Full wwPDB EM Validation Report ⓘ

Mar 5, 2026 – 06:09 PM UTC

PDB ID	:	3J7Q / pdb_00003j7q
EMDB ID	:	EMD-2650
Title	:	Structure of the idle mammalian ribosome-Sec61 complex
Authors	:	Voorhees, R.M.; Fernandez, I.S.; Scheres, S.H.W.; Hegde, R.S.
Deposited on	:	2014-08-01
Resolution	:	3.40 Å(reported)
Based on initial models	:	3J3B, 3J3F

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

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

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

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

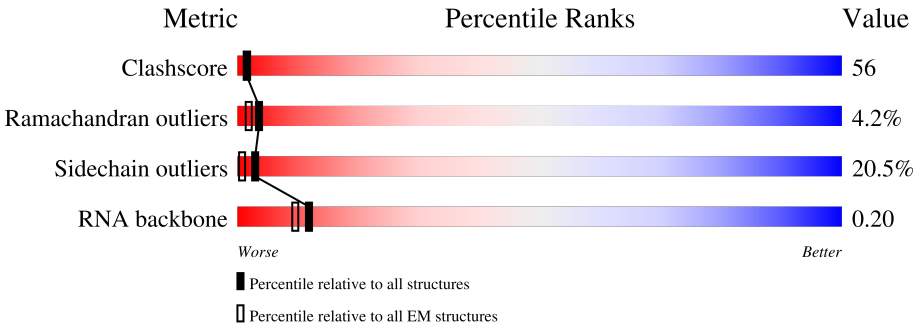
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

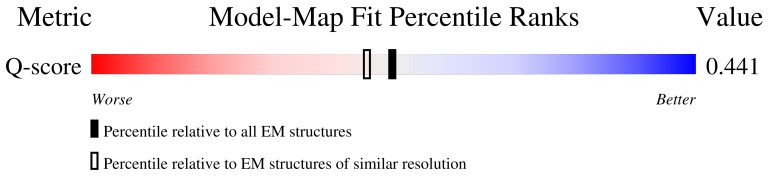
1 Overall quality at a glance

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

The reported resolution of this entry is 3.40 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	14717 (2.90 - 3.90)

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

Mol	Chain	Length	Quality of chain
1	5	3722	9% 8% 40% 32% 18%
2	7	120	18% 55% 19% 8%
3	8	156	8% 6% 48% 28% 17%

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Mol	Chain	Length	Quality of chain
4	A	257	49% 28% 12% 6% 5%
5	B	394	47% 33% 13% 7%
6	C	367	53% 33% 11%
7	D	297	43% 36% 14% 5%
8	E	236	10% 44% 30% 21% 6%
9	F	225	45% 32% 15% 7%
10	G	266	8% 54% 23% 12% 9%
11	H	192	56% 29% 10%
12	I	213	8% 57% 27% 12%
13	J	178	60% 27% 6%
14	L	211	7% 52% 31% 11% 6%
15	M	213	36% 20% 6% 35%
16	N	204	49% 31% 14% 6%
17	O	201	59% 30% 9%
18	P	153	64% 29% 5%
19	Q	188	59% 26% 9% 6%
20	R	196	6% 51% 24% 11% 6% 8%
21	S	224	37% 26% 9% 7% 22%
22	T	160	52% 36% 9%
23	U	128	47% 21% 7% 23%
24	V	140	58% 23% 10% 6%
25	W	157	24% 10% 6% 60%
26	X	156	45% 24% 6% 24%
27	Y	145	50% 26% 12% 5% 8%
28	Z	136	54% 32% 12%

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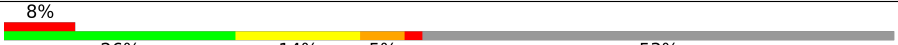
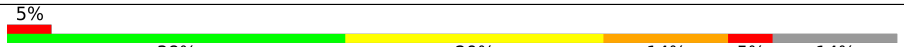
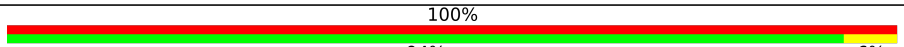
Mol	Chain	Length	Quality of chain
29	a	148	
30	b	160	
31	c	115	
32	d	125	
33	e	135	
34	f	110	
35	g	117	
36	h	123	
37	i	105	
38	j	86	
39	k	70	
40	l	51	
41	m	128	
42	n	25	
43	o	106	
44	p	91	
45	r	125	
46	1	476	
47	2	68	
48	3	36	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
50	ZN	m	201	-	-	X	-

2 Entry composition (i)

There are 50 unique types of molecules in this entry. The entry contains 140540 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 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	5	3662	78486	34947	14363	25515	3661	0	0

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	7	120	2558	1141	456	842	119	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
3	8	156	3314	1480	585	1094	155	0	0

- Molecule 4 is a protein called Ribosomal protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	A	244	1868	1171	382	309	6	0	0

- Molecule 5 is a protein called Ribosomal protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	B	394	3147	2005	591	538	13	0	0

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	85	ILE	VAL	conflict	UNP A0A480L253
B	86	VAL	ILE	conflict	UNP A0A480L253
B	140	ALA	GLU	conflict	UNP A0A480L253

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Chain	Residue	Modelled	Actual	Comment	Reference
B	141	ALA	ASP	conflict	UNP A0A480L253
B	143	ALA	LYS	conflict	UNP A0A480L253
B	144	ALA	LYS	conflict	UNP A0A480L253
B	145	ALA	GLN	conflict	UNP A0A480L253
B	147	ALA	GLU	conflict	UNP A0A480L253
B	148	ALA	ARG	conflict	UNP A0A480L253
B	155	ALA	LYS	conflict	UNP A0A480L253

- Molecule 6 is a protein called Ribosomal protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	C	367	Total	C	N	O	S	0	0
			2919	1836	582	486	15		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	354	ALA	-	insertion	UNP A0A287AE76
C	355	ALA	-	insertion	UNP A0A287AE76
C	356	ALA	-	insertion	UNP A0A287AE76

- Molecule 7 is a protein called Ribosomal protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	D	292	Total	C	N	O	S	0	0
			2380	1508	434	426	12		

- Molecule 8 is a protein called Ribosomal protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	E	236	Total	C	N	O	S	0	0
			1904	1219	364	316	5		

There are 15 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	62	MET	LYS	conflict	UNP Q2YGT9
E	64	MET	LEU	conflict	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	SER	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	VAL	deletion	UNP Q2YGT9
E	?	-	GLU	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	VAL	deletion	UNP Q2YGT9
E	?	-	ARG	deletion	UNP Q2YGT9
E	176	VAL	SER	conflict	UNP Q2YGT9
E	206	LYS	GLU	conflict	UNP Q2YGT9

- Molecule 9 is a protein called Ribosomal protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	F	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	31	LYS	ARG	conflict	UNP A0A480W0U3

- Molecule 10 is a protein called Ribosomal protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	G	241	Total	C	N	O	S	0	0
			1934	1232	372	326	4		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	53	ARG	CYS	conflict	UNP A0A4X1W808
G	172	ALA	SER	conflict	UNP A0A4X1W808
G	185	LYS	ASN	conflict	UNP A0A4X1W808
G	231	ASN	ASP	conflict	UNP A0A4X1W808

- Molecule 11 is a protein called Ribosomal protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	H	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 12 is a protein called Ribosomal protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	I	213	Total	C	N	O	S	0	0
			1713	1083	331	284	15		

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	49	GLY	CYS	conflict	UNP Q29195
I	82	ARG	LYS	conflict	UNP Q29195
I	87	MET	ILE	conflict	UNP Q29195
I	145	GLU	LYS	conflict	UNP Q29195
I	187	LYS	GLU	conflict	UNP Q29195
I	189	CYS	ARG	conflict	UNP Q29195
I	200	VAL	ILE	conflict	UNP Q29195
I	203	HIS	ARG	conflict	UNP Q29195
I	211	VAL	ALA	conflict	UNP Q29195

- Molecule 13 is a protein called Ribosomal protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	J	170	Total	C	N	O	S	0	0
			1359	856	256	241	6		

- Molecule 14 is a protein called Ribosomal protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	L	210	Total	C	N	O	S	0	0
			1703	1064	354	280	5		

- Molecule 15 is a protein called Ribosomal protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	M	138	Total	C	N	O	S	0	0
			1131	727	216	181	7		

- Molecule 16 is a protein called Ribosomal protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	N	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 17 is a protein called Ribosomal protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	O	201	Total	C	N	O	S	0	0
			1651	1063	323	260	5		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	3	GLU	-	variant	UNP A0A481CAM4
O	4	GLY	-	variant	UNP A0A481CAM4

- Molecule 18 is a protein called Ribosomal protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	P	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 19 is a protein called Ribosomal protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	Q	187	Total	C	N	O	S	0	0
			1506	941	311	249	5		

- Molecule 20 is a protein called Ribosomal protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	R	180	Total	C	N	O	S	0	0
			1508	933	328	238	9		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	1	TYR	-	variant	UNP A0A480VXS3

- Molecule 21 is a protein called Ribosomal protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	S	175	Total	C	N	O	S	0	0
			1454	925	284	235	10		

- Molecule 22 is a protein called Ribosomal protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	T	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 23 is a protein called Ribosomal protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	U	99	Total	C	N	O	S	0	0
			808	518	141	147	2		

- Molecule 24 is a protein called Ribosomal protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	V	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 25 is a protein called Ribosomal protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	W	63	Total	C	N	O	S	0	0
			528	337	103	85	3		

- Molecule 26 is a protein called Ribosomal protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	X	119	Total	C	N	O	S	0	0
			976	624	183	168	1		

- Molecule 27 is a protein called Ribosomal protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Y	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 28 is a protein called Ribosomal protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Z	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 29 is a protein called Ribosomal protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	a	147	Total	C	N	O	S	0	0
			1163	735	239	185	4		

- Molecule 30 is a protein called Ribosomal protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	b	75	Total	C	N	O	S	0	0
			610	378	130	99	3		

- Molecule 31 is a protein called Ribosomal protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	c	94	Total	C	N	O	S	0	0
			732	465	130	131	6		

- Molecule 32 is a protein called Ribosomal protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	d	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 33 is a protein called Ribosomal protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	e	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 34 is a protein called Ribosomal protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	f	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 35 is a protein called Ribosomal protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	g	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 36 is a protein called Ribosomal protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	h	122	Total	C	N	O	S	0	0
			1015	642	205	167	1		

- Molecule 37 is a protein called Ribosomal protein eL36.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	i	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 38 is a protein called Ribosomal protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	j	86	Total	C	N	O	S	0	0
			706	436	155	110	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
j	82	ILE	THR	conflict	UNP A0A480UVT3

- Molecule 39 is a protein called Ribosomal protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	k	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 40 is a protein called Ribosomal protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	l	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 41 is a protein called Ribosomal protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	m	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 42 is a protein called Ribosomal protein eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	n	23	Total	C	N	O	S	0	0
			222	134	61	25	2		

- Molecule 43 is a protein called Ribosomal protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	o	104	Total	C	N	O	S	0	0
			851	533	174	138	6		

- Molecule 44 is a protein called Ribosomal protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	p	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 45 is a protein called Ribosomal protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	r	125	Total	C	N	O	S	0	0
			1001	622	206	168	5		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
r	64	ILE	MET	conflict	UNP A0A480YX24

- Molecule 46 is a protein called Sec61 alpha subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	1	392	Total	C	N	O	S	0	0
			3051	2007	493	532	19		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	343	HIS	TYR	conflict	UNP A0A480EHF8

- Molecule 47 is a protein called Sec61 gamma subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	2	62	Total	C	N	O	S	0	0
			494	326	86	79	3		

- Molecule 48 is a protein called Sec61 beta subunit.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	3	36	Total 180	C 108	N 36	O 36	0	0

- Molecule 49 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
49	5	119	Total 119	Mg 119	0
49	7	5	Total 5	Mg 5	0
49	8	4	Total 4	Mg 4	0
49	P	1	Total 1	Mg 1	0
49	V	1	Total 1	Mg 1	0

- Molecule 50 is ZINC ION (CCD ID: ZN) (formula: Zn).

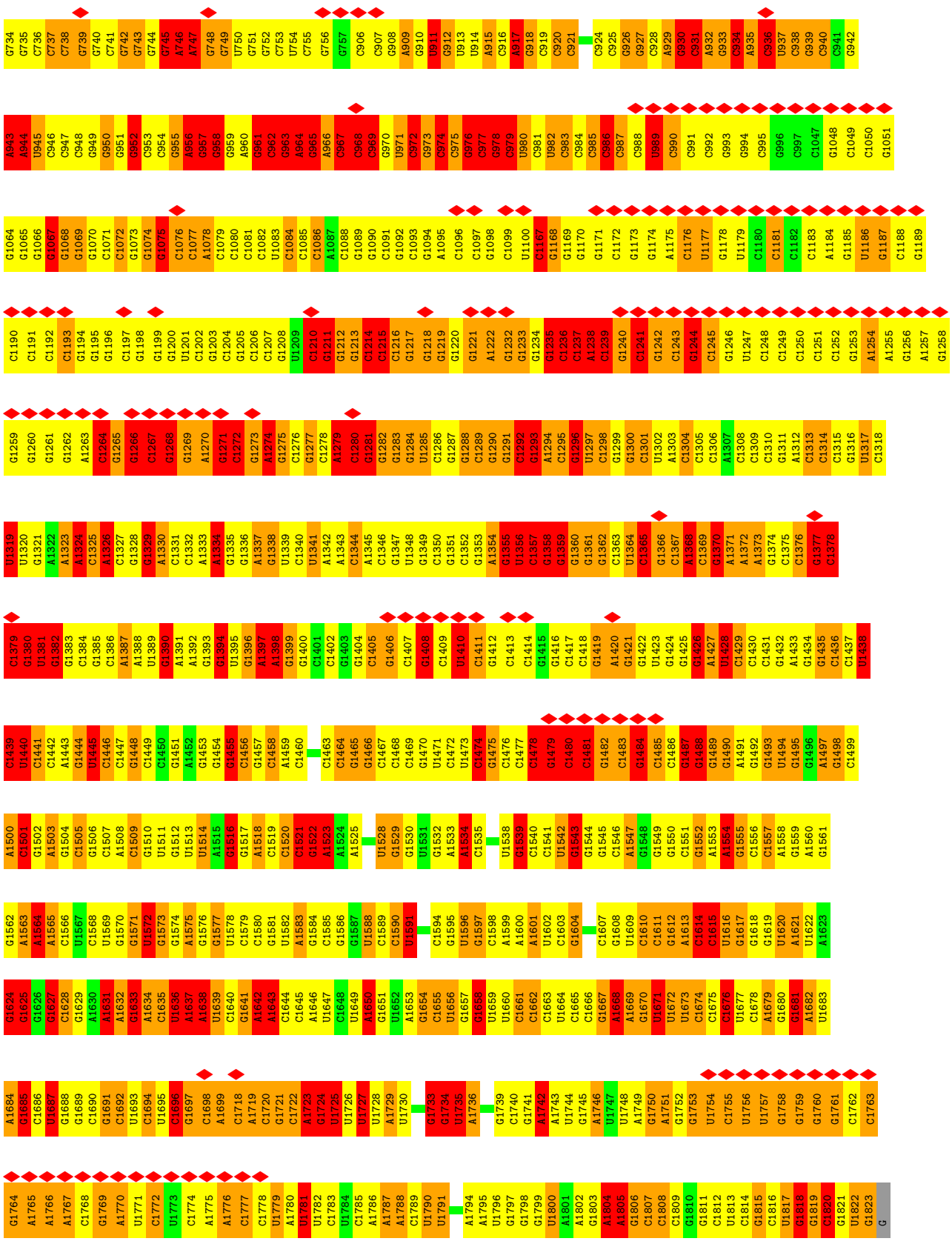
Mol	Chain	Residues	Atoms		AltConf
50	j	1	Total 1	Zn 1	0
50	m	1	Total 1	Zn 1	0
50	o	1	Total 1	Zn 1	0

3 Residue-property plots (i)

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

• Molecule 1: 28S ribosomal RNA

Chain 5: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A943 A944 U945 C946 C947 C948 G949 G950 G951 G952 C953 C954 G955 A956 G957 G958 G959 A960 G961 C962 G963 A964 G965 A966 C967 C968 C969 G970 U971 C972 G973 C974 C975 G976 C977 G978 C979 U980 C981 U982 C983 C984 C985 C986 C987 C988 U989 C990 C991 C992 G993 G994 C995 G996 C997 C1047 G1048 C1049 C1050 G1051
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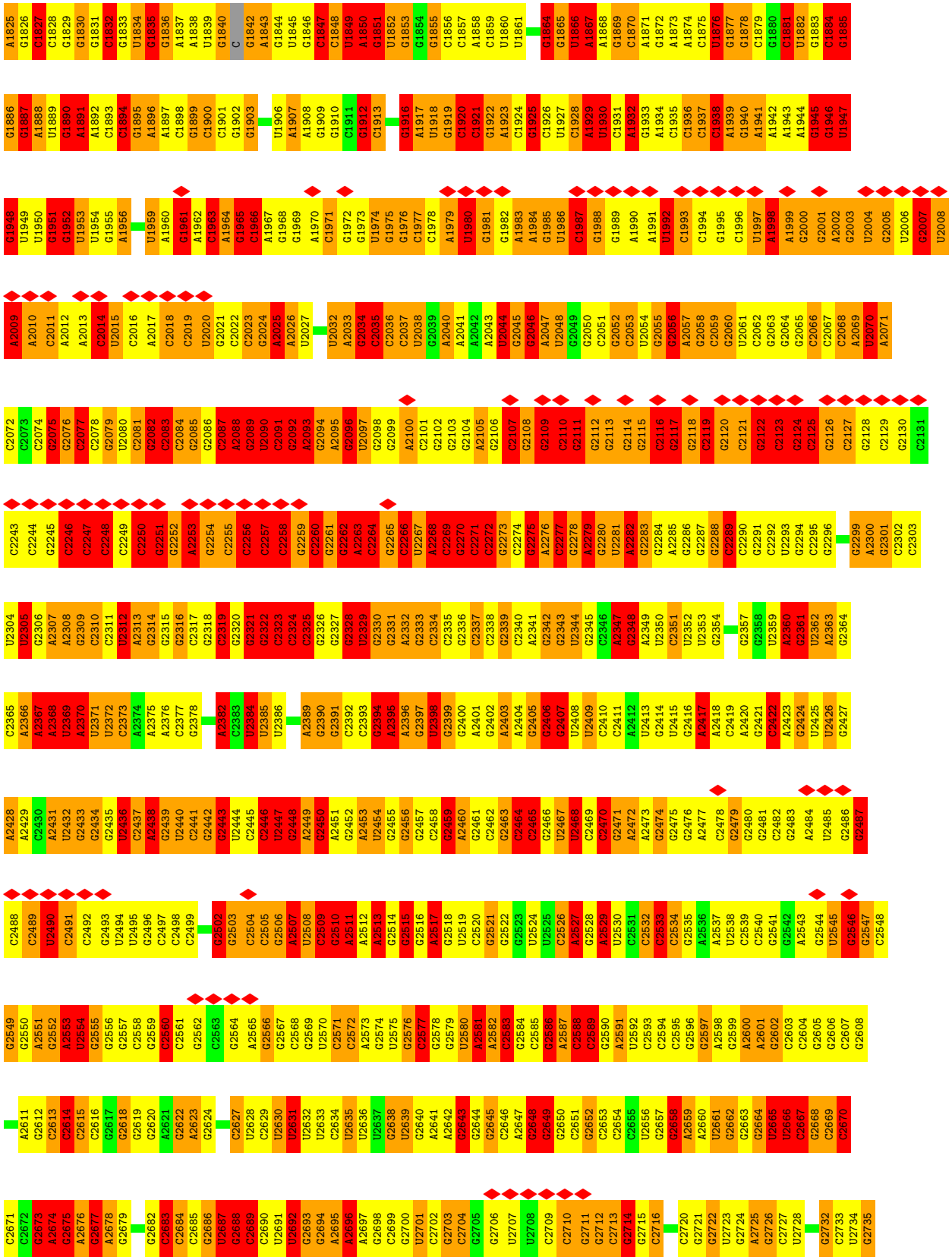
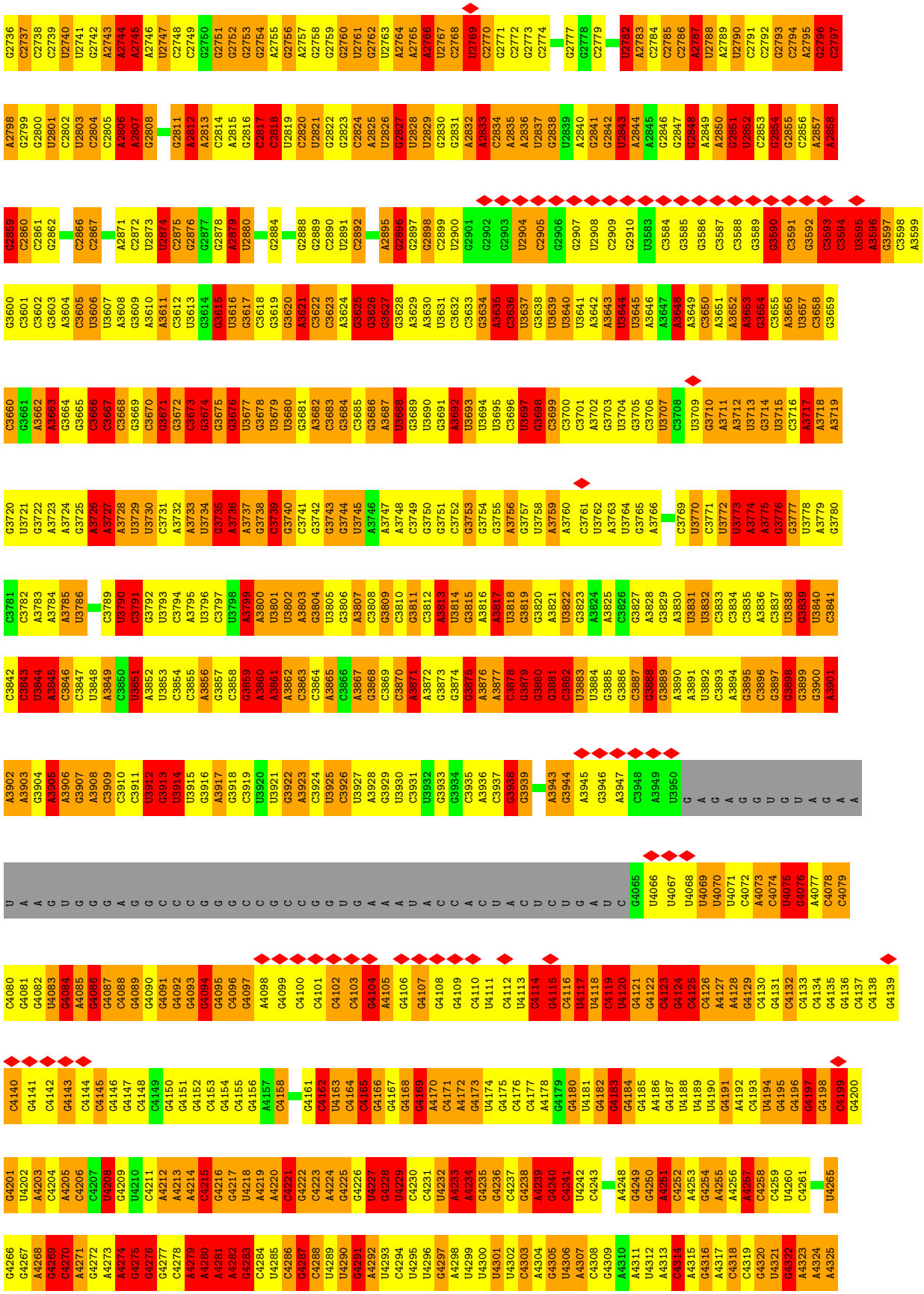
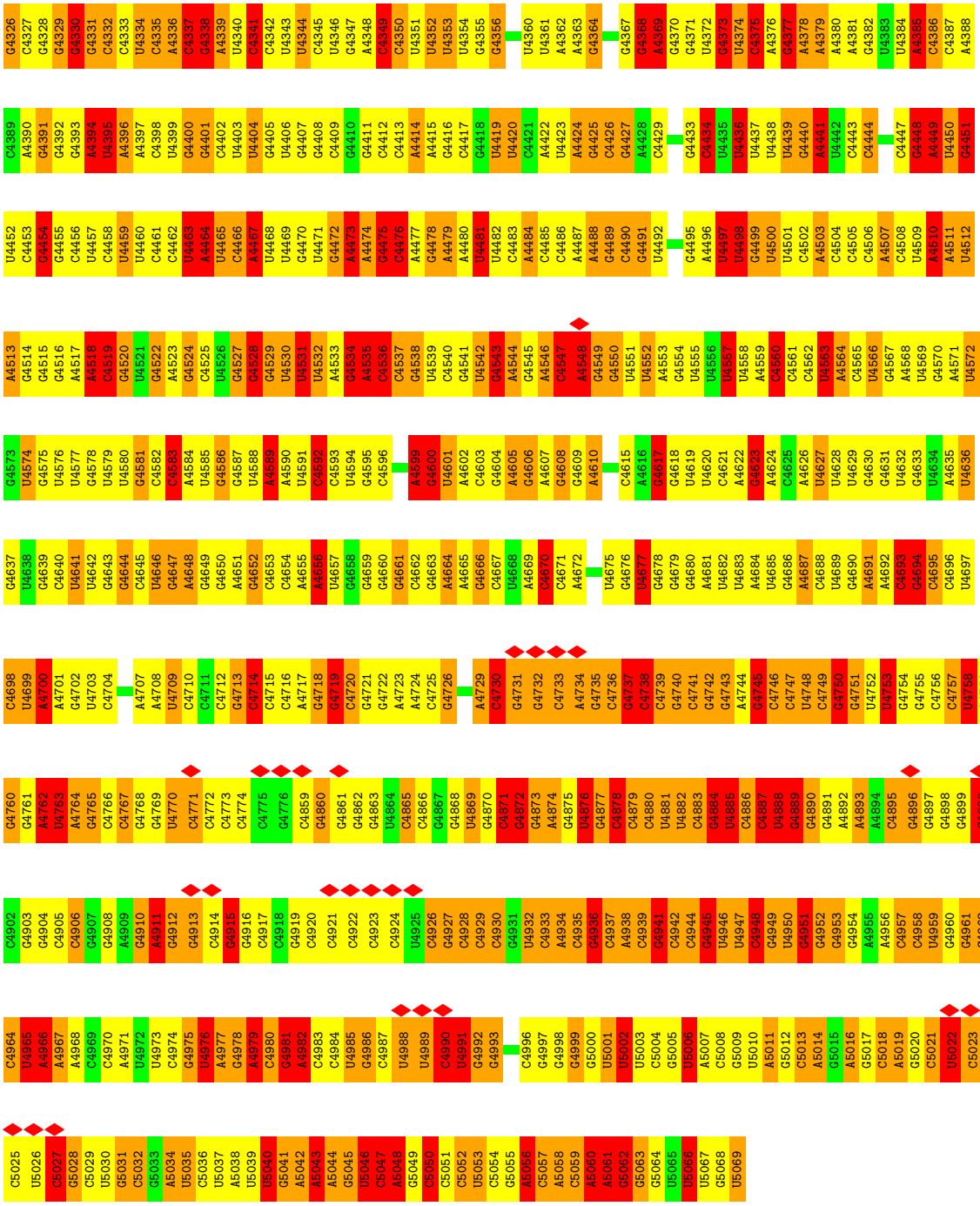
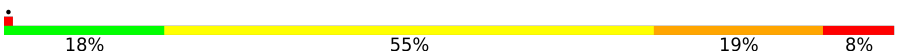






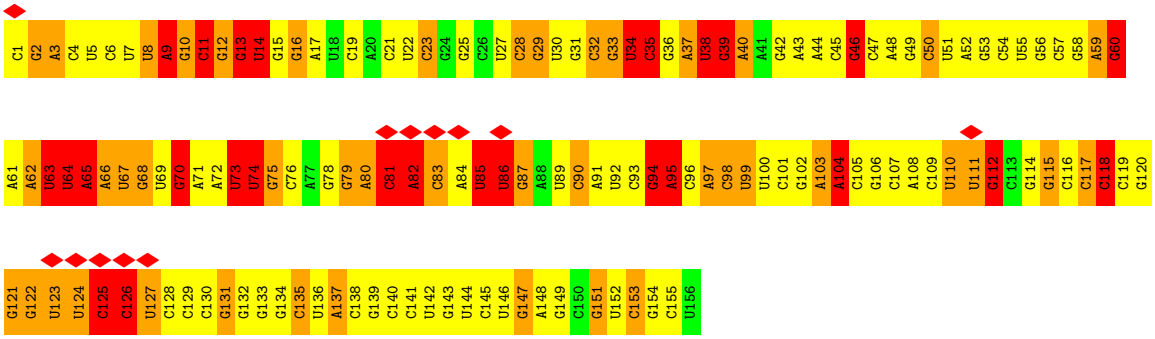
• Molecule 2: 5S ribosomal RNA

Chain 7:



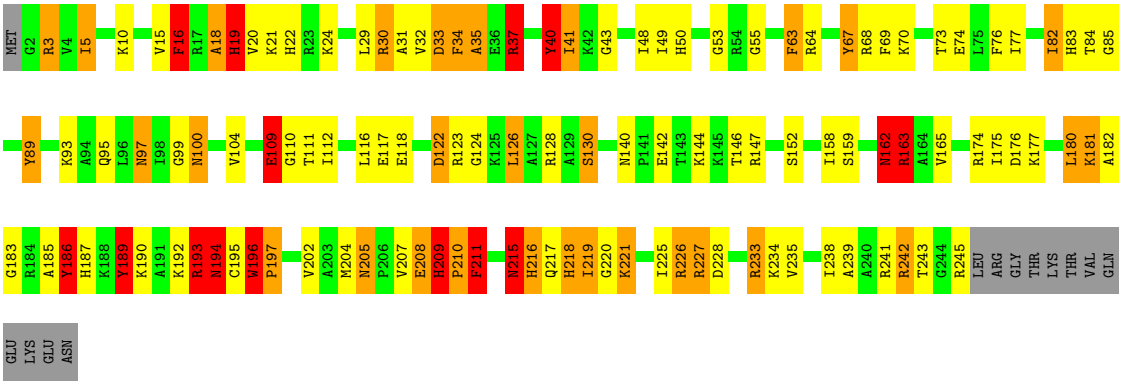
• Molecule 3: 5.8S ribosomal RNA

Chain 8:



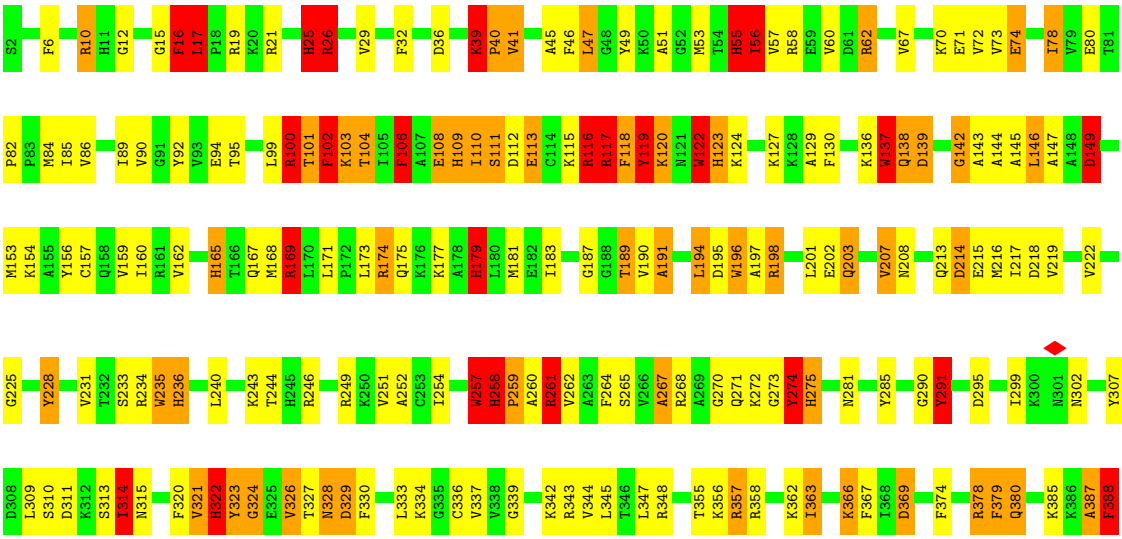
• Molecule 4: Ribosomal protein uL2

Chain A:



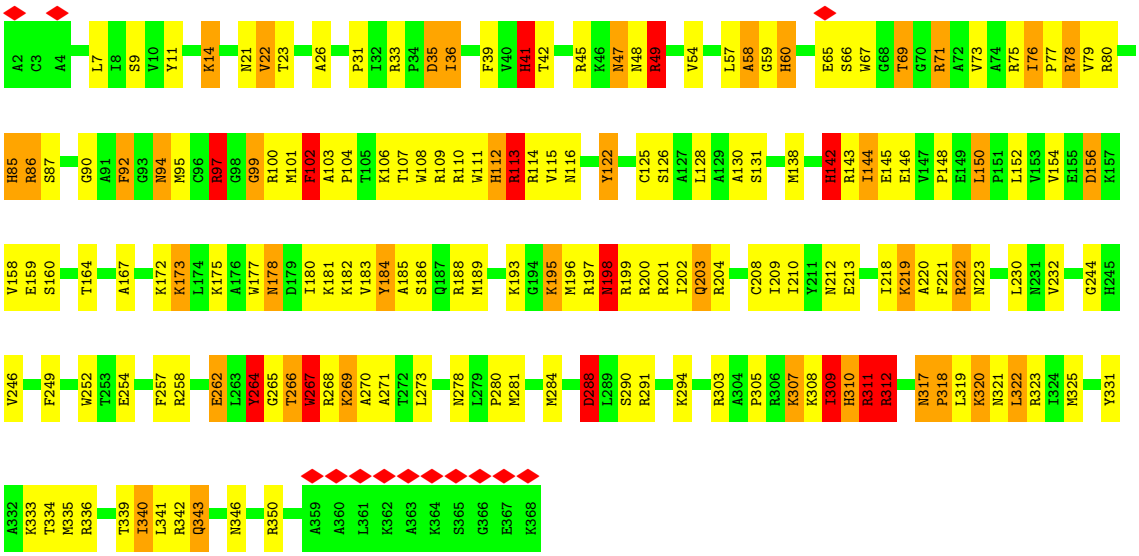
• Molecule 5: Ribosomal protein uL3

Chain B:



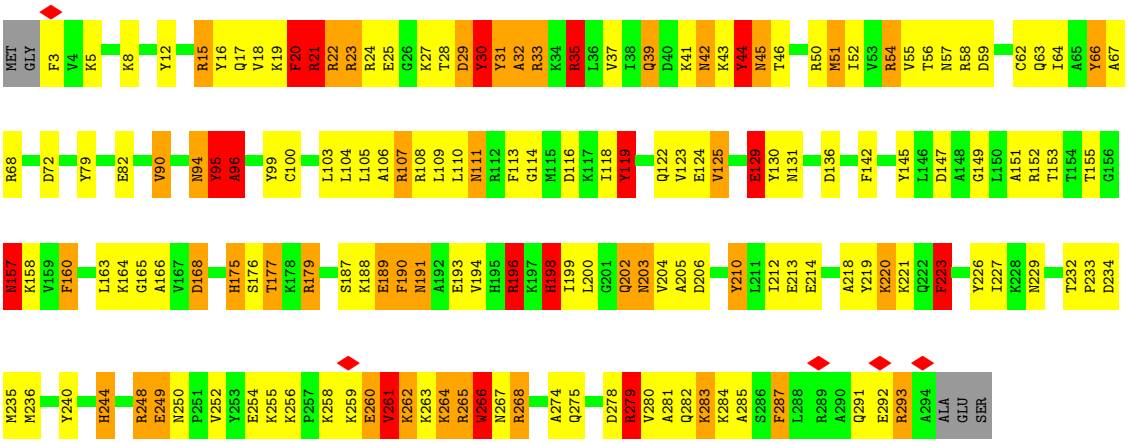
• Molecule 6: Ribosomal protein uL4

Chain C:



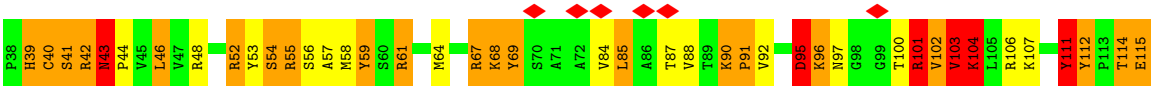
• Molecule 7: Ribosomal protein uL18

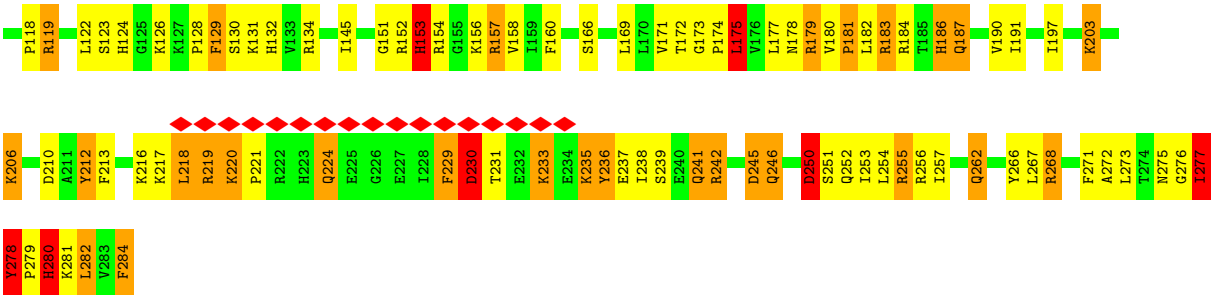
Chain D:



• Molecule 8: Ribosomal protein eL6

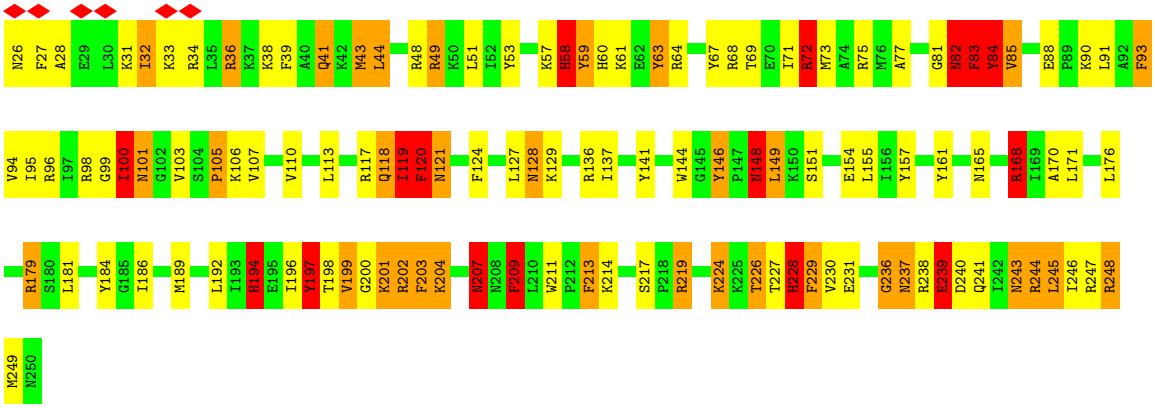
Chain E:





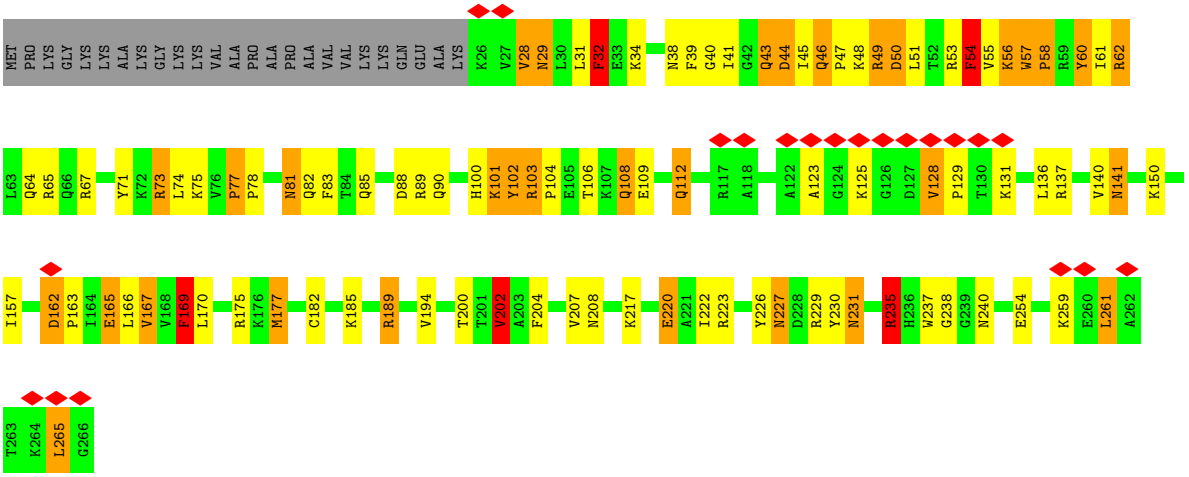
• Molecule 9: Ribosomal protein uL30

Chain F:



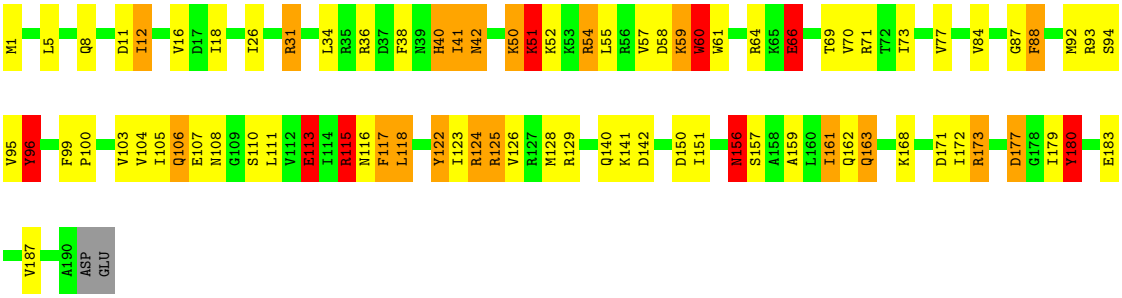
• Molecule 10: Ribosomal protein eL8

Chain G:

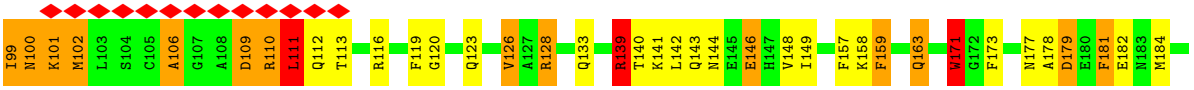


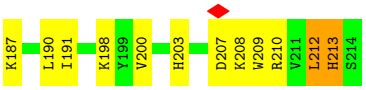
• Molecule 11: Ribosomal protein uL6

Chain H:

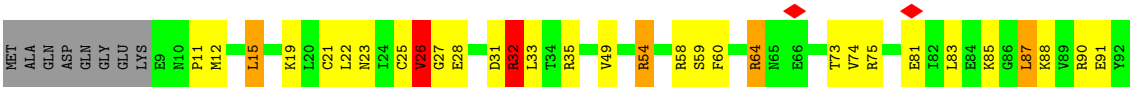


• Molecule 12: Ribosomal protein uL16

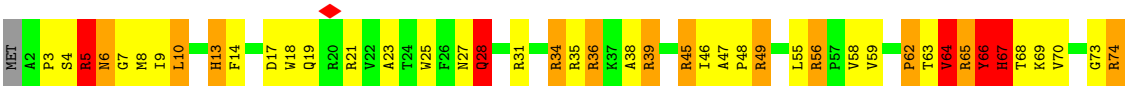


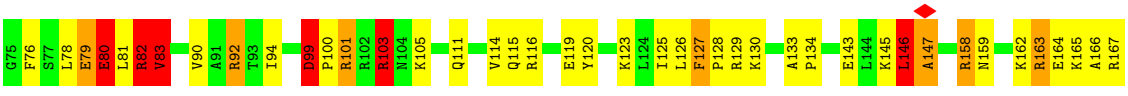


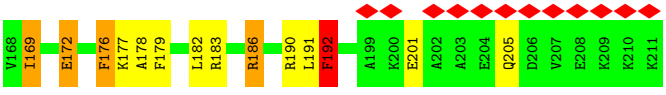
• Molecule 13: Ribosomal protein uL5



• Molecule 14: Ribosomal protein eL13

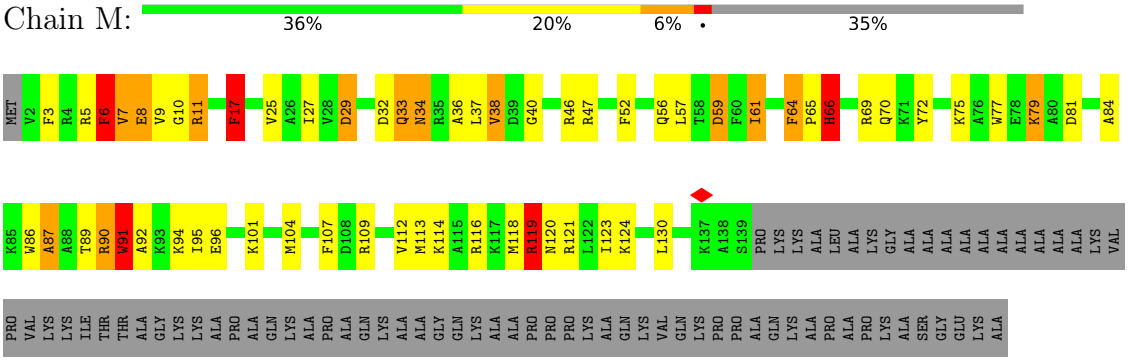






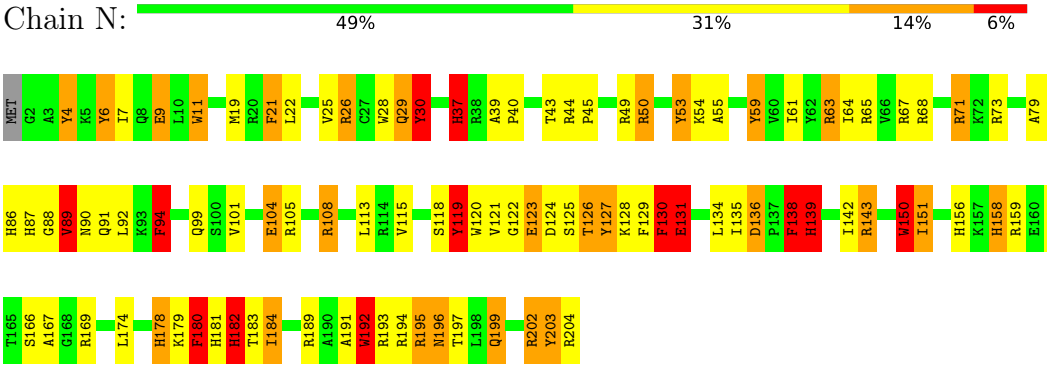
• Molecule 15: Ribosomal protein eL14

Chain M:



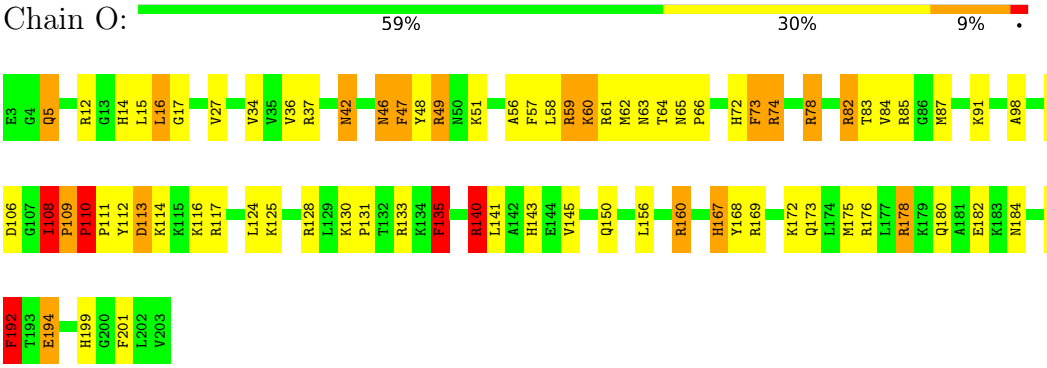
• Molecule 16: Ribosomal protein eL15

Chain N:



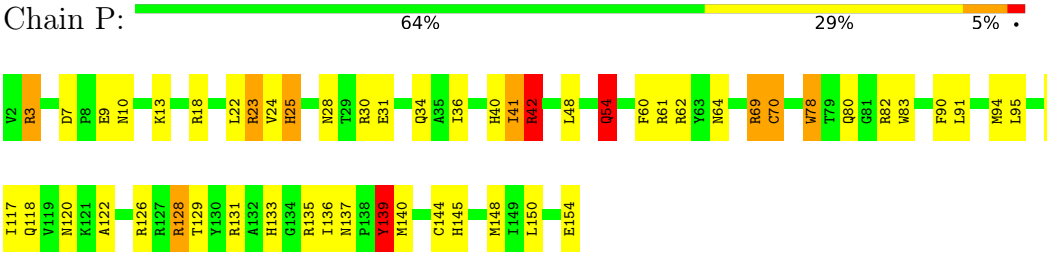
• Molecule 17: Ribosomal protein uL13

Chain O:



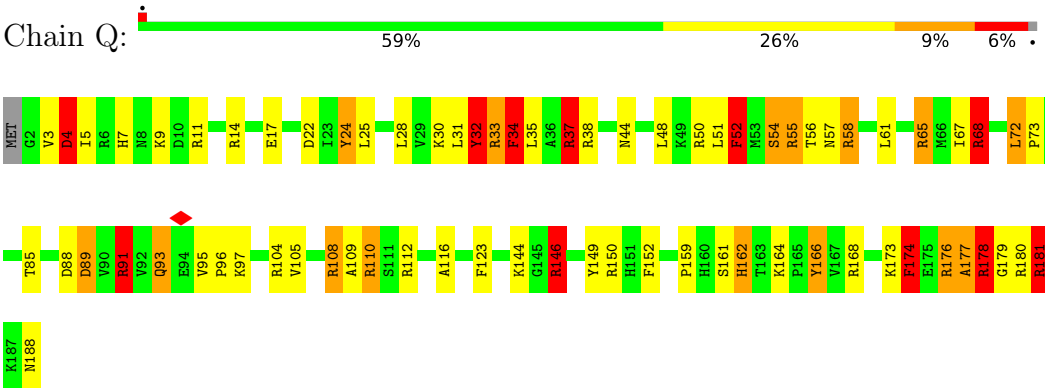
• Molecule 18: Ribosomal protein uL22

Chain P:



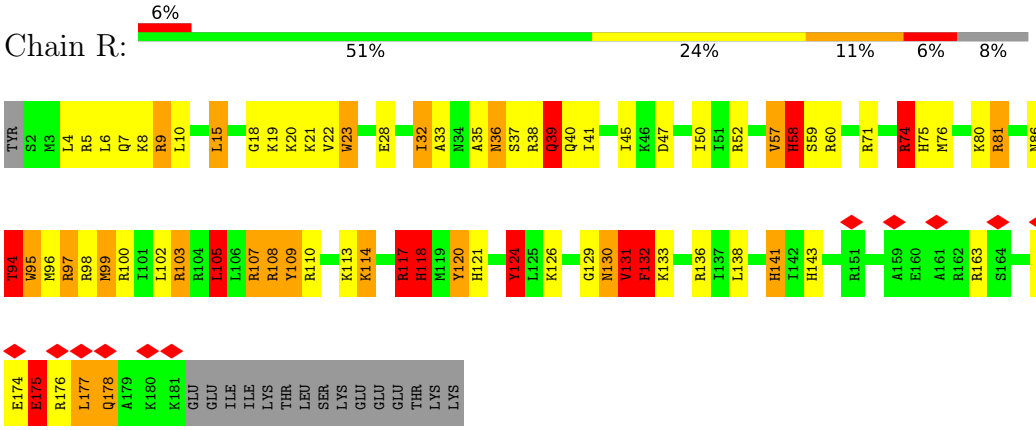
• Molecule 19: Ribosomal protein eL18

Chain Q:



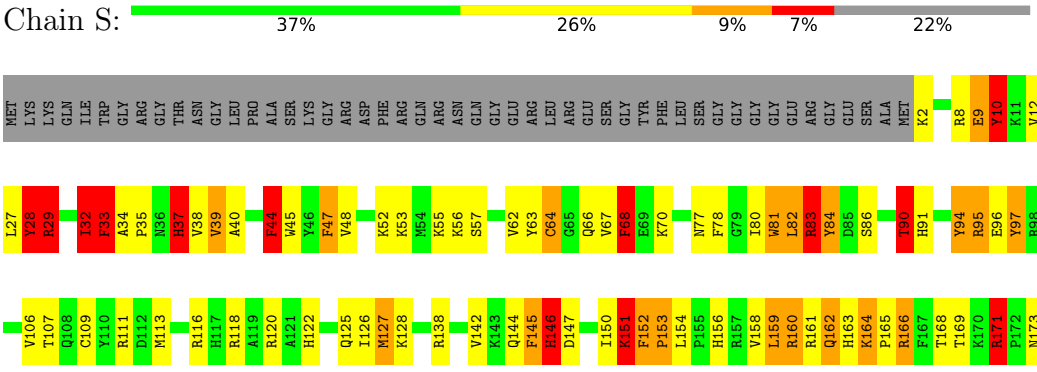
• Molecule 20: Ribosomal protein eL19

Chain R:



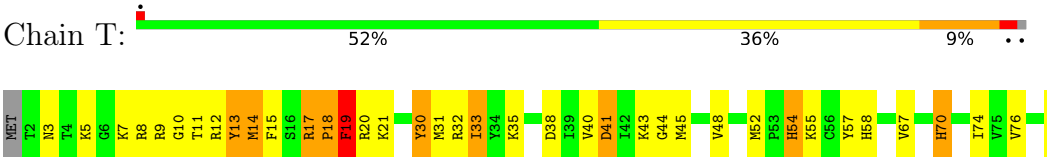
• Molecule 21: Ribosomal protein eL20

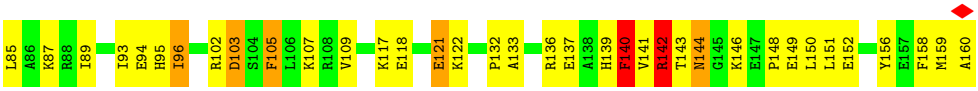
Chain S:



• Molecule 22: Ribosomal protein eL21

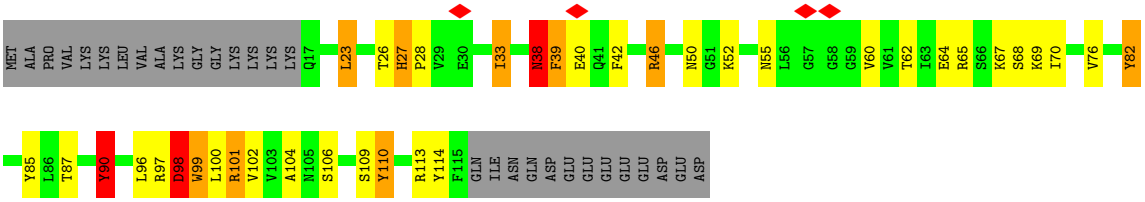
Chain T:





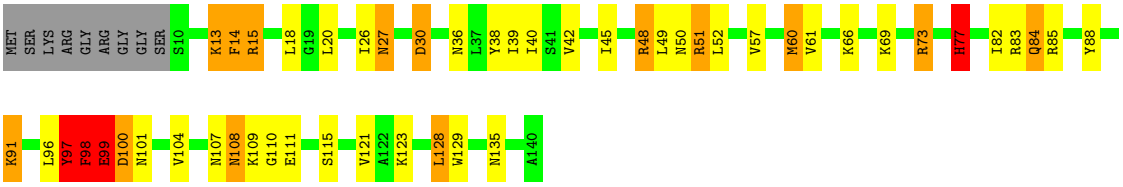
• Molecule 23: Ribosomal protein eL22

Chain U:



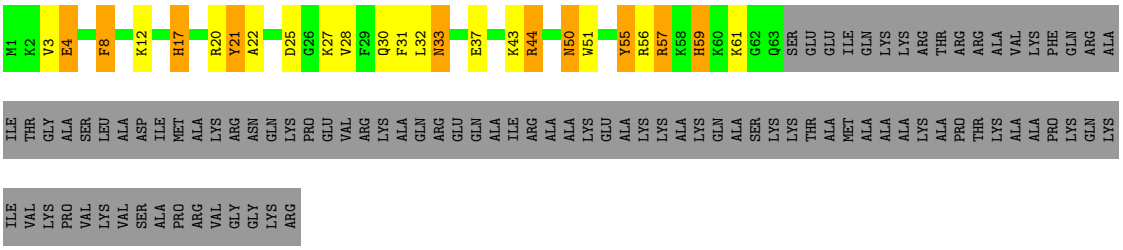
• Molecule 24: Ribosomal protein uL14

Chain V:



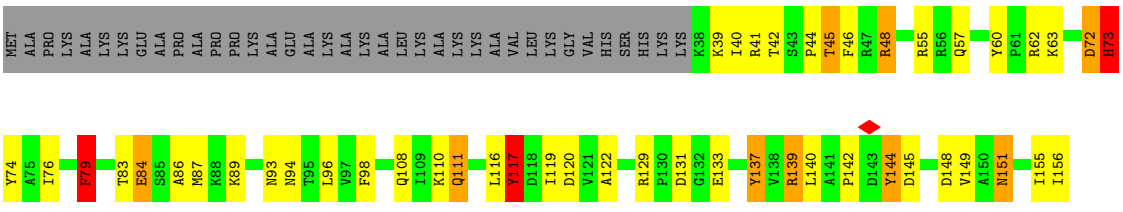
• Molecule 25: Ribosomal protein eL24

Chain W:



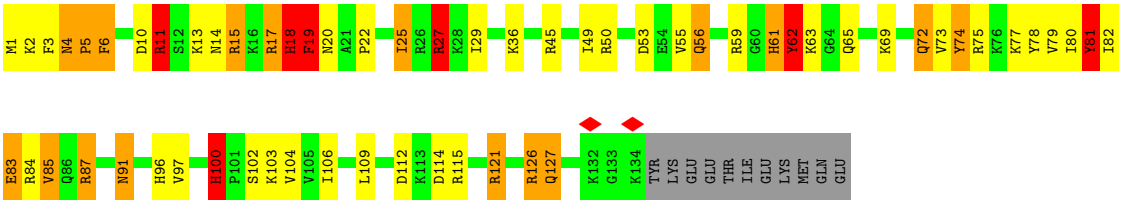
• Molecule 26: Ribosomal protein uL23

Chain X:



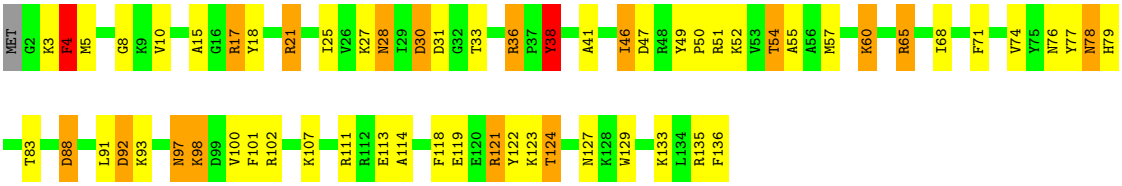
• Molecule 27: Ribosomal protein uL24

Chain Y:



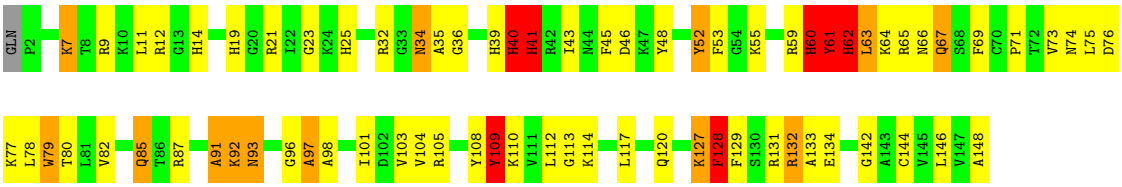
• Molecule 28: Ribosomal protein eL27

Chain Z:



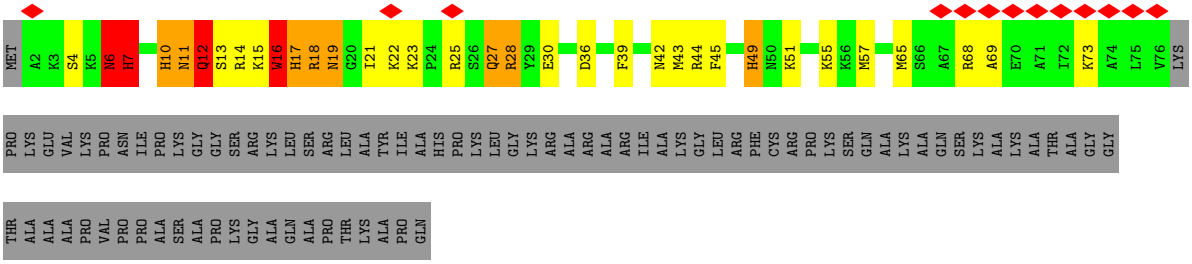
• Molecule 29: Ribosomal protein uL15

Chain a:



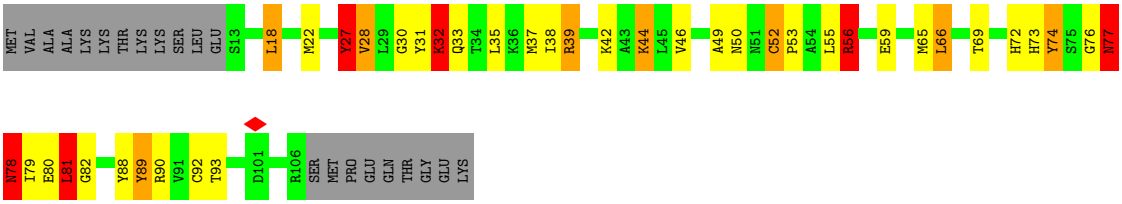
• Molecule 30: Ribosomal protein eL29

Chain b:



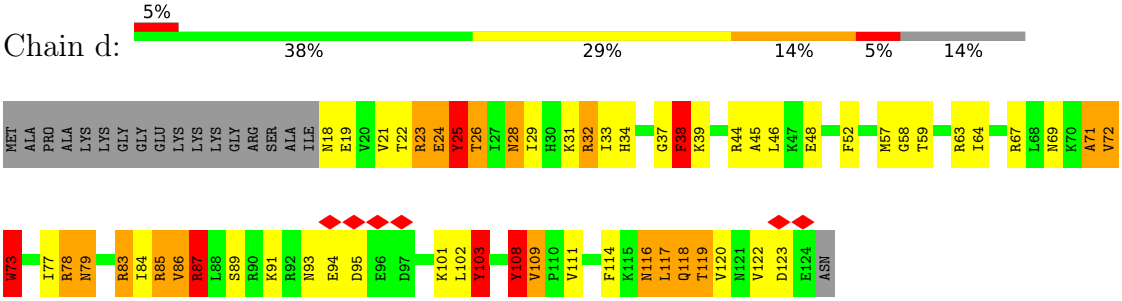
• Molecule 31: Ribosomal protein eL30

Chain c:



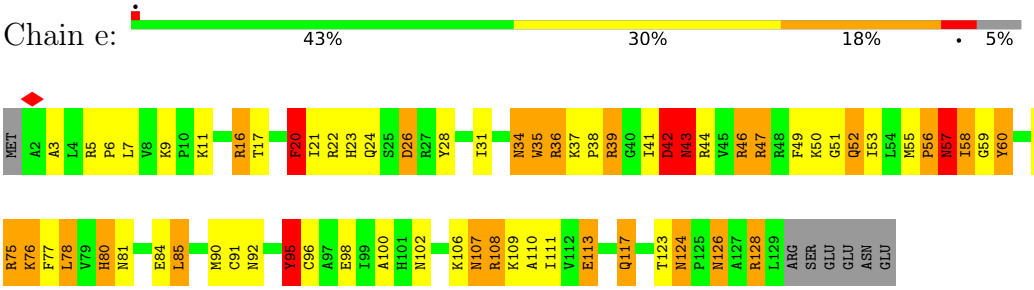
• Molecule 32: Ribosomal protein eL31

Chain d:



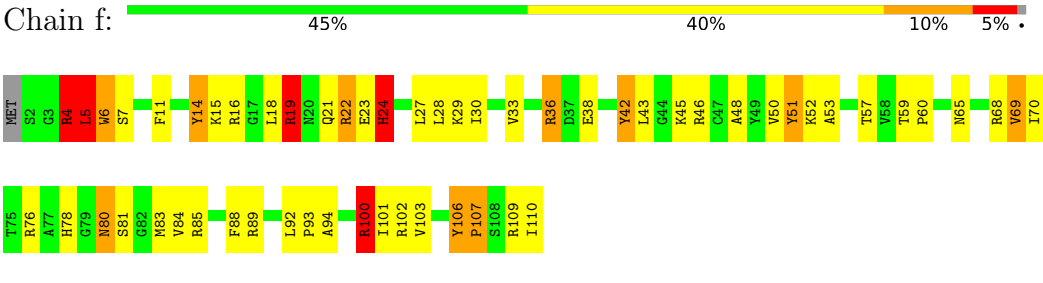
• Molecule 33: Ribosomal protein eL32

Chain e:



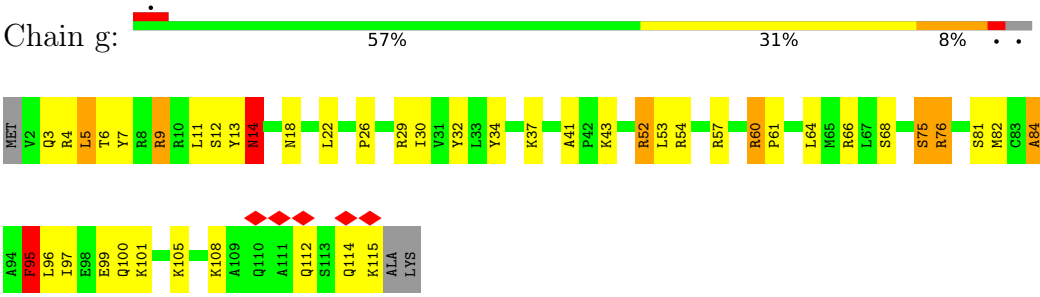
• Molecule 34: Ribosomal protein eL33

Chain f:



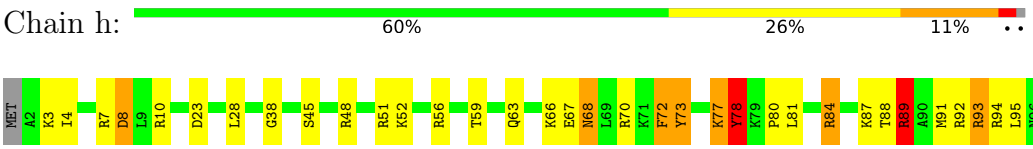
• Molecule 35: Ribosomal protein eL34

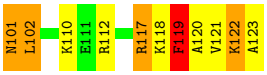
Chain g:



• Molecule 36: Ribosomal protein uL29

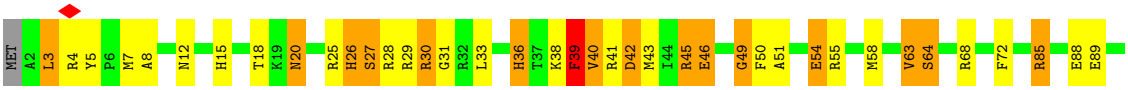
Chain h:





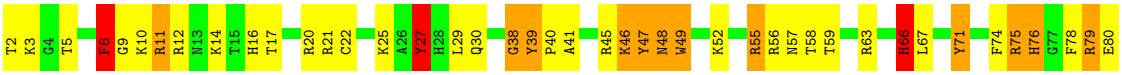
• Molecule 37: Ribosomal protein eL36

Chain i:



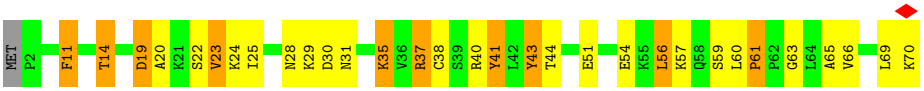
• Molecule 38: Ribosomal protein eL37

Chain j:



• Molecule 39: Ribosomal protein eL38

Chain k:

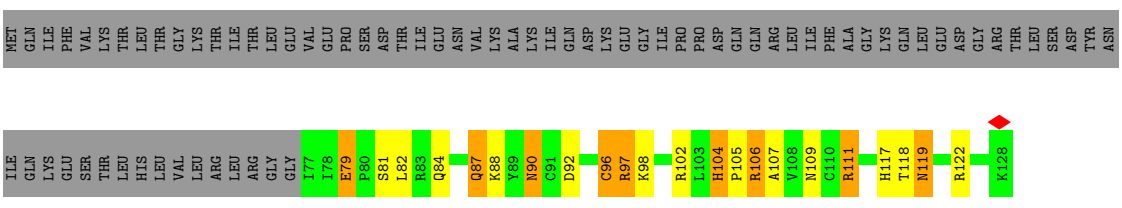


• Molecule 40: Ribosomal protein eL39

Chain l:

• Molecule 41: Ribosomal protein eL40

Chain m:

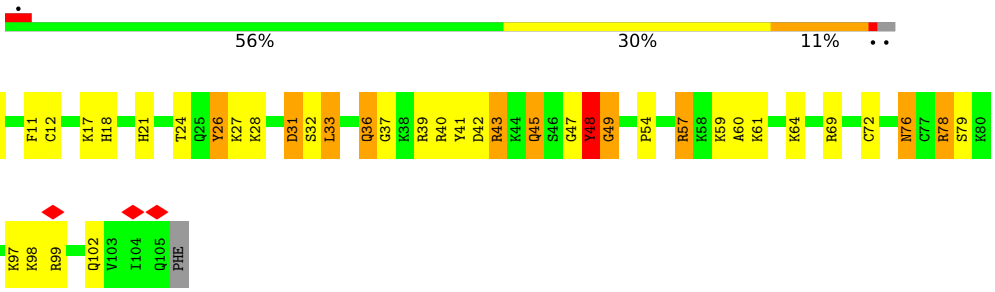


• Molecule 42: Ribosomal protein eL41

Chain n:

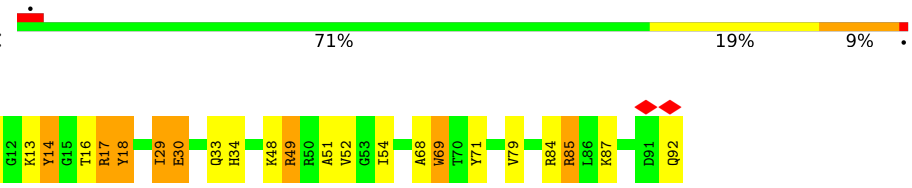
• Molecule 43: Ribosomal protein eL42

Chain o:



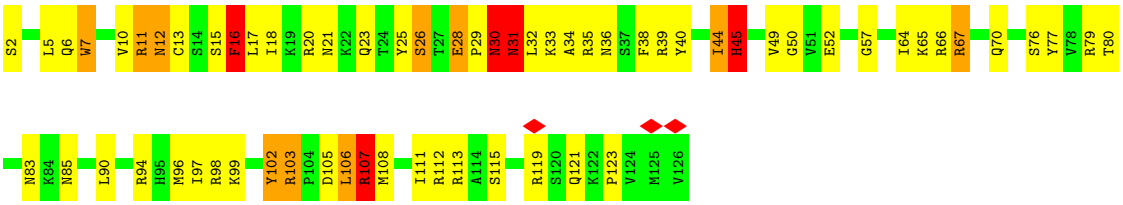
• Molecule 44: Ribosomal protein eL43

Chain p:



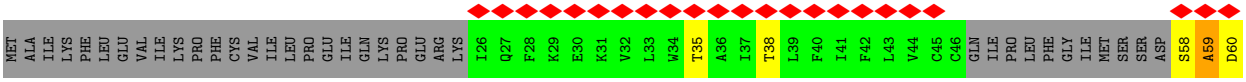
• Molecule 45: Ribosomal protein eL28

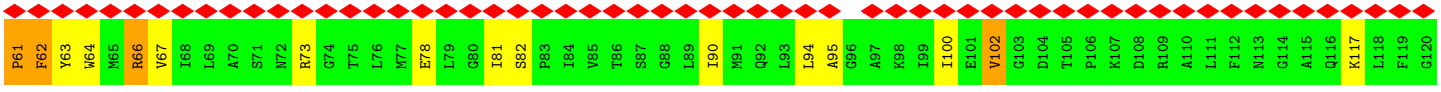
Chain r:

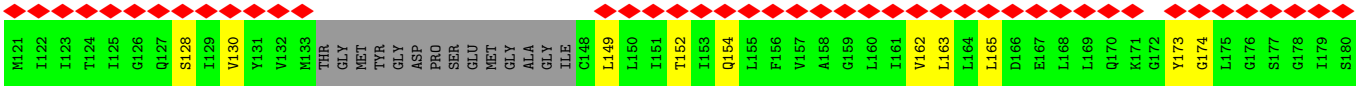


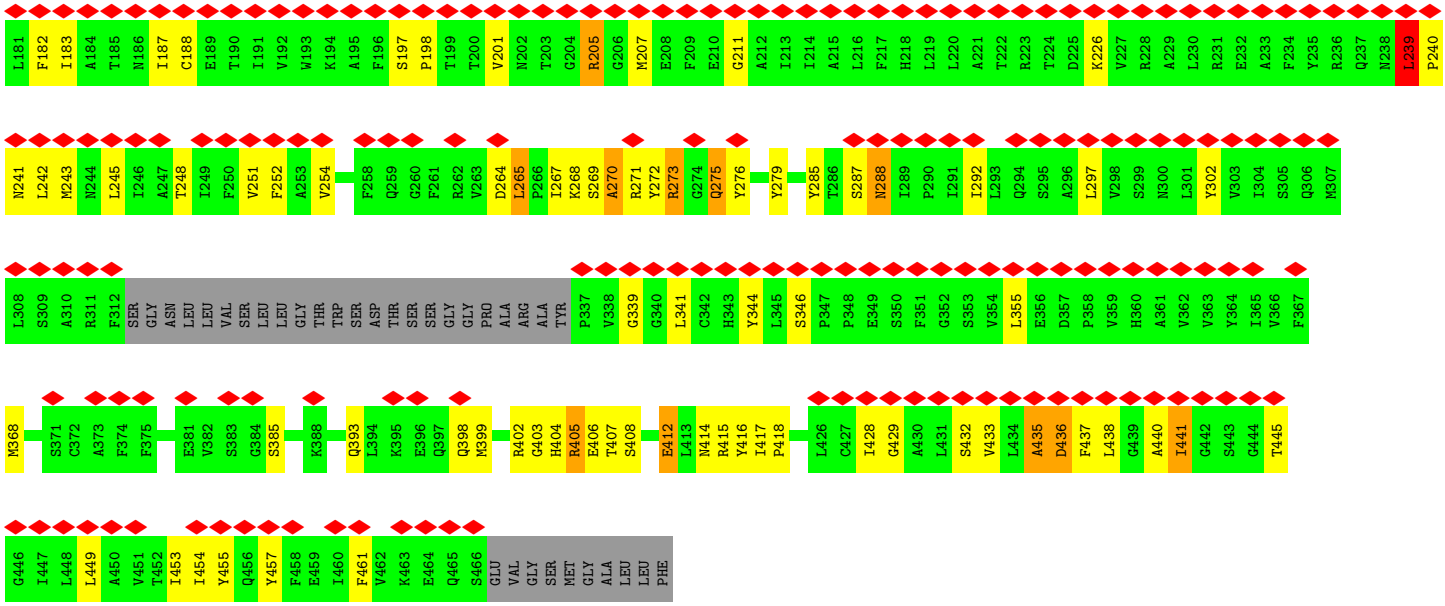
• Molecule 46: Sec61 alpha subunit

Chain 1:



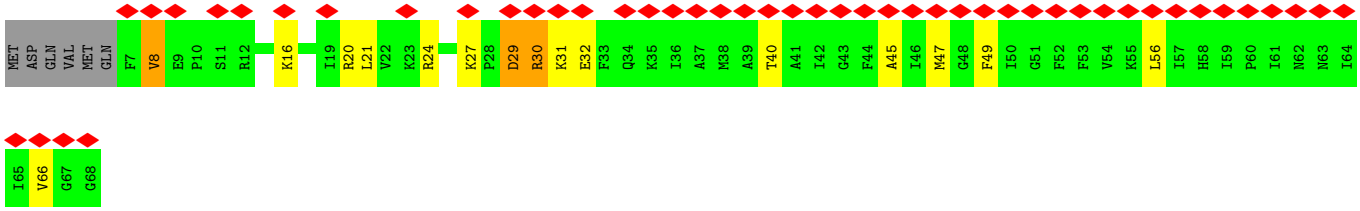






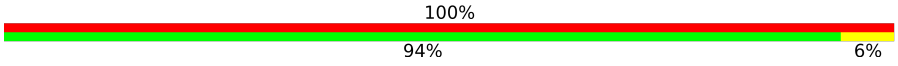
• Molecule 47: Sec61 gamma subunit

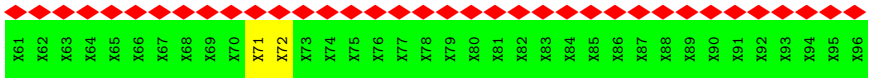
Chain 2:



• Molecule 48: Sec61 beta subunit

Chain 3:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	80019	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Each particle	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	27	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	104478	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	1.043	Depositor
Minimum map value	-0.599	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.024	Depositor
Recommended contour level	0.09	Depositor
Map size (Å)	562.8, 562.8, 562.8	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.3399999, 1.3399999, 1.3399999	Depositor

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	5	0.59	24/87792 (0.0%)	1.26	1287/136945 (0.9%)
2	7	0.51	1/2858 (0.0%)	1.11	16/4455 (0.4%)
3	8	0.62	0/3701	1.30	63/5766 (1.1%)
4	A	1.06	8/1906 (0.4%)	1.40	32/2556 (1.3%)
5	B	1.02	11/3214 (0.3%)	1.30	32/4308 (0.7%)
6	C	0.95	3/2973 (0.1%)	1.24	19/3990 (0.5%)
7	D	0.95	9/2426 (0.4%)	1.39	30/3252 (0.9%)
8	E	0.99	7/1941 (0.4%)	1.39	19/2601 (0.7%)
9	F	1.03	2/1905 (0.1%)	1.51	35/2539 (1.4%)
10	G	0.90	4/1966 (0.2%)	1.25	15/2645 (0.6%)
11	H	0.90	2/1537 (0.1%)	1.29	11/2066 (0.5%)
12	I	0.84	2/1753 (0.1%)	1.28	21/2343 (0.9%)
13	J	0.76	1/1382 (0.1%)	1.10	8/1849 (0.4%)
14	L	0.93	3/1734 (0.2%)	1.26	15/2318 (0.6%)
15	M	0.92	2/1152 (0.2%)	1.27	12/1539 (0.8%)
16	N	1.01	5/1746 (0.3%)	1.49	30/2338 (1.3%)
17	O	0.93	2/1684 (0.1%)	1.30	14/2251 (0.6%)
18	P	0.96	1/1268 (0.1%)	1.21	8/1701 (0.5%)
19	Q	0.89	1/1530 (0.1%)	1.41	24/2041 (1.2%)
20	R	0.97	7/1524 (0.5%)	1.42	21/2013 (1.0%)
21	S	1.20	8/1493 (0.5%)	1.45	28/2002 (1.4%)
22	T	0.88	1/1326 (0.1%)	1.21	12/1770 (0.7%)
23	U	0.83	3/822 (0.4%)	1.12	3/1103 (0.3%)
24	V	1.08	5/993 (0.5%)	1.26	6/1332 (0.5%)
25	W	0.91	1/541 (0.2%)	1.28	0/720
26	X	0.85	3/993 (0.3%)	1.26	7/1334 (0.5%)
27	Y	0.94	3/1132 (0.3%)	1.32	15/1504 (1.0%)
28	Z	0.84	0/1130	1.21	6/1507 (0.4%)
29	a	1.20	7/1192 (0.6%)	1.57	20/1591 (1.3%)
30	b	0.99	3/620 (0.5%)	1.45	11/819 (1.3%)
31	c	0.94	3/742 (0.4%)	1.31	8/996 (0.8%)
32	d	1.08	6/903 (0.7%)	1.46	14/1216 (1.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	e	1.05	5/1071 (0.5%)	1.39	20/1429 (1.4%)
34	f	1.16	4/895 (0.4%)	1.37	16/1198 (1.3%)
35	g	0.87	0/916	1.22	8/1220 (0.7%)
36	h	0.82	2/1023 (0.2%)	1.26	9/1350 (0.7%)
37	i	0.85	2/843 (0.2%)	1.29	8/1115 (0.7%)
38	j	1.13	4/721 (0.6%)	1.57	16/953 (1.7%)
39	k	0.74	1/575 (0.2%)	1.16	3/761 (0.4%)
40	l	0.81	0/454	1.15	4/599 (0.7%)
41	m	0.77	0/435	1.14	1/575 (0.2%)
42	n	0.63	0/223	1.10	0/284
43	o	0.83	1/864 (0.1%)	1.34	8/1140 (0.7%)
44	p	0.80	0/718	1.22	7/953 (0.7%)
45	r	0.89	1/1017 (0.1%)	1.31	13/1365 (1.0%)
46	1	0.64	0/3114	0.94	3/4218 (0.1%)
47	2	0.75	0/504	1.14	5/673 (0.7%)
All	All	0.74	158/151252 (0.1%)	1.28	1963/223243 (0.9%)

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
1	5	1	158
2	7	0	2
3	8	0	11
4	A	0	6
5	B	0	13
6	C	0	5
7	D	0	8
8	E	0	12
9	F	0	5
10	G	0	3
11	H	0	3
12	I	0	5
13	J	0	2
14	L	0	5
15	M	0	4
16	N	0	11
17	O	0	3
18	P	0	1
19	Q	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
20	R	0	6
21	S	0	11
22	T	0	2
23	U	0	2
24	V	0	3
25	W	0	1
26	X	0	1
27	Y	0	4
29	a	0	9
30	b	0	1
31	c	0	2
32	d	0	4
33	e	0	4
34	f	0	2
35	g	0	1
36	h	0	3
37	i	0	3
38	j	0	4
39	k	0	1
43	o	0	6
44	p	0	1
45	r	0	5
46	1	0	1
47	2	0	1
All	All	1	340

All (158) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	1823	G	O3'-P	33.19	2.10	1.61
21	S	81	TRP	CA-CB	14.99	1.71	1.53
29	a	109	TYR	CA-CB	14.19	1.72	1.53
8	E	278	TYR	CA-CB	14.02	1.72	1.53
24	V	97	TYR	CA-CB	12.45	1.73	1.53
5	B	119	TYR	CA-CB	10.80	1.66	1.52
10	G	54	PHE	CA-CB	10.48	1.68	1.53
32	d	25	TYR	CA-CB	9.89	1.66	1.52
34	f	6	TRP	CA-CB	9.87	1.70	1.53
21	S	10	TYR	CA-CB	9.67	1.67	1.52
10	G	109	GLU	CD-OE2	9.52	1.43	1.25
12	I	171	TRP	CA-CB	9.41	1.64	1.52
11	H	66	GLU	CD-OE1	9.34	1.43	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	f	6	TRP	CB-CG	-9.16	1.21	1.50
18	P	139	TYR	CA-CB	9.15	1.66	1.52
5	B	274	TYR	CA-CB	8.97	1.68	1.53
32	d	87	ARG	CA-CB	8.72	1.64	1.52
5	B	118	PHE	CA-C	8.61	1.59	1.52
20	R	132	PHE	CA-CB	8.21	1.65	1.53
7	D	44	TYR	CA-CB	8.17	1.67	1.53
24	V	97	TYR	CB-CG	-8.06	1.33	1.51
36	h	78	TYR	CA-CB	7.85	1.63	1.52
30	b	16	TRP	CB-CG	-7.85	1.25	1.50
21	S	29	ARG	CA-CB	7.82	1.64	1.53
14	L	17	ASP	CG-OD2	7.72	1.40	1.25
29	a	60	HIS	CA-C	-7.64	1.42	1.52
27	Y	81	TYR	CA-CB	7.60	1.64	1.53
30	b	16	TRP	CA-CB	7.57	1.66	1.53
7	D	21	ARG	N-CA	7.54	1.55	1.46
11	H	156	ASN	CA-C	7.52	1.62	1.52
17	O	106	ASP	CG-OD2	7.51	1.39	1.25
24	V	97	TYR	N-CA	7.43	1.55	1.46
4	A	211	PHE	CA-CB	7.36	1.65	1.53
4	A	40	TYR	CA-CB	7.31	1.65	1.53
15	M	6	PHE	CA-CB	7.25	1.65	1.53
4	A	209	HIS	CA-CB	7.19	1.65	1.52
10	G	54	PHE	N-CA	7.17	1.54	1.46
19	Q	34	PHE	CA-CB	7.14	1.64	1.53
7	D	95	TYR	CA-CB	7.07	1.64	1.53
20	R	95	TRP	CB-CG	-7.03	1.28	1.50
10	G	54	PHE	CB-CG	-6.97	1.34	1.50
33	e	35	TRP	CA-CB	6.96	1.64	1.53
1	5	4548	A	O5'-C5'	6.95	1.52	1.42
9	F	228	HIS	CA-CB	6.94	1.65	1.53
7	D	29	ASP	CA-C	-6.86	1.43	1.52
29	a	79	TRP	CA-CB	6.83	1.65	1.53
20	R	118	HIS	CA-CB	6.79	1.64	1.53
24	V	97	TYR	CA-C	6.70	1.61	1.52
22	T	19	PHE	CA-C	-6.70	1.44	1.52
43	o	48	TYR	CA-CB	6.66	1.62	1.52
7	D	145	TYR	CA-CB	6.66	1.62	1.53
1	5	4547	C	O3'-P	6.63	1.71	1.61
34	f	4	ARG	CA-CB	6.51	1.64	1.53
17	O	106	ASP	CG-OD1	6.49	1.37	1.25
4	A	186	TYR	CA-CB	6.49	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
29	a	128	PHE	CA-CB	6.49	1.62	1.53
7	D	16	TYR	CA-CB	6.48	1.63	1.53
21	S	33	PHE	N-CA	-6.47	1.37	1.46
1	5	45	U	O3'-P	-6.40	1.51	1.61
12	I	57	TYR	CA-CB	6.40	1.60	1.52
4	A	89	TYR	CA-CB	6.38	1.61	1.53
1	5	3652	A	O3'-P	6.37	1.70	1.61
8	E	250	ASP	CG-OD2	6.35	1.37	1.25
15	M	6	PHE	CB-CG	-6.32	1.36	1.50
32	d	87	ARG	N-CA	6.29	1.54	1.46
25	W	21	TYR	CA-CB	6.27	1.63	1.53
23	U	99	TRP	CA-C	6.23	1.60	1.52
33	e	74	PHE	CA-CB	6.20	1.62	1.53
6	C	41	HIS	CA-CB	6.18	1.63	1.53
5	B	275	HIS	N-CA	6.12	1.53	1.46
38	j	66	HIS	CA-CB	6.12	1.63	1.53
7	D	210	TYR	CA-CB	6.12	1.63	1.53
9	F	209	PHE	CA-CB	6.10	1.62	1.53
4	A	209	HIS	CB-CG	-6.08	1.41	1.50
5	B	119	TYR	N-CA	6.08	1.54	1.46
6	C	35	ASP	CG-OD1	6.07	1.36	1.25
26	X	117	TYR	CA-CB	6.04	1.61	1.53
37	i	39	PHE	CA-CB	6.04	1.62	1.53
16	N	119	TYR	CA-CB	6.00	1.63	1.53
8	E	97	ASN	CG-ND2	5.99	1.45	1.33
8	E	101	ARG	CZ-NH2	5.95	1.41	1.33
33	e	35	TRP	CB-CG	-5.94	1.31	1.50
29	a	41	HIS	N-CA	-5.94	1.39	1.46
21	S	94	TYR	CA-CB	5.94	1.61	1.53
16	N	139	HIS	CA-CB	5.93	1.61	1.53
24	V	99	GLU	N-CA	5.92	1.53	1.46
21	S	99	ASP	CG-OD1	5.90	1.36	1.25
20	R	95	TRP	CA-CB	5.90	1.62	1.53
4	A	209	HIS	CA-C	5.90	1.60	1.52
20	R	95	TRP	N-CA	5.88	1.53	1.46
16	N	180	PHE	CA-CB	5.84	1.63	1.53
4	A	186	TYR	N-CA	5.83	1.53	1.46
5	B	311	ASP	CG-OD2	5.83	1.36	1.25
1	5	4566	U	O3'-P	-5.82	1.52	1.61
1	5	2510	G	O3'-P	-5.76	1.52	1.61
37	i	26	HIS	CA-C	5.72	1.60	1.52
23	U	99	TRP	CA-CB	5.71	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	2361	G	O3'-P	5.68	1.69	1.61
29	a	60	HIS	CA-CB	-5.66	1.44	1.53
1	5	1851	G	O3'-P	-5.62	1.52	1.61
32	d	86	VAL	CA-C	5.62	1.59	1.52
27	Y	19	PHE	CA-CB	5.61	1.59	1.53
14	L	6	ASN	CA-C	-5.60	1.45	1.52
38	j	27	TYR	CA-CB	5.58	1.61	1.53
45	r	45	HIS	CA-CB	-5.55	1.44	1.53
1	5	1849	U	O3'-P	-5.52	1.52	1.61
21	S	10	TYR	CB-CG	-5.52	1.39	1.51
20	R	132	PHE	CB-CG	-5.51	1.38	1.50
1	5	1364	U	O3'-P	5.49	1.69	1.61
38	j	49	TRP	CA-CB	5.45	1.62	1.53
1	5	4693	C	O3'-P	5.43	1.69	1.61
14	L	17	ASP	CG-OD1	5.41	1.35	1.25
16	N	192	TRP	CB-CG	-5.41	1.33	1.50
8	E	278	TYR	CB-CG	-5.39	1.39	1.51
1	5	2692	U	O3'-P	-5.37	1.53	1.61
1	5	514	U	O3'-P	5.36	1.69	1.61
20	R	94	THR	CA-C	5.35	1.60	1.52
5	B	257	TRP	CA-CB	5.34	1.63	1.53
1	5	964	A	O5'-C5'	5.33	1.50	1.42
1	5	3692	A	O3'-P	5.33	1.69	1.61
1	5	964	A	O3'-P	5.31	1.69	1.61
34	f	6	TRP	CA-C	5.31	1.59	1.52
32	d	26	THR	N-CA	5.31	1.53	1.46
7	D	119	TYR	CA-CB	5.30	1.60	1.53
1	5	2053	C	O3'-P	-5.30	1.53	1.61
13	J	99	PHE	CA-CB	5.30	1.62	1.53
5	B	215	GLU	CD-OE1	5.29	1.35	1.25
8	E	97	ASN	CG-OD1	5.29	1.33	1.23
31	c	78	ASN	CA-CB	5.29	1.62	1.53
5	B	267	ALA	N-CA	-5.28	1.39	1.46
16	N	138	PHE	CA-CB	5.25	1.60	1.53
30	b	16	TRP	N-CA	5.24	1.53	1.46
1	5	1522	G	O3'-P	5.23	1.69	1.61
7	D	29	ASP	N-CA	5.23	1.52	1.46
21	S	9	GLU	CA-C	5.22	1.58	1.53
32	d	71	ALA	CA-CB	-5.22	1.45	1.53
29	a	109	TYR	CB-CG	-5.21	1.40	1.51
1	5	1912	G	O3'-P	-5.20	1.53	1.61
1	5	4375	C	O3'-P	-5.20	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	7	90	A	O3'-P	-5.18	1.53	1.61
26	X	57	GLN	CD-OE1	5.16	1.33	1.23
5	B	137	TRP	CA-CB	5.16	1.62	1.53
27	Y	61	HIS	CA-CB	5.16	1.61	1.53
1	5	2442	G	O3'-P	-5.14	1.53	1.61
33	e	56	PRO	N-CA	-5.14	1.41	1.47
31	c	78	ASN	CA-C	5.12	1.59	1.52
31	c	28	VAL	N-CA	-5.12	1.40	1.46
38	j	76	HIS	N-CA	-5.12	1.39	1.46
26	X	73	HIS	CA-CB	5.10	1.62	1.53
33	e	36	ARG	N-CA	5.08	1.52	1.46
39	k	43	TYR	CA-CB	5.08	1.60	1.53
5	B	55	HIS	CA-CB	5.07	1.61	1.53
1	5	1669	A	O3'-P	-5.04	1.53	1.61
23	U	90	TYR	CA-C	-5.04	1.46	1.52
36	h	99	GLU	N-CA	-5.02	1.40	1.46
1	5	207	G	O3'-P	-5.01	1.53	1.61
6	C	198	ASN	N-CA	5.01	1.52	1.46
8	E	278	TYR	N-CA	5.01	1.51	1.46

All (1963) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	E	278	TYR	CB-CA-C	21.50	129.79	110.44
17	O	135	PHE	N-CA-C	17.84	134.65	108.60
11	H	156	ASN	N-CA-C	-17.41	92.44	111.07
3	8	34	U	C4'-C3'-O3'	-16.89	87.67	113.00
1	5	383	A	C1'-C2'-O2'	-15.03	89.26	111.80
20	R	132	PHE	N-CA-C	-14.79	88.86	109.71
1	5	1676	C	C1'-C2'-O2'	-14.76	89.66	111.80
1	5	1439	C	C4'-C3'-O3'	-14.28	91.58	113.00
3	8	60	G	N9-C1'-C2'	14.01	135.01	114.00
1	5	4163	U	C4'-C3'-O3'	13.94	133.91	113.00
20	R	132	PHE	CB-CA-C	13.89	132.63	112.07
1	5	1358	G	C4'-C3'-O3'	13.36	133.04	113.00
17	O	110	PRO	CA-C-N	12.64	135.65	119.84
17	O	110	PRO	C-N-CA	12.64	135.65	119.84
1	5	4528	G	C2'-C3'-O3'	12.60	132.60	113.70
1	5	1359	G	C4'-C3'-O3'	-12.44	94.34	113.00
1	5	1211	G	C2'-C3'-O3'	12.37	132.25	113.70
1	5	1329	G	C2'-C3'-O3'	12.14	131.92	113.70
20	R	95	TRP	N-CA-CB	12.12	127.55	109.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F	120	PHE	CB-CA-C	12.02	127.20	111.82
1	5	2857	A	C1'-C2'-O2'	-11.98	93.82	111.80
1	5	2389	A	C2'-C3'-O3'	11.90	131.54	113.70
3	8	94	G	C2'-C3'-O3'	11.84	127.26	109.50
24	V	97	TYR	N-CA-C	-11.80	92.25	109.96
12	I	139	ARG	CG-CD-NE	11.64	137.61	112.00
1	5	4498	U	C1'-C2'-O2'	11.58	125.77	108.40
1	5	1642	A	C4'-C3'-O3'	-11.34	96.00	113.00
29	a	61	TYR	CA-CB-CG	11.32	134.27	113.90
21	S	81	TRP	CB-CA-C	11.30	127.85	110.67
16	N	131	GLU	CA-CB-CG	11.28	136.65	114.10
26	X	73	HIS	N-CA-C	-11.25	99.00	113.17
1	5	4385	A	C2'-C3'-O3'	-11.18	96.93	113.70
29	a	109	TYR	CA-CB-CG	-11.08	93.95	113.90
1	5	3880	G	C1'-C2'-O2'	-11.01	95.28	111.80
16	N	131	GLU	CB-CG-CD	-10.90	94.07	112.60
32	d	25	TYR	CA-CB-CG	-10.83	94.41	113.90
1	5	1479	G	C1'-C2'-O2'	-10.82	95.56	111.80
1	5	3773	U	C4'-C3'-O3'	10.79	129.19	113.00
1	5	2858	A	C1'-C2'-O2'	-10.77	95.65	111.80
20	R	95	TRP	N-CA-C	-10.77	99.08	111.03
8	E	278	TYR	CA-CB-CG	-10.77	94.52	113.90
1	5	5059	C	C2'-C3'-O3'	10.75	129.83	113.70
1	5	5061	A	C2'-C3'-O3'	10.75	125.63	109.50
1	5	231	U	C4'-C3'-O3'	-10.71	96.93	113.00
16	N	192	TRP	CA-CB-CG	10.68	133.89	113.60
1	5	4084	G	C2'-C3'-O3'	10.67	125.51	109.50
29	a	79	TRP	N-CA-C	-10.66	100.22	113.02
1	5	1481	C	C2'-C3'-O3'	10.62	125.43	109.50
9	F	58	HIS	CB-CA-C	-10.60	94.23	110.88
1	5	1474	C	C2'-C3'-O3'	10.53	129.49	113.70
43	o	31	ASP	CB-CA-C	10.53	127.62	110.78
1	5	4125	C	C4'-C3'-O3'	-10.41	97.38	113.00
1	5	2046	G	C2'-C3'-O3'	10.37	125.06	109.50
1	5	964	A	C4'-C3'-O3'	10.34	128.51	113.00
1	5	1214	C	N1-C1'-C2'	10.34	129.51	114.00
26	X	73	HIS	CB-CA-C	10.33	127.34	110.09
1	5	4965	U	C1'-C2'-O2'	10.31	123.86	108.40
1	5	2695	A	C2'-C3'-O3'	10.29	124.94	109.50
1	5	936	C	C4'-C3'-O3'	10.28	124.82	109.40
1	5	1	C	N1-C1'-C2'	10.27	129.41	114.00
1	5	125	C	C2'-C3'-O3'	10.24	129.06	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
29	a	128	PHE	CB-CA-C	10.23	125.75	111.74
1	5	62	A	N9-C1'-C2'	10.19	127.28	112.00
19	Q	33	ARG	N-CA-C	-10.19	98.89	111.11
1	5	3735	G	C4'-C3'-O3'	-10.14	97.79	113.00
29	a	34	ASN	CB-CA-C	10.14	125.23	111.14
38	j	66	HIS	N-CA-CB	10.12	127.60	110.49
32	d	25	TYR	CB-CA-C	10.10	128.07	111.41
1	5	977	C	C2'-C3'-O3'	10.08	128.81	113.70
1	5	1356	U	C2'-C3'-O3'	10.06	128.79	113.70
1	5	2511	A	C4'-C3'-O3'	-10.04	94.34	109.40
30	b	16	TRP	N-CA-C	-10.04	100.97	113.01
1	5	978	G	C2'-C3'-O3'	10.03	128.75	113.70
1	5	1359	G	C2'-C3'-O3'	10.00	128.70	113.70
1	5	2588	C	C4'-C3'-O3'	9.99	127.99	113.00
14	L	99	ASP	N-CA-C	-9.98	97.16	109.83
20	R	132	PHE	CA-CB-CG	-9.97	103.83	113.80
1	5	3625	G	C4'-C3'-O3'	-9.95	98.08	113.00
32	d	73	TRP	N-CA-CB	-9.90	97.79	111.65
1	5	215	C	C4'-C3'-O3'	-9.88	98.17	113.00
1	5	1992	U	N1-C1'-C2'	9.88	126.82	112.00
1	5	927	G	C2'-C3'-O3'	9.80	124.19	109.50
1	5	4693	C	N1-C1'-C2'	9.80	126.69	112.00
1	5	2468	U	C4'-C3'-O3'	9.78	124.08	109.40
38	j	66	HIS	CA-CB-CG	-9.74	104.06	113.80
3	8	14	U	N1-C1'-C2'	9.74	126.61	112.00
1	5	4767	C	C3'-C2'-O2'	9.72	125.28	110.70
1	5	4518	A	C2'-C3'-O3'	-9.69	94.96	109.50
9	F	209	PHE	N-CA-C	-9.68	100.81	111.36
1	5	2083	C	C2'-C3'-O3'	-9.68	99.18	113.70
1	5	2588	C	C2'-C3'-O3'	-9.67	99.19	113.70
1	5	1365	C	C4'-C3'-O3'	9.63	123.85	109.40
1	5	92	C	N1-C1'-C2'	-9.60	97.59	112.00
19	Q	174	PHE	CB-CA-C	9.59	126.27	112.07
1	5	1724	G	O4'-C4'-C3'	-9.59	96.51	106.10
1	5	4373	G	N9-C1'-C2'	9.58	128.37	114.00
9	F	194	HIS	CB-CA-C	-9.57	96.22	110.96
1	5	4119	C	C2'-C3'-O3'	9.57	128.06	113.70
29	a	128	PHE	CA-CB-CG	-9.56	104.24	113.80
7	D	210	TYR	N-CA-CB	9.54	123.84	109.91
3	8	85	U	C2'-C3'-O3'	9.52	127.98	113.70
7	D	198	HIS	CB-CA-C	9.52	125.82	110.88
1	5	1324	A	C1'-C2'-O2'	-9.51	97.53	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	T	13	TYR	N-CA-CB	-9.50	96.56	110.53
1	5	3912	U	C1'-C2'-O2'	-9.50	94.15	108.40
1	5	2511	A	C2'-C3'-O3'	9.49	123.73	109.50
1	5	1500	A	C4'-C3'-O3'	9.47	127.21	113.00
1	5	1279	A	C2'-C3'-O3'	9.46	123.69	109.50
1	5	1357	C	C3'-C2'-O2'	9.46	124.89	110.70
1	5	4871	C	N1-C1'-C2'	9.44	128.16	114.00
15	M	95	ILE	N-CA-C	-9.41	99.79	110.05
4	A	83	HIS	N-CA-C	-9.40	94.64	109.50
1	5	1938	C	N1-C1'-C2'	9.40	128.10	114.00
1	5	747	A	C2'-C3'-O3'	9.40	123.60	109.50
1	5	2107	C	C2'-C3'-O3'	9.39	123.58	109.50
1	5	958	G	C2'-C3'-O3'	9.33	127.69	113.70
19	Q	34	PHE	N-CA-CB	9.33	124.00	109.82
1	5	664	G	C4'-C3'-O3'	9.32	123.38	109.40
16	N	139	HIS	N-CA-CB	9.32	125.06	109.87
1	5	2272	C	C1'-C2'-O2'	-9.31	94.43	108.40
3	8	94	G	C1'-C2'-O2'	-9.30	97.84	111.80
1	5	961	G	C4'-C3'-O3'	9.29	123.34	109.40
12	I	171	TRP	CA-CB-CG	-9.29	95.94	113.60
1	5	1866	U	C1'-C2'-O2'	-9.23	97.95	111.80
1	5	3726	A	C1'-C2'-O2'	-9.23	97.95	111.80
9	F	228	HIS	CA-CB-CG	-9.21	104.59	113.80
1	5	1685	G	N9-C1'-C2'	9.20	125.80	112.00
1	5	3913	G	C2'-C3'-O3'	9.20	123.30	109.50
43	o	48	TYR	CB-CA-C	9.20	127.04	111.68
1	5	4693	C	C4'-C3'-O3'	-9.20	99.21	113.00
18	P	54	GLN	CA-CB-CG	9.19	132.48	114.10
1	5	316	U	C4'-C3'-O3'	-9.18	99.23	113.00
1	5	1733	G	C2'-C3'-O3'	-9.15	99.98	113.70
11	H	156	ASN	N-CA-CB	9.13	123.26	110.01
36	h	78	TYR	CA-CB-CG	-9.13	97.46	113.90
1	5	1636	U	C2'-C3'-O3'	-9.12	100.02	113.70
29	a	61	TYR	N-CA-C	-9.10	96.08	109.63
6	C	41	HIS	N-CA-CB	9.09	123.49	109.94
36	h	78	TYR	CB-CA-C	9.09	126.95	111.68
1	5	2513	A	N9-C1'-C2'	9.09	127.63	114.00
1	5	2246	C	C2'-C3'-O3'	9.09	127.33	113.70
1	5	3635	A	C1'-C2'-O2'	9.07	122.01	108.40
1	5	4301	U	C4'-C3'-O3'	-9.06	99.41	113.00
5	B	25	HIS	CB-CA-C	9.06	120.84	109.16
7	D	54	ARG	CG-CD-NE	-9.06	92.08	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	8	34	U	C2'-C3'-O3'	9.05	127.28	113.70
1	5	3735	G	C2'-C3'-O3'	9.05	127.28	113.70
5	B	258	HIS	CA-C-N	-9.04	108.55	119.84
5	B	258	HIS	C-N-CA	-9.04	108.55	119.84
1	5	1920	C	C4'-C3'-O3'	9.01	122.92	109.40
15	M	66	HIS	N-CA-C	9.01	123.57	113.21
6	C	267	TRP	CA-CB-CG	8.99	130.69	113.60
11	H	96	TYR	N-CA-C	8.99	122.27	108.42
12	I	171	TRP	N-CA-CB	8.97	124.06	109.88
29	a	79	TRP	CA-CB-CG	-8.97	96.55	113.60
1	5	1724	G	C4'-C3'-O3'	-8.97	95.95	109.40
32	d	87	ARG	N-CA-C	-8.96	92.97	108.56
1	5	2683	C	C2'-C3'-O3'	8.95	127.13	113.70
1	5	3905	A	C2'-C3'-O3'	8.95	127.12	113.70
4	A	211	PHE	CB-CA-C	8.94	125.67	110.56
21	S	10	TYR	CA-CB-CG	-8.94	97.81	113.90
37	i	39	PHE	N-CA-CB	8.91	123.43	110.06
1	5	1668	A	N9-C1'-C2'	8.91	125.36	112.00
10	G	54	PHE	CA-CB-CG	-8.90	104.90	113.80
29	a	109	TYR	CB-CA-C	8.90	124.79	111.17
1	5	4885	U	C2'-C3'-O3'	8.88	127.02	113.70
21	S	29	ARG	CA-CB-CG	8.87	131.84	114.10
1	5	2517	A	N9-C1'-C2'	8.87	125.30	112.00
4	A	209	HIS	CA-CB-CG	-8.86	104.94	113.80
1	5	1696	C	C2'-C3'-O3'	8.86	122.79	109.50
26	X	117	TYR	N-CA-C	-8.85	102.57	112.57
1	5	31	U	N1-C1'-C2'	8.85	125.28	112.00
1	5	2446	C	N1-C1'-C2'	8.84	125.26	112.00
1	5	3692	A	C2'-C3'-O3'	8.83	126.95	113.70
1	5	716	C	C4'-C3'-O3'	-8.83	99.76	113.00
2	7	56	G	N9-C1'-C2'	8.81	125.22	112.00
21	S	81	TRP	N-CA-C	-8.78	96.51	109.15
1	5	4275	G	C1'-C2'-O2'	8.78	121.57	108.40
7	D	210	TYR	N-CA-C	-8.77	101.41	110.97
1	5	2782	U	C4'-C3'-O3'	8.76	126.14	113.00
1	5	2436	U	N1-C1'-C2'	8.76	127.13	114.00
1	5	2586	G	N9-C1'-C2'	8.74	127.11	114.00
35	g	14	ASN	N-CA-C	-8.74	96.93	109.96
1	5	668	C	C2'-C3'-O3'	8.74	126.81	113.70
1	5	1398	A	C2'-C3'-O3'	8.71	122.57	109.50
15	M	64	PHE	N-CA-C	-8.71	98.99	110.40
1	5	1397	A	C3'-C2'-O2'	8.71	123.76	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2407	G	C4'-C3'-O3'	-8.70	99.95	113.00
1	5	2546	G	C3'-C2'-O2'	8.70	123.75	110.70
1	5	4228	G	C1'-C2'-O2'	8.70	121.44	108.40
1	5	4563	U	N1-C1'-C2'	8.69	125.04	112.00
1	5	2398	U	C2'-C3'-O3'	8.69	122.53	109.50
33	e	41	ILE	N-CA-C	-8.69	102.26	110.42
1	5	1723	A	C4'-C3'-O3'	-8.68	99.97	113.00
8	E	103	VAL	N-CA-C	8.68	119.41	108.82
1	5	716	C	C2'-C3'-O3'	8.66	126.68	113.70
1	5	962	C	C4'-C3'-O3'	-8.64	96.44	109.40
1	5	209	U	C4'-C3'-O3'	8.64	125.96	113.00
1	5	964	A	O4'-C1'-C2'	-8.63	98.97	107.60
1	5	88	A	C1'-C2'-O2'	-8.63	95.46	108.40
4	A	67	TYR	CA-CB-CG	8.63	129.43	113.90
1	5	2118	G	C4'-C3'-O3'	8.62	125.92	113.00
1	5	4199	C	C4'-C3'-O3'	8.62	125.92	113.00
1	5	4713	G	C4'-C3'-O3'	-8.62	100.08	113.00
9	F	244	ARG	N-CA-C	-8.61	101.86	111.07
1	5	1937	C	N1-C1'-C2'	8.60	124.90	112.00
34	f	4	ARG	CA-CB-CG	8.60	131.30	114.10
21	S	81	TRP	CA-CB-CG	-8.60	97.26	113.60
38	j	39	TYR	CA-C-N	-8.59	109.53	119.32
38	j	39	TYR	C-N-CA	-8.59	109.53	119.32
1	5	119	G	O4'-C4'-C3'	-8.59	97.51	106.10
1	5	2546	G	C4'-C3'-O3'	8.59	125.88	113.00
1	5	1974	U	N1-C1'-C2'	8.59	126.88	114.00
11	H	156	ASN	CA-CB-CG	-8.59	104.01	112.60
1	5	2268	A	C2'-C3'-O3'	8.58	122.37	109.50
1	5	1264	C	C3'-C2'-O2'	8.57	123.56	110.70
1	5	2406	G	C1'-C2'-O2'	8.53	121.20	108.40
1	5	4448	G	C4'-C3'-O3'	8.53	122.20	109.40
1	5	1368	A	C3'-C2'-O2'	8.53	123.49	110.70
1	5	5040	U	C4'-C3'-O3'	-8.49	96.66	109.40
29	a	62	HIS	CA-CB-CG	-8.49	105.31	113.80
1	5	3656	A	C4'-C3'-O3'	-8.49	100.26	113.00
4	A	186	TYR	N-CA-C	-8.48	101.99	111.14
29	a	79	TRP	CB-CA-C	8.45	125.40	110.37
1	5	4745	G	C1'-C2'-O2'	-8.44	95.74	108.40
1	5	2394	G	N9-C1'-C2'	-8.44	101.34	114.00
1	5	2263	A	C2'-C3'-O3'	8.40	122.10	109.50
33	e	35	TRP	CA-CB-CG	-8.40	97.64	113.60
1	5	2465	C	N1-C1'-C2'	8.40	124.59	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	Q	37	ARG	NE-CZ-NH2	8.39	126.75	119.20
1	5	1398	A	N9-C1'-C2'	8.39	126.58	114.00
16	N	37	HIS	N-CA-C	-8.37	99.81	110.19
1	5	53	C	C2'-C3'-O3'	8.37	126.25	113.70
2	7	23	A	C1'-C2'-O2'	-8.35	99.27	111.80
33	e	47	ARG	N-CA-C	-8.33	97.15	109.15
1	5	1867	A	N9-C1'-C2'	8.33	124.50	112.00
3	8	81	C	C1'-C2'-O2'	8.32	120.88	108.40
36	h	117	ARG	CG-CD-NE	-8.32	93.69	112.00
4	A	193	ARG	CG-CD-NE	-8.31	93.72	112.00
1	5	1671	U	O4'-C1'-C2'	-8.29	99.31	107.60
1	5	1377	G	C2'-C3'-O3'	8.29	126.13	113.70
1	5	4275	G	N9-C1'-C2'	-8.28	99.58	112.00
7	D	210	TYR	CA-CB-CG	-8.28	98.99	113.90
1	5	4162	C	N1-C1'-C2'	8.28	126.42	114.00
1	5	4871	C	C4'-C3'-O3'	8.27	121.80	109.40
1	5	5040	U	N1-C1'-C2'	8.27	126.40	114.00
1	5	2089	G	C1'-C2'-O2'	-8.26	99.40	111.80
1	5	943	A	C4'-C3'-O3'	8.26	121.79	109.40
1	5	2510	G	C4'-C3'-O3'	-8.25	100.63	113.00
1	5	2109	G	C3'-C2'-O2'	8.24	123.06	110.70
1	5	157	U	C3'-C2'-O2'	8.24	123.06	110.70
5	B	102	PHE	CB-CA-C	-8.24	98.18	110.95
1	5	4518	A	C4'-C3'-O3'	8.22	121.73	109.40
3	8	86	U	O4'-C1'-C2'	-8.22	99.38	107.60
9	F	209	PHE	N-CA-CB	8.21	122.32	110.16
1	5	5046	U	C2'-C3'-O3'	8.21	126.02	113.70
1	5	1501	C	N1-C1'-C2'	8.19	126.29	114.00
1	5	88	A	C2'-C3'-O3'	-8.19	101.42	113.70
1	5	930	G	C4'-C3'-O3'	8.17	121.66	109.40
1	5	4981	G	C1'-C2'-O2'	8.17	120.65	108.40
1	5	2361	G	N9-C1'-C2'	-8.16	99.76	112.00
1	5	1235	G	C2'-C3'-O3'	-8.16	101.46	113.70
1	5	2769	U	C1'-C2'-O2'	8.16	120.64	108.40
26	X	73	HIS	CA-CB-CG	-8.15	105.65	113.80
1	5	2116	C	C2'-C3'-O3'	8.14	121.71	109.50
35	g	14	ASN	N-CA-CB	8.14	122.36	109.51
1	5	291	U	C2'-C3'-O3'	-8.13	101.50	113.70
1	5	2264	C	C2'-C3'-O3'	8.12	121.68	109.50
45	r	31	ASN	CA-CB-CG	-8.12	104.48	112.60
1	5	4535	A	C2'-C3'-O3'	8.12	125.87	113.70
3	8	64	U	N1-C1'-C2'	8.11	124.16	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	4888	U	C4'-C3'-O3'	8.11	121.56	109.40
7	D	44	TYR	CB-CA-C	8.09	126.52	110.42
1	5	3717	A	C1'-C2'-O2'	-8.08	96.28	108.40
1	5	172	C	C1'-C2'-O2'	8.08	120.51	108.40
1	5	1445	U	C2'-C3'-O3'	8.05	125.78	113.70
1	5	1266	G	C2'-C3'-O3'	8.05	125.77	113.70
9	F	228	HIS	N-CA-CB	8.04	124.08	110.49
1	5	5066	U	N1-C1'-C2'	8.03	124.05	112.00
8	E	278	TYR	N-CA-C	-8.03	92.86	108.59
16	N	139	HIS	CA-CB-CG	-8.02	105.78	113.80
1	5	1440	U	C2'-C3'-O3'	8.01	125.72	113.70
1	5	4592	C	C3'-C2'-O2'	8.01	122.72	110.70
1	5	151	G	N9-C1'-C2'	-8.01	99.99	112.00
1	5	4287	G	C1'-C2'-O2'	-7.99	99.82	111.80
1	5	1534	A	N9-C1'-C2'	7.98	125.98	114.00
1	5	979	C	C2'-C3'-O3'	7.98	125.67	113.70
37	i	27	SER	N-CA-C	7.98	119.61	111.07
1	5	2124	G	C2'-C3'-O3'	7.98	125.67	113.70
1	5	2305	U	O4'-C4'-C3'	-7.97	98.13	106.10
1	5	2470	C	O4'-C1'-C2'	-7.97	99.63	107.60
14	L	192	PHE	N-CA-CB	7.97	121.81	109.94
1	5	974	C	C2'-C3'-O3'	7.96	125.63	113.70
21	S	29	ARG	CG-CD-NE	-7.96	94.50	112.00
29	a	34	ASN	CA-CB-CG	-7.96	104.64	112.60
19	Q	4	ASP	CA-CB-CG	-7.95	104.65	112.60
1	5	1575	A	N9-C1'-C2'	7.94	123.91	112.00
1	5	4400	G	C1'-C2'-O2'	7.94	120.31	108.40
1	5	219	G	O4'-C1'-C2'	-7.92	99.69	107.60
1	5	486	C	C2'-C3'-O3'	7.90	125.55	113.70
31	c	89	TYR	N-CA-C	7.88	120.12	108.14
1	5	1916	G	N9-C1'-C2'	7.88	123.82	112.00
1	5	2553	A	N9-C1'-C2'	7.88	125.82	114.00
18	P	25	HIS	CB-CA-C	7.88	123.39	110.78
1	5	2079	G	C4'-C3'-O3'	-7.88	101.18	113.00
7	D	145	TYR	CB-CA-C	7.88	122.95	110.19
1	5	406	C	C2'-C3'-O3'	7.87	125.50	113.70
1	5	4737	G	N9-C1'-C2'	7.86	123.78	112.00
27	Y	18	HIS	CA-CB-CG	-7.86	105.94	113.80
1	5	3727	A	C1'-C2'-O2'	-7.84	96.64	108.40
1	5	1382	G	N9-C1'-C2'	7.83	123.75	112.00
1	5	2251	G	C4'-C3'-O3'	7.82	121.13	109.40
1	5	3596	A	C3'-C2'-O2'	7.82	122.43	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	B	258	HIS	N-CA-C	7.81	127.07	109.81
1	5	3739	C	O4'-C1'-C2'	-7.80	99.80	107.60
15	M	6	PHE	CA-CB-CG	-7.80	106.00	113.80
1	5	1378	C	N1-C1'-C2'	7.79	123.69	112.00
44	p	14	TYR	N-CA-C	-7.79	102.42	112.23
1	5	85	G	C1'-C2'-O2'	7.78	123.48	111.80
43	o	31	ASP	CA-CB-CG	-7.78	104.82	112.60
1	5	2053	C	C4'-C3'-O3'	-7.77	101.35	113.00
47	2	30	ARG	N-CA-C	7.77	120.73	111.33
1	5	1396	G	C3'-C2'-O2'	7.75	122.33	110.70
1	5	2661	U	C2'-C3'-O3'	7.75	121.13	109.50
38	j	27	TYR	CA-CB-CG	-7.75	99.96	113.90
3	8	126	C	C2'-C3'-O3'	7.74	121.10	109.50
30	b	17	HIS	N-CA-C	7.73	123.03	112.90
1	5	3871	A	N9-C1'-C2'	7.73	123.59	112.00
1	5	2125	C	C1'-C2'-O2'	-7.72	100.22	111.80
15	M	17	PHE	N-CA-C	7.72	118.80	108.38
16	N	143	ARG	CG-CD-NE	-7.72	95.02	112.00
4	A	211	PHE	N-CA-C	-7.71	103.43	112.92
1	5	686	A	C4'-C3'-O3'	7.71	120.97	109.40
47	2	29	ASP	O-C-N	-7.71	114.62	123.33
1	5	4464	A	N9-C1'-C2'	7.70	123.55	112.00
1	5	4251	A	N9-C1'-C2'	7.70	123.54	112.00
1	5	147	A	N9-C1'-C2'	7.69	123.53	112.00
1	5	5027	C	C2'-C3'-O3'	7.68	121.02	109.50
7	D	31	TYR	N-CA-C	-7.67	97.81	110.17
8	E	59	TYR	N-CA-C	-7.67	94.46	110.80
1	5	4215	C	O4'-C1'-C2'	-7.66	99.94	107.60
4	A	16	PHE	CB-CA-C	7.65	121.27	111.40
1	5	747	A	C3'-C2'-O2'	7.65	126.07	114.60
1	5	4199	C	O4'-C1'-C2'	-7.65	99.95	107.60
1	5	3859	G	C4'-C3'-O3'	-7.64	101.54	113.00
29	a	62	HIS	N-CA-CB	7.64	123.40	110.49
1	5	4414	A	C4'-C3'-O3'	-7.63	101.56	113.00
1	5	1637	A	N9-C1'-C2'	-7.63	102.56	114.00
43	o	48	TYR	CA-CB-CG	-7.63	100.17	113.90
1	5	2280	G	N9-C1'-C2'	7.62	123.44	112.00
36	h	119	PHE	CB-CA-C	-7.62	95.25	110.42
1	5	2324	C	C2'-C3'-O3'	7.61	125.11	113.70
8	E	275	ASN	N-CA-CB	7.61	121.19	109.85
1	5	1815	G	N9-C1'-C2'	7.61	125.41	114.00
1	5	2464	C	C1'-C2'-O2'	-7.60	100.40	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1998	A	N9-C1'-C2'	7.60	125.40	114.00
1	5	2268	A	N9-C1'-C2'	7.59	125.39	114.00
1	5	4966	A	N9-C1'-C2'	7.59	123.38	112.00
1	5	170	C	C2'-C3'-O3'	7.58	120.87	109.50
1	5	1	C	C4'-C3'-O3'	7.58	120.76	109.40
1	5	514	U	C2'-C3'-O3'	7.56	125.04	113.70
1	5	3698	G	C4'-C3'-O3'	-7.56	101.67	113.00
1	5	2812	A	N9-C1'-C2'	7.55	123.32	112.00
1	5	4464	A	C2'-C3'-O3'	7.55	125.03	113.70
44	p	34	HIS	N-CA-C	-7.55	104.11	112.72
6	C	102	PHE	N-CA-CB	7.54	121.22	109.69
28	Z	38	TYR	CB-CA-C	7.54	123.78	110.36
5	B	274	TYR	CA-CB-CG	-7.53	100.36	113.90
29	a	41	HIS	N-CA-C	-7.53	102.63	112.41
1	5	350	C	N1-C1'-C2'	7.50	123.26	112.00
1	5	514	U	C4'-C3'-O3'	7.50	124.25	113.00
1	5	1455	G	C2'-C3'-O3'	7.50	124.95	113.70
1	5	29	G	N9-C1'-C2'	7.50	123.25	112.00
1	5	1075	G	C4'-C3'-O3'	-7.50	101.76	113.00
1	5	4234	A	N9-C1'-C2'	7.49	125.24	114.00
4	A	189	TYR	CA-CB-CG	7.49	127.38	113.90
1	5	2038	U	N1-C1'-C2'	7.48	123.22	112.00
4	A	211	PHE	CA-CB-CG	-7.48	106.32	113.80
19	Q	4	ASP	CB-CA-C	7.47	122.75	111.70
1	5	1176	C	C3'-C2'-O2'	7.47	121.90	110.70
1	5	1734	G	C2'-C3'-O3'	7.46	120.70	109.50
1	5	1355	G	N9-C1'-C2'	7.46	123.19	112.00
24	V	97	TYR	CA-CB-CG	-7.46	100.48	113.90
27	Y	61	HIS	N-CA-CB	7.46	120.82	110.01
1	5	30	C	N1-C1'-C2'	7.45	123.18	112.00
28	Z	38	TYR	N-CA-C	-7.45	99.19	110.14
16	N	180	PHE	CB-CA-C	7.45	125.24	110.42
1	5	291	U	N1-C1'-C2'	7.44	123.16	112.00
1	5	2256	C	C2'-C3'-O3'	7.44	120.65	109.50
7	D	175	HIS	N-CA-C	-7.43	97.71	109.23
9	F	168	ARG	CG-CD-NE	-7.43	95.66	112.00
1	5	4221	C	C2'-C3'-O3'	-7.42	102.57	113.70
1	5	1214	C	C3'-C2'-O2'	-7.41	103.49	114.60
18	P	140	MET	N-CA-C	7.41	120.55	110.55
1	5	2589	C	C2'-C3'-O3'	7.41	124.81	113.70
1	5	2851	G	C2'-C3'-O3'	7.40	124.81	113.70
6	C	41	HIS	CA-CB-CG	-7.39	106.41	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1890	G	N9-C1'-C2'	-7.39	100.91	112.00
1	5	4677	U	C1'-C2'-O2'	7.39	119.49	108.40
28	Z	54	THR	N-CA-C	7.39	122.03	113.38
1	5	4745	G	C2'-C3'-O3'	-7.39	102.62	113.70
34	f	4	ARG	CG-CD-NE	-7.38	95.75	112.00
1	5	2509	C	C1'-C2'-O2'	-7.38	97.34	108.40
1	5	2091	C	C2'-C3'-O3'	7.37	120.56	109.50
1	5	332	C	N1-C1'-C2'	7.37	123.05	112.00
1	5	1729	A	C4'-C3'-O3'	-7.37	101.95	113.00
9	F	168	ARG	CB-CG-CD	7.36	128.24	111.30
1	5	3676	G	C2'-C3'-O3'	-7.35	102.68	113.70
1	5	3736	A	C1'-C2'-O2'	-7.35	97.38	108.40
1	5	1832	C	C2'-C3'-O3'	7.34	124.72	113.70
1	5	3645	U	C4'-C3'-O3'	-7.34	101.98	113.00
5	B	179	HIS	CA-CB-CG	-7.34	106.45	113.80
34	f	4	ARG	N-CA-CB	7.34	122.90	110.49
6	C	42	THR	N-CA-C	7.34	120.15	111.71
1	5	1484	G	O4'-C4'-C3'	-7.33	98.77	106.10
1	5	1887	G	N9-C1'-C2'	-7.33	101.00	112.00
38	j	71	TYR	CA-CB-CG	7.33	127.09	113.90
1	5	4750	G	C3'-C2'-O2'	7.32	121.69	110.70
1	5	454	U	C2'-C3'-O3'	7.32	124.68	113.70
7	D	119	TYR	N-CA-C	-7.32	101.88	111.02
45	r	21	ASN	CB-CA-C	7.32	121.58	111.63
1	5	1280	C	C4'-C3'-O3'	-7.31	102.03	113.00
4	A	209	HIS	CA-C-N	7.31	128.97	119.84
4	A	209	HIS	C-N-CA	7.31	128.97	119.84
1	5	3790	U	N1-C1'-C2'	7.30	124.96	114.00
10	G	54	PHE	CB-CA-C	7.30	122.78	111.02
1	5	4104	G	C1'-C2'-O2'	-7.29	100.86	111.80
1	5	5001	U	N1-C1'-C2'	7.29	122.94	112.00
32	d	86	VAL	N-CA-C	7.29	117.98	108.35
23	U	90	TYR	CB-CA-C	-7.29	99.38	110.90
33	e	60	TYR	N-CA-C	-7.29	101.50	110.61
1	5	2797	C	N1-C1'-C2'	-7.29	103.07	114.00
12	I	4	ARG	CG-CD-NE	-7.29	95.97	112.00
1	5	2329	U	C1'-C2'-O2'	-7.28	100.88	111.80
1	5	3804	G	C1'-C2'-O2'	7.28	119.32	108.40
4	A	34	PHE	N-CA-CB	7.27	120.87	109.82
45	r	31	ASN	N-CA-CB	7.27	122.15	110.16
32	d	73	TRP	N-CA-C	-7.27	101.53	110.61
1	5	2806	A	C1'-C2'-O2'	7.26	119.30	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	8	64	U	C2'-C3'-O3'	7.26	124.60	113.70
1	5	2852	U	O4'-C1'-C2'	-7.26	100.34	107.60
1	5	2123	C	C2'-C3'-O3'	7.25	120.38	109.50
12	I	213	HIS	CB-CA-C	7.24	121.56	111.86
1	5	2442	G	C4'-C3'-O3'	-7.23	102.15	113.00
1	5	3625	G	C2'-C3'-O3'	7.23	124.55	113.70
1	5	4331	G	C4'-C3'-O3'	-7.23	102.16	113.00
1	5	2271	C	N1-C1'-C2'	7.22	122.84	112.00
2	7	72	U	C2'-C3'-O3'	7.22	124.54	113.70
37	i	28	ARG	CG-CD-NE	-7.22	96.11	112.00
1	5	2325	C	O4'-C1'-C2'	-7.22	100.38	107.60
1	5	3611	A	N9-C1'-C2'	7.22	122.83	112.00
12	I	92	HIS	N-CA-C	-7.22	100.98	110.07
1	5	956	A	C2'-C3'-O3'	7.21	120.32	109.50
1	5	3692	A	C1'-C2'-O2'	7.21	119.22	108.40
34	f	6	TRP	N-CA-C	-7.21	95.44	110.80
27	Y	81	TYR	CA-CB-CG	-7.21	100.93	113.90
5	B	116	ARG	CG-CD-NE	7.20	127.85	112.00
1	5	1292	C	C2'-C3'-O3'	7.19	124.48	113.70
1	5	2319	C	N1-C1'-C2'	7.18	122.78	112.00
1	5	292	G	N9-C1'-C2'	7.18	124.77	114.00
1	5	2666	U	N1-C1'-C2'	-7.17	101.25	112.00
20	R	32	ILE	N-CA-C	-7.16	102.11	110.21
1	5	1364	U	C2'-C3'-O3'	7.15	124.43	113.70
37	i	39	PHE	CA-CB-CG	-7.15	106.65	113.80
38	j	27	TYR	N-CA-CB	7.15	120.80	109.51
3	8	38	U	C3'-C2'-O2'	7.12	121.38	110.70
1	5	2827	G	O4'-C4'-C3'	-7.11	98.99	106.10
1	5	3882	C	N1-C1'-C2'	7.11	122.67	112.00
1	5	4280	A	C2'-C3'-O3'	7.11	124.37	113.70
1	5	2382	A	C2'-C3'-O3'	-7.11	103.04	113.70
1	5	93	G	N9-C1'-C2'	7.10	124.65	114.00
1	5	2347	A	C1'-C2'-O2'	7.09	122.44	111.80
19	Q	35	LEU	N-CA-C	7.09	118.91	111.03
1	5	1238	A	C3'-C2'-O2'	7.09	125.24	114.60
1	5	4531	U	O4'-C4'-C3'	-7.09	99.01	106.10
1	5	4750	G	N9-C1'-C2'	-7.09	101.37	112.00
1	5	4528	G	O4'-C1'-C2'	-7.09	100.51	107.60
1	5	4738	C	C4'-C3'-O3'	-7.08	102.37	113.00
1	5	4325	A	N9-C1'-C2'	7.08	122.62	112.00
9	F	83	PHE	N-CA-C	7.08	119.92	107.61
27	Y	87	ARG	NE-CZ-NH2	7.07	125.57	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	3938	G	N9-C1'-C2'	7.06	124.59	114.00
1	5	4762	A	C4'-C3'-O3'	7.06	119.99	109.40
6	C	340	ILE	N-CA-C	-7.06	106.04	111.62
1	5	5022	U	C2'-C3'-O3'	7.06	124.29	113.70
1	5	353	A	N9-C1'-C2'	-7.06	103.41	114.00
1	5	1650	A	O4'-C4'-C3'	-7.06	99.04	106.10
1	5	4693	C	C2'-C3'-O3'	7.05	124.27	113.70
7	D	29	ASP	N-CA-C	-7.04	98.56	109.76
1	5	2122	G	C2'-C3'-O3'	7.04	120.07	109.50
1	5	4463	U	O4'-C1'-C2'	-7.04	100.56	107.60
20	R	118	HIS	N-CA-C	-7.04	104.26	112.92
1	5	5048	A	C4'-C3'-O3'	-7.04	102.44	113.00
1	5	4677	U	N1-C1'-C2'	-7.03	101.45	112.00
1	5	3883	U	N1-C1'-C2'	7.03	122.55	112.00
33	e	43	ASN	CB-CA-C	7.03	121.30	109.84
1	5	4194	U	C3'-C2'-O2'	7.03	121.24	110.70
1	5	4666	G	C4'-C3'-O3'	-7.02	102.47	113.00
1	5	514	U	N1-C1'-C2'	-7.01	101.48	112.00
1	5	2046	G	C3'-C2'-O2'	7.01	125.11	114.60
9	F	197	TYR	CB-CA-C	-7.00	96.48	110.42
1	5	2847	G	C1'-C2'-O2'	7.00	118.91	108.40
19	Q	34	PHE	CA-CB-CG	-7.00	106.81	113.80
1	5	265	C	C4'-C3'-O3'	6.99	119.89	109.40
12	I	35	ASP	N-CA-C	6.99	119.02	108.46
24	V	97	TYR	CB-CA-C	6.99	121.08	109.89
1	5	48	G	C2'-C3'-O3'	6.99	119.98	109.50
1	5	384	A	N9-C1'-C2'	6.98	122.47	112.00
1	5	172	C	O4'-C1'-C2'	-6.98	100.62	107.60
30	b	6	ASN	CA-CB-CG	-6.98	105.62	112.60
1	5	505	G	C2'-C3'-O3'	6.97	124.16	113.70
1	5	187	U	C2'-C3'-O3'	6.97	124.16	113.70
1	5	4227	U	C2'-C3'-O3'	6.97	124.16	113.70
1	5	5043	A	N9-C1'-C2'	6.97	122.45	112.00
1	5	2328	G	C3'-C2'-O2'	6.97	121.15	110.70
1	5	1887	G	C2'-C3'-O3'	6.96	124.14	113.70
1	5	2851	G	C1'-C2'-O2'	6.96	118.84	108.40
1	5	2075	G	C2'-C3'-O3'	6.96	124.13	113.70
1	5	3908	A	N9-C1'-C2'	6.95	124.42	114.00
1	5	307	A	N9-C1'-C2'	6.95	122.42	112.00
1	5	43	U	C1'-C2'-O2'	6.94	118.81	108.40
27	Y	81	TYR	CB-CA-C	6.94	123.16	111.22
1	5	4566	U	C4'-C3'-O3'	-6.94	102.59	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	4464	A	C4'-C3'-O3'	-6.93	102.61	113.00
1	5	55	G	C1'-C2'-O2'	6.92	118.79	108.40
1	5	1573	G	N9-C1'-C2'	6.92	122.38	112.00
1	5	279	A	C4'-C3'-O3'	-6.92	99.03	109.40
1	5	2521	G	C3'-C2'-O2'	6.92	121.07	110.70
1	5	2438	A	N9-C1'-C2'	-6.91	101.64	112.00
1	5	2490	U	C2'-C3'-O3'	6.90	119.85	109.50
1	5	4762	A	C2'-C3'-O3'	-6.90	99.16	109.50
18	P	139	TYR	CA-CB-CG	-6.90	101.48	113.90
1	5	1554	A	C1'-C2'-O2'	6.89	118.74	108.40
1	5	1572	U	N1-C1'-C2'	6.89	122.34	112.00
37	i	26	HIS	CA-CB-CG	-6.89	106.91	113.80
3	8	35	C	N1-C1'-C2'	6.89	122.33	112.00
1	5	2714	G	C4'-C3'-O3'	-6.87	102.69	113.00
1	5	2649	G	N9-C1'-C2'	6.87	122.30	112.00
1	5	2581	A	N9-C1'-C2'	6.87	122.30	112.00
9	F	58	HIS	N-CA-CB	6.87	119.97	110.01
1	5	354	U	N1-C1'-C2'	-6.86	103.71	114.00
7	D	54	ARG	CB-CG-CD	6.86	127.08	111.30
1	5	4078	C	C1'-C2'-O2'	6.86	118.69	108.40
1	5	1632	A	C1'-C2'-O2'	6.85	118.68	108.40
1	5	2263	A	C4'-C3'-O3'	-6.85	99.12	109.40
1	5	2665	U	C2'-C3'-O3'	6.85	123.98	113.70
13	J	99	PHE	CA-CB-CG	-6.85	106.95	113.80
43	o	78	ARG	NE-CZ-NH2	6.85	125.36	119.20
1	5	4560	C	C4'-C3'-O3'	-6.85	99.13	109.40
1	5	4750	G	C2'-C3'-O3'	-6.84	103.44	113.70
1	5	1358	G	O4'-C1'-C2'	-6.84	100.76	107.60
1	5	3615	G	C4'-C3'-O3'	6.84	119.66	109.40
1	5	4303	C	C3'-C2'-O2'	6.84	120.96	110.70
1	5	3671	G	N9-C1'-C2'	6.84	122.25	112.00
36	h	101	ASN	N-CA-C	-6.83	104.26	112.59
1	5	4519	C	C2'-C3'-O3'	6.83	123.94	113.70
1	5	4270	C	C4'-C3'-O3'	-6.82	102.76	113.00
1	5	3868	G	N9-C1'-C2'	-6.82	103.77	114.00
1	5	4280	A	N9-C1'-C2'	-6.82	101.77	112.00
1	5	84	A	O4'-C4'-C3'	-6.82	99.28	106.10
7	D	44	TYR	CA-CB-CG	-6.82	101.62	113.90
16	N	119	TYR	N-CA-C	-6.82	100.37	110.46
1	5	727	C	C2'-C3'-O3'	6.82	119.73	109.50
1	5	2088	A	C2'-C3'-O3'	6.82	123.93	113.70
1	5	82	U	C1'-C2'-O2'	6.82	118.62	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1241	C	C2'-C3'-O3'	6.81	123.92	113.70
1	5	4479	A	C1'-C2'-O2'	6.81	118.61	108.40
1	5	703	G	C2'-C3'-O3'	-6.80	103.50	113.70
1	5	2844	A	C4'-C3'-O3'	-6.80	102.80	113.00
1	5	294	G	N9-C1'-C2'	6.80	122.20	112.00
13	J	99	PHE	CB-CA-C	6.80	123.94	110.42
1	5	2689	C	O4'-C1'-C2'	-6.79	100.81	107.60
1	5	1805	A	N9-C1'-C2'	6.79	124.18	114.00
1	5	4872	G	C2'-C3'-O3'	6.79	119.68	109.50
21	S	47	PHE	N-CA-C	6.79	118.47	111.14
1	5	4120	U	N1-C1'-C2'	-6.78	103.83	114.00
32	d	87	ARG	N-CA-CB	6.78	119.72	110.57
1	5	220	C	C4'-C3'-O3'	-6.77	102.85	113.00
1	5	2554	U	C2'-C3'-O3'	6.76	123.85	113.70
1	5	1615	C	C2'-C3'-O3'	6.76	123.84	113.70
32	d	73	TRP	CA-CB-CG	6.75	126.43	113.60
1	5	38	A	C4'-C3'-O3'	-6.75	102.87	113.00
1	5	2395	A	C2'-C3'-O3'	6.75	119.63	109.50
1	5	3663	A	O4'-C4'-C3'	-6.75	99.35	106.10
1	5	3859	G	C1'-C2'-O2'	6.75	118.53	108.40
1	5	2281	U	C4'-C3'-O3'	-6.75	102.88	113.00
1	5	2403	A	N9-C1'-C2'	6.74	122.12	112.00
1	5	3878	C	C4'-C3'-O3'	-6.74	99.29	109.40
1	5	962	C	N1-C1'-C2'	6.74	124.11	114.00
1	5	4936	G	C4'-C3'-O3'	6.74	123.11	113.00
1	5	1522	G	C1'-C2'-O2'	6.74	118.50	108.40
1	5	1671	U	C3'-C2'-O2'	-6.73	100.61	110.70
8	E	217	LYS	N-CA-C	6.73	120.57	110.14
1	5	3619	G	C4'-C3'-O3'	-6.73	102.91	113.00
19	Q	181	ARG	CA-CB-CG	6.73	127.55	114.10
1	5	2675	G	C4'-C3'-O3'	-6.72	102.92	113.00
1	5	1533	A	C2'-C3'-O3'	6.72	119.58	109.50
7	D	145	TYR	CA-CB-CG	-6.72	101.81	113.90
1	5	5056	A	N9-C1'-C2'	6.71	122.07	112.00
1	5	2406	G	N9-C1'-C2'	-6.71	101.93	112.00
1	5	4115	G	C4'-C3'-O3'	6.71	119.47	109.40
15	M	6	PHE	CB-CA-C	6.71	122.25	112.05
1	5	2082	G	N9-C1'-C2'	6.71	122.07	112.00
1	5	4476	C	C4'-C3'-O3'	-6.71	102.93	113.00
1	5	1947	U	C4'-C3'-O3'	6.71	123.06	113.00
1	5	3832	U	C1'-C2'-O2'	6.70	118.45	108.40
13	J	146	ARG	CG-CD-NE	-6.70	97.26	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	4228	G	N9-C1'-C2'	-6.70	101.95	112.00
1	5	2804	C	C1'-C2'-O2'	6.70	118.44	108.40
6	C	22	VAL	N-CA-C	6.69	117.68	111.45
1	5	3727	A	N9-C1'-C2'	6.69	122.04	112.00
1	5	4224	A	C1'-C2'-O2'	6.69	118.44	108.40
1	5	417	G	O4'-C1'-C2'	-6.69	100.91	107.60
1	5	92	C	C1'-C2'-O2'	6.68	118.42	108.40
30	b	7	HIS	CB-CA-C	-6.68	97.13	110.42
1	5	4282	A	N9-C1'-C2'	6.67	124.01	114.00
20	R	94	THR	N-CA-C	6.67	121.43	113.16
4	A	194	ASN	N-CA-C	6.67	120.13	108.52
21	S	29	ARG	CB-CA-C	6.67	120.73	109.80
3	8	74	U	O4'-C1'-C2'	-6.66	100.94	107.60
1	5	4700	A	C1'-C2'-O2'	6.66	118.39	108.40
1	5	4451	G	N9-C1'-C2'	6.66	121.99	112.00
35	g	95	PHE	CB-CA-C	-6.66	100.71	110.96
1	5	2846	G	C1'-C2'-O2'	6.66	118.38	108.40
34	f	24	HIS	N-CA-C	-6.66	103.72	110.97
1	5	1633	G	C2'-C3'-O3'	-6.65	103.72	113.70
1	5	220	C	C2'-C3'-O3'	6.65	123.67	113.70
1	5	5062	G	O4'-C1'-C2'	-6.65	100.95	107.60
1	5	2818	C	C1'-C2'-O2'	6.65	118.37	108.40
1	5	1317	U	C4'-C3'-O3'	-6.64	103.04	113.00
1	5	3640	U	C3'-C2'-O2'	6.64	120.66	110.70
1	5	1961	G	C2'-C3'-O3'	6.64	123.66	113.70
1	5	2370	A	C1'-C2'-O2'	-6.64	101.84	111.80
1	5	2658	G	N9-C1'-C2'	-6.64	102.05	112.00
3	8	66	A	N9-C1'-C2'	6.64	121.95	112.00
1	5	4880	C	N1-C1'-C2'	6.63	121.95	112.00
1	5	4165	C	O4'-C1'-C2'	-6.63	100.97	107.60
14	L	64	VAL	N-CA-C	6.63	123.13	109.34
1	5	4548	A	P-O5'-C5'	6.63	130.84	120.90
1	5	707	C	C1'-C2'-O2'	6.62	118.34	108.40
3	8	104	A	O4'-C4'-C3'	-6.62	99.48	106.10
1	5	2474	G	C4'-C3'-O3'	-6.62	103.08	113.00
1	5	2761	U	C4'-C3'-O3'	6.62	119.33	109.40
1	5	4279	A	N9-C1'-C2'	-6.60	104.09	114.00
16	N	150	TRP	CA-CB-CG	6.60	126.14	113.60
1	5	2790	U	N1-C1'-C2'	6.60	123.89	114.00
1	5	968	C	C4'-C3'-O3'	6.59	119.29	109.40
1	5	2363	A	C1'-C2'-O2'	6.59	118.29	108.40
4	A	89	TYR	CB-CA-C	6.59	120.86	110.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	X	117	TYR	CB-CA-C	6.59	121.27	111.06
16	N	130	PHE	CA-CB-CG	-6.58	107.22	113.80
28	Z	65	ARG	CG-CD-NE	-6.57	97.55	112.00
1	5	1271	G	C4'-C3'-O3'	6.57	122.85	113.00
1	5	1236	C	C3'-C2'-O2'	6.57	120.55	110.70
21	S	37	HIS	CB-CA-C	-6.57	100.52	110.90
1	5	4986	G	N9-C1'-C2'	6.57	121.85	112.00
1	5	4991	U	C3'-C2'-O2'	6.56	120.54	110.70
1	5	2854	G	C2'-C3'-O3'	6.56	123.53	113.70
19	Q	24	TYR	N-CA-C	6.56	118.51	111.36
1	5	1239	C	C2'-C3'-O3'	6.55	119.33	109.50
1	5	1577	G	C1'-C2'-O2'	6.55	118.23	108.40
1	5	235	A	O4'-C1'-C2'	-6.54	101.06	107.60
1	5	1379	C	P-O5'-C5'	6.54	130.72	120.90
1	5	4239	A	C2'-C3'-O3'	6.54	123.52	113.70
19	Q	33	ARG	CG-CD-NE	-6.54	97.60	112.00
1	5	1658	G	N9-C1'-C2'	6.54	121.81	112.00
1	5	300	A	C4'-C3'-O3'	-6.54	103.19	113.00
1	5	4238	G	C1'-C2'-O2'	6.54	118.21	108.40
1	5	451	C	C2'-C3'-O3'	6.54	119.30	109.50
1	5	4965	U	N1-C1'-C2'	-6.54	102.20	112.00
3	8	13	G	N9-C1'-C2'	6.54	121.80	112.00
1	5	292	G	O4'-C4'-C3'	-6.53	99.57	106.10
1	5	4385	A	N9-C1'-C2'	-6.53	102.20	112.00
1	5	1881	C	N1-C1'-C2'	6.53	123.80	114.00
1	5	171	U	C4'-C3'-O3'	-6.53	99.61	109.40
1	5	1376	C	C4'-C3'-O3'	-6.53	103.21	113.00
3	8	63	U	O4'-C1'-C2'	-6.52	101.08	107.60
1	5	1380	G	C4'-C3'-O3'	6.52	119.18	109.40
1	5	2091	C	C4'-C3'-O3'	-6.52	99.62	109.40
21	S	151	LYS	N-CA-C	6.52	119.01	108.32
1	5	2312	U	O4'-C1'-C2'	-6.52	101.08	107.60
1	5	2744	A	N9-C1'-C2'	6.51	121.77	112.00
27	Y	80	ILE	N-CA-C	6.51	118.88	108.85
1	5	2266	C	C2'-C3'-O3'	6.50	119.25	109.50
4	A	34	PHE	CB-CA-C	-6.50	100.58	110.92
1	5	1397	A	C4'-C3'-O3'	-6.50	103.25	113.00
1	5	4948	C	C2'-C3'-O3'	6.50	123.44	113.70
7	D	198	HIS	CA-CB-CG	-6.50	107.30	113.80
1	5	47	A	C4'-C3'-O3'	6.49	119.14	109.40
1	5	151	G	C1'-C2'-O2'	6.49	118.14	108.40
1	5	1211	G	O4'-C1'-C2'	-6.49	101.11	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1279	A	C3'-C2'-O2'	6.49	124.34	114.60
1	5	1614	C	C2'-C3'-O3'	6.49	123.44	113.70
19	Q	33	ARG	N-CA-CB	6.49	119.61	109.94
1	5	4979	A	N9-C1'-C2'	6.49	121.74	112.00
22	T	142	ARG	N-CA-C	6.49	118.90	107.61
1	5	1681	G	C1'-C2'-O2'	6.49	118.13	108.40
1	5	2328	G	C1'-C2'-O2'	-6.49	98.67	108.40
1	5	187	U	C4'-C3'-O3'	6.49	122.73	113.00
1	5	207	G	C2'-C3'-O3'	-6.49	103.97	113.70
1	5	2307	A	N9-C1'-C2'	6.49	121.73	112.00
1	5	4557	U	C4'-C3'-O3'	-6.48	103.28	113.00
22	T	13	TYR	CA-CB-CG	6.48	125.56	113.90
31	c	90	ARG	CA-CB-CG	6.48	127.06	114.10
1	5	1488	G	C2'-C3'-O3'	6.48	123.42	113.70
1	5	1616	U	O4'-C1'-C2'	-6.48	101.12	107.60
4	A	186	TYR	N-CA-CB	6.48	119.46	110.07
1	5	1495	G	N9-C1'-C2'	6.48	121.71	112.00
1	5	2092	G	N9-C1'-C2'	6.48	123.71	114.00
1	5	4212	A	N9-C1'-C2'	6.47	123.71	114.00
38	j	11	ARG	NE-CZ-NH2	-6.46	113.38	119.20
1	5	1439	C	O4'-C1'-C2'	-6.46	101.14	107.60
1	5	2373	C	N1-C1'-C2'	6.46	121.69	112.00
7	D	45	ASN	N-CA-C	6.46	118.40	111.36
1	5	3843	C	C2'-C3'-O3'	6.45	119.17	109.50
45	r	45	HIS	CA-CB-CG	6.45	120.25	113.80
1	5	1624	G	C4'-C3'-O3'	6.44	119.06	109.40
1	5	40	G	N9-C1'-C2'	6.44	121.66	112.00
1	5	1268	G	C4'-C3'-O3'	6.43	119.05	109.40
1	5	3896	C	C3'-C2'-O2'	6.43	120.35	110.70
1	5	4270	C	C2'-C3'-O3'	6.43	123.35	113.70
1	5	1894	C	N1-C1'-C2'	6.43	121.65	112.00
1	5	4117	U	O4'-C1'-C2'	-6.43	101.17	107.60
17	O	192	PHE	N-CA-C	-6.43	103.32	112.13
1	5	3663	A	C4'-C3'-O3'	-6.43	99.75	109.40
1	5	498	C	C4'-C3'-O3'	6.43	119.04	109.40
1	5	4201	G	N9-C1'-C2'	6.42	121.63	112.00
1	5	2090	U	C1'-C2'-O2'	-6.41	98.78	108.40
5	B	149	ASP	N-CA-C	6.41	118.35	111.36
9	F	239	GLU	CA-CB-CG	6.41	126.93	114.10
1	5	33	A	N9-C1'-C2'	6.41	121.62	112.00
24	V	98	PHE	CA-CB-CG	-6.41	107.39	113.80
33	e	80	HIS	CB-CA-C	6.41	117.80	109.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2110	C	C3'-C2'-O2'	-6.40	105.00	114.60
1	5	52	G	C2'-C3'-O3'	6.40	123.30	113.70
1	5	965	G	C4'-C3'-O3'	6.39	118.99	109.40
30	b	6	ASN	CB-CA-C	6.39	121.18	110.44
1	5	4936	G	C2'-C3'-O3'	-6.39	104.11	113.70
32	d	87	ARG	CA-CB-CG	6.39	126.88	114.10
1	5	3933	G	C1'-C2'-O2'	6.39	117.98	108.40
1	5	2745	A	C1'-C2'-O2'	-6.38	98.82	108.40
5	B	26	ARG	CG-CD-NE	-6.38	97.95	112.00
1	5	4074	C	N1-C1'-C2'	6.38	121.57	112.00
1	5	4878	C	C4'-C3'-O3'	-6.38	103.43	113.00
1	5	2066	C	C3'-C2'-O2'	6.38	120.27	110.70
1	5	2460	A	C1'-C2'-O2'	6.38	117.97	108.40
2	7	58	A	C2'-C3'-O3'	6.38	123.26	113.70
1	5	943	A	N9-C1'-C2'	-6.37	104.44	114.00
3	8	72	A	C1'-C2'-O2'	6.37	117.96	108.40
1	5	1370	G	N9-C1'-C2'	6.37	123.56	114.00
1	5	2089	G	C2'-C3'-O3'	6.37	119.05	109.50
1	5	4283	G	O4'-C1'-C2'	-6.37	101.23	107.60
1	5	3843	C	N1-C1'-C2'	6.36	123.55	114.00
1	5	337	U	C1'-C2'-O2'	6.36	117.94	108.40
21	S	146	HIS	N-CA-C	6.36	124.35	110.80
1	5	1341	U	N1-C1'-C2'	6.36	121.54	112.00
19	Q	184	ARG	CB-CG-CD	6.36	125.93	111.30
1	5	2279	A	C1'-C2'-O2'	6.35	117.93	108.40
1	5	226	G	N9-C1'-C2'	-6.35	104.48	114.00
21	S	160	ARG	N-CA-C	-6.35	100.17	109.63
1	5	1521	C	C1'-C2'-O2'	6.35	117.92	108.40
27	Y	78	TYR	CB-CA-C	6.35	123.05	110.42
1	5	4531	U	N1-C1'-C2'	6.35	123.52	114.00
16	N	118	SER	N-CA-C	6.34	119.60	108.75
21	S	97	TYR	CA-CB-CG	-6.34	102.48	113.90
8	E	231	THR	N-CA-C	-6.34	105.36	113.23
1	5	2081	C	C2'-C3'-O3'	-6.34	104.19	113.70
1	5	4404	U	N1-C1'-C2'	-6.34	102.49	112.00
1	5	197	A	N9-C1'-C2'	6.34	121.51	112.00
1	5	4481	U	N1-C1'-C2'	6.33	121.50	112.00
1	5	5059	C	C4'-C3'-O3'	-6.33	103.51	113.00
31	c	78	ASN	CA-CB-CG	-6.32	106.28	112.60
1	5	2000	G	C1'-C2'-O2'	6.32	117.87	108.40
1	5	2263	A	C5'-C4'-O4'	6.32	118.57	109.10
1	5	4880	C	C1'-C2'-O2'	-6.32	98.93	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	4075	U	C4'-C3'-O3'	6.31	118.87	109.40
1	5	1980	U	O4'-C1'-C2'	-6.31	101.29	107.60
1	5	1631	A	C4'-C3'-O3'	-6.30	99.94	109.40
3	8	135	C	N1-C1'-C2'	6.30	121.46	112.00
27	Y	27	ARG	NE-CZ-NH2	6.30	124.87	119.20
1	5	2322	G	C2'-C3'-O3'	6.30	123.15	113.70
33	e	60	TYR	N-CA-CB	-6.30	102.83	111.65
40	l	45	ARG	CB-CG-CD	6.30	125.80	111.30
16	N	37	HIS	CA-CB-CG	-6.30	107.50	113.80
1	5	88	A	N9-C1'-C2'	6.30	121.45	112.00
1	5	2305	U	C2'-C3'-O3'	6.30	118.95	109.50
1	5	3674	G	C4'-C3'-O3'	-6.30	103.55	113.00
1	5	2687	U	C2'-C3'-O3'	-6.29	104.26	113.70
1	5	4519	C	O4'-C4'-C3'	-6.29	97.71	104.00
1	5	4976	U	O4'-C4'-C3'	-6.29	99.81	106.10
38	j	76	HIS	CB-CA-C	6.29	120.74	109.29
1	5	236	G	N9-C1'-C2'	6.29	121.43	112.00
1	5	1823	G	O3'-P-O5'	6.29	113.43	104.00
43	o	42	ASP	N-CA-CB	6.29	119.13	110.01
3	8	79	G	N9-C1'-C2'	6.29	121.43	112.00
1	5	352	G	N9-C1'-C2'	-6.28	102.57	112.00
1	5	116	G	C4'-C3'-O3'	-6.28	103.58	113.00
1	5	2307	A	C1'-C2'-O2'	-6.28	98.98	108.40
1	5	1676	C	C2'-C3'-O3'	6.28	118.92	109.50
1	5	2796	G	N9-C1'-C2'	6.28	123.42	114.00
1	5	4221	C	N1-C1'-C2'	-6.28	102.58	112.00
1	5	2395	A	N9-C1'-C2'	-6.27	104.59	114.00
1	5	2851	G	N9-C1'-C2'	-6.27	102.59	112.00
1	5	4229	U	O4'-C1'-C2'	-6.27	101.33	107.60
1	5	4519	C	C4'-C3'-C2'	-6.26	96.33	102.60
11	H	116	ASN	N-CA-C	6.26	120.50	112.86
19	Q	91	ARG	NE-CZ-NH2	6.26	124.84	119.20
1	5	3851	U	C1'-C2'-O2'	6.26	117.79	108.40
1	5	4318	C	C4'-C3'-O3'	-6.26	103.61	113.00
1	5	2282	A	N9-C1'-C2'	6.26	121.39	112.00
3	8	39	G	C4'-C3'-O3'	-6.26	103.61	113.00
1	5	370	U	N1-C1'-C2'	6.25	121.38	112.00
1	5	4884	G	O4'-C1'-C2'	-6.25	101.35	107.60
20	R	117	ARG	CB-CA-C	6.25	120.53	109.65
1	5	1390	G	C1'-C2'-O2'	6.25	117.77	108.40
16	N	192	TRP	N-CA-CB	-6.25	100.95	110.01
33	e	35	TRP	N-CA-CB	6.25	119.16	109.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	113	A	C1'-C2'-O2'	6.25	117.77	108.40
1	5	1487	G	C2'-C3'-O3'	6.24	123.07	113.70
10	G	77	PRO	N-CA-C	6.24	118.32	110.70
17	O	47	PHE	N-CA-CB	6.24	119.31	109.82
2	7	59	G	C3'-C2'-O2'	6.24	120.06	110.70
1	5	5044	A	C1'-C2'-O2'	-6.24	99.04	108.40
19	Q	174	PHE	CA-CB-CG	-6.24	107.56	113.80
1	5	1650	A	C4'-C3'-O3'	-6.23	100.06	109.40
1	5	4114	C	N1-C1'-C2'	6.23	121.34	112.00
19	Q	52	PHE	N-CA-C	6.23	124.06	110.80
1	5	1494	U	N1-C1'-C2'	6.23	121.34	112.00
1	5	1621	A	C3'-C2'-O2'	6.22	120.03	110.70
1	5	1733	G	N9-C1'-C2'	-6.22	102.67	112.00
1	5	2836	A	C4'-C3'-O3'	-6.22	103.67	113.00
1	5	2673	G	O4'-C1'-C2'	-6.22	99.58	105.80
14	L	80	GLU	CB-CG-CD	-6.22	102.03	112.60
45	r	21	ASN	N-CA-CB	-6.22	102.70	112.46
1	5	126	C	O4'-C1'-C2'	-6.21	101.39	107.60
1	5	1835	G	C4'-C3'-O3'	6.21	118.72	109.40
10	G	54	PHE	N-CA-C	-6.21	105.01	112.59
1	5	490	C	N1-C1'-C2'	6.21	121.32	112.00
1	5	2509	C	C2'-C3'-O3'	-6.21	104.38	113.70
3	8	81	C	C5'-C4'-C3'	6.21	125.31	116.00
21	S	94	TYR	CA-CB-CG	-6.21	102.72	113.90
33	e	60	TYR	CB-CA-C	6.21	122.03	111.35
1	5	4589	A	O4'-C4'-C3'	-6.21	99.89	106.10
1	5	4948	C	C1'-C2'-O2'	-6.20	99.10	108.40
1	5	134	G	O4'-C4'-C3'	-6.20	99.91	106.10
1	5	429	A	C4'-C3'-O3'	-6.20	103.71	113.00
3	8	12	G	C4'-C3'-O3'	-6.20	103.71	113.00
31	c	32	LYS	N-CA-C	-6.20	97.60	110.80
1	5	657	C	C2'-C3'-O3'	6.19	122.99	113.70
12	I	17	TYR	CA-C-N	-6.19	113.59	119.85
12	I	17	TYR	C-N-CA	-6.19	113.59	119.85
16	N	130	PHE	CB-CA-C	6.19	120.68	110.78
1	5	684	G	C3'-C2'-O2'	6.18	119.98	110.70
8	E	275	ASN	CA-CB-CG	-6.18	106.42	112.60
1	5	1932	A	N9-C1'-C2'	6.18	121.27	112.00
1	5	967	C	O4'-C1'-C2'	-6.17	101.43	107.60
1	5	2666	U	C4'-C3'-C2'	-6.17	96.43	102.60
22	T	140	PHE	CB-CA-C	-6.17	99.78	110.45
1	5	3909	C	O4'-C1'-C2'	-6.17	101.43	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
7	D	16	TYR	N-CA-CB	6.17	119.25	109.51
1	5	4670	C	O4'-C1'-C2'	-6.15	101.45	107.60
1	5	514	U	C4'-C3'-C2'	-6.15	96.45	102.60
1	5	1951	G	C3'-C2'-O2'	6.15	119.93	110.70
27	Y	18	HIS	N-CA-CB	6.15	120.89	110.49
3	8	28	C	C1'-C2'-O2'	6.15	117.62	108.40
1	5	2807	A	C2'-C3'-O3'	6.15	122.92	113.70
1	5	4589	A	C4'-C3'-O3'	-6.14	100.18	109.40
13	J	170	HIS	CB-CA-C	6.14	120.56	110.17
45	r	45	HIS	CB-CA-C	-6.14	98.19	110.42
1	5	3776	G	C2'-C3'-O3'	6.14	118.71	109.50
9	F	58	HIS	N-CA-C	-6.14	104.50	111.07
16	N	182	HIS	N-CA-C	-6.14	97.72	110.80
1	5	4693	C	O4'-C1'-N1	-6.14	99.29	108.50
3	8	115	G	C2'-C3'-O3'	6.14	122.91	113.70
16	N	180	PHE	CA-CB-CG	-6.14	107.66	113.80
1	5	223	G	C1'-C2'-O2'	6.14	117.61	108.40
1	5	4326	G	N9-C1'-C2'	6.14	121.21	112.00
1	5	4341	C	C1'-C2'-O2'	6.13	117.60	108.40
1	5	4699	U	C4'-C3'-O3'	6.13	118.60	109.40
1	5	2093	A	C4'-C3'-O3'	6.13	118.60	109.40
1	5	4951	G	C3'-C2'-O2'	6.13	123.80	114.60
1	5	1827	C	N1-C1'-C2'	6.13	121.19	112.00
5	B	137	TRP	CA-CB-CG	-6.13	101.96	113.60
21	S	77	ASN	CB-CA-C	6.13	120.77	111.76
1	5	727	C	C3'-C2'-O2'	6.12	123.78	114.60
1	5	1359	G	N9-C1'-C2'	6.12	121.18	112.00
1	5	2328	G	C2'-C3'-O3'	-6.12	104.52	113.70
17	O	109	PRO	CA-C-N	6.12	126.68	120.38
17	O	109	PRO	C-N-CA	6.12	126.68	120.38
1	5	3653	A	C1'-C2'-O2'	6.12	117.58	108.40
1	5	2360	A	C2'-C3'-O3'	6.12	118.68	109.50
1	5	2253	A	C2'-C3'-O3'	-6.12	104.53	113.70
1	5	237	G	C1'-C2'-O2'	-6.11	102.63	111.80
14	L	80	GLU	N-CA-C	6.10	119.56	111.75
3	8	94	G	N9-C1'-C2'	6.10	123.15	114.00
13	J	54	ARG	N-CA-C	-6.10	103.96	111.40
1	5	315	G	C1'-O4'-C4'	-6.10	103.60	109.70
1	5	454	U	C3'-C2'-O2'	6.10	119.84	110.70
1	5	1479	G	N9-C1'-C2'	6.10	123.15	114.00
1	5	3827	G	N9-C1'-C2'	-6.10	104.86	114.00
1	5	1938	C	O4'-C4'-C3'	-6.09	100.00	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2385	U	N1-C1'-C2'	6.09	121.14	112.00
1	5	3817	A	N9-C1'-C2'	6.09	123.14	114.00
1	5	4228	G	O4'-C1'-C2'	-6.09	101.51	107.60
1	5	294	G	C1'-O4'-C4'	-6.09	103.81	109.90
4	A	205	ASN	N-CA-C	-6.09	102.47	110.39
1	5	4338	G	N9-C1'-C2'	-6.09	104.87	114.00
1	5	1264	C	C2'-C3'-O3'	6.08	122.83	113.70
1	5	1625	G	N9-C1'-C2'	6.08	123.13	114.00
7	D	145	TYR	N-CA-C	-6.08	98.81	108.73
1	5	2643	G	C2'-C3'-O3'	6.08	122.82	113.70
33	e	74	PHE	CB-CA-C	6.08	119.56	109.53
1	5	4978	G	N9-C1'-C2'	6.08	121.11	112.00
1	5	1438	U	C2'-C3'-O3'	6.07	122.81	113.70
1	5	2766	A	C4'-C3'-O3'	-6.07	103.89	113.00
1	5	5047	C	C2'-C3'-O3'	6.07	118.61	109.50
1	5	3673	C	C4'-C3'-O3'	-6.07	103.89	113.00
1	5	398	A	N9-C1'-C2'	6.07	121.10	112.00
38	j	39	TYR	CB-CA-C	-6.07	98.22	110.17
16	N	30	TYR	N-CA-CB	-6.06	100.24	110.49
3	8	94	G	C5'-C4'-O4'	6.06	118.19	109.10
8	E	111	TYR	N-CA-CB	6.06	119.03	110.36
1	5	4233	A	C3'-C2'-O2'	6.06	119.79	110.70
1	5	2119	C	C4'-C3'-O3'	6.06	118.48	109.40
1	5	4182	G	C4'-C3'-O3'	-6.06	103.92	113.00
1	5	372	A	N9-C1'-C2'	6.05	121.08	112.00
40	l	12	PHE	CB-CA-C	-6.05	101.13	110.81
1	5	4394	A	C1'-C2'-O2'	-6.05	102.73	111.80
5	B	324	GLY	N-CA-C	6.04	118.03	110.29
16	N	4	TYR	N-CA-C	6.04	119.49	111.75
1	5	2348	G	C1'-C2'-O2'	-6.04	102.73	111.80
1	5	3938	G	O4'-C4'-C3'	-6.04	100.06	106.10
3	8	70	G	N9-C1'-C2'	-6.04	102.94	112.00
18	P	139	TYR	CB-CA-C	6.04	119.19	111.40
1	5	3688	U	C1'-C2'-O2'	6.03	117.45	108.40
14	L	103	ARG	CB-CA-C	6.03	119.69	109.80
1	5	2803	U	C1'-C2'-O2'	6.03	117.45	108.40
38	j	78	PHE	CB-CA-C	-6.03	103.33	111.89
1	5	1876	U	C2'-C3'-O3'	6.03	122.74	113.70
33	e	95	TYR	N-CA-C	6.02	118.45	108.99
1	5	1326	A	C3'-C2'-O2'	6.02	119.73	110.70
1	5	4745	G	N9-C1'-C2'	6.02	121.03	112.00
1	5	226	G	C4'-C3'-O3'	6.02	118.43	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	5062	G	P-O5'-C5'	6.02	129.93	120.90
1	5	111	C	C1'-C2'-O2'	6.02	117.43	108.40
1	5	1215	C	O4'-C1'-C2'	-6.02	101.58	107.60
1	5	4265	U	N1-C1'-C2'	6.02	123.03	114.00
1	5	4589	A	N9-C1'-C2'	6.02	123.03	114.00
1	5	2009	A	C3'-C2'-O2'	6.01	119.72	110.70
1	5	333	U	C4'-C3'-O3'	6.01	122.02	113.00
9	F	57	LYS	N-CA-C	6.01	118.79	111.82
1	5	3879	G	N9-C1'-C2'	-6.01	102.98	112.00
7	D	160	PHE	N-CA-C	-6.01	105.71	113.16
1	5	2368	A	C2'-C3'-O3'	-6.01	104.69	113.70
1	5	663	G	C4'-C3'-O3'	6.01	122.01	113.00
38	j	11	ARG	CG-CD-NE	-6.01	98.78	112.00
39	k	61	PRO	N-CA-C	6.00	118.03	110.70
1	5	2087	C	N1-C1'-C2'	-6.00	103.00	112.00
21	S	44	PHE	N-CA-C	-6.00	104.82	111.36
14	L	6	ASN	N-CA-CB	6.00	120.63	110.49
43	o	32	SER	N-CA-C	6.00	117.82	111.28
1	5	1588	U	N1-C1'-C2'	6.00	121.00	112.00
1	5	4454	G	C1'-C2'-O2'	6.00	117.40	108.40
16	N	182	HIS	N-CA-CB	6.00	120.63	110.49
1	5	4617	G	C4'-C3'-O3'	-6.00	104.01	113.00
1	5	294	G	C2'-C3'-O3'	-5.99	104.71	113.70
4	A	163	ARG	CB-CA-C	5.99	119.55	109.48
3	8	68	G	N9-C1'-C2'	5.99	120.99	112.00
1	5	3653	A	N9-C1'-C2'	-5.99	103.01	112.00
1	5	4498	U	N1-C1'-C2'	-5.99	103.02	112.00
1	5	4753	U	C2'-C3'-O3'	5.99	122.68	113.70
1	5	3740	G	O4'-C1'-C2'	-5.99	101.61	107.60
1	5	3717	A	C2'-C3'-O3'	-5.98	104.73	113.70
1	5	1238	A	C2'-C3'-O3'	5.98	118.47	109.50
8	E	236	TYR	N-CA-C	-5.98	101.06	109.96
22	T	57	TYR	CA-CB-CG	5.98	124.66	113.90
33	e	20	PHE	CA-CB-CG	-5.98	107.82	113.80
1	5	1539	G	C2'-C3'-O3'	5.97	122.66	113.70
16	N	203	TYR	N-CA-CB	-5.97	102.64	110.88
35	g	90	ARG	CG-CD-NE	-5.97	98.86	112.00
1	5	1891	A	C2'-C3'-O3'	5.97	118.45	109.50
6	C	41	HIS	N-CA-C	-5.97	103.95	111.11
18	P	144	CYS	N-CA-C	5.97	118.77	109.52
1	5	118	C	C2'-C3'-O3'	5.96	122.65	113.70
1	5	4747	C	C3'-C2'-O2'	5.96	119.65	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	j	8	PHE	CA-CB-CG	-5.96	107.84	113.80
1	5	2307	A	C2'-C3'-O3'	-5.96	104.76	113.70
1	5	1885	G	C4'-C3'-O3'	5.96	121.94	113.00
1	5	2487	G	C2'-C3'-O3'	5.96	122.64	113.70
31	c	39	ARG	CG-CD-NE	-5.96	98.90	112.00
1	5	2089	G	O4'-C4'-C3'	-5.96	100.14	106.10
39	k	41	TYR	CB-CA-C	5.95	120.24	109.83
10	G	235	ARG	CG-CD-NE	5.95	125.09	112.00
1	5	4742	G	O4'-C1'-C2'	-5.95	101.65	107.60
4	A	34	PHE	N-CA-C	-5.95	103.77	111.02
16	N	21	PHE	N-CA-CB	5.95	118.86	110.12
17	O	140	ARG	NE-CZ-NH2	5.94	124.55	119.20
1	5	27	C	C1'-C2'-O2'	5.94	117.31	108.40
9	F	94	VAL	CB-CA-C	-5.94	103.54	110.91
1	5	416	U	N1-C1'-C2'	5.94	120.91	112.00
2	7	42	A	O4'-C1'-C2'	-5.94	101.66	107.60
8	E	236	TYR	CA-CB-CG	-5.94	103.21	113.90
9	F	83	PHE	N-CA-CB	-5.94	101.62	110.71
1	5	1292	C	C4'-C3'-O3'	-5.94	104.09	113.00
1	5	1521	C	C2'-C3'-O3'	5.94	122.61	113.70
1	5	1832	C	C4'-C3'-O3'	-5.94	104.09	113.00
27	Y	25	ILE	CB-CA-C	-5.94	104.28	112.24
14	L	7	GLY	N-CA-C	-5.94	99.11	113.18
20	R	94	THR	CA-C-N	-5.94	112.56	120.63
20	R	94	THR	C-N-CA	-5.94	112.56	120.63
46	1	265	LEU	CA-C-N	-5.94	113.65	119.76
46	1	265	LEU	C-N-CA	-5.94	113.65	119.76
1	5	2260	C	C2'-C3'-O3'	5.93	118.40	109.50
1	5	2474	G	C2'-C3'-O3'	5.93	122.60	113.70
1	5	2806	A	N9-C1'-C2'	-5.93	103.10	112.00
3	8	2	G	O4'-C1'-C2'	-5.93	101.67	107.60
7	D	223	PHE	CA-CB-CG	5.93	119.73	113.80
1	5	3881	G	C1'-C2'-O2'	-5.93	102.90	111.80
1	5	4274	A	C1'-C2'-O2'	5.93	117.30	108.40
28	Z	38	TYR	N-CA-CB	-5.93	101.86	110.70
1	5	212	A	N9-C1'-C2'	5.93	120.89	112.00
1	5	4730	C	C2'-C3'-O3'	5.93	118.39	109.50
1	5	957	G	C2'-C3'-O3'	5.92	118.39	109.50
33	e	58	ILE	N-CA-C	5.92	116.66	110.62
4	A	163	ARG	N-CA-C	-5.92	100.05	109.76
12	I	139	ARG	CB-CG-CD	-5.92	97.69	111.30
1	5	1534	A	P-O5'-C5'	5.91	129.77	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	3635	A	N9-C1'-C2'	-5.91	103.13	112.00
1	5	2263	A	O4'-C4'-C3'	-5.91	100.19	106.10
1	5	2405	G	C1'-C2'-O2'	5.91	117.27	108.40
1	5	4767	C	C2'-C3'-O3'	5.91	122.57	113.70
3	8	34	U	C5'-C4'-O4'	5.91	118.67	109.80
7	D	196	ARG	N-CA-C	-5.91	103.81	111.02
1	5	1237	C	C4'-C3'-O3'	-5.91	104.14	113.00
11	H	113	GLU	CB-CG-CD	-5.91	102.56	112.60
1	5	2272	C	C3'-C2'-O2'	5.91	119.56	110.70
5	B	380	GLN	N-CA-C	5.91	120.76	113.50
7	D	35	ARG	CG-CD-NE	5.91	124.99	112.00
37	i	26	HIS	N-CA-CB	5.90	120.36	110.32
1	5	1820	C	C3'-C2'-O2'	5.90	119.55	110.70
31	c	78	ASN	N-CA-CB	5.90	120.47	110.49
1	5	2257	C	C2'-C3'-O3'	5.90	118.35	109.50
12	I	92	HIS	CB-CA-C	5.90	117.19	108.87
1	5	1671	U	C1'-C2'-O2'	5.89	117.24	108.40
28	Z	28	ASN	N-CA-C	-5.89	96.01	107.62
1	5	2857	A	C4'-C3'-O3'	5.89	118.23	109.40
1	5	3719	A	C1'-C2'-O2'	5.89	117.23	108.40
32	d	87	ARG	CG-CD-NE	-5.89	99.04	112.00
3	8	11	C	O4'-C1'-C2'	-5.89	101.71	107.60
1	5	1440	U	C4'-C3'-O3'	5.88	121.83	113.00
6	C	288	ASP	N-CA-CB	5.88	118.77	109.71
21	S	37	HIS	N-CA-CB	5.88	118.60	110.07
21	S	83	ARG	CG-CD-NE	5.88	124.94	112.00
1	5	2785	C	C4'-C3'-O3'	-5.88	104.18	113.00
18	P	7	ASP	CB-CA-C	5.88	117.90	109.26
1	5	4600	G	N9-C1'-C2'	-5.88	103.19	112.00
3	8	82	A	O4'-C1'-C2'	-5.87	101.73	107.60
1	5	106	A	C1'-C2'-O2'	5.87	117.21	108.40
1	5	1638	A	C2'-C3'-O3'	5.87	118.31	109.50
1	5	4736	C	N1-C1'-C2'	5.87	120.81	112.00
1	5	4978	G	C1'-C2'-O2'	-5.87	99.59	108.40
19	Q	181	ARG	CG-CD-NE	-5.87	99.09	112.00
1	5	3667	C	C2'-C3'-O3'	5.87	122.50	113.70
1	5	974	C	C4'-C3'-O3'	5.87	121.80	113.00
1	5	4497	U	N1-C1'-C2'	-5.87	103.20	112.00
1	5	2044	U	C2'-C3'-O3'	-5.86	104.91	113.70
1	5	4197	G	C1'-C2'-O2'	5.86	117.19	108.40
1	5	5006	U	N1-C1'-C2'	-5.86	105.21	114.00
1	5	2597	G	N9-C1'-C2'	5.86	120.79	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	B	322	HIS	N-CA-CB	-5.86	104.66	114.27
16	N	143	ARG	CB-CG-CD	5.86	124.77	111.30
1	5	4958	C	C4'-C3'-O3'	5.86	121.78	113.00
19	Q	33	ARG	CB-CG-CD	5.86	124.77	111.30
14	L	147	ALA	N-CA-C	-5.85	104.69	112.94
1	5	3861	A	C1'-C2'-O2'	5.85	117.18	108.40
1	5	1410	U	C3'-C2'-O2'	5.85	119.47	110.70
1	5	2360	A	C4'-C3'-O3'	-5.85	100.63	109.40
1	5	4497	U	C1'-C2'-O2'	5.85	117.17	108.40
37	i	40	VAL	CB-CA-C	-5.84	104.50	111.81
14	L	192	PHE	CA-CB-CG	-5.84	107.96	113.80
1	5	1725	U	O4'-C1'-C2'	-5.84	101.76	107.60
1	5	2443	G	N9-C1'-C2'	5.84	120.76	112.00
10	G	169	PHE	N-CA-C	5.84	119.22	111.75
36	h	89	ARG	CG-CD-NE	5.84	124.84	112.00
1	5	4463	U	C3'-C2'-O2'	5.83	119.45	110.70
1	5	63	G	N9-C1'-C2'	5.83	120.75	112.00
1	5	1480	C	C2'-C3'-O3'	5.83	118.25	109.50
1	5	2583	C	C2'-C3'-O3'	5.83	122.45	113.70
1	5	3634	G	C2'-C3'-O3'	5.83	122.45	113.70
1	5	4314	C	O4'-C1'-C2'	-5.83	101.77	107.60
1	5	417	G	C3'-C2'-O2'	5.83	119.44	110.70
1	5	4694	G	C2'-C3'-O3'	-5.83	104.96	113.70
9	F	207	ASN	CA-CB-CG	-5.83	106.77	112.60
1	5	2667	C	C3'-C2'-O2'	5.83	119.44	110.70
1	5	4911	A	C1'-O4'-C4'	-5.83	103.87	109.70
6	C	312	ARG	CG-CD-NE	-5.83	99.19	112.00
1	5	1394	G	N9-C1'-C2'	5.82	120.73	112.00
1	5	30	C	C1'-C2'-O2'	-5.82	99.67	108.40
1	5	2071	A	C4'-C3'-O3'	-5.82	104.27	113.00
1	5	4543	G	N9-C1'-C2'	5.82	120.73	112.00
36	h	84	ARG	CG-CD-NE	-5.82	99.20	112.00
1	5	218	A	C4'-C3'-O3'	5.82	118.13	109.40
1	5	4330	G	C1'-C2'-O2'	5.82	117.13	108.40
5	B	119	TYR	CA-CB-CG	-5.82	103.43	113.90
1	5	405	U	C1'-C2'-O2'	5.82	117.12	108.40
1	5	421	C	C2'-C3'-O3'	5.82	122.42	113.70
1	5	2323	C	C1'-C2'-O2'	5.82	117.12	108.40
1	5	2676	A	C1'-C2'-O2'	5.82	117.12	108.40
1	5	4713	G	C2'-C3'-O3'	5.81	122.42	113.70
21	S	127	MET	N-CA-C	-5.81	104.58	111.03
1	5	272	U	N1-C1'-C2'	5.81	120.72	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1850	A	N9-C1'-C2'	5.81	120.72	112.00
1	5	3898	G	C2'-C3'-O3'	5.81	122.42	113.70
1	5	4737	G	C1'-C2'-O2'	-5.81	99.69	108.40
1	5	2710	C	C4'-C3'-O3'	5.81	121.71	113.00
5	B	291	TYR	N-CA-CB	5.81	118.69	109.51
8	E	277	ILE	N-CA-C	5.81	117.22	107.18
45	r	45	HIS	N-CA-CB	-5.81	100.68	110.49
1	5	42	A	C1'-C2'-O2'	-5.80	103.09	111.80
1	5	2025	A	C4'-C3'-O3'	5.80	118.11	109.40
1	5	3875	G	C2'-C3'-O3'	5.80	122.40	113.70
1	5	4094	G	C4'-C3'-O3'	-5.80	104.30	113.00
6	C	102	PHE	CA-CB-CG	-5.80	108.00	113.80
1	5	2035	C	O4'-C1'-C2'	-5.80	101.80	107.60
1	5	4941	G	C4'-C3'-O3'	-5.80	104.30	113.00
19	Q	32	TYR	CA-CB-CG	5.80	124.34	113.90
1	5	58	G	N9-C1'-C2'	5.80	122.69	114.00
1	5	2305	U	N1-C1'-C2'	5.80	122.69	114.00
1	5	3917	A	C4'-C3'-O3'	-5.80	104.30	113.00
1	5	4163	U	N1-C1'-C2'	-5.80	103.31	112.00
29	a	65	ARG	CG-CD-NE	-5.80	99.25	112.00
1	5	4900	C	C2'-C3'-O3'	5.79	118.19	109.50
1	5	693	C	C2'-C3'-O3'	5.79	122.39	113.70
34	f	51	TYR	N-CA-C	5.79	116.73	108.74
1	5	1631	A	N9-C1'-C2'	5.79	122.68	114.00
1	5	3637	U	C1'-C2'-O2'	5.79	117.08	108.40
3	8	46	G	N9-C1'-C2'	5.79	120.68	112.00
16	N	182	HIS	CA-CB-CG	5.79	119.59	113.80
1	5	4644	G	C1'-C2'-O2'	5.79	117.08	108.40
27	Y	5	PRO	N-CA-C	-5.79	102.11	111.19
47	2	30	ARG	CA-C-N	-5.78	111.94	120.38
47	2	30	ARG	C-N-CA	-5.78	111.94	120.38
1	5	1211	G	C4'-C3'-O3'	5.78	121.67	113.00
1	5	1998	A	C1'-C2'-O2'	-5.78	103.13	111.80
4	A	209	HIS	N-CA-CB	5.78	118.88	110.32
1	5	1852	U	C1'-C2'-O2'	5.78	117.07	108.40
1	5	2319	C	O5'-C5'-C4'	-5.78	102.83	111.50
1	5	2785	C	N1-C1'-C2'	5.78	120.67	112.00
14	L	5	ARG	N-CA-C	5.78	119.21	111.24
1	5	4276	G	O4'-C1'-C2'	-5.77	101.83	107.60
1	5	4517	A	C4'-C3'-O3'	-5.77	104.35	113.00
1	5	4915	G	C2'-C3'-O3'	5.77	122.36	113.70
22	T	139	HIS	N-CA-C	-5.77	99.65	108.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	294	G	C4'-C3'-O3'	5.77	121.65	113.00
13	J	165	TRP	N-CA-C	-5.77	104.69	110.97
1	5	4478	G	C1'-C2'-O2'	5.76	117.05	108.40
8	E	153	HIS	N-CA-CB	-5.76	100.75	110.49
1	5	293	G	C2'-C3'-O3'	5.76	122.34	113.70
1	5	3870	C	N1-C1'-C2'	5.76	120.64	112.00
12	I	76	MET	N-CA-C	-5.76	101.10	110.20
1	5	4395	U	C4'-C3'-O3'	-5.76	104.36	113.00
7	D	30	TYR	CB-CA-C	5.76	122.91	110.41
1	5	3839	G	O4'-C4'-C3'	-5.76	100.34	106.10
15	M	90	ARG	CG-CD-NE	-5.76	99.33	112.00
1	5	112	C	O4'-C1'-C2'	-5.75	101.84	107.60
1	5	4079	C	O4'-C1'-C2'	-5.75	101.84	107.60
30	b	11	ASN	N-CA-CB	5.75	118.51	109.94
41	m	118	THR	N-CA-C	5.75	118.01	111.11
29	a	40	HIS	N-CA-C	5.75	123.04	110.80
1	5	1267	C	C2'-C3'-O3'	5.75	118.12	109.50
1	5	2046	G	C1'-O4'-C4'	-5.74	103.96	109.70
1	5	2422	C	C3'-C2'-O2'	5.74	119.31	110.70
1	5	2014	C	C2'-C3'-O3'	5.74	122.31	113.70
30	b	11	ASN	N-CA-C	-5.74	104.22	111.11
1	5	229	G	C3'-C2'-O2'	5.74	119.31	110.70
1	5	1534	A	C5'-C4'-O4'	5.74	117.70	109.10
1	5	2056	G	O4'-C1'-C2'	-5.73	101.87	107.60
1	5	2693	G	C4'-C3'-O3'	-5.73	104.40	113.00
14	L	82	ARG	CG-CD-NE	-5.73	99.39	112.00
1	5	85	G	O4'-C1'-C2'	-5.73	100.07	105.80
1	5	4750	G	C1'-O4'-C4'	-5.73	104.17	109.90
12	I	96	VAL	CB-CA-C	-5.73	103.70	111.15
4	A	209	HIS	CB-CA-C	5.73	117.61	109.08
1	5	3863	C	N1-C1'-C2'	5.73	120.59	112.00
29	a	60	HIS	N-CA-C	-5.73	98.60	110.80
1	5	1667	G	C2'-C3'-O3'	5.72	122.29	113.70
3	8	9	A	C1'-C2'-O2'	5.72	116.99	108.40
46	1	81	ILE	N-CA-C	5.72	116.93	112.12
1	5	4283	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	5	4215	C	C4'-C3'-O3'	-5.72	104.42	113.00
1	5	456	C	O4'-C1'-C2'	-5.71	101.89	107.60
1	5	1324	A	C3'-C2'-O2'	5.71	123.17	114.60
1	5	1296	G	C4'-C3'-O3'	5.71	117.97	109.40
1	5	1672	U	N1-C1'-C2'	5.71	120.57	112.00
1	5	74	G	N9-C1'-C2'	5.71	120.56	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2631	U	C4'-C3'-O3'	-5.71	104.44	113.00
1	5	2675	G	C1'-C2'-O2'	5.71	116.96	108.40
5	B	119	TYR	N-CA-CB	5.71	118.94	110.49
16	N	138	PHE	N-CA-C	-5.71	103.68	111.56
1	5	1455	G	C4'-C3'-O3'	-5.70	104.44	113.00
1	5	2118	G	O4'-C4'-C3'	-5.70	98.30	104.00
1	5	2367	A	C3'-C2'-O2'	5.70	119.26	110.70
7	D	130	TYR	CA-CB-CG	-5.70	103.64	113.90
12	I	47	PRO	N-CA-C	5.70	124.22	112.47
1	5	911	U	C2'-C3'-O3'	5.70	122.25	113.70
1	5	1895	G	N9-C1'-C2'	5.70	120.55	112.00
1	5	3590	G	C2'-C3'-O3'	5.70	122.25	113.70
6	C	22	VAL	CB-CA-C	-5.70	104.46	111.92
1	5	1591	U	N1-C1'-C2'	5.69	120.53	112.00
1	5	4982	A	C1'-C2'-O2'	5.69	116.93	108.40
6	C	317	ASN	N-CA-C	-5.69	101.93	109.84
10	G	57	TRP	CB-CA-C	5.69	117.56	109.08
1	5	2614	C	C3'-C2'-O2'	5.69	119.23	110.70
1	5	414	C	C3'-C2'-O2'	5.69	119.23	110.70
1	5	1564	A	C3'-C2'-O2'	5.69	119.23	110.70
1	5	1930	U	N1-C1'-C2'	5.69	122.53	114.00
1	5	2277	C	O4'-C1'-C2'	-5.69	101.91	107.60
1	5	4548	A	O4'-C1'-C2'	-5.69	101.91	107.60
1	5	1953	U	N1-C1'-C2'	5.68	120.53	112.00
1	5	64	A	C4'-C3'-O3'	5.68	117.92	109.40
1	5	2533	C	N1-C1'-C2'	5.68	120.53	112.00
1	5	3914	U	C2'-C3'-O3'	-5.68	105.18	113.70
1	5	4170	A	C2'-C3'-O3'	5.68	118.02	109.50
1	5	4887	C	C1'-C2'-O2'	-5.68	99.88	108.40
11	H	180	TYR	CA-CB-CG	5.68	124.13	113.90
1	5	4368	G	O4'-C1'-C2'	-5.68	101.92	107.60
1	5	4463	U	N1-C1'-C2'	-5.68	103.48	112.00
5	B	119	TYR	CB-CA-C	5.68	121.22	111.68
16	N	53	TYR	N-CA-CB	5.67	118.71	109.69
1	5	1408	G	C1'-C2'-O2'	5.67	116.91	108.40
1	5	2025	A	C2'-C3'-O3'	-5.67	100.99	109.50
1	5	450	G	C1'-C2'-O2'	5.67	116.90	108.40
1	5	1576	G	C2'-C3'-O3'	5.67	118.00	109.50
44	p	14	TYR	CB-CA-C	5.67	121.94	110.38
1	5	3753	G	C2'-C3'-O3'	5.66	122.19	113.70
1	5	972	C	C4'-C3'-O3'	-5.66	104.51	113.00
1	5	3676	G	C1'-C2'-O2'	-5.66	99.91	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	4497	U	C2'-C3'-O3'	5.66	122.19	113.70
3	8	38	U	C1'-O4'-C4'	-5.66	104.24	109.90
1	5	84	A	C1'-C2'-O2'	-5.65	103.32	111.80
45	r	105	ASP	N-CA-C	-5.65	105.41	112.93
1	5	43	U	N1-C1'-C2'	-5.65	103.52	112.00
1	5	2507	A	O4'-C1'-C2'	-5.65	101.95	107.60
4	A	19	HIS	N-CA-CB	-5.65	100.94	110.49
1	5	1379	C	C1'-O4'-C4'	-5.65	104.05	109.70
1	5	97	G	C1'-C2'-O2'	5.65	116.87	108.40
1	5	1930	U	C4'-C3'-O3'	-5.65	100.93	109.40
1	5	4627	U	O4'-C1'-C2'	-5.65	101.95	107.60
1	5	2043	A	C4'-C3'-O3'	-5.65	104.53	113.00
1	5	931	C	C1'-C2'-O2'	-5.64	103.33	111.80
1	5	2077	C	O4'-C1'-C2'	-5.64	101.96	107.60
1	5	3913	G	C4'-C3'-O3'	-5.64	100.93	109.40
1	5	1334	A	C1'-C2'-O2'	5.64	116.86	108.40
8	E	69	TYR	N-CA-C	5.64	118.24	107.75
1	5	2817	C	C2'-C3'-O3'	5.64	122.16	113.70
1	5	2056	G	P-O5'-C5'	-5.63	112.45	120.90
5	B	363	ILE	N-CA-C	5.63	116.11	107.77
1	5	1804	A	C4'-C3'-O3'	5.63	117.85	109.40
1	5	2696	A	C1'-C2'-O2'	-5.63	103.35	111.80
23	U	90	TYR	N-CA-CB	5.63	118.24	110.07
15	M	119	ARG	NE-CZ-NH2	5.63	124.27	119.20
21	S	32	ILE	N-CA-C	-5.63	103.91	110.05
30	b	6	ASN	N-CA-C	-5.63	104.63	113.02
1	5	1379	C	N1-C1'-C2'	5.63	122.45	114.00
1	5	3739	C	C2'-C3'-O3'	5.63	122.14	113.70
1	5	1390	G	C2'-C3'-O3'	5.63	122.14	113.70
1	5	2370	A	C3'-C2'-O2'	5.63	123.04	114.60
3	8	118	C	O4'-C1'-C2'	-5.63	101.97	107.60
16	N	151	ILE	N-CA-C	-5.62	104.87	111.00
1	5	4958	C	O4'-C1'-C2'	-5.62	101.98	107.60
12	I	213	HIS	CA-CB-CG	-5.62	108.18	113.80
6	C	42	THR	CB-CA-C	-5.62	100.23	110.63
1	5	157	U	C1'-O4'-C4'	-5.62	104.28	109.90
1	5	1378	C	C4'-C3'-O3'	5.62	121.42	113.00
35	g	76	ARG	CB-CA-C	-5.62	100.99	110.43
1	5	1522	G	N9-C1'-C2'	-5.61	103.58	112.00
1	5	4324	A	N9-C1'-C2'	5.61	120.42	112.00
1	5	4464	A	C5'-C4'-O4'	5.61	118.22	109.80
1	5	381	U	N1-C1'-C2'	5.61	120.42	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2248	C	O4'-C1'-C2'	-5.61	101.99	107.60
5	B	117	ARG	CG-CD-NE	-5.61	99.66	112.00
1	5	2577	C	O4'-C1'-C2'	-5.61	101.99	107.60
1	5	2688	G	O4'-C1'-C2'	-5.61	101.99	107.60
1	5	1832	C	O4'-C1'-C2'	-5.61	101.99	107.60
9	F	119	ILE	N-CA-CB	5.61	117.20	110.31
1	5	2077	C	C1'-C2'-O2'	5.60	116.81	108.40
1	5	4194	U	N1-C1'-C2'	-5.60	103.59	112.00
32	d	108	TYR	N-CA-C	5.60	117.97	110.35
1	5	468	U	N1-C1'-C2'	5.60	120.40	112.00
11	H	115	ARG	N-CA-CB	5.60	118.37	110.36
22	T	103	ASP	N-CA-C	5.60	119.59	112.87
3	8	34	U	O4'-C1'-C2'	-5.60	102.00	107.60
9	F	203	PHE	N-CA-C	-5.60	104.87	110.97
14	L	66	TYR	N-CA-CB	-5.60	103.55	111.00
1	5	4719	G	C4'-C3'-O3'	5.60	117.80	109.40
1	5	2795	A	C1'-C2'-O2'	-5.59	103.41	111.80
1	5	963	G	C2'-C3'-O3'	-5.59	101.11	109.50
5	B	236	HIS	N-CA-CB	-5.59	103.97	112.47
1	5	1478	C	N1-C1'-C2'	5.59	120.39	112.00
1	5	4238	G	N9-C1'-C2'	-5.59	103.61	112.00
1	5	85	G	N9-C1'-C2'	-5.59	105.62	114.00
1	5	406	C	C3'-C2'-O2'	5.59	119.08	110.70
1	5	2081	C	N1-C1'-C2'	5.59	120.38	112.00
7	D	283	LYS	N-CA-C	-5.59	101.05	109.60
9	F	84	TYR	N-CA-CB	5.59	118.95	110.45
1	5	2467	U	C2'-C3'-O3'	-5.59	105.32	113.70
1	5	2753	G	C2'-C3'-O3'	5.59	122.08	113.70
27	Y	19	PHE	CB-CA-C	5.59	118.15	111.22
1	5	3773	U	C4'-C3'-C2'	-5.59	97.01	102.60
1	5	4979	A	C2'-C3'-O3'	-5.59	105.32	113.70
1	5	209	U	C1'-C2'-O2'	5.58	116.77	108.40
1	5	136	C	C3'-C2'-O2'	5.58	119.07	110.70
1	5	4693	C	O4'-C4'-C3'	-5.58	98.42	104.00
9	F	237	ASN	N-CA-CB	5.58	118.33	109.51
1	5	216	C	C2'-C3'-O3'	5.58	122.06	113.70
1	5	4623	G	C1'-C2'-O2'	5.58	116.77	108.40
1	5	152	U	O4'-C1'-C2'	-5.58	102.02	107.60
1	5	2262	G	C4'-C3'-O3'	5.58	117.76	109.40
1	5	4518	A	C3'-C2'-O2'	-5.58	106.23	114.60
1	5	1292	C	N1-C1'-C2'	5.57	120.36	112.00
1	5	4198	G	O4'-C1'-C2'	-5.57	102.03	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	S	44	PHE	N-CA-CB	5.57	118.41	110.16
47	2	16	LYS	N-CA-C	5.57	117.44	111.36
1	5	1274	A	C2'-C3'-O3'	5.57	117.86	109.50
1	5	2424	G	N9-C1'-C2'	5.57	120.36	112.00
1	5	977	C	C4'-C3'-C2'	-5.57	97.03	102.60
21	S	10	TYR	CB-CA-C	5.57	120.64	111.50
45	r	30	ASN	CA-C-N	-5.57	114.33	122.19
45	r	30	ASN	C-N-CA	-5.57	114.33	122.19
1	5	664	G	C1'-O4'-C4'	-5.57	104.13	109.70
5	B	39	LYS	CA-C-N	5.57	126.80	119.84
5	B	39	LYS	C-N-CA	5.57	126.80	119.84
6	C	144	ILE	CB-CA-C	-5.57	103.45	111.19
1	5	3626	G	C1'-C2'-O2'	5.57	116.75	108.40
1	5	1440	U	O4'-C1'-C2'	-5.57	102.03	107.60
1	5	4976	U	N1-C1'-C2'	5.57	122.35	114.00
3	8	125	C	O4'-C1'-C2'	-5.57	102.03	107.60
3	8	112	G	C3'-C2'-O2'	5.56	119.04	110.70
1	5	2325	C	C2'-C3'-O3'	5.56	122.04	113.70
44	p	18	TYR	CA-CB-CG	5.56	123.91	113.90
9	F	84	TYR	N-CA-C	5.56	118.06	110.55
35	g	14	ASN	CA-CB-CG	-5.56	107.04	112.60
16	N	6	TYR	CA-CB-CG	-5.56	103.90	113.90
1	5	158	A	N9-C1'-C2'	-5.55	103.67	112.00
1	5	267	G	C2'-C3'-O3'	5.55	122.03	113.70
1	5	2670	C	N1-C1'-C2'	5.55	120.33	112.00
17	O	73	PHE	N-CA-CB	5.55	118.13	109.97
1	5	2324	C	O4'-C1'-C2'	-5.55	102.05	107.60
10	G	57	TRP	CA-CB-CG	-5.55	103.06	113.60
1	5	2310	C	C2'-C3'-O3'	5.55	122.02	113.70
1	5	4424	A	C1'-C2'-O2'	5.55	116.72	108.40
4	A	162	ASN	N-CA-CB	5.55	119.22	110.23
35	g	76	ARG	N-CA-C	5.55	116.96	108.42
1	5	4306	U	C1'-C2'-O2'	5.54	116.72	108.40
1	5	1323	A	N9-C1'-C2'	5.54	120.31	112.00
1	5	2270	G	N9-C1'-C2'	5.54	120.31	112.00
45	r	16	PHE	N-CA-C	-5.54	106.10	112.92
1	5	2833	A	N9-C1'-C2'	5.54	120.31	112.00
1	5	4583	C	N1-C1'-C2'	-5.54	103.70	112.00
12	I	111	LEU	N-CA-C	-5.54	102.09	110.28
33	e	57	ASN	N-CA-C	-5.53	100.88	109.24
9	F	136	ARG	CG-CD-NE	-5.53	99.83	112.00
1	5	110	C	C1'-C2'-O2'	5.53	116.69	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2007	G	C1'-C2'-O2'	-5.53	103.51	111.80
1	5	153	G	C4'-C3'-O3'	-5.53	104.71	113.00
1	5	3654	G	C1'-C2'-O2'	5.53	116.69	108.40
2	7	72	U	C3'-C2'-O2'	5.53	118.99	110.70
11	H	115	ARG	CA-CB-CG	5.53	125.15	114.10
1	5	222	C	C1'-C2'-O2'	5.52	116.68	108.40
1	5	1523	A	C4'-C3'-O3'	-5.52	104.72	113.00
44	p	34	HIS	CB-CA-C	5.52	120.05	110.94
1	5	18	C	C4'-C3'-O3'	-5.52	104.72	113.00
1	5	4499	G	C2'-C3'-O3'	-5.52	105.42	113.70
22	T	105	PHE	N-CA-C	-5.52	103.62	110.41
9	F	110	VAL	CB-CA-C	-5.52	104.82	111.88
20	R	97	ARG	CG-CD-NE	-5.52	99.86	112.00
38	j	39	TYR	N-CA-C	5.52	122.00	109.81
1	5	4404	U	C1'-C2'-O2'	5.51	116.67	108.40
9	F	197	TYR	N-CA-CB	5.51	119.81	110.49
1	5	84	A	N9-C1'-C2'	5.51	122.27	114.00
1	5	1280	C	C3'-C2'-O2'	5.51	118.97	110.70
33	e	74	PHE	CA-CB-CG	-5.51	108.29	113.80
1	5	1343	A	C4'-C3'-O3'	-5.51	104.73	113.00
1	5	2323	C	C2'-C3'-O3'	5.51	121.96	113.70
1	5	4165	C	C2'-C3'-O3'	5.51	121.97	113.70
4	A	37	ARG	CG-CD-NE	-5.51	99.88	112.00
4	A	33	ASP	CA-C-O	-5.50	115.47	121.14
43	o	42	ASP	CB-CA-C	-5.50	102.24	110.88
1	5	2529	A	C2'-C3'-O3'	-5.50	105.44	113.70
1	5	4449	A	C4'-C3'-O3'	5.50	121.25	113.00
1	5	4281	A	C2'-C3'-O3'	-5.50	105.45	113.70
1	5	4542	U	N1-C1'-C2'	5.50	120.25	112.00
39	k	11	PHE	N-CA-CB	5.50	118.77	110.30
1	5	1627	G	C1'-C2'-O2'	5.50	116.65	108.40
1	5	1631	A	O4'-C4'-C3'	-5.50	100.60	106.10
1	5	4693	C	C5'-C4'-O4'	5.50	118.05	109.80
1	5	268	G	C2'-C3'-O3'	5.50	121.95	113.70
1	5	405	U	C2'-C3'-O3'	5.50	121.94	113.70
1	5	1722	C	C4'-C3'-O3'	-5.50	104.76	113.00
1	5	1834	U	C4'-C3'-O3'	5.50	117.64	109.40
1	5	4975	G	O4'-C1'-C2'	-5.50	102.10	107.60
3	8	1	C	C5'-C4'-C3'	5.50	124.24	116.00
1	5	1847	C	N1-C1'-C2'	5.50	120.24	112.00
1	5	2668	G	C3'-C2'-O2'	5.50	118.94	110.70
22	T	17	ARG	CB-CA-C	5.49	117.35	109.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2344	U	C2'-C3'-O3'	-5.49	105.47	113.70
12	I	78	LYS	N-CA-C	-5.49	99.10	110.80
1	5	170	C	C4'-C3'-O3'	5.49	117.63	109.40
1	5	2580	U	N1-C1'-C2'	5.49	120.23	112.00
2	7	6	C	C2'-C3'-O3'	5.49	121.93	113.70
1	5	514	U	O4'-C1'-C2'	-5.48	102.12	107.60
1	5	1214	C	C2'-C3'-O3'	-5.48	101.28	109.50
1	5	2035	C	C1'-C2'-O2'	5.48	116.62	108.40
1	5	4600	G	O4'-C1'-C2'	-5.48	102.12	107.60
33	e	75	ARG	CG-CD-NE	-5.48	99.94	112.00
1	5	2289	C	C2'-C3'-O3'	-5.48	105.48	113.70
1	5	658	C	C2'-C3'-O3'	5.48	121.92	113.70
4	A	195	CYS	N-CA-C	-5.48	101.43	109.81
9	F	136	ARG	CA-CB-CG	5.48	125.06	114.10
22	T	14	MET	CB-CA-C	-5.48	102.53	110.96
1	5	4467	A	C4'-C3'-O3'	-5.48	104.79	113.00
3	8	38	U	O4'-C1'-C2'	-5.48	102.12	107.60
19	Q	176	ARG	CG-CD-NE	-5.48	99.95	112.00
1	5	3776	G	N9-C1'-C2'	-5.47	105.79	114.00
1	5	157	U	N1-C1'-C2'	-5.47	103.79	112.00
1	5	376	A	C1'-C2'-O2'	5.47	116.60	108.40
1	5	1818	G	C4'-C3'-O3'	-5.47	104.80	113.00
2	7	65	G	C2'-C3'-O3'	5.47	121.90	113.70
1	5	4764	A	C4'-C3'-O3'	-5.47	104.80	113.00
1	5	5044	A	N9-C1'-C2'	5.46	120.20	112.00
12	I	46	PHE	CB-CA-C	5.46	117.92	111.15
1	5	509	A	C4'-C3'-O3'	-5.46	104.81	113.00
3	8	104	A	N9-C1'-C2'	5.46	122.19	114.00
1	5	4223	C	C1'-C2'-O2'	5.46	116.59	108.40
7	D	218	ALA	N-CA-C	-5.46	105.42	112.68
1	5	4322	G	N9-C1'-C2'	-5.46	103.81	112.00
6	C	311	ARG	CG-CD-NE	-5.46	99.99	112.00
1	5	4320	G	N9-C1'-C2'	5.46	120.19	112.00
1	5	4699	U	C2'-C3'-O3'	-5.46	101.31	109.50
34	f	6	TRP	CB-CA-C	5.46	121.28	110.42
1	5	1945	G	C4'-C3'-O3'	-5.46	104.82	113.00
1	5	2011	C	C3'-C2'-O2'	5.45	118.88	110.70
1	5	99	A	C1'-C2'-O2'	5.45	116.58	108.40
1	5	1373	A	C4'-C3'-O3'	-5.45	104.82	113.00
1	5	1724	G	N9-C1'-C2'	5.45	122.18	114.00
1	5	2090	U	N1-C1'-C2'	5.45	120.17	112.00
3	8	73	U	N1-C1'-C2'	-5.45	103.83	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	Y	74	TYR	N-CA-CB	5.45	119.70	110.49
27	Y	100	HIS	N-CA-CB	5.45	117.89	110.05
1	5	1735	U	C1'-C2'-O2'	5.44	116.57	108.40
2	7	110	G	C4'-C3'-O3'	-5.44	104.83	113.00
44	p	14	TYR	CA-CB-CG	-5.44	104.10	113.90
1	5	2827	G	N9-C1'-C2'	5.44	122.16	114.00
1	5	1521	C	N1-C1'-C2'	-5.44	103.84	112.00
1	5	1895	G	C2'-C3'-O3'	-5.44	105.54	113.70
3	8	115	G	C4'-C3'-O3'	-5.44	104.84	113.00
4	A	194	ASN	N-CA-CB	5.44	118.41	110.58
1	5	2117	G	O4'-C4'-C3'	-5.44	98.56	104.00
1	5	2667	C	C2'-C3'-O3'	-5.44	105.54	113.70
1	5	1534	A	C3'-C2'-O2'	-5.44	106.45	114.60
2	7	6	C	C4'-C3'-O3'	-5.43	104.85	113.00
1	5	3799	A	N9-C1'-C2'	5.43	120.14	112.00
1	5	3938	G	C4'-C3'-O3'	-5.43	101.26	109.40
1	5	2258	C	C4'-C3'-O3'	5.43	121.14	113.00
1	5	3880	G	N9-C1'-C2'	5.43	122.14	114.00
1	5	934	C	O4'-C4'-C3'	-5.43	100.67	106.10
3	8	104	A	P-O5'-C5'	5.43	129.04	120.90
9	F	36	ARG	NE-CZ-NH2	5.43	124.08	119.20
1	5	3734	U	N1-C1'-C2'	5.42	120.14	112.00
1	5	3594	C	N1-C1'-C2'	5.42	120.14	112.00
15	M	91	TRP	CB-CA-C	-5.42	102.30	110.92
27	Y	61	HIS	CA-CB-CG	-5.42	108.38	113.80
1	5	470	A	O4'-C1'-C2'	-5.42	102.18	107.60
21	S	28	TYR	CA-CB-CG	5.42	123.65	113.90
1	5	2674	A	O4'-C4'-C3'	-5.42	100.68	106.10
1	5	3666	C	C2'-C3'-O3'	5.42	121.82	113.70
35	g	9	ARG	CG-CD-NE	-5.42	100.08	112.00
1	5	1610	C	C4'-C3'-O3'	-5.42	104.88	113.00
1	5	1528	U	C4'-C3'-O3'	-5.41	104.88	113.00
1	5	4750	G	C4'-C3'-O3'	5.41	121.12	113.00
20	R	117	ARG	CB-CG-CD	5.41	123.75	111.30
1	5	4234	A	C2'-C3'-O3'	5.41	117.62	109.50
1	5	648	G	C2'-C3'-O3'	5.41	121.81	113.70
1	5	1361	G	C2'-C3'-O3'	5.41	121.81	113.70
1	5	3813	A	O4'-C4'-C3'	-5.41	100.69	106.10
1	5	3918	G	C1'-C2'-O2'	5.41	116.52	108.40
11	H	115	ARG	CG-CD-NE	-5.41	100.10	112.00
1	5	1896	A	C1'-C2'-O2'	5.41	116.51	108.40
1	5	4536	C	C1'-C2'-O2'	5.41	116.51	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
38	j	46	LYS	N-CA-C	-5.41	102.16	109.95
19	Q	178	ARG	CG-CD-NE	-5.41	100.11	112.00
1	5	1358	G	N9-C1'-C2'	5.40	120.11	112.00
1	5	2658	G	C1'-C2'-O2'	5.40	116.51	108.40
1	5	3844	U	C1'-C2'-O2'	5.40	116.51	108.40
1	5	956	A	N9-C1'-C2'	-5.40	105.90	114.00
1	5	4670	C	P-O5'-C5'	5.40	129.00	120.90
4	A	210	PRO	N-CA-C	5.40	123.60	112.47
1	5	2635	U	N1-C1'-C2'	5.40	120.10	112.00
1	5	4434	C	N1-C1'-C2'	5.40	120.10	112.00
1	5	4510	A	O4'-C4'-C3'	-5.40	100.70	106.10
1	5	4714	C	C3'-C2'-O2'	5.40	118.80	110.70
1	5	4763	U	O5'-C5'-C4'	-5.40	103.60	111.70
1	5	42	A	C1'-O4'-C4'	-5.40	104.30	109.70
36	h	117	ARG	CB-CG-CD	5.40	123.71	111.30
1	5	394	G	N9-C1'-C2'	-5.39	103.91	112.00
1	5	2264	C	C3'-C2'-O2'	5.39	122.69	114.60
1	5	2879	A	O4'-C4'-C3'	-5.39	100.70	106.10
1	5	54	G	C2'-C3'-O3'	5.39	121.79	113.70
1	5	3595	U	C3'-C2'-O2'	5.39	118.79	110.70
1	5	3627	G	C2'-C3'-O3'	5.39	121.79	113.70
1	5	1734	G	N9-C1'-C2'	-5.39	105.92	114.00
1	5	4280	A	C4'-C3'-C2'	-5.39	97.21	102.60
1	5	4981	G	N9-C1'-C2'	-5.39	103.92	112.00
20	R	175	GLU	N-CA-C	-5.39	104.29	111.24
1	5	55	G	N9-C1'-C2'	-5.39	103.92	112.00
1	5	1216	C	C2'-C3'-O3'	5.39	121.78	113.70
1	5	1929	A	N9-C1'-C2'	5.39	120.08	112.00
1	5	1930	U	O4'-C4'-C3'	-5.39	100.71	106.10
34	f	42	TYR	CA-CB-CG	-5.39	104.20	113.90
1	5	4915	G	C4'-C3'-O3'	-5.39	104.92	113.00
1	5	450	G	N9-C1'-C2'	-5.38	103.92	112.00
1	5	3697	U	C3'-C2'-O2'	5.38	118.78	110.70
3	8	14	U	C1'-C2'-O2'	-5.38	100.32	108.40
1	5	1620	U	N1-C1'-C2'	5.38	120.08	112.00
1	5	5022	U	O4'-C1'-C2'	-5.38	102.22	107.60
34	f	19	ARG	CA-CB-CG	5.38	124.87	114.10
1	5	1963	C	C2'-C3'-O3'	5.38	121.77	113.70
1	5	2083	C	C4'-C3'-O3'	5.38	121.07	113.00
45	r	77	TYR	N-CA-CB	-5.38	101.47	110.99
1	5	2447	U	C1'-C2'-O2'	-5.38	103.73	111.80
1	5	4257	A	C1'-C2'-O2'	-5.38	103.73	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1067	G	C2'-C3'-O3'	5.38	121.76	113.70
5	B	106	PHE	N-CA-CB	5.38	118.79	110.46
6	C	142	HIS	CB-CA-C	5.38	119.81	110.94
1	5	4183	G	O4'-C4'-C3'	-5.37	100.73	106.10
1	5	664	G	O4'-C1'-N9	5.37	116.26	108.20
1	5	977	C	C4'-C3'-O3'	-5.37	104.94	113.00
1	5	1727	U	N1-C1'-C2'	5.37	120.06	112.00
1	5	2648	G	C2'-C3'-O3'	5.37	117.56	109.50
1	5	2796	G	O4'-C4'-C3'	-5.37	100.73	106.10
10	G	202	VAL	CB-CA-C	5.37	116.79	111.74
1	5	2874	U	O4'-C4'-C3'	-5.37	100.73	106.10
6	C	159	GLU	N-CA-CB	5.37	118.49	110.22
32	d	87	ARG	CB-CG-CD	5.37	123.65	111.30
45	r	12	ASN	N-CA-C	-5.37	102.25	110.14
1	5	288	G	C1'-C2'-O2'	5.37	116.45	108.40
1	5	2859	G	C1'-C2'-O2'	-5.37	103.75	111.80
1	5	4307	A	C1'-C2'-O2'	5.37	116.45	108.40
1	5	5060	A	C4'-C3'-O3'	5.37	121.05	113.00
34	f	70	ILE	N-CA-C	-5.37	100.69	108.36
1	5	1601	A	N9-C1'-C2'	-5.37	103.95	112.00
1	5	2275	G	C2'-C3'-O3'	5.36	121.75	113.70
1	5	4123	C	O4'-C1'-C2'	-5.36	102.24	107.60
1	5	4398	C	C2'-C3'-O3'	5.36	121.75	113.70
1	5	53	C	C1'-C2'-O2'	5.36	116.44	108.40
8	E	212	TYR	CA-CB-CG	5.36	123.55	113.90
1	5	2769	U	N1-C1'-C2'	-5.36	103.96	112.00
1	5	3846	C	C1'-C2'-O2'	5.36	116.44	108.40
1	5	5002	U	C4'-C3'-O3'	-5.36	104.97	113.00
1	5	2675	G	O4'-C1'-C2'	-5.36	102.25	107.60
1	5	4464	A	O4'-C1'-N9	-5.36	100.47	108.50
7	D	20	PHE	CB-CA-C	5.36	121.08	110.42
1	5	4558	U	C4'-C3'-O3'	-5.35	104.97	113.00
31	c	56	ARG	CD-NE-CZ	5.35	131.90	124.40
1	5	1543	G	C1'-C2'-O2'	5.35	116.43	108.40
1	5	3906	A	N9-C1'-C2'	-5.35	105.97	114.00
1	5	97	G	N9-C1'-C2'	-5.35	103.97	112.00
1	5	3801	U	C3'-C2'-O2'	5.35	118.73	110.70
1	5	3714	G	N9-C1'-C2'	5.35	120.03	112.00
32	d	24	GLU	CA-CB-CG	5.35	124.80	114.10
1	5	745	G	N9-C1'-C2'	5.35	120.02	112.00
1	5	2305	U	C1'-C2'-O2'	-5.35	103.78	111.80
20	R	57	VAL	N-CA-C	5.35	116.48	109.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	S	145	PHE	CA-CB-CG	-5.35	108.45	113.80
1	5	1864	G	C2'-C3'-O3'	5.35	121.72	113.70
1	5	4454	G	C2'-C3'-O3'	5.35	121.72	113.70
1	5	100	C	C1'-C2'-O2'	5.34	116.41	108.40
1	5	952	G	N9-C1'-C2'	5.34	120.02	112.00
1	5	3679	U	O4'-C4'-C3'	-5.34	100.76	106.10
1	5	4319	C	N1-C1'-C2'	5.34	120.01	112.00
3	8	29	G	C4'-C3'-O3'	-5.34	104.99	113.00
20	R	74	ARG	NE-CZ-NH1	-5.34	116.16	121.50
31	c	27	TYR	N-CA-C	5.34	116.40	108.60
1	5	4889	G	C2'-C3'-O3'	5.34	117.51	109.50
1	5	1742	A	O4'-C1'-C2'	-5.34	102.26	107.60
1	5	1272	C	O4'-C1'-C2'	-5.33	100.47	105.80
1	5	1244	G	C4'-C3'-O3'	5.33	117.40	109.40
6	C	232	VAL	N-CA-C	-5.33	106.49	111.45
1	5	1765	A	C2'-C3'-O3'	-5.33	105.70	113.70
1	5	4473	A	C2'-C3'-O3'	5.33	121.70	113.70
30	b	49	HIS	CA-CB-CG	-5.33	108.47	113.80
1	5	2502	G	C3'-C2'-O2'	5.33	118.69	110.70
3	8	123	U	C3'-C2'-O2'	5.33	118.69	110.70
1	5	989	U	C3'-C2'-O2'	5.32	118.69	110.70
1	5	4519	C	N1-C1'-C2'	-5.32	104.01	112.00
1	5	5011	A	C2'-C3'-O3'	5.32	121.69	113.70
38	j	67	LEU	N-CA-C	5.32	117.50	111.11
1	5	4124	G	C3'-C2'-O2'	5.32	118.68	110.70
1	5	2848	G	N9-C1'-C2'	-5.32	104.02	112.00
3	8	104	A	C1'-C2'-O2'	-5.32	103.82	111.80
17	O	110	PRO	C-N-CD	-5.32	103.20	125.00
1	5	1555	G	C1'-C2'-O2'	5.32	116.37	108.40
1	5	68	U	C1'-C2'-O2'	5.31	116.37	108.40
1	5	4208	U	C2'-C3'-O3'	5.31	121.67	113.70
1	5	4519	C	O5'-C5'-C4'	-5.31	103.53	111.50
1	5	1266	G	O4'-C1'-C2'	-5.31	102.29	107.60
1	5	2459	G	C1'-C2'-O2'	5.31	116.37	108.40
1	5	2652	G	C3'-C2'-O2'	5.31	118.67	110.70
1	5	4269	G	C1'-C2'-O2'	5.31	116.37	108.40
1	5	4270	C	C1'-C2'-O2'	5.31	116.37	108.40
1	5	4560	C	O4'-C4'-C3'	-5.31	100.79	106.10
1	5	274	C	C3'-C2'-O2'	5.31	118.67	110.70
5	B	56	ILE	N-CA-C	-5.31	100.95	108.65
1	5	2843	U	C2'-C3'-O3'	5.31	121.67	113.70
1	5	2272	C	C4'-C3'-O3'	5.31	120.96	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	e	80	HIS	N-CA-CB	-5.31	102.80	111.18
1	5	2745	A	N9-C1'-C2'	5.31	119.96	112.00
1	5	3644	U	C2'-C3'-O3'	-5.31	105.74	113.70
1	5	1884	C	C3'-C2'-O2'	5.30	118.65	110.70
1	5	931	C	C2'-C3'-O3'	5.30	117.45	109.50
1	5	5031	G	C4'-C3'-O3'	-5.30	105.06	113.00
1	5	405	U	O4'-C1'-C2'	-5.29	102.31	107.60
1	5	2529	A	C3'-C2'-O2'	5.29	118.64	110.70
1	5	347	A	C4'-C3'-O3'	-5.29	105.06	113.00
1	5	2087	C	C1'-C2'-O2'	5.29	116.33	108.40
1	5	1961	G	C4'-C3'-C2'	-5.29	97.31	102.60
1	5	1965	G	O4'-C1'-C2'	-5.29	102.31	107.60
26	X	137	TYR	CA-CB-CG	5.29	123.42	113.90
1	5	944	A	O4'-C1'-C2'	-5.29	102.31	107.60
3	8	81	C	C1'-O4'-C4'	-5.29	104.61	109.90
1	5	100	C	N1-C1'-C2'	-5.28	104.07	112.00
5	B	169	ARG	CG-CD-NE	5.28	123.62	112.00
37	i	28	ARG	CB-CG-CD	5.28	123.45	111.30
1	5	1649	U	N1-C1'-C2'	5.28	121.92	114.00
15	M	91	TRP	N-CA-CB	5.28	117.85	109.82
8	E	42	ARG	N-CA-C	5.28	122.05	110.80
1	5	143	C	O4'-C1'-C2'	-5.28	102.32	107.60
1	5	1379	C	O4'-C1'-N1	5.28	116.11	108.20
1	5	2417	A	O4'-C1'-C2'	-5.28	102.32	107.60
5	B	243	LYS	N-CA-C	5.28	118.98	112.54
1	5	195	C	O4'-C1'-C2'	-5.28	102.32	107.60
30	b	17	HIS	CB-CA-C	-5.28	99.06	109.67
1	5	31	U	C1'-C2'-O2'	-5.27	100.49	108.40
1	5	1643	A	C3'-C2'-O2'	5.27	118.61	110.70
1	5	4876	U	N1-C1'-C2'	5.27	121.91	114.00
10	G	49	ARG	CG-CD-NE	-5.27	100.40	112.00
1	5	1211	G	C4'-C3'-C2'	-5.27	97.33	102.60
1	5	4094	G	C2'-C3'-O3'	5.27	121.61	113.70
33	e	20	PHE	CB-CA-C	5.27	119.78	111.72
1	5	4086	G	O4'-C4'-C3'	5.27	109.27	104.00
1	5	4434	C	C4'-C3'-O3'	-5.27	105.10	113.00
1	5	2032	U	C3'-C2'-O2'	5.26	118.60	110.70
1	5	3602	C	C4'-C3'-O3'	-5.26	105.11	113.00
17	O	135	PHE	CA-CB-CG	5.26	119.06	113.80
1	5	1637	A	C4'-C3'-O3'	5.26	117.29	109.40
1	5	4377	G	C4'-C3'-O3'	-5.26	105.11	113.00
1	5	4765	G	C4'-C3'-O3'	-5.26	105.11	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
23	U	99	TRP	N-CA-C	-5.26	105.14	112.30
1	5	1628	C	O4'-C1'-C2'	-5.26	102.34	107.60
15	M	40	GLY	CA-C-N	5.26	124.44	118.97
15	M	40	GLY	C-N-CA	5.26	124.44	118.97
1	5	293	G	N9-C1'-C2'	5.25	119.88	112.00
1	5	1925	G	O4'-C1'-C2'	-5.25	102.35	107.60
1	5	2527	A	C4'-C3'-O3'	-5.25	105.12	113.00
1	5	4169	G	N9-C1'-C2'	5.25	119.87	112.00
12	I	213	HIS	N-CA-C	-5.25	104.17	111.52
13	J	32	ARG	CG-CD-NE	-5.25	100.45	112.00
1	5	2744	A	C1'-C2'-O2'	-5.24	100.54	108.40
1	5	1806	G	C4'-C3'-O3'	-5.24	105.14	113.00
3	8	34	U	C1'-C2'-O2'	5.24	116.26	108.40
29	a	40	HIS	CA-CB-CG	5.24	119.04	113.80
1	5	1823	G	C4'-C3'-O3'	-5.24	105.14	113.00
9	F	237	ASN	CA-CB-CG	-5.24	107.36	112.60
26	X	79	PHE	N-CA-C	5.24	114.87	108.11
1	5	3596	A	C2'-C3'-O3'	-5.24	105.84	113.70
32	d	26	THR	N-CA-C	5.24	117.24	108.23
1	5	746	A	C3'-C2'-O2'	5.23	118.55	110.70
1	5	3860	A	C1'-C2'-O2'	5.23	116.25	108.40
3	8	67	U	N1-C1'-C2'	5.23	119.85	112.00
1	5	422	C	C2'-C3'-O3'	5.23	121.55	113.70
8	E	59	TYR	N-CA-CB	5.23	119.33	110.49
1	5	976	G	O4'-C1'-C2'	-5.23	102.37	107.60
19	Q	32	TYR	N-CA-CB	5.23	118.83	110.73
1	5	1853	G	C1'-C2'-O2'	5.22	116.24	108.40
1	5	2896	G	O4'-C1'-C2'	-5.22	102.38	107.60
1	5	4475	G	C2'-C3'-O3'	-5.22	105.86	113.70
2	7	55	A	N9-C1'-C2'	5.22	119.83	112.00
1	5	978	G	C3'-C2'-O2'	5.22	118.53	110.70
1	5	1687	U	C4'-C3'-O3'	5.22	120.83	113.00
1	5	3657	U	C2'-C3'-O3'	5.22	121.53	113.70
1	5	4887	C	C2'-C3'-O3'	5.22	121.53	113.70
10	G	32	PHE	N-CA-CB	5.22	117.75	109.71
36	h	119	PHE	N-CA-CB	5.22	119.31	110.49
1	5	4369	A	C4'-C3'-O3'	-5.22	105.17	113.00
1	5	4385	A	C1'-C2'-O2'	5.22	116.23	108.40
9	F	179	ARG	N-CA-C	5.22	116.97	111.28
1	5	1370	G	C4'-C3'-O3'	5.22	117.23	109.40
1	5	2370	A	O4'-C4'-C3'	-5.22	100.88	106.10
14	L	99	ASP	CA-CB-CG	-5.22	107.38	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	2269	C	C2'-C3'-O3'	-5.22	105.87	113.70
1	5	4490	C	C1'-C2'-O2'	5.22	116.23	108.40
1	5	4599	A	N9-C1'-C2'	5.22	121.83	114.00
1	5	1426	G	C4'-C3'-O3'	5.21	120.82	113.00
1	5	4510	A	C2'-C3'-O3'	5.21	117.32	109.50
5	B	261	ARG	N-CA-C	-5.21	101.15	109.23
1	5	1210	C	N1-C1'-C2'	5.21	121.82	114.00
1	5	2677	G	O4'-C1'-C2'	-5.21	102.39	107.60
1	5	4385	A	C4'-C3'-O3'	5.21	120.82	113.00
10	G	81	ASN	CB-CA-C	-5.21	102.70	110.88
1	5	237	G	O4'-C1'-C2'	5.21	111.01	105.80
1	5	3679	U	C4'-C3'-O3'	-5.21	101.58	109.40
3	8	117	C	O4'-C1'-C2'	-5.21	102.39	107.60
1	5	969	C	C3'-C2'-O2'	-5.21	106.79	114.60
1	5	1921	C	C2'-C3'-O3'	5.21	117.31	109.50
1	5	1946	G	N9-C1'-C2'	-5.21	104.19	112.00
1	5	2836	A	C3'-C2'-O2'	5.21	118.51	110.70
1	5	4527	G	C4'-C3'-O3'	5.21	117.21	109.40
1	5	412	G	C4'-C3'-O3'	5.20	117.21	109.40
1	5	2509	C	C3'-C2'-O2'	5.20	118.50	110.70
1	5	2833	A	C1'-C2'-O2'	-5.20	100.59	108.40
12	I	92	HIS	N-CA-CB	5.20	117.32	110.29
1	5	2669	C	C2'-C3'-O3'	5.20	117.30	109.50
1	5	3875	G	C1'-C2'-O2'	5.20	116.20	108.40
1	5	5048	A	O4'-C1'-C2'	-5.20	102.40	107.60
34	f	51	TYR	CA-CB-CG	5.20	123.26	113.90
1	5	1557	C	C1'-C2'-O2'	5.20	116.20	108.40
1	5	2613	C	C1'-C2'-O2'	5.20	116.20	108.40
1	5	4341	C	N1-C1'-C2'	-5.20	104.20	112.00
1	5	4276	G	C1'-C2'-O2'	5.20	116.19	108.40
1	5	4534	G	C1'-C2'-O2'	5.20	116.19	108.40
7	D	16	TYR	CA-CB-CG	-5.20	104.55	113.90
1	5	453	G	O4'-C1'-C2'	-5.19	102.41	107.60
13	J	64	ARG	NE-CZ-NH2	5.19	123.88	119.20
1	5	1505	C	C1'-C2'-O2'	5.19	116.19	108.40
1	5	4275	G	C2'-C3'-O3'	5.19	121.49	113.70
1	5	4719	G	C1'-C2'-O2'	-5.19	104.01	111.80
34	f	59	THR	CA-C-N	5.19	126.00	119.98
34	f	59	THR	C-N-CA	5.19	126.00	119.98
1	5	1921	C	C4'-C3'-O3'	5.19	117.19	109.40
1	5	2250	C	C2'-C3'-O3'	5.19	121.49	113.70
1	5	1948	G	C2'-C3'-O3'	-5.19	105.92	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	F	59	TYR	N-CA-C	-5.19	106.64	112.87
1	5	3888	G	C3'-C2'-O2'	5.19	118.48	110.70
17	O	135	PHE	CB-CA-C	-5.18	101.01	111.17
1	5	4340	U	C1'-C2'-O2'	5.18	116.17	108.40
1	5	4473	A	C4'-C3'-O3'	-5.18	105.23	113.00
29	a	65	ARG	CB-CG-CD	5.18	123.22	111.30
14	L	103	ARG	CA-CB-CG	5.18	124.46	114.10
20	R	124	TYR	CA-CB-CG	5.18	123.23	113.90
3	8	86	U	C2'-C3'-O3'	5.18	121.47	113.70
20	R	141	HIS	CB-CA-C	-5.18	102.92	110.95
1	5	3636	C	O4'-C1'-C2'	-5.18	102.42	107.60
1	5	4677	U	C3'-C2'-C1'	5.17	106.47	101.30
16	N	59	TYR	CA-CB-CG	5.17	123.21	113.90
1	5	331	G	N9-C1'-C2'	5.17	119.75	112.00
1	5	3841	C	C3'-C2'-O2'	5.17	118.45	110.70
9	F	194	HIS	N-CA-CB	5.17	117.45	109.91
1	5	2046	G	O4'-C1'-N9	5.17	115.95	108.20
1	5	2111	G	C1'-C2'-O2'	-5.17	104.05	111.80
1	5	3903	A	C3'-C2'-O2'	5.17	118.45	110.70
1	5	372	A	C4'-C3'-O3'	-5.16	105.26	113.00
1	5	1781	U	N1-C1'-C2'	5.16	119.74	112.00
1	5	4936	G	C3'-C2'-O2'	5.16	118.44	110.70
1	5	3912	U	C3'-C2'-O2'	5.16	118.44	110.70
5	B	257	TRP	N-CA-CB	5.16	119.71	110.32
1	5	1632	A	C2'-C3'-O3'	5.16	121.44	113.70
1	5	2321	G	N9-C1'-C2'	5.16	119.74	112.00
5	B	179	HIS	CB-CA-C	5.16	119.89	112.05
2	7	82	G	C1'-C2'-O2'	5.16	116.13	108.40
10	G	60	TYR	N-CA-CB	5.16	117.70	110.12
1	5	4510	A	C4'-C3'-O3'	-5.15	101.67	109.40
3	8	9	A	C4'-C3'-O3'	-5.15	105.27	113.00
1	5	3845	A	C1'-C2'-O2'	5.15	116.13	108.40
1	5	4291	G	N9-C1'-C2'	5.15	121.72	114.00
1	5	3775	A	N9-C1'-C2'	5.15	119.72	112.00
1	5	3667	C	O4'-C1'-C2'	-5.15	102.45	107.60
3	8	8	U	C1'-C2'-O2'	5.15	116.12	108.40
19	Q	178	ARG	CA-CB-CG	5.15	124.39	114.10
1	5	1516	G	C1'-C2'-O2'	5.14	116.12	108.40
1	5	1552	G	N9-C1'-C2'	-5.14	104.28	112.00
1	5	3901	A	P-O5'-C5'	5.14	128.62	120.90
10	G	57	TRP	N-CA-C	-5.14	103.29	109.72
33	e	117	GLN	CB-CG-CD	-5.14	103.86	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	l	45	ARG	CG-CD-NE	-5.14	100.68	112.00
1	5	2305	U	C4'-C3'-O3'	-5.14	101.69	109.40
1	5	4543	G	C1'-C2'-O2'	-5.14	100.69	108.40
1	5	4879	C	N1-C1'-C2'	5.14	119.71	112.00
1	5	1075	G	C2'-C3'-O3'	5.14	121.41	113.70
1	5	2560	C	O4'-C1'-C2'	-5.14	102.46	107.60
1	5	3676	G	C3'-C2'-O2'	5.14	118.40	110.70
1	5	4163	U	C4'-C3'-C2'	-5.14	97.46	102.60
12	I	96	VAL	N-CA-C	5.13	115.67	108.89
16	N	94	PHE	CA-CB-CG	-5.13	108.67	113.80
21	S	9	GLU	CA-CB-CG	5.13	124.37	114.10
1	5	2308	A	N9-C1'-C2'	5.13	119.70	112.00
1	5	2701	U	C1'-C2'-O2'	5.13	116.10	108.40
1	5	3887	C	C3'-C2'-O2'	5.13	118.40	110.70
1	5	235	A	N9-C1'-C2'	-5.13	104.31	112.00
1	5	1628	C	C2'-C3'-O3'	5.13	121.39	113.70
9	F	63	TYR	CA-CB-CG	-5.13	104.67	113.90
24	V	77	HIS	CB-CA-C	5.13	120.27	110.17
1	5	1635	C	C4'-C3'-O3'	5.13	120.69	113.00
1	5	2096	G	C3'-C2'-O2'	5.13	118.39	110.70
1	5	328	A	N9-C1'-C2'	5.12	119.69	112.00
1	5	1980	U	C1'-O4'-C4'	-5.12	104.78	109.90
1	5	4945	G	C4'-C3'-O3'	-5.12	105.31	113.00
1	5	4321	U	C3'-C2'-O2'	5.12	118.39	110.70
4	A	194	ASN	CA-CB-CG	-5.12	107.48	112.60
1	5	32	G	C2'-C3'-O3'	5.12	121.38	113.70
1	5	217	C	N1-C1'-C2'	5.12	119.68	112.00
2	7	7	G	C1'-C2'-O2'	5.12	116.08	108.40
7	D	157	ASN	CB-CA-C	5.12	118.88	109.46
29	a	60	HIS	CA-CB-CG	5.12	118.92	113.80
22	T	57	TYR	CB-CA-C	-5.12	101.52	110.17
44	p	71	TYR	N-CA-C	-5.12	105.61	111.14
1	5	2509	C	C4'-C3'-O3'	5.12	120.68	113.00
1	5	3841	C	C4'-C3'-O3'	-5.12	105.32	113.00
1	5	4282	A	O4'-C4'-C3'	-5.12	100.98	106.10
1	5	4349	C	O4'-C4'-C3'	-5.12	100.98	106.10
4	A	163	ARG	CB-CG-CD	5.12	123.07	111.30
1	5	4441	A	C2'-C3'-O3'	5.12	121.38	113.70
1	5	2533	C	C1'-C2'-O2'	-5.11	100.73	108.40
1	5	3707	U	C3'-C2'-O2'	5.11	118.37	110.70
1	5	4427	G	C4'-C3'-O3'	-5.11	105.33	113.00
1	5	4436	U	N1-C1'-C2'	-5.11	106.33	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1528	U	C1'-C2'-O2'	5.11	116.07	108.40
1	5	1529	G	C4'-C3'-O3'	-5.11	105.33	113.00
1	5	4758	U	N1-C1'-C2'	5.11	119.66	112.00
1	5	1807	C	C2'-C3'-O3'	5.11	121.36	113.70
1	5	2247	C	C3'-C2'-O2'	5.11	118.36	110.70
1	5	3774	A	N9-C1'-C2'	5.11	121.66	114.00
1	5	4698	C	C3'-C2'-O2'	5.11	118.36	110.70
1	5	206	U	C2'-C3'-O3'	5.11	121.36	113.70
1	5	3639	U	N1-C1'-C2'	5.11	119.66	112.00
1	5	1952	G	N9-C1'-C2'	5.10	119.65	112.00
1	5	2258	C	N1-C1'-C2'	5.10	119.66	112.00
1	5	2384	U	N1-C1'-C2'	5.10	119.65	112.00
1	5	4990	C	C3'-C2'-O2'	5.10	118.35	110.70
34	f	19	ARG	CG-CD-NE	-5.10	100.78	112.00
1	5	353	A	C4'-C3'-O3'	5.10	117.05	109.40
1	5	4510	A	N9-C1'-C2'	5.10	121.65	114.00
24	V	97	TYR	N-CA-CB	5.10	117.45	109.85
1	5	231	U	C2'-C3'-O3'	5.10	121.35	113.70
1	5	2036	C	O4'-C1'-C2'	-5.10	102.50	107.60
1	5	2793	G	C4'-C3'-O3'	-5.10	105.35	113.00
1	5	3593	C	C4'-C3'-O3'	5.10	117.05	109.40
9	F	148	ASN	N-CA-C	-5.10	102.24	110.14
20	R	23	TRP	CB-CA-C	-5.10	100.88	110.51
1	5	2070	U	N1-C1'-C2'	5.10	121.64	114.00
1	5	4337	C	N1-C1'-C2'	5.10	119.64	112.00
1	5	1966	C	O4'-C1'-C2'	-5.09	102.51	107.60
1	5	1324	A	N9-C1'-C2'	5.09	121.64	114.00
1	5	2246	C	C3'-C2'-O2'	5.09	118.34	110.70
1	5	4656	A	C2'-C3'-O3'	5.09	117.14	109.50
20	R	105	LEU	N-CA-C	-5.09	105.42	110.97
34	f	6	TRP	CA-CB-CG	-5.09	103.92	113.60
1	5	2801	U	C3'-C2'-O2'	5.09	118.34	110.70
1	5	3686	G	C3'-C2'-O2'	5.09	118.33	110.70
7	D	96	ALA	N-CA-C	5.09	121.64	110.80
1	5	986	C	C2'-C3'-O3'	5.09	121.33	113.70
1	5	1501	C	O4'-C1'-N1	5.09	115.83	108.20
1	5	4270	C	N1-C1'-C2'	-5.09	104.37	112.00
1	5	1293	G	N9-C1'-C2'	5.09	119.63	112.00
1	5	1381	U	C4'-C3'-O3'	-5.09	105.37	113.00
1	5	4241	C	O4'-C1'-C2'	-5.09	102.51	107.60
1	5	90	G	C1'-C2'-O2'	5.08	116.03	108.40
1	5	1359	G	O4'-C4'-C3'	-5.08	98.92	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1615	C	C1'-C2'-O2'	5.08	116.02	108.40
1	5	4240	G	C1'-C2'-O2'	5.08	116.03	108.40
1	5	226	G	C2'-C3'-O3'	5.08	117.12	109.50
1	5	371	A	C1'-C2'-O2'	-5.08	100.78	108.40
5	B	17	LEU	N-CA-C	5.08	121.04	109.81
1	5	917	A	C2'-C3'-O3'	5.08	117.12	109.50
1	5	1470	G	C1'-C2'-O2'	5.08	116.02	108.40
1	5	2436	U	C1'-C2'-O2'	-5.08	104.18	111.80
21	S	171	ARG	CG-CD-NE	5.08	123.17	112.00
33	e	42	ASP	N-CA-CB	5.08	117.57	110.56
1	5	2257	C	C4'-C3'-O3'	5.08	117.02	109.40
1	5	2369	U	C2'-C3'-O3'	5.08	117.12	109.50
40	l	13	LEU	N-CA-C	-5.08	105.44	111.69
1	5	336	A	C1'-O4'-C4'	-5.08	104.82	109.90
1	5	2554	U	C3'-C2'-O2'	5.08	118.31	110.70
1	5	1937	C	C4'-C3'-O3'	5.07	120.61	113.00
1	5	4395	U	O4'-C1'-C2'	-5.07	102.53	107.60
1	5	421	C	C1'-C2'-O2'	5.07	116.01	108.40
1	5	3687	A	C1'-C2'-O2'	5.07	116.00	108.40
11	H	66	GLU	N-CA-C	-5.07	107.26	113.50
34	f	83	MET	N-CA-C	-5.07	103.02	110.52
1	5	3693	U	O4'-C1'-C2'	-5.07	102.53	107.60
1	5	62	A	C1'-C2'-O2'	-5.07	100.80	108.40
1	5	1887	G	C4'-C3'-C2'	-5.07	97.53	102.60
1	5	1213	G	C4'-C3'-O3'	-5.07	105.40	113.00
1	5	4239	A	C1'-C2'-O2'	5.07	116.00	108.40
3	8	124	U	C2'-C3'-O3'	5.06	117.09	109.50
1	5	218	A	N9-C1'-C2'	-5.06	106.41	114.00
18	P	42	ARG	CG-CD-NE	5.06	123.14	112.00
3	8	29	G	C2'-C3'-O3'	5.06	121.29	113.70
1	5	1319	U	C2'-C3'-O3'	5.06	121.29	113.70
1	5	2782	U	C2'-C3'-O3'	-5.06	106.11	113.70
22	T	140	PHE	CA-CB-CG	5.06	118.86	113.80
1	5	315	G	O4'-C1'-N9	5.06	115.78	108.20
1	5	333	U	N1-C1'-C2'	5.05	119.58	112.00
1	5	2268	A	O5'-C5'-C4'	-5.05	104.12	111.70
1	5	4307	A	C4'-C3'-O3'	-5.05	105.42	113.00
5	B	122	TRP	CA-CB-CG	5.05	123.20	113.60
1	5	3901	A	C5'-C4'-O4'	5.05	116.68	109.10
2	7	7	G	O4'-C1'-C2'	-5.05	102.55	107.60
1	5	4738	C	N1-C1'-C2'	5.05	119.57	112.00
2	7	54	A	N9-C1'-C2'	5.05	119.57	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	219	G	P-O5'-C5'	5.05	128.47	120.90
1	5	1380	G	O4'-C4'-C3'	-5.05	101.05	106.10
1	5	54	G	N9-C1'-C2'	-5.04	104.43	112.00
21	S	100	LEU	N-CA-C	5.04	118.32	112.97
1	5	687	U	C1'-C2'-O2'	5.04	115.96	108.40
1	5	4693	C	O4'-C1'-C2'	-5.04	102.56	107.60
1	5	1319	U	N1-C1'-C2'	-5.04	104.44	112.00
1	5	1534	A	O4'-C4'-C3'	-5.04	101.06	106.10
1	5	2515	G	C1'-C2'-O2'	5.04	115.96	108.40
1	5	2787	A	N9-C1'-C2'	-5.04	106.44	114.00
1	5	2448	G	N9-C1'-C2'	5.04	121.56	114.00
1	5	20	U	N1-C1'-C2'	-5.04	106.45	114.00
1	5	4457	U	N1-C1'-C2'	5.04	119.55	112.00
1	5	1440	U	C4'-C3'-C2'	-5.03	97.57	102.60
30	b	16	TRP	N-CA-CB	5.03	119.20	110.39
1	5	279	A	C2'-C3'-O3'	5.03	117.05	109.50
1	5	300	A	C1'-C2'-O2'	5.03	115.95	108.40
1	5	666	G	C2'-C3'-O3'	5.03	121.25	113.70
3	8	95	A	C4'-C3'-O3'	-5.03	105.45	113.00
1	5	22	G	C3'-C2'-O2'	5.03	118.24	110.70
1	5	1274	A	C3'-C2'-O2'	5.03	122.14	114.60
1	5	2431	A	C1'-C2'-O2'	5.03	115.94	108.40
8	E	54	SER	N-CA-C	5.03	116.79	108.20
1	5	1428	U	N1-C1'-C2'	5.02	119.54	112.00
1	5	2487	G	O4'-C1'-C2'	-5.02	102.58	107.60
1	5	4538	G	C4'-C3'-O3'	-5.02	105.47	113.00
1	5	5032	C	N1-C1'-C2'	5.02	119.53	112.00
21	S	29	ARG	N-CA-C	-5.02	101.12	109.46
1	5	422	C	O4'-C1'-C2'	-5.02	102.58	107.60
1	5	4535	A	C4'-C3'-O3'	-5.02	105.47	113.00
3	8	94	G	P-O5'-C5'	5.02	128.43	120.90
1	5	334	A	N9-C1'-C2'	5.01	119.52	112.00
1	5	2453	A	O4'-C1'-C2'	-5.01	102.59	107.60
17	O	108	ILE	CA-C-N	5.01	125.54	120.38
17	O	108	ILE	C-N-CA	5.01	125.54	120.38
1	5	42	A	O4'-C1'-N9	5.01	115.72	108.20
1	5	478	G	C2'-C3'-O3'	5.01	121.22	113.70
1	5	4322	G	C1'-C2'-O2'	5.01	115.92	108.40
1	5	4666	G	C2'-C3'-O3'	5.01	121.22	113.70
1	5	2034	G	C2'-C3'-O3'	5.01	121.22	113.70
1	5	3815	G	C1'-C2'-O2'	5.01	115.92	108.40
20	R	58	HIS	CB-CA-C	-5.01	102.61	111.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	5	1723	A	C2'-C3'-O3'	5.01	121.21	113.70
1	5	2463	G	N9-C1'-C2'	5.01	119.51	112.00
1	5	54	G	O4'-C1'-C2'	-5.01	102.59	107.60
1	5	514	U	O4'-C4'-C3'	-5.01	98.99	104.00
1	5	1987	C	O4'-C1'-C2'	-5.01	102.59	107.60
10	G	40	GLY	N-CA-C	-5.01	105.06	113.02
1	5	225	G	C1'-C2'-O2'	5.00	119.31	111.80
1	5	4481	U	O4'-C1'-C2'	-5.00	102.60	107.60
19	Q	68	ARG	CG-CD-NE	-5.00	100.99	112.00
1	5	3692	A	C4'-C3'-O3'	-5.00	105.50	113.00
1	5	4324	A	C3'-C2'-O2'	5.00	118.20	110.70
1	5	4726	G	C4'-C3'-O3'	-5.00	105.50	113.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	5	1992	U	C1'

