



# Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Mar 2, 2017 – 12:10 pm GMT

PDB ID : 3J7P  
EMDB ID: : EMD-2646  
Title : Structure of the 80S mammalian ribosome bound to eEF2  
Authors : Voorhees, R.M.; Fernandez, I.S.; Scheres, S.H.W.; Hegde, R.S.  
Deposited on : 2014-08-01  
Resolution : 3.50 Å(reported)  
Based on PDB ID : 3J3B, 3J3A, 3J3F, 3J3D

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report  
for a publicly released PDB/EMDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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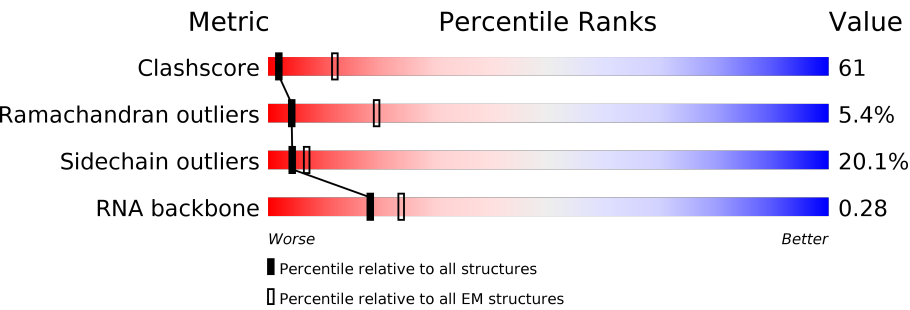
MolProbity : 4.02b-467  
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : recalc29047

# 1 Overall quality at a glance i

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

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	5	3664	9% 46% 34% 11%
2	7	120	18% 57% 22% .
3	8	156	8% 54% 25% 13%
4	A	257	49% 28% 12% 6% 5%
5	B	394	48% 34% 14% 5%
6	C	367	55% 31% 11% .
7	D	297	45% 35% 13% 5% .
8	E	236	47% 27% 19% 6%









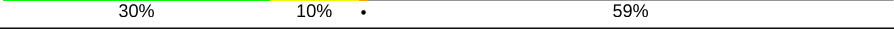


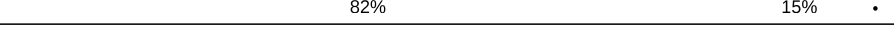

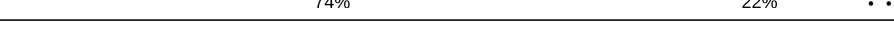
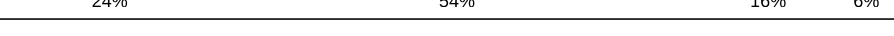

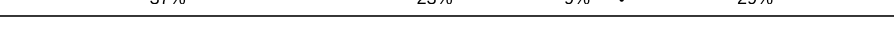

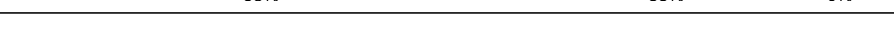
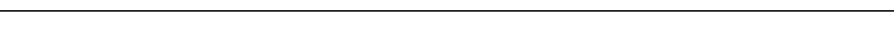

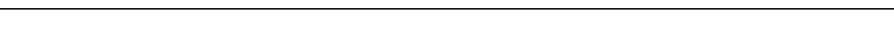
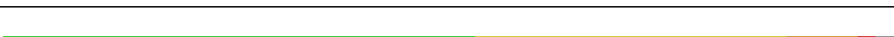
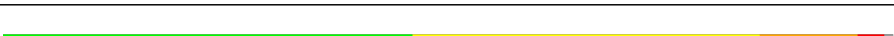

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Mol	Chain	Length	Quality of chain
9	F	225	
10	G	266	
11	H	192	
12	I	213	
13	J	178	
14	K	163	
15	L	211	
16	M	213	
17	N	204	
18	O	204	
19	P	153	
20	Q	188	
21	R	196	
22	S	224	
23	T	160	
24	U	128	
25	V	140	
26	W	157	
27	X	156	
28	Y	145	
29	Z	136	
30	a	148	
31	b	160	
32	c	115	
33	d	125	


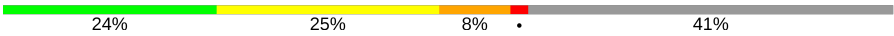

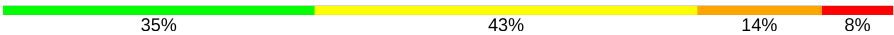


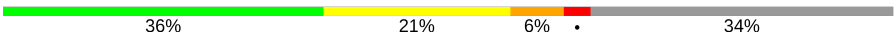

















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Mol	Chain	Length	Quality of chain
34	e	135	
35	f	110	
36	g	117	
37	h	123	
38	i	105	
39	j	86	
40	k	70	
41	l	51	
42	m	128	
43	n	25	
44	o	106	
45	p	91	
46	q	202	
47	r	125	
48	4	856	
49	S2	1742	
50	SA	295	
51	SB	264	
52	SC	218	
53	SD	243	
54	SE	263	
55	SF	204	
56	SG	249	
57	SH	194	
58	SI	208	

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Mol	Chain	Length	Quality of chain
59	SJ	194	
60	SK	165	
61	SL	158	
62	SM	124	
63	SN	151	
64	SO	151	
65	SP	145	
66	SQ	146	
67	SR	135	
68	SS	152	
69	ST	145	
70	SU	119	
71	SV	83	
72	SW	130	
73	SX	143	
74	SY	132	
75	SZ	125	
76	Sa	115	
77	Sb	84	
78	Sc	69	
79	Sd	56	
80	Se	133	
81	Sf	156	
82	Sg	317	

## 2 Entry composition

There are 84 unique types of molecules in this entry. The entry contains 221686 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
1	5	3662	Total	C	N	O	P	0	0
			78486	34947	14363	25515	3661		

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

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

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

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

- Molecule 4 is a protein called Ribosomal protein uL2.

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

- Molecule 5 is a protein called Ribosomal protein uL3.

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

- 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		

- 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		

- 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		

- 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		

- 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		

- 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 uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	151	Total	C	N	O	S	0	0
			1140	708	215	213	4		

- Molecule 15 is a protein called Ribosomal protein eL13.

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

- Molecule 16 is a protein called Ribosomal protein eL14.

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

- Molecule 17 is a protein called Ribosomal protein eL15.

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

- Molecule 18 is a protein called Ribosomal protein uL13.

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

- Molecule 19 is a protein called Ribosomal protein uL22.

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

- Molecule 20 is a protein called Ribosomal protein eL18.

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

- Molecule 21 is a protein called Ribosomal protein eL19.



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

- Molecule 22 is a protein called Ribosomal protein eL20.

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

- Molecule 23 is a protein called Ribosomal protein eL21.

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

- Molecule 24 is a protein called Ribosomal protein eL22.

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

- Molecule 25 is a protein called Ribosomal protein uL14.

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

- Molecule 26 is a protein called Ribosomal protein eL24.

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

- Molecule 27 is a protein called Ribosomal protein uL23.

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

- Molecule 28 is a protein called Ribosomal protein uL24.

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

- Molecule 29 is a protein called Ribosomal protein eL27.

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

- Molecule 30 is a protein called Ribosomal protein uL15.

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

- Molecule 31 is a protein called Ribosomal protein eL29.

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

- Molecule 32 is a protein called Ribosomal protein eL30.

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

- Molecule 33 is a protein called Ribosomal protein eL31.

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

- Molecule 34 is a protein called Ribosomal protein eL32.

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

- Molecule 35 is a protein called Ribosomal protein eL33.

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

- Molecule 36 is a protein called Ribosomal protein eL34.

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

- Molecule 37 is a protein called Ribosomal protein uL29.

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

- Molecule 38 is a protein called Ribosomal protein eL36.

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

- Molecule 39 is a protein called Ribosomal protein eL37.

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

- Molecule 40 is a protein called Ribosomal protein eL38.

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

- Molecule 41 is a protein called Ribosomal protein eL39.

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

- Molecule 42 is a protein called Ribosomal protein eL40.

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

- Molecule 43 is a protein called Ribosomal protein eL41.

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

- Molecule 44 is a protein called Ribosomal protein eL42.

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

- Molecule 45 is a protein called Ribosomal protein eL43.

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

- Molecule 46 is a protein called Ribosomal protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	q	202	Total	C	N	O	S	0	0
			1556	989	272	286	9		

- Molecule 47 is a protein called Ribosomal protein eL28.

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

- Molecule 48 is a protein called Eukaryotic elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	4	856	Total	C	N	O	S	0	0
			6673	4234	1148	1247	44		

- Molecule 49 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	S2	1742	Total	C	N	O	P	0	0
			36900	16458	6595	12106	1741		

- Molecule 50 is a protein called Ribosomal protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	SA	208	Total	C	N	O	S	0	0
			1642	1045	289	300	8		

- Molecule 51 is a protein called Ribosomal protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	SB	213	Total	C	N	O	S	0	0
			1725	1093	311	308	13		

- Molecule 52 is a protein called Ribosomal protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	SC	218	Total	C	N	O	S	0	0
			1690	1094	289	297	10		

- Molecule 53 is a protein called Ribosomal protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 54 is a protein called Ribosomal protein eS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 55 is a protein called Ribosomal protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SF	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 56 is a protein called Ribosomal protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 57 is a protein called Ribosomal protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SH	189	Total	C	N	O	S	0	0
			1521	969	280	271	1		

- Molecule 58 is a protein called Ribosomal protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 59 is a protein called Ribosomal protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 60 is a protein called Ribosomal protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 61 is a protein called Ribosomal protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SL	152	Total	C	N	O	S	0	0
			1238	788	232	212	6		

- Molecule 62 is a protein called Ribosomal protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SM	124	Total	C	N	O	S	0	0
			960	600	171	181	8		

- Molecule 63 is a protein called Ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 64 is a protein called Ribosomal protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SO	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 65 is a protein called Ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SP	96	Total	C	N	O	S	0	0
			805	506	158	135	6		

- Molecule 66 is a protein called Ribosomal protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SQ	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 67 is a protein called Ribosomal protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SR	129	Total	C	N	O	S	0	0
			1047	658	193	191	5		

- Molecule 68 is a protein called Ribosomal protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SS	137	Total	C	N	O	S	0	0
			1139	714	231	193	1		

- Molecule 69 is a protein called Ribosomal protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	ST	141	Total	C	N	O	S	0	0
			1101	690	212	196	3		

- Molecule 70 is a protein called Ribosomal protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	SU	104	Total	C	N	O	S	0	0
			818	513	153	148	4		

- Molecule 71 is a protein called Ribosomal protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SV	82	Total	C	N	O	S	0	0
			625	384	116	120	5		

- Molecule 72 is a protein called Ribosomal protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 73 is a protein called Ribosomal protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SX	141	Total	C	N	O	S	0	0
			1099	694	220	182	3		

- Molecule 74 is a protein called Ribosomal protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SY	126	Total	C	N	O	S	0	0
			1023	646	200	172	5		

- Molecule 75 is a protein called Ribosomal protein es25.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 76 is a protein called Ribosomal protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Sa	98	Total	C	N	O	S	0	0
			781	486	161	129	5		

- Molecule 77 is a protein called Ribosomal protein eS27.



Mol	Chain	Residues	Atoms					AltConf	Trace
77	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 78 is a protein called Ribosomal protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 79 is a protein called Ribosomal protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Sd	52	Total	C	N	O	S	0	0
			434	273	87	69	5		

- Molecule 80 is a protein called Ribosomal protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Se	57	Total	C	N	O	S	0	0
			452	279	99	73	1		

- Molecule 81 is a protein called Ribosomal protein eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	Sf	71	Total	C	N	O	S	0	0
			581	367	109	98	7		

- Molecule 82 is a protein called Ribosomal protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 83 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
83	o	1	Total	Zn	0
			1	1	
83	j	1	Total	Zn	0
			1	1	
83	Sa	1	Total	Zn	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
83	m	1	Total 1	Zn 1	0

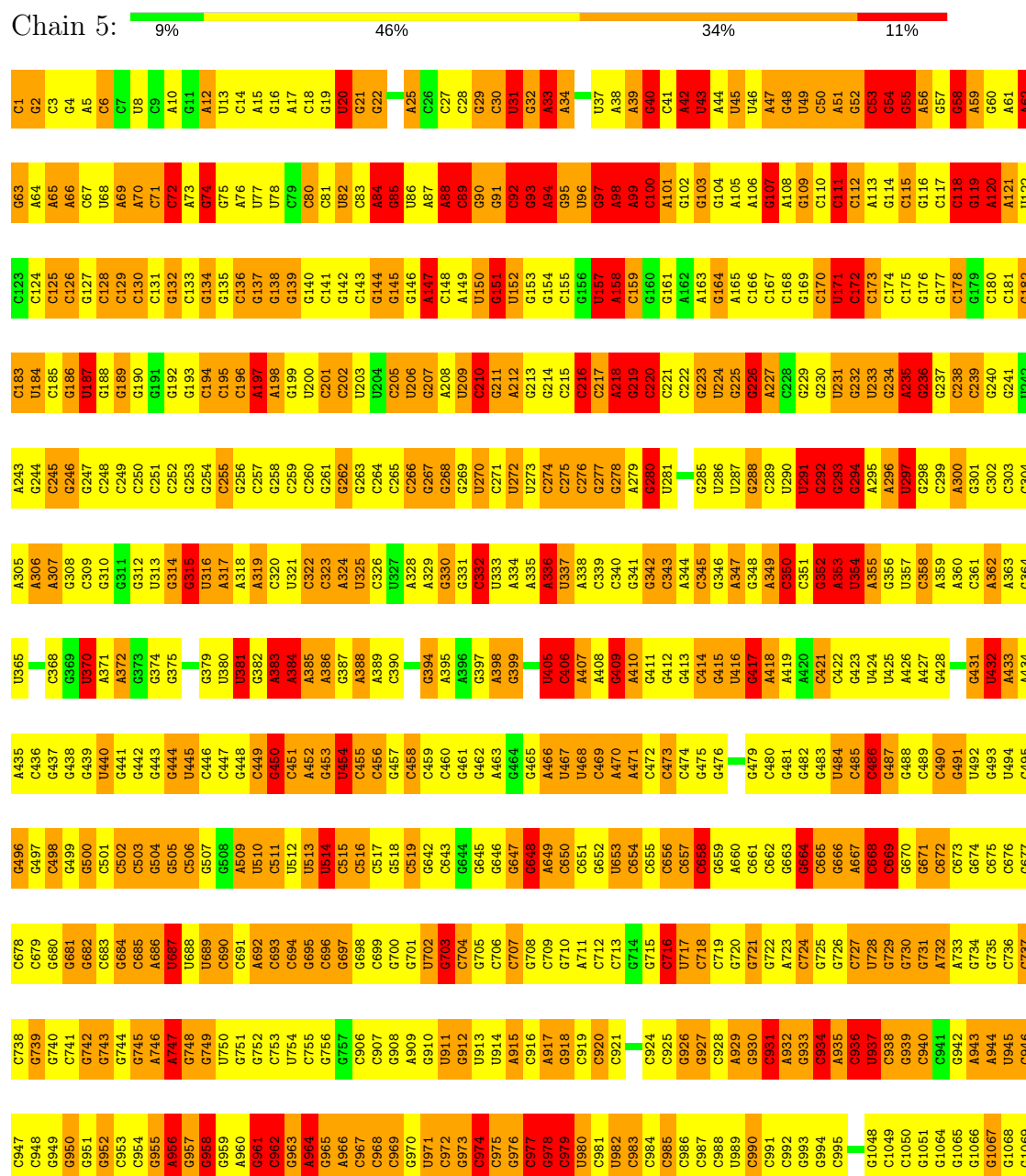
- Molecule 84 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
84	P	1	Total 1	Mg 1	0
84	S2	36	Total 36	Mg 36	0
84	V	1	Total 1	Mg 1	0
84	7	5	Total 5	Mg 5	0
84	4	1	Total 1	Mg 1	0
84	5	118	Total 118	Mg 118	0
84	8	4	Total 4	Mg 4	0

### 3 Residue-property plots

These plots are drawn for all protein, RNA and DNA 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. 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. 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





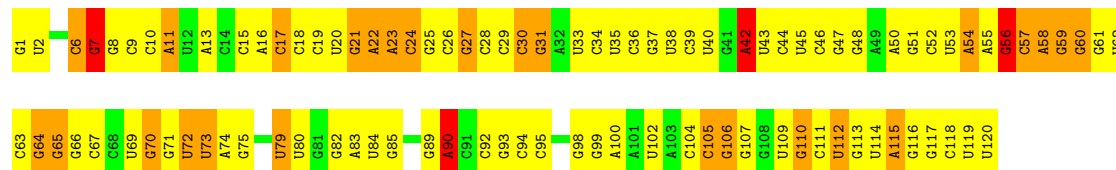




A5042	G4981	G4715	C4653	A4589	G4529	A4467	U4404	C4341	A4281	G4216	C4155	G4095	U3914
A5043	A4982	C4716	C4654	A4590	U4530	U4468	G4405	C4342	A4282	G4217	C4156	C4096	U3915
A5044	C4983	A4717	A4655	U4591	U4531	U4469	U4406	U4343	G4283	U4218	A4157	G4097	G3916
G5045	C4984	A4718	A4656	C4592	U4532	G4470	G4407	U4344	C4284	A4219	C4158	A4098	A3917
U5046	U4985	G4719	U4657	C4593	A4533	U4471	G4408	C4345	U4285	G4220		G4099	G3918
C5047	G4986	G4720	G4658	U4594	G4534	G4472	G4409	C4346	U4286	C4221	G4161	C4100	C3919
A5048	C4987	G4721	G4659	G4595	A4535	A4473	G4410	G4347	G4287	G4222	C4162	U3920	U3920
G5049	U4988	G4722	G4660	C4596	C4536	A4474	G4411	C4348	C4288	G4223	U4163	U3921	U3921
C5051	G4926	A4723	G4661		C4537	G4475	C4412	C4349	C4289	C4224	C4164	C4103	G3922
C5052	C4928	A4724	C4662	A4599	G4538	C4476	C4413	C4350	U4290	G4225	C4165	G4104	A3923
U5053	C4929	G4725	G4663	G4600	U4539	A4477	A4414	C4351	U4291	C4226	C4166	A4105	C3924
G5054	G4930	G4726	A4664	U4601	C4540	G4478	G4415	U4352	A4292	U4227	G4167	U4106	U3925
C5055	C4931		A4665	A4602	G4541	A4479	G4416	U4353	U4293	G4228	C4168	G4107	C3926
	G4932	A4729	G4666	C4603	U4542	A4480	C4417	U4354	C4294	U4229	C4169	G4108	U3927
	U4933	C4730	C4667	G4604	G4543	U4481	G4418	G4355	U4295	C4230	A4170	G4109	A3928
	C4934	G4731	U4668	A4605	A4544	U4482	U4419	G4356	U4296	C4231	C4171	G4110	G3929
	A4935	G4732	A4669	G4606	G4545	C4483		C4357	G4297	U4232	A4172	U4111	U3930
	G4936	C4733	C4670	A4607	A4546	A4484	U4422	U4360	A4298	A4233	C4173	C4112	C3931
	C4937	G4734	C4671	G4608	C4547	C4485	U4423	U4361	U4299	U4234	U4174	U4113	
	A4938	A4735	A4672	G4609	A4548	U4486	A4424	A4362	U4300	G4235	C4175	C3935	C3935
	C4939	C4736		A4610	G4549	C4487	G4425	A4363	U4302	G4236	C4176	G4115	A3936
	U4940		U4675		U4550	A4488	C4426	G4364	U4303	C4237	C4177	C4116	C3937
	C4941	G4737	U4677	C4615	U4551	G4489	G4427		C4304	G4238	A4178	U4117	G3938
	C4942	C4738	G4676	G4617	G4552	C4490	A4428	G4367	A4304	U4239	G4179	C4118	G3939
	G4943	G4739	G4677	C4618	A4553	G4491	C4429	G4368	G4305	G4240	C4180	C4119	
	C4944	A4740	G4678	U4619	C4554	U4492	G4430	A4369	U4306	C4241	U4181	U4120	A3943
	U4945	C4741	G4679	U4620	U4555			G4370	U4307	U4242	C4182	G4121	G3944
	A4946		G4680	A4621	U4556		G4433	G4371	C4308	C4243	G4183	G4122	A3945
	U4947	G4742	A4681	C4622	U4557	A4496	C4434	U4372	C4314		C4184	C4123	G3946
	C4948	A4743	U4682	G4623	U4558	U4497	U4435	G4373	A4315	G4252	C4185	G4124	A3947
	G4949	G4744	G4683	A4624	C4559	U4498	U4436	U4374	G4316	G4254	A4191	C4130	U4070
	C4950	A4745	U4684	G4625	A4560	G4499	U4437	U4375	A4317	A4255	A4192	U4071	U4071
	G4951	G4746	A4685	A4626	C4561	U4500	U4438	U4376	C4318	A4256	C4193	C4072	C4072
	C4952	C4747	U4686	G4627	C4562	U4501	U4439	A4377	C4319	A4257	U4194	C4133	A4073
	U4953	U4748	G4686	U4628	U4563	A4502	G4440	G4378	G4320	C4258	G4195	C4074	C4074
	G4954	G4749	A4687	U4629	A4564	C4503	A4441	A4379	U4321	C4259	C4196	G4135	U4075
	A4955	C4750	C4688	U4630	C4565	A4504	U4442	A4380	G4322	U4260	G4197	G4136	G4076
	C4956	G4751	U4689	G4631	U4566	C4505	C4443	A4381	C4323	C4261	C4198	C4137	A4077
	U4957	U4752	G4690	U4632	G4567	A4510	U4444	U4382	A4324		C4199	C4138	C4078
	C4958	A4753	A4691	G4633	U4572	U4511	U4445	C4387	A4325	U4265	G4200	C4139	C4079
	G4959	G4754	A4692	U4634	G4573	U4512	G4451	A4388	A4326	G4266	C4201	C4140	C4080
	U4960	C4755	C4693	U4635	U4574	A4513	U4452	C4389	G4327	G4267	U4202	G4141	G4081
	G4961	G4756	G4694	U4636	G4575	A4514	C4453	A4390	C4328	A4268	U4203	C4142	G4082
	C4962	C4757	C4695	C4637	U4576	G4515	G4454	G4391	G4329	G4269	C4204	G4143	U4083
	G4963	U4758	A4696	U4638	U4577	G4516	G4455	C4392	C4330	C4270	A4205	C4144	G4084
	C4964	C4759	U4697	U4639	U4578	U4517	U4456	C4393	G4331	A4271	C4206	C4145	A4085
	U4965	G4760	C4698	G4640	U4579	A4518	U4457	U4394	C4332	G4272	C4207	C4146	G4086
	C4966	A4761	U4699	U4641	U4580	C4519	C4458	U4395	C4333	A4273	C4208	G4147	G4087
	A4967	G4762	G4699	U4642	G4581	G4520	U4459	A4396	U4334	A4274	U4209	C4148	C4088
	C4968	U4701	A4700	C4643	C4582	U4521	U4460	A4397	C4335	G4275	U4210	C4149	G4089
	U4969	G4702	A4701	U4644	C4583	G4522	C4461	C4398	A4336	G4276	C4211	G4150	G4090
	G4970	U4703	U4702	U4645	A4584	A4523	C4462	U4399	C4337	G4277	A4212	G4151	G4091
	A4971	C4704	C4703	U4646	U4585	G4524	U4463	C4400	G4338	C4278	A4213	G4152	G4092
	U4972			G4647	G4586	C4525	U4464	G4401	A4213	A4279	A4214	C4153	G4093
	C4973	A4707	A4707	U4648	U4587	G4528	U4465	U4402	U4340	A4280	C4215	G4154	G4094
	G4974	G4708	A4708	U4649	G4588		C4466	U4403					
	C4975	C4709	G4709	G4650									
	U4976	U4710	C4710	A4651									
	C4977	C4711	C4711	G4652									
	A4978	G4712	G4712										
	U4979	C4713	C4713										
	C4980	C4714	C4714										

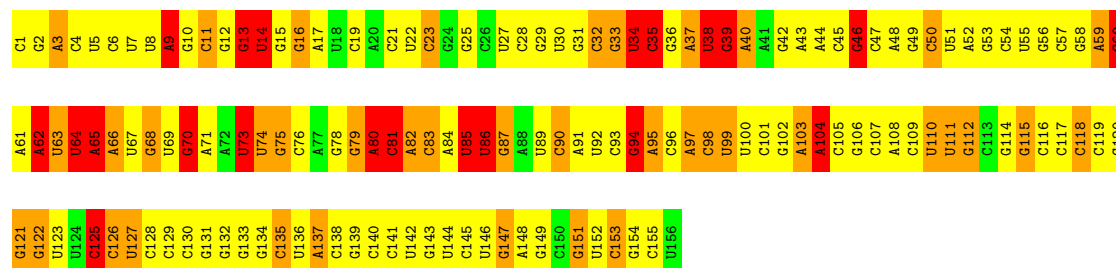
- Molecule 2: 5S ribosomal RNA

Chain 7: 



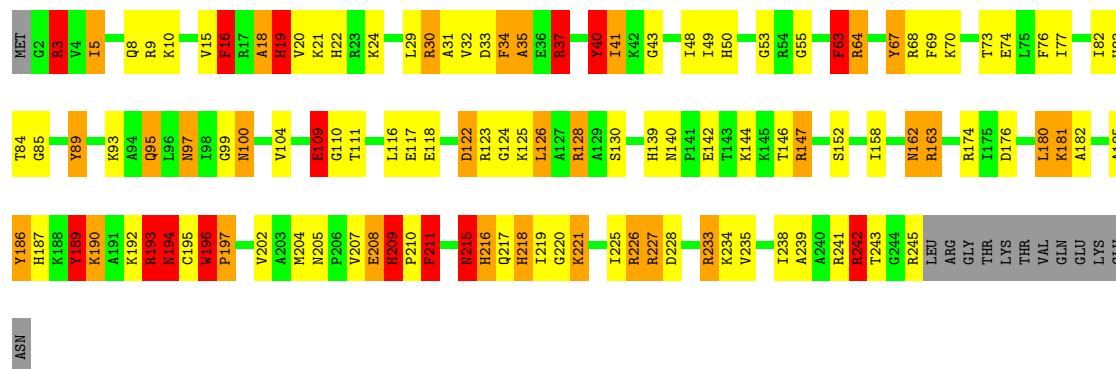
- Molecule 3: 5.8S ribosomal RNA

Chain 8: 



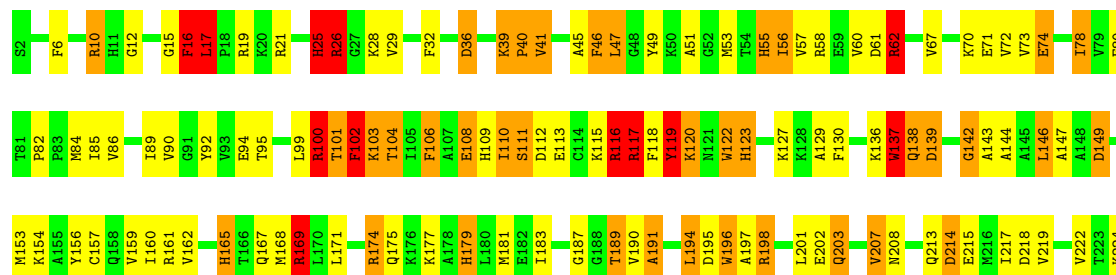
- Molecule 4: Ribosomal protein uL2

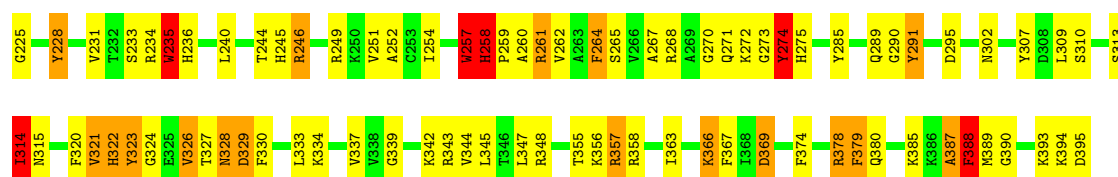
Chain A: 



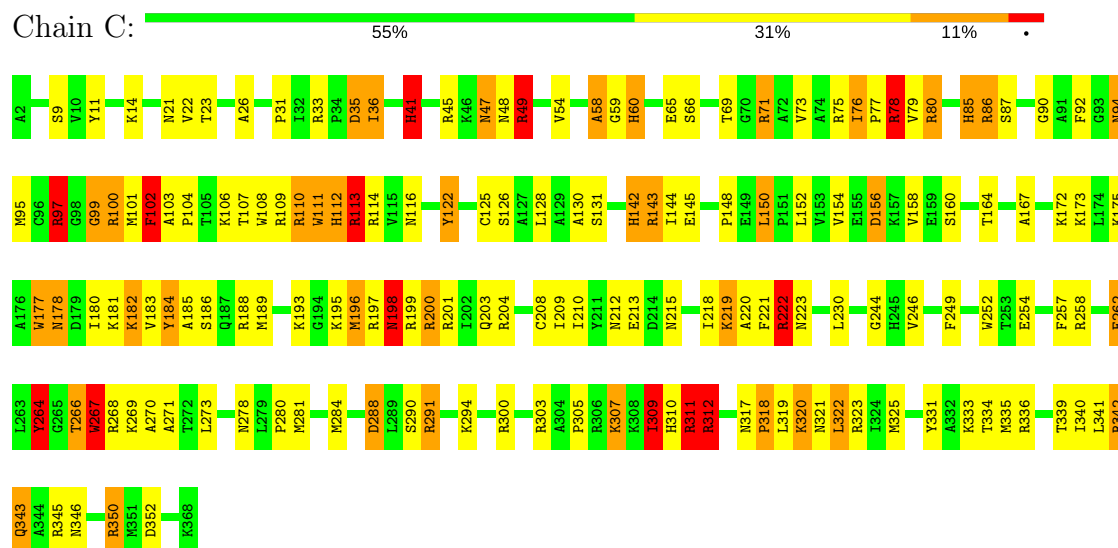
- Molecule 5: Ribosomal protein uL3

Chain B: 

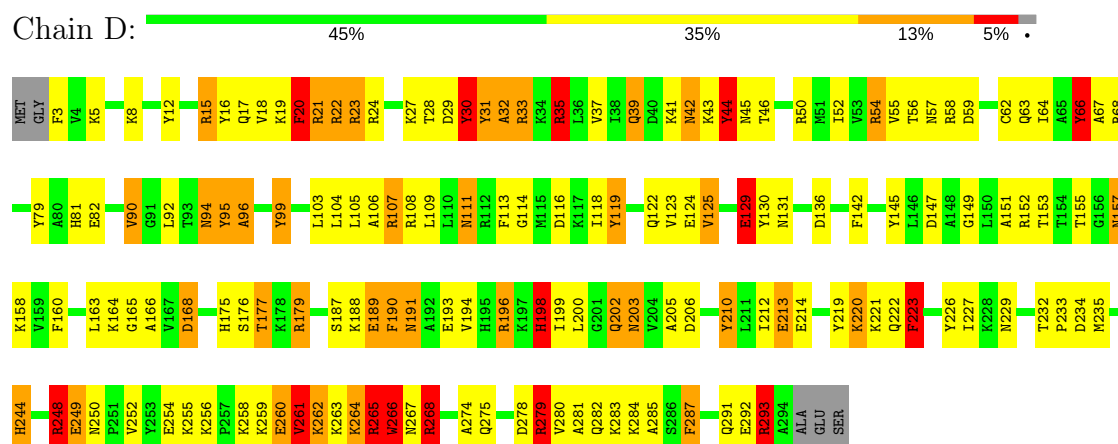




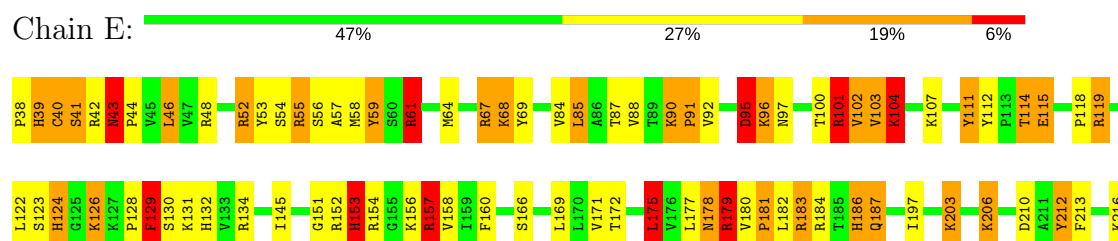
### • Molecule 6: Ribosomal protein uL4



### • Molecule 7: Ribosomal protein uL18



### • Molecule 8: Ribosomal protein eL6

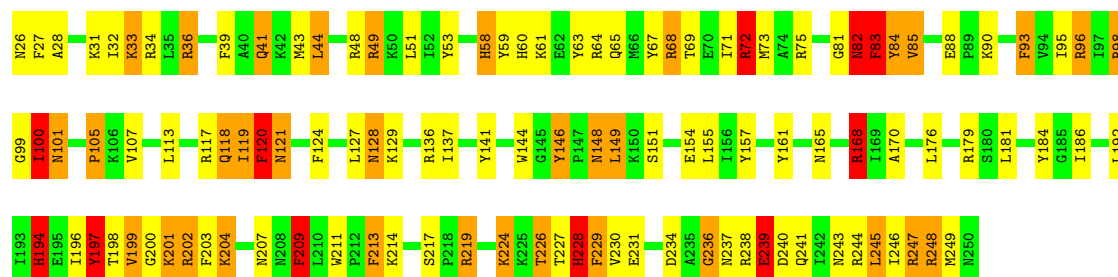






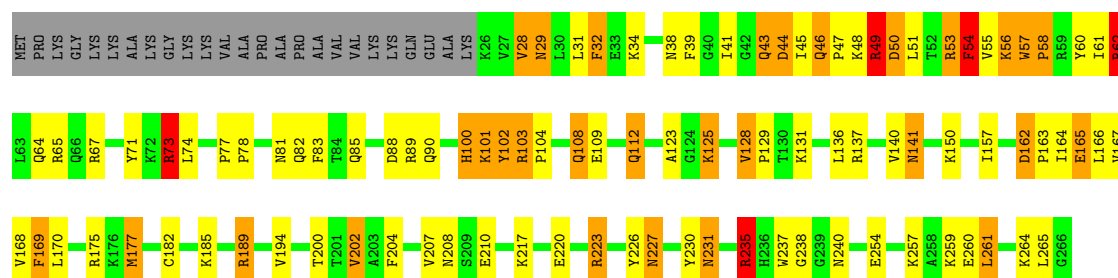
• Molecule 9: Ribosomal protein uL30

Chain F: 49% 31% 15% 5%



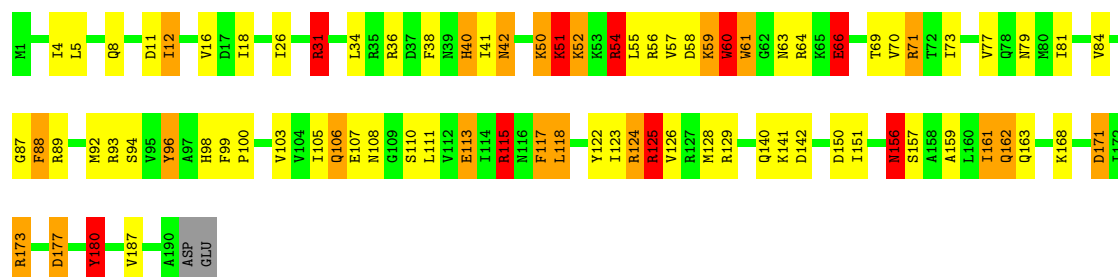
• Molecule 10: Ribosomal protein eL8

Chain G: 53% 24% 11% 9%



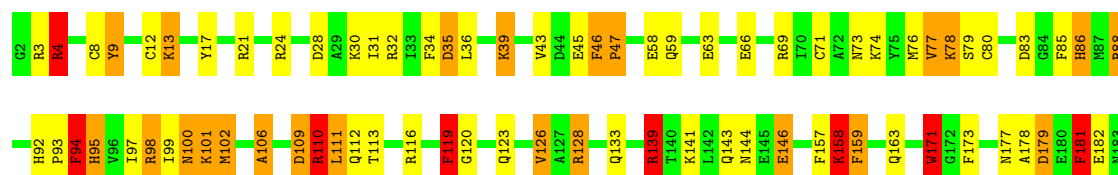
• Molecule 11: Ribosomal protein uL6

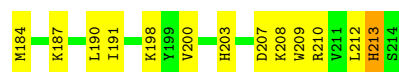
Chain H: 56% 28% 10% 5%



• Molecule 12: Ribosomal protein uL16

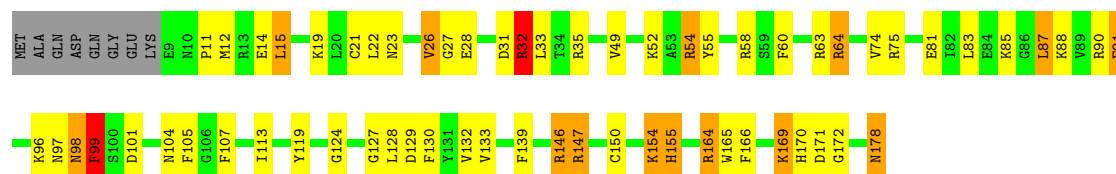
Chain I: 58% 27% 11%





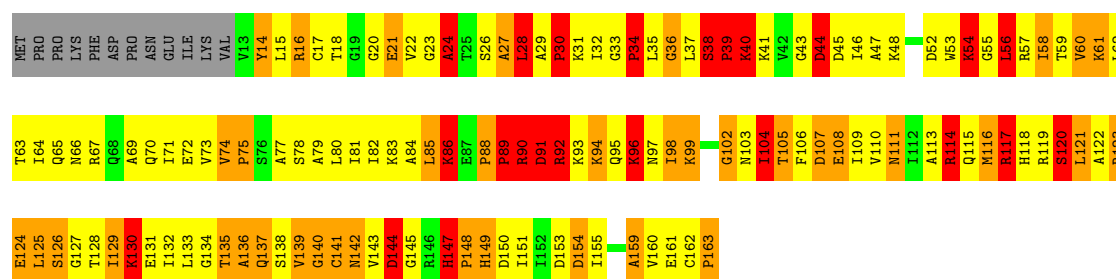
• Molecule 13: Ribosomal protein uL5

Chain J: 60% 26% 8%



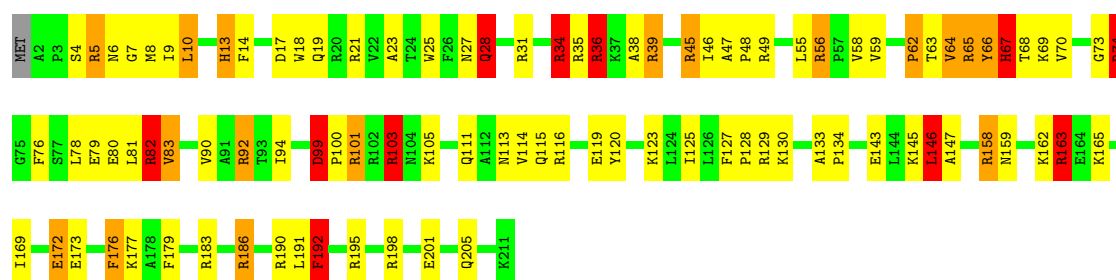
• Molecule 14: Ribosomal protein uL11

Chain K: 11% 44% 24% 14% 7%



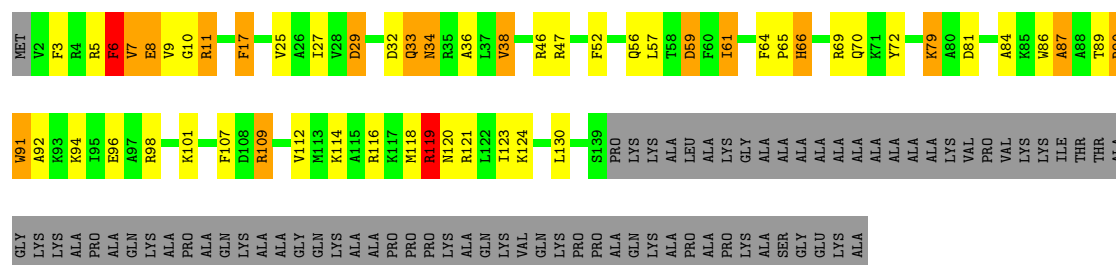
• Molecule 15: Ribosomal protein eL13

Chain L: 54% 33% 8% 5%

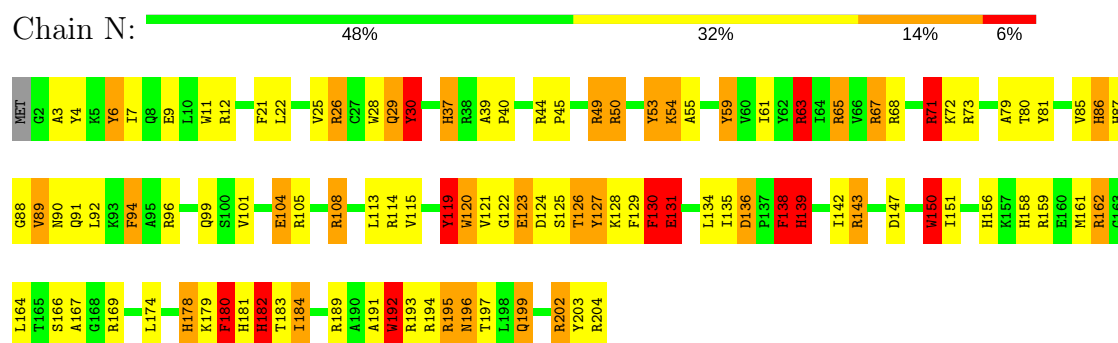


• Molecule 16: Ribosomal protein eL14

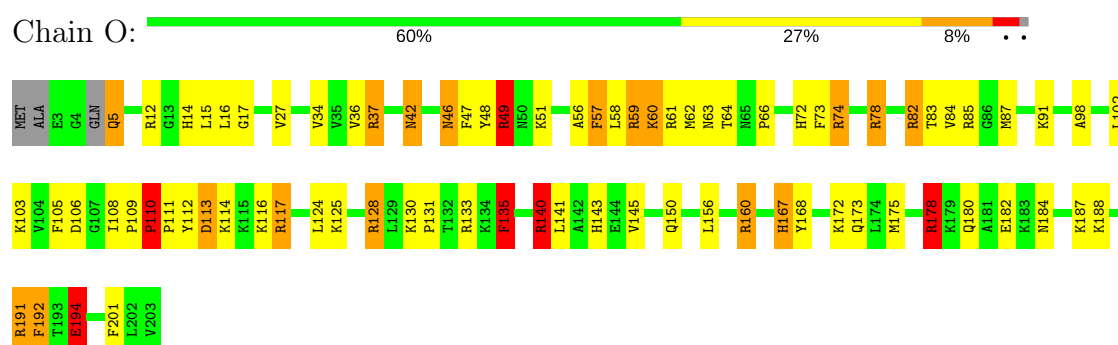
Chain M: 39% 17% 8% 35%



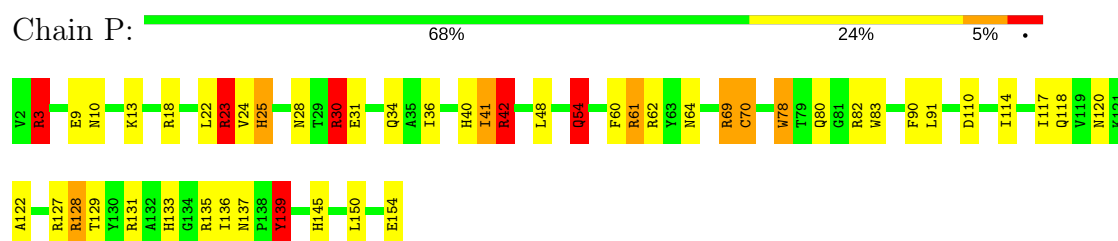
- Molecule 17: Ribosomal protein eL15



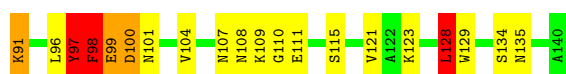
- Molecule 18: Ribosomal protein uL13



- Molecule 19: Ribosomal protein uL22

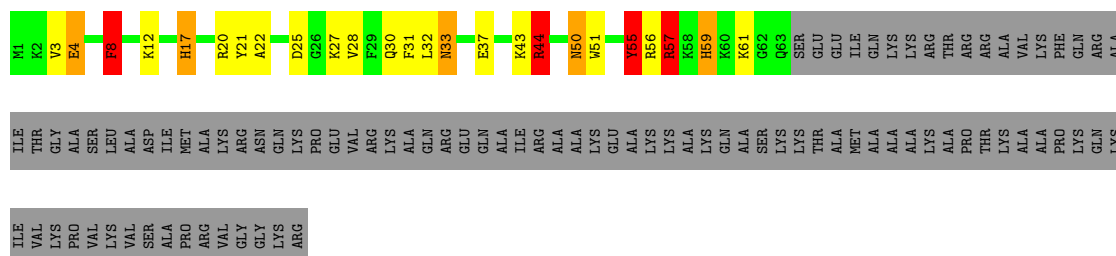






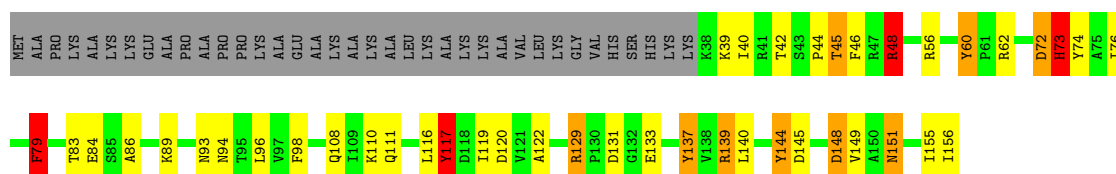
• Molecule 26: Ribosomal protein eL24

Chain W: 24% 10% 60%



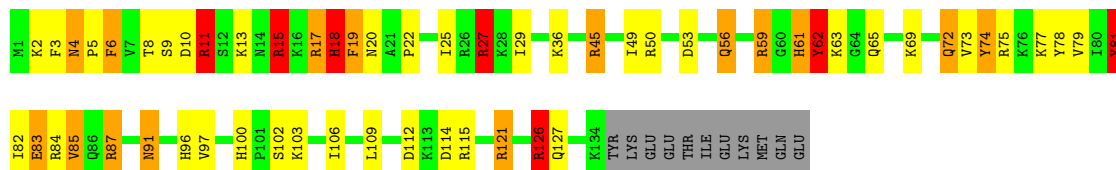
• Molecule 27: Ribosomal protein uL23

Chain X: 48% 20% 6% 24%



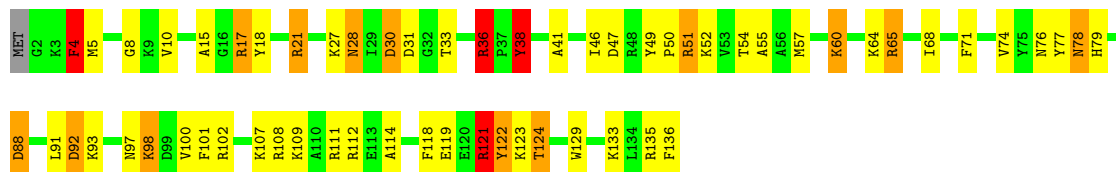
• Molecule 28: Ribosomal protein uL24

Chain Y: 52% 25% 10% 5% 8%



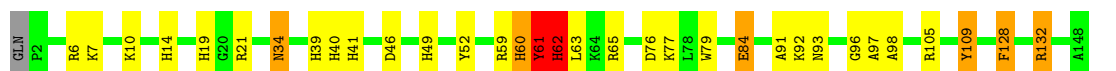
• Molecule 29: Ribosomal protein eL27

Chain Z: 55% 32% 10%

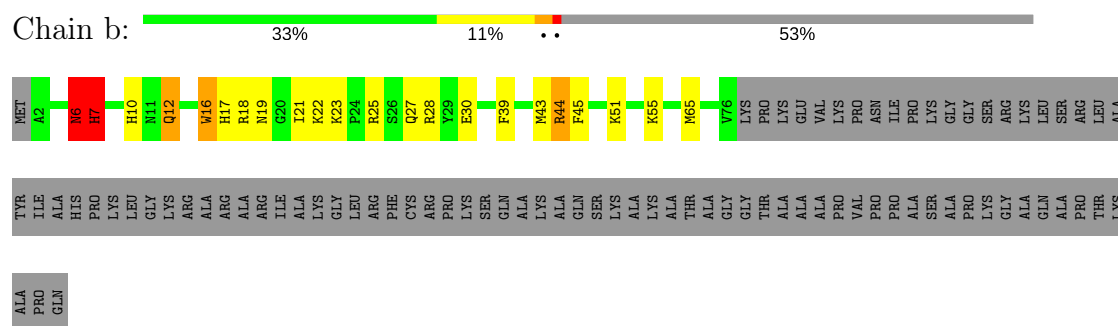


• Molecule 30: Ribosomal protein uL15

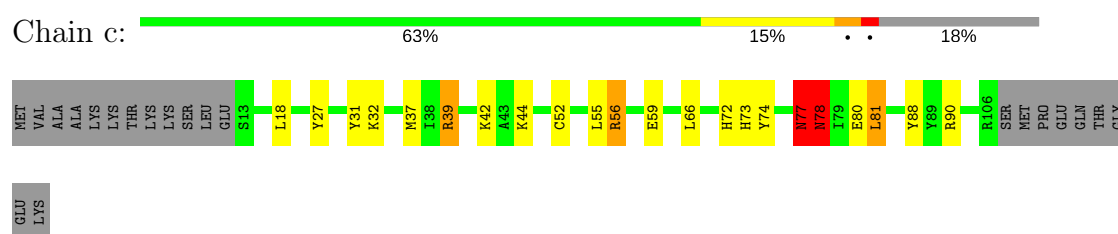
Chain a: 77% 17%



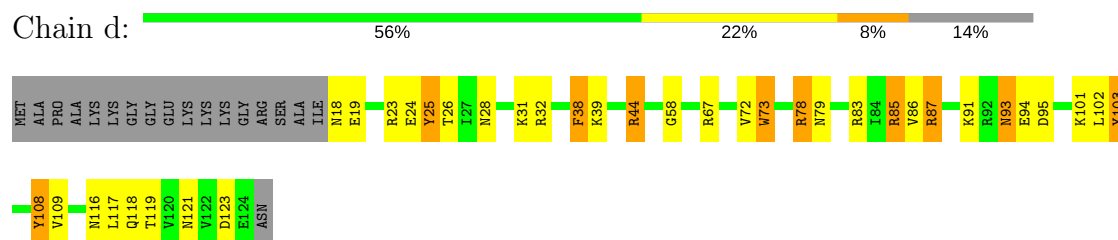
- Molecule 31: Ribosomal protein eL29



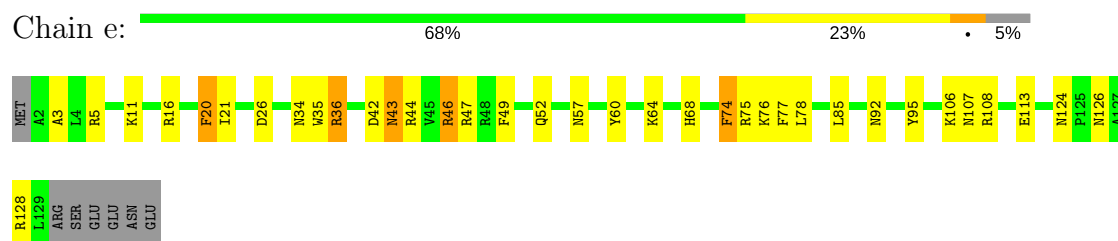
- Molecule 32: Ribosomal protein eL30



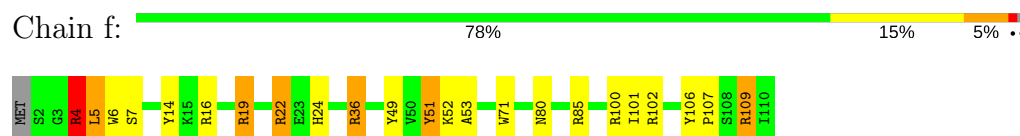
- Molecule 33: Ribosomal protein eL31




- Molecule 34: Ribosomal protein eL32



- Molecule 35: Ribosomal protein eL33




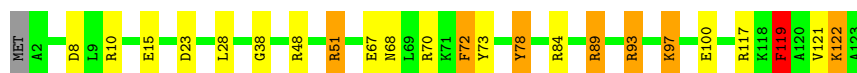
- Molecule 36: Ribosomal protein eL34

Chain g:  77% 19% . .



- Molecule 37: Ribosomal protein uL29

Chain h:  80% 12% 6% . .



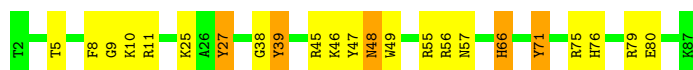
- Molecule 38: Ribosomal protein eL36

Chain i:  76% 17% . .



- Molecule 39: Ribosomal protein eL37

Chain j:  73% 21% 6%



- Molecule 40: Ribosomal protein eL38

Chain k:  71% 27% .



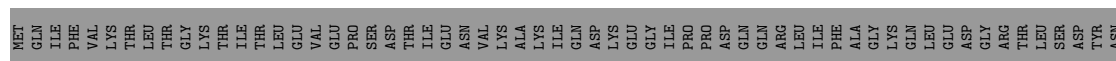
- Molecule 41: Ribosomal protein eL39

Chain l:  76% 18% . .



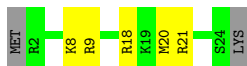
- Molecule 42: Ribosomal protein eL40

Chain m:  30% 10% . 59%



- Molecule 43: Ribosomal protein eL41

Chain n: 




- Molecule 44: Ribosomal protein eL42

Chain o: 



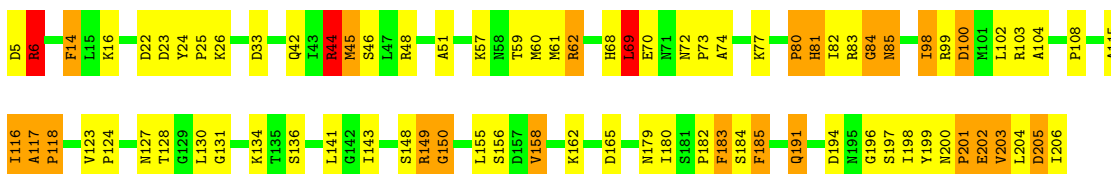
- Molecule 45: Ribosomal protein eL43

Chain p: 



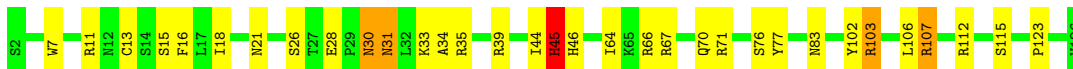
- Molecule 46: Ribosomal protein uL10

Chain q: 

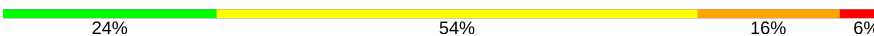


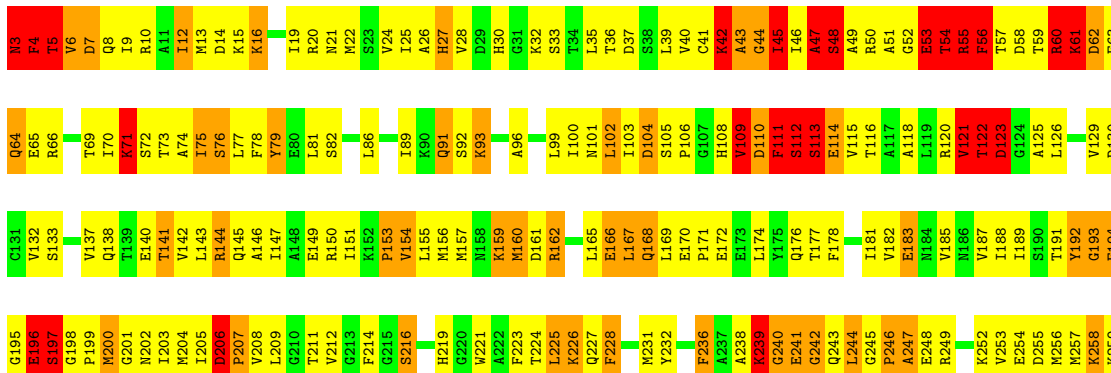
- Molecule 47: Ribosomal protein eL28

Chain r: 

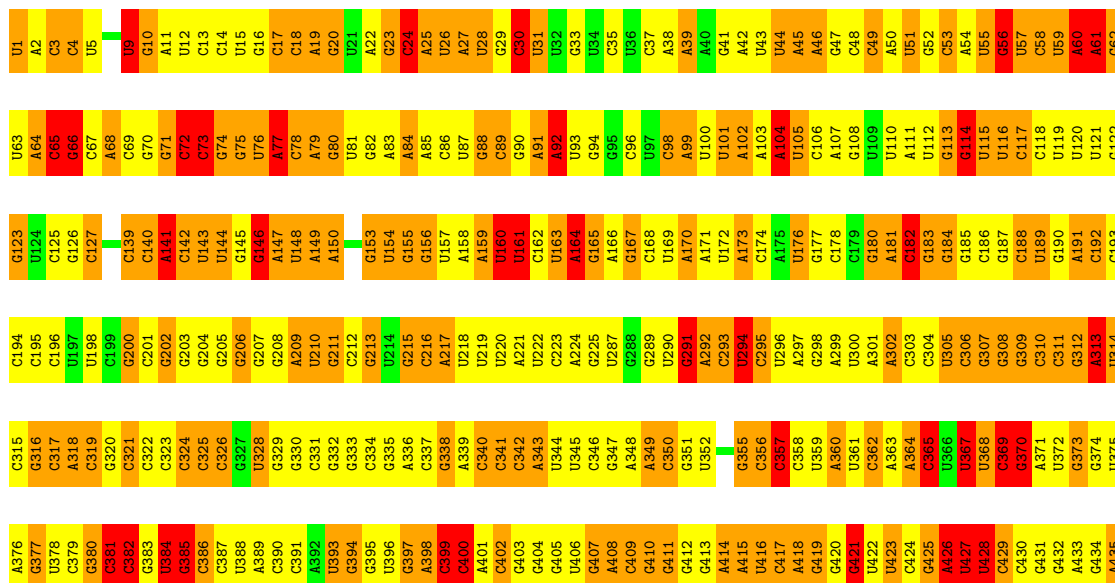


- Molecule 48: Eukaryotic elongation factor 2

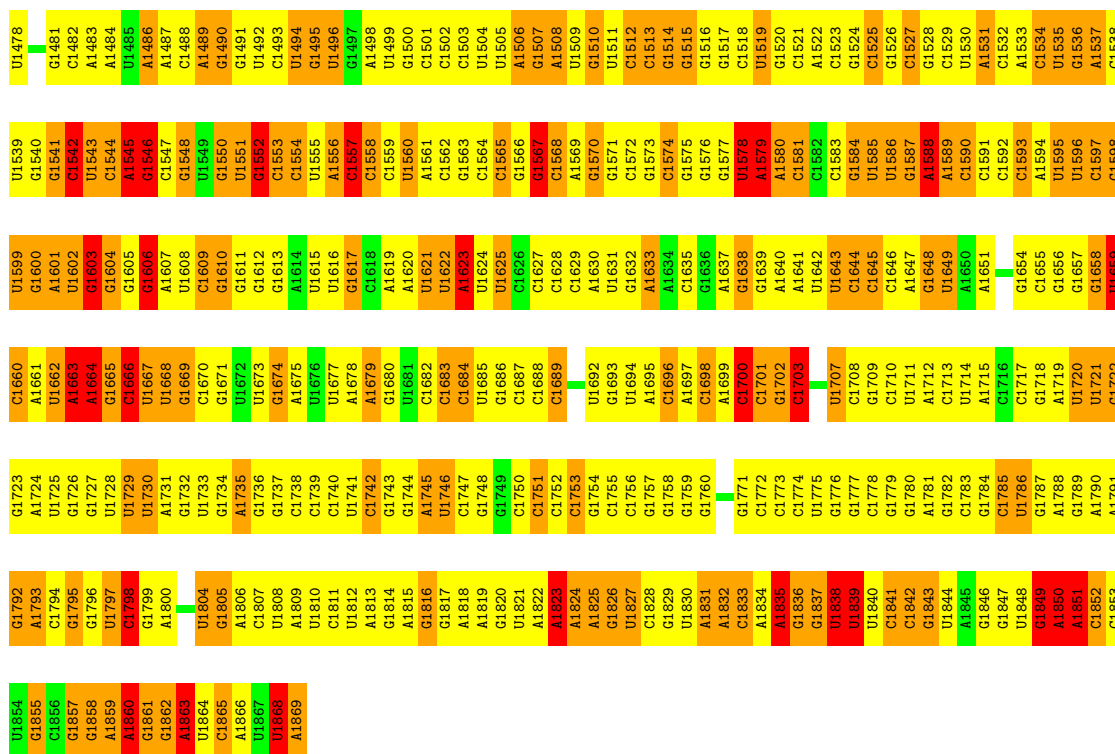
Chain 4: 



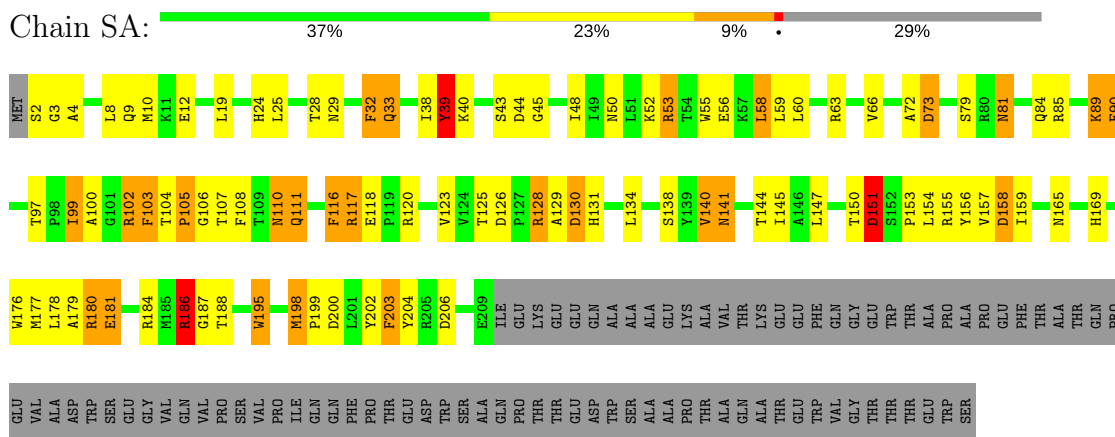




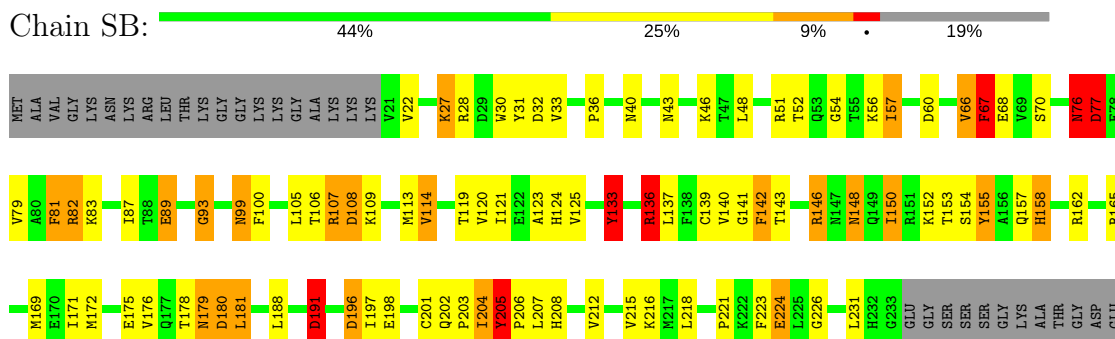
C1416	C1352	A1291	C1231	C1109	A1049	A987	C927	G867	U806	A679	A619	U557	C497	G436
C1417	A1353	C1292	U1232	G1110	A1050	C988	G928	G868	G807		G620	U558	C498	G437
C1418	G1354	A1293	G1233	U1111	G1051	C989	G929	A869	A808	U682	G621	G559	C499	G438
C1419	G1355	A1173	C1234	U1112	A1052	A990	G930	A870	A809		G622	A860	A500	A439
G1420	G1356	U1295	G1235	A1113	C1053	G991	C931	U871	A810	G684	G623	G561	C501	C440
G1421	A1357	U1296	G1236	U1114	G1054	A992	G932	A872	A811	A685	G624	U562	C502	C441
G1422	U1358	U1297	C1237	U1115	A1055	G993	G933	G873	A812	U686	G625	G563	C503	C442
C1423		G1298	U1238	C1116	U1056	C994	G934	G874	A813	C687	G626	G564	G504	U443
C1424	U1362	A1299	U1239	C1117	C1057	G995	G935	A875	U814		U627	G505	G504	U444
G1425	C1363	U1300	A1240	C1118	A1058	A996	G936	C976	U815	U688	A628	G506	G506	A445
G1426	U1364	A1301	C1180	A1119	G1059	A997	C937	C977	A816	U689	A629	G507	G507	A446
C1427	G1365	G1302	U1242	U1120	A1060	A998	U939	G878	G817	G691	U630	A508	A508	A447
G1428	C1366	C1303	U1243	G1121	U1061	G999	U939	G879	A818	G692	U631	G509	G509	A448
G1429	U1367	U1304	U1244	A1122	A1062	C1000	U940	G880	G819	A693	C632	G510	G510	A449
C1430	U1368	C1305	G1245	C1123	C1063	A1001	C941	G881	U820		C633	U511	U511	C450
G1431	U1369	U1306	A1246	C1124	C1064	U1002	G942	U882	G821	C695	C634	A512	A512	G451
G1432	A1370	U1307	C1247	C1125	G1065	U1003	U943	G883	U822	G696	G635	G513	G513	G452
C1433	U1371	U1308	U1248	G1126	U1066	U1004	A944	C884	U823	G697	G636	U514	U514	C453
C1434	U1372	C1309	U1249	C1127	C1067	G1005	U945	U885	C824	G698	U637	G515	G515	U454
C1435	C1373	U1310	A1250	C1128	G1068	C1006	U946	A886	A825	C730	C638	U516	U516	A455
G1436	C1374	A1251	A1251	G1129	U1069	C1007	U947	U887	A826	G731	C639	C517	C517	C456
C1437	G1375	C1312	C1252	G1130	U1070	U1008	C948	U888	A827	U732	A640	C579	G518	C457
A1438	A1376	A1313	A1253	G1131	G1071	U1009	G949	U889	G828	C733	A641	U580	A519	A458
A1439	U1377	U1314	C1254	C1132	U1072	C950	C950	U890	C829	C734	U642	U581	A520	C459
C1440	A1378	U1315	G1255	A1133	U1073	U1013	C951	G891	A830	C735	A643	C582	A521	A460
U1441	A1379	C1316	G1256	G1134	C1074	G1014	G952	U892	G831	C736	G644	C583	A522	U461
C1442	C1380	C1317	G1257	C1135	C1075	U1015	C953	U893	G832		C645	G584	A523	C462
C1443	G1381	G1318	A1258	U1136	G1076	U1016	U954	G894	C833	G737	C646	C585	U524	C463
A1446	A1382	U1319	A1259	U1137	A1077	A955	U955	G895	C834	C739	U647	A525	A525	A464
G1447	C1383	G1320	A1260	C1138	C1078	U1018	G956	U896	C835	G744	A648	A526	A526	A465
A1448	G1384	G1321	C1261	U1139	C1079	C1019	A957	U897	G836	C745	U649	C527	C527	G466
G1449	C1385	G1322	C1262	G1140	A1080	A1020	C958	U898	A837	C746	A650	A528	A528	G467
G1450	A1386	U1323	U1263	G1141	U1081	U1021	G959	U899	G838	U747	U651	U591	A529	A468
G1451	G1387	G1324	C1264	G1142	A1082	U1022	U960	C900	C839	C748	U652	C592	U530	A469
A1452	A1388	G1325	A1265	A1143	A1083	A1023	G961	G901	C840	U749	A653	C593	A531	G470
U1452		U1326	C1266	A1144	A1084	A1024	A962	G902	G841	C750	A654	A594	C532	G471
C1453	U1327	G1327	C1267	A1145	C1085	U1025	A963	A903	C842	G751	A655	U595	A533	C472
A1454	G1393	G1330	G1268	C1146	G1086	C1026	A964	A904	C843	G752	G656	U596	G534	A473
G1455	C1394	C1331	C1269	C1147	A1087	A1027	U965	C905	U844	C753	U657	G597	G535	G474
G1456	C1395	G1210	G1270	A1148	U1088	A1028	U966	U906	G845	C785	U658	G598	A536	C475
U1457	A1396	G1211	C1271	A1149	C1089	G1029	C967	G907	G846	C786	G659	A599	C537	A476
G1458	U1397	G1212	C1272	A1150	C1090	A1030	U968	A908	A847	G787	C660	G600	U638	G477
G1459	G1398	C1213	G1273	G1151	C1091	A1031	U969	G909	U848	G788	U661	G601	C539	G478
C1460	C1399	A1214	U1274	U1152	G1092	C1032	G970	G910	A849	G789	G662	G602	U540	C479
G1461	U1400	C1336	G1275	C1153	A1093	G1033	G971	C911	C850	C790	C663	C603	U541	G480
U1462	A1401	C1337	A1276	U1154	C1094	A1034	A972	C912	C851	C791	A664	A604	U542	C481
U1463	A1402	G1338	C1277	U1155	U1095	A1035	C973	A913	G852	C792	G665	A605	C543	G482
C1464	C1403	U1339	A1278	U1156	G1096	A1036	C974	U914	C853	G793	U666	G606	G544	C483
A1465	U1404	U1340	C1279	G1157	G1097	G1037	G975	G915	A854	A794	U667	U607	A545	A484
G1466	A1405	C1341	G1280	G1158	C1098	U1038	G976	A916	G855	G795	A668	C608	G546	
C1467	G1406	U1342	G1281	G1159	G1099	C1039	C977	U917	C856	C796	A669	U609	G547	U487
C1468	U1407	A1343	A1282	U1160	A1100	G1040	C978	U918	U857	C797	A670	G610	C548	U488
U1469	U1408	A1344	C1283	U1161	U1101	G1041	C979	A919	A858	A798	A671	G611	C549	A489
C1470	A1409	G1345	A1284	G1162	G1102	A1042	A980	A920	G859	U799	A672	U612	C550	C490
C1471	C1410	U1346	G1285	C1163	G1103	G1043	A981	G921	G860	U800	G673	G613	U551	C491
G1472	G1411	U1347	G1286	G1164	G1104	G1044	G982	A922	A861	U801	G674	C514	G552	C492
C1473	C1412	A1287	A1287	G1165	G1105	U1045	A983	G923	A862	A802	U675	C515	U553	A493
A1474	G1413	U1288	U1288	G1166	C1106	U1046	C984	G924	A863	C903	C676	A616	A554	C494
G1475	A1414	G1229	G1167	G1167	G1107	U1047	G985	G925	A864	U804	G677	G617	A555	U495
U1477	C1415	G1351	G1290	C1168	G1108	G1048	G986	A926		U805	U678	C618	U556	C496



- Molecule 50: Ribosomal protein uS2

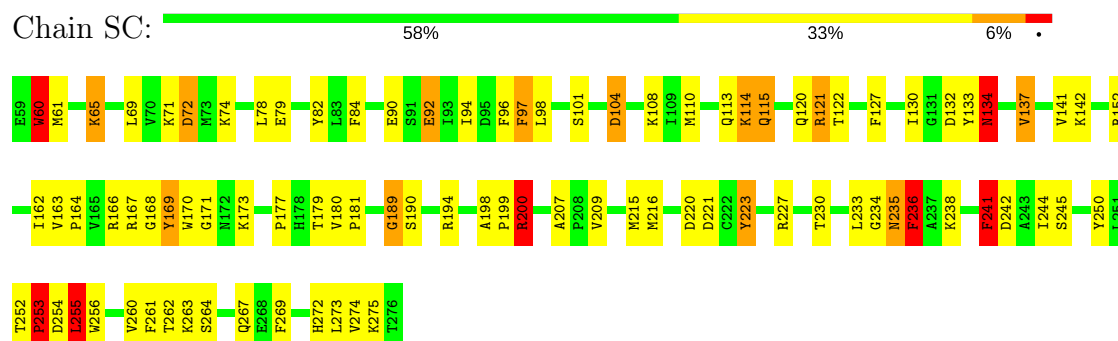


- Molecule 51: Ribosomal protein eS1

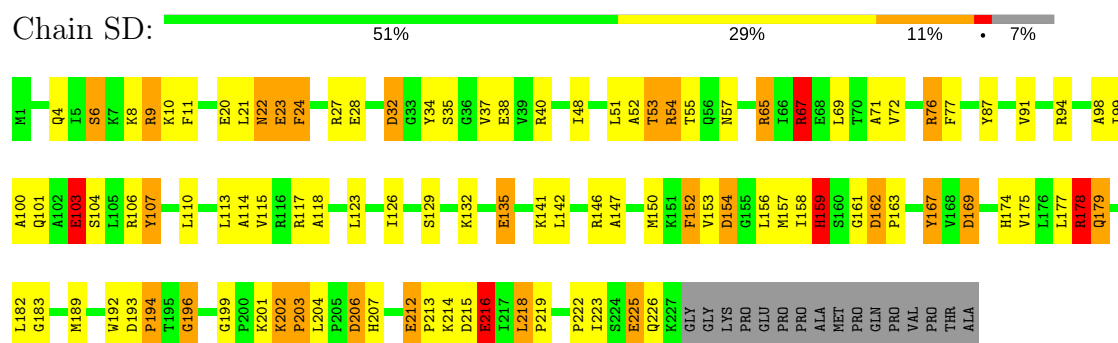


THR  
GLY  
ALA  
LYS  
VAL  
GLU  
ARG  
ALA  
ASP  
GLY  
TYR  
GLU  
PRO  
VAL  
GLN  
GLU  
SER  
VAL

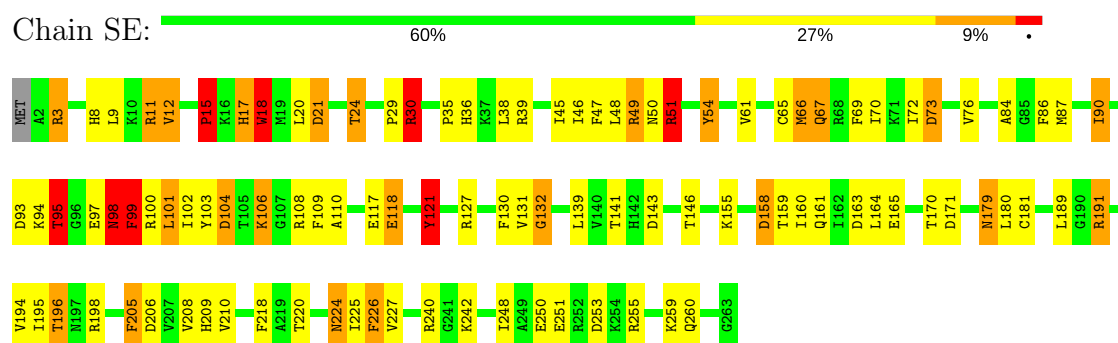
• Molecule 52: Ribosomal protein uS5



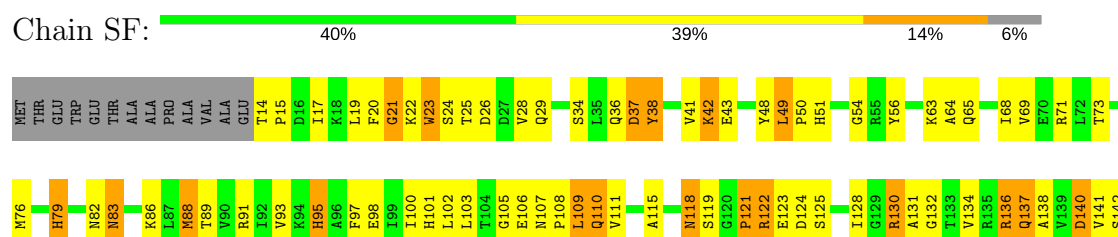
• Molecule 53: Ribosomal protein uS3

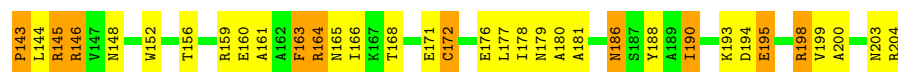


• Molecule 54: Ribosomal protein eS4



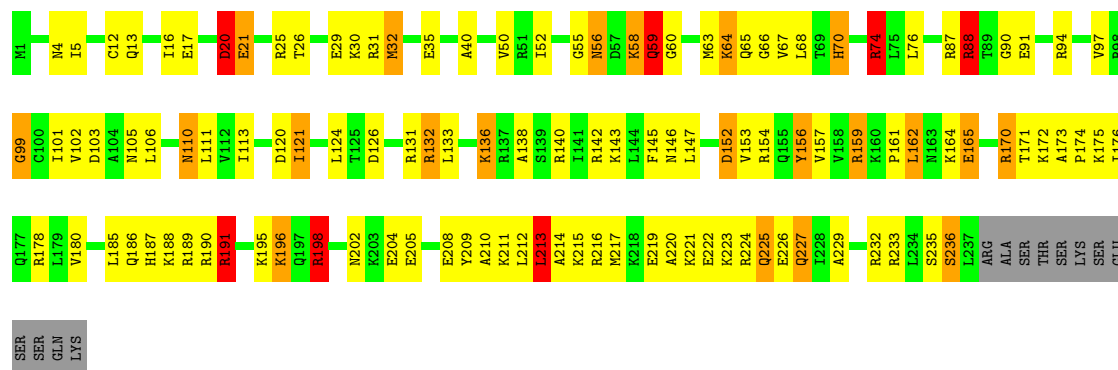
• Molecule 55: Ribosomal protein uS7





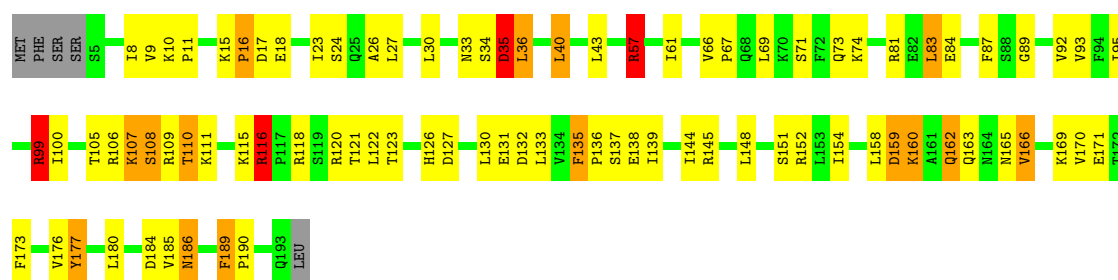
• Molecule 56: Ribosomal protein eS6

Chain SG: 48% 36% 8% 5%



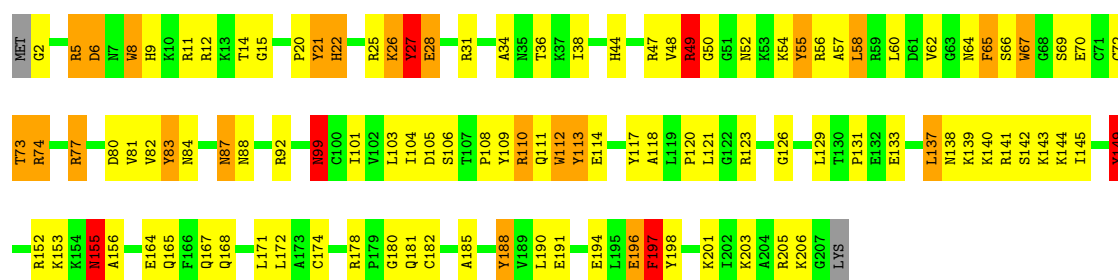
• Molecule 57: Ribosomal protein eS7

Chain SH: 53% 35% 8% ..



• Molecule 58: Ribosomal protein eS8

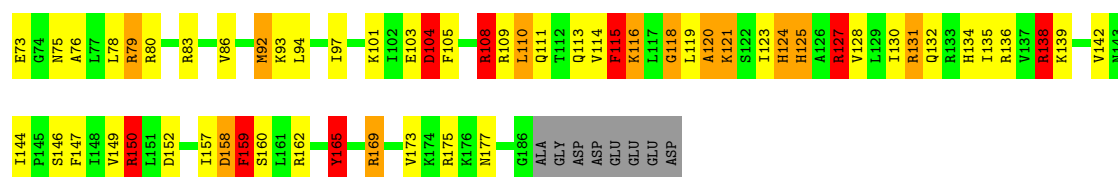
Chain SI: 46% 39% 11% ..



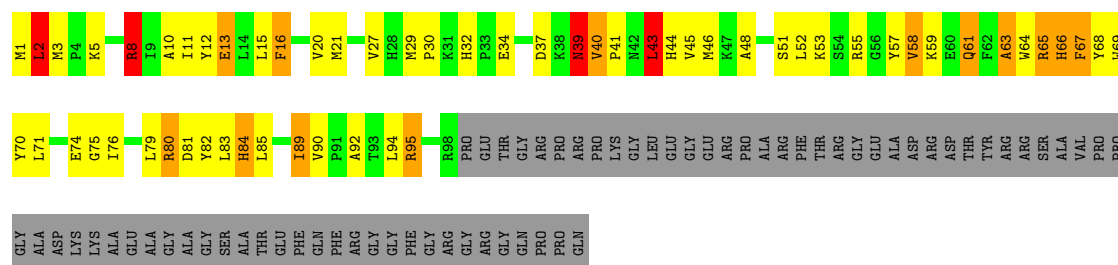
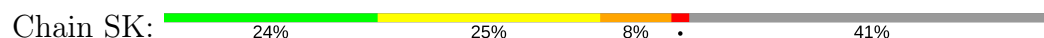
• Molecule 59: Ribosomal protein uS4

Chain SJ: 45% 33% 10% 7% 5%

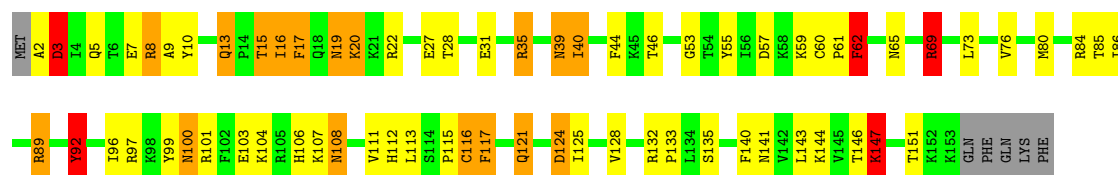




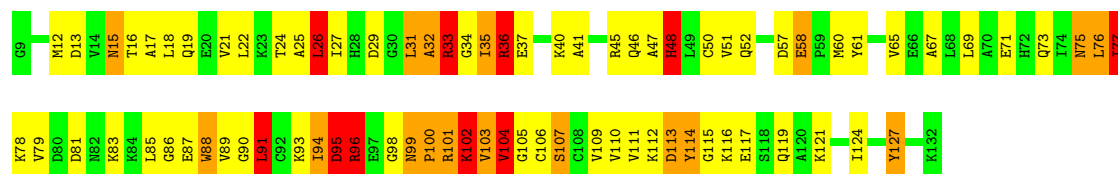
• Molecule 60: Ribosomal protein eS10



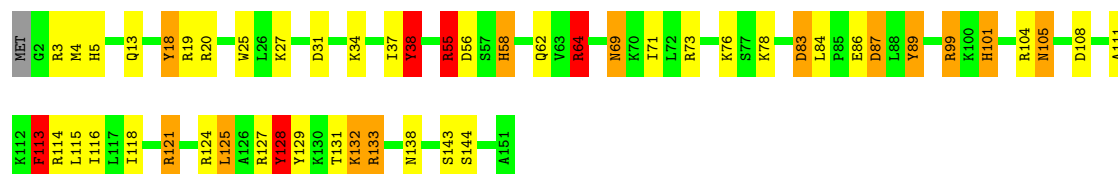
• Molecule 61: Ribosomal protein uS17



• Molecule 62: Ribosomal protein eS12



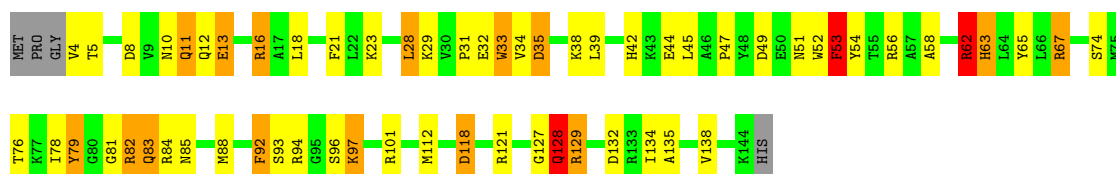
• Molecule 63: Ribosomal protein uS15



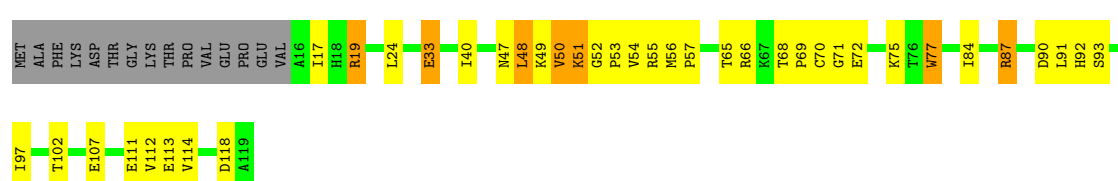
• Molecule 64: Ribosomal protein uS11







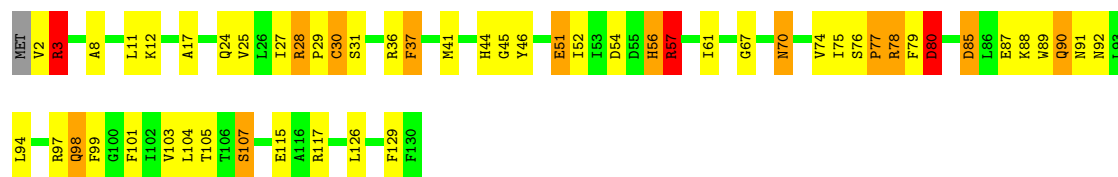
• Molecule 70: Ribosomal protein uS10



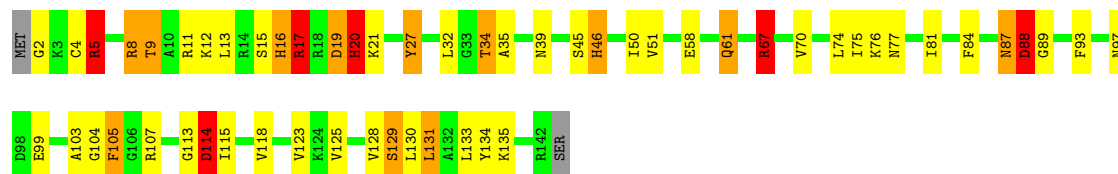
• Molecule 71: Ribosomal protein eS21



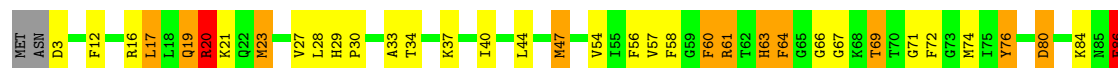
• Molecule 72: Ribosomal protein uS8



• Molecule 73: Ribosomal protein uS12



• Molecule 74: Ribosomal protein eS24

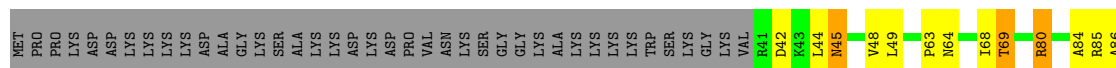






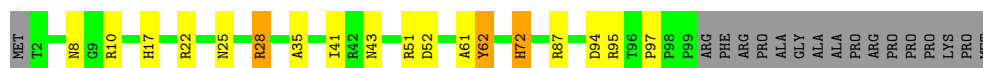
- Molecule 75: Ribosomal protein es25

Chain SZ: 36% 18% 6% 40%



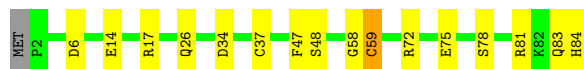
- Molecule 76: Ribosomal protein eS26

Chain Sa: 70% 13% 15%



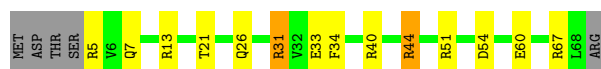
- Molecule 77: Ribosomal protein eS27

Chain Sb: 80% 18% ..



- Molecule 78: Ribosomal protein eS28

Chain Sc: 72% 17% 7%



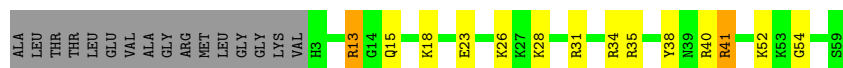
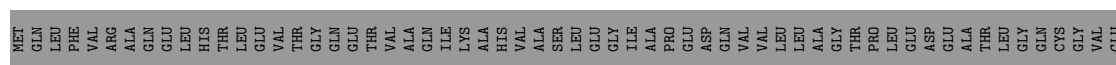
- Molecule 79: Ribosomal protein uS14

Chain Sd: 71% 18% 7%



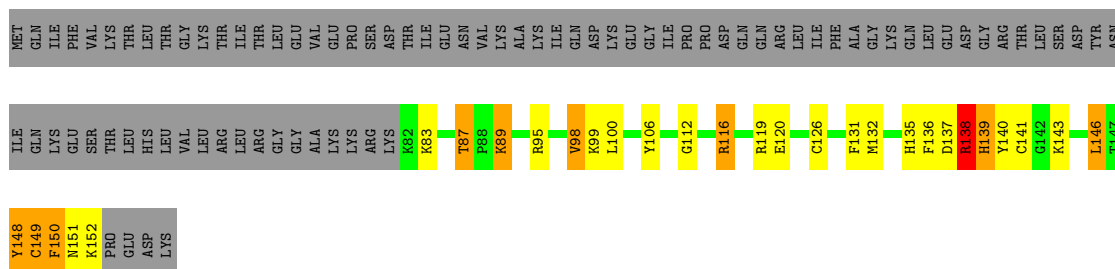
- Molecule 80: Ribosomal protein eS30

Chain Se: 32% 9% 57%



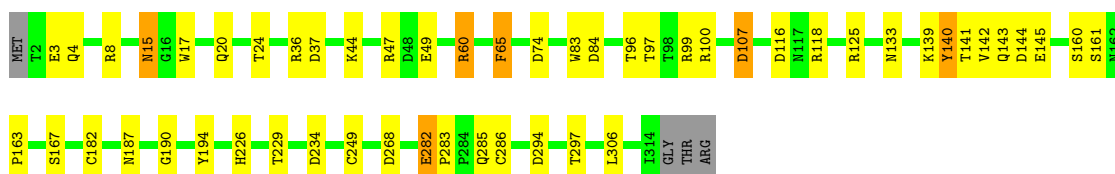
- Molecule 81: Ribosomal protein eS31

Chain Sf:



- Molecule 82: Ribosomal protein RACK1

Chain Sg:



## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	36667	Depositor
Resolution determination method	FSC 0.143	Depositor
CTF correction method	Each particle	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	27	Depositor
Minimum defocus (nm)	2500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	104478	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

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	$\# Z  > 2$	RMSZ	$\# Z  > 2$
1	5	0.64	75/87792 (0.1%)	1.12	729/136945 (0.5%)
10	G	0.76	4/1966 (0.2%)	1.09	14/2645 (0.5%)
11	H	0.77	3/1537 (0.2%)	1.17	10/2066 (0.5%)
12	I	0.66	1/1753 (0.1%)	1.11	12/2343 (0.5%)
13	J	0.63	1/1382 (0.1%)	1.04	12/1849 (0.6%)
14	K	1.04	11/1154 (1.0%)	1.78	54/1555 (3.5%)
15	L	0.70	2/1734 (0.1%)	1.12	15/2318 (0.6%)
16	M	0.76	2/1152 (0.2%)	1.11	5/1539 (0.3%)
17	N	0.84	4/1746 (0.2%)	1.33	23/2338 (1.0%)
18	O	0.72	3/1684 (0.2%)	1.10	12/2251 (0.5%)
19	P	0.74	2/1268 (0.2%)	1.10	9/1701 (0.5%)
2	7	0.54	1/2858 (0.0%)	0.96	9/4455 (0.2%)
20	Q	0.69	0/1530	1.35	31/2041 (1.5%)
21	R	0.79	3/1524 (0.2%)	1.27	20/2013 (1.0%)
22	S	0.95	8/1493 (0.5%)	1.30	19/2002 (0.9%)
23	T	0.67	1/1326 (0.1%)	1.04	7/1770 (0.4%)
24	U	0.63	1/822 (0.1%)	1.03	3/1103 (0.3%)
25	V	0.89	4/993 (0.4%)	1.11	7/1332 (0.5%)
26	W	0.71	0/541	1.23	5/720 (0.7%)
27	X	0.64	0/993	1.09	10/1334 (0.7%)
28	Y	0.72	0/1132	1.24	19/1504 (1.3%)
29	Z	0.63	0/1130	1.11	10/1507 (0.7%)
3	8	0.68	3/3701 (0.1%)	1.19	42/5766 (0.7%)
30	a	0.93	6/1192 (0.5%)	1.37	17/1591 (1.1%)
31	b	0.88	2/620 (0.3%)	1.17	5/819 (0.6%)
32	c	0.70	0/742	1.14	5/996 (0.5%)
33	d	0.84	3/903 (0.3%)	1.37	16/1216 (1.3%)
34	e	0.90	3/1071 (0.3%)	1.23	15/1429 (1.0%)
35	f	1.01	2/895 (0.2%)	1.34	17/1198 (1.4%)
36	g	0.65	0/916	1.08	5/1220 (0.4%)
37	h	0.63	0/1023	1.21	14/1350 (1.0%)
38	i	0.63	0/843	1.20	8/1115 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
39	j	0.97	1/721 (0.1%)	1.43	11/953 (1.2%)
4	A	0.80	3/1906 (0.2%)	1.26	21/2556 (0.8%)
40	k	0.59	0/575	0.97	1/761 (0.1%)
41	l	0.70	0/454	1.14	4/599 (0.7%)
42	m	0.55	0/435	0.95	1/575 (0.2%)
43	n	0.49	0/223	1.01	0/284
44	o	0.64	0/864	1.27	8/1140 (0.7%)
45	p	0.64	1/718 (0.1%)	1.01	3/953 (0.3%)
46	q	0.81	7/1580 (0.4%)	1.35	37/2133 (1.7%)
47	r	0.68	0/1017	1.12	8/1365 (0.6%)
48	4	0.99	20/6804 (0.3%)	1.41	93/9189 (1.0%)
49	S2	0.65	37/41243 (0.1%)	1.14	330/64257 (0.5%)
5	B	0.81	8/3214 (0.2%)	1.16	25/4308 (0.6%)
50	SA	0.94	4/1679 (0.2%)	1.06	6/2283 (0.3%)
51	SB	0.89	6/1753 (0.3%)	1.15	14/2350 (0.6%)
52	SC	0.99	8/1726 (0.5%)	1.11	9/2332 (0.4%)
53	SD	1.39	12/1793 (0.7%)	1.10	9/2414 (0.4%)
54	SE	0.83	8/2118 (0.4%)	0.98	7/2849 (0.2%)
55	SF	0.74	1/1531 (0.1%)	1.08	9/2059 (0.4%)
56	SG	0.97	9/1946 (0.5%)	1.03	9/2590 (0.3%)
57	SH	0.73	2/1544 (0.1%)	1.02	8/2068 (0.4%)
58	SI	0.97	8/1715 (0.5%)	1.12	12/2287 (0.5%)
59	SJ	1.07	12/1550 (0.8%)	1.28	16/2069 (0.8%)
6	C	0.73	3/2973 (0.1%)	1.12	18/3990 (0.5%)
60	SK	0.75	1/851 (0.1%)	1.00	3/1147 (0.3%)
61	SL	0.85	5/1259 (0.4%)	1.09	7/1684 (0.4%)
62	SM	2.22	2/970 (0.2%)	1.21	8/1300 (0.6%)
63	SN	0.82	4/1232 (0.3%)	1.15	10/1656 (0.6%)
64	SO	1.18	7/1029 (0.7%)	1.38	12/1380 (0.9%)
65	SP	1.52	6/816 (0.7%)	1.29	8/1084 (0.7%)
66	SQ	0.72	2/1142 (0.2%)	1.01	8/1528 (0.5%)
67	SR	0.81	5/1060 (0.5%)	1.02	2/1421 (0.1%)
68	SS	0.66	1/1157 (0.1%)	1.18	13/1548 (0.8%)
69	ST	0.67	2/1119 (0.2%)	1.08	7/1499 (0.5%)
7	D	0.73	2/2426 (0.1%)	1.23	26/3252 (0.8%)
70	SU	0.94	4/828 (0.5%)	0.96	1/1112 (0.1%)
71	SV	0.73	0/631	0.97	0/844
72	SW	1.06	6/1051 (0.6%)	1.22	5/1406 (0.4%)
73	SX	0.99	6/1118 (0.5%)	1.12	12/1493 (0.8%)
74	SY	1.63	5/1040 (0.5%)	1.11	9/1382 (0.7%)
75	SZ	0.56	0/604	0.87	0/810
76	Sa	0.81	1/794 (0.1%)	1.25	5/1065 (0.5%)
77	Sb	0.59	0/665	0.90	0/891

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
78	Sc	0.68	0/508	1.13	4/680 (0.6%)
79	Sd	0.79	0/445	1.12	1/589 (0.2%)
8	E	0.73	5/1941 (0.3%)	1.21	20/2601 (0.8%)
80	Se	0.72	1/458 (0.2%)	1.16	5/602 (0.8%)
81	Sf	1.08	6/593 (1.0%)	1.57	12/786 (1.5%)
82	Sg	0.80	11/2493 (0.4%)	0.89	8/3394 (0.2%)
9	F	0.80	2/1905 (0.1%)	1.27	27/2539 (1.1%)
All	All	0.75	379/237633 (0.2%)	1.15	2051/348088 (0.6%)

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	0	154
10	G	0	3
11	H	0	3
12	I	0	4
13	J	0	2
14	K	0	5
15	L	0	5
16	M	0	4
17	N	0	11
18	O	0	3
19	P	0	1
2	7	0	2
20	Q	0	5
21	R	0	6
22	S	0	11
23	T	0	2
24	U	0	2
25	V	0	3
26	W	0	1
27	X	0	1
28	Y	0	4
3	8	0	11
30	a	0	9
31	b	0	1
32	c	0	2
33	d	0	4
34	e	0	4

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Mol	Chain	#Chirality outliers	#Planarity outliers
35	f	0	2
36	g	0	1
37	h	0	3
38	i	0	3
39	j	0	4
4	A	0	6
40	k	0	1
44	o	0	6
45	p	0	1
46	q	0	7
47	r	0	5
48	4	0	40
49	S2	1	66
5	B	0	13
50	SA	0	2
51	SB	0	4
52	SC	0	4
53	SD	0	3
54	SE	0	2
55	SF	0	1
57	SH	0	1
58	SI	0	6
59	SJ	0	2
6	C	0	5
60	SK	0	1
61	SL	0	4
62	SM	0	3
63	SN	0	1
64	SO	0	1
65	SP	0	1
66	SQ	0	1
67	SR	0	2
7	D	0	8
70	SU	0	1
71	SV	0	2
72	SW	0	2
73	SX	0	2
74	SY	0	1
75	SZ	0	1
76	Sa	0	1
77	Sb	0	1
79	Sd	0	2

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Mol	Chain	#Chirality outliers	#Planarity outliers
8	E	0	12
81	Sf	0	4
9	F	0	5
All	All	1	507

All (379) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	SM	58	GLU	CD-OE1	64.43	1.96	1.25
53	SD	216	GLU	CD-OE1	43.67	1.73	1.25
1	5	1823	G	O3'-P	41.55	2.11	1.61
74	SY	86	GLU	CD-OE2	39.60	1.69	1.25
65	SP	21	ASP	CG-OD1	30.90	1.96	1.25
74	SY	86	GLU	CG-CD	22.60	1.85	1.51
56	SG	205	GLU	CD-OE1	21.22	1.49	1.25
64	SO	130	GLU	CD-OE1	17.40	1.44	1.25
72	SW	117	ARG	NE-CZ	16.50	1.54	1.33
10	G	109	GLU	CD-OE2	16.17	1.43	1.25
11	H	66	GLU	CD-OE1	15.81	1.43	1.25
59	SJ	59	GLU	CG-CD	15.74	1.75	1.51
35	f	6	TRP	CB-CG	-15.69	1.22	1.50
48	4	267	ASP	N-CA	15.35	1.77	1.46
54	SE	251	GLU	CD-OE1	14.43	1.41	1.25
50	SA	118	GLU	CG-CD	13.75	1.72	1.51
48	4	267	ASP	CA-C	13.58	1.88	1.52
31	b	16	TRP	CB-CG	-13.52	1.25	1.50
56	SG	205	GLU	CD-OE2	13.45	1.40	1.25
59	SJ	34	GLU	CG-CD	13.17	1.71	1.51
64	SO	130	GLU	CD-OE2	12.85	1.39	1.25
65	SP	31	GLU	CD-OE2	12.79	1.39	1.25
50	SA	151	ASP	CB-CG	12.77	1.78	1.51
65	SP	31	GLU	CD-OE1	12.46	1.39	1.25
50	SA	118	GLU	CD-OE2	12.23	1.39	1.25
64	SO	104	ARG	CZ-NH1	12.19	1.48	1.33
70	SU	33	GLU	CD-OE1	12.13	1.39	1.25
21	R	95	TRP	CB-CG	-12.07	1.28	1.50
25	V	97	TYR	CB-CG	-11.86	1.33	1.51
57	SH	132	ASP	CG-OD2	11.76	1.52	1.25
48	4	269	ALA	C-N	11.65	1.60	1.34
58	SI	111	GLN	CD-NE2	11.63	1.61	1.32
58	SI	188	TYR	CE1-CZ	11.54	1.53	1.38
14	K	163	PRO	C-O	-11.44	1.00	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	SC	90	GLU	CD-OE1	11.28	1.38	1.25
73	SX	58	GLU	CD-OE1	11.16	1.38	1.25
51	SB	198	GLU	CG-CD	11.03	1.68	1.51
54	SE	250	GLU	CD-OE2	10.89	1.37	1.25
74	SY	118	ARG	CZ-NH1	10.62	1.46	1.33
49	S2	1433	C	O3'-P	10.60	1.73	1.61
82	Sg	107	ASP	CB-CG	10.42	1.73	1.51
58	SI	188	TYR	CG-CD1	10.38	1.52	1.39
82	Sg	60	ARG	CZ-NH1	10.31	1.46	1.33
34	e	35	TRP	CB-CG	-10.24	1.31	1.50
73	SX	39	ASN	CG-ND2	10.24	1.58	1.32
64	SO	130	GLU	CG-CD	10.01	1.67	1.51
74	SY	80	ASP	CB-CG	9.94	1.72	1.51
10	G	54	PHE	CB-CG	-9.92	1.34	1.51
70	SU	90	ASP	CB-CG	9.83	1.72	1.51
58	SI	188	TYR	CG-CD2	9.80	1.51	1.39
53	SD	38	GLU	CD-OE2	9.79	1.36	1.25
73	SX	88	ASP	CG-OD2	9.60	1.47	1.25
49	S2	619	A	O3'-P	-9.53	1.49	1.61
53	SD	162	ASP	CG-OD1	9.48	1.47	1.25
58	SI	99	ASN	CG-OD1	9.45	1.44	1.24
52	SC	220	ASP	CG-OD2	9.39	1.47	1.25
52	SC	90	GLU	CG-CD	9.38	1.66	1.51
61	SL	100	ASN	CB-CG	9.36	1.72	1.51
70	SU	113	GLU	CD-OE2	9.35	1.35	1.25
17	N	192	TRP	CB-CG	-9.29	1.33	1.50
65	SP	21	ASP	CB-CG	9.25	1.71	1.51
14	K	114	ARG	CD-NE	9.14	1.61	1.46
52	SC	121	ARG	CZ-NH1	9.08	1.44	1.33
67	SR	87	GLU	CD-OE1	9.02	1.35	1.25
55	SF	130	ARG	CZ-NH1	8.96	1.44	1.33
16	M	6	PHE	CB-CG	-8.92	1.36	1.51
5	B	215	GLU	CD-OE1	8.83	1.35	1.25
59	SJ	64	ASP	CG-OD2	8.81	1.45	1.25
49	S2	1291	A	O3'-P	8.81	1.71	1.61
25	V	97	TYR	CA-CB	8.62	1.73	1.53
54	SE	250	GLU	CD-OE1	8.62	1.35	1.25
48	4	267	ASP	C-N	8.62	1.50	1.34
53	SD	216	GLU	CD-OE2	8.57	1.35	1.25
56	SG	208	GLU	CG-CD	8.48	1.64	1.51
8	E	278	TYR	CA-CB	8.48	1.72	1.53
30	a	109	TYR	CA-CB	8.40	1.72	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	SI	188	TYR	CE2-CZ	8.35	1.49	1.38
1	5	4547	C	O3'-P	8.29	1.71	1.61
61	SL	31	GLU	CD-OE1	8.28	1.34	1.25
81	Sf	120	GLU	CG-CD	8.28	1.64	1.51
59	SJ	158	ASP	CG-OD2	8.26	1.44	1.25
49	S2	1292	C	O3'-P	8.23	1.71	1.61
14	K	130	LYS	CA-CB	8.23	1.72	1.53
22	S	81	TRP	CA-CB	8.09	1.71	1.53
22	S	10	TYR	CB-CG	-8.07	1.39	1.51
53	SD	38	GLU	CG-CD	8.06	1.64	1.51
1	5	45	U	O3'-P	-8.04	1.51	1.61
1	5	3652	A	O3'-P	7.92	1.70	1.61
8	E	278	TYR	CB-CG	-7.87	1.39	1.51
21	R	132	PHE	CB-CG	-7.87	1.38	1.51
53	SD	135	GLU	CD-OE1	7.87	1.34	1.25
53	SD	23	GLU	CD-OE2	7.85	1.34	1.25
66	SQ	85	ARG	CZ-NH1	7.82	1.43	1.33
30	a	84	GLU	CD-OE1	7.82	1.34	1.25
59	SJ	38	ARG	CZ-NH1	7.77	1.43	1.33
49	S2	1309	C	O3'-P	7.73	1.70	1.61
56	SG	204	GLU	CD-OE1	7.71	1.34	1.25
53	SD	216	GLU	CG-CD	7.70	1.63	1.51
30	a	109	TYR	CB-CG	-7.62	1.40	1.51
48	4	76	SER	C-N	7.55	1.51	1.34
53	SD	162	ASP	CG-OD2	7.51	1.42	1.25
59	SJ	104	ASP	CG-OD2	7.47	1.42	1.25
49	S2	1142	G	O3'-P	7.45	1.70	1.61
56	SG	35	GLU	CD-OE1	7.38	1.33	1.25
1	5	4566	U	O3'-P	-7.35	1.52	1.61
35	f	6	TRP	CA-CB	7.35	1.70	1.53
54	SE	104	ASP	CG-OD2	7.30	1.42	1.25
49	S2	1378	A	O3'-P	7.24	1.69	1.61
1	5	2510	G	O3'-P	-7.22	1.52	1.61
76	Sa	22	ARG	CZ-NH1	7.20	1.42	1.33
67	SR	87	GLU	CD-OE2	7.18	1.33	1.25
59	SJ	158	ASP	CG-OD1	7.16	1.41	1.25
1	5	2361	G	O3'-P	7.15	1.69	1.61
50	SA	33	GLN	CD-NE2	7.06	1.50	1.32
56	SG	20	ASP	CG-OD2	7.04	1.41	1.25
6	C	267	TRP	CB-CG	-7.03	1.37	1.50
53	SD	135	GLU	CG-CD	7.00	1.62	1.51
22	S	81	TRP	CB-CG	-6.99	1.37	1.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	SP	27	ASP	CG-OD1	6.99	1.41	1.25
1	5	1851	G	O3'-P	-6.97	1.52	1.61
14	K	137	GLN	N-CA	6.97	1.60	1.46
1	5	1849	U	O3'-P	-6.92	1.52	1.61
5	B	119	TYR	CB-CG	-6.91	1.41	1.51
13	J	14	GLU	CD-OE1	6.88	1.33	1.25
49	S2	1839	U	O3'-P	6.83	1.69	1.61
72	SW	87	GLU	CD-OE1	6.83	1.33	1.25
30	a	128	PHE	CB-CG	-6.82	1.39	1.51
23	T	13	TYR	CB-CG	-6.82	1.41	1.51
1	5	4693	C	O3'-P	6.81	1.69	1.61
49	S2	1290	G	O3'-P	6.78	1.69	1.61
1	5	1364	U	O3'-P	6.76	1.69	1.61
39	j	49	TRP	CB-CG	-6.74	1.38	1.50
73	SX	88	ASP	CG-OD1	6.73	1.40	1.25
59	SJ	103	GLU	CD-OE2	6.73	1.33	1.25
82	Sg	83	TRP	CB-CG	-6.72	1.38	1.50
1	5	2692	U	O3'-P	-6.71	1.53	1.61
48	4	154	VAL	C-N	6.70	1.49	1.34
54	SE	104	ASP	CG-OD1	6.70	1.40	1.25
49	S2	1079	C	O3'-P	-6.69	1.53	1.61
1	5	514	U	O3'-P	6.69	1.69	1.61
5	B	274	TYR	CA-CB	6.68	1.68	1.53
61	SL	13	GLN	CD-NE2	6.68	1.49	1.32
1	5	2053	C	O3'-P	-6.67	1.53	1.61
14	K	130	LYS	CA-C	-6.65	1.35	1.52
72	SW	51	GLU	CD-OE1	6.64	1.32	1.25
1	5	964	A	O3'-P	6.63	1.69	1.61
33	d	25	TYR	CB-CG	-6.63	1.41	1.51
49	S2	1835	A	O3'-P	6.63	1.69	1.61
52	SC	220	ASP	CG-OD1	6.62	1.40	1.25
70	SU	33	GLU	CG-CD	6.61	1.61	1.51
67	SR	37	GLU	CG-CD	6.61	1.61	1.51
1	5	3692	A	O3'-P	6.59	1.69	1.61
12	I	171	TRP	CB-CG	-6.58	1.38	1.50
48	4	768	GLY	C-N	6.55	1.49	1.34
22	S	33	PHE	CB-CG	-6.52	1.40	1.51
1	5	1912	G	O3'-P	-6.51	1.53	1.61
82	Sg	187	ASN	CG-OD1	6.50	1.38	1.24
1	5	1522	G	O3'-P	6.49	1.69	1.61
48	4	56	PHE	CB-CG	6.49	1.62	1.51
1	5	4375	C	O3'-P	-6.48	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
69	ST	32	GLU	CD-OE2	6.48	1.32	1.25
6	C	111	TRP	CB-CG	-6.47	1.38	1.50
2	7	90	A	O3'-P	-6.47	1.53	1.61
1	5	2442	G	O3'-P	-6.45	1.53	1.61
18	O	194	GLU	CD-OE1	6.44	1.32	1.25
49	S2	646	G	O3'-P	6.43	1.68	1.61
73	SX	39	ASN	CG-OD1	6.43	1.38	1.24
49	S2	1833	C	O3'-P	-6.41	1.53	1.61
81	Sf	146	LEU	CA-CB	6.41	1.68	1.53
15	L	17	ASP	CG-OD2	6.40	1.40	1.25
61	SL	89	ARG	CZ-NH1	6.40	1.41	1.33
49	S2	1858	G	O3'-P	6.38	1.68	1.61
69	ST	32	GLU	CD-OE1	6.37	1.32	1.25
10	G	54	PHE	CA-CB	6.36	1.68	1.53
48	4	669	VAL	CA-CB	6.35	1.68	1.54
1	5	207	G	O3'-P	-6.30	1.53	1.61
8	E	101	ARG	CZ-NH2	6.29	1.41	1.33
7	D	213	GLU	CG-CD	6.26	1.61	1.51
1	5	1669	A	O3'-P	-6.26	1.53	1.61
63	SN	13	GLN	CD-NE2	6.25	1.48	1.32
22	S	10	TYR	CA-CB	6.22	1.67	1.53
18	O	106	ASP	CG-OD2	6.21	1.39	1.25
57	SH	177	TYR	CB-CG	-6.21	1.42	1.51
82	Sg	36	ARG	CZ-NH1	6.19	1.41	1.33
11	H	61	TRP	CB-CG	-6.17	1.39	1.50
1	5	1756	U	C4-O4	-6.17	1.18	1.23
48	4	825	PHE	CB-CG	-6.16	1.40	1.51
1	5	171	U	O3'-P	-6.16	1.53	1.61
49	S2	9	U	O3'-P	6.14	1.68	1.61
48	4	109	VAL	CA-CB	-6.13	1.41	1.54
9	F	120	PHE	CB-CG	-6.12	1.41	1.51
82	Sg	4	GLN	CD-OE1	6.12	1.37	1.24
46	q	205	ASP	C-N	6.09	1.48	1.34
59	SJ	48	PHE	CB-CG	-6.08	1.41	1.51
58	SI	99	ASN	CG-ND2	6.08	1.48	1.32
72	SW	115	GLU	CD-OE2	6.07	1.32	1.25
49	S2	1139	C	O3'-P	-6.06	1.53	1.61
48	4	111	PHE	CA-CB	6.05	1.67	1.53
1	5	1591	U	O3'-P	-6.05	1.53	1.61
7	D	44	TYR	CA-CB	6.05	1.67	1.53
1	5	1636	U	O3'-P	-6.04	1.53	1.61
1	5	2589	C	O3'-P	6.02	1.68	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	3901	A	O3'-P	-6.02	1.53	1.61
64	SO	104	ARG	NE-CZ	6.01	1.40	1.33
1	5	4464	A	O3'-P	5.99	1.68	1.61
49	S2	922	A	O3'-P	-5.97	1.53	1.61
49	S2	1055	A	O3'-P	-5.95	1.54	1.61
60	SK	34	GLU	CD-OE1	5.95	1.32	1.25
24	U	99	TRP	CB-CG	-5.94	1.39	1.50
54	SE	251	GLU	CD-OE2	5.94	1.32	1.25
63	SN	128	TYR	CG-CD2	-5.94	1.31	1.39
22	S	152	PHE	CB-CG	-5.93	1.41	1.51
49	S2	1838	U	O3'-P	5.92	1.68	1.61
81	Sf	150	PHE	CB-CG	5.92	1.61	1.51
51	SB	157	GLN	CG-CD	5.92	1.64	1.51
1	5	2520	C	O3'-P	-5.91	1.54	1.61
19	P	139	TYR	CB-CG	-5.88	1.42	1.51
54	SE	121	TYR	CB-CG	-5.88	1.42	1.51
33	d	73	TRP	CB-CG	-5.88	1.39	1.50
52	SC	236	PHE	CA-CB	5.87	1.66	1.53
31	b	16	TRP	CA-CB	5.86	1.66	1.53
14	K	137	GLN	CA-C	5.86	1.68	1.52
5	B	119	TYR	CA-CB	5.86	1.66	1.53
1	5	1395	U	O3'-P	-5.84	1.54	1.61
81	Sf	120	GLU	CD-OE1	-5.84	1.19	1.25
64	SO	147	ARG	CG-CD	5.84	1.66	1.51
51	SB	89	GLU	CD-OE2	5.83	1.32	1.25
82	Sg	145	GLU	CG-CD	5.83	1.60	1.51
53	SD	103	GLU	CD-OE1	5.82	1.32	1.25
19	P	139	TYR	CA-CB	5.82	1.66	1.53
14	K	114	ARG	C-N	-5.81	1.20	1.34
1	5	2811	G	O3'-P	5.81	1.68	1.61
59	SJ	48	PHE	CA-CB	5.81	1.66	1.53
5	B	274	TYR	CB-CG	-5.80	1.43	1.51
49	S2	1190	A	O3'-P	-5.80	1.54	1.61
52	SC	236	PHE	CB-CG	-5.79	1.41	1.51
49	S2	1798	C	O3'-P	-5.78	1.54	1.61
53	SD	38	GLU	CD-OE1	5.78	1.32	1.25
1	5	1357	C	O3'-P	5.77	1.68	1.61
49	S2	397	G	O3'-P	-5.76	1.54	1.61
67	SR	82	ASP	CG-OD1	5.75	1.38	1.25
48	4	794	PHE	CD1-CE1	-5.72	1.27	1.39
64	SO	25	GLU	CG-CD	5.72	1.60	1.51
45	p	18	TYR	CB-CG	-5.70	1.43	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	S2	798	A	O3'-P	5.70	1.68	1.61
25	V	97	TYR	CD2-CE2	-5.70	1.30	1.39
48	4	478	PHE	CD1-CE1	-5.70	1.27	1.39
14	K	114	ARG	CA-C	-5.68	1.38	1.52
15	L	173	GLU	CD-OE2	5.68	1.31	1.25
66	SQ	29	ASN	CG-ND2	5.67	1.47	1.32
1	5	2394	G	O3'-P	-5.66	1.54	1.61
1	5	90	G	O3'-P	-5.66	1.54	1.61
1	5	2325	C	O3'-P	5.66	1.68	1.61
56	SG	142	ARG	CZ-NH1	5.66	1.40	1.33
1	5	2055	G	O3'-P	5.66	1.68	1.61
1	5	32	G	O3'-P	-5.65	1.54	1.61
1	5	3635	A	O3'-P	5.64	1.68	1.61
33	d	25	TYR	CA-CB	5.63	1.66	1.53
63	SN	83	ASP	CB-CG	5.63	1.63	1.51
1	5	147	A	O3'-P	-5.63	1.54	1.61
5	B	235	TRP	CG-CD1	-5.63	1.28	1.36
51	SB	198	GLU	CD-OE2	5.63	1.31	1.25
1	5	2649	G	O3'-P	-5.63	1.54	1.61
49	S2	92	A	O3'-P	5.61	1.67	1.61
49	S2	1851	A	O3'-P	-5.61	1.54	1.61
46	q	62	ARG	N-CA	-5.61	1.35	1.46
1	5	1627	G	O3'-P	5.59	1.67	1.61
1	5	2051	C	O3'-P	5.58	1.67	1.61
17	N	119	TYR	CB-CG	-5.57	1.43	1.51
1	5	2535	G	O3'-P	-5.57	1.54	1.61
1	5	1282	G	O3'-P	-5.56	1.54	1.61
1	5	4239	A	O3'-P	5.56	1.67	1.61
72	SW	80	ASP	CB-CG	5.56	1.63	1.51
72	SW	115	GLU	CD-OE1	5.54	1.31	1.25
49	S2	657	U	O3'-P	-5.53	1.54	1.61
73	SX	58	GLU	CD-OE2	5.53	1.31	1.25
1	5	5001	U	O3'-P	-5.52	1.54	1.61
48	4	196	GLU	CG-CD	5.52	1.60	1.51
52	SC	241	PHE	CB-CG	-5.52	1.42	1.51
49	S2	640	A	O3'-P	-5.50	1.54	1.61
1	5	53	C	O3'-P	5.50	1.67	1.61
1	5	332	C	O3'-P	-5.50	1.54	1.61
30	a	79	TRP	CB-CG	-5.50	1.40	1.50
1	5	3875	G	O3'-P	5.49	1.67	1.61
1	5	4276	G	O3'-P	5.49	1.67	1.61
56	SG	204	GLU	CG-CD	5.49	1.60	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	G	109	GLU	CG-CD	5.48	1.60	1.51
49	S2	848	U	N3-C4	5.47	1.43	1.38
22	S	29	ARG	CG-CD	5.46	1.65	1.51
65	SP	27	ASP	CG-OD2	5.45	1.37	1.25
16	M	6	PHE	CA-CB	5.44	1.66	1.53
1	5	4326	G	O3'-P	-5.43	1.54	1.61
49	S2	1843	G	O3'-P	-5.42	1.54	1.61
63	SN	83	ASP	CG-OD1	5.41	1.37	1.25
1	5	1381	U	O3'-P	-5.40	1.54	1.61
48	4	801	ARG	NE-CZ	5.39	1.40	1.33
51	SB	224	GLU	CD-OE2	5.38	1.31	1.25
61	SL	3	ASP	CB-CG	5.38	1.63	1.51
3	8	64	U	O3'-P	5.38	1.67	1.61
81	Sf	151	ASN	CA-C	5.38	1.67	1.52
51	SB	205	TYR	CE2-CZ	5.38	1.45	1.38
56	SG	17	GLU	CD-OE2	5.37	1.31	1.25
46	q	25	PRO	N-CD	5.37	1.55	1.47
46	q	201	PRO	N-CD	5.36	1.55	1.47
1	5	372	A	O3'-P	-5.35	1.54	1.61
49	S2	357	C	O3'-P	5.35	1.67	1.61
80	Se	23	GLU	CG-CD	5.35	1.59	1.51
18	O	106	ASP	CG-OD1	5.33	1.37	1.25
1	5	89	C	O3'-P	-5.32	1.54	1.61
34	e	74	PHE	CB-CG	-5.32	1.42	1.51
48	4	266	PHE	C-N	5.32	1.46	1.34
67	SR	104	GLU	CD-OE2	5.30	1.31	1.25
1	5	937	U	O3'-P	-5.29	1.54	1.61
1	5	2297	G	O3'-P	-5.29	1.54	1.61
1	5	4548	A	O5'-C5'	5.28	1.52	1.44
8	E	250	ASP	CG-OD2	5.28	1.37	1.25
48	4	4	PHE	CD2-CE2	-5.28	1.28	1.39
1	5	4237	C	O3'-P	-5.27	1.54	1.61
59	SJ	104	ASP	CG-OD1	5.27	1.37	1.25
82	Sg	3	GLU	CD-OE2	5.27	1.31	1.25
1	5	943	A	O3'-P	-5.27	1.54	1.61
4	A	211	PHE	CA-CB	5.26	1.65	1.53
1	5	2043	A	O3'-P	-5.26	1.54	1.61
58	SI	27	TYR	CB-CG	-5.24	1.43	1.51
4	A	40	TYR	CA-CB	5.24	1.65	1.53
14	K	34	PRO	N-CD	5.24	1.55	1.47
1	5	2368	A	O3'-P	-5.22	1.54	1.61
1	5	1917	A	O3'-P	-5.21	1.54	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	E	97	ASN	CG-ND2	5.21	1.45	1.32
49	S2	1293	A	O3'-P	5.20	1.67	1.61
46	q	124	PRO	N-CD	5.20	1.55	1.47
1	5	4977	A	O3'-P	-5.20	1.54	1.61
5	B	137	TRP	CB-CG	-5.20	1.40	1.50
82	Sg	285	GLN	CD-NE2	5.19	1.45	1.32
21	R	132	PHE	CA-CB	5.19	1.65	1.53
25	V	98	PHE	CB-CG	-5.19	1.42	1.51
17	N	120	TRP	CE3-CZ3	-5.18	1.29	1.38
17	N	130	PHE	CB-CG	-5.17	1.42	1.51
46	q	68	HIS	C-N	5.17	1.46	1.34
48	4	478	PHE	CD2-CE2	-5.17	1.28	1.39
14	K	148	PRO	N-CD	5.16	1.55	1.47
4	A	209	HIS	CA-CB	5.16	1.65	1.53
74	SY	80	ASP	CG-OD2	5.15	1.37	1.25
82	Sg	116	ASP	CG-OD1	5.15	1.37	1.25
1	5	4275	G	O3'-P	5.15	1.67	1.61
11	H	66	GLU	CD-OE2	5.14	1.31	1.25
1	5	381	U	O3'-P	-5.14	1.54	1.61
68	SS	130	ARG	CZ-NH1	5.14	1.39	1.33
49	S2	999	G	O3'-P	5.13	1.67	1.61
1	5	4489	G	O3'-P	5.12	1.67	1.61
54	SE	251	GLU	CG-CD	5.12	1.59	1.51
1	5	1457	G	O3'-P	-5.11	1.55	1.61
82	Sg	60	ARG	NE-CZ	5.11	1.39	1.33
3	8	80	A	O3'-P	5.11	1.67	1.61
5	B	257	TRP	CE3-CZ3	-5.11	1.29	1.38
46	q	118	PRO	N-CD	5.10	1.54	1.47
34	e	35	TRP	CG-CD1	-5.09	1.29	1.36
1	5	1283	G	O3'-P	-5.09	1.55	1.61
9	F	228	HIS	CA-CB	5.09	1.65	1.53
48	4	794	PHE	CD2-CE2	-5.09	1.29	1.39
1	5	2406	G	O3'-P	5.09	1.67	1.61
49	S2	1039	C	O3'-P	5.08	1.67	1.61
1	5	97	G	O3'-P	5.08	1.67	1.61
62	SM	58	GLU	CD-OE2	5.08	1.31	1.25
1	5	1682	A	C6-N6	-5.07	1.29	1.33
1	5	2054	U	O3'-P	-5.07	1.55	1.61
49	S2	1552	G	O3'-P	5.07	1.67	1.61
14	K	30	PRO	CA-C	-5.06	1.42	1.52
49	S2	672	A	O3'-P	-5.05	1.55	1.61
1	5	4206	C	O3'-P	-5.05	1.55	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	C	102	PHE	CG-CD2	-5.05	1.31	1.38
22	S	152	PHE	CG-CD2	-5.04	1.31	1.38
49	S2	1168	G	O3'-P	-5.04	1.55	1.61
49	S2	957	A	O3'-P	-5.03	1.55	1.61
1	5	2324	C	O3'-P	5.03	1.67	1.61
30	a	79	TRP	CA-CB	5.03	1.65	1.53
59	SJ	108	ARG	CZ-NH1	5.03	1.39	1.33
81	Sf	149	CYS	N-CA	5.03	1.56	1.46
3	8	73	U	O3'-P	5.00	1.67	1.61

All (2051) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	699	GLY	CA-C-N	-32.10	46.58	117.20
48	4	699	GLY	C-N-CA	-28.33	50.88	121.70
48	4	768	GLY	O-C-N	21.39	156.93	122.70
72	SW	117	ARG	NE-CZ-NH2	-20.64	109.98	120.30
46	q	205	ASP	CA-C-N	-20.22	72.71	117.20
65	SP	21	ASP	CB-CG-OD1	-19.19	101.03	118.30
46	q	205	ASP	O-C-N	18.05	151.59	122.70
14	K	114	ARG	NE-CZ-NH1	17.38	128.99	120.30
81	Sf	146	LEU	CA-CB-CG	16.59	153.47	115.30
48	4	768	GLY	CA-C-N	-16.39	81.15	117.20
3	8	60	G	N9-C1'-C2'	16.18	135.04	114.00
48	4	154	VAL	CB-CA-C	16.12	142.02	111.40
14	K	114	ARG	CD-NE-CZ	16.11	146.16	123.60
64	SO	146	ARG	NE-CZ-NH1	15.24	127.92	120.30
76	Sa	28	ARG	NE-CZ-NH1	14.82	127.71	120.30
49	S2	1109	C	O4'-C1'-N1	14.31	119.65	108.20
48	4	266	PHE	O-C-N	-13.93	100.41	122.70
48	4	121	VAL	O-C-N	-13.86	100.52	122.70
49	S2	1823	A	N9-C1'-C2'	13.82	131.97	114.00
39	j	11	ARG	NE-CZ-NH2	-13.79	113.40	120.30
48	4	269	ALA	O-C-N	-13.70	100.78	122.70
64	SO	104	ARG	NE-CZ-NH2	-13.40	113.60	120.30
49	S2	1434	C	O5'-P-OP1	-12.95	94.05	105.70
14	K	111	ASN	N-CA-CB	12.81	133.66	110.60
20	Q	37	ARG	NE-CZ-NH2	12.80	126.70	120.30
14	K	130	LYS	CB-CA-C	-12.73	84.94	110.40
1	5	92	C	N1-C1'-C2'	-12.63	97.59	114.00
49	S2	1433	C	O5'-P-OP2	-12.40	94.54	105.70
49	S2	1838	U	O4'-C1'-N1	-12.39	98.28	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1109	C	N1-C1'-C2'	12.34	130.04	114.00
64	SO	146	ARG	NE-CZ-NH2	-12.34	114.13	120.30
12	I	139	ARG	CG-CD-NE	12.32	137.68	111.80
49	S2	1838	U	N1-C1'-C2'	12.03	129.64	114.00
1	5	1214	C	N1-C1'-C2'	11.94	129.52	114.00
48	4	278	THR	O-C-N	-11.86	103.72	122.70
4	A	3	ARG	NE-CZ-NH1	11.84	126.22	120.30
1	5	1	C	N1-C1'-C2'	11.83	129.38	114.00
14	K	24	ALA	O-C-N	-11.77	103.88	122.70
48	4	768	GLY	C-N-CA	-11.51	92.93	121.70
65	SP	21	ASP	CB-CG-OD2	11.41	128.57	118.30
33	d	44	ARG	NE-CZ-NH1	11.38	125.99	120.30
58	SI	49	ARG	NE-CZ-NH1	11.28	125.94	120.30
74	SY	80	ASP	CB-CG-OD2	-11.22	108.20	118.30
37	h	93	ARG	NE-CZ-NH1	11.18	125.89	120.30
1	5	4693	C	O4'-C1'-N1	-11.13	99.29	108.20
21	R	132	PHE	CB-CA-C	11.13	132.67	110.40
48	4	4	PHE	N-CA-C	11.12	141.03	111.00
7	D	265	ARG	NE-CZ-NH1	11.12	125.86	120.30
1	5	4373	G	N9-C1'-C2'	11.11	128.44	114.00
1	5	4275	G	N9-C1'-C2'	-11.10	99.57	114.00
61	SL	89	ARG	NE-CZ-NH2	-11.04	114.78	120.30
1	5	2361	G	N9-C1'-C2'	-10.98	99.73	114.00
30	a	61	TYR	CA-CB-CG	10.96	134.22	113.40
48	4	742	GLU	C-N-CD	-10.89	96.65	120.60
49	S2	1293	A	N9-C1'-C2'	10.87	128.13	114.00
21	R	108	ARG	NE-CZ-NH1	10.87	125.73	120.30
1	5	4871	C	N1-C1'-C2'	10.85	128.11	114.00
1	5	1938	C	N1-C1'-C2'	10.83	128.08	114.00
46	q	14	PHE	CB-CG-CD2	-10.81	113.23	120.80
16	M	6	PHE	CB-CG-CD2	-10.77	113.26	120.80
1	5	151	G	N9-C1'-C2'	-10.77	100.00	114.00
17	N	192	TRP	CA-CB-CG	10.62	133.87	113.70
28	Y	87	ARG	NE-CZ-NH2	10.61	125.61	120.30
30	a	132	ARG	NE-CZ-NH1	10.59	125.59	120.30
48	4	539	GLU	C-N-CA	-10.57	95.26	121.70
49	S2	848	U	N1-C1'-C2'	10.56	127.72	114.00
76	Sa	28	ARG	NE-CZ-NH2	-10.55	115.03	120.30
17	N	131	GLU	CA-CB-CG	10.55	136.60	113.40
48	4	111	PHE	CA-CB-CG	10.54	139.21	113.90
53	SD	216	GLU	CG-CD-OE1	-10.54	97.22	118.30
49	S2	642	U	C4'-C3'-O3'	10.53	134.07	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4528	G	C2'-C3'-O3'	10.52	132.65	109.50
55	SF	130	ARG	NE-CZ-NH2	-10.51	115.04	120.30
1	5	2513	A	N9-C1'-C2'	10.51	127.66	114.00
49	S2	1378	A	N9-C1'-C2'	10.50	127.64	114.00
1	5	4163	U	C4'-C3'-O3'	10.48	133.95	113.00
48	4	154	VAL	CA-CB-CG1	10.46	126.58	110.90
49	S2	642	U	N1-C1'-C2'	-10.44	100.42	114.00
38	i	85	ARG	NE-CZ-NH1	10.39	125.49	120.30
49	S2	1114	U	N1-C1'-C2'	10.38	127.49	114.00
74	SY	118	ARG	NE-CZ-NH2	-10.36	115.12	120.30
3	8	34	U	C4'-C3'-O3'	-10.35	87.66	109.40
48	4	123	ASP	O-C-N	-10.34	105.62	123.20
1	5	1211	G	C2'-C3'-O3'	10.33	132.23	109.50
49	S2	1835	A	O4'-C1'-N9	-10.32	99.94	108.20
59	SJ	38	ARG	NE-CZ-NH2	-10.27	115.17	120.30
49	S2	24	C	C2'-C3'-O3'	10.27	132.09	109.50
62	SM	58	GLU	OE1-CD-OE2	10.24	135.59	123.30
30	a	109	TYR	CA-CB-CG	-10.22	93.98	113.40
1	5	62	A	N9-C1'-C2'	10.22	127.28	114.00
1	5	1329	G	C2'-C3'-O3'	10.21	131.97	109.50
44	o	78	ARG	NE-CZ-NH2	10.19	125.40	120.30
66	SQ	85	ARG	NE-CZ-NH2	-10.19	115.20	120.30
1	5	2436	U	N1-C1'-C2'	10.12	127.16	114.00
74	SY	86	GLU	CG-CD-OE2	-10.11	98.07	118.30
14	K	34	PRO	CA-N-CD	-10.10	97.36	111.50
1	5	2586	G	N9-C1'-C2'	10.09	127.12	114.00
1	5	664	G	O4'-C1'-N9	10.09	116.27	108.20
14	K	38	SER	C-N-CD	-10.08	98.42	120.60
1	5	1358	G	C4'-C3'-O3'	10.06	133.12	113.00
49	S2	645	C	N1-C1'-C2'	-10.05	100.93	114.00
11	H	54	ARG	NE-CZ-NH1	10.04	125.32	120.30
49	S2	92	A	N9-C1'-C2'	10.03	127.04	114.00
1	5	1890	G	N9-C1'-C2'	-10.02	100.97	114.00
1	5	4518	A	O5'-P-OP2	-10.02	96.68	105.70
1	5	2389	A	C2'-C3'-O3'	10.02	131.54	109.50
1	5	1887	G	N9-C1'-C2'	-10.00	101.00	112.00
33	d	25	TYR	CA-CB-CG	-9.99	94.41	113.40
50	SA	117	ARG	CG-CD-NE	9.98	132.76	111.80
10	G	54	PHE	CB-CG-CD1	-9.96	113.83	120.80
48	4	807	GLN	N-CA-C	-9.95	84.12	111.00
8	E	278	TYR	CA-CB-CG	-9.95	94.50	113.40
1	5	1974	U	N1-C1'-C2'	9.93	126.91	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1379	C	O4'-C1'-N1	9.92	116.14	108.20
76	Sa	22	ARG	NE-CZ-NH2	-9.84	115.38	120.30
49	S2	428	U	N1-C1'-C2'	9.83	126.78	114.00
1	5	2666	U	N1-C1'-C2'	-9.82	101.19	112.00
21	R	132	PHE	CB-CG-CD1	-9.80	113.94	120.80
14	K	30	PRO	CA-N-CD	-9.78	97.81	111.50
1	5	4693	C	N1-C1'-C2'	9.76	126.69	114.00
30	a	128	PHE	CB-CG-CD1	-9.73	113.99	120.80
1	5	2046	G	O4'-C1'-N9	9.72	115.98	108.20
26	W	44	ARG	NE-CZ-NH1	9.71	125.16	120.30
1	5	1398	A	N9-C1'-C2'	9.70	126.61	114.00
8	E	278	TYR	CB-CA-C	9.70	129.80	110.40
3	8	14	U	N1-C1'-C2'	9.68	126.58	114.00
49	S2	367	U	N1-C1'-C2'	-9.68	101.36	112.00
49	S2	291	G	C4'-C3'-O3'	-9.67	89.09	109.40
30	a	61	TYR	CB-CG-CD2	-9.67	115.20	121.00
49	S2	1063	C	N1-C1'-C2'	-9.66	101.38	112.00
1	5	4464	A	O4'-C1'-N9	-9.65	100.48	108.20
1	5	2394	G	N9-C1'-C2'	-9.64	101.40	112.00
52	SC	121	ARG	NE-CZ-NH2	-9.63	115.48	120.30
35	f	36	ARG	NE-CZ-NH1	9.63	125.12	120.30
64	SO	104	ARG	NE-CZ-NH1	9.62	125.11	120.30
1	5	4750	G	N9-C1'-C2'	-9.62	101.42	112.00
68	SS	124	ARG	NE-CZ-NH1	9.60	125.10	120.30
49	S2	28	U	O5'-P-OP1	-9.60	97.06	105.70
59	SJ	131	ARG	NE-CZ-NH2	-9.59	115.50	120.30
1	5	4677	U	N1-C1'-C2'	-9.57	101.47	112.00
46	q	68	HIS	CA-C-O	-9.57	100.00	120.10
1	5	4162	C	N1-C1'-C2'	9.56	126.44	114.00
1	5	514	U	N1-C1'-C2'	-9.56	101.48	112.00
49	S2	1835	A	C2'-C3'-O3'	9.55	130.52	109.50
80	Se	13	ARG	NE-CZ-NH1	9.52	125.06	120.30
15	L	34	ARG	NE-CZ-NH1	9.52	125.06	120.30
1	5	5040	U	N1-C1'-C2'	9.51	126.36	114.00
29	Z	36	ARG	NE-CZ-NH1	9.51	125.05	120.30
57	SH	177	TYR	CB-CG-CD2	-9.50	115.30	121.00
11	H	31	ARG	NE-CZ-NH1	9.50	125.05	120.30
49	S2	747	U	C2'-C3'-O3'	9.49	130.39	109.50
1	5	1501	C	O4'-C1'-N1	9.49	115.79	108.20
1	5	172	C	O4'-C1'-N1	9.49	115.79	108.20
39	j	66	HIS	N-CA-CB	9.46	127.62	110.60
1	5	2438	A	N9-C1'-C2'	-9.45	101.60	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	q	85	ASN	N-CA-CB	9.45	127.61	110.60
1	5	1501	C	N1-C1'-C2'	9.45	126.28	114.00
21	R	95	TRP	N-CA-CB	9.43	127.57	110.60
1	5	315	G	O4'-C1'-N9	9.42	115.74	108.20
7	D	54	ARG	CG-CD-NE	-9.41	92.04	111.80
1	5	42	A	O4'-C1'-N9	9.40	115.72	108.20
55	SF	130	ARG	NE-CZ-NH1	9.40	125.00	120.30
1	5	294	G	O4'-C1'-N9	9.40	115.72	108.20
49	S2	447	A	O4'-C1'-N9	9.38	115.71	108.20
13	J	32	ARG	NE-CZ-NH2	-9.36	115.62	120.30
53	SD	67	ARG	NE-CZ-NH1	9.36	124.98	120.30
60	SK	2	LEU	CA-CB-CG	9.34	136.79	115.30
64	SO	147	ARG	CA-CB-CG	9.34	133.96	113.40
12	I	171	TRP	CA-CB-CG	-9.34	95.96	113.70
52	SC	200	ARG	NE-CZ-NH2	9.33	124.97	120.30
49	S2	1433	C	C4'-C3'-O3'	9.33	131.65	113.00
62	SM	33	ARG	NE-CZ-NH1	9.31	124.95	120.30
18	O	178	ARG	NE-CZ-NH1	9.29	124.94	120.30
17	N	49	ARG	NE-CZ-NH1	9.27	124.94	120.30
48	4	825	PHE	C-N-CA	-9.27	98.53	121.70
48	4	267	ASP	N-CA-C	9.26	136.01	111.00
1	5	5059	C	C2'-C3'-O3'	9.25	129.84	109.50
1	5	4280	A	N9-C1'-C2'	-9.25	101.83	112.00
14	K	75	PRO	CA-N-CD	-9.24	98.56	111.50
78	Sc	31	ARG	NE-CZ-NH1	9.23	124.92	120.30
46	q	68	HIS	O-C-N	9.22	137.45	122.70
48	4	206	ASP	C-N-CD	-9.22	100.32	120.60
28	Y	27	ARG	NE-CZ-NH2	9.22	124.91	120.30
1	5	1534	A	N9-C1'-C2'	9.18	125.93	114.00
46	q	204	LEU	O-C-N	9.18	137.39	122.70
20	Q	91	ARG	NE-CZ-NH2	9.17	124.89	120.30
49	S2	631	U	N1-C1'-C2'	9.17	125.92	114.00
1	5	280	G	O4'-C1'-N9	9.14	115.51	108.20
46	q	80	PRO	CA-N-CD	-9.14	98.70	111.50
1	5	4228	G	N9-C1'-C2'	-9.12	101.97	112.00
1	5	2406	G	N9-C1'-C2'	-9.11	101.97	112.00
49	S2	1552	G	C2'-C3'-O3'	9.11	129.53	109.50
1	5	1685	G	N9-C1'-C2'	9.10	125.83	114.00
69	ST	53	PHE	CB-CG-CD2	-9.09	114.44	120.80
1	5	2553	A	N9-C1'-C2'	9.09	125.81	114.00
5	B	100	ARG	NE-CZ-NH2	-9.08	115.76	120.30
1	5	1474	C	C2'-C3'-O3'	9.07	129.45	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1578	U	N1-C1'-C2'	9.07	125.79	114.00
46	q	14	PHE	CB-CG-CD1	9.06	127.14	120.80
5	B	119	TYR	CB-CG-CD1	-9.04	115.58	121.00
1	5	2658	G	N9-C1'-C2'	-9.03	102.07	112.00
33	d	85	ARG	NE-CZ-NH1	9.03	124.81	120.30
30	a	79	TRP	CA-CB-CG	-9.02	96.57	113.70
14	K	88	PRO	CA-N-CD	-9.00	98.90	111.50
28	Y	126	ARG	NE-CZ-NH1	9.00	124.80	120.30
1	5	1882	U	O5'-P-OP1	-8.99	97.61	105.70
46	q	69	LEU	O-C-N	-8.97	108.35	122.70
69	ST	62	ARG	NE-CZ-NH2	8.97	124.78	120.30
25	V	97	TYR	CB-CG-CD2	-8.97	115.62	121.00
6	C	78	ARG	NE-CZ-NH1	8.96	124.78	120.30
34	e	46	ARG	NE-CZ-NH1	8.96	124.78	120.30
6	C	267	TRP	CA-CB-CG	8.96	130.72	113.70
38	i	4	ARG	NE-CZ-NH1	8.95	124.78	120.30
81	Sf	146	LEU	CB-CG-CD1	8.95	126.21	111.00
48	4	197	SER	C-N-CA	8.92	141.02	122.30
3	8	94	G	O4'-C1'-N9	-8.91	101.07	108.20
1	5	4911	A	O4'-C1'-N9	8.91	115.32	108.20
1	5	4385	A	N9-C1'-C2'	-8.90	102.21	112.00
1	5	4965	U	N1-C1'-C2'	-8.90	102.21	112.00
45	p	85	ARG	NE-CZ-NH1	8.89	124.75	120.30
49	S2	833	C	C2'-C3'-O3'	8.89	129.07	109.50
14	K	136	ALA	O-C-N	-8.88	108.50	122.70
1	5	125	C	C2'-C3'-O3'	8.87	129.02	109.50
33	d	25	TYR	CB-CA-C	8.86	128.13	110.40
49	S2	437	G	N9-C1'-C2'	8.85	125.50	114.00
1	5	1815	G	N9-C1'-C2'	8.82	125.46	114.00
49	S2	1088	U	N1-C1'-C2'	8.81	125.45	114.00
1	5	977	C	C2'-C3'-O3'	8.80	128.86	109.50
1	5	1998	A	N9-C1'-C2'	8.80	125.44	114.00
82	Sg	60	ARG	NE-CZ-NH2	-8.79	115.90	120.30
8	E	119	ARG	NE-CZ-NH1	8.79	124.69	120.30
65	SP	10	ARG	NE-CZ-NH1	8.79	124.69	120.30
1	5	2268	A	N9-C1'-C2'	8.77	125.41	114.00
1	5	1356	U	C2'-C3'-O3'	8.77	128.78	109.50
49	S2	313	A	O4'-C1'-N9	8.77	115.21	108.20
1	5	1668	A	N9-C1'-C2'	8.76	125.39	114.00
18	O	135	PHE	N-CA-C	8.76	134.65	111.00
23	T	13	TYR	CB-CG-CD2	-8.75	115.75	121.00
72	SW	57	ARG	NE-CZ-NH1	8.75	124.67	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1534	A	O4'-C1'-N9	-8.74	101.20	108.20
1	5	978	G	C2'-C3'-O3'	8.73	128.71	109.50
14	K	163	PRO	CA-N-CD	-8.73	99.28	111.50
1	5	1359	G	C2'-C3'-O3'	8.73	128.71	109.50
1	5	31	U	N1-C1'-C2'	8.72	125.34	114.00
1	5	4976	U	O4'-C1'-N1	-8.72	101.22	108.20
22	S	81	TRP	CB-CA-C	8.72	127.84	110.40
49	S2	1859	A	C8-N9-C1'	-8.72	112.00	127.70
6	C	311	ARG	NE-CZ-NH2	-8.71	115.94	120.30
49	S2	3	C	N1-C1'-C2'	8.70	125.31	114.00
49	S2	1429	G	C2'-C3'-O3'	8.70	128.63	109.50
20	Q	58	ARG	NE-CZ-NH1	8.69	124.64	120.30
1	5	4234	A	N9-C1'-C2'	8.68	125.28	114.00
19	P	54	GLN	CA-CB-CG	8.68	132.49	113.40
14	K	104	ILE	CG1-CB-CG2	8.67	130.47	111.40
29	Z	121	ARG	NE-CZ-NH1	8.66	124.63	120.30
1	5	2305	U	O4'-C1'-N1	-8.65	101.28	108.20
1	5	2517	A	N9-C1'-C2'	8.65	125.25	114.00
1	5	2446	C	N1-C1'-C2'	8.65	125.24	114.00
22	S	81	TRP	CA-CB-CG	-8.65	97.27	113.70
10	G	62	ARG	NE-CZ-NH2	-8.64	115.98	120.30
82	Sg	60	ARG	NE-CZ-NH1	8.64	124.62	120.30
37	h	117	ARG	CG-CD-NE	-8.62	93.70	111.80
4	A	193	ARG	CG-CD-NE	-8.62	93.71	111.80
1	5	4221	C	N1-C1'-C2'	-8.60	102.54	112.00
1	5	4404	U	N1-C1'-C2'	-8.60	102.54	112.00
1	5	1637	A	N9-C1'-C2'	-8.59	102.55	112.00
44	o	31	ASP	CB-CA-C	8.59	127.57	110.40
81	Sf	138	ARG	NE-CZ-NH1	8.58	124.59	120.30
18	O	140	ARG	NE-CZ-NH2	8.58	124.59	120.30
2	7	56	G	N9-C1'-C2'	8.57	125.14	114.00
49	S2	110	U	C2'-C3'-O3'	8.56	128.34	109.50
1	5	1980	U	O4'-C1'-N1	8.56	115.05	108.20
48	4	794	PHE	CB-CA-C	8.56	127.52	110.40
51	SB	165	ARG	NE-CZ-NH2	8.56	124.58	120.30
1	5	2851	G	N9-C1'-C2'	-8.55	102.60	112.00
68	SS	95	TYR	CA-CB-CG	8.54	129.62	113.40
14	K	111	ASN	CB-CA-C	-8.54	93.33	110.40
1	5	352	G	N9-C1'-C2'	-8.52	102.62	112.00
49	S2	1859	A	C4-N9-C1'	8.52	141.63	126.30
1	5	1733	G	N9-C1'-C2'	-8.49	102.66	112.00
1	5	1439	C	C4'-C3'-O3'	-8.49	91.58	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	3790	U	N1-C1'-C2'	8.49	125.03	114.00
1	5	1296	G	O4'-C1'-N9	8.48	114.98	108.20
15	L	74	ARG	NE-CZ-NH1	8.47	124.54	120.30
48	4	392	GLY	C-N-CD	-8.46	101.98	120.60
27	X	73	HIS	CB-CA-C	8.46	127.32	110.40
1	5	4563	U	N1-C1'-C2'	8.45	124.99	114.00
34	e	35	TRP	CA-CB-CG	-8.44	97.66	113.70
49	S2	798	A	C2'-C3'-O3'	8.44	128.07	109.50
4	A	67	TYR	CA-CB-CG	8.43	129.42	113.40
58	SI	197	PHE	CB-CA-C	-8.42	93.55	110.40
73	SX	67	ARG	NE-CZ-NH2	8.41	124.50	120.30
49	S2	622	C	N1-C1'-C2'	-8.41	102.75	112.00
1	5	1937	C	N1-C1'-C2'	8.40	124.92	114.00
9	F	120	PHE	CB-CA-C	8.40	127.21	110.40
3	8	85	U	C2'-C3'-O3'	8.40	127.98	109.50
1	5	4119	C	C2'-C3'-O3'	8.39	127.97	109.50
14	K	89	PRO	CA-N-CD	-8.39	99.75	111.50
22	S	29	ARG	CA-CB-CG	8.39	131.85	113.40
59	SJ	127	ARG	NE-CZ-NH1	8.39	124.49	120.30
49	S2	421	G	N9-C1'-C2'	8.37	124.88	114.00
37	h	78	TYR	CA-CB-CG	-8.37	97.50	113.40
21	R	74	ARG	NE-CZ-NH1	-8.36	116.12	120.30
57	SH	177	TYR	CB-CA-C	-8.36	93.69	110.40
44	o	48	TYR	CB-CA-C	8.35	127.10	110.40
14	K	102	GLY	N-CA-C	8.33	133.93	113.10
57	SH	177	TYR	CA-CB-CG	8.32	129.22	113.40
8	E	268	ARG	NE-CZ-NH1	8.32	124.46	120.30
49	S2	294	U	N1-C1'-C2'	8.30	124.79	114.00
49	S2	1835	A	C4-N9-C1'	-8.29	111.38	126.30
80	Se	41	ARG	NE-CZ-NH1	8.28	124.44	120.30
1	5	292	G	N9-C1'-C2'	8.28	124.76	114.00
49	S2	1407	U	N1-C1'-C2'	8.28	124.76	114.00
68	SS	86	ARG	NE-CZ-NH1	-8.28	116.16	120.30
1	5	958	G	C2'-C3'-O3'	8.26	127.67	109.50
37	h	78	TYR	CB-CA-C	8.26	126.92	110.40
3	8	70	G	N9-C1'-C2'	-8.25	102.92	112.00
10	G	53	ARG	NE-CZ-NH2	-8.23	116.18	120.30
22	S	29	ARG	CG-CD-NE	-8.23	94.52	111.80
22	S	10	TYR	CA-CB-CG	-8.22	97.78	113.40
1	5	2087	C	N1-C1'-C2'	-8.21	102.97	112.00
1	5	3938	G	N9-C1'-C2'	8.21	124.67	114.00
1	5	3879	G	N9-C1'-C2'	-8.20	102.98	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	R	132	PHE	N-CA-C	-8.20	88.86	111.00
1	5	3653	A	N9-C1'-C2'	-8.19	102.99	112.00
50	SA	151	ASP	CB-CG-OD2	8.19	125.67	118.30
1	5	93	G	N9-C1'-C2'	8.18	124.64	114.00
49	S2	594	A	N9-C1'-C2'	-8.18	103.00	112.00
1	5	2553	A	O4'-C1'-N9	8.18	114.74	108.20
49	S2	1623	A	C2'-C3'-O3'	8.17	127.48	109.50
35	f	85	ARG	NE-CZ-NH2	-8.16	116.22	120.30
1	5	4498	U	N1-C1'-C2'	-8.16	103.02	112.00
1	5	2797	C	N1-C1'-C2'	-8.15	103.03	112.00
49	S2	1408	U	N1-C1'-C2'	8.15	124.60	114.00
31	b	44	ARG	NE-CZ-NH1	8.15	124.37	120.30
7	D	268	ARG	NE-CZ-NH1	8.14	124.37	120.30
18	O	37	ARG	NE-CZ-NH2	-8.13	116.23	120.30
49	S2	381	C	N1-C1'-C2'	8.13	124.57	114.00
35	f	4	ARG	CA-CB-CG	8.12	131.28	113.40
1	5	2465	C	N1-C1'-C2'	8.12	124.56	114.00
1	5	2246	C	C2'-C3'-O3'	8.11	127.34	109.50
1	5	4723	A	C4-N9-C1'	8.11	140.89	126.30
1	5	2806	A	N9-C1'-C2'	-8.10	103.08	112.00
3	8	34	U	C2'-C3'-O3'	8.10	127.33	109.50
44	o	57	ARG	NE-CZ-NH1	8.10	124.35	120.30
1	5	3635	A	N9-C1'-C2'	-8.10	103.09	112.00
1	5	1867	A	N9-C1'-C2'	8.09	124.52	114.00
9	F	58	HIS	CB-CA-C	-8.09	94.23	110.40
1	5	3735	G	C2'-C3'-O3'	8.07	127.26	109.50
66	SQ	126	ARG	NE-CZ-NH2	8.07	124.34	120.30
14	K	24	ALA	CA-C-N	8.06	134.94	117.20
1	5	3773	U	C4'-C3'-O3'	8.06	129.12	113.00
25	V	98	PHE	CB-CG-CD1	-8.05	115.16	120.80
1	5	235	A	O4'-C1'-N9	8.05	114.64	108.20
3	8	94	G	C2'-C3'-O3'	8.04	127.19	109.50
7	D	44	TYR	CB-CA-C	8.04	126.49	110.40
1	5	2683	C	C2'-C3'-O3'	8.04	127.19	109.50
1	5	3908	A	N9-C1'-C2'	8.03	124.44	114.00
35	f	22	ARG	NE-CZ-NH1	8.03	124.31	120.30
7	D	248	ARG	NE-CZ-NH2	-8.03	116.29	120.30
1	5	3905	A	C2'-C3'-O3'	8.02	127.15	109.50
17	N	139	HIS	N-CA-CB	8.01	125.02	110.60
1	5	4600	G	N9-C1'-C2'	-8.01	103.19	112.00
3	8	34	U	C5'-C4'-O4'	8.01	118.71	109.10
64	SO	147	ARG	CG-CD-NE	-8.00	95.00	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	B	62	ARG	NE-CZ-NH1	8.00	124.30	120.30
1	5	4497	U	N1-C1'-C2'	-8.00	103.20	112.00
55	SF	136	ARG	NE-CZ-NH1	7.99	124.29	120.30
17	N	143	ARG	CG-CD-NE	-7.98	95.04	111.80
48	4	285	LEU	C-N-CD	-7.98	103.05	120.60
48	4	278	THR	CA-C-N	7.97	134.73	117.20
1	5	4885	U	C2'-C3'-O3'	7.97	127.03	109.50
5	B	169	ARG	NE-CZ-NH1	7.96	124.28	120.30
1	5	2394	G	O4'-C1'-N9	7.95	114.56	108.20
1	5	3692	A	C2'-C3'-O3'	7.95	126.99	109.50
48	4	267	ASP	CA-C-N	7.95	139.34	117.10
20	Q	174	PHE	CB-CA-C	7.93	126.27	110.40
18	O	110	PRO	C-N-CD	-7.93	103.15	120.60
49	S2	964	A	N9-C1'-C2'	7.93	124.31	114.00
1	5	4163	U	N1-C1'-C2'	-7.93	103.28	112.00
12	I	119	PHE	CB-CG-CD1	7.92	126.35	120.80
19	P	3	ARG	NE-CZ-NH1	7.92	124.26	120.30
1	5	315	G	C1'-O4'-C4'	-7.92	103.57	109.90
49	S2	1292	C	C4'-C3'-O3'	7.92	128.83	113.00
49	S2	399	C	N1-C1'-C2'	-7.91	103.30	112.00
1	5	4723	A	C8-N9-C1'	-7.90	113.48	127.70
4	A	193	ARG	NE-CZ-NH2	-7.90	116.35	120.30
1	5	4371	G	O4'-C1'-N9	7.90	114.52	108.20
49	S2	968	U	N1-C1'-C2'	-7.89	103.31	112.00
51	SB	146	ARG	NE-CZ-NH2	-7.88	116.36	120.30
68	SS	42	HIS	CB-CA-C	-7.88	94.65	110.40
1	5	2263	A	O4'-C1'-N9	-7.87	101.91	108.20
14	K	39	PRO	CA-N-CD	-7.86	100.49	111.50
67	SR	82	ASP	CB-CG-OD2	-7.86	111.22	118.30
1	5	668	C	C2'-C3'-O3'	7.86	126.78	109.50
1	5	2263	A	C5'-C4'-O4'	7.86	118.53	109.10
78	Sc	44	ARG	NE-CZ-NH2	7.85	124.22	120.30
49	S2	1703	C	N1-C1'-C2'	-7.84	103.37	112.00
49	S2	1835	A	C5'-C4'-O4'	7.84	118.51	109.10
66	SQ	126	ARG	NE-CZ-NH1	-7.84	116.38	120.30
4	A	37	ARG	NE-CZ-NH2	-7.84	116.38	120.30
48	4	76	SER	O-C-N	7.84	135.24	122.70
1	5	716	C	C2'-C3'-O3'	7.83	126.72	109.50
1	5	353	A	N9-C1'-C2'	-7.82	103.39	112.00
16	M	119	ARG	NE-CZ-NH2	7.82	124.21	120.30
1	5	1805	A	N9-C1'-C2'	7.82	124.17	114.00
1	5	962	C	N1-C1'-C2'	7.81	124.15	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	Y	11	ARG	NE-CZ-NH2	-7.80	116.40	120.30
3	8	64	U	N1-C1'-C2'	7.80	124.14	114.00
49	S2	164	A	N9-C1'-C2'	-7.80	103.42	112.00
1	5	964	A	C4'-C3'-O3'	7.78	128.56	113.00
23	T	13	TYR	N-CA-CB	-7.78	96.60	110.60
73	SX	67	ARG	NE-CZ-NH1	-7.76	116.42	120.30
1	5	4463	U	N1-C1'-C2'	-7.75	103.47	112.00
1	5	43	U	N1-C1'-C2'	-7.75	103.47	112.00
1	5	157	U	O4'-C1'-N1	7.74	114.40	108.20
7	D	198	HIS	CB-CA-C	7.74	125.89	110.40
1	5	4282	A	N9-C1'-C2'	7.73	124.05	114.00
48	4	495	ARG	O-C-N	-7.72	110.35	122.70
1	5	5066	U	N1-C1'-C2'	7.72	124.03	114.00
9	F	168	ARG	CG-CD-NE	-7.71	95.61	111.80
52	SC	241	PHE	N-CA-CB	7.70	124.46	110.60
1	5	4194	U	N1-C1'-C2'	-7.69	103.54	112.00
30	a	128	PHE	CB-CA-C	7.67	125.75	110.40
1	5	4238	G	N9-C1'-C2'	-7.67	103.57	112.00
1	5	294	G	C1'-O4'-C4'	-7.66	103.77	109.90
59	SJ	48	PHE	N-CA-CB	7.66	124.38	110.60
1	5	292	G	O4'-C1'-N9	-7.65	102.08	108.20
1	5	1522	G	N9-C1'-C2'	-7.65	103.59	112.00
35	f	4	ARG	CG-CD-NE	-7.64	95.75	111.80
49	S2	1701	C	N1-C1'-C2'	7.64	123.94	114.00
4	A	211	PHE	CB-CA-C	7.63	125.66	110.40
14	K	30	PRO	CB-CA-C	7.63	131.08	112.00
5	B	116	ARG	CG-CD-NE	7.63	127.82	111.80
63	SN	83	ASP	CB-CG-OD2	-7.62	111.44	118.30
1	5	53	C	C2'-C3'-O3'	7.62	126.25	109.50
1	5	2790	U	N1-C1'-C2'	7.62	123.90	114.00
49	S2	1395	C	C2'-C3'-O3'	7.62	126.26	109.50
3	8	94	G	C5'-C4'-O4'	7.61	118.23	109.10
7	D	210	TYR	CA-CB-CG	-7.60	98.96	113.40
72	SW	117	ARG	NH1-CZ-NH2	7.60	127.76	119.40
9	F	36	ARG	NE-CZ-NH2	7.60	124.10	120.30
49	S2	349	A	C2'-C3'-O3'	7.59	126.21	109.50
1	5	1916	G	N9-C1'-C2'	7.59	123.87	114.00
73	SX	8	ARG	NE-CZ-NH1	-7.59	116.50	120.30
37	h	119	PHE	CB-CA-C	-7.59	95.22	110.40
52	SC	236	PHE	N-CA-CB	7.58	124.25	110.60
63	SN	113	PHE	CB-CA-C	-7.58	95.23	110.40
1	5	4464	A	C5'-C4'-O4'	7.58	118.19	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1575	A	N9-C1'-C2'	7.57	123.84	114.00
48	4	104	ASP	CB-CA-C	7.57	125.54	110.40
70	SU	90	ASP	CB-CG-OD1	7.56	125.11	118.30
12	I	4	ARG	CG-CD-NE	-7.56	95.93	111.80
1	5	4583	C	N1-C1'-C2'	-7.55	103.69	112.00
1	5	1377	G	C2'-C3'-O3'	7.55	126.11	109.50
1	5	4548	A	O4'-C1'-N9	-7.55	102.16	108.20
1	5	4911	A	C1'-O4'-C4'	-7.55	103.86	109.90
49	S2	1114	U	O4'-C1'-N1	7.54	114.24	108.20
1	5	158	A	N9-C1'-C2'	-7.54	103.70	112.00
49	S2	1664	A	C2'-C3'-O3'	7.54	126.09	109.50
3	8	38	U	O4'-C1'-N1	7.53	114.22	108.20
14	K	104	ILE	CA-CB-CG2	-7.53	95.84	110.90
1	5	2588	C	C4'-C3'-O3'	7.52	128.04	113.00
1	5	5046	U	C2'-C3'-O3'	7.52	126.05	109.50
7	D	35	ARG	NE-CZ-NH1	7.52	124.06	120.30
46	q	44	ARG	NE-CZ-NH1	7.52	124.06	120.30
3	8	104	A	O4'-C1'-N9	-7.52	102.19	108.20
1	5	354	U	N1-C1'-C2'	-7.51	103.73	112.00
14	K	130	LYS	CA-CB-CG	7.51	129.93	113.40
9	F	228	HIS	N-CA-CB	7.51	124.12	110.60
30	a	79	TRP	CB-CA-C	7.51	125.42	110.40
49	S2	1835	A	C4'-C3'-O3'	-7.51	93.63	109.40
1	5	4737	G	N9-C1'-C2'	7.51	123.76	114.00
49	S2	1863	A	N9-C1'-C2'	7.51	123.76	114.00
1	5	1881	C	N1-C1'-C2'	7.50	123.75	114.00
12	I	171	TRP	N-CA-CB	7.50	124.09	110.60
82	Sg	125	ARG	NE-CZ-NH2	-7.49	116.55	120.30
1	5	1724	G	O4'-C4'-C3'	-7.49	96.51	104.00
38	i	28	ARG	CG-CD-NE	-7.49	96.08	111.80
46	q	80	PRO	C-N-CA	-7.49	102.99	121.70
6	C	222	ARG	NE-CZ-NH1	7.48	124.04	120.30
49	S2	1142	G	N9-C1'-C2'	-7.48	103.77	112.00
49	S2	732	U	C2'-C3'-O3'	7.48	125.95	109.50
1	5	1382	G	N9-C1'-C2'	7.47	123.72	114.00
49	S2	9	U	N1-C1'-C2'	-7.47	103.78	112.00
1	5	3868	G	N9-C1'-C2'	-7.47	103.78	112.00
8	E	179	ARG	NE-CZ-NH1	7.47	124.03	120.30
14	K	137	GLN	N-CA-C	7.47	131.16	111.00
1	5	4693	C	C5'-C4'-O4'	7.46	118.05	109.10
58	SI	113	TYR	CA-CB-CG	7.46	127.57	113.40
17	N	131	GLU	CB-CG-CD	-7.46	94.06	114.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	157	U	N1-C1'-C2'	-7.46	103.80	112.00
1	5	1378	C	N1-C1'-C2'	7.45	123.69	114.00
49	S2	1542	C	N1-C1'-C2'	7.45	123.69	114.00
1	5	4535	A	C2'-C3'-O3'	7.44	125.87	109.50
48	4	123	ASP	CA-C-N	7.44	131.09	116.20
73	SX	88	ASP	CB-CG-OD2	-7.44	111.60	118.30
49	S2	1113	A	N9-C1'-C2'	7.44	123.67	114.00
1	5	4212	A	N9-C1'-C2'	7.44	123.67	114.00
1	5	2092	G	N9-C1'-C2'	7.44	123.67	114.00
20	Q	34	PHE	N-CA-CB	7.43	123.97	110.60
49	S2	384	U	N1-C1'-C2'	-7.43	103.83	112.00
5	B	117	ARG	NE-CZ-NH2	-7.43	116.59	120.30
49	S2	1	U	C5'-C4'-O4'	7.43	118.01	109.10
1	5	1266	G	C2'-C3'-O3'	7.42	125.83	109.50
1	5	1445	U	C2'-C3'-O3'	7.42	125.82	109.50
1	5	4120	U	N1-C1'-C2'	-7.42	103.84	112.00
49	S2	427	U	N1-C1'-C2'	7.41	123.64	114.00
1	5	2046	G	C1'-O4'-C4'	-7.41	103.97	109.90
1	5	1521	C	N1-C1'-C2'	-7.41	103.85	112.00
1	5	4322	G	N9-C1'-C2'	-7.41	103.86	112.00
81	Sf	143	LYS	CD-CE-NZ	7.41	128.73	111.70
81	Sf	116	ARG	NE-CZ-NH1	7.40	124.00	120.30
17	N	180	PHE	CB-CA-C	7.39	125.19	110.40
49	S2	1606	G	N9-C1'-C2'	-7.39	103.86	112.00
7	D	223	PHE	CB-CG-CD2	-7.39	115.62	120.80
30	a	34	ASN	CB-CA-C	7.39	125.19	110.40
1	5	4464	A	N9-C1'-C2'	7.39	123.60	114.00
1	5	394	G	N9-C1'-C2'	-7.38	103.88	112.00
1	5	3938	G	O4'-C1'-N9	-7.38	102.30	108.20
4	A	242	ARG	NE-CZ-NH1	7.38	123.99	120.30
1	5	4981	G	N9-C1'-C2'	-7.38	103.89	112.00
1	5	2124	G	C2'-C3'-O3'	7.37	125.72	109.50
1	5	3871	A	N9-C1'-C2'	7.37	123.58	114.00
1	5	55	G	N9-C1'-C2'	-7.37	103.89	112.00
1	5	450	G	N9-C1'-C2'	-7.37	103.89	112.00
3	8	73	U	N1-C1'-C2'	-7.37	103.89	112.00
7	D	210	TYR	N-CA-CB	7.37	123.86	110.60
1	5	4251	A	N9-C1'-C2'	7.36	123.57	114.00
68	SS	86	ARG	CG-CD-NE	-7.36	96.33	111.80
1	5	5061	A	C2'-C3'-O3'	7.36	125.69	109.50
1	5	1370	G	N9-C1'-C2'	7.36	123.57	114.00
1	5	3843	C	N1-C1'-C2'	7.36	123.57	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1249	C	N1-C1'-C2'	-7.36	103.91	112.00
51	SB	136	ARG	NE-CZ-NH2	7.36	123.98	120.30
1	5	1440	U	C2'-C3'-O3'	7.36	125.69	109.50
59	SJ	69	ARG	NE-CZ-NH2	7.36	123.98	120.30
4	A	189	TYR	CA-CB-CG	7.35	127.36	113.40
1	5	974	C	C2'-C3'-O3'	7.34	125.66	109.50
1	5	4531	U	N1-C1'-C2'	7.34	123.54	114.00
49	S2	1623	A	N9-C1'-C2'	-7.34	103.93	112.00
49	S2	1659	U	N1-C1'-C2'	-7.34	103.93	112.00
1	5	979	C	C2'-C3'-O3'	7.33	125.63	109.50
1	5	2769	U	N1-C1'-C2'	-7.33	103.94	112.00
49	S2	1115	U	N1-C1'-C2'	7.33	123.52	114.00
49	S2	1486	A	N9-C1'-C2'	-7.32	103.95	112.00
57	SH	99	ARG	NE-CZ-NH2	7.30	123.95	120.30
53	SD	159	HIS	CB-CA-C	7.30	124.99	110.40
1	5	147	A	N9-C1'-C2'	7.29	123.48	114.00
1	5	406	C	C2'-C3'-O3'	7.29	125.55	109.50
1	5	1601	A	N9-C1'-C2'	-7.29	103.98	112.00
1	5	2848	G	N9-C1'-C2'	-7.29	103.98	112.00
1	5	1379	C	C1'-O4'-C4'	-7.29	104.07	109.90
1	5	97	G	N9-C1'-C2'	-7.29	103.98	112.00
1	5	486	C	C2'-C3'-O3'	7.29	125.54	109.50
14	K	74	VAL	C-N-CD	-7.29	104.57	120.60
13	J	64	ARG	NE-CZ-NH2	7.29	123.94	120.30
14	K	130	LYS	CB-CG-CD	7.28	130.53	111.60
1	5	4084	G	C2'-C3'-O3'	7.28	125.50	109.50
1	5	4519	C	N1-C1'-C2'	-7.27	104.00	112.00
1	5	2280	G	N9-C1'-C2'	7.27	123.45	114.00
10	G	235	ARG	NE-CZ-NH1	7.26	123.93	120.30
51	SB	82	ARG	CG-CD-NE	-7.26	96.55	111.80
1	5	2796	G	N9-C1'-C2'	7.25	123.43	114.00
1	5	4750	G	O4'-C1'-N9	7.25	114.00	108.20
1	5	1481	C	C2'-C3'-O3'	7.25	125.45	109.50
27	X	48	ARG	NE-CZ-NH1	7.24	123.92	120.30
1	5	4966	A	N9-C1'-C2'	7.24	123.41	114.00
1	5	2812	A	N9-C1'-C2'	7.23	123.40	114.00
1	5	664	G	C1'-O4'-C4'	-7.22	104.13	109.90
49	S2	1419	C	N1-C1'-C2'	-7.21	104.07	112.00
46	q	84	GLY	N-CA-C	7.20	131.10	113.10
39	j	11	ARG	NE-CZ-NH1	7.20	123.90	120.30
49	S2	24	C	N1-C1'-C2'	-7.20	104.08	112.00
1	5	100	C	N1-C1'-C2'	-7.20	104.08	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	269	ALA	C-N-CA	-7.20	103.71	121.70
49	S2	1339	U	N1-C1'-C2'	-7.19	104.09	112.00
59	SJ	115	PHE	CB-CG-CD2	-7.19	115.77	120.80
37	h	89	ARG	NE-CZ-NH1	7.19	123.89	120.30
39	j	71	TYR	CA-CB-CG	7.18	127.05	113.40
30	a	109	TYR	CB-CA-C	7.18	124.76	110.40
1	5	1534	A	C5'-C4'-O4'	7.18	117.71	109.10
1	5	2511	A	C4'-C3'-O3'	-7.17	94.34	109.40
53	SD	216	GLU	CG-CD-OE2	7.17	132.63	118.30
4	A	3	ARG	NE-CZ-NH2	-7.16	116.72	120.30
33	d	73	TRP	N-CA-CB	-7.16	97.71	110.60
14	K	28	LEU	CB-CG-CD1	7.16	123.17	111.00
49	S2	1404	U	C4'-C3'-O3'	-7.16	94.36	109.40
1	5	1359	G	C4'-C3'-O3'	-7.16	94.36	109.40
1	5	4279	A	N9-C1'-C2'	-7.16	104.13	112.00
49	S2	798	A	N9-C1'-C2'	-7.16	104.13	112.00
49	S2	402	C	N1-C1'-C2'	-7.16	104.13	112.00
6	C	41	HIS	N-CA-CB	7.14	123.46	110.60
38	i	39	PHE	N-CA-CB	7.14	123.44	110.60
59	SJ	115	PHE	CB-CG-CD1	7.13	125.79	120.80
1	5	157	U	C1'-O4'-C4'	-7.13	104.20	109.90
1	5	350	C	N1-C1'-C2'	7.13	123.26	114.00
14	K	114	ARG	CG-CD-NE	7.12	126.76	111.80
73	SX	20	HIS	CB-CA-C	7.12	124.65	110.40
1	5	383	A	C1'-C2'-O2'	-7.12	89.23	110.60
22	S	28	TYR	CB-CG-CD1	7.12	125.27	121.00
15	L	82	ARG	NE-CZ-NH2	-7.11	116.74	120.30
30	a	62	HIS	N-CA-CB	7.11	123.40	110.60
55	SF	122	ARG	NE-CZ-NH1	7.11	123.86	120.30
54	SE	104	ASP	CB-CG-OD2	-7.11	111.90	118.30
1	5	29	G	N9-C1'-C2'	7.11	123.24	114.00
49	S2	1645	C	N1-C1'-C2'	7.11	123.24	114.00
1	5	1500	A	C4'-C3'-O3'	7.10	127.20	113.00
37	h	51	ARG	NE-CZ-NH1	7.10	123.85	120.30
1	5	2324	C	C2'-C3'-O3'	7.10	125.12	109.50
3	8	38	U	C1'-O4'-C4'	-7.10	104.22	109.90
1	5	669	C	O4'-C1'-N1	7.09	113.87	108.20
1	5	4500	U	O5'-P-OP1	-7.09	99.32	105.70
39	j	27	TYR	CA-CB-CG	-7.09	99.92	113.40
3	8	94	G	N9-C1'-C2'	7.09	123.21	114.00
9	F	194	HIS	CB-CA-C	-7.09	96.23	110.40
1	5	4750	G	C1'-O4'-C4'	-7.08	104.23	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	X	48	ARG	NE-CZ-NH2	-7.08	116.76	120.30
1	5	4341	C	N1-C1'-C2'	-7.08	104.22	112.00
1	5	4464	A	C2'-C3'-O3'	7.07	125.06	109.50
1	5	30	C	N1-C1'-C2'	7.07	123.19	114.00
1	5	4519	C	O4'-C1'-N1	7.06	113.85	108.20
1	5	1355	G	N9-C1'-C2'	7.06	123.18	114.00
26	W	8	PHE	CB-CG-CD1	7.05	125.74	120.80
48	4	495	ARG	C-N-CA	-7.05	104.08	121.70
1	5	291	U	N1-C1'-C2'	7.05	123.16	114.00
11	H	156	ASN	N-CA-CB	7.04	123.27	110.60
48	4	113	SER	N-CA-C	-7.04	91.99	111.00
49	S2	384	U	C2'-C3'-O3'	7.04	124.98	109.50
1	5	2046	G	C2'-C3'-O3'	7.03	124.97	109.50
49	S2	863	U	N1-C1'-C2'	7.03	123.14	114.00
1	5	1479	G	N9-C1'-C2'	7.03	123.14	114.00
1	5	1552	G	N9-C1'-C2'	-7.03	104.27	112.00
8	E	219	ARG	NE-CZ-NH1	7.03	123.81	120.30
18	O	49	ARG	NE-CZ-NH1	7.03	123.81	120.30
33	d	25	TYR	CB-CG-CD1	-7.03	116.78	121.00
49	S2	821	G	O4'-C1'-N9	-7.03	102.58	108.20
51	SB	205	TYR	CA-CB-CG	-7.03	100.05	113.40
1	5	1455	G	C2'-C3'-O3'	7.02	124.95	109.50
1	5	514	U	C2'-C3'-O3'	7.02	124.94	109.50
53	SD	67	ARG	NE-CZ-NH2	-7.02	116.79	120.30
49	S2	1378	A	O4'-C1'-N9	-7.01	102.59	108.20
66	SQ	85	ARG	CG-CD-NE	-7.01	97.07	111.80
3	8	34	U	O4'-C1'-N1	-7.01	102.59	108.20
1	5	2695	A	C2'-C3'-O3'	7.00	124.91	109.50
1	5	3817	A	N9-C1'-C2'	7.00	123.10	114.00
49	S2	1157	G	N9-C1'-C2'	-7.00	104.30	112.00
1	5	235	A	N9-C1'-C2'	-7.00	104.30	112.00
1	5	4531	U	O4'-C1'-N1	-7.00	102.60	108.20
1	5	4510	A	O4'-C1'-N9	-7.00	102.60	108.20
48	4	741	MET	CA-CB-CG	7.00	125.19	113.30
49	S2	427	U	O4'-C1'-N1	-7.00	102.60	108.20
1	5	42	A	C1'-O4'-C4'	-6.99	104.31	109.90
48	4	801	ARG	N-CA-CB	6.99	123.19	110.60
1	5	4589	A	O4'-C1'-N9	-6.99	102.61	108.20
6	C	35	ASP	CB-CG-OD1	6.99	124.59	118.30
1	5	1676	C	C1'-C2'-O2'	-6.99	89.64	110.60
9	F	197	TYR	CB-CA-C	-6.99	96.42	110.40
49	S2	1839	U	C2-N1-C1'	6.98	126.08	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	o	48	TYR	CA-CB-CG	-6.98	100.14	113.40
48	4	701	ARG	NE-CZ-NH1	6.98	123.79	120.30
1	5	2851	G	C2'-C3'-O3'	6.97	124.85	113.70
1	5	4265	U	N1-C1'-C2'	6.97	123.06	114.00
48	4	54	THR	N-CA-C	6.97	129.81	111.00
1	5	332	C	N1-C1'-C2'	6.97	123.06	114.00
1	5	4270	C	N1-C1'-C2'	-6.96	104.34	112.00
80	Se	13	ARG	NE-CZ-NH2	-6.96	116.82	120.30
49	S2	448	A	N9-C1'-C2'	-6.96	104.34	112.00
1	5	1625	G	N9-C1'-C2'	6.96	123.05	114.00
1	5	2589	C	C2'-C3'-O3'	6.96	124.83	113.70
49	S2	104	A	C2'-C3'-O3'	6.96	124.83	113.70
34	e	74	PHE	CB-CG-CD1	-6.95	115.93	120.80
59	SJ	138	ARG	NE-CZ-NH1	6.95	123.78	120.30
49	S2	1022	U	O4'-C1'-N1	6.95	113.76	108.20
37	h	93	ARG	NE-CZ-NH2	-6.95	116.83	120.30
49	S2	617	G	N9-C1'-C2'	-6.95	104.36	112.00
1	5	209	U	O4'-C1'-N1	6.95	113.76	108.20
13	J	32	ARG	NE-CZ-NH1	6.95	123.77	120.30
13	J	146	ARG	CG-CD-NE	-6.95	97.21	111.80
25	V	97	TYR	N-CA-C	-6.94	92.25	111.00
48	4	121	VAL	C-N-CA	6.94	139.06	121.70
1	5	4589	A	N9-C1'-C2'	6.94	123.02	114.00
21	R	74	ARG	NE-CZ-NH2	6.93	123.77	120.30
49	S2	1143	A	O5'-P-OP1	-6.92	99.47	105.70
5	B	100	ARG	NE-CZ-NH1	6.90	123.75	120.30
9	F	219	ARG	NE-CZ-NH1	6.90	123.75	120.30
21	R	88	ARG	NE-CZ-NH1	6.90	123.75	120.30
1	5	54	G	N9-C1'-C2'	-6.89	104.42	112.00
10	G	49	ARG	NE-CZ-NH2	-6.89	116.85	120.30
49	S2	104	A	N9-C1'-C2'	-6.88	104.43	112.00
11	H	156	ASN	N-CA-C	-6.88	92.42	111.00
35	f	4	ARG	N-CA-CB	6.88	122.99	110.60
49	S2	923	G	C2'-C3'-O3'	6.88	124.71	113.70
1	5	454	U	C2'-C3'-O3'	6.87	124.70	113.70
49	S2	55	U	N1-C1'-C2'	6.87	122.94	114.00
1	5	1832	C	C2'-C3'-O3'	6.87	124.69	113.70
48	4	427	VAL	CB-CA-C	-6.87	98.34	111.40
20	Q	75	ARG	NE-CZ-NH1	6.87	123.73	120.30
49	S2	77	A	N9-C1'-C2'	-6.87	104.44	112.00
1	5	226	G	N9-C1'-C2'	-6.86	104.45	112.00
49	S2	674	C	O5'-P-OP2	-6.86	99.52	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	943	A	N9-C1'-C2'	-6.86	104.45	112.00
1	5	1631	A	O4'-C1'-N9	-6.86	102.71	108.20
8	E	179	ARG	NE-CZ-NH2	-6.86	116.87	120.30
1	5	5001	U	N1-C1'-C2'	6.86	122.91	114.00
5	B	274	TYR	CA-CB-CG	-6.85	100.39	113.40
1	5	1319	U	N1-C1'-C2'	-6.84	104.47	112.00
58	SI	197	PHE	CB-CG-CD2	-6.84	116.01	120.80
35	f	85	ARG	NE-CZ-NH1	6.83	123.72	120.30
49	S2	182	C	C2'-C3'-O3'	6.83	124.63	113.70
1	5	1815	G	O4'-C1'-N9	6.83	113.66	108.20
49	S2	73	C	O4'-C1'-N1	6.83	113.66	108.20
1	5	2271	C	N1-C1'-C2'	6.83	122.87	114.00
49	S2	1039	C	C2'-C3'-O3'	6.83	124.62	113.70
49	S2	1247	C	N1-C1'-C2'	6.83	122.87	114.00
1	5	3625	G	C2'-C3'-O3'	6.82	124.61	113.70
48	4	285	LEU	O-C-N	-6.82	108.14	121.10
20	Q	37	ARG	NE-CZ-NH1	-6.82	116.89	120.30
3	8	64	U	C2'-C3'-O3'	6.82	124.61	113.70
1	5	964	A	O4'-C1'-C2'	-6.81	98.99	105.80
1	5	5047	C	O5'-P-OP2	-6.81	99.57	105.70
46	q	6	ARG	N-CA-C	6.81	129.38	111.00
49	S2	992	A	N9-C1'-C2'	-6.80	104.52	112.00
63	SN	18	TYR	N-CA-CB	6.80	122.85	110.60
17	N	49	ARG	NE-CZ-NH2	-6.80	116.90	120.30
1	5	4518	A	O5'-P-OP1	6.80	118.86	110.70
1	5	1	C	O4'-C1'-N1	6.79	113.64	108.20
1	5	2319	C	N1-C1'-C2'	6.79	122.83	114.00
62	SM	127	TYR	CA-CB-CG	6.79	126.30	113.40
19	P	42	ARG	NE-CZ-NH1	6.78	123.69	120.30
1	5	3611	A	N9-C1'-C2'	6.78	122.81	114.00
2	7	72	U	C2'-C3'-O3'	6.78	124.55	113.70
29	Z	65	ARG	CG-CD-NE	-6.78	97.57	111.80
10	G	73	ARG	NE-CZ-NH1	6.78	123.69	120.30
25	V	97	TYR	CA-CB-CG	-6.78	100.53	113.40
1	5	1292	C	C2'-C3'-O3'	6.77	124.53	113.70
13	J	99	PHE	CB-CA-C	6.77	123.94	110.40
48	4	825	PHE	N-CA-C	6.76	129.24	111.00
48	4	42	LYS	CA-C-N	-6.75	102.35	117.20
49	S2	61	A	C4'-C3'-O3'	-6.75	95.22	109.40
49	S2	1198	G	C2'-C3'-O3'	6.75	124.50	113.70
20	Q	33	ARG	CG-CD-NE	-6.74	97.64	111.80
49	S2	1114	U	C1'-O4'-C4'	-6.74	104.51	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2395	A	N9-C1'-C2'	-6.74	104.59	112.00
49	S2	1838	U	O4'-C4'-C3'	-6.74	97.26	104.00
20	Q	15	ARG	NE-CZ-NH2	-6.74	116.93	120.30
10	G	54	PHE	CB-CG-CD2	-6.73	116.09	120.80
49	S2	596	U	N1-C1'-C2'	6.73	122.75	114.00
48	4	76	SER	CA-C-N	-6.72	102.41	117.20
8	E	101	ARG	NE-CZ-NH1	-6.72	116.94	120.30
1	5	1364	U	C2'-C3'-O3'	6.72	124.45	113.70
1	5	3875	G	N9-C1'-C2'	-6.72	104.61	112.00
1	5	4936	G	N9-C1'-C2'	-6.72	104.61	112.00
8	E	278	TYR	N-CA-C	-6.72	92.87	111.00
1	5	4230	C	O5'-P-OP1	-6.71	99.66	105.70
1	5	4197	G	N9-C1'-C2'	-6.71	104.62	112.00
49	S2	313	A	C1'-O4'-C4'	-6.71	104.53	109.90
49	S2	1433	C	C5'-C4'-C3'	6.71	126.73	116.00
1	5	84	A	O4'-C1'-N9	-6.71	102.83	108.20
1	5	58	G	N9-C1'-C2'	6.70	122.71	114.00
48	4	197	SER	CA-C-N	-6.70	102.80	116.20
14	K	111	ASN	CA-CB-CG	6.70	128.14	113.40
52	SC	200	ARG	NE-CZ-NH1	-6.70	116.95	120.30
49	S2	983	A	C8-N9-C1'	-6.70	115.64	127.70
1	5	2305	U	N1-C1'-C2'	6.70	122.70	114.00
14	K	26	SER	C-N-CA	6.70	138.44	121.70
59	SJ	108	ARG	NE-CZ-NH2	-6.69	116.96	120.30
49	S2	983	A	C4-N9-C1'	6.69	138.33	126.30
49	S2	824	C	N1-C1'-C2'	6.68	122.69	114.00
62	SM	33	ARG	CG-CD-NE	6.68	125.83	111.80
1	5	2675	G	N9-C1'-C2'	-6.68	104.66	112.00
29	Z	38	TYR	CB-CA-C	6.67	123.75	110.40
9	F	168	ARG	NE-CZ-NH2	-6.67	116.97	120.30
1	5	4280	A	C2'-C3'-O3'	6.67	124.37	113.70
49	S2	1201	U	N1-C1'-C2'	-6.67	104.67	112.00
33	d	87	ARG	N-CA-C	-6.67	93.00	111.00
46	q	204	LEU	CA-C-N	-6.67	102.54	117.20
48	4	122	THR	N-CA-CB	-6.66	97.64	110.30
49	S2	1838	U	C5'-C4'-O4'	6.66	117.10	109.10
1	5	3901	A	O4'-C1'-N9	-6.66	102.87	108.20
48	4	801	ARG	NE-CZ-NH2	-6.66	116.97	120.30
49	S2	918	U	N1-C1'-C2'	6.66	122.65	114.00
1	5	3882	C	N1-C1'-C2'	6.65	122.65	114.00
49	S2	415	A	C4-N9-C1'	-6.65	114.33	126.30
31	b	7	HIS	CB-CA-C	-6.65	97.10	110.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	d	73	TRP	CA-CB-CG	6.65	126.34	113.70
11	H	125	ARG	NE-CZ-NH1	6.65	123.62	120.30
57	SH	116	ARG	NE-CZ-NH2	-6.65	116.98	120.30
62	SM	33	ARG	NE-CZ-NH2	-6.64	116.98	120.30
49	S2	532	C	C2'-C3'-O3'	6.64	124.33	113.70
49	S2	1663	A	O4'-C1'-N9	6.64	113.51	108.20
1	5	1631	A	N9-C1'-C2'	6.64	122.63	114.00
1	5	4693	C	C2'-C3'-O3'	6.64	124.32	113.70
49	S2	620	G	O5'-P-OP1	6.63	118.66	110.70
49	S2	1667	U	N1-C1'-C2'	6.63	122.62	114.00
1	5	5022	U	C2'-C3'-O3'	6.63	124.31	113.70
1	5	336	A	O4'-C1'-N9	6.63	113.50	108.20
74	SY	76	TYR	CA-CB-CG	-6.63	100.81	113.40
1	5	3790	U	O4'-C1'-N1	-6.62	102.90	108.20
1	5	2827	G	O4'-C1'-N9	-6.61	102.91	108.20
1	5	4325	A	N9-C1'-C2'	6.61	122.60	114.00
1	5	4518	A	C2'-C3'-O3'	-6.61	94.96	109.50
49	S2	1452	A	N9-C1'-C2'	6.61	122.59	114.00
49	S2	1401	A	C2'-C3'-O3'	6.60	124.26	113.70
3	8	1	C	C5'-C4'-O4'	6.60	117.02	109.10
3	8	81	C	C1'-O4'-C4'	-6.59	104.62	109.90
1	5	514	U	C5'-C4'-O4'	6.59	117.01	109.10
1	5	964	A	N9-C1'-C2'	-6.59	104.75	112.00
1	5	3883	U	N1-C1'-C2'	6.59	122.57	114.00
5	B	26	ARG	CG-CD-NE	-6.59	97.96	111.80
69	ST	62	ARG	NE-CZ-NH1	-6.59	117.01	120.30
49	S2	631	U	O4'-C1'-N1	-6.59	102.93	108.20
1	5	927	G	C2'-C3'-O3'	6.58	124.23	113.70
28	Y	81	TYR	CA-CB-CG	-6.58	100.89	113.40
1	5	314	G	N9-C1'-C2'	-6.57	104.77	112.00
49	S2	1434	C	N1-C1'-C2'	6.57	122.55	114.00
49	S2	1835	A	O4'-C4'-C3'	-6.57	97.43	104.00
1	5	505	G	C2'-C3'-O3'	6.56	124.20	113.70
49	S2	415	A	C8-N9-C1'	6.56	139.51	127.70
1	5	2782	U	C4'-C3'-O3'	6.56	126.12	113.00
49	S2	1394	G	C2'-C3'-O3'	6.56	124.20	113.70
1	5	1930	U	N1-C1'-C2'	6.56	122.52	114.00
35	f	109	ARG	NE-CZ-NH1	6.56	123.58	120.30
1	5	4336	A	N9-C1'-C2'	-6.55	104.79	112.00
1	5	187	U	C2'-C3'-O3'	6.55	124.18	113.70
49	S2	160	U	C2'-C3'-O3'	6.55	124.18	113.70
62	SM	26	LEU	CB-CG-CD2	6.55	122.14	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	j	27	TYR	CB-CG-CD1	-6.55	117.07	121.00
48	4	122	THR	CB-CA-C	6.55	129.28	111.60
17	N	150	TRP	CA-CB-CG	6.54	126.14	113.70
50	SA	9	GLN	CA-CB-CG	6.54	127.80	113.40
53	SD	162	ASP	CB-CG-OD2	-6.54	112.41	118.30
1	5	1671	U	O4'-C1'-C2'	-6.54	99.26	105.80
49	S2	1830	U	N1-C1'-C2'	-6.54	104.81	112.00
19	P	23	ARG	NE-CZ-NH1	6.54	123.57	120.30
36	g	14	ASN	N-CA-CB	6.54	122.36	110.60
1	5	3827	G	N9-C1'-C2'	-6.53	104.81	112.00
33	d	85	ARG	NE-CZ-NH2	-6.53	117.03	120.30
1	5	1215	C	O5'-P-OP2	-6.53	99.83	105.70
1	5	1650	A	O4'-C1'-N9	-6.53	102.98	108.20
1	5	384	A	N9-C1'-C2'	6.52	122.48	114.00
1	5	119	G	O4'-C4'-C3'	-6.52	97.48	104.00
48	4	154	VAL	N-CA-C	-6.52	93.40	111.00
58	SI	55	TYR	CA-CB-CG	-6.52	101.02	113.40
16	M	109	ARG	NE-CZ-NH2	6.51	123.56	120.30
1	5	2075	G	C2'-C3'-O3'	6.51	124.11	113.70
1	5	5043	A	N9-C1'-C2'	6.50	122.45	114.00
1	5	432	U	N1-C1'-C2'	-6.50	104.85	112.00
49	S2	499	G	C2'-C3'-O3'	6.50	124.10	113.70
49	S2	1272	C	O5'-P-OP1	-6.50	99.85	105.70
1	5	946	C	O4'-C1'-N1	6.50	113.40	108.20
1	5	98	A	N9-C1'-C2'	-6.49	104.86	112.00
1	5	1887	G	C2'-C3'-O3'	6.49	124.09	113.70
73	SX	27	TYR	CA-CB-CG	6.49	125.73	113.40
1	5	4227	U	C2'-C3'-O3'	6.49	124.08	113.70
10	G	223	ARG	NE-CZ-NH1	6.49	123.54	120.30
19	P	25	HIS	CB-CA-C	6.48	123.37	110.40
56	SG	88	ARG	NE-CZ-NH1	6.48	123.54	120.30
49	S2	149	A	N9-C1'-C2'	6.48	122.43	114.00
1	5	209	U	C4'-C3'-O3'	6.48	125.95	113.00
49	S2	1838	U	C2-N1-C1'	-6.47	109.93	117.70
49	S2	427	U	C5'-C4'-O4'	6.47	116.87	109.10
50	SA	186	ARG	NE-CZ-NH1	6.47	123.53	120.30
1	5	1379	C	N1-C1'-C2'	6.47	122.41	114.00
48	4	269	ALA	CA-C-N	6.47	131.43	117.20
1	5	2118	G	C4'-C3'-O3'	6.46	125.93	113.00
9	F	209	PHE	N-CA-CB	6.46	122.23	110.60
1	5	307	A	N9-C1'-C2'	6.46	122.40	114.00
3	8	86	U	O4'-C1'-C2'	-6.46	99.34	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
63	SN	18	TYR	CA-CB-CG	-6.46	101.13	113.40
1	5	136	C	N1-C1'-C2'	-6.46	104.90	112.00
64	SO	147	ARG	NE-CZ-NH2	-6.46	117.07	120.30
1	5	1853	G	N9-C1'-C2'	-6.46	104.90	112.00
68	SS	14	ARG	NE-CZ-NH1	6.46	123.53	120.30
3	8	64	U	C5'-C4'-O4'	6.45	116.84	109.10
49	S2	1291	A	P-O3'-C3'	6.45	127.44	119.70
1	5	4076	G	N9-C1'-C2'	-6.45	104.90	112.00
1	5	4199	C	C4'-C3'-O3'	6.45	125.89	113.00
1	5	1573	G	N9-C1'-C2'	6.44	122.37	114.00
20	Q	181	ARG	CA-CB-CG	6.44	127.57	113.40
49	S2	1850	A	N9-C1'-C2'	6.44	122.37	114.00
30	a	109	TYR	CB-CG-CD2	-6.44	117.14	121.00
49	S2	1116	C	O5'-P-OP1	-6.44	99.91	105.70
1	5	1572	U	N1-C1'-C2'	6.44	122.37	114.00
14	K	129	ILE	O-C-N	-6.43	112.41	122.70
23	T	13	TYR	CA-CB-CG	6.43	125.62	113.40
49	S2	1059	G	N9-C1'-C2'	6.43	122.36	114.00
63	SN	64	ARG	NE-CZ-NH2	-6.43	117.09	120.30
49	S2	848	U	C2-N1-C1'	6.43	125.41	117.70
47	r	31	ASN	N-CA-CB	6.42	122.16	110.60
49	S2	427	U	P-O5'-C5'	6.42	131.18	120.90
49	S2	1860	A	N9-C1'-C2'	-6.42	104.94	112.00
78	Sc	44	ARG	CG-CD-NE	6.42	125.28	111.80
1	5	4338	G	N9-C1'-C2'	-6.42	104.94	112.00
64	SO	147	ARG	NE-CZ-NH1	6.42	123.51	120.30
1	5	2665	U	C2'-C3'-O3'	6.41	123.95	113.70
46	q	45	MET	CA-CB-CG	-6.41	102.41	113.30
1	5	4976	U	N1-C1'-C2'	6.41	122.33	114.00
1	5	4534	G	N9-C1'-C2'	-6.40	104.96	112.00
7	D	293	ARG	NE-CZ-NH1	6.40	123.50	120.30
1	5	4127	A	O4'-C1'-N9	6.40	113.32	108.20
1	5	2546	G	C4'-C3'-O3'	6.40	125.80	113.00
1	5	2649	G	N9-C1'-C2'	6.40	122.32	114.00
48	4	278	THR	C-N-CA	6.40	137.69	121.70
1	5	2088	A	C2'-C3'-O3'	6.39	123.93	113.70
3	8	35	C	N1-C1'-C2'	6.39	122.31	114.00
49	S2	654	A	N9-C1'-C2'	-6.39	104.97	112.00
18	O	37	ARG	NE-CZ-NH1	6.39	123.50	120.30
9	F	168	ARG	CB-CG-CD	6.39	128.21	111.60
1	5	1980	U	C1'-O4'-C4'	-6.39	104.79	109.90
26	W	8	PHE	CB-CG-CD2	-6.39	116.33	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	Y	81	TYR	CB-CA-C	6.38	123.17	110.40
7	D	223	PHE	CB-CG-CD1	6.38	125.27	120.80
4	A	37	ARG	NE-CZ-NH1	6.38	123.49	120.30
1	5	1724	G	C4'-C3'-O3'	-6.38	96.00	109.40
49	S2	1082	A	N9-C1'-C2'	6.38	122.29	114.00
49	S2	1249	C	C2'-C3'-O3'	6.38	123.91	113.70
1	5	1241	C	C2'-C3'-O3'	6.37	123.90	113.70
48	4	404	THR	N-CA-CB	6.37	122.41	110.30
49	S2	1851	A	N9-C1'-C2'	6.37	122.28	114.00
1	5	336	A	C1'-O4'-C4'	-6.36	104.81	109.90
48	4	497	MET	C-N-CA	6.36	137.61	121.70
1	5	1642	A	C4'-C3'-O3'	-6.36	96.05	109.40
6	C	143	ARG	NE-CZ-NH2	-6.36	117.12	120.30
1	5	1272	C	O4'-C1'-N1	6.36	113.28	108.20
4	A	63	PHE	CB-CG-CD1	6.36	125.25	120.80
49	S2	1109	C	C1'-O4'-C4'	-6.36	104.81	109.90
1	5	417	G	O4'-C1'-N9	6.35	113.28	108.20
1	5	2554	U	C2'-C3'-O3'	6.34	123.85	113.70
49	S2	1584	G	N9-C1'-C2'	6.34	122.24	114.00
49	S2	91	A	N9-C1'-C2'	-6.34	105.03	112.00
1	5	1615	C	C2'-C3'-O3'	6.34	123.84	113.70
1	5	4519	C	C2'-C3'-O3'	6.34	123.84	113.70
1	5	2511	A	O4'-C1'-N9	-6.33	103.13	108.20
1	5	3901	A	C5'-C4'-O4'	6.33	116.70	109.10
9	F	36	ARG	NE-CZ-NH1	-6.33	117.13	120.30
1	5	294	G	N9-C1'-C2'	6.33	122.23	114.00
1	5	2581	A	N9-C1'-C2'	6.33	122.23	114.00
1	5	84	A	N9-C1'-C2'	6.33	122.23	114.00
28	Y	78	TYR	CB-CA-C	6.33	123.05	110.40
46	q	44	ARG	CD-NE-CZ	6.33	132.46	123.60
1	5	4911	A	O5'-P-OP2	-6.32	100.01	105.70
49	S2	1292	C	P-O5'-C5'	6.32	131.01	120.90
1	5	4519	C	O4'-C4'-C3'	-6.32	97.69	104.00
49	S2	960	U	C2'-C3'-O3'	6.32	123.80	113.70
19	P	139	TYR	CA-CB-CG	-6.31	101.41	113.40
9	F	136	ARG	NE-CZ-NH2	-6.31	117.14	120.30
10	G	235	ARG	CG-CD-NE	6.30	125.04	111.80
12	I	34	PHE	CB-CG-CD1	-6.30	116.39	120.80
49	S2	1597	C	N1-C1'-C2'	6.30	122.19	114.00
1	5	3671	G	N9-C1'-C2'	6.29	122.18	114.00
49	S2	1194	A	N9-C1'-C2'	-6.29	105.08	112.00
1	5	1282	G	O5'-P-OP1	-6.29	100.04	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1724	G	N9-C1'-C2'	6.29	122.17	114.00
7	D	35	ARG	CG-CD-NE	6.29	125.00	111.80
1	5	1672	U	C2-N1-C1'	6.28	125.24	117.70
3	8	104	A	N9-C1'-C2'	6.28	122.17	114.00
66	SQ	138	ARG	NE-CZ-NH1	6.28	123.44	120.30
14	K	129	ILE	C-N-CA	6.28	137.40	121.70
49	S2	1519	U	N1-C1'-C2'	6.28	122.16	114.00
7	D	145	TYR	CB-CA-C	6.28	122.95	110.40
1	5	3653	A	O5'-P-OP1	-6.27	100.05	105.70
11	H	31	ARG	NE-CZ-NH2	-6.27	117.16	120.30
1	5	219	G	O5'-P-OP2	-6.27	100.06	105.70
22	S	83	ARG	CG-CD-NE	6.27	124.97	111.80
1	5	2827	G	N9-C1'-C2'	6.27	122.15	114.00
1	5	2511	A	C2'-C3'-O3'	6.27	123.73	113.70
1	5	4519	C	C4'-C3'-C2'	-6.27	96.33	102.60
49	S2	475	C	O5'-P-OP1	-6.26	100.06	105.70
7	D	30	TYR	CB-CA-C	6.26	122.92	110.40
1	5	3648	A	O4'-C1'-N9	6.25	113.20	108.20
49	S2	1669	G	N9-C1'-C2'	6.25	122.13	114.00
34	e	5	ARG	NE-CZ-NH1	6.25	123.42	120.30
3	8	62	A	C8-N9-C1'	6.25	138.95	127.70
1	5	3880	G	N9-C1'-C2'	6.25	122.12	114.00
20	Q	33	ARG	NE-CZ-NH2	-6.25	117.18	120.30
49	S2	1855	G	O5'-P-OP2	-6.25	100.08	105.70
1	5	1279	A	C2'-C3'-O3'	6.25	123.69	113.70
49	S2	841	G	O4'-C1'-C2'	-6.25	99.56	105.80
1	5	2874	U	O4'-C1'-N1	-6.24	103.21	108.20
1	5	2673	G	O4'-C1'-C2'	-6.24	99.56	105.80
49	S2	41	G	N9-C1'-C2'	-6.24	105.14	112.00
49	S2	66	G	N9-C1'-C2'	-6.24	105.14	112.00
1	5	4548	A	P-O5'-C5'	6.24	130.88	120.90
1	5	4718	G	N9-C1'-C2'	-6.24	105.14	112.00
55	SF	165	ASN	N-CA-CB	6.24	121.83	110.60
1	5	2403	A	N9-C1'-C2'	6.24	122.11	114.00
81	Sf	148	TYR	CA-CB-CG	6.23	125.24	113.40
82	Sg	140	TYR	CA-CB-CG	-6.23	101.56	113.40
1	5	5056	A	N9-C1'-C2'	6.23	122.10	114.00
49	S2	1022	U	C1'-O4'-C4'	-6.23	104.92	109.90
65	SP	44	ARG	NE-CZ-NH1	6.23	123.42	120.30
26	W	55	TYR	CB-CG-CD1	6.23	124.74	121.00
76	Sa	10	ARG	CG-CD-NE	-6.23	98.72	111.80
1	5	4677	U	C3'-C2'-C1'	6.22	106.48	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
15	L	192	PHE	N-CA-CB	6.22	121.80	110.60
62	SM	127	TYR	CB-CG-CD1	6.22	124.73	121.00
1	5	220	C	C2'-C3'-O3'	6.22	123.66	113.70
1	5	3791	C	O4'-C1'-N1	-6.22	103.22	108.20
49	S2	1	U	C5'-C4'-C3'	6.22	125.95	116.00
6	C	80	ARG	NE-CZ-NH1	6.22	123.41	120.30
1	5	409	G	N9-C1'-C2'	-6.22	105.16	112.00
1	5	2082	G	N9-C1'-C2'	6.22	122.08	114.00
51	SB	165	ARG	NE-CZ-NH1	-6.22	117.19	120.30
1	5	1934	A	N9-C1'-C2'	-6.21	105.16	112.00
7	D	44	TYR	CA-CB-CG	-6.21	101.60	113.40
10	G	54	PHE	CB-CA-C	6.21	122.82	110.40
55	SF	146	ARG	NE-CZ-NH1	6.21	123.41	120.30
49	S2	1420	G	O5'-P-OP2	-6.21	100.11	105.70
49	S2	980	A	C2'-C3'-O3'	6.21	123.63	113.70
5	B	137	TRP	CA-CB-CG	-6.20	101.92	113.70
6	C	311	ARG	NE-CZ-NH1	6.20	123.40	120.30
39	j	11	ARG	CG-CD-NE	-6.20	98.79	111.80
49	S2	1453	C	O4'-C1'-N1	6.20	113.16	108.20
49	S2	1857	G	N9-C1'-C2'	-6.20	105.19	112.00
49	S2	1617	G	N9-C1'-C2'	-6.19	105.19	112.00
61	SL	89	ARG	NE-CZ-NH1	6.19	123.40	120.30
1	5	4560	C	O4'-C1'-N1	-6.19	103.25	108.20
20	Q	4	ASP	CB-CA-C	6.19	122.78	110.40
26	W	57	ARG	NE-CZ-NH1	6.19	123.39	120.30
1	5	747	A	C2'-C3'-O3'	6.19	123.60	113.70
37	h	89	ARG	CG-CD-NE	6.19	124.79	111.80
15	L	82	ARG	NE-CZ-NH1	6.19	123.39	120.30
32	c	90	ARG	CA-CB-CG	6.19	127.01	113.40
46	q	150	GLY	C-N-CA	-6.18	106.24	121.70
48	4	806	GLY	C-N-CA	-6.18	106.24	121.70
1	5	3727	A	N9-C1'-C2'	6.18	122.04	114.00
49	S2	963	A	N9-C1'-C2'	6.18	122.04	114.00
14	K	136	ALA	CA-C-N	6.18	130.80	117.20
36	g	90	ARG	CG-CD-NE	-6.18	98.82	111.80
35	f	19	ARG	NE-CZ-NH2	-6.18	117.21	120.30
1	5	2666	U	C4'-C3'-C2'	-6.18	96.42	102.60
81	Sf	146	LEU	N-CA-CB	6.18	122.75	110.40
1	5	99	A	N9-C1'-C2'	-6.17	105.21	112.00
1	5	219	G	O4'-C1'-C2'	-6.17	99.62	105.80
1	5	962	C	C4'-C3'-O3'	-6.17	96.43	109.40
28	Y	126	ARG	NE-CZ-NH2	-6.17	117.21	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
44	o	78	ARG	NE-CZ-NH1	-6.17	117.21	120.30
49	S2	1668	U	N1-C1'-C2'	6.17	122.02	114.00
9	F	98	ARG	NE-CZ-NH2	-6.17	117.22	120.30
30	a	61	TYR	CB-CG-CD1	6.17	124.70	121.00
48	4	432	PRO	C-N-CA	-6.17	106.28	121.70
9	F	239	GLU	CA-CB-CG	6.16	126.96	113.40
18	O	117	ARG	NE-CZ-NH1	6.16	123.38	120.30
49	S2	1839	U	C6-N1-C1'	-6.16	112.58	121.20
1	5	5006	U	N1-C1'-C2'	-6.16	105.23	112.00
46	q	6	ARG	C-N-CA	6.16	137.10	121.70
1	5	2470	C	O4'-C1'-C2'	-6.16	99.64	105.80
1	5	4579	U	C2-N1-C1'	6.16	125.09	117.70
9	F	168	ARG	NE-CZ-NH1	6.15	123.38	120.30
1	5	2107	C	C2'-C3'-O3'	6.15	123.54	113.70
1	5	4976	U	C5'-C4'-O4'	6.15	116.48	109.10
1	5	2854	G	N9-C1'-C2'	-6.15	105.24	112.00
32	c	39	ARG	CG-CD-NE	-6.15	98.89	111.80
1	5	1379	C	C5'-C4'-O4'	6.14	116.47	109.10
1	5	1379	C	P-O5'-C5'	6.14	130.73	120.90
3	8	62	A	C4-N9-C1'	-6.14	115.24	126.30
6	C	35	ASP	CB-CG-OD2	-6.14	112.77	118.30
48	4	793	SER	C-N-CA	-6.14	106.34	121.70
49	S2	1603	G	O4'-C1'-N9	-6.14	103.29	108.20
1	5	4239	A	C2'-C3'-O3'	6.14	123.52	113.70
47	r	45	HIS	CB-CA-C	-6.14	98.12	110.40
33	d	87	ARG	CA-CB-CG	6.13	126.89	113.40
28	Y	15	ARG	NE-CZ-NH1	-6.13	117.23	120.30
49	S2	1123	C	O5'-P-OP1	-6.13	100.18	105.70
1	5	4451	G	N9-C1'-C2'	6.13	121.97	114.00
49	S2	1021	U	N1-C1'-C2'	6.13	121.97	114.00
73	SX	8	ARG	NE-CZ-NH2	6.13	123.36	120.30
49	S2	1735	A	N9-C1'-C2'	6.12	121.96	114.00
46	q	69	LEU	CA-C-N	6.12	130.67	117.20
21	R	9	ARG	NE-CZ-NH1	6.12	123.36	120.30
49	S2	1223	A	N9-C1'-C2'	-6.12	105.27	112.00
55	SF	164	ARG	CG-CD-NE	-6.12	98.95	111.80
1	5	2854	G	C2'-C3'-O3'	6.12	123.48	113.70
49	S2	19	A	C2'-C3'-O3'	6.12	123.48	113.70
1	5	4880	C	N1-C1'-C2'	6.11	121.95	114.00
49	S2	1545	A	N9-C1'-C2'	6.11	121.95	114.00
17	N	96	ARG	NE-CZ-NH1	-6.11	117.24	120.30
60	SK	8	ARG	NE-CZ-NH1	6.11	123.36	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1614	C	C2'-C3'-O3'	6.11	123.47	113.70
3	8	66	A	N9-C1'-C2'	6.11	121.94	114.00
3	8	81	C	O4'-C1'-N1	6.11	113.08	108.20
48	4	153	PRO	O-C-N	6.10	132.46	122.70
5	B	102	PHE	CB-CA-C	-6.10	98.20	110.40
8	E	59	TYR	N-CA-C	-6.10	94.53	111.00
21	R	107	ARG	NE-CZ-NH1	6.10	123.35	120.30
1	5	514	U	C4'-C3'-C2'	-6.10	96.50	102.60
7	D	145	TYR	CA-CB-CG	-6.10	101.81	113.40
63	SN	128	TYR	CB-CG-CD1	6.09	124.66	121.00
80	Se	41	ARG	CG-CD-NE	6.09	124.60	111.80
49	S2	531	A	C2'-C3'-O3'	6.09	123.45	113.70
14	K	85	LEU	C-N-CA	6.09	136.93	121.70
1	5	4876	U	N1-C1'-C2'	6.09	121.92	114.00
33	d	87	ARG	CG-CD-NE	-6.09	99.01	111.80
49	S2	313	A	N9-C1'-C2'	6.09	121.92	114.00
1	5	1488	G	C2'-C3'-O3'	6.09	123.44	113.70
21	R	108	ARG	NE-CZ-NH2	-6.08	117.26	120.30
15	L	36	ARG	NE-CZ-NH1	6.08	123.34	120.30
1	5	1214	C	O4'-C1'-N1	-6.08	103.34	108.20
1	5	5040	U	C4'-C3'-O3'	-6.08	96.64	109.40
1	5	2119	C	O4'-C1'-N1	6.07	113.06	108.20
1	5	1649	U	N1-C1'-C2'	6.07	121.89	114.00
1	5	3738	G	N9-C1'-C2'	-6.07	105.33	112.00
59	SJ	20	PHE	CB-CG-CD1	6.07	125.05	120.80
1	5	4948	C	C2'-C3'-O3'	6.06	123.40	113.70
48	4	531	ASP	C-N-CD	6.06	141.13	128.40
48	4	760	TYR	CB-CG-CD2	-6.06	117.36	121.00
49	S2	1552	G	N9-C1'-C2'	-6.06	105.33	112.00
14	K	130	LYS	CD-CE-NZ	6.06	125.63	111.70
4	A	83	HIS	N-CA-C	-6.05	94.65	111.00
39	j	39	TYR	CB-CA-C	-6.05	98.30	110.40
49	S2	9	U	C2'-C3'-O3'	6.05	123.38	113.70
49	S2	943	U	C2-N1-C1'	6.05	124.96	117.70
17	N	71	ARG	NE-CZ-NH1	6.04	123.32	120.30
1	5	4270	C	C2'-C3'-O3'	6.04	123.37	113.70
1	5	4519	C	C1'-O4'-C4'	-6.04	105.07	109.90
20	Q	181	ARG	CG-CD-NE	-6.04	99.11	111.80
20	Q	58	ARG	NE-CZ-NH2	-6.04	117.28	120.30
49	S2	959	G	C2'-C3'-O3'	6.04	123.36	113.70
1	5	235	A	C1'-O4'-C4'	-6.04	105.07	109.90
69	ST	53	PHE	CB-CG-CD1	6.04	125.03	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	f	36	ARG	NE-CZ-NH2	-6.03	117.28	120.30
49	S2	1433	C	C4'-C3'-C2'	-6.03	96.57	102.60
49	S2	1419	C	C2'-C3'-O3'	6.03	123.35	113.70
49	S2	1588	A	N9-C1'-C2'	6.03	121.84	114.00
1	5	4986	G	N9-C1'-C2'	6.03	121.84	114.00
14	K	30	PRO	CA-C-O	-6.03	105.73	120.20
6	C	78	ARG	NE-CZ-NH2	-6.03	117.29	120.30
49	S2	398	A	N9-C1'-C2'	-6.03	105.37	112.00
1	5	3843	C	O4'-C1'-N1	-6.02	103.38	108.20
46	q	81	HIS	CB-CA-C	6.02	122.44	110.40
8	E	157	ARG	NE-CZ-NH1	-6.01	117.29	120.30
49	S2	1433	C	O4'-C4'-C3'	-6.01	97.99	104.00
1	5	1210	C	N1-C1'-C2'	6.01	121.81	114.00
1	5	4599	A	N9-C1'-C2'	6.01	121.81	114.00
32	c	56	ARG	NE-CZ-NH1	6.01	123.31	120.30
49	S2	1858	G	C2'-C3'-O3'	6.01	123.31	113.70
51	SB	107	ARG	NE-CZ-NH1	6.00	123.30	120.30
1	5	4731	G	O4'-C1'-N9	6.00	113.00	108.20
14	K	28	LEU	N-CA-CB	6.00	122.41	110.40
44	o	40	ARG	NE-CZ-NH1	6.00	123.30	120.30
6	C	312	ARG	CG-CD-NE	-6.00	99.20	111.80
19	P	127	ARG	NE-CZ-NH2	-6.00	117.30	120.30
1	5	67	C	N1-C1'-C2'	-6.00	105.40	112.00
66	SQ	62	ARG	NE-CZ-NH1	6.00	123.30	120.30
3	8	13	G	N9-C1'-C2'	6.00	121.80	114.00
2	7	58	A	N9-C1'-C2'	-6.00	105.41	112.00
38	i	85	ARG	NE-CZ-NH2	-5.99	117.30	120.30
1	5	4694	G	O5'-P-OP1	-5.99	100.31	105.70
49	S2	918	U	C1'-O4'-C4'	-5.99	105.11	109.90
49	S2	400	C	N1-C1'-C2'	-5.99	105.41	112.00
1	5	1658	G	N9-C1'-C2'	5.99	121.78	114.00
1	5	3739	C	O4'-C1'-C2'	-5.99	99.81	105.80
1	5	3913	G	C2'-C3'-O3'	5.99	123.28	113.70
1	5	2744	A	N9-C1'-C2'	5.98	121.78	114.00
3	8	64	U	C2-N1-C1'	5.98	124.88	117.70
1	5	1697	G	O5'-P-OP2	5.98	117.88	110.70
49	S2	1084	A	N9-C1'-C2'	-5.98	105.42	112.00
49	S2	855	G	N9-C1'-C2'	-5.98	105.42	112.00
37	h	84	ARG	CG-CD-NE	-5.98	99.25	111.80
1	5	52	G	C2'-C3'-O3'	5.97	123.26	113.70
1	5	1523	A	O5'-P-OP1	-5.97	100.32	105.70
1	5	4979	A	N9-C1'-C2'	5.97	121.77	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	7	58	A	C2'-C3'-O3'	5.97	123.25	113.70
1	5	1495	G	N9-C1'-C2'	5.97	121.76	114.00
1	5	4871	C	O4'-C1'-N1	-5.97	103.42	108.20
14	K	124	GLU	N-CA-C	-5.97	94.89	111.00
51	SB	82	ARG	NE-CZ-NH1	-5.96	117.32	120.30
7	D	54	ARG	CB-CG-CD	5.96	127.10	111.60
47	r	103	ARG	NE-CZ-NH1	5.96	123.28	120.30
65	SP	42	ARG	NE-CZ-NH1	5.96	123.28	120.30
56	SG	191	ARG	NE-CZ-NH1	5.96	123.28	120.30
48	4	267	ASP	C-N-CD	5.96	140.92	128.40
20	Q	166	TYR	CB-CG-CD1	5.96	124.58	121.00
30	a	65	ARG	CG-CD-NE	-5.96	99.28	111.80
1	5	4473	A	C4-N9-C1'	5.96	137.02	126.30
34	e	46	ARG	NE-CZ-NH2	-5.96	117.32	120.30
49	S2	73	C	N1-C1'-C2'	5.96	121.74	114.00
49	S2	1420	G	C2'-C3'-O3'	5.95	123.22	113.70
16	M	90	ARG	CG-CD-NE	-5.95	99.31	111.80
1	5	2307	A	N9-C1'-C2'	5.95	121.73	114.00
63	SN	55	ARG	CG-CD-NE	5.95	124.28	111.80
49	S2	1114	U	C2'-C3'-O3'	5.94	123.21	113.70
1	5	2323	C	N1-C1'-C2'	-5.94	105.46	112.00
14	K	85	LEU	CD1-CG-CD2	5.94	128.33	110.50
1	5	231	U	C4'-C3'-O3'	-5.94	96.92	109.40
30	a	132	ARG	NE-CZ-NH2	-5.94	117.33	120.30
5	B	258	HIS	N-CA-C	5.94	127.03	111.00
48	4	71	LYS	C-N-CA	-5.94	106.85	121.70
1	5	2070	U	N1-C1'-C2'	5.94	121.72	114.00
1	5	669	C	C1'-O4'-C4'	-5.93	105.16	109.90
23	T	57	TYR	CA-CB-CG	5.93	124.67	113.40
1	5	3774	A	N9-C1'-C2'	5.93	121.71	114.00
6	C	102	PHE	N-CA-CB	5.93	121.27	110.60
49	S2	482	G	N9-C1'-C2'	-5.92	105.48	112.00
1	5	936	C	C4'-C3'-O3'	5.92	124.84	113.00
15	L	82	ARG	CG-CD-NE	-5.92	99.37	111.80
49	S2	1416	C	C2'-C3'-O3'	5.92	123.17	113.70
14	K	86	LYS	CB-CA-C	-5.92	98.56	110.40
1	5	2515	G	N9-C1'-C2'	-5.92	105.49	112.00
1	5	4291	G	N9-C1'-C2'	5.92	121.69	114.00
1	5	4479	A	N9-C1'-C2'	-5.92	105.49	112.00
49	S2	417	C	C2'-C3'-O3'	5.92	123.17	113.70
49	S2	1823	A	C2'-C3'-O3'	5.92	123.17	113.70
49	S2	1857	G	C2'-C3'-O3'	5.92	123.17	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	795	A	N9-C1'-C2'	5.92	121.69	114.00
61	SL	92	TYR	CA-CB-CG	5.92	124.64	113.40
1	5	1894	C	N1-C1'-C2'	5.91	121.69	114.00
34	e	20	PHE	CB-CG-CD1	-5.91	116.66	120.80
1	5	4449	A	N9-C1'-C2'	-5.91	105.50	112.00
16	M	6	PHE	CB-CA-C	5.91	122.22	110.40
49	S2	848	U	C2-N3-C4	-5.91	123.45	127.00
49	S2	65	C	O4'-C1'-N1	5.91	112.93	108.20
49	S2	1309	C	C4'-C3'-O3'	5.90	124.81	113.00
1	5	1930	U	O4'-C1'-N1	-5.90	103.48	108.20
32	c	56	ARG	CD-NE-CZ	5.90	131.86	123.60
49	S2	446	G	C2'-C3'-O3'	5.90	123.14	113.70
1	5	1398	A	O5'-P-OP2	-5.90	100.39	105.70
1	5	2305	U	O4'-C4'-C3'	-5.90	98.10	104.00
1	5	2373	C	N1-C1'-C2'	5.90	121.67	114.00
1	5	33	A	N9-C1'-C2'	5.90	121.66	114.00
66	SQ	71	ARG	NE-CZ-NH1	5.90	123.25	120.30
33	d	78	ARG	NE-CZ-NH1	5.89	123.25	120.30
49	S2	474	G	C2'-C3'-O3'	5.89	123.13	113.70
48	4	196	GLU	N-CA-C	-5.89	95.10	111.00
1	5	4510	A	N9-C1'-C2'	5.89	121.65	114.00
1	5	2305	U	C5'-C4'-O4'	5.89	116.16	109.10
1	5	2322	G	C2'-C3'-O3'	5.89	123.12	113.70
1	5	4201	G	N9-C1'-C2'	5.89	121.65	114.00
1	5	1324	A	N9-C1'-C2'	5.88	121.65	114.00
49	S2	365	C	N1-C1'-C2'	-5.88	105.53	112.00
73	SX	17	ARG	CG-CD-NE	-5.88	99.44	111.80
49	S2	993	G	C5'-C4'-O4'	5.88	116.16	109.10
1	5	4670	C	O4'-C1'-N1	-5.88	103.50	108.20
8	E	275	ASN	N-CA-CB	5.88	121.19	110.60
49	S2	1273	C	N1-C1'-C2'	-5.88	105.53	112.00
1	5	53	C	N1-C1'-C2'	-5.88	105.53	112.00
1	5	4763	U	O4'-C1'-N1	5.88	112.90	108.20
61	SL	62	PHE	CB-CA-C	5.88	122.15	110.40
49	S2	1477	U	C2'-C3'-O3'	5.88	123.10	113.70
72	SW	3	ARG	CG-CD-NE	-5.87	99.47	111.80
1	5	1487	G	C2'-C3'-O3'	5.87	123.09	113.70
49	S2	1313	A	N9-C1'-C2'	5.87	121.63	114.00
1	5	2642	A	N9-C1'-C2'	-5.87	105.55	112.00
49	S2	26	U	C2'-C3'-O3'	5.87	123.08	113.70
56	SG	213	LEU	CA-CB-CG	5.86	128.79	115.30
1	5	4074	C	N1-C1'-C2'	5.86	121.62	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1367	U	C2'-C3'-O3'	5.86	123.08	113.70
1	5	1815	G	C1'-O4'-C4'	-5.86	105.21	109.90
53	SD	67	ARG	CG-CD-NE	5.86	124.11	111.80
48	4	247	ALA	N-CA-CB	5.86	118.30	110.10
1	5	4199	C	O4'-C1'-C2'	-5.86	99.94	105.80
51	SB	67	PHE	N-CA-CB	-5.85	100.06	110.60
48	4	432	PRO	O-C-N	-5.85	113.34	122.70
49	S2	1868	U	N1-C1'-C2'	5.85	121.61	114.00
11	H	54	ARG	NE-CZ-NH2	-5.85	117.38	120.30
48	4	60	ARG	NE-CZ-NH1	-5.85	117.38	120.30
49	S2	1356	G	N9-C1'-C2'	5.85	121.60	114.00
59	SJ	45	ARG	NE-CZ-NH2	-5.85	117.38	120.30
15	L	34	ARG	NE-CZ-NH2	-5.84	117.38	120.30
1	5	920	C	C5'-C4'-O4'	5.84	116.11	109.10
74	SY	76	TYR	CB-CG-CD1	-5.84	117.50	121.00
1	5	657	C	C2'-C3'-O3'	5.84	123.04	113.70
49	S2	30	C	N1-C1'-C2'	5.84	121.59	114.00
1	5	40	G	N9-C1'-C2'	5.83	121.58	114.00
1	5	2448	G	N9-C1'-C2'	5.83	121.58	114.00
1	5	72	C	C1'-O4'-C4'	-5.83	105.23	109.90
1	5	2586	G	O4'-C1'-N9	5.83	112.86	108.20
1	5	4481	U	C5'-C4'-O4'	5.83	116.10	109.10
12	I	119	PHE	CB-CG-CD2	-5.83	116.72	120.80
1	5	4215	C	O4'-C1'-C2'	-5.82	99.98	105.80
46	q	68	HIS	N-CA-CB	5.82	121.08	110.60
49	S2	441	C	C4'-C3'-O3'	-5.82	97.17	109.40
1	5	934	C	O4'-C1'-N1	-5.82	103.55	108.20
7	D	265	ARG	NE-CZ-NH2	-5.82	117.39	120.30
49	S2	92	A	O4'-C1'-N9	-5.82	103.55	108.20
59	SJ	108	ARG	NE-CZ-NH1	5.82	123.21	120.30
49	S2	1835	A	N9-C1'-C2'	5.81	121.56	114.00
1	5	85	G	N9-C1'-C2'	-5.81	105.61	112.00
49	S2	1658	G	N9-C1'-C2'	-5.81	105.61	112.00
49	S2	548	C	C2'-C3'-O3'	5.81	123.00	113.70
1	5	2268	A	O4'-C1'-N9	-5.81	103.55	108.20
1	5	4463	U	O4'-C1'-N1	5.81	112.85	108.20
49	S2	454	U	N1-C1'-C2'	5.80	121.55	114.00
54	SE	121	TYR	CA-CB-CG	-5.80	102.37	113.40
59	SJ	48	PHE	CB-CG-CD1	-5.80	116.74	120.80
12	I	94	PHE	CB-CG-CD2	-5.80	116.74	120.80
34	e	60	TYR	CB-CA-C	5.80	122.00	110.40
4	A	63	PHE	CB-CG-CD2	-5.80	116.74	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	918	U	O4'-C1'-N1	5.80	112.84	108.20
1	5	1341	U	N1-C1'-C2'	5.79	121.53	114.00
1	5	4548	A	C5'-C4'-O4'	5.79	116.05	109.10
22	S	84	TYR	CB-CG-CD1	5.79	124.48	121.00
49	S2	649	U	O5'-P-OP1	-5.79	100.49	105.70
1	5	1506	G	N9-C1'-C2'	-5.79	105.63	112.00
1	5	1650	A	C4-N9-C1'	-5.79	115.88	126.30
1	5	4473	A	C8-N9-C1'	-5.79	117.28	127.70
49	S2	563	G	N9-C1'-C2'	-5.79	105.63	112.00
3	8	34	U	C3'-C2'-C1'	5.79	106.13	101.50
52	SC	241	PHE	CB-CG-CD2	-5.79	116.75	120.80
58	SI	112	TRP	CA-CB-CG	5.79	124.69	113.70
49	S2	621	C	N1-C1'-C2'	-5.78	105.64	112.00
1	5	4481	U	N1-C1'-C2'	5.78	121.51	114.00
4	A	147	ARG	NE-CZ-NH1	5.78	123.19	120.30
1	5	197	A	N9-C1'-C2'	5.78	121.51	114.00
3	8	81	C	C5'-C4'-C3'	5.78	125.24	116.00
5	B	117	ARG	CG-CD-NE	-5.77	99.67	111.80
48	4	5	THR	C-N-CA	-5.77	107.27	121.70
1	5	2807	A	C2'-C3'-O3'	5.77	122.94	113.70
28	Y	121	ARG	NE-CZ-NH1	5.77	123.19	120.30
45	p	14	TYR	CB-CA-C	5.77	121.94	110.40
51	SB	205	TYR	CB-CG-CD1	-5.77	117.54	121.00
3	8	115	G	C2'-C3'-O3'	5.77	122.93	113.70
17	N	30	TYR	N-CA-CB	-5.77	100.22	110.60
1	5	292	G	C4-N9-C1'	-5.77	119.00	126.50
51	SB	133	TYR	CA-CB-CG	5.76	124.35	113.40
35	f	6	TRP	N-CA-C	-5.76	95.45	111.00
1	5	2769	U	O4'-C1'-N1	5.76	112.81	108.20
1	5	3691	G	N9-C1'-C2'	5.76	121.48	114.00
22	S	97	TYR	CA-CB-CG	-5.75	102.47	113.40
7	D	35	ARG	NE-CZ-NH2	-5.75	117.42	120.30
49	S2	662	G	O4'-C1'-N9	-5.75	103.60	108.20
49	S2	848	U	C6-N1-C1'	-5.75	113.14	121.20
57	SH	189	PHE	CB-CA-C	5.75	121.91	110.40
48	4	685	TRP	CB-CG-CD2	-5.75	119.12	126.60
79	Sd	40	ARG	NE-CZ-NH1	5.75	123.17	120.30
68	SS	86	ARG	NE-CZ-NH2	5.75	123.17	120.30
49	S2	495	U	C1'-C2'-O2'	-5.75	93.36	110.60
54	SE	99	PHE	CB-CG-CD1	5.75	124.82	120.80
20	Q	32	TYR	CA-CB-CG	5.74	124.31	113.40
49	S2	855	G	C2'-C3'-O3'	5.74	122.89	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1832	A	O5'-P-OP2	-5.74	100.53	105.70
1	5	1398	A	O5'-P-OP1	5.74	117.58	110.70
48	4	3	ASN	N-CA-C	-5.74	95.51	111.00
76	Sa	87	ARG	NE-CZ-NH2	5.74	123.17	120.30
1	5	2405	G	N9-C1'-C2'	-5.74	105.69	112.00
1	5	111	C	N1-C1'-C2'	-5.73	105.70	112.00
49	S2	662	G	N9-C1'-C2'	5.73	121.45	114.00
49	S2	594	A	C8-N9-C1'	-5.73	117.39	127.70
1	5	2360	A	N9-C1'-C2'	5.72	121.44	114.00
28	Y	18	HIS	N-CA-CB	5.72	120.90	110.60
54	SE	18	TRP	CB-CA-C	5.72	121.85	110.40
1	5	88	A	N9-C1'-C2'	5.72	121.44	114.00
68	SS	82	TRP	CA-CB-CG	5.72	124.57	113.70
1	5	4385	A	C2'-C3'-O3'	-5.72	96.92	109.50
8	E	278	TYR	CB-CG-CD1	-5.72	117.57	121.00
1	5	703	G	C1'-O4'-C4'	-5.72	105.33	109.90
1	5	1438	U	C2'-C3'-O3'	5.72	122.85	113.70
3	8	79	G	N9-C1'-C2'	5.71	121.43	114.00
1	5	1285	U	O4'-C1'-N1	5.71	112.77	108.20
37	h	119	PHE	CB-CG-CD2	-5.71	116.80	120.80
1	5	236	G	N9-C1'-C2'	5.71	121.42	114.00
48	4	669	VAL	CB-CA-C	5.71	122.25	111.40
1	5	1696	C	C2'-C3'-O3'	5.71	122.83	113.70
1	5	2119	C	C1'-O4'-C4'	-5.71	105.33	109.90
1	5	2643	G	C2'-C3'-O3'	5.71	122.83	113.70
1	5	4125	C	C4'-C3'-O3'	-5.71	97.41	109.40
9	F	136	ARG	CG-CD-NE	-5.71	99.81	111.80
68	SS	130	ARG	NE-CZ-NH2	-5.71	117.45	120.30
74	SY	63	HIS	N-CA-CB	5.71	120.87	110.60
49	S2	146	G	N9-C1'-C2'	-5.70	105.73	112.00
1	5	2553	A	C1'-O4'-C4'	-5.70	105.34	109.90
3	8	135	C	N1-C1'-C2'	5.70	121.41	114.00
9	F	100	ILE	CG1-CB-CG2	5.70	123.94	111.40
4	A	34	PHE	N-CA-CB	5.70	120.85	110.60
22	S	10	TYR	CB-CG-CD1	-5.70	117.58	121.00
1	5	3686	G	N9-C1'-C2'	-5.69	105.74	112.00
1	5	84	A	C4-N9-C1'	-5.69	116.06	126.30
1	5	1281	G	C5'-C4'-O4'	5.69	115.93	109.10
28	Y	61	HIS	N-CA-CB	5.69	120.84	110.60
1	5	2118	G	O4'-C4'-C3'	-5.69	98.31	104.00
82	Sg	83	TRP	CA-CB-CG	-5.68	102.90	113.70
49	S2	1842	C	N1-C1'-C2'	5.68	121.39	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1642	A	P-O3'-C3'	5.68	126.52	119.70
1	5	1849	U	O5'-P-OP1	5.68	117.52	110.70
1	5	1494	U	N1-C1'-C2'	5.68	121.38	114.00
48	4	420	LEU	CB-CG-CD2	-5.68	101.34	111.00
21	R	110	ARG	NE-CZ-NH1	5.68	123.14	120.30
31	b	17	HIS	CB-CA-C	-5.68	99.05	110.40
2	7	7	G	C5'-C4'-O4'	5.67	115.91	109.10
4	A	37	ARG	CG-CD-NE	-5.67	99.89	111.80
8	E	268	ARG	NE-CZ-NH2	-5.67	117.46	120.30
49	S2	504	G	N9-C1'-C2'	5.67	121.38	114.00
56	SG	156	TYR	CA-CB-CG	-5.67	102.62	113.40
1	5	2282	A	N9-C1'-C2'	5.67	121.37	114.00
54	SE	99	PHE	CB-CG-CD2	-5.67	116.83	120.80
49	S2	369	C	N1-C1'-C2'	5.67	121.36	114.00
49	S2	1546	G	N9-C1'-C2'	5.67	121.36	114.00
1	5	85	G	O4'-C1'-C2'	-5.66	100.14	105.80
1	5	1264	C	C2'-C3'-O3'	5.66	122.76	113.70
41	l	12	PHE	CB-CG-CD2	-5.66	116.84	120.80
48	4	358	LEU	C-N-CD	-5.66	108.14	120.60
1	5	100	C	C5'-C4'-O4'	5.66	115.89	109.10
20	Q	32	TYR	CB-CG-CD2	-5.66	117.60	121.00
49	S2	1243	U	C2'-C3'-O3'	5.66	122.76	113.70
8	E	101	ARG	NE-CZ-NH2	5.66	123.13	120.30
48	4	112	SER	CA-C-N	-5.66	104.75	117.20
21	R	97	ARG	CG-CD-NE	-5.66	99.92	111.80
49	S2	1291	A	C3'-C2'-C1'	5.66	106.03	101.50
1	5	1398	A	O4'-C1'-N9	5.66	112.72	108.20
1	5	3776	G	N9-C1'-C2'	-5.66	105.78	112.00
1	5	2088	A	N9-C1'-C2'	-5.65	105.78	112.00
1	5	2383	C	N1-C1'-C2'	5.65	121.34	114.00
61	SL	89	ARG	CG-CD-NE	-5.65	99.93	111.80
1	5	4693	C	O4'-C4'-C3'	-5.65	98.35	104.00
6	C	200	ARG	NE-CZ-NH2	-5.65	117.48	120.30
34	e	75	ARG	CG-CD-NE	-5.65	99.94	111.80
1	5	4966	A	C8-N9-C1'	-5.64	117.54	127.70
49	S2	1395	C	O4'-C1'-C2'	-5.64	100.16	105.80
11	H	180	TYR	CA-CB-CG	5.64	124.12	113.40
74	SY	61	ARG	CG-CD-NE	-5.64	99.95	111.80
5	B	246	ARG	NE-CZ-NH1	5.64	123.12	120.30
27	X	137	TYR	CB-CG-CD1	5.64	124.38	121.00
49	S2	382	C	N1-C1'-C2'	5.64	121.33	114.00
20	Q	104	ARG	NE-CZ-NH1	5.64	123.12	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1639	U	N1-C1'-C2'	5.63	121.32	114.00
48	4	56	PHE	N-CA-CB	5.63	120.74	110.60
49	S2	746	C	C2'-C3'-O3'	5.63	122.72	113.70
1	5	1876	U	C2'-C3'-O3'	5.63	122.71	113.70
73	SX	17	ARG	NE-CZ-NH1	-5.63	117.48	120.30
20	Q	176	ARG	CG-CD-NE	-5.63	99.97	111.80
39	j	27	TYR	N-CA-CB	5.63	120.74	110.60
1	5	514	U	C4'-C3'-O3'	5.63	124.26	113.00
1	5	370	U	N1-C1'-C2'	5.63	121.32	114.00
1	5	118	C	C2'-C3'-O3'	5.63	122.70	113.70
1	5	5062	G	P-O5'-C5'	5.63	129.90	120.90
5	B	169	ARG	CG-CD-NE	5.62	123.61	111.80
46	q	24	TYR	C-N-CD	5.62	140.21	128.40
49	S2	1085	C	N1-C1'-C2'	5.62	121.31	114.00
1	5	3773	U	N1-C1'-C2'	-5.62	105.81	112.00
6	C	311	ARG	CG-CD-NE	-5.62	99.99	111.80
49	S2	649	U	N1-C1'-C2'	5.62	121.31	114.00
49	S2	943	U	C5'-C4'-O4'	5.62	115.84	109.10
1	5	2686	G	N9-C1'-C2'	-5.62	105.82	112.00
49	S2	60	A	C1'-C2'-O2'	-5.62	93.74	110.60
68	SS	124	ARG	NE-CZ-NH2	-5.62	117.49	120.30
1	5	2077	C	N1-C1'-C2'	-5.61	105.83	112.00
6	C	350	ARG	NE-CZ-NH2	-5.61	117.49	120.30
48	4	478	PHE	CB-CA-C	5.61	121.63	110.40
1	5	4753	U	C2'-C3'-O3'	5.61	122.68	113.70
15	L	7	GLY	N-CA-C	-5.61	99.07	113.10
1	5	1539	G	C2'-C3'-O3'	5.61	122.67	113.70
14	K	147	HIS	C-N-CD	5.61	140.18	128.40
22	S	94	TYR	CA-CB-CG	-5.61	102.74	113.40
39	j	66	HIS	CA-CB-CG	-5.61	104.07	113.60
10	G	57	TRP	CA-CB-CG	-5.61	103.05	113.70
1	5	1932	A	N9-C1'-C2'	5.60	121.28	114.00
20	Q	68	ARG	NE-CZ-NH2	-5.60	117.50	120.30
1	5	2857	A	C1'-C2'-O2'	-5.60	93.80	110.60
49	S2	821	G	O4'-C4'-C3'	-5.60	98.40	104.00
1	5	2450	G	N9-C1'-C2'	-5.60	105.84	112.00
47	r	21	ASN	CB-CA-C	5.60	121.59	110.40
64	SO	121	ARG	NE-CZ-NH1	5.60	123.10	120.30
65	SP	81	ARG	NE-CZ-NH1	5.60	123.10	120.30
1	5	2665	U	N1-C1'-C2'	-5.59	105.85	112.00
1	5	2474	G	C2'-C3'-O3'	5.59	122.64	113.70
1	5	2487	G	C2'-C3'-O3'	5.59	122.64	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	8	39	G	N9-C1'-C2'	-5.59	105.85	112.00
1	5	85	G	O4'-C1'-N9	5.59	112.67	108.20
1	5	977	C	C4'-C3'-C2'	-5.59	97.01	102.60
1	5	1295	C	N1-C1'-C2'	5.59	121.26	114.00
36	g	9	ARG	CG-CD-NE	-5.58	100.07	111.80
1	5	4114	C	N1-C1'-C2'	5.58	121.26	114.00
46	q	200	ASN	C-N-CD	5.58	140.13	128.40
1	5	1501	C	C1'-O4'-C4'	-5.58	105.43	109.90
29	Z	121	ARG	NE-CZ-NH2	-5.58	117.51	120.30
5	B	169	ARG	NE-CZ-NH2	-5.58	117.51	120.30
1	5	490	C	N1-C1'-C2'	5.58	121.25	114.00
15	L	6	ASN	N-CA-CB	5.58	120.64	110.60
49	S2	26	U	O4'-C1'-C2'	-5.58	100.22	105.80
57	SH	116	ARG	NE-CZ-NH1	5.58	123.09	120.30
80	Se	38	TYR	CA-CB-CG	5.58	124.00	113.40
1	5	1632	A	O4'-C1'-N9	5.57	112.66	108.20
49	S2	1376	A	C2'-C3'-O3'	5.57	122.62	113.70
1	5	3773	U	C4'-C3'-C2'	-5.57	97.03	102.60
20	Q	178	ARG	CG-CD-NE	-5.57	100.10	111.80
15	L	163	ARG	NE-CZ-NH1	5.57	123.08	120.30
51	SB	196	ASP	CB-CG-OD1	5.57	123.31	118.30
1	5	4950	U	N1-C1'-C2'	5.57	121.24	114.00
12	I	213	HIS	CB-CA-C	5.57	121.53	110.40
9	F	72	ARG	NE-CZ-NH2	-5.56	117.52	120.30
46	q	123	VAL	C-N-CD	5.56	140.07	128.40
1	5	1521	C	C2'-C3'-O3'	5.56	122.59	113.70
1	5	4076	G	C1'-O4'-C4'	-5.56	105.45	109.90
1	5	4767	C	C2'-C3'-O3'	5.56	122.59	113.70
54	SE	51	ARG	NE-CZ-NH1	-5.56	117.52	120.30
59	SJ	150	ARG	NE-CZ-NH1	5.56	123.08	120.30
49	S2	642	U	O5'-P-OP2	-5.55	100.70	105.70
11	H	115	ARG	CG-CD-NE	-5.55	100.14	111.80
1	5	1614	C	N1-C1'-C2'	-5.55	105.90	112.00
17	N	182	HIS	N-CA-CB	5.55	120.59	110.60
1	5	1631	A	C5'-C4'-O4'	5.55	115.76	109.10
7	D	210	TYR	CB-CG-CD1	-5.55	117.67	121.00
29	Z	28	ASN	N-CA-C	-5.55	96.03	111.00
48	4	855	LEU	C-N-CA	5.54	135.56	121.70
49	S2	661	U	N1-C1'-C2'	-5.54	105.90	112.00
1	5	2396	A	N9-C1'-C2'	5.54	121.20	114.00
1	5	4723	A	C5'-C4'-O4'	5.54	115.75	109.10
1	5	1672	U	C6-N1-C1'	-5.54	113.45	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	p	18	TYR	CA-CB-CG	5.54	123.92	113.40
9	F	98	ARG	NE-CZ-NH1	5.54	123.07	120.30
49	S2	457	C	N1-C1'-C2'	-5.54	105.91	112.00
1	5	956	A	N9-C1'-C2'	-5.53	105.91	112.00
1	5	1398	A	C2'-C3'-O3'	5.53	122.56	113.70
48	4	52	GLY	C-N-CA	5.53	135.53	121.70
1	5	687	U	N1-C1'-C2'	-5.53	105.92	112.00
1	5	2468	U	C4'-C3'-O3'	5.53	124.06	113.00
1	5	4975	G	O4'-C1'-N9	5.53	112.62	108.20
2	7	75	G	O4'-C1'-N9	5.53	112.62	108.20
34	e	35	TRP	CB-CG-CD1	-5.53	119.81	127.00
1	5	3735	G	C4'-C3'-O3'	-5.53	97.79	109.40
49	S2	844	U	C1'-O4'-C4'	-5.53	105.48	109.90
49	S2	393	U	O4'-C1'-N1	5.53	112.62	108.20
1	5	4944	C	N1-C1'-C2'	5.52	121.18	114.00
1	5	1359	G	N9-C1'-C2'	5.52	121.18	114.00
24	U	90	TYR	CB-CA-C	-5.52	99.36	110.40
56	SG	191	ARG	NE-CZ-NH2	-5.52	117.54	120.30
20	Q	184	ARG	CB-CG-CD	5.52	125.95	111.60
30	a	61	TYR	N-CA-C	-5.52	96.10	111.00
49	S2	924	G	N9-C1'-C2'	-5.52	105.93	112.00
1	5	2385	U	N1-C1'-C2'	5.52	121.17	114.00
34	e	47	ARG	NE-CZ-NH2	-5.52	117.54	120.30
1	5	2398	U	C2'-C3'-O3'	5.52	122.53	113.70
14	K	44	ASP	CB-CG-OD2	-5.51	113.34	118.30
1	5	4326	G	N9-C1'-C2'	5.51	121.17	114.00
51	SB	198	GLU	OE1-CD-OE2	-5.51	116.69	123.30
1	5	1282	G	O5'-P-OP2	5.51	117.31	110.70
55	SF	204	ARG	NE-CZ-NH1	5.51	123.06	120.30
1	5	3663	A	O4'-C1'-N9	-5.51	103.79	108.20
8	E	278	TYR	CB-CG-CD2	-5.51	117.69	121.00
1	5	421	C	C2'-C3'-O3'	5.51	122.51	113.70
49	S2	839	C	N1-C1'-C2'	5.51	121.16	114.00
65	SP	47	ARG	NE-CZ-NH1	5.51	123.05	120.30
1	5	1534	A	P-O5'-C5'	5.50	129.70	120.90
1	5	3667	C	C2'-C3'-O3'	5.50	122.51	113.70
14	K	85	LEU	N-CA-CB	5.50	121.41	110.40
47	r	45	HIS	N-CA-CB	-5.50	100.70	110.60
1	5	2583	C	C2'-C3'-O3'	5.50	122.50	113.70
1	5	2754	G	N9-C1'-C2'	-5.50	105.95	112.00
1	5	1827	C	N1-C1'-C2'	5.50	121.15	114.00
24	U	101	ARG	NE-CZ-NH1	5.50	123.05	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	3905	A	N9-C1'-C2'	-5.49	105.96	112.00
1	5	4909	A	C1'-O4'-C4'	-5.49	105.50	109.90
1	5	4978	G	N9-C1'-C2'	5.49	121.14	114.00
20	Q	26	ARG	NE-CZ-NH1	5.49	123.05	120.30
8	E	153	HIS	N-CA-CB	-5.49	100.72	110.60
1	5	2852	U	O4'-C1'-C2'	-5.49	100.31	105.80
48	4	267	ASP	CA-C-O	-5.49	108.57	120.10
49	S2	447	A	C1'-O4'-C4'	-5.49	105.51	109.90
1	5	3634	G	C2'-C3'-O3'	5.49	122.48	113.70
10	G	235	ARG	NE-CZ-NH2	-5.48	117.56	120.30
32	c	78	ASN	N-CA-CB	5.48	120.47	110.60
49	S2	1292	C	O4'-C4'-C3'	-5.48	98.52	104.00
1	5	1734	G	N9-C1'-C2'	-5.48	105.97	112.00
20	Q	75	ARG	NE-CZ-NH2	-5.48	117.56	120.30
49	S2	1432	U	N1-C1'-C2'	5.48	121.12	114.00
1	5	210	C	N1-C1'-C2'	5.48	121.12	114.00
1	5	3912	U	C1'-C2'-O2'	-5.48	94.17	110.60
1	5	4731	G	N9-C1'-C2'	5.48	121.12	114.00
35	f	6	TRP	CB-CA-C	5.48	121.36	110.40
68	SS	11	HIS	CB-CA-C	5.48	121.35	110.40
1	5	2268	A	C2'-C3'-O3'	5.47	122.46	113.70
1	5	2858	A	N9-C1'-C2'	5.47	121.12	114.00
1	5	1211	G	N9-C1'-C2'	-5.47	105.98	112.00
1	5	2360	A	O4'-C1'-N9	-5.47	103.82	108.20
1	5	4713	G	C2'-C3'-O3'	5.47	122.46	113.70
14	K	114	ARG	NE-CZ-NH2	-5.47	117.56	120.30
49	S2	868	G	N9-C1'-C2'	-5.47	105.98	112.00
52	SC	97	PHE	CB-CG-CD2	-5.47	116.97	120.80
1	5	2056	G	N9-C1'-C2'	-5.47	105.98	112.00
21	R	60	ARG	NE-CZ-NH1	5.47	123.04	120.30
4	A	211	PHE	CB-CG-CD2	-5.47	116.97	120.80
49	S2	1419	C	O5'-P-OP2	-5.47	100.78	105.70
1	5	3886	G	N9-C1'-C2'	-5.47	105.98	112.00
1	5	4873	G	N9-C1'-C2'	5.46	121.10	114.00
49	S2	381	C	C3'-C2'-C1'	5.46	105.87	101.50
1	5	2117	G	O4'-C4'-C3'	-5.46	98.54	104.00
1	5	3906	A	N9-C1'-C2'	-5.46	105.99	112.00
63	SN	64	ARG	NE-CZ-NH1	5.46	123.03	120.30
64	SO	128	ARG	NE-CZ-NH2	-5.46	117.57	120.30
41	1	45	ARG	CB-CG-CD	5.46	125.79	111.60
1	5	1626	G	N9-C1'-C2'	-5.46	106.00	112.00
1	5	4909	A	O4'-C1'-N9	5.46	112.56	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	SD	65	ARG	NE-CZ-NH1	5.46	123.03	120.30
22	S	152	PHE	CB-CG-CD2	-5.45	116.98	120.80
49	S2	31	U	N1-C1'-C2'	5.45	121.09	114.00
49	S2	1698	C	N1-C1'-C2'	5.45	121.08	114.00
1	5	977	C	C5'-C4'-O4'	5.45	115.64	109.10
49	S2	604	A	C2'-C3'-O3'	5.45	122.42	113.70
27	X	129	ARG	NE-CZ-NH2	5.45	123.02	120.30
34	e	43	ASN	CB-CA-C	5.44	121.29	110.40
1	5	1464	C	N1-C1'-C2'	-5.44	106.01	112.00
1	5	4076	G	O4'-C1'-N9	5.44	112.56	108.20
38	i	26	HIS	N-CA-CB	5.44	120.39	110.60
49	S2	1315	U	C2'-C3'-O3'	5.44	122.40	113.70
22	S	171	ARG	CG-CD-NE	5.44	123.22	111.80
1	5	2054	U	C1'-O4'-C4'	-5.44	105.55	109.90
34	e	36	ARG	NE-CZ-NH1	-5.44	117.58	120.30
49	S2	619	A	C3'-C2'-C1'	-5.44	97.15	101.50
5	B	117	ARG	NE-CZ-NH1	5.44	123.02	120.30
1	5	1852	U	N1-C1'-C2'	-5.43	106.02	112.00
1	5	2673	G	C1'-O4'-C4'	-5.43	105.55	109.90
14	K	28	LEU	N-CA-C	-5.43	96.33	111.00
1	5	372	A	N9-C1'-C2'	5.43	121.06	114.00
1	5	398	A	N9-C1'-C2'	5.43	121.06	114.00
4	A	16	PHE	CB-CA-C	5.43	121.26	110.40
14	K	114	ARG	NH1-CZ-NH2	-5.43	113.42	119.40
27	X	117	TYR	CB-CA-C	5.43	121.27	110.40
34	e	36	ARG	NE-CZ-NH2	5.43	123.02	120.30
1	5	1365	C	C4'-C3'-O3'	5.43	123.86	113.00
1	5	3875	G	C2'-C3'-O3'	5.43	122.39	113.70
61	SL	100	ASN	N-CA-C	5.43	125.66	111.00
38	i	29	ARG	NE-CZ-NH1	5.43	123.01	120.30
47	r	103	ARG	NE-CZ-NH2	-5.43	117.59	120.30
49	S2	1557	C	N1-C1'-C2'	-5.43	106.03	112.00
1	5	2325	C	O4'-C1'-C2'	-5.42	100.38	105.80
1	5	4579	U	C6-N1-C1'	-5.42	113.61	121.20
1	5	4745	G	N9-C1'-C2'	5.42	121.05	114.00
5	B	119	TYR	CB-CA-C	5.42	121.25	110.40
1	5	1724	G	C8-N9-C1'	-5.42	119.95	127.00
37	h	70	ARG	NE-CZ-NH2	5.42	123.01	120.30
8	E	129	PHE	CB-CG-CD1	5.42	124.60	120.80
46	q	69	LEU	C-N-CA	5.42	135.25	121.70
1	5	280	G	C1'-O4'-C4'	-5.42	105.56	109.90
1	5	4915	G	C2'-C3'-O3'	5.42	122.37	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	579	C	N1-C1'-C2'	-5.42	106.04	112.00
22	S	28	TYR	CA-CB-CG	5.41	123.69	113.40
1	5	1667	G	C2'-C3'-O3'	5.41	122.36	113.70
1	5	3898	G	C2'-C3'-O3'	5.41	122.36	113.70
18	O	128	ARG	NE-CZ-NH2	5.41	123.01	120.30
25	V	14	PHE	CB-CG-CD2	-5.41	117.01	120.80
64	SO	117	ARG	NE-CZ-NH1	-5.41	117.59	120.30
1	5	4481	U	C2-N1-C1'	5.41	124.19	117.70
31	b	6	ASN	CB-CA-C	5.41	121.22	110.40
1	5	1272	C	O4'-C1'-C2'	-5.41	100.39	105.80
1	5	2014	C	C2'-C3'-O3'	5.41	122.35	113.70
10	G	49	ARG	CG-CD-NE	-5.40	100.45	111.80
48	4	760	TYR	CB-CA-C	-5.40	99.59	110.40
1	5	3648	A	C1'-O4'-C4'	-5.40	105.58	109.90
44	o	26	TYR	CB-CG-CD1	5.40	124.24	121.00
1	5	693	C	C2'-C3'-O3'	5.39	122.33	113.70
1	5	4280	A	C4'-C3'-C2'	-5.39	97.21	102.60
21	R	108	ARG	CD-NE-CZ	5.39	131.15	123.60
49	S2	1643	U	C1'-C2'-O2'	-5.39	94.43	110.60
1	5	293	G	C2'-C3'-O3'	5.39	122.32	113.70
49	S2	578	C	C2'-C3'-O3'	5.39	122.32	113.70
19	P	42	ARG	CG-CD-NE	5.38	123.11	111.80
49	S2	444	G	O4'-C1'-C2'	-5.38	100.42	105.80
49	S2	1662	U	N1-C1'-C2'	-5.38	106.08	112.00
1	5	2348	G	O4'-C1'-N9	-5.38	103.89	108.20
42	m	106	ARG	NE-CZ-NH1	5.38	122.99	120.30
17	N	192	TRP	N-CA-CB	-5.38	100.92	110.60
20	Q	174	PHE	CB-CG-CD1	-5.38	117.04	120.80
49	S2	1415	C	N1-C1'-C2'	5.38	120.99	114.00
1	5	2272	C	C1'-C2'-O2'	-5.37	94.48	110.60
69	ST	67	ARG	NE-CZ-NH1	5.37	122.99	120.30
1	5	1588	U	N1-C1'-C2'	5.37	120.98	114.00
1	5	4975	G	N9-C1'-C2'	-5.37	106.09	112.00
3	8	68	G	N9-C1'-C2'	5.37	120.97	114.00
13	J	32	ARG	CG-CD-NE	-5.37	100.53	111.80
22	S	81	TRP	N-CA-C	-5.37	96.51	111.00
2	7	59	G	N9-C1'-C2'	-5.36	106.10	112.00
8	E	236	TYR	CA-CB-CG	-5.36	103.21	113.40
38	i	39	PHE	CB-CG-CD1	-5.36	117.05	120.80
49	S2	426	A	C4'-C3'-O3'	5.36	123.72	113.00
1	5	1975	G	O4'-C1'-N9	-5.36	103.91	108.20
1	5	3625	G	C4'-C3'-O3'	-5.36	98.15	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	SJ	64	ASP	CB-CG-OD1	-5.36	113.48	118.30
4	A	19	HIS	N-CA-CB	-5.35	100.96	110.60
49	S2	1567	G	C1'-O4'-C4'	-5.35	105.62	109.90
49	S2	1292	C	C5'-C4'-C3'	5.35	124.56	116.00
1	5	3590	G	C2'-C3'-O3'	5.35	122.26	113.70
1	5	4228	G	O4'-C1'-N9	5.35	112.48	108.20
49	S2	1136	U	N1-C1'-C2'	5.35	120.95	114.00
1	5	703	G	N9-C1'-C2'	-5.34	106.12	112.00
1	5	82	U	N1-C1'-C2'	-5.34	106.12	112.00
3	8	34	U	C2-N1-C1'	-5.34	111.29	117.70
49	S2	56	G	N9-C1'-C2'	5.34	120.94	114.00
1	5	1390	G	N9-C1'-C2'	-5.34	106.13	112.00
1	5	3626	G	N9-C1'-C2'	-5.34	106.13	112.00
1	5	4302	U	N1-C1'-C2'	-5.34	106.13	112.00
11	H	115	ARG	CA-CB-CG	5.34	125.15	113.40
1	5	911	U	C2'-C3'-O3'	5.34	122.24	113.70
1	5	4883	C	O4'-C1'-N1	5.33	112.47	108.20
7	D	20	PHE	CB-CA-C	5.33	121.06	110.40
12	I	139	ARG	CB-CG-CD	-5.33	97.73	111.60
63	SN	55	ARG	NE-CZ-NH1	5.33	122.97	120.30
1	5	416	U	N1-C1'-C2'	5.33	120.93	114.00
5	B	62	ARG	NE-CZ-NH2	-5.33	117.63	120.30
40	k	16	ARG	NE-CZ-NH1	5.33	122.97	120.30
49	S2	438	G	N9-C1'-C2'	5.33	120.93	114.00
49	S2	1666	C	N1-C1'-C2'	5.33	120.93	114.00
1	5	215	C	C4'-C3'-O3'	-5.33	98.22	109.40
1	5	3726	A	N9-C1'-C2'	5.33	120.92	114.00
23	T	140	PHE	CB-CA-C	-5.33	99.75	110.40
81	Sf	148	TYR	C-N-CA	5.33	135.02	121.70
9	F	136	ARG	CA-CB-CG	5.32	125.11	113.40
74	SY	20	ARG	NE-CZ-NH2	5.32	122.96	120.30
73	SX	17	ARG	NE-CZ-NH2	5.32	122.96	120.30
37	h	72	PHE	CB-CG-CD2	-5.32	117.08	120.80
49	S2	553	U	N1-C1'-C2'	5.32	120.92	114.00
78	Sc	44	ARG	CD-NE-CZ	5.32	131.05	123.60
27	X	79	PHE	CB-CG-CD1	5.32	124.52	120.80
67	SR	33	ARG	CG-CD-NE	-5.32	100.64	111.80
7	D	66	TYR	CB-CG-CD1	5.32	124.19	121.00
46	q	165	ASP	CB-CG-OD2	5.31	123.08	118.30
49	S2	1034	A	N9-C1'-C2'	5.31	120.91	114.00
17	N	192	TRP	CB-CG-CD1	-5.31	120.10	127.00
49	S2	646	G	N9-C1'-C2'	-5.31	106.16	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	E	212	TYR	CA-CB-CG	5.31	123.49	113.40
12	I	98	ARG	NE-CZ-NH2	5.31	122.95	120.30
25	V	97	TYR	CB-CA-C	5.31	121.02	110.40
13	J	147	ARG	NE-CZ-NH2	-5.30	117.65	120.30
1	5	1632	A	N9-C1'-C2'	-5.30	106.17	112.00
14	K	44	ASP	CB-CG-OD1	5.30	123.07	118.30
17	N	143	ARG	NE-CZ-NH2	-5.30	117.65	120.30
47	r	77	TYR	CB-CG-CD2	-5.30	117.82	121.00
48	4	55	ARG	C-N-CA	5.30	134.95	121.70
62	SM	26	LEU	CA-CB-CG	5.30	127.49	115.30
1	5	2056	G	P-O5'-C5'	-5.30	112.42	120.90
1	5	4528	G	O4'-C1'-C2'	-5.30	100.50	105.80
15	L	198	ARG	NE-CZ-NH2	-5.30	117.65	120.30
1	5	3753	G	C2'-C3'-O3'	5.29	122.17	113.70
50	SA	39	TYR	CA-CB-CG	5.29	123.46	113.40
1	5	212	A	N9-C1'-C2'	5.29	120.88	114.00
48	4	826	ASP	N-CA-C	-5.29	96.70	111.00
49	S2	1202	U	C2'-C3'-O3'	5.29	122.17	113.70
41	l	45	ARG	CG-CD-NE	-5.29	100.69	111.80
69	ST	83	GLN	CA-CB-CG	5.29	125.04	113.40
52	SC	236	PHE	CB-CG-CD1	-5.29	117.10	120.80
58	SI	49	ARG	NE-CZ-NH2	-5.29	117.66	120.30
1	5	2817	C	C2'-C3'-O3'	5.29	122.16	113.70
6	C	110	ARG	NE-CZ-NH1	5.29	122.94	120.30
49	S2	114	G	N9-C1'-C2'	-5.29	106.19	112.00
20	Q	75	ARG	CG-CD-NE	5.28	122.89	111.80
61	SL	17	PHE	N-CA-CB	5.28	120.11	110.60
1	5	3692	A	N9-C1'-C2'	-5.28	106.19	112.00
49	S2	983	A	C5'-C4'-O4'	5.28	115.44	109.10
1	5	3739	C	C2'-C3'-O3'	5.28	122.15	113.70
49	S2	800	U	O4'-C4'-C3'	-5.28	98.72	104.00
1	5	2263	A	C2'-C3'-O3'	5.28	122.14	113.70
9	F	228	HIS	CA-CB-CG	-5.28	104.63	113.60
5	B	246	ARG	NE-CZ-NH2	-5.28	117.66	120.30
82	Sg	15	ASN	CB-CA-C	5.28	120.95	110.40
5	B	274	TYR	CB-CG-CD1	-5.27	117.84	121.00
27	X	137	TYR	CA-CB-CG	5.27	123.42	113.40
33	d	44	ARG	NE-CZ-NH2	-5.27	117.66	120.30
48	4	409	ARG	CB-CA-C	5.27	120.94	110.40
60	SK	43	LEU	CA-CB-CG	5.27	127.42	115.30
63	SN	55	ARG	NE-CZ-NH2	-5.27	117.66	120.30
1	5	1211	G	C4'-C3'-C2'	-5.27	97.33	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1390	G	C2'-C3'-O3'	5.27	122.13	113.70
1	5	4497	U	C2'-C3'-O3'	5.27	122.13	113.70
13	J	54	ARG	NE-CZ-NH1	5.26	122.93	120.30
35	f	102	ARG	NE-CZ-NH1	5.26	122.93	120.30
49	S2	1243	U	O5'-P-OP2	-5.26	100.96	105.70
74	SY	86	GLU	CB-CG-CD	-5.26	99.99	114.20
35	f	19	ARG	CG-CD-NE	-5.26	100.75	111.80
46	q	204	LEU	C-N-CA	-5.26	108.55	121.70
1	5	4736	C	N1-C1'-C2'	5.26	120.84	114.00
13	J	147	ARG	NE-CZ-NH1	5.26	122.93	120.30
49	S2	1097	G	C2'-C3'-O3'	5.26	122.11	113.70
9	F	136	ARG	NE-CZ-NH1	5.25	122.93	120.30
46	q	22	ASP	CB-CG-OD2	5.25	123.03	118.30
1	5	216	C	C2'-C3'-O3'	5.25	122.10	113.70
48	4	542	GLY	N-CA-C	-5.25	99.98	113.10
51	SB	67	PHE	CB-CG-CD2	-5.25	117.13	120.80
1	5	4463	U	O4'-C1'-C2'	-5.25	100.55	105.80
25	V	128	LEU	CA-CB-CG	5.25	127.37	115.30
58	SI	188	TYR	CB-CG-CD1	-5.24	117.86	121.00
48	4	102	LEU	N-CA-C	-5.24	96.85	111.00
5	B	119	TYR	CA-CB-CG	-5.24	103.45	113.40
49	S2	943	U	C6-N1-C1'	-5.24	113.86	121.20
17	N	114	ARG	NE-CZ-NH2	-5.24	117.68	120.30
49	S2	501	C	O4'-C1'-C2'	-5.24	100.56	105.80
56	SG	198	ARG	NE-CZ-NH1	5.24	122.92	120.30
36	g	14	ASN	N-CA-C	-5.24	96.86	111.00
19	P	30	ARG	NE-CZ-NH2	-5.23	117.68	120.30
1	5	2753	G	C2'-C3'-O3'	5.23	122.07	113.70
1	5	3666	C	N1-C1'-C2'	-5.23	106.24	112.00
46	q	117	ALA	C-N-CD	5.23	139.39	128.40
48	4	47	ALA	O-C-N	5.23	131.07	122.70
69	ST	53	PHE	N-CA-CB	-5.23	101.18	110.60
28	Y	87	ARG	CD-NE-CZ	5.23	130.92	123.60
49	S2	368	U	C2'-C3'-O3'	5.23	122.07	113.70
56	SG	74	ARG	NE-CZ-NH1	5.23	122.92	120.30
35	f	19	ARG	CA-CB-CG	5.23	124.90	113.40
48	4	123	ASP	C-N-CA	5.22	133.27	122.30
49	S2	1578	U	O4'-C1'-N1	-5.22	104.02	108.20
49	S2	1663	A	C1'-O4'-C4'	-5.22	105.72	109.90
1	5	4328	G	N9-C1'-C2'	-5.22	106.26	112.00
5	B	25	HIS	CB-CA-C	5.22	120.84	110.40
1	5	1886	G	N9-C1'-C2'	-5.22	106.26	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4966	A	C4-N9-C1'	5.22	135.69	126.30
4	A	89	TYR	CB-CA-C	5.22	120.84	110.40
9	F	58	HIS	N-CA-CB	5.22	120.00	110.60
49	S2	1093	A	C5'-C4'-O4'	5.22	115.36	109.10
1	5	2325	C	C2'-C3'-O3'	5.22	122.05	113.70
1	5	1	C	C3'-C2'-C1'	-5.22	97.33	101.50
14	K	144	ASP	CB-CG-OD2	5.22	123.00	118.30
20	Q	38	ARG	NE-CZ-NH2	-5.21	117.69	120.30
49	S2	1542	C	C1'-C2'-O2'	-5.21	94.96	110.60
28	Y	45	ARG	NE-CZ-NH1	5.21	122.91	120.30
49	S2	65	C	C2'-C3'-O3'	5.21	122.04	113.70
1	5	1484	G	O4'-C4'-C3'	-5.21	98.79	104.00
49	S2	1167	G	N9-C1'-C2'	5.21	120.78	114.00
1	5	223	G	N9-C1'-C2'	-5.21	106.27	112.00
1	5	2262	G	N9-C1'-C2'	5.21	120.77	114.00
1	5	1642	A	C5'-C4'-O4'	5.21	115.35	109.10
33	d	24	GLU	CA-CB-CG	5.21	124.86	113.40
1	5	2467	U	N1-C1'-C2'	-5.20	106.28	112.00
21	R	108	ARG	CG-CD-NE	5.20	122.73	111.80
56	SG	156	TYR	CB-CA-C	5.20	120.81	110.40
1	5	931	C	N1-C1'-C2'	5.20	120.76	114.00
20	Q	168	ARG	NE-CZ-NH1	5.20	122.90	120.30
1	5	1698	C	O5'-P-OP1	-5.20	101.02	105.70
46	q	72	ASN	C-N-CD	-5.20	109.16	120.60
1	5	267	G	C2'-C3'-O3'	5.20	122.02	113.70
28	Y	87	ARG	NE-CZ-NH1	-5.20	117.70	120.30
1	5	2310	C	C2'-C3'-O3'	5.20	122.01	113.70
18	O	178	ARG	NE-CZ-NH2	-5.20	117.70	120.30
49	S2	1579	A	C2'-C3'-O3'	5.20	122.01	113.70
54	SE	30	ARG	NE-CZ-NH1	5.20	122.90	120.30
68	SS	124	ARG	CG-CD-NE	5.20	122.71	111.80
21	R	124	TYR	CA-CB-CG	5.19	123.27	113.40
1	5	63	G	N9-C1'-C2'	5.19	120.75	114.00
1	5	1394	G	N9-C1'-C2'	5.19	120.75	114.00
14	K	154	ASP	CB-CG-OD2	5.19	122.97	118.30
49	S2	672	A	C3'-C2'-C1'	-5.19	97.35	101.50
1	5	272	U	N1-C1'-C2'	5.18	120.74	114.00
17	N	63	ARG	NE-CZ-NH2	-5.18	117.71	120.30
48	4	196	GLU	N-CA-CB	5.18	119.93	110.60
49	S2	594	A	C4'-C3'-O3'	5.18	123.37	113.00
14	K	44	ASP	CA-C-O	-5.18	109.22	120.10
35	f	51	TYR	CA-CB-CG	5.18	123.25	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	q	118	PRO	CA-N-CD	-5.18	104.24	111.50
68	SS	95	TYR	CB-CG-CD2	-5.18	117.89	121.00
1	5	194	C	N1-C1'-C2'	-5.18	106.30	112.00
48	4	794	PHE	N-CA-C	-5.18	97.02	111.00
49	S2	1292	C	C5'-C4'-O4'	5.18	115.31	109.10
1	5	172	C	O4'-C1'-C2'	-5.18	100.62	105.80
17	N	65	ARG	NE-CZ-NH2	5.18	122.89	120.30
53	SD	159	HIS	CA-CB-CG	-5.18	104.80	113.60
39	j	76	HIS	CB-CA-C	5.17	120.75	110.40
41	l	21	ARG	NE-CZ-NH1	5.17	122.89	120.30
49	S2	919	A	C2'-C3'-O3'	-5.17	98.12	109.50
1	5	268	G	C2'-C3'-O3'	5.17	121.97	113.70
1	5	2443	G	N9-C1'-C2'	5.17	120.72	114.00
15	L	99	ASP	CB-CG-OD1	-5.17	113.65	118.30
55	SF	188	TYR	CA-CB-CG	-5.17	103.58	113.40
1	5	4165	C	C2'-C3'-O3'	5.17	121.97	113.70
1	5	4543	G	N9-C1'-C2'	5.17	120.72	114.00
10	G	53	ARG	NE-CZ-NH1	5.17	122.88	120.30
22	S	29	ARG	CB-CA-C	5.17	120.74	110.40
49	S2	1150	A	N9-C1'-C2'	5.17	120.72	114.00
1	5	2597	G	N9-C1'-C2'	5.16	120.71	114.00
21	R	103	ARG	NE-CZ-NH1	5.16	122.88	120.30
1	5	2256	C	N1-C1'-C2'	5.16	120.71	114.00
17	N	59	TYR	CA-CB-CG	5.16	123.21	113.40
1	5	961	G	C4'-C3'-O3'	5.16	123.32	113.00
2	7	6	C	C2'-C3'-O3'	5.16	121.96	113.70
2	7	65	G	C2'-C3'-O3'	5.16	121.95	113.70
7	D	268	ARG	CG-CD-NE	5.16	122.64	111.80
1	5	664	G	C4'-C3'-O3'	5.16	123.32	113.00
3	8	1	C	C5'-C4'-C3'	5.16	124.25	116.00
35	f	6	TRP	CA-CB-CG	-5.16	103.90	113.70
48	4	448	GLN	CB-CA-C	-5.16	100.08	110.40
23	T	8	ARG	NE-CZ-NH1	5.16	122.88	120.30
1	5	2323	C	C2'-C3'-O3'	5.16	121.95	113.70
7	D	130	TYR	CA-CB-CG	-5.16	103.60	113.40
46	q	131	GLY	C-N-CD	5.16	139.23	128.40
81	Sf	138	ARG	CD-NE-CZ	5.15	130.81	123.60
30	a	6	ARG	NE-CZ-NH1	5.15	122.88	120.30
58	SI	188	TYR	CD1-CG-CD2	5.15	123.56	117.90
22	S	77	ASN	CB-CA-C	5.15	120.70	110.40
1	5	2879	A	N9-C1'-C2'	5.14	120.69	114.00
9	F	197	TYR	N-CA-CB	5.14	119.86	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1394	G	O4'-C1'-C2'	-5.14	100.66	105.80
1	5	4436	U	N1-C1'-C2'	-5.14	106.34	112.00
1	5	1850	A	N9-C1'-C2'	5.14	120.68	114.00
49	S2	1603	G	N9-C1'-C2'	5.14	120.68	114.00
20	Q	68	ARG	CG-CD-NE	-5.14	101.01	111.80
1	5	107	G	N9-C1'-C2'	-5.14	106.35	112.00
1	5	2044	U	C3'-C2'-C1'	5.14	105.61	101.50
1	5	4163	U	C4'-C3'-C2'	-5.14	97.46	102.60
1	5	2785	C	N1-C1'-C2'	5.13	120.67	114.00
1	5	2787	A	N9-C1'-C2'	-5.13	106.35	112.00
1	5	405	U	C2'-C3'-O3'	5.13	121.91	113.70
34	e	47	ARG	N-CA-C	-5.13	97.14	111.00
48	4	272	LYS	C-N-CA	5.13	134.53	121.70
1	5	703	G	O4'-C1'-N9	5.13	112.30	108.20
1	5	1577	G	N9-C1'-C2'	-5.13	106.36	112.00
18	O	140	ARG	NE-CZ-NH1	-5.13	117.73	120.30
5	B	161	ARG	NE-CZ-NH1	5.13	122.86	120.30
31	b	45	PHE	CB-CG-CD1	-5.13	117.21	120.80
49	S2	996	A	C4-N9-C1'	-5.13	117.07	126.30
3	8	46	G	N9-C1'-C2'	5.12	120.66	114.00
17	N	130	PHE	CB-CA-C	5.12	120.65	110.40
48	4	699	GLY	O-C-N	5.12	130.90	122.70
1	5	2529	A	O4'-C1'-N9	5.12	112.30	108.20
7	D	248	ARG	NE-CZ-NH1	5.12	122.86	120.30
81	Sf	138	ARG	CG-CD-NE	5.12	122.56	111.80
1	5	1615	C	N1-C1'-C2'	-5.12	106.37	112.00
15	L	99	ASP	N-CA-C	-5.12	97.18	111.00
36	g	4	ARG	NE-CZ-NH2	-5.12	117.74	120.30
46	q	205	ASP	CB-CG-OD2	5.12	122.91	118.30
49	S2	1567	G	N9-C1'-C2'	5.12	120.65	114.00
29	Z	51	ARG	NE-CZ-NH1	5.12	122.86	120.30
47	r	77	TYR	N-CA-CB	-5.12	101.39	110.60
1	5	648	G	C2'-C3'-O3'	5.11	121.88	113.70
1	5	658	C	C2'-C3'-O3'	5.11	121.88	113.70
1	5	2075	G	N9-C1'-C2'	-5.11	106.37	112.00
49	S2	102	A	C2'-C3'-O3'	5.11	121.88	113.70
22	S	10	TYR	CB-CA-C	5.11	120.62	110.40
29	Z	36	ARG	NE-CZ-NH2	-5.11	117.74	120.30
49	S2	797	C	O4'-C1'-C2'	-5.11	100.69	105.80
21	R	9	ARG	CG-CD-NE	5.11	122.53	111.80
49	S2	141	A	C2'-C3'-O3'	5.11	121.88	113.70
29	Z	51	ARG	NE-CZ-NH2	-5.11	117.75	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	72	C	O4'-C1'-N1	5.11	112.29	108.20
1	5	297	U	N1-C1'-C2'	-5.11	106.38	112.00
1	5	3880	G	C1'-C2'-O2'	-5.11	95.28	110.60
1	5	2538	U	O5'-P-OP1	-5.11	101.11	105.70
1	5	4276	G	N9-C1'-C2'	-5.11	106.38	112.00
65	SP	10	ARG	NE-CZ-NH2	-5.11	117.75	120.30
14	K	91	ASP	N-CA-C	5.10	124.78	111.00
46	q	45	MET	CB-CA-C	5.10	120.61	110.40
6	C	143	ARG	NE-CZ-NH1	5.10	122.85	120.30
46	q	68	HIS	C-N-CA	5.10	134.45	121.70
48	4	539	GLU	O-C-N	-5.10	114.54	122.70
33	d	85	ARG	CG-CD-NE	5.10	122.50	111.80
48	4	239	LYS	CD-CE-NZ	-5.10	99.98	111.70
50	SA	9	GLN	CB-CG-CD	-5.10	98.35	111.60
82	Sg	36	ARG	NE-CZ-NH2	-5.10	117.75	120.30
21	R	117	ARG	CB-CA-C	5.10	120.59	110.40
48	4	433	ASN	CB-CA-C	5.09	120.59	110.40
56	SG	205	GLU	OE1-CD-OE2	5.09	129.41	123.30
1	5	3666	C	C2'-C3'-O3'	5.09	121.84	113.70
3	8	125	C	O4'-C1'-N1	-5.09	104.13	108.20
14	K	153	ASP	CB-CG-OD2	5.09	122.88	118.30
9	F	72	ARG	NE-CZ-NH1	5.09	122.84	120.30
33	d	87	ARG	N-CA-CB	5.09	119.76	110.60
1	5	2117	G	C1'-O4'-C4'	-5.08	105.83	109.90
1	5	218	A	N9-C1'-C2'	-5.08	106.41	112.00
1	5	3870	C	N1-C1'-C2'	5.08	120.61	114.00
3	8	104	A	P-O5'-C5'	5.08	129.03	120.90
24	U	46	ARG	NE-CZ-NH1	5.08	122.84	120.30
49	S2	73	C	O4'-C1'-C2'	-5.08	100.72	105.80
49	S2	853	C	C2'-C3'-O3'	5.08	121.83	113.70
1	5	1361	G	C2'-C3'-O3'	5.08	121.83	113.70
1	5	3667	C	N1-C1'-C2'	-5.08	106.41	112.00
14	K	45	ASP	CB-CG-OD2	5.08	122.87	118.30
28	Y	126	ARG	CD-NE-CZ	5.08	130.71	123.60
28	Y	126	ARG	CG-CD-NE	5.08	122.46	111.80
49	S2	1700	C	N1-C1'-C2'	-5.08	106.42	112.00
27	X	137	TYR	CB-CG-CD2	-5.07	117.96	121.00
28	Y	87	ARG	CG-CD-NE	5.07	122.45	111.80
1	5	1359	G	O4'-C4'-C3'	-5.07	98.93	104.00
1	5	4975	G	C1'-O4'-C4'	-5.07	105.84	109.90
1	5	2614	C	N1-C1'-C2'	-5.07	106.42	112.00
15	L	103	ARG	CA-CB-CG	5.07	124.56	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	524	U	C2'-C3'-O3'	5.07	121.81	113.70
1	5	3627	G	C2'-C3'-O3'	5.07	121.81	113.70
49	S2	410	G	O5'-P-OP1	-5.07	101.14	105.70
1	5	336	A	N9-C1'-C2'	-5.07	106.43	112.00
29	Z	36	ARG	CG-CD-NE	5.07	122.44	111.80
49	S2	1080	A	O4'-C1'-N9	5.07	112.25	108.20
1	5	3804	G	N9-C1'-C2'	-5.06	106.43	112.00
1	5	3863	C	N1-C1'-C2'	5.06	120.58	114.00
1	5	4936	G	C4'-C3'-O3'	5.06	123.12	113.00
1	5	1887	G	C4'-C3'-C2'	-5.06	97.54	102.60
1	5	4563	U	C2-N1-C1'	5.06	123.77	117.70
46	q	23	ASP	CB-CG-OD2	5.06	122.85	118.30
13	J	170	HIS	CB-CA-C	5.06	120.52	110.40
14	K	150	ASP	CB-CG-OD2	5.06	122.85	118.30
49	S2	798	A	C4'-C3'-C2'	-5.06	97.54	102.60
1	5	1672	U	N1-C1'-C2'	5.06	120.57	114.00
1	5	4404	U	C3'-C2'-C1'	5.06	105.54	101.50
17	N	143	ARG	CB-CG-CD	5.06	124.75	111.60
28	Y	74	TYR	N-CA-CB	5.06	119.70	110.60
1	5	2459	G	N9-C1'-C2'	-5.05	106.44	112.00
14	K	27	ALA	N-CA-C	5.05	124.65	111.00
59	SJ	175	ARG	NE-CZ-NH1	5.05	122.83	120.30
1	5	4670	C	P-O5'-C5'	5.05	128.99	120.90
20	Q	33	ARG	CB-CG-CD	5.05	124.74	111.60
1	5	1268	G	N9-C1'-C2'	5.05	120.57	114.00
1	5	1895	G	N9-C1'-C2'	5.05	120.57	114.00
1	5	2054	U	N1-C1'-C2'	5.05	120.57	114.00
1	5	54	G	C2'-C3'-O3'	5.05	121.78	113.70
1	5	4498	U	C1'-C2'-O2'	5.05	125.75	110.60
4	A	209	HIS	CA-CB-CG	-5.05	105.02	113.60
49	S2	1368	U	N1-C1'-C2'	-5.05	106.45	112.00
48	4	242	GLY	C-N-CA	5.05	134.32	121.70
82	Sg	125	ARG	CG-CD-NE	-5.04	101.21	111.80
1	5	20	U	N1-C1'-C2'	-5.04	106.45	112.00
1	5	3773	U	O4'-C4'-C3'	-5.04	98.96	104.00
5	B	257	TRP	N-CA-CB	5.04	119.68	110.60
12	I	181	PHE	CB-CG-CD1	5.04	124.33	120.80
72	SW	57	ARG	CG-CD-NE	5.04	122.39	111.80
1	5	4398	C	C2'-C3'-O3'	5.04	121.76	113.70
13	J	99	PHE	CB-CG-CD2	-5.04	117.27	120.80
58	SI	28	GLU	N-CA-C	-5.04	97.39	111.00
1	5	1067	G	C2'-C3'-O3'	5.04	121.76	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	88	A	C1'-C2'-O2'	-5.04	95.49	110.60
23	T	19	PHE	CB-CA-C	-5.04	100.33	110.40
1	5	74	G	N9-C1'-C2'	5.03	120.54	114.00
1	5	2361	G	P-O3'-C3'	5.03	125.74	119.70
81	Sf	146	LEU	N-CA-C	-5.03	97.41	111.00
14	K	44	ASP	CA-CB-CG	5.03	124.47	113.40
57	SH	99	ARG	CG-CD-NE	5.03	122.37	111.80
1	5	1398	A	C3'-C2'-C1'	-5.03	97.48	101.50
1	5	2116	C	C2'-C3'-O3'	5.03	121.75	113.70
49	S2	385	G	N9-C1'-C2'	5.03	120.54	114.00
58	SI	5	ARG	NE-CZ-NH1	5.03	122.81	120.30
73	SX	20	HIS	CA-CB-CG	-5.03	105.05	113.60
1	5	4373	G	C3'-C2'-C1'	-5.03	97.48	101.50
27	X	56	ARG	CG-CD-NE	-5.03	101.24	111.80
1	5	2275	G	C2'-C3'-O3'	5.03	121.74	113.70
64	SO	55	ARG	NE-CZ-NH2	-5.03	117.79	120.30
34	e	44	ARG	NE-CZ-NH1	5.03	122.81	120.30
81	Sf	150	PHE	CB-CG-CD1	5.03	124.32	120.80
1	5	514	U	O4'-C4'-C3'	-5.02	98.98	104.00
1	5	1216	C	C2'-C3'-O3'	5.02	121.73	113.70
13	J	146	ARG	NE-CZ-NH1	-5.02	117.79	120.30
22	S	28	TYR	CB-CG-CD2	-5.02	117.99	121.00
73	SX	5	ARG	NE-CZ-NH2	5.02	122.81	120.30
1	5	352	G	C3'-C2'-C1'	5.02	105.51	101.50
1	5	1953	U	N1-C1'-C2'	5.02	120.52	114.00
1	5	2533	C	N1-C1'-C2'	5.01	120.52	114.00
17	N	6	TYR	CA-CB-CG	-5.01	103.87	113.40
49	S2	370	G	O5'-P-OP1	-5.01	101.19	105.70
1	5	2827	G	O4'-C4'-C3'	-5.01	98.99	104.00
20	Q	33	ARG	N-CA-CB	5.01	119.62	110.60
1	5	1281	G	C3'-C2'-C1'	5.01	105.51	101.50
1	5	1591	U	N1-C1'-C2'	5.01	120.52	114.00
1	5	4224	A	N9-C1'-C2'	-5.01	106.49	112.00
52	SC	223	TYR	CB-CG-CD1	-5.01	117.99	121.00
1	5	1272	C	C5'-C4'-O4'	5.01	115.11	109.10
1	5	1864	G	C2'-C3'-O3'	5.01	121.71	113.70
49	S2	161	U	N1-C1'-C2'	5.01	120.51	114.00
58	SI	77	ARG	NE-CZ-NH1	5.01	122.80	120.30
1	5	1440	U	C4'-C3'-C2'	-5.01	97.59	102.60
18	O	117	ARG	NE-CZ-NH2	-5.01	117.80	120.30
66	SQ	138	ARG	CG-CD-NE	5.01	122.31	111.80
9	F	83	PHE	N-CA-CB	-5.00	101.59	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1479	G	C1'-C2'-O2'	-5.00	95.59	110.60
1	5	1398	A	P-O3'-C3'	5.00	125.70	119.70
1	5	4454	G	C2'-C3'-O3'	5.00	121.70	113.70
37	h	72	PHE	CB-CG-CD1	5.00	124.30	120.80
49	S2	28	U	C4'-C3'-O3'	5.00	123.00	113.00
49	S2	967	C	N1-C1'-C2'	-5.00	106.50	112.00

