058:C:H6	2.04	0.40
1:A:2317:G:C6	1:A:2333:C:N3	2.87	0.40
1:A:2322:A:H5''	27:H:186:ARG:CG	2.51	0.40
2:C:14:G:H2'	2:C:15:C:C6	2.57	0.40
2:C:26:G:C2'	2:C:27:U:H5'	2.43	0.40
2:C:72:A:C2'	2:C:73:G:C5'	2.94	0.40
3:B:15:A:O2'	3:B:16:G:C8	2.70	0.40
5:M:69:LEU:HB3	5:M:77:ILE:O	2.22	0.40
6:N:114:MET:O	6:N:115:ARG:HB2	2.21	0.40
6:N:117:GLN:OE1	6:N:125:ILE:HG13	2.18	0.40
6:N:157:TYR:HD2	6:N:196:LEU:HD23	1.86	0.40
7:O:17:MET:HE1	7:O:96:VAL:HG13	2.02	0.40
10:R:116:ARG:NE	10:R:116:ARG:CA	2.73	0.40
15:W:65:HIS:O	15:W:66:LYS:CB	2.69	0.40
25:F:159:LYS:HD3	25:F:159:LYS:O	2.22	0.40
26:G:58:LEU:HD13	26:G:63:GLU:O	2.21	0.40
26:G:252:ILE:HD12	26:G:252:ILE:HA	1.98	0.40
27:H:148:LEU:HD12	27:H:148:LEU:H	1.87	0.40
1:A:101:A:O2'	1:A:102:U:H5'	2.22	0.40
1:A:153:G:H21	1:A:154:C:C1'	2.34	0.40
1:A:594:C:N4	1:A:595:G:C6	2.89	0.40
1:A:627:C:O2	26:G:232:ARG:NH1	2.49	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1064:A:N6	1:A:1147:U:H3	2.19	0.40
1:A:1240:G:H2'	1:A:1242:G:H8	1.86	0.40
1:A:1298:A:C2	1:A:1315:G:C2	3.10	0.40
1:A:1320:G:H4'	1:A:1321:A:H5''	2.03	0.40
1:A:1322:A:O2'	1:A:1323:A:H2'	2.21	0.40
1:A:1465:A:C6	1:A:1466:G:C5	3.10	0.40
1:A:1547:C:HO2'	1:A:1548:A:H5'	1.83	0.40
1:A:1746:C:H2'	1:A:1747:C:C6	2.57	0.40
1:A:1766:G:H4'	1:A:1768:G:H1'	2.04	0.40
1:A:1953:U:H3'	1:A:1954:U:H5''	2.03	0.40
1:A:2103:G:C4	1:A:2104:A:C8	3.10	0.40
1:A:2170:C:C4	1:A:2171:G:C6	3.10	0.40
1:A:2219:U:H1'	1:A:2229:U:O4	2.22	0.40
1:A:2393:A:N1	9:Q:141:PHE:CD2	2.90	0.40
1:A:2698:C:N3	1:A:2745:G:N2	2.69	0.40
2:C:12:C:H5''	8:P:109:ARG:CZ	2.52	0.40
3:B:5:C:H2'	3:B:6:U:H6	1.85	0.40
7:O:68:ILE:HG22	7:O:101:ARG:HH11	1.86	0.40
17:Y:106:LYS:HE3	17:Y:106:LYS:HB3	1.81	0.40
19:E:86:TYR:O	19:E:102:HIS:HD2	2.04	0.40
28:I:91:ARG:HA	28:I:109:ARG:NH2	2.19	0.40
28:I:149:PHE:CE1	28:I:192:ARG:HD3	2.57	0.40
1:A:97:A:C8	1:A:97:A:O5'	2.74	0.40
1:A:285:A:O2'	1:A:286:U:P	2.79	0.40
1:A:286:U:H3'	1:A:286:U:H6	1.86	0.40
1:A:288:C:C2'	1:A:289:A:C5'	2.97	0.40
1:A:294:U:C2'	1:A:295:C:C2	2.97	0.40
1:A:354:A:O2'	1:A:355:A:H5'	2.22	0.40
1:A:519:A:C8	13:U:109:ILE:HG13	2.57	0.40
1:A:661:G:H2'	1:A:662:C:H5'	2.03	0.40
1:A:670:A:C5'	26:G:151:LYS:HE3	2.52	0.40
1:A:749:G:C6	1:A:750:A:C2	3.09	0.40
1:A:854:A:H2	1:A:964:C:O2	2.04	0.40
1:A:1162:C:O2'	1:A:1163:G:P	2.79	0.40
1:A:1574:G:H2'	1:A:1575:C:C6	2.56	0.40
1:A:1624:C:H2'	1:A:1625:A:N7	2.36	0.40
1:A:1756:G:H8	1:A:1756:G:O5'	2.04	0.40
1:A:2207:A:C2'	1:A:2208:U:C1'	2.97	0.40
1:A:2211:U:O4	1:A:2241:G:C2	2.75	0.40
1:A:2211:U:C4	1:A:2241:G:C2	3.09	0.40
1:A:2637:U:C1'	25:F:250:MET:HB2	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:35:U:O2'	2:C:36:A:P	2.79	0.40
2:C:45:G:H2'	2:C:46:U:C6	2.56	0.40
2:C:55:A:C6	2:C:56:G:C6	3.10	0.40
3:B:36:A:N7	3:B:45:G:N7	2.69	0.40
6:N:109:SER:O	6:N:110:CYS:CB	2.70	0.40
6:N:165:ILE:HA	6:N:206:LEU:HD11	1.56	0.40
6:N:166:GLU:OE1	6:N:166:GLU:HA	2.22	0.40
6:N:202:GLY:CA	6:N:221:ALA:N	2.85	0.40
12:T:164:VAL:HG21	12:T:227:TYR:HB3	2.04	0.40
12:T:174:THR:HG22	12:T:175:PRO:CD	2.52	0.40
16:X:67:LYS:O	16:X:68:ASN:HB2	2.22	0.40
25:F:199:ILE:HG22	25:F:292:LEU:HD12	2.03	0.40
26:G:204:LYS:HZ1	26:G:241:ASN:CB	2.35	0.40
26:G:206:LEU:HD22	26:G:207:PHE:H	1.86	0.40
26:G:247:PHE:HB3	26:G:251:THR:OG1	2.21	0.40
27:H:66:VAL:HB	27:H:67:PRO:HD3	2.04	0.40
27:H:111:ALA:HB2	27:H:118:PRO:HD3	2.04	0.40
28:I:131:GLY:HA2	28:I:200:LYS:HD2	2.02	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	
4	L	145/191 (76%)	120 (83%)	21 (14%)	4 (3%)	5	32
5	M	119/121 (98%)	97 (82%)	22 (18%)	0	100	100
6	N	175/192 (91%)	156 (89%)	6 (3%)	13 (7%)	1	11
7	O	132/135 (98%)	107 (81%)	23 (17%)	2 (2%)	10	45
8	P	114/116 (98%)	96 (84%)	18 (16%)	0	100	100
9	Q	118/123 (96%)	99 (84%)	19 (16%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
10	R	116/156 (74%)	89 (77%)	26 (22%)	1 (1%)	17	56
11	S	113/127 (89%)	91 (80%)	22 (20%)	0	100	100
12	T	145/201 (72%)	108 (74%)	28 (19%)	9 (6%)	1	15
13	U	142/199 (71%)	117 (82%)	24 (17%)	1 (1%)	22	61
14	V	90/122 (74%)	79 (88%)	9 (10%)	2 (2%)	6	37
15	W	122/145 (84%)	95 (78%)	25 (20%)	2 (2%)	9	43
16	X	98/137 (72%)	87 (89%)	7 (7%)	4 (4%)	3	23
17	Y	72/77 (94%)	61 (85%)	11 (15%)	0	100	100
18	Z	88/109 (81%)	85 (97%)	3 (3%)	0	100	100
19	E	245/271 (90%)	187 (76%)	57 (23%)	1 (0%)	34	72
20	b	44/56 (79%)	35 (80%)	9 (20%)	0	100	100
21	c	49/65 (75%)	34 (69%)	15 (31%)	0	100	100
22	d	55/60 (92%)	47 (86%)	6 (11%)	2 (4%)	3	26
23	e	67/73 (92%)	50 (75%)	16 (24%)	1 (2%)	10	45
24	f	35/37 (95%)	30 (86%)	5 (14%)	0	100	100
25	F	210/221 (95%)	173 (82%)	37 (18%)	0	100	100
26	G	208/243 (86%)	166 (80%)	40 (19%)	2 (1%)	15	54
27	H	173/220 (79%)	145 (84%)	27 (16%)	1 (1%)	25	64
28	I	171/182 (94%)	142 (83%)	27 (16%)	2 (1%)	13	50
29	J	51/155 (33%)	41 (80%)	9 (18%)	1 (2%)	7	39
30	g	41/142 (29%)	36 (88%)	5 (12%)	0	100	100
31	a	36/94 (38%)	26 (72%)	9 (25%)	1 (3%)	5	32
32	h	44/116 (38%)	31 (70%)	12 (27%)	1 (2%)	6	36
All	All	3218/4086 (79%)	2630 (82%)	538 (17%)	50 (2%)	13	43