All (340) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
46	1	405	ARG	Sidechain
47	2	29	ASP	Peptide
1	5	100	C	Sidechain
1	5	103	G	Sidechain
1	5	1167	C	Sidechain
1	5	120	A	Sidechain
1	5	1214	C	Sidechain
1	5	1281	G	Sidechain
1	5	1319	U	Sidechain
1	5	1324	A	Sidechain
1	5	1355	G	Sidechain
1	5	1398	A	Sidechain
1	5	147	A	Sidechain
1	5	1501	C	Sidechain
1	5	151	G	Sidechain
1	5	1522	G	Sidechain
1	5	1534	A	Sidechain
1	5	1539	G	Sidechain
1	5	157	U	Sidechain
1	5	1625	G	Sidechain
1	5	1627	G	Sidechain

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Mol	Chain	Res	Type	Group
1	5	1631	A	Sidechain
1	5	1658	G	Sidechain
1	5	1668	A	Sidechain
1	5	1671	U	Sidechain
1	5	1676	C	Sidechain
1	5	172	C	Sidechain
1	5	1733	G	Sidechain
1	5	1887	G	Sidechain
1	5	1894	C	Sidechain
1	5	1938	C	Sidechain
1	5	2035	C	Sidechain
1	5	2037	C	Sidechain
1	5	2046	G	Sidechain
1	5	2056	G	Sidechain
1	5	2077	C	Sidechain
1	5	2082	G	Sidechain
1	5	2087	C	Sidechain
1	5	22	G	Sidechain
1	5	2263	A	Sidechain
1	5	2268	A	Sidechain
1	5	2271	C	Sidechain
1	5	2305	U	Sidechain
1	5	2325	C	Sidechain
1	5	235	A	Sidechain
1	5	2360	A	Sidechain
1	5	2361	G	Sidechain
1	5	2394	G	Sidechain
1	5	2403	A	Sidechain
1	5	2406	G	Sidechain
1	5	2436	U	Sidechain
1	5	2438	A	Sidechain
1	5	2446	C	Sidechain
1	5	2450	G	Sidechain
1	5	2465	C	Sidechain
1	5	2511	A	Sidechain
1	5	2513	A	Sidechain
1	5	2515	G	Sidechain
1	5	2517	A	Sidechain
1	5	2553	A	Sidechain
1	5	2581	A	Sidechain
1	5	2649	G	Sidechain
1	5	2666	U	Sidechain

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Mol	Chain	Res	Type	Group
1	5	2675	G	Sidechain
1	5	2769	U	Sidechain
1	5	2796	G	Sidechain
1	5	280	G	Sidechain
1	5	2812	A	Sidechain
1	5	2827	G	Sidechain
1	5	2851	G	Sidechain
1	5	2858	A	Sidechain
1	5	291	U	Sidechain
1	5	292	G	Sidechain
1	5	293	G	Sidechain
1	5	294	G	Sidechain
1	5	31	U	Sidechain
1	5	315	G	Sidechain
1	5	332	C	Sidechain
1	5	336	A	Sidechain
1	5	352	G	Sidechain
1	5	354	U	Sidechain
1	5	3621	A	Sidechain
1	5	3635	A	Sidechain
1	5	3648	A	Sidechain
1	5	3653	A	Sidechain
1	5	3692	A	Sidechain
1	5	3726	A	Sidechain
1	5	3774	A	Sidechain
1	5	3790	U	Sidechain
1	5	3791	C	Sidechain
1	5	383	A	Sidechain
1	5	384	A	Sidechain
1	5	3843	C	Sidechain
1	5	3844	U	Sidechain
1	5	3871	A	Sidechain
1	5	3880	G	Sidechain
1	5	3881	G	Sidechain
1	5	3901	A	Sidechain
1	5	3938	G	Sidechain
1	5	405	U	Sidechain
1	5	4076	G	Sidechain
1	5	4162	C	Sidechain
1	5	417	G	Sidechain
1	5	42	A	Sidechain
1	5	4228	G	Sidechain

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Mol	Chain	Res	Type	Group
1	5	4229	U	Sidechain
1	5	4234	A	Sidechain
1	5	4239	A	Sidechain
1	5	4270	C	Sidechain
1	5	4275	G	Sidechain
1	5	4280	A	Sidechain
1	5	4282	A	Sidechain
1	5	43	U	Sidechain
1	5	4330	G	Sidechain
1	5	4341	C	Sidechain
1	5	4371	G	Sidechain
1	5	4373	G	Sidechain
1	5	4385	A	Sidechain
1	5	4463	U	Sidechain
1	5	4464	A	Sidechain
1	5	4497	U	Sidechain
1	5	4498	U	Sidechain
1	5	4510	A	Sidechain
1	5	4519	C	Sidechain
1	5	4528	G	Sidechain
1	5	4531	U	Sidechain
1	5	4548	A	Sidechain
1	5	4563	U	Sidechain
1	5	4564	A	Sidechain
1	5	4589	A	Sidechain
1	5	4600	G	Sidechain
1	5	4670	C	Sidechain
1	5	4677	U	Sidechain
1	5	4693	C	Sidechain
1	5	4763	U	Sidechain
1	5	4871	C	Sidechain
1	5	4911	A	Sidechain
1	5	4965	U	Sidechain
1	5	4966	A	Sidechain
1	5	4976	U	Sidechain
1	5	4981	G	Sidechain
1	5	5006	U	Sidechain
1	5	5040	U	Sidechain
1	5	5043	A	Sidechain
1	5	5050	C	Sidechain
1	5	5066	U	Sidechain
1	5	514	U	Sidechain

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Mol	Chain	Res	Type	Group
1	5	53	C	Sidechain
1	5	54	G	Sidechain
1	5	62	A	Sidechain
1	5	664	G	Sidechain
1	5	84	A	Sidechain
1	5	85	G	Sidechain
1	5	89	C	Sidechain
1	5	92	C	Sidechain
1	5	93	G	Sidechain
1	5	94	A	Sidechain
1	5	964	A	Sidechain
1	5	97	G	Sidechain
1	5	99	A	Sidechain
2	7	42	A	Sidechain
2	7	56	G	Sidechain
3	8	104	A	Sidechain
3	8	14	U	Sidechain
3	8	34	U	Sidechain
3	8	35	C	Sidechain
3	8	38	U	Sidechain
3	8	39	G	Sidechain
3	8	60	G	Sidechain
3	8	65	A	Sidechain
3	8	73	U	Sidechain
3	8	9	A	Sidechain
3	8	94	G	Sidechain
4	A	18	ALA	Peptide
4	A	194	ASN	Peptide
4	A	196	TRP	Peptide
4	A	209	HIS	Sidechain
4	A	211	PHE	Sidechain
4	A	215	ASN	Peptide
5	B	100	ARG	Sidechain
5	B	102	PHE	Peptide
5	B	117	ARG	Sidechain
5	B	119	TYR	Sidechain
5	B	142	GLY	Peptide
5	B	15	GLY	Peptide
5	B	16	PHE	Peptide
5	B	179	HIS	Sidechain
5	B	274	TYR	Sidechain
5	B	322	HIS	Peptide

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Mol	Chain	Res	Type	Group
5	B	379	PHE	Peptide
5	B	387	ALA	Peptide
5	B	388	PHE	Peptide
6	C	102	PHE	Sidechain
6	C	113	ARG	Peptide
6	C	264	TYR	Peptide
6	C	309	ILE	Peptide
6	C	41	HIS	Sidechain
7	D	129	GLU	Peptide
7	D	190	PHE	Peptide
7	D	198	HIS	Sidechain
7	D	20	PHE	Peptide
7	D	261	VAL	Peptide
7	D	266	TRP	Peptide
7	D	30	TYR	Peptide
7	D	44	TYR	Sidechain
8	E	102	VAL	Peptide
8	E	103	VAL	Peptide
8	E	111	TYR	Peptide
8	E	123	SER	Peptide
8	E	152	ARG	Peptide
8	E	177	LEU	Peptide
8	E	216	LYS	Peptide
8	E	224	GLN	Peptide
8	E	230	ASP	Peptide
8	E	235	LYS	Peptide
8	E	278	TYR	Sidechain
8	E	41	SER	Peptide
9	F	127	LEU	Peptide
9	F	197	TYR	Peptide
9	F	228	HIS	Sidechain
9	F	81	GLY	Peptide
9	F	82	ASN	Peptide
10	G	101	LYS	Peptide
10	G	261	LEU	Peptide
10	G	54	PHE	Sidechain
11	H	156	ASN	Peptide,Sidechain
11	H	50	LYS	Peptide
12	I	113	THR	Peptide
12	I	139	ARG	Sidechain
12	I	158	LYS	Peptide
12	I	77	VAL	Peptide

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Mol	Chain	Res	Type	Group
12	I	93	PRO	Peptide
13	J	87	LEU	Peptide
13	J	99	PHE	Sidechain
14	L	146	LEU	Peptide
14	L	147	ALA	Peptide
14	L	192	PHE	Sidechain
14	L	62	PRO	Peptide
14	L	66	TYR	Peptide
15	M	6	PHE	Sidechain
15	M	65	PRO	Peptide
15	M	79	LYS	Peptide
15	M	94	LYS	Peptide
16	N	119	TYR	Sidechain
16	N	130	PHE	Sidechain
16	N	131	GLU	Sidechain
16	N	138	PHE	Peptide
16	N	139	HIS	Sidechain
16	N	180	PHE	Sidechain
16	N	184	ILE	Peptide
16	N	202	ARG	Peptide
16	N	37	HIS	Sidechain
16	N	90	ASN	Peptide
16	N	94	PHE	Sidechain
17	O	110	PRO	Peptide
17	O	117	ARG	Peptide
17	O	135	PHE	Sidechain
18	P	139	TYR	Sidechain
19	Q	161	SER	Peptide
19	Q	162	HIS	Peptide
19	Q	174	PHE	Sidechain
19	Q	32	TYR	Peptide
19	Q	34	PHE	Sidechain
20	R	118	HIS	Sidechain
20	R	132	PHE	Sidechain
20	R	174	GLU	Peptide
20	R	19	LYS	Peptide
20	R	57	VAL	Peptide
20	R	94	THR	Peptide
21	S	10	TYR	Sidechain
21	S	145	PHE	Peptide,Sidechain
21	S	152	PHE	Peptide
21	S	154	LEU	Peptide

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Mol	Chain	Res	Type	Group
21	S	159	LEU	Peptide
21	S	164	LYS	Peptide
21	S	32	ILE	Peptide
21	S	33	PHE	Peptide
21	S	68	PHE	Peptide
21	S	90	THR	Peptide
22	T	140	PHE	Sidechain
22	T	142	ARG	Peptide
23	U	110	TYR	Peptide
23	U	55	ASN	Peptide
24	V	108	ASN	Peptide
24	V	97	TYR	Sidechain
24	V	98	PHE	Sidechain
25	W	27	LYS	Peptide
26	X	73	HIS	Sidechain
27	Y	18	HIS	Sidechain
27	Y	61	HIS	Sidechain
27	Y	62	TYR	Peptide
27	Y	81	TYR	Sidechain
29	a	109	TYR	Sidechain
29	a	128	PHE	Sidechain
29	a	34	ASN	Sidechain
29	a	39	HIS	Peptide
29	a	60	HIS	Sidechain
29	a	61	TYR	Peptide,Sidechain
29	a	62	HIS	Sidechain
29	a	91	ALA	Peptide
30	b	6	ASN	Sidechain
31	c	77	ASN	Peptide
31	c	78	ASN	Sidechain
32	d	103	TYR	Peptide
32	d	108	TYR	Peptide
32	d	25	TYR	Sidechain
32	d	72	VAL	Peptide
33	e	20	PHE	Sidechain
33	e	3	ALA	Peptide
33	e	74	PHE	Sidechain
33	e	76	LYS	Peptide
34	f	100	ARG	Peptide
34	f	53	ALA	Peptide
35	g	6	THR	Peptide
36	h	121	VAL	Peptide

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Mol	Chain	Res	Type	Group
36	h	78	TYR	Sidechain
36	h	97	LYS	Peptide
37	i	26	HIS	Sidechain
37	i	39	PHE	Sidechain
37	i	49	GLY	Peptide
38	j	46	LYS	Peptide
38	j	48	ASN	Peptide
38	j	66	HIS	Sidechain
38	j	8	PHE	Sidechain
39	k	28	ASN	Peptide
43	o	31	ASP	Peptide,Sidechain
43	o	43	ARG	Peptide
43	o	47	GLY	Peptide
43	o	48	TYR	Sidechain
43	o	76	ASN	Peptide
44	p	17	ARG	Peptide
45	r	30	ASN	Peptide
45	r	31	ASN	Sidechain
45	r	45	HIS	Sidechain
45	r	70	GLN	Peptide
45	r	76	SER	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	5	78486	0	39661	10410	0
2	7	2558	0	1296	308	0
3	8	3314	0	1683	501	0
4	A	1868	0	1959	163	0
5	B	3147	0	3280	224	0
6	C	2919	0	3100	179	0
7	D	2380	0	2412	182	0
8	E	1904	0	2055	148	0
9	F	1870	0	1996	180	0
10	G	1934	0	2086	102	0
11	H	1518	0	1601	84	0
12	I	1713	0	1752	90	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	J	1359	0	1390	62	0
14	L	1703	0	1818	102	0
15	M	1131	0	1209	74	0
16	N	1701	0	1749	128	0
17	O	1651	0	1786	89	0
18	P	1242	0	1269	57	0
19	Q	1506	0	1623	78	0
20	R	1508	0	1664	94	0
21	S	1454	0	1496	127	0
22	T	1298	0	1366	84	0
23	U	808	0	831	26	0
24	V	979	0	1039	52	0
25	W	528	0	541	52	0
26	X	976	0	1053	64	0
27	Y	1115	0	1205	62	0
28	Z	1107	0	1182	56	0
29	a	1163	0	1211	108	0
30	b	610	0	650	48	0
31	c	732	0	769	41	0
32	d	888	0	930	66	0
33	e	1053	0	1147	91	0
34	f	876	0	912	58	0
35	g	906	0	1002	54	0
36	h	1015	0	1149	56	0
37	i	832	0	917	29	0
38	j	706	0	743	53	0
39	k	569	0	637	21	0
40	l	444	0	483	36	0
41	m	429	0	466	28	0
42	n	222	0	264	0	0
43	o	851	0	922	43	0
44	p	708	0	760	26	0
45	r	1001	0	1062	74	0
46	1	3051	0	3158	177	0
47	2	494	0	527	23	0
48	3	180	0	40	1	0
49	5	119	0	0	0	0
49	7	5	0	0	0	0
49	8	4	0	0	0	0
49	P	1	0	0	0	0
49	V	1	0	0	0	0
50	j	1	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	m	1	0	0	2	0
50	o	1	0	0	1	0
All	All	140540	0	101851	13543	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 56.