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
49	S2	1109	C	C1'

All (507) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
48	4	102	LEU	Mainchain
48	4	108	HIS	Peptide
48	4	111	PHE	Sidechain
48	4	112	SER	Mainchain,Peptide
48	4	121	VAL	Mainchain
48	4	123	ASP	Mainchain
48	4	193	GLY	Mainchain
48	4	196	GLU	Peptide
48	4	197	SER	Peptide
48	4	199	PRO	Peptide
48	4	242	GLY	Mainchain,Peptide
48	4	245	GLY	Peptide
48	4	246	PRO	Peptide
48	4	247	ALA	Peptide
48	4	266	PHE	Mainchain,Peptide
48	4	269	ALA	Mainchain
48	4	272	LYS	Peptide
48	4	325	SER	Peptide
48	4	4	PHE	Peptide
48	4	403	PRO	Peptide
48	4	406	ASP	Peptide
48	4	408	GLY	Peptide
48	4	42	LYS	Mainchain
48	4	495	ARG	Mainchain,Peptide
48	4	540	GLU	Peptide
48	4	55	ARG	Peptide
48	4	573	SER	Peptide

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Mol	Chain	Res	Type	Group
48	4	574	ASP	Peptide
48	4	575	PRO	Mainchain
48	4	667	LYS	Peptide
48	4	669	VAL	Peptide
48	4	699	GLY	Mainchain
48	4	702	PHE	Sidechain
48	4	775	GLN	Peptide
48	4	827	ASN	Peptide
48	4	847	GLY	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	157	U	Sidechain
1	5	1625	G	Sidechain
1	5	1627	G	Sidechain
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	2046	G	Sidechain
1	5	2056	G	Sidechain
1	5	2077	C	Sidechain
1	5	2082	G	Sidechain
1	5	2087	C	Sidechain

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Mol	Chain	Res	Type	Group
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	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
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

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Mol	Chain	Res	Type	Group
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
1	5	4229	U	Sidechain
1	5	4234	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	4404	U	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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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	Sidechain,Peptide
11	H	50	LYS	Peptide
12	I	113	THR	Peptide
12	I	139	ARG	Sidechain
12	I	77	VAL	Peptide
12	I	93	PRO	Peptide
13	J	87	LEU	Peptide
13	J	99	PHE	Sidechain
14	K	114	ARG	Mainchain
14	K	130	LYS	Mainchain
14	K	27	ALA	Peptide
14	K	44	ASP	Mainchain
14	K	86	LYS	Peptide
15	L	146	LEU	Peptide
15	L	147	ALA	Peptide
15	L	192	PHE	Sidechain
15	L	62	PRO	Peptide
15	L	66	TYR	Peptide
16	M	6	PHE	Sidechain
16	M	65	PRO	Peptide
16	M	79	LYS	Peptide
16	M	94	LYS	Peptide
17	N	119	TYR	Sidechain
17	N	130	PHE	Sidechain

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Mol	Chain	Res	Type	Group
17	N	131	GLU	Sidechain
17	N	138	PHE	Peptide
17	N	139	HIS	Sidechain
17	N	180	PHE	Sidechain
17	N	184	ILE	Peptide
17	N	202	ARG	Peptide
17	N	37	HIS	Sidechain
17	N	90	ASN	Peptide
17	N	94	PHE	Sidechain
18	O	110	PRO	Peptide
18	O	117	ARG	Peptide
18	O	135	PHE	Sidechain
19	P	139	TYR	Sidechain
20	Q	161	SER	Peptide
20	Q	162	HIS	Peptide
20	Q	174	PHE	Sidechain
20	Q	32	TYR	Peptide
20	Q	34	PHE	Sidechain
21	R	118	HIS	Sidechain
21	R	132	PHE	Sidechain
21	R	174	GLU	Peptide
21	R	19	LYS	Peptide
21	R	57	VAL	Peptide
21	R	94	THR	Peptide
22	S	10	TYR	Sidechain
22	S	145	PHE	Sidechain,Peptide
22	S	152	PHE	Peptide
22	S	154	LEU	Peptide
22	S	159	LEU	Peptide
22	S	164	LYS	Peptide
22	S	32	ILE	Peptide
22	S	33	PHE	Peptide
22	S	68	PHE	Peptide
22	S	90	THR	Peptide
49	S2	1034	A	Sidechain
49	S2	104	A	Sidechain
49	S2	1045	U	Sidechain
49	S2	1063	C	Sidechain
49	S2	1085	C	Sidechain
49	S2	1088	U	Sidechain
49	S2	1109	C	Sidechain
49	S2	114	G	Sidechain

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Mol	Chain	Res	Type	Group
49	S2	1142	G	Sidechain
49	S2	1150	A	Sidechain
49	S2	1167	G	Sidechain
49	S2	1181	A	Sidechain
49	S2	1249	C	Sidechain
49	S2	1283	C	Sidechain
49	S2	1315	U	Sidechain
49	S2	1378	A	Sidechain
49	S2	1565	C	Sidechain
49	S2	1578	U	Sidechain
49	S2	1603	G	Sidechain
49	S2	1606	G	Sidechain
49	S2	1623	A	Sidechain
49	S2	1659	U	Sidechain
49	S2	1663	A	Sidechain
49	S2	1703	C	Sidechain
49	S2	1823	A	Sidechain
49	S2	1835	A	Sidechain
49	S2	1838	U	Sidechain
49	S2	1849	G	Sidechain
49	S2	1850	A	Sidechain
49	S2	1851	A	Sidechain
49	S2	1860	A	Sidechain
49	S2	294	U	Sidechain
49	S2	30	C	Sidechain
49	S2	313	A	Sidechain
49	S2	367	U	Sidechain
49	S2	381	C	Sidechain
49	S2	384	U	Sidechain
49	S2	399	C	Sidechain
49	S2	421	G	Sidechain
49	S2	423	U	Sidechain
49	S2	426	A	Sidechain
49	S2	427	U	Sidechain
49	S2	428	U	Sidechain
49	S2	437	G	Sidechain
49	S2	444	G	Sidechain
49	S2	447	A	Sidechain
49	S2	482	G	Sidechain
49	S2	601	G	Sidechain
49	S2	617	G	Sidechain
49	S2	631	U	Sidechain

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Mol	Chain	Res	Type	Group
49	S2	642	U	Sidechain
49	S2	645	C	Sidechain
49	S2	646	G	Sidechain
49	S2	661	U	Sidechain
49	S2	662	G	Sidechain
49	S2	685	A	Sidechain
49	S2	821	G	Sidechain
49	S2	848	U	Sidechain
49	S2	849	A	Sidechain
49	S2	9	U	Sidechain
49	S2	918	U	Sidechain
49	S2	92	A	Sidechain
49	S2	957	A	Sidechain
49	S2	958	G	Sidechain
49	S2	964	A	Sidechain
49	S2	999	G	Sidechain
50	SA	103	PHE	Sidechain
50	SA	131	HIS	Peptide
51	SB	141	GLY	Peptide
51	SB	40	ASN	Peptide
51	SB	66	VAL	Peptide
51	SB	76	ASN	Peptide
52	SC	168	GLY	Peptide
52	SC	236	PHE	Sidechain
52	SC	241	PHE	Sidechain
52	SC	60	TRP	Peptide
53	SD	159	HIS	Sidechain
53	SD	196	GLY	Peptide
53	SD	203	PRO	Peptide
54	SE	17	HIS	Peptide
54	SE	205	PHE	Peptide
55	SF	43	GLU	Peptide
57	SH	108	SER	Peptide
58	SI	149	TYR	Peptide
58	SI	153	LYS	Peptide
58	SI	155	ASN	Peptide
58	SI	26	LYS	Peptide
58	SI	65	PHE	Peptide
58	SI	99	ASN	Sidechain
59	SJ	165	TYR	Peptide
59	SJ	48	PHE	Sidechain
60	SK	29	MET	Peptide

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Mol	Chain	Res	Type	Group
61	SL	147	LYS	Peptide
61	SL	15	THR	Peptide
61	SL	151	THR	Peptide
61	SL	62	PHE	Sidechain
62	SM	100	PRO	Peptide
62	SM	107	SER	Peptide
62	SM	32	ALA	Peptide
63	SN	113	PHE	Peptide
64	SO	147	ARG	Sidechain
65	SP	11	THR	Peptide
66	SQ	43	GLU	Peptide
67	SR	108	LEU	Peptide
67	SR	125	GLY	Peptide
70	SU	71	GLY	Peptide
71	SV	32	ILE	Peptide
71	SV	48	GLY	Peptide
72	SW	54	ASP	Peptide
72	SW	76	SER	Peptide
73	SX	16	HIS	Sidechain
73	SX	20	HIS	Sidechain
74	SY	86	GLU	Sidechain
75	SZ	108	ILE	Peptide
76	Sa	17	HIS	Sidechain
77	Sb	81	ARG	Peptide
79	Sd	10	HIS	Peptide
79	Sd	8	TRP	Peptide
81	Sf	132	MET	Peptide
81	Sf	135	HIS	Peptide
81	Sf	138	ARG	Peptide
81	Sf	139	HIS	Peptide
23	T	140	PHE	Sidechain
23	T	142	ARG	Peptide
24	U	110	TYR	Peptide
24	U	55	ASN	Peptide
25	V	108	ASN	Peptide
25	V	97	TYR	Sidechain
25	V	98	PHE	Sidechain
26	W	27	LYS	Peptide
27	X	73	HIS	Sidechain
28	Y	18	HIS	Sidechain
28	Y	61	HIS	Sidechain
28	Y	62	TYR	Peptide

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Mol	Chain	Res	Type	Group
28	Y	81	TYR	Sidechain
30	a	109	TYR	Sidechain
30	a	128	PHE	Sidechain
30	a	34	ASN	Sidechain
30	a	39	HIS	Peptide
30	a	60	HIS	Sidechain
30	a	61	TYR	Sidechain,Peptide
30	a	62	HIS	Sidechain
30	a	91	ALA	Peptide
31	b	6	ASN	Sidechain
32	c	77	ASN	Peptide
32	c	78	ASN	Sidechain
33	d	103	TYR	Peptide
33	d	108	TYR	Peptide
33	d	25	TYR	Sidechain
33	d	72	VAL	Peptide
34	e	20	PHE	Sidechain
34	e	3	ALA	Peptide
34	e	74	PHE	Sidechain
34	e	76	LYS	Peptide
35	f	100	ARG	Peptide
35	f	53	ALA	Peptide
36	g	6	THR	Peptide
37	h	121	VAL	Peptide
37	h	78	TYR	Sidechain
37	h	97	LYS	Peptide
38	i	26	HIS	Sidechain
38	i	39	PHE	Sidechain
38	i	49	GLY	Peptide
39	j	46	LYS	Peptide
39	j	48	ASN	Peptide
39	j	66	HIS	Sidechain
39	j	8	PHE	Sidechain
40	k	28	ASN	Peptide
44	o	31	ASP	Sidechain,Peptide
44	o	43	ARG	Peptide
44	o	47	GLY	Peptide
44	o	48	TYR	Sidechain
44	o	76	ASN	Peptide
45	p	17	ARG	Peptide
46	q	108	PRO	Peptide
46	q	148	SER	Peptide

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Mol	Chain	Res	Type	Group
46	q	205	ASP	Mainchain,Peptide
46	q	44	ARG	Sidechain
46	q	6	ARG	Peptide
46	q	99	ARG	Sidechain
47	r	30	ASN	Peptide
47	r	31	ASN	Sidechain
47	r	45	HIS	Sidechain
47	r	70	GLN	Peptide
47	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	39660	10326	0
2	7	2558	0	1296	309	0
3	8	3314	0	1683	481	0
4	A	1868	0	1959	159	0
5	B	3147	0	3280	216	0
6	C	2919	0	3100	160	0
7	D	2380	0	2412	174	0
8	E	1904	0	2055	132	0
9	F	1870	0	1996	174	0
10	G	1934	0	2086	132	0
11	H	1518	0	1601	87	0
12	I	1713	0	1752	106	0
13	J	1359	0	1389	73	0
14	K	1140	0	1189	583	0
15	L	1703	0	1818	75	0
16	M	1131	0	1209	68	0
17	N	1701	0	1749	118	0
18	O	1651	0	1786	87	0
19	P	1242	0	1269	54	0
20	Q	1506	0	1623	80	0
21	R	1508	0	1664	104	0
22	S	1454	0	1496	121	0
23	T	1298	0	1366	75	0
24	U	808	0	831	25	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	V	979	0	1039	53	0
26	W	528	0	541	52	0
27	X	976	0	1053	37	0
28	Y	1115	0	1205	62	0
29	Z	1107	0	1182	49	0
30	a	1163	0	1211	0	0
31	b	610	0	650	0	0
32	c	732	0	769	0	0
33	d	888	0	930	0	0
34	e	1053	0	1147	0	0
35	f	876	0	912	0	0
36	g	906	0	1002	0	0
37	h	1015	0	1149	0	0
38	i	832	0	917	0	0
39	j	706	0	743	0	0
40	k	569	0	637	0	0
41	l	444	0	483	0	0
42	m	429	0	466	0	0
43	n	222	0	261	0	0
44	o	851	0	922	0	0
45	p	708	0	760	0	0
46	q	1556	0	1604	0	0
47	r	1001	0	1062	0	0
48	4	6673	0	6737	2045	0
49	S2	36900	0	18598	5189	0
50	SA	1642	0	1646	99	0
51	SB	1725	0	1797	76	0
52	SC	1690	0	1777	66	0
53	SD	1765	0	1865	95	0
54	SE	2076	0	2177	74	0
55	SF	1509	0	1563	61	0
56	SG	1923	0	2089	97	0
57	SH	1521	0	1616	90	0
58	SI	1686	0	1772	102	0
59	SJ	1525	0	1640	95	0
60	SK	827	0	854	50	0
61	SL	1238	0	1315	57	0
62	SM	960	0	989	108	0
63	SN	1208	0	1294	55	0
64	SO	1016	0	1039	58	0
65	SP	805	0	861	25	0
66	SQ	1124	0	1193	47	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
67	SR	1047	0	1103	43	0
68	SS	1139	0	1191	76	0
69	ST	1101	0	1135	69	0
70	SU	818	0	883	25	0
71	SV	625	0	628	19	0
72	SW	1034	0	1080	48	0
73	SX	1099	0	1166	64	0
74	SY	1023	0	1090	54	0
75	SZ	598	0	656	16	0
76	Sa	781	0	830	0	0
77	Sb	651	0	672	0	0
78	Sc	506	0	536	0	0
79	Sd	434	0	427	0	0
80	Se	452	0	494	0	0
81	Sf	581	0	599	0	0
82	Sg	2436	0	2393	0	0
83	Sa	1	0	0	0	0
83	j	1	0	0	0	0
83	m	1	0	0	0	0
83	o	1	0	0	0	0
84	4	1	0	0	0	0
84	5	118	0	0	0	0
84	7	5	0	0	0	0
84	8	4	0	0	0	0
84	P	1	0	0	0	0
84	S2	36	0	0	0	0
84	V	1	0	0	0	0
All	All	221686	0	166619	21521	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 61.