All (50) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	L	107	HIS
6	N	143	LEU
6	N	147	ALA
6	N	154	LEU
6	N	155	PRO
6	N	176	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	N	254	ASP
12	T	94	GLN
12	T	97	GLU
12	T	116	PRO
12	T	117	PRO
12	T	175	PRO
13	U	151	SER
15	W	66	LYS
15	W	170	THR
16	X	70	ARG
16	X	143	GLN
16	X	147	PRO
19	E	237	ILE
22	d	94	CYS
23	e	95	HIS
26	G	96	ARG
28	I	43	ILE
4	L	109	PRO
6	N	216	ALA
12	T	95	ALA
16	X	144	PRO
22	d	99	SER
31	a	49	ALA
6	N	159	PRO
6	N	177	SER
6	N	197	PRO
14	V	106	ARG
27	H	187	GLU
4	L	105	ALA
6	N	167	VAL
6	N	189	PRO
7	O	26	ARG
12	T	92	ASP
12	T	98	PRO
26	G	201	PRO
32	h	79	TYR
4	L	218	PHE
6	N	198	LEU
10	R	139	PRO
28	I	47	PRO
12	T	112	PRO
29	J	69	VAL

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Mol	Chain	Res	Type
7	O	70	PRO
14	V	168	PRO

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	L	125/165 (76%)	124 (99%)	1 (1%)	81	91
5	M	101/101 (100%)	101 (100%)	0	100	100
6	N	135/144 (94%)	126 (93%)	9 (7%)	16	48
7	O	107/108 (99%)	107 (100%)	0	100	100
8	P	96/96 (100%)	96 (100%)	0	100	100
9	Q	99/100 (99%)	99 (100%)	0	100	100
10	R	104/135 (77%)	101 (97%)	3 (3%)	42	71
11	S	102/114 (90%)	102 (100%)	0	100	100
12	T	129/174 (74%)	122 (95%)	7 (5%)	22	55
13	U	126/176 (72%)	125 (99%)	1 (1%)	81	91
14	V	81/103 (79%)	80 (99%)	1 (1%)	71	87
15	W	112/129 (87%)	109 (97%)	3 (3%)	44	73
16	X	85/111 (77%)	74 (87%)	11 (13%)	4	22
17	Y	64/67 (96%)	61 (95%)	3 (5%)	26	60
18	Z	83/97 (86%)	79 (95%)	4 (5%)	25	60
19	E	195/216 (90%)	189 (97%)	6 (3%)	40	70
20	b	39/49 (80%)	39 (100%)	0	100	100
21	c	48/59 (81%)	47 (98%)	1 (2%)	53	79
22	d	47/49 (96%)	45 (96%)	2 (4%)	29	62
23	e	59/62 (95%)	58 (98%)	1 (2%)	60	82
24	f	34/34 (100%)	34 (100%)	0	100	100
25	F	174/182 (96%)	170 (98%)	4 (2%)	50	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
26	G	176/205 (86%)	169 (96%)	7 (4%)	31	64
27	H	148/183 (81%)	146 (99%)	2 (1%)	67	85
28	I	147/154 (96%)	147 (100%)	0	100	100
29	J	47/134 (35%)	46 (98%)	1 (2%)	53	79
30	g	39/121 (32%)	39 (100%)	0	100	100
31	a	33/83 (40%)	32 (97%)	1 (3%)	41	71
32	h	40/96 (42%)	40 (100%)	0	100	100
All	All	2775/3447 (80%)	2707 (98%)	68 (2%)	50	75

All (68) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	L	107	HIS
6	N	84	ASN
6	N	120	ARG
6	N	143	LEU
6	N	157	TYR
6	N	163	ARG
6	N	165	ILE
6	N	196	LEU
6	N	217	PHE
6	N	224	LYS
10	R	116	ARG
10	R	127	ASN
10	R	226	LEU
12	T	93	PHE
12	T	94	GLN
12	T	103	TYR
12	T	113	LYS
12	T	147	LEU
12	T	175	PRO
12	T	176	ILE
13	U	67	LEU
14	V	111	VAL
15	W	104	LEU
15	W	170	THR
15	W	173	ARG
16	X	67	LYS
16	X	68	ASN
16	X	73	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	X	128	TYR
16	X	133	LYS
16	X	146	ASN
16	X	150	TYR
16	X	155	ARG
16	X	156	GLU
16	X	162	ARG
16	X	163	GLU
17	Y	103	LEU
17	Y	128	THR
17	Y	131	LYS
18	Z	114	ARG
18	Z	117	THR
18	Z	120	ARG
18	Z	152	LEU
19	E	61	ILE
19	E	232	GLU
19	E	237	ILE
19	E	258	ARG
19	E	259	ASN
19	E	264	ASN
21	c	13	LEU
22	d	112	ARG
22	d	123	LEU
23	e	153	LEU
25	F	117	PHE
25	F	119	GLU
25	F	121	ASN
25	F	143	ARG
26	G	71	ASN
26	G	79	LYS
26	G	81	ARG
26	G	223	ILE
26	G	230	THR
26	G	232	ARG
26	G	245	LEU
27	H	186	ARG
27	H	188	GLN
29	J	77	PHE
31	a	73	TRP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (63) such sidechains are listed below:

Mol	Chain	Res	Type
4	L	176	HIS
4	L	220	HIS
4	L	235	GLN
5	M	49	ASN
5	M	82	ASN
6	N	84	ASN
6	N	88	GLN
7	O	13	HIS
8	P	75	GLN
9	Q	102	GLN
10	R	127	ASN
10	R	174	ASN
10	R	202	ASN
11	S	28	HIS
11	S	38	GLN
11	S	77	ASN
11	S	83	HIS
11	S	99	GLN
12	T	94	GLN
12	T	109	GLN
12	T	145	GLN
12	T	205	ASN
12	T	212	HIS
12	T	214	GLN
13	U	52	GLN
13	U	90	ASN
13	U	106	ASN
14	V	163	ASN
15	W	68	HIS
15	W	121	GLN
15	W	130	HIS
15	W	133	ASN
15	W	149	HIS
16	X	102	HIS
16	X	146	ASN
18	Z	77	ASN
19	E	54	HIS
19	E	124	ASN
19	E	149	GLN
19	E	228	HIS
19	E	259	ASN
20	b	18	ASN
21	c	36	GLN

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Mol	Chain	Res	Type
21	c	38	ASN
22	d	140	ASN
23	e	95	HIS
23	e	145	ASN
24	f	69	HIS
25	F	135	ASN
25	F	138	GLN
25	F	167	HIS
25	F	209	GLN
25	F	229	HIS
25	F	288	ASN
26	G	71	ASN
26	G	93	GLN
26	G	153	ASN
26	G	222	ASN
26	G	257	GLN
27	H	90	ASN
28	I	105	HIS
28	I	183	GLN
30	g	88	GLN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	2796/2810 (99%)	962 (34%)	106 (3%)
2	C	101/106 (95%)	45 (44%)	4 (3%)
3	B	116/121 (95%)	54 (46%)	5 (4%)
All	All	3013/3037 (99%)	1061 (35%)	115 (3%)