All (13543) 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)
1:5:100:C:C5	1:5:101:A:C8	2.00	1.49
40:l:21:ARG:NH2	40:l:24:PRO:HG3	1.28	1.43
1:5:1174:G:N2	1:5:1175:A:N7	1.67	1.41
1:5:2526:C:C5	46:1:405:ARG:CZ	2.04	1.41
1:5:1266:G:N2	1:5:2111:G:N3	1.67	1.39
1:5:2361:G:O6	18:P:25:HIS:CD2	1.74	1.38
46:1:252:PHE:CZ	47:2:40:THR:HG21	1.58	1.38
1:5:4283:G:C2	1:5:4284:C:C6	2.13	1.37
40:l:21:ARG:HH21	40:l:24:PRO:CD	1.36	1.37
3:8:11:C:N3	3:8:12:G:N7	1.70	1.36
40:l:21:ARG:NH2	40:l:24:PRO:CG	1.87	1.36
26:X:151:ASN:ND2	47:2:20:ARG:HD2	1.39	1.36
26:X:87:MET:HG3	46:1:412:GLU:OE2	1.22	1.35
1:5:2078:C:N3	1:5:2079:G:N7	1.76	1.34
1:5:977:C:C2	1:5:978:G:C8	2.14	1.34
1:5:4283:G:C2	1:5:4284:C:C5	2.15	1.34
2:7:54:A:C2	2:7:55:A:N7	1.96	1.33
1:5:2367:A:N1	1:5:2788:U:O4	1.56	1.33
2:7:18:C:N3	2:7:19:C:C5	1.96	1.33
46:1:252:PHE:HZ	47:2:40:THR:CG2	1.42	1.33
24:V:97:TYR:OH	25:W:21:TYR:HA	1.29	1.33
1:5:4213:A:N1	1:5:4218:U:O4	1.60	1.32
1:5:983:C:O2	1:5:984:C:C6	1.81	1.32
1:5:1388:A:C6	1:5:1396:G:N2	1.96	1.32
1:5:1983:A:N7	1:5:1987:C:OP2	1.64	1.30
1:5:4892:A:N1	1:5:4927:G:O6	1.62	1.30
1:5:4233:A:N1	1:5:4290:U:O4	1.63	1.30
1:5:1964:A:C5	1:5:1965:G:C8	2.20	1.30
1:5:977:C:N3	1:5:978:G:N7	1.81	1.29
1:5:1245:C:O2	1:5:1246:G:C8	1.85	1.29
1:5:1964:A:N7	1:5:1965:G:N7	1.78	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1478:C:O2	1:5:1479:G:N7	1.62	1.27
1:5:5005:G:O6	25:W:51:TRP:HB3	1.32	1.27
1:5:1936:C:C5	2:7:84:U:C5	2.22	1.26
46:1:59:ALA:O	46:1:62:PHE:HE1	1.16	1.26
1:5:2743:A:C2	1:5:2744:A:C5	2.24	1.25
1:5:1672:U:C2	1:5:1673:U:C5	2.23	1.25
1:5:3702:A:C2	1:5:3703:G:C8	2.24	1.24
1:5:1899:G:C2	1:5:1900:C:C5	2.27	1.23
20:R:131:VAL:HB	20:R:132:PHE:CZ	1.74	1.23
46:1:268:LYS:HD2	46:1:276:TYR:CE1	1.74	1.23
1:5:1268:G:C2	1:5:1270:A:C8	2.28	1.22
1:5:2314:G:C2	1:5:2315:G:N7	2.09	1.21
1:5:2497:C:N3	1:5:2498:C:C5	2.08	1.21
1:5:964:A:N6	1:5:966:A:N7	1.87	1.21
3:8:12:G:C2	3:8:13:G:C8	2.28	1.21
1:5:2784:C:C2	1:5:2785:C:C5	2.28	1.20
24:V:97:TYR:OH	25:W:21:TYR:CA	1.89	1.20
1:5:208:A:O4'	1:5:232:G:N2	1.73	1.20
1:5:4283:G:N1	1:5:4284:C:C5	2.09	1.20
1:5:469:C:O2	1:5:688:U:H1'	1.36	1.20
1:5:1279:A:H2'	1:5:1280:C:C5	1.76	1.20
46:1:59:ALA:O	46:1:62:PHE:CE1	1.94	1.19
40:l:21:ARG:NH2	40:l:24:PRO:CD	2.03	1.19
1:5:2361:G:O6	18:P:25:HIS:HD2	1.04	1.19
1:5:106:A:H1'	1:5:336:A:C8	1.76	1.18
1:5:2362:U:C4	1:5:3859:G:N2	2.12	1.18
3:8:119:C:N3	3:8:120:G:N7	1.92	1.18
3:8:64:U:C2	3:8:65:A:N7	2.12	1.18
46:1:267:ILE:HD12	46:1:279:TYR:HB2	1.18	1.18
1:5:207:G:N2	1:5:383:A:N7	1.90	1.18
1:5:1213:G:C4	1:5:1215:C:H1'	1.77	1.17
1:5:4276:G:C6	1:5:4277:G:C8	2.32	1.17
1:5:2724:G:C2	1:5:2726:G:N7	2.13	1.17
1:5:2856:C:C2	1:5:2857:A:N7	2.13	1.17
2:7:54:A:C2	2:7:55:A:C8	2.32	1.17
1:5:1245:C:C5	1:5:1269:G:C6	2.33	1.17
1:5:2856:C:O2	1:5:2857:A:C8	1.98	1.17
1:5:166:C:O2	1:5:167:C:C5	1.98	1.17
1:5:484:U:C4	1:5:486:C:C5	2.32	1.17
1:5:1358:G:H2'	1:5:1359:G:O4'	1.45	1.17
1:5:2035:C:C4	1:5:2036:C:C5	2.32	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4767:C:O2'	1:5:4874:A:N6	1.79	1.16
3:8:96:C:C2	3:8:97:A:C8	2.33	1.16
1:5:1936:C:C5	2:7:84:U:C6	2.33	1.16
1:5:4119:C:N4	35:g:100:GLN:OE1	1.79	1.16
1:5:100:C:C4	1:5:101:A:N7	2.14	1.16
2:7:18:C:O2	2:7:19:C:C6	1.98	1.16
1:5:161:G:N2	1:5:275:C:O2	1.80	1.15
1:5:2080:U:C2	1:5:2081:C:C5	2.34	1.15
1:5:1378:C:H3'	1:5:1379:C:C5'	1.73	1.15
1:5:1358:G:C2'	1:5:1359:G:O4'	1.95	1.15
1:5:1683:U:O2	1:5:1684:A:C8	1.99	1.15
1:5:2508:U:O2	1:5:2509:C:C6	1.99	1.14
1:5:1964:A:C8	1:5:1965:G:N7	2.14	1.14
1:5:2532:C:C2	1:5:2533:C:C5	2.34	1.14
9:F:161:TYR:CE2	9:F:168:ARG:NH2	2.15	1.14
1:5:1628:C:N3	1:5:1629:G:N7	1.94	1.14
1:5:2293:U:O2	1:5:2294:G:C8	2.00	1.14
1:5:2326:G:C2	1:5:2327:G:C8	2.34	1.14
1:5:4757:C:O2	17:O:114:LYS:HA	1.42	1.14
1:5:1598:C:C5	1:5:2798:A:N7	2.16	1.14
1:5:4280:A:H61	7:D:29:ASP:CA	1.59	1.14
46:1:59:ALA:C	46:1:62:PHE:HE1	1.55	1.14
1:5:1724:G:N7	30:b:17:HIS:ND1	1.96	1.13
1:5:2468:U:O4	1:5:2473:A:N1	1.80	1.13
1:5:1214:C:O2'	1:5:2114:G:N1	1.82	1.13
1:5:2277:C:O2	1:5:2278:G:C8	2.02	1.13
1:5:3702:A:N1	1:5:3703:G:C8	2.17	1.13
1:5:208:A:C1'	1:5:232:G:N2	2.12	1.12
1:5:1966:C:N3	1:5:1967:A:N7	1.97	1.13
1:5:2314:G:N2	1:5:2315:G:C8	2.17	1.12
1:5:4518:A:C8	5:B:257:TRP:CH2	2.37	1.12
46:1:435:ALA:O	46:1:437:PHE:N	1.82	1.12
3:8:74:U:O4	27:Y:74:TYR:CD1	2.02	1.12
1:5:84:A:N6	1:5:98:A:C8	2.17	1.12
46:1:267:ILE:CD1	46:1:279:TYR:HB2	1.79	1.12
1:5:28:C:N3	1:5:29:G:N7	1.97	1.11
1:5:1269:G:H3'	1:5:2111:G:O6	1.50	1.11
1:5:1598:C:C6	1:5:2798:A:N7	2.18	1.11
1:5:5048:A:C8	32:d:34:HIS:CD2	2.37	1.11
1:5:1358:G:N2	1:5:1359:G:O6	1.83	1.11
1:5:4280:A:H61	7:D:29:ASP:HA	1.10	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:18:C:C2	2:7:19:C:C6	2.38	1.11
46:1:271:ARG:NH2	46:1:398:GLN:HG3	1.64	1.11
1:5:1325:C:H4'	1:5:3901:A:N1	1.66	1.11
1:5:3909:C:N3	1:5:3910:C:C5	2.19	1.11
26:X:156:ILE:HG22	47:2:24:ARG:HE	1.15	1.11
1:5:1248:C:N3	1:5:1249:C:C5	2.18	1.11
1:5:1899:G:C8	1:5:2278:G:N1	2.19	1.11
1:5:4276:G:C6	1:5:4277:G:N7	2.18	1.11
1:5:491:G:N2	1:5:663:G:N1	1.98	1.10
1:5:1379:C:H4'	1:5:1380:G:C8	1.85	1.10
1:5:4094:G:H2'	1:5:4095:G:O4'	1.50	1.10
1:5:161:G:N2	1:5:275:C:C2	2.19	1.10
1:5:1475:G:C2	1:5:1476:C:C5	2.39	1.10
3:8:96:C:N3	3:8:97:A:N7	2.00	1.10
46:1:271:ARG:HH22	46:1:398:GLN:HG3	1.12	1.10
1:5:1624:G:N2	1:5:1642:A:O2'	1.85	1.10
1:5:2367:A:N6	1:5:2788:U:H3	1.50	1.09
46:1:435:ALA:HB1	46:1:441:ILE:HD11	1.17	1.09
1:5:2078:C:C2	1:5:2079:G:C8	2.40	1.09
1:5:2079:G:C2	1:5:2080:U:C5	2.40	1.09
3:8:64:U:O2	3:8:65:A:C8	2.05	1.09
1:5:84:A:N6	1:5:98:A:N7	1.99	1.09
1:5:166:C:O2	1:5:167:C:C6	2.05	1.09
1:5:1823:G:O3'	1:5:1825:A:P	2.10	1.09
1:5:88:A:N6	1:5:97:G:N3	2.01	1.09
1:5:1628:C:O2	1:5:1629:G:C8	2.06	1.09
1:5:2105:A:C2	1:5:2106:G:C8	2.40	1.09
1:5:4096:C:C4	1:5:4097:G:C8	2.41	1.09
3:8:43:A:C2	3:8:44:A:C8	2.42	1.08
1:5:4725:C:O2	1:5:4726:G:C8	2.07	1.08
1:5:424:U:O2	1:5:425:U:C6	2.07	1.08
1:5:983:C:N3	1:5:984:C:C5	2.22	1.08
1:5:4537:C:N3	1:5:4538:G:N7	2.01	1.08
11:H:156:ASN:OD1	11:H:156:ASN:C	1.96	1.08
40:l:21:ARG:HH21	40:l:24:PRO:HD3	0.95	1.08
1:5:100:C:N4	1:5:101:A:N7	2.01	1.08
1:5:291:U:H2'	1:5:292:G:H2'	1.28	1.08
1:5:1556:C:O2	1:5:1557:C:C6	2.06	1.08
1:5:3785:A:C2	1:5:4536:C:H1'	1.88	1.08
2:7:43:U:N3	2:7:44:C:C5	2.22	1.08
1:5:424:U:O2	1:5:425:U:C5	2.05	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:917:A:C2	1:5:919:C:C5	2.42	1.07
1:5:2604:C:O2	1:5:2605:G:C8	2.07	1.07
1:5:48:G:H5'	16:N:192:TRP:HE1	1.16	1.07
1:5:77:U:H3	1:5:335:A:N6	1.51	1.07
1:5:88:A:N6	1:5:97:G:C2	2.23	1.07
1:5:982:U:H2'	1:5:983:C:C6	1.90	1.07
1:5:2055:G:O6	21:S:158:VAL:HB	1.53	1.07
1:5:2508:U:O2	1:5:2509:C:C5	2.07	1.07
1:5:2314:G:N2	1:5:2315:G:N7	2.01	1.07
1:5:2347:A:O2'	1:5:2348:G:N7	1.84	1.07
1:5:2468:U:N3	1:5:2473:A:N6	2.03	1.07
1:5:4283:G:N1	1:5:4284:C:C4	2.21	1.07
2:7:18:C:C2	2:7:19:C:C5	2.42	1.07
1:5:2095:A:C6	9:F:41:GLN:OE1	2.06	1.07
3:8:10:G:C6	3:8:11:C:C5	2.43	1.07
40:l:21:ARG:HB2	46:1:273:ARG:NH1	1.69	1.07
1:5:28:C:O2	1:5:29:G:C8	2.06	1.07
1:5:4280:A:N6	7:D:29:ASP:HA	1.68	1.07
1:5:173:C:N3	1:5:174:C:C5	2.23	1.06
40:l:21:ARG:HD2	46:1:273:ARG:HD3	1.34	1.06
1:5:1188:C:N3	1:5:1189:G:N7	2.02	1.06
3:8:96:C:O2	3:8:97:A:C8	2.07	1.06
33:e:35:TRP:C	33:e:35:TRP:CD1	2.31	1.06
1:5:271:C:N3	1:5:272:U:C5	2.24	1.06
1:5:1556:C:N3	1:5:1557:C:C5	2.23	1.06
1:5:4229:U:C4	1:5:4230:C:C5	2.44	1.06
46:1:60:ASP:O	46:1:62:PHE:HD1	1.38	1.06
1:5:4213:A:N6	1:5:4218:U:H3	1.54	1.05
1:5:1929:A:N6	1:5:2054:U:H3	1.52	1.05
1:5:2260:C:H2'	1:5:2261:G:N7	1.71	1.05
1:5:2659:A:N6	1:5:2675:G:O2'	1.89	1.05
1:5:4653:C:C2	1:5:4654:C:C5	2.45	1.05
2:7:59:G:C6	2:7:60:G:N7	2.24	1.05
1:5:3739:C:N3	1:5:3740:G:C8	2.24	1.05
1:5:1929:A:N1	1:5:2054:U:O4	1.90	1.05
1:5:1964:A:N7	1:5:1965:G:C8	2.18	1.05
1:5:2417:A:C2	1:5:2418:A:C8	2.45	1.04
1:5:3912:U:O2'	1:5:3913:G:C5'	2.05	1.04
1:5:4113:U:H2'	1:5:4114:C:O4'	1.56	1.04
1:5:4392:G:O2'	1:5:4395:U:O4	1.76	1.04
1:5:1444:G:H2'	1:5:1445:U:C6	1.90	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2691:U:O2	1:5:2692:U:C5	2.11	1.04
1:5:4284:C:C2	1:5:4285:U:C5	2.45	1.04
3:8:119:C:C2	3:8:120:G:C8	2.45	1.04
1:5:77:U:N3	1:5:335:A:N6	2.06	1.04
1:5:1966:C:N3	1:5:1967:A:C8	2.26	1.04
1:5:2105:A:C2	1:5:2106:G:N7	2.25	1.04
1:5:1683:U:O2	1:5:1684:A:H8	1.34	1.04
1:5:1939:A:N1	1:5:3874:G:H5'	1.71	1.04
1:5:1964:A:N7	1:5:1965:G:C5	2.26	1.04
1:5:2854:G:O6	1:5:2856:C:H6	1.40	1.04
1:5:3910:C:O2	1:5:3911:C:C5	2.11	1.04
3:8:94:G:C8	3:8:94:G:H5'	1.92	1.04
40:l:21:ARG:HH22	40:l:24:PRO:CG	1.54	1.04
1:5:957:G:O5'	1:5:1284:G:C2	2.11	1.03
1:5:2078:C:N3	1:5:2079:G:C8	2.25	1.03
1:5:2856:C:N3	1:5:2857:A:N7	2.06	1.03
1:5:4257:A:H2'	1:5:4258:C:C6	1.91	1.03
1:5:4276:G:O6	1:5:4277:G:C5	2.11	1.03
1:5:1556:C:C2	1:5:1557:C:C5	2.47	1.03
1:5:471:A:C6	1:5:472:C:C6	2.46	1.03
1:5:1899:G:C2	1:5:1900:C:C6	2.47	1.03
1:5:2858:A:O2'	1:5:2859:G:O5'	1.77	1.03
1:5:28:C:O2	1:5:29:G:H8	1.36	1.03
1:5:2109:G:O6	1:5:2122:G:O6	1.74	1.03
1:5:4983:C:C2	1:5:4984:C:C5	2.47	1.03
13:J:105:PHE:CE1	13:J:132:VAL:HB	1.93	1.03
1:5:1632:A:C6	1:5:1634:A:C8	2.47	1.03
1:5:2109:G:C6	1:5:2122:G:O6	2.11	1.03
1:5:2646:C:O2	1:5:2647:A:H8	1.42	1.02
32:d:25:TYR:OH	32:d:119:THR:HB	1.56	1.02
40:l:21:ARG:HB2	46:1:273:ARG:HH11	1.16	1.02
1:5:3597:G:OP1	20:R:109:TYR:OH	1.77	1.02
1:5:1190:C:N3	1:5:1191:C:C5	2.28	1.02
1:5:1245:C:C2	1:5:1246:G:N7	2.26	1.02
1:5:2497:C:C2	1:5:2498:C:C6	2.48	1.02
1:5:2526:C:N4	46:1:405:ARG:HG2	1.75	1.02
3:8:133:G:C2	3:8:134:G:C8	2.47	1.02
1:5:173:C:C2	1:5:174:C:C5	2.45	1.02
1:5:1724:G:N7	30:b:17:HIS:CE1	2.28	1.02
1:5:3859:G:O4'	18:P:139:TYR:OH	1.78	1.02
1:5:48:G:O2'	1:5:49:U:OP2	1.78	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3910:C:C2	1:5:3911:C:C5	2.48	1.02
1:5:4284:C:N3	1:5:4285:U:C5	2.28	1.02
3:8:118:C:N3	3:8:119:C:C5	2.28	1.02
1:5:173:C:O2	1:5:174:C:C6	2.13	1.01
1:5:1378:C:C3'	1:5:1379:C:H5'	1.90	1.01
1:5:1392:A:C2	1:5:1393:G:C5	2.48	1.01
1:5:1598:C:O2	1:5:1599:A:H8	1.39	1.01
1:5:1936:C:N3	1:5:1937:C:C5	2.27	1.01
1:5:2327:G:C2	1:5:2328:G:C8	2.48	1.01
1:5:4080:C:N3	1:5:4081:G:N7	2.06	1.01
1:5:1899:G:N3	1:5:1900:C:C6	2.29	1.01
1:5:2367:A:H61	1:5:2788:U:H3	1.03	1.01
1:5:2409:U:C4	1:5:2783:A:N1	2.28	1.01
3:8:119:C:N3	3:8:120:G:C8	2.28	1.01
1:5:1556:C:C2	1:5:1557:C:C6	2.48	1.01
1:5:1618:G:C2	1:5:1619:G:C8	2.48	1.01
1:5:2314:G:N2	1:5:2315:G:C5	2.29	1.01
1:5:4745:G:O2'	1:5:4746:C:C6	2.13	1.01
1:5:983:C:C2	1:5:984:C:C6	2.48	1.01
1:5:470:A:C5	1:5:471:A:C8	2.47	1.01
1:5:1267:C:H5"	1:5:2110:C:O2	1.61	1.01
1:5:1965:G:O6	1:5:2021:G:O6	1.78	1.01
1:5:2035:C:N3	1:5:2036:C:C5	2.27	1.01
1:5:2078:C:O2	1:5:2079:G:C8	2.12	1.01
1:5:1378:C:H3'	1:5:1379:C:H5'	1.05	1.00
1:5:2079:G:C2	1:5:2080:U:C6	2.49	1.00
1:5:3723:A:C2	1:5:3724:A:N7	2.29	1.00
1:5:4080:C:C2	1:5:4081:G:C8	2.49	1.00
2:7:42:A:C2	2:7:43:U:C6	2.48	1.00
3:8:130:C:N3	3:8:131:G:C8	2.28	1.00
1:5:4095:G:N2	1:5:4096:C:C4	2.29	1.00
1:5:4283:G:N3	1:5:4284:C:C6	2.28	1.00
33:e:35:TRP:CZ3	33:e:56:PRO:HD3	1.96	1.00
1:5:27:C:H2'	1:5:27:C:O2	1.62	1.00
1:5:166:C:C2	1:5:167:C:H5	1.78	1.00
1:5:2526:C:C6	46:1:405:ARG:NH2	2.28	1.00
1:5:4165:C:N3	1:5:4166:G:C8	2.29	1.00
1:5:4233:A:N6	1:5:4290:U:H3	1.58	1.00
1:5:4283:G:N2	1:5:4284:C:C2	2.29	1.00
2:7:54:A:N3	2:7:55:A:C8	2.30	1.00
1:5:1266:G:H5"	1:5:2112:G:N3	1.75	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1628:C:C2	1:5:1629:G:C8	2.49	1.00
1:5:1672:U:O2	1:5:1673:U:C5	2.15	1.00
1:5:2127:C:H2'	1:5:2128:G:C8	1.97	1.00
1:5:209:U:C2	1:5:233:U:C4	2.49	1.00
2:7:17:C:N3	2:7:18:C:C5	2.30	1.00
1:5:5005:G:N7	25:W:51:TRP:CD1	2.29	1.00
1:5:1601:A:C8	1:5:3643:A:C8	2.50	1.00
1:5:2508:U:C2	1:5:2509:C:C5	2.50	1.00
46:1:435:ALA:HB1	46:1:441:ILE:CD1	1.91	1.00
1:5:1324:A:O2'	1:5:1326:A:OP1	1.79	0.99
1:5:1358:G:N2	1:5:1359:G:C6	2.29	0.99
1:5:2428:A:C5	1:5:2789:A:C2	2.50	0.99
1:5:4165:C:N3	1:5:4166:G:N7	2.10	0.99
1:5:4983:C:O2	1:5:4984:C:C6	2.15	0.99
1:5:1076:C:O3'	1:5:2114:G:O6	1.81	0.99
1:5:4730:C:O5'	1:5:4731:G:N2	1.94	0.99
2:7:18:C:N3	2:7:19:C:H5	1.58	0.99
1:5:4100:C:N3	1:5:4101:C:C5	2.31	0.99
1:5:1899:G:N2	1:5:1900:C:C2	2.31	0.99
1:5:2590:G:C2	1:5:2754:G:C2	2.51	0.99
1:5:4166:G:C2	1:5:4167:G:C8	2.51	0.99
46:1:271:ARG:HH22	46:1:398:GLN:CG	1.75	0.99
1:5:3912:U:O2'	1:5:3913:G:H5'	1.59	0.99
3:8:64:U:N3	3:8:65:A:C6	2.31	0.99
1:5:1390:G:N2	1:5:1394:G:C5	2.31	0.99
1:5:1485:C:O2	1:5:4349:C:C5	2.15	0.99
1:5:3879:G:C6	1:5:3882:C:C5	2.49	0.99
1:5:4414:A:C2	1:5:4427:G:N2	2.31	0.99
7:D:42:ASN:HA	7:D:44:TYR:OH	1.61	0.99
1:5:291:U:C2'	1:5:292:G:H2'	1.92	0.99
1:5:330:G:C2	1:5:331:G:C8	2.50	0.99
1:5:2784:C:O2	1:5:2785:C:C6	2.16	0.99
1:5:3675:G:C2	1:5:3676:G:N7	2.31	0.99
1:5:4117:U:N3	4:A:40:TYR:CE1	2.31	0.99
2:7:42:A:C6	2:7:43:U:C5	2.51	0.99
1:5:484:U:N3	1:5:486:C:C6	2.31	0.99
1:5:2668:G:H2'	1:5:2669:C:H5'	1.45	0.99
1:5:2673:G:O4'	1:5:2675:G:H1'	1.63	0.99
33:e:35:TRP:HE1	33:e:36:ARG:C	1.71	0.99
1:5:1248:C:C2	1:5:1249:C:C5	2.51	0.98
1:5:1840:G:O3'	1:5:1842:G:P	2.21	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:N1	1:5:1900:C:C4	2.30	0.98
1:5:1269:G:C8	1:5:2111:G:C6	2.52	0.98
1:5:1629:G:C2	1:5:1631:A:C6	2.50	0.98
1:5:85:G:O2'	1:5:97:G:O6	1.79	0.98
1:5:293:G:H2'	1:5:297:U:C6	1.97	0.98
3:8:11:C:N3	3:8:12:G:C8	2.30	0.98
1:5:1248:C:C2	1:5:1249:C:C6	2.51	0.98
1:5:4174:U:N3	1:5:4175:G:N7	2.10	0.98
1:5:4280:A:N6	7:D:29:ASP:CA	2.25	0.98
1:5:4283:G:N2	1:5:4284:C:N1	2.10	0.98
1:5:470:A:C6	1:5:471:A:C8	2.52	0.98
1:5:2325:C:N3	1:5:2326:G:N7	2.12	0.98
1:5:1217:G:H2'	1:5:1218:G:H8	1.28	0.98
1:5:2058:G:C2	1:5:2059:C:C6	2.52	0.98
1:5:1899:G:C2	1:5:1900:C:C4	2.51	0.98
1:5:3717:A:O2'	1:5:3718:A:O5'	1.81	0.98
1:5:1340:C:N3	1:5:1341:U:C5	2.32	0.98
3:8:64:U:C2	3:8:65:A:C5	2.50	0.98
46:1:60:ASP:O	46:1:62:PHE:CD1	2.17	0.98
1:5:1074:G:C2	1:5:1238:A:C2	2.52	0.97
1:5:2743:A:N3	1:5:2744:A:N7	2.11	0.97
1:5:4982:A:C6	1:5:4983:C:C5	2.52	0.97
1:5:4167:G:C2	1:5:4168:G:C8	2.51	0.97
1:5:4174:U:O2	1:5:4175:G:C8	2.17	0.97
15:M:33:GLN:HA	15:M:33:GLN:NE2	1.77	0.97
1:5:2087:C:C5	19:Q:37:ARG:NH1	2.31	0.97
1:5:4223:C:H4'	12:I:119:PHE:HE2	1.29	0.97
25:W:50:ASN:HB3	25:W:55:TYR:CE2	1.98	0.97
1:5:4283:G:N2	1:5:4284:C:C6	2.31	0.97
3:8:64:U:O2	3:8:65:A:N7	1.96	0.97
3:8:94:G:HO2'	3:8:95:A:H8	1.03	0.97
1:5:3740:G:C6	1:5:3741:C:C6	2.52	0.97
3:8:74:U:C4	27:Y:74:TYR:CE1	2.53	0.97
1:5:375:G:OP2	38:j:52:LYS:NZ	1.98	0.97
1:5:3731:C:N3	1:5:3732:A:N7	2.13	0.97
1:5:3702:A:N1	1:5:3703:G:N7	2.10	0.97
1:5:3721:U:O2	1:5:3722:G:C8	2.18	0.97
1:5:4481:U:C2	1:5:4482:U:C5	2.52	0.97
1:5:27:C:O2	1:5:28:C:H6	1.48	0.97
1:5:2437:C:H5"	1:5:2782:U:O4	1.63	0.97
1:5:3694:U:N3	1:5:3695:U:C5	2.33	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1269:G:C6	1:5:2111:G:C2	2.53	0.96
1:5:1899:G:C8	1:5:2278:G:C2	2.52	0.96
1:5:2658:G:C2	1:5:2675:G:C2	2.53	0.96
9:F:149:LEU:HB2	9:F:197:TYR:OH	1.64	0.96
1:5:1269:G:C5	1:5:2111:G:C2	2.52	0.96
1:5:483:G:C2	1:5:484:U:C5	2.53	0.96
1:5:1078:A:H2	1:5:1079:C:H41	1.01	0.96
1:5:2099:G:C2	1:5:2100:A:C8	2.53	0.96
1:5:2743:A:C2	1:5:2744:A:C6	2.53	0.96
3:8:74:U:O4	27:Y:74:TYR:CE1	2.17	0.96
15:M:7:VAL:HB	21:S:152:PHE:HB2	1.44	0.96
46:1:271:ARG:CZ	46:1:398:GLN:HG3	1.95	0.96
1:5:3702:A:C6	1:5:3703:G:N7	2.33	0.96
1:5:4518:A:C8	5:B:257:TRP:CZ2	2.53	0.96
1:5:289:C:N3	1:5:290:U:C5	2.34	0.96
1:5:970:G:O6	1:5:2256:C:N4	1.97	0.96
1:5:977:C:N3	1:5:978:G:C8	2.26	0.96
1:5:1672:U:O2	1:5:1673:U:C6	2.19	0.96
1:5:2726:G:C2	1:5:2727:C:C4	2.54	0.96
1:5:1240:G:OP1	1:5:1271:G:O2'	1.84	0.96
1:5:1724:G:N7	30:b:17:HIS:CG	2.33	0.96
1:5:2279:A:C2	1:5:2280:G:C5	2.54	0.96
1:5:2832:A:H2'	1:5:2833:A:H5"	1.44	0.96
3:8:85:U:H2'	3:8:87:G:C8	2.00	0.96
33:e:35:TRP:CE3	33:e:56:PRO:HD3	2.01	0.96
1:5:957:G:O5'	1:5:1284:G:N2	1.98	0.96
1:5:977:C:O2	1:5:978:G:C8	2.17	0.96
1:5:1983:A:C8	1:5:1987:C:OP2	2.19	0.96
1:5:2532:C:O2	1:5:2533:C:C6	2.18	0.96
1:5:4966:A:H2'	1:5:4967:A:O4'	1.65	0.96
26:X:151:ASN:ND2	47:2:20:ARG:CD	2.28	0.96
1:5:1280:C:C2	1:5:1282:G:N7	2.34	0.96
1:5:2453:A:C6	1:5:2454:U:C5	2.53	0.96
1:5:4414:A:N1	1:5:4427:G:C2	2.34	0.96
3:8:132:G:C2	3:8:133:G:C8	2.52	0.96
46:1:271:ARG:NH2	46:1:398:GLN:CG	2.29	0.96
1:5:2526:C:C5	46:1:405:ARG:NE	2.34	0.95
1:5:2743:A:C2	1:5:2744:A:N7	2.34	0.95
3:8:11:C:C2	3:8:12:G:C8	2.54	0.95
16:N:30:TYR:CE1	16:N:63:ARG:HD2	2.01	0.95
26:X:151:ASN:HD22	47:2:20:ARG:HD2	1.00	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:l:21:ARG:NH1	46:1:273:ARG:HG2	1.81	0.95
1:5:2857:A:O2'	1:5:2858:A:O5'	1.82	0.95
1:5:3905:A:C2	1:5:4449:A:N6	2.34	0.95
1:5:4258:C:C2	1:5:4259:C:C5	2.53	0.95
1:5:472:C:C2	1:5:473:C:C6	2.53	0.95
1:5:486:C:C2	1:5:487:G:C8	2.53	0.95
1:5:92:C:OP2	1:5:4341:C:O2'	1.84	0.95
1:5:1340:C:C2	1:5:1341:U:C6	2.55	0.95
1:5:4080:C:O2	1:5:4081:G:C8	2.20	0.95
1:5:4215:C:C2	1:5:4216:G:C8	2.53	0.95
1:5:4285:U:C2	1:5:4286:C:C5	2.54	0.95
1:5:4999:G:C2	1:5:5000:G:C8	2.55	0.95
21:S:45:TRP:CZ3	21:S:56:LYS:HA	2.00	0.95
1:5:969:C:O2'	1:5:970:G:N3	1.98	0.95
1:5:1217:G:H2'	1:5:1218:G:C8	2.01	0.95
1:5:2854:G:O6	1:5:2856:C:C6	2.19	0.95
1:5:3726:A:O2'	1:5:3727:A:C8	2.19	0.95
1:5:4369:A:C2	1:5:4370:G:C8	2.55	0.95
1:5:4563:U:C2	1:5:4564:A:N7	2.35	0.95
3:8:119:C:O2	3:8:120:G:C8	2.19	0.95
1:5:1936:C:C6	2:7:84:U:C6	2.54	0.95
1:5:2089:G:C4	1:5:2262:G:H2'	2.02	0.95
1:5:1198:G:H2'	1:5:1199:G:C8	2.02	0.95
1:5:1984:A:N6	1:5:2011:C:O2'	1.99	0.95
5:B:118:PHE:HB2	5:B:119:TYR:CE1	2.02	0.95
1:5:208:A:C1'	1:5:232:G:H21	1.78	0.95
1:5:484:U:C2	1:5:486:C:C6	2.54	0.95
1:5:983:C:C2	1:5:984:C:C5	2.55	0.95
1:5:2127:C:H2'	1:5:2128:G:N7	1.82	0.95
1:5:2497:C:C2	1:5:2498:C:C5	2.55	0.95
1:5:2526:C:H5	46:1:405:ARG:CZ	1.80	0.95
1:5:4518:A:N7	5:B:257:TRP:CZ2	2.33	0.95
1:5:3741:C:C2	1:5:3742:G:C8	2.55	0.94
1:5:4194:U:O2'	1:5:4221:C:N4	2.00	0.94
1:5:4379:A:C8	43:o:54:PRO:HA	2.02	0.94
1:5:4414:A:C2	1:5:4427:G:C2	2.55	0.94
8:E:184:ARG:NH2	8:E:210:ASP:OD1	2.00	0.94
27:Y:15:ARG:HH12	27:Y:19:PHE:HE2	1.09	0.94
1:5:1358:G:O2'	1:5:1359:G:O4'	1.84	0.94
1:5:2646:C:O2	1:5:2647:A:C8	2.19	0.94
1:5:2851:G:C5	1:5:2852:U:C6	2.54	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:11:C:O2	3:8:12:G:H8	1.48	0.94
46:1:435:ALA:O	46:1:438:LEU:N	1.99	0.94
1:5:909:A:C2	1:5:910:G:C8	2.55	0.94
1:5:1238:A:O2'	1:5:1239:C:O5'	1.83	0.94
1:5:3790:U:N3	1:5:3792:G:O4'	2.00	0.94
1:5:4729:A:H4'	1:5:4965:U:O2'	1.68	0.94
1:5:917:A:C6	1:5:919:C:C4	2.55	0.94
1:5:1427:A:H3'	1:5:1428:U:H6	1.30	0.94
1:5:1476:C:N3	1:5:1477:C:C5	2.35	0.94
1:5:3737:A:H2'	1:5:3738:G:O4'	1.68	0.94
3:8:80:A:H8	3:8:81:C:HO2'	1.13	0.94
1:5:120:A:H1'	1:5:121:A:C2	2.02	0.94
1:5:246:G:C2	1:5:247:G:C8	2.55	0.94
1:5:514:U:H5	1:5:515:C:O4'	1.48	0.94
1:5:1245:C:C6	1:5:1269:G:C6	2.55	0.94
1:5:42:A:N6	1:5:4379:A:C2	2.36	0.94
1:5:471:A:C5	1:5:472:C:C6	2.55	0.94
1:5:1390:G:C2	1:5:1394:G:C6	2.55	0.94
1:5:2080:U:O2	1:5:2081:C:C6	2.21	0.94
1:5:2326:G:N1	1:5:2327:G:N7	2.16	0.94
1:5:2504:C:O2	1:5:2505:C:C5	2.21	0.94
1:5:3907:G:N9	1:5:4449:A:H1'	1.82	0.94
1:5:4098:A:C2	1:5:4099:G:C8	2.55	0.94
1:5:43:U:C5	1:5:44:A:C8	2.55	0.94
1:5:100:C:C4	1:5:101:A:C8	2.52	0.94
1:5:2604:C:O2	1:5:2605:G:H8	1.50	0.94
38:j:22:CYS:SG	50:j:101:ZN:ZN	1.55	0.94
1:5:975:C:OP1	9:F:49:ARG:NH1	2.01	0.94
1:5:1217:G:C2'	1:5:1218:G:H8	1.80	0.94
1:5:2304:U:O2	1:5:2332:A:N6	2.01	0.94
1:5:2843:U:C2	1:5:2844:A:C8	2.56	0.94
1:5:2859:G:N2	1:5:3837:C:O2	2.01	0.94
1:5:4724:A:HO2'	5:B:104:THR:HG1	1.10	0.94
1:5:4744:A:C2	1:5:4745:G:C5	2.55	0.94
1:5:208:A:H1'	1:5:232:G:N2	1.83	0.94
1:5:2736:G:C2	1:5:2737:C:C5	2.56	0.94
1:5:4983:C:N3	1:5:4984:C:C5	2.36	0.94
1:5:4601:U:C4	1:5:4609:G:N2	2.36	0.94
1:5:4985:U:H4'	5:B:175:GLN:OE1	1.67	0.94
1:5:1438:U:O2	1:5:2099:G:O6	1.86	0.93
1:5:2509:C:O2'	1:5:2510:G:O5'	1.85	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4165:C:C2	1:5:4166:G:C8	2.55	0.93
1:5:4888:U:HO2'	1:5:4889:G:H8	1.12	0.93
1:5:1247:U:C2	1:5:1248:C:C6	2.55	0.93
1:5:1635:C:H2'	1:5:1636:U:H5'	1.46	0.93
1:5:1667:G:N2	1:5:2283:G:O6	2.01	0.93
1:5:2735:G:C2	1:5:2736:G:C8	2.57	0.93
1:5:4324:A:C2	1:5:4325:A:C5	2.56	0.93
1:5:4988:U:H4'	1:5:4989:U:O2	1.67	0.93
1:5:5044:A:C2'	1:5:5045:G:H5'	1.98	0.93
1:5:4563:U:N3	1:5:4564:A:C6	2.35	0.93
1:5:4725:C:O2	1:5:4726:G:H8	1.45	0.93
1:5:5005:G:O6	25:W:51:TRP:CB	2.16	0.93
1:5:747:A:H2'	1:5:749:G:C8	2.04	0.93
1:5:1217:G:N2	1:5:1218:G:O6	2.01	0.93
1:5:1981:G:O2'	1:5:1982:G:O4'	1.85	0.93
1:5:2851:G:H1'	1:5:3840:U:O2	1.67	0.93
1:5:983:C:O2	1:5:984:C:H6	1.48	0.93
1:5:1408:G:O2'	1:5:1411:C:N4	2.02	0.93
1:5:1671:U:N3	1:5:1672:U:H5	1.66	0.93
1:5:4097:G:C2	1:5:4098:A:C8	2.57	0.93
1:5:4257:A:H2'	1:5:4258:C:H6	1.32	0.93
1:5:4697:U:H4'	41:m:104:HIS:CD2	2.04	0.93
46:1:252:PHE:CZ	47:2:40:THR:CG2	2.32	0.93
1:5:2604:C:N3	1:5:2605:G:N7	2.16	0.93
1:5:2784:C:O2	1:5:2785:C:C5	2.22	0.93
1:5:4080:C:N3	1:5:4081:G:C8	2.35	0.93
32:d:24:GLU:OE1	32:d:87:ARG:NH2	2.01	0.93
1:5:173:C:C2	1:5:174:C:C6	2.57	0.93
1:5:969:C:O2'	1:5:970:G:O4'	1.86	0.93
1:5:1739:G:H2'	1:5:1740:C:O4'	1.69	0.93
1:5:2561:C:N3	1:5:2562:G:C8	2.36	0.93
1:5:3617:G:O2'	1:5:3620:G:N7	1.99	0.93
1:5:1264:C:C2	1:5:1265:G:C8	2.57	0.93
1:5:2035:C:N4	1:5:2036:C:C4	2.37	0.93
1:5:3731:C:C2	1:5:3732:A:C8	2.57	0.93
1:5:4095:G:C2	1:5:4096:C:C5	2.56	0.93
1:5:4883:C:O2'	1:5:4884:G:OP2	1.87	0.93
3:8:73:U:C5	3:8:74:U:C6	2.56	0.93
1:5:27:C:N3	1:5:28:C:C5	2.37	0.92
1:5:1280:C:O4'	6:C:323:ARG:NH2	2.02	0.92
1:5:1371:A:N6	3:8:28:C:O2'	2.02	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2613:C:N3	1:5:2614:C:C5	2.37	0.92
1:5:3939:G:N3	1:5:4076:G:O6	2.02	0.92
1:5:4275:G:O6	1:5:4276:G:C5	2.22	0.92
1:5:4981:G:C6	1:5:4982:A:C8	2.57	0.92
10:G:53:ARG:NH2	10:G:54:PHE:HZ	1.67	0.92
1:5:4911:A:C5'	5:B:100:ARG:HD3	1.99	0.92
1:5:2526:C:C6	46:1:405:ARG:CZ	2.52	0.92
1:5:424:U:C2	1:5:425:U:H5	1.87	0.92
1:5:2251:G:H1'	1:5:2252:G:C2	2.04	0.92
1:5:2446:C:H2'	1:5:2447:U:C6	2.04	0.92
10:G:55:VAL:HB	10:G:57:TRP:HE1	1.34	0.92
20:R:109:TYR:CE1	20:R:114:LYS:HD2	2.04	0.92
1:5:469:C:O2	1:5:688:U:C1'	2.17	0.92
1:5:210:C:N4	1:5:231:U:C2	2.38	0.92
1:5:2326:G:C6	1:5:2327:G:N7	2.38	0.92
2:7:94:C:C2	2:7:95:C:C5	2.57	0.92
1:5:272:U:C2	1:5:273:U:C5	2.58	0.92
1:5:1310:C:N3	1:5:1311:G:C8	2.37	0.92
1:5:1750:G:C2	1:5:1751:A:C8	2.58	0.92
3:8:10:G:C6	3:8:11:C:C6	2.57	0.92
8:E:157:ARG:HD2	8:E:266:TYR:CD1	2.04	0.92
46:1:271:ARG:NH1	46:1:398:GLN:HG3	1.82	0.92
1:5:144:G:C2	1:5:145:G:C8	2.57	0.92
1:5:1248:C:O2	1:5:1249:C:C6	2.23	0.92
1:5:3591:C:N4	1:5:3592:G:N7	2.17	0.92
8:E:181:PRO:HA	8:E:246:GLN:HE22	1.34	0.92
1:5:1247:U:N3	1:5:1248:C:C5	2.38	0.91
1:5:3740:G:C6	1:5:3741:C:C5	2.59	0.91
1:5:4998:G:C2	1:5:4999:G:C8	2.57	0.91
3:8:40:A:N7	3:8:102:G:N2	2.17	0.91
1:5:658:C:C2	1:5:659:G:C8	2.58	0.91
1:5:1245:C:N3	1:5:1246:G:N7	2.18	0.91
1:5:1695:U:H2'	1:5:1696:C:H5'	1.52	0.91
1:5:2081:C:H2'	1:5:2082:G:O5'	1.70	0.91
1:5:2856:C:N4	1:5:2857:A:N6	2.18	0.91
1:5:3739:C:C4	1:5:3740:G:N7	2.39	0.91
1:5:3905:A:C6	1:5:4449:A:C6	2.58	0.91
1:5:86:U:O2	1:5:87:A:C8	2.22	0.91
1:5:106:A:H1'	1:5:336:A:H8	1.14	0.91
1:5:466:A:C2	1:5:467:U:C5	2.58	0.91
5:B:203:GLN:HA	5:B:203:GLN:HE21	1.33	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2382:A:N6	1:5:2830:G:O4'	2.04	0.91
1:5:2533:C:OP1	26:X:139:ARG:NH2	2.01	0.91
1:5:2604:C:C2	1:5:2605:G:C8	2.58	0.91
1:5:2851:G:C6	1:5:2852:U:C6	2.58	0.91
1:5:3739:C:N4	1:5:3740:G:N7	2.19	0.91
1:5:2108:G:N2	1:5:2125:C:N3	2.18	0.91
1:5:2294:G:C2	1:5:2295:C:C5	2.57	0.91
1:5:701:G:C6	1:5:702:U:C6	2.58	0.91
1:5:962:C:OP2	1:5:2264:C:N3	2.03	0.91
1:5:1632:A:N6	1:5:1634:A:C8	2.38	0.91
1:5:1695:U:C2'	1:5:1696:C:H5'	2.01	0.91
1:5:1987:C:N3	1:5:1988:G:C8	2.39	0.91
1:5:451:C:N4	1:5:1295:C:H2'	1.86	0.91
1:5:1669:A:H4'	1:5:1685:G:N2	1.85	0.91
1:5:1673:U:C2	1:5:1674:C:C5	2.59	0.91
1:5:1999:A:O2'	1:5:2000:G:O4'	1.88	0.91
1:5:2095:A:N1	9:F:41:GLN:OE1	2.02	0.91
1:5:2328:G:HO2'	1:5:2329:U:C5'	1.83	0.91
1:5:4878:C:C2	1:5:4879:C:C5	2.58	0.91
3:8:12:G:N2	3:8:13:G:H1'	1.84	0.91
33:e:35:TRP:CD1	33:e:36:ARG:N	2.37	0.91
1:5:27:C:O2	1:5:28:C:C6	2.23	0.91
1:5:730:G:N2	1:5:939:G:N2	2.18	0.91
1:5:1778:C:O2	1:5:1779:U:C5	2.24	0.91
1:5:2126:G:H1'	1:5:2127:C:C6	2.05	0.91
1:5:2293:U:O2	1:5:2294:G:H8	1.45	0.91
1:5:1268:G:N1	1:5:1270:A:N7	2.18	0.91
1:5:4627:U:N3	1:5:4628:U:C5	2.38	0.91
1:5:272:U:O2	1:5:273:U:C5	2.23	0.91
1:5:1176:C:O2	7:D:282:GLN:NE2	2.03	0.91
1:5:1696:C:H1'	1:5:1697:G:H5'	1.53	0.91
1:5:1818:G:C8	1:5:1821:G:O6	2.24	0.91
1:5:2613:C:C4	1:5:2614:C:C5	2.58	0.91
3:8:131:G:C6	3:8:132:G:N7	2.38	0.91
1:5:753:C:N3	1:5:754:U:C5	2.39	0.90
1:5:4213:A:H61	1:5:4218:U:H3	0.95	0.90
1:5:100:C:C5	1:5:101:A:N7	2.37	0.90
1:5:489:C:N4	1:5:664:G:O6	2.04	0.90
1:5:2724:G:C2	1:5:2726:G:C5	2.59	0.90
1:5:4172:A:C2	1:5:4173:G:C8	2.60	0.90
1:5:4242:U:O2	1:5:4279:A:H2	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:12:G:N1	3:8:13:G:N7	2.19	0.90
3:8:119:C:C2	3:8:120:G:H8	1.88	0.90
40:l:21:ARG:HH22	40:l:24:PRO:HG3	0.90	0.90
1:5:54:G:C6	1:5:55:G:C8	2.58	0.90
1:5:2724:G:N2	1:5:2726:G:C5	2.39	0.90
1:5:1266:G:N2	1:5:1268:G:C5	2.39	0.90
1:5:1807:C:N3	1:5:1808:C:C6	2.40	0.90
1:5:4123:C:N3	1:5:4124:G:C8	2.39	0.90
29:a:36:GLY:O	29:a:41:HIS:HB2	1.71	0.90
1:5:2538:U:OP1	39:k:41:TYR:OH	1.88	0.90
1:5:3723:A:C2	1:5:3724:A:C5	2.59	0.90
1:5:977:C:C4	1:5:978:G:N7	2.38	0.90
1:5:2007:G:O2'	1:5:2008:U:O4'	1.88	0.90
1:5:2565:A:N7	1:5:2566:G:H1'	1.86	0.90
1:5:3791:C:N3	1:5:3802:U:C6	2.40	0.90
1:5:1174:G:N2	1:5:1175:A:C8	2.40	0.90
1:5:2106:G:N2	1:5:2107:C:C5	2.39	0.90
1:5:2529:A:C5	1:5:2532:C:C5	2.59	0.90
1:5:3783:A:H2	1:5:3789:C:H42	1.17	0.90
1:5:4273:A:H2'	1:5:4274:A:O4'	1.70	0.90
1:5:754:U:N3	1:5:755:C:C5	2.40	0.90
1:5:1475:G:N2	1:5:1476:C:C5	2.40	0.90
1:5:1542:U:OP1	1:5:2743:A:C8	2.24	0.90
1:5:2614:C:O2'	1:5:2808:G:OP1	1.88	0.90
2:7:94:C:N3	2:7:95:C:C5	2.40	0.90
1:5:106:A:C1'	1:5:336:A:H8	1.85	0.90
1:5:3899:G:P	5:B:257:TRP:HB2	2.12	0.90
1:5:2035:C:N3	1:5:2036:C:C6	2.40	0.90
1:5:4281:A:C2	1:5:4283:G:C5	2.60	0.90
1:5:4355:G:C2	1:5:4356:G:N7	2.40	0.90
39:k:40:ARG:HB3	39:k:41:TYR:HD1	1.32	0.90
1:5:2089:G:O6	1:5:2263:A:C5'	2.20	0.89
1:5:2447:U:O2'	1:5:2448:G:O5'	1.89	0.89
1:5:2568:C:C2	1:5:2569:G:C8	2.59	0.89
1:5:4697:U:H4'	41:m:104:HIS:HD2	1.35	0.89
1:5:211:G:C2	1:5:212:A:C8	2.60	0.89
1:5:3743:G:H2'	1:5:3744:G:H5'	1.54	0.89
26:X:156:ILE:HG13	46:1:415:ARG:NH2	1.87	0.89
1:5:352:G:O2'	3:8:22:U:O4	1.89	0.89
1:5:983:C:N3	1:5:984:C:H5	1.65	0.89
1:5:1966:C:C2	1:5:1967:A:C8	2.60	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:172:C:C2	1:5:173:C:C6	2.61	0.89
1:5:1235:G:C2	1:5:1236:C:C5	2.61	0.89
1:5:1632:A:N6	1:5:1634:A:N9	2.19	0.89
1:5:4228:G:H5"	1:5:4229:U:O4'	1.73	0.89
8:E:157:ARG:HD3	8:E:266:TYR:CE1	2.07	0.89
1:5:1245:C:C2	1:5:1246:G:C8	2.61	0.89
1:5:2328:G:O2'	1:5:2329:U:O5'	1.88	0.89
1:5:2463:G:C2	1:5:2464:C:C4	2.60	0.89
1:5:2724:G:C2	1:5:2726:G:C8	2.61	0.89
7:D:210:TYR:OH	7:D:214:GLU:HG3	1.72	0.89
1:5:2433:G:OP1	46:1:268:LYS:NZ	2.04	0.89
1:5:3680:U:H2'	1:5:3680:U:O2	1.71	0.89
1:5:4580:U:N3	1:5:4581:G:C8	2.41	0.89
3:8:11:C:O2	3:8:12:G:C8	2.26	0.89
1:5:4098:A:N1	1:5:4099:G:C5	2.41	0.89
1:5:4229:U:N3	1:5:4230:C:C6	2.40	0.89
1:5:4241:C:N3	1:5:4242:U:C5	2.41	0.89
1:5:4518:A:HO2'	5:B:257:TRP:HZ3	0.94	0.89
1:5:445:U:H1'	1:5:2313:A:C2	2.07	0.89
1:5:504:G:N1	1:5:654:C:C2	2.41	0.89
1:5:1563:A:H2'	1:5:1564:A:C8	2.08	0.89
1:5:4093:G:H2'	1:5:4094:G:H5"	1.55	0.89
1:5:28:C:C2	1:5:29:G:C8	2.60	0.89
1:5:445:U:C1'	1:5:2313:A:C2	2.56	0.89
1:5:1284:G:O6	6:C:312:ARG:NH2	2.06	0.89
1:5:2497:C:O2	1:5:2498:C:C6	2.26	0.89
1:5:4269:G:H1	1:5:4277:G:H1	1.17	0.89
1:5:4579:U:C2	1:5:4580:U:C6	2.61	0.89
1:5:5003:U:C2	1:5:5045:G:N2	2.41	0.89
1:5:271:C:C2	1:5:272:U:C6	2.60	0.88
1:5:1175:A:C2	1:5:1176:C:C6	2.61	0.88
1:5:1269:G:C3'	1:5:2111:G:O6	2.20	0.88
1:5:2325:C:N3	1:5:2326:G:C8	2.41	0.88
1:5:2851:G:C5	1:5:2852:U:H6	1.90	0.88
1:5:3878:C:O2	5:B:258:HIS:HE1	1.54	0.88
1:5:102:G:HO2'	1:5:1381:U:HO2'	1.19	0.88
1:5:294:G:C6	29:a:61:TYR:CD1	2.61	0.88
1:5:733:A:C8	1:5:734:G:C8	2.61	0.88
1:5:751:G:N2	1:5:752:G:C5	2.42	0.88
1:5:2449:A:C8	1:5:2450:G:H1'	2.08	0.88
1:5:3693:U:C4	1:5:3694:U:C5	2.61	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4548:A:C8	1:5:4548:A:C5'	2.55	0.88
1:5:4884:G:C2	1:5:4885:U:C6	2.61	0.88
1:5:294:G:C2	29:a:61:TYR:CE1	2.61	0.88
1:5:1049:C:N3	1:5:1050:C:C5	2.41	0.88
1:5:1245:C:C5	1:5:1269:G:O6	2.25	0.88
1:5:1271:G:H3'	1:5:1272:C:H5'	1.54	0.88
1:5:751:G:C2	1:5:752:G:N7	2.42	0.88
1:5:1213:G:C5	1:5:1215:C:C6	2.62	0.88
1:5:1936:C:H5	2:7:84:U:C5	1.86	0.88
1:5:4934:A:C6	1:5:4935:C:C5	2.61	0.88
1:5:1950:U:C2	1:5:1951:G:C8	2.62	0.88
1:5:2078:C:O2	1:5:2079:G:H8	1.56	0.88
1:5:197:A:H5'	1:5:197:A:H8	1.38	0.88
1:5:689:U:N3	1:5:690:C:C5	2.42	0.88
1:5:1340:C:C2	1:5:1341:U:C5	2.61	0.88
1:5:1411:C:O2	1:5:1412:G:C8	2.27	0.88
1:5:1671:U:H3	1:5:1672:U:H5	1.08	0.88
1:5:1188:C:O2	1:5:1189:G:C8	2.27	0.88
1:5:1929:A:H61	1:5:2054:U:H3	0.89	0.88
1:5:2089:G:C5	1:5:2262:G:H2'	2.08	0.88
1:5:189:G:C2	1:5:190:G:N7	2.42	0.88
1:5:1475:G:N2	1:5:1476:C:C4	2.41	0.88
1:5:2327:G:C2	1:5:2328:G:N7	2.42	0.88
26:X:84:GLU:HB2	46:1:408:SER:OG	1.73	0.88
1:5:1478:C:O2	1:5:1479:G:C8	2.26	0.88
1:5:1687:U:O2	1:5:1850:A:C6	2.26	0.88
1:5:1757:U:C2	1:5:1758:G:C8	2.62	0.88
1:5:2294:G:C2	1:5:2295:C:C6	2.62	0.88
1:5:2465:C:H2'	1:5:2466:G:C8	2.08	0.88
1:5:2844:A:C6	1:5:3839:G:C8	2.61	0.88
1:5:4481:U:H2'	1:5:4482:U:H6	1.37	0.88
3:8:86:U:O4	36:h:7:ARG:HG2	1.72	0.88
13:J:99:PHE:CE2	13:J:105:PHE:HB3	2.09	0.88
46:1:252:PHE:HZ	47:2:40:THR:HG21	0.90	0.88
1:5:1074:G:N2	1:5:1238:A:C2	2.41	0.88
1:5:2468:U:H3	1:5:2473:A:N6	1.67	0.88
1:5:4561:C:O2	1:5:4561:C:H2'	1.73	0.88
35:g:11:LEU:HB3	35:g:18:ASN:HD21	1.35	0.88
1:5:270:U:N3	1:5:271:C:C5	2.42	0.87
1:5:1324:A:C2	1:5:3876:A:H2'	2.09	0.87
1:5:4123:C:C2	1:5:4124:G:C8	2.63	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5062:G:N2	1:5:5063:G:C8	2.41	0.87
1:5:1866:U:O2'	1:5:1867:A:O5'	1.93	0.87
1:5:3662:A:N6	1:5:3680:U:H3	1.70	0.87
1:5:3721:U:O2	1:5:3722:G:H8	1.55	0.87
7:D:22:ARG:HH11	7:D:22:ARG:HG3	1.38	0.87
21:S:29:ARG:CZ	21:S:29:ARG:HB3	2.03	0.87
1:5:2613:C:C2	1:5:2614:C:C6	2.62	0.87
1:5:4563:U:C2	1:5:4564:A:C5	2.61	0.87
1:5:126:C:N3	1:5:127:G:N7	2.22	0.87
1:5:1359:G:H2'	1:5:1360:G:C8	2.09	0.87
1:5:1699:A:O5'	9:F:179:ARG:NH2	2.07	0.87
1:5:2110:C:C6	1:5:2110:C:OP1	2.28	0.87
1:5:4096:C:O2'	35:g:112:GLN:NE2	2.07	0.87
1:5:4885:U:C2	1:5:4886:C:C6	2.63	0.87
7:D:250:ASN:HD21	7:D:252:VAL:HG12	1.39	0.87
46:1:271:ARG:NH2	46:1:398:GLN:HB2	1.89	0.87
1:5:77:U:O4	1:5:335:A:N1	2.06	0.87
1:5:662:C:H2'	1:5:663:G:H8	1.40	0.87
1:5:1965:G:C2	1:5:1966:C:C6	2.61	0.87
1:5:2035:C:N4	1:5:2036:C:N4	2.22	0.87
1:5:425:U:N3	1:5:426:A:N7	2.22	0.87
1:5:964:A:H8	1:5:964:A:C5'	1.86	0.87
1:5:1174:G:C2	1:5:1175:A:N7	2.42	0.87
1:5:1964:A:C6	1:5:1965:G:N9	2.43	0.87
1:5:2784:C:N3	1:5:2785:C:C5	2.42	0.87
1:5:4269:G:H22	1:5:4277:G:H22	1.18	0.87
1:5:4315:A:C2	1:5:4316:G:C8	2.62	0.87
1:5:5047:C:C2	1:5:5048:A:C6	2.62	0.87
46:1:252:PHE:CE2	46:1:455:TYR:CE1	2.62	0.87
1:5:1279:A:H2'	1:5:1280:C:C4	2.09	0.87
1:5:2361:G:C6	18:P:25:HIS:HD2	1.93	0.87
1:5:3907:G:C8	1:5:4449:A:H1'	2.09	0.87
1:5:4332:C:N3	1:5:4333:C:H5	1.73	0.87
1:5:1964:A:C8	1:5:1965:G:C8	2.60	0.87
1:5:2434:G:H5'	46:1:403:GLY:HA2	1.55	0.87
1:5:488:G:C2	1:5:489:C:C6	2.63	0.87
1:5:723:A:C2	1:5:943:A:N1	2.43	0.87
1:5:1598:C:C2	1:5:1599:A:H8	1.93	0.87
1:5:4333:C:C2	1:5:4334:U:C5	2.63	0.87
3:8:39:G:O2'	3:8:103:A:N6	2.08	0.87
1:5:2568:C:O2	1:5:2569:G:C8	2.26	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4230:C:N3	1:5:4231:C:H5	1.72	0.86
1:5:4233:A:H61	1:5:4290:U:H3	1.07	0.86
2:7:59:G:C6	2:7:60:G:C8	2.63	0.86
1:5:1477:C:N3	1:5:1478:C:C6	2.43	0.86
1:5:1726:U:N3	1:5:1727:U:C5	2.43	0.86
1:5:1983:A:C2	1:5:2010:A:H5"	2.10	0.86
1:5:2011:C:H2'	1:5:2012:A:O4'	1.75	0.86
1:5:2279:A:C2	1:5:2280:G:N7	2.43	0.86
1:5:2526:C:C5	46:1:405:ARG:NH2	2.42	0.86
1:5:2689:C:N3	1:5:2690:C:H5	1.73	0.86
1:5:4215:C:N3	1:5:4216:G:N7	2.23	0.86
1:5:4314:C:N3	1:5:4315:A:C8	2.44	0.86
1:5:4550:G:C6	1:5:4551:U:C5	2.62	0.86
2:7:23:A:O2'	2:7:24:C:O5'	1.94	0.86
3:8:60:G:O6	36:h:59:THR:HA	1.74	0.86
1:5:1215:C:N3	1:5:1216:C:C6	2.43	0.86
1:5:1485:C:O2	1:5:4349:C:C4	2.29	0.86
1:5:1724:G:H21	9:F:105:PRO:HB3	1.39	0.86
1:5:1899:G:N3	1:5:1900:C:C5	2.40	0.86
1:5:4934:A:C2	1:5:4935:C:C6	2.63	0.86
1:5:738:C:N3	1:5:739:G:N7	2.24	0.86
1:5:1476:C:C2	1:5:1477:C:C6	2.63	0.86
1:5:2509:C:O2'	1:5:2510:G:C5'	2.23	0.86
1:5:3912:U:O2'	1:5:3913:G:H5"	1.75	0.86
3:8:81:C:O2	3:8:81:C:H2'	1.75	0.86
13:J:99:PHE:CE2	13:J:105:PHE:CB	2.58	0.86
46:1:271:ARG:HH12	46:1:398:GLN:HG3	1.38	0.86
1:5:1447:C:N3	1:5:2097:U:O4	2.08	0.86
1:5:1625:G:C5	1:5:1642:A:N1	2.42	0.86
1:5:1667:G:C2	1:5:2283:G:O6	2.29	0.86
1:5:2508:U:C2	1:5:2509:C:H5	1.93	0.86
1:5:4339:A:O2'	19:Q:178:ARG:NH1	2.08	0.86
16:N:138:PHE:HB3	16:N:143:ARG:HH22	1.40	0.86
1:5:2843:U:N3	1:5:2844:A:N7	2.24	0.86
1:5:4481:U:H2'	1:5:4482:U:C6	2.10	0.86
1:5:4510:A:N6	1:5:4592:C:H4'	1.90	0.86
1:5:4983:C:O2	1:5:4984:C:C5	2.28	0.86
1:5:1598:C:O2	1:5:1598:C:H2'	1.74	0.86
1:5:196:C:N3	1:5:243:A:N6	2.24	0.86
1:5:1213:G:C4	1:5:1215:C:C1'	2.58	0.86
1:5:1240:G:N7	1:5:1271:G:H4'	1.91	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1583:A:H1'	1:5:2396:A:N6	1.91	0.86
1:5:2568:C:N3	1:5:2569:G:N7	2.23	0.86
1:5:3717:A:C6	1:5:3736:A:C6	2.63	0.86
1:5:4174:U:C2	1:5:4175:G:C8	2.63	0.86
4:A:89:TYR:HB2	4:A:100:ASN:HD21	1.41	0.86
1:5:291:U:H2'	1:5:292:G:C2'	2.05	0.86
1:5:470:A:N6	1:5:471:A:C5	2.44	0.86
1:5:1967:A:C2	1:5:1968:G:C8	2.63	0.86
1:5:1552:G:O2'	1:5:1575:A:N6	2.09	0.86
1:5:2576:G:C6	1:5:2577:C:C5	2.63	0.86
3:8:65:A:N3	3:8:66:A:C8	2.43	0.86
1:5:237:G:O2'	1:5:238:C:OP2	1.94	0.85
1:5:1538:U:O2'	1:5:1629:G:OP1	1.94	0.85
1:5:3622:C:O2	1:5:3623:C:C2	2.29	0.85
1:5:4240:G:C6	1:5:4241:C:C5	2.63	0.85
1:5:4414:A:C6	1:5:4427:G:N1	2.44	0.85
28:Z:28:ASN:O	28:Z:28:ASN:ND2	2.07	0.85
1:5:86:U:O2	1:5:86:U:H2'	1.76	0.85
1:5:1249:C:N3	1:5:1250:C:C5	2.44	0.85
1:5:2495:U:N3	1:5:2496:G:N7	2.24	0.85
1:5:2639:U:H2'	1:5:2694:G:H1	1.40	0.85
1:5:2736:G:N2	1:5:2737:C:C2	2.44	0.85
1:5:3718:A:H2'	1:5:3719:A:O4'	1.76	0.85
1:5:4092:G:C6	1:5:4093:G:C2	2.63	0.85
1:5:4276:G:N1	1:5:4277:G:C8	2.44	0.85
1:5:244:G:C6	1:5:246:G:N7	2.45	0.85
1:5:2370:A:HO2'	1:5:2826:U:H3	1.21	0.85
1:5:2513:A:N7	35:g:13:TYR:CD2	2.44	0.85
1:5:4165:C:C4	1:5:4166:G:N7	2.45	0.85
1:5:5005:G:N7	25:W:51:TRP:HD1	1.71	0.85
3:8:125:C:H4'	3:8:126:C:H3'	1.58	0.85
20:R:36:ASN:ND2	46:1:407:THR:HB	1.91	0.85
1:5:2726:G:C6	1:5:2727:C:N4	2.45	0.85
1:5:3675:G:N2	1:5:3676:G:C5	2.44	0.85
1:5:4100:C:C2	1:5:4101:C:C6	2.65	0.85
1:5:4335:C:H2'	1:5:4336:A:O4'	1.77	0.85
1:5:1339:U:O2	1:5:1340:C:C6	2.30	0.85
1:5:1949:U:O2	1:5:1950:U:C6	2.30	0.85
3:8:12:G:H21	3:8:13:G:H1'	1.37	0.85
3:8:134:G:C2	3:8:135:C:C6	2.64	0.85
1:5:703:G:O6	1:5:706:C:N4	2.09	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1439:C:C5'	9:F:36:ARG:HH12	1.88	0.85
1:5:1598:C:N3	1:5:1599:A:C8	2.45	0.85
1:5:1886:G:N2	1:5:1894:C:C2	2.45	0.85
1:5:2452:G:N1	1:5:2467:U:C4	2.44	0.85
1:5:3731:C:N3	1:5:3732:A:C8	2.44	0.85
1:5:4223:C:H4'	12:I:119:PHE:CE2	2.10	0.85
1:5:4757:C:O2	17:O:114:LYS:CA	2.25	0.85
2:7:112:U:O2	2:7:113:G:C8	2.28	0.85
8:E:157:ARG:CD	8:E:266:TYR:CE1	2.59	0.85
9:F:161:TYR:CD2	9:F:168:ARG:NH2	2.44	0.85
11:H:61:TRP:HZ2	21:S:152:PHE:HE2	1.22	0.85
12:I:80:CYS:SG	12:I:144:ASN:ND2	2.50	0.85
20:R:36:ASN:HD21	46:1:407:THR:HB	1.42	0.85
1:5:1188:C:C2	1:5:1189:G:C8	2.64	0.85
1:5:1650:A:C2	6:C:100:ARG:NH2	2.44	0.85
1:5:2568:C:C2	1:5:2569:G:N7	2.44	0.85
1:5:2848:G:O2'	1:5:3838:U:O4	1.94	0.85
1:5:4344:U:C2	1:5:4345:C:C5	2.65	0.85
1:5:4745:G:O2'	1:5:4746:C:H6	1.54	0.85
1:5:4935:C:N4	8:E:179:ARG:HG2	1.90	0.85
1:5:5044:A:H2'	1:5:5045:G:H5'	1.58	0.85
1:5:27:C:N3	1:5:28:C:H5	1.75	0.85
1:5:1214:C:HO2'	1:5:2114:G:H1	1.20	0.85
1:5:1634:A:C2	1:5:1635:C:C6	2.65	0.85
1:5:2529:A:C6	1:5:2532:C:C6	2.64	0.85
1:5:4239:A:N6	1:5:4240:G:C5	2.43	0.85
1:5:94:A:H2'	1:5:95:G:O4'	1.77	0.85
1:5:1177:U:C2	1:5:1178:G:C8	2.64	0.85
1:5:1266:G:H5"	1:5:2112:G:C2	2.10	0.85
1:5:1764:G:C6	1:5:1766:A:OP2	2.29	0.85
1:5:1964:A:N1	1:5:4694:G:C5	2.45	0.85
1:5:2294:G:N2	1:5:2295:C:C2	2.44	0.85
1:5:4230:C:O2	1:5:4231:C:C6	2.30	0.85
1:5:4548:A:C8	1:5:4548:A:H5'	2.12	0.85
1:5:4601:U:O4	1:5:4609:G:N2	2.10	0.85
1:5:4983:C:C2	1:5:4984:C:H5	1.92	0.85
1:5:106:A:C1'	1:5:336:A:C8	2.57	0.85
1:5:957:G:P	1:5:1284:G:N2	2.50	0.85
1:5:982:U:H2'	1:5:983:C:H6	1.40	0.85
1:5:1753:G:O6	1:5:1776:A:N6	2.09	0.85
1:5:1847:C:H4'	19:Q:152:PHE:CE2	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3653:A:N1	1:5:3692:A:H4'	1.92	0.85
1:5:3717:A:O2'	1:5:3718:A:C5'	2.25	0.85
1:5:3726:A:O2'	1:5:3727:A:N7	2.09	0.85
1:5:1427:A:H3'	1:5:1428:U:C6	2.11	0.84
1:5:1991:A:C8	1:5:1992:U:O2	2.30	0.84
1:5:4498:U:H2'	1:5:4498:U:O2	1.76	0.84
46:1:59:ALA:C	46:1:62:PHE:CE1	2.47	0.84
1:5:153:G:C2	1:5:154:G:C8	2.65	0.84
1:5:1916:G:N2	1:5:2067:C:O2	2.10	0.84
1:5:1965:G:C2	1:5:1966:C:C5	2.65	0.84
1:5:3662:A:H61	1:5:3680:U:H3	1.23	0.84
1:5:4241:C:O2	1:5:4241:C:H2'	1.77	0.84
2:7:22:A:C2	2:7:23:A:C5	2.65	0.84
2:7:114:U:H2'	2:7:115:A:H5"	1.59	0.84
1:5:172:C:O4'	1:5:172:C:P	2.35	0.84
1:5:1218:G:N1	1:5:1219:G:H1'	1.92	0.84
1:5:1625:G:C4	1:5:1642:A:N1	2.45	0.84
1:5:1683:U:N3	1:5:1684:A:N7	2.25	0.84
1:5:1992:U:O4	1:5:2002:A:H3'	1.75	0.84
1:5:4982:A:C6	1:5:4983:C:C6	2.64	0.84
1:5:753:C:C2	1:5:754:U:C6	2.65	0.84
1:5:1245:C:O2	1:5:1246:G:N7	2.09	0.84
1:5:2457:G:N2	1:5:2465:C:C2	2.44	0.84
1:5:457:G:C2	1:5:458:C:C6	2.66	0.84
1:5:1887:G:O6	1:5:1890:G:N7	2.09	0.84
1:5:3944:G:C2	1:5:3945:A:C8	2.66	0.84
1:5:4653:C:O2	1:5:4654:C:C5	2.30	0.84
1:5:736:C:H2'	1:5:737:C:O4'	1.77	0.84
1:5:1388:A:C5	1:5:1396:G:N2	2.33	0.84
1:5:2078:C:C2	1:5:2079:G:H8	1.94	0.84
1:5:2282:A:H2'	1:5:2283:G:O5'	1.76	0.84
1:5:2495:U:O2	1:5:2496:G:C8	2.31	0.84
1:5:2532:C:N3	1:5:2533:C:C5	2.46	0.84
1:5:2586:G:N7	1:5:2587:A:C2	2.46	0.84
2:7:43:U:C2	2:7:44:C:C5	2.65	0.84
21:S:83:ARG:NH2	22:T:156:TYR:HB2	1.93	0.84
26:X:87:MET:CG	46:1:412:GLU:OE2	2.17	0.84
1:5:100:C:C5	1:5:101:A:H8	1.96	0.84
1:5:970:G:H2'	1:5:971:U:O4'	1.78	0.84
1:5:2329:U:O2'	1:5:2330:G:C5'	2.25	0.84
1:5:4230:C:O2	1:5:4231:C:H6	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4490:C:N3	1:5:4491:G:C8	2.46	0.84
3:8:134:G:C6	3:8:135:C:C5	2.66	0.84
1:5:146:G:C2	1:5:147:A:C8	2.65	0.84
1:5:166:C:C2	1:5:167:C:C5	2.59	0.84
1:5:514:U:C5	1:5:515:C:O4'	2.30	0.84
1:5:1909:G:OP1	2:7:84:U:O2	1.95	0.84
1:5:2294:G:N1	1:5:2295:C:C4	2.46	0.84
1:5:3692:A:C5	1:5:3693:U:C6	2.66	0.84
2:7:43:U:C2	2:7:44:C:C6	2.65	0.84
7:D:17:GLN:HG3	22:T:20:ARG:HA	1.60	0.84
1:5:2055:G:O6	21:S:158:VAL:CB	2.25	0.84
1:5:2089:G:O6	1:5:2263:A:H5"	1.75	0.84
1:5:2108:G:N1	1:5:2125:C:N4	2.25	0.84
1:5:89:C:O2'	1:5:90:G:H5'	1.78	0.84
1:5:278:G:C2	1:5:330:G:C8	2.66	0.84
1:5:747:A:O2'	1:5:748:G:H5'	1.78	0.84
1:5:2107:C:C5	1:5:2126:G:C2	2.64	0.84
1:5:2113:G:C8	1:5:2115:G:H1'	2.12	0.84
1:5:4095:G:N3	1:5:4096:C:C5	2.44	0.84
1:5:4117:U:C6	10:G:41:ILE:O	2.31	0.84
2:7:54:A:C2	2:7:55:A:C5	2.64	0.84
1:5:246:G:C2	1:5:247:G:N7	2.46	0.83
1:5:4145:C:C2	1:5:4146:G:C8	2.66	0.83
1:5:4879:C:C2	1:5:4880:C:C5	2.66	0.83
1:5:5062:G:C2	1:5:5063:G:C8	2.66	0.83
3:8:38:U:N3	36:h:92:ARG:NH1	2.24	0.83
6:C:325:MET:HE1	9:F:157:TYR:CE2	2.13	0.83
1:5:244:G:C6	1:5:246:G:C8	2.66	0.83
1:5:300:A:C2	1:5:301:G:N7	2.45	0.83
1:5:1439:C:H5'	9:F:36:ARG:HH12	1.40	0.83
1:5:1994:C:C2	1:5:1995:G:C8	2.66	0.83
1:5:2468:U:H2'	1:5:2506:G:C6	2.13	0.83
16:N:138:PHE:N	16:N:138:PHE:CD1	2.43	0.83
33:e:98:GLU:OE1	33:e:123:THR:OG1	1.93	0.83
1:5:216:C:O4'	1:5:216:C:P	2.35	0.83
1:5:1213:G:C6	1:5:1215:C:C2	2.65	0.83
1:5:1268:G:N2	1:5:1270:A:C8	2.46	0.83
1:5:1280:C:N3	1:5:1282:G:C6	2.45	0.83
1:5:2736:G:N1	1:5:2737:C:C4	2.46	0.83
1:5:2743:A:N1	1:5:2744:A:C6	2.47	0.83
1:5:4275:G:C6	1:5:4276:G:C5	2.65	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:p:29:ILE:HG23	44:p:69:TRP:CD1	2.13	0.83
46:1:61:PRO:HB2	46:1:64:TRP:HE3	1.43	0.83
1:5:348:G:C2	1:5:350:C:C4	2.67	0.83
1:5:1965:G:N3	1:5:1966:C:C6	2.46	0.83
1:5:2099:G:N2	1:5:2100:A:C8	2.46	0.83
1:5:2325:C:O2	1:5:2325:C:H2'	1.79	0.83
1:5:2326:G:N1	1:5:2327:G:C5	2.46	0.83
1:5:3693:U:N3	1:5:3694:U:C5	2.47	0.83
1:5:3847:C:N3	1:5:3848:U:C5	2.47	0.83
3:8:102:G:P	3:8:104:A:O2'	2.35	0.83
18:P:41:ILE:HD11	18:P:150:LEU:HD13	1.59	0.83
43:o:12:CYS:SG	50:o:201:ZN:ZN	1.66	0.83
1:5:1215:C:N3	1:5:1216:C:C5	2.46	0.83
1:5:1338:G:H22	29:a:25:HIS:CE1	1.96	0.83
1:5:1673:U:N3	1:5:1674:C:C5	2.47	0.83
1:5:1995:G:O6	1:5:2000:G:N2	2.11	0.83
1:5:2080:U:O2	1:5:2081:C:C5	2.28	0.83
1:5:2301:G:C2	1:5:2302:C:C6	2.66	0.83
1:5:2451:A:C5	1:5:2452:G:C8	2.67	0.83
1:5:2498:C:N3	1:5:2499:C:C5	2.46	0.83
1:5:2633:U:N3	1:5:2634:C:C5	2.46	0.83
1:5:4933:C:N3	1:5:4934:A:C8	2.46	0.83
10:G:53:ARG:HB3	10:G:54:PHE:CZ	2.14	0.83
11:H:156:ASN:OD1	11:H:157:SER:HA	1.77	0.83
45:r:80:THR:HG21	45:r:96:MET:HE1	1.61	0.83
1:5:497:G:N2	1:5:657:C:C2	2.47	0.83
1:5:755:C:C2	1:5:756:G:C8	2.67	0.83
1:5:1979:A:H3'	1:5:1980:U:H5'	1.61	0.83
1:5:1983:A:C2	1:5:2010:A:C5'	2.62	0.83
1:5:4280:A:H61	7:D:29:ASP:N	1.75	0.83
1:5:4549:G:C2	1:5:4550:G:C8	2.66	0.83
30:b:36:ASP:OD1	30:b:39:PHE:HB2	1.78	0.83
46:1:271:ARG:NH2	46:1:398:GLN:CB	2.41	0.83
1:5:83:C:OP2	1:5:84:A:O2'	1.96	0.83
1:5:1387:A:C4	1:5:1397:A:N6	2.45	0.83
1:5:1598:C:N3	1:5:1599:A:N7	2.27	0.83
1:5:1671:U:N3	1:5:1672:U:C5	2.44	0.83
1:5:1876:U:C2	1:5:1877:G:C8	2.67	0.83
1:5:1895:G:H2'	1:5:1896:A:O4'	1.79	0.83
1:5:2433:G:O2'	46:1:402:ARG:O	1.96	0.83
1:5:2743:A:N1	1:5:2744:A:N6	2.26	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4325:A:H2'	1:5:4326:G:O4'	1.79	0.83
3:8:83:C:H4'	3:8:85:U:C2	2.13	0.83
1:5:1683:U:C2	1:5:1684:A:C8	2.66	0.83
1:5:1273:G:N7	8:E:69:TYR:N	2.25	0.83
1:5:1379:C:C4'	1:5:1380:G:C8	2.62	0.83
1:5:2268:A:H4'	1:5:2269:C:C5'	2.09	0.83
1:5:2397:G:C8	1:5:2399:G:C8	2.67	0.83
1:5:3591:C:C4	1:5:3592:G:C8	2.66	0.83
1:5:3910:C:O2	1:5:3911:C:C6	2.32	0.83
1:5:383:A:O2'	1:5:384:A:C8	2.32	0.83
1:5:1442:C:C2	1:5:1443:A:C8	2.67	0.83
1:5:2107:C:C4	1:5:2126:G:C2	2.66	0.83
1:5:3732:A:C2	1:5:3733:A:C8	2.66	0.83
1:5:4601:U:O4	1:5:4609:G:C2	2.32	0.83
1:5:4884:G:C2	1:5:4885:U:C5	2.67	0.83
9:F:149:LEU:CB	9:F:197:TYR:OH	2.26	0.83
1:5:42:A:C6	1:5:4379:A:C2	2.67	0.82
1:5:1671:U:H2'	1:5:1671:U:O2	1.79	0.82
1:5:504:G:N2	1:5:654:C:H1'	1.94	0.82
1:5:4416:G:N2	1:5:4417:C:C2	2.46	0.82
1:5:4772:C:N3	1:5:4773:C:C5	2.47	0.82
1:5:1676:C:O2'	1:5:3914:U:N3	2.02	0.82
1:5:2327:G:N1	1:5:2328:G:C5	2.47	0.82
4:A:202:VAL:HG12	4:A:217:GLN:HG2	1.60	0.82
11:H:156:ASN:OD1	11:H:157:SER:N	2.12	0.82
32:d:85:ARG:HG3	32:d:85:ARG:HH11	1.44	0.82
34:f:6:TRP:HB2	34:f:102:ARG:HB3	1.59	0.82
1:5:43:U:C4	1:5:44:A:C8	2.66	0.82
1:5:1280:C:C2	1:5:1282:G:C5	2.67	0.82
1:5:2018:C:H2'	1:5:2019:C:O4'	1.78	0.82
1:5:2293:U:N3	1:5:2294:G:N7	2.26	0.82
3:8:10:G:C2	3:8:11:C:H1'	2.15	0.82
1:5:287:U:N3	1:5:288:G:N7	2.28	0.82
1:5:321:U:N3	1:5:322:C:C5	2.48	0.82
1:5:957:G:P	1:5:1284:G:H21	2.02	0.82
1:5:2107:C:C4	1:5:2126:G:N2	2.48	0.82
1:5:2251:G:C1'	1:5:2252:G:N2	2.43	0.82
1:5:2566:G:C2	1:5:2567:G:C8	2.67	0.82
1:5:4623:G:H4'	5:B:16:PHE:HE2	1.43	0.82
3:8:10:G:C5	3:8:11:C:C6	2.67	0.82
3:8:125:C:C4'	3:8:126:C:H3'	2.09	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:174:ARG:HA	44:p:69:TRP:CH2	2.14	0.82
5:B:321:VAL:HG12	5:B:322:HIS:HB2	1.62	0.82
1:5:1632:A:N1	1:5:1634:A:C8	2.48	0.82
1:5:2366:A:C2	1:5:3851:U:H1'	2.14	0.82
1:5:2632:U:C2	1:5:2633:U:C5	2.68	0.82
1:5:166:C:N3	1:5:167:C:H5	1.78	0.82
1:5:961:G:H2'	1:5:961:G:N3	1.94	0.82
1:5:1265:G:H5"	1:5:2115:G:N2	1.94	0.82
1:5:1478:C:C2	1:5:1479:G:N7	2.47	0.82
1:5:1572:U:H4'	20:R:95:TRP:HE1	1.43	0.82
1:5:2395:A:O2'	1:5:2806:A:N3	2.11	0.82
1:5:2507:A:C5	1:5:2508:U:C6	2.67	0.82
1:5:2744:A:C2	1:5:2745:A:C6	2.67	0.82
1:5:2784:C:C2	1:5:2785:C:H5	1.97	0.82
1:5:3873:G:H2'	1:5:3874:G:O4'	1.79	0.82
1:5:3911:C:C2	1:5:3912:U:C5	2.68	0.82
1:5:4076:G:H21	10:G:74:LEU:HG	1.43	0.82
3:8:95:A:C2	3:8:96:C:C6	2.68	0.82
46:1:271:ARG:HH12	46:1:398:GLN:CG	1.92	0.82
1:5:723:A:H2	1:5:943:A:N1	1.78	0.82
1:5:1660:U:C4	29:a:12:ARG:NH1	2.48	0.82
3:8:12:G:N1	3:8:13:G:C8	2.48	0.82
1:5:470:A:C5	1:5:471:A:N7	2.48	0.82
1:5:690:C:N3	1:5:691:C:C5	2.48	0.82
1:5:2329:U:O2'	1:5:2330:G:O5'	1.97	0.82
1:5:2826:U:H1'	1:5:2827:G:N1	1.95	0.82
1:5:4581:G:C2	1:5:4582:C:C5	2.67	0.82
3:8:119:C:O2	3:8:120:G:H8	1.58	0.82
5:B:119:TYR:N	5:B:119:TYR:CD1	2.46	0.82
46:1:248:THR:O	46:1:251:VAL:HG22	1.79	0.82
1:5:1465:G:C2	1:5:1466:G:H1'	2.14	0.82
1:5:1771:U:H2'	1:5:1772:C:O4'	1.79	0.82
1:5:2457:G:OP1	16:N:65:ARG:NH1	2.12	0.82
11:H:61:TRP:CZ2	21:S:152:PHE:HE2	1.98	0.82
31:c:28:VAL:HG11	31:c:33:GLN:HB3	1.62	0.82
1:5:370:U:C5	1:5:1637:A:C6	2.69	0.81
1:5:987:C:H2'	1:5:988:C:O4'	1.78	0.81
1:5:1751:A:C6	1:5:1752:G:C8	2.67	0.81
1:5:2769:U:O2'	1:5:2770:C:O5'	1.98	0.81
40:l:21:ARG:NH2	40:l:24:PRO:HD3	1.81	0.81
1:5:728:U:OP1	1:5:728:U:H3'	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:907:C:C2	1:5:908:G:C8	2.69	0.81
1:5:1076:C:C4	1:5:1077:C:C5	2.68	0.81
1:5:2272:C:O2'	1:5:2273:G:H5'	1.80	0.81
1:5:2734:U:C2	1:5:2735:G:C8	2.68	0.81
46:1:271:ARG:NH1	46:1:398:GLN:CG	2.42	0.81
1:5:120:A:C1'	1:5:121:A:N1	2.43	0.81
1:5:484:U:N3	1:5:486:C:C5	2.47	0.81
1:5:662:C:O2	1:5:663:G:C8	2.33	0.81
1:5:1213:G:N1	1:5:1215:C:C2	2.48	0.81
1:5:1340:C:O2	1:5:1341:U:C6	2.33	0.81
1:5:1625:G:C8	1:5:1642:A:H2	1.99	0.81
1:5:2590:G:C2	1:5:2754:G:N2	2.48	0.81
1:5:5047:C:O4'	1:5:5048:A:C2	2.33	0.81
2:7:42:A:C1'	13:J:75:ARG:NH1	2.43	0.81
3:8:94:G:C8	3:8:94:G:C5'	2.62	0.81
18:P:54:GLN:HB3	18:P:83:TRP:HD1	1.45	0.81
26:X:151:ASN:HD21	47:2:20:ARG:HD2	1.45	0.81
1:5:94:A:H2'	1:5:95:G:C4'	2.09	0.81
1:5:690:C:C2	1:5:691:C:C6	2.69	0.81
1:5:1438:U:C2	1:5:2099:G:O6	2.33	0.81
1:5:3674:G:C2	1:5:3675:G:C8	2.68	0.81
30:b:13:SER:HA	30:b:16:TRP:CH2	2.14	0.81
1:5:1392:A:C2	1:5:1393:G:C6	2.68	0.81
1:5:2753:G:H3'	1:5:2754:G:H8	1.46	0.81
1:5:3846:C:N3	1:5:3847:C:C5	2.48	0.81
1:5:4283:G:C6	1:5:4284:C:C5	2.69	0.81
1:5:5045:G:H2'	1:5:5046:U:O4'	1.80	0.81
20:R:117:ARG:NH2	20:R:117:ARG:HB2	1.96	0.81
26:X:156:ILE:CG2	46:1:416:TYR:OH	2.29	0.81
1:5:54:G:C6	1:5:55:G:N7	2.49	0.81
1:5:463:A:N1	1:5:692:A:C2	2.49	0.81
1:5:1280:C:O2'	1:5:1281:G:H3'	1.80	0.81
1:5:1517:G:N2	1:5:1650:A:N1	2.28	0.81
1:5:2294:G:N3	1:5:2295:C:C6	2.48	0.81
1:5:2504:C:O2	1:5:2505:C:C6	2.34	0.81
1:5:4079:C:N3	1:5:4080:C:C5	2.49	0.81
1:5:4731:G:O4'	1:5:4732:G:N2	2.13	0.81
31:c:31:TYR:HE2	31:c:56:ARG:NE	1.77	0.81
1:5:504:G:C2	1:5:654:C:O2	2.34	0.81
1:5:967:C:H5	1:5:968:C:O2	1.63	0.81
1:5:1238:A:H2'	1:5:1239:C:C6	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1857:C:O2	1:5:1858:A:C8	2.34	0.81
1:5:1963:C:C4	1:5:1964:A:C8	2.69	0.81
1:5:1967:A:C2	1:5:1968:G:N7	2.48	0.81
1:5:2438:A:C6	1:5:2441:C:C5	2.69	0.81
1:5:2736:G:C2	1:5:2737:C:C6	2.67	0.81
1:5:3621:A:H8	1:5:4642:U:H1'	1.45	0.81
1:5:3668:C:O2	1:5:3668:C:H2'	1.81	0.81
1:5:4276:G:C5	1:5:4277:G:C8	2.69	0.81
1:5:4999:G:C6	1:5:5000:G:N7	2.48	0.81
26:X:156:ILE:CG2	47:2:24:ARG:HE	1.92	0.81
31:c:31:TYR:HD1	31:c:32:LYS:N	1.77	0.81
1:5:422:C:O2	1:5:423:G:H8	1.64	0.81
1:5:1245:C:C6	1:5:1269:G:C5	2.69	0.81
1:5:2532:C:O2	1:5:2533:C:C5	2.32	0.81
1:5:3686:G:P	4:A:193:ARG:HH22	2.04	0.81
1:5:4653:C:O2	1:5:4654:C:C6	2.34	0.81
28:Z:77:TYR:HB3	31:c:39:ARG:HD3	1.63	0.81
1:5:1269:G:C6	1:5:2111:G:N2	2.49	0.81
1:5:1310:C:C2	1:5:1311:G:C8	2.69	0.81
1:5:2409:U:C5	1:5:2783:A:C2	2.69	0.81
1:5:2691:U:C2	1:5:2692:U:C5	2.68	0.81
1:5:4080:C:C2	1:5:4081:G:H8	1.96	0.81
1:5:4344:U:O2	1:5:4345:C:C6	2.34	0.81
1:5:4416:G:N1	1:5:4417:C:C4	2.49	0.81
1:5:1049:C:C2	1:5:1050:C:C6	2.69	0.81
1:5:1174:G:N2	1:5:1175:A:C5	2.49	0.81
1:5:4580:U:C4	1:5:4581:G:N7	2.48	0.81
3:8:64:U:H2'	3:8:65:A:C8	2.15	0.81
16:N:199:GLN:HA	16:N:199:GLN:OE1	1.79	0.81
1:5:424:U:O2	1:5:425:U:H6	1.64	0.80
1:5:1406:G:O6	1:5:1408:G:O2'	1.97	0.80
1:5:2495:U:C2	1:5:2496:G:C8	2.69	0.80
1:5:3695:U:C4	1:5:3696:C:C5	2.69	0.80
1:5:4332:C:O2	1:5:4333:C:C6	2.34	0.80
1:5:4426:C:C2	1:5:4427:G:C8	2.69	0.80
24:V:97:TYR:CZ	25:W:21:TYR:HA	2.15	0.80
33:e:35:TRP:C	33:e:35:TRP:HD1	1.88	0.80
1:5:93:G:C2	1:5:94:A:C2	2.69	0.80
1:5:100:C:H5	1:5:101:A:C8	1.90	0.80
1:5:504:G:H22	1:5:654:C:H1'	1.43	0.80
1:5:1190:C:C2	1:5:1191:C:C6	2.69	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1441:C:OP1	1:5:2109:G:O3'	2.00	0.80
1:5:1967:A:C2	1:5:1968:G:C5	2.69	0.80
1:5:2515:G:N7	1:5:2516:G:N7	2.28	0.80
1:5:2553:A:N1	1:5:2763:U:C5	2.49	0.80
1:5:3731:C:O2	1:5:3732:A:C8	2.34	0.80
1:5:4233:A:O2'	1:5:4234:A:H3'	1.82	0.80
1:5:4280:A:N6	7:D:29:ASP:OD1	2.14	0.80
8:E:153:HIS:CE1	8:E:180:VAL:HG22	2.16	0.80
46:1:429:GLY:O	46:1:433:VAL:HG23	1.81	0.80
1:5:1279:A:H3'	1:5:1280:C:C5	2.16	0.80
1:5:1338:G:N2	29:a:25:HIS:CE1	2.49	0.80
1:5:3741:C:N3	1:5:3742:G:N7	2.29	0.80
1:5:4098:A:N3	1:5:4099:G:C8	2.49	0.80
1:5:4257:A:H2'	1:5:4258:C:C5	2.16	0.80
1:5:146:G:C2	1:5:147:A:N7	2.50	0.80
1:5:753:C:N3	1:5:754:U:C6	2.48	0.80
1:5:1756:U:C4	1:5:1776:A:C2	2.70	0.80
1:5:2658:G:H22	1:5:2675:G:H2'	1.46	0.80
1:5:2812:A:H2'	1:5:2813:A:C8	2.16	0.80
1:5:4256:A:N7	13:J:60:PHE:CE1	2.50	0.80
3:8:96:C:C2	3:8:97:A:H8	1.99	0.80
11:H:113:GLU:OE2	11:H:113:GLU:HA	1.81	0.80
46:1:268:LYS:CD	46:1:276:TYR:CE1	2.63	0.80
1:5:1926:C:N3	1:5:1927:U:C5	2.49	0.80
3:8:96:C:N3	3:8:97:A:C8	2.47	0.80
26:X:83:THR:HG23	46:1:403:GLY:HA3	1.63	0.80
1:5:33:A:H2'	1:5:34:A:C8	2.16	0.80
1:5:424:U:N3	1:5:425:U:H5	1.79	0.80
1:5:1070:G:C6	1:5:1071:C:C5	2.69	0.80
1:5:1279:A:C2'	1:5:1280:C:C5	2.62	0.80
1:5:1687:U:C2	1:5:1850:A:N6	2.49	0.80
1:5:1948:G:O6	1:5:2034:G:O6	2.00	0.80
1:5:4277:G:C2	1:5:4278:C:C6	2.69	0.80
1:5:4579:U:N3	1:5:4580:U:C5	2.49	0.80
2:7:50:A:C2	2:7:51:G:C8	2.69	0.80
22:T:82:GLY:CA	30:b:16:TRP:HB2	2.12	0.80
1:5:194:C:O2'	27:Y:121:ARG:NH2	2.15	0.80
1:5:473:C:N3	1:5:474:C:C5	2.50	0.80
1:5:2079:G:N1	1:5:2080:U:C4	2.50	0.80
1:5:2277:C:O2	1:5:2278:G:H8	1.60	0.80
1:5:2279:A:N3	1:5:2280:G:C8	2.49	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2690:C:C2	1:5:2691:U:C6	2.69	0.80
1:5:3648:A:C4	1:5:3785:A:N6	2.50	0.80
1:5:3739:C:C4	1:5:3740:G:C8	2.70	0.80
1:5:5012:G:N2	1:5:5014:A:C8	2.50	0.80
6:C:143:ARG:NH2	6:C:145:GLU:HG3	1.96	0.80
31:c:28:VAL:CG1	31:c:33:GLN:HB3	2.11	0.80
1:5:738:C:C4	1:5:739:G:N7	2.50	0.80
1:5:4258:C:O2	1:5:4259:C:C6	2.34	0.80
1:5:4510:A:N6	1:5:4592:C:C4'	2.44	0.80
1:5:4772:C:C2	1:5:4773:C:C6	2.70	0.80
3:8:64:U:O2	3:8:65:A:C5	2.35	0.80
3:8:65:A:C2	3:8:66:A:C5	2.69	0.80
3:8:120:G:C2	3:8:121:G:C8	2.69	0.80
1:5:486:C:N3	1:5:487:G:N7	2.30	0.80
1:5:1268:G:C2	1:5:2111:G:C2	2.70	0.80
1:5:2428:A:C5	1:5:2789:A:H2	2.00	0.80
3:8:81:C:O2	3:8:83:C:OP1	1.99	0.80
45:r:107:ARG:C	45:r:107:ARG:HD2	2.06	0.80
1:5:504:G:C2	1:5:505:G:C5	2.70	0.80
1:5:4976:U:O4	5:B:342:LYS:HD2	1.81	0.80
8:E:197:ILE:HD12	8:E:257:ILE:HG23	1.63	0.80
1:5:1886:G:C2	1:5:1894:C:N3	2.50	0.79
1:5:2505:C:H1'	1:5:2506:G:C5	2.17	0.79
1:5:70:A:C2	1:5:4355:G:O4'	2.35	0.79
1:5:235:A:C6	1:5:238:C:C4	2.70	0.79
1:5:4078:C:O2'	1:5:4172:A:N6	2.14	0.79
1:5:4301:U:H4'	22:T:54:HIS:CD2	2.17	0.79
1:5:982:U:H5'	8:E:69:TYR:OH	1.83	0.79
1:5:1946:G:N1	1:5:2037:C:C4	2.49	0.79
1:5:3695:U:N3	1:5:3696:C:C5	2.51	0.79
1:5:4239:A:C6	1:5:4240:G:C8	2.70	0.79
3:8:11:C:O2	3:8:11:C:H2'	1.82	0.79
3:8:12:G:N2	3:8:13:G:N9	2.30	0.79
18:P:30:ARG:HD3	18:P:30:ARG:C	2.06	0.79
1:5:212:A:H2'	1:5:213:G:H8	1.47	0.79
1:5:440:U:C2	1:5:441:G:C8	2.70	0.79
1:5:1080:C:N3	1:5:1081:C:C5	2.50	0.79
1:5:1247:U:C4	1:5:1248:C:C5	2.70	0.79
1:5:1662:C:C2	1:5:1663:C:C5	2.71	0.79
1:5:1806:G:N2	1:5:1807:C:C2	2.51	0.79
1:5:2632:U:O2	1:5:2632:U:H2'	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4269:G:C6	1:5:4270:C:C5	2.71	0.79
2:7:42:A:C6	2:7:43:U:C4	2.69	0.79
19:Q:37:ARG:HG3	19:Q:38:ARG:N	1.96	0.79
1:5:66:A:C2	1:5:312:G:O4'	2.36	0.79
1:5:2089:G:C6	1:5:2263:A:C5	2.70	0.79
1:5:2328:G:O2'	1:5:2329:U:C5'	2.30	0.79
1:5:4276:G:O6	1:5:4277:G:N7	2.12	0.79
3:8:37:A:O4'	3:8:39:G:H1'	1.82	0.79
3:8:65:A:C2	3:8:66:A:N7	2.50	0.79
1:5:153:G:C2	1:5:154:G:N7	2.51	0.79
1:5:422:C:O2	1:5:423:G:C8	2.35	0.79
1:5:662:C:H2'	1:5:663:G:C8	2.16	0.79
1:5:1348:U:O2	1:5:1349:G:C8	2.36	0.79
1:5:1836:G:C2	1:5:1837:A:C8	2.71	0.79
1:5:4098:A:C2	1:5:4099:G:C5	2.70	0.79
1:5:4627:U:C2	1:5:4628:U:C5	2.70	0.79
1:5:4990:C:O3'	1:5:4991:U:H4'	1.82	0.79
3:8:102:G:OP2	3:8:104:A:O2'	2.00	0.79
11:H:96:TYR:CE2	11:H:100:PRO:HA	2.17	0.79
1:5:1388:A:N6	1:5:1396:G:N2	2.30	0.79
1:5:2441:C:H4'	35:g:9:ARG:HE	1.45	0.79
1:5:4114:C:H3'	1:5:4115:G:O4'	1.83	0.79
1:5:4737:G:C6	1:5:4963:G:C2	2.70	0.79
1:5:4888:U:O2'	1:5:4889:G:H8	1.65	0.79
14:L:35:ARG:C	14:L:39:ARG:HH12	1.91	0.79
1:5:83:C:O2	1:5:99:A:N6	2.12	0.79
1:5:982:U:C5'	8:E:69:TYR:OH	2.31	0.79
1:5:1177:U:H1'	7:D:282:GLN:NE2	1.98	0.79
1:5:1270:A:H2'	1:5:1271:G:O5'	1.83	0.79
1:5:2277:C:N3	1:5:2278:G:N7	2.30	0.79
1:5:2452:G:C2	1:5:2467:U:C4	2.70	0.79
1:5:4537:C:O2	1:5:4538:G:C8	2.35	0.79
1:5:4744:A:C2	1:5:4745:G:C4	2.71	0.79
1:5:425:U:O2	1:5:426:A:C8	2.35	0.79
1:5:1964:A:C2	1:5:4694:G:C4	2.71	0.79
1:5:2090:U:O2'	1:5:2091:C:O5'	2.00	0.79
1:5:2463:G:N2	1:5:2464:C:C2	2.51	0.79
1:5:2533:C:C2	1:5:2534:C:C5	2.71	0.79
1:5:3595:U:O2'	20:R:114:LYS:HG3	1.82	0.79
1:5:4096:C:N4	1:5:4097:G:C5	2.50	0.79
5:B:51:ALA:HA	5:B:323:TYR:CE2	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1358:G:C3'	6:C:114:ARG:HH12	1.96	0.79
1:5:1684:A:C6	1:5:1685:G:C8	2.71	0.79
1:5:1866:U:O2'	1:5:1867:A:C8	2.36	0.79
1:5:1899:G:N7	1:5:2278:G:C6	2.51	0.79
1:5:3593:C:H4'	1:5:3594:C:OP2	1.79	0.79
1:5:70:A:N1	1:5:4355:G:O4'	2.16	0.78
1:5:269:G:C6	1:5:270:U:C5	2.71	0.78
1:5:424:U:C2	1:5:425:U:C5	2.67	0.78
1:5:917:A:C2	1:5:919:C:C6	2.71	0.78
1:5:1177:U:O2	1:5:1178:G:C8	2.36	0.78
1:5:1214:C:O2'	1:5:2114:G:C2	2.25	0.78
1:5:1898:C:C5	1:5:2279:A:H1'	2.17	0.78
1:5:2034:G:C5	1:5:2035:C:C5	2.71	0.78
1:5:4332:C:O2	1:5:4333:C:C5	2.35	0.78
2:7:30:C:C2	2:7:48:G:N2	2.51	0.78
3:8:131:G:C6	3:8:132:G:C8	2.71	0.78
6:C:210:ILE:HD13	6:C:252:TRP:CH2	2.18	0.78
12:I:9:TYR:HD2	12:I:97:ILE:HG12	1.48	0.78
24:V:20:LEU:HD21	24:V:101:ASN:HD22	1.47	0.78
1:5:152:U:N3	1:5:153:G:N7	2.30	0.78
1:5:688:U:N3	1:5:689:U:C6	2.50	0.78
1:5:1339:U:C2	1:5:1340:C:C5	2.71	0.78
1:5:1791:U:H4'	22:T:19:PHE:CZ	2.19	0.78
1:5:2691:U:C2	1:5:2692:U:H5	2.01	0.78
1:5:3905:A:C5	1:5:4449:A:N1	2.51	0.78
1:5:4563:U:C4	1:5:4564:A:N6	2.51	0.78
1:5:4886:C:N3	1:5:4887:C:H5	1.81	0.78
9:F:120:PHE:CZ	9:F:217:SER:HA	2.18	0.78
10:G:169:PHE:CD2	16:N:6:TYR:HB3	2.19	0.78
16:N:179:LYS:HB2	16:N:180:PHE:CE2	2.18	0.78
46:1:252:PHE:HZ	47:2:40:THR:HG22	1.48	0.78
1:5:92:C:N4	43:o:40:ARG:HH11	1.79	0.78
1:5:2079:G:N3	1:5:2080:U:C6	2.52	0.78
1:5:2567:G:C2	1:5:2568:C:C6	2.71	0.78
1:5:2690:C:C4	1:5:2691:U:C5	2.72	0.78
1:5:3655:C:N3	1:5:3656:A:C8	2.52	0.78
1:5:4352:U:OP1	14:L:190:ARG:NH2	2.17	0.78
1:5:5047:C:O2	1:5:5048:A:C5	2.37	0.78
3:8:117:C:N3	3:8:118:C:C5	2.51	0.78
34:f:76:ARG:HE	34:f:85:ARG:NH2	1.81	0.78
1:5:100:C:C6	1:5:101:A:C8	2.70	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:917:A:N1	1:5:919:C:C4	2.52	0.78
1:5:1398:A:H2'	1:5:1398:A:OP1	1.84	0.78
1:5:1735:U:H2'	1:5:1735:U:O2	1.84	0.78
1:5:2361:G:O6	18:P:25:HIS:CG	2.37	0.78
1:5:2509:C:O2'	1:5:2510:G:H5'	1.84	0.78
1:5:125:C:N3	1:5:126:C:C5	2.52	0.78
1:5:966:A:H61	1:5:2252:G:H8	1.29	0.78
1:5:1213:G:C5	1:5:1215:C:N1	2.51	0.78
1:5:1382:G:OP1	14:L:65:ARG:NH1	2.16	0.78
1:5:1811:G:N1	1:5:1812:C:C4	2.52	0.78
1:5:3717:A:O2'	1:5:3718:A:O4'	2.00	0.78
1:5:3739:C:C5'	1:5:3739:C:C6	2.66	0.78
1:5:4284:C:O2	1:5:4285:U:C6	2.36	0.78
10:G:53:ARG:CZ	10:G:54:PHE:HZ	1.95	0.78
35:g:75:SER:O	35:g:76:ARG:HG2	1.84	0.78
1:5:101:A:C2	1:5:102:G:C8	2.72	0.78
1:5:964:A:C2	1:5:2252:G:O6	2.36	0.78
1:5:1734:G:H3'	22:T:13:TYR:CE2	2.18	0.78
1:5:1858:A:C2	1:5:1859:C:C5	2.71	0.78
1:5:2077:C:H2'	1:5:2077:C:O2	1.82	0.78
1:5:2665:U:OP2	20:R:120:TYR:OH	2.02	0.78
1:5:3739:C:H6	1:5:3739:C:H5"	1.47	0.78
1:5:5066:U:H2'	1:5:5067:U:C6	2.17	0.78
4:A:163:ARG:CZ	4:A:163:ARG:HB2	2.14	0.78
32:d:87:ARG:N	32:d:87:ARG:HH12	1.81	0.78
1:5:425:U:C2	1:5:426:A:C8	2.71	0.78
1:5:1572:U:H4'	20:R:95:TRP:NE1	1.97	0.78
1:5:1896:A:C5	9:F:101:ASN:ND2	2.51	0.78
1:5:2108:G:C2	1:5:2125:C:N3	2.52	0.78
1:5:2713:C:O2	1:5:2714:G:C8	2.36	0.78
1:5:2724:G:N3	1:5:2726:G:C8	2.52	0.78
1:5:3621:A:C8	1:5:4642:U:H1'	2.19	0.78
1:5:3738:G:C5	1:5:3739:C:C6	2.72	0.78
1:5:3799:A:H2'	1:5:3800:A:C8	2.18	0.78
1:5:4719:G:O2'	1:5:4720:C:H4'	1.83	0.78
1:5:4761:G:H2'	1:5:4762:A:O4'	1.83	0.78
1:5:4880:C:C2'	1:5:4881:U:H5'	2.14	0.78
7:D:94:ASN:C	7:D:94:ASN:HD22	1.91	0.78
9:F:41:GLN:HA	9:F:41:GLN:HE21	1.48	0.78
44:p:68:ALA:HB1	44:p:69:TRP:CZ3	2.19	0.78
1:5:425:U:C2	1:5:426:A:N7	2.52	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:483:G:C2	1:5:484:U:C4	2.72	0.78
1:5:1598:C:C2	1:5:1599:A:C8	2.72	0.78
1:5:2327:G:N1	1:5:2328:G:N7	2.32	0.78
1:5:4302:U:H5	1:5:4303:C:C5	2.01	0.78
1:5:4426:C:C4	1:5:4427:G:N7	2.52	0.78
2:7:21:G:C6	2:7:58:A:C2	2.72	0.78
10:G:81:ASN:HD21	10:G:238:GLY:HA3	1.49	0.78
1:5:1438:U:O2	1:5:2099:G:C6	2.37	0.78
1:5:2035:C:O2	1:5:2035:C:H2'	1.84	0.78
1:5:2367:A:C2	1:5:2788:U:O4	2.37	0.78
1:5:2724:G:N2	1:5:2726:G:C4	2.52	0.78
1:5:2726:G:N3	1:5:2727:C:C5	2.52	0.78
1:5:3794:C:C2	1:5:3795:A:C8	2.71	0.78
21:S:94:TYR:OH	21:S:96:GLU:HG2	1.84	0.78
33:e:35:TRP:NE1	33:e:36:ARG:C	2.42	0.78
1:5:86:U:C4	1:5:97:G:C2	2.72	0.78
1:5:120:A:H1'	1:5:121:A:N1	1.98	0.78
1:5:223:G:H4'	1:5:225:G:N7	1.99	0.78
1:5:1806:G:N1	1:5:1807:C:C4	2.52	0.78
1:5:1965:G:N2	1:5:1966:C:C2	2.52	0.78
1:5:4076:G:N2	10:G:74:LEU:HG	1.98	0.78
1:5:4213:A:C2	1:5:4218:U:O4	2.37	0.78
1:5:4216:G:C2	1:5:4217:G:C8	2.72	0.78
1:5:4723:A:C2	1:5:4724:A:C5	2.72	0.78
1:5:124:C:N3	1:5:125:C:C5	2.52	0.77
1:5:197:A:H5'	1:5:197:A:C8	2.19	0.77
1:5:1214:C:C2'	1:5:2114:G:C2	2.66	0.77
1:5:1807:C:N3	1:5:1808:C:C5	2.52	0.77
1:5:2264:C:O2'	1:5:2265:G:O5'	2.02	0.77
1:5:2277:C:C2	1:5:2278:G:N7	2.53	0.77
1:5:3607:U:C2	1:5:3608:A:C8	2.72	0.77
1:5:4093:G:C6	1:5:4115:G:O6	2.38	0.77
1:5:4117:U:N3	4:A:40:TYR:HE1	1.81	0.77
1:5:4535:A:C6	1:5:4536:C:C5	2.72	0.77
3:8:64:U:N3	3:8:65:A:C5	2.52	0.77
6:C:111:TRP:HB2	6:C:112:HIS:HD2	1.48	0.77
1:5:1672:U:N3	1:5:1673:U:C5	2.51	0.77
1:5:1724:G:C8	30:b:17:HIS:CE1	2.72	0.77
1:5:1899:G:C4	1:5:1900:C:C5	2.71	0.77
1:5:2438:A:C6	1:5:2441:C:C4	2.72	0.77
1:5:4481:U:C2	1:5:4482:U:C6	2.73	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:86:U:OP1	3:8:87:G:OP1	2.00	0.77
11:H:41:ILE:HD11	11:H:69:THR:CB	2.12	0.77
18:P:54:GLN:HB3	18:P:83:TRP:CD1	2.18	0.77
31:c:31:TYR:HE2	31:c:56:ARG:CD	1.97	0.77
1:5:208:A:H1'	1:5:232:G:C2	2.18	0.77
1:5:300:A:O2'	16:N:94:PHE:O	2.02	0.77
1:5:1811:G:N2	1:5:1812:C:C2	2.50	0.77
1:5:2054:U:H4'	1:5:2056:G:C1'	2.13	0.77
1:5:4416:G:C2	1:5:4417:C:C6	2.73	0.77
1:5:4982:A:N1	1:5:4983:C:C6	2.53	0.77
1:5:195:C:N3	1:5:196:C:C5	2.52	0.77
1:5:1277:G:C2	1:5:1278:C:C6	2.72	0.77
1:5:1781:U:C2	1:5:1782:U:C6	2.72	0.77
1:5:1791:U:H4'	22:T:19:PHE:CE2	2.17	0.77
1:5:1946:G:N2	1:5:2037:C:C6	2.52	0.77
1:5:1950:U:N3	1:5:1951:G:N7	2.32	0.77
1:5:2291:G:C2	1:5:2292:C:C6	2.73	0.77
1:5:4343:U:N3	1:5:4344:U:C5	2.53	0.77
3:8:15:G:H2'	3:8:16:G:C1'	2.14	0.77
3:8:127:U:H2'	3:8:128:C:O4'	1.84	0.77
36:h:73:TYR:CD2	36:h:80:PRO:HD3	2.20	0.77
1:5:54:G:O6	1:5:55:G:N7	2.17	0.77
1:5:458:C:C2	1:5:459:C:C6	2.73	0.77
1:5:2127:C:C2'	1:5:2128:G:C8	2.68	0.77
1:5:2305:U:H5'	1:5:2305:U:C6	2.20	0.77
1:5:2689:C:H2'	1:5:2689:C:O2	1.84	0.77
1:5:4332:C:O2	1:5:4332:C:H2'	1.82	0.77
1:5:4735:G:N3	1:5:4736:C:C6	2.52	0.77
3:8:117:C:N3	3:8:118:C:C6	2.51	0.77
1:5:287:U:C2	1:5:288:G:C8	2.73	0.77
1:5:321:U:C2	1:5:322:C:C6	2.73	0.77
1:5:701:G:O6	1:5:702:U:C5	2.38	0.77
1:5:1421:G:C2	1:5:1422:G:C8	2.72	0.77
1:5:1502:G:OP1	19:Q:65:ARG:NH1	2.17	0.77
1:5:1674:C:N3	1:5:1675:C:C5	2.53	0.77
1:5:1949:U:N3	1:5:1950:U:C5	2.53	0.77
1:5:2663:G:H4'	20:R:117:ARG:HH12	1.49	0.77
1:5:4276:G:C6	1:5:4277:G:C5	2.70	0.77
1:5:4332:C:C2	1:5:4333:C:H5	2.03	0.77
1:5:4551:U:C2	1:5:4552:U:C5	2.72	0.77
1:5:4739:C:H2'	1:5:4740:G:O4'	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:42:A:C5	2:7:43:U:C5	2.72	0.77
2:7:111:C:C4	2:7:112:U:C5	2.73	0.77
6:C:197:ARG:C	6:C:198:ASN:ND2	2.43	0.77
36:h:73:TYR:HD2	36:h:80:PRO:HD3	1.47	0.77
1:5:244:G:N1	1:5:246:G:C8	2.53	0.77
1:5:702:U:O2	1:5:703:G:O2'	2.00	0.77
1:5:1213:G:N3	1:5:1215:C:H1'	2.00	0.77
1:5:1367:C:C2	1:5:1370:G:H2'	2.20	0.77
1:5:1634:A:N3	1:5:1635:C:C6	2.53	0.77
1:5:2277:C:O2	1:5:2278:G:N7	2.17	0.77
1:5:4098:A:C2	1:5:4099:G:N7	2.53	0.77
3:8:81:C:H3'	3:8:82:A:H4'	1.66	0.77
3:8:103:A:C8	3:8:104:A:N7	2.53	0.77
7:D:41:LYS:HG3	22:T:93:ILE:HD11	1.67	0.77
32:d:87:ARG:N	32:d:87:ARG:NH1	2.32	0.77
1:5:145:G:C2	1:5:146:G:C8	2.73	0.77
1:5:182:G:H22	1:5:254:G:H22	1.32	0.77
1:5:274:C:O2'	1:5:275:C:O5'	2.02	0.77
1:5:1781:U:N3	1:5:1782:U:C5	2.53	0.77
1:5:1965:G:H1	1:5:2021:G:H1	1.33	0.77
1:5:4275:G:O6	1:5:4276:G:C6	2.38	0.77
1:5:4560:C:H2'	1:5:4560:C:O2	1.84	0.77
1:5:4750:G:O6	1:5:4949:G:O6	2.02	0.77
1:5:4908:G:H1	1:5:4913:G:H21	1.31	0.77
3:8:10:G:N2	3:8:11:C:H1'	2.00	0.77
5:B:378:ARG:HD3	25:W:32:LEU:HD21	1.65	0.77
1:5:62:A:H2	1:5:77:U:O2	1.67	0.77
1:5:667:A:H2'	1:5:668:C:O4'	1.85	0.77
1:5:1175:A:H1'	7:D:275:GLN:NE2	2.00	0.77
1:5:1289:C:C2	1:5:1290:G:C8	2.73	0.77
1:5:2293:U:C2	1:5:2294:G:C8	2.73	0.77
1:5:2753:G:H3'	1:5:2754:G:C8	2.19	0.77
1:5:4892:A:C2	1:5:4927:G:O6	2.36	0.77
3:8:130:C:C2	3:8:131:G:C8	2.72	0.77
7:D:284:LYS:HB3	12:I:209:TRP:CZ3	2.20	0.77
1:5:1202:C:C2	1:5:1203:G:C8	2.74	0.77
1:5:1363:C:OP2	14:L:36:ARG:NH2	2.18	0.77
1:5:1866:U:O4	1:5:4405:G:C8	2.38	0.77
1:5:1964:A:C5	1:5:1965:G:N9	2.53	0.77
1:5:2041:A:C2	1:5:4464:A:C6	2.73	0.77
1:5:4123:C:C4	1:5:4124:G:N7	2.53	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4341:C:C4	1:5:4342:C:C5	2.73	0.77
1:5:4998:G:C6	1:5:4999:G:N7	2.53	0.77
1:5:5005:G:O2'	1:5:5042:A:N6	2.18	0.77
2:7:33:U:N3	2:7:34:C:C5	2.53	0.77
2:7:111:C:N3	2:7:112:U:C6	2.53	0.77
1:5:664:G:N2	1:5:667:A:C6	2.53	0.76
1:5:1262:G:C2	1:5:1263:A:C8	2.72	0.76
1:5:1302:U:C2	1:5:1303:A:C8	2.73	0.76
1:5:1650:A:N1	6:C:100:ARG:NH2	2.33	0.76
1:5:1696:C:O2'	1:5:2084:C:N4	2.18	0.76
1:5:1796:U:C4	1:5:1797:G:C8	2.73	0.76
1:5:1985:G:O2'	1:5:2003:G:OP2	2.01	0.76
1:5:2107:C:C5	1:5:2126:G:N1	2.53	0.76
1:5:2327:G:N3	1:5:2328:G:C8	2.53	0.76
1:5:2468:U:C4	1:5:2473:A:N1	2.51	0.76
1:5:3899:G:OP1	5:B:257:TRP:HB2	1.85	0.76
1:5:4269:G:C5	1:5:4270:C:C6	2.73	0.76
1:5:4920:C:H2'	1:5:4921:C:H6	1.50	0.76
9:F:120:PHE:HZ	9:F:217:SER:HA	1.48	0.76
1:5:88:A:H62	1:5:97:G:N2	1.82	0.76
1:5:135:G:N2	36:h:94:ARG:NH2	2.33	0.76
1:5:271:C:C4	1:5:272:U:C5	2.74	0.76
1:5:709:C:C2	1:5:710:G:C8	2.73	0.76
1:5:964:A:H3'	1:5:964:A:C8	2.19	0.76
1:5:1370:G:H4'	1:5:1371:A:H4'	1.67	0.76
1:5:2079:G:N1	1:5:2080:U:C5	2.53	0.76
1:5:2124:G:N2	9:F:32:ILE:HG13	2.01	0.76
1:5:4510:A:H61	1:5:4592:C:H4'	1.50	0.76
1:5:1870:C:N3	1:5:1871:A:N7	2.34	0.76
1:5:2513:A:N7	35:g:13:TYR:CG	2.54	0.76
1:5:3692:A:N7	1:5:3693:U:C5	2.54	0.76
1:5:4215:C:N3	1:5:4216:G:C8	2.54	0.76
1:5:5012:G:C2	1:5:5014:A:N7	2.53	0.76
9:F:93:PHE:HB2	9:F:124:PHE:CD1	2.21	0.76
20:R:131:VAL:CB	20:R:132:PHE:CZ	2.64	0.76
1:5:495:C:N3	1:5:496:G:C8	2.54	0.76
1:5:1268:G:C2	1:5:1270:A:N7	2.52	0.76
1:5:1625:G:C8	1:5:1642:A:C2	2.74	0.76
1:5:2261:G:H2'	1:5:2262:G:C8	2.21	0.76
1:5:4562:C:N3	1:5:4563:U:C6	2.53	0.76
1:5:4983:C:N3	1:5:4984:C:H5	1.82	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:6:C:N4	2:7:7:G:C8	2.54	0.76
3:8:38:U:H3	36:h:92:ARG:NH1	1.83	0.76
46:1:271:ARG:CZ	46:1:398:GLN:CG	2.64	0.76
1:5:21:G:C5	3:8:36:G:N2	2.54	0.76
1:5:497:G:C2	1:5:657:C:N3	2.53	0.76
1:5:665:C:O2	1:5:665:C:H2'	1.85	0.76
1:5:919:C:C4	1:5:920:C:C5	2.74	0.76
1:5:1316:G:O4'	1:5:2348:G:N2	2.18	0.76
1:5:1967:A:N3	1:5:1968:G:C8	2.53	0.76
1:5:2792:C:O2'	38:j:11:ARG:HD3	1.85	0.76
1:5:3863:C:C2	1:5:3864:C:C5	2.73	0.76
1:5:4271:A:H3'	1:5:4272:G:H21	1.50	0.76
1:5:4563:U:O2	1:5:4564:A:C8	2.38	0.76
24:V:98:PHE:CZ	25:W:22:ALA:HB3	2.20	0.76
33:e:26:ASP:OD1	33:e:26:ASP:N	2.19	0.76
1:5:125:C:N3	1:5:126:C:C6	2.54	0.76
1:5:1190:C:C2	1:5:1191:C:C5	2.73	0.76
1:5:1628:C:O2	1:5:1629:G:H8	1.62	0.76
1:5:1629:G:N1	4:A:208:GLU:OE1	2.18	0.76
1:5:1720:C:H2'	1:5:1721:G:O4'	1.86	0.76
1:5:2078:C:O2	1:5:2078:C:H2'	1.85	0.76
1:5:2251:G:O4'	1:5:2252:G:N2	2.18	0.76
1:5:4095:G:N2	1:5:4096:C:N4	2.32	0.76
1:5:4343:U:C2	1:5:4344:U:C6	2.73	0.76
22:T:82:GLY:HA3	30:b:16:TRP:HB2	1.65	0.76
1:5:209:U:C4	1:5:211:G:C8	2.74	0.76
1:5:642:G:N2	1:5:643:C:C2	2.53	0.76
1:5:914:U:H2'	1:5:915:A:O4'	1.86	0.76
1:5:957:G:C5'	1:5:1284:G:N2	2.48	0.76
1:5:1078:A:H2	1:5:1079:C:N4	1.82	0.76
1:5:1216:C:C2	1:5:1217:G:C8	2.73	0.76
1:5:1534:A:N6	38:j:14:LYS:HA	2.01	0.76
1:5:2087:C:H5	19:Q:37:ARG:NH1	1.80	0.76
1:5:2453:A:C2	1:5:2454:U:C6	2.74	0.76
1:5:2526:C:C5	46:1:405:ARG:NH1	2.54	0.76
1:5:3717:A:C5	1:5:3736:A:N6	2.54	0.76
1:5:4345:C:N3	1:5:4346:U:C5	2.54	0.76
1:5:4532:U:H5	1:5:4554:G:H21	1.32	0.76
3:8:79:G:C4	3:8:80:A:C2	2.74	0.76
21:S:29:ARG:CZ	21:S:29:ARG:CB	2.63	0.76
1:5:210:C:N4	1:5:231:U:N3	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:237:G:O2'	1:5:238:C:P	2.43	0.76
1:5:466:A:C2	1:5:467:U:C6	2.73	0.76
1:5:752:G:C6	1:5:753:C:C6	2.73	0.76
1:5:752:G:C6	1:5:753:C:C5	2.74	0.76
1:5:1598:C:O2	1:5:1599:A:C8	2.32	0.76
1:5:1945:G:C6	1:5:1946:G:C8	2.73	0.76
1:5:2279:A:C2	1:5:2280:G:C8	2.73	0.76
1:5:2479:G:C6	1:5:2480:G:N7	2.53	0.76
1:5:2613:C:N3	1:5:2614:C:C6	2.54	0.76
1:5:3732:A:C2	1:5:3733:A:N7	2.54	0.76
26:X:156:ILE:HG23	46:1:416:TYR:OH	1.85	0.76
1:5:986:C:C2	1:5:1068:G:N2	2.54	0.76
1:5:1279:A:H3'	1:5:1280:C:H5	1.51	0.76
1:5:1458:C:H2'	1:5:1458:C:O2	1.84	0.76
1:5:1596:U:O2	18:P:131:ARG:NH2	2.19	0.76
1:5:1878:G:N2	1:5:1879:C:C2	2.54	0.76
1:5:1899:G:N7	1:5:2278:G:N1	2.33	0.76
1:5:2036:C:H42	1:5:2037:C:H41	1.33	0.76
1:5:2479:G:C6	1:5:2480:G:C5	2.73	0.76
1:5:3693:U:C2	1:5:3694:U:C6	2.74	0.76
1:5:3721:U:C2	1:5:3722:G:C8	2.74	0.76
1:5:4092:G:C5	1:5:4093:G:N2	2.54	0.76
1:5:4563:U:N3	1:5:4564:A:C5	2.53	0.76
46:1:270:ALA:O	46:1:271:ARG:HG2	1.84	0.76
1:5:752:G:C5	1:5:753:C:C6	2.74	0.76
1:5:1213:G:O6	1:5:1215:C:C4	2.39	0.76
1:5:1217:G:C2'	1:5:1218:G:C8	2.65	0.76
1:5:1625:G:H2'	16:N:81:TYR:OH	1.85	0.76
1:5:2105:A:N3	1:5:2106:G:C8	2.53	0.76
1:5:2316:G:C2	1:5:2317:C:C4	2.74	0.76
1:5:3727:A:O2'	1:5:3728:A:O5'	2.04	0.76
1:5:3909:C:C4	1:5:3910:C:C5	2.74	0.76
1:5:4199:C:N3	1:5:4200:G:C8	2.54	0.76
3:8:106:G:C2	3:8:107:C:C4	2.74	0.76
12:I:47:PRO:CA	12:I:171:TRP:HE1	1.98	0.76
1:5:1410:U:C5	1:5:1815:G:C2	2.74	0.75
1:5:1491:A:C2	1:5:1492:G:C4	2.75	0.75
1:5:1885:G:C2	1:5:1895:G:C2	2.74	0.75
1:5:1893:C:H2'	1:5:1893:C:O2	1.85	0.75
1:5:2101:C:C2	1:5:2102:G:C8	2.73	0.75
1:5:2314:G:C2	1:5:2315:G:C8	2.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2433:G:O3'	46:1:402:ARG:O	2.05	0.75
1:5:2851:G:N7	1:5:2852:U:C5	2.54	0.75
1:5:4117:U:C2	4:A:40:TYR:CE1	2.74	0.75
1:5:4283:G:C2	1:5:4284:C:C4	2.70	0.75
1:5:4355:G:C2	1:5:4356:G:C8	2.73	0.75
1:5:4416:G:C2	1:5:4417:C:C5	2.73	0.75
1:5:1984:A:N7	1:5:2011:C:H4'	2.01	0.75
1:5:2251:G:O6	45:r:99:LYS:HA	1.87	0.75
1:5:2362:U:C5	1:5:3859:G:N2	2.54	0.75
1:5:2362:U:H2'	1:5:2362:U:O2	1.86	0.75
1:5:2743:A:H2	1:5:2744:A:C5	2.01	0.75
1:5:4735:G:N2	1:5:4736:C:C2	2.54	0.75
1:5:4886:C:O2	1:5:4887:C:C6	2.39	0.75
10:G:53:ARG:NH2	10:G:54:PHE:CZ	2.53	0.75
19:Q:89:ASP:OD1	19:Q:91:ARG:NH2	2.19	0.75
1:5:90:G:C8	1:5:92:C:C6	2.74	0.75
1:5:967:C:C5	1:5:968:C:O2	2.38	0.75
1:5:1490:G:C2	1:5:1491:A:C8	2.74	0.75
1:5:1628:C:O2	1:5:1628:C:H2'	1.84	0.75
1:5:1964:A:C4	1:5:1965:G:C8	2.72	0.75
1:5:2081:C:C2'	1:5:2082:G:O5'	2.35	0.75
1:5:2097:U:O2	1:5:2097:U:H5'	1.87	0.75
1:5:2479:G:N1	1:5:2480:G:C5	2.54	0.75
1:5:4362:A:C2	1:5:4363:A:C8	2.75	0.75
1:5:438:G:OP1	33:e:16:ARG:NH1	2.19	0.75
1:5:470:A:N6	1:5:471:A:C4	2.55	0.75
1:5:1440:U:H2'	1:5:1440:U:O2	1.86	0.75
1:5:1598:C:C6	1:5:2798:A:C8	2.74	0.75
1:5:3794:C:N3	1:5:3795:A:N7	2.34	0.75
1:5:4164:C:N3	1:5:4165:C:C5	2.54	0.75
3:8:133:G:N1	3:8:134:G:C5	2.54	0.75
45:r:7:TRP:HZ3	45:r:11:ARG:HA	1.51	0.75
1:5:166:C:O2	1:5:167:C:H6	1.70	0.75
1:5:422:C:O2	1:5:422:C:H2'	1.85	0.75
1:5:1445:U:N3	1:5:1446:C:C5	2.54	0.75
1:5:1987:C:C4	1:5:1988:G:C8	2.75	0.75
1:5:2058:G:N2	1:5:2059:C:C2	2.55	0.75
1:5:2857:A:C2	1:5:2858:A:C6	2.74	0.75
1:5:3657:U:N3	1:5:3658:C:C5	2.54	0.75
1:5:3702:A:C2	1:5:3703:G:H8	2.02	0.75
2:7:56:G:H2'	2:7:57:C:O5'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:77:TYR:CB	31:c:39:ARG:HD3	2.17	0.75
1:5:144:G:C2	1:5:145:G:N7	2.54	0.75
1:5:1447:C:H1'	1:5:2098:G:N2	2.01	0.75
1:5:1757:U:N3	1:5:1758:G:C8	2.55	0.75
1:5:1929:A:N1	1:5:2054:U:C4	2.55	0.75
1:5:2347:A:C2	1:5:2348:G:N1	2.54	0.75
1:5:3717:A:OP2	1:5:3735:G:N2	2.19	0.75
1:5:4097:G:N1	1:5:4098:A:C5	2.55	0.75
1:5:4229:U:C5	1:5:4230:C:C5	2.75	0.75
1:5:4240:G:C5	1:5:4241:C:C5	2.74	0.75
1:5:4368:G:C6	1:5:4369:A:N7	2.55	0.75
1:5:5047:C:H5"	1:5:5050:C:H5	1.52	0.75
3:8:70:G:N2	3:8:87:G:O2'	2.18	0.75
1:5:211:G:C2	1:5:212:A:N7	2.55	0.75
1:5:490:C:H2'	1:5:491:G:C8	2.22	0.75
1:5:661:C:C4	1:5:662:C:C5	2.74	0.75
1:5:1079:C:C4	1:5:1080:C:C5	2.74	0.75
1:5:1261:G:C2	1:5:1262:G:C8	2.75	0.75
1:5:1271:G:C3'	1:5:1272:C:H5'	2.16	0.75
1:5:2101:C:O2	1:5:2102:G:C8	2.40	0.75
15:M:3:PHE:HB2	15:M:6:PHE:CZ	2.20	0.75
1:5:688:U:C4	1:5:689:U:C5	2.75	0.75
1:5:1265:G:C2'	1:5:1266:G:H5'	2.16	0.75
1:5:1280:C:N4	1:5:1282:G:O6	2.19	0.75
1:5:1359:G:H2'	1:5:1360:G:O4'	1.86	0.75
1:5:1811:G:C2	1:5:1812:C:C5	2.75	0.75
1:5:1877:G:C6	1:5:1878:G:N7	2.55	0.75
1:5:1966:C:C2	1:5:1967:A:H8	2.05	0.75
1:5:2507:A:C6	1:5:2508:U:C6	2.74	0.75
1:5:3721:U:N3	1:5:3722:G:N7	2.35	0.75
1:5:3739:C:C6	1:5:3739:C:H5"	2.22	0.75
1:5:4425:G:C6	1:5:4426:C:C6	2.75	0.75
1:5:4627:U:O2	1:5:4628:U:C6	2.39	0.75
31:c:31:TYR:HE2	31:c:56:ARG:HE	1.25	0.75
33:e:110:ALA:HA	33:e:113:GLU:OE2	1.85	0.75
1:5:142:G:C2	1:5:144:G:C8	2.74	0.75
1:5:489:C:C4	1:5:490:C:C5	2.75	0.75
1:5:730:G:N2	1:5:939:G:H22	1.82	0.75
1:5:909:A:C6	1:5:910:G:N7	2.54	0.75
1:5:989:U:H2'	1:5:990:C:H5	1.52	0.75
1:5:1271:G:H3'	1:5:1272:C:C5'	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1811:G:C2	1:5:1812:C:C6	2.74	0.75
1:5:1977:C:O2	1:5:1990:A:N1	2.20	0.75
1:5:2524:U:H5"	1:5:2711:G:N2	2.02	0.75
29:a:127:LYS:CG	29:a:128:PHE:CE2	2.69	0.75
1:5:114:G:H2'	1:5:115:C:H5'	1.69	0.74
1:5:331:G:C2	1:5:332:C:C5	2.75	0.74
1:5:450:G:O2'	1:5:452:A:H4'	1.87	0.74
1:5:1758:G:C2	1:5:1759:G:C5	2.74	0.74
1:5:3676:G:O2'	1:5:3677:U:C5'	2.35	0.74
1:5:4744:A:N1	1:5:4745:G:C6	2.55	0.74
3:8:132:G:N1	3:8:133:G:C5	2.55	0.74
8:E:280:HIS:HD2	34:f:38:GLU:HG3	1.52	0.74
19:Q:34:PHE:CE2	19:Q:38:ARG:HG3	2.22	0.74
46:1:271:ARG:CZ	46:1:398:GLN:CB	2.65	0.74
1:5:977:C:N3	1:5:978:G:C5	2.55	0.74
1:5:1287:G:C2	1:5:1289:C:C6	2.74	0.74
1:5:1900:C:N3	1:5:1901:C:C5	2.55	0.74
1:5:2366:A:H2	1:5:3851:U:H1'	1.50	0.74
1:5:2689:C:N3	1:5:2690:C:C5	2.55	0.74
1:5:4217:G:C2'	1:5:4218:U:O5'	2.35	0.74
1:5:4258:C:N3	1:5:4259:C:C5	2.55	0.74
1:5:4490:C:O2	1:5:4490:C:H2'	1.87	0.74
1:5:4933:C:C4	1:5:4934:A:C8	2.74	0.74
1:5:5047:C:O4'	1:5:5048:A:N1	2.20	0.74
2:7:42:A:N9	13:J:75:ARG:NH1	2.36	0.74
3:8:85:U:H2'	3:8:87:G:H8	1.48	0.74
21:S:33:PHE:HE2	21:S:106:VAL:HG11	1.50	0.74
1:5:348:G:C6	1:5:350:C:N4	2.55	0.74
1:5:431:G:O4'	1:5:3889:G:N2	2.20	0.74
1:5:754:U:C2	1:5:755:C:C6	2.75	0.74
1:5:1485:C:O2	1:5:4349:C:C6	2.40	0.74
1:5:1884:C:H42	1:5:1896:A:H2	1.34	0.74
1:5:3858:C:N4	1:5:3859:G:C5	2.55	0.74
1:5:4093:G:H2'	1:5:4094:G:C5'	2.16	0.74
1:5:4257:A:C2'	1:5:4258:C:H6	2.00	0.74
1:5:5005:G:C6	25:W:51:TRP:HB3	2.20	0.74
2:7:51:G:N2	2:7:52:C:C2	2.55	0.74
3:8:64:U:C4	3:8:65:A:N6	2.55	0.74
9:F:82:ASN:HD21	22:T:142:ARG:CB	2.00	0.74
21:S:10:TYR:OH	21:S:66:GLN:HG3	1.86	0.74
28:Z:49:TYR:CE2	28:Z:133:LYS:HA	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:319:A:H2'	1:5:320:C:O4'	1.86	0.74
1:5:1074:G:H2'	1:5:1075:G:O4'	1.87	0.74
1:5:1280:C:N3	1:5:1282:G:C5	2.55	0.74
1:5:1823:G:H4'	7:D:44:TYR:HD2	1.50	0.74
1:5:1965:G:C4	1:5:1966:C:C5	2.75	0.74
1:5:4120:U:O4	35:g:97:ILE:HA	1.88	0.74
1:5:4213:A:N1	1:5:4218:U:C4	2.51	0.74
1:5:4368:G:C2	1:5:4369:A:C8	2.76	0.74
1:5:4885:U:N3	1:5:4886:C:C5	2.55	0.74
11:H:156:ASN:CG	11:H:157:SER:N	2.45	0.74
20:R:131:VAL:HB	20:R:132:PHE:CE2	2.23	0.74
1:5:89:C:O2'	1:5:90:G:C5'	2.34	0.74
1:5:348:G:N2	1:5:350:C:C2	2.56	0.74
1:5:473:C:C2	1:5:474:C:C5	2.74	0.74
1:5:516:C:C2	1:5:646:G:C2	2.76	0.74
1:5:1216:C:H2'	1:5:1217:G:O4'	1.86	0.74
1:5:2270:G:C2	1:5:2271:C:C4	2.75	0.74
1:5:2301:G:N1	1:5:2302:C:C4	2.56	0.74
1:5:2401:A:C2	1:5:2402:G:C8	2.75	0.74
1:5:4341:C:C4	1:5:4342:C:C6	2.75	0.74
1:5:4920:C:H2'	1:5:4921:C:C6	2.21	0.74
46:1:435:ALA:O	46:1:436:ASP:C	2.31	0.74
1:5:60:G:C5	1:5:61:A:N7	2.56	0.74
1:5:450:G:N2	1:5:1294:A:H2'	2.02	0.74
1:5:472:C:N3	1:5:473:C:C5	2.56	0.74
1:5:509:A:H2	29:a:105:ARG:NE	1.86	0.74
1:5:916:C:C4	1:5:917:A:C8	2.75	0.74
1:5:1269:G:C5	1:5:2111:G:N1	2.56	0.74
1:5:1317:U:OP1	29:a:21:ARG:NH1	2.20	0.74
1:5:1353:G:N7	19:Q:104:ARG:NH2	2.35	0.74
1:5:1663:C:C2	1:5:1664:U:C5	2.75	0.74
1:5:1823:G:H4'	7:D:44:TYR:CD2	2.22	0.74
1:5:2035:C:C4	1:5:2036:C:H5	2.05	0.74
1:5:2830:G:C2	1:5:2831:G:C8	2.76	0.74
1:5:3783:A:H2	1:5:3789:C:N4	1.86	0.74
1:5:4200:G:N2	1:5:4201:G:H1'	2.03	0.74
1:5:4426:C:N3	1:5:4427:G:C8	2.56	0.74
1:5:4549:G:C6	1:5:4550:G:N7	2.56	0.74
1:5:4606:G:H2'	1:5:4607:A:C8	2.22	0.74
1:5:655:C:C2	1:5:656:C:C5	2.75	0.74
1:5:701:G:C6	1:5:702:U:C5	2.76	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1214:C:N3	1:5:2116:C:N4	2.35	0.74
1:5:1358:G:N3	1:5:1359:G:N7	2.34	0.74
1:5:2290:C:C2	1:5:2291:G:C8	2.76	0.74
1:5:3591:C:N4	1:5:3592:G:C8	2.55	0.74
1:5:3736:A:O2'	1:5:3737:A:O5'	2.05	0.74
3:8:133:G:C6	3:8:134:G:N7	2.56	0.74
1:5:516:C:C2	1:5:646:G:N2	2.56	0.74
1:5:660:A:C2	1:5:661:C:C6	2.75	0.74
1:5:1696:C:H1'	1:5:1697:G:C5'	2.17	0.74
1:5:2108:G:N2	1:5:2125:C:C2	2.56	0.74
1:5:2263:A:O3'	1:5:2264:C:C6	2.41	0.74
1:5:2532:C:N3	1:5:2533:C:C4	2.56	0.74
1:5:2856:C:O2	1:5:2856:C:H2'	1.87	0.74
1:5:4223:C:H5'	12:I:119:PHE:HD2	1.53	0.74
1:5:4242:U:O2	1:5:4279:A:C2	2.41	0.74
1:5:4406:U:C2	1:5:4407:G:C8	2.76	0.74
1:5:4502:C:C4	1:5:4503:A:C8	2.75	0.74
1:5:5030:U:C2	1:5:5031:G:C8	2.76	0.74
11:H:95:VAL:HG22	41:m:82:LEU:HD22	1.69	0.74
21:S:10:TYR:CZ	21:S:66:GLN:HG3	2.22	0.74
39:k:40:ARG:HB3	39:k:41:TYR:CD1	2.20	0.74
1:5:467:U:N3	1:5:468:U:C5	2.56	0.74
1:5:964:A:C5'	1:5:964:A:C8	2.69	0.74
1:5:1201:U:C2	1:5:1202:C:C6	2.76	0.74
1:5:1438:U:O2	1:5:2099:G:N7	2.21	0.74
1:5:1988:G:C2	1:5:1989:G:C8	2.75	0.74
1:5:2367:A:N1	1:5:2788:U:C4	2.51	0.74
1:5:2605:G:C2	1:5:2606:G:C8	2.75	0.74
1:5:4981:G:N1	1:5:4982:A:N7	2.36	0.74
3:8:10:G:C2	3:8:11:C:N1	2.55	0.74
3:8:55:U:H3	3:8:62:A:H2	1.33	0.74
4:A:163:ARG:HB2	4:A:163:ARG:NH1	2.02	0.74
5:B:258:HIS:O	5:B:260:ALA:N	2.21	0.74
46:1:267:ILE:CD1	46:1:279:TYR:CB	2.63	0.74
1:5:370:U:C4	1:5:1637:A:C6	2.76	0.74
1:5:1076:C:N3	1:5:1077:C:C6	2.56	0.74
1:5:1818:G:C8	1:5:1821:G:C6	2.75	0.74
1:5:4233:A:N1	1:5:4290:U:C4	2.56	0.74
1:5:4580:U:C2	1:5:4581:G:C8	2.76	0.74
3:8:117:C:C4	3:8:118:C:C5	2.76	0.74
29:a:61:TYR:O	29:a:62:HIS:C	2.31	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:l:21:ARG:NH1	46:1:273:ARG:CG	2.51	0.74
1:5:491:G:N2	1:5:663:G:C2	2.56	0.73
1:5:495:C:C2	1:5:496:G:C8	2.76	0.73
1:5:657:C:H2'	1:5:658:C:O4'	1.87	0.73
1:5:2282:A:C2'	1:5:2283:G:O5'	2.36	0.73
1:5:2452:G:C2	1:5:2467:U:O4	2.41	0.73
1:5:2485:U:O2	1:5:2486:G:C8	2.41	0.73
1:5:2561:C:C2	1:5:2562:G:C8	2.76	0.73
1:5:4537:C:O2	1:5:4537:C:H2'	1.87	0.73
1:5:4733:C:N4	1:5:4734:A:O2'	2.21	0.73
16:N:99:GLN:HG3	16:N:130:PHE:CD2	2.22	0.73
1:5:690:C:C4	1:5:691:C:C5	2.77	0.73
1:5:1265:G:O2'	1:5:2112:G:H3'	1.87	0.73
1:5:1266:G:O2'	1:5:1267:C:H5'	1.87	0.73
1:5:1390:G:N7	1:5:1392:A:OP2	2.21	0.73
1:5:1442:C:N3	1:5:1443:A:C8	2.55	0.73
1:5:1542:U:C2	1:5:1543:G:C8	2.75	0.73
1:5:1555:G:C5	1:5:1556:C:C5	2.77	0.73
1:5:1661:C:O2	1:5:1662:C:C6	2.41	0.73
1:5:1951:G:O2'	21:S:95:ARG:NH2	2.22	0.73
1:5:2058:G:N2	1:5:2059:C:N1	2.37	0.73
1:5:2327:G:C2	1:5:2328:G:C5	2.76	0.73
1:5:2793:G:C6	1:5:2797:C:C4	2.76	0.73
1:5:4687:A:C2	1:5:4688:C:C5	2.75	0.73
1:5:4878:C:O2	1:5:4879:C:C5	2.40	0.73
1:5:4910:G:H8	1:5:4910:G:O5'	1.71	0.73
20:R:95:TRP:O	20:R:98:ARG:N	2.20	0.73
1:5:93:G:O2'	1:5:94:A:N7	2.19	0.73
1:5:1238:A:HO2'	1:5:1239:C:C5'	1.99	0.73
1:5:1268:G:N2	1:5:1270:A:N9	2.36	0.73
1:5:1872:G:C2	1:5:1873:A:C8	2.76	0.73
1:5:2714:G:C2	1:5:2715:G:C8	2.76	0.73
1:5:4166:G:N1	1:5:4167:G:C5	2.55	0.73
1:5:4199:C:O2	1:5:4199:C:H2'	1.88	0.73
3:8:12:G:N2	3:8:13:G:C1'	2.50	0.73
31:c:78:ASN:OD1	31:c:79:ILE:HG13	1.89	0.73
1:5:1070:G:C2	1:5:1071:C:C6	2.76	0.73
1:5:1080:C:C2	1:5:1081:C:C6	2.76	0.73
1:5:1185:G:C6	1:5:1186:U:C6	2.76	0.73
1:5:1982:G:O2'	1:5:2010:A:H5'	1.89	0.73
1:5:2105:A:N1	1:5:2106:G:N7	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2368:A:N1	1:5:2788:U:C4	2.57	0.73
1:5:2526:C:OP1	46:1:405:ARG:NH1	2.21	0.73
1:5:3590:G:C6	1:5:3591:C:C5	2.76	0.73
1:5:3868:G:C6	1:5:4562:C:H1'	2.24	0.73
1:5:4275:G:C5	1:5:4276:G:C8	2.76	0.73
5:B:235:TRP:CD1	5:B:267:ALA:HA	2.23	0.73
1:5:75:G:O6	14:L:103:ARG:NH2	2.20	0.73
1:5:187:U:C6	1:5:245:C:N3	2.56	0.73
1:5:218:A:N6	6:C:185:ALA:HB2	2.03	0.73
1:5:1091:C:C2	1:5:1092:G:C8	2.76	0.73
1:5:1759:G:C2	1:5:1760:G:C8	2.77	0.73
1:5:1965:G:N1	1:5:1966:C:C4	2.57	0.73
1:5:2036:C:N4	1:5:2037:C:H41	1.86	0.73
1:5:2270:G:N2	1:5:2271:C:C2	2.56	0.73
1:5:2842:G:C6	1:5:2843:U:C5	2.75	0.73
1:5:4166:G:C6	1:5:4167:G:N7	2.57	0.73
1:5:4344:U:N3	1:5:4345:C:C5	2.56	0.73
1:5:4563:U:H2'	1:5:4564:A:C8	2.24	0.73
1:5:4686:G:C6	1:5:4687:A:C8	2.76	0.73
2:7:42:A:H1'	13:J:75:ARG:NH1	2.04	0.73
1:5:39:A:C2	29:a:40:HIS:CE1	2.76	0.73
1:5:447:C:N3	1:5:448:G:N7	2.36	0.73
1:5:1268:G:H1'	1:5:2111:G:C5	2.23	0.73
1:5:1726:U:C2	1:5:1727:U:C6	2.76	0.73
1:5:1965:G:C6	1:5:2021:G:O6	2.41	0.73
1:5:3873:G:N2	1:5:3883:U:C2	2.56	0.73
1:5:4124:G:O6	4:A:64:ARG:HD3	1.88	0.73
1:5:4537:C:C2	1:5:4538:G:C8	2.77	0.73
8:E:175:LEU:HB2	8:E:246:GLN:HE21	1.52	0.73
8:E:184:ARG:HD3	8:E:213:PHE:CB	2.19	0.73
8:E:278:TYR:CD2	8:E:278:TYR:N	2.57	0.73
33:e:35:TRP:HE1	33:e:37:LYS:N	1.85	0.73
1:5:126:C:O2	1:5:127:G:C8	2.41	0.73
1:5:269:G:N1	1:5:270:U:C6	2.57	0.73
1:5:1390:G:C2	1:5:1394:G:C5	2.74	0.73
1:5:2364:G:C2	1:5:2365:C:C5	2.76	0.73
1:5:3606:U:N3	1:5:3607:U:C5	2.56	0.73
1:5:4510:A:H61	1:5:4592:C:C4'	2.02	0.73
19:Q:56:THR:HB	19:Q:146:ARG:HH21	1.53	0.73
1:5:270:U:C2	1:5:271:C:C5	2.76	0.73
1:5:1212:G:C2	1:5:1213:G:C8	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1474:C:C2	1:5:1475:G:C8	2.77	0.73
1:5:1634:A:C6	1:5:1635:C:C4	2.77	0.73
1:5:2264:C:O2'	1:5:2265:G:H2'	1.88	0.73
1:5:2463:G:C6	1:5:2464:C:N4	2.57	0.73
1:5:4093:G:C3'	1:5:4094:G:C5'	2.67	0.73
1:5:4707:A:C2'	1:5:4708:A:O5'	2.36	0.73
1:5:5006:U:H1'	1:5:5042:A:C5	2.23	0.73
1:5:5063:G:C2	1:5:5064:G:C8	2.77	0.73
3:8:102:G:O5'	3:8:104:A:O2'	2.06	0.73
46:1:61:PRO:HB2	46:1:64:TRP:CE3	2.24	0.73
1:5:2590:G:N1	1:5:2754:G:C2	2.57	0.73
1:5:2632:U:N3	1:5:2633:U:C5	2.57	0.73
1:5:3736:A:O2'	1:5:3737:A:C5'	2.37	0.73
1:5:4093:G:O6	1:5:4115:G:C6	2.42	0.73
1:5:4280:A:N6	7:D:29:ASP:N	2.37	0.73
1:5:4880:C:H2'	1:5:4881:U:H5'	1.69	0.73
1:5:5047:C:C2	1:5:5048:A:N6	2.57	0.73
2:7:112:U:O2	2:7:113:G:H8	1.69	0.73
7:D:29:ASP:O	7:D:33:ARG:HB2	1.89	0.73
1:5:753:C:C4	1:5:754:U:C5	2.77	0.73
1:5:950:G:C2	1:5:951:G:C8	2.77	0.73
1:5:1092:G:C6	1:5:1093:C:C5	2.77	0.73
1:5:1339:U:O2	1:5:1339:U:H2'	1.89	0.73
1:5:1358:G:O3'	6:C:114:ARG:NH1	2.21	0.73
1:5:1404:G:C2	1:5:1414:C:C2	2.76	0.73
1:5:1545:G:C6	1:5:1546:C:N4	2.56	0.73
1:5:1899:G:N1	1:5:1900:C:C5	2.53	0.73
1:5:2251:G:C1'	1:5:2252:G:C2	2.71	0.73
1:5:2645:G:C2	1:5:2646:C:C6	2.77	0.73
1:5:2843:U:O2	1:5:2844:A:C8	2.42	0.73
1:5:3688:U:C2	1:5:3689:G:C8	2.77	0.73
1:5:3879:G:C6	1:5:3882:C:C4	2.76	0.73
3:8:34:U:O4'	3:8:34:U:O2	1.97	0.73
32:d:71:ALA:CB	32:d:108:TYR:HE2	2.01	0.73
32:d:114:PHE:HA	32:d:117:LEU:HD23	1.71	0.73
33:e:38:PRO:HB2	33:e:43:ASN:OD1	1.88	0.73
1:5:90:G:C2	1:5:95:G:C6	2.77	0.72
1:5:90:G:N2	1:5:95:G:C6	2.57	0.72
1:5:440:U:O2	1:5:441:G:C8	2.42	0.72
1:5:659:G:C2	1:5:660:A:C8	2.77	0.72
1:5:976:G:C6	1:5:977:C:C5	2.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1085:C:C4	1:5:1086:C:C5	2.78	0.72
1:5:1936:C:O2	1:5:1936:C:H2'	1.88	0.72
1:5:2361:G:HO2'	1:5:3859:G:H1	1.35	0.72
1:5:2857:A:C2	1:5:2858:A:C5	2.77	0.72
1:5:3793:U:N3	1:5:3794:C:C5	2.57	0.72
1:5:4561:C:O2	1:5:4562:C:C5	2.42	0.72
15:M:11:ARG:HH22	15:M:61:ILE:HG23	1.53	0.72
30:b:12:GLN:HB2	30:b:16:TRP:HZ2	1.54	0.72
46:1:268:LYS:HD2	46:1:276:TYR:CZ	2.22	0.72
1:5:12:A:C2	1:5:14:C:C5	2.77	0.72
1:5:181:C:C2	1:5:256:G:N2	2.57	0.72
1:5:660:A:C6	1:5:661:C:C5	2.77	0.72
1:5:1887:G:N1	1:5:1890:G:C6	2.57	0.72
1:5:3732:A:N3	1:5:3733:A:C8	2.56	0.72
1:5:4981:G:C6	1:5:4982:A:N9	2.57	0.72
1:5:4982:A:C2	1:5:4983:C:C6	2.77	0.72
1:5:85:G:N2	1:5:97:G:C5	2.57	0.72
1:5:1542:U:H5"	1:5:2743:A:N7	2.03	0.72
1:5:1625:G:N7	1:5:1642:A:C2	2.58	0.72
1:5:2570:U:C2	1:5:2571:C:C5	2.77	0.72
1:5:2606:G:N2	1:5:2607:C:C2	2.58	0.72
1:5:3694:U:C2	1:5:3695:U:C5	2.78	0.72
6:C:106:LYS:HG2	6:C:108:TRP:CZ2	2.24	0.72
1:5:1755:C:H3'	1:5:1756:U:H5"	1.68	0.72
1:5:2281:U:O2	1:5:2281:U:H2'	1.88	0.72
1:5:2631:U:O4'	23:U:82:TYR:CE1	2.41	0.72
1:5:3653:A:N1	1:5:3692:A:C4'	2.53	0.72
1:5:4455:G:C2	1:5:4456:C:C6	2.77	0.72
1:5:4498:U:O2	1:5:4500:U:H5'	1.89	0.72
1:5:4981:G:N1	1:5:4982:A:C8	2.58	0.72
1:5:5062:G:C2	1:5:5063:G:N7	2.57	0.72
2:7:110:G:N2	2:7:111:C:C2	2.56	0.72
3:8:133:G:N1	3:8:134:G:N7	2.37	0.72
4:A:140:ASN:OD1	4:A:142:GLU:O	2.06	0.72
24:V:57:VAL:HG23	24:V:84:GLN:HG2	1.71	0.72
35:g:41:ALA:O	35:g:52:ARG:NH1	2.23	0.72
1:5:88:A:N6	1:5:97:G:N2	2.36	0.72
1:5:212:A:H2'	1:5:213:G:C8	2.25	0.72
1:5:255:C:O2	1:5:255:C:H2'	1.88	0.72
1:5:504:G:C6	1:5:654:C:C2	2.77	0.72
1:5:1213:G:C6	1:5:1215:C:C6	2.78	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2108:G:C6	1:5:2125:C:N4	2.57	0.72
1:5:2250:C:OP2	1:5:2250:C:H4'	1.88	0.72
1:5:2322:G:H2'	1:5:2323:C:O4'	1.89	0.72
2:7:51:G:C2	2:7:52:C:C4	2.77	0.72
2:7:94:C:O2	2:7:95:C:C6	2.42	0.72
3:8:43:A:N1	3:8:44:A:N7	2.38	0.72
5:B:100:ARG:HH21	5:B:101:THR:C	1.98	0.72
28:Z:38:TYR:CE2	28:Z:76:ASN:OD1	2.43	0.72
1:5:85:G:N2	1:5:97:G:N7	2.38	0.72
1:5:447:C:C2	1:5:448:G:C8	2.78	0.72
1:5:916:C:N3	1:5:917:A:C8	2.57	0.72
1:5:1249:C:C2	1:5:1250:C:C6	2.78	0.72
1:5:1412:G:N2	1:5:1413:C:C2	2.58	0.72
1:5:2691:U:O2	1:5:2692:U:C6	2.41	0.72
1:5:2735:G:N3	1:5:2736:G:C8	2.57	0.72
1:5:3676:G:O2'	1:5:3677:U:H5'	1.89	0.72
11:H:117:PHE:C	11:H:117:PHE:HD1	1.97	0.72
13:J:105:PHE:HE1	13:J:132:VAL:HB	1.54	0.72
16:N:30:TYR:CE1	16:N:63:ARG:CD	2.72	0.72
45:r:16:PHE:HD2	45:r:28:GLU:HB3	1.54	0.72
46:1:270:ALA:HB3	46:1:271:ARG:HD3	1.70	0.72
1:5:1177:U:C2	1:5:1178:G:N7	2.58	0.72
1:5:1618:G:N1	1:5:1619:G:N7	2.37	0.72
1:5:2736:G:C2	1:5:2737:C:C4	2.77	0.72
1:5:3607:U:O2	1:5:3608:A:C8	2.43	0.72
1:5:4166:G:N1	1:5:4167:G:N7	2.37	0.72
1:5:4730:C:O2	1:5:4734:A:N7	2.23	0.72
1:5:4742:G:C6	1:5:4743:G:N7	2.58	0.72
3:8:80:A:H3'	3:8:81:C:H4'	1.72	0.72
9:F:144:TRP:CH2	9:F:237:ASN:HB2	2.25	0.72
1:5:300:A:C2	1:5:301:G:C8	2.78	0.72
1:5:423:G:H1'	18:P:120:ASN:OD1	1.90	0.72
1:5:751:G:C2	1:5:752:G:C5	2.77	0.72
1:5:917:A:C6	1:5:919:C:N4	2.57	0.72
1:5:1631:A:H2	4:A:204:MET:SD	2.12	0.72
1:5:1926:C:C2	1:5:1927:U:C5	2.77	0.72
1:5:2058:G:C2	1:5:2059:C:C5	2.78	0.72
1:5:3907:G:H1'	1:5:4449:A:C8	2.24	0.72
1:5:183:C:O2'	1:5:189:G:N7	2.23	0.72
1:5:658:C:O2	1:5:659:G:C8	2.43	0.72
1:5:1442:C:N3	1:5:1443:A:N7	2.38	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1451:G:OP1	1:5:1718:C:N4	2.22	0.72
1:5:2080:U:N3	1:5:2081:C:C5	2.58	0.72
1:5:2452:G:C6	1:5:2467:U:C5	2.76	0.72
1:5:2459:G:N7	16:N:105:ARG:NH2	2.37	0.72
1:5:2856:C:N3	1:5:2857:A:C5	2.57	0.72
1:5:4284:C:C2	1:5:4285:U:C6	2.77	0.72
1:5:4562:C:N3	1:5:4563:U:C5	2.58	0.72
1:5:4579:U:H2'	1:5:4580:U:O4'	1.88	0.72
1:5:4939:C:O2'	8:E:242:ARG:NH2	2.22	0.72
1:5:44:A:C6	1:5:45:U:C4	2.78	0.72
1:5:1269:G:C8	1:5:2111:G:C5	2.76	0.72
1:5:1964:A:N6	1:5:1965:G:C4	2.57	0.72
1:5:2743:A:H2'	1:5:2744:A:C8	2.24	0.72
1:5:4100:C:C2	1:5:4101:C:C5	2.76	0.72
1:5:4759:C:H2'	1:5:4760:G:O4'	1.89	0.72
1:5:4942:C:O2	1:5:4942:C:O5'	2.07	0.72
1:5:489:C:N3	1:5:490:C:C5	2.58	0.71
1:5:1203:G:C6	1:5:1204:C:C5	2.78	0.71
1:5:1217:G:O2'	1:5:1218:G:H8	1.72	0.71
1:5:1990:A:H2'	1:5:1991:A:C4'	2.19	0.71
1:5:2858:A:O2'	1:5:2859:G:C8	2.39	0.71
1:5:3702:A:H2'	1:5:3702:A:N3	2.03	0.71
1:5:4314:C:C2	1:5:4315:A:C8	2.78	0.71
1:5:4455:G:C6	1:5:4456:C:C5	2.78	0.71
1:5:4726:G:H4'	5:B:130:PHE:CE1	2.24	0.71
1:5:4871:C:O2	1:5:4871:C:H5"	1.90	0.71
3:8:10:G:N1	3:8:11:C:C6	2.58	0.71
9:F:248:ARG:CZ	9:F:248:ARG:HB3	2.20	0.71
1:5:493:G:C6	1:5:494:U:C5	2.78	0.71
1:5:1264:C:N3	1:5:1265:G:C8	2.58	0.71
1:5:1671:U:O2'	30:b:12:GLN:NE2	2.22	0.71
1:5:2362:U:O4	1:5:3859:G:N2	2.22	0.71
1:5:4123:C:N3	1:5:4124:G:N7	2.38	0.71
1:5:4463:U:C4	1:5:4488:A:C5	2.79	0.71
1:5:4508:C:N3	1:5:4512:U:H5	1.86	0.71
1:5:4767:C:H4'	1:5:4874:A:N1	2.04	0.71
3:8:65:A:C2	3:8:66:A:C8	2.78	0.71
21:S:95:ARG:HH11	21:S:97:TYR:HH	1.36	0.71
1:5:126:C:C2	1:5:127:G:C8	2.78	0.71
1:5:1390:G:N2	1:5:1394:G:C4	2.57	0.71
1:5:1392:A:N3	1:5:1393:G:N7	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1946:G:N2	1:5:2037:C:N1	2.37	0.71
1:5:2035:C:C2	1:5:2036:C:C6	2.78	0.71
1:5:2842:G:C2	1:5:2843:U:C6	2.78	0.71
1:5:4195:G:N3	1:5:4195:G:H5"	2.05	0.71
1:5:4239:A:C5	1:5:4240:G:C8	2.78	0.71
1:5:4771:C:C6	1:5:4772:C:C6	2.78	0.71
2:7:18:C:O2	2:7:19:C:H6	1.71	0.71
1:5:100:C:N4	1:5:101:A:C5	2.56	0.71
1:5:153:G:N3	1:5:154:G:C8	2.58	0.71
1:5:300:A:C2	1:5:301:G:C5	2.79	0.71
1:5:1280:C:C5'	1:5:1280:C:C6	2.73	0.71
1:5:2058:G:N1	1:5:2059:C:C5	2.58	0.71
1:5:3833:C:N3	1:5:3834:C:C5	2.59	0.71
1:5:4151:G:C2	1:5:4152:G:C8	2.79	0.71
1:5:4285:U:O2	1:5:4286:C:C6	2.43	0.71
1:5:4871:C:H4'	1:5:4872:G:O5'	1.90	0.71
1:5:5001:U:C2'	1:5:5002:U:O5'	2.38	0.71
2:7:25:G:H2'	2:7:26:C:O4'	1.90	0.71
8:E:280:HIS:CE1	8:E:281:LYS:HB2	2.25	0.71
11:H:156:ASN:OD1	11:H:157:SER:CA	2.38	0.71
1:5:93:G:O2'	1:5:94:A:C8	2.44	0.71
1:5:1843:A:C2	1:5:1844:G:C8	2.79	0.71
1:5:1936:C:N3	1:5:1937:C:H5	1.89	0.71
1:5:2533:C:O2	1:5:2534:C:C5	2.42	0.71
1:5:2734:U:O2	1:5:2735:G:C8	2.43	0.71
1:5:4093:G:H3'	1:5:4094:G:H5'	1.72	0.71
1:5:4196:G:H2'	1:5:4197:G:O4'	1.90	0.71
1:5:4240:G:C5	1:5:4241:C:C6	2.77	0.71
1:5:4743:G:C2	1:5:4744:A:C8	2.79	0.71
1:5:4765:G:H22	1:5:4869:U:H3	1.38	0.71
1:5:4906:C:C2	1:5:4916:G:C2	2.78	0.71
1:5:27:C:C2	1:5:28:C:C6	2.78	0.71
1:5:161:G:N2	1:5:275:C:N3	2.35	0.71
1:5:989:U:H2'	1:5:990:C:C5	2.25	0.71
1:5:1183:C:C2	1:5:1184:A:C8	2.78	0.71
1:5:1246:G:C5	1:5:1247:U:C5	2.78	0.71
1:5:1564:A:H2'	1:5:1565:A:C8	2.26	0.71
1:5:1601:A:N7	1:5:3643:A:C8	2.59	0.71
1:5:1727:U:C2	1:5:1728:U:C5	2.78	0.71
1:5:2515:G:O6	1:5:2516:G:C4	2.43	0.71
1:5:2534:C:O2'	1:5:2535:G:H5'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4652:G:N2	1:5:4653:C:C2	2.58	0.71
1:5:4687:A:C2	1:5:4688:C:C6	2.78	0.71
2:7:33:U:C2	2:7:34:C:C6	2.79	0.71
3:8:132:G:C6	3:8:133:G:N7	2.58	0.71
1:5:167:C:C2	1:5:269:G:C2	2.79	0.71
1:5:497:G:H3'	1:5:498:C:H5"	1.71	0.71
1:5:936:C:H2'	15:M:46:ARG:NH1	2.03	0.71
1:5:1672:U:N3	1:5:1673:U:C4	2.59	0.71
1:5:1839:U:H3'	1:5:1840:G:H21	1.54	0.71
1:5:2366:A:C2	1:5:3851:U:C1'	2.73	0.71
1:5:2784:C:C2	1:5:2785:C:C6	2.78	0.71
3:8:95:A:C6	3:8:96:C:C5	2.79	0.71
11:H:61:TRP:HZ2	21:S:152:PHE:CE2	2.08	0.71
15:M:3:PHE:HB2	15:M:6:PHE:HZ	1.53	0.71
1:5:158:A:C6	1:5:277:G:C6	2.78	0.71
1:5:289:C:C2	1:5:290:U:C5	2.79	0.71
1:5:330:G:N3	1:5:331:G:C8	2.59	0.71
1:5:348:G:C2	1:5:350:C:C5	2.79	0.71
1:5:423:G:H1	3:8:10:G:H1	1.39	0.71
1:5:986:C:C2	1:5:1068:G:C2	2.79	0.71
1:5:1948:G:H1	1:5:2034:G:H1	1.36	0.71
1:5:2449:A:C8	1:5:2450:G:C1'	2.73	0.71
1:5:2453:A:N1	1:5:2454:U:C6	2.58	0.71
1:5:2457:G:C2	1:5:2465:C:N3	2.59	0.71
1:5:2497:C:C4	1:5:2498:C:C5	2.78	0.71
1:5:2690:C:N3	1:5:2691:U:C5	2.59	0.71
2:7:19:C:O2	2:7:19:C:H2'	1.91	0.71
2:7:42:A:H1'	13:J:75:ARG:HH12	1.56	0.71
3:8:86:U:H3'	3:8:86:U:C6	2.26	0.71
7:D:17:GLN:HG3	22:T:20:ARG:CA	2.20	0.71
8:E:43:ASN:ND2	8:E:43:ASN:C	2.48	0.71
29:a:79:TRP:N	29:a:79:TRP:CD1	2.58	0.71
1:5:171:U:O2	1:5:266:C:N4	2.23	0.71
1:5:424:U:H3	1:5:425:U:H5	1.36	0.71
1:5:662:C:C2	1:5:663:G:N7	2.58	0.71
1:5:738:C:C2	1:5:739:G:C8	2.79	0.71
1:5:1637:A:H2	38:j:11:ARG:HH22	1.39	0.71
1:5:2326:G:N1	1:5:2327:G:C8	2.57	0.71
1:5:2590:G:C6	1:5:2754:G:N1	2.59	0.71
1:5:4117:U:C2	4:A:40:TYR:HE1	2.08	0.71
1:5:4315:A:H2'	1:5:4316:G:H5'	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4744:A:C6	1:5:4745:G:C6	2.79	0.71
1:5:4884:G:N1	1:5:4885:U:C5	2.59	0.71
2:7:43:U:C4	2:7:44:C:C5	2.78	0.71
2:7:59:G:N1	2:7:60:G:C5	2.59	0.71
3:8:74:U:H2'	3:8:74:U:O2	1.90	0.71
3:8:81:C:O2	3:8:83:C:P	2.49	0.71
40:l:21:ARG:CB	46:1:273:ARG:NH1	2.50	0.71
45:r:52:GLU:OE1	45:r:79:ARG:NH2	2.24	0.71
1:5:1066:G:H2'	1:5:1067:G:O4'	1.91	0.71
1:5:1358:G:N3	1:5:1359:G:C5	2.58	0.71
1:5:1465:G:N2	1:5:1466:G:H1'	2.06	0.71
1:5:1635:C:C2	1:5:1636:U:C5	2.78	0.71
1:5:1866:U:C4	1:5:4405:G:O4'	2.44	0.71
1:5:1950:U:O2	1:5:1951:G:C8	2.44	0.71
1:5:2290:C:N3	1:5:2291:G:C8	2.58	0.71
1:5:2508:U:N3	1:5:2509:C:C5	2.59	0.71
1:5:4096:C:C5	1:5:4097:G:C8	2.79	0.71
1:5:4932:U:H2'	1:5:4933:C:O4'	1.90	0.71
2:7:43:U:O2	2:7:44:C:C6	2.43	0.71
1:5:1238:A:H2'	1:5:1239:C:C5	2.25	0.70
1:5:1692:C:N3	1:5:1693:U:C5	2.58	0.70
1:5:1971:C:C2	1:5:1972:G:C8	2.78	0.70
1:5:2034:G:C4	1:5:2035:C:C6	2.77	0.70
1:5:2058:G:N1	1:5:2059:C:C4	2.59	0.70
1:5:3762:U:H2'	1:5:3763:A:O4'	1.91	0.70
1:5:4229:U:C4	1:5:4230:C:C6	2.78	0.70
1:5:4561:C:C2	1:5:4562:C:C5	2.79	0.70
1:5:5025:C:H2'	1:5:5028:G:O4'	1.90	0.70
2:7:58:A:C6	2:7:59:G:C5	2.79	0.70
16:N:6:TYR:OH	37:i:40:VAL:HG22	1.91	0.70
1:5:18:C:H4'	16:N:138:PHE:CE2	2.25	0.70
1:5:330:G:N2	1:5:331:G:C4	2.58	0.70
1:5:488:G:N2	1:5:489:C:C2	2.59	0.70
1:5:1074:G:H2'	1:5:1075:G:C1'	2.21	0.70
1:5:1310:C:N3	1:5:1311:G:N7	2.39	0.70
1:5:2105:A:C2	1:5:2106:G:C5	2.78	0.70
1:5:2113:G:H8	1:5:2115:G:H1'	1.53	0.70
1:5:2507:A:N1	1:5:2508:U:H1'	2.05	0.70
1:5:3729:U:C4	1:5:3730:U:C5	2.79	0.70
1:5:4277:G:C6	1:5:4278:C:C5	2.79	0.70
1:5:4414:A:N6	1:5:4427:G:C6	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5003:U:H2'	1:5:5004:C:O4'	1.92	0.70
3:8:15:G:H2'	3:8:16:G:H1'	1.74	0.70
35:g:76:ARG:HH22	35:g:84:ALA:HB2	1.54	0.70
1:5:69:A:H3'	1:5:70:A:H8	1.54	0.70
1:5:235:A:C6	1:5:238:C:C5	2.79	0.70
1:5:259:C:C4	1:5:260:C:C5	2.79	0.70
1:5:489:C:C2	1:5:490:C:C6	2.79	0.70
1:5:491:G:N2	1:5:663:G:H1	1.89	0.70
1:5:1265:G:H2'	1:5:1266:G:H5'	1.73	0.70
1:5:1358:G:H2'	1:5:1359:G:C8	2.26	0.70
1:5:2055:G:C5'	1:5:2056:G:H5'	2.21	0.70
1:5:2726:G:C4	1:5:2727:C:C5	2.79	0.70
1:5:2851:G:H2'	1:5:2851:G:N3	2.06	0.70
1:5:3591:C:H2'	1:5:3591:C:O2	1.91	0.70
1:5:3858:C:H2'	1:5:3858:C:O2	1.92	0.70
1:5:4093:G:C2'	1:5:4094:G:H5"	2.21	0.70
1:5:4729:A:C4'	1:5:4965:U:O2'	2.38	0.70
3:8:82:A:C6	3:8:83:C:H5"	2.26	0.70
1:5:189:G:N2	1:5:190:G:C5	2.59	0.70
1:5:737:C:H2'	1:5:738:C:O4'	1.91	0.70
1:5:920:C:H2'	1:5:921:C:O4'	1.90	0.70
1:5:964:A:C8	1:5:964:A:C3'	2.74	0.70
1:5:977:C:C2	1:5:978:G:H8	1.97	0.70
1:5:977:C:C2	1:5:978:G:N7	2.42	0.70
1:5:1358:G:C2	1:5:1359:G:C6	2.79	0.70
1:5:1476:C:C2	1:5:1477:C:C5	2.79	0.70
1:5:3693:U:N3	1:5:3694:U:C6	2.59	0.70
1:5:5029:C:C2	1:5:5030:U:C6	2.79	0.70
2:7:59:G:N1	2:7:60:G:C8	2.59	0.70
3:8:106:G:C6	3:8:107:C:N4	2.59	0.70
7:D:21:ARG:HH12	7:D:22:ARG:HG2	1.55	0.70
14:L:64:VAL:HA	14:L:67:HIS:HD2	1.55	0.70
24:V:97:TYR:OH	25:W:21:TYR:N	2.24	0.70
46:1:269:SER:OG	46:1:275:GLN:NE2	2.23	0.70
1:5:433:A:C2	1:5:3867:A:H4'	2.27	0.70
1:5:1213:G:C6	1:5:1215:C:N1	2.58	0.70
1:5:1629:G:C4	1:5:1631:A:N6	2.60	0.70
1:5:1755:C:O2'	1:5:1756:U:OP1	2.10	0.70
1:5:1828:C:C2	1:5:1829:G:C8	2.79	0.70
1:5:2035:C:N4	1:5:2036:C:C5	2.60	0.70
1:5:2054:U:H4'	1:5:2056:G:H1'	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2266:C:O2'	1:5:2267:U:OP2	2.09	0.70
1:5:2314:G:N3	1:5:2314:G:H2'	2.05	0.70
1:5:3695:U:N3	1:5:3696:C:C6	2.59	0.70
1:5:4230:C:N3	1:5:4231:C:C5	2.57	0.70
1:5:4735:G:N1	1:5:4736:C:C4	2.59	0.70
1:5:5010:U:C2	1:5:5011:A:C8	2.80	0.70
6:C:210:ILE:HD13	6:C:252:TRP:CZ3	2.26	0.70
17:O:73:PHE:HB2	17:O:78:ARG:HB3	1.74	0.70
1:5:189:G:C2	1:5:190:G:C5	2.80	0.70
1:5:208:A:H3'	1:5:209:U:H5"	1.73	0.70
1:5:1266:G:N2	1:5:1268:G:C6	2.59	0.70
1:5:1876:U:N3	1:5:1877:G:C8	2.60	0.70
1:5:2089:G:C6	1:5:2263:A:N7	2.60	0.70
1:5:3695:U:C2	1:5:3696:C:C6	2.79	0.70
1:5:4240:G:C4	1:5:4241:C:C6	2.79	0.70
1:5:4484:A:C2	1:5:4485:C:C5	2.79	0.70
10:G:81:ASN:HD21	10:G:238:GLY:CA	2.04	0.70
14:L:55:LEU:C	14:L:56:ARG:HG2	2.16	0.70
33:e:43:ASN:HD22	33:e:43:ASN:C	2.00	0.70
1:5:86:U:O2	1:5:86:U:C2'	2.38	0.70
1:5:512:U:H2'	1:5:513:U:H5"	1.73	0.70
1:5:692:A:C2	1:5:693:C:C5	2.79	0.70
1:5:1167:C:C2	1:5:1195:G:C2	2.80	0.70
1:5:1475:G:N2	1:5:1489:G:H1	1.89	0.70
1:5:1516:G:C5	1:5:1518:A:C8	2.79	0.70
1:5:1724:G:N2	9:F:105:PRO:HB3	2.06	0.70
1:5:1780:A:C2	1:5:1781:U:H1'	2.27	0.70
1:5:2124:G:H22	9:F:32:ILE:HG13	1.56	0.70
1:5:2277:C:O2	1:5:2277:C:H2'	1.89	0.70
1:5:3591:C:N3	1:5:3592:G:C8	2.60	0.70
1:5:4285:U:H2'	1:5:4286:C:H6	1.55	0.70
18:P:64:ASN:HB2	18:P:80:GLN:OE1	1.91	0.70
1:5:472:C:C2	1:5:473:C:C5	2.80	0.70
1:5:473:C:O2	1:5:474:C:C6	2.44	0.70
1:5:488:G:N2	1:5:489:C:N1	2.40	0.70
1:5:942:G:OP2	9:F:244:ARG:NH1	2.22	0.70
1:5:944:A:C2'	6:C:335:MET:HE1	2.21	0.70
1:5:1188:C:O2	1:5:1189:G:H8	1.73	0.70
1:5:1280:C:C4	1:5:1282:G:O6	2.44	0.70
1:5:1339:U:O2	1:5:1340:C:C5	2.45	0.70
1:5:1733:G:O2'	1:5:4214:A:O2'	2.10	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2289:C:O2	1:5:2289:C:H2'	1.90	0.70
1:5:2589:C:C4	1:5:2590:G:C5	2.79	0.70
1:5:2658:G:C6	1:5:2675:G:C6	2.78	0.70
1:5:2770:C:C2	1:5:2771:G:C8	2.80	0.70
1:5:4121:G:H22	4:A:84:THR:HB	1.55	0.70
1:5:4355:G:C2	1:5:4356:G:C5	2.79	0.70
1:5:4483:C:C2	1:5:4484:A:C8	2.80	0.70
2:7:17:C:C2	2:7:18:C:C6	2.79	0.70
29:a:61:TYR:O	29:a:62:HIS:O	2.10	0.70
1:5:208:A:H1'	1:5:232:G:H21	1.48	0.70
1:5:738:C:C2	1:5:739:G:N7	2.60	0.70
1:5:1506:G:O2'	6:C:116:ASN:OD1	2.06	0.70
1:5:2367:A:C2	1:5:2368:A:C5	2.79	0.70
1:5:2441:C:H4'	35:g:9:ARG:NE	2.06	0.70
1:5:2481:G:C2	1:5:2498:C:C2	2.80	0.70
1:5:2529:A:C5	1:5:2532:C:C6	2.79	0.70
1:5:2529:A:N7	1:5:2532:C:C5	2.60	0.70
1:5:3794:C:N3	1:5:3795:A:C8	2.60	0.70
1:5:5031:G:N2	1:5:5032:C:C2	2.59	0.70
3:8:13:G:C2	3:8:14:U:C2	2.80	0.70
7:D:123:VAL:HG13	7:D:248:ARG:HH22	1.56	0.70
12:I:47:PRO:HA	12:I:171:TRP:HE1	1.56	0.70
12:I:76:MET:HE2	12:I:80:CYS:SG	2.31	0.70
25:W:44:ARG:HH11	25:W:44:ARG:HG3	1.55	0.70
26:X:119:ILE:HD12	26:X:149:VAL:HG21	1.73	0.70
1:5:244:G:N2	1:5:246:G:H1'	2.07	0.70
1:5:752:G:C5	1:5:753:C:C5	2.80	0.70
1:5:990:C:N3	1:5:991:C:C5	2.59	0.70
1:5:1410:U:H5	1:5:1815:G:C2	2.08	0.70
1:5:2080:U:N3	1:5:2081:C:C4	2.59	0.70
1:5:2314:G:N2	1:5:2315:G:C4	2.60	0.70
1:5:2623:A:C2	1:5:2624:G:C8	2.80	0.70
1:5:2713:C:N3	1:5:2714:G:N7	2.40	0.70
1:5:4093:G:O6	1:5:4115:G:O6	2.09	0.70
1:5:4236:G:O2'	1:5:4237:C:O4'	2.08	0.70
1:5:4509:U:H2'	1:5:4510:A:H2'	1.74	0.70
18:P:54:GLN:CB	18:P:83:TRP:CD1	2.75	0.70
26:X:73:HIS:O	26:X:116:LEU:HD11	1.92	0.70
34:f:18:LEU:HG	34:f:19:ARG:HH22	1.56	0.70
1:5:60:G:C4	1:5:61:A:C8	2.80	0.69
1:5:1049:C:C2	1:5:1050:C:C5	2.79	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1070:G:C2	1:5:1071:C:N1	2.60	0.69
1:5:1313:C:N3	1:5:1323:A:C8	2.60	0.69
1:5:1444:G:H2'	1:5:1445:U:C5	2.25	0.69
1:5:1629:G:H2'	1:5:1631:A:N7	2.07	0.69
1:5:1673:U:N3	1:5:1682:A:C2	2.59	0.69
1:5:1780:A:C6	1:5:1781:U:C6	2.80	0.69
1:5:1999:A:O4'	1:5:2019:C:O2'	2.10	0.69
1:5:2086:G:H2'	1:5:2087:C:O4'	1.92	0.69
1:5:2318:G:N2	1:5:2320:G:O2'	2.25	0.69
1:5:2552:G:OP2	1:5:2553:A:H2'	1.91	0.69
1:5:3732:A:C2	1:5:3733:A:C5	2.80	0.69
1:5:3880:G:O2'	1:5:3881:G:C8	2.42	0.69
1:5:4229:U:C2	1:5:4230:C:C6	2.80	0.69
1:5:4342:C:C4	1:5:4343:U:C5	2.80	0.69
1:5:4536:C:N3	1:5:4537:C:C5	2.59	0.69
1:5:4561:C:O2	1:5:4561:C:C2'	2.39	0.69
7:D:94:ASN:C	7:D:94:ASN:ND2	2.48	0.69
20:R:108:ARG:HH11	20:R:108:ARG:HG2	1.57	0.69
21:S:99:ASP:OD1	21:S:100:LEU:N	2.25	0.69
29:a:127:LYS:HG3	29:a:128:PHE:CE2	2.27	0.69
31:c:31:TYR:HE1	31:c:35:LEU:HD22	1.55	0.69
1:5:231:U:H4'	27:Y:100:HIS:CD2	2.26	0.69
1:5:472:C:C4	1:5:473:C:C5	2.80	0.69
1:5:1447:C:C2	1:5:2098:G:C2	2.80	0.69
1:5:2301:G:N2	1:5:2302:C:C2	2.60	0.69
1:5:2347:A:N3	1:5:2348:G:C6	2.60	0.69
1:5:2713:C:C2	1:5:2714:G:C8	2.79	0.69
1:5:2823:G:C6	1:5:2824:C:C5	2.80	0.69
3:8:11:C:C2	3:8:12:G:H8	2.01	0.69
10:G:231:ASN:HD22	10:G:231:ASN:N	1.88	0.69
11:H:41:ILE:HD11	11:H:69:THR:OG1	1.92	0.69
1:5:459:C:C2	1:5:460:C:C6	2.79	0.69
1:5:1264:C:N3	1:5:1265:G:N7	2.40	0.69
1:5:1368:A:H1'	27:Y:1:MET:HE2	1.74	0.69
1:5:1688:G:N2	1:5:1849:U:O2	2.25	0.69
1:5:1876:U:N3	1:5:1877:G:N7	2.41	0.69
1:5:1899:G:C1'	1:5:2278:G:N2	2.55	0.69
1:5:2726:G:N2	1:5:2727:C:C2	2.60	0.69
1:5:3621:A:C5	1:5:3622:C:C5	2.79	0.69
1:5:4579:U:C2	1:5:4580:U:C5	2.79	0.69
2:7:114:U:C2'	2:7:115:A:H5"	2.21	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:102:TYR:OH	10:G:207:VAL:HA	1.91	0.69
15:M:36:ALA:HB2	15:M:52:PHE:CE1	2.28	0.69
1:5:92:C:H41	43:o:40:ARG:HH11	1.37	0.69
1:5:125:C:C2	1:5:126:C:C6	2.81	0.69
1:5:330:G:C2	1:5:331:G:N7	2.59	0.69
1:5:469:C:H2'	1:5:470:A:O4'	1.93	0.69
1:5:1598:C:O2	1:5:1598:C:C2'	2.39	0.69
1:5:1625:G:C5	1:5:1642:A:C2	2.80	0.69
1:5:1667:G:N2	1:5:2283:G:C6	2.60	0.69
1:5:2058:G:C6	1:5:2059:C:C5	2.80	0.69
1:5:2632:U:O2	1:5:2633:U:C6	2.45	0.69
1:5:2685:C:H2'	1:5:2686:G:O4'	1.91	0.69
1:5:2721:G:H2'	1:5:2722:G:H5'	1.75	0.69
1:5:4199:C:C6	1:5:4199:C:O5'	2.45	0.69
1:5:4629:U:C2	1:5:4630:G:C8	2.80	0.69
1:5:5021:C:N3	1:5:5022:U:C5	2.59	0.69
2:7:56:G:H2'	2:7:57:C:O4'	1.92	0.69
16:N:124:ASP:OD1	16:N:125:SER:N	2.25	0.69
1:5:70:A:C2	1:5:4355:G:C1'	2.75	0.69
1:5:445:U:H2'	1:5:446:C:O4'	1.92	0.69
1:5:917:A:N1	1:5:919:C:C5	2.60	0.69
1:5:1218:G:C6	1:5:1219:G:C1'	2.75	0.69
1:5:1543:G:C2	1:5:1544:G:C8	2.80	0.69
1:5:1724:G:H21	9:F:105:PRO:CB	2.04	0.69
1:5:1994:C:N3	1:5:1995:G:N7	2.41	0.69
1:5:3653:A:C2	1:5:3692:A:H4'	2.27	0.69
1:5:3909:C:N3	1:5:3910:C:C6	2.61	0.69
1:5:4743:G:N1	1:5:4744:A:C5	2.61	0.69
7:D:210:TYR:OH	7:D:214:GLU:CG	2.41	0.69
7:D:223:PHE:HB2	7:D:226:TYR:HB2	1.73	0.69
33:e:28:TYR:HB2	33:e:31:ILE:HD12	1.73	0.69
1:5:1188:C:N3	1:5:1189:G:C8	2.60	0.69
1:5:1219:G:C2	1:5:1220:G:C8	2.80	0.69
1:5:1346:C:C2	1:5:1347:G:C8	2.80	0.69
1:5:1634:A:N1	1:5:1635:C:C4	2.60	0.69
1:5:1771:U:C2	1:5:1772:C:C6	2.81	0.69
1:5:2424:G:H2'	1:5:2426:U:C5	2.27	0.69
1:5:2735:G:C2	1:5:2736:G:N7	2.61	0.69
1:5:2743:A:N3	1:5:2744:A:C8	2.60	0.69
1:5:3909:C:O2	1:5:3909:C:H2'	1.92	0.69
1:5:4240:G:C6	1:5:4241:C:C4	2.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4281:A:H2'	1:5:4282:A:H2'	1.74	0.69
3:8:100:U:N3	3:8:101:C:C5	2.61	0.69
9:F:197:TYR:C	9:F:199:VAL:H	2.01	0.69
32:d:87:ARG:NH1	32:d:87:ARG:CA	2.56	0.69
1:5:86:U:O4	1:5:97:G:C2	2.44	0.69
1:5:1204:C:C2	1:5:1205:G:C8	2.81	0.69
1:5:1216:C:C4	1:5:1217:G:N7	2.61	0.69
1:5:1267:C:C5'	1:5:2110:C:O2	2.39	0.69
1:5:1751:A:H2'	1:5:1752:G:H5'	1.73	0.69
1:5:2494:U:C2	1:5:2495:U:C6	2.81	0.69
1:5:3730:U:N3	1:5:3731:C:C5	2.61	0.69
1:5:3878:C:O2	5:B:258:HIS:CE1	2.43	0.69
1:5:4878:C:O2	1:5:4879:C:C6	2.45	0.69
10:G:169:PHE:CE2	16:N:6:TYR:CB	2.75	0.69
24:V:82:ILE:HG22	24:V:83:ARG:HG3	1.73	0.69
1:5:48:G:H5'	16:N:192:TRP:NE1	2.01	0.69
1:5:90:G:N7	1:5:92:C:N1	2.41	0.69
1:5:146:G:N3	1:5:147:A:C8	2.60	0.69
1:5:272:U:C2	1:5:273:U:H5	2.10	0.69
1:5:483:G:N1	1:5:484:U:C4	2.61	0.69
1:5:924:C:H2'	1:5:925:C:O4'	1.92	0.69
1:5:1282:G:N7	8:E:124:HIS:CE1	2.61	0.69
1:5:1629:G:C2	1:5:1631:A:N1	2.61	0.69
1:5:1840:G:C2'	1:5:1842:G:O5'	2.41	0.69
1:5:1867:A:OP1	12:I:13:LYS:NZ	2.24	0.69
1:5:1878:G:C2	1:5:1879:C:C4	2.80	0.69
1:5:1899:G:N2	1:5:1900:C:N1	2.40	0.69
1:5:2371:U:H2'	1:5:2372:U:H5'	1.73	0.69
1:5:3656:A:C4'	1:5:3747:A:C2	2.76	0.69
1:5:4277:G:N3	1:5:4278:C:C6	2.61	0.69
1:5:4302:U:C5	1:5:4303:C:C6	2.80	0.69
1:5:4549:G:N1	1:5:4550:G:N7	2.40	0.69
1:5:4561:C:O2	1:5:4562:C:C6	2.45	0.69
3:8:9:A:C2	3:8:10:G:C8	2.80	0.69
3:8:14:U:H2'	3:8:15:G:C8	2.28	0.69
5:B:118:PHE:CB	5:B:119:TYR:CE1	2.75	0.69
11:H:117:PHE:CD1	11:H:118:LEU:HB2	2.28	0.69
23:U:38:ASN:O	23:U:90:TYR:OH	2.10	0.69
36:h:89:ARG:HH11	36:h:89:ARG:HG2	1.56	0.69
1:5:290:U:C2	1:5:291:U:C5	2.81	0.69
1:5:422:C:C2	1:5:423:G:C8	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:930:G:N3	1:5:931:C:C6	2.61	0.69
1:5:992:C:C2	1:5:993:G:C8	2.81	0.69
1:5:1084:C:N3	1:5:1085:C:C5	2.61	0.69
1:5:1545:G:C2	1:5:1546:C:C4	2.81	0.69
1:5:1946:G:N2	1:5:2037:C:C2	2.61	0.69
1:5:2316:G:N2	1:5:2317:C:C2	2.61	0.69
1:5:2445:C:O2	1:5:2445:C:H2'	1.93	0.69
1:5:2741:U:O2'	4:A:50:HIS:HB3	1.93	0.69
1:5:2744:A:H2'	1:5:2745:A:C8	2.28	0.69
1:5:3635:A:N7	1:5:3636:C:C6	2.61	0.69
1:5:4099:G:C6	1:5:4100:C:C4	2.81	0.69
1:5:4167:G:N1	1:5:4168:G:N7	2.41	0.69
5:B:175:GLN:HE21	5:B:179:HIS:HE1	1.41	0.69
9:F:209:PHE:C	9:F:209:PHE:CD1	2.70	0.69
39:k:22:SER:HA	39:k:65:ALA:HB3	1.74	0.69
1:5:195:C:H2'	1:5:195:C:O2	1.92	0.69
1:5:491:G:N2	1:5:663:G:C6	2.60	0.69
1:5:491:G:C2	1:5:492:U:C5	2.80	0.69
1:5:658:C:N3	1:5:659:G:N7	2.41	0.69
1:5:961:G:N3	1:5:961:G:C2'	2.56	0.69
1:5:1093:C:C2	1:5:1094:G:C8	2.81	0.69
1:5:1628:C:N3	1:5:1629:G:C8	2.58	0.69
1:5:1632:A:N6	1:5:1634:A:C4	2.61	0.69
1:5:2077:C:N3	1:5:2078:C:C5	2.61	0.69
1:5:2282:A:H2'	1:5:2283:G:C5'	2.22	0.69
1:5:2627:C:C5	1:5:2628:U:C5	2.81	0.69
1:5:3773:U:H3	1:5:3774:A:H2'	1.58	0.69
1:5:4070:U:N3	1:5:4071:U:C5	2.60	0.69
1:5:4152:G:N2	1:5:4153:C:C2	2.61	0.69
4:A:209:HIS:NE2	4:A:235:VAL:HG11	2.08	0.69
7:D:29:ASP:HB3	7:D:31:TYR:O	1.92	0.69
14:L:167:ARG:O	29:a:97:ALA:O	2.11	0.69
21:S:95:ARG:NH1	21:S:97:TYR:OH	2.21	0.69
25:W:4:GLU:CD	25:W:30:GLN:HE21	2.00	0.69
1:5:187:U:C5	1:5:245:C:N3	2.61	0.68
1:5:468:U:O2	1:5:469:C:O4'	2.10	0.68
1:5:494:U:N3	1:5:495:C:C5	2.61	0.68
1:5:909:A:N1	1:5:910:G:C8	2.62	0.68
1:5:1338:G:N2	29:a:25:HIS:ND1	2.40	0.68
1:5:2033:A:C2	1:5:2034:G:C8	2.80	0.68
1:5:2034:G:C6	1:5:2035:C:C5	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2076:G:C6	1:5:2077:C:C5	2.81	0.68
1:5:2089:G:O2'	1:5:2090:U:O2	2.11	0.68
1:5:2270:G:C4	1:5:2271:C:C5	2.82	0.68
1:5:2529:A:N7	1:5:2532:C:C4	2.61	0.68
1:5:3656:A:O4'	1:5:3747:A:C2	2.45	0.68
1:5:3670:C:O2'	1:5:3671:G:C8	2.46	0.68
1:5:4229:U:C4	1:5:4230:C:C4	2.80	0.68
1:5:4284:C:C2	1:5:4285:U:H5	2.07	0.68
1:5:4550:G:C2	1:5:4551:U:C6	2.80	0.68
1:5:4879:C:O2	1:5:4880:C:C6	2.45	0.68
1:5:5005:G:C5	25:W:51:TRP:HD1	2.11	0.68
5:B:323:TYR:HB3	5:B:342:LYS:HG2	1.74	0.68
9:F:149:LEU:CA	9:F:197:TYR:OH	2.41	0.68
22:T:82:GLY:HA3	30:b:16:TRP:CB	2.23	0.68
33:e:80:HIS:HB3	33:e:84:GLU:OE2	1.93	0.68
1:5:938:C:H2'	1:5:939:G:C8	2.27	0.68
1:5:1269:G:N7	1:5:2111:G:C5	2.61	0.68
1:5:2279:A:N3	1:5:2279:A:H2'	2.07	0.68
1:5:2294:G:C2	1:5:2295:C:C4	2.80	0.68
1:5:2688:G:N1	1:5:2689:C:C4	2.61	0.68
1:5:3811:G:H4'	1:5:3812:C:OP2	1.93	0.68
1:5:4345:C:C2	1:5:4346:U:C5	2.81	0.68
1:5:4871:C:C4	21:S:176:PHE:CD2	2.81	0.68
1:5:4871:C:C5	21:S:176:PHE:CE2	2.81	0.68
1:5:66:A:C2	1:5:312:G:C1'	2.76	0.68
1:5:73:A:C2	1:5:74:G:C8	2.81	0.68
1:5:278:G:N1	1:5:330:G:C8	2.61	0.68
1:5:287:U:O2	1:5:288:G:C8	2.47	0.68
1:5:488:G:N1	1:5:489:C:C4	2.61	0.68
1:5:642:G:N1	1:5:643:C:C4	2.61	0.68
1:5:957:G:OP2	1:5:1284:G:N2	2.23	0.68
1:5:1272:C:O2'	1:5:1273:G:C4	2.46	0.68
1:5:1744:U:C2	1:5:1745:G:C8	2.81	0.68
1:5:1964:A:C6	1:5:1965:G:C1'	2.76	0.68
1:5:2041:A:C2	1:5:4464:A:C5	2.82	0.68
1:5:2248:C:O2	1:5:2248:C:H2'	1.92	0.68
1:5:2316:G:N1	1:5:2317:C:C4	2.61	0.68
1:5:3736:A:O2'	1:5:3737:A:O4'	2.11	0.68
1:5:4735:G:C2	1:5:4736:C:C6	2.81	0.68
16:N:162:ARG:HH21	16:N:164:LEU:HD11	1.58	0.68
1:5:209:U:C5	1:5:211:G:C8	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:481:G:C2	1:5:482:G:C8	2.82	0.68
1:5:1243:C:O2	1:5:1269:G:N3	2.26	0.68
1:5:1269:G:C4	1:5:2111:G:N1	2.61	0.68
1:5:1554:A:OP2	44:p:4:ARG:NH1	2.26	0.68
1:5:1759:G:C6	1:5:1760:G:N7	2.61	0.68
1:5:1811:G:N3	1:5:1812:C:C6	2.62	0.68
1:5:1934:A:O2'	1:5:2059:C:OP1	2.11	0.68
1:5:1973:G:O6	1:5:2002:A:C8	2.46	0.68
1:5:2305:U:H4'	1:5:2306:G:OP2	1.93	0.68
1:5:2485:U:C2	1:5:2486:G:C8	2.82	0.68
1:5:3635:A:C6	1:5:3636:C:H1'	2.28	0.68
1:5:3692:A:N7	1:5:3693:U:C6	2.60	0.68
1:5:3857:G:C6	1:5:3858:C:C4	2.81	0.68
1:5:4258:C:C2	1:5:4259:C:C6	2.82	0.68
1:5:4287:G:O2'	1:5:4288:C:O5'	2.10	0.68
1:5:424:U:O2	1:5:424:U:H2'	1.93	0.68
1:5:442:G:H2'	1:5:443:G:O5'	1.92	0.68
1:5:656:C:N3	1:5:657:C:C5	2.61	0.68
1:5:719:C:C2	1:5:720:G:C8	2.81	0.68
1:5:1358:G:C4	1:5:1359:G:N7	2.62	0.68
1:5:2463:G:N3	1:5:2464:C:C5	2.62	0.68
1:5:2498:C:C2	1:5:2499:C:C6	2.81	0.68
1:5:2891:U:C5	20:R:74:ARG:NH1	2.61	0.68
1:5:4189:U:H1'	1:5:4380:A:C2	2.28	0.68
1:5:4286:C:O2	1:5:4287:G:N7	2.27	0.68
1:5:4384:U:O2'	1:5:4386:C:OP1	2.11	0.68
2:7:60:G:C6	2:7:61:G:N7	2.61	0.68
7:D:125:VAL:O	7:D:196:ARG:NH2	2.27	0.68
14:L:69:LYS:HA	14:L:159:ASN:HD21	1.59	0.68
1:5:28:C:N3	1:5:29:G:C8	2.62	0.68
1:5:99:A:C2	1:5:100:C:C2	2.82	0.68
1:5:316:U:O2	1:5:316:U:H2'	1.93	0.68
1:5:916:C:C4	1:5:917:A:N7	2.62	0.68
1:5:917:A:C5	1:5:919:C:N4	2.62	0.68
1:5:1249:C:C2	1:5:1262:G:C2	2.81	0.68
1:5:1412:G:C2	1:5:1413:C:C6	2.81	0.68
1:5:2524:U:H5"	1:5:2711:G:C2	2.28	0.68
1:5:2633:U:C2	1:5:2634:C:C6	2.81	0.68
1:5:4069:U:H2'	1:5:4070:U:C6	2.29	0.68
1:5:4093:G:H3'	1:5:4094:G:C5'	2.24	0.68
1:5:4096:C:N4	1:5:4097:G:C8	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4256:A:N7	13:J:60:PHE:CZ	2.60	0.68
1:5:4763:U:O2	15:M:3:PHE:CE2	2.46	0.68
1:5:5021:C:C2	1:5:5022:U:C6	2.82	0.68
2:7:110:G:C2	2:7:111:C:C6	2.81	0.68
3:8:94:G:H4'	3:8:95:A:OP1	1.93	0.68
10:G:136:LEU:HD21	10:G:204:PHE:CE1	2.28	0.68
1:5:33:A:N6	1:5:50:C:C2	2.62	0.68
1:5:43:U:OP1	16:N:85:VAL:HG23	1.94	0.68
1:5:247:G:N2	1:5:248:C:C2	2.62	0.68
1:5:659:G:C6	1:5:660:A:N7	2.62	0.68
1:5:750:U:C2	1:5:751:G:C8	2.82	0.68
1:5:909:A:C2	1:5:910:G:N9	2.61	0.68
1:5:1080:C:C4	1:5:1081:C:C5	2.82	0.68
1:5:1744:U:N3	1:5:1745:G:C8	2.62	0.68
1:5:1807:C:C2	1:5:1808:C:C6	2.81	0.68
1:5:1848:C:H6	1:5:1848:C:H5"	1.59	0.68
1:5:2095:A:N6	9:F:41:GLN:OE1	2.26	0.68
1:5:2904:U:O2	1:5:2905:C:C6	2.46	0.68
1:5:4707:A:H2'	1:5:4708:A:O5'	1.93	0.68
6:C:9:SER:HA	6:C:21:ASN:OD1	1.92	0.68
10:G:227:ASN:N	10:G:227:ASN:HD22	1.91	0.68
32:d:25:TYR:OH	32:d:119:THR:CB	2.39	0.68
40:l:44:TRP:CZ3	40:l:45:ARG:HB2	2.29	0.68
1:5:1358:G:C2	1:5:1359:G:O6	2.47	0.68
1:5:1387:A:N3	1:5:1397:A:N6	2.41	0.68
1:5:1939:A:C2	1:5:3874:G:OP1	2.47	0.68
1:5:2000:G:O2'	1:5:2017:A:N6	2.27	0.68
1:5:2108:G:H2'	1:5:2109:G:H4'	1.76	0.68
1:5:2263:A:O3'	1:5:2264:C:H6	1.74	0.68
1:5:2567:G:N2	1:5:2568:C:C2	2.62	0.68
1:5:2726:G:C2	1:5:2727:C:C5	2.82	0.68
1:5:4623:G:H4'	5:B:16:PHE:CE2	2.28	0.68
1:5:4627:U:C2	1:5:4628:U:C6	2.82	0.68
1:5:5028:G:C4	1:5:5029:C:C5	2.82	0.68
1:5:5035:U:C4	1:5:5036:C:C5	2.81	0.68
3:8:43:A:C2	3:8:44:A:N7	2.62	0.68
3:8:68:G:H2'	3:8:69:U:O4'	1.93	0.68
3:8:125:C:C5'	3:8:125:C:C2	2.76	0.68
8:E:145:ILE:HD11	8:E:267:LEU:HD21	1.76	0.68
16:N:138:PHE:HB3	16:N:143:ARG:NH2	2.08	0.68
1:5:21:G:C6	3:8:36:G:N2	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:445:U:O4'	1:5:2313:A:C2	2.47	0.68
1:5:465:G:C2	1:5:466:A:C8	2.82	0.68
1:5:669:C:C2	1:5:670:G:C8	2.81	0.68
1:5:711:A:C2	1:5:712:C:C5	2.82	0.68
1:5:1170:G:C2	1:5:1192:C:C2	2.82	0.68
1:5:1266:G:H4'	1:5:2112:G:C4	2.28	0.68
1:5:1297:U:O4'	1:5:1297:U:OP2	2.11	0.68
1:5:1421:G:N2	1:5:1422:G:C4	2.62	0.68
1:5:1553:A:C2	1:5:1575:A:H1'	2.28	0.68
1:5:1595:G:C2	1:5:4557:U:H4'	2.28	0.68
1:5:1631:A:C2	4:A:204:MET:SD	2.87	0.68
1:5:1991:A:H3'	1:5:1992:U:H1'	1.74	0.68
1:5:2093:A:H5"	1:5:2093:A:N3	2.09	0.68
1:5:2874:U:H5'	1:5:2874:U:C6	2.29	0.68
1:5:3688:U:N3	1:5:3689:G:N7	2.41	0.68
1:5:4069:U:H2'	1:5:4070:U:C5	2.29	0.68
1:5:4095:G:H2'	1:5:4096:C:H6	1.58	0.68
1:5:4121:G:N2	4:A:85:GLY:N	2.42	0.68
2:7:112:U:O2	2:7:112:U:H2'	1.94	0.68
3:8:106:G:N2	3:8:107:C:C2	2.62	0.68
6:C:325:MET:HA	6:C:325:MET:HE3	1.76	0.68
8:E:184:ARG:HD3	8:E:213:PHE:HB3	1.76	0.68
1:5:65:A:C2	1:5:76:A:H4'	2.29	0.68
1:5:122:U:H1'	1:5:152:U:O2	1.93	0.68
1:5:289:C:C2	1:5:290:U:C6	2.81	0.68
1:5:701:G:O2'	33:e:7:LEU:O	2.11	0.68
1:5:1175:A:C6	1:5:1176:C:C5	2.81	0.68
1:5:1413:C:C2	1:5:1414:C:C5	2.82	0.68
1:5:1694:C:N3	1:5:1695:U:C5	2.62	0.68
1:5:2458:C:H5'	16:N:67:ARG:HD3	1.76	0.68
1:5:2612:G:H2'	1:5:2613:C:O4'	1.94	0.68
1:5:2714:G:C2	1:5:2715:G:N7	2.62	0.68
1:5:3905:A:C6	1:5:4449:A:N1	2.62	0.68
2:7:56:G:C2'	2:7:57:C:O5'	2.42	0.68
31:c:78:ASN:ND2	31:c:78:ASN:C	2.52	0.68
32:d:87:ARG:NH1	32:d:87:ARG:CB	2.56	0.68
1:5:976:G:C4	1:5:977:C:C6	2.82	0.67
1:5:1171:G:C2	1:5:1191:C:C2	2.82	0.67
1:5:1201:U:N3	1:5:1202:C:C5	2.62	0.67
1:5:1287:G:C2	1:5:1289:C:C5	2.82	0.67
1:5:1877:G:C2	1:5:1878:G:C8	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1961:G:O2'	1:5:2025:A:N6	2.26	0.67
1:5:1967:A:N1	1:5:1968:G:C5	2.62	0.67
1:5:2522:G:N2	1:5:2534:C:C2	2.63	0.67
1:5:2745:A:O2'	1:5:2746:A:O5'	2.12	0.67
1:5:3740:G:O6	1:5:3741:C:C5	2.46	0.67
1:5:4112:C:C4	1:5:4113:U:C5	2.82	0.67
1:5:4123:C:H2'	1:5:4123:C:O2	1.92	0.67
1:5:4460:U:OP1	5:B:10:ARG:NH1	2.27	0.67
1:5:4490:C:N3	1:5:4491:G:N7	2.42	0.67
1:5:4745:G:C2'	1:5:4746:C:C6	2.77	0.67
1:5:4985:U:O2	5:B:174:ARG:NH1	2.28	0.67
2:7:17:C:C2	2:7:18:C:C5	2.81	0.67
2:7:110:G:N1	2:7:111:C:C4	2.62	0.67
3:8:35:C:H6	3:8:35:C:O5'	1.77	0.67
3:8:125:C:C2	3:8:125:C:H5"	2.28	0.67
3:8:134:G:N2	3:8:135:C:H1'	2.09	0.67
5:B:235:TRP:HD1	5:B:267:ALA:HA	1.59	0.67
6:C:128:LEU:HD12	6:C:264:TYR:OH	1.94	0.67
1:5:86:U:O2	1:5:87:A:N7	2.27	0.67
1:5:1273:G:N7	8:E:68:LYS:C	2.52	0.67
1:5:1839:U:H3'	1:5:1840:G:N2	2.10	0.67
1:5:2258:C:H2'	1:5:2258:C:O2	1.95	0.67
1:5:2811:G:N2	1:5:2813:A:C8	2.63	0.67
1:5:3621:A:N7	1:5:4642:U:O2'	2.24	0.67
1:5:3730:U:C2	1:5:3731:C:C6	2.82	0.67
1:5:3912:U:C2'	1:5:3913:G:H5'	2.24	0.67
1:5:4091:G:C6	1:5:4092:G:N7	2.62	0.67
1:5:4369:A:N1	1:5:4370:G:C5	2.62	0.67
2:7:22:A:C2	2:7:23:A:N7	2.61	0.67
3:8:11:C:C4	3:8:12:G:N7	2.59	0.67
3:8:81:C:O2	3:8:82:A:O3'	2.13	0.67
3:8:115:G:C6	3:8:116:C:C5	2.83	0.67
4:A:89:TYR:CB	4:A:100:ASN:HD21	2.06	0.67
45:r:7:TRP:CD1	45:r:38:PHE:CD1	2.82	0.67
1:5:1172:C:C2	1:5:1173:G:C8	2.82	0.67
1:5:1186:U:C4	1:5:1187:G:C5	2.83	0.67
1:5:1267:C:O2'	1:5:1271:G:O6	2.13	0.67
1:5:1411:C:C2	1:5:1412:G:C8	2.82	0.67
1:5:1764:G:O6	1:5:1766:A:H5"	1.93	0.67
1:5:2745:A:O2'	1:5:2746:A:C5'	2.43	0.67
1:5:2857:A:N3	1:5:2858:A:C5	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3878:C:C4	1:5:4518:A:C2	2.83	0.67
1:5:4072:C:C2	1:5:4073:A:C8	2.82	0.67
1:5:4094:G:C2'	1:5:4095:G:O4'	2.38	0.67
1:5:4174:U:O2	1:5:4175:G:H8	1.76	0.67
1:5:4945:G:O6	34:f:60:PRO:CD	2.41	0.67
2:7:59:G:C2	2:7:60:G:N9	2.62	0.67
3:8:80:A:H2'	3:8:81:C:O2'	1.94	0.67
1:5:440:U:N3	1:5:441:G:N7	2.42	0.67
1:5:509:A:C2	29:a:105:ARG:NE	2.61	0.67
1:5:1489:G:C6	1:5:1490:G:C8	2.83	0.67
1:5:1491:A:C4	1:5:1492:G:C8	2.83	0.67
1:5:2366:A:H2'	1:5:2367:A:C5'	2.24	0.67
1:5:2453:A:C6	1:5:2454:U:C6	2.82	0.67
1:5:4355:G:N2	1:5:4356:G:C5	2.62	0.67
1:5:4627:U:O2	1:5:4627:U:H2'	1.94	0.67
1:5:4911:A:H5"	5:B:100:ARG:HD3	1.77	0.67
2:7:19:C:N3	2:7:20:U:C5	2.62	0.67
3:8:83:C:H4'	3:8:85:U:O2	1.95	0.67
24:V:20:LEU:HD21	24:V:101:ASN:ND2	2.09	0.67
1:5:38:A:C6	1:5:41:C:C5	2.83	0.67
1:5:68:U:C4	1:5:69:A:C8	2.83	0.67
1:5:99:A:H4'	16:N:181:HIS:ND1	2.09	0.67
1:5:449:C:N3	1:5:450:G:C8	2.62	0.67
1:5:1217:G:O2'	1:5:1218:G:C8	2.47	0.67
1:5:1245:C:C4	1:5:1269:G:O6	2.47	0.67
1:5:1277:G:C6	1:5:1278:C:C5	2.83	0.67
1:5:1629:G:N2	1:5:1631:A:C2	2.63	0.67
1:5:1758:G:N2	1:5:1759:G:C4	2.63	0.67
1:5:2314:G:C2	1:5:2315:G:C5	2.80	0.67
1:5:2513:A:H62	35:g:13:TYR:HE2	1.41	0.67
1:5:2769:U:HO2'	1:5:2770:C:H6	1.42	0.67
1:5:3910:C:C2	1:5:3911:C:H5	2.07	0.67
1:5:4276:G:C5	1:5:4277:G:N7	2.63	0.67
1:5:4984:C:N3	1:5:4985:U:C5	2.63	0.67
2:7:18:C:C4	2:7:19:C:H5	2.12	0.67
7:D:29:ASP:HB3	7:D:32:ALA:HB3	1.76	0.67
1:5:207:G:N2	1:5:383:A:C8	2.61	0.67
1:5:218:A:H1'	1:5:219:G:H5"	1.76	0.67
1:5:451:C:C4	1:5:1295:C:H2'	2.29	0.67
1:5:699:C:N3	1:5:700:G:C8	2.63	0.67
1:5:1218:G:C6	1:5:1219:G:H1'	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1916:G:H21	1:5:2067:C:H1'	1.59	0.67
1:5:2325:C:O2	1:5:2326:G:H8	1.77	0.67
1:5:2480:G:C2	1:5:2481:G:C8	2.83	0.67
1:5:2688:G:N2	1:5:2689:C:C2	2.63	0.67
1:5:2736:G:N3	1:5:2737:C:C6	2.62	0.67
1:5:3907:G:C4	1:5:4449:A:H1'	2.28	0.67
1:5:4075:U:O2	1:5:4076:G:N7	2.27	0.67
1:5:4097:G:N3	1:5:4098:A:C8	2.63	0.67
1:5:4314:C:N3	1:5:4315:A:N7	2.43	0.67
1:5:4729:A:C5'	1:5:4965:U:O2'	2.43	0.67
4:A:211:PHE:CE1	4:A:219:ILE:HG23	2.29	0.67
8:E:157:ARG:HD2	8:E:266:TYR:CE1	2.27	0.67
1:5:50:C:H2'	1:5:51:A:O5'	1.94	0.67
1:5:1069:G:C2	1:5:1070:G:H1'	2.30	0.67
1:5:1271:G:H3'	1:5:1272:C:O4'	1.94	0.67
1:5:1408:G:N3	1:5:1408:G:H2'	2.10	0.67
1:5:1412:G:N3	1:5:1413:C:C6	2.62	0.67
1:5:2274:C:H5'	6:C:312:ARG:HB3	1.77	0.67
1:5:2457:G:N2	1:5:2465:C:N3	2.43	0.67
1:5:4124:G:N2	10:G:43:GLN:O	2.28	0.67
1:5:4228:G:C5'	1:5:4229:U:O4'	2.43	0.67
1:5:4413:C:H3'	1:5:4414:A:H8	1.60	0.67
3:8:73:U:C4	3:8:74:U:C6	2.82	0.67
3:8:91:A:H2'	3:8:92:U:O4'	1.94	0.67
31:c:31:TYR:HD1	31:c:32:LYS:H	1.43	0.67
1:5:91:G:N7	1:5:93:G:C6	2.63	0.67
1:5:951:G:C2	1:5:952:G:N7	2.63	0.67
1:5:957:G:P	1:5:1284:G:C2	2.88	0.67
1:5:1241:C:N4	1:5:1270:A:O2'	2.27	0.67
1:5:1263:A:C5	1:5:1264:C:C5	2.83	0.67
1:5:2056:G:N1	1:5:2058:G:C5	2.62	0.67
1:5:2567:G:N3	1:5:2568:C:C6	2.63	0.67
1:5:3899:G:H5"	5:B:257:TRP:CD1	2.30	0.67
1:5:4562:C:C2	1:5:4563:U:C6	2.83	0.67
1:5:4745:G:H21	1:5:4746:C:N4	1.93	0.67
1:5:4956:A:C6	1:5:4957:C:C5	2.83	0.67
3:8:73:U:C4	3:8:74:U:N1	2.62	0.67
23:U:33:ILE:HD11	23:U:96:LEU:HD22	1.76	0.67
1:5:125:C:C2	1:5:126:C:H6	2.12	0.67
1:5:661:C:C2	1:5:662:C:C6	2.82	0.67
1:5:1079:C:N3	1:5:1080:C:C5	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1542:U:N3	1:5:1543:G:C8	2.63	0.67
1:5:1725:U:N3	1:5:1726:U:C5	2.63	0.67
1:5:1887:G:N1	1:5:1890:G:O6	2.27	0.67
1:5:2293:U:O2	1:5:2293:U:H2'	1.95	0.67
1:5:2526:C:C4	46:1:405:ARG:NE	2.62	0.67
1:5:2689:C:O2	1:5:2689:C:C2'	2.43	0.67
1:5:4285:U:N3	1:5:4286:C:C5	2.62	0.67
1:5:5046:U:OP1	32:d:83:ARG:NH2	2.28	0.67
2:7:62:U:C2	2:7:64:G:C8	2.83	0.67
3:8:64:U:N3	3:8:65:A:N6	2.43	0.67
3:8:73:U:P	27:Y:75:ARG:HD2	2.35	0.67
7:D:29:ASP:CB	7:D:32:ALA:HB3	2.25	0.67
1:5:270:U:O2	1:5:271:C:C6	2.47	0.67
1:5:294:G:N1	29:a:61:TYR:CD1	2.63	0.67
1:5:650:C:H2'	1:5:651:C:C6	2.30	0.67
1:5:673:C:H2'	1:5:674:G:C8	2.30	0.67
1:5:973:G:O6	1:5:1282:G:C2	2.48	0.67
1:5:1191:C:N3	1:5:1192:C:C5	2.63	0.67
1:5:1260:G:N1	1:5:1261:G:C5	2.63	0.67
1:5:1268:G:C2	1:5:2111:G:N2	2.63	0.67
1:5:1774:C:C2	1:5:1775:A:C8	2.83	0.67
1:5:2078:C:C4	1:5:2079:G:N7	2.60	0.67
1:5:2279:A:N3	1:5:2280:G:N7	2.43	0.67
1:5:2673:G:C2	31:c:89:TYR:CE1	2.83	0.67
1:5:3674:G:C6	1:5:3675:G:N7	2.63	0.67
1:5:3772:U:N3	1:5:3773:U:C5	2.62	0.67
1:5:3879:G:N7	1:5:3882:C:N4	2.43	0.67
1:5:4134:C:O2	1:5:4135:G:C8	2.47	0.67
1:5:4136:G:C6	1:5:4137:C:C4	2.83	0.67
1:5:4490:C:C2	1:5:4491:G:H8	2.13	0.67
1:5:4653:C:N3	1:5:4654:C:C5	2.62	0.67
1:5:4698:C:H2'	1:5:4698:C:O2	1.93	0.67
2:7:8:G:OP1	7:D:33:ARG:NH2	2.28	0.67
9:F:168:ARG:HD2	9:F:211:TRP:CD1	2.30	0.67
1:5:504:G:C6	1:5:654:C:N3	2.63	0.66
1:5:1355:G:C6	1:5:1385:G:C2	2.83	0.66
1:5:1380:G:H2'	1:5:1382:G:N7	2.09	0.66
1:5:1742:A:C2	1:5:1743:A:N7	2.63	0.66
1:5:1830:G:C2	1:5:1831:G:C8	2.84	0.66
1:5:2428:A:C4	1:5:2789:A:H2	2.12	0.66
1:5:2811:G:H22	1:5:2813:A:H3'	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2826:U:O2	1:5:2826:U:H2'	1.95	0.66
1:5:3857:G:C6	1:5:3858:C:C5	2.82	0.66
1:5:3912:U:HO2'	1:5:3913:G:H5"	1.60	0.66
1:5:4071:U:N3	1:5:4072:C:C5	2.63	0.66
1:5:4095:G:C2	1:5:4096:C:C4	2.80	0.66
1:5:4223:C:H5'	12:I:119:PHE:CD2	2.30	0.66
1:5:4745:G:N2	1:5:4746:C:N4	2.43	0.66
1:5:4750:G:HO2'	1:5:4751:G:P	2.18	0.66
3:8:95:A:C5	3:8:96:C:C5	2.83	0.66
3:8:101:C:O2	3:8:101:C:H2'	1.95	0.66
4:A:3:ARG:HG3	4:A:3:ARG:HH11	1.58	0.66
9:F:73:MET:HB3	9:F:84:TYR:HE2	1.60	0.66
26:X:84:GLU:HB3	46:1:404:HIS:ND1	2.10	0.66
38:j:39:TYR:O	38:j:40:PRO:C	2.34	0.66
1:5:152:U:O2	1:5:152:U:H2'	1.94	0.66
1:5:332:C:H4'	16:N:150:TRP:CD1	2.30	0.66
1:5:1268:G:OP2	1:5:2109:G:H3'	1.95	0.66
1:5:1438:U:O2	1:5:2099:G:C5	2.49	0.66
1:5:1966:C:C4	1:5:1967:A:N7	2.62	0.66
1:5:2108:G:C4	1:5:2109:G:H1'	2.29	0.66
1:5:2362:U:O4	1:5:3859:G:C2	2.48	0.66
1:5:2422:C:C2	1:5:2423:A:C8	2.83	0.66
1:5:2605:G:N3	1:5:2606:G:C8	2.63	0.66
1:5:3731:C:C2	1:5:3732:A:H8	2.14	0.66
1:5:4266:G:C2	1:5:4279:A:C6	2.83	0.66
1:5:4757:C:C2	17:O:114:LYS:HA	2.29	0.66
2:7:59:G:H4'	7:D:267:ASN:HD21	1.61	0.66
3:8:42:G:C2	3:8:43:A:C8	2.84	0.66
3:8:131:G:N2	3:8:132:G:H1'	2.09	0.66
10:G:55:VAL:HB	10:G:57:TRP:NE1	2.09	0.66
1:5:28:C:C2	1:5:29:G:N7	2.63	0.66
1:5:196:C:H2'	1:5:196:C:O2	1.95	0.66
1:5:471:A:C6	1:5:472:C:C5	2.83	0.66
1:5:976:G:C5	1:5:977:C:C5	2.84	0.66
1:5:1091:C:N3	1:5:1092:G:N7	2.43	0.66
1:5:1280:C:C6	1:5:1280:C:H5"	2.31	0.66
1:5:1298:C:C2	1:5:1299:G:C8	2.83	0.66
1:5:1395:U:O2	1:5:1469:C:H4'	1.94	0.66
1:5:1840:G:C3'	1:5:1842:G:P	2.83	0.66
1:5:1999:A:H4'	1:5:2019:C:H4'	1.76	0.66
1:5:2034:G:C6	1:5:2035:C:C4	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2307:A:C8	1:5:2332:A:C2	2.84	0.66
1:5:2561:C:N3	1:5:2562:G:N7	2.43	0.66
1:5:2905:C:C2	1:5:3590:G:C2	2.84	0.66
1:5:3730:U:C4	1:5:3731:C:C5	2.83	0.66
1:5:4345:C:O2'	43:o:82:MET:HE1	1.95	0.66
1:5:4561:C:C2	1:5:4562:C:H5	2.13	0.66
1:5:4693:C:H5'	1:5:4693:C:C6	2.30	0.66
1:5:4735:G:C4	1:5:4736:C:C6	2.82	0.66
1:5:4939:C:H2'	1:5:4939:C:O2	1.94	0.66
1:5:4999:G:N1	1:5:5000:G:N7	2.44	0.66
3:8:117:C:C2	3:8:118:C:C6	2.83	0.66
8:E:157:ARG:CD	8:E:266:TYR:CD1	2.78	0.66
24:V:77:HIS:ND1	24:V:77:HIS:O	2.28	0.66
24:V:100:ASP:N	24:V:100:ASP:OD1	2.26	0.66
26:X:119:ILE:HA	26:X:144:TYR:HE2	1.60	0.66
1:5:193:G:H2'	1:5:194:C:O4'	1.95	0.66
1:5:1517:G:N2	1:5:1650:A:C6	2.64	0.66
1:5:2076:G:C5	1:5:2077:C:C6	2.83	0.66
1:5:2077:C:C4	1:5:2078:C:C5	2.83	0.66
1:5:2253:A:C8	1:5:2254:G:H1'	2.30	0.66
1:5:2279:A:N1	1:5:2280:G:C5	2.63	0.66
1:5:2293:U:C2	1:5:2294:G:N7	2.64	0.66
1:5:2368:A:C6	1:5:2788:U:C4	2.84	0.66
1:5:2739:C:H4'	44:p:52:VAL:HG21	1.77	0.66
1:5:2744:A:C2	1:5:2745:A:C5	2.83	0.66
1:5:4174:U:C2	1:5:4175:G:N7	2.62	0.66
1:5:4466:C:C2	1:5:4467:A:C8	2.82	0.66
1:5:4498:U:H3	1:5:4500:U:P	2.19	0.66
1:5:4511:A:H2'	1:5:4512:U:O4'	1.95	0.66
2:7:11:A:C8	7:D:18:VAL:HG13	2.30	0.66
3:8:134:G:C2	3:8:135:C:N1	2.64	0.66
5:B:116:ARG:HG3	5:B:177:LYS:HG3	1.78	0.66
11:H:117:PHE:C	11:H:117:PHE:CD1	2.73	0.66
31:c:31:TYR:CE2	31:c:56:ARG:NE	2.55	0.66
47:2:45:ALA:O	47:2:49:PHE:CE2	2.48	0.66
1:5:287:U:C2	1:5:288:G:N7	2.63	0.66
1:5:1214:C:N3	1:5:2116:C:N3	2.42	0.66
1:5:1321:G:N2	1:5:3876:A:C4	2.63	0.66
1:5:1672:U:C2	1:5:1673:U:H5	2.10	0.66
1:5:1827:C:C2	1:5:1828:C:C5	2.84	0.66
1:5:2106:G:O2'	1:5:2107:C:O4'	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2367:A:C5	1:5:2798:A:N3	2.63	0.66
1:5:2441:C:O2	1:5:2442:G:C8	2.48	0.66
1:5:3728:A:N7	1:5:3729:U:H1'	2.11	0.66
1:5:3740:G:N1	1:5:3741:C:C6	2.64	0.66
1:5:3802:U:H2'	1:5:3802:U:O2	1.95	0.66
1:5:3857:G:C5	1:5:3858:C:C6	2.84	0.66
1:5:4504:C:H2'	1:5:4505:C:H6	1.60	0.66
1:5:4896:G:N1	1:5:4897:G:C5	2.63	0.66
1:5:5001:U:O2'	1:5:5002:U:O5'	2.11	0.66
3:8:118:C:N3	3:8:119:C:H5	1.90	0.66
5:B:10:ARG:HD2	5:B:12:GLY:O	1.95	0.66
20:R:130:ASN:O	20:R:131:VAL:HG22	1.96	0.66
22:T:158:PHE:CZ	22:T:160:ALA:HB2	2.31	0.66
45:r:7:TRP:CZ3	45:r:11:ARG:HB3	2.30	0.66
1:5:456:C:C2	1:5:457:G:C8	2.83	0.66
1:5:656:C:C2	1:5:657:C:C5	2.84	0.66
1:5:1172:C:N3	1:5:1173:G:C8	2.64	0.66
1:5:1325:C:C4'	1:5:3901:A:N1	2.52	0.66
1:5:1479:G:C6	1:5:1487:G:C2	2.83	0.66
1:5:1672:U:H2'	1:5:1673:U:H6	1.58	0.66
1:5:1876:U:C4	1:5:1877:G:N7	2.64	0.66
1:5:1987:C:N4	1:5:1988:G:N7	2.43	0.66
1:5:2773:G:N1	1:5:2774:C:C4	2.64	0.66
1:5:3919:C:C5'	4:A:207:VAL:HG12	2.25	0.66
1:5:4199:C:O2	1:5:4199:C:C2'	2.42	0.66
1:5:4904:G:N2	1:5:4905:C:C2	2.64	0.66
1:5:4981:G:O6	1:5:4982:A:C4	2.49	0.66
1:5:4981:G:C5	1:5:4982:A:C8	2.84	0.66
2:7:94:C:C2	2:7:95:C:C6	2.83	0.66
3:8:12:G:N2	3:8:13:G:C8	2.62	0.66
9:F:73:MET:HB3	9:F:84:TYR:CE2	2.31	0.66
9:F:230:VAL:HA	21:S:39:VAL:HG12	1.77	0.66
9:F:248:ARG:HB3	9:F:248:ARG:NH1	2.11	0.66
32:d:25:TYR:HH	32:d:119:THR:HB	1.58	0.66
43:o:41:TYR:OH	43:o:45:GLN:HG2	1.96	0.66
1:5:44:A:C5	1:5:45:U:C5	2.83	0.66
1:5:280:G:C8	16:N:120:TRP:HZ3	2.13	0.66
1:5:500:G:H5"	1:5:501:C:C6	2.30	0.66
1:5:727:C:O2'	1:5:728:U:OP1	2.10	0.66
1:5:1268:G:O4'	1:5:2111:G:C8	2.49	0.66
1:5:1798:G:O4'	1:5:4215:C:C6	2.49	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1878:G:C4	1:5:1879:C:C5	2.84	0.66
1:5:1912:G:N2	1:5:1913:C:C2	2.64	0.66
1:5:2071:A:C2	1:5:2072:C:C4	2.84	0.66
1:5:2115:G:C8	1:5:2116:C:O4'	2.49	0.66
1:5:2301:G:N1	1:5:2302:C:C5	2.63	0.66
1:5:2480:G:C6	1:5:2481:G:N7	2.64	0.66
1:5:2904:U:O2	1:5:2905:C:H6	1.77	0.66
1:5:3800:A:C2	1:5:4496:A:O4'	2.48	0.66
1:5:4255:A:C6	1:5:4256:A:C2	2.83	0.66
1:5:4536:C:C2	1:5:4537:C:C6	2.84	0.66
2:7:110:G:N3	2:7:111:C:C6	2.64	0.66
20:R:120:TYR:CD1	20:R:120:TYR:C	2.74	0.66
1:5:66:A:N3	1:5:312:G:H1'	2.11	0.66
1:5:120:A:C1'	1:5:121:A:C2	2.77	0.66
1:5:197:A:H2'	1:5:198:A:C8	2.30	0.66
1:5:288:G:N2	1:5:289:C:C2	2.64	0.66
1:5:422:C:C2	1:5:423:G:H8	2.12	0.66
1:5:2410:C:C2	1:5:2411:C:C5	2.84	0.66
1:5:2673:G:C4'	1:5:2675:G:H1'	2.25	0.66
1:5:3845:A:C6	1:5:3846:C:C5	2.83	0.66
1:5:3890:A:N7	1:5:4571:A:H1'	2.10	0.66
1:5:3907:G:H1'	1:5:4449:A:N9	2.10	0.66
1:5:4285:U:C2	1:5:4286:C:C6	2.83	0.66
1:5:4633:G:O2'	1:5:4635:A:OP2	2.11	0.66
1:5:4754:G:N2	1:5:4880:C:C2	2.64	0.66
9:F:148:ASN:HB3	9:F:243:ASN:ND2	2.10	0.66
14:L:39:ARG:HB2	14:L:39:ARG:NH1	2.10	0.66
21:S:9:GLU:OE1	21:S:33:PHE:CD1	2.49	0.66
46:1:271:ARG:HH12	46:1:398:GLN:CD	2.03	0.66
1:5:101:A:C6	1:5:102:G:N7	2.63	0.66
1:5:288:G:C4	1:5:289:C:C5	2.84	0.66
1:5:484:U:C4	1:5:486:C:C4	2.83	0.66
1:5:499:G:C2	1:5:656:C:C2	2.84	0.66
1:5:956:A:H3'	1:5:957:G:C5	2.31	0.66
1:5:1245:C:O2	1:5:1246:G:H8	1.73	0.66
1:5:1583:A:C5	1:5:1584:G:C8	2.84	0.66
1:5:1692:C:O2	1:5:1692:C:H2'	1.95	0.66
1:5:1868:A:C8	1:5:1870:C:C6	2.83	0.66
1:5:1936:C:C4	2:7:84:U:C5	2.81	0.66
1:5:2327:G:N2	1:5:2328:G:C4	2.64	0.66
1:5:2428:A:N7	1:5:2789:A:C2	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2634:C:C2	1:5:2635:U:C5	2.84	0.66
1:5:3743:G:C2'	1:5:3744:G:H5'	2.25	0.66
1:5:4280:A:C2	7:D:23:ARG:NE	2.64	0.66
1:5:4934:A:N1	1:5:4935:C:C6	2.64	0.66
1:5:4998:G:N1	1:5:4999:G:N7	2.44	0.66
2:7:30:C:N3	2:7:48:G:C2	2.64	0.66
3:8:127:U:C2'	3:8:128:C:O4'	2.44	0.66
32:d:22:THR:HG22	32:d:89:SER:HB2	1.76	0.66
1:5:98:A:H1'	1:5:292:G:N7	2.11	0.66
1:5:165:A:H3'	1:5:166:C:H6	1.61	0.66
1:5:294:G:O6	29:a:61:TYR:HB2	1.96	0.66
1:5:315:G:C6	29:a:62:HIS:HB2	2.31	0.66
1:5:348:G:N3	1:5:350:C:C5	2.64	0.66
1:5:671:G:N2	1:5:672:C:C2	2.64	0.66
1:5:711:A:C2	1:5:712:C:C6	2.84	0.66
1:5:1260:G:C2	1:5:1261:G:C8	2.84	0.66
1:5:1787:A:O2'	1:5:1788:A:C8	2.49	0.66
1:5:1998:A:O2'	1:5:1999:A:O4'	2.14	0.66
1:5:2253:A:H2	1:5:2260:C:H42	1.43	0.66
1:5:3611:A:N3	1:5:5016:A:H8	1.94	0.66
1:5:3727:A:O2'	1:5:3728:A:C5'	2.44	0.66
1:5:4081:G:C2	1:5:4082:G:N7	2.64	0.66
1:5:4217:G:O2'	1:5:4218:U:O5'	2.14	0.66
1:5:5003:U:C2'	1:5:5004:C:O4'	2.44	0.66
3:8:10:G:C2	3:8:11:C:C1'	2.79	0.66
19:Q:181:ARG:NH2	19:Q:181:ARG:HB3	2.11	0.66
1:5:31:U:H2'	1:5:32:G:C8	2.31	0.65
1:5:42:A:N7	1:5:4379:A:C6	2.64	0.65
1:5:908:G:C6	1:5:909:A:N7	2.64	0.65
1:5:1272:C:O2'	1:5:1273:G:N9	2.30	0.65
1:5:1478:C:H2'	1:5:1479:G:C8	2.31	0.65
1:5:2034:G:C5	1:5:2035:C:C6	2.83	0.65
1:5:2299:G:N7	6:C:204:ARG:NH1	2.44	0.65
1:5:2650:G:H2'	1:5:2651:C:O4'	1.96	0.65
1:5:4079:C:O2	1:5:4079:C:H2'	1.96	0.65
1:5:4208:U:O2'	1:5:4275:G:H1'	1.95	0.65
1:5:4269:G:C6	1:5:4270:C:C6	2.83	0.65
1:5:4355:G:N2	1:5:4356:G:C4	2.64	0.65
1:5:4982:A:C5	1:5:4983:C:C5	2.83	0.65
1:5:5051:C:O2	1:5:5051:C:H2'	1.96	0.65
3:8:95:A:C6	3:8:96:C:C4	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:88:PHE:CE2	11:H:151:ILE:HB	2.31	0.65
21:S:94:TYR:OH	21:S:96:GLU:CG	2.44	0.65
1:5:168:C:C2	1:5:268:G:N2	2.65	0.65
1:5:510:U:O4'	29:a:85:GLN:NE2	2.24	0.65
1:5:1309:C:N3	1:5:1310:C:C5	2.64	0.65
1:5:1439:C:C5'	9:F:36:ARG:NH1	2.58	0.65
1:5:1513:U:H2'	1:5:1514:U:O4'	1.96	0.65
1:5:1750:G:N1	1:5:1751:A:N7	2.44	0.65
1:5:1778:C:C2	1:5:1779:U:C5	2.85	0.65
1:5:1973:G:C6	1:5:2002:A:N7	2.64	0.65
1:5:2108:G:N1	1:5:2125:C:C4	2.65	0.65
1:5:2325:C:C2	1:5:2326:G:C8	2.83	0.65
1:5:2712:G:C2	1:5:2713:C:C6	2.84	0.65
1:5:2736:G:H2'	1:5:2737:C:H5'	1.78	0.65
1:5:2851:G:N7	1:5:2852:U:C6	2.64	0.65
1:5:4091:G:C5	1:5:4092:G:C8	2.85	0.65
1:5:4361:U:C2	1:5:4362:A:C8	2.84	0.65
1:5:4884:G:N2	1:5:4885:U:C6	2.64	0.65
1:5:5012:G:C2	1:5:5014:A:C8	2.85	0.65
3:8:130:C:C4	3:8:131:G:N7	2.65	0.65
33:e:126:ASN:C	33:e:126:ASN:HD22	2.04	0.65
46:1:270:ALA:CB	46:1:271:ARG:HD3	2.25	0.65
1:5:145:G:N1	1:5:146:G:C5	2.64	0.65
1:5:1336:G:H2'	1:5:1337:A:N7	2.11	0.65
1:5:1845:U:O2	1:5:1846:G:C8	2.49	0.65
1:5:2463:G:C4	1:5:2464:C:C5	2.83	0.65
1:5:2746:A:H2'	1:5:2747:U:O4'	1.97	0.65
1:5:2826:U:O2	1:5:2826:U:C2'	2.43	0.65
1:5:4081:G:C2	1:5:4082:G:C8	2.84	0.65
1:5:4998:G:N1	1:5:4999:G:C5	2.64	0.65
3:8:55:U:O4	3:8:62:A:N1	2.29	0.65
7:D:249:GLU:C	7:D:249:GLU:OE1	2.39	0.65
28:Z:15:ALA:HB3	28:Z:79:HIS:HB3	1.78	0.65
43:o:45:GLN:NE2	43:o:45:GLN:HA	2.11	0.65
1:5:445:U:O4'	1:5:2313:A:N1	2.30	0.65
1:5:1666:C:O2'	1:5:1688:G:OP1	2.14	0.65
1:5:1684:A:C6	1:5:1685:G:N7	2.64	0.65
1:5:1964:A:C2	1:5:4694:G:C5	2.84	0.65
1:5:2041:A:N3	1:5:4464:A:C6	2.65	0.65
1:5:2431:A:O2'	46:1:271:ARG:HA	1.95	0.65
1:5:2455:G:H2'	1:5:2456:G:O5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3621:A:C4	1:5:3622:C:C6	2.84	0.65
1:5:3821:A:C6	1:5:3822:U:C5	2.85	0.65
1:5:4093:G:C2'	1:5:4094:G:C5'	2.75	0.65
1:5:4628:U:H4'	25:W:17:HIS:HB3	1.77	0.65
1:5:4693:C:C6	1:5:4693:C:C5'	2.79	0.65
1:5:4698:C:C2	41:m:111:ARG:NH2	2.65	0.65
1:5:4698:C:N3	41:m:111:ARG:NH2	2.45	0.65
1:5:4881:U:O2'	1:5:4882:U:C6	2.49	0.65
1:5:4937:C:H5'	8:E:179:ARG:HD2	1.79	0.65
3:8:13:G:C5	3:8:14:U:C4	2.84	0.65
3:8:132:G:N1	3:8:133:G:N7	2.42	0.65
6:C:318:PRO:O	6:C:320:LYS:N	2.29	0.65
46:1:405:ARG:HD2	46:1:407:THR:HG22	1.78	0.65
1:5:86:U:O2	1:5:87:A:H8	1.76	0.65
1:5:101:A:C6	1:5:102:G:C5	2.85	0.65
1:5:134:G:H5'	1:5:134:G:C8	2.32	0.65
1:5:294:G:H5"	43:o:43:ARG:HH22	1.59	0.65
1:5:307:A:H3'	1:5:308:G:N2	2.11	0.65
1:5:980:U:H2'	1:5:981:C:C6	2.31	0.65
1:5:1264:C:C2'	1:5:1265:G:H5'	2.27	0.65
1:5:1542:U:O2	1:5:1543:G:C8	2.49	0.65
1:5:1602:U:H2'	1:5:1602:U:O2	1.96	0.65
1:5:1635:C:N3	1:5:1636:U:C5	2.64	0.65
1:5:1848:C:H5'	1:5:1849:U:OP2	1.97	0.65
1:5:2106:G:C2	1:5:2107:C:C5	2.84	0.65
1:5:2243:C:C2	1:5:2244:C:C5	2.85	0.65
1:5:2307:A:H2'	1:5:2308:A:O5'	1.96	0.65
1:5:3847:C:C2	1:5:3848:U:C6	2.84	0.65
1:5:3888:G:O2'	1:5:3889:G:OP1	2.11	0.65
1:5:4480:A:C6	1:5:4481:U:C6	2.85	0.65
1:5:4628:U:C2	1:5:4629:U:C5	2.85	0.65
1:5:4896:G:N2	1:5:4897:G:C4	2.65	0.65
16:N:120:TRP:CD1	16:N:121:VAL:N	2.64	0.65
16:N:196:ASN:N	16:N:196:ASN:HD22	1.95	0.65
21:S:27:LEU:C	21:S:28:TYR:HD1	2.04	0.65
21:S:83:ARG:HH22	22:T:156:TYR:HB2	1.58	0.65
1:5:182:G:N2	1:5:254:G:H22	1.94	0.65
1:5:662:C:O2	1:5:663:G:N7	2.28	0.65
1:5:755:C:N3	1:5:756:G:N7	2.44	0.65
1:5:913:U:C2	1:5:914:U:C5	2.85	0.65
1:5:1865:G:H22	1:5:1867:A:H3'	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2390:G:N2	1:5:2391:G:H1'	2.10	0.65
1:5:2478:C:C2	1:5:2479:G:C8	2.84	0.65
1:5:2567:G:C6	1:5:2568:C:C5	2.84	0.65
1:5:2724:G:N3	1:5:2726:G:N7	2.44	0.65
1:5:3636:C:O2	1:5:3636:C:H2'	1.96	0.65
1:5:4215:C:O2	1:5:4216:G:C8	2.49	0.65
1:5:4373:G:OP2	1:5:4374:U:O2'	2.13	0.65
3:8:118:C:C2	3:8:119:C:C6	2.85	0.65
8:E:236:TYR:HE2	8:E:238:ILE:HA	1.62	0.65
16:N:158:HIS:HB3	16:N:161:MET:HG2	1.78	0.65
34:f:22:ARG:HG3	34:f:22:ARG:HH11	1.61	0.65
1:5:91:G:C8	1:5:93:G:C5	2.85	0.65
1:5:246:G:N2	1:5:247:G:C4	2.65	0.65
1:5:320:C:H2'	1:5:321:U:O4'	1.97	0.65
1:5:466:A:N1	1:5:467:U:C4	2.65	0.65
1:5:470:A:C6	1:5:471:A:N9	2.65	0.65
1:5:515:C:C2	1:5:647:G:C2	2.85	0.65
1:5:938:C:H5	15:M:46:ARG:HE	1.45	0.65
1:5:954:C:H2'	1:5:955:G:O4'	1.96	0.65
1:5:1290:G:N2	1:5:1291:G:C5	2.65	0.65
1:5:1885:G:C4	1:5:1895:G:N2	2.64	0.65
1:5:1949:U:C2	1:5:1950:U:C5	2.85	0.65
1:5:2384:U:C2	1:5:2385:U:C5	2.83	0.65
1:5:2562:G:H22	1:5:2564:G:H3'	1.62	0.65
1:5:2856:C:H42	1:5:2857:A:N6	1.92	0.65
1:5:3606:U:O2	1:5:3607:U:C6	2.50	0.65
1:5:4518:A:O2'	5:B:257:TRP:HZ3	1.73	0.65
1:5:4896:G:C2	1:5:4897:G:C4	2.84	0.65
1:5:4901:G:N2	1:5:4921:C:C2	2.65	0.65
1:5:4920:C:C2	1:5:4921:C:C5	2.85	0.65
1:5:4945:G:N3	34:f:69:VAL:HG13	2.12	0.65
3:8:133:G:N3	3:8:134:G:C8	2.65	0.65
19:Q:17:GLU:HA	19:Q:52:PHE:CE1	2.31	0.65
1:5:471:A:C2	1:5:472:C:C1'	2.80	0.65
1:5:494:U:C2	1:5:495:C:C6	2.85	0.65
1:5:911:U:C2	1:5:912:G:C8	2.85	0.65
1:5:1211:G:C2	1:5:1212:G:C5	2.85	0.65
1:5:1216:C:N3	1:5:1217:G:C8	2.64	0.65
1:5:1298:C:N3	1:5:1299:G:N7	2.45	0.65
1:5:1404:G:N2	1:5:1414:C:C2	2.65	0.65
1:5:1445:U:C2	1:5:1446:C:C6	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1608:G:O4'	1:5:3828:A:C2	2.50	0.65
1:5:1760:G:C2	1:5:1761:G:H1'	2.31	0.65
1:5:1767:A:C2	1:5:1769:G:H1'	2.32	0.65
1:5:1840:G:H2'	1:5:1842:G:O5'	1.96	0.65
1:5:1899:G:N1	1:5:1900:C:N4	2.45	0.65
1:5:1920:C:H4'	1:5:1921:C:OP2	1.97	0.65
1:5:2037:C:H2'	1:5:2037:C:O2	1.96	0.65
1:5:2050:G:H2'	1:5:2051:C:O4'	1.97	0.65
1:5:2058:G:N3	1:5:2059:C:C6	2.64	0.65
1:5:2445:C:N3	1:5:2446:C:C5	2.64	0.65
1:5:2606:G:N3	1:5:2607:C:C6	2.65	0.65
1:5:2658:G:C2	1:5:2675:G:N2	2.65	0.65
1:5:3805:U:C2	1:5:3806:G:C8	2.85	0.65
1:5:3873:G:N2	1:5:3883:U:N3	2.45	0.65
1:5:4396:A:C2	1:5:4397:A:C8	2.84	0.65
1:5:4548:A:C8	1:5:4548:A:P	2.89	0.65
1:5:5029:C:C4	1:5:5030:U:C5	2.85	0.65
3:8:122:G:H2'	3:8:123:U:O4'	1.96	0.65
3:8:131:G:N1	3:8:132:G:C8	2.64	0.65
6:C:48:ASN:O	6:C:48:ASN:CG	2.39	0.65
14:L:28:GLN:HG2	16:N:202:ARG:HH11	1.61	0.65
20:R:7:GLN:N	20:R:7:GLN:OE1	2.30	0.65
29:a:63:LEU:C	29:a:63:LEU:HD23	2.22	0.65
43:o:21:HIS:HD2	43:o:72:CYS:HA	1.61	0.65
1:5:271:C:N3	1:5:272:U:C6	2.60	0.65
1:5:489:C:N3	1:5:490:C:C6	2.65	0.65
1:5:691:C:C2	1:5:692:A:C8	2.84	0.65
1:5:951:G:H2'	1:5:952:G:H5"	1.79	0.65
1:5:1175:A:N1	1:5:1176:C:C5	2.65	0.65
1:5:1177:U:H2'	1:5:1178:G:H8	1.62	0.65
1:5:1268:G:N1	1:5:1270:A:C5	2.65	0.65
1:5:1366:G:C8	1:5:1367:C:O3'	2.50	0.65
1:5:1683:U:O2	1:5:1683:U:H2'	1.96	0.65
1:5:2281:U:H4'	33:e:46:ARG:NH2	2.12	0.65
1:5:2509:C:C2'	1:5:2510:G:O5'	2.44	0.65
1:5:2603:C:N3	1:5:2604:C:C5	2.65	0.65
1:5:2768:C:O4'	1:5:2768:C:O2	2.14	0.65
1:5:3642:A:HO2'	38:j:2:THR:N	1.95	0.65
1:5:3846:C:O2	1:5:3846:C:H2'	1.97	0.65
1:5:3857:G:C5	1:5:3858:C:C5	2.85	0.65
1:5:3938:G:C6	1:5:4077:A:H2	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4482:U:O2	1:5:4483:C:C6	2.49	0.65
1:5:4547:C:O3'	1:5:4548:A:C8	2.50	0.65
1:5:4879:C:N3	1:5:4880:C:C5	2.65	0.65
1:5:4885:U:C2	1:5:4886:C:C5	2.85	0.65
3:8:121:G:H2'	3:8:122:G:O5'	1.96	0.65
31:c:31:TYR:CD1	31:c:32:LYS:N	2.64	0.65
1:5:288:G:H2'	1:5:289:C:C6	2.32	0.65
1:5:1246:G:C6	1:5:1247:U:C4	2.86	0.65
1:5:1323:A:C2	1:5:1324:A:C4	2.84	0.65
1:5:1380:G:C2	1:5:1382:G:C2	2.84	0.65
1:5:1617:G:C6	1:5:1618:G:C5	2.84	0.65
1:5:1618:G:C6	1:5:1619:G:N7	2.65	0.65
1:5:1686:C:H2'	1:5:1687:U:H5'	1.78	0.65
1:5:1697:G:O2'	9:F:165:ASN:ND2	2.28	0.65
1:5:2562:G:N2	1:5:2564:G:C8	2.65	0.65
1:5:2567:G:N1	1:5:2568:C:C4	2.65	0.65
1:5:2736:G:N2	1:5:2737:C:N1	2.45	0.65
1:5:2859:G:O2'	1:5:2860:C:O5'	2.15	0.65
1:5:3717:A:N6	1:5:3736:A:C5	2.65	0.65
1:5:4482:U:N3	1:5:4483:C:C5	2.64	0.65
1:5:4772:C:C2	1:5:4773:C:C5	2.85	0.65
3:8:103:A:N7	3:8:104:A:N7	2.45	0.65
12:I:47:PRO:CB	12:I:171:TRP:HE1	2.10	0.65
1:5:259:C:H2'	1:5:260:C:O4'	1.97	0.64
1:5:275:C:O2'	1:5:276:C:O4'	2.11	0.64
1:5:457:G:N1	1:5:458:C:C5	2.64	0.64
1:5:492:U:C2	1:5:493:G:C8	2.85	0.64
1:5:695:G:H3'	1:5:696:C:H5'	1.77	0.64
1:5:704:C:C6	1:5:704:C:H5"	2.31	0.64
1:5:1261:G:N1	1:5:1262:G:C5	2.65	0.64
1:5:1357:C:O2'	1:5:1358:G:H5'	1.96	0.64
1:5:1609:U:C4	1:5:1610:C:C5	2.84	0.64
1:5:1684:A:C2	1:5:1685:G:H1'	2.32	0.64
1:5:1934:A:C6	1:5:2048:U:C2	2.85	0.64
1:5:1987:C:C4	1:5:1988:G:N7	2.65	0.64
1:5:2367:A:O2'	1:5:2368:A:O5'	2.14	0.64
1:5:2392:C:N3	1:5:2393:C:C5	2.65	0.64
1:5:2394:G:O6	1:5:2819:U:P	2.55	0.64
1:5:2463:G:H2'	1:5:2464:C:C6	2.32	0.64
1:5:4099:G:C5	1:5:4100:C:C5	2.85	0.64
1:5:4510:A:O2'	1:5:4511:A:C8	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:112:HIS:CE1	16:N:202:ARG:HE	2.14	0.64
20:R:131:VAL:HB	20:R:132:PHE:CE1	2.31	0.64
1:5:88:A:C2	1:5:89:C:C4	2.85	0.64
1:5:422:C:N3	1:5:423:G:C8	2.66	0.64
1:5:1261:G:C6	1:5:1262:G:N7	2.65	0.64
1:5:1388:A:C6	1:5:1396:G:C2	2.81	0.64
1:5:1900:C:C2	1:5:1901:C:C6	2.85	0.64
1:5:2279:A:N1	1:5:2280:G:C6	2.65	0.64
1:5:2367:A:N6	1:5:2788:U:N3	2.27	0.64
1:5:2468:U:N3	1:5:2473:A:C6	2.64	0.64
1:5:2645:G:C6	1:5:2646:C:C5	2.86	0.64
1:5:2665:U:C4	20:R:124:TYR:CZ	2.85	0.64
1:5:2858:A:O2’	1:5:2859:G:C5’	2.44	0.64
1:5:3723:A:C2	1:5:3724:A:C8	2.85	0.64
1:5:4404:U:C5	1:5:4436:U:O4	2.50	0.64
1:5:4532:U:OP2	1:5:4554:G:N2	2.30	0.64
1:5:5029:C:N3	1:5:5030:U:C5	2.66	0.64
1:5:247:G:N1	1:5:248:C:C4	2.65	0.64
1:5:459:C:N3	1:5:460:C:C5	2.65	0.64
1:5:661:C:N3	1:5:662:C:C5	2.66	0.64
1:5:1177:U:N3	1:5:1178:G:N7	2.46	0.64
1:5:1325:C:H4’	1:5:3901:A:C2	2.32	0.64
1:5:1646:A:H1’	38:j:49:TRP:CH2	2.32	0.64
1:5:1984:A:N6	1:5:2011:C:HO2’	1.95	0.64
1:5:2272:C:O2’	1:5:2273:G:C5’	2.45	0.64
1:5:2292:C:C2	1:5:2293:U:C6	2.85	0.64
1:5:2305:U:C6	1:5:2305:U:C5’	2.80	0.64
1:5:2644:G:C6	1:5:2645:G:C5	2.85	0.64
1:5:3652:A:C8	1:5:3691:G:N2	2.65	0.64
1:5:4096:C:N4	1:5:4097:G:C4	2.64	0.64
3:8:21:C:OP1	6:C:195:LYS:NZ	2.31	0.64
4:A:34:PHE:O	4:A:35:ALA:C	2.41	0.64
10:G:169:PHE:CE2	16:N:6:TYR:HB2	2.31	0.64
24:V:48:ARG:HH21	24:V:48:ARG:HG3	1.61	0.64
46:1:270:ALA:C	46:1:271:ARG:HD3	2.21	0.64
1:5:1085:C:N3	1:5:1086:C:C6	2.65	0.64
1:5:1204:C:N3	1:5:1205:G:N7	2.46	0.64
1:5:1554:A:C5	1:5:1555:G:C8	2.86	0.64
1:5:2371:U:O4	1:5:2825:A:H2	1.79	0.64
1:5:2546:G:O2’	1:5:2547:G:H5”	1.97	0.64
1:5:2570:U:N3	1:5:2571:C:C5	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2703:G:C6	1:5:2704:C:C5	2.86	0.64
1:5:3694:U:C4	1:5:3695:U:C5	2.85	0.64
1:5:4275:G:C6	1:5:4276:G:N7	2.65	0.64
1:5:4463:U:C5	1:5:4488:A:N7	2.66	0.64
3:8:70:G:C2	3:8:87:G:C2	2.86	0.64
6:C:200:ARG:NH2	27:Y:11:ARG:HD2	2.11	0.64
1:5:76:A:C8	14:L:74:ARG:NH2	2.66	0.64
1:5:235:A:C5	1:5:238:C:N4	2.66	0.64
1:5:276:C:OP2	37:i:36:HIS:ND1	2.30	0.64
1:5:453:G:H22	1:5:1294:A:H62	1.46	0.64
1:5:484:U:O4	1:5:486:C:C4	2.51	0.64
1:5:984:C:C2	1:5:1070:G:C2	2.86	0.64
1:5:1198:G:H2'	1:5:1199:G:H8	1.60	0.64
1:5:1412:G:N1	1:5:1413:C:C4	2.65	0.64
1:5:1507:C:C2	1:5:1508:A:C8	2.86	0.64
1:5:1673:U:N3	1:5:1674:C:C4	2.66	0.64
1:5:1878:G:C2	1:5:1879:C:C5	2.86	0.64
1:5:1928:C:H1'	1:5:1929:A:C6	2.33	0.64
1:5:1936:C:O2	1:5:1936:C:C2'	2.46	0.64
1:5:2079:G:N2	1:5:2080:U:C2	2.65	0.64
1:5:3717:A:N6	1:5:3736:A:C6	2.64	0.64
1:5:4241:C:O2	1:5:4241:C:C2'	2.40	0.64
2:7:93:G:C2	2:7:94:C:C6	2.85	0.64
3:8:94:G:C5	38:j:79:ARG:HD2	2.33	0.64
1:5:206:U:O2	1:5:208:A:C8	2.51	0.64
1:5:364:G:O6	38:j:52:LYS:HE3	1.97	0.64
1:5:1632:A:O2'	1:5:3641:U:O2	2.14	0.64
1:5:2325:C:O2	1:5:2325:C:C2'	2.45	0.64
1:5:3629:A:C6	1:5:3630:A:C8	2.85	0.64
1:5:3742:G:C2	1:5:3743:G:C8	2.85	0.64
1:5:3779:A:H2'	1:5:3780:G:O4'	1.98	0.64
1:5:3938:G:H4'	1:5:3939:G:O5'	1.97	0.64
1:5:4343:U:C2	1:5:4344:U:C5	2.86	0.64
1:5:4490:C:C2	1:5:4491:G:C8	2.86	0.64
1:5:4510:A:H62	1:5:4592:C:C2'	2.11	0.64
1:5:4547:C:O2	1:5:4549:G:C8	2.51	0.64
1:5:4723:A:N3	1:5:4724:A:C8	2.65	0.64
1:5:5031:G:N1	1:5:5032:C:C4	2.65	0.64
2:7:17:C:H2'	2:7:17:C:O2	1.97	0.64
8:E:43:ASN:HB3	8:E:58:MET:HE1	1.80	0.64
12:I:9:TYR:HD2	12:I:97:ILE:CG1	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:181:HIS:C	16:N:182:HIS:O	2.38	0.64
1:5:75:G:O6	14:L:103:ARG:NH1	2.30	0.64
1:5:98:A:C1'	1:5:292:G:O6	2.45	0.64
1:5:211:G:N3	1:5:212:A:C8	2.66	0.64
1:5:238:C:C2	1:5:239:C:C5	2.86	0.64
1:5:1079:C:N3	1:5:1080:C:C6	2.66	0.64
1:5:1167:C:H1'	1:5:1195:G:N2	2.13	0.64
1:5:1245:C:C6	1:5:1269:G:O6	2.49	0.64
1:5:1391:A:C5	1:5:1392:A:N7	2.66	0.64
1:5:1516:G:C5	1:5:1518:A:N7	2.66	0.64
1:5:1517:G:C2	1:5:1650:A:C6	2.86	0.64
1:5:1867:A:N3	1:5:4403:U:O2'	2.27	0.64
1:5:1921:C:C6	21:S:161:ARG:HG2	2.33	0.64
1:5:1926:C:C2	1:5:1927:U:C6	2.85	0.64
1:5:1966:C:O2	1:5:1966:C:H2'	1.98	0.64
1:5:1997:U:H2'	1:5:1998:A:H3'	1.80	0.64
1:5:2399:G:C2	1:5:2400:G:C8	2.85	0.64
1:5:2407:G:O2'	1:5:2409:U:N3	2.30	0.64
1:5:3621:A:C2	1:5:3622:C:C6	2.86	0.64
1:5:3622:C:N3	1:5:3623:C:N3	2.45	0.64
1:5:4275:G:C6	1:5:4276:G:C8	2.85	0.64
1:5:4482:U:N3	1:5:4483:C:H5	1.94	0.64
1:5:4652:G:C4	1:5:4653:C:C5	2.86	0.64
1:5:4766:C:H2'	1:5:4767:C:O4'	1.98	0.64
1:5:4935:C:H3'	8:E:179:ARG:NH2	2.13	0.64
3:8:63:U:C2'	3:8:63:U:O2	2.45	0.64
3:8:118:C:O2	3:8:119:C:C6	2.51	0.64
3:8:134:G:H21	3:8:135:C:H1'	1.62	0.64
6:C:54:VAL:HG21	6:C:101:MET:HE3	1.80	0.64
21:S:15:ARG:HH21	22:T:141:VAL:HG22	1.61	0.64
1:5:106:A:H2'	1:5:107:G:O4'	1.98	0.64
1:5:144:G:N3	1:5:145:G:C8	2.65	0.64
1:5:246:G:N1	1:5:247:G:N7	2.45	0.64
1:5:246:G:N3	1:5:247:G:C8	2.66	0.64
1:5:690:C:N3	1:5:691:C:C6	2.66	0.64
1:5:911:U:N3	1:5:912:G:N7	2.46	0.64
1:5:1542:U:N3	1:5:1543:G:N7	2.46	0.64
1:5:1673:U:O4	1:5:1682:A:N1	2.30	0.64
1:5:1878:G:N1	1:5:1879:C:C4	2.66	0.64
1:5:1891:A:H2'	1:5:1892:A:C8	2.33	0.64
1:5:2326:G:C2	1:5:2327:G:N9	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2409:U:O4	1:5:2783:A:C6	2.51	0.64
1:5:2612:G:C6	1:5:2613:C:C4	2.86	0.64
1:5:2861:C:O2	1:5:3626:G:H4'	1.98	0.64
1:5:4097:G:C2	1:5:4098:A:N7	2.65	0.64
1:5:4145:C:N3	1:5:4146:G:N7	2.46	0.64
1:5:4255:A:C2	1:5:4256:A:N3	2.66	0.64
1:5:4528:G:C2	1:5:4529:G:C8	2.85	0.64
8:E:280:HIS:CD2	34:f:38:GLU:HG3	2.32	0.64
40:l:21:ARG:NH2	40:l:24:PRO:N	2.46	0.64
1:5:42:A:N6	1:5:4379:A:N3	2.46	0.64
1:5:50:C:C2'	1:5:51:A:O5'	2.46	0.64
1:5:289:C:C4	1:5:290:U:C5	2.86	0.64
1:5:347:A:C2	1:5:348:G:C5	2.86	0.64
1:5:964:A:H8	1:5:964:A:O5'	1.80	0.64
1:5:966:A:N6	1:5:2252:G:C8	2.56	0.64
1:5:1314:C:C2	1:5:1315:C:C5	2.85	0.64
1:5:1447:C:C1'	1:5:2098:G:N2	2.61	0.64
1:5:1475:G:N3	1:5:1476:C:C5	2.64	0.64
1:5:1807:C:C4	1:5:1808:C:C5	2.85	0.64
1:5:1933:G:H2'	1:5:1934:A:O4'	1.98	0.64
1:5:1936:C:C6	2:7:84:U:H6	2.13	0.64
1:5:1963:C:O2'	1:5:2027:U:O2'	2.16	0.64
1:5:2089:G:C5	1:5:2262:G:C2'	2.79	0.64
1:5:2451:A:C5	1:5:2452:G:N7	2.66	0.64
1:5:2496:G:C6	1:5:2497:C:C4	2.86	0.64
1:5:3722:G:N1	1:5:3723:A:C5	2.65	0.64
1:5:4139:G:C6	1:5:4140:C:C5	2.85	0.64
1:5:4342:C:N3	1:5:4343:U:C6	2.66	0.64
1:5:4369:A:C2	1:5:4370:G:N7	2.65	0.64
1:5:4480:A:C2	1:5:4481:U:C1'	2.81	0.64
1:5:4966:A:H2'	1:5:4967:A:C1'	2.27	0.64
4:A:211:PHE:CD1	4:A:219:ILE:HG23	2.33	0.64
20:R:95:TRP:HZ3	20:R:98:ARG:HH21	1.44	0.64
29:a:104:VAL:HG13	29:a:109:TYR:OH	1.98	0.64
46:1:271:ARG:O	46:1:272:TYR:CD2	2.51	0.64
1:5:83:C:P	1:5:84:A:O2'	2.55	0.64
1:5:107:G:C6	14:L:56:ARG:NH1	2.66	0.64
1:5:176:G:H5"	36:h:98:HIS:CE1	2.32	0.64
1:5:293:G:H4'	1:5:294:G:C8	2.33	0.64
1:5:298:G:C6	1:5:299:C:C5	2.85	0.64
1:5:471:A:C5	1:5:472:C:C5	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:491:G:N2	1:5:492:U:C5	2.66	0.64
1:5:1267:C:H2'	1:5:2121:C:H41	1.62	0.64
1:5:1292:C:H3'	1:5:1293:G:H5"	1.80	0.64
1:5:1476:C:O2	1:5:1477:C:C6	2.51	0.64
1:5:1696:C:O2	1:5:1697:G:H5'	1.97	0.64
1:5:2326:G:N2	1:5:2327:G:N9	2.46	0.64
1:5:3689:G:C6	1:5:3690:U:C4	2.86	0.64
1:5:3741:C:O2	1:5:3742:G:C8	2.49	0.64
1:5:4251:A:H2'	1:5:4252:C:C6	2.31	0.64
3:8:64:U:H2'	3:8:65:A:H8	1.59	0.64
5:B:53:MET:HE1	5:B:336:CYS:HB3	1.80	0.64
15:M:11:ARG:NH2	15:M:61:ILE:HG23	2.13	0.64
24:V:97:TYR:OH	25:W:21:TYR:CB	2.45	0.64
46:1:288:ASN:OD1	46:1:428:ILE:HG13	1.97	0.64
1:5:181:C:C2	1:5:256:G:C2	2.86	0.63
1:5:978:G:H5"	8:E:41:SER:O	1.97	0.63
1:5:1176:C:O2'	7:D:279:ARG:HG2	1.98	0.63
1:5:1258:G:C2	1:5:1259:G:C8	2.86	0.63
1:5:1877:G:N2	1:5:1878:G:H1'	2.11	0.63
1:5:2079:G:C2	1:5:2080:U:C4	2.85	0.63
1:5:2399:G:N1	1:5:2400:G:C5	2.67	0.63
1:5:2449:A:N7	1:5:2450:G:H1'	2.12	0.63
1:5:2453:A:N6	1:5:2454:U:C4	2.67	0.63
1:5:2690:C:N3	1:5:2691:U:C6	2.66	0.63
1:5:2829:U:C2	1:5:2830:G:C8	2.86	0.63
1:5:3689:G:C5	1:5:3690:U:C5	2.87	0.63
1:5:3753:G:C6	1:5:3754:G:N7	2.66	0.63
1:5:3927:U:C4	1:5:4182:G:C2	2.87	0.63
1:5:4158:C:O2	1:5:4158:C:H2'	1.96	0.63
1:5:4453:C:C2	1:5:4529:G:C2	2.86	0.63
1:5:4479:A:C2	1:5:4480:A:H1'	2.32	0.63
1:5:4746:C:C4	1:5:4747:C:C5	2.86	0.63
1:5:4886:C:O2	1:5:4887:C:H6	1.80	0.63
2:7:59:G:C5	2:7:60:G:C8	2.87	0.63
3:8:81:C:O2	3:8:81:C:C2'	2.45	0.63
1:5:189:G:C2	1:5:190:G:C8	2.85	0.63
1:5:209:U:C5	1:5:211:G:N7	2.66	0.63
1:5:293:G:H5"	1:5:294:G:H8	1.61	0.63
1:5:295:A:N7	1:5:316:U:O2'	2.29	0.63
1:5:315:G:N1	29:a:62:HIS:CG	2.66	0.63
1:5:699:C:C2	1:5:700:G:C8	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:916:C:N4	1:5:917:A:N7	2.46	0.63
1:5:1066:G:C4	1:5:1067:G:C8	2.87	0.63
1:5:1476:C:C4	1:5:1477:C:C5	2.86	0.63
1:5:1529:G:H21	38:j:49:TRP:HZ2	1.43	0.63
1:5:1661:C:O2	1:5:1662:C:C5	2.51	0.63
1:5:1990:A:H2'	1:5:1991:A:H4'	1.80	0.63
1:5:2270:G:N1	1:5:2271:C:C4	2.66	0.63
1:5:2301:G:C6	1:5:2302:C:C5	2.85	0.63
1:5:2316:G:C4	1:5:2317:C:C5	2.86	0.63
1:5:2589:C:H3'	1:5:2590:G:H8	1.63	0.63
1:5:3606:U:C2	1:5:3607:U:C5	2.85	0.63
1:5:3674:G:N1	1:5:3675:G:C5	2.67	0.63
1:5:3723:A:N3	1:5:3724:A:C8	2.66	0.63
1:5:3728:A:C8	1:5:3729:U:H1'	2.32	0.63
1:5:3763:A:H2'	1:5:3764:U:O4'	1.98	0.63
1:5:4301:U:H4'	22:T:54:HIS:HD2	1.61	0.63
1:5:4406:U:N3	1:5:4407:G:N7	2.47	0.63
1:5:4426:C:N4	1:5:4427:G:C6	2.66	0.63
2:7:42:A:C8	13:J:75:ARG:NH1	2.67	0.63
7:D:223:PHE:CB	7:D:226:TYR:HB2	2.28	0.63
19:Q:178:ARG:NH2	19:Q:186:TYR:CE1	2.66	0.63
32:d:87:ARG:CZ	32:d:109:VAL:HG22	2.28	0.63
1:5:30:C:C2'	1:5:31:U:O5'	2.47	0.63
1:5:44:A:C2	1:5:45:U:C6	2.86	0.63
1:5:65:A:H2	1:5:76:A:H4'	1.63	0.63
1:5:280:G:H8	16:N:120:TRP:CZ3	2.17	0.63
1:5:292:G:O2'	1:5:293:G:O5'	2.15	0.63
1:5:1091:C:N3	1:5:1092:G:C8	2.66	0.63
1:5:1202:C:N3	1:5:1203:G:N7	2.47	0.63
1:5:1248:C:C4	1:5:1249:C:C5	2.86	0.63
1:5:1411:C:N3	1:5:1412:G:N7	2.45	0.63
1:5:1509:C:N3	1:5:1510:G:N7	2.47	0.63
1:5:2035:C:C4	1:5:2036:C:C4	2.84	0.63
1:5:4114:C:H2'	1:5:4115:G:H1'	1.80	0.63
1:5:4472:G:C6	1:5:4473:A:C8	2.87	0.63
1:5:4478:G:O2'	1:5:4602:A:N1	2.26	0.63
1:5:4583:C:N4	1:5:4718:G:C6	2.67	0.63
1:5:4583:C:C4	1:5:4718:G:N1	2.66	0.63
2:7:42:A:N1	2:7:43:U:C5	2.66	0.63
3:8:82:A:H2'	3:8:82:A:N3	2.12	0.63
4:A:186:TYR:N	4:A:196:TRP:CZ3	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:1:252:PHE:CE2	46:1:455:TYR:HE1	2.16	0.63
1:5:27:C:C2	1:5:28:C:H6	2.16	0.63
1:5:54:G:N1	1:5:55:G:C8	2.66	0.63
1:5:312:G:H2'	1:5:313:U:O4'	1.99	0.63
1:5:1251:C:N3	1:5:1252:C:C5	2.67	0.63
1:5:1439:C:C2	9:F:36:ARG:NH1	2.67	0.63
1:5:2056:G:C6	1:5:2058:G:C5	2.86	0.63
1:5:2090:U:N3	6:C:307:LYS:HE3	2.12	0.63
1:5:3665:G:H2'	1:5:3666:C:O4'	1.98	0.63
1:5:4091:G:C4	1:5:4092:G:C8	2.86	0.63
1:5:4117:U:H2'	1:5:4117:U:O2	1.97	0.63
1:5:4286:C:C2	1:5:4287:G:N7	2.67	0.63
1:5:4368:G:N1	1:5:4369:A:C8	2.66	0.63
1:5:4730:C:H5"	1:5:4965:U:O2	1.98	0.63
1:5:4929:C:H6	1:5:4929:C:H5"	1.63	0.63
3:8:11:C:O2	3:8:11:C:C2'	2.47	0.63
5:B:106:PHE:CE2	5:B:130:PHE:CZ	2.86	0.63
5:B:337:VAL:HG21	5:B:345:LEU:HD21	1.81	0.63
46:1:117:LYS:HZ2	46:1:163:LEU:HB3	1.64	0.63
1:5:748:G:C6	1:5:918:G:H1'	2.34	0.63
1:5:1246:G:C4	1:5:1247:U:C6	2.87	0.63
1:5:1250:C:C2	1:5:1261:G:C2	2.86	0.63
1:5:1843:A:C6	1:5:1844:G:N7	2.66	0.63
1:5:1946:G:C2	1:5:2037:C:C4	2.86	0.63
1:5:1987:C:O2	1:5:1987:C:H2'	1.99	0.63
1:5:2096:G:H3'	1:5:2096:G:N3	2.13	0.63
1:5:2126:G:C1'	1:5:2127:C:C6	2.80	0.63
1:5:2327:G:C6	1:5:2328:G:N7	2.67	0.63
1:5:2441:C:H2'	1:5:2442:G:C8	2.34	0.63
1:5:2485:U:C2	1:5:2486:G:N7	2.67	0.63
1:5:2606:G:C4	1:5:2607:C:C5	2.87	0.63
1:5:2688:G:C2	1:5:2689:C:C6	2.86	0.63
1:5:4080:C:O2	1:5:4081:G:H8	1.69	0.63
1:5:4215:C:C4	1:5:4216:G:N7	2.66	0.63
1:5:4426:C:C4	1:5:4427:G:C5	2.86	0.63
2:7:8:G:C6	2:7:9:C:C4	2.87	0.63
21:S:44:PHE:C	21:S:44:PHE:CD1	2.74	0.63
28:Z:78:ASN:OD1	28:Z:78:ASN:N	2.32	0.63
1:5:31:U:O2'	1:5:32:G:H5'	1.98	0.63
1:5:730:G:H22	1:5:939:G:N2	1.94	0.63
1:5:1321:G:O4'	1:5:1891:A:N6	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1439:C:H5”	9:F:36:ARG:NH1	2.12	0.63
1:5:1671:U:O2	1:5:1671:U:C2’	2.45	0.63
1:5:2422:C:H2’	1:5:2422:C:O2	1.96	0.63
1:5:2496:G:C5	1:5:2497:C:C5	2.87	0.63
1:5:2540:C:C2	1:5:2541:G:C8	2.87	0.63
1:5:2657:G:C6	1:5:2658:G:C6	2.86	0.63
1:5:3590:G:C5	1:5:3591:C:C5	2.87	0.63
1:5:3899:G:H5”	5:B:257:TRP:HD1	1.63	0.63
1:5:4097:G:N1	1:5:4098:A:N7	2.47	0.63
1:5:4101:C:C2	1:5:4109:G:C2	2.86	0.63
1:5:4345:C:C2	1:5:4346:U:C6	2.87	0.63
1:5:4518:A:N9	5:B:257:TRP:CH2	2.65	0.63
1:5:4735:G:C4	1:5:4736:C:C5	2.87	0.63
1:5:5001:U:H2’	1:5:5002:U:O4’	1.99	0.63
27:Y:15:ARG:NH1	27:Y:19:PHE:HE2	1.89	0.63
29:a:62:HIS:C	29:a:62:HIS:CD2	2.77	0.63
32:d:71:ALA:CB	32:d:108:TYR:CE2	2.80	0.63
45:r:33:LYS:HD2	45:r:40:TYR:CE2	2.34	0.63
1:5:465:G:C6	1:5:466:A:N7	2.67	0.63
1:5:470:A:N6	8:E:101:ARG:NH2	2.46	0.63
1:5:698:G:C2	1:5:699:C:C6	2.86	0.63
1:5:1379:C:O3’	1:5:1380:G:H8	1.81	0.63
1:5:1441:C:C2	1:5:1442:C:C6	2.86	0.63
1:5:1556:C:H2’	1:5:1557:C:H6	1.64	0.63
1:5:1771:U:N3	1:5:1772:C:C5	2.66	0.63
1:5:1965:G:C2	1:5:1966:C:C4	2.87	0.63
1:5:2275:G:H5”	1:5:2275:G:H8	1.64	0.63
1:5:2577:C:H2’	1:5:2577:C:O2	1.96	0.63
1:5:3622:C:C2	1:5:3623:C:C2	2.87	0.63
1:5:3858:C:C4	1:5:3859:G:C8	2.86	0.63
1:5:3879:G:OP1	1:5:3879:G:O4’	2.16	0.63
1:5:3911:C:O2’	1:5:3912:U:O5’	2.13	0.63
1:5:4119:C:O2	1:5:4119:C:O5’	2.17	0.63
1:5:4591:U:H2’	1:5:4592:C:C6	2.34	0.63
2:7:59:G:C2	2:7:60:G:C8	2.86	0.63
3:8:12:G:C6	3:8:13:G:N7	2.67	0.63
14:L:169:ILE:HD13	29:a:142:GLY:HA2	1.79	0.63
25:W:50:ASN:HB3	25:W:55:TYR:HE2	1.60	0.63
47:2:45:ALA:O	47:2:49:PHE:CD2	2.52	0.63
1:5:52:G:H8	1:5:52:G:O5’	1.82	0.63
1:5:986:C:N3	1:5:1068:G:C2	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1093:C:N3	1:5:1094:G:C8	2.66	0.63
1:5:1213:G:N7	1:5:1215:C:C6	2.66	0.63
1:5:1264:C:O2'	1:5:2114:G:P	2.56	0.63
1:5:1334:A:C6	1:5:1335:G:N7	2.67	0.63
1:5:1634:A:C2	1:5:1635:C:N1	2.67	0.63
1:5:1661:C:C2	1:5:1662:C:C5	2.86	0.63
1:5:1896:A:N7	9:F:101:ASN:ND2	2.47	0.63
1:5:2056:G:C5	1:5:2058:G:C8	2.87	0.63
1:5:2294:G:C4	1:5:2295:C:C5	2.87	0.63
1:5:2549:G:N2	1:5:2770:C:N3	2.46	0.63
1:5:3625:G:N2	1:5:3627:G:H5'	2.13	0.63
1:5:4189:U:C1'	1:5:4380:A:C2	2.81	0.63
1:5:4194:U:O4	1:5:4197:G:H5"	1.98	0.63
1:5:4277:G:N2	1:5:4278:C:C2	2.67	0.63
1:5:4562:C:C4	1:5:4563:U:C5	2.86	0.63
1:5:4724:A:C5	1:5:4725:C:C5	2.86	0.63
1:5:4987:C:H2'	5:B:123:HIS:CD2	2.34	0.63
4:A:5:ILE:HG13	4:A:209:HIS:HD2	1.64	0.63
7:D:204:VAL:HG12	7:D:236:MET:HE1	1.81	0.63
27:Y:11:ARG:HH22	27:Y:15:ARG:HG3	1.63	0.63
45:r:7:TRP:CZ3	45:r:11:ARG:HA	2.33	0.63
1:5:1089:G:H5'	22:T:140:PHE:CE1	2.33	0.63
1:5:1382:G:O2'	1:5:1383:G:H5'	1.98	0.63
1:5:1870:C:C2	1:5:1871:A:C8	2.87	0.63
1:5:1885:G:N1	1:5:1895:G:C2	2.67	0.63
1:5:2408:U:H5'	40:l:44:TRP:HD1	1.64	0.63
1:5:2453:A:C5	1:5:2454:U:C5	2.86	0.63
1:5:2483:G:C2	1:5:2484:A:C8	2.86	0.63
1:5:2724:G:N2	1:5:2726:G:C8	2.66	0.63
1:5:2726:G:N1	1:5:2727:C:C4	2.67	0.63
1:5:3643:A:C2	38:j:3:LYS:HE3	2.34	0.63
1:5:3858:C:C4	1:5:3859:G:N7	2.67	0.63
1:5:4100:C:C4	1:5:4101:C:C5	2.87	0.63
1:5:4132:C:C4	1:5:4133:C:C5	2.87	0.63
1:5:4243:C:H2'	1:5:4243:C:O2	1.99	0.63
1:5:4874:A:H2'	1:5:4874:A:N3	2.14	0.63
2:7:60:G:C2	2:7:61:G:C8	2.86	0.63
3:8:10:G:O6	3:8:11:C:C5	2.51	0.63
3:8:34:U:C2	3:8:34:U:C5'	2.82	0.63
3:8:135:C:C2	3:8:136:U:C5	2.86	0.63
9:F:219:ARG:HH11	9:F:219:ARG:HB3	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:36:ALA:HB2	15:M:52:PHE:CZ	2.34	0.63
41:m:96:CYS:HG	50:m:201:ZN:ZN	1.09	0.63
46:1:267:ILE:HG22	46:1:399:MET:HE3	1.79	0.63
1:5:112:C:H2'	1:5:112:C:O2	1.99	0.62
1:5:199:G:C4	1:5:201:C:C5	2.87	0.62
1:5:1190:C:O2	1:5:1191:C:C6	2.52	0.62
1:5:1211:G:C2	1:5:1212:G:N7	2.66	0.62
1:5:1758:G:N3	1:5:1759:G:C8	2.67	0.62
1:5:1886:G:N2	1:5:1894:C:N3	2.47	0.62
1:5:1965:G:N2	1:5:1966:C:N1	2.47	0.62
1:5:2329:U:O2'	1:5:2330:G:O4'	2.16	0.62
1:5:2340:C:N3	1:5:2341:A:C8	2.66	0.62
1:5:2506:G:H4'	1:5:2507:A:OP1	1.97	0.62
1:5:2644:G:C6	1:5:2645:G:N7	2.67	0.62
1:5:2826:U:H1'	1:5:2827:G:H1	1.64	0.62
1:5:3689:G:C6	1:5:3690:U:C5	2.87	0.62
1:5:3937:C:O2	1:5:3937:C:H2'	1.99	0.62
1:5:4169:G:H4'	1:5:4171:C:O2	1.98	0.62
1:5:4504:C:H2'	1:5:4505:C:C6	2.34	0.62
3:8:95:A:H2'	36:h:63:GLN:HE22	1.63	0.62
3:8:132:G:N3	3:8:133:G:C8	2.66	0.62
5:B:100:ARG:HB3	5:B:100:ARG:CZ	2.29	0.62
7:D:42:ASN:CA	7:D:44:TYR:OH	2.44	0.62
9:F:171:LEU:HB3	9:F:189:MET:HE1	1.80	0.62
10:G:50:ASP:HB2	26:X:40:ILE:HB	1.81	0.62
11:H:113:GLU:HB3	11:H:115:ARG:HH22	1.63	0.62
16:N:138:PHE:N	16:N:138:PHE:HD1	1.96	0.62
24:V:26:ILE:HG22	24:V:101:ASN:HB3	1.81	0.62
25:W:55:TYR:CD1	25:W:55:TYR:C	2.76	0.62
46:1:78:GLU:OE2	46:1:154:GLN:HG2	1.98	0.62
1:5:99:A:C6	1:5:100:C:N3	2.68	0.62
1:5:294:G:N1	29:a:61:TYR:CE1	2.66	0.62
1:5:468:U:O4	1:5:687:U:O4	2.17	0.62
1:5:688:U:C4	1:5:689:U:C6	2.87	0.62
1:5:930:G:C4	1:5:931:C:C5	2.86	0.62
1:5:979:C:H2'	1:5:980:U:O4'	1.98	0.62
1:5:1070:G:C5	1:5:1071:C:C5	2.87	0.62
1:5:1243:C:H2'	1:5:1244:G:N7	2.14	0.62
1:5:1263:A:C6	1:5:1264:C:C4	2.87	0.62
1:5:1268:G:C6	1:5:1270:A:N7	2.67	0.62
1:5:1304:C:HO2'	3:8:8:U:HO2'	1.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1642:A:H2'	1:5:1642:A:N3	2.14	0.62
1:5:2000:G:H3'	1:5:2000:G:N3	2.14	0.62
1:5:2253:A:H2	1:5:2260:C:N4	1.97	0.62
1:5:2441:C:C2	1:5:2442:G:N7	2.68	0.62
1:5:2508:U:N3	1:5:2509:C:H5	1.97	0.62
1:5:2590:G:N1	1:5:2754:G:N1	2.46	0.62
1:5:3859:G:OP2	18:P:25:HIS:NE2	2.31	0.62
1:5:3901:A:O2'	1:5:4450:U:O3'	2.17	0.62
1:5:4233:A:C2	1:5:4290:U:O4	2.48	0.62
1:5:4324:A:N1	1:5:4325:A:C6	2.68	0.62
1:5:4481:U:N3	1:5:4482:U:C4	2.67	0.62
1:5:4481:U:C2'	1:5:4482:U:H6	2.11	0.62
2:7:22:A:N3	2:7:22:A:H2'	2.13	0.62
3:8:101:C:C2	3:8:102:G:C8	2.86	0.62
7:D:249:GLU:OE1	7:D:250:ASN:N	2.32	0.62
13:J:15:LEU:HB3	13:J:165:TRP:CD1	2.34	0.62
15:M:6:PHE:N	15:M:6:PHE:CD2	2.67	0.62
1:5:28:C:O2	1:5:28:C:H2'	1.97	0.62
1:5:60:G:C6	1:5:61:A:N7	2.68	0.62
1:5:149:A:H4'	1:5:151:G:C8	2.35	0.62
1:5:168:C:C2	1:5:268:G:C2	2.87	0.62
1:5:450:G:O6	1:5:1295:C:C4	2.52	0.62
1:5:962:C:OP1	1:5:2264:C:N4	2.31	0.62
1:5:1174:G:C2	1:5:1175:A:C8	2.87	0.62
1:5:1298:C:N3	1:5:1299:G:C8	2.67	0.62
1:5:1480:C:O2	1:5:1484:G:O6	2.16	0.62
1:5:1534:A:C6	38:j:14:LYS:HA	2.34	0.62
1:5:2099:G:H2'	1:5:2100:A:O4'	1.98	0.62
1:5:2321:G:OP1	33:e:35:TRP:N	2.32	0.62
1:5:2423:A:C2	1:5:2424:G:C4	2.86	0.62
1:5:2639:U:H2'	1:5:2694:G:N1	2.12	0.62
1:5:3712:A:H3'	1:5:3713:U:H5"	1.80	0.62
1:5:4091:G:C6	1:5:4092:G:C5	2.86	0.62
1:5:5047:C:C1'	1:5:5048:A:C2	2.83	0.62
5:B:264:PHE:N	17:O:64:THR:O	2.32	0.62
8:E:55:ARG:O	8:E:58:MET:O	2.17	0.62
11:H:172:ILE:HD11	41:m:102:ARG:HH22	1.64	0.62
1:5:10:A:H1'	1:5:2472:A:N1	2.14	0.62
1:5:112:C:N3	1:5:113:A:C8	2.68	0.62
1:5:172:C:C4	1:5:173:C:C4	2.87	0.62
1:5:499:G:N2	1:5:656:C:C2	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:672:C:C4	1:5:673:C:C5	2.87	0.62
1:5:973:G:N2	1:5:1282:G:O2'	2.32	0.62
1:5:1479:G:O2'	1:5:1480:C:C5'	2.47	0.62
1:5:1550:G:N2	1:5:1579:C:H1'	2.15	0.62
1:5:1672:U:C2	1:5:1673:U:C4	2.87	0.62
1:5:2368:A:N6	1:5:2827:G:H1'	2.14	0.62
1:5:2463:G:C2	1:5:2464:C:N3	2.67	0.62
1:5:2560:C:N3	1:5:2561:C:C5	2.67	0.62
1:5:2856:C:N4	1:5:2857:A:H62	1.94	0.62
1:5:2857:A:HO2'	1:5:2858:A:H8	1.39	0.62
1:5:4997:G:C6	1:5:4998:G:N7	2.66	0.62
2:7:18:C:C4	2:7:19:C:C5	2.85	0.62
3:8:134:G:N2	3:8:135:C:C2	2.68	0.62
7:D:27:LYS:HE3	13:J:147:ARG:NH2	2.14	0.62
7:D:177:THR:HB	7:D:190:PHE:CE2	2.35	0.62
17:O:116:LYS:HE3	21:S:169:THR:HG21	1.81	0.62
19:Q:32:TYR:OH	19:Q:123:PHE:HD2	1.82	0.62
24:V:97:TYR:HE2	25:W:21:TYR:CD1	2.18	0.62
24:V:98:PHE:CE1	25:W:22:ALA:HB3	2.34	0.62
46:1:432:SER:OG	46:1:449:LEU:HD21	1.98	0.62
1:5:911:U:N3	1:5:912:G:C8	2.67	0.62
1:5:1266:G:H21	1:5:2111:G:H1'	1.65	0.62
1:5:1396:G:N7	29:a:112:LEU:HD22	2.14	0.62
1:5:1599:A:H2'	1:5:1600:A:H5"	1.82	0.62
1:5:1685:G:C4	1:5:1686:C:C5	2.87	0.62
1:5:2645:G:N2	1:5:2646:C:C2	2.68	0.62
1:5:2734:U:N3	1:5:2735:G:C8	2.68	0.62
1:5:2769:U:O2'	1:5:2770:C:H6	1.82	0.62
1:5:2856:C:C4	1:5:2857:A:N6	2.67	0.62
1:5:3631:U:N3	1:5:3632:C:C5	2.68	0.62
1:5:4687:A:N7	1:5:4698:C:C6	2.67	0.62
1:5:4702:G:C6	1:5:4703:U:C5	2.87	0.62
9:F:73:MET:CB	9:F:84:TYR:HE2	2.13	0.62
10:G:57:TRP:HE3	10:G:61:ILE:HG21	1.62	0.62
27:Y:59:ARG:HG3	27:Y:103:LYS:HD2	1.80	0.62
31:c:82:GLY:HA3	31:c:89:TYR:O	1.99	0.62
32:d:118:GLN:HA	32:d:118:GLN:OE1	2.00	0.62
1:5:1266:G:H5'	1:5:1266:G:H8	1.65	0.62
1:5:1634:A:C4	1:5:1635:C:C5	2.87	0.62
1:5:1760:G:C5	1:5:1761:G:C8	2.88	0.62
1:5:2444:U:C5	1:5:2445:C:H5	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2450:G:C6	1:5:2451:A:C8	2.87	0.62
1:5:2714:G:N3	1:5:2715:G:C8	2.66	0.62
1:5:4081:G:C2	1:5:4082:G:C5	2.88	0.62
1:5:4234:A:C2	1:5:4271:A:C8	2.88	0.62
1:5:4518:A:C8	5:B:257:TRP:CZ3	2.88	0.62
1:5:4744:A:N1	1:5:4745:G:C5	2.67	0.62
1:5:5050:C:N3	1:5:5051:C:C5	2.68	0.62
2:7:9:C:C5	2:7:10:C:C5	2.87	0.62
2:7:42:A:C1'	13:J:75:ARG:HH12	2.12	0.62
2:7:42:A:N1	2:7:43:U:C6	2.67	0.62
5:B:116:ARG:HB3	5:B:177:LYS:HA	1.82	0.62
6:C:111:TRP:HB2	6:C:112:HIS:CD2	2.31	0.62
10:G:169:PHE:CD2	16:N:6:TYR:CB	2.82	0.62
20:R:36:ASN:HD21	46:1:407:THR:CB	2.12	0.62
32:d:28:ASN:OD1	32:d:28:ASN:C	2.43	0.62
33:e:44:ARG:O	33:e:47:ARG:O	2.17	0.62
39:k:37:ARG:HG3	39:k:38:CYS:N	2.12	0.62
1:5:55:G:N1	1:5:56:A:N7	2.47	0.62
1:5:166:C:N3	1:5:167:C:C5	2.64	0.62
1:5:479:G:C2	1:5:480:C:C6	2.87	0.62
1:5:1247:U:C2	1:5:1248:C:C5	2.87	0.62
1:5:1267:C:H5"	1:5:2110:C:O2'	2.00	0.62
1:5:1676:C:C2'	1:5:3914:U:O4	2.48	0.62
1:5:1752:G:C4	1:5:1753:G:C8	2.87	0.62
1:5:1867:A:O2'	1:5:1868:A:O4'	2.15	0.62
1:5:1894:C:H2'	1:5:1895:G:O5'	1.99	0.62
1:5:2292:C:N3	1:5:2293:U:C5	2.68	0.62
1:5:2451:A:C6	1:5:2452:G:C4	2.87	0.62
1:5:2452:G:N1	1:5:2467:U:C5	2.67	0.62
1:5:2506:G:H2'	1:5:2506:G:N3	2.15	0.62
1:5:2533:C:N3	1:5:2534:C:N4	2.48	0.62
1:5:2857:A:C6	1:5:2858:A:N6	2.68	0.62
1:5:3741:C:C2	1:5:3742:G:N7	2.68	0.62
1:5:4269:G:N2	1:5:4277:G:H22	1.95	0.62
1:5:4737:G:C5	1:5:4963:G:N2	2.67	0.62
7:D:35:ARG:HH11	7:D:35:ARG:HG2	1.63	0.62
10:G:77:PRO:HA	10:G:237:TRP:CZ3	2.34	0.62
37:i:45:ARG:NH2	37:i:50:PHE:CE1	2.67	0.62
1:5:62:A:H2'	1:5:63:G:C8	2.34	0.62
1:5:1302:U:N3	1:5:1303:A:C8	2.68	0.62
1:5:1371:A:H61	3:8:28:C:C2'	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1878:G:N3	1:5:1879:C:C6	2.68	0.62
1:5:1986:U:O2	1:5:2007:G:O6	2.17	0.62
1:5:2712:G:N2	1:5:2713:C:C2	2.67	0.62
1:5:2744:A:N3	1:5:2745:A:C5	2.68	0.62
1:5:3703:G:C6	1:5:3704:U:C4	2.88	0.62
1:5:3728:A:C8	1:5:3729:U:C1'	2.83	0.62
1:5:3793:U:C2	1:5:3794:C:C6	2.88	0.62
1:5:4273:A:H2'	1:5:4274:A:C1'	2.29	0.62
1:5:4651:A:C6	1:5:4652:G:C8	2.88	0.62
3:8:138:C:C2	3:8:139:G:C8	2.88	0.62
10:G:81:ASN:HD21	10:G:238:GLY:N	1.98	0.62
20:R:36:ASN:ND2	46:1:407:THR:CB	2.63	0.62
26:X:84:GLU:CB	46:1:404:HIS:ND1	2.63	0.62
1:5:33:A:C6	1:5:50:C:C2	2.88	0.62
1:5:99:A:N3	1:5:99:A:H2'	2.13	0.62
1:5:202:C:C2	1:5:214:G:C2	2.87	0.62
1:5:270:U:C2	1:5:271:C:C6	2.88	0.62
1:5:964:A:C8	1:5:964:A:C4'	2.82	0.62
1:5:1066:G:C2	1:5:1067:G:C4	2.87	0.62
1:5:1299:G:C6	1:5:1300:G:N7	2.68	0.62
1:5:1797:G:C2	1:5:1798:G:N7	2.67	0.62
1:5:1845:U:O2	1:5:1846:G:N7	2.32	0.62
1:5:1899:G:N2	1:5:1900:C:C6	2.68	0.62
1:5:1928:C:C4	17:O:133:ARG:NH1	2.68	0.62
1:5:2340:C:H2'	1:5:2340:C:O2	2.00	0.62
1:5:2480:G:N1	1:5:2481:G:C5	2.68	0.62
1:5:2606:G:N1	1:5:2607:C:C4	2.67	0.62
1:5:2856:C:O2	1:5:2856:C:C2'	2.47	0.62
1:5:3590:G:C6	1:5:3591:C:C4	2.88	0.62
1:5:3590:G:C4	1:5:3591:C:C6	2.88	0.62
1:5:3606:U:C2	1:5:3607:U:C6	2.87	0.62
1:5:3656:A:H4'	1:5:3747:A:C2	2.35	0.62
1:5:3859:G:H4'	18:P:139:TYR:CZ	2.35	0.62
1:5:4233:A:C8	1:5:4235:G:C8	2.87	0.62
1:5:4498:U:N3	1:5:4500:U:P	2.73	0.62
1:5:4652:G:N3	1:5:4653:C:C6	2.68	0.62
1:5:4653:C:C2	1:5:4654:C:H5	2.13	0.62
1:5:4896:G:C2	1:5:4897:G:C5	2.87	0.62
1:5:5051:C:N3	1:5:5052:C:C5	2.68	0.62
3:8:64:U:C2'	3:8:65:A:C8	2.83	0.62
3:8:133:G:C2	3:8:134:G:N7	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:10:ARG:NH2	5:B:10:ARG:HB2	2.15	0.62
7:D:155:THR:OG1	7:D:179:ARG:NH1	2.33	0.62
9:F:85:VAL:HG13	21:S:62:VAL:HA	1.82	0.62
41:m:96:CYS:SG	50:m:201:ZN:ZN	1.89	0.62
43:o:36:GLN:HA	43:o:36:GLN:HE21	1.64	0.62
1:5:68:U:C5	1:5:69:A:C8	2.88	0.62
1:5:272:U:O2	1:5:273:U:C6	2.52	0.62
1:5:288:G:H2'	1:5:289:C:H6	1.64	0.62
1:5:323:C:N3	1:5:324:A:N7	2.47	0.62
1:5:330:G:N1	1:5:331:G:N7	2.48	0.62
1:5:449:C:C2	1:5:450:G:C8	2.88	0.62
1:5:931:C:O2'	1:5:932:A:O4'	2.12	0.62
1:5:1218:G:C6	1:5:1219:G:N9	2.68	0.62
1:5:1366:G:N7	1:5:1367:C:O3'	2.33	0.62
1:5:1781:U:C2	1:5:1782:U:C5	2.88	0.62
1:5:1785:C:H1'	12:I:94:PHE:CE2	2.34	0.62
1:5:1805:A:N7	30:b:28:ARG:HB3	2.15	0.62
1:5:2409:U:C4	1:5:2783:A:C2	2.88	0.62
1:5:2773:G:N2	1:5:2774:C:C2	2.68	0.62
1:5:2802:C:O2	35:g:13:TYR:OH	2.17	0.62
1:5:4085:A:N6	10:G:62:ARG:HH22	1.98	0.62
1:5:4093:G:C3'	1:5:4094:G:H5'	2.30	0.62
1:5:4304:A:C2	29:a:43:ILE:HG23	2.35	0.62
1:5:4341:C:N4	1:5:4342:C:C5	2.68	0.62
1:5:4464:A:H5'	1:5:4464:A:N3	2.15	0.62
1:5:4468:U:O2	1:5:4708:A:C8	2.53	0.62
1:5:4737:G:C6	1:5:4738:C:N4	2.68	0.62
1:5:4935:C:N4	8:E:179:ARG:CG	2.62	0.62
3:8:13:G:C4	3:8:14:U:C5	2.88	0.62
3:8:63:U:O2	3:8:63:U:H2'	1.99	0.62
46:1:58:SER:OG	46:1:62:PHE:CD1	2.49	0.62
1:5:55:G:C2	1:5:56:A:C8	2.88	0.61
1:5:692:A:C2	1:5:693:C:C4	2.87	0.61
1:5:751:G:N3	1:5:752:G:C8	2.67	0.61
1:5:1265:G:C6	1:5:1266:G:C6	2.88	0.61
1:5:1267:C:C5'	1:5:2110:C:O2'	2.48	0.61
1:5:1268:G:C4	1:5:2111:G:C2	2.88	0.61
1:5:1358:G:O5'	6:C:114:ARG:NH2	2.33	0.61
1:5:1899:G:C8	1:5:2278:G:C6	2.87	0.61
1:5:2363:A:C2	1:5:2364:G:H1'	2.34	0.61
1:5:2367:A:N7	1:5:2798:A:C4	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2784:C:H2'	1:5:2785:C:H6	1.65	0.61
1:5:3648:A:C5	1:5:3785:A:N6	2.67	0.61
1:5:3672:G:N7	1:5:3674:G:C1'	2.63	0.61
1:5:3772:U:C2	1:5:3773:U:C6	2.88	0.61
1:5:4196:G:N3	1:5:4396:A:H1'	2.15	0.61
1:5:4426:C:N4	1:5:4427:G:C5	2.68	0.61
1:5:4618:G:C2	1:5:4619:U:C5	2.88	0.61
1:5:4734:A:C6	1:5:4735:G:C5	2.88	0.61
1:5:4747:C:H2'	1:5:4748:U:C6	2.35	0.61
2:7:8:G:C5	2:7:9:C:C5	2.87	0.61
3:8:3:A:O3'	18:P:61:ARG:HD3	2.00	0.61
6:C:22:VAL:HG11	6:C:257:PHE:HD2	1.64	0.61
26:X:145:ASP:HB3	26:X:148:ASP:OD1	1.99	0.61
34:f:36:ARG:HH11	34:f:36:ARG:HG2	1.64	0.61
45:r:7:TRP:CD1	45:r:38:PHE:HD1	2.18	0.61
1:5:183:C:O2	1:5:253:G:O6	2.17	0.61
1:5:295:A:OP2	43:o:39:ARG:NH1	2.33	0.61
1:5:383:A:O2'	1:5:384:A:O5'	2.18	0.61
1:5:1279:A:C3'	1:5:1280:C:C5	2.83	0.61
1:5:1550:G:C2	1:5:1579:C:C2	2.88	0.61
1:5:1665:C:H2'	1:5:1666:C:O5'	2.00	0.61
1:5:1669:A:H4'	1:5:1685:G:H21	1.66	0.61
1:5:1881:C:O4'	1:5:2281:U:C6	2.53	0.61
1:5:1937:C:H3'	1:5:1938:C:H2'	1.80	0.61
1:5:2441:C:H2'	1:5:2442:G:H8	1.64	0.61
1:5:2479:G:C5	1:5:2480:G:N7	2.68	0.61
1:5:2833:A:O2'	1:5:2834:C:O4'	2.16	0.61
1:5:3633:C:C2	1:5:3634:G:C8	2.88	0.61
1:5:3805:U:N3	1:5:3806:G:N7	2.47	0.61
1:5:3905:A:N1	1:5:4449:A:C6	2.67	0.61
1:5:4369:A:N3	1:5:4370:G:C8	2.67	0.61
1:5:4462:C:C2	1:5:4515:G:N2	2.67	0.61
1:5:4479:A:N7	1:5:4480:A:C8	2.68	0.61
1:5:4481:U:O2	1:5:4482:U:C6	2.52	0.61
1:5:4771:C:H6	1:5:4772:C:C6	2.17	0.61
2:7:18:C:C2	2:7:19:C:H6	2.10	0.61
2:7:51:G:C6	2:7:52:C:N4	2.68	0.61
3:8:10:G:N1	3:8:11:C:N1	2.48	0.61
6:C:94:ASN:HA	6:C:100:ARG:O	2.00	0.61
16:N:150:TRP:HE3	16:N:151:ILE:N	1.99	0.61
35:g:11:LEU:HB3	35:g:18:ASN:ND2	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:86:U:N3	1:5:97:G:N2	2.48	0.61
1:5:114:G:C2'	1:5:115:C:H5'	2.29	0.61
1:5:208:A:C1'	1:5:232:G:C2	2.82	0.61
1:5:288:G:N1	1:5:289:C:C4	2.68	0.61
1:5:370:U:C6	1:5:1637:A:N1	2.69	0.61
1:5:472:C:H2'	1:5:473:C:O4'	2.00	0.61
1:5:1074:G:N2	1:5:1238:A:N3	2.49	0.61
1:5:1214:C:N4	9:F:58:HIS:CE1	2.68	0.61
1:5:1251:C:C2	1:5:1252:C:C6	2.89	0.61
1:5:1264:C:C4	1:5:1265:G:N7	2.69	0.61
1:5:1296:G:O2'	1:5:1297:U:OP1	2.14	0.61
1:5:1752:G:C6	1:5:1753:G:C5	2.88	0.61
1:5:1899:G:N2	1:5:1900:C:N3	2.48	0.61
1:5:2091:C:C2	1:5:2257:C:O2'	2.41	0.61
1:5:2261:G:O2'	1:5:2262:G:O5'	2.18	0.61
1:5:2295:C:O2	1:5:2296:G:C8	2.53	0.61
1:5:2325:C:C2	1:5:2326:G:H8	2.19	0.61
1:5:2342:G:C2	1:5:2344:U:C6	2.87	0.61
1:5:2647:A:H2'	1:5:2648:G:H5'	1.82	0.61
1:5:3656:A:O4'	1:5:3747:A:H2	1.83	0.61
1:5:3694:U:C2	1:5:3695:U:C6	2.88	0.61
1:5:4093:G:C5	1:5:4094:G:C8	2.88	0.61
1:5:4113:U:C2'	1:5:4114:C:O4'	2.42	0.61
1:5:4277:G:N1	1:5:4278:C:C4	2.69	0.61
1:5:4342:C:N3	1:5:4343:U:C5	2.68	0.61
1:5:4934:A:N1	1:5:4935:C:C5	2.68	0.61
2:7:55:A:H2'	2:7:56:G:O5'	1.99	0.61
3:8:131:G:C6	3:8:132:G:C5	2.88	0.61
1:5:130:C:C2	1:5:139:G:C2	2.88	0.61
1:5:164:G:C6	1:5:165:A:C5	2.89	0.61
1:5:181:C:N3	1:5:256:G:C2	2.68	0.61
1:5:209:U:C5	1:5:211:G:C5	2.89	0.61
1:5:950:G:C2	1:5:951:G:N7	2.68	0.61
1:5:1430:C:N3	1:5:1431:C:C5	2.68	0.61
1:5:1634:A:C5	1:5:1635:C:C5	2.88	0.61
1:5:1673:U:C4	1:5:1674:C:N4	2.68	0.61
1:5:1885:G:C2	1:5:1895:G:N3	2.68	0.61
1:5:2301:G:N3	1:5:2302:C:C6	2.69	0.61
1:5:2368:A:C6	1:5:2788:U:O4	2.53	0.61
1:5:2394:G:N2	1:5:2820:C:C5	2.69	0.61
1:5:2526:C:H5	46:1:405:ARG:NH1	1.95	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2602:G:H1'	1:5:2742:G:C4	2.34	0.61
1:5:3717:A:C6	1:5:3736:A:N1	2.68	0.61
1:5:3847:C:N3	1:5:3848:U:C6	2.68	0.61
1:5:4166:G:C2	1:5:4167:G:N7	2.69	0.61
1:5:4187:G:H2'	1:5:4188:U:O4'	2.00	0.61
1:5:4219:A:O2'	1:5:4220:A:O5'	2.19	0.61
1:5:4229:U:O4	1:5:4230:C:C4	2.53	0.61
1:5:4281:A:C6	1:5:4283:G:C8	2.87	0.61
1:5:4978:G:O2'	1:5:4979:A:H3'	2.00	0.61
3:8:30:U:C2	3:8:31:G:C8	2.89	0.61
3:8:96:C:O2	3:8:97:A:H8	1.73	0.61
1:5:90:G:N2	1:5:95:G:C5	2.69	0.61
1:5:112:C:C5	1:5:157:U:C4	2.88	0.61
1:5:422:C:N3	1:5:423:G:N7	2.48	0.61
1:5:1185:G:C2	1:5:1186:U:H1'	2.35	0.61
1:5:1189:G:C6	1:5:1190:C:C4	2.88	0.61
1:5:1635:C:H2'	1:5:1636:U:C5'	2.26	0.61
1:5:1668:A:C8	1:5:1881:C:N4	2.68	0.61
1:5:1936:C:C4	1:5:1937:C:C5	2.88	0.61
1:5:1983:A:N3	1:5:2010:A:O3'	2.34	0.61
1:5:2409:U:O4'	40:l:44:TRP:NE1	2.33	0.61
1:5:2478:C:N3	1:5:2479:G:C5	2.69	0.61
1:5:3636:C:C4	1:5:3637:U:C5	2.89	0.61
1:5:3840:U:O2	1:5:3840:U:H2'	1.99	0.61
1:5:3907:G:C1'	1:5:4449:A:N9	2.64	0.61
1:5:4138:C:C2	1:5:4147:G:C2	2.89	0.61
1:5:4221:C:N3	12:I:116:ARG:HD3	2.15	0.61
1:5:4745:G:C2'	1:5:4746:C:C5	2.83	0.61
1:5:4933:C:N4	1:5:4934:A:N7	2.48	0.61
1:5:4937:C:OP1	8:E:179:ARG:NE	2.31	0.61
1:5:5003:U:O2'	1:5:5004:C:O4'	2.18	0.61
45:r:16:PHE:N	45:r:16:PHE:CD1	2.67	0.61
1:5:99:A:H4'	16:N:181:HIS:CE1	2.36	0.61
1:5:1266:G:H22	1:5:2111:G:N2	1.98	0.61
1:5:1280:C:C2	1:5:1282:G:C8	2.89	0.61
1:5:1340:C:C4	1:5:1341:U:C5	2.89	0.61
1:5:1361:G:C6	1:5:1362:G:N7	2.69	0.61
1:5:1394:G:H5"	14:L:186:ARG:HH12	1.65	0.61
1:5:1634:A:C2	1:5:1635:C:C5	2.89	0.61
1:5:1689:G:H2'	1:5:1690:C:O4'	1.99	0.61
1:5:1725:U:OP1	1:5:1725:U:H4'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1964:A:C6	1:5:4694:G:C5	2.88	0.61
1:5:2046:G:O2'	1:5:2047:A:OP2	2.11	0.61
1:5:2106:G:N2	1:5:2107:C:H5	1.98	0.61
1:5:2319:C:O2	1:5:2319:C:H2'	1.99	0.61
1:5:2371:U:C2'	1:5:2372:U:H5'	2.30	0.61
1:5:2382:A:H62	1:5:2830:G:C1'	2.12	0.61
1:5:2451:A:N6	1:5:2452:G:C5	2.69	0.61
1:5:2723:U:H2'	1:5:2724:G:C8	2.36	0.61
1:5:3643:A:C2	38:j:3:LYS:CE	2.84	0.61
1:5:4277:G:C4	1:5:4278:C:C6	2.89	0.61
1:5:4454:G:O2'	1:5:4500:U:O2'	2.18	0.61
1:5:4477:A:C2	1:5:4604:G:O4'	2.54	0.61
1:5:5020:G:C6	1:5:5021:C:C4	2.88	0.61
2:7:6:C:C4	2:7:7:G:C8	2.89	0.61
2:7:58:A:N6	2:7:59:G:C6	2.69	0.61
2:7:93:G:C5	2:7:94:C:C5	2.88	0.61
3:8:10:G:C5	3:8:11:C:C5	2.87	0.61
3:8:111:U:H3'	3:8:111:U:O2	2.00	0.61
6:C:76:ILE:HG22	6:C:77:PRO:HD2	1.83	0.61
17:O:128:ARG:HE	21:S:162:GLN:HE22	1.49	0.61
24:V:97:TYR:CE2	25:W:21:TYR:CD1	2.89	0.61
25:W:50:ASN:CB	25:W:55:TYR:CE2	2.81	0.61
34:f:76:ARG:NE	34:f:85:ARG:NH2	2.48	0.61
1:5:197:A:N3	1:5:222:C:O2'	2.26	0.61
1:5:348:G:N1	1:5:350:C:C4	2.69	0.61
1:5:480:C:OP1	45:r:66:ARG:O	2.18	0.61
1:5:668:C:H2'	1:5:669:C:O4'	2.01	0.61
1:5:1089:G:H5'	22:T:140:PHE:HE1	1.66	0.61
1:5:1380:G:C4	1:5:1382:G:C6	2.89	0.61
1:5:1437:C:C2	1:5:2098:G:N7	2.69	0.61
1:5:1670:G:OP2	30:b:11:ASN:ND2	2.20	0.61
1:5:1672:U:C2	1:5:1673:U:C6	2.77	0.61
1:5:1693:U:C4	1:5:1694:C:C5	2.89	0.61
1:5:1816:C:O2	1:5:1816:C:H2'	2.00	0.61
1:5:1929:A:N6	1:5:2054:U:N3	2.33	0.61
1:5:2326:G:N3	1:5:2327:G:C8	2.67	0.61
1:5:2400:G:C2	1:5:2401:A:C8	2.88	0.61
1:5:2414:G:H5'	46:1:398:GLN:HE22	1.66	0.61
1:5:3674:G:N1	1:5:3675:G:N7	2.49	0.61
1:5:3909:C:C4	1:5:3910:C:H5	2.19	0.61
1:5:4240:G:C2	1:5:4241:C:N1	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4510:A:N6	1:5:4592:C:C2'	2.64	0.61
1:5:4737:G:C4	1:5:4738:C:C5	2.88	0.61
1:5:4744:A:N3	1:5:4745:G:C8	2.68	0.61
2:7:42:A:N6	2:7:43:U:C4	2.69	0.61
3:8:130:C:C4	3:8:131:G:C8	2.89	0.61
13:J:107:PHE:CE1	13:J:130:PHE:CB	2.82	0.61
15:M:3:PHE:CB	15:M:6:PHE:HZ	2.13	0.61
22:T:17:ARG:HH12	22:T:45:MET:HE2	1.66	0.61
1:5:21:G:C6	3:8:36:G:C2	2.89	0.61
1:5:62:A:C2	1:5:77:U:O2	2.52	0.61
1:5:209:U:C4	1:5:211:G:N9	2.68	0.61
1:5:269:G:H2'	1:5:269:G:N3	2.16	0.61
1:5:280:G:C5'	16:N:120:TRP:HE3	2.13	0.61
1:5:325:U:H2'	1:5:326:C:C6	2.36	0.61
1:5:495:C:N3	1:5:496:G:N7	2.48	0.61
1:5:1252:C:C2	1:5:1259:G:C2	2.89	0.61
1:5:1268:G:N1	1:5:2111:G:N2	2.49	0.61
1:5:1277:G:N2	1:5:1278:C:C2	2.69	0.61
1:5:1277:G:N3	1:5:1278:C:C6	2.69	0.61
1:5:1394:G:H2'	1:5:1395:U:C6	2.36	0.61
1:5:1439:C:O2	9:F:36:ARG:NH1	2.34	0.61
1:5:1552:G:H2'	1:5:1574:G:H22	1.64	0.61
1:5:1916:G:O6	34:f:18:LEU:HB2	2.01	0.61
1:5:2428:A:C8	1:5:2789:A:H2	2.17	0.61
1:5:2584:G:C6	1:5:2585:C:C5	2.89	0.61
1:5:2743:A:H2'	1:5:2744:A:H8	1.62	0.61
1:5:3698:G:N2	1:5:3699:C:C2	2.69	0.61
1:5:3739:C:C2	1:5:3740:G:C8	2.89	0.61
1:5:4085:A:N7	10:G:56:LYS:HA	2.14	0.61
1:5:4243:C:H1'	1:5:4268:A:C2	2.36	0.61
2:7:110:G:C2	2:7:111:C:C5	2.89	0.61
8:E:111:TYR:OH	45:r:119:ARG:HG2	2.00	0.61
9:F:100:ILE:O	9:F:100:ILE:HG23	2.00	0.61
9:F:219:ARG:O	9:F:248:ARG:NH2	2.34	0.61
28:Z:36:ARG:HG3	28:Z:36:ARG:HH11	1.65	0.61
46:1:267:ILE:HD11	46:1:279:TYR:HB2	1.74	0.61
1:5:127:G:N2	1:5:128:C:C2	2.69	0.61
1:5:145:G:C6	1:5:146:G:N7	2.69	0.61
1:5:301:G:C6	1:5:302:C:C4	2.88	0.61
1:5:488:G:N3	1:5:489:C:C6	2.67	0.61
1:5:719:C:N3	1:5:720:G:N7	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1067:G:H2'	1:5:1068:G:O4'	2.01	0.61
1:5:1268:G:OP2	1:5:2110:C:H2'	2.00	0.61
1:5:1367:C:N4	1:5:1369:C:OP2	2.34	0.61
1:5:1613:A:H4'	4:A:186:TYR:CD2	2.36	0.61
1:5:1947:U:O2	1:5:1947:U:H2'	2.01	0.61
1:5:1964:A:C6	1:5:1965:G:H1'	2.36	0.61
1:5:2104:G:C6	1:5:2105:A:N7	2.69	0.61
1:5:2110:C:N3	1:5:2121:C:N4	2.48	0.61
1:5:2566:G:C2	1:5:2567:G:N7	2.69	0.61
1:5:3676:G:O2'	1:5:3677:U:O5'	2.18	0.61
1:5:4287:G:O2'	1:5:4288:C:C5'	2.48	0.61
1:5:4887:C:O2'	1:5:4888:U:H5'	2.00	0.61
4:A:186:TYR:HE1	4:A:190:LYS:HG3	1.65	0.61
6:C:222:ARG:HH21	27:Y:3:PHE:HE2	1.46	0.61
9:F:244:ARG:NH1	9:F:244:ARG:HG2	2.16	0.61
16:N:65:ARG:HG2	16:N:129:PHE:CE2	2.36	0.61
18:P:3:ARG:HG3	18:P:3:ARG:HH11	1.66	0.61
29:a:127:LYS:HG2	29:a:128:PHE:HE2	1.66	0.61
1:5:57:G:N2	1:5:58:G:C2	2.69	0.61
1:5:291:U:O2	1:5:293:G:H3'	2.01	0.61
1:5:957:G:P	1:5:1284:G:N3	2.74	0.61
1:5:1217:G:N3	1:5:1218:G:N7	2.48	0.61
1:5:1290:G:C2	1:5:1291:G:N7	2.69	0.61
1:5:1487:G:N2	1:5:1488:G:H1'	2.16	0.61
1:5:2272:C:C2'	1:5:2273:G:O5'	2.49	0.61
1:5:2282:A:H5"	29:a:21:ARG:HD3	1.81	0.61
1:5:2517:A:H2'	1:5:2518:G:C8	2.36	0.61
1:5:2526:C:N4	46:1:405:ARG:CG	2.60	0.61
1:5:4176:C:C2	1:5:4177:C:C5	2.88	0.61
1:5:4441:A:H8	1:5:4441:A:H5"	1.65	0.61
1:5:4539:U:C2	1:5:4540:C:C5	2.89	0.61
1:5:4547:C:C2	1:5:4549:G:N7	2.69	0.61
1:5:4750:G:O6	1:5:4949:G:C6	2.54	0.61
1:5:4977:A:O2'	1:5:4978:G:H5'	2.01	0.61
2:7:56:G:H2'	2:7:57:C:C6	2.36	0.61
3:8:45:C:C2	3:8:46:G:C8	2.88	0.61
3:8:134:G:N3	3:8:135:C:C6	2.69	0.61
20:R:95:TRP:O	20:R:96:MET:C	2.44	0.61
1:5:56:A:N1	1:5:57:G:C6	2.69	0.60
1:5:152:U:C2	1:5:153:G:C8	2.88	0.60
1:5:182:G:H22	1:5:254:G:N2	1.98	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1354:A:C5	1:5:1503:A:C2	2.88	0.60
1:5:1628:C:C2	1:5:1629:G:H8	2.13	0.60
1:5:1769:G:C2	1:5:1770:A:C5	2.88	0.60
1:5:1852:U:OP1	29:a:23:GLY:N	2.30	0.60
1:5:2059:C:N3	1:5:2060:G:N7	2.49	0.60
1:5:2079:G:N2	1:5:2080:U:C6	2.68	0.60
1:5:2106:G:C2	1:5:2107:C:H5	2.19	0.60
1:5:2256:C:O2	1:5:2256:C:H2'	2.01	0.60
1:5:2454:U:N3	1:5:2455:G:N7	2.49	0.60
1:5:2664:G:N2	1:5:2671:C:C2	2.69	0.60
1:5:2857:A:O2'	1:5:2858:A:C8	2.49	0.60
1:5:3648:A:C8	1:5:3785:A:N6	2.69	0.60
1:5:4143:G:C5	1:5:4145:C:C6	2.89	0.60
1:5:4724:A:C6	1:5:4725:C:C4	2.88	0.60
2:7:59:G:C6	2:7:60:G:C5	2.89	0.60
3:8:134:G:N1	3:8:135:C:C5	2.69	0.60
12:I:171:TRP:CB	12:I:181:PHE:CE2	2.83	0.60
20:R:132:PHE:N	20:R:132:PHE:CD2	2.69	0.60
1:5:69:A:O5'	1:5:100:C:O2'	2.19	0.60
1:5:88:A:C2'	1:5:89:C:O5'	2.49	0.60
1:5:91:G:C8	1:5:93:G:C6	2.89	0.60
1:5:189:G:N2	1:5:190:G:C4	2.69	0.60
1:5:293:G:C4'	1:5:294:G:C8	2.84	0.60
1:5:323:C:O2	1:5:324:A:C8	2.54	0.60
1:5:486:C:C4	1:5:487:G:N7	2.69	0.60
1:5:1277:G:N1	1:5:1278:C:C4	2.69	0.60
1:5:1392:A:H2'	1:5:1393:G:C8	2.36	0.60
1:5:1447:C:H2'	1:5:1448:G:C8	2.35	0.60
1:5:2301:G:C2	1:5:2302:C:C5	2.89	0.60
1:5:2451:A:C4	1:5:2452:G:C8	2.89	0.60
1:5:2468:U:O4	1:5:2473:A:C2	2.53	0.60
1:5:4117:U:C5	10:G:41:ILE:O	2.55	0.60
1:5:4368:G:H21	43:o:26:TYR:HE2	1.48	0.60
1:5:4742:G:C2	1:5:4743:G:C8	2.89	0.60
9:F:93:PHE:C	9:F:93:PHE:CD1	2.79	0.60
46:1:183:ILE:HG21	46:1:453:ILE:HG21	1.82	0.60
1:5:509:A:N3	29:a:105:ARG:NH1	2.48	0.60
1:5:1177:U:H1'	7:D:282:GLN:CD	2.26	0.60
1:5:1179:U:C4	1:5:1181:C:OP2	2.54	0.60
1:5:1392:A:N1	1:5:1393:G:C6	2.69	0.60
1:5:1615:C:C4	1:5:1616:U:C5	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1949:U:C2	1:5:1950:U:C6	2.89	0.60
1:5:1966:C:O2	1:5:1967:A:C8	2.53	0.60
1:5:2367:A:N6	1:5:2798:A:O4'	2.30	0.60
1:5:2468:U:C2	1:5:2473:A:N6	2.70	0.60
1:5:2766:A:H5"	1:5:2766:A:N3	2.16	0.60
1:5:2830:G:C2	1:5:2831:G:N7	2.69	0.60
1:5:3711:A:N1	1:5:3712:A:N3	2.49	0.60
1:5:3871:A:C6	1:5:3885:G:C2	2.90	0.60
1:5:3894:A:H2'	1:5:3895:G:O4'	2.01	0.60
1:5:3944:G:C2	1:5:3945:A:N7	2.69	0.60
1:5:4455:G:C5	1:5:4456:C:C5	2.89	0.60
1:5:5047:C:C1'	1:5:5048:A:N1	2.64	0.60
3:8:42:G:C6	3:8:43:A:N7	2.69	0.60
3:8:116:C:C4	3:8:117:C:C5	2.88	0.60
7:D:44:TYR:N	7:D:44:TYR:CD1	2.69	0.60
7:D:103:LEU:CD2	7:D:244:HIS:HB3	2.31	0.60
8:E:197:ILE:HD11	8:E:256:ARG:HB2	1.83	0.60
12:I:35:ASP:HB2	12:I:86:HIS:HE1	1.66	0.60
20:R:105:LEU:O	20:R:109:TYR:HB2	2.01	0.60
26:X:156:ILE:HG21	46:1:416:TYR:OH	2.00	0.60
41:m:119:ASN:OD1	41:m:119:ASN:C	2.43	0.60
44:p:85:ARG:HH11	44:p:85:ARG:HG2	1.65	0.60
46:1:288:ASN:CG	46:1:428:ILE:HG13	2.25	0.60
1:5:152:U:O2	1:5:153:G:C8	2.55	0.60
1:5:259:C:C2	1:5:260:C:C6	2.89	0.60
1:5:388:A:C6	1:5:411:G:C6	2.90	0.60
1:5:446:C:N3	1:5:447:C:C5	2.68	0.60
1:5:470:A:N7	1:5:471:A:N7	2.48	0.60
1:5:488:G:C6	1:5:489:C:C4	2.89	0.60
1:5:667:A:C2	1:5:668:C:C5	2.89	0.60
1:5:930:G:N3	1:5:931:C:H6	1.99	0.60
1:5:976:G:H22	1:5:1277:G:H22	1.49	0.60
1:5:1324:A:C2	1:5:3876:A:C2'	2.85	0.60
1:5:1582:U:C4	1:5:1583:A:C8	2.89	0.60
1:5:1682:A:H3'	1:5:1683:U:H6	1.66	0.60
1:5:1806:G:C2	1:5:1807:C:C5	2.90	0.60
1:5:1964:A:C2	1:5:4694:G:C2	2.90	0.60
1:5:1965:G:N3	1:5:1966:C:C5	2.69	0.60
1:5:1983:A:N1	1:5:2010:A:OP2	2.35	0.60
1:5:2055:G:H5'	1:5:2056:G:H5'	1.82	0.60
1:5:2290:C:N3	1:5:2291:G:N7	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2309:G:H2'	1:5:2310:C:O4'	2.02	0.60
1:5:2361:G:O2'	1:5:2362:U:OP2	2.19	0.60
1:5:2363:A:H1'	1:5:4560:C:H5	1.66	0.60
1:5:2423:A:C6	1:5:2424:G:C6	2.90	0.60
1:5:2448:G:C6	1:5:2511:A:C6	2.89	0.60
1:5:2532:C:C2	1:5:2533:C:H5	2.13	0.60
1:5:2577:C:C4	28:Z:17:ARG:NH2	2.69	0.60
1:5:2612:G:C5	1:5:2613:C:C5	2.89	0.60
1:5:2874:U:O2'	1:5:2876:G:N7	2.33	0.60
1:5:3846:C:C2	1:5:3847:C:C6	2.89	0.60
1:5:3858:C:N3	1:5:3859:G:C8	2.68	0.60
1:5:3935:C:N3	1:5:3936:A:C8	2.69	0.60
1:5:4332:C:O2	1:5:4333:C:H6	1.81	0.60
1:5:4647:G:H4'	20:R:59:SER:HB3	1.82	0.60
1:5:4979:A:C2'	1:5:4980:C:O5'	2.49	0.60
2:7:119:U:O4	7:D:258:LYS:NZ	2.32	0.60
4:A:186:TYR:CA	4:A:196:TRP:HZ3	2.13	0.60
10:G:261:LEU:HD22	10:G:265:LEU:HD23	1.82	0.60
13:J:99:PHE:CZ	13:J:105:PHE:HB2	2.37	0.60
29:a:131:ARG:O	29:a:134:GLU:HB3	2.02	0.60
32:d:83:ARG:HB2	32:d:114:PHE:CD2	2.36	0.60
1:5:42:A:C5	1:5:4379:A:N1	2.69	0.60
1:5:299:C:H2'	1:5:299:C:O2	2.01	0.60
1:5:325:U:H2'	1:5:326:C:H6	1.67	0.60
1:5:371:A:O2'	1:5:372:A:C5'	2.49	0.60
1:5:745:G:H2'	1:5:746:A:O4'	2.00	0.60
1:5:1264:C:H2'	1:5:1265:G:O4'	2.02	0.60
1:5:1379:C:H4'	1:5:1380:G:N9	2.15	0.60
1:5:1878:G:OP2	30:b:14:ARG:NH1	2.34	0.60
1:5:2089:G:O6	1:5:2263:A:C8	2.54	0.60
1:5:2263:A:O2'	1:5:2265:G:H2'	2.00	0.60
1:5:2498:C:C4	1:5:2499:C:C5	2.88	0.60
1:5:4191:G:N2	1:5:4374:U:O4'	2.34	0.60
1:5:4313:A:C6	1:5:4314:C:C5	2.88	0.60
3:8:142:U:C2	3:8:143:G:C8	2.89	0.60
6:C:102:PHE:O	6:C:103:ALA:C	2.43	0.60
21:S:94:TYR:CE2	21:S:96:GLU:HG3	2.37	0.60
34:f:27:LEU:HD22	34:f:78:HIS:CD2	2.36	0.60
43:o:36:GLN:O	43:o:36:GLN:NE2	2.34	0.60
46:1:264:ASP:C	46:1:265:LEU:HD23	2.26	0.60
1:5:30:C:H2'	1:5:31:U:O5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:225:G:C2	1:5:243:A:C2	2.90	0.60
1:5:483:G:C2	1:5:484:U:C6	2.90	0.60
1:5:642:G:C2	1:5:643:C:C4	2.89	0.60
1:5:747:A:H2'	1:5:749:G:N7	2.16	0.60
1:5:919:C:C2	1:5:920:C:C6	2.90	0.60
1:5:1341:U:C2	1:5:1342:A:N7	2.69	0.60
1:5:2294:G:N2	1:5:2295:C:N1	2.49	0.60
1:5:2294:G:N3	1:5:2295:C:C5	2.69	0.60
1:5:2335:C:H2'	1:5:2335:C:O2	2.00	0.60
1:5:2645:G:N1	1:5:2646:C:C4	2.70	0.60
1:5:3711:A:N6	1:5:3712:A:H1'	2.16	0.60
1:5:3738:G:C6	1:5:3739:C:C6	2.90	0.60
1:5:4077:A:H8	1:5:4077:A:O5'	1.84	0.60
1:5:4080:C:O2	1:5:4080:C:H2'	2.01	0.60
1:5:4198:G:C5	1:5:4199:C:C5	2.89	0.60
1:5:4239:A:C6	1:5:4240:G:N7	2.69	0.60
1:5:4489:G:C6	1:5:4490:C:C4	2.90	0.60
1:5:4746:C:C2	1:5:4747:C:C6	2.90	0.60
1:5:4945:G:O6	34:f:60:PRO:HD3	2.00	0.60
2:7:58:A:C5	2:7:59:G:N7	2.69	0.60
2:7:93:G:N3	2:7:94:C:C6	2.70	0.60
3:8:70:G:C6	3:8:87:G:N1	2.69	0.60
3:8:134:G:C5	3:8:135:C:C5	2.90	0.60
3:8:134:G:C4	3:8:135:C:C6	2.90	0.60
17:O:58:LEU:HD11	17:O:145:VAL:HG13	1.83	0.60
32:d:32:ARG:HG2	32:d:48:GLU:HG2	1.84	0.60
1:5:479:G:C6	1:5:480:C:C5	2.89	0.60
1:5:1410:U:H5	1:5:1815:G:N1	1.99	0.60
1:5:1928:C:C4	17:O:133:ARG:CZ	2.85	0.60
1:5:2076:G:N1	1:5:2077:C:C2	2.70	0.60
1:5:2414:G:H4'	46:1:398:GLN:NE2	2.16	0.60
1:5:2559:G:C6	1:5:2560:C:C5	2.90	0.60
1:5:3590:G:C5	1:5:3591:C:C6	2.90	0.60
1:5:3754:G:C6	1:5:3755:G:C8	2.90	0.60
1:5:4236:G:H4'	1:5:4328:G:O2'	2.01	0.60
1:5:4315:A:C2'	1:5:4316:G:H5'	2.31	0.60
1:5:4544:A:C8	1:5:4545:G:H1'	2.37	0.60
1:5:4647:G:C2	1:5:4648:A:C8	2.90	0.60
1:5:4999:G:N1	1:5:5000:G:C5	2.69	0.60
2:7:29:C:C2	2:7:30:C:C5	2.89	0.60
5:B:198:ARG:HB2	5:B:198:ARG:NH1	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:128:ASN:HD21	22:T:132:PRO:HG2	1.67	0.60
13:J:99:PHE:CE2	13:J:105:PHE:HB2	2.36	0.60
44:p:33:GLN:OE1	44:p:49:ARG:NH2	2.34	0.60
1:5:332:C:H4'	16:N:150:TRP:NE1	2.17	0.60
1:5:460:C:H2'	1:5:461:G:H8	1.65	0.60
1:5:1266:G:C5'	1:5:2112:G:N3	2.60	0.60
1:5:1404:G:C6	1:5:1405:C:C5	2.90	0.60
1:5:1619:G:C5	1:5:1620:U:C5	2.90	0.60
1:5:1629:G:N3	1:5:1631:A:C6	2.70	0.60
1:5:1634:A:C6	1:5:1635:C:C5	2.90	0.60
1:5:1685:G:C6	1:5:1686:C:N4	2.69	0.60
1:5:1692:C:H4'	19:Q:57:ASN:HD21	1.67	0.60
1:5:1945:G:C6	1:5:1946:G:N7	2.69	0.60
1:5:1972:G:C2	1:5:1973:G:C5	2.89	0.60
1:5:2277:C:O2	1:5:2277:C:C2'	2.49	0.60
1:5:2279:A:C2	1:5:2280:G:C4	2.90	0.60
1:5:4109:G:C6	1:5:4110:C:C4	2.90	0.60
1:5:4230:C:O2	1:5:4230:C:H2'	2.01	0.60
1:5:4332:C:C2	1:5:4333:C:C5	2.85	0.60
1:5:4416:G:N2	1:5:4417:C:N1	2.50	0.60
1:5:4733:C:H41	1:5:4734:A:H1'	1.66	0.60
1:5:4747:C:O2'	1:5:4748:U:H5'	2.01	0.60
1:5:4878:C:C2	1:5:4879:C:H5	2.18	0.60
1:5:4977:A:C4	1:5:4978:G:C2	2.90	0.60
1:5:4984:C:C2	1:5:4985:U:C6	2.89	0.60
4:A:186:TYR:CA	4:A:196:TRP:CZ3	2.85	0.60
5:B:314:ILE:HD12	5:B:314:ILE:N	2.16	0.60
15:M:6:PHE:HB3	21:S:151:LYS:CG	2.31	0.60
25:W:55:TYR:C	25:W:55:TYR:HD1	2.09	0.60
28:Z:38:TYR:CZ	28:Z:76:ASN:OD1	2.55	0.60
36:h:81:LEU:HA	36:h:84:ARG:HG3	1.84	0.60
38:j:16:HIS:HA	38:j:27:TYR:O	2.02	0.60
46:1:271:ARG:C	46:1:272:TYR:CD2	2.80	0.60
1:5:20:U:C4	3:8:37:A:C6	2.90	0.60
1:5:166:C:O2	1:5:166:C:H2'	2.02	0.60
1:5:655:C:O2	1:5:656:C:C6	2.55	0.60
1:5:986:C:H2'	1:5:987:C:O4'	2.02	0.60
1:5:1065:G:C2	1:5:1066:G:C4	2.89	0.60
1:5:1268:G:N3	1:5:2111:G:C2	2.70	0.60
1:5:1271:G:N2	1:5:2122:G:OP2	2.35	0.60
1:5:1437:C:O2	1:5:2097:U:C2	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1465:G:C6	1:5:1466:G:C8	2.89	0.60
1:5:2055:G:O6	21:S:158:VAL:CG1	2.50	0.60
1:5:2105:A:N1	1:5:2106:G:C5	2.70	0.60
1:5:2108:G:C2	1:5:2125:C:C4	2.89	0.60
1:5:2367:A:C2	1:5:2368:A:N7	2.69	0.60
1:5:2405:G:HO2'	1:5:2791:C:HO2'	1.49	0.60
1:5:2589:C:N4	1:5:2590:G:C6	2.69	0.60
1:5:2712:G:N1	1:5:2713:C:C4	2.70	0.60
1:5:2736:G:C2'	1:5:2737:C:H5'	2.31	0.60
1:5:2823:G:C2	1:5:2824:C:C6	2.90	0.60
1:5:4078:C:N3	1:5:4079:C:C6	2.69	0.60
1:5:4234:A:C6	1:5:4271:A:H1'	2.37	0.60
1:5:4269:G:H22	1:5:4277:G:N2	1.94	0.60
1:5:4379:A:C8	43:o:54:PRO:CA	2.80	0.60
3:8:68:G:C2	3:8:91:A:C2	2.89	0.60
3:8:79:G:N3	3:8:80:A:C2	2.70	0.60
5:B:217:ILE:HD11	5:B:333:LEU:HD11	1.84	0.60
14:L:94:ILE:HA	36:h:119:PHE:CZ	2.37	0.60
16:N:150:TRP:CZ3	16:N:151:ILE:HG12	2.36	0.60
1:5:30:C:H2'	1:5:31:U:C6	2.37	0.60
1:5:460:C:O2	1:5:461:G:C8	2.55	0.60
1:5:1339:U:N3	1:5:1340:C:C5	2.70	0.60
1:5:1378:C:H5"	1:5:1379:C:H3'	1.83	0.60
1:5:1751:A:C2	1:5:1752:G:O4'	2.55	0.60
1:5:1898:C:N4	1:5:2279:A:O2'	2.35	0.60
1:5:1921:C:O2	21:S:160:ARG:HB2	2.01	0.60
1:5:1992:U:H5	1:5:2002:A:N3	1.99	0.60
1:5:2343:G:C2	6:C:101:MET:HE2	2.37	0.60
1:5:2422:C:C6	1:5:2829:U:H1'	2.37	0.60
1:5:2559:G:H1	1:5:2567:G:H1	1.50	0.60
1:5:2746:A:C2'	1:5:2747:U:O5'	2.50	0.60
1:5:3677:U:H2'	1:5:3678:G:C8	2.37	0.60
1:5:4470:G:N2	1:5:4486:C:C2	2.70	0.60
1:5:4763:U:O2	15:M:3:PHE:HE2	1.85	0.60
1:5:4913:G:O2'	1:5:4914:C:O4'	2.19	0.60
1:5:5030:U:N3	1:5:5031:G:N7	2.50	0.60
2:7:54:A:N1	2:7:55:A:N7	2.46	0.60
1:5:509:A:O2'	14:L:163:ARG:HB2	2.02	0.59
1:5:726:G:H2'	1:5:727:C:O4'	2.02	0.59
1:5:1075:G:C6	1:5:1076:C:C4	2.90	0.59
1:5:2006:U:H2'	1:5:2007:G:O4'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2253:A:H8	1:5:2254:G:HO2'	1.49	0.59
1:5:2328:G:O2'	1:5:2329:U:H5'	2.01	0.59
1:5:2428:A:C4	1:5:2789:A:C2	2.88	0.59
1:5:2438:A:C5	1:5:2441:C:N4	2.70	0.59
1:5:2496:G:C4	1:5:2497:C:C6	2.90	0.59
1:5:2594:C:N3	1:5:2595:C:C5	2.69	0.59
1:5:2603:C:C2	1:5:2604:C:C6	2.89	0.59
1:5:2633:U:C2	1:5:2634:C:C5	2.89	0.59
1:5:2657:G:H3'	1:5:2658:G:H8	1.66	0.59
1:5:2841:G:C6	1:5:2842:G:N7	2.69	0.59
1:5:2852:U:C2'	1:5:2852:U:O2	2.50	0.59
1:5:3802:U:H3	1:5:4498:U:C1'	2.13	0.59
1:5:4543:G:O2'	1:5:4544:A:C5'	2.50	0.59
1:5:4549:G:N1	1:5:4550:G:C8	2.69	0.59
3:8:33:G:H4'	3:8:34:U:C4	2.37	0.59
3:8:141:C:H2'	3:8:142:U:H6	1.67	0.59
4:A:209:HIS:HE1	4:A:211:PHE:HD2	1.47	0.59
7:D:67:ALA:HB1	22:T:31:MET:HE1	1.82	0.59
43:o:26:TYR:C	43:o:26:TYR:HD1	2.10	0.59
45:r:106:LEU:O	45:r:107:ARG:C	2.45	0.59
46:1:267:ILE:HD11	46:1:279:TYR:CB	2.31	0.59
1:5:49:U:H2'	1:5:50:C:O5'	2.01	0.59
1:5:75:G:O6	14:L:103:ARG:CZ	2.51	0.59
1:5:245:C:O2	1:5:245:C:O4'	2.17	0.59
1:5:296:A:O5'	1:5:296:A:H8	1.85	0.59
1:5:459:C:C4	1:5:460:C:C5	2.91	0.59
1:5:982:U:C2'	1:5:983:C:C6	2.77	0.59
1:5:1278:C:C2	1:5:1279:A:H1'	2.37	0.59
1:5:1280:C:H5'	1:5:1280:C:H6	1.65	0.59
1:5:1281:G:O4'	1:5:1281:G:N3	2.34	0.59
1:5:1529:G:N2	38:j:49:TRP:HZ2	2.01	0.59
1:5:1723:A:N1	1:5:1838:A:C2	2.70	0.59
1:5:2059:C:C2	1:5:2060:G:C8	2.90	0.59
1:5:2061:U:O2	21:S:111:ARG:HD3	2.02	0.59
1:5:2316:G:C6	1:5:2317:C:N4	2.70	0.59
1:5:2457:G:N2	1:5:3672:G:N2	2.50	0.59
1:5:2561:C:C4	1:5:2562:G:N7	2.70	0.59
1:5:3675:G:N2	1:5:3676:G:C8	2.70	0.59
1:5:3693:U:C4	1:5:3694:U:C4	2.88	0.59
1:5:3900:G:C6	1:5:3902:A:H1'	2.38	0.59
1:5:3911:C:H5"	1:5:4197:G:O2'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4172:A:C2	1:5:4173:G:N7	2.70	0.59
1:5:4229:U:H2'	1:5:4229:U:O2	2.01	0.59
1:5:4269:G:C2	1:5:4270:C:N1	2.70	0.59
3:8:132:G:C2	3:8:133:G:N9	2.69	0.59
11:H:8:GLN:HE22	11:H:71:ARG:HD2	1.67	0.59
32:d:71:ALA:HB2	32:d:108:TYR:HE2	1.65	0.59
40:l:21:ARG:HH22	40:l:24:PRO:CB	2.14	0.59
40:l:21:ARG:CD	46:1:273:ARG:HD3	2.23	0.59
1:5:86:U:C4	1:5:97:G:N2	2.70	0.59
1:5:296:A:C8	1:5:296:A:P	2.95	0.59
1:5:323:C:C2	1:5:324:A:C8	2.90	0.59
1:5:371:A:O2'	1:5:372:A:O5'	2.20	0.59
1:5:466:A:N3	1:5:467:U:C6	2.71	0.59
1:5:1280:C:O2'	1:5:1281:G:C3'	2.49	0.59
1:5:1342:A:OP1	16:N:204:ARG:NH1	2.35	0.59
1:5:1347:G:C5	1:5:1348:U:C5	2.90	0.59
1:5:1489:G:N2	1:5:1490:G:H1'	2.16	0.59
1:5:1673:U:C4	1:5:1682:A:N1	2.70	0.59
1:5:1794:A:C8	1:5:4214:A:N6	2.70	0.59
1:5:1857:C:O4'	1:5:1892:A:C2	2.55	0.59
1:5:1900:C:C4	1:5:1901:C:C5	2.90	0.59
1:5:1929:A:C2	1:5:2054:U:O4	2.55	0.59
1:5:1966:C:C6	1:5:1966:C:O5'	2.55	0.59
1:5:2307:A:C2'	1:5:2308:A:O5'	2.50	0.59
1:5:2417:A:C2	1:5:2418:A:N7	2.69	0.59
1:5:2447:U:O2'	1:5:2448:G:C5'	2.50	0.59
1:5:2633:U:O2	1:5:2634:C:C6	2.56	0.59
1:5:2746:A:H2'	1:5:2747:U:O5'	2.02	0.59
1:5:2848:G:C2	1:5:3838:U:C5	2.90	0.59
1:5:4078:C:C4	1:5:4079:C:C5	2.89	0.59
1:5:4463:U:C4	1:5:4488:A:C6	2.90	0.59
1:5:4653:C:H2'	1:5:4654:C:H6	1.66	0.59
6:C:122:TYR:HB2	6:C:280:PRO:HG3	1.85	0.59
10:G:54:PHE:CD2	10:G:54:PHE:N	2.70	0.59
14:L:4:SER:C	14:L:5:ARG:HG3	2.27	0.59
16:N:37:HIS:CD2	16:N:37:HIS:C	2.80	0.59
18:P:129:THR:HB	18:P:139:TYR:HB2	1.82	0.59
46:1:239:LEU:HB2	46:1:240:PRO:CD	2.32	0.59
1:5:54:G:H2'	1:5:54:G:N3	2.17	0.59
1:5:98:A:C5	1:5:99:A:C8	2.90	0.59
1:5:111:C:O2	1:5:111:C:H2'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:466:A:C2	1:5:467:U:C4	2.90	0.59
1:5:944:A:H2'	6:C:335:MET:HE1	1.85	0.59
1:5:1201:U:C2	1:5:1202:C:C5	2.90	0.59
1:5:1516:G:C6	1:5:1518:A:C5	2.90	0.59
1:5:1672:U:H2'	1:5:1673:U:C6	2.36	0.59
1:5:1898:C:H1'	1:5:2070:U:O2	2.02	0.59
1:5:1972:G:C2	1:5:1973:G:N7	2.70	0.59
1:5:1991:A:C3'	1:5:1992:U:H1'	2.31	0.59
1:5:2294:G:N1	1:5:2295:C:C5	2.70	0.59
1:5:2304:U:OP1	1:5:2305:U:O2'	2.12	0.59
1:5:2406:G:N2	1:5:2785:C:C2	2.71	0.59
1:5:2485:U:N3	1:5:2486:G:N7	2.50	0.59
1:5:2526:C:H42	46:1:405:ARG:HG2	1.66	0.59
1:5:2658:G:C6	1:5:2675:G:N1	2.71	0.59
1:5:2734:U:N3	1:5:2735:G:N7	2.51	0.59
1:5:2769:U:O2'	1:5:2770:C:C6	2.54	0.59
1:5:2791:C:C2	1:5:2792:C:C5	2.90	0.59
1:5:3607:U:N3	1:5:3608:A:N7	2.50	0.59
1:5:3739:C:N4	1:5:3740:G:C5	2.70	0.59
1:5:3833:C:C2	1:5:3834:C:C5	2.90	0.59
1:5:4096:C:N4	1:5:4097:G:N7	2.50	0.59
1:5:4098:A:C2	1:5:4099:G:C4	2.91	0.59
1:5:4281:A:C2	1:5:4283:G:C6	2.90	0.59
1:5:4331:G:N3	1:5:4331:G:H2'	2.16	0.59
1:5:4501:U:C4	1:5:4502:C:H1'	2.37	0.59
1:5:4532:U:H5	1:5:4554:G:N2	2.00	0.59
1:5:4759:C:OP1	17:O:160:ARG:NH2	2.33	0.59
1:5:4878:C:N3	1:5:4879:C:C5	2.70	0.59
1:5:4952:G:H5"	1:5:4952:G:C8	2.37	0.59
6:C:336:ARG:O	6:C:340:ILE:HG12	2.02	0.59
9:F:41:GLN:HA	9:F:41:GLN:NE2	2.18	0.59
33:e:108:ARG:HD3	33:e:128:ARG:HH21	1.66	0.59
46:1:252:PHE:CZ	46:1:455:TYR:HE1	2.20	0.59
1:5:219:G:H5'	1:5:219:G:C4	2.37	0.59
1:5:423:G:O6	3:8:10:G:O6	2.21	0.59
1:5:1413:C:N3	1:5:1414:C:C5	2.71	0.59
1:5:1509:C:O2	1:5:1510:G:C8	2.56	0.59
1:5:1724:G:N7	30:b:17:HIS:CD2	2.70	0.59
1:5:1925:G:C5	1:5:1926:C:C5	2.91	0.59
1:5:2079:G:N3	1:5:2080:U:C5	2.70	0.59
1:5:2367:A:C8	1:5:2798:A:C2	2.89	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2372:U:H1'	32:d:73:TRP:HE1	1.66	0.59
1:5:2479:G:C4	1:5:2480:G:C8	2.90	0.59
1:5:3764:U:H2'	1:5:3765:G:O4'	2.01	0.59
1:5:4136:G:C5	1:5:4137:C:C5	2.90	0.59
1:5:4277:G:C5	1:5:4278:C:C5	2.90	0.59
1:5:4286:C:O2	1:5:4287:G:C8	2.55	0.59
1:5:4466:C:N3	1:5:4467:A:C8	2.70	0.59
1:5:4561:C:N3	1:5:4562:C:C5	2.70	0.59
1:5:4879:C:C2	1:5:4880:C:C6	2.89	0.59
1:5:4911:A:C5'	5:B:100:ARG:CD	2.77	0.59
2:7:44:C:C2	2:7:45:U:C5	2.90	0.59
3:8:28:C:C2	3:8:29:G:C8	2.90	0.59
3:8:64:U:O2'	36:h:59:THR:OG1	2.14	0.59
3:8:102:G:H3'	3:8:104:A:H2'	1.83	0.59
9:F:96:ARG:O	9:F:120:PHE:HA	2.02	0.59
9:F:168:ARG:HD2	9:F:211:TRP:NE1	2.17	0.59
17:O:36:VAL:HG11	17:O:108:ILE:HD12	1.84	0.59
28:Z:88:ASP:OD1	28:Z:88:ASP:N	2.36	0.59
31:c:22:MET:SD	31:c:27:TYR:CE2	2.95	0.59
1:5:94:A:H2'	1:5:95:G:C5'	2.32	0.59
1:5:722:G:H21	6:C:343:GLN:NE2	2.00	0.59
1:5:976:G:C6	1:5:977:C:C4	2.91	0.59
1:5:978:G:C6	1:5:979:C:C4	2.91	0.59
1:5:1100:U:C2	1:5:1167:C:C5	2.91	0.59
1:5:1296:G:H1'	1:5:1297:U:OP2	2.03	0.59
1:5:1444:G:C2	1:5:1445:U:C4	2.89	0.59
1:5:1684:A:C5	1:5:1685:G:C8	2.90	0.59
1:5:1778:C:O2	1:5:1779:U:C6	2.55	0.59
1:5:2308:A:H2'	1:5:2309:G:O4'	2.02	0.59
1:5:3723:A:N3	1:5:3724:A:N7	2.51	0.59
1:5:3732:A:N1	1:5:3733:A:C5	2.70	0.59
1:5:3802:U:H3	1:5:4498:U:C2'	2.15	0.59
1:5:4333:C:O2	1:5:4334:U:C5	2.56	0.59
1:5:4548:A:P	1:5:4548:A:N7	2.76	0.59
1:5:4946:U:O2	1:5:4946:U:H2'	2.01	0.59
1:5:4984:C:H4'	5:B:25:HIS:CD2	2.38	0.59
3:8:9:A:C6	3:8:10:G:N7	2.71	0.59
3:8:134:G:N1	3:8:135:C:C4	2.70	0.59
9:F:149:LEU:HB2	9:F:197:TYR:HH	1.63	0.59
9:F:161:TYR:CD1	9:F:170:ALA:HA	2.37	0.59
16:N:63:ARG:CZ	16:N:63:ARG:HB2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:c:52:CYS:HB2	31:c:92:CYS:SG	2.41	0.59
1:5:90:G:C5	1:5:92:C:H1'	2.38	0.59
1:5:180:C:C2	1:5:181:C:C5	2.90	0.59
1:5:238:C:C2'	1:5:239:C:H5'	2.33	0.59
1:5:303:C:N3	1:5:304:C:C5	2.71	0.59
1:5:504:G:H2'	1:5:505:G:H8	1.67	0.59
1:5:1172:C:N3	1:5:1173:G:N7	2.50	0.59
1:5:1327:C:H4'	1:5:4448:G:H2'	1.84	0.59
1:5:1367:C:N1	1:5:1370:G:H2'	2.18	0.59
1:5:1398:A:H61	1:5:1419:G:C2'	2.15	0.59
1:5:1617:G:C4	1:5:1618:G:C8	2.91	0.59
1:5:1631:A:O2'	1:5:3650:C:H4'	2.02	0.59
1:5:1634:A:C2	1:5:1635:C:C2	2.90	0.59
1:5:1984:A:N6	1:5:2011:C:C2'	2.64	0.59
1:5:1984:A:H62	1:5:2011:C:C1'	2.15	0.59
1:5:2593:C:N3	1:5:2594:C:C5	2.71	0.59
1:5:3630:A:C2	1:5:3631:U:C6	2.90	0.59
1:5:3722:G:C2	1:5:3723:A:C8	2.91	0.59
1:5:3724:A:C6	1:5:3725:G:C5	2.90	0.59
1:5:3909:C:O2	1:5:3909:C:C2'	2.50	0.59
1:5:3913:G:C2	1:5:4390:A:C2	2.90	0.59
1:5:4425:G:C2	1:5:4426:C:H1'	2.37	0.59
1:5:4467:A:C2	1:5:4468:U:C6	2.91	0.59
1:5:4482:U:C2	1:5:4483:C:C5	2.90	0.59
1:5:4988:U:H2'	1:5:4988:U:O2	2.01	0.59
5:B:203:GLN:HA	5:B:203:GLN:NE2	2.12	0.59
6:C:142:HIS:O	6:C:144:ILE:HG13	2.02	0.59
7:D:20:PHE:HB3	7:D:30:TYR:OH	2.02	0.59
7:D:265:ARG:HH11	7:D:265:ARG:HG2	1.68	0.59
9:F:100:ILE:HG21	19:Q:4:ASP:OD2	2.03	0.59
14:L:166:ALA:CB	29:a:97:ALA:HB1	2.33	0.59
30:b:11:ASN:OD1	30:b:12:GLN:N	2.36	0.59
1:5:174:C:C2	1:5:263:G:C2	2.91	0.59
1:5:183:C:O2	1:5:189:G:O6	2.21	0.59
1:5:279:A:H5'	1:5:329:A:N3	2.18	0.59
1:5:280:G:C8	16:N:120:TRP:CZ3	2.91	0.59
1:5:458:C:C4	1:5:459:C:C5	2.91	0.59
1:5:463:A:N1	1:5:692:A:H2	2.00	0.59
1:5:942:G:P	9:F:244:ARG:HH12	2.25	0.59
1:5:1203:G:C2	1:5:1204:C:C6	2.90	0.59
1:5:1247:U:N3	1:5:1248:C:C6	2.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1263:A:C4	1:5:1264:C:C6	2.90	0.59
1:5:1368:A:O2'	1:5:1369:C:OP1	2.19	0.59
1:5:1378:C:H2'	1:5:1378:C:O2	2.03	0.59
1:5:1479:G:O2'	1:5:1480:C:H5'	2.03	0.59
1:5:1667:G:C5	1:5:2280:G:C2	2.91	0.59
1:5:2320:G:O2'	1:5:2321:G:P	2.61	0.59