All (21521) 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)
48:4:753:GLU:HA	48:4:782:PHE:CE1	1.25	1.71
48:4:236:PHE:CE2	48:4:273:PHE:CZ	1.79	1.71
10:G:261:LEU:CD2	10:G:264:LYS:HE2	1.21	1.66
1:5:4413:C:H4'	12:I:157:PHE:CE2	1.13	1.65
48:4:751:CYS:CB	48:4:755:VAL:HB	1.23	1.64
49:S2:460:A:C2	49:S2:461:U:C5	1.85	1.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:61:LYS:CE	14:K:72:GLU:HB3	1.28	1.63
14:K:97:ASN:CA	14:K:98:ILE:HG13	1.29	1.63
48:4:613:LEU:HD22	48:4:639:TYR:CD1	1.30	1.63
48:4:236:PHE:CE2	48:4:273:PHE:HZ	0.94	1.61
14:K:106:PHE:CD2	14:K:110:VAL:CG2	1.75	1.60
14:K:123:ARG:CA	14:K:129:ILE:HD11	1.19	1.60
14:K:61:LYS:HE3	14:K:72:GLU:CB	1.18	1.60
48:4:507:VAL:CG2	48:4:554:LEU:HD21	1.17	1.60
48:4:825:PHE:CE2	48:4:849:PRO:HD2	1.30	1.59
14:K:94:LYS:CB	14:K:96:LYS:HD2	1.28	1.58
48:4:692:LEU:HD11	48:4:734:LEU:CD1	1.28	1.58
14:K:47:ALA:CB	14:K:72:GLU:HG2	1.24	1.58
48:4:672:LEU:CA	48:4:675:ILE:HG12	1.21	1.57
48:4:753:GLU:CA	48:4:782:PHE:CE1	1.81	1.57
14:K:106:PHE:CD2	14:K:110:VAL:HG21	1.09	1.57
48:4:56:PHE:CZ	48:4:455:GLY:HA3	1.38	1.57
48:4:236:PHE:HE2	48:4:273:PHE:CZ	1.10	1.56
48:4:751:CYS:HB2	48:4:755:VAL:CB	1.22	1.56
48:4:628:LEU:CD2	48:4:631:ARG:HH22	1.13	1.56
48:4:759:ILE:HD13	48:4:784:VAL:CG2	1.34	1.55
14:K:97:ASN:HA	14:K:98:ILE:CG1	1.15	1.55
48:4:58:ASP:HB3	48:4:63:GLU:CG	1.37	1.54
48:4:686:ALA:CB	48:4:729:LEU:HD12	1.35	1.53
49:S2:1453:C:C4	49:S2:1455:A:H1'	1.43	1.53
50:SA:151:ASP:CG	50:SA:151:ASP:CB	1.78	1.52
48:4:691:ALA:N	48:4:730:TYR:CD1	1.75	1.52
14:K:123:ARG:CG	14:K:129:ILE:CD1	1.82	1.52
48:4:744:ILE:CD1	48:4:816:HIS:N	1.70	1.51
1:5:1994:C:C2'	14:K:132:ILE:HG12	1.40	1.51
1:5:4605:A:N6	48:4:801:ARG:CG	1.67	1.51
48:4:206:ASP:HB3	48:4:207:PRO:CD	1.19	1.51
59:SJ:59:GLU:CG	59:SJ:59:GLU:CD	1.75	1.51
48:4:759:ILE:CD1	48:4:784:VAL:HB	1.35	1.50
48:4:686:ALA:HB3	48:4:729:LEU:CD1	1.38	1.50
14:K:123:ARG:CG	14:K:129:ILE:HD12	1.33	1.49
1:5:100:C:C5	1:5:101:A:C8	2.00	1.49
48:4:628:LEU:CD2	48:4:631:ARG:NH2	1.73	1.49
14:K:121:LEU:CD1	14:K:129:ILE:HD13	1.43	1.49
48:4:73:THR:N	48:4:104:ASP:HB3	1.24	1.48
14:K:123:ARG:HB2	14:K:129:ILE:CG1	1.42	1.47
48:4:693:CYS:HA	48:4:839:ARG:NE	1.22	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:58:ASP:CB	48:4:63:GLU:HG2	1.44	1.47
48:4:692:LEU:CD1	48:4:734:LEU:HD11	1.03	1.47
48:4:56:PHE:CZ	48:4:455:GLY:CA	1.94	1.47
14:K:102:GLY:HA2	14:K:139:VAL:C	1.33	1.47
48:4:73:THR:H	48:4:104:ASP:CB	1.28	1.46
48:4:675:ILE:HG21	48:4:709:LEU:CD1	1.41	1.46
48:4:543:GLU:CD	48:4:576:VAL:CG2	1.81	1.46
13:J:119:TYR:CD1	68:SS:108:ARG:NH2	1.84	1.46
48:4:267:ASP:N	48:4:267:ASP:CA	1.77	1.46
48:4:672:LEU:HA	48:4:675:ILE:CG1	1.01	1.46
13:J:119:TYR:CG	68:SS:108:ARG:NH2	1.82	1.46
14:K:123:ARG:CB	14:K:129:ILE:CG1	1.92	1.45
14:K:125:LEU:CD1	14:K:163:PRO:HB3	1.45	1.45
48:4:113:SER:HB3	48:4:533:MET:CB	1.43	1.45
1:5:4413:C:H4'	12:I:157:PHE:CD2	1.50	1.45
48:4:150:ARG:CZ	48:4:194:GLU:OE1	1.65	1.45
14:K:121:LEU:CD1	14:K:129:ILE:HG21	1.47	1.45
48:4:543:GLU:CD	48:4:576:VAL:HG23	1.26	1.45
14:K:102:GLY:N	14:K:139:VAL:HG13	1.12	1.45
1:5:4605:A:N6	48:4:801:ARG:CD	1.79	1.44
14:K:121:LEU:HD13	14:K:129:ILE:CG2	1.47	1.44
48:4:56:PHE:CE1	48:4:455:GLY:CA	2.01	1.44
14:K:160:VAL:O	14:K:163:PRO:CD	1.64	1.44
14:K:56:LEU:CD1	14:K:91:ASP:OD2	1.66	1.43
48:4:741:MET:HG3	48:4:817:TRP:CZ3	1.50	1.43
48:4:744:ILE:HD13	48:4:816:HIS:N	1.15	1.43
48:4:753:GLU:OE2	48:4:779:THR:CG2	1.66	1.43
48:4:691:ALA:HB2	48:4:730:TYR:CG	1.54	1.42
49:S2:460:A:C2	49:S2:461:U:C6	2.03	1.42
48:4:27:HIS:HD2	48:4:28:VAL:N	1.08	1.42
48:4:267:ASP:C	48:4:267:ASP:CA	1.88	1.42
48:4:686:ALA:CB	48:4:729:LEU:CD1	1.91	1.42
74:SY:86:GLU:CD	74:SY:86:GLU:CG	1.85	1.42
1:5:4413:C:C4'	12:I:157:PHE:CE2	2.01	1.41
48:4:56:PHE:HZ	48:4:456:ARG:N	1.17	1.41
49:S2:42:A:C6	49:S2:43:U:H5	1.37	1.41
48:4:113:SER:CB	48:4:533:MET:HB3	1.51	1.41
1:5:1174:G:N2	1:5:1175:A:N7	1.67	1.41
48:4:697:MET:SD	48:4:702:PHE:HZ	1.40	1.41
1:5:3709:U:C4	49:S2:970:G:N2	1.87	1.41
48:4:825:PHE:CE2	48:4:849:PRO:CD	2.01	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:460:A:N1	49:S2:461:U:C5	1.88	1.40
49:S2:1416:C:H2'	49:S2:1417:C:C6	1.55	1.40
48:4:691:ALA:CB	48:4:730:TYR:HB3	0.94	1.40
48:4:613:LEU:CD2	48:4:639:TYR:CD1	2.04	1.39
1:5:1266:G:N2	1:5:2111:G:N3	1.67	1.39
14:K:102:GLY:CA	14:K:139:VAL:C	1.90	1.39
48:4:543:GLU:OE2	48:4:576:VAL:CG2	1.69	1.39
1:5:1958:A:N1	1:5:2026:A:N6	1.68	1.39
48:4:206:ASP:CB	48:4:207:PRO:HD3	1.28	1.39
1:5:2361:G:O6	19:P:25:HIS:CD2	1.74	1.38
49:S2:1538:C:N3	49:S2:1539:U:H5	1.18	1.38
48:4:73:THR:N	48:4:104:ASP:CB	1.77	1.37
48:4:753:GLU:CD	48:4:779:THR:HG23	1.43	1.37
48:4:690:GLY:C	48:4:730:TYR:CE1	1.96	1.37
14:K:94:LYS:HD3	14:K:96:LYS:CE	1.51	1.37
48:4:56:PHE:CZ	48:4:456:ARG:N	1.93	1.37
1:5:4283:G:C2	1:5:4284:C:C6	2.13	1.37
48:4:507:VAL:HG22	48:4:554:LEU:CD2	1.53	1.37
48:4:690:GLY:CA	48:4:730:TYR:CE1	2.06	1.36
48:4:855:LEU:HD23	48:4:856:ASP:N	1.34	1.36
48:4:845:LYS:NZ	48:4:846:GLU:HG2	1.34	1.36
1:5:1563:A:N6	49:S2:1028:A:H61	1.22	1.36
48:4:27:HIS:CD2	48:4:28:VAL:N	1.93	1.36
1:5:3767:C:H5'	49:S2:1849:G:C6	1.60	1.36
3:8:11:C:N3	3:8:12:G:N7	1.70	1.36
48:4:541:SER:O	48:4:543:GLU:CG	1.72	1.36
1:5:1994:C:O2'	14:K:132:ILE:CG1	1.72	1.36
48:4:693:CYS:CA	48:4:839:ARG:HE	1.36	1.35
48:4:4:PHE:O	48:4:46:ILE:CD1	1.72	1.35
48:4:759:ILE:HD13	48:4:784:VAL:CB	1.57	1.35
48:4:543:GLU:CG	48:4:576:VAL:HG21	1.56	1.35
1:5:977:C:C2	1:5:978:G:C8	2.14	1.35
1:5:2078:C:N3	1:5:2079:G:N7	1.76	1.34
48:4:56:PHE:CE1	48:4:455:GLY:HA2	1.62	1.34
48:4:541:SER:O	48:4:543:GLU:HG3	1.17	1.34
1:5:3709:U:C2	49:S2:970:G:C2	2.14	1.34
1:5:2367:A:N1	1:5:2788:U:O4	1.56	1.34
48:4:45:ILE:CG2	48:4:78:PHE:N	1.85	1.34
1:5:4283:G:C2	1:5:4284:C:C5	2.15	1.34
48:4:236:PHE:CZ	48:4:273:PHE:HZ	1.44	1.33
14:K:102:GLY:CA	14:K:139:VAL:O	1.77	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:54:A:C2	2:7:55:A:N7	1.96	1.33
2:7:18:C:N3	2:7:19:C:C5	1.96	1.33
13:J:119:TYR:CD2	68:SS:108:ARG:NH2	1.84	1.33
25:V:97:TYR:OH	26:W:21:TYR:HA	1.29	1.33
1:5:4213:A:N1	1:5:4218:U:O4	1.60	1.32
1:5:3709:U:C5	49:S2:970:G:N2	1.90	1.32
48:4:72:SER:OG	48:4:104:ASP:C	1.63	1.32
14:K:160:VAL:HA	14:K:163:PRO:CG	1.58	1.32
1:5:983:C:O2	1:5:984:C:C6	1.81	1.32
14:K:31:LYS:O	14:K:34:PRO:CD	1.76	1.32
48:4:769:HIS:O	48:4:786:ALA:CB	1.75	1.32
1:5:1973:G:H1	1:5:1993:C:N4	1.28	1.32
48:4:825:PHE:CZ	48:4:849:PRO:HD3	1.63	1.31
14:K:61:LYS:CE	14:K:72:GLU:CB	1.89	1.31
49:S2:1539:U:N3	49:S2:1540:G:N7	1.74	1.31
1:5:1388:A:C6	1:5:1396:G:N2	1.96	1.31
48:4:543:GLU:CG	48:4:576:VAL:CG2	2.08	1.31
1:5:4892:A:N1	1:5:4927:G:O6	1.62	1.31
48:4:198:GLY:CA	48:4:201:GLY:HA2	1.52	1.31
49:S2:647:U:O2	49:S2:648:A:C8	1.83	1.31
48:4:72:SER:OG	48:4:104:ASP:CA	1.78	1.31
49:S2:1231:C:O4'	49:S2:1665:G:N2	1.61	1.31
1:5:1983:A:N7	1:5:1987:C:OP2	1.64	1.30
48:4:613:LEU:CD1	48:4:639:TYR:HB3	1.60	1.30
1:5:4233:A:N1	1:5:4290:U:O4	1.64	1.30
48:4:541:SER:CB	48:4:576:VAL:HG11	1.59	1.30
48:4:697:MET:SD	48:4:702:PHE:CZ	2.22	1.30
49:S2:42:A:N3	49:S2:426:A:N7	1.77	1.30
1:5:1958:A:N1	1:5:2026:A:C6	2.00	1.30
14:K:137:GLN:OE1	14:K:148:PRO:HB3	1.19	1.30
14:K:79:ALA:O	14:K:83:LYS:HG3	1.17	1.30
49:S2:1133:A:C2	49:S2:1134:G:C8	2.19	1.30
48:4:496:VAL:HG22	48:4:497:MET:SD	1.71	1.30
48:4:691:ALA:HB1	48:4:854:PHE:CZ	1.65	1.30
49:S2:524:U:N3	49:S2:594:A:N6	1.77	1.30
49:S2:1284:A:O2'	62:SM:106:CYS:HA	1.17	1.30
74:SY:86:GLU:CD	74:SY:86:GLU:OE2	1.69	1.29
48:4:113:SER:HA	48:4:499:PHE:CB	1.61	1.29
48:4:10:ARG:NH2	48:4:465:PRO:HD3	1.46	1.29
48:4:541:SER:HB3	48:4:576:VAL:CG1	1.61	1.29
48:4:502:SER:HB2	48:4:504:VAL:CG1	1.63	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:753:GLU:CB	48:4:782:PHE:CE1	2.14	1.29
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
49:S2:1114:U:O4	49:S2:1119:A:N1	1.65	1.29
14:K:94:LYS:HG2	14:K:96:LYS:CG	1.62	1.28
49:S2:830:A:N6	49:S2:844:U:H3	1.30	1.28
48:4:771:PHE:HB3	48:4:785:LYS:CB	1.60	1.28
48:4:507:VAL:CG2	48:4:554:LEU:CD2	2.07	1.28
48:4:771:PHE:N	48:4:785:LYS:O	1.67	1.28
48:4:581:GLU:OE2	48:4:695:GLU:HB2	1.33	1.28
14:K:102:GLY:H	14:K:139:VAL:CG1	1.44	1.28
1:5:1998:A:C2	1:5:2019:C:O2'	1.84	1.28
14:K:160:VAL:CA	14:K:163:PRO:CG	2.11	1.28
48:4:691:ALA:HB2	48:4:730:TYR:CB	0.81	1.28
48:4:756:VAL:O	48:4:759:ILE:HG22	1.34	1.28
14:K:160:VAL:C	14:K:163:PRO:CD	2.01	1.28
14:K:94:LYS:HB3	14:K:96:LYS:CD	1.63	1.28
48:4:571:LYS:HE2	48:4:572:LYS:N	1.49	1.27
1:5:5005:G:O6	26:W:51:TRP:HB3	1.32	1.27
48:4:331:GLU:OE2	48:4:335:LEU:HD22	1.30	1.27
49:S2:1408:U:O4	49:S2:1439:A:N1	1.67	1.27
48:4:43:ALA:O	48:4:45:ILE:N	1.66	1.27
48:4:42:LYS:HG3	48:4:79:TYR:OH	1.24	1.27
1:5:1478:C:O2	1:5:1479:G:N7	1.62	1.27
49:S2:56:G:C6	49:S2:90:G:N2	2.02	1.27
48:4:692:LEU:CD1	48:4:734:LEU:CD1	1.91	1.27
14:K:47:ALA:CB	14:K:72:GLU:CG	2.13	1.27
1:5:1958:A:C2	1:5:2026:A:C6	2.21	1.27
14:K:106:PHE:HD2	14:K:110:VAL:CG2	1.24	1.26
1:5:1994:C:C2'	14:K:132:ILE:CG1	2.12	1.26
1:5:1994:C:O2'	14:K:132:ILE:HG13	1.21	1.26
48:4:739:ARG:NH1	48:4:823:ASP:HB2	1.49	1.26
49:S2:469:A:N1	49:S2:470:G:C8	2.04	1.26
48:4:693:CYS:HA	48:4:839:ARG:CZ	1.64	1.26
14:K:14:TYR:CD2	14:K:63:THR:OG1	1.82	1.26
48:4:4:PHE:CD1	48:4:5:THR:HG22	1.70	1.26
49:S2:1539:U:O2	49:S2:1540:G:C8	1.88	1.26
48:4:502:SER:CB	48:4:504:VAL:HG13	1.65	1.26
48:4:740:LEU:CB	48:4:831:PRO:HB3	1.64	1.26
1:5:1936:C:C5	2:7:84:U:C5	2.22	1.25
48:4:3:ASN:HA	48:4:45:ILE:O	1.36	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:125:LEU:HD12	14:K:163:PRO:CB	1.66	1.25
1:5:2743:A:C2	1:5:2744:A:C5	2.24	1.25
49:S2:460:A:N1	49:S2:461:U:C4	2.03	1.25
10:G:261:LEU:CD2	10:G:264:LYS:CE	2.14	1.25
14:K:63:THR:HA	14:K:71:ILE:O	1.35	1.25
14:K:94:LYS:CG	14:K:96:LYS:HD2	1.64	1.25
49:S2:1433:C:H2'	49:S2:1434:C:C1'	1.65	1.25
48:4:79:TYR:CD2	48:4:351:LEU:HD13	1.71	1.25
1:5:1672:U:C2	1:5:1673:U:C5	2.23	1.25
49:S2:551:U:O2	49:S2:552:G:C8	1.89	1.25
48:4:45:ILE:CG2	48:4:78:PHE:H	1.47	1.25
49:S2:50:A:N6	49:S2:488:U:H3	1.36	1.25
48:4:13:MET:CE	48:4:464:VAL:HG13	1.65	1.24
1:5:3702:A:C2	1:5:3703:G:C8	2.24	1.24
53:SD:216:GLU:OE1	53:SD:216:GLU:CD	1.73	1.24
14:K:94:LYS:CB	14:K:96:LYS:CD	2.11	1.24
49:S2:165:G:C8	49:S2:166:A:N7	2.05	1.24
48:4:402:VAL:CG2	48:4:403:PRO:HD2	1.65	1.24
14:K:56:LEU:HB3	14:K:91:ASP:OD1	1.30	1.24
48:4:753:GLU:CA	48:4:782:PHE:HE1	1.28	1.24
14:K:94:LYS:CG	14:K:96:LYS:CD	2.15	1.24
49:S2:50:A:N1	49:S2:488:U:O4	1.69	1.24
14:K:142:ASN:HB2	14:K:148:PRO:N	1.53	1.24
48:4:759:ILE:CD1	48:4:784:VAL:CB	2.10	1.24
48:4:690:GLY:CA	48:4:730:TYR:HE1	1.42	1.24
49:S2:1417:C:N3	49:S2:1419:C:H5	1.36	1.23
49:S2:1433:C:H3'	49:S2:1433:C:OP2	1.38	1.23
48:4:113:SER:CA	48:4:499:PHE:HB2	1.67	1.23
48:4:753:GLU:HB3	48:4:782:PHE:CZ	1.72	1.23
48:4:698:ARG:O	48:4:700:VAL:CG2	1.84	1.23
1:5:1899:G:C2	1:5:1900:C:C5	2.27	1.23
14:K:102:GLY:N	14:K:139:VAL:CG1	1.99	1.23
48:4:762:VAL:HG13	48:4:766:LYS:NZ	1.51	1.23
14:K:61:LYS:HE3	14:K:72:GLU:CA	1.67	1.23
14:K:14:TYR:CE2	14:K:63:THR:OG1	1.90	1.23
48:4:165:LEU:HD12	48:4:305:MET:CE	1.65	1.23
14:K:125:LEU:CD1	14:K:163:PRO:CB	2.16	1.23
21:R:131:VAL:HB	21:R:132:PHE:CZ	1.74	1.23
48:4:58:ASP:OD1	48:4:69:THR:HG23	1.27	1.23
48:4:73:THR:H	48:4:104:ASP:CG	1.40	1.23
14:K:92:ARG:HA	14:K:95:GLN:OE1	1.37	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1268:G:C2	1:5:1270:A:C8	2.28	1.22
48:4:13:MET:CE	48:4:465:PRO:HD2	1.69	1.22
1:5:1958:A:C6	1:5:2026:A:N6	2.06	1.22
49:S2:1538:C:N3	49:S2:1539:U:C5	2.06	1.22
1:5:3709:U:N3	49:S2:970:G:N2	1.87	1.22
48:4:331:GLU:OE2	48:4:335:LEU:CD2	1.86	1.22
1:5:4605:A:N6	48:4:801:ARG:CB	2.01	1.22
1:5:3709:U:C2	49:S2:970:G:N2	2.07	1.22
48:4:481:LYS:HG3	48:4:482:THR:N	1.37	1.22
1:5:1956:A:N1	1:5:2027:U:N3	1.87	1.22
14:K:137:GLN:OE1	14:K:148:PRO:CB	1.86	1.21
48:4:330:LYS:O	48:4:331:GLU:HG2	1.33	1.21
48:4:710:HIS:CD2	48:4:715:HIS:HB2	1.75	1.21
48:4:855:LEU:C	48:4:855:LEU:HD23	1.50	1.21
14:K:102:GLY:HA2	14:K:139:VAL:CA	1.70	1.21
48:4:628:LEU:HD23	48:4:631:ARG:NH2	1.39	1.21
14:K:102:GLY:CA	14:K:139:VAL:CG1	2.18	1.21
48:4:713:ALA:HB2	48:4:716:ARG:NH2	1.53	1.21
1:5:2314:G:C2	1:5:2315:G:N7	2.09	1.21
1:5:964:A:N6	1:5:966:A:N7	1.87	1.21
48:4:103:ILE:CG1	48:4:122:THR:HG21	1.70	1.21
1:5:2497:C:N3	1:5:2498:C:C5	2.08	1.21
14:K:160:VAL:CA	14:K:163:PRO:HG2	1.69	1.21
1:5:2784:C:C2	1:5:2785:C:C5	2.28	1.21
3:8:12:G:C2	3:8:13:G:C8	2.28	1.21
1:5:3709:U:C6	49:S2:970:G:N2	1.99	1.21
48:4:503:PRO:O	48:4:505:VAL:N	1.73	1.20
14:K:102:GLY:HA2	14:K:139:VAL:CG1	1.67	1.20
49:S2:1273:C:O2	49:S2:1506:A:H2	1.22	1.20
49:S2:821:G:O6	59:SJ:150:ARG:HD2	1.40	1.20
49:S2:42:A:C6	49:S2:43:U:C5	2.29	1.20
49:S2:795:A:C2	49:S2:796:G:C5	2.28	1.20
25:V:97:TYR:OH	26:W:21:TYR:CA	1.89	1.20
48:4:672:LEU:CA	48:4:675:ILE:CG1	1.89	1.20
14:K:31:LYS:HG3	48:4:775:GLN:OE1	1.35	1.20
48:4:753:GLU:HA	48:4:782:PHE:CD1	1.76	1.20
1:5:469:C:O2	1:5:688:U:H1'	1.36	1.20
1:5:4413:C:C4'	12:I:157:PHE:CD2	2.16	1.20
14:K:106:PHE:CB	14:K:110:VAL:HG23	1.71	1.20
1:5:1279:A:H2'	1:5:1280:C:C5	1.76	1.20
49:S2:1539:U:C2	49:S2:1540:G:C8	2.28	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3629:A:C1'	49:S2:1721:U:H3	1.53	1.20
48:4:325:SER:O	48:4:327:ASP:N	1.75	1.20
1:5:4283:G:N1	1:5:4284:C:C5	2.09	1.19
14:K:48:LYS:HG2	14:K:52:ASP:OD1	1.41	1.19
14:K:94:LYS:HG2	14:K:96:LYS:CB	1.70	1.19
48:4:496:VAL:CG2	48:4:497:MET:SD	2.29	1.19
1:5:208:A:O4'	1:5:232:G:N2	1.73	1.19
48:4:651:CYS:SG	48:4:662:LEU:HD12	1.83	1.19
48:4:825:PHE:CZ	48:4:849:PRO:CD	2.18	1.19
48:4:275:LYS:HE3	48:4:275:LYS:O	1.40	1.19
48:4:481:LYS:CG	48:4:482:THR:H	1.44	1.19
14:K:113:ALA:O	14:K:116:MET:HG2	1.43	1.19
1:5:106:A:H1'	1:5:336:A:C8	1.76	1.19
48:4:13:MET:SD	48:4:465:PRO:HD2	1.82	1.18
1:5:2362:U:C4	1:5:3859:G:N2	2.12	1.18
1:5:2361:G:O6	19:P:25:HIS:HD2	1.04	1.18
48:4:562:GLU:HA	48:4:570:ILE:HD11	1.25	1.18
14:K:160:VAL:O	14:K:163:PRO:HD2	1.15	1.18
48:4:742:GLU:OE2	48:4:791:ASN:OD1	1.61	1.18
48:4:45:ILE:HG21	48:4:78:PHE:N	1.19	1.18
48:4:111:PHE:CE1	48:4:809:PHE:CZ	2.30	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
48:4:804:THR:CB	48:4:808:ALA:HB2	1.73	1.18
48:4:609:PHE:CZ	48:4:661:ILE:HD12	1.76	1.18
48:4:75:ILE:CG2	48:4:77:LEU:CD1	2.21	1.18
48:4:762:VAL:CG2	48:4:800:LEU:HD12	1.71	1.18
1:5:207:G:N2	1:5:383:A:N7	1.90	1.18
48:4:113:SER:CB	48:4:499:PHE:HB2	1.74	1.17
48:4:150:ARG:NH1	48:4:194:GLU:OE1	1.77	1.17
1:5:1213:G:C4	1:5:1215:C:H1'	1.77	1.17
14:K:94:LYS:HD3	14:K:96:LYS:HE2	1.24	1.17
1:5:4276:G:C6	1:5:4277:G:C8	2.32	1.17
49:S2:26:U:N3	49:S2:27:A:C8	2.12	1.17
49:S2:1273:C:O2	49:S2:1506:A:C2	1.96	1.17
48:4:739:ARG:HA	48:4:824:PRO:HD3	1.26	1.17
48:4:40:VAL:O	48:4:43:ALA:CB	1.92	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	2.33	1.17
1:5:1245:C:C5	1:5:1269:G:C6	2.33	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2856:C:O2	1:5:2857:A:C8	1.98	1.17
1:5:3767:C:C5'	49:S2:1849:G:C6	2.26	1.17
48:4:165:LEU:CD1	48:4:305:MET:HE2	1.74	1.17
1:5:484:U:C4	1:5:486:C:C5	2.32	1.17
1:5:166:C:O2	1:5:167:C:C5	1.98	1.17
1:5:1969:G:O6	1:5:2018:C:N4	1.75	1.17
3:8:96:C:C2	3:8:97:A:C8	2.33	1.17
10:G:264:LYS:NZ	10:G:265:LEU:HD22	1.57	1.17
49:S2:1316:C:N3	49:S2:1317:C:C5	2.13	1.16
48:4:72:SER:OG	48:4:104:ASP:O	1.61	1.16
48:4:675:ILE:CG2	48:4:709:LEU:CD1	2.23	1.16
1:5:4767:C:O2'	1:5:4874:A:N6	1.79	1.16
14:K:131:GLU:O	14:K:135:THR:HG23	1.45	1.16
48:4:740:LEU:HB3	48:4:831:PRO:CB	1.73	1.16
1:5:1936:C:C5	2:7:84:U:C6	2.33	1.16
48:4:103:ILE:HG12	48:4:122:THR:CG2	1.74	1.16
48:4:808:ALA:O	48:4:810:PRO:HD3	1.02	1.16
49:S2:994:C:N3	49:S2:995:G:N7	1.93	1.16
1:5:1358:G:H2'	1:5:1359:G:O4'	1.45	1.16
1:5:100:C:C4	1:5:101:A:N7	2.14	1.16
49:S2:1308:U:H2'	49:S2:1309:C:C6	1.79	1.16
14:K:56:LEU:HD12	14:K:91:ASP:OD2	1.00	1.16
14:K:62:LEU:O	14:K:62:LEU:HD12	1.40	1.16
49:S2:1552:G:O6	49:S2:1578:U:C2	1.96	1.16
48:4:198:GLY:HA2	48:4:201:GLY:HA2	1.22	1.16
48:4:206:ASP:CB	48:4:207:PRO:CD	1.94	1.16
48:4:498:LYS:HG3	48:4:498:LYS:O	1.45	1.16
48:4:672:LEU:N	48:4:675:ILE:HG12	1.58	1.16
48:4:749:ILE:O	48:4:782:PHE:O	1.63	1.16
49:S2:426:A:C2	49:S2:427:U:C5	2.33	1.16
48:4:518:PRO:HA	73:50:50:ILE:CD1	1.76	1.15
49:S2:339:A:H2'	49:S2:340:C:C6	1.81	1.15
49:S2:349:A:H4'	58:SI:27:TYR:OH	1.43	1.15
48:4:690:GLY:HA2	48:4:730:TYR:CE1	1.74	1.15
2:7:18:C:O2	2:7:19:C:C6	1.98	1.15
14:K:38:SER:CB	14:K:39:PRO:HD3	1.66	1.15
48:4:13:MET:HE1	48:4:464:VAL:CG1	1.76	1.15
1:5:1378:C:H3'	1:5:1379:C:C5'	1.73	1.15
48:4:770:VAL:HG13	48:4:784:VAL:HG13	1.16	1.15
1:5:2080:U:C2	1:5:2081:C:C5	2.34	1.15
1:5:161:G:N2	1:5:275:C:O2	1.80	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1249:C:C4	49:S2:1250:A:N7	2.14	1.15
48:4:75:ILE:CG2	48:4:77:LEU:HD12	1.76	1.15
1:5:4606:G:OP1	48:4:27:HIS:NE2	1.78	1.15
48:4:72:SER:C	48:4:104:ASP:HB3	1.64	1.15
49:S2:830:A:N6	49:S2:844:U:N3	1.88	1.15
48:4:240:GLY:CA	48:4:241:GLU:HB2	1.75	1.15
48:4:448:GLN:CA	48:4:448:GLN:HE21	1.57	1.15
49:S2:1283:C:O2'	62:SM:91:LEU:HD22	1.46	1.15
49:S2:649:U:O2	49:S2:650:A:C8	1.98	1.15
48:4:165:LEU:CD1	48:4:305:MET:CE	2.24	1.15
48:4:191:THR:HG21	48:4:192:TYR:CZ	1.81	1.15
1:5:1358:G:C2'	1:5:1359:G:O4'	1.95	1.15
48:4:79:TYR:CD2	48:4:351:LEU:CD1	2.29	1.15
48:4:45:ILE:HG21	48:4:77:LEU:C	1.66	1.14
1:5:2508:U:O2	1:5:2509:C:C6	1.99	1.14
48:4:804:THR:OG1	48:4:808:ALA:HB2	1.47	1.14
1:5:2532:C:C2	1:5:2533:C:C5	2.35	1.14
48:4:762:VAL:HG21	48:4:800:LEU:CD1	1.77	1.14
1:5:1628:C:N3	1:5:1629:G:N7	1.94	1.14
1:5:3767:C:C5'	49:S2:1849:G:O6	1.94	1.14
49:S2:444:G:N2	49:S2:446:G:C8	2.15	1.14
1:5:1683:U:O2	1:5:1684:A:C8	1.99	1.14
14:K:125:LEU:HD13	14:K:163:PRO:HA	1.24	1.14
48:4:613:LEU:HD11	48:4:639:TYR:HB3	1.21	1.14
48:4:667:LYS:HZ3	48:4:667:LYS:HB2	1.12	1.14
1:5:1598:C:C5	1:5:2798:A:N7	2.16	1.14
1:5:2326:G:C2	1:5:2327:G:C8	2.34	1.14
1:5:4606:G:H5''	48:4:28:VAL:HG21	1.15	1.14
1:5:2293:U:O2	1:5:2294:G:C8	2.00	1.14
9:F:161:TYR:CE2	9:F:168:ARG:NH2	2.15	1.14
1:5:4280:A:H61	7:D:29:ASP:CA	1.58	1.14
1:5:4757:C:O2	18:O:114:LYS:HA	1.42	1.14
48:4:49:ALA:HA	48:4:55:ARG:HH21	1.13	1.14
48:4:502:SER:O	48:4:504:VAL:HG22	1.48	1.14
48:4:672:LEU:HA	48:4:675:ILE:CD1	1.78	1.14
49:S2:1402:A:N6	49:S2:1441:U:N3	1.96	1.13
48:4:479:LEU:HD21	48:4:483:GLY:HA3	1.15	1.13
48:4:698:ARG:O	48:4:700:VAL:HG23	0.98	1.13
14:K:102:GLY:O	14:K:139:VAL:O	1.67	1.13
48:4:40:VAL:O	48:4:43:ALA:HB3	1.49	1.13
48:4:45:ILE:HD12	48:4:78:PHE:CD1	1.82	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:4:PHE:C	48:4:46:ILE:HD11	1.69	1.13
1:5:4413:C:C4'	12:I:157:PHE:HE2	1.49	1.13
48:4:106:PRO:HD2	48:4:115:VAL:HG22	1.18	1.13
1:5:2468:U:O4	1:5:2473:A:N1	1.80	1.13
48:4:613:LEU:HD23	48:4:613:LEU:H	1.08	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
48:4:58:ASP:OD1	48:4:69:THR:CG2	1.97	1.13
1:5:1214:C:O2'	1:5:2114:G:N1	1.82	1.13
14:K:121:LEU:HD12	14:K:129:ILE:CD1	1.79	1.13
48:4:829:SER:O	48:4:833:GLN:HG2	1.45	1.12
1:5:208:A:C1'	1:5:232:G:N2	2.12	1.12
14:K:117:ARG:HG3	14:K:133:LEU:HD11	1.15	1.12
14:K:95:GLN:O	14:K:96:LYS:HD3	1.49	1.12
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
49:S2:383:G:H2'	49:S2:384:U:O4'	1.45	1.12
14:K:121:LEU:HD12	14:K:123:ARG:HD2	1.14	1.12
49:S2:925:G:C2	49:S2:926:A:C8	2.36	1.12
1:5:4606:G:OP1	48:4:27:HIS:CE1	2.02	1.12
48:4:236:PHE:HE2	48:4:273:PHE:CE2	1.65	1.12
48:4:610:PRO:HB2	48:4:613:LEU:HG	1.22	1.12
1:5:84:A:N6	1:5:98:A:C8	2.17	1.12
14:K:102:GLY:C	14:K:139:VAL:O	1.88	1.12
1:5:1598:C:C6	1:5:2798:A:N7	2.18	1.12
1:5:3629:A:H4'	49:S2:1721:U:O2	1.49	1.12
48:4:297:ILE:O	48:4:300:VAL:HG22	1.50	1.11
48:4:804:THR:CG2	48:4:808:ALA:HB2	1.80	1.11
3:8:74:U:O4	28:Y:74:TYR:CD1	2.02	1.11
1:5:1269:G:H3'	1:5:2111:G:O6	1.51	1.11
10:G:261:LEU:HD21	10:G:264:LYS:HE2	1.26	1.11
14:K:47:ALA:HB2	14:K:72:GLU:HG2	1.28	1.11
49:S2:1123:C:N3	49:S2:1124:C:C5	2.18	1.11
48:4:295:ASP:O	48:4:299:LYS:HG3	1.49	1.11
48:4:75:ILE:HG21	48:4:77:LEU:HD11	1.19	1.11
1:5:1358:G:N2	1:5:1359:G:O6	1.83	1.11
14:K:94:LYS:HG2	14:K:96:LYS:CD	1.74	1.11
49:S2:1407:U:H2'	49:S2:1408:U:C6	1.84	1.11
48:4:430:MET:HE1	48:4:486:THR:CG2	1.79	1.11
48:4:745:TYR:HA	48:4:815:ASP:HB2	1.28	1.11
2:7:18:C:C2	2:7:19:C:C6	2.38	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:58:ASP:O	48:4:63:GLU:HB3	1.47	1.11
48:4:448:GLN:HA	48:4:448:GLN:HE21	0.95	1.11
1:5:1325:C:H4'	1:5:3901:A:N1	1.66	1.11
1:5:28:C:N3	1:5:29:G:N7	1.97	1.11
14:K:142:ASN:HD21	14:K:151:ILE:HG13	1.10	1.11
48:4:745:TYR:CD2	48:4:814:PHE:HA	1.85	1.11
1:5:1379:C:H4'	1:5:1380:G:C8	1.85	1.11
1:5:3909:C:N3	1:5:3910:C:C5	2.19	1.11
1:5:4276:G:C6	1:5:4277:G:N7	2.18	1.11
1:5:4280:A:H61	7:D:29:ASP:HA	1.10	1.11
48:4:686:ALA:HB3	48:4:729:LEU:HD13	1.15	1.11
48:4:240:GLY:HA3	48:4:241:GLU:HB2	1.20	1.11
48:4:24:VAL:HG23	48:4:32:LYS:HE3	1.32	1.11
49:S2:426:A:N1	49:S2:427:U:C5	2.18	1.11
48:4:427:VAL:HG21	48:4:447:ILE:HD11	1.19	1.11
1:5:1899:G:C8	1:5:2278:G:N1	2.19	1.11
48:4:4:PHE:O	48:4:46:ILE:HD11	0.93	1.10
1:5:1248:C:N3	1:5:1249:C:C5	2.19	1.10
48:4:357:HIS:O	48:4:359:PRO:HD3	1.51	1.10
48:4:753:GLU:HB3	48:4:782:PHE:CE1	1.77	1.10
48:4:808:ALA:O	48:4:810:PRO:CD	1.98	1.10
49:S2:837:A:C2	49:S2:838:G:N7	2.18	1.10
48:4:79:TYR:CE2	48:4:351:LEU:CD1	2.33	1.10
48:4:37:ASP:OD2	48:4:54:THR:HB	1.52	1.10
48:4:776:VAL:HG22	48:4:777:ALA:N	1.54	1.10
1:5:4094:G:H2'	1:5:4095:G:O4'	1.50	1.10
1:5:491:G:N2	1:5:663:G:N1	1.98	1.10
48:4:543:GLU:HG2	48:4:576:VAL:HG21	1.30	1.10
48:4:73:THR:HG23	48:4:74:ALA:N	1.62	1.10
48:4:613:LEU:HD13	48:4:639:TYR:CB	1.81	1.10
48:4:752:PRO:HD2	48:4:755:VAL:CG2	1.81	1.10
48:4:42:LYS:CG	48:4:79:TYR:OH	1.98	1.10
1:5:1475:G:C2	1:5:1476:C:C5	2.39	1.10
1:5:1973:G:N1	1:5:1993:C:N4	1.89	1.10
3:8:96:C:N3	3:8:97:A:N7	2.00	1.10
48:4:236:PHE:CZ	48:4:273:PHE:CZ	2.27	1.10
48:4:60:ARG:HD2	48:4:60:ARG:C	1.72	1.10
48:4:75:ILE:HG21	48:4:77:LEU:CD1	1.78	1.10
14:K:62:LEU:CD1	14:K:73:VAL:HB	1.79	1.10
48:4:751:CYS:O	48:4:781:MET:HA	1.42	1.10
1:5:1624:G:N2	1:5:1642:A:O2'	1.85	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:753:GLU:CB	48:4:782:PHE:CZ	2.32	1.10
14:K:102:GLY:HA3	14:K:139:VAL:O	1.37	1.10
14:K:106:PHE:CG	14:K:110:VAL:CG2	2.35	1.10
1:5:3709:U:H1'	49:S2:970:G:N1	1.67	1.10
49:S2:386:C:N3	49:S2:387:C:C5	2.20	1.10
49:S2:795:A:N3	49:S2:796:G:C8	2.20	1.10
48:4:829:SER:HB2	48:4:832:SER:H	1.15	1.10
1:5:161:G:N2	1:5:275:C:C2	2.19	1.10
14:K:94:LYS:CD	14:K:96:LYS:CE	2.28	1.10
48:4:800:LEU:HG	48:4:808:ALA:HB1	1.32	1.09
48:4:845:LYS:HE3	48:4:846:GLU:N	1.67	1.09
48:4:845:LYS:NZ	48:4:846:GLU:H	1.48	1.09
1:5:2078:C:C2	1:5:2079:G:C8	2.40	1.09
1:5:3767:C:H5''	49:S2:1849:G:N7	1.64	1.09
48:4:24:VAL:CG2	48:4:32:LYS:HE3	1.81	1.09
3:8:64:U:O2	3:8:65:A:C8	2.05	1.09
48:4:93:LYS:O	48:4:93:LYS:HD2	1.49	1.09
1:5:1995:G:O4'	14:K:132:ILE:HD11	1.52	1.09
1:5:2079:G:C2	1:5:2080:U:C5	2.40	1.09
1:5:2367:A:N6	1:5:2788:U:H3	1.50	1.09
49:S2:1453:C:C4	49:S2:1455:A:C1'	2.34	1.09
49:S2:436:G:C8	49:S2:471:G:N2	2.20	1.09
49:S2:795:A:C2	49:S2:796:G:N7	2.19	1.09
48:4:78:PHE:O	48:4:79:TYR:HD1	1.34	1.09
48:4:507:VAL:HG21	48:4:554:LEU:HD21	1.20	1.09
48:4:694:GLU:HG3	48:4:844:LEU:CD1	1.82	1.09
1:5:1628:C:O2	1:5:1629:G:C8	2.06	1.09
49:S2:1100:A:C2	49:S2:1101:U:C6	2.39	1.09
49:S2:599:A:O4'	49:S2:605:A:C2	2.05	1.09
48:4:692:LEU:HD11	48:4:734:LEU:HD13	1.26	1.09
48:4:74:ALA:O	48:4:75:ILE:HD12	1.52	1.09
1:5:166:C:O2	1:5:167:C:C6	2.05	1.09
1:5:2105:A:C2	1:5:2106:G:C8	2.40	1.09
14:K:160:VAL:C	14:K:163:PRO:CG	2.19	1.09
49:S2:449:A:C6	49:S2:452:G:C5	2.40	1.09
48:4:21:ASN:ND2	48:4:469:ILE:HD11	1.66	1.09
48:4:752:PRO:O	48:4:754:GLN:N	1.83	1.09
1:5:4605:A:N6	48:4:801:ARG:HD3	1.53	1.09
1:5:84:A:N6	1:5:98:A:N7	1.99	1.09
1:5:1994:C:C1'	14:K:132:ILE:HG12	1.81	1.09
14:K:160:VAL:C	14:K:163:PRO:HD3	1.73	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:458:A:C6	49:S2:459:C:C6	2.41	1.09
62:SM:85:LEU:HA	62:SM:88:TRP:CH2	1.87	1.09
48:4:56:PHE:CZ	48:4:455:GLY:C	2.24	1.09
1:5:1823:G:O3'	1:5:1825:A:P	2.11	1.09
1:5:4096:C:C4	1:5:4097:G:C8	2.41	1.09
1:5:88:A:N6	1:5:97:G:N3	2.01	1.09
48:4:672:LEU:HA	48:4:675:ILE:HG13	1.16	1.09
14:K:106:PHE:HB2	14:K:110:VAL:HG23	1.13	1.09
49:S2:60:A:O2'	49:S2:61:A:H5''	1.52	1.09
49:S2:858:A:C2	49:S2:859:G:N7	2.19	1.09
49:S2:958:G:O2'	49:S2:959:G:O4'	1.69	1.09
48:4:197:SER:OG	48:4:201:GLY:O	1.69	1.08
48:4:555:GLU:O	48:4:559:LYS:HG3	1.53	1.08
14:K:31:LYS:O	14:K:34:PRO:HD3	1.34	1.08
1:5:3629:A:H1'	49:S2:1721:U:O4	1.53	1.08
49:S2:469:A:C2	49:S2:470:G:C8	2.40	1.08
48:4:791:ASN:O	48:4:794:PHE:CE1	2.06	1.08
1:5:1566:C:H2'	1:5:1567:U:C6	1.88	1.08
14:K:94:LYS:HG2	14:K:96:LYS:HB3	1.35	1.08
3:8:43:A:C2	3:8:44:A:C8	2.42	1.08
49:S2:841:G:C2	49:S2:842:C:C5	2.42	1.08
48:4:744:ILE:HD12	48:4:816:HIS:C	1.73	1.08
1:5:1561:G:H2'	1:5:1562:G:H5'	1.36	1.08
1:5:291:U:H2'	1:5:292:G:H2'	1.28	1.08
1:5:4725:C:O2	1:5:4726:G:C8	2.07	1.08
48:4:771:PHE:CB	48:4:785:LYS:HB2	1.83	1.08
10:G:264:LYS:NZ	10:G:265:LEU:CD2	2.15	1.08
14:K:121:LEU:CD1	14:K:129:ILE:CD1	2.31	1.08
48:4:689:GLU:HB3	48:4:730:TYR:OH	1.51	1.08
14:K:105:THR:O	14:K:106:PHE:CG	2.06	1.08
49:S2:1101:U:O2	49:S2:1102:G:C8	2.07	1.08
48:4:675:ILE:HG21	48:4:709:LEU:HD12	1.30	1.08
48:4:829:SER:OG	48:4:833:GLN:N	1.86	1.08
14:K:131:GLU:OE2	14:K:155:ILE:HD12	1.52	1.08
49:S2:1316:C:O2	49:S2:1317:C:C6	2.05	1.08
48:4:543:GLU:CD	48:4:576:VAL:CB	2.22	1.08
48:4:675:ILE:HG21	48:4:709:LEU:HD11	1.27	1.08
1:5:100:C:N4	1:5:101:A:N7	2.01	1.08
1:5:424:U:O2	1:5:425:U:C5	2.05	1.08
1:5:4605:A:N6	48:4:801:ARG:HB2	1.68	1.08
1:5:983:C:N3	1:5:984:C:C5	2.22	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:689:GLU:O	48:4:730:TYR:CE1	2.06	1.08
1:5:1556:C:O2	1:5:1557:C:C6	2.06	1.08
1:5:2055:G:O6	22:S:158:VAL:HB	1.53	1.08
1:5:3767:C:H4'	49:S2:1849:G:O6	1.53	1.08
1:5:3785:A:C2	1:5:4536:C:H1'	1.88	1.08
49:S2:1513:C:H2'	49:S2:1514:G:H5'	1.35	1.08
49:S2:469:A:C2	49:S2:470:G:H8	1.71	1.08
1:5:2347:A:O2'	1:5:2348:G:N7	1.84	1.08
1:5:424:U:O2	1:5:425:U:C6	2.07	1.08
1:5:4537:C:N3	1:5:4538:G:N7	2.01	1.08
49:S2:494:C:C2	49:S2:495:U:C5	2.42	1.08
1:5:2508:U:O2	1:5:2509:C:C5	2.07	1.07
1:5:917:A:C2	1:5:919:C:C5	2.42	1.07
14:K:97:ASN:OD1	14:K:98:ILE:HD11	1.51	1.07
49:S2:1314:U:N3	49:S2:1315:U:H1'	1.68	1.07
48:4:518:PRO:HA	73:SX:50:ILE:HD11	1.30	1.07
48:4:45:ILE:CG1	48:4:46:ILE:H	1.57	1.07
48:4:744:ILE:HD11	48:4:816:HIS:CG	1.90	1.07
1:5:2604:C:O2	1:5:2605:G:C8	2.07	1.07
1:5:77:U:H3	1:5:335:A:N6	1.51	1.07
1:5:48:G:H5'	17:N:192:TRP:HE1	1.16	1.07
48:4:316:ILE:HG23	48:4:321:ILE:HB	1.34	1.07
48:4:562:GLU:CA	48:4:570:ILE:HD11	1.84	1.07
2:7:43:U:N3	2:7:44:C:C5	2.22	1.07
48:4:60:ARG:HH11	48:4:60:ARG:CG	1.66	1.07
1:5:2314:G:N2	1:5:2315:G:N7	2.01	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	1.89	1.07
48:4:113:SER:HA	48:4:499:PHE:HB2	1.08	1.07
48:4:56:PHE:HZ	48:4:455:GLY:C	1.57	1.07
2:7:18:C:C2	2:7:19:C:C5	2.42	1.07
14:K:106:PHE:CE2	14:K:110:VAL:HG21	1.90	1.07
14:K:106:PHE:CG	14:K:110:VAL:HG23	1.90	1.07
14:K:56:LEU:CG	14:K:91:ASP:OD2	2.02	1.07
1:5:2021:G:O3'	20:Q:84:GLY:HA2	138.38	1.07
48:4:509:VAL:HG21	48:4:546:ILE:HD12	1.30	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
1:5:4413:C:C5'	12:I:157:PHE:HE2	1.66	1.07
14:K:94:LYS:HB3	14:K:96:LYS:CE	1.83	1.07
1:5:28:C:O2	1:5:29:G:C8	2.06	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4280:A:N6	7:D:29:ASP:HA	1.67	1.07
48:4:480:VAL:O	48:4:481:LYS:HB3	1.49	1.07
48:4:72:SER:OG	48:4:104:ASP:CB	2.01	1.07
3:8:10:G:C6	3:8:11:C:C5	2.43	1.07
13:J:91:GLU:OE2	65:SP:12:PHE:HB2	1.54	1.07
14:K:38:SER:HB2	14:K:39:PRO:HD3	1.07	1.07
1:5:2095:A:C6	9:F:41:GLN:OE1	2.06	1.07
49:S2:994:C:C2	49:S2:995:G:C8	2.42	1.07
14:K:94:LYS:HA	14:K:95:GLN:C	1.68	1.06
1:5:173:C:N3	1:5:174:C:C5	2.23	1.06
14:K:94:LYS:HB3	14:K:96:LYS:HD2	1.18	1.06
3:8:96:C:O2	3:8:97:A:C8	2.07	1.06
14:K:117:ARG:HG3	14:K:133:LEU:CD1	1.84	1.06
14:K:131:GLU:HG2	14:K:155:ILE:HD11	1.33	1.06
49:S2:1111:U:N3	49:S2:1112:U:C5	2.23	1.06
49:S2:339:A:C2	49:S2:340:C:N4	2.24	1.06
48:4:752:PRO:O	48:4:754:GLN:HG3	1.54	1.06
1:5:4606:G:C5'	48:4:28:VAL:HG21	1.83	1.06
14:K:125:LEU:HD13	14:K:163:PRO:CA	1.85	1.06
49:S2:339:A:C2	49:S2:340:C:C4	2.43	1.06
1:5:1188:C:N3	1:5:1189:G:N7	2.02	1.06
49:S2:1063:C:C4'	49:S2:1838:U:O4	2.02	1.06
49:S2:1074:C:C2	49:S2:1075:C:C5	2.42	1.06
49:S2:1594:A:C6	49:S2:1595:U:C5	2.44	1.06
48:4:690:GLY:HA2	48:4:730:TYR:HE1	1.03	1.06
48:4:82:SER:O	48:4:86:LEU:HD13	1.56	1.06
1:5:271:C:N3	1:5:272:U:C5	2.24	1.06
14:K:117:ARG:HE	14:K:117:ARG:N	1.53	1.06
49:S2:121:U:C2	49:S2:122:G:C8	2.42	1.06
14:K:117:ARG:HE	14:K:117:ARG:CA	1.67	1.06
14:K:48:LYS:HG2	14:K:52:ASP:CG	1.75	1.06
48:4:691:ALA:CA	48:4:730:TYR:CG	2.39	1.06
48:4:113:SER:HB2	48:4:499:PHE:HB2	1.36	1.05
48:4:686:ALA:HB2	48:4:726:ARG:HA	1.32	1.05
1:5:4229:U:C4	1:5:4230:C:C5	2.44	1.05
48:4:45:ILE:HG12	48:4:46:ILE:H	1.18	1.05
48:4:691:ALA:HB1	48:4:730:TYR:HB3	1.37	1.05
1:5:1556:C:N3	1:5:1557:C:C5	2.23	1.05
1:5:4213:A:N6	1:5:4218:U:H3	1.54	1.05
49:S2:1316:C:C2	49:S2:1317:C:C5	2.44	1.05
48:4:206:ASP:O	48:4:212:VAL:HG23	1.56	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2659:A:N6	1:5:2675:G:O2'	1.89	1.05
1:5:4767:C:HO2'	1:5:4874:A:N6	1.48	1.05
48:4:427:VAL:HG12	48:4:427:VAL:O	1.54	1.05
48:4:689:GLU:O	48:4:730:TYR:CZ	2.09	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
10:G:261:LEU:HD22	10:G:264:LYS:HE2	1.13	1.05
49:S2:1594:A:C2	49:S2:1595:U:C6	2.43	1.05
48:4:427:VAL:HG21	48:4:447:ILE:CD1	1.86	1.05
48:4:592:LEU:C	48:4:592:LEU:HD12	1.76	1.05
1:5:1929:A:N6	1:5:2054:U:H3	1.52	1.05
1:5:3611:A:O2'	58:SI:92:ARG:NH1	1.89	1.05
48:4:613:LEU:HD23	48:4:613:LEU:N	1.65	1.05
48:4:693:CYS:CA	48:4:839:ARG:NE	2.06	1.05
48:4:93:LYS:C	48:4:93:LYS:HD2	1.76	1.05
1:5:3739:C:N3	1:5:3740:G:C8	2.24	1.05
14:K:94:LYS:HD3	14:K:96:LYS:HE3	1.23	1.05
48:4:581:GLU:CD	48:4:695:GLU:HB2	1.75	1.05
1:5:1998:A:H2	1:5:2019:C:O2'	1.25	1.05
1:5:2260:C:H2'	1:5:2261:G:N7	1.71	1.05
14:K:94:LYS:CD	14:K:96:LYS:HE3	1.85	1.05
48:4:4:PHE:CD1	48:4:5:THR:CG2	2.39	1.05
48:4:845:LYS:CE	48:4:846:GLU:H	1.69	1.05
14:K:56:LEU:CB	14:K:91:ASP:OD1	2.05	1.05
14:K:94:LYS:CA	14:K:96:LYS:HD2	1.87	1.05
48:4:510:GLU:O	48:4:570:ILE:HG22	1.57	1.05
48:4:571:LYS:CE	48:4:572:LYS:H	1.69	1.05
48:4:628:LEU:HD22	48:4:631:ARG:NH2	1.51	1.05
48:4:670:GLN:O	48:4:673:ASN:OD1	1.73	1.05
1:5:1929:A:N1	1:5:2054:U:O4	1.90	1.05
49:S2:1419:C:OP2	69:ST:129:ARG:HA	1.57	1.05
48:4:206:ASP:O	48:4:212:VAL:CG2	2.04	1.04
48:4:275:LYS:HE2	48:4:276:SER:HA	1.36	1.04
48:4:767:ARG:HH21	48:4:792:GLU:CG	1.70	1.04
1:5:1444:G:H2'	1:5:1445:U:C6	1.90	1.04
3:8:119:C:C2	3:8:120:G:C8	2.45	1.04
1:5:2691:U:O2	1:5:2692:U:C5	2.10	1.04
1:5:3912:U:O2'	1:5:3913:G:C5'	2.05	1.04
1:5:4392:G:O2'	1:5:4395:U:O4	1.76	1.04
14:K:47:ALA:HB2	14:K:72:GLU:CG	1.80	1.04
49:S2:1249:C:C5	49:S2:1250:A:N7	2.24	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1840:U:N3	49:S2:1841:C:C5	2.25	1.04
49:S2:26:U:N3	49:S2:27:A:N7	2.05	1.04
48:4:741:MET:CG	48:4:817:TRP:CZ3	2.40	1.04
1:5:2417:A:C2	1:5:2418:A:C8	2.45	1.04
49:S2:1063:C:H4'	49:S2:1838:U:O4	1.56	1.04
49:S2:797:C:O4'	57:SH:109:ARG:NH1	1.89	1.04
48:4:607:ARG:HG2	48:4:701:ARG:HD3	1.36	1.04
1:5:2105:A:C2	1:5:2106:G:N7	2.25	1.04
48:4:3:ASN:O	48:4:46:ILE:HG13	1.53	1.04
48:4:744:ILE:CD1	48:4:816:HIS:CA	2.35	1.04
1:5:4284:C:C2	1:5:4285:U:C5	2.45	1.04
14:K:23:GLY:O	14:K:24:ALA:CB	2.05	1.04
1:5:4113:U:H2'	1:5:4114:C:O4'	1.56	1.04
49:S2:384:U:C5	49:S2:386:C:C5	2.46	1.04
48:4:776:VAL:CG2	48:4:777:ALA:H	1.70	1.04
48:4:756:VAL:HG21	48:4:782:PHE:CG	1.93	1.04
1:5:77:U:N3	1:5:335:A:N6	2.06	1.04
49:S2:1433:C:H2'	49:S2:1434:C:H1'	1.34	1.04
1:5:3910:C:O2	1:5:3911:C:C5	2.11	1.04
14:K:154:ASP:O	14:K:155:ILE:HB	1.57	1.04
65:SP:21:ASP:OD1	65:SP:21:ASP:CG	1.96	1.04
48:4:255:ASP:OD1	48:4:259:LYS:HE3	1.58	1.04
48:4:60:ARG:NH1	48:4:60:ARG:HG2	1.49	1.04
1:5:2078:C:N3	1:5:2079:G:C8	2.25	1.04
1:5:2856:C:N3	1:5:2857:A:N7	2.06	1.04
1:5:1939:A:N1	1:5:3874:G:H5'	1.71	1.04
3:8:94:G:H5'	3:8:94:G:C8	1.92	1.04
49:S2:1534:C:N4	49:S2:1600:G:O6	1.89	1.04
62:SM:58:GLU:OE1	62:SM:58:GLU:CD	1.96	1.04
48:4:275:LYS:HE3	48:4:275:LYS:C	1.78	1.03
48:4:616:ASP:CG	48:4:621:GLU:HB2	1.78	1.03
48:4:73:THR:CG2	48:4:74:ALA:H	1.71	1.03
1:5:4276:G:O6	1:5:4277:G:C5	2.11	1.03
14:K:105:THR:O	14:K:106:PHE:CD1	2.11	1.03
1:5:2854:G:O6	1:5:2856:C:H6	1.40	1.03
1:5:3767:C:C5'	49:S2:1849:G:C5	2.41	1.03
1:5:957:G:O5'	1:5:1284:G:C2	2.11	1.03
25:V:134:SER:OG	49:S2:465:A:H2	1.41	1.03
48:4:284:LYS:N	48:4:284:LYS:HD3	1.70	1.03
48:4:691:ALA:CB	48:4:730:TYR:CG	2.25	1.03
48:4:759:ILE:CD1	48:4:784:VAL:CG2	2.30	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1683:U:O2	1:5:1684:A:H8	1.34	1.03
11:H:156:ASN:C	11:H:156:ASN:OD1	1.96	1.03
1:5:1556:C:C2	1:5:1557:C:C5	2.47	1.03
1:5:4257:A:H2'	1:5:4258:C:C6	1.91	1.03
49:S2:1552:G:N7	49:S2:1578:U:O4	1.89	1.03
48:4:10:ARG:NH2	48:4:465:PRO:CD	2.21	1.03
48:4:827:ASN:C	48:4:827:ASN:HD22	1.62	1.03
13:J:105:PHE:CE1	13:J:132:VAL:HB	1.93	1.03
48:4:240:GLY:O	48:4:243:GLN:HG3	1.54	1.03
48:4:686:ALA:HB1	48:4:729:LEU:CD1	1.88	1.03
1:5:1899:G:C2	1:5:1900:C:C6	2.47	1.03
1:5:4983:C:C2	1:5:4984:C:C5	2.47	1.03
48:4:693:CYS:CA	48:4:839:ARG:HH21	1.71	1.03
48:4:713:ALA:HA	48:4:716:ARG:HB3	1.39	1.03
1:5:2027:U:O2'	1:5:2028:C:H5'	1.59	1.03
1:5:3709:U:C1'	49:S2:970:G:H1	1.72	1.03
1:5:1632:A:C6	1:5:1634:A:C8	2.47	1.03
1:5:2858:A:O2'	1:5:2859:G:O5'	1.77	1.03
49:S2:524:U:N3	49:S2:594:A:C6	2.26	1.03
48:4:160:MET:CE	48:4:178:PHE:CE2	2.42	1.03
48:4:825:PHE:HE2	48:4:849:PRO:CD	1.50	1.03
1:5:1973:G:C6	1:5:1993:C:N4	2.23	1.03
1:5:2109:G:O6	1:5:2122:G:O6	1.74	1.03
1:5:471:A:C6	1:5:472:C:C6	2.46	1.03
14:K:123:ARG:HG3	14:K:129:ILE:HD12	1.37	1.03
49:S2:998:A:N7	49:S2:999:G:C1'	2.22	1.03
48:4:165:LEU:HD12	48:4:305:MET:HE1	1.35	1.03
48:4:769:HIS:O	48:4:786:ALA:CA	2.06	1.03
49:S2:1539:U:C2	49:S2:1540:G:N7	2.24	1.03
48:4:739:ARG:CA	48:4:824:PRO:HD3	1.87	1.02
1:5:2109:G:C6	1:5:2122:G:O6	2.11	1.02
1:5:3597:G:OP1	21:R:109:TYR:OH	1.77	1.02
48:4:4:PHE:HD1	48:4:5:THR:CB	1.72	1.02
48:4:756:VAL:HG22	48:4:782:PHE:HB2	1.37	1.02
1:5:1563:A:N6	49:S2:1028:A:N6	2.07	1.02
1:5:28:C:O2	1:5:29:G:H8	1.36	1.02
14:K:97:ASN:CA	14:K:98:ILE:CG1	2.07	1.02
48:4:103:ILE:HG12	48:4:122:THR:HG21	1.06	1.02
48:4:752:PRO:HD2	48:4:755:VAL:HG21	1.38	1.02
1:5:2000:G:O2'	1:5:2017:A:N1	1.92	1.02
3:8:133:G:C2	3:8:134:G:C8	2.47	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1994:C:H2'	14:K:132:ILE:HG12	1.40	1.02
48:4:551:GLU:OE1	48:4:551:GLU:N	1.90	1.02
48:4:686:ALA:HB1	48:4:729:LEU:HD12	1.41	1.02
10:G:264:LYS:CE	10:G:265:LEU:HD22	1.88	1.02
1:5:1245:C:C2	1:5:1246:G:N7	2.26	1.02
1:5:1566:C:H2'	1:5:1567:U:H6	1.17	1.02
1:5:2497:C:C2	1:5:2498:C:C6	2.48	1.02
1:5:2646:C:O2	1:5:2647:A:H8	1.42	1.02
48:4:689:GLU:O	48:4:730:TYR:OH	1.78	1.02
1:5:1190:C:N3	1:5:1191:C:C5	2.28	1.02
50:SA:176:TRP:CZ3	50:SA:199:PRO:HG3	1.95	1.02
48:4:686:ALA:HB2	48:4:729:LEU:HD12	1.42	1.02
1:5:3611:A:H4'	58:SI:92:ARG:HH22	1.25	1.02
14:K:22:VAL:HG21	14:K:48:LYS:HB2	1.42	1.02
49:S2:998:A:N7	49:S2:999:G:O4'	1.93	1.02
49:S2:996:A:C6	63:SN:113:PHE:CZ	2.46	1.02
1:5:2327:G:C2	1:5:2328:G:C8	2.48	1.02
1:5:4284:C:N3	1:5:4285:U:C5	2.28	1.02
1:5:3859:G:O4'	19:P:139:TYR:OH	1.78	1.02
49:S2:458:A:N6	49:S2:459:C:C5	2.28	1.02
49:S2:75:G:O2'	49:S2:76:U:H6	1.41	1.02
48:4:58:ASP:CG	48:4:69:THR:HA	1.75	1.02
1:5:1392:A:C2	1:5:1393:G:C5	2.48	1.02
1:5:3910:C:C2	1:5:3911:C:C5	2.48	1.02
1:5:4080:C:N3	1:5:4081:G:N7	2.06	1.02
14:K:62:LEU:HD11	14:K:73:VAL:CG2	1.90	1.02
48:4:613:LEU:CD1	48:4:639:TYR:CB	2.36	1.01
48:4:691:ALA:CB	48:4:854:PHE:CZ	2.43	1.01
1:5:173:C:O2	1:5:174:C:C6	2.13	1.01
1:5:2367:A:H61	1:5:2788:U:H3	1.03	1.01
1:5:48:G:O2'	1:5:49:U:OP2	1.78	1.01
3:8:118:C:N3	3:8:119:C:C5	2.28	1.01
49:S2:1315:U:N3	49:S2:1316:C:C5	2.27	1.01
48:4:609:PHE:HZ	48:4:661:ILE:HD12	0.89	1.01
1:5:1378:C:C3'	1:5:1379:C:H5'	1.90	1.01
1:5:173:C:C2	1:5:174:C:C5	2.46	1.01
14:K:121:LEU:HD11	14:K:129:ILE:HG21	1.38	1.01
14:K:79:ALA:O	14:K:83:LYS:CG	2.07	1.01
49:S2:1294:G:C2	49:S2:1295:A:C8	2.48	1.01
13:J:119:TYR:CD2	68:SS:108:ARG:HH21	1.04	1.01
13:J:119:TYR:CE1	68:SS:108:ARG:NH2	1.99	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4605:A:H62	48:4:801:ARG:CD	1.50	1.01
1:5:1598:C:O2	1:5:1599:A:H8	1.39	1.01
1:5:1899:G:N3	1:5:1900:C:C6	2.29	1.01
1:5:1936:C:N3	1:5:1937:C:C5	2.27	1.01
49:S2:337:C:C2	49:S2:338:G:C8	2.48	1.01
49:S2:551:U:C2	49:S2:552:G:N7	2.28	1.01
48:4:767:ARG:HH21	48:4:792:GLU:HG3	1.21	1.01
49:S2:1417:C:N3	49:S2:1419:C:C5	2.28	1.01
48:4:759:ILE:HD13	48:4:784:VAL:HG23	1.41	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	2.28	1.01
49:S2:378:U:C2	49:S2:379:C:C6	2.48	1.01
1:5:2409:U:C4	1:5:2783:A:N1	2.28	1.01
1:5:470:A:C5	1:5:471:A:C8	2.47	1.01
1:5:983:C:C2	1:5:984:C:C6	2.48	1.01
3:8:119:C:N3	3:8:120:G:C8	2.28	1.01
49:S2:387:C:N3	49:S2:388:U:C5	2.28	1.01
48:4:125:ALA:O	48:4:154:VAL:HG12	1.60	1.01
48:4:402:VAL:HG23	48:4:403:PRO:HD2	1.03	1.01
1:5:1556:C:C2	1:5:1557:C:C6	2.48	1.01
3:8:130:C:N3	3:8:131:G:C8	2.28	1.01
49:S2:1644:C:O2'	49:S2:1645:C:O4'	1.78	1.01
1:5:5025:C:OP1	58:SI:164:GLU:OE2	1.78	1.01
48:4:27:HIS:CD2	48:4:28:VAL:H	1.65	1.01
48:4:448:GLN:NE2	48:4:448:GLN:HA	1.73	1.01
48:4:823:ASP:OD1	48:4:825:PHE:N	1.93	1.01
49:S2:1538:C:O2	49:S2:1539:U:H6	1.42	1.01
48:4:592:LEU:HD22	48:4:603:TYR:CE2	1.96	1.01
49:S2:1416:C:C2'	49:S2:1417:C:C6	2.44	1.01
49:S2:1433:C:OP2	49:S2:1434:C:P	2.18	1.01
48:4:206:ASP:HB3	48:4:207:PRO:HD2	1.39	1.01
48:4:691:ALA:HB1	48:4:854:PHE:HZ	0.86	1.01
1:5:1267:C:H5''	1:5:2110:C:O2	1.61	1.01
1:5:2078:C:O2	1:5:2079:G:C8	2.12	1.01
1:5:4080:C:C2	1:5:4081:G:C8	2.49	1.01
1:5:4745:G:O2'	1:5:4746:C:C6	2.13	1.01
14:K:162:CYS:N	14:K:163:PRO:HD3	1.76	1.01
49:S2:1402:A:C5	49:S2:1441:U:O4	2.14	1.01
49:S2:1643:U:O2'	49:S2:1644:C:O5'	1.77	1.01
1:5:3709:U:N1	49:S2:970:G:N2	2.08	1.01
48:4:613:LEU:CD2	48:4:639:TYR:HD1	1.56	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1378:C:H3'	1:5:1379:C:H5'	1.05	1.00
1:5:3723:A:C2	1:5:3724:A:N7	2.29	1.00
2:7:42:A:C2	2:7:43:U:C6	2.48	1.00
14:K:22:VAL:CG2	14:K:48:LYS:HB2	1.90	1.00
14:K:61:LYS:HE2	14:K:72:GLU:CG	1.90	1.00
49:S2:1111:U:O2	49:S2:1112:U:C6	2.13	1.00
49:S2:1273:C:C2	49:S2:1506:A:H2	1.78	1.00
48:4:575:PRO:O	48:4:577:VAL:HG23	1.61	1.00
1:5:1993:C:H1'	14:K:135:THR:HB	1.03	1.00
1:5:2079:G:C2	1:5:2080:U:C6	2.49	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
1:5:4233:A:N6	1:5:4290:U:H3	1.58	1.00
14:K:154:ASP:O	14:K:155:ILE:N	1.83	1.00
1:5:1563:A:H61	49:S2:1028:A:H61	1.02	1.00
49:S2:1512:C:O2	49:S2:1513:C:C5	2.14	1.00
49:S2:1540:G:C2	49:S2:1541:G:C8	2.48	1.00
14:K:56:LEU:HD12	14:K:91:ASP:CG	1.81	1.00
48:4:753:GLU:OE2	48:4:779:THR:HG23	0.83	1.00
1:5:1566:C:O2'	1:5:1567:U:O4'	1.78	1.00
1:5:3709:U:C1'	49:S2:970:G:N1	2.25	1.00
1:5:4165:C:N3	1:5:4166:G:C8	2.29	1.00
49:S2:1109:C:C2	49:S2:1110:G:O4'	2.13	1.00
49:S2:848:U:C2	49:S2:849:A:N7	2.29	1.00
48:4:73:THR:HG23	48:4:74:ALA:H	0.86	1.00
1:5:1628:C:C2	1:5:1629:G:C8	2.49	1.00
48:4:402:VAL:CG2	48:4:403:PRO:CD	2.40	1.00
48:4:771:PHE:CB	48:4:785:LYS:CB	2.39	1.00
1:5:2127:C:H2'	1:5:2128:G:C8	1.97	1.00
1:5:27:C:O2	1:5:27:C:H2'	1.62	1.00
2:7:17:C:N3	2:7:18:C:C5	2.30	1.00
2:7:18:C:N3	2:7:19:C:H5	1.59	1.00
14:K:160:VAL:HA	14:K:163:PRO:HG2	1.04	1.00
49:S2:1453:C:C5	49:S2:1455:A:H1'	1.96	1.00
49:S2:493:A:C8	49:S2:574:A:C8	2.50	1.00
48:4:753:GLU:CD	48:4:779:THR:CG2	2.18	1.00
1:5:166:C:C2	1:5:167:C:H5	1.78	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
1:5:5005:G:N7	26:W:51:TRP:CD1	2.29	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)
14:K:160:VAL:CA	14:K:163:PRO:HG3	1.88	1.00
49:S2:1552:G:O6	49:S2:1578:U:N3	1.95	1.00
1:5:1672:U:O2	1:5:1673:U:C5	2.15	1.00
1:5:209:U:C2	1:5:233:U:C4	2.49	1.00
1:5:2508:U:C2	1:5:2509:C:C5	2.50	1.00
1:5:1358:G:N2	1:5:1359:G:C6	2.29	1.00
1:5:1601:A:C8	1:5:3643:A:C8	2.50	1.00
14:K:102:GLY:HA2	14:K:139:VAL:HG12	1.38	1.00
48:4:430:MET:CE	48:4:486:THR:HG23	1.90	0.99
48:4:753:GLU:N	48:4:782:PHE:HE1	1.60	0.99
1:5:4730:C:O5'	1:5:4731:G:N2	1.94	0.99
1:5:4983:C:O2	1:5:4984:C:C6	2.15	0.99
14:K:80:LEU:HA	14:K:83:LYS:CD	1.92	0.99
49:S2:506:G:OP1	74:SY:108:LYS:NZ	1.95	0.99
48:4:671:TYR:CD1	48:4:674:GLU:OE1	2.15	0.99
1:5:2428:A:C5	1:5:2789:A:C2	2.50	0.99
1:5:4100:C:N3	1:5:4101:C:C5	2.31	0.99
1:5:4165:C:N3	1:5:4166:G:N7	2.10	0.99
49:S2:1513:C:C2'	49:S2:1514:G:H5'	1.91	0.99
49:S2:1540:G:N1	49:S2:1541:G:C5	2.30	0.99
49:S2:42:A:C5	49:S2:426:A:N6	2.30	0.99
49:S2:848:U:N3	49:S2:849:A:C6	2.30	0.99
1:5:1076:C:O3'	1:5:2114:G:O6	1.81	0.99
1:5:1324:A:O2'	1:5:1326:A:OP1	1.79	0.99
1:5:3912:U:O2'	1:5:3913:G:H5'	1.59	0.99
1:5:4166:G:C2	1:5:4167:G:C8	2.51	0.99
14:K:77:ALA:HB3	14:K:80:LEU:HD12	1.40	0.99
71:SV:1:MET:N	71:SV:1:MET:SD	2.30	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
14:K:142:ASN:HB2	14:K:147:HIS:C	1.81	0.99
48:4:659:PRO:CG	48:4:698:ARG:NH2	2.25	0.99
48:4:762:VAL:HG13	48:4:766:LYS:HZ3	1.22	0.99
48:4:855:LEU:C	48:4:855:LEU:CD2	2.30	0.99
1:5:4414:A:C2	1:5:4427:G:N2	2.30	0.99
14:K:47:ALA:HB1	14:K:72:GLU:HG2	1.02	0.99
1:5:4606:G:H5''	48:4:28:VAL:CG2	1.91	0.99
1:5:1390:G:N2	1:5:1394:G:C5	2.31	0.99
1:5:330:G:C2	1:5:331:G:C8	2.50	0.99
1:5:3675:G:C2	1:5:3676:G:N7	2.31	0.99
1:5:3709:U:H1'	49:S2:970:G:C6	1.98	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3767:C:C4'	49:S2:1849:G:O6	2.09	0.99
3:8:64:U:N3	3:8:65:A:C6	2.31	0.99
14:K:38:SER:CB	14:K:39:PRO:CD	2.39	0.99
1:5:3879:G:C6	1:5:3882:C:C5	2.49	0.99
14:K:22:VAL:HG21	14:K:48:LYS:HE3	1.42	0.99
49:S2:146:G:O2'	49:S2:147:A:H5'	1.62	0.99
1:5:2668:G:H2'	1:5:2669:C:H5'	1.45	0.99
1:5:2784:C:O2	1:5:2785:C:C6	2.16	0.99
1:5:4117:U:N3	4:A:40:TYR:CE1	2.31	0.99
1:5:1485:C:O2	1:5:4349:C:C5	2.15	0.99
1:5:484:U:N3	1:5:486:C:C6	2.30	0.99
1:5:85:G:O2'	1:5:97:G:O6	1.80	0.99
2:7:42:A:C6	2:7:43:U:C5	2.51	0.99
7:D:42:ASN:HA	7:D:44:TYR:OH	1.61	0.99
49:S2:923:G:N2	49:S2:1022:U:O4	1.96	0.99
49:S2:1133:A:N1	49:S2:1134:G:N7	2.10	0.99
48:4:60:ARG:HH11	48:4:60:ARG:HG2	0.86	0.99
1:5:3629:A:H1'	49:S2:1721:U:C4	1.97	0.99
48:4:45:ILE:HG22	48:4:78:PHE:H	1.26	0.98
48:4:824:PRO:O	48:4:832:SER:HB2	1.61	0.98
1:5:1248:C:C2	1:5:1249:C:C5	2.51	0.98
1:5:1629:G:C2	1:5:1631:A:C6	2.51	0.98
1:5:1899:G:N1	1:5:1900:C:C4	2.30	0.98
1:5:2673:G:O4'	1:5:2675:G:H1'	1.63	0.98
1:5:291:U:C2'	1:5:292:G:H2'	1.92	0.98
1:5:4605:A:N6	48:4:801:ARG:HG2	1.74	0.98
1:5:4174:U:N3	1:5:4175:G:N7	2.10	0.98
1:5:4283:G:N2	1:5:4284:C:N1	2.10	0.98
1:5:4280:A:N6	7:D:29:ASP:CA	2.25	0.98
49:S2:378:U:N3	49:S2:379:C:C5	2.31	0.98
48:4:691:ALA:HB3	48:4:730:TYR:HB3	1.40	0.98
1:5:1217:G:H2'	1:5:1218:G:H8	1.28	0.98
1:5:1269:G:C8	1:5:2111:G:C6	2.52	0.98
1:5:1840:G:O3'	1:5:1842:G:P	2.21	0.98
49:S2:993:G:C6	49:S2:994:C:C5	2.50	0.98
48:4:42:LYS:CE	48:4:79:TYR:OH	2.12	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
49:S2:998:A:C8	49:S2:999:G:O4'	2.16	0.98
48:4:430:MET:CE	48:4:486:THR:CG2	2.41	0.98
48:4:397:TYR:HE1	48:4:496:VAL:HG12	1.25	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:659:PRO:HG3	48:4:698:ARG:CZ	1.92	0.98
1:5:1248:C:C2	1:5:1249:C:C6	2.51	0.98
1:5:2325:C:N3	1:5:2326:G:N7	2.12	0.98
1:5:470:A:C6	1:5:471:A:C8	2.52	0.98
49:S2:1415:C:H2'	49:S2:1416:C:O4'	1.63	0.98
49:S2:923:G:N2	49:S2:1022:U:C4	2.31	0.98
48:4:613:LEU:HD21	48:4:639:TYR:HD1	1.29	0.98
3:8:64:U:C2	3:8:65:A:C5	2.50	0.98
14:K:56:LEU:HB3	14:K:91:ASP:CG	1.83	0.98
14:K:61:LYS:CE	14:K:72:GLU:CA	2.33	0.98
48:4:226:LYS:NZ	48:4:356:ILE:HD12	1.78	0.98
48:4:794:PHE:N	48:4:794:PHE:CD1	2.26	0.98
1:5:2058:G:C2	1:5:2059:C:C6	2.52	0.98
14:K:111:ASN:HA	14:K:114:ARG:HE	1.23	0.98
48:4:198:GLY:CA	48:4:201:GLY:CA	2.40	0.98
48:4:667:LYS:NZ	48:4:667:LYS:HB2	1.74	0.98
48:4:762:VAL:HG13	48:4:766:LYS:HZ2	1.24	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
1:5:4099:G:O2'	51:SB:224:GLU:CB	2.12	0.98
49:S2:1095:U:N3	49:S2:1149:A:N6	2.12	0.98
49:S2:1249:C:C5	49:S2:1250:A:C8	2.52	0.98
49:S2:524:U:C4	49:S2:594:A:N6	2.32	0.98
48:4:79:TYR:CE2	48:4:351:LEU:HD12	1.98	0.98
48:4:13:MET:HE1	48:4:464:VAL:HG13	1.00	0.98
1:5:1340:C:N3	1:5:1341:U:C5	2.32	0.98
1:5:4174:U:O2	1:5:4175:G:C8	2.17	0.98
1:5:4982:A:C6	1:5:4983:C:C5	2.52	0.98
14:K:61:LYS:HE2	14:K:72:GLU:CB	1.94	0.98
1:5:2743:A:N3	1:5:2744:A:N7	2.11	0.97
14:K:111:ASN:HA	14:K:114:ARG:NE	1.78	0.97
16:M:33:GLN:NE2	16:M:33:GLN:HA	1.77	0.97
49:S2:1315:U:C4	49:S2:1316:C:C6	2.53	0.97
48:4:693:CYS:HA	48:4:839:ARG:NH2	1.78	0.97
48:4:759:ILE:HD13	48:4:784:VAL:HG21	1.40	0.97
48:4:78:PHE:O	48:4:79:TYR:CD1	2.16	0.97
26:W:50:ASN:HB3	26:W:55:TYR:CE2	1.98	0.97
48:4:776:VAL:HG22	48:4:777:ALA:H	0.83	0.97
1:5:1074:G:C2	1:5:1238:A:C2	2.52	0.97
1:5:2087:C:C5	20:Q:37:ARG:NH1	2.31	0.97
1:5:4167:G:C2	1:5:4168:G:C8	2.51	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4223:C:H4'	12:I:119:PHE:HE2	1.29	0.97
14:K:116:MET:O	14:K:118:HIS:N	1.98	0.97
1:5:2437:C:H5''	1:5:2782:U:O4	1.63	0.97
3:8:64:U:O2	3:8:65:A:N7	1.96	0.97
14:K:102:GLY:CA	14:K:139:VAL:CA	2.37	0.97
49:S2:620:G:OP1	49:S2:620:G:N2	1.97	0.97
1:5:3709:U:N1	49:S2:970:G:N1	2.12	0.97
48:4:253:VAL:HG12	48:4:257:MET:CE	1.95	0.97
48:4:667:LYS:HZ3	48:4:667:LYS:CB	1.78	0.97
1:5:4283:G:N2	1:5:4284:C:C6	2.31	0.97
14:K:154:ASP:O	14:K:155:ILE:CB	2.12	0.97
14:K:23:GLY:O	14:K:24:ALA:HB3	1.62	0.97
1:5:1979:A:OP1	14:K:99:LYS:CG	2.11	0.97
49:S2:1232:U:O2	49:S2:1233:G:C8	2.18	0.97
49:S2:636:C:N3	49:S2:637:U:C5	2.31	0.97
48:4:770:VAL:CG1	48:4:784:VAL:HG13	1.94	0.97
48:4:769:HIS:O	48:4:786:ALA:HB2	1.62	0.97
1:5:3702:A:N1	1:5:3703:G:N7	2.10	0.97
1:5:3731:C:N3	1:5:3732:A:N7	2.13	0.97
3:8:74:U:C4	28:Y:74:TYR:CE1	2.53	0.97
48:4:45:ILE:CG1	48:4:46:ILE:N	2.20	0.97
48:4:686:ALA:CB	48:4:726:ARG:HA	1.94	0.97
1:5:1973:G:N2	1:5:1993:C:N3	2.12	0.97
1:5:3709:U:N1	49:S2:970:G:C2	2.30	0.97
1:5:3721:U:O2	1:5:3722:G:C8	2.18	0.97
1:5:3740:G:C6	1:5:3741:C:C6	2.52	0.97
1:5:375:G:OP2	13:J:52:LYS:NZ	105.59	0.97
49:S2:797:C:C2	57:SH:109:ARG:NH2	2.33	0.97
49:S2:1857:G:N7	64:SO:146:ARG:NH2	2.12	0.97
48:4:121:VAL:HG23	48:4:122:THR:HG23	1.46	0.97
48:4:189:ILE:CG2	48:4:203:ILE:HG13	1.95	0.97
1:5:4608:G:OP1	48:4:66:ARG:NH2	1.98	0.97
1:5:1993:C:H1'	14:K:135:THR:CB	1.94	0.97
16:M:7:VAL:HB	22:S:152:PHE:HB2	1.44	0.97
48:4:72:SER:OG	48:4:104:ASP:HB3	1.64	0.97
48:4:804:THR:HG21	48:4:808:ALA:HB2	1.45	0.97
48:4:855:LEU:CD2	48:4:856:ASP:N	2.27	0.97
1:5:4481:U:C2	1:5:4482:U:C5	2.52	0.97
49:S2:120:U:C4	49:S2:121:U:C5	2.53	0.97
49:S2:99:A:C2	49:S2:100:U:C6	2.53	0.97
48:4:751:CYS:O	48:4:781:MET:CA	2.12	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2658:G:C2	1:5:2675:G:C2	2.53	0.96
1:5:2743:A:C2	1:5:2744:A:C6	2.53	0.96
14:K:131:GLU:CG	14:K:155:ILE:CD1	2.42	0.96
49:S2:1545:A:C5	49:S2:1588:A:C6	2.52	0.96
48:4:56:PHE:HE1	48:4:455:GLY:HA2	1.23	0.96
48:4:751:CYS:HB2	48:4:755:VAL:CG2	1.95	0.96
1:5:1269:G:C6	1:5:2111:G:C2	2.53	0.96
1:5:3694:U:N3	1:5:3695:U:C5	2.33	0.96
1:5:483:G:C2	1:5:484:U:C5	2.53	0.96
1:5:977:C:N3	1:5:978:G:C8	2.26	0.96
49:S2:1409:A:C2	49:S2:1410:C:C6	2.53	0.96
1:5:1899:G:C8	1:5:2278:G:C2	2.52	0.96
1:5:1269:G:C5	1:5:2111:G:C2	2.52	0.96
1:5:27:C:O2	1:5:28:C:H6	1.48	0.96
9:F:149:LEU:HB2	9:F:197:TYR:OH	1.64	0.96
49:S2:830:A:N1	49:S2:844:U:O4	1.96	0.96
3:8:74:U:O4	28:Y:74:TYR:CE1	2.17	0.96
48:4:756:VAL:CG2	48:4:782:PHE:CG	2.48	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
1:5:3702:A:C6	1:5:3703:G:N7	2.33	0.96
1:5:4099:G:O2'	51:SB:224:GLU:HB3	1.65	0.96
3:8:85:U:H2'	3:8:87:G:C8	2.00	0.96
1:5:4518:A:C8	5:B:257:TRP:CZ2	2.53	0.96
10:G:264:LYS:HZ1	10:G:265:LEU:CD2	1.77	0.96
49:S2:1284:A:O2'	62:SM:106:CYS:CA	2.13	0.96
49:S2:1308:U:H2'	49:S2:1309:C:H6	1.25	0.96
49:S2:56:G:C6	49:S2:90:G:C2	2.52	0.96
1:5:1672:U:O2	1:5:1673:U:C6	2.19	0.96
1:5:2021:G:O3'	20:Q:84:GLY:CA	138.68	0.96
1:5:2726:G:C2	1:5:2727:C:C4	2.54	0.96
1:5:2832:A:H2'	1:5:2833:A:H5''	1.44	0.96
1:5:4966:A:H2'	1:5:4967:A:O4'	1.65	0.96
1:5:957:G:O5'	1:5:1284:G:N2	1.98	0.96
14:K:116:MET:HB2	14:K:117:ARG:HH21	1.28	0.96
49:S2:1051:G:C2	49:S2:1052:A:C8	2.52	0.96
48:4:162:ARG:O	48:4:166:GLU:HG3	1.66	0.96
48:4:804:THR:OG1	48:4:808:ALA:CB	2.12	0.96
1:5:1240:G:OP1	1:5:1271:G:O2'	1.84	0.96
1:5:2279:A:C2	1:5:2280:G:C5	2.54	0.96
1:5:2532:C:O2	1:5:2533:C:C6	2.18	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:289:C:N3	1:5:290:U:C5	2.34	0.96
1:5:102:G:HO2'	1:5:1381:U:HO2'	1.12	0.96
1:5:1983:A:C8	1:5:1987:C:OP2	2.19	0.96
1:5:3767:C:H5''	49:S2:1849:G:C5	2.01	0.96
14:K:131:GLU:HG2	14:K:155:ILE:CD1	1.94	0.96
49:S2:1132:C:C4	49:S2:1133:A:C8	2.54	0.96
49:S2:1541:G:C2	49:S2:1542:C:C5	2.54	0.96
48:4:226:LYS:HZ2	48:4:356:ILE:HD12	1.31	0.96
1:5:970:G:O6	1:5:2256:C:N4	1.97	0.96
1:5:2453:A:C6	1:5:2454:U:C5	2.53	0.96
3:8:132:G:C2	3:8:133:G:C8	2.52	0.96
49:S2:1314:U:H3	49:S2:1315:U:H1'	1.25	0.96
49:S2:94:G:HO2'	49:S2:508:A:HO2'	1.10	0.96
49:S2:77:A:O2'	56:SG:175:LYS:HA	1.65	0.96
49:S2:349:A:C4'	58:SI:27:TYR:OH	2.13	0.96
1:5:1280:C:C2	1:5:1282:G:N7	2.34	0.96
14:K:117:ARG:CG	14:K:133:LEU:CD1	2.43	0.96
14:K:121:LEU:HD13	14:K:129:ILE:HG21	1.05	0.96
49:S2:648:A:C2	49:S2:649:U:C6	2.54	0.96
49:S2:862:A:C2	49:S2:863:U:C6	2.54	0.96
49:S2:974:C:C2	49:S2:975:G:C8	2.53	0.96
1:5:1217:G:H2'	1:5:1218:G:C8	2.01	0.96
49:S2:26:U:C4	49:S2:27:A:N7	2.34	0.96
49:S2:339:A:H2'	49:S2:340:C:C5	2.00	0.96
49:S2:793:G:C5	49:S2:794:A:C8	2.54	0.96
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
1:5:486:C:C2	1:5:487:G:C8	2.53	0.95
17:N:30:TYR:CE1	17:N:63:ARG:HD2	2.01	0.95
49:S2:119:U:N3	49:S2:120:U:C5	2.34	0.95
1:5:3629:A:O2'	49:S2:1721:U:N3	1.98	0.95
49:S2:217:A:N3	49:S2:309:G:C6	2.34	0.95
49:S2:75:G:H21	49:S2:77:A:P	1.89	0.95
1:5:1561:G:C2'	1:5:1562:G:H5'	1.93	0.95
1:5:4215:C:C2	1:5:4216:G:C8	2.53	0.95
1:5:4414:A:N1	1:5:4427:G:C2	2.34	0.95
1:5:472:C:C2	1:5:473:C:C6	2.53	0.95
1:5:92:C:OP2	1:5:4341:C:O2'	1.84	0.95
49:S2:42:A:N1	49:S2:43:U:H5	1.63	0.95
1:5:3807:A:HO2'	49:S2:1816:G:HO2'	0.98	0.95
3:8:11:C:C2	3:8:12:G:C8	2.54	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:102:GLY:HA2	14:K:139:VAL:CB	1.95	0.95
49:S2:1111:U:N3	49:S2:1112:U:H5	1.62	0.95
49:S2:1408:U:N3	49:S2:1439:A:H2	1.64	0.95
49:S2:1609:C:O2	49:S2:1610:G:C8	2.19	0.95
49:S2:588:G:N3	49:S2:589:G:N2	2.14	0.95
49:S2:909:G:C2	49:S2:910:G:C8	2.54	0.95
49:S2:908:A:C2	49:S2:909:G:N7	2.35	0.95
48:4:540:GLU:OE1	48:4:540:GLU:HA	1.62	0.95
48:4:588:ASN:OD1	48:4:589:VAL:N	1.98	0.95
48:4:693:CYS:CA	48:4:839:ARG:NH2	2.29	0.95
48:4:745:TYR:CG	48:4:813:VAL:O	2.20	0.95
1:5:4080:C:O2	1:5:4081:G:C8	2.20	0.95
1:5:4258:C:C2	1:5:4259:C:C5	2.53	0.95
1:5:977:C:O2	1:5:978:G:C8	2.17	0.95
48:4:427:VAL:HG13	48:4:485:ILE:HG23	1.46	0.95
1:5:1340:C:C2	1:5:1341:U:C6	2.55	0.95
1:5:2743:A:C2	1:5:2744:A:N7	2.34	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
10:G:261:LEU:HD22	10:G:264:LYS:CE	1.86	0.95
1:5:1979:A:OP1	14:K:99:LYS:HG3	1.63	0.95
48:4:21:ASN:ND2	48:4:469:ILE:CD1	2.29	0.95
48:4:225:LEU:HD21	48:4:257:MET:O	1.63	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
1:5:1994:C:H2'	14:K:132:ILE:CG1	1.91	0.95
49:S2:1398:G:C2	49:S2:1399:C:C5	2.54	0.95
49:S2:1430:C:N3	49:S2:1431:G:C8	2.35	0.95
49:S2:1540:G:C6	49:S2:1541:G:N7	2.35	0.95
48:4:420:LEU:N	48:4:420:LEU:CD2	2.29	0.95
48:4:691:ALA:N	48:4:730:TYR:CE1	2.28	0.95
48:4:692:LEU:HD22	48:4:734:LEU:HD21	1.48	0.95
1:5:4518:A:N7	5:B:257:TRP:CZ2	2.33	0.95
3:8:119:C:O2	3:8:120:G:C8	2.19	0.95
22:S:45:TRP:CZ3	22:S:56:LYS:HA	2.01	0.95
48:4:75:ILE:HG22	48:4:77:LEU:HD12	1.47	0.95
48:4:753:GLU:CB	48:4:782:PHE:HE1	1.63	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
1:5:2854:G:O6	1:5:2856:C:C6	2.19	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:969:C:O2'	1:5:970:G:N3	1.98	0.95
49:S2:121:U:N3	49:S2:122:G:N7	2.13	0.95
49:S2:1591:C:C4	49:S2:1592:C:C5	2.54	0.95
1:5:3629:A:C1'	49:S2:1721:U:N3	2.29	0.95
1:5:2127:C:H2'	1:5:2128:G:N7	1.82	0.95
5:B:118:PHE:HB2	5:B:119:TYR:CE1	2.02	0.95
8:E:184:ARG:NH2	8:E:210:ASP:OD1	2.00	0.95
14:K:62:LEU:HD11	14:K:73:VAL:CB	1.96	0.95
14:K:97:ASN:HA	14:K:98:ILE:HG12	1.47	0.95
49:S2:1101:U:O2	49:S2:1102:G:N7	1.99	0.95
48:4:144:ARG:NH1	48:4:781:MET:HE2	1.79	0.95
48:4:4:PHE:HD1	48:4:5:THR:CG2	1.79	0.95
48:4:60:ARG:O	48:4:60:ARG:HD2	1.66	0.95
48:4:759:ILE:HG21	48:4:784:VAL:HG21	1.49	0.95
1:5:1198:G:H2'	1:5:1199:G:C8	2.02	0.95
1:5:1427:A:H3'	1:5:1428:U:H6	1.30	0.95
1:5:2497:C:C2	1:5:2498:C:C5	2.55	0.95
14:K:95:GLN:O	14:K:96:LYS:CD	2.13	0.95
48:4:672:LEU:O	48:4:676:LYS:N	1.99	0.94
48:4:692:LEU:HD13	48:4:734:LEU:HD11	0.97	0.94
48:4:754:GLN:OE1	48:4:755:VAL:HG23	1.64	0.94
48:4:845:LYS:CE	48:4:846:GLU:HG2	1.97	0.94
1:5:208:A:C1'	1:5:232:G:H21	1.78	0.94
1:5:983:C:C2	1:5:984:C:C5	2.55	0.94
14:K:102:GLY:CA	14:K:139:VAL:HG12	1.89	0.94
49:S2:1250:A:C2	49:S2:1339:U:O2'	2.19	0.94
49:S2:1412:C:H2'	49:S2:1413:G:C8	2.02	0.94
49:S2:340:C:C2	49:S2:341:C:C5	2.54	0.94
49:S2:1593:C:O2'	69:ST:12:GLN:OE1	1.84	0.94
48:4:160:MET:HE1	48:4:178:PHE:CE2	2.03	0.94
48:4:613:LEU:CD2	48:4:613:LEU:N	2.30	0.94
48:4:659:PRO:CG	48:4:698:ARG:CZ	2.44	0.94
1:5:1217:G:C2'	1:5:1218:G:H8	1.80	0.94
1:5:1476:C:N3	1:5:1477:C:C5	2.35	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
1:5:3741:C:C2	1:5:3742:G:C8	2.55	0.94
1:5:4414:A:C2	1:5:4427:G:C2	2.55	0.94
1:5:4729:A:H4'	1:5:4965:U:O2'	1.67	0.94
1:5:514:U:H5	1:5:515:C:O4'	1.48	0.94
1:5:909:A:C2	1:5:910:G:C8	2.55	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	1.49	0.94
49:S2:1109:C:N3	49:S2:1110:G:O4'	2.00	0.94
49:S2:1545:A:C6	49:S2:1588:A:C6	2.54	0.94
49:S2:1793:A:C2	49:S2:1794:C:C5	2.55	0.94
48:4:430:MET:HE1	48:4:486:THR:HG21	1.46	0.94
1:5:1390:G:C2	1:5:1394:G:C6	2.55	0.94
1:5:1984:A:N6	1:5:2011:C:O2'	1.99	0.94
1:5:3737:A:H2'	1:5:3738:G:O4'	1.68	0.94
1:5:3790:U:N3	1:5:3792:G:O4'	2.00	0.94
1:5:484:U:C2	1:5:486:C:C6	2.54	0.94
1:5:917:A:C6	1:5:919:C:C4	2.55	0.94
49:S2:42:A:N1	49:S2:43:U:C5	2.35	0.94
48:4:571:LYS:HE2	48:4:572:LYS:H	1.13	0.94
48:4:689:GLU:C	48:4:730:TYR:OH	2.04	0.94
1:5:4194:U:O2'	1:5:4221:C:N4	2.00	0.94
1:5:42:A:N6	1:5:4379:A:C2	2.36	0.94
49:S2:1053:C:N3	49:S2:1054:G:N7	2.14	0.94
49:S2:1095:U:O4	49:S2:1149:A:N1	2.00	0.94
49:S2:378:U:C4	49:S2:379:C:C5	2.56	0.94
28:Y:15:ARG:HH12	28:Y:19:PHE:HE2	1.09	0.94
48:4:240:GLY:O	48:4:243:GLN:CG	2.15	0.94
1:5:1238:A:O2'	1:5:1239:C:O5'	1.83	0.94
1:5:2080:U:O2	1:5:2081:C:C6	2.21	0.94
1:5:4098:A:C2	1:5:4099:G:C8	2.55	0.94
1:5:471:A:C5	1:5:472:C:C6	2.55	0.94
14:K:56:LEU:CB	14:K:91:ASP:OD2	2.16	0.94
49:S2:795:A:N3	49:S2:796:G:N7	2.15	0.94
1:5:1358:G:O2'	1:5:1359:G:O4'	1.84	0.94
1:5:246:G:C2	1:5:247:G:C8	2.56	0.94
1:5:2504:C:O2	1:5:2505:C:C5	2.21	0.94
1:5:4724:A:HO2'	5:B:104:THR:HG1	1.09	0.94
14:K:22:VAL:HG23	14:K:48:LYS:HE2	1.46	0.94
49:S2:1266:C:O2	49:S2:1267:C:C5	2.20	0.94
49:S2:444:G:N2	49:S2:446:G:H8	1.64	0.94
49:S2:641:A:H2'	49:S2:642:U:O4'	1.68	0.94
48:4:271:GLY:O	48:4:272:LYS:HD3	1.68	0.94
48:4:694:GLU:HG3	48:4:844:LEU:HD11	1.47	0.94
1:5:2304:U:O2	1:5:2332:A:N6	2.00	0.94
1:5:2604:C:O2	1:5:2605:G:H8	1.51	0.94
1:5:4985:U:H4'	5:B:175:GLN:OE1	1.67	0.94
49:S2:1552:G:C6	49:S2:1578:U:N3	2.35	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:458:A:C6	49:S2:459:C:C5	2.55	0.94
49:S2:428:U:H5	59:SJ:7:TRP:CZ2	1.86	0.94
48:4:745:TYR:HA	48:4:815:ASP:CB	1.97	0.94
1:5:100:C:C4	1:5:101:A:C8	2.52	0.94
1:5:120:A:H1'	1:5:121:A:C2	2.02	0.94
1:5:1245:C:C6	1:5:1269:G:C6	2.55	0.94
1:5:1965:G:H2'	1:5:1966:C:C6	2.02	0.94
1:5:2326:G:N1	1:5:2327:G:N7	2.16	0.94
1:5:2859:G:N2	1:5:3837:C:O2	2.01	0.94
1:5:3907:G:N9	1:5:4449:A:H1'	1.82	0.94
1:5:43:U:C5	1:5:44:A:C8	2.55	0.94
1:5:4744:A:C2	1:5:4745:G:C5	2.55	0.94
10:G:261:LEU:HD23	10:G:264:LYS:HE2	1.44	0.94
49:S2:1402:A:C6	49:S2:1441:U:C4	2.55	0.94
48:4:743:PRO:CB	48:4:744:ILE:HB	1.97	0.94
1:5:2843:U:C2	1:5:2844:A:C8	2.56	0.94
1:5:4725:C:O2	1:5:4726:G:H8	1.45	0.94
1:5:4983:C:N3	1:5:4984:C:C5	2.36	0.94
1:5:983:C:O2	1:5:984:C:H6	1.48	0.94
14:K:102:GLY:CA	14:K:139:VAL:HG13	1.89	0.94
14:K:137:GLN:OE1	14:K:148:PRO:CG	2.16	0.94
48:4:759:ILE:HD11	48:4:784:VAL:HB	0.94	0.94
48:4:42:LYS:CG	48:4:79:TYR:HH	1.73	0.94
1:5:975:C:OP1	9:F:49:ARG:NH1	2.01	0.94
14:K:21:GLU:HA	14:K:21:GLU:OE2	1.67	0.94
49:S2:43:U:C2	49:S2:484:A:H2	1.85	0.94
49:S2:551:U:C2	49:S2:552:G:C8	2.56	0.94
48:4:659:PRO:HG3	48:4:698:ARG:NH2	1.83	0.94
48:4:745:TYR:H	48:4:815:ASP:HB3	1.32	0.94
48:4:845:LYS:NZ	48:4:846:GLU:CG	2.30	0.94
1:5:2736:G:C2	1:5:2737:C:C5	2.56	0.94
1:5:4988:U:H4'	1:5:4989:U:O2	1.67	0.94
49:S2:848:U:C2	49:S2:849:A:C5	2.55	0.94
1:5:1635:C:H2'	1:5:1636:U:H5'	1.46	0.93
1:5:2735:G:C2	1:5:2736:G:C8	2.57	0.93
1:5:4165:C:C2	1:5:4166:G:C8	2.55	0.93
3:8:80:A:H8	3:8:81:C:HO2'	1.13	0.93
49:S2:1420:G:HO2'	69:ST:4:VAL:N	1.65	0.93
49:S2:1402:A:C6	49:S2:1441:U:N3	2.35	0.93
1:5:1667:G:N2	1:5:2283:G:O6	2.01	0.93
1:5:208:A:H1'	1:5:232:G:N2	1.83	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1438:U:O2	1:5:2099:G:O6	1.86	0.93
1:5:4324:A:C2	1:5:4325:A:C5	2.57	0.93
1:5:4601:U:C4	1:5:4609:G:N2	2.36	0.93
14:K:121:LEU:CD1	14:K:129:ILE:CG2	2.24	0.93
14:K:159:ALA:O	14:K:163:PRO:HG3	1.68	0.93
49:S2:384:U:C5	49:S2:386:C:C6	2.57	0.93
48:4:543:GLU:OE2	48:4:576:VAL:HG23	0.76	0.93
1:5:5044:A:C2'	1:5:5045:G:H5'	1.98	0.93
49:S2:1592:C:C4	49:S2:1593:C:C5	2.56	0.93
48:4:113:SER:CB	48:4:533:MET:CB	2.22	0.93
48:4:693:CYS:C	48:4:839:ARG:NH2	2.21	0.93
48:4:769:HIS:O	48:4:786:ALA:HB1	1.67	0.93
48:4:825:PHE:O	48:4:826:ASP:C	1.94	0.93
1:5:1247:U:C2	1:5:1248:C:C6	2.55	0.93
1:5:2509:C:O2'	1:5:2510:G:O5'	1.85	0.93
1:5:4563:U:N3	1:5:4564:A:C6	2.35	0.93
14:K:160:VAL:O	14:K:163:PRO:CG	2.12	0.93
49:S2:1017:U:N3	49:S2:1018:U:C5	2.37	0.93
49:S2:792:C:N3	49:S2:793:G:C8	2.36	0.93
1:5:1217:G:N2	1:5:1218:G:O6	2.01	0.93
1:5:4097:G:C2	1:5:4098:A:C8	2.57	0.93
49:S2:989:C:N3	49:S2:1001:A:N1	2.16	0.93
49:S2:1248:U:H2'	49:S2:1249:C:O4'	1.66	0.93
1:5:5005:G:O6	26:W:51:TRP:CB	2.17	0.93
48:4:4:PHE:CD1	48:4:5:THR:CB	2.52	0.93
1:5:2604:C:N3	1:5:2605:G:N7	2.16	0.93
1:5:4080:C:N3	1:5:4081:G:C8	2.35	0.93
1:5:4257:A:H2'	1:5:4258:C:H6	1.32	0.93
1:5:4745:G:HO2'	1:5:4746:C:H6	1.16	0.93
1:5:747:A:H2'	1:5:749:G:C8	2.04	0.93
14:K:20:GLY:HA3	14:K:92:ARG:HH22	1.31	0.93
14:K:31:LYS:O	14:K:34:PRO:CG	2.16	0.93
49:S2:333:G:N7	56:SG:190:ARG:NH1	2.15	0.93
49:S2:993:G:C2	49:S2:994:C:C6	2.56	0.93
48:4:40:VAL:O	48:4:43:ALA:HB2	1.66	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
1:5:2851:G:H1'	1:5:3840:U:O2	1.67	0.93
49:S2:1050:A:N7	49:S2:1051:G:C8	2.37	0.93
49:S2:1433:C:H2'	49:S2:1434:C:O4'	1.67	0.93
49:S2:963:A:H2'	49:S2:964:A:C8	2.03	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:27:HIS:CD2	48:4:28:VAL:HG22	2.04	0.93
48:4:579:TYR:HA	48:4:817:TRP:HH2	1.30	0.93
1:5:173:C:C2	1:5:174:C:C6	2.57	0.93
1:5:3617:G:O2'	1:5:3620:G:N7	2.00	0.93
1:5:1981:G:O2'	1:5:1982:G:O4'	1.85	0.93
1:5:3731:C:C2	1:5:3732:A:C8	2.57	0.93
1:5:4883:C:O2'	1:5:4884:G:OP2	1.87	0.93
1:5:1264:C:C2	1:5:1265:G:C8	2.56	0.93
1:5:1371:A:N6	3:8:28:C:O2'	2.02	0.93
1:5:2784:C:O2	1:5:2785:C:C5	2.22	0.93
1:5:4981:G:C6	1:5:4982:A:C8	2.57	0.93
1:5:969:C:O2'	1:5:970:G:O4'	1.86	0.93
14:K:121:LEU:HD12	14:K:123:ARG:CD	1.96	0.93
49:S2:381:C:N4	58:SI:49:ARG:HD3	1.83	0.93
1:5:2561:C:N3	1:5:2562:G:C8	2.36	0.92
1:5:2613:C:N3	1:5:2614:C:C5	2.37	0.92
1:5:4095:G:C2	1:5:4096:C:C5	2.56	0.92
10:G:53:ARG:NH2	10:G:54:PHE:HZ	1.67	0.92
14:K:142:ASN:CB	14:K:147:HIS:C	2.37	0.92
49:S2:341:C:C4	49:S2:342:C:C5	2.57	0.92
49:S2:75:G:N2	49:S2:77:A:OP1	2.02	0.92
49:S2:994:C:N3	49:S2:995:G:C8	2.37	0.92
48:4:845:LYS:HZ1	48:4:846:GLU:H	1.02	0.92
1:5:1739:G:H2'	1:5:1740:C:O4'	1.69	0.92
1:5:27:C:N3	1:5:28:C:C5	2.37	0.92
1:5:424:U:C2	1:5:425:U:H5	1.87	0.92
3:8:73:U:C5	3:8:74:U:C6	2.56	0.92
1:5:4911:A:C5'	5:B:100:ARG:HD3	1.99	0.92
14:K:159:ALA:C	14:K:163:PRO:HG3	1.90	0.92
48:4:60:ARG:CD	48:4:60:ARG:C	2.29	0.92
48:4:651:CYS:SG	48:4:683:PHE:HD2	1.92	0.92
48:4:82:SER:O	48:4:86:LEU:CD1	2.16	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
1:5:3939:G:N3	1:5:4076:G:O6	2.02	0.92
49:S2:1398:G:C2	49:S2:1399:C:C6	2.57	0.92
48:4:42:LYS:HE2	48:4:79:TYR:OH	1.68	0.92
1:5:4275:G:O6	1:5:4276:G:C5	2.22	0.92
1:5:1995:G:O4'	14:K:132:ILE:CD1	2.17	0.92
14:K:47:ALA:CA	14:K:72:GLU:HG2	1.98	0.92
49:S2:1455:A:C2	49:S2:1456:G:C8	2.58	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1973:G:O6	1:5:1993:C:N4	2.00	0.92
1:5:1280:C:O4'	6:C:323:ARG:NH2	2.02	0.92
1:5:1993:C:C1'	14:K:135:THR:HB	1.96	0.92
21:R:109:TYR:CE1	21:R:114:LYS:HD2	2.04	0.92
48:4:226:LYS:NZ	48:4:356:ILE:CD1	2.33	0.92
1:5:4413:C:C4'	12:I:157:PHE:HD2	1.80	0.92
3:8:94:G:HO2'	3:8:95:A:H8	0.98	0.92
10:G:55:VAL:HB	10:G:57:TRP:HE1	1.34	0.92
49:S2:1406:G:H2'	49:S2:1407:U:C1'	1.98	0.92
49:S2:165:G:C8	49:S2:166:A:C8	2.56	0.92
49:S2:43:U:N3	49:S2:484:A:H2	1.67	0.92
48:4:160:MET:CE	48:4:178:PHE:CZ	2.53	0.92
1:5:1310:C:N3	1:5:1311:G:C8	2.37	0.92
49:S2:1538:C:O2	49:S2:1539:U:C6	2.22	0.92
49:S2:310:C:H2'	49:S2:311:C:C6	2.03	0.92
49:S2:469:A:N1	49:S2:470:G:H8	1.57	0.92
49:S2:974:C:N3	49:S2:975:G:C8	2.38	0.92
48:4:160:MET:HE3	48:4:178:PHE:CZ	2.05	0.92
48:4:114:GLU:OE2	48:4:400:LYS:HD3	1.69	0.92
48:4:562:GLU:CB	48:4:570:ILE:HD11	2.00	0.92
1:5:210:C:N4	1:5:231:U:C2	2.38	0.92
1:5:469:C:O2	1:5:688:U:C1'	2.17	0.92
49:S2:1111:U:C2	49:S2:1112:U:C5	2.57	0.92
49:S2:120:U:N3	49:S2:121:U:C5	2.38	0.92
49:S2:56:G:C5	49:S2:90:G:N2	2.38	0.92
64:SO:147:ARG:HB2	64:SO:147:ARG:CZ	2.00	0.92
48:4:160:MET:HE3	48:4:178:PHE:CE2	2.04	0.92
48:4:751:CYS:HB3	48:4:755:VAL:CG1	2.00	0.92
1:5:1248:C:O2	1:5:1249:C:C6	2.23	0.92
1:5:144:G:C2	1:5:145:G:C8	2.57	0.92
1:5:1750:G:C2	1:5:1751:A:C8	2.58	0.92
1:5:1967:A:N6	1:5:2020:U:O4	2.03	0.92
1:5:272:U:C2	1:5:273:U:C5	2.58	0.92
2:7:94:C:C2	2:7:95:C:C5	2.57	0.92
3:8:40:A:N7	3:8:102:G:N2	2.17	0.92
8:E:157:ARG:HD2	8:E:266:TYR:CD1	2.04	0.92
8:E:181:PRO:HA	8:E:246:GLN:HE22	1.34	0.92
49:S2:933:G:C2	49:S2:1000:C:N3	2.38	0.92
49:S2:1594:A:N1	49:S2:1595:U:C5	2.38	0.92
1:5:3767:C:H5'	49:S2:1849:G:C5	2.00	0.92
49:S2:377:G:C2	49:S2:378:U:C6	2.58	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:880:G:C8	49:S2:881:G:C8	2.58	0.92
48:4:137:VAL:HG11	48:4:807:GLN:HE22	1.32	0.92
1:5:2326:G:C6	1:5:2327:G:N7	2.38	0.92
14:K:117:ARG:CG	14:K:133:LEU:HD11	1.99	0.92
49:S2:1224:G:N2	49:S2:1643:U:C2	2.38	0.92
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
1:5:3740:G:C6	1:5:3741:C:C5	2.59	0.91
1:5:3905:A:C6	1:5:4449:A:C6	2.58	0.91
3:8:10:G:C6	3:8:11:C:C6	2.57	0.91
49:S2:118:C:C4	49:S2:119:U:C6	2.57	0.91
49:S2:618:C:N3	49:S2:619:A:C8	2.37	0.91
64:SO:147:ARG:CB	64:SO:147:ARG:CZ	2.46	0.91
48:4:58:ASP:C	48:4:63:GLU:OE1	2.08	0.91
48:4:845:LYS:CE	48:4:846:GLU:N	2.30	0.91
1:5:1247:U:N3	1:5:1248:C:C5	2.38	0.91
1:5:2533:C:OP1	27:X:139:ARG:NH2	2.01	0.91
1:5:2851:G:C6	1:5:2852:U:C6	2.58	0.91
1:5:3591:C:N4	1:5:3592:G:N7	2.17	0.91
1:5:3739:C:C4	1:5:3740:G:N7	2.39	0.91
1:5:86:U:O2	1:5:87:A:C8	2.22	0.91
49:S2:1133:A:N1	49:S2:1134:G:C8	2.38	0.91
49:S2:27:A:C6	49:S2:28:U:C5	2.58	0.91
49:S2:460:A:N3	49:S2:461:U:C6	2.37	0.91
49:S2:60:A:O2'	49:S2:61:A:C5'	2.18	0.91
49:S2:623:G:C2	49:S2:624:C:C6	2.59	0.91
1:5:1671:U:H3	1:5:1672:U:H5	1.09	0.91
1:5:451:C:N4	1:5:1295:C:H2'	1.86	0.91
1:5:4998:G:C2	1:5:4999:G:C8	2.57	0.91
5:B:203:GLN:HA	5:B:203:GLN:HE21	1.33	0.91
49:S2:1149:A:C2	49:S2:1151:G:C5	2.58	0.91
48:4:556:ILE:HA	48:4:559:LYS:HE2	1.52	0.91
48:4:769:HIS:O	48:4:786:ALA:HA	1.66	0.91
48:4:694:GLU:HG3	48:4:844:LEU:HD13	1.52	0.91
1:5:1632:A:N6	1:5:1634:A:C8	2.38	0.91
1:5:2095:A:N1	9:F:41:GLN:OE1	2.02	0.91
1:5:2108:G:N2	1:5:2125:C:N3	2.18	0.91
1:5:701:G:C6	1:5:702:U:C6	2.58	0.91
14:K:56:LEU:CB	14:K:91:ASP:CG	2.38	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:804:U:N3	49:S2:805:U:C5	2.38	0.91
48:4:191:THR:HB	48:4:192:TYR:CD1	2.05	0.91
48:4:585:GLU:CD	48:4:737:GLN:HE22	1.71	0.91
1:5:2294:G:C2	1:5:2295:C:C5	2.57	0.91
1:5:2382:A:N6	1:5:2830:G:O4'	2.04	0.91
1:5:27:C:O2	1:5:28:C:C6	2.23	0.91
1:5:106:A:H1'	1:5:336:A:H8	1.15	0.91
1:5:3739:C:N4	1:5:3740:G:N7	2.19	0.91
1:5:466:A:C2	1:5:467:U:C5	2.58	0.91
1:5:658:C:C2	1:5:659:G:C8	2.58	0.91
49:S2:1408:U:H3	49:S2:1439:A:H2	0.96	0.91
49:S2:337:C:N3	49:S2:338:G:N7	2.18	0.91
49:S2:744:G:H2'	49:S2:745:C:C6	2.06	0.91
48:4:541:SER:CB	48:4:576:VAL:CG1	2.33	0.91
48:4:753:GLU:N	48:4:782:PHE:CE1	2.36	0.91
1:5:962:C:OP2	1:5:2264:C:N3	2.03	0.91
1:5:2604:C:C2	1:5:2605:G:C8	2.58	0.91
14:K:121:LEU:HD12	14:K:123:ARG:HB3	1.49	0.91
49:S2:1595:U:N3	49:S2:1596:U:C6	2.38	0.91
48:4:479:LEU:CD2	48:4:483:GLY:HA3	2.00	0.91
48:4:48:SER:OG	48:4:49:ALA:N	2.02	0.91
48:4:791:ASN:C	48:4:794:PHE:HE1	1.74	0.91
48:4:111:PHE:HE1	48:4:809:PHE:CZ	1.83	0.91
1:5:1669:A:H4'	1:5:1685:G:N2	1.85	0.91
3:8:119:C:C2	3:8:120:G:H8	1.89	0.91
3:8:12:G:N2	3:8:13:G:H1'	1.84	0.91
10:G:264:LYS:HZ2	10:G:265:LEU:HD22	1.36	0.91
49:S2:974:C:N3	49:S2:975:G:N7	2.19	0.91
1:5:1673:U:C2	1:5:1674:C:C5	2.59	0.91
1:5:1695:U:C2'	1:5:1696:C:H5'	2.01	0.91
1:5:1778:C:O2	1:5:1779:U:C5	2.24	0.91
1:5:1818:G:C8	1:5:1821:G:O6	2.24	0.91
1:5:4878:C:C2	1:5:4879:C:C5	2.58	0.91
48:4:75:ILE:HG22	48:4:77:LEU:CD1	1.96	0.91
1:5:1987:C:N3	1:5:1988:G:C8	2.39	0.91
1:5:2126:G:H1'	1:5:2127:C:C6	2.05	0.91
1:5:272:U:O2	1:5:273:U:C5	2.23	0.91
1:5:730:G:N2	1:5:939:G:N2	2.18	0.91
49:S2:428:U:C5	59:SJ:7:TRP:CZ2	2.59	0.91
49:S2:599:A:H1'	49:S2:605:A:N3	1.84	0.91
48:4:191:THR:CG2	48:4:192:TYR:CZ	2.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:4:PHE:HD1	48:4:5:THR:HG22	1.32	0.91
48:4:742:GLU:OE2	48:4:791:ASN:CG	2.08	0.91
1:5:1696:C:H1'	1:5:1697:G:H5'	1.53	0.91
1:5:489:C:N4	1:5:664:G:O6	2.04	0.91
3:8:131:G:C6	3:8:132:G:N7	2.38	0.91
49:S2:551:U:H2'	49:S2:552:G:H8	1.36	0.91
48:4:613:LEU:HD22	48:4:639:TYR:CG	2.06	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
1:5:4627:U:N3	1:5:4628:U:C5	2.38	0.90
1:5:4888:U:HO2'	1:5:4889:G:H8	0.98	0.90
1:5:753:C:N3	1:5:754:U:C5	2.39	0.90
3:8:12:G:N1	3:8:13:G:N7	2.19	0.90
1:5:1176:C:O2	7:D:282:GLN:NE2	2.03	0.90
49:S2:27:A:C2	49:S2:28:U:C6	2.59	0.90
48:4:113:SER:HA	48:4:499:PHE:HB3	1.53	0.90
48:4:744:ILE:HD12	48:4:816:HIS:CA	2.00	0.90
1:5:1268:G:N1	1:5:1270:A:N7	2.18	0.90
1:5:2613:C:C4	1:5:2614:C:C5	2.58	0.90
1:5:4123:C:N3	1:5:4124:G:C8	2.39	0.90
14:K:121:LEU:CD1	14:K:123:ARG:HB3	2.01	0.90
14:K:123:ARG:HB2	14:K:129:ILE:HG13	1.52	0.90
49:S2:1433:C:C3'	49:S2:1433:C:OP2	2.19	0.90
49:S2:1755:C:N3	49:S2:1756:C:C5	2.39	0.90
49:S2:387:C:C2	49:S2:388:U:C5	2.59	0.90
49:S2:999:G:C6	49:S2:1000:C:C5	2.58	0.90
48:4:752:PRO:HG3	48:4:780:PRO:HB3	1.53	0.90
1:5:4242:U:O2	1:5:4279:A:H2	1.54	0.90
1:5:54:G:C6	1:5:55:G:C8	2.58	0.90
49:S2:1220:A:N6	49:S2:1221:G:O6	2.04	0.90
49:S2:1317:C:C2	49:S2:1318:G:C8	2.59	0.90
49:S2:633:C:N3	49:S2:634:A:C8	2.39	0.90
49:S2:647:U:O2	49:S2:648:A:H8	1.45	0.90
48:4:121:VAL:O	48:4:415:ARG:NH1	2.04	0.90
1:5:2724:G:N2	1:5:2726:G:C5	2.39	0.90
1:5:2614:C:O2'	1:5:2808:G:OP1	1.88	0.90
1:5:3791:C:N3	1:5:3802:U:C6	2.40	0.90
14:K:80:LEU:HA	14:K:83:LYS:HD3	1.52	0.90
49:S2:1109:C:N3	49:S2:1110:G:C1'	2.34	0.90
48:4:106:PRO:CD	48:4:115:VAL:HG22	2.00	0.90
48:4:743:PRO:O	48:4:790:VAL:N	1.99	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:6:VAL:O	48:4:7:ASP:C	2.04	0.90
1:5:100:C:C5	1:5:101:A:N7	2.37	0.90
1:5:1807:C:N3	1:5:1808:C:C6	2.40	0.90
1:5:2007:G:O2'	1:5:2008:U:O4'	1.88	0.90
1:5:1542:U:OP1	1:5:2743:A:C8	2.24	0.90
1:5:4213:A:H61	1:5:4218:U:H3	0.95	0.90
49:S2:337:C:N3	49:S2:338:G:C8	2.39	0.90
60:SK:8:ARG:HD3	60:SK:12:TYR:CE1	2.06	0.90
1:5:1174:G:N2	1:5:1175:A:C8	2.40	0.90
1:5:1266:G:N2	1:5:1268:G:C5	2.40	0.90
1:5:2034:G:C6	1:5:2035:C:N3	2.39	0.90
1:5:2293:U:O2	1:5:2294:G:H8	1.45	0.90
1:5:3723:A:C2	1:5:3724:A:C5	2.59	0.90
49:S2:1273:C:C2	49:S2:1506:A:C2	2.56	0.90
49:S2:415:A:H2'	49:S2:416:U:O4'	1.70	0.90
64:SO:146:ARG:HH11	64:SO:146:ARG:HG3	1.35	0.90
48:4:751:CYS:CB	48:4:755:VAL:CG1	2.49	0.90
1:5:2017:A:N7	1:5:2018:C:C5	2.39	0.90
1:5:977:C:C4	1:5:978:G:N7	2.38	0.90
49:S2:1310:U:H3	49:S2:1311:C:H5	1.18	0.90
49:S2:388:U:C2	49:S2:389:A:C8	2.59	0.90
67:SR:27:ASP:O	67:SR:31:ASN:ND2	2.05	0.90
48:4:804:THR:HG21	48:4:808:ALA:CB	2.00	0.90
1:5:1999:A:O2'	1:5:2000:G:O4'	1.88	0.90
1:5:3899:G:P	5:B:257:TRP:HB2	2.12	0.90
49:S2:414:A:C2	49:S2:424:C:O2	2.24	0.90
49:S2:579:C:C4	49:S2:580:U:C5	2.60	0.90
48:4:543:GLU:HG3	48:4:576:VAL:HG21	1.53	0.90
48:4:739:ARG:HH11	48:4:823:ASP:HB2	1.25	0.90
1:5:106:A:C1'	1:5:336:A:H8	1.85	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
1:5:2565:A:N7	1:5:2566:G:H1'	1.86	0.90
1:5:2568:C:C2	1:5:2569:G:C8	2.59	0.90
1:5:4355:G:C2	1:5:4356:G:N7	2.40	0.90
1:5:754:U:N3	1:5:755:C:C5	2.40	0.90
49:S2:51:U:N3	49:S2:52:G:N7	2.19	0.90
49:S2:597:G:C2	49:S2:640:A:C2	2.59	0.90
48:4:498:LYS:C	48:4:500:SER:H	1.68	0.90
1:5:1475:G:N2	1:5:1476:C:C5	2.40	0.90
1:5:4281:A:C2	1:5:4283:G:C5	2.60	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2089:G:O6	1:5:2263:A:C5'	2.20	0.89
1:5:3680:U:H2'	1:5:3680:U:O2	1.71	0.89
1:5:3783:A:H2	1:5:3789:C:H42	1.17	0.89
2:7:94:C:N3	2:7:95:C:C5	2.40	0.89
1:5:4518:A:HO2'	5:B:257:TRP:HZ3	0.94	0.89
14:K:117:ARG:NE	14:K:117:ARG:HA	1.86	0.89
49:S2:1030:A:C2	49:S2:1031:A:N7	2.39	0.89
49:S2:1512:C:C2	49:S2:1513:C:C5	2.60	0.89
48:4:613:LEU:HD22	48:4:639:TYR:CE1	2.05	0.89
48:4:691:ALA:N	48:4:730:TYR:CG	2.39	0.89
48:4:713:ALA:HB2	48:4:716:ARG:HH21	1.36	0.89
1:5:211:G:C2	1:5:212:A:C8	2.60	0.89
1:5:2328:G:HO2'	1:5:2329:U:C5'	1.84	0.89
1:5:3743:G:H2'	1:5:3744:G:H5'	1.54	0.89
1:5:4273:A:H2'	1:5:4274:A:O4'	1.71	0.89
14:K:97:ASN:OD1	14:K:98:ILE:CD1	2.19	0.89
49:S2:1095:U:C4	49:S2:1149:A:N1	2.40	0.89
49:S2:1114:U:H3	49:S2:1119:A:N6	1.71	0.89
49:S2:524:U:C2	49:S2:594:A:N6	2.39	0.89
48:4:45:ILE:HG13	48:4:46:ILE:N	1.84	0.89
1:5:1235:G:C2	1:5:1236:C:C5	2.61	0.89
49:S2:1151:G:C2	49:S2:1152:U:C6	2.60	0.89
49:S2:1317:C:O2	49:S2:1318:G:C8	2.25	0.89
49:S2:1782:G:C2	49:S2:1784:G:N7	2.41	0.89
49:S2:1840:U:C2	49:S2:1841:C:C6	2.61	0.89
48:4:543:GLU:CD	48:4:576:VAL:HB	1.91	0.89
1:5:1632:A:N6	1:5:1634:A:N9	2.19	0.89
1:5:2724:G:C2	1:5:2726:G:C8	2.61	0.89
1:5:4580:U:N3	1:5:4581:G:C8	2.40	0.89
14:K:140:GLY:O	14:K:141:CYS:SG	2.30	0.89
49:S2:1434:C:H3'	49:S2:1435:C:O4'	1.71	0.89
49:S2:291:G:O5'	49:S2:291:G:C8	2.25	0.89
48:4:845:LYS:HZ1	48:4:846:GLU:N	1.69	0.89
1:5:1245:C:C2	1:5:1246:G:C8	2.60	0.89
1:5:172:C:C2	1:5:173:C:C6	2.61	0.89
1:5:1992:U:O2'	1:5:2002:A:OP1	1.91	0.89
1:5:4228:G:H5''	1:5:4229:U:O4'	1.73	0.89
14:K:91:ASP:O	14:K:92:ARG:HB2	1.73	0.89
49:S2:1414:A:C2	49:S2:1415:C:C5	2.61	0.89
49:S2:309:G:N2	49:S2:310:C:C2	2.40	0.89
48:4:322:LYS:HB2	48:4:322:LYS:HZ3	1.38	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2026:A:C2'	1:5:2027:U:H5'	2.01	0.89
1:5:2463:G:C2	1:5:2464:C:C4	2.60	0.89
3:8:11:C:O2	3:8:12:G:C8	2.26	0.89
8:E:157:ARG:HD3	8:E:266:TYR:CE1	2.07	0.89
49:S2:56:G:N1	49:S2:90:G:C2	2.39	0.89
13:J:91:GLU:OE2	65:SP:12:PHE:CB	2.19	0.89
1:5:2018:C:N3	1:5:2019:C:C5	2.41	0.89
1:5:445:U:H1'	1:5:2313:A:C2	2.07	0.89
1:5:1284:G:O6	6:C:312:ARG:NH2	2.06	0.89
14:K:22:VAL:CG2	14:K:48:LYS:CE	2.50	0.89
49:S2:186:C:O2	49:S2:187:G:C8	2.25	0.89
48:4:103:ILE:CD1	48:4:122:THR:HG21	2.02	0.89
1:5:1245:C:C5	1:5:1269:G:O6	2.25	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
1:5:5003:U:C2	1:5:5045:G:N2	2.41	0.89
1:5:352:G:O2'	3:8:22:U:O4	1.89	0.89
7:D:210:TYR:OH	7:D:214:GLU:HG3	1.72	0.89
14:K:124:GLU:CA	14:K:128:THR:OG1	2.08	0.89
14:K:61:LYS:CE	14:K:72:GLU:CG	2.48	0.89
1:5:3767:C:C5'	49:S2:1849:G:N7	2.34	0.89
48:4:744:ILE:HD11	48:4:816:HIS:N	1.87	0.89
1:5:2325:C:N3	1:5:2326:G:C8	2.41	0.89
1:5:28:C:C2	1:5:29:G:C8	2.60	0.89
1:5:4241:C:N3	1:5:4242:U:C5	2.41	0.89
1:5:4579:U:C2	1:5:4580:U:C6	2.61	0.89
1:5:983:C:N3	1:5:984:C:H5	1.65	0.89
48:4:659:PRO:HG2	48:4:698:ARG:NH2	1.87	0.89
1:5:2851:G:C5	1:5:2852:U:H6	1.90	0.89
1:5:3878:C:O2	5:B:258:HIS:HE1	1.54	0.89
1:5:504:G:N1	1:5:654:C:C2	2.41	0.89
49:S2:1124:C:N3	49:S2:1125:C:C5	2.41	0.89
1:5:3767:C:H5'	49:S2:1849:G:O6	1.63	0.89
49:S2:51:U:C2	49:S2:52:G:C8	2.60	0.89
49:S2:555:A:C2	49:S2:557:U:C5	2.61	0.89
49:S2:618:C:C4	49:S2:619:A:C8	2.60	0.89
49:S2:419:G:N2	49:S2:661:U:O2	2.06	0.89
49:S2:792:C:C2	49:S2:793:G:C8	2.61	0.89
49:S2:821:G:O6	59:SJ:150:ARG:CD	2.19	0.89
48:4:581:GLU:OE2	48:4:695:GLU:CB	2.21	0.88
1:5:2328:G:O2'	1:5:2329:U:O5'	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2497:C:O2	1:5:2498:C:C6	2.26	0.88
1:5:445:U:C1'	1:5:2313:A:C2	2.56	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	2.41	0.88
14:K:62:LEU:HD11	14:K:73:VAL:HB	1.52	0.88
14:K:94:LYS:CG	14:K:96:LYS:HB3	2.03	0.88
49:S2:449:A:C6	49:S2:452:G:C6	2.60	0.88
48:4:539:GLU:O	48:4:540:GLU:C	1.95	0.88
48:4:585:GLU:CG	48:4:737:GLN:HE22	1.86	0.88
48:4:751:CYS:CB	48:4:755:VAL:CB	2.05	0.88
1:5:1049:C:N3	1:5:1050:C:C5	2.41	0.88
1:5:1269:G:C3'	1:5:2111:G:O6	2.20	0.88
1:5:2449:A:C8	1:5:2450:G:H1'	2.08	0.88
1:5:271:C:C2	1:5:272:U:C6	2.60	0.88
1:5:4934:A:C6	1:5:4935:C:C5	2.61	0.88
14:K:141:CYS:C	14:K:148:PRO:HD3	1.93	0.88
14:K:31:LYS:C	14:K:34:PRO:HD3	1.94	0.88
49:S2:1540:G:N3	49:S2:1541:G:C8	2.41	0.88
49:S2:341:C:N4	49:S2:342:C:C5	2.41	0.88
49:S2:43:U:O2	49:S2:484:A:C2	2.25	0.88
48:4:609:PHE:HZ	48:4:661:ILE:CD1	1.83	0.88
1:5:1175:A:C2	1:5:1176:C:C6	2.61	0.88
1:5:1213:G:C5	1:5:1215:C:C6	2.62	0.88
1:5:1950:U:C2	1:5:1951:G:C8	2.62	0.88
1:5:2017:A:C8	1:5:2018:C:C5	2.62	0.88
1:5:4548:A:C5'	1:5:4548:A:C8	2.55	0.88
1:5:4884:G:C2	1:5:4885:U:C6	2.61	0.88
49:S2:1562:C:O2	49:S2:1563:G:C8	2.26	0.88
49:S2:386:C:C2	49:S2:387:C:C6	2.61	0.88
1:5:1271:G:H3'	1:5:1272:C:H5'	1.54	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
1:5:3693:U:C4	1:5:3694:U:C5	2.61	0.88
1:5:4093:G:H2'	1:5:4094:G:H5''	1.55	0.88
1:5:751:G:C2	1:5:752:G:N7	2.42	0.88
48:4:691:ALA:CB	48:4:730:TYR:CB	1.75	0.88
48:4:762:VAL:CG1	48:4:766:LYS:NZ	2.37	0.88
48:4:771:PHE:HB3	48:4:785:LYS:HB2	0.89	0.88
1:5:1340:C:C2	1:5:1341:U:C5	2.61	0.88
1:5:2844:A:C6	1:5:3839:G:C8	2.61	0.88
1:5:689:U:N3	1:5:690:C:C5	2.42	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:142:ASN:ND2	14:K:151:ILE:HG13	1.88	0.88
14:K:77:ALA:CB	14:K:80:LEU:HD12	2.04	0.88
49:S2:1532:C:H5''	49:S2:1533:A:O4'	1.73	0.88
49:S2:553:U:C2	49:S2:554:A:C8	2.61	0.88
13:J:119:TYR:CE2	68:SS:108:ARG:NH2	1.98	0.88
1:5:189:G:C2	1:5:190:G:N7	2.42	0.88
1:5:2447:U:O2'	1:5:2448:G:O5'	1.89	0.88
48:4:191:THR:HB	48:4:192:TYR:CE1	2.07	0.88
48:4:228:PHE:CD1	48:4:232:TYR:CE2	2.61	0.88
1:5:1411:C:O2	1:5:1412:G:C8	2.27	0.88
1:5:1687:U:O2	1:5:1850:A:C6	2.26	0.88
1:5:197:A:H8	1:5:197:A:H5'	1.38	0.88
1:5:2078:C:O2	1:5:2079:G:H8	1.56	0.88
1:5:2294:G:C2	1:5:2295:C:C6	2.62	0.88
49:S2:1551:U:O4'	49:S2:1558:C:O2	1.90	0.88
49:S2:618:C:C4	49:S2:619:A:N7	2.42	0.88
48:4:741:MET:HG3	48:4:817:TRP:HZ3	1.09	0.88
1:5:1074:G:N2	1:5:1238:A:C2	2.41	0.88
1:5:1757:U:C2	1:5:1758:G:C8	2.62	0.88
1:5:1936:C:H5	2:7:84:U:C5	1.86	0.88
1:5:2327:G:C2	1:5:2328:G:N7	2.42	0.88
1:5:2468:U:H3	1:5:2473:A:N6	1.67	0.88
1:5:5062:G:N2	1:5:5063:G:C8	2.41	0.88
1:5:1563:A:H62	49:S2:1028:A:H61	1.14	0.88
49:S2:1149:A:C2	49:S2:1151:G:N7	2.41	0.88
48:4:420:LEU:CB	48:4:465:PRO:HA	2.03	0.88
48:4:628:LEU:HD21	48:4:631:ARG:HH22	1.36	0.88
48:4:585:GLU:CG	48:4:737:GLN:NE2	2.36	0.88
1:5:1478:C:O2	1:5:1479:G:C8	2.26	0.88
1:5:1958:A:N6	1:5:2026:A:H61	1.70	0.88
1:5:3721:U:O2	1:5:3722:G:H8	1.55	0.88
1:5:4269:G:H1	1:5:4277:G:H1	1.17	0.88
13:J:99:PHE:CE2	13:J:105:PHE:HB3	2.09	0.88
14:K:94:LYS:HB3	14:K:96:LYS:HE3	1.56	0.88
49:S2:1122:A:C6	49:S2:1123:C:C5	2.62	0.88
49:S2:1310:U:N3	49:S2:1311:C:H5	1.71	0.88
49:S2:1545:A:HO2'	49:S2:1546:G:H8	1.15	0.88
1:5:1188:C:O2	1:5:1189:G:C8	2.27	0.88
1:5:1324:A:C2	1:5:3876:A:H2'	2.09	0.88
1:5:3662:A:N6	1:5:3680:U:H3	1.71	0.88
7:D:22:ARG:HG3	7:D:22:ARG:HH11	1.38	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:340:C:N3	49:S2:341:C:C4	2.41	0.88
48:4:72:SER:CB	48:4:104:ASP:O	2.22	0.87
48:4:49:ALA:HA	48:4:55:ARG:NH2	1.88	0.87
48:4:693:CYS:C	48:4:839:ARG:HH21	1.77	0.87
1:5:1475:G:N2	1:5:1476:C:C4	2.41	0.87
1:5:1866:U:O2'	1:5:1867:A:O5'	1.92	0.87
1:5:2465:C:H2'	1:5:2466:G:C8	2.08	0.87
1:5:270:U:N3	1:5:271:C:C5	2.42	0.87
1:5:4123:C:C2	1:5:4124:G:C8	2.63	0.87
14:K:61:LYS:NZ	14:K:72:GLU:HB3	1.88	0.87
49:S2:1310:U:O2	49:S2:1311:C:H6	1.57	0.87
49:S2:475:C:N3	49:S2:476:A:C8	2.42	0.87
49:S2:751:G:C6	49:S2:791:C:N3	2.42	0.87
48:4:604:MET:HG2	48:4:728:CYS:SG	2.14	0.87
48:4:743:PRO:HB3	48:4:744:ILE:HB	1.55	0.87
1:5:2613:C:C2	1:5:2614:C:C6	2.62	0.87
1:5:4269:G:H22	1:5:4277:G:H22	1.18	0.87
1:5:662:C:H2'	1:5:663:G:H8	1.39	0.87
1:5:77:U:O4	1:5:335:A:N1	2.06	0.87
7:D:250:ASN:HD21	7:D:252:VAL:HG12	1.39	0.87
14:K:121:LEU:CD1	14:K:123:ARG:HD2	2.01	0.87
1:5:1994:C:HO2'	14:K:132:ILE:HG13	1.04	0.87
49:S2:1101:U:C2	49:S2:1102:G:N7	2.42	0.87
49:S2:452:G:N2	49:S2:453:C:C2	2.42	0.87
49:S2:649:U:O2	49:S2:650:A:H8	1.49	0.87
49:S2:71:G:H2'	49:S2:72:C:C6	2.09	0.87
22:S:29:ARG:CZ	22:S:29:ARG:HB3	2.03	0.87
48:4:671:TYR:C	48:4:675:ILE:HG12	1.86	0.87
48:4:738:PRO:C	48:4:824:PRO:HD2	1.95	0.87
48:4:829:SER:O	48:4:833:GLN:CG	2.22	0.87
48:4:693:CYS:CB	48:4:839:ARG:HE	1.88	0.87
1:5:1359:G:H2'	1:5:1360:G:C8	2.09	0.87
1:5:2018:C:C2	1:5:2019:C:C6	2.62	0.87
1:5:2021:G:H2'	1:5:2022:C:H6	1.39	0.87
1:5:4561:C:H2'	1:5:4561:C:O2	1.73	0.87
49:S2:384:U:H5	49:S2:386:C:C5	1.91	0.87
54:SE:191:ARG:HD2	54:SE:218:PHE:CE1	2.09	0.87
48:4:111:PHE:HB2	48:4:501:VAL:HG21	1.53	0.87
48:4:24:VAL:HG23	48:4:32:LYS:CE	2.03	0.87
48:4:731:ALA:HB2	48:4:854:PHE:HB3	1.56	0.87
1:5:1174:G:C2	1:5:1175:A:N7	2.42	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4563:U:C2	1:5:4564:A:C5	2.61	0.87
1:5:5047:C:C2	1:5:5048:A:C6	2.62	0.87
1:5:1699:A:O5'	9:F:179:ARG:NH2	2.07	0.87
14:K:92:ARG:O	14:K:93:LYS:HB2	1.72	0.87
49:S2:1017:U:O2	49:S2:1017:U:H2'	1.74	0.87
49:S2:1074:C:O2	49:S2:1075:C:C6	2.27	0.87
49:S2:1284:A:N6	62:SM:33:ARG:HD3	1.89	0.87
49:S2:309:G:C2	49:S2:310:C:C4	2.62	0.87
49:S2:634:A:C2	49:S2:635:G:C8	2.63	0.87
1:5:1991:A:H3'	1:5:1992:U:H5''	1.56	0.87
1:5:2110:C:OP1	1:5:2110:C:C6	2.28	0.87
1:5:425:U:N3	1:5:426:A:N7	2.22	0.87
1:5:4315:A:C2	1:5:4316:G:C8	2.62	0.87
1:5:4332:C:N3	1:5:4333:C:H5	1.73	0.87
1:5:4481:U:H2'	1:5:4482:U:H6	1.37	0.87
1:5:4885:U:C2	1:5:4886:C:C6	2.63	0.87
1:5:4096:C:O2'	10:G:112:GLN:NE2	81.96	0.87
49:S2:1592:C:N3	49:S2:1593:C:C6	2.42	0.87
49:S2:806:U:C2	49:S2:807:G:C8	2.62	0.87
48:4:72:SER:HA	48:4:104:ASP:CG	1.94	0.87
48:4:753:GLU:HB3	48:4:782:PHE:HZ	1.36	0.87
48:4:744:ILE:CD1	48:4:816:HIS:CG	2.58	0.87
48:4:6:VAL:O	48:4:9:ILE:N	2.07	0.87
1:5:126:C:N3	1:5:127:G:N7	2.22	0.87
1:5:2784:C:N3	1:5:2785:C:C5	2.42	0.87
1:5:2361:G:C6	19:P:25:HIS:HD2	1.93	0.87
48:4:143:LEU:HD21	48:4:189:ILE:HD11	1.56	0.87
1:5:2568:C:O2	1:5:2569:G:C8	2.26	0.87
1:5:964:A:H8	1:5:964:A:C5'	1.86	0.87
14:K:106:PHE:CZ	14:K:137:GLN:NE2	2.42	0.87
49:S2:1666:C:C2	49:S2:1667:U:C5	2.63	0.87
49:S2:600:G:C8	49:S2:631:U:C5	2.61	0.87
48:4:231:MET:SD	48:4:343:TRP:HH2	1.98	0.87
1:5:1279:A:H2'	1:5:1280:C:C4	2.09	0.87
1:5:4230:C:N3	1:5:4231:C:H5	1.71	0.87
1:5:4333:C:C2	1:5:4334:U:C5	2.63	0.87
1:5:723:A:C2	1:5:943:A:N1	2.43	0.87
14:K:121:LEU:HD13	14:K:129:ILE:CG1	2.04	0.87
49:S2:1073:U:N3	49:S2:1074:C:C5	2.42	0.87
48:4:112:SER:O	48:4:115:VAL:N	2.07	0.87
48:4:243:GLN:O	48:4:249:ARG:NE	2.07	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3907:G:C8	1:5:4449:A:H1'	2.09	0.87
48:4:13:MET:HE2	48:4:465:PRO:HD2	1.55	0.86
1:5:1598:C:C2	1:5:1599:A:H8	1.93	0.86
2:7:23:A:O2'	2:7:24:C:O5'	1.93	0.86
49:S2:459:C:C4	49:S2:460:A:N7	2.43	0.86
49:S2:499:G:N2	49:S2:504:G:C2	2.44	0.86
54:SE:100:ARG:NH1	54:SE:121:TYR:OH	2.08	0.86
48:4:503:PRO:O	48:4:548:GLY:O	1.93	0.86
48:4:685:TRP:HZ3	48:4:723:PRO:HD3	1.38	0.86
48:4:825:PHE:HZ	48:4:849:PRO:HD3	1.04	0.86
1:5:1477:C:N3	1:5:1478:C:C6	2.43	0.86
1:5:1485:C:O2	1:5:4349:C:C4	2.29	0.86
1:5:1958:A:C2	1:5:2026:A:C5	2.63	0.86
1:5:2279:A:C2	1:5:2280:G:N7	2.43	0.86
1:5:4215:C:N3	1:5:4216:G:N7	2.24	0.86
1:5:4314:C:N3	1:5:4315:A:C8	2.44	0.86
2:7:59:G:C6	2:7:60:G:C8	2.63	0.86
3:8:39:G:O2'	3:8:103:A:N6	2.08	0.86
14:K:125:LEU:O	14:K:127:GLY:N	2.08	0.86
14:K:102:GLY:O	14:K:140:GLY:O	1.93	0.86
14:K:57:ARG:NH2	14:K:89:PRO:HA	1.90	0.86
49:S2:339:A:N3	49:S2:340:C:C5	2.44	0.86
49:S2:823:U:C4	74:SY:64:PHE:CE2	2.63	0.86
48:4:144:ARG:NH1	48:4:781:MET:CE	2.39	0.86
1:5:1215:C:N3	1:5:1216:C:C6	2.43	0.86
1:5:488:G:C2	1:5:489:C:C6	2.63	0.86
1:5:4934:A:C2	1:5:4935:C:C6	2.63	0.86
3:8:81:C:O2	3:8:81:C:H2'	1.75	0.86
49:S2:1755:C:C2	49:S2:1756:C:C6	2.63	0.86
48:4:330:LYS:C	48:4:331:GLU:HG2	1.92	0.86
1:5:1214:C:O2'	1:5:2114:G:C2	2.25	0.86
1:5:1476:C:C2	1:5:1477:C:C6	2.63	0.86
1:5:1899:G:N3	1:5:1900:C:C5	2.40	0.86
1:5:1970:A:O2'	1:5:2017:A:N6	2.08	0.86
1:5:2011:C:H2'	1:5:2012:A:O4'	1.76	0.86
1:5:2689:C:N3	1:5:2690:C:H5	1.73	0.86
10:G:261:LEU:HD21	10:G:264:LYS:CE	1.91	0.86
14:K:61:LYS:HE2	14:K:72:GLU:HG3	1.57	0.86
49:S2:1828:C:H2'	49:S2:1829:G:O4'	1.75	0.86
49:S2:995:G:H22	49:S2:997:A:H3'	1.38	0.86
49:S2:1603:G:N7	68:SS:28:PHE:CE2	2.44	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:845:LYS:HZ3	48:4:846:GLU:HG2	1.04	0.86
1:5:1625:G:C5	1:5:1642:A:N1	2.42	0.86
1:5:1726:U:N3	1:5:1727:U:C5	2.43	0.86
1:5:1994:C:H2'	14:K:132:ILE:CD1	2.06	0.86
1:5:1447:C:N3	1:5:2097:U:O4	2.08	0.86
1:5:2509:C:O2'	1:5:2510:G:C5'	2.23	0.86
1:5:2568:C:N3	1:5:2569:G:N7	2.22	0.86
1:5:3912:U:O2'	1:5:3913:G:H5''	1.76	0.86
1:5:4481:U:H2'	1:5:4482:U:C6	2.10	0.86
1:5:4550:G:C6	1:5:4551:U:C5	2.62	0.86
1:5:738:C:N3	1:5:739:G:N7	2.24	0.86
49:S2:1224:G:N2	49:S2:1643:U:N3	2.23	0.86
49:S2:1434:C:H2'	49:S2:1435:C:C1'	2.06	0.86
48:4:113:SER:HB3	48:4:533:MET:HB2	1.55	0.86
48:4:27:HIS:HD2	48:4:28:VAL:CA	1.87	0.86
48:4:541:SER:O	48:4:543:GLU:HG2	1.73	0.86
1:5:1240:G:N7	1:5:1271:G:H4'	1.91	0.86
1:5:2843:U:N3	1:5:2844:A:N7	2.24	0.86
1:5:4174:U:C2	1:5:4175:G:C8	2.63	0.86
1:5:4233:A:H61	1:5:4290:U:H3	1.07	0.86
14:K:106:PHE:CD2	14:K:110:VAL:HG23	1.80	0.86
14:K:94:LYS:CG	14:K:96:LYS:CE	2.52	0.86
49:S2:1430:C:C4	49:S2:1431:G:N7	2.43	0.86
49:S2:1511:U:N3	49:S2:1512:C:C6	2.44	0.86
49:S2:314:U:OP1	56:SG:191:ARG:NH2	2.09	0.86
49:S2:381:C:H41	58:SI:49:ARG:HD3	1.40	0.86
49:S2:499:G:N2	49:S2:504:G:N1	2.23	0.86
49:S2:551:U:N3	49:S2:552:G:N7	2.23	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	1.92	0.86
13:J:99:PHE:CE2	13:J:105:PHE:CB	2.59	0.86
17:N:138:PHE:HB3	17:N:143:ARG:HH22	1.39	0.86
49:S2:1860:A:C2	49:S2:1862:G:C8	2.63	0.86
49:S2:536:A:C6	49:S2:537:C:C6	2.63	0.86
48:4:13:MET:CE	48:4:465:PRO:CD	2.54	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
1:5:3717:A:C6	1:5:3736:A:C6	2.63	0.86
1:5:4510:A:N6	1:5:4592:C:H4'	1.90	0.86
1:5:470:A:N6	1:5:471:A:C5	2.44	0.86
4:A:89:TYR:HB2	4:A:100:ASN:HD21	1.41	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1724:G:H21	9:F:105:PRO:HB3	1.39	0.86
49:S2:1398:G:N2	49:S2:1399:C:C6	2.43	0.86
49:S2:1528:G:C2	49:S2:1529:C:C4	2.64	0.86
1:5:1983:A:C2	1:5:2010:A:H5''	2.10	0.86
1:5:1583:A:H1'	1:5:2396:A:N6	1.91	0.86
1:5:2576:G:C6	1:5:2577:C:C5	2.63	0.86
1:5:3718:A:H2'	1:5:3719:A:O4'	1.76	0.86
1:5:4983:C:O2	1:5:4984:C:C5	2.28	0.86
3:8:65:A:N3	3:8:66:A:C8	2.43	0.86
1:5:4339:A:O2'	20:Q:178:ARG:NH1	2.09	0.86
49:S2:1402:A:C2	49:S2:1405:A:C6	2.63	0.86
48:4:579:TYR:OH	48:4:791:ASN:HB3	1.76	0.86
1:5:1538:U:O2'	1:5:1629:G:OP1	1.94	0.86
11:H:61:TRP:HZ2	22:S:152:PHE:HE2	1.22	0.86
49:S2:1402:A:N6	49:S2:1441:U:C4	2.44	0.86
49:S2:459:C:N3	49:S2:460:A:C8	2.44	0.86
49:S2:880:G:N7	49:S2:881:G:N7	2.24	0.86
29:Z:28:ASN:O	29:Z:28:ASN:ND2	2.07	0.86
48:4:72:SER:CB	48:4:104:ASP:C	2.44	0.85
48:4:689:GLU:CB	48:4:730:TYR:OH	2.24	0.85
48:4:691:ALA:CB	48:4:854:PHE:HZ	1.78	0.85
1:5:1249:C:N3	1:5:1250:C:C5	2.44	0.85
1:5:3622:C:O2	1:5:3623:C:C2	2.29	0.85
1:5:4165:C:C4	1:5:4166:G:N7	2.44	0.85
1:5:4276:G:N1	1:5:4277:G:C8	2.44	0.85
1:5:4414:A:C6	1:5:4427:G:N1	2.44	0.85
49:S2:1310:U:O2	49:S2:1311:C:C6	2.29	0.85
48:4:110:ASP:OD2	48:4:112:SER:HB3	1.76	0.85
48:4:165:LEU:CD1	48:4:305:MET:HE1	1.98	0.85
48:4:58:ASP:CA	48:4:63:GLU:CD	2.45	0.85
48:4:590:LEU:CD2	48:4:605:LYS:HE3	2.06	0.85
1:5:1213:G:C4	1:5:1215:C:C1'	2.58	0.85
1:5:1552:G:O2'	1:5:1575:A:N6	2.09	0.85
1:5:237:G:O2'	1:5:238:C:OP2	1.94	0.85
1:5:3675:G:N2	1:5:3676:G:C5	2.44	0.85
1:5:4092:G:C6	1:5:4093:G:C2	2.63	0.85
1:5:4240:G:C6	1:5:4241:C:C5	2.63	0.85
14:K:106:PHE:HB2	14:K:110:VAL:CG2	2.03	0.85
14:K:142:ASN:HB2	14:K:148:PRO:CA	2.05	0.85
14:K:33:GLY:O	14:K:38:SER:OG	1.93	0.85
49:S2:1402:A:N6	49:S2:1441:U:C2	2.43	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1642:U:O2	49:S2:1643:U:C5	2.29	0.85
49:S2:447:A:C6	49:S2:449:A:C4	2.64	0.85
49:S2:841:G:C2	49:S2:842:C:C4	2.65	0.85
48:4:160:MET:CE	48:4:178:PHE:HE2	1.84	0.85
48:4:150:ARG:NH2	48:4:194:GLU:OE1	2.08	0.85
1:5:2495:U:N3	1:5:2496:G:N7	2.24	0.85
1:5:2529:A:C6	1:5:2532:C:C6	2.63	0.85
1:5:2736:G:N2	1:5:2737:C:C2	2.44	0.85
1:5:291:U:H2'	1:5:292:G:C2'	2.05	0.85
1:5:4100:C:C2	1:5:4101:C:C6	2.65	0.85
1:5:86:U:O2	1:5:86:U:H2'	1.76	0.85
49:S2:26:U:C2	49:S2:27:A:C8	2.63	0.85
1:5:5005:G:N7	26:W:51:TRP:HD1	1.71	0.85
48:4:634:TYR:CE1	48:4:638:LYS:HG2	2.12	0.85
1:5:244:G:C6	1:5:246:G:N7	2.45	0.85
1:5:2452:G:N1	1:5:2467:U:C4	2.44	0.85
1:5:2726:G:C6	1:5:2727:C:N4	2.45	0.85
3:8:125:C:H4'	3:8:126:C:H3'	1.58	0.85
1:5:1439:C:C5'	9:F:36:ARG:HH12	1.88	0.85
12:I:80:CYS:SG	12:I:144:ASN:ND2	2.50	0.85
14:K:57:ARG:HH22	14:K:89:PRO:HA	1.41	0.85
49:S2:1316:C:N3	49:S2:1317:C:H5	1.69	0.85
48:4:526:ARG:HG2	48:4:526:ARG:HH11	1.41	0.85
48:4:691:ALA:CA	48:4:730:TYR:CD1	2.58	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
1:5:2021:G:H2'	1:5:2022:C:C6	2.10	0.85
1:5:2639:U:H2'	1:5:2694:G:H1	1.40	0.85
1:5:4335:C:H2'	1:5:4336:A:O4'	1.77	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
1:5:703:G:O6	1:5:706:C:N4	2.09	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
49:S2:1611:G:O2'	68:SS:86:ARG:NH1	2.09	0.85
49:S2:841:G:N3	49:S2:842:C:C5	2.43	0.85
49:S2:925:G:N1	49:S2:926:A:N7	2.23	0.85
48:4:208:VAL:HA	48:4:225:LEU:HD22	1.58	0.85
48:4:541:SER:HB3	48:4:576:VAL:HG11	0.87	0.85
48:4:571:LYS:C	48:4:571:LYS:HE2	1.95	0.85
1:5:1650:A:C2	6:C:100:ARG:NH2	2.44	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1886:G:N2	1:5:1894:C:C2	2.45	0.85
1:5:1967:A:C2	1:5:1968:G:C8	2.63	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
1:5:4548:A:H5'	1:5:4548:A:C8	2.12	0.85
3:8:12:G:H21	3:8:13:G:H1'	1.37	0.85
49:S2:999:G:C2	49:S2:1000:C:C6	2.63	0.85
48:4:331:GLU:CD	48:4:335:LEU:HD22	1.97	0.85
48:4:432:PRO:O	48:4:433:ASN:OD1	1.94	0.85
48:4:578:SER:C	48:4:579:TYR:CD1	2.50	0.85
1:5:2568:C:C2	1:5:2569:G:N7	2.44	0.85
1:5:3726:A:O2'	1:5:3727:A:N7	2.09	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
3:8:134:G:C2	3:8:135:C:C6	2.64	0.85
9:F:161:TYR:CD2	9:F:168:ARG:NH2	2.44	0.85
14:K:121:LEU:HD13	14:K:129:ILE:CB	2.06	0.85
14:K:62:LEU:CG	14:K:73:VAL:HB	2.06	0.85
1:5:4757:C:O2	18:O:114:LYS:CA	2.25	0.85
49:S2:1591:C:N4	49:S2:1592:C:C4	2.45	0.85
48:4:420:LEU:HD23	48:4:420:LEU:C	1.91	0.85
48:4:610:PRO:CB	48:4:613:LEU:HG	2.05	0.85
48:4:647:ARG:HG2	48:4:647:ARG:HH21	1.39	0.85
1:5:1266:G:H5''	1:5:2112:G:C2	2.11	0.85
1:5:1598:C:N3	1:5:1599:A:C8	2.45	0.85
1:5:1634:A:C2	1:5:1635:C:C6	2.65	0.85
1:5:1764:G:C6	1:5:1766:A:OP2	2.29	0.85
1:5:3653:A:N1	1:5:3692:A:H4'	1.92	0.85
1:5:4239:A:N6	1:5:4240:G:C5	2.43	0.85
14:K:56:LEU:CD1	14:K:91:ASP:CG	2.40	0.85
49:S2:1303:C:C4	49:S2:1304:U:C5	2.65	0.85
49:S2:1303:C:C5	49:S2:1304:U:C6	2.63	0.85
49:S2:499:G:C2	49:S2:504:G:N1	2.44	0.85
53:SD:106:ARG:HG3	53:SD:174:HIS:O	1.77	0.85
1:5:106:A:C1'	1:5:336:A:C8	2.57	0.85
1:5:1188:C:C2	1:5:1189:G:C8	2.64	0.85
1:5:2027:U:O2'	1:5:2028:C:C5'	2.24	0.85
1:5:2370:A:HO2'	1:5:2826:U:H3	1.22	0.85
1:5:27:C:N3	1:5:28:C:H5	1.75	0.85
1:5:4230:C:O2	1:5:4231:C:C6	2.30	0.85
1:5:4601:U:O4	1:5:4609:G:N2	2.10	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:7:22:A:C2	2:7:23:A:C5	2.65	0.85
14:K:62:LEU:HD11	14:K:73:VAL:HG21	1.56	0.85
49:S2:1316:C:C2	49:S2:1317:C:C6	2.64	0.85
49:S2:164:A:H2'	49:S2:165:G:H21	1.41	0.85
49:S2:341:C:C4	49:S2:342:C:C6	2.65	0.85
72:SW:77:PRO:HD2	72:SW:79:PHE:CZ	2.12	0.85
1:5:1177:U:C2	1:5:1178:G:C8	2.64	0.85
1:5:1916:G:N2	1:5:2067:C:O2	2.10	0.85
1:5:4982:A:C6	1:5:4983:C:C6	2.64	0.85
1:5:4983:C:C2	1:5:4984:C:H5	1.92	0.85
1:5:94:A:H2'	1:5:95:G:O4'	1.77	0.85
2:7:114:U:H2'	2:7:115:A:H5''	1.59	0.85
1:5:1847:C:H4'	20:Q:152:PHE:CE2	2.12	0.85
49:S2:1123:C:C4	49:S2:1124:C:C5	2.64	0.85
49:S2:1592:C:C2	49:S2:1593:C:C6	2.65	0.85
49:S2:1666:C:C2	49:S2:1667:U:C6	2.65	0.85
49:S2:387:C:O2	49:S2:388:U:C6	2.29	0.85
49:S2:42:A:C2	49:S2:426:A:N7	2.44	0.85
49:S2:25:A:H61	49:S2:648:A:H61	1.22	0.85
49:S2:933:G:N2	49:S2:1000:C:C4	2.45	0.85
48:4:189:ILE:HG22	48:4:203:ILE:HG13	1.59	0.84
48:4:420:LEU:O	48:4:420:LEU:HD23	1.75	0.84
48:4:690:GLY:C	48:4:730:TYR:CD1	2.32	0.84
48:4:759:ILE:HD11	48:4:784:VAL:CB	1.91	0.84
1:5:2080:U:O2	1:5:2081:C:C5	2.28	0.84
1:5:2294:G:N2	1:5:2295:C:C2	2.44	0.84
1:5:3717:A:O2'	1:5:3718:A:C5'	2.25	0.84
14:K:117:ARG:NE	14:K:117:ARG:CA	2.33	0.84
49:S2:1540:G:C4	49:S2:1541:G:C8	2.64	0.84
48:4:479:LEU:HD21	48:4:483:GLY:CA	2.03	0.84
48:4:813:VAL:HG13	48:4:814:PHE:N	1.92	0.84
1:5:1218:G:N1	1:5:1219:G:H1'	1.92	0.84
1:5:4241:C:O2	1:5:4241:C:H2'	1.77	0.84
49:S2:1049:A:C4	49:S2:1070:A:C2	2.66	0.84
49:S2:1508:A:C5	49:S2:1510:G:C8	2.64	0.84
49:S2:575:A:H2'	49:S2:576:A:O4'	1.75	0.84
48:4:59:THR:N	48:4:63:GLU:OE1	2.10	0.84
48:4:672:LEU:HB2	48:4:675:ILE:HD11	1.59	0.84
1:5:1427:A:H3'	1:5:1428:U:C6	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1625:G:C4	1:5:1642:A:N1	2.45	0.84
1:5:172:C:P	1:5:172:C:O4'	2.35	0.84
1:5:1753:G:O6	1:5:1776:A:N6	2.09	0.84
1:5:1887:G:O6	1:5:1890:G:N7	2.09	0.84
49:S2:794:A:C2	49:S2:795:A:C4	2.65	0.84
49:S2:1857:G:C8	64:SO:146:ARG:NH2	2.46	0.84
48:4:343:TRP:O	48:4:343:TRP:CE3	2.30	0.84
1:5:1388:A:C5	1:5:1396:G:N2	2.33	0.84
1:5:153:G:C2	1:5:154:G:C8	2.65	0.84
1:5:2532:C:N3	1:5:2533:C:C5	2.46	0.84
1:5:4498:U:O2	1:5:4498:U:H2'	1.76	0.84
1:5:753:C:C2	1:5:754:U:C6	2.65	0.84
1:5:970:G:H2'	1:5:971:U:O4'	1.77	0.84
49:S2:1416:C:H2'	49:S2:1417:C:C5	2.11	0.84
49:S2:992:A:C6	49:S2:993:G:C8	2.65	0.84
48:4:275:LYS:CE	48:4:275:LYS:C	2.45	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
1:5:2495:U:O2	1:5:2496:G:C8	2.31	0.84
1:5:3662:A:H61	1:5:3680:U:H3	1.23	0.84
1:5:457:G:C2	1:5:458:C:C6	2.66	0.84
1:5:4653:C:O2	1:5:4654:C:C5	2.30	0.84
14:K:20:GLY:HA3	14:K:92:ARG:NH2	1.91	0.84
49:S2:1018:U:C2	49:S2:1019:C:C5	2.64	0.84
49:S2:105:U:C4	49:S2:106:C:C5	2.65	0.84
49:S2:1133:A:C6	49:S2:1134:G:N7	2.45	0.84
49:S2:1545:A:O2'	49:S2:1546:G:C8	2.30	0.84
49:S2:1839:U:C2	49:S2:1840:U:C6	2.66	0.84
49:S2:28:U:O2	49:S2:29:G:C8	2.30	0.84
49:S2:474:G:C2	49:S2:475:C:C6	2.64	0.84
49:S2:618:C:N4	49:S2:619:A:C5	2.45	0.84
22:S:83:ARG:NH2	23:T:156:TYR:HB2	1.93	0.84
48:4:10:ARG:HD2	48:4:13:MET:SD	2.18	0.84
48:4:75:ILE:CG2	48:4:77:LEU:HD11	1.96	0.84
1:5:1214:C:HO2'	1:5:2114:G:H1	1.21	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
1:5:1683:U:N3	1:5:1684:A:N7	2.25	0.84
1:5:2055:G:O6	22:S:158:VAL:CB	2.25	0.84
1:5:2107:C:C5	1:5:2126:G:C2	2.64	0.84
1:5:2586:G:N7	1:5:2587:A:C2	2.46	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:94:LYS:CB	14:K:96:LYS:HE3	2.07	0.84
49:S2:1431:G:C6	49:S2:1432:U:C5	2.66	0.84
49:S2:1455:A:C6	49:S2:1456:G:N7	2.46	0.84
48:4:27:HIS:HD2	48:4:28:VAL:H	0.89	0.84
1:5:100:C:C5	1:5:101:A:H8	1.96	0.84
1:5:3944:G:C2	1:5:3945:A:C8	2.66	0.84
1:5:4230:C:O2	1:5:4231:C:H6	1.60	0.84
1:5:4413:C:C5'	12:I:157:PHE:CE2	2.49	0.84
2:7:54:A:C2	2:7:55:A:C5	2.64	0.84
49:S2:1100:A:C6	49:S2:1101:U:C5	2.66	0.84
48:4:73:THR:N	48:4:104:ASP:OD2	2.11	0.84
48:4:284:LYS:CD	48:4:284:LYS:H	1.87	0.84
48:4:42:LYS:HG3	48:4:79:TYR:HH	0.99	0.84
48:4:120:ARG:NH1	48:4:495:ARG:HB3	1.93	0.84
48:4:845:LYS:HZ1	48:4:846:GLU:HG2	1.38	0.84
1:5:2078:C:C2	1:5:2079:G:H8	1.94	0.84
1:5:2294:G:N1	1:5:2295:C:C4	2.46	0.84
1:5:2329:U:O2'	1:5:2330:G:C5'	2.25	0.84
1:5:3692:A:C5	1:5:3693:U:C6	2.66	0.84
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
49:S2:1205:C:O2	49:S2:1206:G:C8	2.31	0.84
49:S2:1317:C:N3	49:S2:1318:G:N7	2.25	0.84
49:S2:1667:U:C2	49:S2:1668:U:C5	2.64	0.84
7:D:17:GLN:HG3	23:T:20:ARG:HA	1.59	0.84
48:4:284:LYS:CD	48:4:284:LYS:N	2.34	0.84
1:5:1994:C:C2	1:5:1995:G:C8	2.65	0.84
1:5:2282:A:H2'	1:5:2283:G:O5'	1.76	0.84
1:5:736:C:H2'	1:5:737:C:O4'	1.77	0.84
2:7:43:U:C2	2:7:44:C:C5	2.65	0.84
2:7:43:U:C2	2:7:44:C:C6	2.65	0.84
1:5:4117:U:C6	10:G:41:ILE:O	2.31	0.84
48:4:157:MET:CE	48:4:214:PHE:HE2	1.91	0.84
48:4:61:LYS:O	48:4:62:ASP:HB2	1.76	0.84
1:5:1268:G:N2	1:5:1270:A:C8	2.46	0.84
1:5:2108:G:N1	1:5:2125:C:N4	2.25	0.84
1:5:278:G:C2	1:5:330:G:C8	2.66	0.84
1:5:4095:G:N3	1:5:4096:C:C5	2.44	0.84
1:5:514:U:C5	1:5:515:C:O4'	2.30	0.84
49:S2:1552:G:N7	49:S2:1578:U:C4	2.46	0.84
1:5:2113:G:C8	1:5:2115:G:H1'	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4145:C:C2	1:5:4146:G:C8	2.66	0.83
1:5:747:A:O2'	1:5:748:G:H5'	1.78	0.83
1:5:1909:G:OP1	2:7:84:U:O2	1.95	0.83
14:K:94:LYS:CG	14:K:96:LYS:CG	2.50	0.83
17:N:138:PHE:N	17:N:138:PHE:CD1	2.42	0.83
49:S2:1564:C:N3	49:S2:1565:C:C5	2.46	0.83
49:S2:1226:G:O6	49:S2:1638:G:H8	1.61	0.83
1:5:3709:U:H1'	49:S2:970:G:H1	1.33	0.83
48:4:297:ILE:O	48:4:300:VAL:CG2	2.27	0.83
48:4:741:MET:HA	48:4:820:LEU:H	1.43	0.83
1:5:1995:G:O6	1:5:2000:G:N2	2.11	0.83
1:5:216:C:P	1:5:216:C:O4'	2.35	0.83
1:5:246:G:C2	1:5:247:G:N7	2.47	0.83
1:5:244:G:C6	1:5:246:G:C8	2.66	0.83
1:5:4275:G:C6	1:5:4276:G:C5	2.65	0.83
1:5:4879:C:C2	1:5:4880:C:C5	2.66	0.83
1:5:89:C:O2'	1:5:90:G:H5'	1.78	0.83
1:5:1439:C:H5'	9:F:36:ARG:HH12	1.40	0.83
14:K:47:ALA:HB1	14:K:72:GLU:CG	1.96	0.83
49:S2:1114:U:C4	49:S2:1119:A:N1	2.46	0.83
49:S2:158:A:N6	49:S2:466:G:O6	2.11	0.83
49:S2:1840:U:C2	49:S2:1841:C:C5	2.66	0.83
49:S2:70:G:C2	49:S2:80:G:C2	2.65	0.83
49:S2:994:C:O2	49:S2:994:C:H2'	1.78	0.83
69:ST:56:ARG:HD3	69:ST:79:TYR:CE2	2.12	0.83
48:4:296:PRO:HA	48:4:299:LYS:CE	2.08	0.83
48:4:4:PHE:O	48:4:46:ILE:CG1	2.25	0.83
1:5:1280:C:N3	1:5:1282:G:C6	2.45	0.83
1:5:2301:G:C2	1:5:2302:C:C6	2.66	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
1:5:300:A:C2	1:5:301:G:N7	2.45	0.83
49:S2:1410:C:C2	49:S2:1411:G:C8	2.65	0.83
55:SF:51:HIS:ND1	66:SQ:82:TYR:OH	2.11	0.83
48:4:448:GLN:NE2	48:4:448:GLN:CA	2.29	0.83
48:4:813:VAL:HG22	48:4:814:PHE:H	1.43	0.83
1:5:2089:G:O6	1:5:2263:A:H5''	1.75	0.83
1:5:2099:G:N2	1:5:2100:A:C8	2.46	0.83
1:5:2468:U:H2'	1:5:2506:G:C6	2.13	0.83
1:5:2736:G:N1	1:5:2737:C:C4	2.46	0.83
1:5:3693:U:N3	1:5:3694:U:C5	2.47	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3847:C:N3	1:5:3848:U:C5	2.47	0.83
1:5:1676:C:O2'	1:5:3914:U:N3	2.02	0.83
1:5:4549:G:C2	1:5:4550:G:C8	2.66	0.83
1:5:5062:G:C2	1:5:5063:G:C8	2.65	0.83
14:K:22:VAL:HG23	14:K:48:LYS:CE	2.09	0.83
14:K:21:GLU:OE1	14:K:48:LYS:HD3	1.78	0.83
49:S2:53:C:N3	49:S2:54:A:N7	2.25	0.83
60:SK:8:ARG:HD3	60:SK:12:TYR:HE1	1.39	0.83
69:ST:23:LYS:HE2	69:ST:51:ASN:HD22	1.42	0.83
48:4:829:SER:HB2	48:4:832:SER:N	1.93	0.83
1:5:1213:G:C6	1:5:1215:C:C2	2.65	0.83
1:5:1673:U:N3	1:5:1674:C:C5	2.47	0.83
1:5:2451:A:C5	1:5:2452:G:C8	2.67	0.83
1:5:2743:A:N1	1:5:2744:A:C6	2.47	0.83
1:5:348:G:C2	1:5:350:C:C4	2.67	0.83
3:8:102:G:P	3:8:104:A:O2'	2.35	0.83
10:G:53:ARG:HB3	10:G:54:PHE:CZ	2.14	0.83
14:K:62:LEU:CD1	14:K:73:VAL:CB	2.56	0.83
49:S2:305:U:O3'	49:S2:306:C:O4'	1.96	0.83
49:S2:426:A:C2	49:S2:427:U:C4	2.66	0.83
48:4:531:ASP:HB3	48:4:534:VAL:HG12	1.59	0.83
1:5:1215:C:N3	1:5:1216:C:C5	2.46	0.83
1:5:1983:A:C2	1:5:2010:A:C5'	2.62	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
19:P:41:ILE:HD11	19:P:150:LEU:HD13	1.59	0.83
49:S2:1402:A:C5	49:S2:1441:U:C4	2.66	0.83
49:S2:994:C:C4	49:S2:995:G:N7	2.47	0.83
48:4:623:SER:HB3	48:4:626:GLN:HG2	1.60	0.83
48:4:770:VAL:HG13	48:4:784:VAL:CG1	2.06	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
1:5:1979:A:H3'	1:5:1980:U:H5'	1.61	0.83
1:5:2268:A:H4'	1:5:2269:C:C5'	2.09	0.83
1:5:383:A:O2'	1:5:384:A:C8	2.31	0.83
1:5:497:G:N2	1:5:657:C:C2	2.47	0.83
49:S2:1123:C:N3	49:S2:1124:C:C6	2.46	0.83
49:S2:858:A:C2	49:S2:859:G:C8	2.66	0.83
48:4:829:SER:CB	48:4:832:SER:H	1.91	0.83
1:5:2397:G:C8	1:5:2399:G:C8	2.67	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2743:A:N1	1:5:2744:A:N6	2.26	0.83
1:5:4325:A:H2'	1:5:4326:G:O4'	1.79	0.83
1:5:755:C:C2	1:5:756:G:C8	2.67	0.83
1:5:4280:A:H61	7:D:29:ASP:N	1.75	0.83
11:H:156:ASN:OD1	11:H:157:SER:HA	1.77	0.83
49:S2:623:G:N1	49:S2:624:C:C5	2.46	0.83
49:S2:805:U:N3	49:S2:806:U:C5	2.45	0.83
49:S2:1286:G:N2	62:SM:33:ARG:HG3	1.92	0.83
48:4:160:MET:HE1	48:4:178:PHE:HE2	1.39	0.83
1:5:1379:C:C4'	1:5:1380:G:C8	2.62	0.83
1:5:1598:C:N3	1:5:1599:A:N7	2.27	0.83
1:5:1683:U:C2	1:5:1684:A:C8	2.66	0.83
1:5:2107:C:C4	1:5:2126:G:C2	2.66	0.83
1:5:42:A:C6	1:5:4379:A:C2	2.67	0.83
1:5:43:U:C4	1:5:44:A:C8	2.66	0.83
1:5:4601:U:O4	1:5:4609:G:C2	2.31	0.83
1:5:83:C:OP2	1:5:84:A:O2'	1.96	0.83
3:8:83:C:H4'	3:8:85:U:C2	2.13	0.83
49:S2:1018:U:N3	49:S2:1019:C:C5	2.47	0.83
49:S2:1095:U:H3	49:S2:1149:A:N6	1.75	0.83
49:S2:1249:C:N4	49:S2:1250:A:C6	2.47	0.83
49:S2:42:A:C5	49:S2:43:U:H5	1.96	0.83
49:S2:851:C:O2'	49:S2:852:G:N2	2.11	0.83
48:4:27:HIS:CD2	48:4:28:VAL:O	2.31	0.83
48:4:762:VAL:HG11	48:4:800:LEU:HD13	1.59	0.83
1:5:1387:A:C4	1:5:1397:A:N6	2.45	0.83
1:5:4416:G:N2	1:5:4417:C:C2	2.46	0.83
9:F:149:LEU:CB	9:F:197:TYR:OH	2.26	0.83
49:S2:1850:A:O2'	49:S2:1851:A:O4'	1.96	0.83
49:S2:449:A:C2	49:S2:452:G:N7	2.46	0.83
48:4:225:LEU:CD2	48:4:257:MET:O	2.26	0.82
48:4:628:LEU:HD22	48:4:631:ARG:HH21	1.40	0.82
1:5:3591:C:C4	1:5:3592:G:C8	2.66	0.82
1:5:3732:A:C2	1:5:3733:A:C8	2.66	0.82
1:5:3910:C:O2	1:5:3911:C:C6	2.32	0.82
1:5:4413:C:C1'	12:I:157:PHE:HD2	1.91	0.82
1:5:504:G:N2	1:5:654:C:H1'	1.94	0.82
49:S2:1537:A:H4'	49:S2:1604:G:H4'	1.61	0.82
49:S2:494:C:O2	49:S2:495:U:C6	2.32	0.82
49:S2:600:G:C5	49:S2:631:U:C4	2.66	0.82
49:S2:669:A:H2'	49:S2:670:A:C8	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:518:PRO:CA	73:5X:50:ILE:CD1	2.57	0.82
48:4:692:LEU:HD22	48:4:734:LEU:CD2	2.08	0.82
48:4:776:VAL:CG2	48:4:777:ALA:N	2.32	0.82
1:5:1273:G:N7	8:E:69:TYR:N	2.25	0.82
1:5:1280:C:C2	1:5:1282:G:C5	2.67	0.82
1:5:1442:C:C2	1:5:1443:A:C8	2.67	0.82
1:5:1994:C:H1'	14:K:132:ILE:HG12	1.59	0.82
1:5:4884:G:C2	1:5:4885:U:C5	2.67	0.82
14:K:142:ASN:ND2	14:K:151:ILE:CG1	2.41	0.82
1:5:1572:U:H4'	21:R:95:TRP:HE1	1.43	0.82
49:S2:1407:U:H2'	49:S2:1408:U:C5	2.13	0.82
49:S2:1575:G:C2	49:S2:1576:G:N7	2.47	0.82
48:4:420:LEU:N	48:4:420:LEU:HD23	1.94	0.82
48:4:751:CYS:HB3	48:4:755:VAL:HG11	1.62	0.82
1:5:1671:U:H2'	1:5:1671:U:O2	1.79	0.82
1:5:1671:U:N3	1:5:1672:U:C5	2.44	0.82
1:5:4772:C:N3	1:5:4773:C: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
49:S2:1051:G:N1	49:S2:1052:A:N7	2.27	0.82
49:S2:1254:C:O2	49:S2:1255:G:C8	2.32	0.82
48:4:101:ASN:CG	48:4:469:ILE:HD13	1.99	0.82
48:4:3:ASN:O	48:4:46:ILE:HA	1.78	0.82
1:5:1265:G:H5''	1:5:2115:G:N2	1.94	0.82
1:5:957:G:P	1:5:1284:G:H21	2.02	0.82
1:5:1632:A:N1	1:5:1634:A:C8	2.47	0.82
1:5:2327:G:N1	1:5:2328:G:C5	2.47	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
3:8:10:G:C5	3:8:11:C:C6	2.67	0.82
5:B:321:VAL:HG12	5:B:322:HIS:HB2	1.62	0.82
49:S2:1018:U:O2	49:S2:1019:C:C6	2.32	0.82
49:S2:1249:C:N4	49:S2:1250:A:C5	2.46	0.82
49:S2:1434:C:C3'	49:S2:1435:C:O4'	2.27	0.82
49:S2:1601:A:H1'	49:S2:1604:G:O6	1.80	0.82
49:S2:452:G:N3	49:S2:453:C:C6	2.48	0.82
49:S2:996:A:N6	63:SN:113:PHE:CZ	2.47	0.82
48:4:740:LEU:HD12	48:4:820:LEU:HD12	1.59	0.82
48:4:829:SER:OG	48:4:832:SER:C	2.17	0.82
1:5:2034:G:C6	1:5:2035:C:C4	2.68	0.82
1:5:2107:C:C4	1:5:2126:G:N2	2.48	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2293:U:N3	1:5:2294:G:N7	2.26	0.82
1:5:4623:G:H4'	5:B:16:PHE:HE2	1.43	0.82
3:8:10:G:C2	3:8:11:C:H1'	2.15	0.82
5:B:119:TYR:N	5:B:119:TYR:CD1	2.46	0.82
14:K:116:MET:HB2	14:K:117:ARG:NH2	1.95	0.82
14:K:121:LEU:HD13	14:K:129:ILE:HD13	1.52	0.82
49:S2:1315:U:N3	49:S2:1316:C:C6	2.47	0.82
49:S2:1414:A:C2	49:S2:1415:C:C6	2.67	0.82
49:S2:1781:A:C2	49:S2:1782:G:C5	2.67	0.82
49:S2:476:A:C2	49:S2:488:U:O2	2.33	0.82
1:5:1478:C:C2	1:5:1479:G:N7	2.47	0.82
1:5:2026:A:H2'	1:5:2027:U:H5'	1.62	0.82
1:5:2251:G:C1'	1:5:2252:G:N2	2.43	0.82
1:5:2632:U:C2	1:5:2633:U:C5	2.68	0.82
1:5:2744:A:C2	1:5:2745:A:C6	2.67	0.82
1:5:2366:A:C2	1:5:3851:U:H1'	2.14	0.82
49:S2:339:A:C2'	49:S2:340:C:C6	2.61	0.82
48:4:638:LYS:N	48:4:638:LYS:HD2	1.95	0.82
1:5:166:C:N3	1:5:167:C:H5	1.78	0.82
1:5:2566:G:C2	1:5:2567:G:C8	2.67	0.82
1:5:2395:A:O2'	1:5:2806:A:N3	2.11	0.82
1:5:3911:C:C2	1:5:3912:U:C5	2.68	0.82
1:5:4581:G:C2	1:5:4582:C:C5	2.67	0.82
1:5:723:A:H2	1:5:943:A:N1	1.78	0.82
3:8:12:G:N1	3:8:13:G:C8	2.48	0.82
1:5:4076:G:H21	10:G:74:LEU:HG	1.43	0.82
48:4:331:GLU:OE2	48:4:335:LEU:HD23	1.80	0.82
1:5:1465:G:C2	1:5:1466:G:H1'	2.14	0.82
1:5:2507:A:C5	1:5:2508:U:C6	2.67	0.82
1:5:3873:G:H2'	1:5:3874:G:O4'	1.79	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
3:8:95:A:C2	3:8:96:C:C6	2.68	0.82
49:S2:452:G:C2	49:S2:453:C:C5	2.68	0.82
49:S2:862:A:C6	49:S2:863:U:C5	2.66	0.82
48:4:592:LEU:HD12	48:4:592:LEU:O	1.80	0.82
48:4:730:TYR:HB3	48:4:854:PHE:CZ	2.15	0.82
3:8:119:C:O2	3:8:120:G:H8	1.58	0.82
14:K:125:LEU:CD1	14:K:163:PRO:CA	2.51	0.82
49:S2:439:A:C2	49:S2:455:A:C2	2.67	0.82
48:4:155:LEU:HD23	48:4:156:MET:N	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:205:ILE:HG13	48:4:211:THR:HB	1.60	0.82
48:4:240:GLY:CA	48:4:241:GLU:CB	2.55	0.82
48:4:275:LYS:HE2	48:4:276:SER:CA	2.09	0.82
48:4:27:HIS:CD2	48:4:28:VAL:CG2	2.63	0.82
48:4:58:ASP:HA	48:4:63:GLU:CD	2.00	0.82
48:4:611:ASP:OD1	48:4:612:GLY:N	2.13	0.82
1:5:2272:C:O2'	1:5:2273:G:H5'	1.80	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
1:5:484:U:N3	1:5:486:C:C5	2.47	0.82
1:5:961:G:N3	1:5:961:G:H2'	1.94	0.82
11:H:61:TRP:CZ2	22:S:152:PHE:HE2	1.98	0.82
49:S2:1114:U:O4	49:S2:1119:A:C2	2.32	0.82
49:S2:1453:C:N4	49:S2:1455:A:H1'	1.94	0.82
49:S2:1528:G:N2	49:S2:1529:C:C2	2.48	0.82
49:S2:1595:U:N3	49:S2:1596:U:C5	2.47	0.82
49:S2:581:U:C4	49:S2:582:C:C5	2.68	0.82
49:S2:806:U:N3	49:S2:807:G:N7	2.27	0.82
48:4:771:PHE:CD2	48:4:785:LYS:HD2	2.15	0.81
1:5:1213:G:N1	1:5:1215:C:C2	2.48	0.81
1:5:1771:U:H2'	1:5:1772:C:O4'	1.79	0.81
1:5:1967:A:C2	1:5:1968:G:N7	2.48	0.81
1:5:2734:U:C2	1:5:2735:G:C8	2.68	0.81
1:5:370:U:C5	1:5:1637:A:C6	2.68	0.81
1:5:987:C:H2'	1:5:988:C:O4'	1.78	0.81
14:K:123:ARG:CD	14:K:129:ILE:CD1	2.58	0.81
49:S2:1422:G:N2	49:S2:1424:G:C8	2.48	0.81
49:S2:1824:A:C2	49:S2:1825:A:N7	2.48	0.81
49:S2:604:A:C8	59:SJ:20:PHE:CD2	2.68	0.81
49:S2:792:C:N3	49:S2:793:G:N7	2.28	0.81
49:S2:868:G:N2	57:SH:115:LYS:HA	1.95	0.81
48:4:722:ILE:HB	48:4:723:PRO:HD3	1.60	0.81
1:5:1076:C:C4	1:5:1077:C:C5	2.69	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
1:5:3674:G:C2	1:5:3675:G:C8	2.68	0.81
1:5:4745:G:O2'	1:5:4746:C:H6	1.55	0.81
14:K:17:CYS:O	14:K:18:THR:OG1	1.97	0.81
49:S2:105:U:C4	49:S2:106:C:C6	2.67	0.81
49:S2:349:A:O3'	58:SI:27:TYR:OH	1.98	0.81
1:5:2457:G:OP1	17:N:65:ARG:NH1	2.12	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2590:G:C2	1:5:2754:G:N2	2.48	0.81
1:5:728:U:OP1	1:5:728:U:H3'	1.80	0.81
1:5:907:C:C2	1:5:908:G:C8	2.69	0.81
14:K:77:ALA:HB3	14:K:80:LEU:CD1	2.10	0.81
49:S2:1418:C:C2	49:S2:1420:G:N7	2.48	0.81
49:S2:1782:G:N2	49:S2:1784:G:C5	2.49	0.81
49:S2:380:G:N2	49:S2:382:C:H3'	1.94	0.81
54:SE:18:TRP:HB3	54:SE:46:ILE:HD13	1.61	0.81
48:4:543:GLU:OE1	48:4:576:VAL:HB	1.80	0.81
48:4:824:PRO:O	48:4:832:SER:CB	2.27	0.81
1:5:1340:C:O2	1:5:1341:U:C6	2.33	0.81
1:5:2018:C:C2'	1:5:2019:C:H5'	2.11	0.81
1:5:3846:C:N3	1:5:3847:C:C5	2.48	0.81
1:5:5045:G:H2'	1:5:5046:U:O4'	1.80	0.81
1:5:662:C:O2	1:5:663:G:C8	2.33	0.81
1:5:94:A:H2'	1:5:95:G:C4'	2.09	0.81
3:8:125:C:C4'	3:8:126:C:H3'	2.09	0.81
14:K:22:VAL:CG2	14:K:48:LYS:HE3	2.10	0.81
49:S2:1496:U:N3	49:S2:1498:A:C8	2.48	0.81
48:4:848:ILE:CG2	48:4:849:PRO:N	2.41	0.81
1:5:1625:G:C8	1:5:1642:A:H2	1.99	0.81
1:5:2784:C:C2	1:5:2785:C:H5	1.97	0.81
1:5:5047:C:O4'	1:5:5048:A:C2	2.33	0.81
1:5:690:C:C2	1:5:691:C:C6	2.69	0.81
3:8:94:G:C5'	3:8:94:G:C8	2.62	0.81
14:K:123:ARG:HB3	14:K:129:ILE:CG1	1.78	0.81
14:K:93:LYS:O	14:K:94:LYS:HB2	1.79	0.81
49:S2:173:A:C6	49:S2:174:C:C5	2.69	0.81
68:SS:10:GLN:HG2	68:SS:13:LEU:HD21	1.63	0.81
48:4:402:VAL:HG23	48:4:403:PRO:CD	1.97	0.81
48:4:396:MET:HE1	48:4:472:LEU:HD11	1.61	0.81
48:4:58:ASP:O	48:4:63:GLU:CB	2.28	0.81
1:5:1517:G:N2	1:5:1650:A:N1	2.28	0.81
1:5:2504:C:O2	1:5:2505:C:C6	2.34	0.81
1:5:2736:G:C2	1:5:2737:C:C6	2.67	0.81
1:5:4731:G:O4'	1:5:4732:G:N2	2.13	0.81
14:K:131:GLU:CG	14:K:155:ILE:HD12	2.10	0.81
14:K:96:LYS:O	14:K:98:ILE:HG12	1.80	0.81
19:P:54:GLN:HB3	19:P:83:TRP:HD1	1.45	0.81
49:S2:120:U:N3	49:S2:121:U:C6	2.49	0.81
49:S2:120:U:C2	49:S2:121:U:C6	2.68	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1314:U:C2	49:S2:1315:U:H1'	2.15	0.81
49:S2:1605:G:H2'	49:S2:1606:G:H1'	1.63	0.81
48:4:741:MET:SD	48:4:817:TRP:CE3	2.74	0.81
1:5:120:A:C1'	1:5:121:A:N1	2.43	0.81
1:5:1238:A:H2'	1:5:1239:C:C6	2.14	0.81
1:5:1392:A:C2	1:5:1393:G:C6	2.68	0.81
1:5:1438:U:C2	1:5:2099:G:O6	2.33	0.81
1:5:1857:C:O2	1:5:1858:A:C8	2.34	0.81
1:5:2753:G:H3'	1:5:2754:G:H8	1.46	0.81
1:5:422:C:O2	1:5:423:G:H8	1.64	0.81
1:5:4283:G:C6	1:5:4284:C:C5	2.69	0.81
1:5:967:C:H5	1:5:968:C:O2	1.63	0.81
49:S2:1132:C:N4	49:S2:1133:A:N7	2.29	0.81
49:S2:459:C:C2	49:S2:460:A:C8	2.69	0.81
49:S2:43:U:H3	49:S2:484:A:H2	1.22	0.81
55:SF:79:HIS:O	55:SF:83:ASN:ND2	2.14	0.81
48:4:253:VAL:HG12	48:4:257:MET:HE2	1.61	0.81
48:4:45:ILE:HD12	48:4:78:PHE:HD1	1.38	0.81
48:4:746:LEU:O	48:4:812:CYS:HB2	1.81	0.81
48:4:794:PHE:N	48:4:794:PHE:HD1	1.76	0.81
1:5:1280:C:O2'	1:5:1281:G:H3'	1.80	0.81
1:5:2409:U:C5	1:5:2783:A:C2	2.69	0.81
1:5:2438:A:C6	1:5:2441:C:C5	2.69	0.81
1:5:3668:C:H2'	1:5:3668:C:O2	1.81	0.81
1:5:4079:C:N3	1:5:4080:C:C5	2.49	0.81
1:5:4276:G:C5	1:5:4277:G:C8	2.69	0.81
2:7:42:A:C1'	13:J:75:ARG:NH1	2.43	0.81
21:R:117:ARG:HB2	21:R:117:ARG:NH2	1.96	0.81
49:S2:636:C:C2	49:S2:637:U:C6	2.69	0.81
48:4:574:ASP:HB3	48:4:575:PRO:C	2.01	0.81
48:4:649:ILE:HD13	48:4:652:PHE:CE1	2.15	0.81
48:4:710:HIS:HD2	48:4:715:HIS:HB2	1.42	0.81
1:5:1269:G:C6	1:5:2111:G:N2	2.49	0.81
1:5:2294:G:N3	1:5:2295:C:C6	2.48	0.81
1:5:2515:G:N7	1:5:2516:G:N7	2.28	0.81
1:5:463:A:N1	1:5:692:A:C2	2.49	0.81
1:5:3621:A:H8	1:5:4642:U:H1'	1.45	0.81
1:5:4653:C:O2	1:5:4654:C:C6	2.34	0.81
1:5:54:G:C6	1:5:55:G:N7	2.49	0.81
1:5:504:G:C2	1:5:654:C:O2	2.34	0.81
14:K:81:ILE:HD13	14:K:117:ARG:NH1	1.95	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:162:CYS:N	14:K:163:PRO:CD	2.44	0.81
17:N:199:GLN:HA	17:N:199:GLN:OE1	1.79	0.81
49:S2:1231:C:C1'	49:S2:1665:G:N2	2.43	0.81
49:S2:1430:C:C2	49:S2:1431:G:C8	2.69	0.81
49:S2:460:A:C2	49:S2:461:U:C4	2.57	0.81
49:S2:75:G:HO2'	49:S2:76:U:H6	1.28	0.81
49:S2:617:G:N7	73:SX:67:ARG:NH1	2.28	0.81
48:4:10:ARG:CD	48:4:13:MET:SD	2.69	0.81
1:5:1049:C:C2	1:5:1050:C:C6	2.69	0.81
1:5:1245:C:C6	1:5:1269:G:C5	2.69	0.81
1:5:2658:G:H22	1:5:2675:G:H2'	1.45	0.81
1:5:4416:G:N1	1:5:4417:C:C4	2.49	0.81
1:5:4580:U:C4	1:5:4581:G:N7	2.48	0.81
1:5:4999:G:C6	1:5:5000:G:N7	2.48	0.81
3:8:64:U:H2'	3:8:65:A:C8	2.15	0.81
14:K:104:ILE:O	14:K:106:PHE:CD1	2.34	0.81
49:S2:1035:A:H2'	49:S2:1036:A:O4'	1.80	0.81
49:S2:1394:G:C6	49:S2:1395:C:H5	1.99	0.81
1:5:1628:C:O2	1:5:1629:G:H8	1.62	0.81
1:5:2495:U:C2	1:5:2496:G:C8	2.69	0.81
1:5:2691:U:C2	1:5:2692:U:C5	2.68	0.81
1:5:4344:U:O2	1:5:4345:C:C6	2.34	0.81
1:5:504:G:H22	1:5:654:C:H1'	1.44	0.81
1:5:3686:G:P	4:A:193:ARG:HH22	2.04	0.81
49:S2:1034:A:H2'	49:S2:1035:A:O5'	1.81	0.81
49:S2:1099:G:C6	49:S2:1100:A:N7	2.48	0.81
49:S2:1248:U:H2'	49:S2:1249:C:C1'	2.11	0.81
49:S2:795:A:H2'	49:S2:796:G:H8	1.45	0.81
1:5:1174:G:N2	1:5:1175:A:C5	2.49	0.80
1:5:1310:C:C2	1:5:1311:G:C8	2.69	0.80
1:5:2277:C:O2	1:5:2278:G:H8	1.60	0.80
1:5:2553:A:N1	1:5:2763:U:C5	2.49	0.80
1:5:3695:U:C4	1:5:3696:C:C5	2.69	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
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
1:5:93:G:C2	1:5:94:A:C2	2.69	0.80
14:K:123:ARG:N	14:K:129:ILE:HD11	1.96	0.80
14:K:60:VAL:HG12	14:K:75:PRO:HG2	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:107:A:H2'	49:S2:108:G:C8	2.17	0.80
49:S2:1597:C:O2'	49:S2:1598:G:O4'	1.99	0.80
49:S2:445:A:H2'	49:S2:446:G:O4'	1.80	0.80
50:SA:111:GLN:HA	50:SA:116:PHE:CE2	2.15	0.80
25:V:97:TYR:CZ	26:W:21:TYR:HA	2.15	0.80
48:4:13:MET:HE2	48:4:465:PRO:CD	2.12	0.80
48:4:671:TYR:O	48:4:675:ILE:N	2.01	0.80
48:4:686:ALA:HB2	48:4:726:ARG:CA	2.12	0.80
1:5:100:C:H5	1:5:101:A:C8	1.90	0.80
1:5:1190:C:C2	1:5:1191:C:C6	2.69	0.80
1:5:1406:G:O6	1:5:1408:G:O2'	1.97	0.80
1:5:4257:A:H2'	1:5:4258:C:C5	2.16	0.80
8:E:153:HIS:CE1	8:E:180:VAL:HG22	2.16	0.80
14:K:61:LYS:CE	14:K:72:GLU:HA	2.11	0.80
49:S2:1648:G:C8	66:SQ:125:ARG:HB3	2.17	0.80
49:S2:1258:A:N7	49:S2:1659:U:O2	2.14	0.80
49:S2:1835:A:H5'	49:S2:1863:A:C8	2.17	0.80
49:S2:452:G:N1	49:S2:453:C:C4	2.50	0.80
49:S2:751:G:O6	49:S2:791:C:N3	2.13	0.80
13:J:119:TYR:CG	68:SS:108:ARG:HH21	1.34	0.80
68:SS:86:ARG:HD3	68:SS:89:ASP:HB2	1.61	0.80
1:5:1441:C:OP1	1:5:2109:G:O3'	2.00	0.80
1:5:2532:C:O2	1:5:2533:C:C5	2.32	0.80
1:5:424:U:O2	1:5:425:U:H6	1.64	0.80
1:5:4277:G:C2	1:5:4278:C:C6	2.69	0.80
3:8:96:C:C2	3:8:97:A:H8	1.99	0.80
11:H:113:GLU:HA	11:H:113:GLU:OE2	1.81	0.80
49:S2:1051:G:C6	49:S2:1052:A:N7	2.48	0.80
49:S2:1156:U:O4	52:SC:194:ARG:NH1	2.15	0.80
49:S2:1594:A:N1	49:S2:1595:U:C6	2.48	0.80
1:5:146:G:C2	1:5:147:A:N7	2.50	0.80
1:5:1756:U:C4	1:5:1776:A:C2	2.70	0.80
1:5:1926:C:N3	1:5:1927:U:C5	2.49	0.80
1:5:1967:A:C2	1:5:1968:G:C5	2.69	0.80
1:5:2690:C:C2	1:5:2691:U:C6	2.69	0.80
1:5:3741:C:N3	1:5:3742:G:N7	2.29	0.80
1:5:4256:A:N7	13:J:60:PHE:CE1	2.50	0.80
10:G:264:LYS:HE3	10:G:265:LEU:HD22	1.61	0.80
49:S2:1074:C:N3	49:S2:1075:C:C5	2.48	0.80
49:S2:1310:U:N3	49:S2:1311:C:C5	2.48	0.80
49:S2:1409:A:C2	49:S2:1410:C:C5	2.70	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:165:G:C2'	49:S2:166:A:H8	1.94	0.80
48:4:540:GLU:OE1	48:4:540:GLU:CA	2.29	0.80
48:4:562:GLU:HA	48:4:570:ILE:CD1	2.08	0.80
1:5:1279:A:H3'	1:5:1280:C:C5	2.16	0.80
1:5:1687:U:C2	1:5:1850:A:N6	2.49	0.80
1:5:3739:C:C4	1:5:3740:G:C8	2.69	0.80
1:5:4098:A:N3	1:5:4099:G:C8	2.49	0.80
1:5:4579:U:N3	1:5:4580:U:C5	2.49	0.80
1:5:753:C:N3	1:5:754:U:C6	2.48	0.80
49:S2:1134:G:N1	49:S2:1135:C:C4	2.49	0.80
49:S2:1834:A:C2	49:S2:1837:G:N2	2.48	0.80
49:S2:220:U:C2	49:S2:221:A:C8	2.70	0.80
49:S2:648:A:C6	49:S2:649:U:C5	2.69	0.80
48:4:113:SER:HB3	48:4:533:MET:HB3	0.80	0.80
48:4:271:GLY:O	48:4:272:LYS:CD	2.30	0.80
48:4:271:GLY:O	48:4:272:LYS:CG	2.30	0.80
1:5:1279:A:C2'	1:5:1280:C:C5	2.62	0.80
1:5:2079:G:N1	1:5:2080:U:C4	2.50	0.80
1:5:3648:A:C4	1:5:3785:A:N6	2.50	0.80
1:5:4080:C:C2	1:5:4081:G:H8	1.96	0.80
3:8:64:U:O2	3:8:65:A:C5	2.35	0.80
6:C:143:ARG:NH2	6:C:145:GLU:HG3	1.96	0.80
14:K:114:ARG:HD2	14:K:130:LYS:HE3	1.62	0.80
14:K:121:LEU:HD12	14:K:129:ILE:HD13	0.83	0.80
1:5:1572:U:H4'	21:R:95:TRP:NE1	1.97	0.80
49:S2:580:U:O4	49:S2:581:U:C5	2.35	0.80
49:S2:599:A:C1'	49:S2:605:A:N3	2.45	0.80
49:S2:750:C:O2	49:S2:751:G:C8	2.35	0.80
48:4:155:LEU:CD1	48:4:185:VAL:HG21	2.12	0.80
48:4:206:ASP:CB	48:4:207:PRO:HD2	2.02	0.80
48:4:849:PRO:O	48:4:849:PRO:CD	2.30	0.80
48:4:849:PRO:O	48:4:849:PRO:CG	2.29	0.80
1:5:1070:G:C6	1:5:1071:C:C5	2.69	0.80
1:5:1948:G:O6	1:5:2034:G:O6	2.00	0.80
1:5:2279:A:N3	1:5:2280:G:C8	2.49	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
1:5:473:C:N3	1:5:474:C:C5	2.49	0.80
49:S2:1039:C:N3	49:S2:1040:G:C8	2.50	0.80
49:S2:1408:U:N3	49:S2:1439:A:C2	2.42	0.80
49:S2:165:G:O2'	49:S2:166:A:O4'	2.00	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:182:C:H2'	49:S2:184:G:H1'	1.61	0.80
49:S2:863:U:O2	49:S2:864:A:C8	2.35	0.80
49:S2:964:A:O2'	49:S2:965:U:O5'	1.97	0.80
51:SB:133:TYR:CE2	51:SB:181:LEU:HD12	2.16	0.80
48:4:420:LEU:N	48:4:420:LEU:HD22	1.96	0.80
48:4:49:ALA:CA	48:4:55:ARG:HH21	1.92	0.80
48:4:660:ASN:ND2	48:4:697:MET:O	2.14	0.80
48:4:752:PRO:HD2	48:4:755:VAL:HG23	1.61	0.80
48:4:829:SER:CB	48:4:832:SER:HB3	2.12	0.80
1:5:1268:G:C2	1:5:2111:G:C2	2.70	0.80
1:5:2812:A:H2'	1:5:2813:A:C8	2.16	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
1:5:4772:C:C2	1:5:4773:C:C6	2.70	0.80
1:5:486:C:N3	1:5:487:G:N7	2.30	0.80
1:5:738:C:C4	1:5:739:G:N7	2.50	0.80
2:7:50:A:C2	2:7:51:G:C8	2.69	0.80
14:K:48:LYS:CG	14:K:52:ASP:OD1	2.26	0.80
49:S2:1539:U:O2	49:S2:1540:G:H8	1.62	0.80
49:S2:599:A:O4'	49:S2:605:A:H2	1.65	0.80
60:SK:2:LEU:HB3	60:SK:8:ARG:NH2	1.96	0.80
48:4:420:LEU:O	48:4:420:LEU:CD2	2.30	0.80
48:4:101:ASN:CB	48:4:469:ILE:HD13	2.12	0.80
48:4:60:ARG:O	48:4:60:ARG:CG	2.30	0.80
1:5:2428:A:C5	1:5:2789:A:H2	2.00	0.80
1:5:4078:C:O2'	1:5:4172:A:N6	2.14	0.80
1:5:5012:G:N2	1:5:5014:A:C8	2.50	0.80
3:8:65:A:C2	3:8:66:A:C5	2.69	0.80
49:S2:1835:A:C2	49:S2:1863:A:N6	2.50	0.80
49:S2:1063:C:C1'	49:S2:1838:U:O4	2.30	0.80
49:S2:38:A:C2	49:S2:515:G:N2	2.50	0.80
49:S2:71:G:H3'	49:S2:72:C:H5''	1.64	0.80
48:4:402:VAL:HG22	48:4:403:PRO:CD	2.10	0.80
1:5:1080:C:N3	1:5:1081:C:C5	2.50	0.80
1:5:194:C:O2'	28:Y:121:ARG:NH2	2.15	0.80
1:5:4301:U:H4'	23:T:54:HIS:CD2	2.17	0.80
1:5:504:G:C2	1:5:505:G:C5	2.70	0.80
49:S2:1134:G:N2	49:S2:1135:C:C2	2.49	0.80
49:S2:1146:C:C2	49:S2:1147:C:C5	2.70	0.80
49:S2:1595:U:C4	49:S2:1596:U:C5	2.70	0.80
49:S2:1708:C:N3	49:S2:1709:G:N7	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1755:C:C4	49:S2:1756:C:C5	2.70	0.80
49:S2:618:C:H2'	49:S2:618:C:O2	1.79	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
1:5:4239:A:C6	1:5:4240:G:C8	2.70	0.79
1:5:440:U:C2	1:5:441:G:C8	2.70	0.79
3:8:11:C:H2'	3:8:11:C:O2	1.82	0.79
3:8:120:G:C2	3:8:121:G:C8	2.69	0.79
8:E:197:ILE:HD12	8:E:257:ILE:HG23	1.63	0.79
49:S2:1053:C:O2	49:S2:1054:G:C8	2.36	0.79
49:S2:1094:C:N3	49:S2:1095:U:C5	2.51	0.79
49:S2:1540:G:C2	49:S2:1541:G:N9	2.50	0.79
49:S2:1786:U:C2	49:S2:1787:G:C8	2.69	0.79
49:S2:1831:A:H1'	49:S2:1851:A:H2'	1.63	0.79
49:S2:339:A:N3	49:S2:340:C:C4	2.49	0.79
49:S2:495:U:O2'	49:S2:496:C:O4'	1.99	0.79
49:S2:608:C:N3	49:S2:609:U:C5	2.50	0.79
49:S2:795:A:C4	49:S2:796:G:N7	2.50	0.79
49:S2:998:A:N7	49:S2:999:G:H1'	1.97	0.79
1:5:235:A:C6	1:5:238:C:C4	2.70	0.79
1:5:3695:U:N3	1:5:3696:C:C5	2.51	0.79
1:5:70:A:C2	1:5:4355:G:O4'	2.35	0.79
3:8:12:G:N2	3:8:13:G:N9	2.30	0.79
3:8:81:C:O2	3:8:83:C:OP1	1.99	0.79
1:5:4976:U:O4	5:B:342:LYS:HD2	1.81	0.79
1:5:982:U:H5'	8:E:69:TYR:OH	1.83	0.79
14:K:104:ILE:O	14:K:106:PHE:HD1	1.66	0.79
14:K:62:LEU:HG	14:K:73:VAL:HB	1.65	0.79
49:S2:1008:A:H1'	63:SN:101:HIS:CE1	2.16	0.79
49:S2:1202:U:N3	49:S2:1203:G:C8	2.50	0.79
48:4:744:ILE:HD13	48:4:815:ASP:C	2.02	0.79
1:5:1247:U:C4	1:5:1248:C:C5	2.70	0.79
1:5:2089:G:C6	1:5:2263:A:C5	2.70	0.79
1:5:212:A:H2'	1:5:213:G:H8	1.47	0.79
1:5:2328:G:O2'	1:5:2329:U:C5'	2.30	0.79
1:5:662:C:H2'	1:5:663:G:C8	2.16	0.79
14:K:140:GLY:O	14:K:141:CYS:CB	2.30	0.79
14:K:159:ALA:O	14:K:163:PRO:CG	2.31	0.79
49:S2:1100:A:C2	49:S2:1101:U:C5	2.70	0.79
49:S2:114:G:HO2'	49:S2:382:C:HO2'	1.18	0.79
49:S2:119:U:C2	49:S2:120:U:C6	2.69	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1592:C:N3	49:S2:1593:C:C5	2.51	0.79
49:S2:164:A:H2'	49:S2:165:G:N2	1.96	0.79
49:S2:221:A:C6	49:S2:222:U:C5	2.69	0.79
49:S2:494:C:N3	49:S2:495:U:C5	2.51	0.79
48:4:191:THR:CG2	48:4:192:TYR:CE1	2.65	0.79
48:4:751:CYS:SG	48:4:755:VAL:HB	2.22	0.79
48:4:756:VAL:HG22	48:4:782:PHE:CB	2.13	0.79
1:5:1388:A:N6	1:5:1396:G:N2	2.30	0.79
1:5:1806:G:N2	1:5:1807:C:C2	2.51	0.79
1:5:66:A:C2	1:5:312:G:O4'	2.36	0.79
1:5:4098:A:C2	1:5:4099:G:C5	2.70	0.79
1:5:4269:G:C6	1:5:4270:C:C5	2.71	0.79
1:5:4627:U:C2	1:5:4628:U:C5	2.70	0.79
1:5:83:C:O2	1:5:99:A:N6	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
14:K:124:GLU:O	14:K:128:THR:OG1	2.01	0.79
49:S2:1222:G:H2'	49:S2:1223:A:O4'	1.81	0.79
49:S2:1785:C:C2	49:S2:1786:U:C5	2.70	0.79
49:S2:848:U:H2'	49:S2:849:A:C8	2.16	0.79
60:SK:27:VAL:HG13	60:SK:43:LEU:HD23	1.65	0.79
48:4:259:LYS:O	48:4:288:THR:HG21	1.83	0.79
48:4:502:SER:HB2	48:4:504:VAL:HG13	0.81	0.79
1:5:153:G:C2	1:5:154:G:N7	2.51	0.79
1:5:4537:C:O2	1:5:4538:G:C8	2.35	0.79
1:5:4737:G:C6	1:5:4963:G:C2	2.70	0.79
2:7:42:A:C6	2:7:43:U:C4	2.69	0.79
20:Q:37:ARG:HG3	20:Q:38:ARG:N	1.96	0.79
49:S2:1246:A:N6	49:S2:1247:C:H41	1.81	0.79
49:S2:1271:C:C4	49:S2:1272:C:C5	2.71	0.79
49:S2:1433:C:C2'	49:S2:1434:C:C1'	2.56	0.79
49:S2:1545:A:C6	49:S2:1588:A:N1	2.51	0.79
49:S2:475:C:C2	49:S2:476:A:C8	2.71	0.79
49:S2:996:A:C6	63:SN:113:PHE:CE2	2.70	0.79
48:4:420:LEU:HB2	48:4:465:PRO:HA	1.63	0.79
48:4:592:LEU:HD22	48:4:603:TYR:CZ	2.17	0.79
48:4:846:GLU:CA	48:4:846:GLU:OE2	2.30	0.79
48:4:846:GLU:HA	48:4:846:GLU:OE2	1.82	0.79
1:5:1348:U:O2	1:5:1349:G:C8	2.36	0.79
1:5:1662:C:C2	1:5:1663:C:C5	2.71	0.79
1:5:2277:C:N3	1:5:2278:G:N7	2.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2452:G:C2	1:5:2467:U:C4	2.70	0.79
1:5:2632:U:H2'	1:5:2632:U:O2	1.83	0.79
1:5:4114:C:H3'	1:5:4115:G:O4'	1.83	0.79
1:5:1516:G:HO2'	15:L:18:TRP:HE1	1.29	0.79
49:S2:1772:C:N3	49:S2:1773:C:C5	2.51	0.79
49:S2:332:G:O6	56:SG:186:GLN:NE2	2.15	0.79
49:S2:691:G:C2	49:S2:692:G:C8	2.71	0.79
48:4:4:PHE:CD1	48:4:5:THR:HB	2.15	0.79
48:4:610:PRO:HB2	48:4:613:LEU:CG	2.10	0.79
48:4:647:ARG:NH2	48:4:647:ARG:HG2	1.95	0.79
1:5:1965:G:H2'	1:5:1966:C:H6	1.46	0.79
1:5:3593:C:H4'	1:5:3594:C:OP2	1.79	0.79
1:5:422:C:O2	1:5:423:G:C8	2.35	0.79
1:5:4888:U:O2'	1:5:4889:G:H8	1.65	0.79
1:5:4990:C:O3'	1:5:4991:U:H4'	1.82	0.79
1:5:982:U:C5'	8:E:69:TYR:OH	2.31	0.79
11:H:96:TYR:CE2	11:H:100:PRO:HA	2.17	0.79
14:K:160:VAL:N	14:K:163:PRO:HG3	1.97	0.79
49:S2:1408:U:C4	49:S2:1439:A:N1	2.50	0.79
49:S2:22:A:C2	49:S2:653:A:C2	2.70	0.79
49:S2:43:U:C2	49:S2:484:A:C2	2.69	0.79
48:4:449:ARG:HB3	48:4:473:VAL:CG1	2.13	0.79
1:5:1270:A:H2'	1:5:1271:G:O5'	1.83	0.79
1:5:1836:G:C2	1:5:1837:A:C8	2.71	0.79
1:5:2463:G:N2	1:5:2464:C:C2	2.51	0.79
1:5:425:U:O2	1:5:426:A:C8	2.35	0.79
1:5:4744:A:C2	1:5:4745:G:C4	2.71	0.79
14:K:59:THR:O	14:K:60:VAL:HG23	1.83	0.79
49:S2:449:A:N1	49:S2:452:G:N7	2.31	0.79
48:4:27:HIS:HE2	48:4:28:VAL:HG23	1.48	0.79
48:4:577:VAL:HG12	48:4:579:TYR:CE1	2.18	0.79
48:4:634:TYR:O	48:4:638:LYS:HB2	1.83	0.79
48:4:607:ARG:CG	48:4:701:ARG:HD3	2.12	0.79
48:4:591:CYS:SG	48:4:732:SER:HB3	2.21	0.79
1:5:152:U:N3	1:5:153:G:N7	2.30	0.79
1:5:1899:G:N7	1:5:2278:G:C6	2.51	0.79
1:5:2090:U:O2'	1:5:2091:C:O5'	2.00	0.79
1:5:4096:C:N4	1:5:4097:G:C5	2.50	0.79
3:8:102:G:OP2	3:8:104:A:O2'	2.00	0.79
14:K:142:ASN:OD1	14:K:143:VAL:N	2.15	0.79
49:S2:1266:C:C2	49:S2:1267:C:C5	2.70	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1365:G:O6	49:S2:1375:G:N2	2.16	0.79
49:S2:1552:G:O6	49:S2:1578:U:O2	2.01	0.79
1:5:3629:A:C2'	49:S2:1721:U:H3	1.95	0.79
49:S2:751:G:C2	49:S2:792:C:C2	2.71	0.79
49:S2:933:G:N2	49:S2:1000:C:N3	2.30	0.79
51:SB:79:VAL:HB	51:SB:81:PHE:CZ	2.18	0.79
48:4:113:SER:CA	48:4:499:PHE:CB	2.42	0.79
48:4:10:ARG:HH22	48:4:465:PRO:HD3	1.47	0.79
1:5:1177:U:H1'	7:D:282:GLN:NE2	1.98	0.79
1:5:1177:U:O2	1:5:1178:G:C8	2.36	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
1:5:2533:C:C2	1:5:2534:C:C5	2.71	0.79
1:5:4276:G:O6	1:5:4277:G:N7	2.12	0.79
1:5:4332:C:O2	1:5:4333:C:C5	2.35	0.79
1:5:70:A:N1	1:5:4355:G:O4'	2.16	0.79
1:5:4605:A:H62	48:4:801:ARG:HD2	1.47	0.79
2:7:30:C:C2	2:7:48:G:N2	2.51	0.79
3:8:96:C:N3	3:8:97:A:C8	2.47	0.79
5:B:51:ALA:HA	5:B:323:TYR:CE2	2.18	0.79
12:I:9:TYR:HD2	12:I:97:ILE:HG12	1.48	0.79
1:5:3595:U:O2'	21:R:114:LYS:HG3	1.82	0.79
49:S2:1100:A:N1	49:S2:1101:U:C5	2.51	0.79
49:S2:1109:C:H41	67:SR:122:PRO:C	1.85	0.79
49:S2:1135:C:C2	49:S2:1136:U:C5	2.71	0.79
49:S2:1551:U:H2'	49:S2:1552:G:C1'	2.13	0.79
49:S2:381:C:C6	49:S2:381:C:O5'	2.36	0.79
49:S2:649:U:O2	49:S2:650:A:N7	2.16	0.79
49:S2:848:U:N3	49:S2:849:A:C5	2.51	0.79
48:4:27:HIS:HE2	48:4:28:VAL:CG2	1.96	0.78
1:5:1339:U:C2	1:5:1340:C:C5	2.71	0.78
1:5:1898:C:C5	1:5:2279:A:H1'	2.17	0.78
1:5:269:G:C6	1:5:270:U:C5	2.71	0.78
1:5:3905:A:C5	1:5:4449:A:N1	2.51	0.78
3:8:131:G:C6	3:8:132:G:C8	2.71	0.78
1:5:1358:G:C3'	6:C:114:ARG:HH12	1.96	0.78
14:K:142:ASN:HD21	14:K:151:ILE:CG1	1.79	0.78
14:K:22:VAL:HG21	14:K:48:LYS:CE	2.13	0.78
10:G:169:PHE:CD2	17:N:6:TYR:HB3	2.18	0.78
49:S2:341:C:N3	49:S2:342:C:C6	2.52	0.78
1:5:2691:U:C2	1:5:2692:U:H5	2.01	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3655:C:N3	1:5:3656:A:C8	2.52	0.78
1:5:3739:C:H6	1:5:3739:C:H5''	1.47	0.78
1:5:4563:U:C4	1:5:4564:A:N6	2.52	0.78
1:5:917:A:C2	1:5:919:C:C6	2.71	0.78
6:C:210:ILE:HD13	6:C:252:TRP:CH2	2.18	0.78
9:F:120:PHE:CZ	9:F:217:SER:HA	2.18	0.78
14:K:61:LYS:HD3	14:K:73:VAL:O	1.83	0.78
49:S2:1093:A:N6	49:S2:1151:G:O6	2.16	0.78
49:S2:1569:A:C8	49:S2:1570:G:H1'	2.19	0.78
49:S2:222:U:N3	49:S2:223:C:C5	2.52	0.78
49:S2:460:A:C6	49:S2:461:U:C5	2.70	0.78
49:S2:554:A:C2	49:S2:555:A:C5	2.71	0.78
49:S2:794:A:C6	49:S2:795:A:C5	2.70	0.78
49:S2:928:G:H2'	49:S2:929:G:C8	2.18	0.78
54:SE:18:TRP:CB	54:SE:46:ILE:HD13	2.12	0.78
1:5:1791:U:H4'	23:T:19:PHE:CZ	2.19	0.78
25:V:20:LEU:HD21	25:V:101:ASN:HD22	1.47	0.78
48:4:394:LEU:H	48:4:487:THR:HG22	1.49	0.78
48:4:433:ASN:O	48:4:434:TYR:C	2.20	0.78
48:4:518:PRO:CA	73:SX:50:ILE:HD11	2.10	0.78
48:4:544:HIS:NE2	73:SX:97:ASN:ND2	2.30	0.78
1:5:1398:A:H2'	1:5:1398:A:OP1	1.84	0.78
1:5:2509:C:O2'	1:5:2510:G:H5'	1.84	0.78
1:5:2690:C:C4	1:5:2691:U:C5	2.72	0.78
1:5:3629:A:H1'	49:S2:1721:U:N3	1.95	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	2.52	0.78
10:G:53:ARG:CZ	10:G:54:PHE:HZ	1.95	0.78
49:S2:1419:C:O2'	69:ST:132:ASP:HB3	1.83	0.78
49:S2:1495:G:C2	49:S2:1496:U:H1'	2.19	0.78
49:S2:986:G:C8	64:SO:137:SER:HA	2.18	0.78
48:4:267:ASP:N	48:4:267:ASP:HA	1.98	0.78
48:4:411:TYR:HD1	48:4:411:TYR:N	1.80	0.78
48:4:442:LEU:HD21	48:4:444:LEU:HD11	1.64	0.78
1:5:1811:G:N1	1:5:1812:C:C4	2.52	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
1:5:424:U:C2	1:5:425:U:C5	2.67	0.78
1:5:4352:U:OP1	15:L:190:ARG:NH2	2.17	0.78
1:5:4719:G:O2'	1:5:4720:C:H4'	1.83	0.78
1:5:688:U:N3	1:5:689:U:C6	2.50	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
1:5:964:A:C2	1:5:2252:G:O6	2.36	0.78
14:K:141:CYS:O	14:K:142:ASN:CB	2.32	0.78
49:S2:1413:G:C2	49:S2:1414:A:H1'	2.17	0.78
49:S2:1540:G:N1	49:S2:1541:G:N7	2.31	0.78
49:S2:53:C:O2	49:S2:54:A:H8	1.67	0.78
48:4:396:MET:CE	48:4:472:LEU:HD11	2.13	0.78
48:4:6:VAL:O	48:4:8:GLN:N	2.16	0.78
1:5:100:C:C6	1:5:101:A:C8	2.70	0.78
1:5:125:C:N3	1:5:126:C:C5	2.52	0.78
1:5:1735:U:O2	1:5:1735:U:H2'	1.84	0.78
1:5:1858:A:C2	1:5:1859:C:C5	2.71	0.78
1:5:2361:G:O6	19:P:25:HIS:CG	2.37	0.78
1:5:3717:A:O2'	1:5:3718:A:O4'	2.00	0.78
17:N:179:LYS:HB2	17:N:180:PHE:CE2	2.18	0.78
49:S2:340:C:C2	49:S2:341:C:C6	2.71	0.78
49:S2:42:A:C2	49:S2:43:U:C6	2.71	0.78
49:S2:563:G:C2	49:S2:564:A:C8	2.71	0.78
1:5:1213:G:C5	1:5:1215:C:N1	2.51	0.78
1:5:2724:G:N3	1:5:2726:G:C8	2.52	0.78
1:5:3739:C:C6	1:5:3739:C:C5'	2.66	0.78
1:5:4117:U:N3	4:A:40:TYR:HE1	1.81	0.78
1:5:4761:G:H2'	1:5:4762:A:O4'	1.83	0.78
1:5:4886:C:N3	1:5:4887:C:H5	1.82	0.78
1:5:966:A:H61	1:5:2252:G:H8	1.29	0.78
1:5:1896:A:C5	9:F:101:ASN:ND2	2.51	0.78
1:5:2665:U:OP2	21:R:120:TYR:OH	2.02	0.78
49:S2:1121:G:C6	49:S2:1122:A:C5	2.72	0.78
49:S2:10:G:N7	49:S2:1697:A:C2	2.52	0.78
49:S2:383:G:H2'	49:S2:384:U:C1'	2.13	0.78
49:S2:52:G:C6	49:S2:53:C:C5	2.72	0.78
51:SB:82:ARG:NH1	51:SB:188:LEU:O	2.15	0.78
48:4:510:GLU:HB3	48:4:571:LYS:O	1.83	0.78
1:5:101:A:C2	1:5:102:G:C8	2.72	0.78
1:5:1958:A:C2	1:5:2026:A:N1	2.52	0.78
1:5:2077:C:O2	1:5:2077:C:H2'	1.81	0.78
1:5:2713:C:O2	1:5:2714:G:C8	2.36	0.78
1:5:2367:A:C2	1:5:2788:U:O4	2.37	0.78
1:5:4284:C:O2	1:5:4285:U:C6	2.36	0.78
1:5:5066:U:H2'	1:5:5067:U:C6	2.17	0.78
4:A:163:ARG:HB2	4:A:163:ARG:CZ	2.14	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:81:ASN:HD21	10:G:238:GLY:HA3	1.49	0.78
14:K:47:ALA:HB2	14:K:72:GLU:CD	2.04	0.78
49:S2:1533:A:N1	49:S2:1537:A:H1'	1.99	0.78
49:S2:1538:C:O2	49:S2:1538:C:H2'	1.84	0.78
49:S2:553:U:C2	49:S2:554:A:N7	2.51	0.78
49:S2:623:G:N1	49:S2:624:C:C4	2.51	0.78
49:S2:70:G:C6	49:S2:71:G:C5	2.72	0.78
49:S2:977:C:C2	49:S2:978:G:C8	2.71	0.78
59:SJ:136:ARG:HD3	59:SJ:160:SER:HA	1.65	0.78
1:5:1382:G:OP1	15:L:65:ARG:NH1	2.16	0.78
1:5:1438:U:O2	1:5:2099:G:C6	2.36	0.78
1:5:2108:G:C2	1:5:2125:C:N3	2.52	0.78
1:5:1214:C:C2'	1:5:2114:G:C2	2.66	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
1:5:3738:G:C5	1:5:3739:C:C6	2.72	0.78
1:5:425:U:C2	1:5:426:A:C8	2.71	0.78
1:5:4426:C:C4	1:5:4427:G:N7	2.52	0.78
1:5:3621:A:C8	1:5:4642:U:H1'	2.19	0.78
1:5:4880:C:C2'	1:5:4881:U:H5'	2.14	0.78
9:F:41:GLN:HE21	9:F:41:GLN:HA	1.48	0.78
14:K:22:VAL:CG2	14:K:48:LYS:CB	2.62	0.78
14:K:86:LYS:O	14:K:104:ILE:HG21	1.82	0.78
49:S2:1411:G:C5	49:S2:1412:C:H1'	2.18	0.78
49:S2:1547:C:H2'	49:S2:1548:G:O4'	1.83	0.78
49:S2:148:U:C2	49:S2:170:A:N6	2.52	0.78
1:5:4099:G:O2'	51:SB:224:GLU:CG	2.31	0.78
1:5:1734:G:H3'	23:T:13:TYR:CE2	2.18	0.78
48:4:27:HIS:NE2	48:4:28:VAL:CG2	2.47	0.78
48:4:507:VAL:HG22	48:4:554:LEU:HD21	0.79	0.78
48:4:767:ARG:NH2	48:4:792:GLU:HG3	1.98	0.78
1:5:1806:G:N1	1:5:1807:C:C4	2.52	0.78
1:5:1811:G:N2	1:5:1812:C:C2	2.50	0.78
1:5:2327:G:N1	1:5:2328:G:N7	2.32	0.78
1:5:3607:U:C2	1:5:3608:A:C8	2.72	0.78
1:5:3799:A:H2'	1:5:3800:A:C8	2.19	0.78
1:5:4213:A:C2	1:5:4218:U:O4	2.37	0.78
1:5:425:U:C2	1:5:426:A:N7	2.52	0.78
1:5:4302:U:H5	1:5:4303:C:C5	2.01	0.78
1:5:483:G:C2	1:5:484:U:C4	2.72	0.78
1:5:86:U:C4	1:5:97:G:C2	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1134:G:N3	49:S2:1135:C:C6	2.51	0.78
49:S2:460:A:H2	49:S2:461:U:C6	1.94	0.78
48:4:739:ARG:NH1	48:4:823:ASP:CB	2.41	0.78
1:5:1598:C:C2	1:5:1599:A:C8	2.72	0.78
1:5:1807:C:N3	1:5:1808:C:C5	2.52	0.78
1:5:4093:G:C6	1:5:4115:G:O6	2.37	0.78
2:7:21:G:C6	2:7:58:A:C2	2.72	0.78
3:8:64:U:N3	3:8:65:A:C5	2.52	0.78
6:C:111:TRP:HB2	6:C:112:HIS:HD2	1.48	0.78
14:K:123:ARG:CA	14:K:129:ILE:CD1	2.05	0.78
19:P:54:GLN:HB3	19:P:83:TRP:CD1	2.18	0.78
49:S2:1406:G:H2'	49:S2:1407:U:O4'	1.84	0.78
48:4:114:GLU:HA	48:4:114:GLU:OE1	1.82	0.77
48:4:420:LEU:O	48:4:420:LEU:CG	2.30	0.77
1:5:2438:A:C6	1:5:2441:C:C4	2.72	0.77
1:5:4216:G:C2	1:5:4217:G:C8	2.72	0.77
1:5:4606:G:C5'	48:4:28:VAL:CG2	2.56	0.77
49:S2:923:G:C2	49:S2:1022:U:O4	2.37	0.77
49:S2:1030:A:C2	49:S2:1031:A:C8	2.72	0.77
49:S2:1575:G:C2	49:S2:1576:G:C5	2.72	0.77
49:S2:388:U:O2	49:S2:389:A:C8	2.37	0.77
49:S2:414:A:C2	49:S2:424:C:C2	2.72	0.77
49:S2:491:C:H1'	49:S2:574:A:N6	1.99	0.77
49:S2:992:A:N1	49:S2:993:G:C8	2.51	0.77
48:4:575:PRO:O	48:4:576:VAL:C	2.20	0.77
1:5:120:A:H1'	1:5:121:A:N1	1.98	0.77
1:5:124:C:N3	1:5:125:C:C5	2.52	0.77
1:5:197:A:C8	1:5:197:A:H5'	2.19	0.77
1:5:2277:C:C2	1:5:2278:G:N7	2.53	0.77
1:5:3794:C:C2	1:5:3795:A:C8	2.71	0.77
1:5:4076:G:N2	10:G:74:LEU:HG	1.98	0.77
1:5:4276:G:C6	1:5:4277:G:C5	2.70	0.77
1:5:4481:U:C2	1:5:4482:U:C6	2.73	0.77
1:5:4535:A:C6	1:5:4536:C:C5	2.72	0.77
1:5:4723:A:C2	1:5:4724:A:C5	2.72	0.77
1:5:4982:A:N1	1:5:4983:C:C6	2.53	0.77
1:5:300:A:O2'	17:N:94:PHE:O	2.02	0.77
49:S2:1109:C:N3	49:S2:1110:G:H1'	1.99	0.77
49:S2:1527:C:C4	49:S2:1528:G:N7	2.53	0.77
49:S2:337:C:O2	49:S2:338:G:C8	2.37	0.77
22:S:94:TYR:OH	22:S:96:GLU:HG2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:240:GLY:O	48:4:243:GLN:CD	2.22	0.77
48:4:650:TRP:HZ3	48:4:679:VAL:CG1	1.97	0.77
48:4:689:GLU:C	48:4:730:TYR:CE1	2.58	0.77
1:5:1672:U:N3	1:5:1673:U:C5	2.51	0.77
1:5:1899:G:C4	1:5:1900:C:C5	2.71	0.77
1:5:223:G:H4'	1:5:225:G:N7	1.99	0.77
1:5:2264:C:O2'	1:5:2265:G:O5'	2.02	0.77
1:5:458:C:C2	1:5:459:C:C6	2.73	0.77
1:5:54:G:O6	1:5:55:G:N7	2.17	0.77
3:8:15:G:H2'	3:8:16:G:C1'	2.14	0.77
14:K:123:ARG:HD2	14:K:129:ILE:HD13	1.64	0.77
21:R:163:ARG:NE	49:S2:871:U:O2	2.16	0.77
49:S2:1405:A:N6	49:S2:1441:U:O4	2.18	0.77
49:S2:338:G:C4	49:S2:339:A:C8	2.71	0.77
49:S2:494:C:O2	49:S2:495:U:C5	2.36	0.77
49:S2:636:C:C2	49:S2:637:U:C5	2.72	0.77
49:S2:821:G:C8	49:S2:821:G:H5'	2.18	0.77
48:4:402:VAL:O	48:4:403:PRO:O	2.02	0.77
48:4:498:LYS:O	48:4:500:SER:N	2.18	0.77
48:4:114:GLU:CB	48:4:532:PRO:CG	2.48	0.77
48:4:829:SER:OG	48:4:832:SER:CA	2.32	0.77
1:5:1781:U:C2	1:5:1782:U:C6	2.72	0.77
1:5:1950:U:N3	1:5:1951:G:N7	2.32	0.77
1:5:195:C:N3	1:5:196:C:C5	2.52	0.77
1:5:2054:U:H4'	1:5:2056:G:C1'	2.13	0.77
1:5:208:A:H1'	1:5:232:G:C2	2.19	0.77
1:5:2291:G:C2	1:5:2292:C:C6	2.73	0.77
1:5:2689:C:H2'	1:5:2689:C:O2	1.84	0.77
1:5:4343:U:N3	1:5:4344:U:C5	2.53	0.77
1:5:4416:G:C2	1:5:4417:C:C6	2.73	0.77
1:5:4735:G:N3	1:5:4736:C:C6	2.52	0.77
2:7:111:C:C4	2:7:112:U:C5	2.73	0.77
3:8:81:C:H3'	3:8:82:A:H4'	1.65	0.77
11:H:41:ILE:HD11	11:H:69:THR:CB	2.12	0.77
14:K:154:ASP:O	14:K:155:ILE:CA	2.31	0.77
52:SC:199:PRO:HD2	52:SC:223:TYR:OH	1.84	0.77
48:4:296:PRO:HA	48:4:299:LYS:HE3	1.66	0.77
48:4:425:LEU:HD23	48:4:426:LYS:N	1.98	0.77
48:4:634:TYR:CD1	48:4:638:LYS:HG2	2.19	0.77
48:4:648:LYS:HD3	48:4:664:ASP:O	1.83	0.77
48:4:691:ALA:H	48:4:730:TYR:HD1	1.23	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:93:LYS:O	48:4:93:LYS:CD	2.30	0.77
1:5:1238:A:HO2'	1:5:1239:C:C5'	1.96	0.77
1:5:1277:G:C2	1:5:1278:C:C6	2.72	0.77
1:5:1791:U:H4'	23:T:19:PHE:CE2	2.17	0.77
1:5:2018:C:C4	1:5:2019:C:C5	2.72	0.77
1:5:2127:C:C2'	1:5:2128:G:C8	2.68	0.77
1:5:4560:C:O2	1:5:4560:C:H2'	1.84	0.77
1:5:4739:C:H2'	1:5:4740:G:O4'	1.85	0.77
3:8:127:U:H2'	3:8:128:C:O4'	1.84	0.77
5:B:378:ARG:HD3	26:W:32:LEU:HD21	1.65	0.77
49:S2:1114:U:H3	49:S2:1119:A:H61	1.31	0.77
49:S2:1124:C:C2	49:S2:1125:C:C6	2.72	0.77
49:S2:1243:U:C2	49:S2:1265:A:N1	2.53	0.77
49:S2:1400:U:H2'	49:S2:1401:A:O4'	1.85	0.77
1:5:3796:U:O2'	49:S2:1720:U:O2'	2.02	0.77
49:S2:476:A:H2	49:S2:488:U:O2	1.66	0.77
49:S2:908:A:N3	49:S2:909:G:C8	2.53	0.77
50:SA:110:ASN:O	50:SA:116:PHE:HD2	1.66	0.77
75:SZ:97:ILE:HD12	75:SZ:109:TYR:CE2	2.20	0.77
48:4:541:SER:O	48:4:576:VAL:HG21	1.82	0.77
48:4:602:LEU:HD23	48:4:603:TYR:N	2.00	0.77
48:4:665:ILE:HB	48:4:704:VAL:O	1.85	0.77
1:5:1367:C:C2	1:5:1370:G:H2'	2.20	0.77
1:5:1421:G:C2	1:5:1422:G:C8	2.72	0.77
1:5:145:G:C2	1:5:146:G:C8	2.73	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
1:5:287: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
1:5:4098:A:C2	1:5:4099:G:N7	2.53	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
1:5:4892:A:C2	1:5:4927:G:O6	2.36	0.77
1:5:702:U:O2	1:5:703:G:O2'	2.00	0.77
3:8:103:A:C8	3:8:104:A:N7	2.53	0.77
3:8:117:C:N3	3:8:118:C:C6	2.51	0.77
3:8:86:U:OP1	3:8:87:G:OP1	2.00	0.77
1:5:1502:G:OP1	20:Q:65:ARG:NH1	2.17	0.77
49:S2:1510:G:C5	49:S2:1511:U:C5	2.73	0.77
49:S2:185:G:N2	49:S2:186:C:C2	2.53	0.77
49:S2:609:U:C2	49:S2:610:G:C8	2.72	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:637:U:C2	49:S2:638:C:C5	2.72	0.77
49:S2:1603:G:N7	68:SS:28:PHE:CZ	2.52	0.77
48:4:411:TYR:N	48:4:411:TYR:CD1	2.52	0.77
1:5:1289:C:C2	1:5:1290:G:C8	2.73	0.77
1:5:1634:A:N3	1:5:1635:C:C6	2.53	0.77
1:5:1781:U:N3	1:5:1782:U:C5	2.53	0.77
1:5:2305:U:C6	1:5:2305:U:H5'	2.20	0.77
1:5:244:G:N1	1:5:246:G:C8	2.53	0.77
1:5:274:C:O2'	1:5:275:C:O5'	2.02	0.77
1:5:4275:G:O6	1:5:4276:G:C6	2.38	0.77
1:5:4908:G:H1	1:5:4913:G:H21	1.31	0.77
1:5:701:G:O6	1:5:702:U:C5	2.38	0.77
14:K:124:GLU:C	14:K:128:THR:OG1	2.23	0.77
1:5:2663:G:H4'	21:R:117:ARG:HH12	1.49	0.77
49:S2:1433:C:C2'	49:S2:1434:C:O4'	2.32	0.77
49:S2:1540:G:C2	49:S2:1541:G:C4	2.71	0.77
49:S2:1696:C:O2	49:S2:1696:C:H2'	1.84	0.77
49:S2:1839:U:C2	49:S2:1840:U:C5	2.73	0.77
49:S2:474:G:N2	49:S2:475:C:C2	2.52	0.77
49:S2:494:C:N3	49:S2:495:U:C4	2.53	0.77
49:S2:672:A:C2	49:S2:1162:C:O2'	2.37	0.77
61:SL:61:PRO:HG2	61:SL:62:PHE:CE2	2.19	0.77
48:4:526:ARG:NH1	48:4:526:ARG:HG2	1.97	0.77
48:4:713:ALA:HA	48:4:716:ARG:CB	2.13	0.77
1:5:1973:G:C2	1:5:1993:C:N3	2.53	0.77
2:7:42:A:C5	2:7:43:U:C5	2.72	0.77
3:8:10:G:N2	3:8:11:C:H1'	2.00	0.77
9:F:120:PHE:HZ	9:F:217:SER:HA	1.48	0.77
7:D:284:LYS:HB3	12:I:209:TRP:CZ3	2.20	0.77
14:K:38:SER:HB2	14:K:39:PRO:CD	2.00	0.77
49:S2:1433:C:C2'	49:S2:1434:C:H1'	2.12	0.77
49:S2:15:U:H2'	49:S2:16:G:O4'	1.84	0.77
49:S2:29:G:C2	49:S2:30:C:C4	2.73	0.77
7:D:41:LYS:HG3	23:T:93:ILE:HD11	1.67	0.77
48:4:226:LYS:HZ2	48:4:356:ILE:CD1	1.93	0.77
48:4:3:ASN:O	48:4:46:ILE:CG1	2.32	0.77
48:4:509:VAL:HG21	48:4:546:ILE:CD1	2.14	0.77
1:5:1213:G:N3	1:5:1215:C:H1'	2.00	0.77
1:5:1370:G:H4'	1:5:1371:A:H4'	1.67	0.77
1:5:1563:A:O2'	1:5:1564:A:O4'	2.02	0.77
1:5:1956:A:C2	1:5:2027:U:N3	2.44	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2019:C:C2	1:5:2020:U:C6	2.73	0.77
1:5:2293:U:C2	1:5:2294:G:C8	2.73	0.77
1:5:4332:C:O2	1:5:4332:C:H2'	1.82	0.77
1:5:2041:A:C2	1:5:4464:A:C6	2.73	0.77
1:5:4750:G:O6	1:5:4949:G:O6	2.02	0.77
1:5:5005:G:O2'	1:5:5042:A:N6	2.18	0.77
1:5:667:A:H2'	1:5:668:C:O4'	1.85	0.77
1:5:709:C:C2	1:5:710:G:C8	2.72	0.77
2:7:111:C:N3	2:7:112:U:C6	2.53	0.77
3:8:130:C:C2	3:8:131:G:C8	2.72	0.77
1:5:1175:A:H1'	7:D:275:GLN:NE2	1.99	0.77
49:S2:1229:G:H2'	49:S2:1230:C:O4'	1.84	0.77
49:S2:1405:A:H2'	49:S2:1406:G:O4'	1.85	0.77
49:S2:493:A:C8	49:S2:574:A:N7	2.52	0.77
48:4:713:ALA:CB	48:4:716:ARG:NH2	2.44	0.77
1:5:1262:G:C2	1:5:1263:A:C8	2.72	0.77
1:5:2277:C:O2	1:5:2278:G:N7	2.17	0.77
1:5:4269:G:C5	1:5:4270:C:C6	2.73	0.77
1:5:1866:U:O4	1:5:4405:G:C8	2.38	0.77
1:5:1363:C:OP2	15:L:36:ARG:NH2	2.18	0.77
49:S2:386:C:C4	49:S2:387:C:C5	2.73	0.77
49:S2:42:A:C4	49:S2:426:A:N6	2.53	0.77
49:S2:598:G:N2	49:S2:639:C:C2	2.53	0.77
1:5:1202:C:C2	1:5:1203:G:C8	2.74	0.76
1:5:1268:G:C2	1:5:1270:A:N7	2.52	0.76
1:5:1696:C:O2'	1:5:2084:C:N4	2.18	0.76
1:5:182:G:H22	1:5:254:G:H22	1.33	0.76
1:5:2468:U:C4	1:5:2473:A:N1	2.51	0.76
1:5:2753:G:H3'	1:5:2754:G:C8	2.19	0.76
1:5:4123:C:C4	1:5:4124:G:N7	2.53	0.76
1:5:4998:G:C6	1:5:4999:G:N7	2.53	0.76
1:5:664:G:N2	1:5:667:A:C6	2.53	0.76
2:7:33:U:N3	2:7:34:C:C5	2.53	0.76
1:5:3899:G:OP1	5:B:257:TRP:HB2	1.84	0.76
1:5:1650:A:N1	6:C:100:ARG:NH2	2.33	0.76
1:5:2124:G:N2	9:F:32:ILE:HG13	2.01	0.76
14:K:96:LYS:C	14:K:98:ILE:HG12	2.05	0.76
49:S2:148:U:N3	49:S2:170:A:N6	2.33	0.76
49:S2:980:A:H2'	49:S2:981:A:C8	2.19	0.76
1:5:1302:U:C2	1:5:1303:A:C8	2.73	0.76
1:5:1563:A:C2	1:5:1564:A:C4	2.73	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1796:U:C4	1:5:1797:G:C8	2.73	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
1:5:271:C:C4	1:5:272:U:C5	2.74	0.76
1:5:4341:C:C4	1:5:4342:C:C5	2.73	0.76
1:5:4510:A:H61	1:5:4592:C:H4'	1.50	0.76
1:5:4920:C:H2'	1:5:4921:C:H6	1.50	0.76
1:5:5012:G:C2	1:5:5014:A:N7	2.53	0.76
1:5:62:A:H2	1:5:77:U:O2	1.67	0.76
9:F:93:PHE:HB2	9:F:124:PHE:CD1	2.21	0.76
49:S2:378:U:N3	49:S2:379:C:C6	2.52	0.76
49:S2:45:A:C2	49:S2:481:C:H1'	2.21	0.76
49:S2:694:G:C2	49:S2:695:C:C5	2.73	0.76
49:S2:75:G:O2'	49:S2:76:U:C6	2.34	0.76
49:S2:961:G:C2	49:S2:962:A:C8	2.73	0.76
48:4:56:PHE:CE1	48:4:455:GLY:C	2.52	0.76
1:5:1985:G:O2'	1:5:2003:G:OP2	2.01	0.76
1:5:2079:G:N1	1:5:2080:U:C5	2.53	0.76
1:5:2261:G:H2'	1:5:2262:G:C8	2.20	0.76
1:5:665:C:H2'	1:5:665:C:O2	1.85	0.76
1:5:964:A:C8	1:5:964:A:H3'	2.19	0.76
14:K:92:ARG:HA	14:K:95:GLN:CD	2.04	0.76
49:S2:1564:C:C2	49:S2:1565:C:C5	2.73	0.76
49:S2:1735:A:N6	49:S2:1799:G:O2'	2.17	0.76
49:S2:217:A:C2	49:S2:309:G:O6	2.38	0.76
49:S2:449:A:N1	49:S2:452:G:C8	2.54	0.76
49:S2:993:G:C2	49:S2:994:C:N1	2.54	0.76
48:4:168:GLN:O	48:4:168:GLN:CG	2.33	0.76
48:4:194:GLU:OE2	48:4:195:GLY:N	2.18	0.76
48:4:385:ILE:HD12	48:4:417:PHE:HB3	1.66	0.76
48:4:49:ALA:CA	48:4:55:ARG:NH2	2.46	0.76
1:5:1870:C:N3	1:5:1871:A:N7	2.34	0.76
1:5:2743:A:H2	1:5:2744:A:C5	2.01	0.76
1:5:3863:C:C2	1:5:3864:C:C5	2.73	0.76
1:5:4215:C:N3	1:5:4216:G:C8	2.54	0.76
1:5:4562:C:N3	1:5:4563:U:C6	2.53	0.76
1:5:4563:U:O2	1:5:4564:A:C8	2.38	0.76
1:5:495:C:N3	1:5:496:G:C8	2.54	0.76
1:5:497:G:C2	1:5:657:C:N3	2.53	0.76
14:K:102:GLY:C	14:K:139:VAL:C	2.37	0.76
14:K:131:GLU:CD	14:K:155:ILE:HD12	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1412:C:O2	49:S2:1413:G:N7	2.18	0.76
49:S2:1527:C:N3	49:S2:1528:G:C8	2.54	0.76
49:S2:1284:A:H61	62:SM:33:ARG:HB2	1.51	0.76
67:SR:69:ILE:HD11	67:SR:71:ILE:HD11	1.66	0.76
25:V:98:PHE:CZ	26:W:22:ALA:HB3	2.20	0.76
48:4:73:THR:N	48:4:104:ASP:HB2	1.97	0.76
48:4:739:ARG:CA	48:4:824:PRO:CD	2.63	0.76
48:4:827:ASN:ND2	48:4:827:ASN:C	2.29	0.76
48:4:829:SER:HB3	48:4:832:SER:HB3	1.67	0.76
1:5:1190:C:C2	1:5:1191:C:C5	2.73	0.76
1:5:1625:G:C8	1:5:1642:A:C2	2.74	0.76
1:5:1720:C:H2'	1:5:1721:G:O4'	1.86	0.76
1:5:1969:G:C6	1:5:2018:C:N4	2.41	0.76
1:5:2078:C:H2'	1:5:2078:C:O2	1.85	0.76
1:5:210:C:N4	1:5:231:U:N3	2.33	0.76
1:5:3692:A:N7	1:5:3693:U:C5	2.53	0.76
1:5:4532:U:H5	1:5:4554:G:H21	1.32	0.76
1:5:642:G:N2	1:5:643:C:C2	2.53	0.76
1:5:919:C:C4	1:5:920:C:C5	2.74	0.76
1:5:957:G:C5'	1:5:1284:G:N2	2.48	0.76
2:7:6:C:N4	2:7:7:G:C8	2.53	0.76
49:S2:1348:G:N3	49:S2:1348:G:H2'	1.99	0.76
49:S2:1835:A:H5'	49:S2:1863:A:N7	1.99	0.76
48:4:10:ARG:CZ	48:4:465:PRO:CD	2.64	0.76
48:4:46:ILE:O	48:4:46:ILE:HG22	1.85	0.76
48:4:113:SER:CB	48:4:499:PHE:CB	2.61	0.76
48:4:543:GLU:HG2	48:4:576:VAL:CG2	1.94	0.76
1:5:1217:G:HO2'	1:5:1218:G:H8	1.23	0.76
1:5:1967:A:N3	1:5:1968:G:C8	2.53	0.76
1:5:209:U:C4	1:5:211:G:C8	2.74	0.76
1:5:2479:G:C6	1:5:2480:G:N7	2.53	0.76
1:5:88:A:H62	1:5:97:G:N2	1.82	0.76
1:5:1629:G:N1	4:A:208:GLU:OE1	2.18	0.76
49:S2:1100:A:N3	49:S2:1101:U:C6	2.54	0.76
49:S2:1432:U:N3	49:S2:1433:C:C5	2.54	0.76
49:S2:298:G:C2	49:S2:299:A:C8	2.73	0.76
49:S2:827:A:C5	49:S2:828:G:C8	2.74	0.76
1:5:125:C:N3	1:5:126:C:C6	2.54	0.76
1:5:2087:C:H5	20:Q:37:ARG:NH1	1.80	0.76
1:5:3717:A:C5	1:5:3736:A:N6	2.54	0.76
1:5:4271:A:H3'	1:5:4272:G:H21	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4343:U:C2	1:5:4344:U:C6	2.73	0.76
1:5:4345:C:N3	1:5:4346:U:C5	2.54	0.76
1:5:914:U:H2'	1:5:915:A:O4'	1.86	0.76
1:5:21:G:C5	3:8:36:G:N2	2.54	0.76
3:8:79:G:C4	3:8:80:A:C2	2.74	0.76
1:5:1596:U:O2	19:P:131:ARG:NH2	2.19	0.76
49:S2:1017:U:O2	49:S2:1018:U:C6	2.38	0.76
49:S2:1486:A:O2'	49:S2:1487:A:O4'	2.03	0.76
49:S2:1569:A:N7	49:S2:1570:G:H1'	2.01	0.76
49:S2:996:A:O2'	49:S2:997:A:O5'	2.04	0.76
22:S:29:ARG:CB	22:S:29:ARG:CZ	2.63	0.76
55:SF:50:PRO:HB2	55:SF:73:THR:HG21	1.67	0.76
63:SN:18:TYR:CE1	72:SW:56:HIS:HB2	2.19	0.76
48:4:10:ARG:O	48:4:13:MET:HG2	1.85	0.76
48:4:739:ARG:HA	48:4:824:PRO:CD	2.12	0.76
48:4:756:VAL:CG2	48:4:782:PHE:CD1	2.67	0.76
1:5:1216:C:C2	1:5:1217:G:C8	2.73	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
1:5:1984:A:N7	1:5:2011:C:H4'	2.01	0.76
1:5:2105:A:N3	1:5:2106:G:C8	2.53	0.76
1:5:2279:A:C2	1:5:2280:G:C8	2.73	0.76
1:5:1316:G:O4'	1:5:2348:G:N2	2.17	0.76
1:5:2453:A:C2	1:5:2454:U:C6	2.74	0.76
1:5:3693:U:C2	1:5:3694:U:C6	2.74	0.76
1:5:3732:A:C2	1:5:3733:A:N7	2.54	0.76
1:5:3909:C:C4	1:5:3910:C:C5	2.74	0.76
1:5:752:G:C6	1:5:753:C:C5	2.74	0.76
1:5:986:C:C2	1:5:1068:G:N2	2.54	0.76
1:5:4117:U:C2	4:A:40:TYR:CE1	2.74	0.76
12:I:47:PRO:CA	12:I:171:TRP:HE1	1.98	0.76
14:K:123:ARG:HB3	14:K:129:ILE:HD13	0.76	0.76
49:S2:1540:G:N2	49:S2:1541:G:C4	2.54	0.76
49:S2:474:G:N1	49:S2:475:C:C4	2.54	0.76
48:4:271:GLY:C	48:4:272:LYS:HG2	2.06	0.76
1:5:1078:A:H2	1:5:1079:C:N4	1.82	0.76
1:5:2251:G:O4'	1:5:2252:G:N2	2.18	0.76
1:5:237:G:O2'	1:5:238:C:P	2.43	0.76
1:5:2479:G:C6	1:5:2480:G:C5	2.73	0.76
1:5:2851:G:N7	1:5:2852:U:C5	2.54	0.76
1:5:3727:A:O2'	1:5:3728:A:O5'	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4092:G:C5	1:5:4093:G:N2	2.54	0.76
1:5:4355:G:C2	1:5:4356:G:C8	2.73	0.76
1:5:4563:U:N3	1:5:4564:A:C5	2.53	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
3:8:106:G:C2	3:8:107:C:C4	2.74	0.76
12:I:157:PHE:O	12:I:159:PHE:N	2.17	0.76
21:R:107:ARG:C	21:R:107:ARG:HD2	3.94	0.76
49:S2:1289:U:H5'	49:S2:1315:U:O2'	1.86	0.76
49:S2:1289:U:H3'	49:S2:1290:G:H8	1.51	0.76
49:S2:1315:U:C2	49:S2:1316:C:C5	2.74	0.76
49:S2:1545:A:C4	49:S2:1588:A:N6	2.54	0.76
49:S2:217:A:C2	49:S2:309:G:C6	2.73	0.76
49:S2:367:U:O2'	49:S2:371:A:N7	2.18	0.76
49:S2:158:A:N6	49:S2:466:G:C6	2.54	0.76
49:S2:595:U:O2'	49:S2:596:U:C6	2.38	0.76
59:SJ:18:ARG:HG2	59:SJ:21:GLU:HG2	1.67	0.76
48:4:60:ARG:O	48:4:60:ARG:CD	2.29	0.76
48:4:616:ASP:OD2	48:4:621:GLU:HB2	1.86	0.76
48:4:675:ILE:CG2	48:4:709:LEU:HD13	2.15	0.76
1:5:1213:G:O6	1:5:1215:C:C4	2.39	0.76
1:5:1458:C:H2'	1:5:1458:C:O2	1.84	0.76
1:5:1598:C:O2	1:5:1599:A:C8	2.32	0.76
1:5:1625:G:H2'	17:N:81:TYR:OH	1.85	0.76
1:5:2101:C:C2	1:5:2102:G:C8	2.73	0.76
1:5:3721:U:C2	1:5:3722:G:C8	2.74	0.76
1:5:4095:G:N2	1:5:4096:C:N4	2.32	0.76
1:5:4199:C:N3	1:5:4200:G:C8	2.54	0.76
1:5:967:C:C5	1:5:968:C:O2	2.38	0.76
10:G:53:ARG:NH2	10:G:54:PHE:CZ	2.53	0.76
21:R:131:VAL:CB	21:R:132:PHE:CZ	2.64	0.76
49:S2:1111:U:O2	49:S2:1112:U:H6	1.64	0.76
49:S2:1122:A:O3'	51:SB:205:TYR:OH	2.04	0.76
49:S2:1243:U:O2	49:S2:1265:A:C2	2.39	0.76
49:S2:1489:A:N1	53:SD:146:ARG:NH2	2.34	0.76
49:S2:804:U:C2	49:S2:805:U:C6	2.73	0.76
49:S2:925:G:N2	49:S2:926:A:C8	2.54	0.76
49:S2:98:C:N3	49:S2:409:C:C5	2.54	0.76
48:4:649:ILE:CD1	48:4:652:PHE:CE1	2.69	0.75
48:4:762:VAL:CG1	48:4:766:LYS:HZ2	1.94	0.75
48:4:845:LYS:HZ3	48:4:846:GLU:CG	1.92	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1279:A:H3'	1:5:1280:C:H5	1.51	0.75
1:5:1410:U:C5	1:5:1815:G:C2	2.74	0.75
1:5:1490:G:C2	1:5:1491:A:C8	2.74	0.75
1:5:2316:G:C2	1:5:2317:C:C4	2.74	0.75
1:5:2362:U:C5	1:5:3859:G:N2	2.54	0.75
1:5:4283:G:C2	1:5:4284:C:C4	2.70	0.75
1:5:752:G:C5	1:5:753:C:C6	2.74	0.75
3:8:133:G:N1	3:8:134:G:C5	2.54	0.75
14:K:123:ARG:CD	14:K:129:ILE:HD13	2.16	0.75
49:S2:1224:G:C5	49:S2:1225:U:C6	2.73	0.75
49:S2:1545:A:N6	49:S2:1588:A:C2	2.53	0.75
49:S2:1658:G:H1	49:S2:1664:A:N6	1.83	0.75
49:S2:426:A:N1	49:S2:427:U:H5	1.80	0.75
49:S2:625:G:C4'	49:S2:629:A:C2	2.70	0.75
49:S2:637:U:N3	49:S2:638:C:C5	2.54	0.75