All (1061) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	7	C
1	A	13	A
1	A	22	G
1	A	27	A
1	A	32	U
1	A	33	A
1	A	34	G
1	A	39	C
1	A	43	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	44	G
1	A	45	A
1	A	46	C
1	A	47	G
1	A	48	A
1	A	49	G
1	A	50	G
1	A	60	U
1	A	61	U
1	A	70	A
1	A	71	A
1	A	74	G
1	A	81	G
1	A	82	G
1	A	83	A
1	A	84	G
1	A	89	A
1	A	90	A
1	A	91	A
1	A	94	A
1	A	95	G
1	A	97	A
1	A	98	G
1	A	99	A
1	A	100	G
1	A	101	A
1	A	102	U
1	A	108	G
1	A	112	C
1	A	116	A
1	A	117	A
1	A	118	U
1	A	119	A
1	A	121	G
1	A	122	U
1	A	123	C
1	A	130	U
1	A	131	C
1	A	132	G
1	A	133	A
1	A	134	A
1	A	136	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	141	C
1	A	142	U
1	A	143	G
1	A	144	A
1	A	146	U
1	A	147	C
1	A	148	C
1	A	150	U
1	A	153	G
1	A	154	C
1	A	156	G
1	A	157	G
1	A	158	C
1	A	160	A
1	A	161	G
1	A	162	A
1	A	163	G
1	A	166	A
1	A	175	A
1	A	181	A
1	A	184	A
1	A	188	U
1	A	189	A
1	A	190	G
1	A	191	U
1	A	200	G
1	A	201	A
1	A	206	A
1	A	207	A
1	A	213	A
1	A	214	A
1	A	218	A
1	A	220	U
1	A	226	A
1	A	227	G
1	A	228	U
1	A	233	G
1	A	234	C
1	A	235	G
1	A	237	G
1	A	240	A
1	A	250	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	251	G
1	A	255	A
1	A	256	A
1	A	257	A
1	A	262	G
1	A	263	A
1	A	264	A
1	A	265	A
1	A	266	A
1	A	271	G
1	A	274	G
1	A	275	U
1	A	276	G
1	A	277	G
1	A	279	A
1	A	282	G
1	A	283	C
1	A	284	A
1	A	285	A
1	A	286	U
1	A	287	A
1	A	288	C
1	A	289	A
1	A	291	G
1	A	292	C
1	A	294	U
1	A	296	G
1	A	298	G
1	A	299	C
1	A	302	C
1	A	303	U
1	A	304	A
1	A	311	U
1	A	316	G
1	A	317	G
1	A	320	U
1	A	321	G
1	A	332	G
1	A	333	A
1	A	335	G
1	A	336	G
1	A	337	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	338	G
1	A	339	A
1	A	340	A
1	A	341	A
1	A	342	G
1	A	343	U
1	A	346	A
1	A	347	G
1	A	353	G
1	A	355	A
1	A	356	A
1	A	360	U
1	A	365	A
1	A	366	G
1	A	367	C
1	A	370	A
1	A	371	U
1	A	372	G
1	A	375	C
1	A	377	G
1	A	378	A
1	A	379	C
1	A	380	C
1	A	381	C
1	A	382	G
1	A	383	A
1	A	384	G
1	A	388	C
1	A	389	A
1	A	392	G
1	A	396	A
1	A	397	C
1	A	398	G
1	A	399	U
1	A	400	G
1	A	403	A
1	A	404	U
1	A	407	C
1	A	411	U
1	A	414	A
1	A	415	U
1	A	417	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	418	G
1	A	423	G
1	A	431	U
1	A	433	C
1	A	434	A
1	A	448	C
1	A	455	A
1	A	460	U
1	A	461	A
1	A	467	G
1	A	468	U
1	A	470	G
1	A	471	U
1	A	487	U
1	A	490	A
1	A	491	A
1	A	493	G
1	A	494	A
1	A	501	A
1	A	502	U
1	A	503	C
1	A	504	G
1	A	507	G
1	A	515	U
1	A	516	A
1	A	518	A
1	A	519	A
1	A	520	C
1	A	521	A
1	A	524	A
1	A	538	C
1	A	539	A
1	A	540	A
1	A	541	G
1	A	542	C
1	A	544	G
1	A	545	U
1	A	549	A
1	A	552	G
1	A	553	G
1	A	554	G
1	A	555	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	561	C
1	A	565	G
1	A	572	U
1	A	573	G
1	A	578	U
1	A	579	U
1	A	583	G
1	A	584	A
1	A	585	A
1	A	587	G
1	A	588	A
1	A	593	G
1	A	613	U
1	A	614	G
1	A	615	G
1	A	622	G
1	A	623	A
1	A	624	A
1	A	625	C
1	A	627	C
1	A	628	A
1	A	649	A
1	A	654	U
1	A	657	U
1	A	658	A
1	A	659	G
1	A	665	U
1	A	666	U
1	A	667	G
1	A	672	U
1	A	680	G
1	A	681	A
1	A	687	A
1	A	688	C
1	A	695	G
1	A	696	A
1	A	697	U
1	A	701	U
1	A	706	G
1	A	712	G
1	A	718	G
1	A	725	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	726	G
1	A	728	A
1	A	730	C
1	A	741	U
1	A	747	C
1	A	750	A
1	A	751	C
1	A	758	U
1	A	763	A
1	A	764	A
1	A	774	G
1	A	775	A
1	A	782	G
1	A	785	A
1	A	787	G
1	A	788	G
1	A	793	A
1	A	794	A
1	A	795	U
1	A	796	G
1	A	800	C
1	A	801	U
1	A	802	C
1	A	805	A
1	A	811	A
1	A	813	C
1	A	814	U
1	A	816	G
1	A	817	C
1	A	822	U
1	A	823	C
1	A	824	U
1	A	830	A
1	A	838	U
1	A	840	A
1	A	842	G
1	A	853	G
1	A	855	C
1	A	856	U
1	A	857	G
1	A	858	G
1	A	859	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	862	U
1	A	866	G
1	A	869	G
1	A	870	U
1	A	874	G
1	A	876	A
1	A	877	C
1	A	881	U
1	A	882	U
1	A	883	C
1	A	884	G
1	A	885	G
1	A	887	G
1	A	888	C
1	A	889	G
1	A	891	G
1	A	893	C
1	A	894	G
1	A	896	G
1	A	898	G
1	A	900	G
1	A	901	C
1	A	902	G
1	A	903	G
1	A	904	U
1	A	905	A
1	A	906	C
1	A	907	C
1	A	909	A
1	A	910	A
1	A	911	U
1	A	912	C
1	A	913	G
1	A	914	A
1	A	916	G
1	A	918	A
1	A	919	A
1	A	920	A
1	A	921	C
1	A	922	U
1	A	924	U
1	A	935	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	936	A
1	A	938	G
1	A	940	C
1	A	941	C
1	A	943	C
1	A	945	A
1	A	946	A
1	A	947	A
1	A	950	A
1	A	951	C
1	A	952	A
1	A	953	G
1	A	954	G
1	A	956	G
1	A	957	U
1	A	960	A
1	A	961	G
1	A	962	G
1	A	965	G
1	A	969	A
1	A	972	G
1	A	973	A
1	A	974	G
1	A	981	G
1	A	982	G
1	A	985	A
1	A	986	U
1	A	987	A
1	A	989	G
1	A	993	C
1	A	1001	A
1	A	1003	A
1	A	1011	A
1	A	1012	G
1	A	1013	C
1	A	1017	G
1	A	1018	A
1	A	1024	A
1	A	1033	C
1	A	1036	U
1	A	1037	A
1	A	1038	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1039	A
1	A	1040	U
1	A	1041	G
1	A	1043	C
1	A	1045	G
1	A	1046	C
1	A	1047	U
1	A	1050	G
1	A	1051	U
1	A	1052	G
1	A	1053	A
1	A	1055	A
1	A	1061	G
1	A	1064	A
1	A	1065	G
1	A	1066	G
1	A	1070	G
1	A	1073	G
1	A	1074	A
1	A	1075	G
1	A	1078	A
1	A	1079	G
1	A	1080	C
1	A	1081	C
1	A	1082	A
1	A	1085	A
1	A	1090	U
1	A	1097	A
1	A	1098	A
1	A	1099	G
1	A	1111	G
1	A	1116	A
1	A	1137	C
1	A	1139	A
1	A	1140	G
1	A	1154	A
1	A	1155	A
1	A	1158	U
1	A	1160	A
1	A	1161	A
1	A	1162	C
1	A	1163	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1165	G
1	A	1169	A
1	A	1173	G
1	A	1175	U
1	A	1177	U
1	A	1182	A
1	A	1184	G
1	A	1186	U
1	A	1194	G
1	A	1195	U
1	A	1196	A
1	A	1197	A
1	A	1198	A
1	A	1199	A
1	A	1203	C
1	A	1204	A
1	A	1207	G
1	A	1220	U
1	A	1225	G
1	A	1227	U
1	A	1231	G
1	A	1232	A
1	A	1233	G
1	A	1234	A
1	A	1235	A
1	A	1236	A
1	A	1237	C
1	A	1238	G
1	A	1239	C
1	A	1241	U
1	A	1242	G
1	A	1251	G
1	A	1254	U
1	A	1255	U
1	A	1256	G
1	A	1257	G
1	A	1259	C
1	A	1268	A
1	A	1271	G
1	A	1274	A
1	A	1276	U
1	A	1277	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1283	U
1	A	1286	A
1	A	1287	G
1	A	1288	U
1	A	1290	A
1	A	1293	C
1	A	1294	A
1	A	1295	A
1	A	1296	A
1	A	1297	C
1	A	1307	A
1	A	1314	U
1	A	1321	A
1	A	1322	A
1	A	1323	A
1	A	1333	U
1	A	1334	U
1	A	1335	C
1	A	1341	C
1	A	1342	A
1	A	1349	G
1	A	1351	C
1	A	1353	A
1	A	1361	U
1	A	1362	G
1	A	1366	C
1	A	1373	U
1	A	1379	C
1	A	1386	A
1	A	1389	G
1	A	1397	C
1	A	1399	A
1	A	1400	U
1	A	1406	A
1	A	1418	U
1	A	1430	C
1	A	1434	G
1	A	1436	U
1	A	1437	G
1	A	1438	G
1	A	1450	G
1	A	1451	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1452	A
1	A	1454	G
1	A	1458	C
1	A	1460	A
1	A	1463	U
1	A	1466	G
1	A	1472	A
1	A	1473	G
1	A	1474	A
1	A	1475	U
1	A	1476	G
1	A	1480	A
1	A	1481	U
1	A	1482	C
1	A	1486	U
1	A	1494	G
1	A	1495	C
1	A	1498	G
1	A	1501	G
1	A	1502	A
1	A	1503	C
1	A	1504	C
1	A	1506	U
1	A	1507	G
1	A	1516	G
1	A	1517	G
1	A	1518	U
1	A	1521	G
1	A	1522	A
1	A	1523	A
1	A	1527	G
1	A	1530	G
1	A	1531	A
1	A	1532	G
1	A	1533	A
1	A	1534	A
1	A	1535	A
1	A	1537	U
1	A	1541	U
1	A	1542	C
1	A	1543	G
1	A	1544	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1548	A
1	A	1551	G
1	A	1552	U
1	A	1556	A
1	A	1557	G
1	A	1559	A
1	A	1569	A
1	A	1570	C
1	A	1571	G
1	A	1572	G
1	A	1574	G
1	A	1583	A
1	A	1589	G
1	A	1592	A
1	A	1593	U
1	A	1594	A
1	A	1597	C
1	A	1598	C
1	A	1600	A
1	A	1602	G
1	A	1603	A
1	A	1604	A
1	A	1607	G
1	A	1613	A
1	A	1615	G
1	A	1616	A
1	A	1617	C
1	A	1618	C
1	A	1619	U
1	A	1624	C
1	A	1627	A
1	A	1628	A
1	A	1629	G
1	A	1634	C
1	A	1635	C
1	A	1643	G
1	A	1645	A
1	A	1646	A
1	A	1647	C
1	A	1649	G
1	A	1651	C
1	A	1652	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1653	C
1	A	1655	G
1	A	1663	G
1	A	1676	U
1	A	1684	C
1	A	1688	A
1	A	1689	C
1	A	1690	A
1	A	1701	A
1	A	1705	A
1	A	1709	G
1	A	1710	G
1	A	1712	A
1	A	1716	U
1	A	1730	C
1	A	1732	G
1	A	1734	A
1	A	1736	A
1	A	1737	A
1	A	1743	G
1	A	1746	C
1	A	1747	C
1	A	1752	C
1	A	1753	A
1	A	1754	A
1	A	1755	A
1	A	1768	G
1	A	1769	A
1	A	1774	G
1	A	1776	C
1	A	1783	A
1	A	1786	G
1	A	1794	A
1	A	1796	A
1	A	1797	A
1	A	1810	C
1	A	1811	A
1	A	1812	A
1	A	1813	A
1	A	1818	U
1	A	1819	A
1	A	1821	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1825	A
1	A	1826	U
1	A	1829	A
1	A	1830	U
1	A	1837	U
1	A	1839	A
1	A	1849	A
1	A	1858	A
1	A	1859	G
1	A	1876	A
1	A	1878	C
1	A	1880	G
1	A	1881	A
1	A	1882	U
1	A	1883	G
1	A	1884	A
1	A	1885	C
1	A	1887	G
1	A	1890	G
1	A	1895	G
1	A	1910	G
1	A	1915	A
1	A	1917	G
1	A	1920	G
1	A	1921	G
1	A	1925	U
1	A	1926	A
1	A	1927	A
1	A	1928	C
1	A	1931	U
1	A	1933	A
1	A	1937	U
1	A	1940	U
1	A	1941	A
1	A	1942	A
1	A	1943	G
1	A	1945	U
1	A	1951	A
1	A	1952	A
1	A	1953	U
1	A	1954	U
1	A	1955	C