1:5:2477:A:C2	1:5:2478:C:C4	2.91	0.59
1:5:2508:U:O2	1:5:2509:C:H6	1.75	0.59
1:5:2714:G:C2	1:5:2715:G:C5	2.91	0.59
1:5:2736:G:N3	1:5:2737:C:C5	2.71	0.59
1:5:2751:G:C2	1:5:2752:G:C8	2.90	0.59
1:5:2773:G:C2	1:5:2774:C:C6	2.91	0.59
1:5:3720:G:C5	1:5:3721:U:C5	2.90	0.59
1:5:3785:A:N1	1:5:4536:C:H1'	2.14	0.59
1:5:4076:G:H21	10:G:74:LEU:CG	2.13	0.59
1:5:4152:G:N1	1:5:4153:C:C4	2.70	0.59
1:5:4342:C:C2	1:5:4343:U:C6	2.90	0.59
1:5:4628:U:O2	1:5:4629:U:C6	2.55	0.59
1:5:4735:G:C5	1:5:4736:C:C5	2.90	0.59
1:5:4772:C:O2	1:5:4773:C:C6	2.55	0.59
3:8:79:G:C2	3:8:80:A:N1	2.71	0.59
8:E:157:ARG:HB3	8:E:267:LEU:HD23	1.85	0.59
8:E:197:ILE:CD1	8:E:257:ILE:HG23	2.32	0.59
9:F:83:PHE:HE2	21:S:13:VAL:HG21	1.67	0.59
25:W:50:ASN:HB3	25:W:55:TYR:CZ	2.37	0.59
33:e:58:ILE:C	33:e:60:TYR:H	2.11	0.59
33:e:107:ASN:OD1	33:e:107:ASN:N	2.36	0.59
1:5:54:G:O6	1:5:55:G:C5	2.56	0.59
1:5:421:C:C4	1:5:422:C:C5	2.91	0.59
1:5:964:A:H1'	45:r:98:ARG:NH1	2.18	0.59
1:5:1674:C:C2	1:5:1675:C:C6	2.91	0.59
1:5:1813:U:H4'	30:b:49:HIS:O	2.02	0.59
1:5:2282:A:O2'	1:5:2283:G:H5'	2.01	0.59
1:5:2478:C:H2'	1:5:2479:G:C8	2.38	0.59
1:5:2560:C:C4	1:5:2561:C:C5	2.91	0.59
1:5:2657:G:H3'	1:5:2658:G:C8	2.38	0.59
1:5:3611:A:C2	1:5:5016:A:C8	2.91	0.59
1:5:3863:C:O2	1:5:3864:C:C6	2.56	0.59
1:5:4276:G:N1	1:5:4277:G:N9	2.51	0.59
1:5:4302:U:H5	1:5:4303:C:C6	2.17	0.59
1:5:4416:G:C2	1:5:4417:C:C4	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4536:C:C4	1:5:4537:C:C5	2.91	0.59
1:5:4628:U:N3	1:5:4629:U:C5	2.71	0.59
1:5:5044:A:O2'	1:5:5045:G:H5'	2.03	0.59
1:5:5047:C:C5	1:5:5050:C:H6	2.20	0.59
2:7:55:A:C2	2:7:56:G:C5	2.91	0.59
3:8:70:G:N1	3:8:87:G:C2	2.71	0.59
5:B:55:HIS:CE1	5:B:369:ASP:OD2	2.56	0.59
28:Z:30:ASP:OD1	28:Z:31:ASP:HB2	2.02	0.59
35:g:9:ARG:NH1	35:g:34:TYR:CD1	2.71	0.59
1:5:90:G:C2	1:5:95:G:N1	2.71	0.59
1:5:405:U:O4	1:5:407:A:OP2	2.21	0.59
1:5:1217:G:N2	1:5:1218:G:C6	2.67	0.59
1:5:1265:G:C5'	1:5:2115:G:N2	2.64	0.59
1:5:1299:G:C2	1:5:1300:G:C8	2.91	0.59
1:5:1430:C:C2	1:5:1431:C:C6	2.91	0.59
1:5:1751:A:C5	1:5:1752:G:C8	2.91	0.59
1:5:2404:A:H2'	1:5:2405:G:O4'	2.03	0.59
1:5:2794:C:C2	18:P:136:ILE:HD12	2.37	0.59
1:5:3704:U:C2	1:5:3705:G:C8	2.90	0.59
1:5:3909:C:N3	1:5:3910:C:H5	1.92	0.59
1:5:3919:C:H5"	4:A:207:VAL:HG12	1.85	0.59
1:5:4087:G:C5	4:A:34:PHE:CE2	2.91	0.59
1:5:5038:A:OP1	25:W:61:LYS:NZ	2.34	0.59
1:5:5047:C:O2	1:5:5048:A:C6	2.53	0.59
5:B:222:VAL:HG11	5:B:274:TYR:CZ	2.38	0.59
9:F:83:PHE:CE2	21:S:13:VAL:HG21	2.38	0.59
26:X:83:THR:HG23	46:1:403:GLY:CA	2.33	0.59
28:Z:97:ASN:OD1	28:Z:98:LYS:N	2.36	0.59
43:o:40:ARG:HB3	43:o:40:ARG:HH21	1.66	0.59
1:5:70:A:C2	1:5:4355:G:H1'	2.37	0.58
1:5:167:C:N3	1:5:168:C:C5	2.71	0.58
1:5:456:C:O2	1:5:457:G:C8	2.55	0.58
1:5:665:C:O2	1:5:665:C:C2'	2.49	0.58
1:5:1266:G:C5'	1:5:2112:G:C2	2.84	0.58
1:5:1441:C:C4	1:5:1442:C:C5	2.90	0.58
1:5:1583:A:H1'	1:5:2396:A:C6	2.38	0.58
1:5:1629:G:N1	1:5:1631:A:N1	2.51	0.58
1:5:1965:G:C6	1:5:1966:C:C4	2.91	0.58
1:5:2265:G:H1'	1:5:2266:C:OP1	2.03	0.58
1:5:2268:A:H4'	1:5:2269:C:H5'	1.85	0.58
1:5:2604:C:C2	1:5:2605:G:H8	2.10	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4070:U:C2	1:5:4071:U:C6	2.91	0.58
1:5:4531:U:H5'	1:5:4531:U:C6	2.38	0.58
1:5:4539:U:N3	1:5:4540:C:C5	2.71	0.58
1:5:4734:A:C4	1:5:4735:G:C8	2.91	0.58
1:5:4874:A:H1'	17:O:175:MET:SD	2.42	0.58
1:5:4895:C:O2	1:5:4896:G:C5	2.56	0.58
5:B:302:ASN:HD22	5:B:330:PHE:HE2	1.51	0.58
6:C:138:MET:O	45:r:16:PHE:HZ	1.84	0.58
6:C:210:ILE:HG21	6:C:252:TRP:HZ3	1.67	0.58
7:D:111:ASN:C	7:D:111:ASN:ND2	2.60	0.58
9:F:58:HIS:O	9:F:61:LYS:N	2.36	0.58
9:F:244:ARG:HG2	9:F:244:ARG:HH11	1.66	0.58
14:L:179:PHE:CE2	29:a:131:ARG:HB2	2.38	0.58
1:5:153:G:N1	1:5:154:G:C5	2.72	0.58
1:5:218:A:N7	6:C:181:LYS:HG2	2.19	0.58
1:5:423:G:C5	1:5:424:U:C5	2.91	0.58
1:5:436:C:H4'	33:e:26:ASP:OD2	2.03	0.58
1:5:661:C:C4	1:5:662:C:C4	2.91	0.58
1:5:936:C:O2'	15:M:46:ARG:CZ	2.50	0.58
1:5:976:G:C2	1:5:977:C:N1	2.71	0.58
1:5:1070:G:C4	1:5:1071:C:C6	2.90	0.58
1:5:1170:G:C2	1:5:1171:G:C8	2.91	0.58
1:5:1188:C:O2	1:5:1188:C:H2'	2.01	0.58
1:5:1213:G:O6	1:5:1215:C:C5	2.55	0.58
1:5:1233:G:C2	1:5:1234:G:C8	2.90	0.58
1:5:1265:G:N2	1:5:2111:G:O3'	2.37	0.58
1:5:1421:G:N3	1:5:1422:G:C8	2.71	0.58
1:5:1437:C:N3	1:5:2098:G:N7	2.51	0.58
1:5:1507:C:N3	1:5:1508:A:C8	2.70	0.58
1:5:1520:C:H4'	6:C:94:ASN:HD21	1.68	0.58
1:5:1556:C:N3	1:5:1557:C:H5	1.98	0.58
1:5:2078:C:O2	1:5:2078:C:C2'	2.51	0.58
1:5:2128:G:C6	1:5:2129:C:C4	2.90	0.58
1:5:2313:A:O2'	1:5:2314:G:OP1	2.17	0.58
1:5:2459:G:O6	16:N:105:ARG:NE	2.36	0.58
1:5:2481:G:C6	1:5:2482:C:C4	2.91	0.58
1:5:2497:C:N3	1:5:2498:C:C4	2.70	0.58
1:5:3791:C:N3	1:5:3802:U:H6	1.99	0.58
1:5:4099:G:C4	1:5:4100:C:C6	2.92	0.58
1:5:4236:G:H2'	1:5:4237:C:C6	2.38	0.58
1:5:4416:G:N3	1:5:4417:C:C6	2.70	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4537:C:C2	1:5:4538:G:N7	2.68	0.58
1:5:5047:C:C6	1:5:5050:C:H6	2.20	0.58
3:8:10:G:N1	3:8:11:C:C2	2.71	0.58
3:8:70:G:C5'	27:Y:27:ARG:HH11	2.16	0.58
5:B:103:LYS:HD3	5:B:149:ASP:OD1	2.02	0.58
5:B:307:TYR:CD2	5:B:366:LYS:HD2	2.38	0.58
8:E:218:LEU:HD21	8:E:230:ASP:OD2	2.03	0.58
12:I:146:GLU:N	12:I:146:GLU:OE2	2.36	0.58
13:J:105:PHE:CE1	13:J:132:VAL:CB	2.81	0.58
16:N:6:TYR:CZ	37:i:40:VAL:HG22	2.37	0.58
20:R:4:LEU:HD21	20:R:33:ALA:HB2	1.83	0.58
21:S:13:VAL:HG22	21:S:63:TYR:HB3	1.84	0.58
1:5:212:A:C2	1:5:213:G:C5	2.92	0.58
1:5:235:A:N6	1:5:238:C:C4	2.71	0.58
1:5:494:U:C4	1:5:495:C:C5	2.91	0.58
1:5:962:C:P	1:5:2264:C:N3	2.76	0.58
1:5:1215:C:C4	1:5:1216:C:C5	2.91	0.58
1:5:1492:G:N1	1:5:1493:G:C5	2.71	0.58
1:5:1572:U:C5'	20:R:95:TRP:HZ2	2.16	0.58
1:5:1725:U:C6	1:5:1725:U:H5"	2.39	0.58
1:5:1755:C:C2	7:D:3:PHE:HB2	2.38	0.58
1:5:1946:G:C6	1:5:2037:C:N4	2.72	0.58
1:5:2056:G:N1	1:5:2058:G:C6	2.71	0.58
1:5:2125:C:O5'	1:5:2125:C:H6	1.86	0.58
1:5:2128:G:H2'	1:5:2129:C:O4'	2.04	0.58
1:5:2261:G:C2'	1:5:2262:G:C8	2.86	0.58
1:5:3663:A:N3	1:5:3663:A:H2'	2.19	0.58
1:5:4268:A:H2'	1:5:4269:G:O4'	2.03	0.58
1:5:4287:G:C6	1:5:4288:C:N4	2.71	0.58
1:5:4414:A:N3	1:5:4427:G:N2	2.51	0.58
1:5:4724:A:C4	1:5:4725:C:C6	2.92	0.58
2:7:21:G:H8	2:7:21:G:H5"	1.68	0.58
9:F:100:ILE:C	9:F:101:ASN:OD1	2.46	0.58
14:L:179:PHE:CD2	29:a:131:ARG:HB2	2.39	0.58
19:Q:146:ARG:HH11	19:Q:146:ARG:CB	2.16	0.58
24:V:14:PHE:CE2	24:V:91:LYS:HG3	2.38	0.58
1:5:247:G:N3	1:5:248:C:C6	2.71	0.58
1:5:910:G:C6	1:5:911:U:C5	2.91	0.58
1:5:1245:C:H1'	1:5:2111:G:H2'	1.86	0.58
1:5:1309:C:C2	1:5:1310:C:C6	2.90	0.58
1:5:1326:A:P	1:5:3901:A:H61	2.25	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1351:G:OP1	6:C:33:ARG:NH1	2.36	0.58
1:5:1440:U:C2	1:5:1441:C:C5	2.91	0.58
1:5:1618:G:C2	1:5:1619:G:N7	2.71	0.58
1:5:2261:G:O2'	1:5:2262:G:O4'	2.20	0.58
1:5:2270:G:C6	1:5:2271:C:N4	2.72	0.58
1:5:2369:U:C5	1:5:4656:A:C2	2.92	0.58
1:5:2417:A:N1	1:5:2418:A:N7	2.51	0.58
1:5:2783:A:C4	1:5:2784:C:C5	2.91	0.58
1:5:3665:G:N2	1:5:3685:C:O2'	2.36	0.58
1:5:3796:U:C2	1:5:3797:C:C5	2.91	0.58
1:5:4480:A:C2	1:5:4481:U:O4'	2.57	0.58
1:5:4881:U:O2'	1:5:4882:U:O4'	2.18	0.58
1:5:4982:A:N6	1:5:4983:C:C5	2.70	0.58
1:5:5021:C:C2	1:5:5022:U:C5	2.91	0.58
3:8:144:U:C2	3:8:145:C:C5	2.90	0.58
6:C:325:MET:CE	9:F:157:TYR:CE2	2.86	0.58
8:E:184:ARG:HD3	8:E:213:PHE:HB2	1.83	0.58
16:N:11:TRP:CE3	16:N:19:MET:HE2	2.38	0.58
24:V:115:SER:HA	24:V:135:ASN:HD21	1.68	0.58
31:c:78:ASN:CG	31:c:79:ILE:N	2.61	0.58
43:o:37:GLY:HA2	43:o:40:ARG:HH22	1.67	0.58
1:5:28:C:C2	1:5:29:G:H8	2.09	0.58
1:5:174:C:C2	1:5:263:G:N2	2.71	0.58
1:5:490:C:H3'	1:5:491:G:H8	1.68	0.58
1:5:919:C:C4	1:5:920:C:C4	2.92	0.58
1:5:981:C:C4	8:E:69:TYR:CE1	2.92	0.58
1:5:1206:C:C2	1:5:1207:C:C5	2.92	0.58
1:5:1686:C:H2'	1:5:1687:U:C5'	2.34	0.58
1:5:1894:C:O2'	1:5:1895:G:H5'	2.03	0.58
1:5:1918:U:C2	1:5:1920:C:C5	2.92	0.58
1:5:1946:G:N1	1:5:2037:C:C5	2.71	0.58
1:5:2098:G:H2'	1:5:2099:G:O4'	2.04	0.58
1:5:2319:C:H41	33:e:58:ILE:HD12	1.68	0.58
1:5:2515:G:O6	1:5:2516:G:C5	2.57	0.58
1:5:2595:C:C2	1:5:2596:G:C8	2.90	0.58
1:5:2851:G:O2'	1:5:3841:C:C4'	2.51	0.58
1:5:3590:G:C2	1:5:3591:C:N1	2.71	0.58
1:5:3800:A:C2	1:5:4496:A:C1'	2.87	0.58
1:5:3812:C:OP1	1:5:3813:A:O2'	2.21	0.58
1:5:3892:U:O2'	18:P:80:GLN:NE2	2.37	0.58
1:5:4166:G:N3	1:5:4167:G:C8	2.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4660:G:C2	1:5:4661:G:N7	2.71	0.58
2:7:58:A:C6	2:7:59:G:N7	2.72	0.58
13:J:107:PHE:CE1	13:J:130:PHE:HB2	2.38	0.58
13:J:154:LYS:O	13:J:155:HIS:HB2	2.04	0.58
15:M:104:MET:HE2	17:O:199:HIS:HB3	1.84	0.58
21:S:12:VAL:HG13	21:S:64:CYS:HB2	1.85	0.58
21:S:80:ILE:HD11	21:S:126:ILE:HD12	1.85	0.58
26:X:117:TYR:N	26:X:117:TYR:CD1	2.69	0.58
29:a:127:LYS:CG	29:a:128:PHE:HE2	2.16	0.58
29:a:127:LYS:HG2	29:a:128:PHE:CE2	2.38	0.58
1:5:88:A:C6	1:5:97:G:N3	2.71	0.58
1:5:151:G:C6	10:G:141:ASN:ND2	2.72	0.58
1:5:731:G:C5	1:5:732:A:C8	2.91	0.58
1:5:916:C:N4	1:5:917:A:C5	2.70	0.58
1:5:964:A:H8	1:5:964:A:H5"	1.65	0.58
1:5:1489:G:N3	1:5:1489:G:H2'	2.18	0.58
1:5:1616:U:O2	1:5:1617:G:C8	2.56	0.58
1:5:1758:G:N1	1:5:1759:G:C5	2.72	0.58
1:5:1770:A:C6	1:5:1771:U:C4	2.92	0.58
1:5:1936:C:C4	2:7:84:U:H5	2.20	0.58
1:5:2376:A:H2'	1:5:2377:C:O4'	2.03	0.58
1:5:2468:U:OP2	1:5:2506:G:N2	2.36	0.58
1:5:3859:G:N3	1:5:3859:G:H2'	2.18	0.58
1:5:4098:A:N1	1:5:4099:G:N7	2.51	0.58
1:5:4315:A:N1	1:5:4316:G:N7	2.52	0.58
1:5:4404:U:O4	1:5:4436:U:C4	2.56	0.58
1:5:4539:U:C2	1:5:4540:C:C6	2.92	0.58
1:5:4977:A:C2	1:5:4978:G:C4	2.92	0.58
1:5:5052:C:C4	1:5:5053:U:C5	2.91	0.58
2:7:28:C:C4	2:7:29:C:C6	2.92	0.58
3:8:5:U:OP2	18:P:62:ARG:NH1	2.37	0.58
3:8:53:G:C6	3:8:54:C:C4	2.91	0.58
3:8:73:U:C5	3:8:74:U:C5	2.92	0.58
27:Y:10:ASP:O	27:Y:11:ARG:C	2.45	0.58
29:a:129:PHE:CE2	29:a:144:CYS:HB3	2.37	0.58
1:5:83:C:O5'	1:5:84:A:H2'	2.04	0.58
1:5:488:G:C2	1:5:489:C:C5	2.91	0.58
1:5:488:G:C2	1:5:489:C:N1	2.72	0.58
1:5:909:A:N1	1:5:910:G:N7	2.51	0.58
1:5:1177:U:H4'	7:D:282:GLN:HB3	1.85	0.58
1:5:1301:C:O4'	1:5:1301:C:O2	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1326:A:H2'	1:5:1327:C:C6	2.38	0.58
1:5:1543:G:C6	1:5:1544:G:N7	2.72	0.58
1:5:1582:U:H5	1:5:1610:C:O2	1.87	0.58
1:5:1617:G:N3	1:5:2513:A:C2	2.72	0.58
1:5:1618:G:N1	1:5:1619:G:C5	2.72	0.58
1:5:1755:C:H41	1:5:1778:C:C4'	2.16	0.58
1:5:2126:G:H1'	1:5:2127:C:C5	2.38	0.58
1:5:2362:U:C4	1:5:3859:G:C2	2.90	0.58
1:5:2438:A:N6	1:5:2441:C:C4	2.71	0.58
1:5:3654:G:O2'	1:5:3693:U:OP1	2.20	0.58
1:5:4086:G:H4'	10:G:54:PHE:HB3	1.86	0.58
1:5:4137:C:H2'	1:5:4138:C:H6	1.67	0.58
1:5:4332:C:O2	1:5:4332:C:C2'	2.47	0.58
1:5:4608:G:C6	1:5:4609:G:C4	2.92	0.58
1:5:4896:G:N3	1:5:4897:G:C8	2.71	0.58
1:5:4957:C:N3	1:5:4958:C:H5	2.00	0.58
1:5:4976:U:C4	5:B:342:LYS:HD2	2.38	0.58
1:5:4999:G:N3	1:5:5000:G:C8	2.72	0.58
3:8:97:A:C4	3:8:98:C:C5	2.91	0.58
4:A:186:TYR:N	4:A:196:TRP:HZ3	2.01	0.58
24:V:14:PHE:CZ	24:V:91:LYS:HD2	2.38	0.58
25:W:50:ASN:HA	25:W:55:TYR:CD2	2.39	0.58
28:Z:74:VAL:HG23	28:Z:101:PHE:CE2	2.38	0.58
37:i:29:ARG:HG3	37:i:29:ARG:O	2.04	0.58
43:o:26:TYR:C	43:o:26:TYR:CD1	2.81	0.58
1:5:167:C:C2	1:5:269:G:N2	2.72	0.58
1:5:1270:A:C5	1:5:1271:G:H1'	2.38	0.58
1:5:1441:C:N3	1:5:1442:C:C5	2.72	0.58
1:5:1491:A:C2	1:5:1492:G:C5	2.92	0.58
1:5:1628:C:C2	1:5:1629:G:N7	2.55	0.58
1:5:1806:G:C2	1:5:1807:C:C6	2.92	0.58
1:5:2004:U:H2'	1:5:2005:G:O4'	2.03	0.58
1:5:2081:C:O2'	1:5:2082:G:H5'	2.03	0.58
1:5:2085:G:C2	1:5:2273:G:C6	2.92	0.58
1:5:2089:G:C6	1:5:2262:G:O2'	2.57	0.58
1:5:3596:A:O3'	20:R:143:HIS:CE1	2.56	0.58
1:5:3868:G:H22	1:5:3899:G:N2	2.01	0.58
1:5:4283:G:C4	1:5:4284:C:C5	2.91	0.58
1:5:4369:A:N1	1:5:4370:G:N7	2.51	0.58
1:5:4537:C:O2	1:5:4537:C:C2'	2.51	0.58
1:5:5007:A:N7	1:5:5040:U:O4	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:30:C:C2	2:7:48:G:C2	2.91	0.58
2:7:93:G:C4	2:7:94:C:C6	2.92	0.58
5:B:264:PHE:HD2	17:O:66:PRO:CD	2.16	0.58
8:E:43:ASN:ND2	8:E:44:PRO:O	2.37	0.58
12:I:209:TRP:HE1	12:I:213:HIS:CD2	2.22	0.58
20:R:117:ARG:HB2	20:R:117:ARG:CZ	2.33	0.58
21:S:8:ARG:HB2	21:S:10:TYR:HE2	1.67	0.58
32:d:24:GLU:HG2	32:d:120:VAL:HB	1.84	0.58
45:r:45:HIS:CE1	45:r:103:ARG:NH1	2.71	0.58
1:5:490:C:C2'	1:5:491:G:C8	2.87	0.58
1:5:1254:A:H2'	1:5:1256:G:N7	2.19	0.58
1:5:1545:G:N2	1:5:1546:C:C2	2.71	0.58
1:5:1572:U:H5'	20:R:95:TRP:CZ2	2.38	0.58
1:5:1755:C:H5	1:5:1778:C:H1'	1.69	0.58
1:5:1757:U:N3	1:5:1758:G:N7	2.51	0.58
1:5:1948:G:C5	1:5:1949:U:C5	2.92	0.58
1:5:2013:A:H2'	1:5:2014:C:O4'	2.04	0.58
1:5:2076:G:C6	1:5:2077:C:C6	2.92	0.58
1:5:2796:G:H4'	1:5:2797:C:OP2	2.04	0.58
1:5:2857:A:O2'	1:5:2858:A:P	2.61	0.58
1:5:3698:G:N1	1:5:3699:C:C4	2.72	0.58
1:5:3909:C:C2	1:5:3910:C:C6	2.91	0.58
1:5:4199:C:N3	1:5:4200:G:H8	2.02	0.58
1:5:4314:C:C4	1:5:4315:A:N7	2.72	0.58
3:8:94:G:C6	38:j:79:ARG:HD2	2.39	0.58
3:8:152:U:H2'	3:8:153:C:O4'	2.03	0.58
5:B:17:LEU:HD13	5:B:17:LEU:C	2.28	0.58
1:5:218:A:C1'	1:5:219:G:H5"	2.33	0.58
1:5:307:A:H2'	1:5:308:G:N3	2.19	0.58
1:5:488:G:C6	1:5:489:C:C5	2.92	0.58
1:5:919:C:N4	1:5:920:C:N4	2.52	0.58
1:5:985:C:N3	1:5:986:C:C5	2.72	0.58
1:5:1243:C:N3	1:5:1269:G:N2	2.47	0.58
1:5:1866:U:C4	1:5:4405:G:C1'	2.87	0.58
1:5:1921:C:H1'	21:S:160:ARG:HB2	1.86	0.58
1:5:2026:A:H2'	1:5:2027:U:O4'	2.04	0.58
1:5:2089:G:C2	1:5:2263:A:C6	2.92	0.58
1:5:2365:C:O2	1:5:2829:U:C5	2.57	0.58
1:5:4497:U:C5	1:5:4498:U:C6	2.92	0.58
1:5:4626:A:H5'	5:B:53:MET:HE3	1.85	0.58
1:5:4735:G:C2	1:5:4736:C:C5	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4737:G:C2	1:5:4738:C:N3	2.72	0.58
2:7:17:C:O2	2:7:18:C:C6	2.56	0.58
4:A:186:TYR:HA	4:A:196:TRP:CE3	2.39	0.58
24:V:97:TYR:CE2	25:W:21:TYR:HD1	2.22	0.58
30:b:27:GLN:N	30:b:27:GLN:HE21	2.02	0.58
46:1:271:ARG:O	46:1:272:TYR:CG	2.57	0.58
1:5:125:C:O2	1:5:126:C:C6	2.57	0.57
1:5:301:G:C5	1:5:302:C:C5	2.92	0.57
1:5:486:C:O2	1:5:487:G:C8	2.56	0.57
1:5:910:G:C5	1:5:911:U:C5	2.92	0.57
1:5:991:C:C2	1:5:992:C:C6	2.92	0.57
1:5:1212:G:N3	1:5:1213:G:C8	2.72	0.57
1:5:1379:C:O3'	1:5:1380:G:O4'	2.22	0.57
1:5:1392:A:C2	1:5:1393:G:N7	2.71	0.57
1:5:1570:G:C6	1:5:1571:G:N7	2.72	0.57
1:5:1676:C:O2'	1:5:3914:U:C4	2.50	0.57
1:5:1887:G:C2	1:5:1890:G:O6	2.57	0.57
1:5:1926:C:O2	1:5:1927:U:C6	2.57	0.57
1:5:1959:U:C1'	1:5:1961:G:H1'	2.33	0.57
1:5:2263:A:OP2	45:r:39:ARG:NH2	2.36	0.57
1:5:2480:G:C4	1:5:2481:G:C8	2.92	0.57
1:5:2481:G:C5	1:5:2482:C:C5	2.92	0.57
1:5:2578:G:C2	1:5:2579:G:C8	2.92	0.57
1:5:2844:A:O2'	1:5:4631:G:H4'	2.04	0.57
1:5:3793:U:O2	1:5:3794:C:C6	2.57	0.57
1:5:4070:U:C4	1:5:4071:U:C5	2.91	0.57
1:5:4124:G:H21	10:G:44:ASP:HA	1.69	0.57
1:5:4304:A:H2	29:a:43:ILE:HG23	1.69	0.57
1:5:4323:A:C2	1:5:4324:A:C4	2.92	0.57
1:5:4455:G:N3	1:5:4456:C:C6	2.72	0.57
1:5:4700:A:H2	11:H:69:THR:HG22	1.69	0.57
1:5:4915:G:C2	1:5:4916:G:C8	2.93	0.57
2:7:17:C:C4	2:7:18:C:C5	2.92	0.57
3:8:130:C:N3	3:8:131:G:N7	2.51	0.57
3:8:131:G:C2	3:8:132:G:C8	2.92	0.57
4:A:40:TYR:O	4:A:40:TYR:CG	2.56	0.57
5:B:51:ALA:HA	5:B:323:TYR:HE2	1.66	0.57
9:F:101:ASN:OD1	9:F:101:ASN:N	2.35	0.57
9:F:239:GLU:C	9:F:241:GLN:H	2.12	0.57
12:I:171:TRP:HB3	12:I:181:PHE:CE2	2.38	0.57
14:L:126:LEU:HD11	36:h:117:ARG:HG3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:166:ALA:HB1	29:a:97:ALA:HB1	1.85	0.57
21:S:95:ARG:NH1	21:S:97:TYR:HH	1.99	0.57
24:V:98:PHE:CZ	25:W:22:ALA:CB	2.86	0.57
46:1:60:ASP:O	46:1:62:PHE:N	2.37	0.57
1:5:951:G:C2	1:5:952:G:C8	2.92	0.57
1:5:1456:C:O2'	19:Q:73:PRO:O	2.21	0.57
1:5:1491:A:N1	1:5:1492:G:C5	2.72	0.57
1:5:1572:U:H4'	20:R:95:TRP:CE2	2.38	0.57
1:5:1632:A:C6	1:5:1634:A:N9	2.69	0.57
1:5:1888:A:N6	1:5:3873:G:O2'	2.36	0.57
1:5:2347:A:C4	1:5:2348:G:C6	2.91	0.57
1:5:2385:U:H2'	1:5:2386:U:C6	2.39	0.57
1:5:2478:C:H2'	1:5:2479:G:O4'	2.04	0.57
1:5:2515:G:C6	1:5:2516:G:C4	2.92	0.57
1:5:2770:C:C4	1:5:2771:G:N7	2.72	0.57
1:5:2793:G:C5	1:5:2797:C:N4	2.72	0.57
1:5:3621:A:C8	1:5:4642:U:O2	2.56	0.57
1:5:3782:C:C4	1:5:3809:G:C6	2.92	0.57
1:5:3907:G:C2	1:5:3909:C:C5	2.92	0.57
1:5:4079:C:C2	1:5:4080:C:C6	2.92	0.57
1:5:4081:G:N1	1:5:4082:G:C5	2.72	0.57
1:5:4092:G:C2	1:5:4158:C:C2	2.92	0.57
1:5:4219:A:O2'	1:5:4220:A:C8	2.52	0.57
1:5:4537:C:O2	1:5:4538:G:H8	1.85	0.57
1:5:4607:A:C5	1:5:4608:G:H1'	2.39	0.57
1:5:4734:A:C2	1:5:4735:G:C4	2.92	0.57
2:7:93:G:C6	2:7:94:C:C4	2.92	0.57
4:A:192:LYS:HB3	4:A:193:ARG:HD3	1.86	0.57
12:I:36:LEU:HD22	12:I:73:ASN:ND2	2.19	0.57
13:J:15:LEU:HB3	13:J:165:TRP:HD1	1.69	0.57
14:L:78:LEU:O	14:L:82:ARG:NH2	2.37	0.57
17:O:49:ARG:HH11	17:O:49:ARG:HG2	1.69	0.57
19:Q:34:PHE:CZ	19:Q:38:ARG:HG3	2.39	0.57
20:R:110:ARG:HH11	20:R:120:TYR:HE2	1.52	0.57
29:a:62:HIS:O	29:a:62:HIS:CD2	2.57	0.57
29:a:104:VAL:HG22	29:a:109:TYR:CE2	2.39	0.57
40:l:27:ILE:O	40:l:33:ASN:ND2	2.37	0.57
1:5:12:A:C2	1:5:14:C:C6	2.92	0.57
1:5:29:G:C6	1:5:30:C:C4	2.92	0.57
1:5:98:A:N6	1:5:99:A:C5	2.72	0.57
1:5:124:C:C2	1:5:125:C:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:291:U:O2	1:5:292:G:O2'	2.21	0.57
1:5:752:G:O6	1:5:753:C:C4	2.57	0.57
1:5:754:U:C4	1:5:755:C:C5	2.93	0.57
1:5:978:G:H2'	1:5:979:C:O4'	2.04	0.57
1:5:1048:G:C6	1:5:1049:C:C4	2.91	0.57
1:5:1175:A:C2	1:5:1176:C:C5	2.91	0.57
1:5:1261:G:C2	1:5:1262:G:N9	2.72	0.57
1:5:1270:A:C2'	1:5:1271:G:O5'	2.52	0.57
1:5:1539:G:H4'	4:A:194:ASN:HD22	1.69	0.57
1:5:1777:C:C2	1:5:1778:C:C6	2.92	0.57
1:5:1878:G:C6	1:5:1879:C:N4	2.73	0.57
1:5:1948:G:C6	1:5:1949:U:C4	2.93	0.57
1:5:2113:G:OP1	1:5:2113:G:O4'	2.21	0.57
1:5:2440:U:O2'	1:5:2441:C:P	2.62	0.57
1:5:2581:A:H2'	1:5:2582:A:C8	2.39	0.57
1:5:3945:A:C2	1:5:3946:G:C5	2.92	0.57
1:5:4100:C:O2	1:5:4101:C:C6	2.57	0.57
1:5:4269:G:C4	1:5:4270:C:C6	2.91	0.57
1:5:4683:U:C4	1:5:4707:A:C6	2.92	0.57
1:5:4989:U:O2	1:5:4989:U:O4'	2.23	0.57
2:7:11:A:H4'	2:7:13:A:C8	2.39	0.57
2:7:116:G:C2	2:7:117:G:C8	2.92	0.57
10:G:51:LEU:O	10:G:55:VAL:HG23	2.03	0.57
14:L:176:PHE:C	14:L:176:PHE:CD1	2.81	0.57
16:N:143:ARG:HD3	36:h:95:LEU:CD2	2.35	0.57
17:O:113:ASP:N	17:O:113:ASP:OD1	2.38	0.57
45:r:33:LYS:HD2	45:r:40:TYR:HE2	1.69	0.57
46:1:248:THR:OG1	46:1:440:ALA:O	2.20	0.57
46:1:267:ILE:HG22	46:1:399:MET:CE	2.33	0.57
1:5:60:G:C2	1:5:61:A:C8	2.91	0.57
1:5:300:A:N3	1:5:301:G:C8	2.72	0.57
1:5:448:G:C6	1:5:449:C:C6	2.92	0.57
1:5:486:C:N3	1:5:487:G:C8	2.71	0.57
1:5:1190:C:C4	1:5:1191:C:C5	2.92	0.57
1:5:1444:G:C2	1:5:1445:U:O4	2.58	0.57
1:5:1797:G:C2	1:5:1798:G:C5	2.93	0.57
1:5:1811:G:C2	1:5:1812:C:C4	2.92	0.57
1:5:2316:G:C2	1:5:2317:C:C5	2.92	0.57
1:5:2783:A:C4	1:5:2784:C:C6	2.92	0.57
1:5:3688:U:N3	1:5:3689:G:C8	2.72	0.57
1:5:3945:A:C2	1:5:3946:G:C8	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3945:A:N3	1:5:3946:G:C8	2.73	0.57
1:5:4480:A:C6	1:5:4481:U:C5	2.92	0.57
1:5:4886:C:O2	1:5:4887:C:C5	2.57	0.57
1:5:4958:C:H2'	1:5:4958:C:O2	2.04	0.57
3:8:29:G:C2	3:8:30:U:C6	2.93	0.57
3:8:31:G:H2'	3:8:32:C:O4'	2.05	0.57
3:8:40:A:C8	3:8:102:G:N2	2.72	0.57
3:8:66:A:H2'	3:8:67:U:C6	2.38	0.57
3:8:118:C:O2	3:8:118:C:H2'	2.03	0.57
4:A:82:ILE:HD11	4:A:99:GLY:HA3	1.85	0.57
6:C:33:ARG:HH11	6:C:122:TYR:HH	1.52	0.57
7:D:94:ASN:HD21	7:D:96:ALA:HB3	1.69	0.57
9:F:184:TYR:HB3	9:F:202:ARG:HG2	1.85	0.57
13:J:164:ARG:O	13:J:164:ARG:NH2	2.37	0.57
26:X:155:ILE:O	26:X:156:ILE:HB	2.04	0.57
29:a:78:LEU:C	29:a:80:THR:H	2.13	0.57
32:d:46:LEU:HD23	32:d:64:ILE:HD13	1.86	0.57
35:g:37:LYS:HB2	35:g:60:ARG:HE	1.69	0.57
46:1:414:ASN:O	46:1:418:PRO:HD2	2.04	0.57
1:5:99:A:N1	1:5:100:C:C2	2.72	0.57
1:5:144:G:N2	1:5:145:G:C4	2.73	0.57
1:5:150:U:O2	10:G:166:LEU:HD11	2.03	0.57
1:5:258:G:N1	1:5:259:C:C4	2.73	0.57
1:5:436:C:O2	1:5:436:C:H2'	2.03	0.57
1:5:504:G:N1	1:5:505:G:C6	2.73	0.57
1:5:732:A:C6	1:5:733:A:C4	2.92	0.57
1:5:755:C:N3	1:5:756:G:C8	2.72	0.57
1:5:907:C:N3	1:5:908:G:N7	2.52	0.57
1:5:977:C:O2	1:5:977:C:H2'	2.04	0.57
1:5:1079:C:C2	1:5:1080:C:C6	2.93	0.57
1:5:1437:C:N4	1:5:2098:G:O6	2.35	0.57
1:5:1446:C:C4	1:5:1447:C:C5	2.92	0.57
1:5:1491:A:H2'	1:5:1492:G:O4'	2.05	0.57
1:5:1618:G:N3	1:5:1619:G:C8	2.73	0.57
1:5:1846:G:N2	1:5:1847:C:C2	2.72	0.57
1:5:1882:U:H1'	1:5:1883:G:C8	2.40	0.57
1:5:1979:A:H3'	1:5:1980:U:C5'	2.32	0.57
1:5:2089:G:N1	1:5:2263:A:C6	2.73	0.57
1:5:2363:A:O2'	1:5:4560:C:N4	2.37	0.57
1:5:2419:C:H2'	1:5:2420:A:O5'	2.05	0.57
1:5:2458:C:H1'	1:5:3672:G:H21	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2461:G:C2	1:5:2462:C:C5	2.92	0.57
1:5:2612:G:C4	1:5:2613:C:C6	2.91	0.57
1:5:2663:G:OP1	20:R:118:HIS:HA	2.03	0.57
1:5:3898:G:C2'	1:5:3899:G:H5'	2.34	0.57
1:5:4235:G:H2'	1:5:4236:G:O5'	2.04	0.57
1:5:4355:G:N3	1:5:4356:G:C8	2.73	0.57
1:5:4548:A:N7	1:5:4548:A:OP1	2.37	0.57
1:5:4636:U:O4	32:d:78:ARG:NH1	2.38	0.57
1:5:4644:G:N2	1:5:4654:C:C2	2.73	0.57
1:5:4898:G:C2	1:5:4923:C:C2	2.93	0.57
3:8:43:A:N1	3:8:44:A:C5	2.72	0.57
3:8:70:G:H5"	27:Y:27:ARG:HH11	1.69	0.57
9:F:33:LYS:HA	9:F:36:ARG:HE	1.69	0.57
28:Z:46:ILE:HD12	28:Z:49:TYR:CD1	2.40	0.57
1:5:158:A:C5	1:5:277:G:C6	2.92	0.57
1:5:225:G:O4'	1:5:243:A:H1'	2.04	0.57
1:5:456:C:N3	1:5:457:G:N7	2.52	0.57
1:5:470:A:C6	1:5:471:A:N7	2.70	0.57
1:5:499:G:C2	1:5:500:G:C8	2.92	0.57
1:5:691:C:C2	1:5:692:A:N7	2.72	0.57
1:5:701:G:N1	1:5:702:U:C6	2.72	0.57
1:5:950:G:N3	1:5:951:G:C8	2.73	0.57
1:5:965:G:N2	8:E:85:LEU:O	2.38	0.57
1:5:1257:A:C2	1:5:1258:G:H1'	2.39	0.57
1:5:1465:G:C5	1:5:1466:G:C8	2.93	0.57
1:5:1804:A:H4'	1:5:1805:A:O5'	2.05	0.57
1:5:1998:A:N1	1:5:2020:U:O2'	2.31	0.57
1:5:2656:U:H2'	1:5:2657:G:O4'	2.04	0.57
1:5:2688:G:N3	1:5:2689:C:C6	2.72	0.57
1:5:3652:A:N7	1:5:3691:G:N2	2.53	0.57
1:5:4341:C:N4	1:5:4342:C:C4	2.73	0.57
1:5:4951:G:O2'	1:5:4952:G:P	2.62	0.57
1:5:5030:U:O2	1:5:5031:G:C8	2.57	0.57
4:A:242:ARG:HH11	4:A:242:ARG:HB2	1.69	0.57
5:B:367:PHE:HZ	5:B:380:GLN:HE22	1.49	0.57
17:O:130:LYS:HG3	17:O:131:PRO:HD2	1.87	0.57
24:V:39:ILE:HG23	24:V:61:VAL:HG13	1.85	0.57
1:5:43:U:C4	1:5:44:A:N9	2.72	0.57
1:5:92:C:H41	43:o:40:ARG:NH1	2.01	0.57
1:5:296:A:C8	1:5:296:A:C5'	2.88	0.57
1:5:299:C:C2	1:5:300:A:C8	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:479:G:N2	1:5:480:C:C2	2.73	0.57
1:5:670:G:H2'	1:5:671:G:H8	1.68	0.57
1:5:687:U:C4	1:5:688:U:C5	2.93	0.57
1:5:1081:C:C2	1:5:1220:G:C2	2.92	0.57
1:5:1186:U:C2	1:5:1187:G:C8	2.93	0.57
1:5:1204:C:O2	1:5:1205:G:C8	2.58	0.57
1:5:1268:G:C1'	1:5:2111:G:C5	2.87	0.57
1:5:1269:G:N7	1:5:2111:G:C4	2.72	0.57
1:5:1477:C:O2	1:5:1478:C:H1'	2.04	0.57
1:5:1598:C:C4	1:5:2798:A:N7	2.71	0.57
1:5:1785:C:OP1	12:I:133:GLN:NE2	2.37	0.57
1:5:1857:C:C2	1:5:1858:A:C8	2.91	0.57
1:5:2244:C:O2	1:5:2245:G:C8	2.57	0.57
1:5:2439:G:C2	1:5:2440:U:C6	2.92	0.57
1:5:2463:G:N2	1:5:2464:C:N3	2.52	0.57
1:5:2466:G:H2'	1:5:2467:U:C1'	2.34	0.57
1:5:2515:G:O2'	1:5:2745:A:N1	2.35	0.57
1:5:2673:G:C1'	1:5:2675:G:H1'	2.35	0.57
1:5:3777:G:N2	1:5:3815:G:H2'	2.19	0.57
1:5:3894:A:O4'	1:5:4979:A:N1	2.37	0.57
1:5:4476:C:O4'	1:5:4476:C:O2	2.22	0.57
1:5:4730:C:C2	1:5:4734:A:N7	2.73	0.57
1:5:4742:G:N1	1:5:4743:G:C8	2.73	0.57
1:5:4911:A:H5"	5:B:100:ARG:CD	2.35	0.57
3:8:44:A:C2	3:8:45:C:C2	2.93	0.57
3:8:101:C:C4	3:8:102:G:C5	2.92	0.57
5:B:53:MET:HE1	5:B:336:CYS:CB	2.33	0.57
5:B:106:PHE:CD2	5:B:130:PHE:CE2	2.93	0.57
21:S:27:LEU:C	21:S:28:TYR:CD1	2.81	0.57
22:T:19:PHE:O	22:T:20:ARG:C	2.46	0.57
23:U:99:TRP:CD1	23:U:99:TRP:N	2.73	0.57
30:b:12:GLN:CB	30:b:16:TRP:HZ2	2.17	0.57
1:5:80:C:C2	1:5:104:G:N2	2.73	0.57
1:5:271:C:O2	1:5:272:U:C6	2.57	0.57
1:5:642:G:C2	1:5:643:C:C5	2.93	0.57
1:5:1248:C:N3	1:5:1249:C:C4	2.72	0.57
1:5:1269:G:N1	1:5:2111:G:N2	2.53	0.57
1:5:1281:G:C4	1:5:1281:G:O5'	2.58	0.57
1:5:1752:G:H2'	1:5:1753:G:O4'	2.04	0.57
1:5:1846:G:H2'	1:5:1847:C:C6	2.40	0.57
1:5:1940:G:H2'	1:5:1941:A:H5"	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2391:G:N2	1:5:2392:C:C2	2.73	0.57
1:5:3605:C:C2	1:5:3606:U:C6	2.93	0.57
1:5:3635:A:C5	1:5:3636:C:C6	2.93	0.57
1:5:3785:A:H2	1:5:4536:C:H1'	1.63	0.57
1:5:3846:C:C4	1:5:3847:C:C5	2.93	0.57
1:5:3848:U:C2	1:5:3849:A:C8	2.93	0.57
1:5:4194:U:C2'	1:5:4221:C:H41	2.18	0.57
1:5:4258:C:H2'	1:5:4259:C:H6	1.70	0.57
1:5:4301:U:C5'	22:T:54:HIS:CD2	2.88	0.57
1:5:4455:G:C4	1:5:4456:C:C6	2.93	0.57
1:5:4695:C:O2'	1:5:4696:C:H5'	2.05	0.57
1:5:4910:G:O5'	1:5:4910:G:C8	2.56	0.57
2:7:111:C:N4	2:7:112:U:C5	2.73	0.57
7:D:287:PHE:C	7:D:287:PHE:CD1	2.83	0.57
27:Y:5:PRO:O	27:Y:6:PHE:HB2	2.05	0.57
1:5:77:U:C2	1:5:335:A:N6	2.71	0.57
1:5:209:U:N3	1:5:233:U:C4	2.73	0.57
1:5:243:A:H2'	1:5:244:G:O4'	2.05	0.57
1:5:358:C:C2	1:5:359:A:C8	2.92	0.57
1:5:482:G:H2'	1:5:483:G:O4'	2.04	0.57
1:5:1444:G:H2'	1:5:1445:U:H6	1.58	0.57
1:5:1619:G:H2'	1:5:1620:U:O5'	2.05	0.57
1:5:1781:U:C4	1:5:1782:U:C5	2.92	0.57
1:5:3694:U:O4	1:5:3695:U:O4	2.23	0.57
1:5:4228:G:O2'	1:5:4373:G:O6	2.21	0.57
1:5:4455:G:C2	1:5:4456:C:N1	2.73	0.57
1:5:4583:C:N3	1:5:4718:G:C2	2.73	0.57
1:5:4583:C:C2	1:5:4718:G:N2	2.73	0.57
1:5:4730:C:H2'	1:5:4965:U:H3	1.69	0.57
1:5:5050:C:C4	1:5:5051:C:C5	2.93	0.57
2:7:33:U:C2	2:7:34:C:C5	2.93	0.57
2:7:43:U:O4	2:7:44:C:N4	2.37	0.57
2:7:82:G:C2	2:7:95:C:C2	2.93	0.57
3:8:108:A:C2	3:8:112:G:C6	2.93	0.57
3:8:120:G:C6	3:8:121:G:N7	2.73	0.57
6:C:79:VAL:HG21	6:C:86:ARG:HE	1.70	0.57
7:D:107:ARG:HD3	7:D:248:ARG:HG3	1.85	0.57
10:G:50:ASP:OD1	10:G:50:ASP:C	2.48	0.57
23:U:106:SER:HG	23:U:109:SER:HG	1.52	0.57
29:a:128:PHE:CZ	37:i:8:ALA:HB3	2.40	0.57
1:5:45:U:H2'	1:5:46:U:O5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:199:G:C6	1:5:201:C:N4	2.73	0.57
1:5:685:C:C2'	1:5:685:C:O2	2.52	0.57
1:5:1070:G:N2	1:5:1071:C:H1'	2.20	0.57
1:5:1071:C:O2	1:5:1071:C:C2'	2.52	0.57
1:5:1268:G:N3	1:5:2111:G:N1	2.52	0.57
1:5:1629:G:C2	1:5:1631:A:C5	2.93	0.57
1:5:1846:G:H2'	1:5:1847:C:H6	1.70	0.57
1:5:1846:G:C2	1:5:1847:C:C4	2.93	0.57
1:5:1847:C:C4'	19:Q:152:PHE:CE2	2.86	0.57
1:5:1893:C:C2	1:5:1894:C:C5	2.93	0.57
1:5:2044:U:O2'	17:O:63:ASN:HB3	2.04	0.57
1:5:2081:C:C2	1:5:2082:G:C8	2.93	0.57
1:5:2292:C:C2	1:5:2293:U:C5	2.92	0.57
1:5:2465:C:O2'	1:5:2466:G:O4'	2.23	0.57
1:5:2577:C:N4	28:Z:17:ARG:NH2	2.53	0.57
1:5:3656:A:N1	1:5:3657:U:C4	2.73	0.57
1:5:3693:U:O4	1:5:3694:U:C4	2.58	0.57
1:5:3724:A:N6	1:5:3725:G:C6	2.72	0.57
1:5:3829:G:C2	1:5:3830:A:C8	2.93	0.57
1:5:4105:A:H1'	1:5:4106:G:N2	2.20	0.57
1:5:4198:G:O6	12:I:112:GLN:CD	2.48	0.57
1:5:4566:U:O2'	5:B:234:ARG:NH2	2.38	0.57
1:5:4942:C:H5'	8:E:151:GLY:HA2	1.87	0.57
1:5:5020:G:C2	1:5:5021:C:C2	2.93	0.57
3:8:75:G:N2	3:8:76:C:C2	2.73	0.57
14:L:63:THR:O	14:L:65:ARG:N	2.37	0.57
16:N:68:ARG:HH12	16:N:123:GLU:HG3	1.69	0.57
16:N:143:ARG:HB3	36:h:99:GLU:OE1	2.05	0.57
21:S:81:TRP:CZ2	21:S:94:TYR:CD1	2.92	0.57
26:X:73:HIS:N	26:X:73:HIS:CD2	2.72	0.57
1:5:30:C:O2'	1:5:31:U:H5'	2.04	0.56
1:5:133:C:H2'	1:5:133:C:O2	2.05	0.56
1:5:275:C:O2'	1:5:276:C:OP1	2.23	0.56
1:5:322:C:H2'	1:5:322:C:O2	2.04	0.56
1:5:470:A:C6	1:5:471:A:C5	2.92	0.56
1:5:486:C:N3	1:5:487:G:C5	2.73	0.56
1:5:504:G:C2	1:5:654:C:C2	2.91	0.56
1:5:663:G:H3'	1:5:664:G:C5'	2.35	0.56
1:5:933:G:C2	1:5:939:G:N1	2.73	0.56
1:5:956:A:H3'	1:5:957:G:C4	2.40	0.56
1:5:1447:C:O2	1:5:2098:G:C2	2.57	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1724:G:N3	9:F:105:PRO:HB3	2.20	0.56
1:5:2058:G:C2	1:5:2059:C:N1	2.73	0.56
1:5:2090:U:O2'	1:5:2091:C:C5'	2.53	0.56
1:5:2124:G:H22	9:F:32:ILE:CG1	2.17	0.56
1:5:2312:U:O2	1:5:2312:U:H2'	2.03	0.56
1:5:3755:G:C6	1:5:3756:A:N7	2.73	0.56
1:5:3858:C:C4	1:5:3859:G:C5	2.92	0.56
1:5:3923:A:C2	1:5:3924:C:C4	2.93	0.56
1:5:4216:G:N1	1:5:4217:G:C5	2.73	0.56
1:5:4660:G:C2	1:5:4661:G:C8	2.93	0.56
3:8:131:G:C2	3:8:132:G:N9	2.73	0.56
5:B:41:VAL:HG12	5:B:187:GLY:HA3	1.87	0.56
5:B:137:TRP:CZ2	5:B:146:LEU:HG	2.40	0.56
7:D:278:ASP:O	7:D:282:GLN:HG2	2.05	0.56
25:W:50:ASN:HA	25:W:55:TYR:CE2	2.40	0.56
27:Y:11:ARG:NH2	27:Y:15:ARG:HD3	2.20	0.56
30:b:12:GLN:O	30:b:13:SER:C	2.48	0.56
32:d:37:GLY:O	32:d:38:PHE:HB2	2.05	0.56
32:d:87:ARG:CA	32:d:87:ARG:CZ	2.83	0.56
1:5:209:U:O4	1:5:211:G:H1'	2.05	0.56
1:5:246:G:C2	1:5:247:G:C5	2.93	0.56
1:5:269:G:C2	1:5:270:U:C6	2.93	0.56
1:5:483:G:N3	1:5:484:U:C5	2.72	0.56
1:5:490:C:C3'	1:5:491:G:H8	2.17	0.56
1:5:916:C:N3	1:5:918:G:O6	2.38	0.56
1:5:1090:G:C6	1:5:1091:C:C4	2.93	0.56
1:5:1273:G:H5'	1:5:2123:C:H4'	1.86	0.56
1:5:1288:G:HO2'	1:5:1289:C:P	2.29	0.56
1:5:1324:A:H2'	1:5:1326:A:N7	2.20	0.56
1:5:1507:C:N3	1:5:1508:A:N7	2.53	0.56
1:5:1544:G:C2	1:5:1545:G:C8	2.94	0.56
1:5:1661:C:H1'	1:5:2345:G:N2	2.20	0.56
1:5:1724:G:C8	30:b:17:HIS:NE2	2.73	0.56
1:5:1843:A:N1	1:5:1844:G:C5	2.72	0.56
1:5:2079:G:N2	1:5:2080:U:N1	2.53	0.56
1:5:2086:G:N2	1:5:2272:C:C2	2.74	0.56
1:5:2110:C:C6	1:5:2110:C:P	2.97	0.56
1:5:2342:G:C6	1:5:2344:U:C4	2.92	0.56
1:5:2557:G:C6	1:5:2558:C:C4	2.93	0.56
1:5:2668:G:C2'	1:5:2669:C:H5'	2.28	0.56
1:5:2675:G:H2'	1:5:2675:G:N3	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2830:G:N3	1:5:2831:G:C8	2.73	0.56
1:5:2844:A:C5	1:5:3839:G:C8	2.93	0.56
1:5:2854:G:C8	1:5:2854:G:H3'	2.40	0.56
1:5:3621:A:H1'	1:5:4655:A:H2	1.70	0.56
1:5:3676:G:C2'	1:5:3677:U:O5'	2.53	0.56
1:5:3867:A:C2	1:5:3880:G:O6	2.57	0.56
1:5:4276:G:H2'	1:5:4276:G:N3	2.20	0.56
1:5:4321:U:H2'	1:5:4322:G:O4'	2.05	0.56
1:5:4349:C:H3'	1:5:4350:C:C5'	2.35	0.56
1:5:4652:G:N1	1:5:4653:C:C4	2.73	0.56
1:5:4666:G:C6	1:5:4667:C:C4	2.93	0.56
1:5:5020:G:H2'	1:5:5021:C:O4'	2.06	0.56
1:5:5035:U:N3	1:5:5036:C:C5	2.73	0.56
2:7:69:U:C2	2:7:70:G:C8	2.92	0.56
5:B:90:VAL:HB	5:B:104:THR:HG23	1.86	0.56
9:F:203:PHE:CE1	9:F:207:ASN:HB2	2.41	0.56
10:G:162:ASP:HB3	10:G:163:PRO:CD	2.35	0.56
29:a:67:GLN:HA	29:a:67:GLN:HE21	1.70	0.56
32:d:33:ILE:HD11	32:d:45:ALA:HB2	1.86	0.56
38:j:20:ARG:CD	38:j:39:TYR:OH	2.53	0.56
1:5:85:G:C6	14:L:13:HIS:CE1	2.93	0.56
1:5:100:C:O4'	1:5:100:C:O2	2.22	0.56
1:5:153:G:N1	1:5:154:G:N7	2.53	0.56
1:5:183:C:H1'	1:5:184:U:N3	2.21	0.56
1:5:258:G:N2	1:5:259:C:C2	2.72	0.56
1:5:463:A:N1	1:5:692:A:N1	2.52	0.56
1:5:497:G:C2	1:5:657:C:C2	2.94	0.56
1:5:505:G:N2	1:5:506:C:C2	2.74	0.56
1:5:516:C:N3	1:5:646:G:C2	2.73	0.56
1:5:517:C:C2	1:5:645:G:C2	2.92	0.56
1:5:919:C:H2'	1:5:920:C:O5'	2.06	0.56
1:5:931:C:C6	1:5:932:A:N7	2.72	0.56
1:5:932:A:H2'	1:5:932:A:N3	2.20	0.56
1:5:936:C:C2'	15:M:46:ARG:NH1	2.68	0.56
1:5:1049:C:O2	1:5:1050:C:C6	2.59	0.56
1:5:1070:G:C6	1:5:1071:C:C4	2.92	0.56
1:5:1093:C:N3	1:5:1094:G:N7	2.54	0.56
1:5:1218:G:C6	1:5:1219:G:C8	2.93	0.56
1:5:1298:C:C4	1:5:1299:G:N7	2.73	0.56
1:5:1334:A:C6	1:5:1335:G:C5	2.93	0.56
1:5:1341:U:O2	1:5:1342:A:C8	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1380:G:H2'	1:5:1382:G:C5	2.41	0.56
1:5:1465:G:C2	1:5:1466:G:C1'	2.88	0.56
1:5:1558:A:C2	1:5:1559:G:C4	2.93	0.56
1:5:1582:U:O4	1:5:1583:A:C5	2.59	0.56
1:5:1750:G:C6	1:5:1751:A:N7	2.73	0.56
1:5:1760:G:N2	1:5:1761:G:H1'	2.19	0.56
1:5:1831:G:C6	1:5:1832:C:C5	2.93	0.56
1:5:1887:G:C6	1:5:1890:G:O6	2.59	0.56
1:5:2260:C:C2'	1:5:2261:G:N7	2.57	0.56
1:5:2315:G:C2	1:5:2316:G:C8	2.94	0.56
1:5:2324:C:H2'	1:5:2324:C:O2	2.04	0.56
1:5:2339:G:C6	1:5:2340:C:C4	2.93	0.56
1:5:2463:G:N1	1:5:2464:C:C4	2.73	0.56
1:5:2577:C:N3	1:5:2578:G:N7	2.53	0.56
1:5:2634:C:C2	1:5:2635:U:C6	2.93	0.56
1:5:2712:G:C6	1:5:2713:C:C5	2.93	0.56
1:5:2880:U:N3	1:5:3625:G:C8	2.73	0.56
1:5:3652:A:N7	1:5:3691:G:C2	2.74	0.56
1:5:3655:C:C2	1:5:3656:A:C8	2.94	0.56
1:5:3688:U:H2'	1:5:3688:U:O2	2.05	0.56
1:5:3703:G:C5	1:5:3704:U:C5	2.93	0.56
1:5:3893:C:N3	1:5:4568:A:C2	2.73	0.56
1:5:4095:G:N2	1:5:4096:C:C5	2.69	0.56
1:5:4189:U:H1'	1:5:4380:A:N3	2.20	0.56
1:5:4217:G:H2'	1:5:4218:U:O5'	2.05	0.56
1:5:4455:G:C6	1:5:4456:C:C4	2.94	0.56
1:5:4698:C:O2	1:5:4698:C:C2'	2.53	0.56
1:5:4735:G:C2	1:5:4736:C:C2	2.94	0.56
1:5:4981:G:C6	1:5:4982:A:C4	2.93	0.56
1:5:4982:A:C5	1:5:4983:C:C6	2.93	0.56
1:5:5019:A:C2	1:5:5020:G:C5	2.94	0.56
2:7:59:G:N1	2:7:60:G:N7	2.52	0.56
3:8:37:A:OP2	36:h:89:ARG:HD3	2.05	0.56
3:8:53:G:C5	3:8:54:C:C5	2.94	0.56
3:8:86:U:C6	3:8:86:U:C3'	2.87	0.56
3:8:89:U:H2'	3:8:90:C:C6	2.40	0.56
4:A:37:ARG:CZ	4:A:37:ARG:HB2	2.32	0.56
5:B:175:GLN:HE21	5:B:179:HIS:CE1	2.22	0.56
7:D:42:ASN:N	7:D:42:ASN:OD1	2.37	0.56
15:M:3:PHE:CB	15:M:6:PHE:CZ	2.89	0.56
26:X:156:ILE:HG13	46:1:415:ARG:HH21	1.66	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:28:ASN:O	28:Z:28:ASN:CG	2.48	0.56
28:Z:41:ALA:HB2	28:Z:77:TYR:CE1	2.40	0.56
34:f:43:LEU:HD22	34:f:76:ARG:HA	1.87	0.56
1:5:48:G:HO2'	1:5:49:U:P	2.19	0.56
1:5:153:G:C2	1:5:154:G:C5	2.93	0.56
1:5:158:A:C6	1:5:277:G:C5	2.93	0.56
1:5:370:U:C5	1:5:1637:A:N1	2.74	0.56
1:5:388:A:C6	1:5:411:G:C5	2.93	0.56
1:5:471:A:N6	1:5:472:C:C5	2.73	0.56
1:5:655:C:N3	1:5:656:C:C5	2.73	0.56
1:5:696:C:H5"	1:5:697:G:H5'	1.86	0.56
1:5:1379:C:H1'	1:5:1380:G:C8	2.40	0.56
1:5:1539:G:H1'	4:A:15:VAL:HG13	1.87	0.56
1:5:1547:A:C6	1:5:1582:U:H1'	2.40	0.56
1:5:1555:G:C6	1:5:1556:C:C5	2.93	0.56
1:5:1857:C:H2'	1:5:1858:A:H8	1.70	0.56
1:5:1860:U:N3	1:5:1861:U:C5	2.73	0.56
1:5:1995:G:C2	1:5:1996:C:C2	2.94	0.56
1:5:2084:C:H3'	1:5:2085:G:C5'	2.36	0.56
1:5:2090:U:H1'	6:C:305:PRO:HG2	1.88	0.56
1:5:2505:C:H1'	1:5:2506:G:C4	2.40	0.56
1:5:2569:G:C6	1:5:2570:U:C4	2.94	0.56
1:5:3834:C:C2	1:5:3835:C:C5	2.94	0.56
1:5:3858:C:C2	1:5:3859:G:C8	2.93	0.56
1:5:4109:G:C5	1:5:4110:C:C5	2.93	0.56
1:5:4236:G:H22	1:5:4289:U:H1'	1.69	0.56
1:5:4433:G:H2'	1:5:4434:C:C6	2.40	0.56
1:5:4878:C:O2	1:5:4878:C:H2'	2.04	0.56
2:7:7:G:C2	2:7:8:G:C8	2.93	0.56
2:7:22:A:N3	2:7:23:A:N7	2.53	0.56
2:7:93:G:C6	2:7:94:C:C5	2.94	0.56
5:B:138:GLN:O	5:B:139:ASP:HB3	2.05	0.56
5:B:314:ILE:HD13	5:B:326:VAL:HG12	1.88	0.56
5:B:323:TYR:CB	5:B:342:LYS:HG2	2.34	0.56
7:D:163:LEU:HD21	7:D:175:HIS:HB3	1.87	0.56
11:H:31:ARG:NH2	11:H:187:VAL:HG21	2.20	0.56
26:X:122:ALA:HB3	26:X:139:ARG:HG3	1.87	0.56
1:5:173:C:N3	1:5:174:C:H5	1.99	0.56
1:5:481:G:OP1	45:r:67:ARG:NH1	2.38	0.56
1:5:499:G:H2'	1:5:499:G:N3	2.20	0.56
1:5:671:G:N1	1:5:672:C:C4	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1189:G:C5	1:5:1190:C:C5	2.93	0.56
1:5:1213:G:C5	1:5:1215:C:C1'	2.89	0.56
1:5:1270:A:C6	1:5:1271:G:H1'	2.40	0.56
1:5:1310:C:C4	1:5:1311:G:N7	2.73	0.56
1:5:1390:G:N3	1:5:1394:G:C6	2.73	0.56
1:5:1410:U:C5	1:5:1815:G:N1	2.73	0.56
1:5:1596:U:O2'	1:5:1597:G:P	2.64	0.56
1:5:1776:A:C5	1:5:1777:C:C5	2.94	0.56
1:5:1806:G:C2	1:5:1807:C:C4	2.93	0.56
1:5:1812:C:C2	1:5:1813:U:C5	2.94	0.56
1:5:1899:G:H1'	33:e:59:GLY:HA3	1.88	0.56
1:5:1918:U:O2	1:5:1920:C:C5	2.58	0.56
1:5:1963:C:N4	1:5:1964:A:N7	2.53	0.56
1:5:2325:C:O2'	33:e:98:GLU:OE2	2.20	0.56
1:5:2451:A:C6	1:5:2452:G:C8	2.93	0.56
1:5:2692:U:H2'	1:5:2693:G:H5'	1.87	0.56
1:5:2714:G:N2	1:5:2715:G:C4	2.73	0.56
1:5:2726:G:N1	1:5:2727:C:N4	2.53	0.56
1:5:2744:A:O2'	1:5:2745:A:O5'	2.24	0.56
1:5:2857:A:O2'	1:5:2858:A:H8	1.86	0.56
1:5:3721:U:O2	1:5:3721:U:H2'	2.05	0.56
1:5:3765:G:O2'	1:5:3766:A:C8	2.52	0.56
1:5:4088:C:C4	10:G:53:ARG:NH2	2.74	0.56
1:5:4152:G:N3	1:5:4153:C:C6	2.74	0.56
1:5:4222:G:C6	1:5:4223:C:C4	2.94	0.56
1:5:4232:U:O2	43:o:5:PRO:HG3	2.04	0.56
1:5:4239:A:N6	1:5:4240:G:N7	2.54	0.56
1:5:4324:A:C2	1:5:4325:A:N7	2.73	0.56
1:5:4343:U:C4	1:5:4344:U:C5	2.93	0.56
1:5:4413:C:H2'	1:5:4414:A:O4'	2.05	0.56
1:5:4518:A:C2'	5:B:257:TRP:CZ3	2.89	0.56
1:5:4549:G:N1	1:5:4550:G:C5	2.73	0.56
1:5:4563:U:O2	1:5:4564:A:N7	2.36	0.56
1:5:4563:U:H2'	1:5:4564:A:H8	1.67	0.56
1:5:4897:G:C4	1:5:4898:G:C8	2.94	0.56
1:5:4951:G:O2'	1:5:4952:G:OP1	2.23	0.56
5:B:169:ARG:HH11	5:B:169:ARG:HG2	1.69	0.56
8:E:102:VAL:HB	8:E:103:VAL:HG13	1.87	0.56
9:F:71:ILE:HG22	9:F:75:ARG:HD2	1.86	0.56
38:j:20:ARG:HD3	38:j:39:TYR:OH	2.05	0.56
46:1:117:LYS:NZ	46:1:163:LEU:HB3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:495:C:C4	1:5:496:G:N7	2.74	0.56
1:5:969:C:C2'	1:5:970:G:N3	2.69	0.56
1:5:1219:G:N1	1:5:1220:G:C5	2.72	0.56
1:5:1348:U:C2	1:5:1349:G:C8	2.94	0.56
1:5:1398:A:C2	1:5:1399:G:H1'	2.41	0.56
1:5:1882:U:O2	1:5:1883:G:N7	2.38	0.56
1:5:1895:G:H2'	1:5:1896:A:O5'	2.05	0.56
1:5:1937:C:OP2	1:5:1938:C:O2'	2.22	0.56
1:5:1946:G:C2	1:5:1948:G:C8	2.94	0.56
1:5:1946:G:C2	1:5:2037:C:N3	2.74	0.56
1:5:2097:U:O2	1:5:2097:U:C5'	2.52	0.56
1:5:2400:G:C6	1:5:2401:A:N7	2.74	0.56
1:5:2490:U:H2'	1:5:2491:C:C6	2.40	0.56
1:5:3731:C:O2	1:5:3732:A:H8	1.88	0.56
1:5:4324:A:C2	1:5:4325:A:C6	2.94	0.56
1:5:4413:C:H4'	12:I:157:PHE:CD2	2.40	0.56
1:5:4479:A:N6	1:5:4480:A:C4	2.74	0.56
1:5:4714:C:O2	1:5:4714:C:H2'	2.05	0.56
1:5:4896:G:C2	1:5:4897:G:C8	2.93	0.56
1:5:5028:G:N2	1:5:5029:C:C2	2.73	0.56
3:8:10:G:C4	3:8:11:C:C6	2.92	0.56
13:J:107:PHE:CZ	13:J:130:PHE:CB	2.89	0.56
14:L:58:VAL:HG13	14:L:70:VAL:CG1	2.36	0.56
16:N:126:THR:C	16:N:127:TYR:HD1	2.14	0.56
21:S:44:PHE:C	21:S:44:PHE:HD1	2.13	0.56
25:W:4:GLU:OE1	25:W:30:GLN:NE2	2.29	0.56
26:X:116:LEU:HB2	26:X:117:TYR:CE1	2.41	0.56
28:Z:21:ARG:HH11	28:Z:21:ARG:HG3	1.70	0.56
31:c:31:TYR:CE1	31:c:35:LEU:HD22	2.40	0.56
39:k:22:SER:O	39:k:23:VAL:C	2.48	0.56
1:5:29:G:N2	1:5:30:C:C2	2.74	0.56
1:5:42:A:C6	1:5:4379:A:N1	2.73	0.56
1:5:76:A:N7	14:L:74:ARG:NH2	2.54	0.56
1:5:78:U:C2	1:5:336:A:N6	2.73	0.56
1:5:177:G:C6	1:5:178:C:C4	2.94	0.56
1:5:291:U:O2	1:5:293:G:H8	1.88	0.56
1:5:471:A:C2	1:5:472:C:H1'	2.40	0.56
1:5:1173:G:C6	1:5:1174:G:C5	2.94	0.56
1:5:1464:C:H2'	1:5:1464:C:O2	2.04	0.56
1:5:1850:A:H2'	1:5:1851:G:O5'	2.05	0.56
1:5:1995:G:C4	1:5:1996:C:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2454:U:H2'	1:5:2454:U:O2	2.04	0.56
1:5:2723:U:C2	1:5:2724:G:N7	2.74	0.56
1:5:2904:U:P	1:5:2905:C:H41	2.29	0.56
1:5:4099:G:C2	1:5:4100:C:C2	2.93	0.56
1:5:4192:A:C2	1:5:4204:C:N3	2.73	0.56
1:5:4301:U:OP2	22:T:87:LYS:NZ	2.39	0.56
1:5:4628:U:O2	1:5:4628:U:H2'	2.06	0.56
1:5:4684:A:H2'	1:5:4685:U:O4'	2.06	0.56
1:5:4737:G:O2'	1:5:4738:C:O5'	2.23	0.56
1:5:4767:C:O3'	1:5:4874:A:N1	2.38	0.56
1:5:4945:G:H21	34:f:69:VAL:N	2.04	0.56
1:5:5036:C:N3	1:5:5037:U:C5	2.74	0.56
1:5:5061:A:C4'	1:5:5062:G:H5"	2.35	0.56
2:7:34:C:C2	2:7:35:U:C5	2.93	0.56
2:7:69:U:N3	2:7:70:G:N7	2.53	0.56
4:A:186:TYR:C	4:A:186:TYR:CD1	2.84	0.56
9:F:148:ASN:HB3	9:F:243:ASN:HD22	1.71	0.56
21:S:90:THR:HG23	22:T:156:TYR:CD2	2.40	0.56
29:a:132:ARG:HH11	29:a:132:ARG:HB3	1.70	0.56
31:c:44:LYS:HA	31:c:69:THR:HG23	1.87	0.56
1:5:314:G:C2	1:5:4355:G:N7	2.73	0.56
1:5:465:G:N2	1:5:466:A:H1'	2.21	0.56
1:5:973:G:O6	1:5:1282:G:N2	2.38	0.56
1:5:1377:G:C8	1:5:1378:C:H4'	2.40	0.56
1:5:1380:G:N1	1:5:1382:G:C2	2.74	0.56
1:5:1478:C:H2'	1:5:1479:G:H8	1.70	0.56
1:5:1479:G:C2'	1:5:1480:C:O5'	2.54	0.56
1:5:1570:G:C5	1:5:1571:G:C8	2.94	0.56
1:5:1691:G:C6	1:5:1692:C:C5	2.93	0.56
1:5:1755:C:C3'	1:5:1756:U:H5"	2.36	0.56
1:5:1868:A:C5	1:5:1870:C:H1'	2.41	0.56
1:5:1984:A:H62	1:5:2011:C:C2'	2.19	0.56
1:5:2395:A:C2'	1:5:2806:A:HO2'	2.16	0.56
1:5:2650:G:N2	1:5:2684:C:C2	2.74	0.56
1:5:2715:G:C4	1:5:2716:C:C5	2.93	0.56
1:5:2725:A:N6	20:R:88:ARG:O	2.38	0.56
1:5:2772:C:C2	1:5:2773:G:C8	2.94	0.56
1:5:2852:U:H3'	1:5:2852:U:C2	2.41	0.56
1:5:2857:A:N1	1:5:2858:A:C6	2.74	0.56
1:5:2909:C:C2	1:5:3586:G:C2	2.93	0.56
1:5:3871:A:H2'	1:5:3872:A:O5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4091:G:C2	1:5:4092:G:N9	2.74	0.56
1:5:4152:G:C2	1:5:4153:C:C5	2.94	0.56
1:5:4152:G:C2	1:5:4153:C:C6	2.93	0.56
1:5:4205:A:C2	1:5:4206:C:C6	2.93	0.56
1:5:4297:G:C2	1:5:4298:A:C8	2.93	0.56
1:5:4482:U:O2	1:5:4482:U:H2'	2.04	0.56
1:5:4605:A:H2'	1:5:4606:G:C8	2.40	0.56
1:5:4723:A:C4	1:5:4724:A:C8	2.94	0.56
1:5:4988:U:H3'	1:5:4988:U:OP2	2.05	0.56
3:8:37:A:C4'	3:8:39:G:H1'	2.34	0.56
45:r:39:ARG:HB3	45:r:40:TYR:HD1	1.71	0.56
1:5:12:A:N1	1:5:14:C:C4	2.74	0.56
1:5:98:A:C6	1:5:99:A:C4	2.94	0.56
1:5:165:A:C5	1:5:166:C:C5	2.94	0.56
1:5:190:G:C2	1:5:252:C:O2	2.57	0.56
1:5:288:G:C2	1:5:289:C:C4	2.93	0.56
1:5:290:U:H2'	1:5:291:U:O5'	2.06	0.56
1:5:443:G:P	34:f:68:ARG:HH22	2.28	0.56
1:5:469:C:C4	1:5:470:A:C5	2.94	0.56
1:5:494:U:N3	1:5:495:C:C6	2.73	0.56
1:5:994:G:C6	1:5:995:C:C4	2.94	0.56
1:5:1269:G:N7	1:5:2111:G:C6	2.74	0.56
1:5:1279:A:O2'	1:5:1280:C:H5"	2.05	0.56
1:5:1473:U:C4	1:5:1474:C:C5	2.94	0.56
1:5:1582:U:C4	1:5:1583:A:N7	2.74	0.56
1:5:1634:A:C4	1:5:1635:C:C6	2.94	0.56
1:5:2092:G:H1'	1:5:2093:A:C2	2.41	0.56
1:5:2422:C:N3	1:5:2423:A:N7	2.54	0.56
1:5:2451:A:C6	1:5:2452:G:C5	2.94	0.56
1:5:2521:G:C2	1:5:2535:G:C2	2.94	0.56
1:5:2645:G:C2	1:5:2646:C:N1	2.74	0.56
1:5:3594:C:H2'	1:5:3597:G:H1'	1.86	0.56
1:5:3756:A:C2	1:5:3757:G:C4	2.94	0.56
1:5:3857:G:N1	1:5:3858:C:C2	2.74	0.56
1:5:3873:G:H2'	1:5:3874:G:C1'	2.35	0.56
1:5:4133:C:O2	1:5:4134:C:C6	2.59	0.56
1:5:4269:G:C5	1:5:4270:C:C5	2.93	0.56
1:5:4344:U:O2	1:5:4345:C:C5	2.54	0.56
1:5:4749:C:O4'	1:5:4749:C:O2	2.23	0.56
1:5:4957:C:O2	1:5:4958:C:C6	2.59	0.56
2:7:111:C:H2'	2:7:111:C:O2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:116:C:N3	3:8:117:C:C6	2.74	0.56
4:A:226:ARG:NH1	4:A:226:ARG:HB2	2.21	0.56
6:C:213:GLU:N	6:C:213:GLU:OE1	2.39	0.56
8:E:95:ASP:OD1	8:E:96:LYS:N	2.38	0.56
14:L:36:ARG:HB2	14:L:36:ARG:HH11	1.70	0.56
1:5:15:A:H2'	1:5:16:G:O4'	2.06	0.56
1:5:39:A:C2	29:a:40:HIS:NE2	2.74	0.56
1:5:165:A:H3'	1:5:166:C:C6	2.40	0.56
1:5:183:C:H4'	1:5:184:U:C5	2.41	0.56
1:5:302:C:C2	1:5:303:C:C5	2.94	0.56
1:5:450:G:C6	1:5:1295:C:N3	2.74	0.56
1:5:677:G:N2	1:5:678:C:C2	2.74	0.56
1:5:711:A:N1	1:5:712:C:C4	2.73	0.56
1:5:751:G:C2	1:5:752:G:C8	2.94	0.56
1:5:949:G:C2	1:5:950:G:C8	2.94	0.56
1:5:964:A:H2	1:5:2252:G:C6	2.24	0.56
1:5:1177:U:C1'	7:D:282:GLN:NE2	2.67	0.56
1:5:1214:C:N4	9:F:58:HIS:ND1	2.54	0.56
1:5:1281:G:H1'	6:C:322:LEU:N	2.21	0.56
1:5:1340:C:N3	1:5:1341:U:C4	2.73	0.56
1:5:1697:G:C4'	1:5:1698:C:OP1	2.54	0.56
1:5:1743:A:O4'	7:D:15:ARG:HD3	2.04	0.56
1:5:1819:G:H2'	1:5:1819:G:N3	2.20	0.56
1:5:2444:U:C5	1:5:2445:C:C5	2.94	0.56
1:5:2494:U:N3	1:5:2495:U:C5	2.74	0.56
1:5:2494:U:C4	1:5:2495:U:C5	2.94	0.56
1:5:2589:C:H5"	1:5:2590:G:OP2	2.06	0.56
1:5:2606:G:C2	1:5:2607:C:C5	2.94	0.56
1:5:2735:G:N1	1:5:2736:G:C5	2.73	0.56
1:5:3720:G:C6	1:5:3721:U:C5	2.94	0.56
1:5:4098:A:C6	1:5:4099:G:N7	2.74	0.56
1:5:4174:U:O2	1:5:4174:U:H2'	2.05	0.56
1:5:4235:G:O5'	1:5:4331:G:O2'	2.24	0.56
1:5:4483:C:N3	1:5:4484:A:N7	2.54	0.56
1:5:4504:C:C2	1:5:4505:C:C5	2.94	0.56
1:5:4535:A:H2'	1:5:4535:A:N3	2.21	0.56
1:5:4999:G:N1	1:5:5000:G:C8	2.73	0.56
1:5:5048:A:N7	32:d:34:HIS:CD2	2.73	0.56
2:7:82:G:N2	2:7:95:C:C2	2.74	0.56
3:8:10:G:C6	3:8:11:C:C4	2.93	0.56
5:B:62:ARG:HH11	5:B:62:ARG:HG3	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:82:ASN:HD21	22:T:142:ARG:HB3	1.70	0.56
10:G:108:GLN:CA	10:G:108:GLN:HE21	2.19	0.56
14:L:5:ARG:HA	29:a:48:TYR:CE2	2.41	0.56
14:L:9:ILE:O	14:L:10:LEU:HB2	2.05	0.56
20:R:89:MET:HE1	20:R:97:ARG:HD2	1.87	0.56
27:Y:62:TYR:OH	27:Y:97:VAL:HB	2.06	0.56
29:a:91:ALA:HB2	29:a:120:GLN:OE1	2.06	0.56
36:h:119:PHE:N	36:h:119:PHE:CD1	2.74	0.56
46:1:62:PHE:O	46:1:63:TYR:C	2.47	0.56
1:5:66:A:C2	1:5:312:G:H1'	2.40	0.55
1:5:471:A:C6	1:5:472:C:N1	2.74	0.55
1:5:964:A:C2	1:5:2252:G:N7	2.75	0.55
1:5:1249:C:C2	1:5:1250:C:C5	2.94	0.55
1:5:1260:G:C2	1:5:1261:G:C4	2.94	0.55
1:5:1287:G:N1	1:5:1289:C:C5	2.74	0.55
1:5:1359:G:C2'	1:5:1360:G:C8	2.87	0.55
1:5:1479:G:C5	1:5:1487:G:N2	2.74	0.55
1:5:1552:G:C2	1:5:1574:G:C2	2.94	0.55
1:5:1589:C:C2'	1:5:1590:C:O5'	2.54	0.55
1:5:1661:C:H2'	1:5:1662:C:H6	1.71	0.55
1:5:1873:A:C2	1:5:1874:A:C8	2.94	0.55
1:5:1899:G:H1'	1:5:2278:G:N2	2.19	0.55
1:5:2394:G:N2	1:5:2820:C:H5	2.04	0.55
1:5:2439:G:C6	1:5:2440:U:C4	2.94	0.55
1:5:2686:G:H5'	1:5:2687:U:OP1	2.07	0.55
1:5:2726:G:C2	1:5:2727:C:N3	2.74	0.55
1:5:3675:G:C2	1:5:3676:G:C8	2.94	0.55
1:5:3778:U:H2'	1:5:3778:U:O2	2.06	0.55
1:5:3880:G:O2'	1:5:3881:G:O5'	2.24	0.55
1:5:4071:U:C2	1:5:4072:C:C6	2.94	0.55
1:5:4413:C:O4'	1:5:4413:C:O2	2.23	0.55
1:5:4490:C:O2	1:5:4491:G:H8	1.89	0.55
1:5:4510:A:H62	1:5:4592:C:HO2'	1.53	0.55
1:5:4976:U:O4	5:B:342:LYS:CD	2.52	0.55
1:5:5020:G:C5	1:5:5021:C:C5	2.94	0.55
1:5:5043:A:O2'	1:5:5044:A:C5'	2.54	0.55
3:8:139:G:C6	3:8:140:C:C4	2.94	0.55
4:A:118:GLU:HB3	4:A:126:LEU:HD21	1.88	0.55
5:B:86:VAL:HG13	5:B:162:VAL:HG13	1.88	0.55
6:C:78:ARG:HH11	6:C:78:ARG:HG2	1.70	0.55
6:C:331:TYR:O	6:C:331:TYR:CG	2.59	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:84:VAL:HG11	17:O:102:LEU:HD22	1.88	0.55
33:e:22:ARG:NH2	33:e:36:ARG:HG3	2.20	0.55
1:5:247:G:C2	1:5:248:C:C6	2.93	0.55
1:5:331:G:C2	1:5:332:C:C4	2.94	0.55
1:5:497:G:C2	1:5:657:C:C4	2.94	0.55
1:5:688:U:O4	1:5:689:U:C5	2.60	0.55
1:5:693:C:C2	1:5:694:C:C5	2.94	0.55
1:5:1048:G:C2	1:5:1049:C:C2	2.94	0.55
1:5:1089:G:C5'	22:T:140:PHE:CE1	2.89	0.55
1:5:1269:G:N9	1:5:2111:G:C6	2.75	0.55
1:5:1358:G:C2	1:5:1359:G:C5	2.94	0.55
1:5:1388:A:N1	1:5:1396:G:N2	2.48	0.55
1:5:1555:G:C5	1:5:1556:C:C6	2.95	0.55
1:5:1691:G:C6	1:5:1692:C:C4	2.94	0.55
1:5:1749:A:H4'	12:I:35:ASP:OD2	2.05	0.55
1:5:1774:C:N3	1:5:1775:A:N7	2.54	0.55
1:5:2089:G:N1	1:5:2263:A:C5	2.74	0.55
1:5:2453:A:H1'	1:5:2507:A:C6	2.41	0.55
1:5:2480:G:C2	1:5:2499:C:C2	2.94	0.55
1:5:2658:G:N1	1:5:2675:G:C2	2.74	0.55
1:5:3607:U:C2	1:5:3608:A:N7	2.74	0.55
1:5:3734:U:C2'	1:5:3735:G:O5'	2.55	0.55
1:5:3753:G:C2	1:5:3754:G:C8	2.95	0.55
1:5:3754:G:N1	1:5:3755:G:C8	2.74	0.55
1:5:3870:C:C2	1:5:3886:G:C2	2.94	0.55
1:5:4083:U:H5'	4:A:31:ALA:HB2	1.88	0.55
1:5:4280:A:H61	7:D:28:THR:C	2.13	0.55
1:5:4473:A:C2	1:5:4474:A:C4	2.93	0.55
1:5:4530:U:N3	1:5:4531:U:O2'	2.38	0.55
1:5:4670:C:O2	24:V:15:ARG:NH2	2.39	0.55
1:5:4872:G:O2'	1:5:4873:G:OP1	2.20	0.55
1:5:5037:U:C2	1:5:5038:A:C8	2.94	0.55
2:7:8:G:C4	2:7:9:C:C6	2.94	0.55
2:7:89:G:H2'	2:7:90:A:C8	2.41	0.55
3:8:141:C:H2'	3:8:142:U:C6	2.41	0.55
19:Q:181:ARG:HB3	19:Q:181:ARG:HH21	1.71	0.55
27:Y:62:TYR:N	27:Y:62:TYR:CD1	2.73	0.55
1:5:293:G:H2'	1:5:297:U:N1	2.21	0.55
1:5:405:U:H2'	1:5:405:U:O2	2.07	0.55
1:5:497:G:N1	1:5:657:C:C4	2.75	0.55
1:5:515:C:O2	1:5:515:C:H2'	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:659:G:N1	1:5:660:A:C5	2.74	0.55
1:5:909:A:C6	1:5:910:G:C8	2.94	0.55
1:5:1215:C:C4	1:5:1216:C:H5	2.25	0.55
1:5:1273:G:C8	8:E:69:TYR:C	2.84	0.55
1:5:1279:A:H2'	1:5:1280:C:C6	2.35	0.55
1:5:1437:C:O2	1:5:2098:G:N7	2.40	0.55
1:5:1554:A:C2	1:5:1555:G:H1'	2.41	0.55
1:5:2104:G:N1	1:5:2105:A:C5	2.75	0.55
1:5:2382:A:H2'	1:5:2382:A:N3	2.21	0.55
1:5:2404:A:H61	1:5:2787:A:N6	2.04	0.55
1:5:2721:G:C2'	1:5:2722:G:H5'	2.36	0.55
1:5:2783:A:C5	1:5:2784:C:C5	2.94	0.55
1:5:3694:U:N3	1:5:3695:U:C4	2.73	0.55
1:5:4092:G:N1	1:5:4093:G:N3	2.54	0.55
1:5:4164:C:C4	1:5:4165:C:C5	2.94	0.55
1:5:4173:G:C2	1:5:4174:U:C6	2.94	0.55
1:5:4652:G:C2	1:5:4653:C:C5	2.94	0.55
1:5:4768:G:H3'	1:5:4769:G:H8	1.72	0.55
1:5:5031:G:C2	1:5:5032:C:C5	2.95	0.55
1:5:5039:U:H5"	1:5:5040:U:H2'	1.88	0.55
2:7:7:G:OP1	7:D:33:ARG:HD2	2.06	0.55
4:A:234:LYS:HG2	4:A:238:ILE:HD12	1.88	0.55
6:C:317:ASN:HD21	6:C:320:LYS:HG3	1.72	0.55
6:C:334:THR:HG21	9:F:53:TYR:OH	2.06	0.55
17:O:16:LEU:HD11	17:O:83:THR:HG21	1.88	0.55
29:a:67:GLN:HA	29:a:67:GLN:NE2	2.21	0.55
29:a:109:TYR:CD1	29:a:109:TYR:N	2.74	0.55
36:h:72:PHE:HB3	36:h:73:TYR:HD1	1.71	0.55
46:1:251:VAL:O	46:1:254:VAL:HG22	2.05	0.55
1:5:42:A:N7	1:5:4379:A:N6	2.55	0.55
1:5:125:C:O2	1:5:125:C:H2'	2.05	0.55
1:5:145:G:C2	1:5:146:G:N9	2.75	0.55
1:5:211:G:N2	1:5:212:A:C8	2.74	0.55
1:5:299:C:C4	1:5:300:A:N7	2.74	0.55
1:5:470:A:C6	1:5:471:A:C4	2.95	0.55
1:5:471:A:C2	1:5:472:C:O4'	2.59	0.55
1:5:737:C:C4	1:5:738:C:C5	2.94	0.55
1:5:961:G:O6	1:5:969:C:C5	2.59	0.55
1:5:990:C:C4	1:5:1064:G:C2	2.94	0.55
1:5:1286:C:C2	1:5:1287:G:C8	2.93	0.55
1:5:1447:C:C2	1:5:2098:G:N1	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1534:A:C2'	1:5:1637:A:C2	2.89	0.55
1:5:1572:U:C4'	20:R:95:TRP:HE1	2.18	0.55
1:5:1992:U:C5	1:5:2002:A:N3	2.74	0.55
1:5:2128:G:C2	1:5:2129:C:C2	2.94	0.55
1:5:2291:G:N1	1:5:2292:C:C5	2.75	0.55
1:5:2463:G:H2'	1:5:2464:C:H6	1.71	0.55
1:5:2468:U:C4	1:5:2473:A:C6	2.95	0.55
1:5:2479:G:C2	1:5:2480:G:C4	2.93	0.55
1:5:2496:G:C2	1:5:2497:C:C2	2.94	0.55
1:5:2677:G:C5	1:5:2678:A:C8	2.94	0.55
1:5:2791:C:H2'	1:5:2791:C:O2	2.05	0.55
1:5:2857:A:O2'	1:5:2858:A:C5'	2.54	0.55
1:5:2866:C:C4	1:5:2867:C:C5	2.95	0.55
1:5:3910:C:H2'	1:5:3911:C:H6	1.70	0.55
1:5:3935:C:C2	1:5:3936:A:C8	2.94	0.55
1:5:4092:G:N2	1:5:4158:C:C2	2.75	0.55
1:5:4102:C:C2	1:5:4108:G:C2	2.94	0.55
1:5:4145:C:O2	1:5:4146:G:C8	2.59	0.55
1:5:4164:C:C2	1:5:4165:C:C6	2.95	0.55
1:5:4405:G:C5	1:5:4406:U:C6	2.94	0.55
1:5:4490:C:O2	1:5:4490:C:C2'	2.54	0.55
1:5:4563:U:C4	1:5:4564:A:C6	2.94	0.55
2:7:19:C:C2	2:7:20:U:C5	2.94	0.55
3:8:39:G:C2	3:8:104:A:C2	2.95	0.55
4:A:163:ARG:NH1	4:A:163:ARG:CB	2.69	0.55
6:C:284:MET:HE3	19:Q:28:LEU:HB3	1.88	0.55
33:e:81:ASN:OD1	33:e:81:ASN:C	2.49	0.55
46:1:239:LEU:HB2	46:1:240:PRO:HD2	1.88	0.55
1:5:126:C:C2	1:5:127:G:N7	2.72	0.55
1:5:172:C:O4'	1:5:172:C:OP1	2.24	0.55
1:5:258:G:C6	1:5:259:C:C4	2.94	0.55
1:5:266:C:H1'	36:h:112:ARG:NH1	2.21	0.55
1:5:460:C:C2	1:5:461:G:N7	2.74	0.55
1:5:656:C:C2	1:5:657:C:C6	2.95	0.55
1:5:712:C:N3	1:5:713:C:C5	2.75	0.55
1:5:733:A:N7	1:5:734:G:C8	2.74	0.55
1:5:919:C:H2'	1:5:920:C:O4'	2.07	0.55
1:5:1076:C:C2	1:5:1077:C:C6	2.94	0.55
1:5:1080:C:N3	1:5:1081:C:C6	2.74	0.55
1:5:1203:G:C2	1:5:1204:C:N1	2.75	0.55
1:5:1215:C:H2'	1:5:1216:C:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1282:G:C8	8:E:124:HIS:CE1	2.94	0.55
1:5:1393:G:H2'	1:5:1394:G:C5'	2.37	0.55
1:5:1413:C:O2	1:5:1414:C:C6	2.60	0.55
1:5:1475:G:H22	1:5:1489:G:H1	1.55	0.55
1:5:1509:C:C2	1:5:1510:G:C8	2.95	0.55
1:5:1688:G:C2	1:5:1849:U:O2	2.59	0.55
1:5:1725:U:C4	1:5:1726:U:C5	2.95	0.55
1:5:1877:G:C6	1:5:1878:G:C5	2.94	0.55
1:5:1912:G:C4	1:5:1913:C:C5	2.94	0.55
1:5:1945:G:N2	1:5:1946:G:H1'	2.21	0.55
1:5:1966:C:O2	1:5:1967:A:H8	1.89	0.55
1:5:2034:G:C2	1:5:2035:C:N1	2.73	0.55
1:5:2104:G:H2'	1:5:2105:A:O4'	2.07	0.55
1:5:2482:C:C2	1:5:2483:G:C8	2.95	0.55
1:5:2519:U:C2	1:5:2520:C:C4	2.95	0.55
1:5:3741:C:N3	1:5:3742:G:C5	2.74	0.55
1:5:3879:G:C6	1:5:3882:C:C6	2.94	0.55
1:5:4081:G:N3	1:5:4082:G:C8	2.74	0.55
1:5:4215:C:N3	1:5:4216:G:C5	2.74	0.55
1:5:4241:C:N3	1:5:4242:U:H5	2.03	0.55
1:5:4293:U:O4	1:5:4329:G:H8	1.89	0.55
1:5:4572:U:C2	1:5:4720:C:C5	2.94	0.55
1:5:4601:U:H2'	1:5:4601:U:O2	2.07	0.55
1:5:4620:U:C4	1:5:4621:C:C5	2.94	0.55
1:5:4911:A:N6	17:O:105:PHE:CD1	2.73	0.55
2:7:33:U:O2	2:7:34:C:C6	2.60	0.55
3:8:38:U:H2'	3:8:38:U:O2	2.05	0.55
6:C:270:ALA:HA	6:C:278:ASN:HD21	1.71	0.55
7:D:107:ARG:HD3	7:D:248:ARG:CG	2.36	0.55
19:Q:32:TYR:HH	19:Q:123:PHE:HD2	1.52	0.55
21:S:35:PRO:HD2	21:S:39:VAL:HG21	1.87	0.55
25:W:50:ASN:OD1	25:W:50:ASN:N	2.40	0.55
32:d:83:ARG:CB	32:d:114:PHE:CD2	2.89	0.55
1:5:29:G:N1	1:5:30:C:C4	2.75	0.55
1:5:49:U:C2'	1:5:50:C:O5'	2.55	0.55
1:5:105:A:H2'	1:5:106:A:O4'	2.07	0.55
1:5:288:G:N3	1:5:289:C:C6	2.75	0.55
1:5:332:C:C2'	1:5:333:U:O5'	2.55	0.55
1:5:1266:G:C2	1:5:1268:G:C6	2.95	0.55
1:5:1864:G:C6	1:5:1865:G:C4	2.94	0.55
1:5:1932:A:H2'	1:5:1933:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2129:C:C2	1:5:2130:G:C8	2.95	0.55
1:5:2582:A:OP1	35:g:76:ARG:NH1	2.39	0.55
1:5:2688:G:C2	1:5:2689:C:C5	2.95	0.55
1:5:2855:G:N2	1:5:2859:G:H22	2.04	0.55
1:5:3717:A:O2'	1:5:3718:A:C4'	2.54	0.55
1:5:4097:G:C2	1:5:4098:A:C5	2.95	0.55
1:5:4333:C:N3	1:5:4334:U:C4	2.75	0.55
1:5:4413:C:H3'	1:5:4414:A:C8	2.39	0.55
1:5:4481:U:N3	1:5:4482:U:C5	2.74	0.55
1:5:4484:A:C2	1:5:4485:C:C4	2.95	0.55
1:5:4747:C:H2'	1:5:4748:U:C5	2.42	0.55
1:5:4998:G:C2	1:5:4999:G:N9	2.74	0.55
1:5:4998:G:N1	1:5:4999:G:C8	2.74	0.55
2:7:19:C:C2	2:7:60:G:C2	2.94	0.55
3:8:43:A:N3	3:8:44:A:C8	2.73	0.55
5:B:46:PHE:CE2	5:B:207:VAL:HG13	2.42	0.55
7:D:119:TYR:N	7:D:119:TYR:CD1	2.72	0.55
7:D:123:VAL:HG22	7:D:248:ARG:NH2	2.21	0.55
8:E:277:ILE:N	8:E:278:TYR:CE2	2.74	0.55
16:N:9:GLU:OE2	37:i:41:ARG:NE	2.37	0.55
28:Z:21:ARG:HG3	28:Z:21:ARG:NH1	2.22	0.55
46:1:62:PHE:CD1	46:1:62:PHE:N	2.73	0.55
1:5:44:A:C6	1:5:45:U:C5	2.95	0.55
1:5:60:G:N3	1:5:61:A:C8	2.74	0.55
1:5:83:C:O2	1:5:83:C:H2'	2.07	0.55
1:5:90:G:N7	1:5:92:C:C1'	2.70	0.55
1:5:184:U:C2	1:5:254:G:N2	2.74	0.55
1:5:388:A:N6	1:5:411:G:C4	2.75	0.55
1:5:483:G:N3	1:5:484:U:C6	2.75	0.55
1:5:675:C:N3	1:5:676:C:C5	2.75	0.55
1:5:711:A:N3	1:5:712:C:C6	2.75	0.55
1:5:1583:A:N7	1:5:1584:G:C8	2.74	0.55
1:5:1627:G:H3'	1:5:1628:C:H6	1.71	0.55
1:5:1878:G:N3	1:5:1879:C:C5	2.75	0.55
1:5:2081:C:C2	1:5:2082:G:N7	2.75	0.55
1:5:2367:A:N3	1:5:2368:A:C8	2.75	0.55
1:5:2417:A:N3	1:5:2418:A:C8	2.75	0.55
1:5:2567:G:C4	1:5:2568:C:C6	2.94	0.55
1:5:2606:G:C2	1:5:2607:C:C4	2.95	0.55
1:5:3771:C:H2'	1:5:3772:U:C6	2.42	0.55
1:5:4104:G:O2'	1:5:4105:A:H8	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4271:A:C3'	1:5:4272:G:H21	2.19	0.55
1:5:4277:G:C2	1:5:4278:C:N1	2.75	0.55
1:5:4550:G:N1	1:5:4551:U:C6	2.75	0.55
1:5:4560:C:H5'	1:5:4560:C:C2	2.42	0.55
2:7:54:A:H2	2:7:55:A:C5	2.19	0.55
3:8:42:G:N1	3:8:43:A:C5	2.75	0.55
3:8:78:G:H2'	3:8:79:G:O4'	2.07	0.55
5:B:264:PHE:C	5:B:264:PHE:CD1	2.85	0.55
5:B:307:TYR:HD2	5:B:366:LYS:HD2	1.71	0.55
7:D:27:LYS:CE	13:J:147:ARG:NH2	2.70	0.55
9:F:107:VAL:HG11	9:F:141:TYR:CE1	2.42	0.55
16:N:85:VAL:HA	43:o:49:GLY:HA2	1.89	0.55
28:Z:36:ARG:HD2	28:Z:38:TYR:CE1	2.41	0.55
36:h:119:PHE:N	36:h:119:PHE:HD1	2.04	0.55
1:5:144:G:N1	1:5:145:G:N7	2.54	0.55
1:5:219:G:C8	1:5:220:C:H5	2.25	0.55
1:5:447:C:N3	1:5:448:G:C8	2.74	0.55
1:5:661:C:N4	1:5:662:C:N4	2.55	0.55
1:5:1210:C:H2'	1:5:1210:C:O2	2.06	0.55
1:5:1214:C:H42	9:F:58:HIS:CE1	2.24	0.55
1:5:1629:G:N2	1:5:1631:A:C4	2.75	0.55
1:5:1726:U:N3	1:5:1727:U:C6	2.75	0.55
1:5:1846:G:C6	1:5:1847:C:N4	2.74	0.55
1:5:1950:U:C2	1:5:1951:G:N7	2.74	0.55
1:5:1959:U:O4'	1:5:1961:G:H1'	2.07	0.55
1:5:2021:G:C6	1:5:2022:C:C5	2.94	0.55
1:5:2082:G:C2'	1:5:2083:C:O5'	2.55	0.55
1:5:2103:G:C6	1:5:2104:G:C5	2.95	0.55
1:5:2253:A:H8	1:5:2254:G:H1'	1.72	0.55
1:5:2319:C:H2'	1:5:2320:G:H5'	1.89	0.55
1:5:2328:G:C5	1:5:2329:U:C4	2.94	0.55
1:5:2390:G:C6	1:5:2391:G:C8	2.94	0.55
1:5:2436:U:O4	1:5:2783:A:C8	2.60	0.55
1:5:2567:G:C2	1:5:2568:C:C5	2.95	0.55
1:5:2792:C:C2	1:5:2793:G:C8	2.95	0.55
1:5:2840:A:C6	1:5:2841:G:N7	2.74	0.55
1:5:3593:C:C4'	1:5:3594:C:OP2	2.54	0.55
1:5:3656:A:N3	1:5:3657:U:C6	2.75	0.55
1:5:3727:A:O2'	1:5:3728:A:O4'	2.23	0.55
1:5:3797:C:O2	1:5:3801:U:O4	2.25	0.55
1:5:3832:U:N3	1:5:3833:C:C5	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4097:G:N2	1:5:4098:A:C4	2.75	0.55
1:5:4194:U:O4'	1:5:4194:U:O2	2.23	0.55
1:5:4433:G:N2	1:5:4434:C:C2	2.75	0.55
1:5:5057:C:O3'	32:d:23:ARG:NH2	2.39	0.55
12:I:66:GLU:OE1	12:I:69:ARG:NH1	2.40	0.55
12:I:100:ASN:C	12:I:102:MET:H	2.14	0.55
12:I:159:PHE:HB3	12:I:163:GLN:HE22	1.71	0.55
14:L:23:ALA:HB3	16:N:199:GLN:OE1	2.07	0.55
16:N:126:THR:C	16:N:127:TYR:CD1	2.85	0.55
25:W:28:VAL:HG12	25:W:30:GLN:OE1	2.05	0.55
1:5:74:G:C5'	14:L:59:VAL:HG13	2.37	0.55
1:5:172:C:C2	1:5:173:C:C5	2.95	0.55
1:5:184:U:C2	1:5:254:G:C2	2.95	0.55
1:5:208:A:C4'	1:5:232:G:N2	2.68	0.55
1:5:293:G:C5'	1:5:294:G:H8	2.20	0.55
1:5:448:G:N1	1:5:449:C:C6	2.74	0.55
1:5:460:C:C2	1:5:461:G:C8	2.95	0.55
1:5:977:C:C2'	1:5:978:G:H5'	2.36	0.55
1:5:1086:C:H2'	1:5:1086:C:O2	2.05	0.55
1:5:1202:C:N3	1:5:1203:G:C8	2.75	0.55
1:5:1211:G:N2	1:5:1212:G:C4	2.75	0.55
1:5:1404:G:C6	1:5:1405:C:C4	2.95	0.55
1:5:1444:G:C2'	1:5:1445:U:C6	2.78	0.55
1:5:1684:A:C2	1:5:1685:G:C1'	2.90	0.55
1:5:1723:A:N1	1:5:1838:A:N1	2.55	0.55
1:5:1726:U:O2	1:5:1727:U:C6	2.60	0.55
1:5:1726:U:C4	1:5:1727:U:C5	2.94	0.55
1:5:1761:G:C6	1:5:1762:C:C4	2.95	0.55
1:5:1899:G:C6	1:5:1900:C:N4	2.75	0.55
1:5:1937:C:C3'	1:5:1938:C:H2'	2.37	0.55
1:5:1970:A:C2	1:5:2016:C:C5	2.95	0.55
1:5:2009:A:O2'	1:5:2010:A:OP1	2.20	0.55
1:5:2080:U:N3	1:5:2081:C:N4	2.55	0.55
1:5:2088:A:N6	19:Q:30:LYS:HB3	2.21	0.55
1:5:2100:A:C8	1:5:2101:C:C5	2.95	0.55
1:5:2126:G:C1'	1:5:2127:C:C5	2.90	0.55
1:5:2392:C:H2'	1:5:2392:C:O2	2.05	0.55
1:5:2436:U:H4'	1:5:2437:C:OP2	2.06	0.55
1:5:2450:G:C5	1:5:2451:A:C8	2.95	0.55
1:5:2546:G:O2'	1:5:2547:G:C5'	2.55	0.55
1:5:2611:A:H5'	1:5:2688:G:H4'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3662:A:N6	1:5:3680:U:N3	2.40	0.55
1:5:3773:U:O2	1:5:3775:A:N1	2.40	0.55
1:5:3816:A:OP1	1:5:3818:U:H5	1.89	0.55
1:5:4275:G:C6	1:5:4276:G:C4	2.95	0.55
1:5:4403:U:H2'	1:5:4404:U:O4'	2.07	0.55
1:5:4652:G:C2	1:5:4653:C:C6	2.95	0.55
1:5:4735:G:C6	1:5:4736:C:C5	2.94	0.55
1:5:4956:A:C6	1:5:4957:C:C6	2.95	0.55
1:5:5047:C:O2'	1:5:5050:C:OP2	2.15	0.55
1:5:5061:A:H4'	1:5:5062:G:H5"	1.87	0.55
2:7:111:C:C2	2:7:112:U:C6	2.93	0.55
3:8:95:A:N3	3:8:96:C:C6	2.75	0.55
3:8:134:G:C6	3:8:135:C:C4	2.94	0.55
29:a:79:TRP:CE3	29:a:87:ARG:HG3	2.42	0.55
35:g:5:LEU:HD21	35:g:22:LEU:HD12	1.87	0.55
45:r:10:VAL:HG12	45:r:10:VAL:O	2.07	0.55
1:5:409:G:N2	1:5:2329:U:H4'	2.22	0.55
1:5:514:U:C6	1:5:514:U:H3'	2.42	0.55
1:5:672:C:N3	1:5:673:C:C6	2.74	0.55
1:5:754:U:C2	1:5:755:C:C5	2.95	0.55
1:5:1759:G:C2	1:5:1760:G:N9	2.75	0.55
1:5:1786:A:H2'	1:5:1789:C:C5	2.42	0.55
1:5:1884:C:OP1	33:e:50:LYS:HB2	2.07	0.55
1:5:1885:G:H2'	1:5:1886:G:O4'	2.07	0.55
1:5:1906:U:H2'	1:5:1907:A:H5'	1.89	0.55
1:5:2090:U:HO2'	1:5:2091:C:P	2.30	0.55
1:5:2368:A:N1	1:5:2788:U:C5	2.75	0.55
1:5:2576:G:C2	1:5:2577:C:N1	2.75	0.55
1:5:2607:C:C2	1:5:2608:G:N7	2.75	0.55
1:5:3859:G:C4'	18:P:139:TYR:OH	2.55	0.55
1:5:4090:G:C6	1:5:4091:G:C5	2.95	0.55
1:5:4260:U:H2'	1:5:4261:C:C6	2.41	0.55
1:5:4270:C:H2'	1:5:4270:C:O2	1.98	0.55
1:5:4885:U:O2	1:5:4886:C:C6	2.59	0.55
1:5:4910:G:N2	17:O:109:PRO:CA	2.70	0.55
1:5:4979:A:H2'	1:5:4980:C:O5'	2.06	0.55
3:8:12:G:N2	3:8:13:G:C4	2.75	0.55
3:8:74:U:N3	27:Y:74:TYR:CE1	2.75	0.55
3:8:139:G:C5	3:8:140:C:C5	2.95	0.55
9:F:197:TYR:O	9:F:199:VAL:N	2.40	0.55
12:I:100:ASN:O	12:I:102:MET:N	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:1:60:ASP:O	46:1:61:PRO:C	2.50	0.55
46:1:264:ASP:O	46:1:265:LEU:HD23	2.06	0.55
1:5:69:A:H3'	1:5:70:A:C8	2.40	0.54
1:5:100:C:C6	1:5:101:A:H8	2.19	0.54
1:5:299:C:N3	1:5:300:A:C8	2.75	0.54
1:5:365:U:H2'	1:5:365:U:O2	2.06	0.54
1:5:460:C:H2'	1:5:461:G:C8	2.42	0.54
1:5:470:A:C4	1:5:471:A:C8	2.95	0.54
1:5:515:C:C2	1:5:516:C:C5	2.95	0.54
1:5:1260:G:C6	1:5:1261:G:N7	2.75	0.54
1:5:1309:C:C4	1:5:1310:C:C5	2.95	0.54
1:5:1378:C:H5"	1:5:1379:C:C3'	2.37	0.54
1:5:1380:G:C2	1:5:1382:G:C4	2.94	0.54
1:5:1699:A:N6	1:5:2094:G:O2'	2.40	0.54
1:5:1756:U:H3	1:5:1775:A:H2	1.53	0.54
1:5:1893:C:O2	1:5:1893:C:C2'	2.55	0.54
1:5:2088:A:N1	1:5:2268:A:O2'	2.40	0.54
1:5:2559:G:C6	1:5:2560:C:C4	2.95	0.54
1:5:2690:C:C4	1:5:2691:U:C4	2.95	0.54
1:5:2852:U:O2	1:5:2852:U:H2'	2.06	0.54
1:5:2878:G:OP2	1:5:2879:A:O2'	2.18	0.54
1:5:3657:U:O2	1:5:3657:U:H2'	2.07	0.54
1:5:3804:G:H1'	1:5:3832:U:O2'	2.07	0.54
1:5:3879:G:O6	1:5:3882:C:C4	2.60	0.54
1:5:3898:G:H2'	1:5:3899:G:H5'	1.88	0.54
1:5:4068:U:C4	1:5:4069:U:C6	2.95	0.54
1:5:4093:G:C6	1:5:4094:G:N7	2.75	0.54
1:5:4108:G:C2	1:5:4109:G:C8	2.95	0.54
1:5:4140:C:C5	1:5:4141:G:C8	2.94	0.54
1:5:4251:A:N6	13:J:127:GLY:O	2.39	0.54
1:5:4548:A:C8	1:5:4548:A:C4'	2.89	0.54
1:5:4687:A:N1	1:5:4688:C:C5	2.75	0.54
1:5:4949:G:N2	1:5:4950:U:H2'	2.22	0.54
1:5:5043:A:H2'	1:5:5044:A:C8	2.42	0.54
1:5:5050:C:O2'	5:B:321:VAL:HA	2.08	0.54
14:L:65:ARG:HB2	29:a:69:PHE:CD2	2.42	0.54
17:O:167:HIS:CD2	17:O:167:HIS:C	2.85	0.54
21:S:120:ARG:HB2	21:S:122:HIS:CD2	2.41	0.54
43:o:36:GLN:HE21	43:o:36:GLN:CA	2.20	0.54
1:5:93:G:N2	1:5:94:A:C2	2.75	0.54
1:5:164:G:C6	1:5:165:A:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:211:G:C2	1:5:212:A:C5	2.95	0.54
1:5:286:U:C2	1:5:287:U:C6	2.95	0.54
1:5:448:G:C2	1:5:449:C:H1'	2.43	0.54
1:5:504:G:C2	1:5:505:G:C6	2.95	0.54
1:5:1272:C:H3'	1:5:2122:G:O2'	2.07	0.54
1:5:1273:G:N2	1:5:2123:C:OP1	2.31	0.54
1:5:1411:C:O2	1:5:1412:G:H8	1.88	0.54
1:5:1558:A:H2'	1:5:1559:G:C8	2.42	0.54
1:5:1577:G:H3'	1:5:1577:G:N3	2.22	0.54
1:5:1871:A:N1	1:5:1872:G:C5	2.76	0.54
1:5:1965:G:H2'	1:5:1966:C:H6	1.72	0.54
1:5:2014:C:C4	1:5:2015:U:C5	2.95	0.54
1:5:2106:G:HO2'	1:5:2107:C:C1'	2.18	0.54
1:5:2128:G:C5	1:5:2129:C:C5	2.96	0.54
1:5:2258:C:O2	1:5:2258:C:C2'	2.55	0.54
1:5:2784:C:N3	1:5:2785:C:C4	2.75	0.54
1:5:2853:C:H2'	1:5:2854:G:O4'	2.07	0.54
1:5:3687:A:C6	1:5:3688:U:C5	2.95	0.54
1:5:3738:G:H8	1:5:3738:G:O5'	1.89	0.54
1:5:3738:G:N7	1:5:3739:C:C6	2.75	0.54
1:5:4085:A:H3'	1:5:4086:G:C5'	2.38	0.54
1:5:4211:C:O5'	1:5:4211:C:H6	1.90	0.54
1:5:4651:A:C2	1:5:4652:G:H1'	2.43	0.54
1:5:4700:A:H2'	1:5:4700:A:N3	2.21	0.54
2:7:59:G:N1	2:7:60:G:C4	2.76	0.54
5:B:168:MET:HE3	5:B:171:LEU:HD12	1.89	0.54
10:G:137:ARG:O	10:G:202:VAL:HA	2.07	0.54
10:G:235:ARG:HG3	10:G:235:ARG:HH11	1.73	0.54
12:I:99:ILE:HG22	12:I:123:GLN:HB2	1.88	0.54
18:P:30:ARG:HH22	18:P:62:ARG:NH2	2.06	0.54
1:5:194:C:N4	1:5:195:C:C5	2.75	0.54
1:5:210:C:H6	1:5:210:C:O5'	1.91	0.54
1:5:290:U:C2'	1:5:291:U:O5'	2.55	0.54
1:5:908:G:C2	1:5:909:A:C8	2.96	0.54
1:5:972:C:C6	1:5:1283:G:O6	2.59	0.54
1:5:1214:C:N3	1:5:2116:C:C4	2.75	0.54
1:5:1249:C:C4	1:5:1250:C:C5	2.95	0.54
1:5:1289:C:N3	1:5:1290:G:N7	2.56	0.54
1:5:1323:A:N3	1:5:1324:A:C8	2.75	0.54
1:5:1855:G:C6	1:5:1856:C:C4	2.96	0.54
1:5:1999:A:C2'	1:5:2000:G:O4'	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2037:C:N3	1:5:2038:U:C5	2.75	0.54
1:5:2409:U:O4	1:5:2783:A:N1	2.39	0.54
1:5:2438:A:N1	1:5:2441:C:C5	2.75	0.54
1:5:2543:A:C2	1:5:2773:G:N1	2.74	0.54
1:5:2565:A:N7	1:5:2566:G:C1'	2.65	0.54
1:5:2712:G:N3	1:5:2713:C:C6	2.76	0.54
1:5:2733:C:C4	1:5:2734:U:C5	2.95	0.54
1:5:2743:A:C6	1:5:2744:A:N6	2.75	0.54
1:5:3656:A:C2	1:5:3657:U:C6	2.96	0.54
1:5:3877:A:N1	1:5:4444:C:H1'	2.22	0.54
1:5:4098:A:N1	1:5:4099:G:C6	2.75	0.54
1:5:4133:C:C2	1:5:4134:C:C5	2.96	0.54
1:5:4222:G:C6	1:5:4223:C:C5	2.94	0.54
1:5:4363:A:C2	1:5:4364:G:C8	2.95	0.54
1:5:4495:G:N2	1:5:4506:C:C2	2.75	0.54
1:5:4707:A:O2'	1:5:4708:A:O5'	2.26	0.54
1:5:4771:C:C5	1:5:4772:C:C6	2.96	0.54
1:5:4881:U:O2	1:5:4881:U:H2'	2.05	0.54
1:5:4988:U:N3	1:5:5060:A:O3'	2.38	0.54
1:5:5028:G:C6	1:5:5029:C:N4	2.75	0.54
1:5:5039:U:C5'	1:5:5040:U:H2'	2.37	0.54
6:C:35:ASP:OD1	6:C:36:ILE:N	2.41	0.54
12:I:73:ASN:O	12:I:76:MET:O	2.25	0.54
19:Q:159:PRO:HA	19:Q:188:ASN:HD22	1.71	0.54
20:R:88:ARG:HH11	20:R:88:ARG:HG2	1.72	0.54
1:5:112:C:C2	1:5:113:A:C8	2.96	0.54
1:5:127:G:C6	1:5:128:C:C4	2.95	0.54
1:5:211:G:N1	1:5:212:A:C5	2.76	0.54
1:5:450:G:HO2'	1:5:452:A:H4'	1.73	0.54
1:5:917:A:C2	1:5:918:G:N1	2.76	0.54
1:5:992:C:O2	1:5:993:G:C8	2.60	0.54
1:5:1070:G:O6	8:E:42:ARG:NH1	2.40	0.54
1:5:1198:G:C2'	1:5:1199:G:C8	2.86	0.54
1:5:1267:C:O5'	1:5:1267:C:H6	1.90	0.54
1:5:1268:G:H4'	1:5:1269:G:OP1	2.06	0.54
1:5:1569:U:C2	1:5:1570:G:C8	2.96	0.54
1:5:1695:U:O2'	1:5:1696:C:H5'	2.06	0.54
1:5:1763:C:N4	1:5:1764:G:C4	2.76	0.54
1:5:1828:C:N3	1:5:1829:G:N7	2.55	0.54
1:5:1870:C:N3	1:5:1871:A:C8	2.75	0.54
1:5:1946:G:C2	1:5:1948:G:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1964:A:C6	1:5:4694:G:C6	2.95	0.54
1:5:2426:U:O2'	1:5:2427:G:H5'	2.07	0.54
1:5:2539:C:C2	1:5:2540:C:C5	2.95	0.54
1:5:2632:U:O2	1:5:2633:U:C5	2.61	0.54
1:5:2852:U:N3	1:5:2854:G:OP2	2.37	0.54
1:5:2856:C:O2	1:5:2857:A:H8	1.75	0.54
1:5:3753:G:N1	1:5:3754:G:C5	2.75	0.54
1:5:3756:A:H2'	1:5:3757:G:O4'	2.07	0.54
1:5:4183:G:H2'	1:5:4183:G:N3	2.23	0.54
1:5:4560:C:O2	1:5:4560:C:C2'	2.55	0.54
1:5:4562:C:C2	1:5:4563:U:H6	2.23	0.54
1:5:4579:U:N3	1:5:4580:U:C4	2.75	0.54
1:5:4984:C:C4	1:5:4985:U:C5	2.95	0.54
1:5:4997:G:C2	1:5:4998:G:N9	2.75	0.54
2:7:51:G:N1	2:7:52:C:C4	2.75	0.54
2:7:59:G:O6	2:7:60:G:N7	2.37	0.54
3:8:83:C:H4'	3:8:85:U:N3	2.23	0.54
3:8:95:A:C2	3:8:96:C:N1	2.75	0.54
4:A:29:LEU:HD13	4:A:163:ARG:HH12	1.73	0.54
4:A:48:ILE:HG22	44:p:54:ILE:HD12	1.88	0.54
7:D:109:LEU:HD21	7:D:142:PHE:CZ	2.43	0.54
8:E:119:ARG:HG3	8:E:119:ARG:HH11	1.72	0.54
14:L:59:VAL:HG21	14:L:73:GLY:HA3	1.89	0.54
18:P:82:ARG:HA	18:P:83:TRP:HE3	1.72	0.54
1:5:32:G:N1	1:5:48:G:O2'	2.40	0.54
1:5:82:U:C4	1:5:83:C:C5	2.96	0.54
1:5:288:G:C6	1:5:289:C:N4	2.76	0.54
1:5:471:A:N6	1:5:472:C:C4	2.75	0.54
1:5:686:A:C3'	1:5:687:U:H5'	2.38	0.54
1:5:723:A:N1	1:5:943:A:N1	2.54	0.54
1:5:908:G:N2	1:5:909:A:H1'	2.23	0.54
1:5:909:A:N1	1:5:910:G:C5	2.75	0.54
1:5:1271:G:C3'	1:5:1272:C:C5'	2.81	0.54
1:5:1590:C:H5"	1:5:1591:U:O5'	2.07	0.54
1:5:1744:U:C4	1:5:1745:G:N7	2.75	0.54
1:5:1758:G:C2	1:5:1759:G:C4	2.96	0.54
1:5:2282:A:C2'	1:5:2283:G:C5'	2.86	0.54
1:5:2493:G:O2'	3:8:127:U:OP2	2.20	0.54
1:5:2702:C:O2	1:5:2715:G:C2	2.61	0.54
1:5:3595:U:OP1	1:5:3596:A:C8	2.60	0.54
1:5:3656:A:C2	1:5:3657:U:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3741:C:C4	1:5:3742:G:N7	2.75	0.54
1:5:3790:U:H3	1:5:3792:G:C1'	2.20	0.54
1:5:4269:G:H2'	1:5:4270:C:O4'	2.07	0.54
1:5:4467:A:C6	1:5:4468:U:C5	2.96	0.54
1:5:4550:G:N2	1:5:4551:U:H1'	2.22	0.54
1:5:4745:G:C2'	1:5:4746:C:H6	2.17	0.54
1:5:4886:C:C2	1:5:4887:C:H5	2.26	0.54
2:7:28:C:C5	2:7:29:C:C5	2.95	0.54
2:7:69:U:O4	2:7:106:G:O6	2.26	0.54
15:M:6:PHE:O	15:M:8:GLU:N	2.41	0.54
21:S:83:ARG:HH21	21:S:83:ARG:HG3	1.72	0.54
22:T:105:PHE:HE1	22:T:109:VAL:CG2	2.21	0.54
25:W:31:PHE:CD2	25:W:37:GLU:HA	2.43	0.54
27:Y:18:HIS:HB3	27:Y:19:PHE:CE1	2.43	0.54
35:g:93:ARG:HB2	35:g:93:ARG:HH11	1.72	0.54
1:5:231:U:H4'	27:Y:100:HIS:NE2	2.22	0.54
1:5:291:U:O2'	1:5:292:G:H2'	2.06	0.54
1:5:668:C:C2	1:5:669:C:C6	2.96	0.54
1:5:919:C:H2'	1:5:920:C:C5'	2.38	0.54
1:5:933:G:C5	1:5:940:C:C4	2.96	0.54
1:5:1075:G:C4	1:5:1076:C:C5	2.95	0.54
1:5:1237:C:O4'	1:5:1237:C:O2	2.25	0.54
1:5:1280:C:C5'	1:5:1280:C:H6	2.15	0.54
1:5:1302:U:H4'	33:e:17:THR:O	2.07	0.54
1:5:1352:C:O2'	1:5:1356:U:OP1	2.25	0.54
1:5:1358:G:OP2	6:C:114:ARG:NH2	2.40	0.54
1:5:1359:G:C2'	1:5:1360:G:O4'	2.55	0.54
1:5:1390:G:H3'	1:5:1390:G:C8	2.42	0.54
1:5:1479:G:C6	1:5:1487:G:N2	2.76	0.54
1:5:1591:U:N3	1:5:4555:U:OP1	2.40	0.54
1:5:1699:A:H4'	1:5:1718:C:P	2.48	0.54
1:5:1753:G:N3	1:5:1755:C:H5"	2.22	0.54
1:5:1871:A:C6	1:5:1872:G:N7	2.76	0.54
1:5:2021:G:C6	1:5:2022:C:C4	2.96	0.54
1:5:2079:G:H1	1:5:2276:A:H61	1.54	0.54
1:5:2328:G:C2	1:5:2329:U:C2	2.96	0.54
1:5:2341:A:N1	1:5:2342:G:C5	2.75	0.54
1:5:2576:G:C6	1:5:2577:C:C4	2.95	0.54
1:5:2594:C:C2	1:5:2595:C:C6	2.96	0.54
1:5:2605:G:N1	1:5:2606:G:C5	2.76	0.54
1:5:2632:U:C5	23:U:85:TYR:CD1	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2656:U:H3'	1:5:2657:G:H8	1.72	0.54
1:5:3586:G:C6	1:5:3587:C:C4	2.96	0.54
1:5:3594:C:H2'	1:5:3594:C:O2	2.08	0.54
1:5:3773:U:N3	1:5:3774:A:H2'	2.21	0.54
1:5:4146:G:H2'	1:5:4147:G:H8	1.72	0.54
1:5:4154:G:N2	1:5:4155:C:C2	2.76	0.54
1:5:4285:U:H2'	1:5:4286:C:C6	2.40	0.54
1:5:5019:A:C2	1:5:5020:G:C8	2.95	0.54
1:5:5035:U:O2	1:5:5035:U:H2'	2.08	0.54
1:5:5043:A:O2'	1:5:5044:A:H5'	2.07	0.54
2:7:27:G:H1'	2:7:56:G:H1	1.73	0.54
4:A:177:LYS:HD2	44:p:29:ILE:HG21	1.90	0.54
20:R:175:GLU:OE1	20:R:176:ARG:HA	2.07	0.54
1:5:330:G:N2	1:5:331:G:N9	2.56	0.54
1:5:488:G:N1	1:5:489:C:C5	2.76	0.54
1:5:728:U:C2'	1:5:729:G:OP1	2.56	0.54
1:5:1277:G:N1	1:5:1278:C:C5	2.75	0.54
1:5:1572:U:H3'	1:5:1573:G:H8	1.73	0.54
1:5:1583:A:N1	1:5:1584:G:H1'	2.23	0.54
1:5:1682:A:C5	1:5:1683:U:C5	2.96	0.54
1:5:1719:A:O2'	1:5:1720:C:C6	2.58	0.54
1:5:1724:G:H21	9:F:105:PRO:CG	2.21	0.54
1:5:1725:U:O2	1:5:1725:U:H2'	2.07	0.54
1:5:1816:C:H2'	1:5:1817:U:H5'	1.88	0.54
1:5:1857:C:C2	1:5:1858:A:N7	2.75	0.54
1:5:1912:G:N2	17:O:87:MET:SD	2.81	0.54
1:5:1938:C:H4'	1:5:1939:A:O5'	2.08	0.54
1:5:1946:G:C2	1:5:2037:C:C2	2.96	0.54
1:5:1964:A:N1	1:5:4694:G:C4	2.73	0.54
1:5:2567:G:C5	1:5:2568:C:C5	2.95	0.54
1:5:2743:A:H1'	4:A:21:LYS:HE3	1.90	0.54
1:5:2769:U:O2'	1:5:2770:C:C5'	2.56	0.54
1:5:3605:C:N3	1:5:3606:U:C5	2.75	0.54
1:5:3753:G:C5	1:5:3776:G:C6	2.95	0.54
1:5:3832:U:C2	1:5:3833:C:C6	2.96	0.54
1:5:4175:G:C6	1:5:4176:C:C4	2.95	0.54
1:5:4183:G:C4	1:5:4183:G:H5"	2.42	0.54
1:5:4368:G:N2	1:5:4369:A:H1'	2.23	0.54
1:5:4618:G:C2	1:5:4619:U:C6	2.96	0.54
1:5:4880:C:O2'	1:5:4881:U:H5'	2.08	0.54
1:5:4916:G:C6	1:5:4917:C:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:10:G:C2	3:8:11:C:C6	2.96	0.54
3:8:132:G:N2	3:8:133:G:C4	2.75	0.54
5:B:100:ARG:NH2	5:B:101:THR:C	2.65	0.54
5:B:222:VAL:HG11	5:B:274:TYR:CE2	2.43	0.54
8:E:266:TYR:CD2	15:M:107:PHE:CD1	2.95	0.54
11:H:59:LYS:O	11:H:60:TRP:CB	2.55	0.54
13:J:107:PHE:CE1	13:J:130:PHE:HB3	2.42	0.54
21:S:81:TRP:CZ2	21:S:94:TYR:CE1	2.96	0.54
39:k:11:PHE:HZ	39:k:56:LEU:HD11	1.71	0.54
1:5:246:G:N2	1:5:247:G:C8	2.74	0.54
1:5:259:C:N3	1:5:260:C:C5	2.76	0.54
1:5:479:G:N1	1:5:480:C:C4	2.76	0.54
1:5:1065:G:C2	1:5:1066:G:C5	2.95	0.54
1:5:1273:G:H21	1:5:2123:C:P	2.30	0.54
1:5:1377:G:C8	1:5:1377:G:H3'	2.43	0.54
1:5:1394:G:O2'	1:5:1395:U:H5'	2.08	0.54
1:5:1482:G:N2	1:5:1484:G:H22	2.06	0.54
1:5:1539:G:C1'	4:A:15:VAL:HG13	2.38	0.54
1:5:1666:C:H2'	1:5:1667:G:O4'	2.08	0.54
1:5:1759:G:N1	1:5:1760:G:C8	2.75	0.54
1:5:1813:U:H2'	1:5:1814:C:C6	2.42	0.54
1:5:1867:A:H2'	1:5:1868:A:C8	2.42	0.54
1:5:1994:C:O2	1:5:1995:G:C8	2.60	0.54
1:5:2107:C:N4	1:5:2126:G:C2	2.75	0.54
1:5:2605:G:N2	1:5:2606:G:C4	2.76	0.54
1:5:3635:A:C8	1:5:3692:A:H1'	2.42	0.54
1:5:3667:C:O2	1:5:3667:C:H2'	2.08	0.54
1:5:3685:C:H5"	4:A:193:ARG:NH2	2.22	0.54
1:5:3870:C:C2	1:5:3886:G:N2	2.76	0.54
1:5:3910:C:H2'	1:5:3911:C:C6	2.43	0.54
1:5:4101:C:C4	1:5:4102:C:C5	2.96	0.54
1:5:4142:C:C4	1:5:4143:G:N1	2.76	0.54
1:5:4750:G:H2'	1:5:4751:G:O5'	2.07	0.54
1:5:4763:U:C6	11:H:42:ASN:ND2	2.76	0.54
1:5:4767:C:H4'	1:5:4874:A:C2	2.42	0.54
1:5:4896:G:C4	1:5:4897:G:C8	2.95	0.54
1:5:4983:C:O2	1:5:4984:C:H6	1.86	0.54
3:8:118:C:C2	3:8:119:C:C5	2.95	0.54
4:A:180:LEU:HG	44:p:18:TYR:CE1	2.43	0.54
16:N:178:HIS:HA	16:N:181:HIS:NE2	2.22	0.54
33:e:35:TRP:CE3	33:e:56:PRO:CD	2.86	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:102:G:O2'	1:5:1381:U:O2'	2.03	0.54
1:5:120:A:O4'	1:5:121:A:C6	2.61	0.54
1:5:244:G:O6	1:5:246:G:N7	2.41	0.54
1:5:425:U:O4	1:5:426:A:N6	2.41	0.54
1:5:1066:G:N1	1:5:1067:G:C5	2.76	0.54
1:5:1234:G:C2	1:5:1235:G:C4	2.96	0.54
1:5:1397:A:O2'	1:5:1398:A:C5'	2.56	0.54
1:5:1856:C:O2	1:5:1892:A:H2	1.89	0.54
1:5:1898:C:H5	1:5:2279:A:H1'	1.66	0.54
1:5:2092:G:N1	6:C:305:PRO:O	2.37	0.54
1:5:2285:A:OP2	29:a:7:LYS:NZ	2.41	0.54
1:5:2291:G:C2	1:5:2292:C:C5	2.96	0.54
1:5:3657:U:C4	1:5:3658:C:C5	2.96	0.54
1:5:3690:U:C2	1:5:3691:G:C8	2.96	0.54
1:5:3714:G:C2	1:5:3715:U:C2	2.96	0.54
1:5:3875:G:O6	1:5:3877:A:H4'	2.08	0.54
1:5:4085:A:OP1	26:X:45:THR:HG23	2.08	0.54
1:5:4173:G:C6	1:5:4174:U:C4	2.96	0.54
1:5:4205:A:O4'	1:5:4375:C:H2'	2.08	0.54
1:5:4239:A:C6	1:5:4240:G:C5	2.95	0.54
1:5:4277:G:C2	1:5:4278:C:C5	2.96	0.54
1:5:4297:G:C6	1:5:4298:A:N7	2.76	0.54
6:C:178:ASN:ND2	6:C:178:ASN:N	2.55	0.54
9:F:168:ARG:HD2	9:F:211:TRP:HE1	1.73	0.54
10:G:57:TRP:N	10:G:57:TRP:CD1	2.75	0.54
10:G:102:TYR:OH	10:G:207:VAL:CA	2.56	0.54
20:R:109:TYR:CE1	20:R:114:LYS:CD	2.87	0.54
24:V:30:ASP:OD1	24:V:104:VAL:HG12	2.08	0.54
30:b:12:GLN:C	30:b:16:TRP:CZ2	2.86	0.54
1:5:736:C:C2'	1:5:737:C:O4'	2.53	0.54
1:5:967:C:H2'	1:5:969:C:OP1	2.08	0.54
1:5:994:G:C2	1:5:1050:C:C2	2.95	0.54
1:5:1297:U:O2	1:5:1298:C:C6	2.61	0.54
1:5:1329:G:C2	1:5:3865:A:H1'	2.43	0.54
1:5:1473:U:C2	1:5:1474:C:C6	2.96	0.54
1:5:1802:A:H5'	22:T:105:PHE:CD2	2.43	0.54
1:5:1899:G:H1'	1:5:2278:G:H22	1.73	0.54
1:5:1936:C:C5	2:7:84:U:H5	2.13	0.54
1:5:2021:G:C5	1:5:2022:C:C5	2.96	0.54
1:5:2090:U:N3	6:C:307:LYS:CE	2.71	0.54
1:5:2116:C:H4'	1:5:2117:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2122:G:O2'	1:5:2123:C:OP1	2.26	0.54
1:5:2260:C:H2'	1:5:2261:G:C8	2.41	0.54
1:5:2326:G:N2	1:5:2327:G:H1'	2.23	0.54
1:5:2347:A:N7	33:e:31:ILE:HD11	2.23	0.54
1:5:2439:G:N3	1:5:2439:G:H2'	2.23	0.54
1:5:2614:C:O2	1:5:2614:C:H2'	2.08	0.54
1:5:3638:G:C6	1:5:3651:A:C2	2.96	0.54
1:5:3680:U:O2	1:5:3680:U:C2'	2.44	0.54
1:5:3754:G:C6	1:5:3755:G:N7	2.76	0.54
1:5:4093:G:N7	1:5:4094:G:C8	2.76	0.54
1:5:4096:C:C4	1:5:4097:G:N9	2.75	0.54
1:5:4146:G:N3	1:5:4147:G:C8	2.76	0.54
1:5:4172:A:N3	1:5:4173:G:C8	2.75	0.54
1:5:4216:G:H2'	1:5:4217:G:H5'	1.90	0.54
1:5:4275:G:H3'	1:5:4275:G:C8	2.43	0.54
1:5:4543:G:O2'	1:5:4544:A:O5'	2.26	0.54
1:5:4579:U:C4	1:5:4580:U:C5	2.96	0.54
1:5:4735:G:C6	1:5:4736:C:C4	2.95	0.54
1:5:4884:G:H2'	1:5:4884:G:N3	2.23	0.54
1:5:4942:C:O2	1:5:4942:C:O4'	2.23	0.54
1:5:4997:G:C6	1:5:4998:G:C5	2.96	0.54
1:5:5042:A:C2	1:5:5043:A:C5	2.96	0.54
2:7:9:C:O2	2:7:9:C:H2'	2.08	0.54
3:8:125:C:O4'	3:8:125:C:O2	2.21	0.54
4:A:97:ASN:O	4:A:100:ASN:HB2	2.08	0.54
10:G:165:GLU:OE1	16:N:22:LEU:HD13	2.07	0.54
12:I:171:TRP:CB	12:I:181:PHE:CD2	2.91	0.54
15:M:6:PHE:HA	21:S:152:PHE:O	2.08	0.54
16:N:143:ARG:HD3	36:h:95:LEU:HD23	1.91	0.54
17:O:109:PRO:O	17:O:113:ASP:OD1	2.26	0.54
20:R:8:LYS:HG3	20:R:22:VAL:HG11	1.90	0.54
43:o:26:TYR:CD2	43:o:82:MET:HE3	2.43	0.54
1:5:27:C:C2	1:5:28:C:C5	2.96	0.53
1:5:73:A:C2	1:5:74:G:N7	2.77	0.53
1:5:473:C:C2	1:5:474:C:C6	2.95	0.53
1:5:750:U:C4	1:5:751:G:N7	2.77	0.53
1:5:981:C:C2	8:E:69:TYR:CE2	2.96	0.53
1:5:1355:G:H2'	1:5:1356:U:O5'	2.07	0.53
1:5:1445:U:N3	1:5:1446:C:C6	2.76	0.53
1:5:1492:G:C4	1:5:1493:G:C8	2.97	0.53
1:5:1665:C:O2'	1:5:1666:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1667:G:C2	1:5:2283:G:C6	2.94	0.53
1:5:1750:G:N1	1:5:1751:A:C5	2.77	0.53
1:5:2243:C:O2	1:5:2244:C:C6	2.61	0.53
1:5:2245:G:C6	1:5:2246:C:C4	2.96	0.53
1:5:2484:A:H2'	1:5:2485:U:O4'	2.08	0.53
1:5:3692:A:C6	1:5:3693:U:N1	2.76	0.53
1:5:3731:C:O2	1:5:3731:C:H2'	2.06	0.53
1:5:3944:G:N2	1:5:3945:A:C4	2.76	0.53
1:5:4592:C:H2'	1:5:4593:C:H6	1.72	0.53
1:5:4975:G:C5	1:5:4977:A:C6	2.96	0.53
1:5:4981:G:C2	1:5:4982:A:C8	2.96	0.53
2:7:58:A:C5	2:7:59:G:C8	2.95	0.53
6:C:341:LEU:HD21	8:E:52:ARG:HD2	1.90	0.53
7:D:52:ILE:HG23	7:D:54:ARG:NH2	2.23	0.53
7:D:99:TYR:CE1	7:D:165:GLY:HA2	2.42	0.53
9:F:161:TYR:CD2	9:F:168:ARG:CZ	2.91	0.53
9:F:243:ASN:N	9:F:243:ASN:OD1	2.37	0.53
16:N:88:GLY:CA	43:o:48:TYR:HD2	2.21	0.53
21:S:8:ARG:HB2	21:S:10:TYR:CE2	2.42	0.53
27:Y:15:ARG:NH1	27:Y:15:ARG:CG	2.70	0.53
32:d:87:ARG:NH1	32:d:109:VAL:HG22	2.23	0.53
37:i:51:ALA:HB3	37:i:54:GLU:OE1	2.08	0.53
1:5:190:G:N1	1:5:252:C:C2	2.77	0.53
1:5:206:U:O2	1:5:208:A:H8	1.90	0.53
1:5:209:U:N3	1:5:233:U:C5	2.76	0.53
1:5:471:A:N1	1:5:472:C:H1'	2.24	0.53
1:5:491:G:N2	1:5:492:U:C4	2.76	0.53
1:5:751:G:N2	1:5:752:G:C4	2.76	0.53
1:5:1183:C:N3	1:5:1184:A:C8	2.76	0.53
1:5:1549:G:N2	1:5:1580:C:C2	2.76	0.53
1:5:1776:A:C6	1:5:1777:C:C4	2.96	0.53
1:5:1778:C:C2	1:5:1779:U:H5	2.25	0.53
1:5:1844:G:C6	1:5:1845:U:C4	2.95	0.53
1:5:1872:G:C2	1:5:1873:A:N7	2.76	0.53
1:5:1875:C:H2'	1:5:1876:U:O4'	2.08	0.53
1:5:1992:U:H6	1:5:2002:A:H2	1.53	0.53
1:5:2104:G:C6	1:5:2105:A:C5	2.96	0.53
1:5:2113:G:C8	1:5:2115:G:N3	2.76	0.53
1:5:2335:C:O2	1:5:2336:G:C8	2.62	0.53
1:5:2394:G:O2'	1:5:2819:U:O4	2.23	0.53
1:5:2417:A:N1	1:5:2418:A:C5	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2677:G:C6	1:5:2678:A:C8	2.96	0.53
1:5:2835:A:N3	5:B:228:TYR:HD2	2.07	0.53
1:5:3668:C:C4	1:5:3669:G:N7	2.75	0.53
1:5:3694:U:C4	1:5:3695:U:C4	2.95	0.53
1:5:3791:C:N4	1:5:3802:U:C5	2.76	0.53
1:5:3909:C:C2	1:5:3910:C:C5	2.96	0.53
1:5:3925:U:H2'	1:5:3926:C:O4'	2.08	0.53
1:5:4131:G:C6	1:5:4132:C:C4	2.96	0.53
1:5:4132:C:C2	1:5:4133:C:C6	2.96	0.53
1:5:4214:A:H8	1:5:4214:A:O5'	1.91	0.53
1:5:4400:G:N3	1:5:4400:G:H2'	2.23	0.53
1:5:4424:A:H5'	41:m:122:ARG:HE	1.73	0.53
1:5:4991:U:H2'	1:5:4992:G:H8	1.73	0.53
1:5:5000:G:C6	1:5:5001:U:C4	2.96	0.53
1:5:5022:U:C4	1:5:5024:C:C4	2.96	0.53
3:8:64:U:C2	3:8:95:A:N1	2.76	0.53
9:F:63:TYR:HD2	9:F:149:LEU:HD21	1.73	0.53
9:F:228:HIS:O	9:F:229:PHE:C	2.51	0.53
14:L:28:GLN:HG2	16:N:202:ARG:NH1	2.23	0.53
21:S:45:TRP:CZ3	21:S:56:LYS:CA	2.84	0.53
45:r:2:SER:O	45:r:6:GLN:HG2	2.09	0.53
1:5:102:G:C2'	1:5:103:G:O5'	2.56	0.53
1:5:208:A:H1'	1:5:232:G:N3	2.23	0.53
1:5:670:G:H2'	1:5:671:G:C8	2.43	0.53
1:5:976:G:H3'	1:5:977:C:H6	1.72	0.53
1:5:1092:G:C2	1:5:1093:C:C6	2.97	0.53
1:5:1278:C:C3'	1:5:1279:A:H4'	2.38	0.53
1:5:1348:U:N3	1:5:1349:G:N7	2.56	0.53
1:5:1609:U:C2	1:5:1610:C:C6	2.97	0.53
1:5:1670:G:O5'	1:5:1671:U:H6	1.91	0.53
1:5:1758:G:C2	1:5:1759:G:C8	2.97	0.53
1:5:1789:C:C2'	1:5:1790:U:O5'	2.55	0.53
1:5:1978:C:N3	1:5:1988:G:O6	2.41	0.53
1:5:2284:G:H2'	1:5:2285:A:O4'	2.08	0.53
1:5:2549:G:N1	1:5:2770:C:N4	2.57	0.53
1:5:2593:C:C2	1:5:2594:C:C6	2.95	0.53
1:5:2658:G:N3	1:5:2675:G:N2	2.56	0.53
1:5:2698:G:C6	1:5:2699:C:C4	2.97	0.53
1:5:3612:C:H2'	1:5:3613:U:O4'	2.09	0.53
1:5:3622:C:O2	1:5:3623:C:O2	2.26	0.53
1:5:4078:C:C2	1:5:4079:C:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4202:U:O2	1:5:4204:C:C4	2.61	0.53
1:5:4308:C:O2'	1:5:4338:G:H4'	2.07	0.53
1:5:4881:U:O2'	1:5:4882:U:O5'	2.27	0.53
1:5:4999:G:C4	1:5:5000:G:C8	2.97	0.53
1:5:5031:G:C2	1:5:5032:C:C4	2.96	0.53
3:8:99:U:N3	3:8:100:U:C5	2.76	0.53
7:D:21:ARG:HA	7:D:24:ARG:HE	1.72	0.53
7:D:95:TYR:HA	7:D:158:LYS:HG2	1.89	0.53
14:L:82:ARG:CZ	14:L:82:ARG:HB3	2.36	0.53
24:V:97:TYR:C	24:V:97:TYR:CD2	2.85	0.53
33:e:35:TRP:CZ3	33:e:55:MET:HA	2.43	0.53
33:e:77:PHE:HE2	45:r:25:TYR:HD2	1.56	0.53
45:r:17:LEU:HD12	45:r:36:ASN:HD21	1.72	0.53
1:5:124:C:O2	1:5:124:C:H2'	2.07	0.53
1:5:209:U:C6	1:5:211:G:N7	2.76	0.53
1:5:271:C:C2	1:5:272:U:C5	2.86	0.53
1:5:319:A:H1'	1:5:3726:A:C2	2.44	0.53
1:5:422:C:O2	1:5:422:C:C2'	2.54	0.53
1:5:648:G:C2	1:5:649:A:C8	2.96	0.53
1:5:713:C:H42	1:5:955:G:H1	1.55	0.53
1:5:907:C:N3	1:5:908:G:C8	2.77	0.53
1:5:976:G:H1	1:5:1277:G:H1	1.57	0.53
1:5:1167:C:O2	1:5:1195:G:C2	2.61	0.53
1:5:1337:A:C5'	6:C:102:PHE:HD2	2.21	0.53
1:5:1394:G:O2'	1:5:1395:U:C5'	2.57	0.53
1:5:1398:A:O2'	1:5:1399:G:OP2	2.13	0.53
1:5:1442:C:C4	1:5:1443:A:N7	2.76	0.53
1:5:1595:G:N1	1:5:4557:U:H5'	2.23	0.53
1:5:1894:C:C2'	1:5:1895:G:O5'	2.56	0.53
1:5:2352:U:C2	1:5:2353:U:C5	2.96	0.53
1:5:2439:G:C8	1:5:2777:G:C6	2.96	0.53
1:5:2457:G:H21	1:5:3672:G:N2	2.06	0.53
1:5:2682:G:H2'	1:5:2683:C:C6	2.43	0.53
1:5:2737:C:C2	1:5:2738:C:C5	2.97	0.53
1:5:3668:C:N4	1:5:3669:G:C5	2.76	0.53
1:5:3857:G:C4	1:5:3858:C:C6	2.96	0.53
1:5:4167:G:N1	1:5:4168:G:C8	2.76	0.53
1:5:4198:G:O6	12:I:112:GLN:NE2	2.42	0.53
1:5:4276:G:O6	1:5:4277:G:C6	2.61	0.53
1:5:4345:C:O2	1:5:4346:U:C6	2.60	0.53
1:5:4401:G:C6	1:5:4402:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4416:G:N1	1:5:4417:C:C5	2.77	0.53
1:5:4957:C:O2	1:5:4957:C:H2'	2.08	0.53
1:5:5006:U:C1'	1:5:5042:A:C5	2.91	0.53
7:D:31:TYR:CD1	7:D:31:TYR:C	2.87	0.53
14:L:47:ALA:HB3	14:L:48:PRO:HD3	1.90	0.53
31:c:56:ARG:HG3	31:c:56:ARG:HH11	1.74	0.53
36:h:93:ARG:CG	36:h:93:ARG:HH11	2.21	0.53
38:j:39:TYR:HB3	38:j:40:PRO:CD	2.37	0.53
1:5:46:U:OP2	1:5:47:A:O2'	2.19	0.53
1:5:60:G:C6	1:5:61:A:C5	2.96	0.53
1:5:69:A:C2	1:5:70:A:C4	2.97	0.53
1:5:70:A:N1	1:5:4355:G:C1'	2.72	0.53
1:5:328:A:C2	1:5:329:A:C5	2.96	0.53
1:5:426:A:O2'	1:5:427:A:H5'	2.09	0.53
1:5:976:G:H2'	1:5:977:C:O4'	2.09	0.53
1:5:1280:C:N3	1:5:1282:G:O6	2.42	0.53
1:5:1335:G:C6	1:5:1336:G:C5	2.96	0.53
1:5:1337:A:H2	1:5:1658:G:N3	2.06	0.53
1:5:1359:G:H2'	1:5:1360:G:N9	2.22	0.53
1:5:1662:C:O2	1:5:1663:C:C6	2.62	0.53
1:5:1939:A:N1	1:5:3874:G:C5'	2.59	0.53
1:5:2020:U:H2'	1:5:2020:U:O2	2.07	0.53
1:5:2270:G:N3	1:5:2271:C:C6	2.76	0.53
1:5:2368:A:N6	1:5:2827:G:O2'	2.42	0.53
1:5:2492:C:H2'	1:5:2493:G:O4'	2.08	0.53
1:5:2801:U:O2'	38:j:12:ARG:NH2	2.35	0.53
1:5:3635:A:C6	1:5:3636:C:C1'	2.91	0.53
1:5:3657:U:C2	1:5:3658:C:C6	2.96	0.53
1:5:3742:G:C2	1:5:3743:G:N7	2.77	0.53
1:5:4117:U:O2	1:5:4117:U:C2'	2.55	0.53
1:5:4404:U:C4	1:5:4436:U:C4	2.96	0.53
1:5:4479:A:N1	1:5:4480:A:H1'	2.23	0.53
1:5:4750:G:C2'	1:5:4751:G:O5'	2.56	0.53
1:5:4886:C:O2	1:5:4886:C:H2'	2.08	0.53
1:5:4960:G:C2'	1:5:4961:G:H5'	2.38	0.53
1:5:5028:G:C2	1:5:5029:C:C2	2.97	0.53
3:8:80:A:C5	3:8:81:C:C6	2.96	0.53
3:8:132:G:N2	3:8:133:G:N9	2.55	0.53
5:B:323:TYR:CD1	5:B:324:GLY:N	2.77	0.53
8:E:54:SER:O	8:E:55:ARG:C	2.51	0.53
11:H:88:PHE:CZ	11:H:151:ILE:HB	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:39:ALA:HB2	16:N:63:ARG:HH21	1.74	0.53
17:O:14:HIS:CD2	17:O:124:LEU:HD12	2.44	0.53
18:P:82:ARG:HA	18:P:83:TRP:CE3	2.44	0.53
23:U:97:ARG:O	23:U:98:ASP:HB2	2.08	0.53
25:W:8:PHE:CD1	25:W:8:PHE:C	2.87	0.53
29:a:103:VAL:HG12	29:a:108:TYR:HB2	1.89	0.53
30:b:13:SER:N	30:b:16:TRP:CZ2	2.77	0.53
1:5:127:G:N1	1:5:128:C:C4	2.77	0.53
1:5:180:C:O2	1:5:181:C:C6	2.61	0.53
1:5:235:A:N1	1:5:238:C:C5	2.77	0.53
1:5:258:G:C2	1:5:259:C:C6	2.97	0.53
1:5:345:C:O2	1:5:346:G:C8	2.62	0.53
1:5:687:U:O2'	8:E:101:ARG:HG2	2.09	0.53
1:5:965:G:H2'	1:5:965:G:N3	2.23	0.53
1:5:983:C:C2	1:5:984:C:H6	2.10	0.53
1:5:1092:G:C2	1:5:1093:C:N1	2.76	0.53
1:5:1098:G:C6	1:5:1099:C:C4	2.96	0.53
1:5:1235:G:N2	1:5:1236:C:C5	2.77	0.53
1:5:1260:G:C2	1:5:1261:G:N9	2.77	0.53
1:5:1260:G:C4	1:5:1261:G:C8	2.97	0.53
1:5:1272:C:H5"	1:5:2122:G:C8	2.43	0.53
1:5:1609:U:N3	1:5:1610:C:C5	2.77	0.53
1:5:1667:G:C6	1:5:2280:G:C4	2.96	0.53
1:5:1691:G:C5	1:5:1692:C:C5	2.97	0.53
1:5:1866:U:C5	1:5:4405:G:O4'	2.61	0.53
1:5:1959:U:H1'	1:5:1961:G:H1'	1.91	0.53
1:5:2089:G:C6	1:5:2263:A:C8	2.96	0.53
1:5:2246:C:H2'	1:5:2247:C:O4'	2.09	0.53
1:5:2451:A:N6	1:5:2452:G:C4	2.77	0.53
1:5:2468:U:H2'	1:5:2506:G:O6	2.09	0.53
1:5:2480:G:C2	1:5:2481:G:N9	2.77	0.53
1:5:2481:G:C4	1:5:2482:C:C6	2.96	0.53
1:5:2583:C:OP1	35:g:54:ARG:HB2	2.07	0.53
1:5:2604:C:O2	1:5:2604:C:H2'	2.09	0.53
1:5:2614:C:O2	1:5:2726:G:C2	2.61	0.53
1:5:3820:G:C6	1:5:3821:A:C5	2.97	0.53
1:5:3837:C:H2'	1:5:3838:U:C1'	2.39	0.53
1:5:4215:C:O2	1:5:4215:C:H2'	2.07	0.53
1:5:4223:C:O2	1:5:4223:C:H2'	2.08	0.53
1:5:4277:G:N1	1:5:4278:C:C5	2.77	0.53
1:5:4279:A:O4'	1:5:4281:A:C8	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4441:A:H5"	1:5:4441:A:C8	2.43	0.53
1:5:4640:C:C4	1:5:4641:U:C5	2.97	0.53
1:5:4948:C:O2'	1:5:4949:G:H5'	2.07	0.53
1:5:4965:U:O2	1:5:4965:U:H2'	2.04	0.53
1:5:4967:A:H2'	1:5:4968:A:C8	2.44	0.53
1:5:4997:G:N2	1:5:4998:G:H1'	2.23	0.53
1:5:5019:A:C2	1:5:5020:G:N7	2.77	0.53
1:5:5055:G:C2	1:5:5056:A:C5	2.96	0.53
10:G:108:GLN:HE21	10:G:108:GLN:HA	1.74	0.53
15:M:11:ARG:CZ	15:M:11:ARG:HB2	2.38	0.53
16:N:196:ASN:N	16:N:196:ASN:ND2	2.54	0.53
26:X:156:ILE:HG22	47:2:24:ARG:NE	2.01	0.53
41:m:79:GLU:OE1	41:m:81:SER:N	2.42	0.53
1:5:92:C:N4	43:o:40:ARG:NH1	2.55	0.53
1:5:127:G:C4	1:5:128:C:C5	2.96	0.53
1:5:219:G:C8	1:5:220:C:C5	2.97	0.53
1:5:313:U:C2	1:5:314:G:C8	2.96	0.53
1:5:330:G:C2	1:5:331:G:C5	2.97	0.53
1:5:424:U:O2	1:5:424:U:C2'	2.57	0.53
1:5:437:G:H5'	33:e:53:ILE:HG22	1.90	0.53
1:5:732:A:C5	1:5:733:A:C2	2.96	0.53
1:5:908:G:C2	1:5:909:A:N9	2.77	0.53
1:5:962:C:C5	45:r:112:ARG:NH2	2.76	0.53
1:5:1092:G:C6	1:5:1093:C:C4	2.96	0.53
1:5:1191:C:C2	1:5:1192:C:C6	2.97	0.53
1:5:1297:U:O2	1:5:1298:C:H6	1.91	0.53
1:5:1367:C:N3	1:5:1369:C:P	2.82	0.53
1:5:1388:A:N1	1:5:1396:G:C2	2.77	0.53
1:5:1541:C:C4	1:5:1542:U:C5	2.97	0.53
1:5:1555:G:N2	1:5:1556:C:H1'	2.24	0.53
1:5:1806:G:N3	1:5:1807:C:C6	2.77	0.53
1:5:1949:U:O2	1:5:1949:U:H2'	2.09	0.53
1:5:1955:G:C5	1:5:1956:A:C8	2.97	0.53
1:5:1961:G:C2	1:5:2024:G:C2	2.97	0.53
1:5:2314:G:N2	1:5:2315:G:N9	2.56	0.53
1:5:2605:G:C2	1:5:2606:G:C5	2.96	0.53
1:5:2851:G:O2'	1:5:3841:C:O4'	2.23	0.53
1:5:3703:G:C2	1:5:3704:U:C6	2.96	0.53
1:5:3741:C:N3	1:5:3742:G:C8	2.76	0.53
1:5:3742:G:N3	1:5:3743:G:C8	2.77	0.53
1:5:3879:G:C5	1:5:3882:C:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4083:U:H2'	1:5:4084:G:H3'	1.90	0.53
1:5:4091:G:N1	1:5:4092:G:C5	2.77	0.53
1:5:4136:G:C2	1:5:4137:C:C2	2.97	0.53
1:5:4703:U:N3	1:5:4704:C:C5	2.76	0.53
1:5:4737:G:C5	1:5:4738:C:C4	2.97	0.53
1:5:4763:U:O2	15:M:3:PHE:CZ	2.61	0.53
1:5:4928:C:H2'	1:5:4929:C:H5"	1.90	0.53
1:5:5000:G:C5	1:5:5001:U:C5	2.96	0.53
1:5:5005:G:C5	25:W:51:TRP:CD1	2.91	0.53
1:5:5031:G:N3	1:5:5032:C:C6	2.77	0.53
4:A:40:TYR:O	4:A:40:TYR:CD1	2.62	0.53
7:D:99:TYR:HD2	7:D:199:ILE:HG23	1.74	0.53
7:D:265:ARG:HH11	7:D:265:ARG:CG	2.22	0.53
8:E:277:ILE:HD11	8:E:282:LEU:HD13	1.90	0.53
15:M:118:MET:HG3	17:O:192:PHE:HE2	1.73	0.53
16:N:115:VAL:HA	16:N:134:LEU:HD23	1.91	0.53
28:Z:50:PRO:CG	28:Z:122:TYR:CE2	2.91	0.53
32:d:25:TYR:N	32:d:25:TYR:CD1	2.76	0.53
46:1:128:SER:HB2	46:1:152:THR:HG23	1.91	0.53
1:5:84:A:C8	1:5:84:A:H5'	2.44	0.53
1:5:91:G:N7	1:5:93:G:C5	2.77	0.53
1:5:111:C:OP1	36:h:110:LYS:NZ	2.38	0.53
1:5:322:C:O2	1:5:4356:G:C2	2.61	0.53
1:5:505:G:C6	1:5:506:C:C4	2.97	0.53
1:5:924:C:C2	1:5:925:C:C6	2.96	0.53
1:5:964:A:C8	1:5:964:A:O5'	2.61	0.53
1:5:964:A:N3	1:5:2252:G:O6	2.42	0.53
1:5:1090:G:C2	1:5:1091:C:C2	2.97	0.53
1:5:1090:G:H2'	1:5:1091:C:O4'	2.09	0.53
1:5:1098:G:C2	1:5:1099:C:C2	2.97	0.53
1:5:1214:C:H2'	1:5:2114:G:C2	2.41	0.53
1:5:1215:C:C2	1:5:1216:C:H6	2.27	0.53
1:5:1260:G:N3	1:5:1261:G:C8	2.77	0.53
1:5:1572:U:C5'	20:R:95:TRP:CZ2	2.92	0.53
1:5:1663:C:H2'	1:5:1664:U:H6	1.74	0.53
1:5:1987:C:O2	1:5:1987:C:C2'	2.55	0.53
1:5:2076:G:C6	1:5:2077:C:C4	2.97	0.53
1:5:2085:G:C2	1:5:2273:G:N1	2.76	0.53
1:5:2104:G:C4	1:5:2105:A:C8	2.96	0.53
1:5:2244:C:C2	1:5:2245:G:C8	2.96	0.53
1:5:2316:G:N3	1:5:2317:C:C6	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2463:G:C2	1:5:2464:C:C5	2.97	0.53
1:5:2494:U:H2'	1:5:2495:U:O4'	2.08	0.53
1:5:2497:C:N4	1:5:2498:C:H41	2.07	0.53
1:5:2522:G:HO2'	1:5:2697:A:HO2'	1.53	0.53
1:5:2645:G:C6	1:5:2646:C:C4	2.97	0.53
1:5:2735:G:N1	1:5:2736:G:N7	2.57	0.53
1:5:4284:C:N3	1:5:4285:U:C4	2.76	0.53
1:5:4399:U:C4	1:5:4400:G:N7	2.76	0.53
1:5:4498:U:O2	1:5:4500:U:C5'	2.57	0.53
1:5:4697:U:C4'	41:m:104:HIS:HD2	2.15	0.53
1:5:4731:G:C8	1:5:4732:G:C6	2.97	0.53
1:5:4904:G:N1	1:5:4905:C:C4	2.76	0.53
3:8:142:U:N3	3:8:143:G:C8	2.77	0.53
7:D:43:LYS:HB3	7:D:46:THR:CG2	2.38	0.53
9:F:124:PHE:CD2	9:F:196:ILE:CG2	2.92	0.53
9:F:171:LEU:CB	9:F:189:MET:HE1	2.38	0.53
10:G:100:HIS:HA	10:G:103:ARG:HD2	1.89	0.53
11:H:113:GLU:OE2	11:H:124:ARG:O	2.27	0.53
15:M:17:PHE:CD2	15:M:17:PHE:C	2.86	0.53
45:r:7:TRP:HE1	45:r:38:PHE:HB2	1.74	0.53
45:r:103:ARG:CZ	45:r:106:LEU:HD21	2.39	0.53
1:5:99:A:H4'	16:N:181:HIS:HD1	1.71	0.53
1:5:101:A:N6	1:5:102:G:C6	2.77	0.53
1:5:145:G:N3	1:5:146:G:C8	2.76	0.53
1:5:426:A:C2	1:5:427:A:C5	2.96	0.53
1:5:450:G:H21	1:5:1294:A:H2'	1.74	0.53
1:5:666:G:C2	1:5:666:G:OP2	2.62	0.53
1:5:667:A:C2'	1:5:668:C:O4'	2.55	0.53
1:5:992:C:N3	1:5:993:G:N7	2.57	0.53
1:5:1185:G:N2	7:D:282:GLN:NE2	2.56	0.53
1:5:1490:G:N1	1:5:1491:A:C5	2.77	0.53
1:5:1492:G:H5'	30:b:45:PHE:HZ	1.74	0.53
1:5:1543:G:N1	1:5:1544:G:C5	2.76	0.53
1:5:1549:G:C2	1:5:1580:C:C2	2.97	0.53
1:5:1682:A:C4	1:5:1683:U:C6	2.97	0.53
1:5:1696:C:O2'	1:5:1697:G:OP2	2.21	0.53
1:5:1698:C:OP2	1:5:1698:C:C6	2.61	0.53
1:5:1752:G:C2	1:5:1753:G:C4	2.97	0.53
1:5:1770:A:C5	1:5:1771:U:C5	2.97	0.53
1:5:1878:G:C2	1:5:1879:C:C6	2.97	0.53
1:5:2044:U:O2'	17:O:63:ASN:CB	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2061:U:O2	21:S:111:ARG:CD	2.57	0.53
1:5:2366:A:H2	1:5:3851:U:C1'	2.14	0.53
1:5:2529:A:N6	1:5:2532:C:H1'	2.23	0.53
1:5:2538:U:H2'	1:5:2539:C:C6	2.44	0.53
1:5:2594:C:C2	1:5:2595:C:C5	2.97	0.53
1:5:3653:A:C2	1:5:3692:A:C4'	2.91	0.53
1:5:3858:C:N4	1:5:3859:G:C6	2.76	0.53
1:5:4236:G:N2	1:5:4289:U:H1'	2.23	0.53
1:5:4640:C:N3	1:5:4641:U:C5	2.77	0.53
1:5:4750:G:O2'	1:5:4751:G:P	2.67	0.53
2:7:11:A:C2	2:7:67:C:O4'	2.62	0.53
2:7:43:U:N3	2:7:44:C:C4	2.75	0.53
3:8:9:A:N1	3:8:10:G:C5	2.77	0.53
3:8:79:G:C2	3:8:80:A:C6	2.97	0.53
4:A:16:PHE:CE1	4:A:194:ASN:HB3	2.44	0.53
4:A:89:TYR:HB2	4:A:100:ASN:ND2	2.17	0.53
5:B:45:ALA:HB3	5:B:183:ILE:HG23	1.90	0.53
5:B:92:TYR:CE2	5:B:101:THR:HB	2.43	0.53
5:B:160:ILE:HD13	5:B:194:LEU:HD13	1.90	0.53
8:E:273:LEU:HB2	34:f:4:ARG:CG	2.39	0.53
9:F:59:TYR:O	9:F:63:TYR:HB2	2.08	0.53
12:I:95:HIS:CE1	12:I:97:ILE:HD12	2.44	0.53
14:L:94:ILE:HG22	14:L:94:ILE:O	2.09	0.53
26:X:84:GLU:HB3	46:1:404:HIS:CG	2.44	0.53
33:e:77:PHE:HE2	45:r:25:TYR:CD2	2.27	0.53
45:r:7:TRP:CE3	45:r:11:ARG:HB3	2.43	0.53
1:5:65:A:O2'	1:5:66:A:H4'	2.08	0.53
1:5:286:U:N3	1:5:287:U:C5	2.77	0.53
1:5:1075:G:C2	1:5:1076:C:C2	2.97	0.53
1:5:1189:G:C2	1:5:1190:C:N1	2.77	0.53
1:5:1373:A:C2	1:5:1374:G:C8	2.97	0.53
1:5:1379:C:O2	1:5:1380:G:N7	2.42	0.53
1:5:1516:G:N7	1:5:1518:A:C8	2.77	0.53
1:5:1555:G:C4	1:5:1556:C:C6	2.97	0.53
1:5:1557:C:H2'	1:5:1557:C:O2	2.07	0.53
1:5:1651:G:H8	1:5:1651:G:O5'	1.92	0.53
1:5:1797:G:C2	1:5:1798:G:C8	2.97	0.53
1:5:1831:G:C5	1:5:1832:C:C5	2.97	0.53
1:5:2505:C:H4'	1:5:2506:G:H5'	1.90	0.53
1:5:2577:C:C5	28:Z:17:ARG:NH2	2.77	0.53
1:5:2605:G:C2	1:5:2606:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2725:A:H2'	1:5:2726:G:C5'	2.38	0.53
1:5:2819:U:HO2'	20:R:58:HIS:CD2	2.24	0.53
1:5:2851:G:C6	1:5:2852:U:H1'	2.44	0.53
1:5:4228:G:H5"	1:5:4229:U:C4'	2.39	0.53
1:5:4687:A:C8	1:5:4698:C:C6	2.97	0.53
1:5:4767:C:HO2'	1:5:4874:A:H61	1.46	0.53
1:5:4981:G:C2	1:5:4982:A:N7	2.77	0.53
2:7:73:U:O2	2:7:102:U:O4	2.26	0.53
2:7:104:C:N3	2:7:105:C:C5	2.77	0.53
3:8:53:G:C4	3:8:54:C:C6	2.97	0.53
4:A:68:ARG:C	10:G:45:ILE:HD11	2.34	0.53
6:C:317:ASN:OD1	6:C:317:ASN:C	2.52	0.53
12:I:184:MET:CB	12:I:190:LEU:HD12	2.38	0.53
14:L:81:LEU:O	14:L:83:VAL:N	2.42	0.53
19:Q:58:ARG:HH11	19:Q:58:ARG:HB2	1.72	0.53
21:S:29:ARG:HH12	22:T:150:LEU:HA	1.74	0.53
26:X:151:ASN:HD21	47:2:20:ARG:CD	2.08	0.53
33:e:6:PRO:HA	33:e:74:PHE:HE1	1.74	0.53
45:r:16:PHE:CD2	45:r:28:GLU:HB3	2.40	0.53
1:5:21:G:N1	3:8:36:G:C2	2.77	0.52
1:5:31:U:O2'	1:5:32:G:C5'	2.57	0.52
1:5:84:A:H4'	1:5:85:G:OP1	2.08	0.52
1:5:258:G:N3	1:5:259:C:C6	2.77	0.52
1:5:303:C:C2	1:5:304:C:C6	2.97	0.52
1:5:397:G:N2	18:P:22:LEU:HD22	2.24	0.52
1:5:981:C:C4	8:E:69:TYR:CZ	2.97	0.52
1:5:990:C:C2	1:5:991:C:C6	2.96	0.52
1:5:1048:G:C5	1:5:1049:C:C5	2.97	0.52
1:5:1092:G:H2'	1:5:1093:C:O4'	2.09	0.52
1:5:1168:G:C2	1:5:1169:G:N7	2.77	0.52
1:5:1265:G:H5"	1:5:2115:G:C2	2.43	0.52
1:5:1348:U:O2	1:5:1348:U:H2'	2.09	0.52
1:5:1474:C:N3	1:5:1475:G:C5	2.77	0.52
1:5:1545:G:C2	1:5:1546:C:N3	2.77	0.52
1:5:1601:A:N7	1:5:3643:A:N9	2.57	0.52
1:5:1836:G:N1	1:5:1837:A:N7	2.56	0.52
1:5:1902:G:C6	1:5:2075:G:C2	2.97	0.52
1:5:1912:G:N1	1:5:1913:C:C4	2.77	0.52
1:5:2103:G:C6	1:5:2104:G:N7	2.77	0.52
1:5:2316:G:N3	1:5:2317:C:C5	2.77	0.52
1:5:2319:C:C5	33:e:58:ILE:HG13	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2503:G:H3'	1:5:2504:C:C5'	2.40	0.52
1:5:2678:A:N1	1:5:2679:G:C5	2.77	0.52
1:5:2843:U:N3	1:5:2844:A:C8	2.75	0.52
1:5:3753:G:C6	1:5:3776:G:N1	2.77	0.52
1:5:3893:C:C4	1:5:4568:A:C2	2.97	0.52
1:5:4114:C:H3'	1:5:4115:G:C4'	2.39	0.52
1:5:4283:G:N3	1:5:4284:C:C5	2.63	0.52
1:5:4730:C:H2'	1:5:4965:U:N3	2.23	0.52
1:5:4966:A:C2'	1:5:4967:A:O4'	2.47	0.52
3:8:13:G:C4	3:8:14:U:C4	2.97	0.52
3:8:80:A:C8	3:8:81:C:H1'	2.44	0.52
3:8:80:A:C3'	3:8:81:C:H4'	2.38	0.52
5:B:39:LYS:O	5:B:40:PRO:O	2.27	0.52
5:B:118:PHE:CB	5:B:119:TYR:HE1	2.21	0.52
5:B:388:PHE:O	5:B:390:GLY:N	2.42	0.52
9:F:202:ARG:N	9:F:202:ARG:HD2	2.23	0.52
10:G:57:TRP:CE3	10:G:61:ILE:HG21	2.44	0.52
13:J:19:LYS:HD2	13:J:21:CYS:SG	2.49	0.52
13:J:32:ARG:CZ	13:J:32:ARG:HB3	2.39	0.52
20:R:117:ARG:HD3	20:R:118:HIS:CE1	2.43	0.52
27:Y:81:TYR:CD2	27:Y:96:HIS:HB2	2.44	0.52
1:5:146:G:C2	1:5:147:A:C5	2.97	0.52
1:5:209:U:C2	1:5:233:U:C5	2.96	0.52
1:5:754:U:O2	1:5:755:C:C6	2.61	0.52
1:5:1066:G:C6	1:5:1067:G:C5	2.98	0.52
1:5:1074:G:H2'	1:5:1075:G:H1'	1.91	0.52
1:5:1211:G:N2	1:5:1212:G:C5	2.78	0.52
1:5:1624:G:C5	1:5:1643:A:C8	2.98	0.52
1:5:1655:C:H4'	1:5:1679:A:C2	2.45	0.52
1:5:1782:U:O2	1:5:1783:C:C6	2.62	0.52
1:5:1871:A:C6	1:5:1872:G:C5	2.97	0.52
1:5:1889:U:H3'	1:5:1890:G:C8	2.44	0.52
1:5:1907:A:H2'	1:5:1908:A:C8	2.44	0.52
1:5:2521:G:O2'	35:g:26:PRO:HG2	2.09	0.52
1:5:2567:G:C2	1:5:2568:C:N1	2.76	0.52
1:5:2586:G:N7	1:5:2587:A:N1	2.57	0.52
1:5:2736:G:C4	1:5:2737:C:C5	2.98	0.52
1:5:2786:C:H4'	1:5:2787:A:C8	2.44	0.52
1:5:2859:G:O2'	1:5:2860:C:C5'	2.57	0.52
1:5:4173:G:C5	1:5:4174:U:C5	2.98	0.52
1:5:4297:G:N3	1:5:4297:G:H2'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4344:U:O2	1:5:4344:U:H2'	2.09	0.52
1:5:4617:G:C2	1:5:4618:G:C8	2.97	0.52
1:5:4690:G:N2	1:5:4691:A:N7	2.57	0.52
1:5:4733:C:C5	1:5:4734:A:O4'	2.63	0.52
1:5:4932:U:H2'	1:5:4933:C:C1'	2.39	0.52
4:A:89:TYR:O	4:A:100:ASN:ND2	2.43	0.52
5:B:57:VAL:HG22	5:B:73:VAL:HG12	1.91	0.52
5:B:251:VAL:HG21	5:B:267:ALA:HB3	1.91	0.52
6:C:22:VAL:HG13	6:C:258:ARG:HE	1.74	0.52
6:C:200:ARG:NH2	27:Y:11:ARG:CD	2.72	0.52
12:I:171:TRP:HB2	12:I:181:PHE:CD2	2.44	0.52
14:L:176:PHE:C	14:L:176:PHE:HD1	2.17	0.52
17:O:34:VAL:HG11	17:O:112:TYR:CE1	2.44	0.52
23:U:42:PHE:CD2	23:U:90:TYR:CE1	2.98	0.52
46:1:162:VAL:HG13	46:1:182:PHE:CZ	2.44	0.52
1:5:321:U:H2'	1:5:322:C:O4'	2.08	0.52
1:5:427:A:O2'	1:5:428:G:H5'	2.08	0.52
1:5:942:G:P	9:F:244:ARG:NH1	2.82	0.52
1:5:993:G:C2	1:5:994:G:C8	2.97	0.52
1:5:1219:G:N3	1:5:1220:G:C8	2.77	0.52
1:5:1275:G:C6	1:5:1276:C:C4	2.98	0.52
1:5:1362:G:C2	1:5:1363:C:C6	2.97	0.52
1:5:1393:G:H2'	1:5:1394:G:H5'	1.91	0.52
1:5:1429:C:C2	1:5:1430:C:C6	2.98	0.52
1:5:1487:G:C6	1:5:1488:G:C8	2.97	0.52
1:5:1673:U:O2	1:5:1674:C:C6	2.62	0.52
1:5:1685:G:C2	1:5:1686:C:C2	2.97	0.52
1:5:1846:G:C4	1:5:1847:C:C5	2.98	0.52
1:5:1866:U:O4	1:5:4405:G:N9	2.41	0.52
1:5:1965:G:C6	1:5:1966:C:N4	2.77	0.52
1:5:2079:G:C4	1:5:2080:U:C5	2.98	0.52
1:5:2128:G:C4	1:5:2129:C:C6	2.97	0.52
1:5:2301:G:N2	1:5:2302:C:N1	2.56	0.52
1:5:2560:C:C2	1:5:2561:C:C6	2.98	0.52
1:5:2606:G:C2	1:5:2607:C:C6	2.97	0.52
1:5:2753:G:H3'	1:5:2754:G:O4'	2.09	0.52
1:5:3623:C:H5	1:5:3624:A:C5	2.28	0.52
1:5:3668:C:N3	1:5:3669:G:C8	2.77	0.52
1:5:3722:G:C2	1:5:3723:A:C4	2.98	0.52
1:5:3738:G:C6	1:5:3739:C:N1	2.77	0.52
1:5:4097:G:C6	1:5:4098:A:N7	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4301:U:P	22:T:87:LYS:HZ3	2.32	0.52
1:5:4399:U:C4	1:5:4400:G:C8	2.97	0.52
1:5:4510:A:N6	1:5:4592:C:O2'	2.39	0.52
1:5:4518:A:C4'	1:5:4519:C:H5'	2.39	0.52
1:5:4580:U:C4	1:5:4581:G:C8	2.96	0.52
1:5:4773:C:C2	1:5:4863:G:C2	2.98	0.52
1:5:4885:U:C4	1:5:4886:C:C5	2.96	0.52
2:7:92:C:C2	2:7:93:G:C8	2.98	0.52
2:7:110:G:C4	2:7:111:C:C5	2.97	0.52
3:8:79:G:H2'	3:8:80:A:N3	2.25	0.52
3:8:131:G:C5	3:8:132:G:C8	2.97	0.52
5:B:118:PHE:HB2	5:B:119:TYR:HE1	1.68	0.52
6:C:33:ARG:HH21	19:Q:22:ASP:HB3	1.75	0.52
6:C:54:VAL:HG21	6:C:101:MET:CE	2.39	0.52
9:F:93:PHE:CE1	9:F:95:ILE:HG13	2.44	0.52
13:J:98:ASN:OD1	13:J:98:ASN:N	2.43	0.52
16:N:191:ALA:O	16:N:194:ARG:HB3	2.09	0.52
26:X:79:PHE:N	26:X:79:PHE:CD1	2.77	0.52
34:f:14:TYR:OH	34:f:94:ALA:HB2	2.09	0.52
1:5:54:G:N1	1:5:55:G:N9	2.58	0.52
1:5:70:A:N6	1:5:314:G:O2'	2.42	0.52
1:5:98:A:C6	1:5:99:A:N9	2.78	0.52
1:5:127:G:N3	1:5:128:C:C6	2.77	0.52
1:5:138:G:C3'	1:5:139:G:H5'	2.40	0.52
1:5:394:G:N3	1:5:394:G:H2'	2.25	0.52
1:5:712:C:C4	1:5:713:C:C5	2.98	0.52
1:5:984:C:N3	1:5:1070:G:C2	2.78	0.52
1:5:1272:C:O3'	1:5:1273:G:O4'	2.25	0.52
1:5:1293:G:H5"	1:5:1293:G:H8	1.74	0.52
1:5:1308:C:C2	1:5:1309:C:C5	2.97	0.52
1:5:1619:G:C6	1:5:1620:U:C4	2.97	0.52
1:5:1682:A:C5	1:5:1683:U:C6	2.98	0.52
1:5:1899:G:N2	1:5:1900:C:C4	2.78	0.52
1:5:2080:U:C4	1:5:2081:C:N4	2.77	0.52
1:5:2288:G:C2	1:5:2290:C:C5	2.98	0.52
1:5:2448:G:C6	1:5:2511:A:C5	2.98	0.52
1:5:2534:C:H2'	1:5:2535:G:O5'	2.09	0.52
1:5:2569:G:C4	1:5:2570:U:C5	2.97	0.52
1:5:2908:U:N3	1:5:2909:C:C5	2.78	0.52
1:5:3728:A:C8	1:5:3729:U:O4'	2.63	0.52
1:5:3846:C:N3	1:5:3847:C:C6	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4092:G:C6	1:5:4093:G:N2	2.77	0.52
1:5:4136:G:C4	1:5:4137:C:C6	2.97	0.52
1:5:4745:G:H2'	1:5:4746:C:C5	2.44	0.52
1:5:4872:G:O2'	1:5:4873:G:P	2.67	0.52
1:5:4874:A:O2'	17:O:175:MET:HE3	2.09	0.52
1:5:4963:G:H3'	1:5:4964:C:H5"	1.90	0.52
1:5:5057:C:H2'	1:5:5058:A:C8	2.45	0.52
3:8:43:A:C6	3:8:44:A:N7	2.77	0.52
3:8:139:G:C4	3:8:140:C:C6	2.98	0.52
5:B:119:TYR:OH	5:B:129:ALA:HB3	2.10	0.52
9:F:117:ARG:O	19:Q:4:ASP:OD1	2.27	0.52
9:F:146:TYR:CE2	9:F:239:GLU:HB3	2.45	0.52
10:G:48:LYS:HB3	26:X:42:THR:HG23	1.90	0.52
46:1:60:ASP:HB3	46:1:61:PRO:HD2	1.91	0.52
1:5:127:G:C2	1:5:128:C:C6	2.97	0.52
1:5:939:G:H5'	1:5:940:C:OP2	2.10	0.52
1:5:986:C:C4	1:5:1068:G:N1	2.78	0.52
1:5:1271:G:H5"	1:5:1272:C:O4'	2.10	0.52
1:5:1287:G:N2	1:5:1289:C:C6	2.77	0.52
1:5:1388:A:H2'	1:5:1389:U:O4'	2.09	0.52
1:5:1629:G:C5	1:5:1631:A:N6	2.78	0.52
1:5:1776:A:C4	1:5:1777:C:C6	2.98	0.52
1:5:1902:G:H2'	1:5:1903:G:O5'	2.09	0.52
1:5:1928:C:N3	17:O:133:ARG:HD2	2.23	0.52
1:5:2300:A:C2	6:C:182:LYS:HA	2.45	0.52
1:5:2453:A:C4	1:5:2507:A:C8	2.97	0.52
1:5:2567:G:N1	1:5:2568:C:C5	2.78	0.52
1:5:2570:U:C2	1:5:2571:C:C6	2.98	0.52
1:5:2573:A:H2'	1:5:2574:G:O4'	2.09	0.52
1:5:2590:G:C6	1:5:2754:G:C6	2.98	0.52
1:5:2592:U:C5	1:5:2593:C:C6	2.98	0.52
1:5:2715:G:C6	1:5:2716:C:C4	2.98	0.52
1:5:2805:C:N4	1:5:2806:A:C6	2.78	0.52
1:5:2898:G:C6	1:5:2899:C:C4	2.98	0.52
1:5:3650:C:H2'	1:5:3651:A:O4'	2.10	0.52
1:5:3755:G:O6	1:5:3769:C:N4	2.42	0.52
1:5:3800:A:N3	1:5:4496:A:H1'	2.24	0.52
1:5:4124:G:N1	4:A:64:ARG:NH1	2.57	0.52
1:5:4201:G:C2	1:5:4202:U:C4	2.97	0.52
1:5:4455:G:N1	1:5:4456:C:C4	2.78	0.52
1:5:4462:C:C2	1:5:4515:G:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:135:C:C2	3:8:136:U:C6	2.98	0.52
6:C:209:ILE:HD13	6:C:221:PHE:CD2	2.45	0.52
7:D:164:LYS:O	7:D:168:ASP:HB2	2.08	0.52
12:I:39:LYS:HB3	12:I:86:HIS:CE1	2.44	0.52
22:T:3:ASN:HB3	22:T:9:ARG:NH1	2.25	0.52
38:j:76:HIS:O	38:j:79:ARG:NH1	2.43	0.52
1:5:154:G:N2	1:5:155:C:C2	2.77	0.52
1:5:230:G:N2	1:5:239:C:C2	2.78	0.52
1:5:328:A:OP2	37:i:30:ARG:NH1	2.42	0.52
1:5:370:U:C4	1:5:1637:A:N6	2.78	0.52
1:5:486:C:C2	1:5:487:G:N7	2.72	0.52
1:5:691:C:H2'	1:5:692:A:C8	2.45	0.52
1:5:1170:G:N1	1:5:1171:G:C5	2.77	0.52
1:5:1189:G:C4	1:5:1190:C:C6	2.97	0.52
1:5:1347:G:C6	1:5:1348:U:C5	2.97	0.52
1:5:1404:G:C2	1:5:1414:C:N3	2.76	0.52
1:5:1475:G:C2	1:5:1476:C:C4	2.92	0.52
1:5:1540:C:H5"	4:A:19:HIS:CD2	2.44	0.52
1:5:1554:A:C6	1:5:1555:G:C4	2.97	0.52
1:5:1617:G:C5	1:5:1618:G:N7	2.77	0.52
1:5:1687:U:O2	1:5:1850:A:N1	2.42	0.52
1:5:1990:A:H2'	1:5:1991:A:O4'	2.10	0.52
1:5:2089:G:O6	1:5:2263:A:O5'	2.27	0.52
1:5:2090:U:P	1:5:2090:U:O4'	2.66	0.52
1:5:2553:A:C6	1:5:2763:U:C5	2.98	0.52
1:5:2555:G:H2'	1:5:2556:G:O4'	2.09	0.52
1:5:2557:G:C2	1:5:2571:C:C2	2.97	0.52
1:5:4109:G:C4	1:5:4110:C:C6	2.98	0.52
1:5:4175:G:C6	1:5:4176:C:C5	2.98	0.52
1:5:4236:G:C2	1:5:4289:U:O2	2.62	0.52
1:5:4283:G:N1	1:5:4284:C:N4	2.57	0.52
1:5:4341:C:N3	1:5:4342:C:C6	2.78	0.52
1:5:4483:C:N3	1:5:4484:A:C8	2.77	0.52
1:5:5063:G:C2	1:5:5064:G:N7	2.78	0.52
2:7:114:U:C2	2:7:115:A:C8	2.97	0.52
3:8:10:G:O6	3:8:11:C:C4	2.63	0.52
8:E:129:PHE:CD1	8:E:129:PHE:C	2.88	0.52
9:F:59:TYR:CD2	9:F:194:HIS:CD2	2.98	0.52
13:J:104:ASN:OD1	13:J:133:VAL:HA	2.10	0.52
14:L:178:ALA:HB3	29:a:134:GLU:OE1	2.10	0.52
20:R:35:ALA:O	20:R:37:SER:N	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:29:PRO:C	45:r:30:ASN:OD1	2.53	0.52
1:5:48:G:C5'	16:N:192:TRP:HE1	2.05	0.52
1:5:56:A:C2	1:5:57:G:C5	2.97	0.52
1:5:219:G:C4	1:5:219:G:C5'	2.93	0.52
1:5:219:G:H8	1:5:220:C:C5	2.28	0.52
1:5:914:U:H2'	1:5:915:A:C1'	2.40	0.52
1:5:1203:G:C4	1:5:1204:C:C6	2.97	0.52
1:5:1262:G:N1	1:5:1263:A:C5	2.78	0.52
1:5:1360:G:H5"	14:L:25:TRP:CZ3	2.45	0.52
1:5:1412:G:C2	1:5:1413:C:C5	2.97	0.52
1:5:1672:U:N3	1:5:1673:U:O4	2.43	0.52
1:5:1689:G:C6	1:5:1690:C:C4	2.98	0.52
1:5:1965:G:C5	1:5:1966:C:C5	2.97	0.52
1:5:1987:C:O2'	1:5:4420:U:O3'	2.15	0.52
1:5:2065:G:C6	1:5:2066:C:C4	2.97	0.52
1:5:2424:G:N2	1:5:2426:U:O2	2.43	0.52
1:5:2428:A:C8	1:5:2789:A:C2	2.98	0.52
1:5:2567:G:C6	1:5:2568:C:C4	2.97	0.52
1:5:2632:U:O2	1:5:2632:U:C2'	2.52	0.52
1:5:2648:G:O2'	1:5:2649:G:P	2.68	0.52
1:5:2804:C:O2	1:5:2804:C:H2'	2.08	0.52
1:5:3775:A:H3'	1:5:3776:G:O4'	2.09	0.52
1:5:3858:C:O2	1:5:3858:C:C2'	2.55	0.52
1:5:4147:G:C6	1:5:4148:C:C4	2.97	0.52
1:5:4479:A:C5	1:5:4480:A:C8	2.98	0.52
1:5:4518:A:O2'	5:B:257:TRP:CZ3	2.54	0.52
4:A:158:ILE:CG2	4:A:162:ASN:OD1	2.57	0.52
4:A:196:TRP:CG	4:A:197:PRO:N	2.78	0.52
8:E:175:LEU:HD11	8:E:179:ARG:HH11	1.75	0.52
11:H:156:ASN:HD21	11:H:157:SER:HB3	1.74	0.52
11:H:172:ILE:HD12	41:m:90:ASN:HB3	1.91	0.52
14:L:56:ARG:O	14:L:116:ARG:NH2	2.40	0.52
23:U:26:THR:HA	23:U:68:SER:HB3	1.91	0.52
31:c:35:LEU:HD23	31:c:39:ARG:HH12	1.75	0.52
1:5:12:A:C2	1:5:14:C:C4	2.98	0.52
1:5:61:A:OP1	16:N:162:ARG:NH2	2.42	0.52
1:5:247:G:C4	1:5:248:C:C5	2.98	0.52
1:5:661:C:N4	1:5:662:C:C4	2.78	0.52
1:5:709:C:H4'	8:E:186:HIS:HE1	1.73	0.52
1:5:961:G:H5'	8:E:119:ARG:HH11	1.75	0.52
1:5:1189:G:C2	1:5:1190:C:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1441:C:H2'	1:5:1442:C:O4'	2.09	0.52
1:5:1467:C:N3	1:5:1468:C:C5	2.78	0.52
1:5:1479:G:H2'	1:5:1480:C:C6	2.45	0.52
1:5:1570:G:C6	1:5:1571:G:C8	2.98	0.52
1:5:1779:U:C2	1:5:1780:A:C8	2.98	0.52
1:5:1831:G:C6	1:5:1832:C:C4	2.97	0.52
1:5:1855:G:C5	1:5:1856:C:C5	2.98	0.52
1:5:1877:G:C4	1:5:1878:G:C8	2.97	0.52
1:5:1970:A:O2'	1:5:2017:A:N6	2.43	0.52
1:5:2082:G:H2'	1:5:2083:C:C6	2.45	0.52
1:5:2311:C:C4	1:5:2312:U:C5	2.98	0.52
1:5:2367:A:C2	1:5:2368:A:C8	2.98	0.52
1:5:2495:U:C2	1:5:2496:G:N7	2.76	0.52
1:5:2607:C:O2	1:5:2608:G:C8	2.63	0.52
1:5:2643:G:C6	1:5:2644:G:N7	2.77	0.52
1:5:2723:U:O2	1:5:2724:G:C8	2.62	0.52
1:5:2874:U:H4'	1:5:2875:C:OP2	2.10	0.52
1:5:3611:A:C2	1:5:5016:A:H8	2.27	0.52
1:5:3656:A:H2'	1:5:3657:U:H6	1.75	0.52
1:5:3730:U:N3	1:5:3731:C:C6	2.78	0.52
1:5:3772:U:C4	1:5:3773:U:C5	2.98	0.52
1:5:3856:A:C6	1:5:3857:G:C5	2.97	0.52
1:5:3899:G:C5'	5:B:257:TRP:HD1	2.22	0.52
1:5:4093:G:C3'	1:5:4094:G:H5"	2.40	0.52
1:5:4194:U:O4	1:5:4197:G:C5'	2.57	0.52
1:5:4238:G:C2	1:5:4287:G:C6	2.97	0.52
1:5:4255:A:C2	1:5:4256:A:C4	2.98	0.52
1:5:4498:U:C4	1:5:4500:U:OP2	2.62	0.52
1:5:4619:U:C2	1:5:4620:U:C6	2.98	0.52
1:5:5042:A:C2	1:5:5043:A:C4	2.97	0.52
3:8:130:C:N4	3:8:131:G:N7	2.57	0.52
5:B:67:VAL:HG13	5:B:70:LYS:HB2	1.91	0.52
17:O:143:HIS:ND1	17:O:150:GLN:OE1	2.37	0.52
21:S:10:TYR:HB2	21:S:40:ALA:CB	2.39	0.52
25:W:8:PHE:C	25:W:8:PHE:HD1	2.17	0.52
29:a:110:LYS:HG2	29:a:112:LEU:HD21	1.92	0.52
32:d:33:ILE:HD11	32:d:45:ALA:CB	2.40	0.52
1:5:118:C:H2'	1:5:118:C:O2	2.09	0.52
1:5:244:G:C2	1:5:246:G:C8	2.98	0.52
1:5:307:A:H3'	1:5:308:G:H21	1.74	0.52
1:5:442:G:O2'	1:5:443:G:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:687:U:C5	1:5:688:U:C5	2.97	0.52
1:5:689:U:C2	1:5:690:C:C6	2.98	0.52
1:5:966:A:C2	8:E:84:VAL:HB	2.45	0.52
1:5:991:C:C4	1:5:992:C:C4	2.98	0.52
1:5:1183:C:N3	1:5:1184:A:N7	2.58	0.52
1:5:1203:G:C6	1:5:1204:C:C4	2.98	0.52
1:5:1218:G:N1	1:5:1219:G:C1'	2.71	0.52
1:5:1266:G:H8	1:5:1266:G:C5'	2.22	0.52
1:5:1268:G:C4	1:5:2111:G:C4	2.98	0.52
1:5:1395:U:H2'	1:5:1396:G:O5'	2.09	0.52
1:5:1490:G:N3	1:5:1491:A:C8	2.77	0.52
1:5:1552:G:O2'	1:5:1574:G:N2	2.43	0.52
1:5:1663:C:O2	1:5:1664:U:C5	2.63	0.52
1:5:1774:C:N3	1:5:1775:A:C8	2.77	0.52
1:5:1936:C:C2	1:5:1937:C:C5	2.97	0.52
1:5:1968:G:C2	1:5:1969:G:C4	2.98	0.52
1:5:2409:U:C4	1:5:2783:A:C6	2.98	0.52
1:5:2736:G:N2	1:5:2737:C:C6	2.78	0.52
1:5:2769:U:OP1	35:g:68:SER:HA	2.10	0.52
1:5:3697:U:O2'	1:5:3698:G:OP2	2.20	0.52
1:5:3703:G:C4	1:5:3704:U:C5	2.98	0.52
1:5:3719:A:C5	1:5:3720:G:C8	2.98	0.52
1:5:3740:G:C5	1:5:3741:C:C6	2.97	0.52
1:5:3804:G:C6	1:5:3805:U:C5	2.98	0.52
1:5:4066:U:H2'	1:5:4067:U:O4'	2.10	0.52
1:5:4071:U:C2	1:5:4072:C:C5	2.98	0.52
1:5:4087:G:H3'	1:5:4087:G:H8	1.74	0.52
1:5:4097:G:N2	1:5:4098:A:N9	2.58	0.52
1:5:4123:C:O2'	28:Z:135:ARG:HB3	2.10	0.52
1:5:4139:G:C2	1:5:4140:C:N1	2.78	0.52
1:5:4314:C:H2'	1:5:4314:C:O2	2.09	0.52
1:5:4502:C:N3	1:5:4503:A:C8	2.78	0.52
1:5:4730:C:N3	1:5:4734:A:N7	2.58	0.52
1:5:4744:A:C6	1:5:4745:G:O6	2.63	0.52
1:5:4980:C:C5	1:5:4981:G:C4	2.98	0.52
2:7:94:C:N3	2:7:95:C:H5	2.06	0.52
3:8:115:G:C2	3:8:116:C:C6	2.98	0.52
5:B:201:LEU:O	5:B:202:GLU:HB2	2.09	0.52
9:F:82:ASN:HD21	22:T:142:ARG:CA	2.22	0.52
11:H:177:ASP:OD1	11:H:177:ASP:N	2.42	0.52
13:J:107:PHE:CZ	13:J:130:PHE:HB2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:25:VAL:CG1	15:M:38:VAL:HG22	2.40	0.52
16:N:120:TRP:HE1	16:N:122:GLY:C	2.17	0.52
19:Q:67:ILE:HD12	19:Q:96:PRO:HD2	1.91	0.52
21:S:161:ARG:HD2	21:S:164:LYS:HB2	1.91	0.52
1:5:98:A:H1'	1:5:292:G:O6	2.09	0.52
1:5:223:G:H21	6:C:223:ASN:HB3	1.75	0.52
1:5:385:A:C2	1:5:386:A:C5	2.98	0.52
1:5:1073:G:N2	1:5:1239:C:N3	2.58	0.52
1:5:1196:G:C6	1:5:1197:C:C4	2.98	0.52
1:5:1197:C:C2	1:5:1198:G:C8	2.98	0.52
1:5:1203:G:C5	1:5:1204:C:C5	2.98	0.52
1:5:1270:A:C8	1:5:1271:G:C8	2.97	0.52
1:5:1277:G:C5	1:5:1278:C:C5	2.98	0.52
1:5:1497:A:H1'	19:Q:164:LYS:HG2	1.91	0.52
1:5:2055:G:C1'	17:O:130:LYS:HD3	2.40	0.52
1:5:2245:G:H2'	1:5:2246:C:O4'	2.10	0.52
1:5:2249:C:H2'	1:5:2249:C:O2	2.09	0.52
1:5:2328:G:C4	1:5:2329:U:C5	2.98	0.52
1:5:3597:G:C2	1:5:3598:C:C2	2.98	0.52
1:5:3621:A:N3	1:5:3622:C:C6	2.78	0.52
1:5:3630:A:N1	1:5:3631:U:C4	2.78	0.52
1:5:3634:G:N2	1:5:3636:C:H5'	2.24	0.52
1:5:3652:A:N6	1:5:3691:G:O2'	2.43	0.52
1:5:3833:C:O2	1:5:3834:C:C6	2.63	0.52
1:5:3848:U:N3	1:5:3849:A:N7	2.57	0.52
1:5:4139:G:C6	1:5:4140:C:C4	2.97	0.52
1:5:4313:A:C2	1:5:4314:C:C6	2.98	0.52
1:5:4369:A:C2	1:5:4370:G:C5	2.98	0.52
1:5:4608:G:H3'	1:5:4609:G:H8	1.74	0.52
1:5:4652:G:C2	1:5:4653:C:C4	2.98	0.52
1:5:4675:U:OP1	5:B:358:ARG:NH2	2.43	0.52
1:5:4859:C:C2	1:5:4860:G:C8	2.97	0.52
1:5:4927:G:H1'	15:M:121:ARG:CD	2.40	0.52
1:5:5062:G:N2	1:5:5063:G:N7	2.58	0.52
3:8:73:U:O4	3:8:74:U:C2	2.63	0.52
3:8:132:G:C2	3:8:133:G:N7	2.76	0.52
3:8:135:C:C4	3:8:136:U:C4	2.98	0.52
5:B:116:ARG:CG	5:B:177:LYS:HG3	2.39	0.52
22:T:105:PHE:CE1	22:T:109:VAL:CG2	2.92	0.52
32:d:83:ARG:HB2	32:d:114:PHE:HD2	1.74	0.52
34:f:45:LYS:HA	34:f:107:PRO:HG2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:g:37:LYS:HB2	35:g:60:ARG:NE	2.24	0.52
1:5:102:G:H2'	1:5:103:G:O5'	2.10	0.51
1:5:288:G:C6	1:5:289:C:C4	2.98	0.51
1:5:512:U:C2'	1:5:513:U:H5"	2.39	0.51
1:5:672:C:H2'	1:5:673:C:O4'	2.09	0.51
1:5:976:G:C5	1:5:977:C:C6	2.99	0.51
1:5:1069:G:C6	1:5:1070:G:C8	2.98	0.51
1:5:1443:A:H2'	1:5:1444:G:O4'	2.09	0.51
1:5:1699:A:C2	9:F:179:ARG:O	2.63	0.51
1:5:2004:U:C2	1:5:2005:G:C8	2.99	0.51
1:5:2434:G:O3'	26:X:83:THR:HG21	2.10	0.51
1:5:2556:G:N2	1:5:2572:C:C2	2.78	0.51
1:5:2740:U:O4'	1:5:2740:U:O2	2.24	0.51
1:5:2757:A:O2'	1:5:2758:G:C5'	2.58	0.51
1:5:2844:A:N6	1:5:3839:G:C8	2.78	0.51
1:5:3648:A:N9	1:5:3785:A:N6	2.58	0.51
1:5:3754:G:C2	1:5:3755:G:N9	2.78	0.51
1:5:3911:C:N3	1:5:3912:U:C5	2.77	0.51
1:5:4143:G:C5	1:5:4145:C:C5	2.99	0.51
1:5:4168:G:H2'	1:5:4169:G:O5'	2.10	0.51
1:5:4271:A:N6	1:5:4336:A:H61	2.09	0.51
1:5:4323:A:N3	1:5:4324:A:C8	2.79	0.51
1:5:4344:U:C2	1:5:4345:C:C6	2.97	0.51
1:5:4593:C:O2	1:5:4594:U:C6	2.63	0.51
1:5:4744:A:C4	1:5:4745:G:N7	2.78	0.51
1:5:5031:G:C2	1:5:5032:C:C6	2.98	0.51
1:5:5051:C:N3	1:5:5052:C:C6	2.78	0.51
3:8:100:U:C2	3:8:101:C:C6	2.98	0.51
5:B:78:ILE:HD11	5:B:320:PHE:CE1	2.45	0.51
8:E:153:HIS:HD2	8:E:183:ARG:NH1	2.08	0.51
20:R:126:LYS:HB3	20:R:132:PHE:CE2	2.44	0.51
26:X:48:ARG:HG3	26:X:48:ARG:HH11	1.75	0.51
27:Y:15:ARG:HB3	27:Y:15:ARG:CZ	2.40	0.51
27:Y:121:ARG:CZ	27:Y:121:ARG:HB3	2.40	0.51
28:Z:18:TYR:CD2	28:Z:47:ASP:OD1	2.63	0.51
31:c:18:LEU:HD23	31:c:22:MET:HE3	1.93	0.51
33:e:16:ARG:CD	33:e:60:TYR:OH	2.58	0.51
33:e:51:GLY:C	33:e:52:GLN:OE1	2.53	0.51
36:h:118:LYS:C	36:h:119:PHE:CD1	2.88	0.51
45:r:103:ARG:NH2	45:r:106:LEU:HD21	2.24	0.51
1:5:59:A:C4	1:5:60:G:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:104:G:O2'	1:5:1361:G:O2'	2.06	0.51
1:5:135:G:C2	36:h:94:ARG:NH2	2.78	0.51
1:5:137:G:H4'	36:h:98:HIS:HD2	1.73	0.51
1:5:238:C:N3	1:5:239:C:C5	2.78	0.51
1:5:371:A:HO2'	1:5:372:A:C5'	2.23	0.51
1:5:382:G:H2'	1:5:383:A:H2'	1.91	0.51
1:5:518:G:C6	1:5:519:C:C4	2.98	0.51
1:5:718:C:N3	1:5:719:C:C5	2.79	0.51
1:5:747:A:N7	1:5:915:A:C2	2.78	0.51
1:5:918:G:H2'	1:5:918:G:N3	2.25	0.51
1:5:975:C:H2'	1:5:976:G:C1'	2.40	0.51
1:5:1177:U:H2'	1:5:1178:G:C8	2.44	0.51
1:5:1302:U:C4'	33:e:17:THR:O	2.58	0.51
1:5:1424:G:H2'	1:5:1425:G:O4'	2.10	0.51
1:5:1432:G:C2	1:5:1451:G:C2	2.97	0.51
1:5:1571:G:C5	1:5:1572:U:C5	2.99	0.51
1:5:1995:G:C6	1:5:1996:C:C4	2.98	0.51
1:5:2046:G:C4	17:O:60:LYS:HD3	2.45	0.51
1:5:2054:U:C4'	1:5:2056:G:H1'	2.38	0.51
1:5:2056:G:C6	1:5:2058:G:C4	2.99	0.51
1:5:2089:G:C2	1:5:2263:A:N6	2.78	0.51
1:5:2612:G:C2	1:5:2613:C:C2	2.98	0.51
1:5:2645:G:N3	1:5:2646:C:C6	2.76	0.51
1:5:2823:G:N2	1:5:2824:C:H1'	2.24	0.51
1:5:3702:A:N1	1:5:3703:G:C5	2.77	0.51
1:5:3710:G:N3	1:5:3710:G:H2'	2.24	0.51
1:5:3944:G:N3	1:5:3945:A:C8	2.78	0.51
1:5:4142:C:C2	1:5:4143:G:C2	2.99	0.51
1:5:4240:G:C6	1:5:4241:C:C6	2.97	0.51
1:5:4248:A:H2'	1:5:4249:G:O4'	2.10	0.51
1:5:4266:G:C6	1:5:4279:A:N7	2.78	0.51
1:5:4277:G:C6	1:5:4278:C:C4	2.98	0.51
1:5:4324:A:N3	1:5:4325:A:N7	2.58	0.51
1:5:4536:C:C2	1:5:4537:C:C5	2.99	0.51
1:5:4563:U:O2	1:5:4564:A:C5	2.63	0.51
1:5:4910:G:C2	17:O:109:PRO:HA	2.44	0.51
1:5:5006:U:C5	25:W:50:ASN:ND2	2.78	0.51
2:7:21:G:N1	2:7:58:A:C2	2.78	0.51
2:7:55:A:H2'	2:7:56:G:C5'	2.41	0.51
3:8:35:C:O2'	3:8:36:G:H5'	2.10	0.51
3:8:103:A:C8	3:8:104:A:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:62:ARG:HH11	5:B:62:ARG:CG	2.23	0.51
5:B:67:VAL:HG12	5:B:67:VAL:O	2.10	0.51
5:B:379:PHE:HE2	5:B:385:LYS:CG	2.23	0.51
6:C:122:TYR:CD1	6:C:122:TYR:O	2.63	0.51
9:F:118:GLN:HB3	9:F:121:ASN:OD1	2.10	0.51
20:R:109:TYR:CD1	20:R:114:LYS:HD2	2.45	0.51
21:S:13:VAL:HG12	21:S:29:ARG:HA	1.92	0.51
32:d:69:ASN:O	32:d:73:TRP:HB3	2.09	0.51
1:5:45:U:C2'	1:5:46:U:O5'	2.58	0.51
1:5:146:G:N2	1:5:147:A:C4	2.79	0.51
1:5:261:G:H2'	1:5:262:G:O4'	2.11	0.51
1:5:466:A:N1	1:5:467:U:C5	2.79	0.51
1:5:930:G:C4	1:5:931:C:H5	2.28	0.51
1:5:964:A:C2	1:5:2252:G:C6	2.98	0.51
1:5:1090:G:C5	1:5:1091:C:C5	2.98	0.51
1:5:1205:G:C6	1:5:1206:C:C4	2.98	0.51
1:5:1236:C:H2'	8:E:56:SER:OG	2.11	0.51
1:5:1374:G:C6	1:5:1375:C:C4	2.98	0.51
1:5:1444:G:C2'	1:5:1445:U:H6	2.22	0.51
1:5:1973:G:O6	1:5:2002:A:N7	2.44	0.51
1:5:2022:C:O2	1:5:2022:C:H2'	2.09	0.51
1:5:2032:U:O2'	21:S:91:HIS:CE1	2.63	0.51
1:5:2448:G:H2'	1:5:2449:A:C8	2.45	0.51
1:5:2497:C:H42	1:5:2498:C:N4	2.08	0.51
1:5:2658:G:N1	1:5:2675:G:N1	2.59	0.51
1:5:2669:C:C6	1:5:2669:C:O5'	2.64	0.51
1:5:3802:U:H3	1:5:4498:U:HO2'	1.58	0.51
1:5:3829:G:N3	1:5:3829:G:H2'	2.24	0.51
1:5:4104:G:O2'	1:5:4106:G:C6	2.63	0.51
1:5:4167:G:C6	1:5:4168:G:N7	2.77	0.51
1:5:4336:A:C8	1:5:4336:A:H3'	2.45	0.51
1:5:4453:C:H1'	1:5:4529:G:N2	2.26	0.51
1:5:4719:G:H8	1:5:4719:G:O5'	1.92	0.51
1:5:4724:A:C2	1:5:4725:C:C2	2.98	0.51
1:5:4750:G:C6	1:5:4949:G:O6	2.61	0.51
1:5:4884:G:N1	1:5:4885:U:C4	2.78	0.51
1:5:4886:C:C2	1:5:4887:C:C5	2.99	0.51
1:5:5004:C:H2'	1:5:5005:G:O4'	2.11	0.51
2:7:42:A:H2'	2:7:42:A:N3	2.26	0.51
2:7:56:G:H2'	2:7:57:C:H6	1.75	0.51
3:8:94:G:O2'	3:8:95:A:H8	1.81	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:290:SER:O	6:C:294:LYS:HG2	2.10	0.51
9:F:128:ASN:ND2	22:T:132:PRO:HG2	2.25	0.51
9:F:243:ASN:O	9:F:247:ARG:HG2	2.11	0.51
10:G:81:ASN:ND2	10:G:238:GLY:HA3	2.21	0.51
12:I:59:GLN:NE2	12:I:126:VAL:HG11	2.25	0.51
20:R:28:GLU:O	20:R:32:ILE:HD12	2.10	0.51
27:Y:18:HIS:NE2	27:Y:29:ILE:HD13	2.25	0.51
32:d:22:THR:HG22	32:d:89:SER:CB	2.39	0.51
1:5:181:C:H42	1:5:255:C:H42	1.59	0.51
1:5:216:C:O4’	1:5:216:C:OP2	2.29	0.51
1:5:247:G:C6	1:5:248:C:C4	2.99	0.51
1:5:386:A:H2	1:5:405:U:O4’	1.93	0.51
1:5:474:C:C2	1:5:475:G:C8	2.98	0.51
1:5:484:U:O5’	1:5:485:C:O5’	2.29	0.51
1:5:720:G:C6	1:5:721:G:N7	2.78	0.51
1:5:957:G:H1’	1:5:958:G:OP2	2.11	0.51
1:5:976:G:C2	1:5:977:C:C2	2.98	0.51
1:5:1268:G:C2	1:5:2111:G:N1	2.78	0.51
1:5:1382:G:H2’	1:5:1383:G:O5’	2.10	0.51
1:5:1416:G:C6	1:5:1417:C:C4	2.98	0.51
1:5:1662:C:N3	1:5:1663:C:C5	2.78	0.51
1:5:1669:A:H2’	1:5:1670:G:O4’	2.10	0.51
1:5:1945:G:C2	1:5:1946:G:N9	2.79	0.51
1:5:2071:A:C2	1:5:2072:C:C5	2.99	0.51
1:5:2248:C:O2	1:5:2248:C:C2’	2.56	0.51
1:5:2323:C:H2’	1:5:2324:C:O4’	2.10	0.51
1:5:2441:C:H4’	35:g:9:ARG:CD	2.41	0.51
1:5:2482:C:N3	1:5:2483:G:C8	2.78	0.51
1:5:2532:C:O2’	26:X:93:ASN:ND2	2.44	0.51
1:5:2852:U:O2	1:5:2853:C:H3’	2.11	0.51
1:5:3862:A:H2’	1:5:3862:A:N3	2.25	0.51
1:5:3909:C:N4	1:5:3910:C:N4	2.59	0.51
1:5:4091:G:C2	1:5:4092:G:C4	2.99	0.51
1:5:4124:G:H2’	1:5:4124:G:N3	2.26	0.51
1:5:4142:C:H2’	1:5:4143:G:C1’	2.41	0.51
1:5:4142:C:C5	1:5:4143:G:C6	2.98	0.51
1:5:4167:G:N2	1:5:4168:G:N9	2.59	0.51
1:5:4405:G:C5	1:5:4406:U:C5	2.98	0.51
1:5:4490:C:O2	1:5:4491:G:C8	2.63	0.51
1:5:4574:U:O2	1:5:4574:U:H2’	2.11	0.51
1:5:4737:G:C2	1:5:4738:C:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4737:G:H5”	1:5:5069:U:C4	2.45	0.51
2:7:59:G:H4’	7:D:267:ASN:ND2	2.25	0.51
3:8:54:C:C4	3:8:55:U:C5	2.99	0.51
3:8:110:U:O3’	3:8:111:U:H4’	2.11	0.51
3:8:117:C:O2	3:8:117:C:H2’	2.09	0.51
5:B:260:ALA:C	5:B:261:ARG:HD3	2.35	0.51
5:B:321:VAL:O	5:B:322:HIS:CB	2.59	0.51
6:C:58:ALA:O	6:C:60:HIS:HB2	2.09	0.51
9:F:229:PHE:CD2	9:F:238:ARG:HB3	2.46	0.51
10:G:162:ASP:HB3	10:G:163:PRO:HD3	1.92	0.51
15:M:7:VAL:N	21:S:152:PHE:O	2.44	0.51
18:P:42:ARG:HH11	18:P:42:ARG:HG3	1.75	0.51
21:S:9:GLU:HB3	21:S:67:VAL:HG12	1.91	0.51
21:S:45:TRP:CE3	21:S:56:LYS:HA	2.42	0.51
27:Y:15:ARG:HH11	27:Y:15:ARG:HG2	1.75	0.51
28:Z:68:ILE:HG22	28:Z:119:GLU:HG3	1.92	0.51
33:e:20:PHE:HZ	33:e:60:TYR:OH	1.93	0.51
1:5:44:A:C4	1:5:45:U:C5	2.98	0.51
1:5:49:U:H5’	16:N:192:TRP:CZ2	2.45	0.51
1:5:91:G:OP2	1:5:92:C:H5”	2.11	0.51
1:5:106:A:OP1	14:L:39:ARG:NH2	2.43	0.51
1:5:186:G:H1’	1:5:187:U:H1’	1.93	0.51
1:5:248:C:C2	1:5:249:C:C5	2.98	0.51
1:5:269:G:N1	1:5:270:U:C5	2.78	0.51
1:5:292:G:N2	1:5:293:G:C2	2.79	0.51
1:5:302:C:N3	1:5:303:C:C5	2.78	0.51
1:5:331:G:N3	1:5:332:C:C5	2.78	0.51
1:5:458:C:N3	1:5:459:C:C5	2.79	0.51
1:5:483:G:N2	1:5:484:U:C2	2.78	0.51
1:5:715:G:H2’	1:5:716:C:O4’	2.10	0.51
1:5:739:G:N1	1:5:740:G:C5	2.78	0.51
1:5:930:G:H4’	1:5:931:C:O5’	2.09	0.51
1:5:1091:C:C4	1:5:1092:G:N7	2.78	0.51
1:5:1213:G:C2	1:5:1215:C:O2	2.64	0.51
1:5:1289:C:O2	1:5:1290:G:C8	2.63	0.51
1:5:1421:G:C2	1:5:1422:G:C5	2.99	0.51
1:5:1475:G:N3	1:5:1476:C:C6	2.79	0.51
1:5:1517:G:N2	1:5:1650:A:C2	2.79	0.51
1:5:1543:G:N3	1:5:2513:A:C2	2.79	0.51
1:5:1724:G:C2	9:F:105:PRO:HB3	2.44	0.51
1:5:1886:G:C5	1:5:1887:G:C8	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1898:C:C5	1:5:2279:A:C1'	2.91	0.51
1:5:1945:G:N1	1:5:1946:G:C4	2.79	0.51
1:5:2021:G:C4	1:5:2022:C:C6	2.99	0.51
1:5:2104:G:C2	1:5:2105:A:C4	2.99	0.51
1:5:2245:G:C2	1:5:2246:C:C2	2.98	0.51
1:5:2328:G:C2'	1:5:2329:U:O5'	2.58	0.51
1:5:2347:A:H61	33:e:24:GLN:HE21	1.58	0.51
1:5:2391:G:N1	1:5:2392:C:C4	2.78	0.51
1:5:2442:G:H2'	1:5:2443:G:H5"	1.92	0.51
1:5:2477:A:H2'	1:5:2478:C:H6	1.74	0.51
1:5:2611:A:H2'	1:5:2612:G:C8	2.45	0.51
1:5:2704:C:H2'	1:5:2704:C:O2	2.10	0.51
1:5:3907:G:N9	1:5:4449:A:C1'	2.65	0.51
1:5:4137:C:N3	1:5:4138:C:C5	2.79	0.51
1:5:4284:C:N3	1:5:4285:U:H5	1.99	0.51
1:5:4287:G:C2	1:5:4288:C:N3	2.79	0.51
1:5:4579:U:O2	1:5:4580:U:C6	2.63	0.51
2:7:33:U:O2	2:7:33:U:H2'	2.09	0.51
3:8:79:G:H3'	3:8:80:A:N3	2.25	0.51
4:A:63:PHE:N	4:A:63:PHE:CD1	2.77	0.51
5:B:168:MET:CE	5:B:171:LEU:HD12	2.40	0.51
7:D:42:ASN:HA	7:D:44:TYR:CZ	2.44	0.51
8:E:236:TYR:C	8:E:236:TYR:CD2	2.89	0.51
11:H:5:LEU:HD13	11:H:60:TRP:CE3	2.45	0.51
11:H:59:LYS:O	11:H:60:TRP:HB2	2.00	0.51
11:H:96:TYR:CZ	11:H:100:PRO:HA	2.46	0.51
12:I:95:HIS:ND1	12:I:95:HIS:C	2.69	0.51
14:L:146:LEU:CD1	36:h:120:ALA:HB3	2.41	0.51
21:S:81:TRP:CE2	21:S:94:TYR:HD1	2.27	0.51
21:S:175:PHE:C	21:S:175:PHE:CD1	2.89	0.51
27:Y:22:PRO:HD2	27:Y:25:ILE:HD12	1.91	0.51
36:h:89:ARG:HA	36:h:92:ARG:HH21	1.76	0.51
43:o:41:TYR:CZ	43:o:45:GLN:HG2	2.44	0.51
45:r:103:ARG:NH2	45:r:106:LEU:HD11	2.26	0.51
1:5:139:G:H2'	1:5:140:G:O4'	2.11	0.51
1:5:142:G:N2	1:5:144:G:C8	2.78	0.51
1:5:152:U:N3	1:5:153:G:C8	2.78	0.51
1:5:158:A:H5"	1:5:159:C:C6	2.45	0.51
1:5:660:A:N1	1:5:661:C:C5	2.79	0.51
1:5:675:C:C2	1:5:676:C:C6	2.98	0.51
1:5:971:U:H2'	1:5:972:C:H5'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1048:G:C4	1:5:1049:C:C6	2.99	0.51
1:5:1049:C:C4	1:5:1050:C:C5	2.99	0.51
1:5:1072:C:C2'	1:5:1072:C:O2	2.57	0.51
1:5:1337:A:C2	1:5:1659:U:O4'	2.64	0.51
1:5:1683:U:C2	1:5:1684:A:N7	2.77	0.51
1:5:1945:G:C5	1:5:1946:G:C8	2.98	0.51
1:5:2040:A:H4'	1:5:2041:A:O5'	2.11	0.51
1:5:2055:G:H1'	17:O:130:LYS:HD3	1.91	0.51
1:5:2627:C:O2	1:5:2627:C:O4'	2.28	0.51
1:5:3591:C:O2	1:5:3591:C:C2'	2.56	0.51
1:5:3710:G:C2	1:5:3711:A:C2	2.99	0.51
1:5:3791:C:O4'	1:5:3791:C:O2	2.25	0.51
1:5:3879:G:C5	1:5:3882:C:N4	2.79	0.51
1:5:3930:U:C2	1:5:3931:C:C5	2.99	0.51
1:5:4229:U:H3'	1:5:4230:C:H6	1.74	0.51
1:5:4414:A:C6	1:5:4427:G:C6	2.97	0.51
1:5:4456:C:H2'	1:5:4456:C:O2	2.11	0.51
1:5:4459:U:H5"	5:B:10:ARG:HH22	1.75	0.51
1:5:4489:G:C5	1:5:4490:C:C5	2.98	0.51
1:5:4581:G:C2	1:5:4582:C:C6	2.98	0.51
1:5:4730:C:O2	1:5:4730:C:O4'	2.27	0.51
1:5:4737:G:C4	1:5:4738:C:C4	2.99	0.51
1:5:4911:A:H5'	5:B:100:ARG:HD3	1.89	0.51
2:7:43:U:C4	2:7:44:C:C4	2.99	0.51
5:B:17:LEU:HD21	5:B:264:PHE:CE1	2.46	0.51
7:D:51:MET:HE1	7:D:163:LEU:HA	1.92	0.51
13:J:26:VAL:HG22	13:J:28:GLU:HG3	1.91	0.51
14:L:83:VAL:HG11	14:L:114:VAL:HG21	1.92	0.51
20:R:4:LEU:HD22	20:R:32:ILE:HG22	1.93	0.51
20:R:10:LEU:HD23	20:R:41:ILE:HD12	1.92	0.51
23:U:27:HIS:O	23:U:114:TYR:OH	2.23	0.51
36:h:78:TYR:N	36:h:78:TYR:CD1	2.78	0.51
46:1:432:SER:OG	46:1:449:LEU:CD2	2.59	0.51
1:5:70:A:H1'	1:5:71:C:N4	2.26	0.51
1:5:85:G:C5	14:L:13:HIS:CE1	2.98	0.51
1:5:91:G:C5	1:5:93:G:C6	2.98	0.51
1:5:111:C:C2	1:5:331:G:C2	2.99	0.51
1:5:449:C:C4	1:5:450:G:N7	2.79	0.51
1:5:463:A:C2	1:5:692:A:H2	2.29	0.51
1:5:518:G:H2'	1:5:519:C:O4'	2.09	0.51
1:5:691:C:H2'	1:5:692:A:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:908:G:C6	1:5:909:A:C8	2.98	0.51
1:5:978:G:C2	1:5:979:C:C2	2.98	0.51
1:5:1234:G:H2'	1:5:1235:G:C8	2.46	0.51
1:5:1320:U:H2'	1:5:1891:A:H61	1.76	0.51
1:5:1365:C:H4'	1:5:1366:G:OP1	2.11	0.51
1:5:1380:G:C2	1:5:1382:G:N3	2.79	0.51
1:5:1550:G:C2	1:5:1579:C:O2	2.63	0.51
1:5:1727:U:N3	1:5:1728:U:C5	2.79	0.51
1:5:1750:G:H2'	1:5:1750:G:N3	2.25	0.51
1:5:1758:G:C2	1:5:1759:G:N7	2.79	0.51
1:5:1936:C:C4	1:5:1937:C:H5	2.26	0.51
1:5:2268:A:O4'	1:5:2270:G:N7	2.44	0.51
1:5:2532:C:O2	1:5:2532:C:H2'	2.10	0.51
1:5:2682:G:C6	1:5:2683:C:N4	2.79	0.51
1:5:2703:G:C2	1:5:2704:C:N1	2.79	0.51
1:5:2721:G:C2	1:5:2722:G:C8	2.99	0.51
1:5:3625:G:H2'	1:5:3625:G:N3	2.25	0.51
1:5:3744:G:C2'	1:5:3745:U:O5'	2.59	0.51
1:5:3937:C:H1'	16:N:125:SER:HB3	1.93	0.51
1:5:4100:C:N3	1:5:4101:C:C4	2.79	0.51
1:5:4189:U:O4'	1:5:4380:A:C2	2.63	0.51
1:5:4198:G:C5	1:5:4199:C:C6	2.99	0.51
1:5:4332:C:N3	1:5:4333:C:C5	2.65	0.51
1:5:4499:G:H3'	1:5:4500:U:H5"	1.92	0.51
1:5:4702:G:N2	1:5:4703:U:H1'	2.25	0.51
1:5:4977:A:C2'	1:5:4978:G:H5'	2.41	0.51
1:5:5020:G:C4	1:5:5021:C:C6	2.99	0.51
3:8:80:A:C6	3:8:81:C:C5	2.98	0.51
3:8:129:C:N3	3:8:130:C:C5	2.79	0.51
5:B:49:TYR:CE1	5:B:171:LEU:HD11	2.45	0.51
5:B:122:TRP:NE1	5:B:127:LYS:HE3	2.26	0.51
5:B:323:TYR:CD1	5:B:323:TYR:C	2.89	0.51
6:C:197:ARG:O	6:C:199:ARG:N	2.43	0.51
6:C:210:ILE:HG21	6:C:252:TRP:CZ3	2.45	0.51
13:J:74:VAL:C	13:J:75:ARG:HG2	2.35	0.51
14:L:65:ARG:HB2	29:a:69:PHE:CG	2.46	0.51
19:Q:34:PHE:C	19:Q:34:PHE:CD2	2.88	0.51
21:S:99:ASP:CG	21:S:100:LEU:N	2.69	0.51
34:f:74:VAL:HG13	34:f:84:VAL:CG1	2.41	0.51
40:l:44:TRP:CE3	40:l:45:ARG:N	2.79	0.51
46:1:270:ALA:O	46:1:272:TYR:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:125:C:O2	1:5:126:C:H6	1.91	0.51
1:5:165:A:C4	1:5:166:C:C6	2.99	0.51
1:5:222:C:H2'	1:5:223:G:O4'	2.11	0.51
1:5:1374:G:C5	1:5:1375:C:C5	2.99	0.51
1:5:1421:G:C2	1:5:1422:G:N7	2.79	0.51
1:5:1516:G:C6	1:5:1518:A:C4	2.98	0.51
1:5:1912:G:N3	1:5:1913:C:C6	2.79	0.51
1:5:1927:U:H4'	1:5:2035:C:H2'	1.92	0.51
1:5:2034:G:O3'	21:S:118:ARG:HD3	2.11	0.51
1:5:2088:A:H61	19:Q:30:LYS:HB3	1.75	0.51
1:5:2089:G:C6	1:5:2262:G:H2'	2.44	0.51
1:5:2307:A:O2'	1:5:2308:A:H5'	2.11	0.51
1:5:3711:A:C6	1:5:3712:A:N3	2.79	0.51
1:5:3842:C:H3'	1:5:3843:C:H2'	1.93	0.51
1:5:3874:G:C6	1:5:3875:G:C4	2.99	0.51
1:5:4082:G:C4	1:5:4083:U:C5	2.98	0.51
1:5:4093:G:C2'	1:5:4094:G:H5'	2.41	0.51
1:5:4122:G:C5	1:5:4123:C:C6	2.98	0.51
1:5:4124:G:C2	4:A:64:ARG:NH1	2.78	0.51
1:5:4136:G:N2	1:5:4137:C:H1'	2.26	0.51
1:5:4137:C:C2	1:5:4138:C:C5	2.98	0.51
1:5:4743:G:C2	1:5:4744:A:C5	2.99	0.51
2:7:18:C:O2	2:7:18:C:H2'	2.11	0.51
2:7:22:A:C4	7:D:266:TRP:CH2	2.99	0.51
3:8:12:G:OP1	18:P:3:ARG:NH1	2.43	0.51
3:8:103:A:H3'	3:8:104:A:C5'	2.41	0.51
23:U:96:LEU:O	23:U:100:LEU:HB2	2.11	0.51
44:p:29:ILE:CG2	44:p:69:TRP:CD1	2.89	0.51
1:5:55:G:C6	1:5:56:A:N7	2.79	0.51
1:5:68:U:N3	1:5:69:A:H1'	2.26	0.51
1:5:217:C:O2	6:C:172:LYS:HE2	2.11	0.51
1:5:313:U:H2'	1:5:314:G:O4'	2.11	0.51
1:5:388:A:C5	1:5:411:G:N1	2.79	0.51
1:5:676:C:C2	1:5:677:G:C8	2.99	0.51
1:5:1194:G:C2	1:5:1195:G:C8	2.99	0.51
1:5:1280:C:H2'	1:5:1282:G:OP2	2.11	0.51
1:5:1344:C:C2	1:5:1345:A:C8	2.98	0.51
1:5:1387:A:H1'	1:5:1397:A:N6	2.26	0.51
1:5:1743:A:C6	1:5:1744:U:C5	2.99	0.51
1:5:1748:U:C2	1:5:1749:A:C8	2.98	0.51
1:5:1748:U:H2'	1:5:1749:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1994:C:N3	1:5:1995:G:C8	2.78	0.51
1:5:2363:A:C1'	1:5:4560:C:C5	2.94	0.51
1:5:2391:G:N3	1:5:2392:C:C6	2.79	0.51
1:5:2408:U:H1'	1:5:2409:U:C5	2.45	0.51
1:5:2851:G:C6	1:5:2852:U:H6	2.17	0.51
1:5:3771:C:O2	1:5:3771:C:O5'	2.28	0.51
1:5:3847:C:C4	1:5:3848:U:C5	2.99	0.51
1:5:3859:G:C1'	18:P:139:TYR:OH	2.58	0.51
1:5:4126:C:H3'	1:5:4127:A:C5'	2.41	0.51
1:5:4147:G:N1	1:5:4148:C:C4	2.79	0.51
1:5:4230:C:C2	1:5:4231:C:C5	2.99	0.51
1:5:4440:G:H8	1:5:4440:G:H5"	1.76	0.51
1:5:4525:C:OP1	5:B:246:ARG:NH2	2.44	0.51
1:5:4735:G:C2	1:5:4736:C:C4	2.98	0.51
1:5:4754:G:C2	1:5:4880:C:N3	2.78	0.51
2:7:7:G:HO2'	7:D:72:ASP:H	1.58	0.51
4:A:216:HIS:CD2	4:A:216:HIS:N	2.78	0.51
5:B:19:ARG:NE	5:B:235:TRP:CZ3	2.78	0.51
5:B:102:PHE:HB3	5:B:103:LYS:HB2	1.93	0.51
15:M:5:ARG:N	15:M:6:PHE:CE2	2.79	0.51
19:Q:88:ASP:OD2	19:Q:108:ARG:HD3	2.10	0.51
19:Q:177:ALA:O	19:Q:179:GLY:N	2.43	0.51
22:T:70:HIS:N	22:T:70:HIS:CD2	2.79	0.51
31:c:49:ALA:HB2	31:c:81:LEU:HD12	1.92	0.51
1:5:189:G:N3	1:5:190:G:C8	2.79	0.51
1:5:205:C:N3	1:5:209:U:C5	2.79	0.51
1:5:364:G:N7	38:j:55:ARG:NH2	2.59	0.51
1:5:455:C:N3	1:5:456:C:C6	2.79	0.51
1:5:913:U:O2	1:5:914:U:C5	2.64	0.51
1:5:973:G:O6	1:5:1282:G:N3	2.44	0.51
1:5:1092:G:C5	1:5:1093:C:C5	2.98	0.51
1:5:1169:G:C2	1:5:1170:G:C8	2.98	0.51
1:5:1193:C:N3	1:5:1194:G:C8	2.78	0.51
1:5:1277:G:C2	1:5:1278:C:C5	2.98	0.51
1:5:1302:U:C2	1:5:1303:A:H8	2.24	0.51
1:5:1412:G:C4	1:5:1413:C:C6	2.99	0.51
1:5:1989:G:C2	1:5:1990:A:C5	2.99	0.51
1:5:2408:U:C1'	1:5:2409:U:C4	2.94	0.51
1:5:2440:U:N3	1:5:2519:U:C5	2.79	0.51
1:5:2466:G:H2'	1:5:2467:U:O4'	2.11	0.51
1:5:2634:C:N3	1:5:2635:U:C5	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2823:G:C2	1:5:2824:C:N1	2.79	0.51
1:5:3819:G:C2	1:5:3820:G:C8	2.99	0.51
1:5:4152:G:C4	1:5:4153:C:C5	2.99	0.51
1:5:4323:A:H3'	1:5:4324:A:H8	1.76	0.51
1:5:4362:A:N1	1:5:4363:A:C5	2.79	0.51
1:5:4455:G:N2	1:5:4456:C:C2	2.79	0.51
1:5:4501:U:C5	1:5:4502:C:C6	2.99	0.51
1:5:4535:A:C6	1:5:4536:C:C6	2.98	0.51
1:5:4545:G:N7	4:A:215:ASN:ND2	2.59	0.51
1:5:4734:A:N1	1:5:4735:G:C4	2.79	0.51
1:5:4901:G:C2	1:5:4921:C:N3	2.78	0.51
2:7:54:A:H2	2:7:55:A:C8	2.15	0.51
2:7:60:G:H2'	2:7:60:G:N3	2.25	0.51
2:7:112:U:O2	2:7:112:U:C2'	2.58	0.51
3:8:42:G:C2	3:8:43:A:N9	2.78	0.51
3:8:64:U:O2	3:8:65:A:C4	2.63	0.51
3:8:82:A:N3	3:8:82:A:C2'	2.74	0.51
5:B:85:ILE:HB	5:B:165:HIS:CD2	2.45	0.51
6:C:59:GLY:HA3	6:C:99:GLY:O	2.10	0.51
12:I:46:PHE:N	12:I:47:PRO:HD3	2.26	0.51
16:N:178:HIS:CD2	16:N:178:HIS:C	2.88	0.51
1:5:56:A:N1	1:5:57:G:C5	2.79	0.50
1:5:441:G:C2	1:5:442:G:C5	2.99	0.50
1:5:446:C:C2	1:5:447:C:C6	2.99	0.50
1:5:471:A:N1	1:5:472:C:C1'	2.74	0.50
1:5:978:G:C5	1:5:979:C:C5	3.00	0.50
1:5:1203:G:N2	1:5:1204:C:C2	2.79	0.50
1:5:1584:G:C6	1:5:1585:C:C4	2.99	0.50
1:5:1620:U:C2	1:5:1621:A:N7	2.79	0.50
1:5:1751:A:N6	1:5:1752:G:C8	2.79	0.50
1:5:1751:A:C2'	1:5:1752:G:H5'	2.38	0.50
1:5:1877:G:C2	1:5:1878:G:N9	2.79	0.50
1:5:1924:C:N3	1:5:1925:G:C8	2.79	0.50
1:5:1975:G:C6	1:5:1984:A:C4	2.99	0.50
1:5:2320:G:O2'	1:5:2321:G:C8	2.57	0.50
1:5:2435:G:N2	1:5:2783:A:H1'	2.26	0.50
1:5:3589:G:H2'	1:5:3590:G:O4'	2.11	0.50
1:5:3590:G:C2	1:5:3591:C:H1'	2.46	0.50
1:5:3660:C:OP2	4:A:241:ARG:NH2	2.44	0.50
1:5:3707:U:O2'	4:A:241:ARG:HG2	2.10	0.50
1:5:3720:G:C6	1:5:3721:U:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3738:G:N7	1:5:3739:C:C5	2.79	0.50
1:5:3870:C:H4'	5:B:261:ARG:HE	1.76	0.50
1:5:3921:U:OP2	1:5:4183:G:O2'	2.20	0.50
1:5:4118:U:O4	4:A:95:GLN:HB3	2.11	0.50
1:5:4164:C:N3	1:5:4165:C:C6	2.78	0.50
1:5:4301:U:P	22:T:87:LYS:NZ	2.84	0.50
1:5:4467:A:O2'	1:5:4510:A:N3	2.41	0.50
1:5:4479:A:C6	1:5:4480:A:H1'	2.46	0.50
1:5:4510:A:N6	1:5:4592:C:HO2'	2.08	0.50
1:5:4537:C:N3	1:5:4538:G:C8	2.71	0.50
1:5:4594:U:O2	1:5:4595:G:C8	2.64	0.50
1:5:4723:A:H2'	1:5:4724:A:H8	1.75	0.50
5:B:264:PHE:HD2	17:O:66:PRO:HD2	1.76	0.50
7:D:22:ARG:HG3	7:D:22:ARG:NH1	2.14	0.50
7:D:284:LYS:HB3	12:I:209:TRP:HZ3	1.72	0.50
8:E:145:ILE:HD11	8:E:267:LEU:CD2	2.40	0.50
21:S:171:ARG:HH11	21:S:171:ARG:HG3	1.76	0.50
28:Z:77:TYR:HB3	31:c:39:ARG:CD	2.39	0.50
1:5:29:G:C4	1:5:30:C:C5	2.99	0.50
1:5:56:A:C2	1:5:57:G:C4	2.99	0.50
1:5:69:A:C2	1:5:70:A:C5	2.99	0.50
1:5:130:C:C2	1:5:139:G:N2	2.80	0.50
1:5:132:G:C2	1:5:133:C:H1'	2.46	0.50
1:5:226:G:O2'	1:5:227:A:OP2	2.21	0.50
1:5:470:A:H61	8:E:101:ARG:NH2	2.09	0.50
1:5:505:G:C2	1:5:506:C:C2	2.99	0.50
1:5:930:G:N3	1:5:931:C:C5	2.79	0.50
1:5:1247:U:O2	1:5:1248:C:C6	2.64	0.50
1:5:1325:C:O3'	1:5:3901:A:N6	2.43	0.50
1:5:1632:A:H3'	1:5:1632:A:N3	2.27	0.50
1:5:1651:G:O5'	1:5:1651:G:C8	2.64	0.50
1:5:1663:C:O2	1:5:1664:U:C6	2.65	0.50
1:5:2089:G:C5	1:5:2263:A:N7	2.79	0.50
1:5:2100:A:C8	1:5:2101:C:C6	3.00	0.50
1:5:2247:C:H5"	1:5:2248:C:O5'	2.11	0.50
1:5:2295:C:H5'	6:C:199:ARG:HH21	1.76	0.50
1:5:2322:G:OP1	33:e:36:ARG:NH1	2.43	0.50
1:5:2347:A:N7	33:e:31:ILE:CD1	2.74	0.50
1:5:2366:A:C2'	1:5:2367:A:C5'	2.89	0.50
1:5:2540:C:N3	1:5:2541:G:N7	2.59	0.50
1:5:2555:G:O6	1:5:2572:C:N4	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2557:G:H2'	1:5:2558:C:O4'	2.11	0.50
1:5:2601:A:C8	1:5:2743:A:OP1	2.63	0.50
1:5:2662:G:H2'	1:5:2663:G:O4'	2.11	0.50
1:5:2666:U:C5	1:5:2669:C:N4	2.80	0.50
1:5:3642:A:C4	38:j:3:LYS:HB3	2.46	0.50
1:5:3643:A:C2	38:j:3:LYS:HE2	2.45	0.50
1:5:3791:C:C4	1:5:3802:U:C6	2.99	0.50
1:5:4175:G:C5	1:5:4176:C:C5	2.99	0.50
1:5:5034:A:C2	1:5:5035:U:C6	2.99	0.50
1:5:5048:A:N9	32:d:34:HIS:CD2	2.76	0.50
2:7:26:C:H5"	7:D:56:THR:HG21	1.93	0.50
2:7:42:A:N3	2:7:43:U:C6	2.79	0.50
3:8:63:U:H3'	3:8:63:U:C2	2.46	0.50
3:8:86:U:O4	36:h:7:ARG:NE	2.44	0.50
6:C:178:ASN:N	6:C:178:ASN:HD22	2.08	0.50
7:D:287:PHE:C	7:D:287:PHE:HD1	2.20	0.50
8:E:111:TYR:OH	45:r:119:ARG:CG	2.59	0.50
9:F:248:ARG:CZ	9:F:248:ARG:CB	2.87	0.50
20:R:81:ARG:HG3	20:R:88:ARG:NE	2.26	0.50
33:e:23:HIS:CD2	33:e:24:GLN:HG3	2.46	0.50
34:f:5:LEU:O	34:f:6:TRP:C	2.54	0.50
46:1:35:THR:HG22	46:1:173:TYR:CD2	2.45	0.50
46:1:302:TYR:CZ	46:1:341:LEU:HD12	2.47	0.50
1:5:145:G:C4	1:5:146:G:C8	3.00	0.50
1:5:416:U:H2'	1:5:417:G:O4'	2.12	0.50
1:5:658:C:H2'	1:5:659:G:O4'	2.11	0.50
1:5:660:A:N1	1:5:661:C:C4	2.79	0.50
1:5:709:C:N3	1:5:710:G:C8	2.80	0.50
1:5:1196:G:C2	1:5:1197:C:C2	2.99	0.50
1:5:1235:G:C2	1:5:1236:C:C4	2.99	0.50
1:5:1250:C:C2	1:5:1261:G:N2	2.79	0.50
1:5:1267:C:C4'	1:5:2110:C:O2'	2.59	0.50
1:5:1309:C:H2'	34:f:21:GLN:HE22	1.76	0.50
1:5:1508:A:C6	1:5:1509:C:C5	3.00	0.50
1:5:1616:U:O2	1:5:1616:U:H2'	2.11	0.50
1:5:1721:G:C6	1:5:1840:G:N7	2.78	0.50
1:5:1758:G:N1	1:5:1759:G:C6	2.80	0.50
1:5:1818:G:H2'	1:5:1819:G:H5'	1.93	0.50
1:5:1856:C:N3	1:5:1857:C:C5	2.79	0.50
1:5:1890:G:H22	1:5:1938:C:N4	2.09	0.50
1:5:1929:A:C6	1:5:2054:U:O4	2.62	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1944:A:C5	1:5:1945:G:C8	2.99	0.50
1:5:2000:G:HO2'	1:5:2017:A:H61	1.58	0.50
1:5:2270:G:C2	1:5:2271:C:N3	2.79	0.50
1:5:2366:A:H2'	1:5:2367:A:H5'	1.91	0.50
1:5:2468:U:C4	1:5:2473:A:N6	2.77	0.50
1:5:2496:G:C2	1:5:2497:C:N1	2.80	0.50
1:5:2905:C:C2	1:5:3590:G:N2	2.80	0.50
1:5:3795:A:C5	1:5:3796:U:C5	3.00	0.50
1:5:3832:U:H2'	1:5:3833:C:H6	1.75	0.50
1:5:3943:A:C2	1:5:3944:G:H1'	2.46	0.50
1:5:4095:G:H2'	1:5:4096:C:C6	2.44	0.50
1:5:4255:A:C5	1:5:4256:A:C2	2.99	0.50
1:5:4433:G:C6	1:5:4434:C:N4	2.80	0.50
1:5:4511:A:H2'	1:5:4512:U:C1'	2.42	0.50
1:5:4730:C:P	1:5:4731:G:N2	2.85	0.50
1:5:4997:G:C4	1:5:4998:G:C8	3.00	0.50
1:5:5023:C:O4'	1:5:5023:C:O2	2.28	0.50
3:8:30:U:O2	3:8:31:G:C8	2.65	0.50
3:8:133:G:N2	3:8:134:G:N9	2.59	0.50
4:A:209:HIS:HE1	4:A:211:PHE:CD2	2.26	0.50
12:I:191:ILE:HD12	12:I:200:VAL:HG11	1.94	0.50
13:J:31:ASP:O	13:J:32:ARG:HB2	2.10	0.50
19:Q:176:ARG:O	19:Q:177:ALA:HB2	2.10	0.50
31:c:28:VAL:CG1	31:c:33:GLN:CB	2.86	0.50
1:5:247:G:C5	1:5:248:C:C5	3.00	0.50
1:5:354:U:O4	1:5:1334:A:H1'	2.10	0.50
1:5:504:G:O2'	1:5:505:G:O4'	2.26	0.50
1:5:654:C:O2	1:5:654:C:H2'	2.11	0.50
1:5:1203:G:H2'	1:5:1204:C:O4'	2.11	0.50
1:5:1215:C:H2'	1:5:1215:C:O2	2.10	0.50
1:5:1271:G:H3'	1:5:1272:C:C4'	2.41	0.50
1:5:1320:U:H2'	1:5:1320:U:O2	2.11	0.50
1:5:1440:U:C4'	1:5:2109:G:O2'	2.60	0.50
1:5:1725:U:C2	1:5:1726:U:C6	2.99	0.50
1:5:1755:C:H41	1:5:1778:C:H4'	1.75	0.50
1:5:1885:G:H2'	1:5:1886:G:O5'	2.11	0.50
1:5:1893:C:O2	1:5:1894:C:C5	2.64	0.50
1:5:1895:G:C6	1:5:1896:A:C2	2.99	0.50
1:5:1912:G:C2	1:5:1913:C:C4	2.99	0.50
1:5:1983:A:H2	1:5:2008:U:C5	2.28	0.50
1:5:2007:G:C3'	1:5:2008:U:H5"	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2080:U:C2	1:5:2081:C:H5	2.17	0.50
1:5:2261:G:H2'	1:5:2262:G:N7	2.26	0.50
1:5:2496:G:C6	1:5:2497:C:C5	3.00	0.50
1:5:2547:G:H2'	1:5:2547:G:N3	2.26	0.50
1:5:2644:G:N1	1:5:2645:G:C5	2.80	0.50
1:5:2690:C:N4	1:5:2691:U:C4	2.78	0.50
1:5:2745:A:C2	1:5:2746:A:C6	2.99	0.50
1:5:2762:G:H1'	1:5:2763:U:O4'	2.11	0.50
1:5:2837:U:C4	1:5:2838:G:C8	2.98	0.50
1:5:2889:G:H21	1:5:5034:A:H8	1.58	0.50
1:5:3653:A:O2'	4:A:180:LEU:O	2.22	0.50
1:5:3666:C:C4	1:5:3667:C:C6	3.00	0.50
1:5:4355:G:N1	1:5:4356:G:N7	2.59	0.50
1:5:4724:A:C4	1:5:4725:C:C5	2.99	0.50
1:5:4758:U:H2'	1:5:4759:C:O5'	2.12	0.50
1:5:4905:C:N3	1:5:4906:C:C6	2.80	0.50
1:5:4960:G:H2'	1:5:4961:G:H5'	1.93	0.50
1:5:5003:U:N3	1:5:5045:G:C2	2.80	0.50
2:7:22:A:N1	2:7:23:A:C6	2.79	0.50
3:8:4:C:C2	3:8:5:U:C6	3.00	0.50
3:8:5:U:H2'	3:8:6:C:C6	2.46	0.50
3:8:65:A:OP1	36:h:56:ARG:HG3	2.12	0.50
3:8:81:C:H3'	3:8:82:A:C4'	2.38	0.50
3:8:99:U:C2	3:8:100:U:C6	3.00	0.50
3:8:99:U:C2	3:8:100:U:C5	3.00	0.50
3:8:144:U:C2	3:8:145:C:C6	3.00	0.50
4:A:3:ARG:HG3	4:A:3:ARG:NH1	2.26	0.50
12:I:184:MET:HB3	12:I:190:LEU:HD12	1.94	0.50
21:S:33:PHE:CZ	21:S:106:VAL:HB	2.46	0.50
26:X:79:PHE:N	26:X:79:PHE:HD1	2.08	0.50
31:c:30:GLY:O	31:c:93:THR:HB	2.12	0.50
33:e:124:ASN:OD1	33:e:124:ASN:N	2.45	0.50
34:f:88:PHE:CE1	34:f:92:LEU:HD11	2.47	0.50
44:p:10:ILE:HG12	44:p:30:GLU:HB3	1.92	0.50
44:p:14:TYR:N	44:p:14:TYR:CD1	2.80	0.50
45:r:90:LEU:HG	45:r:111:ILE:HG23	1.93	0.50
1:5:40:G:C6	1:5:4378:A:C4	2.98	0.50
1:5:165:A:C6	1:5:166:C:C4	2.99	0.50
1:5:345:C:C2	1:5:346:G:C8	2.99	0.50
1:5:642:G:N3	1:5:643:C:C6	2.80	0.50
1:5:739:G:H2'	1:5:740:G:O4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:994:G:C2	1:5:995:C:C2	2.99	0.50
1:5:1178:G:C5	1:5:1179:U:C6	3.00	0.50
1:5:1187:G:H4'	7:D:274:ALA:CB	2.41	0.50
1:5:1267:C:O2'	1:5:2109:G:N7	2.42	0.50
1:5:1358:G:H2'	1:5:1359:G:H8	1.72	0.50
1:5:1522:G:C6	1:5:1653:A:C6	2.99	0.50
1:5:1570:G:C6	1:5:1571:G:C5	3.00	0.50
1:5:1594:C:N4	1:5:1595:G:C5	2.80	0.50
1:5:1968:G:C4	1:5:1969:G:C8	3.00	0.50
1:5:2015:U:N3	1:5:2016:C:C5	2.80	0.50
1:5:2270:G:N3	1:5:2271:C:C5	2.80	0.50
1:5:2436:U:C4	1:5:2783:A:C8	3.00	0.50
1:5:2460:A:O4'	16:N:94:PHE:CE1	2.64	0.50
1:5:2612:G:N1	1:5:2613:C:C2	2.79	0.50
1:5:2724:G:N1	1:5:2726:G:C5	2.79	0.50
1:5:2794:C:N3	18:P:136:ILE:HD12	2.26	0.50
1:5:2836:A:C2	1:5:3895:G:H4'	2.46	0.50
1:5:3753:G:C4	1:5:3776:G:C6	3.00	0.50
1:5:4107:G:C2	1:5:4108:G:C8	3.00	0.50
1:5:4145:C:C2	1:5:4146:G:N7	2.79	0.50
1:5:4538:G:C5	1:5:4539:U:C5	2.99	0.50
1:5:4898:G:C2	1:5:4899:G:C5	2.99	0.50
1:5:4910:G:N2	17:O:109:PRO:N	2.59	0.50
1:5:5028:G:C6	1:5:5029:C:C4	2.99	0.50
2:7:51:G:C2	2:7:52:C:C5	3.00	0.50
2:7:58:A:C4	2:7:59:G:C8	2.99	0.50
2:7:85:G:OP1	9:F:224:LYS:NZ	2.43	0.50
7:D:66:TYR:CD1	7:D:66:TYR:C	2.90	0.50
8:E:54:SER:O	8:E:56:SER:N	2.44	0.50
8:E:129:PHE:O	8:E:130:SER:C	2.53	0.50
11:H:103:VAL:HA	11:H:113:GLU:O	2.12	0.50
12:I:47:PRO:HA	12:I:171:TRP:NE1	2.25	0.50
12:I:98:ARG:CD	12:I:119:PHE:HE1	2.25	0.50
12:I:171:TRP:HE3	12:I:181:PHE:HB2	1.75	0.50
19:Q:75:ARG:HH11	19:Q:75:ARG:HG3	1.76	0.50
44:p:68:ALA:HB1	44:p:69:TRP:CE3	2.47	0.50
1:5:77:U:C4	1:5:335:A:N1	2.79	0.50
1:5:190:G:C2	1:5:252:C:C2	3.00	0.50
1:5:258:G:C5	1:5:259:C:C5	2.99	0.50
1:5:353:A:C2	1:5:379:G:C8	3.00	0.50
1:5:457:G:C2	1:5:458:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:469:C:C2	1:5:688:U:H1'	2.35	0.50
1:5:751:G:H2'	1:5:752:G:H8	1.77	0.50
1:5:936:C:O4'	1:5:936:C:O2	2.27	0.50
1:5:1213:G:N9	1:5:1215:C:H1'	2.25	0.50
1:5:1279:A:C2	1:5:1280:C:N3	2.80	0.50
1:5:1329:G:N2	1:5:3865:A:H1'	2.27	0.50
1:5:1456:C:OP1	1:5:1456:C:H4'	2.11	0.50
1:5:1484:G:H5"	1:5:1484:G:C8	2.47	0.50
1:5:1540:C:O2	1:5:1540:C:H2'	2.11	0.50
1:5:1666:C:C2	1:5:2284:G:N2	2.80	0.50
1:5:1811:G:N1	1:5:1812:C:C5	2.78	0.50
1:5:1890:G:N2	1:5:1938:C:N4	2.59	0.50
1:5:1899:G:H1	1:5:2076:G:H1	1.60	0.50
1:5:1939:A:H2	1:5:3874:G:OP1	1.94	0.50
1:5:1964:A:N6	1:5:1965:G:N9	2.56	0.50
1:5:2056:G:N2	1:5:2058:G:O6	2.45	0.50
1:5:2315:G:C6	1:5:2316:G:N7	2.79	0.50
1:5:2339:G:C6	1:5:2340:C:C5	2.99	0.50
1:5:2433:G:P	46:1:268:LYS:NZ	2.83	0.50
1:5:2559:G:H22	1:5:2567:G:H22	1.60	0.50
1:5:2658:G:N2	1:5:2675:G:C2	2.78	0.50
1:5:2841:G:C6	1:5:2842:G:C8	3.00	0.50
1:5:3721:U:N3	1:5:3722:G:C8	2.80	0.50
1:5:3802:U:N3	1:5:4498:U:O2'	2.44	0.50
1:5:3879:G:O6	1:5:3882:C:C5	2.63	0.50
1:5:4133:C:N3	1:5:4134:C:C5	2.80	0.50
1:5:4136:G:C2	1:5:4137:C:N1	2.79	0.50
1:5:4137:C:H2'	1:5:4138:C:C6	2.47	0.50
1:5:4362:A:N3	1:5:4363:A:C8	2.80	0.50
1:5:4552:U:H2'	1:5:4553:A:O5'	2.11	0.50
1:5:4651:A:C5	1:5:4652:G:C8	3.00	0.50
1:5:4731:G:N7	1:5:4732:G:C6	2.79	0.50
1:5:4967:A:H2'	1:5:4968:A:H8	1.76	0.50
3:8:12:G:N1	3:8:13:G:C5	2.78	0.50
3:8:115:G:C6	3:8:116:C:C4	2.99	0.50
4:A:40:TYR:HB3	4:A:93:LYS:HB2	1.93	0.50
11:H:117:PHE:HD1	11:H:118:LEU:HB2	1.74	0.50
17:O:12:ARG:NH1	21:S:171:ARG:NH2	2.60	0.50
20:R:76:MET:O	20:R:81:ARG:NH1	2.45	0.50
25:W:57:ARG:HH11	25:W:57:ARG:HG2	1.76	0.50
37:i:20:ASN:OD1	37:i:20:ASN:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:101:A:N1	1:5:102:G:C5	2.79	0.50
1:5:105:A:O2'	14:L:35:ARG:NH1	2.44	0.50
1:5:193:G:C6	1:5:194:C:C4	3.00	0.50
1:5:321:U:O2	1:5:322:C:C6	2.64	0.50
1:5:446:C:O2'	1:5:2314:G:H4'	2.11	0.50
1:5:929:A:N1	1:5:930:G:H3'	2.26	0.50
1:5:951:G:C2'	1:5:952:G:H5"	2.41	0.50
1:5:990:C:C4	1:5:991:C:C5	2.99	0.50
1:5:1266:G:H5"	1:5:2112:G:N2	2.25	0.50
1:5:1277:G:C2	1:5:1278:C:N1	2.80	0.50
1:5:1362:G:C6	1:5:1363:C:C4	3.00	0.50
1:5:1627:G:C5	1:5:1628:C:C6	3.00	0.50
1:5:1671:U:O4	1:5:1853:G:H1'	2.10	0.50
1:5:1673:U:C2	1:5:1674:C:C6	3.00	0.50
1:5:1808:C:C2	1:5:1831:G:C2	3.00	0.50
1:5:1832:C:O2	1:5:1832:C:H2'	2.11	0.50
1:5:1872:G:N3	1:5:4219:A:H2	2.10	0.50
1:5:1961:G:C6	1:5:2024:G:C6	3.00	0.50
1:5:2016:C:C2	1:5:2017:A:C8	3.00	0.50
1:5:2089:G:C6	1:5:2262:G:C2'	2.95	0.50
1:5:2089:G:C8	1:5:2262:G:H3'	2.47	0.50
1:5:2104:G:C5	1:5:2105:A:C8	3.00	0.50
1:5:2435:G:H21	1:5:2783:A:H1'	1.76	0.50
1:5:2440:U:O2'	1:5:2441:C:OP1	2.26	0.50
1:5:2463:G:N1	1:5:2464:C:N4	2.60	0.50
1:5:2645:G:N1	1:5:2646:C:C5	2.80	0.50
1:5:2669:C:O2'	1:5:2670:C:P	2.70	0.50
1:5:2907:G:H2'	1:5:2908:U:O4'	2.12	0.50
1:5:3621:A:H1'	1:5:4655:A:C2	2.46	0.50
1:5:4087:G:C8	4:A:34:PHE:CE1	2.99	0.50
1:5:4702:G:C6	1:5:4703:U:C6	3.00	0.50
1:5:4743:G:N3	1:5:4744:A:C8	2.80	0.50
1:5:4745:G:N2	1:5:4746:C:H41	2.09	0.50
1:5:4763:U:H6	11:H:42:ASN:ND2	2.09	0.50
1:5:4945:G:N7	34:f:60:PRO:HD2	2.27	0.50
1:5:4956:A:N1	1:5:4957:C:C6	2.80	0.50
1:5:4957:C:O2	1:5:4958:C:H6	1.94	0.50
1:5:5020:G:O6	1:5:5028:G:O6	2.28	0.50
1:5:5043:A:C2'	1:5:5044:A:O5'	2.60	0.50
2:7:92:C:O2	2:7:93:G:C8	2.65	0.50
3:8:23:C:OP1	27:Y:15:ARG:NH2	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:31:G:C6	3:8:32:C:C4	3.00	0.50
3:8:106:G:N1	3:8:107:C:C4	2.80	0.50
6:C:103:ALA:O	6:C:104:PRO:C	2.55	0.50
44:p:10:ILE:HG23	44:p:11:VAL:HG13	1.93	0.50
45:r:39:ARG:HB3	45:r:40:TYR:CD1	2.46	0.50
47:2:30:ARG:O	47:2:31:LYS:C	2.50	0.50
1:5:292:G:C2	1:5:293:G:N1	2.79	0.50
1:5:493:G:C6	1:5:494:U:C6	3.00	0.50
1:5:677:G:C6	1:5:678:C:N4	2.80	0.50
1:5:695:G:C3'	1:5:696:C:H5'	2.42	0.50
1:5:699:C:C4	1:5:700:G:N7	2.80	0.50
1:5:739:G:C2	1:5:740:G:C4	3.00	0.50
1:5:931:C:C6	1:5:932:A:C8	3.00	0.50
1:5:1185:G:C5	1:5:1186:U:C6	3.00	0.50
1:5:1213:G:C6	1:5:1215:C:C5	3.00	0.50
1:5:1472:C:C4	1:5:1473:U:C5	2.99	0.50
1:5:1735:U:O2	1:5:1736:A:C8	2.65	0.50
1:5:1751:A:N6	1:5:1752:G:C5	2.80	0.50
1:5:2371:U:O4	1:5:2825:A:C2	2.61	0.50
1:5:2503:G:H3'	1:5:2504:C:C4'	2.41	0.50
1:5:2645:G:C5	1:5:2646:C:C5	3.00	0.50
1:5:2827:G:H2'	1:5:2827:G:N3	2.26	0.50
1:5:3597:G:P	20:R:109:TYR:OH	2.67	0.50
1:5:3599:A:H2'	1:5:3600:G:C8	2.47	0.50
1:5:3636:C:O2	1:5:3636:C:C2'	2.59	0.50
1:5:3754:G:C2	1:5:3755:G:C8	2.99	0.50
1:5:3878:C:C5	1:5:4518:A:C2	2.99	0.50
1:5:4257:A:C5	13:J:60:PHE:CE2	2.99	0.50
1:5:4536:C:O2	1:5:4536:C:H2'	2.11	0.50
1:5:4743:G:O6	1:5:4744:A:N6	2.45	0.50
1:5:4744:A:N3	1:5:4745:G:N7	2.60	0.50
1:5:4755:G:N1	1:5:4876:U:C4	2.80	0.50
1:5:4913:G:C2'	1:5:4914:C:O4'	2.59	0.50
1:5:4930:C:OP1	8:E:262:GLN:N	2.44	0.50
4:A:202:VAL:CG1	4:A:217:GLN:HG2	2.39	0.50
5:B:116:ARG:C	5:B:118:PHE:H	2.20	0.50
7:D:39:GLN:HA	7:D:39:GLN:OE1	2.11	0.50
8:E:129:PHE:C	8:E:129:PHE:HD1	2.20	0.50
21:S:84:TYR:HD2	21:S:113:MET:CE	2.24	0.50
22:T:74:ILE:HG23	22:T:89:ILE:HG13	1.93	0.50
27:Y:91:ASN:OD1	27:Y:91:ASN:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:82:VAL:HG21	29:a:101:ILE:HG12	1.94	0.50
35:g:60:ARG:HG3	35:g:61:PRO:HD2	1.93	0.50
43:o:26:TYR:HD1	43:o:27:LYS:N	2.09	0.50
1:5:33:A:H5"	1:5:33:A:H8	1.77	0.50
1:5:246:G:N1	1:5:247:G:C5	2.80	0.50
1:5:920:C:C4	1:5:921:C:C5	3.00	0.50
1:5:936:C:C5	15:M:46:ARG:HA	2.47	0.50
1:5:964:A:H5'	45:r:94:ARG:HH11	1.76	0.50
1:5:1168:G:C2	1:5:1169:G:C5	2.99	0.50
1:5:1263:A:C6	1:5:1264:C:C5	3.00	0.50
1:5:1263:A:H2'	1:5:1264:C:O4'	2.12	0.50
1:5:1326:A:H2'	1:5:1327:C:H6	1.76	0.50
1:5:1404:G:C2	1:5:1405:C:N1	2.80	0.50
1:5:1633:G:N2	1:5:1642:A:C8	2.79	0.50
1:5:1805:A:C8	30:b:28:ARG:CB	2.95	0.50
1:5:1829:G:C2	1:5:1830:G:C4	2.99	0.50
1:5:1831:G:C4	1:5:1832:C:C6	2.99	0.50
1:5:1870:C:O2	1:5:1870:C:H2'	2.10	0.50
1:5:2065:G:C5	1:5:2066:C:C5	2.99	0.50
1:5:2084:C:H3'	1:5:2085:G:H5"	1.93	0.50
1:5:2113:G:H8	1:5:2115:G:N3	2.10	0.50
1:5:2123:C:O2'	1:5:2124:G:OP2	2.15	0.50
1:5:2248:C:OP1	9:F:26:ASN:N	2.45	0.50
1:5:2326:G:N2	1:5:2327:G:C4	2.80	0.50
1:5:2499:C:O2	1:5:2499:C:H2'	2.11	0.50
1:5:2700:G:H2'	1:5:2701:U:O4'	2.12	0.50
1:5:2909:C:O2	1:5:3586:G:C2	2.65	0.50
1:5:3693:U:O2	1:5:3693:U:H2'	2.12	0.50
1:5:4068:U:C2	1:5:4069:U:H1'	2.47	0.50
1:5:4233:A:N6	1:5:4290:U:N3	2.27	0.50
1:5:4302:U:C5	1:5:4303:C:C5	2.90	0.50
1:5:4476:C:O2'	1:5:4478:G:OP2	2.17	0.50
1:5:4543:G:H2'	1:5:4544:A:C8	2.46	0.50
1:5:4916:G:C5	1:5:4917:C:C5	3.00	0.50
1:5:4961:G:H2'	1:5:4962:C:O4'	2.11	0.50
3:8:39:G:N3	3:8:39:G:H2'	2.26	0.50
3:8:118:C:O2	3:8:119:C:H6	1.95	0.50
3:8:132:G:C4	3:8:133:G:C8	3.00	0.50
5:B:291:TYR:CZ	5:B:327:THR:HA	2.47	0.50
5:B:378:ARG:CD	25:W:32:LEU:HD21	2.39	0.50
6:C:218:ILE:HD12	6:C:222:ARG:HD2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:99:TYR:CD2	7:D:199:ILE:HG23	2.47	0.50
10:G:231:ASN:N	10:G:231:ASN:ND2	2.59	0.50
19:Q:22:ASP:OD1	19:Q:25:LEU:HB3	2.12	0.50
20:R:117:ARG:HH21	20:R:118:HIS:CE1	2.30	0.50
37:i:72:PHE:CD2	37:i:72:PHE:C	2.90	0.50
1:5:28:C:O2	1:5:28:C:C2'	2.60	0.49
1:5:302:C:H5"	16:N:68:ARG:HE	1.77	0.49
1:5:316:U:O2	1:5:316:U:C2'	2.57	0.49
1:5:731:G:N7	1:5:732:A:C8	2.80	0.49
1:5:910:G:C6	1:5:911:U:C4	3.00	0.49
1:5:1188:C:C2	1:5:1189:G:H8	2.23	0.49
1:5:1202:C:O2	1:5:1203:G:C8	2.65	0.49
1:5:1412:G:C4	1:5:1413:C:C5	3.00	0.49
1:5:1828:C:H1'	30:b:57:MET:HE2	1.94	0.49
1:5:1877:G:N1	1:5:1878:G:C5	2.80	0.49
1:5:1936:C:C2	1:5:1937:C:C6	3.00	0.49
1:5:2052:G:OP1	17:O:83:THR:HG22	2.12	0.49
1:5:2079:G:C6	1:5:2080:U:C5	3.00	0.49
1:5:2257:C:O2'	1:5:2258:C:O5'	2.30	0.49
1:5:2361:G:O2'	1:5:2362:U:P	2.70	0.49
1:5:3594:C:O2	1:5:3594:C:C2'	2.60	0.49
1:5:4240:G:C2	1:5:4241:C:H1'	2.46	0.49
1:5:4481:U:C2	1:5:4482:U:C4	2.99	0.49
1:5:4565:C:O2'	1:5:4566:U:H5'	2.12	0.49
1:5:4713:G:C6	1:5:4714:C:C4	3.00	0.49
1:5:4899:G:C2	1:5:4922:C:C2	3.00	0.49
1:5:4922:C:C2	1:5:4923:C:C6	3.00	0.49
2:7:38:U:N3	2:7:40:U:OP2	2.45	0.49
3:8:35:C:H2'	3:8:36:G:O5'	2.11	0.49
3:8:92:U:H2'	3:8:93:C:O4'	2.12	0.49
4:A:209:HIS:CE1	4:A:235:VAL:HG11	2.46	0.49
6:C:341:LEU:HD11	8:E:52:ARG:HD2	1.94	0.49
7:D:200:LEU:HB2	7:D:202:GLN:HE22	1.76	0.49
8:E:279:PRO:C	8:E:281:LYS:N	2.69	0.49
9:F:161:TYR:CE2	9:F:168:ARG:CZ	2.91	0.49
10:G:58:PRO:CD	26:X:46:PHE:HD2	2.25	0.49
12:I:47:PRO:HD2	12:I:141:LYS:HA	1.94	0.49
26:X:119:ILE:HA	26:X:144:TYR:CE2	2.42	0.49
39:k:19:ASP:OD1	39:k:19:ASP:C	2.55	0.49
39:k:30:ASP:OD1	39:k:31:ASN:N	2.44	0.49
1:5:154:G:N1	1:5:155:C:C4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:187:U:H3'	1:5:245:C:C2	2.47	0.49
1:5:230:G:C2	1:5:239:C:C2	3.00	0.49
1:5:278:G:N2	1:5:330:G:C8	2.79	0.49
1:5:467:U:C2	1:5:468:U:C6	3.00	0.49
1:5:712:C:C2	1:5:713:C:C6	3.00	0.49
1:5:1358:G:O6	1:5:1379:C:N3	2.45	0.49
1:5:1412:G:C6	1:5:1413:C:C4	3.00	0.49
1:5:1433:A:N6	1:5:1451:G:O2'	2.44	0.49
1:5:1563:A:H2'	1:5:1564:A:N7	2.26	0.49
1:5:1972:G:N2	1:5:1973:G:C4	2.80	0.49
1:5:2032:U:H2'	1:5:2033:A:O4'	2.13	0.49
1:5:2325:C:O2	1:5:2326:G:C8	2.61	0.49
1:5:2393:C:OP2	1:5:2394:G:N7	2.45	0.49
1:5:2408:U:N1	1:5:2409:U:O4	2.45	0.49
1:5:2456:G:O2'	1:5:2457:G:H5'	2.12	0.49
1:5:2460:A:H1'	16:N:94:PHE:CZ	2.47	0.49
1:5:2551:A:H2'	1:5:2552:G:H5'	1.94	0.49
1:5:2556:G:H2'	1:5:2557:G:O4'	2.12	0.49
1:5:2707:U:H2'	1:5:2707:U:O2	2.11	0.49
1:5:3692:A:N6	1:5:3693:U:C2	2.80	0.49
1:5:3711:A:H5"	1:5:3711:A:N3	2.27	0.49
1:5:3794:C:O2	1:5:3795:A:C8	2.65	0.49
1:5:3880:G:C2	1:5:3881:G:C6	3.01	0.49
1:5:4098:A:C4	1:5:4099:G:C8	3.00	0.49
1:5:4269:G:O6	1:5:4277:G:O6	2.29	0.49
1:5:4285:U:N3	1:5:4286:C:C4	2.80	0.49
1:5:4548:A:C8	1:5:4548:A:O5'	2.64	0.49
1:5:4562:C:H2'	1:5:4562:C:O2	2.11	0.49
1:5:4997:G:C2	1:5:4998:G:C8	3.00	0.49
3:8:64:U:H3'	3:8:65:A:C8	2.47	0.49
3:8:106:G:C2	3:8:107:C:N3	2.80	0.49
3:8:151:G:OP2	10:G:65:ARG:NE	2.43	0.49
4:A:30:ARG:NE	4:A:63:PHE:CE2	2.80	0.49
6:C:209:ILE:HD13	6:C:221:PHE:CE2	2.47	0.49
8:E:191:ILE:HG23	34:f:110:ILE:HD12	1.94	0.49
9:F:58:HIS:HB2	9:F:59:TYR:HD1	1.77	0.49
10:G:55:VAL:HG22	26:X:44:PRO:HA	1.94	0.49
11:H:54:ARG:CG	11:H:54:ARG:HH11	2.25	0.49
18:P:95:LEU:HD13	18:P:148:MET:HE1	1.93	0.49
19:Q:88:ASP:OD1	19:Q:109:ALA:HA	2.12	0.49
23:U:28:PRO:HA	23:U:114:TYR:OH	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:15:ARG:CG	27:Y:15:ARG:HH11	2.25	0.49
45:r:65:LYS:N	45:r:102:TYR:OH	2.45	0.49
1:5:74:G:H5'	14:L:59:VAL:HG13	1.95	0.49
1:5:99:A:C6	1:5:100:C:C2	3.00	0.49
1:5:209:U:O2	1:5:233:U:C4	2.64	0.49
1:5:211:G:N2	1:5:212:A:N9	2.60	0.49
1:5:298:G:C6	1:5:299:C:C4	3.00	0.49
1:5:754:U:N3	1:5:755:C:C6	2.78	0.49
1:5:1215:C:C2	1:5:1216:C:C6	3.00	0.49
1:5:1261:G:N1	1:5:1262:G:N7	2.60	0.49
1:5:1265:G:C6	1:5:1266:G:C5	3.00	0.49
1:5:1277:G:C4	1:5:1278:C:C6	3.01	0.49
1:5:1310:C:O2	1:5:1310:C:H2'	2.11	0.49
1:5:1434:G:H2'	1:5:1435:G:O4'	2.12	0.49
1:5:1491:A:C6	1:5:1492:G:C5	3.01	0.49
1:5:1598:C:N1	1:5:2798:A:C8	2.80	0.49
1:5:1665:C:C2'	1:5:1666:C:O5'	2.59	0.49
1:5:1696:C:HO2'	1:5:1697:G:P	2.34	0.49
1:5:1999:A:C4'	1:5:2019:C:H4'	2.40	0.49
1:5:2080:U:O2'	1:5:2081:C:H5'	2.12	0.49
1:5:2279:A:C4	1:5:2280:G:N7	2.80	0.49
1:5:2322:G:N1	1:5:2323:C:C2	2.80	0.49
1:5:2363:A:H1'	1:5:4560:C:C5	2.46	0.49
1:5:2448:G:O2'	1:5:2449:A:O4'	2.29	0.49
1:5:2519:U:H1'	1:5:2520:C:C6	2.47	0.49
1:5:2735:G:C2	1:5:2736:G:C5	3.00	0.49
1:5:2866:C:N3	1:5:2867:C:C5	2.81	0.49
1:5:2895:A:C6	1:5:2896:G:N7	2.80	0.49
1:5:3721:U:C2	1:5:3722:G:H8	2.18	0.49
1:5:3862:A:C5	1:5:3863:C:C6	3.01	0.49
1:5:3911:C:C2'	1:5:3912:U:O5'	2.59	0.49
1:5:4271:A:N3	1:5:4271:A:H2'	2.26	0.49
1:5:4305:G:C2'	1:5:4305:G:N3	2.75	0.49
1:5:4369:A:C6	1:5:4370:G:N7	2.81	0.49
1:5:4547:C:N3	1:5:4549:G:N7	2.60	0.49
1:5:4592:C:C2	1:5:4593:C:C5	3.00	0.49
1:5:4631:G:H2'	1:5:4632:U:O4'	2.12	0.49
1:5:4758:U:O2	1:5:4758:U:O4'	2.29	0.49
1:5:4920:C:O2	1:5:4921:C:C5	2.66	0.49
2:7:93:G:C4	2:7:94:C:C5	3.00	0.49
2:7:104:C:C2	2:7:105:C:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:53:G:C2	3:8:54:C:C2	3.00	0.49
4:A:33:ASP:O	4:A:34:PHE:C	2.53	0.49
5:B:21:ARG:HG3	5:B:274:TYR:HB3	1.94	0.49
6:C:33:ARG:HH21	19:Q:22:ASP:CB	2.25	0.49
7:D:278:ASP:O	7:D:280:VAL:N	2.44	0.49
9:F:148:ASN:CB	9:F:243:ASN:ND2	2.75	0.49
10:G:61:ILE:O	10:G:62:ARG:C	2.55	0.49
14:L:94:ILE:HA	36:h:119:PHE:HZ	1.76	0.49
16:N:26:ARG:O	16:N:30:TYR:HB2	2.12	0.49
19:Q:178:ARG:NH2	19:Q:186:TYR:HE1	2.10	0.49
19:Q:184:ARG:NH1	19:Q:184:ARG:HG2	2.27	0.49
23:U:42:PHE:CE1	23:U:46:ARG:HD3	2.48	0.49
27:Y:81:TYR:HD2	27:Y:96:HIS:HB2	1.78	0.49
30:b:16:TRP:N	30:b:16:TRP:CD1	2.80	0.49
38:j:21:ARG:NH2	38:j:38:GLY:O	2.46	0.49
45:r:57:GLY:O	45:r:121:GLN:OE1	2.30	0.49
1:5:66:A:C5	1:5:328:A:C8	3.01	0.49
1:5:294:G:OP2	1:5:294:G:O4’	2.31	0.49
1:5:347:A:C2	1:5:348:G:N7	2.81	0.49
1:5:917:A:C2	1:5:918:G:C2	3.00	0.49
1:5:957:G:OP1	1:5:1284:G:O2’	2.30	0.49
1:5:964:A:C8	1:5:964:A:H5”	2.43	0.49
1:5:1207:C:C2	1:5:1208:G:C8	3.00	0.49
1:5:1211:G:C2	1:5:1212:G:C8	3.01	0.49
1:5:1235:G:N2	1:5:1236:C:C6	2.80	0.49
1:5:1251:C:C2	1:5:1252:C:C5	2.99	0.49
1:5:1439:C:H5”	9:F:36:ARG:HH12	1.68	0.49
1:5:1440:U:H4’	1:5:2109:G:O2’	2.11	0.49
1:5:1563:A:C2’	1:5:1564:A:C8	2.91	0.49
1:5:1724:G:C8	30:b:17:HIS:CD2	2.99	0.49
1:5:1780:A:N1	1:5:1781:U:H1’	2.27	0.49
1:5:1884:C:HO2’	1:5:1885:G:C5’	2.25	0.49
1:5:2056:G:O2’	1:5:2057:A:H2’	2.13	0.49
1:5:2363:A:O4’	1:5:4560:C:C5	2.65	0.49
1:5:2385:U:H2’	1:5:2386:U:H6	1.77	0.49
1:5:2385:U:C2	1:5:2386:U:C5	3.00	0.49
1:5:2457:G:H2’	1:5:2458:C:O4’	2.11	0.49
1:5:2496:G:N3	1:5:2497:C:C6	2.80	0.49
1:5:2515:G:O6	1:5:2516:G:C2	2.66	0.49
1:5:2795:A:O2’	1:5:2796:G:H3’	2.12	0.49
1:5:3705:G:C6	1:5:3706:C:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3722:G:C6	1:5:3723:A:N7	2.81	0.49
1:5:3802:U:O2	1:5:3802:U:C2'	2.57	0.49
1:5:3902:A:C2	1:5:3903:A:C8	3.00	0.49
1:5:4222:G:C5	1:5:4223:C:C5	3.01	0.49
1:5:4269:G:N1	1:5:4270:C:C2	2.80	0.49
1:5:4350:C:N3	1:5:4351:U:C5	2.80	0.49
1:5:4505:C:C2	1:5:4506:C:C5	3.01	0.49
1:5:4524:G:N2	1:5:4525:C:C2	2.81	0.49
1:5:4627:U:O2'	5:B:55:HIS:CE1	2.66	0.49
1:5:4647:G:H5'	1:5:4647:G:C8	2.47	0.49
1:5:4653:C:H2'	1:5:4654:C:C6	2.48	0.49
1:5:4768:G:H3'	1:5:4769:G:C8	2.47	0.49
1:5:4932:U:C2'	1:5:4933:C:O4'	2.60	0.49
2:7:11:A:N1	2:7:66:G:O2'	2.37	0.49
2:7:44:C:N3	2:7:45:U:C5	2.81	0.49
3:8:42:G:C4	3:8:43:A:C8	3.00	0.49
8:E:253:ILE:O	8:E:255:ARG:N	2.44	0.49
12:I:76:MET:HB3	12:I:85:PHE:CE2	2.47	0.49
17:O:140:ARG:HH21	17:O:140:ARG:HG3	1.77	0.49
21:S:90:THR:HG23	22:T:156:TYR:CE2	2.47	0.49
27:Y:27:ARG:HH21	27:Y:27:ARG:HG2	1.76	0.49
28:Z:36:ARG:C	28:Z:38:TYR:H	2.21	0.49
34:f:46:ARG:HD2	34:f:106:TYR:HE1	1.78	0.49
36:h:4:ILE:O	36:h:56:ARG:HD2	2.12	0.49
36:h:87:LYS:H	36:h:92:ARG:HD3	1.75	0.49
1:5:89:C:C2'	1:5:90:G:O5'	2.61	0.49
1:5:176:G:C5'	36:h:98:HIS:CE1	2.95	0.49
1:5:223:G:O2'	6:C:223:ASN:ND2	2.45	0.49
1:5:322:C:H1'	1:5:4356:G:N2	2.28	0.49
1:5:669:C:HO2'	1:5:670:G:C5'	2.24	0.49
1:5:979:C:C4	1:5:980:U:C5	3.00	0.49
1:5:1070:G:N3	1:5:1071:C:C6	2.81	0.49
1:5:1173:G:C6	1:5:1174:G:C4	3.00	0.49
1:5:1277:G:C6	1:5:1278:C:C4	3.00	0.49
1:5:1283:G:C8	1:5:1283:G:H3'	2.48	0.49
1:5:1344:C:C6	1:5:1344:C:H5"	2.47	0.49
1:5:1412:G:C2	1:5:1413:C:C2	3.00	0.49
1:5:1444:G:N3	1:5:1445:U:C5	2.81	0.49
1:5:1468:C:H2'	1:5:1469:C:C6	2.48	0.49
1:5:1685:G:N2	1:5:1686:C:C2	2.81	0.49
1:5:1761:G:C2	1:5:1772:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:H8	1:5:2278:G:C2	2.25	0.49
1:5:2046:G:OP1	17:O:60:LYS:HE2	2.12	0.49
1:5:2292:C:C4	1:5:2293:U:C5	3.00	0.49
1:5:2314:G:C6	1:5:2326:G:C5	3.00	0.49
1:5:2406:G:N7	40:l:2:SER:N	2.60	0.49
1:5:2438:A:N7	1:5:2441:C:N4	2.60	0.49
1:5:2464:C:O2'	1:5:2465:C:O5'	2.25	0.49
1:5:2498:C:C2	1:5:2499:C:C5	3.01	0.49
1:5:2557:G:C5	1:5:2558:C:C5	3.01	0.49
1:5:2566:G:N3	1:5:2567:G:C8	2.80	0.49
1:5:2613:C:N4	1:5:2614:C:N4	2.61	0.49
1:5:2644:G:N2	1:5:2645:G:H1'	2.28	0.49
1:5:2760:G:H4'	1:5:2762:G:H22	1.76	0.49
1:5:3621:A:C2	1:5:3622:C:C1'	2.95	0.49
1:5:4168:G:H2'	1:5:4169:G:C5'	2.43	0.49
1:5:4181:U:C4	1:5:4182:G:C5	3.00	0.49
1:5:4301:U:C5'	22:T:54:HIS:HD2	2.25	0.49
1:5:4651:A:C6	1:5:4652:G:N7	2.81	0.49
1:5:4976:U:H5'	1:5:4976:U:C6	2.47	0.49
2:7:111:C:N3	2:7:112:U:C5	2.80	0.49
9:F:82:ASN:HD21	22:T:142:ARG:HA	1.77	0.49
9:F:168:ARG:HB2	9:F:211:TRP:NE1	2.27	0.49
11:H:1:MET:HE3	21:S:144:GLN:HE21	1.78	0.49
12:I:109:ASP:OD2	12:I:111:LEU:O	2.30	0.49
14:L:38:ALA:O	14:L:39:ARG:C	2.55	0.49
24:V:13:LYS:HG2	24:V:128:LEU:HD22	1.95	0.49
28:Z:92:ASP:OD1	28:Z:92:ASP:C	2.56	0.49
45:r:49:VAL:HG11	45:r:97:ILE:HD11	1.92	0.49
1:5:16:G:O3'	36:h:78:TYR:HE2	1.96	0.49
1:5:183:C:H1'	1:5:184:U:C4	2.46	0.49
1:5:196:C:O2	1:5:196:C:C2'	2.59	0.49
1:5:272:U:N3	1:5:273:U:C5	2.80	0.49
1:5:733:A:N7	1:5:734:G:N7	2.59	0.49
1:5:1092:G:C4	1:5:1093:C:C6	3.00	0.49
1:5:1200:G:C6	1:5:1201:U:C4	3.01	0.49
1:5:1206:C:N3	1:5:1207:C:C5	2.80	0.49
1:5:1218:G:O6	1:5:1219:G:N9	2.46	0.49
1:5:1330:A:C8	1:5:3864:C:C4	3.00	0.49
1:5:1570:G:C2	1:5:1571:G:N9	2.81	0.49
1:5:1805:A:C8	30:b:28:ARG:HB3	2.47	0.49
1:5:2314:G:C8	1:5:2326:G:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2326:G:N2	1:5:2327:G:C1’	2.76	0.49
1:5:2327:G:N2	1:5:2328:G:N9	2.60	0.49
1:5:2336:G:C6	1:5:2337:C:C4	3.00	0.49
1:5:2445:C:O2	1:5:2445:C:C2’	2.60	0.49
1:5:2585:C:N3	1:5:2588:C:N4	2.60	0.49
1:5:2738:C:N3	1:5:2741:U:C4	2.81	0.49
1:5:2862:G:N3	1:5:3624:A:H2’	2.27	0.49
1:5:3596:A:O3’	1:5:3597:G:C4’	2.61	0.49
1:5:3672:G:C8	1:5:3674:G:O4’	2.65	0.49
1:5:3867:A:C2	1:5:3868:G:C4	3.01	0.49
1:5:3907:G:N7	1:5:4447:C:H1’	2.27	0.49
1:5:4085:A:H3’	1:5:4086:G:H5”	1.94	0.49
1:5:4092:G:N2	1:5:4093:G:O4’	2.46	0.49
1:5:4143:G:C8	1:5:4145:C:C5	3.00	0.49
1:5:4240:G:C2	1:5:4241:C:C2	3.01	0.49
1:5:4652:G:H2’	1:5:4653:C:H6	1.77	0.49
1:5:4743:G:C2	1:5:4744:A:N7	2.80	0.49
1:5:4749:C:H3’	1:5:4750:G:H5”	1.95	0.49
1:5:4886:C:N3	1:5:4887:C:C5	2.71	0.49
1:5:4910:G:H4’	1:5:4911:A:OP2	2.10	0.49
1:5:4949:G:H3’	1:5:4950:U:H5”	1.94	0.49
1:5:4982:A:C2	1:5:4983:C:C1’	2.95	0.49
4:A:18:ALA:O	4:A:20:VAL:HG13	2.13	0.49
4:A:55:GLY:HA2	4:A:174:ARG:HD3	1.95	0.49
7:D:125:VAL:HG11	7:D:199:ILE:HG21	1.94	0.49
9:F:239:GLU:O	9:F:240:ASP:HB3	2.13	0.49
10:G:29:ASN:HB3	10:G:32:PHE:CE1	2.48	0.49
11:H:111:LEU:HD12	11:H:113:GLU:OE1	2.12	0.49
12:I:112:GLN:HB2	12:I:116:ARG:HH11	1.76	0.49
28:Z:18:TYR:CE2	28:Z:47:ASP:OD1	2.65	0.49
35:g:96:LEU:O	35:g:100:GLN:HG3	2.13	0.49
36:h:101:ASN:OD1	36:h:101:ASN:N	2.42	0.49
1:5:85:G:C2	1:5:97:G:N7	2.81	0.49
1:5:322:C:C2	1:5:4356:G:C2	3.00	0.49
1:5:982:U:C6	8:E:67:ARG:NE	2.81	0.49
1:5:1097:C:H42	1:5:1198:G:H1	1.61	0.49
1:5:1189:G:C6	1:5:1190:C:C5	3.00	0.49
1:5:1197:C:H2’	1:5:1198:G:O4’	2.12	0.49
1:5:1312:A:O2’	33:e:44:ARG:NH2	2.46	0.49
1:5:1467:C:C2	1:5:1468:C:C5	3.00	0.49
1:5:1479:G:O2’	1:5:1480:C:O5’	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1528:U:H2'	1:5:1529:G:O4'	2.13	0.49
1:5:1635:C:N3	1:5:1636:U:C4	2.80	0.49
1:5:2076:G:O6	1:5:2077:C:C4	2.66	0.49
1:5:2491:C:H2'	1:5:2492:C:O4'	2.12	0.49
1:5:2614:C:C2	1:5:2726:G:C2	3.01	0.49
1:5:2724:G:N1	1:5:2726:G:N7	2.57	0.49
1:5:2854:G:C6	1:5:2856:C:H6	2.22	0.49
1:5:2860:C:H2'	1:5:2861:C:O4'	2.13	0.49
1:5:3652:A:H3'	1:5:3653:A:C8	2.47	0.49
1:5:3669:G:C2	1:5:3671:G:OP2	2.66	0.49
1:5:3672:G:N7	1:5:3674:G:O4'	2.46	0.49
1:5:3820:G:C5	1:5:3821:A:C8	3.00	0.49
1:5:3910:C:N3	1:5:3911:C:C5	2.80	0.49
1:5:3938:G:H5'	1:5:3938:G:N3	2.27	0.49
1:5:4077:A:N7	1:5:4078:C:C6	2.81	0.49
1:5:4518:A:C5	5:B:257:TRP:CZ2	3.00	0.49
1:5:4628:U:O2	1:5:4629:U:C5	2.64	0.49
1:5:4731:G:N7	1:5:4733:C:C5	2.81	0.49
1:5:5062:G:H2'	1:5:5062:G:N3	2.27	0.49
2:7:8:G:C6	2:7:9:C:C5	3.01	0.49
2:7:60:G:N1	2:7:61:G:C8	2.80	0.49
3:8:14:U:O2'	3:8:15:G:C5'	2.61	0.49
3:8:66:A:C2	3:8:67:U:C4	3.00	0.49
3:8:78:G:H2'	3:8:79:G:C1'	2.43	0.49
4:A:35:ALA:HB1	4:A:41:ILE:HB	1.95	0.49
4:A:112:ILE:HD12	44:p:79:VAL:HG22	1.94	0.49
8:E:52:ARG:NH2	8:E:53:TYR:CE1	2.80	0.49
10:G:227:ASN:N	10:G:227:ASN:ND2	2.60	0.49
12:I:76:MET:HB3	12:I:85:PHE:CD2	2.47	0.49
15:M:120:ASN:HA	15:M:123:ILE:HG22	1.93	0.49
16:N:150:TRP:HZ3	16:N:151:ILE:HG12	1.77	0.49
19:Q:28:LEU:CD1	19:Q:51:LEU:HD22	2.43	0.49
19:Q:168:ARG:HD3	19:Q:174:PHE:HE2	1.78	0.49
20:R:130:ASN:O	20:R:130:ASN:CG	2.55	0.49
22:T:11:THR:HB	22:T:15:PHE:CD1	2.48	0.49
27:Y:62:TYR:CE2	27:Y:85:VAL:HG13	2.48	0.49
27:Y:121:ARG:HB3	27:Y:121:ARG:NH1	2.28	0.49
35:g:13:TYR:N	35:g:13:TYR:CD1	2.81	0.49
40:l:21:ARG:O	40:l:22:PRO:O	2.31	0.49
46:1:271:ARG:HG2	46:1:272:TYR:CE2	2.47	0.49
1:5:18:C:C4'	16:N:138:PHE:CE2	2.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:449:C:N3	1:5:450:G:N7	2.61	0.49
1:5:455:C:C4	1:5:456:C:C5	3.01	0.49
1:5:465:G:N1	1:5:466:A:C8	2.81	0.49
1:5:482:G:H2'	1:5:483:G:C1'	2.41	0.49
1:5:500:G:C2	1:5:504:G:N7	2.80	0.49
1:5:723:A:H2	1:5:943:A:C2	2.29	0.49
1:5:1076:C:N4	1:5:1077:C:C5	2.81	0.49
1:5:1290:G:C2'	1:5:1291:G:H5'	2.42	0.49
1:5:1309:C:H2'	1:5:1309:C:O2	2.12	0.49
1:5:1358:G:C2'	1:5:1359:G:C8	2.94	0.49
1:5:1392:A:N3	1:5:1393:G:C8	2.81	0.49
1:5:1726:U:C2	1:5:1727:U:C5	3.00	0.49
1:5:1759:G:N1	1:5:1760:G:N7	2.60	0.49
1:5:1771:U:N3	1:5:1772:C:C6	2.80	0.49
1:5:2058:G:C6	1:5:2059:C:C4	2.99	0.49
1:5:2260:C:C2'	1:5:2261:G:C8	2.96	0.49
1:5:2395:A:O3'	1:5:2806:A:C2	2.66	0.49
1:5:2454:U:N3	1:5:2455:G:C8	2.81	0.49
1:5:2479:G:C2	1:5:2480:G:C8	3.01	0.49
1:5:2533:C:C2	1:5:2534:C:C4	3.00	0.49
1:5:2595:C:N3	1:5:2596:G:N7	2.61	0.49
1:5:2802:C:H6	1:5:2802:C:O5'	1.96	0.49
1:5:2851:G:O6	1:5:2852:U:C6	2.63	0.49
1:5:3669:G:N2	1:5:3671:G:OP2	2.45	0.49
1:5:3732:A:N1	1:5:3733:A:N7	2.61	0.49
1:5:3753:G:C6	1:5:3776:G:C2	3.01	0.49
1:5:4287:G:C2	1:5:4288:C:C2	3.01	0.49
1:5:4486:C:H2'	1:5:4487:A:O4'	2.13	0.49
1:5:4509:U:C2'	1:5:4510:A:H2'	2.43	0.49
1:5:4592:C:H2'	1:5:4593:C:C6	2.47	0.49
1:5:4690:G:C6	1:5:4697:U:C5	3.01	0.49
1:5:4935:C:H3'	8:E:179:ARG:HH21	1.78	0.49
1:5:5023:C:H42	1:5:5028:G:H21	1.61	0.49
2:7:8:G:C2	2:7:9:C:N1	2.81	0.49
2:7:93:G:C2	2:7:94:C:N1	2.80	0.49
2:7:105:C:O2	2:7:105:C:H2'	2.12	0.49
3:8:80:A:H3'	3:8:81:C:C4'	2.40	0.49
3:8:116:C:N3	3:8:117:C:C5	2.81	0.49
4:A:30:ARG:NE	4:A:63:PHE:HE2	2.11	0.49
4:A:209:HIS:CE1	4:A:211:PHE:HD2	2.29	0.49
5:B:235:TRP:HD1	5:B:267:ALA:CA	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:157:ARG:O	8:E:178:ASN:OD1	2.31	0.49
20:R:110:ARG:HD3	20:R:120:TYR:HE2	1.77	0.49
21:S:32:ILE:HG22	21:S:33:PHE:H	1.78	0.49
29:a:63:LEU:HD23	29:a:64:LYS:N	2.28	0.49
33:e:76:LYS:HD2	33:e:98:GLU:HG2	1.95	0.49
1:5:66:A:N7	1:5:328:A:H1'	2.27	0.49
1:5:98:A:C2	1:5:99:A:H1'	2.48	0.49
1:5:247:G:C2	1:5:248:C:C5	3.01	0.49
1:5:668:C:C4	1:5:669:C:C5	3.01	0.49
1:5:991:C:C4	1:5:992:C:C5	3.00	0.49
1:5:1193:C:C2	1:5:1194:G:C8	3.00	0.49
1:5:1205:G:N2	1:5:1206:C:C2	2.81	0.49
1:5:1261:G:C4	1:5:1262:G:C8	3.01	0.49
1:5:1280:C:C2'	1:5:1281:G:H3'	2.43	0.49
1:5:1542:U:O2	1:5:1542:U:H2'	2.13	0.49
1:5:1724:G:O6	30:b:14:ARG:HA	2.13	0.49
1:5:1811:G:C4	1:5:1812:C:C5	3.00	0.49
1:5:1999:A:H2'	1:5:2000:G:N3	2.28	0.49
1:5:2254:G:O2'	1:5:2255:C:H4'	2.13	0.49
1:5:2314:G:C5	1:5:2326:G:C4	3.01	0.49
1:5:2334:C:H2'	1:5:2334:C:O2	2.12	0.49
1:5:2450:G:C6	1:5:2451:A:N7	2.80	0.49
1:5:2483:G:C6	1:5:2484:A:N7	2.81	0.49
1:5:2673:G:N2	31:c:89:TYR:CD1	2.80	0.49
1:5:2682:G:H2'	1:5:2683:C:H6	1.77	0.49
1:5:3590:G:N1	1:5:3591:C:C2	2.81	0.49
1:5:3856:A:N6	1:5:3857:G:C5	2.80	0.49
1:5:3861:A:C2	1:5:3862:A:N9	2.81	0.49
1:5:4136:G:C4	1:5:4137:C:C5	3.01	0.49
1:5:4201:G:C4	1:5:4202:U:C5	3.01	0.49
1:5:4276:G:C2	1:5:4277:G:C8	3.00	0.49
1:5:4466:C:N3	1:5:4467:A:N7	2.61	0.49
1:5:4467:A:C6	1:5:4468:U:C4	3.00	0.49
1:5:4467:A:C5	1:5:4468:U:C5	3.01	0.49
1:5:4478:G:H2'	1:5:4479:A:O4'	2.12	0.49
1:5:4563:U:N3	1:5:4564:A:N6	2.58	0.49
1:5:4635:A:C2	1:5:4664:A:C5	3.00	0.49
1:5:4643:G:H2'	1:5:4644:G:O4'	2.13	0.49
1:5:4769:G:N2	1:5:4865:C:N3	2.61	0.49
1:5:4978:G:O2'	1:5:4979:A:O5'	2.22	0.49
1:5:4998:G:N3	1:5:4999:G:C8	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:30:C:C4	2:7:48:G:N1	2.81	0.49
12:I:76:MET:HE1	12:I:140:THR:HG21	1.94	0.49
22:T:3:ASN:CB	22:T:9:ARG:HH12	2.26	0.49
1:5:94:A:C2'	1:5:95:G:O5'	2.60	0.49
1:5:293:G:C5'	1:5:294:G:C8	2.95	0.49
1:5:435:A:H2'	1:5:435:A:N3	2.27	0.49
1:5:442:G:C2'	1:5:443:G:O5'	2.58	0.49
1:5:462:G:C2	1:5:694:C:C2	3.01	0.49
1:5:652:G:C2	1:5:653:U:H1'	2.48	0.49
1:5:947:C:H2'	1:5:948:C:C6	2.47	0.49
1:5:980:U:H2'	1:5:981:C:H6	1.78	0.49
1:5:994:G:C5	1:5:995:C:C5	3.01	0.49
1:5:1184:A:C2	1:5:1185:G:C8	3.01	0.49
1:5:1205:G:C2	1:5:1206:C:C2	3.01	0.49
1:5:1268:G:C4	1:5:2111:G:N3	2.81	0.49
1:5:1444:G:N2	1:5:1445:U:C4	2.81	0.49
1:5:1492:G:C6	1:5:1493:G:N7	2.81	0.49
1:5:1727:U:O2	1:5:1728:U:C6	2.66	0.49
1:5:1740:C:H1'	1:5:1742:A:N6	2.28	0.49
1:5:1925:G:C6	1:5:1926:C:C5	3.01	0.49
1:5:1992:U:H6	1:5:2002:A:C2	2.30	0.49
1:5:2384:U:O2	1:5:2385:U:C6	2.66	0.49
1:5:2509:C:C2	1:5:2510:G:N7	2.81	0.49
1:5:2569:G:H2'	1:5:2570:U:H6	1.78	0.49
1:5:2684:C:H2'	1:5:2685:C:O4'	2.13	0.49
1:5:3833:C:C2	1:5:3834:C:C6	3.01	0.49
1:5:3861:A:C4	1:5:3862:A:C8	3.01	0.49
1:5:3913:G:N1	1:5:4390:A:C2	2.81	0.49
1:5:4146:G:C2	1:5:4147:G:C8	3.01	0.49
1:5:4167:G:N3	1:5:4168:G:C8	2.81	0.49
1:5:4350:C:O2	1:5:4350:C:H2'	2.12	0.49
1:5:4423:U:O2	1:5:4423:U:H3'	2.13	0.49
1:5:4479:A:C5	1:5:4480:A:N9	2.81	0.49
1:5:4725:C:C2	1:5:4726:G:C8	2.94	0.49
1:5:4746:C:N3	1:5:4747:C:C5	2.81	0.49
1:5:4750:G:O6	1:5:4949:G:N7	2.45	0.49
1:5:4884:G:N2	1:5:4885:U:N1	2.61	0.49
1:5:4913:G:H2'	1:5:4914:C:O4'	2.11	0.49
1:5:4950:U:O2	1:5:4950:U:O4'	2.29	0.49
1:5:5006:U:H1'	1:5:5042:A:N7	2.27	0.49
1:5:5048:A:C8	32:d:34:HIS:CG	2.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:29:LEU:HD12	4:A:124:GLY:HA3	1.95	0.49
10:G:53:ARG:CZ	10:G:54:PHE:CZ	2.85	0.49
20:R:15:LEU:O	20:R:52:ARG:NH2	2.46	0.49
20:R:95:TRP:CE3	20:R:95:TRP:HA	2.47	0.49
33:e:43:ASN:C	33:e:43:ASN:ND2	2.66	0.49
35:g:5:LEU:HD21	35:g:22:LEU:CD1	2.43	0.49
1:5:144:G:N2	1:5:145:G:C5	2.81	0.48
1:5:330:G:N1	1:5:331:G:C5	2.81	0.48
1:5:352:G:O6	6:C:196:MET:HG3	2.12	0.48
1:5:412:G:N2	40:l:28:ARG:NH1	2.61	0.48
1:5:504:G:C4	1:5:505:G:N7	2.81	0.48
1:5:505:G:C4	1:5:506:C:C5	3.01	0.48
1:5:710:G:H2'	1:5:711:A:C8	2.48	0.48
1:5:725:G:H2'	1:5:726:G:O4'	2.12	0.48
1:5:965:G:C8	8:E:88:VAL:CG1	2.96	0.48
1:5:1336:G:H2'	1:5:1337:A:C8	2.48	0.48
1:5:1429:C:N3	1:5:1430:C:C5	2.81	0.48
1:5:1488:G:C6	1:5:1489:G:N7	2.81	0.48
1:5:1511:U:C2	1:5:1512:G:C8	3.01	0.48
1:5:1529:G:O3'	38:j:47:TYR:OH	2.31	0.48
1:5:1627:G:H3'	1:5:1628:C:C6	2.47	0.48
1:5:1826:G:N2	1:5:1827:C:H1'	2.28	0.48
1:5:1964:A:C6	1:5:1965:G:C4	3.00	0.48
1:5:2116:C:O5'	1:5:2116:C:C6	2.66	0.48
1:5:2288:G:C2	1:5:2290:C:C6	3.01	0.48
1:5:2301:G:C2	1:5:2302:C:N1	2.80	0.48
1:5:2311:C:N4	1:5:2312:U:C5	2.81	0.48
1:5:2419:C:C2'	1:5:2420:A:O5'	2.60	0.48
1:5:2421:G:OP2	1:5:2828:U:H1'	2.13	0.48
1:5:2481:G:C2	1:5:2482:C:C2	3.00	0.48
1:5:2521:G:N1	1:5:2535:G:C2	2.81	0.48
1:5:2534:C:C2'	1:5:2535:G:O5'	2.61	0.48
1:5:2566:G:N1	1:5:2567:G:C5	2.81	0.48
1:5:2591:A:N6	1:5:2753:G:N2	2.60	0.48
1:5:2745:A:HO2'	1:5:2746:A:C5'	2.24	0.48
1:5:3586:G:C4	1:5:3587:C:C5	3.01	0.48
1:5:3611:A:H2	1:5:5016:A:C8	2.30	0.48
1:5:3621:A:C4	1:5:3622:C:C5	3.01	0.48
1:5:3891:A:H2'	1:5:3892:U:O4'	2.13	0.48
1:5:4087:G:H3'	1:5:4087:G:C8	2.47	0.48
1:5:4104:G:H3'	1:5:4105:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4283:G:C5	1:5:4284:C:C5	3.00	0.48
1:5:4300:U:H4'	22:T:89:ILE:HG22	1.95	0.48
1:5:4323:A:C4	1:5:4324:A:C8	3.01	0.48
1:5:4480:A:N1	1:5:4481:U:C6	2.81	0.48
1:5:4482:U:C2	1:5:4483:C:H5	2.30	0.48
1:5:4746:C:H2'	1:5:4747:C:O4'	2.13	0.48
1:5:5028:G:N3	1:5:5029:C:C6	2.80	0.48
3:8:100:U:O2	3:8:101:C:C6	2.66	0.48
4:A:29:LEU:HD23	4:A:76:PHE:CE2	2.47	0.48
4:A:219:ILE:HG22	4:A:220:GLY:N	2.28	0.48
10:G:47:PRO:HG2	10:G:49:ARG:HH22	1.78	0.48
12:I:76:MET:CE	12:I:80:CYS:SG	2.99	0.48
21:S:13:VAL:HG12	21:S:29:ARG:CA	2.43	0.48
22:T:41:ASP:OD1	22:T:41:ASP:N	2.46	0.48
26:X:111:GLN:OE1	26:X:111:GLN:HA	2.13	0.48
27:Y:4:ASN:OD1	27:Y:4:ASN:C	2.56	0.48
41:m:97:ARG:HD2	41:m:122:ARG:CD	2.43	0.48
1:5:39:A:C5	1:5:1654:G:C6	3.01	0.48
1:5:342:G:C6	1:5:343:C:C4	3.02	0.48
1:5:694:C:H2'	1:5:695:G:O4'	2.14	0.48
1:5:708:G:C2	1:5:709:C:C6	3.00	0.48
1:5:1213:G:C2	1:5:1215:C:C2	3.02	0.48
1:5:1233:G:N2	1:5:1234:G:C4	2.81	0.48
1:5:1289:C:C2	1:5:1290:G:N7	2.81	0.48
1:5:1347:G:C4	1:5:1348:U:C6	3.00	0.48
1:5:1398:A:C4	1:5:1399:G:C8	3.01	0.48
1:5:1516:G:N3	1:5:1516:G:H2'	2.29	0.48
1:5:1807:C:C2	1:5:1808:C:H6	2.31	0.48
1:5:1807:C:N4	1:5:1808:C:C5	2.81	0.48
1:5:1871:A:C2	1:5:1872:G:C8	3.01	0.48
1:5:1983:A:C5	1:5:1987:C:OP2	2.57	0.48
1:5:2091:C:H1'	1:5:2092:G:H2'	1.94	0.48
1:5:2107:C:O2	1:5:2107:C:O2'	2.31	0.48
1:5:2314:G:N3	1:5:2314:G:C2'	2.76	0.48
1:5:2534:C:O2'	1:5:2535:G:C5'	2.60	0.48
1:5:2703:G:C6	1:5:2704:C:C4	3.01	0.48
1:5:2818:C:O2	1:5:2818:C:H2'	2.13	0.48
1:5:3686:G:P	4:A:193:ARG:NH2	2.82	0.48
1:5:3773:U:O2	1:5:3775:A:C2	2.66	0.48
1:5:3859:G:C4'	18:P:139:TYR:CZ	2.95	0.48
1:5:3911:C:H2'	1:5:3912:U:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4241:C:N3	1:5:4242:U:C6	2.80	0.48
1:5:4547:C:C2	1:5:4549:G:C8	3.01	0.48
1:5:5006:U:O2	1:5:5042:A:C8	2.66	0.48
3:8:65:A:C4	3:8:66:A:C8	3.01	0.48
3:8:131:G:N1	3:8:132:G:C4	2.81	0.48
5:B:71:GLU:OE1	5:B:366:LYS:CE	2.61	0.48
7:D:90:VAL:HG23	7:D:226:TYR:CZ	2.48	0.48
9:F:59:TYR:CE2	9:F:194:HIS:CD2	3.01	0.48
12:I:36:LEU:HD22	12:I:73:ASN:HD21	1.77	0.48
22:T:80:VAL:HG21	22:T:85:LEU:HD12	1.94	0.48
34:f:6:TRP:HB2	34:f:102:ARG:CB	2.37	0.48
38:j:74:PHE:O	38:j:75:ARG:C	2.56	0.48
1:5:17:A:OP2	26:X:60:TYR:OH	2.18	0.48
1:5:126:C:O2	1:5:126:C:H2'	2.13	0.48
1:5:219:G:OP1	1:5:219:G:H4'	2.14	0.48
1:5:323:C:O2	1:5:323:C:H2'	2.12	0.48
1:5:440:U:C2	1:5:441:G:N7	2.82	0.48
1:5:503:C:OP2	1:5:505:G:OP2	2.31	0.48
1:5:747:A:C2	1:5:918:G:O6	2.67	0.48
1:5:936:C:O2'	15:M:46:ARG:NH1	2.46	0.48
1:5:973:G:C6	1:5:974:C:C4	3.01	0.48
1:5:1068:G:H2'	1:5:1069:G:H8	1.77	0.48
1:5:1072:C:N4	1:5:1239:C:C4	2.81	0.48
1:5:1212:G:N1	1:5:1213:G:C5	2.81	0.48
1:5:1213:G:C6	1:5:1215:C:C4	3.01	0.48
1:5:1267:C:H4'	1:5:2110:C:O2'	2.13	0.48
1:5:1509:C:C2	1:5:1510:G:N7	2.82	0.48
1:5:1683:U:O2	1:5:1683:U:C2'	2.61	0.48
1:5:1690:C:OP2	19:Q:11:ARG:NH2	2.46	0.48
1:5:1933:G:H2'	1:5:1934:A:C1'	2.43	0.48
1:5:1983:A:C2	1:5:2010:A:C3'	2.96	0.48
1:5:2065:G:C4	1:5:2066:C:C6	3.01	0.48
1:5:2256:C:O2'	1:5:2257:C:OP2	2.24	0.48
1:5:2417:A:C6	1:5:2418:A:N7	2.82	0.48
1:5:2479:G:C2	1:5:2480:G:N9	2.81	0.48
1:5:2482:C:N3	1:5:2483:G:N7	2.61	0.48
1:5:2521:G:H2'	1:5:2522:G:O4'	2.13	0.48
1:5:3714:G:O6	1:5:3739:C:N3	2.46	0.48
1:5:3736:A:P	1:5:3736:A:H3'	2.53	0.48
1:5:3894:A:C2	1:5:4567:G:C2	3.01	0.48
1:5:3930:U:H3	1:5:4180:G:H1	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4091:G:N1	1:5:4092:G:C4	2.82	0.48
1:5:4104:G:C3'	1:5:4105:A:C8	2.97	0.48
1:5:4153:C:C2	1:5:4154:G:C8	3.01	0.48
1:5:4281:A:C5	1:5:4283:G:C8	3.01	0.48
3:8:94:G:O6	38:j:76:HIS:CE1	2.66	0.48
3:8:119:C:C4	3:8:120:G:N7	2.76	0.48
5:B:136:LYS:HB3	5:B:146:LEU:HD11	1.95	0.48
6:C:112:HIS:CD2	6:C:112:HIS:N	2.82	0.48
8:E:160:PHE:HE2	8:E:169:LEU:HD22	1.77	0.48
11:H:117:PHE:CE1	11:H:118:LEU:HB2	2.48	0.48
12:I:35:ASP:N	12:I:35:ASP:OD1	2.45	0.48
17:O:108:ILE:HG23	17:O:160:ARG:CD	2.43	0.48
19:Q:68:ARG:CZ	19:Q:68:ARG:HB3	2.40	0.48
29:a:7:LYS:HD3	29:a:11:LEU:HD11	1.95	0.48
30:b:6:ASN:ND2	30:b:6:ASN:N	2.59	0.48
33:e:77:PHE:HE1	45:r:20:ARG:HD2	1.78	0.48
43:o:57:ARG:HH11	43:o:57:ARG:HG3	1.78	0.48
1:5:85:G:N2	1:5:97:G:C8	2.82	0.48
1:5:195:C:N3	1:5:196:C:C6	2.82	0.48
1:5:246:G:N2	1:5:247:G:C5	2.82	0.48
1:5:512:U:C3'	1:5:513:U:C5'	2.90	0.48
1:5:642:G:C2	1:5:643:C:C6	3.01	0.48
1:5:655:C:OP2	6:C:268:ARG:NH1	2.47	0.48
1:5:660:A:C6	1:5:661:C:C4	3.01	0.48
1:5:669:C:N3	1:5:670:G:N7	2.60	0.48
1:5:677:G:C4	1:5:678:C:C5	3.01	0.48
1:5:739:G:C6	1:5:740:G:N7	2.81	0.48
1:5:750:U:N3	1:5:751:G:N7	2.61	0.48
1:5:961:G:H5'	8:E:119:ARG:NH1	2.28	0.48
1:5:1193:C:H2'	1:5:1193:C:O2	2.12	0.48
1:5:1268:G:N3	1:5:1270:A:C8	2.77	0.48
1:5:1280:C:C1'	6:C:323:ARG:NH2	2.76	0.48
1:5:1406:G:N2	1:5:1409:C:N4	2.60	0.48
1:5:1412:G:C5	1:5:1413:C:C5	3.01	0.48
1:5:1455:G:C2	1:5:1456:C:C6	3.01	0.48
1:5:1463:C:C2	1:5:1464:C:C6	3.01	0.48
1:5:1727:U:C2	1:5:1728:U:C6	3.02	0.48
1:5:1745:G:N2	1:5:1746:A:H1'	2.28	0.48
1:5:2035:C:C2	1:5:2036:C:C5	2.98	0.48
1:5:2085:G:N2	1:5:2273:G:C4	2.82	0.48
1:5:2122:G:H1'	1:5:2123:C:OP2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2125:C:O2'	1:5:2126:G:O5'	2.15	0.48
1:5:2247:C:O2'	9:F:28:ALA:HB3	2.12	0.48
1:5:2263:A:O2'	1:5:2265:G:C2'	2.61	0.48
1:5:2270:G:C2	1:5:2271:C:C5	3.01	0.48
1:5:2648:G:O2'	1:5:2649:G:OP2	2.29	0.48
1:5:2789:A:H1'	1:5:2796:G:C8	2.48	0.48
1:5:2866:C:C2	1:5:2867:C:C6	3.01	0.48
1:5:3629:A:C5	1:5:3630:A:C8	3.01	0.48
1:5:3703:G:N3	1:5:3704:U:C6	2.81	0.48
1:5:3725:G:N2	1:5:3727:A:H2'	2.29	0.48
1:5:4426:C:C4	1:5:4427:G:C8	2.99	0.48
1:5:4482:U:O2	1:5:4483:C:C5	2.67	0.48
1:5:4551:U:O2	1:5:4552:U:C5	2.66	0.48
1:5:4580:U:N3	1:5:4581:G:N7	2.54	0.48
1:5:4753:U:OP2	34:f:4:ARG:NH1	2.45	0.48
1:5:4984:C:N3	1:5:4985:U:C6	2.81	0.48
3:8:10:G:N3	3:8:11:C:H1'	2.27	0.48
3:8:146:U:H2'	3:8:147:G:O4'	2.13	0.48
7:D:284:LYS:CB	12:I:209:TRP:CH2	2.96	0.48
12:I:100:ASN:HA	12:I:120:GLY:HA2	1.95	0.48
13:J:178:ASN:OD1	13:J:178:ASN:C	2.56	0.48
15:M:101:LYS:HD2	17:O:201:PHE:HE1	1.78	0.48
17:O:12:ARG:NH1	21:S:171:ARG:HH21	2.11	0.48
18:P:30:ARG:NE	18:P:34:GLN:OE1	2.47	0.48
19:Q:33:ARG:NH2	19:Q:48:LEU:HD11	2.28	0.48
19:Q:33:ARG:HH21	19:Q:48:LEU:HD11	1.78	0.48
21:S:120:ARG:HB2	21:S:122:HIS:HD2	1.78	0.48
46:1:368:MET:HA	46:1:368:MET:HE3	1.94	0.48
1:5:52:G:H3'	1:5:52:G:C8	2.48	0.48
1:5:112:C:C4	1:5:157:U:C4	3.02	0.48
1:5:163:A:C6	1:5:164:G:N7	2.81	0.48
1:5:1090:G:C4	1:5:1091:C:C6	3.01	0.48
1:5:1215:C:C6	1:5:1215:C:H5"	2.49	0.48
1:5:1390:G:C8	1:5:1390:G:C3'	2.97	0.48
1:5:1426:G:C2'	1:5:1459:A:N6	2.76	0.48
1:5:1491:A:N3	1:5:1492:G:C8	2.81	0.48
1:5:1550:G:N1	1:5:1579:C:C2	2.82	0.48
1:5:1777:C:N3	1:5:1778:C:C5	2.81	0.48
1:5:1822:U:O2	1:5:1822:U:O4'	2.32	0.48
1:5:1865:G:N2	1:5:1867:A:H3'	2.29	0.48
1:5:1899:G:O2'	33:e:57:ASN:OD1	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1902:G:C2'	1:5:1903:G:O5'	2.62	0.48
1:5:1983:A:N3	1:5:2010:A:H5"	2.28	0.48
1:5:2052:G:N2	1:5:2053:C:C2	2.82	0.48
1:5:2314:G:N1	1:5:2315:G:N7	2.58	0.48
1:5:2436:U:C5	1:5:2783:A:H1'	2.49	0.48
1:5:2438:A:C5	1:5:2441:C:C4	3.01	0.48
1:5:2453:A:C6	1:5:2454:U:C4	3.01	0.48
1:5:2454:U:C2	1:5:2455:G:C8	3.01	0.48
1:5:2477:A:H2'	1:5:2478:C:C6	2.48	0.48
1:5:3696:C:C2	1:5:3697:U:C5	3.00	0.48
1:5:3702:A:C6	1:5:3703:G:C8	2.88	0.48
1:5:3791:C:O2	1:5:3802:U:O4'	2.31	0.48
1:5:4069:U:O2	1:5:4070:U:C5	2.66	0.48
1:5:4125:C:H2'	1:5:4126:C:C6	2.49	0.48
1:5:4152:G:C2	1:5:4153:C:C4	3.02	0.48
1:5:4303:C:O2	1:5:4303:C:H3'	2.14	0.48
1:5:4368:G:C6	1:5:4369:A:C8	3.01	0.48
1:5:4564:A:O2'	1:5:4565:C:H5'	2.13	0.48
1:5:4577:U:O2'	1:5:4967:A:O2'	2.31	0.48
1:5:4635:A:H3'	1:5:4636:U:H4'	1.96	0.48
2:7:60:G:O2'	7:D:268:ARG:NH1	2.46	0.48
2:7:62:U:N3	2:7:64:G:N7	2.62	0.48
3:8:101:C:O2	3:8:101:C:C2'	2.61	0.48
4:A:97:ASN:OD1	4:A:97:ASN:N	2.46	0.48
8:E:56:SER:OG	8:E:57:ALA:N	2.45	0.48
9:F:71:ILE:HG22	9:F:75:ARG:CD	2.44	0.48
11:H:59:LYS:HB2	11:H:70:VAL:HG22	1.95	0.48
16:N:101:VAL:HG12	16:N:105:ARG:HD2	1.94	0.48
27:Y:11:ARG:HH22	27:Y:15:ARG:CG	2.24	0.48
28:Z:10:VAL:HG11	28:Z:129:TRP:HZ3	1.78	0.48
32:d:71:ALA:C	32:d:73:TRP:H	2.21	0.48
33:e:35:TRP:CD1	33:e:36:ARG:CA	2.96	0.48
40:l:21:ARG:HD2	46:1:273:ARG:CD	2.24	0.48
1:5:218:A:N7	6:C:181:LYS:CG	2.77	0.48
1:5:345:C:C2	1:5:346:G:N7	2.81	0.48
1:5:450:G:N2	1:5:1294:A:C2'	2.75	0.48
1:5:701:G:N3	1:5:701:G:H2'	2.29	0.48
1:5:747:A:C2'	1:5:749:G:C8	2.87	0.48
1:5:964:A:H2	1:5:2252:G:O6	1.93	0.48
1:5:985:C:C2	1:5:986:C:C6	3.01	0.48
1:5:1212:G:C2	1:5:1213:G:N7	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1341:U:H2'	1:5:1342:A:H8	1.78	0.48
1:5:1349:G:C6	1:5:1350:C:C4	3.02	0.48
1:5:1455:G:H3'	1:5:1456:C:H5"	1.94	0.48
1:5:1477:C:O2	1:5:1478:C:C1'	2.61	0.48
1:5:1760:G:C6	1:5:1761:G:C8	3.01	0.48
1:5:1967:A:C2	1:5:1968:G:C4	3.01	0.48
1:5:1995:G:C5	1:5:1996:C:C4	3.01	0.48
1:5:2099:G:N2	1:5:2100:A:N9	2.62	0.48
1:5:2102:G:N1	1:5:2103:G:C5	2.82	0.48
1:5:2119:C:O2'	1:5:2120:G:OP2	2.16	0.48
1:5:2515:G:N7	1:5:2516:G:C5	2.81	0.48
1:5:2678:A:C2	1:5:2679:G:C4	3.02	0.48
1:5:3630:A:C2	1:5:3631:U:C5	3.01	0.48
1:5:3795:A:C6	1:5:3796:U:C4	3.01	0.48
1:5:4250:G:N2	1:5:4259:C:C2	2.82	0.48
1:5:4258:C:H2'	1:5:4259:C:C6	2.47	0.48
1:5:4299:U:C2	1:5:4300:U:C5	3.00	0.48
1:5:4729:A:H5'	1:5:4965:U:O2'	2.13	0.48
1:5:4860:G:C2	1:5:4861:G:C8	3.02	0.48
1:5:4942:C:O3'	1:5:4944:C:P	2.72	0.48
1:5:4945:G:O6	34:f:60:PRO:HD2	2.13	0.48
1:5:5029:C:N3	1:5:5030:U:C6	2.80	0.48
2:7:27:G:H1'	2:7:56:G:N1	2.28	0.48
3:8:14:U:O2'	3:8:15:G:O4'	2.28	0.48
3:8:142:U:C4	3:8:143:G:N7	2.81	0.48
4:A:174:ARG:HA	44:p:69:TRP:HH2	1.73	0.48
9:F:144:TRP:CZ3	9:F:237:ASN:HB2	2.48	0.48
16:N:65:ARG:HH21	16:N:127:TYR:HE2	1.59	0.48
17:O:56:ALA:HA	17:O:59:ARG:HE	1.78	0.48
19:Q:17:GLU:HA	19:Q:52:PHE:HE1	1.78	0.48
24:V:73:ARG:HH11	24:V:73:ARG:HB3	1.79	0.48
32:d:87:ARG:NH1	32:d:87:ARG:HB2	2.27	0.48
45:r:33:LYS:CD	45:r:40:TYR:CE2	2.95	0.48
1:5:1:C:C6	1:5:2:G:C8	3.01	0.48
1:5:37:U:C4	1:5:38:A:C5	3.02	0.48
1:5:172:C:C4	1:5:173:C:C5	3.02	0.48
1:5:354:U:H1'	6:C:97:ARG:CG	2.44	0.48
1:5:423:G:C4	1:5:424:U:C6	3.01	0.48
1:5:661:C:N3	1:5:662:C:C6	2.81	0.48
1:5:982:U:H5"	8:E:69:TYR:OH	2.09	0.48
1:5:1094:G:C2	1:5:1095:A:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1215:C:N4	1:5:1216:C:C5	2.81	0.48
1:5:1292:C:H6	1:5:1292:C:H5"	1.78	0.48
1:5:1387:A:H1'	1:5:1397:A:H61	1.78	0.48
1:5:1471:U:C4	1:5:1472:C:C5	3.02	0.48
1:5:1492:G:C2	1:5:1493:G:C8	3.02	0.48
1:5:1598:C:C5	1:5:2798:A:C5	2.99	0.48
1:5:1753:G:H2'	1:5:1755:C:H5"	1.96	0.48
1:5:1878:G:C6	1:5:1879:C:C4	3.02	0.48
1:5:1919:G:H5'	21:S:163:HIS:CE1	2.49	0.48
1:5:1945:G:C2	1:5:1946:G:H1'	2.49	0.48
1:5:2096:G:H22	9:F:41:GLN:HE22	1.62	0.48
1:5:2243:C:O2	1:5:2244:C:C5	2.67	0.48
1:5:2319:C:O2	1:5:2319:C:C2'	2.60	0.48
1:5:2347:A:C2	1:5:2348:G:C2	3.02	0.48
1:5:2417:A:N3	1:5:2417:A:H2'	2.27	0.48
1:5:2432:U:H2'	1:5:2433:G:O4'	2.14	0.48
1:5:2622:G:N2	1:5:2623:A:H1'	2.29	0.48
1:5:2871:A:H2'	1:5:2872:C:O4'	2.14	0.48
1:5:3585:G:C2	1:5:3586:G:C8	3.02	0.48
1:5:3608:A:N3	1:5:3609:G:C8	2.81	0.48
1:5:3651:A:H2'	1:5:3652:A:O4'	2.14	0.48
1:5:3868:G:N2	1:5:3899:G:N2	2.62	0.48
1:5:3907:G:C1'	1:5:4449:A:C1'	2.92	0.48
1:5:4095:G:H22	1:5:4096:C:N4	2.12	0.48
1:5:4142:C:C4	1:5:4143:G:C6	3.01	0.48
1:5:4303:C:O2'	1:5:4304:A:H2'	2.14	0.48
1:5:4594:U:C2	1:5:4595:G:C8	3.02	0.48
1:5:4692:A:H3'	1:5:4693:C:H2'	1.96	0.48
1:5:5052:C:N3	1:5:5053:U:C6	2.82	0.48
3:8:141:C:C2	3:8:142:U:C5	3.01	0.48
5:B:25:HIS:HB2	5:B:274:TYR:OH	2.14	0.48
6:C:186:SER:O	6:C:203:GLN:HA	2.13	0.48
7:D:67:ALA:O	7:D:68:ARG:NH1	2.46	0.48
12:I:85:PHE:CD1	12:I:85:PHE:C	2.92	0.48
14:L:191:LEU:O	14:L:192:PHE:C	2.55	0.48
18:P:30:ARG:HH12	18:P:62:ARG:HH21	1.62	0.48
19:Q:95:VAL:HG23	19:Q:116:ALA:HB2	1.95	0.48
19:Q:146:ARG:HH11	19:Q:146:ARG:HB3	1.79	0.48
1:5:69:A:C3'	1:5:70:A:H8	2.24	0.48
1:5:314:G:N2	1:5:4355:G:C5	2.82	0.48
1:5:325:U:C2	1:5:326:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:480:C:C2	1:5:481:G:C8	3.02	0.48
1:5:738:C:H2'	1:5:739:G:H8	1.79	0.48
1:5:741:C:C2	1:5:742:G:C8	3.01	0.48
1:5:744:G:H2'	1:5:745:G:H8	1.79	0.48
1:5:750:U:N3	1:5:751:G:C8	2.82	0.48
1:5:1069:G:C5	1:5:1070:G:C8	3.01	0.48
1:5:1175:A:H1'	7:D:275:GLN:HE22	1.76	0.48
1:5:1263:A:C2	1:5:1264:C:N1	2.82	0.48
1:5:1265:G:O2'	1:5:2113:G:OP1	2.31	0.48
1:5:1395:U:C2'	1:5:1396:G:O5'	2.61	0.48
1:5:1448:G:N2	1:5:1449:C:C2	2.82	0.48
1:5:1481:C:O4'	1:5:1481:C:O2	2.30	0.48
1:5:1874:A:H2'	1:5:1875:C:O4'	2.14	0.48
1:5:1886:G:C2	1:5:1894:C:C4	3.02	0.48
1:5:1936:C:N3	1:5:1937:C:C6	2.76	0.48
1:5:1964:A:C2	1:5:4694:G:C6	3.02	0.48
1:5:1967:A:N1	1:5:1968:G:N7	2.62	0.48
1:5:1968:G:N2	1:5:1969:G:C4	2.82	0.48
1:5:2076:G:C5	1:5:2077:C:C5	3.02	0.48
1:5:2367:A:N9	1:5:2798:A:C2	2.81	0.48
1:5:2503:G:H5'	1:5:2504:C:O5'	2.14	0.48
1:5:2566:G:N2	1:5:2567:G:N9	2.62	0.48
1:5:2647:A:H2'	1:5:2648:G:C5'	2.43	0.48
1:5:2673:G:C2	31:c:89:TYR:CD1	3.01	0.48
1:5:2712:G:C6	1:5:2713:C:C4	3.02	0.48
1:5:2745:A:O2'	1:5:2746:A:H5'	2.12	0.48
1:5:2757:A:HO2'	1:5:2758:G:C5'	2.26	0.48
1:5:2758:G:H2'	1:5:2759:G:C8	2.49	0.48
1:5:2842:G:N1	1:5:2843:U:C5	2.82	0.48
1:5:3587:C:H2'	1:5:3588:C:C6	2.49	0.48
1:5:3613:U:O2'	1:5:5035:U:O2'	2.28	0.48
1:5:3740:G:O6	1:5:3741:C:C4	2.67	0.48
1:5:3806:G:C6	1:5:3807:A:C5	3.02	0.48
1:5:3898:G:C3'	1:5:3899:G:H5'	2.44	0.48
1:5:3911:C:C2	1:5:3912:U:C6	3.01	0.48
1:5:3935:C:C4	1:5:3936:A:N7	2.81	0.48
1:5:4094:G:C6	1:5:4095:G:C6	3.02	0.48
1:5:4109:G:N3	1:5:4110:C:C6	2.82	0.48
1:5:4201:G:C6	1:5:4202:U:O4	2.67	0.48
1:5:4269:G:C6	1:5:4270:C:C4	3.01	0.48
1:5:4271:A:C4	1:5:4272:G:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4281:A:N1	1:5:4283:G:C4	2.82	0.48
1:5:4283:G:N2	1:5:4284:C:N3	2.62	0.48
1:5:4312:U:C2	1:5:4313:A:C8	3.01	0.48
3:8:101:C:N4	3:8:102:G:C6	2.81	0.48
5:B:225:GLY:HA2	5:B:274:TYR:H	1.78	0.48
5:B:369:ASP:OD1	5:B:369:ASP:C	2.55	0.48
6:C:78:ARG:HH11	6:C:78:ARG:CG	2.26	0.48
6:C:180:ILE:O	6:C:184:TYR:HB2	2.14	0.48
7:D:219:TYR:O	7:D:220:LYS:CB	2.61	0.48
21:S:9:GLU:HB3	21:S:67:VAL:CG1	2.43	0.48
21:S:29:ARG:HB3	21:S:29:ARG:NH2	2.29	0.48
46:1:435:ALA:CB	46:1:441:ILE:CD1	2.79	0.48
1:5:57:G:C2	1:5:58:G:C6	3.02	0.48
1:5:73:A:N3	1:5:74:G:C8	2.81	0.48
1:5:141:C:C2	1:5:142:G:C8	3.02	0.48
1:5:218:A:H1'	1:5:219:G:C2	2.47	0.48
1:5:238:C:H2'	1:5:239:C:H5'	1.96	0.48
1:5:457:G:C6	1:5:458:C:C5	3.02	0.48
1:5:467:U:N3	1:5:468:U:C6	2.81	0.48
1:5:474:C:O2	1:5:475:G:C8	2.67	0.48
1:5:945:U:C5	9:F:67:TYR:CE2	3.02	0.48
1:5:1265:G:C3'	1:5:1266:G:H5'	2.44	0.48
1:5:1367:C:H2'	1:5:1368:A:O5'	2.14	0.48
1:5:1367:C:C6	1:5:1370:G:H2'	2.48	0.48
1:5:1404:G:C5	1:5:1405:C:C5	3.02	0.48
1:5:1534:A:H1'	38:j:11:ARG:NH2	2.29	0.48
1:5:1607:C:H2'	1:5:1607:C:O2	2.13	0.48
1:5:1619:G:C4	1:5:1620:U:C5	3.02	0.48
1:5:1857:C:N3	1:5:1858:A:N7	2.62	0.48
1:5:1955:G:C6	1:5:1956:A:N7	2.81	0.48
1:5:2332:A:N3	1:5:2333:G:H1'	2.29	0.48
1:5:2391:G:C2	1:5:2392:C:C6	3.02	0.48
1:5:2410:C:O2	1:5:2411:C:C6	2.66	0.48
1:5:2413:U:C2	1:5:2414:G:C8	3.02	0.48
1:5:2420:A:C2	1:5:2427:G:C2	3.02	0.48
1:5:2615:C:O2	1:5:2615:C:H2'	2.13	0.48
1:5:2690:C:H2'	1:5:2690:C:O2	2.13	0.48
1:5:2702:C:C2	1:5:2715:G:C2	3.02	0.48
1:5:2706:G:O2'	1:5:2709:C:N4	2.47	0.48
1:5:2737:C:N3	1:5:2738:C:C5	2.82	0.48
1:5:2807:A:C2	1:5:2808:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2833:A:O2'	1:5:2834:C:C5'	2.62	0.48
1:5:3586:G:C2	1:5:3587:C:C2	3.02	0.48
1:5:3686:G:OP2	4:A:193:ARG:NH2	2.46	0.48
1:5:3711:A:C6	1:5:3712:A:H1'	2.49	0.48
1:5:3722:G:C4	1:5:3723:A:C8	3.02	0.48
1:5:3793:U:C2	1:5:3794:C:C5	3.02	0.48
1:5:3863:C:H2'	1:5:3864:C:H6	1.79	0.48
1:5:3944:G:N1	1:5:3945:A:N7	2.61	0.48
1:5:4098:A:C2	1:5:4099:G:N9	2.81	0.48
1:5:4129:G:H2'	1:5:4130:C:O4'	2.14	0.48
1:5:4161:G:H2'	1:5:4162:C:H3'	1.94	0.48
1:5:4298:A:C6	1:5:4299:U:C5	3.01	0.48
1:5:4301:U:H5"	22:T:54:HIS:CD2	2.49	0.48
1:5:4461:C:O2	1:5:4516:G:C2	2.67	0.48
1:5:4922:C:N3	1:5:4923:C:C5	2.82	0.48
1:5:5031:G:C4	1:5:5032:C:C5	3.02	0.48
2:7:28:C:H2'	2:7:28:C:O2	2.12	0.48
2:7:110:G:C6	2:7:111:C:C4	3.02	0.48
3:8:46:G:N2	3:8:47:C:C2	2.81	0.48
3:8:95:A:C4	3:8:96:C:C6	3.02	0.48
8:E:279:PRO:C	8:E:281:LYS:H	2.22	0.48
11:H:94:SER:OG	11:H:142:ASP:HB3	2.14	0.48
17:O:192:PHE:N	17:O:192:PHE:CD1	2.81	0.48
21:S:8:ARG:NH1	21:S:10:TYR:OH	2.47	0.48
22:T:17:ARG:HG3	22:T:18:PRO:CD	2.44	0.48
30:b:42:ASN:ND2	30:b:42:ASN:C	2.72	0.48
33:e:77:PHE:HD1	33:e:78:LEU:N	2.12	0.48
34:f:22:ARG:HG3	34:f:22:ARG:NH1	2.27	0.48
46:1:292:ILE:HG23	46:1:449:LEU:HD22	1.95	0.48
1:5:62:A:C2'	1:5:63:G:O5'	2.62	0.48
1:5:180:C:N3	1:5:181:C:C5	2.82	0.48
1:5:209:U:C2	1:5:233:U:O4	2.66	0.48
1:5:235:A:C5	1:5:238:C:C4	3.02	0.48
1:5:288:G:C2	1:5:289:C:C5	3.02	0.48
1:5:298:G:C5	1:5:299:C:C5	3.02	0.48
1:5:332:C:C4'	16:N:150:TRP:NE1	2.76	0.48
1:5:456:C:C2	1:5:457:G:N7	2.81	0.48
1:5:709:C:N3	1:5:710:G:N7	2.62	0.48
1:5:1168:G:N2	1:5:1169:G:C4	2.82	0.48
1:5:1268:G:OP2	1:5:2110:C:C2'	2.62	0.48
1:5:1321:G:C2	1:5:3876:A:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1380:G:N3	1:5:1382:G:C5	2.82	0.48
1:5:1412:G:C6	1:5:1413:C:C5	3.02	0.48
1:5:1655:C:H2'	1:5:1655:C:O2	2.14	0.48
1:5:1749:A:C2	1:5:1750:G:C4	3.02	0.48
1:5:1749:A:H2'	1:5:1750:G:C1'	2.44	0.48
1:5:1759:G:C6	1:5:1760:G:C8	3.02	0.48
1:5:1775:A:H3'	1:5:1776:A:H8	1.79	0.48
1:5:1887:G:C6	1:5:1890:G:C6	3.02	0.48
1:5:1953:U:H2'	1:5:1954:U:O4'	2.14	0.48
1:5:1971:C:O2	1:5:1971:C:H2'	2.14	0.48
1:5:1995:G:H2'	1:5:1996:C:C6	2.49	0.48
1:5:2036:C:H2'	1:5:2037:C:H6	1.79	0.48
1:5:2263:A:O3'	1:5:2264:C:H2'	2.13	0.48
1:5:2503:G:N3	1:5:2503:G:H2'	2.29	0.48
1:5:2688:G:C6	1:5:2689:C:C4	3.02	0.48
1:5:2689:C:O2	1:5:2690:C:H6	1.97	0.48
1:5:2858:A:O2'	1:5:2859:G:P	2.71	0.48
1:5:3621:A:C2	1:5:3622:C:N1	2.82	0.48
1:5:3655:C:N3	1:5:3656:A:N7	2.62	0.48
1:5:3689:G:C2	1:5:3690:U:C6	3.01	0.48
1:5:3717:A:O2'	1:5:3718:A:P	2.71	0.48
1:5:3945:A:C2	1:5:3946:G:C4	3.01	0.48
1:5:4169:G:H4'	1:5:4171:C:C2	2.48	0.48
1:5:4173:G:N3	1:5:4174:U:C6	2.82	0.48
1:5:4455:G:H22	1:5:4524:G:H22	1.62	0.48
1:5:4712:C:O2	1:5:4712:C:H2'	2.13	0.48
1:5:5004:C:O2	1:5:5044:A:C2	2.67	0.48
1:5:5019:A:N3	1:5:5020:G:C8	2.82	0.48
1:5:5050:C:C2	1:5:5051:C:C6	3.02	0.48
3:8:66:A:C4	3:8:67:U:C5	3.02	0.48
3:8:154:G:C6	3:8:155:C:C4	3.02	0.48
4:A:109:GLU:CD	4:A:109:GLU:C	2.82	0.48
9:F:98:ARG:HH22	9:F:226:THR:HG23	1.79	0.48
16:N:135:ILE:HG21	16:N:151:ILE:CD1	2.44	0.48
18:P:70:CYS:HG	18:P:83:TRP:HH2	1.62	0.48
32:d:87:ARG:CZ	32:d:87:ARG:HA	2.44	0.48
34:f:72:GLY:HA3	34:f:88:PHE:CD2	2.49	0.48
1:5:87:A:H2'	1:5:87:A:N3	2.29	0.47
1:5:182:G:H1	1:5:254:G:H1	1.62	0.47
1:5:272:U:N3	1:5:273:U:C4	2.82	0.47
1:5:398:A:C2	1:5:399:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:437:G:C2	1:5:438:G:C8	3.02	0.47
1:5:722:G:N2	6:C:343:GLN:HE22	2.13	0.47
1:5:743:G:N2	1:5:744:G:C5	2.82	0.47
1:5:1176:C:C2	1:5:1177:U:C6	3.01	0.47
1:5:1268:G:H1'	1:5:2111:G:C6	2.49	0.47
1:5:1488:G:C2	1:5:1489:G:N9	2.82	0.47
1:5:1769:G:N2	1:5:1770:A:C4	2.82	0.47
1:5:1786:A:H2'	1:5:1789:C:H5	1.79	0.47
1:5:1850:A:C2'	1:5:1851:G:O5'	2.62	0.47
1:5:1945:G:C2	1:5:1946:G:C1'	2.97	0.47
1:5:2101:C:H2'	1:5:2102:G:O4'	2.14	0.47
1:5:2120:G:H2'	1:5:2121:C:C2	2.48	0.47
1:5:2270:G:C2	1:5:2271:C:C2	3.02	0.47
1:5:2278:G:H5'	19:Q:7:HIS:CE1	2.48	0.47
1:5:2339:G:C5	1:5:2340:C:C5	3.01	0.47
1:5:2522:G:C2	1:5:2534:C:N3	2.82	0.47
1:5:2532:C:N3	1:5:2533:C:N4	2.62	0.47
1:5:2874:U:C6	1:5:2874:U:C5'	2.97	0.47
1:5:2878:G:H4'	1:5:3825:A:H5"	1.96	0.47
1:5:3629:A:C2	1:5:3630:A:H1'	2.48	0.47
1:5:3722:G:C6	1:5:3723:A:C5	3.02	0.47
1:5:3733:A:C6	1:5:3734:U:C4	3.02	0.47
1:5:3799:A:N7	24:V:40:ILE:HG21	2.29	0.47
1:5:3877:A:O2'	1:5:4400:G:N2	2.45	0.47
1:5:3879:G:C5	1:5:3882:C:C5	3.00	0.47
1:5:4092:G:N3	1:5:4092:G:H2'	2.29	0.47
1:5:4122:G:C5	1:5:4123:C:C5	3.02	0.47
1:5:4128:A:N3	10:G:34:LYS:O	2.47	0.47
1:5:4185:G:C2	1:5:4186:A:C8	3.02	0.47
1:5:4241:C:C4	1:5:4242:U:C5	3.02	0.47
1:5:4337:C:O2'	1:5:4338:G:O5'	2.26	0.47
1:5:4691:A:C6	1:5:4692:A:C5	3.01	0.47
2:7:11:A:N7	7:D:18:VAL:HG13	2.28	0.47
2:7:93:G:N2	2:7:94:C:C2	2.82	0.47
3:8:146:U:N3	3:8:147:G:C8	2.82	0.47
5:B:273:GLY:O	5:B:275:HIS:CD2	2.67	0.47
12:I:88:ARG:HB2	12:I:173:PHE:HE2	1.79	0.47
13:J:64:ARG:HG2	13:J:64:ARG:HH21	1.77	0.47
18:P:41:ILE:HD11	18:P:150:LEU:CD1	2.38	0.47
19:Q:31:LEU:O	19:Q:31:LEU:HD23	2.14	0.47
20:R:32:ILE:O	20:R:33:ALA:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:10:TYR:OH	21:S:66:GLN:CG	2.60	0.47
34:f:50:VAL:HG22	34:f:69:VAL:CG1	2.44	0.47
45:r:45:HIS:NE2	45:r:103:ARG:NH1	2.62	0.47
1:5:2:G:N2	1:5:3:C:C2	2.83	0.47
1:5:60:G:C4	1:5:61:A:N7	2.82	0.47
1:5:85:G:N3	1:5:97:G:C6	2.82	0.47
1:5:98:A:N6	1:5:99:A:C4	2.82	0.47
1:5:118:C:H42	1:5:121:A:H62	1.61	0.47
1:5:423:G:H2'	18:P:118:GLN:NE2	2.28	0.47
1:5:483:G:H2'	1:5:484:U:H6	1.79	0.47
1:5:504:G:O6	1:5:654:C:N3	2.47	0.47
1:5:931:C:N1	1:5:932:A:C8	2.82	0.47
1:5:963:G:N3	1:5:963:G:H2'	2.29	0.47
1:5:985:C:O2	1:5:986:C:C6	2.67	0.47
1:5:1168:G:C2	1:5:1169:G:C8	3.02	0.47
1:5:1185:G:N2	1:5:1186:U:H1'	2.29	0.47
1:5:1239:C:H4'	1:5:1240:G:O5'	2.14	0.47
1:5:1260:G:N2	1:5:1261:G:C4	2.83	0.47
1:5:1421:G:N1	1:5:1422:G:C5	2.82	0.47
1:5:1477:C:C2	1:5:1478:C:C6	3.02	0.47
1:5:1516:G:O2'	14:L:18:TRP:NE1	2.39	0.47
1:5:1613:A:H4'	4:A:186:TYR:HD2	1.77	0.47
1:5:1655:C:O3'	1:5:1679:A:H2	1.98	0.47
1:5:1759:G:N1	1:5:1760:G:C5	2.81	0.47
1:5:1838:A:C2	1:5:1839:U:C6	3.02	0.47
1:5:1881:C:O4'	1:5:2281:U:C5	2.67	0.47
1:5:1972:G:C2	1:5:1973:G:C8	3.02	0.47
1:5:2037:C:C2	1:5:2038:U:C5	3.02	0.47
1:5:2367:A:N6	1:5:2798:A:C1'	2.77	0.47
1:5:2399:G:N3	1:5:2400:G:C8	2.81	0.47
1:5:2480:G:N3	1:5:2481:G:C8	2.82	0.47
1:5:2581:A:H1'	1:5:2654:C:O2'	2.14	0.47
1:5:2632:U:C6	23:U:85:TYR:CE1	3.02	0.47
1:5:2676:A:C2	1:5:2677:G:H1'	2.50	0.47
1:5:2739:C:H4'	44:p:52:VAL:CG2	2.44	0.47
1:5:2749:C:O2'	35:g:64:LEU:HD23	2.14	0.47
1:5:2770:C:N3	1:5:2771:G:C8	2.82	0.47
1:5:2835:A:C1'	1:5:4979:A:H5'	2.43	0.47
1:5:3734:U:O2'	1:5:3735:G:H5'	2.14	0.47
1:5:3857:G:O6	1:5:3858:C:C4	2.67	0.47
1:5:3867:A:C2	1:5:3880:G:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3945:A:N1	1:5:3946:G:C5	2.82	0.47
1:5:4082:G:H2'	1:5:4083:U:C6	2.49	0.47
1:5:4224:A:C6	1:5:4225:G:C8	3.02	0.47
1:5:4342:C:OP1	29:a:55:LYS:NZ	2.37	0.47
1:5:4481:U:C2'	1:5:4482:U:C6	2.88	0.47
1:5:4531:U:C6	1:5:4531:U:C5'	2.97	0.47
1:5:4635:A:H2	1:5:4663:G:H21	1.62	0.47
1:5:4687:A:N1	1:5:4688:C:C4	2.82	0.47
1:5:4713:G:C5	1:5:4714:C:C5	3.02	0.47
1:5:4733:C:C5	1:5:4734:A:C1'	2.96	0.47
1:5:4734:A:C2	1:5:4735:G:N9	2.82	0.47
1:5:4871:C:H3'	15:M:91:TRP:HE1	1.79	0.47
1:5:4981:G:N1	1:5:4982:A:C5	2.81	0.47
1:5:4982:A:N3	1:5:4982:A:H2'	2.28	0.47
3:8:69:U:H2'	3:8:70:G:O4'	2.14	0.47
3:8:108:A:C2	3:8:112:G:N1	2.82	0.47
3:8:115:G:C2	3:8:116:C:N1	2.81	0.47
6:C:122:TYR:HB2	6:C:280:PRO:CG	2.44	0.47
10:G:58:PRO:CG	26:X:46:PHE:HD2	2.26	0.47
14:L:125:ILE:HD11	36:h:123:ALA:HB3	1.95	0.47
16:N:99:GLN:HG3	16:N:130:PHE:CE2	2.48	0.47
17:O:57:PHE:HZ	17:O:82:ARG:HH21	1.62	0.47
20:R:95:TRP:CG	20:R:99:MET:HE2	2.49	0.47
26:X:151:ASN:OD1	26:X:151:ASN:N	2.46	0.47
29:a:35:ALA:O	29:a:41:HIS:HD2	1.96	0.47
33:e:75:ARG:O	33:e:95:TYR:HB2	2.13	0.47
35:g:13:TYR:O	35:g:14:ASN:C	2.56	0.47
37:i:85:ARG:HG3	37:i:85:ARG:HH11	1.79	0.47
41:m:106:ARG:HB2	41:m:106:ARG:HH11	1.79	0.47
41:m:106:ARG:O	41:m:107:ALA:C	2.57	0.47
45:r:7:TRP:HD1	45:r:38:PHE:CD1	2.32	0.47
1:5:90:G:C5	1:5:92:C:C1'	2.97	0.47
1:5:94:A:H2'	1:5:95:G:O5'	2.15	0.47
1:5:299:C:O2	1:5:299:C:C2'	2.62	0.47
1:5:479:G:C6	1:5:480:C:C4	3.01	0.47
1:5:511:C:H2'	1:5:512:U:C6	2.49	0.47
1:5:698:G:C6	1:5:699:C:C5	3.01	0.47
1:5:993:G:N1	1:5:994:G:C5	2.82	0.47
1:5:1170:G:N2	1:5:1192:C:C2	2.82	0.47
1:5:1283:G:H3'	1:5:1283:G:H8	1.79	0.47
1:5:1380:G:N2	1:5:1382:G:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1428:U:H5'	1:5:1429:C:OP2	2.14	0.47
1:5:1473:U:H2'	1:5:1474:C:O4'	2.14	0.47
1:5:1489:G:N1	1:5:1490:G:C8	2.82	0.47
1:5:1633:G:C6	4:A:207:VAL:HG11	2.49	0.47
1:5:1754:U:O2	1:5:1754:U:O4'	2.31	0.47
1:5:2080:U:H2'	1:5:2081:C:H6	1.79	0.47
1:5:2302:C:N4	1:5:2303:C:N4	2.61	0.47
1:5:2507:A:N7	1:5:2508:U:C5	2.82	0.47
1:5:2557:G:C2	1:5:2558:C:C2	3.03	0.47
1:5:2577:C:N3	1:5:2578:G:C8	2.82	0.47
1:5:2816:G:C5	1:5:2817:C:C5	3.03	0.47
1:5:2895:A:C2	1:5:2896:G:C8	3.02	0.47
1:5:3742:G:C2	1:5:3743:G:C5	3.03	0.47
1:5:3755:G:C2	1:5:3756:A:C8	3.02	0.47
1:5:3761:C:O4'	1:5:3761:C:O2	2.30	0.47
1:5:3803:A:H2'	1:5:3803:A:N3	2.30	0.47
1:5:3841:C:O2	1:5:3841:C:H2'	2.14	0.47
1:5:3883:U:C2'	1:5:3884:U:O5'	2.62	0.47
1:5:3911:C:O2	1:5:3912:U:C6	2.67	0.47
1:5:4266:G:N1	1:5:4279:A:C5	2.82	0.47
1:5:4415:A:N1	1:5:4416:G:H1'	2.29	0.47
1:5:4433:G:H2'	1:5:4434:C:H6	1.78	0.47
1:5:4463:U:C5	1:5:4488:A:C5	3.03	0.47
1:5:4510:A:C6	1:5:4592:C:H4'	2.48	0.47
1:5:4576:U:H2'	1:5:4577:U:O4'	2.15	0.47
1:5:4683:U:C4	1:5:4707:A:C5	3.02	0.47
1:5:4769:G:H2'	1:5:4770:U:O4'	2.15	0.47
1:5:4876:U:O2	1:5:4876:U:O4'	2.31	0.47
1:5:4895:C:H1'	1:5:4896:G:C8	2.49	0.47
3:8:127:U:O2'	3:8:128:C:O4'	2.33	0.47
4:A:32:VAL:CG1	4:A:163:ARG:HD2	2.44	0.47
5:B:228:TYR:CE1	5:B:270:GLY:HA2	2.50	0.47
9:F:124:PHE:HD2	9:F:196:ILE:CG2	2.27	0.47
16:N:99:GLN:OE1	16:N:167:ALA:HB2	2.14	0.47
27:Y:27:ARG:HH21	27:Y:27:ARG:CG	2.26	0.47
27:Y:69:LYS:HB3	27:Y:83:GLU:OE2	2.14	0.47
33:e:95:TYR:CE2	45:r:23:GLN:HG2	2.49	0.47
45:r:30:ASN:HB3	45:r:50:GLY:HA3	1.96	0.47
45:r:31:ASN:OD1	45:r:32:LEU:N	2.47	0.47
1:5:21:G:H3'	1:5:21:G:C8	2.49	0.47
1:5:22:G:C2	3:8:35:C:N3	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:29:G:C5	1:5:30:C:C5	3.01	0.47
1:5:88:A:H2'	1:5:89:C:O5'	2.13	0.47
1:5:258:G:C6	1:5:259:C:C5	3.02	0.47
1:5:296:A:H8	1:5:296:A:P	2.35	0.47
1:5:659:G:C2	1:5:660:A:N9	2.81	0.47
1:5:743:G:C2	1:5:744:G:C5	3.03	0.47
1:5:944:A:C1'	6:C:335:MET:HE1	2.44	0.47
1:5:950:G:C2	1:5:951:G:C5	3.01	0.47
1:5:1410:U:C5	1:5:1815:G:N2	2.83	0.47
1:5:1475:G:C2	1:5:1476:C:C6	3.00	0.47
1:5:1770:A:C2	1:5:1771:U:C2	3.03	0.47
1:5:1838:A:C2	1:5:1839:U:C5	3.02	0.47
1:5:1846:G:N1	1:5:1847:C:C4	2.82	0.47
1:5:1866:U:C5	1:5:4405:G:C1'	2.98	0.47
1:5:2302:C:C4	1:5:2303:C:C4	3.03	0.47
1:5:2322:G:C6	1:5:2323:C:C4	3.03	0.47
1:5:2363:A:C1'	1:5:4560:C:H5	2.26	0.47
1:5:2431:A:OP1	40:l:41:ARG:NH1	2.47	0.47
1:5:2455:G:H2'	1:5:2456:G:C5'	2.44	0.47
1:5:2507:A:H2'	1:5:2507:A:N3	2.28	0.47
1:5:2508:U:O2	1:5:2508:U:H2'	2.14	0.47
1:5:2643:G:C6	1:5:2644:G:C8	3.02	0.47
1:5:3605:C:OP2	20:R:71:ARG:NH1	2.45	0.47
1:5:3739:C:C6	1:5:3739:C:C4'	2.97	0.47
1:5:3747:A:C1'	1:5:3817:A:H2'	2.44	0.47
1:5:3839:G:N1	1:5:3842:C:N4	2.63	0.47
1:5:3853:U:O2'	1:5:4979:A:H1'	2.14	0.47
1:5:4096:C:C4	1:5:4097:G:N7	2.78	0.47
1:5:4198:G:C6	1:5:4199:C:C6	3.02	0.47
1:5:4275:G:C8	1:5:4275:G:C3'	2.97	0.47
1:5:4324:A:N3	1:5:4325:A:C8	2.83	0.47
1:5:4565:C:H1'	5:B:262:VAL:HG21	1.95	0.47
1:5:4595:G:C6	1:5:4596:C:C4	3.02	0.47
1:5:4627:U:O2	1:5:4627:U:C2'	2.60	0.47
1:5:4868:G:H3'	1:5:4869:U:H5"	1.96	0.47
1:5:5050:C:H2'	1:5:5050:C:O2	2.14	0.47
3:8:149:G:H21	10:G:64:GLN:HE22	1.61	0.47
4:A:3:ARG:HH11	4:A:3:ARG:CG	2.25	0.47
5:B:240:LEU:HB3	5:B:244:THR:HG21	1.97	0.47
7:D:95:TYR:HE2	7:D:198:HIS:C	2.21	0.47
7:D:200:LEU:CB	7:D:202:GLN:HE22	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:158:VAL:HG22	8:E:180:VAL:HG21	1.96	0.47
10:G:77:PRO:HA	10:G:237:TRP:CE3	2.49	0.47
11:H:41:ILE:CD1	11:H:69:THR:HG21	2.44	0.47
14:L:176:PHE:HD1	14:L:177:LYS:N	2.12	0.47
36:h:66:LYS:HG2	36:h:70:ARG:HH21	1.79	0.47
1:5:88:A:O2'	1:5:89:C:O5'	2.33	0.47
1:5:142:G:C6	1:5:144:G:N7	2.82	0.47
1:5:169:G:C6	1:5:170:C:C4	3.02	0.47
1:5:173:C:N3	1:5:174:C:C4	2.80	0.47
1:5:268:G:C2	1:5:269:G:N9	2.82	0.47
1:5:368:C:C2	1:5:374:G:N2	2.83	0.47
1:5:450:G:C6	1:5:1295:C:C4	3.03	0.47
1:5:1175:A:N1	1:5:1176:C:C4	2.82	0.47
1:5:1200:G:C5	1:5:1201:U:C5	3.02	0.47
1:5:1257:A:C6	1:5:1258:G:C4	3.03	0.47
1:5:1318:C:OP1	29:a:21:ARG:HB2	2.14	0.47
1:5:1362:G:C5	1:5:1363:C:C5	3.02	0.47
1:5:1474:C:C4	1:5:1475:G:N7	2.81	0.47
1:5:1516:G:C2	1:5:1518:A:C6	3.02	0.47
1:5:1965:G:C2	1:5:1966:C:N1	2.82	0.47
1:5:2089:G:O2'	1:5:2090:U:P	2.72	0.47