48:4:507:VAL:HG21	48:4:554:LEU:CD2	1.93	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
1:5:2479:G:N1	1:5:2480:G:C5	2.54	0.75
1:5:2613:C:N3	1:5:2614:C:C6	2.54	0.75
1:5:4416:G:C2	1:5:4417:C:C5	2.73	0.75
1:5:4735:G:N2	1:5:4736:C:C2	2.54	0.75
14:K:32:ILE:C	14:K:34:PRO:HD3	2.06	0.75
49:S2:1134:G:C2	49:S2:1135:C:C6	2.74	0.75
49:S2:1835:A:H4'	49:S2:1836:G:OP2	1.84	0.75
49:S2:857:U:C2	49:S2:858:A:C8	2.74	0.75
49:S2:957:A:C2	49:S2:967:C:O2	2.40	0.75
1:5:3709:U:C2	49:S2:970:G:N1	2.53	0.75
48:4:592:LEU:CD2	48:4:603:TYR:CE2	2.67	0.75
1:5:1440:U:H2'	1:5:1440:U:O2	1.86	0.75
1:5:1445:U:N3	1:5:1446:C:C5	2.54	0.75
1:5:166:C:O2	1:5:167:C:H6	1.69	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
1:5:2362:U:O2	1:5:2362:U:H2'	1.86	0.75
1:5:422:C:H2'	1:5:422:C:O2	1.85	0.75
1:5:90:G:C8	1:5:92:C:C6	2.74	0.75
20:Q:89:ASP:OD1	20:Q:91:ARG:NH2	2.19	0.75
49:S2:1134:G:C2	49:S2:1135:C:C5	2.74	0.75
49:S2:1256:G:C8	53:SD:40:ARG:HD2	36.57	0.75
49:S2:1855:G:OP2	64:SO:147:ARG:NH2	2.18	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:378:U:C4	49:S2:379:C:C4	2.74	0.75
49:S2:452:G:C2	49:S2:453:C:C4	2.74	0.75
49:S2:474:G:C2	49:S2:475:C:C5	2.74	0.75
49:S2:579:C:C4	49:S2:580:U:C6	2.73	0.75
48:4:207:PRO:HG2	48:4:261:TRP:CE2	2.20	0.75
48:4:42:LYS:HG3	48:4:79:TYR:CZ	2.20	0.75
48:4:590:LEU:HD23	48:4:605:LYS:HG3	1.69	0.75
48:4:4:PHE:CE1	48:4:5:THR:HB	2.21	0.75
48:4:665:ILE:HG13	48:4:703:ASP:HB3	1.69	0.75
1:5:144:G:C2	1:5:145:G:N7	2.54	0.75
1:5:1628:C:H2'	1:5:1628:C:O2	1.84	0.75
1:5:3794:C:N3	1:5:3795:A:N7	2.34	0.75
1:5:4240:G:C5	1:5:4241:C:C5	2.74	0.75
1:5:4362:A:C2	1:5:4363:A:C8	2.75	0.75
1:5:470:A:N6	1:5:471:A:C4	2.55	0.75
1:5:4886:C:O2	1:5:4887:C:C6	2.39	0.75
49:S2:381:C:H2'	49:S2:382:C:C5	2.22	0.75
49:S2:848:U:O2	49:S2:849:A:C8	2.39	0.75
49:S2:1283:C:N4	62:SM:104:VAL:O	2.17	0.75
48:4:364:ALA:HA	48:4:367:TYR:CE2	2.22	0.75
48:4:498:LYS:C	48:4:500:SER:N	2.39	0.75
48:4:567:CYS:C	48:4:568:ILE:HD12	2.06	0.75
1:5:1217:G:C2'	1:5:1218:G:C8	2.65	0.75
1:5:1271:G:C3'	1:5:1272:C:H5'	2.16	0.75
1:5:2034:G:N1	1:5:2035:C:N3	2.35	0.75
1:5:3717:A:OP2	1:5:3735:G:N2	2.19	0.75
1:5:4368:G:C6	1:5:4369:A:N7	2.55	0.75
14:K:159:ALA:O	14:K:163:PRO:CD	2.34	0.75
49:S2:1000:C:H2'	49:S2:1000:C:O2	1.86	0.75
49:S2:1066:U:N3	49:S2:1067:C:C6	2.55	0.75
49:S2:1408:U:H2'	49:S2:1409:A:C8	2.22	0.75
49:S2:1434:C:H2'	49:S2:1435:C:O4'	1.87	0.75
49:S2:1709:G:N1	49:S2:1710:C:C4	2.53	0.75
49:S2:402:C:C4	49:S2:403:G:N7	2.55	0.75
49:S2:436:G:H8	49:S2:471:G:N2	1.85	0.75
49:S2:653:A:H2'	49:S2:654:A:O4'	1.86	0.75
48:4:27:HIS:CD2	48:4:27:HIS:C	2.60	0.75
48:4:398:ILE:CD1	48:4:479:LEU:HD23	2.17	0.75
48:4:4:PHE:HD1	48:4:5:THR:CA	1.98	0.75
48:4:762:VAL:HG22	48:4:803:ASN:HB2	1.68	0.75
48:4:830:ARG:CB	48:4:831:PRO:HD3	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1757:U:N3	1:5:1758:G:C8	2.55	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
1:5:211:G:C2	1:5:212:A:N7	2.55	0.75
1:5:2314:G:C2	1:5:2315:G:C8	2.67	0.75
1:5:2347:A:C2	1:5:2348:G:N1	2.54	0.75
1:5:2507:A:C6	1:5:2508:U:C6	2.74	0.75
1:5:3629:A:H4'	49:S2:1721:U:C2	2.21	0.75
1:5:3739:C:C6	1:5:3739:C:H5''	2.22	0.75
1:5:4097:G:N1	1:5:4098:A:C5	2.55	0.75
1:5:4627:U:O2	1:5:4628:U:C6	2.39	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
49:S2:551:U:O2	49:S2:552:G:N7	2.18	0.75
52:SC:199:PRO:CD	52:SC:223:TYR:OH	2.34	0.75
49:S2:745:C:H1'	57:SH:108:SER:HA	1.67	0.75
48:4:597:ASN:O	48:4:598:LYS:HB2	1.84	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
1:5:1811:G:C2	1:5:1812:C:C5	2.75	0.75
1:5:1893:C:H2'	1:5:1893:C:O2	1.85	0.75
1:5:1929:A:N1	1:5:2054:U:C4	2.55	0.75
1:5:2101:C:O2	1:5:2102:G:C8	2.40	0.75
1:5:1598:C:C6	1:5:2798:A:C8	2.74	0.75
1:5:3657:U:N3	1:5:3658:C:C5	2.55	0.75
1:5:4164:C:N3	1:5:4165:C:C5	2.54	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
1:5:688:U:C4	1:5:689:U:C5	2.75	0.75
1:5:909:A:C6	1:5:910:G:N7	2.54	0.75
2:7:56:G:H2'	2:7:57:C:O5'	1.87	0.75
14:K:31:LYS:NZ	48:4:753:GLU:OE1	2.19	0.75
49:S2:1253:A:C2	49:S2:1666:C:O4'	2.39	0.75
49:S2:1709:G:C2	49:S2:1710:C:C6	2.75	0.75
49:S2:444:G:H22	49:S2:446:G:H3'	1.51	0.75
49:S2:549:C:C4	49:S2:550:C:C6	2.74	0.75
49:S2:56:G:C2'	49:S2:57:U:O5'	2.33	0.75
48:4:749:ILE:HD12	48:4:759:ILE:CD1	2.17	0.75
1:5:1271:G:H3'	1:5:1272:C:C5'	2.16	0.75
1:5:1287:G:C2	1:5:1289:C:C6	2.74	0.75
1:5:2857:A:C2	1:5:2858:A:C6	2.74	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2366:A:H2	1:5:3851:U:H1'	1.50	0.75
1:5:4425:G:C6	1:5:4426:C:C6	2.75	0.75
3:8:132:G:N1	3:8:133:G:C5	2.55	0.75
16:M:3:PHE:HB2	16:M:6:PHE:CZ	2.20	0.75
22:S:33:PHE:HE2	22:S:106:VAL:HG11	1.50	0.75
49:S2:1149:A:N1	49:S2:1151:G:C5	2.55	0.75
49:S2:1545:A:C5	49:S2:1588:A:N6	2.54	0.75
49:S2:1595:U:C4	49:S2:1596:U:H5	2.05	0.75
49:S2:1862:G:N3	49:S2:1863:A:O2'	2.18	0.75
49:S2:51:U:N3	49:S2:52:G:C8	2.55	0.75
49:S2:623:G:N2	49:S2:624:C:C2	2.55	0.75
49:S2:858:A:C2	49:S2:859:G:C5	2.74	0.75
48:4:111:PHE:CD1	48:4:809:PHE:CZ	2.75	0.75
48:4:191:THR:HG22	48:4:192:TYR:CD2	2.22	0.75
48:4:531:ASP:CB	48:4:534:VAL:CG1	2.64	0.75
48:4:770:VAL:HG22	48:4:784:VAL:HG11	1.69	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
1:5:142:G:C2	1:5:144:G:C8	2.74	0.75
1:5:1758:G:C2	1:5:1759:G:C5	2.74	0.75
1:5:1877:G:C6	1:5:1878:G:N7	2.55	0.75
1:5:1946:G:C2	1:5:1948:G:N7	2.54	0.75
1:5:1979:A:P	14:K:99:LYS:HG3	2.26	0.75
1:5:2524:U:H5''	1:5:2711:G:N2	2.02	0.75
1:5:3721:U:N3	1:5:3722:G:N7	2.35	0.75
1:5:4229:U:C5	1:5:4230:C:C5	2.75	0.75
1:5:4933:C:C4	1:5:4934:A:C8	2.74	0.75
1:5:730:G:N2	1:5:939:G:H22	1.82	0.75
3:8:85:U:H2'	3:8:87:G:H8	1.48	0.75
49:S2:1356:G:H2'	49:S2:1357:A:C8	2.21	0.75
49:S2:1405:A:C2	49:S2:1406:G:C4	2.74	0.75
49:S2:1454:A:C8	49:S2:1476:A:H1'	2.22	0.75
49:S2:340:C:C4	49:S2:341:C:N4	2.55	0.75
49:S2:452:G:C2	49:S2:453:C:C6	2.75	0.75
49:S2:835:C:N3	49:S2:837:A:H4'	2.02	0.75
1:5:5005:G:C6	26:W:51:TRP:HB3	2.20	0.75
48:4:165:LEU:HD11	48:4:305:MET:CE	2.15	0.74
48:4:427:VAL:CG1	48:4:427:VAL:O	2.29	0.74
48:4:588:ASN:OD1	48:4:589:VAL:HG23	1.87	0.74
14:K:31:LYS:CG	48:4:775:GLN:OE1	2.29	0.74
1:5:1447:C:H1'	1:5:2098:G:N2	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1900:C:N3	1:5:1901:C:C5	2.55	0.74
1:5:331:G:C2	1:5:332:C:C5	2.75	0.74
1:5:3676:G:O2'	1:5:3677:U:C5'	2.35	0.74
1:5:450:G:O2'	1:5:452:A:H4'	1.87	0.74
20:Q:34:PHE:CE2	20:Q:38:ARG:HG3	2.22	0.74
49:S2:1366:G:H2'	49:S2:1367:U:O4'	1.87	0.74
49:S2:647:U:C2	49:S2:648:A:N7	2.55	0.74
49:S2:65:C:O2'	56:SG:172:LYS:NZ	2.15	0.74
48:4:157:MET:CE	48:4:214:PHE:CE2	2.69	0.74
48:4:710:HIS:CD2	48:4:715:HIS:CB	2.64	0.74
48:4:845:LYS:HA	48:4:845:LYS:HZ1	1.51	0.74
1:5:114:G:H2'	1:5:115:C:H5'	1.69	0.74
1:5:1564:A:H61	49:S2:1029:G:HO2'	1.35	0.74
1:5:1811:G:C2	1:5:1812:C:C6	2.74	0.74
1:5:348:G:C6	1:5:350:C:N4	2.55	0.74
1:5:4217:G:C2'	1:5:4218:U:O5'	2.35	0.74
1:5:4257:A:C2'	1:5:4258:C:H6	2.00	0.74
1:5:4744:A:N1	1:5:4745:G:C6	2.55	0.74
1:5:489:C:C4	1:5:490:C:C5	2.75	0.74
1:5:5047:C:O4'	1:5:5048:A:N1	2.20	0.74
1:5:754:U:C2	1:5:755:C:C6	2.75	0.74
2:7:42:A:N9	13:J:75:ARG:NH1	2.36	0.74
1:5:1823:G:H4'	7:D:44:TYR:HD2	1.50	0.74
49:S2:1053:C:C2	49:S2:1054:G:C8	2.75	0.74
49:S2:1623:A:N6	49:S2:1625:U:OP2	2.20	0.74
49:S2:316:G:N2	49:S2:317:C:C2	2.56	0.74
29:Z:49:TYR:CE2	29:Z:133:LYS:HA	2.22	0.74
48:4:157:MET:HE1	48:4:214:PHE:HE2	1.51	0.74
1:5:1216:C:H2'	1:5:1217:G:O4'	1.86	0.74
1:5:1353:G:N7	20:Q:104:ARG:NH2	2.35	0.74
1:5:1359:G:H2'	1:5:1360:G:O4'	1.86	0.74
1:5:2689:C:N3	1:5:2690:C:C5	2.55	0.74
1:5:3858:C:N4	1:5:3859:G:C5	2.55	0.74
1:5:4258:C:N3	1:5:4259:C:C5	2.55	0.74
1:5:4490:C:H2'	1:5:4490:C:O2	1.87	0.74
1:5:989:U:H2'	1:5:990:C:H5	1.52	0.74
9:F:82:ASN:HD21	23:T:142:ARG:CB	2.00	0.74
14:K:161:GLU:N	14:K:163:PRO:HD3	2.01	0.74
21:R:163:ARG:NE	49:S2:871:U:C2	2.55	0.74
49:S2:1045:U:N3	49:S2:1046:U:C5	2.55	0.74
49:S2:908:A:C2	49:S2:909:G:C8	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:531:ASP:CB	48:4:534:VAL:HG12	2.17	0.74
48:4:671:TYR:CE1	48:4:674:GLU:OE1	2.39	0.74
48:4:849:PRO:HG2	48:4:849:PRO:O	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
1:5:1977:C:O2	1:5:1990:A:N1	2.20	0.74
1:5:4093:G:H2'	1:5:4094:G:C5'	2.17	0.74
1:5:4213:A:N1	1:5:4218:U:C4	2.51	0.74
1:5:4920:C:H2'	1:5:4921:C:C6	2.21	0.74
1:5:516:C:C2	1:5:646:G:C2	2.76	0.74
1:5:916:C:C4	1:5:917:A:C8	2.75	0.74
1:5:977:C:N3	1:5:978:G:C5	2.55	0.74
2:7:51:G:N2	2:7:52:C:C2	2.55	0.74
14:K:62:LEU:HD23	14:K:75:PRO:HB3	1.70	0.74
19:P:30:ARG:HD3	19:P:30:ARG:C	2.06	0.74
21:R:131:VAL:HB	21:R:132:PHE:CE2	2.23	0.74
49:S2:182:C:C2'	49:S2:184:G:H1'	2.16	0.74
49:S2:69:C:C2	49:S2:70:G:C8	2.76	0.74
22:S:10:TYR:OH	22:S:66:GLN:HG3	1.85	0.74
58:SI:101:ILE:HG13	58:SI:198:TYR:CD2	2.23	0.74
57:SH:145:ARG:HD2	72:SW:51:GLU:HG2	1.69	0.74
48:4:521:VAL:O	48:4:525:LYS:HD2	1.87	0.74
48:4:571:LYS:CA	48:4:571:LYS:HE2	2.16	0.74
48:4:622:VAL:HG11	48:4:635:LEU:HD21	1.70	0.74
1:5:1214:C:N3	1:5:2116:C:N4	2.35	0.74
1:5:1269:G:C5	1:5:2111:G:N1	2.56	0.74
1:5:1485:C:O2	1:5:4349:C:C6	2.40	0.74
1:5:2830:G:C2	1:5:2831:G:C8	2.76	0.74
1:5:348:G:N2	1:5:350:C:C2	2.56	0.74
1:5:431:G:O4'	1:5:3889:G:N2	2.20	0.74
1:5:4368:G:C2	1:5:4369:A:C8	2.76	0.74
1:5:473:C:C2	1:5:474:C:C5	2.74	0.74
1:5:4885:U:N3	1:5:4886:C:C5	2.55	0.74
1:5:89:C:O2'	1:5:90:G:C5'	2.35	0.74
3:8:64:U:C4	3:8:65:A:N6	2.55	0.74
1:5:1823:G:H4'	7:D:44:TYR:CD2	2.22	0.74
15:L:35:ARG:C	15:L:39:ARG:HH12	1.91	0.74
49:S2:106:C:O2	49:S2:107:A:C8	2.38	0.74
49:S2:1514:G:H2'	49:S2:1515:G:O4'	1.87	0.74
49:S2:647:U:C2	49:S2:648:A:C8	2.73	0.74
52:SC:115:GLN:HE21	52:SC:115:GLN:HA	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:192:TRP:CD1	53:SD:196:GLY:HA2	2.23	0.74
48:4:150:ARG:CZ	48:4:194:GLU:CD	2.56	0.74
48:4:40:VAL:C	48:4:43:ALA:HB2	2.07	0.74
1:5:1663:C:C2	1:5:1664:U:C5	2.76	0.74
1:5:1988:G:C2	1:5:1989:G:C8	2.75	0.74
1:5:2270:G:C2	1:5:2271:C:C4	2.75	0.74
1:5:2290:C:C2	1:5:2291:G:C8	2.76	0.74
1:5:2301:G:N1	1:5:2302:C:C4	2.55	0.74
1:5:2401:A:C2	1:5:2402:G:C8	2.75	0.74
1:5:319:A:H2'	1:5:320:C:O4'	1.86	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
1:5:4341:C:C4	1:5:4342:C:C6	2.75	0.74
1:5:4426:C:N3	1:5:4427:G:C8	2.56	0.74
1:5:450:G:N2	1:5:1294:A:H2'	2.02	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
1:5:472:C:N3	1:5:473:C:C5	2.56	0.74
1:5:655:C:C2	1:5:656:C:C5	2.75	0.74
1:5:660:A:C2	1:5:661:C:C6	2.75	0.74
14:K:141:CYS:O	14:K:142:ASN:HB3	1.87	0.74
49:S2:386:C:N3	49:S2:387:C:C6	2.55	0.74
49:S2:604:A:C5	59:SJ:20:PHE:CE2	2.75	0.74
49:S2:665:G:O4'	49:S2:670:A:C2	2.40	0.74
48:4:14:ASP:O	48:4:16:LYS:CE	2.36	0.74
48:4:157:MET:HE1	48:4:214:PHE:CE2	2.22	0.74
48:4:321:ILE:HG23	48:4:342:ARG:HD2	1.70	0.74
1:5:1358:G:N3	1:5:1359:G:N7	2.34	0.74
1:5:3591:C:N4	1:5:3592:G:C8	2.55	0.74
1:5:4406:U:C2	1:5:4407:G:C8	2.76	0.74
1:5:60:G:C5	1:5:61:A:N7	2.56	0.74
1:5:516:C:C2	1:5:646:G:N2	2.56	0.74
1:5:701:G:C6	1:5:702:U:C5	2.76	0.74
1:5:964:A:C8	1:5:964:A:C5'	2.69	0.74
3:8:133:G:C6	3:8:134:G:N7	2.56	0.74
49:S2:29:G:N2	49:S2:30:C:C2	2.56	0.74
49:S2:458:A:N1	49:S2:459:C:C6	2.54	0.74
48:4:686:ALA:CB	48:4:729:LEU:HD13	1.80	0.74
1:5:1884:C:H42	1:5:1896:A:H2	1.34	0.74
1:5:2021:G:C5	1:5:2022:C:C4	2.75	0.74
1:5:2263:A:O3'	1:5:2264:C:C6	2.41	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4242:U:O2	1:5:4279:A:C2	2.41	0.74
1:5:4223:C:H5'	12:I:119:PHE:HD2	1.53	0.74
14:K:119:ARG:H	14:K:123:ARG:HH12	1.35	0.74
14:K:125:LEU:HD23	14:K:125:LEU:H	1.52	0.74
14:K:137:GLN:CD	14:K:148:PRO:HB3	2.08	0.74
49:S2:1074:C:O2	49:S2:1075:C:C5	2.39	0.74
49:S2:1431:G:C2	49:S2:1432:U:H1'	2.22	0.74
49:S2:1507:G:O2'	49:S2:1508:A:H5'	1.87	0.74
49:S2:1538:C:C2	49:S2:1539:U:C5	2.76	0.74
49:S2:185:G:N1	49:S2:186:C:C4	2.55	0.74
49:S2:377:G:C2	49:S2:378:U:C5	2.75	0.74
49:S2:388:U:N3	49:S2:389:A:N7	2.36	0.74
49:S2:436:G:N7	49:S2:471:G:N2	2.30	0.74
49:S2:809:A:H2'	49:S2:810:A:O4'	1.87	0.74
1:5:1201:U:C2	1:5:1202:C:C6	2.76	0.74
1:5:1696:C:H1'	1:5:1697:G:C5'	2.17	0.74
1:5:1438:U:O2	1:5:2099:G:N7	2.21	0.74
1:5:2108:G:N2	1:5:2125:C:C2	2.56	0.74
1:5:2532:C:N3	1:5:2533:C:C4	2.56	0.74
1:5:2856:C:H2'	1:5:2856:C:O2	1.87	0.74
1:5:4166:G:N1	1:5:4167:G:C5	2.55	0.74
1:5:4502:C:C4	1:5:4503:A:C8	2.75	0.74
1:5:4687:A:C2	1:5:4688:C:C5	2.75	0.74
1:5:467:U:N3	1:5:468:U:C5	2.56	0.74
1:5:657:C:H2'	1:5:658:C:O4'	1.87	0.74
3:8:10:G:C2	3:8:11:C:N1	2.55	0.74
5:B:258:HIS:O	5:B:260:ALA:N	2.21	0.74
14:K:121:LEU:HD13	14:K:129:ILE:HG23	1.63	0.74
14:K:55:GLY:O	14:K:56:LEU:HD23	1.88	0.74
49:S2:933:G:N2	49:S2:1000:C:C2	2.56	0.74
49:S2:10:G:C5	49:S2:1697:A:C2	2.76	0.74
49:S2:1322:G:H2'	49:S2:1323:U:C6	2.23	0.74
49:S2:1332:A:O2'	53:SD:141:LYS:NZ	2.15	0.74
49:S2:1455:A:N1	49:S2:1456:G:C8	2.55	0.74
49:S2:1781:A:C2	49:S2:1782:G:C6	2.75	0.74
49:S2:54:A:C2	49:S2:451:G:C2	2.75	0.74
49:S2:968:U:O2'	49:S2:972:A:H1'	1.87	0.74
22:S:10:TYR:CZ	22:S:66:GLN:HG3	2.22	0.74
50:SA:2:SER:O	50:SA:4:ALA:N	2.20	0.74
48:4:743:PRO:CA	48:4:744:ILE:HB	2.16	0.74
1:5:2282:A:C2'	1:5:2283:G:O5'	2.36	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3736:A:O2'	1:5:3737:A:O5'	2.05	0.74
1:5:4910:G:H8	1:5:4910:G:O5'	1.71	0.74
1:5:4981:G:N1	1:5:4982:A:N7	2.36	0.74
1:5:5030:U:C2	1:5:5031:G:C8	2.76	0.74
3:8:55:U:H3	3:8:62:A:H2	1.34	0.74
14:K:113:ALA:HA	14:K:116:MET:SD	2.28	0.74
17:N:99:GLN:HG3	17:N:130:PHE:CD2	2.22	0.74
49:S2:1316:C:O2	49:S2:1317:C:H6	1.70	0.74
49:S2:449:A:C5	49:S2:452:G:C6	2.75	0.74
49:S2:794:A:N1	49:S2:795:A:C4	2.56	0.74
48:4:208:VAL:HG22	48:4:261:TRP:HB3	1.70	0.73
48:4:585:GLU:HB2	48:4:737:GLN:NE2	2.03	0.73
48:4:791:ASN:O	48:4:794:PHE:CZ	2.41	0.73
48:4:86:LEU:O	48:4:89:ILE:HG22	1.88	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	2.20	0.73
1:5:370:U:C4	1:5:1637:A:C6	2.76	0.73
1:5:2327:G:C2	1:5:2328:G:C5	2.76	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
1:5:4580:U:C2	1:5:4581:G:C8	2.76	0.73
1:5:4733:C:N4	1:5:4734:A:O2'	2.21	0.73
1:5:495:C:C2	1:5:496:G:C8	2.76	0.73
3:8:117:C:C4	3:8:118:C:C5	2.76	0.73
4:A:163:ARG:HB2	4:A:163:ARG:NH1	2.02	0.73
49:S2:123:G:N3	49:S2:123:G:H2'	2.02	0.73
49:S2:1666:C:N3	49:S2:1667:U:C5	2.56	0.73
49:S2:975:G:H4'	64:SO:32:HIS:CD2	2.23	0.73
62:SM:16:THR:HA	62:SM:19:GLN:HG3	1.70	0.73
48:4:113:SER:HB2	48:4:499:PHE:CB	2.16	0.73
48:4:752:PRO:CD	48:4:755:VAL:HG21	2.17	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
1:5:1818:G:C8	1:5:1821:G:C6	2.75	0.73
1:5:1982:G:O2'	1:5:2010:A:H5'	1.89	0.73
1:5:1265:G:O2'	1:5:2112:G:H3'	1.87	0.73
1:5:2367:A:N1	1:5:2788:U:C4	2.51	0.73
1:5:2605:G:C2	1:5:2606:G:C8	2.75	0.73
1:5:491:G:N2	1:5:663:G:C2	2.56	0.73
1:5:690:C:C4	1:5:691:C:C5	2.77	0.73
1:5:93:G:O2'	1:5:94:A:N7	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:103:ASN:C	14:K:104:ILE:HG13	2.08	0.73
14:K:125:LEU:HD23	14:K:125:LEU:N	2.03	0.73
49:S2:1330:G:N2	49:S2:1333:U:C4	2.56	0.73
49:S2:1324:G:HO2'	49:S2:1510:G:HO2'	0.76	0.73
49:S2:1562:C:O2	49:S2:1563:G:H8	1.70	0.73
49:S2:458:A:N6	49:S2:459:C:C4	2.56	0.73
48:4:228:PHE:CE2	48:4:293:ILE:HG23	2.22	0.73
48:4:539:GLU:O	48:4:540:GLU:O	2.06	0.73
48:4:804:THR:CG2	48:4:808:ALA:CB	2.61	0.73
1:5:1076:C:N3	1:5:1077:C:C6	2.56	0.73
1:5:1442:C:N3	1:5:1443:A:C8	2.56	0.73
1:5:1661:C:O2	1:5:1662:C:C6	2.41	0.73
1:5:1958:A:N6	1:5:2026:A:N6	2.31	0.73
1:5:2036:C:H2'	1:5:2037:C:H6	1.54	0.73
1:5:2058:G:N2	1:5:2059:C:N1	2.37	0.73
1:5:2368:A:N1	1:5:2788:U:C4	2.57	0.73
1:5:2452:G:C2	1:5:2467:U:O4	2.41	0.73
1:5:2714:G:C2	1:5:2715:G:C8	2.76	0.73
1:5:2793:G:C6	1:5:2797:C:C4	2.76	0.73
1:5:3590:G:C6	1:5:3591:C:C5	2.75	0.73
1:5:4563:U:H2'	1:5:4564:A:C8	2.24	0.73
3:8:12:G:N2	3:8:13:G:C1'	2.50	0.73
5:B:235:TRP:CD1	5:B:267:ALA:HA	2.23	0.73
14:K:22:VAL:HG22	14:K:48:LYS:HB2	1.69	0.73
49:S2:1408:U:H3'	49:S2:1409:A:C8	2.23	0.73
49:S2:550:C:H2'	49:S2:551:U:H6	1.52	0.73
49:S2:647:U:O2	49:S2:647:U:H2'	1.88	0.73
48:4:191:THR:CB	48:4:192:TYR:CE1	2.70	0.73
48:4:149:GLU:O	48:4:368:ARG:HD2	1.89	0.73
48:4:628:LEU:HD23	48:4:631:ARG:CZ	2.18	0.73
1:5:1726:U:C2	1:5:1727:U:C6	2.76	0.73
1:5:1872:G:C2	1:5:1873:A:C8	2.76	0.73
1:5:218:A:N6	6:C:185:ALA:HB2	2.03	0.73
1:5:187:U:C6	1:5:245:C:N3	2.56	0.73
1:5:3606:U:N3	1:5:3607:U:C5	2.56	0.73
1:5:3868:G:C6	1:5:4562:C:H1'	2.24	0.73
1:5:4199:C:H2'	1:5:4199:C:O2	1.88	0.73
1:5:447:C:N3	1:5:448:G:N7	2.36	0.73
1:5:4878:C:O2	1:5:4879:C:C5	2.40	0.73
1:5:75:G:O6	15:L:103:ARG:NH2	2.20	0.73
21:R:95:TRP:O	21:R:98:ARG:N	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1146:C:O2	49:S2:1147:C:C6	2.41	0.73
49:S2:1431:G:C5	49:S2:1432:U:C5	2.75	0.73
49:S2:64:A:C6	49:S2:82:G:C2	2.75	0.73
1:5:1951:G:O2'	22:S:95:ARG:NH2	2.22	0.73
48:4:634:TYR:HA	48:4:638:LYS:HD3	1.70	0.73
1:5:1070:G:C2	1:5:1071:C:C6	2.76	0.73
1:5:2105:A:N1	1:5:2106:G:N7	2.37	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
1:5:4124:G:O6	4:A:64:ARG:HD3	1.88	0.73
1:5:4275:G:C5	1:5:4276:G:C8	2.76	0.73
1:5:4537:C:H2'	1:5:4537:C:O2	1.87	0.73
3:8:34:U:O2	3:8:34:U:O4'	1.97	0.73
8:E:278:TYR:N	8:E:278:TYR:CD2	2.57	0.73
49:S2:1151:G:C2	49:S2:1152:U:C5	2.77	0.73
49:S2:1398:G:N1	49:S2:1399:C:C5	2.56	0.73
49:S2:1224:G:C2	49:S2:1643:U:C4	2.76	0.73
49:S2:1776:G:C2	49:S2:1777:G:C8	2.75	0.73
17:N:12:ARG:NH1	49:S2:1848:U:O4	100.22	0.73
49:S2:309:G:C2	49:S2:310:C:C5	2.76	0.73
48:4:402:VAL:HG12	48:4:411:TYR:O	1.89	0.73
48:4:585:GLU:CD	48:4:737:GLN:NE2	2.41	0.73
1:5:1185:G:C6	1:5:1186:U:C6	2.76	0.73
1:5:1268:G:N2	1:5:1270:A:N9	2.36	0.73
1:5:1390:G:C2	1:5:1394:G:C5	2.74	0.73
1:5:2017:A:C8	1:5:2018:C:H5	2.05	0.73
1:5:1268:G:H1'	1:5:2111:G:C5	2.23	0.73
1:5:2463:G:C6	1:5:2464:C:N4	2.57	0.73
1:5:3873:G:N2	1:5:3883:U:C2	2.56	0.73
1:5:4344:U:N3	1:5:4345:C:C5	2.56	0.73
1:5:5006:U:H1'	1:5:5042:A:C5	2.23	0.73
8:E:175:LEU:HB2	8:E:246:GLN:HE21	1.52	0.73
2:7:42:A:H1'	13:J:75:ARG:NH1	2.04	0.73
49:S2:1017:U:C2	49:S2:1018:U:C5	2.76	0.73
49:S2:121:U:O2	49:S2:122:G:C8	2.40	0.73
49:S2:1294:G:N1	49:S2:1295:A:N7	2.37	0.73
49:S2:1430:C:C4	49:S2:1431:G:C8	2.76	0.73
49:S2:316:G:C2	49:S2:317:C:C4	2.77	0.73
49:S2:1578:U:H6	53:SD:6:SER:CA	2.02	0.73
48:4:113:SER:HB2	48:4:499:PHE:CD2	2.24	0.73
48:4:556:ILE:O	48:4:560:ASP:CG	2.27	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:58:ASP:OD1	48:4:69:THR:CB	2.35	0.73
48:4:744:ILE:HG23	48:4:745:TYR:N	2.03	0.73
1:5:1080:C:C2	1:5:1081:C:C6	2.76	0.73
1:5:1091:C:C2	1:5:1092:G:C8	2.76	0.73
1:5:1545:G:C6	1:5:1546:C:N4	2.56	0.73
1:5:1634:A:C6	1:5:1635:C:C4	2.77	0.73
1:5:1759:G:C2	1:5:1760:G:C8	2.77	0.73
1:5:2264:C:O2'	1:5:2265:G:H2'	1.88	0.73
1:5:2364:G:C2	1:5:2365:C:C5	2.76	0.73
1:5:269:G:N1	1:5:270:U:C6	2.57	0.73
1:5:4093:G:C3'	1:5:4094:G:C5'	2.66	0.73
1:5:4093:G:O6	1:5:4115:G:C6	2.42	0.73
1:5:4166:G:C6	1:5:4167:G:N7	2.57	0.73
1:5:4537:C:C2	1:5:4538:G:C8	2.77	0.73
1:5:4686:G:C6	1:5:4687:A:C8	2.76	0.73
1:5:4707:A:C2'	1:5:4708:A:O5'	2.36	0.73
1:5:5063:G:C2	1:5:5064:G:C8	2.77	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
8:E:184:ARG:HD3	8:E:213:PHE:CB	2.18	0.73
14:K:47:ALA:CA	14:K:72:GLU:CG	2.61	0.73
49:S2:1249:C:C4	49:S2:1250:A:C5	2.76	0.73
49:S2:1408:U:O4	49:S2:1439:A:C2	2.42	0.73
49:S2:1526:G:C6	49:S2:1527:C:C5	2.77	0.73
49:S2:37:C:C4	49:S2:38:A:C8	2.77	0.73
49:S2:973:C:C4	49:S2:974:C:C6	2.76	0.73
50:SA:198:MET:HG3	50:SA:199:PRO:HD2	1.69	0.73
48:4:651:CYS:SG	48:4:662:LEU:CD1	2.73	0.73
1:5:3736:A:O2'	1:5:3737:A:C5'	2.37	0.73
1:5:950:G:C2	1:5:951:G:C8	2.77	0.73
3:8:102:G:O5'	3:8:104:A:O2'	2.06	0.73
8:E:38:PRO:HB2	8:E:43:ASN:OD1	17.55	0.73
49:S2:105:U:C5	49:S2:106:C:C5	2.76	0.73
49:S2:1394:G:C6	49:S2:1395:C:C5	2.76	0.73
49:S2:1408:U:C4	49:S2:1439:A:C2	2.76	0.73
49:S2:1696:C:O2	49:S2:1697:A:C8	2.41	0.73
49:S2:832:G:H2'	49:S2:833:C:O4'	1.88	0.73
53:SD:11:PHE:CE2	70:SU:84:ILE:HD13	2.24	0.73
48:4:21:ASN:HD22	48:4:469:ILE:HD11	1.53	0.73
48:4:562:GLU:HB3	48:4:570:ILE:HG13	1.71	0.73
48:4:616:ASP:CG	48:4:621:GLU:CB	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:126:C:O2	1:5:127:G:C8	2.41	0.73
1:5:1936:C:O2	1:5:1936:C:H2'	1.88	0.73
1:5:2251:G:C1'	1:5:2252:G:C2	2.71	0.73
1:5:2632:U:N3	1:5:2633:U:C5	2.57	0.73
1:5:270:U:C2	1:5:271:C:C5	2.76	0.73
1:5:3688:U:C2	1:5:3689:G:C8	2.77	0.73
1:5:4510:A:H61	1:5:4592:C:C4'	2.02	0.73
1:5:5047:C:C2	1:5:5048:A:N6	2.57	0.73
1:5:659:G:C2	1:5:660:A:C8	2.77	0.73
1:5:753:C:C4	1:5:754:U:C5	2.77	0.73
49:S2:42:A:C2	49:S2:43:U:H6	2.07	0.73
49:S2:752:G:N1	49:S2:790:C:C4	2.56	0.73
49:S2:989:C:O2	49:S2:1001:A:N6	2.22	0.73
48:4:271:GLY:O	48:4:272:LYS:HG2	1.87	0.73
48:4:27:HIS:NE2	48:4:28:VAL:HG22	2.04	0.73
48:4:567:CYS:O	48:4:568:ILE:HD12	1.87	0.73
48:4:769:HIS:H	48:4:786:ALA:HB1	1.53	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
1:5:1474:C:C2	1:5:1475:G:C8	2.77	0.73
1:5:2843:U:O2	1:5:2844:A:C8	2.42	0.73
1:5:3879:G:C6	1:5:3882:C:C4	2.76	0.73
7:D:94:ASN:HD22	7:D:94:ASN:C	1.91	0.73
14:K:117:ARG:HG2	14:K:133:LEU:CD1	2.19	0.73
14:K:117:ARG:CG	14:K:133:LEU:HD13	2.17	0.73
20:Q:56:THR:HB	20:Q:146:ARG:HH21	1.53	0.73
49:S2:1528:G:N1	49:S2:1529:C:C4	2.57	0.73
49:S2:604:A:H2'	49:S2:605:A:C8	2.24	0.73
49:S2:848:U:H2'	49:S2:849:A:H8	1.54	0.73
48:4:206:ASP:HA	48:4:212:VAL:CG2	2.19	0.72
1:5:1085:C:C4	1:5:1086:C:C5	2.77	0.72
1:5:1212:G:C2	1:5:1213:G:C8	2.76	0.72
1:5:1339:U:H2'	1:5:1339:U:O2	1.89	0.72
1:5:1887:G:N1	1:5:1890:G:C6	2.57	0.72
1:5:181:C:C2	1:5:256:G:N2	2.57	0.72
1:5:3732:A:N3	1:5:3733:A:C8	2.56	0.72
1:5:440:U:O2	1:5:441:G:C8	2.42	0.72
1:5:4419:U:C5	48:4:765:ARG:NH2	2.57	0.72
1:5:4561:C:O2	1:5:4562:C:C5	2.42	0.72
1:5:4981:G:C6	1:5:4982:A:N9	2.57	0.72
1:5:660:A:C6	1:5:661:C:C5	2.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:976:G:C6	1:5:977:C:C5	2.77	0.72
1:5:85:G:N2	1:5:97:G:C5	2.57	0.72
14:K:47:ALA:HA	14:K:72:GLU:CG	2.18	0.72
16:M:11:ARG:HH22	16:M:61:ILE:HG23	1.53	0.72
49:S2:1574:C:N3	49:S2:1575:G:N7	2.37	0.72
49:S2:379:C:C2	49:S2:380:G:C8	2.77	0.72
49:S2:42:A:C5	49:S2:43:U:C5	2.73	0.72
49:S2:618:C:C2	49:S2:619:A:C8	2.77	0.72
48:4:191:THR:CG2	48:4:192:TYR:CE2	2.72	0.72
1:5:1092:G:C6	1:5:1093:C:C5	2.77	0.72
1:5:2322:G:H2'	1:5:2323:C:O4'	1.89	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	2.57	0.72
1:5:2631:U:O4'	24:U:82:TYR:CE1	2.41	0.72
1:5:2857:A:C2	1:5:2858:A:C5	2.77	0.72
1:5:4455:G:C2	1:5:4456:C:C6	2.77	0.72
1:5:4982:A:C2	1:5:4983:C:C6	2.77	0.72
1:5:90:G:C2	1:5:95:G:C6	2.78	0.72
1:5:90:G:N2	1:5:95:G:C6	2.57	0.72
14:K:160:VAL:C	14:K:163:PRO:HG2	1.96	0.72
49:S2:50:A:N6	49:S2:488:U:N3	2.10	0.72
49:S2:524:U:O2	49:S2:594:A:N7	2.21	0.72
49:S2:53:C:O2	49:S2:54:A:C8	2.41	0.72
49:S2:996:A:C5	63:SN:113:PHE:CE2	2.77	0.72
61:SL:99:TYR:O	61:SL:101:ARG:N	2.20	0.72
48:4:79:TYR:CG	48:4:351:LEU:HD13	2.23	0.72
48:4:369:CYS:SG	48:4:385:ILE:HB	2.29	0.72
48:4:63:GLU:HG3	48:4:70:ILE:H	1.53	0.72
1:5:12:A:C2	1:5:14:C:C5	2.77	0.72
1:5:1625:G:N7	1:5:1642:A:C2	2.58	0.72
1:5:1755:C:H3'	1:5:1756:U:H5''	1.68	0.72
1:5:2590:G:N1	1:5:2754:G:C2	2.57	0.72
1:5:2645:G:C2	1:5:2646:C:C6	2.77	0.72
1:5:1542:U:H5''	1:5:2743:A:N7	2.04	0.72
1:5:3694:U:C2	1:5:3695:U:C5	2.78	0.72
1:5:3793:U:N3	1:5:3794:C:C5	2.57	0.72
1:5:88:A:N6	1:5:97:G:N2	2.36	0.72
14:K:137:GLN:OE1	14:K:148:PRO:HG3	1.89	0.72
14:K:74:VAL:O	14:K:74:VAL:HG12	1.88	0.72
49:S2:620:G:C2	49:S2:620:G:OP1	2.43	0.72
48:4:155:LEU:HD22	48:4:157:MET:SD	2.30	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:224:THR:OG1	48:4:227:GLN:HG3	1.88	0.72
48:4:275:LYS:CE	48:4:275:LYS:O	2.31	0.72
48:4:753:GLU:HG2	48:4:779:THR:HG22	1.70	0.72
48:4:693:CYS:CA	48:4:839:ARG:CZ	2.50	0.72
1:5:1899:G:N1	1:5:1900:C:C5	2.54	0.72
1:5:2108:G:C6	1:5:2125:C:N4	2.57	0.72
1:5:212:A:H2'	1:5:213:G:C8	2.24	0.72
1:5:255:C:H2'	1:5:255:C:O2	1.88	0.72
1:5:2736:G:C2	1:5:2737:C:C4	2.77	0.72
1:5:2735:G:N3	1:5:2736:G:C8	2.57	0.72
1:5:3653:A:N1	1:5:3692:A:C4'	2.53	0.72
1:5:4498:U:O2	1:5:4500:U:H5'	1.89	0.72
1:5:4880:C:H2'	1:5:4881:U:H5'	1.69	0.72
2:7:51:G:C2	2:7:52:C:C4	2.77	0.72
3:8:80:A:H3'	3:8:81:C:H4'	1.71	0.72
14:K:105:THR:HG22	14:K:144:ASP:H	1.55	0.72
17:N:30:TYR:CE1	17:N:63:ARG:CD	2.72	0.72
49:S2:597:G:N2	49:S2:640:A:C2	2.57	0.72
49:S2:647:U:O2	49:S2:648:A:N7	2.20	0.72
25:V:57:VAL:HG23	25:V:84:GLN:HG2	1.71	0.72
29:Z:38:TYR:CE2	29:Z:76:ASN:OD1	2.43	0.72
1:5:2858:A:O2'	1:5:2859:G:C8	2.39	0.72
1:5:3907:G:H1'	1:5:4449:A:C8	2.24	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
1:5:504:G:C6	1:5:654:C:C2	2.77	0.72
1:5:916:C:N3	1:5:917:A:C8	2.57	0.72
1:5:85:G:N2	1:5:97:G:N7	2.38	0.72
3:8:133:G:N1	3:8:134:G:N7	2.37	0.72
3:8:43:A:N1	3:8:44:A:N7	2.38	0.72
6:C:106:LYS:HG2	6:C:108:TRP:CZ2	2.24	0.72
14:K:105:THR:HG22	14:K:144:ASP:CA	2.19	0.72
14:K:22:VAL:CG2	14:K:48:LYS:CG	2.67	0.72
49:S2:1102:G:H22	49:S2:1130:G:N2	1.88	0.72
49:S2:337:C:C2	49:S2:338:G:H8	2.03	0.72
49:S2:434:G:H2'	49:S2:435:A:C8	2.24	0.72
49:S2:436:G:C2	49:S2:437:G:C5	2.78	0.72
49:S2:499:G:N2	49:S2:504:G:C6	2.57	0.72
49:S2:633:C:C2	49:S2:634:A:C8	2.77	0.72
49:S2:842:C:C2	49:S2:843:C:C5	2.78	0.72
48:4:207:PRO:HG2	48:4:261:TRP:NE1	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:397:TYR:HE1	48:4:496:VAL:CG1	2.03	0.72
48:4:585:GLU:HG3	48:4:737:GLN:NE2	2.05	0.72
1:5:1213:G:C6	1:5:1215:C:C6	2.78	0.72
1:5:1956:A:N1	1:5:2027:U:C4	2.57	0.72
1:5:2281:U:H2'	1:5:2281:U:O2	1.88	0.72
1:5:423:G:H1'	19:P:120:ASN:OD1	1.90	0.72
1:5:4413:C:O4'	12:I:157:PHE:CD2	2.42	0.72
1:5:4730:C:O2	1:5:4734:A:N7	2.23	0.72
1:5:4939:C:O2'	8:E:242:ARG:NH2	2.22	0.72
1:5:751:G:C2	1:5:752:G:C5	2.77	0.72
2:7:110:G:N2	2:7:111:C:C2	2.56	0.72
4:A:140:ASN:OD1	4:A:142:GLU:O	2.06	0.72
14:K:80:LEU:HA	14:K:83:LYS:HD2	1.70	0.72
49:S2:518:G:C2	49:S2:519:A:C8	2.78	0.72
49:S2:70:G:C6	49:S2:71:G:C6	2.78	0.72
49:S2:796:G:C6	57:SH:109:ARG:NH2	2.58	0.72
48:4:715:HIS:O	48:4:716:ARG:HB2	1.90	0.72
48:4:741:MET:HG3	48:4:817:TRP:CE3	2.22	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
1:5:1451:G:OP1	1:5:1718:C:N4	2.22	0.72
1:5:1618:G:N1	1:5:1619:G:N7	2.37	0.72
1:5:1998:A:N3	1:5:2019:C:O2'	2.22	0.72
1:5:2452:G:C6	1:5:2467:U:C5	2.76	0.72
1:5:4166:G:N1	1:5:4167:G:N7	2.37	0.72
1:5:447:C:C2	1:5:448:G:C8	2.78	0.72
2:7:94:C:O2	2:7:95:C:C6	2.42	0.72
1:5:1631:A:H2	4:A:204:MET:SD	2.12	0.72
9:F:144:TRP:CH2	9:F:237:ASN:HB2	2.25	0.72
49:S2:1607:A:N6	49:S2:1632:G:H1'	2.04	0.72
49:S2:383:G:C2'	49:S2:384:U:O4'	2.33	0.72
69:ST:82:ARG:HB2	69:ST:82:ARG:CZ	2.20	0.72
48:4:225:LEU:HD23	48:4:257:MET:HB2	1.70	0.72
1:5:2058:G:C2	1:5:2059:C:C5	2.78	0.72
1:5:2080:U:N3	1:5:2081:C:C5	2.58	0.72
1:5:2691:U:O2	1:5:2692:U:C6	2.41	0.72
1:5:3607:U:O2	1:5:3608:A:C8	2.43	0.72
1:5:4562:C:N3	1:5:4563:U:C5	2.58	0.72
1:5:4726:G:H4'	5:B:130:PHE:CE1	2.24	0.72
1:5:917:A:C6	1:5:919:C:N4	2.57	0.72
49:S2:42:A:C4	49:S2:426:A:N7	2.57	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:551:U:H2'	49:S2:552:G:C8	2.22	0.72
49:S2:599:A:C1'	49:S2:605:A:C2	2.72	0.72
48:4:73:THR:N	48:4:104:ASP:CG	2.20	0.72
48:4:153:PRO:O	48:4:205:ILE:HD12	1.90	0.72
48:4:206:ASP:O	48:4:212:VAL:CB	2.37	0.72
48:4:759:ILE:CG2	48:4:784:VAL:HG21	2.19	0.72
1:5:1177:U:C2	1:5:1178:G:N7	2.58	0.72
1:5:300:A:C2	1:5:301:G:C8	2.78	0.72
1:5:4284:C:C2	1:5:4285:U:C6	2.77	0.72
1:5:4579:U:H2'	1:5:4580:U:O4'	1.88	0.72
1:5:4742:G:C6	1:5:4743:G:N7	2.58	0.72
1:5:658:C:O2	1:5:659:G:C8	2.43	0.72
13:J:105:PHE:HE1	13:J:132:VAL:HB	1.54	0.72
14:K:106:PHE:CE2	14:K:137:GLN:NE2	2.57	0.72
49:S2:1376:A:C6	49:S2:1377:U:H1'	2.25	0.72
49:S2:56:G:N1	49:S2:90:G:N2	2.37	0.72
49:S2:597:G:C2	49:S2:640:A:N1	2.58	0.72
52:SC:230:THR:HG23	52:SC:236:PHE:CD2	2.24	0.72
73:SX:67:ARG:HG2	73:SX:115:ILE:HD13	1.70	0.72
48:4:495:ARG:O	48:4:496:VAL:HG12	1.90	0.72
48:4:675:ILE:CG2	48:4:709:LEU:HD11	2.06	0.72
1:5:1926:C:C2	1:5:1927:U:C5	2.77	0.72
1:5:2250:C:OP2	1:5:2250:C:H4'	1.88	0.72
1:5:2743:A:H2'	1:5:2744:A:C8	2.24	0.72
1:5:2856:C:N3	1:5:2857:A:C5	2.57	0.72
1:5:4100:C:C2	1:5:4101:C:C5	2.76	0.72
14:K:106:PHE:HZ	14:K:137:GLN:NE2	1.84	0.72
49:S2:1122:A:C2	49:S2:1123:C:C6	2.78	0.72
49:S2:1405:A:C6	49:S2:1406:G:C5	2.78	0.72
49:S2:1527:C:C4	49:S2:1528:G:C8	2.78	0.72
49:S2:52:G:C2	49:S2:53:C:H1'	2.25	0.72
49:S2:525:A:N6	49:S2:588:G:H22	1.87	0.72
49:S2:832:G:N1	49:S2:833:C:C2	2.58	0.72
49:S2:842:C:H2'	49:S2:843:C:O5'	1.88	0.72
48:4:154:VAL:HG11	48:4:358:LEU:HD11	1.70	0.71
48:4:541:SER:HB3	48:4:576:VAL:CB	2.20	0.71
48:4:58:ASP:C	48:4:63:GLU:HB3	2.10	0.71
48:4:659:PRO:HG3	48:4:698:ARG:NH1	2.05	0.71
48:4:690:GLY:N	48:4:730:TYR:HE1	1.88	0.71
48:4:819:ILE:O	48:4:819:ILE:HD12	1.90	0.71
48:4:831:PRO:O	48:4:834:VAL:HG22	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1264:C:N3	1:5:1265:G:C8	2.58	0.71
1:5:1392:A:N3	1:5:1393:G:N7	2.38	0.71
1:5:1390:G:N2	1:5:1394:G:C4	2.57	0.71
1:5:1442:C:N3	1:5:1443:A:N7	2.38	0.71
1:5:183:C:O2'	1:5:189:G:N7	2.23	0.71
1:5:1958:A:O2'	1:5:1959:U:H5''	1.90	0.71
1:5:1269:G:C8	1:5:2111:G:C5	2.76	0.71
1:5:2459:G:N7	17:N:105:ARG:NH2	2.37	0.71
1:5:2362:U:O4	1:5:3859:G:N2	2.22	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
1:5:44:A:C6	1:5:45:U:C4	2.78	0.71
1:5:4759:C:H2'	1:5:4760:G:O4'	1.89	0.71
1:5:4871:C:H5''	1:5:4871:C:O2	1.90	0.71
1:5:489:C:N3	1:5:490:C:C5	2.58	0.71
1:5:4942:C:O2	1:5:4942:C:O5'	2.07	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
14:K:125:LEU:HD12	14:K:163:PRO:HB3	0.74	0.71
49:S2:1406:G:N3	49:S2:1407:U:H1'	2.04	0.71
49:S2:1849:G:H2'	49:S2:1850:A:N7	2.05	0.71
49:S2:793:G:C6	49:S2:794:A:C8	2.78	0.71
48:4:590:LEU:HD23	48:4:605:LYS:HE3	1.70	0.71
48:4:651:CYS:SG	48:4:683:PHE:CD2	2.80	0.71
1:5:1203:G:C6	1:5:1204:C:C5	2.78	0.71
1:5:126:C:C2	1:5:127:G:C8	2.78	0.71
1:5:2533:C:O2	1:5:2534:C:C5	2.42	0.71
1:5:4239:A:C5	1:5:4240:G:C8	2.78	0.71
1:5:4871:C:H4'	1:5:4872:G:O5'	1.90	0.71
1:5:4767:C:H4'	1:5:4874:A:N1	2.04	0.71
1:5:493:G:C6	1:5:494:U:C5	2.78	0.71
3:8:65:A:C2	3:8:66:A:C8	2.78	0.71
14:K:86:LYS:CA	14:K:104:ILE:HG12	2.19	0.71
14:K:47:ALA:HB2	14:K:72:GLU:OE2	1.91	0.71
49:S2:1308:U:H2'	49:S2:1309:C:C5	2.24	0.71
49:S2:497:C:C2	49:S2:506:G:N2	2.58	0.71
49:S2:1665:G:N7	69:ST:88:MET:CG	2.52	0.71
48:4:240:GLY:N	48:4:241:GLU:HB2	2.05	0.71
48:4:43:ALA:O	48:4:45:ILE:HG22	1.89	0.71
48:4:617:ILE:HG12	48:4:622:VAL:HG23	1.71	0.71
48:4:813:VAL:HG22	48:4:814:PHE:N	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1563:A:H61	49:S2:1028:A:N6	1.80	0.71
1:5:1727:U:C2	1:5:1728:U:C5	2.78	0.71
1:5:1839:U:H3'	1:5:1840:G:H21	1.54	0.71
1:5:3676:G:O2'	1:5:3677:U:H5'	1.89	0.71
1:5:3833:C:N3	1:5:3834:C:C5	2.59	0.71
1:5:4093:G:H3'	1:5:4094:G:H5'	1.72	0.71
1:5:4463:U:C4	1:5:4488:A:C5	2.79	0.71
1:5:4771:C:C6	1:5:4772:C:C6	2.78	0.71
1:5:4906:C:C2	1:5:4916:G:C2	2.78	0.71
2:7:25:G:H2'	2:7:26:C:O4'	1.90	0.71
6:C:197:ARG:C	6:C:198:ASN:ND2	2.43	0.71
1:5:4413:C:C2'	12:I:157:PHE:HD2	2.03	0.71
14:K:53:TRP:O	14:K:54:LYS:HB2	1.90	0.71
49:S2:1622:U:C4	68:SS:120:HIS:CE1	2.78	0.71
54:SE:36:HIS:HE1	54:SE:143:ASP:HB2	1.53	0.71
49:S2:996:A:N6	63:SN:113:PHE:CE2	2.59	0.71
64:SO:94:HIS:HB3	64:SO:128:ARG:HB2	1.72	0.71
1:5:100:C:N4	1:5:101:A:C5	2.56	0.71
1:5:1183:C:C2	1:5:1184:A:C8	2.78	0.71
1:5:1217:G:O2'	1:5:1218:G:H8	1.72	0.71
1:5:1280:C:C5'	1:5:1280:C:C6	2.73	0.71
1:5:1564:A:O2'	1:5:1565:A:H5'	1.90	0.71
1:5:1843:A:C2	1:5:1844:G:C8	2.78	0.71
1:5:1994:C:H2'	14:K:132:ILE:HD11	1.72	0.71
1:5:2058:G:N1	1:5:2059:C:C5	2.58	0.71
1:5:2326:G:N1	1:5:2327:G:C8	2.57	0.71
1:5:300:A:C2	1:5:301:G:C5	2.79	0.71
1:5:4123:C:N3	1:5:4124:G:N7	2.38	0.71
1:5:4195:G:N3	1:5:4195:G:H5''	2.05	0.71
1:5:4196:G:H2'	1:5:4197:G:O4'	1.90	0.71
1:5:4508:C:N3	1:5:4512:U:H5	1.86	0.71
1:5:497:G:H3'	1:5:498:C:H5''	1.71	0.71
1:5:4280:A:N6	7:D:29:ASP:N	2.37	0.71
8:E:280:HIS:CE1	8:E:281:LYS:HB2	2.25	0.71
14:K:62:LEU:O	14:K:62:LEU:CD1	2.29	0.71
49:S2:1510:G:C6	49:S2:1511:U:C5	2.77	0.71
49:S2:1597:C:H2'	49:S2:1598:G:C8	2.24	0.71
49:S2:1804:U:C2	49:S2:1805:G:C8	2.78	0.71
49:S2:620:G:P	49:S2:620:G:N2	2.63	0.71
65:SP:39:ALA:HA	65:SP:42:ARG:NH2	2.05	0.71
48:4:752:PRO:CD	48:4:755:VAL:CG2	2.67	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:111:PHE:CE1	48:4:809:PHE:CE2	2.77	0.71
48:4:808:ALA:C	48:4:810:PRO:HD3	2.06	0.71
1:5:153:G:N3	1:5:154:G:C8	2.58	0.71
1:5:1628:C:C2	1:5:1629:G:N7	2.55	0.71
1:5:1936:C:N3	1:5:1937:C:H5'	1.89	0.71
1:5:1945:G:H2'	1:5:1946:G:H5'	1.71	0.71
1:5:1993:C:N4	1:5:2002:A:C5	2.58	0.71
1:5:2534:C:O2'	1:5:2535:G:H5'	1.90	0.71
1:5:4151:G:C2	1:5:4152:G:C8	2.79	0.71
1:5:4687:A:C2	1:5:4688:C:C6	2.79	0.71
1:5:936:C:H2'	16:M:46:ARG:NH1	2.03	0.71
1:5:93:G:O2'	1:5:94:A:C8	2.44	0.71
11:H:156:ASN:OD1	11:H:157:SER:CA	2.38	0.71
14:K:113:ALA:O	14:K:116:MET:CG	2.32	0.71
14:K:86:LYS:HA	14:K:104:ILE:HG12	1.72	0.71
49:S2:1596:U:C4	49:S2:1597:C:C5	2.79	0.71
49:S2:38:A:N1	49:S2:515:G:C2	2.59	0.71
49:S2:66:G:C5	49:S2:68:A:C8	2.78	0.71
57:SH:154:ILE:HB	57:SH:185:VAL:HG22	1.72	0.71
61:SL:112:HIS:HB3	61:SL:141:ASN:OD1	1.90	0.71
48:4:517:LEU:HB3	48:4:518:PRO:HD3	1.73	0.71
48:4:749:ILE:HD12	48:4:759:ILE:HG13	1.73	0.71
48:4:826:ASP:OD1	48:4:827:ASN:C	2.29	0.71
48:4:12:ILE:CG2	48:4:99:LEU:HD22	2.19	0.71
1:5:1246:G:C5	1:5:1247:U:C5	2.78	0.71
1:5:161:G:N2	1:5:275:C:N3	2.35	0.71
1:5:2515:G:O6	1:5:2516:G:C4	2.43	0.71
1:5:2690:C:N3	1:5:2691:U:C5	2.59	0.71
1:5:167:C:C2	1:5:269:G:C2	2.79	0.71
1:5:2842:G:C2	1:5:2843:U:C6	2.78	0.71
1:5:1601:A:N7	1:5:3643:A:C8	2.59	0.71
1:5:3702:A:N3	1:5:3702:A:H2'	2.04	0.71
1:5:2366:A:C2	1:5:3851:U:C1'	2.73	0.71
1:5:4240:G:C5	1:5:4241:C:C6	2.77	0.71
1:5:4285:U:O2	1:5:4286:C:C6	2.43	0.71
1:5:4743:G:C2	1:5:4744:A:C8	2.79	0.71
1:5:989:U:H2'	1:5:990:C:C5	2.26	0.71
2:7:18:C:O2	2:7:19:C:H6	1.71	0.71
2:7:33:U:C2	2:7:34:C:C6	2.79	0.71
49:S2:106:C:C2	49:S2:107:A:N7	2.58	0.71
49:S2:1407:U:C2'	49:S2:1408:U:C6	2.69	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1708:C:C2	49:S2:1709:G:C8	2.78	0.71
49:S2:50:A:N1	49:S2:488:U:C4	2.57	0.71
49:S2:600:G:N7	49:S2:631:U:C5	2.59	0.71
49:S2:842:C:N3	49:S2:843:C:C5	2.59	0.71
49:S2:1123:C:O2'	51:SB:148:ASN:ND2	2.24	0.71
48:4:191:THR:HG21	48:4:192:TYR:CE1	2.25	0.71
48:4:208:VAL:CG1	48:4:258:LYS:HA	2.20	0.71
48:4:3:ASN:CA	48:4:45:ILE:O	2.28	0.71
48:4:571:LYS:HA	48:4:571:LYS:CE	2.20	0.71
1:5:1672:U:N3	1:5:1673:U:C4	2.59	0.71
1:5:2734:U:O2	1:5:2735:G:C8	2.43	0.71
1:5:4652:G:N2	1:5:4653:C:C2	2.58	0.71
1:5:5001:U:C2'	1:5:5002:U:O5'	2.38	0.71
1:5:86:U:O2	1:5:86:U:C2'	2.38	0.71
1:5:423:G:H1	3:8:10:G:H1	1.39	0.71
1:5:4117:U:C2	4:A:40:TYR:HE1	2.08	0.71
14:K:116:MET:CB	14:K:117:ARG:HH21	2.02	0.71
14:K:123:ARG:CB	14:K:129:ILE:HD13	1.45	0.71
49:S2:112:U:H1'	49:S2:114:G:O6	1.91	0.71
49:S2:1396:A:H2'	49:S2:1398:G:N7	2.05	0.71
49:S2:426:A:C2	49:S2:427:U:C6	2.78	0.71
49:S2:114:G:O4'	61:SL:132:ARG:HD2	1.90	0.71
48:4:205:ILE:O	48:4:206:ASP:CG	2.29	0.71
48:4:543:GLU:CG	48:4:576:VAL:HG23	1.98	0.71
48:4:762:VAL:HG21	48:4:800:LEU:HD12	0.84	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
1:5:2457: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
1:5:158:A:C6	1:5:277:G:C6	2.78	0.71
1:5:4315:A:H2'	1:5:4316:G:H5'	1.72	0.71
1:5:4765:G:H22	1:5:4869:U:H3	1.38	0.71
1:5:977:C:C2	1:5:978:G:N7	2.42	0.71
1:5:986:C:C2	1:5:1068:G:C2	2.79	0.71
2:7:19:C:H2'	2:7:19:C:O2	1.91	0.71
2:7:43:U:C4	2:7:44:C:C5	2.78	0.71
3:8:132:G:C6	3:8:133:G:N7	2.58	0.71
3:8:81:C:O2	3:8:83:C:P	2.49	0.71
3:8:95:A:C6	3:8:96:C:C5	2.79	0.71
11:H:61:TRP:HZ2	22:S:152:PHE:CE2	2.08	0.71
14:K:38:SER:OG	14:K:39:PRO:CD	2.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1709:G:N2	49:S2:1710:C:C2	2.58	0.71
49:S2:381:C:N4	58:SI:49:ARG:CD	2.54	0.71
48:4:574:ASP:HB3	48:4:576:VAL:N	2.06	0.71
1:5:171:U:O2	1:5:266:C:N4	2.23	0.71
1:5:1948:G:H1	1:5:2034:G:H1	1.36	0.71
1:5:2058:G:N1	1:5:2059:C:C4	2.59	0.71
1:5:2449:A:C8	1:5:2450:G:C1'	2.73	0.71
1:5:2508:U:N3	1:5:2509:C:C5	2.59	0.71
1:5:2590:G:C6	1:5:2754:G:N1	2.59	0.71
1:5:27:C:C2	1:5:28:C:C6	2.78	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
1:5:3762:U:H2'	1:5:3763:A:O4'	1.91	0.71
1:5:4096:C:C5	1:5:4097:G:C8	2.79	0.71
1:5:424:U:H3	1:5:425:U:H5	1.36	0.71
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
1:5:4932:U:H2'	1:5:4933:C:O4'	1.90	0.71
1:5:738:C:C2	1:5:739:G:C8	2.79	0.71
2:7:59:G:N1	2:7:60:G:C5	2.59	0.71
3:8:74:U:O2	3:8:74:U:H2'	1.90	0.71
3:8:86:U:H3'	3:8:86:U:C6	2.26	0.71
2:7:42:A:H1'	13:J:75:ARG:HH12	1.56	0.71
16:M:3:PHE:HB2	16:M:6:PHE:HZ	1.53	0.71
49:S2:1073:U:C2	49:S2:1074:C:C6	2.79	0.71
49:S2:379:C:C2	49:S2:380:G:N7	2.59	0.71
49:S2:600:G:N7	49:S2:631:U:C4	2.59	0.71
49:S2:654:A:C5	49:S2:655:A:C2	2.79	0.71
49:S2:974:C:C4	49:S2:975:G:N7	2.59	0.71
48:4:544:HIS:CE1	73:SX:97:ASN:HD22	2.09	0.71
48:4:27:HIS:HB3	48:4:30:HIS:CE1	2.25	0.71
1:5:1628:C:N3	1:5:1629:G:C8	2.58	0.71
1:5:1692:C:N3	1:5:1693:U:C5	2.58	0.71
1:5:1991:A:C3'	1:5:1992:U:H5''	2.20	0.71
1:5:2784:C:C2	1:5:2785:C:C6	2.78	0.71
1:5:289:C:C2	1:5:290:U:C5	2.79	0.71
1:5:1866:U:C4	1:5:4405:G:O4'	2.43	0.71
1:5:491:G:N2	1:5:663:G:H1	1.89	0.71
1:5:5025:C:H2'	1:5:5028:G:O4'	1.89	0.71
1:5:662:C:C2	1:5:663:G:N7	2.58	0.71
2:7:43:U:O2	2:7:44:C:C6	2.43	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:58:A:C6	2:7:59:G:C5	2.79	0.71
14:K:124:GLU:N	14:K:128:THR:OG1	2.23	0.71
49:S2:118:C:H1'	49:S2:445:A:C2	2.26	0.71
49:S2:1452:A:H4'	49:S2:1453:C:O4'	1.90	0.71
49:S2:470:G:H2'	49:S2:471:G:C8	2.26	0.71
49:S2:795:A:C4	49:S2:796:G:C8	2.79	0.71
64:SO:147:ARG:HB2	64:SO:147:ARG:NH1	2.05	0.71
7:D:17:GLN:HG3	23:T:20:ARG:CA	2.20	0.71
48:4:330:LYS:HB2	48:4:330:LYS:NZ	2.06	0.70
48:4:58:ASP:CA	48:4:63:GLU:OE1	2.40	0.70
48:4:762:VAL:O	48:4:766:LYS:HD3	1.91	0.70
48:4:767:ARG:NH2	48:4:792:GLU:CG	2.52	0.70
48:4:801:ARG:HD2	48:4:802:SER:N	2.06	0.70
48:4:845:LYS:NZ	48:4:845:LYS:HA	2.06	0.70
1:5:1066:G:H2'	1:5:1067:G:O4'	1.91	0.70
1:5:1238:A:H2'	1:5:1239:C:C5	2.25	0.70
1:5:2290:C:N3	1:5:2291:G:C8	2.58	0.70
1:5:259:C:C4	1:5:260:C:C5	2.79	0.70
1:5:3693:U:N3	1:5:3694:U:C6	2.59	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
1:5:4561:C:C2	1:5:4562:C:C5	2.79	0.70
1:5:489:C:C2	1:5:490:C:C6	2.79	0.70
14:K:86:LYS:HA	14:K:104:ILE:CG1	2.21	0.70
49:S2:1573:G:C6	49:S2:1574:C:C5	2.79	0.70
49:S2:1606:G:C2	49:S2:1632:G:N2	2.58	0.70
49:S2:1772:C:C2	49:S2:1773:C:C5	2.79	0.70
49:S2:466:G:O2'	56:SG:59:GLN:NE2	2.23	0.70
49:S2:86:C:C4	49:S2:87:U:C5	2.79	0.70
49:S2:924:G:C5	49:S2:925:G:C8	2.79	0.70
48:4:72:SER:CA	48:4:104:ASP:HB3	2.20	0.70
48:4:13:MET:SD	48:4:465:PRO:CD	2.71	0.70
48:4:144:ARG:CZ	48:4:781:MET:HE1	2.21	0.70
48:4:685:TRP:CZ3	48:4:723:PRO:HD3	2.23	0.70
48:4:771:PHE:CB	48:4:785:LYS:HB3	2.21	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
1:5:1950:U:O2	1:5:1951:G:C8	2.44	0.70
1:5:1971:C:C2	1:5:1972:G:C8	2.78	0.70
1:5:2726:G:C4	1:5:2727:C:C5	2.79	0.70
1:5:2851:G:N3	1:5:2851:G:H2'	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:330:G:N2	1:5:331:G:C4	2.58	0.70
1:5:3591:C:H2'	1:5:3591:C:O2	1.91	0.70
1:5:3729:U:C4	1:5:3730:U:C5	2.79	0.70
1:5:3858:C:O2	1:5:3858:C:H2'	1.91	0.70
1:5:4229:U:C4	1:5:4230:C:C6	2.78	0.70
1:5:4230:C:N3	1:5:4231:C:C5	2.57	0.70
1:5:737:C:H2'	1:5:738:C:O4'	1.91	0.70
3:8:106:G:C6	3:8:107:C:N4	2.59	0.70
3:8:82:A:C6	3:8:83:C:H5''	2.26	0.70
49:S2:1061:U:H3	49:S2:1848:U:HO2'	1.38	0.70
49:S2:1418:C:N4	49:S2:1421:A:H62	1.88	0.70
49:S2:1434:C:C2'	49:S2:1435:C:O4'	2.39	0.70
49:S2:1842:C:H2'	49:S2:1843:G:O5'	1.91	0.70
49:S2:493:A:N7	49:S2:574:A:N7	2.39	0.70
49:S2:530:U:C2	49:S2:531:A:C8	2.79	0.70
49:S2:636:C:C4	49:S2:637:U:C5	2.79	0.70
49:S2:993:G:C5	49:S2:994:C:C5	2.79	0.70
55:SF:91:ARG:O	55:SF:95:HIS:HB2	1.91	0.70
25:V:97:TYR:OH	26:W:21:TYR:N	2.24	0.70
48:4:162:ARG:HG3	48:4:166:GLU:HG2	1.72	0.70
48:4:206:ASP:HA	48:4:212:VAL:HG21	1.73	0.70
1:5:1635:C:C2	1:5:1636:U:C5	2.78	0.70
1:5:1993:C:O2	14:K:135:THR:OG1	2.04	0.70
1:5:2055:G:C5'	1:5:2056:G:H5'	2.21	0.70
1:5:2113:G:H8	1:5:2115:G:H1'	1.53	0.70
1:5:235:A:C6	1:5:238:C:C5	2.79	0.70
1:5:2453:A:N1	1:5:2454:U:C6	2.58	0.70
1:5:488:G:N2	1:5:489:C:C2	2.59	0.70
1:5:4729:A:C4'	1:5:4965:U:O2'	2.38	0.70
1:5:5003:U:H2'	1:5:5004:C:O4'	1.92	0.70
1:5:69:A:H3'	1:5:70:A:H8	1.54	0.70
1:5:920:C:H2'	1:5:921:C:O4'	1.90	0.70
3:8:15:G:H2'	3:8:16:G:H1'	1.74	0.70
1:5:18:C:H4'	17:N:138:PHE:CE2	2.25	0.70
49:S2:1224:G:C2	49:S2:1643:U:N3	2.58	0.70
49:S2:449:A:N1	49:S2:452:G:C5	2.60	0.70
49:S2:460:A:N3	49:S2:461:U:C5	2.55	0.70
49:S2:53:C:C2	49:S2:54:A:C8	2.79	0.70
49:S2:56:G:H2'	49:S2:57:U:O5'	1.89	0.70
49:S2:898:U:C4	49:S2:899:U:C5	2.79	0.70
68:SS:81:ASP:O	68:SS:87:GLN:NE2	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:60:ARG:NH1	48:4:60:ARG:CG	2.30	0.70
48:4:848:ILE:HG23	48:4:849:PRO:N	2.06	0.70
1:5:1074:G:H2'	1:5:1075:G:C1'	2.22	0.70
1:5:1266:G:N2	1:5:1268:G:C6	2.59	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	2.79	0.70
1:5:5010:U:C2	1:5:5011:A:C8	2.80	0.70
1:5:5029:C:C2	1:5:5030:U:C6	2.79	0.70
14:K:97:ASN:C	14:K:98:ILE:HG13	2.11	0.70
49:S2:1417:C:O2	49:S2:1419:C:C6	2.44	0.70
49:S2:1739:C:N3	49:S2:1740:C:C5	2.60	0.70
49:S2:64:A:H2	49:S2:83:A:H62	1.38	0.70
48:4:340:MET:CE	48:4:340:MET:HA	2.21	0.70
48:4:56:PHE:CE1	48:4:455:GLY:HA3	1.89	0.70
48:4:10:ARG:CZ	48:4:465:PRO:HD3	2.21	0.70
48:4:16:LYS:HD3	48:4:466:CYS:O	1.92	0.70
48:4:410:PHE:CE2	48:4:530:SER:HB2	2.27	0.70
48:4:692:LEU:CD2	48:4:734:LEU:CD2	2.69	0.70
1:5:1167:C:C2	1:5:1195:G:C2	2.80	0.70
1:5:1213:G:C6	1:5:1215:C:N1	2.59	0.70
1:5:1358:G:C2	1:5:1359:G:C6	2.79	0.70
1:5:189:G:N2	1:5:190:G:C5	2.59	0.70
1:5:2089:G:C6	1:5:2263:A:N7	2.60	0.70
1:5:2507:A:N1	1:5:2508:U:H1'	2.06	0.70
1:5:2658:G:C6	1:5:2675:G:C6	2.78	0.70
1:5:4240:G:C4	1:5:4241:C:C6	2.79	0.70
1:5:4355:G:C2	1:5:4356:G:C5	2.79	0.70
1:5:4735:G:N1	1:5:4736:C:C4	2.59	0.70
1:5:512:U:H2'	1:5:513:U:H5''	1.73	0.70
1:5:977:C:C2	1:5:978:G:H8	1.96	0.70
2:7:59:G:N1	2:7:60:G:C8	2.59	0.70
6:C:210:ILE:HD13	6:C:252:TRP:CZ3	2.26	0.70
1:5:1724:G:N2	9:F:105:PRO:HB3	2.06	0.70
1:5:942:G:OP2	9:F:244:ARG:NH1	2.22	0.70
10:G:264:LYS:CE	10:G:265:LEU:CD2	2.66	0.70
14:K:160:VAL:O	14:K:163:PRO:HG2	1.86	0.70
14:K:48:LYS:HG2	14:K:52:ASP:OD2	1.92	0.70
18:O:73:PHE:HB2	18:O:78:ARG:HB3	1.74	0.70
49:S2:1501:C:C2	49:S2:1502:C:C6	2.80	0.70
49:S2:1562:C:N3	49:S2:1563:G:N7	2.39	0.70
49:S2:1593:C:O2	49:S2:1593:C:H2'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1793:A:C2	49:S2:1794:C:C6	2.78	0.70
69:ST:52:TRP:CZ3	69:ST:53:PHE:HB2	2.27	0.70
48:4:692:LEU:HD13	48:4:734:LEU:CD1	1.87	0.70
1:5:1475:G:N2	1:5:1489:G:H1	1.89	0.70
1:5:1629:G:C4	1:5:1631:A:N6	2.60	0.70
1:5:1780:A:C2	1:5:1781:U:H1'	2.27	0.70
1:5:1828:C:C2	1:5:1829:G:C8	2.79	0.70
1:5:1876:U:N3	1:5:1877:G:C8	2.59	0.70
1:5:189:G:C2	1:5:190:G:C5	2.79	0.70
1:5:2054:U:H4'	1:5:2056:G:H1'	1.71	0.70
1:5:208:A:H3'	1:5:209:U:H5''	1.73	0.70
1:5:2289:C:H2'	1:5:2289:C:O2	1.90	0.70
1:5:3695:U:N3	1:5:3696:C:C6	2.59	0.70
1:5:4285:U:H2'	1:5:4286:C:H6	1.55	0.70
1:5:433:A:C2	1:5:3867:A:H4'	2.26	0.70
1:5:472:C:C2	1:5:473:C:C5	2.80	0.70
2:7:17:C:C2	2:7:18:C:C6	2.79	0.70
7:D:21:ARG:HH12	7:D:22:ARG:HG2	1.55	0.70
14:K:121:LEU:HD13	14:K:129:ILE:CD1	2.08	0.70
49:S2:119:U:N3	49:S2:120:U:C6	2.58	0.70
49:S2:2:A:C8	52:SC:223:TYR:HB3	2.27	0.70
49:S2:1109:C:H41	67:SR:123:THR:N	1.90	0.70
26:W:44:ARG:HH11	26:W:44:ARG:HG3	1.55	0.70
27:X:119:ILE:HD12	27:X:149:VAL:HG21	1.73	0.70
48:4:397:TYR:CE1	48:4:496:VAL:HG12	2.17	0.70
48:4:502:SER:O	48:4:504:VAL:CG2	2.36	0.70
48:4:64:GLN:CD	48:4:64:GLN:O	2.30	0.70
48:4:745:TYR:N	48:4:815:ASP:HB3	2.06	0.70
1:5:1410:U:H5	1:5:1815:G:C2	2.08	0.70
1:5:1476:C:C2	1:5:1477:C:C5	2.79	0.70
1:5:1755:C:O2'	1:5:1756:U:OP1	2.10	0.70
1:5:2367:A:C2	1:5:2368:A:C5	2.79	0.70
1:5:2481:G:C2	1:5:2498:C:C2	2.80	0.70
1:5:2770:C:C2	1:5:2771:G:C8	2.80	0.70
1:5:3591:C:N3	1:5:3592:G:C8	2.60	0.70
1:5:3695:U:C2	1:5:3696:C:C6	2.79	0.70
1:5:3880:G:O2'	1:5:3881:G:C8	2.42	0.70
1:5:4093:G:C2'	1:5:4094:G:H5''	2.21	0.70
1:5:4483:C:C2	1:5:4484:A:C8	2.80	0.70
1:5:4484:A:C2	1:5:4485:C:C5	2.79	0.70
1:5:5031:G:N2	1:5:5032:C:C2	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:692:A:C2	1:5:693:C:C5	2.79	0.70
1:5:964:A:C8	1:5:964:A:C3'	2.74	0.70
4:A:109:GLU:OE2	49:S2:980:A:OP1	2.10	0.70
14:K:117:ARG:HG2	14:K:133:LEU:HD13	1.74	0.70
15:L:64:VAL:HA	15:L:67:HIS:HD2	1.55	0.70
49:S2:167:G:N1	49:S2:168:C:C4	2.60	0.70
49:S2:908:A:C2	49:S2:909:G:C5	2.79	0.70
53:SD:157:MET:HG3	53:SD:159:HIS:HE1	1.55	0.70
53:SD:67:ARG:HH11	53:SD:67:ARG:HG3	1.57	0.70
49:S2:428:U:H5	59:SJ:7:TRP:CH2	2.10	0.70
72:SW:88:LYS:O	72:SW:92:ASN:OD1	2.10	0.70
1:5:1280:C:C4	1:5:1282:G:O6	2.44	0.70
1:5:1673:U:N3	1:5:1682:A:C2	2.59	0.70
1:5:2266:C:O2'	1:5:2267:U:OP2	2.09	0.70
1:5:2314:G:H2'	1:5:2314:G:N3	2.05	0.70
1:5:208:A:H1'	1:5:232:G:H21	1.48	0.70
1:5:244:G:N2	1:5:246:G:H1'	2.07	0.70
1:5:2529:A:C5	1:5:2532:C:C6	2.79	0.70
1:5:738:C:C2	1:5:739:G:N7	2.60	0.70
1:5:990:C:N3	1:5:991:C:C5	2.59	0.70
3:8:11:C:C2	3:8:12:G:H8	2.01	0.70
10:G:81:ASN:HD21	10:G:238:GLY:CA	2.04	0.70
14:K:22:VAL:CG2	14:K:48:LYS:HG3	2.21	0.70
19:P:64:ASN:HB2	19:P:80:GLN:OE1	1.91	0.70
49:S2:1137:U:H3	49:S2:1148:A:N6	1.89	0.70
49:S2:184:G:C2	49:S2:185:G:C8	2.79	0.70
49:S2:493:A:H8	49:S2:574:A:C8	2.05	0.70
49:S2:632:C:C2	49:S2:633:C:C5	2.80	0.70
49:S2:666:U:C2	49:S2:667:U:C5	2.79	0.70
49:S2:863:U:C2	49:S2:864:A:N7	2.60	0.70
48:4:228:PHE:HE1	48:4:232:TYR:OH	1.73	0.70
48:4:37:ASP:OD2	48:4:54:THR:CB	2.35	0.70
48:4:697:MET:SD	48:4:702:PHE:CE2	2.85	0.70
48:4:744:ILE:HG12	48:4:745:TYR:H	1.55	0.70
48:4:752:PRO:O	48:4:754:GLN:CG	2.34	0.70
1:5:1049:C:C2	1:5:1050:C:C5	2.79	0.70
1:5:1444:G:H2'	1:5:1445:U:C5	2.25	0.70
1:5:1516:G:C5	1:5:1518:A:C8	2.79	0.70
1:5:2080:U:N3	1:5:2081:C:C4	2.59	0.70
1:5:2277:C:H2'	1:5:2277:C:O2	1.89	0.70
1:5:231:U:H4'	28:Y:100:HIS:CD2	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2623:A:C2	1:5:2624:G:C8	2.80	0.70
1:5:4236:G:O2'	1:5:4237:C:O4'	2.08	0.70
1:5:60:G:C4	1:5:61:A:C8	2.80	0.70
3:8:13:G:C2	3:8:14:U:C2	2.80	0.70
1:5:4121:G:H22	4:A:84:THR:HB	1.55	0.70
1:5:2124:G:H22	9:F:32:ILE:HG13	1.56	0.70
12:I:47:PRO:HA	12:I:171:TRP:HE1	1.56	0.70
14:K:40:LYS:O	14:K:44:ASP:HB2	1.90	0.70
49:S2:1146:C:N3	49:S2:1147:C:C5	2.60	0.70
49:S2:1265:A:N3	49:S2:1266:C:H6	1.89	0.70
49:S2:1453:C:N4	49:S2:1455:A:C1'	2.53	0.70
49:S2:148:U:N3	49:S2:149:A:N7	2.39	0.70
49:S2:1526:G:C2	49:S2:1527:C:C6	2.79	0.70
49:S2:1740:C:N3	49:S2:1741:U:C5	2.60	0.70
49:S2:70:G:C4	49:S2:71:G:C8	2.80	0.70
49:S2:792:C:C4	49:S2:793:G:N7	2.60	0.70
49:S2:862:A:C8	72:SW:107:SER:HA	2.27	0.70
27:X:73:HIS:O	27:X:116:LEU:HD11	1.92	0.70
48:4:126:LEU:HD21	48:4:156:MET:SD	2.32	0.70
48:4:143:LEU:HD21	48:4:189:ILE:CD1	2.22	0.70
48:4:394:LEU:H	48:4:487:THR:CG2	2.04	0.70
48:4:501:VAL:O	48:4:502:SER:C	2.30	0.70
48:4:616:ASP:HA	48:4:621:GLU:OE1	1.92	0.70
48:4:829:SER:CB	48:4:832:SER:N	2.53	0.70
1:5:1188:C:O2	1:5:1189:G:H8	1.73	0.70
1:5:1339:U:O2	1:5:1340:C:C5	2.45	0.70
1:5:2021:G:C5	1:5:2022:C:C5	2.80	0.70
1:5:2086:G:H2'	1:5:2087:C:O4'	1.92	0.70
1:5:2301:G:N2	1:5:2302:C:C2	2.60	0.70
1:5:2529:A:N7	1:5:2532:C:C5	2.60	0.70
1:5:2552:G:OP2	1:5:2553:A:H2'	1.91	0.70
1:5:2589:C:C4	1:5:2590:G:C5	2.80	0.70
1:5:3621:A:C5	1:5:3622:C:C5	2.79	0.70
1:5:3702:A:C2	1:5:3703:G:H8	2.02	0.70
1:5:3794:C:N3	1:5:3795:A:C8	2.60	0.70
1:5:4093:G:O6	1:5:4115:G:O6	2.09	0.70
1:5:4509:U:H2'	1:5:4510:A:H2'	1.74	0.70
1:5:4536:C:N3	1:5:4537:C:C5	2.59	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
1:5:752:G:C5	1:5:753:C:C5	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:123:VAL:HG13	7:D:248:ARG:HH22	1.57	0.70
21:R:108:ARG:HH11	21:R:108:ARG:HG2	1.57	0.70
49:S2:1095:U:C4	49:S2:1149:A:C6	2.79	0.70
49:S2:1112:U:C4	49:S2:1113:A:C5	2.79	0.70
49:S2:122:G:C5	49:S2:123:G:C8	2.80	0.70
49:S2:1258:A:H62	49:S2:1659:U:H3	1.38	0.70
1:5:3759:A:N1	49:S2:1709:G:H5'	2.06	0.70
49:S2:1747:C:H2'	49:S2:1748:G:O4'	1.91	0.70
49:S2:1805:G:C2	49:S2:1806:A:C8	2.80	0.70
49:S2:18:C:O4'	49:S2:1194:A:N6	2.25	0.70
49:S2:477:G:C2	49:S2:478:G:C8	2.80	0.70
49:S2:859:G:C2	49:S2:860:G:C8	2.80	0.70
49:S2:993:G:H1	49:S2:999:G:H1	1.38	0.70
48:4:116:THR:HB	48:4:499:PHE:HB3	1.74	0.69
48:4:120:ARG:O	48:4:368:ARG:NH2	2.20	0.69
48:4:178:PHE:O	48:4:182:VAL:HG23	1.91	0.69
48:4:511:ALA:HB2	48:4:520:LEU:HD22	1.74	0.69
48:4:640:GLU:CD	48:4:640:GLU:O	2.31	0.69
48:4:690:GLY:HA2	48:4:730:TYR:CD1	2.27	0.69
1:5:1070:G:C2	1:5:1071:C:N1	2.60	0.69
1:5:2018:C:N3	1:5:2019:C:C6	2.60	0.69
1:5:2314:G:N2	1:5:2315:G:C4	2.60	0.69
1:5:330:G:C2	1:5:331:G:N7	2.59	0.69
1:5:3611:A:H4'	58:SI:92:ARG:NH2	2.05	0.69
1:5:3629:A:O2'	49:S2:1721:U:C2	2.44	0.69
1:5:3732:A:C2	1:5:3733:A:C5	2.80	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
1:5:4983:C:N3	1:5:4984:C:H5	1.82	0.69
1:5:1506:G:O2'	6:C:116:ASN:OD1	2.06	0.69
11:H:156:ASN:CG	11:H:157:SER:N	2.45	0.69
11:H:41:ILE:HD11	11:H:69:THR:OG1	1.92	0.69
19:P:54:GLN:CB	19:P:83:TRP:CD1	2.75	0.69
22:S:99:ASP:OD1	22:S:100:LEU:N	2.25	0.69
49:S2:1308:U:C2'	49:S2:1309:C:H6	2.02	0.69
49:S2:1378:A:H4'	49:S2:1379:A:O5'	1.91	0.69
49:S2:1417:C:O2	49:S2:1419:C:H6	1.75	0.69
49:S2:1643:U:C2	49:S2:1644:C:C4	2.80	0.69
49:S2:309:G:N1	49:S2:310:C:C4	2.59	0.69
49:S2:404:G:C2	49:S2:405:G:C8	2.80	0.69
49:S2:996:A:O2'	49:S2:997:A:C5'	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SG:209:TYR:CE2	56:SG:213:LEU:HD23	2.26	0.69
48:4:394:LEU:HD23	48:4:485:ILE:HG22	1.73	0.69
48:4:497:MET:HA	48:4:499:PHE:CE1	2.27	0.69
48:4:502:SER:C	48:4:504:VAL:N	2.41	0.69
48:4:756:VAL:CG2	48:4:782:PHE:HB2	2.17	0.69
1:5:1264:C:N3	1:5:1265:G:N7	2.40	0.69
1:5:1313:C:N3	1:5:1323:A:C8	2.60	0.69
1:5:1780:A:C6	1:5:1781:U:C6	2.80	0.69
1:5:2018:C:O2'	1:5:2019:C:H5'	1.91	0.69
1:5:2318:G:N2	1:5:2320:G:O2'	2.25	0.69
1:5:2347:A:N3	1:5:2348:G:C6	2.60	0.69
1:5:2713:C:N3	1:5:2714:G:N7	2.39	0.69
1:5:2726:G:N2	1:5:2727:C:C2	2.60	0.69
1:5:4561:C:O2	1:5:4561:C:C2'	2.39	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
10:G:231:ASN:HD22	10:G:231:ASN:N	1.88	0.69
49:S2:1446:A:HO2'	49:S2:1447:G:H8	1.39	0.69
49:S2:1839:U:N3	49:S2:1840:U:C5	2.60	0.69
49:S2:219:U:N3	49:S2:220:U:C5	2.60	0.69
49:S2:309:G:N3	49:S2:310:C:C5	2.60	0.69
49:S2:399:C:O4'	73:SX:11:ARG:NH1	2.24	0.69
49:S2:640:A:O2'	49:S2:641:A:O4'	2.09	0.69
49:S2:863:U:C2	49:S2:864:A:C8	2.80	0.69
49:S2:926:A:C2	49:S2:927:C:C6	2.80	0.69
48:4:60:ARG:O	48:4:61:LYS:C	2.31	0.69
48:4:613:LEU:HD13	48:4:639:TYR:HB2	1.70	0.69
1:5:1629:G:H2'	1:5:1631:A:N7	2.07	0.69
1:5:1634:A:N1	1:5:1635:C:C4	2.60	0.69
1:5:1688:G:N2	1:5:1849:U:O2	2.25	0.69
1:5:2019:C:H2'	1:5:2020:U:H5''	1.74	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
1:5:3909:C:H2'	1:5:3909:C:O2	1.92	0.69
1:5:445:U:H2'	1:5:446:C:O4'	1.92	0.69
1:5:4579:U:C2	1:5:4580:U:C5	2.79	0.69
1:5:472:C:C4	1:5:473:C:C5	2.80	0.69
1:5:48:G:H5'	17:N:192:TRP:NE1	2.01	0.69
16:M:36:ALA:HB2	16:M:52:PHE:CE1	2.28	0.69
17:N:124:ASP:OD1	17:N:125:SER:N	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1063:C:O4'	49:S2:1838:U:O4	2.08	0.69
49:S2:1303:C:C5	49:S2:1304:U:C5	2.80	0.69
49:S2:1569:A:C8	49:S2:1570:G:C1'	2.75	0.69
49:S2:495:U:O2'	49:S2:496:C:C5'	2.40	0.69
49:S2:68:A:H2'	49:S2:69:C:O4'	1.92	0.69
49:S2:841:G:N2	49:S2:842:C:C4	2.61	0.69
49:S2:925:G:N3	49:S2:925:G:H2'	2.07	0.69
49:S2:1746:U:H4'	56:SG:65:GLN:HE22	1.56	0.69
48:4:393:PRO:O	48:4:393:PRO:CG	2.40	0.69
48:4:3:ASN:ND2	48:4:3:ASN:N	2.39	0.69
48:4:49:ALA:N	48:4:55:ARG:NH2	2.40	0.69
48:4:740:LEU:HB3	48:4:831:PRO:HB3	0.78	0.69
1:5:1543:G:C2	1:5:1544:G:C8	2.80	0.69
1:5:1625:G:C5	1:5:1642:A:C2	2.81	0.69
1:5:1667:G:N2	1:5:2283:G:C6	2.60	0.69
1:5:2632:U:O2	1:5:2633:U:C6	2.45	0.69
1:5:3909:C:N3	1:5:3910:C:C6	2.61	0.69
1:5:459:C:C2	1:5:460:C:C6	2.79	0.69
1:5:469:C:H2'	1:5:470:A:O4'	1.93	0.69
2:7:114:U:C2'	2:7:115:A:H5''	2.21	0.69
10:G:102:TYR:OH	10:G:207:VAL:HA	1.91	0.69
49:S2:1642:U:O2	49:S2:1643:U:H5	1.74	0.69
49:S2:1755:C:N3	49:S2:1756:C:C6	2.61	0.69
49:S2:1794:C:C2	49:S2:1795:G:C8	2.79	0.69
49:S2:42:A:C2	49:S2:43:U:C5	2.80	0.69
25:V:82:ILE:HG22	25:V:83:ARG:HG3	1.72	0.69
48:4:813:VAL:HG13	48:4:814:PHE:H	1.56	0.69
48:4:830:ARG:HB2	48:4:831:PRO:HD3	1.72	0.69
1:5:1216:C:C4	1:5:1217:G:N7	2.61	0.69
1:5:1219:G:C2	1:5:1220:G:C8	2.81	0.69
1:5:125:C:C2	1:5:126:C:C6	2.81	0.69
1:5:1876:U:N3	1:5:1877:G:N7	2.41	0.69
1:5:2058:G:C6	1:5:2059:C:C5	2.80	0.69
1:5:1899:G:C1'	1:5:2278:G:N2	2.55	0.69
1:5:2721:G:H2'	1:5:2722:G:H5'	1.75	0.69
1:5:4199:C:O5'	1:5:4199:C:C6	2.45	0.69
1:5:4240:G:C6	1:5:4241:C:C4	2.80	0.69
1:5:4878:C:O2	1:5:4879:C:C6	2.45	0.69
1:5:70:A:C2	1:5:4355:G:C1'	2.75	0.69
1:5:917:A:N1	1:5:919:C:C5	2.60	0.69
7:D:210:TYR:OH	7:D:214:GLU:CG	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:141:CYS:CA	14:K:148:PRO:HD3	2.22	0.69
49:S2:1126:G:N2	49:S2:1127:C:C2	2.61	0.69
49:S2:1224:G:N7	49:S2:1225:U:C5	2.61	0.69
49:S2:1295:A:C5	49:S2:1296:U:H1'	2.27	0.69
49:S2:1307:U:H2'	49:S2:1308:U:H4'	1.72	0.69
49:S2:1401:A:H2'	49:S2:1402:A:C8	2.28	0.69
49:S2:1427:C:O2	49:S2:1428:G:C8	2.45	0.69
49:S2:1453:C:N3	49:S2:1455:A:H1'	2.05	0.69
49:S2:349:A:H4'	58:SI:27:TYR:CZ	2.28	0.69
49:S2:436:G:C2	49:S2:437:G:C8	2.79	0.69
49:S2:444:G:C6	49:S2:446:G:OP2	2.45	0.69
49:S2:977:C:N3	49:S2:978:G:C8	2.60	0.69
58:SI:34:ALA:HB2	58:SI:56:ARG:HD3	1.74	0.69
49:S2:1603:G:N7	68:SS:28:PHE:HE2	1.90	0.69
48:4:420:LEU:HB3	48:4:465:PRO:HA	1.72	0.69
1:5:4605:A:C6	48:4:801:ARG:HB2	2.28	0.69
1:5:1188:C:N3	1:5:1189:G:C8	2.60	0.69
1:5:1204:C:C2	1:5:1205:G:C8	2.81	0.69
1:5:1346:C:C2	1:5:1347:G:C8	2.80	0.69
1:5:1751:A:H2'	1:5:1752:G:H5'	1.73	0.69
1:5:1771:U:C2	1:5:1772:C:C6	2.81	0.69
1:5:1447:C:C2	1:5:2098:G:C2	2.80	0.69
1:5:2685:C:H2'	1:5:2686:G:O4'	1.91	0.69
1:5:272:U:C2	1:5:273:U:H5	2.10	0.69
1:5:3653:A:C2	1:5:3692:A:H4'	2.27	0.69
3:8:100:U:N3	3:8:101:C:C5	2.61	0.69
1:5:1724:G:H21	9:F:105:PRO:CB	2.04	0.69
11:H:89:ARG:HG2	11:H:89:ARG:HH11	5.56	0.69
49:S2:1283:C:H2'	49:S2:1283:C:O2	1.92	0.69
49:S2:1537:A:O2'	49:S2:1604:G:H5'	1.92	0.69
49:S2:140:C:N4	49:S2:176:U:O2	2.18	0.69
49:S2:600:G:C2	49:S2:601:G:C5	2.80	0.69
49:S2:994:C:O2	49:S2:995:G:C8	2.45	0.69
64:SO:150:ARG:HH21	64:SO:150:ARG:HG2	1.58	0.69
48:4:408:GLY:HA2	49:S2:479:C:C5'	2.23	0.69
48:4:420:LEU:HD23	48:4:420:LEU:H	1.58	0.69
48:4:120:ARG:HH11	48:4:496:VAL:HA	1.57	0.69
48:4:45:ILE:HG21	48:4:77:LEU:CA	2.21	0.69
1:5:1218:G:C6	1:5:1219:G:C1'	2.75	0.69
1:5:1598:C:C2'	1:5:1598:C:O2	2.39	0.69
1:5:2024:G:O2'	1:5:2025:A:OP2	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2494:U:C2	1:5:2495:U:C6	2.81	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
1:5:4743:G:N1	1:5:4744:A:C5	2.61	0.69
1:5:90:G:N7	1:5:92:C:N1	2.41	0.69
1:5:924:C:H2'	1:5:925:C:O4'	1.92	0.69
7:D:223:PHE:HB2	7:D:226:TYR:HB2	1.73	0.69
14:K:34:PRO:HD2	14:K:35:LEU:H	1.57	0.69
10:G:169:PHE:CE2	17:N:6:TYR:CB	2.75	0.69
49:S2:1030:A:C2	49:S2:1031:A:C5	2.81	0.69
49:S2:752:G:C6	49:S2:790:C:N4	2.60	0.69
70:SU:65:THR:O	70:SU:77:TRP:HB3	1.92	0.69
48:4:744:ILE:HD11	48:4:816:HIS:ND1	2.08	0.69
1:5:1545:G:C2	1:5:1546:C:C4	2.81	0.69
1:5:1563:A:H62	49:S2:1028:A:N6	1.81	0.69
1:5:1867:A:OP1	12:I:13:LYS:NZ	2.24	0.69
1:5:2424:G:H2'	1:5:2426:U:C5	2.27	0.69
1:5:3730:U:N3	1:5:3731:C:C5	2.61	0.69
1:5:3656:A:C4'	1:5:3747:A:C2	2.76	0.69
1:5:3773:U:H3	1:5:3774:A:H2'	1.58	0.69
1:5:3878:C:O2	5:B:258:HIS:CE1	2.43	0.69
1:5:4099:G:C6	1:5:4100:C:C4	2.81	0.69
1:5:422:C:C2	1:5:423:G:C8	2.81	0.69
1:5:4277:G:N3	1:5:4278:C:C6	2.61	0.69
1:5:4281:A:H2'	1:5:4282:A:H2'	1.74	0.69
1:5:491:G:C2	1:5:492:U:C5	2.80	0.69
1:5:86:U:O4	1:5:97:G:C2	2.44	0.69
1:5:992:C:C2	1:5:993:G:C8	2.81	0.69
49:S2:1083:A:N3	49:S2:1859:A:O2'	2.22	0.69
49:S2:1093:A:H4'	72:SW:3:ARG:HH22	1.58	0.69
49:S2:1406:G:H2'	49:S2:1407:U:C4'	2.23	0.69
49:S2:443:U:C4	49:S2:444:G:C8	2.80	0.69
49:S2:557:U:H2'	49:S2:558:G:O4'	1.93	0.69
49:S2:608:C:C2	49:S2:609:U:C6	2.80	0.69
49:S2:625:G:O4'	49:S2:629:A:C2	2.46	0.69
49:S2:598:G:C2	49:S2:639:C:N3	2.61	0.69
49:S2:797:C:H4'	49:S2:798:A:OP1	1.91	0.69
49:S2:804:U:C2	49:S2:805:U:C5	2.80	0.69
10:G:260:GLU:OE1	51:SB:57:ILE:HD13	1.93	0.69
24:U:38:ASN:O	24:U:90:TYR:OH	2.10	0.69
1:5:1084:C:N3	1:5:1085:C:C5	2.61	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:1994:C:N3	1:5:1995:G:N7	2.41	0.69
1:5:1267:C:C5'	1:5:2110:C:O2	2.39	0.69
1:5:2445:C:H2'	1:5:2445:C:O2	1.93	0.69
1:5:3635:A:N7	1:5:3636:C:C6	2.61	0.69
1:5:4561:C:O2	1:5:4562:C:C6	2.45	0.69
1:5:658:C:N3	1:5:659:G:N7	2.41	0.69
1:5:930:G:N3	1:5:931:C:C6	2.61	0.69
1:5:961:G:N3	1:5:961:G:C2'	2.55	0.69
5:B:175:GLN:HE21	5:B:179:HIS:HE1	1.41	0.69
11:H:117:PHE:CD1	11:H:118:LEU:HB2	2.28	0.69
49:S2:882:U:H2'	49:S2:883:U:O4'	1.91	0.69
49:S2:950:C:N3	49:S2:951:C:C5	2.61	0.69
49:S2:1022:U:H6	63:SN:128:TYR:HE2	1.39	0.69
48:4:592:LEU:HB2	48:4:603:TYR:CD2	2.28	0.69
48:4:683:PHE:CD1	48:4:729:LEU:HD21	2.28	0.69
1:5:146:G:N3	1:5:147:A:C8	2.60	0.69
1:5:1629:G:C2	1:5:1631:A:N1	2.61	0.69
1:5:1632:A:N6	1:5:1634:A:C4	2.61	0.69
1:5:1840:G:C2'	1:5:1842:G:O5'	2.41	0.69
1:5:2033:A:C2	1:5:2034:G:C8	2.80	0.69
1:5:2316:G:N2	1:5:2317:C:C2	2.61	0.69
1:5:290:U:C2	1:5:291:U:C5	2.81	0.69
1:5:4167:G:N1	1:5:4168:G:N7	2.41	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
1:5:4550:G:C2	1:5:4551:U:C6	2.80	0.69
1:5:957:G:OP2	1:5:1284:G:N2	2.23	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
1:5:1282:G:N7	8:E:124:HIS:CE1	2.61	0.69
49:S2:118:C:C5	49:S2:119:U:C5	2.80	0.69
49:S2:1786:U:N3	49:S2:1787:G:N7	2.40	0.69
49:S2:220:U:N3	49:S2:221:A:C8	2.61	0.69
49:S2:321:C:C2	49:S2:322:C:C5	2.80	0.69
49:S2:403:G:C6	49:S2:404:G:N7	2.60	0.69
49:S2:449:A:C2	49:S2:452:G:C8	2.81	0.69
49:S2:830:A:N6	49:S2:844:U:C2	2.60	0.69
49:S2:926:A:C6	49:S2:927:C:C4	2.80	0.69
49:S2:927:C:O2	49:S2:928:G:C8	2.46	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:296:PRO:HA	48:4:299:LYS:HE2	1.74	0.69
48:4:475:VAL:O	48:4:475:VAL:HG12	1.92	0.69
48:4:649:ILE:HD11	48:4:652:PHE:HE1	1.57	0.69
1:5:1272:C:O2'	1:5:1273:G:C4	2.46	0.69
1:5:2077:C:N3	1:5:2078:C:C5	2.61	0.69
1:5:2248:C:O2	1:5:2248:C:H2'	1.92	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
1:5:2744:A:H2'	1:5:2745:A:C8	2.28	0.69
1:5:3656:A:O4'	1:5:3747:A:C2	2.45	0.69
1:5:4070:U:N3	1:5:4071:U:C5	2.60	0.69
1:5:483:G:N1	1:5:484:U:C4	2.61	0.69
7:D:29:ASP:HB3	7:D:31:TYR:O	1.92	0.69
49:S2:1093:A:C6	49:S2:1094:C:C5	2.81	0.69
49:S2:1397:U:C5	49:S2:1442:U:H4'	2.28	0.69
49:S2:1540:G:C2	49:S2:1541:G:C5	2.81	0.69
49:S2:1775:U:C2	49:S2:1776:G:C8	2.81	0.69
49:S2:339:A:N1	49:S2:340:C:N4	2.41	0.69
49:S2:475:C:C4	49:S2:476:A:N7	2.61	0.69
49:S2:638:C:C2	49:S2:639:C:C5	2.81	0.69
49:S2:848:U:O2	49:S2:849:A:C5	2.45	0.69
49:S2:83:A:C2	49:S2:84:A:H1'	2.27	0.69
49:S2:994:C:C2	49:S2:995:G:H8	2.09	0.69
49:S2:999:G:C2	49:S2:1000:C:N1	2.61	0.69
1:5:187:U:C5	1:5:245:C:N3	2.61	0.68
1:5:195:C:O2	1:5:195:C:H2'	1.92	0.68
1:5:2076:G:C6	1:5:2077:C:C5	2.81	0.68
1:5:2270:G:C4	1:5:2271:C:C5	2.82	0.68
1:5:3635:A:C6	1:5:3636:C:H1'	2.28	0.68
1:5:3670:C:O2'	1:5:3671:G:C8	2.46	0.68
1:5:3692:A:N7	1:5:3693:U:C6	2.60	0.68
1:5:4152:G:N2	1:5:4153:C:C2	2.61	0.68
1:5:4229:U:C4	1:5:4230:C:C4	2.81	0.68
1:5:424:U:H2'	1:5:424:U:O2	1.93	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
9:F:149:LEU:CA	9:F:197:TYR:OH	2.41	0.68
49:S2:1413:G:C6	49:S2:1414:A:C8	2.80	0.68
49:S2:340:C:H2'	49:S2:341:C:C6	2.28	0.68
49:S2:53:C:H2'	49:S2:53:C:O2	1.93	0.68
49:S2:594:A:O5'	49:S2:594:A:H8	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:951:C:C2	49:S2:952:G:C8	2.80	0.68
1:5:5005:G:C5	26:W:51:TRP:HD1	2.11	0.68
48:4:144:ARG:O	48:4:147:ILE:HG22	1.93	0.68
48:4:74:ALA:O	48:4:75:ILE:CD1	2.37	0.68
1:5:1093:C:C2	1:5:1094:G:C8	2.81	0.68
1:5:2089:G:O2'	1:5:2090:U:O2	2.11	0.68
1:5:1269:G:C4	1:5:2111:G:N1	2.61	0.68
1:5:2294:G:C2	1:5:2295:C:C4	2.80	0.68
1:5:2371:U:H2'	1:5:2372:U:H5'	1.73	0.68
1:5:2688:G:N1	1:5:2689:C:C4	2.61	0.68
1:5:3629:A:C2'	49:S2:1721:U:N3	2.53	0.68
1:5:3759:A:H61	49:S2:1709:G:C5'	2.07	0.68
1:5:4093:G:H3'	1:5:4094:G:C5'	2.23	0.68
1:5:4345:C:C2	1:5:4346:U:C5	2.81	0.68
1:5:468:U:O2	1:5:469:C:O4'	2.10	0.68
1:5:4871:C:C4	22:S:176:PHE:CD2	2.81	0.68
1:5:4871:C:C5	22:S:176:PHE:CE2	2.81	0.68
1:5:488:G:N1	1:5:489:C:C4	2.61	0.68
1:5:491:G:N2	1:5:663:G:C6	2.60	0.68
1:5:2741:U:O2'	4:A:50:HIS:HB3	1.93	0.68
5:B:323:TYR:HB3	5:B:342:LYS:HG2	1.74	0.68
14:K:131:GLU:CG	14:K:155:ILE:HD11	2.11	0.68
14:K:22:VAL:HG22	14:K:48:LYS:HG3	1.76	0.68
49:S2:1760:G:C2	49:S2:1773:C:C2	2.81	0.68
49:S2:81:U:C4	49:S2:82:G:C8	2.81	0.68
61:SL:44:PHE:CE2	61:SL:143:LEU:HD23	2.27	0.68
63:SN:38:TYR:OH	63:SN:78:LYS:HG3	1.92	0.68
50:SA:39:TYR:OH	67:SR:104:GLU:HB2	1.94	0.68
1:5:1759:G:C6	1:5:1760:G:N7	2.61	0.68
1:5:2041:A:C2	1:5:4464:A:C5	2.82	0.68
1:5:2279:A:N3	1:5:2279:A:H2'	2.07	0.68
1:5:2498:C:C2	1:5:2499:C:C6	2.82	0.68
1:5:2529:A:N7	1:5:2532:C:C4	2.61	0.68
1:5:287:U:O2	1:5:288:G:C8	2.47	0.68
1:5:278:G:N1	1:5:330:G:C8	2.61	0.68
1:5:938:C:H2'	1:5:939:G:C8	2.27	0.68
4:A:209:HIS:NE2	4:A:235:VAL:HG11	2.08	0.68
14:K:93:LYS:O	14:K:94:LYS:CB	2.40	0.68
14:K:94:LYS:HA	14:K:96:LYS:HD2	1.75	0.68
17:N:162:ARG:HH21	17:N:164:LEU:HD11	1.58	0.68
49:S2:104:A:C5	49:S2:105:U:C6	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1111:U:C2	49:S2:1112:U:H5	2.05	0.68
49:S2:1280:G:C6	49:S2:1281:G:C8	2.81	0.68
49:S2:43:U:O2	49:S2:484:A:N1	2.26	0.68
49:S2:579:C:N3	49:S2:580:U:C6	2.62	0.68
57:SH:177:TYR:CE2	57:SH:185:VAL:HG21	2.27	0.68
48:4:137:VAL:CG1	48:4:807:GLN:HE22	2.05	0.68
48:4:691:ALA:HB2	48:4:730:TYR:CA	2.10	0.68
48:4:745:TYR:CD1	48:4:813:VAL:O	2.46	0.68
48:4:756:VAL:HG21	48:4:782:PHE:CD2	2.29	0.68
48:4:745:TYR:HD2	48:4:814:PHE:HA	1.53	0.68
1:5:1269:G:N7	1:5:2111:G:C5	2.61	0.68
1:5:1358:G:C4	1:5:1359:G:N7	2.62	0.68
1:5:1744:U:C2	1:5:1745:G:C8	2.81	0.68
1:5:2316:G:N1	1:5:2317:C:C4	2.61	0.68
1:5:2633:U:C2	1:5:2634:C:C6	2.81	0.68
1:5:3736:A:O2'	1:5:3737:A:O4'	2.11	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
1:5:4189:U:H1'	1:5:4380:A:C2	2.28	0.68
1:5:4763:U:O2	16:M:3:PHE:CE2	2.46	0.68
1:5:481:G:C2	1:5:482:G:C8	2.82	0.68
1:5:4879:C:O2	1:5:4880:C:C6	2.45	0.68
1:5:5021:C:C2	1:5:5022:U:C6	2.82	0.68
1:5:642:G:N1	1:5:643:C:C4	2.61	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
7:D:125:VAL:O	7:D:196:ARG:NH2	2.27	0.68
1:5:2891:U:C5	21:R:74:ARG:NH1	2.61	0.68
49:S2:1049:A:C5	49:S2:1070:A:C2	2.81	0.68
49:S2:1565:C:C2	49:S2:1571:G:C2	2.81	0.68
49:S2:993:G:C4	49:S2:994:C:C6	2.81	0.68
22:S:95:ARG:NH1	22:S:97:TYR:OH	2.21	0.68
49:S2:1394:G:O2'	66:SQ:124:PRO:O	2.11	0.68
48:4:228:PHE:CD2	48:4:293:ILE:HG12	2.28	0.68
1:5:1243:C:O2	1:5:1269:G:N3	2.26	0.68
1:5:1811:G:N3	1:5:1812:C:C6	2.62	0.68
1:5:1848:C:H6	1:5:1848:C:H5''	1.58	0.68
1:5:2095:A:N6	9:F:41:GLN:OE1	2.26	0.68
1:5:2108:G:H2'	1:5:2109:G:H4'	1.76	0.68
1:5:209:U:C5	1:5:211:G:C8	2.82	0.68
1:5:2305:U:H4'	1:5:2306:G:OP2	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2485:U:C2	1:5:2486:G:C8	2.82	0.68
1:5:442:G:H2'	1:5:443:G:O5'	1.92	0.68
1:5:4735:G:C2	1:5:4736:C:C6	2.81	0.68
1:5:909:A:C2	1:5:910:G:N9	2.61	0.68
1:5:917:A:C5	1:5:919:C:N4	2.62	0.68
5:B:118:PHE:CB	5:B:119:TYR:CE1	2.75	0.68
14:K:105:THR:O	14:K:106:PHE:CD2	2.46	0.68
14:K:34:PRO:HD2	14:K:35:LEU:N	2.08	0.68
15:L:69:LYS:HA	15:L:159:ASN:HD21	1.59	0.68
17:N:138:PHE:HB3	17:N:143:ARG:NH2	2.08	0.68
49:S2:1137:U:H3	49:S2:1148:A:H61	1.41	0.68
49:S2:1545:A:O2'	49:S2:1546:G:H8	1.72	0.68
49:S2:1606:G:N1	49:S2:1632:G:C2	2.61	0.68
49:S2:1658:G:N1	49:S2:1664:A:N6	2.42	0.68
49:S2:52:G:C5	49:S2:53:C:C6	2.81	0.68
49:S2:649:U:H2'	49:S2:649:U:O2	1.91	0.68
56:SG:215:LYS:O	56:SG:219:GLU:N	2.27	0.68
48:4:33:SER:CB	48:4:57:THR:HG21	2.24	0.68
48:4:709:LEU:HD13	48:4:716:ARG:HD2	1.76	0.68
48:4:756:VAL:CG2	48:4:782:PHE:CB	2.69	0.68
48:4:42:LYS:HE2	48:4:79:TYR:HH	1.52	0.68
1:5:99:A:C2	1:5:100:C:C2	2.82	0.68
1:5:1080:C:C4	1:5:1081:C:C5	2.82	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
1:5:1744:U:N3	1:5:1745:G:C8	2.62	0.68
1:5:1934:A:O2'	1:5:2059:C:OP1	2.11	0.68
1:5:247:G:N2	1:5:248:C:C2	2.62	0.68
1:5:2567:G:N2	1:5:2568:C:C2	2.62	0.68
1:5:3811:G:H4'	1:5:3812:C:OP2	1.93	0.68
1:5:3857:G:C6	1:5:3858:C:C4	2.81	0.68
1:5:4284:C:C2	1:5:4285:U:H5	2.07	0.68
1:5:4286:C:O2	1:5:4287:G:N7	2.27	0.68
1:5:4623:G:H4'	5:B:16:PHE:CE2	2.28	0.68
1:5:4707:A:H2'	1:5:4708:A:O5'	1.93	0.68
1:5:5035:U:C4	1:5:5036:C:C5	2.81	0.68
1:5:669:C:C2	1:5:670:G:C8	2.81	0.68
1:5:916:C:C4	1:5:917:A:N7	2.62	0.68
2:7:60:G:C6	2:7:61:G:N7	2.61	0.68
10:G:136:LEU:HD21	10:G:204:PHE:CE1	2.28	0.68
49:S2:1049:A:C6	49:S2:1070:A:N3	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1133:A:N1	49:S2:1134:G:C5	2.62	0.68
49:S2:1575:G:N2	49:S2:1576:G:C5	2.62	0.68
49:S2:1643:U:HO2'	49:S2:1644:C:P	2.17	0.68
49:S2:164:A:O2'	49:S2:165:G:H5'	1.93	0.68
49:S2:378:U:C2	49:S2:379:C:C5	2.77	0.68
49:S2:377:G:N1	49:S2:378:U:C5	2.62	0.68
49:S2:752:G:N1	49:S2:791:C:C2	2.62	0.68
49:S2:993:G:N1	49:S2:994:C:C5	2.62	0.68
55:SF:71:ARG:NH1	55:SF:148:ASN:OD1	2.25	0.68
48:4:420:LEU:H	48:4:420:LEU:CD2	2.06	0.68
48:4:113:SER:OG	48:4:533:MET:HB3	1.93	0.68
1:5:1297:U:O4'	1:5:1297:U:OP2	2.11	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
1:5:1595:G:C2	1:5:4557:U:H4'	2.28	0.68
1:5:1694:C:N3	1:5:1695:U:C5	2.62	0.68
1:5:1807:C:C2	1:5:1808:C:C6	2.81	0.68
1:5:2093:A:N3	1:5:2093:A:H5''	2.09	0.68
1:5:28:C:N3	1:5:29:G:C8	2.62	0.68
1:5:4069:U:H2'	1:5:4070:U:C5	2.29	0.68
1:5:4256:A:N7	13:J:60:PHE:CZ	2.61	0.68
1:5:659:G:C6	1:5:660:A:N7	2.62	0.68
1:5:719:C:C2	1:5:720:G:C8	2.81	0.68
1:5:750:U:C2	1:5:751:G:C8	2.82	0.68
3:8:125:C:C2	3:8:125:C:C5'	2.76	0.68
8:E:145:ILE:HD11	8:E:267:LEU:HD21	1.76	0.68
14:K:117:ARG:HE	14:K:117:ARG:HA	1.45	0.68
1:5:1995:G:C4'	14:K:132:ILE:HD11	2.24	0.68
14:K:161:GLU:C	14:K:163:PRO:HD3	2.14	0.68
14:K:22:VAL:HG22	14:K:48:LYS:CB	2.22	0.68
14:K:94:LYS:CA	14:K:95:GLN:C	2.54	0.68
49:S2:1051:G:N1	49:S2:1052:A:C5	2.62	0.68
49:S2:1295:A:C4	49:S2:1296:U:H1'	2.29	0.68
49:S2:1512:C:O2	49:S2:1513:C:C6	2.46	0.68
49:S2:1666:C:O2	49:S2:1667:U:C6	2.47	0.68
49:S2:436:G:C6	49:S2:458:A:C2	2.82	0.68
49:S2:440:G:OP1	49:S2:1798:C:O2'	2.11	0.68
49:S2:580:U:O2	49:S2:580:U:H2'	1.92	0.68
49:S2:648:A:N1	49:S2:649:U:C5	2.62	0.68
49:S2:695:C:C2	49:S2:696:G:C8	2.81	0.68
49:S2:71:G:H3'	49:S2:72:C:C5'	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:794:A:C2	49:S2:795:A:N9	2.60	0.68
48:4:264:ARG:O	48:4:288:THR:HG22	1.94	0.68
48:4:41:CYS:SG	48:4:49:ALA:CB	2.82	0.68
48:4:505:VAL:HB	48:4:548:GLY:O	1.94	0.68
1:5:1553:A:C2	1:5:1575:A:H1'	2.28	0.68
1:5:2463:G:N3	1:5:2464:C:C5	2.62	0.68
1:5:2904:U:O2	1:5:2905:C:C6	2.46	0.68
1:5:33:A:N6	1:5:50:C:C2	2.62	0.68
1:5:4095:G:H2'	1:5:4096:C:H6	1.58	0.68
1:5:43:U:OP1	17:N:85:VAL:HG23	1.94	0.68
1:5:4627:U:C2	1:5:4628:U:C6	2.82	0.68
1:5:656:C:N3	1:5:657:C:C5	2.61	0.68
2:7:110:G:C2	2:7:111:C:C6	2.81	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
3:8:35:C:O5'	3:8:35:C:H6	1.77	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
49:S2:1273:C:N3	49:S2:1506:A:N3	2.41	0.68
49:S2:1308:U:C2	49:S2:1309:C:C5	2.82	0.68
49:S2:1406:G:H2'	49:S2:1407:U:H1'	1.76	0.68
49:S2:588:G:C1'	49:S2:589:G:H21	2.05	0.68
49:S2:831:G:C2	49:S2:844:U:C4	2.82	0.68
49:S2:956:G:C2	49:S2:957:A:C5	2.82	0.68
48:4:432:PRO:HB3	48:4:497:MET:CE	2.24	0.68
48:4:541:SER:C	48:4:543:GLU:HG3	2.08	0.68
48:4:849:PRO:HD2	48:4:849:PRO:O	1.92	0.68
1:5:1170:G:C2	1:5:1192:C:C2	2.82	0.68
1:5:1201:U:N3	1:5:1202:C:C5	2.62	0.68
1:5:1266:G:H4'	1:5:2112:G:C4	2.28	0.68
1:5:21:G:C6	3:8:36:G:N2	2.62	0.68
1:5:2726:G:C2	1:5:2727:C:C5	2.82	0.68
1:5:2874:U:H5'	1:5:2874:U:C6	2.29	0.68
1:5:316:U:H2'	1:5:316:U:O2	1.94	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:C6	2.29	0.68
1:5:4094:G:C2'	1:5:4095:G:O4'	2.38	0.68
1:5:4096:C:N4	1:5:4097:G:C8	2.61	0.68
1:5:4121:G:N2	4:A:85:GLY:N	2.42	0.68
1:5:4174:U:O2	1:5:4175:G:H8	1.76	0.68
1:5:4460:U:OP1	5:B:10:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:465:G:C2	1:5:466:A:C8	2.82	0.68
1:5:5028:G:C4	1:5:5029:C:C5	2.82	0.68
2:7:17:C:C2	2:7:18:C:C5	2.81	0.68
2:7:56:G:C2'	2:7:57:C:O5'	2.42	0.68
8:E:184:ARG:HD3	8:E:213:PHE:HB3	1.76	0.68
49:S2:1342:U:C4	49:S2:1483:A:C5	2.82	0.68
49:S2:1348:G:C2	49:S2:1349:G:C8	2.82	0.68
49:S2:1501:C:N3	49:S2:1502:C:C5	2.62	0.68
49:S2:1568:C:H2'	49:S2:1569:A:C8	2.29	0.68
49:S2:806:U:O2	49:S2:807:G:C8	2.45	0.68
49:S2:828:G:C6	49:S2:829:C:C5	2.81	0.68
49:S2:951:C:N3	49:S2:952:G:N7	2.42	0.68
49:S2:965:U:O2	49:S2:1066:U:H1'	1.94	0.68
69:ST:13:GLU:HA	69:ST:16:ARG:HG3	1.75	0.68
1:5:1175:A:C6	1:5:1176:C:C5	2.81	0.68
1:5:122:U:H1'	1:5:152:U:O2	1.93	0.68
1:5:1413:C:C2	1:5:1414:C:C5	2.82	0.68
1:5:1877:G:C2	1:5:1878:G:C8	2.82	0.68
1:5:1939:A:C2	1:5:3874:G:OP1	2.47	0.68
1:5:1967:A:N1	1:5:1968:G:C5	2.62	0.68
1:5:1973:G:O6	1:5:2002:A:C8	2.46	0.68
1:5:2263:A:O3'	1:5:2264:C:H6	1.74	0.68
1:5:2524:U:H5''	1:5:2711:G:C2	2.28	0.68
1:5:2857:A:N3	1:5:2858:A:C5	2.62	0.68
1:5:4091:G:C6	1:5:4092:G:N7	2.62	0.68
1:5:4490:C:N3	1:5:4491:G:N7	2.42	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
3:8:94:G:H4'	3:8:95:A:OP1	1.93	0.68
5:B:100:ARG:HH21	5:B:101:THR:C	1.98	0.68
49:S2:1017:U:C2	49:S2:1018:U:C6	2.82	0.68
49:S2:1366:G:N2	49:S2:1374:C:N3	2.42	0.68
49:S2:1422:G:H22	49:S2:1424:G:H3'	1.58	0.68
49:S2:436:G:C2	49:S2:437:G:N7	2.61	0.68
49:S2:436:G:N3	49:S2:437:G:C8	2.62	0.68
49:S2:580:U:C4	49:S2:581:U:C5	2.82	0.68
49:S2:925:G:N1	49:S2:926:A:C8	2.59	0.68
68:SS:124:ARG:HH11	68:SS:124:ARG:HG2	1.57	0.68
48:4:767:ARG:NH2	48:4:789:PRO:HG2	2.10	0.67
1:5:1421:G:N2	1:5:1422:G:C4	2.62	0.67
1:5:445:U:O4'	1:5:2313:A:C2	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2458:C:H5'	17:N:67:ARG:HD3	1.76	0.67
1:5:2522:G:N2	1:5:2534:C:C2	2.63	0.67
1:5:2612:G:H2'	1:5:2613:C:O4'	1.95	0.67
1:5:2811:G:N2	1:5:2813:A:C8	2.63	0.67
1:5:289:C:C2	1:5:290:U:C6	2.81	0.67
1:5:3740:G:O6	1:5:3741:C:C5	2.45	0.67
1:5:440:U:N3	1:5:441:G:N7	2.42	0.67
1:5:711:A:C2	1:5:712:C:C5	2.82	0.67
1:5:65:A:C2	1:5:76:A:H4'	2.29	0.67
1:5:86:U:O2	1:5:87:A:N7	2.27	0.67
1:5:976:G:C4	1:5:977:C:C6	2.82	0.67
2:7:110:G:N1	2:7:111:C:C4	2.62	0.67
1:5:1936:C:C4	2:7:84:U:C5	2.81	0.67
3:8:134:G:N2	3:8:135:C:H1'	2.09	0.67
1:5:1631:A:C2	4:A:204:MET:SD	2.87	0.67
5:B:235:TRP:HD1	5:B:267:ALA:HA	1.59	0.67
49:S2:1204:A:C4	49:S2:1205:C:C5	2.81	0.67
49:S2:1248:U:C2'	49:S2:1249:C:O4'	2.42	0.67
49:S2:1256:G:N7	53:SD:40:ARG:HD2	35.41	0.67
49:S2:1630:A:C2	49:S2:1631:U:C6	2.82	0.67
49:S2:552:G:C4	49:S2:553:U:C5	2.82	0.67
49:S2:870:A:H4'	49:S2:871:U:O5'	1.94	0.67
49:S2:154:U:H1'	56:SG:13:GLN:HG2	1.76	0.67
48:4:393:PRO:O	48:4:393:PRO:CD	2.42	0.67
48:4:691:ALA:HA	48:4:730:TYR:CG	2.28	0.67
1:5:1172:C:C2	1:5:1173:G:C8	2.82	0.67
1:5:1287:G:C2	1:5:1289:C:C5	2.82	0.67
1:5:2714:G:C2	1:5:2715:G:N7	2.62	0.67
1:5:2745:A:O2'	1:5:2746:A:O5'	2.12	0.67
1:5:3730:U:C2	1:5:3731:C:C6	2.82	0.67
1:5:3905:A:C6	1:5:4449:A:N1	2.62	0.67
1:5:3912:U:C2'	1:5:3913:G:H5'	2.24	0.67
1:5:4072:C:C2	1:5:4073:A:C8	2.82	0.67
1:5:3878:C:C4	1:5:4518:A:C2	2.82	0.67
2:7:22:A:C2	2:7:23:A:N7	2.61	0.67
4:A:89:TYR:CB	4:A:100:ASN:HD21	2.06	0.67
1:5:4985:U:O2	5:B:174:ARG:NH1	2.28	0.67
11:H:117:PHE:HD1	11:H:117:PHE:C	1.97	0.67
49:S2:155:G:C2	49:S2:156:G:H1'	2.29	0.67
49:S2:1794:C:N3	49:S2:1795:G:C8	2.62	0.67
49:S2:1840:U:C4	49:S2:1841:C:C5	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:316:G:N1	49:S2:317:C:C4	2.62	0.67
49:S2:637:U:C2	49:S2:638:C:C6	2.82	0.67
49:S2:604:A:N7	59:SJ:20:PHE:CE2	2.62	0.67
48:4:154:VAL:CA	48:4:205:ILE:CD1	2.73	0.67
48:4:751:CYS:SG	48:4:756:VAL:CG2	2.83	0.67
48:4:791:ASN:C	48:4:794:PHE:CE1	2.55	0.67
1:5:1171:G:C2	1:5:1191:C:C2	2.82	0.67
1:5:1217:G:O2'	1:5:1218:G:C8	2.47	0.67
1:5:1267:C:O2'	1:5:1271:G:O6	2.13	0.67
1:5:2453:A:C6	1:5:2454:U:C6	2.83	0.67
1:5:2745:A:O2'	1:5:2746:A:C5'	2.43	0.67
1:5:207:G:N2	1:5:383:A:C8	2.61	0.67
1:5:4123:C:H2'	1:5:4123:C:O2	1.92	0.67
1:5:4369:A:N1	1:5:4370:G:C5	2.62	0.67
3:8:115:G:C6	3:8:116:C:C5	2.83	0.67
3:8:125:C:C2	3:8:125:C:H5''	2.28	0.67
3:8:80:A:H2'	3:8:81:C:O2'	1.94	0.67
3:8:81:C:O2	3:8:82:A:O3'	2.13	0.67
3:8:83:C:H4'	3:8:85:U:O2	1.95	0.67
1:5:4911:A:H5''	5:B:100:ARG:HD3	1.77	0.67
6:C:128:LEU:HD12	6:C:264:TYR:OH	1.95	0.67
14:K:62:LEU:HD13	14:K:64:ILE:HD11	1.76	0.67
49:S2:1067:C:C4	49:S2:1068:G:C5	2.82	0.67
49:S2:1126:G:N1	49:S2:1127:C:C4	2.63	0.67
49:S2:1308:U:C2'	49:S2:1309:C:C6	2.68	0.67
49:S2:386:C:O2	49:S2:387:C:C6	2.47	0.67
49:S2:623:G:C6	49:S2:624:C:C5	2.81	0.67
49:S2:794:A:C4	49:S2:795:A:C8	2.82	0.67
60:SK:95:ARG:NE	60:SK:95:ARG:HA	2.10	0.67
57:SH:145:ARG:CD	72:SW:51:GLU:HG2	2.24	0.67
48:4:340:MET:HE2	48:4:340:MET:HA	1.75	0.67
1:5:451:C:C4	1:5:1295:C:H2'	2.29	0.67
1:5:1489:G:C6	1:5:1490:G:C8	2.83	0.67
1:5:1758:G:N2	1:5:1759:G:C4	2.63	0.67
1:5:1764:G:O6	1:5:1766:A:H5''	1.94	0.67
1:5:2021:G:C6	1:5:2022:C:C4	2.82	0.67
1:5:2258:C:H2'	1:5:2258:C:O2	1.95	0.67
1:5:4112:C:C4	1:5:4113:U:C5	2.82	0.67
1:5:4233:A:N1	1:5:4290:U:C4	2.56	0.67
1:5:4745:G:C2'	1:5:4746:C:C6	2.77	0.67
14:K:141:CYS:HA	14:K:148:PRO:HD3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:15:LEU:HD11	14:K:60:VAL:CG1	2.25	0.67
14:K:64:ILE:HB	14:K:71:ILE:HD12	1.76	0.67
1:5:99:A:H4'	17:N:181:HIS:ND1	2.09	0.67
49:S2:1427:C:C2	49:S2:1428:G:N7	2.62	0.67
49:S2:1435:C:C4	49:S2:1436:C:C5	2.83	0.67
49:S2:1542:C:O2'	49:S2:1543:U:O5'	2.12	0.67
49:S2:98:C:C2	49:S2:409:C:C5	2.82	0.67
49:S2:81:U:C4	49:S2:82:G:C5	2.81	0.67
66:SQ:53:GLU:OE1	66:SQ:85:ARG:NH2	2.27	0.67
48:4:79:TYR:CD2	48:4:351:LEU:HD12	2.19	0.67
48:4:10:ARG:HH22	48:4:465:PRO:HG3	1.60	0.67
48:4:531:ASP:HB3	48:4:534:VAL:CG1	2.25	0.67
48:4:730:TYR:CB	48:4:854:PHE:CZ	2.77	0.67
1:5:1186:U:C4	1:5:1187:G:C5	2.83	0.67
1:5:1218:G:C6	1:5:1219:G:H1'	2.30	0.67
1:5:1411:C:C2	1:5:1412:G:C8	2.82	0.67
1:5:1491:A:C4	1:5:1492:G:C8	2.82	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
1:5:2736:G:N3	1:5:2737:C:C6	2.62	0.67
1:5:4075:U:O2	1:5:4076:G:N7	2.27	0.67
1:5:38:A:C6	1:5:41:C:C5	2.83	0.67
1:5:4285:U:N3	1:5:4286:C:C5	2.62	0.67
1:5:4627:U:O2	1:5:4627:U:H2'	1.94	0.67
2:7:19:C:N3	2:7:20:U:C5	2.62	0.67
2:7:59:G:C2	2:7:60:G:N9	2.62	0.67
7:D:29:ASP:HB3	7:D:32:ALA:HB3	1.76	0.67
8:E:157:ARG:HD2	8:E:266:TYR:CE1	2.28	0.67
49:S2:1052:A:C5	49:S2:1053:C:C5	2.82	0.67
49:S2:1112:U:H2'	49:S2:1113:A:O4'	1.95	0.67
49:S2:119:U:C4	49:S2:120:U:C5	2.82	0.67
49:S2:1840:U:O2	49:S2:1841:C:C6	2.47	0.67
49:S2:452:G:C4	49:S2:453:C:C5	2.82	0.67
49:S2:439:A:C2	49:S2:455:A:N1	2.63	0.67
49:S2:663:C:N3	49:S2:664:A:C8	2.62	0.67
55:SF:91:ARG:HD2	66:SQ:46:THR:HG22	1.76	0.67
48:4:228:PHE:HD1	48:4:232:TYR:CE2	2.12	0.67
48:4:322:LYS:NZ	48:4:322:LYS:HB2	2.08	0.67
48:4:40:VAL:CA	48:4:43:ALA:HB2	2.24	0.67
1:5:1271:G:H3'	1:5:1272:C:O4'	1.94	0.67
1:5:1277:G:C6	1:5:1278:C:C5	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1408:G:H2'	1:5:1408:G:N3	2.10	0.67
1:5:1412:G:N3	1:5:1413:C:C6	2.62	0.67
1:5:1629:G:N2	1:5:1631:A:C2	2.63	0.67
1:5:2343:G:C2	6:C:101:MET:HE2	2.30	0.67
1:5:2457:G:N2	1:5:2465:C:N3	2.43	0.67
1:5:4097:G:N3	1:5:4098:A:C8	2.63	0.67
1:5:4355:G:N2	1:5:4356:G:C5	2.62	0.67
1:5:3907:G:C4	1:5:4449:A:H1'	2.28	0.67
1:5:449:C:N3	1:5:450:G:C8	2.62	0.67
1:5:4729:A:C5'	1:5:4965:U:O2'	2.43	0.67
1:5:4956:A:C6	1:5:4957:C:C5	2.83	0.67
1:5:68:U:C4	1:5:69:A:C8	2.83	0.67
3:8:118:C:N3	3:8:119:C:H5	1.90	0.67
49:S2:1231:C:O4'	49:S2:1665:G:C2	2.45	0.67
49:S2:1287:A:C6	49:S2:1314:U:C4	2.83	0.67
49:S2:1589:A:H2'	49:S2:1590:C:C6	2.29	0.67
49:S2:381:C:H6	49:S2:381:C:O5'	1.76	0.67
49:S2:439:A:H4'	49:S2:1799:G:H4'	1.75	0.67
49:S2:444:G:N2	49:S2:446:G:H3'	2.10	0.67
49:S2:550:C:C2	49:S2:551:U:C5	2.83	0.67
49:S2:854:A:H2'	49:S2:855:G:O4'	1.94	0.67
55:SF:121:PRO:C	55:SF:146:ARG:HD2	2.15	0.67
74:SY:86:GLU:CB	74:SY:86:GLU:CD	2.63	0.67
25:V:20:LEU:HD21	25:V:101:ASN:ND2	2.09	0.67
48:4:585:GLU:CB	48:4:737:GLN:NE2	2.58	0.67
48:4:744:ILE:HD12	48:4:816:HIS:O	1.93	0.67
1:5:1245:C:C4	1:5:1269:G:O6	2.47	0.67
1:5:1263:A:C5	1:5:1264:C:C5	2.83	0.67
1:5:957:G:P	1:5:1284:G:C2	2.88	0.67
1:5:1887:G:N1	1:5:1890:G:O6	2.27	0.67
1:5:2366:A:H2'	1:5:2367:A:C5'	2.24	0.67
1:5:2367:A:HO2'	1:5:2368:A:C5'	2.08	0.67
1:5:4228:G:C5'	1:5:4229:U:O4'	2.43	0.67
1:5:4276:G:C5	1:5:4277:G:N7	2.63	0.67
1:5:4562:C:C2	1:5:4563:U:C6	2.83	0.67
1:5:4653:C:N3	1:5:4654:C:C5	2.63	0.67
1:5:4984:C:N3	1:5:4985:U:C5	2.63	0.67
1:5:699:C:N3	1:5:700:G:C8	2.62	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
2:7:18:C:C4	2:7:19:C:H5	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:11:C:C4	3:8:12:G:N7	2.59	0.67
3:8:91:A:H2'	3:8:92:U:O4'	1.94	0.67
4:A:211:PHE:CE1	4:A:219:ILE:HG23	2.29	0.67
49:S2:1432:U:C2	49:S2:1433:C:C5	2.83	0.67
49:S2:1510:G:C6	49:S2:1511:U:C6	2.83	0.67
49:S2:1606:G:C2	49:S2:1632:G:C2	2.81	0.67
1:5:3759:A:N6	49:S2:1709:G:C5'	2.58	0.67
1:5:3629:A:C4'	49:S2:1721:U:H3	2.08	0.67
49:S2:300:U:C2	49:S2:301:A:C8	2.83	0.67
49:S2:926:A:C5	49:S2:927:C:C5	2.82	0.67
51:SB:66:VAL:HG22	51:SB:87:ILE:HG22	1.77	0.67
66:SQ:70:VAL:HG11	66:SQ:84:ILE:HG22	1.75	0.67
49:S2:1665:G:N7	69:ST:88:MET:HG3	2.09	0.67
48:4:770:VAL:HG22	48:4:784:VAL:CG1	2.24	0.67
48:4:741:MET:HB2	48:4:818:GLN:O	1.95	0.67
1:5:1069:G:C2	1:5:1070:G:H1'	2.30	0.67
1:5:1241:C:N4	1:5:1270:A:O2'	2.27	0.67
1:5:1725:U:N3	1:5:1726:U:C5	2.63	0.67
1:5:1839:U:H3'	1:5:1840:G:N2	2.09	0.67
1:5:2056:G:N1	1:5:2058:G:C5	2.62	0.67
1:5:2688:G:N2	1:5:2689:C:C2	2.63	0.67
1:5:3796:U:HO2'	49:S2:1720:U:HO2'	1.42	0.67
1:5:3910:C:C2	1:5:3911:C:H5	2.07	0.67
1:5:4124:G:N2	10:G:43:GLN:O	2.28	0.67
1:5:4314:C:N3	1:5:4315:A:N7	2.43	0.67
1:5:4413:C:H3'	1:5:4414:A:H8	1.60	0.67
1:5:4939:C:O2	1:5:4939:C:H2'	1.94	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
1:5:3899:G:H5''	5:B:257:TRP:CD1	2.30	0.67
1:5:2274:C:H5'	6:C:312:ARG:HB3	1.77	0.67
7:D:29:ASP:CB	7:D:32:ALA:HB3	2.25	0.67
14:K:105:THR:HG22	14:K:144:ASP:N	2.09	0.67
49:S2:1039:C:C2	49:S2:1040:G:C8	2.83	0.67
49:S2:1149:A:C5	49:S2:1151:G:C8	2.83	0.67
49:S2:114:G:H2'	49:S2:114:G:N3	2.09	0.67
49:S2:1412:C:H2'	49:S2:1413:G:H8	1.58	0.67
49:S2:1538:C:C2	49:S2:1539:U:C6	2.83	0.67
49:S2:1599:U:C5	55:SF:164:ARG:HA	2.30	0.67
49:S2:1687:C:N3	49:S2:1688:C:C5	2.62	0.67
49:S2:1841:C:C2	49:S2:1842:C:C5	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1849:G:H2'	49:S2:1850:A:C8	2.30	0.67
49:S2:27:A:C2	49:S2:28:U:N1	2.63	0.67
49:S2:525:A:H62	49:S2:588:G:H22	1.42	0.67
49:S2:609:U:N3	49:S2:610:G:N7	2.43	0.67
48:4:111:PHE:HB3	48:4:145:GLN:NE2	2.10	0.67
48:4:206:ASP:C	48:4:212:VAL:HG23	2.15	0.67
48:4:206:ASP:O	48:4:212:VAL:HB	1.94	0.67
48:4:272:LYS:HD2	48:4:273:PHE:CE1	2.30	0.67
48:4:449:ARG:HB3	48:4:473:VAL:HG11	1.74	0.67
48:4:60:ARG:O	48:4:61:LYS:O	2.13	0.67
1:5:1268:G:C2	1:5:2111:G:N2	2.63	0.67
1:5:1380:G:H2'	1:5:1382:G:N7	2.09	0.67
1:5:1742:A:C2	1:5:1743:A:N7	2.63	0.67
1:5:1916:G:H21	1:5:2067:C:H1'	1.59	0.67
1:5:218:A:H1'	1:5:219:G:H5''	1.76	0.67
1:5:2567:G:N3	1:5:2568:C:C6	2.63	0.67
1:5:2689:C:C2'	1:5:2689:C:O2	2.43	0.67
1:5:270:U:O2	1:5:271:C:C6	2.47	0.67
1:5:2826:U:H2'	1:5:2826:U:O2	1.95	0.67
1:5:3674:G:C6	1:5:3675:G:N7	2.63	0.67
1:5:4136:G:C6	1:5:4137:C:C4	2.83	0.67
1:5:4745:G:H21	1:5:4746:C:N4	1.93	0.67
1:5:661:C:C2	1:5:662:C:C6	2.82	0.67
1:5:673:C:H2'	1:5:674:G:C8	2.30	0.67
9:F:168:ARG:HD2	9:F:211:TRP:CD1	2.30	0.67
10:G:55:VAL:HB	10:G:57:TRP:NE1	2.09	0.67
14:K:20:GLY:CA	14:K:92:ARG:NH2	2.58	0.67
49:S2:118:C:C5	49:S2:119:U:C6	2.82	0.67
49:S2:1442:U:O2	49:S2:1442:U:H2'	1.95	0.67
49:S2:1591:C:N3	49:S2:1592:C:C6	2.62	0.67
49:S2:358:C:O2	49:S2:358:C:H2'	1.94	0.67
49:S2:440:G:H2'	49:S2:441:C:O4'	1.95	0.67
49:S2:628:A:C2	53:SD:178:ARG:HD2	2.29	0.67
64:SO:56:VAL:HA	64:SO:60:MET:HE2	1.76	0.67
24:U:33:ILE:HD11	24:U:96:LEU:HD22	1.76	0.67
3:8:73:U:P	28:Y:75:ARG:HD2	2.35	0.67
48:4:155:LEU:HD12	48:4:185:VAL:HG21	1.77	0.67
48:4:41:CYS:HA	48:4:49:ALA:HB2	1.77	0.67
48:4:10:ARG:HH22	48:4:465:PRO:CG	2.08	0.67
48:4:55:ARG:HD2	48:4:56:PHE:HB2	1.77	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)
1:5:1260:G:N1	1:5:1261:G:C5	2.63	0.67
1:5:1355:G:C6	1:5:1385:G:C2	2.83	0.67
1:5:1542:U:N3	1:5:1543:G:C8	2.63	0.67
1:5:1672:U:H2'	1:5:1673:U:H6	1.58	0.67
1:5:2279:A:N3	1:5:2280:G:N7	2.43	0.67
1:5:2293:U:H2'	1:5:2293:U:O2	1.95	0.67
1:5:2314:G:C2	1:5:2315:G:C5	2.80	0.67
1:5:2428:A:C4	1:5:2789:A:H2	2.12	0.67
1:5:332:C:H4'	17:N:150:TRP:CD1	2.30	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
1:5:4071:U:N3	1:5:4072:C:C5	2.63	0.67
1:5:4745:G:N2	1:5:4746:C:N4	2.43	0.67
1:5:504:G:C6	1:5:654:C:N3	2.63	0.67
1:5:50:C:H2'	1:5:51:A:O5'	1.94	0.67
2:7:8:G:OP1	7:D:33:ARG:NH2	2.28	0.67
3:8:73:U:C4	3:8:74:U:C6	2.82	0.67
3:8:73:U:C4	3:8:74:U:N1	2.62	0.67
1:5:4223:C:H5'	12:I:119:PHE:CD2	2.30	0.67
49:S2:1029:G:C2	49:S2:1030:A:C8	2.83	0.67
49:S2:1405:A:O4'	49:S2:1580:A:C5	2.48	0.67
49:S2:355:G:OP2	61:SL:107:LYS:NZ	2.28	0.67
49:S2:632:C:O2	49:S2:632:C:H2'	1.95	0.67
49:S2:995:G:N2	49:S2:996:A:O2'	2.28	0.67
48:4:154:VAL:CG1	48:4:358:LEU:HD21	2.24	0.66
48:4:183:GLU:O	48:4:187:VAL:HG23	1.95	0.66
1:5:1091:C:N3	1:5:1092:G:N7	2.43	0.66
1:5:1191:C:N3	1:5:1192:C:C5	2.63	0.66
1:5:1438:U:O2	1:5:2099:G:C5	2.49	0.66
1:5:152:U:O2	1:5:152:U:H2'	1.94	0.66
1:5:1830:G:C2	1:5:1831:G:C8	2.84	0.66
1:5:196:C:O2	1:5:196:C:H2'	1.95	0.66
1:5:2605:G:N3	1:5:2606:G:C8	2.63	0.66
1:5:28:C:C2	1:5:29:G:N7	2.63	0.66
1:5:2362:U:O4	1:5:3859:G:C2	2.48	0.66
1:5:1325:C:C4'	1:5:3901:A:N1	2.52	0.66
1:5:4174:U:C2	1:5:4175:G:N7	2.62	0.66
1:5:4266:G:C2	1:5:4279:A:C6	2.83	0.66
1:5:650:C:H2'	1:5:651:C:C6	2.30	0.66
9:F:73:MET:HB3	9:F:84:TYR:HE2	1.60	0.66
1:5:4757:C:C2	18:O:114:LYS:HA	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:982:G:N3	49:S2:1045:U:H1'	2.10	0.66
49:S2:1111:U:O2	49:S2:1111:U:H2'	1.95	0.66
49:S2:1508:A:N7	49:S2:1510:G:N7	2.43	0.66
49:S2:1215:C:N4	49:S2:1646:C:N4	2.43	0.66
49:S2:633:C:N3	49:S2:634:A:N7	2.42	0.66
25:V:77:HIS:O	25:V:77:HIS:ND1	2.28	0.66
48:4:238:ALA:HB1	48:4:239:LYS:HB2	1.77	0.66
48:4:322:LYS:NZ	48:4:322:LYS:CB	2.57	0.66
1:5:1395:U:O2	1:5:1469:C:H4'	1.94	0.66
1:5:1517:G:N2	1:5:1650:A:C6	2.63	0.66
1:5:1774:C:C2	1:5:1775:A:C8	2.83	0.66
1:5:2077:C:C4	1:5:2078:C:C5	2.83	0.66
1:5:2279:A:N1	1:5:2280:G:C5	2.63	0.66
1:5:2422:C:C2	1:5:2423:A:C8	2.84	0.66
1:5:2744:A:C2	1:5:2745:A:C5	2.83	0.66
1:5:2811:G:H22	1:5:2813:A:H3'	1.59	0.66
1:5:2905:C:C2	1:5:3590:G:C2	2.84	0.66
1:5:3731:C:C2	1:5:3732:A:H8	2.14	0.66
1:5:4490:C:C2	1:5:4491:G:H8	2.13	0.66
1:5:973:G:O6	1:5:1282:G:C2	2.48	0.66
2:7:59:G:H4'	7:D:267:ASN:HD21	1.60	0.66
3:8:42:G:C2	3:8:43:A:C8	2.84	0.66
3:8:95:A:C5	3:8:96:C:C5	2.83	0.66
49:S2:1034:A:C2'	49:S2:1035:A:O5'	2.42	0.66
49:S2:1099:G:C2	49:S2:1100:A:C8	2.83	0.66
49:S2:1409:A:C2	49:S2:1438:A:N1	2.64	0.66
49:S2:149:A:H2'	49:S2:150:A:O4'	1.94	0.66
49:S2:1821:U:H2'	49:S2:1822:A:O4'	1.95	0.66
49:S2:18:C:C2	49:S2:19:A:C8	2.84	0.66
49:S2:394:G:C2	49:S2:395:G:C8	2.84	0.66
49:S2:461:U:C2	49:S2:462:C:C5	2.83	0.66
49:S2:588:G:O4'	49:S2:589:G:N2	2.24	0.66
49:S2:795:A:C2	49:S2:796:G:C6	2.83	0.66
10:G:257:LYS:NZ	51:SB:54:GLY:O	2.24	0.66
49:S2:796:G:C5	57:SH:109:ARG:NH2	2.63	0.66
25:V:100:ASP:N	25:V:100:ASP:OD1	2.26	0.66
48:4:189:ILE:CG2	48:4:203:ILE:CG1	2.71	0.66
48:4:240:GLY:HA3	48:4:241:GLU:CB	2.06	0.66
1:5:125:C:C2	1:5:126:C:H6	2.12	0.66
1:5:1321:G:N2	1:5:3876:A:C4	2.63	0.66
1:5:2078:C:C4	1:5:2079:G:N7	2.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1268:G:OP2	1:5:2109:G:H3'	1.95	0.66
1:5:2307:A:C8	1:5:2332:A:C2	2.83	0.66
1:5:2561:C:N3	1:5:2562:G:N7	2.44	0.66
1:5:2367:A:C5	1:5:2798:A:N3	2.63	0.66
1:5:287:U:C2	1:5:288:G:N7	2.63	0.66
1:5:2904:U:O2	1:5:2905:C:H6	1.77	0.66
1:5:3857:G:C6	1:5:3858:C:C5	2.82	0.66
1:5:4134:C:O2	1:5:4135:G:C8	2.47	0.66
1:5:4199:C:C2'	1:5:4199:C:O2	2.42	0.66
1:5:4466:C:C2	1:5:4467:A:C8	2.82	0.66
1:5:4561:C:C2	1:5:4562:C:H5	2.13	0.66
1:5:471:A:C6	1:5:472:C:C5	2.83	0.66
1:5:4735:G:C4	1:5:4736:C:C6	2.82	0.66
3:8:101:C:H2'	3:8:101:C:O2	1.95	0.66
4:A:3:ARG:HG3	4:A:3:ARG:HH11	1.58	0.66
5:B:10:ARG:HD2	5:B:12:GLY:O	1.95	0.66
5:B:116:ARG:HG3	5:B:177:LYS:HG3	1.78	0.66
2:7:11:A:C8	7:D:18:VAL:HG13	2.30	0.66
8:E:157:ARG:CD	8:E:266:TYR:CD1	2.78	0.66
14:K:22:VAL:HG21	14:K:48:LYS:CB	2.22	0.66
49:S2:1839:U:H2'	49:S2:1840:U:O4'	1.95	0.66
49:S2:26:U:O4	49:S2:27:A:N7	2.27	0.66
49:S2:404:G:C6	49:S2:405:G:N7	2.63	0.66
49:S2:581:U:N3	49:S2:582:C:C6	2.64	0.66
49:S2:591:U:H5''	49:S2:593:C:C5	2.30	0.66
49:S2:623:G:C2	49:S2:624:C:C5	2.82	0.66
48:4:470:VAL:HG22	48:4:471:GLY:H	1.58	0.66
48:4:585:GLU:O	48:4:736:ALA:HB1	1.96	0.66
48:4:58:ASP:HB3	48:4:63:GLU:CD	2.15	0.66
48:4:61:LYS:O	48:4:62:ASP:CB	2.40	0.66
48:4:86:LEU:HD21	48:4:96:ALA:HA	1.76	0.66
1:5:2035:C:H6	1:5:2035:C:O5'	1.79	0.66
1:5:2076:G:C5	1:5:2077:C:C6	2.83	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
1:5:3728:A:N7	1:5:3729:U:H1'	2.11	0.66
1:5:4498:U:H3	1:5:4500:U:P	2.19	0.66
1:5:4693:C:C6	1:5:4693:C:H5'	2.30	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
1:5:656:C:C2	1:5:657:C:C5	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:976:G:C5	1:5:977:C:C5	2.84	0.66
3:8:131:G:N2	3:8:132:G:H1'	2.09	0.66
3:8:12:G:N2	3:8:13:G:C8	2.62	0.66
21:R:130:ASN:O	21:R:131:VAL:HG22	1.96	0.66
49:S2:1232:U:O2'	49:S2:1253:A:C8	2.48	0.66
49:S2:1292:C:N4	49:S2:1293:A:N7	2.43	0.66
49:S2:1412:C:C2'	49:S2:1413:G:C8	2.78	0.66
49:S2:396:U:H2'	49:S2:397:G:O5'	1.95	0.66
49:S2:806:U:N3	49:S2:807:G:C8	2.64	0.66
49:S2:842:C:C2'	49:S2:843:C:O5'	2.43	0.66
49:S2:892:U:N3	49:S2:893:U:C5	2.63	0.66
53:SD:192:TRP:CG	53:SD:196:GLY:HA2	2.30	0.66
59:SJ:111:GLN:HE21	59:SJ:127:ARG:HB2	1.59	0.66
27:X:119:ILE:HA	27:X:144:TYR:HE2	1.60	0.66
48:4:191:THR:HG21	48:4:192:TYR:CE2	2.28	0.66
1:5:1245:C:O2	1:5:1246:G:H8	1.73	0.66
1:5:1280:C:H5''	1:5:1280:C:C6	2.31	0.66
1:5:1840:G:C3'	1:5:1842:G:P	2.83	0.66
1:5:2021:G:O2'	1:5:2022:C:H5'	1.95	0.66
1:5:2108:G:C4	1:5:2109:G:H1'	2.29	0.66
1:5:2441:C:O2	1:5:2442:G:C8	2.48	0.66
1:5:3730:U:C4	1:5:3731:C:C5	2.83	0.66
1:5:3857:G:C5	1:5:3858:C:C6	2.84	0.66
1:5:4095:G:C2	1:5:4096:C:C4	2.80	0.66
1:5:422:C:C2	1:5:423:G:H8	2.12	0.66
1:5:44:A:C5	1:5:45:U:C5	2.83	0.66
1:5:4504:C:H2'	1:5:4505:C:H6	1.61	0.66
1:5:456:C:C2	1:5:457:G:C8	2.83	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
1:5:4999:G:N1	1:5:5000:G:N7	2.44	0.66
3:8:134:G:C2	3:8:135:C:N1	2.64	0.66
9:F:73:MET:HB3	9:F:84:TYR:CE2	2.30	0.66
14:K:61:LYS:HE3	14:K:72:GLU:C	2.15	0.66
49:S2:1050:A:C6	49:S2:1051:G:H1'	2.30	0.66
49:S2:1432:U:N3	49:S2:1433:C:H5	1.93	0.66
49:S2:1540:G:C5	49:S2:1541:G:N7	2.63	0.66
49:S2:16:G:H2'	49:S2:17:C:O4'	1.95	0.66
49:S2:580:U:N3	49:S2:581:U:C6	2.63	0.66
49:S2:795:A:N1	49:S2:796:G:C6	2.63	0.66
49:S2:302:A:O2'	58:SI:64:ASN:ND2	2.27	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:604:A:N7	59:SJ:20:PHE:CD2	2.64	0.66
23:T:158:PHE:CZ	23:T:160:ALA:HB2	2.31	0.66
48:4:112:SER:C	48:4:114:GLU:N	2.35	0.66
48:4:40:VAL:HG22	48:4:75:ILE:HG12	1.77	0.66
48:4:616:ASP:OD2	48:4:621:GLU:CB	2.43	0.66
48:4:672:LEU:CA	48:4:675:ILE:CD1	2.54	0.66
48:4:752:PRO:CG	48:4:780:PRO:HB3	2.26	0.66
1:5:1172:C:N3	1:5:1173:G:C8	2.64	0.66
1:5:1733:G:O2'	1:5:4214:A:O2'	2.10	0.66
1:5:1827:C:C2	1:5:1828:C:C5	2.84	0.66
1:5:193:G:H2'	1:5:194:C:O4'	1.95	0.66
1:5:1987:C:N4	1:5:1988:G:N7	2.43	0.66
1:5:1268:G:O4'	1:5:2111:G:C8	2.49	0.66
1:5:2480:G:C6	1:5:2481:G:N7	2.64	0.66
1:5:3740:G:N1	1:5:3741:C:C6	2.64	0.66
1:5:4255:A:C6	1:5:4256:A:C2	2.83	0.66
1:5:4285:U:C2	1:5:4286:C:C6	2.83	0.66
1:5:3800:A:C2	1:5:4496:A:O4'	2.48	0.66
1:5:4536:C:C2	1:5:4537:C:C6	2.84	0.66
1:5:4981:G:C5	1:5:4982:A:C8	2.84	0.66
1:5:727:C:O2'	1:5:728:U:OP1	2.10	0.66
2:7:110:G:N3	2:7:111:C:C6	2.64	0.66
3:8:117:C:C2	3:8:118:C:C6	2.83	0.66
9:F:248:ARG:NH1	9:F:248:ARG:HB3	2.11	0.66
49:S2:1017:U:O2	49:S2:1017:U:C2'	2.43	0.66
49:S2:1059:G:C2'	49:S2:1060:A:H5'	2.26	0.66
49:S2:1234:C:O2	49:S2:1234:C:H2'	1.95	0.66
49:S2:1495:G:C5	49:S2:1496:U:C6	2.83	0.66
49:S2:1537:A:C6	49:S2:1538:C:C5	2.83	0.66
49:S2:311:C:H2'	49:S2:312:G:H1'	1.78	0.66
49:S2:436:G:N2	49:S2:437:G:C4	2.63	0.66
60:SK:76:ILE:O	60:SK:80:ARG:HB3	1.96	0.66
49:S2:1394:G:H4'	66:SQ:126:ARG:NH1	2.10	0.66
48:4:563:GLU:CD	48:4:563:GLU:O	2.34	0.66
48:4:39:LEU:HB3	48:4:77:LEU:HD21	1.76	0.66
1:5:101:A:C6	1:5:102:G:N7	2.63	0.66
1:5:1298:C:C2	1:5:1299:G:C8	2.83	0.66
1:5:1479:G:C6	1:5:1487:G:C2	2.83	0.66
1:5:1876:U:C4	1:5:1877:G:N7	2.64	0.66
1:5:1912:G:N2	1:5:1913:C:C2	2.64	0.66
1:5:2021:G:C4	1:5:2022:C:C5	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1214:C:N3	1:5:2116:C:N3	2.42	0.66
1:5:2115:G:C8	1:5:2116:C:O4'	2.49	0.66
1:5:2253:A:C8	1:5:2254:G:H1'	2.30	0.66
1:5:2253:A:H2	1:5:2260:C:H42	1.43	0.66
1:5:2410:C:C2	1:5:2411:C:C5	2.84	0.66
1:5:280:G:C8	17:N:120:TRP:HZ3	2.13	0.66
1:5:288:G:C4	1:5:289:C:C5	2.84	0.66
1:5:3802:U:H2'	1:5:3802:U:O2	1.95	0.66
1:5:1798:G:O4'	1:5:4215:C:C6	2.49	0.66
1:5:4511:A:H2'	1:5:4512:U:O4'	1.95	0.66
1:5:4698:C:O2	1:5:4698:C:H2'	1.93	0.66
1:5:4998:G:N1	1:5:4999:G:N7	2.44	0.66
2:7:94:C:C2	2:7:95:C:C6	2.83	0.66
9:F:230:VAL:HA	22:S:39:VAL:HG12	1.77	0.66
9:F:148:ASN:HB3	9:F:243:ASN:ND2	2.10	0.66
15:L:39:ARG:HB2	15:L:39:ARG:NH1	2.10	0.66
49:S2:1528:G:C2	49:S2:1529:C:C5	2.83	0.66
49:S2:185:G:C2	49:S2:186:C:C5	2.83	0.66
49:S2:459:C:C4	49:S2:460:A:C8	2.84	0.66
49:S2:535:G:N2	49:S2:536:A:N7	2.43	0.66
49:S2:832:G:C5	49:S2:833:C:C6	2.83	0.66
50:SA:38:ILE:HD11	50:SA:150:THR:HG22	1.78	0.66
48:4:126:LEU:HD11	48:4:156:MET:HG3	1.77	0.66
48:4:541:SER:OG	48:4:576:VAL:HG11	1.96	0.66
48:4:58:ASP:CB	48:4:63:GLU:CG	2.27	0.66
48:4:672:LEU:CB	48:4:675:ILE:HD11	2.26	0.66
48:4:818:GLN:HG2	48:4:819:ILE:N	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
1:5:2071:A:C2	1:5:2072:C:C4	2.84	0.66
1:5:2428:A:N7	1:5:2789:A:C2	2.64	0.66
1:5:2634:C:C2	1:5:2635:U:C5	2.84	0.66
1:5:2773:G:N1	1:5:2774:C:C4	2.64	0.66
1:5:348:G:N3	1:5:350:C:C5	2.64	0.66
1:5:3611:A:N3	1:5:5016:A:H8	1.94	0.66
1:5:3919:C:C5'	4:A:207:VAL:HG12	2.25	0.66
1:5:4081:G:C2	1:5:4082:G:N7	2.64	0.66
1:5:4269:G:C6	1:5:4270:C:C6	2.83	0.66
8:E:43:ASN:C	8:E:43:ASN:ND2	2.48	0.66
49:S2:1527:C:N4	49:S2:1528:G:N7	2.44	0.66
49:S2:386:C:C2	49:S2:387:C:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:696:G:C2	49:S2:735:C:C2	2.84	0.66
49:S2:795:A:C2	49:S2:796:G:C8	2.76	0.66
49:S2:64:A:C6	49:S2:82:G:N1	2.64	0.66
49:S2:856:C:C4	49:S2:857:U:C5	2.84	0.66
22:S:9:GLU:OE1	22:S:33:PHE:CD1	2.49	0.66
50:SA:89:LYS:HB3	50:SA:202:TYR:CZ	2.31	0.66
53:SD:34:TYR:CE1	53:SD:37:VAL:HG13	2.31	0.66
56:SG:5:ILE:HD12	56:SG:16:ILE:HD13	1.76	0.66
64:SO:147:ARG:CZ	64:SO:147:ARG:HB3	2.26	0.66
48:4:393:PRO:HD2	48:4:418:SER:OG	1.96	0.66
48:4:543:GLU:OE2	48:4:576:VAL:N	2.28	0.66
48:4:649:ILE:CD1	48:4:652:PHE:HE1	2.09	0.66
48:4:826:ASP:OD1	48:4:827:ASN:N	2.29	0.66
1:5:165:A:H3'	1:5:166:C:H6	1.61	0.66
1:5:1672:U:C2	1:5:1673:U:H5	2.10	0.66
1:5:1692:C:O2	1:5:1692:C:H2'	1.95	0.66
1:5:1787:A:O2'	1:5:1788:A:C8	2.49	0.66
1:5:1878:G:C4	1:5:1879:C:C5	2.84	0.66
1:5:2327:G:N2	1:5:2328:G:C4	2.64	0.66
1:5:2736:G:H2'	1:5:2737:C:H5'	1.78	0.66
1:5:288:G:N2	1:5:289:C:C2	2.64	0.66
1:5:3743:G:C2'	1:5:3744:G:H5'	2.25	0.66
1:5:4217:G:O2'	1:5:4218:U:O5'	2.14	0.66
1:5:4208:U:O2'	1:5:4275:G:H1'	1.95	0.66
1:5:3890:A:N7	1:5:4571:A:H1'	2.10	0.66
1:5:4934:A:N1	1:5:4935:C:C6	2.64	0.66
1:5:500:G:H5''	1:5:501:C:C6	2.30	0.66
1:5:499:G:C2	1:5:656:C:C2	2.84	0.66
1:5:66:A:N3	1:5:312:G:H1'	2.11	0.66
1:5:98:A:H1'	1:5:292:G:N7	2.11	0.66
14:K:105:THR:HB	14:K:107:ASP:OD1	1.95	0.66
14:K:57:ARG:NH2	14:K:89:PRO:CA	2.59	0.66
20:Q:181:ARG:HB3	20:Q:181:ARG:NH2	2.11	0.66
49:S2:1050:A:C8	49:S2:1051:G:C8	2.83	0.66
49:S2:1074:C:H2'	49:S2:1075:C:H6	1.61	0.66
49:S2:1123:C:C2	49:S2:1124:C:C6	2.83	0.66
49:S2:18:C:C4'	49:S2:1194:A:N6	2.59	0.66
49:S2:1319:U:H2'	49:S2:1320:G:C8	2.30	0.66
49:S2:1409:A:N1	49:S2:1410:C:C5	2.64	0.66
49:S2:1410:C:H2'	49:S2:1410:C:O2	1.95	0.66
49:S2:29:G:C6	49:S2:30:C:N4	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:532:C:C2	49:S2:533:A:C8	2.83	0.66
49:S2:616:A:C5	49:S2:617:G:H1'	2.30	0.66
49:S2:826:A:N7	49:S2:827:A:H1'	2.11	0.66
49:S2:836:G:H2'	49:S2:837:A:H5''	1.77	0.66
49:S2:858:A:N3	49:S2:859:G:C8	2.63	0.66
49:S2:868:G:C2	57:SH:115:LYS:HA	2.31	0.66
49:S2:981:A:H2'	49:S2:982:G:C8	2.31	0.66
49:S2:999:G:N1	49:S2:1000:C:C5	2.64	0.66
48:4:236:PHE:CZ	48:4:273:PHE:CE1	2.84	0.66
48:4:283:LYS:HA	48:4:284:LYS:NZ	2.10	0.66
48:4:347:GLY:O	48:4:351:LEU:HG	1.96	0.66
48:4:448:GLN:O	48:4:448:GLN:NE2	2.29	0.66
48:4:577:VAL:HG12	48:4:579:TYR:HE1	1.60	0.66
48:4:634:TYR:CE2	48:4:639:TYR:HE2	2.14	0.66
48:4:748:GLU:HG2	48:4:748:GLU:O	1.96	0.66
48:4:759:ILE:HG21	48:4:784:VAL:CG2	2.25	0.66
1:5:1260:G:C2	1:5:1261:G:C8	2.84	0.66
1:5:1583:A:C5	1:5:1584:G:C8	2.84	0.66
1:5:1697:G:O2'	9:F:165:ASN:ND2	2.28	0.66
1:5:1868:A:C8	1:5:1870:C:C6	2.83	0.66
1:5:2301:G:N1	1:5:2302:C:C5	2.63	0.66
1:5:3727:A:O2'	1:5:3728:A:C5'	2.44	0.66
1:5:3759:A:C6	49:S2:1709:G:C4'	2.79	0.66
1:5:3907:G:H1'	1:5:4449:A:N9	2.10	0.66
1:5:4079:C:O2	1:5:4079:C:H2'	1.96	0.66
1:5:4280:A:C2	7:D:23:ARG:NE	2.64	0.66
1:5:4754:G:N2	1:5:4880:C:C2	2.64	0.66
1:5:5003:U:C2'	1:5:5004:C:O4'	2.44	0.66
1:5:711:A:C2	1:5:712:C:C6	2.84	0.66
1:5:86:U:O2	1:5:87:A:H8	1.76	0.66
1:5:956:A:H3'	1:5:957:G:C5	2.31	0.66
3:8:10:G:C2	3:8:11:C:C1'	2.79	0.66
3:8:127:U:C2'	3:8:128:C:O4'	2.44	0.66
7:D:42:ASN:HA	7:D:44:TYR:HH	1.61	0.66
1:5:1439:C:C5'	9:F:36:ARG:NH1	2.58	0.66
15:L:55:LEU:C	15:L:56:ARG:HG2	2.16	0.66
49:S2:1109:C:O2	49:S2:1110:G:H8	1.78	0.66
49:S2:1134:G:C2	49:S2:1135:C:C4	2.84	0.66
49:S2:1254:C:O2	49:S2:1254:C:H2'	1.96	0.66
49:S2:1309:C:H2'	49:S2:1309:C:O2	1.96	0.66
49:S2:1410:C:C2	49:S2:1411:G:N7	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1860:A:N3	49:S2:1862:G:C8	2.64	0.66
49:S2:388:U:C2	49:S2:389:A:N7	2.64	0.66
49:S2:404:G:N1	49:S2:405:G:C5	2.64	0.66
49:S2:43:U:N3	49:S2:484:A:C2	2.50	0.66
49:S2:50:A:C6	49:S2:51:U:H1'	2.30	0.66
49:S2:646:G:H2'	49:S2:646:G:N3	2.11	0.66
49:S2:793:G:O6	49:S2:794:A:C5	2.49	0.66
49:S2:862:A:C5	49:S2:863:U:C5	2.84	0.66
52:SC:170:TRP:CD1	52:SC:198:ALA:C	2.70	0.66
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
1:5:1750:G:N1	1:5:1751:A:N7	2.44	0.65
1:5:1998:A:H2	1:5:2019:C:C2'	2.09	0.65
1:5:2108:G:N1	1:5:2125:C:C4	2.65	0.65
1:5:2299:G:N7	6:C:204:ARG:NH1	2.44	0.65
1:5:2463:G:C4	1:5:2464:C:C5	2.83	0.65
1:5:2851:G:N7	1:5:2852:U:C6	2.64	0.65
1:5:2856:C:H42	1:5:2857:A:N6	1.92	0.65
1:5:3845:A:C6	1:5:3846:C:C5	2.83	0.65
1:5:42:A:N7	1:5:4379:A:C6	2.64	0.65
1:5:484:U:C4	1:5:486:C:C4	2.83	0.65
1:5:4982:A:C5	1:5:4983:C:C5	2.83	0.65
1:5:5051:C:H2'	1:5:5051:C:O2	1.96	0.65
1:5:671:G:N2	1:5:672:C:C2	2.64	0.65
49:S2:1250:A:C2	49:S2:1339:U:C2'	2.79	0.65
49:S2:1419:C:O2'	69:ST:132:ASP:CB	2.44	0.65
49:S2:1431:G:C5	49:S2:1432:U:C6	2.84	0.65
49:S2:1502:C:N3	49:S2:1503:C:C5	2.65	0.65
49:S2:1552:G:H4'	49:S2:1557:C:H41	1.61	0.65
49:S2:1786:U:O2	49:S2:1787:G:C8	2.49	0.65
49:S2:402:C:C4	49:S2:403:G:C8	2.84	0.65
49:S2:42:A:C4	49:S2:426:A:C5	2.84	0.65
49:S2:623:G:N2	49:S2:624:C:N1	2.44	0.65
49:S2:675:U:N3	49:S2:676:C:C5	2.63	0.65
49:S2:77:A:O2'	56:SG:175:LYS:CA	2.44	0.65
49:S2:793:G:C6	49:S2:794:A:C4	2.84	0.65
49:S2:909:G:N1	49:S2:910:G:N7	2.44	0.65
49:S2:964:A:HO2'	49:S2:965:U:C5'	2.09	0.65
67:SR:83:ASN:C	67:SR:83:ASN:HD22	2.00	0.65
29:Z:15:ALA:HB3	29:Z:79:HIS:HB3	1.78	0.65
48:4:113:SER:HB2	48:4:499:PHE:HD2	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:396:MET:HE3	48:4:472:LEU:CD1	2.26	0.65
48:4:562:GLU:CB	48:4:570:ILE:CD1	2.73	0.65
48:4:579:TYR:HA	48:4:817:TRP:CH2	2.22	0.65
48:4:740:LEU:O	48:4:820:LEU:HB2	1.96	0.65
1:5:1336:G:H2'	1:5:1337:A:N7	2.11	0.65
1:5:145:G:N1	1:5:146:G:C5	2.64	0.65
1:5:1778:C:C2	1:5:1779:U:C5	2.85	0.65
1:5:2673:G:C4'	1:5:2675:G:H1'	2.25	0.65
1:5:168:C:C2	1:5:268:G:N2	2.65	0.65
1:5:2826:U:C2'	1:5:2826:U:O2	2.43	0.65
1:5:4091:G:C5	1:5:4092:G:C8	2.85	0.65
1:5:4355:G:N2	1:5:4356:G:C4	2.64	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
1:5:908:G:C6	1:5:909:A:N7	2.65	0.65
2:7:30:C:N3	2:7:48:G:C2	2.64	0.65
3:8:130:C:C4	3:8:131:G:N7	2.65	0.65
3:8:132:G:N1	3:8:133:G:N7	2.42	0.65
3:8:95:A:C6	3:8:96:C:C4	2.84	0.65
1:5:4518:A:O2'	5:B:257:TRP:HZ3	1.73	0.65
8:E:43:ASN:C	8:E:43:ASN:HD22	2.27	0.65
11:H:88:PHE:CE2	11:H:151:ILE:HB	2.31	0.65
14:K:117:ARG:NE	14:K:117:ARG:N	2.37	0.65
14:K:160:VAL:HA	14:K:163:PRO:HG3	1.50	0.65
49:S2:1100:A:N1	49:S2:1101:U:C4	2.65	0.65
49:S2:1134:G:C4	49:S2:1135:C:C5	2.85	0.65
49:S2:1177:U:C2	49:S2:1178:U:C5	2.84	0.65
49:S2:1709:G:C2	49:S2:1710:C:C5	2.83	0.65
49:S2:609:U:N3	49:S2:610:G:C8	2.64	0.65
49:S2:70:G:C2	49:S2:71:G:C4	2.84	0.65
49:S2:70:G:N2	49:S2:71:G:H1'	2.10	0.65
49:S2:970:G:O3'	49:S2:971:G:O4'	2.14	0.65
22:S:94:TYR:OH	22:S:96:GLU:CG	2.44	0.65
1:5:4628:U:H4'	26:W:17:HIS:HB3	1.77	0.65
48:4:420:LEU:O	48:4:420:LEU:HG	1.96	0.65
48:4:594:LYS:HE3	48:4:856:ASP:HB2	1.77	0.65
1:5:1309:C:N3	1:5:1310:C:C5	2.64	0.65
1:5:1684:A:C6	1:5:1685:G:N7	2.64	0.65
1:5:2041:A:N3	1:5:4464:A:C6	2.65	0.65
1:5:2307:A:H2'	1:5:2308:A:O5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2325:C:C2	1:5:2326:G:C8	2.84	0.65
1:5:237:G:HO2'	1:5:238:C:P	2.19	0.65
1:5:2384:U:C2	1:5:2385:U:C5	2.83	0.65
1:5:2650:G:H2'	1:5:2651:C:O4'	1.96	0.65
1:5:4081:G:C2	1:5:4082:G:C8	2.84	0.65
1:5:4093:G:C2'	1:5:4094:G:C5'	2.75	0.65
1:5:4693:C:C5'	1:5:4693:C:C6	2.79	0.65
1:5:4998:G:N1	1:5:4999:G:C5	2.64	0.65
3:8:13:G:C5	3:8:14:U:C4	2.84	0.65
49:S2:1052:A:C6	49:S2:1053:C:C5	2.85	0.65
49:S2:1280:G:C6	49:S2:1281:G:N7	2.64	0.65
49:S2:1418:C:C2	49:S2:1420:G:C8	2.84	0.65
49:S2:1511:U:C4	49:S2:1512:C:C5	2.84	0.65
49:S2:1742:C:C2	49:S2:1743:G:C8	2.83	0.65
49:S2:217:A:C6	49:S2:218:U:C5	2.84	0.65
49:S2:750:C:O2	49:S2:750:C:H2'	1.96	0.65
49:S2:793:G:C6	49:S2:794:A:C5	2.84	0.65
49:S2:837:A:N3	49:S2:837:A:H2'	2.10	0.65
72:SW:30:CYS:SG	72:SW:31:SER:N	2.69	0.65
48:4:226:LYS:HZ1	48:4:356:ILE:HD12	1.61	0.65
48:4:43:ALA:O	48:4:44:GLY:C	2.34	0.65
48:4:532:PRO:HD2	48:4:533:MET:H	1.61	0.65
1:5:1513:U:H2'	1:5:1514:U:O4'	1.96	0.65
1:5:1635:C:N3	1:5:1636:U:C5	2.64	0.65
1:5:1666:C:O2'	1:5:1688:G:OP1	2.14	0.65
1:5:1998:A:O2'	1:5:1999:A:O4'	2.14	0.65
1:5:445:U:O4'	1:5:2313:A:N1	2.30	0.65
1:5:2390:G:N2	1:5:2391:G:H1'	2.10	0.65
1:5:2455:G:H2'	1:5:2456:G:O5'	1.97	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
1:5:2712:G:C2	1:5:2713:C:C6	2.84	0.65
1:5:2746:A:H2'	1:5:2747:U:O4'	1.97	0.65
1:5:4215:C:O2	1:5:4216:G:C8	2.49	0.65
1:5:4896:G:C2	1:5:4897:G:C4	2.84	0.65
1:5:4896:G:N2	1:5:4897:G:C4	2.65	0.65
3:8:55:U:O4	3:8:62:A:N1	2.29	0.65
7:D:94:ASN:ND2	7:D:94:ASN:C	2.48	0.65
17:N:196:ASN:N	17:N:196:ASN:HD22	1.94	0.65
49:S2:1528:G:C6	49:S2:1529:C:N4	2.64	0.65
49:S2:1759:G:C2	49:S2:1774:C:C2	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:309:G:C6	49:S2:310:C:N4	2.65	0.65
49:S2:310:C:H2'	49:S2:311:C:H6	1.61	0.65
49:S2:379:C:N3	49:S2:380:G:C5	2.64	0.65
49:S2:449:A:N6	49:S2:452:G:C5	2.64	0.65
49:S2:892:U:C2	49:S2:893:U:C5	2.84	0.65
49:S2:962:A:C2	49:S2:963:A:C8	2.84	0.65
22:S:83:ARG:HH22	23:T:156:TYR:HB2	1.58	0.65
55:SF:160:GLU:HA	55:SF:163:PHE:CE1	2.30	0.65
48:4:226:LYS:HZ1	48:4:356:ILE:CD1	2.10	0.65
48:4:3:ASN:HB3	48:4:47:ALA:O	1.97	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
1:5:1542: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
1:5:1760:G:C2	1:5:1761:G:H1'	2.31	0.65
1:5:31:U:H2'	1:5:32:G:C8	2.31	0.65
1:5:3621:A:C4	1:5:3622:C:C6	2.84	0.65
1:5:3636:C:H2'	1:5:3636:C:O2	1.96	0.65
1:5:3680:U:C2'	1:5:3680:U:O2	2.44	0.65
1:5:3717:A:N6	1:5:3736:A:C6	2.64	0.65
1:5:3821:A:C6	1:5:3822:U:C5	2.85	0.65
1:5:4480:A:C6	1:5:4481:U:C6	2.85	0.65
1:5:4920:C:C2	1:5:4921:C:C5	2.85	0.65
3:8:118:C:C2	3:8:119:C:C6	2.85	0.65
6:C:318:PRO:O	6:C:320:LYS:N	2.29	0.65
1:5:4937:C:H5'	8:E:179:ARG:HD2	1.79	0.65
14:K:23:GLY:O	14:K:24:ALA:HB2	1.96	0.65
49:S2:1317:C:N3	49:S2:1318:G:C8	2.63	0.65
49:S2:1441:U:H1'	49:S2:1442:U:O4	1.95	0.65
49:S2:1454:A:C8	49:S2:1476:A:C1'	2.79	0.65
49:S2:1454:A:O4'	49:S2:1476:A:H1'	1.97	0.65
49:S2:1492:U:HO2'	70:SU:70:CYS:HG	1.43	0.65
49:S2:1263:U:O4	49:S2:1517:G:O6	2.13	0.65
49:S2:618:C:C4	49:S2:619:A:C5	2.84	0.65
49:S2:62:G:H1'	49:S2:172:U:O2	1.97	0.65
49:S2:649:U:C2	49:S2:650:A:N7	2.64	0.65
49:S2:948:C:C2	49:S2:949:G:C8	2.85	0.65
49:S2:957:A:O2'	49:S2:958:G:O5'	2.15	0.65
48:4:398:ILE:HG13	48:4:398:ILE:O	1.95	0.65
48:4:120:ARG:NH1	48:4:496:VAL:HA	2.11	0.65
48:4:510:GLU:CG	48:4:511:ALA:H	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:747:VAL:O	48:4:784:VAL:O	2.15	0.65
48:4:751:CYS:SG	48:4:756:VAL:N	2.70	0.65
1:5:1264:C:C2'	1:5:1265:G:H5'	2.27	0.65
1:5:1290:G:N2	1:5:1291:G:C5	2.65	0.65
1:5:1845:U:O2	1:5:1846:G:C8	2.49	0.65
1:5:1865:G:H22	1:5:1867:A:H3'	1.61	0.65
1:5:2243:C:C2	1:5:2244:C:C5	2.84	0.65
1:5:2562:G:H22	1:5:2564:G:H3'	1.61	0.65
1:5:274:C:HO2'	1:5:275:C:C5'	2.09	0.65
1:5:307:A:H3'	1:5:308:G:N2	2.11	0.65
1:5:320:C:H2'	1:5:321:U:O4'	1.97	0.65
1:5:4373:G:OP2	1:5:4374:U:O2'	2.13	0.65
1:5:4628:U:C2	1:5:4629:U:C5	2.85	0.65
1:5:470:A:C6	1:5:471:A:N9	2.65	0.65
1:5:662:C:O2	1:5:663:G:N7	2.28	0.65
1:5:911:U:C2	1:5:912:G:C8	2.85	0.65
1:5:913:U:C2	1:5:914:U:C5	2.85	0.65
1:5:91:G:C8	1:5:93:G:C5	2.85	0.65
1:5:980:U:H2'	1:5:981:C:C6	2.31	0.65
1:5:938:C:H5	16:M:46:ARG:HE	1.45	0.65
49:S2:1277:C:H5'	60:SK:51:SER:HA	1.79	0.65
49:S2:1508:A:N7	49:S2:1510:G:C8	2.65	0.65
49:S2:1708:C:N3	49:S2:1709:G:C8	2.65	0.65
49:S2:357:C:N3	49:S2:358:C:C5	2.65	0.65
48:4:110:ASP:OD2	48:4:112:SER:CB	2.45	0.65
48:4:113:SER:CB	48:4:499:PHE:CD2	2.79	0.65
48:4:690:GLY:C	48:4:730:TYR:CZ	2.67	0.65
48:4:742:GLU:HB3	48:4:820:LEU:HD21	1.78	0.65
1:5:1216:C:N3	1:5:1217:G:C8	2.64	0.65
1:5:1380:G:C2	1:5:1382:G:C2	2.84	0.65
1:5:1848:C:H5'	1:5:1849:U:OP2	1.97	0.65
1:5:1920:C:H4'	1:5:1921:C:OP2	1.97	0.65
1:5:1949:U:C2	1:5:1950:U:C5	2.85	0.65
1:5:2106:G:C2	1:5:2107:C:C5	2.84	0.65
1:5:182:G:N2	1:5:254:G:H22	1.94	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
1:5:2724:G:N3	1:5:2726:G:N7	2.44	0.65
1:5:3606:U:O2	1:5:3607:U:C6	2.50	0.65
1:5:1608:G:O4'	1:5:3828:A:C2	2.50	0.65
1:5:3847:C:C2	1:5:3848:U:C6	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:466:A:N1	1:5:467:U:C4	2.65	0.65
1:5:494:U:C2	1:5:495:C:C6	2.85	0.65
1:5:691:C:C2	1:5:692:A:C8	2.84	0.65
1:5:954:C:H2'	1:5:955:G:O4'	1.96	0.65
3:8:122:G:H2'	3:8:123:U:O4'	1.96	0.65
6:C:325:MET:HE3	6:C:325:MET:HA	1.78	0.65
14:K:102:GLY:CA	14:K:139:VAL:HA	2.24	0.65
17:N:120:TRP:CD1	17:N:121:VAL:N	2.64	0.65
49:S2:1135:C:N3	49:S2:1136:U:C4	2.64	0.65
49:S2:1149:A:C4	49:S2:1151:G:C8	2.85	0.65
49:S2:1253:A:C2	49:S2:1666:C:C1'	2.80	0.65
49:S2:1283:C:H1'	62:SM:86:GLY:HA3	1.79	0.65
49:S2:1835:A:C5'	49:S2:1863:A:N7	2.60	0.65
49:S2:92:A:C6	49:S2:447:A:C2	2.85	0.65
49:S2:993:G:H22	49:S2:999:G:H22	1.42	0.65
52:SC:170:TRP:HD1	52:SC:198:ALA:C	2.00	0.65
48:4:207:PRO:HB3	48:4:261:TRP:CD2	2.32	0.65
48:4:470:VAL:HG22	48:4:471:GLY:N	2.12	0.65
1:5:1175:A:N1	1:5:1176:C:C5	2.65	0.65
1:5:1298:C:N3	1:5:1299:G:N7	2.45	0.65
1:5:1564:A:N6	49:S2:1029:G:HO2'	1.94	0.65
1:5:1617:G:C6	1:5:1618:G:C5	2.84	0.65
1:5:1686:C:H2'	1:5:1687:U:H5'	1.78	0.65
1:5:1767:A:C2	1:5:1769:G:H1'	2.32	0.65
1:5:1885:G:C4	1:5:1895:G:N2	2.64	0.65
1:5:1899:G:N1	1:5:1900:C:N4	2.45	0.65
1:5:2050:G:H2'	1:5:2051:C:O4'	1.97	0.65
1:5:246:G:N2	1:5:247:G:C4	2.65	0.65
1:5:2857:A:O2'	1:5:2858:A:C8	2.49	0.65
1:5:4396:A:C2	1:5:4397:A:C8	2.84	0.65
1:5:4482:U:N3	1:5:4483:C:C5	2.64	0.65
1:5:4548:A:P	1:5:4548:A:C8	2.90	0.65
1:5:471:A:C2	1:5:472:C:C1'	2.80	0.65
1:5:4879:C:N3	1:5:4880:C:C5	2.65	0.65
14:K:105:THR:C	14:K:106:PHE:CD1	2.69	0.65
14:K:94:LYS:CD	14:K:96:LYS:HE2	2.10	0.65
21:R:7:GLN:OE1	21:R:7:GLN:N	2.30	0.65
49:S2:1294:G:C2	49:S2:1295:A:N7	2.65	0.65
49:S2:1402:A:C2	49:S2:1405:A:N1	2.65	0.65
49:S2:1431:G:C4	49:S2:1432:U:C6	2.84	0.65
49:S2:1594:A:C2	49:S2:1595:U:N1	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:384:U:C4	49:S2:386:C:C6	2.84	0.65
49:S2:530:U:N3	49:S2:531:A:C8	2.65	0.65
49:S2:578:C:C4	49:S2:579:C:C6	2.85	0.65
49:S2:656:G:H21	49:S2:663:C:H5''	1.60	0.65
49:S2:70:G:N1	49:S2:80:G:C2	2.65	0.65
49:S2:793:G:C5	49:S2:794:A:N7	2.63	0.65
49:S2:964:A:C2	49:S2:965:U:C4	2.85	0.65
50:SA:39:TYR:HB2	50:SA:50:ASN:OD1	1.97	0.65
48:4:432:PRO:HB3	48:4:497:MET:HE3	1.78	0.65
1:5:1211:G:C2	1:5:1212:G:C5	2.85	0.65
1:5:1323:A:C2	1:5:1324:A:C4	2.84	0.65
1:5:1366:G:C8	1:5:1367:C:O3'	2.50	0.65
1:5:1445:U:C2	1:5:1446:C:C6	2.85	0.65
1:5:1683:U:H2'	1:5:1683:U:O2	1.96	0.65
1:5:2058:G:N3	1:5:2059:C:C6	2.64	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
1:5:2603:C:N3	1:5:2604:C:C5	2.65	0.65
1:5:275:C:O2'	1:5:276:C:O4'	2.11	0.65
1:5:3717:A:N6	1:5:3736:A:C5	2.65	0.65
1:5:3759:A:N1	49:S2:1709:G:O4'	2.29	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
1:5:4510:A:O2'	1:5:4511:A:C8	2.46	0.65
1:5:4547:C:O3'	1:5:4548:A:C8	2.50	0.65
1:5:4885:U:C2	1:5:4886:C:C5	2.85	0.65
1:5:4901:G:N2	1:5:4921:C:C2	2.65	0.65
1:5:492:U:C2	1:5:493:G:C8	2.85	0.65
1:5:5029:C:C4	1:5:5030:U:C5	2.85	0.65
1:5:755:C:N3	1:5:756:G:N7	2.44	0.65
1:5:951:G:H2'	1:5:952:G:H5''	1.79	0.65
3:8:133:G:N3	3:8:134:G:C8	2.65	0.65
8:E:236:TYR:HE2	8:E:238:ILE:HA	1.62	0.65
12:I:47:PRO:CB	12:I:171:TRP:HE1	2.10	0.65
49:S2:933:G:C2	49:S2:1000:C:C2	2.84	0.65
49:S2:1127:C:C2	49:S2:1128:C:C5	2.85	0.65
49:S2:98:C:C2	49:S2:409:C:C6	2.85	0.65
49:S2:832:G:N2	49:S2:843:C:C2	2.65	0.65
62:SM:33:ARG:HG2	62:SM:33:ARG:HH11	1.62	0.65
48:4:150:ARG:HA	48:4:200:MET:HE1	1.79	0.65
48:4:126:LEU:HD11	48:4:156:MET:SD	2.36	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:168:GLN:HG2	48:4:168:GLN:O	1.96	0.65
48:4:24:VAL:CG2	48:4:32:LYS:CE	2.67	0.65
48:4:690:GLY:CA	48:4:730:TYR:CD1	2.74	0.65
48:4:692:LEU:CD2	48:4:734:LEU:HD21	2.25	0.65
48:4:740:LEU:HD13	48:4:741:MET:N	2.12	0.65
1:5:1177:U:H2'	1:5:1178:G:H8	1.61	0.65
1:5:1246:G:C6	1:5:1247:U:C4	2.85	0.65
1:5:1261:G:C6	1:5:1262:G:N7	2.65	0.65
1:5:1268:G:N1	1:5:1270:A:C5	2.65	0.65
1:5:1404:G:N2	1:5:1414:C:C2	2.65	0.65
1:5:1618:G:C6	1:5:1619:G:N7	2.65	0.65
1:5:1840:G:H2'	1:5:1842:G:O5'	1.96	0.65
1:5:2392:C:N3	1:5:2393:C:C5	2.65	0.65
1:5:2445:C:N3	1:5:2446:C:C5	2.64	0.65
1:5:2509:C:C2'	1:5:2510:G:O5'	2.44	0.65
1:5:259:C:H2'	1:5:260:C:O4'	1.97	0.65
1:5:2665:U:C4	21:R:124:TYR:CZ	2.85	0.65
1:5:2858:A:O2'	1:5:2859:G:C5'	2.44	0.65
1:5:2859:G:O2'	1:5:2860:C:O5'	2.15	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
1:5:4772:C:C2	1:5:4773:C:C5	2.85	0.65
1:5:515:C:C2	1:5:647:G:C2	2.85	0.65
6:C:112:HIS:CE1	17:N:202:ARG:HE	2.14	0.65
14:K:71:ILE:HG22	14:K:73:VAL:HG23	1.78	0.65
17:N:158:HIS:HB3	17:N:161:MET:HG2	1.79	0.65
49:S2:1415:C:H2'	49:S2:1416:C:C4'	2.26	0.65
49:S2:1791:A:C6	49:S2:1792:G:H1'	2.31	0.65
49:S2:1792:G:C2	49:S2:1793:A:C8	2.85	0.65
49:S2:387:C:C2	49:S2:388:U:C6	2.82	0.65
49:S2:625:G:H4'	49:S2:629:A:C2	2.32	0.65
49:S2:632:C:N3	49:S2:633:C:C5	2.65	0.65
49:S2:960:U:O4	64:SO:66:ARG:HA	1.97	0.65
52:SC:267:GLN:NE2	71:SV:50:PHE:HE2	1.94	0.65
48:4:150:ARG:O	48:4:200:MET:HE3	1.97	0.64
48:4:40:VAL:HA	48:4:43:ALA:HB2	1.78	0.64
48:4:730:TYR:HB2	48:4:854:PHE:CE2	2.31	0.64
1:5:1357:C:O2'	1:5:1358:G:H5'	1.96	0.64
1:5:1973:G:C6	1:5:2002:A:N7	2.64	0.64
1:5:1934:A:C6	1:5:2048:U:C2	2.85	0.64
1:5:2279:A:N1	1:5:2280:G:C6	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2768:C:O4'	1:5:2768:C:O2	2.14	0.64
1:5:288:G:H2'	1:5:289:C:C6	2.32	0.64
1:5:3652:A:C8	1:5:3691:G:N2	2.65	0.64
1:5:3938:G:C6	1:5:4077:A:H2	2.14	0.64
1:5:4241:C:O2	1:5:4241:C:C2'	2.40	0.64
1:5:4275:G:C6	1:5:4276:G:N7	2.65	0.64
1:5:457:G:N1	1:5:458:C:C5	2.64	0.64
1:5:489:C:N3	1:5:490:C:C6	2.65	0.64
1:5:695:G:H3'	1:5:696:C:H5'	1.77	0.64
3:8:103:A:N7	3:8:104:A:N7	2.45	0.64
3:8:121:G:H2'	3:8:122:G:O5'	1.96	0.64
14:K:86:LYS:C	14:K:104:ILE:HG21	2.16	0.64
15:L:28:GLN:HG2	17:N:202:ARG:HH11	1.61	0.64
20:Q:17:GLU:HA	20:Q:52:PHE:CE1	2.31	0.64
21:R:131:VAL:HB	21:R:132:PHE:CE1	2.31	0.64
49:S2:1352:G:H1'	49:S2:1378:A:N3	2.12	0.64
49:S2:1466:G:N2	49:S2:1467:C:C2	2.65	0.64
49:S2:1595:U:O4	49:S2:1596:U:C5	2.49	0.64
49:S2:173:A:C2	49:S2:174:C:C6	2.84	0.64
49:S2:554:A:C2	49:S2:555:A:N7	2.65	0.64
49:S2:796:G:H3'	49:S2:797:C:H5''	1.78	0.64
49:S2:833:C:C2	49:S2:834:C:C6	2.85	0.64
49:S2:963:A:C2	49:S2:964:A:C5	2.84	0.64
49:S2:1578:U:C6	53:SD:6:SER:N	2.65	0.64
61:SL:17:PHE:CZ	61:SL:19:ASN:HB2	2.31	0.64
63:SN:128:TYR:CD1	63:SN:129:TYR:N	2.65	0.64
68:SS:86:ARG:CZ	68:SS:86:ARG:HA	2.27	0.64
25:V:48:ARG:HH21	25:V:48:ARG:HG3	1.61	0.64
48:4:191:THR:HG22	48:4:192:TYR:CE2	2.32	0.64
48:4:267:ASP:OD1	48:4:268:PRO:N	2.30	0.64
48:4:609:PHE:CZ	48:4:661:ILE:CD1	2.68	0.64
48:4:827:ASN:ND2	48:4:827:ASN:O	2.30	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
1:5:1900:C:C2	1:5:1901:C:C6	2.85	0.64
1:5:1994:C:HO2'	14:K:132:ILE:CG1	1.78	0.64
1:5:2367:A:O2'	1:5:2368:A:O5'	2.14	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
1:5:2468:U:N3	1:5:2473:A:C6	2.64	0.64
1:5:2644:G:C6	1:5:2645:G:C5	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3694:U:C4	1:5:3695:U:C5	2.85	0.64
1:5:4099:G:C5	1:5:4100:C:C5	2.85	0.64
1:5:422:C:N3	1:5:423:G:C8	2.66	0.64
1:5:4404:U:C5	1:5:4436:U:O4	2.50	0.64
1:5:4482:U:O2	1:5:4483:C:C6	2.49	0.64
1:5:4463:U:C5	1:5:4488:A:N7	2.66	0.64
1:5:459:C:N3	1:5:460:C:C5	2.65	0.64
1:5:5029:C:N3	1:5:5030:U:C5	2.66	0.64
3:8:131:G:N1	3:8:132:G:C8	2.64	0.64
9:F:197:TYR:C	9:F:199:VAL:H	2.00	0.64
14:K:66:ASN:HB2	14:K:69:ALA:HB3	1.79	0.64
49:S2:1144:A:OP1	49:S2:1355:C:C5	2.50	0.64
49:S2:1215:C:H42	49:S2:1221:G:H1	1.44	0.64
49:S2:1366:G:N2	49:S2:1374:C:C2	2.64	0.64
49:S2:1405:A:C4	49:S2:1406:G:C8	2.85	0.64
49:S2:1551:U:O4'	49:S2:1558:C:C2	2.50	0.64
49:S2:340:C:C4	49:S2:341:C:C4	2.85	0.64
49:S2:494:C:C2	49:S2:495:U:H5	2.14	0.64
49:S2:500:A:H3'	49:S2:501:C:C5	2.33	0.64
49:S2:609:U:O2	49:S2:610:G:C8	2.50	0.64
49:S2:842:C:C2	49:S2:843:C:C6	2.85	0.64
49:S2:848:U:C2	49:S2:849:A:C8	2.86	0.64
49:S2:863:U:N3	49:S2:864:A:N7	2.45	0.64
52:SC:104:ASP:OD2	52:SC:130:ILE:HB	1.96	0.64
48:4:690:GLY:N	48:4:730:TYR:CE1	2.61	0.64
1:5:1261:G:N1	1:5:1262:G:C5	2.65	0.64
1:5:1554:A:C5	1:5:1555:G:C8	2.86	0.64
1:5:1673:U:N3	1:5:1674:C:C4	2.66	0.64
1:5:966:A:N6	1:5:2252:G:C8	2.56	0.64
1:5:2272:C:O2'	1:5:2273:G:C5'	2.45	0.64
1:5:2367:A:N6	1:5:2788:U:N3	2.27	0.64
1:5:247:G:N1	1:5:248:C:C4	2.65	0.64
1:5:2645:G:C6	1:5:2646:C:C5	2.86	0.64
1:5:2736:G:N2	1:5:2737:C:N1	2.45	0.64
1:5:4723:A:N3	1:5:4724:A:C8	2.65	0.64
1:5:661:C:N3	1:5:662:C:C5	2.66	0.64
1:5:88:A:C2	1:5:89:C:C4	2.85	0.64
2:7:17:C:O2	2:7:17:C:H2'	1.97	0.64
3:8:21:C:OP1	6:C:195:LYS:NZ	2.31	0.64
3:8:70:G:C2	3:8:87:G:C2	2.86	0.64
49:S2:1030:A:N3	49:S2:1031:A:C8	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:673:G:H1'	49:S2:1084:A:C2	2.32	0.64
49:S2:1126:G:C2	49:S2:1127:C:C6	2.86	0.64
49:S2:1220:A:N6	49:S2:1221:G:C6	2.65	0.64
49:S2:139:C:O2'	49:S2:140:C:O3'	2.15	0.64
49:S2:676:C:C2	49:S2:677:G:C8	2.85	0.64
48:4:70:ILE:O	48:4:71:LYS:CB	2.44	0.64
1:5:1177:U:N3	1:5:1178:G:N7	2.46	0.64
1:5:2079:G:N2	1:5:2080:U:C2	2.65	0.64
1:5:2305:U:C6	1:5:2305:U:C5'	2.80	0.64
1:5:2325:C:O2	1:5:2325:C:C2'	2.45	0.64
1:5:3723:A:C2	1:5:3724:A:C8	2.85	0.64
1:5:3779:A:H2'	1:5:3780:G:O4'	1.98	0.64
1:5:4096:C:N4	1:5:4097:G:C4	2.64	0.64
1:5:4532:U:OP2	1:5:4554:G:N2	2.30	0.64
1:5:5031:G:N1	1:5:5032:C:C4	2.65	0.64
1:5:704:C:H5''	1:5:704:C:C6	2.31	0.64
10:G:169:PHE:CE2	17:N:6:TYR:HB2	2.31	0.64
49:S2:1032:C:C2	49:S2:1033:G:C8	2.86	0.64
49:S2:1409:A:H2'	49:S2:1410:C:O4'	1.97	0.64
49:S2:530:U:C4	49:S2:531:A:N7	2.64	0.64
49:S2:81:U:C4	49:S2:82:G:N7	2.65	0.64
68:SS:86:ARG:HA	68:SS:86:ARG:NH1	2.12	0.64
6:C:200:ARG:NH2	28:Y:11:ARG:HD2	2.11	0.64
1:5:984:C:C2	1:5:1070:G:C2	2.86	0.64
1:5:1085:C:N3	1:5:1086:C:C6	2.65	0.64
1:5:453:G:H22	1:5:1294:A:H62	1.46	0.64
1:5:1388:A:C6	1:5:1396:G:C2	2.81	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
1:5:1936:C:O2	1:5:1936:C:C2'	2.46	0.64
1:5:211:G:N3	1:5:212:A:C8	2.66	0.64
1:5:2292:C:C2	1:5:2293:U:C6	2.85	0.64
1:5:235:A:C5	1:5:238:C:N4	2.66	0.64
1:5:2570:U:N3	1:5:2571:C:C5	2.66	0.64
1:5:271:C:N3	1:5:272:U:C6	2.60	0.64
1:5:3938:G:H4'	1:5:3939:G:O5'	1.97	0.64
14:K:81:ILE:CD1	14:K:117:ARG:NH1	2.60	0.64
1:5:75:G:O6	15:L:103:ARG:NH1	2.30	0.64
49:S2:1123:C:C4	49:S2:1124:C:H5	2.13	0.64
49:S2:1201:U:H1'	49:S2:1357:A:C2	2.33	0.64
49:S2:1254:C:O2	49:S2:1255:G:H8	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1496:U:C4	49:S2:1498:A:N7	2.66	0.64
49:S2:1710:C:N3	49:S2:1711:U:C5	2.66	0.64
49:S2:52:G:N2	49:S2:53:C:H1'	2.12	0.64
49:S2:600:G:C2	49:S2:601:G:N7	2.65	0.64
49:S2:841:G:N3	49:S2:842:C:C6	2.65	0.64
49:S2:925:G:N2	49:S2:926:A:N9	2.46	0.64
49:S2:927:C:C2	49:S2:928:G:C8	2.85	0.64
49:S2:958:G:HO2'	49:S2:959:G:C4'	2.05	0.64
49:S2:977:C:N3	49:S2:978:G:N7	2.45	0.64
57:SH:57:ARG:NE	57:SH:57:ARG:HA	2.13	0.64
73:SX:88:ASP:OD1	73:SX:88:ASP:C	2.35	0.64
22:S:15:ARG:HH21	23:T:141:VAL:HG22	1.61	0.64
48:4:308:LYS:HB3	48:4:311:GLU:HG3	1.78	0.64
48:4:495:ARG:O	48:4:496:VAL:CG1	2.45	0.64
1:5:1204:C:N3	1:5:1205:G:N7	2.46	0.64
1:5:1325:C:H4'	1:5:3901:A:C2	2.32	0.64
1:5:1632:A:O2'	1:5:3641:U:O2	2.14	0.64
1:5:1673:U:O4	1:5:1682:A:N1	2.30	0.64
1:5:1877:G:N2	1:5:1878:G:H1'	2.11	0.64
1:5:1878:G:C2	1:5:1879:C:C5	2.86	0.64
1:5:1921:C:C6	22:S:161:ARG:HG2	2.33	0.64
1:5:1928:C:H1'	1:5:1929:A:C6	2.33	0.64
1:5:1997:U:H2'	1:5:1998:A:H3'	1.80	0.64
1:5:238:C:C2	1:5:239:C:C5	2.86	0.64
1:5:2612:G:C6	1:5:2613:C:C4	2.86	0.64
1:5:2703:G:C6	1:5:2704:C:C5	2.86	0.64
1:5:3622:C:N3	1:5:3623:C:N3	2.45	0.64
1:5:3629:A:C6	1:5:3630:A:C8	2.85	0.64
1:5:364:G:O6	13:J:52:LYS:HE3	108.46	0.64
1:5:3742:G:C2	1:5:3743:G:C8	2.85	0.64
1:5:4301:U:H4'	23:T:54:HIS:HD2	1.61	0.64
1:5:4343:U:C2	1:5:4344:U:C5	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
1:5:4652:G:C4	1:5:4653:C:C5	2.86	0.64
1:5:4766:C:H2'	1:5:4767:C:O4'	1.97	0.64
1:5:484:U:O4	1:5:486:C:C4	2.51	0.64
3:8:134:G:H21	3:8:135:C:H1'	1.62	0.64
12:I:9:TYR:HD2	12:I:97:ILE:CG1	2.11	0.64
1:5:76:A:C8	15:L:74:ARG:NH2	2.66	0.64
21:R:95:TRP:HZ3	21:R:98:ARG:HH21	1.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1265:A:N3	49:S2:1266:C:C6	2.65	0.64
49:S2:1276:A:C2	49:S2:1277:C:H1'	2.33	0.64
49:S2:1654:G:H2'	49:S2:1655:C:O4'	1.97	0.64
49:S2:469:A:N1	49:S2:470:G:N7	2.44	0.64
49:S2:694:G:C2	49:S2:695:C:C6	2.85	0.64
49:S2:69:C:H2'	49:S2:70:G:C8	2.32	0.64
49:S2:751:G:O6	49:S2:791:C:C4	2.51	0.64
49:S2:906:U:O2	49:S2:907:G:C8	2.51	0.64
49:S2:910:G:C6	49:S2:911:C:C4	2.85	0.64
49:S2:926:A:C6	49:S2:927:C:C5	2.86	0.64
56:SG:162:LEU:HG	56:SG:170:ARG:HB2	1.78	0.64
56:SG:180:VAL:HG13	56:SG:185:LEU:HD21	1.80	0.64
26:W:4:GLU:CD	26:W:30:GLN:HE21	2.00	0.64
48:4:191:THR:CB	48:4:192:TYR:CD1	2.80	0.64
48:4:284:LYS:CE	48:4:284:LYS:H	2.11	0.64
48:4:113:SER:CB	48:4:533:MET:HB2	2.17	0.64
48:4:541:SER:O	48:4:543:GLU:N	2.31	0.64
48:4:58:ASP:CB	48:4:63:GLU:CD	2.65	0.64
14:K:31:LYS:NZ	48:4:753:GLU:CD	2.50	0.64
48:4:742:GLU:HB2	48:4:820:LEU:HD11	1.79	0.64
1:5:1167:C:H1'	1:5:1195:G:N2	2.13	0.64
1:5:1517:G:C2	1:5:1650:A:C6	2.86	0.64
1:5:1516:G:C5	1:5:1518:A:N7	2.66	0.64
1:5:1926:C:C2	1:5:1927:U:C6	2.85	0.64
1:5:206:U:O2	1:5:208:A:C8	2.51	0.64
1:5:2089:G:C5	1:5:2262:G:C2'	2.79	0.64
1:5:2399:G:C2	1:5:2400:G:C8	2.85	0.64
1:5:246:G:N3	1:5:247:G:C8	2.66	0.64
1:5:2546:G:O2'	1:5:2547:G:H5''	1.96	0.64
1:5:4097:G:C2	1:5:4098:A:N7	2.65	0.64
1:5:4369:A:C2	1:5:4370:G:N7	2.65	0.64
1:5:4490:C:C2	1:5:4491:G:C8	2.86	0.64
2:7:93:G:C2	2:7:94:C:C6	2.85	0.64
3:8:118:C:O2	3:8:119:C:C6	2.51	0.64
3:8:63:U:O2	3:8:63:U:C2'	2.45	0.64
14:K:31:LYS:O	14:K:34:PRO:HD2	1.93	0.64
14:K:61:LYS:HE3	14:K:72:GLU:HB3	0.67	0.64
49:S2:1561:A:H2'	49:S2:1561:A:N3	2.13	0.64
49:S2:1573:G:C5	49:S2:1574:C:C6	2.85	0.64
49:S2:360:A:C2	49:S2:363:A:C8	2.86	0.64
48:4:408:GLY:HA2	49:S2:479:C:H5'	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:553:U:N3	49:S2:554:A:C5	2.65	0.64
49:S2:635:G:C6	49:S2:636:C:C4	2.86	0.64
49:S2:837:A:C2	49:S2:838:G:C8	2.86	0.64
48:4:516:ASP:O	48:4:518:PRO:N	2.30	0.64
48:4:60:ARG:O	48:4:60:ARG:HG3	1.97	0.64
48:4:616:ASP:OD1	48:4:621:GLU:CB	2.46	0.64
48:4:749:ILE:HD12	48:4:759:ILE:CG1	2.28	0.64
48:4:800:LEU:CG	48:4:808:ALA:HB1	2.21	0.64
1:5:1079:C:N3	1:5:1080:C:C6	2.66	0.64
1:5:1198:G:H2'	1:5:1199:G:H8	1.59	0.64
1:5:1314:C:C2	1:5:1315:C:C5	2.85	0.64
1:5:1391:A:C5	1:5:1392:A:N7	2.66	0.64
1:5:1696:C:O2	1:5:1697:G:H5'	1.97	0.64
1:5:1807:C:C4	1:5:1808:C:C5	2.85	0.64
1:5:2079:G:C2	1:5:2080:U:C4	2.85	0.64
1:5:2326:G:N2	1:5:2327:G:N9	2.45	0.64
1:5:2409:U:O4	1:5:2783:A:C6	2.51	0.64
1:5:2451:A:C5	1:5:2452:G:N7	2.66	0.64
1:5:2371:U:O4	1:5:2825:A:H2	1.79	0.64
1:5:3621:A:C2	1:5:3622:C:C6	2.86	0.64
1:5:3722:G:N1	1:5:3723:A:C5	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
1:5:4275:G:C6	1:5:4276:G:C8	2.85	0.64
1:5:4342:C:N3	1:5:4343:U:C6	2.66	0.64
1:5:4881:U:O2'	1:5:4882:U:C6	2.50	0.64
1:5:50:C:C2'	1:5:51:A:O5'	2.46	0.64
1:5:690:C:N3	1:5:691:C:C6	2.66	0.64
1:5:98:A:C1'	1:5:292:G:O6	2.45	0.64
4:A:211:PHE:CD1	4:A:219:ILE:HG23	2.33	0.64
1:5:176:G:H5''	11:H:98:HIS:CE1	177.37	0.64
14:K:123:ARG:CB	14:K:129:ILE:CD1	0.64	0.64
49:S2:1204:A:N3	49:S2:1205:C:C6	2.66	0.64
49:S2:1741:U:C2	49:S2:1742:C:C6	2.86	0.64
49:S2:1793:A:N1	49:S2:1794:C:C4	2.66	0.64
49:S2:1797:U:O2'	49:S2:1798:C:O5'	2.13	0.64
49:S2:856:C:O2	49:S2:856:C:H2'	1.98	0.64
59:SJ:86:VAL:HG21	59:SJ:105:PHE:CE1	2.32	0.64
62:SM:87:GLU:HA	62:SM:91:LEU:HD11	1.80	0.64
48:4:481:LYS:CG	48:4:482:THR:N	2.16	0.64
48:4:502:SER:O	48:4:504:VAL:N	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:738:PRO:HB2	48:4:824:PRO:HG2	1.80	0.64
1:5:106:A:H2'	1:5:107:G:O4'	1.98	0.64
1:5:107:G:C6	15:L:56:ARG:NH1	2.66	0.64
1:5:1292:C:H3'	1:5:1293:G:H5''	1.80	0.64
1:5:1447:C:C1'	1:5:2098:G:N2	2.61	0.64
1:5:1542:U:N3	1:5:1543:G:N7	2.46	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
1:5:2301:G:C6	1:5:2302:C:C5	2.85	0.64
1:5:2407:G:O2'	1:5:2409:U:N3	2.30	0.64
1:5:2449:A:N7	1:5:2450:G:H1'	2.12	0.64
1:5:2496:G:C6	1:5:2497:C:C4	2.86	0.64
1:5:298:G:C6	1:5:299:C:C5	2.85	0.64
1:5:347:A:C2	1:5:348:G:C5	2.86	0.64
1:5:4480:A:C2	1:5:4481:U:C1'	2.81	0.64
1:5:4528:G:C2	1:5:4529:G:C8	2.85	0.64
1:5:471:A:C5	1:5:472:C:C5	2.85	0.64
1:5:491:G:N2	1:5:492:U:C5	2.66	0.64
1:5:83:C:P	1:5:84:A:O2'	2.55	0.64
1:5:911:U:N3	1:5:912:G:N7	2.46	0.64
1:5:978:G:H5''	8:E:41:SER:O	1.97	0.64
3:8:64:U:H2'	3:8:65:A:H8	1.59	0.64
1:5:4935:C:H3'	8:E:179:ARG:NH2	2.13	0.64
14:K:102:GLY:HA2	14:K:140:GLY:N	2.07	0.64
14:K:121:LEU:HB2	14:K:123:ARG:HB3	1.80	0.64
14:K:61:LYS:HA	14:K:75:PRO:HD3	1.79	0.64
16:M:11:ARG:NH2	16:M:61:ILE:HG23	2.13	0.64
49:S2:1095:U:O4	49:S2:1149:A:C6	2.51	0.64
49:S2:1162:C:H2'	49:S2:1162:C:O2	1.97	0.64
49:S2:1271:C:N3	49:S2:1272:C:C6	2.66	0.64
49:S2:1283:C:C2'	49:S2:1283:C:O2	2.46	0.64
49:S2:1253:A:OP2	49:S2:1526:G:N2	2.30	0.64
49:S2:909:G:C6	49:S2:910:G:N7	2.65	0.64
25:V:97:TYR:OH	26:W:21:TYR:CB	2.45	0.64
48:4:73:THR:CA	48:4:104:ASP:CB	2.74	0.64
48:4:216:SER:OG	48:4:219:HIS:HB2	1.98	0.64
48:4:207:PRO:CG	48:4:261:TRP:CE2	2.81	0.64
48:4:27:HIS:NE2	48:4:28:VAL:HG23	2.10	0.64
48:4:571:LYS:CE	48:4:571:LYS:CA	2.75	0.64
48:4:592:LEU:C	48:4:592:LEU:CD1	2.52	0.64
48:4:638:LYS:HD2	48:4:638:LYS:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:70:ILE:O	48:4:71:LYS:CG	2.46	0.64
1:5:189:G:C2	1:5:190:G:C8	2.85	0.64
1:5:1987:C:C4	1:5:1988:G:N7	2.65	0.64
1:5:2326:G:C2	1:5:2327:G:N9	2.65	0.64
1:5:2690:C:N3	1:5:2691:U:C6	2.66	0.64
1:5:2861:C:O2	1:5:3626:G:H4'	1.98	0.64
1:5:289:C:C4	1:5:290:U:C5	2.86	0.64
1:5:292:G:O2'	1:5:293:G:O5'	2.15	0.64
1:5:3741:C:O2	1:5:3742:G:C8	2.49	0.64
1:5:42:A:N6	1:5:4379:A:N3	2.46	0.64
1:5:4482:U:N3	1:5:4483:C:H5	1.94	0.64
1:5:4966:A:H2'	1:5:4967:A:C1'	2.27	0.64
1:5:699:C:C2	1:5:700:G:C8	2.85	0.64
1:5:730:G:H22	1:5:939:G:N2	1.94	0.64
1:5:964:A:H8	1:5:964:A:O5'	1.80	0.64
3:8:82:A:N3	3:8:82:A:H2'	2.12	0.64
7:D:223:PHE:CB	7:D:226:TYR:HB2	2.28	0.64
9:F:209:PHE:CD1	9:F:209:PHE:C	2.70	0.64
49:S2:1311:C:H2'	49:S2:1312:G:O4'	1.98	0.64
49:S2:1412:C:H2'	49:S2:1413:G:N7	2.12	0.64
49:S2:218:U:H2'	49:S2:219:U:O4'	1.98	0.64
49:S2:27:A:C5	49:S2:28:U:C5	2.85	0.64
49:S2:475:C:N3	49:S2:476:A:N7	2.46	0.64
48:4:207:PRO:HB2	48:4:261:TRP:CG	2.33	0.63
48:4:335:LEU:O	48:4:339:VAL:HG23	1.98	0.63
48:4:223:PHE:HB3	48:4:344:LEU:HD13	1.79	0.63
48:4:396:MET:CE	48:4:472:LEU:CD1	2.76	0.63
1:5:1258:G:C2	1:5:1259:G:C8	2.87	0.63
1:5:1245:C:C6	1:5:1269:G:O6	2.49	0.63
1:5:1475:G:N3	1:5:1476:C:C5	2.64	0.63
1:5:1476:C:O2	1:5:1477:C:C6	2.51	0.63
1:5:1867:A:N3	1:5:4403:U:O2'	2.27	0.63
1:5:1933:G:H2'	1:5:1934:A:O4'	1.98	0.63
1:5:1958:A:C6	1:5:2026:A:C6	2.70	0.63
1:5:1964:A:C2	1:5:4694:G:C6	2.86	0.63
1:5:1979:A:OP1	14:K:99:LYS:HG2	1.97	0.63
1:5:1267:C:H2'	1:5:2121:C:H41	1.62	0.63
1:5:2316:G:C4	1:5:2317:C:C5	2.86	0.63
1:5:2399:G:N1	1:5:2400:G:C5	2.67	0.63
1:5:246:G:N1	1:5:247:G:N7	2.45	0.63
1:5:2589:C:H3'	1:5:2590:G:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2829:U:C2	1:5:2830:G:C8	2.86	0.63
1:5:3665:G:H2'	1:5:3666:C:O4'	1.98	0.63
1:5:3674:G:N1	1:5:3675:G:C5	2.67	0.63
1:5:3689:G:C5	1:5:3690:U:C5	2.87	0.63
1:5:3689:G:C6	1:5:3690:U:C4	2.87	0.63
1:5:3927:U:C4	1:5:4182:G:C2	2.87	0.63
1:5:4114:C:H2'	1:5:4115:G:H1'	1.80	0.63
1:5:4117:U:H2'	1:5:4117:U:O2	1.97	0.63
1:5:4139:G:C6	1:5:4140:C:C5	2.85	0.63
1:5:4251:A:H2'	1:5:4252:C:C6	2.31	0.63
1:5:4426:C:N4	1:5:4427:G:C6	2.66	0.63
1:5:4746:C:C4	1:5:4747:C:C5	2.86	0.63
2:7:42:A:N1	2:7:43:U:C5	2.66	0.63
1:5:1936:C:C6	2:7:84:U:H6	2.13	0.63
49:S2:113:G:N3	49:S2:293:C:C5	2.66	0.63
49:S2:121:U:C4	49:S2:122:G:N7	2.66	0.63
49:S2:1591:C:N4	49:S2:1592:C:C5	2.66	0.63
49:S2:377:G:C6	49:S2:378:U:C5	2.86	0.63
49:S2:387:C:N3	49:S2:388:U:H5	1.92	0.63
49:S2:52:G:C5	49:S2:53:C:C5	2.85	0.63
49:S2:85:A:N1	49:S2:86:C:C4	2.65	0.63
49:S2:892:U:C2	49:S2:893:U:C6	2.86	0.63
63:SN:128:TYR:HD1	63:SN:129:TYR:N	1.96	0.63
72:SW:27:ILE:HD11	72:SW:61:ILE:HD12	1.79	0.63
48:4:267:ASP:C	48:4:267:ASP:HA	2.10	0.63
48:4:496:VAL:HG23	48:4:497:MET:N	2.13	0.63
48:4:823:ASP:C	48:4:823:ASP:OD1	2.37	0.63
1:5:1411:C:N3	1:5:1412:G:N7	2.45	0.63
1:5:144:G:N3	1:5:145:G:C8	2.65	0.63
1:5:181:C:C2	1:5:256:G:C2	2.86	0.63
1:5:1993:C:C4	1:5:2002:A:C6	2.86	0.63
1:5:2056:G:C6	1:5:2058:G:C5	2.86	0.63
1:5:2270:G:N1	1:5:2271:C:C4	2.66	0.63
1:5:2453:A:N6	1:5:2454:U:C4	2.67	0.63
1:5:280:G:H8	17:N:120:TRP:CZ3	2.16	0.63
1:5:293:G:H4'	1:5:294:G:C8	2.33	0.63
1:5:295:A:N7	1:5:316:U:O2'	2.29	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
1:5:3753:G:C6	1:5:3754:G:N7	2.66	0.63
1:5:4215:C:C4	1:5:4216:G:N7	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4406:U:N3	1:5:4407:G:N7	2.46	0.63
1:5:4453:C:C2	1:5:4529:G:C2	2.87	0.63
1:5:4472:G:C6	1:5:4473:A:C8	2.86	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
5:B:106:PHE:CE2	5:B:130:PHE:CZ	2.86	0.63
1:5:1439:C:C2	9:F:36:ARG:NH1	2.67	0.63
2:7:42:A:C8	13:J:75:ARG:NH1	2.67	0.63
14:K:14:TYR:CD1	14:K:14:TYR:C	2.72	0.63
49:S2:1266:C:C2	49:S2:1267:C:H5	2.15	0.63
49:S2:1546:G:O2'	49:S2:1547:C:C5'	2.46	0.63
49:S2:1574:C:C2	49:S2:1575:G:C8	2.87	0.63
49:S2:1729:U:O2	49:S2:1730:U:C5	2.51	0.63
49:S2:1781:A:H2'	49:S2:1782:G:H8	1.62	0.63
49:S2:26:U:C2	49:S2:27:A:H8	2.13	0.63
49:S2:634:A:N3	49:S2:635:G:C8	2.66	0.63
49:S2:752:G:C2	49:S2:791:C:O2	2.51	0.63
48:4:27:HIS:CD2	48:4:28:VAL:CA	2.70	0.63
48:4:502:SER:C	48:4:504:VAL:H	2.00	0.63
48:4:753:GLU:OE2	48:4:779:THR:CB	2.45	0.63
48:4:752:PRO:HB2	48:4:754:GLN:CD	2.17	0.63
1:5:1066:G:C4	1:5:1067:G:C8	2.87	0.63
1:5:1091:C:N3	1:5:1092:G:C8	2.66	0.63
1:5:1176:C:O2'	7:D:279:ARG:HG2	1.98	0.63
1:5:1250:C:C2	1:5:1261:G:C2	2.86	0.63
1:5:1476:C:C4	1:5:1477:C:C5	2.86	0.63
1:5:1661:C:O2	1:5:1662:C:C5	2.52	0.63
1:5:209:U:C5	1:5:211:G:N7	2.66	0.63
1:5:2422:C:H2'	1:5:2422:C:O2	1.96	0.63
1:5:293:G:H5''	1:5:294:G:H8	1.61	0.63
1:5:3606:U:C2	1:5:3607:U:C5	2.85	0.63
1:5:4479:A:C2	1:5:4480:A:H1'	2.32	0.63
1:5:4583:C:N4	1:5:4718:G:C6	2.67	0.63
1:5:44:A:C2	1:5:45:U:C6	2.86	0.63
1:5:54:G:N1	1:5:55:G:C8	2.66	0.63
4:A:186:TYR:N	4:A:196:TRP:CZ3	2.66	0.63
14:K:105:THR:HG22	14:K:144:ASP:HA	1.79	0.63
14:K:114:ARG:NE	14:K:130:LYS:HE2	2.13	0.63
14:K:94:LYS:CG	14:K:96:LYS:HE3	2.24	0.63
20:Q:178:ARG:NH2	20:Q:186:TYR:CE1	2.66	0.63
49:S2:104:A:N6	49:S2:105:U:C4	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1455:A:C6	49:S2:1456:G:C8	2.86	0.63
49:S2:402:C:N3	49:S2:403:G:C8	2.67	0.63
49:S2:100:U:O4	49:S2:409:C:H1'	1.99	0.63
49:S2:579:C:N4	49:S2:580:U:C4	2.66	0.63
49:S2:906:U:O2	49:S2:907:G:N7	2.31	0.63
49:S2:942:G:H2'	49:S2:943:U:C6	2.34	0.63
57:SH:158:LEU:HB2	57:SH:189:PHE:CZ	2.33	0.63
62:SM:35:ILE:HB	62:SM:61:TYR:CE1	2.34	0.63
48:4:157:MET:HE2	48:4:214:PHE:CE2	2.33	0.63
48:4:228:PHE:CE1	48:4:232:TYR:OH	2.49	0.63
48:4:507:VAL:HG22	48:4:554:LEU:HD22	1.71	0.63
48:4:557:CYS:HA	48:4:560:ASP:OD2	1.98	0.63
48:4:739:ARG:HH12	48:4:823:ASP:HB2	1.59	0.63
1:5:1202:C:N3	1:5:1203:G:N7	2.47	0.63
1:5:1251:C:N3	1:5:1252:C:C5	2.67	0.63
1:5:1441:C:C2	1:5:1442:C:C6	2.86	0.63
1:5:1509:C:N3	1:5:1510:G:N7	2.47	0.63
1:5:2441:C:H2'	1:5:2442:G:C8	2.34	0.63
1:5:30:C:C2'	1:5:31:U:O5'	2.47	0.63
1:5:3590:G:C5	1:5:3591:C:C5	2.87	0.63
1:5:3622:C:C2	1:5:3623:C:C2	2.87	0.63
1:5:3763:A:H2'	1:5:3764:U:O4'	1.98	0.63
1:5:4583:C:C4	1:5:4718:G:N1	2.66	0.63
1:5:65:A:H2	1:5:76:A:H4'	1.63	0.63
1:5:916:C:N4	1:5:917:A:N7	2.46	0.63
3:8:11:C:O2	3:8:11:C:C2'	2.47	0.63
14:K:78:SER:HA	14:K:117:ARG:HH11	1.62	0.63
49:S2:114:G:H1'	49:S2:383:G:O4'	1.98	0.63
49:S2:10:G:C2	49:S2:11:A:C8	2.86	0.63
49:S2:1229:G:C5	49:S2:1230:C:C5	2.86	0.63
49:S2:1273:C:N3	49:S2:1506:A:C2	2.67	0.63
49:S2:1528:G:C4	49:S2:1529:C:C5	2.87	0.63
49:S2:1590:C:C4	49:S2:1591:C:H1'	2.34	0.63
49:S2:1603:G:C8	68:SS:28:PHE:HE2	2.16	0.63
49:S2:166:A:C2	49:S2:167:G:C8	2.87	0.63
49:S2:185:G:N3	49:S2:186:C:C6	2.66	0.63
49:S2:383:G:O2'	61:SL:133:PRO:O	2.16	0.63
49:S2:61:A:C2	49:S2:335:G:H1'	2.33	0.63
49:S2:835:C:H5'	49:S2:836:G:OP2	1.98	0.63
1:5:3709:U:N3	49:S2:970:G:C2	2.52	0.63
59:SJ:48:PHE:CZ	59:SJ:52:LYS:HG3	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SL:57:ASP:OD2	61:SL:60:CYS:N	2.30	0.63
49:S2:1160:U:OP2	73:SX:4:CYS:O	2.16	0.63
73:SX:67:ARG:CG	73:SX:115:ILE:HD13	2.27	0.63
1:5:1248:C:C4	1:5:1249:C:C5	2.86	0.63
1:5:1273:G:N7	8:E:68:LYS:C	2.52	0.63
1:5:2026:A:O2'	1:5:2027:U:H5'	1.98	0.63
1:5:2096:G:N3	1:5:2096:G:H3'	2.13	0.63
1:5:2126:G:C1'	1:5:2127:C:C6	2.80	0.63
1:5:2657:G:C6	1:5:2658:G:C6	2.86	0.63
1:5:27:C:C2	1:5:28:C:H6	2.16	0.63
1:5:3879:G:OP1	1:5:3879:G:O4'	2.16	0.63
1:5:4091:G:C4	1:5:4092:G:C8	2.86	0.63
1:5:4426:C:C4	1:5:4427:G:C5	2.86	0.63
1:5:4886:C:O2	1:5:4887:C:H6	1.80	0.63
1:5:4929:C:H6	1:5:4929:C:H5''	1.63	0.63
1:5:4730:C:H5''	1:5:4965:U:O2	1.98	0.63
2:7:59:G:C2	2:7:60:G:C8	2.86	0.63
1:5:2090:U:N3	6:C:307:LYS:HE3	2.13	0.63
49:S2:1205:C:C2	49:S2:1206:G:C8	2.86	0.63
49:S2:1408:U:C2'	49:S2:1409:A:C8	2.81	0.63
49:S2:1417:C:C2	49:S2:1419:C:C5	2.86	0.63
49:S2:1448:A:C6	49:S2:1449:G:C8	2.86	0.63
49:S2:1526:G:C4	49:S2:1527:C:C6	2.86	0.63
49:S2:1568:C:O2'	49:S2:1569:A:O4'	2.16	0.63
49:S2:1036:A:N3	49:S2:1844:U:O2'	2.30	0.63
49:S2:299:A:C6	49:S2:300:U:C5	2.87	0.63
49:S2:338:G:C6	49:S2:339:A:C5	2.87	0.63
49:S2:380:G:H22	49:S2:382:C:H3'	1.63	0.63
49:S2:81:U:O4	49:S2:82:G:C5	2.52	0.63
49:S2:90:G:H2'	49:S2:91:A:O4'	1.99	0.63
52:SC:200:ARG:HG3	52:SC:200:ARG:HH21	1.64	0.63
58:SI:139:LYS:HD2	58:SI:145:ILE:HD12	1.81	0.63
62:SM:51:VAL:HG12	62:SM:109:VAL:HG22	1.81	0.63
67:SR:5:ARG:HG3	67:SR:49:LYS:HE3	1.79	0.63
26:W:50:ASN:HB3	26:W:55:TYR:HE2	1.60	0.63
29:Z:78:ASN:OD1	29:Z:78:ASN:N	2.32	0.63
48:4:845:LYS:HE3	48:4:846:GLU:CA	2.28	0.63
1:5:1246:G:C4	1:5:1247:U:C6	2.87	0.63
1:5:1382:G:O2'	1:5:1383:G:H5'	1.98	0.63
1:5:2327:G:C6	1:5:2328:G:N7	2.67	0.63
1:5:2606:G:C4	1:5:2607:C:C5	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2644:G:C6	1:5:2645:G:N7	2.66	0.63
1:5:2688:G:C2	1:5:2689:C:C6	2.86	0.63
1:5:3911:C:O2'	1:5:3912:U:O5'	2.13	0.63
1:5:4080:C:O2	1:5:4081:G:H8	1.69	0.63
1:5:4158:C:O2	1:5:4158:C:H2'	1.97	0.63
1:5:4194:U:O4	1:5:4197:G:H5''	1.98	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
1:5:4189:U:C1'	1:5:4380:A:C2	2.81	0.63
1:5:4591:U:H2'	1:5:4592:C:C6	2.34	0.63
1:5:4735:G:C4	1:5:4736:C:C5	2.87	0.63
1:5:748:G:C6	1:5:918:G:H1'	2.34	0.63
2:7:8:G:C6	2:7:9:C:C4	2.87	0.63
5:B:337:VAL:HG21	5:B:345:LEU:HD21	1.81	0.63
7:D:42:ASN:CA	7:D:44:TYR:OH	2.44	0.63
49:S2:99:A:C6	49:S2:100:U:C5	2.87	0.63
49:S2:1433:C:O3'	49:S2:1434:C:O4'	2.17	0.63
49:S2:1804:U:N3	49:S2:1805:G:N7	2.47	0.63
49:S2:221:A:C5	49:S2:222:U:C5	2.87	0.63
49:S2:419:G:N2	49:S2:661:U:C2	2.67	0.63
49:S2:499:G:C2	49:S2:504:G:C6	2.87	0.63
50:SA:110:ASN:O	50:SA:116:PHE:CD2	2.50	0.63
54:SE:11:ARG:HD2	54:SE:20:LEU:HB3	1.80	0.63
65:SP:17:TYR:HB3	65:SP:25:LEU:HD11	1.81	0.63
48:4:120:ARG:CZ	48:4:496:VAL:O	2.47	0.63
48:4:300:VAL:HG23	48:4:301:PHE:N	2.12	0.63
48:4:700:VAL:CG1	48:4:702:PHE:CE2	2.82	0.63
1:5:1089:G:H5'	23:T:140:PHE:CE1	2.33	0.63
1:5:1379:C:O3'	1:5:1380:G:H8	1.81	0.63
1:5:1556:C:H2'	1:5:1557:C:H6	1.64	0.63
1:5:1661:C:C2	1:5:1662:C:C5	2.86	0.63
1:5:1671:U:C2'	1:5:1671:U:O2	2.45	0.63
1:5:1771:U:N3	1:5:1772:C:C5	2.66	0.63
1:5:1843:A:C6	1:5:1844:G:N7	2.66	0.63
1:5:1321:G:O4'	1:5:1891:A:N6	2.32	0.63
1:5:2275:G:H5''	1:5:2275:G:H8	1.63	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
1:5:2856:C:N4	1:5:2857:A:H62	1.94	0.63
1:5:312:G:H2'	1:5:313:U:O4'	1.99	0.63
1:5:3858:C:C4	1:5:3859:G:C8	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3858:C:C4	1:5:3859:G:N7	2.67	0.63
1:5:4097:G:N1	1:5:4098:A:N7	2.47	0.63
1:5:4119:C:O5'	1:5:4119:C:O2	2.17	0.63
1:5:4277:G:N2	1:5:4278:C:C2	2.67	0.63
1:5:4478:G:O2'	1:5:4602:A:N1	2.26	0.63
1:5:52:G:H8	1:5:52:G:O5'	1.82	0.63
9:F:219:ARG:HH11	9:F:219:ARG:HB3	1.63	0.63
1:5:1439:C:H5''	9:F:36:ARG:NH1	2.12	0.63
14:K:78:SER:HA	14:K:117:ARG:NH1	2.14	0.63
16:M:36:ALA:HB2	16:M:52:PHE:CZ	2.34	0.63
17:N:138:PHE:N	17:N:138:PHE:HD1	1.96	0.63
49:S2:113:G:C2	49:S2:293:C:C4	2.86	0.63
49:S2:1095:U:N3	49:S2:1149:A:C6	2.67	0.63
49:S2:1304:U:O2	49:S2:1305:C:C5	2.52	0.63
49:S2:1741:U:N3	49:S2:1742:C:C5	2.67	0.63
49:S2:449:A:N6	49:S2:452:G:C6	2.66	0.63
49:S2:493:A:N3	49:S2:493:A:H2'	2.14	0.63
49:S2:693:A:H2'	49:S2:694:G:O4'	1.99	0.63
49:S2:80:G:C6	49:S2:81:U:C4	2.87	0.63
73:SX:115:ILE:HG22	73:SX:118:VAL:HB	1.80	0.63
48:4:771:PHE:HD2	48:4:785:LYS:HD2	1.63	0.63
1:5:1243:C:H2'	1:5:1244:G:N7	2.14	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
1:5:1758:G:N3	1:5:1759:G:C8	2.67	0.63
1:5:2294:G:C4	1:5:2295:C:C5	2.87	0.63
1:5:2340:C:N3	1:5:2341:A:C8	2.66	0.63
1:5:2483:G:C2	1:5:2484:A:C8	2.85	0.63
1:5:2485:U:C2	1:5:2486:G:N7	2.67	0.63
1:5:2506:G:H4'	1:5:2507:A:OP1	1.97	0.63
1:5:2545:U:H5	1:5:2546:G:HO2'	1.46	0.63
1:5:2549:G:N2	1:5:2770:C:N3	2.46	0.63
1:5:3859:G:OP2	19:P:25:HIS:NE2	2.31	0.63
1:5:4100:C:C4	1:5:4101:C:C5	2.87	0.63
1:5:4345:C:C2	1:5:4346:U:C6	2.87	0.63
1:5:470:A:N6	8:E:101:ARG:NH2	2.46	0.63
1:5:5001:U:H2'	1:5:5002:U:O4'	1.99	0.63
1:5:698:G:C2	1:5:699:C:C6	2.86	0.63
1:5:979:C:H2'	1:5:980:U:O4'	1.97	0.63
3:8:10:G:O6	3:8:11:C:C5	2.51	0.63
3:8:12:G:C6	3:8:13:G:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:5:ILE:HG13	4:A:209:HIS:HD2	1.64	0.63
14:K:62:LEU:CD1	14:K:73:VAL:CG2	2.72	0.63
14:K:97:ASN:CA	14:K:98:ILE:HG12	2.16	0.63
49:S2:1004:U:C2	49:S2:1005:G:C8	2.87	0.63
49:S2:1046:U:C4	49:S2:1047:C:N4	2.67	0.63
49:S2:1061:U:H2'	49:S2:1061:U:O2	1.97	0.63
49:S2:1063:C:O2	49:S2:1063:C:H2'	1.90	0.63
49:S2:1591:C:C4	49:S2:1592:C:C6	2.86	0.63
49:S2:1831:A:C1'	49:S2:1851:A:H2'	2.27	0.63
49:S2:42:A:C4	49:S2:426:A:C6	2.86	0.63
49:S2:821:G:C8	49:S2:821:G:C5'	2.82	0.63
54:SE:67:GLN:HB3	54:SE:69:PHE:CE2	2.34	0.63
73:SX:15:SER:O	73:SX:19:ASP:OD1	2.16	0.63
28:Y:15:ARG:NH1	28:Y:19:PHE:HE2	1.89	0.63
48:4:239:LYS:HD2	48:4:241:GLU:HB3	1.80	0.63
48:4:649:ILE:HG22	48:4:663:THR:OG1	1.99	0.63
48:4:751:CYS:SG	48:4:756:VAL:HG22	2.39	0.63
48:4:816:HIS:HD2	48:4:818:GLN:N	1.96	0.63
1:5:986:C:N3	1:5:1068:G:C2	2.67	0.63
1:5:112:C:H2'	1:5:112:C:O2	1.99	0.63
1:5:1213:G:N7	1:5:1215:C:C6	2.66	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
1:5:199:G:C4	1:5:201:C:C5	2.87	0.63
1:5:2056:G:C5	1:5:2058:G:C8	2.87	0.63
1:5:962:C:OP1	1:5:2264:C:N4	2.31	0.63
1:5:2577:C:H2'	1:5:2577:C:O2	1.96	0.63
1:5:28:C:H2'	1:5:28:C:O2	1.97	0.63
1:5:31:U:O2'	1:5:32:G:H5'	1.98	0.63
1:5:4101:C:C2	1:5:4109:G:C2	2.86	0.63
1:5:4132:C:C4	1:5:4133:C:C5	2.87	0.63
1:5:4504:C:H2'	1:5:4505:C:C6	2.34	0.63
1:5:4562:C:C4	1:5:4563:U:C5	2.86	0.63
1:5:465:G:C6	1:5:466:A:N7	2.67	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
3:8:101:C:C2	3:8:102:G:C8	2.86	0.63
3:8:132:G:N3	3:8:133:G:C8	2.66	0.63
3:8:135:C:C2	3:8:136:U:C5	2.86	0.63
1:5:3899:G:H5''	5:B:257:TRP:HD1	1.63	0.63
11:H:113:GLU:HB3	11:H:115:ARG:HH22	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1045:U:H2'	49:S2:1045:U:O2	1.97	0.63
49:S2:1132:C:N3	49:S2:1133:A:C8	2.66	0.63
49:S2:1394:G:N1	49:S2:1395:C:C5	2.67	0.63
49:S2:1431:G:C6	49:S2:1432:U:C4	2.87	0.63
49:S2:37:C:C4	49:S2:38:A:N7	2.66	0.63
49:S2:43:U:O2	49:S2:43:U:C2'	2.47	0.63
49:S2:496:C:H5'	54:SE:29:PRO:HA	1.81	0.63
49:S2:582:C:H4'	74:SY:33:ALA:HB2	1.80	0.63
48:4:160:MET:SD	48:4:178:PHE:HZ	2.21	0.62
48:4:160:MET:CE	48:4:178:PHE:HZ	2.08	0.62
48:4:801:ARG:HD2	48:4:802:SER:CA	2.29	0.62
1:5:10:A:H1'	1:5:2472:A:N1	2.14	0.62
1:5:1211:G:C2	1:5:1212:G:N7	2.66	0.62
1:5:1268:G:C6	1:5:1270:A:N7	2.67	0.62
1:5:1886:G:N2	1:5:1894:C:N3	2.47	0.62
1:5:1264:C:O2'	1:5:2114:G:P	2.56	0.62
1:5:2253:A:H2	1:5:2260:C:N4	1.97	0.62
1:5:2463:G:C2	1:5:2464:C:N3	2.67	0.62
1:5:3625:G:N2	1:5:3627:G:H5'	2.13	0.62
1:5:3689:G:C6	1:5:3690:U:C5	2.87	0.62
1:5:3937:C:H2'	1:5:3937:C:O2	1.99	0.62
1:5:4169:G:H4'	1:5:4171:C:O2	1.98	0.62
1:5:4233:A:C2	1:5:4290:U:O4	2.48	0.62
1:5:3901:A:O2'	1:5:4450:U:O3'	2.17	0.62
1:5:4518:A:N9	5:B:257:TRP:CH2	2.65	0.62
1:5:672:C:C4	1:5:673:C:C5	2.86	0.62
1:5:468:U:O4	1:5:687:U:O4	2.17	0.62
2:7:22:A:H2'	2:7:22:A:N3	2.13	0.62
3:8:34:U:C5'	3:8:34:U:C2	2.82	0.62
7:D:249:GLU:OE1	7:D:250:ASN:N	2.32	0.62
7:D:27:LYS:HE3	13:J:147:ARG:NH2	2.14	0.62
1:5:1896:A:N7	9:F:101:ASN:ND2	2.47	0.62
14:K:113:ALA:C	14:K:116:MET:HG2	2.17	0.62
49:S2:1018:U:O2	49:S2:1019:C:C5	2.52	0.62
49:S2:1066:U:C4	49:S2:1067:C:C5	2.87	0.62
49:S2:1220:A:C6	49:S2:1221:G:C6	2.87	0.62
49:S2:1223:A:C2	49:S2:1644:C:N3	2.67	0.62
49:S2:1588:A:H4'	69:ST:92:PHE:CE2	2.34	0.62
49:S2:164:A:O2'	49:S2:165:G:O4'	2.17	0.62
49:S2:1757:G:C2	49:S2:1758:G:C8	2.87	0.62
49:S2:1841:C:O2	49:S2:1842:C:C5	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:309:G:C4	49:S2:310:C:C5	2.87	0.62
49:S2:384:U:C5	49:S2:386:C:H5	2.15	0.62
49:S2:690:G:C5	49:S2:691:G:H1'	2.34	0.62
49:S2:851:C:C2'	49:S2:852:G:H21	2.10	0.62
49:S2:995:G:N2	49:S2:997:A:H3'	2.12	0.62
59:SJ:20:PHE:N	59:SJ:20:PHE:CD1	2.67	0.62
53:SD:24:PHE:HB2	60:SK:63:ALA:HB1	1.79	0.62
60:SK:2:LEU:CB	60:SK:8:ARG:NH2	2.61	0.62
25:V:26:ILE:HG22	25:V:101:ASN:HB3	1.81	0.62
28:Y:59:ARG:HG3	28:Y:103:LYS:HD2	1.80	0.62
48:4:448:GLN:C	48:4:448:GLN:HE21	2.03	0.62
48:4:449:ARG:NE	48:4:460:PRO:HB3	2.14	0.62
48:4:498:LYS:O	48:4:498:LYS:CG	2.34	0.62
48:4:615:GLU:O	48:4:619:LYS:HB2	1.99	0.62
48:4:691:ALA:HA	48:4:730:TYR:CD2	2.34	0.62
1:5:1070:G:C5	1:5:1071:C:C5	2.87	0.62
1:5:112:C:N3	1:5:113:A:C8	2.68	0.62
1:5:1174:G:C2	1:5:1175:A:C8	2.87	0.62
1:5:1190:C:O2	1:5:1191:C:C6	2.52	0.62
1:5:1263:A:C6	1:5:1264:C:C4	2.87	0.62
1:5:450:G:O6	1:5:1295:C:C4	2.52	0.62
1:5:149:A:H4'	1:5:151:G:C8	2.34	0.62
1:5:166:C:N3	1:5:167:C:C5	2.64	0.62
1:5:1987:C:H2'	1:5:1987:C:O2	1.99	0.62
1:5:2000:G:H3'	1:5:2000:G:N3	2.15	0.62
1:5:2034:G:O6	1:5:2035:C:N4	2.32	0.62
1:5:2253:A:H8	1:5:2254:G:HO2'	1.46	0.62
1:5:2441:C:C2	1:5:2442:G:N7	2.68	0.62
1:5:2453:A:C5	1:5:2454:U:C5	2.86	0.62
1:5:2508:U:N3	1:5:2509:C:H5	1.97	0.62
1:5:2724:G:N2	1:5:2726:G:C8	2.66	0.62
1:5:2726:G:N1	1:5:2727:C:C4	2.67	0.62
1:5:4243:C:O2	1:5:4243:C:H2'	1.99	0.62
1:5:4324:A:N1	1:5:4325:A:C6	2.67	0.62
1:5:4384:U:O2'	1:5:4386:C:OP1	2.11	0.62
1:5:4481:U:N3	1:5:4482:U:C4	2.67	0.62
1:5:4724:A:C5	1:5:4725:C:C5	2.86	0.62
1:5:930:G:C4	1:5:931:C:C5	2.86	0.62
5:B:100:ARG:HB3	5:B:100:ARG:CZ	2.29	0.62
1:5:4987:C:H2'	5:B:123:HIS:CD2	2.34	0.62
8:E:55:ARG:O	8:E:58:MET:O	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:260:GLU:CD	51:SB:57:ILE:HD13	2.19	0.62
1:5:4413:C:O4'	12:I:157:PHE:HD2	1.81	0.62
16:M:6:PHE:CD2	16:M:6:PHE:N	2.67	0.62
49:S2:1142:G:H2'	49:S2:1142:G:N3	2.13	0.62
49:S2:149:A:H2'	49:S2:150:A:C8	2.34	0.62
49:S2:1696:C:N3	49:S2:1697:A:N7	2.47	0.62
49:S2:341:C:H3'	49:S2:342:C:H5''	1.81	0.62
49:S2:52:G:C2	49:S2:53:C:N1	2.66	0.62
49:S2:68:A:C2	49:S2:69:C:C2	2.88	0.62
49:S2:1746:U:H4'	56:SG:65:GLN:NE2	2.13	0.62
63:SN:128:TYR:C	63:SN:128:TYR:HD1	2.01	0.62
63:SN:38:TYR:OH	63:SN:78:LYS:HE3	2.00	0.62
49:S2:619:A:C2	73:SX:113:GLY:HA3	2.35	0.62
25:V:98:PHE:CE1	26:W:22:ALA:HB3	2.34	0.62
48:4:14:ASP:O	48:4:16:LYS:HE3	1.98	0.62
48:4:692:LEU:HD21	48:4:733:VAL:HG12	1.81	0.62
1:5:1093:C:N3	1:5:1094:G:C8	2.66	0.62
1:5:1266:G:H21	1:5:2111:G:H1'	1.65	0.62
1:5:1642:A:N3	1:5:1642:A:H2'	2.14	0.62
1:5:172:C:C4	1:5:173:C:C4	2.87	0.62
1:5:2329:U:O2'	1:5:2330:G:O4'	2.16	0.62
1:5:2370:A:O2'	1:5:2826:U:N3	2.22	0.62
1:5:2714:G:N3	1:5:2715:G:C8	2.66	0.62
1:5:2368:A:N6	1:5:2827:G:H1'	2.14	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
1:5:4302:U:H5	1:5:4303:C:C6	2.17	0.62
1:5:5047:C:C1'	1:5:5048:A:C2	2.83	0.62
1:5:911:U:N3	1:5:912:G:C8	2.67	0.62
10:G:50:ASP:HB2	27:X:40:ILE:HB	1.81	0.62
10:G:57:TRP:HE3	10:G:61:ILE:HG21	1.62	0.62
13:J:15:LEU:HB3	13:J:165:TRP:CD1	2.34	0.62
10:G:169:PHE:CD2	17:N:6:TYR:CB	2.82	0.62
18:O:116:LYS:HE3	22:S:169:THR:HG21	1.81	0.62
49:S2:1402:A:N7	49:S2:1441:U:O4	2.32	0.62
49:S2:1406:G:C4	49:S2:1407:U:H1'	2.34	0.62
49:S2:1574:C:O2	49:S2:1574:C:H2'	1.97	0.62
49:S2:1781:A:H2'	49:S2:1782:G:C8	2.34	0.62
49:S2:1063:C:C2'	49:S2:1838:U:O4	2.47	0.62
49:S2:376:A:C6	49:S2:377:G:C8	2.87	0.62
49:S2:837:A:H2	49:S2:838:G:N7	1.89	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:85:A:C2	49:S2:86:C:C5	2.87	0.62
49:S2:94:G:O2'	49:S2:508:A:O2'	1.98	0.62
49:S2:1397:U:O4	66:SQ:12:VAL:HA	1.99	0.62
25:V:97:TYR:HE2	26:W:21:TYR:CD1	2.18	0.62
28:Y:11:ARG:HH22	28:Y:15:ARG:HG3	1.63	0.62
48:4:739:ARG:N	48:4:824:PRO:CD	2.62	0.62
48:4:741:MET:HB2	48:4:819:ILE:HA	1.81	0.62
48:4:744:ILE:HG23	48:4:745:TYR:CD2	2.34	0.62
1:5:99:A:C6	1:5:100:C:N3	2.68	0.62
1:5:1298:C:N3	1:5:1299:G:C8	2.67	0.62
1:5:1550:G:N2	1:5:1579:C:H1'	2.15	0.62
1:5:1634:A:C4	1:5:1635:C:C5	2.87	0.62
1:5:2099:G:H2'	1:5:2100:A:O4'	1.98	0.62
1:5:2123:C:O2'	1:5:2124:G:OP2	2.15	0.62
1:5:2423:A:C2	1:5:2424:G:C4	2.86	0.62
1:5:2590:G:N1	1:5:2754:G:N1	2.46	0.62
1:5:2645:G:N2	1:5:2646:C:C2	2.68	0.62
1:5:2826:U:H1'	1:5:2827:G:H1	1.64	0.62
1:5:3631:U:N3	1:5:3632:C:C5	2.68	0.62
1:5:4702:G:C6	1:5:4703:U:C5	2.87	0.62
1:5:4997:G:C6	1:5:4998:G:N7	2.66	0.62
1:5:499:G:N2	1:5:656:C:C2	2.67	0.62
3:8:134:G:N2	3:8:135:C:C2	2.67	0.62
5:B:264:PHE:N	18:O:64:THR:O	2.32	0.62
7:D:35:ARG:HH11	7:D:35:ARG:HG2	1.63	0.62
1:5:1994:C:O2'	14:K:132:ILE:HG12	1.56	0.62
14:K:159:ALA:O	14:K:163:PRO:HD3	1.98	0.62
49:S2:1058:A:C2	49:S2:1059:G:C5	2.87	0.62
49:S2:1073:U:O2	49:S2:1073:U:H2'	1.98	0.62
49:S2:1102:G:H22	49:S2:1130:G:H22	1.46	0.62
49:S2:148:U:O4	49:S2:170:A:N7	2.33	0.62
49:S2:220:U:N3	49:S2:221:A:N7	2.48	0.62
49:S2:460:A:N1	49:S2:461:U:O4	2.33	0.62
49:S2:848:U:N3	49:S2:849:A:N6	2.46	0.62
49:S2:957:A:H4'	49:S2:973:C:O2'	1.99	0.62
48:4:531:ASP:HB2	48:4:534:VAL:CG1	2.29	0.62
48:4:616:ASP:OD1	48:4:621:GLU:HB2	1.98	0.62
1:5:1266:G:H8	1:5:1266:G:H5'	1.64	0.62
1:5:1479:G:O2'	1:5:1480:C:C5'	2.47	0.62
1:5:1867:A:O2'	1:5:1868:A:O4'	2.15	0.62
1:5:2450:G:C6	1:5:2451:A:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2560:C:N3	1:5:2561:C:C5	2.67	0.62
1:5:168:C:C2	1:5:268:G:C2	2.87	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
1:5:4081:G:C2	1:5:4082:G:C5	2.88	0.62
1:5:4737:G:C5	1:5:4963:G:N2	2.67	0.62
1:5:60:G:C6	1:5:61:A:N7	2.68	0.62
1:5:688:U:C4	1:5:689:U:C6	2.87	0.62
1:5:973:G:N2	1:5:1282:G:O2'	2.32	0.62
1:5:99:A:N3	1:5:99:A:H2'	2.13	0.62
2:7:9:C:C5	2:7:10:C:C5	2.87	0.62
2:7:42:A:N1	2:7:43:U:C6	2.67	0.62
1:5:4518:A:C8	5:B:257:TRP:CZ3	2.88	0.62
7:D:177:THR:HB	7:D:190:PHE:CE2	2.35	0.62
14:K:77:ALA:HB3	14:K:80:LEU:CG	2.29	0.62
14:K:92:ARG:CA	14:K:95:GLN:OE1	2.32	0.62
49:S2:1537:A:C5	49:S2:1538:C:C5	2.87	0.62
49:S2:1741:U:C4	49:S2:1742:C:C5	2.87	0.62
49:S2:1859:A:N1	49:S2:1860:A:C6	2.68	0.62
49:S2:550:C:H2'	49:S2:551:U:C6	2.32	0.62
49:S2:751:G:C6	49:S2:792:C:C4	2.87	0.62
49:S2:950:C:C4	49:S2:951:C:C5	2.88	0.62
62:SM:16:THR:HA	62:SM:19:GLN:CG	2.30	0.62
48:4:753:GLU:CG	48:4:779:THR:CG2	2.76	0.62
48:4:42:LYS:CD	48:4:79:TYR:OH	2.46	0.62
1:5:1480:C:O2	1:5:1484:G:O6	2.16	0.62
1:5:1599:A:H2'	1:5:1600:A:H5''	1.82	0.62
1:5:1929:A:N6	1:5:2054:U:N3	2.33	0.62
1:5:1986:U:O2	1:5:2007:G:O6	2.18	0.62
1:5:2639:U:H2'	1:5:2694:G:N1	2.12	0.62
1:5:3741:C:C2	1:5:3742:G:N7	2.68	0.62
1:5:4234:A:C2	1:5:4271:A:C8	2.88	0.62
1:5:4481:U:C2'	1:5:4482:U:H6	2.11	0.62
1:5:4687:A:N7	1:5:4698:C:C6	2.67	0.62
1:5:479:G:C2	1:5:480:C:C6	2.87	0.62
1:5:5050:C:N3	1:5:5051:C:C5	2.68	0.62
1:5:964:A:C8	1:5:964:A:C4'	2.82	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
2:7:42:A:C1'	13:J:75:ARG:HH12	2.12	0.62
14:K:58:ILE:HG22	14:K:59:THR:N	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:61:LYS:CD	14:K:72:GLU:HA	2.30	0.62
49:S2:104:A:N7	49:S2:105:U:C5	2.68	0.62
49:S2:1133:A:H2'	49:S2:1133:A:N3	2.15	0.62
49:S2:1250:A:C2	49:S2:1339:U:H1'	2.33	0.62
49:S2:1562:C:C2	49:S2:1563:G:C8	2.86	0.62
49:S2:1552:G:C5	49:S2:1578:U:N3	2.68	0.62
49:S2:1608:U:C2	49:S2:1609:C:C6	2.87	0.62
49:S2:165:G:N7	49:S2:166:A:N7	2.46	0.62