*Continued on next page...*



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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1958	U
1	A	1959	G
1	A	1970	U
1	A	1979	C
1	A	1980	A
1	A	1981	C
1	A	1982	G
1	A	1984	A
1	A	1985	A
1	A	1986	G
1	A	2004	C
1	A	2005	U
1	A	2006	G
1	A	2007	U
1	A	2011	G
1	A	2033	A
1	A	2034	C
1	A	2037	G
1	A	2040	U
1	A	2044	A
1	A	2045	A
1	A	2046	G
1	A	2047	A
1	A	2048	U
1	A	2049	G
1	A	2054	C
1	A	2057	C
1	A	2061	C
1	A	2065	U
1	A	2066	G
1	A	2069	C
1	A	2070	A
1	A	2073	A
1	A	2074	A
1	A	2075	G
1	A	2076	A
1	A	2083	G
1	A	2091	A
1	A	2094	G
1	A	2104	A
1	A	2107	G
1	A	2108	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2109	C
1	A	2114	G
1	A	2115	G
1	A	2117	U
1	A	2120	U
1	A	2122	C
1	A	2124	G
1	A	2125	C
1	A	2126	G
1	A	2127	C
1	A	2129	G
1	A	2130	C
1	A	2131	U
1	A	2132	U
1	A	2133	A
1	A	2137	G
1	A	2140	A
1	A	2141	G
1	A	2142	G
1	A	2145	A
1	A	2146	A
1	A	2147	G
1	A	2148	A
1	A	2150	G
1	A	2151	G
1	A	2159	C
1	A	2160	C
1	A	2161	G
1	A	2162	G
1	A	2163	G
1	A	2173	G
1	A	2174	C
1	A	2175	C
1	A	2176	A
1	A	2177	U
1	A	2178	C
1	A	2179	A
1	A	2181	U
1	A	2182	G
1	A	2183	A
1	A	2184	G
1	A	2185	A

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2186	U
1	A	2187	A
1	A	2191	C
1	A	2192	U
1	A	2193	C
1	A	2194	U
1	A	2195	G
1	A	2197	A
1	A	2198	A
1	A	2199	G
1	A	2201	G
1	A	2202	C
1	A	2204	A
1	A	2205	G
1	A	2206	A
1	A	2208	U
1	A	2209	U
1	A	2210	C
1	A	2211	U
1	A	2212	A
1	A	2213	A
1	A	2215	C
1	A	2219	U
1	A	2220	G
1	A	2221	U
1	A	2222	C
1	A	2223	A
1	A	2225	G
1	A	2226	A
1	A	2227	C
1	A	2229	U
1	A	2230	A
1	A	2231	C
1	A	2233	G
1	A	2236	C
1	A	2237	A
1	A	2238	A
1	A	2243	C
1	A	2254	A
1	A	2255	G
1	A	2256	A
1	A	2262	U

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2267	G
1	A	2268	G
1	A	2276	G
1	A	2283	A
1	A	2290	A
1	A	2296	G
1	A	2300	U
1	A	2303	A
1	A	2305	A
1	A	2314	C
1	A	2315	G
1	A	2320	G
1	A	2322	A
1	A	2324	G
1	A	2325	G
1	A	2329	U
1	A	2333	C
1	A	2334	C
1	A	2335	C
1	A	2336	U
1	A	2338	G
1	A	2339	A
1	A	2340	G
1	A	2342	G
1	A	2350	A
1	A	2351	G
1	A	2352	A
1	A	2362	G
1	A	2363	A
1	A	2364	C
1	A	2367	C
1	A	2372	C
1	A	2378	C
1	A	2394	A
1	A	2399	G
1	A	2400	G
1	A	2402	C
1	A	2406	G
1	A	2408	G
1	A	2418	U
1	A	2419	G
1	A	2420	C

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2423	A
1	A	2437	C
1	A	2439	C
1	A	2440	U
1	A	2441	C
1	A	2442	A
1	A	2443	A
1	A	2446	G
1	A	2447	A
1	A	2452	A
1	A	2458	U
1	A	2462	G
1	A	2465	A
1	A	2467	A
1	A	2476	A
1	A	2481	C
1	A	2485	A
1	A	2486	A
1	A	2493	A
1	A	2495	A
1	A	2498	G
1	A	2507	G
1	A	2508	U
1	A	2511	G
1	A	2512	G
1	A	2515	C
1	A	2519	G
1	A	2520	A
1	A	2522	G
1	A	2530	U
1	A	2535	C
1	A	2536	A
1	A	2537	C
1	A	2539	U
1	A	2540	G
1	A	2542	G
1	A	2546	G
1	A	2551	A
1	A	2552	U
1	A	2555	U
1	A	2560	G
1	A	2564	U