1:5:2592:U:C5	1:5:2593:C:C5	3.02	0.47
1:5:2666:U:C4	1:5:2668:G:OP2	2.68	0.47
1:5:3718:A:H2'	1:5:3719:A:C1'	2.44	0.47
1:5:4238:G:C6	1:5:4239:A:C5	3.03	0.47
1:5:4433:G:C4	1:5:4434:C:C5	3.02	0.47
1:5:4518:A:H4'	1:5:4519:C:H5'	1.96	0.47
1:5:4686:G:C6	1:5:4687:A:N7	2.82	0.47
1:5:4862:G:C6	1:5:4863:G:N7	2.83	0.47
1:5:4888:U:O2'	1:5:4889:G:C8	2.50	0.47
1:5:5000:G:H2'	1:5:5001:U:O5'	2.14	0.47
3:8:34:U:C2	3:8:34:U:C4'	2.97	0.47
3:8:73:U:N3	3:8:74:U:H1'	2.29	0.47
5:B:235:TRP:HA	5:B:235:TRP:CE3	2.50	0.47
8:E:53:TYR:CE2	8:E:61:ARG:NH2	2.82	0.47
8:E:250:ASP:OD1	8:E:251:SER:N	2.48	0.47
10:G:182:CYS:HA	10:G:226:TYR:CE2	2.50	0.47
11:H:31:ARG:HH11	11:H:31:ARG:CG	2.27	0.47
14:L:90:VAL:HG12	14:L:94:ILE:HD12	1.96	0.47
15:M:5:ARG:NH2	15:M:59:ASP:OD1	2.46	0.47
21:S:78:PHE:CE1	21:S:102:THR:HG22	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:33:ILE:CD1	23:U:96:LEU:HD22	2.45	0.47
24:V:99:GLU:HG3	25:W:21:TYR:OH	2.14	0.47
1:5:10:A:H1'	1:5:2472:A:C6	2.50	0.47
1:5:199:G:N2	1:5:201:C:C2	2.83	0.47
1:5:258:G:C4	1:5:259:C:C6	3.02	0.47
1:5:370:U:C4	1:5:1637:A:C5	3.02	0.47
1:5:415:G:N2	1:5:416:U:H1'	2.30	0.47
1:5:438:G:C4	1:5:439:G:C8	3.01	0.47
1:5:449:C:O2	1:5:449:C:H2'	2.13	0.47
1:5:504:G:N1	1:5:654:C:O2	2.42	0.47
1:5:716:C:H5"	1:5:716:C:H6	1.79	0.47
1:5:977:C:H2'	1:5:978:G:O4'	2.14	0.47
1:5:985:C:C2	1:5:986:C:C5	3.02	0.47
1:5:1185:G:C2	1:5:1186:U:C1'	2.97	0.47
1:5:1187:G:N2	1:5:1188:C:H41	2.12	0.47
1:5:1203:G:C2	1:5:1204:C:C2	3.03	0.47
1:5:1321:G:H1'	1:5:1891:A:H62	1.80	0.47
1:5:1627:G:N7	1:5:1628:C:C5	2.82	0.47
1:5:1664:U:C2	1:5:1665:C:C5	3.03	0.47
1:5:1812:C:H1'	30:b:57:MET:HE3	1.97	0.47
1:5:1836:G:H2'	1:5:1836:G:N3	2.30	0.47
1:5:1877:G:C5	1:5:1878:G:N7	2.82	0.47
1:5:1900:C:C4'	33:e:60:TYR:HB2	2.44	0.47
1:5:1919:G:O6	34:f:29:LYS:CE	2.62	0.47
1:5:1940:G:H2'	1:5:1941:A:C5'	2.45	0.47
1:5:1986:U:O4	1:5:2011:C:H5'	2.15	0.47
1:5:2065:G:H2'	1:5:2066:C:O4'	2.13	0.47
1:5:2082:G:C2	1:5:2275:G:C2	3.03	0.47
1:5:2083:C:H3'	1:5:2084:C:H5"	1.96	0.47
1:5:2104:G:C2	1:5:2105:A:N9	2.82	0.47
1:5:2125:C:O5'	1:5:2125:C:C6	2.65	0.47
1:5:2340:C:C2	1:5:2341:A:C8	3.03	0.47
1:5:2391:G:C6	1:5:2392:C:C4	3.01	0.47
1:5:2515:G:C6	1:5:2516:G:C5	3.03	0.47
1:5:2567:G:C2	1:5:2568:C:C2	3.02	0.47
1:5:2597:G:H2'	1:5:2598:A:O5'	2.14	0.47
1:5:2618:G:C2	1:5:2619:G:C8	3.02	0.47
1:5:2829:U:N3	1:5:2830:G:N7	2.62	0.47
1:5:3636:C:N3	1:5:3637:U:C5	2.82	0.47
1:5:3654:G:N3	1:5:3654:G:H2'	2.30	0.47
1:5:3792:G:C4	1:5:3793:U:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4109:G:C2	1:5:4110:C:C2	3.01	0.47
1:5:4165:C:H2'	1:5:4165:C:O2	2.15	0.47
1:5:4173:G:C4	1:5:4174:U:C5	3.03	0.47
1:5:4287:G:O2'	1:5:4288:C:O4'	2.32	0.47
1:5:4315:A:N1	1:5:4316:G:C8	2.83	0.47
1:5:4510:A:N6	1:5:4592:C:C1'	2.77	0.47
1:5:4565:C:H1'	5:B:262:VAL:CG2	2.44	0.47
1:5:4652:G:C6	1:5:4653:C:C4	3.03	0.47
1:5:4683:U:C5	1:5:4707:A:C6	3.03	0.47
1:5:4723:A:C4	1:5:4724:A:N7	2.83	0.47
1:5:4730:C:C5'	1:5:4731:G:H21	2.24	0.47
1:5:4737:G:H5'	1:5:4737:G:H8	1.79	0.47
2:7:36:C:H2'	2:7:37:G:C8	2.49	0.47
2:7:43:U:O2	2:7:43:U:H2'	2.15	0.47
4:A:40:TYR:HE2	4:A:89:TYR:CD2	2.32	0.47
4:A:209:HIS:CE1	4:A:211:PHE:H	2.33	0.47
6:C:208:CYS:SG	6:C:230:LEU:HD12	2.55	0.47
7:D:233:PRO:O	7:D:235:MET:N	2.48	0.47
9:F:213:PHE:N	9:F:213:PHE:CD1	2.83	0.47
11:H:93:ARG:NH1	41:m:82:LEU:HD21	2.30	0.47
12:I:9:TYR:CD2	12:I:97:ILE:HG12	2.39	0.47
15:M:81:ASP:OD1	15:M:81:ASP:C	2.57	0.47
18:P:30:ARG:NH2	18:P:34:GLN:OE1	2.48	0.47
21:S:33:PHE:HE2	21:S:106:VAL:CG1	2.24	0.47
27:Y:74:TYR:CD2	27:Y:77:LYS:HD2	2.49	0.47
33:e:35:TRP:HZ2	33:e:38:PRO:HD3	1.78	0.47
38:j:21:ARG:HH21	38:j:39:TYR:HA	1.80	0.47
1:5:25:A:C4	1:5:341:G:C8	3.02	0.47
1:5:27:C:OP1	16:N:193:ARG:HD3	2.14	0.47
1:5:56:A:C6	1:5:57:G:C6	3.03	0.47
1:5:70:A:H4'	1:5:71:C:H5'	1.96	0.47
1:5:84:A:H5'	1:5:86:U:C1'	2.44	0.47
1:5:85:G:N3	1:5:97:G:O6	2.47	0.47
1:5:124:C:C4	1:5:125:C:C5	3.03	0.47
1:5:181:C:C4	1:5:256:G:N1	2.83	0.47
1:5:247:G:C4	1:5:248:C:C6	3.03	0.47
1:5:259:C:N3	1:5:260:C:C6	2.83	0.47
1:5:504:G:C2	1:5:505:G:C4	3.03	0.47
1:5:515:C:C2	1:5:647:G:N2	2.82	0.47
1:5:692:A:N1	1:5:693:C:C4	2.83	0.47
1:5:708:G:C6	1:5:709:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:746:A:N1	1:5:916:C:OP2	2.47	0.47
1:5:751:G:N2	1:5:752:G:C6	2.83	0.47
1:5:752:G:C2	1:5:753:C:C1'	2.98	0.47
1:5:951:G:C2	1:5:952:G:C5	3.02	0.47
1:5:952:G:N2	1:5:953:C:C2	2.83	0.47
1:5:974:C:C6	1:5:974:C:H3'	2.49	0.47
1:5:987:C:C2	1:5:988:C:C6	3.03	0.47
1:5:1068:G:H2'	1:5:1069:G:C8	2.50	0.47
1:5:1219:G:C6	1:5:1220:G:N7	2.83	0.47
1:5:1308:C:N3	1:5:1309:C:C5	2.83	0.47
1:5:1445:U:O2	1:5:1446:C:C6	2.68	0.47
1:5:1572:U:H4'	20:R:95:TRP:CZ2	2.49	0.47
1:5:1609:U:N3	1:5:1610:C:C6	2.83	0.47
1:5:1644:C:C2	1:5:1645:C:C5	3.03	0.47
1:5:1789:C:H2'	1:5:1790:U:O5'	2.14	0.47
1:5:1866:U:O2'	1:5:1867:A:H8	1.95	0.47
1:5:1921:C:N1	21:S:161:ARG:HG2	2.30	0.47
1:5:1965:G:C4	1:5:1966:C:C6	3.02	0.47
1:5:1983:A:C2	1:5:2010:A:O5'	2.67	0.47
1:5:2044:U:O2	1:5:2044:U:H2'	2.15	0.47
1:5:2256:C:O2	1:5:2256:C:C2'	2.63	0.47
1:5:2307:A:N3	1:5:2333:G:O2'	2.46	0.47
1:5:2351:C:C2	1:5:2352:U:C5	3.02	0.47
1:5:2365:C:C2	1:5:2829:U:C5	3.02	0.47
1:5:2368:A:C2	1:5:2788:U:C5	3.03	0.47
1:5:2436:U:C5	1:5:2783:A:C1'	2.98	0.47
1:5:2445:C:C2	1:5:2446:C:C5	3.02	0.47
1:5:2455:G:C2'	1:5:2456:G:O5'	2.60	0.47
1:5:2513:A:N7	35:g:13:TYR:CE2	2.82	0.47
1:5:2548:C:C2	1:5:2549:G:C8	3.02	0.47
1:5:2577:C:C2	1:5:2578:G:C8	3.02	0.47
1:5:2688:G:C4	1:5:2689:C:C5	3.03	0.47
1:5:2726:G:N3	1:5:2727:C:C6	2.82	0.47
1:5:2756:G:C2	1:5:2757:A:C5	3.03	0.47
1:5:2773:G:C2	1:5:2774:C:C5	3.02	0.47
1:5:2843:U:C4	1:5:2844:A:N7	2.83	0.47
1:5:3600:G:C6	1:5:3601:C:C4	3.03	0.47
1:5:3668:C:N4	1:5:3669:G:C6	2.83	0.47
1:5:3717:A:C5	1:5:3736:A:C6	2.97	0.47
1:5:3754:G:N2	1:5:3755:G:H1'	2.30	0.47
1:5:3757:G:C5	1:5:3758:U:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3759:A:C8	1:5:3765:G:C2	3.02	0.47
1:5:3773:U:H2'	1:5:3774:A:C8	2.49	0.47
1:5:3867:A:N3	1:5:3880:G:C6	2.83	0.47
1:5:3884:U:H2'	1:5:3885:G:O4'	2.15	0.47
1:5:4099:G:C2	1:5:4100:C:N1	2.82	0.47
1:5:4112:C:N4	1:5:4113:U:C4	2.83	0.47
1:5:4119:C:O2	1:5:4119:C:O4'	2.31	0.47
1:5:4233:A:C5	1:5:4235:G:N7	2.82	0.47
1:5:4239:A:N6	1:5:4240:G:C6	2.83	0.47
1:5:4281:A:C2	1:5:4283:G:N7	2.83	0.47
1:5:4510:A:C2	1:5:4511:A:C2	3.02	0.47
1:5:4518:A:H3'	1:5:4519:C:C5'	2.44	0.47
1:5:4538:G:C6	1:5:4539:U:C4	3.03	0.47
1:5:4549:G:N3	1:5:4549:G:H2'	2.30	0.47
1:5:4567:G:OP1	5:B:19:ARG:N	2.43	0.47
1:5:4593:C:C2	1:5:4594:U:C5	3.03	0.47
1:5:4699:U:O4	1:5:4702:G:C6	2.67	0.47
1:5:4726:G:C4'	5:B:130:PHE:CE1	2.96	0.47
1:5:4744:A:C2	1:5:4745:G:N7	2.83	0.47
1:5:4887:C:H2'	1:5:4888:U:C6	2.49	0.47
1:5:4916:G:C2	1:5:4917:C:C2	3.02	0.47
1:5:4916:G:C4	1:5:4917:C:C6	3.03	0.47
1:5:4933:C:C4	1:5:4934:A:N7	2.83	0.47
1:5:5004:C:C5	1:5:5005:G:C4	3.01	0.47
1:5:5030:U:C2	1:5:5031:G:N7	2.82	0.47
2:7:73:U:H1'	2:7:102:U:O4	2.14	0.47
3:8:21:C:H5"	6:C:196:MET:HE2	1.97	0.47
3:8:34:U:O2	38:j:74:PHE:HB2	2.15	0.47
3:8:70:G:C6	3:8:87:G:C2	3.03	0.47
3:8:115:G:N1	3:8:116:C:C4	2.83	0.47
3:8:138:C:O2	3:8:139:G:C8	2.68	0.47
5:B:254:ILE:HG21	5:B:262:VAL:CG1	2.45	0.47
7:D:64:ILE:HD12	7:D:105:LEU:HD21	1.96	0.47
8:E:158:VAL:CG2	8:E:180:VAL:HG21	2.45	0.47
11:H:41:ILE:O	11:H:41:ILE:HD12	2.15	0.47
14:L:8:MET:HB2	14:L:10:LEU:HD13	1.96	0.47
15:M:29:ASP:OD1	15:M:29:ASP:C	2.58	0.47
16:N:135:ILE:HG23	16:N:142:ILE:HD13	1.97	0.47
23:U:87:THR:HG23	23:U:102:VAL:HG21	1.97	0.47
26:X:73:HIS:O	26:X:116:LEU:CD1	2.63	0.47
27:Y:62:TYR:N	27:Y:62:TYR:HD1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:110:LYS:HE3	29:a:128:PHE:O	2.14	0.47
32:d:33:ILE:HD11	32:d:45:ALA:HA	1.97	0.47
33:e:95:TYR:HE2	45:r:23:GLN:HG2	1.79	0.47
44:p:17:ARG:O	44:p:18:TYR:HB2	2.07	0.47
46:1:270:ALA:O	46:1:271:ARG:CG	2.58	0.47
1:5:154:G:C6	1:5:155:C:C4	3.03	0.47
1:5:166:C:O2	1:5:166:C:C2'	2.62	0.47
1:5:246:G:N2	1:5:247:G:N9	2.63	0.47
1:5:389:A:N3	1:5:389:A:H2'	2.29	0.47
1:5:458:C:C4	1:5:459:C:C4	3.03	0.47
1:5:517:C:C2	1:5:645:G:N2	2.83	0.47
1:5:970:G:C2'	1:5:971:U:O4'	2.55	0.47
1:5:1072:C:H1'	1:5:1073:G:C8	2.50	0.47
1:5:1092:G:C2	1:5:1093:C:C2	3.03	0.47
1:5:1189:G:C2	1:5:1190:C:C6	3.02	0.47
1:5:1264:C:H2'	1:5:1265:G:H5'	1.96	0.47
1:5:1284:G:C6	6:C:312:ARG:NH2	2.83	0.47
1:5:1305:C:H2'	1:5:1306:C:O4'	2.15	0.47
1:5:1330:A:N3	1:5:1331:C:C6	2.83	0.47
1:5:1467:C:O2	1:5:1467:C:H2'	2.15	0.47
1:5:1486:C:H2'	1:5:1487:G:O4'	2.15	0.47
1:5:1664:U:H2'	1:5:1665:C:C6	2.49	0.47
1:5:1761:G:C5	1:5:1762:C:C5	3.03	0.47
1:5:1855:G:OP1	30:b:4:SER:HB2	2.15	0.47
1:5:1900:C:C2	1:5:1901:C:C5	3.03	0.47
1:5:1988:G:N1	1:5:1989:G:C5	2.82	0.47
1:5:2108:G:C5	1:5:2109:G:H1'	2.49	0.47
1:5:2247:C:H5"	1:5:2248:C:H6	1.80	0.47
1:5:2270:G:H2'	1:5:2271:C:C6	2.50	0.47
1:5:2276:A:C5	1:5:2277:C:C6	3.03	0.47
1:5:2422:C:N3	1:5:2423:A:C8	2.82	0.47
1:5:2424:G:H2'	1:5:2426:U:C4	2.50	0.47
1:5:2453:A:H2'	1:5:2453:A:N3	2.29	0.47
1:5:2464:C:HO2'	1:5:2465:C:C5'	2.28	0.47
1:5:2504:C:OP1	1:5:2504:C:H4'	2.15	0.47
1:5:2576:G:C2	1:5:2577:C:C6	3.03	0.47
1:5:2646:C:O2	1:5:2646:C:H2'	2.14	0.47
1:5:2737:C:C2	1:5:2738:C:C6	3.03	0.47
1:5:2773:G:C6	1:5:2774:C:C4	3.03	0.47
1:5:3622:C:C2	1:5:3623:C:N3	2.82	0.47
1:5:3689:G:N2	1:5:3690:U:H1'	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3719:A:N7	1:5:3720:G:C8	2.83	0.47
1:5:3740:G:C5	1:5:3741:C:C5	3.01	0.47
1:5:3861:A:H4'	18:P:137:ASN:ND2	2.30	0.47
1:5:4240:G:N3	1:5:4241:C:H1'	2.30	0.47
1:5:4362:A:C2	1:5:4363:A:N9	2.82	0.47
1:5:4506:C:H2'	1:5:4507:A:O4'	2.15	0.47
1:5:4509:U:H2'	1:5:4510:A:C2'	2.44	0.47
1:5:4733:C:C5	1:5:4734:A:H1'	2.49	0.47
1:5:4750:G:O2'	1:5:4751:G:OP1	2.30	0.47
1:5:4895:C:C2	1:5:4896:G:N7	2.82	0.47
1:5:4904:G:C6	1:5:4905:C:C4	3.02	0.47
1:5:4992:G:H2'	1:5:4993:G:C8	2.49	0.47
1:5:5014:A:OP1	1:5:5014:A:H3'	2.15	0.47
2:7:66:G:C2	2:7:67:C:C2	3.03	0.47
3:8:30:U:N3	3:8:31:G:N7	2.62	0.47
3:8:35:C:C2'	3:8:36:G:O5'	2.62	0.47
3:8:54:C:C5	3:8:55:U:C5	3.03	0.47
3:8:132:G:C2	3:8:133:G:C4	3.02	0.47
3:8:133:G:C2	3:8:134:G:N9	2.80	0.47
4:A:43:GLY:HA3	4:A:63:PHE:CD1	2.50	0.47
5:B:208:ASN:OD1	5:B:208:ASN:N	2.44	0.47
6:C:341:LEU:HD11	8:E:52:ARG:CD	2.45	0.47
7:D:220:LYS:HA	7:D:227:ILE:HD12	1.96	0.47
9:F:168:ARG:CD	9:F:211:TRP:CD1	2.98	0.47
13:J:22:LEU:HD22	13:J:130:PHE:CE1	2.49	0.47
15:M:118:MET:HG3	17:O:192:PHE:CE2	2.48	0.47
19:Q:25:LEU:HD12	19:Q:28:LEU:HD11	1.96	0.47
22:T:159:MET:HE2	22:T:159:MET:HA	1.96	0.47
26:X:116:LEU:CB	26:X:117:TYR:CE1	2.98	0.47
1:5:46:U:OP2	1:5:47:A:C2'	2.62	0.47
1:5:66:A:C6	1:5:328:A:C5	3.02	0.47
1:5:90:G:N3	1:5:95:G:N1	2.63	0.47
1:5:290:U:N3	1:5:291:U:C4	2.83	0.47
1:5:294:G:C6	29:a:61:TYR:HD1	2.26	0.47
1:5:295:A:O3'	1:5:296:A:N7	2.48	0.47
1:5:488:G:H21	1:5:489:C:H1'	1.80	0.47
1:5:689:U:C4	1:5:690:C:C5	3.02	0.47
1:5:938:C:H2'	1:5:939:G:H8	1.76	0.47
1:5:964:A:H2	1:5:2252:G:C5	2.33	0.47
1:5:1092:G:N2	1:5:1093:C:C2	2.83	0.47
1:5:1288:G:O2'	8:E:128:PRO:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1375:C:N3	1:5:1376:C:C5	2.83	0.47
1:5:1381:U:O2	1:5:1381:U:O4'	2.32	0.47
1:5:1572:U:O2	1:5:1572:U:H2'	2.15	0.47
1:5:1660:U:O4	29:a:12:ARG:NH1	2.36	0.47
1:5:1663:C:O2'	1:5:1664:U:H5'	2.15	0.47
1:5:1674:C:C2	1:5:1675:C:C5	3.02	0.47
1:5:1693:U:H2'	1:5:1694:C:O4'	2.14	0.47
1:5:1756:U:O4	1:5:1776:A:C2	2.66	0.47
1:5:1770:A:H2'	1:5:1771:U:O4'	2.15	0.47
1:5:1778:C:H5"	7:D:5:LYS:HD2	1.97	0.47
1:5:2117:G:H1'	9:F:51:LEU:HD13	1.97	0.47
1:5:2126:G:O3'	1:5:2127:C:O4'	2.33	0.47
1:5:2267:U:O2	1:5:2267:U:O4'	2.31	0.47
1:5:2538:U:H2'	1:5:2539:C:H6	1.80	0.47
1:5:2644:G:N1	1:5:2645:G:C4	2.83	0.47
1:5:2820:C:H2'	1:5:2821:U:H5'	1.96	0.47
1:5:3608:A:C2	1:5:3609:G:C5	3.02	0.47
1:5:3830:A:C6	1:5:3831:U:C5	3.03	0.47
1:5:3938:G:C6	1:5:4077:A:C2	3.01	0.47
1:5:4087:G:C8	1:5:4087:G:C3'	2.98	0.47
1:5:4147:G:N2	1:5:4148:C:C2	2.82	0.47
1:5:4154:G:N1	1:5:4155:C:C4	2.83	0.47
1:5:4498:U:N3	1:5:4500:U:OP2	2.47	0.47
1:5:4547:C:O2	1:5:4547:C:H2'	2.15	0.47
1:5:4602:A:H4'	11:H:99:PHE:CE2	2.50	0.47
1:5:4622:A:H5'	5:B:12:GLY:HA2	1.97	0.47
1:5:4729:A:H4'	1:5:4965:U:HO2'	1.78	0.47
1:5:5003:U:C2	1:5:5045:G:C2	3.03	0.47
2:7:8:G:P	7:D:33:ARG:HH22	2.37	0.47
2:7:13:A:P	2:7:109:U:HO2'	2.38	0.47
2:7:110:G:C2	2:7:111:C:C4	3.03	0.47
3:8:64:U:C2'	3:8:65:A:H8	2.23	0.47
3:8:134:G:C2	3:8:135:C:C2	3.03	0.47
3:8:144:U:H2'	3:8:145:C:H6	1.80	0.47
5:B:203:GLN:HE21	5:B:203:GLN:CA	2.14	0.47
6:C:325:MET:HE1	9:F:157:TYR:CD2	2.48	0.47
9:F:59:TYR:CZ	9:F:194:HIS:CE1	3.03	0.47
9:F:69:THR:O	9:F:73:MET:HG3	2.15	0.47
9:F:88:GLU:HG3	22:T:136:ARG:HG2	1.97	0.47
12:I:119:PHE:HD1	12:I:120:GLY:N	2.13	0.47
13:J:166:PHE:CE2	13:J:172:GLY:HA3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:6:ASN:ND2	29:a:48:TYR:CE2	2.83	0.47
19:Q:75:ARG:HH11	19:Q:75:ARG:CG	2.28	0.47
19:Q:105:VAL:HB	19:Q:110:ARG:HH12	1.80	0.47
19:Q:146:ARG:HH12	19:Q:149:TYR:HE1	1.63	0.47
21:S:35:PRO:HD2	21:S:39:VAL:CG2	2.45	0.47
21:S:94:TYR:HE2	21:S:96:GLU:HG3	1.77	0.47
26:X:110:LYS:CD	26:X:111:GLN:HE22	2.28	0.47
26:X:119:ILE:HD11	26:X:140:LEU:HD13	1.96	0.47
27:Y:27:ARG:CB	27:Y:75:ARG:HH12	2.27	0.47
28:Z:17:ARG:HG2	28:Z:18:TYR:CD1	2.50	0.47
29:a:69:PHE:CE2	29:a:71:PRO:CD	2.98	0.47
29:a:104:VAL:HG22	29:a:109:TYR:HE2	1.79	0.47
1:5:101:A:C5	1:5:102:G:N7	2.83	0.47
1:5:210:C:C4	1:5:231:U:N3	2.83	0.47
1:5:219:G:H5’	1:5:219:G:N9	2.30	0.47
1:5:328:A:C6	1:5:329:A:N6	2.83	0.47
1:5:362:A:C2	3:8:53:G:H1’	2.50	0.47
1:5:370:U:C5	1:5:1637:A:C5	3.03	0.47
1:5:472:C:N3	1:5:473:C:C4	2.83	0.47
1:5:698:G:N1	1:5:699:C:C5	2.83	0.47
1:5:716:C:H6	1:5:716:C:C5’	2.28	0.47
1:5:934:C:H4’	1:5:935:A:OP2	2.14	0.47
1:5:947:C:H2’	1:5:948:C:H6	1.80	0.47
1:5:1265:G:C2	1:5:1266:G:C4	3.02	0.47
1:5:1348:U:C2	1:5:1349:G:N7	2.83	0.47
1:5:1358:G:C1’	1:5:1359:G:C8	2.98	0.47
1:5:1374:G:C4	1:5:1375:C:C6	3.02	0.47
1:5:1380:G:H2’	1:5:1382:G:C6	2.50	0.47
1:5:1443:A:C4	1:5:1444:G:C8	3.03	0.47
1:5:1474:C:N3	1:5:1475:G:N7	2.63	0.47
1:5:1492:G:C6	1:5:1493:G:C5	3.03	0.47
1:5:1532:G:OP1	38:j:16:HIS:HE1	1.98	0.47
1:5:1570:G:N1	1:5:1571:G:C4	2.82	0.47
1:5:1603:C:H2’	1:5:1604:G:C8	2.50	0.47
1:5:1619:G:C4	1:5:1620:U:C6	3.02	0.47
1:5:1682:A:C2	1:5:1683:U:H1’	2.50	0.47
1:5:1780:A:C2	1:5:1781:U:C1’	2.98	0.47
1:5:1797:G:N3	1:5:1798:G:C8	2.83	0.47
1:5:1922:G:H2’	1:5:1923:A:H5”	1.96	0.47
1:5:1975:G:O4’	1:5:1976:G:OP2	2.33	0.47
1:5:1983:A:H2	1:5:2010:A:H3’	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2055:G:O4'	17:O:130:LYS:HE2	2.14	0.47
1:5:2285:A:H2'	1:5:2286:G:O4'	2.14	0.47
1:5:2301:G:C6	1:5:2302:C:C4	3.02	0.47
1:5:2513:A:C5	35:g:13:TYR:CD2	3.03	0.47
1:5:2590:G:N2	1:5:2754:G:O2'	2.48	0.47
1:5:2590:G:N2	1:5:2754:G:C2	2.79	0.47
1:5:2712:G:C2	1:5:2713:C:N1	2.83	0.47
1:5:3652:A:O2'	4:A:182:ALA:HB2	2.15	0.47
1:5:3706:C:OP1	4:A:226:ARG:HG3	2.14	0.47
1:5:3813:A:C2	1:5:4539:U:O4'	2.68	0.47
1:5:4077:A:C8	1:5:4078:C:C6	3.04	0.47
1:5:4082:G:H2'	1:5:4083:U:H6	1.80	0.47
1:5:4117:U:N3	4:A:40:TYR:CD1	2.72	0.47
1:5:4129:G:C6	1:5:4130:C:C4	3.02	0.47
1:5:4158:C:O2	1:5:4158:C:C2'	2.62	0.47
1:5:4199:C:C2	1:5:4199:C:H3'	2.50	0.47
1:5:4257:A:N7	13:J:60:PHE:HE2	2.13	0.47
1:5:4286:C:H2'	1:5:4287:G:H8	1.80	0.47
1:5:4551:U:N3	1:5:4552:U:C4	2.83	0.47
1:5:4942:C:O2'	1:5:4944:C:P	2.73	0.47
3:8:9:A:H2'	3:8:9:A:N3	2.30	0.47
3:8:15:G:H2'	3:8:16:G:O4'	2.15	0.47
3:8:46:G:C4	3:8:47:C:C5	3.03	0.47
3:8:94:G:C6	38:j:79:ARG:CD	2.98	0.47
3:8:134:G:N2	3:8:135:C:N1	2.62	0.47
4:A:24:LYS:HG3	4:A:49:ILE:HG21	1.97	0.47
5:B:67:VAL:HG11	5:B:72:VAL:HG11	1.97	0.47
5:B:82:PRO:HG3	5:B:171:LEU:HD21	1.97	0.47
5:B:234:ARG:HA	5:B:272:LYS:HD2	1.97	0.47
7:D:284:LYS:HB3	12:I:209:TRP:CH2	2.49	0.47
10:G:177:MET:SD	10:G:177:MET:N	2.87	0.47
26:X:84:GLU:HB2	46:1:408:SER:HG	1.78	0.47
29:a:128:PHE:CD2	29:a:128:PHE:N	2.83	0.47
35:g:75:SER:C	35:g:76:ARG:CG	2.88	0.47
46:1:252:PHE:CZ	47:2:40:THR:HG22	2.34	0.47
1:5:48:G:O2'	1:5:49:U:P	2.71	0.46
1:5:85:G:C2	1:5:97:G:C5	3.03	0.46
1:5:290:U:H2'	1:5:291:U:C6	2.50	0.46
1:5:303:C:C2	1:5:304:C:C5	3.02	0.46
1:5:316:U:O4	1:5:4353:U:C1'	2.63	0.46
1:5:322:C:C2	1:5:4356:G:N1	2.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:330:G:OP2	16:N:166:SER:HB2	2.15	0.46
1:5:710:G:C2	1:5:711:A:C5	3.03	0.46
1:5:921:C:OP1	15:M:69:ARG:NH1	2.47	0.46
1:5:1262:G:N1	1:5:1263:A:N7	2.63	0.46
1:5:1285:U:C4	1:5:1286:C:C4	3.03	0.46
1:5:1585:C:N3	1:5:1586:G:C8	2.83	0.46
1:5:1617:G:N1	1:5:1618:G:C5	2.83	0.46
1:5:1735:U:N3	1:5:1736:A:N7	2.63	0.46
1:5:1761:G:C4	1:5:1762:C:C5	3.03	0.46
1:5:1949:U:O2	1:5:1950:U:H6	1.94	0.46
1:5:1987:C:C2	1:5:1988:G:C8	3.03	0.46
1:5:2052:G:C6	1:5:2053:C:C4	3.03	0.46
1:5:2532:C:C4	1:5:2533:C:N4	2.83	0.46
1:5:2569:G:H2'	1:5:2570:U:C6	2.50	0.46
1:5:3584:C:O2	1:5:3585:G:C8	2.67	0.46
1:5:3927:U:H3	1:5:4184:G:H1	1.63	0.46
1:5:4079:C:O2	1:5:4079:C:C2'	2.63	0.46
1:5:4095:G:C2	1:5:4096:C:N4	2.82	0.46
1:5:4116:C:O2	1:5:4116:C:O2'	2.29	0.46
1:5:4147:G:C2	1:5:4148:C:C6	3.03	0.46
1:5:4257:A:C5	13:J:60:PHE:HE2	2.33	0.46
1:5:4478:G:C6	1:5:4479:A:C4	3.03	0.46
1:5:4535:A:N1	1:5:4536:C:C6	2.84	0.46
1:5:4572:U:O2	1:5:4720:C:C5	2.68	0.46
2:7:66:G:C6	2:7:67:C:C4	3.03	0.46
3:8:7:U:H2'	3:8:8:U:O4'	2.15	0.46
3:8:120:G:H2'	3:8:121:G:H5'	1.96	0.46
3:8:121:G:C2'	3:8:122:G:O5'	2.63	0.46
5:B:89:ILE:HG21	5:B:197:ALA:HB1	1.97	0.46
5:B:285:TYR:CD1	5:B:363:ILE:HD13	2.51	0.46
6:C:262:GLU:O	6:C:271:ALA:O	2.33	0.46
7:D:284:LYS:HB2	12:I:209:TRP:HH2	1.79	0.46
13:J:165:TRP:HE3	13:J:166:PHE:HA	1.80	0.46
14:L:3:PRO:HD2	29:a:41:HIS:CE1	2.50	0.46
14:L:14:PHE:HD1	14:L:18:TRP:CD1	2.33	0.46
15:M:119:ARG:HH21	15:M:119:ARG:CG	2.29	0.46
21:S:47:PHE:HE1	21:S:125:GLN:HG2	1.80	0.46
28:Z:123:LYS:O	28:Z:124:THR:OG1	2.24	0.46
46:1:90:ILE:O	46:1:94:LEU:HG	2.14	0.46
1:5:211:G:N2	1:5:212:A:C4	2.83	0.46
1:5:258:G:C2	1:5:259:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:479:G:C2	1:5:480:C:N1	2.83	0.46
1:5:739:G:C4	1:5:740:G:C8	3.04	0.46
1:5:752:G:C6	1:5:753:C:C4	3.03	0.46
1:5:983:C:O2	1:5:984:C:C5	2.44	0.46
1:5:1074:G:C2	1:5:1238:A:N1	2.80	0.46
1:5:1268:G:N2	1:5:1270:A:C1'	2.78	0.46
1:5:1338:G:N2	29:a:25:HIS:HD1	2.12	0.46
1:5:1345:A:H4'	19:Q:166:TYR:CE2	2.49	0.46
1:5:1367:C:H1'	1:5:1370:G:C8	2.51	0.46
1:5:1400:G:C2	1:5:1418:C:C2	3.03	0.46
1:5:1440:U:H5"	1:5:2110:C:OP2	2.15	0.46
1:5:1508:A:C2	1:5:1509:C:C6	3.04	0.46
1:5:1632:A:C6	1:5:1634:A:C1'	2.98	0.46
1:5:1770:A:C4	1:5:1771:U:C6	3.03	0.46
1:5:1796:U:N3	1:5:1797:G:C8	2.83	0.46
1:5:1885:G:N2	1:5:1895:G:N3	2.62	0.46
1:5:2025:A:H4'	1:5:2026:A:OP1	2.15	0.46
1:5:2265:G:C1'	1:5:2266:C:OP1	2.63	0.46
1:5:2327:G:C4	1:5:2328:G:C8	3.03	0.46
1:5:2367:A:N3	1:5:2368:A:N7	2.62	0.46
1:5:2391:G:C4	1:5:2392:C:C5	3.04	0.46
1:5:2414:G:C5'	46:1:398:GLN:HE22	2.27	0.46
1:5:2440:U:C2	1:5:2519:U:C6	3.03	0.46
1:5:2447:U:O2'	1:5:2448:G:P	2.73	0.46
1:5:2484:A:C6	1:5:2485:U:C4	3.03	0.46
1:5:2526:C:N4	46:1:405:ARG:NE	2.63	0.46
1:5:2598:A:O2'	1:5:2599:G:H5'	2.15	0.46
1:5:2669:C:O2'	1:5:2670:C:OP2	2.25	0.46
1:5:2720:C:N3	1:5:2721:G:C8	2.83	0.46
1:5:2857:A:C2'	1:5:2858:A:C8	2.98	0.46
1:5:3729:U:H2'	1:5:3730:U:O4'	2.14	0.46
1:5:3744:G:H2'	1:5:3745:U:O5'	2.15	0.46
1:5:4114:C:H2'	1:5:4115:G:C1'	2.44	0.46
1:5:4333:C:N3	1:5:4334:U:C5	2.82	0.46
1:5:4373:G:H2'	43:o:60:ALA:HB2	1.96	0.46
1:5:4462:C:N3	1:5:4515:G:C2	2.83	0.46
1:5:4724:A:N3	1:5:4725:C:C6	2.84	0.46
1:5:4754:G:C2	1:5:4880:C:C2	3.03	0.46
1:5:5001:U:H2'	1:5:5002:U:O5'	2.13	0.46
1:5:5042:A:N3	1:5:5043:A:C8	2.83	0.46
3:8:143:G:C2	3:8:144:U:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:99:ASP:OD1	14:L:101:ARG:N	2.45	0.46
15:M:130:LEU:HD21	17:O:180:GLN:OE1	2.15	0.46
18:P:36:ILE:CD1	18:P:48:LEU:HD11	2.46	0.46
20:R:110:ARG:HD3	20:R:120:TYR:CE2	2.50	0.46
21:S:82:LEU:HD21	21:S:109:CYS:SG	2.55	0.46
27:Y:18:HIS:C	27:Y:20:ASN:H	2.24	0.46
33:e:35:TRP:HE1	33:e:37:LYS:CA	2.27	0.46
37:i:43:MET:HA	37:i:46:GLU:OE2	2.15	0.46
46:1:268:LYS:O	46:1:399:MET:HA	2.16	0.46
1:5:12:A:N3	1:5:14:C:C6	2.83	0.46
1:5:167:C:C2	1:5:168:C:C6	3.04	0.46
1:5:169:G:C2	1:5:170:C:C2	3.03	0.46
1:5:255:C:O2	1:5:255:C:C2'	2.55	0.46
1:5:337:U:O2	1:5:337:U:H2'	2.14	0.46
1:5:352:G:H1'	1:5:355:A:H2	1.81	0.46
1:5:388:A:C5	1:5:411:G:C6	3.03	0.46
1:5:465:G:C2	1:5:466:A:N9	2.83	0.46
1:5:1075:G:H2'	1:5:1076:C:C6	2.50	0.46
1:5:1191:C:C4	1:5:1192:C:C5	3.03	0.46
1:5:1263:A:C2	1:5:1264:C:C2	3.04	0.46
1:5:1330:A:C2	1:5:1331:C:C5	3.03	0.46
1:5:1516:G:C4	1:5:1518:A:N7	2.84	0.46
1:5:1674:C:C4	1:5:1675:C:C5	3.04	0.46
1:5:1745:G:C6	1:5:1746:A:N7	2.83	0.46
1:5:1858:A:C2	1:5:1859:C:C4	3.03	0.46
1:5:1925:G:N2	1:5:1926:C:H1'	2.31	0.46
1:5:2092:G:H8	1:5:2093:A:N1	2.12	0.46
1:5:2277:C:C2	1:5:2278:G:C8	2.91	0.46
1:5:2347:A:C4	1:5:2348:G:O6	2.68	0.46
1:5:2559:G:C2	1:5:2560:C:N1	2.83	0.46
1:5:2589:C:N4	1:5:2590:G:C5	2.83	0.46
1:5:2756:G:H2'	1:5:2757:A:C8	2.50	0.46
1:5:3625:G:H21	1:5:3627:G:P	2.37	0.46
1:5:3635:A:C8	1:5:3635:A:H3'	2.50	0.46
1:5:3722:G:N3	1:5:3723:A:C8	2.83	0.46
1:5:4283:G:C4	1:5:4284:C:C6	3.02	0.46
1:5:4293:U:O4	1:5:4329:G:C8	2.68	0.46
1:5:4524:G:C2	1:5:4525:C:C6	3.03	0.46
1:5:4561:C:N3	1:5:4562:C:H5	2.09	0.46
1:5:4587:G:C2	1:5:4716:C:C2	3.03	0.46
1:5:4697:U:C4'	41:m:104:HIS:CD2	2.87	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4738:C:H2'	1:5:4739:C:O4'	2.14	0.46
2:7:27:G:C6	2:7:28:C:C4	3.03	0.46
3:8:10:G:N2	3:8:11:C:C1'	2.74	0.46
3:8:12:G:N3	3:8:13:G:C8	2.80	0.46
3:8:139:G:C2	3:8:140:C:C2	3.03	0.46
5:B:302:ASN:HB2	5:B:313:SER:HA	1.96	0.46
5:B:321:VAL:O	5:B:322:HIS:HB3	2.14	0.46
6:C:164:THR:HG22	6:C:220:ALA:O	2.15	0.46
7:D:30:TYR:N	7:D:30:TYR:CD1	2.83	0.46
7:D:41:LYS:C	7:D:44:TYR:HE1	2.23	0.46
15:M:6:PHE:HB3	21:S:151:LYS:HG2	1.97	0.46
15:M:116:ARG:NH2	17:O:201:PHE:CE2	2.84	0.46
22:T:30:TYR:N	22:T:30:TYR:CD1	2.83	0.46
31:c:38:ILE:HD11	31:c:46:VAL:HG21	1.97	0.46
33:e:95:TYR:N	33:e:95:TYR:CD1	2.83	0.46
45:r:106:LEU:O	45:r:108:MET:N	2.48	0.46
1:5:351:C:C2	3:8:25:G:C2	3.03	0.46
1:5:425:U:N3	1:5:426:A:C5	2.81	0.46
1:5:647:G:C5	1:5:648:G:C8	3.04	0.46
1:5:677:G:C2	1:5:678:C:C2	3.04	0.46
1:5:700:G:C6	1:5:701:G:N7	2.83	0.46
1:5:920:C:H5"	15:M:72:TYR:CD2	2.50	0.46
1:5:973:G:C6	1:5:974:C:C5	3.03	0.46
1:5:1238:A:C2'	1:5:1239:C:O5'	2.62	0.46
1:5:1337:A:H5'	6:C:102:PHE:HD2	1.80	0.46
1:5:1367:C:H6	1:5:1367:C:H5"	1.80	0.46
1:5:1391:A:N1	1:5:4351:U:H1'	2.31	0.46
1:5:1392:A:H2'	1:5:1393:G:H8	1.78	0.46
1:5:1466:G:C2	1:5:1467:C:C6	3.03	0.46
1:5:1611:C:O4'	1:5:1612:G:N7	2.48	0.46
1:5:1687:U:H2'	1:5:1688:G:O5'	2.15	0.46
1:5:1757:U:H2'	1:5:1758:G:O4'	2.15	0.46
1:5:1968:G:N1	1:5:1969:G:C5	2.84	0.46
1:5:2276:A:C5	1:5:2277:C:C5	3.04	0.46
1:5:2318:G:C2	1:5:2322:G:C2	3.03	0.46
1:5:2351:C:H2'	1:5:2351:C:O2	2.15	0.46
1:5:2441:C:C5'	35:g:9:ARG:HE	2.28	0.46
1:5:2481:G:N3	1:5:2482:C:C6	2.83	0.46
1:5:2557:G:C4	1:5:2558:C:C6	3.04	0.46
1:5:2578:G:N1	1:5:2579:G:C5	2.82	0.46
1:5:2586:G:C8	1:5:2587:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2599:G:N2	1:5:2747:U:C4	2.83	0.46
1:5:2773:G:N3	1:5:2774:C:C6	2.84	0.46
1:5:2851:G:HO2'	1:5:3841:C:C4'	2.26	0.46
1:5:3621:A:N3	1:5:3621:A:H2'	2.31	0.46
1:5:4117:U:O2	4:A:40:TYR:CE1	2.68	0.46
1:5:4133:C:O2	1:5:4133:C:H2'	2.14	0.46
1:5:4257:A:C2'	1:5:4258:C:C6	2.77	0.46
1:5:4458:C:C2'	1:5:4459:U:O5'	2.64	0.46
1:5:4581:G:N2	1:5:4582:C:C5	2.84	0.46
1:5:4861:G:N1	1:5:4862:G:C5	2.84	0.46
1:5:5000:G:C4	1:5:5001:U:C5	3.03	0.46
1:5:5023:C:H5	1:5:5028:G:H1'	1.80	0.46
3:8:95:A:C4	3:8:96:C:C5	3.03	0.46
4:A:29:LEU:HD22	4:A:163:ARG:HH22	1.80	0.46
5:B:46:PHE:CD1	5:B:84:MET:CE	2.98	0.46
7:D:202:GLN:N	7:D:202:GLN:HE21	2.13	0.46
11:H:41:ILE:HD11	11:H:69:THR:HB	1.97	0.46
28:Z:100:VAL:CG1	28:Z:107:LYS:HA	2.46	0.46
29:a:60:HIS:ND1	29:a:63:LEU:HD12	2.30	0.46
33:e:90:MET:HG2	45:r:33:LYS:HB2	1.97	0.46
36:h:77:LYS:HB3	36:h:78:TYR:HD1	1.81	0.46
1:5:29:G:N3	1:5:30:C:C6	2.83	0.46
1:5:37:U:O4	1:5:38:A:C6	2.68	0.46
1:5:69:A:C6	1:5:70:A:C6	3.04	0.46
1:5:174:C:C2	1:5:175:C:C5	3.04	0.46
1:5:194:C:C4	1:5:195:C:C5	3.03	0.46
1:5:278:G:C6	1:5:330:G:N7	2.84	0.46
1:5:315:G:C6	29:a:62:HIS:CB	2.97	0.46
1:5:504:G:O6	1:5:654:C:C4	2.68	0.46
1:5:749:G:O6	1:5:913:U:O4	2.33	0.46
1:5:919:C:N3	1:5:920:C:C5	2.84	0.46
1:5:947:C:C2	1:5:948:C:C5	3.04	0.46
1:5:1203:G:N1	1:5:1204:C:C4	2.83	0.46
1:5:1278:C:H3'	1:5:1279:A:H4'	1.97	0.46
1:5:1280:C:O2	1:5:1282:G:C8	2.68	0.46
1:5:1373:A:N3	1:5:1374:G:C8	2.83	0.46
1:5:1464:C:O2	1:5:1464:C:C2'	2.64	0.46
1:5:1555:G:C6	1:5:1556:C:C4	3.03	0.46
1:5:1760:G:C6	1:5:1761:G:C5	3.04	0.46
1:5:1945:G:N1	1:5:1946:G:N9	2.62	0.46
1:5:1964:A:C2	1:5:4694:G:N3	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1978:C:C2	1:5:1979:A:H1'	2.51	0.46
1:5:2311:C:C4	1:5:2312:U:C6	3.03	0.46
1:5:2329:U:O2'	1:5:2330:G:H5'	2.11	0.46
1:5:2392:C:C2	1:5:2393:C:C5	3.04	0.46
1:5:2463:G:N3	1:5:2464:C:C6	2.83	0.46
1:5:2497:C:N4	1:5:2498:C:N4	2.63	0.46
1:5:2645:G:N2	1:5:2646:C:N1	2.63	0.46
1:5:2658:G:O2'	1:5:2675:G:N2	2.45	0.46
1:5:2673:G:C4'	1:5:2675:G:C1'	2.92	0.46
1:5:2744:A:N1	1:5:2745:A:C6	2.83	0.46
1:5:2793:G:O6	1:5:2797:C:C5	2.68	0.46
1:5:3590:G:C2	1:5:3591:C:C2	3.03	0.46
1:5:3629:A:C6	1:5:3630:A:N7	2.84	0.46
1:5:3674:G:N3	1:5:3675:G:C8	2.84	0.46
1:5:3715:U:O4'	1:5:3715:U:O2	2.33	0.46
1:5:3805:U:N3	1:5:3806:G:C8	2.84	0.46
1:5:3847:C:H2'	1:5:3847:C:O2	2.14	0.46
1:5:3871:A:C2'	1:5:3872:A:O5'	2.64	0.46
1:5:3930:U:H1'	4:A:228:ASP:OD1	2.15	0.46
1:5:4085:A:C3'	1:5:4086:G:C5'	2.93	0.46
1:5:4089:G:H2'	1:5:4090:G:O4'	2.15	0.46
1:5:4094:G:O6	1:5:4114:C:N3	2.49	0.46
1:5:4111:U:N3	1:5:4112:C:C5	2.84	0.46
1:5:4135:G:C4	1:5:4136:G:C8	3.04	0.46
1:5:4468:U:O2	1:5:4708:A:N7	2.48	0.46
1:5:4473:A:C4	1:5:4474:A:C8	3.03	0.46
1:5:4551:U:H2'	1:5:4552:U:C6	2.51	0.46
1:5:4767:C:C4'	1:5:4874:A:N1	2.77	0.46
1:5:4871:C:H5"	15:M:91:TRP:CZ2	2.51	0.46
1:5:4981:G:O4'	1:5:4981:G:N3	2.47	0.46
3:8:96:C:C4	3:8:97:A:N7	2.78	0.46
4:A:180:LEU:HD23	44:p:14:TYR:CE2	2.50	0.46
4:A:202:VAL:HG12	4:A:217:GLN:CG	2.38	0.46
5:B:100:ARG:HB3	5:B:100:ARG:NH1	2.30	0.46
8:E:102:VAL:HG23	8:E:103:VAL:HG22	1.97	0.46
9:F:98:ARG:NH2	9:F:226:THR:HG23	2.30	0.46
9:F:165:ASN:O	9:F:165:ASN:CG	2.58	0.46
10:G:261:LEU:HD22	10:G:265:LEU:CD2	2.46	0.46
11:H:60:TRP:NE1	21:S:153:PRO:CG	2.79	0.46
15:M:7:VAL:HG13	15:M:27:ILE:HD13	1.97	0.46
21:S:96:GLU:HB3	21:S:142:VAL:HG21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:57:VAL:CG2	24:V:84:GLN:HG2	2.44	0.46
25:W:17:HIS:N	25:W:17:HIS:CD2	2.83	0.46
26:X:151:ASN:HD21	47:2:20:ARG:NE	2.13	0.46
33:e:58:ILE:HG23	33:e:59:GLY:N	2.31	0.46
34:f:33:VAL:HG23	34:f:38:GLU:HB3	1.98	0.46
35:g:75:SER:C	35:g:76:ARG:HG2	2.40	0.46
1:5:112:C:N3	1:5:113:A:N7	2.64	0.46
1:5:223:G:H4'	1:5:225:G:C8	2.50	0.46
1:5:453:G:H22	1:5:1294:A:N6	2.10	0.46
1:5:487:G:C4	1:5:488:G:C8	3.04	0.46
1:5:492:U:N3	1:5:493:G:N7	2.64	0.46
1:5:650:C:H2'	1:5:651:C:H6	1.75	0.46
1:5:671:G:C2	1:5:672:C:C6	3.03	0.46
1:5:741:C:H2'	1:5:742:G:O4'	2.15	0.46
1:5:969:C:H2'	1:5:970:G:C2	2.50	0.46
1:5:1085:C:C2	1:5:1086:C:C6	3.04	0.46
1:5:1216:C:C4	1:5:1217:G:C8	3.04	0.46
1:5:1344:C:H5"	1:5:1344:C:H6	1.81	0.46
1:5:1355:G:C5	1:5:1385:G:N2	2.84	0.46
1:5:1370:G:N3	1:5:1370:G:O4'	2.49	0.46
1:5:1477:C:N4	1:5:1478:C:C5	2.84	0.46
1:5:1481:C:H1'	1:5:1482:G:O4'	2.16	0.46
1:5:1570:G:H2'	1:5:1571:G:O4'	2.15	0.46
1:5:1797:G:N2	1:5:1798:G:C4	2.83	0.46
1:5:1811:G:N2	1:5:1812:C:N1	2.63	0.46
1:5:1855:G:C4	1:5:1856:C:C6	3.03	0.46
1:5:1900:C:H4'	33:e:60:TYR:CD1	2.50	0.46
1:5:1929:A:H2'	17:O:49:ARG:HH22	1.81	0.46
1:5:1965:G:H4'	1:5:4695:C:H1'	1.98	0.46
1:5:2405:G:H5'	38:j:12:ARG:O	2.15	0.46
1:5:2645:G:C4	1:5:2646:C:C6	3.04	0.46
1:5:2753:G:C3'	1:5:2754:G:O4'	2.64	0.46
1:5:3632:C:C4	1:5:3633:C:C5	3.04	0.46
1:5:3805:U:H2'	1:5:3805:U:O2	2.14	0.46
1:5:3829:G:C6	1:5:3830:A:N7	2.84	0.46
1:5:4086:G:C5	4:A:67:TYR:CD1	3.03	0.46
1:5:4368:G:N2	43:o:26:TYR:HE2	2.13	0.46
1:5:4406:U:N3	1:5:4407:G:C8	2.83	0.46
1:5:4528:G:N3	1:5:4529:G:C8	2.84	0.46
1:5:4709:U:C2	1:5:4710:C:C6	3.04	0.46
1:5:4923:C:C2	1:5:4924:C:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:8:G:C2	2:7:9:C:C2	3.03	0.46
3:8:118:C:O2	3:8:118:C:C2'	2.64	0.46
3:8:144:U:O2	3:8:145:C:C6	2.69	0.46
4:A:227:ARG:HB3	4:A:239:ALA:HB2	1.96	0.46
11:H:31:ARG:HH11	11:H:31:ARG:HG3	1.80	0.46
18:P:54:GLN:HB2	18:P:83:TRP:CD1	2.48	0.46
28:Z:4:PHE:N	28:Z:4:PHE:CD1	2.84	0.46
28:Z:77:TYR:CB	31:c:39:ARG:CD	2.92	0.46
30:b:19:ASN:N	30:b:19:ASN:HD22	2.14	0.46
34:f:81:SER:OG	34:f:81:SER:O	2.32	0.46
44:p:49:ARG:HD3	44:p:51:ALA:N	2.30	0.46
1:5:31:U:O2	1:5:52:G:C2	2.68	0.46
1:5:302:C:OP1	16:N:68:ARG:HG2	2.16	0.46
1:5:316:U:O4	1:5:4353:U:O4'	2.34	0.46
1:5:353:A:C5	1:5:379:G:C5	3.04	0.46
1:5:450:G:HO2'	1:5:453:G:P	2.38	0.46
1:5:472:C:O2	1:5:473:C:C6	2.66	0.46
1:5:748:G:O6	1:5:918:G:H1'	2.16	0.46
1:5:1077:C:O2	1:5:1077:C:H2'	2.16	0.46
1:5:1245:C:C5	1:5:1269:G:N1	2.82	0.46
1:5:1377:G:N2	14:L:158:ARG:HG2	2.30	0.46
1:5:1554:A:N6	1:5:1555:G:C4	2.84	0.46
1:5:1608:G:C1'	1:5:3828:A:C2	2.98	0.46
1:5:1698:C:H5'	1:5:1698:C:H6	1.81	0.46
1:5:1724:G:N2	9:F:105:PRO:CG	2.78	0.46
1:5:1749:A:C2	1:5:1750:G:C5	3.03	0.46
1:5:1785:C:H1'	12:I:94:PHE:CZ	2.51	0.46
1:5:1823:G:C4'	7:D:44:TYR:HD2	2.22	0.46
1:5:2034:G:N1	1:5:2035:C:C2	2.83	0.46
1:5:2050:G:C2	1:5:2051:C:C2	3.04	0.46
1:5:2086:G:C6	1:5:2087:C:C4	3.03	0.46
1:5:2451:A:N3	1:5:2451:A:H2'	2.30	0.46
1:5:2570:U:O2	1:5:2571:C:C6	2.68	0.46
1:5:2589:C:C5	1:5:2590:G:N7	2.84	0.46
1:5:2666:U:C5	1:5:2668:G:OP2	2.68	0.46
1:5:2703:G:C5	1:5:2704:C:C5	3.04	0.46
1:5:2736:G:C6	1:5:2737:C:N4	2.83	0.46
1:5:2768:C:H4'	1:5:2769:U:OP2	2.16	0.46
1:5:3591:C:N4	1:5:3592:G:C5	2.82	0.46
1:5:3723:A:N1	1:5:3724:A:N6	2.64	0.46
1:5:3755:G:H3'	1:5:3756:A:H5"	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3806:G:C6	1:5:3807:A:N7	2.84	0.46
1:5:3860:A:C2	1:5:3861:A:H1'	2.51	0.46
1:5:3943:A:C5	1:5:3944:G:C8	3.04	0.46
1:5:4109:G:C2	1:5:4110:C:N1	2.83	0.46
1:5:4118:U:O4	4:A:95:GLN:CB	2.64	0.46
1:5:4200:G:C2	1:5:4201:G:C8	3.03	0.46
1:5:4202:U:C2	1:5:4204:C:C4	3.04	0.46
1:5:4322:G:C2	1:5:4326:G:C6	3.04	0.46
1:5:4326:G:H2'	1:5:4327:C:O4'	2.16	0.46
1:5:4343:U:O2	1:5:4343:U:H2'	2.15	0.46
1:5:4600:G:O2'	1:5:4601:U:OP2	2.32	0.46
1:5:4652:G:C6	1:5:4653:C:N4	2.84	0.46
1:5:4772:C:H2'	1:5:4773:C:O4'	2.16	0.46
1:5:4904:G:N3	1:5:4905:C:C6	2.84	0.46
1:5:4998:G:N2	1:5:4999:G:N9	2.64	0.46
1:5:5047:C:H5"	1:5:5050:C:C5	2.42	0.46
3:8:70:G:C4	3:8:87:G:N2	2.84	0.46
3:8:75:G:C2	3:8:76:C:C4	3.04	0.46
5:B:108:GLU:HB2	5:B:137:TRP:HB3	1.98	0.46
6:C:177:TRP:O	6:C:180:ILE:N	2.48	0.46
7:D:27:LYS:HE2	13:J:147:ARG:HH22	1.81	0.46
7:D:33:ARG:HE	7:D:37:VAL:HG21	1.80	0.46
9:F:213:PHE:N	9:F:213:PHE:HD1	2.14	0.46
16:N:104:GLU:O	16:N:108:ARG:HB2	2.16	0.46
20:R:96:MET:O	20:R:100:ARG:HD2	2.16	0.46
20:R:131:VAL:CG2	20:R:132:PHE:CZ	2.99	0.46
24:V:82:ILE:CD1	24:V:104:VAL:HG13	2.46	0.46
29:a:71:PRO:HB2	29:a:108:TYR:HA	1.97	0.46
32:d:63:ARG:HD3	32:d:103:TYR:CE1	2.51	0.46
36:h:93:ARG:HH11	36:h:93:ARG:HG2	1.79	0.46
43:o:45:GLN:HA	43:o:45:GLN:HE21	1.77	0.46
46:1:341:LEU:HD13	46:1:344:TYR:CZ	2.51	0.46
1:5:152:U:O2	1:5:152:U:C2'	2.59	0.46
1:5:315:G:N1	29:a:62:HIS:CB	2.78	0.46
1:5:423:G:H2'	1:5:424:U:H6	1.80	0.46
1:5:451:C:N4	1:5:1295:C:C2'	2.68	0.46
1:5:655:C:C2'	1:5:656:C:O5'	2.63	0.46
1:5:662:C:C2'	1:5:663:G:H8	2.20	0.46
1:5:731:G:C6	1:5:732:A:N9	2.84	0.46
1:5:975:C:H2'	1:5:976:G:H1'	1.98	0.46
1:5:979:C:H4'	8:E:39:HIS:HB3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:986:C:C2	1:5:987:C:C6	3.03	0.46
1:5:1205:G:C4	1:5:1206:C:C5	3.04	0.46
1:5:1358:G:H3'	6:C:114:ARG:HH22	1.80	0.46
1:5:1404:G:H2'	1:5:1405:C:O4'	2.16	0.46
1:5:1529:G:O2'	38:j:47:TYR:OH	2.34	0.46
1:5:1541:C:H5"	4:A:21:LYS:HD2	1.98	0.46
1:5:1602:U:C2	1:5:1603:C:C5	3.04	0.46
1:5:1632:A:N6	1:5:1634:A:C1'	2.78	0.46
1:5:1743:A:C5	1:5:1744:U:C5	3.04	0.46
1:5:1826:G:C6	1:5:1827:C:C5	3.03	0.46
1:5:1975:G:C5	1:5:1984:A:N3	2.84	0.46
1:5:2409:U:C5	1:5:2410:C:C5	3.04	0.46
1:5:2428:A:C6	1:5:2789:A:C2	3.03	0.46
1:5:2478:C:C2	1:5:2479:G:N7	2.84	0.46
1:5:2479:G:N1	1:5:2480:G:C4	2.84	0.46
1:5:2494:U:N3	1:5:2495:U:C6	2.84	0.46
1:5:2505:C:H1'	1:5:2506:G:C6	2.51	0.46
1:5:2561:C:H2'	1:5:2561:C:O2	2.16	0.46
1:5:2569:G:C2	1:5:2570:U:C2	3.04	0.46
1:5:2596:G:N3	1:5:2597:G:C8	2.84	0.46
1:5:2602:G:C4	1:5:2742:G:C6	3.04	0.46
1:5:2712:G:C4	1:5:2713:C:C6	3.04	0.46
1:5:2745:A:C2'	1:5:2746:A:O5'	2.64	0.46
1:5:2891:U:H5	20:R:74:ARG:NH1	2.11	0.46
1:5:3616:U:H1'	1:5:3617:G:C6	2.50	0.46
1:5:3696:C:N3	1:5:3697:U:C5	2.84	0.46
1:5:3700:C:O2'	1:5:3774:A:N3	2.39	0.46
1:5:3801:U:O2'	1:5:3802:U:H5'	2.16	0.46
1:5:3811:G:O2'	1:5:3814:U:OP2	2.28	0.46
1:5:3862:A:N1	1:5:3863:C:H1'	2.31	0.46
1:5:3898:G:O3'	5:B:257:TRP:HB2	2.16	0.46
1:5:4085:A:C3'	1:5:4086:G:H5"	2.46	0.46
1:5:4166:G:N2	1:5:4167:G:N9	2.63	0.46
1:5:4330:G:C6	1:5:4331:G:C8	3.04	0.46
1:5:4734:A:N3	1:5:4734:A:H2'	2.30	0.46
1:5:4883:C:H42	8:E:272:ALA:HB3	1.81	0.46
1:5:4997:G:C5	1:5:4998:G:C8	3.04	0.46
1:5:4999:G:C5	1:5:5000:G:N7	2.84	0.46
1:5:5010:U:N3	1:5:5011:A:N7	2.63	0.46
1:5:5012:G:N2	1:5:5014:A:N7	2.62	0.46
2:7:17:C:O2	2:7:17:C:C2'	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:23:A:O2'	2:7:24:C:C6	2.62	0.46
3:8:46:G:C6	3:8:47:C:N4	2.84	0.46
3:8:56:G:C6	3:8:57:C:C4	3.04	0.46
3:8:63:U:C2	3:8:63:U:C3'	2.98	0.46
3:8:75:G:C6	3:8:76:C:N4	2.84	0.46
4:A:122:ASP:OD1	4:A:122:ASP:C	2.59	0.46
5:B:80:GLU:HG3	5:B:326:VAL:HG22	1.98	0.46
9:F:149:LEU:N	9:F:197:TYR:OH	2.48	0.46
15:M:7:VAL:O	15:M:7:VAL:HG12	2.15	0.46
15:M:10:GLY:HA2	15:M:64:PHE:CZ	2.51	0.46
16:N:11:TRP:CZ3	16:N:19:MET:HE2	2.50	0.46
16:N:37:HIS:NE2	16:N:63:ARG:HB3	2.31	0.46
22:T:40:VAL:HG13	22:T:96:ILE:HG23	1.98	0.46
34:f:74:VAL:HG13	34:f:84:VAL:HG13	1.98	0.46
46:1:60:ASP:CB	46:1:61:PRO:HD2	2.46	0.46
1:5:2:G:C6	1:5:3:C:C4	3.04	0.46
1:5:118:C:N3	1:5:121:A:N7	2.63	0.46
1:5:154:G:C6	1:5:155:C:N4	2.84	0.46
1:5:184:U:O2	1:5:254:G:C2	2.69	0.46
1:5:247:G:C2	1:5:248:C:C2	3.03	0.46
1:5:262:G:C6	1:5:263:G:N7	2.83	0.46
1:5:371:A:O2'	1:5:372:A:H5'	2.15	0.46
1:5:432:U:O4	17:O:91:LYS:HD3	2.16	0.46
1:5:731:G:H5"	1:5:732:A:OP2	2.16	0.46
1:5:1048:G:H2'	1:5:1049:C:O4'	2.15	0.46
1:5:1234:G:C6	1:5:1235:G:C6	3.04	0.46
1:5:1267:C:H2'	1:5:2121:C:N4	2.31	0.46
1:5:1325:C:C4'	1:5:3901:A:C2	2.98	0.46
1:5:1446:C:N3	1:5:1447:C:C6	2.84	0.46
1:5:1612:G:C8	1:5:1612:G:H5"	2.51	0.46
1:5:1676:C:O2'	1:5:3914:U:O4	2.34	0.46
1:5:1758:G:N3	1:5:1758:G:H2'	2.31	0.46
1:5:1780:A:N6	1:5:1781:U:C5	2.83	0.46
1:5:1899:G:C6	1:5:1900:C:C5	3.03	0.46
1:5:2059:C:O2	21:S:118:ARG:NH1	2.46	0.46
1:5:2094:G:N7	9:F:48:ARG:HD3	2.31	0.46
1:5:2272:C:H2'	1:5:2273:G:O5'	2.16	0.46
1:5:2282:A:C2'	1:5:2283:G:H5'	2.46	0.46
1:5:2311:C:O2	1:5:2311:C:H2'	2.15	0.46
1:5:2515:G:C5	1:5:2516:G:C8	3.03	0.46
1:5:2552:G:N2	1:5:2764:A:N7	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2569:G:C5	1:5:2570:U:C5	3.03	0.46
1:5:3597:G:C6	1:5:3598:C:C4	3.03	0.46
1:5:3631:U:O2	1:5:3631:U:H2'	2.16	0.46
1:5:3648:A:C5	1:5:3785:A:C6	3.04	0.46
1:5:3723:A:N1	1:5:3724:A:C6	2.84	0.46
1:5:3749:C:C5	1:5:3750:G:C8	3.04	0.46
1:5:3946:G:C2	1:5:3947:A:C8	3.03	0.46
1:5:4109:G:C4	1:5:4110:C:C5	3.04	0.46
1:5:4121:G:N2	4:A:85:GLY:CA	2.79	0.46
1:5:4146:G:C2	1:5:4147:G:C5	3.03	0.46
1:5:4333:C:C2'	1:5:4334:U:O5'	2.63	0.46
1:5:4367:G:C6	1:5:4368:G:N7	2.84	0.46
1:5:4652:G:C2	1:5:4653:C:C2	3.04	0.46
1:5:4661:G:C6	1:5:4662:C:C4	3.03	0.46
1:5:4731:G:C8	1:5:4732:G:C5	3.04	0.46
1:5:4939:C:O3'	1:5:4941:G:P	2.74	0.46
1:5:4973:U:H1'	1:5:4986:G:C2	2.51	0.46
2:7:21:G:C2	2:7:58:A:N3	2.83	0.46
3:8:55:U:N3	3:8:62:A:H2	2.10	0.46
3:8:131:G:N1	3:8:132:G:C5	2.84	0.46
4:A:33:ASP:OD1	4:A:33:ASP:N	2.48	0.46
4:A:40:TYR:CE2	4:A:89:TYR:HD2	2.33	0.46
4:A:53:GLY:HA2	4:A:192:LYS:HD3	1.98	0.46
6:C:200:ARG:CZ	27:Y:11:ARG:HD2	2.46	0.46
16:N:150:TRP:HE3	16:N:150:TRP:C	2.23	0.46
19:Q:58:ARG:HH11	19:Q:58:ARG:CB	2.29	0.46
21:S:106:VAL:O	21:S:107:THR:C	2.59	0.46
24:V:60:MET:HE1	24:V:108:ASN:HA	1.98	0.46
24:V:96:LEU:HD12	25:W:20:ARG:O	2.15	0.46
33:e:126:ASN:C	33:e:126:ASN:ND2	2.72	0.46
36:h:91:MET:HG3	36:h:94:ARG:NE	2.30	0.46
37:i:63:VAL:O	37:i:63:VAL:HG12	2.15	0.46
38:j:66:HIS:CD2	38:j:66:HIS:C	2.93	0.46
43:o:39:ARG:O	43:o:43:ARG:HG2	2.16	0.46
46:1:205:ARG:HD2	46:1:242:LEU:HD13	1.98	0.46
46:1:435:ALA:C	46:1:437:PHE:N	2.65	0.46
1:5:120:A:N7	1:5:149:A:C6	2.84	0.46
1:5:150:U:OP2	10:G:140:VAL:HG23	2.16	0.46
1:5:458:C:C2	1:5:459:C:C5	3.03	0.46
1:5:516:C:C4	1:5:646:G:N1	2.84	0.46
1:5:752:G:N2	1:5:753:C:H1'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:936:C:H5	15:M:46:ARG:HA	1.81	0.46
1:5:964:A:H1'	45:r:98:ARG:CZ	2.46	0.46
1:5:1072:C:H4'	1:5:1073:G:OP1	2.16	0.46
1:5:1187:G:HO2'	1:5:1188:C:H6	1.62	0.46
1:5:1292:C:C3'	1:5:1293:G:H5"	2.46	0.46
1:5:1396:G:H3'	1:5:1396:G:C8	2.51	0.46
1:5:1412:G:C2	1:5:1413:C:N1	2.84	0.46
1:5:1463:C:N3	1:5:1464:C:C5	2.84	0.46
1:5:1560:A:H2'	1:5:1561:G:O4'	2.16	0.46
1:5:1584:G:C4	1:5:1585:C:C5	3.04	0.46
1:5:1658:G:H4'	1:5:2348:G:O2'	2.15	0.46
1:5:1673:U:O4	1:5:1674:C:N4	2.48	0.46
1:5:1698:C:C6	1:5:1698:C:H5'	2.51	0.46
1:5:1866:U:O4	1:5:4405:G:C1'	2.64	0.46
1:5:1944:A:N6	1:5:1945:G:C5	2.84	0.46
1:5:2375:A:OP1	32:d:63:ARG:NH2	2.48	0.46
1:5:2397:G:N7	1:5:2399:G:C8	2.83	0.46
1:5:2566:G:N2	1:5:2567:G:C4	2.84	0.46
1:5:2662:G:H2'	1:5:2663:G:O5'	2.16	0.46
1:5:2823:G:N1	1:5:2824:C:C5	2.84	0.46
1:5:2857:A:C2	1:5:2858:A:C4	3.03	0.46
1:5:3740:G:H2'	1:5:3740:G:N3	2.31	0.46
1:5:3837:C:H2'	1:5:3838:U:O4'	2.16	0.46
1:5:4091:G:C6	1:5:4092:G:C8	3.04	0.46
1:5:4103:C:C4	1:5:4105:A:N6	2.84	0.46
1:5:4139:G:C2	1:5:4140:C:C6	3.04	0.46
1:5:4277:G:C2	1:5:4278:C:C2	3.04	0.46
1:5:4314:C:C2	1:5:4315:A:H8	2.33	0.46
1:5:4333:C:H2'	1:5:4334:U:O5'	2.16	0.46
1:5:4343:U:O2	1:5:4344:U:C6	2.69	0.46
1:5:4518:A:H2'	5:B:257:TRP:CZ3	2.51	0.46
1:5:4518:A:C3'	1:5:4519:C:C5'	2.93	0.46
1:5:4524:G:N3	5:B:252:ALA:HB1	2.31	0.46
1:5:4559:A:O3'	1:5:4560:C:O2	2.34	0.46
1:5:4758:U:C2'	1:5:4759:C:O5'	2.63	0.46
1:5:4882:U:O2'	1:5:4883:C:H2'	2.16	0.46
2:7:9:C:C4	2:7:10:C:C6	3.04	0.46
2:7:11:A:O2'	2:7:13:A:OP2	2.33	0.46
3:8:31:G:C5	3:8:32:C:C5	3.04	0.46
3:8:45:C:C2'	3:8:46:G:O5'	2.64	0.46
5:B:228:TYR:HE1	5:B:270:GLY:HA2	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:100:ARG:HD3	6:C:100:ARG:C	2.41	0.46
6:C:122:TYR:CB	6:C:280:PRO:HG3	2.46	0.46
7:D:106:ALA:HB2	7:D:166:ALA:HA	1.97	0.46
7:D:280:VAL:O	7:D:280:VAL:HG23	2.16	0.46
8:E:250:ASP:OD1	8:E:250:ASP:C	2.58	0.46
9:F:58:HIS:C	9:F:60:HIS:N	2.72	0.46
10:G:29:ASN:HB2	10:G:32:PHE:CZ	2.50	0.46
14:L:21:ARG:HB3	16:N:197:THR:HG22	1.97	0.46
17:O:51:LYS:HA	17:O:141:LEU:HD11	1.97	0.46
28:Z:76:ASN:HB2	28:Z:79:HIS:CD2	2.50	0.46
37:i:45:ARG:NH1	37:i:49:GLY:O	2.49	0.46
47:2:45:ALA:O	47:2:49:PHE:HE2	1.95	0.46
1:5:88:A:O2'	1:5:89:C:H5'	2.15	0.45
1:5:114:G:O6	1:5:157:U:C2	2.69	0.45
1:5:116:G:C6	1:5:117:C:C4	3.04	0.45
1:5:197:A:C8	1:5:197:A:C5'	2.95	0.45
1:5:209:U:C2	1:5:233:U:N3	2.84	0.45
1:5:484:U:C5	1:5:486:C:C5	3.01	0.45
1:5:660:A:C5	1:5:661:C:C5	3.03	0.45
1:5:703:G:C6	1:5:706:C:N4	2.75	0.45
1:5:708:G:OP1	34:f:46:ARG:NH2	2.49	0.45
1:5:753:C:C2	1:5:754:U:H6	2.26	0.45
1:5:1169:G:N1	1:5:1170:G:C5	2.84	0.45
1:5:1218:G:C5	1:5:1219:G:C8	3.04	0.45
1:5:1246:G:C6	1:5:1247:U:C5	3.04	0.45
1:5:1379:C:O3'	1:5:1380:G:C8	2.67	0.45
1:5:1388:A:N1	1:5:1396:G:N3	2.64	0.45
1:5:1394:G:C2'	1:5:1395:U:O5'	2.64	0.45
1:5:1427:A:H2'	1:5:1428:U:O5'	2.16	0.45
1:5:1534:A:H2'	1:5:1637:A:C2	2.51	0.45
1:5:1620:U:O2	1:5:1621:A:N7	2.49	0.45
1:5:1645:C:H2'	1:5:1646:A:C8	2.51	0.45
1:5:1666:C:H2'	1:5:1667:G:O5'	2.16	0.45
1:5:1733:G:C6	1:5:4214:A:C2	3.04	0.45
1:5:1829:G:C4	1:5:1830:G:C8	3.04	0.45
1:5:1858:A:C2	1:5:1859:C:C6	3.05	0.45
1:5:1930:U:O5'	1:5:1930:U:H6	1.99	0.45
1:5:1938:C:H5'	1:5:1938:C:H6	1.81	0.45
1:5:2090:U:H2'	1:5:2259:G:OP1	2.16	0.45
1:5:2267:U:O2'	1:5:2268:A:P	2.74	0.45
1:5:2316:G:C2	1:5:2324:C:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2482:C:H2'	1:5:2482:C:O2	2.16	0.45
1:5:2496:G:C2	1:5:2497:C:C6	3.04	0.45
1:5:2712:G:C5	1:5:2713:C:C5	3.04	0.45
1:5:2854:G:C8	1:5:2854:G:C3'	2.97	0.45
1:5:3610:A:H2'	1:5:3611:A:H8	1.81	0.45
1:5:3652:A:C3'	1:5:3653:A:C8	2.98	0.45
1:5:3919:C:H5'	4:A:207:VAL:HG12	1.95	0.45
1:5:3928:A:H5'	16:N:89:VAL:CG1	2.46	0.45
1:5:4111:U:C4	1:5:4112:C:C5	3.05	0.45
1:5:4134:C:C2	1:5:4135:G:C8	3.04	0.45
1:5:4175:G:N1	1:5:4176:C:C4	2.84	0.45
1:5:4323:A:H4'	7:D:176:SER:HB3	1.98	0.45
1:5:4405:G:C4	1:5:4406:U:C6	3.03	0.45
1:5:4547:C:H2'	1:5:4549:G:H8	1.81	0.45
1:5:4550:G:C6	1:5:4551:U:C6	3.04	0.45
1:5:4977:A:C5	1:5:4978:G:C2	3.04	0.45
1:5:4988:U:C4'	1:5:4989:U:O2	2.50	0.45
1:5:5022:U:O2	1:5:5022:U:H2'	2.17	0.45
1:5:5050:C:H1'	5:B:374:PHE:CE2	2.51	0.45
2:7:23:A:O2'	2:7:24:C:P	2.74	0.45
2:7:27:G:O6	7:D:58:ARG:NH1	2.46	0.45
2:7:50:A:N1	2:7:51:G:C8	2.83	0.45
3:8:55:U:N3	3:8:62:A:C2	2.74	0.45
4:A:37:ARG:CZ	4:A:37:ARG:CB	2.93	0.45
4:A:77:ILE:HD13	4:A:128:ARG:HB2	1.97	0.45
5:B:290:GLY:HA3	5:B:328:ASN:HA	1.97	0.45
5:B:379:PHE:N	5:B:379:PHE:CD1	2.83	0.45
6:C:197:ARG:C	6:C:198:ASN:CG	2.84	0.45
8:E:43:ASN:HB3	8:E:58:MET:CE	2.46	0.45
8:E:111:TYR:CZ	45:r:119:ARG:HD3	2.51	0.45
9:F:194:HIS:C	9:F:196:ILE:N	2.74	0.45
9:F:228:HIS:NE2	9:F:236:GLY:HA3	2.30	0.45
14:L:178:ALA:HB1	29:a:146:LEU:HD21	1.99	0.45
15:M:3:PHE:C	15:M:6:PHE:HZ	2.24	0.45
22:T:14:MET:HE3	22:T:58:HIS:CG	2.51	0.45
26:X:74:TYR:CE1	26:X:116:LEU:HD22	2.51	0.45
27:Y:106:ILE:HG21	27:Y:109:LEU:HD23	1.97	0.45
31:c:50:ASN:OD1	31:c:76:GLY:C	2.60	0.45
33:e:90:MET:HE1	45:r:113:ARG:HA	1.99	0.45
33:e:98:GLU:CD	33:e:123:THR:OG1	2.57	0.45
46:1:241:ASN:O	46:1:245:LEU:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:145:G:N2	1:5:146:G:H1'	2.31	0.45
1:5:271:C:C4	1:5:272:U:H5	2.28	0.45
1:5:273:U:O2'	1:5:274:C:O5'	2.27	0.45
1:5:294:G:C2'	1:5:294:G:N3	2.79	0.45
1:5:348:G:C4	1:5:350:C:C5	3.04	0.45
1:5:467:U:C4	1:5:468:U:C5	3.05	0.45
1:5:678:C:C2	1:5:679:C:C5	3.04	0.45
1:5:695:G:H3'	1:5:696:C:C5'	2.45	0.45
1:5:721:G:C2	1:5:948:C:C2	3.04	0.45
1:5:952:G:C6	1:5:953:C:C4	3.04	0.45
1:5:1067:G:N2	1:5:1068:G:H1'	2.30	0.45
1:5:1171:G:N2	1:5:1191:C:C2	2.84	0.45
1:5:1184:A:C4	1:5:1185:G:C8	3.05	0.45
1:5:1271:G:O6	1:5:2109:G:O6	2.33	0.45
1:5:1558:A:C2	1:5:1559:G:C5	3.05	0.45
1:5:1698:C:H4'	1:5:1699:A:OP2	2.17	0.45
1:5:1733:G:HO2'	1:5:4214:A:HO2'	1.52	0.45
1:5:1751:A:N6	1:5:1752:G:N7	2.65	0.45
1:5:1925:G:C6	1:5:1926:C:C4	3.04	0.45
1:5:1965:G:C6	1:5:1966:C:C5	3.04	0.45
1:5:2033:A:C2	1:5:2034:G:N7	2.85	0.45
1:5:2071:A:N3	1:5:2072:C:C5	2.84	0.45
1:5:2085:G:N2	1:5:2273:G:C5	2.84	0.45
1:5:2246:C:O2'	1:5:2247:C:H5'	2.17	0.45
1:5:2263:A:H5'	45:r:39:ARG:HH22	1.81	0.45
1:5:2273:G:H5"	6:C:311:ARG:HH22	1.80	0.45
1:5:2329:U:O2'	1:5:2330:G:C4'	2.64	0.45
1:5:2458:C:O2'	1:5:3671:G:H1'	2.17	0.45
1:5:2645:G:N2	1:5:2646:C:H1'	2.31	0.45
1:5:2786:C:C4'	1:5:2787:A:C8	2.99	0.45
1:5:2805:C:H1'	35:g:5:LEU:O	2.17	0.45
1:5:2904:U:OP2	1:5:2905:C:N4	2.49	0.45
1:5:3696:C:C2	1:5:3697:U:C6	3.04	0.45
1:5:3773:U:H2'	1:5:3774:A:H8	1.82	0.45
1:5:3776:G:O4'	1:5:3776:G:N3	2.50	0.45
1:5:3856:A:N6	1:5:3857:G:C6	2.85	0.45
1:5:4072:C:N3	1:5:4073:A:N7	2.64	0.45
1:5:4079:C:C4	1:5:4080:C:C5	3.04	0.45
1:5:4087:G:H1	10:G:46:GLN:HG2	1.80	0.45
1:5:4088:C:N3	10:G:53:ARG:NH2	2.63	0.45
1:5:4532:U:C5	1:5:4554:G:N2	2.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4661:G:H2'	1:5:4662:C:O4'	2.16	0.45
1:5:4723:A:H2'	1:5:4724:A:C8	2.51	0.45
1:5:4958:C:O2	1:5:4958:C:C2'	2.63	0.45
1:5:4970:C:C2	1:5:4971:A:C8	3.04	0.45
1:5:5006:U:C6	25:W:50:ASN:ND2	2.84	0.45
1:5:5047:C:H1'	1:5:5048:A:C2	2.52	0.45
2:7:16:A:C5	2:7:17:C:C5	3.04	0.45
2:7:45:U:H2'	2:7:46:C:O4'	2.16	0.45
4:A:186:TYR:HA	4:A:196:TRP:CZ3	2.51	0.45
8:E:90:LYS:N	8:E:91:PRO:CD	2.80	0.45
8:E:151:GLY:O	8:E:154:ARG:NH2	2.49	0.45
9:F:100:ILE:HG21	19:Q:4:ASP:CG	2.41	0.45
16:N:88:GLY:HA2	43:o:48:TYR:HD2	1.80	0.45
17:O:47:PHE:CD2	17:O:47:PHE:C	2.94	0.45
24:V:88:TYR:CE1	24:V:96:LEU:HB3	2.51	0.45
31:c:22:MET:HA	31:c:22:MET:HE2	1.98	0.45
32:d:46:LEU:HD12	32:d:72:VAL:HG11	1.99	0.45
35:g:99:GLU:HA	35:g:99:GLU:OE1	2.16	0.45
37:i:39:PHE:C	37:i:39:PHE:CD2	2.93	0.45
1:5:194:C:C4	1:5:195:C:C6	3.05	0.45
1:5:474:C:N3	1:5:475:G:N7	2.65	0.45
1:5:709:C:C4	1:5:710:G:N7	2.85	0.45
1:5:735:G:H2'	1:5:736:C:C6	2.51	0.45
1:5:743:G:H1	1:5:921:C:H42	1.63	0.45
1:5:1077:C:C4	1:5:1078:A:C5	3.04	0.45
1:5:1349:G:N2	1:5:1350:C:C2	2.85	0.45
1:5:1426:G:O2'	1:5:1459:A:N6	2.50	0.45
1:5:1437:C:O2	1:5:2098:G:C8	2.70	0.45
1:5:1443:A:C6	1:5:1444:G:C5	3.04	0.45
1:5:1448:G:C6	1:5:1449:C:C4	3.04	0.45
1:5:1507:C:C4	1:5:1508:A:N7	2.85	0.45
1:5:1543:G:N1	1:5:1544:G:N7	2.63	0.45
1:5:1634:A:C6	1:5:1635:C:N4	2.84	0.45
1:5:1752:G:C5	1:5:1753:G:C8	3.05	0.45
1:5:1811:G:H2'	1:5:1812:C:H6	1.81	0.45
1:5:1899:G:C5	1:5:1900:C:C5	3.03	0.45
1:5:1963:C:N4	1:5:1964:A:C8	2.84	0.45
1:5:1970:A:N6	1:5:2016:C:OP2	2.44	0.45
1:5:1991:A:H3'	1:5:1992:U:H2'	1.99	0.45
1:5:1997:U:H3'	1:5:1998:A:H5"	1.97	0.45
1:5:2115:G:C8	1:5:2116:C:C1'	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2253:A:H8	1:5:2254:G:O2'	1.99	0.45
1:5:2292:C:H2'	1:5:2293:U:H6	1.82	0.45
1:5:2326:G:C4	1:5:2327:G:C8	3.04	0.45
1:5:2339:G:C2	1:5:2340:C:N1	2.85	0.45
1:5:2451:A:N7	1:5:2452:G:N7	2.64	0.45
1:5:2496:G:C4	1:5:2497:C:C5	3.04	0.45
1:5:2543:A:C2	1:5:2773:G:C6	3.04	0.45
1:5:2575:U:O4	28:Z:51:ARG:NH2	2.50	0.45
1:5:2752:G:C8	1:5:2752:G:C5'	2.99	0.45
1:5:2851:G:N7	1:5:2852:U:H5	2.09	0.45
1:5:2857:A:C4	1:5:2858:A:N7	2.85	0.45
1:5:3644:U:O2	1:5:4554:G:O2'	2.29	0.45
1:5:3717:A:N7	1:5:3736:A:N6	2.65	0.45
1:5:3899:G:C5'	5:B:257:TRP:CD1	2.96	0.45
1:5:4203:A:N6	1:5:4221:C:C2	2.85	0.45
1:5:4216:G:N3	1:5:4217:G:C8	2.84	0.45
1:5:4273:A:C2'	1:5:4274:A:O4'	2.54	0.45
1:5:4287:G:C4	1:5:4288:C:C5	3.04	0.45
1:5:4293:U:N3	1:5:4294:C:C5	2.84	0.45
1:5:4322:G:N2	1:5:4326:G:C5	2.84	0.45
1:5:4480:A:H2'	1:5:4480:A:N3	2.30	0.45
1:5:4686:G:N2	1:5:4687:A:H1'	2.32	0.45
1:5:4905:C:N3	1:5:4906:C:C5	2.85	0.45
1:5:4926:C:H2'	1:5:4927:G:H21	1.81	0.45
1:5:5041:G:OP2	25:W:61:LYS:HE3	2.17	0.45
2:7:62:U:O2	2:7:64:G:C8	2.70	0.45
5:B:29:VAL:HB	5:B:32:PHE:CE1	2.51	0.45
5:B:110:ILE:HG21	5:B:115:LYS:HD3	1.96	0.45
6:C:252:TRP:CB	6:C:257:PHE:HD1	2.29	0.45
6:C:269:LYS:O	6:C:278:ASN:ND2	2.49	0.45
9:F:73:MET:CB	9:F:84:TYR:CE2	2.96	0.45
9:F:245:LEU:HD22	9:F:249:MET:SD	2.56	0.45
11:H:162:GLN:HG3	11:H:180:TYR:HA	1.99	0.45
11:H:171:ASP:OD1	11:H:173:ARG:NH1	2.48	0.45
19:Q:24:TYR:CE1	45:r:5:LEU:CD1	2.99	0.45
32:d:33:ILE:HD11	32:d:45:ALA:CA	2.47	0.45
36:h:99:GLU:HA	36:h:102:LEU:HD12	1.98	0.45
39:k:11:PHE:HA	39:k:14:THR:HG22	1.97	0.45
46:1:66:ARG:O	46:1:67:VAL:C	2.58	0.45
1:5:47:A:H4'	1:5:48:G:OP1	2.16	0.45
1:5:72:C:H41	14:L:68:THR:HA	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:84:A:H5'	1:5:86:U:H1'	1.98	0.45
1:5:96:U:OP1	14:L:13:HIS:HB3	2.16	0.45
1:5:142:G:N1	1:5:144:G:C8	2.84	0.45
1:5:182:G:H2'	1:5:182:G:N3	2.32	0.45
1:5:299:C:N3	1:5:300:A:N7	2.64	0.45
1:5:320:C:C4	1:5:321:U:C5	3.04	0.45
1:5:379:G:C2	1:5:380:U:C5	3.04	0.45
1:5:447:C:C4	1:5:448:G:N7	2.84	0.45
1:5:755:C:C4	1:5:756:G:N7	2.85	0.45
1:5:917:A:C4	1:5:918:G:C6	3.04	0.45
1:5:1173:G:C2	1:5:1174:G:H1'	2.51	0.45
1:5:1175:A:N3	1:5:1176:C:C6	2.85	0.45
1:5:1283:G:C8	1:5:1283:G:C3'	3.00	0.45
1:5:1440:U:O2	1:5:1440:U:C2'	2.52	0.45
1:5:1443:A:C5	1:5:1444:G:C5	3.05	0.45
1:5:1475:G:N2	1:5:1476:C:C6	2.83	0.45
1:5:1618:G:N2	1:5:1619:G:N9	2.64	0.45
1:5:1663:C:O2'	1:5:2319:C:N4	2.48	0.45
1:5:1682:A:H3'	1:5:1683:U:C6	2.50	0.45
1:5:1683:U:C2	1:5:1684:A:H8	2.13	0.45
1:5:1694:C:O2	1:5:1694:C:H2'	2.16	0.45
1:5:1744:U:N3	1:5:1745:G:N7	2.65	0.45
1:5:1972:G:N3	1:5:1973:G:C8	2.85	0.45
1:5:2001:G:N2	1:5:2004:U:C6	2.85	0.45
1:5:2032:U:O2'	21:S:91:HIS:HE1	1.99	0.45
1:5:2497:C:C4	1:5:2498:C:H5	2.29	0.45
1:5:2507:A:C6	1:5:2508:U:N1	2.83	0.45
1:5:2529:A:C8	1:5:2532:C:C5	3.04	0.45
1:5:2590:G:C2'	1:5:2755:A:H61	2.30	0.45
1:5:2599:G:H5'	35:g:60:ARG:HH22	1.81	0.45
1:5:2759:G:H2'	1:5:2760:G:H1'	1.97	0.45
1:5:3600:G:N2	1:5:3601:C:C2	2.85	0.45
1:5:3632:C:N3	1:5:3633:C:C5	2.84	0.45
1:5:4275:G:N1	1:5:4276:G:C4	2.85	0.45
1:5:4299:U:O2	1:5:4300:U:C6	2.70	0.45
1:5:4408:G:C6	1:5:4409:C:C4	3.04	0.45
1:5:4483:C:H2'	1:5:4484:A:O5'	2.17	0.45
1:5:4588:U:O2'	1:5:4589:A:H2'	2.14	0.45
1:5:4640:C:C2	1:5:4641:U:C6	3.04	0.45
1:5:4687:A:H62	1:5:4698:C:H1'	1.80	0.45
1:5:4905:C:C2	1:5:4906:C:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:29:LEU:HD23	4:A:76:PHE:HE2	1.81	0.45
6:C:265:GLY:C	6:C:266:THR:O	2.58	0.45
6:C:322:LEU:O	6:C:325:MET:HB3	2.16	0.45
7:D:99:TYR:CD1	7:D:165:GLY:HA2	2.51	0.45
7:D:147:ASP:OD1	7:D:149:GLY:N	2.49	0.45
7:D:196:ARG:NH1	7:D:196:ARG:HA	2.31	0.45
7:D:278:ASP:O	7:D:280:VAL:C	2.60	0.45
8:E:46:LEU:HG	8:E:52:ARG:HG2	1.98	0.45
8:E:175:LEU:HB2	8:E:246:GLN:NE2	2.27	0.45
10:G:78:PRO:HD3	10:G:237:TRP:CE3	2.52	0.45
11:H:41:ILE:CD1	11:H:69:THR:CB	2.89	0.45
11:H:172:ILE:HD11	41:m:102:ARG:NH2	2.31	0.45
12:I:47:PRO:HB3	12:I:171:TRP:HE1	1.79	0.45
13:J:60:PHE:CD1	13:J:60:PHE:N	2.84	0.45
14:L:101:ARG:HA	37:i:25:ARG:HH21	1.81	0.45
25:W:8:PHE:CE1	25:W:51:TRP:CH2	3.04	0.45
32:d:33:ILE:HG22	32:d:33:ILE:O	2.16	0.45
34:f:18:LEU:HG	34:f:19:ARG:NH2	2.26	0.45
39:k:22:SER:O	39:k:24:LYS:N	2.49	0.45
39:k:23:VAL:HG13	39:k:66:VAL:HA	1.98	0.45
1:5:31:U:H5"	16:N:71:ARG:HH21	1.81	0.45
1:5:192:G:N2	1:5:250:C:C2	2.84	0.45
1:5:218:A:H62	6:C:185:ALA:HB2	1.76	0.45
1:5:235:A:O2'	1:5:237:G:OP2	2.35	0.45
1:5:446:C:H2'	1:5:446:C:O2	2.16	0.45
1:5:462:G:N2	1:5:694:C:C2	2.85	0.45
1:5:512:U:H3'	1:5:513:U:H5'	1.98	0.45
1:5:656:C:O2	1:5:657:C:C6	2.69	0.45
1:5:728:U:H2'	1:5:729:G:OP1	2.16	0.45
1:5:1076:C:N4	1:5:1077:C:C4	2.84	0.45
1:5:1092:G:N1	1:5:1093:C:C4	2.84	0.45
1:5:1096:C:C2	1:5:1097:C:C6	3.05	0.45
1:5:1212:G:C2	1:5:1213:G:C5	3.05	0.45
1:5:1310:C:C2	1:5:1311:G:H8	2.32	0.45
1:5:1394:G:C2	1:5:1395:U:C2	3.05	0.45
1:5:1668:A:C8	1:5:1881:C:C4	3.05	0.45
1:5:1902:G:OP1	34:f:24:HIS:CE1	2.70	0.45
1:5:2008:U:H5	1:5:2010:A:H3'	1.81	0.45
1:5:2058:G:C5	1:5:2059:C:C5	3.04	0.45
1:5:2126:G:C8	1:5:2127:C:C5	3.05	0.45
1:5:2351:C:N3	1:5:2352:U:C5	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2367:A:N7	1:5:2798:A:N3	2.65	0.45
1:5:2603:C:N3	1:5:2604:C:C6	2.85	0.45
1:5:2612:G:C5	1:5:2613:C:C6	3.04	0.45
1:5:2725:A:H2'	1:5:2726:G:H5"	1.98	0.45
1:5:2744:A:H2'	1:5:2745:A:N7	2.32	0.45
1:5:2867:C:C2	1:5:2884:G:C2	3.04	0.45
1:5:2908:U:C2	1:5:2909:C:C6	3.04	0.45
1:5:3603:G:H2'	1:5:3604:A:N3	2.31	0.45
1:5:3635:A:N1	1:5:3636:C:H1'	2.31	0.45
1:5:3757:G:C6	1:5:3758:U:C4	3.05	0.45
1:5:3819:G:H2'	1:5:3819:G:N3	2.31	0.45
1:5:3911:C:N3	1:5:3912:U:C4	2.84	0.45
1:5:4175:G:N2	1:5:4176:C:C2	2.85	0.45
1:5:4233:A:N7	1:5:4235:G:C8	2.84	0.45
1:5:4292:A:O4'	1:5:4330:G:C1'	2.65	0.45
1:5:4363:A:C6	1:5:4364:G:N7	2.84	0.45
1:5:4470:G:C2	1:5:4486:C:N3	2.85	0.45
1:5:4474:A:N7	1:5:4476:C:C2	2.85	0.45
1:5:4489:G:C2	1:5:4490:C:C2	3.04	0.45
1:5:4899:G:C2	1:5:4922:C:O2	2.69	0.45
1:5:4999:G:C2	1:5:5000:G:N9	2.85	0.45
1:5:5006:U:C1'	1:5:5042:A:N7	2.80	0.45
1:5:5027:C:O2	1:5:5027:C:H2'	2.15	0.45
1:5:5028:G:C2	1:5:5029:C:C4	3.04	0.45
2:7:69:U:C4	2:7:106:G:O6	2.70	0.45
2:7:115:A:H5'	2:7:115:A:H8	1.82	0.45
3:8:38:U:H5	36:h:84:ARG:HB2	1.82	0.45
4:A:218:HIS:C	4:A:218:HIS:ND1	2.74	0.45
5:B:136:LYS:C	5:B:138:GLN:H	2.24	0.45
6:C:31:PRO:HB3	19:Q:24:TYR:HE2	1.80	0.45
6:C:41:HIS:HB3	6:C:244:GLY:HA2	1.97	0.45
7:D:189:GLU:OE2	7:D:189:GLU:N	2.50	0.45
10:G:166:LEU:HD21	16:N:45:PRO:HG2	1.98	0.45
14:L:27:ASN:O	14:L:28:GLN:C	2.59	0.45
16:N:30:TYR:CZ	16:N:63:ARG:CD	2.99	0.45
17:O:49:ARG:HG2	17:O:49:ARG:NH1	2.32	0.45
21:S:28:TYR:HD2	22:T:151:LEU:HD11	1.81	0.45
21:S:68:PHE:N	21:S:68:PHE:CD1	2.85	0.45
34:f:93:PRO:O	34:f:94:ALA:HB3	2.16	0.45
1:5:44:A:H2'	1:5:44:A:N3	2.32	0.45
1:5:85:G:H1'	1:5:86:U:H5	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:124:C:C2	1:5:125:C:C5	3.05	0.45
1:5:145:G:C2	1:5:146:G:C4	3.04	0.45
1:5:224:U:O2	1:5:224:U:O4'	2.33	0.45
1:5:292:G:C2	1:5:293:G:C2	3.05	0.45
1:5:294:G:N3	1:5:294:G:H2'	2.32	0.45
1:5:488:G:N2	1:5:489:C:C1'	2.80	0.45
1:5:906:C:C2	1:5:907:C:C6	3.05	0.45
1:5:939:G:H2'	1:5:939:G:N3	2.32	0.45
1:5:1067:G:C2	1:5:1068:G:H1'	2.52	0.45
1:5:1084:C:C2	1:5:1085:C:C6	3.05	0.45
1:5:1362:G:C2	1:5:1363:C:N1	2.85	0.45
1:5:1446:C:H2'	1:5:1447:C:H5'	1.98	0.45
1:5:1491:A:C5	1:5:1492:G:N7	2.84	0.45
1:5:1542:U:C2	1:5:1543:G:H8	2.31	0.45
1:5:1663:C:H2'	1:5:1664:U:C6	2.50	0.45
1:5:1691:G:C4	1:5:1692:C:C6	3.05	0.45
1:5:1694:C:C2	1:5:1695:U:C5	3.05	0.45
1:5:2058:G:H21	1:5:2059:C:H1'	1.82	0.45
1:5:2367:A:C4	1:5:2798:A:C2	3.05	0.45
1:5:2391:G:C2	1:5:2392:C:C2	3.05	0.45
1:5:2441:C:O2	1:5:2442:G:N7	2.50	0.45
1:5:2557:G:N1	1:5:2558:C:C2	2.84	0.45
1:5:2603:C:C4	1:5:2604:C:C5	3.05	0.45
1:5:2658:G:N2	1:5:2675:G:N3	2.65	0.45
1:5:2744:A:C6	1:5:2745:A:N6	2.85	0.45
1:5:3597:G:P	1:5:3597:G:O4'	2.75	0.45
1:5:3657:U:C2	1:5:3658:C:C5	3.04	0.45
1:5:3673:C:O2'	1:5:3674:G:OP1	2.32	0.45
1:5:3722:G:C2	1:5:3723:A:N9	2.85	0.45
1:5:3738:G:C8	1:5:3738:G:H3'	2.51	0.45
1:5:4106:G:C5	1:5:4107:G:H1'	2.51	0.45
1:5:4108:G:N1	1:5:4109:G:C5	2.85	0.45
1:5:4112:C:C2	1:5:4113:U:C6	3.05	0.45
1:5:4238:G:O2'	1:5:4322:G:H4'	2.17	0.45
1:5:4276:G:H4'	22:T:12:ARG:O	2.17	0.45
1:5:4291:G:N3	1:5:4291:G:H5"	2.32	0.45
1:5:4315:A:C3'	1:5:4316:G:H5'	2.47	0.45
1:5:4405:G:H4'	12:I:4:ARG:HD3	1.98	0.45
1:5:4742:G:C6	1:5:4743:G:C5	3.05	0.45
1:5:4910:G:N2	17:O:109:PRO:HA	2.32	0.45
2:7:24:C:C2'	2:7:25:G:O5'	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:51:G:N3	2:7:52:C:C5	2.84	0.45
3:8:143:G:C6	3:8:144:U:C5	3.04	0.45
5:B:190:VAL:O	5:B:191:ALA:CB	2.65	0.45
5:B:234:ARG:HD2	5:B:271:GLN:O	2.17	0.45
7:D:90:VAL:HB	7:D:226:TYR:CE1	2.50	0.45
7:D:111:ASN:C	7:D:111:ASN:HD22	2.24	0.45
7:D:122:GLN:HB3	7:D:168:ASP:OD1	2.17	0.45
7:D:282:GLN:C	7:D:283:LYS:O	2.54	0.45
9:F:84:TYR:HD1	9:F:85:VAL:H	1.65	0.45
19:Q:33:ARG:O	19:Q:34:PHE:C	2.59	0.45
21:S:33:PHE:HZ	21:S:106:VAL:HB	1.81	0.45
43:o:11:PHE:HA	43:o:18:HIS:HA	1.99	0.45
46:1:270:ALA:O	46:1:272:TYR:CD2	2.70	0.45
46:1:271:ARG:CZ	46:1:398:GLN:HB2	2.39	0.45
1:5:14:C:O2	1:5:15:A:C8	2.70	0.45
1:5:74:G:H5”	14:L:59:VAL:HG13	1.98	0.45
1:5:145:G:C6	1:5:146:G:C5	3.04	0.45
1:5:146:G:N1	1:5:147:A:N7	2.65	0.45
1:5:235:A:N6	1:5:238:C:C2	2.85	0.45
1:5:277:G:O2’	1:5:278:G:P	2.75	0.45
1:5:306:A:C2	1:5:307:A:C5	3.04	0.45
1:5:332:C:H2’	1:5:333:U:C6	2.52	0.45
1:5:476:G:C2	1:5:679:C:C2	3.05	0.45
1:5:512:U:H3’	1:5:513:U:C5’	2.46	0.45
1:5:719:C:N3	1:5:720:G:C8	2.85	0.45
1:5:722:G:H21	6:C:343:GLN:HE22	1.64	0.45
1:5:937:U:O2	1:5:937:U:H2’	2.16	0.45
1:5:1176:C:N3	1:5:1177:U:C5	2.85	0.45
1:5:1241:C:C2’	1:5:1242:G:OP1	2.65	0.45
1:5:1247:U:H2’	1:5:1248:C:O4’	2.17	0.45
1:5:1321:G:N2	1:5:3876:A:O4’	2.49	0.45
1:5:1321:G:C1’	1:5:1891:A:H62	2.29	0.45
1:5:1427:A:OP2	1:5:1428:U:C4	2.70	0.45
1:5:1475:G:H2’	1:5:1476:C:H6	1.82	0.45
1:5:1541:C:C2	1:5:1542:U:C6	3.05	0.45
1:5:1617:G:C2	1:5:2513:A:C2	3.04	0.45
1:5:1656:U:N3	1:5:1657:G:N7	2.65	0.45
1:5:1916:G:H2’	1:5:1917:A:C8	2.52	0.45
1:5:1993:C:C2	1:5:1994:C:C5	3.04	0.45
1:5:2076:G:C2	1:5:2077:C:N1	2.85	0.45
1:5:2360:A:N6	1:5:3860:A:C8	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2442:G:C3’	1:5:2443:G:H5”	2.47	0.45
1:5:2576:G:N1	1:5:2577:C:C5	2.84	0.45
1:5:2598:A:O2’	1:5:2599:G:C5’	2.64	0.45
1:5:2622:G:C2	1:5:2623:A:H1’	2.52	0.45
1:5:2852:U:C2	1:5:2852:U:C3’	2.97	0.45
1:5:3591:C:C4	1:5:3592:G:N7	2.76	0.45
1:5:3598:C:C2	1:5:3599:A:C8	3.05	0.45
1:5:3600:G:C2	1:5:3601:C:C2	3.05	0.45
1:5:3684:G:H2’	1:5:3685:C:O5’	2.17	0.45
1:5:3692:A:N1	1:5:3693:U:H1’	2.32	0.45
1:5:3736:A:O2’	1:5:3737:A:C4’	2.64	0.45
1:5:3751:G:H21	1:5:3775:A:H8	1.59	0.45
1:5:3794:C:C4	1:5:3795:A:N7	2.84	0.45
1:5:3923:A:H2’	1:5:3924:C:C6	2.51	0.45
1:5:4069:U:H2’	1:5:4069:U:O2	2.16	0.45
1:5:4109:G:C2	1:5:4110:C:C6	3.04	0.45
1:5:4167:G:C2	1:5:4168:G:N7	2.83	0.45
1:5:4205:A:H3’	1:5:4206:C:H5”	1.97	0.45
1:5:4460:U:H2’	1:5:4461:C:C6	2.52	0.45
1:5:4539:U:O2	1:5:4540:C:C6	2.69	0.45
1:5:4595:G:C2	1:5:4596:C:C2	3.04	0.45
1:5:4686:G:C5	1:5:4687:A:C8	3.05	0.45
1:5:4755:G:C6	1:5:4876:U:C4	3.05	0.45
1:5:4923:C:N3	1:5:4924:C:C5	2.85	0.45
1:5:4978:G:C2’	1:5:4979:A:O5’	2.64	0.45
2:7:21:G:H5”	2:7:21:G:C8	2.51	0.45
2:7:42:A:C2	2:7:43:U:C5	2.99	0.45
2:7:44:C:H2’	2:7:45:U:O5’	2.16	0.45
3:8:14:U:C2’	3:8:15:G:O5’	2.65	0.45
3:8:38:U:C2	36:h:92:ARG:NH1	2.83	0.45
5:B:213:GLN:C	5:B:214:ASP:OD1	2.60	0.45
6:C:138:MET:O	45:r:16:PHE:CZ	2.67	0.45
7:D:62:CYS:HB3	7:D:105:LEU:HD22	1.98	0.45
7:D:223:PHE:N	7:D:223:PHE:CD1	2.84	0.45
8:E:169:LEU:HD21	8:E:187:GLN:HB2	1.97	0.45
9:F:203:PHE:O	9:F:204:LYS:C	2.59	0.45
16:N:19:MET:HA	16:N:19:MET:HE3	1.99	0.45
17:O:168:TYR:OH	17:O:172:LYS:HD3	2.17	0.45
18:P:114:ILE:HD11	18:P:117:ILE:HD12	1.98	0.45
20:R:117:ARG:NH2	20:R:118:HIS:CE1	2.84	0.45
24:V:77:HIS:ND1	24:V:77:HIS:C	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:k:41:TYR:CB	39:k:43:TYR:CE1	3.00	0.45
1:5:2:G:C4	1:5:3:C:C5	3.05	0.45
1:5:300:A:N1	1:5:301:G:C5	2.85	0.45
1:5:453:G:H2'	1:5:453:G:N3	2.32	0.45
1:5:467:U:H2'	1:5:467:U:O2	2.17	0.45
1:5:677:G:C6	1:5:678:C:C4	3.05	0.45
1:5:1285:U:O2	8:E:126:LYS:HG3	2.16	0.45
1:5:1293:G:H2'	1:5:1294:A:C4	2.51	0.45
1:5:1362:G:C6	1:5:1363:C:C5	3.05	0.45
1:5:1377:G:N7	1:5:1378:C:H4'	2.32	0.45
1:5:1583:A:N6	1:5:1584:G:C4	2.85	0.45
1:5:1662:C:C2	1:5:1663:C:C6	3.04	0.45
1:5:1781:U:O2	1:5:1782:U:C6	2.69	0.45
1:5:2104:G:N1	1:5:2105:A:C4	2.85	0.45
1:5:2115:G:H8	1:5:2116:C:C6	2.35	0.45
1:5:2120:G:H4'	9:F:43:MET:HE1	1.99	0.45
1:5:2359:U:OP2	1:5:2360:A:O2'	2.25	0.45
1:5:2480:G:C6	1:5:2481:G:C5	3.04	0.45
1:5:2481:G:N2	1:5:2498:C:C2	2.85	0.45
1:5:2484:A:C5	1:5:2485:U:C5	3.04	0.45
1:5:2518:G:H4'	1:5:2538:U:O2'	2.16	0.45
1:5:2703:G:C2	1:5:2704:C:C6	3.05	0.45
1:5:2703:G:C4	1:5:2704:C:C6	3.05	0.45
1:5:2779:C:O2'	3:8:112:G:OP1	2.28	0.45
1:5:3606:U:O2	1:5:3606:U:H2'	2.16	0.45
1:5:3813:A:H2	1:5:4538:G:N3	2.14	0.45
1:5:3869:C:C2	1:5:3870:C:C5	3.05	0.45
1:5:4124:G:O2'	1:5:4125:C:OP1	2.30	0.45
1:5:4152:G:C6	1:5:4153:C:C4	3.05	0.45
1:5:4165:C:N4	1:5:4166:G:N7	2.63	0.45
1:5:4283:G:H1	1:5:4284:C:N4	2.10	0.45
1:5:4411:G:C6	1:5:4412:C:C4	3.05	0.45
1:5:4491:G:C6	1:5:4492:U:C4	3.05	0.45
1:5:4696:C:H2'	1:5:4697:U:O4'	2.16	0.45
1:5:4735:G:C2	1:5:4736:C:N1	2.85	0.45
1:5:4904:G:C2	1:5:4905:C:C2	3.04	0.45
1:5:5003:U:H2'	1:5:5004:C:C6	2.52	0.45
2:7:42:A:C2	2:7:43:U:N1	2.83	0.45
2:7:83:A:N1	2:7:85:G:C8	2.85	0.45
2:7:117:G:C6	2:7:118:C:C4	3.05	0.45
3:8:59:A:O5'	3:8:60:G:H2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:115:G:N2	3:8:116:C:C2	2.85	0.45
3:8:132:G:C2	3:8:133:G:C5	3.04	0.45
5:B:26:ARG:HB2	5:B:344:VAL:HG11	1.99	0.45
5:B:115:LYS:HE2	5:B:119:TYR:OH	2.16	0.45
5:B:216:MET:HE3	5:B:281:ASN:OD1	2.17	0.45
5:B:367:PHE:HZ	5:B:380:GLN:NE2	2.14	0.45
18:P:70:CYS:SG	18:P:83:TRP:HH2	2.39	0.45
20:R:9:ARG:HH11	20:R:9:ARG:HG2	1.82	0.45
35:g:101:LYS:O	35:g:105:LYS:HB2	2.17	0.45
36:h:72:PHE:CB	36:h:73:TYR:HD1	2.30	0.45
1:5:93:G:C4	1:5:94:A:C6	3.04	0.45
1:5:144:G:C2	1:5:145:G:C5	3.05	0.45
1:5:229:G:OP1	27:Y:11:ARG:NH1	2.48	0.45
1:5:273:U:N3	1:5:274:C:C4	2.85	0.45
1:5:296:A:O5’	1:5:296:A:C8	2.69	0.45
1:5:314:G:C2	1:5:4355:G:C5	3.05	0.45
1:5:316:U:O2’	1:5:317:A:C8	2.70	0.45
1:5:423:G:C4	1:5:424:U:C5	3.04	0.45
1:5:449:C:O2	1:5:449:C:C2’	2.64	0.45
1:5:475:G:H2’	1:5:476:G:O4’	2.16	0.45
1:5:488:G:N2	1:5:489:C:H1’	2.32	0.45
1:5:691:C:O2	1:5:692:A:C8	2.69	0.45
1:5:707:C:H1’	1:5:4944:C:N4	2.32	0.45
1:5:1188:C:O2	1:5:1188:C:C2’	2.63	0.45
1:5:1269:G:C2’	1:5:2111:G:O6	2.65	0.45
1:5:1280:C:C6	1:5:1280:C:H5’	2.46	0.45
1:5:1359:G:H2’	1:5:1360:G:C1’	2.47	0.45
1:5:1362:G:N2	1:5:1363:C:H1’	2.32	0.45
1:5:1473:U:C4	1:5:1474:C:C4	3.05	0.45
1:5:1725:U:N3	1:5:1726:U:C6	2.85	0.45
1:5:1725:U:H1’	9:F:113:LEU:CD1	2.47	0.45
1:5:1817:U:O2	1:5:1821:G:O6	2.35	0.45
1:5:1878:G:C2	1:5:1879:C:C2	3.05	0.45
1:5:1885:G:C6	1:5:1895:G:N1	2.85	0.45
1:5:1927:U:O2	1:5:1928:C:C6	2.70	0.45
1:5:2021:G:C2	1:5:2022:C:C2	3.05	0.45
1:5:2052:G:O3’	17:O:17:GLY:HA3	2.17	0.45
1:5:2415:U:H2’	1:5:2416:G:C8	2.52	0.45
1:5:2422:C:O2	1:5:2422:C:C2’	2.63	0.45
1:5:2448:G:O6	1:5:2510:G:O2’	2.30	0.45
1:5:2480:G:N2	1:5:2499:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2641:A:H2'	1:5:2642:A:O4'	2.17	0.45
1:5:2644:G:C2	1:5:2645:G:C8	3.05	0.45
1:5:2644:G:C2	1:5:2645:G:N9	2.85	0.45
1:5:2713:C:O2	1:5:2714:G:H8	1.96	0.45
1:5:2725:A:H2'	1:5:2726:G:H5'	1.99	0.45
1:5:2823:G:N2	1:5:2824:C:C2	2.85	0.45
1:5:2833:A:HO2'	1:5:2834:C:C4'	2.28	0.45
1:5:3694:U:O2	1:5:3695:U:C6	2.70	0.45
1:5:3702:A:N3	1:5:3702:A:C2'	2.76	0.45
1:5:3878:C:C2	1:5:4518:A:C6	3.05	0.45
1:5:4079:C:C2	1:5:4080:C:C5	3.05	0.45
1:5:4091:G:C5	1:5:4092:G:N7	2.85	0.45
1:5:4323:A:C2	1:5:4324:A:C5	3.05	0.45
1:5:4343:U:C4	1:5:4344:U:C4	3.05	0.45
1:5:4465:U:C4	1:5:4487:A:C6	3.04	0.45
1:5:4479:A:C6	1:5:4480:A:C4	3.05	0.45
2:7:93:G:N1	2:7:94:C:C4	2.85	0.45
3:8:99:U:O2	3:8:99:U:H2'	2.16	0.45
11:H:93:ARG:NH1	11:H:93:ARG:HB3	2.32	0.45
14:L:49:ARG:HA	36:h:119:PHE:O	2.17	0.45
19:Q:24:TYR:HE1	45:r:5:LEU:CD1	2.30	0.45
20:R:96:MET:O	20:R:97:ARG:C	2.60	0.45
21:S:81:TRP:NE1	21:S:94:TYR:HD1	2.15	0.45
33:e:34:ASN:O	33:e:35:TRP:C	2.60	0.45
38:j:39:TYR:C	38:j:41:ALA:N	2.75	0.45
46:1:417:ILE:HB	46:1:418:PRO:HD2	1.99	0.45
1:5:84:A:C6	1:5:86:U:C4	3.04	0.45
1:5:144:G:N2	1:5:145:G:C8	2.83	0.45
1:5:154:G:C4	1:5:155:C:C5	3.04	0.45
1:5:195:C:C2	1:5:196:C:C6	3.05	0.45
1:5:277:G:O2'	37:i:30:ARG:NH2	2.50	0.45
1:5:435:A:C6	1:5:436:C:C6	3.04	0.45
1:5:489:C:H42	1:5:664:G:H1	1.64	0.45
1:5:514:U:C6	1:5:514:U:C3'	3.00	0.45
1:5:1085:C:C2	1:5:1213:G:N1	2.85	0.45
1:5:1261:G:N3	1:5:1262:G:C8	2.84	0.45
1:5:1334:A:N6	1:5:1335:G:C6	2.85	0.45
1:5:1367:C:N3	1:5:1369:C:OP2	2.50	0.45
1:5:1383:G:H2'	1:5:1384:C:O4'	2.16	0.45
1:5:1404:G:N1	1:5:1414:C:C4	2.85	0.45
1:5:1684:A:N6	1:5:1685:G:C5	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1761:G:C2	1:5:1762:C:C2	3.05	0.45
1:5:1868:A:C6	1:5:1870:C:H1'	2.52	0.45
1:5:1912:G:C6	1:5:1913:C:N4	2.84	0.45
1:5:1983:A:H2	1:5:2010:A:C3'	2.29	0.45
1:5:2082:G:O2'	1:5:2083:C:O5'	2.34	0.45
1:5:2090:U:HO2'	1:5:2091:C:C5'	2.19	0.45
1:5:2273:G:H2'	1:5:2274:C:C6	2.52	0.45
1:5:2575:U:O2	1:5:2758:G:N2	2.50	0.45
1:5:2607:C:C2	1:5:2608:G:C8	3.05	0.45
1:5:2628:U:C2	1:5:2629:C:C6	3.05	0.45
1:5:2727:C:H2'	1:5:2728:U:C6	2.52	0.45
1:5:3632:C:C2	1:5:3633:C:C6	3.05	0.45
1:5:3656:A:HO2'	1:5:3747:A:HO2'	1.65	0.45
1:5:3867:A:H3'	1:5:3868:G:H8	1.81	0.45
1:5:3873:G:C2'	1:5:3874:G:O4'	2.58	0.45
1:5:4070:U:N3	1:5:4071:U:C6	2.85	0.45
1:5:4083:U:O2	1:5:4085:A:O4'	2.34	0.45
1:5:4165:C:O2	1:5:4166:G:C8	2.70	0.45
1:5:4216:G:C6	1:5:4217:G:N7	2.85	0.45
1:5:4230:C:O2	1:5:4230:C:C2'	2.64	0.45
1:5:4363:A:C2	1:5:4364:G:N9	2.85	0.45
1:5:4433:G:C2	1:5:4434:C:C4	3.04	0.45
1:5:4455:G:N1	1:5:4456:C:C5	2.84	0.45
1:5:4936:G:C2	1:5:4938:A:C8	3.04	0.45
1:5:4977:A:C6	1:5:4978:G:N1	2.85	0.45
2:7:25:G:C6	2:7:26:C:C4	3.05	0.45
2:7:42:A:C4	2:7:43:U:C5	3.05	0.45
2:7:71:G:C2	2:7:105:C:C2	3.05	0.45
3:8:118:C:N3	3:8:119:C:C6	2.76	0.45
6:C:288:ASP:OD2	6:C:291:ARG:CB	2.64	0.45
7:D:151:ALA:O	7:D:153:THR:N	2.50	0.45
8:E:42:ARG:O	8:E:43:ASN:C	2.59	0.45
8:E:114:THR:O	8:E:115:GLU:HB2	2.16	0.45
11:H:41:ILE:HD11	11:H:69:THR:CG2	2.47	0.45
12:I:86:HIS:HD2	12:I:139:ARG:HH12	1.65	0.45
14:L:9:ILE:HG13	29:a:52:TYR:HE2	1.80	0.45
14:L:39:ARG:HB2	14:L:39:ARG:HH11	1.81	0.45
16:N:182:HIS:O	16:N:183:THR:C	2.59	0.45
18:P:78:TRP:HA	18:P:78:TRP:CE3	2.52	0.45
19:Q:37:ARG:HG3	19:Q:38:ARG:HG2	1.99	0.45
19:Q:93:GLN:CB	29:a:87:ARG:HH12	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:k:41:TYR:HB3	39:k:43:TYR:CE1	2.51	0.45
1:5:54:G:C6	1:5:55:G:C5	3.04	0.44
1:5:66:A:C8	1:5:328:A:H1'	2.53	0.44
1:5:111:C:C2	1:5:331:G:N1	2.85	0.44
1:5:125:C:O2	1:5:125:C:C2'	2.65	0.44
1:5:176:G:C6	1:5:261:G:C6	3.05	0.44
1:5:270:U:O2	1:5:270:U:H2'	2.17	0.44
1:5:344:A:C6	1:5:345:C:C5	3.05	0.44
1:5:368:C:C2	1:5:374:G:C2	3.05	0.44
1:5:497:G:C6	1:5:657:C:N4	2.85	0.44
1:5:659:G:N1	1:5:660:A:N7	2.65	0.44
1:5:961:G:O6	1:5:969:C:C6	2.70	0.44
1:5:994:G:C4	1:5:995:C:C6	3.05	0.44
1:5:1070:G:N1	1:5:1071:C:C5	2.84	0.44
1:5:1077:C:C2	1:5:1078:A:C8	3.05	0.44
1:5:1176:C:C4	1:5:1177:U:C5	3.05	0.44
1:5:1273:G:H2'	8:E:69:TYR:O	2.17	0.44
1:5:1313:C:C2	1:5:1323:A:C8	3.06	0.44
1:5:1358:G:OP1	1:5:1506:G:O2'	2.34	0.44
1:5:1487:G:H8	1:5:1487:G:O5'	2.00	0.44
1:5:1497:A:OP2	19:Q:162:HIS:HB2	2.18	0.44
1:5:1522:G:H5"	1:5:1523:A:OP1	2.16	0.44
1:5:1551:C:H2'	1:5:1552:G:O4'	2.17	0.44
1:5:1751:A:C3'	1:5:1752:G:H5'	2.47	0.44
1:5:1759:G:N2	1:5:1760:G:H1'	2.32	0.44
1:5:2081:C:H2'	1:5:2082:G:H8	1.82	0.44
1:5:2315:G:N1	1:5:2316:G:C5	2.85	0.44
1:5:2319:C:H5	33:e:58:ILE:HG13	1.81	0.44
1:5:2366:A:O2'	1:5:2367:A:H5"	2.17	0.44
1:5:2496:G:N2	1:5:2497:C:C2	2.85	0.44
1:5:2505:C:O2	1:5:2505:C:O4'	2.33	0.44
1:5:2726:G:C5	1:5:2727:C:N4	2.85	0.44
1:5:3780:G:O6	1:5:3815:G:C2	2.70	0.44
1:5:3804:G:C5	1:5:3805:U:C5	3.05	0.44
1:5:4154:G:C6	1:5:4155:C:C4	3.05	0.44
1:5:4167:G:N2	1:5:4168:G:C4	2.86	0.44
1:5:4202:U:O2	1:5:4204:C:C5	2.70	0.44
1:5:4283:G:N2	1:5:4284:C:C4	2.85	0.44
1:5:4394:A:HO2'	1:5:4395:U:H5	1.62	0.44
1:5:4411:G:N2	1:5:4412:C:C2	2.85	0.44
1:5:4414:A:C6	1:5:4427:G:C2	2.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4463:U:C5	1:5:4488:A:C8	3.05	0.44
1:5:4772:C:C4	1:5:4773:C:C5	3.05	0.44
1:5:4975:G:C2	1:5:4977:A:C8	3.04	0.44
1:5:5004:C:C3'	1:5:5005:G:O4'	2.65	0.44
1:5:5013:C:O2	1:5:5013:C:O2'	2.32	0.44
1:5:5047:C:C6	1:5:5050:C:C6	3.02	0.44
3:8:13:G:C6	3:8:14:U:C4	3.05	0.44
3:8:116:C:O2	3:8:116:C:H2'	2.17	0.44
5:B:110:ILE:O	5:B:111:SER:CB	2.65	0.44
6:C:102:PHE:CD1	6:C:103:ALA:N	2.85	0.44
8:E:181:PRO:HA	8:E:246:GLN:NE2	2.17	0.44
11:H:12:ILE:HD11	11:H:16:VAL:HB	1.99	0.44
11:H:41:ILE:HG21	11:H:73:ILE:HD11	1.99	0.44
11:H:66:GLU:N	11:H:66:GLU:OE1	2.50	0.44
17:O:46:ASN:O	17:O:47:PHE:C	2.58	0.44
19:Q:68:ARG:O	19:Q:72:LEU:HD13	2.17	0.44
20:R:99:MET:HG3	20:R:103:ARG:NH1	2.31	0.44
22:T:19:PHE:CG	22:T:20:ARG:HG3	2.52	0.44
33:e:35:TRP:CZ3	33:e:56:PRO:CD	2.86	0.44
39:k:11:PHE:C	39:k:11:PHE:CD1	2.94	0.44
1:5:2:G:C2	1:5:3:C:C2	3.06	0.44
1:5:37:U:C4	1:5:38:A:N7	2.85	0.44
1:5:99:A:C4	1:5:100:C:O2	2.70	0.44
1:5:199:G:C2	1:5:201:C:C2	3.05	0.44
1:5:268:G:C6	1:5:269:G:N7	2.85	0.44
1:5:294:G:H5"	43:o:43:ARG:NH2	2.30	0.44
1:5:405:U:H2'	1:5:407:A:N7	2.32	0.44
1:5:488:G:C5	1:5:489:C:C5	3.05	0.44
1:5:920:C:C2	1:5:921:C:C6	3.06	0.44
1:5:984:C:C2	1:5:1070:G:N2	2.85	0.44
1:5:1099:C:H2'	1:5:1100:U:O4'	2.17	0.44
1:5:1234:G:H3'	1:5:1235:G:H8	1.82	0.44
1:5:1374:G:N2	1:5:1375:C:H1'	2.31	0.44
1:5:1376:C:H2'	1:5:1378:C:H6	1.82	0.44
1:5:1420:A:OP1	1:5:1420:A:H4'	2.17	0.44
1:5:1590:C:H5'	1:5:2856:C:O2'	2.17	0.44
1:5:1667:G:C6	1:5:2280:G:N3	2.85	0.44
1:5:1864:G:C5	1:5:1865:G:C8	3.05	0.44
1:5:1968:G:H2'	1:5:1969:G:O4'	2.17	0.44
1:5:1985:G:H2'	1:5:1986:U:C6	2.52	0.44
1:5:2023:C:H3'	1:5:2024:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2245:G:C5	1:5:2246:C:C5	3.06	0.44
1:5:2308:A:H1'	3:8:19:C:O2'	2.18	0.44
1:5:2367:A:HO2'	1:5:2368:A:C5'	2.29	0.44
1:5:2384:U:C2	1:5:2385:U:C6	3.04	0.44
1:5:2448:G:C2'	1:5:2449:A:C8	3.00	0.44
1:5:2486:G:H2'	1:5:2487:G:C1'	2.47	0.44
1:5:2566:G:N3	1:5:2566:G:H2'	2.33	0.44
1:5:2567:G:C4	1:5:2568:C:C5	3.06	0.44
1:5:2715:G:C5	1:5:2716:C:C5	3.05	0.44
1:5:3655:C:O2	1:5:3655:C:H2'	2.16	0.44
1:5:3692:A:H5"	1:5:3693:U:OP2	2.17	0.44
1:5:3830:A:H4'	1:5:4552:U:H4'	1.98	0.44
1:5:3880:G:O2'	1:5:3881:G:C5'	2.65	0.44
1:5:4142:C:C2	1:5:4143:G:N2	2.86	0.44
1:5:4164:C:O2	1:5:4164:C:H2'	2.18	0.44
1:5:4462:C:H2'	1:5:4463:U:O4'	2.17	0.44
1:5:4568:A:N3	18:P:69:ARG:NH2	2.65	0.44
1:5:4661:G:C5'	1:5:4661:G:H8	2.30	0.44
1:5:4730:C:H2'	1:5:4965:U:C4	2.52	0.44
1:5:4737:G:N1	1:5:4963:G:N3	2.64	0.44
3:8:63:U:O2	3:8:63:U:H3'	2.18	0.44
4:A:185:ALA:HB3	4:A:196:TRP:CH2	2.53	0.44
4:A:186:TYR:CB	4:A:196:TRP:HZ3	2.30	0.44
4:A:211:PHE:CZ	4:A:221:LYS:HD3	2.52	0.44
4:A:242:ARG:HH11	4:A:242:ARG:CB	2.29	0.44
5:B:264:PHE:HD2	17:O:66:PRO:HD3	1.82	0.44
7:D:191:ASN:HB3	7:D:194:VAL:HG23	1.98	0.44
10:G:182:CYS:HA	10:G:226:TYR:CD2	2.53	0.44
16:N:21:PHE:CZ	16:N:25:VAL:HG21	2.53	0.44
16:N:28:TRP:CE3	16:N:29:GLN:HA	2.53	0.44
30:b:15:LYS:C	30:b:17:HIS:N	2.74	0.44
41:m:97:ARG:HD2	41:m:122:ARG:HD2	1.99	0.44
46:1:38:THR:HG22	46:1:165:LEU:HD22	1.98	0.44
46:1:406:GLU:CD	46:1:406:GLU:C	2.85	0.44
1:5:83:C:O5'	1:5:84:A:C2'	2.64	0.44
1:5:313:U:N3	1:5:314:G:C8	2.85	0.44
1:5:344:A:C2	1:5:345:C:H1'	2.52	0.44
1:5:381:U:H4'	1:5:414:C:H2'	2.00	0.44
1:5:455:C:C2	1:5:456:C:C6	3.06	0.44
1:5:487:G:C6	1:5:488:G:C5	3.06	0.44
1:5:660:A:N3	1:5:661:C:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:664:G:C2	1:5:667:A:N1	2.84	0.44
1:5:976:G:OP1	1:5:976:G:H4'	2.17	0.44
1:5:1064:G:C2	1:5:1065:G:C4	3.05	0.44
1:5:1210:C:O2	1:5:1210:C:C2'	2.64	0.44
1:5:1215:C:N4	1:5:1216:C:H5	2.16	0.44
1:5:1374:G:C2	1:5:1375:C:N1	2.85	0.44
1:5:1435:G:C3'	1:5:1436:C:H5'	2.48	0.44
1:5:2090:U:C2	6:C:307:LYS:HE2	2.51	0.44
1:5:2327:G:C2	1:5:2328:G:C4	3.05	0.44
1:5:2418:A:C2	1:5:2419:C:C6	3.05	0.44
1:5:2438:A:N6	1:5:2441:C:N3	2.65	0.44
1:5:2446:C:H2'	1:5:2447:U:H6	1.74	0.44
1:5:2484:A:C2	1:5:2485:U:C2	3.06	0.44
1:5:2513:A:OP1	35:g:11:LEU:HG	2.17	0.44
1:5:2645:G:H21	1:5:2646:C:H1'	1.83	0.44
1:5:2701:U:N3	1:5:2702:C:C5	2.85	0.44
1:5:2811:G:H22	1:5:2813:A:C3'	2.28	0.44
1:5:2822:G:H5"	20:R:18:GLY:HA3	1.99	0.44
1:5:2895:A:C2	1:5:2896:G:N9	2.85	0.44
1:5:3596:A:O3'	1:5:3597:G:O4'	2.35	0.44
1:5:3633:C:H1'	1:5:3648:A:N3	2.32	0.44
1:5:3658:C:H2'	1:5:3659:G:H8	1.82	0.44
1:5:3687:A:C6	1:5:3688:U:C6	3.05	0.44
1:5:3861:A:C2	1:5:3862:A:C4	3.06	0.44
1:5:3871:A:H2'	1:5:3872:A:C8	2.52	0.44
1:5:4104:G:C2'	1:5:4105:A:C8	3.00	0.44
1:5:4153:C:O2	1:5:4154:G:C8	2.71	0.44
1:5:4292:A:O4'	1:5:4330:G:O4'	2.35	0.44
1:5:4297:G:N1	1:5:4298:A:C8	2.86	0.44
1:5:4454:G:N3	1:5:4454:G:H2'	2.33	0.44
1:5:4479:A:C6	1:5:4480:A:N9	2.86	0.44
1:5:4508:C:N3	1:5:4512:U:C5	2.76	0.44
1:5:4652:G:N3	1:5:4653:C:C5	2.85	0.44
1:5:4681:A:H2'	1:5:4682:U:O4'	2.17	0.44
1:5:4739:C:C2'	1:5:4740:G:O4'	2.62	0.44
1:5:4757:C:O2	17:O:114:LYS:C	2.59	0.44
1:5:4884:G:C8	1:5:4884:G:H5"	2.52	0.44
1:5:4923:C:H2'	1:5:4924:C:O4'	2.17	0.44
1:5:4968:A:OP1	5:B:120:LYS:HB2	2.17	0.44
1:5:4998:G:N2	1:5:4999:G:H1'	2.32	0.44
2:7:7:G:H5"	7:D:22:ARG:HH12	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:24:C:H2'	2:7:25:G:O5'	2.17	0.44
2:7:55:A:H2'	2:7:56:G:H5'	2.00	0.44
5:B:258:HIS:O	5:B:258:HIS:HD2	2.00	0.44
5:B:315:ASN:OD1	5:B:326:VAL:HG12	2.18	0.44
8:E:224:GLN:HA	8:E:229:PHE:HB2	1.98	0.44
9:F:201:LYS:HA	9:F:201:LYS:HE3	1.99	0.44
14:L:55:LEU:HD22	14:L:120:TYR:CD2	2.52	0.44
20:R:95:TRP:CD2	20:R:99:MET:HE2	2.52	0.44
20:R:98:ARG:NH1	20:R:133:LYS:HB2	2.31	0.44
28:Z:17:ARG:HG2	28:Z:18:TYR:CE1	2.53	0.44
1:5:29:G:C2	1:5:30:C:C2	3.05	0.44
1:5:278:G:H4'	1:5:279:A:OP2	2.16	0.44
1:5:458:C:H2'	1:5:459:C:O4'	2.18	0.44
1:5:483:G:N1	1:5:484:U:C5	2.83	0.44
1:5:671:G:C6	1:5:672:C:C4	3.05	0.44
1:5:672:C:C2	1:5:673:C:C6	3.05	0.44
1:5:709:C:H2'	1:5:710:G:O4'	2.18	0.44
1:5:738:C:H2'	1:5:739:G:C8	2.52	0.44
1:5:973:G:H1	1:5:1282:G:H1'	1.83	0.44
1:5:1169:G:C6	1:5:1170:G:N7	2.85	0.44
1:5:1189:G:N3	1:5:1190:C:C6	2.86	0.44
1:5:1232:G:C4'	1:5:1233:G:OP2	2.66	0.44
1:5:1264:C:HO2'	1:5:2114:G:P	2.36	0.44
1:5:1411:C:C2	1:5:1412:G:N7	2.84	0.44
1:5:1416:G:C2	1:5:1417:C:C2	3.05	0.44
1:5:1492:G:C2	1:5:1493:G:C4	3.06	0.44
1:5:1727:U:N3	1:5:1728:U:C4	2.85	0.44
1:5:1988:G:H2'	1:5:1988:G:N3	2.33	0.44
1:5:1991:A:H2'	1:5:1992:U:H1'	1.99	0.44
1:5:2316:G:C2	1:5:2324:C:O2	2.71	0.44
1:5:2692:U:C2'	1:5:2693:G:H5'	2.47	0.44
1:5:2783:A:N3	1:5:2784:C:C6	2.86	0.44
1:5:3633:C:N3	1:5:3634:G:N7	2.66	0.44
1:5:3807:A:C2	1:5:3808:C:C6	3.05	0.44
1:5:4092:G:N1	1:5:4093:G:C2	2.84	0.44
1:5:4097:G:C2	1:5:4098:A:N9	2.86	0.44
1:5:4107:G:N3	1:5:4108:G:C8	2.86	0.44
1:5:4236:G:C2'	1:5:4237:C:O4'	2.66	0.44
1:5:4283:G:C6	1:5:4284:C:C4	3.03	0.44
1:5:4513:A:O2'	1:5:4514:G:H5'	2.17	0.44
1:5:4535:A:C2	1:5:4536:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4550:G:N1	1:5:4551:U:C5	2.85	0.44
1:5:4599:A:N6	1:5:4610:A:C8	2.86	0.44
2:7:50:A:C6	2:7:51:G:N7	2.85	0.44
3:8:75:G:N1	3:8:76:C:C4	2.85	0.44
3:8:149:G:C2	3:8:151:G:C5	3.05	0.44
4:A:48:ILE:HD11	4:A:82:ILE:HG22	1.98	0.44
6:C:41:HIS:CD2	6:C:41:HIS:C	2.96	0.44
7:D:264:LYS:HD2	7:D:266:TRP:CD2	2.53	0.44
10:G:104:PRO:HG3	10:G:194:VAL:HG12	1.99	0.44
12:I:209:TRP:O	12:I:212:LEU:N	2.49	0.44
14:L:65:ARG:HD3	29:a:69:PHE:CD1	2.52	0.44
14:L:127:PHE:HB2	36:h:118:LYS:C	2.42	0.44
23:U:70:ILE:HD12	23:U:70:ILE:N	2.32	0.44
26:X:84:GLU:OE1	46:1:408:SER:OG	2.31	0.44
26:X:155:ILE:O	26:X:156:ILE:CB	2.66	0.44
32:d:79:ASN:N	32:d:79:ASN:OD1	2.50	0.44
32:d:87:ARG:CB	32:d:87:ARG:CZ	2.95	0.44
1:5:37:U:H5”	29:a:32:ARG:HD2	1.99	0.44
1:5:102:G:C2	1:5:103:G:C5	3.06	0.44
1:5:176:G:C4	1:5:261:G:C2	3.06	0.44
1:5:273:U:C2’	1:5:274:C:O5’	2.66	0.44
1:5:289:C:N4	1:5:290:U:O4	2.51	0.44
1:5:341:G:H2’	1:5:341:G:N3	2.32	0.44
1:5:341:G:C6	1:5:342:G:N7	2.85	0.44
1:5:481:G:C2	1:5:482:G:N7	2.86	0.44
1:5:483:G:N2	1:5:484:U:N3	2.66	0.44
1:5:497:G:N1	1:5:499:G:C5	2.86	0.44
1:5:1076:C:N3	1:5:1077:C:C5	2.80	0.44
1:5:1088:C:C2	1:5:1089:G:C8	3.06	0.44
1:5:1201:U:O2	1:5:1202:C:C6	2.70	0.44
1:5:1233:G:C2	1:5:1234:G:C5	3.06	0.44
1:5:1266:G:C2	1:5:1268:G:O6	2.71	0.44
1:5:1354:A:N1	1:5:1385:G:O2’	2.42	0.44
1:5:1362:G:N2	1:5:1363:C:C2	2.86	0.44
1:5:1391:A:C4	1:5:1392:A:C8	3.06	0.44
1:5:1430:C:C4	1:5:1431:C:C5	3.06	0.44
1:5:1473:U:N3	1:5:1474:C:C5	2.86	0.44
1:5:1577:G:N3	1:5:1577:G:C3’	2.81	0.44
1:5:1618:G:N2	1:5:1619:G:C8	2.86	0.44
1:5:1668:A:OP1	30:b:18:ARG:NH1	2.51	0.44
1:5:1691:G:C5	1:5:1692:C:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1752:G:C5	1:5:1753:G:N7	2.86	0.44
1:5:1848:C:H5”	1:5:1848:C:C6	2.45	0.44
1:5:1886:G:C2	1:5:1894:C:C2	3.02	0.44
1:5:1984:A:H62	1:5:2011:C:C4’	2.31	0.44
1:5:1992:U:C6	1:5:2002:A:C2	3.05	0.44
1:5:2074:C:H2’	1:5:2075:G:O4’	2.17	0.44
1:5:2278:G:H5’	19:Q:7:HIS:HE1	1.83	0.44
1:5:2330:G:H2’	1:5:2331:G:O4’	2.17	0.44
1:5:2405:G:H8	1:5:2405:G:O5’	2.01	0.44
1:5:2409:U:C5	1:5:2783:A:N1	2.74	0.44
1:5:2451:A:C6	1:5:2452:G:N9	2.86	0.44
1:5:2543:A:H2	1:5:2773:G:N1	2.14	0.44
1:5:2559:G:C2	1:5:2560:C:C2	3.05	0.44
1:5:2638:G:N2	1:5:2697:A:H61	2.15	0.44
1:5:2769:U:H3	1:5:2770:C:N4	2.16	0.44
1:5:2823:G:N7	20:R:20:LYS:HD3	2.33	0.44
1:5:3845:A:H2’	1:5:3845:A:N3	2.33	0.44
1:5:3854:C:C4	1:5:3855:C:C5	3.05	0.44
1:5:3857:G:C6	1:5:3858:C:C6	3.05	0.44
1:5:4167:G:C2	1:5:4168:G:N9	2.85	0.44
1:5:4192:A:H2’	1:5:4193:C:O4’	2.17	0.44
1:5:4199:C:C2	1:5:4199:C:C3’	2.96	0.44
1:5:4209:G:H5”	1:5:4275:G:O2’	2.17	0.44
1:5:4235:G:C2’	1:5:4236:G:O5’	2.62	0.44
1:5:4281:A:C2	1:5:4283:G:C4	3.04	0.44
1:5:4355:G:N1	1:5:4356:G:C5	2.84	0.44
1:5:4547:C:O3’	1:5:4548:A:H8	2.00	0.44
1:5:4551:U:N3	1:5:4552:U:C5	2.86	0.44
1:5:4646:U:OP1	20:R:58:HIS:HA	2.17	0.44
1:5:5050:C:N3	1:5:5051:C:C6	2.86	0.44
1:5:5055:G:N2	1:5:5056:A:C4	2.85	0.44
2:7:28:C:H1’	2:7:55:A:N6	2.33	0.44
3:8:129:C:C4	3:8:130:C:C5	3.06	0.44
5:B:92:TYR:HB2	5:B:159:VAL:HB	1.98	0.44
5:B:106:PHE:N	5:B:106:PHE:CD1	2.86	0.44
11:H:122:TYR:C	11:H:122:TYR:CD1	2.96	0.44
19:Q:88:ASP:OD1	19:Q:109:ALA:CA	2.66	0.44
20:R:9:ARG:HH12	20:R:10:LEU:CD1	2.31	0.44
27:Y:56:GLN:HE21	27:Y:56:GLN:HB3	1.63	0.44
33:e:47:ARG:HD2	33:e:49:PHE:CE2	2.53	0.44
41:m:88:LYS:HA	41:m:92:ASP:OD1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:32:G:H2'	1:5:33:A:O5'	2.18	0.44
1:5:111:C:O2	1:5:331:G:C2	2.70	0.44
1:5:279:A:H3'	1:5:279:A:OP1	2.17	0.44
1:5:341:G:C2	1:5:342:G:C8	3.06	0.44
1:5:382:G:N2	1:5:384:A:H2'	2.32	0.44
1:5:479:G:N3	1:5:480:C:C6	2.86	0.44
1:5:483:G:N2	1:5:484:U:C4	2.85	0.44
1:5:726:G:O2'	1:5:727:C:H5'	2.18	0.44
1:5:744:G:H2'	1:5:745:G:C8	2.52	0.44
1:5:1086:C:H42	1:5:1211:G:H1	1.64	0.44
1:5:1184:A:C6	1:5:1185:G:N7	2.86	0.44
1:5:1185:G:C6	1:5:1186:U:C5	3.05	0.44
1:5:1246:G:C5	1:5:1247:U:C6	3.04	0.44
1:5:1339:U:O2	1:5:1339:U:C2'	2.58	0.44
1:5:1358:G:P	6:C:114:ARG:NH2	2.91	0.44
1:5:1370:G:H5"	1:5:1371:A:OP1	2.17	0.44
1:5:1451:G:OP1	1:5:1718:C:C4	2.70	0.44
1:5:1551:C:C3'	1:5:1552:G:O4'	2.65	0.44
1:5:1615:C:N3	1:5:1616:U:C6	2.86	0.44
1:5:1621:A:O2'	1:5:1622:U:H5'	2.18	0.44
1:5:1692:C:C4	1:5:1693:U:C5	3.06	0.44
1:5:1761:G:N3	1:5:1762:C:C6	2.84	0.44
1:5:1800:U:H6	1:5:1800:U:H5"	1.83	0.44
1:5:1865:G:OP1	12:I:119:PHE:HA	2.17	0.44
1:5:1916:G:C8	34:f:16:ARG:HD3	2.53	0.44
1:5:1928:C:N4	17:O:133:ARG:CZ	2.81	0.44
1:5:1937:C:C2'	1:5:1938:C:H2'	2.48	0.44
1:5:1968:G:C2	1:5:1969:G:C5	3.06	0.44
1:5:2339:G:C4	1:5:2340:C:C6	3.06	0.44
1:5:2360:A:O4'	1:5:2362:U:C6	2.71	0.44
1:5:2394:G:O6	1:5:2819:U:OP2	2.36	0.44
1:5:2460:A:C1'	16:N:94:PHE:CE1	3.01	0.44
1:5:2479:G:C6	1:5:2480:G:C6	3.05	0.44
1:5:2484:A:C4	1:5:2485:U:C6	3.06	0.44
1:5:2559:G:C5	1:5:2560:C:C5	3.06	0.44
1:5:2587:A:OP1	35:g:68:SER:OG	2.26	0.44
1:5:2588:C:C6	1:5:2588:C:C3'	3.01	0.44
1:5:2614:C:C2	1:5:2726:G:N1	2.85	0.44
1:5:2651:C:O2'	35:g:54:ARG:NH2	2.50	0.44
1:5:2657:G:H2'	1:5:2658:G:C8	2.53	0.44
1:5:2698:G:C5	1:5:2699:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2732:G:C6	1:5:2733:C:C4	3.05	0.44
1:5:2832:A:C2'	1:5:2833:A:H5"	2.32	0.44
1:5:3717:A:C2'	1:5:3718:A:O5'	2.64	0.44
1:5:3751:G:C6	1:5:3752:C:C4	3.05	0.44
1:5:3771:C:N4	1:5:3776:G:H22	2.15	0.44
1:5:3830:A:C2	1:5:3831:U:C6	3.06	0.44
1:5:3922:G:C2	1:5:4542:U:C5	3.06	0.44
1:5:4107:G:C4	1:5:4108:G:C8	3.06	0.44
1:5:4114:C:C3'	1:5:4115:G:O4'	2.62	0.44
1:5:4123:C:P	35:g:90:ARG:HH12	2.41	0.44
1:5:4177:C:C2	1:5:4178:A:C8	3.05	0.44
1:5:4277:G:C4	1:5:4278:C:C5	3.05	0.44
1:5:4464:A:H5'	1:5:4464:A:C4	2.52	0.44
1:5:4535:A:N6	1:5:4536:C:C5	2.85	0.44
1:5:4659:G:N1	1:5:4660:G:C5	2.85	0.44
1:5:4730:C:H1'	1:5:4731:G:H3'	1.99	0.44
1:5:4953:G:H2'	1:5:4954:G:O4'	2.16	0.44
2:7:39:C:C5	13:J:49:VAL:HG21	2.52	0.44
2:7:99:G:N7	21:S:55:LYS:HE3	2.33	0.44
3:8:49:G:C2	3:8:50:C:C2	3.06	0.44
5:B:74:GLU:HG2	5:B:334:LYS:HE3	2.00	0.44
9:F:95:ILE:HG22	9:F:96:ARG:O	2.17	0.44
11:H:40:HIS:CD2	11:H:40:HIS:N	2.85	0.44
21:S:29:ARG:NH1	21:S:29:ARG:CG	2.80	0.44
23:U:101:ARG:HH11	23:U:101:ARG:HG3	1.81	0.44
28:Z:4:PHE:CE2	31:c:66:LEU:HB3	2.53	0.44
38:j:17:THR:CG2	38:j:29:LEU:HD21	2.48	0.44
1:5:27:C:O2	1:5:27:C:C2'	2.42	0.44
1:5:33:A:H5'	16:N:86:HIS:CD2	2.53	0.44
1:5:93:G:N2	1:5:94:A:N3	2.65	0.44
1:5:234:G:O2'	1:5:235:A:H5'	2.18	0.44
1:5:273:U:C4	1:5:274:C:N4	2.85	0.44
1:5:328:A:N1	1:5:329:A:C6	2.86	0.44
1:5:432:U:O4	17:O:91:LYS:HA	2.17	0.44
1:5:1201:U:C4	1:5:1202:C:C5	3.06	0.44
1:5:1221:G:N2	1:5:1233:G:C8	2.86	0.44
1:5:1239:C:C4'	1:5:1240:G:O5'	2.65	0.44
1:5:1354:A:C4	1:5:1503:A:C2	3.05	0.44
1:5:1374:G:C2	1:5:1375:C:C2	3.06	0.44
1:5:1411:C:O2	1:5:1411:C:H2'	2.17	0.44
1:5:1413:C:C2	1:5:1414:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1577:G:O4'	4:A:181:LYS:HE3	2.18	0.44
1:5:1602:U:O2	1:5:1602:U:C2'	2.64	0.44
1:5:1613:A:H3'	1:5:1614:C:H5'	2.00	0.44
1:5:1843:A:C2	1:5:1844:G:N9	2.85	0.44
1:5:1886:G:N1	1:5:1894:C:N4	2.66	0.44
1:5:1960:A:H3'	1:5:1961:G:C5'	2.48	0.44
1:5:2279:A:H2'	1:5:2280:G:C8	2.53	0.44
1:5:2281:U:C4'	33:e:46:ARG:NH2	2.79	0.44
1:5:2398:U:O2	1:5:2398:U:O2'	2.36	0.44
1:5:2606:G:C2	1:5:2607:C:C2	3.05	0.44
1:5:2857:A:C4	1:5:2858:A:C5	3.06	0.44
1:5:3844:U:N3	1:5:3845:A:C8	2.85	0.44
1:5:4150:G:C6	1:5:4151:G:C5	3.06	0.44
1:5:4215:C:N4	1:5:4216:G:C6	2.86	0.44
1:5:4483:C:C4	1:5:4484:A:N7	2.85	0.44
1:5:4489:G:C4	1:5:4490:C:C6	3.06	0.44
1:5:4653:C:N3	1:5:4654:C:C4	2.85	0.44
1:5:4749:C:C5	1:5:4750:G:C2	3.05	0.44
1:5:4750:G:O6	1:5:4949:G:C5	2.70	0.44
2:7:22:A:C2	2:7:23:A:C6	3.06	0.44
3:8:102:G:O3'	38:j:21:ARG:HD3	2.18	0.44
4:A:233:ARG:O	4:A:235:VAL:N	2.51	0.44
5:B:67:VAL:HG23	24:V:14:PHE:HE2	1.81	0.44
7:D:284:LYS:CB	12:I:209:TRP:CZ3	2.95	0.44
9:F:237:ASN:HD21	9:F:238:ARG:C	2.25	0.44
10:G:157:ILE:HG23	10:G:167:VAL:HG11	1.99	0.44
13:J:166:PHE:CZ	13:J:172:GLY:HA3	2.52	0.44
15:M:112:VAL:HG11	17:O:201:PHE:CE2	2.53	0.44
16:N:88:GLY:HA2	43:o:48:TYR:CD2	2.53	0.44
17:O:192:PHE:N	17:O:192:PHE:HD1	2.15	0.44
33:e:108:ARG:HD3	33:e:128:ARG:NH2	2.30	0.44
38:j:58:THR:O	38:j:59:THR:C	2.60	0.44
1:5:88:A:O2'	1:5:89:C:C5'	2.65	0.44
1:5:349:A:C6	6:C:45:ARG:NH2	2.86	0.44
1:5:445:U:C5	1:5:446:C:C5	3.06	0.44
1:5:450:G:O2'	1:5:453:G:P	2.76	0.44
1:5:732:A:C2	1:5:733:A:C1'	3.00	0.44
1:5:992:C:C2	1:5:993:G:N7	2.85	0.44
1:5:1086:C:C2	1:5:1212:G:C2	3.06	0.44
1:5:1174:G:N3	1:5:1175:A:C8	2.86	0.44
1:5:1219:G:C4	1:5:1220:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1293:G:H8	1:5:1293:G:C5'	2.31	0.44
1:5:1491:A:N1	1:5:1492:G:C6	2.86	0.44
1:5:1492:G:N3	1:5:1493:G:C8	2.86	0.44
1:5:1581:G:C5	1:5:1610:C:C4	3.06	0.44
1:5:1584:G:C5	1:5:1585:C:C5	3.06	0.44
1:5:1638:A:H4'	1:5:1639:U:OP2	2.18	0.44
1:5:1656:U:C2	1:5:1657:G:C8	3.06	0.44
1:5:1828:C:N3	1:5:1829:G:C8	2.85	0.44
1:5:1858:A:N3	1:5:1859:C:C6	2.86	0.44
1:5:1965:G:C2	1:5:1966:C:C2	3.06	0.44
1:5:2110:C:HO2'	1:5:2111:G:H5'	1.83	0.44
1:5:2328:G:C6	1:5:2329:U:C4	3.06	0.44
1:5:2413:U:N3	1:5:2414:G:N7	2.66	0.44
1:5:2545:U:C5	1:5:2546:G:H4'	2.53	0.44
1:5:2599:G:C8	1:5:2600:A:C8	3.05	0.44
1:5:2632:U:C2	1:5:2633:U:H5	2.30	0.44
1:5:2697:A:C2	1:5:2698:G:C8	3.05	0.44
1:5:2698:G:C2	1:5:2699:C:C2	3.06	0.44
1:5:2735:G:N2	1:5:2736:G:C4	2.86	0.44
1:5:2851:G:C6	1:5:2852:U:C1'	3.00	0.44
1:5:2855:G:N2	1:5:2859:G:N2	2.66	0.44
1:5:3658:C:H2'	1:5:3659:G:C8	2.53	0.44
1:5:3758:U:C4	1:5:3765:G:C5	3.05	0.44
1:5:3878:C:N4	1:5:4518:A:N3	2.64	0.44
1:5:4087:G:H21	10:G:49:ARG:HD2	1.83	0.44
1:5:4098:A:C6	1:5:4099:G:C5	3.06	0.44
1:5:4099:G:C6	1:5:4100:C:C5	3.05	0.44
1:5:4197:G:C6	1:5:4198:G:C4	3.06	0.44
1:5:4335:C:H2'	1:5:4336:A:C1'	2.47	0.44
1:5:4336:A:H5'	1:5:4337:C:O5'	2.18	0.44
1:5:4406:U:C4	1:5:4407:G:N7	2.85	0.44
1:5:4413:C:H2'	1:5:4414:A:C1'	2.47	0.44
1:5:4869:U:H5'	1:5:4870:G:N2	2.32	0.44
1:5:4981:G:H1'	18:P:69:ARG:NH1	2.33	0.44
2:7:94:C:C2	2:7:95:C:H5	2.27	0.44
3:8:103:A:H3'	3:8:104:A:H5"	2.00	0.44
3:8:118:C:C4	3:8:119:C:H5	2.36	0.44
4:A:202:VAL:HA	4:A:211:PHE:O	2.18	0.44
5:B:40:PRO:O	5:B:187:GLY:HA2	2.18	0.44
5:B:116:ARG:CB	5:B:177:LYS:HA	2.47	0.44
6:C:57:LEU:O	6:C:58:ALA:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:29:ASP:HB2	7:D:32:ALA:HB3	2.00	0.44
8:E:129:PHE:O	8:E:132:HIS:HB2	2.17	0.44
8:E:241:GLN:OE1	8:E:242:ARG:N	2.50	0.44
9:F:229:PHE:C	9:F:229:PHE:CD1	2.96	0.44
10:G:73:ARG:HH11	10:G:73:ARG:HB2	1.82	0.44
13:J:154:LYS:O	13:J:155:HIS:CB	2.66	0.44
15:M:81:ASP:OD1	15:M:84:ALA:HB3	2.17	0.44
16:N:68:ARG:NH1	16:N:123:GLU:HG3	2.33	0.44
20:R:120:TYR:C	20:R:120:TYR:HD1	2.25	0.44
20:R:131:VAL:HG23	20:R:132:PHE:CE2	2.52	0.44
22:T:54:HIS:C	22:T:54:HIS:ND1	2.75	0.44
23:U:26:THR:HA	23:U:68:SER:CB	2.48	0.44
32:d:85:ARG:HD3	32:d:109:VAL:HG21	2.00	0.44
33:e:44:ARG:O	33:e:49:PHE:HB2	2.18	0.44
33:e:85:LEU:HD12	33:e:111:ILE:HG23	1.99	0.44
34:f:36:ARG:HH11	34:f:36:ARG:CG	2.28	0.44
1:5:21:G:C4	3:8:36:G:N2	2.85	0.44
1:5:111:C:H1’	1:5:331:G:N2	2.33	0.44
1:5:318:A:H2’	1:5:319:A:C8	2.53	0.44
1:5:952:G:N1	1:5:953:C:C4	2.86	0.44
1:5:1177:U:C4’	7:D:282:GLN:HB3	2.47	0.44
1:5:1190:C:N3	1:5:1191:C:C4	2.83	0.44
1:5:1206:C:C2	1:5:1207:C:C6	3.06	0.44
1:5:1264:C:O2’	1:5:2114:G:OP2	2.36	0.44
1:5:1281:G:C6	8:E:48:ARG:NH1	2.86	0.44
1:5:1545:G:N1	1:5:1546:C:C4	2.86	0.44
1:5:1627:G:C4	1:5:1628:C:C6	3.05	0.44
1:5:1650:A:N6	6:C:100:ARG:HE	2.16	0.44
1:5:1865:G:C6	1:5:1867:A:OP2	2.71	0.44
1:5:1966:C:H42	1:5:1967:A:H62	1.66	0.44
1:5:1983:A:C2	1:5:2008:U:C5	2.94	0.44
1:5:1989:G:C2	1:5:1990:A:N7	2.85	0.44
1:5:2091:C:OP2	1:5:2259:G:C8	2.71	0.44
1:5:2382:A:N3	1:5:2382:A:C2’	2.81	0.44
1:5:2481:G:C4	1:5:2482:C:C5	3.05	0.44
1:5:2628:U:N3	1:5:2629:C:C5	2.86	0.44
1:5:2639:U:H1’	35:g:26:PRO:HA	1.99	0.44
1:5:2712:G:C2	1:5:2713:C:C2	3.06	0.44
1:5:3742:G:N2	1:5:3743:G:C4	2.86	0.44
1:5:3823:G:H8	1:5:3823:G:O5’	2.00	0.44
1:5:4092:G:C2	1:5:4093:G:N3	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4131:G:C5	1:5:4132:C:C5	3.06	0.44
1:5:4243:C:O2	1:5:4243:C:C2'	2.65	0.44
1:5:4275:G:O6	1:5:4276:G:N7	2.48	0.44
1:5:4324:A:C2	1:5:4325:A:C4	3.04	0.44
1:5:4423:U:N3	41:m:97:ARG:NH1	2.65	0.44
1:5:4543:G:O2'	1:5:4544:A:H5'	2.18	0.44
1:5:4581:G:N2	1:5:4582:C:C4	2.85	0.44
1:5:4659:G:C6	1:5:4660:G:C5	3.06	0.44
1:5:4712:C:OP1	17:O:74:ARG:NH2	2.51	0.44
1:5:4723:A:C2	1:5:4724:A:C4	3.06	0.44
1:5:4877:G:O2'	1:5:4878:C:O5'	2.32	0.44
2:7:6:C:H5"	7:D:54:ARG:HH21	1.83	0.44
2:7:117:G:C2	2:7:118:C:C2	3.06	0.44
3:8:56:G:C2	3:8:57:C:C2	3.06	0.44
3:8:58:G:O6	38:j:63:ARG:NH1	2.51	0.44
3:8:93:C:O3'	3:8:94:G:C8	2.71	0.44
5:B:17:LEU:HD22	5:B:17:LEU:O	2.17	0.44
8:E:95:ASP:OD1	8:E:95:ASP:C	2.60	0.44
8:E:271:PHE:O	8:E:272:ALA:HB2	2.18	0.44
9:F:32:ILE:N	9:F:32:ILE:CD1	2.81	0.44
11:H:156:ASN:ND2	11:H:157:SER:N	2.65	0.44
12:I:209:TRP:CD1	12:I:209:TRP:C	2.94	0.44
13:J:99:PHE:CD2	13:J:105:PHE:HB3	2.49	0.44
13:J:146:ARG:O	13:J:147:ARG:C	2.61	0.44
17:O:167:HIS:O	17:O:168:TYR:C	2.61	0.44
21:S:27:LEU:C	22:T:148:PRO:HB3	2.42	0.44
27:Y:100:HIS:HB3	27:Y:102:SER:N	2.33	0.44
33:e:37:LYS:HB3	33:e:39:ARG:HH22	1.83	0.44
34:f:4:ARG:O	34:f:5:LEU:HB2	2.18	0.44
34:f:48:ALA:HB2	34:f:71:TRP:CZ3	2.53	0.44
1:5:3:C:C2	1:5:4:G:C8	3.06	0.43
1:5:43:U:C5	1:5:44:A:N7	2.85	0.43
1:5:127:G:C2	1:5:128:C:C5	3.05	0.43
1:5:159:C:H1'	14:L:78:LEU:HD11	1.99	0.43
1:5:285:G:H2'	1:5:286:U:O4'	2.18	0.43
1:5:343:C:C2	1:5:344:A:C8	3.06	0.43
1:5:345:C:N3	1:5:346:G:N7	2.65	0.43
1:5:397:G:H22	18:P:22:LEU:HD22	1.83	0.43
1:5:446:C:C4	1:5:447:C:C5	3.05	0.43
1:5:457:G:N2	1:5:458:C:C6	2.86	0.43
1:5:469:C:C4	1:5:470:A:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:482:G:H2'	1:5:483:G:C8	2.53	0.43
1:5:642:G:C4	1:5:643:C:C5	3.06	0.43
1:5:664:G:H21	1:5:665:C:H5	1.66	0.43
1:5:711:A:C2	1:5:712:C:C4	3.06	0.43
1:5:976:G:C2	1:5:977:C:C6	3.05	0.43
1:5:978:G:C4	1:5:979:C:C6	3.05	0.43
1:5:1218:G:O6	1:5:1219:G:C4	2.71	0.43
1:5:1266:G:H4'	1:5:2112:G:N3	2.33	0.43
1:5:1268:G:N9	1:5:2111:G:C4	2.86	0.43
1:5:1341:U:C2	1:5:1342:A:C8	3.05	0.43
1:5:1374:G:C6	1:5:1375:C:C5	3.05	0.43
1:5:1436:C:O2'	1:5:2097:U:OP2	2.36	0.43
1:5:1482:G:N2	1:5:1484:G:N2	2.66	0.43
1:5:1492:G:C5	1:5:1493:G:N7	2.86	0.43
1:5:1547:A:C5	1:5:1582:U:H1'	2.53	0.43
1:5:1554:A:N3	1:5:1554:A:H2'	2.33	0.43
1:5:1602:U:N3	1:5:1603:C:C5	2.86	0.43
1:5:1617:G:H3'	1:5:1618:G:H8	1.82	0.43
1:5:1631:A:H8	1:5:1631:A:O5'	2.00	0.43
1:5:1684:A:N6	1:5:1685:G:N7	2.66	0.43
1:5:1729:A:H5"	1:5:1729:A:H8	1.82	0.43
1:5:1851:G:O5'	1:5:1851:G:H8	2.00	0.43
1:5:1975:G:C2	1:5:1984:A:N9	2.86	0.43
1:5:2050:G:C6	1:5:2051:C:C4	3.06	0.43
1:5:2056:G:C6	1:5:2058:G:C8	3.06	0.43
1:5:2100:A:C6	1:5:2101:C:H1'	2.53	0.43
1:5:2287:G:C2	1:5:2288:G:H1'	2.53	0.43
1:5:2315:G:C2	1:5:2316:G:N9	2.86	0.43
1:5:2327:G:N1	1:5:2328:G:C6	2.86	0.43
1:5:2344:U:H2'	1:5:2345:G:OP2	2.18	0.43
1:5:2508:U:H2'	1:5:2509:C:H6	1.83	0.43
1:5:2556:G:C2	1:5:2572:C:N3	2.86	0.43
1:5:2589:C:C4	1:5:2590:G:C4	3.05	0.43
1:5:2715:G:C2	1:5:2716:C:C2	3.06	0.43
1:5:2744:A:C2'	1:5:2745:A:C8	2.99	0.43
1:5:2851:G:O2'	1:5:3841:C:H4'	2.18	0.43
1:5:3770:U:O2	1:5:3770:U:H2'	2.17	0.43
1:5:3876:A:O2'	1:5:3877:A:P	2.76	0.43
1:5:3945:A:C4	1:5:3946:G:C8	3.06	0.43
1:5:4147:G:N3	1:5:4148:C:C6	2.86	0.43
1:5:4333:C:O2	1:5:4334:U:C6	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4401:G:C5	1:5:4402:C:C5	3.06	0.43
1:5:4405:G:N7	1:5:4406:U:C5	2.86	0.43
1:5:4518:A:H3'	1:5:4519:C:H5'	1.99	0.43
1:5:4760:G:O2'	1:5:4761:G:H5'	2.17	0.43
1:5:5002:U:O2'	1:5:5003:U:H5'	2.18	0.43
2:7:44:C:N3	2:7:45:U:C4	2.86	0.43
3:8:137:A:C2	3:8:138:C:C5	3.05	0.43
4:A:77:ILE:CD1	4:A:128:ARG:HB2	2.48	0.43
4:A:182:ALA:O	4:A:183:GLY:C	2.59	0.43
5:B:264:PHE:CD2	17:O:66:PRO:HD2	2.52	0.43
7:D:147:ASP:OD1	7:D:147:ASP:C	2.61	0.43
8:E:53:TYR:CE2	8:E:61:ARG:CZ	3.01	0.43
9:F:119:ILE:HG12	9:F:120:PHE:HB3	2.00	0.43
11:H:60:TRP:CZ2	21:S:153:PRO:HD3	2.53	0.43
12:I:46:PHE:CZ	12:I:85:PHE:HA	2.52	0.43
16:N:182:HIS:CD2	16:N:182:HIS:H	2.36	0.43
17:O:108:ILE:HG23	17:O:160:ARG:HD2	1.99	0.43
18:P:36:ILE:HD12	18:P:48:LEU:HD11	1.99	0.43
21:S:84:TYR:C	21:S:84:TYR:CD1	2.96	0.43
24:V:27:ASN:OD1	24:V:27:ASN:N	2.51	0.43
26:X:148:ASP:OD2	47:2:20:ARG:NH1	2.49	0.43
28:Z:83:THR:HB	35:g:95:PHE:CZ	2.53	0.43
29:a:73:VAL:CG2	29:a:108:TYR:CG	3.01	0.43
33:e:74:PHE:HB2	33:e:96:CYS:SG	2.58	0.43
38:j:76:HIS:C	38:j:79:ARG:NH1	2.76	0.43
43:o:37:GLY:HA2	43:o:40:ARG:NH2	2.33	0.43
45:r:5:LEU:O	45:r:6:GLN:C	2.59	0.43
1:5:127:G:C6	1:5:128:C:N4	2.86	0.43
1:5:181:C:H2'	1:5:182:G:C8	2.53	0.43
1:5:245:C:H4'	1:5:246:G:O5'	2.18	0.43
1:5:356:G:O2'	3:8:25:G:N3	2.51	0.43
1:5:469:C:N4	1:5:470:A:C6	2.86	0.43
1:5:732:A:C2	1:5:733:A:H1'	2.53	0.43
1:5:973:G:C6	1:5:1282:G:N3	2.86	0.43
1:5:1065:G:H2'	1:5:1066:G:C8	2.53	0.43
1:5:1245:C:C6	1:5:1269:G:N7	2.86	0.43
1:5:1266:G:C5'	1:5:1266:G:C8	3.01	0.43
1:5:1277:G:N2	1:5:1278:C:N1	2.66	0.43
1:5:1290:G:H2'	1:5:1291:G:H5'	2.00	0.43
1:5:1324:A:C2'	1:5:1326:A:OP1	2.65	0.43
1:5:1360:G:H2'	1:5:1361:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1362:G:N3	1:5:1363:C:C6	2.86	0.43
1:5:1404:G:C4	1:5:1405:C:C6	3.06	0.43
1:5:1620:U:OP2	38:j:30:GLN:HG2	2.18	0.43
1:5:1672:U:O2'	1:5:4304:A:OP1	2.31	0.43
1:5:1846:G:C2	1:5:1847:C:N3	2.86	0.43
1:5:1997:U:C3'	1:5:1998:A:H5"	2.47	0.43
1:5:2065:G:C2	1:5:2066:C:C2	3.06	0.43
1:5:2077:C:N3	1:5:2078:C:C6	2.86	0.43
1:5:2108:G:C6	1:5:2109:G:C4	3.05	0.43
1:5:2302:C:C4	1:5:2303:C:N4	2.86	0.43
1:5:2372:U:H2'	1:5:2373:C:H6	1.83	0.43
1:5:2439:G:H1'	1:5:2777:G:N3	2.33	0.43
1:5:2568:C:H2'	1:5:2569:G:H8	1.83	0.43
1:5:3595:U:O2'	20:R:114:LYS:HA	2.17	0.43
1:5:3688:U:O2	1:5:3689:G:C8	2.70	0.43
1:5:3702:A:C5	1:5:3774:A:C6	3.06	0.43
1:5:3923:A:C8	1:5:4381:A:C4	3.06	0.43
1:5:4111:U:C2	1:5:4112:C:C6	3.06	0.43
1:5:4115:G:H5'	1:5:4116:C:OP1	2.18	0.43
1:5:4131:G:C2	1:5:4132:C:C2	3.06	0.43
1:5:4173:G:C6	1:5:4174:U:C5	3.06	0.43
1:5:4461:C:C2	1:5:4516:G:C2	3.06	0.43
1:5:4473:A:C2	1:5:4474:A:C5	3.06	0.43
1:5:4862:G:H2'	1:5:4863:G:O4'	2.18	0.43
1:5:4871:C:C6	21:S:176:PHE:CE2	3.05	0.43
1:5:4904:G:C4	1:5:4905:C:C5	3.06	0.43
1:5:4985:U:C2	1:5:4986:G:C8	3.06	0.43
1:5:5031:G:C6	1:5:5032:C:C4	3.06	0.43
1:5:5031:G:C6	1:5:5032:C:N4	2.86	0.43
1:5:5055:G:H2'	1:5:5056:A:H8	1.83	0.43
2:7:66:G:H2'	2:7:67:C:H6	1.82	0.43
3:8:120:G:N1	3:8:121:G:C5	2.86	0.43
3:8:133:G:C4	3:8:134:G:C8	3.06	0.43
5:B:47:LEU:HD13	5:B:181:MET:SD	2.58	0.43
5:B:153:MET:O	5:B:157:CYS:HB3	2.18	0.43
8:E:43:ASN:HB3	8:E:58:MET:SD	2.58	0.43
9:F:239:GLU:O	9:F:241:GLN:N	2.50	0.43
11:H:36:ARG:HD3	11:H:38:PHE:CE1	2.53	0.43
16:N:53:TYR:HD1	16:N:54:LYS:N	2.16	0.43
16:N:63:ARG:HG3	16:N:131:GLU:HB3	2.00	0.43
23:U:38:ASN:C	23:U:90:TYR:OH	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:X:148:ASP:OD1	26:X:148:ASP:N	2.50	0.43
29:a:69:PHE:CE2	29:a:71:PRO:HD3	2.53	0.43
30:b:10:HIS:O	30:b:11:ASN:C	2.60	0.43
32:d:25:TYR:CE2	32:d:119:THR:HG22	2.53	0.43
34:f:30:ILE:HB	34:f:33:VAL:HG11	2.00	0.43
1:5:90:G:N3	1:5:95:G:C2	2.86	0.43
1:5:101:A:C2	1:5:102:G:N9	2.85	0.43
1:5:146:G:N2	1:5:147:A:C5	2.86	0.43
1:5:295:A:O3’	1:5:296:A:C8	2.71	0.43
1:5:301:G:C4	1:5:302:C:C6	3.06	0.43
1:5:450:G:O2’	1:5:453:G:OP1	2.29	0.43
1:5:490:C:C2’	1:5:491:G:H8	2.31	0.43
1:5:677:G:H2’	1:5:678:C:C6	2.54	0.43
1:5:689:U:C2	1:5:690:C:C5	3.05	0.43
1:5:713:C:N4	1:5:955:G:H1	2.15	0.43
1:5:1075:G:C6	1:5:1076:C:N4	2.87	0.43
1:5:1262:G:C6	1:5:1263:A:N7	2.86	0.43
1:5:1278:C:H3’	1:5:1279:A:C4’	2.47	0.43
1:5:1280:C:O2	1:5:1282:G:C5	2.71	0.43
1:5:1362:G:C4	1:5:1363:C:C6	3.07	0.43
1:5:1367:C:C2	1:5:1368:A:H3’	2.54	0.43
1:5:1543:G:H1’	1:5:2513:A:N3	2.33	0.43
1:5:1665:C:N3	1:5:2285:A:C2	2.87	0.43
1:5:1667:G:O5’	1:5:1667:G:H8	2.01	0.43
1:5:1728:U:H2’	1:5:1729:A:H5”	2.00	0.43
1:5:1929:A:H3’	1:5:1929:A:N3	2.33	0.43
1:5:1971:C:H5	1:5:2000:G:H2’	1.83	0.43
1:5:1972:G:N2	1:5:1973:G:C5	2.87	0.43
1:5:2290:C:H1’	1:5:2321:G:N3	2.33	0.43
1:5:2315:G:C4	1:5:2316:G:C8	3.06	0.43
1:5:2439:G:C8	1:5:2777:G:C5	3.07	0.43
1:5:2519:U:C2	1:5:2520:C:C5	3.06	0.43
1:5:2676:A:C5	1:5:2677:G:C8	3.07	0.43
1:5:2742:G:H4’	4:A:22:HIS:CD2	2.54	0.43
1:5:3656:A:C1’	1:5:3747:A:C2	3.01	0.43
1:5:3727:A:C2’	1:5:3728:A:O5’	2.66	0.43
1:5:3777:G:O2’	1:5:3815:G:O6	2.24	0.43
1:5:3794:C:O2	1:5:3794:C:H2’	2.17	0.43
1:5:3848:U:O2	1:5:3848:U:H2’	2.18	0.43
1:5:4089:G:C2	1:5:4161:G:C2	3.06	0.43
1:5:4093:G:C8	1:5:4094:G:O4’	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4106:G:C2	1:5:4107:G:C8	3.06	0.43
1:5:4113:U:H3'	1:5:4114:C:H5"	2.00	0.43
1:5:4122:G:H2'	1:5:4122:G:N3	2.33	0.43
1:5:4165:C:C2	1:5:4166:G:H8	2.30	0.43
1:5:4269:G:C2	1:5:4270:C:H1'	2.53	0.43
1:5:4482:U:O2	1:5:4482:U:C2'	2.66	0.43
1:5:4564:A:C4	1:5:4565:C:C5	3.06	0.43
1:5:4703:U:O2	1:5:4704:C:C6	2.71	0.43
1:5:4746:C:N4	1:5:4747:C:N4	2.66	0.43
1:5:5003:U:N3	1:5:5045:G:N2	2.65	0.43
1:5:5006:U:O4'	1:5:5042:A:N6	2.51	0.43
1:5:5048:A:O4'	1:5:5048:A:N3	2.51	0.43
3:8:121:G:C6	3:8:122:G:C4	3.06	0.43
3:8:131:G:N1	3:8:132:G:N9	2.66	0.43
3:8:131:G:O6	3:8:132:G:N7	2.50	0.43
6:C:125:CYS:HG	6:C:264:TYR:HE2	1.63	0.43
7:D:95:TYR:CD1	7:D:95:TYR:C	2.96	0.43
13:J:74:VAL:C	13:J:75:ARG:CG	2.92	0.43
14:L:6:ASN:N	29:a:48:TYR:HD2	2.15	0.43
15:M:96:GLU:OE1	15:M:96:GLU:O	2.37	0.43
17:O:12:ARG:HD3	17:O:37:ARG:NH2	2.32	0.43
23:U:39:PHE:CD1	23:U:90:TYR:CE2	3.06	0.43
32:d:46:LEU:CD2	32:d:64:ILE:HD13	2.48	0.43
33:e:78:LEU:HD21	33:e:100:ALA:HA	1.99	0.43
1:5:1:C:O2	1:5:1:C:O2'	2.26	0.43
1:5:95:G:H3'	1:5:95:G:C8	2.53	0.43
1:5:157:U:O2'	1:5:158:A:C8	2.70	0.43
1:5:266:C:OP1	1:5:266:C:C2	2.71	0.43
1:5:505:G:N3	1:5:506:C:C6	2.86	0.43
1:5:669:C:O2'	1:5:670:G:O5'	2.32	0.43
1:5:711:A:H1'	8:E:132:HIS:CE1	2.53	0.43
1:5:723:A:H4'	6:C:346:ASN:HB2	1.99	0.43
1:5:1066:G:C5	1:5:1067:G:N7	2.86	0.43
1:5:1195:G:H2'	1:5:1196:G:C8	2.53	0.43
1:5:1247:U:N3	1:5:1248:C:C4	2.85	0.43
1:5:1251:C:O2	1:5:1252:C:C6	2.71	0.43
1:5:1289:C:N3	1:5:1290:G:C5	2.87	0.43
1:5:1296:G:H1'	1:5:1297:U:P	2.58	0.43
1:5:1423:U:C2	1:5:1424:G:C8	3.07	0.43
1:5:1620:U:O2	1:5:1621:A:C8	2.71	0.43
1:5:1775:A:C4	1:5:1776:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2470:C:C2	1:5:2470:C:H5”	2.54	0.43
1:5:2503:G:H1’	1:5:4084:G:C2	2.53	0.43
1:5:2600:A:C1’	1:5:2601:A:C6	3.01	0.43
1:5:2643:G:C6	1:5:2644:G:C5	3.06	0.43
1:5:2898:G:C2	1:5:2899:C:C2	3.06	0.43
1:5:3713:U:O2	1:5:3713:U:O4’	2.36	0.43
1:5:3883:U:H2’	1:5:3884:U:O5’	2.18	0.43
1:5:3927:U:O4	1:5:4182:G:C2	2.71	0.43
1:5:4094:G:C2	1:5:4095:G:C4	3.07	0.43
1:5:4136:G:N3	1:5:4137:C:C6	2.86	0.43
1:5:4145:C:N3	1:5:4146:G:C5	2.87	0.43
1:5:4338:G:H1	1:5:4372:U:H3’	1.84	0.43
1:5:4404:U:O2’	1:5:4405:G:N7	2.42	0.43
1:5:4433:G:N1	1:5:4434:C:C4	2.87	0.43
1:5:4460:U:H2’	1:5:4461:C:H6	1.82	0.43
1:5:4538:G:C4	1:5:4539:U:C6	3.06	0.43
1:5:4734:A:C6	1:5:4735:G:C6	3.06	0.43
1:5:4742:G:N2	1:5:4743:G:H1’	2.34	0.43
1:5:4861:G:C2	1:5:4862:G:C8	3.07	0.43
1:5:4890:G:C2	1:5:4930:C:C2	3.06	0.43
1:5:4928:C:H5”	15:M:114:LYS:HD3	2.01	0.43
2:7:15:C:C2	2:7:16:A:C8	3.06	0.43
2:7:112:U:O2	2:7:113:G:N7	2.50	0.43
3:8:38:U:O2	3:8:38:U:C2’	2.67	0.43
3:8:54:C:H2’	3:8:54:C:O2	2.17	0.43
5:B:320:PHE:O	5:B:321:VAL:C	2.61	0.43
6:C:26:ALA:HB3	6:C:266:THR:HA	2.00	0.43
9:F:85:VAL:CG1	21:S:62:VAL:HA	2.46	0.43
11:H:50:LYS:O	11:H:51:LYS:HG3	2.18	0.43
11:H:126:VAL:HG11	11:H:161:ILE:HG22	2.00	0.43
20:R:124:TYR:C	20:R:124:TYR:CD1	2.97	0.43
24:V:48:ARG:HD2	24:V:51:ARG:NH2	2.32	0.43
24:V:82:ILE:HG23	24:V:121:VAL:HA	2.00	0.43
28:Z:5:MET:HE3	28:Z:25:ILE:HD11	1.99	0.43
31:c:78:ASN:ND2	31:c:79:ILE:N	2.66	0.43
32:d:71:ALA:C	32:d:73:TRP:N	2.76	0.43
1:5:12:A:N3	1:5:14:C:C5	2.86	0.43
1:5:29:G:C2	1:5:30:C:C6	3.07	0.43
1:5:30:C:O2’	1:5:31:U:C5’	2.67	0.43
1:5:44:A:N3	1:5:45:U:C6	2.87	0.43
1:5:98:A:H1’	1:5:292:G:C5	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:99:A:O2'	16:N:181:HIS:CE1	2.72	0.43
1:5:114:G:O6	1:5:157:U:O2	2.36	0.43
1:5:288:G:C5	1:5:289:C:C5	3.06	0.43
1:5:298:G:C2	1:5:299:C:N1	2.86	0.43
1:5:452:A:O3'	1:5:454:U:OP2	2.37	0.43
1:5:506:C:C2	1:5:507:G:C8	3.06	0.43
1:5:516:C:N1	1:5:646:G:N2	2.66	0.43
1:5:655:C:C2	1:5:656:C:C6	3.06	0.43
1:5:659:G:N1	1:5:660:A:C8	2.86	0.43
1:5:673:C:C2	1:5:674:G:N7	2.87	0.43
1:5:691:C:N3	1:5:692:A:C5	2.87	0.43
1:5:908:G:N1	1:5:909:A:C8	2.87	0.43
1:5:1081:C:H1'	1:5:1220:G:N2	2.34	0.43
1:5:1098:G:C5	1:5:1099:C:C5	3.07	0.43
1:5:1248:C:C4	1:5:1249:C:H5	2.36	0.43
1:5:1421:G:C5	1:5:1465:G:C2	3.07	0.43
1:5:1912:G:C2	1:5:1913:C:C2	3.07	0.43
1:5:1951:G:N2	1:5:1952:G:H1'	2.34	0.43
1:5:2015:U:C2	1:5:2016:C:C6	3.06	0.43
1:5:2069:A:C5	1:5:2071:A:C8	3.07	0.43
1:5:2080:U:H2'	1:5:2081:C:O5'	2.18	0.43
1:5:2353:U:C2	1:5:2354:G:C8	3.06	0.43
1:5:2448:G:O2'	1:5:2449:A:C8	2.63	0.43
1:5:2606:G:C6	1:5:2607:C:C4	3.07	0.43
1:5:2712:G:N1	1:5:2713:C:C5	2.87	0.43
1:5:2723:U:C2	1:5:2724:G:C8	3.07	0.43
1:5:2784:C:N3	1:5:2785:C:N4	2.66	0.43
1:5:2811:G:N3	1:5:2811:G:H2'	2.33	0.43
1:5:3600:G:C4	1:5:3601:C:C5	3.06	0.43
1:5:3623:C:C5	1:5:3624:A:C5	3.07	0.43
1:5:3628:G:C2	1:5:3629:A:C8	3.07	0.43
1:5:3752:C:H2'	1:5:3777:G:C8	2.53	0.43
1:5:3755:G:C6	1:5:3756:A:C8	3.06	0.43
1:5:4125:C:H4'	10:G:45:ILE:HG21	2.00	0.43
1:5:4127:A:N7	1:5:4156:G:N2	2.66	0.43
1:5:4140:C:O2	1:5:4140:C:H2'	2.18	0.43
1:5:4219:A:O2'	1:5:4220:A:C5'	2.66	0.43
1:5:4298:A:C5	1:5:4299:U:C5	3.06	0.43
1:5:4343:U:OP1	43:o:37:GLY:HA3	2.18	0.43
1:5:4401:G:C8	1:5:4401:G:H5"	2.54	0.43
1:5:4413:C:H5	1:5:4429:C:H42	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4505:C:H2'	1:5:4506:C:H6	1.83	0.43
1:5:4629:U:H2'	1:5:4630:G:O4'	2.18	0.43
1:5:4653:C:N3	1:5:4654:C:N4	2.67	0.43
1:5:4724:A:H4'	5:B:102:PHE:O	2.18	0.43
1:5:4880:C:O2'	1:5:4881:U:C5'	2.67	0.43
1:5:4895:C:O2	1:5:4896:G:N7	2.51	0.43
1:5:4897:G:N1	1:5:4898:G:C5	2.87	0.43
1:5:4898:G:C2	1:5:4899:G:C8	3.07	0.43
1:5:4911:A:H62	17:O:109:PRO:HG3	1.83	0.43
1:5:5018:C:C2	1:5:5019:A:C8	3.06	0.43
2:7:34:C:N3	2:7:35:U:C5	2.87	0.43
3:8:135:C:N3	3:8:136:U:C4	2.87	0.43
6:C:150:LEU:O	6:C:152:LEU:N	2.52	0.43
7:D:55:VAL:HG21	7:D:158:LYS:HB2	2.01	0.43
12:I:31:ILE:HG13	12:I:66:GLU:OE1	2.17	0.43
17:O:103:LYS:HG2	17:O:105:PHE:CZ	2.53	0.43
19:Q:32:TYR:OH	19:Q:123:PHE:CD2	2.69	0.43
22:T:11:THR:HB	22:T:15:PHE:HD1	1.82	0.43
28:Z:71:PHE:HA	28:Z:111:ARG:HG2	1.99	0.43
32:d:71:ALA:HB3	32:d:108:TYR:HE2	1.83	0.43
40:l:21:ARG:HH12	46:1:273:ARG:HG2	1.72	0.43
1:5:1:C:C5	1:5:2:G:C8	3.07	0.43
1:5:120:A:C8	1:5:121:A:N6	2.87	0.43
1:5:164:G:N2	1:5:165:A:H1'	2.33	0.43
1:5:216:C:O4'	1:5:216:C:OP1	2.36	0.43
1:5:328:A:C6	1:5:329:A:C6	3.06	0.43
1:5:468:U:O2	1:5:468:U:H2'	2.18	0.43
1:5:472:C:C4	1:5:473:C:C4	3.06	0.43
1:5:518:G:C2	1:5:519:C:C2	3.07	0.43
1:5:933:G:C2	1:5:940:C:C5	3.06	0.43
1:5:957:G:H5'	1:5:1284:G:N2	2.32	0.43
1:5:988:C:C2	1:5:989:U:C6	3.07	0.43
1:5:1100:U:O2	1:5:1167:C:C5	2.72	0.43
1:5:1236:C:O2'	1:5:1237:C:O5'	2.32	0.43
1:5:1299:G:N1	1:5:1300:G:C5	2.87	0.43
1:5:1358:G:N1	1:5:1379:C:O2	2.52	0.43
1:5:1387:A:N9	1:5:1397:A:N6	2.64	0.43
1:5:1685:G:C6	1:5:1686:C:C4	3.07	0.43
1:5:1693:U:N3	1:5:1694:C:C6	2.85	0.43
1:5:1755:C:N4	1:5:1778:C:H4'	2.33	0.43
1:5:1767:A:C4	1:5:1769:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1818:G:H8	1:5:1821:G:C6	2.33	0.43
1:5:2041:A:C2	1:5:4464:A:N6	2.86	0.43
1:5:2100:A:C5	1:5:2101:C:C6	3.06	0.43
1:5:2107:C:O2	1:5:2107:C:C2'	2.66	0.43
1:5:2281:U:O2	1:5:2282:A:C8	2.72	0.43
1:5:2509:C:N3	1:5:2510:G:C5	2.87	0.43
1:5:2550:G:C2	1:5:2551:A:C8	3.06	0.43
1:5:2612:G:C6	1:5:2613:C:N3	2.87	0.43
1:5:2735:G:N2	1:5:2736:G:N9	2.67	0.43
1:5:2857:A:C6	1:5:2858:A:C6	3.06	0.43
1:5:3754:G:C2	1:5:3755:G:H1'	2.53	0.43
1:5:3842:C:OP2	1:5:3843:C:O2'	2.27	0.43
1:5:3910:C:N3	1:5:3911:C:N4	2.66	0.43
1:5:3928:A:H3'	1:5:3929:G:H8	1.84	0.43
1:5:4254:G:N3	1:5:4254:G:H2'	2.34	0.43
1:5:4284:C:O2	1:5:4284:C:H2'	2.19	0.43
1:5:4307:A:H4'	19:Q:186:TYR:CD2	2.53	0.43
1:5:4713:G:C4	1:5:4714:C:C6	3.07	0.43
1:5:4749:C:C3'	1:5:4750:G:H5"	2.49	0.43
1:5:4927:G:H1'	15:M:121:ARG:HD3	1.99	0.43
1:5:4967:A:C2	1:5:4968:A:C5	3.06	0.43
1:5:4974:C:H2'	1:5:4975:G:O4'	2.19	0.43
1:5:5004:C:N4	1:5:5005:G:C2	2.87	0.43
2:7:111:C:C4	2:7:112:U:C6	3.04	0.43
2:7:111:C:O2	2:7:111:C:C2'	2.67	0.43
3:8:106:G:N3	3:8:107:C:C5	2.87	0.43
5:B:60:VAL:HG12	5:B:62:ARG:HG2	1.99	0.43
7:D:37:VAL:HG13	7:D:67:ALA:CB	2.48	0.43
7:D:250:ASN:ND2	7:D:252:VAL:HG12	2.20	0.43
8:E:104:LYS:HA	8:E:104:LYS:HE2	2.01	0.43
9:F:93:PHE:HE2	9:F:246:ILE:HG12	1.84	0.43
9:F:219:ARG:HH11	9:F:219:ARG:CB	2.31	0.43
9:F:228:HIS:O	9:F:231:GLU:N	2.52	0.43
11:H:113:GLU:OE2	11:H:125:ARG:HB3	2.19	0.43
12:I:35:ASP:HB2	12:I:86:HIS:CE1	2.50	0.43
12:I:171:TRP:CE3	12:I:181:PHE:HB2	2.51	0.43
16:N:195:ARG:H	16:N:195:ARG:HG3	1.72	0.43
22:T:143:THR:OG1	22:T:146:LYS:O	2.18	0.43
35:g:82:MET:SD	35:g:90:ARG:HD2	2.59	0.43
38:j:8:PHE:HA	38:j:11:ARG:HD2	2.01	0.43
40:l:21:ARG:HH11	46:1:273:ARG:CD	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:90:G:C8	1:5:92:C:N1	2.85	0.43
1:5:175:C:H2'	1:5:176:G:C8	2.54	0.43
1:5:247:G:C2	1:5:248:C:C4	3.07	0.43
1:5:459:C:N3	1:5:460:C:C6	2.87	0.43
1:5:661:C:C2	1:5:662:C:C5	3.07	0.43
1:5:1065:G:N1	1:5:1066:G:C6	2.87	0.43
1:5:1100:U:O2	1:5:1167:C:C6	2.71	0.43
1:5:1189:G:N2	1:5:1190:C:H1'	2.33	0.43
1:5:1244:G:O4'	1:5:1269:G:H1'	2.18	0.43
1:5:1258:G:C2	1:5:1259:G:N9	2.87	0.43
1:5:1334:A:H2'	1:5:1334:A:N3	2.32	0.43
1:5:1373:A:C4	1:5:1374:G:C8	3.06	0.43
1:5:1384:C:O2'	1:5:1505:C:OP1	2.33	0.43
1:5:1427:A:H2	19:Q:50:ARG:HH22	1.65	0.43
1:5:1477:C:C4	1:5:1478:C:C6	3.06	0.43
1:5:1539:G:H5'	4:A:194:ASN:ND2	2.33	0.43
1:5:1581:G:N7	1:5:1610:C:N4	2.67	0.43
1:5:1684:A:N1	1:5:1685:G:C8	2.86	0.43
1:5:1689:G:H4'	1:5:2285:A:H4'	2.01	0.43
1:5:1865:G:N2	1:5:1867:A:H2'	2.34	0.43
1:5:1921:C:C5	15:M:17:PHE:HD1	2.36	0.43
1:5:1943:A:C8	1:5:1944:A:C1'	3.01	0.43
1:5:2009:A:HO2'	1:5:2010:A:P	2.41	0.43
1:5:2103:G:C4	1:5:2104:G:C8	3.06	0.43
1:5:2307:A:N9	1:5:2332:A:C2	2.87	0.43
1:5:2401:A:N1	1:5:2402:G:C5	2.87	0.43
1:5:2439:G:C2	1:5:2440:U:C5	3.07	0.43
1:5:2441:C:C4'	35:g:9:ARG:HE	2.21	0.43
1:5:2594:C:O2	1:5:2595:C:C6	2.72	0.43
1:5:2599:G:C5'	35:g:60:ARG:HH22	2.32	0.43
1:5:3698:G:C6	1:5:3699:C:C4	3.07	0.43
1:5:3734:U:O2'	1:5:3735:G:C5'	2.67	0.43
1:5:3832:U:C2	1:5:3833:C:C5	3.06	0.43
1:5:4314:C:O2'	30:b:36:ASP:HB3	2.18	0.43
1:5:4415:A:C2	1:5:4416:G:H1'	2.54	0.43
1:5:4518:A:H5"	1:5:4520:G:H4'	2.01	0.43
1:5:4731:G:N7	1:5:4733:C:C6	2.86	0.43
1:5:4737:G:H2'	1:5:4738:C:H6	1.83	0.43
1:5:4906:C:H1'	1:5:4916:G:N2	2.34	0.43
1:5:5034:A:C5	1:5:5035:U:H1'	2.54	0.43
1:5:5055:G:C2	1:5:5056:A:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:40:U:O2	13:J:75:ARG:HD2	2.19	0.43
3:8:27:U:C2	3:8:28:C:C6	3.06	0.43
3:8:115:G:C5	3:8:116:C:C5	3.07	0.43
3:8:144:U:N3	3:8:145:C:C5	2.87	0.43
4:A:158:ILE:HG21	4:A:162:ASN:OD1	2.18	0.43
5:B:231:VAL:HG11	5:B:251:VAL:HG23	2.01	0.43
8:E:157:ARG:HH22	8:E:271:PHE:HB2	1.83	0.43
9:F:44:LEU:CD2	9:F:48:ARG:NE	2.81	0.43
10:G:108:GLN:NE2	10:G:108:GLN:N	2.66	0.43
11:H:106:GLN:NE2	11:H:113:GLU:HG2	2.34	0.43
12:I:110:ARG:CZ	12:I:110:ARG:HA	2.49	0.43
13:J:99:PHE:CZ	13:J:105:PHE:CB	2.97	0.43
13:J:105:PHE:HE1	13:J:132:VAL:CB	2.25	0.43
20:R:177:LEU:HB3	20:R:178:GLN:OE1	2.18	0.43
24:V:48:ARG:HG2	24:V:51:ARG:HB2	2.00	0.43
27:Y:27:ARG:HB2	27:Y:75:ARG:HH12	1.83	0.43
45:r:7:TRP:CZ3	45:r:11:ARG:CB	3.00	0.43
46:1:302:TYR:OH	46:1:341:LEU:HG	2.18	0.43
1:5:53:C:O2	1:5:53:C:H2'	2.19	0.43
1:5:352:G:C6	6:C:196:MET:SD	3.12	0.43
1:5:426:A:O2'	1:5:427:A:C5'	2.66	0.43
1:5:476:G:N2	1:5:679:C:C2	2.87	0.43
1:5:680:G:N2	1:5:681:G:H1'	2.34	0.43
1:5:686:A:C2'	1:5:687:U:H5'	2.49	0.43
1:5:689:U:C3'	1:5:690:C:H5"	2.49	0.43
1:5:1085:C:N3	1:5:1086:C:C5	2.85	0.43
1:5:1176:C:H4'	7:D:279:ARG:HG3	2.01	0.43
1:5:1235:G:H2'	1:5:1236:C:H5'	2.01	0.43
1:5:1236:C:H2'	8:E:56:SER:CB	2.49	0.43
1:5:1483:C:H2'	1:5:1483:C:OP2	2.18	0.43
1:5:1564:A:O2'	1:5:1565:A:O5'	2.37	0.43
1:5:1697:G:H4'	1:5:1698:C:OP1	2.19	0.43
1:5:1777:C:O2	1:5:1777:C:H2'	2.19	0.43
1:5:1844:G:C5	1:5:1845:U:C5	3.07	0.43
1:5:1872:G:N2	1:5:1873:A:C4	2.87	0.43
1:5:1966:C:O2	1:5:1966:C:C2'	2.61	0.43
1:5:2058:G:N2	1:5:2059:C:C1'	2.80	0.43
1:5:2359:U:O5'	1:5:2360:A:H2'	2.19	0.43
1:5:2418:A:C6	1:5:2419:C:C4	3.06	0.43
1:5:2452:G:C6	1:5:2467:U:C4	3.02	0.43
1:5:2566:G:N2	1:5:2567:G:C8	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2635:U:H2'	1:5:2636:U:C6	2.54	0.43
1:5:2645:G:C2	1:5:2646:C:C2	3.07	0.43
1:5:2666:U:C4	1:5:2669:C:C5	3.07	0.43
1:5:2738:C:C2	1:5:2741:U:C4	3.07	0.43
1:5:2757:A:O2'	1:5:2758:G:O5'	2.36	0.43
1:5:3640:U:H2'	1:5:3646:A:H62	1.83	0.43
1:5:3694:U:O2	1:5:3694:U:H2'	2.17	0.43
1:5:3806:G:C4	1:5:3807:A:C8	3.07	0.43
1:5:3871:A:N1	1:5:3885:G:C2	2.87	0.43
1:5:3921:U:H2'	1:5:3922:G:H3'	2.00	0.43
1:5:4081:G:N1	1:5:4082:G:N7	2.66	0.43
1:5:4112:C:N3	1:5:4113:U:C6	2.87	0.43
1:5:4175:G:C2	1:5:4176:C:C6	3.07	0.43
1:5:4235:G:H2'	1:5:4236:G:C5'	2.49	0.43
1:5:4360:U:C5	1:5:4361:U:C5	3.07	0.43
1:5:4439:U:C2	1:5:4440:G:C8	3.06	0.43
1:5:4688:C:C2	1:5:4689:U:C6	3.07	0.43
1:5:4692:A:OP2	1:5:4693:C:O2'	2.36	0.43
1:5:4724:A:C2	1:5:4725:C:N1	2.87	0.43
1:5:4914:C:H2'	1:5:4915:G:C8	2.54	0.43
1:5:4991:U:C2	1:5:4992:G:C8	3.07	0.43
2:7:54:A:N3	2:7:55:A:H8	2.06	0.43
2:7:54:A:N7	13:J:12:MET:CG	2.82	0.43
2:7:110:G:N2	2:7:111:C:N1	2.66	0.43
6:C:266:THR:OG1	6:C:267:TRP:N	2.52	0.43
6:C:336:ARG:O	6:C:340:ILE:CG1	2.67	0.43
7:D:284:LYS:HB2	12:I:209:TRP:CH2	2.53	0.43
8:E:238:ILE:O	8:E:239:SER:HB3	2.18	0.43
9:F:181:LEU:HB3	9:F:186:ILE:HB	2.00	0.43
14:L:65:ARG:HE	29:a:66:ASN:ND2	2.16	0.43
14:L:78:LEU:O	14:L:79:GLU:C	2.62	0.43
15:M:109:ARG:HH21	15:M:109:ARG:CB	2.32	0.43
24:V:42:VAL:HB	24:V:45:ILE:HD12	2.01	0.43
32:d:87:ARG:HB2	32:d:87:ARG:HH11	1.83	0.43
36:h:68:ASN:HD22	36:h:68:ASN:HA	1.65	0.43
39:k:41:TYR:CB	39:k:43:TYR:HE1	2.31	0.43
41:m:90:ASN:OD1	41:m:90:ASN:N	2.50	0.43
1:5:29:G:C5	1:5:54:G:C2	3.06	0.43
1:5:55:G:N1	1:5:56:A:C5	2.87	0.43
1:5:86:U:C2	1:5:87:A:N7	2.86	0.43
1:5:113:A:N3	1:5:113:A:H2'	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:119:G:H3'	1:5:120:A:H5'	2.00	0.43
1:5:141:C:H2'	1:5:142:G:O4'	2.19	0.43
1:5:202:C:C2	1:5:214:G:N2	2.87	0.43
1:5:332:C:H2'	1:5:333:U:O5'	2.19	0.43
1:5:509:A:N3	29:a:105:ARG:CZ	2.82	0.43
1:5:512:U:C3'	1:5:513:U:H5"	2.48	0.43
1:5:660:A:C2	1:5:661:C:C5	3.07	0.43
1:5:1098:G:H2'	1:5:1099:C:O4'	2.19	0.43
1:5:1176:C:O2'	7:D:279:ARG:CG	2.66	0.43
1:5:1203:G:N3	1:5:1204:C:C6	2.87	0.43
1:5:1248:C:N4	1:5:1249:C:H41	2.17	0.43
1:5:1380:G:N2	1:5:1382:G:N3	2.67	0.43
1:5:1396:G:N7	29:a:112:LEU:CD2	2.81	0.43
1:5:1404:G:C2	1:5:1405:C:C2	3.07	0.43
1:5:1421:G:C6	1:5:1465:G:C4	3.07	0.43
1:5:1438:U:O4	1:5:1444:G:O6	2.35	0.43
1:5:1448:G:C2	1:5:1449:C:C2	3.06	0.43
1:5:1458:C:O2	1:5:1458:C:C2'	2.54	0.43
1:5:1617:G:C2	1:5:1618:G:C4	3.07	0.43
1:5:1721:G:N1	1:5:1840:G:C8	2.82	0.43
1:5:1743:A:C6	1:5:1744:U:C6	3.07	0.43
1:5:1751:A:C2	1:5:1752:G:C1'	3.02	0.43
1:5:1752:G:N1	1:5:1753:G:C4	2.86	0.43
1:5:1776:A:C4	1:5:1777:C:C5	3.07	0.43
1:5:1806:G:N1	1:5:1807:C:C5	2.87	0.43
1:5:1819:G:C8	7:D:142:PHE:HD2	2.37	0.43
1:5:1899:G:C6	1:5:1900:C:C4	3.05	0.43
1:5:1919:G:N2	21:S:166:ARG:HB2	2.33	0.43
1:5:1944:A:C6	1:5:1945:G:C5	3.06	0.43
1:5:1944:A:C6	1:5:1945:G:C8	3.07	0.43
1:5:1964:A:C5	1:5:4694:G:C6	3.07	0.43
1:5:1968:G:N3	1:5:1969:G:C8	2.87	0.43
1:5:1988:G:N3	1:5:1989:G:C8	2.86	0.43
1:5:2090:U:O2	1:5:2090:U:OP2	2.37	0.43
1:5:2301:G:C5	1:5:2302:C:C5	3.06	0.43
1:5:2315:G:C2	1:5:2316:G:C4	3.07	0.43
1:5:2347:A:O2'	1:5:2348:G:C8	2.59	0.43
1:5:2576:G:C6	1:5:2577:C:C6	3.06	0.43
1:5:2587:A:H8	1:5:2588:C:N3	2.17	0.43
1:5:2613:C:H42	1:5:2614:C:N4	2.17	0.43
1:5:2690:C:C2	1:5:2691:U:C5	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2701:U:C2	1:5:2702:C:C6	3.07	0.43
1:5:2823:G:N1	1:5:2824:C:C4	2.86	0.43
1:5:2825:A:H4'	1:5:2826:U:O5'	2.18	0.43
1:5:3675:G:C2	1:5:3676:G:C5	2.97	0.43
1:5:3717:A:N1	1:5:3736:A:N1	2.66	0.43
1:5:3737:A:H2'	1:5:3738:G:C1'	2.48	0.43
1:5:3879:G:O6	1:5:3882:C:C6	2.72	0.43
1:5:3904:G:H3'	1:5:3905:A:O4'	2.18	0.43
1:5:3943:A:C6	1:5:3944:G:C5	3.07	0.43
1:5:4090:G:C5	1:5:4091:G:C8	3.07	0.43
1:5:4099:G:C4	1:5:4100:C:C5	3.07	0.43
1:5:4168:G:C2'	1:5:4169:G:O5'	2.66	0.43
1:5:4222:G:H2'	1:5:4223:C:O4'	2.18	0.43
1:5:4238:G:H2'	1:5:4239:A:O4'	2.19	0.43
1:5:4250:G:C2	1:5:4259:C:C2	3.07	0.43
1:5:4283:G:N3	1:5:4284:C:H6	2.04	0.43
1:5:4316:G:C6	1:5:4317:A:N7	2.86	0.43
1:5:4425:G:O6	1:5:4426:C:C5	2.72	0.43
1:5:4475:G:H8	1:5:4475:G:O5'	2.02	0.43
1:5:4734:A:N3	1:5:4735:G:C8	2.87	0.43
1:5:4945:G:H21	34:f:69:VAL:H	1.65	0.43
1:5:4991:U:O2	1:5:4992:G:C8	2.72	0.43
1:5:5063:G:N3	1:5:5064:G:C8	2.87	0.43
2:7:7:G:N3	2:7:7:G:H2'	2.34	0.43
2:7:73:U:O2	2:7:102:U:C4	2.72	0.43
3:8:28:C:N3	3:8:29:G:C8	2.87	0.43
5:B:146:LEU:N	5:B:146:LEU:HD13	2.34	0.43
5:B:190:VAL:O	5:B:191:ALA:HB3	2.18	0.43
5:B:213:GLN:CD	5:B:214:ASP:OD1	2.62	0.43
6:C:14:LYS:C	6:C:173:LYS:HG2	2.44	0.43
6:C:331:TYR:O	6:C:335:MET:HG3	2.18	0.43
7:D:160:PHE:CE2	7:D:179:ARG:HB2	2.54	0.43
7:D:275:GLN:HA	7:D:278:ASP:OD1	2.19	0.43
8:E:112:TYR:CE2	45:r:108:MET:HE1	2.54	0.43
9:F:198:THR:O	9:F:200:GLY:N	2.52	0.43
12:I:30:LYS:HG2	12:I:63:GLU:HG2	2.01	0.43
14:L:35:ARG:O	14:L:36:ARG:C	2.62	0.43
14:L:182:LEU:HD23	37:i:7:MET:CE	2.49	0.43
15:M:75:LYS:C	15:M:77:TRP:H	2.27	0.43
22:T:3:ASN:CB	22:T:9:ARG:NH1	2.81	0.43
1:5:224:U:O2	6:C:219:LYS:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:268:G:C2	1:5:269:G:C8	3.07	0.43
1:5:490:C:H3'	1:5:491:G:C8	2.51	0.43
1:5:652:G:C5	1:5:653:U:C6	3.07	0.43
1:5:686:A:H3'	1:5:687:U:H5'	2.00	0.43
1:5:687:U:C4	1:5:688:U:C4	3.07	0.43
1:5:919:C:O2'	1:5:920:C:H5'	2.18	0.43
1:5:1279:A:N3	1:5:1280:C:N3	2.67	0.43
1:5:1285:U:C4	1:5:1286:C:C5	3.07	0.43
1:5:1305:C:OP1	3:8:7:U:O2'	2.37	0.43
1:5:1368:A:HO2'	1:5:1369:C:P	2.41	0.43
1:5:1422:G:C4	1:5:1423:U:C5	3.06	0.43
1:5:1540:C:N3	1:5:1541:C:C5	2.87	0.43
1:5:1558:A:H1'	20:R:129:GLY:HA3	2.01	0.43
1:5:1775:A:C2	1:5:1776:A:C4	3.07	0.43
1:5:1840:G:O2'	1:5:1842:G:O5'	2.37	0.43
1:5:1948:G:C4	1:5:1949:U:C5	3.06	0.43
1:5:2044:U:O2	1:5:2044:U:C2'	2.62	0.43
1:5:2288:G:H5'	1:5:2289:C:OP1	2.18	0.43
1:5:2294:G:N2	1:5:2295:C:C6	2.86	0.43
1:5:2316:G:H2'	1:5:2317:C:H6	1.83	0.43
1:5:2364:G:N3	1:5:2365:C:C5	2.86	0.43
1:5:2464:C:O2'	1:5:2465:C:C5'	2.67	0.43
1:5:2505:C:H4'	1:5:2506:G:C5'	2.48	0.43
1:5:2576:G:N1	1:5:2577:C:C4	2.87	0.43
1:5:2650:G:C6	1:5:2651:C:C4	3.07	0.43
1:5:2666:U:C4	1:5:2669:C:C4	3.07	0.43
1:5:2820:C:C2'	1:5:2821:U:H5'	2.49	0.43
1:5:2889:G:N2	1:5:5034:A:H8	2.17	0.43
1:5:3656:A:C6	1:5:3657:U:C5	3.06	0.43
1:5:3663:A:H5'	1:5:3663:A:C4	2.54	0.43
1:5:3702:A:C6	1:5:3774:A:C6	3.07	0.43
1:5:3757:G:C6	1:5:3758:U:C5	3.06	0.43
1:5:4085:A:N6	10:G:62:ARG:NH2	2.67	0.43
1:5:4193:C:H3'	1:5:4194:U:O2	2.19	0.43
1:5:4216:G:C6	1:5:4217:G:C5	3.07	0.43
1:5:4352:U:H2'	1:5:4353:U:H5'	2.00	0.43
1:5:4355:G:N2	1:5:4356:G:C8	2.87	0.43
1:5:4580:U:N3	1:5:4723:A:C2	2.87	0.43
1:5:4892:A:C2	1:5:4893:A:H1'	2.54	0.43
2:7:27:G:C2	2:7:28:C:C2	3.07	0.43
3:8:82:A:H3'	3:8:82:A:C4	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:97:A:C6	3:8:98:C:N4	2.87	0.43
3:8:117:C:N4	3:8:118:C:C5	2.86	0.43
3:8:131:G:O6	3:8:132:G:C5	2.72	0.43
5:B:145:ALA:C	5:B:146:LEU:HD13	2.44	0.43
5:B:339:GLY:HA3	5:B:343:ARG:HD2	2.01	0.43
6:C:189:MET:HB3	6:C:195:LYS:HD3	2.01	0.43
7:D:43:LYS:HB3	7:D:46:THR:HG22	2.01	0.43
7:D:82:GLU:OE2	7:D:108:ARG:NH1	2.48	0.43
9:F:41:GLN:NE2	9:F:41:GLN:CA	2.77	0.43
9:F:129:LYS:HB2	22:T:133:ALA:HB3	2.00	0.43
11:H:41:ILE:CD1	11:H:69:THR:HB	2.48	0.43
11:H:60:TRP:NE1	21:S:153:PRO:HG3	2.34	0.43
13:J:107:PHE:CZ	13:J:130:PHE:CG	3.06	0.43
14:L:128:PRO:HB2	14:L:133:ALA:HB3	1.99	0.43
16:N:120:TRP:CZ2	16:N:123:GLU:HB3	2.54	0.43
30:b:13:SER:CA	30:b:16:TRP:CH2	2.95	0.43
46:1:268:LYS:HB3	46:1:268:LYS:HE2	1.71	0.43
46:1:270:ALA:C	46:1:271:ARG:CG	2.92	0.43
1:5:52:G:C8	1:5:52:G:C3'	3.02	0.42
1:5:74:G:H5'	14:L:59:VAL:CG1	2.49	0.42
1:5:301:G:C4	1:5:302:C:C5	3.08	0.42
1:5:371:A:H2'	1:5:372:A:C8	2.54	0.42
1:5:489:C:N4	1:5:490:C:C4	2.87	0.42
1:5:719:C:O2	1:5:720:G:C8	2.72	0.42
1:5:731:G:O6	1:5:732:A:C4	2.72	0.42
1:5:917:A:N3	1:5:918:G:C6	2.86	0.42
1:5:950:G:N2	1:5:951:G:C4	2.87	0.42
1:5:951:G:N3	1:5:952:G:C8	2.87	0.42
1:5:993:G:C4	1:5:994:G:C8	3.07	0.42
1:5:1086:C:O2	1:5:1086:C:C2'	2.67	0.42
1:5:1184:A:N1	1:5:1185:G:C5	2.87	0.42
1:5:1205:G:C5	1:5:1206:C:C5	3.07	0.42
1:5:1268:G:O5'	1:5:2109:G:H8	2.01	0.42
1:5:1398:A:H61	1:5:1419:G:H2'	1.83	0.42
1:5:1543:G:H1'	1:5:2513:A:C2	2.54	0.42
1:5:1581:G:C6	1:5:1610:C:C4	3.07	0.42
1:5:1672:U:O2	1:5:1673:U:C4	2.70	0.42
1:5:1750:G:N3	1:5:1751:A:C8	2.87	0.42
1:5:1805:A:C8	30:b:28:ARG:HB2	2.54	0.42
1:5:1961:G:C6	1:5:2024:G:N1	2.87	0.42
1:5:1961:G:H2'	1:5:2024:G:N2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2012:A:H2'	1:5:2013:A:O4'	2.19	0.42
1:5:2052:G:C2	1:5:2053:C:C2	3.06	0.42
1:5:2124:G:H2'	1:5:2124:G:N3	2.34	0.42
1:5:2261:G:O2'	1:5:2262:G:C8	2.72	0.42
1:5:2276:A:C4	1:5:2277:C:C6	3.07	0.42
1:5:2322:G:C2	1:5:2323:C:C2	3.07	0.42
1:5:2382:A:N7	1:5:2830:G:O2'	2.43	0.42
1:5:2405:G:H3'	1:5:2405:G:C8	2.54	0.42
1:5:2538:U:C2	1:5:2539:C:C5	3.07	0.42
1:5:2546:G:H4'	1:5:2547:G:OP1	2.18	0.42
1:5:2606:G:N3	1:5:2607:C:C5	2.87	0.42
1:5:2622:G:C6	1:5:2623:A:C8	3.07	0.42
1:5:2646:C:N4	1:5:2686:G:C6	2.87	0.42
1:5:2678:A:C2	1:5:2679:G:C8	3.07	0.42
1:5:3621:A:C6	1:5:3622:C:C5	3.07	0.42
1:5:3775:A:H2'	1:5:3776:G:O4'	2.19	0.42
1:5:3834:C:N3	1:5:3835:C:C5	2.87	0.42
1:5:3927:U:C4	1:5:4182:G:N2	2.87	0.42
1:5:4101:C:N3	1:5:4102:C:C6	2.87	0.42
1:5:4166:G:C2	1:5:4167:G:N9	2.86	0.42
1:5:4241:C:C4	1:5:4242:U:H5	2.37	0.42
1:5:4343:U:N3	1:5:4344:U:C4	2.87	0.42
1:5:4400:G:C6	1:5:4401:G:N7	2.87	0.42
1:5:4404:U:C4	1:5:4436:U:N3	2.87	0.42
1:5:4538:G:C4	1:5:4539:U:C5	3.07	0.42
1:5:4660:G:H2'	1:5:4661:G:H5"	1.99	0.42
1:5:4723:A:C2	1:5:4724:A:N7	2.87	0.42
1:5:4744:A:C2	1:5:4745:G:C8	3.07	0.42
1:5:4910:G:N7	17:O:156:LEU:HD22	2.34	0.42
2:7:31:G:C2	2:7:47:G:C2	3.07	0.42
2:7:73:U:O2	2:7:102:U:C5	2.72	0.42
3:8:73:U:OP1	27:Y:75:ARG:HD2	2.19	0.42
3:8:101:C:N3	3:8:102:G:C8	2.87	0.42
3:8:116:C:C2	3:8:117:C:C6	3.07	0.42
3:8:119:C:O2	3:8:119:C:H2'	2.19	0.42
3:8:138:C:N3	3:8:139:G:N7	2.67	0.42
3:8:149:G:C2	3:8:151:G:N7	2.87	0.42
5:B:25:HIS:ND1	5:B:25:HIS:C	2.77	0.42
7:D:198:HIS:CE1	7:D:203:ASN:CG	2.97	0.42
8:E:277:ILE:CD1	8:E:282:LEU:HD13	2.48	0.42
9:F:88:GLU:CG	22:T:136:ARG:HG2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:54:ARG:HH11	11:H:54:ARG:HG3	1.84	0.42
12:I:12:CYS:SG	12:I:59:GLN:HG2	2.59	0.42
13:J:147:ARG:O	13:J:147:ARG:HG2	2.18	0.42
16:N:156:HIS:O	16:N:159:ARG:HG3	2.19	0.42
20:R:131:VAL:CB	20:R:132:PHE:CE2	2.99	0.42
21:S:13:VAL:HA	21:S:28:TYR:O	2.19	0.42
21:S:13:VAL:HG23	21:S:62:VAL:HB	2.00	0.42
21:S:28:TYR:CD2	22:T:151:LEU:HD11	2.53	0.42
26:X:72:ASP:OD1	26:X:72:ASP:N	2.50	0.42
27:Y:126:ARG:HH11	27:Y:126:ARG:HG2	1.84	0.42
28:Z:60:LYS:HA	28:Z:60:LYS:CE	2.49	0.42
29:a:127:LYS:HG3	29:a:128:PHE:CZ	2.53	0.42
32:d:111:VAL:HB	32:d:114:PHE:HE1	1.84	0.42
34:f:57:THR:HG21	34:f:68:ARG:HD3	2.01	0.42
41:m:104:HIS:HB2	41:m:105:PRO:HD2	2.01	0.42
1:5:32:G:OP1	16:N:73:ARG:NH1	2.52	0.42
1:5:165:A:C4	1:5:166:C:C5	3.07	0.42
1:5:269:G:N3	1:5:269:G:C2'	2.82	0.42
1:5:298:G:C4	1:5:299:C:C6	3.07	0.42
1:5:459:C:C2	1:5:460:C:C5	3.08	0.42
1:5:469:C:N4	1:5:470:A:C5	2.87	0.42
1:5:500:G:H5"	1:5:501:C:C5	2.53	0.42
1:5:681:G:C2	1:5:682:G:H1'	2.54	0.42
1:5:717:U:C4	1:5:718:C:C5	3.07	0.42
1:5:727:C:C2'	1:5:728:U:OP1	2.67	0.42
1:5:744:G:N1	1:5:921:C:C2	2.87	0.42
1:5:919:C:C5	1:5:920:C:C5	3.07	0.42
1:5:975:C:C3'	1:5:976:G:O4'	2.67	0.42
1:5:1079:C:N4	1:5:1080:C:C5	2.87	0.42
1:5:1186:U:C5	1:5:1187:G:N7	2.87	0.42
1:5:1189:G:N2	1:5:1190:C:C2	2.87	0.42
1:5:1247:U:C4	1:5:1248:C:C4	3.07	0.42
1:5:1274:A:O2'	1:5:1275:G:O5'	2.31	0.42
1:5:1349:G:C5	1:5:1350:C:C5	3.06	0.42
1:5:1355:G:N1	1:5:1385:G:N3	2.67	0.42
1:5:1556:C:H2'	1:5:1557:C:C6	2.51	0.42
1:5:1617:G:C6	1:5:1618:G:C6	3.07	0.42
1:5:1641:G:C6	1:5:4386:C:O4'	2.72	0.42
1:5:1667:G:N3	1:5:2283:G:C6	2.87	0.42
1:5:1829:G:C2	1:5:1830:G:C5	3.07	0.42
1:5:1918:U:O2	1:5:1920:C:C4	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1930:U:C4	17:O:48:TYR:CD2	3.07	0.42
1:5:1992:U:C5	1:5:2002:A:H5"	2.55	0.42
1:5:2325:C:C4	1:5:2326:G:N7	2.84	0.42
1:5:2338:C:H5"	45:r:12:ASN:HD22	1.85	0.42
1:5:2414:G:C5'	46:1:398:GLN:NE2	2.82	0.42
1:5:2442:G:C2'	1:5:2443:G:H5"	2.49	0.42
1:5:2560:C:N3	1:5:2561:C:C6	2.87	0.42
1:5:2580:U:H1'	28:Z:38:TYR:OH	2.19	0.42
1:5:2674:A:H4'	1:5:2675:G:OP2	2.18	0.42
1:5:2703:G:C2	1:5:2704:C:C2	3.07	0.42
1:5:2736:G:N1	1:5:2737:C:C5	2.77	0.42
1:5:2782:U:O2	1:5:2782:U:H2'	2.17	0.42
1:5:3593:C:H2'	1:5:3595:U:C5	2.54	0.42
1:5:3605:C:C4	1:5:3606:U:C5	3.07	0.42
1:5:3723:A:N1	1:5:3724:A:C5	2.87	0.42
1:5:3795:A:C4	1:5:3796:U:C6	3.07	0.42
1:5:3845:A:C6	1:5:3846:C:C4	3.07	0.42
1:5:3861:A:C6	1:5:3862:A:C5	3.06	0.42
1:5:3899:G:H5"	5:B:257:TRP:O	2.19	0.42
1:5:4301:U:C4'	22:T:54:HIS:HD2	2.27	0.42
1:5:4342:C:O2	1:5:4342:C:H2'	2.18	0.42
1:5:4362:A:O2'	43:o:39:ARG:NH2	2.52	0.42
1:5:4502:C:C4	1:5:4503:A:N7	2.87	0.42
1:5:4578:G:C2	1:5:4579:U:C6	3.07	0.42
1:5:4730:C:H1'	1:5:4731:G:C3'	2.50	0.42
1:5:4746:C:C4	1:5:4747:C:C4	3.07	0.42
1:5:4862:G:C2	1:5:4863:G:N9	2.87	0.42
1:5:4898:G:C2	1:5:4899:G:N7	2.87	0.42
1:5:5063:G:O6	5:B:124:LYS:NZ	2.40	0.42
2:7:22:A:C6	7:D:266:TRP:CE2	3.07	0.42
3:8:121:G:H2'	3:8:122:G:C5'	2.49	0.42
3:8:133:G:C2	3:8:134:G:C5	3.07	0.42
6:C:310:HIS:O	6:C:311:ARG:C	2.62	0.42
7:D:109:LEU:HD21	7:D:142:PHE:CE1	2.54	0.42
8:E:276:GLY:C	8:E:278:TYR:CE2	2.97	0.42
12:I:184:MET:HB2	12:I:190:LEU:HD12	2.00	0.42
14:L:103:ARG:CZ	14:L:103:ARG:HB3	2.49	0.42
16:N:113:LEU:CD2	16:N:136:ASP:OD1	2.66	0.42
16:N:128:LYS:HB3	16:N:130:PHE:HE1	1.83	0.42
21:S:173:ASN:OD1	21:S:174:THR:N	2.53	0.42
22:T:8:ARG:HH11	22:T:52:MET:HE1	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:141:VAL:HG12	22:T:142:ARG:N	2.34	0.42
24:V:85:ARG:NE	24:V:99:GLU:O	2.50	0.42
25:W:20:ARG:HE	25:W:30:GLN:HG3	1.83	0.42
36:h:84:ARG:CZ	36:h:84:ARG:HB3	2.49	0.42
39:k:19:ASP:OD1	39:k:20:ALA:N	2.52	0.42
1:5:38:A:C2	1:5:41:C:C4	3.07	0.42
1:5:247:G:C6	1:5:248:C:C5	3.06	0.42
1:5:294:G:C5	29:a:61:TYR:CD1	3.07	0.42
1:5:301:G:C2	1:5:302:C:C2	3.07	0.42
1:5:405:U:H5'	1:5:406:C:OP2	2.18	0.42
1:5:418:A:N6	3:8:16:G:O2'	2.53	0.42
1:5:497:G:N1	1:5:657:C:N4	2.67	0.42
1:5:680:G:C6	1:5:681:G:N7	2.88	0.42
1:5:685:C:O2	1:5:685:C:H2'	2.19	0.42
1:5:689:U:H4'	45:r:85:ASN:HD22	1.84	0.42
1:5:736:C:O5'	1:5:737:C:OP2	2.37	0.42
1:5:957:G:C5'	1:5:1284:G:C2	2.97	0.42
1:5:1258:G:N3	1:5:1259:G:C8	2.87	0.42
1:5:1274:A:H5'	1:5:2123:C:C6	2.55	0.42
1:5:1320:U:C2	1:5:1321:G:C8	3.06	0.42
1:5:1330:A:C2	1:5:1331:C:C6	3.07	0.42
1:5:1398:A:H2'	1:5:1398:A:P	2.59	0.42
1:5:1421:G:N1	1:5:1422:G:N7	2.68	0.42
1:5:1554:A:N6	1:5:1573:G:H1'	2.34	0.42
1:5:1557:C:C2	1:5:1558:A:C8	3.08	0.42
1:5:1633:G:N1	4:A:207:VAL:HG11	2.35	0.42
1:5:1646:A:C6	1:5:1647:U:C4	3.07	0.42
1:5:1866:U:C5	1:5:4405:G:H1'	2.54	0.42
1:5:1886:G:N1	1:5:1894:C:C4	2.87	0.42
1:5:1921:C:H2'	15:M:17:PHE:CE1	2.55	0.42
1:5:1984:A:N6	1:5:2011:C:C1'	2.81	0.42
1:5:1998:A:H2	1:5:2020:U:O4'	2.02	0.42
1:5:2290:C:H1'	1:5:2321:G:H1'	2.02	0.42
1:5:2316:G:C2	1:5:2317:C:N3	2.87	0.42
1:5:2480:G:C5	1:5:2481:G:N7	2.87	0.42
1:5:2487:G:O6	1:5:2489:C:H1'	2.19	0.42
1:5:2574:G:O6	1:5:2762:G:O6	2.37	0.42
1:5:2576:G:N1	1:5:2577:C:C6	2.88	0.42
1:5:2588:C:H3'	1:5:2588:C:H6	1.83	0.42
1:5:2658:G:H22	1:5:2675:G:C2'	2.25	0.42
1:5:2682:G:C4	1:5:2683:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2743:A:C4	1:5:2744:A:N7	2.85	0.42
1:5:2752:G:C5'	1:5:2752:G:H8	2.32	0.42
1:5:2812:A:H2'	1:5:2813:A:H8	1.78	0.42
1:5:3615:G:H1'	25:W:44:ARG:HD3	2.01	0.42
1:5:3630:A:N3	1:5:3631:U:C6	2.87	0.42
1:5:3698:G:C4	1:5:3699:C:C5	3.08	0.42
1:5:3755:G:N1	1:5:3756:A:C8	2.87	0.42
1:5:3759:A:C8	1:5:3765:G:N2	2.87	0.42
1:5:3806:G:C2	1:5:3807:A:C8	3.07	0.42
1:5:3841:C:C2	1:5:3842:C:C5	3.08	0.42
1:5:3871:A:C5	1:5:3885:G:N2	2.88	0.42
1:5:3873:G:C2	1:5:3883:U:N3	2.87	0.42
1:5:3946:G:N1	1:5:3947:A:C5	2.87	0.42
1:5:4176:C:H2'	1:5:4177:C:H6	1.83	0.42
1:5:4322:G:N2	1:5:4326:G:C6	2.88	0.42
1:5:4593:C:C2	1:5:4594:U:C6	3.07	0.42
1:5:4629:U:H2'	1:5:4630:G:O5'	2.20	0.42
1:5:4682:U:O2	1:5:4682:U:H2'	2.19	0.42
1:5:4719:G:H4'	1:5:4720:C:OP1	2.18	0.42
1:5:4742:G:N1	1:5:4743:G:C5	2.88	0.42
1:5:4871:C:H3'	15:M:91:TRP:NE1	2.34	0.42
1:5:4898:G:N3	1:5:4899:G:C8	2.87	0.42
1:5:4904:G:C2	1:5:4905:C:C6	3.06	0.42
1:5:4982:A:N6	1:5:4983:C:C4	2.87	0.42
2:7:113:G:N2	2:7:114:U:C2	2.87	0.42
5:B:89:ILE:CG2	5:B:197:ALA:HB1	2.50	0.42
5:B:109:HIS:HB2	5:B:202:GLU:CD	2.44	0.42
12:I:9:TYR:CD1	12:I:9:TYR:N	2.87	0.42
14:L:92:ARG:HB3	14:L:92:ARG:CZ	2.49	0.42
17:O:15:LEU:HA	17:O:42:ASN:O	2.19	0.42
21:S:34:ALA:HB1	21:S:35:PRO:CD	2.49	0.42
23:U:23:LEU:HA	23:U:110:TYR:O	2.18	0.42
33:e:16:ARG:HD3	33:e:60:TYR:OH	2.20	0.42
1:5:6:C:O2	1:5:6:C:H2'	2.18	0.42
1:5:62:A:O2'	1:5:63:G:H5'	2.19	0.42
1:5:146:G:N2	1:5:147:A:C8	2.87	0.42
1:5:199:G:C2	1:5:201:C:C4	3.07	0.42
1:5:218:A:C8	6:C:181:LYS:HG3	2.54	0.42
1:5:227:A:N6	1:5:241:G:H2'	2.34	0.42
1:5:423:G:C2'	18:P:118:GLN:HE21	2.32	0.42
1:5:444:G:N2	1:5:1304:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:473:C:O2	1:5:473:C:H2'	2.19	0.42
1:5:479:G:C5	1:5:480:C:C5	3.07	0.42
1:5:506:C:C2	1:5:507:G:N7	2.88	0.42
1:5:910:G:C2	1:5:911:U:C6	3.07	0.42
1:5:1167:C:C2	1:5:1195:G:N1	2.87	0.42
1:5:1194:G:N1	1:5:1195:G:C5	2.87	0.42
1:5:1265:G:H22	1:5:2111:G:HO2'	1.62	0.42
1:5:1321:G:C1'	1:5:1891:A:N6	2.83	0.42
1:5:1346:C:N3	1:5:1347:G:N7	2.67	0.42
1:5:1358:G:H2'	1:5:1359:G:C1'	2.44	0.42
1:5:1368:A:O2'	1:5:1369:C:P	2.78	0.42
1:5:1398:A:N1	1:5:1420:A:C8	2.87	0.42
1:5:1421:G:C2	1:5:1422:G:C4	3.07	0.42
1:5:1570:G:C2	1:5:1571:G:H1'	2.54	0.42
1:5:1603:C:H2'	1:5:1604:G:H8	1.85	0.42
1:5:1750:G:N2	1:5:1751:A:N9	2.67	0.42
1:5:1823:G:C3'	1:5:1825:A:P	3.03	0.42
1:5:1829:G:N1	1:5:1830:G:C5	2.88	0.42
1:5:1967:A:N1	1:5:1968:G:C6	2.87	0.42
1:5:2437:C:H5"	1:5:2782:U:C4	2.48	0.42
1:5:2443:G:OP2	1:5:2516:G:N2	2.48	0.42
1:5:2471:G:H3'	1:5:2472:A:H5"	2.01	0.42
1:5:2529:A:H61	1:5:2532:C:H1'	1.84	0.42
1:5:2533:C:O2	1:5:2534:C:C4	2.72	0.42
1:5:2630:U:O2	1:5:2632:U:H1'	2.19	0.42
1:5:2693:G:OP1	39:k:35:LYS:NZ	2.50	0.42
1:5:2752:G:H3'	1:5:2753:G:H8	1.84	0.42
1:5:3804:G:O2'	1:5:3832:U:H1'	2.19	0.42
1:5:3832:U:H2'	1:5:3833:C:C6	2.53	0.42
1:5:3877:A:C2	1:5:4444:C:H1'	2.54	0.42
1:5:4139:G:C2	1:5:4140:C:C2	3.06	0.42
1:5:4154:G:C2	1:5:4155:C:C2	3.07	0.42
1:5:4189:U:C2	1:5:4190:U:C6	3.07	0.42
1:5:4301:U:C4'	22:T:54:HIS:CD2	2.95	0.42
1:5:4344:U:N3	1:5:4345:C:H5	2.14	0.42
1:5:4487:A:O2'	1:5:4708:A:N1	2.49	0.42
1:5:4583:C:C4	1:5:4718:G:C2	3.07	0.42
1:5:4693:C:H4'	1:5:4694:G:OP1	2.16	0.42
1:5:4898:G:N2	1:5:4899:G:C4	2.87	0.42
1:5:5042:A:N3	1:5:5042:A:H2'	2.33	0.42
2:7:50:A:H2'	2:7:50:A:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:60:G:C6	2:7:61:G:C8	3.07	0.42
2:7:119:U:O4	7:D:258:LYS:CE	2.68	0.42
3:8:53:G:C4	3:8:54:C:C5	3.08	0.42
3:8:94:G:C4'	3:8:95:A:OP1	2.63	0.42
4:A:227:ARG:CZ	4:A:227:ARG:HB2	2.50	0.42
5:B:6:PHE:HB3	24:V:49:LEU:HD11	2.01	0.42
7:D:203:ASN:OD1	7:D:203:ASN:N	2.49	0.42
14:L:125:ILE:HD12	14:L:125:ILE:N	2.35	0.42
15:M:3:PHE:HB2	15:M:6:PHE:CE1	2.54	0.42
21:S:84:TYR:HD2	21:S:113:MET:HE3	1.85	0.42
22:T:48:VAL:HG21	22:T:94:GLU:HG2	2.00	0.42
22:T:121:GLU:OE2	22:T:122:LYS:HG3	2.19	0.42
25:W:59:HIS:N	25:W:59:HIS:CD2	2.87	0.42
28:Z:50:PRO:HB2	28:Z:122:TYR:HE2	1.85	0.42
30:b:69:ALA:O	30:b:73:LYS:HB2	2.19	0.42
34:f:11:PHE:HZ	34:f:14:TYR:CD1	2.37	0.42
1:5:38:A:N1	1:5:41:C:C5	2.88	0.42
1:5:113:A:C2	1:5:114:G:H1'	2.54	0.42
1:5:177:G:C2	1:5:178:C:C2	3.08	0.42
1:5:212:A:C2	1:5:213:G:C6	3.08	0.42
1:5:212:A:C4	1:5:213:G:N7	2.86	0.42
1:5:229:G:C2	1:5:240:G:C2	3.07	0.42
1:5:274:C:C2'	1:5:275:C:O5'	2.67	0.42
1:5:289:C:N3	1:5:290:U:C4	2.85	0.42
1:5:298:G:C5	1:5:299:C:C6	3.07	0.42
1:5:681:G:C6	1:5:682:G:C5	3.07	0.42
1:5:1067:G:C5	1:5:1068:G:C8	3.07	0.42
1:5:1084:C:N3	1:5:1085:C:C6	2.87	0.42
1:5:1096:C:N3	1:5:1097:C:C5	2.87	0.42
1:5:1211:G:N3	1:5:1212:G:C8	2.88	0.42
1:5:1260:G:C6	1:5:1261:G:C5	3.08	0.42
1:5:1345:A:H4'	19:Q:166:TYR:HE2	1.84	0.42
1:5:1358:G:O2'	1:5:1359:G:C4'	2.67	0.42
1:5:1376:C:H2'	1:5:1378:C:C6	2.55	0.42
1:5:1396:G:C8	1:5:1396:G:C3'	3.02	0.42
1:5:1460:C:H5"	19:Q:144:LYS:HB2	2.02	0.42
1:5:1617:G:C6	1:5:1618:G:N7	2.88	0.42
1:5:1634:A:N6	1:5:1635:C:N4	2.67	0.42
1:5:1761:G:N2	1:5:1762:C:C2	2.88	0.42
1:5:1811:G:C6	1:5:1812:C:C4	3.07	0.42
1:5:1827:C:N3	1:5:1828:C:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2076:G:C2	1:5:2077:C:H1'	2.54	0.42
1:5:2336:G:C4	1:5:2337:C:C5	3.07	0.42
1:5:2347:A:N3	1:5:2348:G:N1	2.66	0.42
1:5:2393:C:H1'	1:5:2398:U:C2	2.55	0.42
1:5:2598:A:C2	1:5:2748:C:O2	2.72	0.42
1:5:2657:G:C3'	1:5:2658:G:H8	2.31	0.42
1:5:2670:C:O2'	1:5:2671:C:C5'	2.67	0.42
1:5:2791:C:N3	1:5:2792:C:C5	2.87	0.42
1:5:3610:A:C2	1:5:3611:A:C5	3.08	0.42
1:5:3695:U:C4	1:5:3696:C:H5	2.32	0.42
1:5:3753:G:C2	1:5:3754:G:N9	2.88	0.42
1:5:3846:C:C4	1:5:3847:C:H5	2.37	0.42
1:5:3879:G:O4'	1:5:3879:G:P	2.78	0.42
1:5:4107:G:N1	1:5:4108:G:C5	2.88	0.42
1:5:4139:G:N2	1:5:4140:C:C2	2.88	0.42
1:5:4172:A:C2	1:5:4173:G:C5	3.08	0.42
1:5:4200:G:C6	1:5:4201:G:C5	3.07	0.42
1:5:4352:U:C2'	1:5:4353:U:H5'	2.49	0.42
1:5:4416:G:C6	1:5:4417:C:C4	3.07	0.42
1:5:4453:C:O2	1:5:4529:G:C2	2.73	0.42
1:5:4503:A:C4	1:5:4504:C:C5	3.07	0.42
1:5:4550:G:N2	1:5:4551:U:C1'	2.82	0.42
1:5:4639:G:C5	1:5:4640:C:C5	3.07	0.42
1:5:4725:C:O2	1:5:4725:C:H2'	2.19	0.42
1:5:4956:A:N6	1:5:4957:C:C5	2.87	0.42
1:5:4986:G:C2'	1:5:4987:C:O5'	2.67	0.42
1:5:4998:G:C4	1:5:4999:G:C8	3.07	0.42
2:7:27:G:C5	2:7:28:C:C5	3.08	0.42
2:7:29:C:C2'	2:7:30:C:H5'	2.50	0.42
2:7:44:C:C2	2:7:45:U:C6	3.08	0.42
2:7:56:G:H2'	2:7:57:C:C5'	2.49	0.42
3:8:49:G:H2'	3:8:50:C:O4'	2.20	0.42
3:8:118:C:C4	3:8:119:C:C5	3.04	0.42
4:A:174:ARG:CZ	4:A:174:ARG:HB3	2.49	0.42
4:A:242:ARG:CG	4:A:243:THR:N	2.83	0.42
5:B:285:TYR:CE2	5:B:334:LYS:HB2	2.54	0.42
7:D:44:TYR:HA	22:T:33:ILE:HB	2.00	0.42
9:F:155:LEU:HB3	9:F:213:PHE:CE2	2.54	0.42
11:H:129:ARG:HG2	11:H:156:ASN:ND2	2.34	0.42
19:Q:32:TYR:N	19:Q:32:TYR:HD1	2.17	0.42
20:R:107:ARG:HH11	20:R:107:ARG:HB3	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:84:TYR:C	21:S:84:TYR:HD1	2.28	0.42
24:V:13:LYS:HG2	24:V:128:LEU:HD13	2.02	0.42
28:Z:4:PHE:N	28:Z:4:PHE:HD1	2.18	0.42
46:1:288:ASN:OD1	46:1:428:ILE:CG1	2.65	0.42
1:5:74:G:C5'	14:L:59:VAL:CG1	2.97	0.42
1:5:98:A:H1'	1:5:292:G:C6	2.54	0.42
1:5:106:A:P	14:L:39:ARG:HH21	2.42	0.42
1:5:273:U:H2'	1:5:274:C:O4'	2.20	0.42
1:5:446:C:N3	1:5:447:C:C6	2.87	0.42
1:5:718:C:C2	1:5:719:C:C6	3.07	0.42
1:5:910:G:C4	1:5:911:U:C6	3.08	0.42
1:5:1085:C:N4	1:5:1086:C:C5	2.88	0.42
1:5:1260:G:C2	1:5:1261:G:C5	3.07	0.42
1:5:1398:A:H3'	29:a:132:ARG:HH22	1.84	0.42
1:5:1520:C:H2'	1:5:1521:C:O4'	2.19	0.42
1:5:1545:G:C4	1:5:1546:C:C5	3.07	0.42
1:5:1667:G:N1	1:5:2280:G:H2'	2.34	0.42
1:5:1808:C:C4	1:5:1809:C:C5	3.07	0.42
1:5:2021:G:C2	1:5:2022:C:N1	2.87	0.42
1:5:2081:C:O2'	1:5:2082:G:C5'	2.67	0.42
1:5:2102:G:C2	1:5:2103:G:C8	3.08	0.42
1:5:2481:G:N1	1:5:2482:C:C4	2.88	0.42
1:5:2549:G:N2	1:5:2550:G:H1'	2.34	0.42
1:5:2566:G:C2	1:5:2567:G:C5	3.07	0.42
1:5:2606:G:C5	1:5:2607:C:C5	3.07	0.42
1:5:2667:C:O4'	20:R:96:MET:HG2	2.20	0.42
1:5:2771:G:C5	1:5:2772:C:C6	3.08	0.42
1:5:2843:U:C2	1:5:2844:A:N7	2.72	0.42
1:5:3617:G:H2'	1:5:3618:C:O4'	2.20	0.42
1:5:3701:C:N4	1:5:3745:U:H2'	2.35	0.42
1:5:3756:A:C4	1:5:3757:G:C8	3.08	0.42
1:5:3857:G:C2	1:5:3858:C:N1	2.88	0.42
1:5:3896:C:H5"	1:5:3897:G:OP2	2.19	0.42
1:5:3909:C:H42	1:5:3910:C:N4	2.18	0.42
1:5:4081:G:N2	1:5:4082:G:C4	2.87	0.42
1:5:4147:G:C2	1:5:4148:C:C2	3.08	0.42
1:5:4280:A:C6	7:D:29:ASP:OD1	2.72	0.42
1:5:4336:A:C8	1:5:4336:A:C3'	3.02	0.42
1:5:4489:G:C4	1:5:4490:C:C5	3.08	0.42
1:5:4595:G:C4	1:5:4596:C:C5	3.07	0.42
1:5:4652:G:H2'	1:5:4653:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4761:G:C2'	1:5:4762:A:O4'	2.60	0.42
1:5:5035:U:N3	1:5:5036:C:C6	2.87	0.42
2:7:19:C:C2	2:7:60:G:N2	2.87	0.42
2:7:66:G:H2'	2:7:67:C:C6	2.54	0.42
2:7:72:U:H2'	2:7:73:U:C6	2.54	0.42
3:8:131:G:H2'	3:8:131:G:N3	2.33	0.42
4:A:40:TYR:CE2	4:A:89:TYR:CD2	3.07	0.42
7:D:163:LEU:HD21	7:D:175:HIS:CB	2.50	0.42
8:E:233:LYS:O	8:E:235:LYS:N	2.52	0.42
10:G:29:ASN:HD22	10:G:29:ASN:HA	1.68	0.42
10:G:102:TYR:OH	10:G:208:ASN:N	2.50	0.42
12:I:112:GLN:HB2	12:I:116:ARG:NH1	2.34	0.42
15:M:86:TRP:O	15:M:87:ALA:CB	2.68	0.42
15:M:120:ASN:O	15:M:124:LYS:HB2	2.19	0.42
15:M:123:ILE:HD11	17:O:182:GLU:CG	2.49	0.42
16:N:184:ILE:HG23	16:N:194:ARG:HH12	1.84	0.42
18:P:23:ARG:HH11	18:P:23:ARG:HG2	1.84	0.42
25:W:33:ASN:OD1	25:W:33:ASN:N	2.53	0.42
27:Y:5:PRO:O	27:Y:6:PHE:CB	2.67	0.42
29:a:75:LEU:HA	29:a:78:LEU:HD13	2.01	0.42
44:p:29:ILE:HG23	44:p:69:TRP:HD1	1.74	0.42
47:2:30:ARG:H	47:2:30:ARG:HG2	1.52	0.42
1:5:12:A:H8	1:5:12:A:H5"	1.84	0.42
1:5:69:A:N1	1:5:70:A:C6	2.88	0.42
1:5:107:G:N3	1:5:107:G:H2'	2.35	0.42
1:5:138:G:C3'	1:5:139:G:C5'	2.97	0.42
1:5:258:G:C4	1:5:259:C:C5	3.07	0.42
1:5:275:C:H2'	1:5:276:C:H5"	2.00	0.42
1:5:347:A:N3	1:5:348:G:C8	2.88	0.42
1:5:353:A:C4	1:5:379:G:N7	2.87	0.42
1:5:642:G:C6	1:5:643:C:N4	2.87	0.42
1:5:753:C:O2	1:5:754:U:C6	2.71	0.42
1:5:962:C:N4	45:r:112:ARG:HD2	2.34	0.42
1:5:982:U:C2	1:5:983:C:C5	3.07	0.42
1:5:987:C:C2	1:5:1067:G:N2	2.88	0.42
1:5:1075:G:N2	1:5:1076:C:C2	2.88	0.42
1:5:1195:G:H2'	1:5:1196:G:H8	1.84	0.42
1:5:1272:C:O2'	1:5:1273:G:C1'	2.67	0.42
1:5:1303:A:H2'	1:5:1303:A:N3	2.33	0.42
1:5:1355:G:H2'	1:5:1356:U:C6	2.55	0.42
1:5:1355:G:C2'	1:5:1356:U:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1424:G:C4	1:5:1425:G:C8	3.08	0.42
1:5:1522:G:N3	1:5:1522:G:H2'	2.34	0.42
1:5:1588:U:H2'	1:5:1589:C:C6	2.55	0.42
1:5:1644:C:N3	1:5:1645:C:C5	2.88	0.42
1:5:1769:G:C2	1:5:1770:A:N7	2.87	0.42
1:5:1820:C:O2'	1:5:1821:G:O5'	2.26	0.42
1:5:1964:A:C6	1:5:1965:G:C8	2.84	0.42
1:5:1971:C:N3	1:5:1972:G:C5	2.87	0.42
1:5:2123:C:H3'	9:F:39:PHE:CE1	2.54	0.42
1:5:2370:A:H3'	1:5:2826:U:O2	2.20	0.42
1:5:2408:U:C6	1:5:2409:U:O4	2.73	0.42
1:5:2481:G:C6	1:5:2482:C:C5	3.07	0.42
1:5:2528:G:C6	1:5:2529:A:C5	3.08	0.42
1:5:2533:C:O2'	1:5:2534:C:O5'	2.37	0.42
1:5:2666:U:C6	1:5:2666:U:H3'	2.55	0.42
1:5:2830:G:N1	1:5:2831:G:N7	2.68	0.42
1:5:3690:U:C4	1:5:3691:G:C5	3.08	0.42
1:5:3775:A:H2'	1:5:3776:G:C1'	2.49	0.42
1:5:3801:U:O2'	1:5:3802:U:C5'	2.68	0.42
1:5:3894:A:O4'	1:5:4979:A:C6	2.73	0.42
1:5:4238:G:N2	1:5:4287:G:C5	2.87	0.42
1:5:4337:C:HO2'	1:5:4338:G:C5'	2.31	0.42
1:5:4411:G:N1	1:5:4412:C:C4	2.88	0.42
1:5:4495:G:C2	1:5:4506:C:C2	3.07	0.42
1:5:5000:G:H2'	1:5:5001:U:C5'	2.49	0.42
3:8:49:G:C6	3:8:50:C:C4	3.08	0.42
6:C:48:ASN:O	6:C:49:ARG:CB	2.66	0.42
8:E:160:PHE:C	8:E:160:PHE:CD1	2.96	0.42
10:G:136:LEU:HD22	10:G:202:VAL:HG13	2.01	0.42
14:L:34:ARG:HH11	14:L:34:ARG:CB	2.33	0.42
21:S:33:PHE:CE2	21:S:106:VAL:HG21	2.55	0.42
22:T:52:MET:HG2	22:T:95:HIS:CE1	2.54	0.42
23:U:27:HIS:N	23:U:28:PRO:HD2	2.34	0.42
24:V:128:LEU:HG	24:V:129:TRP:CD1	2.54	0.42
26:X:76:ILE:CD1	26:X:108:GLN:HB3	2.50	0.42
27:Y:72:GLN:HE21	27:Y:73:VAL:N	2.16	0.42
28:Z:41:ALA:HB2	28:Z:77:TYR:HE1	1.84	0.42
29:a:103:VAL:CG1	29:a:108:TYR:HB2	2.50	0.42
32:d:29:ILE:HD12	32:d:84:ILE:HG13	2.02	0.42
32:d:57:MET:O	32:d:59:THR:N	2.52	0.42
1:5:12:A:C4	1:5:14:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:83:C:P	1:5:84:A:HO2'	2.38	0.42
1:5:96:U:C5	1:5:97:G:C8	3.08	0.42
1:5:101:A:N3	1:5:101:A:H2'	2.33	0.42
1:5:194:C:C2'	27:Y:121:ARG:NH2	2.82	0.42
1:5:288:G:N3	1:5:289:C:C5	2.88	0.42
1:5:291:U:C2'	1:5:292:G:C2'	2.78	0.42
1:5:316:U:O4	1:5:4353:U:H1'	2.19	0.42
1:5:342:G:C2	1:5:343:C:C2	3.08	0.42
1:5:671:G:N3	1:5:672:C:C6	2.88	0.42
1:5:675:C:C2	1:5:676:C:C5	3.08	0.42
1:5:702:U:H2'	1:5:703:G:H4'	2.02	0.42
1:5:744:G:C2	1:5:921:C:O2	2.73	0.42
1:5:962:C:H4'	1:5:968:C:N4	2.35	0.42
1:5:972:C:C5	1:5:1282:G:N2	2.87	0.42
1:5:982:U:H2'	1:5:983:C:C5	2.46	0.42
1:5:1215:C:C2'	1:5:1216:C:H5'	2.49	0.42
1:5:1221:G:O2'	1:5:1222:A:P	2.78	0.42
1:5:1233:G:N3	1:5:1234:G:C8	2.88	0.42
1:5:1258:G:N1	1:5:1259:G:C5	2.88	0.42
1:5:1374:G:C2	1:5:1375:C:C6	3.07	0.42
1:5:1466:G:C2	1:5:1467:C:C5	3.08	0.42
1:5:1667:G:N3	1:5:2283:G:N1	2.67	0.42
1:5:1687:U:N3	1:5:1850:A:N6	2.68	0.42
1:5:1806:G:C6	1:5:1807:C:C4	3.08	0.42
1:5:1859:C:C4	1:5:1860:U:C4	3.08	0.42
1:5:1860:U:C2	1:5:1861:U:C6	3.08	0.42
1:5:2102:G:C2	1:5:2103:G:C5	3.07	0.42
1:5:2295:C:O2	1:5:2296:G:N7	2.52	0.42
1:5:2347:A:C2	1:5:2348:G:C6	3.07	0.42
1:5:2395:A:OP1	1:5:2395:A:H4'	2.20	0.42
1:5:2401:A:N3	1:5:2402:G:C8	2.87	0.42
1:5:2470:C:C2	1:5:2470:C:C5'	3.02	0.42
1:5:2486:G:C4	1:5:2487:G:C8	3.07	0.42
1:5:2502:G:H4'	1:5:2503:G:OP1	2.20	0.42
1:5:2568:C:N3	1:5:2569:G:C5	2.87	0.42
1:5:2673:G:N1	31:c:89:TYR:CZ	2.87	0.42
1:5:2674:A:C3'	1:5:2675:G:H5'	2.48	0.42
1:5:2751:G:N1	1:5:2752:G:C5	2.88	0.42
1:5:2867:C:O2	1:5:2867:C:H2'	2.20	0.42
1:5:2890:C:O4'	1:5:5034:A:H1'	2.20	0.42
1:5:3608:A:C2	1:5:3609:G:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3625:G:N2	1:5:3626:G:O3'	2.43	0.42
1:5:3668:C:C4	1:5:3669:G:C5	3.08	0.42
1:5:3733:A:C5	1:5:3734:U:C5	3.08	0.42
1:5:3744:G:H2'	1:5:3745:U:C6	2.54	0.42
1:5:3851:U:C4	1:5:3852:A:C5	3.08	0.42
1:5:3857:G:C2	1:5:3858:C:H1'	2.54	0.42
1:5:3867:A:H3'	1:5:3868:G:C8	2.55	0.42
1:5:3907:G:C1'	1:5:4449:A:H1'	2.50	0.42
1:5:4077:A:N7	1:5:4078:C:C5	2.88	0.42
1:5:4107:G:C2	1:5:4108:G:C4	3.08	0.42
1:5:4129:G:C2	1:5:4130:C:C2	3.07	0.42
1:5:4215:C:O2	1:5:4215:C:C2'	2.68	0.42
1:5:4240:G:N1	1:5:4241:C:C2	2.88	0.42
1:5:4330:G:C5	1:5:4331:G:C8	3.07	0.42
1:5:4390:A:H2'	1:5:4391:G:O4'	2.20	0.42
1:5:4666:G:C5	1:5:4667:C:C5	3.07	0.42
1:5:4898:G:N2	1:5:4923:C:C2	2.87	0.42
1:5:4977:A:C4	1:5:4978:G:N2	2.88	0.42
1:5:4978:G:HO2'	1:5:4979:A:P	2.40	0.42
1:5:4997:G:N1	1:5:4998:G:C5	2.88	0.42
1:5:5051:C:C4	1:5:5052:C:C5	3.08	0.42
2:7:30:C:C4	2:7:48:G:C2	3.07	0.42
3:8:13:G:H2'	3:8:14:U:O5'	2.20	0.42
3:8:154:G:C2	3:8:155:C:C2	3.08	0.42
5:B:55:HIS:O	5:B:56:ILE:HD12	2.19	0.42
5:B:323:TYR:C	5:B:323:TYR:HD1	2.28	0.42
6:C:109:ARG:HD2	6:C:111:TRP:CZ3	2.55	0.42
6:C:154:VAL:HG11	6:C:158:VAL:HG21	2.02	0.42
6:C:270:ALA:HA	6:C:278:ASN:ND2	2.34	0.42
7:D:107:ARG:HD3	7:D:248:ARG:HD2	2.02	0.42
8:E:95:ASP:HB3	8:E:101:ARG:HB2	2.02	0.42
15:M:109:ARG:NH2	15:M:109:ARG:HB2	2.35	0.42
16:N:30:TYR:CZ	16:N:63:ARG:HD3	2.54	0.42
17:O:49:ARG:NH1	17:O:49:ARG:CG	2.83	0.42
17:O:178:ARG:HH11	17:O:178:ARG:HG3	1.83	0.42
31:c:28:VAL:HG13	31:c:33:GLN:HB3	1.98	0.42
37:i:38:LYS:O	37:i:42:ASP:OD1	2.38	0.42
46:1:187:ILE:HB	46:1:454:ILE:HD11	2.01	0.42
1:5:72:C:C1'	37:i:15:HIS:HB3	2.50	0.42
1:5:109:G:N2	1:5:333:U:C2	2.87	0.42
1:5:113:A:O2'	16:N:50:ARG:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:177:G:C5	1:5:178:C:C5	3.08	0.42
1:5:209:U:C6	1:5:211:G:C8	3.08	0.42
1:5:287:U:O2	1:5:287:U:H2'	2.20	0.42
1:5:302:C:C2	1:5:303:C:C6	3.08	0.42
1:5:480:C:H2'	1:5:481:G:C8	2.54	0.42
1:5:660:A:C2	1:5:661:C:N1	2.87	0.42
1:5:963:G:N3	1:5:963:G:C2'	2.82	0.42
1:5:964:A:OP1	45:r:94:ARG:HD3	2.20	0.42
1:5:986:C:N1	1:5:1068:G:N2	2.68	0.42
1:5:1210:C:H5'	9:F:72:ARG:HH22	1.85	0.42
1:5:1308:C:O2	1:5:1308:C:H2'	2.20	0.42
1:5:1330:A:C4	1:5:1331:C:C5	3.08	0.42
1:5:1487:G:C2	1:5:1488:G:C1'	3.03	0.42
1:5:1545:G:O2'	1:5:1546:C:O5'	2.37	0.42
1:5:1555:G:N3	1:5:1555:G:H2'	2.34	0.42
1:5:1617:G:C2	1:5:1618:G:N9	2.88	0.42
1:5:1667:G:H1	1:5:2280:G:H2'	1.84	0.42
1:5:1685:G:C2	1:5:1686:C:N3	2.88	0.42
1:5:1780:A:N3	12:I:198:LYS:NZ	2.68	0.42
1:5:1877:G:C5	1:5:1878:G:C8	3.08	0.42
1:5:1938:C:O4'	1:5:1939:A:O4'	2.38	0.42
1:5:2008:U:N3	1:5:2010:A:OP2	2.53	0.42
1:5:2054:U:H4'	1:5:2056:G:O4'	2.19	0.42
1:5:2566:G:N1	1:5:2567:G:N7	2.67	0.42
1:5:2606:G:C6	1:5:2607:C:N4	2.87	0.42
1:5:2658:G:N1	1:5:2675:G:C6	2.88	0.42
1:5:2702:C:O2	1:5:2702:C:H2'	2.19	0.42
1:5:2783:A:C5	1:5:2784:C:C4	3.08	0.42
1:5:2823:G:C6	1:5:2824:C:C4	3.08	0.42
1:5:3611:A:H2	1:5:5016:A:N7	2.17	0.42
1:5:3714:G:N1	1:5:3739:C:O2	2.53	0.42
1:5:3758:U:C4	1:5:3765:G:C6	3.08	0.42
1:5:3896:C:O2'	5:B:268:ARG:NH2	2.53	0.42
1:5:3907:G:C8	1:5:4449:A:C1'	2.94	0.42
1:5:4237:C:H4'	1:5:4327:C:O2	2.19	0.42
1:5:4277:G:N3	1:5:4282:A:H2	2.18	0.42
1:5:4481:U:H2'	1:5:4482:U:O4'	2.20	0.42
1:5:4524:G:N1	1:5:4525:C:C4	2.88	0.42
1:5:4551:U:H2'	1:5:4552:U:H6	1.85	0.42
1:5:4651:A:C2	1:5:4652:G:C1'	3.02	0.42
1:5:4693:C:C6	1:5:4693:C:O5'	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4743:G:C6	1:5:4744:A:C6	3.08	0.42
1:5:4979:A:O2'	1:5:4980:C:O5'	2.36	0.42
1:5:4985:U:H2'	1:5:4986:G:O5'	2.20	0.42
2:7:43:U:C4	2:7:44:C:N4	2.88	0.42
3:8:42:G:N3	3:8:43:A:C8	2.88	0.42
4:A:109:GLU:O	4:A:111:THR:N	2.53	0.42
4:A:117:GLU:HB2	4:A:162:ASN:HB2	2.02	0.42
4:A:186:TYR:HA	4:A:196:TRP:HE3	1.84	0.42
6:C:308:LYS:C	6:C:309:ILE:O	2.63	0.42
8:E:276:GLY:C	8:E:278:TYR:HE2	2.27	0.42
11:H:41:ILE:HD11	11:H:69:THR:HG21	2.01	0.42
14:L:103:ARG:HD2	14:L:105:LYS:HD2	2.02	0.42
15:M:112:VAL:O	15:M:113:MET:C	2.62	0.42
18:P:122:ALA:HA	18:P:145:HIS:HE1	1.84	0.42
27:Y:72:GLN:HE21	27:Y:72:GLN:C	2.28	0.42
28:Z:5:MET:O	28:Z:28:ASN:HB3	2.20	0.42
29:a:74:ASN:HB3	29:a:114:LYS:HB3	2.02	0.42
32:d:83:ARG:HB3	32:d:114:PHE:CD2	2.54	0.42
34:f:23:GLU:N	34:f:23:GLU:OE1	2.52	0.42
40:l:21:ARG:HH11	46:1:273:ARG:HD3	1.84	0.42
1:5:98:A:C8	1:5:98:A:H3'	2.55	0.42
1:5:127:G:C2	1:5:128:C:C2	3.08	0.42
1:5:145:G:N1	1:5:146:G:N7	2.68	0.42
1:5:153:G:N2	1:5:154:G:C4	2.87	0.42
1:5:343:C:C4	1:5:344:A:N7	2.88	0.42
1:5:445:U:H1'	1:5:2313:A:N3	2.33	0.42
1:5:455:C:N3	1:5:456:C:C5	2.87	0.42
1:5:509:A:H2	29:a:105:ARG:HE	1.65	0.42
1:5:689:U:O2	1:5:689:U:H2'	2.20	0.42
1:5:693:C:H2'	1:5:694:C:H6	1.85	0.42
1:5:980:U:C2	1:5:981:C:C5	3.08	0.42
1:5:1065:G:H2'	1:5:1066:G:H8	1.84	0.42
1:5:1178:G:C5	1:5:1179:U:C5	3.08	0.42
1:5:1261:G:N1	1:5:1262:G:C8	2.88	0.42
1:5:1268:G:C5	1:5:2111:G:N3	2.88	0.42
1:5:1349:G:N1	1:5:1350:C:C4	2.88	0.42
1:5:1358:G:C4	1:5:1359:G:C8	3.08	0.42
1:5:1377:G:C8	1:5:1377:G:C3'	3.03	0.42
1:5:1380:G:H4'	1:5:1381:U:OP1	2.20	0.42
1:5:1447:C:H2'	1:5:1448:G:H8	1.78	0.42
1:5:1629:G:N2	1:5:1631:A:N3	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1760:G:C2	1:5:1761:G:C1'	3.01	0.42
1:5:1819:G:C8	7:D:142:PHE:CD2	3.07	0.42
1:5:1844:G:C4	1:5:1845:U:C5	3.08	0.42
1:5:2106:G:N2	1:5:2107:C:C4	2.87	0.42
1:5:2243:C:O2	1:5:2243:C:H2'	2.20	0.42
1:5:2263:A:O2'	1:5:2264:C:O2'	2.36	0.42
1:5:2276:A:C2	1:5:2277:C:H1'	2.54	0.42
1:5:2308:A:C2'	1:5:2309:G:O5'	2.67	0.42
1:5:2316:G:N1	1:5:2317:C:N4	2.68	0.42
1:5:2336:G:C2	1:5:2337:C:C2	3.08	0.42
1:5:2401:A:N1	1:5:2402:G:N7	2.68	0.42
1:5:2453:A:H1'	1:5:2507:A:C5	2.55	0.42
1:5:2465:C:C2'	1:5:2466:G:O4'	2.68	0.42
1:5:2481:G:C2	1:5:2482:C:N1	2.88	0.42
1:5:2526:C:O2'	1:5:2527:A:O5'	2.37	0.42
1:5:2743:A:H2	1:5:2744:A:C4	2.38	0.42
1:5:2794:C:C2	18:P:136:ILE:CD1	3.02	0.42
1:5:2831:G:C2	1:5:2832:A:C5	3.08	0.42
1:5:3604:A:C5	1:5:3605:C:C6	3.08	0.42
1:5:3656:A:H2'	1:5:3657:U:C6	2.54	0.42
1:5:3698:G:C2	1:5:3699:C:C4	3.07	0.42
1:5:3718:A:C2'	1:5:3719:A:O4'	2.59	0.42
1:5:3774:A:O2'	1:5:3775:A:N3	2.44	0.42
1:5:3820:G:C5	1:5:3821:A:N7	2.87	0.42
1:5:3924:C:H2'	1:5:3925:U:O5'	2.20	0.42
1:5:4092:G:C5	1:5:4093:G:C2	3.05	0.42
1:5:4283:G:H21	1:5:4284:C:H1'	1.85	0.42
1:5:4510:A:C4	1:5:4511:A:C6	3.08	0.42
1:5:4956:A:C2	1:5:4957:C:C6	3.07	0.42
1:5:4973:U:H1'	1:5:4986:G:N1	2.34	0.42
1:5:4990:C:H2'	1:5:4992:G:OP1	2.19	0.42
1:5:5047:C:H6	1:5:5050:C:C6	2.38	0.42
2:7:1:G:H2'	2:7:2:U:O4'	2.20	0.42
2:7:19:C:O2	2:7:19:C:C2'	2.58	0.42
2:7:23:A:O2'	2:7:24:C:C5'	2.67	0.42
2:7:59:G:C2	2:7:60:G:C4	3.08	0.42
2:7:66:G:C4	2:7:67:C:C5	3.08	0.42
2:7:93:G:C2	2:7:94:C:C2	3.07	0.42
2:7:106:G:C6	2:7:107:G:C5	3.08	0.42
3:8:75:G:C4	3:8:76:C:C5	3.08	0.42
4:A:10:LYS:HE2	4:A:16:PHE:CE2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:82:ILE:HD11	4:A:99:GLY:CA	2.49	0.42
6:C:39:PHE:CD1	6:C:39:PHE:C	2.98	0.42
6:C:112:HIS:HE1	16:N:202:ARG:HE	1.66	0.42
7:D:177:THR:HB	7:D:190:PHE:CZ	2.55	0.42
8:E:156:LYS:HB3	8:E:178:ASN:HD21	1.85	0.42
8:E:236:TYR:CE2	8:E:238:ILE:HA	2.47	0.42
8:E:284:PHE:CD1	8:E:284:PHE:C	2.98	0.42
9:F:201:LYS:C	9:F:202:ARG:HD2	2.45	0.42
10:G:185:LYS:O	10:G:189:ARG:HD2	2.20	0.42
12:I:171:TRP:CG	12:I:181:PHE:CD2	3.08	0.42
13:J:19:LYS:HB3	13:J:75:ARG:HE	1.85	0.42
15:M:17:PHE:C	15:M:17:PHE:HD2	2.27	0.42
17:O:65:ASN:ND2	17:O:65:ASN:C	2.77	0.42
20:R:110:ARG:CD	20:R:120:TYR:HE2	2.32	0.42
24:V:14:PHE:CE1	24:V:91:LYS:HD2	2.55	0.42
28:Z:52:LYS:O	28:Z:65:ARG:NH2	2.50	0.42
28:Z:121:ARG:CG	28:Z:121:ARG:HH11	2.33	0.42
46:1:183:ILE:HG22	46:1:187:ILE:HD12	2.02	0.42
46:1:341:LEU:HD13	46:1:344:TYR:CE2	2.54	0.42
47:2:45:ALA:O	47:2:49:PHE:HD2	2.02	0.42
1:5:138:G:H2'	1:5:139:G:H5'	2.00	0.41
1:5:142:G:N1	1:5:144:G:C5	2.88	0.41
1:5:206:U:O2	1:5:206:U:H2'	2.20	0.41
1:5:479:G:N1	1:5:480:C:C5	2.88	0.41
1:5:483:G:C4	1:5:484:U:C5	3.08	0.41
1:5:711:A:H1'	8:E:132:HIS:NE2	2.35	0.41
1:5:961:G:C6	1:5:969:C:C5	3.08	0.41
1:5:1075:G:H2'	1:5:1076:C:H6	1.84	0.41
1:5:1234:G:C2	1:5:1235:G:C5	3.07	0.41
1:5:1241:C:C4	1:5:1242:G:C2	3.08	0.41
1:5:1267:C:C2	1:5:1271:G:N1	2.88	0.41
1:5:1406:G:C2	1:5:1409:C:N4	2.88	0.41
1:5:1484:G:O4'	1:5:1485:C:P	2.78	0.41
1:5:1552:G:N2	1:5:1574:G:C2	2.88	0.41
1:5:1599:A:C2'	1:5:1600:A:H5"	2.47	0.41
1:5:1727:U:O2	1:5:1727:U:H2'	2.20	0.41
1:5:1835:G:O2'	1:5:1836:G:OP2	2.22	0.41
1:5:1846:G:C2	1:5:1847:C:C2	3.09	0.41
1:5:1922:G:C2	1:5:1923:A:C8	3.07	0.41
1:5:1982:G:O2'	1:5:2010:A:C5'	2.65	0.41
1:5:1993:C:C2	1:5:1994:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2311:C:N3	1:5:2312:U:C6	2.88	0.41
1:5:2448:G:O6	1:5:2511:A:C5	2.73	0.41
1:5:2450:G:O6	1:5:2451:A:C5	2.73	0.41
1:5:2453:A:N6	1:5:2454:U:C5	2.83	0.41
1:5:2485:U:H2'	1:5:2486:G:H8	1.86	0.41
1:5:2522:G:C2	1:5:2534:C:C2	3.08	0.41
1:5:2555:G:C6	1:5:2573:A:C6	3.08	0.41
1:5:2567:G:N2	1:5:2568:C:N1	2.68	0.41
1:5:2821:U:OP1	20:R:21:LYS:NZ	2.44	0.41
1:5:2840:A:C6	1:5:2841:G:C8	3.08	0.41
1:5:3630:A:C6	1:5:3631:U:C5	3.08	0.41
1:5:4086:G:N3	10:G:51:LEU:HD11	2.35	0.41
1:5:4205:A:N3	1:5:4206:C:C6	2.88	0.41
1:5:4419:U:H6	1:5:4419:U:O5'	2.03	0.41
1:5:4563:U:C2	1:5:4564:A:C8	2.96	0.41
1:5:4565:C:C1'	5:B:262:VAL:CG2	2.97	0.41
1:5:4649:G:H2'	1:5:4650:G:O4'	2.20	0.41
1:5:4752:U:O2	1:5:4948:C:N3	2.52	0.41
1:5:4886:C:H41	8:E:268:ARG:HH22	1.68	0.41
1:5:4944:C:H4'	1:5:4945:G:OP2	2.20	0.41
1:5:5007:A:C5	1:5:5040:U:O4	2.73	0.41
1:5:5047:C:N3	1:5:5048:A:N6	2.68	0.41
3:8:66:A:H2'	3:8:67:U:H6	1.82	0.41
3:8:154:G:H4'	10:G:189:ARG:NH1	2.35	0.41
4:A:226:ARG:HB2	4:A:226:ARG:CZ	2.50	0.41
8:E:104:LYS:HG3	8:E:107:LYS:HB3	2.01	0.41
8:E:172:THR:OG1	8:E:182:LEU:HD23	2.19	0.41
17:O:125:LYS:HD2	17:O:135:PHE:CZ	2.55	0.41
17:O:125:LYS:HD2	17:O:135:PHE:HZ	1.84	0.41
19:Q:32:TYR:N	19:Q:32:TYR:CD1	2.88	0.41
19:Q:91:ARG:HH21	19:Q:91:ARG:CG	2.32	0.41
21:S:29:ARG:HH22	22:T:149:GLU:C	2.28	0.41
22:T:14:MET:HE3	22:T:58:HIS:CB	2.50	0.41
26:X:110:LYS:HD2	26:X:111:GLN:HE22	1.85	0.41
30:b:12:GLN:CB	30:b:16:TRP:CZ2	3.00	0.41
31:c:31:TYR:CE2	31:c:56:ARG:CD	2.89	0.41
31:c:74:TYR:CD1	31:c:74:TYR:C	2.98	0.41
32:d:22:THR:OG1	32:d:122:VAL:HB	2.20	0.41
40:l:44:TRP:CE3	40:l:45:ARG:HB2	2.55	0.41
44:p:68:ALA:C	44:p:69:TRP:CE3	2.98	0.41
48:3:71:UNK:O	48:3:72:UNK:C	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:88:A:N1	1:5:97:G:H1'	2.35	0.41
1:5:647:G:N3	1:5:647:G:H2'	2.34	0.41
1:5:682:G:H2'	1:5:682:G:N3	2.35	0.41
1:5:698:G:N1	1:5:699:C:C6	2.88	0.41
1:5:709:C:H4'	8:E:186:HIS:CE1	2.53	0.41
1:5:720:G:C2	1:5:721:G:C8	3.08	0.41
1:5:738:C:N4	1:5:739:G:O6	2.53	0.41
1:5:945:U:C5	9:F:67:TYR:CZ	3.08	0.41
1:5:1169:G:C2	1:5:1170:G:N9	2.88	0.41
1:5:1199:G:C4	1:5:1200:G:C8	3.08	0.41
1:5:1233:G:C2	1:5:1234:G:N7	2.88	0.41
1:5:1246:G:H2'	1:5:1247:U:O4'	2.20	0.41
1:5:1329:G:C2'	1:5:1330:A:OP1	2.69	0.41
1:5:1577:G:OP1	44:p:17:ARG:NH2	2.53	0.41
1:5:1761:G:C4	1:5:1762:C:C6	3.08	0.41
1:5:1818:G:N7	1:5:1821:G:O6	2.51	0.41
1:5:1866:U:O2'	1:5:1867:A:P	2.78	0.41
1:5:1912:G:C2	1:5:1913:C:C5	3.09	0.41
1:5:1996:C:C4	1:5:1997:U:H1'	2.55	0.41
1:5:2008:U:C5	1:5:2010:A:H3'	2.55	0.41
1:5:2060:G:C5	1:5:2061:U:C5	3.08	0.41
1:5:2090:U:C2'	1:5:2091:C:O5'	2.68	0.41
1:5:2247:C:H5"	1:5:2248:C:C6	2.55	0.41
1:5:2271:C:C2	1:5:2272:C:C5	3.07	0.41
1:5:2294:G:H2'	1:5:2295:C:H6	1.85	0.41
1:5:2339:G:C2	1:5:2340:C:C2	3.09	0.41
1:5:2481:G:C2	1:5:2482:C:C6	3.07	0.41
1:5:2576:G:N3	1:5:2576:G:H2'	2.35	0.41
1:5:2577:C:N4	28:Z:17:ARG:CZ	2.83	0.41
1:5:2678:A:C4	1:5:2679:G:C8	3.09	0.41
1:5:2726:G:N2	1:5:2727:C:N3	2.69	0.41
1:5:3725:G:H2'	1:5:3726:A:H2'	2.01	0.41
1:5:3753:G:C8	1:5:3776:G:C5	3.08	0.41
1:5:3836:A:H2'	1:5:3837:C:O4'	2.20	0.41
1:5:4175:G:C4	1:5:4176:C:C6	3.08	0.41
1:5:4229:U:H3'	1:5:4230:C:C6	2.52	0.41
1:5:4425:G:C2	1:5:4426:C:C1'	3.04	0.41
1:5:4567:G:H2'	1:5:4568:A:C5'	2.51	0.41
1:5:4879:C:H2'	1:5:4880:C:H6	1.85	0.41
1:5:4912:G:OP1	1:5:4913:G:OP2	2.37	0.41
1:5:5004:C:C2'	1:5:5005:G:O4'	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5055:G:H2'	1:5:5056:A:C8	2.55	0.41
2:7:9:C:O2	2:7:9:C:C2'	2.66	0.41
2:7:25:G:C2	2:7:26:C:C2	3.08	0.41
2:7:98:G:C2	2:7:99:G:H1'	2.55	0.41
3:8:27:U:N3	3:8:28:C:C5	2.88	0.41
3:8:102:G:H5"	38:j:39:TYR:OH	2.20	0.41
7:D:8:LYS:HA	7:D:12:TYR:CB	2.50	0.41
7:D:41:LYS:CG	22:T:93:ILE:HD11	2.44	0.41
8:E:43:ASN:C	8:E:43:ASN:HD22	2.27	0.41
10:G:82:GLN:HG3	10:G:83:PHE:CE1	2.55	0.41
12:I:12:CYS:HB3	12:I:128:ARG:HE	1.86	0.41
28:Z:114:ALA:HB1	28:Z:118:PHE:HE2	1.85	0.41
29:a:45:PHE:HD2	29:a:53:PHE:CE1	2.39	0.41
33:e:42:ASP:OD1	33:e:42:ASP:N	2.53	0.41
34:f:76:ARG:NE	34:f:85:ARG:HH21	2.17	0.41
35:g:76:ARG:NH2	35:g:84:ALA:HB2	2.27	0.41
40:l:21:ARG:NH1	46:1:273:ARG:HD3	2.35	0.41
1:5:29:G:O6	1:5:53:C:N3	2.53	0.41
1:5:31:U:C2'	1:5:32:G:O5'	2.67	0.41
1:5:117:C:H5'	1:5:118:C:P	2.60	0.41
1:5:128:C:C2	1:5:129:C:C6	3.08	0.41
1:5:128:C:H2'	1:5:129:C:C6	2.56	0.41
1:5:150:U:OP2	10:G:200:THR:OG1	2.39	0.41
1:5:218:A:C8	6:C:181:LYS:CG	3.02	0.41
1:5:288:G:C2	1:5:289:C:C2	3.07	0.41
1:5:292:G:C4	1:5:293:G:C6	3.08	0.41
1:5:324:A:C2	1:5:325:U:C2	3.08	0.41
1:5:483:G:N1	1:5:484:U:O4	2.53	0.41
1:5:708:G:N2	1:5:709:C:H1'	2.34	0.41
1:5:711:A:C4	1:5:712:C:C5	3.08	0.41
1:5:744:G:C2	1:5:745:G:C5	3.08	0.41
1:5:979:C:H4'	8:E:39:HIS:CB	2.50	0.41
1:5:1070:G:N1	1:5:1071:C:C4	2.88	0.41
1:5:1078:A:H2'	1:5:1079:C:H5	1.85	0.41
1:5:1212:G:N1	1:5:1213:G:N7	2.67	0.41
1:5:1218:G:O6	1:5:1219:G:C8	2.73	0.41
1:5:1367:C:H3'	1:5:1368:A:H5"	2.02	0.41
1:5:1488:G:C4	1:5:1489:G:C8	3.08	0.41
1:5:1534:A:N6	38:j:14:LYS:CA	2.79	0.41
1:5:1589:C:O2'	1:5:1590:C:O5'	2.27	0.41
1:5:1694:C:C2	1:5:1695:U:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1756:U:H2'	1:5:1757:U:O4'	2.20	0.41
1:5:1777:C:C2	1:5:1778:C:C5	3.09	0.41
1:5:1872:G:N1	1:5:1873:A:N7	2.67	0.41
1:5:1891:A:C2'	1:5:1892:A:C8	3.03	0.41
1:5:1899:G:C8	1:5:2278:G:N2	2.87	0.41
1:5:1920:C:C4'	1:5:1921:C:OP2	2.66	0.41
1:5:1964:A:C5	1:5:1965:G:C4	3.09	0.41
1:5:1979:A:H2	1:5:1982:G:N7	2.18	0.41
1:5:2021:G:C2	1:5:2022:C:C6	3.09	0.41
1:5:2055:G:C8	1:5:2055:G:H3'	2.56	0.41
1:5:2283:G:O2'	1:5:2284:G:H5'	2.21	0.41
1:5:2399:G:C6	1:5:2400:G:N7	2.88	0.41
1:5:2410:C:O2	1:5:2411:C:C5	2.73	0.41
1:5:2479:G:C5	1:5:2480:G:C8	3.08	0.41
1:5:2493:G:C5	1:5:2494:U:C5	3.09	0.41
1:5:2513:A:N6	35:g:13:TYR:CE2	2.74	0.41
1:5:2673:G:H4'	1:5:2675:G:C1'	2.50	0.41
1:5:2696:A:C8	39:k:69:LEU:HD12	2.56	0.41
1:5:2712:G:C2	1:5:2713:C:C5	3.08	0.41
1:5:2788:U:O2	1:5:2798:A:H4'	2.21	0.41
1:5:3585:G:N3	1:5:3586:G:C8	2.88	0.41
1:5:3590:G:C6	1:5:3591:C:C6	3.08	0.41
1:5:3605:C:N3	1:5:3606:U:C6	2.88	0.41
1:5:3616:U:C1'	1:5:3617:G:C6	3.03	0.41
1:5:3631:U:C2	1:5:3632:C:C6	3.08	0.41
1:5:3901:A:OP1	1:5:3902:A:H5'	2.20	0.41
1:5:4075:U:H4'	1:5:4076:G:OP1	2.21	0.41
1:5:4108:G:N3	1:5:4109:G:C8	2.88	0.41
1:5:4280:A:N6	7:D:29:ASP:CG	2.78	0.41
1:5:4455:G:H1	1:5:4524:G:H1	1.67	0.41
1:5:4489:G:C2	1:5:4490:C:N1	2.89	0.41
1:5:4518:A:C3'	1:5:4519:C:H5'	2.50	0.41
1:5:4544:A:C8	1:5:4545:G:C1'	3.03	0.41
1:5:4745:G:H2'	1:5:4746:C:H5	1.86	0.41
1:5:4884:G:C6	1:5:4885:U:C5	3.07	0.41
1:5:4897:G:C2	1:5:4898:G:C4	3.08	0.41
1:5:4929:C:H6	1:5:4929:C:C5'	2.28	0.41
1:5:4988:U:O2	1:5:4988:U:C2'	2.66	0.41
1:5:5006:U:C2	1:5:5042:A:C8	3.08	0.41
1:5:5022:U:C4	1:5:5024:C:C5	3.08	0.41
2:7:36:C:H2'	2:7:37:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:111:U:O2	3:8:111:U:C3'	2.68	0.41
6:C:33:ARG:HD3	6:C:122:TYR:OH	2.20	0.41
7:D:268:ARG:HH11	7:D:268:ARG:HG3	1.85	0.41
8:E:84:VAL:HG13	8:E:87:THR:O	2.19	0.41
9:F:120:PHE:CE2	9:F:217:SER:HA	2.54	0.41
10:G:128:VAL:N	10:G:129:PRO:CD	2.83	0.41
12:I:181:PHE:CD1	12:I:190:LEU:HD13	2.55	0.41
15:M:86:TRP:CD1	15:M:92:ALA:HB2	2.55	0.41
23:U:104:ALA:HA	23:U:110:TYR:HD1	1.86	0.41
26:X:96:LEU:HB3	26:X:98:PHE:HE1	1.85	0.41
27:Y:13:LYS:HB3	27:Y:17:ARG:HH21	1.86	0.41
29:a:92:LYS:O	29:a:93:ASN:HB3	2.19	0.41
31:c:53:PRO:CD	31:c:56:ARG:NH1	2.84	0.41
43:o:57:ARG:HH11	43:o:57:ARG:CG	2.33	0.41
45:r:16:PHE:O	45:r:26:SER:HA	2.20	0.41
45:r:28:GLU:OE1	45:r:31:ASN:HB3	2.20	0.41
1:5:168:C:N3	1:5:268:G:C2	2.89	0.41
1:5:238:C:O2	1:5:239:C:C6	2.73	0.41
1:5:370:U:C5	1:5:1637:A:C2	3.08	0.41
1:5:417:G:H1'	3:8:17:A:N6	2.35	0.41
1:5:496:G:N2	1:5:658:C:C2	2.87	0.41
1:5:505:G:N1	1:5:506:C:C4	2.89	0.41
1:5:732:A:C8	1:5:732:A:H5"	2.55	0.41
1:5:738:C:N3	1:5:739:G:C5	2.88	0.41
1:5:919:C:N3	1:5:920:C:C4	2.88	0.41
1:5:962:C:O2	1:5:2264:C:O5'	2.38	0.41
1:5:977:C:C3'	1:5:978:G:H5'	2.50	0.41
1:5:1233:G:N1	1:5:1234:G:C5	2.88	0.41
1:5:1371:A:C2	3:8:29:G:H1'	2.55	0.41
1:5:1380:G:O2'	1:5:1381:U:O5'	2.32	0.41
1:5:1390:G:N2	1:5:1394:G:N7	2.64	0.41
1:5:1422:G:C2	1:5:1464:C:C2	3.09	0.41
1:5:1554:A:C6	1:5:1555:G:N9	2.88	0.41
1:5:1753:G:H2'	1:5:1755:C:C5'	2.50	0.41
1:5:1779:U:N3	1:5:1780:A:N7	2.68	0.41
1:5:1781:U:C4	1:5:1782:U:C4	3.09	0.41
1:5:1830:G:H2'	30:b:68:ARG:NH2	2.35	0.41
1:5:1831:G:C2	1:5:1832:C:N1	2.88	0.41
1:5:1876:U:O4	30:b:10:HIS:NE2	2.53	0.41
1:5:1968:G:C2	1:5:1969:G:C8	3.07	0.41
1:5:2047:A:N1	1:5:3885:G:O2'	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2083:C:H2'	1:5:2085:G:O4'	2.19	0.41
1:5:2245:G:C4	1:5:2246:C:C6	3.08	0.41
1:5:2392:C:O2	1:5:2392:C:C2'	2.68	0.41
1:5:2562:G:C6	1:5:2564:G:OP2	2.73	0.41
1:5:2702:C:C2	1:5:2715:G:N1	2.88	0.41
1:5:2800:G:C5	1:5:2801:U:C5	3.09	0.41
1:5:3587:C:H2'	1:5:3588:C:H6	1.84	0.41
1:5:3869:C:N3	1:5:3870:C:C5	2.88	0.41
1:5:3904:G:H5"	1:5:3905:A:OP2	2.20	0.41
1:5:4095:G:N3	1:5:4096:C:C6	2.87	0.41
1:5:4147:G:C5	1:5:4148:C:C5	3.09	0.41
1:5:4152:G:C6	1:5:4153:C:N4	2.88	0.41
1:5:4167:G:N1	1:5:4168:G:C5	2.88	0.41
1:5:4274:A:H2'	1:5:4275:G:O4'	2.20	0.41
1:5:4315:A:C6	1:5:4316:G:N7	2.88	0.41
1:5:4451:G:H3'	1:5:4522:G:H22	1.85	0.41
1:5:4552:U:C2'	1:5:4553:A:O5'	2.68	0.41
1:5:4580:U:C4	1:5:4581:G:C5	3.08	0.41
1:5:4688:C:C4	1:5:4689:U:C4	3.08	0.41
1:5:4690:G:O2'	1:5:4691:A:O4'	2.30	0.41
1:5:4737:G:C6	1:5:4963:G:N2	2.88	0.41
1:5:5006:U:O4'	1:5:5042:A:C6	2.74	0.41
3:8:134:G:N2	3:8:135:C:C1'	2.82	0.41
6:C:183:VAL:HA	6:C:204:ARG:HB2	2.03	0.41
9:F:124:PHE:HD2	9:F:196:ILE:HG23	1.86	0.41
9:F:148:ASN:HD22	9:F:149:LEU:H	1.68	0.41
10:G:46:GLN:HG3	10:G:47:PRO:HD2	2.01	0.41
11:H:31:ARG:HE	11:H:87:GLY:HA3	1.86	0.41
11:H:159:ALA:O	11:H:163:GLN:HB2	2.20	0.41
14:L:45:ARG:HG2	14:L:46:ILE:HG23	2.02	0.41
16:N:44:ARG:HD2	16:N:120:TRP:O	2.21	0.41
19:Q:54:SER:O	19:Q:55:ARG:C	2.63	0.41
22:T:105:PHE:CE1	22:T:109:VAL:HG23	2.56	0.41
25:W:57:ARG:HG2	25:W:57:ARG:NH1	2.35	0.41
37:i:45:ARG:NH2	37:i:50:PHE:HE1	2.14	0.41
45:r:107:ARG:CG	45:r:107:ARG:HH11	2.34	0.41
46:1:197:SER:N	46:1:198:PRO:CD	2.84	0.41
1:5:258:G:C2	1:5:259:C:N1	2.89	0.41
1:5:268:G:C4	1:5:269:G:C8	3.08	0.41
1:5:275:C:C2'	1:5:276:C:H5"	2.50	0.41
1:5:308:G:H8	37:i:31:GLY:HA3	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:348:G:N2	1:5:350:C:N1	2.69	0.41
1:5:684:G:O2'	1:5:685:C:O5'	2.38	0.41
1:5:722:G:H21	6:C:343:GLN:CD	2.29	0.41
1:5:732:A:C5	1:5:733:A:N3	2.88	0.41
1:5:742:G:N3	1:5:742:G:H2'	2.35	0.41
1:5:752:G:C2	1:5:753:C:H1'	2.55	0.41
1:5:909:A:N3	1:5:910:G:C8	2.88	0.41
1:5:924:C:N3	1:5:925:C:C5	2.89	0.41
1:5:1249:C:H1'	1:5:1262:G:N2	2.36	0.41
1:5:1262:G:N3	1:5:1263:A:C8	2.87	0.41
1:5:1334:A:C5	1:5:1335:G:N7	2.89	0.41
1:5:1629:G:N3	1:5:1631:A:C5	2.88	0.41
1:5:1664:U:H2'	1:5:1665:C:H6	1.85	0.41
1:5:1696:C:H1'	1:5:1697:G:O5'	2.21	0.41
1:5:1895:G:C2'	1:5:1896:A:O5'	2.68	0.41
1:5:1994:C:C4	1:5:1995:G:N7	2.88	0.41
1:5:2068:C:C2'	1:5:2069:A:H5"	2.50	0.41
1:5:2340:C:C4	1:5:2341:A:N7	2.88	0.41
1:5:2342:G:N2	1:5:2344:U:O4'	2.53	0.41
1:5:2439:G:H1'	1:5:2777:G:C2	2.55	0.41
1:5:2477:A:C2	1:5:2478:C:C5	3.09	0.41
1:5:2554:U:O4	1:5:2762:G:C2'	2.69	0.41
1:5:2597:G:C2'	1:5:2598:A:O5'	2.69	0.41
1:5:2682:G:C2	1:5:2683:C:C2	3.09	0.41
1:5:2688:G:N2	1:5:2689:C:N1	2.69	0.41
1:5:2793:G:C6	1:5:2797:C:N4	2.88	0.41
1:5:2850:A:O2'	24:V:52:LEU:HD21	2.20	0.41
1:5:2851:G:N2	1:5:2856:C:N4	2.68	0.41
1:5:2854:G:O6	1:5:2856:C:C1'	2.68	0.41
1:5:3643:A:N1	38:j:3:LYS:HG3	2.36	0.41
1:5:3727:A:C2'	1:5:3728:A:C8	3.03	0.41
1:5:4075:U:O2	1:5:4076:G:C8	2.73	0.41
1:5:4100:C:H42	1:5:4101:C:N4	2.18	0.41
1:5:4111:U:N3	1:5:4112:C:C6	2.88	0.41
1:5:4137:C:C2	1:5:4138:C:C6	3.07	0.41
1:5:4257:A:C8	13:J:60:PHE:HE2	2.39	0.41
1:5:4280:A:N6	7:D:28:THR:C	2.75	0.41
1:5:4320:G:H2'	1:5:4321:U:O4'	2.20	0.41
1:5:4346:U:H2'	1:5:4347:G:O5'	2.20	0.41
1:5:4351:U:C2	1:5:4352:U:C6	3.08	0.41
1:5:4966:A:C2	1:5:4967:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5005:G:H22	1:5:5041:G:H1'	1.85	0.41
2:7:29:C:O2'	2:7:30:C:H5'	2.21	0.41
2:7:51:G:C4	2:7:52:C:C5	3.08	0.41
2:7:55:A:C2	2:7:56:G:N7	2.89	0.41
2:7:113:G:C2	2:7:114:U:C5	3.08	0.41
3:8:120:G:C2	3:8:121:G:N9	2.87	0.41
5:B:142:GLY:HA2	5:B:146:LEU:HD21	2.03	0.41
6:C:167:ALA:CB	6:C:221:PHE:CE1	3.04	0.41
7:D:202:GLN:HA	7:D:205:ALA:HB3	2.02	0.41
8:E:280:HIS:CB	34:f:42:TYR:HE1	2.34	0.41
10:G:220:GLU:CD	10:G:220:GLU:C	2.88	0.41
11:H:38:PHE:HB3	11:H:41:ILE:CG2	2.51	0.41
11:H:60:TRP:HE1	21:S:153:PRO:HG3	1.85	0.41
11:H:179:ILE:C	11:H:180:TYR:CD2	2.99	0.41
17:O:27:VAL:HG12	17:O:98:ALA:HB1	2.01	0.41
20:R:102:LEU:HD13	20:R:132:PHE:O	2.20	0.41
20:R:120:TYR:O	20:R:121:HIS:C	2.63	0.41
22:T:43:LYS:HA	22:T:58:HIS:CE1	2.56	0.41
24:V:27:ASN:OD1	24:V:101:ASN:O	2.38	0.41
29:a:45:PHE:HD2	29:a:53:PHE:HE1	1.67	0.41
32:d:78:ARG:HH11	32:d:78:ARG:CG	2.34	0.41
33:e:6:PRO:CA	33:e:74:PHE:HE1	2.34	0.41
33:e:57:ASN:OD1	33:e:60:TYR:HB3	2.21	0.41
33:e:91:CYS:HB3	33:e:95:TYR:CE1	2.55	0.41
37:i:63:VAL:O	37:i:64:SER:C	2.64	0.41
37:i:68:ARG:O	37:i:72:PHE:N	2.45	0.41
39:k:25:ILE:HD13	39:k:57:LYS:HE2	2.03	0.41
46:1:188:CYS:HB3	47:2:47:MET:HB3	2.03	0.41
1:5:18:C:O2	1:5:19:G:C8	2.74	0.41
1:5:70:A:C6	1:5:4355:G:O4'	2.72	0.41
1:5:167:C:C4	1:5:269:G:N1	2.89	0.41
1:5:175:C:H2'	1:5:176:G:H8	1.86	0.41
1:5:244:G:N1	1:5:246:G:N9	2.69	0.41
1:5:419:A:N3	1:5:1332:C:O2'	2.49	0.41
1:5:426:A:C2'	1:5:427:A:O5'	2.68	0.41
1:5:671:G:C2	1:5:672:C:C5	3.09	0.41
1:5:911:U:O2	1:5:911:U:H2'	2.21	0.41
1:5:1212:G:C4	1:5:1213:G:C8	3.08	0.41
1:5:1265:G:C5	1:5:1266:G:C5	3.09	0.41
1:5:1269:G:C5	1:5:2111:G:C6	3.09	0.41
1:5:1274:A:O2'	1:5:1275:G:P	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1337:A:C2	1:5:1658:G:N3	2.87	0.41
1:5:1341:U:H2'	1:5:1342:A:C8	2.56	0.41
1:5:1367:C:C6	1:5:1367:C:H5"	2.55	0.41
1:5:1669:A:C2	1:5:1852:U:H4'	2.55	0.41
1:5:1912:G:C6	1:5:1913:C:C4	3.09	0.41
1:5:1918:U:OP1	34:f:80:ASN:HB2	2.21	0.41
1:5:2000:G:N3	1:5:2000:G:C3'	2.83	0.41
1:5:2005:G:C2	1:5:2006:U:C6	3.08	0.41
1:5:2079:G:H4'	33:e:58:ILE:HD11	2.02	0.41
1:5:2092:G:C8	1:5:2093:A:N1	2.89	0.41
1:5:2270:G:C6	1:5:2271:C:C4	3.09	0.41
1:5:2454:U:O2	1:5:2454:U:C2'	2.68	0.41
1:5:2526:C:H41	46:1:405:ARG:HG2	1.77	0.41
1:5:2529:A:C4	1:5:2532:C:C5	3.09	0.41
1:5:2605:G:C2	1:5:2606:G:C4	3.09	0.41
1:5:2782:U:H4'	1:5:2783:A:OP2	2.21	0.41
1:5:2823:G:H2'	1:5:2824:C:O4'	2.20	0.41
1:5:3672:G:N7	1:5:3674:G:H1'	2.34	0.41
1:5:3702:A:C8	1:5:3774:A:C4	3.09	0.41
1:5:3733:A:C4	1:5:3734:U:C5	3.09	0.41
1:5:3739:C:C6	1:5:3739:C:H5'	2.50	0.41
1:5:3756:A:N1	1:5:3757:G:C5	2.88	0.41
1:5:3779:A:C2	1:5:3816:A:C6	3.08	0.41
1:5:3898:G:O3'	5:B:257:TRP:HA	2.21	0.41
1:5:3928:A:H5'	16:N:89:VAL:HG11	2.03	0.41
1:5:4122:G:O4'	35:g:93:ARG:HD3	2.21	0.41
1:5:4162:C:O2	1:5:4162:C:O4'	2.38	0.41
1:5:4215:C:C2	1:5:4216:G:N7	2.76	0.41
1:5:4349:C:H3'	1:5:4350:C:H5"	2.03	0.41
1:5:4404:U:C4	1:5:4436:U:O4	2.73	0.41
1:5:4685:U:H2'	1:5:4686:G:O4'	2.20	0.41
1:5:4753:U:P	34:f:4:ARG:NH1	2.93	0.41
1:5:4914:C:C2	1:5:4915:G:C8	3.08	0.41
2:7:59:G:C4	2:7:60:G:C8	3.08	0.41
3:8:31:G:C4	3:8:32:C:C6	3.09	0.41
5:B:219:VAL:HG21	5:B:333:LEU:HD21	2.02	0.41
5:B:258:HIS:O	5:B:259:PRO:C	2.54	0.41
6:C:77:PRO:O	6:C:90:GLY:HA2	2.21	0.41
6:C:197:ARG:O	6:C:198:ASN:ND2	2.54	0.41
7:D:27:LYS:HE3	13:J:147:ARG:HH21	1.82	0.41
8:E:219:ARG:C	8:E:220:LYS:HG2	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:82:ASN:HD22	9:F:82:ASN:HA	1.49	0.41
10:G:73:ARG:HH11	10:G:73:ARG:CB	2.32	0.41
11:H:61:TRP:CZ2	15:M:33:GLN:CD	2.99	0.41
28:Z:123:LYS:O	28:Z:124:THR:CB	2.68	0.41
29:a:148:ALA:HA	37:i:8:ALA:HB2	2.01	0.41
34:f:6:TRP:O	34:f:6:TRP:CD2	2.74	0.41
40:l:44:TRP:HE3	40:l:45:ARG:N	2.19	0.41
44:p:13:LYS:HG3	44:p:14:TYR:HD1	1.85	0.41
1:5:68:U:O4	1:5:69:A:C4	2.74	0.41
1:5:82:U:O2	1:5:82:U:H2'	2.19	0.41
1:5:101:A:N1	1:5:102:G:C4	2.89	0.41
1:5:113:A:C5	1:5:114:G:C8	3.08	0.41
1:5:137:G:H2'	1:5:138:G:H8	1.86	0.41
1:5:465:G:N1	1:5:466:A:C5	2.88	0.41
1:5:961:G:C4'	1:5:962:C:OP1	2.69	0.41
1:5:986:C:C4	1:5:1068:G:C2	3.08	0.41
1:5:1070:G:N1	1:5:1071:C:C6	2.89	0.41
1:5:1095:A:C5	1:5:1096:C:C5	3.09	0.41
1:5:1187:G:N3	1:5:1188:C:H5	2.18	0.41
1:5:1195:G:C2	1:5:1196:G:C5	3.09	0.41
1:5:1219:G:N2	1:5:1220:G:C4	2.88	0.41
1:5:1261:G:C2	1:5:1262:G:C4	3.09	0.41
1:5:1281:G:O6	8:E:48:ARG:NH1	2.52	0.41
1:5:1396:G:O6	29:a:110:LYS:HD3	2.20	0.41
1:5:1437:C:H1'	1:5:2097:U:H5'	2.03	0.41
1:5:1492:G:C5'	30:b:45:PHE:HZ	2.33	0.41
1:5:1556:C:O2	1:5:1556:C:H2'	2.19	0.41
1:5:1650:A:C3'	1:5:1651:G:H5"	2.50	0.41
1:5:1751:A:C6	1:5:1752:G:N9	2.89	0.41
1:5:1795:A:N3	2:7:79:U:O2'	2.50	0.41
1:5:1887:G:C6	1:5:1890:G:N7	2.87	0.41
1:5:1925:G:C2	1:5:1926:C:C6	3.09	0.41
1:5:2259:G:OP2	1:5:2262:G:O6	2.38	0.41
1:5:2394:G:H1'	1:5:2397:G:N2	2.36	0.41
1:5:2409:U:H5	1:5:2410:C:C5	2.38	0.41
1:5:2479:G:O6	1:5:2480:G:O6	2.39	0.41
1:5:2498:C:N3	1:5:2499:C:C6	2.83	0.41
1:5:2605:G:C4	1:5:2606:G:C8	3.09	0.41
1:5:2715:G:C6	1:5:2716:C:N4	2.88	0.41
1:5:2767:U:H3'	1:5:2769:U:H6	1.86	0.41
1:5:3590:G:N3	1:5:3591:C:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3615:G:N3	1:5:3615:G:C2'	2.84	0.41
1:5:4068:U:N3	1:5:4069:U:H1'	2.36	0.41
1:5:4101:C:N3	1:5:4102:C:C5	2.88	0.41
1:5:4113:U:C4	1:5:4114:C:C4	3.09	0.41
1:5:4232:U:H1'	1:5:4233:A:OP2	2.21	0.41
1:5:4266:G:C6	1:5:4279:A:C5	3.08	0.41
1:5:4361:U:N3	1:5:4362:A:C8	2.88	0.41
1:5:4424:A:C5'	41:m:122:ARG:HE	2.34	0.41
1:5:4483:C:C2'	1:5:4484:A:O5'	2.68	0.41
1:5:4484:A:N1	1:5:4485:C:C4	2.89	0.41
1:5:4608:G:C5	1:5:4609:G:C5	3.09	0.41
1:5:4683:U:H2'	1:5:4684:A:O5'	2.21	0.41
1:5:4735:G:N1	1:5:4736:C:C5	2.88	0.41
1:5:4868:G:C3'	1:5:4869:U:H5"	2.50	0.41
1:5:4942:C:H4'	1:5:4944:C:P	2.61	0.41
1:5:4981:G:O2'	18:P:69:ARG:HB3	2.21	0.41
2:7:13:A:P	2:7:109:U:O2'	2.78	0.41
3:8:30:U:C2	3:8:31:G:N7	2.89	0.41
4:A:5:ILE:HB	4:A:208:GLU:O	2.19	0.41
4:A:192:LYS:C	4:A:193:ARG:HD3	2.45	0.41
5:B:235:TRP:HA	5:B:235:TRP:HE3	1.85	0.41
6:C:67:TRP:CD1	6:C:71:ARG:HE	2.39	0.41
7:D:123:VAL:CG1	7:D:248:ARG:HH22	2.29	0.41
10:G:53:ARG:HB3	10:G:54:PHE:CE2	2.55	0.41
12:I:47:PRO:CB	12:I:171:TRP:NE1	2.82	0.41
14:L:76:PHE:HD2	14:L:80:GLU:OE1	2.04	0.41
15:M:6:PHE:O	15:M:7:VAL:C	2.64	0.41
22:T:136:ARG:O	22:T:137:GLU:HB2	2.19	0.41
26:X:89:LYS:HE3	26:X:93:ASN:HD22	1.84	0.41
26:X:156:ILE:CG1	46:1:415:ARG:NH2	2.73	0.41
27:Y:11:ARG:HH22	27:Y:15:ARG:HD3	1.85	0.41
29:a:75:LEU:HB3	29:a:117:LEU:HD13	2.02	0.41
30:b:13:SER:HA	30:b:16:TRP:CZ2	2.55	0.41
33:e:43:ASN:HD22	33:e:44:ARG:N	2.18	0.41
46:1:405:ARG:HD2	46:1:407:THR:CG2	2.50	0.41
1:5:186:G:H1'	1:5:187:U:C1'	2.51	0.41
1:5:187:U:H3'	1:5:245:C:O2	2.19	0.41
1:5:435:A:H61	1:5:1312:A:H2	1.66	0.41
1:5:718:C:O2	1:5:718:C:H2'	2.21	0.41
1:5:916:C:O2	1:5:916:C:H2'	2.20	0.41
1:5:1074:G:C2'	1:5:1075:G:O4'	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1218:G:O5'	1:5:1219:G:OP2	2.39	0.41
1:5:1258:G:C4	1:5:1259:G:C8	3.09	0.41
1:5:1372:A:C5	1:5:1373:A:C8	3.08	0.41
1:5:1390:G:N3	1:5:1394:G:N1	2.69	0.41
1:5:1558:A:H2'	1:5:1559:G:H8	1.86	0.41
1:5:1642:A:N3	1:5:1642:A:C2'	2.82	0.41
1:5:1669:A:C4'	1:5:1685:G:N2	2.69	0.41
1:5:1685:G:C2	1:5:1686:C:C4	3.09	0.41
1:5:1760:G:C6	1:5:1761:G:N7	2.89	0.41
1:5:1895:G:C6	1:5:1896:A:N3	2.88	0.41
1:5:1971:C:C5	1:5:2000:G:C4	3.09	0.41
1:5:2081:C:N3	1:5:2082:G:C5	2.89	0.41
1:5:2086:G:C2	1:5:2087:C:C2	3.08	0.41
1:5:2108:G:N2	1:5:2125:C:C4	2.87	0.41
1:5:2320:G:O2'	1:5:2321:G:OP2	2.39	0.41
1:5:2623:A:N1	1:5:2624:G:C5	2.89	0.41
1:5:3692:A:C6	1:5:3693:U:C6	3.08	0.41
1:5:3698:G:C6	1:5:3699:C:N4	2.89	0.41
1:5:3736:A:O2'	1:5:3737:A:P	2.79	0.41
1:5:3806:G:N1	1:5:3807:A:C5	2.89	0.41
1:5:4097:G:C2	1:5:4098:A:C4	3.09	0.41
1:5:4227:U:H2'	1:5:4228:G:O4'	2.21	0.41
1:5:4275:G:C5	1:5:4276:G:N7	2.88	0.41
1:5:4433:G:C2	1:5:4434:C:C2	3.09	0.41
1:5:4502:C:N4	1:5:4503:A:N7	2.68	0.41
1:5:4586:G:OP1	17:O:72:HIS:CD2	2.74	0.41
1:5:4656:A:N3	1:5:4656:A:O4'	2.53	0.41
1:5:4737:G:C6	1:5:4738:C:C4	3.08	0.41
1:5:4896:G:N3	1:5:4926:C:N4	2.66	0.41
1:5:4946:U:O2	1:5:4946:U:C2'	2.69	0.41
1:5:4981:G:C6	1:5:4982:A:C5	3.08	0.41
1:5:4990:C:N3	5:B:113:GLU:OE2	2.54	0.41
1:5:5008:C:H2'	1:5:5009:G:O4'	2.20	0.41
1:5:5036:C:C2	1:5:5037:U:C5	3.09	0.41
2:7:8:G:N2	2:7:9:C:H1'	2.35	0.41
2:7:16:A:C4	2:7:17:C:C6	3.09	0.41
2:7:45:U:O3'	7:D:157:ASN:HB2	2.20	0.41
3:8:78:G:O2'	36:h:45:SER:HB3	2.20	0.41
4:A:211:PHE:HE1	4:A:219:ILE:HG23	1.81	0.41
6:C:110:ARG:O	6:C:113:ARG:NH1	2.53	0.41
8:E:153:HIS:CD2	8:E:183:ARG:NH1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:108:GLN:CA	10:G:108:GLN:NE2	2.83	0.41
18:P:31:GLU:OE2	18:P:60:PHE:HA	2.21	0.41
21:S:37:HIS:O	21:S:38:VAL:C	2.64	0.41
21:S:84:TYR:CE1	21:S:91:HIS:HB2	2.55	0.41
23:U:60:VAL:HG11	23:U:76:VAL:HG22	2.03	0.41
30:b:11:ASN:O	30:b:13:SER:N	2.54	0.41
38:j:79:ARG:HG3	38:j:82:ILE:CG2	2.51	0.41
43:o:3:ASN:OD1	43:o:3:ASN:C	2.64	0.41
45:r:44:ILE:HG22	45:r:45:HIS:N	2.36	0.41
46:1:66:ARG:HA	46:1:66:ARG:HD3	1.73	0.41
1:5:86:U:C4	1:5:97:G:N1	2.89	0.41
1:5:96:U:C4	1:5:97:G:C4	3.09	0.41
1:5:138:G:H3’	1:5:139:G:H5’	2.02	0.41
1:5:163:A:C6	1:5:164:G:C8	3.08	0.41
1:5:183:C:C2	1:5:189:G:O6	2.74	0.41
1:5:250:C:H2’	1:5:251:C:O4’	2.20	0.41
1:5:289:C:O2	1:5:290:U:C6	2.73	0.41
1:5:423:G:H2’	1:5:424:U:C6	2.55	0.41
1:5:450:G:H22	1:5:1294:A:C2’	2.34	0.41
1:5:454:U:H4’	1:5:455:C:C5’	2.51	0.41
1:5:466:A:N3	1:5:467:U:C5	2.86	0.41
1:5:684:G:HO2’	1:5:685:C:P	2.44	0.41
1:5:689:U:O2	1:5:690:C:C6	2.74	0.41
1:5:692:A:N3	1:5:693:C:C5	2.88	0.41
1:5:723:A:C2’	1:5:724:C:O5’	2.68	0.41
1:5:944:A:H1’	6:C:335:MET:HE1	2.03	0.41
1:5:1076:C:C4	1:5:1077:C:C6	3.03	0.41
1:5:1085:C:N3	1:5:1213:G:C6	2.88	0.41
1:5:1086:C:C2	1:5:1212:G:N1	2.89	0.41
1:5:1173:G:C4	1:5:1174:G:C8	3.08	0.41
1:5:1173:G:C5	1:5:1174:G:C8	3.09	0.41
1:5:1199:G:C6	1:5:1200:G:C5	3.08	0.41
1:5:1243:C:O2’	1:5:1244:G:C8	2.66	0.41
1:5:1253:G:N2	1:5:1256:G:C8	2.89	0.41
1:5:1281:G:H2’	6:C:323:ARG:HG2	2.03	0.41
1:5:1302:U:C4	1:5:1303:A:N7	2.89	0.41
1:5:1351:G:C6	1:5:1352:C:C4	3.09	0.41
1:5:1511:U:H2’	1:5:1512:G:O4’	2.20	0.41
1:5:1667:G:H2’	1:5:2280:G:H22	1.86	0.41
1:5:1675:C:C2	1:5:1681:G:N2	2.89	0.41
1:5:1697:G:C8	9:F:165:ASN:HA	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1719:A:N3	1:5:1719:A:H5"	2.36	0.41
1:5:1757:U:O2	1:5:1758:G:C8	2.71	0.41
1:5:1776:A:C2	1:5:1777:C:C2	3.08	0.41
1:5:1855:G:C2	1:5:1856:C:C2	3.08	0.41
1:5:1899:G:C4	1:5:1900:C:H5	2.34	0.41
1:5:1965:G:O2'	1:5:4695:C:C4'	2.69	0.41
1:5:1983:A:H62	1:5:1987:C:H5'	1.86	0.41
1:5:1998:A:C2	1:5:2020:U:O4'	2.74	0.41
1:5:2056:G:C2	1:5:2058:G:C6	3.09	0.41
1:5:2084:C:H6	1:5:2084:C:OP1	2.03	0.41
1:5:2115:G:N7	1:5:2116:C:H1'	2.36	0.41
1:5:2263:A:O2'	1:5:2264:C:H2'	2.21	0.41
1:5:2282:A:H5"	29:a:21:ARG:CD	2.48	0.41
1:5:2294:G:C6	1:5:2295:C:C4	3.09	0.41
1:5:2301:G:C4	1:5:2302:C:C6	3.08	0.41
1:5:2304:U:C4	1:5:2332:A:N7	2.88	0.41
1:5:2314:G:N1	1:5:2326:G:C8	2.89	0.41
1:5:2399:G:C2	1:5:2400:G:C5	3.09	0.41
1:5:2463:G:C2	1:5:2464:C:C2	3.09	0.41
1:5:2591:A:H62	1:5:2753:G:N2	2.19	0.41
1:5:2606:G:C4	1:5:2607:C:C6	3.08	0.41
1:5:2724:G:N1	1:5:2726:G:C6	2.89	0.41
1:5:2727:C:C2	1:5:2728:U:C5	3.09	0.41
1:5:2732:G:C2	1:5:2733:C:C2	3.09	0.41
1:5:2745:A:H2'	1:5:2746:A:C8	2.56	0.41
1:5:2855:G:H22	1:5:2859:G:N2	2.18	0.41
1:5:2891:U:H2'	1:5:2892:C:O4'	2.21	0.41
1:5:3641:U:C5	1:5:3646:A:N7	2.89	0.41
1:5:3653:A:H8	1:5:3653:A:P	2.43	0.41
1:5:3705:G:C5	1:5:3706:C:C4	3.08	0.41
1:5:3724:A:C6	1:5:3725:G:C6	3.09	0.41
1:5:3786:U:H6	1:5:3786:U:C5'	2.33	0.41
1:5:3800:A:C2	1:5:4496:A:H1'	2.56	0.41
1:5:3804:G:N2	1:5:3805:U:H1'	2.35	0.41
1:5:3841:C:O2	1:5:3841:C:C2'	2.69	0.41
1:5:3867:A:H2'	1:5:3868:G:C8	2.56	0.41
1:5:3874:G:C5	1:5:3875:G:C8	3.09	0.41
1:5:4100:C:N4	1:5:4101:C:H41	2.19	0.41
1:5:4125:C:C5	4:A:69:PHE:CD2	3.09	0.41
1:5:4171:C:H2'	1:5:4172:A:O4'	2.21	0.41
1:5:4184:G:N2	1:5:4185:G:H1'	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4233:A:OP1	43:o:97:LYS:HA	2.21	0.41
1:5:4286:C:H2'	1:5:4287:G:C8	2.56	0.41
1:5:4313:A:C2	1:5:4314:C:N1	2.89	0.41
1:5:4413:C:H5	1:5:4429:C:N4	2.18	0.41
1:5:4425:G:C5	1:5:4426:C:C6	3.08	0.41
1:5:4455:G:N2	1:5:4456:C:N1	2.69	0.41
1:5:4497:U:C4	1:5:4498:U:C6	3.08	0.41
1:5:4547:C:H2'	1:5:4549:G:C8	2.55	0.41
1:5:4608:G:C2	1:5:4609:G:H1'	2.56	0.41
1:5:4628:U:C2	1:5:4629:U:H5	2.36	0.41
1:5:4661:G:C2	1:5:4662:C:C2	3.09	0.41
1:5:4665:A:C6	1:5:4666:G:C5	3.09	0.41
1:5:4742:G:H2'	1:5:4742:G:N3	2.35	0.41
1:5:4748:U:H2'	1:5:4749:C:O4'	2.21	0.41
1:5:4754:G:N1	1:5:4880:C:C4	2.89	0.41
1:5:4770:U:O2'	1:5:4771:C:C6	2.73	0.41
1:5:4865:C:C2	1:5:4866:C:C6	3.09	0.41
1:5:4914:C:H2'	1:5:4915:G:O4'	2.21	0.41
1:5:4946:U:C4	1:5:4947:U:C5	3.09	0.41
1:5:4984:C:H2'	1:5:4985:U:C5'	2.51	0.41
1:5:4996:C:C4	1:5:4997:G:N7	2.88	0.41
1:5:5006:U:N1	1:5:5042:A:N7	2.69	0.41
1:5:5019:A:N1	1:5:5020:G:C5	2.89	0.41
1:5:5047:C:N1	1:5:5048:A:C6	2.89	0.41
1:5:5061:A:O4'	1:5:5062:G:H5"	2.20	0.41
2:7:54:A:N7	13:J:12:MET:HG2	2.36	0.41
2:7:56:G:C2'	2:7:57:C:O4'	2.64	0.41
2:7:56:G:HO2'	2:7:57:C:P	2.44	0.41
2:7:57:C:H2'	2:7:58:A:O4'	2.21	0.41
2:7:82:G:C2	2:7:95:C:N3	2.89	0.41
2:7:119:U:C4	7:D:261:VAL:HG21	2.56	0.41
3:8:31:G:C2	3:8:32:C:C2	3.09	0.41
3:8:52:A:H2'	3:8:52:A:N3	2.36	0.41
3:8:66:A:C2	3:8:67:U:N3	2.89	0.41
3:8:70:G:C2	3:8:87:G:N3	2.89	0.41
3:8:80:A:C8	3:8:81:C:C1'	3.03	0.41
3:8:82:A:N1	3:8:83:C:H5"	2.35	0.41
3:8:94:G:C8	3:8:94:G:C4'	3.03	0.41
3:8:97:A:C6	3:8:98:C:C4	3.09	0.41
3:8:120:G:N1	3:8:121:G:N7	2.69	0.41
4:A:104:VAL:HG12	4:A:146:THR:HG21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:142:HIS:HD2	6:C:249:PHE:HB3	1.85	0.41
6:C:156:ASP:OD1	6:C:254:GLU:HB3	2.20	0.41
6:C:335:MET:HE3	9:F:60:HIS:CE1	2.56	0.41
7:D:240:TYR:C	7:D:244:HIS:CE1	2.99	0.41
8:E:174:PRO:O	8:E:175:LEU:C	2.64	0.41
9:F:58:HIS:O	9:F:60:HIS:N	2.53	0.41
9:F:239:GLU:C	9:F:241:GLN:N	2.78	0.41
10:G:32:PHE:CD2	28:Z:55:ALA:HB2	2.56	0.41
10:G:136:LEU:HD21	10:G:204:PHE:HE1	1.82	0.41
14:L:9:ILE:HG13	29:a:52:TYR:CE2	2.55	0.41
14:L:58:VAL:C	14:L:59:VAL:HG23	2.46	0.41
14:L:145:LYS:HG3	14:L:146:LEU:N	2.36	0.41
14:L:179:PHE:CE1	14:L:183:ARG:HD3	2.56	0.41
15:M:9:VAL:HG11	15:M:66:HIS:HA	2.02	0.41
15:M:86:TRP:NE1	15:M:92:ALA:HB2	2.35	0.41
16:N:61:ILE:HD12	16:N:131:GLU:OE2	2.20	0.41
17:O:191:ARG:HA	17:O:194:GLU:HB3	2.03	0.41
20:R:38:ARG:O	20:R:39:GLN:HB3	2.21	0.41
22:T:9:ARG:HG3	22:T:10:GLY:N	2.28	0.41
23:U:27:HIS:CD2	23:U:27:HIS:C	2.99	0.41
26:X:142:PRO:C	26:X:144:TYR:H	2.29	0.41
36:h:88:THR:O	36:h:89:ARG:C	2.64	0.41
37:i:55:ARG:HA	37:i:58:MET:HG2	2.03	0.41
38:j:39:TYR:HB3	38:j:40:PRO:HD3	2.01	0.41
40:l:38:ASN:OD1	40:l:38:ASN:C	2.64	0.41
45:r:30:ASN:OD1	45:r:30:ASN:N	2.52	0.41
46:1:58:SER:OG	46:1:62:PHE:CE1	2.70	0.41
46:1:95:ALA:O	46:1:102:VAL:HG21	2.20	0.41
1:5:147:A:H2'	1:5:148:C:C5'	2.51	0.41
1:5:231:U:O2'	27:Y:100:HIS:HD2	2.04	0.41
1:5:272:U:O2	1:5:272:U:H2'	2.21	0.41
1:5:349:A:H2'	1:5:349:A:O5'	2.21	0.41
1:5:431:G:C1'	1:5:3889:G:C2	3.03	0.41
1:5:496:G:N1	1:5:658:C:N3	2.69	0.41
1:5:511:C:H2'	1:5:512:U:H6	1.86	0.41
1:5:911:U:C4	1:5:912:G:N7	2.89	0.41
1:5:957:G:H3'	1:5:2077:C:OP1	2.21	0.41
1:5:993:G:N3	1:5:994:G:C8	2.89	0.41
1:5:1095:A:C6	1:5:1096:C:C4	3.08	0.41
1:5:1212:G:N2	1:5:1213:G:C4	2.89	0.41
1:5:1257:A:C5	1:5:1258:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1281:G:O2'	6:C:323:ARG:N	2.38	0.41
1:5:1380:G:H1'	1:5:1381:U:H3	1.86	0.41
1:5:1388:A:C6	1:5:1389:U:C2	3.09	0.41
1:5:1410:U:O2'	1:5:1411:C:OP2	2.33	0.41
1:5:1446:C:N3	1:5:1447:C:C5	2.88	0.41
1:5:1570:G:C4	1:5:1571:G:C8	3.09	0.41
1:5:1571:G:N3	1:5:1571:G:H2'	2.36	0.41
1:5:1619:G:C2'	1:5:1620:U:O5'	2.69	0.41
1:5:1634:A:N1	1:5:1635:C:C5	2.88	0.41
1:5:1681:G:H21	29:a:40:HIS:HB2	1.86	0.41
1:5:1734:G:H2'	22:T:13:TYR:CZ	2.56	0.41
1:5:1782:U:C2	1:5:1783:C:C5	3.09	0.41
1:5:1869:G:C8	1:5:3877:A:C6	3.09	0.41
1:5:2021:G:N1	1:5:2022:C:C4	2.89	0.41
1:5:2034:G:H1'	21:S:116:ARG:O	2.21	0.41
1:5:2036:C:H2'	1:5:2037:C:C6	2.55	0.41
1:5:2046:G:N9	17:O:60:LYS:HD3	2.36	0.41
1:5:2059:C:O2	1:5:2060:G:C8	2.74	0.41
1:5:2065:G:O2'	34:f:80:ASN:ND2	2.54	0.41
1:5:2312:U:O2	1:5:2312:U:C2'	2.64	0.41
1:5:2327:G:N2	1:5:2328:G:C8	2.88	0.41
1:5:2330:G:C2'	1:5:2331:G:O4'	2.69	0.41
1:5:2447:U:HO2'	1:5:2448:G:P	2.44	0.41
1:5:2477:A:N1	1:5:2478:C:C4	2.88	0.41
1:5:2559:G:C4	1:5:2560:C:C6	3.09	0.41
1:5:2633:U:C4	1:5:2634:C:C5	3.08	0.41
1:5:2664:G:C2	1:5:2671:C:N3	2.89	0.41
1:5:2765:A:H5"	1:5:2766:A:H2	1.85	0.41
1:5:2791:C:O2	1:5:2792:C:C6	2.74	0.41
1:5:2907:G:C2	1:5:3588:C:C2	3.09	0.41
1:5:3747:A:O4'	1:5:3817:A:H2'	2.21	0.41
1:5:3882:C:C2	1:5:3883:U:C5	3.08	0.41
1:5:4166:G:C6	1:5:4167:G:C5	3.09	0.41
1:5:4258:C:N3	1:5:4259:C:C4	2.88	0.41
1:5:4369:A:C2	1:5:4370:G:N9	2.87	0.41
1:5:4372:U:O2	1:5:4377:G:H1'	2.20	0.41
1:5:4399:U:N3	1:5:4400:G:C8	2.89	0.41
1:5:4524:G:N3	1:5:4525:C:C6	2.89	0.41
1:5:4871:C:C5	21:S:176:PHE:CD2	3.08	0.41
1:5:4896:G:C2	1:5:4897:G:N9	2.88	0.41
1:5:4906:C:O2	1:5:4916:G:C2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4997:G:N1	1:5:4998:G:C4	2.89	0.41
1:5:5021:C:C4	1:5:5022:U:C5	3.09	0.41
2:7:8:G:P	7:D:33:ARG:NH2	2.94	0.41
2:7:69:U:O2	2:7:70:G:C8	2.74	0.41
3:8:70:G:C2	3:8:87:G:N2	2.89	0.41
3:8:75:G:C2	3:8:76:C:C2	3.09	0.41
5:B:195:ASP:O	5:B:196:TRP:HB2	2.21	0.41
6:C:71:ARG:HB3	6:C:71:ARG:CZ	2.50	0.41
10:G:108:GLN:O	10:G:112:GLN:NE2	2.54	0.41
16:N:150:TRP:C	16:N:150:TRP:CE3	2.99	0.41
18:P:128:ARG:NH1	18:P:136:ILE:HG21	2.36	0.41
21:S:29:ARG:HH12	22:T:150:LEU:CA	2.34	0.41
25:W:21:TYR:HB2	25:W:31:PHE:CE2	2.56	0.41
29:a:9:ARG:NE	29:a:9:ARG:HA	2.36	0.41
32:d:25:TYR:HB3	32:d:52:PHE:HE2	1.85	0.41
35:g:3:GLN:HE22	35:g:30:ILE:HB	1.85	0.41
44:p:14:TYR:N	44:p:14:TYR:HD1	2.19	0.41
46:1:94:LEU:HD22	46:1:100:ILE:CD1	2.51	0.41
1:5:189:G:N2	1:5:190:G:C8	2.90	0.40
1:5:209:U:O2	1:5:233:U:N3	2.54	0.40
1:5:324:A:C2'	1:5:325:U:H5'	2.52	0.40
1:5:731:G:N1	1:5:732:A:H1'	2.36	0.40
1:5:753:C:C4	1:5:754:U:H5	2.33	0.40
1:5:1275:G:C5	1:5:1276:C:C5	3.09	0.40
1:5:1308:C:C2	1:5:1309:C:C6	3.10	0.40
1:5:1384:C:O2	1:5:1505:C:H4'	2.21	0.40
1:5:1478:C:O2	1:5:1478:C:H2'	2.20	0.40
1:5:1529:G:C2'	38:j:47:TYR:OH	2.69	0.40
1:5:1620:U:H2'	1:5:1621:A:H8	1.85	0.40
1:5:1638:A:H5'	38:j:8:PHE:HE1	1.85	0.40
1:5:1760:G:O6	1:5:1772:C:N3	2.53	0.40
1:5:1780:A:N6	1:5:1781:U:C6	2.88	0.40
1:5:1817:U:C2'	1:5:1818:G:O5'	2.69	0.40
1:5:1886:G:C6	1:5:1887:G:C8	3.09	0.40
1:5:1995:G:C6	1:5:1996:C:N4	2.89	0.40
1:5:2290:C:C4	1:5:2291:G:N7	2.90	0.40
1:5:2470:C:C3'	1:5:2470:C:C6	3.04	0.40
1:5:2509:C:HO2'	1:5:2510:G:H5'	1.83	0.40
1:5:2560:C:O2	1:5:2560:C:H2'	2.20	0.40
1:5:2583:C:N4	35:g:75:SER:OG	2.54	0.40
1:5:2614:C:H1'	1:5:2726:G:N2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2664:G:C6	1:5:2665:U:C2	3.09	0.40
1:5:2714:G:N2	1:5:2715:G:C5	2.89	0.40
1:5:2752:G:H8	1:5:2752:G:H5"	1.85	0.40
1:5:2830:G:C2	1:5:2831:G:C5	3.09	0.40
1:5:3639:U:H2'	1:5:3640:U:O4'	2.22	0.40
1:5:3656:A:C2	1:5:3657:U:C4	3.08	0.40
1:5:3683:C:H4'	1:5:3684:G:OP2	2.22	0.40
1:5:3699:C:O2	1:5:3699:C:H2'	2.20	0.40
1:5:3703:G:C4	1:5:3704:U:C6	3.09	0.40
1:5:3738:G:C8	1:5:3738:G:C3'	3.04	0.40
1:5:3740:G:C2	1:5:3741:C:O4'	2.74	0.40
1:5:3801:U:O2'	1:5:3802:U:O5'	2.38	0.40
1:5:3883:U:O2'	1:5:3884:U:C5'	2.70	0.40
1:5:4074:C:O2'	1:5:4075:U:C5'	2.69	0.40
1:5:4100:C:N4	1:5:4101:C:N4	2.69	0.40
1:5:4101:C:C2	1:5:4102:C:C6	3.09	0.40
1:5:4269:G:C2	1:5:4270:C:C1'	3.04	0.40
1:5:4361:U:N3	1:5:4362:A:N7	2.68	0.40
1:5:4552:U:O2	1:5:4553:A:C8	2.74	0.40
1:5:4608:G:C4	1:5:4609:G:C8	3.09	0.40
1:5:4737:G:H5'	1:5:4737:G:C8	2.55	0.40
1:5:4905:C:C4	1:5:4906:C:C5	3.09	0.40
1:5:5043:A:H2'	1:5:5044:A:O5'	2.21	0.40
2:7:34:C:H2'	2:7:34:C:O2	2.21	0.40
3:8:62:A:OP1	36:h:52:LYS:NZ	2.42	0.40
3:8:63:U:O2	3:8:63:U:C3'	2.69	0.40
3:8:147:G:C2	3:8:148:A:C8	3.09	0.40
4:A:209:HIS:CD2	4:A:210:PRO:HD2	2.57	0.40
5:B:393:LYS:O	5:B:395:ASP:N	2.54	0.40
6:C:85:HIS:CD2	6:C:85:HIS:N	2.89	0.40
6:C:172:LYS:CE	6:C:177:TRP:HE1	2.34	0.40
6:C:288:ASP:OD2	6:C:291:ARG:HB3	2.21	0.40
6:C:339:THR:HA	6:C:342:ARG:HB3	2.03	0.40
9:F:83:PHE:CD2	21:S:62:VAL:HG11	2.56	0.40
9:F:100:ILE:N	9:F:101:ASN:OD1	2.53	0.40
11:H:31:ARG:NE	11:H:87:GLY:HA3	2.35	0.40
11:H:34:LEU:HD21	11:H:150:ASP:OD1	2.21	0.40
11:H:55:LEU:HD22	11:H:77:VAL:HG11	2.03	0.40
11:H:59:LYS:O	11:H:59:LYS:HE3	2.21	0.40
11:H:95:VAL:HG22	41:m:82:LEU:CD2	2.45	0.40
12:I:148:VAL:O	12:I:149:ILE:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:d:63:ARG:CD	32:d:103:TYR:CE1	3.04	0.40
32:d:116:ASN:ND2	32:d:116:ASN:C	2.78	0.40
36:h:73:TYR:HE2	36:h:80:PRO:HG3	1.86	0.40
39:k:41:TYR:HB3	39:k:43:TYR:HE1	1.85	0.40
40:l:44:TRP:HZ3	40:l:45:ARG:HD3	1.87	0.40
41:m:87:GLN:HE21	41:m:87:GLN:HB3	1.71	0.40
46:1:302:TYR:OH	46:1:341:LEU:CD1	2.69	0.40
1:5:98:A:N7	1:5:99:A:C8	2.90	0.40
1:5:120:A:O4’	1:5:121:A:N1	2.54	0.40
1:5:226:G:C4	1:5:236:G:C8	3.09	0.40
1:5:381:U:C4’	1:5:414:C:H2’	2.51	0.40
1:5:447:C:O2	1:5:448:G:C8	2.74	0.40
1:5:468:U:O2’	1:5:469:C:H4’	2.21	0.40
1:5:471:A:N1	1:5:472:C:N1	2.69	0.40
1:5:704:C:C6	1:5:704:C:C5’	3.02	0.40
1:5:715:G:N2	1:5:954:C:C2	2.89	0.40
1:5:931:C:C5	1:5:932:A:N7	2.89	0.40
1:5:938:C:C2	1:5:939:G:C8	3.10	0.40
1:5:1072:C:O2	1:5:1072:C:H2’	2.21	0.40
1:5:1234:G:C4	1:5:1235:G:N7	2.89	0.40
1:5:1377:G:C8	1:5:1378:C:C5’	3.04	0.40
1:5:1379:C:H4’	1:5:1380:G:C1’	2.51	0.40
1:5:1601:A:C5	1:5:3643:A:O4’	2.74	0.40
1:5:1617:G:N3	1:5:1618:G:C8	2.90	0.40
1:5:1697:G:H8	9:F:165:ASN:HA	1.86	0.40
1:5:1764:G:C5	1:5:1766:A:OP2	2.73	0.40
1:5:1949:U:O2	1:5:1949:U:C2’	2.69	0.40
1:5:1989:G:N2	1:5:1990:A:C5	2.89	0.40
1:5:2020:U:O2	1:5:2021:G:C8	2.74	0.40
1:5:2101:C:N3	1:5:2102:G:N7	2.70	0.40
1:5:2618:G:C6	1:5:2619:G:N7	2.89	0.40
1:5:2658:G:N2	1:5:2675:G:H2’	2.25	0.40
1:5:2688:G:C2	1:5:2689:C:C4	3.08	0.40
1:5:2838:G:C8	1:5:2838:G:H5”	2.56	0.40
1:5:3636:C:N4	1:5:3637:U:C5	2.88	0.40
1:5:3772:U:C2	1:5:3773:U:C5	3.10	0.40
1:5:3879:G:N1	1:5:3882:C:C5	2.86	0.40
1:5:4096:C:N4	1:5:4097:G:N9	2.70	0.40
1:5:4278:C:O2	1:5:4278:C:H2’	2.21	0.40
1:5:4459:U:H4’	5:B:265:SER:O	2.21	0.40
1:5:4518:A:OP2	5:B:258:HIS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4534:G:C2	1:5:4535:A:H1'	2.57	0.40
1:5:4615:C:H5"	5:B:357:ARG:HD2	2.03	0.40
1:5:4683:U:C2'	1:5:4684:A:O5'	2.69	0.40
1:5:4741:C:O2	1:5:4741:C:H2'	2.20	0.40
1:5:4752:U:C2	1:5:4948:C:N3	2.90	0.40
1:5:4897:G:C2	1:5:4924:C:C2	3.09	0.40
1:5:4959:U:O2	1:5:4959:U:H2'	2.21	0.40
1:5:4975:G:C6	1:5:4977:A:C6	3.08	0.40
1:5:4981:G:H1'	18:P:69:ARG:HH11	1.85	0.40
1:5:4997:G:C6	1:5:4998:G:C8	3.10	0.40
2:7:18:C:H42	2:7:19:C:H41	1.69	0.40
3:8:42:G:N2	3:8:43:A:H1'	2.36	0.40
3:8:70:G:C6	3:8:87:G:C6	3.09	0.40
3:8:106:G:C4	3:8:107:C:C5	3.09	0.40
6:C:130:ALA:HB3	6:C:246:VAL:CG1	2.51	0.40
10:G:32:PHE:N	10:G:32:PHE:CD1	2.89	0.40
12:I:106:ALA:HB1	12:I:109:ASP:HA	2.03	0.40
13:J:165:TRP:CH2	13:J:169:LYS:HG2	2.56	0.40
16:N:135:ILE:CG2	16:N:142:ILE:HD13	2.50	0.40
20:R:8:LYS:HG3	20:R:22:VAL:CG1	2.50	0.40
22:T:19:PHE:O	22:T:21:LYS:HG3	2.20	0.40
22:T:43:LYS:CG	22:T:58:HIS:HE1	2.35	0.40
24:V:57:VAL:HG23	24:V:84:GLN:CG	2.45	0.40
33:e:58:ILE:C	33:e:60:TYR:N	2.78	0.40
37:i:3:LEU:HD12	37:i:5:TYR:CZ	2.56	0.40
37:i:85:ARG:HH11	37:i:85:ARG:CG	2.34	0.40
40:l:21:ARG:NH1	46:1:273:ARG:CD	2.85	0.40
43:o:45:GLN:NE2	43:o:45:GLN:CA	2.82	0.40
1:5:101:A:N1	1:5:102:G:C8	2.90	0.40
1:5:167:C:N1	1:5:269:G:N2	2.69	0.40
1:5:225:G:N3	1:5:243:A:C2	2.89	0.40
1:5:730:G:N2	1:5:939:G:C2	2.82	0.40
1:5:925:C:C4	1:5:926:G:N7	2.89	0.40
1:5:1219:G:C2	1:5:1220:G:C4	3.09	0.40
1:5:1310:C:O2	1:5:1310:C:C2'	2.69	0.40
1:5:1320:U:H1'	1:5:1856:C:O4'	2.22	0.40
1:5:1358:G:H3'	1:5:1358:G:C8	2.57	0.40
1:5:1408:G:C2'	1:5:1411:C:H41	2.35	0.40
1:5:1453:G:N1	1:5:1454:G:C5	2.89	0.40
1:5:1742:A:H2'	1:5:1742:A:N3	2.35	0.40
1:5:1993:C:N3	1:5:1994:C:C5	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2076:G:C4	1:5:2077:C:C6	3.10	0.40
1:5:2326:G:C2	1:5:2327:G:C4	3.10	0.40
1:5:2326:G:N3	1:5:2326:G:H2'	2.36	0.40
1:5:2384:U:H2'	1:5:2385:U:C6	2.57	0.40
1:5:2396:A:N3	1:5:2396:A:O4'	2.54	0.40
1:5:2408:U:O4'	1:5:2409:U:C4	2.74	0.40
1:5:2549:G:C6	1:5:2550:G:C5	3.09	0.40
1:5:2590:G:H2'	1:5:2755:A:N6	2.36	0.40
1:5:2677:G:N3	1:5:2677:G:H2'	2.36	0.40
1:5:2833:A:C2'	1:5:2834:C:O5'	2.69	0.40
1:5:3621:A:H3'	1:5:3622:C:C6	2.57	0.40
1:5:3644:U:H2'	1:5:3645:U:H5'	2.03	0.40
1:5:3683:C:O3'	4:A:174:ARG:NH2	2.55	0.40
1:5:3848:U:O2	1:5:3849:A:C8	2.74	0.40
1:5:3858:C:N3	1:5:3859:G:N9	2.70	0.40
1:5:3930:U:N3	1:5:3931:C:C5	2.90	0.40
1:5:4123:C:H3'	1:5:4124:G:H8	1.85	0.40
1:5:4164:C:H4'	10:G:53:ARG:O	2.21	0.40
1:5:4237:C:O2'	1:5:4326:G:N2	2.53	0.40
1:5:4308:C:C2	1:5:4309:G:C8	3.09	0.40
1:5:4489:G:N3	1:5:4490:C:C6	2.89	0.40
1:5:4546:A:N7	4:A:215:ASN:ND2	2.69	0.40
1:5:4550:G:C5	1:5:4551:U:C5	3.07	0.40
1:5:4586:G:H8	1:5:4586:G:H5"	1.87	0.40
1:5:4680:G:C2	1:5:4681:A:C5	3.09	0.40
1:5:4739:C:C2	1:5:4961:G:C2	3.09	0.40
1:5:4745:G:C2'	1:5:4746:C:H5	2.32	0.40
1:5:4901:G:N1	1:5:4921:C:C4	2.90	0.40
1:5:4933:C:OP1	1:5:4933:C:H4'	2.21	0.40
1:5:5063:G:N2	1:5:5064:G:C4	2.89	0.40
3:8:117:C:C4	3:8:118:C:H5	2.36	0.40
4:A:33:ASP:C	4:A:37:ARG:NH2	2.80	0.40
4:A:225:ILE:HD12	4:A:233:ARG:CZ	2.50	0.40
5:B:175:GLN:NE2	5:B:179:HIS:HE1	2.14	0.40
6:C:47:ASN:OD1	6:C:47:ASN:N	2.52	0.40
7:D:99:TYR:O	7:D:100:CYS:C	2.65	0.40
9:F:32:ILE:N	9:F:32:ILE:HD12	2.36	0.40
14:L:163:ARG:HD2	14:L:164:GLU:C	2.46	0.40
15:M:34:ASN:ND2	15:M:34:ASN:N	2.69	0.40
20:R:74:ARG:O	20:R:75:HIS:HB2	2.20	0.40
21:S:28:TYR:CE2	21:S:52:LYS:HG3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:38:TYR:CB	24:V:66:LYS:HD3	2.51	0.40
24:V:48:ARG:HD2	24:V:51:ARG:HH22	1.86	0.40
29:a:113:GLY:N	29:a:133:ALA:HB2	2.37	0.40
33:e:74:PHE:HB3	33:e:95:TYR:HA	2.02	0.40
46:1:268:LYS:HE3	46:1:275:GLN:O	2.22	0.40
46:1:268:LYS:C	46:1:399:MET:HE3	2.47	0.40
1:5:44:A:C4	1:5:45:U:C6	3.10	0.40
1:5:84:A:C8	1:5:84:A:C5'	3.04	0.40
1:5:248:C:N3	1:5:249:C:C5	2.90	0.40
1:5:410:A:N3	1:5:410:A:H2'	2.36	0.40
1:5:440:U:O2	1:5:440:U:H2'	2.22	0.40
1:5:487:G:C2	1:5:488:G:C4	3.09	0.40
1:5:722:G:H2'	1:5:723:A:C8	2.57	0.40
1:5:907:C:C4	1:5:908:G:N7	2.89	0.40
1:5:979:C:C6	1:5:979:C:OP2	2.74	0.40
1:5:986:C:N3	1:5:987:C:C5	2.90	0.40
1:5:1065:G:N1	1:5:1066:G:C5	2.90	0.40
1:5:1098:G:C4	1:5:1099:C:C6	3.09	0.40
1:5:1327:C:H2'	1:5:1328:G:C8	2.56	0.40
1:5:1334:A:C2	1:5:1335:G:C8	3.09	0.40
1:5:1475:G:N2	1:5:1489:G:N1	2.59	0.40
1:5:1509:C:O2	1:5:1509:C:H2'	2.20	0.40
1:5:1520:C:H5'	6:C:102:PHE:CZ	2.56	0.40
1:5:1571:G:C4	1:5:1572:U:C6	3.10	0.40
1:5:1627:G:C8	1:5:1628:C:C5	3.09	0.40
1:5:1627:G:C2	1:5:1628:C:H1'	2.56	0.40
1:5:1811:G:C6	1:5:1812:C:C5	3.09	0.40
1:5:1843:A:N1	1:5:1844:G:N7	2.70	0.40
1:5:1867:A:O2'	1:5:1868:A:C5'	2.69	0.40
1:5:1870:C:C4	1:5:1871:A:N7	2.89	0.40
1:5:1919:G:O6	34:f:29:LYS:HE2	2.21	0.40
1:5:1945:G:O6	1:5:1946:G:N7	2.54	0.40
1:5:1979:A:C2	1:5:1982:G:N7	2.89	0.40
1:5:2045:G:O6	1:5:3870:C:O2'	2.39	0.40
1:5:2244:C:N3	1:5:2245:G:N7	2.70	0.40
1:5:2483:G:N1	1:5:2484:A:C5	2.89	0.40
1:5:2515:G:C5	1:5:2516:G:N7	2.89	0.40
1:5:2559:G:N1	1:5:2560:C:C2	2.89	0.40
1:5:2634:C:O2	1:5:2635:U:C6	2.74	0.40
1:5:2701:U:C2	1:5:2702:C:C5	3.09	0.40
1:5:2744:A:C2	1:5:2745:A:N1	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3751:G:N2	1:5:3775:A:H8	2.17	0.40
1:5:3894:A:C4'	1:5:4979:A:N1	2.84	0.40
1:5:4079:C:O2	1:5:4080:C:C6	2.75	0.40
1:5:4253:A:N1	13:J:25:CYS:SG	2.86	0.40
1:5:4333:C:N3	1:5:4334:U:O4	2.54	0.40
1:5:4344:U:C2	1:5:4345:C:H5	2.30	0.40
1:5:4381:A:C6	1:5:4382:G:N7	2.89	0.40
1:5:4456:C:O2	1:5:4456:C:C2'	2.69	0.40
1:5:4501:U:C4	1:5:4502:C:C1'	3.04	0.40
1:5:4751:G:OP2	34:f:100:ARG:HB2	2.21	0.40
1:5:4978:G:HO2'	1:5:4979:A:H3'	1.86	0.40
1:5:5048:A:C8	32:d:34:HIS:NE2	2.85	0.40
2:7:27:G:C4	2:7:28:C:C6	3.10	0.40
2:7:62:U:C5'	7:D:279:ARG:HH12	2.35	0.40
2:7:110:G:C5	2:7:111:C:C5	3.09	0.40
3:8:102:G:H4'	38:j:21:ARG:HD3	2.04	0.40
6:C:92:PHE:C	6:C:100:ARG:NH1	2.79	0.40
7:D:31:TYR:CD1	7:D:35:ARG:NH2	2.90	0.40
8:E:173:GLY:O	8:E:174:PRO:C	2.64	0.40
8:E:277:ILE:HD11	8:E:282:LEU:HD22	2.04	0.40
10:G:166:LEU:HD23	16:N:7:ILE:HD13	2.02	0.40
10:G:231:ASN:HD22	10:G:231:ASN:H	1.65	0.40
17:O:36:VAL:CG1	17:O:108:ILE:HB	2.52	0.40
18:P:94:MET:HE3	18:P:94:MET:HB2	1.97	0.40
21:S:94:TYR:CZ	21:S:96:GLU:HG3	2.56	0.40
27:Y:127:GLN:C	27:Y:127:GLN:HE21	2.28	0.40
28:Z:76:ASN:HB3	28:Z:78:ASN:H	1.86	0.40
36:h:8:ASP:OD1	36:h:8:ASP:N	2.52	0.40
45:r:31:ASN:OD1	45:r:40:TYR:HB3	2.21	0.40
1:5:12:A:C6	1:5:14:C:N4	2.89	0.40
1:5:183:C:O2	1:5:189:G:C6	2.74	0.40
1:5:190:G:N2	1:5:252:C:H1'	2.36	0.40
1:5:209:U:N3	1:5:211:G:C8	2.88	0.40
1:5:297:U:H2'	1:5:298:G:O4'	2.21	0.40
1:5:348:G:C2	1:5:350:C:C6	3.09	0.40
1:5:504:G:N3	1:5:505:G:C8	2.90	0.40
1:5:509:A:H3'	1:5:510:U:C5'	2.52	0.40
1:5:642:G:C2	1:5:643:C:C2	3.09	0.40
1:5:699:C:N3	1:5:700:G:N7	2.69	0.40
1:5:932:A:N3	1:5:932:A:C2'	2.85	0.40
1:5:962:C:C5	45:r:112:ARG:CZ	3.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:963:G:O3'	45:r:107:ARG:NH2	2.54	0.40
1:5:988:C:C4	1:5:989:U:C4	3.09	0.40
1:5:990:C:N3	1:5:991:C:C6	2.90	0.40
1:5:1098:G:H2'	1:5:1099:C:H6	1.86	0.40
1:5:1220:G:C2	1:5:1221:G:C8	3.10	0.40
1:5:1234:G:C3'	1:5:1235:G:H8	2.33	0.40
1:5:1258:G:N2	1:5:1259:G:C4	2.90	0.40
1:5:1280:C:C4	1:5:1282:G:C6	3.05	0.40
1:5:1337:A:H4'	6:C:102:PHE:CE2	2.56	0.40
1:5:1349:G:N3	1:5:1350:C:C6	2.89	0.40
1:5:1397:A:H2	1:5:1498:G:N3	2.18	0.40
1:5:1494:U:O2	1:5:1495:G:C8	2.73	0.40
1:5:1614:C:H3'	1:5:1614:C:C6	2.56	0.40
1:5:1725:U:OP1	9:F:106:LYS:HG3	2.22	0.40
1:5:1828:C:O2	1:5:1829:G:C8	2.74	0.40
1:5:1941:A:C2'	1:5:1942:A:O5'	2.70	0.40
1:5:1966:C:N4	1:5:1967:A:N7	2.70	0.40
1:5:2263:A:H5"	1:5:2263:A:C8	2.57	0.40
1:5:2307:A:H5"	33:e:102:ASN:HB2	2.04	0.40
1:5:2367:A:C2'	1:5:2368:A:O5'	2.70	0.40
1:5:2821:U:H2'	1:5:2822:G:O4'	2.22	0.40
1:5:2830:G:N1	1:5:2831:G:C5	2.89	0.40
1:5:2833:A:O2'	1:5:2834:C:C4'	2.69	0.40
1:5:2843:U:N3	1:5:2844:A:C5	2.90	0.40
1:5:3682:A:C2	4:A:152:SER:HB3	2.57	0.40
1:5:3789:C:OP2	1:5:3790:U:O2'	2.39	0.40
1:5:3945:A:C2	1:5:3946:G:N7	2.90	0.40
1:5:4143:G:N7	1:5:4145:C:C4	2.89	0.40
1:5:4198:G:N3	1:5:4198:G:H2'	2.37	0.40
1:5:4274:A:C8	1:5:4274:A:H3'	2.56	0.40
1:5:4476:C:C6	11:H:171:ASP:OD2	2.75	0.40
1:5:4540:C:C2	1:5:4541:G:C8	3.10	0.40
1:5:4593:C:N3	1:5:4594:U:C5	2.90	0.40
1:5:4697:U:C5'	1:5:4698:C:OP2	2.70	0.40
1:5:4742:G:C6	1:5:4743:G:C8	3.09	0.40
1:5:4878:C:N3	1:5:4879:C:C4	2.90	0.40
1:5:4889:G:O2'	1:5:4890:G:O5'	2.32	0.40
1:5:4900:C:H4'	1:5:4901:G:OP2	2.22	0.40
1:5:5022:U:C5	1:5:5024:C:C4	3.10	0.40
1:5:5028:G:N1	1:5:5029:C:C4	2.90	0.40
2:7:113:G:C4	2:7:114:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:13:G:N2	3:8:14:U:C2	2.90	0.40
3:8:13:G:N1	3:8:14:U:N3	2.70	0.40
3:8:82:A:C5	3:8:83:C:H5"	2.57	0.40
3:8:99:U:O2	3:8:100:U:C6	2.74	0.40
3:8:123:U:O2	3:8:125:C:O2	2.38	0.40
4:A:189:TYR:HA	4:A:192:LYS:HG3	2.03	0.40
5:B:379:PHE:HE2	5:B:385:LYS:HG3	1.87	0.40
6:C:11:TYR:HE2	6:C:148:PRO:HG2	1.86	0.40
6:C:102:PHE:HD1	6:C:103:ALA:N	2.19	0.40
7:D:66:TYR:C	7:D:66:TYR:HD1	2.28	0.40
7:D:278:ASP:O	7:D:279:ARG:C	2.64	0.40
9:F:77:ALA:HB1	9:F:83:PHE:N	2.36	0.40
9:F:202:ARG:N	9:F:202:ARG:CD	2.85	0.40
9:F:219:ARG:HB3	9:F:219:ARG:NH1	2.34	0.40
12:I:46:PHE:CZ	12:I:85:PHE:CA	3.05	0.40
16:N:180:PHE:CD2	16:N:180:PHE:N	2.89	0.40
16:N:195:ARG:C	16:N:196:ASN:HD22	2.28	0.40
22:T:144:ASN:OD1	22:T:144:ASN:N	2.54	0.40
33:e:76:LYS:HD2	33:e:98:GLU:CG	2.50	0.40
34:f:15:LYS:HA	34:f:27:LEU:HD21	2.04	0.40
35:g:108:LYS:O	35:g:112:GLN:HG2	2.21	0.40
41:m:97:ARG:HD2	41:m:122:ARG:HD3	2.03	0.40
46:1:78:GLU:OE2	46:1:154:GLN:CG	2.67	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	A	242/257 (94%)	203 (84%)	30 (12%)	9 (4%)	2 16
5	B	392/394 (100%)	319 (81%)	40 (10%)	33 (8%)	0 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	C	365/367 (100%)	304 (83%)	46 (13%)	15 (4%)	2	15
7	D	290/297 (98%)	235 (81%)	33 (11%)	22 (8%)	1	5
8	E	232/236 (98%)	150 (65%)	51 (22%)	31 (13%)	0	1
9	F	223/225 (99%)	190 (85%)	23 (10%)	10 (4%)	2	12
10	G	239/266 (90%)	200 (84%)	32 (13%)	7 (3%)	3	19
11	H	188/192 (98%)	164 (87%)	20 (11%)	4 (2%)	5	24
12	I	211/213 (99%)	168 (80%)	30 (14%)	13 (6%)	1	7
13	J	168/178 (94%)	137 (82%)	23 (14%)	8 (5%)	2	11
14	L	208/211 (99%)	172 (83%)	25 (12%)	11 (5%)	1	10
15	M	136/213 (64%)	118 (87%)	16 (12%)	2 (2%)	8	30
16	N	201/204 (98%)	172 (86%)	23 (11%)	6 (3%)	3	18
17	O	199/201 (99%)	182 (92%)	14 (7%)	3 (2%)	8	30
18	P	151/153 (99%)	140 (93%)	9 (6%)	2 (1%)	9	33
19	Q	185/188 (98%)	160 (86%)	20 (11%)	5 (3%)	4	20
20	R	178/196 (91%)	153 (86%)	21 (12%)	4 (2%)	5	24
21	S	173/224 (77%)	146 (84%)	24 (14%)	3 (2%)	7	28
22	T	157/160 (98%)	128 (82%)	26 (17%)	3 (2%)	6	26
23	U	97/128 (76%)	74 (76%)	21 (22%)	2 (2%)	5	24
24	V	129/140 (92%)	112 (87%)	14 (11%)	3 (2%)	5	23
25	W	61/157 (39%)	57 (93%)	3 (5%)	1 (2%)	7	29
26	X	117/156 (75%)	108 (92%)	7 (6%)	2 (2%)	7	28
27	Y	132/145 (91%)	112 (85%)	14 (11%)	6 (4%)	2	12
28	Z	133/136 (98%)	113 (85%)	15 (11%)	5 (4%)	2	15
29	a	145/148 (98%)	111 (77%)	26 (18%)	8 (6%)	1	9
30	b	73/160 (46%)	58 (80%)	11 (15%)	4 (6%)	1	9
31	c	92/115 (80%)	78 (85%)	10 (11%)	4 (4%)	2	13
32	d	105/125 (84%)	85 (81%)	16 (15%)	4 (4%)	2	15
33	e	126/135 (93%)	110 (87%)	15 (12%)	1 (1%)	16	44
34	f	107/110 (97%)	95 (89%)	7 (6%)	5 (5%)	2	12
35	g	112/117 (96%)	103 (92%)	7 (6%)	2 (2%)	6	26
36	h	120/123 (98%)	103 (86%)	14 (12%)	3 (2%)	4	21