49:S2:1709:G:N3	49:S2:1710:C:C6	2.67	0.62
49:S2:1746:U:O4	49:S2:1789:G:N2	2.33	0.62
49:S2:311:C:C4	49:S2:312:G:C8	2.87	0.62
49:S2:377:G:N1	49:S2:378:U:C4	2.68	0.62
49:S2:54:A:C4	49:S2:451:G:N2	2.67	0.62
49:S2:70:G:N1	49:S2:71:G:C4	2.68	0.62
49:S2:75:G:C6	56:SG:171:THR:HB	2.35	0.62
49:S2:804:U:O2	49:S2:805:U:C6	2.52	0.62
49:S2:836:G:H2'	49:S2:837:A:C5'	2.30	0.62
74:SY:20:ARG:HB3	74:SY:76:TYR:HD1	1.63	0.62
48:4:275:LYS:HG3	48:4:276:SER:N	2.14	0.62
48:4:698:ARG:C	48:4:700:VAL:HG23	2.06	0.62
48:4:762:VAL:HG11	48:4:800:LEU:CD1	2.27	0.62
48:4:762:VAL:CB	48:4:800:LEU:CD1	2.78	0.62
48:4:801:ARG:HD2	48:4:802:SER:HA	1.81	0.62
48:4:855:LEU:HD23	48:4:856:ASP:CA	2.27	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
1:5:1672:U:C2	1:5:1673:U:C4	2.87	0.62
1:5:1685:G:C4	1:5:1686:C:C5	2.87	0.62
1:5:1760:G:C5	1:5:1761:G:C8	2.88	0.62
1:5:1928:C:C4	18:O:133:ARG:NH1	2.68	0.62
1:5:2292:C:N3	1:5:2293:U:C5	2.68	0.62
1:5:2444:U:C5	1:5:2445:C:H5	2.17	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
1:5:2734:U:N3	1:5:2735:G:C8	2.68	0.62
1:5:2833:A:O2'	1:5:2834:C:O4'	2.16	0.62
1:5:2857:A:C6	1:5:2858:A:N6	2.68	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
1:5:62:A:H2'	1:5:63:G:C8	2.34	0.62
9:F:73:MET:CB	9:F:84:TYR:HE2	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:77:PRO:HA	10:G:237:TRP:CZ3	2.34	0.62
11:H:117:PHE:C	11:H:117:PHE:CD1	2.73	0.62
14:K:102:GLY:C	14:K:140:GLY:HA2	2.19	0.62
20:Q:32:TYR:OH	20:Q:123:PHE:HD2	1.82	0.62
49:S2:1229:G:C4	49:S2:1230:C:C6	2.88	0.62
49:S2:1325:G:C2	49:S2:1327:G:C5	2.87	0.62
49:S2:1371:U:O2	49:S2:1371:U:H2'	1.98	0.62
49:S2:1420:G:HO2'	69:ST:4:VAL:CA	2.12	0.62
49:S2:1527:C:N4	49:S2:1528:G:C5	2.68	0.62
49:S2:1552:G:H5'	49:S2:1557:C:H5	1.65	0.62
49:S2:1728:U:C4	49:S2:1729:U:C6	2.87	0.62
49:S2:529:A:C6	49:S2:530:U:C5	2.87	0.62
49:S2:751:G:N1	49:S2:791:C:O2	2.32	0.62
49:S2:993:G:N3	49:S2:994:C:C6	2.67	0.62
49:S2:994:C:C2'	49:S2:994:C:O2	2.47	0.62
53:SD:150:MET:HB3	53:SD:152:PHE:HE1	1.64	0.62
49:S2:1284:A:C6	62:SM:33:ARG:HD3	2.34	0.62
48:4:157:MET:HE2	48:4:214:PHE:HE2	1.65	0.62
48:4:636:ALA:HA	48:4:641:TRP:O	2.00	0.62
48:4:672:LEU:C	48:4:675:ILE:HG12	2.15	0.62
1:5:1218:G:C6	1:5:1219:G:N9	2.68	0.62
1:5:1267:C:H5''	1:5:2110:C:O2'	2.00	0.62
1:5:1752:G:C4	1:5:1753:G:C8	2.87	0.62
1:5:1845:U:O2	1:5:1846:G:N7	2.32	0.62
1:5:1894:C:H2'	1:5:1895:G:O5'	1.99	0.62
1:5:1899:G:N2	1:5:1900:C:C6	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
1:5:323:C:N3	1:5:324:A:N7	2.47	0.62
1:5:3590:G:C6	1:5:3591:C:C4	2.88	0.62
1:5:3606:U:C2	1:5:3607:U:C6	2.87	0.62
1:5:3703:G:C6	1:5:3704:U:C4	2.88	0.62
1:5:4651:A:C6	1:5:4652:G:C8	2.88	0.62
1:5:4652:G:N3	1:5:4653:C:C6	2.68	0.62
1:5:4744:A:N1	1:5:4745:G:C5	2.67	0.62
1:5:4896:G:C2	1:5:4897:G:C5	2.87	0.62
3:8:133:G:C2	3:8:134:G:N7	2.67	0.62
9:F:36:ARG:HH11	9:F:36:ARG:HG2	4.12	0.62
10:G:81:ASN:HD21	10:G:238:GLY:N	1.98	0.62
49:S2:1205:C:C2	49:S2:1206:G:N7	2.68	0.62
49:S2:185:G:C2	49:S2:186:C:C4	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:37:C:N4	49:S2:38:A:C5	2.68	0.62
49:S2:426:A:N3	49:S2:426:A:H2'	2.15	0.62
49:S2:447:A:C5	49:S2:449:A:C8	2.88	0.62
49:S2:497:C:N3	49:S2:506:G:C2	2.68	0.62
49:S2:794:A:N1	49:S2:795:A:C5	2.68	0.62
1:5:3709:U:H1'	49:S2:970:G:O6	2.00	0.62
50:SA:10:MET:HA	50:SA:55:TRP:CZ3	2.35	0.62
48:4:72:SER:CA	48:4:104:ASP:CB	2.77	0.62
48:4:480:VAL:O	48:4:481:LYS:CB	2.35	0.62
48:4:562:GLU:HB3	48:4:570:ILE:CG1	2.29	0.62
1:5:1265:G:C6	1:5:1266:G:C6	2.87	0.62
1:5:1302:U:N3	1:5:1303:A:C8	2.68	0.62
1:5:1550:G:C2	1:5:1579:C:C2	2.88	0.62
1:5:1878:G:N3	1:5:1879:C:C6	2.68	0.62
1:5:1973:G:N2	1:5:1993:C:C2	2.61	0.62
1:5:202:C:C2	1:5:214:G:C2	2.87	0.62
1:5:2036:C:H2'	1:5:2037:C:C6	2.35	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
1:5:2606:G:N1	1:5:2607:C:C4	2.67	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
1:5:2409:U:C4	1:5:2783:A:C2	2.88	0.62
1:5:2856:C:C2'	1:5:2856:C:O2	2.47	0.62
1:5:3590:G:C4	1:5:3591:C:C6	2.88	0.62
1:5:1676:C:C2'	1:5:3914:U:O4	2.48	0.62
1:5:4093:G:C3'	1:5:4094:G:H5'	2.30	0.62
1:5:4233:A:C8	1:5:4235:G:C8	2.87	0.62
1:5:4273:A:H2'	1:5:4274:A:C1'	2.29	0.62
1:5:4498:U:N3	1:5:4500:U:P	2.73	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
1:5:68:U:C5	1:5:69:A:C8	2.88	0.62
1:5:692:A:C2	1:5:693:C:C4	2.87	0.62
2:7:8:G:C5	2:7:9:C:C5	2.88	0.62
3:8:138:C:C2	3:8:139:G:C8	2.88	0.62
9:F:85:VAL:HG13	22:S:62:VAL:HA	1.82	0.62
1:5:3859:G:H4'	19:P:139:TYR:CZ	2.35	0.62
49:S2:118:C:C1'	49:S2:445:A:C2	2.83	0.62
49:S2:376:A:C6	49:S2:377:G:N7	2.67	0.62
49:S2:426:A:C6	49:S2:427:U:C5	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:533:A:C5	49:S2:534:G:C8	2.88	0.62
49:S2:74:G:H5'	49:S2:75:G:OP2	1.99	0.62
56:SG:198:ARG:NH1	56:SG:202:ASN:OD1	2.32	0.62
63:SN:128:TYR:C	63:SN:128:TYR:CD1	2.73	0.62
72:SW:101:PHE:HB2	72:SW:129:PHE:CE1	2.34	0.62
74:SY:76:TYR:HE2	74:SY:86:GLU:OE2	1.82	0.62
48:4:205:ILE:HG13	48:4:211:THR:CB	2.30	0.62
48:4:236:PHE:HZ	48:4:273:PHE:CZ	2.11	0.62
48:4:325:SER:O	48:4:326:GLU:C	2.37	0.62
48:4:552:LEU:HA	48:4:555:GLU:OE1	1.99	0.62
48:4:744:ILE:HG23	48:4:815:ASP:H	1.64	0.62
48:4:825:PHE:HE2	48:4:849:PRO:HD2	0.65	0.62
1:5:1635:C:H2'	1:5:1636:U:C5'	2.26	0.62
1:5:1672:U:C2	1:5:1673:U:C6	2.77	0.62
1:5:1781:U:C2	1:5:1782:U:C5	2.88	0.62
1:5:1937:C:H3'	1:5:1938:C:H2'	1.80	0.62
1:5:2441:C:H2'	1:5:2442:G:H8	1.64	0.62
1:5:270:U:C2	1:5:271:C:C6	2.88	0.62
1:5:272:U:O2	1:5:273:U:C6	2.52	0.62
1:5:2367:A:N7	1:5:2798:A:C4	2.68	0.62
1:5:330:G:N1	1:5:331:G:N7	2.48	0.62
1:5:3672:G:N7	1:5:3674:G:C1'	2.63	0.62
1:5:3656:A:O4'	1:5:3747:A:H2	1.83	0.62
1:5:3772:U:C2	1:5:3773:U:C6	2.88	0.62
1:5:3805:U:N3	1:5:3806:G:N7	2.47	0.62
1:5:4464:A:H5'	1:5:4464:A:N3	2.15	0.62
1:5:4653:C:C2	1:5:4654:C:H5	2.13	0.62
1:5:4747:C:H2'	1:5:4748:U:C6	2.35	0.62
1:5:4771:C:H6	1:5:4772:C:C6	2.17	0.62
1:5:5051:C:N3	1:5:5052:C:C5	2.68	0.62
1:5:33:A:C6	1:5:50:C:C2	2.88	0.62
1:5:55:G:C2	1:5:56:A:C8	2.88	0.62
1:5:55:G:N1	1:5:56:A:N7	2.47	0.62
1:5:751:G:N3	1:5:752:G:C8	2.67	0.62
3:8:13:G:C4	3:8:14:U:C5	2.88	0.62
1:5:1371:A:H61	3:8:28:C:C2'	2.13	0.62
3:8:64:U:C2'	3:8:65:A:C8	2.83	0.62
5:B:10:ARG:NH2	5:B:10:ARG:HB2	2.15	0.62
6:C:22:VAL:HG11	6:C:257:PHE:HD2	1.64	0.62
1:5:4935:C:N4	8:E:179:ARG:CG	2.62	0.62
1:5:1214:C:N4	9:F:58:HIS:CE1	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1785:C:H1'	12:I:94:PHE:CE2	2.34	0.62
49:S2:1433:C:O3'	49:S2:1433:C:OP2	2.18	0.62
49:S2:1552:G:H5'	49:S2:1557:C:C5	2.35	0.62
49:S2:1573:G:C2	49:S2:1574:C:H1'	2.34	0.62
49:S2:1258:A:N6	49:S2:1659:U:H3	1.98	0.62
49:S2:1730:U:C4	49:S2:1731:A:N7	2.67	0.62
74:SY:88:LYS:HE3	74:SY:97:TYR:OH	2.00	0.62
48:4:200:MET:HG2	48:4:203:ILE:HG21	1.81	0.61
48:4:56:PHE:HE1	48:4:455:GLY:CA	1.83	0.61
1:5:1247:U:C2	1:5:1248:C:C5	2.87	0.61
1:5:1366:G:N7	1:5:1367:C:O3'	2.33	0.61
1:5:1673:U:C4	1:5:1674:C:N4	2.68	0.61
1:5:1881:C:O4'	1:5:2281:U:C6	2.53	0.61
1:5:197:A:N3	1:5:222:C:O2'	2.26	0.61
1:5:2342:G:C2	1:5:2344:U:C6	2.88	0.61
1:5:2363:A:C2	1:5:2364:G:H1'	2.34	0.61
1:5:2773:G:N2	1:5:2774:C:C2	2.68	0.61
1:5:2368:A:C6	1:5:2788:U:O4	2.53	0.61
1:5:2874:U:O2'	1:5:2876:G:N7	2.33	0.61
1:5:288:G:H2'	1:5:289:C:H6	1.64	0.61
1:5:3633:C:C2	1:5:3634:G:C8	2.88	0.61
1:5:3656:A:H4'	1:5:3747:A:C2	2.35	0.61
1:5:4085:A:N6	10:G:62:ARG:HH22	1.98	0.61
1:5:4269:G:N2	1:5:4277:G:H22	1.95	0.61
1:5:4341:C:N4	1:5:4342:C:C5	2.68	0.61
1:5:4369:A:N3	1:5:4370:G:C8	2.67	0.61
1:5:4426:C:N4	1:5:4427:G:C5	2.68	0.61
1:5:4481:U:O2	1:5:4482:U:C6	2.52	0.61
1:5:4734:A:C6	1:5:4735:G:C5	2.88	0.61
1:5:4881:U:O2'	1:5:4882:U:O4'	2.18	0.61
7:D:155:THR:OG1	7:D:179:ARG:NH1	2.33	0.61
3:8:3:A:O3'	19:P:61:ARG:HD3	2.00	0.61
49:S2:1249:C:H42	49:S2:1250:A:N6	1.97	0.61
49:S2:413:G:H2'	49:S2:414:A:O5'	2.00	0.61
49:S2:457:C:C4	49:S2:458:A:C8	2.88	0.61
49:S2:608:C:N3	49:S2:609:U:C6	2.68	0.61
49:S2:695:C:C4	49:S2:696:G:N7	2.68	0.61
49:S2:832:G:C6	49:S2:833:C:C5	2.88	0.61
49:S2:909:G:N1	49:S2:910:G:C5	2.67	0.61
49:S2:961:G:H2'	49:S2:961:G:N3	2.15	0.61
59:SJ:115:PHE:C	59:SJ:115:PHE:HD1	2.03	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:60:ARG:HD2	48:4:61:LYS:N	2.15	0.61
48:4:710:HIS:CD2	48:4:712:ASP:H	2.17	0.61
48:4:756:VAL:HG23	48:4:782:PHE:CD1	2.35	0.61
48:4:845:LYS:CE	48:4:846:GLU:CG	2.74	0.61
1:5:114:G:C2'	1:5:115:C:H5'	2.29	0.61
1:5:1296:G:O2'	1:5:1297:U:OP1	2.14	0.61
1:5:1669:A:H4'	1:5:1685:G:H21	1.66	0.61
1:5:1752:G:C6	1:5:1753:G:C5	2.88	0.61
1:5:1797:G:C2	1:5:1798:G:N7	2.67	0.61
1:5:1267:C:C5'	1:5:2110:C:O2'	2.48	0.61
1:5:2319:C:O2	1:5:2319:C:H2'	1.99	0.61
1:5:3694:U:C2	1:5:3695:U:C6	2.88	0.61
1:5:3648:A:C5	1:5:3785:A:N6	2.67	0.61
1:5:3847:C:N3	1:5:3848:U:C6	2.68	0.61
1:5:4196:G:N3	1:5:4396:A:H1'	2.15	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
1:5:4342:C:N3	1:5:4343:U:C5	2.68	0.61
1:5:449:C:C2	1:5:450:G:C8	2.88	0.61
1:5:4934:A:N1	1:5:4935:C:C5	2.68	0.61
3:8:10:G:N1	3:8:11:C:N1	2.48	0.61
3:8:131:G:C6	3:8:132:G:C5	2.89	0.61
14:K:123:ARG:CB	14:K:129:ILE:HD11	0.62	0.61
17:N:150:TRP:HE3	17:N:151:ILE:N	1.99	0.61
49:S2:1109:C:O2	49:S2:1110:G:C8	2.52	0.61
49:S2:1303:C:O4'	49:S2:1303:C:O2	2.18	0.61
49:S2:1451:G:O2'	49:S2:1474:A:N6	2.32	0.61
49:S2:1824:A:H2	49:S2:1825:A:N7	1.96	0.61
49:S2:185:G:C2	49:S2:186:C:C6	2.88	0.61
49:S2:221:A:C2	49:S2:222:U:C6	2.89	0.61
49:S2:533:A:C6	49:S2:534:G:N7	2.68	0.61
49:S2:52:G:C4	49:S2:53:C:C6	2.88	0.61
52:SC:253:PRO:O	52:SC:255:LEU:N	2.33	0.61
54:SE:29:PRO:HG2	54:SE:46:ILE:HD11	1.81	0.61
48:4:526:ARG:O	48:4:529:LYS:HG3	2.01	0.61
48:4:650:TRP:CZ3	48:4:679:VAL:HB	2.34	0.61
48:4:766:LYS:O	48:4:767:ARG:HB2	1.99	0.61
1:5:1074:G:N2	1:5:1238:A:N3	2.49	0.61
1:5:1189:G:C6	1:5:1190:C:C4	2.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1268:G:C4	1:5:2111:G:C2	2.88	0.61
1:5:130:C:C2	1:5:139:G:C2	2.88	0.61
1:5:1358:G:O5'	6:C:114:ARG:NH2	2.33	0.61
1:5:1668:A:C8	1:5:1881:C:N4	2.68	0.61
1:5:1885:G:C2	1:5:1895:G:N3	2.68	0.61
1:5:1969:G:N1	1:5:2018:C:N4	2.48	0.61
1:5:2091:C:C2	1:5:2257:C:O2'	2.41	0.61
1:5:1899:G:C8	1:5:2278:G:C6	2.87	0.61
1:5:2479:G:C5	1:5:2480:G:N7	2.68	0.61
1:5:2743:A:H2'	1:5:2744:A:H8	1.62	0.61
1:5:2784:C:H2'	1:5:2785:C:H6	1.65	0.61
1:5:370:U:C6	1:5:1637:A:N1	2.69	0.61
1:5:383:A:O2'	1:5:384:A:O5'	2.18	0.61
1:5:3840:U:O2	1:5:3840:U:H2'	1.99	0.61
1:5:4277:G:N1	1:5:4278:C:C4	2.69	0.61
1:5:4479:A:N7	1:5:4480:A:C8	2.68	0.61
1:5:472:C:H2'	1:5:473:C:O4'	2.00	0.61
1:5:4978:G:O2'	1:5:4979:A:H3'	2.00	0.61
1:5:5003:U:O2'	1:5:5004:C:O4'	2.18	0.61
1:5:86:U:N3	1:5:97:G:N2	2.48	0.61
3:8:63:U:O2	3:8:63:U:H2'	1.99	0.61
18:O:128:ARG:HE	22:S:162:GLN:HE22	1.48	0.61
49:S2:1284:A:H2	62:SM:34:GLY:HA2	1.66	0.61
49:S2:1278:A:C2	49:S2:1320:G:C2	2.89	0.61
49:S2:1409:A:H2	49:S2:1438:A:N1	1.98	0.61
49:S2:301:A:N3	58:SI:73:THR:HG21	2.15	0.61
49:S2:452:G:C2'	49:S2:453:C:O5'	2.48	0.61
49:S2:474:G:N1	49:S2:475:C:C5	2.68	0.61
48:4:526:ARG:NH2	49:S2:480:G:OP1	2.33	0.61
53:SD:201:LYS:O	53:SD:203:PRO:HD2	1.99	0.61
57:SH:110:THR:O	57:SH:110:THR:HG23	2.00	0.61
48:4:333:LYS:HB2	48:4:334:PRO:HD3	1.82	0.61
48:4:449:ARG:HB3	48:4:473:VAL:HG12	1.81	0.61
48:4:617:ILE:CG1	48:4:622:VAL:HG23	2.29	0.61
48:4:762:VAL:CG1	48:4:800:LEU:HD13	2.30	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
1:5:164:G:C6	1:5:165:A:C5	2.89	0.61
1:5:1665:C:H2'	1:5:1666:C:O5'	2.00	0.61
1:5:1983:A:N3	1:5:2010:A:O3'	2.34	0.61
1:5:209:U:C5	1:5:211:G:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2261:G:O2'	1:5:2262:G:O5'	2.18	0.61
1:5:2325:C:C2	1:5:2326:G:H8	2.19	0.61
1:5:2394:G:N2	1:5:2820:C:C5	2.69	0.61
1:5:2478:C:N3	1:5:2479:G:C5	2.69	0.61
1:5:2647:A:H2'	1:5:2648:G:H5'	1.82	0.61
1:5:2602:G:H1'	1:5:2742:G:C4	2.34	0.61
1:5:3674:G:N1	1:5:3675:G:N7	2.49	0.61
1:5:3717:A:C6	1:5:3736:A:N1	2.68	0.61
1:5:3905:A:N1	1:5:4449:A:C6	2.67	0.61
1:5:4113:U:C2'	1:5:4114:C:O4'	2.42	0.61
1:5:4166:G:C2	1:5:4167:G:N7	2.69	0.61
1:5:4219:A:O2'	1:5:4220:A:O5'	2.19	0.61
1:5:422:C:N3	1:5:423:G:N7	2.48	0.61
1:5:4462:C:C2	1:5:4515:G:N2	2.68	0.61
1:5:4618:G:C2	1:5:4619:U:C5	2.88	0.61
1:5:931:C:O2'	1:5:932:A:O4'	2.12	0.61
1:5:950:G:C2	1:5:951:G:N7	2.68	0.61
2:7:51:G:C6	2:7:52:C:N4	2.68	0.61
2:7:55:A:H2'	2:7:56:G:O5'	1.99	0.61
3:8:30:U:C2	3:8:31:G:C8	2.89	0.61
6:C:94:ASN:HA	6:C:100:ARG:O	2.00	0.61
1:5:4221:C:N3	12:I:116:ARG:HD3	2.15	0.61
49:S2:1250:A:H2	49:S2:1339:U:O2'	1.76	0.61
49:S2:1316:C:C2	49:S2:1317:C:H5	2.06	0.61
49:S2:1542:C:H2'	49:S2:1543:U:C6	2.35	0.61
49:S2:1611:G:C1'	68:SS:86:ARG:HH12	2.13	0.61
49:S2:590:A:O2'	49:S2:591:U:O5'	2.18	0.61
49:S2:1310:U:OP2	62:SM:36:ARG:NH1	2.29	0.61
48:4:369:CYS:CB	48:4:386:LYS:HG3	2.29	0.61
48:4:531:ASP:HB2	48:4:534:VAL:HG11	1.83	0.61
48:4:58:ASP:HA	48:4:63:GLU:OE1	2.00	0.61
48:4:667:LYS:NZ	48:4:667:LYS:CB	2.30	0.61
1:5:1279:A:C3'	1:5:1280:C:C5	2.83	0.61
1:5:1340:C:C4	1:5:1341:U:C5	2.89	0.61
1:5:1394:G:H5''	15:L:186:ARG:HH12	1.65	0.61
1:5:1634:A:C2	1:5:1635:C:C5	2.89	0.61
1:5:1725:U:H4'	1:5:1725:U:OP1	1.99	0.61
1:5:181:C:N3	1:5:256:G:C2	2.68	0.61
1:5:183:C:O2	1:5:253:G:O6	2.17	0.61
1:5:1899:G:N2	1:5:1900:C:N3	2.48	0.61
1:5:1936:C:C4	1:5:1937:C:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2295:C:O2	1:5:2296:G:C8	2.53	0.61
1:5:2382:A:H62	1:5:2830:G:C1'	2.12	0.61
1:5:288:G:N1	1:5:289:C:C4	2.68	0.61
1:5:348:G:N1	1:5:350:C:C4	2.68	0.61
1:5:4138:C:C2	1:5:4147:G:C2	2.89	0.61
1:5:4240:G:C2	1:5:4241:C:N1	2.68	0.61
1:5:4277:G:C4	1:5:4278:C:C6	2.89	0.61
1:5:3907:G:C1'	1:5:4449:A:N9	2.64	0.61
1:5:4933:C:N4	1:5:4934:A:N7	2.48	0.61
2:7:6:C:C4	2:7:7:G:C8	2.89	0.61
2:7:93:G:C5	2:7:94:C:C5	2.88	0.61
1:5:1304:C:HO2'	3:8:8:U:HO2'	1.47	0.61
9:F:100:ILE:O	9:F:100:ILE:HG23	2.00	0.61
49:S2:1094:C:C2	49:S2:1095:U:C6	2.88	0.61
49:S2:1476:A:N3	49:S2:1476:A:H5'	2.16	0.61
49:S2:1612:G:C2	49:S2:1628:C:C2	2.87	0.61
49:S2:340:C:N4	49:S2:341:C:N4	2.48	0.61
49:S2:477:G:C2	49:S2:478:G:N7	2.69	0.61
49:S2:480:G:H2'	49:S2:481:C:O4'	2.00	0.61
53:SD:150:MET:HB3	53:SD:152:PHE:CE1	2.36	0.61
49:S2:1022:U:H1'	63:SN:128:TYR:CD2	2.35	0.61
27:X:145:ASP:HB3	27:X:148:ASP:OD1	1.99	0.61
29:Z:36:ARG:HH11	29:Z:36:ARG:HG3	1.65	0.61
48:4:308:LYS:HB3	48:4:311:GLU:CG	2.30	0.61
48:4:753:GLU:CG	48:4:779:THR:HG22	2.30	0.61
1:5:1280:C:C2	1:5:1282:G:C8	2.89	0.61
1:5:1689:G:H2'	1:5:1690:C:O4'	1.99	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
1:5:2301:G:N3	1:5:2302:C:C6	2.69	0.61
1:5:2400:G:C2	1:5:2401:A:C8	2.88	0.61
1:5:2723:U:H2'	1:5:2724:G:C8	2.36	0.61
1:5:3909:C:C4	1:5:3910:C:H5	2.19	0.61
1:5:4093:G:C5	1:5:4094:G:C8	2.88	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
1:5:62:A:C2	1:5:77:U:O2	2.52	0.61
3:8:130:C:C4	3:8:131:G:C8	2.89	0.61
6:C:76:ILE:HG22	6:C:77:PRO:HD2	1.83	0.61
11:H:59:LYS:O	11:H:60:TRP:HB2	2.00	0.61
1:5:280:G:C5'	17:N:120:TRP:HE3	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1102:G:N2	49:S2:1130:G:H22	1.99	0.61
49:S2:1132:C:N4	49:S2:1133:A:C8	2.67	0.61
49:S2:1095:U:O4	49:S2:1149:A:C2	2.53	0.61
49:S2:1596:U:N3	49:S2:1597:C:C5	2.69	0.61
49:S2:1730:U:N3	49:S2:1731:A:C8	2.68	0.61
49:S2:396:U:C2'	49:S2:397:G:O5'	2.49	0.61
49:S2:431:G:C6	49:S2:432:G:N7	2.68	0.61
49:S2:536:A:N6	49:S2:537:C:C5	2.69	0.61
49:S2:992:A:N3	49:S2:992:A:H2'	2.16	0.61
49:S2:992:A:C6	49:S2:993:G:N7	2.69	0.61
59:SJ:69:ARG:O	59:SJ:71:LEU:N	2.33	0.61
66:SQ:55:VAL:HA	66:SQ:63:PHE:CE1	2.35	0.61
25:V:97:TYR:CE2	26:W:21:TYR:CD1	2.89	0.61
6:C:222:ARG:HH21	28:Y:3:PHE:HE2	1.46	0.61
1:5:1185:G:C2	1:5:1186:U:H1'	2.35	0.61
1:5:1252:C:C2	1:5:1259:G:C2	2.89	0.61
1:5:1361:G:C6	1:5:1362:G:N7	2.69	0.61
1:5:145:G:C6	1:5:146:G:N7	2.69	0.61
1:5:112:C:C5	1:5:157:U:C4	2.88	0.61
1:5:1266:G:H22	1:5:2111:G:N2	1.98	0.61
1:5:2110:C:N3	1:5:2121:C:N4	2.48	0.61
1:5:2326:G:N3	1:5:2327:G:C8	2.67	0.61
1:5:2451:A:N6	1:5:2452:G:C5	2.69	0.61
1:5:2584:G:C6	1:5:2585:C:C5	2.89	0.61
1:5:325:U:H2'	1:5:326:C:C6	2.36	0.61
1:5:3636:C:C4	1:5:3637:U:C5	2.89	0.61
1:5:3739:C:C2	1:5:3740:G:C8	2.89	0.61
1:5:4187:G:H2'	1:5:4188:U:O4'	2.00	0.61
1:5:4510:A:N6	1:5:4592:C:C2'	2.64	0.61
1:5:4724:A:C6	1:5:4725:C:C4	2.88	0.61
1:5:4737:G:C4	1:5:4738:C:C5	2.88	0.61
1:5:4745:G:C2'	1:5:4746:C:C5	2.83	0.61
1:5:57:G:N2	1:5:58:G:C2	2.69	0.61
1:5:668:C:H2'	1:5:669:C:O4'	2.01	0.61
1:5:90:G:N2	1:5:95:G:C5	2.69	0.61
2:7:58:A:N6	2:7:59:G:C6	2.69	0.61
1:5:4085:A:N7	10:G:56:LYS:HA	2.14	0.61
1:5:99:A:H4'	17:N:181:HIS:CE1	2.36	0.61
21:R:120:TYR:C	21:R:120:TYR:CD1	2.74	0.61
49:S2:1111:U:C2	49:S2:1112:U:C6	2.82	0.61
49:S2:1317:C:C2	49:S2:1318:G:H8	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1526:G:N3	49:S2:1527:C:C6	2.69	0.61
49:S2:1568:C:C2'	49:S2:1569:A:C8	2.84	0.61
49:S2:1739:C:C2	49:S2:1740:C:C6	2.89	0.61
49:S2:429:C:H2'	49:S2:429:C:O2	2.00	0.61
49:S2:570:C:C2	49:S2:571:U:C6	2.89	0.61
49:S2:891:G:C6	49:S2:892:U:C5	2.89	0.61
49:S2:99:A:N1	49:S2:100:U:C5	2.69	0.61
48:4:394:LEU:N	48:4:487:THR:HG22	2.14	0.61
48:4:587:SER:CB	48:4:735:THR:HG23	2.30	0.61
48:4:845:LYS:CA	48:4:845:LYS:HZ1	2.13	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
1:5:1437:C:C2	1:5:2098:G:N7	2.68	0.61
1:5:1354:A:C5	1:5:1503:A:C2	2.88	0.61
1:5:1613:A:H4'	4:A:186:TYR:CD2	2.36	0.61
1:5:1693:U:C4	1:5:1694:C:C5	2.89	0.61
1:5:208:A:C1'	1:5:232:G:C2	2.82	0.61
1:5:209:U:C4	1:5:211:G:N9	2.68	0.61
1:5:2371:U:C2'	1:5:2372:U:H5'	2.30	0.61
1:5:2428:A:C8	1:5:2789:A:H2	2.17	0.61
1:5:2532:C:C2	1:5:2533:C:H5	2.13	0.61
1:5:2566:G:C2	1:5:2567:G:N7	2.69	0.61
1:5:4243:C:H1'	1:5:4268:A:C2	2.36	0.61
1:5:4744:A:N3	1:5:4745:G:C8	2.68	0.61
1:5:4887:C:O2'	1:5:4888:U:H5'	2.00	0.61
1:5:4937:C:OP1	8:E:179:ARG:NE	2.31	0.61
2:7:42:A:N6	2:7:43:U:C4	2.69	0.61
2:7:56:G:H2'	2:7:57:C:C6	2.36	0.61
3:8:10:G:C5	3:8:11:C:C5	2.87	0.61
9:F:219:ARG:O	9:F:248:ARG:NH2	2.34	0.61
13:J:107:PHE:CE1	13:J:130:PHE:CB	2.82	0.61
14:K:111:ASN:O	14:K:115:GLN:HG3	2.01	0.61
16:M:3:PHE:CB	16:M:6:PHE:HZ	2.13	0.61
49:S2:1217:A:H2'	49:S2:1218:C:C6	2.36	0.61
49:S2:1314:U:C2	49:S2:1315:U:C1'	2.84	0.61
49:S2:1315:U:C4	49:S2:1316:C:N1	2.67	0.61
49:S2:1317:C:O2	49:S2:1318:G:H8	1.83	0.61
49:S2:1539:U:C4	49:S2:1540:G:N7	2.66	0.61
49:S2:1207:G:O2'	49:S2:1835:A:O2'	1.97	0.61
49:S2:28:U:O2	49:S2:28:U:H2'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:217:A:N3	49:S2:309:G:O6	2.34	0.61
49:S2:381:C:C2'	49:S2:382:C:C5	2.84	0.61
49:S2:558:G:H2'	49:S2:559:G:C8	2.36	0.61
49:S2:70:G:C5	49:S2:71:G:C5	2.88	0.61
49:S2:839:C:C6	49:S2:841:G:C5	2.89	0.61
49:S2:957:A:N1	49:S2:967:C:C2	2.69	0.61
59:SJ:115:PHE:C	59:SJ:115:PHE:CD1	2.73	0.61
48:4:24:VAL:HG23	48:4:32:LYS:CD	2.29	0.61
48:4:449:ARG:CZ	48:4:460:PRO:HB3	2.31	0.61
48:4:650:TRP:HZ2	48:4:672:LEU:HD11	1.66	0.61
48:4:752:PRO:HB3	48:4:780:PRO:HA	1.83	0.61
48:4:769:HIS:N	48:4:786:ALA:HB1	2.14	0.61
1:5:1067:G:H2'	1:5:1068:G:O4'	2.01	0.61
1:5:1268:G:N1	1:5:2111:G:N2	2.49	0.61
1:5:1367:C:N4	1:5:1369:C:OP2	2.34	0.61
1:5:1380:G:C4	1:5:1382:G:C6	2.89	0.61
1:5:152:U:C2	1:5:153:G:C8	2.88	0.61
1:5:1552:G:H2'	1:5:1574:G:H22	1.64	0.61
1:5:2079:G:N2	1:5:2080:U:C6	2.67	0.61
1:5:2104:G:C6	1:5:2105:A:N7	2.69	0.61
1:5:291:U:O2	1:5:293:G:H3'	2.01	0.61
1:5:3698:G:N2	1:5:3699:C:C2	2.69	0.61
1:5:3648:A:C8	1:5:3785:A:N6	2.69	0.61
1:5:4176:C:C2	1:5:4177:C:C5	2.88	0.61
1:5:4287:G:O2'	1:5:4288:C:C5'	2.48	0.61
1:5:4539:U:C2	1:5:4540:C:C5	2.89	0.61
1:5:495:C:N3	1:5:496:G:N7	2.48	0.61
1:5:4977:A:O2'	1:5:4978:G:H5'	2.01	0.61
1:5:719:C:N3	1:5:720:G:N7	2.49	0.61
1:5:957:G:P	1:5:1284:G:N3	2.74	0.61
2:7:110:G:C2	2:7:111:C:C5	2.89	0.61
3:8:111:U:H3'	3:8:111:U:O2	2.00	0.61
1:5:21:G:C6	3:8:36:G:C2	2.88	0.61
14:K:105:THR:C	14:K:106:PHE:CG	2.73	0.61
14:K:114:ARG:HE	14:K:130:LYS:HE2	1.65	0.61
17:N:65:ARG:HG2	17:N:129:PHE:CE2	2.36	0.61
49:S2:1228:A:H2'	49:S2:1229:G:C8	2.36	0.61
49:S2:1249:C:N4	49:S2:1250:A:N6	2.48	0.61
49:S2:1365:G:C6	49:S2:1375:G:N2	2.68	0.61
49:S2:1526:G:N2	49:S2:1527:C:C2	2.69	0.61
49:S2:1215:C:C5	49:S2:1645:C:H2'	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1771:G:C2	49:S2:1772:C:C6	2.88	0.61
49:S2:315:C:O2	49:S2:316:G:C8	2.54	0.61
49:S2:339:A:C2'	49:S2:340:C:H6	2.10	0.61
49:S2:474:G:N3	49:S2:475:C:C6	2.69	0.61
49:S2:961:G:C6	49:S2:962:A:C5	2.88	0.61
1:5:1089:G:H5'	23:T:140:PHE:HE1	1.66	0.61
26:W:50:ASN:CB	26:W:55:TYR:CE2	2.81	0.61
48:4:208:VAL:HG11	48:4:258:LYS:HA	1.82	0.61
48:4:526:ARG:HA	48:4:529:LYS:HD2	1.82	0.61
48:4:669:VAL:HG11	48:4:707:VAL:O	2.01	0.61
48:4:144:ARG:HH12	48:4:781:MET:HE2	1.63	0.61
1:5:69:A:O5'	1:5:100:C:O2'	2.19	0.61
1:5:1217:G:N3	1:5:1218:G:N7	2.48	0.61
1:5:1268:G:OP2	1:5:2110:C:H2'	2.00	0.61
1:5:1277:G:N1	1:5:1278:C:C4	2.69	0.61
1:5:1487:G:N2	1:5:1488:G:H1'	2.16	0.61
1:5:1566:C:O2'	1:5:1567:U:C5'	2.49	0.61
1:5:1816:C:H2'	1:5:1816:C:O2	2.00	0.61
1:5:1965:G:C5	1:5:1966:C:C4	2.89	0.61
1:5:2059:C:N3	1:5:2060:G:N7	2.48	0.61
1:5:2106:G:C2	1:5:2107:C:H5	2.19	0.61
1:5:2256:C:H2'	1:5:2256:C:O2	2.01	0.61
1:5:2517:A:H2'	1:5:2518:G:C8	2.36	0.61
1:5:269:G:H2'	1:5:269:G:N3	2.16	0.61
1:5:3676:G:O2'	1:5:3677:U:O5'	2.18	0.61
1:5:4143:G:C5	1:5:4145:C:C6	2.89	0.61
1:5:4441:A:H5''	1:5:4441:A:H8	1.65	0.61
3:8:116:C:C4	3:8:117:C:C5	2.88	0.61
3:8:134:G:N3	3:8:135:C:C6	2.69	0.61
4:A:186:TYR:HE1	4:A:190:LYS:HG3	1.65	0.61
9:F:244:ARG:NH1	9:F:244:ARG:HG2	2.16	0.61
1:5:1439:C:O2	9:F:36:ARG:NH1	2.34	0.61
12:I:171:TRP:CB	12:I:181:PHE:CE2	2.83	0.61
14:K:140:GLY:O	14:K:141:CYS:HB2	2.00	0.61
19:P:3:ARG:HG3	19:P:3:ARG:HH11	1.66	0.61
49:S2:1059:G:H2'	49:S2:1060:A:H5'	1.83	0.61
49:S2:107:A:H2'	49:S2:108:G:H8	1.66	0.61
49:S2:1272:C:OP1	49:S2:1303:C:O4'	2.19	0.61
49:S2:1374:C:H2'	49:S2:1375:G:O5'	2.01	0.61
49:S2:1500:G:H3'	49:S2:1501:C:H6	1.65	0.61
49:S2:1526:G:N1	49:S2:1527:C:C4	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1607:A:H61	49:S2:1632:G:H1'	1.64	0.61
49:S2:1643:U:C2	49:S2:1644:C:C5	2.89	0.61
49:S2:360:A:N1	49:S2:363:A:N7	2.49	0.61
49:S2:377:G:N3	49:S2:378:U:C6	2.69	0.61
49:S2:535:G:N2	49:S2:536:A:C8	2.69	0.61
49:S2:924:G:C6	49:S2:925:G:C8	2.89	0.61
50:SA:32:PHE:CD1	50:SA:32:PHE:C	2.74	0.61
51:SB:106:THR:OG1	51:SB:108:ASP:OD1	2.16	0.61
57:SH:177:TYR:HE2	57:SH:185:VAL:HG21	1.66	0.61
63:SN:20:ARG:HD3	72:SW:56:HIS:NE2	2.15	0.61
48:4:183:GLU:HA	48:4:183:GLU:OE1	2.01	0.60
48:4:171:PRO:HB2	48:4:290:CYS:SG	2.41	0.60
48:4:330:LYS:O	48:4:331:GLU:CG	2.29	0.60
1:5:1290:G:C2	1:5:1291:G:N7	2.69	0.60
1:5:1392:A:N1	1:5:1393:G:C6	2.69	0.60
1:5:1447:C:H2'	1:5:1448:G:C8	2.35	0.60
1:5:1565:A:C2'	1:5:1566:C:H5'	2.31	0.60
1:5:189:G:N2	1:5:190:G:C4	2.69	0.60
1:5:2263:A:O2'	1:5:2265:G:H2'	2.00	0.60
1:5:2272:C:C2'	1:5:2273:G:O5'	2.49	0.60
1:5:2454:U:N3	1:5:2455:G:N7	2.49	0.60
1:5:2498:C:C4	1:5:2499:C:C5	2.88	0.60
1:5:2664:G:N2	1:5:2671:C:C2	2.69	0.60
1:5:301:G:C6	1:5:302:C:C4	2.88	0.60
1:5:3894:A:H2'	1:5:3895:G:O4'	2.01	0.60
1:5:4547:C:C2	1:5:4549:G:N7	2.69	0.60
1:5:486:C:C4	1:5:487:G:N7	2.69	0.60
1:5:488:G:N3	1:5:489:C:C6	2.67	0.60
1:5:4750:G:O6	1:5:4949:G:C6	2.54	0.60
1:5:5047:C:C1'	1:5:5048:A:N1	2.64	0.60
1:5:56:A:N1	1:5:57:G:C6	2.69	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
3:8:96:C:O2	3:8:97:A:H8	1.73	0.60
7:D:249:GLU:OE1	7:D:249:GLU:C	2.39	0.60
14:K:109:ILE:O	14:K:113:ALA:N	2.34	0.60
14:K:123:ARG:HB3	14:K:129:ILE:CD1	0.64	0.60
14:K:132:ILE:O	14:K:135:THR:OG1	2.19	0.60
21:R:132:PHE:N	21:R:132:PHE:CD2	2.69	0.60
49:S2:1093:A:C5	49:S2:1094:C:C5	2.89	0.60
49:S2:1266:C:O2	49:S2:1266:C:H2'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:300:U:N3	49:S2:301:A:N7	2.49	0.60
49:S2:639:C:O2'	49:S2:640:A:H5'	2.01	0.60
49:S2:751:G:N1	49:S2:791:C:C2	2.69	0.60
49:S2:850:C:O2'	49:S2:851:C:H5'	2.00	0.60
49:S2:879:C:C4	49:S2:880:G:C2	2.89	0.60
49:S2:880:G:C8	49:S2:881:G:N7	2.66	0.60
49:S2:975:G:C6	49:S2:976:G:N7	2.69	0.60
64:SO:146:ARG:C	64:SO:148:GLY:N	2.54	0.60
69:ST:78:ILE:HG23	69:ST:79:TYR:CE1	2.36	0.60
48:4:72:SER:CA	48:4:104:ASP:CG	2.69	0.60
48:4:738:PRO:O	48:4:739:ARG:NH1	2.33	0.60
1:5:127:G:N2	1:5:128:C:C2	2.69	0.60
1:5:1615:C:C4	1:5:1616:U:C5	2.89	0.60
1:5:1628:C:C2	1:5:1629:G:H8	2.13	0.60
1:5:1949:U:C2	1:5:1950:U:C6	2.89	0.60
1:5:2301:G:C2	1:5:2302:C:C5	2.89	0.60
1:5:2309:G:H2'	1:5:2310:C:O4'	2.02	0.60
1:5:2335:C:O2	1:5:2335:C:H2'	2.00	0.60
1:5:2367:A:N6	1:5:2798:A:O4'	2.30	0.60
1:5:323:C:O2	1:5:324:A:C8	2.54	0.60
1:5:3711:A:N6	1:5:3712:A:H1'	2.16	0.60
1:5:3759:A:C6	49:S2:1709:G:H4'	2.36	0.60
1:5:4332:C:C2	1:5:4333:C:C5	2.85	0.60
1:5:4742:G:C2	1:5:4743:G:C8	2.89	0.60
1:5:930:G:N3	1:5:931:C:H6	1.99	0.60
2:7:59:G:C6	2:7:60:G:C5	2.89	0.60
6:C:33:ARG:HH11	6:C:122:TYR:HH	1.48	0.60
10:G:261:LEU:HD22	10:G:265:LEU:HD23	1.82	0.60
14:K:81:ILE:HD12	14:K:113:ALA:HB1	1.82	0.60
49:S2:1124:C:C4	49:S2:1125:C:C5	2.88	0.60
49:S2:1605:G:C3'	49:S2:1606:G:O4'	2.48	0.60
49:S2:579:C:O2	49:S2:579:C:H2'	1.99	0.60
49:S2:849:A:C6	49:S2:850:C:N4	2.69	0.60
49:S2:903:A:N7	49:S2:904:A:C8	2.69	0.60
57:SH:57:ARG:HA	57:SH:57:ARG:CZ	2.32	0.60
57:SH:8:ILE:HG23	57:SH:9:VAL:HG13	1.83	0.60
48:4:683:PHE:HD1	48:4:729:LEU:HD21	1.66	0.60
48:4:738:PRO:O	48:4:824:PRO:HD2	2.01	0.60
1:5:1392:A:H2'	1:5:1393:G:C8	2.37	0.60
1:5:1769:G:C2	1:5:1770:A:C5	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)
1:5:1969:G:H1	1:5:2018:C:N4	1.98	0.60
1:5:2451:A:C4	1:5:2452:G:C8	2.89	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
1:5:3858: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
1:5:4117:U:C5	10:G:41:ILE:O	2.55	0.60
1:5:388:A:C6	1:5:411:G:C6	2.90	0.60
1:5:42:A:C5	1:5:4379:A:N1	2.69	0.60
1:5:4455:G:C5	1:5:4456:C:C5	2.89	0.60
1:5:460:C:H2'	1:5:461:G:H8	1.65	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
2:7:18:C:C2	2:7:19:C:H6	2.10	0.60
3:8:42:G:C6	3:8:43:A:N7	2.69	0.60
3:8:45:C:C2	3:8:46:G:C8	2.88	0.60
14:K:95:GLN:C	14:K:97:ASN:H	2.05	0.60
49:S2:1310:U:O2	49:S2:1310:U:H2'	2.01	0.60
49:S2:1571:G:C6	49:S2:1572:C:C4	2.89	0.60
49:S2:1593:C:N3	49:S2:1594:A:N7	2.49	0.60
49:S2:1754:G:C6	49:S2:1755:C:C4	2.89	0.60
49:S2:1772:C:C2	49:S2:1773:C:C6	2.88	0.60
49:S2:323:C:H3'	49:S2:324:C:H5''	1.83	0.60
49:S2:570:C:N3	49:S2:571:U:C5	2.69	0.60
49:S2:608:C:C4	49:S2:609:U:C5	2.89	0.60
49:S2:816:A:C5	49:S2:817:G:C8	2.90	0.60
62:SM:85:LEU:O	62:SM:85:LEU:HD23	2.01	0.60
69:ST:52:TRP:CE3	69:ST:53:PHE:HB2	2.37	0.60
1:5:2577:C:C4	29:Z:17:ARG:NH2	2.69	0.60
1:5:152:U:O2	1:5:153:G:C8	2.55	0.60
1:5:1582:U:C4	1:5:1583:A:C8	2.89	0.60
1:5:1983:A:N1	1:5:2010:A:OP2	2.35	0.60
1:5:2290:C:N3	1:5:2291:G:N7	2.50	0.60
1:5:2361:G:O2'	1:5:2362:U:OP2	2.19	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
1:5:293:G:C4'	1:5:294:G:C8	2.84	0.60
1:5:325:U:H2'	1:5:326:C:H6	1.67	0.60
1:5:3711:A:N1	1:5:3712:A:N3	2.49	0.60
1:5:1324:A:C2	1:5:3876:A:C2'	2.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3871:A:C6	1:5:3885:G:C2	2.90	0.60
1:5:4191:G:N2	1:5:4374:U:O4'	2.34	0.60
1:5:4239:A:C6	1:5:4240:G:N7	2.69	0.60
1:5:4332:C:O2	1:5:4333:C:H6	1.81	0.60
1:5:446:C:N3	1:5:447:C:C5	2.68	0.60
1:5:4647:G:H4'	21:R:59:SER:HB3	1.82	0.60
1:5:4746:C:C2	1:5:4747:C:C6	2.90	0.60
1:5:4999:G:N1	1:5:5000:G:C5	2.69	0.60
2:7:93:G:N3	2:7:94:C:C6	2.69	0.60
3:8:134:G:N1	3:8:135:C:C5	2.69	0.60
3:8:142:U:C2	3:8:143:G:C8	2.89	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
14:K:120:SER:OG	14:K:121:LEU:N	2.34	0.60
49:S2:1056:U:H2'	49:S2:1057:C:O4'	2.00	0.60
49:S2:1287:A:C2	49:S2:1313:A:C4	2.89	0.60
49:S2:1611:G:H1'	68:SS:86:ARG:HH12	1.66	0.60
49:S2:167:G:N2	49:S2:168:C:C2	2.69	0.60
49:S2:222:U:C2	49:S2:223:C:C6	2.90	0.60
49:S2:338:G:C5	49:S2:339:A:N7	2.69	0.60
49:S2:376:A:C5	49:S2:377:G:C8	2.90	0.60
49:S2:452:G:H2'	49:S2:453:C:O5'	2.02	0.60
49:S2:457:C:C4	49:S2:458:A:N7	2.69	0.60
49:S2:51:U:C4	49:S2:52:G:N7	2.68	0.60
49:S2:53:C:N3	49:S2:54:A:C8	2.69	0.60
49:S2:751:G:C6	49:S2:791:C:C2	2.90	0.60
49:S2:798:A:N6	57:SH:106:ARG:HB2	2.17	0.60
22:S:27:LEU:C	22:S:28:TYR:HD1	2.04	0.60
74:SY:76:TYR:CE2	74:SY:86:GLU:OE2	2.54	0.60
48:4:10:ARG:HH22	48:4:465:PRO:CD	2.01	0.60
48:4:113:SER:OG	48:4:499:PHE:CD2	2.52	0.60
48:4:238:ALA:HB1	48:4:239:LYS:CB	2.31	0.60
48:4:77:LEU:HB2	48:4:100:ILE:HB	1.82	0.60
48:4:42:LYS:CD	48:4:79:TYR:HH	2.13	0.60
48:4:42:LYS:CE	48:4:79:TYR:HH	2.05	0.60
1:5:1179:U:C4	1:5:1181:C:OP2	2.54	0.60
1:5:1410:U:H5	1:5:1815:G:N1	1.99	0.60
1:5:1437:C:O2	1:5:2097:U:C2	2.54	0.60
1:5:1806:G:C2	1:5:1807:C:C5	2.90	0.60
1:5:1928:C:C4	18:O:133:ARG:CZ	2.85	0.60
1:5:2055:G:H5'	1:5:2056:G:H5'	1.82	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
1:5:2468:U:O4	1:5:2473:A:C2	2.53	0.60
1:5:259:C:C2	1:5:260:C:C6	2.89	0.60
1:5:2645:G:N1	1:5:2646:C:C4	2.70	0.60
1:5:30:C:H2'	1:5:31:U:O5'	2.02	0.60
1:5:371:A:O2'	1:5:372:A:C5'	2.49	0.60
1:5:3944:G:C2	1:5:3945:A:N7	2.69	0.60
1:5:4198:G:C5	1:5:4199:C:C5	2.89	0.60
1:5:4544:A:C8	1:5:4545:G:H1'	2.37	0.60
1:5:488:G:C6	1:5:489:C:C4	2.90	0.60
1:5:642:G:C2	1:5:643:C:C4	2.89	0.60
1:5:745:G:H2'	1:5:746:A:O4'	2.00	0.60
2:7:58:A:C5	2:7:59:G:N7	2.69	0.60
7:D:103:LEU:CD2	7:D:244:HIS:HB3	2.31	0.60
7:D:44:TYR:CD1	7:D:44:TYR:N	2.69	0.60
13:J:99:PHE:CZ	13:J:105:PHE:HB2	2.37	0.60
21:R:105:LEU:O	21:R:109:TYR:HB2	2.01	0.60
16:M:6:PHE:HB3	22:S:151:LYS:CG	2.31	0.60
49:S2:1082:A:C5	49:S2:1084:A:H1'	2.37	0.60
49:S2:1455:A:C6	49:S2:1456:G:C5	2.88	0.60
49:S2:1575:G:N2	49:S2:1576:G:C4	2.69	0.60
49:S2:1609:C:O2	49:S2:1610:G:H8	1.82	0.60
49:S2:1784:G:H2'	49:S2:1785:C:H5'	1.83	0.60
49:S2:431:G:C2	49:S2:432:G:C8	2.89	0.60
49:S2:54:A:N3	49:S2:451:G:C2	2.69	0.60
49:S2:461:U:O2	49:S2:462:C:C5	2.54	0.60
49:S2:474:G:N2	49:S2:475:C:N1	2.48	0.60
49:S2:795:A:N1	49:S2:796:G:C5	2.70	0.60
49:S2:797:C:C2	49:S2:798:A:O2'	2.40	0.60
49:S2:64:A:C5	49:S2:82:G:N1	2.69	0.60
49:S2:886:A:H2'	49:S2:887:U:O4'	2.02	0.60
49:S2:950:C:C2	49:S2:951:C:C6	2.89	0.60
52:SC:133:TYR:HD1	52:SC:216:MET:HA	1.66	0.60
55:SF:119:SER:OG	55:SF:180:ALA:HB1	2.01	0.60
59:SJ:110:LEU:HD12	59:SJ:142:VAL:HG11	1.83	0.60
63:SN:125:LEU:HD22	63:SN:129:TYR:CE2	2.37	0.60
48:4:462:GLU:O	48:4:463:ASP:HB3	2.02	0.60
48:4:13:MET:HE1	48:4:464:VAL:CA	2.31	0.60
48:4:801:ARG:CD	48:4:802:SER:N	2.64	0.60
48:4:825:PHE:C	48:4:826:ASP:O	2.32	0.60
1:5:1264:C:H2'	1:5:1265:G:O4'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1379:C:H4'	1:5:1380:G:N9	2.15	0.60
1:5:2089:G:O6	1:5:2263:A:C8	2.54	0.60
1:5:2294:G:N3	1:5:2295:C:C5	2.69	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
1:5:3738:G:C6	1:5:3739:C:C6	2.90	0.60
1:5:3754:G:C6	1:5:3755:G:C8	2.90	0.60
1:5:3806:G:O2'	49:S2:1719:A:H1'	2.00	0.60
1:5:3846:C:C2	1:5:3847:C:C6	2.89	0.60
1:5:4269:G:H22	1:5:4277:G:N2	1.94	0.60
1:5:4313:A:C6	1:5:4314:C:C5	2.88	0.60
1:5:4489:G:C6	1:5:4490:C:C4	2.90	0.60
1:5:2363:A:H1'	1:5:4560:C:H5	1.66	0.60
1:5:470:A:N7	1:5:471:A:N7	2.48	0.60
1:5:4977:A:C4	1:5:4978:G:C2	2.90	0.60
1:5:919:C:C2	1:5:920:C:C6	2.90	0.60
1:5:976:G:H22	1:5:1277:G:H22	1.49	0.60
2:7:29:C:C2	2:7:30:C:C5	2.89	0.60
4:A:186:TYR:CA	4:A:196:TRP:HZ3	2.13	0.60
17:N:150:TRP:CZ3	17:N:151:ILE:HG12	2.36	0.60
18:O:58:LEU:HD11	18:O:145:VAL:HG13	1.83	0.60
49:S2:1040:G:C6	49:S2:1041:G:N7	2.70	0.60
49:S2:1272:C:N3	49:S2:1273:C:C5	2.69	0.60
49:S2:149:A:H2'	49:S2:150:A:H8	1.66	0.60
49:S2:1542:C:C2'	49:S2:1543:U:O5'	2.49	0.60
49:S2:1795:G:C2	49:S2:1796:G:C8	2.89	0.60
49:S2:27:A:C2	49:S2:28:U:H1'	2.37	0.60
49:S2:309:G:N3	49:S2:310:C:C6	2.70	0.60
49:S2:333:G:H2'	49:S2:334:C:O4'	2.02	0.60
49:S2:69:C:C2	49:S2:70:G:N7	2.70	0.60
49:S2:881:G:C2	49:S2:882:U:C6	2.90	0.60
22:S:94:TYR:CE2	22:S:96:GLU:HG3	2.37	0.60
62:SM:51:VAL:HG13	62:SM:85:LEU:HD21	1.83	0.60
48:4:111:PHE:HB2	48:4:501:VAL:CG2	2.29	0.60
48:4:13:MET:HE1	48:4:464:VAL:CB	2.32	0.60
48:4:427:VAL:CG1	48:4:485:ILE:HG23	2.27	0.60
48:4:556:ILE:O	48:4:560:ASP:OD1	2.19	0.60
48:4:590:LEU:HD23	48:4:605:LYS:CG	2.31	0.60
48:4:698:ARG:O	48:4:700:VAL:CB	2.49	0.60
1:5:1065:G:C2	1:5:1066:G:C4	2.89	0.60
1:5:1341:U:C2	1:5:1342:A:N7	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1682:A:H3'	1:5:1683:U:H6	1.66	0.60
1:5:1961:G:O2'	1:5:2025:A:N6	2.34	0.60
1:5:1972:G:C2	1:5:1973:G:C5	2.89	0.60
1:5:2076:G:N1	1:5:2077:C:C2	2.70	0.60
1:5:2105:A:N1	1:5:2106:G:C5	2.70	0.60
1:5:2612:G:C5	1:5:2613:C:C5	2.89	0.60
1:5:2841:G:C6	1:5:2842:G:N7	2.69	0.60
1:5:299:C:H2'	1:5:299:C:O2	2.01	0.60
1:5:4077:A:O5'	1:5:4077:A:H8	1.84	0.60
1:5:4078:C:N3	1:5:4079:C:C6	2.69	0.60
1:5:4080:C:O2	1:5:4080:C:H2'	2.01	0.60
1:5:4109:G:C6	1:5:4110:C:C4	2.90	0.60
1:5:4315:A:C2'	1:5:4316:G:H5'	2.31	0.60
1:5:747:A:H2'	1:5:749:G:N7	2.16	0.60
3:8:134:G:C4	3:8:135:C:C6	2.90	0.60
3:8:79:G:N3	3:8:80:A:C2	2.70	0.60
4:A:186:TYR:CA	4:A:196:TRP:CZ3	2.85	0.60
5:B:198:ARG:HB2	5:B:198:ARG:NH1	2.16	0.60
14:K:91:ASP:O	14:K:92:ARG:CB	2.46	0.60
49:S2:1040:G:C6	49:S2:1041:G:C8	2.90	0.60
49:S2:1232:U:O2'	49:S2:1253:A:N7	2.24	0.60
49:S2:166:A:N3	49:S2:167:G:C8	2.69	0.60
49:S2:26:U:O2	49:S2:26:U:H2'	2.02	0.60
49:S2:349:A:C3'	58:SI:27:TYR:OH	2.49	0.60
49:S2:350:C:O2'	49:S2:383:G:N1	2.34	0.60
49:S2:570:C:C2	49:S2:571:U:C5	2.89	0.60
49:S2:591:U:H5''	49:S2:593:C:H5	1.64	0.60
49:S2:910:G:C5	49:S2:911:C:C5	2.90	0.60
55:SF:20:PHE:CZ	55:SF:69:VAL:HG11	2.37	0.60
49:S2:1665:G:N7	69:ST:88:MET:HG2	2.17	0.60
9:F:128:ASN:HD21	23:T:132:PRO:HG2	1.67	0.60
48:4:189:ILE:HG21	48:4:203:ILE:HG13	1.83	0.60
48:4:207:PRO:CB	48:4:261:TRP:CD2	2.85	0.60
48:4:541:SER:O	48:4:543:GLU:CB	2.49	0.60
48:4:693:CYS:O	48:4:694:GLU:HB2	2.00	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
1:5:2006:U:H2'	1:5:2007:G:O4'	2.01	0.60
1:5:2279:A:C2	1:5:2280:G:C4	2.90	0.60
1:5:2294:G:N2	1:5:2295:C:N1	2.49	0.60
1:5:245:C:O2	1:5:245:C:O4'	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2496:G:C4	1:5:2497:C:C6	2.89	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
1:5:3693:U:C4	1:5:3694:U:C4	2.88	0.60
1:5:4416:G:N2	1:5:4417:C:N1	2.50	0.60
1:5:4647:G:C2	1:5:4648:A:C8	2.90	0.60
1:5:4747:C:O2'	1:5:4748:U:H5'	2.01	0.60
1:5:483:G:C2	1:5:484:U:C6	2.90	0.60
1:5:4984:C:C2	1:5:4985:U:C6	2.89	0.60
1:5:667:A:C2	1:5:668:C:C5	2.89	0.60
1:5:986:C:H2'	1:5:987:C:O4'	2.02	0.60
3:8:134:G:C5	3:8:135:C:C5	2.90	0.60
1:5:20:U:C4	3:8:37:A:C6	2.90	0.60
3:8:70:G:C6	3:8:87:G:N1	2.70	0.60
5:B:217:ILE:HD11	5:B:333:LEU:HD11	1.84	0.60
14:K:92:ARG:O	14:K:93:LYS:CB	2.42	0.60
1:5:1692:C:H4'	20:Q:57:ASN:HD21	1.67	0.60
49:S2:1131:G:N1	49:S2:1132:C:C4	2.69	0.60
49:S2:1202:U:C4	49:S2:1203:G:C8	2.90	0.60
49:S2:1270:G:H1'	49:S2:1298:G:O6	2.02	0.60
49:S2:1540:G:C2	49:S2:1541:G:N7	2.70	0.60
49:S2:1596:U:C2	49:S2:1597:C:C6	2.90	0.60
49:S2:1835:A:C5'	49:S2:1863:A:C8	2.84	0.60
49:S2:433:A:H2'	49:S2:434:G:C8	2.37	0.60
49:S2:553:U:O2	49:S2:554:A:C8	2.55	0.60
49:S2:581:U:C2	49:S2:582:C:C6	2.90	0.60
49:S2:744:G:H1'	57:SH:107:LYS:HB3	1.82	0.60
49:S2:796:G:H3'	49:S2:797:C:C5'	2.32	0.60
49:S2:973:C:C4	49:S2:974:C:C5	2.90	0.60
50:SA:55:TRP:C	50:SA:55:TRP:CD1	2.74	0.60
54:SE:99:PHE:HD1	54:SE:99:PHE:N	1.98	0.60
58:SI:99:ASN:HA	58:SI:174:CYS:SG	2.42	0.60
49:S2:1283:C:C5	62:SM:103:VAL:HA	2.37	0.60
48:4:481:LYS:HG3	48:4:482:THR:H	0.54	0.60
48:4:686:ALA:HB1	48:4:729:LEU:HB2	1.83	0.60
1:5:1271:G:N2	1:5:2122:G:OP2	2.35	0.60
1:5:1339:U:N3	1:5:1340:C:C5	2.70	0.60
1:5:1404:G:C6	1:5:1405:C:C5	2.90	0.60
1:5:1685:G:C6	1:5:1686:C:N4	2.70	0.60
1:5:2277:C:C2'	1:5:2277:C:O2	2.49	0.60
1:5:1898:C:N4	1:5:2279:A:O2'	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2633:U:C2	1:5:2634:C:C5	2.89	0.60
1:5:2823:G:C2	1:5:2824:C:C6	2.90	0.60
1:5:2852:U:C2'	1:5:2852:U:O2	2.50	0.60
1:5:3900:G:C6	1:5:3902:A:H1'	2.37	0.60
1:5:4230:C:O2	1:5:4230:C:H2'	2.01	0.60
1:5:4234:A:C6	1:5:4271:A:H1'	2.37	0.60
1:5:4733:C:H41	1:5:4734:A:H1'	1.66	0.60
1:5:479:G:C6	1:5:480:C:C5	2.89	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
1:5:982:U:C2'	1:5:983:C:C6	2.77	0.60
5:B:314:ILE:HD12	5:B:314:ILE:N	2.16	0.60
6:C:48:ASN:CG	6:C:48:ASN:O	2.39	0.60
11:H:8:GLN:HE22	11:H:71:ARG:HD2	1.67	0.60
49:S2:1038:U:H1'	49:S2:1181:A:N1	2.17	0.60
49:S2:1405:A:H1'	49:S2:1580:A:N1	2.15	0.60
49:S2:218:U:C2	49:S2:219:U:C5	2.90	0.60
57:SH:135:PHE:C	57:SH:135:PHE:CD1	2.74	0.60
57:SH:138:GLU:HG2	63:SN:19:ARG:HD3	1.84	0.60
67:SR:83:ASN:ND2	67:SR:83:ASN:C	2.55	0.60
69:ST:85:ASN:HB2	69:ST:88:MET:HB2	1.83	0.60
29:Z:38:TYR:CZ	29:Z:76:ASN:OD1	2.55	0.60
48:4:423:THR:HG22	48:4:450:THR:H	1.66	0.60
1:5:4608:G:OP1	48:4:66:ARG:CZ	2.50	0.60
48:4:73:THR:C	48:4:104:ASP:HB2	2.22	0.60
48:4:731:ALA:HB2	48:4:854:PHE:CB	2.30	0.60
1:5:1378:C:H5''	1:5:1379:C:H3'	1.83	0.60
1:5:1634:A:C6	1:5:1635:C:C5	2.90	0.60
1:5:166:C:H2'	1:5:166:C:O2	2.02	0.60
1:5:1268:G:N3	1:5:2111:G:C2	2.70	0.60
1:5:1266:G:C5'	1:5:2112:G:N3	2.60	0.60
1:5:2108:G:C2	1:5:2125:C:C4	2.90	0.60
1:5:2304:U:OP1	1:5:2305:U:O2'	2.12	0.60
1:5:2428:A:C4	1:5:2789:A:C2	2.88	0.60
1:5:2438:A:C5	1:5:2441:C:N4	2.70	0.60
1:5:30:C:H2'	1:5:31:U:C6	2.37	0.60
1:5:4236:G:H4'	1:5:4328:G:O2'	2.01	0.60
1:5:655:C:O2	1:5:656:C:C6	2.55	0.60
2:7:54:A:N1	2:7:55:A:N7	2.46	0.60
1:5:332:C:H4'	17:N:150:TRP:NE1	2.17	0.60
1:5:2055:G:O6	22:S:158:VAL:CG1	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1229:G:C6	49:S2:1230:C:C4	2.89	0.60
49:S2:1368:U:H1'	49:S2:1372:U:N3	2.17	0.60
49:S2:1422:G:C6	49:S2:1424:G:OP2	2.55	0.60
49:S2:1542:C:O2'	49:S2:1543:U:C5'	2.49	0.60
49:S2:1561:A:C5	49:S2:1562:C:C6	2.90	0.60
49:S2:1730:U:C2	49:S2:1731:A:C8	2.90	0.60
49:S2:190:G:O2'	49:S2:209:A:N6	2.35	0.60
49:S2:371:A:C2	49:S2:372:U:C4	2.89	0.60
49:S2:379:C:N4	49:S2:380:G:O6	2.34	0.60
49:S2:440:G:N2	49:S2:454:U:C2	2.70	0.60
49:S2:453:C:O2'	49:S2:454:U:H5'	2.02	0.60
49:S2:50:A:C2	49:S2:488:U:O4	2.53	0.60
49:S2:582:C:O2	49:S2:583:C:C5	2.54	0.60
49:S2:732:U:C2	49:S2:733:C:C6	2.89	0.60
61:SL:116:CYS:SG	61:SL:117:PHE:N	2.74	0.60
48:4:58:ASP:CA	48:4:63:GLU:CG	2.80	0.59
48:4:671:TYR:CB	48:4:675:ILE:HG23	2.32	0.59
1:5:1465:G:C6	1:5:1466:G:C8	2.89	0.59
1:5:2059:C:C2	1:5:2060:G:C8	2.90	0.59
1:5:2422:C:C6	1:5:2829:U:H1'	2.37	0.59
1:5:2559:G:H1	1:5:2567:G:H1	1.50	0.59
1:5:2589:C:N4	1:5:2590:G:C6	2.69	0.59
1:5:2848:G:C2	1:5:3838:U:C5	2.90	0.59
1:5:4172:A:C2	1:5:4173:G:N7	2.70	0.59
1:5:4878:C:N3	1:5:4879:C:C5	2.70	0.59
1:5:726:G:H2'	1:5:727:C:O4'	2.02	0.59
3:8:33:G:H4'	3:8:34:U:C4	2.38	0.59
3:8:68:G:C2	3:8:91:A:C2	2.89	0.59
4:A:209:HIS:HE1	4:A:211:PHE:HD2	1.47	0.59
10:G:264:LYS:HZ2	10:G:265:LEU:CD2	2.01	0.59
49:S2:1368:U:C2	49:S2:1372:U:O4	2.55	0.59
49:S2:1406:G:C2	49:S2:1407:U:C2	2.89	0.59
49:S2:1418:C:O2	49:S2:1420:G:C8	2.55	0.59
49:S2:1448:A:C2	49:S2:1449:G:H1'	2.37	0.59
49:S2:1551:U:H3'	49:S2:1552:G:C8	2.37	0.59
49:S2:1552:G:C8	49:S2:1578:U:O4	2.54	0.59
49:S2:1573:G:N3	49:S2:1574:C:H1'	2.16	0.59
49:S2:165:G:HO2'	49:S2:166:A:H8	1.50	0.59
49:S2:1839:U:O2	49:S2:1840:U:C6	2.54	0.59
49:S2:453:C:O2'	49:S2:454:U:C5'	2.50	0.59
49:S2:615:C:H2'	49:S2:616:A:O4'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:848:U:C4	49:S2:849:A:N6	2.70	0.59
49:S2:862:A:H2'	49:S2:862:A:N3	2.17	0.59
51:SB:77:ASP:O	51:SB:77:ASP:OD1	2.19	0.59
72:SW:90:GLN:HB2	72:SW:94:LEU:HD12	1.83	0.59
1:5:1201:U:C2	1:5:1202:C:C5	2.90	0.59
1:5:1247:U:N3	1:5:1248:C:C6	2.67	0.59
1:5:1280:C:H5'	1:5:1280:C:H6	1.65	0.59
1:5:1280:C:O2'	1:5:1281:G:C3'	2.49	0.59
1:5:1342:A:OP1	17:N:204:ARG:NH1	2.35	0.59
1:5:1751:A:C2	1:5:1752:G:O4'	2.55	0.59
1:5:1857:C:O4'	1:5:1892:A:C2	2.55	0.59
1:5:1921:C:O2	22:S:160:ARG:HB2	2.01	0.59
1:5:2307:A:C2'	1:5:2308:A:O5'	2.50	0.59
1:5:2316:G:C6	1:5:2317:C:N4	2.70	0.59
1:5:2367:A:C2	1:5:2368:A:N7	2.69	0.59
1:5:2367:A:C8	1:5:2798:A:C2	2.89	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	2.90	0.59
1:5:2633:U:O2	1:5:2634:C:C6	2.55	0.59
1:5:2746:A:C2'	1:5:2747:U:O5'	2.50	0.59
1:5:3677:U:H2'	1:5:3678:G:C8	2.37	0.59
1:5:3833:C:C2	1:5:3834:C:C5	2.90	0.59
1:5:4078:C:C4	1:5:4079:C:C5	2.89	0.59
1:5:3911:C:H5''	1:5:4197:G:O2'	2.01	0.59
1:5:4470:G:N2	1:5:4486:C:C2	2.70	0.59
1:5:4549:G:N1	1:5:4550:G:C8	2.69	0.59
1:5:459:C:C4	1:5:460:C:C5	2.91	0.59
1:5:460:C:O2	1:5:461:G:C8	2.55	0.59
3:8:132:G:C2	3:8:133:G:N9	2.69	0.59
3:8:141:C:H2'	3:8:142:U:H6	1.67	0.59
4:A:34:PHE:O	4:A:35:ALA:C	2.41	0.59
10:G:264:LYS:HZ1	10:G:265:LEU:HD21	1.64	0.59
14:K:17:CYS:C	14:K:18:THR:HG1	2.03	0.59
14:K:22:VAL:HG22	14:K:48:LYS:CG	2.31	0.59
1:5:75:G:O6	15:L:103:ARG:CZ	2.51	0.59
17:N:181:HIS:C	17:N:182:HIS:O	2.38	0.59
19:P:129:THR:HB	19:P:139:TYR:HB2	1.82	0.59
49:S2:1031:A:C5	49:S2:1032:C:C5	2.91	0.59
49:S2:1149:A:C6	49:S2:1151:G:C4	2.90	0.59
49:S2:1157:G:H1'	73:SX:5:ARG:HE	1.67	0.59
49:S2:1408:U:H3'	49:S2:1409:A:H8	1.63	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1532:C:OP1	49:S2:1604:G:O2'	2.20	0.59
49:S2:1608:U:C4	49:S2:1609:C:C5	2.89	0.59
49:S2:537:C:H42	49:S2:546:G:H1	1.48	0.59
49:S2:622:C:N4	49:S2:623:G:H1'	2.18	0.59
49:S2:805:U:C2	49:S2:806:U:C5	2.89	0.59
49:S2:851:C:H5''	49:S2:852:G:H5'	1.84	0.59
22:S:44:PHE:C	22:S:44:PHE:CD1	2.74	0.59
49:S2:1022:U:H1'	63:SN:128:TYR:CE2	2.36	0.59
63:SN:128:TYR:O	63:SN:131:THR:N	2.35	0.59
49:S2:1231:C:OP2	68:SS:139:THR:HG21	2.01	0.59
48:4:410:PHE:CE2	48:4:530:SER:CB	2.85	0.59
48:4:64:GLN:CD	48:4:64:GLN:C	2.58	0.59
48:4:804:THR:HG1	48:4:808:ALA:CB	2.15	0.59
1:5:1075:G:C6	1:5:1076:C:C4	2.90	0.59
1:5:1278:C:C2	1:5:1279:A:H1'	2.37	0.59
1:5:1281:G:O4'	1:5:1281:G:N3	2.34	0.59
1:5:1444:G:C2	1:5:1445:U:C4	2.89	0.59
1:5:1489:G:N2	1:5:1490:G:H1'	2.16	0.59
1:5:1516:G:C6	1:5:1518:A:C5	2.90	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
1:5:1723:A:N1	1:5:1838:A:C2	2.70	0.59
1:5:1898:C:H1'	1:5:2070:U:O2	2.02	0.59
1:5:1900:C:C4	1:5:1901:C:C5	2.91	0.59
1:5:2447:U:O2'	1:5:2448:G:C5'	2.50	0.59
1:5:2561:C:C4	1:5:2562:G:N7	2.70	0.59
1:5:2457:G:N2	1:5:3672:G:N2	2.50	0.59
1:5:3675:G:N2	1:5:3676:G:C8	2.70	0.59
1:5:371:A:O2'	1:5:372:A:O5'	2.20	0.59
1:5:4413:C:H4'	12:I:157:PHE:HE2	0.86	0.59
1:5:4532:U:H5	1:5:4554:G:N2	2.00	0.59
1:5:4543:G:O2'	1:5:4544:A:C5'	2.50	0.59
1:5:466:A:N3	1:5:467:U:C6	2.71	0.59
6:C:122:TYR:HB2	6:C:280:PRO:HG3	1.85	0.59
10:G:54:PHE:N	10:G:54:PHE:CD2	2.70	0.59
1:5:509:A:O2'	15:L:163:ARG:HB2	2.02	0.59
18:O:36:VAL:HG11	18:O:108:ILE:HD12	1.84	0.59
1:5:2061:U:O2	22:S:111:ARG:HD3	2.02	0.59
49:S2:1528:G:N3	49:S2:1529:C:C5	2.70	0.59
49:S2:29:G:C4	49:S2:30:C:C5	2.89	0.59
49:S2:752:G:C6	49:S2:791:C:N3	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:123:VAL:HG13	50:SA:145:ILE:HB	1.83	0.59
54:SE:161:GLN:HB3	54:SE:170:THR:O	2.01	0.59
60:SK:82:TYR:O	62:SM:27:ILE:HD11	2.00	0.59
49:S2:582:C:C4'	74:SY:33:ALA:HB2	2.32	0.59
49:S2:837:A:H62	74:SY:47:MET:HB3	1.67	0.59
1:5:1347:G:C5	1:5:1348:U:C5	2.90	0.59
1:5:1684:A:C5	1:5:1685:G:C8	2.90	0.59
1:5:1929:A:C2	1:5:2054:U:O4	2.55	0.59
1:5:1964:A:N1	1:5:4694:G:O6	2.35	0.59
1:5:2406:G:N2	1:5:2785:C:C2	2.71	0.59
1:5:2417:A:C2	1:5:2418:A:N7	2.69	0.59
1:5:2657:G:H3'	1:5:2658:G:H8	1.66	0.59
1:5:2746:A:H2'	1:5:2747:U:O5'	2.02	0.59
1:5:2791:C:C2	1:5:2792:C:C5	2.90	0.59
1:5:296:A:P	1:5:296:A:C8	2.95	0.59
1:5:296:A:H8	1:5:296:A:O5'	1.85	0.59
1:5:3630:A:C2	1:5:3631:U:C6	2.90	0.59
1:5:3739:C:N4	1:5:3740:G:C5	2.70	0.59
1:5:4098:A:C2	1:5:4099:G:C4	2.91	0.59
1:5:4269:G:C2	1:5:4270:C:N1	2.70	0.59
1:5:4277:G:C5	1:5:4278:C:C5	2.90	0.59
1:5:4281:A:C2	1:5:4283:G:C6	2.90	0.59
1:5:4463:U:C4	1:5:4488:A:C6	2.90	0.59
1:5:4501:U:C4	1:5:4502:C:H1'	2.37	0.59
1:5:4763:U:O2	16:M:3:PHE:HE2	1.85	0.59
1:5:4878:C:C2	1:5:4879:C:H5	2.18	0.59
1:5:4952:G:H5''	1:5:4952:G:C8	2.37	0.59
1:5:49:U:H2'	1:5:50:C:O5'	2.01	0.59
1:5:86:U:C4	1:5:97:G:N2	2.70	0.59
1:5:423:G:O6	3:8:10:G:O6	2.21	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
9:F:96:ARG:O	9:F:120:PHE:HA	2.02	0.59
14:K:94:LYS:HA	14:K:95:GLN:O	2.03	0.59
17:N:63:ARG:HB2	17:N:63:ARG:CZ	2.32	0.59
49:S2:1142:G:H22	49:S2:1144:A:H3'	1.67	0.59
49:S2:11:A:C2	49:S2:12:U:C6	2.90	0.59
49:S2:1337:C:H2'	49:S2:1337:C:O2	2.01	0.59
49:S2:1428:G:O2'	66:SQ:33:LYS:NZ	2.35	0.59
49:S2:1533:A:C2	49:S2:1537:A:O4'	2.56	0.59
49:S2:1540:G:C6	49:S2:1541:G:C5	2.87	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:42:A:N3	49:S2:426:A:C5	2.68	0.59
49:S2:672:A:N1	49:S2:1162:C:C1'	2.65	0.59
49:S2:837:A:C2	49:S2:838:G:C5	2.91	0.59
49:S2:900:C:O2	49:S2:901:G:C8	2.55	0.59
61:SL:55:TYR:OH	61:SL:116:CYS:HB3	2.02	0.59
70:SU:102:THR:HG21	70:SU:114:VAL:HG21	1.83	0.59
48:4:578:SER:O	48:4:579:TYR:CD1	2.56	0.59
48:4:597:ASN:OD1	48:4:720:GLN:HG3	2.02	0.59
48:4:671:TYR:HD1	48:4:674:GLU:OE1	1.76	0.59
48:4:111:PHE:CD1	48:4:809:PHE:HZ	2.17	0.59
1:5:111:C:O2	1:5:111:C:H2'	2.01	0.59
1:5:1634:A:C2	1:5:1635:C:C2	2.90	0.59
1:5:1778:C:O2	1:5:1779:U:C6	2.55	0.59
1:5:180:C:C2	1:5:181:C:C5	2.90	0.59
1:5:1925:G:C5	1:5:1926:C:C5	2.91	0.59
1:5:219:G:C4	1:5:219:G:H5'	2.37	0.59
1:5:2294:G:N1	1:5:2295:C:C5	2.69	0.59
1:5:2479:G:C4	1:5:2480:G:C8	2.90	0.59
1:5:2508:U:O2	1:5:2509:C:H6	1.75	0.59
1:5:2658:G:C6	1:5:2675:G:N1	2.70	0.59
1:5:2734:U:N3	1:5:2735:G:N7	2.51	0.59
1:5:323:C:C2	1:5:324:A:C8	2.90	0.59
1:5:3764:U:H2'	1:5:3765:G:O4'	2.01	0.59
1:5:3802:U:H3	1:5:4498:U:C1'	2.14	0.59
1:5:4096:C:N4	1:5:4097:G:N7	2.51	0.59
1:5:4466:C:N3	1:5:4467:A:C8	2.70	0.59
1:5:4467:A:C2	1:5:4468:U:C6	2.91	0.59
1:5:463:A:N1	1:5:692:A:H2	2.00	0.59
1:5:4653:C:H2'	1:5:4654:C:H6	1.66	0.59
1:5:466:A:C2	1:5:467:U:C4	2.90	0.59
1:5:4988:U:H2'	1:5:4988:U:O2	2.01	0.59
1:5:54:G:H2'	1:5:54:G:N3	2.17	0.59
1:5:94:A:H2'	1:5:95:G:C5'	2.32	0.59
2:7:44:C:C2	2:7:45:U:C5	2.90	0.59
3:8:102:G:H3'	3:8:104:A:H2'	1.83	0.59
1:5:4911:A:C5'	5:B:100:ARG:CD	2.77	0.59
9:F:168:ARG:HD2	9:F:211:TRP:NE1	2.17	0.59
1:5:4759:C:OP1	18:O:160:ARG:NH2	2.33	0.59
21:R:172:ARG:HG2	49:S2:909:G:OP1	2.03	0.59
49:S2:1052:A:C4	49:S2:1053:C:C6	2.91	0.59
49:S2:104:A:C5	49:S2:105:U:C5	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1139:C:H2'	49:S2:1140:G:O4'	2.02	0.59
49:S2:1363:C:N3	49:S2:1376:A:N1	2.50	0.59
49:S2:1589:A:O2'	49:S2:1590:C:O4'	2.19	0.59
49:S2:1616:U:H2'	49:S2:1617:G:O4'	2.03	0.59
49:S2:1643:U:N3	49:S2:1644:C:N4	2.49	0.59
49:S2:891:G:C2	49:S2:892:U:C6	2.89	0.59
4:A:109:GLU:OE2	49:S2:980:A:H5''	2.02	0.59
49:S2:993:G:N1	49:S2:994:C:C6	2.70	0.59
52:SC:137:VAL:HG21	52:SC:244:ILE:HD12	1.84	0.59
52:SC:252:THR:O	52:SC:253:PRO:C	2.40	0.59
62:SM:22:LEU:HD22	62:SM:89:VAL:HG22	1.83	0.59
66:SQ:44:PRO:HG2	66:SQ:81:ILE:HD11	1.84	0.59
29:Z:88:ASP:N	29:Z:88:ASP:OD1	2.36	0.59
48:4:372:LEU:HD13	48:4:417:PHE:CE1	2.38	0.59
48:4:829:SER:OG	48:4:832:SER:N	2.36	0.59
1:5:1172:C:N3	1:5:1173:G:N7	2.50	0.59
1:5:1265:G:C5'	1:5:2115:G:N2	2.64	0.59
1:5:1296:G:H1'	1:5:1297:U:OP2	2.03	0.59
1:5:1398:A:H61	1:5:1419:G:C2'	2.15	0.59
1:5:1509:C:O2	1:5:1510:G:C8	2.56	0.59
1:5:2308:A:H2'	1:5:2309:G:O4'	2.02	0.59
1:5:238:C:C2'	1:5:239:C:H5'	2.33	0.59
1:5:2769:U:O2'	1:5:2770:C:C6	2.54	0.59
1:5:3607:U:N3	1:5:3608:A:N7	2.50	0.59
1:5:3723:A:N3	1:5:3724:A:N7	2.51	0.59
1:5:3724:A:C6	1:5:3725:G:C5	2.90	0.59
1:5:4136:G:C5	1:5:4137:C:C5	2.90	0.59
1:5:4152:G:N1	1:5:4153:C:C4	2.70	0.59
1:5:4229:U:H2'	1:5:4229:U:O2	2.02	0.59
1:5:3913:G:C2	1:5:4390:A:C2	2.90	0.59
1:5:4548:A:P	1:5:4548:A:N7	2.76	0.59
1:5:4772:C:O2	1:5:4773:C:C6	2.55	0.59
1:5:4984:C:H4'	5:B:25:HIS:CD2	2.38	0.59
1:5:98:A:C5	1:5:99:A:C8	2.90	0.59
3:8:134:G:N1	3:8:135:C:C4	2.70	0.59
9:F:161:TYR:CD1	9:F:170:ALA:HA	2.37	0.59
49:S2:1133:A:C2	49:S2:1134:G:N9	2.67	0.59
49:S2:1278:A:C5	49:S2:1279:C:C5	2.91	0.59
49:S2:12:U:H2'	49:S2:13:C:C6	2.37	0.59
49:S2:1304:U:C2	49:S2:1305:C:C5	2.91	0.59
49:S2:1201:U:C1'	49:S2:1357:A:C2	2.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1415:C:C4	49:S2:1416:C:C2	2.90	0.59
49:S2:624:C:H1'	49:S2:631:U:O2	2.01	0.59
49:S2:752:G:C6	49:S2:790:C:C4	2.91	0.59
49:S2:848:U:O2	49:S2:849:A:C4	2.56	0.59
48:4:330:LYS:HB2	48:4:330:LYS:HZ3	1.66	0.59
48:4:13:MET:HE1	48:4:464:VAL:HA	1.85	0.59
48:4:496:VAL:HG23	48:4:497:MET:SD	2.37	0.59
48:4:742:GLU:CB	48:4:820:LEU:HD21	2.32	0.59
48:4:769:HIS:C	48:4:786:ALA:CB	2.66	0.59
1:5:1100:U:C2	1:5:1167:C:C5	2.91	0.59
1:5:1327:C:H4'	1:5:4448:G:H2'	1.84	0.59
1:5:1378:C:O2	1:5:1378:C:H2'	2.03	0.59
1:5:1413:C:N3	1:5:1414:C:C5	2.71	0.59
1:5:1672:U:H2'	1:5:1673:U:C6	2.36	0.59
1:5:2079:G:N3	1:5:2080:U:C5	2.70	0.59
1:5:2477:A:C2	1:5:2478:C:C4	2.91	0.59
1:5:2478:C:H2'	1:5:2479:G:C8	2.38	0.59
1:5:2485:U:N3	1:5:2486:G:N7	2.50	0.59
1:5:2593:C:N3	1:5:2594:C:C5	2.71	0.59
1:5:2773:G:C2	1:5:2774:C:C6	2.91	0.59
1:5:303:C:N3	1:5:304:C:C5	2.71	0.59
1:5:3720:G:C5	1:5:3721:U:C5	2.90	0.59
1:5:3732:A:N1	1:5:3733:A:C5	2.71	0.59
1:5:3802:U:H3	1:5:4498:U:C2'	2.15	0.59
1:5:3909:C:C2'	1:5:3909:C:O2	2.50	0.59
1:5:4286:C:O2	1:5:4287:G:C8	2.55	0.59
1:5:4342:C:C2	1:5:4343:U:C6	2.90	0.59
1:5:4425:G:C2	1:5:4426:C:H1'	2.37	0.59
1:5:4476:C:O2'	1:5:4478:G:OP2	2.17	0.59
1:5:4561:C:N3	1:5:4562:C:C5	2.70	0.59
1:5:4628:U:O2	1:5:4629:U:C6	2.55	0.59
1:5:4879:C:C2	1:5:4880:C:C6	2.89	0.59
1:5:4946:U:O2	1:5:4946:U:H2'	2.01	0.59
1:5:504:G:H2'	1:5:505:G:H8	1.67	0.59
1:5:90:G:C5	1:5:92:C:H1'	2.38	0.59
1:5:976:G:C6	1:5:977:C:C4	2.91	0.59
3:8:28:C:C2	3:8:29:G:C8	2.90	0.59
5:B:203:GLN:NE2	5:B:203:GLN:HA	2.12	0.59
6:C:142:HIS:O	6:C:144:ILE:HG13	2.02	0.59
14:K:124:GLU:C	14:K:128:THR:HG1	2.02	0.59
14:K:81:ILE:CD1	14:K:113:ALA:HB1	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1055:A:H2	49:S2:1063:C:H41	1.49	0.59
49:S2:1098:C:C2	49:S2:1099:G:C8	2.91	0.59
49:S2:1101:U:H2'	49:S2:1102:G:H8	1.68	0.59
49:S2:1266:C:O2	49:S2:1267:C:C6	2.55	0.59
49:S2:1270:G:C2	49:S2:1271:C:C6	2.91	0.59
49:S2:1415:C:C2	49:S2:1416:C:H1'	2.37	0.59
49:S2:1538:C:O2	49:S2:1538:C:C2'	2.51	0.59
49:S2:1644:C:O2'	49:S2:1645:C:C5'	2.50	0.59
49:S2:1741:U:N3	49:S2:1742:C:C6	2.71	0.59
49:S2:529:A:N1	49:S2:555:A:N1	2.51	0.59
49:S2:610:G:C2	49:S2:611:G:C8	2.90	0.59
49:S2:617:G:C6	49:S2:618:C:C6	2.90	0.59
49:S2:862:A:C2	49:S2:863:U:N1	2.70	0.59
49:S2:975:G:C2	49:S2:976:G:C8	2.91	0.59
26:W:50:ASN:HB3	26:W:55:TYR:CZ	2.37	0.59
48:4:140:GLU:HG3	48:4:188:ILE:HD13	1.84	0.59
48:4:120:ARG:HA	48:4:149:GLU:OE1	2.03	0.59
48:4:208:VAL:HG13	48:4:258:LYS:HA	1.83	0.59
48:4:526:ARG:CG	48:4:526:ARG:HH11	2.12	0.59
48:4:693:CYS:N	48:4:839:ARG:HH21	2.01	0.59
1:5:1263:A:C4	1:5:1264:C:C6	2.90	0.59
1:5:1367:C:N1	1:5:1370:G:H2'	2.18	0.59
1:5:1566:C:HO2'	1:5:1567:U:C4'	2.09	0.59
1:5:1617:G:C4	1:5:1618:G:C8	2.91	0.59
1:5:174:C:C2	1:5:263:G:C2	2.91	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
1:5:2404:A:H2'	1:5:2405:G:O4'	2.03	0.59
1:5:2736:G:N3	1:5:2737:C:C5	2.71	0.59
1:5:1631:A:O2'	1:5:3650:C:H4'	2.02	0.59
1:5:3704:U:C2	1:5:3705:G:C8	2.90	0.59
1:5:3722:G:C2	1:5:3723:A:C8	2.91	0.59
1:5:3785:A:N1	1:5:4536:C:H1'	2.14	0.59
1:5:4276:G:N1	1:5:4277:G:N9	2.51	0.59
1:5:4331:G:N3	1:5:4331:G:H2'	2.16	0.59
1:5:4333:C:O2	1:5:4334:U:C5	2.56	0.59
1:5:4482:U:C2	1:5:4483:C:C5	2.90	0.59
1:5:4537:C:C2	1:5:4538:G:N7	2.68	0.59
1:5:458:C:C4	1:5:459:C:C5	2.91	0.59
1:5:4735:G:C5	1:5:4736:C:C5	2.90	0.59
1:5:54:G:O6	1:5:55:G:C5	2.56	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:665:C:O2	1:5:665:C:C2'	2.49	0.59
1:5:978:G:C6	1:5:979:C:C4	2.91	0.59
3:8:79:G:C2	3:8:80:A:N1	2.71	0.59
3:8:9:A:C6	3:8:10:G:N7	2.71	0.59
7:D:265:ARG:HH11	7:D:265:ARG:HG2	1.68	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
1:5:942:G:P	9:F:244:ARG:HH12	2.25	0.59
1:5:4413:C:C1'	12:I:157:PHE:CD2	2.81	0.59
14:K:131:GLU:HG3	14:K:155:ILE:CD1	2.31	0.59
1:5:280:G:C8	17:N:120:TRP:CZ3	2.91	0.59
1:5:2794:C:C2	19:P:136:ILE:HD12	2.37	0.59
9:F:100:ILE:HG21	20:Q:4:ASP:OD1	2.03	0.59
21:R:4:LEU:HD21	21:R:33:ALA:HB2	1.82	0.59
49:S2:1095:U:H2'	49:S2:1095:U:O2	2.03	0.59
49:S2:1123:C:H2'	49:S2:1123:C:O2	2.00	0.59
49:S2:165:G:H2'	49:S2:166:A:H8	1.68	0.59
49:S2:1792:G:C6	49:S2:1793:A:N7	2.70	0.59
49:S2:696:G:N2	49:S2:735:C:H1'	2.17	0.59
49:S2:899:U:C4	49:S2:900:C:C5	2.91	0.59
49:S2:979:C:N3	49:S2:980:A:N7	2.50	0.59
49:S2:1123:C:P	51:SB:205:TYR:OH	2.61	0.59
49:S2:1590:C:H5'	69:ST:82:ARG:HD3	1.84	0.59
72:SW:57:ARG:HH11	72:SW:57:ARG:HG3	1.68	0.59
49:S2:617:G:H4'	73:SX:88:ASP:HB2	1.83	0.59
48:4:393:PRO:O	48:4:393:PRO:HG2	2.03	0.59
48:4:591:CYS:O	48:4:728:CYS:SG	2.61	0.59
48:4:694:GLU:CG	48:4:844:LEU:CD1	2.71	0.59
1:5:1188:C:H2'	1:5:1188:C:O2	2.01	0.59
1:5:1430:C:C2	1:5:1431:C:C6	2.91	0.59
1:5:1629:G:N1	1:5:1631:A:N1	2.51	0.59
1:5:183:C:O2	1:5:189:G:O6	2.21	0.59
1:5:1972:G:C2	1:5:1973:G:N7	2.70	0.59
1:5:1437:C:N3	1:5:2098:G:N7	2.51	0.59
1:5:2657:G:H3'	1:5:2658:G:C8	2.38	0.59
1:5:2714:G:C2	1:5:2715:G:C5	2.91	0.59
1:5:279:A:H5'	1:5:329:A:N3	2.18	0.59
1:5:3759:A:H2	49:S2:1708:C:O2	1.84	0.59
1:5:3863:C:O2	1:5:3864:C:C6	2.56	0.59
1:5:4070:U:C2	1:5:4071:U:C6	2.90	0.59
1:5:421:C:C4	1:5:422:C:C5	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4416:G:C2	1:5:4417:C:C4	2.91	0.59
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
1:5:4895:C:O2	1:5:4896:G:C5	2.56	0.59
1:5:5047:C:C5	1:5:5050:C:H6	2.20	0.59
1:5:722:G:H21	6:C:343:GLN:NE2	2.00	0.59
1:5:964:A:H1'	21:R:98:ARG:NH1	175.30	0.59
2:7:55:A:C2	2:7:56:G:C5	2.91	0.59
1:5:3919:C:H5''	4:A:207:VAL:HG12	1.85	0.59
7:D:20:PHE:HB3	7:D:30:TYR:OH	2.02	0.59
14:K:81:ILE:O	14:K:85:LEU:HG	2.03	0.59
9:F:83:PHE:CE2	22:S:13:VAL:HG21	2.38	0.59
49:S2:1018:U:H2'	49:S2:1018:U:O2	2.01	0.59
49:S2:1039:C:H3'	49:S2:1040:G:H5''	1.85	0.59
49:S2:1414:A:N1	49:S2:1415:C:C4	2.71	0.59
49:S2:1414:A:N1	49:S2:1415:C:C5	2.70	0.59
49:S2:439:A:N1	49:S2:455:A:C6	2.71	0.59
49:S2:444:G:H2'	49:S2:444:G:N3	2.17	0.59
49:S2:530:U:N3	49:S2:531:A:N7	2.50	0.59
49:S2:536:A:C6	49:S2:537:C:C5	2.91	0.59
49:S2:644:G:H2'	49:S2:645:C:O4'	2.03	0.59
49:S2:663:C:C2	49:S2:664:A:C8	2.91	0.59
49:S2:74:G:C6	56:SG:171:THR:OG1	2.55	0.59
49:S2:816:A:C2	49:S2:817:G:H1'	2.38	0.59
49:S2:910:G:C4	49:S2:911:C:C5	2.91	0.59
63:SN:114:ARG:O	63:SN:118:ILE:HD12	2.03	0.59
29:Z:30:ASP:OD1	29:Z:31:ASP:HB2	2.02	0.59
48:4:402:VAL:HG22	48:4:403:PRO:N	2.16	0.59
48:4:694:GLU:CG	48:4:844:LEU:HD13	2.29	0.59
1:5:1479:G:O2'	1:5:1480:C:H5'	2.03	0.59
1:5:1556:C:N3	1:5:1557:C:H5	1.98	0.59
1:5:1674:C:C2	1:5:1675:C:C6	2.91	0.59
1:5:167:C:N3	1:5:168:C:C5	2.71	0.59
1:5:3611:A:C2	1:5:5016:A:C8	2.91	0.59
1:5:3663:A:H2'	1:5:3663:A:N3	2.18	0.59
1:5:3791:C:N3	1:5:3802:U:H6	1.99	0.59
1:5:4531:U:H5'	1:5:4531:U:C6	2.38	0.59
1:5:4539:U:N3	1:5:4540:C:C5	2.71	0.59
1:5:456:C:O2	1:5:457:G:C8	2.55	0.59
1:5:4874:A:H1'	18:O:175:MET:SD	2.42	0.59
1:5:5038:A:OP1	26:W:61:LYS:NZ	2.34	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:90:G:C2	1:5:95:G:N1	2.71	0.59
3:8:70:G:N1	3:8:87:G:C2	2.71	0.59
5:B:302:ASN:HD22	5:B:330:PHE:HE2	1.51	0.59
5:B:55:HIS:CE1	5:B:369:ASP:OD2	2.56	0.59
9:F:244:ARG:HH11	9:F:244:ARG:HG2	1.66	0.59
9:F:58:HIS:O	9:F:61:LYS:N	2.36	0.59
9:F:83:PHE:HE2	22:S:13:VAL:HG21	1.67	0.59
49:S2:1123:C:OP1	51:SB:205:TYR:OH	2.20	0.59
49:S2:1141:G:H5'	49:S2:1142:G:OP2	2.03	0.59
49:S2:1221:G:O2'	49:S2:1222:G:H5'	2.03	0.59
49:S2:122:G:C6	49:S2:123:G:N7	2.71	0.59
49:S2:1272:C:C2	49:S2:1273:C:C6	2.91	0.59
49:S2:1286:G:C2	49:S2:1312:G:C6	2.91	0.59
49:S2:1408:U:C3'	49:S2:1409:A:C8	2.85	0.59
49:S2:1436:C:N3	49:S2:1438:A:C8	2.71	0.59
49:S2:750:C:C2	49:S2:751:G:C8	2.91	0.59
50:SA:12:GLU:OE1	67:SR:111:PHE:HD1	1.85	0.59
52:SC:170:TRP:CZ3	72:SW:97:ARG:HD3	2.38	0.59
72:SW:37:PHE:CD1	72:SW:103:VAL:HG11	2.37	0.59
29:Z:97:ASN:OD1	29:Z:98:LYS:N	2.36	0.59
48:4:132:VAL:HG23	48:4:133:SER:N	2.17	0.58
48:4:154:VAL:CA	48:4:205:ILE:HD11	2.33	0.58
48:4:585:GLU:HG3	48:4:737:GLN:HE22	1.60	0.58
48:4:590:LEU:HD21	48:4:605:LYS:HE3	1.85	0.58
48:4:647:ARG:CG	48:4:647:ARG:HH21	2.10	0.58
48:4:700:VAL:HG12	48:4:702:PHE:CE2	2.38	0.58
1:5:1170:G:C2	1:5:1171:G:C8	2.91	0.58
1:5:1233:G:C2	1:5:1234:G:C8	2.90	0.58
1:5:1751:A:C5	1:5:1752:G:C8	2.91	0.58
1:5:2125:C:H6	1:5:2125:C:O5'	1.86	0.58
1:5:2282:A:O2'	1:5:2283:G:H5'	2.01	0.58
1:5:2313:A:O2'	1:5:2314:G:OP1	2.17	0.58
1:5:2481:G:C6	1:5:2482:C:C4	2.91	0.58
1:5:2560:C:C4	1:5:2561:C:C5	2.91	0.58
1:5:2604:C:C2	1:5:2605:G:H8	2.10	0.58
1:5:2751:G:C2	1:5:2752:G:C8	2.90	0.58
1:5:405:U:O4	1:5:407:A:OP2	2.21	0.58
1:5:4099:G:C4	1:5:4100:C:C6	2.91	0.58
1:5:4236:G:H2'	1:5:4237:C:C6	2.38	0.58
1:5:4734:A:C4	1:5:4735:G:C8	2.91	0.58
1:5:5044:A:O2'	1:5:5045:G:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:222:VAL:HG11	5:B:274:TYR:CZ	2.38	0.58
22:S:13:VAL:HG22	22:S:63:TYR:HB3	1.84	0.58
49:S2:1039:C:N3	49:S2:1040:G:N7	2.50	0.58
49:S2:1223:A:O2'	49:S2:1651:A:C5'	2.50	0.58
49:S2:447:A:N3	49:S2:449:A:H1'	2.17	0.58
49:S2:841:G:C2	49:S2:842:C:C6	2.90	0.58
49:S2:142:C:N3	56:SG:185:LEU:HD22	2.17	0.58
61:SL:13:GLN:HB2	61:SL:16:ILE:HD12	1.85	0.58
25:V:115:SER:HA	25:V:135:ASN:HD21	1.68	0.58
27:X:117:TYR:CD1	27:X:117:TYR:N	2.69	0.58
48:4:177:THR:O	48:4:181:ILE:HG13	2.03	0.58
48:4:477:GLN:NE2	48:4:477:GLN:H	2.01	0.58
1:5:1203:G:C2	1:5:1204:C:C6	2.90	0.58
1:5:1213:G:O6	1:5:1215:C:C5	2.55	0.58
1:5:1265:G:N2	1:5:2111:G:O3'	2.37	0.58
1:5:1299:G:C2	1:5:1300:G:C8	2.91	0.58
1:5:1368:A:O2'	1:5:1369:C:OP1	2.19	0.58
1:5:153:G:N1	1:5:154:G:C5	2.72	0.58
1:5:1984:A:N6	1:5:2011:C:C2'	2.65	0.58
1:5:1266:G:C5'	1:5:2112:G:C2	2.84	0.58
1:5:2265:G:H1'	1:5:2266:C:OP1	2.03	0.58
1:5:235:A:N6	1:5:238:C:C4	2.71	0.58
1:5:247:G:N3	1:5:248:C:C6	2.71	0.58
1:5:3909:C:N3	1:5:3910:C:H5	1.92	0.58
1:5:4076:G:H21	10:G:74:LEU:CG	2.13	0.58
1:5:4166:G:N3	1:5:4167:G:C8	2.69	0.58
1:5:4414:A:N3	1:5:4427:G:N2	2.51	0.58
1:5:4416:G:N3	1:5:4417:C:C6	2.70	0.58
1:5:4660:G:C2	1:5:4661:G:N7	2.71	0.58
1:5:5021:C:C2	1:5:5022:U:C5	2.91	0.58
1:5:5047:C:C6	1:5:5050:C:H6	2.20	0.58
1:5:661:C:C4	1:5:662:C:C4	2.91	0.58
3:8:10:G:N1	3:8:11:C:C2	2.71	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
12:I:146:GLU:N	12:I:146:GLU:OE2	2.36	0.58
14:K:94:LYS:HA	14:K:96:LYS:N	2.18	0.58
49:S2:105:U:H2'	49:S2:105:U:O2	2.03	0.58
49:S2:1097:G:H4'	50:SA:32:PHE:CD2	2.38	0.58
49:S2:1431:G:N3	49:S2:1432:U:H1'	2.18	0.58
49:S2:1453:C:N4	49:S2:1455:A:N9	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1605:G:H3'	49:S2:1606:G:O4'	2.04	0.58
49:S2:1793:A:C2	49:S2:1794:C:C4	2.90	0.58
49:S2:143:U:N3	49:S2:315:C:OP1	2.33	0.58
49:S2:340:C:C2	49:S2:341:C:C4	2.90	0.58
49:S2:449:A:C5	49:S2:452:G:O6	2.56	0.58
49:S2:676:C:C4	49:S2:677:G:C5	2.91	0.58
49:S2:71:G:O2'	49:S2:79:A:N6	2.36	0.58
49:S2:70:G:N2	49:S2:80:G:N3	2.51	0.58
49:S2:832:G:C2	49:S2:843:C:N3	2.71	0.58
49:S2:958:G:O2'	49:S2:959:G:C4'	2.51	0.58
49:S2:1123:C:C2'	51:SB:148:ASN:HD21	2.17	0.58
51:SB:191:ASP:OD1	51:SB:191:ASP:N	2.36	0.58
54:SE:181:CYS:SG	54:SE:195:ILE:HG13	2.43	0.58
67:SR:33:ARG:HG2	67:SR:36:GLU:HG2	1.85	0.58
48:4:195:GLY:O	48:4:196:GLU:C	2.36	0.58
48:4:503:PRO:HA	48:4:549:ALA:HA	1.85	0.58
48:4:672:LEU:HA	48:4:675:ILE:HD11	1.81	0.58
1:5:1301:C:O4'	1:5:1301:C:O2	2.20	0.58
1:5:1309:C:C2	1:5:1310:C:C6	2.90	0.58
1:5:1507:C:N3	1:5:1508:A:C8	2.70	0.58
1:5:2078:C:C2'	1:5:2078:C:O2	2.51	0.58
1:5:212:A:C2	1:5:213:G:C5	2.91	0.58
1:5:962:C:P	1:5:2264:C:N3	2.76	0.58
1:5:1583:A:H1'	1:5:2396:A:C6	2.38	0.58
1:5:1733:G:HO2'	1:5:4214:A:HO2'	1.48	0.58
1:5:423:G:C5	1:5:424:U:C5	2.91	0.58
1:5:4268:A:H2'	1:5:4269:G:O4'	2.03	0.58
1:5:4724:A:C4	1:5:4725:C:C6	2.92	0.58
1:5:5047:C:O2	1:5:5048:A:C6	2.53	0.58
1:5:4087:G:C5	4:A:34:PHE:CE2	2.91	0.58
1:5:218:A:N7	6:C:181:LYS:HG2	2.19	0.58
8:E:218:LEU:HD21	8:E:230:ASP:OD2	2.03	0.58
14:K:94:LYS:HG2	14:K:96:LYS:HG3	1.76	0.58
1:5:936:C:O2'	16:M:46:ARG:CZ	2.50	0.58
20:Q:146:ARG:CB	20:Q:146:ARG:HH11	2.16	0.58
1:5:1572:U:C5'	21:R:95:TRP:HZ2	2.16	0.58
49:S2:1046:U:C4	49:S2:1047:C:C4	2.90	0.58
49:S2:1126:G:C2	49:S2:1127:C:C5	2.91	0.58
49:S2:1181:A:O2'	49:S2:1182:A:C8	2.43	0.58
49:S2:1225:U:C4	49:S2:1226:G:N7	2.72	0.58
49:S2:1246:A:O2'	70:SU:72:GLU:OE1	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1412:C:C2'	49:S2:1413:G:H8	2.16	0.58
49:S2:1545:A:C5	49:S2:1588:A:C5	2.90	0.58
49:S2:1609:C:O2	49:S2:1610:G:N7	2.34	0.58
49:S2:210:U:C2	49:S2:211:G:C8	2.91	0.58
49:S2:378:U:O4	49:S2:379:C:N4	2.37	0.58
25:V:134:SER:HG	49:S2:465:A:H2	0.66	0.58
49:S2:926:A:C2	49:S2:927:C:N1	2.72	0.58
22:S:80:ILE:HD11	22:S:126:ILE:HD12	1.85	0.58
61:SL:61:PRO:HD3	61:SL:141:ASN:HD21	1.67	0.58
3:8:70:G:C5'	28:Y:27:ARG:HH11	2.16	0.58
48:4:155:LEU:N	48:4:205:ILE:HD11	2.17	0.58
48:4:101:ASN:OD1	48:4:469:ILE:CD1	2.51	0.58
48:4:713:ALA:O	48:4:716:ARG:N	2.37	0.58
1:5:1070:G:C4	1:5:1071:C:C6	2.90	0.58
1:5:1215:C:C4	1:5:1216:C:C5	2.91	0.58
1:5:1421:G:N3	1:5:1422:G:C8	2.71	0.58
1:5:1440:U:C2	1:5:1441:C:C5	2.91	0.58
1:5:1441:C:C4	1:5:1442:C:C5	2.90	0.58
1:5:1489:G:N3	1:5:1489:G:H2'	2.18	0.58
1:5:1492:G:N1	1:5:1493:G:C5	2.71	0.58
1:5:1725:U:H5''	1:5:1725:U:C6	2.39	0.58
1:5:1894:C:O2'	1:5:1895:G:H5'	2.03	0.58
1:5:1956:A:H2	1:5:2027:U:O2	1.87	0.58
1:5:1965:G:C5	1:5:1966:C:N4	2.70	0.58
1:5:1984:A:H62	1:5:2011:C:C1'	2.15	0.58
1:5:2056:G:N1	1:5:2058:G:C6	2.71	0.58
1:5:1245:C:H1'	1:5:2111:G:H2'	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
1:5:2268:A:H4'	1:5:2269:C:H5'	1.85	0.58
1:5:2270:G:C6	1:5:2271:C:N4	2.72	0.58
1:5:2417:A:N1	1:5:2418:A:N7	2.51	0.58
1:5:2459:G:O6	17:N:105:ARG:NE	2.36	0.58
1:5:2468:U:OP2	1:5:2506:G:N2	2.36	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
1:5:2783:A:C4	1:5:2784:C:C5	2.91	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
1:5:3665:G:N2	1:5:3685:C:O2'	2.36	0.58
1:5:3759:A:C2	49:S2:1709:G:O4'	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3800:A:C2	1:5:4496:A:C1'	2.87	0.58
1:5:1326:A:P	1:5:3901:A:H61	2.25	0.58
1:5:4098:A:N1	1:5:4099:G:N7	2.51	0.58
1:5:4480:A:C2	1:5:4481:U:O4'	2.57	0.58
1:5:2369:U:C5	1:5:4656:A:C2	2.92	0.58
1:5:490:C:H3'	1:5:491:G:H8	1.68	0.58
1:5:494:U:C4	1:5:495:C:C5	2.91	0.58
1:5:4977:A:C2	1:5:4978:G:C4	2.92	0.58
1:5:4982:A:N6	1:5:4983:C:C5	2.70	0.58
1:5:916:C:N4	1:5:917:A:C5	2.70	0.58
1:5:919:C:C4	1:5:920:C:C4	2.92	0.58
1:5:976:G:C2	1:5:977:C:N1	2.71	0.58
2:7:21:G:H8	2:7:21:G:H5''	1.68	0.58
6:C:210:ILE:HG21	6:C:252:TRP:HZ3	1.67	0.58
1:5:1177:U:H4'	7:D:282:GLN:HB3	1.85	0.58
1:5:1755:C:C2	7:D:3:PHE:HB2	2.38	0.58
8:E:184:ARG:HD3	8:E:213:PHE:HB2	1.83	0.58
10:G:261:LEU:HD23	10:G:264:LYS:HB3	1.86	0.58
13:J:105:PHE:CE1	13:J:132:VAL:CB	2.81	0.58
13:J:154:LYS:O	13:J:155:HIS:HB2	2.04	0.58
14:K:110:VAL:O	14:K:110:VAL:HG12	2.04	0.58
14:K:88:PRO:HB2	14:K:89:PRO:HB3	1.85	0.58
49:S2:105:U:N3	49:S2:106:C:C6	2.71	0.58
49:S2:1151:G:N1	49:S2:1152:U:C5	2.71	0.58
49:S2:1281:G:N2	49:S2:1315:U:O4	2.32	0.58
49:S2:166:A:H2'	49:S2:167:G:H5''	1.85	0.58
49:S2:171:A:N7	49:S2:173:A:C5	2.71	0.58
49:S2:1750:C:C4	49:S2:1751:C:C6	2.91	0.58
49:S2:1782:G:N2	49:S2:1784:G:N7	2.49	0.58
49:S2:1833:C:OP2	49:S2:1836:G:O2'	2.13	0.58
49:S2:316:G:C6	49:S2:317:C:N4	2.71	0.58
49:S2:83:A:N1	49:S2:84:A:H1'	2.18	0.58
59:SJ:32:ILE:HD11	59:SJ:40:LYS:HD3	1.85	0.58
61:SL:117:PHE:CZ	61:SL:144:LYS:HA	2.38	0.58
48:4:110:ASP:OD1	48:4:110:ASP:N	2.35	0.58
48:4:154:VAL:HG13	48:4:353:MET:CE	2.34	0.58
48:4:58:ASP:CB	48:4:69:THR:HA	2.33	0.58
48:4:744:ILE:HD13	48:4:815:ASP:CB	2.34	0.58
48:4:744:ILE:CG2	48:4:745:TYR:CD2	2.86	0.58
1:5:1206:C:C2	1:5:1207:C:C5	2.92	0.58
1:5:174:C:C2	1:5:263:G:N2	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1918:U:C2	1:5:1920:C:C5	2.92	0.58
1:5:1936:C:C4	2:7:84:U:H5	2.20	0.58
1:5:2128:G:C6	1:5:2129:C:C4	2.91	0.58
1:5:2261:G:O2'	1:5:2262:G:O4'	2.20	0.58
1:5:2376:A:H2'	1:5:2377:C:O4'	2.03	0.58
1:5:2405:G:HO2'	1:5:2791:C:HO2'	1.51	0.58
1:5:2497:C:N3	1:5:2498:C:C4	2.70	0.58
1:5:3796:U:C2	1:5:3797:C:C5	2.91	0.58
1:5:3812:C:OP1	1:5:3813:A:O2'	2.21	0.58
1:5:4287:G:C6	1:5:4288:C:N4	2.71	0.58
1:5:70:A:C2	1:5:4355:G:H1'	2.37	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
1:5:910:G:C6	1:5:911:U:C5	2.91	0.58
1:5:944:A:H2'	6:C:335:MET:HE1	1.84	0.58
2:7:28:C:C4	2:7:29:C:C6	2.92	0.58
2:7:58:A:C6	2:7:59:G:N7	2.72	0.58
3:8:97:A:C4	3:8:98:C:C5	2.91	0.58
1:5:1520:C:H4'	6:C:94:ASN:HD21	1.68	0.58
13:J:99:PHE:CE2	13:J:105:PHE:HB2	2.36	0.58
49:S2:1092:G:C2	49:S2:1093:A:C8	2.92	0.58
49:S2:1203:G:C6	49:S2:1204:A:C6	2.92	0.58
49:S2:1526:G:C5	49:S2:1527:C:C5	2.91	0.58
49:S2:1756:C:H2'	49:S2:1756:C:O2	2.01	0.58
49:S2:343:A:C6	49:S2:344:U:C5	2.92	0.58
49:S2:495:U:OP1	54:SE:49:ARG:NH1	2.31	0.58
49:S2:525:A:H62	49:S2:588:G:N2	2.01	0.58
49:S2:620:G:N3	49:S2:620:G:O5'	2.36	0.58
49:S2:66:G:C6	49:S2:68:A:C8	2.91	0.58
49:S2:980:A:H2'	49:S2:981:A:H8	1.67	0.58
49:S2:993:G:N2	49:S2:994:C:H1'	2.18	0.58
62:SM:32:ALA:HB2	62:SM:112:LYS:HD3	1.86	0.58
74:SY:27:VAL:HG12	74:SY:28:LEU:O	2.03	0.58
25:V:14:PHE:CE2	25:V:91:LYS:HG3	2.38	0.58
48:4:165:LEU:HD11	48:4:305:MET:HE2	1.72	0.58
48:4:552:LEU:HD12	48:4:555:GLU:OE1	2.04	0.58
1:5:1566:C:O2'	1:5:1567:U:C4'	2.52	0.58
1:5:1618:G:C2	1:5:1619:G:N7	2.71	0.58
1:5:1758:G:N1	1:5:1759:G:C5	2.72	0.58
1:5:1806:G:C2	1:5:1807:C:C6	2.92	0.58
1:5:1979:A:H3'	1:5:1980:U:C5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2438:A:N6	1:5:2441:C:C4	2.71	0.58
1:5:1617:G:N3	1:5:2513:A:C2	2.72	0.58
1:5:167:C:C2	1:5:269:G:N2	2.72	0.58
1:5:3654:G:O2'	1:5:3693:U:OP1	2.20	0.58
1:5:4539:U:C2	1:5:4540:C:C6	2.92	0.58
1:5:4608:G:C6	1:5:4609:G:C4	2.92	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
1:5:4976:U:C4	5:B:342:LYS:HD2	2.39	0.58
1:5:5052:C:C4	1:5:5053:U:C5	2.91	0.58
3:8:144:U:C2	3:8:145:C:C5	2.90	0.58
3:8:5:U:OP2	19:P:62:ARG:NH1	2.36	0.58
3:8:73:U:C5	3:8:74:U:C5	2.91	0.58
6:C:325:MET:CE	9:F:157:TYR:CE2	2.86	0.58
1:5:151:G:C6	10:G:141:ASN:ND2	2.72	0.58
10:G:264:LYS:NZ	10:G:265:LEU:HD21	2.15	0.58
13:J:107:PHE:CE1	13:J:130:PHE:HB2	2.38	0.58
1:5:3892:U:O2'	19:P:80:GLN:NE2	2.36	0.58
49:S2:1036:A:C5	49:S2:1037:G:C8	2.91	0.58
49:S2:1099:G:C6	49:S2:1100:A:C8	2.92	0.58
49:S2:1399:C:C2	49:S2:1400:U:C5	2.92	0.58
49:S2:1500:G:H3'	49:S2:1501:C:C6	2.39	0.58
49:S2:1527:C:O2	49:S2:1527:C:H2'	2.01	0.58
49:S2:1228:A:C2	49:S2:1531:A:C2	2.91	0.58
49:S2:1849:G:O2'	49:S2:1850:A:H5'	2.03	0.58
49:S2:444:G:N1	49:S2:446:G:OP2	2.36	0.58
49:S2:647:U:N3	49:S2:648:A:N7	2.52	0.58
49:S2:648:A:N3	49:S2:649:U:C6	2.71	0.58
50:SA:151:ASP:CG	50:SA:151:ASP:CA	2.69	0.58
55:SF:141:VAL:HG21	55:SF:146:ARG:HG3	1.84	0.58
59:SJ:111:GLN:NE2	59:SJ:127:ARG:HB2	2.19	0.58
64:SO:139:SER:O	64:SO:140:THR:O	2.21	0.58
66:SQ:138:ARG:HH11	66:SQ:138:ARG:HG3	1.68	0.58
49:S2:921:G:C6	72:SW:28:ARG:HG3	2.38	0.58
26:W:55:TYR:CD1	26:W:55:TYR:C	2.76	0.58
48:4:671:TYR:HB3	48:4:675:ILE:HG23	1.86	0.58
48:4:685:TRP:HZ3	48:4:723:PRO:CD	2.13	0.58
48:4:691:ALA:CB	48:4:730:TYR:CA	2.76	0.58
48:4:689:GLU:C	48:4:730:TYR:HE1	1.99	0.58
48:4:826:ASP:OD1	48:4:828:SER:N	2.37	0.58
1:5:1270:A:C5	1:5:1271:G:H1'	2.38	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
1:5:1351:G:OP1	6:C:33:ARG:NH1	2.36	0.58
1:5:1441:C:N3	1:5:1442:C:C5	2.72	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
1:5:1616:U:O2	1:5:1617:G:C8	2.56	0.58
1:5:1618:G:N1	1:5:1619:G:C5	2.72	0.58
1:5:1686:C:H2'	1:5:1687:U:C5'	2.34	0.58
1:5:1770:A:C6	1:5:1771:U:C4	2.92	0.58
1:5:1755:C:H41	1:5:1778:C:C4'	2.16	0.58
1:5:2098:G:H2'	1:5:2099:G:O4'	2.04	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
1:5:4315: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
1:5:4454:G:O2'	1:5:4500:U:O2'	2.18	0.58
1:5:4537:C:C2'	1:5:4537:C:O2	2.51	0.58
1:5:4999:G:N3	1:5:5000:G:C8	2.72	0.58
1:5:909:A:N1	1:5:910:G:N7	2.51	0.58
3:8:53:G:C6	3:8:54:C:C4	2.91	0.58
5:B:264:PHE:HD2	18:O:66:PRO:CD	2.16	0.58
1:5:981:C:C4	8:E:69:TYR:CE1	2.92	0.58
12:I:209:TRP:HE1	12:I:213:HIS:CD2	2.22	0.58
21:R:117:ARG:CZ	21:R:117:ARG:HB2	2.33	0.58
22:S:12:VAL:HG13	22:S:64:CYS:HB2	1.86	0.58
49:S2:1100:A:C2	49:S2:1101:U:N1	2.70	0.58
49:S2:1136:U:O2'	49:S2:1137:U:H5'	2.03	0.58
49:S2:1402:A:N3	49:S2:1405:A:C6	2.71	0.58
49:S2:1409:A:N3	49:S2:1410:C:C6	2.71	0.58
49:S2:1571:G:C5	49:S2:1572:C:C5	2.92	0.58
49:S2:1728:U:N3	49:S2:1729:U:C6	2.72	0.58
49:S2:186:C:C2	49:S2:187:G:C8	2.92	0.58
49:S2:321:C:H2'	49:S2:322:C:H6	1.68	0.58
49:S2:499:G:C6	49:S2:501:C:H1'	2.39	0.58
49:S2:501:C:O2	49:S2:501:C:C2'	2.52	0.58
49:S2:635:G:C5	49:S2:636:C:C5	2.91	0.58
49:S2:916:A:C2	63:SN:73:ARG:HD3	2.38	0.58
49:S2:943:U:H2'	49:S2:944:A:O4'	2.02	0.58
49:S2:951:C:O2	49:S2:952:G:C8	2.57	0.58
22:S:8:ARG:HB2	22:S:10:TYR:HE2	1.66	0.58
53:SD:6:SER:O	53:SD:10:LYS:N	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:157:MET:CG	53:SD:159:HIS:HE1	2.16	0.58
54:SE:11:ARG:O	54:SE:12:VAL:HB	2.04	0.58
55:SF:110:GLN:NE2	55:SF:110:GLN:HA	2.19	0.58
68:SS:123:LEU:O	68:SS:127:TRP:CD1	2.57	0.58
48:4:448:GLN:C	48:4:448:GLN:NE2	2.57	0.58
1:5:1491:A:C2	1:5:1492:G:C5	2.92	0.58
1:5:1963:C:N4	1:5:1964:A:N6	2.52	0.58
1:5:2076:G:C6	1:5:2077:C:C6	2.92	0.58
1:5:2081:C:O2'	1:5:2082:G:H5'	2.03	0.58
1:5:2089:G:C6	1:5:2262:G:O2'	2.57	0.58
1:5:2126:G:H1'	1:5:2127:C:C5	2.38	0.58
1:5:218:A:C1'	1:5:219:G:H5''	2.33	0.58
1:5:2085:G:C2	1:5:2273:G:C6	2.92	0.58
1:5:3859:G:N3	1:5:3859:G:H2'	2.18	0.58
1:5:3868:G:H22	1:5:3899:G:N2	2.01	0.58
1:5:3909:C:C2	1:5:3910:C:C6	2.91	0.58
1:5:4369:A:N1	1:5:4370:G:N7	2.51	0.58
1:5:83:C:O5'	1:5:84:A:H2'	2.04	0.58
2:7:93:G:C4	2:7:94:C:C6	2.92	0.58
8:E:43:ASN:ND2	8:E:44:PRO:O	2.37	0.58
9:F:101:ASN:OD1	9:F:101:ASN:N	2.35	0.58
12:I:171:TRP:HB3	12:I:181:PHE:CE2	2.38	0.58
49:S2:1045:U:O4	49:S2:1046:U:C4	2.57	0.58
49:S2:1053:C:H2'	49:S2:1053:C:O2	2.03	0.58
49:S2:10:G:C6	49:S2:11:A:N7	2.72	0.58
49:S2:1232:U:C2	49:S2:1233:G:C8	2.91	0.58
49:S2:1366:G:C2	49:S2:1374:C:N3	2.71	0.58
49:S2:1402:A:C4	49:S2:1405:A:N6	2.72	0.58
49:S2:144:U:C2	49:S2:145:G:C8	2.92	0.58
49:S2:1596:U:H2'	49:S2:1596:U:O2	2.03	0.58
49:S2:1605:G:H2'	49:S2:1606:G:C1'	2.34	0.58
1:5:3760:A:H2'	49:S2:1826:G:O2'	2.03	0.58
49:S2:1842:C:C2'	49:S2:1843:G:O5'	2.52	0.58
49:S2:413:G:C6	49:S2:425:G:C2	2.91	0.58
49:S2:665:G:C2	49:S2:671:A:N7	2.72	0.58
49:S2:794:A:C6	49:S2:795:A:C6	2.91	0.58
51:SB:150:ILE:HD11	67:SR:128:PHE:HA	1.86	0.58
52:SC:230:THR:HG23	52:SC:236:PHE:CE2	2.38	0.58
54:SE:54:TYR:CD1	74:SY:17:LEU:HD11	2.39	0.58
49:S2:1280:G:H5'	62:SM:96:ARG:HG2	1.86	0.58
25:V:14:PHE:CZ	25:V:91:LYS:HD2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:97:TYR:CE2	26:W:21:TYR:HD1	2.22	0.58
29:Z:74:VAL:HG23	29:Z:101:PHE:CE2	2.38	0.58
48:4:111:PHE:HE1	48:4:809:PHE:CE1	2.22	0.58
48:4:155:LEU:HD23	48:4:156:MET:C	2.24	0.58
48:4:150:ARG:C	48:4:200:MET:HE3	2.23	0.58
48:4:24:VAL:HG21	48:4:32:LYS:HG3	1.84	0.58
48:4:602:LEU:HD22	48:4:728:CYS:SG	2.44	0.58
1:5:1254:A:H2'	1:5:1256:G:N7	2.19	0.58
1:5:1570:G:C6	1:5:1571:G:N7	2.71	0.58
1:5:1755:C:H5	1:5:1778:C:H1'	1.69	0.58
1:5:1948:G:C5	1:5:1949:U:C5	2.92	0.58
1:5:2089:G:C2	1:5:2263:A:C6	2.92	0.58
1:5:2347:A:C4	1:5:2348:G:C6	2.91	0.58
1:5:2480:G:C4	1:5:2481:G:C8	2.92	0.58
1:5:2578:G:C2	1:5:2579:G:C8	2.92	0.58
1:5:2796:G:H4'	1:5:2797:C:OP2	2.04	0.58
1:5:301:G:C5	1:5:302:C:C5	2.92	0.58
1:5:3698:G:N1	1:5:3699:C:C4	2.72	0.58
1:5:1866:U:C4	1:5:4405:G:C1'	2.87	0.58
1:5:490:C:C2'	1:5:491:G:C8	2.87	0.58
1:5:5007:A:N7	1:5:5040:U:O4	2.36	0.58
1:5:731:G:C5	1:5:732:A:C8	2.91	0.58
1:5:964:A:H8	1:5:964:A:H5''	1.66	0.58
1:5:985:C:N3	1:5:986:C:C5	2.72	0.58
2:7:30:C:C2	2:7:48:G:C2	2.91	0.58
4:A:186:TYR:N	4:A:196:TRP:HZ3	2.01	0.58
14:K:105:THR:O	14:K:106:PHE:CE1	2.55	0.58
14:K:65:GLN:O	14:K:66:ASN:OD1	2.22	0.58
49:S2:1045:U:C4	49:S2:1046:U:C5	2.92	0.58
49:S2:1203:G:C6	49:S2:1204:A:C5	2.92	0.58
49:S2:1287:A:N1	49:S2:1314:U:C2	2.72	0.58
49:S2:1352:G:O4'	49:S2:1378:A:C2	2.57	0.58
49:S2:1382:A:C2	49:S2:1383:A:C8	2.91	0.58
49:S2:1565:C:C2	49:S2:1571:G:N2	2.71	0.58
49:S2:1709:G:N1	49:S2:1710:C:C5	2.71	0.58
49:S2:458:A:C2	49:S2:459:C:C1'	2.87	0.58
49:S2:477:G:N3	49:S2:478:G:C8	2.72	0.58
49:S2:663:C:C4	49:S2:664:A:N7	2.72	0.58
49:S2:81:U:C5	49:S2:82:G:N7	2.72	0.58
49:S2:926:A:N3	49:S2:927:C:C6	2.72	0.58
49:S2:949:G:C5	49:S2:950:C:C5	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:22:ASN:C	53:SD:22:ASN:HD22	2.07	0.58
65:SP:43:ARG:HD3	65:SP:47:ARG:HG3	1.86	0.58
26:W:50:ASN:HA	26:W:55:TYR:CD2	2.39	0.58
48:4:727:ARG:HH11	48:4:727:ARG:HG3	1.69	0.58
48:4:759:ILE:HG23	48:4:760:TYR:N	2.19	0.58
48:4:727:ARG:NH2	48:4:853:ASN:O	2.37	0.58
1:5:1212:G:N3	1:5:1213:G:C8	2.72	0.58
1:5:1777:C:C2	1:5:1778:C:C6	2.92	0.58
1:5:1811:G:C2	1:5:1812:C:C4	2.92	0.58
1:5:1887:G:C2	1:5:1890:G:O6	2.57	0.58
1:5:1926:C:O2	1:5:1927:U:C6	2.57	0.58
1:5:2365:C:O2	1:5:2829:U:C5	2.57	0.58
1:5:2844:A:O2'	1:5:4631:G:H4'	2.04	0.58
1:5:3907:G:C2	1:5:3909:C:C5	2.92	0.58
1:5:1676:C:O2'	1:5:3914:U:C4	2.50	0.58
1:5:4269:G:C4	1:5:4270:C:C6	2.91	0.58
1:5:4283:G:C4	1:5:4284:C:C5	2.91	0.58
1:5:4314:C:C4	1:5:4315:A:N7	2.72	0.58
1:5:4332:C:O2	1:5:4332:C:C2'	2.47	0.58
1:5:4497:U:C5	1:5:4498:U:C6	2.92	0.58
1:5:4735:G:C2	1:5:4736:C:C5	2.92	0.58
1:5:910:G:C5	1:5:911:U:C5	2.92	0.58
1:5:88:A:C6	1:5:97:G:N3	2.71	0.58
2:7:17:C:O2	2:7:18:C:C6	2.56	0.58
2:7:17:C:C4	2:7:18:C:C5	2.92	0.58
3:8:131:G:C2	3:8:132:G:C8	2.92	0.58
3:8:130:C:N3	3:8:131:G:N7	2.51	0.58
4:A:186:TYR:HA	4:A:196:TRP:CE3	2.39	0.58
13:J:15:LEU:HB3	13:J:165:TRP:HD1	1.69	0.58
49:S2:1189:A:C2	49:S2:1190:A:C5	2.92	0.58
49:S2:1202:U:C4	49:S2:1203:G:N7	2.72	0.58
49:S2:1325:G:N2	49:S2:1327:G:C4	2.72	0.58
49:S2:1453:C:H1'	67:SR:48:ASN:ND2	2.19	0.58
49:S2:1578:U:H6	53:SD:6:SER:N	2.02	0.58
49:S2:1537:A:O2'	49:S2:1604:G:C5'	2.52	0.58
49:S2:340:C:H2'	49:S2:341:C:O4'	2.04	0.58
49:S2:579:C:N4	49:S2:580:U:C5	2.72	0.58
49:S2:20:G:P	49:S2:620:G:H8	2.27	0.58
52:SC:170:TRP:CD1	52:SC:199:PRO:N	2.71	0.58
57:SH:123:THR:O	57:SH:127:ASP:OD1	2.22	0.58
48:4:323:LEU:HD11	48:4:335:LEU:HD11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:531:ASP:CB	48:4:534:VAL:HG11	2.33	0.57
1:5:4605:A:H62	48:4:801:ARG:CB	2.11	0.57
1:5:1175:A:C2	1:5:1176:C:C5	2.91	0.57
1:5:1243:C:N3	1:5:1269:G:N2	2.48	0.57
1:5:125:C:O2	1:5:126:C:C6	2.57	0.57
1:5:1261:G:C2	1:5:1262:G:N9	2.72	0.57
1:5:1392:A:C2	1:5:1393:G:N7	2.71	0.57
1:5:1757:U:N3	1:5:1758:G:N7	2.51	0.57
1:5:1970:A:C2'	1:5:2017:A:N6	2.66	0.57
1:5:2113:G:OP1	1:5:2113:G:O4'	2.21	0.57
1:5:2328:G:O2'	1:5:2329:U:H5'	2.01	0.57
1:5:2362:U:C4	1:5:3859:G:C2	2.90	0.57
1:5:2440:U:O2'	1:5:2441:C:P	2.62	0.57
1:5:2857:A:O2'	1:5:2858:A:P	2.61	0.57
1:5:29:G:C6	1:5:30:C:C4	2.92	0.57
1:5:307:A:H2'	1:5:308:G:N3	2.19	0.57
1:5:3596:A:O3'	21:R:143:HIS:CE1	2.56	0.57
1:5:3793:U:O2	1:5:3794:C:C6	2.57	0.57
1:5:4081:G:N1	1:5:4082:G:C5	2.72	0.57
1:5:4100:C:O2	1:5:4101:C:C6	2.57	0.57
1:5:3621:A:C8	1:5:4642:U:O2	2.56	0.57
1:5:4683:U:C4	1:5:4707:A:C6	2.92	0.57
1:5:4737:G:C2	1:5:4738:C:N3	2.72	0.57
1:5:919:C:N4	1:5:920:C:N4	2.52	0.57
4:A:40:TYR:O	4:A:40:TYR:CG	2.56	0.57
1:5:4124:G:H21	10:G:44:ASP:HA	1.69	0.57
10:G:51:LEU:O	10:G:55:VAL:HG23	2.03	0.57
14:K:62:LEU:CD1	14:K:64:ILE:HD11	2.34	0.57
15:L:78:LEU:O	15:L:82:ARG:NH2	2.37	0.57
18:O:49:ARG:HH11	18:O:49:ARG:HG2	1.69	0.57
49:S2:1073:U:C4	49:S2:1074:C:C5	2.92	0.57
49:S2:144:U:H2'	49:S2:145:G:H8	1.69	0.57
49:S2:1224:G:N2	49:S2:1643:U:C4	2.72	0.57
49:S2:211:G:C6	49:S2:212:C:C4	2.91	0.57
49:S2:223:C:H2'	49:S2:224:A:H8	1.69	0.57
49:S2:816:A:N1	49:S2:817:G:H1'	2.18	0.57
49:S2:989:C:H5'	49:S2:990:A:C8	2.39	0.57
50:SA:73:ASP:OD1	50:SA:73:ASP:N	2.36	0.57
53:SD:35:SER:CB	53:SD:91:VAL:HG21	2.34	0.57
54:SE:11:ARG:NH1	54:SE:24:THR:OG1	2.37	0.57
58:SI:197:PHE:CZ	61:SL:5:GLN:HG3	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:189:ILE:HG22	48:4:203:ILE:CG1	2.32	0.57
48:4:290:CYS:HA	48:4:294:LEU:HD12	1.86	0.57
48:4:496:VAL:CG2	48:4:497:MET:N	2.67	0.57
48:4:536:CYS:O	48:4:537:ILE:HG23	2.05	0.57
48:4:579:TYR:CD2	48:4:740:LEU:HD11	2.39	0.57
48:4:605:LYS:HD2	48:4:705:HIS:CE1	2.38	0.57
48:4:5:THR:OG1	48:4:6:VAL:N	2.37	0.57
48:4:605:LYS:HB2	48:4:705:HIS:HE1	1.68	0.57
48:4:818:GLN:CG	48:4:819:ILE:N	2.67	0.57
1:5:1048:G:C6	1:5:1049:C:C4	2.91	0.57
1:5:124:C:C2	1:5:125:C:C6	2.92	0.57
1:5:1379:C:O3'	1:5:1380:G:O4'	2.22	0.57
1:5:1491:A:N1	1:5:1492:G:C5	2.72	0.57
1:5:1545:G:N2	1:5:1546:C:C2	2.71	0.57
1:5:1572:U:H4'	21:R:95:TRP:CE2	2.38	0.57
1:5:1921:C:H1'	22:S:160:ARG:HB2	1.86	0.57
1:5:2004:U:H2'	1:5:2005:G:O4'	2.03	0.57
1:5:2013:A:H2'	1:5:2014:C:O4'	2.04	0.57
1:5:2316:G:C2	1:5:2317:C:C5	2.92	0.57
1:5:2481:G:C5	1:5:2482:C:C5	2.92	0.57
1:5:2515:G:C6	1:5:2516:G:C4	2.92	0.57
1:5:2663:G:OP1	21:R:118:HIS:HA	2.03	0.57
1:5:28:C:C2	1:5:29:G:H8	2.09	0.57
1:5:3782:C:C4	1:5:3809:G:C6	2.92	0.57
1:5:3945:A:C2	1:5:3946:G:C5	2.92	0.57
1:5:4079:C:C2	1:5:4080:C:C6	2.92	0.57
1:5:4199:C:N3	1:5:4200:G:H8	2.02	0.57
1:5:4455:G:N3	1:5:4456:C:C6	2.72	0.57
1:5:2363:A:O2'	1:5:4560:C:N4	2.37	0.57
1:5:486:C:O2	1:5:487:G:C8	2.56	0.57
1:5:488:G:C6	1:5:489:C:C5	2.92	0.57
1:5:4915:G:C2	1:5:4916:G:C8	2.93	0.57
1:5:4989:U:O4'	1:5:4989:U:O2	2.23	0.57
1:5:60:G:C2	1:5:61:A:C8	2.91	0.57
1:5:991:C:C2	1:5:992:C:C6	2.93	0.57
2:7:116:G:C2	2:7:117:G:C8	2.92	0.57
3:8:152:U:H2'	3:8:153:C:O4'	2.03	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
20:Q:34:PHE:CZ	20:Q:38:ARG:HG3	2.39	0.57
21:R:110:ARG:HH11	21:R:120:TYR:HE2	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1034:A:C6	49:S2:1082:A:C5	2.91	0.57
49:S2:1224:G:N1	49:S2:1643:U:C4	2.72	0.57
49:S2:1667:U:O2	49:S2:1668:U:C6	2.57	0.57
49:S2:1063:C:O2'	49:S2:1838:U:C4	2.55	0.57
49:S2:431:G:N1	49:S2:432:G:C5	2.72	0.57
49:S2:907:G:H3'	49:S2:908:A:H8	1.68	0.57
54:SE:86:PHE:CE2	54:SE:87:MET:HG2	2.39	0.57
55:SF:28:VAL:HA	55:SF:110:GLN:OE1	2.04	0.57
65:SP:56:LEU:HD22	65:SP:78:THR:HG22	1.85	0.57
69:ST:31:PRO:HB3	69:ST:33:TRP:CH2	2.39	0.57
48:4:671:TYR:C	48:4:675:ILE:CG1	2.64	0.57
48:4:829:SER:CB	48:4:832:SER:CB	2.82	0.57
48:4:824:PRO:C	48:4:832:SER:HB2	2.24	0.57
1:5:150:U:O2	10:G:166:LEU:HD11	2.03	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
1:5:1437:C:N4	1:5:2098:G:O6	2.35	0.57
1:5:2385:U:H2'	1:5:2386:U:C6	2.39	0.57
1:5:2612:G:C4	1:5:2613:C:C6	2.91	0.57
1:5:2688:G:N3	1:5:2689:C:C6	2.72	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
1:5:291:U:O2	1:5:292:G:O2'	2.21	0.57
1:5:3898:G:C2'	1:5:3899:G:H5'	2.34	0.57
1:5:4323:A:C2	1:5:4324:A:C4	2.92	0.57
1:5:4607:A:C5	1:5:4608:G:H1'	2.39	0.57
1:5:4700:A:H2	11:H:69:THR:HG22	1.69	0.57
1:5:4734:A:C2	1:5:4735:G:C4	2.92	0.57
1:5:752:G:O6	1:5:753:C:C4	2.57	0.57
1:5:951:G:C2	1:5:952:G:C8	2.92	0.57
1:5:98:A:N6	1:5:99:A:C5	2.72	0.57
2:7:11:A:H4'	2:7:13:A:C8	2.39	0.57
2:7:93:G:C6	2:7:94:C:C4	2.92	0.57
3:8:40:A:C8	3:8:102:G:N2	2.72	0.57
3:8:29:G:C2	3:8:30:U:C6	2.93	0.57
9:F:184:TYR:HB3	9:F:202:ARG:HG2	1.85	0.57
14:K:80:LEU:HD23	14:K:83:LYS:CD	2.34	0.57
14:K:97:ASN:N	14:K:98:ILE:CG1	2.65	0.57
18:O:113:ASP:OD1	18:O:113:ASP:N	2.38	0.57
1:5:1572:U:H5'	21:R:95:TRP:CZ2	2.38	0.57
49:S2:1121:G:C4	49:S2:1122:A:C8	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:121:U:C2	49:S2:122:G:N7	2.58	0.57
49:S2:1564:C:C2	49:S2:1565:C:C6	2.93	0.57
49:S2:1728:U:C4	49:S2:1729:U:C5	2.91	0.57
49:S2:16:G:H2'	49:S2:17:C:C1'	2.34	0.57
49:S2:187:G:C6	49:S2:188:C:C4	2.93	0.57
49:S2:311:C:C3'	49:S2:312:G:H4'	2.34	0.57
49:S2:493:A:C1'	49:S2:574:A:H5'	2.35	0.57
49:S2:646:G:C6	49:S2:647:U:C6	2.92	0.57
49:S2:68:A:C6	49:S2:69:C:C4	2.92	0.57
49:S2:793:G:C4	49:S2:794:A:C8	2.91	0.57
50:SA:134:LEU:HD22	50:SA:144:THR:HG21	1.85	0.57
54:SE:99:PHE:CD1	54:SE:99:PHE:N	2.69	0.57
62:SM:33:ARG:NH2	62:SM:90:GLY:O	2.37	0.57
66:SQ:12:VAL:HG11	66:SQ:90:LYS:HB3	1.84	0.57
68:SS:80:PRO:HG2	68:SS:82:TRP:CD1	2.38	0.57
27:X:155:ILE:O	27:X:156:ILE:HB	2.04	0.57
48:4:113:SER:OG	48:4:481:LYS:NZ	2.37	0.57
48:4:154:VAL:CG1	48:4:358:LEU:HD11	2.35	0.57
48:4:521:VAL:O	48:4:525:LYS:CD	2.52	0.57
48:4:712:ASP:O	48:4:715:HIS:N	2.38	0.57
48:4:692:LEU:CD2	48:4:734:LEU:HD22	2.33	0.57
48:4:741:MET:CG	48:4:817:TRP:CE3	2.83	0.57
1:5:1079:C:C2	1:5:1080:C:C6	2.93	0.57
1:5:1257:A:C2	1:5:1258:G:H1'	2.39	0.57
1:5:1270:A:C2'	1:5:1271:G:O5'	2.52	0.57
1:5:1444:G:C2	1:5:1445:U:O4	2.58	0.57
1:5:1446:C:C4	1:5:1447:C:C5	2.93	0.57
1:5:1456:C:O2'	20:Q:73:PRO:O	2.21	0.57
1:5:144:G:N2	1:5:145:G:C4	2.73	0.57
1:5:1618:G:N3	1:5:1619:G:C8	2.73	0.57
1:5:1857:C:C2	1:5:1858:A:C8	2.91	0.57
1:5:1882:U:H1'	1:5:1883:G:C8	2.40	0.57
1:5:225:G:O4'	1:5:243:A:H1'	2.04	0.57
1:5:2419:C:H2'	1:5:2420:A:O5'	2.05	0.57
1:5:2439:G:C2	1:5:2440:U:C6	2.92	0.57
1:5:2783:A:C4	1:5:2784:C:C6	2.92	0.57
1:5:2458:C:H1'	1:5:3672:G:H21	1.69	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
1:5:3945:A:N3	1:5:3946:G:C8	2.73	0.57
1:5:4070:U:C4	1:5:4071:U:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4092:G:C2	1:5:4158:C:C2	2.92	0.57
1:5:4235:G:H2'	1:5:4236:G:O5'	2.04	0.57
1:5:436:C:O2	1:5:436:C:H2'	2.03	0.57
1:5:486:C:N3	1:5:487:G:C8	2.71	0.57
1:5:4898:G:C2	1:5:4923:C:C2	2.93	0.57
1:5:4958:C:H2'	1:5:4958:C:O2	2.04	0.57
1:5:499:G:C2	1:5:500:G:C8	2.92	0.57
1:5:504:G:N1	1:5:505:G:C6	2.73	0.57
1:5:670:G:H2'	1:5:671:G:H8	1.68	0.57
1:5:691:C:C2	1:5:692:A:N7	2.72	0.57
1:5:754:U:C4	1:5:755:C:C5	2.93	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
3:8:118:C:O2	3:8:118:C:H2'	2.03	0.57
3:8:66:A:H2'	3:8:67:U:C6	2.38	0.57
1:5:1539:G:H4'	4:A:194:ASN:HD22	1.69	0.57
4:A:242:ARG:HH11	4:A:242:ARG:HB2	1.69	0.57
4:A:82:ILE:HD11	4:A:99:GLY:HA3	1.85	0.57
7:D:107:ARG:HD3	7:D:248:ARG:HG3	1.85	0.57
21:R:163:ARG:NH2	49:S2:871:U:H3	2.02	0.57
49:S2:1053:C:N3	49:S2:1054:G:C8	2.73	0.57
49:S2:121:U:N3	49:S2:122:G:C5	2.71	0.57
49:S2:1259:A:N3	49:S2:1259:A:H3'	2.19	0.57
49:S2:1488:C:O2	49:S2:1490:G:C8	2.58	0.57
49:S2:1533:A:N1	49:S2:1537:A:C1'	2.67	0.57
49:S2:1667:U:N3	49:S2:1668:U:C4	2.72	0.57
49:S2:1860:A:C6	49:S2:1862:G:C5	2.92	0.57
49:S2:532:C:N3	49:S2:533:A:N7	2.51	0.57
49:S2:533:A:C6	49:S2:534:G:C5	2.92	0.57
49:S2:676:C:N4	49:S2:677:G:C6	2.72	0.57
50:SA:59:LEU:HD23	50:SA:181:GLU:HG2	1.86	0.57
72:SW:98:GLN:HE21	72:SW:98:GLN:HA	1.67	0.57
49:S2:619:A:N1	73:SX:113:GLY:HA3	2.20	0.57
25:V:39:ILE:HG23	25:V:61:VAL:HG13	1.85	0.57
48:4:13:MET:CE	48:4:464:VAL:CG1	2.55	0.57
48:4:239:LYS:HD3	48:4:241:GLU:HG2	1.85	0.57
48:4:275:LYS:CE	48:4:276:SER:HA	2.23	0.57
48:4:449:ARG:NH2	48:4:460:PRO:HB2	2.18	0.57
48:4:13:MET:HE3	48:4:464:VAL:HG13	1.79	0.57
48:4:541:SER:C	48:4:543:GLU:N	2.55	0.57
48:4:62:ASP:HA	48:4:65:GLU:HB3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:762:VAL:CG1	48:4:766:LYS:HZ3	2.07	0.57
1:5:1190:C:C4	1:5:1191:C:C5	2.92	0.57
1:5:1204:C:O2	1:5:1205:G:C8	2.58	0.57
1:5:12:A:C2	1:5:14:C:C6	2.92	0.57
1:5:1444:G:H2'	1:5:1445:U:H6	1.57	0.57
1:5:1491:A:H2'	1:5:1492:G:O4'	2.05	0.57
1:5:1797:G:C2	1:5:1798:G:C5	2.93	0.57
1:5:1846:G:H2'	1:5:1847:C:C6	2.39	0.57
1:5:2394:G:O2'	1:5:2819:U:O4	2.23	0.57
1:5:2461:G:C2	1:5:2462:C:C5	2.92	0.57
1:5:2463:G:N2	1:5:2464:C:N3	2.52	0.57
1:5:2478:C:H2'	1:5:2479:G:O4'	2.04	0.57
1:5:2581:A:H2'	1:5:2582:A:C8	2.39	0.57
1:5:2656:U:H2'	1:5:2657:G:O4'	2.04	0.57
1:5:158:A:C5	1:5:277:G:C6	2.92	0.57
1:5:3777:G:N2	1:5:3815:G:H2'	2.19	0.57
1:5:4355:G:N3	1:5:4356:G:C8	2.73	0.57
1:5:4476:C:O4'	1:5:4476:C:O2	2.22	0.57
1:5:4480:A:C6	1:5:4481:U:C5	2.92	0.57
1:5:448:G:C6	1:5:449:C:C6	2.92	0.57
1:5:3785:A:H2	1:5:4536:C:H1'	1.63	0.57
1:5:4644:G:N2	1:5:4654:C:C2	2.73	0.57
1:5:5030:U:O2	1:5:5031:G:C8	2.58	0.57
1:5:950:G:N3	1:5:951:G:C8	2.73	0.57
1:5:978:G:H2'	1:5:979:C:O4'	2.04	0.57
3:8:43:A:N1	3:8:44:A:C5	2.72	0.57
1:5:4911:A:H5''	5:B:100:ARG:CD	2.35	0.57
5:B:51:ALA:HA	5:B:323:TYR:HE2	1.66	0.57
5:B:367:PHE:HZ	5:B:380:GLN:HE22	1.49	0.57
7:D:94:ASN:HD21	7:D:96:ALA:HB3	1.69	0.57
13:J:164:ARG:NH2	13:J:164:ARG:O	2.37	0.57
14:K:119:ARG:N	14:K:123:ARG:HH12	2.03	0.57
49:S2:1114:U:N3	49:S2:1119:A:N6	2.40	0.57
49:S2:1511:U:C2	49:S2:1512:C:C6	2.92	0.57
49:S2:1564:C:O2	49:S2:1565:C:C6	2.58	0.57
49:S2:316:G:C2	49:S2:317:C:C5	2.92	0.57
49:S2:403:G:C6	49:S2:404:G:C5	2.93	0.57
49:S2:857:U:N3	49:S2:858:A:N7	2.52	0.57
49:S2:85:A:C2	49:S2:86:C:C4	2.93	0.57
50:SA:19:LEU:HD23	50:SA:24:HIS:HE1	1.68	0.57
55:SF:179:ASN:HD22	55:SF:186:ASN:HB3	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SM:26:LEU:HG	62:SM:90:GLY:HA3	1.86	0.57
24:U:99:TRP:N	24:U:99:TRP:CD1	2.73	0.57
29:Z:46:ILE:HD12	29:Z:49:TYR:CD1	2.40	0.57
48:4:587:SER:HB3	48:4:735:THR:CG2	2.35	0.57
48:4:58:ASP:OD2	48:4:69:THR:N	2.27	0.57
48:4:672:LEU:CA	48:4:675:ILE:HD11	2.33	0.57
48:4:12:ILE:HG21	48:4:99:LEU:HD22	1.85	0.57
1:5:99:A:N1	1:5:100:C:C2	2.72	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
1:5:1465:G:C5	1:5:1466:G:C8	2.93	0.57
1:5:1632:A:C6	1:5:1634:A:N9	2.69	0.57
1:5:1943:A:C8	1:5:1944:A:C8	2.92	0.57
1:5:1268:G:C1'	1:5:2111:G:C5	2.87	0.57
1:5:2244:C:O2	1:5:2245:G:C8	2.57	0.57
1:5:2089:G:N1	1:5:2263:A:C6	2.73	0.57
1:5:258:G:N1	1:5:259:C:C4	2.73	0.57
1:5:2857:A:O2'	1:5:2858:A:H8	1.87	0.57
1:5:296:A:C5'	1:5:296:A:C8	2.88	0.57
1:5:300:A:N3	1:5:301:G:C8	2.73	0.57
1:5:3652:A:N7	1:5:3691:G:N2	2.53	0.57
1:5:1888:A:N6	1:5:3873:G:O2'	2.36	0.57
1:5:4341:C:N4	1:5:4342:C:C4	2.73	0.57
1:5:4537:C:O2	1:5:4538:G:H8	1.85	0.57
1:5:4548:A:N7	1:5:4548:A:OP1	2.37	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
1:5:4886:C:O2	1:5:4887:C:C5	2.57	0.57
1:5:4951:G:O2'	1:5:4952:G:P	2.62	0.57
1:5:4730:C:H2'	1:5:4965:U:H3	1.69	0.57
1:5:687:U:C4	1:5:688:U:C5	2.93	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
1:5:965:G:N2	8:E:85:LEU:O	2.38	0.57
3:8:101:C:C4	3:8:102:G:C5	2.92	0.57
49:S2:989:C:N3	49:S2:1001:A:C2	2.72	0.57
49:S2:1045:U:N3	49:S2:1046:U:C6	2.72	0.57
49:S2:1411:G:H3'	49:S2:1412:C:H4'	1.85	0.57
49:S2:1428:G:H2'	49:S2:1429:G:O4'	2.04	0.57
49:S2:1433:C:P	49:S2:1434:C:OP1	2.62	0.57
49:S2:1502:C:C2	49:S2:1503:C:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1590:C:C6	49:S2:1591:C:C6	2.92	0.57
49:S2:1771:G:N2	49:S2:1772:C:C2	2.72	0.57
49:S2:1826:G:C2	49:S2:1827:U:C5	2.93	0.57
49:S2:443:U:C5	49:S2:444:G:C8	2.93	0.57
49:S2:648:A:C2	49:S2:649:U:N1	2.72	0.57
49:S2:649:U:N3	49:S2:650:A:N7	2.53	0.57
49:S2:832:G:C2	49:S2:833:C:H1'	2.38	0.57
49:S2:898:U:N3	49:S2:899:U:C5	2.72	0.57
49:S2:993:G:C6	49:S2:994:C:C4	2.92	0.57
53:SD:216:GLU:OE1	53:SD:216:GLU:CG	2.52	0.57
49:S2:1274:G:N7	60:SK:43:LEU:HD22	2.19	0.57
60:SK:8:ARG:NH1	60:SK:12:TYR:OH	2.37	0.57
25:V:98:PHE:CZ	26:W:22:ALA:CB	2.86	0.57
28:Y:5:PRO:O	28:Y:6:PHE:HB2	2.05	0.57
48:4:113:SER:OG	48:4:533:MET:CB	2.52	0.57
1:5:1071:C:O2	1:5:1071:C:C2'	2.52	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
1:5:1804:A:H4'	1:5:1805:A:O5'	2.05	0.57
1:5:1846:G:N2	1:5:1847:C:C2	2.72	0.57
1:5:1940:G:H2'	1:5:1941:A:H5''	1.87	0.57
1:5:1976:G:N1	1:5:1992:U:O4	2.37	0.57
1:5:1991:A:H3'	1:5:1992:U:C5'	2.31	0.57
1:5:1269:G:N7	1:5:2111:G:C4	2.72	0.57
1:5:243:A:H2'	1:5:244:G:O4'	2.05	0.57
1:5:2675:G:N3	1:5:2675:G:H2'	2.18	0.57
1:5:3846:C:C4	1:5:3847:C:C5	2.93	0.57
1:5:3894:A:O4'	1:5:4979:A:N1	2.37	0.57
1:5:43:U:C4	1:5:44:A:N9	2.72	0.57
1:5:4583:C:N3	1:5:4718:G:C2	2.73	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
1:5:482:G:H2'	1:5:483:G:O4'	2.04	0.57
1:5:490:C:C3'	1:5:491:G:H8	2.17	0.57
1:5:701:G:N1	1:5:702:U:C6	2.72	0.57
3:8:31:G:H2'	3:8:32:C:O4'	2.05	0.57
3:8:44:A:C2	3:8:45:C:C2	2.93	0.57
5:B:106:PHE:CD2	5:B:130:PHE:CE2	2.93	0.57
9:F:33:LYS:HA	9:F:36:ARG:HE	1.69	0.57
14:K:75:PRO:O	14:K:75:PRO:HD2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:97:ASN:N	14:K:98:ILE:HG12	2.20	0.57
18:O:130:LYS:HG3	18:O:131:PRO:HD2	1.87	0.57
49:S2:1223:A:H2	49:S2:1644:C:N3	2.02	0.57
49:S2:1225:U:N3	49:S2:1226:G:C8	2.73	0.57
49:S2:1526:G:C2	49:S2:1527:C:N1	2.72	0.57
49:S2:1545:A:N7	49:S2:1588:A:C5	2.73	0.57
49:S2:164:A:O2'	49:S2:165:G:N3	2.37	0.57
49:S2:1757:G:N1	49:S2:1758:G:C5	2.73	0.57
49:S2:299:A:C2	49:S2:300:U:C6	2.92	0.57
49:S2:659:G:N3	49:S2:659:G:H2'	2.19	0.57
49:S2:68:A:C4	49:S2:69:C:C6	2.93	0.57
53:SD:157:MET:HG3	53:SD:159:HIS:CE1	2.39	0.57
49:S2:75:G:H1	56:SG:159:ARG:HE	1.53	0.57
1:5:4301:U:C5'	23:T:54:HIS:CD2	2.88	0.57
48:4:258:LYS:O	48:4:258:LYS:HD2	2.05	0.57
48:4:814:PHE:CD2	48:4:815:ASP:N	2.73	0.57
1:5:1268:G:N3	1:5:2111:G:N1	2.52	0.57
1:5:1447:C:O2	1:5:2098:G:C2	2.57	0.57
1:5:1946:G:N2	1:5:1948:G:C8	2.73	0.57
1:5:2124:G:H22	9:F:32:ILE:CG1	2.17	0.57
1:5:209:U:N3	1:5:233:U:C4	2.73	0.57
1:5:2391:G:N2	1:5:2392:C:C2	2.72	0.57
1:5:2673:G:C1'	1:5:2675:G:H1'	2.35	0.57
1:5:271:C:O2	1:5:272:U:C6	2.57	0.57
1:5:358:C:C2	1:5:359:A:C8	2.92	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
1:5:3848:U:C2	1:5:3849:A:C8	2.93	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
1:5:479:G:N2	1:5:480:C:C2	2.73	0.57
1:5:5050:C:C4	1:5:5051:C:C5	2.93	0.57
2:7:111:C:N4	2:7:112:U:C5	2.73	0.57
3:8:70:G:H5''	28:Y:27:ARG:HH11	1.69	0.57
3:8:75:G:N2	3:8:76:C:C2	2.73	0.57
15:L:63:THR:O	15:L:65:ARG:N	2.37	0.57
17:N:68:ARG:HH12	17:N:123:GLU:HG3	1.68	0.57
49:S2:1094:C:N3	49:S2:1095:U:H5	2.02	0.57
49:S2:1232:U:O2	49:S2:1232:U:H2'	2.05	0.57
49:S2:1294:G:N3	49:S2:1295:A:C8	2.73	0.57
49:S2:834:C:H5'	49:S2:835:C:O5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:ST:23:LYS:CE	69:ST:51:ASN:HD22	2.14	0.57
72:SW:17:ALA:HB2	72:SW:25:VAL:HG11	1.87	0.57
48:4:112:SER:C	48:4:114:GLU:H	1.93	0.57
48:4:159:LYS:HE2	48:4:162:ARG:HH11	1.70	0.57
48:4:4:PHE:CD1	48:4:5:THR:CA	2.86	0.57
48:4:597:ASN:HB3	48:4:599:HIS:ND1	2.20	0.57
48:4:58:ASP:CG	48:4:69:THR:CG2	2.72	0.57
1:5:80:C:C2	1:5:104:G:N2	2.73	0.57
1:5:1273:G:H5'	1:5:2123:C:H4'	1.86	0.57
1:5:133:C:O2	1:5:133:C:H2'	2.05	0.57
1:5:1440:U:C2'	1:5:1440:U:O2	2.52	0.57
1:5:1477:C:O2	1:5:1478:C:H1'	2.04	0.57
1:5:1619:G:H2'	1:5:1620:U:O5'	2.05	0.57
1:5:1843:A:N1	1:5:1844:G:C5	2.72	0.57
1:5:1893:C:C2	1:5:1894:C:C5	2.93	0.57
1:5:2466:G:H2'	1:5:2467:U:C1'	2.34	0.57
1:5:2854:G:C8	1:5:2854:G:H3'	2.40	0.57
1:5:299:C:C2	1:5:300:A:C8	2.92	0.57
1:5:3724:A:N6	1:5:3725:G:C6	2.72	0.57
1:5:4194:U:C2'	1:5:4221:C:H41	2.18	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
1:5:486:C:N3	1:5:487:G:C5	2.73	0.57
1:5:642:G:C2	1:5:643:C:C5	2.93	0.57
1:5:663:G:H3'	1:5:664:G:C5'	2.35	0.57
1:5:685:C:O2	1:5:685:C:C2'	2.52	0.57
3:8:108:A:C2	3:8:112:G:C6	2.93	0.57
6:C:79:VAL:HG21	6:C:86:ARG:HE	1.70	0.57
1:5:1785:C:OP1	12:I:133:GLN:NE2	2.37	0.57
49:S2:1099:G:N1	49:S2:1100:A:C8	2.73	0.57
49:S2:1111:U:O2	49:S2:1112:U:C5	2.48	0.57
49:S2:1405:A:C1'	49:S2:1580:A:C6	2.87	0.57
49:S2:1563:G:N2	49:S2:1564:C:C2	2.73	0.57
49:S2:1735:A:H2'	49:S2:1736:G:O4'	2.04	0.57
49:S2:27:A:C6	49:S2:28:U:C4	2.92	0.57
49:S2:380:G:H21	49:S2:382:C:H6	1.52	0.57
49:S2:529:A:N1	49:S2:555:A:C2	2.73	0.57
49:S2:832:G:C6	49:S2:833:C:C4	2.92	0.57
22:S:81:TRP:CZ2	22:S:94:TYR:CD1	2.92	0.57
54:SE:118:GLU:HG2	54:SE:121:TYR:CE1	2.40	0.57
56:SG:4:ASN:HB3	56:SG:110:ASN:HB3	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:206:ASP:CA	48:4:212:VAL:HG23	2.35	0.57
48:4:241:GLU:N	48:4:243:GLN:OE1	2.31	0.57
48:4:296:PRO:CA	48:4:299:LYS:HE2	2.35	0.57
48:4:46:ILE:O	48:4:46:ILE:CG2	2.51	0.57
48:4:683:PHE:CE1	48:4:729:LEU:CD2	2.87	0.57
48:4:744:ILE:HG12	48:4:745:TYR:N	2.20	0.57
1:5:1781:U:C4	1:5:1782:U:C5	2.92	0.57
1:5:1846:G:C2	1:5:1847:C:C4	2.93	0.57
1:5:1846:G:H2'	1:5:1847:C:H6	1.70	0.57
1:5:2018:C:H2'	1:5:2019:C:H5'	1.86	0.57
1:5:2020:U:H2'	1:5:2020:U:O2	2.04	0.57
1:5:2044:U:O2'	18:O:63:ASN:HB3	2.04	0.57
1:5:2058:G:C2	1:5:2059:C:N1	2.73	0.57
1:5:2081:C:C2	1:5:2082:G:C8	2.93	0.57
1:5:2465:C:O2'	1:5:2466:G:O4'	2.23	0.57
1:5:2577:C:N4	29:Z:17:ARG:NH2	2.53	0.57
1:5:77:U:C2	1:5:335:A:N6	2.71	0.57
1:5:3694:U:O4	1:5:3695:U:O4	2.23	0.57
1:5:2844:A:C5	1:5:3839:G:C8	2.93	0.57
1:5:3858:C:C4	1:5:3859:G:C5	2.92	0.57
1:5:4105:A:H1'	1:5:4106:G:N2	2.20	0.57
1:5:4258:C:H2'	1:5:4259:C:H6	1.70	0.57
1:5:4910:G:C8	1:5:4910:G:O5'	2.56	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
1:5:504:G:C2	1:5:654:C:C2	2.92	0.57
1:5:933:G:C2	1:5:939:G:N1	2.73	0.57
1:5:956:A:H3'	1:5:957:G:C4	2.40	0.57
3:8:120:G:C6	3:8:121:G:N7	2.73	0.57
1:5:4566:U:O2'	5:B:234:ARG:NH2	2.38	0.57
14:K:15:LEU:HD11	14:K:60:VAL:HG12	1.86	0.57
49:S2:1284:A:C2	62:SM:34:GLY:HA2	2.40	0.57
49:S2:1433:C:P	49:S2:1434:C:P	3.02	0.57
49:S2:1459:G:C6	49:S2:1460:C:C4	2.93	0.57
49:S2:1609:C:O2	49:S2:1609:C:H2'	2.04	0.57
49:S2:1722:G:N2	49:S2:1723:G:H1'	2.20	0.57
49:S2:414:A:O2'	49:S2:415:A:O5'	2.23	0.57
49:S2:429:C:N3	49:S2:430:C:C5	2.72	0.57
49:S2:504:G:C2'	49:S2:505:G:O5'	2.52	0.57
49:S2:794:A:N6	49:S2:795:A:C6	2.72	0.57
49:S2:940:U:H2'	49:S2:941:C:H6	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:29:ASN:HB3	50:SA:151:ASP:OD2	2.04	0.57
59:SJ:59:GLU:CB	59:SJ:59:GLU:CD	2.68	0.57
69:ST:31:PRO:HB2	69:ST:33:TRP:CZ2	2.39	0.57
27:X:73:HIS:N	27:X:73:HIS:CD2	2.72	0.57
48:4:228:PHE:CE1	48:4:231:MET:CE	2.88	0.56
48:4:485:ILE:N	48:4:485:ILE:HD12	2.20	0.56
48:4:588:ASN:OD1	48:4:588:ASN:C	2.44	0.56
1:5:1070:G:N2	1:5:1071:C:HI'	2.20	0.56
1:5:1090:G:C6	1:5:1091:C:C4	2.93	0.56
1:5:1507:C:N3	1:5:1508:A:N7	2.53	0.56
1:5:1598:C:C4	1:5:2798:A:N7	2.71	0.56
1:5:1629:G:C2	1:5:1631:A:C5	2.93	0.56
1:5:1724:G:N3	9:F:105:PRO:HB3	2.20	0.56
1:5:1752:G:H2'	1:5:1753:G:O4'	2.04	0.56
1:5:1760:G:N2	1:5:1761:G:HI'	2.19	0.56
1:5:1847:C:C4'	20:Q:152:PHE:CE2	2.86	0.56
1:5:1991:A:H8	1:5:1991:A:H3'	1.70	0.56
1:5:199:G:C6	1:5:201:C:N4	2.73	0.56
1:5:2312:U:H2'	1:5:2312:U:O2	2.04	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
1:5:30:C:O2'	1:5:31:U:H5'	2.05	0.56
1:5:3693:U:O4	1:5:3694:U:C4	2.58	0.56
1:5:3755:G:C6	1:5:3756:A:N7	2.73	0.56
1:5:3765:G:O2'	1:5:3766:A:C8	2.52	0.56
1:5:3867:A:C2	1:5:3880:G:O6	2.57	0.56
1:5:4216:G:N1	1:5:4217:G:C5	2.73	0.56
1:5:4236:G:H22	1:5:4289:U:HI'	1.69	0.56
1:5:4349:C:H3'	1:5:4350:C:C5'	2.35	0.56
1:5:4583:C:C2	1:5:4718:G:N2	2.73	0.56
1:5:470:A:C6	1:5:471:A:C5	2.92	0.56
1:5:919:C:H2'	1:5:920:C:O5'	2.05	0.56
1:5:931:C:C6	1:5:932:A:N7	2.72	0.56
2:7:33:U:C2	2:7:34:C:C5	2.93	0.56
2:7:43:U:O4	2:7:44:C:N4	2.37	0.56
2:7:69:U:C2	2:7:70:G:C8	2.92	0.56
2:7:82:G:C2	2:7:95:C:C2	2.93	0.56
5:B:137:TRP:CZ2	5:B:146:LEU:HG	2.40	0.56
10:G:162:ASP:HB3	10:G:163:PRO:CD	2.35	0.56
11:H:31:ARG:NH2	11:H:187:VAL:HG21	2.20	0.56
14:K:119:ARG:H	14:K:123:ARG:NH1	2.00	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:28:LEU:HD13	14:K:29:ALA:H	1.70	0.56
14:K:78:SER:O	14:K:81:ILE:HG12	2.05	0.56
14:K:94:LYS:H	14:K:95:GLN:HB2	1.69	0.56
49:S2:1052:A:C2	49:S2:1053:C:C6	2.92	0.56
49:S2:1126:G:N3	49:S2:1127:C:C6	2.73	0.56
49:S2:1303:C:C6	49:S2:1304:U:C6	2.93	0.56
49:S2:1397:U:C5	49:S2:1442:U:C4'	2.87	0.56
49:S2:1432:U:O2	49:S2:1433:C:C6	2.58	0.56
49:S2:1775:U:N3	49:S2:1776:G:N7	2.52	0.56
49:S2:1782:G:C2	49:S2:1784:G:C8	2.93	0.56
49:S2:1794:C:C4	49:S2:1795:G:N7	2.73	0.56
49:S2:127:C:OP1	49:S2:180:G:N2	2.38	0.56
49:S2:1:U:O4'	49:S2:1:U:O2	2.22	0.56
49:S2:351:G:N1	49:S2:352:U:C5	2.73	0.56
49:S2:924:G:H2'	49:S2:924:G:N3	2.20	0.56
49:S2:963:A:C2	49:S2:964:A:C6	2.92	0.56
51:SB:133:TYR:CD1	51:SB:221:PRO:HD3	2.39	0.56
58:SI:197:PHE:O	58:SI:201:LYS:N	2.36	0.56
67:SR:53:TYR:O	67:SR:54:VAL:C	2.43	0.56
28:Y:11:ARG:NH2	28:Y:15:ARG:HD3	2.20	0.56
48:4:207:PRO:HB2	48:4:261:TRP:CD1	2.41	0.56
48:4:269:ALA:O	48:4:270:ASN:C	2.35	0.56
48:4:449:ARG:CB	48:4:473:VAL:CG1	2.83	0.56
1:5:1070:G:C6	1:5:1071:C:C4	2.92	0.56
1:5:1379:C:H1'	1:5:1380:G:C8	2.40	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	2.73	0.56
1:5:2090:U:O2'	1:5:2091:C:C5'	2.53	0.56
1:5:2260:C:C2'	1:5:2261:G:N7	2.57	0.56
1:5:275:C:O2'	1:5:276:C:OP1	2.23	0.56
1:5:2830:G:N3	1:5:2831:G:C8	2.73	0.56
1:5:3656:A:N1	1:5:3657:U:C4	2.73	0.56
1:5:3676:G:C2'	1:5:3677:U:O5'	2.53	0.56
1:5:3829:G:C2	1:5:3830:A:C8	2.93	0.56
1:5:4217:G:H2'	1:5:4218:U:O5'	2.05	0.56
1:5:4321:U:H2'	1:5:4322:G:O4'	2.05	0.56
1:5:4563:U:H2'	1:5:4564:A:H8	1.67	0.56
1:5:463:A:N1	1:5:692:A:N1	2.52	0.56
1:5:4652:G:N1	1:5:4653:C:C4	2.73	0.56
1:5:45:U:H2'	1:5:46:U:O5'	2.06	0.56
1:5:5020:G:H2'	1:5:5021:C:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:517:C:C2	1:5:645:G:C2	2.92	0.56
1:5:516:C:N3	1:5:646:G:C2	2.73	0.56
3:8:86:U:C6	3:8:86:U:C3'	2.87	0.56
9:F:203:PHE:CE1	9:F:207:ASN:HB2	2.41	0.56
49:S2:1109:C:O2'	49:S2:1109:C:O2	2.21	0.56
49:S2:1148:A:O4'	49:S2:1149:A:C8	2.59	0.56
49:S2:1538:C:H1'	49:S2:1603:G:H21	1.69	0.56
49:S2:1622:U:C5	68:SS:120:HIS:CE1	2.93	0.56
49:S2:1639:G:C2	49:S2:1640:A:C8	2.93	0.56
49:S2:1773:C:C2	49:S2:1774:C:C5	2.93	0.56
49:S2:221:A:C6	49:S2:222:U:C4	2.93	0.56
49:S2:127:C:OP2	49:S2:312:G:N3	2.38	0.56
49:S2:458:A:N1	49:S2:459:C:N1	2.52	0.56
49:S2:52:G:C6	49:S2:53:C:C4	2.93	0.56
49:S2:618:C:N3	49:S2:619:A:N9	2.53	0.56
49:S2:634:A:C6	49:S2:635:G:N7	2.73	0.56
50:SA:111:GLN:N	50:SA:111:GLN:OE1	2.38	0.56
50:SA:203:PHE:N	50:SA:203:PHE:CD1	2.73	0.56
52:SC:163:VAL:HG22	52:SC:241:PHE:HZ	1.70	0.56
55:SF:179:ASN:ND2	55:SF:186:ASN:HB3	2.19	0.56
62:SM:101:ARG:NH1	62:SM:101:ARG:HA	2.20	0.56
63:SN:4:MET:HE2	63:SN:124:ARG:HD3	1.87	0.56
48:4:155:LEU:HD11	48:4:185:VAL:HG21	1.84	0.56
48:4:727:ARG:CG	48:4:727:ARG:HH11	2.17	0.56
48:4:739:ARG:HD2	48:4:821:PRO:O	2.05	0.56
48:4:42:LYS:NZ	48:4:79:TYR:OH	2.38	0.56
48:4:762:VAL:CG2	48:4:800:LEU:CD1	2.55	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
1:5:1324:A:H2'	1:5:1326:A:N7	2.20	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
1:5:158:A:C6	1:5:277:G:C5	2.93	0.56
1:5:1661:C:H1'	1:5:2345:G:N2	2.20	0.56
1:5:209:U:O4	1:5:211:G:H1'	2.05	0.56
1:5:2292:C:C2	1:5:2293:U:C5	2.92	0.56
1:5:2577:C:N3	1:5:2578:G:N7	2.54	0.56
1:5:2668:G:C2'	1:5:2669:C:H5'	2.28	0.56
1:5:2712:G:C6	1:5:2713:C:C5	2.92	0.56
1:5:2726:G:N1	1:5:2727:C:N4	2.53	0.56
1:5:322:C:H2'	1:5:322:C:O2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3923:A:C2	1:5:3924:C:C4	2.93	0.56
1:5:4276:G:N3	1:5:4276:G:H2'	2.20	0.56
1:5:4189:U:H1'	1:5:4380:A:N3	2.20	0.56
1:5:4413:C:H2'	1:5:4414:A:O4'	2.05	0.56
1:5:4563:U:O2	1:5:4564:A:N7	2.35	0.56
1:5:3621:A:H1'	1:5:4655:A:H2	1.70	0.56
1:5:4666:G:C6	1:5:4667:C:C4	2.93	0.56
1:5:4735:G:C2	1:5:4736:C:C2	2.94	0.56
1:5:5019:A:C2	1:5:5020:G:C5	2.94	0.56
1:5:5035:U:N3	1:5:5036:C:C5	2.73	0.56
1:5:505:G:N2	1:5:506:C:C2	2.74	0.56
1:5:696:C:H5''	1:5:697:G:H5'	1.86	0.56
1:5:916:C:N3	1:5:918:G:O6	2.38	0.56
2:7:59:G:N1	2:7:60:G:N7	2.52	0.56
3:8:89:U:H2'	3:8:90:C:C6	2.40	0.56
5:B:41:VAL:HG12	5:B:187:GLY:HA3	1.87	0.56
7:D:278:ASP:O	7:D:282:GLN:HG2	2.04	0.56
7:D:42:ASN:N	7:D:42:ASN:OD1	2.37	0.56
14:K:18:THR:HA	14:K:58:ILE:HG23	1.88	0.56
1:5:85:G:C6	15:L:13:HIS:CE1	2.93	0.56
16:M:3:PHE:CB	16:M:6:PHE:CZ	2.89	0.56
49:S2:1073:U:C2	49:S2:1074:C:C5	2.93	0.56
49:S2:1118:C:O2	49:S2:1118:C:O4'	2.22	0.56
49:S2:12:U:C2	49:S2:13:C:C5	2.92	0.56
49:S2:1508:A:O4'	49:S2:1508:A:OP2	2.23	0.56
49:S2:1563:G:C4	49:S2:1564:C:C5	2.93	0.56
49:S2:1550:G:H3'	49:S2:1579:A:H61	1.71	0.56
49:S2:1753:C:C2	49:S2:1754:G:C8	2.94	0.56
49:S2:309:G:H2'	49:S2:310:C:C6	2.39	0.56
49:S2:310:C:H2'	49:S2:311:C:O4'	2.04	0.56
49:S2:325:C:O2	49:S2:326:C:C6	2.58	0.56
49:S2:402:C:N4	49:S2:403:G:N7	2.54	0.56
49:S2:636:C:N3	49:S2:637:U:C4	2.72	0.56
49:S2:75:G:N2	49:S2:77:A:P	2.68	0.56
54:SE:51:ARG:HE	54:SE:51:ARG:HA	1.69	0.56
49:S2:77:A:OP1	56:SG:157:VAL:HG11	2.05	0.56
66:SQ:62:ARG:HA	66:SQ:62:ARG:HH11	1.70	0.56
69:ST:76:THR:HG21	69:ST:97:LYS:HG3	1.87	0.56
29:Z:41:ALA:HB2	29:Z:77:TYR:CE1	2.40	0.56
48:4:331:GLU:HA	48:4:335:LEU:HB2	1.87	0.56
48:4:592:LEU:HD12	48:4:593:SER:N	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:791:ASN:CA	48:4:794:PHE:HE1	2.19	0.56
1:5:1380:G:H2'	1:5:1382:G:C5	2.41	0.56
1:5:1390:G:N3	1:5:1394:G:C6	2.73	0.56
1:5:1465:G:C2	1:5:1466:G:C1'	2.88	0.56
1:5:1544:G:C2	1:5:1545:G:C8	2.94	0.56
1:5:153:G:C2	1:5:154:G:C5	2.93	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
1:5:370:U:C5	1:5:1637:A:N1	2.74	0.56
1:5:1750:G:C6	1:5:1751:A:N7	2.73	0.56
1:5:1410:U:C5	1:5:1815:G:N1	2.73	0.56
1:5:183:C:H1'	1:5:184:U:N3	2.21	0.56
1:5:1887:G:C6	1:5:1890:G:O6	2.59	0.56
1:5:1995:G:C2	1:5:1996:C:C2	2.94	0.56
1:5:2110:C:P	1:5:2110:C:C6	2.97	0.56
1:5:2315:G:C2	1:5:2316:G:C8	2.94	0.56
1:5:2569:G:C6	1:5:2570:U:C4	2.94	0.56
1:5:2634:C:C2	1:5:2635:U:C6	2.93	0.56
1:5:269:G:C2	1:5:270:U:C6	2.93	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
1:5:3703:G:C5	1:5:3704:U:C5	2.93	0.56
1:5:3834:C:C2	1:5:3835:C:C5	2.94	0.56
1:5:4455:G:C6	1:5:4456:C:C4	2.94	0.56
1:5:4660:G:C2	1:5:4661:G:C8	2.93	0.56
1:5:932:A:H2'	1:5:932:A:N3	2.20	0.56
3:8:131:G:C2	3:8:132:G:N9	2.73	0.56
5:B:90:VAL:HB	5:B:104:THR:HG23	1.86	0.56
5:B:175:GLN:HE21	5:B:179:HIS:CE1	2.22	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	2.35	0.56
1:5:2090:U:H1'	6:C:305:PRO:HG2	1.88	0.56
8:E:102:VAL:HB	8:E:103:VAL:HG13	1.87	0.56
20:Q:32:TYR:HH	20:Q:123:PHE:HD2	1.51	0.56
49:S2:1021:U:H4'	49:S2:1022:U:O4'	2.04	0.56
49:S2:1137:U:O2'	49:S2:1138:C:OP1	2.15	0.56
49:S2:1184:G:C5	49:S2:1185:C:C5	2.93	0.56
49:S2:120:U:C4	49:S2:121:U:C4	2.93	0.56
49:S2:122:G:H2'	49:S2:123:G:C1'	2.35	0.56
49:S2:1233:G:C6	49:S2:1234:C:C5	2.94	0.56
49:S2:1408:U:H2'	49:S2:1409:A:N9	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1429:G:H2'	49:S2:1430:C:C6	2.41	0.56
49:S2:1709:G:C6	49:S2:1710:C:C5	2.93	0.56
49:S2:1776:G:C2	49:S2:1777:G:N7	2.74	0.56
49:S2:1777:G:C6	49:S2:1778:C:C4	2.92	0.56
49:S2:360:A:H4'	49:S2:361:U:H3'	1.87	0.56
49:S2:379:C:O2	49:S2:380:G:C8	2.58	0.56
49:S2:550:C:O2	49:S2:551:U:C6	2.59	0.56
49:S2:856:C:N3	49:S2:857:U:C5	2.74	0.56
49:S2:923:G:C2	49:S2:924:G:N9	2.73	0.56
49:S2:958:G:O2'	49:S2:959:G:C5'	2.54	0.56
58:SI:62:VAL:HG12	58:SI:77:ARG:HA	1.88	0.56
61:SL:99:TYR:CE2	73:SX:13:LEU:HB3	2.40	0.56
26:W:50:ASN:HA	26:W:55:TYR:CE2	2.40	0.56
27:X:122:ALA:HB3	27:X:139:ARG:HG3	1.87	0.56
48:4:408:GLY:HA2	49:S2:479:C:H5''	1.86	0.56
48:4:563:GLU:C	48:4:563:GLU:CD	2.63	0.56
48:4:744:ILE:CG1	48:4:745:TYR:H	2.17	0.56
1:5:100:C:O4'	1:5:100:C:O2	2.22	0.56
1:5:1093:C:N3	1:5:1094:G:N7	2.54	0.56
1:5:1270:A:C6	1:5:1271:G:H1'	2.40	0.56
1:5:1539:G:H1'	4:A:15:VAL:HG13	1.87	0.56
1:5:1857:C:H2'	1:5:1858:A:H8	1.70	0.56
1:5:1945:G:H4'	1:5:1945:G:OP1	2.06	0.56
1:5:2324:C:O2	1:5:2324:C:H2'	2.04	0.56
1:5:2454:U:O2	1:5:2454:U:H2'	2.04	0.56
1:5:246:G:C2	1:5:247:G:C5	2.93	0.56
1:5:2505:C:H1'	1:5:2506:G:C4	2.40	0.56
1:5:2692:U:H2'	1:5:2693:G:H5'	1.87	0.56
1:5:2880:U:N3	1:5:3625:G:C8	2.73	0.56
1:5:3688:U:H2'	1:5:3688:U:O2	2.05	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
1:5:3893:C:N3	1:5:4568:A:C2	2.73	0.56
1:5:4633:G:O2'	1:5:4635:A:OP2	2.11	0.56
1:5:483:G:N3	1:5:484:U:C5	2.72	0.56
1:5:4896:G:C2	1:5:4897:G:C8	2.93	0.56
1:5:4897:G:C4	1:5:4898:G:C8	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
1:5:499:G:N3	1:5:499:G:H2'	2.20	0.56
1:5:5061:A:C4'	1:5:5062:G:H5''	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:936:C:C2'	16:M:46:ARG:NH1	2.68	0.56
2:7:22:A:N3	2:7:23:A:N7	2.53	0.56
2:7:7:G:C2	2:7:8:G:C8	2.93	0.56
2:7:93:G:C6	2:7:94:C:C5	2.94	0.56
3:8:53:G:C5	3:8:54:C:C5	2.94	0.56
4:A:37:ARG:CZ	4:A:37:ARG:HB2	2.32	0.56
9:F:71:ILE:HG22	9:F:75:ARG:HD2	1.86	0.56
15:L:58:VAL:HG13	15:L:70:VAL:CG1	2.36	0.56
49:S2:999:G:C5	49:S2:1000:C:C5	2.93	0.56
49:S2:105:U:H4'	58:SI:21:TYR:OH	2.04	0.56
49:S2:1085:C:C4	49:S2:1087:A:H1'	2.40	0.56
49:S2:118:C:N1	49:S2:445:A:C2	2.73	0.56
49:S2:1501:C:C2	49:S2:1502:C:C5	2.93	0.56
49:S2:1592:C:N4	49:S2:1593:C:C5	2.73	0.56
49:S2:1593:C:O2	49:S2:1593:C:C2'	2.54	0.56
49:S2:1644:C:HO2'	49:S2:1645:C:C1'	2.17	0.56
49:S2:1776:G:N2	49:S2:1777:G:C4	2.73	0.56
49:S2:1794:C:N3	49:S2:1795:G:N7	2.53	0.56
49:S2:211:G:C2	49:S2:212:C:C2	2.94	0.56
49:S2:357:C:C2	49:S2:358:C:C6	2.94	0.56
49:S2:532:C:O2	49:S2:533:A:C8	2.58	0.56
49:S2:625:G:O4'	49:S2:629:A:H2	1.87	0.56
49:S2:920:A:O2'	49:S2:922:A:O5'	2.23	0.56
49:S2:927:C:C2	49:S2:928:G:N7	2.74	0.56
54:SE:98:ASN:C	54:SE:99:PHE:HD1	2.09	0.56
56:SG:26:THR:HG21	56:SG:40:ALA:HB3	1.87	0.56
59:SJ:120:ALA:O	59:SJ:121:LYS:CB	2.54	0.56
62:SM:101:ARG:C	62:SM:102:LYS:HG2	2.25	0.56
62:SM:85:LEU:HA	62:SM:88:TRP:CZ2	2.38	0.56
63:SN:113:PHE:O	63:SN:116:ILE:N	2.38	0.56
68:SS:34:LYS:HB3	68:SS:103:LEU:HD21	1.88	0.56
70:SU:66:ARG:HD2	70:SU:77:TRP:CD1	2.41	0.56
49:S2:581:U:O2	74:SY:33:ALA:HB1	2.04	0.56
22:S:90:THR:HG23	23:T:156:TYR:CD2	2.40	0.56
26:W:4:GLU:OE1	26:W:30:GLN:NE2	2.29	0.56
48:4:206:ASP:HB2	48:4:207:PRO:CD	2.22	0.56
48:4:369:CYS:HB3	48:4:386:LYS:HG3	1.86	0.56
1:5:1189:G:C5	1:5:1190:C:C5	2.93	0.56
1:5:1348:U:C2	1:5:1349:G:C8	2.94	0.56
1:5:1388:A:N1	1:5:1396:G:N2	2.48	0.56
1:5:1464:C:H2'	1:5:1464:C:O2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:153:G:N1	1:5:154:G:N7	2.53	0.56
1:5:1547:A:C6	1:5:1582:U:H1'	2.40	0.56
1:5:173:C:N3	1:5:174:C:H5	1.99	0.56
1:5:1831:G:C6	1:5:1832:C:C5	2.93	0.56
1:5:1850:A:H2'	1:5:1851:G:O5'	2.05	0.56
1:5:1860:U:N3	1:5:1861:U:C5	2.73	0.56
1:5:1895:G:H2'	1:5:1896:A:O5'	2.04	0.56
1:5:1918:U:O2	1:5:1920:C:C5	2.58	0.56
1:5:2084:C:H3'	1:5:2085:G:C5'	2.36	0.56
1:5:2463:G:N1	1:5:2464:C:C4	2.73	0.56
1:5:258:G:N2	1:5:259:C:C2	2.72	0.56
1:5:2714:G:N2	1:5:2715:G:C4	2.73	0.56
1:5:2744:A:O2'	1:5:2745:A:O5'	2.24	0.56
1:5:3731:C:O2	1:5:3732:A:H8	1.88	0.56
1:5:3858:C:C2	1:5:3859:G:C8	2.93	0.56
1:5:388:A:C6	1:5:411:G:C5	2.93	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
1:5:4518:A:C2'	5:B:257:TRP:CZ3	2.89	0.56
1:5:4878:C:O2	1:5:4878:C:H2'	2.04	0.56
1:5:497:G:C2	1:5:657:C:C2	2.94	0.56
1:5:655:C:N3	1:5:656:C:C5	2.73	0.56
1:5:671:G:N1	1:5:672:C:C4	2.74	0.56
2:7:111:C:O2	2:7:111:C:H2'	2.04	0.56
7:D:163:LEU:HD21	7:D:175:HIS:HB3	1.87	0.56
9:F:148:ASN:HB3	9:F:243:ASN:HD22	1.71	0.56
3:8:37:A:OP2	11:H:89:ARG:HD3	164.73	0.56
49:S2:99:A:N1	49:S2:100:U:C6	2.72	0.56
49:S2:1074:C:C2	49:S2:1075:C:C6	2.87	0.56
49:S2:106:C:O2	49:S2:107:A:N7	2.38	0.56
49:S2:1115:U:O4'	49:S2:1115:U:O2	2.24	0.56
49:S2:1119:A:C5	49:S2:1120:U:H1'	2.41	0.56
49:S2:1278:A:C6	49:S2:1279:C:C4	2.93	0.56
49:S2:1410:C:N3	49:S2:1411:G:C5	2.74	0.56
49:S2:1502:C:C2	49:S2:1503:C:C5	2.94	0.56
49:S2:1739:C:C2	49:S2:1740:C:C5	2.94	0.56
49:S2:1753:C:O2	49:S2:1754:G:C8	2.59	0.56
49:S2:1811:C:C2	49:S2:1812:U:C6	2.93	0.56
49:S2:194:C:C2	49:S2:206:G:C2	2.94	0.56
49:S2:340:C:N3	49:S2:341:C:C5	2.67	0.56
49:S2:447:A:N6	49:S2:449:A:C5	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:51:U:O2	49:S2:52:G:C8	2.58	0.56
49:S2:562:U:H2'	49:S2:563:G:C8	2.40	0.56
49:S2:672:A:N1	49:S2:1162:C:H1'	2.20	0.56
49:S2:805:U:O2	49:S2:806:U:C6	2.58	0.56
49:S2:943:U:C2	49:S2:944:A:C8	2.94	0.56
50:SA:158:ASP:OD2	50:SA:159:ILE:HB	2.05	0.56
59:SJ:132:GLN:HB2	59:SJ:134:HIS:HD2	1.69	0.56
48:4:393:PRO:O	48:4:393:PRO:HD2	2.06	0.56
48:4:503:PRO:HB3	48:4:533:MET:SD	2.45	0.56
48:4:675:ILE:HG22	48:4:709:LEU:HD13	1.86	0.56
48:4:804:THR:HG1	48:4:808:ALA:HB2	1.63	0.56
1:5:1177:U:C1'	7:D:282:GLN:NE2	2.67	0.56
1:5:1213:G:C5	1:5:1215:C:C1'	2.89	0.56
1:5:1219:G:N1	1:5:1220:G:C5	2.72	0.56
1:5:1310:C:C4	1:5:1311:G:N7	2.73	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
1:5:1596: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
1:5:1812:C:C2	1:5:1813:U:C5	2.94	0.56
1:5:1882:U:O2	1:5:1883:G:N7	2.38	0.56
1:5:1937:C:OP2	1:5:1938:C:O2'	2.22	0.56
1:5:2034:G:C6	1:5:2035:C:N4	2.73	0.56
1:5:2339:G:C6	1:5:2340:C:C4	2.93	0.56
1:5:2451:A:C6	1:5:2452:G:C8	2.93	0.56
1:5:291:U:O2	1:5:293:G:H8	1.88	0.56
1:5:3594:C:H2'	1:5:3597:G:H1'	1.86	0.56
1:5:4095:G:N2	1:5:4096:C:C5	2.69	0.56
1:5:4269:G:C5	1:5:4270:C:C5	2.93	0.56
1:5:4343:U:C4	1:5:4344:U:C5	2.93	0.56
1:5:4479:A:N6	1:5:4480:A:C4	2.74	0.56
1:5:4684:A:H2'	1:5:4685:U:O4'	2.06	0.56
1:5:4698:C:C2'	1:5:4698:C:O2	2.53	0.56
1:5:4714:C:O2	1:5:4714:C:H2'	2.05	0.56
1:5:471:A:N6	1:5:472:C:C5	2.73	0.56
1:5:4723:A:C4	1:5:4724:A:C8	2.94	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
1:5:5036:C:N3	1:5:5037:U:C5	2.74	0.56
1:5:969:C:C2'	1:5:970:G:N3	2.69	0.56
3:8:10:G:C4	3:8:11:C:C6	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:138:GLN:O	5:B:139:ASP:HB3	2.05	0.56
5:B:169:ARG:HH11	5:B:169:ARG:HG2	1.69	0.56
49:S2:1406:G:C5	49:S2:1407:U:C6	2.94	0.56
49:S2:1419:C:OP2	69:ST:129:ARG:CA	2.43	0.56
49:S2:1568:C:OP1	69:ST:96:SER:OG	2.18	0.56
49:S2:291:G:C8	49:S2:291:G:C5'	2.88	0.56
49:S2:323:C:H3'	49:S2:324:C:C5'	2.35	0.56
49:S2:447:A:C5	49:S2:449:A:N9	2.74	0.56
49:S2:647:U:O2	49:S2:647:U:C2'	2.51	0.56
49:S2:675:U:C2	49:S2:676:C:C6	2.93	0.56
49:S2:862:A:C6	49:S2:863:U:C4	2.94	0.56
49:S2:903:A:C5	49:S2:904:A:C8	2.94	0.56
27:X:116:LEU:HB2	27:X:117:TYR:CE1	2.41	0.56
48:4:120:ARG:NH1	48:4:496:VAL:CA	2.69	0.56
48:4:373:TYR:CE2	48:4:375:GLY:HA3	2.40	0.56
48:4:501:VAL:O	48:4:501:VAL:HG12	2.06	0.56
48:4:589:VAL:HG12	48:4:590:LEU:N	2.21	0.56
48:4:744:ILE:HD11	48:4:816:HIS:CB	2.36	0.56
48:4:82:SER:O	48:4:86:LEU:HD12	2.05	0.56
1:5:1398:A:C2	1:5:1399:G:H1'	2.41	0.56
1:5:177:G:C6	1:5:178:C:C4	2.94	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	2.73	0.56
1:5:2650:G:N2	1:5:2684:C:C2	2.74	0.56
1:5:2852:U:C2	1:5:2852:U:H3'	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
1:5:3759:A:H61	49:S2:1709:G:H5'	1.70	0.56
1:5:4222:G:C6	1:5:4223:C:C4	2.94	0.56
1:5:4297:G:C2	1:5:4298:A:C8	2.93	0.56
1:5:42:A:C6	1:5:4379:A:N1	2.73	0.56
1:5:4324:A:C2	1:5:4325:A:C6	2.94	0.56
1:5:4433:G:H2'	1:5:4434:C:C6	2.40	0.56
1:5:4549:G:N1	1:5:4550:G:C5	2.74	0.56
1:5:4605:A:H2'	1:5:4606:G:C8	2.40	0.56
1:5:4628:U:O2	1:5:4628:U:H2'	2.06	0.56
1:5:471:A:C2	1:5:472:C:H1'	2.40	0.56
1:5:495:C:C4	1:5:496:G:N7	2.74	0.56
1:5:76:A:N7	15:L:74:ARG:NH2	2.54	0.56
6:C:78:ARG:HG2	6:C:78:ARG:HH11	1.70	0.56
14:K:59:THR:HA	14:K:80:LEU:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:97:ASN:N	14:K:98:ILE:HA	2.19	0.56
21:R:95:TRP:O	21:R:96:MET:C	2.44	0.56
49:S2:1115:U:H4'	49:S2:1116:C:OP1	2.06	0.56
49:S2:1121:G:C5	49:S2:1122:A:N7	2.74	0.56
49:S2:120:U:O4	49:S2:121:U:C4	2.59	0.56
49:S2:144:U:H2'	49:S2:145:G:C8	2.40	0.56
49:S2:1533:A:H2	49:S2:1536:G:N3	2.03	0.56
49:S2:348:A:C2'	49:S2:349:A:H5'	2.36	0.56
49:S2:414:A:O2'	49:S2:415:A:C5'	2.54	0.56
49:S2:639:C:O2'	49:S2:640:A:C5'	2.53	0.56
49:S2:892:U:O2	49:S2:893:U:C6	2.59	0.56
57:SH:105:THR:OG1	57:SH:108:SER:N	2.36	0.56
57:SH:83:LEU:HD13	57:SH:92:VAL:HG21	1.87	0.56
71:SV:64:GLU:O	71:SV:66:ASP:N	2.37	0.56
49:S2:862:A:N7	72:SW:107:SER:HA	2.21	0.56
49:S2:823:U:C4	74:SY:64:PHE:HE2	2.22	0.56
29:Z:21:ARG:HH11	29:Z:21:ARG:HG3	1.70	0.56
48:4:49:ALA:N	48:4:55:ARG:HH22	2.03	0.56
1:5:1049:C:O2	1:5:1050:C:C6	2.59	0.56
1:5:1173:G:C6	1:5:1174:G:C5	2.94	0.56
1:5:1279:A:O2'	1:5:1280:C:H5''	2.05	0.56
1:5:1340:C:N3	1:5:1341:U:C4	2.73	0.56
1:5:1479:G:C2'	1:5:1480:C:O5'	2.54	0.56
1:5:12:A:N1	1:5:14:C:C4	2.74	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
1:5:1806:G:C2	1:5:1807:C:C4	2.93	0.56
1:5:1868:A:C5	1:5:1870:C:H1'	2.41	0.56
1:5:190:G:C2	1:5:252:C:O2	2.57	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
1:5:2490:U:H2'	1:5:2491:C:C6	2.40	0.56
1:5:2494:U:N3	1:5:2495:U:C5	2.74	0.56
1:5:2521:G:C2	1:5:2535:G:C2	2.94	0.56
1:5:2723:U:C2	1:5:2724:G:N7	2.74	0.56
1:5:2725:A:N6	21:R:88:ARG:O	2.38	0.56
1:5:2735:G:N1	1:5:2736:G:C5	2.73	0.56
1:5:2395:A:C2'	1:5:2806:A:HO2'	2.16	0.56
1:5:29:G:N2	1:5:30:C:C2	2.74	0.56
1:5:3721:U:O2	1:5:3721:U:H2'	2.05	0.56
1:5:4109:G:C5	1:5:4110:C:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4152:G:C2	1:5:4153:C:C5	2.94	0.56
1:5:4192:A:C2	1:5:4204:C:N3	2.73	0.56
1:5:4482:U:O2	1:5:4482:U:H2'	2.04	0.56
1:5:465:G:N2	1:5:466:A:H1'	2.21	0.56
1:5:711:A:N1	1:5:712:C:C4	2.73	0.56
1:5:78:U:C2	1:5:336:A:N6	2.73	0.56
2:7:34:C:C2	2:7:35:U:C5	2.93	0.56
3:8:37:A:C4'	3:8:39:G:H1'	2.34	0.56
5:B:86:VAL:HG13	5:B:162:VAL:HG13	1.88	0.56
5:B:168:MET:HE3	5:B:171:LEU:HD12	1.88	0.56
1:5:1177:U:H1'	7:D:282:GLN:CD	2.26	0.56
8:E:95:ASP:OD1	8:E:96:LYS:N	2.38	0.56
9:F:82:ASN:HD21	23:T:142:ARG:HB3	1.70	0.56
13:J:107:PHE:CZ	13:J:130:PHE:CB	2.89	0.56
14:K:147:HIS:N	14:K:147:HIS:CD2	2.73	0.56
15:L:36:ARG:HH11	15:L:36:ARG:HB2	1.70	0.56
49:S2:1149:A:C2	49:S2:1151:G:C6	2.94	0.56
49:S2:1241:A:H2'	49:S2:1242:U:O4'	2.05	0.56
49:S2:1315:U:O4	49:S2:1316:C:C2	2.59	0.56
49:S2:1687:C:C2	49:S2:1688:C:C6	2.94	0.56
49:S2:1776:G:C2	49:S2:1777:G:C5	2.94	0.56
49:S2:449:A:N6	49:S2:452:G:C4	2.74	0.56
49:S2:830:A:N1	49:S2:844:U:C4	2.73	0.56
49:S2:949:G:C6	49:S2:950:C:C4	2.93	0.56
55:SF:86:LYS:HA	55:SF:89:THR:HG22	1.88	0.56
61:SL:39:ASN:C	61:SL:39:ASN:OD1	2.44	0.56
48:4:24:VAL:HG23	48:4:24:VAL:O	2.06	0.56
48:4:510:GLU:CB	48:4:571:LYS:O	2.54	0.56
48:4:723:PRO:O	48:4:727:ARG:HB2	2.06	0.56
1:5:1279:A:H2'	1:5:1280:C:C6	2.35	0.56
1:5:1359:G:C2'	1:5:1360:G:C8	2.87	0.56
1:5:1368:A:HO2'	1:5:1369:C:P	2.28	0.56
1:5:1377:G:C8	1:5:1378:C:H4'	2.40	0.56
1:5:1555:G:C6	1:5:1556:C:C5	2.93	0.56
1:5:1570:G:C5	1:5:1571:G:C8	2.94	0.56
1:5:1589:C:C2'	1:5:1590:C:O5'	2.54	0.56
1:5:165:A:H3'	1:5:166:C:C6	2.40	0.56
1:5:1661:C:H2'	1:5:1662:C:H6	1.71	0.56
1:5:1691:G:C6	1:5:1692:C:C5	2.93	0.56
1:5:1697:G:C4'	1:5:1698:C:OP1	2.54	0.56
1:5:1755:C:C3'	1:5:1756:U:H5''	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2451:A:C6	1:5:2452:G:C5	2.94	0.56
1:5:2606:G:C2	1:5:2607:C:C5	2.94	0.56
1:5:2645:G:C2	1:5:2646:C:N1	2.74	0.56
1:5:288:G:C2	1:5:289:C:C4	2.93	0.56
1:5:314:G:C2	1:5:4355:G:N7	2.73	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
1:5:3880:G:O2'	1:5:3881:G:O5'	2.24	0.56
1:5:4091:G:C2	1:5:4092:G:N9	2.74	0.56
1:5:4098:A:C6	1:5:4099:G:N7	2.74	0.56
1:5:4099:G:C2	1:5:4100:C:C2	2.93	0.56
1:5:4152:G:C2	1:5:4153:C:C6	2.93	0.56
1:5:4174:U:O2	1:5:4174:U:H2'	2.05	0.56
1:5:4413:C:O4'	1:5:4413:C:O2	2.23	0.56
1:5:443:G:P	9:F:68:ARG:HH22	74.08	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
1:5:494:U:N3	1:5:495:C:C6	2.73	0.56
1:5:4988:U:OP2	1:5:4988:U:H3'	2.05	0.56
1:5:5028:G:N2	1:5:5029:C:C2	2.73	0.56
1:5:693:C:C2	1:5:694:C:C5	2.94	0.56
1:5:751:G:C2	1:5:752:G:C8	2.93	0.56
1:5:994:G:C6	1:5:995:C:C4	2.94	0.56
2:7:69:U:N3	2:7:70:G:N7	2.53	0.56
3:8:116:C:N3	3:8:117:C:C6	2.74	0.56
4:A:118:GLU:HB3	4:A:126:LEU:HD21	1.88	0.56
4:A:226:ARG:NH1	4:A:226:ARG:HB2	2.21	0.56
5:B:62:ARG:HG3	5:B:62:ARG:HH11	1.70	0.56
6:C:331:TYR:O	6:C:331:TYR:CG	2.59	0.56
1:5:1743:A:O4'	7:D:15:ARG:HD3	2.04	0.56
9:F:93:PHE:CD1	9:F:93:PHE:C	2.79	0.56
10:G:108:GLN:HE21	10:G:108:GLN:CA	2.19	0.56
18:O:84:VAL:HG11	18:O:102:LEU:HD22	1.88	0.56
49:S2:122:G:H2'	49:S2:123:G:H1'	1.88	0.56
49:S2:1250:A:C2	49:S2:1339:U:C1'	2.89	0.56
49:S2:1261:C:C5	49:S2:1262:C:C5	2.93	0.56
49:S2:1368:U:C2	49:S2:1372:U:C4	2.93	0.56
49:S2:1426:U:C2	49:S2:1427:C:C6	2.94	0.56
49:S2:219:U:C2	49:S2:220:U:C6	2.94	0.56
49:S2:45:A:C2	49:S2:481:C:C1'	2.89	0.56
49:S2:749:U:C5	49:S2:750:C:C6	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:77:A:O3'	56:SG:173:ALA:HB3	2.06	0.56
49:S2:85:A:C2	49:S2:86:C:C6	2.94	0.56
49:S2:898:U:N3	49:S2:899:U:C6	2.73	0.56
52:SC:74:LYS:HG3	52:SC:269:PHE:CD2	2.41	0.56
58:SI:83:TYR:C	58:SI:83:TYR:CD1	2.79	0.56
1:5:4301:U:OP2	23:T:87:LYS:NZ	2.39	0.56
48:4:12:ILE:HG22	48:4:99:LEU:HD22	1.87	0.56
48:4:154:VAL:HA	48:4:205:ILE:HD11	1.86	0.56
1:5:1260:G:C2	1:5:1261:G:C4	2.94	0.56
1:5:1286:C:C2	1:5:1287:G:C8	2.93	0.56
1:5:450:G:C6	1:5:1295:C:N3	2.74	0.56
1:5:1358:G:C2	1:5:1359:G:C5	2.94	0.56
1:5:1473:U:C4	1:5:1474:C:C5	2.94	0.56
1:5:1774:C:N3	1:5:1775:A:N7	2.53	0.56
1:5:1984:A:H62	1:5:2011:C:C2'	2.19	0.56
1:5:1269:G:N7	1:5:2111:G:C6	2.74	0.56
1:5:2394:G:N2	1:5:2820:C:H5	2.04	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
1:5:2715:G:C4	1:5:2716:C:C5	2.93	0.56
1:5:2904:U:P	1:5:2905:C:H41	2.29	0.56
1:5:290:U:H2'	1:5:291:U:O5'	2.06	0.56
1:5:331:G:C2	1:5:332:C:C4	2.93	0.56
1:5:3720:G:C6	1:5:3721:U:C5	2.94	0.56
1:5:4164:C:C4	1:5:4165:C:C5	2.94	0.56
1:5:4205:A:C2	1:5:4206:C:C6	2.93	0.56
1:5:4235:G:O5'	1:5:4331:G:O2'	2.24	0.56
1:5:4413:C:H5'	12:I:157:PHE:CE2	2.39	0.56
1:5:4473:A:C2	1:5:4474:A:C4	2.93	0.56
1:5:4535:A:H2'	1:5:4535:A:N3	2.21	0.56
1:5:4749:C:O2	1:5:4749:C:O4'	2.23	0.56
1:5:4957:C:O2	1:5:4958:C:C6	2.59	0.56
1:5:5037:U:C2	1:5:5038:A:C8	2.94	0.56
1:5:98:A:C6	1:5:99:A:C4	2.94	0.56
2:7:82:G:N2	2:7:95:C:C2	2.74	0.56
6:C:213:GLU:N	6:C:213:GLU:OE1	2.39	0.56
1:5:1214:C:N4	9:F:58:HIS:ND1	2.54	0.56
14:K:61:LYS:HD3	14:K:72:GLU:C	2.25	0.56
15:L:9:ILE:O	15:L:10:LEU:HB2	2.05	0.56
49:S2:1124:C:C2	49:S2:1125:C:C5	2.93	0.56
49:S2:1259:A:O2'	49:S2:1263:U:O2	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1338:G:C5	49:S2:1339:U:C5	2.94	0.56
49:S2:1250:A:N3	49:S2:1339:U:H4'	2.21	0.56
49:S2:1398:G:H2'	49:S2:1398:G:N3	2.21	0.56
49:S2:1432:U:H2'	49:S2:1432:U:O2	2.04	0.56
49:S2:1484:A:C5'	53:SD:159:HIS:HB3	2.36	0.56
49:S2:1554:C:O2	49:S2:1554:C:O4'	2.23	0.56
49:S2:1588:A:O2'	49:S2:1589:A:C5'	2.54	0.56
49:S2:1852:C:C2	49:S2:1853:C:C5	2.93	0.56
49:S2:376:A:C2	49:S2:377:G:N9	2.74	0.56
49:S2:580:U:C4	49:S2:581:U:C6	2.94	0.56
49:S2:68:A:C5	49:S2:69:C:C5	2.94	0.56
49:S2:824:C:H2'	49:S2:825:A:C8	2.41	0.56
49:S2:927:C:N3	49:S2:928:G:N7	2.54	0.56
49:S2:978:G:N2	49:S2:979:C:C2	2.73	0.56
51:SB:33:VAL:HG21	51:SB:67:PHE:HZ	1.71	0.56
51:SB:89:GLU:OE2	51:SB:89:GLU:N	2.39	0.56
68:SS:111:LEU:HD22	68:SS:125:HIS:HD2	1.70	0.56
28:Y:62:TYR:OH	28:Y:97:VAL:HB	2.06	0.56
48:4:125:ALA:C	48:4:154:VAL:HG12	2.27	0.55
1:5:1287:G:N1	1:5:1289:C:C5	2.74	0.55
1:5:165:A:C5	1:5:166:C:C5	2.94	0.55
1:5:183:C:H4'	1:5:184:U:C5	2.41	0.55
1:5:964:A:H2	1:5:2252:G:C6	2.24	0.55
1:5:2463:G:H2'	1:5:2464:C:H6	1.71	0.55
1:5:247:G:C2	1:5:248:C:C6	2.93	0.55
1:5:2726:G:C2	1:5:2727:C:N3	2.74	0.55
1:5:2772:C:C2	1:5:2773:G:C8	2.94	0.55
1:5:2783:A:C5	1:5:2784:C:C5	2.94	0.55
1:5:302:C:C2	1:5:303:C:C5	2.94	0.55
1:5:3675:G:C2	1:5:3676:G:C8	2.94	0.55
1:5:3754:G:N1	1:5:3755:G:C8	2.74	0.55
1:5:3871:A:H2'	1:5:3872:A:O5'	2.06	0.55
1:5:3873:G:H2'	1:5:3874:G:C1'	2.35	0.55
1:5:4133:C:O2	1:5:4134:C:C6	2.59	0.55
1:5:4173:G:C2	1:5:4174:U:C6	2.94	0.55
1:5:469:C:C4	1:5:470:A:C5	2.93	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
1:5:677:G:N2	1:5:678:C:C2	2.74	0.55
3:8:10:G:C6	3:8:11:C:C4	2.93	0.55
3:8:139:G:C6	3:8:140:C:C4	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1749:A:H4'	12:I:35:ASP:OD2	2.05	0.55
49:S2:1294:G:C6	49:S2:1295:A:N7	2.75	0.55
49:S2:1435:C:H2'	49:S2:1436:C:O4'	2.06	0.55
49:S2:1454:A:N7	49:S2:1476:A:C4	2.74	0.55
49:S2:149:A:C2'	49:S2:150:A:O4'	2.54	0.55
49:S2:172:U:O2	49:S2:172:U:C2'	2.52	0.55
49:S2:1776:G:N1	49:S2:1777:G:C5	2.74	0.55
49:S2:1779:G:C2	49:S2:1780:G:C8	2.94	0.55
49:S2:1804:U:N3	49:S2:1805:G:C8	2.74	0.55
49:S2:27:A:N1	49:S2:28:U:C5	2.74	0.55
49:S2:27:A:N3	49:S2:28:U:C6	2.74	0.55
49:S2:297:A:C6	49:S2:298:G:C8	2.93	0.55
49:S2:351:G:C2	49:S2:352:U:C6	2.94	0.55
49:S2:574:A:O2'	49:S2:575:A:O5'	2.24	0.55
49:S2:637:U:O2	49:S2:638:C:C6	2.59	0.55
49:S2:695:C:N3	49:S2:696:G:C8	2.75	0.55
49:S2:926:A:C4	49:S2:927:C:C6	2.94	0.55
49:S2:945:U:O2	49:S2:1045:U:O2'	2.23	0.55
50:SA:90:PHE:HB2	50:SA:179:ALA:HB2	1.87	0.55
49:S2:1387:G:N1	53:SD:206:ASP:OD2	2.33	0.55
55:SF:83:ASN:HD22	55:SF:83:ASN:N	2.04	0.55
58:SI:6:ASP:N	58:SI:6:ASP:OD1	2.38	0.55
49:S2:1622:U:O4	68:SS:120:HIS:CE1	2.59	0.55
48:4:312:THR:HG23	48:4:313:ALA:N	2.21	0.55
48:4:330:LYS:NZ	48:4:330:LYS:CB	2.69	0.55
48:4:816:HIS:CD2	48:4:818:GLN:N	2.73	0.55
1:5:1215:C:C4	1:5:1216:C:H5	2.24	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
1:5:15:A:H2'	1:5:16:G:O4'	2.06	0.55
1:5:1819:G:H2'	1:5:1819:G:N3	2.21	0.55
1:5:1873:A:C2	1:5:1874:A:C8	2.94	0.55
1:5:2106:G:O2'	1:5:2107:C:O4'	2.11	0.55
1:5:2089:G:N1	1:5:2263:A:C5	2.74	0.55
1:5:2439:G:C6	1:5:2440:U:C4	2.94	0.55
1:5:2480:G:C2	1:5:2499:C:C2	2.94	0.55
1:5:2453:A:H1'	1:5:2507:A:C6	2.41	0.55
1:5:2658:G:N1	1:5:2675:G:C2	2.74	0.55
1:5:2677:G:C5	1:5:2678:A:C8	2.94	0.55
1:5:2686:G:H5'	1:5:2687:U:OP1	2.07	0.55
1:5:3607:U:C2	1:5:3608:A:N7	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3935:C:C2	1:5:3936:A:C8	2.94	0.55
1:5:4071:U:C2	1:5:4072:C:C6	2.94	0.55
1:5:4083:U:H5'	4:A:31:ALA:HB2	1.87	0.55
1:5:4092:G:N1	1:5:4093:G:N3	2.54	0.55
1:5:4344:U:O2	1:5:4345:C:C5	2.54	0.55
1:5:4490:C:O2	1:5:4491:G:H8	1.89	0.55
1:5:4572:U:C2	1:5:4720:C:C5	2.94	0.55
1:5:471:A:C6	1:5:472:C:N1	2.74	0.55
1:5:4999:G:N1	1:5:5000:G:C8	2.73	0.55
1:5:497:G:C2	1:5:657:C:C4	2.94	0.55
1:5:497:G:N1	1:5:657:C:C4	2.75	0.55
1:5:659:G:N1	1:5:660:A:C5	2.74	0.55
1:5:688:U:O4	1:5:689:U:C5	2.60	0.55
1:5:737:C:C4	1:5:738:C:C5	2.94	0.55
1:5:909:A:C6	1:5:910:G:C8	2.95	0.55
1:5:949:G:C2	1:5:950:G:C8	2.94	0.55
1:5:964:A:C2	1:5:2252:G:N7	2.75	0.55
1:5:973:G:O6	1:5:1282:G:N2	2.38	0.55
2:7:8:G:C4	2:7:9:C:C6	2.94	0.55
6:C:334:THR:HG21	9:F:53:TYR:OH	2.06	0.55
14:K:47:ALA:CA	14:K:72:GLU:CD	2.74	0.55
20:Q:181:ARG:HB3	20:Q:181:ARG:HH21	1.71	0.55
49:S2:1077:A:C6	49:S2:1078:C:C5	2.95	0.55
49:S2:1171:G:O2'	49:S2:1172:U:OP2	2.25	0.55
49:S2:1563:G:C6	49:S2:1564:C:C4	2.94	0.55
49:S2:1573:G:C6	49:S2:1574:C:C4	2.94	0.55
49:S2:1585:U:C6	49:S2:1585:U:H5'	2.40	0.55
49:S2:10:G:C8	49:S2:1697:A:N3	2.75	0.55
49:S2:1776:G:N3	49:S2:1777:G:C8	2.74	0.55
1:5:3759:A:O2'	49:S2:1826:G:H2'	2.06	0.55
49:S2:193:C:C2	49:S2:207:G:C2	2.94	0.55
49:S2:449:A:H2'	49:S2:449:A:N3	2.20	0.55
49:S2:458:A:C5	49:S2:459:C:C6	2.92	0.55
49:S2:518:G:C2	49:S2:519:A:N7	2.74	0.55
49:S2:35:C:O2	49:S2:520:A:N1	2.39	0.55
49:S2:623:G:N2	49:S2:624:C:H1'	2.22	0.55
49:S2:633:C:C4	49:S2:634:A:N7	2.74	0.55
49:S2:816:A:C6	49:S2:817:G:C4	2.95	0.55
49:S2:828:G:C5	49:S2:829:C:C5	2.94	0.55
49:S2:834:C:C2	49:S2:841:G:C2	2.95	0.55
49:S2:830:A:OP2	49:S2:846:G:N2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SL:15:THR:HG22	61:SL:15:THR:O	2.07	0.55
74:SY:60:PHE:HD1	74:SY:71:GLY:HA3	1.72	0.55
48:4:144:ARG:HH12	48:4:781:MET:CE	2.18	0.55
48:4:189:ILE:CG2	48:4:203:ILE:CD1	2.84	0.55
48:4:316:ILE:CG2	48:4:321:ILE:O	2.54	0.55
48:4:41:CYS:HA	48:4:48:SER:O	2.06	0.55
48:4:398:ILE:HD13	48:4:479:LEU:HD23	1.88	0.55
48:4:575:PRO:HG2	48:4:577:VAL:CG2	2.36	0.55
48:4:650:TRP:CE2	48:4:664:ASP:HB2	2.40	0.55
48:4:749:ILE:HB	48:4:759:ILE:HD12	1.88	0.55
1:5:1048:G:C2	1:5:1049:C:C2	2.94	0.55
1:5:1215:C:H2'	1:5:1216:C:H5'	1.88	0.55
1:5:1437:C:O2	1:5:2098:G:N7	2.40	0.55
1:5:1447:C:C2	1:5:2098:G:N1	2.74	0.55
1:5:1475:G:H22	1:5:1489:G:H1	1.54	0.55
1:5:1691:G:C6	1:5:1692:C:C4	2.94	0.55
1:5:1995:G:C4	1:5:1996:C:C5	2.93	0.55
1:5:2034:G:N1	1:5:2035:C:C2	2.74	0.55
1:5:2104:G:N1	1:5:2105:A:C5	2.75	0.55
1:5:1269:G:N9	1:5:2111:G:C6	2.75	0.55
1:5:1899:G:H1'	1:5:2278:G:N2	2.19	0.55
1:5:2444:U:C5	1:5:2445:C:C5	2.94	0.55
1:5:2479:G:C2	1:5:2480:G:C4	2.93	0.55
1:5:2855:G:N2	1:5:2859:G:H22	2.04	0.55
1:5:3694:U:N3	1:5:3695:U:C4	2.73	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
1:5:3778:U:O2	1:5:3778:U:H2'	2.06	0.55
1:5:4102:C:C2	1:5:4108:G:C2	2.94	0.55
1:5:4215:C:N3	1:5:4216:G:C5	2.74	0.55
1:5:42:A:N7	1:5:4379:A:N6	2.54	0.55
1:5:4530:U:N3	1:5:4531:U:O2'	2.38	0.55
1:5:471:A:C2	1:5:472:C:O4'	2.59	0.55
1:5:712:C:N3	1:5:713:C:C5	2.75	0.55
1:5:990:C:C4	1:5:1064:G:C2	2.94	0.55
3:8:43:A:N3	3:8:44:A:C8	2.73	0.55
4:A:163:ARG:NH1	4:A:163:ARG:CB	2.69	0.55
6:C:102:PHE:O	6:C:103:ALA:C	2.43	0.55
1:5:1281:G:H1'	6:C:322:LEU:N	2.21	0.55
49:S2:1301:A:H2'	49:S2:1303:C:O2	2.06	0.55
49:S2:1574:C:N3	49:S2:1575:G:C8	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1630:A:C6	49:S2:1631:U:C5	2.95	0.55
49:S2:413:G:C2'	49:S2:414:A:O5'	2.54	0.55
49:S2:96:C:O2	49:S2:473:A:O2'	2.24	0.55
49:S2:52:G:C6	49:S2:53:C:C6	2.95	0.55
49:S2:19:A:O3'	49:S2:620:G:H8	1.89	0.55
49:S2:92:A:C5	49:S2:447:A:N3	2.74	0.55
49:S2:1097:G:H4'	50:SA:32:PHE:CE2	2.41	0.55
53:SD:99:ILE:O	53:SD:103:GLU:HB2	2.07	0.55
54:SE:47:PHE:CE1	54:SE:101:LEU:HD21	2.41	0.55
54:SE:18:TRP:HB3	54:SE:46:ILE:HG21	1.87	0.55
49:S2:860:G:OP1	57:SH:107:LYS:NZ	2.39	0.55
62:SM:25:ALA:CB	62:SM:111:VAL:HG13	2.36	0.55
68:SS:86:ARG:HA	68:SS:86:ARG:NE	2.22	0.55
26:W:50:ASN:N	26:W:50:ASN:OD1	2.40	0.55
28:Y:62:TYR:N	28:Y:62:TYR:CD1	2.74	0.55
48:4:126:LEU:HD11	48:4:156:MET:CG	2.36	0.55
48:4:16:LYS:H	48:4:16:LYS:HE3	1.71	0.55
48:4:43:ALA:O	48:4:45:ILE:CG2	2.55	0.55
48:4:475:VAL:O	48:4:475:VAL:CG1	2.54	0.55
48:4:500:SER:O	48:4:501:VAL:HB	2.07	0.55
48:4:73:THR:H	48:4:104:ASP:HB2	1.53	0.55
48:4:753:GLU:HB2	48:4:782:PHE:CZ	2.38	0.55
1:5:1089:G:C5'	23:T:140:PHE:CE1	2.89	0.55
1:5:1249:C:C2	1:5:1250:C:C5	2.94	0.55
1:5:125:C:O2	1:5:125:C:H2'	2.05	0.55
1:5:1266:G:C2	1:5:1268:G:C6	2.95	0.55
1:5:126:C:C2	1:5:127:G:N7	2.72	0.55
1:5:1554:A:C2	1:5:1555:G:H1'	2.41	0.55
1:5:1534:A:C2'	1:5:1637:A:C2	2.89	0.55
1:5:1950:U:C2	1:5:1951:G:N7	2.74	0.55
1:5:2128:G:C2	1:5:2129:C:C2	2.94	0.55
1:5:2468:U:C4	1:5:2473:A:C6	2.95	0.55
1:5:2519:U:C2	1:5:2520:C:C4	2.95	0.55
1:5:2522:G:HO2'	1:5:2697:A:HO2'	1.52	0.55
1:5:258:G:C6	1:5:259:C:C4	2.94	0.55
1:5:2404:A:H61	1:5:2787:A:N6	2.04	0.55
1:5:293:G:H2'	1:5:297:U:N1	2.21	0.55
1:5:3741:C:N3	1:5:3742:G:C5	2.74	0.55
1:5:3870:C:C2	1:5:3886:G:C2	2.94	0.55
1:5:3879:G:C6	1:5:3882:C:C6	2.94	0.55
1:5:4481:U:N3	1:5:4482:U:C5	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4563:U:C4	1:5:4564:A:C6	2.94	0.55
1:5:4620:U:C4	1:5:4621:C:C5	2.94	0.55
1:5:470:A:C6	1:5:471:A:C4	2.95	0.55
1:5:5039:U:H5''	1:5:5040:U:H2'	1.88	0.55
2:7:19:C:C2	2:7:20:U:C5	2.94	0.55
2:7:33:U:O2	2:7:34:C:C6	2.60	0.55
3:8:141:C:H2'	3:8:142:U:C6	2.41	0.55
4:A:234:LYS:HG2	4:A:238:ILE:HD12	1.89	0.55
1:5:4976:U:O4	5:B:342:LYS:CD	2.52	0.55
6:C:317:ASN:HD21	6:C:320:LYS:HG3	1.72	0.55
7:D:107:ARG:HD3	7:D:248:ARG:CG	2.36	0.55
14:K:123:ARG:CG	14:K:129:ILE:HD11	1.91	0.55
14:K:43:GLY:O	14:K:72:GLU:OE2	2.25	0.55
1:5:4911:A:N6	18:O:105:PHE:CD1	2.73	0.55
49:S2:1233:G:C6	49:S2:1234:C:C4	2.94	0.55
49:S2:1283:C:C4	62:SM:103:VAL:HA	2.41	0.55
49:S2:1405:A:N1	49:S2:1406:G:C4	2.75	0.55
49:S2:1408:U:H2'	49:S2:1409:A:C1'	2.36	0.55
49:S2:1518:C:O2	49:S2:1518:C:O4'	2.24	0.55
49:S2:1588:A:H4'	69:ST:92:PHE:HE2	1.72	0.55
49:S2:1589:A:C2'	49:S2:1590:C:O4'	2.55	0.55
49:S2:171:A:C5	49:S2:173:A:C5	2.94	0.55
49:S2:1773:C:N3	49:S2:1774:C:C5	2.73	0.55
49:S2:378:U:O2	49:S2:379:C:C6	2.60	0.55
49:S2:452:G:N3	49:S2:453:C:C5	2.71	0.55
49:S2:455:A:O2'	49:S2:1735:A:O2'	2.24	0.55
49:S2:600:G:C5	49:S2:631:U:O4	2.59	0.55
49:S2:752:G:N2	49:S2:790:C:C2	2.75	0.55
50:SA:56:GLU:OE1	71:SV:82:ASN:ND2	2.38	0.55
52:SC:134:ASN:C	52:SC:134:ASN:HD22	2.08	0.55
53:SD:152:PHE:N	53:SD:152:PHE:CD1	2.71	0.55
70:SU:93:SER:HB2	70:SU:97:ILE:HB	1.89	0.55
1:5:4670:C:O2	25:V:15:ARG:NH2	2.39	0.55
48:4:191:THR:HG22	48:4:192:TYR:CG	2.41	0.55
48:4:150:ARG:HB2	48:4:368:ARG:HG3	1.88	0.55
48:4:3:ASN:CB	48:4:47:ALA:O	2.54	0.55
48:4:842:LYS:N	48:4:842:LYS:HD3	2.21	0.55
1:5:1413:C:O2	1:5:1414:C:C6	2.60	0.55
1:5:144:G:N1	1:5:145:G:N7	2.54	0.55
1:5:145:G:C2	1:5:146:G:N9	2.75	0.55
1:5:1725:U:C4	1:5:1726:U:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1864:G:C6	1:5:1865:G:C4	2.94	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:C2'	1:5:1946:G:H5'	2.34	0.55
1:5:1946:G:C2	1:5:1948:G:C8	2.95	0.55
1:5:2034:G:C2	1:5:2035:C:C2	2.95	0.55
1:5:211:G:N2	1:5:212:A:C8	2.74	0.55
1:5:2291:G:N1	1:5:2292:C:C5	2.75	0.55
1:5:2482:C:C2	1:5:2483:G:C8	2.95	0.55
1:5:2496:G:C2	1:5:2497:C:C2	2.94	0.55
1:5:2721:G:C2'	1:5:2722:G:H5'	2.36	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
1:5:288:G:N3	1:5:289:C:C6	2.75	0.55
1:5:3910:C:H2'	1:5:3911:C:H6	1.70	0.55
1:5:405:U:O2	1:5:405:U:H2'	2.07	0.55
1:5:4081:G:N3	1:5:4082:G:C8	2.74	0.55
1:5:4092:G:N2	1:5:4158:C:C2	2.75	0.55
1:5:4145:C:O2	1:5:4146:G:C8	2.59	0.55
1:5:4277:G:C2	1:5:4278:C:N1	2.75	0.55
1:5:4405:G:C5	1:5:4406:U:C6	2.94	0.55
1:5:4652:G:C2	1:5:4653:C:C5	2.94	0.55
1:5:4747:C:H2'	1:5:4748:U:C5	2.42	0.55
1:5:5031:G:C2	1:5:5032:C:C5	2.95	0.55
1:5:515:C:H2'	1:5:515:C:O2	2.04	0.55
1:5:656:C:C2	1:5:657:C:C6	2.95	0.55
1:5:961:G:O6	1:5:969:C:C5	2.59	0.55
2:7:19:C:C2	2:7:60:G:C2	2.94	0.55
2:7:7:G:OP1	7:D:33:ARG:HD2	2.06	0.55
3:8:42:G:N1	3:8:43:A:C5	2.75	0.55
14:K:113:ALA:HA	14:K:116:MET:CG	2.37	0.55
18:O:16:LEU:HD11	18:O:83:THR:HG21	1.89	0.55
49:S2:1029:G:N2	49:S2:1030:A:H1'	2.22	0.55
49:S2:1142:G:N2	49:S2:1144:A:H3'	2.22	0.55
49:S2:1325:G:N1	49:S2:1327:G:C5	2.75	0.55
49:S2:1426:U:N3	49:S2:1427:C:C5	2.75	0.55
49:S2:1453:C:C4	49:S2:1455:A:N9	2.75	0.55
49:S2:1467:C:C2	49:S2:1468:C:C6	2.95	0.55
49:S2:1659:U:H2'	49:S2:1659:U:O2	2.07	0.55
49:S2:170:A:H4'	56:SG:136:LYS:HD2	1.89	0.55
49:S2:180:G:H3'	49:S2:181:A:H3'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:20:G:P	49:S2:620:G:C8	2.99	0.55
49:S2:862:A:N1	49:S2:863:U:C6	2.74	0.55
22:S:35:PRO:HD2	22:S:39:VAL:HG21	1.87	0.55
51:SB:133:TYR:CE2	51:SB:181:LEU:CD1	2.88	0.55
53:SD:107:TYR:HA	53:SD:110:LEU:HB3	1.88	0.55
62:SM:15:ASN:O	62:SM:19:GLN:HG3	2.06	0.55
68:SS:82:TRP:C	68:SS:84:LEU:H	2.10	0.55
49:S2:921:G:O6	72:SW:28:ARG:HG3	2.05	0.55
26:W:55:TYR:HD1	26:W:55:TYR:C	2.09	0.55
29:Z:21:ARG:NH1	29:Z:21:ARG:HG3	2.22	0.55
48:4:206:ASP:HB3	48:4:207:PRO:HD3	0.56	0.55
48:4:402:VAL:C	48:4:403:PRO:O	2.40	0.55
48:4:532:PRO:CD	48:4:533:MET:H	2.20	0.55
48:4:752:PRO:CD	48:4:755:VAL:HG23	2.35	0.55
1:5:105:A:H2'	1:5:106:A:O4'	2.07	0.55
1:5:1509:C:C2	1:5:1510:G:C8	2.95	0.55
1:5:1627:G:H3'	1:5:1628:C:H6	1.71	0.55
1:5:1688:G:C2	1:5:1849:U:O2	2.59	0.55
1:5:1878:G:N3	1:5:1879:C:C5	2.75	0.55
1:5:1970:A:C2	1:5:2016:C:C5	2.95	0.55
1:5:2104:G:H2'	1:5:2105:A:O4'	2.07	0.55
1:5:2328:G:C5	1:5:2329:U:C4	2.94	0.55
1:5:2367:A:N3	1:5:2368:A:C8	2.75	0.55
1:5:2382:A:N3	1:5:2382:A:H2'	2.21	0.55
1:5:2392:C:H2'	1:5:2392:C:O2	2.05	0.55
1:5:2417:A:N3	1:5:2418:A:C8	2.75	0.55
1:5:2688:G:C2	1:5:2689:C:C5	2.95	0.55
1:5:2791:C:O2	1:5:2791:C:H2'	2.05	0.55
1:5:2840:A:C6	1:5:2841:G:N7	2.74	0.55
1:5:332:C:C2'	1:5:333:U:O5'	2.55	0.55
1:5:3593:C:C4'	1:5:3594:C:OP2	2.54	0.55
1:5:3717:A:O2'	1:5:3718:A:C4'	2.54	0.55
1:5:3816:A:OP1	1:5:3818:U:H5	1.89	0.55
1:5:3888:G:O2'	1:5:3889:G:OP1	2.11	0.55
1:5:388:A:N6	1:5:411:G:C4	2.75	0.55
1:5:4164:C:C2	1:5:4165:C:C6	2.95	0.55
1:5:4194:U:O4'	1:5:4194:U:O2	2.23	0.55
1:5:4270:C:H2'	1:5:4270:C:O2	1.98	0.55
1:5:4333:C:N3	1:5:4334:U:C4	2.75	0.55
1:5:4484:A:C2	1:5:4485:C:C4	2.95	0.55
1:5:460:C:C2	1:5:461:G:N7	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4768:G:H3'	1:5:4769:G:H8	1.72	0.55
1:5:4998:G:N1	1:5:4999:G:C8	2.74	0.55
1:5:733:A:N7	1:5:734:G:C8	2.74	0.55
2:7:111:C:C2	2:7:112:U:C6	2.93	0.55
2:7:89:G:H2'	2:7:90:A:C8	2.41	0.55
3:8:38:U:H2'	3:8:38:U:O2	2.05	0.55
3:8:39:G:C2	3:8:104:A:C2	2.95	0.55
5:B:46:PHE:CE2	5:B:207:VAL:HG13	2.42	0.55
6:C:270:ALA:HA	6:C:278:ASN:HD21	1.71	0.55
7:D:119:TYR:CD1	7:D:119:TYR:N	2.72	0.55
8:E:277:ILE:N	8:E:278:TYR:CE2	2.74	0.55
14:K:40:LYS:HD2	14:K:41:LYS:N	2.21	0.55
49:S2:11:A:C6	49:S2:12:U:C5	2.95	0.55
49:S2:1224:G:C6	49:S2:1225:U:C2	2.95	0.55
49:S2:140:C:O2'	49:S2:141:A:O4'	2.23	0.55
49:S2:1466:G:N1	49:S2:1467:C:C4	2.74	0.55
49:S2:1550:G:OP2	53:SD:8:LYS:NZ	2.35	0.55
49:S2:167:G:H2'	49:S2:168:C:O4'	2.07	0.55
49:S2:447:A:N6	49:S2:449:A:C6	2.74	0.55
49:S2:622:C:C4	49:S2:623:G:H1'	2.42	0.55
49:S2:898:U:C2	49:S2:899:U:C6	2.94	0.55
51:SB:81:PHE:HB3	51:SB:109:LYS:HB2	1.89	0.55
49:S2:1263:U:H5''	53:SD:27:ARG:HH12	23.05	0.55
59:SJ:69:ARG:HD2	59:SJ:73:GLU:HG3	1.88	0.55
60:SK:52:LEU:HD11	60:SK:79:LEU:HD21	1.88	0.55
62:SM:85:LEU:HA	62:SM:88:TRP:HH2	1.64	0.55
63:SN:99:ARG:HH21	63:SN:115:LEU:HD11	1.71	0.55
67:SR:54:VAL:O	67:SR:58:MET:HG2	2.07	0.55
48:4:140:GLU:HG3	48:4:188:ILE:CD1	2.36	0.55
48:4:206:ASP:C	48:4:212:VAL:CG2	2.73	0.55
48:4:297:ILE:C	48:4:300:VAL:HG22	2.25	0.55
48:4:46:ILE:CG2	48:4:454:MET:SD	2.95	0.55
1:5:1080:C:N3	1:5:1081:C:C6	2.74	0.55
1:5:1210:C:H2'	1:5:1210:C:O2	2.06	0.55
1:5:1282:G:C8	8:E:124:HIS:CE1	2.94	0.55
1:5:172:C:O4'	1:5:172:C:OP1	2.24	0.55
1:5:1898:C:N4	1:5:2279:A:HO2'	2.05	0.55
1:5:1932:A:H2'	1:5:1933:G:C8	2.42	0.55
1:5:2080:U:N3	1:5:2081:C:N4	2.55	0.55
1:5:2100:A:C8	1:5:2101:C:C5	2.95	0.55
1:5:2129:C:C2	1:5:2130:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:208:A:C4'	1:5:232:G:N2	2.68	0.55
1:5:299:C:C4	1:5:300:A:N7	2.74	0.55
1:5:29:G:N1	1:5:30:C:C4	2.75	0.55
1:5:66:A:C2	1:5:312:G:H1'	2.40	0.55
1:5:3797:C:O2	1:5:3801:U:O4	2.25	0.55
1:5:4241:C:N3	1:5:4242:U:H5	2.03	0.55
1:5:4271:A:C3'	1:5:4272:G:H21	2.19	0.55
1:5:4293:U:O4	1:5:4329:G:H8	1.89	0.55
1:5:4413:C:H3'	1:5:4414:A:C8	2.39	0.55
1:5:447:C:N3	1:5:448:G:C8	2.74	0.55
1:5:448:G:N1	1:5:449:C:C6	2.74	0.55
1:5:4550:G:N1	1:5:4551:U:C6	2.75	0.55
1:5:4560:C:C2	1:5:4560:C:H5'	2.42	0.55
1:5:44:A:C6	1:5:45:U:C5	2.95	0.55
1:5:4979:A:H2'	1:5:4980:C:O5'	2.06	0.55
1:5:4998:G:C2	1:5:4999:G:N9	2.74	0.55
1:5:711:A:N3	1:5:712:C:C6	2.75	0.55
1:5:83:C:O2	1:5:83:C:H2'	2.07	0.55
1:5:919:C:H2'	1:5:920:C:O4'	2.07	0.55
1:5:90:G:N7	1:5:92:C:C1'	2.70	0.55
5:B:307:TYR:HD2	5:B:366:LYS:HD2	1.71	0.55
12:I:100:ASN:O	12:I:102:MET:N	2.37	0.55
14:K:47:ALA:HA	14:K:72:GLU:CD	2.25	0.55
49:S2:1034:A:C5	49:S2:1082:A:C6	2.95	0.55
49:S2:1153:C:O4'	49:S2:1153:C:O2	2.20	0.55
49:S2:1442:U:C2'	49:S2:1442:U:O2	2.54	0.55
49:S2:10:G:H8	49:S2:1697:A:O2'	1.90	0.55
49:S2:1781:A:N3	49:S2:1782:G:N7	2.54	0.55
49:S2:185:G:C4	49:S2:186:C:C5	2.94	0.55
49:S2:29:G:H2'	49:S2:30:C:C6	2.42	0.55
49:S2:328:U:H2'	49:S2:329:G:C8	2.42	0.55
49:S2:798:A:O3'	49:S2:798:A:OP1	2.24	0.55
49:S2:956:G:O6	49:S2:968:U:C2	2.59	0.55
56:SG:70:HIS:CD2	56:SG:103:ASP:OD2	2.59	0.55
48:4:398:ILE:HD11	48:4:479:LEU:HD23	1.88	0.55
48:4:576:VAL:O	48:4:577:VAL:HB	2.07	0.55
48:4:591:CYS:SG	48:4:591:CYS:O	2.64	0.55
48:4:622:VAL:HG11	48:4:635:LEU:CD2	2.35	0.55
48:4:591:CYS:SG	48:4:732:SER:CB	2.94	0.55
14:K:30:PRO:HB3	48:4:775:GLN:O	2.07	0.55
48:4:81:LEU:HB3	48:4:86:LEU:HD12	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1076:C:C2	1:5:1077:C:C6	2.94	0.55
1:5:1203:G:C2	1:5:1204:C:N1	2.75	0.55
1:5:1393:G:H2'	1:5:1394:G:C5'	2.37	0.55
1:5:1555:G:C5	1:5:1556:C:C6	2.95	0.55
1:5:1629:G:N2	1:5:1631:A:C4	2.75	0.55
1:5:1684:A:C2	1:5:1685:G:C1'	2.90	0.55
1:5:1726:U:O2	1:5:1727:U:C6	2.60	0.55
1:5:184:U:C2	1:5:254:G:N2	2.75	0.55
1:5:2034:G:H5'	1:5:2035:C:OP2	2.06	0.55
1:5:2081:C:C2	1:5:2082:G:N7	2.75	0.55
1:5:219:G:C8	1:5:220:C:H5	2.25	0.55
1:5:2253:A:H8	1:5:2254:G:H1'	1.72	0.55
1:5:2390:G:C6	1:5:2391:G:C8	2.94	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
1:5:299:C:N3	1:5:300:A:C8	2.74	0.55
1:5:365:U:O2	1:5:365:U:H2'	2.06	0.55
1:5:3773:U:O2	1:5:3775:A:N1	2.40	0.55
1:5:4097:G:C2	1:5:4098:A:C5	2.95	0.55
1:5:4104:G:O2'	1:5:4105:A:H8	1.89	0.55
1:5:4275:G:C6	1:5:4276:G:C4	2.95	0.55
1:5:4601:U:H2'	1:5:4601:U:O2	2.07	0.55
1:5:4735:G:C6	1:5:4736:C:C5	2.94	0.55
1:5:483:G:N3	1:5:484:U:C6	2.75	0.55
1:5:4872:G:O2'	1:5:4873:G:OP1	2.20	0.55
1:5:4885:U:O2	1:5:4886:C:C6	2.59	0.55
1:5:5057:C:O3'	7:D:23:ARG:NH2	166.48	0.55
1:5:49:U:C2'	1:5:50:C:O5'	2.55	0.55
1:5:514:U:H3'	1:5:514:U:C6	2.42	0.55
1:5:60:G:N3	1:5:61:A:C8	2.74	0.55
1:5:675:C:N3	1:5:676:C:C5	2.75	0.55
1:5:977:C:C2'	1:5:978:G:H5'	2.36	0.55
3:8:134:G:C6	3:8:135:C:C4	2.94	0.55
3:8:139:G:C5	3:8:140:C:C5	2.95	0.55
7:D:123:VAL:HG22	7:D:248:ARG:NH2	2.22	0.55
7:D:27:LYS:CE	13:J:147:ARG:NH2	2.69	0.55
9:F:107:VAL:HG11	9:F:141:TYR:CE1	2.42	0.55
12:I:159:PHE:HB3	12:I:163:GLN:HE22	1.71	0.55
15:L:23:ALA:HB3	17:N:199:GLN:OE1	2.07	0.55
21:R:106:LEU:O	21:R:107:ARG:C	3.32	0.55
49:S2:1133:A:N3	49:S2:1134:G:C8	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1271:C:N4	49:S2:1272:C:C4	2.75	0.55
49:S2:1430:C:N4	49:S2:1431:G:N7	2.54	0.55
49:S2:1535:U:H1'	55:SF:88:MET:SD	2.47	0.55
49:S2:1606:G:O2'	49:S2:1633:A:N6	2.35	0.55
49:S2:212:C:N3	49:S2:213:G:C8	2.75	0.55
49:S2:223:C:H2'	49:S2:224:A:C8	2.42	0.55
49:S2:294:U:H4'	49:S2:295:C:OP2	2.06	0.55
49:S2:46:A:C5	49:S2:473:A:C2	2.95	0.55
49:S2:526:A:O2'	59:SJ:125:HIS:ND1	2.22	0.55
49:S2:53:C:C2	49:S2:54:A:H8	2.20	0.55
49:S2:576:A:H2'	49:S2:577:U:O4'	2.07	0.55
49:S2:623:G:H21	49:S2:624:C:H1'	1.71	0.55
49:S2:678:U:N3	49:S2:679:A:C8	2.75	0.55
49:S2:85:A:N3	49:S2:86:C:C6	2.75	0.55
52:SC:253:PRO:O	52:SC:256:TRP:HB2	2.07	0.55
58:SI:110:ARG:NH1	58:SI:121:LEU:HB2	2.21	0.55
60:SK:61:GLN:HA	60:SK:61:GLN:OE1	2.05	0.55
71:SV:64:GLU:O	71:SV:65:SER:C	2.44	0.55
48:4:518:PRO:HB3	73:SX:75:ILE:HD12	1.89	0.55
26:W:28:VAL:HG12	26:W:30:GLN:OE1	2.05	0.55
3:8:74:U:N3	28:Y:74:TYR:CE1	2.75	0.55
48:4:183:GLU:CA	48:4:183:GLU:OE1	2.55	0.55
48:4:265:TYR:CD1	48:4:265:TYR:N	2.74	0.55
48:4:316:ILE:HG22	48:4:321:ILE:O	2.06	0.55
48:4:659:PRO:HG2	48:4:698:ARG:CZ	2.25	0.55
48:4:689:GLU:C	48:4:730:TYR:CZ	2.65	0.55
48:4:798:ALA:O	48:4:801:ARG:HG3	2.06	0.55
1:5:1211:G:N2	1:5:1212:G:C4	2.75	0.55
1:5:1583:A:N7	1:5:1584:G:C8	2.74	0.55
1:5:1723:A:N1	1:5:1838:A:N1	2.55	0.55
1:5:1726:U:N3	1:5:1727:U:C6	2.75	0.55
1:5:172:C:C2	1:5:173:C:C5	2.95	0.55
1:5:1761:G:C6	1:5:1762:C:C4	2.95	0.55
1:5:1786:A:H2'	1:5:1789:C:C5	2.42	0.55
1:5:1899:G:C6	1:5:1900:C:N4	2.75	0.55
1:5:2082:G:C2'	1:5:2083:C:O5'	2.55	0.55
1:5:2368:A:N1	1:5:2788:U:C5	2.75	0.55
1:5:184:U:C2	1:5:254:G:C2	2.95	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
1:5:2792:C:C2	1:5:2793:G:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:293:G:C5'	1:5:294:G:H8	2.20	0.55
1:5:3656:A:N3	1:5:3657:U:C6	2.75	0.55
1:5:3771:C:H2'	1:5:3772:U:C6	2.42	0.55
1:5:3832:U:N3	1:5:3833:C:C5	2.75	0.55
1:5:4097:G:N2	1:5:4098:A:C4	2.75	0.55
1:5:4251:A:N6	13:J:127:GLY:O	2.39	0.55
1:5:4403:U:H2'	1:5:4404:U:O4'	2.07	0.55
1:5:460:C:H2'	1:5:461:G:C8	2.42	0.55
1:5:5061:A:H4'	1:5:5062:G:H5''	1.87	0.55
1:5:515:C:C2	1:5:516:C:C5	2.95	0.55
1:5:754:U:C2	1:5:755:C:C5	2.95	0.55
3:8:78:G:H2'	3:8:79:G:O4'	2.07	0.55
3:8:95:A:N3	3:8:96:C:C6	2.75	0.55
12:I:66:GLU:OE1	12:I:69:ARG:NH1	2.40	0.55
14:K:32:ILE:C	14:K:34:PRO:CD	2.74	0.55
17:N:37:HIS:C	17:N:37:HIS:CD2	2.80	0.55
49:S2:1233:G:C5	49:S2:1234:C:C5	2.95	0.55
49:S2:164:A:H2'	49:S2:165:G:C2	2.41	0.55
49:S2:1738:C:C4	49:S2:1739:C:C5	2.95	0.55
49:S2:1822:A:C8	49:S2:1823:A:H2'	2.42	0.55
49:S2:1860:A:N1	49:S2:1862:G:C5	2.75	0.55
49:S2:194:C:C2	49:S2:206:G:N2	2.75	0.55
49:S2:298:G:C6	49:S2:299:A:N7	2.74	0.55
49:S2:92:A:C5	49:S2:447:A:C2	2.95	0.55
49:S2:70:G:C5	49:S2:71:G:N7	2.75	0.55
49:S2:794:A:N3	49:S2:795:A:C8	2.75	0.55
49:S2:893:U:C2	49:S2:894:G:C8	2.95	0.55
49:S2:910:G:C4	49:S2:911:C:C6	2.95	0.55
49:S2:165:G:H5''	56:SG:110:ASN:HB2	1.88	0.55
29:Z:36:ARG:HD2	29:Z:38:TYR:CE1	2.41	0.55
48:4:189:ILE:HG23	48:4:203:ILE:CD1	2.37	0.55
48:4:41:CYS:SG	48:4:49:ALA:HB2	2.47	0.55
48:4:609:PHE:HD1	48:4:610:PRO:HD2	1.72	0.55
48:4:752:PRO:C	48:4:754:GLN:N	2.59	0.55
1:5:1086:C:H2'	1:5:1086:C:O2	2.05	0.55
1:5:1268:G:H4'	1:5:1269:G:OP1	2.06	0.55
1:5:1309:C:C4	1:5:1310:C:C5	2.94	0.55
1:5:1378:C:H5''	1:5:1379:C:C3'	2.37	0.55
1:5:1411:C:O2	1:5:1412:G:H8	1.88	0.55
1:5:1444:G:C2'	1:5:1445:U:C6	2.78	0.55
1:5:1846:G:C6	1:5:1847:C:N4	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1906:U:H2'	1:5:1907:A:H5'	1.89	0.55
1:5:1937:C:C3'	1:5:1938:C:H2'	2.37	0.55
1:5:2014:C:C4	1:5:2015:U:C5	2.95	0.55
1:5:2103:G:C6	1:5:2104:G:C5	2.95	0.55
1:5:1272:C:H3'	1:5:2122:G:O2'	2.07	0.55
1:5:2319:C:H2'	1:5:2320:G:H5'	1.89	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
1:5:2567:G:C2	1:5:2568:C:C5	2.95	0.55
1:5:2690:C:C4	1:5:2691:U:C4	2.95	0.55
1:5:2436:U:O4	1:5:2783:A:C8	2.60	0.55
1:5:2878:G:OP2	1:5:2879:A:O2'	2.18	0.55
1:5:3657:U:O2	1:5:3657:U:H2'	2.07	0.55
1:5:4090:G:C6	1:5:4091:G:C5	2.95	0.55
1:5:4108:G:C2	1:5:4109:G:C8	2.95	0.55
1:5:4222:G:C6	1:5:4223:C:C5	2.94	0.55
1:5:4433:G:N2	1:5:4434:C:C2	2.75	0.55
1:5:4548:A:C4'	1:5:4548:A:C8	2.89	0.55
1:5:4652:G:C2	1:5:4653:C:C6	2.95	0.55
1:5:4881:U:H2'	1:5:4881:U:O2	2.05	0.55
1:5:48:G:HO2'	1:5:49:U:P	2.21	0.55
1:5:4910:G:N2	18:O:109:PRO:CA	2.70	0.55
1:5:4949:G:N2	1:5:4950:U:H2'	2.22	0.55
1:5:4956:A:C6	1:5:4957:C:C6	2.95	0.55
1:5:5050:C:O2'	5:B:321:VAL:HA	2.07	0.55
1:5:661:C:N4	1:5:662:C:N4	2.55	0.55
1:5:74:G:C5'	15:L:59:VAL:HG13	2.37	0.55
3:8:12:G:N2	3:8:13:G:C4	2.75	0.55
9:F:197:TYR:O	9:F:199:VAL:N	2.40	0.55
20:Q:159:PRO:HA	20:Q:188:ASN:HD22	1.71	0.55
49:S2:1274:G:N3	49:S2:1274:G:H2'	2.22	0.55
49:S2:1380:C:H2'	49:S2:1381:G:O4'	2.07	0.55
49:S2:1433:C:C3'	49:S2:1434:C:O4'	2.55	0.55
49:S2:1528:G:N3	49:S2:1529:C:C6	2.75	0.55
49:S2:155:G:N2	49:S2:156:G:H1'	2.22	0.55
49:S2:1622:U:C4	68:SS:120:HIS:HE1	2.22	0.55
49:S2:1735:A:C4	49:S2:1800:A:C2	2.95	0.55
49:S2:1758:G:N1	49:S2:1759:G:C5	2.75	0.55
49:S2:381:C:O2'	49:S2:382:C:C5'	2.55	0.55
49:S2:527:C:H2'	49:S2:528:A:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:491:C:C1'	49:S2:574:A:N6	2.70	0.55
49:S2:872:A:H61	49:S2:914:U:H6	1.47	0.55
49:S2:963:A:H2'	49:S2:964:A:H8	1.63	0.55
51:SB:120:VAL:HG13	51:SB:142:PHE:HE1	1.72	0.55
54:SE:48:LEU:HD21	54:SE:70:ILE:HD11	1.89	0.55
57:SH:10:LYS:NZ	57:SH:15:LYS:O	2.37	0.55
58:SI:11:ARG:HD3	58:SI:15:GLY:O	2.06	0.55
59:SJ:20:PHE:N	59:SJ:20:PHE:HD1	2.05	0.55
65:SP:9:LYS:O	65:SP:10:ARG:HG3	2.07	0.55
65:SP:19:GLY:CA	68:SS:92:ASP:HA	2.37	0.55
51:SB:150:ILE:CD1	67:SR:128:PHE:HA	2.37	0.55
68:SS:111:LEU:HD22	68:SS:125:HIS:CD2	2.42	0.55
48:4:518:PRO:HG3	73:SX:50:ILE:HD12	1.88	0.55
48:4:154:VAL:HG13	48:4:353:MET:HE1	1.88	0.54
48:4:51:ALA:O	48:4:53:GLU:N	2.40	0.54
1:5:1202:C:N3	1:5:1203:G:C8	2.75	0.54
1:5:1558:A:H2'	1:5:1559:G:C8	2.42	0.54
1:5:164:G:C6	1:5:165:A:N7	2.75	0.54
1:5:1756:U:H3	1:5:1775:A:H2	1.53	0.54
1:5:1885:G:H2'	1:5:1886:G:O4'	2.07	0.54
1:5:194:C:N4	1:5:195:C:C5	2.75	0.54
1:5:1699:A:N6	1:5:2094:G:O2'	2.40	0.54
1:5:2126:G:C1'	1:5:2127:C:C5	2.90	0.54
1:5:409:G:N2	1:5:2329:U:H4'	2.22	0.54
1:5:2438:A:N1	1:5:2441:C:C5	2.75	0.54
1:5:2559:G:C6	1:5:2560:C:C4	2.95	0.54
1:5:2565:A:N7	1:5:2566:G:C1'	2.65	0.54
1:5:2611:A:H5'	1:5:2688:G:H4'	1.88	0.54
1:5:2853:C:H2'	1:5:2854:G:O4'	2.07	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
1:5:286:U:C2	1:5:287:U:C6	2.95	0.54
1:5:3727:A:O2'	1:5:3728:A:O4'	2.23	0.54
1:5:3898:G:H2'	1:5:3899:G:H5'	1.88	0.54
1:5:460:C:C2	1:5:461:G:C8	2.95	0.54
1:5:4687:A:N1	1:5:4688:C:C5	2.75	0.54
1:5:4700:A:H2'	1:5:4700:A:N3	2.21	0.54
1:5:470:A:C4	1:5:471:A:C8	2.95	0.54
1:5:5039:U:C5'	1:5:5040:U:H2'	2.37	0.54
1:5:93:G:N2	1:5:94:A:C2	2.75	0.54
1:5:972:C:C6	1:5:1283:G:O6	2.59	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1214:C:H42	9:F:58:HIS:CE1	2.24	0.54
15:L:4:SER:C	15:L:5:ARG:HG3	2.27	0.54
17:N:196:ASN:ND2	17:N:196:ASN:N	2.54	0.54
1:5:2088:A:N6	20:Q:30:LYS:HB3	2.21	0.54
22:S:120:ARG:HB2	22:S:122:HIS:CD2	2.41	0.54
49:S2:1100:A:C5	49:S2:1101:U:C5	2.95	0.54