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2566	G
1	A	2571	U
1	A	2572	U
1	A	2573	C
1	A	2574	G
1	A	2576	C
1	A	2583	A
1	A	2584	G
1	A	2586	G
1	A	2589	A
1	A	2590	C
1	A	2602	U
1	A	2614	G
1	A	2619	A
1	A	2620	G
1	A	2625	G
1	A	2626	U
1	A	2630	U
1	A	2631	A
1	A	2632	U
1	A	2640	G
1	A	2645	U
1	A	2646	U
1	A	2647	A
1	A	2653	U
1	A	2661	A
1	A	2662	C
1	A	2663	C
1	A	2672	G
1	A	2673	U
1	A	2679	A
1	A	2680	G
1	A	2683	C
1	A	2684	C
1	A	2699	U
1	A	2702	G
1	A	2705	G
1	A	2706	U
1	A	2723	A
1	A	2724	C
1	A	2729	A
1	A	2730	A

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2731	C
1	A	2734	U
1	A	2744	A
1	A	2745	G
1	A	2750	G
1	A	2751	A
1	A	2753	C
1	A	2754	G
1	A	2757	U
1	A	2762	G
1	A	2766	A
1	A	2767	A
1	A	2768	A
1	A	2770	C
1	A	2775	A
1	A	2776	A
1	A	2782	A
1	A	2783	A
1	A	2784	G
1	A	2792	C
1	A	2796	A
1	A	2797	U
1	A	2798	G
1	A	2803	C
1	A	2804	U
1	A	2805	C
1	A	2808	C
1	A	2809	U
1	A	2810	A
2	C	16	G
2	C	17	A
2	C	22	A
2	C	23	G
2	C	26	G
2	C	27	U
2	C	28	U
2	C	29	U
2	C	30	A
2	C	31	U
2	C	32	C
2	C	33	A
2	C	34	U

*Continued on next page...*

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	C	35	U
2	C	36	A
2	C	37	C
2	C	38	G
2	C	39	A
2	C	47	C
2	C	54	A
2	C	55	A
2	C	65	U
2	C	71	C
2	C	73	G
2	C	74	C
2	C	75	U
2	C	76	G
2	C	77	A
2	C	78	G
2	C	80	C
2	C	83	C
2	C	84	C
2	C	85	U
2	C	86	A
2	C	87	A
2	C	88	C
2	C	90	G
2	C	95	A
2	C	96	C
2	C	97	A
2	C	99	A
2	C	100	C
2	C	102	U
2	C	103	G
2	C	104	A
3	B	4	U
3	B	7	G
3	B	8	G
3	B	9	U
3	B	10	G
3	B	12	C
3	B	14	U
3	B	15	A
3	B	16	G
3	B	17	G

*Continued on next page...*



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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	18	C
3	B	21	A
3	B	22	G
3	B	25	G
3	B	26	A
3	B	32	A
3	B	37	U
3	B	39	C
3	B	41	U
3	B	42	C
3	B	43	C
3	B	46	A
3	B	47	A
3	B	53	U
3	B	54	G
3	B	55	G
3	B	56	U
3	B	58	A
3	B	64	U
3	B	66	C
3	B	67	U
3	B	68	G
3	B	70	G
3	B	73	G
3	B	74	A
3	B	75	C
3	B	83	U
3	B	84	A
3	B	87	G
3	B	89	A
3	B	90	G
3	B	91	G
3	B	92	U
3	B	101	A
3	B	102	A
3	B	109	U
3	B	110	C
3	B	111	G
3	B	112	A
3	B	114	G
3	B	116	C
3	B	117	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	B	118	G
3	B	119	G

All (115) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	69	G
1	A	80	G
1	A	81	G
1	A	90	A
1	A	118	U
1	A	153	G
1	A	159	A
1	A	161	G
1	A	162	A
1	A	190	G
1	A	212	A
1	A	213	A
1	A	227	G
1	A	256	A
1	A	284	A
1	A	285	A
1	A	319	G
1	A	320	U
1	A	354	A
1	A	371	U
1	A	379	C
1	A	382	G
1	A	459	A
1	A	470	G
1	A	493	G
1	A	517	G
1	A	523	G
1	A	540	A
1	A	542	C
1	A	548	G
1	A	627	C
1	A	696	A
1	A	750	A
1	A	773	U
1	A	786	G
1	A	787	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	793	A
1	A	795	U
1	A	804	A
1	A	856	U
1	A	869	G
1	A	899	A
1	A	934	A
1	A	1002	G
1	A	1017	G
1	A	1036	U
1	A	1050	G
1	A	1161	A
1	A	1162	C
1	A	1194	G
1	A	1219	U
1	A	1236	A
1	A	1254	U
1	A	1256	G
1	A	1287	G
1	A	1332	G
1	A	1333	U
1	A	1334	U
1	A	1341	C
1	A	1471	A
1	A	1474	A
1	A	1479	U
1	A	1493	C
1	A	1501	G
1	A	1531	A
1	A	1592	A
1	A	1651	C
1	A	1662	A
1	A	1689	C
1	A	1810	C
1	A	1818	U
1	A	1828	U
1	A	1829	A
1	A	1848	C
1	A	1944	G
1	A	1951	A
1	A	1954	U
1	A	1980	A

*Continued on next page...*

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Mol	Chain	Res	Type
1	A	2003	A
1	A	2036	U
1	A	2047	A
1	A	2106	U
1	A	2123	U
1	A	2132	U
1	A	2141	G
1	A	2144	G
1	A	2172	A
1	A	2192	U
1	A	2210	C
1	A	2212	A
1	A	2224	G
1	A	2242	A
1	A	2261	U
1	A	2289	U
1	A	2338	G
1	A	2362	G
1	A	2442	A
1	A	2464	G
1	A	2507	G
1	A	2536	A
1	A	2646	U
1	A	2672	G
1	A	2683	C
1	A	2744	A
1	A	2774	U
1	A	2802	G
2	C	29	U
2	C	32	C
2	C	33	A
2	C	35	U
3	B	7	G
3	B	45	G
3	B	57	U
3	B	110	C
3	B	118	G

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

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

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

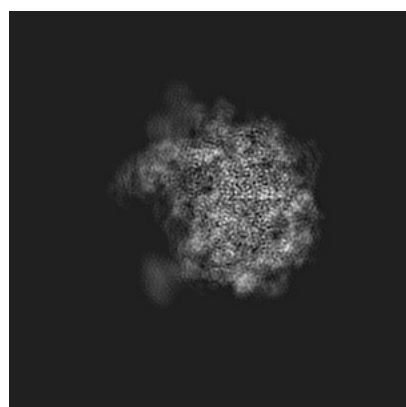
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-9572. These allow visual inspection of the internal detail of the map and identification of artifacts.

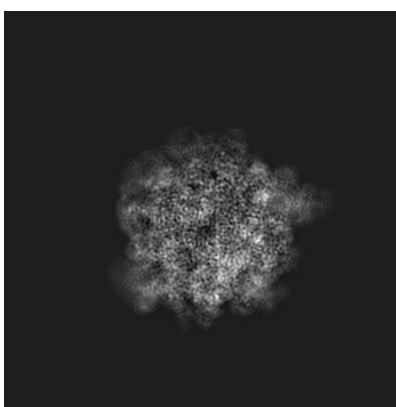
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

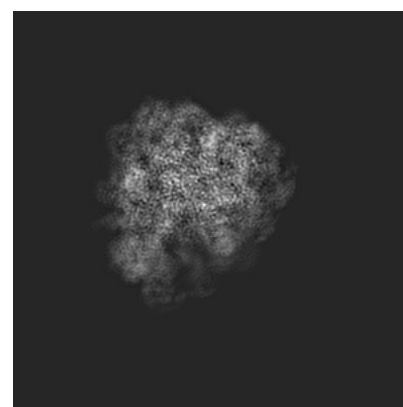
#### 6.1.1 Primary map



X



Y

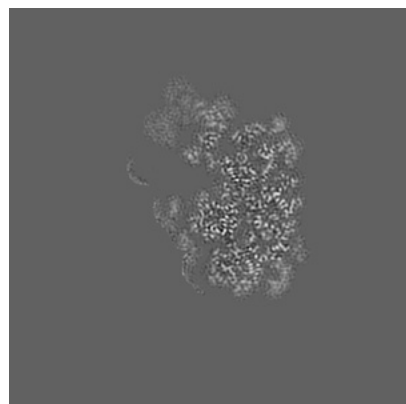


Z

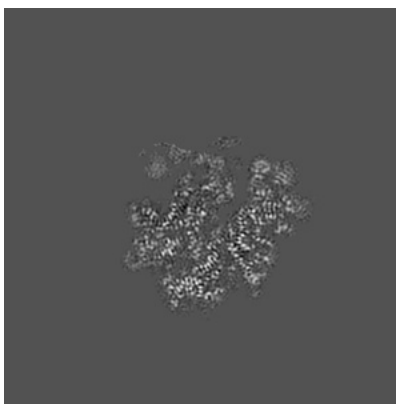
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