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	i	100/105 (95%)	91 (91%)	7 (7%)	2 (2%)	6 25
38	j	84/86 (98%)	67 (80%)	13 (16%)	4 (5%)	2 11
39	k	67/70 (96%)	55 (82%)	7 (10%)	5 (8%)	1 5
40	l	48/51 (94%)	42 (88%)	4 (8%)	2 (4%)	2 14
41	m	50/128 (39%)	44 (88%)	6 (12%)	0	100 100
42	n	21/25 (84%)	21 (100%)	0	0	100 100
43	o	102/106 (96%)	85 (83%)	11 (11%)	6 (6%)	1 8
44	p	89/91 (98%)	79 (89%)	9 (10%)	1 (1%)	11 38
45	r	123/125 (98%)	97 (79%)	20 (16%)	6 (5%)	1 11
46	1	384/476 (81%)	325 (85%)	42 (11%)	17 (4%)	2 13
47	2	60/68 (88%)	51 (85%)	6 (10%)	3 (5%)	1 10
All	All	6815/7601 (90%)	5717 (84%)	811 (12%)	287 (4%)	3 14

All (287) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	19	HIS
4	A	197	PRO
5	B	16	PHE
5	B	40	PRO
5	B	108	GLU
5	B	109	HIS
5	B	111	SER
5	B	120	LYS
5	B	138	GLN
5	B	143	ALA
5	B	169	ARG
5	B	191	ALA
5	B	196	TRP
5	B	388	PHE
5	B	389	MET
6	C	69	THR
6	C	99	GLY
6	C	309	ILE
6	C	318	PRO
6	C	319	LEU
7	D	19	LYS
7	D	212	ILE