49:S2:1294:G:N1	49:S2:1295:A:C5	2.74	0.54
49:S2:1310:U:C2	49:S2:1311:C:C5	2.95	0.54
49:S2:1315:U:C2	49:S2:1316:C:C6	2.94	0.54
49:S2:1427:C:H2'	49:S2:1428:G:H8	1.72	0.54
49:S2:1512:C:C2	49:S2:1513:C:H5	2.23	0.54
49:S2:1540:G:N2	49:S2:1541:G:N9	2.55	0.54
49:S2:1551:U:C6	49:S2:1577:G:C2	2.95	0.54
49:S2:1775:U:O2	49:S2:1776:G:C8	2.59	0.54
49:S2:1831:A:C2	49:S2:1832:A:C8	2.95	0.54
49:S2:407:G:N3	49:S2:407:G:H2'	2.22	0.54
49:S2:466:G:N3	49:S2:466:G:H3'	2.21	0.54
49:S2:837:A:N6	74:SY:47:MET:HB3	2.22	0.54
49:S2:56:G:N1	49:S2:90:G:N3	2.54	0.54
49:S2:949:G:C6	49:S2:950:C:C5	2.95	0.54
49:S2:98:C:O2	49:S2:409:C:C6	2.61	0.54
50:SA:12:GLU:OE1	67:SR:111:PHE:CD1	2.60	0.54
51:SB:137:LEU:HD23	51:SB:215:VAL:HG22	1.88	0.54
49:S2:395:G:N2	58:SI:14:THR:O	2.40	0.54
59:SJ:63:LEU:HD11	59:SJ:69:ARG:HH22	1.72	0.54
49:S2:1464:C:O3'	67:SR:60:ARG:NH1	2.41	0.54
68:SS:82:TRP:O	68:SS:84:LEU:N	2.39	0.54
48:4:111:PHE:HB3	48:4:145:GLN:HE22	1.72	0.54
48:4:508:ALA:HB3	48:4:573:SER:O	2.06	0.54
48:4:634:TYR:CE2	48:4:639:TYR:CE2	2.94	0.54
48:4:816:HIS:CD2	48:4:817:TRP:N	2.75	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
1:5:1288:G:HO2'	1:5:1289:C:P	2.31	0.54
1:5:1323:A:N3	1:5:1324:A:C8	2.75	0.54
1:5:1404:G:C6	1:5:1405:C:C4	2.95	0.54
1:5:1569:U:C2	1:5:1570:G:C8	2.95	0.54
1:5:1577:G:N3	1:5:1577:G:H3'	2.22	0.54
1:5:1590:C:H5''	1:5:1591:U:O5'	2.07	0.54
1:5:1759:G:C2	1:5:1760:G:N9	2.75	0.54
1:5:1871:A:N1	1:5:1872:G:C5	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1893:C:C2'	1:5:1893:C:O2	2.55	0.54
1:5:2017:A:C8	1:5:2018:C:C6	2.96	0.54
1:5:210:C:H6	1:5:210:C:O5'	1.91	0.54
1:5:2128:G:C5	1:5:2129:C:C5	2.96	0.54
1:5:211:G:C2	1:5:212:A:C5	2.95	0.54
1:5:2258:C:C2'	1:5:2258:C:O2	2.56	0.54
1:5:2784:C:N3	1:5:2785:C:C4	2.75	0.54
1:5:290:U:C2'	1:5:291:U:O5'	2.55	0.54
1:5:3879:G:O6	1:5:3882:C:C4	2.60	0.54
1:5:4093:G:C6	1:5:4094:G:N7	2.75	0.54
1:5:4098:A:N1	1:5:4099:G:C6	2.75	0.54
1:5:4211:C:H6	1:5:4211:C:O5'	1.90	0.54
1:5:448:G:C2	1:5:449:C:H1'	2.43	0.54
1:5:4495:G:N2	1:5:4506:C:C2	2.75	0.54
1:5:4560:C:C2'	1:5:4560:C:O2	2.55	0.54
1:5:4579:U:N3	1:5:4580:U:C4	2.75	0.54
1:5:4997:G:C2	1:5:4998:G:N9	2.75	0.54
1:5:504:G:C2	1:5:505:G:C6	2.95	0.54
1:5:672:C:N3	1:5:673:C:C6	2.75	0.54
1:5:908:G:C2	1:5:909:A:C8	2.96	0.54
2:7:59:G:N1	2:7:60:G:C4	2.76	0.54
4:A:69:PHE:CD2	15:L:65:ARG:HB2	106.39	0.54
19:P:30:ARG:HH22	19:P:62:ARG:NH2	2.06	0.54
49:S2:1121:G:C5	49:S2:1122:A:C8	2.95	0.54
49:S2:1265:A:H2'	49:S2:1266:C:C6	2.42	0.54
49:S2:1367:U:HO2'	49:S2:1466:G:HO2'	1.52	0.54
49:S2:305:U:OP2	49:S2:306:C:C2	2.60	0.54
49:S2:477:G:N2	49:S2:478:G:C4	2.75	0.54
49:S2:583:C:C4	49:S2:584:G:C8	2.95	0.54
49:S2:678:U:C2	49:S2:679:A:C8	2.95	0.54
49:S2:70:G:C2	49:S2:71:G:N9	2.75	0.54
49:S2:70:G:C2	49:S2:80:G:N3	2.76	0.54
51:SB:153:THR:O	51:SB:154:SER:OG	2.25	0.54
49:S2:1123:C:P	51:SB:205:TYR:HH	2.31	0.54
49:S2:84:A:O2'	74:SY:119:GLY:O	2.21	0.54
48:4:160:MET:SD	48:4:178:PHE:CZ	2.98	0.54
48:4:577:VAL:HG12	48:4:578:SER:N	2.23	0.54
48:4:58:ASP:O	48:4:64:GLN:N	2.41	0.54
48:4:830:ARG:CB	48:4:831:PRO:CD	2.84	0.54
1:5:1075:G:C4	1:5:1076:C:C5	2.95	0.54
1:5:1260:G:C6	1:5:1261:G:N7	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1289:C:N3	1:5:1290:G:N7	2.56	0.54
1:5:1695:U:O2'	1:5:1696:C:H5'	2.06	0.54
1:5:1726:U:C4	1:5:1727:U:C5	2.94	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
1:5:2539:C:C2	1:5:2540:C:C5	2.95	0.54
1:5:2543:A:C2	1:5:2773:G:N1	2.74	0.54
1:5:2712:G:N3	1:5:2713:C:C6	2.76	0.54
1:5:2409:U:O4	1:5:2783:A:N1	2.39	0.54
1:5:2852:U:O2	1:5:2852:U:H2'	2.06	0.54
1:5:3656:A:C2	1:5:3657:U:C6	2.96	0.54
1:5:3804:G:H1'	1:5:3832:U:O2'	2.07	0.54
1:5:4085:A:H3'	1:5:4086:G:C5'	2.38	0.54
1:5:4133:C:C2	1:5:4134:C:C5	2.96	0.54
1:5:4140:C:C5	1:5:4141:G:C8	2.94	0.54
1:5:4626:A:OP2	5:B:224:LYS:NZ	2.32	0.54
1:5:4651:A:C2	1:5:4652:G:H1'	2.43	0.54
1:5:4771:C:C5	1:5:4772:C:C6	2.96	0.54
1:5:5043:A:H2'	1:5:5044:A:C8	2.42	0.54
1:5:4988:U:N3	1:5:5060:A:O3'	2.38	0.54
1:5:69:A:H3'	1:5:70:A:C8	2.40	0.54
2:7:28:C:C5	2:7:29:C:C5	2.95	0.54
2:7:51:G:N1	2:7:52:C:C4	2.75	0.54
10:G:137:ARG:O	10:G:202:VAL:HA	2.07	0.54
10:G:260:GLU:OE1	51:SB:57:ILE:CD1	2.50	0.54
12:I:73:ASN:O	12:I:76:MET:O	2.26	0.54
1:5:3859:G:C4'	19:P:139:TYR:OH	2.55	0.54
49:S2:1041:G:C6	49:S2:1042:A:N7	2.75	0.54
49:S2:1151:G:C6	49:S2:1152:U:C5	2.94	0.54
49:S2:1200:A:H2'	49:S2:1200:A:N3	2.22	0.54
49:S2:1226:G:N2	49:S2:1639:G:C5	2.75	0.54
49:S2:1231:C:H2'	49:S2:1232:U:O4'	2.07	0.54
49:S2:1483:A:H4'	53:SD:159:HIS:O	2.07	0.54
49:S2:164:A:C2	49:S2:165:G:C4	2.95	0.54
49:S2:1231:C:C4'	49:S2:1665:G:N2	2.69	0.54
49:S2:1754:G:C2	49:S2:1755:C:C2	2.96	0.54
49:S2:1834:A:H2	49:S2:1837:G:N2	2.03	0.54
49:S2:27:A:C4	49:S2:28:U:C6	2.95	0.54
49:S2:297:A:C5	49:S2:298:G:C8	2.95	0.54
49:S2:338:G:C2	49:S2:339:A:C4	2.95	0.54
49:S2:341:C:H3'	49:S2:342:C:C5'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:574:A:C2'	49:S2:575:A:C8	2.90	0.54
49:S2:601:G:N1	49:S2:622:C:C2	2.75	0.54
49:S2:623:G:N3	49:S2:624:C:C6	2.74	0.54
49:S2:635:G:C4	49:S2:636:C:C6	2.96	0.54
49:S2:828:G:C2	49:S2:829:C:N1	2.76	0.54
49:S2:841:G:N2	49:S2:842:C:C5	2.73	0.54
49:S2:956:G:C2	49:S2:957:A:N7	2.75	0.54
50:SA:99:ILE:HG12	50:SA:117:ARG:NH2	2.22	0.54
57:SH:135:PHE:HD1	57:SH:136:PRO:N	2.05	0.54
49:S2:1286:G:N2	62:SM:33:ARG:HD2	2.23	0.54
64:SO:137:SER:C	64:SO:138:ASP:OD1	2.46	0.54
48:4:114:GLU:CA	48:4:532:PRO:CG	2.85	0.54
48:4:126:LEU:HD13	48:4:353:MET:CE	2.37	0.54
48:4:137:VAL:HG11	48:4:807:GLN:NE2	2.14	0.54
48:4:170:GLU:HG2	48:4:171:PRO:N	2.23	0.54
48:4:502:SER:CB	48:4:504:VAL:CG1	2.48	0.54
48:4:504:VAL:HG11	48:4:811:GLN:HA	1.89	0.54
48:4:562:GLU:HB3	48:4:570:ILE:CD1	2.36	0.54
48:4:579:TYR:N	48:4:579:TYR:CD1	2.75	0.54
1:5:100:C:C6	1:5:101:A:H8	2.19	0.54
1:5:1277:G:N1	1:5:1278:C:C5	2.75	0.54
1:5:127:G:C6	1:5:128:C:C4	2.95	0.54
1:5:1358:G:OP2	6:C:114:ARG:NH2	2.40	0.54
1:5:1380:G:C2	1:5:1382:G:C4	2.95	0.54
1:5:1759:G:N1	1:5:1760:G:C8	2.74	0.54
1:5:1763:C:N4	1:5:1764:G:C4	2.76	0.54
1:5:1816:C:H2'	1:5:1817:U:H5'	1.88	0.54
1:5:211:G:N1	1:5:212:A:C5	2.76	0.54
1:5:231:U:H4'	28:Y:100:HIS:NE2	2.22	0.54
1:5:2576:G:C6	1:5:2577:C:C4	2.95	0.54
1:5:2605:G:N1	1:5:2606:G:C5	2.75	0.54
1:5:2632:U:O2	1:5:2633:U:C5	2.61	0.54
1:5:2702:C:O2	1:5:2715:G:C2	2.61	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
1:5:32:G:N1	1:5:48:G:O2'	2.40	0.54
1:5:3595:U:OP1	1:5:3596:A:C8	2.60	0.54
1:5:3687:A:C6	1:5:3688:U:C5	2.95	0.54
1:5:3738:G:N7	1:5:3739:C:C6	2.75	0.54
1:5:4068:U:C4	1:5:4069:U:C6	2.95	0.54
1:5:4146:G:H2'	1:5:4147:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4260:U:H2'	1:5:4261:C:C6	2.41	0.54
1:5:4269:G:H2'	1:5:4270:C:O4'	2.07	0.54
1:5:4363:A:C2	1:5:4364:G:C8	2.95	0.54
1:5:5019:A:C2	1:5:5020:G:C8	2.95	0.54
1:5:723:A:N1	1:5:943:A:N1	2.54	0.54
3:8:83:C:H4'	3:8:85:U:N3	2.23	0.54
4:A:29:LEU:HD13	4:A:163:ARG:HH12	1.73	0.54
6:C:35:ASP:OD1	6:C:36:ILE:N	2.41	0.54
7:D:109:LEU:HD21	7:D:142:PHE:CZ	2.43	0.54
8:E:119:ARG:HH11	8:E:119:ARG:HG3	1.72	0.54
10:G:235:ARG:HG3	10:G:235:ARG:HH11	1.73	0.54
11:H:59:LYS:O	11:H:60:TRP:CB	2.55	0.54
14:K:15:LEU:HD11	14:K:60:VAL:HG13	1.88	0.54
14:K:81:ILE:HD13	14:K:117:ARG:HH12	1.71	0.54
20:Q:16:LYS:H	20:Q:16:LYS:HD2	3.28	0.54
49:S2:106:C:H2'	49:S2:107:A:H8	1.72	0.54
49:S2:1134:G:C5	49:S2:1135:C:C5	2.95	0.54
49:S2:118:C:H1'	49:S2:445:A:C6	2.43	0.54
49:S2:18:C:H4'	49:S2:1194:A:N6	2.23	0.54
49:S2:122:G:C6	49:S2:123:G:C5	2.95	0.54
49:S2:1286:G:C2	49:S2:1312:G:N1	2.76	0.54
49:S2:1311:C:N3	49:S2:1314:U:H5	2.06	0.54
49:S2:1643:U:C4	49:S2:1644:C:N4	2.76	0.54
49:S2:555:A:C2	49:S2:557:U:C6	2.95	0.54
49:S2:567:C:H2'	49:S2:568:C:H5''	1.89	0.54
49:S2:69:C:N3	49:S2:70:G:C5	2.75	0.54
49:S2:887:U:C5	49:S2:888:U:C5	2.96	0.54
54:SE:47:PHE:HE1	54:SE:101:LEU:HD21	1.73	0.54
55:SF:137:GLN:HE21	55:SF:137:GLN:HA	1.73	0.54
28:Y:18:HIS:HB3	28:Y:19:PHE:CE1	2.43	0.54
48:4:556:ILE:HA	48:4:559:LYS:CE	2.32	0.54
1:5:112:C:C2	1:5:113:A:C8	2.96	0.54
1:5:1271:G:C3'	1:5:1272:C:C5'	2.81	0.54
1:5:1280:C:H6	1:5:1280:C:C5'	2.15	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
1:5:1563:A:C2	1:5:1564:A:N3	2.75	0.54
1:5:1572:U:H3'	1:5:1573:G:H8	1.73	0.54
1:5:1828:C:N3	1:5:1829:G:N7	2.55	0.54
1:5:1857:C:C2	1:5:1858:A:N7	2.75	0.54
1:5:1870:C:N3	1:5:1871:A:C8	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2106:G:HO2'	1:5:2107:C:Cl1'	2.19	0.54
1:5:1273:G:N2	1:5:2123:C:OP1	2.31	0.54
1:5:2282:A:C2'	1:5:2283:G:C5'	2.86	0.54
1:5:3594:C:O2	1:5:3594:C:H2'	2.08	0.54
1:5:3662:A:N6	1:5:3680:U:N3	2.40	0.54
1:5:3741:C:C4	1:5:3742:G:N7	2.75	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
1:5:3759:A:N6	49:S2:1709:G:H4'	2.22	0.54
1:5:3773:U:N3	1:5:3774:A:H2'	2.21	0.54
1:5:3877:A:N1	1:5:4444:C:H1'	2.22	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
1:5:4562:C:C2	1:5:4563:U:H6	2.23	0.54
1:5:4984:C:C4	1:5:4985:U:C5	2.95	0.54
1:5:5028:G:C6	1:5:5029:C:N4	2.75	0.54
1:5:5043:A:O2'	1:5:5044:A:H5'	2.07	0.54
1:5:82:U:C4	1:5:83:C:C5	2.96	0.54
1:5:908:G:N2	1:5:909:A:H1'	2.23	0.54
1:5:917:A:C2	1:5:918:G:N1	2.76	0.54
1:5:933:G:C5	1:5:940:C:C4	2.96	0.54
1:5:992:C:O2	1:5:993:G:C8	2.60	0.54
2:7:54:A:H2	2:7:55:A:C5	2.19	0.54
3:8:95:A:C2	3:8:96:C:N1	2.75	0.54
1:5:3685:C:H5''	4:A:193:ARG:NH2	2.22	0.54
7:D:111:ASN:ND2	7:D:111:ASN:C	2.60	0.54
8:E:266:TYR:CD2	16:M:107:PHE:CD1	2.95	0.54
15:L:59:VAL:HG21	15:L:73:GLY:HA3	1.89	0.54
16:M:6:PHE:O	16:M:8:GLU:N	2.41	0.54
21:R:175:GLU:OE1	21:R:176:ARG:HA	2.07	0.54
49:S2:1792:G:C2	49:S2:1793:A:N9	2.75	0.54
49:S2:1805:G:C6	49:S2:1806:A:N7	2.75	0.54
49:S2:325:C:O2	49:S2:326:C:C5	2.61	0.54
49:S2:447:A:N7	49:S2:449:A:C8	2.76	0.54
49:S2:882:U:C2	49:S2:883:U:C6	2.96	0.54
49:S2:910:G:C2	49:S2:911:C:C2	2.95	0.54
50:SA:158:ASP:CG	50:SA:159:ILE:N	2.61	0.54
53:SD:115:VAL:CG2	53:SD:142:LEU:HD11	2.37	0.54
60:SK:11:ILE:HD12	60:SK:45:VAL:HG22	1.88	0.54
62:SM:21:VAL:HG22	62:SM:121:LYS:HG3	1.89	0.54
49:S2:925:G:O2'	63:SN:87:ASP:HA	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:823:U:C5	74:SY:64:PHE:HE2	2.26	0.54
26:W:31:PHE:CD2	26:W:37:GLU:HA	2.42	0.54
48:4:267:ASP:C	48:4:267:ASP:OD1	2.45	0.54
48:4:356:ILE:HG23	48:4:357:HIS:ND1	2.22	0.54
48:4:738:PRO:C	48:4:824:PRO:CD	2.72	0.54
1:5:1070:G:O6	8:E:42:ARG:NH1	2.40	0.54
1:5:1267:C:O5'	1:5:1267:C:H6	1.91	0.54
1:5:1563:A:N7	49:S2:678:U:O4'	2.40	0.54
1:5:1682:A:C5	1:5:1683:U:C5	2.96	0.54
1:5:1758:G:C2	1:5:1759:G:C4	2.96	0.54
1:5:1871:A:C6	1:5:1872:G:N7	2.76	0.54
1:5:2426:U:O2'	1:5:2427:G:H5'	2.08	0.54
1:5:2632:U:C5	24:U:85:TYR:CD1	2.96	0.54
1:5:2769:U:O2'	1:5:2770:C:C5'	2.56	0.54
1:5:288:G:C6	1:5:289:C:N4	2.76	0.54
1:5:291:U:O2'	1:5:292:G:H2'	2.06	0.54
1:5:3586:G:C6	1:5:3587:C:C4	2.96	0.54
1:5:3656:A:C2	1:5:3657:U:C5	2.96	0.54
1:5:3635:A:C8	1:5:3692:A:H1'	2.42	0.54
1:5:3753:G:C5	1:5:3776:G:C6	2.95	0.54
1:5:4101:C:C4	1:5:4102:C:C5	2.96	0.54
1:5:4154:G:N2	1:5:4155:C:C2	2.76	0.54
1:5:4183:G:C4	1:5:4183:G:H5''	2.42	0.54
1:5:450:G:HO2'	1:5:452:A:H4'	1.73	0.54
1:5:1591:U:N3	1:5:4555:U:OP1	2.40	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
1:5:4916:G:C6	1:5:4917:C:C4	2.96	0.54
1:5:4942:C:O4'	1:5:4942:C:O2	2.23	0.54
1:5:5035:U:H2'	1:5:5035:U:O2	2.08	0.54
1:5:919:C:H2'	1:5:920:C:C5'	2.38	0.54
2:7:69:U:O4	2:7:106:G:O6	2.26	0.54
1:5:2092:G:N1	6:C:305:PRO:O	2.37	0.54
14:K:161:GLU:C	14:K:163:PRO:CD	2.76	0.54
14:K:58:ILE:CG2	14:K:59:THR:N	2.70	0.54
19:P:82:ARG:HA	19:P:83:TRP:HE3	1.72	0.54
49:S2:999:G:N1	49:S2:1000:C:C6	2.75	0.54
49:S2:1348:G:C2	49:S2:1349:G:N7	2.76	0.54
49:S2:1395:C:C6	49:S2:1395:C:C5'	2.91	0.54
49:S2:1405:A:C6	49:S2:1406:G:C6	2.94	0.54
49:S2:1510:G:C5	49:S2:1511:U:C6	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1537:A:N6	49:S2:1538:C:C4	2.76	0.54
49:S2:1756:C:C2	49:S2:1777:G:C2	2.96	0.54
49:S2:414:A:C2'	49:S2:415:A:O5'	2.56	0.54
49:S2:519:A:C2	49:S2:520:A:C8	2.95	0.54
49:S2:545:A:C2	49:S2:546:G:C5	2.95	0.54
49:S2:579:C:C5	49:S2:580:U:C5	2.95	0.54
49:S2:583:C:C4	49:S2:584:G:N7	2.75	0.54
49:S2:81:U:N3	49:S2:82:G:C8	2.76	0.54
22:S:83:ARG:HG3	22:S:83:ARG:HH21	1.72	0.54
54:SE:67:GLN:HG2	54:SE:69:PHE:CZ	2.42	0.54
70:SU:48:LEU:CD2	70:SU:97:ILE:HD13	2.38	0.54
23:T:105:PHE:HE1	23:T:109:VAL:CG2	2.21	0.54
48:4:130:ASP:OD2	48:4:132:VAL:HG22	2.08	0.54
48:4:189:ILE:HG23	48:4:203:ILE:HD12	1.88	0.54
48:4:393:PRO:CD	48:4:418:SER:OG	2.55	0.54
48:4:482:THR:OG1	48:4:496:VAL:HG21	2.08	0.54
48:4:398:ILE:HG23	48:4:485:ILE:HD13	1.90	0.54
48:4:829:SER:CB	48:4:832:SER:CA	2.86	0.54
1:5:1065:G:C2	1:5:1066:G:C5	2.96	0.54
1:5:1198:G:C2'	1:5:1199:G:C8	2.86	0.54
1:5:1237:C:O4'	1:5:1237:C:O2	2.25	0.54
1:5:1352:C:O2'	1:5:1356:U:OP1	2.25	0.54
1:5:1359:G:C2'	1:5:1360:G:O4'	2.55	0.54
1:5:1482:G:N2	1:5:1484:G:H22	2.06	0.54
1:5:1666:C:H2'	1:5:1667:G:O4'	2.08	0.54
1:5:1699:A:H4'	1:5:1718:C:P	2.48	0.54
1:5:1725:U:H2'	1:5:1725:U:O2	2.07	0.54
1:5:1744:U:C4	1:5:1745:G:N7	2.75	0.54
1:5:1813:U:H2'	1:5:1814:C:C6	2.42	0.54
1:5:1938:C:H4'	1:5:1939:A:O5'	2.08	0.54
1:5:2328:G:C2	1:5:2329:U:C2	2.96	0.54
1:5:244:G:O6	1:5:246:G:N7	2.41	0.54
1:5:2567:G:C5	1:5:2568:C:C5	2.95	0.54
1:5:2594:C:C2	1:5:2595:C:C6	2.96	0.54
1:5:3738:G:H8	1:5:3738:G:O5'	1.89	0.54
1:5:3832:U:C2	1:5:3833:C:C6	2.96	0.54
1:5:3910:C:H2'	1:5:3911:C:C6	2.43	0.54
1:5:4142:C:C4	1:5:4143:G:N1	2.76	0.54
1:5:4175:G:C6	1:5:4176:C:C4	2.95	0.54
1:5:4183:G:H2'	1:5:4183:G:N3	2.23	0.54
1:5:425:U:O4	1:5:426:A:N6	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4510:A:H62	1:5:4592:C:HO2'	1.54	0.54
1:5:471:A:N6	1:5:472:C:C4	2.75	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
1:5:488:G:N1	1:5:489:C:C5	2.76	0.54
1:5:668:C:C2	1:5:669:C:C6	2.96	0.54
1:5:686:A:C3'	1:5:687:U:H5'	2.38	0.54
1:5:909:A:N1	1:5:910:G:C5	2.75	0.54
3:8:118:C:C2	3:8:119:C:C5	2.95	0.54
3:8:10:G:C2	3:8:11:C:C6	2.96	0.54
1:5:2493:G:O2'	3:8:127:U:OP2	2.20	0.54
12:I:99:ILE:HG22	12:I:123:GLN:HB2	1.88	0.54
21:R:88:ARG:HG2	21:R:88:ARG:HH11	1.72	0.54
49:S2:1053:C:O2	49:S2:1054:G:H8	1.87	0.54
49:S2:1315:U:C5	49:S2:1316:C:C6	2.95	0.54
49:S2:1342:U:C5	49:S2:1483:A:C6	2.96	0.54
49:S2:1410:C:N4	49:S2:1411:G:C6	2.75	0.54
49:S2:1508:A:C6	49:S2:1510:G:N9	2.76	0.54
49:S2:1551:U:H2'	49:S2:1552:G:N9	2.22	0.54
49:S2:155:G:C2	49:S2:164:A:C8	2.96	0.54
49:S2:1609:C:C2	49:S2:1610:G:N7	2.75	0.54
49:S2:1839:U:N3	49:S2:1840:U:C4	2.76	0.54
49:S2:222:U:O2	49:S2:223:C:C6	2.61	0.54
49:S2:316:G:C4	49:S2:317:C:C5	2.96	0.54
49:S2:635:G:C2	49:S2:636:C:C2	2.95	0.54
49:S2:635:G:C4	49:S2:636:C:C5	2.95	0.54
49:S2:69:C:H2'	49:S2:70:G:O4'	2.08	0.54
49:S2:949:G:C4	49:S2:950:C:C6	2.95	0.54
22:S:81:TRP:CZ2	22:S:94:TYR:CE1	2.96	0.54
50:SA:155:ARG:HB3	50:SA:156:TYR:HD2	1.72	0.54
54:SE:45:ILE:O	54:SE:49:ARG:HG3	2.08	0.54
49:S2:375:U:O4'	61:SL:7:GLU:OE1	2.26	0.54
69:ST:47:PRO:HG2	69:ST:52:TRP:CD1	2.42	0.54
71:SV:2:GLN:HB3	71:SV:6:GLY:HA2	1.88	0.54
52:SC:170:TRP:CH2	72:SW:97:ARG:HD2	2.43	0.54
48:4:571:LYS:HE3	48:4:572:LYS:H	1.65	0.54
1:5:1273:G:H21	1:5:2123:C:P	2.30	0.54
1:5:1377:G:H3'	1:5:1377:G:C8	2.43	0.54
1:5:1394:G:O2'	1:5:1395:U:H5'	2.08	0.54
1:5:1445:U:N3	1:5:1446:C:C6	2.76	0.54
1:5:1583:A:N1	1:5:1584:G:H1'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1724:G:H21	9:F:105:PRO:CG	2.21	0.54
1:5:1936:C:C5	2:7:84:U:H5	2.13	0.54
1:5:1939:A:N1	1:5:3874:G:C5'	2.59	0.54
1:5:2122:G:O2'	1:5:2123:C:OP1	2.26	0.54
1:5:2291:G:C2	1:5:2292:C:C5	2.96	0.54
1:5:2326:G:N2	1:5:2327:G:H1'	2.23	0.54
1:5:2341:A:N1	1:5:2342:G:C5	2.75	0.54
1:5:259:C:N3	1:5:260:C:C5	2.76	0.54
1:5:2605:G:N2	1:5:2606:G:C4	2.76	0.54
1:5:3605:C:N3	1:5:3606:U:C5	2.75	0.54
1:5:3667:C:H2'	1:5:3667:C:O2	2.08	0.54
1:5:3790:U:H3	1:5:3792:G:C1'	2.20	0.54
1:5:3870:C:C2	1:5:3886:G:N2	2.76	0.54
1:5:3875:G:O6	1:5:3877:A:H4'	2.08	0.54
1:5:4285:U:H2'	1:5:4286:C:C6	2.40	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
1:5:479:G:N1	1:5:480:C:C4	2.76	0.54
1:5:4880:C:O2'	1:5:4881:U:H5'	2.08	0.54
1:5:4884:G:H2'	1:5:4884:G:N3	2.23	0.54
1:5:4997:G:C6	1:5:4998:G:C5	2.96	0.54
1:5:728:U:C2'	1:5:729:G:OP1	2.56	0.54
2:7:27:G:H1'	2:7:56:G:H1	1.73	0.54
2:7:59:G:O6	2:7:60:G:N7	2.37	0.54
3:8:132:G:N2	3:8:133:G:C4	2.75	0.54
1:5:1539:G:C1'	4:A:15:VAL:HG13	2.38	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
13:J:107:PHE:CE1	13:J:130:PHE:HB3	2.42	0.54
17:N:178:HIS:HA	17:N:181:HIS:NE2	2.22	0.54
49:S2:999:G:C6	49:S2:1000:C:C4	2.95	0.54
49:S2:1040:G:C5	49:S2:1041:G:C8	2.95	0.54
49:S2:1243:U:C2	49:S2:1265:A:C2	2.94	0.54
49:S2:1287:A:C6	49:S2:1314:U:N3	2.75	0.54
49:S2:142:C:O4'	49:S2:142:C:O2	2.24	0.54
49:S2:1721:U:H5'	49:S2:1721:U:C6	2.43	0.54
49:S2:172:U:O2	49:S2:172:U:O2'	2.23	0.54
49:S2:1868:U:H4'	49:S2:1869:A:OP2	2.08	0.54
49:S2:511:U:C2	49:S2:512:A:C8	2.95	0.54
49:S2:618:C:C5	49:S2:619:A:N7	2.76	0.54
22:S:45:TRP:CZ3	22:S:56:LYS:CA	2.84	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:79:VAL:CB	51:SB:81:PHE:CZ	2.90	0.54
56:SG:210:ALA:O	56:SG:214:ALA:HB3	2.08	0.54
57:SH:35:ASP:OD1	57:SH:36:LEU:N	2.41	0.54
25:V:30:ASP:OD1	25:V:104:VAL:HG12	2.08	0.54
48:4:111:PHE:CD1	48:4:141:THR:HG23	2.43	0.54
48:4:510:GLU:HG2	48:4:511:ALA:H	1.73	0.54
48:4:571:LYS:CE	48:4:572:LYS:N	2.33	0.54
48:4:73:THR:CA	48:4:104:ASP:HB2	2.37	0.54
1:5:120:A:O4'	1:5:121:A:C6	2.61	0.54
1:5:1234:G:C2	1:5:1235:G:C4	2.96	0.54
1:5:1355:G:H2'	1:5:1356:U:O5'	2.08	0.54
1:5:1398:A:O2'	1:5:1399:G:OP2	2.13	0.54
1:5:1473:U:C2	1:5:1474:C:C6	2.96	0.54
1:5:1565:A:H2'	1:5:1566:C:H5'	1.90	0.54
1:5:1753:G:N3	1:5:1755:C:H5''	2.22	0.54
1:5:1956:A:C2	1:5:2027:U:C2	2.96	0.54
1:5:2260:C:H2'	1:5:2261:G:C8	2.41	0.54
1:5:2079:G:H1	1:5:2276:A:H61	1.54	0.54
1:5:246:G:N2	1:5:247:G:C8	2.74	0.54
1:5:2656:U:H3'	1:5:2657:G:H8	1.72	0.54
1:5:2669:C:O2'	1:5:2670:C:OP2	2.25	0.54
1:5:330:G:N2	1:5:331:G:N9	2.56	0.54
1:5:3657:U:C4	1:5:3658:C:C5	2.96	0.54
1:5:3692:A:C6	1:5:3693:U:N1	2.76	0.54
1:5:3714:G:C2	1:5:3715:U:C2	2.96	0.54
1:5:3754:G:C6	1:5:3755:G:N7	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
1:5:4173:G:C6	1:5:4174:U:C4	2.96	0.54
1:5:4735:G:C6	1:5:4736:C:C4	2.95	0.54
1:5:4896:G:C4	1:5:4897:G:C8	2.95	0.54
1:5:736:C:C2'	1:5:737:C:O4'	2.53	0.54
2:7:9:C:O2	2:7:9:C:H2'	2.08	0.54
1:5:2743:A:H1'	4:A:21:LYS:HE3	1.90	0.54
5:B:222:VAL:HG11	5:B:274:TYR:CE2	2.43	0.54
1:5:981:C:C2	8:E:69:TYR:CE2	2.96	0.54
12:I:171:TRP:CB	12:I:181:PHE:CD2	2.91	0.54
14:K:102:GLY:O	14:K:140:GLY:CA	2.56	0.54
14:K:61:LYS:CD	14:K:72:GLU:CA	2.84	0.54
1:5:1912:G:N2	18:O:87:MET:SD	2.81	0.54
21:R:8:LYS:HG3	21:R:22:VAL:HG11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:6:PHE:HA	22:S:152:PHE:O	2.08	0.54
49:S2:1448:A:C2	49:S2:1449:G:C1'	2.91	0.54
49:S2:1566:G:N7	69:ST:101:ARG:NH2	2.56	0.54
49:S2:157:U:H4'	56:SG:59:GLN:C	2.28	0.54
49:S2:1602:U:H2'	49:S2:1603:G:H3'	1.90	0.54
49:S2:200:G:C6	49:S2:201:C:C4	2.95	0.54
49:S2:385:G:H2'	49:S2:385:G:N3	2.23	0.54
49:S2:656:G:H21	49:S2:663:C:C5'	2.21	0.54
49:S2:673:G:C8	49:S2:1084:A:C6	2.96	0.54
49:S2:872:A:N1	49:S2:914:U:H5	2.06	0.54
53:SD:35:SER:O	53:SD:99:ILE:HD11	2.07	0.54
58:SI:67:TRP:HB2	58:SI:72:CYS:SG	2.48	0.54
59:SJ:83:ARG:HD3	59:SJ:150:ARG:NH2	2.23	0.54
49:S2:1022:U:C6	63:SN:128:TYR:HE2	2.23	0.54
68:SS:23:ARG:CZ	68:SS:23:ARG:HB2	2.38	0.54
69:ST:52:TRP:CE3	69:ST:53:PHE:N	2.76	0.54
49:S2:1587:G:O6	69:ST:67:ARG:HG2	2.08	0.54
74:SY:57:VAL:HG11	74:SY:60:PHE:CZ	2.43	0.54
1:5:4085:A:OP1	27:X:45:THR:HG23	2.08	0.54
28:Y:15:ARG:CG	28:Y:15:ARG:NH1	2.70	0.54
48:4:24:VAL:HG22	48:4:32:LYS:HE3	1.85	0.54
48:4:546:ILE:CG2	48:4:554:LEU:CD1	2.86	0.54
48:4:738:PRO:HB2	48:4:824:PRO:CG	2.39	0.54
1:5:1397:A:O2'	1:5:1398:A:C5'	2.56	0.54
1:5:1802:A:H5'	23:T:105:PHE:CD2	2.43	0.54
1:5:1856:C:O2	1:5:1892:A:H2	1.89	0.54
1:5:1872:G:C2	1:5:1873:A:N7	2.76	0.54
1:5:1947:U:O2	1:5:1947:U:H2'	2.08	0.54
1:5:206:U:O2	1:5:208:A:H8	1.90	0.54
1:5:2104:G:C6	1:5:2105:A:C5	2.96	0.54
1:5:2107:C:N4	1:5:2126:G:C2	2.75	0.54
1:5:2614:C:H2'	1:5:2614:C:O2	2.08	0.54
1:5:3690:U:C2	1:5:3691:G:C8	2.96	0.54
1:5:4093:G:N7	1:5:4094:G:C8	2.76	0.54
1:5:4172:A:N3	1:5:4173:G:C8	2.75	0.54
1:5:4205:A:O4'	1:5:4375:C:H2'	2.08	0.54
1:5:4216:G:H2'	1:5:4217:G:H5'	1.90	0.54
1:5:4239:A:C6	1:5:4240:G:C5	2.95	0.54
1:5:4275:G:H3'	1:5:4275:G:C8	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4308:C:O2'	1:5:4338:G:H4'	2.07	0.54
1:5:4592:C:H2'	1:5:4593:C:H6	1.72	0.54
1:5:473:C:C2	1:5:474:C:C6	2.95	0.54
1:5:4767:C:H4'	1:5:4874:A:C2	2.42	0.54
1:5:5042:A:C2	1:5:5043:A:C5	2.96	0.54
1:5:73:A:C2	1:5:74:G:N7	2.76	0.54
1:5:976:G:H3'	1:5:977:C:H6	1.72	0.54
6:C:178:ASN:N	6:C:178:ASN:ND2	2.55	0.54
9:F:100:ILE:C	9:F:101:ASN:OD1	2.46	0.54
9:F:161:TYR:CD2	9:F:168:ARG:CZ	2.91	0.54
10:G:102:TYR:OH	10:G:207:VAL:CA	2.56	0.54
10:G:165:GLU:OE1	17:N:22:LEU:HD13	2.07	0.54
17:N:88:GLY:CA	18:O:48:TYR:HD2	102.54	0.54
49:S2:1039:C:C4	49:S2:1040:G:N7	2.76	0.54
49:S2:1074:C:H2'	49:S2:1075:C:C6	2.42	0.54
49:S2:1256:G:N2	49:S2:1658:G:O2'	2.37	0.54
49:S2:1280:G:N1	49:S2:1281:G:C8	2.76	0.54
49:S2:1286:G:H21	62:SM:33:ARG:HD2	1.73	0.54
49:S2:1292:C:H2'	49:S2:1292:C:O2	2.07	0.54
49:S2:1348:G:N3	49:S2:1348:G:C2'	2.71	0.54
49:S2:1407:U:O2	49:S2:1408:U:C5	2.60	0.54
49:S2:1408:U:H2'	49:S2:1409:A:O4'	2.08	0.54
49:S2:1457:U:C2	49:S2:1458:G:C8	2.95	0.54
49:S2:1575:G:C2	49:S2:1576:G:C8	2.96	0.54
49:S2:1576:G:C4	49:S2:1577:G:C8	2.96	0.54
49:S2:1588:A:C2	49:S2:1589:A:C6	2.96	0.54
49:S2:1729:U:O2	49:S2:1729:U:H2'	2.07	0.54
49:S2:1732:G:C6	49:S2:1733:U:C5	2.96	0.54
49:S2:1754:G:C5	49:S2:1755:C:C5	2.96	0.54
49:S2:1759:G:N2	49:S2:1774:C:C2	2.76	0.54
49:S2:52:G:C2	49:S2:53:C:C1'	2.91	0.54
49:S2:548:C:H41	49:S2:549:C:H1'	1.73	0.54
49:S2:574:A:H2'	49:S2:575:A:C8	2.43	0.54
49:S2:613:G:H2'	49:S2:627:U:C5	2.43	0.54
49:S2:620:G:C2	49:S2:620:G:P	3.01	0.54
49:S2:73:C:H1'	49:S2:74:G:O4'	2.07	0.54
49:S2:847:A:N1	49:S2:848:U:H1'	2.22	0.54
49:S2:862:A:N3	49:S2:863:U:C6	2.76	0.54
49:S2:909:G:N3	49:S2:910:G:C8	2.76	0.54
49:S2:909:G:C2	49:S2:910:G:N7	2.76	0.54
49:S2:989:C:C2	49:S2:1001:A:N1	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:992:A:N6	49:S2:993:G:N7	2.56	0.54
49:S2:996:A:C2	49:S2:997:A:C2	2.95	0.54
49:S2:999:G:N2	49:S2:1000:C:H1'	2.23	0.54
22:S:8:ARG:HB2	22:S:10:TYR:CE2	2.42	0.54
49:S2:2:A:C8	52:SC:223:TYR:CB	2.91	0.54
49:S2:1578:U:H2'	53:SD:4:GLN:HG2	1.90	0.54
55:SF:36:GLN:O	55:SF:37:ASP:HB2	2.08	0.54
48:4:121:VAL:HG23	48:4:122:THR:N	2.23	0.53
48:4:154:VAL:HG11	48:4:358:LEU:HD21	1.89	0.53
48:4:480:VAL:HG13	48:4:529:LYS:HA	1.90	0.53
1:5:1066:G:N1	1:5:1067:G:C5	2.76	0.53
1:5:1167:C:O2	1:5:1195:G:C2	2.61	0.53
1:5:1329:G:C2	1:5:3865:A:H1'	2.43	0.53
1:5:1750:G:N1	1:5:1751:A:C5	2.76	0.53
1:5:1844:G:C6	1:5:1845:U:C4	2.95	0.53
1:5:1867:A:H2'	1:5:1868:A:C8	2.42	0.53
1:5:2090:U:HO2'	1:5:2091:C:P	2.31	0.53
1:5:2116:C:H4'	1:5:2117:G:O4'	2.08	0.53
1:5:2417:A:N1	1:5:2418:A:C5	2.76	0.53
1:5:2593:C:C2	1:5:2594:C:C6	2.95	0.53
1:5:27:C:C2	1:5:28:C:C5	2.96	0.53
1:5:3638:G:C6	1:5:3651:A:C2	2.96	0.53
1:5:3668:C:C4	1:5:3669:G:N7	2.75	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
1:5:4400:G:N3	1:5:4400:G:H2'	2.23	0.53
1:5:4543:G:O2'	1:5:4544:A:O5'	2.26	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
1:5:4991:U:H2'	1:5:4992:G:H8	1.73	0.53
1:5:5022:U:C4	1:5:5024:C:C4	2.96	0.53
1:5:670:G:H2'	1:5:671:G:C8	2.43	0.53
1:5:750:U:C4	1:5:751:G:N7	2.77	0.53
1:5:751:G:N2	1:5:752:G:C4	2.76	0.53
1:5:967:C:H2'	1:5:969:C:OP1	2.08	0.53
2:7:58:A:C5	2:7:59:G:C8	2.95	0.53
4:A:97:ASN:O	4:A:100:ASN:HB2	2.08	0.53
1:5:2090:U:N3	6:C:307:LYS:CE	2.71	0.53
7:D:95:TYR:HA	7:D:158:LYS:HG2	1.89	0.53
7:D:99:TYR:CE1	7:D:165:GLY:HA2	2.42	0.53
9:F:243:ASN:OD1	9:F:243:ASN:N	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:104:A:C6	49:S2:105:U:C6	2.96	0.53
49:S2:1134:G:C4	49:S2:1135:C:C6	2.96	0.53
49:S2:1231:C:H3'	49:S2:1232:U:H6	1.73	0.53
49:S2:1387:G:C2	49:S2:1388:A:H1'	2.43	0.53
49:S2:1496:U:O2	49:S2:1496:U:H2'	2.08	0.53
49:S2:1526:G:C6	49:S2:1527:C:C4	2.96	0.53
49:S2:1529:C:H2'	49:S2:1530:U:C6	2.43	0.53
49:S2:1594:A:N1	49:S2:1595:U:C4	2.76	0.53
49:S2:1754:G:H2'	49:S2:1755:C:O4'	2.08	0.53
49:S2:380:G:N2	49:S2:382:C:H2'	2.23	0.53
49:S2:384:U:C4	49:S2:386:C:H6	2.24	0.53
49:S2:449:A:H4'	54:SE:3:ARG:HE	1.73	0.53
49:S2:584:G:C6	49:S2:585:C:C4	2.96	0.53
49:S2:734:C:H5''	49:S2:734:C:C6	2.44	0.53
49:S2:974:C:H4'	64:SO:41:PHE:CE2	2.43	0.53
49:S2:997:A:H2'	49:S2:998:A:O4'	2.07	0.53
50:SA:33:GLN:HB3	50:SA:154:LEU:HD12	1.88	0.53
50:SA:53:ARG:CZ	50:SA:53:ARG:HB2	2.39	0.53
52:SC:267:GLN:HE22	71:SV:50:PHE:HE2	1.55	0.53
52:SC:274:VAL:HG13	52:SC:274:VAL:O	2.08	0.53
54:SE:224:ASN:N	54:SE:224:ASN:OD1	2.41	0.53
57:SH:92:VAL:O	57:SH:169:LYS:NZ	2.41	0.53
49:S2:219:U:H4'	58:SI:182:CYS:SG	2.48	0.53
59:SJ:69:ARG:O	59:SJ:72:PHE:N	2.41	0.53
61:SL:80:MET:HG2	61:SL:86:ILE:CG2	2.38	0.53
72:SW:8:ALA:HA	72:SW:74:VAL:HG11	1.89	0.53
28:Y:10:ASP:O	28:Y:11:ARG:C	2.45	0.53
48:4:617:ILE:CG1	48:4:622:VAL:CG2	2.87	0.53
48:4:848:ILE:HG22	48:4:849:PRO:N	2.15	0.53
48:4:6:VAL:C	48:4:8:GLN:N	2.61	0.53
1:5:994:G:C2	1:5:1050:C:C2	2.95	0.53
1:5:1092:G:C2	1:5:1093:C:N1	2.76	0.53
1:5:1297:U:O2	1:5:1298:C:C6	2.61	0.53
1:5:1492:G:C4	1:5:1493:G:C8	2.97	0.53
1:5:1549:G:N2	1:5:1580:C:C2	2.76	0.53
1:5:1595:G:N1	1:5:4557:U:H5'	2.23	0.53
1:5:1719:A:O2'	1:5:1720:C:C6	2.58	0.53
1:5:1758:G:C2	1:5:1759:G:C8	2.97	0.53
1:5:1898:C:H5	1:5:2279:A:H1'	1.66	0.53
1:5:1899:G:H1'	1:5:2278:G:H22	1.73	0.53
1:5:190:G:N1	1:5:252:C:C2	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1978:C:N3	1:5:1988:G:O6	2.41	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
1:5:2335:C:O2	1:5:2336:G:C8	2.62	0.53
1:5:209:U:N3	1:5:233:U:C5	2.76	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
1:5:2439:G:H2'	1:5:2439:G:N3	2.23	0.53
1:5:2492:C:H2'	1:5:2493:G:O4'	2.08	0.53
1:5:2549:G:N1	1:5:2770:C:N4	2.56	0.53
1:5:2677:G:C6	1:5:2678:A:C8	2.96	0.53
1:5:2682:G:H2'	1:5:2683:C:C6	2.43	0.53
1:5:3694:U:C4	1:5:3695:U:C4	2.95	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
1:5:4131:G:C6	1:5:4132:C:C4	2.96	0.53
1:5:4579:U:C4	1:5:4580:U:C5	2.96	0.53
1:5:471:A:N1	1:5:472:C:H1'	2.24	0.53
1:5:5006:U:C1'	1:5:5042:A:C5	2.91	0.53
1:5:5026:U:OP1	58:SI:168:GLN:HG3	2.09	0.53
1:5:648:G:C2	1:5:649:A:C8	2.96	0.53
1:5:970:G:C2'	1:5:971:U:O4'	2.55	0.53
3:8:125:C:O2	3:8:125:C:O4'	2.21	0.53
1:5:2835:A:N3	5:B:228:TYR:HD2	2.07	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
14:K:56:LEU:HB2	14:K:91:ASP:OD2	2.04	0.53
15:L:28:GLN:HG2	17:N:202:ARG:NH1	2.23	0.53
18:O:109:PRO:O	18:O:113:ASP:OD1	2.26	0.53
21:R:109:TYR:CE1	21:R:114:LYS:CD	2.87	0.53
49:S2:1272:C:OP1	49:S2:1303:C:C1'	2.56	0.53
49:S2:1308:U:N3	49:S2:1309:C:C4	2.76	0.53
49:S2:1545:A:H4'	66:SQ:74:GLY:HA2	1.90	0.53
49:S2:1648:G:O2'	49:S2:1674:G:O6	2.15	0.53
49:S2:367:U:H4'	49:S2:371:A:C8	2.43	0.53
49:S2:386:C:H2'	49:S2:386:C:O2	2.08	0.53
49:S2:404:G:C4	49:S2:405:G:C8	2.96	0.53
49:S2:553:U:N3	49:S2:554:A:N7	2.56	0.53
49:S2:961:G:N1	49:S2:962:A:C5	2.76	0.53
49:S2:1209:A:O2'	50:SA:85:ARG:NH2	51.33	0.53
51:SB:120:VAL:HG13	51:SB:142:PHE:CE1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:10:G:O2'	52:SC:113:GLN:NE2	2.41	0.53
56:SG:229:ALA:HB1	56:SG:233:ARG:NH2	2.23	0.53
49:S2:823:U:C5	59:SJ:144:ILE:HD13	2.43	0.53
49:S2:643:A:OP2	59:SJ:38:ARG:NH2	2.41	0.53
72:SW:11:LEU:HD11	72:SW:37:PHE:HE2	1.71	0.53
48:4:206:ASP:CA	48:4:212:VAL:CG2	2.86	0.53
48:4:593:SER:OG	48:4:728:CYS:HA	2.09	0.53
1:5:1092:G:C2	1:5:1093:C:C6	2.97	0.53
1:5:1183:C:N3	1:5:1184:A:C8	2.76	0.53
1:5:1442:C:C4	1:5:1443:A:N7	2.76	0.53
1:5:1665:C:O2'	1:5:1666:C:H5'	2.08	0.53
1:5:1667:G:C2	1:5:2283:G:C6	2.94	0.53
1:5:1670:G:O5'	1:5:1671:U:H6	1.91	0.53
1:5:1875:C:H2'	1:5:1876:U:O4'	2.08	0.53
1:5:1894:C:C2'	1:5:1895:G:O5'	2.56	0.53
1:5:1994:C:O2	1:5:1995:G:C8	2.60	0.53
1:5:2009:A:O2'	1:5:2010:A:OP1	2.20	0.53
1:5:1961:G:O2'	1:5:2024:G:N2	2.40	0.53
1:5:2113:G:C8	1:5:2115:G:N3	2.76	0.53
1:5:2484:A:H2'	1:5:2485:U:O4'	2.08	0.53
1:5:2698:G:C6	1:5:2699:C:C4	2.97	0.53
1:5:328:A:C2	1:5:329:A:C5	2.96	0.53
1:5:2457:G:H21	1:5:3672:G:N2	2.06	0.53
1:5:2366:A:H2	1:5:3851:U:C1'	2.14	0.53
1:5:3857:G:C4	1:5:3858:C:C6	2.96	0.53
1:5:4078:C:C2	1:5:4079:C:C6	2.96	0.53
1:5:4132:C:C2	1:5:4133:C:C6	2.97	0.53
1:5:4202:U:O2	1:5:4204:C:C4	2.61	0.53
1:5:4214:A:H8	1:5:4214:A:O5'	1.91	0.53
1:5:70:A:N1	1:5:4355:G:C1'	2.72	0.53
1:5:4881:U:O2'	1:5:4882:U:O5'	2.27	0.53
1:5:4886:C:O2	1:5:4886:C:H2'	2.08	0.53
1:5:491:G:N2	1:5:492:U:C4	2.76	0.53
1:5:4948:C:O2'	1:5:4949:G:H5'	2.07	0.53
1:5:5031:G:C2	1:5:5032:C:C4	2.96	0.53
1:5:713:C:H42	1:5:955:G:H1	1.55	0.53
1:5:976:G:H1	1:5:1277:G:H1	1.57	0.53
1:5:976:G:H2'	1:5:977:C:O4'	2.09	0.53
3:8:64:U:C2	3:8:95:A:N1	2.76	0.53
5:B:323:TYR:CD1	5:B:324:GLY:N	2.76	0.53
9:F:63:TYR:HD2	9:F:149:LEU:HD21	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:59:THR:O	14:K:60:VAL:CG2	2.54	0.53
15:L:82:ARG:HB3	15:L:82:ARG:CZ	2.36	0.53
21:R:163:ARG:HD2	49:S2:871:U:O2'	2.08	0.53
49:S2:1112:U:C4	49:S2:1113:A:C4	2.96	0.53
49:S2:1162:C:C4	49:S2:1163:C:C5	2.96	0.53
49:S2:1253:A:H4'	49:S2:1254:C:H5''	1.89	0.53
49:S2:1410:C:N3	49:S2:1411:G:N7	2.57	0.53
49:S2:1432:U:C2	49:S2:1433:C:H5	2.22	0.53
49:S2:1537:A:C6	49:S2:1538:C:C4	2.96	0.53
49:S2:1771:G:N3	49:S2:1772:C:C6	2.77	0.53
49:S2:29:G:C2	49:S2:30:C:N3	2.75	0.53
49:S2:311:C:C2	49:S2:312:G:H1'	2.43	0.53
49:S2:312:G:O2'	49:S2:313:A:OP2	2.26	0.53
49:S2:360:A:C2	49:S2:363:A:N7	2.76	0.53
49:S2:634:A:N1	49:S2:635:G:C5	2.76	0.53
49:S2:73:C:C6	49:S2:74:G:C8	2.96	0.53
49:S2:793:G:C2	49:S2:794:A:H1'	2.43	0.53
49:S2:964:A:N3	49:S2:965:U:C4	2.76	0.53
54:SE:248:ILE:HD12	59:SJ:72:PHE:CD2	2.43	0.53
57:SH:133:LEU:HD21	57:SH:176:VAL:HG11	1.90	0.53
73:SX:88:ASP:OD1	73:SX:89:GLY:N	2.41	0.53
48:4:401:MET:HE1	48:4:476:ASP:HA	1.90	0.53
48:4:743:PRO:HG3	48:4:817:TRP:CE3	2.44	0.53
1:5:102:G:C2'	1:5:103:G:O5'	2.56	0.53
1:5:1280:C:N3	1:5:1282:G:O6	2.42	0.53
1:5:127:G:C4	1:5:128:C:C5	2.96	0.53
1:5:1337:A:H2	1:5:1658:G:N3	2.06	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
1:5:1662:C:O2	1:5:1663:C:C6	2.62	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	2.26	0.53
1:5:1272:C:H5''	1:5:2122:G:C8	2.43	0.53
1:5:2284:G:H2'	1:5:2285:A:O4'	2.08	0.53
1:5:2737:C:C2	1:5:2738:C:C5	2.97	0.53
1:5:313:U:C2	1:5:314:G:C8	2.96	0.53
1:5:319:A:H1'	1:5:3726:A:C2	2.44	0.53
1:5:3612:C:H2'	1:5:3613:U:O4'	2.09	0.53
1:5:3742:G:C2	1:5:3743:G:N7	2.77	0.53
1:5:2851:G:O2'	1:5:3841:C:O4'	2.23	0.53
1:5:3925:U:H2'	1:5:3926:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4167:G:N1	1:5:4168:G:C8	2.76	0.53
1:5:4345:C:O2	1:5:4346:U:C6	2.60	0.53
1:5:4416:G:N1	1:5:4417:C:C5	2.77	0.53
1:5:4430:G:O2'	12:I:158:LYS:HB2	2.09	0.53
1:5:4965:U:H2'	1:5:4965:U:O2	2.04	0.53
1:5:4983:C:O2	1:5:4984:C:H6	1.86	0.53
1:5:5000:G:C6	1:5:5001:U:C4	2.96	0.53
1:5:4999:G:C4	1:5:5000:G:C8	2.97	0.53
1:5:5000:G:C5	1:5:5001:U:C5	2.96	0.53
1:5:60:G:C6	1:5:61:A:C5	2.96	0.53
1:5:907:C:N3	1:5:908:G:C8	2.77	0.53
1:5:942:G:P	9:F:244:ARG:NH1	2.82	0.53
1:5:4198:G:O6	12:I:112:GLN:NE2	2.42	0.53
14:K:62:LEU:HD12	14:K:73:VAL:HB	1.85	0.53
49:S2:1067:C:O2	49:S2:1067:C:H2'	2.08	0.53
49:S2:1181:A:C2	49:S2:1182:A:C2	2.97	0.53
49:S2:1184:G:C6	49:S2:1185:C:C4	2.96	0.53
49:S2:1250:A:H2	49:S2:1339:U:H1'	1.73	0.53
49:S2:1393:G:C6	49:S2:1394:G:N7	2.77	0.53
49:S2:1431:G:N2	49:S2:1432:U:H1'	2.22	0.53
49:S2:1561:A:C6	49:S2:1562:C:C6	2.97	0.53
49:S2:1729:U:O2	49:S2:1730:U:H5	1.91	0.53
49:S2:1859:A:C2	49:S2:1860:A:C5	2.97	0.53
49:S2:436:G:C6	49:S2:458:A:N3	2.76	0.53
49:S2:650:A:H2'	49:S2:651:U:O5'	2.08	0.53
49:S2:697:G:C2	49:S2:734:C:C2	2.97	0.53
49:S2:810:A:H5'	49:S2:811:A:OP2	2.08	0.53
49:S2:816:A:N6	49:S2:817:G:C4	2.76	0.53
49:S2:979:C:H2'	49:S2:979:C:O2	2.08	0.53
49:S2:993:G:N2	49:S2:994:C:N1	2.56	0.53
22:S:95:ARG:HH11	22:S:97:TYR:HH	1.53	0.53
51:SB:113:MET:O	51:SB:142:PHE:HE2	1.92	0.53
49:S2:1355:C:O3'	52:SC:238:LYS:NZ	2.41	0.53
62:SM:101:ARG:CZ	62:SM:101:ARG:HA	2.39	0.53
64:SO:35:ALA:CB	64:SO:112:ALA:HB2	2.38	0.53
68:SS:130:ARG:HG3	68:SS:136:THR:CG2	2.39	0.53
68:SS:15:VAL:HG13	68:SS:68:ILE:HD11	1.90	0.53
48:4:48:SER:O	48:4:49:ALA:HB2	2.08	0.53
1:5:1214:C:H2'	1:5:2114:G:C2	2.41	0.53
1:5:1260:G:C4	1:5:1261:G:C8	2.97	0.53
1:5:1278:C:C3'	1:5:1279:A:H4'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1335:G:C6	1:5:1336:G:C5	2.96	0.53
1:5:1394:G:O2'	1:5:1395:U:C5'	2.57	0.53
1:5:1789:C:C2'	1:5:1790:U:O5'	2.55	0.53
1:5:1806:G:N3	1:5:1807:C:C6	2.77	0.53
1:5:1866:U:C5	1:5:4405:G:O4'	2.61	0.53
1:5:209:U:C6	1:5:211:G:N7	2.77	0.53
1:5:2270:G:N3	1:5:2271:C:C6	2.76	0.53
1:5:1667:G:C6	1:5:2280:G:C4	2.96	0.53
1:5:2451:A:N6	1:5:2452:G:C4	2.77	0.53
1:5:2481:G:C4	1:5:2482:C:C6	2.96	0.53
1:5:271:C:C2	1:5:272:U:C5	2.86	0.53
1:5:3622:C:O2	1:5:3623:C:O2	2.26	0.53
1:5:3668:C:N4	1:5:3669:G:C5	2.76	0.53
1:5:426:A:O2'	1:5:427:A:H5'	2.09	0.53
1:5:4401:G:C6	1:5:4402:C:C4	2.97	0.53
1:5:4404:U:C4	1:5:4436:U:C4	2.96	0.53
1:5:4763:U:O2	16:M:3:PHE:CZ	2.62	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
1:5:5028:G:C2	1:5:5029:C:C2	2.97	0.53
1:5:5055:G:C2	1:5:5056:A:C5	2.96	0.53
1:5:69:A:C2	1:5:70:A:C4	2.97	0.53
1:5:965:G:N3	1:5:965:G:H2'	2.23	0.53
1:5:99:A:H4'	17:N:181:HIS:HD1	1.71	0.53
3:8:132:G:N2	3:8:133:G:N9	2.55	0.53
4:A:209:HIS:HE1	4:A:211:PHE:CD2	2.26	0.53
6:C:54:VAL:HG21	6:C:101:MET:CE	2.39	0.53
7:D:21:ARG:HA	7:D:24:ARG:HE	1.73	0.53
11:H:93:ARG:HH11	11:H:93:ARG:CG	3.01	0.53
14:K:47:ALA:CB	14:K:72:GLU:CD	2.68	0.53
14:K:83:LYS:O	14:K:86:LYS:HB2	2.08	0.53
15:L:47:ALA:HB3	15:L:48:PRO:HD3	1.90	0.53
16:M:11:ARG:CZ	16:M:11:ARG:HB2	2.38	0.53
18:O:14:HIS:CD2	18:O:124:LEU:HD12	2.44	0.53
19:P:82:ARG:HA	19:P:83:TRP:CE3	2.44	0.53
49:S2:1050:A:C5	49:S2:1051:G:C8	2.97	0.53
49:S2:1094:C:N3	49:S2:1095:U:C6	2.76	0.53
49:S2:112:U:H1'	49:S2:114:G:C6	2.43	0.53
49:S2:1222:G:C2'	49:S2:1223:A:O4'	2.54	0.53
49:S2:1256:G:H2'	49:S2:1256:G:N3	2.23	0.53
49:S2:1201:U:HO2'	49:S2:1358:U:HO2'	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1405:A:C2'	49:S2:1406:G:H5'	2.39	0.53
49:S2:1407:U:O2	49:S2:1408:U:C4	2.62	0.53
49:S2:1410:C:C4	49:S2:1411:G:C5	2.96	0.53
49:S2:1467:C:OP1	67:SR:1:MET:N	2.30	0.53
49:S2:1511:U:N3	49:S2:1512:C:C5	2.76	0.53
49:S2:1595:U:C2	49:S2:1596:U:H6	2.26	0.53
49:S2:218:U:C2	49:S2:219:U:C6	2.97	0.53
49:S2:410:G:C6	49:S2:411:G:C5	2.96	0.53
49:S2:459:C:N3	49:S2:460:A:N7	2.55	0.53
49:S2:617:G:C6	49:S2:618:C:C5	2.97	0.53
49:S2:833:C:N3	49:S2:834:C:C5	2.77	0.53
50:SA:10:MET:O	50:SA:55:TRP:CZ3	2.62	0.53
52:SC:72:ASP:OD1	52:SC:72:ASP:N	2.42	0.53
69:ST:33:TRP:O	69:ST:35:ASP:N	2.41	0.53
48:4:58:ASP:C	48:4:63:GLU:CD	2.66	0.53
48:4:604:MET:HE1	48:4:729:LEU:HA	1.90	0.53
48:4:845:LYS:NZ	48:4:845:LYS:CA	2.69	0.53
1:5:1090:G:H2'	1:5:1091:C:O4'	2.09	0.53
1:5:1092:G:C6	1:5:1093:C:C4	2.96	0.53
1:5:1235:G:N2	1:5:1236:C:C5	2.77	0.53
1:5:124:C:O2	1:5:124:C:H2'	2.07	0.53
1:5:1260:G:C2	1:5:1261:G:N9	2.77	0.53
1:5:1337:A:C5'	6:C:102:PHE:HD2	2.21	0.53
1:5:1359:G:H2'	1:5:1360:G:N9	2.23	0.53
1:5:1367:C:N3	1:5:1369:C:P	2.82	0.53
1:5:1609:U:N3	1:5:1610:C:C5	2.77	0.53
1:5:1752:G:C2	1:5:1753:G:C4	2.97	0.53
1:5:2019:C:C2	1:5:2020:U:H6	2.24	0.53
1:5:2034:G:C5	1:5:2035:C:C4	2.96	0.53
1:5:2244:C:C2	1:5:2245:G:C8	2.96	0.53
1:5:2246:C:H2'	1:5:2247:C:O4'	2.09	0.53
1:5:2314:G:N2	1:5:2315:G:N9	2.56	0.53
1:5:235:A:N1	1:5:238:C:C5	2.77	0.53
1:5:2494:U:H2'	1:5:2495:U:O4'	2.08	0.53
1:5:258:G:C2	1:5:259:C:C6	2.97	0.53
1:5:2605:G:C2	1:5:2606:G:C5	2.96	0.53
1:5:2658:G:N3	1:5:2675:G:N2	2.56	0.53
1:5:2368:A:N6	1:5:2827:G:O2'	2.41	0.53
1:5:330:G:C2	1:5:331:G:C5	2.97	0.53
1:5:345:C:O2	1:5:346:G:C8	2.62	0.53
1:5:3635:A:C6	1:5:3636:C:Cl'	2.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3703:G:C2	1:5:3704:U:C6	2.96	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
1:5:3879:G:C5	1:5:3882:C:C4	2.96	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
1:5:424:U:C2'	1:5:424:U:O2	2.57	0.53
1:5:4276:G:O6	1:5:4277:G:C6	2.61	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
1:5:4703:U:N3	1:5:4704:C:C5	2.77	0.53
1:5:4750:G:C2'	1:5:4751:G:O5'	2.56	0.53
1:5:4904:G:N1	1:5:4905:C:C4	2.76	0.53
1:5:4928:C:H2'	1:5:4929:C:H5''	1.90	0.53
1:5:4957:C:O2	1:5:4957:C:H2'	2.09	0.53
1:5:4960:G:C2'	1:5:4961:G:H5'	2.38	0.53
1:5:687:U:O2'	8:E:101:ARG:HG2	2.09	0.53
1:5:924:C:C2	1:5:925:C:C6	2.96	0.53
1:5:936:C:O2	1:5:936:C:O4'	2.27	0.53
1:5:983:C:C2	1:5:984:C:H6	2.10	0.53
3:8:99:U:N3	3:8:100:U:C5	2.76	0.53
4:A:40:TYR:O	4:A:40:TYR:CD1	2.62	0.53
5:B:92:TYR:CE2	5:B:101:THR:HB	2.43	0.53
8:E:277:ILE:HD11	8:E:282:LEU:HD13	1.90	0.53
10:G:100:HIS:HA	10:G:103:ARG:HD2	1.89	0.53
10:G:108:GLN:HA	10:G:108:GLN:HE21	1.74	0.53
11:H:88:PHE:CZ	11:H:151:ILE:HB	2.43	0.53
17:N:39:ALA:HB2	17:N:63:ARG:HH21	1.74	0.53
49:S2:999:G:N1	49:S2:1000:C:C4	2.77	0.53
49:S2:1040:G:C6	49:S2:1041:G:C5	2.97	0.53
49:S2:1408:U:H4'	66:SQ:71:ARG:HH21	1.73	0.53
49:S2:1660:C:O4'	49:S2:1660:C:O2	2.23	0.53
49:S2:1791:A:C5	49:S2:1792:G:H1'	2.44	0.53
49:S2:403:G:C2	49:S2:404:G:C8	2.97	0.53
49:S2:437:G:C2	49:S2:457:C:O2	2.61	0.53
49:S2:608:C:O2	49:S2:608:C:H2'	2.08	0.53
49:S2:597:G:N2	49:S2:640:A:N3	2.57	0.53
49:S2:851:C:C2'	49:S2:852:G:N2	2.70	0.53
49:S2:948:C:N3	49:S2:949:G:N7	2.57	0.53
49:S2:987:A:C2	51:SB:114:VAL:HG21	2.43	0.53
53:SD:34:TYR:HE1	53:SD:37:VAL:HG13	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SE:48:LEU:HD22	54:SE:61:VAL:HG13	1.91	0.53
57:SH:135:PHE:HD1	57:SH:136:PRO:CA	2.22	0.53
58:SI:149:TYR:HA	58:SI:152:ARG:HB2	1.91	0.53
1:5:1090:G:C2	1:5:1091:C:C2	2.97	0.53
1:5:1191:C:C2	1:5:1192:C:C6	2.97	0.53
1:5:127:G:N1	1:5:128:C:C4	2.77	0.53
1:5:1388:A:N1	1:5:1396:G:C2	2.77	0.53
1:5:145:G:N3	1:5:146:G:C8	2.76	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
1:5:1691:G:C5	1:5:1692:C:C5	2.97	0.53
1:5:1949:U:O2	1:5:1949:U:H2'	2.09	0.53
1:5:1991:A:C8	1:5:1991:A:H3'	2.44	0.53
1:5:2089:G:C6	1:5:2263:A:C8	2.96	0.53
1:5:219:G:C8	1:5:220:C:C5	2.97	0.53
1:5:208:A:H1'	1:5:232:G:N3	2.23	0.53
1:5:2480:G:C2	1:5:2481:G:N9	2.77	0.53
1:5:2497:C:N4	1:5:2498:C:H41	2.07	0.53
1:5:2468:U:H2'	1:5:2506:G:O6	2.09	0.53
1:5:2604:C:H2'	1:5:2604:C:O2	2.09	0.53
1:5:2614:C:O2	1:5:2726:G:C2	2.61	0.53
1:5:3657:U:C2	1:5:3658:C:C6	2.96	0.53
1:5:3741:C:N3	1:5:3742:G:C8	2.76	0.53
1:5:4215:C:O2	1:5:4215:C:H2'	2.07	0.53
1:5:4337:C:O2'	1:5:4338:G:O5'	2.26	0.53
1:5:4399:U:C4	1:5:4400:G:N7	2.76	0.53
1:5:4441:A:H5''	1:5:4441:A:C8	2.43	0.53
1:5:4479:A:N1	1:5:4480:A:H1'	2.23	0.53
1:5:4498:U:O2	1:5:4500:U:C5'	2.57	0.53
1:5:4640:C:C4	1:5:4641:U:C5	2.97	0.53
1:5:4967:A:H2'	1:5:4968:A:C8	2.44	0.53
1:5:5031:G:N3	1:5:5032:C:C6	2.77	0.53
1:5:732:A:C5	1:5:733:A:C2	2.96	0.53
1:5:84:A:C8	1:5:84:A:H5'	2.44	0.53
1:5:84:A:H4'	1:5:85:G:OP1	2.08	0.53
1:5:908:G:C2	1:5:909:A:N9	2.77	0.53
1:5:992:C:N3	1:5:993:G:N7	2.57	0.53
3:8:79:G:C2	3:8:80:A:C6	2.97	0.53
3:8:80:A:C5	3:8:81:C:C6	2.96	0.53
1:5:1185:G:N2	7:D:282:GLN:NE2	2.56	0.53
9:F:149:LEU:HB2	9:F:197:TYR:HH	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:239:GLU:C	9:F:241:GLN:H	2.12	0.53
14:K:102:GLY:C	14:K:140:GLY:CA	2.76	0.53
14:K:147:HIS:H	14:K:147:HIS:CD2	2.26	0.53
1:5:1572:U:C5'	21:R:95:TRP:CZ2	2.92	0.53
49:S2:1048:G:H2'	49:S2:1068:G:N2	2.24	0.53
49:S2:1110:G:C4	49:S2:1111:U:C6	2.96	0.53
49:S2:1113:A:H2'	49:S2:1114:U:C3'	2.39	0.53
49:S2:1431:G:C2	49:S2:1432:U:N1	2.77	0.53
49:S2:1551:U:C1'	49:S2:1558:C:C2	2.92	0.53
49:S2:1580:A:OP1	49:S2:1580:A:H2'	2.08	0.53
49:S2:1760:G:N2	49:S2:1773:C:C2	2.76	0.53
49:S2:1777:G:C5	49:S2:1778:C:C5	2.97	0.53
49:S2:23:G:H2'	49:S2:24:C:O4'	2.07	0.53
49:S2:477:G:C2	49:S2:478:G:C5	2.97	0.53
49:S2:70:G:C4	49:S2:71:G:N7	2.76	0.53
22:S:27:LEU:C	22:S:28:TYR:CD1	2.81	0.53
49:S2:828:G:C6	49:S2:829:C:C4	2.97	0.53
49:S2:835:C:C2	49:S2:837:A:H4'	2.43	0.53
49:S2:859:G:N1	49:S2:860:G:C5	2.76	0.53
49:S2:933:G:C4	49:S2:1001:A:C8	2.97	0.53
50:SA:199:PRO:HB2	50:SA:203:PHE:HZ	1.74	0.53
54:SE:121:TYR:HB2	54:SE:161:GLN:HE21	1.74	0.53
49:S2:996:A:N6	63:SN:113:PHE:CE1	2.76	0.53
49:S2:1629:C:O2'	68:SS:82:TRP:O	2.26	0.53
24:U:97:ARG:O	24:U:98:ASP:HB2	2.08	0.53
1:5:5005:G:C5	26:W:51:TRP:CD1	2.91	0.53
48:4:450:THR:CG2	48:4:470:VAL:HG21	2.38	0.53
48:4:3:ASN:HB3	48:4:47:ALA:H	1.74	0.53
48:4:64:GLN:O	48:4:64:GLN:NE2	2.42	0.53
14:K:31:LYS:HE2	48:4:753:GLU:OE2	2.08	0.53
1:5:1098:G:C6	1:5:1099:C:C4	2.96	0.53
1:5:1098:G:C2	1:5:1099:C:C2	2.97	0.53
1:5:1215:C:C2	1:5:1216:C:H6	2.27	0.53
1:5:1297:U:O2	1:5:1298:C:H6	1.91	0.53
1:5:1543:G:N1	1:5:1544:G:C5	2.76	0.53
1:5:1663:C:H2'	1:5:1664:U:H6	1.74	0.53
1:5:1696:C:O2'	1:5:1697:G:OP2	2.21	0.53
1:5:180:C:O2	1:5:181:C:C6	2.61	0.53
1:5:1836:G:N1	1:5:1837:A:N7	2.56	0.53
1:5:964:A:N3	1:5:2252:G:O6	2.42	0.53
1:5:2316:G:N3	1:5:2317:C:C6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3653:A:C2	1:5:3692:A:C4'	2.91	0.53
1:5:3742:G:N3	1:5:3743:G:C8	2.77	0.53
1:5:3858:C:N4	1:5:3859:G:C6	2.76	0.53
1:5:4083:U:H2'	1:5:4084:G:H3'	1.90	0.53
1:5:4117:U:C2'	1:5:4117:U:O2	2.55	0.53
1:5:4223:C:O2	1:5:4223:C:H2'	2.08	0.53
1:5:4283:G:N3	1:5:4284:C:C5	2.63	0.53
1:5:4284:C:N3	1:5:4285:U:C4	2.76	0.53
1:5:4731:G:C8	1:5:4732:G:C6	2.97	0.53
1:5:4737:G:C5	1:5:4738:C:C4	2.97	0.53
1:5:505:G:C6	1:5:506:C:C4	2.97	0.53
1:5:666:G:OP2	1:5:666:G:C2	2.62	0.53
1:5:990:C:C2	1:5:991:C:C6	2.97	0.53
3:8:80:A:C8	3:8:81:C:H1'	2.44	0.53
3:8:80:A:C3'	3:8:81:C:H4'	2.38	0.53
3:8:9:A:N1	3:8:10:G:C5	2.77	0.53
4:A:16:PHE:CE1	4:A:194:ASN:HB3	2.44	0.53
7:D:265:ARG:CG	7:D:265:ARG:HH11	2.22	0.53
7:D:43:LYS:HB3	7:D:46:THR:CG2	2.38	0.53
12:I:95:HIS:CE1	12:I:97:ILE:HD12	2.44	0.53
16:M:118:MET:HG3	18:O:192:PHE:HE2	1.73	0.53
21:R:103:ARG:CZ	21:R:106:LEU:HD21	9.22	0.53
49:S2:1283:C:C1'	62:SM:91:LEU:HD13	2.37	0.53
49:S2:1325:G:C2	49:S2:1327:G:C8	2.97	0.53
49:S2:1341:C:H4'	49:S2:1342:U:OP1	2.09	0.53
49:S2:1572:C:N3	49:S2:1573:G:C8	2.77	0.53
49:S2:1744:G:C2	49:S2:1789:G:C2	2.96	0.53
49:S2:1842:C:O2'	49:S2:1843:G:H5'	2.08	0.53
49:S2:291:G:C5'	49:S2:291:G:H8	2.22	0.53
49:S2:118:C:H1'	49:S2:445:A:C4	2.44	0.53
49:S2:494:C:H2'	49:S2:494:C:O2	2.09	0.53
49:S2:583:C:N3	49:S2:584:G:C8	2.77	0.53
49:S2:58:C:H1'	49:S2:59:U:C5	2.43	0.53
49:S2:632:C:O2	49:S2:633:C:C6	2.62	0.53
49:S2:636:C:C4	49:S2:637:U:C4	2.97	0.53
49:S2:646:G:C5	49:S2:647:U:C6	2.97	0.53
49:S2:64:A:N6	49:S2:82:G:C4	2.77	0.53
49:S2:976:G:C5	49:S2:977:C:C5	2.97	0.53
49:S2:976:G:C6	49:S2:977:C:C4	2.97	0.53
49:S2:992:A:C2	49:S2:993:G:C8	2.97	0.53
50:SA:176:TRP:HE1	50:SA:195:TRP:HE3	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SL:124:ASP:OD1	61:SL:147:LYS:HB3	2.08	0.53
61:SL:89:ARG:HE	61:SL:106:HIS:CD2	2.27	0.53
29:Z:50:PRO:CG	29:Z:122:TYR:CE2	2.91	0.53
48:4:162:ARG:O	48:4:166:GLU:CG	2.49	0.53
48:4:403:PRO:HA	48:4:410:PHE:CD2	2.44	0.53
1:5:101:A:N6	1:5:102:G:C6	2.77	0.53
1:5:1092:G:H2'	1:5:1093:C:O4'	2.09	0.53
1:5:1260:G:N3	1:5:1261:G:C8	2.77	0.53
1:5:1373:A:C2	1:5:1374:G:C8	2.97	0.53
1:5:1549:G:C2	1:5:1580:C:C2	2.97	0.53
1:5:1698:C:OP2	1:5:1698:C:C6	2.61	0.53
1:5:1955:G:C5	1:5:1956:A:C8	2.97	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
1:5:2301:G:N2	1:5:2302:C:N1	2.56	0.53
1:5:2529:A:N6	1:5:2532:C:H1'	2.23	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
1:5:2851:G:C6	1:5:2852:U:H1'	2.44	0.53
1:5:322:C:O2	1:5:4356:G:C2	2.61	0.53
1:5:3709:U:C6	49:S2:970:G:C2	2.82	0.53
1:5:426:A:C2	1:5:427:A:C5	2.96	0.53
1:5:4297:G:H2'	1:5:4297:G:N3	2.23	0.53
1:5:4640:C:N3	1:5:4641:U:C5	2.77	0.53
1:5:4687:A:C8	1:5:4698:C:C6	2.97	0.53
1:5:4750:G:O2'	1:5:4751:G:P	2.67	0.53
1:5:486:C:C2	1:5:487:G:N7	2.72	0.53
1:5:4981:G:C2	1:5:4982:A:N7	2.77	0.53
1:5:91:G:N7	1:5:93:G:C5	2.77	0.53
3:8:142:U:N3	3:8:143:G:C8	2.77	0.53
5:B:17:LEU:C	5:B:17:LEU:HD13	2.28	0.53
5:B:45:ALA:HB3	5:B:183:ILE:HG23	1.90	0.53
7:D:99:TYR:HD2	7:D:199:ILE:HG23	1.74	0.53
9:F:124:PHE:CD2	9:F:196:ILE:CG2	2.92	0.53
11:H:113:GLU:OE2	11:H:124:ARG:O	2.27	0.53
14:K:88:PRO:O	14:K:88:PRO:HD2	2.07	0.53
15:L:81:LEU:O	15:L:83:VAL:N	2.42	0.53
17:N:115:VAL:HA	17:N:134:LEU:HD23	1.91	0.53
1:5:397:G:N2	19:P:22:LEU:HD22	2.24	0.53
1:5:2061:U:O2	22:S:111:ARG:CD	2.57	0.53
49:S2:989:C:C4	49:S2:1001:A:C2	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1117:C:O4'	49:S2:1117:C:O2	2.27	0.53
49:S2:122:G:C2	49:S2:123:G:C4	2.97	0.53
49:S2:1271:C:C4	49:S2:1272:C:C6	2.97	0.53
49:S2:1410:C:O2	49:S2:1411:G:C8	2.62	0.53
49:S2:1683:C:N3	49:S2:1684:C:C5	2.77	0.53
49:S2:1687:C:C2	49:S2:1688:C:C5	2.96	0.53
49:S2:1838:U:C5'	49:S2:1838:U:C6	2.92	0.53
49:S2:350:C:C2	49:S2:351:G:C8	2.97	0.53
49:S2:38:A:N1	49:S2:515:G:N2	2.57	0.53
49:S2:402:C:N4	49:S2:403:G:C5	2.77	0.53
49:S2:751:G:N1	49:S2:792:C:C2	2.77	0.53
49:S2:752:G:C2	49:S2:790:C:N3	2.77	0.53
49:S2:997:A:C2'	49:S2:998:A:O5'	2.56	0.53
50:SA:84:GLN:HE21	50:SA:100:ALA:HB1	1.73	0.53
55:SF:20:PHE:HB3	55:SF:23:TRP:HB2	1.89	0.53
49:S2:383:G:H4'	61:SL:132:ARG:HD2	1.90	0.53
48:4:591:CYS:SG	48:4:732:SER:CA	2.97	0.53
1:5:1048:G:C5	1:5:1049:C:C5	2.97	0.53
1:5:1075:G:C2	1:5:1076:C:C2	2.97	0.53
1:5:1265:G:H5''	1:5:2115:G:C2	2.43	0.53
1:5:1272:C:O3'	1:5:1273:G:O4'	2.25	0.53
1:5:450:G:H21	1:5:1294:A:H2'	1.74	0.53
1:5:1348:U:H2'	1:5:1348:U:O2	2.09	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
1:5:1651:G:O5'	1:5:1651:G:H8	1.92	0.53
1:5:1673:U:O2	1:5:1674:C:C6	2.62	0.53
1:5:1682:A:C4	1:5:1683:U:C6	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
1:5:1912:G:N1	1:5:1913:C:C4	2.77	0.53
1:5:2044:U:O2'	18:O:63:ASN:CB	2.57	0.53
1:5:2463:G:C2	1:5:2464:C:C5	2.97	0.53
1:5:2503:G:H3'	1:5:2504:C:C5'	2.39	0.53
1:5:2538:U:H2'	1:5:2539:C:C6	2.44	0.53
1:5:2567:G:C2	1:5:2568:C:N1	2.76	0.53
1:5:2594:C:C2	1:5:2595:C:C5	2.97	0.53
1:5:258:G:N3	1:5:259:C:C6	2.77	0.53
1:5:286:U:N3	1:5:287:U:C5	2.77	0.53
1:5:31:U:O2'	1:5:32:G:C5'	2.57	0.53
1:5:3753:G:C6	1:5:3776:G:N1	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4236:G:N2	1:5:4289:U:H1'	2.23	0.53
1:5:3893:C:C4	1:5:4568:A:C2	2.97	0.53
1:5:4617:G:C2	1:5:4618:G:C8	2.97	0.53
1:5:65:A:O2'	1:5:66:A:H4'	2.08	0.53
1:5:754:U:O2	1:5:755:C:C6	2.61	0.53
2:7:104:C:N3	2:7:105:C:C5	2.77	0.53
2:7:43:U:N3	2:7:44:C:C4	2.75	0.53
3:8:53:G:C4	3:8:54:C:C6	2.97	0.53
5:B:160:ILE:HD13	5:B:194:LEU:HD13	1.90	0.53
5:B:39:LYS:O	5:B:40:PRO:O	2.27	0.53
9:F:202:ARG:HD2	9:F:202:ARG:N	2.23	0.53
10:G:57:TRP:CE3	10:G:61:ILE:HG21	2.44	0.53
15:L:176:PHE:CD1	15:L:176:PHE:C	2.81	0.53
15:L:94:ILE:O	15:L:94:ILE:HG22	2.09	0.53
1:5:3597:G:P	21:R:109:TYR:OH	2.67	0.53
49:S2:1029:G:C6	49:S2:1030:A:N7	2.77	0.53
49:S2:1248:U:C5	49:S2:1249:C:C2	2.96	0.53
49:S2:1489:A:N1	53:SD:146:ARG:CZ	2.72	0.53
49:S2:1510:G:C6	49:S2:1511:U:C4	2.97	0.53
49:S2:1552:G:H5''	49:S2:1553:C:H5''	1.91	0.53
49:S2:158:A:H2'	49:S2:159:A:C8	2.43	0.53
49:S2:166:A:C2	49:S2:167:G:C5	2.97	0.53
49:S2:171:A:N7	49:S2:173:A:C6	2.77	0.53
49:S2:18:C:N3	49:S2:19:A:N7	2.57	0.53
49:S2:205:G:H2'	49:S2:206:G:O4'	2.09	0.53
49:S2:376:A:C6	49:S2:377:G:C5	2.96	0.53
49:S2:409:C:H2'	49:S2:409:C:O2	2.06	0.53
49:S2:436:G:N1	49:S2:437:G:C5	2.76	0.53
49:S2:752:G:C2	49:S2:791:C:C2	2.97	0.53
49:S2:956:G:N2	49:S2:957:A:C5	2.76	0.53
51:SB:120:VAL:HG22	51:SB:142:PHE:CE1	2.43	0.53
63:SN:18:TYR:C	63:SN:18:TYR:CD2	2.83	0.53
48:4:518:PRO:CG	73:SX:50:ILE:HD12	2.39	0.53
23:T:8:ARG:HH11	23:T:52:MET:HE1	1.74	0.53
48:4:543:GLU:HG3	48:4:576:VAL:CG2	2.22	0.52
48:4:763:LEU:HD12	48:4:770:VAL:HG22	1.89	0.52
48:4:772:GLU:O	48:4:783:VAL:O	2.27	0.52
48:4:749:ILE:O	48:4:783:VAL:HA	2.09	0.52
48:4:797:THR:HG23	48:4:798:ALA:N	2.23	0.52
48:4:79:TYR:CE2	48:4:351:LEU:HD11	2.38	0.52
48:4:762:VAL:CB	48:4:800:LEU:HD12	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:801:ARG:NE	48:4:802:SER:HB3	2.24	0.52
1:5:1168:G:C2	1:5:1169:G:N7	2.77	0.52
1:5:1189:G:C2	1:5:1190:C:N1	2.77	0.52
1:5:146:G:C2	1:5:147:A:C5	2.97	0.52
1:5:1490:G:N1	1:5:1491:A:C5	2.77	0.52
1:5:1557:C:O2	1:5:1557:C:H2'	2.07	0.52
1:5:1655:C:H4'	1:5:1679:A:C2	2.44	0.52
1:5:1907:A:H2'	1:5:1908:A:C8	2.44	0.52
1:5:1928:C:N3	18:O:133:ARG:HD2	2.23	0.52
1:5:1902:G:C6	1:5:2075:G:C2	2.97	0.52
1:5:209:U:C2	1:5:233:U:C5	2.96	0.52
1:5:2104:G:C4	1:5:2105:A:C8	2.96	0.52
1:5:2316:G:N3	1:5:2317:C:C5	2.77	0.52
1:5:2605:G:C2	1:5:2606:G:N7	2.77	0.52
1:5:2606:G:C2	1:5:2607:C:C6	2.97	0.52
1:5:4173:G:C5	1:5:4174:U:C5	2.98	0.52
1:5:4580:U:C4	1:5:4581:G:C8	2.96	0.52
1:5:4932:U:H2'	1:5:4933:C:C1'	2.39	0.52
1:5:4730:C:H2'	1:5:4965:U:N3	2.23	0.52
1:5:964:A:C8	1:5:964:A:O5'	2.61	0.52
2:7:73:U:O2	2:7:102:U:O4	2.26	0.52
3:8:13:G:C4	3:8:14:U:C4	2.97	0.52
1:5:4518:A:O2'	5:B:257:TRP:CZ3	2.54	0.52
9:F:59:TYR:O	9:F:63:TYR:HB2	2.08	0.52
12:I:184:MET:CB	12:I:190:LEU:HD12	2.38	0.52
13:J:19:LYS:HD2	13:J:21:CYS:SG	2.49	0.52
14:K:113:ALA:CA	14:K:116:MET:SD	2.94	0.52
20:Q:58:ARG:HH11	20:Q:58:ARG:HB2	1.72	0.52
49:S2:1097:G:C6	49:S2:1098:C:C5	2.96	0.52
49:S2:1185:C:O2	49:S2:1185:C:H2'	2.09	0.52
49:S2:1289:U:C4	49:S2:1290:G:C5	2.98	0.52
49:S2:1315:U:O4'	49:S2:1315:U:O2	2.27	0.52
49:S2:1435:C:C2	49:S2:1436:C:C6	2.97	0.52
49:S2:1451:G:H2'	49:S2:1452:A:H2'	1.90	0.52
49:S2:1467:C:N3	49:S2:1468:C:C5	2.77	0.52
49:S2:1498:A:C2	49:S2:1499:U:H1'	2.44	0.52
1:5:3759:A:N6	49:S2:1709:G:H5'	2.25	0.52
49:S2:291:G:O5'	49:S2:291:G:H8	1.89	0.52
49:S2:29:G:N3	49:S2:30:C:C5	2.77	0.52
49:S2:340:C:C2'	49:S2:341:C:C6	2.91	0.52
49:S2:568:C:C5	49:S2:569:A:C8	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:605:A:O5'	49:S2:605:A:H8	1.91	0.52
49:S2:646:G:H5'	49:S2:647:U:OP2	2.09	0.52
49:S2:666:U:H2'	49:S2:667:U:H6	1.73	0.52
49:S2:823:U:O4'	49:S2:823:U:O2	2.27	0.52
49:S2:983:A:H2'	49:S2:984:C:O4'	2.09	0.52
49:S2:998:A:C8	49:S2:998:A:H3'	2.43	0.52
55:SF:19:LEU:HD22	55:SF:24:SER:HA	1.90	0.52
60:SK:40:VAL:HG13	60:SK:40:VAL:O	2.10	0.52
60:SK:57:TYR:HB3	60:SK:75:GLY:HA2	1.89	0.52
49:S2:1284:A:N6	62:SM:33:ARG:HB2	2.20	0.52
28:Y:81:TYR:CD2	28:Y:96:HIS:HB2	2.44	0.52
48:4:160:MET:HE3	48:4:174:LEU:HD21	1.91	0.52
48:4:166:GLU:HG3	48:4:167:LEU:H	1.73	0.52
48:4:398:ILE:HD11	48:4:479:LEU:CD2	2.37	0.52
48:4:120:ARG:NH1	48:4:496:VAL:O	2.42	0.52
48:4:613:LEU:HD13	48:4:639:TYR:CG	2.42	0.52
48:4:685:TRP:CZ3	48:4:723:PRO:CD	2.90	0.52
48:4:749:ILE:HD12	48:4:759:ILE:HD12	1.88	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
1:5:1219:G:N3	1:5:1220:G:C8	2.77	0.52
1:5:1287:G:N2	1:5:1289:C:C6	2.77	0.52
1:5:127:G:N3	1:5:128:C:C6	2.77	0.52
1:5:1362:G:C2	1:5:1363:C:C6	2.97	0.52
1:5:1379:C:O2	1:5:1380:G:N7	2.42	0.52
1:5:1429:C:C2	1:5:1430:C:C6	2.98	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
1:5:1624:G:C5	1:5:1643:A:C8	2.98	0.52
1:5:1782:U:O2	1:5:1783:C:C6	2.62	0.52
1:5:1797:G:C2	1:5:1798:G:C8	2.97	0.52
1:5:1831:G:C5	1:5:1832:C:C5	2.97	0.52
1:5:1871:A:C6	1:5:1872:G:C5	2.96	0.52
1:5:1889:U:H3'	1:5:1890:G:C8	2.43	0.52
1:5:1987:C:C2'	1:5:1987:C:O2	2.55	0.52
1:5:2080:U:C4	1:5:2081:C:N4	2.77	0.52
1:5:21:G:N1	3:8:36:G:C2	2.77	0.52
1:5:2288:G:C2	1:5:2290:C:C5	2.98	0.52
1:5:2505:C:H4'	1:5:2506:G:H5'	1.90	0.52
1:5:2569:G:C4	1:5:2570:U:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2577:C:C5	29:Z:17:ARG:NH2	2.77	0.52
1:5:2725:A:H2'	1:5:2726:G:C5'	2.38	0.52
1:5:2736:G:C4	1:5:2737:C:C5	2.98	0.52
1:5:2753:G:H3'	1:5:2754:G:O4'	2.09	0.52
1:5:303:C:C2	1:5:304:C:C6	2.97	0.52
1:5:4228:G:H5''	1:5:4229:U:C4'	2.39	0.52
1:5:427:A:O2'	1:5:428:G:H5'	2.08	0.52
1:5:4399:U:C4	1:5:4400:G:C8	2.97	0.52
1:5:4690:G:N2	1:5:4691:A:N7	2.57	0.52
1:5:46:U:OP2	1:5:47:A:O2'	2.19	0.52
1:5:4885:U:C4	1:5:4886:C:C5	2.96	0.52
1:5:984:C:N3	1:5:1070:G:C2	2.78	0.52
1:5:98:A:C6	1:5:99:A:N9	2.77	0.52
2:7:110:G:C4	2:7:111:C:C5	2.97	0.52
2:7:11:A:C2	2:7:67:C:O4'	2.62	0.52
5:B:118:PHE:CB	5:B:119:TYR:HE1	2.21	0.52
5:B:251:VAL:HG21	5:B:267:ALA:HB3	1.91	0.52
6:C:200:ARG:NH2	28:Y:11:ARG:CD	2.72	0.52
6:C:22:VAL:HG13	6:C:258:ARG:HE	1.74	0.52
7:D:287:PHE:CD1	7:D:287:PHE:C	2.82	0.52
1:5:981:C:C4	8:E:69:TYR:CZ	2.97	0.52
10:G:50:ASP:OD1	10:G:50:ASP:C	2.48	0.52
49:S2:100:U:H2'	49:S2:101:U:O5'	2.09	0.52
49:S2:1025:U:H2'	49:S2:1026:C:O4'	2.09	0.52
49:S2:1052:A:C6	49:S2:1053:C:C4	2.98	0.52
49:S2:1061:U:O2	49:S2:1848:U:H4'	2.09	0.52
49:S2:1267:C:C2	49:S2:1268:C:C5	2.97	0.52
49:S2:1708:C:C4	49:S2:1709:G:N7	2.77	0.52
49:S2:196:C:C2	49:S2:204:G:C2	2.98	0.52
49:S2:217:A:C2	49:S2:218:U:C6	2.97	0.52
49:S2:447:A:C6	49:S2:449:A:C5	2.97	0.52
49:S2:533:A:C4	49:S2:534:G:C8	2.98	0.52
49:S2:54:A:C2	49:S2:451:G:N3	2.77	0.52
49:S2:955:A:N6	49:S2:971:G:O2'	2.42	0.52
49:S2:99:A:C2	49:S2:100:U:N1	2.77	0.52
57:SH:177:TYR:O	57:SH:180:LEU:N	2.41	0.52
60:SK:52:LEU:HD12	60:SK:57:TYR:HB2	1.91	0.52
61:SL:84:ARG:NH1	61:SL:115:PRO:HG3	2.24	0.52
73:SX:61:GLN:O	73:SX:61:GLN:NE2	2.42	0.52
22:S:29:ARG:HH12	23:T:150:LEU:HA	1.74	0.52
24:U:42:PHE:CD2	24:U:90:TYR:CE1	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:X:79:PHE:N	27:X:79:PHE:CD1	2.77	0.52
48:4:264:ARG:HB3	48:4:288:THR:HG21	1.92	0.52
48:4:477:GLN:CD	48:4:477:GLN:H	2.12	0.52
48:4:536:CYS:C	48:4:537:ILE:HG23	2.30	0.52
48:4:619:LYS:HB3	48:4:621:GLU:OE1	2.08	0.52
48:4:847:GLY:HA3	48:4:848:ILE:CG1	2.39	0.52
1:5:1271:G:H5''	1:5:1272:C:O4'	2.10	0.52
1:5:1601:A:N7	1:5:3643:A:N9	2.57	0.52
1:5:1619:G:C6	1:5:1620:U:C4	2.97	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
1:5:2103:G:C6	1:5:2104:G:N7	2.77	0.52
1:5:2128:G:C4	1:5:2129:C:C6	2.97	0.52
1:5:2573:A:H2'	1:5:2574:G:O4'	2.09	0.52
1:5:2586:G:N7	1:5:2587:A:N1	2.57	0.52
1:5:2678:A:N1	1:5:2679:G:C5	2.77	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
1:5:2908:U:N3	1:5:2909:C:C5	2.78	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
1:5:4114:C:H3'	1:5:4115:G:C4'	2.39	0.52
1:5:4344:U:O2	1:5:4344:U:H2'	2.09	0.52
1:5:4951:G:O2'	1:5:4952:G:OP1	2.23	0.52
1:5:512:U:C2'	1:5:513:U:H5''	2.39	0.52
1:5:667:A:C2'	1:5:668:C:O4'	2.55	0.52
3:8:131:G:C5	3:8:132:G:C8	2.97	0.52
3:8:79:G:H2'	3:8:80:A:N3	2.25	0.52
4:A:89:TYR:O	4:A:100:ASN:ND2	2.43	0.52
4:A:89:TYR:HB2	4:A:100:ASN:ND2	2.17	0.52
5:B:388:PHE:O	5:B:390:GLY:N	2.42	0.52
5:B:57:VAL:HG22	5:B:73:VAL:HG12	1.91	0.52
6:C:209:ILE:HD13	6:C:221:PHE:CD2	2.45	0.52
13:J:32:ARG:HB3	13:J:32:ARG:CZ	2.39	0.52
14:K:121:LEU:HD12	14:K:123:ARG:CG	2.39	0.52
17:N:191:ALA:O	17:N:194:ARG:HB3	2.09	0.52
6:C:33:ARG:HH21	20:Q:22:ASP:HB3	1.75	0.52
49:S2:1223:A:O2'	49:S2:1651:A:H4'	2.09	0.52
49:S2:1236:G:C2	49:S2:1237:C:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1411:G:N7	49:S2:1412:C:H1'	2.23	0.52
49:S2:1541:G:N2	49:S2:1542:C:C5	2.78	0.52
49:S2:1743:G:H2'	49:S2:1744:G:C8	2.44	0.52
49:S2:1843:G:H2'	49:S2:1844:U:O4'	2.09	0.52
49:S2:321:C:H2'	49:S2:322:C:C6	2.43	0.52
49:S2:413:G:C5	49:S2:425:G:N2	2.78	0.52
49:S2:449:A:C6	49:S2:452:G:N7	2.72	0.52
49:S2:497:C:N3	49:S2:506:G:N2	2.57	0.52
49:S2:553:U:H2'	49:S2:554:A:C8	2.44	0.52
49:S2:582:C:H2'	49:S2:582:C:O2	2.09	0.52
49:S2:675:U:O2	49:S2:675:U:H2'	2.09	0.52
49:S2:902:G:C2	49:S2:903:A:C4	2.97	0.52
50:SA:103:PHE:HZ	50:SA:107:THR:HG1	1.56	0.52
52:SC:169:TYR:CE2	52:SC:173:LYS:HA	2.45	0.52
56:SG:64:LYS:HG2	56:SG:97:VAL:HG11	1.91	0.52
58:SI:87:ASN:C	58:SI:87:ASN:OD1	2.47	0.52
49:S2:1589:A:H4'	69:ST:82:ARG:HG2	1.92	0.52
48:4:228:PHE:HE2	48:4:293:ILE:HG23	1.71	0.52
48:4:297:ILE:O	48:4:301:PHE:HD1	1.93	0.52
48:4:452:LEU:HD11	48:4:461:ILE:CD1	2.39	0.52
48:4:689:GLU:CB	48:4:730:TYR:HH	2.18	0.52
48:4:693:CYS:CB	48:4:839:ARG:NE	2.63	0.52
48:4:713:ALA:CA	48:4:716:ARG:HB3	2.27	0.52
48:4:144:ARG:CZ	48:4:781:MET:CE	2.83	0.52
1:5:1293:G:H8	1:5:1293:G:H5''	1.74	0.52
1:5:154:G:N2	1:5:155:C:C2	2.77	0.52
1:5:1682:A:C5	1:5:1683:U:C6	2.98	0.52
1:5:2079:G:C4	1:5:2080:U:C5	2.98	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
1:5:2448:G:C6	1:5:2511:A:C5	2.98	0.52
1:5:2557:G:C2	1:5:2571:C:C2	2.97	0.52
1:5:2570:U:C2	1:5:2571:C:C6	2.97	0.52
1:5:3650:C:H2'	1:5:3651:A:O4'	2.10	0.52
1:5:3858:C:O2	1:5:3858:C:C2'	2.55	0.52
1:5:4240:G:C6	1:5:4241:C:C6	2.97	0.52
1:5:1866:U:O4	1:5:4405:G:N9	2.41	0.52
1:5:3800:A:N3	1:5:4496:A:H1'	2.24	0.52
1:5:4518:A:C4'	1:5:4519:C:H5'	2.39	0.52
1:5:4733:C:C5	1:5:4734:A:O4'	2.63	0.52
1:5:4750:G:HO2'	1:5:4751:G:P	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4773:C:C2	1:5:4863:G:C2	2.98	0.52
1:5:4872:G:O2'	1:5:4873:G:P	2.67	0.52
1:5:4963:G:H3'	1:5:4964:C:H5''	1.90	0.52
1:5:4966:A:C2'	1:5:4967:A:O4'	2.47	0.52
1:5:56:A:C2	1:5:57:G:C5	2.97	0.52
1:5:691:C:H2'	1:5:692:A:C8	2.45	0.52
1:5:712:C:C4	1:5:713:C:C5	2.98	0.52
5:B:119:TYR:OH	5:B:129:ALA:HB3	2.10	0.52
12:I:171:TRP:HB2	12:I:181:PHE:CD2	2.44	0.52
1:5:48:G:C5'	17:N:192:TRP:HE1	2.05	0.52
18:O:34:VAL:HG11	18:O:112:TYR:CE2	2.44	0.52
21:R:117:ARG:HD3	21:R:118:HIS:CE1	2.43	0.52
49:S2:989:C:N4	49:S2:1001:A:C2	2.77	0.52
49:S2:1094:C:C2	49:S2:1095:U:H6	2.27	0.52
49:S2:1132:C:N4	49:S2:1133:A:C5	2.78	0.52
49:S2:1278:A:C4	49:S2:1279:C:C6	2.97	0.52
49:S2:1563:G:C2	49:S2:1564:C:C2	2.98	0.52
49:S2:1571:G:C4	49:S2:1572:C:C6	2.98	0.52
49:S2:1630:A:N1	49:S2:1631:U:C4	2.77	0.52
49:S2:376:A:N1	49:S2:377:G:C4	2.78	0.52
49:S2:425:G:H8	49:S2:425:G:H5''	1.74	0.52
49:S2:56:G:H2'	49:S2:57:U:C6	2.44	0.52
49:S2:840:C:H2'	74:SY:12:PHE:CD2	2.44	0.52
49:S2:959:G:C8	49:S2:959:G:H3'	2.45	0.52
49:S2:999:G:C4	49:S2:1000:C:C6	2.97	0.52
51:SB:205:TYR:CD1	51:SB:206:PRO:HD2	2.43	0.52
52:SC:74:LYS:HG3	52:SC:269:PHE:CE2	2.45	0.52
66:SQ:109:LYS:HG2	66:SQ:113:ILE:HD12	1.91	0.52
67:SR:104:GLU:HA	67:SR:104:GLU:OE1	2.09	0.52
23:T:19:PHE:O	23:T:20:ARG:C	2.46	0.52
48:4:461:ILE:HG23	48:4:463:ASP:H	1.74	0.52
1:5:1275:G:C6	1:5:1276:C:C4	2.98	0.52
1:5:1347:G:C6	1:5:1348:U:C5	2.97	0.52
1:5:1388:A:H2'	1:5:1389:U:O4'	2.09	0.52
1:5:138:G:C3'	1:5:139:G:H5'	2.40	0.52
1:5:1412:G:C2	1:5:1413:C:C5	2.97	0.52
1:5:1487:G:C6	1:5:1488:G:C8	2.97	0.52
1:5:1554:A:C6	1:5:1555:G:C4	2.97	0.52
1:5:1629:G:C5	1:5:1631:A:N6	2.78	0.52
1:5:1672:U:N3	1:5:1673:U:O4	2.42	0.52
1:5:1776:A:C4	1:5:1777:C:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:N2	1:5:1900:C:C4	2.78	0.52
1:5:230:G:N2	1:5:239:C:C2	2.78	0.52
1:5:2555:G:H2'	1:5:2556:G:O4'	2.09	0.52
1:5:2560:C:C2	1:5:2561:C: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
1:5:2553:A:C6	1:5:2763:U:C5	2.98	0.52
1:5:2805:C:N4	1:5:2806:A:C6	2.78	0.52
1:5:70:A:N6	1:5:314:G:O2'	2.42	0.52
1:5:3728:A:C8	1:5:3729:U:O4'	2.63	0.52
1:5:394:G:H2'	1:5:394:G:N3	2.25	0.52
1:5:4097:G:C6	1:5:4098:A:N7	2.78	0.52
1:5:4109:G:C4	1:5:4110:C:C6	2.98	0.52
1:5:4124:G:N1	4:A:64:ARG:NH1	2.57	0.52
1:5:4136:G:C4	1:5:4137:C:C6	2.97	0.52
1:5:4198:G:O6	12:I:112:GLN:CD	2.48	0.52
1:5:4455:G:N1	1:5:4456:C:C4	2.78	0.52
1:5:5057:C:H2'	1:5:5058:A:C8	2.45	0.52
1:5:54:G:N1	1:5:55:G:N9	2.58	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
1:5:993:G:C2	1:5:994:G:C8	2.97	0.52
2:7:92:C:C2	2:7:93:G:C8	2.98	0.52
3:8:139:G:C4	3:8:140:C:C6	2.98	0.52
3:8:43:A:C6	3:8:44:A:N7	2.77	0.52
9:F:93:PHE:CE1	9:F:95:ILE:HG13	2.44	0.52
13:J:104:ASN:OD1	13:J:133:VAL:HA	2.10	0.52
13:J:98:ASN:OD1	13:J:98:ASN:N	2.42	0.52
21:R:35:ALA:O	21:R:37:SER:N	2.42	0.52
49:S2:118:C:C4	49:S2:119:U:C5	2.97	0.52
49:S2:1191:C:H2'	49:S2:1192:U:O4'	2.08	0.52
49:S2:1287:A:C4	49:S2:1313:A:C6	2.97	0.52
49:S2:1405:A:H1'	49:S2:1580:A:C6	2.44	0.52
49:S2:1510:G:H2'	49:S2:1510:G:N3	2.23	0.52
49:S2:1541:G:C2	49:S2:1542:C:C4	2.97	0.52
49:S2:1669:G:C4	49:S2:1670:C:C5	2.98	0.52
49:S2:430:C:C2	49:S2:431:G:C8	2.97	0.52
49:S2:589:G:O2'	49:S2:590:A:H2'	2.09	0.52
49:S2:72:C:O2	49:S2:73:C:N1	2.43	0.52
53:SD:193:ASP:HB3	53:SD:194:PRO:CD	2.39	0.52
54:SE:17:HIS:O	54:SE:18:TRP:CD1	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1678:A:OP1	55:SF:145:ARG:NH2	2.43	0.52
58:SI:38:ILE:HD11	58:SI:81:VAL:HG23	1.90	0.52
64:SO:146:ARG:HG3	64:SO:146:ARG:NH1	2.08	0.52
65:SP:17:TYR:OH	65:SP:38:SER:HB3	2.10	0.52
52:SC:166:ARG:NH2	71:SV:10:ASP:OD2	2.41	0.52
48:4:170:GLU:CG	48:4:171:PRO:HD2	2.40	0.52
48:4:3:ASN:C	48:4:46:ILE:HA	2.29	0.52
48:4:525:LYS:O	48:4:529:LYS:HG2	2.09	0.52
1:5:127:G:C2	1:5:128:C:C6	2.97	0.52
1:5:1308:C:C2	1:5:1309:C:C5	2.97	0.52
1:5:1393:G:H2'	1:5:1394:G:H5'	1.92	0.52
1:5:1490:G:N3	1:5:1491:A:C8	2.77	0.52
1:5:370:U:C4	1:5:1637:A:N6	2.78	0.52
1:5:2090:U:P	1:5:2090:U:O4'	2.66	0.52
1:5:219:G:H8	1:5:220:C:C5	2.28	0.52
1:5:2424:G:N2	1:5:2426:U:O2	2.43	0.52
1:5:2534:C:H2'	1:5:2535:G:O5'	2.09	0.52
1:5:2567:G:N1	1:5:2568:C:C5	2.77	0.52
1:5:2643:G:C6	1:5:2644:G:N7	2.77	0.52
1:5:2898:G:C6	1:5:2899:C:C4	2.98	0.52
1:5:321:U:H2'	1:5:322:C:O4'	2.08	0.52
1:5:3755:G:O6	1:5:3769:C:N4	2.42	0.52
1:5:3775:A:H3'	1:5:3776:G:O4'	2.09	0.52
1:5:3846:C:N3	1:5:3847:C:C6	2.77	0.52
1:5:4147:G:C6	1:5:4148:C:C4	2.97	0.52
1:5:4201:G:C2	1:5:4202:U:C4	2.97	0.52
1:5:4236:G:C2	1:5:4289:U:O2	2.62	0.52
1:5:4479:A:C5	1:5:4480:A:C8	2.98	0.52
1:5:4745:G:H2'	1:5:4746:C:C5	2.44	0.52
1:5:914:U:H2'	1:5:915:A:C1'	2.40	0.52
1:5:961:G:H5'	8:E:119:ARG:HH11	1.75	0.52
3:8:10:G:O6	3:8:11:C:C4	2.63	0.52
3:8:130:C:N4	3:8:131:G:N7	2.57	0.52
3:8:135:C:C2	3:8:136:U:C6	2.98	0.52
4:A:196:TRP:CG	4:A:197:PRO:N	2.78	0.52
9:F:117:ARG:O	20:Q:4:ASP:OD2	2.27	0.52
9:F:146:TYR:CE2	9:F:239:GLU:HB3	2.45	0.52
9:F:59:TYR:CD2	9:F:194:HIS:CD2	2.98	0.52
11:H:156:ASN:HD21	11:H:157:SER:HB3	1.74	0.52
11:H:177:ASP:N	11:H:177:ASP:OD1	2.42	0.52
14:K:162:CYS:H	14:K:163:PRO:HD3	1.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:22:VAL:HG12	14:K:44:ASP:OD1	2.09	0.52
21:R:103:ARG:NH2	21:R:106:LEU:HD21	10.39	0.52
49:S2:1233:G:C4	49:S2:1234:C:C6	2.97	0.52
49:S2:1364:U:O2	49:S2:1364:U:O4'	2.27	0.52
49:S2:1792:G:N1	49:S2:1793:A:C5	2.78	0.52
1:5:3767:C:H5''	49:S2:1849:G:C6	2.18	0.52
49:S2:187:G:C2	49:S2:188:C:C2	2.97	0.52
49:S2:293:C:H2'	49:S2:293:C:O2	2.09	0.52
49:S2:313:A:O5'	56:SG:195:LYS:NZ	2.42	0.52
49:S2:318:A:C2	49:S2:332:G:N2	2.77	0.52
49:S2:375:U:H2'	49:S2:376:A:O4'	2.10	0.52
49:S2:378:U:O4	49:S2:379:C:C4	2.61	0.52
49:S2:414:A:N1	49:S2:424:C:C2	2.78	0.52
49:S2:426:A:C5	49:S2:427:U:O4	2.63	0.52
49:S2:460:A:N3	49:S2:460:A:H2'	2.25	0.52
49:S2:494:C:H2'	49:S2:495:U:O5'	2.09	0.52
49:S2:56:G:O6	49:S2:90:G:C2	2.61	0.52
49:S2:648:A:C2	49:S2:649:U:C5	2.97	0.52
49:S2:83:A:C5	49:S2:84:A:C8	2.97	0.52
53:SD:20:GLU:HG2	60:SK:64:TRP:CD2	2.45	0.52
54:SE:139:LEU:HD13	54:SE:160:ILE:CD1	2.40	0.52
69:ST:31:PRO:CB	69:ST:33:TRP:CZ2	2.93	0.52
70:SU:17:ILE:HG22	70:SU:92:HIS:HB3	1.92	0.52
23:T:3:ASN:HB3	23:T:9:ARG:NH1	2.25	0.52
48:4:322:LYS:HG3	48:4:323:LEU:N	2.25	0.52
48:4:692:LEU:N	48:4:692:LEU:HD22	2.24	0.52
48:4:800:LEU:HD23	48:4:810:PRO:HG3	1.91	0.52
1:5:1189:G:C4	1:5:1190:C:C6	2.97	0.52
1:5:1262:G:N1	1:5:1263:A:C5	2.78	0.52
1:5:1395:U:H2'	1:5:1396:G:O5'	2.09	0.52
1:5:1467:C:N3	1:5:1468:C:C5	2.78	0.52
1:5:1774:C:N3	1:5:1775:A:C8	2.77	0.52
1:5:1855:G:C5	1:5:1856:C:C5	2.98	0.52
1:5:1902:G:H2'	1:5:1903:G:O5'	2.09	0.52
1:5:219:G:C4	1:5:219:G:C5'	2.93	0.52
1:5:2567:G:C6	1:5:2568:C:C4	2.97	0.52
1:5:2723:U:O2	1:5:2724:G:C8	2.62	0.52
1:5:2590:G:C6	1:5:2754:G:C6	2.98	0.52
1:5:2428:A:C8	1:5:2789:A:C2	2.98	0.52
1:5:2804:C:H2'	1:5:2804:C:O2	2.08	0.52
1:5:2819:U:HO2'	21:R:58:HIS:CD2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3856:A:C6	1:5:3857:G:C5	2.97	0.52
1:5:4092:G:C6	1:5:4093:G:N2	2.77	0.52
1:5:4194:U:O4	1:5:4197:G:C5'	2.57	0.52
1:5:4283:G:N1	1:5:4284:C:N4	2.57	0.52
1:5:4313:A:C2	1:5:4314:C:C6	2.98	0.52
1:5:4341:C:N3	1:5:4342:C:C6	2.78	0.52
1:5:4462:C:C2	1:5:4515:G:C2	2.98	0.52
1:5:4510:A:N6	1:5:4592:C:O2'	2.39	0.52
1:5:4619:U:C2	1:5:4620:U:C6	2.98	0.52
1:5:5063:G:C2	1:5:5064:G:N7	2.78	0.52
1:5:709:C:H4'	8:E:186:HIS:HE1	1.73	0.52
3:8:135:C:C4	3:8:136:U:C4	2.98	0.52
4:A:158:ILE:CG2	4:A:162:ASN:OD1	2.57	0.52
5:B:118:PHE:HB2	5:B:119:TYR:HE1	1.69	0.52
7:D:164:LYS:O	7:D:168:ASP:HB2	2.09	0.52
8:E:175:LEU:HD11	8:E:179:ARG:HH11	1.75	0.52
14:K:104:ILE:HD12	14:K:140:GLY:HA3	1.92	0.52
14:K:111:ASN:HA	14:K:114:ARG:CD	2.40	0.52
14:K:141:CYS:C	14:K:148:PRO:CD	2.75	0.52
14:K:81:ILE:HG13	14:K:82:ILE:N	2.24	0.52
18:O:143:HIS:ND1	18:O:150:GLN:OE1	2.37	0.52
49:S2:1121:G:N1	49:S2:1122:A:C4	2.77	0.52
49:S2:1126:G:C6	49:S2:1127:C:C4	2.97	0.52
49:S2:1140:G:H2'	49:S2:1141:G:O4'	2.10	0.52
49:S2:1149:A:N3	49:S2:1151:G:N7	2.57	0.52
49:S2:1207:G:H4'	49:S2:1208:A:OP2	2.08	0.52
49:S2:1236:G:C4	49:S2:1237:C:C5	2.98	0.52
49:S2:1286:G:N2	62:SM:33:ARG:CG	2.70	0.52
49:S2:1307:U:C4	49:S2:1308:U:C6	2.97	0.52
49:S2:1346:U:OP2	49:S2:1371:U:O4	2.28	0.52
49:S2:1407:U:C2'	49:S2:1408:U:C5	2.91	0.52
49:S2:1419:C:O4'	69:ST:128:GLN:OE1	2.27	0.52
49:S2:1533:A:C2	49:S2:1536:G:N3	2.78	0.52
49:S2:1850:A:H2'	49:S2:1851:A:C8	2.45	0.52
49:S2:113:G:C2	49:S2:293:C:C5	2.97	0.52
49:S2:421:G:C2	49:S2:422:U:N3	2.78	0.52
49:S2:43:U:O2	49:S2:43:U:H2'	2.09	0.52
49:S2:604:A:C2	49:S2:605:A:C5	2.98	0.52
49:S2:610:G:C6	49:S2:611:G:N7	2.77	0.52
22:S:10:TYR:HB2	22:S:40:ALA:CB	2.39	0.52
54:SE:86:PHE:CD2	54:SE:87:MET:HG2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:97:PHE:HB3	55:SF:108:PRO:HG2	1.91	0.52
57:SH:61:ILE:HD12	57:SH:93:VAL:HG13	1.92	0.52
61:SL:73:LEU:HD12	61:SL:140:PHE:CE2	2.45	0.52
69:ST:5:THR:HA	69:ST:132:ASP:OD2	2.09	0.52
49:S2:1668:U:H5'	70:SU:77:TRP:CH2	2.44	0.52
75:SZ:68:ILE:O	75:SZ:69:THR:HG23	2.09	0.52
24:U:26:THR:HA	24:U:68:SER:HB3	1.91	0.52
10:G:48:LYS:HB3	27:X:42:THR:HG23	1.90	0.52
48:4:118:ALA:O	48:4:122:THR:OG1	2.26	0.52
48:4:228:PHE:CE1	48:4:232:TYR:CZ	2.98	0.52
48:4:301:PHE:CE2	48:4:336:LEU:HD21	2.44	0.52
48:4:432:PRO:O	48:4:433:ASN:CG	2.48	0.52
48:4:609:PHE:HB2	48:4:699:GLY:HA2	1.91	0.52
1:5:1170:G:N1	1:5:1171:G:C5	2.77	0.52
1:5:1266:G:C5'	1:5:1266:G:H8	2.22	0.52
1:5:1404:G:C2	1:5:1414:C:N3	2.76	0.52
1:5:1443:A:H2'	1:5:1444:G:O4'	2.09	0.52
1:5:1475:G:C2	1:5:1476:C:C4	2.92	0.52
1:5:12:A:C2	1:5:14:C:C4	2.98	0.52
1:5:1552:G:O2'	1:5:1574:G:N2	2.43	0.52
1:5:1617:G:C5	1:5:1618:G:N7	2.77	0.52
1:5:1689:G:C6	1:5:1690:C:C4	2.98	0.52
1:5:2065:G:C6	1:5:2066:C:C4	2.97	0.52
1:5:2089:G:O6	1:5:2263:A:O5'	2.27	0.52
1:5:2311:C:C4	1:5:2312:U:C5	2.98	0.52
1:5:2409:U:C4	1:5:2783:A:C6	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
1:5:2648:G:O2'	1:5:2649:G:P	2.68	0.52
1:5:2736:G:N2	1:5:2737:C:C6	2.78	0.52
1:5:98:A:H1'	1:5:292:G:O6	2.09	0.52
1:5:307:A:H3'	1:5:308:G:H21	1.74	0.52
1:5:3621:A:N3	1:5:3622:C:C6	2.78	0.52
1:5:3719:A:C5	1:5:3720:G:C8	2.97	0.52
1:5:3730:U:N3	1:5:3731:C:C6	2.78	0.52
1:5:4093:G:C3'	1:5:4094:G:H5''	2.40	0.52
1:5:4123:C:O2'	29:Z:135:ARG:HB3	2.10	0.52
1:5:4139:G:C6	1:5:4140:C:C4	2.97	0.52
1:5:4175:G:C6	1:5:4176:C:C5	2.98	0.52
1:5:4255:A:C2	1:5:4256:A:C4	2.98	0.52
1:5:4483:C:N3	1:5:4484:A:C8	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4498:U:C4	1:5:4500:U:OP2	2.62	0.52
1:5:4675:U:OP1	5:B:358:ARG:NH2	2.43	0.52
1:5:4910:G:C2	18:O:109:PRO:HA	2.44	0.52
1:5:4980:C:C5	1:5:4981:G:C4	2.98	0.52
1:5:3611:A:C2	1:5:5016:A:H8	2.27	0.52
1:5:5042:A:C2	1:5:5043:A:C4	2.97	0.52
1:5:661:C:N4	1:5:662:C:C4	2.78	0.52
1:5:689:U:C2	1:5:690:C:C6	2.98	0.52
2:7:114:U:C2	2:7:115:A:C8	2.97	0.52
5:B:67:VAL:HG13	5:B:70:LYS:HB2	1.91	0.52
14:K:28:LEU:CD1	14:K:29:ALA:H	2.23	0.52
14:K:61:LYS:CD	14:K:73:VAL:O	2.57	0.52
14:K:97:ASN:OD1	14:K:98:ILE:CG1	2.55	0.52
1:5:1360:G:H5'	15:L:25:TRP:CZ3	2.45	0.52
21:R:126:LYS:HB3	21:R:132:PHE:CE2	2.44	0.52
22:S:161:ARG:HD2	22:S:164:LYS:HB2	1.91	0.52
49:S2:1100:A:C6	49:S2:1101:U:C4	2.98	0.52
49:S2:1156:U:H2'	49:S2:1157:G:H21	1.74	0.52
49:S2:1232:U:O2	49:S2:1233:G:H8	1.86	0.52
49:S2:1318:G:C6	49:S2:1319:U:C4	2.97	0.52
49:S2:166:A:C2	49:S2:167:G:N7	2.77	0.52
49:S2:1739:C:H2'	49:S2:1739:C:O2	2.09	0.52
49:S2:582:C:H2'	49:S2:583:C:H6	1.75	0.52
49:S2:70:G:C6	49:S2:80:G:N1	2.77	0.52
49:S2:868:G:N2	57:SH:115:LYS:CA	2.71	0.52
49:S2:902:G:C5	49:S2:903:A:C2	2.98	0.52
49:S2:925:G:C6	49:S2:926:A:N7	2.77	0.52
49:S2:958:G:C6	49:S2:959:G:N2	2.78	0.52
50:SA:181:GLU:HA	50:SA:181:GLU:OE1	2.10	0.52
53:SD:72:VAL:HG22	60:SK:20:VAL:HG21	1.91	0.52
57:SH:130:LEU:HD11	57:SH:177:TYR:OH	2.10	0.52
59:SJ:5:ARG:HB2	59:SJ:7:TRP:CH2	2.45	0.52
61:SL:62:PHE:CD2	61:SL:62:PHE:N	2.78	0.52
69:ST:132:ASP:O	69:ST:135:ALA:HB3	2.10	0.52
69:ST:92:PHE:HD1	69:ST:93:SER:N	2.07	0.52
23:T:105:PHE:CE1	23:T:109:VAL:CG2	2.92	0.52
27:X:48:ARG:HG3	27:X:48:ARG:HH11	1.75	0.52
29:Z:28:ASN:CG	29:Z:28:ASN:O	2.48	0.52
48:4:753:GLU:CB	48:4:782:PHE:HZ	1.99	0.52
48:4:813:VAL:CG1	48:4:814:PHE:N	2.61	0.52
1:5:1073:G:N2	1:5:1239:C:N3	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1183:C:N3	1:5:1184:A:N7	2.58	0.52
1:5:1197:C:C2	1:5:1198:G:C8	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
1:5:1441:C:H2'	1:5:1442:C:O4'	2.09	0.52
1:5:1432:G:C2	1:5:1451:G:C2	2.97	0.52
1:5:1479:G:H2'	1:5:1480:C:C6	2.45	0.52
1:5:1540:C:H5''	4:A:19:HIS:CD2	2.44	0.52
1:5:1570:G:C6	1:5:1571:G:C8	2.98	0.52
1:5:1687:U:O2	1:5:1850:A:N1	2.42	0.52
1:5:1993:C:H2'	1:5:1994:C:H6	1.75	0.52
1:5:2055:G:C1'	18:O:130:LYS:HD3	2.40	0.52
1:5:1268:G:C4	1:5:2111:G:C4	2.98	0.52
1:5:2328:G:C4	1:5:2329:U:C5	2.98	0.52
1:5:2367:A:C2	1:5:2368:A:C8	2.98	0.52
1:5:2556:G:N2	1:5:2572:C:C2	2.78	0.52
1:5:3597:G:C2	1:5:3598:C:C2	2.98	0.52
1:5:3652:A:N6	1:5:3691:G:O2'	2.43	0.52
1:5:3772:U:C4	1:5:3773:U:C5	2.98	0.52
1:5:3648:A:N9	1:5:3785:A:N6	2.58	0.52
1:5:3804:G:C6	1:5:3805:U:C5	2.98	0.52
1:5:3848:U:N3	1:5:3849:A:N7	2.57	0.52
1:5:3899:G:C5'	5:B:257:TRP:HD1	2.22	0.52
1:5:3944:G:N3	1:5:3945:A:C8	2.78	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
1:5:4139:G:C2	1:5:4140:C:N1	2.78	0.52
1:5:4332:C:N3	1:5:4333:C:C5	2.65	0.52
1:5:4502:C:N3	1:5:4503:A:C8	2.78	0.52
1:5:4744:A:C6	1:5:4745:G:O6	2.63	0.52
1:5:4859:C:C2	1:5:4860:G:C8	2.97	0.52
1:5:5031:G:C2	1:5:5032:C:C6	2.98	0.52
1:5:991:C:C4	1:5:992:C:C4	2.98	0.52
12:I:39:LYS:HB3	12:I:86:HIS:CE1	2.44	0.52
14:K:16:ARG:HH12	14:K:28:LEU:C	2.13	0.52
14:K:64:ILE:O	14:K:70:GLN:HA	2.10	0.52
15:L:56:ARG:O	15:L:116:ARG:NH2	2.40	0.52
49:S2:1102:G:N2	49:S2:1103:C:C2	2.78	0.52
49:S2:1112:U:C5	49:S2:1113:A:C5	2.98	0.52
49:S2:1121:G:O6	49:S2:1122:A:C6	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:113:G:C2	49:S2:292:A:H1'	2.45	0.52
49:S2:1180:C:O2	49:S2:1180:C:H2'	2.10	0.52
49:S2:1272:C:C4	49:S2:1273:C:C5	2.98	0.52
49:S2:1308:U:C2	49:S2:1309:C:C6	2.98	0.52
49:S2:1466:G:C4	49:S2:1467:C:C5	2.97	0.52
49:S2:191:A:H3'	49:S2:192:C:H5''	1.92	0.52
49:S2:143:U:O4	49:S2:315:C:P	2.68	0.52
49:S2:532:C:C2	49:S2:533:A:N7	2.78	0.52
49:S2:563:G:N2	49:S2:564:A:C8	2.78	0.52
49:S2:672:A:N3	49:S2:672:A:O4'	2.40	0.52
49:S2:858:A:N1	49:S2:859:G:N7	2.56	0.52
49:S2:956:G:C6	49:S2:968:U:O2	2.63	0.52
62:SM:17:ALA:HB1	62:SM:124:ILE:HG23	1.92	0.52
53:SD:212:GLU:C	67:SR:20:TYR:OH	2.47	0.52
67:SR:16:ILE:HG22	67:SR:24:LEU:HD11	1.91	0.52
9:F:82:ASN:HD21	23:T:142:ARG:CA	2.23	0.52
48:4:126:LEU:HD13	48:4:353:MET:HE2	1.93	0.52
48:4:16:LYS:HA	48:4:19:ILE:HD12	1.92	0.52
48:4:744:ILE:CD1	48:4:816:HIS:CB	2.87	0.52
1:5:102:G:H2'	1:5:103:G:O5'	2.10	0.52
1:5:1177:U:H2'	1:5:1178:G:C8	2.44	0.52
1:5:118:C:O2	1:5:118:C:H2'	2.09	0.52
1:5:1189:G:C2	1:5:1190:C:C2	2.98	0.52
1:5:1196:G:C6	1:5:1197:C:C4	2.98	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
1:5:1221:G:HO2'	1:5:1222:A:P	2.32	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
1:5:1877:G:C4	1:5:1878:G:C8	2.97	0.52
1:5:2082:G:H2'	1:5:2083:C:C6	2.45	0.52
1:5:2245:G:H2'	1:5:2246:C:O4'	2.10	0.52
1:5:247:G:C4	1:5:248:C:C5	2.98	0.52
1:5:2612:G:C2	1:5:2613:C:C2	2.98	0.52
1:5:2632:U:C2'	1:5:2632:U:O2	2.52	0.52
1:5:2874:U:H4'	1:5:2875:C:OP2	2.10	0.52
1:5:288:G:C6	1:5:289:C:C4	2.98	0.52
1:5:3630:A:N1	1:5:3631:U:C4	2.78	0.52
1:5:3703:G:C4	1:5:3704:U:C5	2.98	0.52
1:5:3829:G:N3	1:5:3829:G:H2'	2.24	0.52
1:5:3833:C:O2	1:5:3834:C:C6	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4097:G:N2	1:5:4098:A:N9	2.58	0.52
1:5:4248:A:H2'	1:5:4249:G:O4'	2.10	0.52
1:5:4266:G:C6	1:5:4279:A:N7	2.78	0.52
1:5:4238:G:C2	1:5:4287:G:C6	2.97	0.52
1:5:442:G:O2'	1:5:443:G:H5'	2.10	0.52
1:5:4536:C:C2	1:5:4537:C:C5	2.99	0.52
1:5:4730:C:N3	1:5:4734:A:N7	2.58	0.52
1:5:687:U:C5	1:5:688:U:C5	2.97	0.52
1:5:966:A:C2	8:E:84:VAL:HB	2.45	0.52
1:5:976:G:C5	1:5:977:C:C6	2.99	0.52
2:7:56:G:H2'	2:7:57:C:H6	1.75	0.52
3:8:100:U:C2	3:8:101:C:C6	2.98	0.52
3:8:115:G:C2	3:8:116:C:C6	2.98	0.52
3:8:132:G:C2	3:8:133:G:N7	2.77	0.52
3:8:73:U:O4	3:8:74:U:C2	2.63	0.52
5:B:379:PHE:HE2	5:B:385:LYS:CG	2.23	0.52
9:F:118:GLN:HB3	9:F:121:ASN:OD1	2.10	0.52
10:G:81:ASN:ND2	10:G:238:GLY:HA3	2.21	0.52
13:J:107:PHE:CZ	13:J:130:PHE:HB2	2.45	0.52
1:5:4927:G:H1'	16:M:121:ARG:CD	2.40	0.52
16:M:25:VAL:CG1	16:M:38:VAL:HG22	2.40	0.52
1:5:61:A:OP1	17:N:162:ARG:NH2	2.42	0.52
49:S2:1112:U:C2	49:S2:1113:A:C8	2.98	0.52
49:S2:1139:C:O2	49:S2:1139:C:O4'	2.28	0.52
49:S2:1453:C:N4	49:S2:1455:A:C4	2.78	0.52
49:S2:1484:A:H5'	53:SD:159:HIS:HB3	1.91	0.52
49:S2:1575:G:N3	49:S2:1576:G:C8	2.78	0.52
49:S2:415:A:H2	49:S2:423:U:O2	1.93	0.52
49:S2:469:A:H2'	49:S2:469:A:N3	2.25	0.52
49:S2:88:G:C2	49:S2:500:A:C2	2.99	0.52
49:S2:661:U:H3'	49:S2:662:G:H8	1.75	0.52
49:S2:833:C:H2'	49:S2:834:C:O4'	2.10	0.52
49:S2:977:C:C4	49:S2:978:G:N7	2.78	0.52
50:SA:141:ASN:ND2	50:SA:141:ASN:N	2.58	0.52
51:SB:158:HIS:CD2	51:SB:158:HIS:C	2.82	0.52
54:SE:210:VAL:HB	54:SE:218:PHE:CE2	2.45	0.52
49:S2:1309:C:H5''	62:SM:36:ARG:CZ	2.39	0.52
64:SO:64:ALA:O	64:SO:66:ARG:N	2.40	0.52
69:ST:56:ARG:HD3	69:ST:79:TYR:HE2	1.69	0.52
48:4:609:PHE:CD2	48:4:699:GLY:HA2	2.44	0.51
1:5:1091:C:C4	1:5:1092:G:N7	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1203:G:C4	1:5:1204:C:C6	2.97	0.51
1:5:1203:G:C5	1:5:1204:C:C5	2.98	0.51
1:5:1571:G:C5	1:5:1572:U:C5	2.98	0.51
1:5:2004:U:C2	1:5:2005:G:C8	2.99	0.51
1:5:2249:C:H2'	1:5:2249:C:O2	2.09	0.51
1:5:2434:G:O3'	27:X:83:THR:HG21	2.10	0.51
1:5:2448:G:H2'	1:5:2449:A:C8	2.45	0.51
1:5:244:G:C2	1:5:246:G:C8	2.98	0.51
1:5:261:G:H2'	1:5:262:G:O4'	2.10	0.51
1:5:3656:A:H2'	1:5:3657:U:H6	1.75	0.51
1:5:3710:G:H2'	1:5:3710:G:N3	2.23	0.51
1:5:3740:G:C5	1:5:3741:C:C6	2.97	0.51
1:5:385:A:C2	1:5:386:A:C5	2.98	0.51
1:5:3911:C:N3	1:5:3912:U:C5	2.77	0.51
1:5:4104:G:O2'	1:5:4106:G:C6	2.63	0.51
1:5:4143:G:C5	1:5:4145:C:C5	2.99	0.51
1:5:4277:G:C6	1:5:4278:C:C4	2.98	0.51
1:5:4314:C:H2'	1:5:4314:C:O2	2.09	0.51
1:5:4324:A:N3	1:5:4325:A:N7	2.58	0.51
1:5:4369:A:C2	1:5:4370:G:C5	2.98	0.51
1:5:4719:G:H8	1:5:4719:G:O5'	1.92	0.51
1:5:5051:C:N3	1:5:5052:C:C6	2.78	0.51
2:7:21:G:N1	2:7:58:A:C2	2.78	0.51
3:8:103:A:C8	3:8:104:A:C8	2.98	0.51
5:B:116:ARG:CG	5:B:177:LYS:HG3	2.39	0.51
5:B:201:LEU:O	5:B:202:GLU:HB2	2.09	0.51
5:B:62:ARG:CG	5:B:62:ARG:HH11	2.23	0.51
8:E:153:HIS:HD2	8:E:183:ARG:NH1	2.08	0.51
12:I:59:GLN:NE2	12:I:126:VAL:HG11	2.25	0.51
20:Q:67:ILE:HD12	20:Q:96:PRO:HD2	1.91	0.51
49:S2:1123:C:C2'	49:S2:1123:C:O2	2.58	0.51
49:S2:119:U:O2	49:S2:120:U:C6	2.63	0.51
49:S2:1573:G:H5'	49:S2:1574:C:OP2	2.10	0.51
49:S2:1573:G:N1	49:S2:1574:C:C2	2.78	0.51
49:S2:1606:G:C2'	49:S2:1633:A:H62	2.22	0.51
49:S2:1670:C:H2'	49:S2:1671:G:C8	2.45	0.51
49:S2:1771:G:C6	49:S2:1772:C:C4	2.98	0.51
49:S2:292:A:H4'	61:SL:40:ILE:O	2.10	0.51
49:S2:344:U:C2	49:S2:345:U:C5	2.99	0.51
49:S2:403:G:H2'	49:S2:403:G:N3	2.26	0.51
49:S2:443:U:O4	49:S2:444:G:C5	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:493:A:C2'	49:S2:493:A:N3	2.73	0.51
49:S2:903:A:C8	49:S2:904:A:C8	2.98	0.51
49:S2:931:C:H2'	49:S2:932:G:C8	2.45	0.51
22:S:44:PHE:HD1	22:S:44:PHE:C	2.13	0.51
50:SA:176:TRP:CH2	50:SA:199:PRO:HG3	2.45	0.51
53:SD:113:LEU:HD21	53:SD:117:ARG:HB3	1.92	0.51
64:SO:147:ARG:NH2	64:SO:150:ARG:HH11	2.08	0.51
28:Y:121:ARG:CZ	28:Y:121:ARG:HB3	2.40	0.51
29:Z:18:TYR:CD2	29:Z:47:ASP:OD1	2.63	0.51
48:4:154:VAL:CB	48:4:358:LEU:HD21	2.40	0.51
48:4:451:ILE:HD12	48:4:458:VAL:CG1	2.40	0.51
48:4:505:VAL:HG23	48:4:549:ALA:O	2.10	0.51
48:4:4:PHE:CG	48:4:5:THR:HG22	2.34	0.51
48:4:604:MET:HE3	48:4:702:PHE:HB3	1.93	0.51
48:4:732:SER:O	48:4:735:THR:HG22	2.10	0.51
48:4:754:GLN:OE1	48:4:755:VAL:CG2	2.50	0.51
48:4:45:ILE:HD13	48:4:78:PHE:CA	2.40	0.51
1:5:146:G:N2	1:5:147:A:C4	2.79	0.51
1:5:1968:G:C2	1:5:1969:G:C4	2.98	0.51
1:5:2046:G:C4	18:O:60:LYS:HD3	2.45	0.51
1:5:2056:G:C6	1:5:2058:G:C4	2.98	0.51
1:5:2054:U:C4'	1:5:2056:G:H1'	2.38	0.51
1:5:2089:G:C2	1:5:2263:A:N6	2.78	0.51
1:5:964:A:C2	1:5:2252:G:C6	2.98	0.51
1:5:2323:C:H2'	1:5:2324:C:O4'	2.10	0.51
1:5:238:C:N3	1:5:239:C:C5	2.78	0.51
1:5:2611:A:H2'	1:5:2612:G:C8	2.44	0.51
1:5:2645:G:N3	1:5:2646:C:C6	2.76	0.51
1:5:2658:G:N1	1:5:2675:G:N1	2.59	0.51
1:5:2740:U:O2	1:5:2740:U:O4'	2.24	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
1:5:3754:G:C2	1:5:3755:G:N9	2.78	0.51
1:5:2844:A:N6	1:5:3839:G:C8	2.78	0.51
1:5:382:G:H2'	1:5:383:A:H2'	1.91	0.51
1:5:3907:G:N9	1:5:4449:A:C1'	2.65	0.51
1:5:4142:C:C2	1:5:4143:G:C2	2.99	0.51
1:5:4167:G:C6	1:5:4168:G:N7	2.78	0.51
1:5:4336:A:C8	1:5:4336:A:H3'	2.45	0.51
1:5:3802:U:H3	1:5:4498:U:HO2'	1.58	0.51
1:5:4593:C:O2	1:5:4594:U:C6	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4652:G:C2	1:5:4653:C:C4	2.98	0.51
1:5:4737:G:C2	1:5:4738:C:C2	2.98	0.51
1:5:518:G:C6	1:5:519:C:C4	2.98	0.51
1:5:59:A:C4	1:5:60:G:C8	2.98	0.51
1:5:672:C:H2'	1:5:673:C:O4'	2.10	0.51
1:5:718:C:N3	1:5:719:C:C5	2.79	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
5:B:78:ILE:HD11	5:B:320:PHE:CE1	2.45	0.51
5:B:67:VAL:O	5:B:67:VAL:HG12	2.10	0.51
1:5:223:G:H21	6:C:223:ASN:HB3	1.75	0.51
14:K:14:TYR:HE1	14:K:16:ARG:HB3	1.76	0.51
1:5:49:U:H5'	17:N:192:TRP:CZ2	2.45	0.51
21:R:28:GLU:O	21:R:32:ILE:HD12	2.10	0.51
49:S2:1127:C:N3	49:S2:1128:C:C5	2.79	0.51
49:S2:1319:U:H2'	49:S2:1320:G:H8	1.71	0.51
49:S2:1330:G:N2	49:S2:1333:U:C5	2.78	0.51
49:S2:1459:G:C2	49:S2:1468:C:C2	2.99	0.51
49:S2:1610:G:N1	49:S2:1611:G:C5	2.78	0.51
49:S2:1808:U:C2	49:S2:1809:A:C8	2.98	0.51
49:S2:1807:C:C2	49:S2:1808:U:C6	2.98	0.51
49:S2:27:A:N1	49:S2:28:U:C6	2.77	0.51
49:S2:348:A:C6	49:S2:349:A:C5	2.98	0.51
49:S2:381:C:O2'	49:S2:382:C:H5'	2.09	0.51
49:S2:431:G:C4	49:S2:432:G:C8	2.99	0.51
49:S2:488:U:H3'	49:S2:489:A:C5'	2.40	0.51
49:S2:52:G:N1	49:S2:53:C:C2	2.78	0.51
49:S2:619:A:N3	49:S2:619:A:H2'	2.24	0.51
49:S2:68:A:C4	49:S2:69:C:C5	2.98	0.51
49:S2:750:C:N3	49:S2:751:G:N7	2.58	0.51
49:S2:805:U:O2	49:S2:805:U:H2'	2.09	0.51
49:S2:832:G:C6	49:S2:833:C:C6	2.98	0.51
51:SB:32:ASP:OD1	51:SB:46:LYS:CD	2.58	0.51
52:SC:82:TYR:CE1	52:SC:164:PRO:HD3	2.46	0.51
59:SJ:13:TYR:HA	59:SJ:48:PHE:HB3	1.92	0.51
49:S2:1311:C:OP2	62:SM:37:GLU:OE2	2.28	0.51
63:SN:34:LYS:O	63:SN:38:TYR:HB2	2.10	0.51
68:SS:20:ILE:CG2	68:SS:29:ALA:HB1	2.41	0.51
9:F:128:ASN:ND2	23:T:132:PRO:HG2	2.25	0.51
28:Y:15:ARG:CZ	28:Y:15:ARG:HB3	2.40	0.51
48:4:343:TRP:HA	48:4:343:TRP:CE3	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:546:ILE:HG22	48:4:554:LEU:CD1	2.40	0.51
48:4:580:ARG:HG3	48:4:817:TRP:CZ2	2.46	0.51
48:4:58:ASP:CG	48:4:69:THR:HG23	2.20	0.51
48:4:744:ILE:HG12	48:4:815:ASP:HB3	1.92	0.51
48:4:744:ILE:HD13	48:4:815:ASP:HB3	1.92	0.51
48:4:81:LEU:HB2	48:4:86:LEU:CD1	2.39	0.51
1:5:1069:G:C6	1:5:1070:G:C8	2.98	0.51
1:5:1416:G:C6	1:5:1417:C:C4	2.98	0.51
1:5:1424:G:H2'	1:5:1425:G:O4'	2.10	0.51
1:5:1497:A:H1'	20:Q:164:LYS:HG2	1.91	0.51
1:5:1663:C:O2	1:5:1664:U:C5	2.63	0.51
1:5:1699:A:C2	9:F:179:ARG:O	2.63	0.51
1:5:1936:C:C2	1:5:1937:C:C5	2.97	0.51
1:5:1991:A:H2'	1:5:1992:U:C6	2.44	0.51
1:5:1995:G:C6	1:5:1996:C:C4	2.98	0.51
1:5:2104:G:C2	1:5:2105:A:C4	2.99	0.51
1:5:216:C:OP2	1:5:216:C:O4'	2.29	0.51
1:5:2245:G:C2	1:5:2246:C:C2	2.98	0.51
1:5:2248:C:O2	1:5:2248:C:C2'	2.56	0.51
1:5:247:G:C6	1:5:248:C:C4	2.99	0.51
1:5:248:C:C2	1:5:249:C:C5	2.98	0.51
1:5:2669:C:C6	1:5:2669:C:O5'	2.64	0.51
1:5:2757:A:O2'	1:5:2758:G:C5'	2.58	0.51
1:5:371:A:HO2'	1:5:372:A:C5'	2.23	0.51
1:5:386:A:H2	1:5:405:U:O4'	1.93	0.51
1:5:4091:G:C2	1:5:4092:G:C4	2.99	0.51
1:5:4142:C:H2'	1:5:4143:G:C1'	2.41	0.51
1:5:4168:G:H2'	1:5:4169:G:O5'	2.10	0.51
1:5:4323:A:N3	1:5:4324:A:C8	2.79	0.51
1:5:4271:A:N6	1:5:4336:A:H61	2.09	0.51
1:5:4453:C:H1'	1:5:4529:G:N2	2.26	0.51
1:5:4563:U:O2	1:5:4564:A:C5	2.64	0.51
1:5:4574:U:O2	1:5:4574:U:H2'	2.11	0.51
1:5:4579:U:O2	1:5:4580:U:C6	2.63	0.51
1:5:44:A:C4	1:5:45:U:C5	2.98	0.51
1:5:4606:G:H5'	48:4:28:VAL:CG2	2.36	0.51
1:5:4608:G:H3'	1:5:4609:G:H8	1.75	0.51
1:5:466:A:N1	1:5:467:U:C5	2.79	0.51
1:5:45:U:C2'	1:5:46:U:O5'	2.58	0.51
1:5:4730:C:O4'	1:5:4730:C:O2	2.27	0.51
1:5:4744:A:C4	1:5:4745:G:N7	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4884:G:N1	1:5:4885:U:C4	2.78	0.51
1:5:5004:C:H2'	1:5:5005:G:O4'	2.11	0.51
1:5:5062:G:N2	1:5:5063:G:N7	2.58	0.51
1:5:739:G:N1	1:5:740:G:C5	2.78	0.51
1:5:747:A:N7	1:5:915:A:C2	2.78	0.51
1:5:957:G:H1'	1:5:958:G:OP2	2.10	0.51
1:5:976:G:C2	1:5:977:C:C2	2.98	0.51
2:7:42:A:H2'	2:7:42:A:N3	2.26	0.51
2:7:55:A:H2'	2:7:56:G:C5'	2.41	0.51
3:8:54:C:C4	3:8:55:U:C5	2.99	0.51
5:B:321:VAL:O	5:B:322:HIS:CB	2.59	0.51
1:5:137:G:H4'	11:H:98:HIS:HD2	175.65	0.51
13:J:26:VAL:HG22	13:J:28:GLU:HG3	1.91	0.51
22:S:13:VAL:HG12	22:S:29:ARG:HA	1.92	0.51
49:S2:1595:U:C2	49:S2:1596:U:C6	2.99	0.51
49:S2:1686:G:C6	49:S2:1687:C:C4	2.97	0.51
49:S2:1740:C:C2	49:S2:1741:U:C6	2.99	0.51
49:S2:186:C:C2	49:S2:187:G:N7	2.78	0.51
49:S2:549:C:N4	49:S2:550:C:C5	2.78	0.51
49:S2:665:G:H1'	49:S2:670:A:N3	2.25	0.51
49:S2:678:U:C4	49:S2:679:A:N7	2.78	0.51
49:S2:993:G:N1	49:S2:994:C:C4	2.79	0.51
22:S:81:TRP:CE2	22:S:94:TYR:HD1	2.27	0.51
1:5:2032:U:O2'	22:S:91:HIS:CE1	2.63	0.51
62:SM:22:LEU:HD23	62:SM:111:VAL:HG22	1.93	0.51
66:SQ:126:ARG:HG3	66:SQ:126:ARG:HH21	1.75	0.51
73:SX:84:PHE:HD2	73:SX:105:PHE:HZ	1.58	0.51
28:Y:15:ARG:HH11	28:Y:15:ARG:HG2	1.75	0.51
48:4:231:MET:SD	48:4:343:TRP:CH2	2.90	0.51
48:4:24:VAL:CG2	48:4:32:LYS:HG3	2.39	0.51
48:4:526:ARG:O	48:4:529:LYS:CG	2.58	0.51
48:4:700:VAL:HG12	48:4:702:PHE:CD2	2.45	0.51
48:4:813:VAL:CG2	48:4:814:PHE:H	2.10	0.51
1:5:1048:G:C4	1:5:1049:C:C6	2.98	0.51
1:5:1236:C:H2'	8:E:56:SER:OG	2.11	0.51
1:5:1289:C:O2	1:5:1290:G:C8	2.64	0.51
1:5:142:G:N2	1:5:144:G:C8	2.78	0.51
1:5:1517:G:N2	1:5:1650:A:C2	2.79	0.51
1:5:1662:C:N3	1:5:1663:C:C5	2.78	0.51
1:5:2071:A:C2	1:5:2072:C:C5	2.99	0.51
1:5:1268:G:C2	1:5:2111:G:N1	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:181:C:H42	1:5:255:C:H42	1.59	0.51
1:5:269:G:N1	1:5:270:U:C5	2.78	0.51
1:5:2852:U:O2	1:5:2853:C:H3'	2.11	0.51
1:5:3862:A:N3	1:5:3862:A:H2'	2.25	0.51
1:5:3909:C:N4	1:5:3910:C:N4	2.59	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
1:5:4287:G:C2	1:5:4288:C:N3	2.79	0.51
1:5:4405:G:C5	1:5:4406:U:C5	2.98	0.51
1:5:4414:A:C6	1:5:4427:G:C6	2.97	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
1:5:474:C:C2	1:5:475:G:C8	2.98	0.51
1:5:483:G:N2	1:5:484:U:C2	2.78	0.51
1:5:484:U:O5'	1:5:485:C:O5'	2.29	0.51
1:5:675:C:C2	1:5:676:C:C6	2.98	0.51
1:5:720:G:C6	1:5:721:G:N7	2.78	0.51
1:5:91:G:OP2	1:5:92:C:H5''	2.11	0.51
1:5:930:G:C4	1:5:931:C:H5	2.29	0.51
2:7:33:U:O2	2:7:33:U:H2'	2.09	0.51
3:8:110:U:O3'	3:8:111:U:H4'	2.10	0.51
3:8:35:C:O2'	3:8:36:G:H5'	2.10	0.51
4:A:186:TYR:C	4:A:186:TYR:CD1	2.84	0.51
6:C:122:TYR:CD1	6:C:122:TYR:O	2.63	0.51
6:C:290:SER:O	6:C:294:LYS:HG2	2.10	0.51
9:F:243:ASN:O	9:F:247:ARG:HG2	2.11	0.51
10:G:162:ASP:HB3	10:G:163:PRO:HD3	1.92	0.51
11:H:96:TYR:CZ	11:H:100:PRO:HA	2.45	0.51
14:K:121:LEU:O	14:K:122:ALA:HB3	2.10	0.51
14:K:21:GLU:OE1	14:K:48:LYS:CD	2.56	0.51
14:K:62:LEU:H	14:K:75:PRO:HG3	1.76	0.51
17:N:126:THR:C	17:N:127:TYR:HD1	2.14	0.51
21:R:109:TYR:CD1	21:R:114:LYS:HD2	2.45	0.51
49:S2:1061:U:C2'	49:S2:1061:U:O2	2.59	0.51
49:S2:1157:G:H1'	73:SX:5:ARG:NE	2.25	0.51
49:S2:1224:G:C5	49:S2:1225:U:C5	2.98	0.51
49:S2:127:C:C5	49:S2:181:A:C6	2.98	0.51
49:S2:1307:U:H2'	49:S2:1308:U:C4'	2.39	0.51
49:S2:1402:A:N7	49:S2:1441:U:C4	2.77	0.51
49:S2:148:U:C2	49:S2:149:A:C8	2.98	0.51
49:S2:1534:C:O4'	49:S2:1536:G:H1'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1563:G:N3	49:S2:1564:C:C6	2.79	0.51
49:S2:1568:C:O2'	49:S2:1569:A:C8	2.60	0.51
49:S2:1576:G:N1	49:S2:1577:G:C5	2.79	0.51
49:S2:599:A:C4'	49:S2:605:A:C2	2.94	0.51
49:S2:70:G:N3	49:S2:71:G:C8	2.77	0.51
49:S2:836:G:H3'	49:S2:837:A:H5'	1.92	0.51
49:S2:84:A:C6	49:S2:85:A:C5	2.98	0.51
22:S:9:GLU:HB3	22:S:67:VAL:HG12	1.91	0.51
54:SE:208:VAL:HB	54:SE:225:ILE:HD12	1.93	0.51
55:SF:49:LEU:HD13	55:SF:50:PRO:HD2	1.93	0.51
58:SI:113:TYR:CD2	58:SI:121:LEU:HD21	2.45	0.51
58:SI:54:LYS:HD3	58:SI:181:GLN:NE2	2.25	0.51
69:ST:47:PRO:CG	69:ST:52:TRP:CD1	2.94	0.51
28:Y:18:HIS:NE2	28:Y:29:ILE:HD13	2.26	0.51
48:4:137:VAL:HG23	48:4:138:GLN:N	2.25	0.51
48:4:207:PRO:CB	48:4:261:TRP:CG	2.94	0.51
48:4:364:ALA:HA	48:4:367:TYR:CZ	2.45	0.51
48:4:536:CYS:O	48:4:537:ILE:CG2	2.58	0.51
48:4:693:CYS:O	48:4:694:GLU:CB	2.59	0.51
48:4:81:LEU:CB	48:4:86:LEU:HD12	2.41	0.51
1:5:1090:G:C5	1:5:1091:C:C5	2.98	0.51
1:5:1382:G:H2'	1:5:1383:G:O5'	2.10	0.51
1:5:1421:G:C2	1:5:1422:G:C5	2.99	0.51
1:5:1444:G:C2'	1:5:1445:U:H6	2.22	0.51
1:5:1543:G:N3	1:5:2513:A:C2	2.79	0.51
1:5:1669:A:H2'	1:5:1670:G:O4'	2.10	0.51
1:5:1886:G:C5	1:5:1887:G:C8	2.98	0.51
1:5:1898:C:C5	1:5:2279:A:C1'	2.91	0.51
1:5:2447:U:HO2'	1:5:2448:G:P	2.34	0.51
1:5:2482:C:N3	1:5:2483:G:C8	2.78	0.51
1:5:2497:C:H42	1:5:2498:C:N4	2.08	0.51
1:5:331:G:N3	1:5:332:C:C5	2.78	0.51
1:5:3625:G:N3	1:5:3625:G:H2'	2.25	0.51
1:5:3634:G:N2	1:5:3636:C:H5'	2.24	0.51
1:5:4124:G:N3	1:5:4124:G:H2'	2.25	0.51
1:5:4137:C:N3	1:5:4138:C:C5	2.79	0.51
1:5:4229:U:H3'	1:5:4230:C:H6	1.74	0.51
1:5:4499:G:H3'	1:5:4500:U:H5''	1.92	0.51
1:5:458:C:N3	1:5:459:C:C5	2.79	0.51
1:5:4724:A:C2	1:5:4725:C:C2	2.98	0.51
1:5:4737:G:C4	1:5:4738:C:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4886:C:C2	1:5:4887:C:C5	2.99	0.51
1:5:4977:A:C2'	1:5:4978:G:H5'	2.41	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
1:5:715:G:H2'	1:5:716:C:O4'	2.10	0.51
2:7:43:U:C4	2:7:44:C:C4	2.99	0.51
2:7:94:C:N3	2:7:95:C:H5	2.06	0.51
3:8:117:C:H2'	3:8:117:C:O2	2.09	0.51
6:C:58:ALA:O	6:C:60:HIS:HB2	2.10	0.51
9:F:229:PHE:CD2	9:F:238:ARG:HB3	2.46	0.51
16:M:7:VAL:N	22:S:152:PHE:O	2.44	0.51
49:S2:1042:A:C6	49:S2:1043:G:C5	2.98	0.51
49:S2:1045:U:C4	49:S2:1046:U:C4	2.98	0.51
49:S2:1052:A:N3	49:S2:1053:C:C6	2.79	0.51
49:S2:1386:A:C2	49:S2:1387:G:H1'	2.45	0.51
49:S2:1367:U:O2'	49:S2:1466:G:O2'	2.26	0.51
49:S2:1590:C:C5	49:S2:1591:C:N1	2.79	0.51
49:S2:114:G:O2'	49:S2:382:C:O2'	2.00	0.51
49:S2:501:C:O2	49:S2:501:C:H2'	2.10	0.51
49:S2:828:G:C2	49:S2:829:C:C6	2.98	0.51
49:S2:832:G:C2	49:S2:843:C:C2	2.99	0.51
50:SA:181:GLU:OE1	50:SA:184:ARG:HB2	2.10	0.51
50:SA:28:THR:HA	50:SA:45:GLY:O	2.10	0.51
54:SE:159:THR:HG23	54:SE:227:VAL:HG22	1.92	0.51
57:SH:186:ASN:N	57:SH:186:ASN:OD1	2.44	0.51
59:SJ:54:ARG:HB3	59:SJ:54:ARG:NH2	2.25	0.51
61:SL:55:TYR:CD2	61:SL:115:PRO:HG2	2.46	0.51
73:SX:74:LEU:HG	73:SX:81:ILE:HD12	1.93	0.51
1:5:5006:U:C5	26:W:50:ASN:ND2	2.78	0.51
28:Y:22:PRO:HD2	28:Y:25:ILE:HD12	1.91	0.51
29:Z:68:ILE:HG22	29:Z:119:GLU:HG3	1.92	0.51
48:4:449:ARG:CB	48:4:473:VAL:HG11	2.41	0.51
48:4:816:HIS:NE2	48:4:818:GLN:HB2	2.25	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
1:5:1205:G:C6	1:5:1206:C:C4	2.98	0.51
1:5:1234:G:H2'	1:5:1235:G:C8	2.46	0.51
1:5:1374:G:C6	1:5:1375:C:C4	2.98	0.51
1:5:139:G:H2'	1:5:140:G:O4'	2.11	0.51
1:5:1421:G:C2	1:5:1422:G:N7	2.79	0.51
1:5:1475:G:N3	1:5:1476:C:C6	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:158:A:H5''	1:5:159:C:C6	2.45	0.51
1:5:1337:A:C2	1:5:1659:U:O4'	2.64	0.51
1:5:1724:G:C2	9:F:105:PRO:HB3	2.44	0.51
1:5:1758:G:C2	1:5:1759:G:N7	2.79	0.51
1:5:186:G:H1'	1:5:187:U:H1'	1.93	0.51
1:5:1961:G:H2'	1:5:2024:G:N1	2.26	0.51
1:5:1973:G:O6	1:5:2002:A:N7	2.44	0.51
1:5:2040:A:H4'	1:5:2041:A:O5'	2.11	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
1:5:255:C:C2'	1:5:255:C:O2	2.55	0.51
1:5:2703:G:C2	1:5:2704:C:N1	2.79	0.51
1:5:2704:C:H2'	1:5:2704:C:O2	2.10	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
1:5:3744:G:C2'	1:5:3745:U:O5'	2.59	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
1:5:4122:G:C5	1:5:4123:C:C6	2.98	0.51
1:5:4456:C:O2	1:5:4456:C:H2'	2.10	0.51
1:5:4490:C:O2	1:5:4491:G:C8	2.63	0.51
1:5:5020:G:C4	1:5:5021:C:C6	2.99	0.51
1:5:70:A:H1'	1:5:71:C:N4	2.26	0.51
1:5:930:G:H4'	1:5:931:C:O5'	2.09	0.51
2:7:23:A:O2'	2:7:24:C:C6	2.62	0.51
2:7:59:G:H4'	7:D:267:ASN:ND2	2.25	0.51
3:8:129:C:N3	3:8:130:C:C5	2.79	0.51
4:A:69:PHE:CG	15:L:65:ARG:HB2	106.20	0.51
5:B:122:TRP:NE1	5:B:127:LYS:HE3	2.26	0.51
5:B:168:MET:CE	5:B:171:LEU:HD12	2.40	0.51
5:B:49:TYR:CE1	5:B:171:LEU:HD11	2.45	0.51
5:B:17:LEU:HD21	5:B:264:PHE:CE1	2.46	0.51
6:C:197:ARG:O	6:C:199:ARG:N	2.43	0.51
1:5:1273:G:C8	8:E:69:TYR:C	2.84	0.51
11:H:5:LEU:HD13	11:H:60:TRP:CE3	2.45	0.51
1:5:1993:C:O2'	14:K:135:THR:CG2	2.59	0.51
1:5:2055:G:H1'	18:O:130:LYS:HD3	1.91	0.51
20:Q:88:ASP:OD2	20:Q:108:ARG:HD3	2.10	0.51
21:R:103:ARG:NH2	21:R:106:LEU:HD11	11.88	0.51
49:S2:1004:U:O2	49:S2:1005:G:C8	2.63	0.51
49:S2:1122:A:C5	49:S2:1123:C:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1122:A:N1	49:S2:1123:C:C6	2.78	0.51
49:S2:1131:G:N2	49:S2:1132:C:C2	2.78	0.51
49:S2:1135:C:C4	49:S2:1136:U:C4	2.98	0.51
49:S2:1136:U:O2'	49:S2:1137:U:C5'	2.58	0.51
49:S2:1392:U:C2	49:S2:1393:G:C8	2.99	0.51
49:S2:1449:G:C2	49:S2:1450:G:C4	2.99	0.51
49:S2:1567:G:H1'	68:SS:82:TRP:CH2	2.46	0.51
49:S2:1643:U:O2'	49:S2:1644:C:C6	2.63	0.51
49:S2:1683:C:O2	49:S2:1684:C:C6	2.63	0.51
49:S2:1808:U:O2	49:S2:1809:A:C8	2.64	0.51
49:S2:1812:U:O2	49:S2:1812:U:H2'	2.11	0.51
49:S2:311:C:H2'	49:S2:312:G:C1'	2.41	0.51
49:S2:340:C:C2'	49:S2:341:C:H6	2.24	0.51
49:S2:46:A:C2	49:S2:99:A:N9	2.78	0.51
49:S2:747:U:H3'	49:S2:748:C:C6	2.46	0.51
49:S2:962:A:C6	49:S2:963:A:N7	2.78	0.51
49:S2:978:G:C6	49:S2:979:C:C4	2.98	0.51
22:S:45:TRP:CE3	22:S:56:LYS:HA	2.43	0.51
50:SA:39:TYR:OH	67:SR:104:GLU:CB	2.59	0.51
50:SA:10:MET:HA	50:SA:55:TRP:CE3	2.45	0.51
56:SG:188:LYS:HA	56:SG:191:ARG:HD3	1.93	0.51
57:SH:43:LEU:HD21	57:SH:71:SER:HB3	1.92	0.51
62:SM:113:ASP:O	62:SM:115:GLY:N	2.43	0.51
49:S2:985:G:O4'	64:SO:138:ASP:OD2	2.28	0.51
24:U:27:HIS:O	24:U:114:TYR:OH	2.23	0.51
1:5:2532:C:O2'	27:X:93:ASN:ND2	2.44	0.51
48:4:27:HIS:CD2	48:4:28:VAL:C	2.84	0.51
48:4:284:LYS:HE2	48:4:284:LYS:H	1.76	0.51
48:4:420:LEU:HB2	48:4:465:PRO:CA	2.38	0.51
1:5:111:C:C2	1:5:331:G:C2	2.99	0.51
1:5:1193:C:N3	1:5:1194:G:C8	2.78	0.51
1:5:1213:G:C2	1:5:1215:C:O2	2.64	0.51
1:5:1280:C:H2'	1:5:1282:G:OP2	2.11	0.51
1:5:1365:C:H4'	1:5:1366:G:OP1	2.11	0.51
1:5:1374:G:C5	1:5:1375:C:C5	2.99	0.51
1:5:1516:G:C6	1:5:1518:A:C4	2.98	0.51
1:5:1683:U:C2	1:5:1684:A:N7	2.77	0.51
1:5:1727:U:N3	1:5:1728:U:C5	2.79	0.51
1:5:1965:G:C6	1:5:1966:C:N4	2.78	0.51
1:5:2268:A:O4'	1:5:2270:G:N7	2.44	0.51
1:5:2440:U:N3	1:5:2519:U:C5	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2682:G:C6	1:5:2683:C:N4	2.79	0.51
1:5:3710:G:C2	1:5:3711:A:C2	2.99	0.51
1:5:4082:G:C4	1:5:4083:U:C5	2.98	0.51
1:5:4137:C:C2	1:5:4138:C:C5	2.98	0.51
1:5:4440:G:H5''	1:5:4440:G:H8	1.76	0.51
1:5:449:C:C4	1:5:450:G:N7	2.79	0.51
1:5:4535:A:C6	1:5:4536:C:C6	2.98	0.51
1:5:4537:C:N3	1:5:4538:G:C8	2.71	0.51
1:5:4702:G:N2	1:5:4703:U:H1'	2.25	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
1:5:4750:G:C6	1:5:4949:G:O6	2.61	0.51
1:5:660:A:N1	1:5:661:C:C5	2.79	0.51
1:5:463:A:C2	1:5:692:A:H2	2.29	0.51
1:5:85:G:C5	15:L:13:HIS:CE1	2.99	0.51
1:5:908:G:C6	1:5:909:A:C8	2.98	0.51
1:5:91:G:C5	1:5:93:G:C6	2.98	0.51
2:7:18:C:H2'	2:7:18:C:O2	2.11	0.51
3:8:79:G:H3'	3:8:80:A:N3	2.25	0.51
4:A:63:PHE:CD1	4:A:63:PHE:N	2.77	0.51
1:5:4124:G:C2	4:A:64:ARG:NH1	2.79	0.51
1:5:4459:U:H5''	5:B:10:ARG:HH22	1.75	0.51
6:C:210:ILE:HG21	6:C:252:TRP:CZ3	2.45	0.51
12:I:46:PHE:N	12:I:47:PRO:HD3	2.26	0.51
12:I:76:MET:CE	12:I:80:CYS:SG	2.99	0.51
14:K:102:GLY:HA3	14:K:139:VAL:HA	1.91	0.51
14:K:81:ILE:HD13	14:K:117:ARG:CZ	2.40	0.51
15:L:83:VAL:HG11	15:L:114:VAL:HG21	1.92	0.51
1:5:106:A:OP1	15:L:39:ARG:NH2	2.43	0.51
19:P:42:ARG:HH11	19:P:42:ARG:HG3	1.76	0.51
21:R:10:LEU:HD23	21:R:41:ILE:HD12	1.92	0.51
21:R:4:LEU:HD22	21:R:32:ILE:HG22	1.93	0.51
49:S2:1048:G:H2'	49:S2:1068:G:H22	1.76	0.51
49:S2:1130:G:O5'	49:S2:1130:G:H8	1.94	0.51
49:S2:1149:A:C6	49:S2:1151:G:C8	2.99	0.51
49:S2:1422:G:C2	49:S2:1424:G:C8	2.98	0.51
49:S2:1540:G:C5	49:S2:1541:G:C8	2.98	0.51
49:S2:1561:A:N6	49:S2:1574:C:N3	2.58	0.51
49:S2:1612:G:N2	49:S2:1628:C:C2	2.79	0.51
49:S2:1707:U:C5	49:S2:1708:C:C5	2.98	0.51
49:S2:17:C:C2	49:S2:18:C:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1811:C:N3	49:S2:1812:U:C5	2.79	0.51
49:S2:1831:A:OP2	49:S2:1837:G:OP2	2.28	0.51
49:S2:300:U:N3	49:S2:301:A:C8	2.79	0.51
49:S2:320:G:N2	49:S2:321:C:H1'	2.26	0.51
49:S2:49:C:O2	49:S2:49:C:H2'	2.11	0.51
49:S2:601:G:C2	49:S2:622:C:O2	2.63	0.51
49:S2:71:G:C2'	49:S2:72:C:O4'	2.59	0.51
49:S2:997:A:C2'	49:S2:998:A:O4'	2.59	0.51
62:SM:90:GLY:C	62:SM:91:LEU:HG	2.30	0.51
68:SS:87:GLN:HA	68:SS:95:TYR:HB3	1.92	0.51
74:SY:119:GLY:O	74:SY:121:ALA:N	2.44	0.51
48:4:430:MET:CE	48:4:486:THR:OG1	2.57	0.51
48:4:693:CYS:HA	48:4:839:ARG:HE	0.76	0.51
48:4:752:PRO:CB	48:4:780:PRO:HA	2.08	0.51
48:4:739:ARG:HD3	48:4:823:ASP:HA	1.92	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
1:5:1194:G:C2	1:5:1195:G:C8	2.99	0.51
1:5:1380:G:C2	1:5:1382:G:N3	2.79	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
1:5:1320:U:H2'	1:5:1891:A:H61	1.76	0.51
1:5:1912:G:N3	1:5:1913:C:C6	2.79	0.51
1:5:1975:G:C6	1:5:1984:A:C4	2.98	0.51
1:5:2089:G:C6	1:5:2262:G:H2'	2.44	0.51
1:5:222:C:H2'	1:5:223:G:O4'	2.11	0.51
1:5:2307:A:O2'	1:5:2308:A:H5'	2.11	0.51
1:5:2328:G:C2'	1:5:2329:U:O5'	2.58	0.51
1:5:2391:G:N1	1:5:2392:C:C4	2.78	0.51
1:5:2468:U:C4	1:5:2473:A:N6	2.77	0.51
1:5:2627:C:O2	1:5:2627:C:O4'	2.28	0.51
1:5:2721:G:C2	1:5:2722:G:C8	2.99	0.51
1:5:2435:G:N2	1:5:2783:A:H1'	2.26	0.51
1:5:3707:U:O2'	4:A:241:ARG:HG2	2.10	0.51
1:5:3791:C:O4'	1:5:3791:C:O2	2.25	0.51
1:5:3874:G:C6	1:5:3875:G:C4	2.99	0.51
1:5:4198:G:C5	1:5:4199:C:C6	2.99	0.51
1:5:4525:C:OP1	5:B:246:ARG:NH2	2.44	0.51
1:5:4901:G:C2	1:5:4921:C:N3	2.78	0.51
1:5:4737:G:H5''	1:5:5069:U:C4	2.46	0.51
3:8:103:A:H3'	3:8:104:A:C5'	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:80:A:C6	3:8:81:C:C5	2.98	0.51
5:B:102:PHE:HB3	5:B:103:LYS:HB2	1.92	0.51
2:7:22:A:C4	7:D:266:TRP:CH2	2.99	0.51
7:D:42:ASN:HA	7:D:44:TYR:CZ	2.44	0.51
14:K:131:GLU:O	14:K:135:THR:CG2	2.38	0.51
1:5:3937:C:H1'	17:N:125:SER:HB3	1.93	0.51
1:5:3859:G:C1'	19:P:139:TYR:OH	2.58	0.51
1:5:2088:A:H61	20:Q:30:LYS:HB3	1.75	0.51
49:S2:1134:G:C6	49:S2:1135:C:C4	2.99	0.51
49:S2:1134:G:N1	49:S2:1135:C:C5	2.78	0.51
49:S2:1232:U:N3	49:S2:1233:G:N7	2.57	0.51
49:S2:1243:U:C4	49:S2:1244:U:H1'	2.46	0.51
49:S2:1280:G:C2	49:S2:1318:G:C5	2.99	0.51
49:S2:1455:A:N3	49:S2:1455:A:H2'	2.26	0.51
49:S2:1495:G:N1	49:S2:1496:U:H1'	2.26	0.51
49:S2:1546:G:O2'	49:S2:1547:C:O5'	2.29	0.51
49:S2:1613:G:C2	49:S2:1627:C:C2	2.99	0.51
49:S2:87:U:H4'	49:S2:173:A:O4'	2.10	0.51
49:S2:371:A:N3	49:S2:372:U:C5	2.79	0.51
49:S2:847:A:N3	49:S2:847:A:H2'	2.26	0.51
49:S2:873:G:H2'	49:S2:874:G:C8	2.46	0.51
53:SD:113:LEU:HD22	53:SD:118:ALA:HB2	1.93	0.51
53:SD:35:SER:HB2	53:SD:91:VAL:HG21	1.92	0.51
56:SG:66:GLY:O	56:SG:68:LEU:HD22	2.11	0.51
57:SH:135:PHE:CD1	57:SH:136:PRO:N	2.78	0.51
57:SH:130:LEU:HD21	57:SH:177:TYR:CZ	2.46	0.51
58:SI:69:SER:HA	61:SL:20:LYS:HE2	1.93	0.51
59:SJ:114:VAL:HG12	59:SJ:120:ALA:HB2	1.91	0.51
62:SM:77:ILE:HG23	62:SM:78:LYS:H	1.76	0.51
65:SP:17:TYR:HH	65:SP:38:SER:HB3	1.75	0.51
73:SX:67:ARG:NH2	73:SX:114:ASP:OD2	2.38	0.51
74:SY:20:ARG:NH1	74:SY:74:MET:HE2	2.25	0.51
24:U:96:LEU:O	24:U:100:LEU:HB2	2.11	0.51
48:4:330:LYS:O	48:4:335:LEU:HB2	2.11	0.51
48:4:477:GLN:HG2	48:4:478:PHE:CG	2.45	0.51
48:4:110:ASP:O	48:4:501:VAL:HG21	2.11	0.51
48:4:590:LEU:HD23	48:4:605:LYS:CE	2.40	0.51
1:5:1203:G:N2	1:5:1204:C:C2	2.79	0.51
1:5:1247:U:O2	1:5:1248:C:C6	2.64	0.51
1:5:1412:G:C4	1:5:1413:C:C6	2.99	0.51
1:5:1550:G:C2	1:5:1579:C:O2	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1651:G:O5'	1:5:1651:G:C8	2.64	0.51
1:5:165:A:C4	1:5:166:C:C6	2.99	0.51
1:5:1748:U:C2	1:5:1749:A:C8	2.98	0.51
1:5:1750:G:N3	1:5:1750:G:H2'	2.26	0.51
1:5:1751:A:C2'	1:5:1752:G:H5'	2.38	0.51
1:5:1936:C:C4	1:5:1937:C:H5	2.26	0.51
1:5:1989:G:C2	1:5:1990:A:C5	2.99	0.51
1:5:2080:U:C2	1:5:2081:C:H5	2.17	0.51
1:5:205:C:N3	1:5:209:U:C5	2.79	0.51
1:5:2391:G:N3	1:5:2392:C:C6	2.79	0.51
1:5:3771:C:O5'	1:5:3771:C:O2	2.28	0.51
1:5:4100:C:N3	1:5:4101:C:C4	2.79	0.51
1:5:388:A:C5	1:5:411:G:N1	2.79	0.51
1:5:4189:U:O4'	1:5:4380:A:C2	2.63	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
1:5:4743:G:C2	1:5:4744:A:C5	2.99	0.51
1:5:930:G:N3	1:5:931:C:C5	2.79	0.51
1:5:971:U:H2'	1:5:972:C:H5'	1.93	0.51
1:5:978:G:C2	1:5:979:C:C2	2.98	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
5:B:19:ARG:NE	5:B:235:TRP:CZ3	2.78	0.51
7:D:284:LYS:HB3	12:I:209:TRP:HZ3	1.72	0.51
49:S2:1045:U:C2	49:S2:1046:U:C6	2.97	0.51
49:S2:1074:C:C2	49:S2:1075:C:H5	2.15	0.51
49:S2:1109:C:C2'	49:S2:1109:C:O2	2.57	0.51
49:S2:1221:G:O2'	49:S2:1222:G:C5'	2.59	0.51
49:S2:1434:C:H3'	49:S2:1435:C:C4'	2.41	0.51
49:S2:1807:C:C2	49:S2:1808:U:C5	2.98	0.51
49:S2:338:G:H3'	49:S2:339:A:H8	1.76	0.51
49:S2:415:A:C2'	49:S2:416:U:O4'	2.52	0.51
49:S2:460:A:C6	49:S2:461:U:H5	2.24	0.51
49:S2:552:G:C2	49:S2:553:U:C4	2.99	0.51
49:S2:56:G:O2'	49:S2:57:U:O5'	2.28	0.51
49:S2:956:G:O6	49:S2:968:U:O2	2.28	0.51
52:SC:94:ILE:HD11	52:SC:98:LEU:HD12	1.92	0.51
49:S2:973:C:N3	64:SO:55:ARG:NH1	2.59	0.51
64:SO:65:ASP:N	64:SO:65:ASP:OD1	2.44	0.51
72:SW:27:ILE:HG12	72:SW:61:ILE:HB	1.92	0.51
23:T:70:HIS:N	23:T:70:HIS:CD2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:430:MET:HE1	48:4:486:THR:CB	2.39	0.51
48:4:568:ILE:O	48:4:570:ILE:HD13	2.11	0.51
48:4:580:ARG:HB2	48:4:741:MET:SD	2.51	0.51
48:4:693:CYS:C	48:4:839:ARG:CZ	2.73	0.51
48:4:752:PRO:HB2	48:4:754:GLN:OE1	2.11	0.51
48:4:45:ILE:HD12	48:4:78:PHE:CG	2.04	0.51
1:5:354:U:O4	1:5:1334:A:H1'	2.10	0.51
1:5:1344:C:C2	1:5:1345:A:C8	2.98	0.51
1:5:152:U:N3	1:5:153:G:C8	2.78	0.51
1:5:1620:U:C2	1:5:1621:A:N7	2.79	0.51
1:5:1748:U:H2'	1:5:1749:A:O4'	2.10	0.51
1:5:189:G:N3	1:5:190:G:C8	2.79	0.51
1:5:2034:G:O3'	22:S:118:ARG:HD3	2.11	0.51
1:5:2408:U:H1'	1:5:2409:U:C5	2.45	0.51
1:5:2532:C:O2	1:5:2532:C:H2'	2.10	0.51
1:5:3589:G:H2'	1:5:3590:G:O4'	2.11	0.51
1:5:3591:C:C2'	1:5:3591:C:O2	2.56	0.51
1:5:3697:U:O2'	1:5:3698:G:OP2	2.20	0.51
1:5:3711:A:C6	1:5:3712:A:N3	2.79	0.51
1:5:3720:G:C6	1:5:3721:U:C4	2.99	0.51
1:5:3791:C:C4	1:5:3802:U:C6	2.99	0.51
1:5:3819:G:C2	1:5:3820:G:C8	2.99	0.51
1:5:3842:C:H3'	1:5:3843:C:H2'	1.93	0.51
1:5:3921:U:OP2	1:5:4183:G:O2'	2.20	0.51
1:5:4093:G:C2'	1:5:4094:G:H5'	2.41	0.51
1:5:4136:G:N2	1:5:4137:C:H1'	2.26	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
1:5:4362:A:N1	1:5:4363:A:C5	2.79	0.51
1:5:4545:G:N7	4:A:215:ASN:ND2	2.59	0.51
1:5:455:C:N3	1:5:456:C:C6	2.79	0.51
1:5:4734:A:N1	1:5:4735:G:C4	2.79	0.51
1:5:68:U:N3	1:5:69:A:H1'	2.26	0.51
1:5:913:U:O2	1:5:914:U:C5	2.64	0.51
3:8:23:C:OP1	28:Y:15:ARG:NH2	2.29	0.51
1:5:4911:A:H5'	5:B:100:ARG:HD3	1.89	0.51
8:E:145:ILE:HD11	8:E:267:LEU:CD2	2.40	0.51
16:M:5:ARG:N	16:M:6:PHE:CE2	2.79	0.51
3:8:12:G:OP1	19:P:3:ARG:NH1	2.43	0.51
20:Q:177:ALA:O	20:Q:179:GLY:N	2.43	0.51
49:S2:1005:G:H2'	49:S2:1006:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1018:U:C2	49:S2:1019:C:H5	2.24	0.51
49:S2:1236:G:C6	49:S2:1237:C:C4	2.99	0.51
49:S2:1387:G:C5	49:S2:1388:A:C8	2.99	0.51
49:S2:1841:C:O2	49:S2:1842:C:C6	2.63	0.51
49:S2:374:G:OP1	61:SL:59:LYS:NZ	2.41	0.51
49:S2:524:U:C2	49:S2:594:A:C6	2.94	0.51
49:S2:522:A:N1	49:S2:643:A:H5'	2.26	0.51
49:S2:86:C:N4	49:S2:87:U:C4	2.79	0.51
49:S2:880:G:N7	49:S2:881:G:C5	2.79	0.51
49:S2:903:A:C5	49:S2:904:A:N7	2.79	0.51
54:SE:195:ILE:O	54:SE:196:THR:CB	2.59	0.51
57:SH:118:ARG:O	57:SH:121:THR:HG22	2.11	0.51
58:SI:174:CYS:HB3	58:SI:188:TYR:CE1	2.46	0.51
48:4:193:GLY:HA3	48:4:203:ILE:CD1	2.40	0.50
48:4:518:PRO:HB3	73:SX:75:ILE:CD1	2.41	0.50
48:4:541:SER:O	48:4:542:GLY:C	2.50	0.50
48:4:558:LEU:O	48:4:562:GLU:HG2	2.11	0.50
48:4:650:TRP:HZ3	48:4:679:VAL:CB	2.24	0.50
48:4:693:CYS:SG	48:4:695:GLU:HG2	2.51	0.50
1:5:1277:G:C2	1:5:1278:C:C5	2.98	0.50
1:5:145:G:C4	1:5:146:G:C8	3.00	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
1:5:2007:G:C3'	1:5:2008:U:H5''	2.41	0.50
1:5:2089:G:C5	1:5:2263:A:N7	2.79	0.50
1:5:2247:C:H5''	1:5:2248:C:O5'	2.11	0.50
1:5:2363:A:C1'	1:5:4560:C:C5	2.94	0.50
1:5:2366:A:C2'	1:5:2367:A:C5'	2.89	0.50
1:5:2555:G:O6	1:5:2572:C:N4	2.43	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
1:5:4126:C:H3'	1:5:4127:A:C5'	2.41	0.50
1:5:4152:G:C4	1:5:4153:C:C5	2.99	0.50
1:5:4164:C:N3	1:5:4165:C:C6	2.78	0.50
1:5:4258:C:O2	1:5:4259:C:C5	2.59	0.50
1:5:4594:U:O2	1:5:4595:G:C8	2.64	0.50
1:5:471:A:N1	1:5:472:C:C1'	2.74	0.50
1:5:5034:A:C2	1:5:5035:U:C6	2.99	0.50
1:5:505:G:C2	1:5:506:C:C2	2.99	0.50
1:5:55:G:C6	1:5:56:A:N7	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:56:A:C2	1:5:57:G:C4	2.99	0.50
1:5:676:C:C2	1:5:677:G:C8	2.99	0.50
1:5:973:G:O6	1:5:1282:G:N3	2.45	0.50
1:5:978:G:C5	1:5:979:C:C5	2.99	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
1:5:3660:C:OP2	4:A:241:ARG:NH2	2.44	0.50
1:5:2295:C:H5'	6:C:199:ARG:HH21	1.76	0.50
7:D:22:ARG:NH1	7:D:22:ARG:HG3	2.14	0.50
1:5:4413:C:H5''	12:I:157:PHE:HE2	1.68	0.50
14:K:103:ASN:CA	14:K:140:GLY:HA2	2.40	0.50
49:S2:105:U:H5''	49:S2:106:C:OP2	2.11	0.50
49:S2:1146:C:O2	49:S2:1147:C:C5	2.60	0.50
49:S2:1201:U:O4'	49:S2:1357:A:C2	2.64	0.50
49:S2:1226:G:O6	49:S2:1638:G:C8	2.53	0.50
49:S2:1283:C:N4	62:SM:103:VAL:HA	2.26	0.50
49:S2:1417:C:H42	49:S2:1419:C:H41	1.59	0.50
49:S2:1593:C:O2'	69:ST:12:GLN:CD	2.49	0.50
49:S2:1594:A:C6	49:S2:1595:U:C6	2.93	0.50
49:S2:1812:U:O2	49:S2:1813:A:C8	2.64	0.50
49:S2:1828:C:H2'	49:S2:1829:G:C1'	2.41	0.50
49:S2:1841:C:N3	49:S2:1842:C:C5	2.79	0.50
49:S2:1083:A:N3	49:S2:1859:A:C2'	2.74	0.50
49:S2:29:G:N1	49:S2:30:C:C4	2.79	0.50
49:S2:341:C:C2	49:S2:342:C:C6	2.99	0.50
49:S2:356:C:O2	49:S2:356:C:O4'	2.29	0.50
49:S2:453:C:O2'	49:S2:454:U:O5'	2.29	0.50
49:S2:732:U:N3	49:S2:733:C:C5	2.80	0.50
49:S2:841:G:N2	49:S2:842:C:C2	2.79	0.50
49:S2:850:C:H2'	49:S2:851:C:C6	2.46	0.50
49:S2:853:C:O4'	49:S2:853:C:O2	2.29	0.50
49:S2:999:G:N2	49:S2:1000:C:N1	2.59	0.50
50:SA:141:ASN:HD22	50:SA:141:ASN:N	2.07	0.50
50:SA:59:LEU:CD2	50:SA:181:GLU:HG2	2.40	0.50
58:SI:196:GLU:OE2	58:SI:197:PHE:N	2.44	0.50
59:SJ:5:ARG:HB2	59:SJ:7:TRP:CZ2	2.46	0.50
74:SY:58:PHE:CE1	74:SY:72:PHE:HB3	2.46	0.50
48:4:26:ALA:HB3	48:4:32:LYS:HB2	1.93	0.50
48:4:154:VAL:HG22	48:4:353:MET:SD	2.52	0.50
48:4:541:SER:OG	48:4:576:VAL:CG1	2.54	0.50
48:4:751:CYS:SG	48:4:756:VAL:HG23	2.50	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:752:PRO:CB	48:4:780:PRO:CA	2.77	0.50
48:4:845:LYS:HE3	48:4:846:GLU:CB	2.42	0.50
1:5:1250:C:C2	1:5:1261:G:N2	2.79	0.50
1:5:130:C:C2	1:5:139:G:N2	2.80	0.50
1:5:1584:G:C6	1:5:1585:C:C4	2.99	0.50
1:5:1632:A:N3	1:5:1632:A:H3'	2.27	0.50
1:5:1663:C:O2	1:5:1664:U:C6	2.65	0.50
1:5:1751:A:N6	1:5:1752:G:C8	2.79	0.50
1:5:1721:G:C6	1:5:1840:G:N7	2.78	0.50
1:5:1890:G:H22	1:5:1938:C:N4	2.09	0.50
1:5:2027:U:H2'	1:5:2028:C:H6	1.76	0.50
1:5:2100:A:C8	1:5:2101:C:C6	2.99	0.50
1:5:217:C:O2	6:C:172:LYS:HE2	2.11	0.50
1:5:2320:G:O2'	1:5:2321:G:C8	2.57	0.50
1:5:2408:U:C1'	1:5:2409:U:C4	2.95	0.50
1:5:2466:G:H2'	1:5:2467:U:O4'	2.11	0.50
1:5:2496:G:C2	1:5:2497:C:N1	2.80	0.50
1:5:2557:G:H2'	1:5:2558:C:O4'	2.11	0.50
1:5:2634:C:N3	1:5:2635:U:C5	2.79	0.50
1:5:2823:G:C2	1:5:2824:C:N1	2.79	0.50
1:5:29:G:C4	1:5:30:C:C5	2.99	0.50
1:5:313:U:H2'	1:5:314:G:O4'	2.11	0.50
1:5:3590:G:C2	1:5:3591:C:H1'	2.46	0.50
1:5:3738:G:N7	1:5:3739:C:C5	2.79	0.50
1:5:3847:C:C4	1:5:3848:U:C5	2.99	0.50
1:5:4095:G:H2'	1:5:4096:C:C6	2.44	0.50
1:5:4118:U:O4	4:A:95:GLN:HB3	2.11	0.50
1:5:4175:G:C5	1:5:4176:C:C5	2.99	0.50
1:5:4233:A:N6	1:5:4290:U:N3	2.27	0.50
1:5:4301:U:P	23:T:87:LYS:NZ	2.84	0.50
1:5:4355:G:N1	1:5:4356:G:N7	2.59	0.50
1:5:40:G:C6	1:5:4378:A:C4	2.98	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
1:5:4479:A:C6	1:5:4480:A:H1'	2.46	0.50
1:5:4730:C:P	1:5:4731:G:N2	2.85	0.50
1:5:56:A:N1	1:5:57:G:C5	2.79	0.50
1:5:739:G:H2'	1:5:740:G:O4'	2.10	0.50
2:7:60:G:H2'	2:7:60:G:N3	2.25	0.50
3:8:30:U:O2	3:8:31:G:C8	2.65	0.50
4:A:216:HIS:N	4:A:216:HIS:CD2	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:85:ILE:HB	5:B:165:HIS:CD2	2.46	0.50
2:7:26:C:H5'	7:D:56:THR:HG21	1.93	0.50
9:F:248:ARG:CB	9:F:248:ARG:CZ	2.87	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
14:K:116:MET:CB	14:K:117:ARG:NH2	2.68	0.50
14:K:117:ARG:O	14:K:123:ARG:NH1	2.44	0.50
14:K:14:TYR:CE1	14:K:16:ARG:HB3	2.47	0.50
1:5:2794:C:N3	19:P:136:ILE:HD12	2.26	0.50
20:Q:176:ARG:O	20:Q:177:ALA:HB2	2.10	0.50
22:S:171:ARG:HH11	22:S:171:ARG:HG3	1.76	0.50
49:S2:1031:A:C4	49:S2:1032:C:C6	2.99	0.50
49:S2:1070:A:C8	49:S2:1071:G:C8	3.00	0.50
49:S2:1135:C:C4	49:S2:1136:U:O4	2.65	0.50
49:S2:1184:G:H2'	49:S2:1185:C:O4'	2.11	0.50
49:S2:1513:C:O2'	49:S2:1514:G:H5'	2.11	0.50
49:S2:1565:C:N3	49:S2:1571:G:C2	2.80	0.50
49:S2:1667:U:O2	49:S2:1668:U:C5	2.64	0.50
1:5:3759:A:C6	49:S2:1709:G:H5'	2.47	0.50
49:S2:309:G:C2	49:S2:310:C:C6	2.98	0.50
49:S2:79:A:O5'	49:S2:79:A:H8	1.95	0.50
49:S2:805:U:C2	49:S2:806:U:C6	2.99	0.50
49:S2:950:C:O2	49:S2:950:C:H2'	2.11	0.50
56:SG:217:MET:O	56:SG:221:LYS:N	2.43	0.50
62:SM:22:LEU:HD21	62:SM:109:VAL:HG21	1.93	0.50
62:SM:99:ASN:HD22	62:SM:99:ASN:N	2.09	0.50
71:SV:59:ILE:HG23	71:SV:64:GLU:HB2	1.93	0.50
72:SW:44:HIS:O	72:SW:46:TYR:N	2.45	0.50
48:4:72:SER:CB	48:4:104:ASP:HB3	2.42	0.50
48:4:288:THR:HG23	48:4:289:PHE:N	2.27	0.50
48:4:562:GLU:CB	48:4:570:ILE:CG1	2.90	0.50
48:4:577:VAL:CG1	48:4:579:TYR:CE1	2.91	0.50
48:4:579:TYR:HB2	48:4:740:LEU:HD21	1.94	0.50
1:5:1196:G:C2	1:5:1197:C:C2	2.99	0.50
1:5:1325:C:O3'	1:5:3901:A:N6	2.44	0.50
1:5:132:G:C2	1:5:133:C:H1'	2.47	0.50
1:5:104:G:O2'	1:5:1361:G:O2'	2.06	0.50
1:5:1616:U:H2'	1:5:1616:U:O2	2.11	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
1:5:1885:G:H2'	1:5:1886:G:O5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1912:G:C2	1:5:1913:C:C4	2.99	0.50
1:5:1929:A:C6	1:5:2054:U:O4	2.62	0.50
1:5:1267:C:O2'	1:5:2109:G:N7	2.42	0.50
1:5:2366:A:H2'	1:5:2367:A:H5'	1.91	0.50
1:5:2440:U:O2'	1:5:2441:C:OP1	2.26	0.50
1:5:247:G:C5	1:5:248:C:C5	3.00	0.50
1:5:2547:G:H2'	1:5:2547:G:N3	2.26	0.50
1:5:2436:U:C4	1:5:2783:A:C8	3.00	0.50
1:5:2435:G:H21	1:5:2783:A:H1'	1.76	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
1:5:416:U:H2'	1:5:417:G:O4'	2.12	0.50
1:5:4255:A:C5	1:5:4256:A:C2	2.99	0.50
1:5:4280:A:H61	7:D:28:THR:C	2.13	0.50
1:5:4323:A:H3'	1:5:4324:A:H8	1.77	0.50
1:5:4433:G:C6	1:5:4434:C:N4	2.80	0.50
1:5:4723:A:H2'	1:5:4724:A:H8	1.75	0.50
1:5:4724:A:C4	1:5:4725:C:C5	2.99	0.50
1:5:4905:C:N3	1:5:4906:C:C6	2.80	0.50
1:5:4997:G:C4	1:5:4998:G:C8	2.99	0.50
1:5:5023:C:O2	1:5:5023:C:O4'	2.28	0.50
1:5:2889:G:H21	1:5:5034:A:H8	1.58	0.50
1:5:5003:U:N3	1:5:5045:G:C2	2.80	0.50
1:5:660:A:N1	1:5:661:C:C4	2.79	0.50
1:5:69:A:C2	1:5:70:A:C5	2.99	0.50
1:5:709:C:N3	1:5:710:G:C8	2.80	0.50
2:7:112:U:C2'	2:7:112:U:O2	2.58	0.50
2:7:22:A:N1	2:7:23:A:C6	2.79	0.50
3:8:82:A:C2'	3:8:82:A:N3	2.74	0.50
3:8:99:U:C2	3:8:100:U:C6	3.00	0.50
1:5:3870:C:H4'	5:B:261:ARG:HE	1.76	0.50
6:C:59:GLY:HA3	6:C:99:GLY:O	2.10	0.50
12:I:100:ASN:C	12:I:102:MET:H	2.14	0.50
1:5:4413:C:O2'	12:I:157:PHE:CD2	2.59	0.50
5:B:264:PHE:HD2	18:O:66:PRO:HD2	1.76	0.50
21:R:81:ARG:HG3	21:R:88:ARG:NE	2.26	0.50
49:S2:999:G:N3	49:S2:1000:C:C6	2.79	0.50
49:S2:1037:G:C6	49:S2:1038:U:C5	2.99	0.50
49:S2:1094:C:O2	49:S2:1095:U:C6	2.64	0.50
49:S2:1132:C:C4	49:S2:1133:A:N7	2.75	0.50
49:S2:1205:C:N3	49:S2:1206:G:N7	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1248:U:H2'	49:S2:1249:C:H1'	1.92	0.50
49:S2:1405:A:N6	49:S2:1406:G:C6	2.79	0.50
49:S2:1630:A:C6	49:S2:1631:U:C4	2.99	0.50
49:S2:1795:G:N3	49:S2:1796:G:C8	2.79	0.50
49:S2:1811:C:C4	49:S2:1812:U:C5	2.99	0.50
49:S2:188:C:N3	49:S2:189:U:C6	2.80	0.50
49:S2:340:C:H2'	49:S2:341:C:H6	1.74	0.50
49:S2:428:U:H5	59:SJ:7:TRP:CE2	2.28	0.50
49:S2:552:G:N1	49:S2:553:U:C4	2.79	0.50
49:S2:59:U:H2'	49:S2:60:A:H2'	1.92	0.50
49:S2:750:C:O2	49:S2:750:C:C2'	2.59	0.50
49:S2:793:G:N7	49:S2:794:A:N7	2.59	0.50
49:S2:923:G:N1	49:S2:924:G:C5	2.79	0.50
52:SC:133:TYR:CD1	52:SC:216:MET:HA	2.45	0.50
52:SC:177:PRO:HD3	71:SV:9:VAL:HG11	1.93	0.50
48:4:394:LEU:CD2	48:4:485:ILE:HG22	2.39	0.50
48:4:503:PRO:HB3	48:4:533:MET:CE	2.41	0.50
48:4:540:GLU:OE1	48:4:540:GLU:O	2.29	0.50
48:4:650:TRP:NE1	48:4:664:ASP:HB2	2.26	0.50
48:4:60:ARG:HG3	48:4:70:ILE:HD12	1.93	0.50
48:4:756:VAL:O	48:4:759:ILE:CG2	2.29	0.50
48:4:81:LEU:HB2	48:4:86:LEU:HD11	1.93	0.50
1:5:1235:G:C2	1:5:1236:C:C4	2.99	0.50
1:5:1302:U:C2	1:5:1303:A:H8	2.24	0.50
1:5:1357:C:HO2'	1:5:1358:G:H5'	1.74	0.50
1:5:1358:G:H2'	1:5:1359:G:H8	1.72	0.50
1:5:1508:A:C6	1:5:1509:C:C5	3.00	0.50
1:5:1522:G:C6	1:5:1653:A:C6	2.99	0.50
1:5:1566:C:O2'	1:5:1567:U:H5'	2.11	0.50
1:5:165:A:C6	1:5:166:C:C4	2.98	0.50
1:5:1856:C:N3	1:5:1857:C:C5	2.79	0.50
1:5:1893:C:O2	1:5:1894:C:C5	2.64	0.50
1:5:1899:G:H1	1:5:2076:G:H1	1.60	0.50
1:5:1267:C:C4'	1:5:2110:C:O2'	2.59	0.50
1:5:2270:G:C2	1:5:2271:C:N3	2.79	0.50
1:5:2496:G:C6	1:5:2497:C:C5	3.00	0.50
1:5:2540:C:N3	1:5:2541:G:N7	2.59	0.50
1:5:2644:G:N1	1:5:2645:G:C5	2.80	0.50
1:5:2724:G:N1	1:5:2726:G:C5	2.79	0.50
1:5:2762:G:H1'	1:5:2763:U:O4'	2.11	0.50
1:5:2851:G:C6	1:5:2852:U:H6	2.17	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:345:C:C2	1:5:346:G:C8	2.99	0.50
1:5:3666:C:C4	1:5:3667:C:C6	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
1:5:4145:C:C2	1:5:4146:G:N7	2.79	0.50
1:5:4284:C:N3	1:5:4285:U:H5	1.99	0.50
1:5:4511:A:H2'	1:5:4512:U:C1'	2.42	0.50
1:5:4731:G:N7	1:5:4732:G:C6	2.79	0.50
1:5:4898:G:C2	1:5:4899:G:C5	2.99	0.50
1:5:4960:G:H2'	1:5:4961:G:H5'	1.93	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
3:8:99:U:C2	3:8:100:U:C5	3.00	0.50
3:8:133:G:N2	3:8:134:G:N9	2.59	0.50
3:8:144:U:C2	3:8:145:C:C6	3.00	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
5:B:264:PHE:CD1	5:B:264:PHE:C	2.85	0.50
1:5:470:A:H61	8:E:101:ARG:NH2	2.09	0.50
12:I:184:MET:HB3	12:I:190:LEU:HD12	1.94	0.50
22:S:33:PHE:CZ	22:S:106:VAL:HB	2.46	0.50
49:S2:1063:C:H5''	49:S2:1064:C:OP2	2.12	0.50
49:S2:1234:C:C2'	49:S2:1234:C:O2	2.59	0.50
49:S2:1573:G:C5	49:S2:1574:C:C5	2.99	0.50
49:S2:1710:C:C4	49:S2:1711:U:C5	3.00	0.50
49:S2:1795:G:N1	49:S2:1796:G:C5	2.80	0.50
49:S2:1824:A:N1	49:S2:1825:A:N6	2.53	0.50
49:S2:20:G:H4'	49:S2:620:G:N7	2.27	0.50
49:S2:609:U:C2	49:S2:610:G:H8	2.27	0.50
49:S2:880:G:N7	49:S2:881:G:C8	2.72	0.50
49:S2:976:G:C4	49:S2:977:C:C6	2.99	0.50
49:S2:978:G:C2	49:S2:979:C:C2	2.99	0.50
50:SA:81:ASN:HB2	50:SA:204:TYR:CE2	2.46	0.50
55:SF:110:GLN:HA	55:SF:110:GLN:HE21	1.77	0.50
55:SF:97:PHE:HB3	55:SF:108:PRO:CG	2.41	0.50
56:SG:173:ALA:HB1	56:SG:174:PRO:CD	2.41	0.50
49:S2:191:A:P	58:SI:141:ARG:HD2	2.51	0.50
61:SL:80:MET:HG2	61:SL:86:ILE:HG22	1.92	0.50
72:SW:78:ARG:HD3	72:SW:126:LEU:HD23	1.94	0.50
48:4:196:GLU:HA	48:4:196:GLU:OE1	2.05	0.50
48:4:451:ILE:HD12	48:4:458:VAL:HB	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:536:CYS:HA	48:4:545:ILE:O	2.12	0.50
48:4:591:CYS:SG	48:4:732:SER:N	2.85	0.50
48:4:592:LEU:HA	48:4:602:LEU:O	2.11	0.50
48:4:686:ALA:O	48:4:689:GLU:O	2.30	0.50
1:5:1178:G:C5	1:5:1179:U:C6	3.00	0.50
1:5:1271:G:H3'	1:5:1272:C:C4'	2.41	0.50
1:5:1440:U:C4'	1:5:2109:G:O2'	2.60	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
1:5:1671:U:O4	1:5:1853:G:H1'	2.10	0.50
1:5:1961:G:H2'	1:5:2024:G:H1	1.75	0.50
1:5:2261:G:H2'	1:5:2262:G:N7	2.26	0.50
1:5:2270:G:N3	1:5:2271:C:C5	2.80	0.50
1:5:1666:C:C2	1:5:2284:G:N2	2.80	0.50
1:5:2690:C:N4	1:5:2691:U:C4	2.79	0.50
1:5:2745:A:C2	1:5:2746:A:C6	2.99	0.50
1:5:2836:A:C2	1:5:3895:G:H4'	2.46	0.50
1:5:2907:G:H2'	1:5:2908:U:O4'	2.12	0.50
1:5:3753:G:C4	1:5:3776:G:C6	3.00	0.50
1:5:3879:G:O6	1:5:3882:C:C5	2.63	0.50
1:5:4087:G:C8	4:A:34:PHE:CE1	2.99	0.50
1:5:4107:G:C2	1:5:4108:G:C8	3.00	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
1:5:4913:G:C2'	1:5:4914:C:O4'	2.59	0.50
1:5:654:C:O2	1:5:654:C:H2'	2.12	0.50
1:5:658:C:H2'	1:5:659:G:O4'	2.11	0.50
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
2:7:85:G:OP1	9:F:224:LYS:NZ	2.43	0.50
3:8:115:G:C6	3:8:116:C:C4	2.99	0.50
4:A:3:ARG:HG3	4:A:3:ARG:NH1	2.26	0.50
6:C:178:ASN:HD22	6:C:178:ASN:N	2.08	0.50
11:H:117:PHE:HD1	11:H:118:LEU:HB2	1.74	0.50
3:8:65:A:OP1	11:H:56:ARG:HG3	164.58	0.50
12:I:47:PRO:HA	12:I:171:TRP:NE1	2.25	0.50
14:K:86:LYS:C	14:K:104:ILE:HG12	2.31	0.50
20:Q:75:ARG:HG3	20:Q:75:ARG:HH11	1.76	0.50
18:O:12:ARG:NH1	22:S:171:ARG:NH2	2.60	0.50
49:S2:1005:G:H2'	49:S2:1006:C:H6	1.77	0.50
49:S2:1018:U:H5'	63:SN:71:ILE:HD12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1018:U:N3	49:S2:1019:C:H5	2.04	0.50
49:S2:1159:G:H2'	49:S2:1160:U:O4'	2.12	0.50
49:S2:1204:A:H2'	49:S2:1205:C:H6	1.76	0.50
49:S2:1434:C:H3'	49:S2:1435:C:C5'	2.42	0.50
49:S2:1455:A:N6	49:S2:1456:G:C5	2.79	0.50
49:S2:1459:G:C5	49:S2:1460:C:C5	2.99	0.50
49:S2:1589:A:H2'	49:S2:1590:C:O4'	2.11	0.50
49:S2:1596:U:N3	49:S2:1597:C:C6	2.80	0.50
49:S2:1785:C:C2	49:S2:1786:U:C4	2.99	0.50
49:S2:623:G:C2	49:S2:624:C:N1	2.80	0.50
49:S2:794:A:C5	49:S2:795:A:N7	2.80	0.50
49:S2:828:G:C4	49:S2:829:C:C6	3.00	0.50
49:S2:862:A:C2	49:S2:863:U:C1'	2.95	0.50
53:SD:141:LYS:HA	53:SD:147:ALA:HA	1.93	0.50
55:SF:25:THR:HG23	55:SF:109:LEU:HD13	1.94	0.50
57:SH:169:LYS:O	57:SH:171:GLU:N	2.45	0.50
58:SI:65:PHE:O	58:SI:109:TYR:OH	2.30	0.50
58:SI:165:GLN:HE21	58:SI:171:LEU:HD23	1.77	0.50
62:SM:19:GLN:CB	62:SM:88:TRP:HB3	2.42	0.50
65:SP:53:GLN:HG2	65:SP:83:MET:SD	2.52	0.50
48:4:101:ASN:CG	48:4:469:ILE:CD1	2.77	0.50
48:4:200:MET:HG2	48:4:203:ILE:CG2	2.40	0.50
48:4:4:PHE:HD1	48:4:5:THR:N	2.10	0.50
48:4:804:THR:OG1	48:4:808:ALA:HB3	2.05	0.50
1:5:1188:C:C2	1:5:1189:G:H8	2.23	0.50
1:5:1203:G:H2'	1:5:1204:C:O4'	2.11	0.50
1:5:1279:A:C2	1:5:1280:C:N3	2.80	0.50
1:5:1326:A:H2'	1:5:1327:C:H6	1.76	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
1:5:1565:A:H2'	1:5:1566:C:C5'	2.42	0.50
1:5:1598:C:C5	1:5:2798:A:C5	2.99	0.50
1:5:1673:U:C2	1:5:1674:C:C6	3.00	0.50
1:5:1751:A:N6	1:5:1752:G:C5	2.80	0.50
1:5:1872:G:N3	1:5:4219:A:H2	2.10	0.50
1:5:1895:G:C6	1:5:1896:A:C2	3.00	0.50
1:5:190:G:C2	1:5:252:C:C2	3.00	0.50
1:5:1890:G:N2	1:5:1938:C:N4	2.59	0.50
1:5:1983:A:H2	1:5:2008:U:C5	2.28	0.50
1:5:2056:G:N2	1:5:2058:G:O6	2.45	0.50
1:5:2104:G:C5	1:5:2105:A:C8	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:226:G:O2'	1:5:227:A:OP2	2.21	0.50
1:5:2339:G:C6	1:5:2340:C:C5	2.99	0.50
1:5:2460:A:O4'	17:N:94:PHE:CE1	2.64	0.50
1:5:2559:G:H22	1:5:2567:G:H22	1.59	0.50
1:5:2669:C:O2'	1:5:2670:C:P	2.70	0.50
1:5:2837:U:C4	1:5:2838:G:C8	2.98	0.50
1:5:4133:C:N3	1:5:4134:C:C5	2.80	0.50
1:5:4419:U:H5	48:4:765:ARG:NH2	2.08	0.50
1:5:4536:C:O2	1:5:4536:C:H2'	2.11	0.50
1:5:4552:U:H2'	1:5:4553:A:O5'	2.11	0.50
1:5:457:G:C2	1:5:458:C:C5	3.00	0.50
1:5:4651:A:C5	1:5:4652:G:C8	3.00	0.50
1:5:4758:U:H2'	1:5:4759:C:O5'	2.12	0.50
1:5:4956:A:N1	1:5:4957:C:C6	2.80	0.50
1:5:4961:G:H2'	1:5:4962:C:O4'	2.11	0.50
1:5:4967:A:H2'	1:5:4968:A:H8	1.76	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
1:5:642:G:N3	1:5:643:C:C6	2.80	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
1:5:994:G:C2	1:5:995:C:C2	2.99	0.50
3:8:31:G:C6	3:8:32:C:C4	3.00	0.50
3:8:74:U:O2	3:8:74:U:C2'	2.55	0.50
3:8:81:C:H3'	3:8:82:A:C4'	2.38	0.50
4:A:40:TYR:HB3	4:A:93:LYS:HB2	1.93	0.50
1:5:4930:C:OP1	8:E:262:GLN:N	2.44	0.50
8:E:54:SER:O	8:E:56:SER:N	2.44	0.50
11:H:103:VAL:HA	11:H:113:GLU:O	2.12	0.50
1:5:4413:C:C2'	12:I:157:PHE:CD2	2.90	0.50
12:I:98:ARG:CD	12:I:119:PHE:HE1	2.25	0.50
14:K:126:SER:HB2	14:K:130:LYS:CE	2.42	0.50
14:K:34:PRO:CD	14:K:35:LEU:N	2.74	0.50
17:N:126:THR:C	17:N:127:TYR:CD1	2.85	0.50
20:Q:22:ASP:OD1	20:Q:25:LEU:HB3	2.12	0.50
1:5:1564:A:N6	49:S2:1029:G:O2'	2.28	0.50
49:S2:1074:C:N3	49:S2:1075:C:C4	2.80	0.50
49:S2:10:G:H2'	49:S2:10:G:N3	2.26	0.50
49:S2:1339:U:C2	49:S2:1340:U:C5	3.00	0.50
49:S2:1792:G:C4	49:S2:1793:A:C8	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1805:G:N1	49:S2:1806:A:C8	2.80	0.50
49:S2:1849:G:O2'	49:S2:1850:A:C5'	2.59	0.50
49:S2:393:U:O2	49:S2:394:G:C8	2.64	0.50
49:S2:452:G:O2'	49:S2:453:C:H5'	2.12	0.50
49:S2:72:C:H4'	49:S2:73:C:OP1	2.10	0.50
49:S2:800:U:H2'	49:S2:801:U:O4'	2.12	0.50
49:S2:70:G:C2	49:S2:80:G:N2	2.78	0.50
49:S2:928:G:H2'	49:S2:929:G:H8	1.75	0.50
49:S2:936:G:C6	49:S2:937:C:C4	3.00	0.50
49:S2:974:C:O2	49:S2:975:G:C8	2.65	0.50
50:SA:116:PHE:C	50:SA:117:ARG:HG3	2.32	0.50
53:SD:115:VAL:HG21	53:SD:142:LEU:HD21	1.94	0.50
56:SG:224:ARG:HA	56:SG:227:GLN:HB2	1.92	0.50
57:SH:145:ARG:NE	72:SW:51:GLU:HG2	2.26	0.50
62:SM:93:LYS:O	62:SM:94:ILE:HG22	2.12	0.50
49:S2:959:G:O6	64:SO:68:GLU:OE1	2.30	0.50
49:S2:581:U:O3'	74:SY:66:GLY:HA3	2.12	0.50
5:B:378:ARG:CD	26:W:32:LEU:HD21	2.39	0.50
27:X:79:PHE:HD1	27:X:79:PHE:N	2.08	0.50
48:4:147:ILE:HD11	48:4:203:ILE:CD1	2.41	0.50
48:4:253:VAL:HG12	48:4:257:MET:HE1	1.87	0.50
48:4:281:GLU:CD	48:4:281:GLU:H	2.15	0.50
48:4:32:LYS:O	48:4:36:THR:HG23	2.12	0.50
48:4:430:MET:HE3	48:4:486:THR:HG23	1.85	0.50
48:4:563:GLU:OE1	48:4:563:GLU:O	2.30	0.50
48:4:72:SER:HB2	48:4:105:SER:HA	1.94	0.50
48:4:833:GLN:O	48:4:837:GLU:HG2	2.12	0.50
1:5:101:A:N1	1:5:102:G:C5	2.79	0.50
1:5:105:A:O2'	15:L:35:ARG:NH1	2.44	0.50
1:5:1213:G:C6	1:5:1215:C:C5	3.00	0.50
1:5:1215:C:O2	1:5:1215:C:H2'	2.10	0.50
1:5:1277:G:C2	1:5:1278:C:N1	2.80	0.50
1:5:1329:G:N2	1:5:3865:A:H1'	2.27	0.50
1:5:1627:G:C5	1:5:1628:C:C6	3.00	0.50
1:5:1633:G:N2	1:5:1642:A:C8	2.79	0.50
1:5:1725:U:C2	1:5:1726:U:C6	2.99	0.50
1:5:1808:C:C2	1:5:1831:G:C2	3.00	0.50
1:5:193:G:C6	1:5:194:C:C4	3.00	0.50
1:5:1968:G:C4	1:5:1969:G:C8	3.00	0.50
1:5:1972:G:N2	1:5:1973:G:C4	2.80	0.50
1:5:1994:C:N3	1:5:1995:G:C8	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2315:G:C6	1:5:2316:G:N7	2.80	0.50
1:5:2463:G:N1	1:5:2464:C:N4	2.60	0.50
1:5:2612:G:N1	1:5:2613:C:C2	2.79	0.50
1:5:2645:G:N1	1:5:2646:C:C5	2.80	0.50
1:5:2841:G:C6	1:5:2842:G:C8	3.00	0.50
1:5:316:U:C2'	1:5:316:U:O2	2.57	0.50
1:5:3599:A:H2'	1:5:3600:G:C8	2.47	0.50
1:5:3621:A:H1'	1:5:4655:A:C2	2.46	0.50
1:5:3721:U:C2	1:5:3722:G:H8	2.18	0.50
1:5:353:A:C2	1:5:379:G:C8	3.00	0.50
1:5:1939:A:H2	1:5:3874:G:OP1	1.95	0.50
1:5:4240:G:C2	1:5:4241:C:H1'	2.46	0.50
1:5:4257:A:C5	13:J:60:PHE:CE2	2.99	0.50
1:5:4362:A:N3	1:5:4363:A:C8	2.80	0.50
1:5:4426:C:C4	1:5:4427:G:C8	2.99	0.50
1:5:3878:C:C5	1:5:4518:A:C2	2.99	0.50
1:5:4538:G:C5	1:5:4539:U:C5	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
1:5:4910:G:N2	18:O:109:PRO:N	2.59	0.50
1:5:677:G:C6	1:5:678:C:N4	2.80	0.50
2:7:58:A:C4	2:7:59:G:C8	2.99	0.50
3:8:106:G:N1	3:8:107:C:C4	2.80	0.50
3:8:132:G:C4	3:8:133:G:C8	3.00	0.50
3:8:35:C:H2'	3:8:36:G:O5'	2.11	0.50
1:5:1187:G:H4'	7:D:274:ALA:CB	2.41	0.50
12:I:171:TRP:HE3	12:I:181:PHE:HB2	1.75	0.50
14:K:111:ASN:O	14:K:114:ARG:HG2	2.12	0.50
14:K:142:ASN:CG	14:K:143:VAL:H	2.13	0.50
18:O:167:HIS:CD2	18:O:167:HIS:C	2.84	0.50
49:S2:1286:G:N2	49:S2:1312:G:C4	2.79	0.50
49:S2:1394:G:N3	49:S2:1394:G:H2'	2.26	0.50
49:S2:1590:C:H3'	49:S2:1591:C:H6	1.77	0.50
49:S2:1610:G:C2	49:S2:1611:G:C4	3.00	0.50
49:S2:1666:C:N3	49:S2:1667:U:C4	2.80	0.50
49:S2:1754:G:C4	49:S2:1755:C:C6	3.00	0.50
49:S2:25:A:H61	49:S2:648:A:N6	2.02	0.50
49:S2:28:U:O2	49:S2:29:G:N7	2.44	0.50
49:S2:505:G:O2'	49:S2:506:G:H5'	2.12	0.50
49:S2:600:G:N2	49:S2:601:G:C5	2.80	0.50
49:S2:597:G:N1	49:S2:640:A:N1	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:84:TYR:HD2	22:S:113:MET:CE	2.24	0.50
53:SD:72:VAL:CG2	60:SK:20:VAL:HG21	2.42	0.50
54:SE:106:LYS:HB3	54:SE:108:ARG:HD3	1.94	0.50
57:SH:127:ASP:O	57:SH:130:LEU:HB2	2.10	0.50
58:SI:87:ASN:OD1	58:SI:88:ASN:N	2.45	0.50
60:SK:43:LEU:HD12	60:SK:44:HIS:CD2	2.46	0.50
65:SP:43:ARG:HB3	65:SP:47:ARG:HD3	1.93	0.50
68:SS:92:ASP:O	68:SS:94:LYS:N	2.37	0.50
48:4:103:ILE:HD11	48:4:122:THR:HG21	1.88	0.50
48:4:518:PRO:CA	73:SX:50:ILE:HD12	2.42	0.50
48:4:759:ILE:CD1	48:4:784:VAL:HG21	2.23	0.50
1:5:1266:G:H5''	1:5:2112:G:N2	2.26	0.50
1:5:1320:U:H2'	1:5:1320:U:O2	2.11	0.50
1:5:1362:G:C6	1:5:1363:C:C4	3.00	0.50
1:5:1456:C:OP1	1:5:1456:C:H4'	2.11	0.50
1:5:1735:U:O2	1:5:1736:A:C8	2.65	0.50
1:5:1755:C:H41	1:5:1778:C:H4'	1.75	0.50
1:5:1811:G:N1	1:5:1812:C:C5	2.78	0.50
1:5:1829:G:C2	1:5:1830:G:C4	2.99	0.50
1:5:1962:A:H8	1:5:1962:A:H5''	1.76	0.50
1:5:2015:U:N3	1:5:2016:C:C5	2.80	0.50
1:5:2065:G:C5	1:5:2066:C:C5	2.99	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
1:5:2326:G:N2	1:5:2327:G:C4	2.80	0.50
1:5:2645:G:C5	1:5:2646:C:C5	3.00	0.50
1:5:2827:G:N3	1:5:2827:G:H2'	2.26	0.50
1:5:321:U:O2	1:5:322:C:C6	2.64	0.50
1:5:77:U:C4	1:5:335:A:N1	2.79	0.50
1:5:33:A:H5''	1:5:33:A:H8	1.77	0.50
1:5:3636:C:C2'	1:5:3636:C:O2	2.59	0.50
1:5:3754:G:C2	1:5:3755:G:C8	2.99	0.50
1:5:3802:U:N3	1:5:4498:U:O2'	2.44	0.50
1:5:4543:G:H2'	1:5:4544:A:C8	2.46	0.50
1:5:4763:U:H6	11:H:42:ASN:ND2	2.09	0.50
1:5:4755:G:N1	1:5:4876:U:C4	2.80	0.50
1:5:4957:C:O2	1:5:4958:C:H6	1.94	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
2:7:92:C:O2	2:7:93:G:C8	2.65	0.50
3:8:12:G:N1	3:8:13:G:C5	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:39:G:H2'	3:8:39:G:N3	2.26	0.50
4:A:202:VAL:CG1	4:A:217:GLN:HG2	2.39	0.50
6:C:209:ILE:HD13	6:C:221:PHE:CE2	2.47	0.50
7:D:200:LEU:HB2	7:D:202:GLN:HE22	1.75	0.50
7:D:39:GLN:HA	7:D:39:GLN:OE1	2.11	0.50
10:G:58:PRO:CD	27:X:46:PHE:HD2	2.25	0.50
14:K:121:LEU:HB2	14:K:129:ILE:CD1	2.41	0.50
14:K:40:LYS:O	14:K:44:ASP:CB	2.59	0.50
21:R:117:ARG:HH21	21:R:118:HIS:CE1	2.30	0.50
49:S2:1032:C:C4	49:S2:1033:G:N7	2.80	0.50
49:S2:1094:C:O2	49:S2:1094:C:H2'	2.12	0.50
49:S2:1325:G:C2	49:S2:1327:G:N7	2.80	0.50
49:S2:1373:C:H2'	49:S2:1374:C:C6	2.47	0.50
49:S2:1466:G:N3	49:S2:1467:C:C6	2.80	0.50
49:S2:1471:C:H2'	49:S2:1472:C:C6	2.47	0.50
1:5:3629:A:C4'	49:S2:1721:U:C2	2.94	0.50
49:S2:171:A:C5	49:S2:173:A:N7	2.79	0.50
49:S2:1772:C:O2	49:S2:1773:C:C6	2.65	0.50
49:S2:461:U:O2	49:S2:462:C:C6	2.65	0.50
49:S2:49:C:O2	49:S2:478:G:C2	2.65	0.50
49:S2:689:U:H2'	49:S2:690:G:C1'	2.42	0.50
67:SR:3:ARG:NH1	67:SR:49:LYS:HD3	2.27	0.50
48:4:517:LEU:HD23	73:SX:50:ILE:HD13	1.94	0.50
23:T:74:ILE:HG23	23:T:89:ILE:HG13	1.93	0.50
26:W:57:ARG:HG2	26:W:57:ARG:HH11	1.76	0.50
48:4:91:GLN:OE1	48:4:363:THR:HG21	2.12	0.50
1:5:1168:G:C2	1:5:1169:G:C5	2.99	0.50
1:5:1185:G:C5	1:5:1186:U:C6	3.00	0.50
1:5:1213:G:N9	1:5:1215:C:H1'	2.25	0.50
1:5:1261:G:N1	1:5:1262:G:N7	2.60	0.50
1:5:1263:A:H2'	1:5:1264:C:O4'	2.12	0.50
1:5:1412:G:C4	1:5:1413:C:C5	3.00	0.50
1:5:1832:C:O2	1:5:1832:C:H2'	2.11	0.50
1:5:2248:C:OP1	9:F:26:ASN:N	2.45	0.50
1:5:2257:C:O2'	1:5:2258:C:O5'	2.30	0.50
1:5:446:C:O2'	1:5:2314:G:H4'	2.11	0.50
1:5:246:G:N1	1:5:247:G:C5	2.80	0.50
1:5:258:G:C5	1:5:259:C:C5	2.99	0.50
1:5:2658:G:N2	1:5:2675:G:C2	2.78	0.50
1:5:2700:G:H2'	1:5:2701:U:O4'	2.12	0.50
1:5:3693:U:H2'	1:5:3693:U:O2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3794:C:O2	1:5:3795:A:C8	2.65	0.50
1:5:4068:U:C2	1:5:4069:U:H1'	2.47	0.50
1:5:4269:G:O6	1:5:4277:G:O6	2.29	0.50
1:5:4565:C:O2'	1:5:4566:U:H5'	2.12	0.50
1:5:4707:A:O2'	1:5:4708:A:O5'	2.26	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
1:5:4922:C:C2	1:5:4923:C:C6	3.00	0.50
1:5:493:G:C6	1:5:494:U:C6	3.00	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
1:5:712:C:C2	1:5:713:C:C6	3.00	0.50
1:5:920:C:C4	1:5:921:C:C5	3.00	0.50
1:5:936:C:C5	16:M:46:ARG:HA	2.47	0.50
2:7:38:U:N3	2:7:40:U:OP2	2.45	0.50
3:8:118:C:O2	3:8:119:C:H6	1.95	0.50
3:8:92:U:H2'	3:8:93:C:O4'	2.12	0.50
1:5:3653:A:O2'	4:A:180:LEU:O	2.22	0.50
6:C:218:ILE:HD12	6:C:222:ARG:HD2	1.93	0.50
7:D:99:TYR:CD2	7:D:199:ILE:HG23	2.47	0.50
14:K:123:ARG:HB2	14:K:129:ILE:CD1	0.95	0.50
14:K:143:VAL:O	14:K:145:GLY:N	2.45	0.50
1:5:2460:A:H1'	17:N:94:PHE:CZ	2.47	0.50
21:R:172:ARG:HD2	49:S2:909:G:OP2	2.12	0.50
21:R:76:MET:O	21:R:81:ARG:NH1	2.45	0.50
49:S2:1304:U:C2	49:S2:1305:C:H5	2.29	0.50
49:S2:1512:C:H2'	49:S2:1513:C:C6	2.47	0.50
49:S2:1643:U:N3	49:S2:1644:C:C4	2.80	0.50
49:S2:1685:U:H2'	49:S2:1686:G:O4'	2.11	0.50
49:S2:218:U:N3	49:S2:219:U:C4	2.80	0.50
49:S2:441:C:C6	49:S2:448:A:H2	2.29	0.50
49:S2:554:A:N1	49:S2:555:A:C6	2.80	0.50
49:S2:574:A:O2'	49:S2:575:A:C8	2.61	0.50
49:S2:788:G:H2'	49:S2:789:G:C8	2.47	0.50
49:S2:839:C:C5	49:S2:841:G:C5	3.00	0.50
51:SB:205:TYR:O	51:SB:207:LEU:HG	2.10	0.50
58:SI:55:TYR:CD2	58:SI:55:TYR:N	2.79	0.50
68:SS:132:ARG:O	68:SS:134:GLN:N	2.44	0.50
24:U:28:PRO:HA	24:U:114:TYR:OH	2.12	0.50
48:4:12:ILE:CG2	48:4:99:LEU:HB2	2.41	0.49
48:4:241:GLU:H	48:4:243:GLN:CD	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:21:ASN:HD21	48:4:469:ILE:CD1	2.22	0.49
48:4:722:ILE:CB	48:4:723:PRO:HD3	2.36	0.49
48:4:75:ILE:CG2	48:4:76:SER:N	2.75	0.49
1:5:1263:A:C6	1:5:1264:C:C5	3.00	0.49
1:5:1265:G:C6	1:5:1266:G:C5	3.00	0.49
1:5:1404:G:C2	1:5:1405:C:N1	2.80	0.49
1:5:1412:G:C6	1:5:1413:C:C4	3.00	0.49
1:5:1870:C:O2	1:5:1870:C:H2'	2.10	0.49
1:5:2079:G:C6	1:5:2080:U:C5	3.00	0.49
1:5:2113:G:H8	1:5:2115:G:N3	2.10	0.49
1:5:2314:G:C6	1:5:2326:G:C5	2.99	0.49
1:5:2393:C:OP2	1:5:2394:G:N7	2.45	0.49
1:5:2457:G:H2'	1:5:2458:C:O4'	2.11	0.49
1:5:2503:G:H3'	1:5:2504:C:C4'	2.41	0.49
1:5:2735:G:C2	1:5:2736:G:C5	3.00	0.49
1:5:278:G:N2	1:5:330:G:C8	2.79	0.49
1:5:2909:C:O2	1:5:3586:G:C2	2.65	0.49
1:5:3594:C:O2	1:5:3594:C:C2'	2.60	0.49
1:5:3711:A:N3	1:5:3711:A:H5''	2.27	0.49
1:5:3911:C:C2'	1:5:3912:U:O5'	2.59	0.49
1:5:4302:U:C5	1:5:4303:C:C5	2.90	0.49
1:5:4548:A:O5'	1:5:4548:A:C8	2.64	0.49
1:5:467:U:C2	1:5:468:U:C6	3.00	0.49
1:5:4713:G:C6	1:5:4714:C:C4	3.00	0.49
1:5:4916:G:C5	1:5:4917:C:C5	3.00	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
2:7:54:A:H2	2:7:55:A:C8	2.15	0.49
4:A:30:ARG:NE	4:A:63:PHE:CE2	2.80	0.49
5:B:291:TYR:CZ	5:B:327:THR:HA	2.47	0.49
9:F:168:ARG:HB2	9:F:211:TRP:NE1	2.27	0.49
1:5:2052:G:OP1	18:O:83:THR:HG22	2.12	0.49
49:S2:1050:A:C5	49:S2:1051:G:N9	2.80	0.49
49:S2:1433:C:O3'	49:S2:1434:C:C4'	2.59	0.49
49:S2:1454:A:C8	49:S2:1476:A:N9	2.80	0.49
49:S2:1488:C:C2	49:S2:1490:G:N7	2.80	0.49
49:S2:1688:C:N3	49:S2:1689:C:C5	2.80	0.49
49:S2:340:C:O2	49:S2:341:C:C6	2.64	0.49
49:S2:656:G:H5'	49:S2:662:G:N2	2.27	0.49
49:S2:978:G:N1	49:S2:979:C:C4	2.80	0.49
49:S2:986:G:N3	49:S2:986:G:H2'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:60:TRP:CZ2	52:SC:92:GLU:HB3	2.47	0.49
49:S2:74:G:O6	56:SG:171:THR:OG1	2.25	0.49
58:SI:83:TYR:HD1	58:SI:84:ASN:N	2.09	0.49
49:S2:823:U:H5	59:SJ:144:ILE:HD13	1.77	0.49
61:SL:121:GLN:N	61:SL:124:ASP:OD2	2.44	0.49
69:ST:4:VAL:HA	69:ST:8:ASP:HB3	1.93	0.49
10:G:55:VAL:HG22	27:X:44:PRO:HA	1.94	0.49
28:Y:15:ARG:HH11	28:Y:15:ARG:CG	2.25	0.49
28:Y:91:ASN:OD1	28:Y:91:ASN:N	2.44	0.49
48:4:442:LEU:CD2	48:4:444:LEU:HD11	2.36	0.49
48:4:546:ILE:HG22	48:4:554:LEU:HD13	1.94	0.49
48:4:744:ILE:HG23	48:4:745:TYR:H	1.77	0.49
1:5:1202:C:O2	1:5:1203:G:C8	2.65	0.49
1:5:1215:C:C2	1:5:1216:C:C6	3.00	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
1:5:1472:C:C4	1:5:1473:U:C5	2.99	0.49
1:5:1565:A:H2'	1:5:1566:C:O4'	2.12	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
1:5:2322:G:N1	1:5:2323:C:C2	2.80	0.49
1:5:209:U:O2	1:5:233:U:C4	2.64	0.49
1:5:2361:G:O2'	1:5:2362:U:P	2.70	0.49
1:5:2363:A:O4'	1:5:4560:C:C5	2.65	0.49
1:5:2496:G:N3	1:5:2497:C:C6	2.80	0.49
1:5:2519:U:H1'	1:5:2520:C:C6	2.47	0.49
1:5:2371:U:O4	1:5:2825:A:C2	2.61	0.49
1:5:292:G:C2	1:5:293:G:N1	2.79	0.49
1:5:298:G:C6	1:5:299:C:C4	3.00	0.49
1:5:3862:A:C5	1:5:3863:C:C6	3.01	0.49
1:5:3880:G:C2	1:5:3881:G:C6	3.01	0.49
1:5:4285:U:N3	1:5:4286:C:C4	2.80	0.49
1:5:4305:G:N3	1:5:4305:G:C2'	2.75	0.49
1:5:3907:G:N7	1:5:4447:C:H1'	2.27	0.49
1:5:4481:U:C2	1:5:4482:U:C4	2.99	0.49
1:5:4647:G:C8	1:5:4647:G:H5'	2.47	0.49
1:5:4758:U:O2	1:5:4758:U:O4'	2.29	0.49
1:5:4997:G:C2	1:5:4998:G:C8	3.00	0.49
1:5:74:G:H5'	15:L:59:VAL:HG13	1.95	0.49
2:7:111:C:N3	2:7:112:U:C5	2.80	0.49
3:8:151:G:OP2	10:G:65:ARG:NE	2.43	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
7:D:278:ASP:O	7:D:280:VAL:N	2.44	0.49
8:E:43:ASN:HB3	8:E:58:MET:HE1	1.94	0.49
6:C:341:LEU:HD11	8:E:52:ARG:HD2	1.94	0.49
9:F:58:HIS:HB2	9:F:59:TYR:HD1	1.77	0.49
10:G:231:ASN:ND2	10:G:231:ASN:N	2.59	0.49
12:I:47:PRO:HD2	12:I:141:LYS:HA	1.94	0.49
12:I:76:MET:HB3	12:I:85:PHE:CE2	2.47	0.49
14:K:107:ASP:HA	14:K:143:VAL:HG22	1.93	0.49
6:C:33:ARG:HH21	20:Q:22:ASP:CB	2.25	0.49
20:Q:88:ASP:OD1	20:Q:109:ALA:HA	2.12	0.49
49:S2:1113:A:O2'	49:S2:1114:U:H5'	2.12	0.49
49:S2:1116:C:O4'	49:S2:1116:C:O2	2.30	0.49
49:S2:1134:G:C6	49:S2:1135:C:C5	3.00	0.49
49:S2:1200:A:H2	49:S2:1357:A:H2	1.59	0.49
49:S2:1294:G:N2	49:S2:1295:A:N9	2.60	0.49
49:S2:1327:G:N2	49:S2:1503:C:H1'	2.27	0.49
49:S2:1528:G:C2	49:S2:1529:C:N3	2.80	0.49
49:S2:164:A:OP2	49:S2:165:G:N2	2.45	0.49
49:S2:1683:C:O2	49:S2:1683:C:H2'	2.11	0.49
49:S2:1793:A:N3	49:S2:1794:C:C5	2.79	0.49
49:S2:182:C:H2'	49:S2:184:G:C1'	2.36	0.49
49:S2:1831:A:H1'	49:S2:1852:C:OP1	2.11	0.49
49:S2:306:C:H5	49:S2:308:G:N7	2.10	0.49
49:S2:488:U:H3'	49:S2:489:A:H5'	1.94	0.49
49:S2:499:G:N1	49:S2:504:G:C6	2.79	0.49
49:S2:595:U:O2'	49:S2:596:U:P	2.69	0.49
49:S2:738:C:N3	49:S2:739:C:C5	2.80	0.49
49:S2:963:A:N1	49:S2:964:A:C6	2.80	0.49
59:SJ:120:ALA:O	59:SJ:121:LYS:HB3	2.12	0.49
65:SP:49:LEU:O	65:SP:50:ARG:C	2.51	0.49
66:SQ:23:ALA:HA	66:SQ:70:VAL:HA	1.93	0.49
68:SS:42:HIS:CE1	69:ST:45:LEU:HD11	2.47	0.49
73:SX:128:VAL:O	73:SX:129:SER:CB	2.60	0.49
48:4:643:VAL:HG13	48:4:644:ALA:N	2.27	0.49
48:4:683:PHE:CE1	48:4:729:LEU:HD22	2.47	0.49
48:4:700:VAL:HG11	48:4:702:PHE:CE2	2.47	0.49
48:4:70:ILE:O	48:4:71:LYS:HG3	2.11	0.49
48:4:685:TRP:HH2	48:4:723:PRO:HG3	1.76	0.49
48:4:766:LYS:HG2	48:4:796:PHE:CE1	2.47	0.49
1:5:99:A:C6	1:5:100:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1207:C:C2	1:5:1208:G:C8	2.99	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
1:5:1358:G:O6	1:5:1379:C:N3	2.45	0.49
1:5:1491:A:C6	1:5:1492:G:C5	3.01	0.49
1:5:1831:G:C4	1:5:1832:C:C6	2.99	0.49
1:5:1959:U:C2	1:5:1961:G:C2	3.00	0.49
1:5:2032:U:H2'	1:5:2033:A:O4'	2.13	0.49
1:5:2080:U:O2'	1:5:2081:C:H5'	2.12	0.49
1:5:2084:C:H3'	1:5:2085:G:H5''	1.93	0.49
1:5:1440:U:H4'	1:5:2109:G:O2'	2.11	0.49
1:5:2292:C:C4	1:5:2293:U:C5	3.00	0.49
1:5:230:G:C2	1:5:239:C:C2	3.00	0.49
1:5:2438:A:N7	1:5:2441:C:N4	2.60	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
1:5:2851:G:O6	1:5:2852:U:C6	2.63	0.49
1:5:2866:C:N3	1:5:2867:C:C5	2.80	0.49
1:5:2895:A:C6	1:5:2896:G:N7	2.80	0.49
1:5:302:C:H5''	17:N:68:ARG:HE	1.77	0.49
1:5:3692:A:N6	1:5:3693:U:C2	2.80	0.49
1:5:4369:A:C6	1:5:4370:G:N7	2.81	0.49
1:5:4653:C:H2'	1:5:4654:C:C6	2.48	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
1:5:4899:G:C2	1:5:4922:C:C2	3.00	0.49
1:5:4920:C:O2	1:5:4921:C:C5	2.66	0.49
1:5:66:A:C5	1:5:328:A:C8	3.01	0.49
3:8:64:U:H3'	3:8:65:A:C8	2.48	0.49
4:A:209:HIS:CE1	4:A:235:VAL:HG11	2.46	0.49
11:H:54:ARG:CG	11:H:54:ARG:HH11	2.25	0.49
1:5:2046:G:OP1	18:O:60:LYS:HE2	2.12	0.49
49:S2:1102:G:N1	49:S2:1103:C:C4	2.80	0.49
49:S2:1348:G:N2	49:S2:1349:G:C8	2.80	0.49
49:S2:1415:C:C2'	49:S2:1416:C:O4'	2.47	0.49
49:S2:1436:C:N3	49:S2:1438:A:N7	2.60	0.49
49:S2:154:U:H2'	49:S2:154:U:O2	2.12	0.49
49:S2:1668:U:C2	49:S2:1669:G:C8	3.00	0.49
49:S2:1840:U:N3	49:S2:1859:A:C2	2.80	0.49
49:S2:192:C:C2	49:S2:193:C:C5	2.99	0.49
49:S2:418:A:C6	49:S2:419:G:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:433:A:H5''	58:SI:22:HIS:HB3	1.94	0.49
49:S2:458:A:C2	49:S2:459:C:H1'	2.47	0.49
49:S2:529:A:C6	49:S2:530:U:C4	3.00	0.49
49:S2:548:C:N4	49:S2:549:C:H1'	2.28	0.49
49:S2:570:C:O2	49:S2:571:U:C6	2.65	0.49
49:S2:636:C:N4	49:S2:637:U:O4	2.45	0.49
49:S2:804:U:C4	49:S2:805:U:C5	2.99	0.49
49:S2:979:C:C2	49:S2:980:A:C8	3.00	0.49
52:SC:113:GLN:HB3	52:SC:122:THR:HA	1.95	0.49
56:SG:74:ARG:HH11	56:SG:74:ARG:HB3	1.77	0.49
58:SI:172:LEU:HB3	58:SI:190:LEU:HD12	1.93	0.49
66:SQ:32:ILE:HG23	66:SQ:68:ILE:HB	1.92	0.49
28:Y:81:TYR:HD2	28:Y:96:HIS:HB2	1.78	0.49
11:H:100:PRO:HG3	48:4:167:LEU:O	2.12	0.49
48:4:267:ASP:N	48:4:267:ASP:CB	2.67	0.49
48:4:154:VAL:HG11	48:4:358:LEU:CD1	2.39	0.49
48:4:665:ILE:HG22	48:4:665:ILE:O	2.11	0.49
48:4:650:TRP:CZ2	48:4:672:LEU:HD11	2.47	0.49
48:4:671:TYR:C	48:4:675:ILE:H	2.15	0.49
1:5:1070:G:N3	1:5:1071:C:C6	2.81	0.49
1:5:1211:G:C2	1:5:1212:G:C8	3.01	0.49
1:5:1277:G:C6	1:5:1278:C:C4	3.00	0.49
1:5:1412:G:C2	1:5:1413:C:C2	3.00	0.49
1:5:1434:G:H2'	1:5:1435:G:O4'	2.12	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	2.47	0.49
1:5:154:G:N1	1:5:155:C:C4	2.80	0.49
1:5:1685:G:N2	1:5:1686:C:C2	2.81	0.49
1:5:176:G:C5'	11:H:98:HIS:CE1	178.31	0.49
1:5:1761:G:C2	1:5:1772:C:C2	3.00	0.49
1:5:1965:G:C4	1:5:1966:C:C5	3.00	0.49
1:5:1993:C:C4	1:5:2002:A:C5	3.00	0.49
1:5:2035:C:C4	1:5:2036:C:C4	3.00	0.49
1:5:2056:G:O2'	1:5:2057:A:H2'	2.13	0.49
1:5:211:G:N2	1:5:212:A:N9	2.60	0.49
1:5:2279:A:C4	1:5:2280:G:N7	2.80	0.49
1:5:2325:C:O2	1:5:2326:G:C8	2.61	0.49
1:5:2408:U:N1	1:5:2409:U:O4	2.45	0.49
1:5:2445:C:C2'	1:5:2445:C:O2	2.60	0.49
1:5:2456:G:O2'	1:5:2457:G:H5'	2.13	0.49
1:5:2499:C:O2	1:5:2499:C:H2'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2515:G:O6	1:5:2516:G:C2	2.66	0.49
1:5:2566:G:N3	1:5:2567:G:C8	2.80	0.49
1:5:2760:G:H4'	1:5:2762:G:H22	1.76	0.49
1:5:2795:A:O2'	1:5:2796:G:H3'	2.12	0.49
1:5:294:G:O4'	1:5:294:G:OP2	2.31	0.49
1:5:322:C:H1'	1:5:4356:G:N2	2.28	0.49
1:5:3705:G:C6	1:5:3706:C:C4	2.99	0.49
1:5:3722:G:C6	1:5:3723:A:N7	2.81	0.49
1:5:4098:A:C4	1:5:4099:G:C8	3.00	0.49
1:5:4271:A:H2'	1:5:4271:A:N3	2.26	0.49
1:5:4350:C:N3	1:5:4351:U:C5	2.80	0.49
1:5:4524:G:N2	1:5:4525:C:C2	2.81	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
1:5:4932:U:C2'	1:5:4933:C:O4'	2.60	0.49
1:5:4978:G:O2'	1:5:4979:A:O5'	2.22	0.49
1:5:5062:G:H2'	1:5:5062:G:N3	2.27	0.49
1:5:917:A:C2	1:5:918:G:C2	3.00	0.49
2:7:44:C:N3	2:7:45:U:C5	2.81	0.49
2:7:93:G:C4	2:7:94:C:C5	3.00	0.49
2:7:93:G:C2	2:7:94:C:N1	2.80	0.49
3:8:106:G:C2	3:8:107:C:N3	2.80	0.49
3:8:80:A:H3'	3:8:81:C:C4'	2.40	0.49
1:5:4627:U:O2'	5:B:55:HIS:CE1	2.66	0.49
6:C:54:VAL:HG21	6:C:101:MET:HE3	1.94	0.49
1:5:223:G:O2'	6:C:223:ASN:ND2	2.45	0.49
10:G:264:LYS:HE3	10:G:265:LEU:N	2.27	0.49
11:H:111:LEU:HD12	11:H:113:GLU:OE1	2.12	0.49
14:K:103:ASN:HA	14:K:140:GLY:HA2	1.95	0.49
18:O:140:ARG:HG3	18:O:140:ARG:HH21	1.77	0.49
20:Q:178:ARG:NH2	20:Q:186:TYR:HE1	2.10	0.49
20:Q:184:ARG:HG2	20:Q:184:ARG:NH1	2.27	0.49
49:S2:1378:A:N6	50:SA:106:GLY:CA	2.75	0.49
49:S2:1510:G:O6	49:S2:1511:U:C4	2.65	0.49
49:S2:1083:A:N3	49:S2:1859:A:H1'	2.28	0.49
49:S2:311:C:H3'	49:S2:312:G:C4'	2.42	0.49
49:S2:436:G:N7	49:S2:471:G:C2	2.79	0.49
49:S2:533:A:C6	49:S2:534:G:C8	3.01	0.49
49:S2:793:G:C6	49:S2:794:A:N9	2.81	0.49
49:S2:940:U:H2'	49:S2:941:C:C6	2.48	0.49
50:SA:128:ARG:HD2	50:SA:153:PRO:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:72:ALA:O	50:SA:97:THR:OG1	2.30	0.49
54:SE:94:LYS:O	54:SE:95:THR:HG23	2.13	0.49
49:S2:443:U:H4'	56:SG:90:GLY:HA3	1.93	0.49
49:S2:380:G:OP1	58:SI:31:ARG:HB2	2.11	0.49
59:SJ:110:LEU:CD1	59:SJ:142:VAL:HG11	2.42	0.49
62:SM:89:VAL:HB	62:SM:91:LEU:HD21	1.93	0.49
63:SN:89:TYR:CD1	63:SN:89:TYR:C	2.85	0.49
69:ST:62:ARG:HG3	69:ST:63:HIS:N	2.26	0.49
49:S2:574:A:H4'	74:SY:89:HIS:HB3	1.93	0.49
22:S:90:THR:HG23	23:T:156:TYR:CE2	2.47	0.49
25:V:13:LYS:HG2	25:V:128:LEU:HD22	1.95	0.49
28:Y:27:ARG:HG2	28:Y:27:ARG:HH21	1.77	0.49
48:4:72:SER:HB2	48:4:104:ASP:C	2.32	0.49
48:4:192:TYR:CD1	48:4:192:TYR:N	2.81	0.49
48:4:154:VAL:C	48:4:205:ILE:HD11	2.32	0.49
48:4:275:LYS:HE2	48:4:276:SER:N	2.27	0.49
1:5:1092:G:C4	1:5:1093:C:C6	3.00	0.49
1:5:1217:G:N2	1:5:1218:G:C6	2.67	0.49
1:5:1283:G:C8	1:5:1283:G:H3'	2.48	0.49
1:5:1344:C:H5''	1:5:1344:C:C6	2.47	0.49
1:5:1433:A:N6	1:5:1451:G:O2'	2.44	0.49
1:5:1665:C:C2'	1:5:1666:C:O5'	2.60	0.49
1:5:1970:A:H1'	1:5:2017:A:N6	2.28	0.49
1:5:2314:G:C8	1:5:2326:G:C2	3.00	0.49
1:5:2448:G:O2'	1:5:2449:A:O4'	2.29	0.49
1:5:2498:C:C2	1:5:2499:C:C5	3.00	0.49
1:5:2585:C:N3	1:5:2588:C:N4	2.60	0.49
1:5:2613:C:N4	1:5:2614:C:N4	2.61	0.49
1:5:1598:C:N1	1:5:2798:A:C8	2.80	0.49
1:5:347:A:C2	1:5:348:G:N7	2.81	0.49
1:5:3629:A:O4'	49:S2:1721:U:N3	2.38	0.49
1:5:3766:A:H2	49:S2:1828:C:O4'	1.95	0.49
1:5:1330:A:C8	1:5:3864:C:C4	3.00	0.49
1:5:3902:A:C2	1:5:3903:A:C8	3.00	0.49
1:5:4092:G:N2	1:5:4093:G:O4'	2.46	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
1:5:4222: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
1:5:4505:C:C2	1:5:4506:C:C5	3.01	0.49
1:5:4547:C:N3	1:5:4549:G:N7	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4562:C:O2	1:5:4562:C:H2'	2.11	0.49
1:5:4651:A:C6	1:5:4652:G:N7	2.81	0.49
1:5:4652:G:H2'	1:5:4653:C:H6	1.77	0.49
1:5:4768:G:H3'	1:5:4769:G:C8	2.47	0.49
1:5:4910:G:H4'	1:5:4911:A:OP2	2.10	0.49
1:5:4976:U:H5'	1:5:4976:U:C6	2.48	0.49
2:7:60:G:N1	2:7:61:G:C8	2.80	0.49
3:8:42:G:C4	3:8:43:A:C8	3.00	0.49
3:8:66:A:C2	3:8:67:U:C4	3.00	0.49
4:A:18:ALA:O	4:A:20:VAL:HG13	2.12	0.49
4:A:35:ALA:HB1	4:A:41:ILE:HB	1.94	0.49
5:B:21:ARG:HG3	5:B:274:TYR:HB3	1.94	0.49
8:E:253:ILE:O	8:E:255:ARG:N	2.44	0.49
9:F:148:ASN:CB	9:F:243:ASN:ND2	2.75	0.49
10:G:227:ASN:N	10:G:227:ASN:ND2	2.60	0.49
12:I:109:ASP:OD2	12:I:111:LEU:O	2.30	0.49
12:I:112:GLN:HB2	12:I:116:ARG:HH11	1.76	0.49
17:N:26:ARG:O	17:N:30:TYR:HB2	2.12	0.49
49:S2:1124:C:O2	49:S2:1125:C:C6	2.65	0.49
49:S2:1126:G:C4	49:S2:1127:C:C5	3.00	0.49
49:S2:1135:C:N3	49:S2:1136:U:C5	2.80	0.49
49:S2:1143:A:H2'	49:S2:1144:A:C1'	2.42	0.49
49:S2:1174:U:C2	49:S2:1175:G:C8	3.01	0.49
49:S2:1425:G:C5	49:S2:1426:U:H1'	2.47	0.49
49:S2:1452:A:C4	49:S2:1475:G:C2	3.00	0.49
49:S2:1526:G:C2	49:S2:1527:C:C2	3.01	0.49
49:S2:1541:G:C2	49:S2:1542:C:C6	2.98	0.49
49:S2:1546:G:O2'	49:S2:1547:C:O4'	2.29	0.49
49:S2:1552:G:C5'	49:S2:1557:C:H5	2.24	0.49
49:S2:1686:G:C5	49:S2:1687:C:C5	3.00	0.49
49:S2:1777:G:C2	49:S2:1778:C:C2	3.00	0.49
49:S2:1838:U:H5'	49:S2:1838:U:C6	2.47	0.49
49:S2:306:C:H3'	49:S2:307:G:H5'	1.95	0.49
49:S2:328:U:H2'	49:S2:329:G:O4'	2.11	0.49
49:S2:333:G:C6	49:S2:334:C:C4	3.00	0.49
49:S2:375:U:C2	49:S2:376:A:C8	3.01	0.49
49:S2:495:U:O2'	49:S2:496:C:O5'	2.30	0.49
49:S2:532:C:H4'	49:S2:532:C:OP1	2.13	0.49
49:S2:549:C:C4	49:S2:550:C:C5	3.01	0.49
49:S2:552:G:H3'	49:S2:553:U:H6	1.78	0.49
49:S2:638:C:O2	49:S2:639:C:C5	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:959:G:H8	49:S2:959:G:H3'	1.76	0.49
49:S2:990:A:N3	49:S2:990:A:H2'	2.28	0.49
54:SE:73:ASP:N	54:SE:73:ASP:OD1	2.45	0.49
58:SI:44:HIS:CD2	58:SI:58:LEU:HD11	2.47	0.49
61:SL:17:PHE:CE2	61:SL:19:ASN:HB2	2.46	0.49
49:S2:1589:A:OP1	69:ST:81:GLY:N	2.45	0.49
74:SY:20:ARG:CB	74:SY:76:TYR:HD1	2.26	0.49
24:U:42:PHE:CE1	24:U:46:ARG:HD3	2.48	0.49
27:X:119:ILE:HA	27:X:144:TYR:CE2	2.42	0.49
48:4:154:VAL:HG22	48:4:353:MET:CG	2.42	0.49
48:4:191:THR:CG2	48:4:192:TYR:CD1	2.95	0.49
48:4:343:TRP:HE3	48:4:343:TRP:O	1.90	0.49
48:4:672:LEU:C	48:4:675:ILE:CG1	2.77	0.49
48:4:58:ASP:CG	48:4:69:THR:CA	2.38	0.49
48:4:825:PHE:HD1	48:4:825:PHE:N	2.11	0.49
1:5:1218:G:O6	1:5:1219:G:N9	2.46	0.49
1:5:1570:G:C2	1:5:1571:G:N9	2.81	0.49
1:5:1811:G:C4	1:5:1812:C:C5	3.00	0.49
1:5:1973:G:N1	1:5:1993:C:C4	2.41	0.49
1:5:2058:G:C6	1:5:2059:C:C4	2.99	0.49
1:5:2326:G:N2	1:5:2327:G:C1'	2.76	0.49
1:5:2385:U:C2	1:5:2386:U:C5	3.00	0.49
1:5:187:U:H3'	1:5:245:C:C2	2.47	0.49
1:5:2464:C:O2'	1:5:2465:C:O5'	2.25	0.49
1:5:2557:G:C5	1:5:2558:C:C5	3.01	0.49
1:5:2644:G:N2	1:5:2645:G:H1'	2.28	0.49
1:5:2707:U:H2'	1:5:2707:U:O2	2.11	0.49
1:5:2860:C:H2'	1:5:2861:C:O4'	2.13	0.49
1:5:322:C:C2	1:5:4356:G:C2	3.00	0.49
1:5:3596:A:O3'	1:5:3597:G:C4'	2.61	0.49
1:5:2862:G:N3	1:5:3624:A:H2'	2.27	0.49
1:5:3669:G:C2	1:5:3671:G:OP2	2.66	0.49
1:5:3672:G:C8	1:5:3674:G:O4'	2.65	0.49
1:5:3802:U:C2'	1:5:3802:U:O2	2.57	0.49
1:5:3867:A:C2	1:5:3868:G:C4	3.01	0.49
1:5:3879:G:C5	1:5:3882:C:C5	3.00	0.49
1:5:3910:C:N3	1:5:3911:C:C5	2.80	0.49
1:5:4085:A:H3'	1:5:4086:G:H5''	1.94	0.49
1:5:4143:G:C8	1:5:4145:C:C5	3.00	0.49
1:5:4628:U:O2	1:5:4629:U:C5	2.64	0.49
1:5:4635:A:C2	1:5:4664:A:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4725:C:C2	1:5:4726:G:C8	2.94	0.49
1:5:4731:G:N7	1:5:4733:C:C5	2.81	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
1:5:733:A:N7	1:5:734:G:N7	2.59	0.49
1:5:754:U:N3	1:5:755:C:C6	2.78	0.49
1:5:89:C:C2'	1:5:90:G:O5'	2.61	0.49
1:5:979:C:C4	1:5:980:U:C5	3.00	0.49
1:5:85:G:C2	1:5:97:G:N7	2.81	0.49
2:7:104:C:C2	2:7:105:C:C6	3.00	0.49
2:7:105:C:H2'	2:7:105:C:O2	2.12	0.49
3:8:74:U:C4	28:Y:74:TYR:HE1	2.27	0.49
4:A:55:GLY:HA2	4:A:174:ARG:HD3	1.95	0.49
4:A:97:ASN:OD1	4:A:97:ASN:N	2.46	0.49
49:S2:1073:U:N3	49:S2:1074:C:C6	2.81	0.49
49:S2:116:U:C2	49:S2:117:C:C6	3.01	0.49
49:S2:1335:G:C6	49:S2:1336:C:C4	2.99	0.49
49:S2:1200:A:C2	49:S2:1357:A:H2	2.29	0.49
49:S2:1573:G:C6	49:S2:1574:C:C6	3.00	0.49
49:S2:1593:C:N3	49:S2:1594:A:C8	2.80	0.49
49:S2:1630:A:C2	49:S2:1631:U:C5	3.00	0.49
49:S2:376:A:C2	49:S2:377:G:H1'	2.47	0.49
49:S2:404:G:N3	49:S2:405:G:C8	2.80	0.49
49:S2:428:U:C5	59:SJ:7:TRP:CE2	2.99	0.49
49:S2:529:A:C5	49:S2:530:U:C5	3.00	0.49
49:S2:553:U:C2	49:S2:554:A:C5	3.01	0.49
49:S2:589:G:OP1	49:S2:589:G:H4'	2.12	0.49
49:S2:632:C:O2	49:S2:632:C:C2'	2.61	0.49
49:S2:636:C:O2	49:S2:637:U:C6	2.64	0.49
57:SH:160:LYS:O	57:SH:163:GLN:HG2	2.11	0.49
58:SI:113:TYR:CE2	58:SI:121:LEU:HD11	2.48	0.49
59:SJ:44:TRP:HA	59:SJ:47:LYS:HB3	1.94	0.49
59:SJ:67:ASP:C	59:SJ:67:ASP:OD1	2.50	0.49
64:SO:56:VAL:HG21	64:SO:61:LYS:HE2	1.95	0.49
73:SX:19:ASP:OD1	73:SX:19:ASP:N	2.44	0.49
74:SY:20:ARG:CB	74:SY:76:TYR:CD1	2.96	0.49
74:SY:20:ARG:HB2	74:SY:76:TYR:CE1	2.48	0.49
9:F:82:ASN:HD21	23:T:142:ARG:HA	1.77	0.49