#### 6.2.1 Primary map



X Index: 156



Y Index: 156

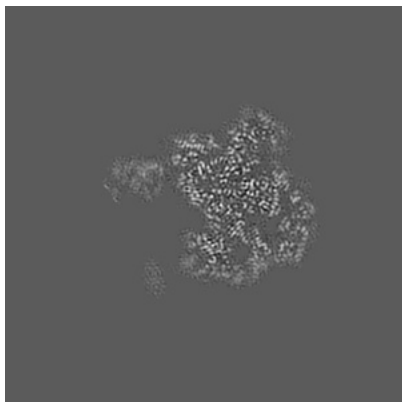


Z Index: 156

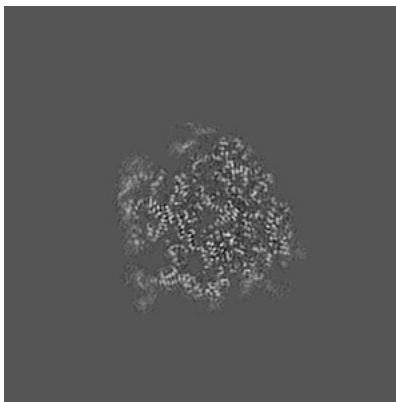
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

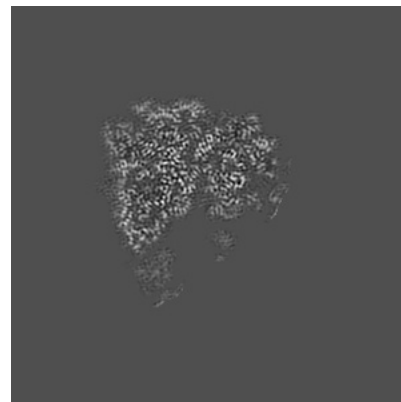
### 6.3.1 Primary map



X Index: 120



Y Index: 186

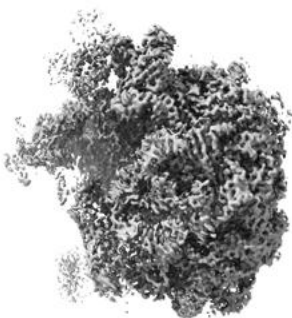


Z Index: 166

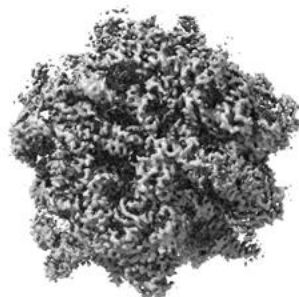
The images above show the largest variance slices of the map in three orthogonal directions.

## 6.4 Orthogonal surface views [i](#)

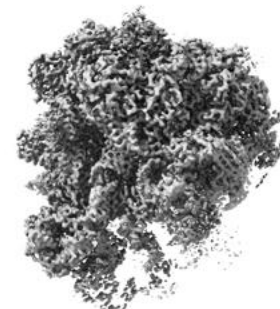
### 6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.132. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

## 6.5 Mask visualisation

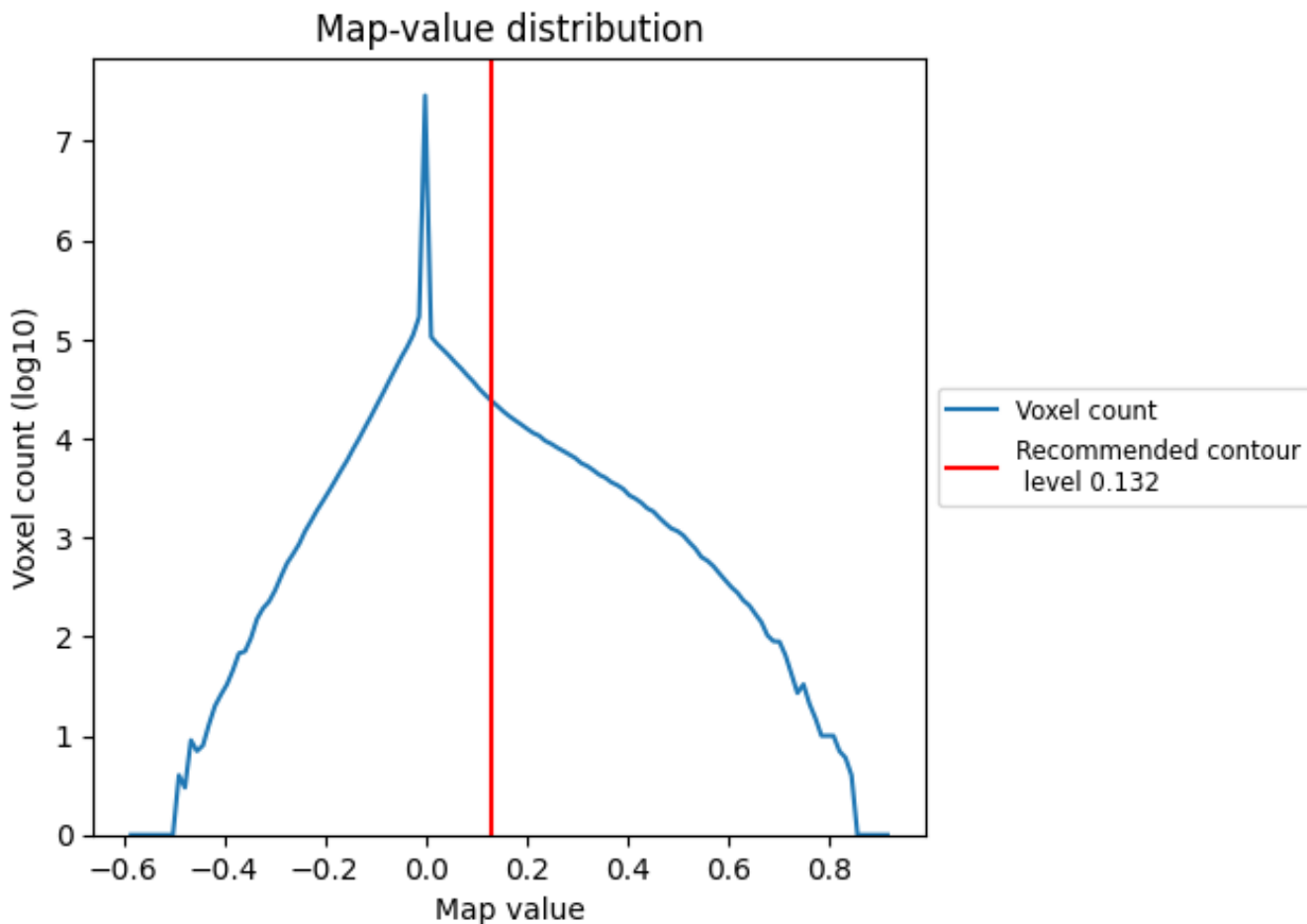
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