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Mol	Chain	Res	Type
7	D	262	LYS
7	D	285	ALA
8	E	55	ARG
8	E	59	TYR
8	E	96	LYS
8	E	131	LYS
8	E	175	LEU
8	E	221	PRO
8	E	230	ASP
8	E	280	HIS
9	F	72	ARG
9	F	128	ASN
9	F	236	GLY
10	G	128	VAL
11	H	60	TRP
12	I	78	LYS
12	I	79	SER
12	I	178	ALA
12	I	179	ASP
12	I	187	LYS
13	J	91	GLU
14	L	62	PRO
14	L	64	VAL
14	L	67	HIS
14	L	82	ARG
14	L	83	VAL
14	L	134	PRO
15	M	7	VAL
16	N	30	TYR
16	N	89	VAL
17	O	5	GLN
17	O	111	PRO
19	Q	177	ALA
20	R	36	ASN
21	S	146	HIS
21	S	165	PRO
24	V	14	PHE
24	V	99	GLU
26	X	131	ASP
29	a	76	ASP
29	a	92	LYS
29	a	96	GLY

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Mol	Chain	Res	Type
30	b	7	HIS
30	b	12	GLN
34	f	4	ARG
35	g	7	TYR
36	h	119	PHE
37	i	64	SER
39	k	23	VAL
39	k	59	SER
40	l	22	PRO
43	o	90	HIS
43	o	94	GLY
45	r	34	ALA
45	r	45	HIS
45	r	107	ARG
46	1	62	PHE
46	1	174	GLY
46	1	285	TYR
46	1	435	ALA
46	1	436	ASP
46	1	445	THR
4	A	110	GLY
5	B	47	LEU
5	B	147	ALA
5	B	274	TYR
5	B	314	ILE
5	B	394	LYS
6	C	58	ALA
6	C	66	SER
6	C	320	LYS
7	D	21	ARG
7	D	57	ASN
7	D	96	ALA
7	D	220	LYS
7	D	260	GLU
7	D	279	ARG
7	D	281	ALA
7	D	293	ARG
8	E	43	ASN
8	E	61	ARG
8	E	91	PRO
8	E	181	PRO
8	E	220	LYS