1:5:4301:U:C5'	23:T:54:HIS:HD2	2.25	0.49
24:U:106:SER:OG	24:U:109:SER:OG	2.27	0.49
29:Z:18:TYR:CE2	29:Z:47:ASP:OD1	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:205:ILE:O	48:4:206:ASP:OD2	2.30	0.49
48:4:818:GLN:CG	48:4:819:ILE:H	2.26	0.49
1:5:1097:C:H42	1:5:1198:G:H1	1.61	0.49
1:5:1200:G:C6	1:5:1201:U:C4	3.00	0.49
1:5:1309:C:O2	1:5:1309:C:H2'	2.12	0.49
1:5:1635:C:N3	1:5:1636:U:C4	2.80	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
1:5:18:C:C4'	17:N:138:PHE:CE2	2.94	0.49
1:5:196:C:C2'	1:5:196:C:O2	2.59	0.49
1:5:2260:C:C2'	1:5:2261:G:C8	2.96	0.49
1:5:2327:G:N2	1:5:2328:G:N9	2.60	0.49
1:5:2614:C:C2	1:5:2726:G:C2	3.01	0.49
1:5:3621:A:C2	1:5:3622:C:C1'	2.95	0.49
1:5:4240:G:C2	1:5:4241:C:C2	3.01	0.49
1:5:4467:A:C6	1:5:4468:U:C4	3.00	0.49
1:5:2363:A:H1'	1:5:4560:C:C5	2.47	0.49
1:5:4580:U:N3	1:5:4581:G:N7	2.54	0.49
1:5:482:G:H2'	1:5:483:G:C1'	2.41	0.49
1:5:4913:G:H2'	1:5:4914:C:O4'	2.11	0.49
1:5:500:G:C2	1:5:504:G:N7	2.80	0.49
1:5:5023:C:H42	1:5:5028:G:H21	1.61	0.49
1:5:964:A:C8	1:5:964:A:H5''	2.43	0.49
1:5:980:U:H2'	1:5:981:C:H6	1.78	0.49
2:7:8:G:C6	2:7:9:C:C5	3.01	0.49
3:8:116:C:N3	3:8:117:C:C5	2.81	0.49
3:8:14:U:O2'	3:8:15:G:C5'	2.61	0.49
9:F:161:TYR:CE2	9:F:168:ARG:CZ	2.91	0.49
9:F:239:GLU:O	9:F:240:ASP:HB3	2.12	0.49
10:G:29:ASN:HB3	10:G:32:PHE:CE1	2.48	0.49
11:H:4:ILE:O	11:H:56:ARG:HD2	10.80	0.49
14:K:86:LYS:HA	14:K:104:ILE:CD1	2.43	0.49
16:M:120:ASN:HA	16:M:123:ILE:HG22	1.93	0.49
20:Q:28:LEU:CD1	20:Q:51:LEU:HD22	2.43	0.49
49:S2:1008:A:H1'	63:SN:101:HIS:ND1	2.27	0.49
49:S2:666:U:O4'	49:S2:1088:U:C4	2.65	0.49
49:S2:1149:A:C6	49:S2:1151:G:N9	2.81	0.49
49:S2:1316:C:O2	49:S2:1316:C:H2'	2.13	0.49
49:S2:1431:G:C6	49:S2:1432:U:C6	3.01	0.49
49:S2:1551:U:H2'	49:S2:1552:G:O4'	2.12	0.49
49:S2:1624:U:O4'	49:S2:1624:U:O2	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:167:G:C4	49:S2:168:C:C6	3.01	0.49
49:S2:330:G:N1	49:S2:331:C:C6	2.81	0.49
49:S2:386:C:C4	49:S2:387:C:H5	2.29	0.49
49:S2:746:C:H2'	49:S2:747:U:O4'	2.11	0.49
49:S2:830:A:C6	49:S2:844:U:N3	2.70	0.49
49:S2:887:U:O4'	49:S2:887:U:O2	2.26	0.49
54:SE:159:THR:HG23	54:SE:227:VAL:CG2	2.43	0.49
57:SH:145:ARG:HD2	72:SW:51:GLU:CG	2.41	0.49
49:S2:301:A:C2	58:SI:73:THR:HG21	2.47	0.49
23:T:11:THR:HB	23:T:15:PHE:CD1	2.48	0.49
28:Y:121:ARG:NH1	28:Y:121:ARG:HB3	2.28	0.49
28:Y:62:TYR:CE2	28:Y:85:VAL:HG13	2.48	0.49
48:4:159:LYS:CE	48:4:162:ARG:HH11	2.25	0.49
48:4:183:GLU:O	48:4:183:GLU:OE1	2.30	0.49
48:4:650:TRP:HZ3	48:4:679:VAL:HB	1.78	0.49
48:4:689:GLU:CA	48:4:730:TYR:OH	2.60	0.49
48:4:741:MET:CB	48:4:819:ILE:HA	2.43	0.49
1:5:1173:G:C6	1:5:1174:G:C4	3.00	0.49
1:5:1189:G:C6	1:5:1190:C:C5	3.00	0.49
1:5:1206:C:N3	1:5:1207:C:C5	2.80	0.49
1:5:1261:G:C4	1:5:1262:G:C8	3.01	0.49
1:5:125:C:O2	1:5:126:C:H6	1.92	0.49
1:5:1392:A:N3	1:5:1393:G:C8	2.81	0.49
1:5:1444:G:N2	1:5:1445:U:C4	2.81	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
1:5:1528:U:H2'	1:5:1529:G:O4'	2.13	0.49
1:5:1565:A:H2'	1:5:1566:C:C4'	2.43	0.49
1:5:1780:A:N1	1:5:1781:U:H1'	2.27	0.49
1:5:183:C:H1'	1:5:184:U:C4	2.46	0.49
1:5:2076:G:O6	1:5:2077:C:C4	2.66	0.49
1:5:1899:G:H8	1:5:2278:G:C2	2.25	0.49
1:5:2334:C:O2	1:5:2334:C:H2'	2.12	0.49
1:5:2336:G:C6	1:5:2337:C:C4	3.00	0.49
1:5:2454:U:N3	1:5:2455:G:C8	2.81	0.49
1:5:2509:C:C2	1:5:2510:G:N7	2.81	0.49
1:5:2595:C:N3	1:5:2596:G:N7	2.61	0.49
1:5:2738:C:N3	1:5:2741:U:C4	2.81	0.49
1:5:272:U:N3	1:5:273:U:C5	2.80	0.49
1:5:3629:A:C4'	49:S2:1721:U:N3	2.75	0.49
1:5:3652:A:H3'	1:5:3653:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3669:G:N2	1:5:3671:G:OP2	2.45	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
1:5:3913:G:N1	1:5:4390:A:C2	2.81	0.49
1:5:4077:A:N7	1:5:4078:C:C6	2.81	0.49
1:5:4201:G:C4	1:5:4202:U:C5	3.01	0.49
1:5:4287:G:C2	1:5:4288:C:C2	3.01	0.49
1:5:442:G:C2'	1:5:443:G:O5'	2.58	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'	2.11	0.49
1:5:4509:U:C2'	1:5:4510:A:H2'	2.43	0.49
1:5:455:C:C4	1:5:456:C:C5	3.01	0.49
1:5:4592:C:H2'	1:5:4593:C:C6	2.47	0.49
1:5:4643:G:H2'	1:5:4644:G:O4'	2.13	0.49
1:5:465:G:N1	1:5:466:A:C8	2.81	0.49
1:5:4690:G:C6	1:5:4697:U:C5	3.01	0.49
1:5:4743:G:C2	1:5:4744:A:N7	2.80	0.49
1:5:66:A:N7	1:5:328:A:H1'	2.27	0.49
1:5:94:A:C2'	1:5:95:G:O5'	2.60	0.49
1:5:991:C:C4	1:5:992:C:C5	3.00	0.49
2:7:8:G:C2	2:7:9:C:N1	2.81	0.49
3:8:78:G:H2'	3:8:79:G:C1'	2.43	0.49
5:B:235:TRP:HD1	5:B:267:ALA:CA	2.25	0.49
7:D:125:VAL:HG11	7:D:199:ILE:HG21	1.94	0.49
12:I:76:MET:HB3	12:I:85:PHE:CD2	2.47	0.49
21:R:110:ARG:HD3	21:R:120:TYR:HE2	1.77	0.49
22:S:13:VAL:HG12	22:S:29:ARG:CA	2.42	0.49
49:S2:673:G:C1'	49:S2:1084:A:C2	2.96	0.49
49:S2:1201:U:C4	49:S2:1202:U:C5	3.01	0.49
49:S2:148:U:H2'	49:S2:149:A:O5'	2.13	0.49
49:S2:1526:G:N1	49:S2:1527:C:C5	2.80	0.49
49:S2:153:G:C6	49:S2:154:U:C5	3.00	0.49
49:S2:1567:G:H2'	49:S2:1568:C:O5'	2.11	0.49
49:S2:1739:C:C4	49:S2:1740:C:C5	3.01	0.49
49:S2:1859:A:C2	49:S2:1860:A:C4	3.00	0.49
49:S2:404:G:C2	49:S2:405:G:C4	3.01	0.49
49:S2:498:C:C2	49:S2:505:G:N2	2.81	0.49
49:S2:635:G:N3	49:S2:636:C:C6	2.80	0.49
49:S2:666:U:H2'	49:S2:667:U:C6	2.47	0.49
49:S2:827:A:C5	49:S2:828:G:N7	2.81	0.49
49:S2:836:G:H3'	49:S2:837:A:C5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:88:G:H2'	49:S2:89:C:O4'	2.12	0.49
49:S2:978:G:C4	49:S2:979:C:C5	3.00	0.49
51:SB:121:ILE:HD12	51:SB:207:LEU:HD21	1.93	0.49
55:SF:128:ILE:O	55:SF:134:VAL:HG13	2.13	0.49
59:SJ:48:PHE:CE2	59:SJ:52:LYS:HE3	2.48	0.49
60:SK:53:LYS:N	60:SK:58:VAL:HG12	2.27	0.49
64:SO:130:GLU:OE2	64:SO:132:VAL:CG1	2.61	0.49
13:J:119:TYR:CE2	68:SS:108:ARG:HH21	1.39	0.49
74:SY:20:ARG:HB3	74:SY:76:TYR:CD1	2.46	0.49
48:4:255:ASP:OD1	48:4:259:LYS:CE	2.46	0.49
48:4:343:TRP:HA	48:4:343:TRP:HE3	1.77	0.49
48:4:126:LEU:CD1	48:4:353:MET:CE	2.90	0.49
48:4:672:LEU:CA	48:4:675:ILE:HG13	2.01	0.49
48:4:683:PHE:CE1	48:4:729:LEU:HD21	2.48	0.49
1:5:1076:C:N4	1:5:1077:C:C5	2.81	0.49
1:5:1197:C:H2'	1:5:1198:G:O4'	2.12	0.49
1:5:1205:G:N2	1:5:1206:C:C2	2.81	0.49
1:5:1280:C:C2'	1:5:1281:G:H3'	2.43	0.49
1:5:1290:G:C2'	1:5:1291:G:H5'	2.42	0.49
1:5:1358:G:C2'	1:5:1359:G:C8	2.94	0.49
1:5:1492:G:C6	1:5:1493:G:N7	2.81	0.49
1:5:1627:G:H3'	1:5:1628:C:C6	2.47	0.49
1:5:2288:G:C2	1:5:2290:C:C6	3.01	0.49
1:5:2483:G:C6	1:5:2484:A:N7	2.81	0.49
1:5:2491:C:H2'	1:5:2492:C:O4'	2.12	0.49
1:5:2682:G:H2'	1:5:2683:C:H6	1.76	0.49
1:5:2802:C:H6	1:5:2802:C:O5'	1.96	0.49
1:5:293:G:C5'	1:5:294:G:C8	2.95	0.49
1:5:3590:G:N1	1:5:3591:C:C2	2.81	0.49
1:5:3611:A:H2	1:5:5016:A:C8	2.30	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
1:5:3861:A:C2	1:5:3862:A:N9	2.81	0.49
1:5:3891:A:H2'	1:5:3892:U:O4'	2.13	0.49
1:5:4087:G:C8	1:5:4087:G:H3'	2.47	0.49
1:5:4146:G:C2	1:5:4147:G:C8	3.01	0.49
1:5:449:C:N3	1:5:450:G:N7	2.61	0.49
1:5:4510:A:N6	1:5:4592:C:HO2'	2.09	0.49
1:5:4769:G:N2	1:5:4865:C:N3	2.61	0.49
1:5:5028:G:N3	1:5:5029:C:C6	2.80	0.49
1:5:5006:U:H1'	1:5:5042:A:N7	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:668:C:C4	1:5:669:C:C5	3.01	0.49
1:5:462:G:C2	1:5:694:C:C2	3.01	0.49
1:5:710:G:H2'	1:5:711:A:C8	2.48	0.49
1:5:723:A:H2	1:5:943:A:C2	2.29	0.49
1:5:982:U:C6	8:E:67:ARG:NE	2.81	0.49
1:5:98:A:C2	1:5:99:A:H1'	2.48	0.49
4:A:209:HIS:CE1	4:A:211:PHE:HD2	2.29	0.49
14:K:114:ARG:HD2	14:K:130:LYS:CE	2.37	0.49
17:N:150:TRP:HZ3	17:N:151:ILE:HG12	1.78	0.49
20:Q:168:ARG:HD3	20:Q:174:PHE:HE2	1.78	0.49
20:Q:68:ARG:CZ	20:Q:68:ARG:HB3	2.40	0.49
49:S2:1122:A:H4'	51:SB:205:TYR:CZ	2.48	0.49
49:S2:1233:G:C2	49:S2:1234:C:N1	2.81	0.49
49:S2:1524:G:C6	49:S2:1525:C:C4	3.01	0.49
49:S2:1545:A:N7	49:S2:1588:A:N7	2.61	0.49
49:S2:1615:U:H2'	49:S2:1616:U:C6	2.48	0.49
49:S2:1659:U:C5	49:S2:1660:C:N3	2.81	0.49
49:S2:310:C:HO2'	49:S2:311:C:H5'	1.76	0.49
49:S2:378:U:N3	49:S2:379:C:C4	2.78	0.49
49:S2:428:U:C5	59:SJ:7:TRP:CH2	2.93	0.49
49:S2:615:C:C2'	49:S2:616:A:O4'	2.60	0.49
49:S2:20:G:C5'	49:S2:620:G:N7	2.76	0.49
49:S2:751:G:N2	49:S2:792:C:H1'	2.28	0.49
49:S2:936:G:H2'	49:S2:937:C:O4'	2.13	0.49
49:S2:961:G:C6	49:S2:962:A:N7	2.81	0.49
22:S:32:ILE:HG22	22:S:33:PHE:H	1.78	0.49
54:SE:159:THR:HG21	54:SE:227:VAL:O	2.12	0.49
62:SM:104:VAL:HG13	62:SM:105:GLY:N	2.28	0.49
65:SP:60:LEU:HD21	65:SP:94:VAL:HG22	1.95	0.49
73:SX:16:HIS:NE2	73:SX:20:HIS:CD2	2.81	0.49
48:4:146:ALA:HA	48:4:151:ILE:HD12	1.93	0.49
48:4:181:ILE:O	48:4:185:VAL:HG23	2.13	0.49
48:4:613:LEU:HD12	48:4:641:TRP:CD1	2.48	0.49
48:4:747:VAL:HA	48:4:812:CYS:HB3	1.95	0.49
1:5:1205:G:C2	1:5:1206:C:C2	3.01	0.49
1:5:1336:G:H2'	1:5:1337:A:C8	2.48	0.49
1:5:1347:G:C4	1:5:1348:U:C6	3.00	0.49
1:5:1542:U:H2'	1:5:1542:U:O2	2.13	0.49
1:5:1871:A:C2	1:5:1872:G:C8	3.01	0.49
1:5:1925:G:C6	1:5:1926:C:C5	3.01	0.49
1:5:2021:G:C6	1:5:2022:C:N4	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2384:U:O2	1:5:2385:U:C6	2.66	0.49
1:5:2395:A:O3'	1:5:2806:A:C2	2.66	0.49
1:5:2419:C:C2'	1:5:2420:A:O5'	2.60	0.49
1:5:2450:G:C6	1:5:2451:A:N7	2.80	0.49
1:5:2479:G:C2	1:5:2480:G:C8	3.01	0.49
1:5:247:G:C2	1:5:248:C:C5	3.01	0.49
1:5:2521:G:N1	1:5:2535:G:C2	2.81	0.49
1:5:2684:C:H2'	1:5:2685:C:O4'	2.13	0.49
1:5:2703:G:C6	1:5:2704:C:C4	3.01	0.49
1:5:323:C:O2	1:5:323:C:H2'	2.12	0.49
1:5:3702:A:C6	1:5:3703:G:C8	2.88	0.49
1:5:3856:A:N6	1:5:3857:G:C5	2.80	0.49
1:5:3861:A:C4	1:5:3862:A:C8	3.01	0.49
1:5:4136:G:C4	1:5:4137:C:C5	3.01	0.49
1:5:4350:C:O2	1:5:4350:C:H2'	2.12	0.49
1:5:435:A:H2'	1:5:435:A:N3	2.27	0.49
1:5:4466:C:N3	1:5:4467:A:N7	2.61	0.49
1:5:4479:A:C5	1:5:4480:A:N9	2.81	0.49
1:5:4486:C:H2'	1:5:4487:A:O4'	2.13	0.49
1:5:4750:G:O2'	1:5:4751:G:OP1	2.30	0.49
1:5:4884:G:N2	1:5:4885:U:N1	2.61	0.49
1:5:4935:C:H3'	8:E:179:ARG:HH21	1.78	0.49
1:5:4951:G:HO2'	1:5:4952:G:P	2.36	0.49
1:5:5006:U:O2	1:5:5042:A:C8	2.66	0.49
1:5:504:G:C4	1:5:505:G:N7	2.81	0.49
1:5:652:G:C2	1:5:653:U:H1'	2.48	0.49
1:5:994:G:C5	1:5:995:C:C5	3.01	0.49
2:7:30:C:C4	2:7:48:G:N1	2.81	0.49
4:A:30:ARG:NE	4:A:63:PHE:HE2	2.11	0.49
5:B:71:GLU:OE1	5:B:366:LYS:CE	2.61	0.49
8:E:157:ARG:O	8:E:178:ASN:OD1	2.31	0.49
8:E:52:ARG:NH2	8:E:53:TYR:CE1	2.80	0.49
1:5:965:G:C8	8:E:88:VAL:CG1	2.96	0.49
9:F:228:HIS:O	9:F:229:PHE:C	2.51	0.49
1:5:1439:C:H5''	9:F:36:ARG:HH12	1.68	0.49
21:R:15:LEU:O	21:R:52:ARG:NH2	2.46	0.49
21:R:95:TRP:HA	21:R:95:TRP:CE3	2.47	0.49
1:5:1572:U:C4'	21:R:95:TRP:HE1	2.19	0.49
22:S:120:ARG:HB2	22:S:122:HIS:HD2	1.77	0.49
49:S2:1111:U:C2'	49:S2:1111:U:O2	2.61	0.49
49:S2:1112:U:N3	49:S2:1113:A:C4	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1182:A:C8	49:S2:1183:A:H1'	2.48	0.49
49:S2:1404:U:C4'	49:S2:1581:C:O2	2.61	0.49
49:S2:1433:C:OP2	49:S2:1434:C:OP2	2.31	0.49
49:S2:1560:U:O2	49:S2:1560:U:H2'	2.11	0.49
49:S2:1561:A:O4'	49:S2:1583:C:H4'	2.12	0.49
49:S2:164:A:O2'	49:S2:165:G:C5'	2.60	0.49
49:S2:1793:A:N3	49:S2:1794:C:C6	2.80	0.49
1:5:3807:A:O4'	49:S2:1815:A:H2	1.96	0.49
49:S2:198:U:H2'	49:S2:200:G:N7	2.28	0.49
49:S2:339:A:C4	49:S2:340:C:C5	3.00	0.49
49:S2:344:U:O2'	49:S2:345:U:H5'	2.13	0.49
49:S2:348:A:H2'	49:S2:349:A:H5'	1.93	0.49
49:S2:37:C:N3	49:S2:38:A:C8	2.81	0.49
49:S2:441:C:C6	49:S2:448:A:C2	3.01	0.49
49:S2:38:A:C6	49:S2:515:G:N1	2.81	0.49
49:S2:552:G:C6	49:S2:553:U:C4	3.01	0.49
49:S2:61:A:C2	49:S2:334:C:H2'	2.48	0.49
49:S2:634:A:C4	49:S2:635:G:C8	3.01	0.49
55:SF:38:TYR:HA	55:SF:64:ALA:HB1	1.95	0.49
58:SI:66:SER:CB	58:SI:73:THR:HB	2.42	0.49
59:SJ:118:GLY:O	59:SJ:120:ALA:N	2.46	0.49
23:T:80:VAL:HG21	23:T:85:LEU:HD12	1.94	0.49
48:4:433:ASN:O	48:4:434:TYR:O	2.30	0.48
48:4:692:LEU:HD21	48:4:734:LEU:HD22	1.93	0.48
48:4:763:LEU:CD1	48:4:786:ALA:HB2	2.43	0.48
48:4:845:LYS:CE	48:4:846:GLU:CB	2.90	0.48
1:5:1289:C:C2	1:5:1290:G:N7	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
1:5:1727:U:O2	1:5:1728:U:C6	2.66	0.48
1:5:1740:C:H1'	1:5:1742:A:N6	2.28	0.48
1:5:1771:U:N3	1:5:1772:C:C6	2.80	0.48
1:5:1993:C:O2'	14:K:135:THR:HG21	2.13	0.48
1:5:1268:G:C4	1:5:2111:G:N3	2.81	0.48
1:5:2254:G:O2'	1:5:2255:C:H4'	2.13	0.48
1:5:2270:G:C2	1:5:2271:C:C5	3.01	0.48
1:5:2311:C:N4	1:5:2312:U:C5	2.81	0.48
1:5:2314:G:C2'	1:5:2314:G:N3	2.76	0.48
1:5:2314:G:C5	1:5:2326:G:C4	3.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:342:G:C6	1:5:343:C:C4	3.02	0.48
1:5:3586:G:C4	1:5:3587:C:C5	3.01	0.48
1:5:3773:U:O2	1:5:3775:A:C2	2.66	0.48
1:5:3833:C:C2	1:5:3834:C:C6	3.01	0.48
1:5:3938:G:H5'	1:5:3938:G:N3	2.27	0.48
1:5:4104:G:H3'	1:5:4105:A:C8	2.48	0.48
1:5:4276:G:C2	1:5:4277:G:C8	3.00	0.48
1:5:4423:U:H3'	1:5:4423:U:O2	2.13	0.48
1:5:4547:C:C2	1:5:4549:G:C8	3.01	0.48
1:5:4551:U:O2	1:5:4552:U:C5	2.66	0.48
1:5:4746:C:H2'	1:5:4747:C:O4'	2.13	0.48
1:5:4750:G:O6	1:5:4949:G:N7	2.45	0.48
1:5:4950:U:O4'	1:5:4950:U:O2	2.29	0.48
1:5:505:G:C4	1:5:506:C:C5	3.01	0.48
1:5:708:G:C2	1:5:709:C:C6	3.00	0.48
4:A:219:ILE:HG22	4:A:220:GLY:N	2.28	0.48
1:5:4518:A:C5	5:B:257:TRP:CZ2	3.00	0.48
1:5:352:G:O6	6:C:196:MET:HG3	2.12	0.48
1:5:2247:C:O2'	9:F:28:ALA:HB3	2.12	0.48
12:I:35:ASP:N	12:I:35:ASP:OD1	2.45	0.48
14:K:103:ASN:N	14:K:140:GLY:HA2	2.28	0.48
14:K:108:GLU:O	14:K:111:ASN:HB2	2.13	0.48
14:K:33:GLY:N	14:K:34:PRO:HD3	2.26	0.48
21:R:163:ARG:NH2	49:S2:871:U:N3	2.60	0.48
49:S2:1093:A:H4'	72:SW:3:ARG:NH2	2.27	0.48
49:S2:1121:G:C6	49:S2:1122:A:N7	2.80	0.48
49:S2:1189:A:H2'	49:S2:1190:A:C8	2.48	0.48
49:S2:1452:A:C5	49:S2:1475:G:C2	3.01	0.48
49:S2:1545:A:C4	49:S2:1546:G:C5	3.00	0.48
49:S2:1669:G:C6	49:S2:1670:C:N4	2.81	0.48
49:S2:1832:A:C2	49:S2:1833:C:C4	3.00	0.48
49:S2:339:A:C3'	49:S2:340:C:H6	2.26	0.48
49:S2:504:G:O2'	49:S2:505:G:H5'	2.13	0.48
49:S2:527:C:H2'	49:S2:528:A:H8	1.78	0.48
49:S2:597:G:OP1	73:SX:131:LEU:HD11	2.12	0.48
49:S2:696:G:C2	49:S2:735:C:O2	2.65	0.48
49:S2:799:U:OP2	57:SH:106:ARG:O	2.31	0.48
49:S2:923:G:C2	49:S2:924:G:C8	3.01	0.48
50:SA:39:TYR:C	50:SA:39:TYR:HD1	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SQ:48:GLN:HE21	66:SQ:52:LEU:HD11	1.78	0.48
23:T:41:ASP:N	23:T:41:ASP:OD1	2.46	0.48
1:5:4300:U:H4'	23:T:89:ILE:HG22	1.95	0.48
23:T:3:ASN:CB	23:T:9:ARG:HH12	2.26	0.48
25:V:97:TYR:C	25:V:97:TYR:CD2	2.85	0.48
48:4:275:LYS:CE	48:4:276:SER:N	2.76	0.48
48:4:325:SER:C	48:4:327:ASP:H	2.05	0.48
48:4:396:MET:HG3	48:4:415:ARG:O	2.13	0.48
48:4:432:PRO:HB3	48:4:497:MET:HE1	1.95	0.48
48:4:801:ARG:C	48:4:801:ARG:HD2	2.32	0.48
1:5:1184:A:C2	1:5:1185:G:C8	3.01	0.48
1:5:1193:C:O2	1:5:1193:C:H2'	2.12	0.48
1:5:1193:C:C2	1:5:1194:G:C8	3.00	0.48
1:5:1213:G:C2	1:5:1215:C:C2	3.02	0.48
1:5:126:C:O2	1:5:126:C:H2'	2.13	0.48
1:5:1398:A:C4	1:5:1399:G:C8	3.01	0.48
1:5:1429:C:N3	1:5:1430:C:C5	2.81	0.48
1:5:144:G:N2	1:5:145:G:C5	2.81	0.48
1:5:1516:G:N3	1:5:1516:G:H2'	2.28	0.48
1:5:1745:G:N2	1:5:1746:A:H1'	2.28	0.48
1:5:1826:G:N2	1:5:1827:C:H1'	2.28	0.48
1:5:1936:C:N3	1:5:1937:C:C6	2.76	0.48
1:5:1999:A:H2'	1:5:2000:G:N3	2.28	0.48
1:5:2122:G:H1'	1:5:2123:C:OP2	2.13	0.48
1:5:2314:G:N1	1:5:2315:G:N7	2.58	0.48
1:5:2385:U:H2'	1:5:2386:U:H6	1.77	0.48
1:5:2479:G:C2	1:5:2480:G:N9	2.81	0.48
1:5:2533:C:C2	1:5:2534:C:C4	3.00	0.48
1:5:2534:C:O2'	1:5:2535:G:C5'	2.60	0.48
1:5:2534:C:C2'	1:5:2535:G:O5'	2.61	0.48
1:5:2569:G:H2'	1:5:2570:U:H6	1.78	0.48
1:5:2724:G:N1	1:5:2726:G:N7	2.57	0.48
1:5:2854:G:C6	1:5:2856:C:H6	2.22	0.48
1:5:330:G:N1	1:5:331:G:C5	2.81	0.48
1:5:3911:C:H2'	1:5:3912:U:H6	1.77	0.48
1:5:4241:C:N3	1:5:4242:U:C6	2.80	0.48
1:5:4283:G:C5	1:5:4284:C:C5	3.00	0.48
1:5:4323:A:C4	1:5:4324:A:C8	3.01	0.48
1:5:4577:U:O2'	1:5:4967:A:O2'	2.31	0.48
1:5:4746:C:N3	1:5:4747:C:C5	2.81	0.48
1:5:694:C:H2'	1:5:695:G:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:18:C:C4	2:7:19:C:C5	2.85	0.48
3:8:100:U:O2	3:8:101:C:C6	2.66	0.48
3:8:131:G:N1	3:8:132:G:C4	2.81	0.48
4:A:29:LEU:HD12	4:A:124:GLY:HA3	1.95	0.48
5:B:100:ARG:NH2	5:B:101:THR:C	2.65	0.48
7:D:31:TYR:C	7:D:31:TYR:CD1	2.87	0.48
10:G:47:PRO:HG2	10:G:49:ARG:HH22	1.78	0.48
16:M:101:LYS:HD2	18:O:201:PHE:HE1	1.78	0.48
49:S2:1122:A:C6	49:S2:1123:C:C6	3.01	0.48
49:S2:1204:A:C5	49:S2:1205:C:C5	3.01	0.48
49:S2:1287:A:N6	49:S2:1314:U:C4	2.82	0.48
49:S2:1363:C:O5'	49:S2:1363:C:H6	1.95	0.48
49:S2:1366:G:N1	49:S2:1374:C:N4	2.61	0.48
49:S2:1380:C:H2'	49:S2:1381:G:C8	2.48	0.48
49:S2:1449:G:H2'	49:S2:1450:G:O4'	2.12	0.48
49:S2:1537:A:C2	49:S2:1538:C:H1'	2.49	0.48
49:S2:167:G:C5	49:S2:168:C:C5	3.01	0.48
49:S2:1703:C:H2'	49:S2:1703:C:O2	2.13	0.48
49:S2:1727:G:C6	49:S2:1728:U:C5	3.01	0.48
49:S2:187:G:C4	49:S2:188:C:C5	3.01	0.48
49:S2:200:G:C2	49:S2:201:C:C2	3.01	0.48
49:S2:349:A:H2'	49:S2:350:C:C6	2.49	0.48
49:S2:361:U:H4'	49:S2:362:C:C5'	2.43	0.48
49:S2:387:C:C2	49:S2:388:U:H5	2.20	0.48
49:S2:44:U:C4	49:S2:484:A:C6	3.01	0.48
49:S2:493:A:H1'	49:S2:574:A:H5'	1.95	0.48
49:S2:797:C:C4'	49:S2:798:A:OP1	2.60	0.48
49:S2:923:G:C6	49:S2:924:G:N7	2.80	0.48
49:S2:928:G:H1	49:S2:1013:U:H3	1.61	0.48
50:SA:55:TRP:O	50:SA:56:GLU:C	2.51	0.48
52:SC:69:LEU:HG	52:SC:273:LEU:HD21	1.94	0.48
56:SG:138:ALA:HB1	56:SG:153:VAL:HG21	1.95	0.48
56:SG:222:GLU:HA	56:SG:225:GLN:OE1	2.14	0.48
49:S2:1286:G:C2	62:SM:33:ARG:O	2.66	0.48
64:SO:35:ALA:HB1	64:SO:112:ALA:HB2	1.93	0.48
71:SV:19:ALA:HB3	71:SV:59:ILE:HD13	1.95	0.48
26:W:8:PHE:CD1	26:W:8:PHE:C	2.87	0.48
27:X:111:GLN:HA	27:X:111:GLN:OE1	2.13	0.48
48:4:326:GLU:O	48:4:327:ASP:C	2.51	0.48
48:4:669:VAL:O	48:4:671:TYR:N	2.46	0.48
48:4:70:ILE:O	48:4:71:LYS:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:710:HIS:NE2	48:4:715:HIS:CD2	2.81	0.48
48:4:683:PHE:HE1	48:4:729:LEU:CD2	2.26	0.48
48:4:72:SER:HA	48:4:104:ASP:OD2	2.11	0.48
1:5:1068:G:H2'	1:5:1069:G:H8	1.77	0.48
1:5:1233:G:N2	1:5:1234:G:C4	2.82	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	3.02	0.48
1:5:1463:C:C2	1:5:1464:C:C6	3.01	0.48
1:5:1491:A:N3	1:5:1492:G:C8	2.81	0.48
1:5:1563:A:H2'	1:5:1564:A:C8	2.48	0.48
1:5:1727:U:C2	1:5:1728:U:C6	3.02	0.48
1:5:1760:G:C6	1:5:1761:G:C8	3.01	0.48
1:5:1807:C:N4	1:5:1808:C:C5	2.81	0.48
1:5:2085:G:N2	1:5:2273:G:C4	2.82	0.48
1:5:2091:C:H1'	1:5:2092:G:H2'	1.94	0.48
1:5:1267:C:H4'	1:5:2110:C:O2'	2.13	0.48
1:5:2116:C:C6	1:5:2116:C:O5'	2.66	0.48
1:5:2417:A:C6	1:5:2418:A:N7	2.82	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	2.47	0.48
1:5:3859:G:C4'	19:P:139:TYR:CZ	2.95	0.48
1:5:39:A:C5	1:5:1654:G:C6	3.01	0.48
1:5:4091:G:N1	1:5:4092:G:C4	2.82	0.48
1:5:440:U:C2	1:5:441:G:N7	2.82	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
1:5:503:C:OP2	1:5:505:G:OP2	2.31	0.48
1:5:725:G:H2'	1:5:726:G:O4'	2.12	0.48
1:5:936:C:O2'	16:M:46:ARG:NH1	2.46	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
3:8:65:A:C4	3:8:66:A:C8	3.01	0.48
4:A:29:LEU:HD23	4:A:76:PHE:CE1	2.47	0.48
5:B:136:LYS:HB3	5:B:146:LEU:HD11	1.95	0.48
7:D:90:VAL:HG23	7:D:226:TYR:CZ	2.48	0.48
8:E:160:PHE:HE2	8:E:169:LEU:HD22	1.78	0.48
8:E:54:SER:O	8:E:55:ARG:C	2.51	0.48
12:I:100:ASN:HA	12:I:120:GLY:HA2	1.95	0.48
7:D:284:LYS:CB	12:I:209:TRP:CH2	2.96	0.48
18:O:108:ILE:HG23	18:O:160:ARG:CD	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:O:56:ALA:HA	18:O:59:ARG:HE	1.78	0.48
49:S2:1055:A:H2	49:S2:1063:C:N4	2.12	0.48
49:S2:1034:A:C6	49:S2:1082:A:C4	3.01	0.48
49:S2:1415:C:C6	49:S2:1416:C:C6	3.01	0.48
49:S2:1434:C:C2	49:S2:1435:C:C5	3.02	0.48
49:S2:1454:A:N7	49:S2:1476:A:N3	2.61	0.48
49:S2:1606:G:H22	49:S2:1632:G:H2'	1.78	0.48
49:S2:1712:A:H2'	49:S2:1713:C:C6	2.49	0.48
49:S2:1735:A:C6	49:S2:1800:A:C4	3.01	0.48
49:S2:449:A:C6	49:S2:452:G:C4	2.99	0.48
49:S2:436:G:C5	49:S2:458:A:C2	3.01	0.48
49:S2:457:C:N4	49:S2:458:A:C5	2.81	0.48
49:S2:22:A:C2	49:S2:653:A:N3	2.81	0.48
49:S2:926:A:C4	49:S2:927:C:C5	3.01	0.48
49:S2:933:G:C8	49:S2:1001:A:C4	3.01	0.48
52:SC:65:LYS:HD3	52:SC:273:LEU:HD13	1.94	0.48
54:SE:46:ILE:O	54:SE:50:ASN:HB2	2.12	0.48
69:ST:79:TYR:CD1	69:ST:79:TYR:N	2.81	0.48
70:SU:40:ILE:HD11	70:SU:53:PRO:CG	2.43	0.48
29:Z:10:VAL:HG11	29:Z:129:TRP:HZ3	1.78	0.48
48:4:144:ARG:NH2	48:4:781:MET:HE1	2.28	0.48
48:4:281:GLU:CD	48:4:281:GLU:N	2.67	0.48
48:4:341:ARG:O	48:4:345:PRO:HG3	2.13	0.48
48:4:381:ALA:O	48:4:385:ILE:HG12	2.13	0.48
1:5:1212:G:N1	1:5:1213:G:C5	2.81	0.48
1:5:1072:C:N4	1:5:1239:C:C4	2.81	0.48
1:5:1683:U:C2'	1:5:1683:U:O2	2.61	0.48
1:5:17:A:OP2	27:X:60:TYR:OH	2.18	0.48
1:5:1807:C:C2	1:5:1808:C:H6	2.31	0.48
1:5:1865:G:N2	1:5:1867:A:H3'	2.28	0.48
1:5:1933:G:H2'	1:5:1934:A:C1'	2.44	0.48
1:5:1995:G:C5	1:5:1996:C:C4	3.01	0.48
1:5:2052:G:N2	1:5:2053:C:C2	2.82	0.48
1:5:219:G:H4'	1:5:219:G:OP1	2.14	0.48
1:5:2301:G:C2	1:5:2302:C:N1	2.80	0.48
1:5:246:G:N2	1:5:247:G:C5	2.82	0.48
1:5:3613:U:O2'	1:5:5035:U:O2'	2.28	0.48
1:5:3630:A:C2	1:5:3631:U:C5	3.00	0.48
1:5:3703:G:N3	1:5:3704:U:C6	2.81	0.48
1:5:3791:C:O2	1:5:3802:U:O4'	2.31	0.48
1:5:4104:G:C3'	1:5:4105:A:C8	2.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4281:A:C5	1:5:4283:G:C8	3.02	0.48
1:5:4368:G:C6	1:5:4369:A:C8	3.01	0.48
1:5:4563:U:N3	1:5:4564:A:N6	2.58	0.48
1:5:4998:G:N3	1:5:4999:G:C8	2.80	0.48
1:5:5026:U:OP1	58:SI:168:GLN:CD	2.50	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:HO2'	1:5:670:G:C5'	2.25	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
1:5:747:A:C2	1:5:918:G:O6	2.67	0.48
1:5:750:U:N3	1:5:751:G:N7	2.61	0.48
1:5:85:G:N2	1:5:97:G:C8	2.82	0.48
6:C:112:HIS:N	6:C:112:HIS:CD2	2.82	0.48
1:5:1280:C:C1'	6:C:323:ARG:NH2	2.76	0.48
9:F:59:TYR:CE2	9:F:194:HIS:CD2	3.01	0.48
9:F:71:ILE:HG22	9:F:75:ARG:CD	2.44	0.48
10:G:53:ARG:CZ	10:G:54:PHE:CZ	2.85	0.48
11:H:59:LYS:HB2	11:H:70:VAL:HG22	1.95	0.48
12:I:36:LEU:HD22	12:I:73:ASN:HD21	1.77	0.48
14:K:121:LEU:HD13	14:K:123:ARG:HB3	1.94	0.48
14:K:64:ILE:HB	14:K:71:ILE:HB	1.95	0.48
19:P:30:ARG:NE	19:P:34:GLN:OE1	2.47	0.48
1:5:1690:C:OP2	20:Q:11:ARG:NH2	2.46	0.48
20:Q:17:GLU:HA	20:Q:52:PHE:HE1	1.78	0.48
20:Q:33:ARG:NH2	20:Q:48:LEU:HD11	2.28	0.48
49:S2:1131:G:C6	49:S2:1132:C:C5	3.01	0.48
49:S2:1176:G:C6	49:S2:1177:U:C4	3.01	0.48
49:S2:1184:G:C6	49:S2:1185:C:C5	3.01	0.48
49:S2:1186:U:H2'	49:S2:1186:U:O2	2.12	0.48
49:S2:1413:G:C5	49:S2:1414:A:C8	3.01	0.48
49:S2:1442:U:O2	49:S2:1443:C:C6	2.67	0.48
49:S2:1573:G:C4	49:S2:1574:C:C6	3.01	0.48
49:S2:173:A:N1	49:S2:174:C:C6	2.81	0.48
49:S2:177:G:N2	49:S2:178:C:H41	2.10	0.48
49:S2:371:A:C2	49:S2:372:U:C5	3.02	0.48
49:S2:501:C:O2	49:S2:501:C:H3'	2.12	0.48
49:S2:601:G:O2'	49:S2:602:G:C5'	2.62	0.48
49:S2:618:C:N4	49:S2:619:A:C6	2.79	0.48
49:S2:60:A:HO2'	49:S2:61:A:H5''	1.70	0.48
49:S2:918:U:H2'	49:S2:919:A:C4	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:923:G:C2	49:S2:1022:U:C4	2.98	0.48
49:S2:952:G:C2	49:S2:953:C:C2	3.00	0.48
49:S2:46:A:C6	49:S2:99:A:N7	2.82	0.48
54:SE:141:THR:OG1	54:SE:143:ASP:OD1	2.13	0.48
60:SK:84:HIS:HB3	62:SM:27:ILE:HD13	1.95	0.48
64:SO:41:PHE:CD1	64:SO:41:PHE:N	2.80	0.48
68:SS:107:LEU:O	68:SS:111:LEU:HG	2.12	0.48
73:SX:4:CYS:SG	73:SX:5:ARG:N	2.86	0.48
48:4:228:PHE:CE1	48:4:232:TYR:CE2	3.02	0.48
48:4:753:GLU:OE2	48:4:779:THR:CA	2.61	0.48
48:4:769:HIS:C	48:4:786:ALA:HB1	2.32	0.48
1:5:1090:G:C4	1:5:1091:C:C6	3.01	0.48
1:5:112:C:C4	1:5:157:U:C4	3.02	0.48
1:5:1213:G:C6	1:5:1215:C:C4	3.02	0.48
1:5:1390:G:C3'	1:5:1390:G:C8	2.97	0.48
1:5:1455:G:C2	1:5:1456:C:C6	3.01	0.48
1:5:1471:U:C4	1:5:1472:C:C5	3.02	0.48
1:5:1509:C:C2	1:5:1510:G:N7	2.82	0.48
1:5:1550:G:N1	1:5:1579:C:C2	2.82	0.48
1:5:163:A:C6	1:5:164:G:N7	2.81	0.48
1:5:1822:U:O2	1:5:1822:U:O4'	2.32	0.48
1:5:195:C:N3	1:5:196:C:C6	2.82	0.48
1:5:1967:A:C2	1:5:1968:G:C4	3.01	0.48
1:5:1983:A:C5	1:5:1987:C:OP2	2.57	0.48
1:5:1958:A:H2	1:5:2026:A:C5	2.29	0.48
1:5:2065:G:C4	1:5:2066:C:C6	3.02	0.48
1:5:2102:G:N1	1:5:2103:G:C5	2.82	0.48
1:5:2263:A:O2'	1:5:2265:G:C2'	2.61	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
1:5:2477:A:H2'	1:5:2478:C:C6	2.48	0.48
1:5:2818:C:O2	1:5:2818:C:H2'	2.14	0.48
1:5:2866:C:C2	1:5:2867:C:C6	3.01	0.48
1:5:3725:G:N2	1:5:3727:A:H2'	2.29	0.48
1:5:3736:A:P	1:5:3736:A:H3'	2.53	0.48
1:5:3759:A:H61	49:S2:1709:G:H5''	1.79	0.48
1:5:3894:A:C2	1:5:4567:G:C2	3.01	0.48
1:5:4152:G:C2	1:5:4153:C:C4	3.02	0.48
1:5:4153:C:C2	1:5:4154:G:C8	3.01	0.48
1:5:4303:C:O2	1:5:4303:C:H3'	2.13	0.48
1:5:4482:U:O2	1:5:4483:C:C5	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:450:G:N2	1:5:1294:A:C2'	2.75	0.48
1:5:4564:A:O2'	1:5:4565:C:H5'	2.13	0.48
1:5:4984:C:N3	1:5:4985:U:C6	2.81	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
1:5:739:G:C6	1:5:740:G:N7	2.81	0.48
1:5:947:C:H2'	1:5:948:C:C6	2.47	0.48
1:5:973:G:C6	1:5:974:C:C4	3.01	0.48
1:5:985:C:C2	1:5:986:C:C6	3.01	0.48
3:8:119:C:C4	3:8:120:G:N7	2.76	0.48
5:B:25:HIS:HB2	5:B:274:TYR:OH	2.14	0.48
11:H:117:PHE:CE1	11:H:118:LEU:HB2	2.48	0.48
14:K:31:LYS:O	14:K:34:PRO:HG2	2.10	0.48
20:Q:95:VAL:HG23	20:Q:116:ALA:HB2	1.95	0.48
18:O:12:ARG:NH1	22:S:171:ARG:HH21	2.11	0.48
49:S2:1005:G:C2	49:S2:1006:C:C2	3.01	0.48
49:S2:1162:C:C4	49:S2:1163:C:C4	3.01	0.48
49:S2:1323:U:H2'	49:S2:1324:G:O4'	2.14	0.48
49:S2:145:G:C2	49:S2:146:G:C5	3.01	0.48
49:S2:1545:A:C2	49:S2:1546:G:C2	3.01	0.48
49:S2:1545:A:C6	49:S2:1546:G:C6	3.02	0.48
49:S2:1551:U:C2'	49:S2:1552:G:O4'	2.61	0.48
49:S2:1567:G:C2'	49:S2:1568:C:O5'	2.61	0.48
49:S2:1596:U:C4	49:S2:1597:C:C4	3.02	0.48
49:S2:1599:U:OP2	75:SZ:80:ARG:O	2.31	0.48
49:S2:1617:G:N7	65:SP:47:ARG:NH2	2.59	0.48
49:S2:167:G:C6	49:S2:168:C:C5	3.02	0.48
49:S2:1758:G:C2	49:S2:1759:G:C8	3.02	0.48
49:S2:379:C:N3	49:S2:380:G:N7	2.61	0.48
49:S2:531:A:C5	49:S2:532:C:C6	3.02	0.48
49:S2:583:C:H2'	49:S2:583:C:O2	2.13	0.48
49:S2:604:A:C2	49:S2:605:A:C6	3.02	0.48
49:S2:669:A:C2	49:S2:670:A:C6	3.01	0.48
49:S2:827:A:C6	49:S2:828:G:C8	3.01	0.48
49:S2:856:C:N3	49:S2:857:U:C6	2.81	0.48
49:S2:923:G:C2	49:S2:924:G:C4	3.01	0.48
49:S2:933:G:C2	49:S2:1000:C:C4	2.96	0.48
49:S2:994:C:C2	49:S2:995:G:N7	2.62	0.48
50:SA:107:THR:O	50:SA:116:PHE:HA	2.13	0.48
50:SA:198:MET:CG	50:SA:199:PRO:HD2	2.43	0.48
50:SA:81:ASN:HB2	50:SA:204:TYR:HE2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SH:116:ARG:NH2	57:SH:121:THR:OG1	2.46	0.48
57:SH:166:VAL:HG22	57:SH:173:PHE:HE2	1.79	0.48
49:S2:376:A:H4'	61:SL:9:ALA:CB	2.43	0.48
49:S2:1282:A:N6	62:SM:93:LYS:HG3	2.28	0.48
73:SX:84:PHE:HD2	73:SX:105:PHE:CZ	2.31	0.48
48:4:198:GLY:N	48:4:201:GLY:HA2	2.21	0.48
48:4:308:LYS:CB	48:4:311:GLU:HG3	2.44	0.48
48:4:430:MET:HE1	48:4:486:THR:OG1	2.13	0.48
48:4:4:PHE:CD1	48:4:5:THR:N	2.81	0.48
48:4:750:GLN:HA	48:4:782:PHE:O	2.14	0.48
48:4:814:PHE:CD2	48:4:814:PHE:C	2.86	0.48
1:5:1215:C:N4	1:5:1216:C:C5	2.80	0.48
1:5:1268:G:N3	1:5:1270:A:C8	2.77	0.48
1:5:1341:U:H2'	1:5:1342:A:H8	1.78	0.48
1:5:1426:G:C2'	1:5:1459:A:N6	2.76	0.48
1:5:1481:C:O4'	1:5:1481:C:O2	2.30	0.48
1:5:1777:C:N3	1:5:1778:C:C5	2.81	0.48
1:5:1902:G:C2'	1:5:1903:G:O5'	2.62	0.48
1:5:1983:A:C2	1:5:2010:A:C3'	2.96	0.48
1:5:2035:C:C5	1:5:2036:C:C5	3.02	0.48
1:5:2099:G:N2	1:5:2100:A:N9	2.62	0.48
1:5:2319:C:O2	1:5:2319:C:C2'	2.60	0.48
1:5:2432:U:H2'	1:5:2433:G:O4'	2.14	0.48
1:5:2454:U:C2	1:5:2455:G:C8	3.01	0.48
1:5:2515:G:N7	1:5:2516:G:C5	2.81	0.48
1:5:2622:G:N2	1:5:2623:A:H1'	2.29	0.48
1:5:2648:G:O2'	1:5:2649:G:OP2	2.29	0.48
1:5:2678:A:C2	1:5:2679:G:C4	3.02	0.48
1:5:2789:A:H1'	1:5:2796:G:C8	2.48	0.48
1:5:2871:A:H2'	1:5:2872:C:O4'	2.14	0.48
1:5:1:C:C6	1:5:2:G:C8	3.02	0.48
1:5:3629:A:C5	1:5:3630:A:C8	3.01	0.48
1:5:3696:C:C2	1:5:3697:U:C5	3.00	0.48
1:5:3711:A:C6	1:5:3712:A:H1'	2.48	0.48
1:5:3944:G:N1	1:5:3945:A:N7	2.61	0.48
1:5:4069:U:O2	1:5:4070:U:C5	2.67	0.48
1:5:4098:A:C2	1:5:4099:G:N9	2.81	0.48
1:5:4142:C:C4	1:5:4143:G:C6	3.01	0.48
1:5:423:G:C4	1:5:424:U:C6	3.01	0.48
1:5:4250:G:N2	1:5:4259:C:C2	2.82	0.48
1:5:4269:G:C6	1:5:4270:C:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4271:A:C4	1:5:4272:G:C2	3.01	0.48
1:5:4298:A:C6	1:5:4299:U:C5	3.01	0.48
1:5:4299:U:C2	1:5:4300:U:C5	3.00	0.48
1:5:3907:G:C1'	1:5:4449:A:C1'	2.92	0.48
1:5:4635:A:H3'	1:5:4636:U:H4'	1.95	0.48
1:5:4860:G:C2	1:5:4861:G:C8	3.02	0.48
1:5:52:G:H3'	1:5:52:G:C8	2.48	0.48
1:5:661:C:N3	1:5:662:C:C6	2.82	0.48
1:5:701:G:N3	1:5:701:G:H2'	2.29	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:C2'	3:8:101:C:O2	2.61	0.48
3:8:141:C:C2	3:8:142:U:C5	3.01	0.48
5:B:225:GLY:HA2	5:B:274:TYR:H	1.78	0.48
7:D:219:TYR:O	7:D:220:LYS:CB	2.61	0.48
8:E:56:SER:OG	8:E:57:ALA:N	2.45	0.48
17:N:65:ARG:HH21	17:N:127:TYR:HE2	1.59	0.48
20:Q:146:ARG:HH11	20:Q:146:ARG:HB3	1.78	0.48
49:S2:1012:A:H2'	49:S2:1013:U:O4'	2.13	0.48
49:S2:1041:G:N3	49:S2:1041:G:H2'	2.27	0.48
49:S2:1073:U:O2	49:S2:1074:C:C6	2.66	0.48
49:S2:1121:G:O2'	51:SB:204:ILE:HA	2.13	0.48
49:S2:1281:G:C2	49:S2:1282:A:H1'	2.49	0.48
49:S2:1311:C:C5	49:S2:1312:G:C5	3.02	0.48
49:S2:14:C:O2	49:S2:668:A:H2	1.97	0.48
49:S2:1567:G:C5	49:S2:1568:C:C4	3.01	0.48
49:S2:1683:C:C2	49:S2:1684:C:C5	3.01	0.48
49:S2:1702:G:C6	49:S2:1703:C:C4	3.02	0.48
49:S2:1826:G:N1	49:S2:1827:U:C4	2.82	0.48
49:S2:310:C:O2'	49:S2:339:A:O2'	2.19	0.48
49:S2:410:G:C6	49:S2:411:G:N7	2.80	0.48
49:S2:468:A:C4	49:S2:469:A:C8	3.01	0.48
49:S2:478:G:N1	49:S2:479:C:C4	2.82	0.48
49:S2:550:C:N3	49:S2:551:U:C5	2.82	0.48
49:S2:61:A:C2	49:S2:335:G:C1'	2.95	0.48
49:S2:70:G:O6	49:S2:71:G:C6	2.66	0.48
49:S2:961:G:N2	49:S2:962:A:H1'	2.28	0.48
49:S2:963:A:C6	49:S2:964:A:N6	2.82	0.48
53:SD:52:ALA:O	53:SD:91:VAL:HG23	2.12	0.48
57:SH:177:TYR:CE2	57:SH:185:VAL:CG2	2.96	0.48
67:SR:10:LYS:HD3	67:SR:53:TYR:CE2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SS:86:ARG:CA	68:SS:86:ARG:NE	2.77	0.48
73:SX:125:VAL:HG21	73:SX:130:LEU:HD21	1.96	0.48
25:V:73:ARG:HH11	25:V:73:ARG:HB3	1.79	0.48
28:Y:11:ARG:HH22	28:Y:15:ARG:CG	2.24	0.48
48:4:420:LEU:HB2	48:4:464:VAL:O	2.14	0.48
48:4:495:ARG:C	48:4:496:VAL:CG1	2.81	0.48
48:4:556:ILE:O	48:4:560:ASP:OD2	2.31	0.48
48:4:710:HIS:HB3	48:4:715:HIS:O	2.13	0.48
48:4:593:SER:OG	48:4:728:CYS:CA	2.62	0.48
48:4:744:ILE:CD1	48:4:815:ASP:HB3	2.42	0.48
1:5:1069:G:C5	1:5:1070:G:C8	3.01	0.48
1:5:1215:C:H5''	1:5:1215:C:C6	2.49	0.48
1:5:1292:C:H6	1:5:1292:C:H5''	1.78	0.48
1:5:1349:G:C6	1:5:1350:C:C4	3.02	0.48
1:5:1387:A:H1'	1:5:1397:A:H61	1.78	0.48
1:5:1477:C:O2	1:5:1478:C:C1'	2.61	0.48
1:5:1753:G:H2'	1:5:1755:C:H5''	1.95	0.48
1:5:1857:C:N3	1:5:1858:A:N7	2.62	0.48
1:5:1874:A:H2'	1:5:1875:C:O4'	2.14	0.48
1:5:1878:G:C6	1:5:1879:C:C4	3.02	0.48
1:5:1919:G:H5'	22:S:163:HIS:CE1	2.49	0.48
1:5:1983:A:N3	1:5:2010:A:H5''	2.28	0.48
1:5:218:A:N7	6:C:181:LYS:CG	2.77	0.48
1:5:218:A:H1'	1:5:219:G:C2	2.47	0.48
1:5:2647:A:H2'	1:5:2648:G:C5'	2.44	0.48
1:5:2702:C:C2	1:5:2715:G:C2	3.01	0.48
1:5:2842:G:N1	1:5:2843:U:C5	2.82	0.48
1:5:345:C:C2	1:5:346:G:N7	2.81	0.48
1:5:3585:G:C2	1:5:3586:G:C8	3.02	0.48
1:5:3686:G:OP2	4:A:193:ARG:NH2	2.46	0.48
1:5:3689:G:C2	1:5:3690:U:C6	3.01	0.48
1:5:3795:A:C6	1:5:3796:U:C4	3.01	0.48
1:5:4125:C:H2'	1:5:4126:C:C6	2.49	0.48
1:5:3930:U:H3	1:5:4180:G:H1	1.60	0.48
1:5:314:G:N2	1:5:4355:G:C5	2.82	0.48
1:5:4692:A:H3'	1:5:4693:C:H2'	1.96	0.48
1:5:4712:C:H2'	1:5:4712:C:O2	2.13	0.48
1:5:4729:A:H5'	1:5:4965:U:O2'	2.13	0.48
1:5:4922:C:N3	1:5:4923:C:C5	2.82	0.48
1:5:4942:C:O3'	1:5:4944:C:P	2.72	0.48
1:5:5019:A:N3	1:5:5020:G:C8	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5052:C:N3	1:5:5053:U:C6	2.82	0.48
1:5:69:A:C3'	1:5:70:A:H8	2.24	0.48
1:5:961:G:H5'	8:E:119:ARG:NH1	2.28	0.48
1:5:982:U:H5''	8:E:69:TYR:OH	2.09	0.48
2:7:27:G:H1'	2:7:56:G:N1	2.28	0.48
3:8:101:C:N4	3:8:102:G:C6	2.81	0.48
3:8:142:U:C4	3:8:143:G:N7	2.81	0.48
3:8:14:U:O2'	3:8:15:G:O4'	2.28	0.48
1:5:2096:G:H22	9:F:41:GLN:HE22	1.62	0.48
14:K:123:ARG:CB	14:K:129:ILE:HD12	0.97	0.48
17:N:101:VAL:HG12	17:N:105:ARG:HD2	1.94	0.48
19:P:30:ARG:HH12	19:P:62:ARG:HH21	1.62	0.48
49:S2:1051:G:N3	49:S2:1052:A:C8	2.80	0.48
49:S2:1083:A:C8	49:S2:1861:G:C6	3.02	0.48
49:S2:1496:U:N3	49:S2:1498:A:N7	2.62	0.48
49:S2:1514:G:C2'	49:S2:1515:G:O4'	2.61	0.48
49:S2:1253:A:N3	49:S2:1666:C:C1'	2.77	0.48
49:S2:1736:G:O6	49:S2:1798:C:N4	2.44	0.48
49:S2:1860:A:C4	49:S2:1862:G:N7	2.82	0.48
49:S2:307:G:O3'	49:S2:307:G:OP2	2.30	0.48
49:S2:457:C:N3	49:S2:458:A:C8	2.82	0.48
49:S2:509:G:N2	49:S2:510:G:C4	2.81	0.48
49:S2:533:A:H2'	49:S2:534:G:O4'	2.14	0.48
49:S2:635:G:N2	49:S2:636:C:C2	2.81	0.48
49:S2:72:C:OP1	49:S2:79:A:N1	2.47	0.48
49:S2:845:G:H2'	49:S2:846:G:C8	2.49	0.48
22:S:29:ARG:NH2	22:S:29:ARG:HB3	2.28	0.48
22:S:9:GLU:HB3	22:S:67:VAL:CG1	2.43	0.48
52:SC:260:VAL:O	52:SC:261:PHE:HB2	2.13	0.48
53:SD:76:ARG:HD2	53:SD:77:PHE:CE1	2.49	0.48
54:SE:72:ILE:HG12	54:SE:90:ILE:HG12	1.96	0.48
56:SG:50:VAL:HG11	56:SG:111:LEU:HD13	1.95	0.48
56:SG:232:ARG:O	56:SG:236:SER:N	2.46	0.48
58:SI:8:TRP:CD1	58:SI:9:HIS:N	2.82	0.48
59:SJ:36:GLY:O	59:SJ:111:GLN:OE1	2.30	0.48
59:SJ:45:ARG:HH22	59:SJ:146:SER:CB	2.26	0.48
64:SO:75:MET:O	64:SO:79:GLN:HG3	2.13	0.48
48:4:206:ASP:N	48:4:211:THR:OG1	2.42	0.48
48:4:24:VAL:HG21	48:4:32:LYS:CG	2.44	0.48
1:5:1367:C:C6	1:5:1370:G:H2'	2.48	0.48
1:5:1455:G:H3'	1:5:1456:C:H5''	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1492:G:C2	1:5:1493:G:C8	3.02	0.48
1:5:172:C:C4	1:5:173:C:C5	3.02	0.48
1:5:1886:G:C2	1:5:1894:C:C4	3.02	0.48
1:5:2076:G:C5	1:5:2077:C:C5	3.02	0.48
1:5:1265:G:O2'	1:5:2113:G:OP1	2.31	0.48
1:5:2119:C:O2'	1:5:2120:G:OP2	2.16	0.48
1:5:2256:C:O2'	1:5:2257:C:OP2	2.24	0.48
1:5:235:A:C5	1:5:238:C:C4	3.02	0.48
1:5:2391:G:C2	1:5:2392:C:C6	3.02	0.48
1:5:2690:C:O2	1:5:2690:C:H2'	2.13	0.48
1:5:2712:G:C6	1:5:2713:C:C4	3.02	0.48
1:5:2758:G:H2'	1:5:2759:G:C8	2.49	0.48
1:5:325:U:C2	1:5:326:C:C5	3.01	0.48
1:5:3586:G:C2	1:5:3587:C:C2	3.02	0.48
1:5:3587:C:H2'	1:5:3588:C:C6	2.49	0.48
1:5:3608:A:N3	1:5:3609:G:C8	2.81	0.48
1:5:3621:A:C2	1:5:3622:C:N1	2.82	0.48
1:5:3651:A:H2'	1:5:3652:A:O4'	2.14	0.48
1:5:3686:G:P	4:A:193:ARG:NH2	2.82	0.48
1:5:3717:A:O2'	1:5:3718:A:P	2.71	0.48
1:5:3793:U:C2	1:5:3794:C:C5	3.02	0.48
1:5:37:U:C4	1:5:38:A:C5	3.02	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
1:5:3945:A:C2	1:5:3946:G:C4	3.01	0.48
1:5:4109:G:N3	1:5:4110:C:C6	2.82	0.48
1:5:4169:G:H4'	1:5:4171:C:C2	2.48	0.48
1:5:4258:C:H2'	1:5:4259:C:C6	2.47	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
1:5:474:C:O2	1:5:475:G:C8	2.67	0.48
1:5:5029:C:N3	1:5:5030:U:C6	2.80	0.48
1:5:57:G:C2	1:5:58:G:C6	3.02	0.48
1:5:738:C:H2'	1:5:739:G:H8	1.79	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
6:C:180:ILE:O	6:C:184:TYR:HB2	2.14	0.48
6:C:186:SER:O	6:C:203:GLN:HA	2.13	0.48
6:C:317:ASN:OD1	6:C:317:ASN:C	2.52	0.48
1:5:354:U:H1'	6:C:97:ARG:CG	2.44	0.48
7:D:67:ALA:O	7:D:68:ARG:NH1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:98:ARG:HH22	9:F:226:THR:HG23	1.79	0.48
9:F:144:TRP:CZ3	9:F:237:ASN:HB2	2.48	0.48
1:5:945:U:C5	9:F:67:TYR:CE2	3.02	0.48
1:5:1994:C:O2	14:K:132:ILE:HD13	2.14	0.48
18:O:192:PHE:N	18:O:192:PHE:CD1	2.81	0.48
20:Q:33:ARG:HH21	20:Q:48:LEU:HD11	1.78	0.48
49:S2:1095:U:C2	49:S2:1149:A:N6	2.79	0.48
49:S2:1310:U:C2	49:S2:1311:C:C6	2.99	0.48
49:S2:1429:G:C2	49:S2:1430:C:C4	3.02	0.48
49:S2:1440:C:H2'	49:S2:1441:U:O4'	2.13	0.48
49:S2:1514:G:H21	65:SP:97:TYR:HE2	1.61	0.48
49:S2:1528:G:N1	49:S2:1529:C:N4	2.62	0.48
49:S2:1573:G:C2	49:S2:1574:C:N1	2.81	0.48
49:S2:1591:C:C5	49:S2:1592:C:C5	3.02	0.48
49:S2:177:G:H21	49:S2:178:C:N4	2.12	0.48
49:S2:201:C:C4	49:S2:202:G:H1'	2.49	0.48
49:S2:224:A:H2'	49:S2:225:G:C8	2.48	0.48
49:S2:437:G:H2'	49:S2:438:G:N3	2.28	0.48
49:S2:821:G:O6	59:SJ:150:ARG:NH1	2.46	0.48
49:S2:962:A:N1	49:S2:963:A:C5	2.82	0.48
49:S2:976:G:C6	49:S2:977:C:C5	3.02	0.48
52:SC:263:LYS:HB3	52:SC:267:GLN:OE1	2.14	0.48
54:SE:181:CYS:SG	54:SE:195:ILE:CG1	3.02	0.48
54:SE:21:ASP:C	54:SE:21:ASP:OD1	2.52	0.48
55:SF:41:VAL:HG13	55:SF:42:LYS:HD3	1.96	0.48
49:S2:913:A:C2	57:SH:120:ARG:NH2	2.82	0.48
58:SI:181:GLN:NE2	58:SI:181:GLN:HA	2.29	0.48
59:SJ:48:PHE:CZ	59:SJ:52:LYS:CG	2.97	0.48
64:SO:130:GLU:OE1	64:SO:131:ASP:N	2.46	0.48
67:SR:83:ASN:ND2	67:SR:83:ASN:O	2.47	0.48
68:SS:28:PHE:N	68:SS:28:PHE:CD1	2.81	0.48
48:4:172:GLU:O	48:4:176:GLN:HG2	2.13	0.48
48:4:241:GLU:N	48:4:243:GLN:HB2	2.28	0.48
48:4:300:VAL:CG2	48:4:301:PHE:N	2.77	0.48
1:5:1212:G:C2	1:5:1213:G:N7	2.81	0.48
1:5:1263:A:C2	1:5:1264:C:N1	2.82	0.48
1:5:1265:G:C3'	1:5:1266:G:H5'	2.44	0.48
1:5:1395:U:C2'	1:5:1396:G:O5'	2.61	0.48
1:5:1607:C:O2	1:5:1607:C:H2'	2.12	0.48
1:5:1619:G:C4	1:5:1620:U:C5	3.02	0.48
1:5:1749:A:C2	1:5:1750:G:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1749:A:H2'	1:5:1750:G:C1'	2.44	0.48
1:5:1775:A:H3'	1:5:1776:A:H8	1.79	0.48
1:5:1955:G:C6	1:5:1956:A:N7	2.81	0.48
1:5:2019:C:N3	1:5:2020:U:C6	2.82	0.48
1:5:1268:G:H1'	1:5:2111:G:C6	2.49	0.48
1:5:2263:A:O3'	1:5:2264:C:H2'	2.13	0.48
1:5:2332:A:N3	1:5:2333:G:H1'	2.29	0.48
1:5:2339:G:C5	1:5:2340:C:C5	3.01	0.48
1:5:2347:A:C2	1:5:2348:G:C2	3.02	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
1:5:2503:G:H5'	1:5:2504:C:O5'	2.14	0.48
1:5:2503:G:H2'	1:5:2503:G:N3	2.29	0.48
1:5:2566:G:N2	1:5:2567:G:N9	2.62	0.48
1:5:2615:C:O2	1:5:2615:C:H2'	2.13	0.48
1:5:2688:G:C6	1:5:2689:C:C4	3.02	0.48
1:5:2706:G:O2'	1:5:2709:C:N4	2.47	0.48
1:5:2745:A:O2'	1:5:2746:A:H5'	2.12	0.48
1:5:2807:A:C2	1:5:2808:G:C8	3.02	0.48
1:5:2833:A:O2'	1:5:2834:C:C5'	2.62	0.48
1:5:298:G:C5	1:5:299:C:C5	3.02	0.48
1:5:3629:A:C2	1:5:3630:A:H1'	2.48	0.48
1:5:3655:C:N3	1:5:3656:A:N7	2.62	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
1:5:3868:G:N2	1:5:3899:G:N2	2.62	0.48
1:5:3877:A:O2'	1:5:4400:G:N2	2.45	0.48
1:5:3898:G:C3'	1:5:3899:G:H5'	2.44	0.48
1:5:4122:G:C5	1:5:4123:C:C5	3.02	0.48
1:5:4161:G:H2'	1:5:4162:C:H3'	1.94	0.48
1:5:4173:G:N3	1:5:4174:U:C6	2.82	0.48
1:5:4201:G:C6	1:5:4202:U:O4	2.67	0.48
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
1:5:4461:C:O2	1:5:4516:G:C2	2.67	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
1:5:4691:A:C6	1:5:4692:A:C5	3.01	0.48
1:5:4713:G:C5	1:5:4714:C:C5	3.02	0.48
1:5:480:C:C2	1:5:481:G:C8	3.02	0.48
1:5:5004:C:O2	1:5:5044:A:C2	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5031:G:C4	1:5:5032:C:C5	3.02	0.48
1:5:741:C:C2	1:5:742:G:C8	3.01	0.48
1:5:747:A:C2'	1:5:749:G:C8	2.87	0.48
1:5:931:C:N1	1:5:932:A:C8	2.82	0.48
2:7:28:C:H2'	2:7:28:C:O2	2.12	0.48
3:8:46:G:N2	3:8:47:C:C2	2.81	0.48
3:8:66:A:C4	3:8:67:U:C5	3.02	0.48
3:8:95:A:C4	3:8:96:C:C6	3.02	0.48
6:C:78:ARG:CG	6:C:78:ARG:HH11	2.26	0.48
2:7:11:A:N7	7:D:18:VAL:HG13	2.28	0.48
1:5:1175:A:H1'	7:D:275:GLN:HE22	1.76	0.48
4:A:68:ARG:C	10:G:45:ILE:HD11	2.34	0.48
16:M:17:PHE:CD1	16:M:17:PHE:C	2.86	0.48
1:5:2278:G:H5'	20:Q:7:HIS:CE1	2.49	0.48
22:S:10:TYR:OH	22:S:66:GLN:CG	2.60	0.48
22:S:8:ARG:NH1	22:S:10:TYR:OH	2.47	0.48
49:S2:1552:G:OP2	53:SD:9:ARG:NH2	2.47	0.48
1:5:3759:A:N1	49:S2:1709:G:C4'	2.76	0.48
49:S2:170:A:H2'	49:S2:171:A:O4'	2.14	0.48
49:S2:1746:U:C4	49:S2:1789:G:N2	2.81	0.48
49:S2:216:C:O4'	49:S2:216:C:O2	2.32	0.48
49:S2:386:C:O2'	58:SI:5:ARG:HA	2.14	0.48
49:S2:387:C:H2'	49:S2:387:C:O2	2.13	0.48
49:S2:533:A:C2	49:S2:534:G:N9	2.81	0.48
49:S2:637:U:N3	49:S2:638:C:C4	2.82	0.48
49:S2:786:G:C8	56:SG:236:SER:O	2.67	0.48
49:S2:794:A:C2	49:S2:795:A:C8	3.02	0.48
49:S2:857:U:O2	49:S2:858:A:C8	2.66	0.48
49:S2:84:A:C4	49:S2:85:A:C8	3.01	0.48
49:S2:952:G:H2'	49:S2:953:C:O4'	2.14	0.48
49:S2:995:G:H21	49:S2:997:A:H8	1.62	0.48
50:SA:130:ASP:OD1	50:SA:130:ASP:N	2.46	0.48
53:SD:76:ARG:NE	60:SK:66:HIS:CE1	2.82	0.48
60:SK:90:VAL:HG21	60:SK:94:LEU:HD12	1.96	0.48
61:SL:46:THR:HG23	61:SL:46:THR:O	2.13	0.48
49:S2:161:U:H6	74:SY:116:LYS:HA	1.78	0.48
23:T:17:ARG:HG3	23:T:18:PRO:CD	2.44	0.48
1:5:4301:U:H5''	23:T:54:HIS:CD2	2.49	0.48
48:4:395:MET:SD	48:4:486:THR:HG22	2.54	0.48
48:4:402:VAL:HG22	48:4:403:PRO:CG	2.43	0.48
48:4:590:LEU:CD2	48:4:605:LYS:HG3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:791:ASN:HA	48:4:794:PHE:CE1	2.49	0.48
1:5:1094:G:C2	1:5:1095:A:C8	3.02	0.48
1:5:1168:G:N2	1:5:1169:G:C4	2.82	0.48
1:5:1239:C:H4'	1:5:1240:G:O5'	2.14	0.48
1:5:1475:G:C2	1:5:1476:C:C6	3.00	0.48
1:5:1488:G:C2	1:5:1489:G:N9	2.82	0.48
1:5:1786:A:H2'	1:5:1789:C:H5	1.79	0.48
1:5:180:C:N3	1:5:181:C:C5	2.82	0.48
1:5:182:G:H1	1:5:254:G:H1	1.62	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
1:5:1972:G:C2	1:5:1973:G:C8	3.02	0.48
1:5:2101:C:H2'	1:5:2102:G:O4'	2.13	0.48
1:5:2243:C:O2	1:5:2244:C:C5	2.67	0.48
1:5:2270:G:C2	1:5:2271:C:C2	3.02	0.48
1:5:2302:C:N4	1:5:2303:C:N4	2.61	0.48
1:5:238:C:H2'	1:5:239:C:H5'	1.96	0.48
1:5:2410:C:O2	1:5:2411:C:C6	2.66	0.48
1:5:2507:A:H2'	1:5:2507:A:N3	2.28	0.48
1:5:2532:C:N3	1:5:2533:C:N4	2.62	0.48
1:5:2581:A:H1'	1:5:2654:C:O2'	2.14	0.48
1:5:2737:C:N3	1:5:2738:C:C5	2.82	0.48
1:5:2858:A:O2'	1:5:2859:G:P	2.71	0.48
1:5:288:G:C2	1:5:289:C:C5	3.02	0.48
1:5:3722:G:C4	1:5:3723:A:C8	3.02	0.48
1:5:3863:C:H2'	1:5:3864:C:H6	1.79	0.48
1:5:3945:A:N1	1:5:3946:G:C5	2.81	0.48
1:5:4095:G:H22	1:5:4096:C:N4	2.11	0.48
1:5:4531:U:C5'	1:5:4531:U:C6	2.97	0.48
1:5:4876:U:O4'	1:5:4876:U:O2	2.31	0.48
1:5:5050:C:C2	1:5:5051:C:C6	3.02	0.48
1:5:62:A:C2'	1:5:63:G:O5'	2.61	0.48
1:5:73:A:N3	1:5:74:G:C8	2.81	0.48
1:5:87:A:H2'	1:5:87:A:N3	2.29	0.48
1:5:85:G:N3	1:5:97:G:C6	2.82	0.48
3:8:154:G:C6	3:8:155:C:C4	3.02	0.48
6:C:325:MET:HE2	9:F:157:TYR:CE2	2.49	0.48
1:5:4128:A:N3	10:G:34:LYS:O	2.47	0.48
11:H:94:SER:OG	11:H:142:ASP:HB3	2.14	0.48
12:I:88:ARG:HB2	12:I:173:PHE:HE2	1.79	0.48
14:K:102:GLY:O	14:K:140:GLY:C	2.53	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:56:LEU:HB2	14:K:91:ASP:CG	2.31	0.48
49:S2:1175:G:C6	49:S2:1176:G:C5	3.01	0.48
49:S2:121:U:N3	49:S2:122:G:C8	2.67	0.48
49:S2:1241:A:H2	49:S2:1516:G:O2'	1.96	0.48
49:S2:1551:U:C4'	49:S2:1558:C:H1'	2.44	0.48
49:S2:1782:G:N3	49:S2:1784:G:C8	2.81	0.48
49:S2:217:A:H1'	49:S2:309:G:H1	1.79	0.48
49:S2:27:A:C2	49:S2:28:U:C1'	2.97	0.48
49:S2:322:C:H2'	49:S2:323:C:H6	1.78	0.48
49:S2:472:C:O4'	49:S2:472:C:OP1	2.32	0.48
49:S2:554:A:N3	49:S2:555:A:C8	2.82	0.48
49:S2:871:U:H5'	49:S2:871:U:H6	1.77	0.48
49:S2:950:C:N3	49:S2:951:C:C6	2.82	0.48
49:S2:995:G:N2	49:S2:997:A:H8	2.11	0.48
51:SB:125:VAL:HG22	51:SB:169:MET:HG3	1.96	0.48
51:SB:153:THR:HB	51:SB:155:TYR:CZ	2.49	0.48
51:SB:36:PRO:HB3	51:SB:231:LEU:HD21	1.96	0.48
57:SH:99:ARG:HH21	57:SH:99:ARG:HG2	1.79	0.48
59:SJ:69:ARG:O	59:SJ:70:ARG:C	2.52	0.48
69:ST:31:PRO:CB	69:ST:33:TRP:CH2	2.97	0.48
49:S2:1538:C:H5''	69:ST:44:GLU:HG3	1.95	0.48
1:5:3799:A:N7	25:V:40:ILE:HG21	2.29	0.48
27:X:151:ASN:N	27:X:151:ASN:OD1	2.46	0.48
48:4:146:ALA:CA	48:4:151:ILE:HD12	2.45	0.47
48:4:168:GLN:O	48:4:168:GLN:HG3	2.12	0.47
48:4:444:LEU:N	48:4:444:LEU:HD12	2.29	0.47
48:4:427:VAL:CG2	48:4:447:ILE:CD1	2.75	0.47
48:4:742:GLU:HA	48:4:743:PRO:HD3	1.55	0.47
48:4:579:TYR:CE2	48:4:742:GLU:HG3	2.49	0.47
48:4:812:CYS:SG	48:4:813:VAL:N	2.87	0.47
48:4:744:ILE:CG2	48:4:815:ASP:H	2.27	0.47
48:4:744:ILE:HD12	48:4:816:HIS:CG	2.47	0.47
1:5:1168:G:C2	1:5:1169:G:C8	3.02	0.47
1:5:1176:C:C2	1:5:1177:U:C6	3.01	0.47
1:5:1170:G:N2	1:5:1192:C:C2	2.82	0.47
1:5:1260:G:N2	1:5:1261:G:C4	2.82	0.47
1:5:1268:G:OP2	1:5:2110:C:C2'	2.62	0.47
1:5:1321:G:C2	1:5:3876:A:C4	3.02	0.47
1:5:1367:C:H2'	1:5:1368:A:O5'	2.14	0.47
1:5:1380:G:N3	1:5:1382:G:C5	2.82	0.47
1:5:1412:G:C6	1:5:1413:C:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1421:G:N1	1:5:1422:G:C5	2.82	0.47
1:5:1448:G:N2	1:5:1449:C:C2	2.82	0.47
1:5:1759:G:C6	1:5:1760:G:C8	3.02	0.47
1:5:1968:G:N2	1:5:1969:G:C4	2.82	0.47
1:5:209:U:C2	1:5:233:U:O4	2.66	0.47
1:5:2367:A:N9	1:5:2798:A:C2	2.81	0.47
1:5:2417:A:N3	1:5:2417:A:H2'	2.27	0.47
1:5:2480:G:N3	1:5:2481:G:C8	2.82	0.47
1:5:2522:G:C2	1:5:2534:C:N3	2.82	0.47
1:5:2632:U:C6	24:U:85:TYR:CE1	3.02	0.47
1:5:2689:C:O2	1:5:2690:C:H6	1.97	0.47
1:5:272:U:N3	1:5:273:U:C4	2.82	0.47
1:5:2835:A:C1'	1:5:4979:A:H5'	2.43	0.47
1:5:3733:A:C6	1:5:3734:U:C4	3.02	0.47
1:5:3734:U:O2'	1:5:3735:G:H5'	2.14	0.47
1:5:2878:G:H4'	1:5:3825:A:H5''	1.96	0.47
1:5:4094:G:C6	1:5:4095:G:C6	3.02	0.47
1:5:4129:G:H2'	1:5:4130:C:O4'	2.14	0.47
1:5:4185:G:C2	1:5:4186:A:C8	3.02	0.47
1:5:4312:U:C2	1:5:4313:A:C8	3.01	0.47
1:5:4455:G:H22	1:5:4524:G:H22	1.62	0.47
1:5:456:C:C2	1:5:457:G:N7	2.81	0.47
1:5:4595:G:C6	1:5:4596:C:C4	3.01	0.47
1:5:4635:A:H2	1:5:4663:G:H21	1.62	0.47
1:5:4683:U:C4	1:5:4707:A:C5	3.02	0.47
1:5:479:G:C6	1:5:480:C:C4	3.01	0.47
1:5:4895:C:H1'	1:5:4896:G:C8	2.49	0.47
1:5:332:C:C4'	17:N:150:TRP:NE1	2.76	0.47
17:N:99:GLN:HG3	17:N:130:PHE:CE2	2.48	0.47
20:Q:31:LEU:O	20:Q:31:LEU:HD23	2.14	0.47
49:S2:119:U:C2	49:S2:120:U:H6	2.30	0.47
49:S2:1225:U:C4	49:S2:1226:G:C8	3.02	0.47
49:S2:1236:G:N2	49:S2:1237:C:C2	2.82	0.47
49:S2:1269:G:H2'	49:S2:1270:G:O4'	2.14	0.47
49:S2:1283:C:H4'	62:SM:102:LYS:HE3	1.95	0.47
49:S2:1575:G:N3	49:S2:1576:G:N7	2.62	0.47
49:S2:1404:U:H4'	49:S2:1581:C:O2	2.14	0.47
49:S2:1589:A:H2'	49:S2:1590:C:O5'	2.14	0.47
49:S2:163:U:O2	49:S2:164:A:N7	2.47	0.47
49:S2:177:G:O2'	49:S2:178:C:H6	1.96	0.47
49:S2:1822:A:H5''	49:S2:1823:A:H5''	1.94	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:380:G:N2	49:S2:382:C:C3'	2.73	0.47
49:S2:452:G:C2	49:S2:453:C:C2	3.02	0.47
49:S2:47:G:C6	49:S2:48:C:C4	3.02	0.47
49:S2:534:G:C2	49:S2:535:G:C8	3.02	0.47
49:S2:620:G:P	49:S2:620:G:H21	2.33	0.47
49:S2:932:G:C2	49:S2:934:G:C8	3.02	0.47
50:SA:147:LEU:O	50:SA:165:ASN:ND2	2.46	0.47
50:SA:138:SER:HB2	50:SA:156:TYR:CE1	2.48	0.47
52:SC:132:ASP:N	52:SC:132:ASP:OD1	2.45	0.47
53:SD:202:LYS:O	53:SD:203:PRO:C	2.50	0.47
54:SE:54:TYR:OH	54:SE:97:GLU:OE1	2.30	0.47
62:SM:67:ALA:O	62:SM:71:GLU:HG2	2.14	0.47
63:SN:99:ARG:NH2	63:SN:115:LEU:HD21	2.29	0.47
49:S2:916:A:C6	63:SN:73:ARG:HD3	2.49	0.47
49:S2:823:U:C5	74:SY:64:PHE:CE2	3.00	0.47
68:SS:23:ARG:HD3	75:SZ:48:VAL:HG21	1.96	0.47
48:4:438:LYS:HB3	48:4:440:GLU:HG2	1.95	0.47
48:4:516:ASP:O	48:4:517:LEU:C	2.53	0.47
48:4:617:ILE:HG13	48:4:622:VAL:CG2	2.44	0.47
48:4:739:ARG:C	48:4:824:PRO:HD3	2.34	0.47
1:5:118:C:H42	1:5:121:A:H62	1.61	0.47
1:5:1283:G:H8	1:5:1283:G:H3'	1.79	0.47
1:5:1404:G:C5	1:5:1405:C:C5	3.02	0.47
1:5:141:C:C2	1:5:142:G:C8	3.02	0.47
1:5:1613:A:H4'	4:A:186:TYR:HD2	1.77	0.47
1:5:1655:C:O2	1:5:1655:C:H2'	2.14	0.47
1:5:1655:C:O3'	1:5:1679:A:H2	1.98	0.47
1:5:1769:G:N2	1:5:1770:A:C4	2.82	0.47
1:5:1838:A:C2	1:5:1839:U:C5	3.02	0.47
1:5:1962:A:C8	1:5:1962:A:H5''	2.49	0.47
1:5:2120:G:H2'	1:5:2121:C:C2	2.48	0.47
1:5:22:G:C2	3:8:35:C:N3	2.82	0.47
1:5:2557:G:C2	1:5:2558:C:C2	3.03	0.47
1:5:2643:G:C6	1:5:2644:G:C8	3.02	0.47
1:5:2676:A:C2	1:5:2677:G:H1'	2.50	0.47
1:5:2770:C:N3	1:5:2771:G:C8	2.82	0.47
1:5:2874:U:C6	1:5:2874:U:C5'	2.97	0.47
1:5:296:A:P	1:5:296:A:H8	2.35	0.47
1:5:29:G:C5	1:5:30:C:C5	3.01	0.47
1:5:3621:A:C4	1:5:3622:C:C5	3.01	0.47
1:5:3722:G:C6	1:5:3723:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3739:C:C6	1:5:3739:C:C4'	2.97	0.47
1:5:3841:C:H2'	1:5:3841:C:O2	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
1:5:398:A:C2	1:5:399:G:C8	3.02	0.47
1:5:4082:G:H2'	1:5:4083:U:C6	2.49	0.47
1:5:4096:C:C4	1:5:4097:G:N7	2.78	0.47
1:5:4241:C:C4	1:5:4242:U:C5	3.02	0.47
1:5:4266:G:N1	1:5:4279:A:C5	2.82	0.47
1:5:437:G:C2	1:5:438:G:C8	3.02	0.47
1:5:438:G:C4	1:5:439:G:C8	3.01	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	3.02	0.47
1:5:4481:U:C2'	1:5:4482:U:C6	2.88	0.47
1:5:4565:C:H1'	5:B:262:VAL:CG2	2.44	0.47
1:5:4510:A:C6	1:5:4592:C:H4'	2.48	0.47
1:5:4687:A:N1	1:5:4688:C:C4	2.82	0.47
1:5:4981:G:N1	1:5:4982:A:C5	2.81	0.47
1:5:5026:U:OP1	58:SI:168:GLN:CG	2.62	0.47
1:5:709:C:N3	1:5:710:G:N7	2.62	0.47
1:5:743:G:N2	1:5:744:G:C5	2.82	0.47
1:5:88:A:H2'	1:5:89:C:O5'	2.13	0.47
1:5:944:A:C2'	6:C:335:MET:HE1	2.43	0.47
1:5:94:A:H2'	1:5:95:G:O5'	2.15	0.47
1:5:963:G:N3	1:5:963:G:H2'	2.29	0.47
2:7:110:G:C6	2:7:111:C:C4	3.02	0.47
3:8:108:A:C2	3:8:112:G:N1	2.82	0.47
3:8:146:U:N3	3:8:147:G:C8	2.82	0.47
3:8:69:U:H2'	3:8:70:G:O4'	2.14	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
5:B:273:GLY:O	5:B:275:HIS:CD2	2.68	0.47
7:D:200:LEU:CB	7:D:202:GLN:HE22	2.27	0.47
13:J:64:ARG:HH21	13:J:64:ARG:HG2	1.77	0.47
14:K:110:VAL:HG12	14:K:114:ARG:NH1	2.29	0.47
14:K:71:ILE:CG2	14:K:73:VAL:HG23	2.44	0.47
16:M:5:ARG:NH2	16:M:59:ASP:OD1	2.45	0.47
17:N:99:GLN:OE1	17:N:167:ALA:HB2	2.14	0.47
21:R:32:ILE:O	21:R:33:ALA:HB3	2.13	0.47
49:S2:1099:G:C6	49:S2:1100:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1232:U:C2	49:S2:1233:G:N7	2.81	0.47
49:S2:1287:A:N6	49:S2:1314:U:C5	2.83	0.47
49:S2:140:C:O2'	49:S2:141:A:O5'	2.29	0.47
49:S2:1551:U:H1'	49:S2:1558:C:C2	2.49	0.47
49:S2:1571:G:C2	49:S2:1572:C:C2	3.02	0.47
49:S2:1603:G:N7	68:SS:28:PHE:HZ	2.09	0.47
49:S2:1654:G:C2	49:S2:1655:C:C2	3.01	0.47
49:S2:165:G:O2'	49:S2:166:A:C5'	2.63	0.47
1:5:3759:A:C6	49:S2:1709:G:C5'	2.97	0.47
49:S2:1859:A:N1	49:S2:1860:A:C5	2.82	0.47
49:S2:1860:A:C5	49:S2:1862:G:N7	2.82	0.47
49:S2:212:C:C2	49:S2:213:G:C8	3.01	0.47
49:S2:338:G:C5	49:S2:339:A:C8	3.02	0.47
49:S2:482:G:O2'	49:S2:484:A:N6	2.41	0.47
49:S2:598:G:N2	49:S2:639:C:N3	2.61	0.47
49:S2:673:G:C6	49:S2:674:C:C4	3.02	0.47
49:S2:787:G:H2'	49:S2:788:G:O4'	2.14	0.47
49:S2:64:A:N6	49:S2:82:G:C5	2.82	0.47
49:S2:857:U:C2	49:S2:858:A:N7	2.82	0.47
55:SF:14:THR:HG1	55:SF:48:TYR:HE1	1.61	0.47
62:SM:106:CYS:SG	62:SM:107:SER:N	2.88	0.47
62:SM:89:VAL:HG12	62:SM:90:GLY:H	1.79	0.47
68:SS:80:PRO:HG2	68:SS:82:TRP:NE1	2.29	0.47
69:ST:52:TRP:CE3	69:ST:53:PHE:CA	2.97	0.47
72:SW:80:ASP:OD1	72:SW:80:ASP:N	2.47	0.47
73:SX:51:VAL:HG13	73:SX:70:VAL:CG1	2.44	0.47
28:Y:69:LYS:HB3	28:Y:83:GLU:OE2	2.14	0.47
48:4:402:VAL:CG2	48:4:403:PRO:N	2.74	0.47
48:4:594:LYS:HA	48:4:600:ASN:O	2.14	0.47
48:4:744:ILE:C	48:4:745:TYR:CG	2.88	0.47
1:5:4605:A:C6	48:4:801:ARG:HD3	2.42	0.47
48:4:847:GLY:HA3	48:4:848:ILE:HG13	1.94	0.47
1:5:1175:A:N1	1:5:1176:C:C4	2.82	0.47
1:5:1185:G:N2	1:5:1186:U:H1'	2.29	0.47
1:5:142:G:C6	1:5:144:G:N7	2.82	0.47
1:5:1473:U:H2'	1:5:1474:C:O4'	2.14	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
1:5:1633:G:C6	4:A:207:VAL:HG11	2.49	0.47
1:5:173:C:N3	1:5:174:C:C4	2.80	0.47
1:5:1759:G:N1	1:5:1760:G:C5	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1838:A:C2	1:5:1839:U:C6	3.02	0.47
1:5:1850:A:C2'	1:5:1851:G:O5'	2.62	0.47
1:5:1967:A:N1	1:5:1968:G:N7	2.62	0.47
1:5:1995:G:H2'	1:5:1996:C:C6	2.50	0.47
1:5:2125:C:C6	1:5:2125:C:O5'	2.65	0.47
1:5:1881:C:O4'	1:5:2281:U:C5	2.67	0.47
1:5:2367:A:N6	1:5:2798:A:C1'	2.77	0.47
1:5:2508:U:H2'	1:5:2508:U:O2	2.14	0.47
1:5:2577:C:N3	1:5:2578:G:C8	2.82	0.47
1:5:299:C:C2'	1:5:299:C:O2	2.62	0.47
1:5:3742:G:C2	1:5:3743:G:C5	3.03	0.47
1:5:3747:A:C1'	1:5:3817:A:H2'	2.44	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
1:5:2:G:N2	1:5:3:C:C2	2.83	0.47
1:5:4092:G:H2'	1:5:4092:G:N3	2.29	0.47
1:5:4109:G:C2	1:5:4110:C:C2	3.01	0.47
1:5:423:G:H2'	19:P:118:GLN:NE2	2.28	0.47
1:5:4324:A:N3	1:5:4325:A:C8	2.83	0.47
1:5:4433:G:C4	1:5:4434:C:C5	3.02	0.47
1:5:4576:U:H2'	1:5:4577:U:O4'	2.15	0.47
1:5:483:G:H2'	1:5:484:U:H6	1.79	0.47
1:5:4868:G:H3'	1:5:4869:U:H5''	1.96	0.47
1:5:4982:A:H2'	1:5:4982:A:N3	2.28	0.47
1:5:60:G:C4	1:5:61:A:N7	2.82	0.47
1:5:504:G:O6	1:5:654:C:N3	2.47	0.47
1:5:698:G:C6	1:5:699:C:C5	3.01	0.47
1:5:722:G:N2	6:C:343:GLN:HE22	2.13	0.47
1:5:90:G:C5	1:5:92:C:C1'	2.97	0.47
1:5:950:G:C2	1:5:951:G:C5	3.02	0.47
1:5:985:C:O2	1:5:986:C:C6	2.67	0.47
1:5:98:A:N6	1:5:99:A:C4	2.82	0.47
2:7:93:G:N2	2:7:94:C:C2	2.82	0.47
3:8:115:G:C2	3:8:116:C:N1	2.81	0.47
5:B:240:LEU:HB3	5:B:244:THR:HG21	1.97	0.47
6:C:122:TYR:HB2	6:C:280:PRO:CG	2.44	0.47
6:C:125:CYS:HG	6:C:264:TYR:HE2	1.58	0.47
17:N:135:ILE:HG21	17:N:151:ILE:CD1	2.44	0.47
19:P:41:ILE:HD11	19:P:150:LEU:CD1	2.39	0.47
49:S2:1067:C:C2	49:S2:1068:G:C8	3.02	0.47
49:S2:112:U:H5''	49:S2:113:G:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:114:G:C2	49:S2:383:G:N2	2.82	0.47
49:S2:1410:C:C2'	49:S2:1410:C:O2	2.62	0.47
49:S2:1573:G:C2	49:S2:1574:C:C2	3.02	0.47
49:S2:1595:U:O4	49:S2:1596:U:H5	1.88	0.47
49:S2:1624:U:H2'	49:S2:1625:U:O5'	2.14	0.47
49:S2:1629:C:N3	49:S2:1630:A:C8	2.82	0.47
49:S2:1035:A:H1'	49:S2:1857:G:H1'	1.96	0.47
49:S2:23:G:C6	49:S2:24:C:C4	3.02	0.47
49:S2:61:A:N3	49:S2:335:G:H1'	2.29	0.47
49:S2:340:C:N1	49:S2:341:C:C5	2.82	0.47
49:S2:46:A:C6	49:S2:473:A:C2	3.02	0.47
49:S2:525:A:N6	49:S2:588:G:N2	2.60	0.47
49:S2:648:A:C4	49:S2:649:U:C6	3.02	0.47
49:S2:862:A:C4	49:S2:863:U:C6	3.03	0.47
49:S2:900:C:C2	49:S2:901:G:N7	2.82	0.47
49:S2:978:G:N3	49:S2:979:C:C6	2.82	0.47
49:S2:987:A:H2	51:SB:114:VAL:HG21	1.79	0.47
50:SA:38:ILE:HD11	50:SA:150:THR:CG2	2.44	0.47
1:5:4100:C:O3'	51:SB:226:GLY:HA2	2.14	0.47
53:SD:76:ARG:HB3	53:SD:77:PHE:CD2	2.49	0.47
55:SF:161:ALA:HB3	55:SF:172:CYS:SG	2.53	0.47
56:SG:209:TYR:O	56:SG:213:LEU:N	2.47	0.47
60:SK:12:TYR:CE2	60:SK:79:LEU:HD23	2.49	0.47
72:SW:41:MET:HG2	72:SW:129:PHE:CD2	2.49	0.47
74:SY:27:VAL:HB	74:SY:69:THR:HG23	1.96	0.47
48:4:114:GLU:CB	48:4:532:PRO:HG2	2.39	0.47
48:4:39:LEU:O	48:4:43:ALA:N	2.47	0.47
48:4:449:ARG:CZ	48:4:460:PRO:CB	2.93	0.47
48:4:477:GLN:HG3	48:4:478:PHE:CZ	2.50	0.47
48:4:410:PHE:CZ	48:4:530:SER:HB3	2.50	0.47
48:4:568:ILE:CG2	48:4:569:PRO:N	2.77	0.47
48:4:73:THR:CG2	48:4:74:ALA:N	2.39	0.47
48:4:769:HIS:C	48:4:786:ALA:HB2	2.31	0.47
48:4:744:ILE:CD1	48:4:816:HIS:CD2	2.97	0.47
1:5:1257:A:C6	1:5:1258:G:C4	3.03	0.47
1:5:1380:G:N2	1:5:1382:G:C4	2.83	0.47
1:5:1428:U:H5'	1:5:1429:C:OP2	2.14	0.47
1:5:1477:C:C2	1:5:1478:C:C6	3.02	0.47
1:5:1489:G:N1	1:5:1490:G:C8	2.82	0.47
1:5:1770:A:C2	1:5:1771:U:C2	3.03	0.47
1:5:1866:U:C5	1:5:4405:G:C1'	2.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1877:G:C5	1:5:1878:G:N7	2.82	0.47
1:5:1940:G:H2'	1:5:1941:A:C5'	2.45	0.47
1:5:21:G:C8	1:5:21:G:H3'	2.49	0.47
1:5:2399:G:N3	1:5:2400:G:C8	2.81	0.47
1:5:2455:G:H2'	1:5:2456:G:C5'	2.44	0.47
1:5:2507:A:N7	1:5:2508:U:C5	2.82	0.47
1:5:268:G:C2	1:5:269:G:N9	2.82	0.47
1:5:2816:G:C5	1:5:2817:C:C5	3.03	0.47
1:5:3636:C:N3	1:5:3637:U:C5	2.82	0.47
1:5:3755:G:C2	1:5:3756:A:C8	3.02	0.47
1:5:3839:G:N1	1:5:3842:C:N4	2.63	0.47
1:5:4224:A:C6	1:5:4225:G:C8	3.02	0.47
1:5:4238:G:C6	1:5:4239:A:C5	3.03	0.47
1:5:450:G:C6	1:5:1295:C:C4	3.03	0.47
1:5:4627:U:O2	1:5:4627:U:C2'	2.60	0.47
1:5:4871:C:H3'	16:M:91:TRP:HE1	1.79	0.47
1:5:3853:U:O2'	1:5:4979:A:H1'	2.14	0.47
1:5:5050:C:H2'	1:5:5050:C:O2	2.14	0.47
1:5:511:C:H2'	1:5:512:U:C6	2.49	0.47
1:5:743:G:C2	1:5:744:G:C5	3.03	0.47
3:8:127:U:O2'	3:8:128:C:O4'	2.33	0.47
4:A:209:HIS:CE1	4:A:211:PHE:H	2.33	0.47
4:A:3:ARG:CG	4:A:3:ARG:HH11	2.25	0.47
1:5:4565:C:H1'	5:B:262:VAL:HG21	1.95	0.47
9:F:124:PHE:HD2	9:F:196:ILE:CG2	2.27	0.47
9:F:213:PHE:N	9:F:213:PHE:CD1	2.83	0.47
11:H:41:ILE:CD1	11:H:69:THR:HG21	2.44	0.47
15:L:90:VAL:HG12	15:L:94:ILE:HD12	1.96	0.47
18:O:57:PHE:HZ	18:O:82:ARG:HH21	1.62	0.47
49:S2:999:G:N2	49:S2:1000:C:C2	2.81	0.47
49:S2:933:G:C5	49:S2:1001:A:C5	3.03	0.47
49:S2:1072:U:H3'	49:S2:1073:U:H5'	1.96	0.47
49:S2:1041:G:C2	49:S2:1075:C:C2	3.02	0.47
49:S2:1136:U:C2	49:S2:1137:U:C5	3.01	0.47
49:S2:1145:A:N6	49:S2:1150:A:C2	2.83	0.47
49:S2:118:C:C4	49:S2:119:U:N1	2.82	0.47
49:S2:1253:A:C2	49:S2:1666:C:H1'	2.49	0.47
49:S2:1352:G:C1'	49:S2:1378:A:C2	2.97	0.47
49:S2:1456:G:C6	49:S2:1457:U:C4	3.02	0.47
49:S2:1459:G:C4	49:S2:1460:C:C6	3.03	0.47
49:S2:1332:A:C2	49:S2:1500:G:H1'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1576:G:C2	49:S2:1577:G:C4	3.02	0.47
49:S2:1578:U:H6	53:SD:6:SER:CB	2.27	0.47
49:S2:167:G:C6	49:S2:168:C:C4	3.03	0.47
49:S2:1797:U:H2'	49:S2:1798:C:C6	2.49	0.47
49:S2:1868:U:P	49:S2:1869:A:H8	2.37	0.47
49:S2:429:C:C2	49:S2:430:C:C5	3.03	0.47
49:S2:474:G:C6	49:S2:475:C:C5	3.02	0.47
49:S2:552:G:N3	49:S2:553:U:C6	2.83	0.47
49:S2:807:G:N1	49:S2:808:A:C5	2.82	0.47
49:S2:868:G:N1	57:SH:115:LYS:HD2	2.29	0.47
49:S2:952:G:H2'	49:S2:953:C:C6	2.50	0.47
22:S:78:PHE:CE1	22:S:102:THR:HG22	2.50	0.47
56:SG:180:VAL:CG1	56:SG:185:LEU:HD21	2.44	0.47
57:SH:83:LEU:CD1	57:SH:92:VAL:HG21	2.45	0.47
58:SI:110:ARG:HG2	58:SI:114:GLU:HG3	1.95	0.47
59:SJ:76:ALA:O	59:SJ:80:ARG:HG3	2.13	0.47
60:SK:52:LEU:HB3	60:SK:58:VAL:HG12	1.95	0.47
68:SS:40:TYR:CE2	68:SS:97:GLN:CD	2.87	0.47
49:S2:1157:G:O6	72:SW:89:TRP:HZ3	1.96	0.47
24:U:33:ILE:CD1	24:U:96:LEU:HD22	2.45	0.47
48:4:165:LEU:HD22	48:4:165:LEU:N	2.29	0.47
48:4:170:GLU:HG3	48:4:171:PRO:HD2	1.96	0.47
48:4:264:ARG:O	48:4:288:THR:CG2	2.61	0.47
48:4:272:LYS:HD2	48:4:273:PHE:HE1	1.75	0.47
48:4:477:GLN:HG2	48:4:478:PHE:CD2	2.50	0.47
48:4:81:LEU:CB	48:4:86:LEU:CD1	2.93	0.47
1:5:10:A:H1'	1:5:2472:A:C6	2.49	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
1:5:1362:G:C5	1:5:1363:C:C5	3.02	0.47
1:5:1410:U:C5	1:5:1815:G:N2	2.83	0.47
1:5:1664:U:C2	1:5:1665:C:C5	3.03	0.47
1:5:169:G:C6	1:5:170:C:C4	3.02	0.47
1:5:1983:A:H2	1:5:2010:A:H3'	1.80	0.47
1:5:2044:U:O2	1:5:2044:U:H2'	2.15	0.47
1:5:2080:U:H2'	1:5:2081:C:H6	1.79	0.47
1:5:2083:C:H3'	1:5:2084:C:H5''	1.96	0.47
1:5:2281:U:C2'	1:5:2281:U:O2	2.59	0.47
1:5:2340:C:C2	1:5:2341:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2445:C:C2	1:5:2446:C:C5	3.02	0.47
1:5:2548:C:C2	1:5:2549:G:C8	3.02	0.47
1:5:258:G:C4	1:5:259:C:C6	3.02	0.47
1:5:258:G:C6	1:5:259:C:C5	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
1:5:2688:G:C4	1:5:2689:C:C5	3.03	0.47
1:5:2895:A:C2	1:5:2896:G:C8	3.02	0.47
1:5:368:C:C2	1:5:374:G:N2	2.83	0.47
1:5:3718:A:H2'	1:5:3719:A:C1'	2.44	0.47
1:5:3773:U:H2'	1:5:3774:A:C8	2.49	0.47
1:5:3803:A:H2'	1:5:3803:A:N3	2.30	0.47
1:5:4173:G:C4	1:5:4174:U:C5	3.03	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
1:5:449:C:H2'	1:5:449:C:O2	2.13	0.47
1:5:4510:A:N6	1:5:4592:C:C1'	2.77	0.47
1:5:4723:A:C4	1:5:4724:A:N7	2.83	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
1:5:4769:G:H2'	1:5:4770:U:O4'	2.15	0.47
1:5:4862:G:C6	1:5:4863:G:N7	2.83	0.47
1:5:5004:C:C5	1:5:5005:G:C4	3.01	0.47
1:5:659:G:C2	1:5:660:A:N9	2.81	0.47
1:5:88:A:O2'	1:5:89:C:O5'	2.33	0.47
1:5:993:G:N1	1:5:994:G:C5	2.82	0.47
3:8:34:U:C4'	3:8:34:U:C2	2.97	0.47
4:A:40:TYR:HE2	4:A:89:TYR:CD2	2.32	0.47
5:B:321:VAL:O	5:B:322:HIS:HB3	2.14	0.47
8:E:129:PHE:CD1	8:E:129:PHE:C	2.87	0.47
8:E:158:VAL:HG22	8:E:180:VAL:HG21	1.96	0.47
10:G:182:CYS:HA	10:G:226:TYR:CE2	2.50	0.47
10:G:58:PRO:CG	27:X:46:PHE:HD2	2.26	0.47
14:K:104:ILE:HD12	14:K:140:GLY:CA	2.44	0.47
14:K:80:LEU:HD23	14:K:83:LYS:NZ	2.29	0.47
15:L:176:PHE:HD1	15:L:176:PHE:C	2.17	0.47
15:L:176:PHE:HD1	15:L:177:LYS:N	2.12	0.47
1:5:27:C:OP1	17:N:193:ARG:HD3	2.14	0.47
1:5:3605:C:OP2	21:R:71:ARG:NH1	2.45	0.47
49:S2:1066:U:O4	49:S2:1067:C:C5	2.68	0.47
49:S2:115:U:H2'	49:S2:116:U:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1201:U:H1'	49:S2:1357:A:N3	2.29	0.47
49:S2:1314:U:H4'	60:SK:2:LEU:HA	1.97	0.47
49:S2:1459:G:C2	49:S2:1460:C:C2	3.03	0.47
49:S2:1541:G:N2	49:S2:1542:C:C6	2.83	0.47
49:S2:159:A:O2'	49:S2:160:U:H5'	2.15	0.47
49:S2:1616:U:H3	49:S2:1620:A:H2	1.62	0.47
49:S2:1688:C:C2	49:S2:1689:C:C6	3.02	0.47
49:S2:167:G:C2	49:S2:168:C:C2	3.02	0.47
49:S2:1771:G:C2	49:S2:1772:C:N1	2.83	0.47
49:S2:1781:A:C2	49:S2:1782:G:N7	2.82	0.47
49:S2:410:G:N1	49:S2:411:G:C5	2.83	0.47
49:S2:493:A:H61	49:S2:509:G:N2	2.13	0.47
49:S2:597:G:N2	49:S2:640:A:C4	2.82	0.47
49:S2:631:U:H5'	49:S2:631:U:H6	1.79	0.47
49:S2:855:G:C5	49:S2:856:C:C6	3.03	0.47
49:S2:878:G:C6	49:S2:879:C:C5	3.03	0.47
49:S2:998:A:C8	49:S2:998:A:C3'	2.98	0.47
58:SI:120:PRO:HG3	58:SI:133:GLU:HG3	1.97	0.47
58:SI:54:LYS:HD3	58:SI:181:GLN:HE22	1.80	0.47
58:SI:83:TYR:CD1	58:SI:84:ASN:N	2.82	0.47
66:SQ:15:ARG:HG2	66:SQ:20:THR:HG22	1.95	0.47
49:S2:1453:C:H1'	67:SR:48:ASN:HD21	1.77	0.47
28:Y:62:TYR:HD1	28:Y:62:TYR:N	2.12	0.47
48:4:160:MET:HE3	48:4:178:PHE:HZ	1.65	0.47
48:4:193:GLY:HA3	48:4:203:ILE:HD11	1.97	0.47
48:4:244:LEU:H	48:4:244:LEU:CD2	2.27	0.47
48:4:609:PHE:HD2	48:4:699:GLY:HA2	1.79	0.47
48:4:616:ASP:OD2	48:4:622:VAL:HG13	2.15	0.47
48:4:650:TRP:CZ3	48:4:679:VAL:CG1	2.87	0.47
48:4:727:ARG:CG	48:4:727:ARG:NH1	2.76	0.47
48:4:756:VAL:HG21	48:4:782:PHE:CD1	2.42	0.47
48:4:744:ILE:CG1	48:4:815:ASP:HB3	2.44	0.47
48:4:730:TYR:CB	48:4:854:PHE:CE2	2.97	0.47
1:5:1754:U:O4'	1:5:1754:U:O2	2.31	0.47
1:5:1836:G:H2'	1:5:1836:G:N3	2.30	0.47
1:5:1846:G:N1	1:5:1847:C:C4	2.82	0.47
1:5:1975:G:O4'	1:5:1976:G:OP2	2.33	0.47
1:5:2019:C:N3	1:5:2020:U:C5	2.83	0.47
1:5:2089:G:O2'	1:5:2090:U:P	2.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2365:C:C2	1:5:2829:U:C5	3.02	0.47
1:5:2422:C:N3	1:5:2423:A:C8	2.82	0.47
1:5:2577:C:C2	1:5:2578:G:C8	3.02	0.47
1:5:2592:U:C5	1:5:2593:C:C5	3.02	0.47
1:5:2829:U:N3	1:5:2830:G:N7	2.62	0.47
1:5:2843:U:C4	1:5:2844:A:N7	2.83	0.47
1:5:3717:A:C5	1:5:3736:A:C6	2.97	0.47
1:5:3759:A:C8	1:5:3765:G:C2	3.02	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
1:5:4165:C:O2	1:5:4165:C:H2'	2.15	0.47
1:5:4233:A:C5	1:5:4235:G:N7	2.82	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
1:5:4518:A:H4'	1:5:4519:C:H5'	1.96	0.47
1:5:4538:G:C6	1:5:4539:U:C4	3.03	0.47
1:5:2363:A:C1'	1:5:4560:C:H5	2.27	0.47
1:5:4652:G:C6	1:5:4653:C:C4	3.03	0.47
1:5:4730:C:C5'	1:5:4731:G:H21	2.24	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
1:5:983:C:O2	1:5:984:C:C5	2.44	0.47
1:5:985:C:C2	1:5:986:C:C5	3.02	0.47
2:7:73:U:H1'	2:7:102:U:O4	2.14	0.47
2:7:36:C:H2'	2:7:37:G:C8	2.49	0.47
3:8:35:C:C2'	3:8:36:G:O5'	2.62	0.47
3:8:73:U:N3	3:8:74:U:H1'	2.29	0.47
5:B:203:GLN:CA	5:B:203:GLN:HE21	2.14	0.47
7:D:64:ILE:HD12	7:D:105:LEU:HD21	1.96	0.47
7:D:233:PRO:O	7:D:235:MET:N	2.48	0.47
8:E:250:ASP:OD1	8:E:251:SER:N	2.48	0.47
10:G:261:LEU:HD21	10:G:264:LYS:CD	2.43	0.47
3:8:149:G:H21	10:G:64:GLN:HE22	1.61	0.47
10:G:77:PRO:HA	10:G:237:TRP:CE3	2.49	0.47
14:K:116:MET:HG3	14:K:117:ARG:NH2	2.29	0.47
14:K:36:GLY:O	14:K:37:LEU:HB2	2.15	0.47
17:N:120:TRP:HE1	17:N:122:GLY:C	2.17	0.47
19:P:30:ARG:NH2	19:P:34:GLN:OE1	2.48	0.47
49:S2:1067:C:N4	49:S2:1068:G:C6	2.83	0.47
49:S2:929:G:N2	49:S2:1104:G:H4'	2.28	0.47
49:S2:120:U:O2	49:S2:120:U:H2'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1229:G:C2	49:S2:1230:C:C2	3.02	0.47
49:S2:1235:G:C2	49:S2:1236:G:H1'	2.49	0.47
49:S2:1284:A:N6	62:SM:33:ARG:CD	2.72	0.47
49:S2:1629:C:H2'	49:S2:1629:C:O2	2.15	0.47
49:S2:1835:A:C4'	49:S2:1836:G:OP2	2.58	0.47
49:S2:1063:C:H1'	49:S2:1838:U:C5	2.48	0.47
49:S2:202:G:C2	49:S2:203:G:C8	3.02	0.47
49:S2:191:A:N6	49:S2:208:G:O2'	2.48	0.47
49:S2:310:C:N3	49:S2:311:C:C4	2.82	0.47
49:S2:311:C:H3'	49:S2:312:G:H4'	1.96	0.47
49:S2:339:A:C2'	49:S2:340:C:C5	2.87	0.47
49:S2:414:A:O2'	49:S2:415:A:H5'	2.15	0.47
49:S2:50:A:N7	49:S2:51:U:C6	2.82	0.47
49:S2:618:C:H3'	49:S2:619:A:H8	1.80	0.47
49:S2:75:G:N3	49:S2:77:A:OP2	2.46	0.47
49:S2:429:C:O2'	49:S2:811:A:N1	2.42	0.47
49:S2:832:G:C5	49:S2:833:C:C5	3.02	0.47
51:SB:120:VAL:HG22	51:SB:142:PHE:HE1	1.79	0.47
59:SJ:13:TYR:CE2	59:SJ:41:ARG:HG3	2.50	0.47
26:W:8:PHE:HD1	26:W:8:PHE:C	2.17	0.47
48:4:330:LYS:HB2	48:4:330:LYS:HZ2	1.78	0.47
48:4:538:ILE:O	48:4:538:ILE:HG23	2.13	0.47
48:4:745:TYR:CA	48:4:815:ASP:CB	2.81	0.47
1:5:1068:G:H2'	1:5:1069:G:C8	2.50	0.47
1:5:1074:G:C2	1:5:1238:A:N1	2.80	0.47
1:5:1200:G:C5	1:5:1201:U:C5	3.02	0.47
1:5:124:C:C4	1:5:125:C:C5	3.03	0.47
1:5:1570:G:N1	1:5:1571:G:C4	2.82	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
1:5:1921:C:N1	22:S:161:ARG:HG2	2.30	0.47
1:5:199:G:N2	1:5:201:C:C2	2.83	0.47
1:5:2082:G:C2	1:5:2275:G:C2	3.03	0.47
1:5:2104:G:C2	1:5:2105:A:N9	2.82	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
1:5:2391:G:C6	1:5:2392:C:C4	3.01	0.47
1:5:2436:U:C5	1:5:2783:A:C1'	2.98	0.47
1:5:247:G:C4	1:5:248:C:C6	3.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2576:G:C2	1:5:2577:C:C6	3.03	0.47
1:5:2666:U:C4	1:5:2668:G:OP2	2.68	0.47
1:5:25:A:C4	1:5:341:G:C8	3.02	0.47
1:5:3600:G:C6	1:5:3601:C:C4	3.03	0.47
1:5:3654:G:N3	1:5:3654:G:H2'	2.30	0.47
1:5:3668:C:N4	1:5:3669:G:C6	2.83	0.47
1:5:3689:G:N2	1:5:3690:U:H1'	2.30	0.47
1:5:3740:G:C5	1:5:3741:C:C5	3.01	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
1:5:3792:G:C4	1:5:3793:U:C5	3.02	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
1:5:415:G:N2	1:5:416:U:H1'	2.30	0.47
1:5:4239:A:N6	1:5:4240:G:C6	2.83	0.47
1:5:4686:G:C6	1:5:4687:A:N7	2.82	0.47
1:5:4699:U:O4	1:5:4702:G:C6	2.68	0.47
1:5:4683:U:C5	1:5:4707:A:C6	3.03	0.47
1:5:4933:C:C4	1:5:4934:A:N7	2.83	0.47
1:5:5030:U:C2	1:5:5031:G:N7	2.83	0.47
1:5:515:C:C2	1:5:647:G:N2	2.82	0.47
1:5:56:A:C6	1:5:57:G:C6	3.03	0.47
1:5:716:C:H6	1:5:716:C:H5''	1.79	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
1:5:974:C:H3'	1:5:974:C:C6	2.50	0.47
2:7:43:U:O2	2:7:43:U:H2'	2.15	0.47
3:8:138:C:O2	3:8:139:G:C8	2.68	0.47
3:8:144:U:H2'	3:8:145:C:H6	1.80	0.47
5:B:235:TRP:CE3	5:B:235:TRP:HA	2.50	0.47
6:C:208:CYS:SG	6:C:230:LEU:HD12	2.55	0.47
8:E:158:VAL:CG2	8:E:180:VAL:HG21	2.45	0.47
11:H:31:ARG:CG	11:H:31:ARG:HH11	2.27	0.47
16:M:118:MET:HG3	18:O:192:PHE:CE2	2.48	0.47
1:5:3861:A:H4'	19:P:137:ASN:ND2	2.30	0.47
49:S2:1154:U:O4'	49:S2:1154:U:O2	2.32	0.47
49:S2:119:U:C4	49:S2:120:U:H5	2.29	0.47
49:S2:1249:C:C6	49:S2:1250:A:C8	3.00	0.47
49:S2:1299:A:O2'	49:S2:1301:A:H5'	2.15	0.47
49:S2:1399:C:H2'	49:S2:1400:U:H6	1.80	0.47
49:S2:1438:A:H2'	49:S2:1439:A:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1453:C:N3	49:S2:1455:A:C1'	2.73	0.47
49:S2:1456:G:C4	49:S2:1457:U:C5	3.03	0.47
49:S2:1467:C:C4	49:S2:1468:C:C5	3.02	0.47
49:S2:1528:G:N2	49:S2:1529:C:N3	2.62	0.47
49:S2:1692:U:H2'	49:S2:1693:G:C8	2.50	0.47
49:S2:1697:A:H4'	49:S2:1698:C:H5''	1.96	0.47
49:S2:1793:A:N1	49:S2:1794:C:C5	2.83	0.47
49:S2:188:C:N3	49:S2:189:U:C5	2.83	0.47
49:S2:330:G:N2	49:S2:331:C:H1'	2.29	0.47
49:S2:44:U:O2'	49:S2:45:A:H2'	2.14	0.47
49:S2:467:G:C6	49:S2:468:A:C8	3.03	0.47
49:S2:615:C:H2'	49:S2:616:A:C8	2.49	0.47
49:S2:69:C:N3	49:S2:70:G:N7	2.62	0.47
49:S2:75:G:O2'	49:S2:76:U:H3'	2.15	0.47
49:S2:859:G:C6	49:S2:860:G:N7	2.82	0.47
49:S2:947:G:C6	49:S2:948:C:C5	3.02	0.47
49:S2:956:G:N3	49:S2:957:A:N7	2.63	0.47
50:SA:116:PHE:C	50:SA:117:ARG:CG	2.82	0.47
56:SG:13:GLN:OE1	56:SG:13:GLN:N	2.47	0.47
49:S2:797:C:N3	57:SH:109:ARG:NH2	2.62	0.47
57:SH:9:VAL:CG2	57:SH:24:SER:HB2	2.45	0.47
60:SK:83:LEU:HB2	60:SK:85:LEU:HD12	1.97	0.47
62:SM:19:GLN:HB3	62:SM:88:TRP:HB3	1.97	0.47
49:S2:1109:C:N4	67:SR:123:THR:OG1	2.48	0.47
73:SX:21:LYS:HD3	73:SX:27:TYR:CE1	2.49	0.47
25:V:99:GLU:HG3	26:W:21:TYR:OH	2.14	0.47
28:Y:27:ARG:HH21	28:Y:27:ARG:CG	2.26	0.47
28:Y:74:TYR:CD2	28:Y:77:LYS:HD2	2.49	0.47
48:4:202:ASN:OD1	48:4:204:MET:HG3	2.15	0.47
48:4:401:MET:CE	48:4:476:ASP:HA	2.44	0.47
48:4:575:PRO:HG2	48:4:577:VAL:HG23	1.97	0.47
48:4:592:LEU:CB	48:4:603:TYR:CD2	2.98	0.47
48:4:744:ILE:HG23	48:4:745:TYR:HD2	1.79	0.47
48:4:762:VAL:CG1	48:4:800:LEU:CD1	2.92	0.47
48:4:851:LEU:HA	48:4:854:PHE:HD1	1.79	0.47
1:5:1072:C:H1'	1:5:1073:G:C8	2.50	0.47
1:5:1076:C:N3	1:5:1077:C:C5	2.81	0.47
1:5:1308:C:N3	1:5:1309:C:C5	2.83	0.47
1:5:1381:U:O2	1:5:1381:U:O4'	2.32	0.47
1:5:1445:U:O2	1:5:1446:C:C6	2.68	0.47
1:5:1609:U:N3	1:5:1610:C:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1627:G:N7	1:5:1628:C:C5	2.82	0.47
1:5:1674:C:C2	1:5:1675:C:C5	3.02	0.47
1:5:1761:G:C5	1:5:1762:C:C5	3.03	0.47
1:5:181:C:C4	1:5:256:G:N1	2.83	0.47
1:5:1866:U:O2'	1:5:1867:A:H8	1.95	0.47
1:5:1900:C:C2	1:5:1901:C:C5	3.03	0.47
1:5:1971:C:H2'	1:5:1971:C:O2	2.14	0.47
1:5:1991:A:C3'	1:5:1991:A:C8	2.98	0.47
1:5:2276:A:C5	1:5:2277:C:C6	3.03	0.47
1:5:2351:C:C2	1:5:2352:U:C5	3.02	0.47
1:5:259:C:N3	1:5:260:C:C6	2.83	0.47
1:5:2737:C:C2	1:5:2738:C:C6	3.03	0.47
1:5:2756:G:C2	1:5:2757:A:C5	3.03	0.47
1:5:290:U:N3	1:5:291:U:C4	2.83	0.47
1:5:66:A:C6	1:5:328:A:C5	3.02	0.47
1:5:370:U:C4	1:5:1637:A:C5	3.02	0.47
1:5:3761:C:O4'	1:5:3761:C:O2	2.30	0.47
1:5:389:A:N3	1:5:389:A:H2'	2.29	0.47
1:5:4147:G:N2	1:5:4148:C:C2	2.82	0.47
1:5:4281:A:C2	1:5:4283:G:N7	2.83	0.47
1:5:4286:C:H2'	1:5:4287:G:H8	1.80	0.47
1:5:4510:A:C2	1:5:4511:A:C2	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
1:5:4744:A:C2	1:5:4745:G:N7	2.83	0.47
1:5:4895:C:C2	1:5:4896:G:N7	2.82	0.47
1:5:5000:G:H2'	1:5:5001:U:O5'	2.14	0.47
1:5:504:G:N1	1:5:654:C:O2	2.42	0.47
1:5:517:C:C2	1:5:645:G:N2	2.83	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
1:5:746:A:N1	1:5:916:C:OP2	2.47	0.47
1:5:938:C:H2'	1:5:939:G:H8	1.76	0.47
1:5:952:G:N2	1:5:953:C:C2	2.83	0.47
1:5:987:C:C2	1:5:988:C:C6	3.03	0.47
3:8:70:G:C6	3:8:87:G:C2	3.03	0.47
5:B:254:ILE:HG21	5:B:262:VAL:CG1	2.45	0.47
9:F:69:THR:O	9:F:73:MET:HG3	2.15	0.47
17:N:135:ILE:HG23	17:N:142:ILE:HD13	1.97	0.47
49:S2:1113:A:C2'	49:S2:1114:U:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1132:C:O2	49:S2:1132:C:H2'	2.15	0.47
49:S2:118:C:H1'	49:S2:445:A:C5	2.50	0.47
49:S2:1204:A:N1	49:S2:1205:C:C4	2.82	0.47
49:S2:122:G:C4	49:S2:123:G:C8	3.02	0.47
49:S2:1304:U:O2	49:S2:1305:C:C6	2.68	0.47
49:S2:1351:G:H1'	50:SA:110:ASN:HD21	1.79	0.47
49:S2:1537:A:C5	49:S2:1538:C:C6	3.02	0.47
49:S2:1540:G:N2	49:S2:1541:G:H1'	2.29	0.47
49:S2:1609:C:N3	49:S2:1610:G:N7	2.62	0.47
49:S2:167:G:C2	49:S2:168:C:C4	3.03	0.47
49:S2:211:G:C5	49:S2:212:C:C5	3.03	0.47
49:S2:217:A:C5	49:S2:218:U:C5	3.03	0.47
49:S2:316:G:N3	49:S2:317:C:C6	2.83	0.47
49:S2:310:C:HO2'	49:S2:339:A:HO2'	1.42	0.47
49:S2:377:G:C6	49:S2:378:U:C4	3.03	0.47
49:S2:46:A:C6	49:S2:99:A:C8	3.03	0.47
49:S2:66:G:N7	49:S2:68:A:N7	2.62	0.47
49:S2:752:G:C6	49:S2:791:C:C2	3.03	0.47
49:S2:897:U:H2'	49:S2:898:U:O4'	2.14	0.47
22:S:33:PHE:HE2	22:S:106:VAL:CG1	2.25	0.47
53:SD:103:GLU:HA	53:SD:103:GLU:OE1	2.15	0.47
56:SG:226:GLU:HA	56:SG:229:ALA:HB3	1.96	0.47
59:SJ:130:ILE:HG12	59:SJ:135:ILE:HD11	1.97	0.47
64:SO:42:VAL:O	64:SO:55:ARG:O	2.32	0.47
65:SP:52:LYS:HA	65:SP:52:LYS:HE2	1.97	0.47
27:X:116:LEU:CB	27:X:117:TYR:CE1	2.98	0.47
27:X:73:HIS:O	27:X:116:LEU:CD1	2.63	0.47
48:4:125:ALA:O	48:4:154:VAL:HB	2.15	0.47
48:4:267:ASP:C	48:4:267:ASP:CG	2.74	0.47
48:4:683:PHE:CD1	48:4:729:LEU:CD2	2.96	0.47
1:5:1189:G:C2	1:5:1190:C:C6	3.02	0.47
1:5:1219:G:C6	1:5:1220:G:N7	2.83	0.47
1:5:1264:C:H2'	1:5:1265:G:H5'	1.95	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
1:5:1474:C:N3	1:5:1475:G:N7	2.63	0.47
1:5:1486:C:H2'	1:5:1487:G:O4'	2.15	0.47
1:5:154:G:C6	1:5:155:C:C4	3.03	0.47
1:5:1572:U:H4'	21:R:95:TRP:CZ2	2.50	0.47
1:5:1663:C:H2'	1:5:1664:U:C6	2.50	0.47
1:5:1986:U:O4	1:5:2011:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2017:A:C5	1:5:2018:C:C6	3.03	0.47
1:5:2301:G:C6	1:5:2302:C:C4	3.02	0.47
1:5:2368:A:C2	1:5:2788:U:C5	3.03	0.47
1:5:2424:G:H2'	1:5:2426:U:C4	2.50	0.47
1:5:2440:U:HO2'	1:5:2441:C:P	2.38	0.47
1:5:246:G:N2	1:5:247:G:N9	2.63	0.47
1:5:2504:C:OP1	1:5:2504:C:H4'	2.15	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
1:5:2773:G:C2	1:5:2774:C:C5	3.02	0.47
1:5:3719:A:N7	1:5:3720:G:C8	2.83	0.47
1:5:4240:G:N3	1:5:4241:C:H1'	2.30	0.47
1:5:4333:C:N3	1:5:4334:U:C5	2.82	0.47
1:5:4498:U:N3	1:5:4500:U:OP2	2.47	0.47
1:5:4506:C:H2'	1:5:4507:A:O4'	2.15	0.47
1:5:4729:A:H4'	1:5:4965:U:HO2'	1.78	0.47
1:5:4737:G:H8	1:5:4737:G:H5'	1.79	0.47
1:5:4887:C:H2'	1:5:4888:U:C6	2.49	0.47
1:5:5003:U:C2	1:5:5045:G:C2	3.03	0.47
1:5:5014:A:OP1	1:5:5014:A:H3'	2.15	0.47
1:5:504:G:C2	1:5:505:G:C4	3.03	0.47
1:5:70:A:H4'	1:5:71:C:H5'	1.96	0.47
1:5:977:C:H2'	1:5:978:G:O4'	2.14	0.47
2:7:66:G:C2	2:7:67:C:C2	3.03	0.47
3:8:115:G:N1	3:8:116:C:C4	2.83	0.47
3:8:120:G:H2'	3:8:121:G:H5'	1.96	0.47
5:B:260:ALA:C	5:B:261:ARG:HD3	2.35	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
8:E:53:TYR:CE2	8:E:61:ARG:NH2	2.82	0.47
14:K:56:LEU:HB2	14:K:91:ASP:OD1	2.06	0.47
15:L:8:MET:HB2	15:L:10:LEU:HD13	1.97	0.47
20:Q:75:ARG:CG	20:Q:75:ARG:HH11	2.28	0.47
49:S2:1102:G:H1	49:S2:1130:G:H22	1.63	0.47
49:S2:1265:A:C2	49:S2:1266:C:C6	3.02	0.47
49:S2:1279:C:N3	49:S2:1280:G:C8	2.83	0.47
49:S2:1304:U:H2'	49:S2:1304:U:O2	2.12	0.47
49:S2:1411:G:C8	49:S2:1412:C:H1'	2.49	0.47
49:S2:1455:A:C5	49:S2:1456:G:N7	2.83	0.47
49:S2:1501:C:C4	49:S2:1502:C:C5	3.02	0.47
49:S2:1543:U:O2'	49:S2:1544:C:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1791:A:N7	49:S2:1792:G:C8	2.83	0.47
49:S2:289:G:N2	49:S2:295:C:C2	2.83	0.47
49:S2:29:G:C2	49:S2:30:C:C2	3.02	0.47
49:S2:383:G:C8	49:S2:384:U:C2	3.03	0.47
49:S2:460:A:N3	49:S2:461:U:H6	2.08	0.47
49:S2:533:A:N1	49:S2:534:G:C4	2.83	0.47
22:S:94:TYR:HE2	22:S:96:GLU:HG3	1.77	0.47
55:SF:177:LEU:O	55:SF:181:ALA:HB2	2.15	0.47
55:SF:24:SER:O	55:SF:107:ASN:ND2	2.48	0.47
56:SG:162:LEU:HD11	56:SG:165:GLU:CD	2.35	0.47
57:SH:135:PHE:CD1	57:SH:136:PRO:CA	2.98	0.47
57:SH:131:GLU:OE2	57:SH:139:ILE:HD12	2.14	0.47
49:S2:1590:C:H5'	69:ST:82:ARG:CD	2.44	0.47
24:U:87:THR:HG23	24:U:102:VAL:HG21	1.97	0.47
48:4:510:GLU:CG	48:4:511:ALA:N	2.78	0.47
48:4:616:ASP:OD1	48:4:621:GLU:CG	2.63	0.47
48:4:643:VAL:HG22	48:4:647:ARG:HD2	1.95	0.47
48:4:685:TRP:CH2	48:4:723:PRO:HG3	2.50	0.47
48:4:745:TYR:CZ	48:4:790:VAL:HG22	2.50	0.47
1:5:1092:G:C2	1:5:1093:C:C2	3.03	0.47
1:5:1092:G:N2	1:5:1093:C:C2	2.83	0.47
1:5:1265:G:C2	1:5:1266:G:C4	3.02	0.47
1:5:1443:A:C4	1:5:1444:G:C8	3.03	0.47
1:5:1585:C:N3	1:5:1586:G:C8	2.83	0.47
1:5:1664:U:H2'	1:5:1665:C:C6	2.49	0.47
1:5:166:C:O2	1:5:166:C:C2'	2.62	0.47
1:5:1770:A:H2'	1:5:1771:U:O4'	2.15	0.47
1:5:1797:G:N3	1:5:1798:G:C8	2.83	0.47
1:5:1949:U:O2	1:5:1950:U:H6	1.94	0.47
1:5:1988:G:N1	1:5:1989:G:C5	2.83	0.47
1:5:2065:G:H2'	1:5:2066:C:O4'	2.13	0.47
1:5:210:C:C4	1:5:231:U:N3	2.83	0.47
1:5:2285:A:H2'	1:5:2286:G:O4'	2.14	0.47
1:5:2726:G:N3	1:5:2727:C:C6	2.83	0.47
1:5:290:U:H2'	1:5:291:U:C6	2.50	0.47
1:5:328:A:C6	1:5:329:A:N6	2.83	0.47
1:5:3584:C:O2	1:5:3585:G:C8	2.67	0.47
1:5:3622:C:C2	1:5:3623:C:N3	2.82	0.47
1:5:3813:A:C2	1:5:4539:U:O4'	2.68	0.47
1:5:4079:C:O2	1:5:4079:C:C2'	2.63	0.47
1:5:4116:C:O2'	1:5:4116:C:O2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4119:C:O4'	1:5:4119:C:O2	2.31	0.47
1:5:4147:G:C2	1:5:4148:C:C6	3.03	0.47
1:5:4199:C:H3'	1:5:4199:C:C2	2.50	0.47
1:5:4257:A:N7	13:J:60:PHE:HE2	2.13	0.47
1:5:4362:A:C2	1:5:4363:A:N9	2.82	0.47
1:5:4518:A:H3'	1:5:4519:C:C5'	2.44	0.47
1:5:4547:C:O2	1:5:4547:C:H2'	2.15	0.47
1:5:46:U:OP2	1:5:47:A:C2'	2.62	0.47
1:5:4733:C:C5	1:5:4734:A:H1'	2.49	0.47
1:5:4916:G:C4	1:5:4917:C:C6	3.03	0.47
1:5:4992:G:H2'	1:5:4993:G:C8	2.49	0.47
1:5:698:G:N1	1:5:699:C:C5	2.83	0.47
1:5:951:G:C2	1:5:952:G:C5	3.02	0.47
1:5:90:G:N3	1:5:95:G:N1	2.63	0.47
3:8:134:G:N2	3:8:135:C:N1	2.62	0.47
3:8:54:C:C5	3:8:55:U:C5	3.03	0.47
1:5:3706:C:OP1	4:A:226:ARG:HG3	2.15	0.47
4:A:43:GLY:HA3	4:A:63:PHE:CD1	2.50	0.47
1:5:4726:G:C4'	5:B:130:PHE:CE1	2.96	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
1:5:1284:G:C6	6:C:312:ARG:NH2	2.83	0.47
2:7:8:G:P	7:D:33:ARG:HH22	2.37	0.47
9:F:168:ARG:CD	9:F:211:TRP:CD1	2.98	0.47
1:5:2117:G:H1'	9:F:51:LEU:HD13	1.97	0.47
11:H:41:ILE:O	11:H:41:ILE:HD12	2.15	0.47
7:D:284:LYS:HB3	12:I:209:TRP:CH2	2.49	0.47
13:J:166:PHE:CE2	13:J:172:GLY:HA3	2.50	0.47
14:K:111:ASN:CA	14:K:114:ARG:HG2	2.45	0.47
14:K:34:PRO:CD	14:K:35:LEU:H	2.26	0.47
14:K:58:ILE:C	14:K:59:THR:HG23	2.36	0.47
16:M:119:ARG:HH21	16:M:119:ARG:CG	2.28	0.47
20:Q:105:VAL:HB	20:Q:110:ARG:HH12	1.80	0.47
20:Q:25:LEU:HD12	20:Q:28:LEU:HD11	1.96	0.47
49:S2:1005:G:C4	49:S2:1006:C:C5	3.03	0.47
49:S2:1066:U:N3	49:S2:1067:C:C5	2.83	0.47
49:S2:1108:G:C2	49:S2:1125:C:C2	3.03	0.47
49:S2:118:C:H1'	49:S2:445:A:N1	2.30	0.47
49:S2:1219:C:C5	49:S2:1220:A:C6	3.03	0.47
49:S2:1408:U:H5''	66:SQ:71:ARG:HE	1.79	0.47
49:S2:1446:A:H5'	70:SU:57:PRO:HA	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1541:G:C2	49:S2:1593:C:C2	3.02	0.47
49:S2:1590:C:C5	49:S2:1591:C:H1'	2.50	0.47
49:S2:1709:G:C6	49:S2:1710:C:C4	3.03	0.47
49:S2:1810:U:C2	49:S2:1811:C:C6	3.03	0.47
49:S2:333:G:C2	49:S2:334:C:C2	3.03	0.47
49:S2:426:A:N3	49:S2:427:U:C4	2.82	0.47
49:S2:431:G:N3	49:S2:432:G:C8	2.83	0.47
49:S2:52:G:N3	49:S2:53:C:H1'	2.29	0.47
49:S2:61:A:H5'	49:S2:61:A:H8	1.80	0.47
49:S2:693:A:C2	49:S2:694:G:C4	3.03	0.47
49:S2:693:A:C2	49:S2:694:G:C5	3.03	0.47
49:S2:797:C:C2	57:SH:109:ARG:CZ	2.96	0.47
49:S2:880:G:C5	49:S2:881:G:N7	2.82	0.47
49:S2:897:U:N3	49:S2:898:U:C6	2.83	0.47
49:S2:902:G:C6	49:S2:903:A:C2	3.03	0.47
49:S2:952:G:C6	49:S2:953:C:C4	3.03	0.47
49:S2:993:G:N2	49:S2:994:C:C2	2.83	0.47
49:S2:993:G:C5	49:S2:994:C:C6	3.02	0.47
53:SD:132:LYS:HB3	53:SD:189:MET:CG	2.45	0.47
54:SE:11:ARG:O	54:SE:12:VAL:CB	2.62	0.47
58:SI:118:ALA:HB1	58:SI:137:LEU:HD21	1.96	0.47
59:SJ:48:PHE:HE2	59:SJ:52:LYS:HE3	1.79	0.47
62:SM:101:ARG:C	62:SM:102:LYS:CG	2.83	0.47
49:S2:823:U:C2	74:SY:64:PHE:CD2	3.02	0.47
27:X:110:LYS:CD	27:X:111:GLN:HE22	2.28	0.47
48:4:228:PHE:CD1	48:4:232:TYR:HE2	2.28	0.47
48:4:41:CYS:SG	48:4:49:ALA:HB1	2.54	0.47
1:5:1348:U:C2	1:5:1349:G:N7	2.83	0.47
1:5:1375:C:N3	1:5:1376:C:C5	2.83	0.47
1:5:1380:G:H2'	1:5:1382:G:C6	2.50	0.47
1:5:1467:C:H2'	1:5:1467:C:O2	2.15	0.47
1:5:1693:U:H2'	1:5:1694:C:O4'	2.14	0.47
1:5:1770:A:C4	1:5:1771:U:C6	3.03	0.47
1:5:1780:A:C2	1:5:1781:U:C1'	2.98	0.47
1:5:2108:G:C5	1:5:2109:G:H1'	2.49	0.47
1:5:2126:G:O3'	1:5:2127:C:O4'	2.33	0.47
1:5:219:G:N9	1:5:219:G:H5'	2.30	0.47
1:5:2247:C:H5''	1:5:2248:C:H6	1.80	0.47
1:5:2265:G:C1'	1:5:2266:C:OP1	2.63	0.47
1:5:2267:U:O2	1:5:2267:U:O4'	2.31	0.47
1:5:2270:G:H2'	1:5:2271:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2327:G:C4	1:5:2328:G:C8	3.03	0.47
1:5:2453:A:N3	1:5:2453:A:H2'	2.29	0.47
1:5:2532:C:C4	1:5:2533:C:N4	2.83	0.47
1:5:2773:G:C6	1:5:2774:C:C4	3.03	0.47
1:5:295:A:O3'	1:5:296:A:N7	2.48	0.47
1:5:316:U:O4	1:5:4353:U:C1'	2.63	0.47
1:5:3608:A:C2	1:5:3609:G:C5	3.02	0.47
1:5:362:A:C2	3:8:53:G:H1'	2.50	0.47
1:5:3744:G:H2'	1:5:3745:U:O5'	2.15	0.47
1:5:3700:C:O2'	1:5:3774:A:N3	2.39	0.47
1:5:3830:A:C6	1:5:3831:U:C5	3.03	0.47
1:5:4077:A:C8	1:5:4078:C:C6	3.03	0.47
1:5:4087:G:C3'	1:5:4087:G:C8	2.98	0.47
1:5:4095:G:C2	1:5:4096:C:N4	2.82	0.47
1:5:4114:C:H2'	1:5:4115:G:C1'	2.44	0.47
1:5:3927:U:H3	1:5:4184:G:H1	1.63	0.47
1:5:4283:G:C4	1:5:4284:C:C6	3.02	0.47
1:5:322:C:C2	1:5:4356:G:N1	2.82	0.47
1:5:4509:U:H2'	1:5:4510:A:C2'	2.44	0.47
1:5:4535:A:N1	1:5:4536:C:C6	2.83	0.47
1:5:4551:U:N3	1:5:4552:U:C4	2.83	0.47
1:5:4916:G:C2	1:5:4917:C:C2	3.02	0.47
1:5:4942:C:O2'	1:5:4944:C:P	2.73	0.47
1:5:669:C:O2'	1:5:670:G:O5'	2.33	0.47
1:5:716:C:H6	1:5:716:C:C5'	2.28	0.47
1:5:752:G:C6	1:5:753:C:C4	3.03	0.47
1:5:85:G:C2	1:5:97:G:C5	3.03	0.47
3:8:133:G:C2	3:8:134:G:N9	2.80	0.47
3:8:134:G:C2	3:8:135:C:C2	3.03	0.47
3:8:15:G:H2'	3:8:16:G:O4'	2.15	0.47
3:8:30:U:N3	3:8:31:G:N7	2.62	0.47
3:8:7:U:H2'	3:8:8:U:O4'	2.15	0.47
4:A:24:LYS:HG3	4:A:49:ILE:HG21	1.97	0.47
5:B:234:ARG:HA	5:B:272:LYS:HD2	1.97	0.47
6:C:262:GLU:O	6:C:271:ALA:O	2.33	0.47
1:5:1778:C:H5''	7:D:5:LYS:HD2	1.97	0.47
9:F:59:TYR:CZ	9:F:194:HIS:CE1	3.03	0.47
7:D:284:LYS:HB2	12:I:209:TRP:HH2	1.79	0.47
13:J:22:LEU:HD22	13:J:130:PHE:CE1	2.49	0.47
14:K:163:PRO:O	14:K:163:PRO:HD2	2.13	0.47
15:L:14:PHE:HD1	15:L:18:TRP:CD1	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:105:U:C2'	49:S2:105:U:O2	2.63	0.47
49:S2:1284:A:H61	62:SM:33:ARG:CB	2.26	0.47
49:S2:1287:A:H2'	49:S2:1315:U:C5	2.50	0.47
49:S2:1414:A:N3	49:S2:1415:C:C6	2.83	0.47
49:S2:1423:C:H2'	49:S2:1424:G:C8	2.50	0.47
49:S2:1667:U:C2	49:S2:1668:U:C4	3.03	0.47
49:S2:1685:U:C2	49:S2:1686:G:C8	3.03	0.47
49:S2:1771:G:N2	49:S2:1772:C:N1	2.63	0.47
49:S2:218:U:N3	49:S2:219:U:C5	2.83	0.47
49:S2:221:A:C4	49:S2:222:U:C6	3.03	0.47
49:S2:501:C:H3'	49:S2:501:C:C2	2.49	0.47
49:S2:563:G:C2	49:S2:564:A:N7	2.83	0.47
49:S2:638:C:O2'	49:S2:639:C:O5'	2.33	0.47
49:S2:64:A:C5	49:S2:82:G:C6	3.03	0.47
22:S:35:PRO:HD2	22:S:39:VAL:CG2	2.45	0.47
50:SA:126:ASP:HB2	50:SA:129:ALA:HB3	1.97	0.47
50:SA:134:LEU:CD2	50:SA:144:THR:HG21	2.44	0.47
51:SB:143:THR:HG22	51:SB:205:TYR:HB3	1.97	0.47
51:SB:70:SER:OG	64:SO:128:ARG:NH1	2.48	0.47
57:SH:176:VAL:O	57:SH:177:TYR:C	2.52	0.47
62:SM:98:GLY:C	62:SM:99:ASN:HD22	2.19	0.47
55:SF:49:LEU:HD23	66:SQ:49:TYR:HB2	1.96	0.47
72:SW:17:ALA:CB	72:SW:25:VAL:HG11	2.45	0.47
29:Z:123:LYS:O	29:Z:124:THR:OG1	2.24	0.47
48:4:219:HIS:HB3	48:4:221:TRP:HD1	1.79	0.46
48:4:587:SER:HB3	48:4:735:THR:HG23	1.95	0.46
1:5:1191:C:C4	1:5:1192:C:C5	3.03	0.46
1:5:1262:G:N1	1:5:1263:A:N7	2.63	0.46
1:5:1374:G:C4	1:5:1375:C:C6	3.02	0.46
1:5:1492:G:C6	1:5:1493:G:C5	3.03	0.46
1:5:1572:U:O2	1:5:1572:U:H2'	2.15	0.46
1:5:1617:G:N1	1:5:1618:G:C5	2.83	0.46
1:5:1619:G:C4	1:5:1620:U:C6	3.02	0.46
1:5:1663:C:O2'	1:5:1664:U:H5'	2.15	0.46
1:5:1682:A:C2	1:5:1683:U:H1'	2.50	0.46
1:5:1735:U:N3	1:5:1736:A:N7	2.63	0.46
1:5:1756:U:O4	1:5:1776:A:C2	2.66	0.46
1:5:1761:G:C4	1:5:1762:C:C5	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
1:5:1978:C:C2	1:5:1979:A:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2052:G:C6	1:5:2053:C:C4	3.03	0.46
1:5:2092:G:H8	1:5:2093:A:N1	2.12	0.46
1:5:1440:U:H5''	1:5:2110:C:OP2	2.15	0.46
1:5:964:A:H2	1:5:2252:G:C5	2.33	0.46
1:5:2347:A:C4	1:5:2348:G:O6	2.68	0.46
1:5:2484:A:C6	1:5:2485:U:C4	3.03	0.46
1:5:2598:A:O2'	1:5:2599:G:H5'	2.15	0.46
1:5:2644:G:N1	1:5:2645:G:C4	2.83	0.46
1:5:2646:C:H2'	1:5:2646:C:O2	2.14	0.46
1:5:2712:G:C2	1:5:2713:C:N1	2.83	0.46
1:5:2756:G:H2'	1:5:2757:A:C8	2.50	0.46
1:5:303:C:C2	1:5:304:C:C5	3.02	0.46
1:5:3652:A:O2'	4:A:182:ALA:HB2	2.15	0.46
1:5:4082:G:H2'	1:5:4083:U:H6	1.80	0.46
1:5:4154:G:N1	1:5:4155:C:C4	2.83	0.46
1:5:4478:G:C6	1:5:4479:A:C4	3.03	0.46
1:5:458:C:C4	1:5:459:C:C4	3.03	0.46
1:5:4602:A:H4'	11:H:99:PHE:CE2	2.50	0.46
1:5:4587:G:C2	1:5:4716:C:C2	3.03	0.46
1:5:4724:A:N3	1:5:4725:C:C6	2.83	0.46
1:5:472:C:N3	1:5:473:C:C4	2.83	0.46
1:5:4754:G:C2	1:5:4880:C:C2	3.03	0.46
1:5:689:U:C4	1:5:690:C:C5	3.02	0.46
1:5:934:C:H4'	1:5:935:A:OP2	2.14	0.46
2:7:110:G:C2	2:7:111:C:C4	3.03	0.46
3:8:132:G:C2	3:8:133:G:C4	3.02	0.46
3:8:143:G:C2	3:8:144:U:C6	3.03	0.46
3:8:46:G:C4	3:8:47:C:C5	3.03	0.46
3:8:64:U:C2'	3:8:65:A:H8	2.24	0.46
5:B:285:TYR:CD1	5:B:363:ILE:HD13	2.50	0.46
1:5:1288:G:O2'	8:E:128:PRO:HB2	2.14	0.46
8:E:236:TYR:C	8:E:236:TYR:CD2	2.89	0.46
12:I:119:PHE:HD1	12:I:120:GLY:N	2.13	0.46
12:I:9:TYR:CD2	12:I:97:ILE:HG12	2.39	0.46
1:5:1975:G:H2'	14:K:17:CYS:SG	2.55	0.46
20:Q:146:ARG:HH12	20:Q:149:TYR:HE1	1.63	0.46
1:5:1345:A:H4'	20:Q:166:TYR:CE2	2.49	0.46
21:R:110:ARG:HD3	21:R:120:TYR:CE2	2.50	0.46
49:S2:102:A:H5''	49:S2:104:A:H1'	1.97	0.46
49:S2:1097:G:C6	49:S2:1098:C:C4	3.03	0.46
49:S2:1101:U:C2	49:S2:1102:G:C8	2.92	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1166:G:C2	49:S2:1167:G:C8	3.03	0.46
49:S2:1318:G:C5	49:S2:1319:U:C5	3.03	0.46
49:S2:1330:G:C2	49:S2:1333:U:C4	3.02	0.46
49:S2:1342:U:C6	49:S2:1483:A:C6	3.03	0.46
49:S2:1373:C:O2'	49:S2:1374:C:O4'	2.21	0.46
49:S2:1398:G:N2	49:S2:1399:C:N1	2.63	0.46
49:S2:148:U:N3	49:S2:170:A:C6	2.82	0.46
49:S2:1553:C:O2	49:S2:1553:C:O4'	2.32	0.46
49:S2:1648:G:N3	49:S2:1674:G:C6	2.83	0.46
49:S2:1804:U:C4	49:S2:1805:G:N7	2.83	0.46
49:S2:187:G:C5	49:S2:188:C:C5	3.02	0.46
49:S2:193:C:C2	49:S2:207:G:N2	2.83	0.46
49:S2:348:A:C4	49:S2:349:A:C8	3.03	0.46
49:S2:357:C:C2	49:S2:358:C:C5	3.03	0.46
49:S2:394:G:N3	49:S2:394:G:H2'	2.30	0.46
49:S2:446:G:OP1	58:SI:50:GLY:N	2.36	0.46
49:S2:452:G:C6	49:S2:453:C:C4	3.03	0.46
49:S2:452:G:C6	49:S2:453:C:N4	2.83	0.46
49:S2:504:G:H2'	49:S2:505:G:O5'	2.15	0.46
49:S2:53:C:O2	49:S2:53:C:C2'	2.58	0.46
49:S2:578:C:N4	49:S2:579:C:C5	2.84	0.46
49:S2:71:G:O2'	49:S2:72:C:O4'	2.33	0.46
49:S2:78:C:H2'	49:S2:79:A:H4'	1.97	0.46
49:S2:819:G:H1	49:S2:828:G:H1	1.63	0.46
49:S2:927:C:H2'	49:S2:928:G:O5'	2.15	0.46
49:S2:963:A:N3	49:S2:964:A:C5	2.84	0.46
49:S2:977:C:H2'	49:S2:977:C:O2	2.13	0.46
50:SA:103:PHE:C	50:SA:103:PHE:CD2	2.87	0.46
51:SB:178:THR:O	51:SB:179:ASN:O	2.33	0.46
59:SJ:138:ARG:HB2	59:SJ:138:ARG:HH11	1.79	0.46
60:SK:12:TYR:CD2	60:SK:79:LEU:HD22	2.50	0.46
62:SM:22:LEU:HD23	62:SM:111:VAL:CG2	2.45	0.46
64:SO:41:PHE:HD1	64:SO:41:PHE:N	2.13	0.46
67:SR:94:GLU:O	67:SR:95:ILE:HB	2.15	0.46
69:ST:78:ILE:HG23	69:ST:79:TYR:CD1	2.50	0.46
74:SY:56:PHE:CE1	74:SY:94:HIS:HE1	2.33	0.46
68:SS:23:ARG:CD	75:SZ:48:VAL:HG21	2.45	0.46
9:F:88:GLU:HG3	23:T:136:ARG:HG2	1.97	0.46
23:T:30:TYR:N	23:T:30:TYR:CD1	2.83	0.46
29:Z:17:ARG:HG2	29:Z:18:TYR:CD1	2.50	0.46
48:4:10:ARG:NH2	48:4:465:PRO:CG	2.72	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:113:SER:CB	48:4:499:PHE:HD2	2.22	0.46
48:4:396:MET:HE3	48:4:472:LEU:HD12	1.96	0.46
48:4:120:ARG:HH12	48:4:495:ARG:HB3	1.78	0.46
48:4:60:ARG:H	48:4:63:GLU:CB	2.28	0.46
1:5:101:A:C5	1:5:102:G:N7	2.83	0.46
1:5:1187:G:HO2'	1:5:1188:C:H6	1.61	0.46
1:5:1285:U:C4	1:5:1286:C:C4	3.03	0.46
1:5:1358:G:C1'	1:5:1359:G:C8	2.98	0.46
1:5:1367:C:H1'	1:5:1370:G:C8	2.51	0.46
1:5:1391:A:N1	1:5:4351:U:H1'	2.31	0.46
1:5:1508:A:C2	1:5:1509:C:C6	3.04	0.46
1:5:1516:G:C4	1:5:1518:A:N7	2.84	0.46
1:5:1561:G:C3'	1:5:1562:G:H5'	2.45	0.46
1:5:1745:G:C6	1:5:1746:A:N7	2.83	0.46
1:5:1922:G:H2'	1:5:1923:A:H5''	1.96	0.46
1:5:211:G:N2	1:5:212:A:C4	2.83	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	3.03	0.46
1:5:2447:U:O2'	1:5:2448:G:P	2.73	0.46
1:5:2440:U:C2	1:5:2519:U:C6	3.04	0.46
1:5:2538:U:H2'	1:5:2539:C:H6	1.80	0.46
1:5:2559:G:C2	1:5:2560:C:N1	2.83	0.46
1:5:2569:G:H2'	1:5:2570:U:C6	2.51	0.46
1:5:2589:C:N4	1:5:2590:G:C5	2.83	0.46
1:5:2673:G:C4'	1:5:2675:G:C1'	2.92	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
1:5:4129:G:C6	1:5:4130:C:C4	3.02	0.46
1:5:4462:C:N3	1:5:4515:G:C2	2.83	0.46
1:5:4714:C:C2'	1:5:4714:C:O2	2.62	0.46
1:5:4738:C:H2'	1:5:4739:C:O4'	2.14	0.46
1:5:4904:G:C6	1:5:4905:C:C4	3.02	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
1:5:739:G:C4	1:5:740:G:C8	3.04	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
1:5:351:C:C2	3:8:25:G:C2	3.03	0.46
1:5:4622:A:H5'	5:B:12:GLY:HA2	1.98	0.46
5:B:89:ILE:HG21	5:B:197:ALA:HB1	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:208:ASN:OD1	5:B:208:ASN:N	2.44	0.46
5:B:302:ASN:HB2	5:B:313:SER:HA	1.96	0.46
10:G:177:MET:SD	10:G:177:MET:N	2.87	0.46
12:I:95:HIS:ND1	12:I:95:HIS:C	2.69	0.46
13:J:165:TRP:HE3	13:J:166:PHE:HA	1.80	0.46
14:K:120:SER:OG	14:K:121:LEU:HD23	2.15	0.46
14:K:48:LYS:CG	14:K:52:ASP:OD2	2.54	0.46
14:K:80:LEU:CA	14:K:83:LYS:HD2	2.42	0.46
1:5:921:C:OP1	16:M:69:ARG:NH1	2.47	0.46
1:5:330:G:OP2	17:N:166:SER:HB2	2.15	0.46
1:5:2055:G:O4'	18:O:130:LYS:HE2	2.13	0.46
19:P:36:ILE:CD1	19:P:48:LEU:HD11	2.46	0.46
22:S:175:PHE:CD1	22:S:175:PHE:C	2.89	0.46
49:S2:1031:A:C6	49:S2:1032:C:C4	3.03	0.46
49:S2:1089:G:C6	49:S2:1090:C:C4	3.03	0.46
49:S2:114:G:O4'	61:SL:132:ARG:CD	2.62	0.46
49:S2:1149:A:N1	49:S2:1151:G:C4	2.84	0.46
49:S2:1184:G:C4	49:S2:1185:C:C6	3.03	0.46
49:S2:1258:A:N1	49:S2:1663:A:C4	2.83	0.46
49:S2:1250:A:N3	49:S2:1339:U:C4'	2.78	0.46
49:S2:1434:C:C2	49:S2:1435:C:C6	3.04	0.46
49:S2:1589:A:H2'	49:S2:1590:C:H6	1.79	0.46
49:S2:1654:G:C2	49:S2:1671:G:N1	2.83	0.46
49:S2:1717:C:C2	49:S2:1817:G:C2	3.03	0.46
49:S2:1771:G:N1	49:S2:1772:C:C4	2.83	0.46
49:S2:1777:G:C4	49:S2:1778:C:C6	3.03	0.46
49:S2:1790:A:H2'	49:S2:1791:A:O4'	2.14	0.46
49:S2:17:C:H2'	49:S2:18:C:C6	2.50	0.46
49:S2:331:C:C2	49:S2:332:G:C8	3.04	0.46
49:S2:404:G:N1	49:S2:405:G:N7	2.62	0.46
49:S2:404:G:N2	49:S2:405:G:C4	2.84	0.46
49:S2:569:A:C6	49:S2:570:C:C4	3.02	0.46
49:S2:595:U:HO2'	49:S2:596:U:H6	1.45	0.46
49:S2:697:G:C2	49:S2:734:C:O2	2.69	0.46
49:S2:841:G:N2	49:S2:842:C:C6	2.83	0.46
49:S2:910:G:N3	49:S2:911:C:C6	2.83	0.46
49:S2:976:G:C2	49:S2:977:C:C2	3.03	0.46
49:S2:993:G:H21	49:S2:994:C:H1'	1.79	0.46
22:S:47:PHE:HE1	22:S:125:GLN:HG2	1.80	0.46
53:SD:101:GLN:HG3	53:SD:126:ILE:HG22	1.96	0.46
57:SH:43:LEU:HD21	57:SH:71:SER:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:128:VAL:HG12	59:SJ:132:GLN:HG3	1.97	0.46
49:S2:375:U:C1'	61:SL:7:GLU:OE1	2.63	0.46
62:SM:51:VAL:HA	62:SM:77:ILE:HG22	1.98	0.46
49:S2:1283:C:C1'	62:SM:86:GLY:HA3	2.44	0.46
49:S2:1064:C:P	64:SO:150:ARG:HH22	2.37	0.46
27:X:119:ILE:HD11	27:X:140:LEU:HD13	1.96	0.46
28:Y:27:ARG:CB	28:Y:75:ARG:HH12	2.27	0.46
48:4:748:GLU:OE2	48:4:811:GLN:NE2	2.48	0.46
48:4:851:LEU:HD23	48:4:851:LEU:H	1.80	0.46
1:5:1203:G:N1	1:5:1204:C:C4	2.83	0.46
1:5:1344:C:H5''	1:5:1344:C:H6	1.80	0.46
1:5:1367:C:H6	1:5:1367:C:H5''	1.80	0.46
1:5:1355:G:C5	1:5:1385:G:N2	2.83	0.46
1:5:1400:G:C2	1:5:1418:C:C2	3.03	0.46
1:5:12:A:N3	1:5:14:C:C6	2.84	0.46
1:5:1603:C:H2'	1:5:1604:G:C8	2.50	0.46
1:5:1632:A:C6	1:5:1634:A:C1'	2.99	0.46
1:5:370:U:C5	1:5:1637:A:C5	3.03	0.46
1:5:1674:C:C4	1:5:1675:C:C5	3.04	0.46
1:5:1696:C:HO2'	1:5:1697:G:P	2.37	0.46
1:5:1925:G:N2	1:5:1926:C:H1'	2.31	0.46
1:5:1968:G:N1	1:5:1969:G:C5	2.84	0.46
1:5:1956:A:H2	1:5:2027:U:C2	2.33	0.46
1:5:2318:G:C2	1:5:2322:G:C2	3.03	0.46
1:5:2329:U:O2'	1:5:2330:G:H5'	2.11	0.46
1:5:258:G:C2	1:5:259:C:C2	3.03	0.46
1:5:2820:C:H2'	1:5:2821:U:H5'	1.96	0.46
1:5:29:G:N3	1:5:30:C:C6	2.83	0.46
1:5:3635:A:H3'	1:5:3635:A:C8	2.51	0.46
1:5:3722:G:N3	1:5:3723:A:C8	2.83	0.46
1:5:3729:U:H2'	1:5:3730:U:O4'	2.15	0.46
1:5:37:U:O4	1:5:38:A:C6	2.68	0.46
1:5:3930:U:H1'	4:A:228:ASP:OD1	2.15	0.46
1:5:3938:G:C6	1:5:4077:A:C2	3.01	0.46
1:5:4117:U:N3	4:A:40:TYR:CD1	2.72	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:C5	13:J:60:PHE:HE2	2.33	0.46
1:5:4524:G:C2	1:5:4525:C:C6	3.03	0.46
1:5:465:G:C2	1:5:466:A:N9	2.83	0.46
1:5:4572:U:O2	1:5:4720:C:C5	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:488:G:H21	1:5:489:C:H1'	1.80	0.46
1:5:700:G:C6	1:5:701:G:N7	2.83	0.46
1:5:710:G:C2	1:5:711:A:C5	3.03	0.46
2:7:66:G:C6	2:7:67:C:C4	3.03	0.46
3:8:9:A:N3	3:8:9:A:H2'	2.30	0.46
5:B:46:PHE:CD1	5:B:84:MET:CE	2.98	0.46
7:D:30:TYR:N	7:D:30:TYR:CD1	2.83	0.46
13:J:74:VAL:C	13:J:75:ARG:HG2	2.35	0.46
16:M:130:LEU:HD21	18:O:180:GLN:OE1	2.15	0.46
16:M:7:VAL:HG13	16:M:27:ILE:HD13	1.97	0.46
17:N:178:HIS:CD2	17:N:178:HIS:C	2.88	0.46
19:P:54:GLN:HB2	19:P:83:TRP:CD1	2.48	0.46
20:Q:34:PHE:C	20:Q:34:PHE:CD2	2.88	0.46
22:S:96:GLU:HB3	22:S:142:VAL:HG21	1.97	0.46
49:S2:1029:G:N1	49:S2:1030:A:C8	2.83	0.46
49:S2:1114:U:O4	49:S2:1119:A:C6	2.58	0.46
49:S2:1126:G:C2	49:S2:1127:C:C4	3.04	0.46
49:S2:1297:U:O2	49:S2:1299:A:H8	1.99	0.46
49:S2:1305:C:H2'	49:S2:1305:C:O2	2.15	0.46
49:S2:1350:U:N3	49:S2:1351:G:C8	2.83	0.46
49:S2:1393:G:N1	49:S2:1394:G:C5	2.84	0.46
49:S2:1407:U:C2	49:S2:1408:U:C5	3.03	0.46
49:S2:1786:U:C2	49:S2:1787:G:N7	2.83	0.46
49:S2:200:G:H2'	49:S2:201:C:O4'	2.15	0.46
49:S2:363:A:N6	49:S2:400:C:O2'	2.48	0.46
49:S2:403:G:N2	49:S2:404:G:H1'	2.30	0.46
49:S2:549:C:O2	49:S2:549:C:H2'	2.15	0.46
49:S2:836:G:C3'	49:S2:837:A:C5'	2.94	0.46
49:S2:842:C:O2	49:S2:843:C:C6	2.68	0.46
49:S2:929:G:H2'	49:S2:930:C:O4'	2.15	0.46
49:S2:947:G:C6	49:S2:948:C:C4	3.03	0.46
49:S2:978:G:C5	49:S2:979:C:C5	3.03	0.46
52:SC:179:THR:OG1	52:SC:180:VAL:N	2.48	0.46
55:SF:142:SER:O	55:SF:144:LEU:N	2.49	0.46
49:S2:145:G:N7	56:SG:178:ARG:NH1	2.64	0.46
59:SJ:108:ARG:NH2	59:SJ:113:GLN:OE1	2.49	0.46
75:SZ:63:PRO:O	75:SZ:111:ARG:NH1	2.48	0.46
48:4:330:LYS:CB	48:4:330:LYS:HZ3	2.26	0.46
48:4:19:ILE:HD13	48:4:468:ASN:OD1	2.15	0.46
48:4:504:VAL:CG1	48:4:811:GLN:HA	2.45	0.46
48:4:683:PHE:HA	48:4:729:LEU:HD11	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1075:G:H2'	1:5:1076:C:C6	2.50	0.46
1:5:1263:A:C2	1:5:1264:C:C2	3.04	0.46
1:5:1264:C:HO2'	1:5:2114:G:P	2.34	0.46
1:5:1268:G:N2	1:5:1270:A:C1'	2.78	0.46
1:5:1464:C:C2'	1:5:1464:C:O2	2.64	0.46
1:5:1608:G:C1'	1:5:3828:A:C2	2.98	0.46
1:5:167:C:C2	1:5:168:C:C6	3.04	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
1:5:1983:A:C2	1:5:2008:U:C5	2.94	0.46
1:5:1983:A:C2	1:5:2010:A:O5'	2.67	0.46
1:5:2276:A:C5	1:5:2277:C:C5	3.04	0.46
1:5:2557:G:C4	1:5:2558:C:C6	3.04	0.46
1:5:2586:G:C8	1:5:2587:A:C4	3.04	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
1:5:2773:G:N3	1:5:2774:C:C6	2.84	0.46
1:5:2833:A:HO2'	1:5:2834:C:C4'	2.27	0.46
1:5:2857:A:C2'	1:5:2858:A:C8	2.98	0.46
1:5:337:U:O2	1:5:337:U:H2'	2.14	0.46
1:5:3591:C:N4	1:5:3592:G:C5	2.82	0.46
1:5:3621:A:H2'	1:5:3621:A:N3	2.31	0.46
1:5:4085:A:C3'	1:5:4086:G:C5'	2.93	0.46
1:5:4109:G:C2	1:5:4110:C:N1	2.83	0.46
1:5:4111:U:N3	1:5:4112:C:C5	2.84	0.46
1:5:4158:C:O2	1:5:4158:C:C2'	2.62	0.46
1:5:4551:U:H2'	1:5:4552:U:C6	2.51	0.46
1:5:4581:G:N2	1:5:4582:C:C5	2.84	0.46
1:5:4709:U:C2	1:5:4710:C:C6	3.04	0.46
1:5:479:G:C2	1:5:480:C:N1	2.83	0.46
1:5:4861:G:N1	1:5:4862:G:C5	2.83	0.46
1:5:48:G:O2'	1:5:49:U:P	2.71	0.46
1:5:4923:C:C2	1:5:4924:C:C6	3.04	0.46
1:5:4981:G:N3	1:5:4981:G:O4'	2.47	0.46
1:5:5023:C:H5	1:5:5028:G:H1'	1.80	0.46
1:5:5047:C:H5''	1:5:5050:C:C5	2.42	0.46
1:5:504:G:O6	1:5:654:C:C4	2.68	0.46
1:5:658:C:C2	1:5:659:G:N7	2.81	0.46
1:5:749:G:O6	1:5:913:U:O4	2.33	0.46
1:5:973:G:C6	1:5:974:C:C5	3.03	0.46
3:8:139:G:C2	3:8:140:C:C2	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1337:A:H5'	6:C:102:PHE:HD2	1.80	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
15:L:99:ASP:OD1	15:L:101:ARG:N	2.45	0.46
1:5:920:C:H5''	16:M:72:TYR:CD2	2.50	0.46
16:M:116:ARG:NH2	18:O:201:PHE:CE2	2.84	0.46
11:H:60:TRP:NE1	22:S:153:PRO:CG	2.79	0.46
49:S2:1233:G:C2	49:S2:1234:C:C2	3.04	0.46
49:S2:1251:A:N3	49:S2:1251:A:H2'	2.31	0.46
49:S2:1405:A:O4'	49:S2:1580:A:C6	2.69	0.46
49:S2:1688:C:C2	49:S2:1689:C:C5	3.04	0.46
49:S2:184:G:N3	49:S2:185:G:C8	2.84	0.46
49:S2:211:G:H2'	49:S2:212:C:O4'	2.15	0.46
49:S2:297:A:H5'	54:SE:132:GLY:O	2.15	0.46
49:S2:322:C:H2'	49:S2:323:C:C6	2.51	0.46
49:S2:349:A:C5'	58:SI:27:TYR:OH	2.62	0.46
49:S2:367:U:H1'	49:S2:371:A:C4	2.50	0.46
49:S2:452:G:C4	49:S2:453:C:C6	3.03	0.46
49:S2:459:C:N4	49:S2:460:A:N7	2.61	0.46
49:S2:493:A:H1'	49:S2:574:A:OP1	2.15	0.46
49:S2:691:G:C6	49:S2:692:G:N7	2.84	0.46
49:S2:69:C:H2'	49:S2:70:G:H8	1.79	0.46
49:S2:738:C:C2	49:S2:739:C:C6	3.04	0.46
49:S2:914:U:O4'	49:S2:914:U:O2	2.32	0.46
49:S2:961:G:N3	49:S2:962:A:C8	2.84	0.46
49:S2:979:C:O2	49:S2:980:A:C8	2.68	0.46
49:S2:990:A:C2	49:S2:992:A:C5	3.04	0.46
58:SI:60:LEU:CD2	58:SI:185:ALA:HB2	2.46	0.46
63:SN:5:HIS:HD2	63:SN:121:ARG:CD	2.28	0.46
67:SR:21:TYR:CD1	67:SR:71:ILE:HD13	2.50	0.46
73:SX:9:THR:HG22	73:SX:12:LYS:HB3	1.97	0.46
75:SZ:98:LYS:HB2	75:SZ:113:THR:HG23	1.96	0.46
29:Z:100:VAL:CG1	29:Z:107:LYS:HA	2.46	0.46
48:4:343:TRP:CA	48:4:343:TRP:CE3	2.98	0.46
48:4:385:ILE:CD1	48:4:417:PHE:HB3	2.42	0.46
48:4:751:CYS:SG	48:4:756:VAL:CA	3.04	0.46
48:4:830:ARG:HB2	48:4:831:PRO:CD	2.43	0.46
1:5:1238:A:C2'	1:5:1239:C:O5'	2.62	0.46
1:5:1278:C:H3'	1:5:1279:A:H4'	1.97	0.46
1:5:1330:A:C2	1:5:1331:C:C5	3.03	0.46
1:5:1358:G:H3'	6:C:114:ARG:HH22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1373:A:N3	1:5:1374:G:C8	2.83	0.46
1:5:1611:C:O4'	1:5:1612:G:N7	2.48	0.46
1:5:169:G:C2	1:5:170:C:C2	3.04	0.46
1:5:1757:U:H2'	1:5:1758:G:O4'	2.16	0.46
1:5:1797:G:N2	1:5:1798:G:C4	2.83	0.46
1:5:1858:A:C2	1:5:1859:C:C4	3.03	0.46
1:5:1987:C:C2	1:5:1988:G:C8	3.03	0.46
1:5:223:G:H4'	1:5:225:G:C8	2.50	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
1:5:2570:U:O2	1:5:2571:C:C6	2.68	0.46
1:5:2578:G:N1	1:5:2579:G:C5	2.82	0.46
1:5:2720:C:N3	1:5:2721:G:C8	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
1:5:3625:G:H21	1:5:3627:G:P	2.37	0.46
1:5:3629:A:C6	1:5:3630:A:N7	2.84	0.46
1:5:3805:U:H2'	1:5:3805:U:O2	2.14	0.46
1:5:3805:U:N3	1:5:3806:G:C8	2.84	0.46
1:5:3829:G:C6	1:5:3830:A:N7	2.84	0.46
1:5:3847:C:O2	1:5:3847:C:H2'	2.14	0.46
1:5:4293:U:O4	1:5:4329:G:C8	2.68	0.46
1:5:4406:U:N3	1:5:4407:G:C8	2.83	0.46
1:5:4458:C:C2'	1:5:4459:U:O5'	2.64	0.46
1:5:4528:G:N3	1:5:4529:G:C8	2.84	0.46
1:5:4871:C:H5''	16:M:91:TRP:CZ2	2.51	0.46
1:5:4767:C:C4'	1:5:4874:A:N1	2.77	0.46
1:5:5000:G:C4	1:5:5001:U:C5	3.03	0.46
1:5:655:C:C2'	1:5:656:C:O5'	2.63	0.46
1:5:753:C:C2	1:5:754:U:H6	2.26	0.46
1:5:919:C:N3	1:5:920:C:C5	2.84	0.46
1:5:947:C:H2'	1:5:948:C:H6	1.80	0.46
2:7:8:G:C2	2:7:9:C:C2	3.03	0.46
3:8:63:U:C2	3:8:63:U:C3'	2.98	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:100:ARG:NH1	5:B:100:ARG:HB3	2.30	0.46
5:B:108:GLU:HB2	5:B:137:TRP:HB3	1.97	0.46
5:B:323:TYR:CD1	5:B:323:TYR:C	2.89	0.46
6:C:164:THR:HG22	6:C:220:ALA:O	2.15	0.46
7:D:27:LYS:HE2	13:J:147:ARG:HH22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:261:LEU:HD22	10:G:265:LEU:CD2	2.46	0.46
1:5:302:C:OP1	17:N:68:ARG:HG2	2.16	0.46
22:S:99:ASP:CG	22:S:100:LEU:N	2.69	0.46
49:S2:100:U:O2	49:S2:100:U:H2'	2.15	0.46
49:S2:1034:A:H2'	49:S2:1035:A:O4'	2.16	0.46
49:S2:1134:G:C2	49:S2:1135:C:C2	3.03	0.46
49:S2:1204:A:C4	49:S2:1205:C:C6	3.03	0.46
49:S2:122:G:C6	49:S2:123:G:C8	3.04	0.46
49:S2:1374:C:C2'	49:S2:1375:G:O5'	2.64	0.46
49:S2:1385:G:H5''	49:S2:1386:A:OP2	2.15	0.46
49:S2:1427:C:C2	49:S2:1428:G:C8	3.04	0.46
49:S2:1590:C:C5	49:S2:1591:C:C1'	2.98	0.46
49:S2:1644:C:O2'	49:S2:1645:C:C4'	2.64	0.46
1:5:3759:A:N1	49:S2:1708:C:H2'	2.31	0.46
49:S2:171:A:C4	49:S2:173:A:C8	3.03	0.46
49:S2:171:A:C8	49:S2:173:A:N7	2.83	0.46
49:S2:1780:G:C2	49:S2:1781:A:C4	3.04	0.46
49:S2:1806:A:C2	49:S2:1807:C:C6	3.03	0.46
49:S2:30:C:C2'	49:S2:31:U:O5'	2.63	0.46
49:S2:309:G:C2	49:S2:310:C:C2	3.04	0.46
49:S2:312:G:OP1	49:S2:314:U:OP2	2.33	0.46
49:S2:340:C:C3'	49:S2:341:C:H6	2.28	0.46
49:S2:4:C:H4'	52:SC:207:ALA:HB2	1.97	0.46
49:S2:646:G:C5	49:S2:647:U:C5	3.03	0.46
49:S2:420:G:O2'	49:S2:660:C:N3	2.46	0.46
49:S2:862:A:N1	49:S2:863:U:C5	2.83	0.46
49:S2:882:U:C4	49:S2:883:U:C5	3.04	0.46
49:S2:975:G:N3	49:S2:975:G:H2'	2.31	0.46
50:SA:158:ASP:OD1	50:SA:159:ILE:HG22	2.16	0.46
57:SH:130:LEU:HB3	57:SH:139:ILE:HD11	1.97	0.46
59:SJ:48:PHE:HZ	59:SJ:52:LYS:CG	2.28	0.46
60:SK:66:HIS:O	60:SK:67:PHE:HB2	2.16	0.46
49:S2:373:G:H4'	61:SL:85:THR:HG21	1.98	0.46
62:SM:31:LEU:HB3	62:SM:33:ARG:HB3	1.98	0.46
68:SS:124:ARG:HD3	68:SS:131:VAL:HA	1.98	0.46
49:S2:1668:U:H5'	70:SU:77:TRP:CZ2	2.51	0.46
48:4:27:HIS:NE2	48:4:28:VAL:O	2.48	0.46
48:4:435:THR:OG1	48:4:438:LYS:HB2	2.15	0.46
48:4:543:GLU:OE1	48:4:576:VAL:CB	2.50	0.46
48:4:4:PHE:HE1	48:4:5:THR:HB	1.76	0.46
48:4:592:LEU:HB2	48:4:603:TYR:CE2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:689:GLU:O	48:4:730:TYR:HE1	1.72	0.46
1:5:1077:C:O2	1:5:1077:C:H2'	2.16	0.46
1:5:112:C:N3	1:5:113:A:N7	2.64	0.46
1:5:1216:C:C4	1:5:1217:G:C8	3.04	0.46
1:5:1280:C:O2	1:5:1282:G:C8	2.68	0.46
1:5:1392:A:H2'	1:5:1393:G:H8	1.78	0.46
1:5:1404:G:H2'	1:5:1405:C:O4'	2.16	0.46
1:5:1466:G:C2	1:5:1467:C:C6	3.03	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
1:5:1555:G:C6	1:5:1556:C:C4	3.03	0.46
1:5:1570:G:H2'	1:5:1571:G:O4'	2.15	0.46
1:5:1724:G:N2	9:F:105:PRO:CG	2.78	0.46
1:5:174:C:C2	1:5:175:C:C5	3.04	0.46
1:5:1760:G:C6	1:5:1761:G:C5	3.04	0.46
1:5:1975:G:C5	1:5:1984:A:N3	2.84	0.46
1:5:2018:C:H2'	1:5:2018:C:O2	2.15	0.46
1:5:2311:C:C4	1:5:2312:U:C6	3.03	0.46
1:5:2351:C:H2'	1:5:2351:C:O2	2.16	0.46
1:5:2392:C:C2	1:5:2393:C:C5	3.04	0.46
1:5:2455:G:C2'	1:5:2456:G:O5'	2.60	0.46
1:5:2479:G:N1	1:5:2480:G:C4	2.84	0.46
1:5:2645:G:C4	1:5:2646:C:C6	3.04	0.46
1:5:2703:G:C5	1:5:2704:C:C5	3.04	0.46
1:5:2599:G:N2	1:5:2747:U:C4	2.83	0.46
1:5:2753:G:C3'	1:5:2754:G:O4'	2.64	0.46
1:5:2768:C:H4'	1:5:2769:U:OP2	2.16	0.46
1:5:2854:G:C8	1:5:2854:G:C3'	2.97	0.46
1:5:278:G:C6	1:5:330:G:N7	2.84	0.46
1:5:3632:C:C4	1:5:3633:C:C5	3.04	0.46
1:5:3674:G:N3	1:5:3675:G:C8	2.84	0.46
1:5:3946:G:C2	1:5:3947:A:C8	3.03	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
1:5:4135:G:C4	1:5:4136:G:C8	3.04	0.46
1:5:4314:C:C2	1:5:4315:A:H8	2.33	0.46
1:5:450:G:HO2'	1:5:453:G:P	2.38	0.46
1:5:453:G:H22	1:5:1294:A:N6	2.10	0.46
1:5:4561:C:N3	1:5:4562:C:H5	2.09	0.46
1:5:4652:G:C6	1:5:4653:C:N4	2.84	0.46
1:5:4734:A:N3	1:5:4734:A:H2'	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:487:G:C4	1:5:488:G:C8	3.04	0.46
1:5:4913:G:HO2'	1:5:4914:C:C4'	2.28	0.46
1:5:4997:G:C5	1:5:4998:G:C8	3.04	0.46
1:5:4998:G:N2	1:5:4999:G:N9	2.64	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
1:5:947:C:C2	1:5:948:C:C5	3.04	0.46
1:5:969:C:H2'	1:5:970:G:C2	2.50	0.46
2:7:21:G:C2	2:7:58:A:N3	2.83	0.46
3:8:144:U:O2	3:8:145:C:C6	2.69	0.46
4:A:202:VAL:HG12	4:A:217:GLN:CG	2.38	0.46
4:A:227:ARG:HB3	4:A:239:ALA:HB2	1.96	0.46
1:5:4086:G:C5	4:A:67:TYR:CD1	3.03	0.46
7:D:202:GLN:HE21	7:D:202:GLN:N	2.13	0.46
11:H:31:ARG:HH11	11:H:31:ARG:HG3	1.80	0.46
11:H:41:ILE:HD11	11:H:69:THR:HB	1.97	0.46
1:5:1929:A:H2'	18:O:49:ARG:HH22	1.81	0.46
21:R:96:MET:O	21:R:100:ARG:HD2	2.16	0.46
22:S:82:LEU:HD21	22:S:109:CYS:SG	2.55	0.46
16:M:6:PHE:HB3	22:S:151:LYS:HG2	1.97	0.46
49:S2:1123:C:N4	49:S2:1124:C:N4	2.63	0.46
49:S2:1141:G:N2	49:S2:1147:C:C2	2.83	0.46
49:S2:1095:U:C4	49:S2:1149:A:N6	2.81	0.46
49:S2:1307:U:C2	49:S2:1308:U:H1'	2.51	0.46
49:S2:14:C:OP1	52:SC:190:SER:OG	2.31	0.46
49:S2:1533:A:C2	49:S2:1537:A:C1'	2.99	0.46
49:S2:1568:C:H2'	49:S2:1569:A:N7	2.31	0.46
49:S2:1835:A:C2	49:S2:1863:A:C6	3.04	0.46
49:S2:447:A:C2	49:S2:449:A:H1'	2.51	0.46
49:S2:474:G:C2	49:S2:475:C:C4	3.02	0.46
49:S2:545:A:C2	49:S2:546:G:N7	2.84	0.46
49:S2:554:A:N3	49:S2:555:A:N7	2.63	0.46
49:S2:616:A:N7	49:S2:617:G:N9	2.64	0.46
49:S2:832:G:O6	49:S2:833:C:C4	2.69	0.46
49:S2:839:C:O2'	49:S2:841:G:H1'	2.16	0.46
49:S2:900:C:C2	49:S2:901:G:C8	3.04	0.46
49:S2:946:U:C2	49:S2:947:G:C8	3.03	0.46
49:S2:956:G:C2'	49:S2:957:A:O5'	2.64	0.46
49:S2:956:G:N2	49:S2:957:A:C4	2.84	0.46
49:S2:957:A:N1	49:S2:967:C:O2	2.48	0.46
61:SL:44:PHE:HE2	61:SL:143:LEU:HD23	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SM:32:ALA:CB	62:SM:41:ALA:HB2	2.45	0.46
62:SM:37:GLU:O	62:SM:41:ALA:N	2.49	0.46
49:S2:1622:U:O4	68:SS:120:HIS:HE1	1.98	0.46
49:S2:658:U:N3	73:SX:20:HIS:O	2.47	0.46
26:W:17:HIS:N	26:W:17:HIS:CD2	2.83	0.46
48:4:352:GLN:O	48:4:356:ILE:HG22	2.16	0.46
1:5:1085:C:C2	1:5:1086:C:C6	3.04	0.46
1:5:1205:G:C4	1:5:1206:C:C5	3.04	0.46
1:5:118:C:N3	1:5:121:A:N7	2.63	0.46
1:5:1370:G:O4'	1:5:1370:G:N3	2.49	0.46
1:5:1446:C:N3	1:5:1447:C:C6	2.84	0.46
1:5:152:U:O2	1:5:152:U:C2'	2.59	0.46
1:5:1687:U:H2'	1:5:1688:G:O5'	2.15	0.46
1:5:1698:C:H6	1:5:1698:C:H5'	1.81	0.46
1:5:1780:A:N6	1:5:1781:U:C5	2.83	0.46
1:5:194:C:C4	1:5:195:C:C5	3.03	0.46
1:5:2050:G:C2	1:5:2051:C:C2	3.04	0.46
1:5:2059:C:O2	22:S:118:ARG:NH1	2.46	0.46
1:5:2086:G:C6	1:5:2087:C:C4	3.03	0.46
1:5:2398:U:O2'	1:5:2399:G:OP1	2.34	0.46
1:5:2478:C:C2	1:5:2479:G:N7	2.84	0.46
1:5:2481:G:N3	1:5:2482:C:C6	2.83	0.46
1:5:247:G:C2	1:5:248:C:C2	3.03	0.46
1:5:2515:G:C5	1:5:2516:G:C8	3.03	0.46
1:5:2569:G:C2	1:5:2570:U:C2	3.04	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
1:5:2736:G:C6	1:5:2737:C:N4	2.83	0.46
1:5:2744:A:N1	1:5:2745:A:C6	2.83	0.46
1:5:2428:A:C6	1:5:2789:A:C2	3.03	0.46
1:5:353:A:C5	1:5:379:G:C5	3.04	0.46
1:5:3696:C:N3	1:5:3697:U:C5	2.84	0.46
1:5:3715:U:O4'	1:5:3715:U:O2	2.33	0.46
1:5:3806:G:C6	1:5:3807:A:N7	2.84	0.46
1:5:3871:A:C2'	1:5:3872:A:O5'	2.64	0.46
1:5:1325:C:C4'	1:5:3901:A:C2	2.98	0.46
1:5:3943:A:C5	1:5:3944:G:C8	3.04	0.46
1:5:4085:A:C3'	1:5:4086:G:H5''	2.46	0.46
1:5:4118:U:O4	4:A:95:GLN:CB	2.64	0.46
1:5:4202:U:C2	1:5:4204:C:C4	3.03	0.46
1:5:423:G:H2'	1:5:424:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:425:U:N3	1:5:426:A:C5	2.81	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
1:5:4330:G:C6	1:5:4331: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
1:5:4652:G:C2	1:5:4653:C:C2	3.04	0.46
1:5:4883:C:H42	8:E:272:ALA:HB3	1.81	0.46
1:5:5012:G:N2	1:5:5014:A:N7	2.62	0.46
1:5:31:U:O2	1:5:52:G:C2	2.68	0.46
1:5:69:A:C6	1:5:70:A:C6	3.04	0.46
1:5:741:C:H2'	1:5:742:G:O4'	2.15	0.46
1:5:748:G:O6	1:5:918:G:H1'	2.16	0.46
2:7:17:C:O2	2:7:17:C:C2'	2.62	0.46
3:8:118:C:C2'	3:8:118:C:O2	2.64	0.46
3:8:56:G:C6	3:8:57:C:C4	3.04	0.46
3:8:75:G:C2	3:8:76:C:C4	3.04	0.46
6:C:177:TRP:O	6:C:180:ILE:N	2.48	0.46
7:D:33:ARG:HE	7:D:37:VAL:HG21	1.80	0.46
1:5:1785:C:H1'	12:I:94:PHE:CZ	2.51	0.46
14:K:123:ARG:CA	14:K:129:ILE:CG1	2.72	0.46
14:K:81:ILE:HD12	14:K:113:ALA:CB	2.45	0.46
1:5:1377:G:N2	15:L:158:ARG:HG2	2.30	0.46
17:N:37:HIS:NE2	17:N:63:ARG:HB3	2.31	0.46
18:O:51:LYS:HA	18:O:141:LEU:HD11	1.97	0.46
1:5:2891:U:H5	21:R:74:ARG:NH1	2.11	0.46
49:S2:1018:U:C2'	49:S2:1018:U:O2	2.64	0.46
49:S2:1031:A:H2'	49:S2:1032:C:O4'	2.15	0.46
49:S2:1045:U:O4	49:S2:1046:U:O4	2.34	0.46
49:S2:1099:G:C5	49:S2:1100:A:C8	3.03	0.46
49:S2:1110:G:C5	49:S2:1111:U:C5	3.04	0.46
49:S2:1137:U:O2'	50:SA:155:ARG:NH2	2.49	0.46
49:S2:1202:U:O4	49:S2:1203:G:N7	2.49	0.46
49:S2:1295:A:C6	49:S2:1296:U:H1'	2.51	0.46
49:S2:1289:U:C5'	49:S2:1315:U:O2'	2.61	0.46
49:S2:1405:A:C2	49:S2:1406:G:N9	2.83	0.46
49:S2:1414:A:C6	49:S2:1415:C:C5	3.03	0.46
49:S2:177:G:HO2'	49:S2:178:C:H6	1.63	0.46
49:S2:478:G:C4	49:S2:479:C:C5	3.04	0.46
49:S2:611:G:C5	49:S2:612:U:C5	3.04	0.46
56:SG:26:THR:HG21	56:SG:40:ALA:CB	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SM:19:GLN:HG2	62:SM:88:TRP:CG	2.51	0.46
67:SR:18:GLU:OE2	67:SR:69:ILE:HA	2.16	0.46
68:SS:15:VAL:HG13	68:SS:68:ILE:CD1	2.46	0.46
75:SZ:86:ALA:HA	75:SZ:89:GLN:OE1	2.16	0.46
25:V:82:ILE:CD1	25:V:104:VAL:HG13	2.46	0.46
25:V:57:VAL:CG2	25:V:84:GLN:HG2	2.44	0.46
29:Z:4:PHE:CD1	29:Z:4:PHE:N	2.84	0.46
48:4:111:PHE:CG	48:4:141:THR:HG23	2.51	0.46
48:4:21:ASN:HD21	48:4:469:ILE:HD12	1.79	0.46
1:5:1048:G:H2'	1:5:1049:C:O4'	2.15	0.46
1:5:1245:C:C5	1:5:1269:G:N1	2.82	0.46
1:5:145:G:N2	1:5:146:G:H1'	2.31	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
1:5:1749:A:C2	1:5:1750:G:C5	3.03	0.46
1:5:184:U:O2	1:5:254:G:C2	2.69	0.46
1:5:2090:U:H2'	1:5:2259:G:OP1	2.16	0.46
1:5:2451:A:H2'	1:5:2451:A:N3	2.30	0.46
1:5:2494:U:N3	1:5:2495:U:C6	2.84	0.46
1:5:2561:C:O2	1:5:2561:C:H2'	2.16	0.46
1:5:2569:G:C5	1:5:2570:U:C5	3.03	0.46
1:5:2745:A:C2'	1:5:2746:A:O5'	2.64	0.46
1:5:316:U:O4	1:5:4353:U:O4'	2.34	0.46
1:5:3631:U:H2'	1:5:3631:U:O2	2.16	0.46
1:5:3648:A:C5	1:5:3785:A:C6	3.04	0.46
1:5:3860:A:C2	1:5:3861:A:H1'	2.51	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
1:5:4139:G:C2	1:5:4140:C:C6	3.04	0.46
1:5:4200:G:C2	1:5:4201:G:C8	3.03	0.46
1:5:4772:C:H2'	1:5:4773:C:O4'	2.16	0.46
1:5:492:U:N3	1:5:493:G:N7	2.64	0.46
1:5:5010:U:N3	1:5:5011:A:N7	2.63	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
1:5:731:G:H5''	1:5:732:A:OP2	2.16	0.46
1:5:986:C:C2	1:5:987:C:C6	3.03	0.46
2:7:50:A:N1	2:7:51:G:C8	2.83	0.46
3:8:31:G:C5	3:8:32:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:70:G:C4	3:8:87:G:N2	2.84	0.46
4:A:40:TYR:CE2	4:A:89:TYR:HD2	2.33	0.46
7:D:106:ALA:HB2	7:D:166:ALA:HA	1.97	0.46
7:D:287:PHE:C	7:D:287:PHE:HD1	2.19	0.46
9:F:149:LEU:N	9:F:197:TYR:OH	2.48	0.46
9:F:213:PHE:N	9:F:213:PHE:HD1	2.14	0.46
1:5:2094:G:N7	9:F:48:ARG:HD3	2.31	0.46
11:H:93:ARG:HG2	11:H:93:ARG:HH11	3.78	0.46
14:K:95:GLN:O	14:K:97:ASN:N	2.48	0.46
16:M:10:GLY:HA2	16:M:64:PHE:CZ	2.51	0.46
17:N:104:GLU:O	17:N:108:ARG:HB2	2.16	0.46
1:5:432:U:O4	18:O:91:LYS:HD3	2.16	0.46
21:R:131:VAL:CG2	21:R:132:PHE:CZ	2.99	0.46
49:S2:10:G:C6	49:S2:11:A:C5	3.03	0.46
49:S2:1123:C:N4	49:S2:1124:C:C5	2.83	0.46
49:S2:1185:C:C4	49:S2:1186:U:C5	3.04	0.46
49:S2:1189:A:H2'	49:S2:1190:A:H8	1.80	0.46
49:S2:1203:G:C4	49:S2:1204:A:C8	3.04	0.46
49:S2:1250:A:H2	49:S2:1339:U:C1'	2.29	0.46
49:S2:1518:C:P	49:S2:1519:U:H2'	2.55	0.46
49:S2:1607:A:C5	49:S2:1608:U:C5	3.03	0.46
49:S2:404:G:C2	49:S2:405:G:N9	2.83	0.46
49:S2:582:C:O2	49:S2:583:C:C6	2.68	0.46
49:S2:688:U:O2	57:SH:122:LEU:HG	2.15	0.46
49:S2:993:G:N2	49:S2:994:C:C1'	2.79	0.46
50:SA:200:ASP:HA	50:SA:203:PHE:CE2	2.51	0.46
58:SI:8:TRP:NE1	58:SI:9:HIS:HB3	2.31	0.46
49:S2:916:A:C4	63:SN:73:ARG:HD3	2.50	0.46
67:SR:10:LYS:HD3	67:SR:53:TYR:HE2	1.79	0.46
74:SY:86:GLU:CD	74:SY:90:ARG:HD2	2.36	0.46
23:T:40:VAL:HG13	23:T:96:ILE:HG23	1.98	0.46
48:4:114:GLU:HA	48:4:532:PRO:HB2	1.96	0.46
48:4:240:GLY:C	48:4:243:GLN:CD	2.75	0.46
48:4:533:MET:C	48:4:533:MET:SD	2.94	0.46
48:4:762:VAL:HG22	48:4:803:ASN:CB	2.42	0.46
1:5:114:G:O6	1:5:157:U:C2	2.69	0.46
1:5:1234:G:C6	1:5:1235:G:C6	3.04	0.46
1:5:1396:G:H3'	1:5:1396:G:C8	2.51	0.46
1:5:1427:A:H2'	1:5:1428:U:O5'	2.16	0.46
1:5:120:A:N7	1:5:149:A:C6	2.84	0.46
1:5:1554:A:N6	1:5:1555:G:C4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1698:C:C6	1:5:1698:C:H5'	2.51	0.46
1:5:1758:G:H2'	1:5:1758:G:N3	2.31	0.46
1:5:1938:C:H6	1:5:1938:C:H5'	1.81	0.46
1:5:2272:C:H2'	1:5:2273:G:O5'	2.16	0.46
1:5:2277:C:C2	1:5:2278:G:C8	2.91	0.46
1:5:2282:A:C2'	1:5:2283:G:H5'	2.46	0.46
1:5:2409:U:C5	1:5:2410:C:C5	3.04	0.46
1:5:2496:G:C2	1:5:2497:C:C6	3.03	0.46
1:5:2505:C:H1'	1:5:2506:G:C6	2.51	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
1:5:262:G:C6	1:5:263:G:N7	2.83	0.46
1:5:2662:G:H2'	1:5:2663:G:O5'	2.16	0.46
1:5:2712:G:C4	1:5:2713:C:C6	3.04	0.46
1:5:271:C:C4	1:5:272:U:H5	2.28	0.46
1:5:3616:U:H1'	1:5:3617:G:C6	2.50	0.46
1:5:3652:A:C3'	1:5:3653:A:C8	2.98	0.46
1:5:3723:A:N1	1:5:3724:A:C6	2.84	0.46
1:5:3723:A:N1	1:5:3724:A:N6	2.64	0.46
1:5:371:A:O2'	1:5:372:A:H5'	2.15	0.46
1:5:3837:C:H2'	1:5:3838:U:O4'	2.16	0.46
1:5:3862:A:N1	1:5:3863:C:H1'	2.31	0.46
1:5:4146:G:C2	1:5:4147:G:C5	3.03	0.46
1:5:4273:A:C2'	1:5:4274:A:O4'	2.54	0.46
1:5:4277:G:C2	1:5:4278:C:C2	3.04	0.46
1:5:4343:U:O2	1:5:4343:U:H2'	2.15	0.46
1:5:4367:G:C6	1:5:4368:G:N7	2.84	0.46
1:5:4532:U:C5	1:5:4554:G:N2	2.79	0.46
1:5:4550:G:C6	1:5:4551:U:C6	3.04	0.46
1:5:4600:G:O2'	1:5:4601:U:OP2	2.32	0.46
1:5:4904:G:N3	1:5:4905:C:C6	2.84	0.46
1:5:4973:U:H1'	1:5:4986:G:C2	2.51	0.46
1:5:4999:G:C5	1:5:5000:G:N7	2.84	0.46
1:5:660:A:C5	1:5:661:C:C5	3.03	0.46
1:5:703:G:C6	1:5:706:C:N4	2.75	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
2:7:24:C:C2'	2:7:25:G:O5'	2.64	0.46
2:7:27:G:O6	7:D:58:ARG:NH1	2.46	0.46
3:8:75:G:C6	3:8:76:C:N4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:96:C:C4	3:8:97:A:N7	2.78	0.46
4:A:186:TYR:HA	4:A:196:TRP:CZ3	2.51	0.46
4:A:33:ASP:OD1	4:A:33:ASP:N	2.48	0.46
4:A:77:ILE:HD13	4:A:128:ARG:HB2	1.97	0.46
5:B:228:TYR:HE1	5:B:270:GLY:HA2	1.80	0.46
5:B:290:GLY:HA3	5:B:328:ASN:HA	1.97	0.46
6:C:122:TYR:CB	6:C:280:PRO:HG3	2.46	0.46
1:5:1823:G:C4'	7:D:44:TYR:HD2	2.22	0.46
10:G:29:ASN:HB2	10:G:32:PHE:CZ	2.50	0.46
11:H:41:ILE:CD1	11:H:69:THR:CB	2.90	0.46
16:M:7:VAL:O	16:M:7:VAL:HG12	2.15	0.46
49:S2:1049:A:C4	49:S2:1070:A:H2	2.30	0.46
49:S2:1095:U:C2'	49:S2:1095:U:O2	2.60	0.46
49:S2:1099:G:N2	49:S2:1100:A:H1'	2.30	0.46
49:S2:1314:U:O2	49:S2:1315:U:O4'	2.34	0.46
49:S2:1540:G:H21	49:S2:1541:G:H1'	1.80	0.46
49:S2:1585:U:H4'	49:S2:1586:U:OP2	2.16	0.46
49:S2:1644:C:O2'	49:S2:1645:C:O5'	2.34	0.46
49:S2:1709:G:C2	49:S2:1710:C:C4	3.04	0.46
49:S2:1736:G:H2'	49:S2:1737:G:O4'	2.15	0.46
49:S2:1782:G:C2	49:S2:1784:G:C5	3.00	0.46
49:S2:1796:G:H2'	49:S2:1797:U:C6	2.50	0.46
49:S2:222:U:O2	49:S2:222:U:H2'	2.15	0.46
49:S2:309:G:H2'	49:S2:310:C:H6	1.80	0.46
49:S2:380:G:H21	49:S2:382:C:H2'	1.81	0.46
49:S2:539:C:C4	49:S2:540:U:C5	3.03	0.46
49:S2:793:G:O6	49:S2:794:A:C4	2.69	0.46
49:S2:795:A:H2'	49:S2:796:G:C8	2.36	0.46
49:S2:849:A:C4	49:S2:850:C:C5	3.04	0.46
52:SC:163:VAL:HG22	52:SC:241:PHE:CZ	2.51	0.46
58:SI:167:GLN:HG3	58:SI:168:GLN:N	2.31	0.46
58:SI:174:CYS:HB2	58:SI:190:LEU:HD21	1.98	0.46
59:SJ:132:GLN:HB2	59:SJ:134:HIS:CD2	2.51	0.46
61:SL:96:ILE:N	61:SL:96:ILE:HD12	2.31	0.46
62:SM:58:GLU:O	62:SM:60:MET:N	2.48	0.46
63:SN:4:MET:CE	63:SN:124:ARG:HD3	2.46	0.46
29:Z:76:ASN:HB2	29:Z:79:HIS:CD2	2.50	0.46
48:4:58:ASP:C	48:4:63:GLU:CG	2.85	0.46
48:4:669:VAL:O	48:4:672:LEU:N	2.46	0.46
48:4:659:PRO:HG2	48:4:698:ARG:HG3	1.98	0.46
1:5:1218:G:C5	1:5:1219:G:C8	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1267:C:H2'	1:5:2121:C:N4	2.31	0.46
1:5:1379:C:O3'	1:5:1380:G:C8	2.67	0.46
1:5:1412:G:C2	1:5:1413:C:N1	2.84	0.46
1:5:1443:A:C6	1:5:1444:G:C5	3.04	0.46
1:5:1463:C:N3	1:5:1464:C:C5	2.85	0.46
1:5:154:G:C6	1:5:155:C:N4	2.84	0.46
1:5:1584:G:C4	1:5:1585:C:C5	3.04	0.46
1:5:1612:G:C8	1:5:1612:G:H5''	2.51	0.46
1:5:1620:U:O2	1:5:1621:A:N7	2.49	0.46
1:5:1645:C:H2'	1:5:1646:A:C8	2.51	0.46
1:5:1658:G:H4'	1:5:2348:G:O2'	2.15	0.46
1:5:1826:G:C6	1:5:1827:C:C5	3.03	0.46
1:5:1829:G:C4	1:5:1830:G:C8	3.03	0.46
1:5:1899:G:C6	1:5:1900:C:C5	3.03	0.46
1:5:2033:A:C2	1:5:2034:G:N7	2.84	0.46
1:5:2397:G:N7	1:5:2399:G:C8	2.83	0.46
1:5:2458:C:O2'	1:5:3671:G:H1'	2.16	0.46
1:5:2851:G:N7	1:5:2852:U:H5	2.09	0.46
1:5:2:G:C6	1:5:3:C:C4	3.04	0.46
1:5:3610:A:H2'	1:5:3611:A:H8	1.81	0.46
1:5:3740:G:N3	1:5:3740:G:H2'	2.31	0.46
1:5:3749:C:C5	1:5:3750:G:C8	3.04	0.46
1:5:3755:G:H3'	1:5:3756:A:H5''	1.97	0.46
1:5:3801:U:O2'	1:5:3802:U:H5'	2.16	0.46
1:5:3899:G:C5'	5:B:257:TRP:CD1	2.96	0.46
1:5:4103:C:C4	1:5:4105:A:N6	2.84	0.46
1:5:4111:U:C4	1:5:4112:C:C5	3.04	0.46
1:5:4134:C:C2	1:5:4135:G:C8	3.04	0.46
1:5:4166:G:N2	1:5:4167:G:N9	2.63	0.46
1:5:1733:G:C6	1:5:4214:A:C2	3.04	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
1:5:1866:U:O4	1:5:4405:G:C1'	2.64	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
1:5:4547:C:H2'	1:5:4549:G:H8	1.81	0.46
1:5:4559:A:O3'	1:5:4560:C:O2	2.34	0.46
1:5:458:C:C2	1:5:459:C:C5	3.03	0.46
1:5:4687:A:H62	1:5:4698:C:H1'	1.80	0.46
1:5:4731:G:C8	1:5:4732:G:C5	3.04	0.46
1:5:472:C:O2	1:5:473:C:C6	2.66	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4882:U:O2'	1:5:4883:C:H2'	2.16	0.46
1:5:4939:C:O3'	1:5:4941:G:P	2.74	0.46
1:5:4958:C:C2'	1:5:4958:C:O2	2.63	0.46
1:5:516:C:C4	1:5:646:G:N1	2.84	0.46
1:5:662:C:C2'	1:5:663:G:H8	2.20	0.46
1:5:752:G:N2	1:5:753:C:H1'	2.31	0.46
1:5:88:A:O2'	1:5:89:C:H5'	2.15	0.46
2:7:23:A:O2'	2:7:24:C:P	2.74	0.46
2:7:9:C:C4	2:7:10:C:C6	3.04	0.46
3:8:131:G:N1	3:8:132:G:C5	2.84	0.46
3:8:46:G:C6	3:8:47:C:N4	2.84	0.46
4:A:53:GLY:HA2	4:A:192:LYS:HD3	1.98	0.46
4:A:29:LEU:HD23	4:A:76:PHE:HE1	1.80	0.46
1:5:4524:G:N3	5:B:252:ALA:HB1	2.31	0.46
5:B:29:VAL:HB	5:B:32:PHE:CE1	2.51	0.46
1:5:2273:G:H5''	6:C:311:ARG:HH22	1.79	0.46
1:5:4088:C:N3	10:G:53:ARG:NH2	2.63	0.46
14:K:114:ARG:CD	14:K:130:LYS:HE3	2.39	0.46
15:L:21:ARG:HB3	17:N:197:THR:HG22	1.97	0.46
49:S2:1041:G:N2	49:S2:1075:C:C2	2.84	0.46
49:S2:1100:A:C4	49:S2:1101:U:C6	3.03	0.46
49:S2:1151:G:N3	49:S2:1152:U:C6	2.82	0.46
49:S2:1199:A:C6	49:S2:1200:A:C5	3.04	0.46
49:S2:1204:A:C2	49:S2:1205:C:C5	3.04	0.46
49:S2:1593:C:C2	49:S2:1594:A:C8	3.04	0.46
49:S2:1732:G:C6	49:S2:1733:U:C4	3.04	0.46
49:S2:173:A:C5	49:S2:174:C:C5	3.04	0.46
49:S2:176:U:H3'	49:S2:177:G:C8	2.51	0.46
49:S2:287:U:O4	49:S2:297:A:N3	2.48	0.46
49:S2:316:G:N3	49:S2:317:C:C5	2.84	0.46
49:S2:378:U:H2'	49:S2:378:U:O2	2.16	0.46
49:S2:571:U:C2	49:S2:572:U:C6	3.04	0.46
49:S2:621:C:H2'	49:S2:622:C:O4'	2.15	0.46
49:S2:694:G:N1	49:S2:695:C:C5	2.83	0.46
49:S2:806:U:C2	49:S2:807:G:H8	2.25	0.46
49:S2:80:G:C2	49:S2:81:U:C2	3.04	0.46
49:S2:913:A:H2'	49:S2:913:A:N3	2.30	0.46
49:S2:957:A:C2	49:S2:958:G:N7	2.84	0.46
49:S2:962:A:C6	49:S2:963:A:C5	3.04	0.46
49:S2:965:U:H2'	49:S2:966:U:O4'	2.16	0.46
49:S2:99:A:OP2	49:S2:409:C:OP2	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:180:ASP:C	51:SB:180:ASP:OD1	2.55	0.46
51:SB:202:GLN:N	51:SB:203:PRO:HD2	2.31	0.46
51:SB:27:LYS:O	51:SB:28:ARG:HD2	2.16	0.46
52:SC:209:VAL:HG21	52:SC:233:LEU:HD13	1.97	0.46
53:SD:103:GLU:OE1	53:SD:106:ARG:NH1	2.49	0.46
56:SG:58:LYS:C	56:SG:60:GLY:H	2.19	0.46
49:S2:522:A:OP2	59:SJ:45:ARG:NH1	2.47	0.46
59:SJ:58:ARG:HA	59:SJ:61:LEU:HD23	1.97	0.46
62:SM:94:ILE:O	62:SM:95:ASP:C	2.54	0.46
49:S2:1232:U:O4	68:SS:138:THR:HG21	2.16	0.46
69:ST:18:LEU:HB2	69:ST:134:ILE:HD11	1.97	0.46
70:SU:66:ARG:NH1	70:SU:75:LYS:HG2	2.30	0.46
72:SW:90:GLN:HB2	72:SW:94:LEU:CD1	2.46	0.46
73:SX:51:VAL:HG13	73:SX:70:VAL:HG13	1.98	0.46
1:5:5006:U:C6	26:W:50:ASN:ND2	2.84	0.46
48:4:241:GLU:N	48:4:243:GLN:CD	2.68	0.45
48:4:434:TYR:HB3	48:4:493:ASN:ND2	2.30	0.45
48:4:64:GLN:CA	48:4:64:GLN:NE2	2.78	0.45
48:4:604:MET:CE	48:4:729:LEU:HD23	2.47	0.45
48:4:752:PRO:CB	48:4:780:PRO:HB3	2.46	0.45
48:4:823:ASP:OD2	48:4:826:ASP:N	2.46	0.45
1:5:1067:G:N2	1:5:1068:G:HI'	2.30	0.45
1:5:1072:C:H4'	1:5:1073:G:OP1	2.16	0.45
1:5:1171:G:N2	1:5:1191:C:C2	2.84	0.45
1:5:1173:G:C2	1:5:1174:G:HI'	2.51	0.45
1:5:1394:G:C2'	1:5:1395:U:O5'	2.64	0.45
1:5:1634:A:C6	1:5:1635:C:N4	2.84	0.45
1:5:1811:G:H2'	1:5:1812:C:H6	1.81	0.45
1:5:1858:A:C2	1:5:1859:C:C6	3.05	0.45
1:5:1930:U:H6	1:5:1930:U:O5'	1.99	0.45
1:5:2085:G:N2	1:5:2273:G:C5	2.84	0.45
1:5:2311:C:O2	1:5:2311:C:H2'	2.16	0.45
1:5:2482:C:H2'	1:5:2482:C:O2	2.16	0.45
1:5:2507:A:C6	1:5:2508:U:N1	2.83	0.45
1:5:2552:G:N2	1:5:2764:A:N7	2.64	0.45
1:5:2566:G:N2	1:5:2567:G:C4	2.84	0.45
1:5:2712:G:C5	1:5:2713:C:C5	3.04	0.45
1:5:3597:G:C6	1:5:3598:C:C4	3.03	0.45
1:5:3696:C:C2	1:5:3697:U:C6	3.04	0.45
1:5:3898:G:O3'	5:B:257:TRP:HB2	2.16	0.45
1:5:3919:C:H5'	4:A:207:VAL:HG12	1.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4079:C:C4	1:5:4080:C:C5	3.04	0.45
1:5:4216:G:N3	1:5:4217:G:C8	2.84	0.45
1:5:4287:G:C4	1:5:4288:C:C5	3.04	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
1:5:4480:A:N3	1:5:4480:A:H2'	2.30	0.45
1:5:4758:U:C2'	1:5:4759:C:O5'	2.63	0.45
1:5:5022:U:O2	1:5:5022:U:H2'	2.16	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
3:8:45:C:C2'	3:8:46:G:O5'	2.64	0.45
5:B:80:GLU:HG3	5:B:326:VAL:HG22	1.98	0.45
7:D:123:VAL:CG1	7:D:248:ARG:HH22	2.29	0.45
7:D:280:VAL:O	7:D:280:VAL:HG23	2.16	0.45
8:E:151:GLY:O	8:E:154:ARG:NH2	2.49	0.45
8:E:90:LYS:N	8:E:91:PRO:CD	2.80	0.45
9:F:228:HIS:NE2	9:F:236:GLY:HA3	2.30	0.45
9:F:73:MET:CB	9:F:84:TYR:CE2	2.96	0.45
1:5:150:U:OP2	10:G:140:VAL:HG23	2.16	0.45
1:5:4087:G:H1	10:G:46:GLN:HG2	1.80	0.45
14:K:116:MET:CG	14:K:117:ARG:NH2	2.79	0.45
14:K:163:PRO:O	14:K:163:PRO:CD	2.64	0.45
14:K:22:VAL:CG2	14:K:48:LYS:HE2	2.20	0.45
14:K:61:LYS:HG2	14:K:73:VAL:O	2.16	0.45
1:5:936:C:H5	16:M:46:ARG:HA	1.81	0.45
1:5:3928:A:H5'	17:N:89:VAL:CG1	2.46	0.45
17:N:88:GLY:HA2	18:O:48:TYR:HD2	102.60	0.45
20:Q:58:ARG:CB	20:Q:58:ARG:HH11	2.29	0.45
1:5:964:A:H1'	21:R:98:ARG:CZ	174.55	0.45
49:S2:1043:G:C2	49:S2:1044:G:C4	3.05	0.45
49:S2:1050:A:N6	49:S2:1051:G:C4	2.84	0.45
49:S2:1089:G:C2	49:S2:1090:C:C2	3.05	0.45
49:S2:1122:A:C2	49:S2:1123:C:N1	2.83	0.45
49:S2:1204:A:C6	49:S2:1205:C:C4	3.04	0.45
49:S2:1277:C:H2'	49:S2:1278:A:C8	2.51	0.45
49:S2:1280:G:N2	49:S2:1281:G:H1'	2.31	0.45
49:S2:1401:A:H2'	49:S2:1402:A:H8	1.77	0.45
49:S2:1453:C:N3	49:S2:1455:A:C8	2.84	0.45
49:S2:1455:A:C2	49:S2:1456:G:N9	2.83	0.45
49:S2:1462:U:O2	49:S2:1464:C:N4	2.49	0.45
49:S2:1542:C:H42	49:S2:1591:C:H42	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1617:G:H1'	49:S2:1661:A:H2	1.81	0.45
1:5:3629:A:C1'	49:S2:1721:U:C4	2.77	0.45
49:S2:219:U:C2	49:S2:220:U:C5	3.04	0.45
49:S2:499:G:N1	49:S2:504:G:O6	2.48	0.45
49:S2:521:A:H2'	49:S2:522:A:O4'	2.16	0.45
49:S2:752:G:C5	49:S2:790:C:N4	2.84	0.45
52:SC:127:PHE:CD1	52:SC:141:VAL:HG22	2.52	0.45
54:SE:191:ARG:CD	54:SE:218:PHE:CE1	2.91	0.45
49:S2:74:G:O6	56:SG:171:THR:N	2.49	0.45
59:SJ:7:TRP:O	59:SJ:8:VAL:C	2.54	0.45
60:SK:95:ARG:CA	60:SK:95:ARG:NE	2.79	0.45
62:SM:50:CYS:HB3	62:SM:75:ASN:HD21	1.79	0.45
49:S2:975:G:C5'	64:SO:32:HIS:HD2	2.29	0.45
25:V:96:LEU:HD12	26:W:20:ARG:O	2.15	0.45
28:Y:106:ILE:HG21	28:Y:109:LEU:HD23	1.98	0.45
48:4:33:SER:HA	48:4:57:THR:HG21	1.98	0.45
48:4:702:PHE:CE1	48:4:733:VAL:HG23	2.51	0.45
1:5:1077:C:C4	1:5:1078:A:C5	3.04	0.45
1:5:116:G:C6	1:5:117:C:C4	3.05	0.45
1:5:1169:G:N1	1:5:1170:G:C5	2.84	0.45
1:5:1246:G:C6	1:5:1247:U:C5	3.04	0.45
1:5:1388:A:N1	1:5:1396:G:N3	2.64	0.45
1:5:142:G:N1	1:5:144:G:C8	2.84	0.45
1:5:1534:A:H2'	1:5:1637:A:C2	2.51	0.45
1:5:1666:C:H2'	1:5:1667:G:O5'	2.16	0.45
1:5:1682:A:H3'	1:5:1683:U:C6	2.50	0.45
1:5:182:G:H2'	1:5:182:G:N3	2.32	0.45
1:5:1964:A:O2'	1:5:1965:G:H5'	2.15	0.45
1:5:197:A:C5'	1:5:197:A:C8	2.96	0.45
1:5:1993:C:N4	1:5:2002:A:N7	2.63	0.45
1:5:2001:G:N2	1:5:2004:U:C6	2.85	0.45
1:5:2071:A:N3	1:5:2072:C:C5	2.84	0.45
1:5:1271:G:O6	1:5:2109:G:O6	2.33	0.45
1:5:2115:G:C8	1:5:2116:C:C1'	2.99	0.45
1:5:2246:C:O2'	1:5:2247:C:H5'	2.17	0.45
1:5:2326:G:C4	1:5:2327:G:C8	3.04	0.45
1:5:2329:U:O2'	1:5:2330:G:C4'	2.64	0.45
1:5:2359:U:OP2	1:5:2360:A:O2'	2.25	0.45
1:5:2451:A:N7	1:5:2452:G:N7	2.65	0.45
1:5:2786:C:C4'	1:5:2787:A:C8	2.99	0.45
1:5:2823:G:N1	1:5:2824:C:C5	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:294:G:N3	1:5:294:G:C2'	2.79	0.45
1:5:348:G:C4	1:5:350:C:C5	3.04	0.45
1:5:3773:U:H2'	1:5:3774:A:H8	1.82	0.45
1:5:3856:A:N6	1:5:3857:G:C6	2.84	0.45
1:5:3911:C:N3	1:5:3912:U:C4	2.84	0.45
1:5:4072:C:N3	1:5:4073:A:N7	2.64	0.45
1:5:4091:G:C6	1:5:4092:G:C8	3.04	0.45
1:5:4322:G:N2	1:5:4326:G:C5	2.84	0.45
1:5:4588:U:O2'	1:5:4589:A:H2'	2.14	0.45
1:5:4661:G:C6	1:5:4662:C:C4	3.03	0.45
1:5:4661:G:H2'	1:5:4662:C:O4'	2.16	0.45
1:5:467:U:C4	1:5:468:U:C5	3.05	0.45
1:5:4970:C:C2	1:5:4971:A:C8	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
1:5:5047:C:H1'	1:5:5048:A:C2	2.52	0.45
1:5:735:G:H2'	1:5:736:C:C6	2.51	0.45
1:5:84:A:H5'	1:5:86:U:H1'	1.98	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
2:7:11:A:O2'	2:7:13:A:OP2	2.33	0.45
4:A:37:ARG:CZ	4:A:37:ARG:CB	2.93	0.45
5:B:110:ILE:HG21	5:B:115:LYS:HD3	1.96	0.45
8:E:43:ASN:HB3	8:E:58:MET:CE	2.47	0.45
9:F:245:LEU:HD22	9:F:249:MET:SD	2.56	0.45
11:H:171:ASP:OD1	11:H:173:ARG:NH1	2.48	0.45
14:K:14:TYR:CE2	14:K:63:THR:CB	2.93	0.45
20:Q:24:TYR:N	20:Q:24:TYR:CD1	3.54	0.45
49:S2:1031:A:C6	49:S2:1032:C:C5	3.04	0.45
49:S2:1040:G:N1	49:S2:1041:G:C4	2.85	0.45
49:S2:1067:C:N4	49:S2:1068:G:C5	2.83	0.45
49:S2:1204:A:C2	49:S2:1205:C:C4	3.04	0.45
49:S2:122:G:H2'	49:S2:123:G:O4'	2.16	0.45
49:S2:1545:A:O2'	49:S2:1546:G:O5'	2.33	0.45
49:S2:1570:G:C6	49:S2:1571:G:N7	2.85	0.45
49:S2:1610:G:C2	49:S2:1611:G:C5	3.04	0.45
49:S2:1223:A:O2'	49:S2:1651:A:H5'	2.16	0.45
49:S2:1654:G:C6	49:S2:1655:C:C4	3.04	0.45
49:S2:1647:A:N6	49:S2:1675:A:C2	2.85	0.45
49:S2:1806:A:C5	49:S2:1807:C:C5	3.04	0.45
49:S2:343:A:C5	49:S2:344:U:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:381:C:C4	58:SI:49:ARG:HG2	2.52	0.45
49:S2:401:A:C8	49:S2:402:C:C6	3.05	0.45
49:S2:602:G:N2	49:S2:621:C:C2	2.85	0.45
49:S2:83:A:N6	49:S2:84:A:C4	2.84	0.45
49:S2:872:A:HO2'	49:S2:873:G:H8	1.63	0.45
49:S2:962:A:C4	49:S2:963:A:C8	3.04	0.45
49:S2:973:C:H2'	49:S2:973:C:O2	2.15	0.45
51:SB:81:PHE:CB	51:SB:109:LYS:HB2	2.46	0.45
56:SG:221:LYS:HG3	56:SG:224:ARG:NH1	2.31	0.45
58:SI:56:ARG:HA	58:SI:180:GLY:O	2.16	0.45
60:SK:66:HIS:HB3	60:SK:68:TYR:CE1	2.52	0.45
75:SZ:103:HIS:O	75:SZ:104:ARG:C	2.54	0.45
1:5:5041:G:OP2	26:W:61:LYS:HE3	2.17	0.45
26:W:8:PHE:CE1	26:W:51:TRP:CH2	3.04	0.45
6:C:200:ARG:CZ	28:Y:11:ARG:HD2	2.46	0.45
48:4:585:GLU:OE1	48:4:737:GLN:NE2	2.49	0.45
48:4:592:LEU:O	48:4:592:LEU:CD1	2.57	0.45
48:4:694:GLU:N	48:4:839:ARG:HH21	2.14	0.45
1:5:1184:A:C4	1:5:1185:G:C8	3.05	0.45
1:5:1283:G:C3'	1:5:1283:G:C8	3.00	0.45
1:5:1292:C:C3'	1:5:1293:G:H5''	2.46	0.45
1:5:1349:G:N2	1:5:1350:C:C2	2.85	0.45
1:5:1437:C:O2	1:5:2098:G:C8	2.70	0.45
1:5:1448:G:C6	1:5:1449:C:C4	3.04	0.45
1:5:1475:G:N2	1:5:1476:C:C6	2.84	0.45
1:5:1507:C:C4	1:5:1508:A:N7	2.85	0.45
1:5:1558:A:C2	1:5:1559:G:C5	3.04	0.45
1:5:1618:G:N2	1:5:1619:G:N9	2.64	0.45
1:5:1673:U:O4	1:5:1674:C:N4	2.48	0.45
1:5:1694:C:H2'	1:5:1694:C:O2	2.16	0.45
1:5:1698:C:H4'	1:5:1699:A:OP2	2.17	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
1:5:194:C:C4	1:5:195:C:C6	3.05	0.45
1:5:2032:U:O2'	22:S:91:HIS:HE1	1.99	0.45
1:5:2058:G:C5	1:5:2059:C:C5	3.04	0.45
1:5:209:U:C2	1:5:233:U:N3	2.84	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
1:5:2557:G:N1	1:5:2558:C:C2	2.84	0.45
1:5:2645:G:N2	1:5:2646:C:HI'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2752:G:C8	1:5:2752:G:C5'	2.99	0.45
1:5:2590:G:C2'	1:5:2755:A:H61	2.30	0.45
1:5:2857:A:C2	1:5:2858:A:C4	3.03	0.45
1:5:2908:U:C2	1:5:2909:C:C6	3.04	0.45
1:5:31:U:H5''	17:N:71:ARG:HH21	1.81	0.45
1:5:3591:C:C4	1:5:3592:G:N7	2.76	0.45
1:5:3600:G:N2	1:5:3601:C:C2	2.85	0.45
1:5:3776:G:N3	1:5:3776:G:O4'	2.50	0.45
1:5:3819:G:N3	1:5:3819:G:H2'	2.31	0.45
1:5:4175:G:N1	1:5:4176:C:C4	2.84	0.45
1:5:4203:A:N6	1:5:4221:C:C2	2.85	0.45
1:5:4205:A:H3'	1:5:4206:C:H5''	1.97	0.45
1:5:4293:U:N3	1:5:4294:C:C5	2.84	0.45
1:5:4333:C:C2'	1:5:4334:U:O5'	2.63	0.45
1:5:4483:C:H2'	1:5:4484:A:O5'	2.17	0.45
1:5:447:C:C4	1:5:448:G:N7	2.84	0.45
1:5:4686:G:N2	1:5:4687:A:H1'	2.32	0.45
1:5:474:C:N3	1:5:475:G:N7	2.65	0.45
1:5:484:U:C5	1:5:486:C:C5	3.01	0.45
1:5:4926:C:H2'	1:5:4927:G:H21	1.82	0.45
1:5:512:U:H3'	1:5:513:U:H5'	1.98	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
5:B:116:ARG:C	5:B:118:PHE:H	2.20	0.45
1:5:5050:C:H1'	5:B:374:PHE:CE2	2.51	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
6:C:31:PRO:HB3	20:Q:24:TYR:HE2	1.80	0.45
12:I:47:PRO:HB3	12:I:171:TRP:HE1	1.79	0.45
1:5:72:C:H41	15:L:68:THR:HA	1.80	0.45
49:S2:989:C:C2	49:S2:1001:A:C6	3.05	0.45
49:S2:1004:U:N3	49:S2:1005:G:N7	2.64	0.45
49:S2:1059:G:O2'	49:S2:1060:A:H5'	2.17	0.45
49:S2:1176:G:C5	49:S2:1177:U:C5	3.05	0.45
49:S2:1237:C:C4	49:S2:1238:U:C4	3.04	0.45
49:S2:122:G:N1	49:S2:123:G:C5	2.84	0.45
49:S2:123:G:O2'	54:SE:146:THR:HG23	2.15	0.45
49:S2:1338:G:C6	49:S2:1339:U:C4	3.04	0.45
49:S2:1379:A:H2'	49:S2:1380:C:C6	2.51	0.45
49:S2:141:A:N6	49:S2:177:G:N2	2.64	0.45
49:S2:1462:U:C2	49:S2:1464:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1510:G:N1	49:S2:1511:U:C6	2.84	0.45
49:S2:1525:C:O2	49:S2:1525:C:H2'	2.15	0.45
49:S2:1810:U:H2'	49:S2:1811:C:O4'	2.17	0.45
49:S2:379:C:H2'	49:S2:380:G:H8	1.82	0.45
49:S2:452:G:N2	49:S2:453:C:N1	2.64	0.45
49:S2:454:U:C2'	49:S2:455:A:O5'	2.64	0.45
49:S2:493:A:C8	49:S2:574:A:H8	2.26	0.45
49:S2:55:U:H3	49:S2:91:A:HO2'	1.62	0.45
49:S2:602:G:H2'	49:S2:603:C:C5	2.51	0.45
49:S2:638:C:HO2'	49:S2:639:C:C5'	2.29	0.45
49:S2:597:G:N3	49:S2:640:A:C2	2.85	0.45
49:S2:804:U:O2	49:S2:804:U:H2'	2.16	0.45
50:SA:116:PHE:CD1	50:SA:116:PHE:C	2.88	0.45
50:SA:19:LEU:HD23	50:SA:24:HIS:CE1	2.51	0.45
56:SG:212:LEU:HD12	56:SG:216:ARG:HG2	1.97	0.45
57:SH:162:GLN:OE1	57:SH:162:GLN:HA	2.16	0.45
58:SI:65:PHE:CE2	58:SI:104:ILE:HG21	2.50	0.45
58:SI:66:SER:HB3	58:SI:73:THR:HB	1.98	0.45
62:SM:85:LEU:HB3	62:SM:106:CYS:HB3	1.99	0.45
71:SV:21:ASN:HB3	72:SW:67:GLY:HA3	1.98	0.45
25:V:88:TYR:CE1	25:V:96:LEU:HB3	2.51	0.45
27:X:74:TYR:CE1	27:X:116:LEU:HD22	2.51	0.45
48:4:113:SER:HB2	48:4:499:PHE:CG	2.50	0.45
48:4:33:SER:HB3	48:4:57:THR:HG21	1.95	0.45
48:4:505:VAL:CG2	48:4:549:ALA:O	2.64	0.45
1:5:1175:A:N3	1:5:1176:C:C6	2.85	0.45
1:5:1443:A:C5	1:5:1444:G:C5	3.05	0.45
1:5:1426:G:O2'	1:5:1459:A:N6	2.50	0.45
1:5:1475:G:H2'	1:5:1476:C:H6	1.81	0.45
1:5:1542:U:C2	1:5:1543:G:H8	2.31	0.45
1:5:1752:G:C5	1:5:1753:G:C8	3.05	0.45
1:5:1668:A:C8	1:5:1881:C:C4	3.05	0.45
1:5:1899:G:C5	1:5:1900:C:C5	3.04	0.45
1:5:192:G:N2	1:5:250:C:C2	2.84	0.45
1:5:2292:C:H2'	1:5:2293:U:H6	1.82	0.45
1:5:2339:G:C2	1:5:2340:C:N1	2.85	0.45
1:5:2351:C:N3	1:5:2352:U:C5	2.85	0.45
1:5:2367:A:N7	1:5:2798:A:N3	2.65	0.45
1:5:2453:A:C6	1:5:2454:U:C4	3.01	0.45
1:5:2496:G:C4	1:5:2497:C:C5	3.04	0.45
1:5:2497:C:C4	1:5:2498:C:H5	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2529:A:C8	1:5:2532: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	29:Z:51:ARG:NH2	2.50	0.45
1:5:2744:A:H2'	1:5:2745:A:N7	2.32	0.45
1:5:2857:A:C4	1:5:2858:A:N7	2.85	0.45
1:5:2904:U:OP2	1:5:2905:C:N4	2.49	0.45
1:5:299:C:N3	1:5:300:A:N7	2.64	0.45
1:5:3603:G:H2'	1:5:3604:A:N3	2.31	0.45
1:5:3632:C:N3	1:5:3633:C:C5	2.84	0.45
1:5:3717:A:N7	1:5:3736:A:N6	2.65	0.45
1:5:3757:G:C6	1:5:3758:U:C4	3.05	0.45
1:5:379:G:C2	1:5:380:U:C5	3.04	0.45
1:5:4099:G:O2'	51:SB:224:GLU:CA	2.64	0.45
1:5:4109:G:C2	1:5:4110:C:C6	3.04	0.45
1:5:4112:C:C2	1:5:4113:U:C6	3.05	0.45
1:5:4257:A:C2'	1:5:4258:C:C6	2.77	0.45
1:5:4292:A:O4'	1:5:4330:G:C1'	2.65	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
1:5:44:A:N3	1:5:44:A:H2'	2.32	0.45
1:5:4723:A:H2'	1:5:4724:A:C8	2.51	0.45
1:5:47:A:H4'	1:5:48:G:OP1	2.16	0.45
1:5:4905:C:N3	1:5:4906:C:C5	2.85	0.45
1:5:4899:G:C2	1:5:4922:C:O2	2.70	0.45
1:5:4999:G:C2	1:5:5000:G:N9	2.85	0.45
1:5:5027:C:O2	1:5:5027:C:H2'	2.15	0.45
1:5:5047:C:O2'	1:5:5050:C:OP2	2.15	0.45
1:5:512:U:H3'	1:5:513:U:C5'	2.46	0.45
1:5:678:C:C2	1:5:679:C:C5	3.04	0.45
1:5:709:C:C4	1:5:710:G:N7	2.85	0.45
1:5:728:U:H2'	1:5:729:G:OP1	2.16	0.45
1:5:96:U:OP1	15:L:13:HIS:HB3	2.16	0.45
2:7:115:A:H5'	2:7:115:A:H8	1.81	0.45
2:7:62:U:O2	2:7:64:G:C8	2.70	0.45
2:7:69:U:C4	2:7:106:G:O6	2.70	0.45
3:8:55:U:N3	3:8:62:A:C2	2.74	0.45
5:B:379:PHE:N	5:B:379:PHE:CD1	2.83	0.45
6:C:322:LEU:O	6:C:325:MET:HB3	2.16	0.45
8:E:46:LEU:HG	8:E:52:ARG:HG2	1.98	0.45
10:G:261:LEU:HD22	10:G:264:LYS:NZ	2.29	0.45
11:H:162:GLN:HG3	11:H:180:TYR:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:60:PHE:N	13:J:60:PHE:CD1	2.84	0.45
10:G:166:LEU:HD21	17:N:45:PRO:HG2	1.98	0.45
18:O:49:ARG:NH1	18:O:49:ARG:HG2	2.32	0.45
49:S2:1005:G:C6	49:S2:1006:C:C4	3.04	0.45
49:S2:1045:U:N3	49:S2:1046:U:C4	2.84	0.45
49:S2:1050:A:C6	49:S2:1051:G:C1'	2.98	0.45
49:S2:1106:C:C2	49:S2:1107:G:C8	3.04	0.45
49:S2:1335:G:C5	49:S2:1336:C:C5	3.05	0.45
49:S2:1387:G:C6	49:S2:1388:A:C4	3.05	0.45
49:S2:1418:C:N3	49:S2:1420:G:C5	2.84	0.45
49:S2:1466:G:C6	49:S2:1467:C:C4	3.04	0.45
49:S2:147:A:O2'	49:S2:148:U:O5'	2.33	0.45
49:S2:1508:A:N6	49:S2:1510:G:C4	2.84	0.45
49:S2:1552:G:OP1	49:S2:1553:C:O2	2.34	0.45
49:S2:1612:G:C2	49:S2:1613:G:C8	3.04	0.45
49:S2:1621:U:HO2'	49:S2:1622:U:H6	1.63	0.45
49:S2:1686:G:C2	49:S2:1687:C:C2	3.04	0.45
49:S2:1806:A:C4	49:S2:1807:C:C6	3.05	0.45
49:S2:330:G:C6	49:S2:331:C:C5	3.05	0.45
49:S2:448:A:H4'	49:S2:449:A:H5'	1.99	0.45
49:S2:452:G:C5	49:S2:453:C:C5	3.05	0.45
49:S2:498:C:N3	49:S2:505:G:N2	2.65	0.45
49:S2:569:A:C6	49:S2:570:C:C5	3.04	0.45
49:S2:899:U:N3	49:S2:900:C:C6	2.85	0.45
49:S2:982:G:O2'	49:S2:983:A:H5'	2.17	0.45
22:S:68:PHE:CD1	22:S:68:PHE:N	2.85	0.45
50:SA:104:THR:O	50:SA:107:THR:HG23	2.16	0.45
52:SC:74:LYS:CG	52:SC:269:PHE:CD2	2.99	0.45
54:SE:100:ARG:HG2	54:SE:102:ILE:HG13	1.98	0.45
55:SF:100:ILE:CG2	55:SF:111:VAL:HG21	2.46	0.45
55:SF:73:THR:HG22	55:SF:93:VAL:HG21	1.98	0.45
49:S2:1791:A:O2'	56:SG:67:VAL:HA	2.16	0.45
59:SJ:124:HIS:O	59:SJ:127:ARG:N	2.49	0.45
62:SM:32:ALA:HB3	62:SM:110:VAL:HB	1.99	0.45
64:SO:40:THR:HG21	64:SO:111:GLY:HA3	1.99	0.45
48:4:114:GLU:CA	48:4:114:GLU:OE1	2.61	0.45
48:4:19:ILE:HG22	48:4:20:ARG:N	2.31	0.45
48:4:236:PHE:HZ	48:4:273:PHE:CE1	2.33	0.45
48:4:27:HIS:HB3	48:4:30:HIS:CD2	2.52	0.45
48:4:517:LEU:HD23	48:4:517:LEU:O	2.16	0.45
48:4:745:TYR:CG	48:4:814:PHE:HA	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1096:C:C2	1:5:1097:C:C6	3.05	0.45
1:5:1176:C:N3	1:5:1177:U:C5	2.85	0.45
1:5:1362:G:C2	1:5:1363:C:N1	2.85	0.45
1:5:1394:G:C2	1:5:1395:U:C2	3.05	0.45
1:5:1491:A:C5	1:5:1492:G:N7	2.84	0.45
1:5:1543:G:N1	1:5:1544:G:N7	2.63	0.45
1:5:1563:A:O2'	1:5:1564:A:C8	2.70	0.45
1:5:14:C:O2	1:5:15:A:C8	2.70	0.45
1:5:1617:G:C2	1:5:2513:A:C2	3.04	0.45
1:5:1683:U:C2	1:5:1684:A:H8	2.13	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
1:5:1744:U:N3	1:5:1745:G:N7	2.65	0.45
1:5:1781:U:O2	1:5:1782:U:C6	2.69	0.45
1:5:1983:A:H2	1:5:2010:A:C3'	2.28	0.45
1:5:2008:U:H5	1:5:2010:A:H3'	1.81	0.45
1:5:2391:G:C2	1:5:2392:C:C2	3.05	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
1:5:2745:A:HO2'	1:5:2746:A:C5'	2.28	0.45
1:5:2867:C:C2	1:5:2884:G:C2	3.04	0.45
1:5:320:C:C4	1:5:321:U:C5	3.04	0.45
1:5:3635:A:N1	1:5:3636:C:H1'	2.31	0.45
1:5:3738:G:H3'	1:5:3738:G:C8	2.52	0.45
1:5:3759:A:C2	49:S2:1708:C:H2'	2.50	0.45
1:5:4167:G:C2	1:5:4168:G:N7	2.83	0.45
1:5:4233:A:N7	1:5:4235:G:C8	2.84	0.45
1:5:4291:G:H5''	1:5:4291:G:N3	2.32	0.45
1:5:4315:A:C3'	1:5:4316:G:H5'	2.47	0.45
1:5:4363:A:C6	1:5:4364:G:N7	2.84	0.45
1:5:446:C:O2	1:5:446:C:H2'	2.16	0.45
1:5:4470:G:C2	1:5:4486:C:N3	2.85	0.45
1:5:4489:G:C2	1:5:4490:C:C2	3.04	0.45
1:5:451:C:N4	1:5:1295:C:C2'	2.68	0.45
1:5:4905:C:C2	1:5:4906:C:C6	3.04	0.45
1:5:5006:U:C1'	1:5:5042:A:N7	2.80	0.45
1:5:656:C:O2	1:5:657:C:C6	2.69	0.45
1:5:691:C:O2	1:5:692:A:C8	2.69	0.45
1:5:695:G:H3'	1:5:696:C:C5'	2.45	0.45
1:5:743:G:H1	1:5:921:C:H42	1.63	0.45
1:5:937:U:H2'	1:5:937:U:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:42:A:C2	2:7:43:U:N1	2.83	0.45
5:B:234:ARG:HD2	5:B:271:GLN:O	2.17	0.45
7:D:189:GLU:N	7:D:189:GLU:OE2	2.50	0.45
7:D:196:ARG:HA	7:D:196:ARG:NH1	2.31	0.45
7:D:66:TYR:CD1	7:D:66:TYR:C	2.90	0.45
8:E:129:PHE:C	8:E:129:PHE:HD1	2.20	0.45
8:E:129:PHE:O	8:E:130:SER:C	2.52	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
17:N:30:TYR:CZ	17:N:63:ARG:CD	2.99	0.45
19:P:114:ILE:HD11	19:P:117:ILE:HD12	1.98	0.45
49:S2:1279:C:H2'	49:S2:1280:G:O4'	2.16	0.45
49:S2:1326:U:O4'	49:S2:1494:U:C6	2.70	0.45
49:S2:1421:A:C6	49:S2:1422:G:C4	3.05	0.45
49:S2:1427:C:O2	49:S2:1428:G:N7	2.49	0.45
49:S2:1446:A:O2'	49:S2:1447:G:H8	1.98	0.45
49:S2:1553:C:H5'	49:S2:1556:A:H61	1.82	0.45
49:S2:1562:C:O2	49:S2:1562:C:H2'	2.16	0.45
49:S2:1605:G:N2	49:S2:1635:C:N4	2.64	0.45
49:S2:1662:U:H5''	49:S2:1663:A:OP2	2.16	0.45
49:S2:165:G:H8	49:S2:166:A:C8	2.23	0.45
49:S2:1677:U:C2	49:S2:1678:A:C2	3.05	0.45
49:S2:173:A:C6	49:S2:174:C:C6	3.03	0.45
49:S2:1832:A:C6	49:S2:1833:C:N4	2.85	0.45
49:S2:192:C:H4'	49:S2:192:C:OP1	2.16	0.45
49:S2:46:A:C2	49:S2:99:A:C4	3.04	0.45
49:S2:478:G:C6	49:S2:479:C:C4	3.05	0.45
49:S2:533:A:C2	49:S2:534:G:H1'	2.51	0.45
49:S2:556:U:H1'	49:S2:557:U:C5	2.51	0.45
49:S2:569:A:C5	49:S2:570:C:C5	3.04	0.45
49:S2:816:A:C2	49:S2:817:G:C1'	2.99	0.45
49:S2:64:A:N1	49:S2:82:G:C2	2.84	0.45
49:S2:92:A:H5''	49:S2:92:A:N3	2.31	0.45
56:SG:147:LEU:HD21	56:SG:156:TYR:CB	2.47	0.45
60:SK:57:TYR:O	60:SK:58:VAL:HB	2.16	0.45
65:SP:53:GLN:OE1	65:SP:53:GLN:N	2.49	0.45
50:SA:52:LYS:HD3	67:SR:109:LEU:HD12	1.98	0.45
74:SY:74:MET:HG3	74:SY:76:TYR:OH	2.16	0.45
48:4:330:LYS:C	48:4:331:GLU:CG	2.74	0.45
48:4:739:ARG:HH11	48:4:823:ASP:CB	2.13	0.45
48:4:770:VAL:HA	48:4:785:LYS:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:767:ARG:HH22	48:4:789:PRO:HG2	1.82	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
1:5:1092:G:N1	1:5:1093:C:C4	2.84	0.45
1:5:1212:G:C2	1:5:1213:G:C5	3.05	0.45
1:5:1241:C:C2'	1:5:1242:G:OP1	2.65	0.45
1:5:1280:C:H5'	1:5:1280:C:C6	2.45	0.45
1:5:1310:C:C2	1:5:1311:G:H8	2.32	0.45
1:5:1427:A:OP2	1:5:1428:U:C4	2.70	0.45
1:5:1446:C:H2'	1:5:1447:C:H5'	1.98	0.45
1:5:1662:C:C2	1:5:1663:C:C6	3.04	0.45
1:5:1663:C:O2'	1:5:2319:C:N4	2.48	0.45
1:5:1972:G:N3	1:5:1973:G:C8	2.85	0.45
1:5:1985:G:H2'	1:5:1986:U:C6	2.52	0.45
1:5:2076:G:C2	1:5:2077:C:N1	2.84	0.45
1:5:2126:G:C8	1:5:2127:C:C5	3.05	0.45
1:5:235:A:O2'	1:5:237:G:OP2	2.35	0.45
1:5:2441:C:O2	1:5:2442:G:N7	2.50	0.45
1:5:2603:C:N3	1:5:2604:C:C6	2.85	0.45
1:5:2603:C:C4	1:5:2604:C:C5	3.05	0.45
1:5:2622:G:C2	1:5:2623:A:H1'	2.52	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
1:5:2759:G:H2'	1:5:2760:G:H1'	1.97	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
1:5:296:A:O5'	1:5:296:A:C8	2.69	0.45
1:5:3597:G:O4'	1:5:3597:G:P	2.75	0.45
1:5:3673:C:O2'	1:5:3674:G:OP1	2.32	0.45
1:5:3721:U:N3	1:5:3722:G:C8	2.80	0.45
1:5:3722:G:C2	1:5:3723:A:N9	2.85	0.45
1:5:4069:U:H2'	1:5:4069:U:O2	2.16	0.45
1:5:4092:G:N1	1:5:4093:G:C2	2.84	0.45
1:5:4108:G:N1	1:5:4109:G:C5	2.85	0.45
1:5:4175:G:N2	1:5:4176:C:C2	2.85	0.45
1:5:4275:G:N1	1:5:4276:G:C4	2.85	0.45
1:5:4276:G:H4'	23:T:12:ARG:O	2.17	0.45
1:5:4539:U:O2	1:5:4540:C:C6	2.69	0.45
1:5:4640:C:C2	1:5:4641:U:C6	3.04	0.45
1:5:476:G:C2	1:5:679:C:C2	3.05	0.45
1:5:4904:G:C2	1:5:4905:C:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4910:G:N2	18:O:109:PRO:HA	2.31	0.45
1:5:4978:G:C2'	1:5:4979:A:O5'	2.65	0.45
1:5:5028:G:C2	1:5:5029:C:C4	3.04	0.45
1:5:85:G:H1'	1:5:86:U:H5	1.81	0.45
1:5:906:C:C2	1:5:907:C:C6	3.05	0.45
2:7:21:G:C8	2:7:21:G:H5''	2.51	0.45
3:8:121:G:C2'	3:8:122:G:O5'	2.63	0.45
3:8:132:G:C2	3:8:133:G:C5	3.04	0.45
3:8:59:A:O5'	3:8:60:G:H2'	2.17	0.45
5:B:190:VAL:O	5:B:191:ALA:CB	2.65	0.45
5:B:26:ARG:HB2	5:B:344:VAL:HG11	1.99	0.45
6:C:103:ALA:O	6:C:104:PRO:C	2.55	0.45
1:5:218:A:H62	6:C:185:ALA:HB2	1.76	0.45
6:C:41:HIS:HB3	6:C:244:GLY:HA2	1.97	0.45
7:D:62:CYS:HB3	7:D:105:LEU:HD22	1.98	0.45
8:E:279:PRO:C	8:E:281:LYS:N	2.69	0.45
14:K:86:LYS:HA	14:K:104:ILE:HD13	1.98	0.45
1:5:74:G:H5''	15:L:59:VAL:HG13	1.98	0.45
18:O:168:TYR:OH	18:O:172:LYS:HD3	2.17	0.45
49:S2:1102:G:C6	49:S2:1103:C:C4	3.05	0.45
49:S2:672:A:C2	49:S2:1162:C:H1'	2.52	0.45
49:S2:1332:A:C6	49:S2:1333:U:C6	3.05	0.45
49:S2:1407:U:C2'	49:S2:1408:U:H6	2.24	0.45
49:S2:1411:G:C4	49:S2:1412:C:H1'	2.51	0.45
49:S2:1466:G:C2	49:S2:1467:C:C4	3.04	0.45
49:S2:148:U:C4	49:S2:170:A:N7	2.85	0.45
49:S2:1502:C:H2'	49:S2:1502:C:O2	2.16	0.45
49:S2:1531:A:H2'	49:S2:1532:C:C1'	2.46	0.45
49:S2:1537:A:C4	49:S2:1538:C:C6	3.04	0.45
49:S2:1646:C:OP1	66:SQ:138:ARG:NH1	2.50	0.45
49:S2:1777:G:C4	49:S2:1778:C:C5	3.05	0.45
49:S2:1820:G:H2'	49:S2:1821:U:O4'	2.16	0.45
49:S2:187:G:C5	49:S2:188:C:C4	3.05	0.45
49:S2:186:C:N3	49:S2:187:G:N7	2.64	0.45
49:S2:25:A:C6	49:S2:26:U:C5	3.05	0.45
49:S2:302:A:C6	49:S2:303:C:C4	3.04	0.45
49:S2:306:C:C5	49:S2:308:G:N7	2.85	0.45
49:S2:365:C:H4'	49:S2:402:C:O2'	2.16	0.45
49:S2:547:G:H2'	49:S2:548:C:H5''	1.97	0.45
49:S2:600:G:C4	49:S2:631:U:O4	2.70	0.45
49:S2:641:A:O2'	49:S2:645:C:OP1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:65:C:C4	56:SG:133:LEU:HB3	2.52	0.45
49:S2:65:C:C5	56:SG:133:LEU:HD22	2.52	0.45
49:S2:837:A:H2	49:S2:838:G:C5	2.33	0.45
49:S2:839:C:C6	49:S2:841:G:C4	3.05	0.45
49:S2:947:G:C5	49:S2:948:C:C5	3.04	0.45
50:SA:39:TYR:CD1	50:SA:39:TYR:C	2.89	0.45
54:SE:51:ARG:CA	54:SE:51:ARG:HE	2.29	0.45
55:SF:118:ASN:ND2	55:SF:181:ALA:O	2.49	0.45
55:SF:199:VAL:O	55:SF:203:ASN:ND2	2.49	0.45
56:SG:211:LYS:O	56:SG:215:LYS:N	2.37	0.45
57:SH:61:ILE:HD11	57:SH:95:ILE:HD12	1.98	0.45
58:SI:80:ASP:OD1	58:SI:81:VAL:N	2.50	0.45
61:SL:117:PHE:HZ	61:SL:144:LYS:HA	1.80	0.45
64:SO:126:ILE:CG2	64:SO:129:ILE:HD11	2.47	0.45
49:S2:1428:G:OP1	66:SQ:69:ARG:NH2	2.50	0.45
73:SX:115:ILE:HG22	73:SX:118:VAL:CG2	2.47	0.45
74:SY:19:GLN:N	74:SY:19:GLN:OE1	2.50	0.45
75:SZ:84:ALA:O	75:SZ:88:LEU:HG	2.17	0.45
22:S:28:TYR:HD2	23:T:151:LEU:HD11	1.81	0.45
48:4:21:ASN:ND2	48:4:469:ILE:HD12	2.22	0.45
48:4:430:MET:HE2	48:4:486:THR:HG23	1.92	0.45
1:5:1076:C:N4	1:5:1077:C:C4	2.84	0.45
1:5:1247:U:H2'	1:5:1248:C:O4'	2.17	0.45
1:5:1293:G:H2'	1:5:1294:A:C4	2.51	0.45
1:5:145:G:C2	1:5:146:G:C4	3.04	0.45
1:5:154:G:C4	1:5:155:C:C5	3.04	0.45
1:5:1564:A:H2'	1:5:1565:A:C8	2.51	0.45
1:5:1656:U:N3	1:5:1657:G:N7	2.65	0.45
1:5:1878:G:C2	1:5:1879:C:C2	3.05	0.45
1:5:2058:G:H21	1:5:2059:C:H1'	1.82	0.45
1:5:235:A:N6	1:5:238:C:C2	2.85	0.45
1:5:2367:A:C4	1:5:2798:A:C2	3.05	0.45
1:5:2422:C:O2	1:5:2422:C:C2'	2.63	0.45
1:5:2484:A:C5	1:5:2485:U:C5	3.04	0.45
1:5:2644:G:C2	1:5:2645:G:C8	3.05	0.45
1:5:2725:A:H2'	1:5:2726:G:H5''	1.98	0.45
1:5:2823:G:N2	1:5:2824:C:C2	2.85	0.45
1:5:3657:U:C2	1:5:3658:C:C5	3.04	0.45
1:5:2360:A:N6	1:5:3860:A:C8	2.84	0.45
1:5:3869:C:C2	1:5:3870:C:C5	3.05	0.45
1:5:3923:A:H2'	1:5:3924:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4152:G:C6	1:5:4153:C:C4	3.05	0.45
1:5:4238:G:O2'	1:5:4322:G:H4'	2.17	0.45
1:5:4405:G:H4'	12:I:4:ARG:HD3	1.98	0.45
1:5:4460:U:H2'	1:5:4461:C:C6	2.52	0.45
1:5:4474:A:N7	1:5:4476:C:C2	2.85	0.45
1:5:4491:G:C6	1:5:4492:U:C4	3.05	0.45
1:5:4686:G:C5	1:5:4687:A:C8	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
1:5:4742:G:C6	1:5:4743:G:C5	3.05	0.45
1:5:4755:G:C6	1:5:4876:U:C4	3.05	0.45
1:5:462:G:N2	1:5:694:C:C2	2.85	0.45
1:5:719:C:N3	1:5:720:G:C8	2.85	0.45
2:7:83:A:N1	2:7:85:G:C8	2.85	0.45
7:D:147:ASP:OD1	7:D:149:GLY:N	2.50	0.45
7:D:99:TYR:CD1	7:D:165:GLY:HA2	2.51	0.45
7:D:223:PHE:N	7:D:223:PHE:CD1	2.84	0.45
11:H:93:ARG:NH1	11:H:93:ARG:HB3	2.32	0.45
14:K:94:LYS:HE2	14:K:96:LYS:HG3	1.97	0.45
19:P:70:CYS:SG	19:P:83:TRP:HH2	2.39	0.45
21:R:9:ARG:HH11	21:R:9:ARG:HG2	1.82	0.45
22:S:33:PHE:HZ	22:S:106:VAL:HB	1.81	0.45
49:S2:989:C:C4	49:S2:1001:A:N1	2.83	0.45
49:S2:1102:G:N2	49:S2:1130:G:N2	2.58	0.45
49:S2:1135:C:C2	49:S2:1136:U:C6	3.04	0.45
49:S2:1180:C:O2	49:S2:1180:C:C2'	2.64	0.45
49:S2:1295:A:C8	49:S2:1296:U:C6	3.04	0.45
49:S2:1457:U:H2'	49:S2:1458:G:H8	1.79	0.45
49:S2:1730:U:C4	49:S2:1731:A:C8	3.05	0.45
49:S2:1865:C:H3'	49:S2:1866:A:H5'	1.98	0.45
49:S2:415:A:H2'	49:S2:416:U:O5'	2.17	0.45
49:S2:752:G:C2	49:S2:790:C:C4	3.05	0.45
49:S2:807:G:C2	49:S2:808:A:C5	3.05	0.45
49:S2:975:G:N1	49:S2:976:G:C5	2.85	0.45
56:SG:113:ILE:HD12	56:SG:124:LEU:HD21	1.99	0.45
57:SH:36:LEU:CD1	57:SH:40:LEU:HD12	2.47	0.45
58:SI:118:ALA:HB1	58:SI:137:LEU:CD2	2.47	0.45
62:SM:46:GLN:OE1	62:SM:112:LYS:HD2	2.16	0.45
71:SV:21:ASN:ND2	71:SV:21:ASN:O	2.48	0.45
48:4:518:PRO:CB	73:SX:50:ILE:HD11	2.46	0.45
28:Y:56:GLN:HB3	28:Y:56:GLN:HE21	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:239:LYS:CD	48:4:241:GLU:HG2	2.46	0.45
48:4:323:LEU:CD1	48:4:335:LEU:HD11	2.47	0.45
48:4:562:GLU:CA	48:4:570:ILE:CD1	2.74	0.45
48:4:5:THR:O	48:4:9:ILE:HG13	2.16	0.45
48:4:604:MET:CE	48:4:702:PHE:CD1	3.00	0.45
48:4:744:ILE:HG22	48:4:745:TYR:CD2	2.52	0.45
1:5:124:C:C2	1:5:125:C:C5	3.05	0.45
1:5:1261:G:N3	1:5:1262:G:C8	2.84	0.45
1:5:1321:G:N2	1:5:3876:A:O4'	2.49	0.45
1:5:1377:G:N7	1:5:1378:C:H4'	2.32	0.45
1:5:145:G:C6	1:5:146:G:C5	3.04	0.45
1:5:1473:U:C4	1:5:1474:C:C4	3.05	0.45
1:5:146:G:N1	1:5:147:A:N7	2.65	0.45
1:5:1541:C:C2	1:5:1542:U:C6	3.05	0.45
1:5:1583:A:N6	1:5:1584:G:C4	2.85	0.45
1:5:2052:G:O3'	18:O:17:GLY:HA3	2.17	0.45
1:5:1269:G:C2'	1:5:2111:G:O6	2.65	0.45
1:5:2115:G:H8	1:5:2116:C:C6	2.35	0.45
1:5:224:U:O2	1:5:224:U:O4'	2.33	0.45
1:5:2442:G:C3'	1:5:2443:G:H5''	2.47	0.45
1:5:2518:G:H4'	1:5:2538:U:O2'	2.16	0.45
1:5:2612:G:C5	1:5:2613:C:C6	3.04	0.45
1:5:2641:A:H2'	1:5:2642:A:O4'	2.17	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
1:5:3598:C:C2	1:5:3599:A:C8	3.05	0.45
1:5:3692:A:N1	1:5:3693:U:H1'	2.32	0.45
1:5:2:G:C4	1:5:3:C:C5	3.05	0.45
1:5:4079:C:C2	1:5:4080:C:C5	3.05	0.45
1:5:435:A:C6	1:5:436:C:C6	3.04	0.45
1:5:3813:A:H2	1:5:4538:G:N3	2.14	0.45
1:5:453:G:H2'	1:5:453:G:N3	2.32	0.45
1:5:4595:G:C2	1:5:4596:C:C2	3.04	0.45
1:5:467:U:H2'	1:5:467:U:O2	2.17	0.45
1:5:488:G:N2	1:5:489:C:C1'	2.80	0.45
1:5:489:C:H42	1:5:664:G:H1	1.64	0.45
1:5:4923:C:N3	1:5:4924:C:C5	2.85	0.45
1:5:4977:A:C6	1:5:4978:G:N1	2.85	0.45
1:5:4975:G:C2	1:5:4977:A:C8	3.04	0.45
1:5:677:G:C6	1:5:678:C:C4	3.05	0.45
1:5:722:G:H21	6:C:343:GLN:HE22	1.64	0.45