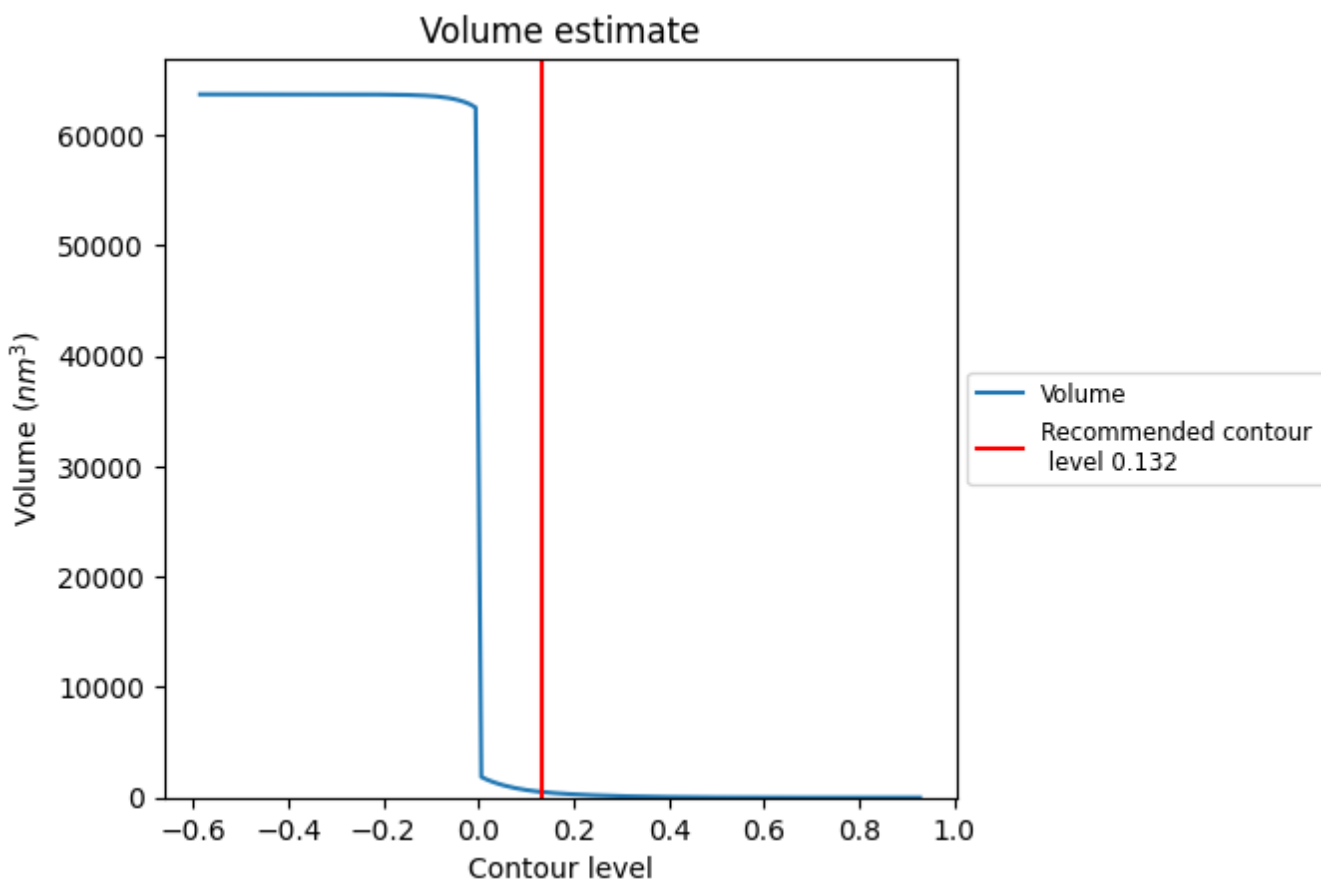
This section contains the results of statistical analysis of the map.

### 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.

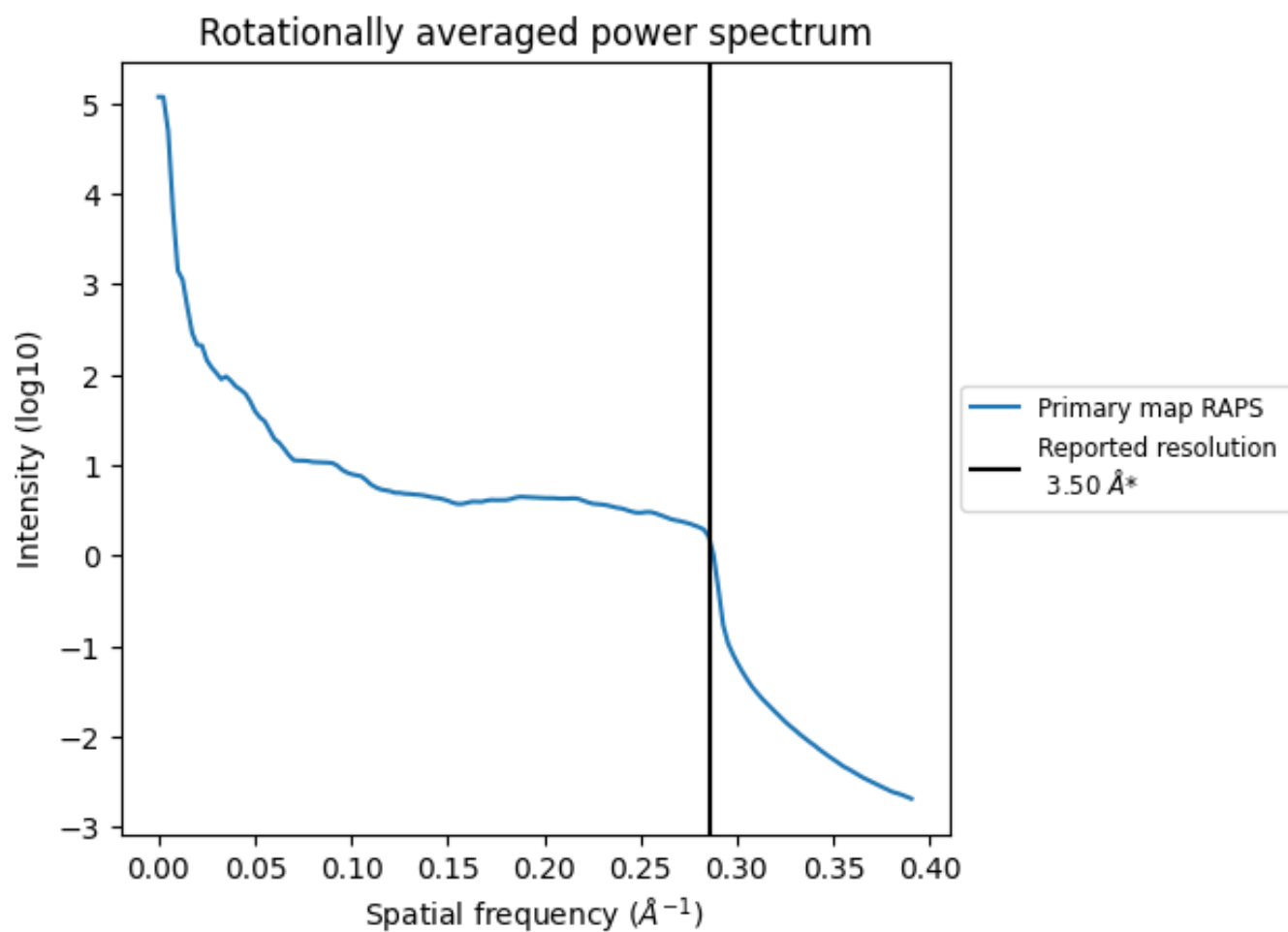
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 516 nm<sup>3</sup>; this corresponds to an approximate mass of 466 kDa.

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

### 7.3 Rotationally averaged power spectrum [i](#)



\*Reported resolution corresponds to spatial frequency of  $0.286 \text{\AA}^{-1}$