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Mol	Chain	Res	Type
9	F	31	LYS
9	F	168	ARG
9	F	229	PHE
10	G	28	VAL
11	H	64	ARG
12	I	101	LYS
12	I	210	ARG
13	J	26	VAL
13	J	88	LYS
13	J	169	LYS
14	L	143	GLU
15	M	87	ALA
16	N	79	ALA
18	P	41	ILE
19	Q	178	ARG
20	R	39	GLN
22	T	18	PRO
22	T	44	GLY
22	T	55	LYS
26	X	86	ALA
27	Y	6	PHE
28	Z	91	LEU
29	a	60	HIS
29	a	62	HIS
29	a	97	ALA
31	c	32	LYS
31	c	80	GLU
31	c	81	LEU
32	d	93	ASN
33	e	34	ASN
36	h	122	LYS
39	k	61	PRO
43	o	33	LEU
43	o	98	LYS
45	r	123	PRO
46	1	61	PRO
46	1	239	LEU
46	1	288	ASN
46	1	385	SER
47	2	8	VAL
47	2	66	VAL
4	A	180	LEU

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Mol	Chain	Res	Type
4	A	196	TRP
5	B	295	ASP
6	C	73	VAL
6	C	97	ARG
6	C	266	THR
6	C	273	LEU
7	D	129	GLU
7	D	152	ARG
7	D	187	SER
7	D	188	LYS
8	E	92	VAL
8	E	95	ASP
8	E	104	LYS
8	E	153	HIS
8	E	206	LYS
8	E	218	LEU
8	E	255	ARG
9	F	105	PRO
12	I	94	PHE
12	I	106	ALA
13	J	124	GLY
14	L	172	GLU
18	P	54	GLN
19	Q	52	PHE
19	Q	146	ARG
20	R	130	ASN
21	S	153	PRO
23	U	38	ASN
27	Y	11	ARG
27	Y	18	HIS
28	Z	8	GLY
28	Z	33	THR
29	a	93	ASN
32	d	38	PHE
34	f	80	ASN
34	f	107	PRO
40	l	47	THR
43	o	49	GLY
4	A	35	ALA
4	A	109	GLU
4	A	193	ARG
5	B	117	ARG

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Mol	Chain	Res	Type
5	B	189	THR
5	B	310	SER
5	B	329	ASP
6	C	23	THR
6	C	49	ARG
7	D	20	PHE
7	D	32	ALA
8	E	85	LEU
8	E	118	PRO
8	E	122	LEU
8	E	183	ARG
8	E	203	LYS
8	E	254	LEU
10	G	43	GLN
10	G	165	GLU
11	H	51	LYS
12	I	77	VAL
12	I	109	ASP
16	N	182	HIS
19	Q	55	ARG
20	R	131	VAL
23	U	98	ASP
24	V	110	GLY
25	W	43	LYS
29	a	98	ALA
30	b	10	HIS
32	d	58	GLY
32	d	102	LEU
34	f	5	LEU
39	k	29	LYS
43	o	8	ARG
46	1	270	ALA
4	A	130	SER
5	B	137	TRP
5	B	139	ASP
5	B	194	LEU
5	B	387	ALA
7	D	125	VAL
7	D	263	LYS
8	E	229	PHE
8	E	245	ASP
9	F	99	GLY

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Mol	Chain	Res	Type
10	G	123	ALA
10	G	125	LYS
11	H	110	SER
13	J	11	PRO
13	J	32	ARG
16	N	40	PRO
16	N	55	ALA
27	Y	85	VAL
28	Z	124	THR
30	b	21	ILE
31	c	77	ASN
34	f	106	TYR
35	g	84	ALA
38	j	5	THR
38	j	38	GLY
46	1	59	ALA
46	1	73	ARG
46	1	287	SER
47	2	27	LYS
5	B	17	LEU
5	B	112	ASP
5	B	144	ALA
6	C	198	ASN
8	E	40	CYS
8	E	100	THR
12	I	110	ARG
13	J	27	GLY
14	L	169	ILE
17	O	110	PRO
27	Y	63	LYS
27	Y	79	VAL
28	Z	4	PHE
38	j	9	GLY
38	j	75	ARG
44	p	4	ARG
45	r	103	ARG
5	B	110	ILE
5	B	259	PRO
7	D	114	GLY
39	k	63	GLY
46	1	211	GLY
14	L	100	PRO

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Mol	Chain	Res	Type
46	1	201	VAL
7	D	261	VAL
12	I	47	PRO
46	1	339	GLY
5	B	321	VAL
8	E	90	LYS
9	F	100	ILE
10	G	58	PRO
14	L	28	GLN
36	h	38	GLY
37	i	63	VAL
45	r	44	ILE
9	F	199	VAL

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	A	187/199 (94%)	141 (75%)	46 (25%)	1 2
5	B	335/335 (100%)	267 (80%)	68 (20%)	1 4
6	C	305/305 (100%)	242 (79%)	63 (21%)	1 4
7	D	246/250 (98%)	179 (73%)	67 (27%)	0 1
8	E	209/209 (100%)	162 (78%)	47 (22%)	1 3
9	F	194/194 (100%)	143 (74%)	51 (26%)	0 1
10	G	206/226 (91%)	156 (76%)	50 (24%)	1 2
11	H	169/171 (99%)	126 (75%)	43 (25%)	0 1
12	I	180/180 (100%)	140 (78%)	40 (22%)	1 3
13	J	143/149 (96%)	111 (78%)	32 (22%)	1 3
14	L	176/177 (99%)	135 (77%)	41 (23%)	1 2
15	M	116/160 (72%)	95 (82%)	21 (18%)	2 7
16	N	171/172 (99%)	132 (77%)	39 (23%)	1 3
17	O	172/172 (100%)	144 (84%)	28 (16%)	2 10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	P	134/134 (100%)	113 (84%)	21 (16%)	2 10
19	Q	163/164 (99%)	132 (81%)	31 (19%)	1 6
20	R	159/175 (91%)	119 (75%)	40 (25%)	0 1
21	S	156/192 (81%)	121 (78%)	35 (22%)	1 3
22	T	139/140 (99%)	117 (84%)	22 (16%)	2 10
23	U	89/114 (78%)	70 (79%)	19 (21%)	1 3
24	V	101/107 (94%)	79 (78%)	22 (22%)	1 3
25	W	55/126 (44%)	42 (76%)	13 (24%)	1 2
26	X	107/133 (80%)	87 (81%)	20 (19%)	1 6
27	Y	124/135 (92%)	92 (74%)	32 (26%)	0 1
28	Z	117/118 (99%)	94 (80%)	23 (20%)	1 5
29	a	119/120 (99%)	104 (87%)	15 (13%)	4 18
30	b	63/123 (51%)	46 (73%)	17 (27%)	0 1
31	c	79/97 (81%)	61 (77%)	18 (23%)	1 3
32	d	98/110 (89%)	66 (67%)	32 (33%)	0 0
33	e	114/121 (94%)	87 (76%)	27 (24%)	1 2
34	f	88/89 (99%)	69 (78%)	19 (22%)	1 3
35	g	98/100 (98%)	80 (82%)	18 (18%)	1 7
36	h	109/110 (99%)	91 (84%)	18 (16%)	2 10
37	i	86/89 (97%)	69 (80%)	17 (20%)	1 5
38	j	73/73 (100%)	61 (84%)	12 (16%)	2 10
39	k	64/65 (98%)	54 (84%)	10 (16%)	2 10
40	l	47/48 (98%)	39 (83%)	8 (17%)	2 9
41	m	48/116 (41%)	35 (73%)	13 (27%)	0 1
42	n	22/24 (92%)	19 (86%)	3 (14%)	3 15
43	o	92/94 (98%)	71 (77%)	21 (23%)	1 3
44	p	74/74 (100%)	62 (84%)	12 (16%)	2 10
45	r	109/109 (100%)	92 (84%)	17 (16%)	2 10
46	1	330/398 (83%)	310 (94%)	20 (6%)	17 43
47	2	53/59 (90%)	49 (92%)	4 (8%)	12 38
All	All	5919/6456 (92%)	4704 (80%)	1215 (20%)	3 4

All (1215) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	3	ARG
4	A	5	ILE
4	A	16	PHE
4	A	30	ARG
4	A	37	ARG
4	A	40	TYR
4	A	41	ILE
4	A	63	PHE
4	A	70	LYS
4	A	73	THR
4	A	74	GLU
4	A	82	ILE
4	A	97	ASN
4	A	100	ASN
4	A	109	GLU
4	A	116	LEU
4	A	122	ASP
4	A	123	ARG
4	A	126	LEU
4	A	130	SER
4	A	144	LYS
4	A	147	ARG
4	A	159	SER
4	A	162	ASN
4	A	163	ARG
4	A	165	VAL
4	A	175	ILE
4	A	176	ASP
4	A	181	LYS
4	A	186	TYR
4	A	187	HIS
4	A	189	TYR
4	A	193	ARG
4	A	194	ASN
4	A	205	ASN
4	A	208	GLU
4	A	215	ASN
4	A	216	HIS
4	A	218	HIS
4	A	219	ILE
4	A	221	LYS
4	A	226	ARG

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Mol	Chain	Res	Type
4	A	227	ARG
4	A	233	ARG
4	A	242	ARG
4	A	245	ARG
5	B	10	ARG
5	B	16	PHE
5	B	17	LEU
5	B	25	HIS
5	B	26	ARG
5	B	36	ASP
5	B	39	LYS
5	B	41	VAL
5	B	55	HIS
5	B	56	ILE
5	B	58	ARG
5	B	62	ARG
5	B	74	GLU
5	B	78	ILE
5	B	94	GLU
5	B	95	THR
5	B	99	LEU
5	B	100	ARG
5	B	101	THR
5	B	103	LYS
5	B	104	THR
5	B	106	PHE
5	B	113	GLU
5	B	116	ARG
5	B	117	ARG
5	B	119	TYR
5	B	122	TRP
5	B	123	HIS
5	B	146	LEU
5	B	149	ASP
5	B	154	LYS
5	B	156	TYR
5	B	165	HIS
5	B	167	GLN
5	B	169	ARG
5	B	173	LEU
5	B	174	ARG
5	B	189	THR

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Mol	Chain	Res	Type
5	B	198	ARG
5	B	203	GLN
5	B	207	VAL
5	B	214	ASP
5	B	218	ASP
5	B	228	TYR
5	B	233	SER
5	B	235	TRP
5	B	236	HIS
5	B	249	ARG
5	B	257	TRP
5	B	258	HIS
5	B	261	ARG
5	B	291	TYR
5	B	299	ILE
5	B	309	LEU
5	B	314	ILE
5	B	323	TYR
5	B	326	VAL
5	B	328	ASN
5	B	329	ASP
5	B	347	LEU
5	B	348	ARG
5	B	355	THR
5	B	356	LYS
5	B	357	ARG
5	B	362	LYS
5	B	366	LYS
5	B	369	ASP
5	B	378	ARG
6	C	7	LEU
6	C	14	LYS
6	C	36	ILE
6	C	47	ASN
6	C	49	ARG
6	C	60	HIS
6	C	65	GLU
6	C	69	THR
6	C	71	ARG
6	C	75	ARG
6	C	76	ILE
6	C	78	ARG

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Mol	Chain	Res	Type
6	C	80	ARG
6	C	85	HIS
6	C	86	ARG
6	C	87	SER
6	C	92	PHE
6	C	94	ASN
6	C	95	MET
6	C	97	ARG
6	C	107	THR
6	C	112	HIS
6	C	113	ARG
6	C	115	VAL
6	C	122	TYR
6	C	126	SER
6	C	131	SER
6	C	142	HIS
6	C	146	GLU
6	C	150	LEU
6	C	156	ASP
6	C	160	SER
6	C	173	LYS
6	C	175	LYS
6	C	178	ASN
6	C	184	TYR
6	C	188	ARG
6	C	193	LYS
6	C	195	LYS
6	C	198	ASN
6	C	201	ARG
6	C	202	ILE
6	C	203	GLN
6	C	212	ASN
6	C	219	LYS
6	C	222	ARG
6	C	262	GLU
6	C	264	TYR
6	C	267	TRP
6	C	269	LYS
6	C	281	MET
6	C	288	ASP
6	C	303	ARG
6	C	307	LYS

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Mol	Chain	Res	Type
6	C	309	ILE
6	C	310	HIS
6	C	311	ARG
6	C	312	ARG
6	C	321	ASN
6	C	322	LEU
6	C	333	LYS
6	C	343	GLN
6	C	350	ARG
7	D	15	ARG
7	D	22	ARG
7	D	23	ARG
7	D	25	GLU
7	D	30	TYR
7	D	33	ARG
7	D	35	ARG
7	D	39	GLN
7	D	42	ASN
7	D	44	TYR
7	D	45	ASN
7	D	50	ARG
7	D	51	MET
7	D	59	ASP
7	D	63	GLN
7	D	66	TYR
7	D	79	TYR
7	D	90	VAL
7	D	94	ASN
7	D	95	TYR
7	D	104	LEU
7	D	107	ARG
7	D	110	LEU
7	D	111	ASN
7	D	113	PHE
7	D	116	ASP
7	D	118	ILE
7	D	119	TYR
7	D	124	GLU
7	D	129	GLU
7	D	131	ASN
7	D	136	ASP
7	D	157	ASN

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Mol	Chain	Res	Type
7	D	168	ASP
7	D	177	THR
7	D	179	ARG
7	D	189	GLU
7	D	191	ASN
7	D	193	GLU
7	D	196	ARG
7	D	202	GLN
7	D	203	ASN
7	D	206	ASP
7	D	213	GLU
7	D	221	LYS
7	D	223	PHE
7	D	229	ASN
7	D	232	THR
7	D	234	ASP
7	D	244	HIS
7	D	248	ARG
7	D	249	GLU
7	D	254	GLU
7	D	255	LYS
7	D	256	LYS
7	D	259	LYS
7	D	260	GLU
7	D	262	LYS
7	D	264	LYS
7	D	265	ARG
7	D	266	TRP
7	D	268	ARG
7	D	279	ARG
7	D	287	PHE
7	D	291	GLN
7	D	292	GLU
7	D	293	ARG
8	E	39	HIS
8	E	40	CYS
8	E	43	ASN
8	E	46	LEU
8	E	52	ARG
8	E	64	MET
8	E	67	ARG
8	E	68	LYS

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Mol	Chain	Res	Type
8	E	95	ASP
8	E	101	ARG
8	E	104	LYS
8	E	106	ARG
8	E	111	TYR
8	E	112	TYR
8	E	114	THR
8	E	115	GLU
8	E	119	ARG
8	E	129	PHE
8	E	134	ARG
8	E	153	HIS
8	E	157	ARG
8	E	166	SER
8	E	171	VAL
8	E	175	LEU
8	E	179	ARG
8	E	186	HIS
8	E	187	GLN
8	E	190	VAL
8	E	203	LYS
8	E	206	LYS
8	E	212	TYR
8	E	219	ARG
8	E	230	ASP
8	E	233	LYS
8	E	237	GLU
8	E	241	GLN
8	E	242	ARG
8	E	245	ASP
8	E	246	GLN
8	E	250	ASP
8	E	252	GLN
8	E	262	GLN
8	E	268	ARG
8	E	277	ILE
8	E	280	HIS
8	E	282	LEU
8	E	284	PHE
9	F	27	PHE
9	F	32	ILE
9	F	34	ARG

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Mol	Chain	Res	Type
9	F	38	LYS
9	F	41	GLN
9	F	43	MET
9	F	44	LEU
9	F	49	ARG
9	F	58	HIS
9	F	64	ARG
9	F	68	ARG
9	F	72	ARG
9	F	82	ASN
9	F	83	PHE
9	F	84	TYR
9	F	85	VAL
9	F	90	LYS
9	F	91	LEU
9	F	93	PHE
9	F	100	ILE
9	F	101	ASN
9	F	103	VAL
9	F	118	GLN
9	F	119	ILE
9	F	120	PHE
9	F	121	ASN
9	F	137	ILE
9	F	146	TYR
9	F	148	ASN
9	F	149	LEU
9	F	151	SER
9	F	154	GLU
9	F	176	LEU
9	F	192	LEU
9	F	194	HIS
9	F	201	LYS
9	F	202	ARG
9	F	204	LYS
9	F	207	ASN
9	F	209	PHE
9	F	213	PHE
9	F	214	LYS
9	F	219	ARG
9	F	224	LYS
9	F	226	THR

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Mol	Chain	Res	Type
9	F	227	THR
9	F	228	HIS
9	F	239	GLU
9	F	243	ASN
9	F	245	LEU
9	F	248	ARG
10	G	28	VAL
10	G	29	ASN
10	G	31	LEU
10	G	32	PHE
10	G	38	ASN
10	G	39	PHE
10	G	44	ASP
10	G	46	GLN
10	G	50	ASP
10	G	56	LYS
10	G	60	TYR
10	G	62	ARG
10	G	67	ARG
10	G	71	TYR
10	G	73	ARG
10	G	75	LYS
10	G	85	GLN
10	G	88	ASP
10	G	89	ARG
10	G	90	GLN
10	G	101	LYS
10	G	102	TYR
10	G	103	ARG
10	G	106	THR
10	G	108	GLN
10	G	112	GLN
10	G	131	LYS
10	G	141	ASN
10	G	150	LYS
10	G	162	ASP
10	G	167	VAL
10	G	169	PHE
10	G	170	LEU
10	G	175	ARG
10	G	177	MET
10	G	189	ARG

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Mol	Chain	Res	Type
10	G	202	VAL
10	G	217	LYS
10	G	220	GLU
10	G	222	ILE
10	G	223	ARG
10	G	227	ASN
10	G	229	ARG
10	G	230	TYR
10	G	231	ASN
10	G	235	ARG
10	G	240	ASN
10	G	254	GLU
10	G	259	LYS
10	G	265	LEU
11	H	11	ASP
11	H	12	ILE
11	H	18	ILE
11	H	26	ILE
11	H	31	ARG
11	H	40	HIS
11	H	41	ILE
11	H	42	ASN
11	H	51	LYS
11	H	52	LYS
11	H	54	ARG
11	H	57	VAL
11	H	58	ASP
11	H	59	LYS
11	H	60	TRP
11	H	66	GLU
11	H	84	VAL
11	H	88	PHE
11	H	92	MET
11	H	96	TYR
11	H	104	VAL
11	H	105	ILE
11	H	106	GLN
11	H	107	GLU
11	H	108	ASN
11	H	113	GLU
11	H	115	ARG
11	H	117	PHE

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Mol	Chain	Res	Type
11	H	118	LEU
11	H	122	TYR
11	H	123	ILE
11	H	124	ARG
11	H	125	ARG
11	H	128	MET
11	H	140	GLN
11	H	141	LYS
11	H	161	ILE
11	H	163	GLN
11	H	168	LYS
11	H	173	ARG
11	H	177	ASP
11	H	180	TYR
11	H	183	GLU
12	I	3	ARG
12	I	4	ARG
12	I	8	CYS
12	I	9	TYR
12	I	13	LYS
12	I	17	TYR
12	I	32	ARG
12	I	35	ASP
12	I	39	LYS
12	I	43	VAL
12	I	45	GLU
12	I	46	PHE
12	I	48	LEU
12	I	58	GLU
12	I	78	LYS
12	I	83	ASP
12	I	92	HIS
12	I	95	HIS
12	I	97	ILE
12	I	99	ILE
12	I	100	ASN
12	I	101	LYS
12	I	102	MET
12	I	111	LEU
12	I	126	VAL
12	I	128	ARG
12	I	142	LEU

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Mol	Chain	Res	Type
12	I	143	GLN
12	I	146	GLU
12	I	159	PHE
12	I	163	GLN
12	I	171	TRP
12	I	177	ASN
12	I	179	ASP
12	I	181	PHE
12	I	182	GLU
12	I	203	HIS
12	I	207	ASP
12	I	208	LYS
12	I	212	LEU
13	J	15	LEU
13	J	23	ASN
13	J	26	VAL
13	J	32	ARG
13	J	33	LEU
13	J	35	ARG
13	J	54	ARG
13	J	58	ARG
13	J	59	SER
13	J	73	THR
13	J	81	GLU
13	J	83	LEU
13	J	85	LYS
13	J	87	LEU
13	J	90	ARG
13	J	95	ARG
13	J	96	LYS
13	J	97	ASN
13	J	98	ASN
13	J	101	ASP
13	J	110	GLN
13	J	113	ILE
13	J	128	LEU
13	J	129	ASP
13	J	143	ASP
13	J	146	ARG
13	J	150	CYS
13	J	154	LYS
13	J	155	HIS

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Mol	Chain	Res	Type
13	J	164	ARG
13	J	171	ASP
13	J	178	ASN
14	L	5	ARG
14	L	10	LEU
14	L	13	HIS
14	L	19	GLN
14	L	28	GLN
14	L	31	ARG
14	L	34	ARG
14	L	36	ARG
14	L	39	ARG
14	L	45	ARG
14	L	49	ARG
14	L	56	ARG
14	L	65	ARG
14	L	66	TYR
14	L	67	HIS
14	L	74	ARG
14	L	79	GLU
14	L	80	GLU
14	L	82	ARG
14	L	83	VAL
14	L	92	ARG
14	L	99	ASP
14	L	101	ARG
14	L	103	ARG
14	L	111	GLN
14	L	115	GLN
14	L	119	GLU
14	L	123	LYS
14	L	127	PHE
14	L	129	ARG
14	L	130	LYS
14	L	146	LEU
14	L	158	ARG
14	L	162	LYS
14	L	163	ARG
14	L	165	LYS
14	L	172	GLU
14	L	176	PHE
14	L	186	ARG

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Mol	Chain	Res	Type
14	L	201	GLU
14	L	205	GLN
15	M	8	GLU
15	M	11	ARG
15	M	17	PHE
15	M	29	ASP
15	M	32	ASP
15	M	33	GLN
15	M	34	ASN
15	M	37	LEU
15	M	38	VAL
15	M	47	ARG
15	M	56	GLN
15	M	57	LEU
15	M	59	ASP
15	M	61	ILE
15	M	66	HIS
15	M	70	GLN
15	M	79	LYS
15	M	89	THR
15	M	90	ARG
15	M	91	TRP
15	M	119	ARG
16	N	4	TYR
16	N	9	GLU
16	N	11	TRP
16	N	26	ARG
16	N	29	GLN
16	N	43	THR
16	N	49	ARG
16	N	50	ARG
16	N	59	TYR
16	N	63	ARG
16	N	64	ILE
16	N	71	ARG
16	N	80	THR
16	N	87	HIS
16	N	89	VAL
16	N	91	GLN
16	N	92	LEU
16	N	104	GLU
16	N	108	ARG

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Mol	Chain	Res	Type
16	N	119	TYR
16	N	123	GLU
16	N	126	THR
16	N	127	TYR
16	N	131	GLU
16	N	136	ASP
16	N	138	PHE
16	N	139	HIS
16	N	150	TRP
16	N	158	HIS
16	N	169	ARG
16	N	174	LEU
16	N	178	HIS
16	N	182	HIS
16	N	189	ARG
16	N	192	TRP
16	N	195	ARG
16	N	196	ASN
16	N	199	GLN
16	N	203	TYR
17	O	5	GLN
17	O	16	LEU
17	O	42	ASN
17	O	46	ASN
17	O	49	ARG
17	O	59	ARG
17	O	60	LYS
17	O	61	ARG
17	O	62	MET
17	O	74	ARG
17	O	78	ARG
17	O	82	ARG
17	O	85	ARG
17	O	108	ILE
17	O	110	PRO
17	O	113	ASP
17	O	140	ARG
17	O	160	ARG
17	O	167	HIS
17	O	169	ARG
17	O	173	GLN
17	O	176	ARG

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Mol	Chain	Res	Type
17	O	178	ARG
17	O	184	ASN
17	O	187	LYS
17	O	188	LYS
17	O	192	PHE
17	O	194	GLU
18	P	3	ARG
18	P	9	GLU
18	P	10	ASN
18	P	13	LYS
18	P	18	ARG
18	P	23	ARG
18	P	24	VAL
18	P	28	ASN
18	P	40	HIS
18	P	42	ARG
18	P	69	ARG
18	P	70	CYS
18	P	78	TRP
18	P	90	PHE
18	P	91	LEU
18	P	110	ASP
18	P	126	ARG
18	P	128	ARG
18	P	133	HIS
18	P	135	ARG
18	P	154	GLU
19	Q	3	VAL
19	Q	4	ASP
19	Q	5	ILE
19	Q	9	LYS
19	Q	14	ARG
19	Q	32	TYR
19	Q	37	ARG
19	Q	44	ASN
19	Q	54	SER
19	Q	58	ARG
19	Q	61	LEU
19	Q	65	ARG
19	Q	68	ARG
19	Q	72	LEU
19	Q	75	ARG

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Mol	Chain	Res	Type
19	Q	79	THR
19	Q	85	THR
19	Q	89	ASP
19	Q	91	ARG
19	Q	93	GLN
19	Q	97	LYS
19	Q	108	ARG
19	Q	110	ARG
19	Q	112	ARG
19	Q	146	ARG
19	Q	150	ARG
19	Q	166	TYR
19	Q	173	LYS
19	Q	178	ARG
19	Q	180	ARG
19	Q	181	ARG
20	R	5	ARG
20	R	6	LEU
20	R	9	ARG
20	R	15	LEU
20	R	23	TRP
20	R	39	GLN
20	R	40	GLN
20	R	45	ILE
20	R	47	ASP
20	R	50	ILE
20	R	58	HIS
20	R	60	ARG
20	R	74	ARG
20	R	80	LYS
20	R	81	ARG
20	R	86	ASN
20	R	89	MET
20	R	94	THR
20	R	99	MET
20	R	103	ARG
20	R	105	LEU
20	R	107	ARG
20	R	108	ARG
20	R	109	TYR
20	R	113	LYS
20	R	114	LYS

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Mol	Chain	Res	Type
20	R	117	ARG
20	R	118	HIS
20	R	120	TYR
20	R	124	TYR
20	R	131	VAL
20	R	136	ARG
20	R	138	LEU
20	R	141	HIS
20	R	163	ARG
20	R	168	GLU
20	R	172	ARG
20	R	175	GLU
20	R	177	LEU
20	R	178	GLN
21	S	2	LYS
21	S	15	ARG
21	S	28	TYR
21	S	29	ARG
21	S	37	HIS
21	S	39	VAL
21	S	44	PHE
21	S	48	VAL
21	S	53	LYS
21	S	57	SER
21	S	64	CYS
21	S	68	PHE
21	S	70	LYS
21	S	82	LEU
21	S	83	ARG
21	S	84	TYR
21	S	86	SER
21	S	90	THR
21	S	95	ARG
21	S	99	ASP
21	S	100	LEU
21	S	101	THR
21	S	127	MET
21	S	128	LYS
21	S	138	ARG
21	S	146	HIS
21	S	147	ASP
21	S	150	ILE

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Mol	Chain	Res	Type
21	S	151	LYS
21	S	156	HIS
21	S	159	LEU
21	S	162	GLN
21	S	166	ARG
21	S	168	THR
21	S	171	ARG
22	T	5	LYS
22	T	7	LYS
22	T	19	PHE
22	T	30	TYR
22	T	32	ARG
22	T	33	ILE
22	T	35	LYS
22	T	38	ASP
22	T	41	ASP
22	T	54	HIS
22	T	67	VAL
22	T	70	HIS
22	T	76	VAL
22	T	96	ILE
22	T	102	ARG
22	T	103	ASP
22	T	107	LYS
22	T	117	LYS
22	T	118	GLU
22	T	121	GLU
22	T	144	ASN
22	T	152	GLU
23	U	23	LEU
23	U	27	HIS
23	U	33	ILE
23	U	38	ASN
23	U	39	PHE
23	U	40	GLU
23	U	46	ARG
23	U	50	ASN
23	U	52	LYS
23	U	62	THR
23	U	64	GLU
23	U	65	ARG
23	U	67	LYS

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Mol	Chain	Res	Type
23	U	69	LYS
23	U	82	TYR
23	U	90	TYR
23	U	98	ASP
23	U	101	ARG
23	U	113	ARG
24	V	13	LYS
24	V	15	ARG
24	V	18	LEU
24	V	27	ASN
24	V	30	ASP
24	V	36	ASN
24	V	48	ARG
24	V	50	ASN
24	V	51	ARG
24	V	60	MET
24	V	69	LYS
24	V	73	ARG
24	V	77	HIS
24	V	84	GLN
24	V	91	LYS
24	V	98	PHE
24	V	100	ASP
24	V	107	ASN
24	V	109	LYS
24	V	111	GLU
24	V	123	LYS
24	V	128	LEU
25	W	3	VAL
25	W	4	GLU
25	W	8	PHE
25	W	12	LYS
25	W	17	HIS
25	W	25	ASP
25	W	33	ASN
25	W	44	ARG
25	W	50	ASN
25	W	55	TYR
25	W	56	ARG
25	W	57	ARG
25	W	59	HIS
26	X	39	LYS

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Mol	Chain	Res	Type
26	X	41	ARG
26	X	45	THR
26	X	48	ARG
26	X	55	ARG
26	X	62	ARG
26	X	63	LYS
26	X	72	ASP
26	X	79	PHE
26	X	84	GLU
26	X	94	ASN
26	X	111	GLN
26	X	117	TYR
26	X	120	ASP
26	X	129	ARG
26	X	133	GLU
26	X	137	TYR
26	X	139	ARG
26	X	144	TYR
26	X	151	ASN
27	Y	2	LYS
27	Y	4	ASN
27	Y	11	ARG
27	Y	14	ASN
27	Y	15	ARG
27	Y	17	ARG
27	Y	18	HIS
27	Y	19	PHE
27	Y	27	ARG
27	Y	36	LYS
27	Y	45	ARG
27	Y	49	ILE
27	Y	50	ARG
27	Y	53	ASP
27	Y	55	VAL
27	Y	56	GLN
27	Y	62	TYR
27	Y	65	GLN
27	Y	72	GLN
27	Y	82	ILE
27	Y	83	GLU
27	Y	84	ARG
27	Y	87	ARG

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Mol	Chain	Res	Type
27	Y	91	ASN
27	Y	100	HIS
27	Y	104	VAL
27	Y	112	ASP
27	Y	114	ASP
27	Y	115	ARG
27	Y	121	ARG
27	Y	126	ARG
27	Y	127	GLN
28	Z	3	LYS
28	Z	4	PHE
28	Z	17	ARG
28	Z	21	ARG
28	Z	27	LYS
28	Z	30	ASP
28	Z	36	ARG
28	Z	38	TYR
28	Z	46	ILE
28	Z	54	THR
28	Z	57	MET
28	Z	60	LYS
28	Z	78	ASN
28	Z	88	ASP
28	Z	92	ASP
28	Z	93	LYS
28	Z	97	ASN
28	Z	98	LYS
28	Z	102	ARG
28	Z	113	GLU
28	Z	121	ARG
28	Z	127	ASN
28	Z	136	PHE
29	a	7	LYS
29	a	14	HIS
29	a	19	HIS
29	a	40	HIS
29	a	41	HIS
29	a	46	ASP
29	a	52	TYR
29	a	59	ARG
29	a	61	TYR
29	a	63	LEU

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Mol	Chain	Res	Type
29	a	67	GLN
29	a	77	LYS
29	a	85	GLN
29	a	127	LYS
29	a	132	ARG
30	b	6	ASN
30	b	7	HIS
30	b	12	GLN
30	b	16	TRP
30	b	18	ARG
30	b	19	ASN
30	b	22	LYS
30	b	23	LYS
30	b	25	ARG
30	b	27	GLN
30	b	28	ARG
30	b	30	GLU
30	b	43	MET
30	b	44	ARG
30	b	51	LYS
30	b	55	LYS
30	b	65	MET
31	c	18	LEU
31	c	27	TYR
31	c	37	MET
31	c	42	LYS
31	c	44	LYS
31	c	52	CYS
31	c	55	LEU
31	c	56	ARG
31	c	59	GLU
31	c	65	MET
31	c	66	LEU
31	c	72	HIS
31	c	73	HIS
31	c	74	TYR
31	c	77	ASN
31	c	78	ASN
31	c	81	LEU
31	c	88	TYR
32	d	18	ASN
32	d	19	GLU

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Mol	Chain	Res	Type
32	d	21	VAL
32	d	23	ARG
32	d	26	THR
32	d	28	ASN
32	d	31	LYS
32	d	32	ARG
32	d	38	PHE
32	d	39	LYS
32	d	44	ARG
32	d	67	ARG
32	d	73	TRP
32	d	77	ILE
32	d	78	ARG
32	d	79	ASN
32	d	83	ARG
32	d	85	ARG
32	d	86	VAL
32	d	87	ARG
32	d	91	LYS
32	d	94	GLU
32	d	95	ASP
32	d	101	LYS
32	d	103	TYR
32	d	108	TYR
32	d	109	VAL
32	d	116	ASN
32	d	117	LEU
32	d	118	GLN
32	d	119	THR
32	d	123	ASP
33	e	5	ARG
33	e	9	LYS
33	e	11	LYS
33	e	16	ARG
33	e	21	ILE
33	e	26	ASP
33	e	39	ARG
33	e	42	ASP
33	e	43	ASN
33	e	46	ARG
33	e	52	GLN
33	e	57	ASN

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Mol	Chain	Res	Type
33	e	64	LYS
33	e	68	HIS
33	e	78	LEU
33	e	85	LEU
33	e	92	ASN
33	e	95	TYR
33	e	106	LYS
33	e	107	ASN
33	e	108	ARG
33	e	109	LYS
33	e	113	GLU
33	e	117	GLN
33	e	124	ASN
33	e	126	ASN
33	e	128	ARG
34	f	4	ARG
34	f	5	LEU
34	f	7	SER
34	f	14	TYR
34	f	19	ARG
34	f	22	ARG
34	f	24	HIS
34	f	28	LEU
34	f	36	ARG
34	f	51	TYR
34	f	52	LYS
34	f	65	ASN
34	f	69	VAL
34	f	71	TRP
34	f	89	ARG
34	f	100	ARG
34	f	101	ILE
34	f	103	VAL
34	f	109	ARG
35	g	4	ARG
35	g	5	LEU
35	g	12	SER
35	g	14	ASN
35	g	29	ARG
35	g	32	TYR
35	g	43	LYS
35	g	52	ARG

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Mol	Chain	Res	Type
35	g	53	LEU
35	g	57	ARG
35	g	60	ARG
35	g	66	ARG
35	g	75	SER
35	g	81	SER
35	g	93	ARG
35	g	95	PHE
35	g	114	GLN
35	g	115	LYS
36	h	3	LYS
36	h	8	ASP
36	h	10	ARG
36	h	23	ASP
36	h	28	LEU
36	h	48	ARG
36	h	51	ARG
36	h	67	GLU
36	h	68	ASN
36	h	72	PHE
36	h	73	TYR
36	h	77	LYS
36	h	89	ARG
36	h	93	ARG
36	h	97	LYS
36	h	102	LEU
36	h	119	PHE
36	h	122	LYS
37	i	3	LEU
37	i	4	ARG
37	i	12	ASN
37	i	18	THR
37	i	20	ASN
37	i	27	SER
37	i	30	ARG
37	i	33	LEU
37	i	36	HIS
37	i	42	ASP
37	i	45	ARG
37	i	46	GLU
37	i	54	GLU
37	i	85	ARG

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Mol	Chain	Res	Type
37	i	88	GLU
37	i	89	GLU
37	i	103	LYS
38	j	10	LYS
38	j	25	LYS
38	j	27	TYR
38	j	45	ARG
38	j	47	TYR
38	j	48	ASN
38	j	55	ARG
38	j	56	ARG
38	j	57	ASN
38	j	71	TYR
38	j	79	ARG
38	j	80	GLU
39	k	14	THR
39	k	19	ASP
39	k	35	LYS
39	k	37	ARG
39	k	44	THR
39	k	51	GLU
39	k	54	GLU
39	k	56	LEU
39	k	60	LEU
39	k	70	LYS
40	l	12	PHE
40	l	13	LEU
40	l	16	LYS
40	l	17	GLN
40	l	21	ARG
40	l	36	ARG
40	l	46	ARG
40	l	49	LEU
41	m	79	GLU
41	m	84	GLN
41	m	87	GLN
41	m	90	ASN
41	m	96	CYS
41	m	97	ARG
41	m	98	LYS
41	m	104	HIS
41	m	106	ARG

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Mol	Chain	Res	Type
41	m	109	ASN
41	m	111	ARG
41	m	117	HIS
41	m	119	ASN
42	n	8	LYS
42	n	9	ARG
42	n	18	ARG
43	o	3	ASN
43	o	17	LYS
43	o	24	THR
43	o	26	TYR
43	o	28	LYS
43	o	33	LEU
43	o	36	GLN
43	o	45	GLN
43	o	48	TYR
43	o	57	ARG
43	o	59	LYS
43	o	61	LYS
43	o	64	LYS
43	o	69	ARG
43	o	76	ASN
43	o	78	ARG
43	o	79	SER
43	o	81	ARG
43	o	82	MET
43	o	99	ARG
43	o	102	GLN
44	p	3	LYS
44	p	4	ARG
44	p	16	THR
44	p	29	ILE
44	p	30	GLU
44	p	48	LYS
44	p	49	ARG
44	p	69	TRP
44	p	84	ARG
44	p	85	ARG
44	p	87	LYS
44	p	92	GLN
45	r	7	TRP
45	r	11	ARG

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Mol	Chain	Res	Type
45	r	13	CYS
45	r	15	SER
45	r	16	PHE
45	r	18	ILE
45	r	26	SER
45	r	28	GLU
45	r	30	ASN
45	r	35	ARG
45	r	64	ILE
45	r	67	ARG
45	r	83	ASN
45	r	102	TYR
45	r	106	LEU
45	r	107	ARG
45	r	115	SER
46	1	66	ARG
46	1	82	SER
46	1	102	VAL
46	1	130	VAL
46	1	149	LEU
46	1	205	ARG
46	1	207	MET
46	1	226	LYS
46	1	239	LEU
46	1	243	MET
46	1	273	ARG
46	1	275	GLN
46	1	297	LEU
46	1	346	SER
46	1	355	LEU
46	1	393	GLN
46	1	412	GLU
46	1	441	ILE
46	1	457	TYR
46	1	461	PHE
47	2	8	VAL
47	2	21	LEU
47	2	32	GLU
47	2	56	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (197) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	19	HIS
4	A	100	ASN
4	A	132	ASN
4	A	194	ASN
4	A	209	HIS
4	A	215	ASN
5	B	109	HIS
5	B	123	HIS
5	B	167	GLN
5	B	179	HIS
5	B	203	GLN
5	B	258	HIS
5	B	275	HIS
5	B	276	HIS
5	B	289	GLN
5	B	302	ASN
5	B	322	HIS
5	B	380	GLN
6	C	50	GLN
6	C	85	HIS
6	C	94	ASN
6	C	112	HIS
6	C	142	HIS
6	C	178	ASN
6	C	198	ASN
6	C	203	GLN
6	C	223	ASN
6	C	282	HIS
6	C	321	ASN
6	C	338	ASN
6	C	343	GLN
7	D	45	ASN
7	D	94	ASN
7	D	111	ASN
7	D	157	ASN
7	D	191	ASN
7	D	195	HIS
7	D	202	GLN
7	D	244	HIS
7	D	250	ASN
7	D	282	GLN
8	E	97	ASN
8	E	124	HIS

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Mol	Chain	Res	Type
8	E	153	HIS
8	E	178	ASN
8	E	186	HIS
8	E	246	GLN
9	F	58	HIS
9	F	82	ASN
9	F	153	ASN
9	F	174	ASN
9	F	194	HIS
9	F	237	ASN
9	F	250	ASN
10	G	29	ASN
10	G	64	GLN
10	G	66	GLN
10	G	81	ASN
10	G	108	GLN
10	G	112	GLN
10	G	231	ASN
11	H	40	HIS
11	H	63	ASN
11	H	106	GLN
11	H	108	ASN
11	H	188	GLN
12	I	59	GLN
12	I	100	ASN
12	I	144	ASN
12	I	163	GLN
12	I	177	ASN
12	I	213	HIS
13	J	46	GLN
13	J	155	HIS
13	J	170	HIS
14	L	6	ASN
14	L	28	GLN
14	L	87	HIS
14	L	113	ASN
14	L	159	ASN
15	M	20	HIS
15	M	33	GLN
15	M	34	ASN
15	M	48	GLN
16	N	8	GLN

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Mol	Chain	Res	Type
16	N	29	GLN
16	N	90	ASN
16	N	109	HIS
16	N	158	HIS
16	N	178	HIS
16	N	181	HIS
16	N	182	HIS
16	N	196	ASN
16	N	201	HIS
17	O	14	HIS
17	O	65	ASN
17	O	173	GLN
17	O	184	ASN
18	P	28	ASN
18	P	56	GLN
18	P	64	ASN
18	P	80	GLN
18	P	133	HIS
18	P	145	HIS
19	Q	7	HIS
19	Q	8	ASN
19	Q	40	ASN
19	Q	44	ASN
19	Q	57	ASN
19	Q	93	GLN
19	Q	188	ASN
20	R	66	ASN
20	R	75	HIS
20	R	118	HIS
20	R	143	HIS
21	S	37	HIS
21	S	50	GLN
21	S	91	HIS
21	S	122	HIS
21	S	125	GLN
21	S	163	HIS
22	T	58	HIS
22	T	70	HIS
22	T	139	HIS
23	U	38	ASN
23	U	55	ASN
24	V	36	ASN

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Mol	Chain	Res	Type
24	V	135	ASN
25	W	17	HIS
25	W	59	HIS
26	X	57	GLN
26	X	93	ASN
26	X	111	GLN
27	Y	24	HIS
27	Y	56	GLN
27	Y	72	GLN
27	Y	86	GLN
27	Y	100	HIS
27	Y	127	GLN
28	Z	79	HIS
29	a	19	HIS
29	a	34	ASN
29	a	40	HIS
29	a	41	HIS
29	a	62	HIS
29	a	67	GLN
30	b	7	HIS
30	b	19	ASN
30	b	27	GLN
30	b	42	ASN
31	c	19	GLN
31	c	40	GLN
31	c	77	ASN
32	d	30	HIS
32	d	93	ASN
32	d	100	ASN
33	e	24	GLN
33	e	43	ASN
33	e	126	ASN
34	f	21	GLN
34	f	24	HIS
34	f	55	ASN
34	f	56	ASN
34	f	65	ASN
34	f	78	HIS
34	f	80	ASN
35	g	18	ASN
35	g	112	GLN
36	h	68	ASN

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Mol	Chain	Res	Type
36	h	98	HIS
38	j	16	HIS
38	j	48	ASN
41	m	84	GLN
41	m	87	GLN
41	m	109	ASN
41	m	120	ASN
43	o	21	HIS
43	o	25	GLN
43	o	45	GLN
43	o	76	ASN
43	o	90	HIS
44	p	92	GLN
45	r	6	GLN
45	r	12	ASN
45	r	31	ASN
45	r	36	ASN
45	r	70	GLN
45	r	83	ASN
46	1	113	ASN
46	1	127	GLN
46	1	154	GLN
46	1	244	ASN
46	1	275	GLN
46	1	277	ASN
46	1	300	ASN
46	1	398	GLN
46	1	456	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	5	3652/3722 (98%)	1667 (45%)	629 (17%)
2	7	119/120 (99%)	31 (26%)	9 (7%)
3	8	155/156 (99%)	61 (39%)	22 (14%)
All	All	3926/3998 (98%)	1759 (44%)	660 (16%)

All (1759) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	5	2	G

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Mol	Chain	Res	Type
1	5	5	A
1	5	6	C
1	5	8	U
1	5	12	A
1	5	13	U
1	5	20	U
1	5	21	G
1	5	25	A
1	5	33	A
1	5	34	A
1	5	39	A
1	5	40	G
1	5	42	A
1	5	43	U
1	5	47	A
1	5	48	G
1	5	49	U
1	5	50	C
1	5	51	A
1	5	53	C
1	5	54	G
1	5	56	A
1	5	58	G
1	5	59	A
1	5	64	A
1	5	65	A
1	5	66	A
1	5	69	A
1	5	70	A
1	5	71	C
1	5	72	C
1	5	74	G
1	5	80	C
1	5	81	C
1	5	84	A
1	5	85	G
1	5	88	A
1	5	89	C
1	5	91	G
1	5	92	C
1	5	93	G
1	5	94	A

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Mol	Chain	Res	Type
1	5	95	G
1	5	96	U
1	5	98	A
1	5	99	A
1	5	101	A
1	5	107	G
1	5	108	A
1	5	109	G
1	5	110	C
1	5	111	C
1	5	112	C
1	5	115	C
1	5	118	C
1	5	119	G
1	5	120	A
1	5	121	A
1	5	125	C
1	5	126	C
1	5	128	C
1	5	129	C
1	5	130	C
1	5	131	C
1	5	132	G
1	5	134	G
1	5	135	G
1	5	136	C
1	5	137	G
1	5	138	G
1	5	139	G
1	5	143	C
1	5	144	G
1	5	145	G
1	5	150	U
1	5	152	U
1	5	157	U
1	5	158	A
1	5	159	C
1	5	164	G
1	5	170	C
1	5	171	U
1	5	172	C
1	5	173	C

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Mol	Chain	Res	Type
1	5	178	C
1	5	182	G
1	5	183	C
1	5	184	U
1	5	185	C
1	5	186	G
1	5	187	U
1	5	188	G
1	5	189	G
1	5	195	C
1	5	196	C
1	5	197	A
1	5	198	A
1	5	200	U
1	5	201	C
1	5	202	C
1	5	203	U
1	5	205	C
1	5	206	U
1	5	210	C
1	5	211	G
1	5	216	C
1	5	217	C
1	5	218	A
1	5	219	G
1	5	220	C
1	5	221	C
1	5	224	U
1	5	225	G
1	5	226	G
1	5	227	A
1	5	232	G
1	5	233	U
1	5	234	G
1	5	235	A
1	5	236	G
1	5	237	G
1	5	238	C
1	5	239	C
1	5	245	C
1	5	246	G
1	5	255	C

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Mol	Chain	Res	Type
1	5	257	C
1	5	262	G
1	5	264	C
1	5	265	C
1	5	266	C
1	5	267	G
1	5	270	U
1	5	274	C
1	5	275	C
1	5	276	C
1	5	277	G
1	5	278	G
1	5	280	G
1	5	281	U
1	5	288	G
1	5	292	G
1	5	293	G
1	5	294	G
1	5	296	A
1	5	297	U
1	5	300	A
1	5	305	A
1	5	306	A
1	5	309	C
1	5	310	G
1	5	315	G
1	5	316	U
1	5	317	A
1	5	319	A
1	5	322	C
1	5	323	C
1	5	324	A
1	5	325	U
1	5	330	G
1	5	334	A
1	5	337	U
1	5	338	A
1	5	339	C
1	5	340	C
1	5	342	G
1	5	343	C
1	5	345	C

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Mol	Chain	Res	Type
1	5	347	A
1	5	349	A
1	5	350	C
1	5	352	G
1	5	353	A
1	5	354	U
1	5	355	A
1	5	357	U
1	5	358	C
1	5	360	A
1	5	361	C
1	5	362	A
1	5	363	A
1	5	370	U
1	5	371	A
1	5	372	A
1	5	381	U
1	5	383	A
1	5	384	A
1	5	385	A
1	5	386	A
1	5	387	G
1	5	388	A
1	5	389	A
1	5	390	C
1	5	395	A
1	5	399	G
1	5	406	C
1	5	407	A
1	5	408	A
1	5	409	G
1	5	410	A
1	5	412	G
1	5	413	G
1	5	414	C
1	5	415	G
1	5	417	G
1	5	418	A
1	5	431	G
1	5	432	U
1	5	433	A
1	5	434	A

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Mol	Chain	Res	Type
1	5	440	U
1	5	444	G
1	5	445	U
1	5	449	C
1	5	450	G
1	5	451	C
1	5	452	A
1	5	453	G
1	5	454	U
1	5	455	C
1	5	456	C
1	5	458	C
1	5	466	A
1	5	467	U
1	5	468	U
1	5	469	C
1	5	470	A
1	5	471	A
1	5	473	C
1	5	484	U
1	5	485	C
1	5	486	C
1	5	487	G
1	5	491	G
1	5	496	G
1	5	498	C
1	5	500	G
1	5	502	C
1	5	503	C
1	5	504	G
1	5	506	C
1	5	509	A
1	5	510	U
1	5	511	C
1	5	513	U
1	5	514	U
1	5	515	C
1	5	516	C
1	5	519	C
1	5	647	G
1	5	648	G
1	5	649	A

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Mol	Chain	Res	Type
1	5	650	C
1	5	653	U
1	5	654	C
1	5	656	C
1	5	658	C
1	5	664	G
1	5	665	C
1	5	666	G
1	5	667	A
1	5	668	C
1	5	669	C
1	5	671	G
1	5	672	C
1	5	681	G
1	5	682	G
1	5	683	C
1	5	684	G
1	5	685	C
1	5	686	A
1	5	687	U
1	5	689	U
1	5	690	C
1	5	692	A
1	5	694	C
1	5	695	G
1	5	696	C
1	5	697	G
1	5	702	U
1	5	703	G
1	5	704	C
1	5	705	G
1	5	707	C
1	5	716	C
1	5	717	U
1	5	718	C
1	5	721	G
1	5	724	C
1	5	727	C
1	5	728	U
1	5	729	G
1	5	730	G
1	5	731	G

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Mol	Chain	Res	Type
1	5	732	A
1	5	737	C
1	5	739	G
1	5	742	G
1	5	743	G
1	5	745	G
1	5	746	A
1	5	747	A
1	5	748	G
1	5	749	G
1	5	912	G
1	5	915	A
1	5	917	A
1	5	918	G
1	5	920	C
1	5	921	C
1	5	926	G
1	5	927	G
1	5	928	C
1	5	929	A
1	5	930	G
1	5	931	C
1	5	932	A
1	5	933	G
1	5	934	C
1	5	935	A
1	5	936	C
1	5	937	U
1	5	938	C
1	5	939	G
1	5	940	C
1	5	944	A
1	5	945	U
1	5	946	C
1	5	950	G
1	5	952	G
1	5	955	G
1	5	956	A
1	5	957	G
1	5	958	G
1	5	959	G
1	5	960	A

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Mol	Chain	Res	Type
1	5	961	G
1	5	962	C
1	5	963	G
1	5	964	A
1	5	965	G
1	5	966	A
1	5	967	C
1	5	968	C
1	5	969	C
1	5	971	U
1	5	972	C
1	5	973	G
1	5	974	C
1	5	975	C
1	5	976	G
1	5	977	C
1	5	978	G
1	5	979	C
1	5	980	U
1	5	982	U
1	5	983	C
1	5	985	C
1	5	990	C
1	5	1051	G
1	5	1068	G
1	5	1069	G
1	5	1072	C
1	5	1075	G
1	5	1076	C
1	5	1077	C
1	5	1078	A
1	5	1082	C
1	5	1083	U
1	5	1084	C
1	5	1086	C
1	5	1167	C
1	5	1168	G
1	5	1177	U
1	5	1181	C
1	5	1186	U
1	5	1187	G
1	5	1193	C

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Mol	Chain	Res	Type
1	5	1210	C
1	5	1211	G
1	5	1212	G
1	5	1214	C
1	5	1215	C
1	5	1218	G
1	5	1219	G
1	5	1221	G
1	5	1222	A
1	5	1233	G
1	5	1235	G
1	5	1236	C
1	5	1237	C
1	5	1238	A
1	5	1239	C
1	5	1240	G
1	5	1242	G
1	5	1243	C
1	5	1244	G
1	5	1245	C
1	5	1255	A
1	5	1264	C
1	5	1265	G
1	5	1266	G
1	5	1267	C
1	5	1268	G
1	5	1269	G
1	5	1270	A
1	5	1271	G
1	5	1272	C
1	5	1273	G
1	5	1274	A
1	5	1275	G
1	5	1277	G
1	5	1279	A
1	5	1280	C
1	5	1282	G
1	5	1283	G
1	5	1284	G
1	5	1285	U
1	5	1288	G
1	5	1289	C

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Mol	Chain	Res	Type
1	5	1290	G
1	5	1291	G
1	5	1292	C
1	5	1293	G
1	5	1294	A
1	5	1295	C
1	5	1296	G
1	5	1297	U
1	5	1298	C
1	5	1300	G
1	5	1301	C
1	5	1304	C
1	5	1313	C
1	5	1314	C
1	5	1319	U
1	5	1324	A
1	5	1325	C
1	5	1326	A
1	5	1329	G
1	5	1330	A
1	5	1333	A
1	5	1337	A
1	5	1338	G
1	5	1344	C
1	5	1354	A
1	5	1357	C
1	5	1358	G
1	5	1359	G
1	5	1360	G
1	5	1362	G
1	5	1364	U
1	5	1365	C
1	5	1366	G
1	5	1367	C
1	5	1368	A
1	5	1369	C
1	5	1370	G
1	5	1371	A
1	5	1372	A
1	5	1377	G
1	5	1378	C
1	5	1379	C

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Mol	Chain	Res	Type
1	5	1380	G
1	5	1381	U
1	5	1382	G
1	5	1387	A
1	5	1390	G
1	5	1394	G
1	5	1397	A
1	5	1398	A
1	5	1399	G
1	5	1402	C
1	5	1407	C
1	5	1408	G
1	5	1410	U
1	5	1411	C
1	5	1420	A
1	5	1421	G
1	5	1426	G
1	5	1427	A
1	5	1428	U
1	5	1429	C
1	5	1435	G
1	5	1436	C
1	5	1438	U
1	5	1439	C
1	5	1440	U
1	5	1441	C
1	5	1444	G
1	5	1445	U
1	5	1446	C
1	5	1448	G
1	5	1455	G
1	5	1456	C
1	5	1457	G
1	5	1458	C
1	5	1465	G
1	5	1466	G
1	5	1474	C
1	5	1475	G
1	5	1478	C
1	5	1479	G
1	5	1480	C
1	5	1481	C

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Mol	Chain	Res	Type
1	5	1482	G
1	5	1483	C
1	5	1484	G
1	5	1485	C
1	5	1487	G
1	5	1488	G
1	5	1489	G
1	5	1490	G
1	5	1493	G
1	5	1497	A
1	5	1498	G
1	5	1499	C
1	5	1500	A
1	5	1501	C
1	5	1503	A
1	5	1504	G
1	5	1514	U
1	5	1516	G
1	5	1518	A
1	5	1519	C
1	5	1520	C
1	5	1521	C
1	5	1522	G
1	5	1523	A
1	5	1525	A
1	5	1530	G
1	5	1534	A
1	5	1535	C
1	5	1542	U
1	5	1543	G
1	5	1547	A
1	5	1563	A
1	5	1564	A
1	5	1565	A
1	5	1566	C
1	5	1568	C
1	5	1571	G
1	5	1572	U
1	5	1578	U
1	5	1583	A
1	5	1590	C
1	5	1591	U

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Mol	Chain	Res	Type
1	5	1596	U
1	5	1597	G
1	5	1604	G
1	5	1611	C
1	5	1612	G
1	5	1613	A
1	5	1614	C
1	5	1624	G
1	5	1625	G
1	5	1631	A
1	5	1633	G
1	5	1634	A
1	5	1636	U
1	5	1637	A
1	5	1638	A
1	5	1639	U
1	5	1640	C
1	5	1641	G
1	5	1642	A
1	5	1643	A
1	5	1650	A
1	5	1654	G
1	5	1655	C
1	5	1656	U
1	5	1661	C
1	5	1662	C
1	5	1670	G
1	5	1671	U
1	5	1673	U
1	5	1674	C
1	5	1676	C
1	5	1677	U
1	5	1678	C
1	5	1679	A
1	5	1680	G
1	5	1681	G
1	5	1684	A
1	5	1685	G
1	5	1687	U
1	5	1691	G
1	5	1692	C
1	5	1694	C

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Mol	Chain	Res	Type
1	5	1696	C
1	5	1697	G
1	5	1698	C
1	5	1699	A
1	5	1718	C
1	5	1719	A
1	5	1720	C
1	5	1721	G
1	5	1722	C
1	5	1723	A
1	5	1724	G
1	5	1725	U
1	5	1727	U
1	5	1730	U
1	5	1733	G
1	5	1734	G
1	5	1735	U
1	5	1736	A
1	5	1741	G
1	5	1742	A
1	5	1746	A
1	5	1750	G
1	5	1751	A
1	5	1753	G
1	5	1754	U
1	5	1755	C
1	5	1756	U
1	5	1757	U
1	5	1758	G
1	5	1759	G
1	5	1760	G
1	5	1761	G
1	5	1764	G
1	5	1765	A
1	5	1766	A
1	5	1767	A
1	5	1768	C
1	5	1769	G
1	5	1770	A
1	5	1772	C
1	5	1776	A
1	5	1777	C

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Mol	Chain	Res	Type
1	5	1779	U
1	5	1781	U
1	5	1787	A
1	5	1788	A
1	5	1790	U
1	5	1791	U
1	5	1799	G
1	5	1800	U
1	5	1803	G
1	5	1804	A
1	5	1805	A
1	5	1817	U
1	5	1818	G
1	5	1819	G
1	5	1820	C
1	5	1822	U
1	5	1825	A
1	5	1827	C
1	5	1830	G
1	5	1832	C
1	5	1833	G
1	5	1834	U
1	5	1835	G
1	5	1836	G
1	5	1840	G
1	5	1842	G
1	5	1843	A
1	5	1847	C
1	5	1848	C
1	5	1849	U
1	5	1850	A
1	5	1851	G
1	5	1855	G
1	5	1864	G
1	5	1866	U
1	5	1867	A
1	5	1869	G
1	5	1870	C
1	5	1876	U
1	5	1877	G
1	5	1878	G
1	5	1881	C

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Mol	Chain	Res	Type
1	5	1882	U
1	5	1884	C
1	5	1885	G
1	5	1886	G
1	5	1887	G
1	5	1888	A
1	5	1890	G
1	5	1891	A
1	5	1897	A
1	5	1899	G
1	5	1900	C
1	5	1903	G
1	5	1907	A
1	5	1910	G
1	5	1912	G
1	5	1913	C
1	5	1916	G
1	5	1917	A
1	5	1918	U
1	5	1919	G
1	5	1920	C
1	5	1921	C
1	5	1922	G
1	5	1923	A
1	5	1925	G
1	5	1929	A
1	5	1930	U
1	5	1931	C
1	5	1932	A
1	5	1935	C
1	5	1936	C
1	5	1938	C
1	5	1939	A
1	5	1940	G
1	5	1941	A
1	5	1947	U
1	5	1948	G
1	5	1951	G
1	5	1952	G
1	5	1956	A
1	5	1959	U
1	5	1961	G

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Mol	Chain	Res	Type
1	5	1962	A
1	5	1964	A
1	5	1965	G
1	5	1966	C
1	5	1971	C
1	5	1974	U
1	5	1975	G
1	5	1976	G
1	5	1977	C
1	5	1979	A
1	5	1980	U
1	5	1981	G
1	5	1983	A
1	5	1984	A
1	5	1985	G
1	5	1986	U
1	5	1987	C
1	5	1988	G
1	5	1992	U
1	5	1993	C
1	5	1997	U
1	5	1998	A
1	5	1999	A
1	5	2001	G
1	5	2002	A
1	5	2003	G
1	5	2004	U
1	5	2005	G
1	5	2007	G
1	5	2008	U
1	5	2009	A
1	5	2010	A
1	5	2014	C
1	5	2015	U
1	5	2018	C
1	5	2019	C
1	5	2020	U
1	5	2023	C
1	5	2024	G
1	5	2025	A
1	5	2026	A
1	5	2033	A

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Mol	Chain	Res	Type
1	5	2034	G
1	5	2040	A
1	5	2044	U
1	5	2045	G
1	5	2046	G
1	5	2047	A
1	5	2048	U
1	5	2052	G
1	5	2055	G
1	5	2056	G
1	5	2057	A
1	5	2058	G
1	5	2059	C
1	5	2060	G
1	5	2062	C
1	5	2063	G
1	5	2064	G
1	5	2069	A
1	5	2070	U
1	5	2075	G
1	5	2076	G
1	5	2077	C
1	5	2083	C
1	5	2084	C
1	5	2085	G
1	5	2088	A
1	5	2089	G
1	5	2090	U
1	5	2091	C
1	5	2092	G
1	5	2093	A
1	5	2094	G
1	5	2095	A
1	5	2096	G
1	5	2097	U
1	5	2100	A
1	5	2105	A
1	5	2107	C
1	5	2108	G
1	5	2109	G
1	5	2110	C
1	5	2111	G

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Mol	Chain	Res	Type
1	5	2112	G
1	5	2113	G
1	5	2114	G
1	5	2115	G
1	5	2116	C
1	5	2117	G
1	5	2118	G
1	5	2119	C
1	5	2120	G
1	5	2121	C
1	5	2122	G
1	5	2123	C
1	5	2124	G
1	5	2125	C
1	5	2126	G
1	5	2127	C
1	5	2247	C
1	5	2248	C
1	5	2250	C
1	5	2251	G
1	5	2252	G
1	5	2253	A
1	5	2254	G
1	5	2255	C
1	5	2256	C
1	5	2257	C
1	5	2258	C
1	5	2259	G
1	5	2260	C
1	5	2261	G
1	5	2262	G
1	5	2263	A
1	5	2264	C
1	5	2265	G
1	5	2266	C
1	5	2267	U
1	5	2268	A
1	5	2269	C
1	5	2270	G
1	5	2273	G
1	5	2275	G
1	5	2277	C

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Mol	Chain	Res	Type
1	5	2279	A
1	5	2282	A
1	5	2283	G
1	5	2288	G
1	5	2289	C
1	5	2299	G
1	5	2300	A
1	5	2301	G
1	5	2305	U
1	5	2309	G
1	5	2312	U
1	5	2313	A
1	5	2314	G
1	5	2316	G
1	5	2319	C
1	5	2321	G
1	5	2322	G
1	5	2324	C
1	5	2325	C
1	5	2328	G
1	5	2329	U
1	5	2330	G
1	5	2331	G
1	5	2332	A
1	5	2333	G
1	5	2334	C
1	5	2337	C
1	5	2339	G
1	5	2342	G
1	5	2343	G
1	5	2347	A
1	5	2348	G
1	5	2349	A
1	5	2350	U
1	5	2351	C
1	5	2357	G
1	5	2360	A
1	5	2361	G
1	5	2362	U
1	5	2366	A
1	5	2367	A
1	5	2368	A

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Mol	Chain	Res	Type
1	5	2369	U
1	5	2370	A
1	5	2371	U
1	5	2372	U
1	5	2378	G
1	5	2382	A
1	5	2384	U
1	5	2389	A
1	5	2390	G
1	5	2391	G
1	5	2395	A
1	5	2396	A
1	5	2397	G
1	5	2398	U
1	5	2399	G
1	5	2407	G
1	5	2409	U
1	5	2417	A
1	5	2422	C
1	5	2425	U
1	5	2426	U
1	5	2428	A
1	5	2429	A
1	5	2432	U
1	5	2433	G
1	5	2434	G
1	5	2437	C
1	5	2438	A
1	5	2439	G
1	5	2440	U
1	5	2441	C
1	5	2443	G
1	5	2447	U
1	5	2448	G
1	5	2449	A
1	5	2450	G
1	5	2454	U
1	5	2456	G
1	5	2464	C
1	5	2465	C
1	5	2468	U
1	5	2469	C

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Mol	Chain	Res	Type
1	5	2470	C
1	5	2471	G
1	5	2472	A
1	5	2474	G
1	5	2475	G
1	5	2476	G
1	5	2487	G
1	5	2488	C
1	5	2489	C
1	5	2490	U
1	5	2491	C
1	5	2502	G
1	5	2503	G
1	5	2504	C
1	5	2505	C
1	5	2506	G
1	5	2507	A
1	5	2508	U
1	5	2509	C
1	5	2510	G
1	5	2511	A
1	5	2512	A
1	5	2513	A
1	5	2514	G
1	5	2526	C
1	5	2527	A
1	5	2529	A
1	5	2530	U
1	5	2532	C
1	5	2533	C
1	5	2534	C
1	5	2537	A
1	5	2544	G
1	5	2545	U
1	5	2546	G
1	5	2547	G
1	5	2549	G
1	5	2551	A
1	5	2552	G
1	5	2553	A
1	5	2554	U
1	5	2555	G

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Mol	Chain	Res	Type
1	5	2560	C
1	5	2566	G
1	5	2571	C
1	5	2572	C
1	5	2577	C
1	5	2581	A
1	5	2582	A
1	5	2583	C
1	5	2586	G
1	5	2587	A
1	5	2588	C
1	5	2589	C
1	5	2600	A
1	5	2601	A
1	5	2602	G
1	5	2615	C
1	5	2616	C
1	5	2620	G
1	5	2623	A
1	5	2627	C
1	5	2630	U
1	5	2631	U
1	5	2638	G
1	5	2639	U
1	5	2640	G
1	5	2643	G
1	5	2645	G
1	5	2648	G
1	5	2649	G
1	5	2652	G
1	5	2653	C
1	5	2658	G
1	5	2659	A
1	5	2660	A
1	5	2661	U
1	5	2662	G
1	5	2664	G
1	5	2665	U
1	5	2666	U
1	5	2667	C
1	5	2670	C
1	5	2673	G

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Mol	Chain	Res	Type
1	5	2674	A
1	5	2675	G
1	5	2678	A
1	5	2683	C
1	5	2684	C
1	5	2687	U
1	5	2688	G
1	5	2689	C
1	5	2692	U
1	5	2694	G
1	5	2696	A
1	5	2704	C
1	5	2710	C
1	5	2711	G
1	5	2712	G
1	5	2713	C
1	5	2714	G
1	5	2716	C
1	5	2722	G
1	5	2725	A
1	5	2726	G
1	5	2735	G
1	5	2737	C
1	5	2740	U
1	5	2743	A
1	5	2744	A
1	5	2745	A
1	5	2747	U
1	5	2751	G
1	5	2752	G
1	5	2754	G
1	5	2756	G
1	5	2760	G
1	5	2762	G
1	5	2764	A
1	5	2765	A
1	5	2766	A
1	5	2767	U
1	5	2768	C
1	5	2769	U
1	5	2770	C
1	5	2783	A

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Mol	Chain	Res	Type
1	5	2786	C
1	5	2787	A
1	5	2788	U
1	5	2790	U
1	5	2794	C
1	5	2796	G
1	5	2797	C
1	5	2798	A
1	5	2799	G
1	5	2806	A
1	5	2807	A
1	5	2808	G
1	5	2812	A
1	5	2813	A
1	5	2814	C
1	5	2815	A
1	5	2818	C
1	5	2820	C
1	5	2821	U
1	5	2824	C
1	5	2826	U
1	5	2827	G
1	5	2828	U
1	5	2829	U
1	5	2832	A
1	5	2833	A
1	5	2834	C
1	5	2835	A
1	5	2838	G
1	5	2841	G
1	5	2842	G
1	5	2848	G
1	5	2849	A
1	5	2850	A
1	5	2852	U
1	5	2854	G
1	5	2855	G
1	5	2858	A
1	5	2859	G
1	5	2860	C
1	5	2866	C
1	5	2867	C

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Mol	Chain	Res	Type
1	5	2873	U
1	5	2874	U
1	5	2875	C
1	5	2876	G
1	5	2879	A
1	5	2880	U
1	5	2888	G
1	5	2892	C
1	5	2897	G
1	5	2898	G
1	5	2900	U
1	5	2904	U
1	5	2905	C
1	5	2910	G
1	5	3591	C
1	5	3592	G
1	5	3594	C
1	5	3595	U
1	5	3596	A
1	5	3597	G
1	5	3605	C
1	5	3606	U
1	5	3615	G
1	5	3616	U
1	5	3617	G
1	5	3620	G
1	5	3621	A
1	5	3622	C
1	5	3623	C
1	5	3625	G
1	5	3626	G
1	5	3627	G
1	5	3635	A
1	5	3636	C
1	5	3643	A
1	5	3644	U
1	5	3648	A
1	5	3649	A
1	5	3650	C
1	5	3658	C
1	5	3660	C
1	5	3662	A

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Mol	Chain	Res	Type
1	5	3663	A
1	5	3664	G
1	5	3667	C
1	5	3668	C
1	5	3670	C
1	5	3671	G
1	5	3672	G
1	5	3673	C
1	5	3674	G
1	5	3675	G
1	5	3676	G
1	5	3677	U
1	5	3678	G
1	5	3679	U
1	5	3680	U
1	5	3681	G
1	5	3682	A
1	5	3683	C
1	5	3684	G
1	5	3688	U
1	5	3692	A
1	5	3698	G
1	5	3699	C
1	5	3709	U
1	5	3710	G
1	5	3711	A
1	5	3712	A
1	5	3713	U
1	5	3715	U
1	5	3716	C
1	5	3717	A
1	5	3718	A
1	5	3727	A
1	5	3728	A
1	5	3729	U
1	5	3733	A
1	5	3735	G
1	5	3736	A
1	5	3737	A
1	5	3738	G
1	5	3739	C
1	5	3743	G

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Mol	Chain	Res	Type
1	5	3744	G
1	5	3745	U
1	5	3748	A
1	5	3756	A
1	5	3759	A
1	5	3760	A
1	5	3770	U
1	5	3772	U
1	5	3773	U
1	5	3774	A
1	5	3775	A
1	5	3776	G
1	5	3777	G
1	5	3784	A
1	5	3785	A
1	5	3786	U
1	5	3791	C
1	5	3799	A
1	5	3800	A
1	5	3802	U
1	5	3803	A
1	5	3807	A
1	5	3809	G
1	5	3810	C
1	5	3811	G
1	5	3813	A
1	5	3814	U
1	5	3817	A
1	5	3818	U
1	5	3819	G
1	5	3822	U
1	5	3831	U
1	5	3838	U
1	5	3839	G
1	5	3840	U
1	5	3843	C
1	5	3849	A
1	5	3851	U
1	5	3859	G
1	5	3861	A
1	5	3865	A
1	5	3867	A

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Mol	Chain	Res	Type
1	5	3876	A
1	5	3877	A
1	5	3878	C
1	5	3879	G
1	5	3880	G
1	5	3881	G
1	5	3882	C
1	5	3887	C
1	5	3889	G
1	5	3895	G
1	5	3897	G
1	5	3898	G
1	5	3899	G
1	5	3900	G
1	5	3901	A
1	5	3902	A
1	5	3905	A
1	5	3906	A
1	5	3907	G
1	5	3908	A
1	5	3912	U
1	5	3913	G
1	5	3914	U
1	5	3915	U
1	5	3916	G
1	5	3917	A
1	5	3922	G
1	5	3923	A
1	5	3925	U
1	5	3926	C
1	5	3938	G
1	5	3939	G
1	5	3943	A
1	5	4069	U
1	5	4070	U
1	5	4073	A
1	5	4075	U
1	5	4076	G
1	5	4083	U
1	5	4084	G
1	5	4085	A
1	5	4086	G

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Mol	Chain	Res	Type
1	5	4087	G
1	5	4088	C
1	5	4089	G
1	5	4091	G
1	5	4092	G
1	5	4093	G
1	5	4094	G
1	5	4095	G
1	5	4097	G
1	5	4104	G
1	5	4105	A
1	5	4107	G
1	5	4114	C
1	5	4115	G
1	5	4116	C
1	5	4117	U
1	5	4118	U
1	5	4119	C
1	5	4120	U
1	5	4121	G
1	5	4122	G
1	5	4125	C
1	5	4126	C
1	5	4127	A
1	5	4128	A
1	5	4129	G
1	5	4132	C
1	5	4140	C
1	5	4143	G
1	5	4145	C
1	5	4158	C
1	5	4162	C
1	5	4164	C
1	5	4166	G
1	5	4168	G
1	5	4169	G
1	5	4171	C
1	5	4172	A
1	5	4173	G
1	5	4180	G
1	5	4183	G
1	5	4184	G

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Mol	Chain	Res	Type
1	5	4191	G
1	5	4195	G
1	5	4196	G
1	5	4197	G
1	5	4199	C
1	5	4203	A
1	5	4205	A
1	5	4206	C
1	5	4208	U
1	5	4212	A
1	5	4213	A
1	5	4214	A
1	5	4215	C
1	5	4216	G
1	5	4217	G
1	5	4218	U
1	5	4219	A
1	5	4220	A
1	5	4221	C
1	5	4222	G
1	5	4225	G
1	5	4226	G
1	5	4228	G
1	5	4229	U
1	5	4232	U
1	5	4233	A
1	5	4234	A
1	5	4235	G
1	5	4236	G
1	5	4239	A
1	5	4241	C
1	5	4249	G
1	5	4251	A
1	5	4252	C
1	5	4254	G
1	5	4255	A
1	5	4257	A
1	5	4258	C
1	5	4265	U
1	5	4267	G
1	5	4268	A
1	5	4270	C

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Mol	Chain	Res	Type
1	5	4271	A
1	5	4274	A
1	5	4276	G
1	5	4279	A
1	5	4280	A
1	5	4281	A
1	5	4282	A
1	5	4283	G
1	5	4286	C
1	5	4287	G
1	5	4288	C
1	5	4290	U
1	5	4291	G
1	5	4292	A
1	5	4296	U
1	5	4297	G
1	5	4305	G
1	5	4306	U
1	5	4311	A
1	5	4314	C
1	5	4316	G
1	5	4318	C
1	5	4323	A
1	5	4329	G
1	5	4330	G
1	5	4332	C
1	5	4335	C
1	5	4336	A
1	5	4337	C
1	5	4339	A
1	5	4344	U
1	5	4348	A
1	5	4349	C
1	5	4350	C
1	5	4352	U
1	5	4353	U
1	5	4354	U
1	5	4356	G
1	5	4364	G
1	5	4368	G
1	5	4369	A
1	5	4373	G

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Mol	Chain	Res	Type
1	5	4374	U
1	5	4375	C
1	5	4376	A
1	5	4377	G
1	5	4378	A
1	5	4379	A
1	5	4385	A
1	5	4386	C
1	5	4387	C
1	5	4388	A
1	5	4391	G
1	5	4393	G
1	5	4394	A
1	5	4395	U
1	5	4396	A
1	5	4401	G
1	5	4419	U
1	5	4420	U
1	5	4422	A
1	5	4425	G
1	5	4426	C
1	5	4434	C
1	5	4436	U
1	5	4437	U
1	5	4438	U
1	5	4439	U
1	5	4440	G
1	5	4441	A
1	5	4443	C
1	5	4444	C
1	5	4448	G
1	5	4449	A
1	5	4450	U
1	5	4451	G
1	5	4452	U
1	5	4454	G
1	5	4459	U
1	5	4463	U
1	5	4464	A
1	5	4465	U
1	5	4466	C
1	5	4467	A

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Mol	Chain	Res	Type
1	5	4469	U
1	5	4471	U
1	5	4472	G
1	5	4473	A
1	5	4475	G
1	5	4476	C
1	5	4484	A
1	5	4488	A
1	5	4489	G
1	5	4491	G
1	5	4497	U
1	5	4498	U
1	5	4500	U
1	5	4503	A
1	5	4510	A
1	5	4511	A
1	5	4512	U
1	5	4513	A
1	5	4518	A
1	5	4519	C
1	5	4520	G
1	5	4522	G
1	5	4523	A
1	5	4524	G
1	5	4528	G
1	5	4529	G
1	5	4530	U
1	5	4531	U
1	5	4532	U
1	5	4534	G
1	5	4536	C
1	5	4537	C
1	5	4543	G
1	5	4544	A
1	5	4546	A
1	5	4548	A
1	5	4549	G
1	5	4550	G
1	5	4552	U
1	5	4557	U
1	5	4560	C
1	5	4569	U

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Mol	Chain	Res	Type
1	5	4570	G
1	5	4572	U
1	5	4574	U
1	5	4575	G
1	5	4581	G
1	5	4583	C
1	5	4584	A
1	5	4585	U
1	5	4586	G
1	5	4589	A
1	5	4590	A
1	5	4592	C
1	5	4599	A
1	5	4600	G
1	5	4601	U
1	5	4603	C
1	5	4605	A
1	5	4606	G
1	5	4608	G
1	5	4617	G
1	5	4623	G
1	5	4624	A
1	5	4636	U
1	5	4637	G
1	5	4641	U
1	5	4646	U
1	5	4647	G
1	5	4648	A
1	5	4652	G
1	5	4656	A
1	5	4657	U
1	5	4661	G
1	5	4664	A
1	5	4669	A
1	5	4670	C
1	5	4671	C
1	5	4672	A
1	5	4676	G
1	5	4677	U
1	5	4678	G
1	5	4679	G
1	5	4687	A

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Mol	Chain	Res	Type
1	5	4693	C
1	5	4694	G
1	5	4695	C
1	5	4700	A
1	5	4701	A
1	5	4709	U
1	5	4714	C
1	5	4715	C
1	5	4717	A
1	5	4718	G
1	5	4719	G
1	5	4720	C
1	5	4721	G
1	5	4722	G
1	5	4729	A
1	5	4730	C
1	5	4731	G
1	5	4732	G
1	5	4733	C
1	5	4734	A
1	5	4735	G
1	5	4737	G
1	5	4738	C
1	5	4741	C
1	5	4743	G
1	5	4745	G
1	5	4746	C
1	5	4748	U
1	5	4749	C
1	5	4750	G
1	5	4751	G
1	5	4753	U
1	5	4756	C
1	5	4757	C
1	5	4758	U
1	5	4760	G
1	5	4763	U
1	5	4764	A
1	5	4770	U
1	5	4771	C
1	5	4774	C
1	5	4860	G

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Mol	Chain	Res	Type
1	5	4865	C
1	5	4869	U
1	5	4871	C
1	5	4872	G
1	5	4873	G
1	5	4874	A
1	5	4875	G
1	5	4876	U
1	5	4877	G
1	5	4878	C
1	5	4881	U
1	5	4882	U
1	5	4883	C
1	5	4884	G
1	5	4885	U
1	5	4886	C
1	5	4888	U
1	5	4889	G
1	5	4890	G
1	5	4891	G
1	5	4893	A
1	5	4895	C
1	5	4896	G
1	5	4900	C
1	5	4901	G
1	5	4903	G
1	5	4906	C
1	5	4910	G
1	5	4911	A
1	5	4912	G
1	5	4913	G
1	5	4915	G
1	5	4919	G
1	5	4926	C
1	5	4927	G
1	5	4928	C
1	5	4929	C
1	5	4930	C
1	5	4932	U
1	5	4933	C
1	5	4934	A
1	5	4936	G

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Mol	Chain	Res	Type
1	5	4937	C
1	5	4938	A
1	5	4939	C
1	5	4941	G
1	5	4942	C
1	5	4944	C
1	5	4945	G
1	5	4946	U
1	5	4947	U
1	5	4948	C
1	5	4949	G
1	5	4950	U
1	5	4951	G
1	5	4952	G
1	5	4953	G
1	5	4957	C
1	5	4959	U
1	5	4961	G
1	5	4962	C
1	5	4964	C
1	5	4965	U
1	5	4966	A
1	5	4967	A
1	5	4977	A
1	5	4979	A
1	5	4980	C
1	5	4981	G
1	5	4982	A
1	5	4985	U
1	5	4988	U
1	5	4989	U
1	5	4990	C
1	5	4991	U
1	5	4992	G
1	5	4993	G
1	5	4999	G
1	5	5002	U
1	5	5006	U
1	5	5013	C
1	5	5014	A
1	5	5016	A
1	5	5017	G

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Mol	Chain	Res	Type
1	5	5018	C
1	5	5019	A
1	5	5021	C
1	5	5023	C
1	5	5026	U
1	5	5027	C
1	5	5028	G
1	5	5034	A
1	5	5035	U
1	5	5040	U
1	5	5041	G
1	5	5042	A
1	5	5045	G
1	5	5047	C
1	5	5048	A
1	5	5049	G
1	5	5050	C
1	5	5052	C
1	5	5053	U
1	5	5054	C
1	5	5056	A
1	5	5057	C
1	5	5058	A
1	5	5060	A
1	5	5061	A
1	5	5062	G
1	5	5063	G
1	5	5069	U
2	7	7	G
2	7	11	A
2	7	17	C
2	7	21	G
2	7	22	A
2	7	23	A
2	7	24	C
2	7	27	G
2	7	30	C
2	7	31	G
2	7	42	A
2	7	53	U
2	7	54	A
2	7	57	C

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Mol	Chain	Res	Type
2	7	60	G
2	7	63	C
2	7	64	G
2	7	65	G
2	7	70	G
2	7	73	U
2	7	74	A
2	7	79	U
2	7	80	U
2	7	90	A
2	7	100	A
2	7	105	C
2	7	106	G
2	7	110	G
2	7	112	U
2	7	115	A
2	7	120	U
3	8	2	G
3	8	3	A
3	8	9	A
3	8	11	C
3	8	13	G
3	8	16	G
3	8	23	C
3	8	32	C
3	8	33	G
3	8	34	U
3	8	35	C
3	8	37	A
3	8	38	U
3	8	39	G
3	8	40	A
3	8	46	G
3	8	48	A
3	8	50	C
3	8	51	U
3	8	59	A
3	8	61	A
3	8	62	A
3	8	63	U
3	8	64	U
3	8	65	A

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Mol	Chain	Res	Type
3	8	70	G
3	8	71	A
3	8	74	U
3	8	75	G
3	8	80	A
3	8	81	C
3	8	82	A
3	8	83	C
3	8	84	A
3	8	85	U
3	8	86	U
3	8	87	G
3	8	90	C
3	8	94	G
3	8	95	A
3	8	97	A
3	8	98	C
3	8	99	U
3	8	103	A
3	8	104	A
3	8	105	C
3	8	109	C
3	8	110	U
3	8	111	U
3	8	112	G
3	8	114	G
3	8	118	C
3	8	121	G
3	8	122	G
3	8	125	C
3	8	126	C
3	8	127	U
3	8	137	A
3	8	147	G
3	8	151	G
3	8	153	C

All (660) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	5	1	C
1	5	20	U

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Mol	Chain	Res	Type
1	5	33	A
1	5	39	A
1	5	42	A
1	5	47	A
1	5	48	G
1	5	51	A
1	5	53	C
1	5	54	G
1	5	55	G
1	5	62	A
1	5	64	A
1	5	65	A
1	5	66	A
1	5	84	A
1	5	85	G
1	5	88	A
1	5	94	A
1	5	97	G
1	5	98	A
1	5	99	A
1	5	100	C
1	5	107	G
1	5	111	C
1	5	112	C
1	5	119	G
1	5	120	A
1	5	125	C
1	5	134	G
1	5	136	C
1	5	143	C
1	5	149	A
1	5	151	G
1	5	158	A
1	5	159	C
1	5	163	A
1	5	170	C
1	5	172	C
1	5	183	C
1	5	186	G
1	5	187	U
1	5	197	A
1	5	207	G

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Mol	Chain	Res	Type
1	5	209	U
1	5	216	C
1	5	218	A
1	5	219	G
1	5	226	G
1	5	235	A
1	5	237	G
1	5	245	C
1	5	253	G
1	5	265	C
1	5	266	C
1	5	268	G
1	5	275	C
1	5	276	C
1	5	280	G
1	5	292	G
1	5	293	G
1	5	296	A
1	5	298	G
1	5	315	G
1	5	333	U
1	5	337	U
1	5	340	C
1	5	349	A
1	5	353	A
1	5	354	U
1	5	360	A
1	5	361	C
1	5	362	A
1	5	371	A
1	5	385	A
1	5	387	G
1	5	388	A
1	5	393	U
1	5	394	G
1	5	405	U
1	5	406	C
1	5	407	A
1	5	410	A
1	5	414	C
1	5	417	G
1	5	421	C

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Mol	Chain	Res	Type
1	5	432	U
1	5	435	A
1	5	451	C
1	5	454	U
1	5	485	C
1	5	486	C
1	5	493	G
1	5	495	C
1	5	496	G
1	5	497	G
1	5	502	C
1	5	505	G
1	5	514	U
1	5	647	G
1	5	648	G
1	5	655	C
1	5	658	C
1	5	659	G
1	5	664	G
1	5	666	G
1	5	668	C
1	5	684	G
1	5	686	A
1	5	693	C
1	5	704	C
1	5	727	C
1	5	728	U
1	5	732	A
1	5	733	A
1	5	738	C
1	5	746	A
1	5	747	A
1	5	909	A
1	5	911	U
1	5	917	A
1	5	920	C
1	5	927	G
1	5	930	G
1	5	931	C
1	5	932	A
1	5	936	C
1	5	943	A

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Mol	Chain	Res	Type
1	5	946	C
1	5	956	A
1	5	957	G
1	5	958	G
1	5	961	G
1	5	962	C
1	5	965	G
1	5	968	C
1	5	974	C
1	5	977	C
1	5	978	G
1	5	979	C
1	5	986	C
1	5	987	C
1	5	989	U
1	5	1067	G
1	5	1068	G
1	5	1074	G
1	5	1076	C
1	5	1186	U
1	5	1210	C
1	5	1211	G
1	5	1214	C
1	5	1217	G
1	5	1221	G
1	5	1232	G
1	5	1235	G
1	5	1236	C
1	5	1237	C
1	5	1238	A
1	5	1239	C
1	5	1241	C
1	5	1243	C
1	5	1244	G
1	5	1254	A
1	5	1264	C
1	5	1266	G
1	5	1268	G
1	5	1272	C
1	5	1274	A
1	5	1279	A
1	5	1280	C

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Mol	Chain	Res	Type
1	5	1281	G
1	5	1293	G
1	5	1296	G
1	5	1319	U
1	5	1324	A
1	5	1325	C
1	5	1329	G
1	5	1334	A
1	5	1356	U
1	5	1357	C
1	5	1359	G
1	5	1364	U
1	5	1365	C
1	5	1368	A
1	5	1370	G
1	5	1371	A
1	5	1377	G
1	5	1378	C
1	5	1379	C
1	5	1380	G
1	5	1386	C
1	5	1398	A
1	5	1405	C
1	5	1406	G
1	5	1407	C
1	5	1410	U
1	5	1419	G
1	5	1420	A
1	5	1426	G
1	5	1428	U
1	5	1438	U
1	5	1439	C
1	5	1440	U
1	5	1445	U
1	5	1464	C
1	5	1474	C
1	5	1479	G
1	5	1480	C
1	5	1481	C
1	5	1484	G
1	5	1488	G
1	5	1489	G

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Mol	Chain	Res	Type
1	5	1500	A
1	5	1509	C
1	5	1521	C
1	5	1522	G
1	5	1539	G
1	5	1554	A
1	5	1562	G
1	5	1563	A
1	5	1564	A
1	5	1596	U
1	5	1613	A
1	5	1614	C
1	5	1615	C
1	5	1617	G
1	5	1627	G
1	5	1633	G
1	5	1636	U
1	5	1640	C
1	5	1650	A
1	5	1654	G
1	5	1671	U
1	5	1676	C
1	5	1681	G
1	5	1682	A
1	5	1696	C
1	5	1697	G
1	5	1698	C
1	5	1724	G
1	5	1725	U
1	5	1742	A
1	5	1763	C
1	5	1764	G
1	5	1804	A
1	5	1808	C
1	5	1819	G
1	5	1835	G
1	5	1864	G
1	5	1865	G
1	5	1869	G
1	5	1876	U
1	5	1881	C
1	5	1884	C

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Mol	Chain	Res	Type
1	5	1887	G
1	5	1890	G
1	5	1891	A
1	5	1912	G
1	5	1919	G
1	5	1920	C
1	5	1921	C
1	5	1925	G
1	5	1928	C
1	5	1930	U
1	5	1935	C
1	5	1938	C
1	5	1945	G
1	5	1946	G
1	5	1961	G
1	5	1963	C
1	5	1974	U
1	5	1975	G
1	5	1980	U
1	5	1983	A
1	5	1992	U
1	5	1998	A
1	5	2007	G
1	5	2008	U
1	5	2009	A
1	5	2014	C
1	5	2025	A
1	5	2034	G
1	5	2035	C
1	5	2044	U
1	5	2046	G
1	5	2057	A
1	5	2068	C
1	5	2075	G
1	5	2077	C
1	5	2083	C
1	5	2088	A
1	5	2089	G
1	5	2090	U
1	5	2093	A
1	5	2094	G
1	5	2096	G

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Mol	Chain	Res	Type
1	5	2107	C
1	5	2111	G
1	5	2114	G
1	5	2116	C
1	5	2118	G
1	5	2119	C
1	5	2122	G
1	5	2123	C
1	5	2124	G
1	5	2126	G
1	5	2246	C
1	5	2248	C
1	5	2250	C
1	5	2251	G
1	5	2256	C
1	5	2257	C
1	5	2258	C
1	5	2260	C
1	5	2261	G
1	5	2262	G
1	5	2264	C
1	5	2265	G
1	5	2266	C
1	5	2267	U
1	5	2268	A
1	5	2269	C
1	5	2272	C
1	5	2276	A
1	5	2278	G
1	5	2289	C
1	5	2313	A
1	5	2321	G
1	5	2323	C
1	5	2324	C
1	5	2325	C
1	5	2328	G
1	5	2329	U
1	5	2331	G
1	5	2332	A
1	5	2347	A
1	5	2361	G
1	5	2362	U

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Mol	Chain	Res	Type
1	5	2370	A
1	5	2389	A
1	5	2394	G
1	5	2396	A
1	5	2398	U
1	5	2417	A
1	5	2436	U
1	5	2438	A
1	5	2447	U
1	5	2448	G
1	5	2459	G
1	5	2464	C
1	5	2468	U
1	5	2470	C
1	5	2474	G
1	5	2479	G
1	5	2487	G
1	5	2490	U
1	5	2502	G
1	5	2507	A
1	5	2509	C
1	5	2512	A
1	5	2513	A
1	5	2514	G
1	5	2515	G
1	5	2529	A
1	5	2533	C
1	5	2544	G
1	5	2545	U
1	5	2546	G
1	5	2553	A
1	5	2554	U
1	5	2576	G
1	5	2581	A
1	5	2583	C
1	5	2587	A
1	5	2588	C
1	5	2589	C
1	5	2591	A
1	5	2600	A
1	5	2614	C
1	5	2618	G

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Mol	Chain	Res	Type
1	5	2622	G
1	5	2631	U
1	5	2652	G
1	5	2658	G
1	5	2661	U
1	5	2665	U
1	5	2666	U
1	5	2673	G
1	5	2674	A
1	5	2677	G
1	5	2683	C
1	5	2686	G
1	5	2688	G
1	5	2695	A
1	5	2703	G
1	5	2711	G
1	5	2732	G
1	5	2744	A
1	5	2761	U
1	5	2768	C
1	5	2769	U
1	5	2782	U
1	5	2786	C
1	5	2796	G
1	5	2803	U
1	5	2806	A
1	5	2811	G
1	5	2812	A
1	5	2817	C
1	5	2825	A
1	5	2827	G
1	5	2828	U
1	5	2833	A
1	5	2834	C
1	5	2837	U
1	5	2843	U
1	5	2848	G
1	5	2851	G
1	5	2858	A
1	5	2859	G
1	5	2879	A
1	5	2895	A

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Mol	Chain	Res	Type
1	5	2896	G
1	5	3590	G
1	5	3593	C
1	5	3615	G
1	5	3620	G
1	5	3622	C
1	5	3625	G
1	5	3626	G
1	5	3636	C
1	5	3648	A
1	5	3653	A
1	5	3654	G
1	5	3663	A
1	5	3666	C
1	5	3667	C
1	5	3671	G
1	5	3676	G
1	5	3679	U
1	5	3681	G
1	5	3683	C
1	5	3692	A
1	5	3697	U
1	5	3712	A
1	5	3717	A
1	5	3727	A
1	5	3730	U
1	5	3735	G
1	5	3736	A
1	5	3773	U
1	5	3774	A
1	5	3776	G
1	5	3784	A
1	5	3799	A
1	5	3802	U
1	5	3803	A
1	5	3809	G
1	5	3813	A
1	5	3817	A
1	5	3839	G
1	5	3845	A
1	5	3856	A
1	5	3860	A

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Mol	Chain	Res	Type
1	5	3862	A
1	5	3875	G
1	5	3876	A
1	5	3877	A
1	5	3879	G
1	5	3888	G
1	5	3905	A
1	5	3922	G
1	5	3938	G
1	5	3944	G
1	5	4069	U
1	5	4075	U
1	5	4084	G
1	5	4085	A
1	5	4086	G
1	5	4095	G
1	5	4096	C
1	5	4097	G
1	5	4102	C
1	5	4103	C
1	5	4115	G
1	5	4118	U
1	5	4119	C
1	5	4120	U
1	5	4121	G
1	5	4123	C
1	5	4124	G
1	5	4127	A
1	5	4144	C
1	5	4163	U
1	5	4165	C
1	5	4170	A
1	5	4173	G
1	5	4183	G
1	5	4195	G
1	5	4197	G
1	5	4219	A
1	5	4221	C
1	5	4227	U
1	5	4228	G
1	5	4229	U
1	5	4232	U

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Mol	Chain	Res	Type
1	5	4233	A
1	5	4239	A
1	5	4240	G
1	5	4250	G
1	5	4251	A
1	5	4254	G
1	5	4257	A
1	5	4269	G
1	5	4270	C
1	5	4275	G
1	5	4276	G
1	5	4280	A
1	5	4282	A
1	5	4283	G
1	5	4287	G
1	5	4291	G
1	5	4295	U
1	5	4297	G
1	5	4322	G
1	5	4330	G
1	5	4334	U
1	5	4338	G
1	5	4348	A
1	5	4349	C
1	5	4368	G
1	5	4374	U
1	5	4375	C
1	5	4378	A
1	5	4385	A
1	5	4395	U
1	5	4419	U
1	5	4425	G
1	5	4436	U
1	5	4440	G
1	5	4448	G
1	5	4449	A
1	5	4451	G
1	5	4454	G
1	5	4463	U
1	5	4464	A
1	5	4472	G
1	5	4474	A

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Mol	Chain	Res	Type
1	5	4475	G
1	5	4481	U
1	5	4488	A
1	5	4489	G
1	5	4497	U
1	5	4498	U
1	5	4507	A
1	5	4518	A
1	5	4519	C
1	5	4522	G
1	5	4527	G
1	5	4528	G
1	5	4531	U
1	5	4533	A
1	5	4535	A
1	5	4536	C
1	5	4543	G
1	5	4547	C
1	5	4548	A
1	5	4560	C
1	5	4574	U
1	5	4583	C
1	5	4600	G
1	5	4605	A
1	5	4610	A
1	5	4645	C
1	5	4647	G
1	5	4656	A
1	5	4670	C
1	5	4677	U
1	5	4678	G
1	5	4691	A
1	5	4693	C
1	5	4700	A
1	5	4718	G
1	5	4719	G
1	5	4720	C
1	5	4730	C
1	5	4731	G
1	5	4737	G
1	5	4739	C
1	5	4740	G

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Mol	Chain	Res	Type
1	5	4745	G
1	5	4756	C
1	5	4762	A
1	5	4763	U
1	5	4871	C
1	5	4872	G
1	5	4873	G
1	5	4874	A
1	5	4884	G
1	5	4885	U
1	5	4887	C
1	5	4888	U
1	5	4889	G
1	5	4900	C
1	5	4911	A
1	5	4926	C
1	5	4929	C
1	5	4935	C
1	5	4936	G
1	5	4938	A
1	5	4948	C
1	5	4949	G
1	5	4950	U
1	5	4951	G
1	5	4981	G
1	5	4990	C
1	5	4991	U
1	5	5022	U
1	5	5026	U
1	5	5027	C
1	5	5041	G
1	5	5046	U
1	5	5049	G
1	5	5056	A
1	5	5059	C
1	5	5060	A
1	5	5061	A
1	5	5062	G
1	5	5068	G
2	7	7	G
2	7	21	G
2	7	42	A

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Mol	Chain	Res	Type
2	7	56	G
2	7	58	A
2	7	60	G
2	7	63	C
2	7	72	U
2	7	75	G
3	8	2	G
3	8	9	A
3	8	10	G
3	8	14	U
3	8	33	G
3	8	34	U
3	8	37	A
3	8	64	U
3	8	70	G
3	8	73	U
3	8	81	C
3	8	83	C
3	8	85	U
3	8	94	G
3	8	95	A
3	8	98	C
3	8	110	U
3	8	111	U
3	8	124	U
3	8	125	C
3	8	126	C
3	8	131	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

There are no oligosaccharides in this entry.

5.6 Ligand geometry

Of 133 ligands modelled in this entry, 133 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	5	12
8	E	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	E	72:ALA	C	84:VAL	N	23.51
1	5	4776:G	O3’	4859:C	P	17.87
1	5	757:G	O3’	906:C	P	16.89
1	5	519:C	O3’	642:G	P	16.61
1	5	2910:G	O3’	3583:U	P	16.04
1	5	2131:C	O3’	2243:C	P	14.89
1	5	997:C	O3’	1047:C	P	13.99
1	5	1051:G	O3’	1064:G	P	9.59
1	5	1222:A	O3’	1232:G	P	3.97
1	5	1699:A	O3’	1718:C	P	3.33
1	5	1100:U	O3’	1167:C	P	3.02
1	5	4939:C	O3’	4941:G	P	2.74
1	5	4942:C	O3’	4944:C	P	2.72

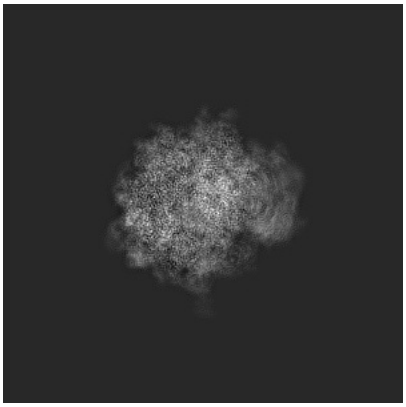
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2650. These allow visual inspection of the internal detail of the map and identification of artifacts.

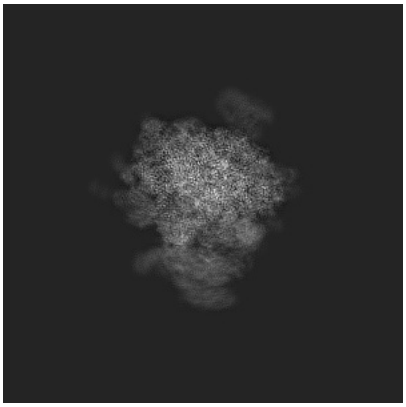
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

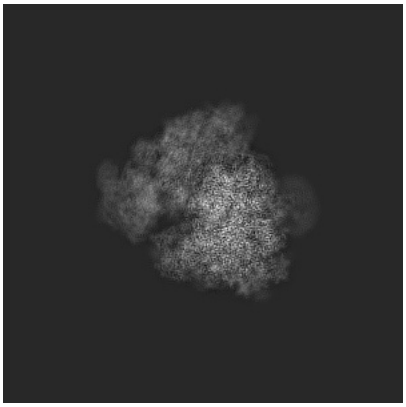
6.1.1 Primary map



X



Y

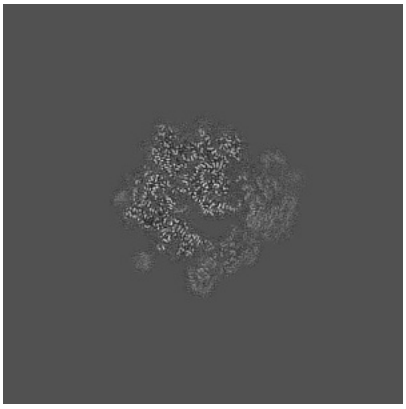


Z

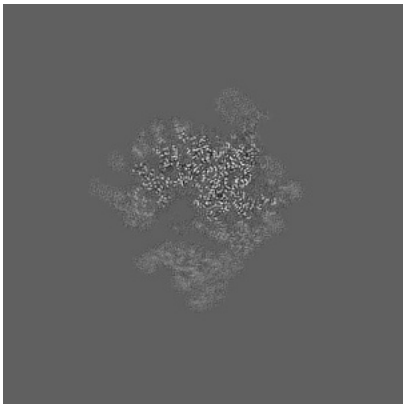
The images above show the map projected in three orthogonal directions.

6.2 Central slices

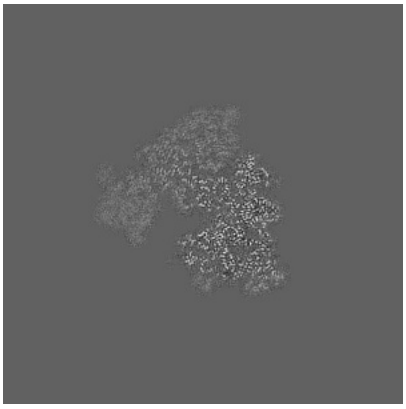
6.2.1 Primary map



X Index: 210



Y Index: 210

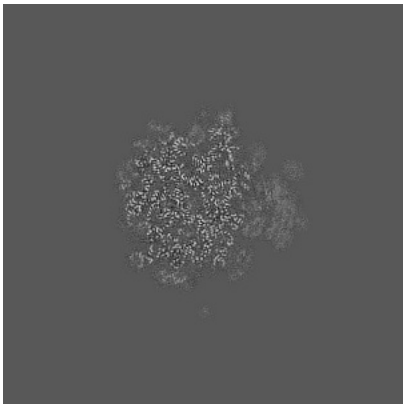


Z Index: 210

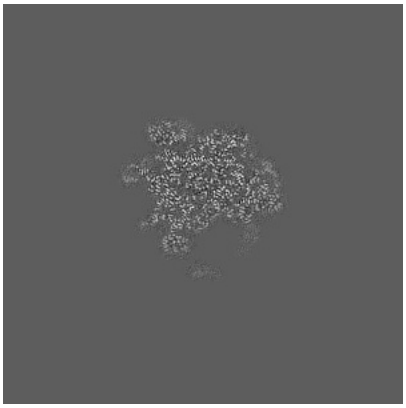
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

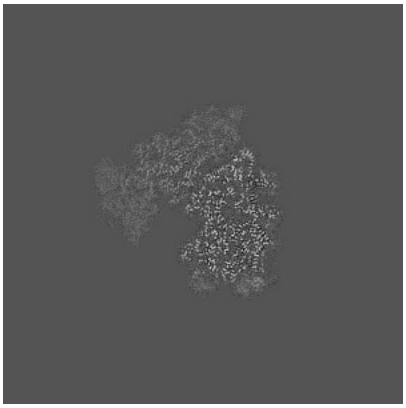
6.3.1 Primary map



X Index: 233



Y Index: 168

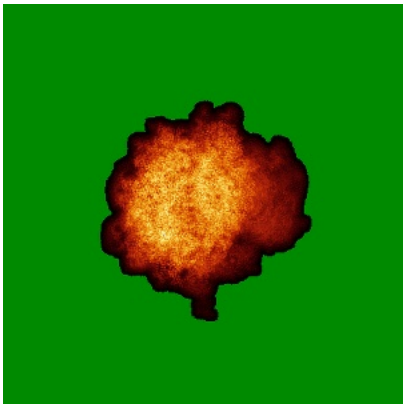


Z Index: 219

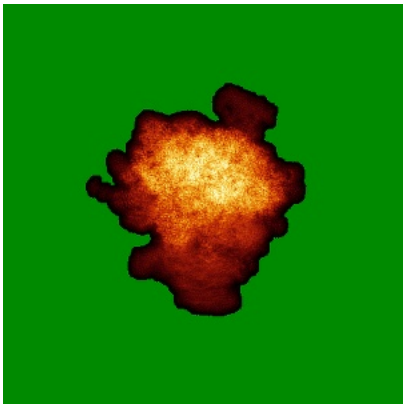
The images above show the largest variance slices of the map in three orthogonal directions.

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

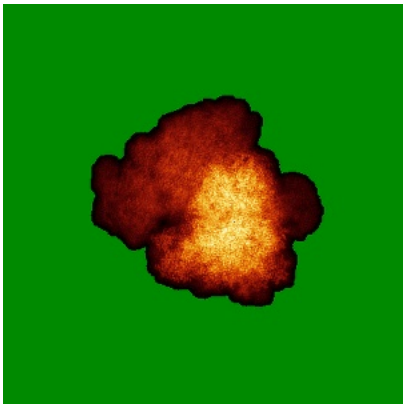
6.4.1 Primary map



X



Y

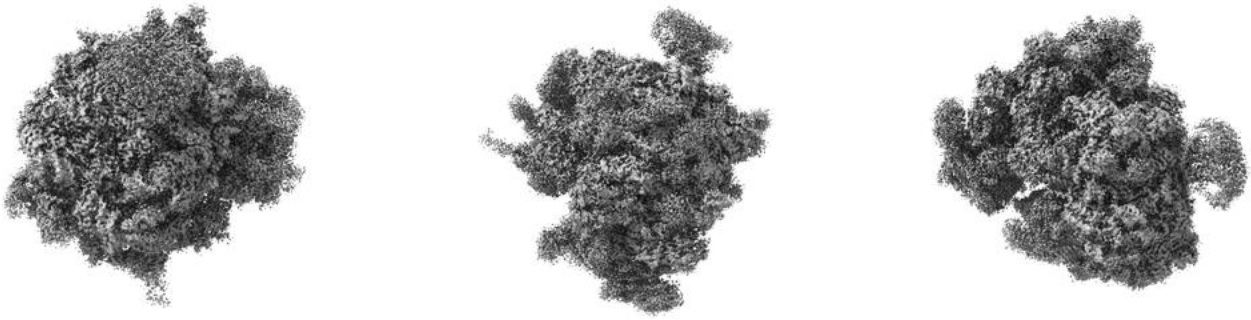


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.09. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

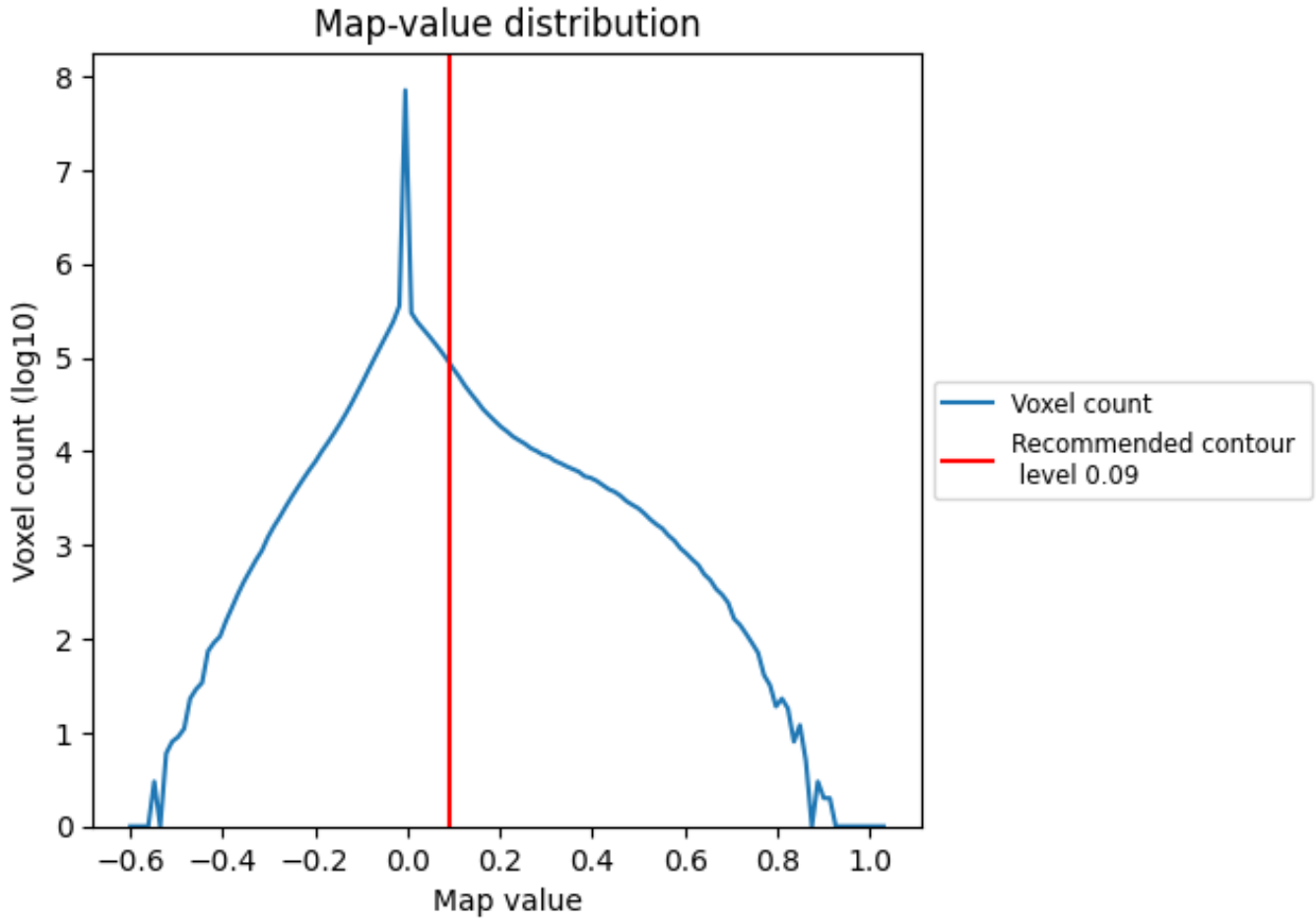
6.6 Mask visualisation (i)

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

7 Map analysis

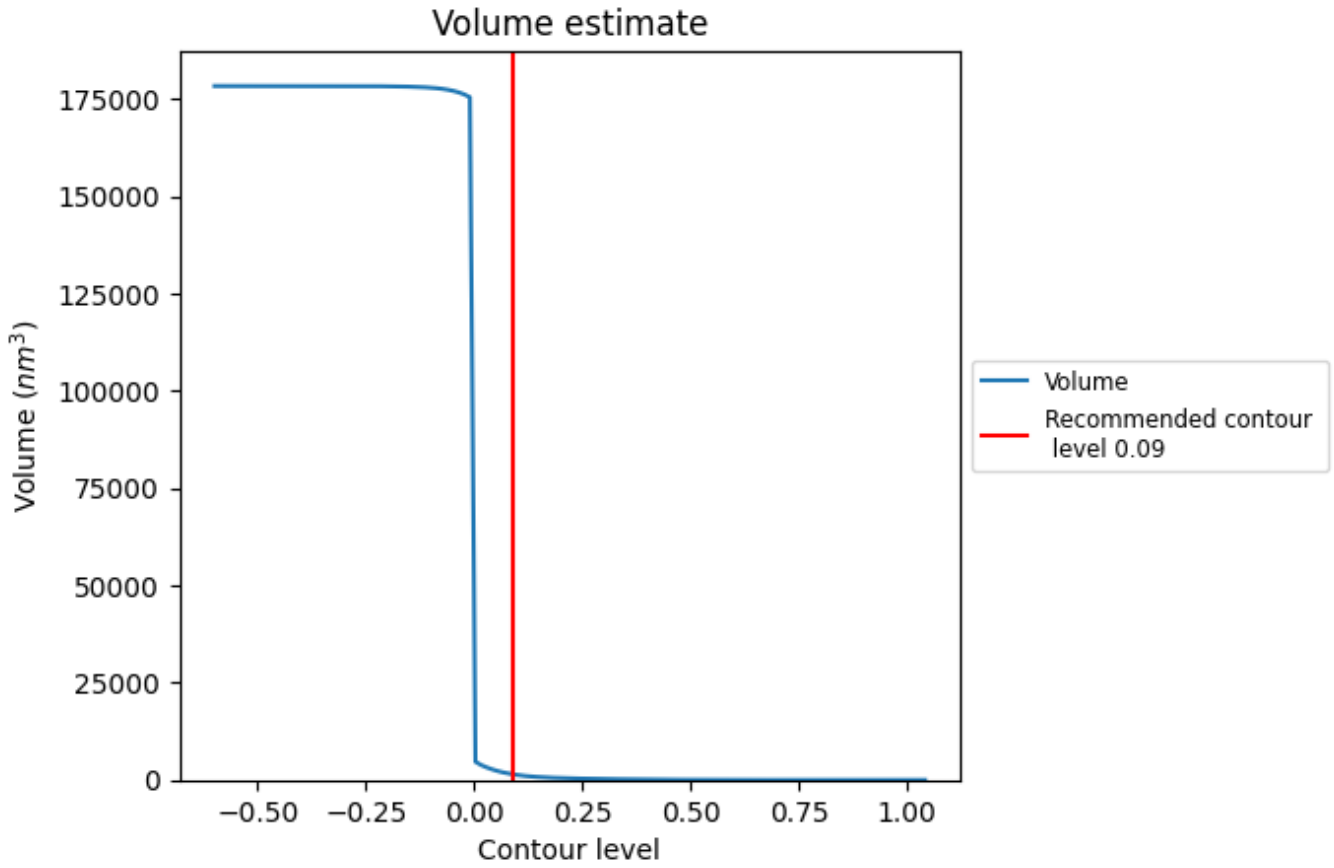
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

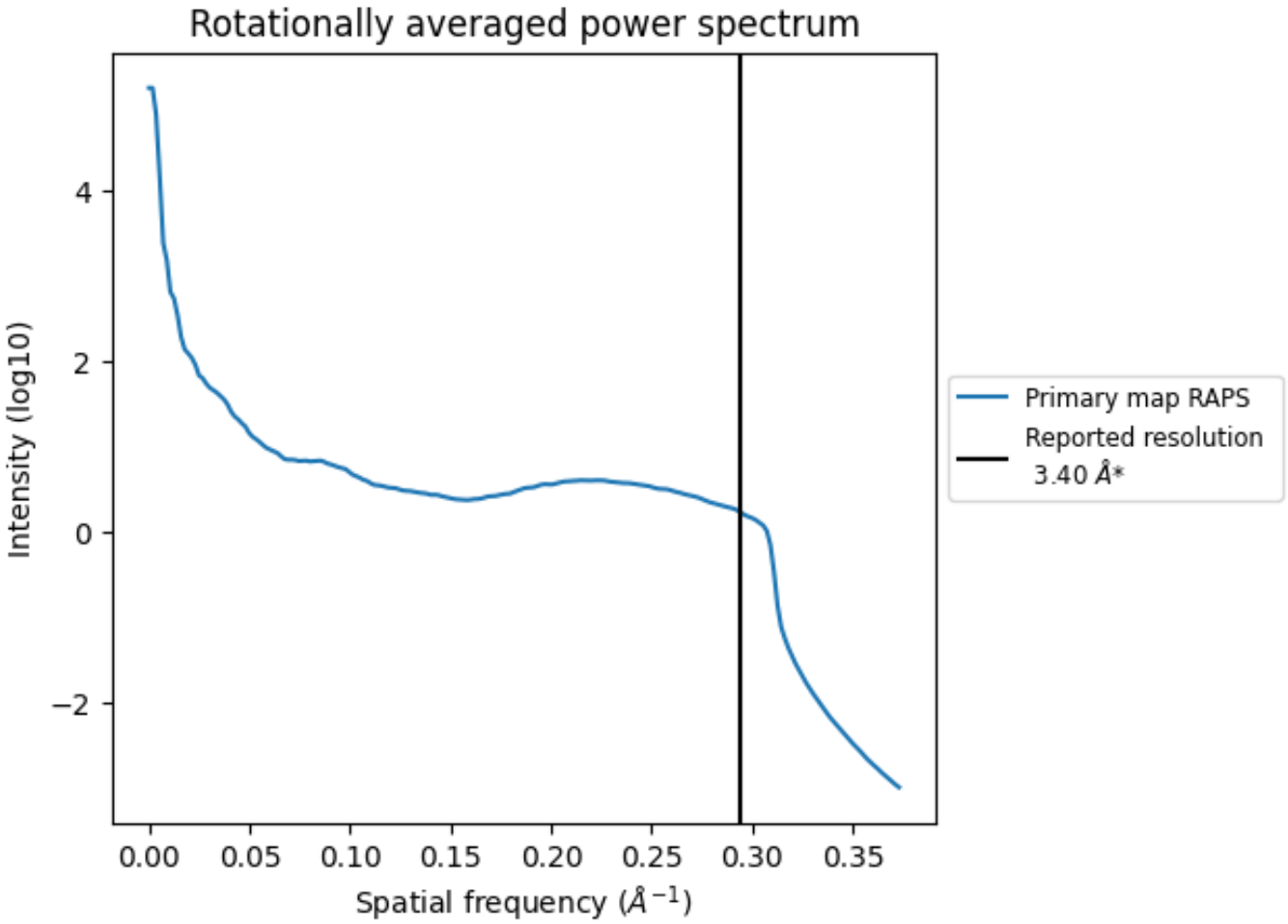
7.2 Volume estimate



The volume at the recommended contour level is 1453 nm^3; this corresponds to an approximate mass of 1312 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 0.294 Å^{-1}

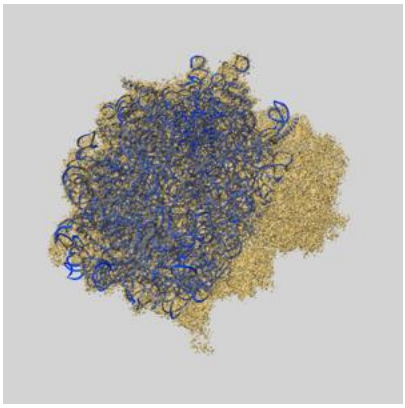
8 Fourier-Shell correlation

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

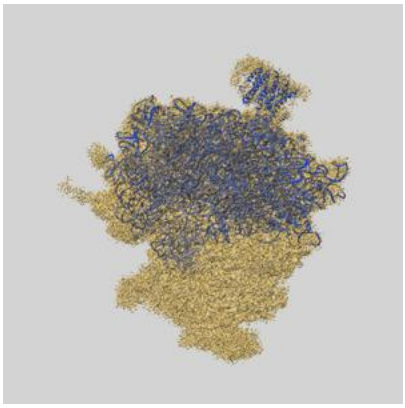
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2650 and PDB model 3J7Q. Per-residue inclusion information can be found in section 3 on page 15.

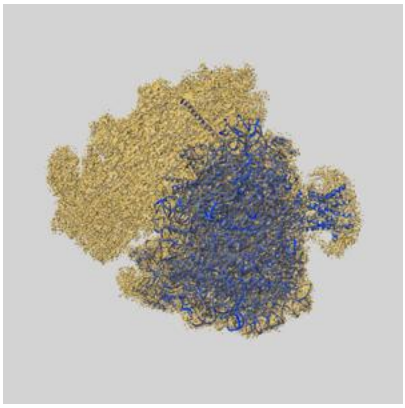
9.1 Map-model overlay



X



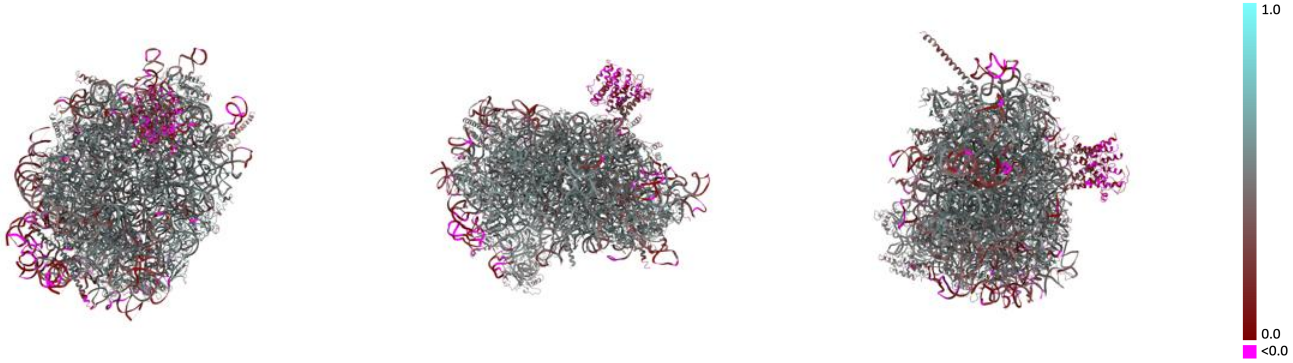
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.09 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.

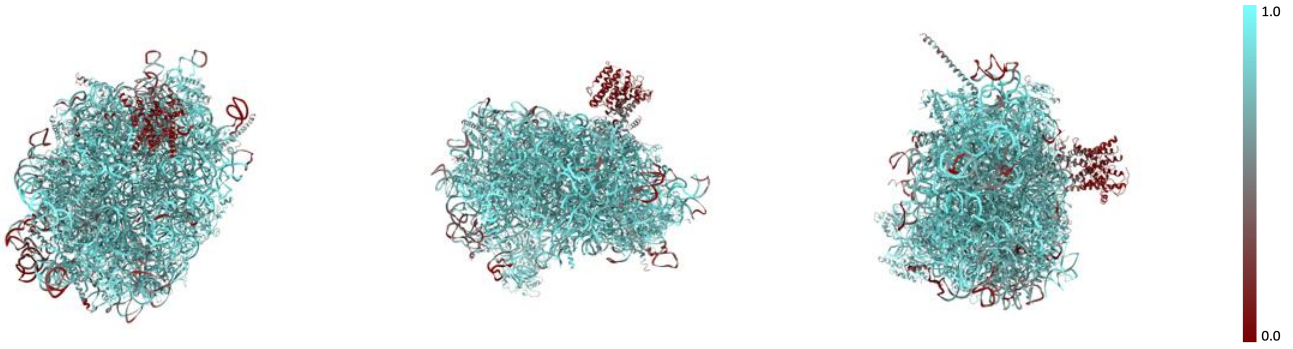
9.2 Q-score mapped to coordinate model



X Y Z

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

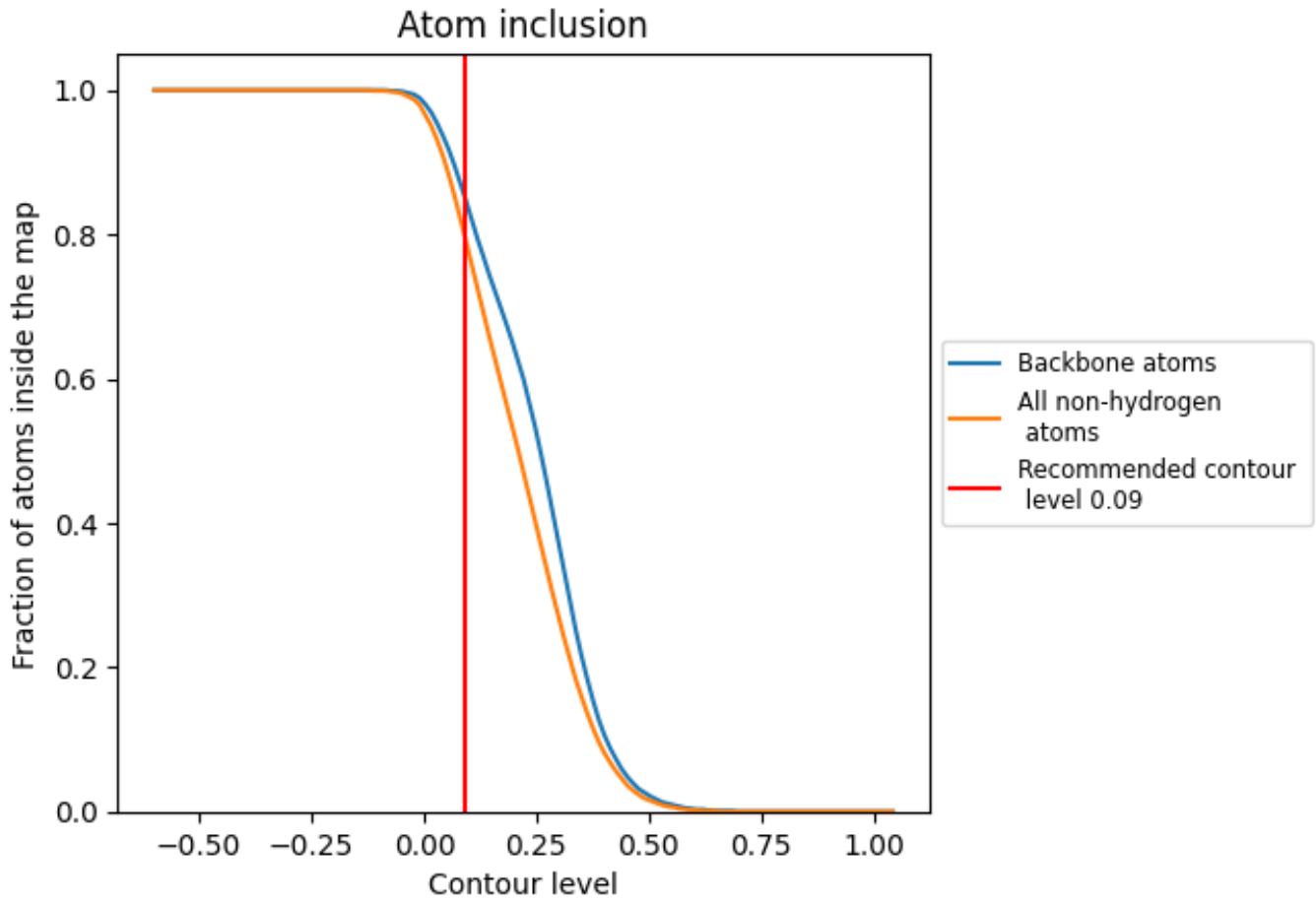
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.09).

9.4 Atom inclusion (i)



At the recommended contour level, 85% of all backbone atoms, 80% 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 (0.09) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8000	0.4410
1	0.2230	0.1560
2	0.2590	0.1820
3	0.0280	0.0620
5	0.8090	0.4170
7	0.9290	0.4920
8	0.8500	0.4530
A	0.8620	0.5200
B	0.8600	0.5130
C	0.8300	0.5000
D	0.8060	0.4580
E	0.7580	0.4480
F	0.8320	0.5010
G	0.7680	0.4560
H	0.8280	0.5050
I	0.8010	0.4800
J	0.7620	0.4510
L	0.7750	0.4650
M	0.8310	0.5010
N	0.8720	0.5200
O	0.8570	0.5230
P	0.8350	0.5160
Q	0.8610	0.5230
R	0.7790	0.4670
S	0.8610	0.5190
T	0.8250	0.5020
U	0.7200	0.4240
V	0.8430	0.5190
W	0.8210	0.5040
X	0.7870	0.4910
Y	0.8100	0.4990
Z	0.8310	0.4950
a	0.8630	0.5160
b	0.6780	0.4120
c	0.8080	0.4850

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Chain	Atom inclusion	Q-score
d	0.7990	0.4790
e	0.8470	0.5210
f	0.8780	0.5260
g	0.8150	0.5080
h	0.7890	0.4880
i	0.8040	0.4890
j	0.8470	0.5010
k	0.7540	0.4600
l	0.8350	0.5180
m	0.8490	0.5220
n	0.7710	0.4760
o	0.8010	0.5020
p	0.8200	0.5160
r	0.8390	0.5060