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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	0.45
1:5:939:G:N3	1:5:939:G:H2'	2.32	0.45
1:5:93:G:C4	1:5:94:A:C6	3.04	0.45
3:8:143:G:C6	3:8:144:U:C5	3.04	0.45
3:8:14:U:C2'	3:8:15:G:O5'	2.65	0.45
4:A:33:ASP:O	4:A:34:PHE:C	2.53	0.45
5:B:367:PHE:HZ	5:B:380:GLN:NE2	2.14	0.45
7:D:122:GLN:HB3	7:D:168:ASP:OD1	2.17	0.45
1:5:1285:U:O2	8:E:126:LYS:HG3	2.16	0.45
8:E:169:LEU:HD21	8:E:187:GLN:HB2	1.97	0.45
9:F:84:TYR:HD1	9:F:85:VAL:H	1.65	0.45
10:G:61:ILE:O	10:G:62:ARG:C	2.55	0.45
12:I:86:HIS:HD2	12:I:139:ARG:HH12	1.65	0.45
14:K:134:GLY:O	14:K:137:GLN:HG3	2.17	0.45
21:R:117:ARG:NH2	21:R:118:HIS:CE1	2.84	0.45
49:S2:102:A:H5'	49:S2:104:A:N3	2.31	0.45
49:S2:1296:U:H2'	49:S2:1297:U:C6	2.51	0.45
49:S2:1215:C:H5	49:S2:1645:C:H2'	1.81	0.45
49:S2:1669:G:C2	49:S2:1670:C:C2	3.04	0.45
49:S2:220:U:C4	49:S2:221:A:N7	2.85	0.45
49:S2:693:A:C4	49:S2:694:G:C8	3.04	0.45
49:S2:793:G:C6	49:S2:794:A:N7	2.84	0.45
49:S2:803:C:C2	49:S2:804:U:C6	3.05	0.45
49:S2:849:A:O2'	49:S2:850:C:H5'	2.17	0.45
49:S2:962:A:C2	49:S2:963:A:N9	2.85	0.45
49:S2:968:U:O2'	49:S2:972:A:C1'	2.60	0.45
50:SA:53:ARG:NH1	50:SA:53:ARG:HB2	2.32	0.45
51:SB:123:ALA:O	51:SB:124:HIS:HB3	2.17	0.45
54:SE:65:CYS:SG	54:SE:66:MET:N	2.90	0.45
58:SI:36:THR:HB	58:SI:57:ALA:O	2.17	0.45
62:SM:24:THR:HB	62:SM:115:GLY:HA3	1.99	0.45
64:SO:146:ARG:O	64:SO:148:GLY:N	2.50	0.45
64:SO:44:VAL:HG23	64:SO:81:VAL:HG11	1.98	0.45
49:S2:922:A:OP1	72:SW:28:ARG:NH2	2.49	0.45
48:4:518:PRO:CB	73:SX:50:ILE:CD1	2.94	0.45
74:SY:44:LEU:HA	74:SY:47:MET:HG2	1.98	0.45
48:4:322:LYS:CG	48:4:323:LEU:N	2.80	0.45
48:4:154:VAL:HG11	48:4:358:LEU:CG	2.47	0.45
48:4:577:VAL:CG1	48:4:578:SER:N	2.80	0.45
48:4:749:ILE:CD1	48:4:759:ILE:HG13	2.42	0.45
1:5:1362:G:C6	1:5:1363:C:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1374:G:N2	1:5:1375:C:H1'	2.31	0.45
1:5:1684:A:N6	1:5:1685:G:C5	2.85	0.45
1:5:1725:U:N3	1:5:1726:U:C6	2.85	0.45
1:5:1817:U:O2	1:5:1821:G:O6	2.35	0.45
1:5:1868:A:C6	1:5:1870:C:H1'	2.52	0.45
1:5:1885:G:C6	1:5:1895:G:N1	2.85	0.45
1:5:1321:G:C1'	1:5:1891:A:H62	2.29	0.45
1:5:1927:U:O2	1:5:1928:C:C6	2.70	0.45
1:5:1997:U:H3'	1:5:1998:A:H5''	1.97	0.45
1:5:2104:G:N1	1:5:2105:A:C4	2.85	0.45
1:5:229:G:OP1	28:Y:11:ARG:NH1	2.48	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
1:5:2480:G:N2	1:5:2499:C:C2	2.85	0.45
1:5:2644:G:C2	1:5:2645:G:N9	2.85	0.45
1:5:2703:G:C4	1:5:2704:C:C6	3.05	0.45
1:5:2725:A:H2'	1:5:2726:G:H5'	1.99	0.45
1:5:277:G:O2'	1:5:278:G:P	2.75	0.45
1:5:2852:U:C2	1:5:2852:U:C3'	2.97	0.45
1:5:316:U:O2'	1:5:317:A:C8	2.70	0.45
1:5:3600:G:C2	1:5:3601:C:C2	3.05	0.45
1:5:3694:U:O2	1:5:3695:U:C6	2.70	0.45
1:5:3736:A:O2'	1:5:3737:A:C4'	2.64	0.45
1:5:3794:C:C4	1:5:3795:A:N7	2.84	0.45
1:5:4083:U:O2	1:5:4085:A:O4'	2.34	0.45
1:5:4106:G:C5	1:5:4107:G:H1'	2.51	0.45
1:5:4165:C:N4	1:5:4166:G:N7	2.63	0.45
1:5:4216:G:C6	1:5:4217:G:N7	2.85	0.45
1:5:4411:G:C6	1:5:4412:C:C4	3.05	0.45
1:5:4479:A:C6	1:5:4480:A:C4	3.05	0.45
1:5:449:C:C2'	1:5:449:C:O2	2.64	0.45
1:5:4737:G:N1	1:5:4963:G:N3	2.64	0.45
1:5:707:C:H1'	1:5:4944:C:N4	2.32	0.45
1:5:5003:U:H2'	1:5:5004:C:C6	2.52	0.45
1:5:5004:C:C3'	1:5:5005:G:O4'	2.65	0.45
2:7:24:C:H2'	2:7:25:G:O5'	2.16	0.45
2:7:42:A:C4	2:7:43:U:C5	3.05	0.45
2:7:44:C:H2'	2:7:45:U:O5'	2.16	0.45
2:7:51:G:N3	2:7:52:C:C5	2.84	0.45
2:7:93:G:N1	2:7:94:C:C4	2.85	0.45
3:8:115:G:N2	3:8:116:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:116:C:O2	3:8:116:C:H2'	2.17	0.45
5:B:110:ILE:O	5:B:111:SER:CB	2.64	0.45
5:B:115:LYS:HE2	5:B:119:TYR:OH	2.16	0.45
7:D:90:VAL:HB	7:D:226:TYR:CE1	2.51	0.45
19:P:78:TRP:CE3	19:P:78:TRP:HA	2.52	0.45
21:R:99:MET:HG3	21:R:103:ARG:NH1	2.31	0.45
49:S2:1016:U:O2	49:S2:1016:U:O4'	2.34	0.45
49:S2:1024:A:H2'	49:S2:1025:U:O4'	2.16	0.45
49:S2:1110:G:C6	49:S2:1111:U:C5	3.05	0.45
49:S2:1190:A:H2'	49:S2:1191:C:C5'	2.47	0.45
49:S2:1203:G:H3'	49:S2:1204:A:C8	2.52	0.45
49:S2:1259:A:HO2'	49:S2:1263:U:H3	1.65	0.45
49:S2:12:U:H2'	49:S2:13:C:H6	1.82	0.45
49:S2:1303:C:N4	49:S2:1304:U:C4	2.85	0.45
49:S2:1481:G:H2'	49:S2:1482:C:O4'	2.16	0.45
49:S2:1535:U:OP2	75:SZ:106:GLN:NE2	2.47	0.45
49:S2:1551:U:C1'	49:S2:1558:C:O2	2.65	0.45
49:S2:1594:A:N6	49:S2:1595:U:C5	2.81	0.45
49:S2:1840:U:N3	49:S2:1841:C:C4	2.84	0.45
49:S2:1841:C:C2	49:S2:1842:C:H5	2.31	0.45
49:S2:201:C:N3	49:S2:202:G:H1'	2.32	0.45
49:S2:217:A:C2	49:S2:218:U:O4'	2.70	0.45
49:S2:458:A:H2'	49:S2:458:A:N3	2.31	0.45
49:S2:552:G:C5	49:S2:553:U:C5	3.05	0.45
49:S2:828:G:H2'	49:S2:829:C:O4'	2.17	0.45
49:S2:896:U:H2'	49:S2:897:U:O4'	2.16	0.45
49:S2:901:G:C4	49:S2:902:G:C8	3.05	0.45
22:S:81:TRP:NE1	22:S:94:TYR:HD1	2.15	0.45
49:S2:14:C:OP1	52:SC:189:GLY:O	2.35	0.45
56:SG:102:VAL:HG13	56:SG:106:LEU:HD11	1.99	0.45
59:SJ:124:HIS:O	59:SJ:125:HIS:C	2.55	0.45
62:SM:77:ILE:HG23	62:SM:78:LYS:N	2.31	0.45
63:SN:133:ARG:CZ	63:SN:133:ARG:CB	2.94	0.45
69:ST:134:ILE:O	69:ST:138:VAL:N	2.50	0.45
70:SU:50:VAL:HG13	70:SU:51:LYS:H	1.80	0.45
48:4:109:VAL:CG2	48:4:138:GLN:HE21	2.29	0.45
48:4:267:ASP:C	48:4:267:ASP:CB	2.75	0.45
48:4:379:ASP:OD2	48:4:381:ALA:HB3	2.17	0.45
48:4:502:SER:O	48:4:503:PRO:C	2.55	0.45
48:4:51:ALA:C	48:4:53:GLU:H	2.19	0.45
48:4:602:LEU:C	48:4:602:LEU:HD23	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:740:LEU:CB	48:4:831:PRO:CB	2.56	0.45
48:4:814:PHE:CE2	48:4:815:ASP:O	2.70	0.45
1:5:1362:G:N2	1:5:1363:C:HI'	2.32	0.45
1:5:1404:G:N1	1:5:1414:C:C4	2.85	0.45
1:5:1411:C:C2	1:5:1412:G:N7	2.84	0.45
1:5:144:G:C2	1:5:145:G:C5	3.05	0.45
1:5:1522:G:H5''	1:5:1523:A:OP1	2.16	0.45
1:5:1551:C:H2'	1:5:1552:G:O4'	2.17	0.45
1:5:176:G:C6	1:5:261:G:C6	3.05	0.45
1:5:1848:C:H5''	1:5:1848:C:C6	2.45	0.45
1:5:1916:G:H2'	1:5:1917:A:C8	2.52	0.45
1:5:2021:G:C4	1:5:2022:C:C6	3.05	0.45
1:5:2082:G:O2'	1:5:2083:C:O5'	2.34	0.45
1:5:1667:G:C6	1:5:2280:G:N3	2.85	0.45
1:5:2315:G:N1	1:5:2316:G:C5	2.85	0.45
1:5:2366:A:O2'	1:5:2367:A:H5''	2.17	0.45
1:5:2415:U:H2'	1:5:2416:G:C8	2.52	0.45
1:5:268:G:C6	1:5:269:G:N7	2.85	0.45
1:5:2703:G:C2	1:5:2704:C:C6	3.05	0.45
1:5:2727:C:H2'	1:5:2728:U:C6	2.52	0.45
1:5:273:U:N3	1:5:274:C:C4	2.85	0.45
1:5:2575:U:O2	1:5:2758:G:N2	2.50	0.45
1:5:300:A:N1	1:5:301:G:C5	2.85	0.45
1:5:66:A:C8	1:5:328:A:HI'	2.53	0.45
1:5:3632:C:C2	1:5:3633:C:C6	3.05	0.45
1:5:3684:G:H2'	1:5:3685:C:O5'	2.17	0.45
1:5:3759:A:N1	49:S2:1709:G:C5'	2.77	0.45
1:5:3780:G:O6	1:5:3815:G:C2	2.70	0.45
1:5:3878:C:C2	1:5:4518:A:C6	3.05	0.45
1:5:3880:G:O2'	1:5:3881:G:C5'	2.65	0.45
1:5:405:U:H2'	1:5:407:A:N7	2.32	0.45
1:5:4070:U:N3	1:5:4071:U:C6	2.85	0.45
1:5:4091:G:C5	1:5:4092:G:N7	2.85	0.45
1:5:4165:C:O2	1:5:4166:G:C8	2.70	0.45
1:5:4202:U:O2	1:5:4204:C:C5	2.70	0.45
1:5:423:G:C4	1:5:424:U:C5	3.04	0.45
1:5:4283:G:N2	1:5:4284:C:C4	2.85	0.45
1:5:4343:U:C4	1:5:4344:U:C4	3.05	0.45
1:5:314:G:C2	1:5:4355:G:C5	3.05	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4455:G:N1	1:5:4456:C:C5	2.84	0.45
1:5:4463:U:C5	1:5:4488:A:C8	3.05	0.45
1:5:4465:U:C4	1:5:4487:A:C6	3.04	0.45
1:5:4772:C:C4	1:5:4773:C:C5	3.05	0.45
1:5:488:G:C5	1:5:489:C:C5	3.05	0.45
1:5:4936:G:C2	1:5:4938:A:C8	3.04	0.45
1:5:4998:G:N2	1:5:4999:G:H1'	2.32	0.45
1:5:504:G:O2'	1:5:505:G:O4'	2.26	0.45
1:5:514:U:C3'	1:5:514:U:C6	3.00	0.45
1:5:54:G:C6	1:5:55:G:C5	3.04	0.45
1:5:664:G:C2	1:5:667:A:N1	2.84	0.45
2:7:117:G:C6	2:7:118:C:C4	3.05	0.45
2:7:71:G:C2	2:7:105:C:C2	3.05	0.45
4:A:211:PHE:CZ	4:A:221:LYS:HD3	2.52	0.45
4:A:242:ARG:HH11	4:A:242:ARG:CB	2.29	0.45
6:C:102:PHE:CD1	6:C:103:ALA:N	2.85	0.45
7:D:151:ALA:O	7:D:153:THR:N	2.50	0.45
8:E:114:THR:O	8:E:115:GLU:HB2	2.16	0.45
1:5:1725:U:H1'	9:F:113:LEU:CD1	2.47	0.45
11:H:12:ILE:HD11	11:H:16:VAL:HB	1.99	0.45
7:D:284:LYS:CB	12:I:209:TRP:CZ3	2.95	0.45
14:K:141:CYS:O	14:K:147:HIS:HA	2.17	0.45
15:L:39:ARG:HB2	15:L:39:ARG:HH11	1.81	0.45
20:Q:37:ARG:HG3	20:Q:38:ARG:HG2	1.99	0.45
49:S2:1015:U:O2	49:S2:1017:U:C5	2.70	0.45
49:S2:1050:A:H4'	49:S2:1846:G:O2'	2.16	0.45
49:S2:1121:G:C2	49:S2:1122:A:N9	2.85	0.45
49:S2:1245:G:C5	49:S2:1246:A:C8	3.05	0.45
49:S2:1232:U:H1'	49:S2:1253:A:N7	2.32	0.45
49:S2:1253:A:H4'	49:S2:1254:C:C5'	2.47	0.45
49:S2:1405:A:C5	49:S2:1406:G:N7	2.85	0.45
49:S2:1411:G:N7	49:S2:1412:C:C1'	2.80	0.45
49:S2:1429:G:H21	69:ST:65:TYR:HH	1.63	0.45
49:S2:1431:G:C2	49:S2:1432:U:C1'	2.98	0.45
49:S2:1513:C:C2	49:S2:1514:G:C8	3.04	0.45
49:S2:1673:U:C5	49:S2:1674:G:C8	3.05	0.45
49:S2:1782:G:N2	49:S2:1784:G:C8	2.85	0.45
49:S2:296:U:H2'	49:S2:297:A:O4'	2.17	0.45
49:S2:309:G:C2	49:S2:310:C:N3	2.85	0.45
49:S2:319:C:O2	49:S2:320:G:N7	2.50	0.45
49:S2:406:U:O2'	49:S2:407:G:H3'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:443:U:C2	49:S2:444:G:H1'	2.51	0.45
49:S2:447:A:C5	49:S2:449:A:C4	3.05	0.45
49:S2:437:G:N1	49:S2:457:C:C2	2.85	0.45
49:S2:504:G:O2'	49:S2:505:G:C5'	2.65	0.45
49:S2:552:G:N2	49:S2:553:U:C2	2.85	0.45
49:S2:841:G:N2	49:S2:842:C:N3	2.65	0.45
50:SA:39:TYR:CD1	50:SA:40:LYS:HG2	2.52	0.45
52:SC:94:ILE:CD1	52:SC:162:ILE:HD11	2.46	0.45
57:SH:61:ILE:HD12	57:SH:93:VAL:O	2.16	0.45
49:S2:381:C:OP1	58:SI:48:VAL:HB	2.16	0.45
59:SJ:165:TYR:CD1	59:SJ:165:TYR:N	2.85	0.45
59:SJ:64:ASP:O	59:SJ:67:ASP:HB3	2.17	0.45
49:S2:1282:A:H3'	62:SM:102:LYS:HB3	1.99	0.45
66:SQ:32:ILE:HG21	66:SQ:39:LEU:HD11	1.98	0.45
68:SS:117:ILE:HG22	68:SS:117:ILE:O	2.17	0.45
69:ST:11:GLN:NE2	69:ST:62:ARG:NH1	2.65	0.45
70:SU:68:THR:HG22	70:SU:69:PRO:O	2.17	0.45
61:SL:99:TYR:HE2	73:SX:13:LEU:HB3	1.81	0.45
74:SY:88:LYS:CE	74:SY:97:TYR:OH	2.65	0.45
23:T:19:PHE:CG	23:T:20:ARG:HG3	2.52	0.45
48:4:573:SER:HB2	48:4:574:ASP:CG	2.38	0.44
48:4:816:HIS:HD2	48:4:817:TRP:N	2.14	0.44
1:5:984:C:C2	1:5:1070:G:N2	2.85	0.44
1:5:1210:C:C2'	1:5:1210:C:O2	2.64	0.44
1:5:125:C:C2'	1:5:125:C:O2	2.65	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
1:5:1334:A:N6	1:5:1335:G:C6	2.85	0.44
1:5:1359:G:H2'	1:5:1360:G:C1'	2.47	0.44
1:5:1367:C:N3	1:5:1369:C:OP2	2.50	0.44
1:5:1374:G:C2	1:5:1375:C:N1	2.85	0.44
1:5:1497:A:OP2	20:Q:162:HIS:HB2	2.18	0.44
1:5:1751:A:C3'	1:5:1752:G:H5'	2.47	0.44
1:5:1761:G:C2	1:5:1762:C:C2	3.05	0.44
1:5:1864:G:C5	1:5:1865:G:C8	3.05	0.44
1:5:1912:G:C6	1:5:1913:C:N4	2.85	0.44
1:5:199:G:C2	1:5:201:C:C2	3.05	0.44
1:5:2308:A:H1'	3:8:19:C:O2'	2.18	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
1:5:2448:G:O6	1:5:2510:G:O2'	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2484:A:C2	1:5:2485:U:C2	3.06	0.44
1:5:2607:C:C2	1:5:2608:G:C8	3.05	0.44
1:5:2726:G:C5	1:5:2727:C:N4	2.85	0.44
1:5:2754:G:HO2'	1:5:2755:A:H8	1.65	0.44
1:5:2895:A:C2	1:5:2896:G:N9	2.85	0.44
1:5:344:A:C2	1:5:345:C:H1'	2.52	0.44
1:5:344:A:C6	1:5:345:C:C5	3.05	0.44
1:5:3606:U:H2'	1:5:3606:U:O2	2.16	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
1:5:3804:G:C5	1:5:3805:U:C5	3.05	0.44
1:5:381:U:H4'	1:5:414:C:H2'	1.99	0.44
1:5:4283:G:H1	1:5:4284:C:N4	2.10	0.44
1:5:4394:A:HO2'	1:5:4395:U:H5	1.62	0.44
1:5:4462:C:H2'	1:5:4463:U:O4'	2.17	0.44
1:5:4652:G:N3	1:5:4653:C:C5	2.85	0.44
1:5:4730:C:H2'	1:5:4965:U:C4	2.52	0.44
1:5:475:G:H2'	1:5:476:G:O4'	2.17	0.44
1:5:488:G:N2	1:5:489:C:H1'	2.32	0.44
1:5:84:A:C6	1:5:86:U:C4	3.04	0.44
1:5:961:G:O6	1:5:969:C:C6	2.70	0.44
1:5:976:G:H4'	1:5:976:G:OP1	2.17	0.44
1:5:994:G:C4	1:5:995:C:C6	3.05	0.44
2:7:25:G:C6	2:7:26:C:C4	3.05	0.44
3:8:99:U:O2	3:8:99:U:H2'	2.16	0.44
4:A:186:TYR:CB	4:A:196:TRP:HZ3	2.30	0.44
1:5:4968:A:OP1	5:B:120:LYS:HB2	2.17	0.44
6:C:288:ASP:OD2	6:C:291:ARG:CB	2.64	0.44
7:D:191:ASN:HB3	7:D:194:VAL:HG23	1.98	0.44
11:H:41:ILE:HG21	11:H:73:ILE:HD11	1.99	0.44
14:K:116:MET:C	14:K:118:HIS:N	2.70	0.44
14:K:148:PRO:HA	14:K:151:ILE:HD12	1.98	0.44
15:L:38:ALA:O	15:L:39:ARG:C	2.55	0.44
17:N:21:PHE:CZ	17:N:25:VAL:HG21	2.52	0.44
1:5:2822:G:H5''	21:R:18:GLY:HA3	1.99	0.44
49:S2:1022:U:H6	63:SN:128:TYR:CE2	2.27	0.44
49:S2:1109:C:O2	49:S2:1110:G:O4'	2.33	0.44
49:S2:1123:C:H42	49:S2:1124:C:N4	2.15	0.44
49:S2:1177:U:N3	49:S2:1178:U:C5	2.85	0.44
49:S2:1254:C:O2	49:S2:1254:C:C2'	2.61	0.44
49:S2:1294:G:N2	49:S2:1295:A:C8	2.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1308:U:C4	49:S2:1309:C:N4	2.85	0.44
49:S2:1311:C:C4	49:S2:1312:G:C4	3.05	0.44
49:S2:1287:A:C6	49:S2:1313:A:N7	2.85	0.44
49:S2:1405:A:N1	49:S2:1406:G:C5	2.85	0.44
49:S2:1455:A:H5'	49:S2:1456:G:OP2	2.18	0.44
49:S2:1496:U:O4	49:S2:1498:A:N7	2.50	0.44
49:S2:1613:G:C2	49:S2:1627:C:O2	2.70	0.44
49:S2:1775:U:N3	49:S2:1776:G:C8	2.85	0.44
49:S2:18:C:H4'	49:S2:1194:A:H62	1.82	0.44
49:S2:222:U:C2	49:S2:223:C:C5	3.04	0.44
49:S2:415:A:C2	49:S2:423:U:O2	2.69	0.44
49:S2:536:A:N6	49:S2:537:C:C4	2.85	0.44
49:S2:648:A:N1	49:S2:649:U:C4	2.86	0.44
49:S2:656:G:N2	49:S2:663:C:H5''	2.31	0.44
49:S2:814:U:H5''	59:SJ:8:VAL:HG11	1.99	0.44
49:S2:832:G:C2	49:S2:833:C:N1	2.85	0.44
49:S2:932:G:N2	49:S2:934:G:C8	2.85	0.44
50:SA:55:TRP:O	50:SA:58:LEU:N	2.50	0.44
54:SE:15:PRO:HD2	54:SE:18:TRP:CH2	2.52	0.44
49:S2:332:G:C6	56:SG:186:GLN:NE2	2.84	0.44
56:SG:52:ILE:HG23	56:SG:52:ILE:O	2.17	0.44
57:SH:34:SER:O	57:SH:36:LEU:N	2.47	0.44
58:SI:34:ALA:HB2	58:SI:56:ARG:CD	2.46	0.44
60:SK:95:ARG:HE	60:SK:95:ARG:HA	1.81	0.44
29:Z:92:ASP:OD1	29:Z:92:ASP:C	2.56	0.44
48:4:114:GLU:HG2	48:4:532:PRO:HD3	1.96	0.44
48:4:154:VAL:HG21	48:4:358:LEU:CD2	2.48	0.44
48:4:207:PRO:CB	48:4:261:TRP:CE2	3.00	0.44
48:4:236:PHE:CE2	48:4:273:PHE:CE2	2.58	0.44
48:4:301:PHE:O	48:4:305:MET:HG2	2.16	0.44
48:4:563:GLU:OE1	48:4:563:GLU:C	2.54	0.44
48:4:570:ILE:HG12	48:4:570:ILE:H	1.74	0.44
48:4:743:PRO:HA	48:4:744:ILE:HB	1.97	0.44
48:4:744:ILE:O	48:4:745:TYR:CD1	2.70	0.44
48:4:763:LEU:HD13	48:4:786:ALA:CB	2.47	0.44
1:5:99:A:C4	1:5:100:C:O2	2.70	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
1:5:1085:C:C2	1:5:1213:G:N1	2.85	0.44
1:5:1188:C:C2'	1:5:1188:C:O2	2.63	0.44
1:5:126:C:N3	1:5:127:G:C8	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1272:C:HO2'	1:5:1273:G:C1'	2.30	0.44
1:5:1376:C:H2'	1:5:1378:C:H6	1.82	0.44
1:5:1383:G:H2'	1:5:1384:C:O4'	2.16	0.44
1:5:1590:C:H5'	1:5:2856:C:O2'	2.17	0.44
1:5:1759:G:N2	1:5:1760:G:H1'	2.32	0.44
1:5:195:C:C2	1:5:196:C:C6	3.05	0.44
1:5:2081:C:H2'	1:5:2082:G:H8	1.82	0.44
1:5:2245:G:C5	1:5:2246:C:C5	3.06	0.44
1:5:2273:G:H2'	1:5:2274:C:C6	2.52	0.44
1:5:2327:G:C2	1:5:2328:G:C4	3.05	0.44
1:5:2486:G:H2'	1:5:2487:G:C1'	2.47	0.44
1:5:2496:G:N2	1:5:2497:C:C2	2.85	0.44
1:5:2505:C:O4'	1:5:2505:C:O2	2.33	0.44
1:5:270:U:H2'	1:5:270:U:O2	2.17	0.44
1:5:2713:C:O2	1:5:2714:G:H8	1.96	0.44
1:5:27:C:O2	1:5:27:C:C2'	2.42	0.44
1:5:2811:G:H22	1:5:2813:A:C3'	2.28	0.44
1:5:2843:U:N3	1:5:2844:A:C8	2.75	0.44
1:5:313:U:N3	1:5:314:G:C8	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
1:5:368:C:C2	1:5:374:G:C2	3.05	0.44
1:5:3751:G:H21	1:5:3775:A:H8	1.59	0.44
1:5:3871:A:H2'	1:5:3872:A:C8	2.52	0.44
1:5:3873:G:C2'	1:5:3874:G:O4'	2.58	0.44
1:5:4142:C:C2	1:5:4143:G:N2	2.86	0.44
1:5:4164:C:H2'	1:5:4164:C:O2	2.18	0.44
1:5:4167:G:N2	1:5:4168:G:C4	2.86	0.44
1:5:4230:C:O2	1:5:4230:C:C2'	2.64	0.44
1:5:4323:A:C2	1:5:4324:A:C5	3.05	0.44
1:5:4661:G:H8	1:5:4661:G:C5'	2.30	0.44
1:5:4681:A:H2'	1:5:4682:U:O4'	2.17	0.44
1:5:483:G:N1	1:5:484:U:C5	2.83	0.44
1:5:4923:C:H2'	1:5:4924:C:O4'	2.17	0.44
1:5:5047:C:C6	1:5:5050:C:C6	3.02	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
1:5:920:C:C2	1:5:921:C:C6	3.06	0.44
2:7:11:A:N1	2:7:66:G:O2'	2.37	0.44
1:5:2779:C:O2'	3:8:112:G:OP1	2.28	0.44
3:8:13:G:C6	3:8:14:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:185:ALA:HB3	4:A:196:TRP:CH2	2.53	0.44
4:A:48:ILE:HD11	4:A:82:ILE:HG22	1.98	0.44
10:G:104:PRO:HG3	10:G:194:VAL:HG12	1.98	0.44
11:H:41:ILE:HD11	11:H:69:THR:CG2	2.47	0.44
11:H:66:GLU:N	11:H:66:GLU:OE1	2.50	0.44
14:K:108:GLU:O	14:K:111:ASN:CB	2.65	0.44
14:K:89:PRO:C	14:K:90:ARG:O	2.52	0.44
15:L:55:LEU:HD22	15:L:120:TYR:CD2	2.52	0.44
20:Q:68:ARG:O	20:Q:72:LEU:HD13	2.17	0.44
49:S2:1040:G:H8	49:S2:1040:G:H5''	1.83	0.44
49:S2:1049:A:C5	49:S2:1070:A:N3	2.85	0.44
49:S2:1131:G:C6	49:S2:1132:C:C4	3.06	0.44
49:S2:1207:G:H3'	49:S2:1207:G:P	2.57	0.44
49:S2:1338:G:C4	49:S2:1339:U:C6	3.06	0.44
49:S2:1402:A:N1	49:S2:1405:A:N1	2.66	0.44
49:S2:1500:G:H2'	49:S2:1501:C:C6	2.52	0.44
49:S2:1568:C:HO2'	49:S2:1569:A:C1'	2.30	0.44
49:S2:1570:G:H2'	49:S2:1571:G:O4'	2.17	0.44
49:S2:1620:A:N3	49:S2:1620:A:H2'	2.33	0.44
49:S2:1686:G:N2	49:S2:1687:C:C2	2.85	0.44
49:S2:1738:C:N3	49:S2:1739:C:C5	2.84	0.44
49:S2:173:A:C2	49:S2:174:C:N1	2.85	0.44
49:S2:1832:A:OP2	49:S2:1837:G:OP2	2.33	0.44
1:5:3767:C:H5''	49:S2:1849:G:O6	2.02	0.44
49:S2:1855:G:OP2	64:SO:147:ARG:CZ	2.64	0.44
49:S2:1860:A:C2	49:S2:1862:G:N7	2.84	0.44
49:S2:195:C:C2	49:S2:205:G:C2	3.06	0.44
49:S2:211:G:C4	49:S2:212:C:C6	3.05	0.44
49:S2:302:A:C5	49:S2:303:C:C5	3.05	0.44
49:S2:143:U:O4	49:S2:315:C:OP2	2.35	0.44
49:S2:335:G:C2	49:S2:336:A:C8	3.05	0.44
49:S2:349:A:H2'	49:S2:350:C:H6	1.83	0.44
49:S2:495:U:C4	49:S2:496:C:C4	3.04	0.44
49:S2:502:C:O2	49:S2:502:C:C2'	2.64	0.44
49:S2:551:U:O2	49:S2:551:U:H2'	2.17	0.44
49:S2:600:G:N3	49:S2:601:G:N7	2.65	0.44
49:S2:672:A:H3'	49:S2:673:G:H5''	1.99	0.44
49:S2:74:G:C5'	49:S2:75:G:OP2	2.65	0.44
49:S2:752:G:C2	49:S2:790:C:C2	3.05	0.44
49:S2:826:A:C8	49:S2:827:A:C1'	3.01	0.44
49:S2:893:U:N3	49:S2:894:G:N7	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:39:TYR:HD1	50:SA:40:LYS:HG2	1.83	0.44
50:SA:90:PHE:CD1	50:SA:90:PHE:C	2.91	0.44
51:SB:32:ASP:OD1	51:SB:46:LYS:HD3	2.16	0.44
55:SF:20:PHE:O	55:SF:22:LYS:N	2.50	0.44
56:SG:105:ASN:O	56:SG:106:LEU:HD23	2.17	0.44
56:SG:229:ALA:HA	56:SG:232:ARG:HB2	1.98	0.44
61:SL:111:VAL:HG21	61:SL:128:VAL:HG11	1.98	0.44
74:SY:60:PHE:CD1	74:SY:71:GLY:HA3	2.52	0.44
48:4:587:SER:HB3	48:4:735:THR:HG21	1.98	0.44
48:4:659:PRO:HG3	48:4:698:ARG:HH22	1.75	0.44
48:4:824:PRO:O	48:4:832:SER:OG	2.35	0.44
1:5:1064:G:C2	1:5:1065:G:C4	3.05	0.44
1:5:1086:C:H42	1:5:1211:G:H1	1.64	0.44
1:5:1099:C:H2'	1:5:1100:U:O4'	2.17	0.44
1:5:111:C:C2	1:5:331:G:N1	2.85	0.44
1:5:1176:C:C4	1:5:1177:U:C5	3.05	0.44
1:5:1201:U:O2	1:5:1202:C:C6	2.70	0.44
1:5:1232:G:C4'	1:5:1233:G:OP2	2.66	0.44
1:5:1233:G:C2	1:5:1234:G:C5	3.06	0.44
1:5:1234:G:H3'	1:5:1235:G:H8	1.82	0.44
1:5:1362:G:N2	1:5:1363:C:C2	2.86	0.44
1:5:1420:A:OP1	1:5:1420:A:H4'	2.17	0.44
1:5:1435:G:C3'	1:5:1436:C:H5'	2.48	0.44
1:5:144:G:N2	1:5:145:G:C8	2.83	0.44
1:5:1487:G:H8	1:5:1487:G:O5'	2.01	0.44
1:5:1727:U:N3	1:5:1728:U:C4	2.85	0.44
1:5:1761:G:N3	1:5:1762:C:C6	2.84	0.44
1:5:1968:G:H2'	1:5:1969:G:O4'	2.17	0.44
1:5:1973:G:O2'	14:K:133:LEU:HD21	2.17	0.44
1:5:1970:A:C2'	1:5:2017:A:H61	2.23	0.44
1:5:2019:C:O2	1:5:2020:U:C6	2.70	0.44
1:5:2035:C:N4	1:5:2036:C:N4	2.65	0.44
1:5:2090:U:C2	6:C:307:LYS:HE2	2.51	0.44
1:5:2330:G:H2'	1:5:2331:G:O4'	2.17	0.44
1:5:2418:A:C2	1:5:2419:C:C6	3.05	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
1:5:2628:U:C2	1:5:2629:C:C6	3.05	0.44
1:5:2645:G:H21	1:5:2646:C:H1'	1.83	0.44
1:5:2692:U:C2'	1:5:2693:G:H5'	2.47	0.44
1:5:29:G:C2	1:5:30:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:364:G:O6	13:J:52:LYS:CE	108.39	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
1:5:3867:A:H3'	1:5:3868:G:H8	1.82	0.44
1:5:2:G:C2	1:5:3:C:C2	3.06	0.44
1:5:4104:G:C2'	1:5:4105:A:C8	3.00	0.44
1:5:4107:G:N3	1:5:4108:G:C8	2.86	0.44
1:5:4153:C:O2	1:5:4154:G:C8	2.70	0.44
1:5:4154:G:C6	1:5:4155:C:C4	3.05	0.44
1:5:4411:G:N2	1:5:4412:C:C2	2.85	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
1:5:4550:G:N1	1:5:4551:U:C5	2.86	0.44
1:5:455:C:C2	1:5:456:C:C6	3.06	0.44
1:5:458:C:H2'	1:5:459:C:O4'	2.18	0.44
1:5:4739:C:C2'	1:5:4740:G:O4'	2.62	0.44
1:5:481:G:C2	1:5:482:G:N7	2.85	0.44
1:5:487:G:C6	1:5:488:G:C5	3.06	0.44
1:5:4884:G:C8	1:5:4884:G:H5''	2.52	0.44
1:5:660:A:N3	1:5:661:C:C6	2.85	0.44
2:7:7:G:H5''	7:D:22:ARG:HH12	1.83	0.44
3:8:63:U:H3'	3:8:63:U:O2	2.18	0.44
3:8:75:G:N1	3:8:76:C:C4	2.85	0.44
5:B:258:HIS:HD2	5:B:258:HIS:O	2.00	0.44
9:F:36:ARG:HH11	9:F:36:ARG:CG	3.78	0.44
12:I:209:TRP:O	12:I:212:LEU:N	2.49	0.44
14:K:114:ARG:O	14:K:117:ARG:HB2	2.17	0.44
4:A:69:PHE:CD1	15:L:65:ARG:HD3	106.42	0.44
17:N:28:TRP:CE3	17:N:29:GLN:HA	2.53	0.44
49:S2:1098:C:O2	49:S2:1098:C:H2'	2.16	0.44
49:S2:1415:C:H2'	49:S2:1416:C:C5'	2.47	0.44
49:S2:1419:C:OP2	49:S2:1420:G:P	2.76	0.44
49:S2:1439:A:O2'	49:S2:1440:C:O4'	2.34	0.44
49:S2:1450:G:C6	49:S2:1451:G:C5	3.05	0.44
49:S2:1588:A:O2'	49:S2:1589:A:H5'	2.18	0.44
49:S2:1605:G:O3'	49:S2:1606:G:O4'	2.36	0.44
49:S2:1609:C:C2'	49:S2:1609:C:O2	2.65	0.44
49:S2:1846:G:C6	49:S2:1847:G:N7	2.85	0.44
49:S2:402:C:H2'	49:S2:402:C:O2	2.15	0.44
49:S2:583:C:N4	49:S2:584:G:C5	2.84	0.44
49:S2:610:G:C6	49:S2:611:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:611:G:C6	49:S2:612:U:C4	3.06	0.44
49:S2:616:A:N6	49:S2:617:G:N3	2.65	0.44
49:S2:682:U:OP2	73:SX:8:ARG:HD3	2.17	0.44
49:S2:803:C:C4	49:S2:804:U:C5	3.04	0.44
53:SD:175:VAL:CG1	53:SD:182:LEU:HB2	2.47	0.44
55:SF:76:MET:O	55:SF:159:ARG:NH2	2.50	0.44
59:SJ:13:TYR:HA	59:SJ:48:PHE:CB	2.47	0.44
63:SN:114:ARG:O	63:SN:118:ILE:CD1	2.66	0.44
70:SU:69:PRO:C	70:SU:70:CYS:SG	2.96	0.44
24:U:70:ILE:N	24:U:70:ILE:HD12	2.32	0.44
27:X:155:ILE:O	27:X:156:ILE:CB	2.66	0.44
28:Y:4:ASN:OD1	28:Y:4:ASN:C	2.56	0.44
48:4:12:ILE:HG21	48:4:99:LEU:HB2	1.99	0.44
48:4:402:VAL:HG11	48:4:453:MET:CE	2.48	0.44
48:4:754:GLN:HG3	48:4:754:GLN:H	1.45	0.44
1:5:1088:C:C2	1:5:1089:G:C8	3.06	0.44
1:5:1185:G:C6	1:5:1186:U:C5	3.05	0.44
1:5:1189:G:N3	1:5:1190:C:C6	2.86	0.44
1:5:1215:C:N4	1:5:1216:C:H5	2.16	0.44
1:5:1246:G:C5	1:5:1247:U:C6	3.04	0.44
1:5:1370:G:H5'	1:5:1371:A:OP1	2.17	0.44
1:5:1411:C:H2'	1:5:1411:C:O2	2.16	0.44
1:5:1473:U:N3	1:5:1474:C:C5	2.85	0.44
1:5:1492:G:C2	1:5:1493:G:C4	3.06	0.44
1:5:1358:G:OP1	1:5:1506:G:O2'	2.34	0.44
1:5:1577:G:C3'	1:5:1577:G:N3	2.81	0.44
1:5:1451:G:OP1	1:5:1718:C:C4	2.70	0.44
1:5:2074:C:H2'	1:5:2075:G:O4'	2.17	0.44
1:5:2316:G:C2	1:5:2324:C:O2	2.71	0.44
1:5:2438:A:N6	1:5:2441:C:N3	2.65	0.44
1:5:2460:A:C1'	17:N:94:PHE:CE1	3.01	0.44
1:5:2715:G:C5	1:5:2716:C:C5	3.05	0.44
1:5:2732:G:C6	1:5:2733:C:C4	3.05	0.44
1:5:273:U:C2'	1:5:274:C:O5'	2.66	0.44
1:5:3633:C:N3	1:5:3634:G:N7	2.66	0.44
1:5:3717:A:C2'	1:5:3718:A:O5'	2.64	0.44
1:5:3771:C:N4	1:5:3776:G:H22	2.15	0.44
1:5:3845:A:N3	1:5:3845:A:H2'	2.33	0.44
1:5:3857:G:C6	1:5:3858:C:C6	3.05	0.44
1:5:3861:A:C2	1:5:3862:A:C4	3.06	0.44
1:5:4236:G:C2'	1:5:4237:C:O4'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4281:A:C2	1:5:4283:G:C4	3.03	0.44
1:5:4283:G:C6	1:5:4284:C:C4	3.03	0.44
1:5:4292:A:O4'	1:5:4330:G:O4'	2.36	0.44
1:5:4355:G:N1	1:5:4356:G:C5	2.85	0.44
1:5:4750:G:O6	1:5:4949:G:C5	2.70	0.44
1:5:4953:G:H2'	1:5:4954:G:O4'	2.16	0.44
1:5:671:G:C6	1:5:672:C:C4	3.05	0.44
1:5:83:C:O5'	1:5:84:A:C2'	2.64	0.44
3:8:49:G:C2	3:8:50:C:C2	3.06	0.44
3:8:62:A:OP1	11:H:52:LYS:NZ	158.86	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	1.99	0.44
10:G:182:CYS:HA	10:G:226:TYR:CD2	2.52	0.44
10:G:261:LEU:CD2	10:G:264:LYS:NZ	2.79	0.44
14:K:106:PHE:HA	14:K:109:ILE:HB	2.00	0.44
14:K:52:ASP:O	14:K:53:TRP:CD1	2.70	0.44
1:5:432:U:O4	18:O:91:LYS:HA	2.17	0.44
21:R:9:ARG:HH12	21:R:10:LEU:CD1	2.31	0.44
49:S2:936:G:C2	49:S2:1007:C:C2	3.05	0.44
49:S2:100:U:C2'	49:S2:101:U:O5'	2.65	0.44
49:S2:1129:G:H3'	49:S2:1130:G:C8	2.52	0.44
49:S2:1137:U:N3	49:S2:1148:A:N6	2.59	0.44
49:S2:1299:A:O2'	49:S2:1300:U:H3'	2.17	0.44
49:S2:1334:G:O3'	53:SD:183:GLY:HA3	2.18	0.44
49:S2:1341:C:H5'	49:S2:1343:U:H1'	2.00	0.44
49:S2:1597:C:C2'	49:S2:1598:G:O4'	2.65	0.44
49:S2:1662:U:C5'	49:S2:1663:A:OP2	2.66	0.44
49:S2:1684:C:C2	49:S2:1685:U:C6	3.06	0.44
49:S2:1709:G:C5	49:S2:1710:C:C5	3.05	0.44
49:S2:381:C:N4	58:SI:49:ARG:CG	2.80	0.44
49:S2:421:G:C4	49:S2:422:U:C4	3.06	0.44
49:S2:447:A:C4	49:S2:449:A:H1'	2.52	0.44
49:S2:56:G:O6	49:S2:90:G:N1	2.50	0.44
49:S2:794:A:C2	49:S2:795:A:H1'	2.53	0.44
49:S2:56:G:O6	49:S2:90:G:N2	2.43	0.44
49:S2:915:G:O2'	49:S2:916:A:H5'	2.17	0.44
49:S2:989:C:N3	49:S2:1001:A:C6	2.83	0.44
56:SG:220:ALA:HA	56:SG:223:LYS:HB2	2.00	0.44
49:S2:447:A:P	58:SI:49:ARG:HE	2.40	0.44
59:SJ:32:ILE:HG23	59:SJ:37:LEU:HB3	2.00	0.44
67:SR:99:ASP:O	67:SR:103:LYS:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SY:108:LYS:O	74:SY:111:LYS:HG3	2.18	0.44
74:SY:23:MET:SD	74:SY:23:MET:N	2.91	0.44
24:U:34:MET:O	24:U:34:MET:HE3	2.18	0.44
48:4:27:HIS:HB3	48:4:30:HIS:NE2	2.32	0.44
48:4:388:CYS:O	48:4:390:PRO:HD3	2.18	0.44
48:4:430:MET:HE3	48:4:484:THR:HG22	1.99	0.44
48:4:800:LEU:HD23	48:4:808:ALA:O	2.17	0.44
1:5:102:G:C2	1:5:103:G:C5	3.06	0.44
1:5:1391:A:C4	1:5:1392:A:C8	3.06	0.44
1:5:1413:C:C2	1:5:1414:C:C6	3.05	0.44
1:5:1551:C:C3'	1:5:1552:G:O4'	2.65	0.44
1:5:1692:C:C4	1:5:1693:U:C5	3.06	0.44
1:5:1691:G:C5	1:5:1692:C:C6	3.06	0.44
1:5:1865:G:OP1	12:I:119:PHE:HA	2.17	0.44
1:5:1928:C:N4	18:O:133:ARG:CZ	2.81	0.44
1:5:1984:A:H62	1:5:2011:C:C4'	2.31	0.44
1:5:1988:G:N3	1:5:1988:G:H2'	2.33	0.44
1:5:1970:A:N6	1:5:2016:C:OP2	2.44	0.44
1:5:2360:A:O4'	1:5:2362:U:C6	2.71	0.44
1:5:2543:A:H2	1:5:2773:G:N1	2.14	0.44
1:5:176:G:C4	1:5:261:G:C2	3.06	0.44
1:5:2701:U:N3	1:5:2702:C:C5	2.85	0.44
1:5:2614:C:C2	1:5:2726:G:N1	2.85	0.44
1:5:2769:U:H3	1:5:2770:C:N4	2.16	0.44
1:5:2783:A:N3	1:5:2784:C:C6	2.86	0.44
1:5:278:G:H4'	1:5:279:A:OP2	2.17	0.44
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
1:5:341:G:C2	1:5:342:G:C8	3.06	0.44
1:5:341:G:N3	1:5:341:G:H2'	2.32	0.44
1:5:37:U:C4	1:5:38:A:N7	2.85	0.44
1:5:3807:A:C2	1:5:3808:C:C6	3.05	0.44
1:5:3830:A:C2	1:5:3831:U:C6	3.06	0.44
1:5:3878:C:N4	1:5:4518:A:N3	2.64	0.44
1:5:4099:G:C6	1:5:4100:C:C5	3.05	0.44
1:5:4177:C:C2	1:5:4178:A:C8	3.05	0.44
1:5:4209:G:H5''	1:5:4275:G:O2'	2.17	0.44
1:5:4297:G:N1	1:5:4298:A:C8	2.86	0.44
1:5:4513:A:O2'	1:5:4514:G:H5'	2.18	0.44
1:5:4535:A:C2	1:5:4536:C:C6	3.05	0.44
1:5:4547:C:O3'	1:5:4548:A:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4568:A:N3	19:P:69:ARG:NH2	2.65	0.44
1:5:4599:A:N6	1:5:4610:A:C8	2.86	0.44
1:5:4646:U:OP1	21:R:58:HIS:HA	2.18	0.44
1:5:4659:G:N1	1:5:4660:G:C5	2.85	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:N3	2.66	0.44
1:5:4877:G:O2'	1:5:4878:C:O5'	2.32	0.44
1:5:709:C:H2'	1:5:710:G:O4'	2.18	0.44
1:5:726:G:O2'	1:5:727:C:H5'	2.18	0.44
1:5:973:G:H1	1:5:1282:G:H1'	1.83	0.44
2:7:55:A:H2'	2:7:56:G:H5'	2.00	0.44
5:B:264:PHE:HD2	18:O:66:PRO:HD3	1.82	0.44
9:F:95:ILE:HG22	9:F:96:ARG:O	2.17	0.44
10:G:157:ILE:HG23	10:G:167:VAL:HG11	1.99	0.44
2:7:39:C:C5	13:J:49:VAL:HG21	2.52	0.44
20:Q:88:ASP:OD1	20:Q:109:ALA:CA	2.66	0.44
21:R:163:ARG:CZ	49:S2:871:U:N3	2.81	0.44
1:5:2823:G:N7	21:R:20:LYS:HD3	2.33	0.44
21:R:98:ARG:NH1	21:R:133:LYS:HB2	2.31	0.44
49:S2:1171:G:O2'	49:S2:1187:G:C6	2.70	0.44
49:S2:1234:C:C2	49:S2:1235:G:C8	3.06	0.44
49:S2:140:C:H2'	49:S2:178:C:H1'	1.98	0.44
49:S2:1458:G:C2	49:S2:1459:G:C8	3.06	0.44
49:S2:1495:G:C6	49:S2:1496:U:C2	3.06	0.44
49:S2:1524:G:C6	49:S2:1525:C:C5	3.05	0.44
49:S2:1524:G:C5	49:S2:1525:C:C5	3.06	0.44
49:S2:1617:G:C5	49:S2:1619:A:OP2	2.71	0.44
49:S2:1639:G:N3	49:S2:1639:G:H2'	2.33	0.44
49:S2:1220:A:C2	49:S2:1678:A:H1'	2.52	0.44
49:S2:1686:G:C4	49:S2:1687:C:C6	3.05	0.44
49:S2:1732:G:C5	49:S2:1733:U:C5	3.05	0.44
49:S2:185:G:C6	49:S2:186:C:C4	3.05	0.44
49:S2:200:G:C5	49:S2:201:C:C5	3.05	0.44
49:S2:28:U:C2	49:S2:29:G:N7	2.86	0.44
49:S2:309:G:H2'	49:S2:309:G:N3	2.32	0.44
49:S2:418:A:N3	49:S2:418:A:H2'	2.33	0.44
49:S2:839:C:H2'	49:S2:839:C:O2	2.17	0.44
49:S2:951:C:N3	49:S2:952:G:C8	2.85	0.44
49:S2:963:A:C2	49:S2:964:A:C4	3.05	0.44
49:S2:978:G:C4	49:S2:979:C:C6	3.05	0.44
49:S2:988:C:C4	49:S2:989:C:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:29:ARG:NH1	22:S:29:ARG:CG	2.80	0.44
51:SB:172:MET:CE	51:SB:212:VAL:HG12	2.47	0.44
56:SG:29:GLU:HA	56:SG:101:ILE:HG23	1.99	0.44
61:SL:111:VAL:HG23	61:SL:140:PHE:HB3	1.99	0.44
49:S2:823:U:N3	74:SY:64:PHE:CE2	2.85	0.44
24:U:101:ARG:HG3	24:U:101:ARG:HH11	1.81	0.44
29:Z:17:ARG:HG2	29:Z:18:TYR:CE1	2.53	0.44
48:4:587:SER:CB	48:4:735:THR:CG2	2.95	0.44
48:4:744:ILE:HD13	48:4:815:ASP:CA	2.47	0.44
48:4:825:PHE:O	48:4:827:ASN:N	2.47	0.44
1:5:1169:G:C6	1:5:1170:G:N7	2.85	0.44
1:5:1184:A:C6	1:5:1185:G:N7	2.86	0.44
1:5:1201:U:C4	1:5:1202:C:C5	3.06	0.44
1:5:1266:G:C2	1:5:1268:G:O6	2.71	0.44
1:5:1416:G:C2	1:5:1417:C:C2	3.05	0.44
1:5:1430:C:C4	1:5:1431:C:C5	3.06	0.44
1:5:1491:A:N1	1:5:1492:G:C6	2.86	0.44
1:5:1563:A:C5	49:S2:677:G:O2'	2.71	0.44
1:5:1602:U:C2'	1:5:1602:U:O2	2.64	0.44
1:5:1581:G:C5	1:5:1610:C:C4	3.06	0.44
1:5:1638:A:H4'	1:5:1639:U:OP2	2.18	0.44
1:5:1843:A:C2	1:5:1844:G:N9	2.85	0.44
1:5:1851:G:H8	1:5:1851:G:O5'	2.00	0.44
1:5:1937:C:C2'	1:5:1938:C:H2'	2.48	0.44
1:5:2018:C:O2	1:5:2019:C:C6	2.70	0.44
1:5:2107:C:O2	1:5:2107:C:O2'	2.31	0.44
1:5:234:G:O2'	1:5:235:A:H5'	2.18	0.44
1:5:2405:G:H8	1:5:2405:G:O5'	2.01	0.44
1:5:2446:C:H2'	1:5:2447:U:H6	1.74	0.44
1:5:2451:A:C6	1:5:2452:G:N9	2.86	0.44
1:5:2588:C:C3'	1:5:2588:C:C6	3.01	0.44
1:5:2599:G:C8	1:5:2600:A:C8	3.05	0.44
1:5:2638:G:N2	1:5:2697:A:H61	2.15	0.44
1:5:2657:G:H2'	1:5:2658:G:C8	2.53	0.44
1:5:2697:A:C2	1:5:2698:G:C8	3.05	0.44
1:5:2744:A:C2'	1:5:2745:A:C8	2.99	0.44
1:5:2857:A:C4	1:5:2858:A:C5	3.06	0.44
1:5:289:C:N4	1:5:290:U:O4	2.51	0.44
1:5:341:G:C6	1:5:342:G:N7	2.85	0.44
1:5:3655:C:O2	1:5:3655:C:H2'	2.16	0.44
1:5:3658:C:H2'	1:5:3659:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3751:G:C6	1:5:3752:C:C4	3.05	0.44
1:5:3777:G:O2'	1:5:3815:G:O6	2.24	0.44
1:5:3854:C:C4	1:5:3855:C:C5	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
1:5:4277: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
1:5:4483:C:C4	1:5:4484:A:N7	2.85	0.44
1:5:3922:G:C2	1:5:4542:U:C5	3.06	0.44
1:5:4749:C:C5	1:5:4750:G:C2	3.05	0.44
1:5:483:G:N2	1:5:484:U:C4	2.85	0.44
1:5:5050:C:N3	1:5:5051:C:C6	2.86	0.44
1:5:672:C:C2	1:5:673:C:C6	3.05	0.44
1:5:732:A:C2	1:5:733:A:C1'	3.00	0.44
1:5:738:C:H2'	1:5:739:G:C8	2.52	0.44
1:5:744:G:H2'	1:5:745:G:C8	2.52	0.44
2:7:22:A:C2	2:7:23:A:C6	3.06	0.44
2:7:28:C:H1'	2:7:55:A:N6	2.33	0.44
2:7:50:A:C6	2:7:51:G:N7	2.85	0.44
2:7:99:G:N7	22:S:55:LYS:HE3	2.33	0.44
3:8:129:C:C4	3:8:130:C:C5	3.06	0.44
3:8:149:G:C2	3:8:151:G:C5	3.05	0.44
1:5:1577:G:O4'	4:A:181:LYS:HE3	2.18	0.44
5:B:106:PHE:CD1	5:B:106:PHE:N	2.86	0.44
5:B:92:TYR:HB2	5:B:159:VAL:HB	1.98	0.44
5:B:74:GLU:HG2	5:B:334:LYS:HE3	2.00	0.44
5:B:67:VAL:HG23	25:V:14:PHE:HE2	1.81	0.44
1:5:349:A:C6	6:C:45:ARG:NH2	2.86	0.44
7:D:264:LYS:HD2	7:D:266:TRP:CD2	2.53	0.44
9:F:201:LYS:HA	9:F:201:LYS:HE3	1.99	0.44
11:H:40:HIS:N	11:H:40:HIS:CD2	2.85	0.44
13:J:99:PHE:CD2	13:J:105:PHE:HB3	2.49	0.44
14:K:114:ARG:CD	14:K:130:LYS:CE	2.96	0.44
14:K:14:TYR:CD1	14:K:15:LEU:N	2.85	0.44
14:K:81:ILE:HG13	14:K:82:ILE:HG13	2.00	0.44
16:M:81:ASP:OD1	16:M:84:ALA:HB3	2.17	0.44
21:R:130:ASN:O	21:R:130:ASN:CG	2.55	0.44
49:S2:1093:A:C6	49:S2:1094:C:C4	3.06	0.44
49:S2:1227:G:N3	49:S2:1227:G:H2'	2.33	0.44
49:S2:1250:A:H2	49:S2:1339:U:C2'	2.27	0.44
49:S2:1278:A:H5'	60:SK:55:ARG:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1335:G:C4	49:S2:1336:C:C6	3.05	0.44
49:S2:1406:G:C2'	49:S2:1407:U:H4'	2.47	0.44
49:S2:1418:C:H41	49:S2:1421:A:H62	1.61	0.44
49:S2:1466:G:C6	49:S2:1467:C:N4	2.86	0.44
49:S2:1394:G:N2	49:S2:1474:A:C8	2.86	0.44
49:S2:1452:A:N1	49:S2:1475:G:H5''	2.33	0.44
49:S2:1539:U:H2'	49:S2:1539:U:O2	2.17	0.44
49:S2:1570:G:C4	49:S2:1571:G:C8	3.05	0.44
49:S2:1600:G:C3'	49:S2:1601:A:C5'	2.96	0.44
49:S2:1657:G:C6	49:S2:1658:G:C5	3.04	0.44
49:S2:165:G:O2'	49:S2:166:A:H8	1.98	0.44
49:S2:1694:U:H2'	49:S2:1696:C:C5	2.53	0.44
49:S2:1696:C:C2	49:S2:1697:A:C8	3.06	0.44
49:S2:1806:A:C6	49:S2:1807:C:C4	3.05	0.44
49:S2:1860:A:C6	49:S2:1862:G:N7	2.86	0.44
49:S2:187:G:H3'	49:S2:188:C:H6	1.82	0.44
49:S2:191:A:H3'	49:S2:192:C:C5'	2.48	0.44
49:S2:414:A:HO2'	49:S2:415:A:C5'	2.29	0.44
49:S2:421:G:N2	49:S2:422:U:C2	2.85	0.44
49:S2:508:A:C6	49:S2:509:G:H1'	2.53	0.44
49:S2:654:A:C6	49:S2:655:A:C2	3.05	0.44
49:S2:795:A:N1	49:S2:796:G:O6	2.50	0.44
49:S2:842:C:N3	49:S2:843:C:C4	2.85	0.44
52:SC:104:ASP:OD1	52:SC:130:ILE:HG13	2.18	0.44
58:SI:104:ILE:HD11	58:SI:171:LEU:HB2	1.99	0.44
49:S2:301:A:O2'	58:SI:72:CYS:HA	2.16	0.44
61:SL:108:ASN:N	61:SL:108:ASN:OD1	2.45	0.44
66:SQ:85:ARG:HD3	66:SQ:119:LEU:HD23	1.98	0.44
66:SQ:35:ASN:N	66:SQ:35:ASN:OD1	2.50	0.44
68:SS:135:HIS:CD2	68:SS:135:HIS:N	2.86	0.44
68:SS:78:LYS:O	68:SS:80:PRO:HD3	2.18	0.44
70:SU:24:LEU:HD23	70:SU:112:VAL:HG13	1.98	0.44
71:SV:40:ASP:O	71:SV:41:LYS:CB	2.65	0.44
49:S2:618:C:OP1	73:SX:87:ASN:HA	2.18	0.44
48:4:751:CYS:SG	48:4:756:VAL:HA	2.58	0.44
48:4:807:GLN:HA	48:4:807:GLN:OE1	2.18	0.44
1:5:1174:G:N3	1:5:1175:A:C8	2.86	0.44
1:5:1266:G:H4'	1:5:2112:G:N3	2.33	0.44
1:5:1374:G:C2	1:5:1375:C:C2	3.06	0.44
1:5:1354:A:C4	1:5:1503:A:C2	3.05	0.44
1:5:1615:C:N3	1:5:1616:U:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:1886:G:N1	1:5:1894:C:N4	2.66	0.44
1:5:2021:G:C8	1:5:2022:C:C5	3.06	0.44
1:5:2027:U:O2'	1:5:2028:C:C4'	2.66	0.44
1:5:2278:G:H5'	20:Q:7:HIS:HE1	1.83	0.44
1:5:2339:G:C4	1:5:2340:C:C6	3.06	0.44
1:5:2413:U:N3	1:5:2414:G:N7	2.66	0.44
1:5:2464:C:HO2'	1:5:2465:C:C5'	2.31	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:C2	1:5:2560:C:C2	3.05	0.44
1:5:2606:G:C2	1:5:2607:C:C2	3.05	0.44
1:5:2698:G:C5	1:5:2699:C:C5	3.06	0.44
1:5:2735:G:N2	1:5:2736:G:C4	2.86	0.44
1:5:273:U:C4	1:5:274:C:N4	2.85	0.44
1:5:2394:G:O6	1:5:2819:U:OP2	2.36	0.44
1:5:328:A:N1	1:5:329:A:C6	2.86	0.44
1:5:345:C:N3	1:5:346:G:N7	2.65	0.44
1:5:3770:U:O2	1:5:3770:U:H2'	2.17	0.44
1:5:4098:A:C6	1:5:4099:G:C5	3.06	0.44
1:5:4107:G:C4	1:5:4108:G:C8	3.06	0.44
1:5:4150:G:C6	1:5:4151:G:C5	3.06	0.44
1:5:4167:G:N3	1:5:4168:G:C8	2.81	0.44
1:5:4243:C:O2	1:5:4243:C:C2'	2.65	0.44
1:5:4406:U:C4	1:5:4407:G:N7	2.85	0.44
1:5:4414:A:C6	1:5:4427:G:C2	2.97	0.44
1:5:4551:U:N3	1:5:4552:U:C5	2.86	0.44
1:5:4659:G:C6	1:5:4660:G:C5	3.06	0.44
1:5:4678:G:HO2'	1:5:4679:G:P	2.41	0.44
1:5:497:G:N1	1:5:499:G:C5	2.86	0.44
1:5:5055:G:N2	1:5:5056:A:C4	2.85	0.44
1:5:93:G:N2	1:5:94:A:N3	2.65	0.44
1:5:952:G:N1	1:5:953:C:C4	2.86	0.44
1:5:992:C:C2	1:5:993:G:N7	2.85	0.44
2:7:6:C:H5''	7:D:54:ARG:HH21	1.82	0.44
3:8:103:A:H3'	3:8:104:A:H5''	2.00	0.44
1:5:1358:G:P	6:C:114:ARG:NH2	2.91	0.44
1:5:1177:U:C4'	7:D:282:GLN:HB3	2.47	0.44
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:110:VAL:O	14:K:114:ARG:CD	2.66	0.44
18:O:192:PHE:N	18:O:192:PHE:HD1	2.15	0.44
17:N:88:GLY:HA2	18:O:48:TYR:CD2	102.87	0.44
49:S2:1063:C:C2'	49:S2:1063:C:O2	2.60	0.44
49:S2:673:G:C8	49:S2:1084:A:N1	2.86	0.44
49:S2:1203:G:C4	49:S2:1204:A:N7	2.86	0.44
49:S2:1407:U:C3'	49:S2:1408:U:H6	2.31	0.44
49:S2:1415:C:C2	49:S2:1416:C:C1'	3.01	0.44
49:S2:1713:C:O2'	49:S2:1714:U:O5'	2.29	0.44
49:S2:217:A:N3	49:S2:217:A:H2'	2.32	0.44
49:S2:321:C:O2	49:S2:322:C:C6	2.71	0.44
49:S2:457:C:N4	49:S2:458:A:N7	2.65	0.44
49:S2:492:C:N4	49:S2:506:G:C8	2.86	0.44
49:S2:640:A:C2'	49:S2:641:A:O4'	2.66	0.44
49:S2:648:A:N3	49:S2:648:A:H2'	2.32	0.44
49:S2:872:A:N6	49:S2:914:U:C5	2.78	0.44
49:S2:995:G:N2	49:S2:997:A:C8	2.81	0.44
49:S2:46:A:C5	49:S2:99:A:C8	3.06	0.44
50:SA:155:ARG:HB3	50:SA:156:TYR:CD2	2.51	0.44
50:SA:180:ARG:HD2	50:SA:184:ARG:HD2	2.00	0.44
51:SB:99:ASN:O	51:SB:100:PHE:C	2.56	0.44
53:SD:153:VAL:HG12	53:SD:154:ASP:N	2.33	0.44
54:SE:104:ASP:OD1	54:SE:110:ALA:HB2	2.18	0.44
54:SE:121:TYR:C	54:SE:121:TYR:CD1	2.90	0.44
59:SJ:78:LEU:HD22	59:SJ:92:MET:HA	1.99	0.44
68:SS:120:HIS:CD2	68:SS:124:ARG:HD2	2.53	0.44
68:SS:39:ARG:NH2	69:ST:38:LYS:HD3	2.33	0.44
69:ST:18:LEU:HB3	69:ST:58:ALA:HB1	2.00	0.44
69:ST:23:LYS:HD3	69:ST:54:TYR:CD1	2.52	0.44
48:4:161:ASP:O	48:4:165:LEU:HD23	2.18	0.44
48:4:36:THR:O	48:4:40:VAL:HG23	2.17	0.44
48:4:452:LEU:HD11	48:4:461:ILE:HD13	1.98	0.44
48:4:517:LEU:C	48:4:517:LEU:HD23	2.38	0.44
48:4:588:ASN:OD1	48:4:589:VAL:CG2	2.63	0.44
48:4:759:ILE:CD1	48:4:784:VAL:HG23	2.27	0.44
1:5:1219:G:C4	1:5:1220:G:C8	3.06	0.44
1:5:1221:G:N2	1:5:1233:G:C8	2.86	0.44
1:5:127:G:C6	1:5:128:C:N4	2.86	0.44
1:5:1293:G:C5'	1:5:1293:G:H8	2.31	0.44
1:5:1324:A:C2'	1:5:1326:A:OP1	2.65	0.44
1:5:1613:A:H3'	1:5:1614:C:H5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1621:A:O2'	1:5:1622:U:H5'	2.18	0.44
1:5:1684:A:N6	1:5:1685:G:N7	2.65	0.44
1:5:1752:G:C5	1:5:1753:G:N7	2.86	0.44
1:5:1858:A:N3	1:5:1859:C:C6	2.86	0.44
1:5:1886:G:C2	1:5:1894:C:C2	3.02	0.44
1:5:1989:G:C2	1:5:1990:A:N7	2.85	0.44
1:5:2328:G:C6	1:5:2329:U:C4	3.06	0.44
1:5:2556:G:C2	1:5:2572:C:N3	2.86	0.44
1:5:2559:G:C5	1:5:2560:C:C5	3.06	0.44
1:5:279:A:OP1	1:5:279:A:H3'	2.18	0.44
1:5:2832:A:C2'	1:5:2833:A:H5''	2.32	0.44
1:5:33:A:H5'	17:N:86:HIS:CD2	2.53	0.44
1:5:3759:A:N6	49:S2:1709:G:C4'	2.81	0.44
1:5:382:G:N2	1:5:384:A:H2'	2.32	0.44
1:5:4413:C:H2'	1:5:4414:A:C1'	2.47	0.44
1:5:445:U:C5	1:5:446:C:C5	3.06	0.44
1:5:4489:G:C4	1:5:4490:C:C6	3.06	0.44
1:5:4543:G:O2'	1:5:4544:A:H5'	2.18	0.44
1:5:4760:G:O2'	1:5:4761:G:H5'	2.17	0.44
1:5:482:G:H2'	1:5:483:G:C8	2.53	0.44
1:5:978:G:C4	1:5:979:C:C6	3.05	0.44
2:7:44:C:N3	2:7:45:U:C4	2.86	0.44
3:8:118:C:N3	3:8:119:C:C6	2.76	0.44
3:8:118:C:C4	3:8:119:C:H5	2.35	0.44
3:8:137:A:C2	3:8:138:C:C5	3.05	0.44
3:8:56:G:C2	3:8:57:C:C2	3.06	0.44
4:A:202:VAL:HA	4:A:211:PHE:O	2.18	0.44
4:A:233:ARG:O	4:A:235:VAL:N	2.51	0.44
5:B:116:ARG:CB	5:B:177:LYS:HA	2.47	0.44
5:B:40:PRO:O	5:B:187:GLY:HA2	2.18	0.44
8:E:241:GLN:OE1	8:E:242:ARG:N	2.50	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
13:J:166:PHE:CZ	13:J:172:GLY:HA3	2.52	0.44
14:K:104:ILE:O	14:K:105:THR:C	2.55	0.44
14:K:28:LEU:HD13	14:K:29:ALA:N	2.32	0.44
14:K:84:ALA:C	14:K:86:LYS:H	2.19	0.44
16:M:112:VAL:HG11	18:O:201:PHE:CE2	2.53	0.44
17:N:68:ARG:NH1	17:N:123:GLU:HG3	2.33	0.44
49:S2:1058:A:H2'	49:S2:1058:A:N3	2.33	0.44
49:S2:10:G:N7	49:S2:1697:A:N3	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1112:U:O2	49:S2:1113:A:O4'	2.36	0.44
49:S2:1113:A:H2'	49:S2:1114:U:H3'	1.98	0.44
49:S2:1130:G:H2'	49:S2:1130:G:N3	2.33	0.44
49:S2:1167:G:H2'	49:S2:1168:G:O5'	2.17	0.44
49:S2:118:C:N3	49:S2:119:U:C6	2.85	0.44
49:S2:1203:G:H3'	49:S2:1204:A:H8	1.82	0.44
49:S2:1224:G:C6	49:S2:1225:U:N1	2.86	0.44
49:S2:1406:G:C2'	49:S2:1407:U:C4'	2.93	0.44
49:S2:1432:U:O2	49:S2:1433:C:C5	2.70	0.44
49:S2:1504:U:H2'	49:S2:1505:U:O4'	2.18	0.44
49:S2:1508:A:C6	49:S2:1510:G:C8	3.05	0.44
49:S2:1696:C:O2	49:S2:1696:C:C2'	2.53	0.44
49:S2:421:G:C2	49:S2:422:U:C2	3.05	0.44
49:S2:495:U:O2'	49:S2:496:C:C4'	2.65	0.44
49:S2:506:G:OP1	74:SY:108:LYS:CE	2.64	0.44
49:S2:839:C:C2'	49:S2:839:C:O2	2.66	0.44
55:SF:17:ILE:HD11	55:SF:26:ASP:HB2	2.00	0.44
55:SF:54:GLY:HA2	55:SF:56:TYR:CE2	2.53	0.44
57:SH:61:ILE:CD1	57:SH:93:VAL:HG13	2.46	0.44
60:SK:2:LEU:HB3	60:SK:8:ARG:HH21	1.77	0.44
49:S2:384:U:O2'	61:SL:135:SER:O	2.35	0.44
61:SL:2:ALA:O	61:SL:3:ASP:HB3	2.18	0.44
62:SM:19:GLN:HG2	62:SM:88:TRP:CB	2.48	0.44
50:SA:48:ILE:HG22	67:SR:105:MET:HE3	1.98	0.44
29:Z:36:ARG:C	29:Z:38:TYR:H	2.21	0.44
48:4:113:SER:CB	48:4:499:PHE:CG	3.01	0.44
48:4:114:GLU:HA	48:4:532:PRO:CB	2.35	0.44
48:4:425:LEU:HD23	48:4:426:LYS:H	1.78	0.44
48:4:6:VAL:HG22	48:4:6:VAL:H	1.34	0.44
48:4:744:ILE:O	48:4:745:TYR:CG	2.70	0.44
48:4:744:ILE:CG2	48:4:745:TYR:N	2.73	0.44
1:5:1065:G:H2'	1:5:1066:G:C8	2.53	0.44
1:5:1086:C:C2	1:5:1212:G:C2	3.06	0.44
1:5:1236:C:O2'	1:5:1237:C:O5'	2.32	0.44
1:5:1239:C:C4'	1:5:1240:G:O5'	2.65	0.44
1:5:1266:G:C5'	1:5:1266:G:C8	3.01	0.44
1:5:1268:G:N9	1:5:2111:G:C4	2.86	0.44
1:5:1290:G:H2'	1:5:1291:G:H5'	2.00	0.44
1:5:1341:U:C2	1:5:1342:A:C8	3.05	0.44
1:5:1374:G:C6	1:5:1375:C:C5	3.05	0.44
1:5:1492:G:N3	1:5:1493:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1545:G:N1	1:5:1546:C:C4	2.86	0.44
1:5:1554:A:H2'	1:5:1554:A:N3	2.33	0.44
1:5:1656:U:C2	1:5:1657:G:C8	3.06	0.44
1:5:1800:U:H5''	1:5:1800:U:H6	1.83	0.44
1:5:1865:G:C6	1:5:1867:A:OP2	2.71	0.44
1:5:2050:G:C6	1:5:2051:C:C4	3.06	0.44
1:5:2056:G:C6	1:5:2058:G:C8	3.06	0.44
1:5:2091:C:OP2	1:5:2259:G:C8	2.71	0.44
1:5:2279:A:H2'	1:5:2280:G:C8	2.53	0.44
1:5:2315:G:C2	1:5:2316:G:N9	2.86	0.44
1:5:2382:A:N3	1:5:2382:A:C2'	2.81	0.44
1:5:2508:U:H2'	1:5:2509:C:H6	1.83	0.44
1:5:2545:U:C5	1:5:2546:G:H4'	2.53	0.44
1:5:2712:G:C2	1:5:2713:C:C2	3.06	0.44
1:5:2855:G:N2	1:5:2859:G:N2	2.66	0.44
1:5:111:C:H1'	1:5:331:G:N2	2.33	0.44
1:5:3688:U:O2	1:5:3689:G:C8	2.70	0.44
1:5:3742:G:N2	1:5:3743:G:C4	2.86	0.44
1:5:3758:U:C4	1:5:3765:G:C5	3.05	0.44
1:5:3823:G:H8	1:5:3823:G:O5'	2.00	0.44
1:5:3842:C:OP2	1:5:3843:C:O2'	2.27	0.44
1:5:3844:U:N3	1:5:3845:A:C8	2.86	0.44
1:5:4092:G:C2	1:5:4093:G:N3	2.85	0.44
1:5:4114:C:C3'	1:5:4115:G:O4'	2.61	0.44
1:5:4131:G:C5	1:5:4132:C:C5	3.06	0.44
1:5:4197:G:C6	1:5:4198:G:C4	3.06	0.44
1:5:4215:C:N4	1:5:4216:G:C6	2.86	0.44
1:5:4235:G:C2'	1:5:4236:G:O5'	2.62	0.44
1:5:4257:A:HO2'	1:5:4258:C:H6	1.66	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
1:5:43:U:C5	1:5:44:A:N7	2.85	0.44
1:5:4405:G:N7	1:5:4406:U:C5	2.86	0.44
1:5:4518:A:H3'	1:5:4519:C:H5'	1.99	0.44
1:5:4535:A:N6	1:5:4536:C:C5	2.85	0.44
1:5:450:G:O2'	1:5:453:G:P	2.76	0.44
1:5:457:G:N2	1:5:458:C:C6	2.86	0.44
1:5:4653:C:N3	1:5:4654:C:C4	2.86	0.44
1:5:469:C:C4	1:5:470:A:N7	2.86	0.44
1:5:4862:G:H2'	1:5:4863:G:O4'	2.18	0.44
1:5:3:C:C2	1:5:4:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5002:U:O2'	1:5:5003:U:H5'	2.18	0.44
1:5:5031:G:C6	1:5:5032:C:C4	3.06	0.44
3:8:120:G:N1	3:8:121:G:C5	2.86	0.44
3:8:131:G:O6	3:8:132:G:N7	2.50	0.44
1:5:21:G:C4	3:8:36:G:N2	2.85	0.44
3:8:58:G:O6	13:J:63:ARG:NH1	126.91	0.44
5:B:17:LEU:O	5:B:17:LEU:HD22	2.17	0.44
8:E:181:PRO:HA	8:E:246:GLN:NE2	2.17	0.44
1:5:4087:G:H21	10:G:49:ARG:HD2	1.83	0.44
14:K:38:SER:OG	14:K:39:PRO:N	2.50	0.44
14:K:95:GLN:C	14:K:97:ASN:N	2.68	0.44
1:5:159:C:H1'	15:L:78:LEU:HD11	1.99	0.44
18:O:108:ILE:HG23	18:O:160:ARG:HD2	1.99	0.44
5:B:264:PHE:CD2	18:O:66:PRO:HD2	2.52	0.44
1:5:4981:G:H1'	19:P:69:ARG:NH1	2.32	0.44
1:5:3595:U:O2'	21:R:114:LYS:HA	2.17	0.44
21:R:131:VAL:HG23	21:R:132:PHE:CE2	2.52	0.44
49:S2:1063:C:C1'	49:S2:1838:U:C4	3.00	0.44
49:S2:1087:A:C5	49:S2:1861:G:C6	3.06	0.44
49:S2:1259:A:H5''	49:S2:1260:A:OP2	2.18	0.44
49:S2:1271:C:C2	49:S2:1272:C:C6	3.06	0.44
49:S2:1277:C:H3'	49:S2:1278:A:H8	1.83	0.44
49:S2:1250:A:N3	49:S2:1339:U:C1'	2.81	0.44
49:S2:1347:U:C4	49:S2:1362:U:O4	2.71	0.44
49:S2:1373:C:H4'	67:SR:10:LYS:HE3	2.00	0.44
49:S2:1449:G:C4	49:S2:1450:G:C8	3.05	0.44
49:S2:1491:G:H2'	49:S2:1492:U:O4'	2.18	0.44
49:S2:1253:A:N3	49:S2:1666:C:O4'	2.49	0.44
49:S2:1714:U:H2'	49:S2:1715:A:C8	2.52	0.44
49:S2:1725:U:C2	49:S2:1726:G:C8	3.06	0.44
49:S2:1839:U:H2'	49:S2:1840:U:C6	2.52	0.44
49:S2:217:A:N1	49:S2:218:U:C6	2.86	0.44
49:S2:217:A:C4	49:S2:309:G:O6	2.71	0.44
49:S2:441:C:H6	49:S2:448:A:C2	2.36	0.44
49:S2:448:A:C8	58:SI:26:LYS:N	2.86	0.44
49:S2:478:G:N2	49:S2:479:C:C2	2.86	0.44
49:S2:4:C:O2	49:S2:4:C:H2'	2.17	0.44
49:S2:584:G:C5	49:S2:585:C:C5	3.06	0.44
49:S2:4:C:C2	49:S2:5:U:C5	3.06	0.44
49:S2:5:U:H2'	49:S2:5:U:O2	2.18	0.44
49:S2:807:G:N3	49:S2:808:A:C8	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:873:G:O6	49:S2:912:C:N3	2.51	0.44
49:S2:46:A:H2'	49:S2:99:A:O4'	2.18	0.44
52:SC:96:PHE:CD1	52:SC:96:PHE:C	2.92	0.44
53:SD:24:PHE:CD1	53:SD:24:PHE:C	2.90	0.44
54:SE:100:ARG:O	54:SE:101:LEU:HB2	2.18	0.44
49:S2:496:C:C5'	54:SE:29:PRO:HA	2.47	0.44
56:SG:121:ILE:HG22	56:SG:124:LEU:HB3	1.99	0.44
65:SP:10:ARG:HG3	65:SP:10:ARG:HH11	1.83	0.44
71:SV:20:SER:HB3	71:SV:59:ILE:HD11	1.99	0.44
24:U:26:THR:HA	24:U:68:SER:CB	2.48	0.44
48:4:12:ILE:HD12	48:4:12:ILE:HA	1.66	0.43
1:5:1247:U:N3	1:5:1248:C:C4	2.85	0.43
1:5:1277:G:N2	1:5:1278:C:N1	2.66	0.43
1:5:127:G:C2	1:5:128:C:C5	3.05	0.43
1:5:1360:G:H2'	1:5:1361:G:O4'	2.18	0.43
1:5:1362:G:N3	1:5:1363:C:C6	2.86	0.43
1:5:1397:A:HO2'	1:5:1398:A:C5'	2.31	0.43
1:5:1436:C:O2'	1:5:2097:U:OP2	2.36	0.43
1:5:1547:A:C5	1:5:1582:U:H1'	2.53	0.43
1:5:1584:G:C5	1:5:1585:C:C5	3.06	0.43
1:5:1617:G:H3'	1:5:1618:G:H8	1.82	0.43
1:5:1:C:O2	1:5:1:C:O2'	2.26	0.43
1:5:2100:A:C6	1:5:2101:C:H1'	2.53	0.43
1:5:2108:G:C6	1:5:2109:G:C4	3.05	0.43
1:5:1264:C:O2'	1:5:2114:G:OP2	2.36	0.43
1:5:2287:G:C2	1:5:2288:G:H1'	2.53	0.43
1:5:2302:C:C4	1:5:2303:C:N4	2.86	0.43
1:5:2344:U:H2'	1:5:2345:G:OP2	2.18	0.43
1:5:2372:U:H2'	1:5:2373:C:H6	1.83	0.43
1:5:2503:G:H1'	1:5:4084:G:C2	2.53	0.43
1:5:2698:G:C2	1:5:2699:C:C2	3.06	0.43
1:5:2851:G:O2'	1:5:3841:C:H4'	2.18	0.43
1:5:2851:G:C6	1:5:2852:U:C1'	3.00	0.43
1:5:2898:G:C2	1:5:2899:C:C2	3.06	0.43
1:5:318:A:H2'	1:5:319:A:C8	2.53	0.43
1:5:343:C:C2	1:5:344:A:C8	3.06	0.43
1:5:3876:A:O2'	1:5:3877:A:P	2.76	0.43
1:5:3883:U:H2'	1:5:3884:U:O5'	2.18	0.43
1:5:397:G:H22	19:P:22:LEU:HD22	1.83	0.43
1:5:4115:G:H5'	1:5:4116:C:OP1	2.18	0.43
1:5:4199:C:C3'	1:5:4199:C:C2	2.96	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4275:G:O6	1:5:4276:G:N7	2.48	0.43
1:5:4333:C:O2	1:5:4334:U:C6	2.71	0.43
1:5:446:C:C4	1:5:447:C:C5	3.05	0.43
1:5:4508:C:N3	1:5:4512:U:C5	2.76	0.43
1:5:4581:G:N2	1:5:4582:C:C4	2.85	0.43
1:5:4712:C:OP1	18:O:74:ARG:NH2	2.51	0.43
1:5:4730:C:H1'	1:5:4731:G:H3'	1.99	0.43
1:5:4869:U:H5'	1:5:4870:G:N2	2.32	0.43
1:5:4904:G:C4	1:5:4905:C:C5	3.06	0.43
1:5:732:A:C2	1:5:733:A:H1'	2.53	0.43
1:5:88:A:O2'	1:5:89:C:C5'	2.65	0.43
1:5:90:G:N3	1:5:95:G:C2	2.86	0.43
2:7:66:G:H2'	2:7:67:C:H6	1.83	0.43
3:8:93:C:O3'	3:8:94:G:C8	2.71	0.43
4:A:77:ILE:CD1	4:A:128:ARG:HB2	2.48	0.43
5:B:47:LEU:HD13	5:B:181:MET:SD	2.58	0.43
8:E:271:PHE:O	8:E:272:ALA:HB2	2.18	0.43
10:G:73:ARG:HH11	10:G:73:ARG:HB2	1.83	0.43
13:J:154:LYS:O	13:J:155:HIS:CB	2.66	0.43
13:J:178:ASN:OD1	13:J:178:ASN:C	2.56	0.43
16:M:96:GLU:O	16:M:96:GLU:OE1	2.36	0.43
17:N:182:HIS:CD2	17:N:182:HIS:H	2.36	0.43
17:N:63:ARG:HG3	17:N:131:GLU:HB3	2.00	0.43
49:S2:1042:A:C5	49:S2:1043:G:C8	3.06	0.43
49:S2:1212:G:C6	49:S2:1213:C:C4	3.05	0.43
49:S2:1219:C:C5	49:S2:1220:A:N6	2.86	0.43
49:S2:1298:G:H2'	49:S2:1299:A:C8	2.53	0.43
49:S2:1431:G:H5''	49:S2:1432:U:OP2	2.17	0.43
49:S2:1466:G:C2	49:S2:1467:C:C5	3.06	0.43
49:S2:154:U:O2	56:SG:4:ASN:ND2	2.48	0.43
49:S2:1566:G:H3'	49:S2:1567:G:H5''	2.00	0.43
49:S2:1595:U:H2'	49:S2:1595:U:O2	2.18	0.43
49:S2:167:G:N3	49:S2:168:C:C6	2.86	0.43
49:S2:1792:G:C6	49:S2:1793:A:C5	3.05	0.43
49:S2:210:U:O2	49:S2:211:G:C8	2.71	0.43
49:S2:28:U:O2	49:S2:28:U:C2'	2.61	0.43
49:S2:426:A:C4	49:S2:427:U:C4	3.06	0.43
49:S2:496:C:O2'	49:S2:497:C:H5'	2.18	0.43
49:S2:20:G:H5'	49:S2:620:G:N7	2.32	0.43
49:S2:634:A:C2	49:S2:635:G:N9	2.85	0.43
49:S2:796:G:C4	57:SH:109:ARG:CZ	3.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:834:C:H3'	49:S2:835:C:O4'	2.18	0.43
49:S2:933:G:N3	49:S2:1000:C:C2	2.86	0.43
49:S2:960:U:H3'	49:S2:960:U:C6	2.53	0.43
51:SB:36:PRO:HB3	51:SB:231:LEU:CD2	2.48	0.43
54:SE:195:ILE:O	54:SE:209:HIS:O	2.36	0.43
49:S2:77:A:H1'	56:SG:176:ILE:HD12	2.00	0.43
58:SI:117:TYR:HB3	58:SI:156:ALA:HB1	2.00	0.43
58:SI:167:GLN:CG	58:SI:168:GLN:N	2.81	0.43
68:SS:127:TRP:CD1	68:SS:127:TRP:N	2.86	0.43
70:SU:48:LEU:CD1	70:SU:91:LEU:HD22	2.48	0.43
72:SW:85:ASP:OD1	72:SW:85:ASP:N	2.51	0.43
27:X:148:ASP:OD1	27:X:148:ASP:N	2.50	0.43
28:Y:100:HIS:HB3	28:Y:102:SER:N	2.33	0.43
48:4:120:ARG:NH1	48:4:496:VAL:C	2.71	0.43
48:4:319:LEU:O	48:4:320:ASP:HB2	2.18	0.43
48:4:60:ARG:N	48:4:63:GLU:CB	2.82	0.43
48:4:731:ALA:CB	48:4:854:PHE:HB3	2.39	0.43
1:5:1075:G:C6	1:5:1076:C:N4	2.87	0.43
1:5:1218:G:O6	1:5:1219:G:C4	2.71	0.43
1:5:1245:C:C6	1:5:1269:G:N7	2.86	0.43
1:5:1280:C:O2	1:5:1282:G:C5	2.71	0.43
1:5:146:G:N2	1:5:147:A:C5	2.86	0.43
1:5:1492:G:C5	1:5:1493:G:N7	2.86	0.43
1:5:1602:U:N3	1:5:1603:C:C5	2.86	0.43
1:5:1631:A:H8	1:5:1631:A:O5'	2.00	0.43
1:5:1818:G:H8	1:5:1821:G:C6	2.33	0.43
1:5:1828:C:N3	1:5:1829:G:C8	2.85	0.43
1:5:181:C:H2'	1:5:182:G:C8	2.52	0.43
1:5:1929:A:H3'	1:5:1929:A:N3	2.33	0.43
1:5:1964:A:C2	1:5:4694:G:O6	2.70	0.43
1:5:2017:A:H5''	1:5:2017:A:H8	1.84	0.43
1:5:2065:G:C2	1:5:2066:C:C2	3.06	0.43
1:5:2253:A:H8	1:5:2254:G:O2'	1.99	0.43
1:5:2327:G:N1	1:5:2328:G:C6	2.86	0.43
1:5:2439:G:H1'	1:5:2777:G:N3	2.33	0.43
1:5:245:C:H4'	1:5:246:G:O5'	2.18	0.43
1:5:2519:U:C2	1:5:2520:C:C5	3.06	0.43
1:5:2568:C:H2'	1:5:2569:G:H8	1.83	0.43
1:5:2628:U:N3	1:5:2629:C:C5	2.86	0.43
1:5:2742:G:H4'	4:A:22:HIS:CD2	2.53	0.43
1:5:2409:U:C5	1:5:2783:A:N1	2.74	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:295:A:O3'	1:5:296:A:C8	2.71	0.43
1:5:3656:A:C1'	1:5:3747:A:C2	3.01	0.43
1:5:3766:A:C2	49:S2:1828:C:O4'	2.71	0.43
1:5:3702:A:C5	1:5:3774:A:C6	3.06	0.43
1:5:3945:A:C4	1:5:3946:G:C8	3.06	0.43
1:5:4106:G:C2	1:5:4107:G:C8	3.06	0.43
1:5:4131:G:C2	1:5:4132:C:C2	3.06	0.43
1:5:4147:G:N3	1:5:4148:C:C6	2.86	0.43
1:5:4168:G:C2'	1:5:4169:G:O5'	2.66	0.43
1:5:4173:G:C6	1:5:4174:U:C5	3.06	0.43
1:5:1672:U:O2'	1:5:4304:A:OP1	2.31	0.43
1:5:3923:A:C8	1:5:4381:A:C4	3.06	0.43
1:5:469:C:N4	1:5:470:A:C6	2.86	0.43
1:5:4703:U:O2	1:5:4704:C:C6	2.72	0.43
1:5:4723:A:C2	1:5:4724:A:C4	3.06	0.43
1:5:5031:G:C6	1:5:5032:C:N4	2.86	0.43
1:5:659:G:N1	1:5:660:A:C8	2.86	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
1:5:711: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
1:5:713:C:N4	1:5:955:G:H1	2.15	0.43
1:5:976:G:C2	1:5:977:C:C6	3.05	0.43
2:7:117:G:C2	2:7:118:C:C2	3.06	0.43
2:7:15:C:C2	2:7:16:A:C8	3.06	0.43
3:8:54:C:O2	3:8:54:C:H2'	2.17	0.43
8:E:43:ASN:HB3	8:E:58:MET:SD	2.58	0.43
1:5:1281:G:C6	8:E:48:ARG:NH1	2.86	0.43
12:I:46:PHE:CZ	12:I:85:PHE:HA	2.53	0.43
15:L:191:LEU:O	15:L:192:PHE:C	2.55	0.43
1:5:4927:G:H1'	16:M:121:ARG:HD3	1.99	0.43
19:P:36:ILE:HD12	19:P:48:LEU:HD11	1.99	0.43
11:H:60:TRP:CZ2	22:S:153:PRO:HD3	2.53	0.43
49:S2:1005:G:N2	49:S2:1006:C:C2	2.86	0.43
49:S2:1101:U:N3	49:S2:1102:G:N7	2.64	0.43
49:S2:10:G:N1	49:S2:11:A:C5	2.86	0.43
49:S2:1204:A:C2	49:S2:1205:C:C6	3.06	0.43
49:S2:1237:C:C2	49:S2:1238:U:C6	3.05	0.43
49:S2:1413:G:N1	49:S2:1414:A:H1'	2.33	0.43
49:S2:1415:C:C5	49:S2:1416:C:C2	3.06	0.43
49:S2:1512:C:H2'	49:S2:1513:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1524:G:C2	49:S2:1525:C:C2	3.06	0.43
49:S2:1574:C:O2	49:S2:1575:G:C8	2.72	0.43
49:S2:1528:G:O2'	49:S2:1666:C:OP1	2.36	0.43
49:S2:1694:U:H2'	49:S2:1696:C:H5	1.83	0.43
49:S2:182:C:H5'	49:S2:183:G:P	2.58	0.43
49:S2:1841:C:H2'	49:S2:1841:C:O2	2.18	0.43
49:S2:217:A:C6	49:S2:218:U:C6	3.05	0.43
49:S2:302:A:N1	49:S2:303:C:C4	2.86	0.43
49:S2:302:A:N3	49:S2:303:C:C6	2.86	0.43
49:S2:217:A:H61	49:S2:303:C:H42	1.66	0.43
49:S2:465:A:H4'	49:S2:466:G:O5'	2.19	0.43
49:S2:529:A:H2'	49:S2:530:U:O4'	2.17	0.43
49:S2:536:A:C5	49:S2:537:C:C6	3.06	0.43
49:S2:9:U:C5	49:S2:11:A:OP2	2.71	0.43
50:SA:55:TRP:C	50:SA:55:TRP:HD1	2.21	0.43
55:SF:21:GLY:HA2	66:SQ:49:TYR:CZ	2.53	0.43
56:SG:67:VAL:HG23	56:SG:99:GLY:HA2	2.00	0.43
49:S2:797:C:O2	57:SH:109:ARG:NH2	2.50	0.43
63:SN:64:ARG:HA	63:SN:69:ASN:O	2.18	0.43
68:SS:17:ASN:O	68:SS:18:THR:HG23	2.18	0.43
25:V:27:ASN:N	25:V:27:ASN:OD1	2.51	0.43
48:4:10:ARG:HA	48:4:10:ARG:HD2	1.78	0.43
48:4:25:ILE:CG2	48:4:142:VAL:HB	2.48	0.43
48:4:226:LYS:CE	48:4:356:ILE:CD1	2.97	0.43
48:4:154:VAL:CG2	48:4:358:LEU:HD21	2.48	0.43
48:4:390:PRO:N	48:4:466:CYS:SG	2.92	0.43
48:4:577:VAL:HG11	48:4:579:TYR:OH	2.18	0.43
48:4:613:LEU:CD2	48:4:639:TYR:CG	2.81	0.43
48:4:661:ILE:CG2	48:4:662:LEU:N	2.81	0.43
48:4:713:ALA:CA	48:4:716:ARG:CZ	2.96	0.43
48:4:771:PHE:HB2	48:4:785:LYS:C	2.38	0.43
48:4:800:LEU:O	48:4:804:THR:HG23	2.17	0.43
1:5:1195:G:H2'	1:5:1196:G:C8	2.53	0.43
1:5:1081:C:H1'	1:5:1220:G:N2	2.34	0.43
1:5:1278:C:H3'	1:5:1279:A:C4'	2.47	0.43
1:5:1296:G:H1'	1:5:1297:U:P	2.58	0.43
1:5:1339:U:C2'	1:5:1339:U:O2	2.58	0.43
1:5:1387:A:N9	1:5:1397:A:N6	2.64	0.43
1:5:1404:G:C4	1:5:1405:C:C6	3.06	0.43
1:5:1665:C:N3	1:5:2285:A:C2	2.87	0.43
1:5:1729:A:H5''	1:5:1729:A:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1968:G:C2	1:5:1969:G:C5	3.06	0.43
1:5:1971:C:H5	1:5:2000:G:H2'	1.83	0.43
1:5:1975:G:C2	1:5:1984:A:N9	2.86	0.43
1:5:1988:G:N3	1:5:1989:G:C8	2.86	0.43
1:5:2077:C:N3	1:5:2078:C:C6	2.86	0.43
1:5:2290:C:H1'	1:5:2321:G:N3	2.33	0.43
1:5:2589:C:C4	1:5:2590:G:C4	3.05	0.43
1:5:2632:U:C2	1:5:2633:U:H5	2.30	0.43
1:5:2715:G:C2	1:5:2716:C:C2	3.06	0.43
1:5:2439:G:C8	1:5:2777:G:C5	3.07	0.43
1:5:2811:G:H2'	1:5:2811:G:N3	2.33	0.43
1:5:285:G:H2'	1:5:286:U:O4'	2.18	0.43
1:5:98:A:H1'	1:5:292:G:C5	2.53	0.43
1:5:3675:G:C2	1:5:3676:G:C5	2.97	0.43
1:5:3713:U:O2	1:5:3713:U:O4'	2.36	0.43
1:5:3727:A:C2'	1:5:3728:A:O5'	2.66	0.43
1:5:3794:C:H2'	1:5:3794:C:O2	2.17	0.43
1:5:4111:U:C2	1:5:4112:C:C6	3.06	0.43
1:5:4122:G:H2'	1:5:4122:G:N3	2.33	0.43
1:5:4136:G:N3	1:5:4137:C:C6	2.86	0.43
1:5:3927:U:O4	1:5:4182:G:C2	2.71	0.43
1:5:4324:A:C2	1:5:4325:A:C4	3.04	0.43
1:5:4338:G:H1	1:5:4372:U:H3'	1.83	0.43
1:5:4401:G:C5	1:5:4402:C:C5	3.06	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
1:5:4461:C:C2	1:5:4516:G:C2	3.06	0.43
1:5:4460:U:H2'	1:5:4461:C:H6	1.82	0.43
1:5:4473:A:C2	1:5:4474:A:C5	3.06	0.43
1:5:4538:G:C4	1:5:4539:U:C6	3.06	0.43
1:5:4861:G:C2	1:5:4862:G:C8	3.07	0.43
1:5:4880:C:O2'	1:5:4881:U:C5'	2.67	0.43
1:5:4897:G:N1	1:5:4898:G:C5	2.87	0.43
1:5:4985:U:C2	1:5:4986:G:C8	3.06	0.43
1:5:5055:G:H2'	1:5:5056:A:H8	1.82	0.43
1:5:506:C:C2	1:5:507:G:C8	3.06	0.43
1:5:664:G:H21	1:5:665:C:H5	1.67	0.43
1:5:711:A:C2	1:5:712:C:C4	3.06	0.43
5:B:153:MET:O	5:B:157:CYS:HB3	2.18	0.43
5:B:369:ASP:OD1	5:B:369:ASP:C	2.55	0.43
6:C:150:LEU:O	6:C:152:LEU:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:53:TYR:CE2	8:E:61:ARG:CZ	3.02	0.43
9:F:119:ILE:HG12	9:F:120:PHE:HB3	2.00	0.43
12:I:85:PHE:C	12:I:85:PHE:CD1	2.92	0.43
14:K:106:PHE:O	14:K:110:VAL:HG23	2.19	0.43
14:K:119:ARG:N	14:K:123:ARG:NH1	2.63	0.43
18:O:12:ARG:HD3	18:O:37:ARG:NH2	2.32	0.43
1:S:4871:C:C6	22:S:176:PHE:CE2	3.05	0.43
49:S2:1118:C:H3'	49:S2:1119:A:C2	2.54	0.43
49:S2:1131:G:C2	49:S2:1132:C:C6	3.06	0.43
49:S2:1202:U:O2	49:S2:1202:U:H2'	2.17	0.43
49:S2:1261:C:N4	49:S2:1262:C:N3	2.65	0.43
49:S2:1517:G:H2'	49:S2:1518:C:O4'	2.17	0.43
49:S2:1545:A:C5	49:S2:1546:G:C6	3.07	0.43
49:S2:1545:A:N6	49:S2:1588:A:C4	2.86	0.43
49:S2:1563:G:C5	49:S2:1564:C:C5	3.06	0.43
49:S2:1641:A:C4	49:S2:1642:U:C5	3.06	0.43
49:S2:1666:C:O2	49:S2:1666:C:H2'	2.19	0.43
49:S2:1709:G:C4	49:S2:1710:C:C5	3.06	0.43
49:S2:1776:G:N1	49:S2:1777:G:N7	2.67	0.43
49:S2:1806:A:N3	49:S2:1807:C:C6	2.86	0.43
49:S2:1858:G:C6	49:S2:1859:A:N7	2.86	0.43
49:S2:196:C:C2	49:S2:204:G:N2	2.87	0.43
49:S2:302:A:C4	49:S2:303:C:C6	3.06	0.43
49:S2:319:C:H2'	49:S2:320:G:H8	1.82	0.43
49:S2:596:U:O2'	49:S2:597:G:O5'	2.36	0.43
49:S2:695:C:N3	49:S2:696:G:N7	2.65	0.43
49:S2:787:G:H2'	49:S2:788:G:C4'	2.47	0.43
49:S2:929:G:C6	49:S2:930:C:C4	3.07	0.43
49:S2:973:C:N4	49:S2:974:C:C5	2.87	0.43
49:S2:976:G:N2	49:S2:977:C:C2	2.86	0.43
9:F:85:VAL:CG1	22:S:62:VAL:HA	2.46	0.43
53:SD:123:LEU:HD21	53:SD:154:ASP:HB3	2.00	0.43
57:SH:69:LEU:HD11	57:SH:73:GLN:HE21	1.83	0.43
49:S2:448:A:C8	58:SI:26:LYS:CA	3.01	0.43
60:SK:10:ALA:O	60:SK:13:GLU:HG3	2.18	0.43
67:SR:20:TYR:HB3	67:SR:23:ARG:HB2	1.99	0.43
70:SU:40:ILE:HD11	70:SU:53:PRO:HG3	2.00	0.43
73:SX:76:LYS:HG3	73:SX:77:ASN:OD1	2.19	0.43
48:4:343:TRP:O	48:4:344:LEU:HD23	2.17	0.43
48:4:60:ARG:N	48:4:63:GLU:HB3	2.33	0.43
48:4:61:LYS:HD3	48:4:61:LYS:HA	1.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:845:LYS:HZ1	48:4:846:GLU:CG	2.14	0.43
48:4:847:GLY:HA3	48:4:848:ILE:CB	2.48	0.43
1:5:1190:C:N3	1:5:1191:C:C4	2.83	0.43
1:5:1206:C:C2	1:5:1207:C:C6	3.06	0.43
1:5:1262:G:C6	1:5:1263:A:N7	2.86	0.43
1:5:973:G:C6	1:5:1282:G:N3	2.86	0.43
1:5:957:G:H5'	1:5:1284:G:N2	2.32	0.43
1:5:1334:A:N3	1:5:1334:A:H2'	2.32	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
1:5:1482:G:N2	1:5:1484:G:N2	2.66	0.43
1:5:1543:G:H1'	1:5:2513:A:N3	2.33	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
1:5:1912:G:C2	1:5:1913:C:C2	3.07	0.43
1:5:1972:G:N2	1:5:1973:G:C5	2.86	0.43
1:5:2080:U:H2'	1:5:2081:C:O5'	2.18	0.43
1:5:2470:C:H5''	1:5:2470:C:C2	2.54	0.43
1:5:2481:G:C4	1:5:2482:C:C5	3.05	0.43
1:5:2550:G:C2	1:5:2551:A:C8	3.06	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
1:5:2676:A:C5	1:5:2677:G:C8	3.07	0.43
1:5:29:G:C2	1:5:30:C:C6	3.07	0.43
1:5:3600:G:C4	1:5:3601:C:C5	3.06	0.43
1:5:1632:A:H8	1:5:3640:U:HO2'	1.66	0.43
1:5:3928:A:H3'	1:5:3929:G:H8	1.84	0.43
1:5:4089:G:C2	1:5:4161:G:C2	3.06	0.43
1:5:4145:C:N3	1:5:4146:G:C5	2.87	0.43
1:5:4127:A:N7	1:5:4156:G:N2	2.66	0.43
1:5:4284:C:O2	1:5:4284:C:H2'	2.18	0.43
1:5:4564:A:C4	1:5:4565:C:C5	3.06	0.43
1:5:4629:U:H2'	1:5:4630:G:O4'	2.18	0.43
1:5:4746:C:N4	1:5:4747:C:N4	2.66	0.43
1:5:4749:C:C3'	1:5:4750:G:H5''	2.49	0.43
1:5:5003:U:N3	1:5:5045:G:N2	2.65	0.43
1:5:5048:A:N3	1:5:5048:A:O4'	2.51	0.43
1:5:642:G:C4	1:5:643:C:C5	3.06	0.43
2:7:112:U:O2	2:7:113:G:N7	2.50	0.43
3:8:121:G:C6	3:8:122:G:C4	3.06	0.43
3:8:133:G:C4	3:8:134:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:135:C:N3	3:8:136:U:C4	2.86	0.43
11:H:50:LYS:O	11:H:51:LYS:HG3	2.18	0.43
12:I:35:ASP:HB2	12:I:86:HIS:CE1	2.50	0.43
12:I:31:ILE:HG13	12:I:66:GLU:OE1	2.17	0.43
13:J:99:PHE:CZ	13:J:105:PHE:CB	2.97	0.43
1:5:4928:C:H5'	16:M:114:LYS:HD3	2.01	0.43
1:5:1921:C:C5	16:M:17:PHE:HD2	2.36	0.43
17:N:53:TYR:HD1	17:N:54:LYS:N	2.16	0.43
49:S2:1034:A:N6	49:S2:1082:A:C4	2.86	0.43
49:S2:1077:A:C2	49:S2:1078:C:C6	3.05	0.43
49:S2:1266:C:O2	49:S2:1266:C:C2'	2.65	0.43
49:S2:1337:C:C2'	49:S2:1337:C:O2	2.66	0.43
49:S2:1402:A:C6	49:S2:1441:U:O4	2.53	0.43
49:S2:142:C:C2	56:SG:185:LEU:CD2	3.02	0.43
49:S2:153:G:C2	49:S2:154:U:C6	3.06	0.43
49:S2:168:C:OP1	56:SG:131:ARG:NH2	2.52	0.43
49:S2:1751:C:H2'	49:S2:1751:C:O2	2.18	0.43
49:S2:342:C:C2	49:S2:343:A:C8	3.07	0.43
49:S2:513:G:C5	49:S2:514:U:C5	3.07	0.43
49:S2:654:A:C6	49:S2:655:A:N1	2.86	0.43
49:S2:746:C:H2'	49:S2:747:U:C5'	2.48	0.43
49:S2:81:U:C2	49:S2:82:G:C8	3.06	0.43
49:S2:878:G:C6	49:S2:879:C:C6	3.07	0.43
49:S2:962:A:N3	49:S2:963:A:C8	2.86	0.43
1:5:3709:U:C6	49:S2:970:G:N1	2.86	0.43
57:SH:27:LEU:HD12	57:SH:40:LEU:HD21	1.99	0.43
58:SI:60:LEU:HD23	58:SI:185:ALA:HB2	2.00	0.43
59:SJ:13:TYR:C	59:SJ:13:TYR:CD1	2.90	0.43
59:SJ:45:ARG:O	59:SJ:49:THR:HG23	2.18	0.43
63:SN:89:TYR:HD1	63:SN:89:TYR:C	2.22	0.43
51:SB:30:TRP:HD1	64:SO:19:PRO:HD3	1.83	0.43
66:SQ:47:LEU:O	66:SQ:49:TYR:N	2.51	0.43
25:V:48:ARG:HD2	25:V:51:ARG:NH2	2.32	0.43
48:4:9:ILE:HG21	48:4:452:LEU:HD13	1.99	0.43
48:4:33:SER:CA	48:4:57:THR:HG21	2.47	0.43
1:5:101:A:C2	1:5:102:G:N9	2.85	0.43
1:5:1085:C:N3	1:5:1086:C:C5	2.84	0.43
1:5:114:G:O6	1:5:157:U:O2	2.36	0.43
1:5:1244:G:O4'	1:5:1269:G:H1'	2.18	0.43
1:5:1248:C:C4	1:5:1249:C:H5	2.36	0.43
1:5:1289:C:N3	1:5:1290:G:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1373:A:C4	1:5:1374:G:C8	3.06	0.43
1:5:1358:G:N1	1:5:1379:C:O2	2.52	0.43
1:5:1423:U:C2	1:5:1424:G:C8	3.07	0.43
1:5:1427:A:H2	20:Q:50:ARG:HH22	1.65	0.43
1:5:1421:G:C5	1:5:1465:G:C2	3.07	0.43
1:5:1667:G:H8	1:5:1667:G:O5'	2.01	0.43
1:5:1685:G:C6	1:5:1686:C:C4	3.07	0.43
1:5:1728:U:H2'	1:5:1729:A:H5''	2.00	0.43
1:5:1846:G:C2	1:5:1847:C:N3	2.86	0.43
1:5:1951:G:N2	1:5:1952:G:H1'	2.34	0.43
1:5:1984:A:N6	1:5:2011:C:C1'	2.81	0.43
1:5:2069:A:C5	1:5:2071:A:C8	3.07	0.43
1:5:2103:G:C4	1:5:2104:G:C8	3.06	0.43
1:5:2439:G:C2	1:5:2440:U:C5	3.07	0.43
1:5:2504:C:O2'	1:5:2505:C:N3	2.34	0.43
1:5:2690:C:C2	1:5:2691:U:C5	3.05	0.43
1:5:2712:G:N1	1:5:2713:C:C5	2.86	0.43
1:5:2735:G:N2	1:5:2736:G:N9	2.67	0.43
1:5:2736:G:N1	1:5:2737:C:C5	2.77	0.43
1:5:288:G:C5	1:5:289:C:C5	3.06	0.43
1:5:301:G:C4	1:5:302:C:C6	3.06	0.43
1:5:3752:C:H2'	1:5:3777:G:C8	2.53	0.43
1:5:3848:U:O2	1:5:3848:U:H2'	2.18	0.43
1:5:4093:G:C8	1:5:4094:G:O4'	2.71	0.43
1:5:4094:G:C2	1:5:4095:G:C4	3.07	0.43
1:5:4113:U:H3'	1:5:4114:C:H5''	2.00	0.43
1:5:4219:A:O2'	1:5:4220:A:C5'	2.66	0.43
1:5:4269:G:C2	1:5:4270:C:H1'	2.53	0.43
1:5:4298:A:C5	1:5:4299:U:C5	3.06	0.43
1:5:4482:U:C2'	1:5:4482:U:O2	2.66	0.43
1:5:4505:C:H2'	1:5:4506:C:H6	1.83	0.43
1:5:4518:A:H5''	1:5:4520:G:H4'	2.01	0.43
1:5:452:A:O3'	1:5:454:U:OP2	2.37	0.43
1:5:4688:C:C2	1:5:4689:U:C6	3.07	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
1:5:4895:C:O2	1:5:4896:G:N7	2.51	0.43
1:5:490:C:H3'	1:5:491:G:C8	2.51	0.43
1:5:4890:G:C2	1:5:4930:C:C2	3.06	0.43
1:5:5018:C:C2	1:5:5019:A:C8	3.06	0.43
1:5:518:G:C2	1:5:519:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:673:C:C2	1:5:674:G:N7	2.87	0.43
1:5:908:G:N1	1:5:909:A:C8	2.87	0.43
1:5:95:G:H3'	1:5:95:G:C8	2.53	0.43
1:5:99:A:O2'	17:N:181:HIS:CE1	2.72	0.43
2:7:13:A:P	2:7:109:U:HO2'	2.42	0.43
2:7:40:U:O2	13:J:75:ARG:HD2	2.18	0.43
2:7:94:C:C2	2:7:95:C:H5	2.28	0.43
3:8:38:U:C2'	3:8:38:U:O2	2.67	0.43
6:C:26:ALA:HB3	6:C:266:THR:HA	2.00	0.43
7:D:55:VAL:HG21	7:D:158:LYS:HB2	2.01	0.43
8:E:279:PRO:C	8:E:281:LYS:H	2.22	0.43
9:F:239:GLU:O	9:F:241:GLN:N	2.50	0.43
11:H:126:VAL:HG11	11:H:161:ILE:HG22	2.00	0.43
18:O:103:LYS:HG2	18:O:105:PHE:CZ	2.53	0.43
1:5:1345:A:H4'	20:Q:166:TYR:HE2	1.84	0.43
1:5:4307:A:H4'	20:Q:186:TYR:CD2	2.53	0.43
20:Q:32:TYR:OH	20:Q:123:PHE:CD2	2.69	0.43
49:S2:1068:G:HO2'	49:S2:1069:U:H6	1.67	0.43
49:S2:1275:G:H4'	49:S2:1276:A:H5'	2.00	0.43
49:S2:1279:C:C2	49:S2:1280:G:C8	3.07	0.43
49:S2:1339:U:O2	49:S2:1340:U:C6	2.72	0.43
49:S2:1356:G:C2	49:S2:1357:A:C6	3.07	0.43
49:S2:139:C:O2'	49:S2:140:C:O5'	2.19	0.43
49:S2:1528:G:C6	49:S2:1529:C:C4	3.07	0.43
49:S2:1731:A:C4	49:S2:1732:G:C8	3.06	0.43
49:S2:1740:C:C2	49:S2:1741:U:C5	3.07	0.43
49:S2:302:A:C2	49:S2:303:C:C2	3.06	0.43
49:S2:215:G:N2	49:S2:312:G:H1	2.16	0.43
49:S2:315:C:H2'	49:S2:316:G:H8	1.83	0.43
49:S2:340:C:H3'	49:S2:341:C:H6	1.82	0.43
49:S2:341:C:N4	49:S2:342:C:C4	2.85	0.43
49:S2:341:C:O2	49:S2:342:C:H1'	2.18	0.43
49:S2:364:A:C2	49:S2:397:G:N3	2.87	0.43
49:S2:410:G:N1	49:S2:411:G:C4	2.85	0.43
49:S2:418:A:H3'	49:S2:419:G:H8	1.82	0.43
49:S2:50:A:N1	49:S2:51:U:H1'	2.34	0.43
49:S2:60:A:O4'	49:S2:60:A:N3	2.51	0.43
49:S2:795:A:C2	49:S2:796:G:C4	2.98	0.43
21:R:163:ARG:CZ	49:S2:871:U:C2	3.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:907:G:H3'	49:S2:908:A:C8	2.52	0.43
49:S2:92:A:H4'	49:S2:93:U:OP2	2.19	0.43
53:SD:167:TYR:OH	53:SD:193:ASP:OD2	2.36	0.43
56:SG:235:SER:OG	56:SG:236:SER:N	2.52	0.43
57:SH:10:LYS:N	57:SH:11:PRO:HD3	2.34	0.43
58:SI:6:ASP:HB3	58:SI:28:GLU:HG2	2.00	0.43
59:SJ:50:LEU:CD2	59:SJ:54:ARG:HG3	2.49	0.43
60:SK:15:LEU:HD13	60:SK:21:MET:HE3	2.00	0.43
64:SO:28:PHE:HD1	64:SO:92:ALA:HB3	1.83	0.43
66:SQ:102:GLU:O	66:SQ:106:LYS:HG2	2.19	0.43
67:SR:99:ASP:N	67:SR:102:THR:OG1	2.40	0.43
75:SZ:45:ASN:OD1	75:SZ:45:ASN:N	2.49	0.43
24:U:39:PHE:CD1	24:U:90:TYR:CE2	3.06	0.43
25:V:82:ILE:HG23	25:V:121:VAL:HA	2.01	0.43
1:5:1066:G:C5	1:5:1067:G:N7	2.86	0.43
1:5:1098:G:C5	1:5:1099:C:C5	3.07	0.43
1:5:1100:U:O2	1:5:1167:C:C6	2.71	0.43
1:5:113:A:H2'	1:5:113:A:N3	2.32	0.43
1:5:120:A:C8	1:5:121:A:N6	2.87	0.43
1:5:1458:C:C2'	1:5:1458:C:O2	2.54	0.43
1:5:164:G:N2	1:5:165:A:H1'	2.33	0.43
1:5:1992:U:C6	1:5:2002:A:H2	2.36	0.43
1:5:2014:C:OP1	20:