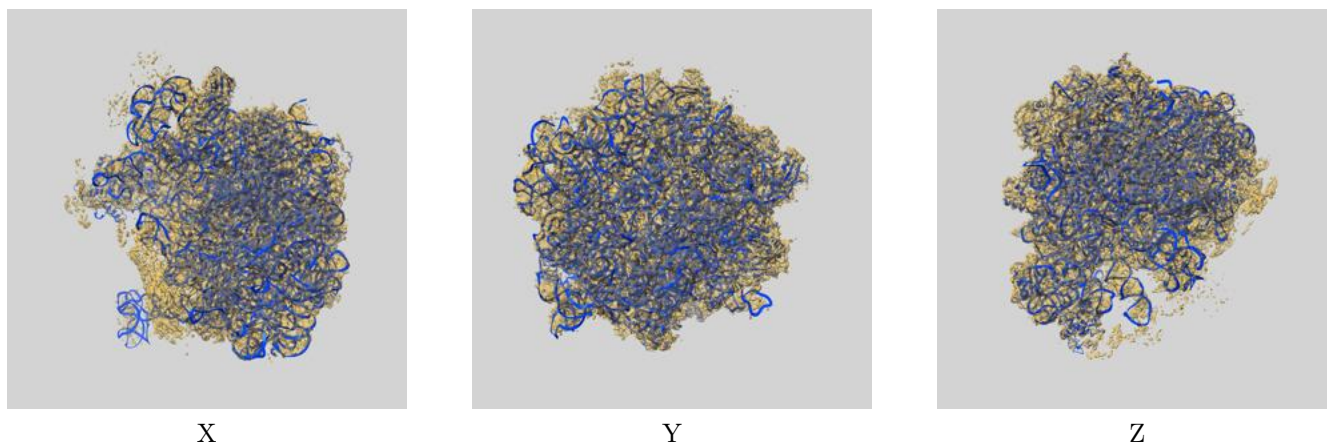
## 8 Fourier-Shell correlation

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

## 9 Map-model fit [i](#)

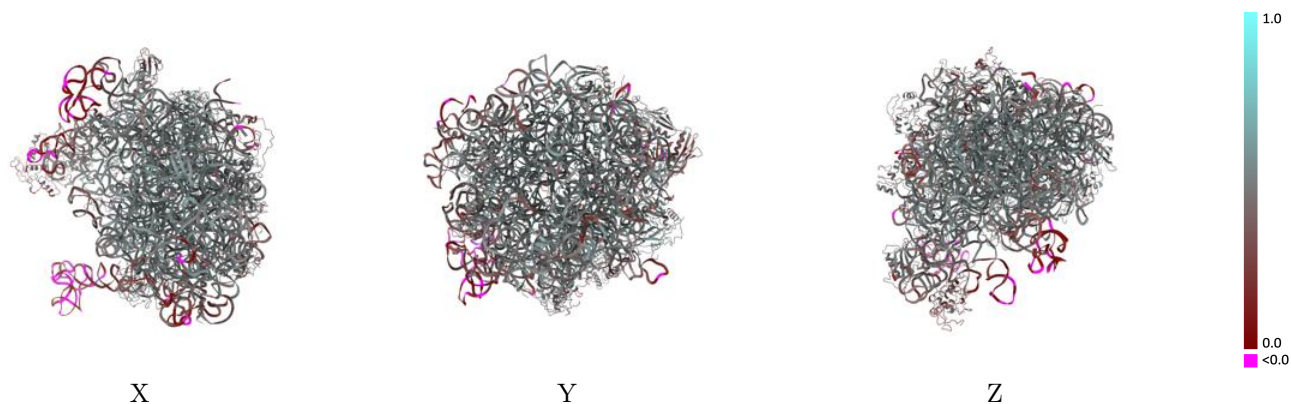
This section contains information regarding the fit between EMDB map EMD-9572 and PDB model 5H1S. Per-residue inclusion information can be found in section 3 on page 9.

### 9.1 Map-model overlay [i](#)



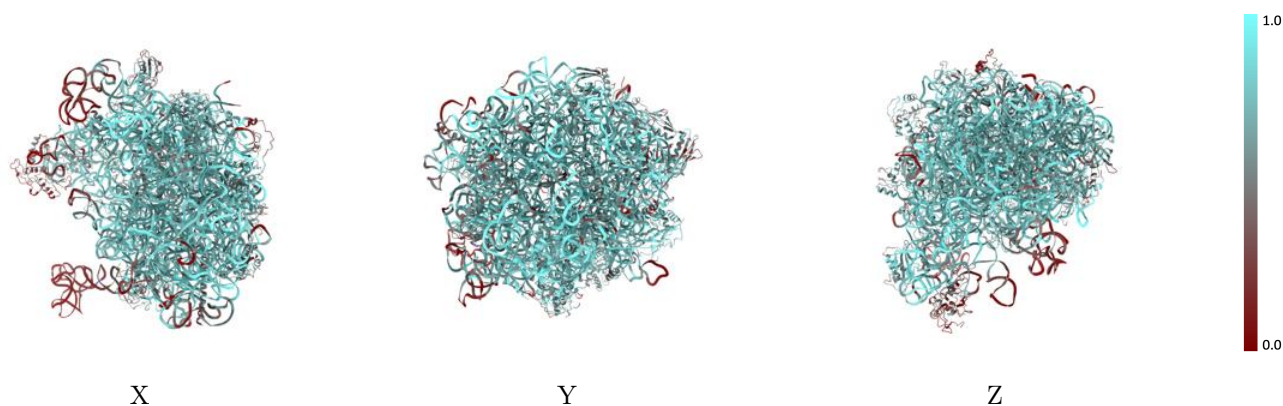
The images above show the 3D surface view of the map at the recommended contour level 0.132 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



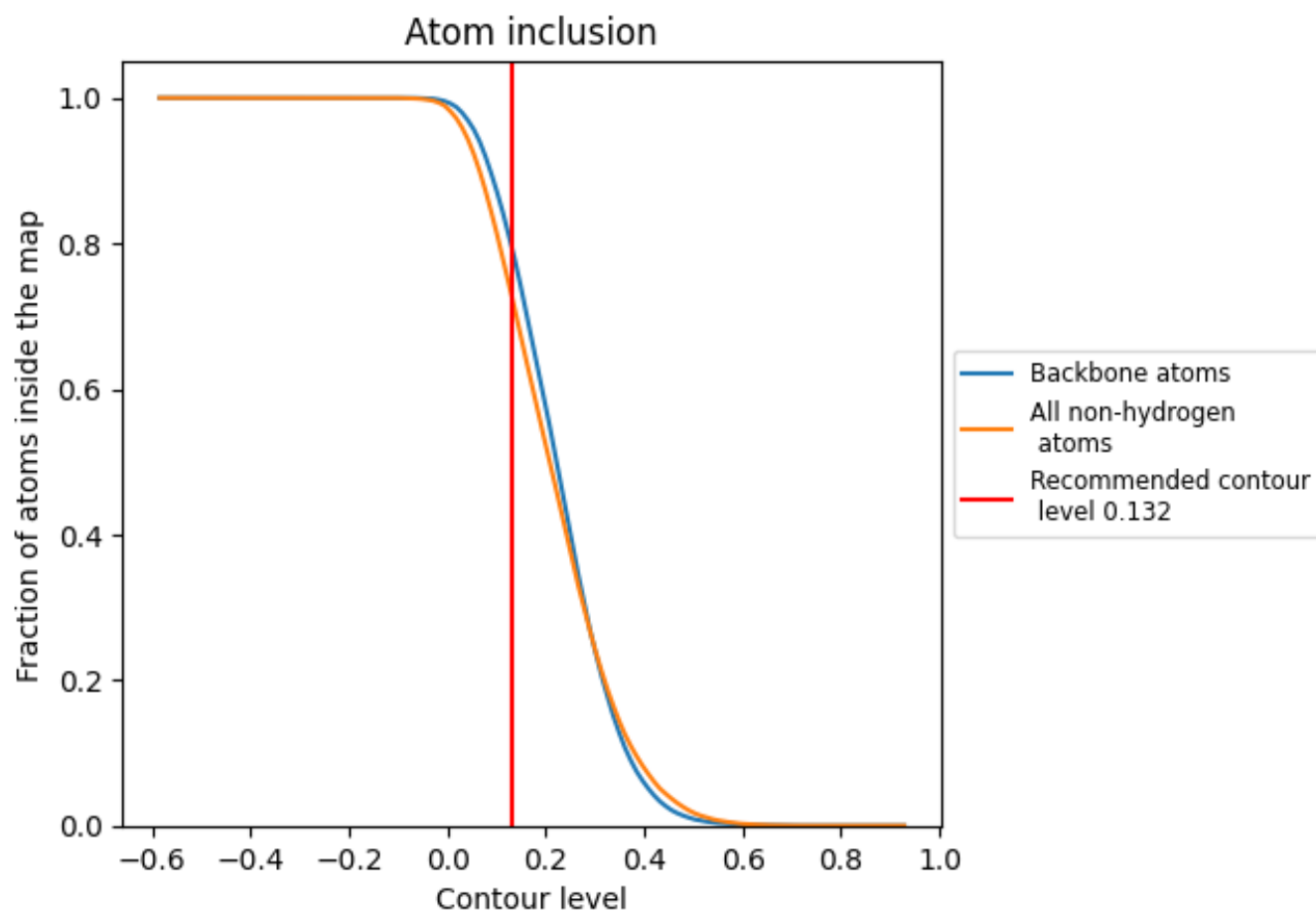
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.132).



































































## 9.4 Atom inclusion [i](#)



At the recommended contour level, 79% of all backbone atoms, 72% 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 (0.132) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7241	 0.4530
A	 0.7631	 0.4510
B	 0.8056	 0.4300
C	 0.8048	 0.4520
E	 0.6718	 0.4930
F	 0.6857	 0.4970
G	 0.6495	 0.4640
H	 0.2816	 0.3440
I	 0.5668	 0.4240
J	 0.2110	 0.3920
L	 0.7252	 0.5060
M	 0.5963	 0.4760
N	 0.6777	 0.4590
O	 0.6464	 0.4630
P	 0.7127	 0.5020
Q	 0.6235	 0.4310
R	 0.6104	 0.4800
S	 0.7362	 0.4770
T	 0.6274	 0.4750
U	 0.6057	 0.4530
V	 0.5718	 0.4870
W	 0.5732	 0.4400
X	 0.6438	 0.4660
Y	 0.6956	 0.4980
Z	 0.6041	 0.4490
a	 0.1017	 0.2240
b	 0.6793	 0.4930
c	 0.6150	 0.4100
d	 0.6817	 0.5020
e	 0.7362	 0.5200
f	 0.6840	 0.4880
g	 0.5575	 0.4140
h	 0.7255	 0.4920

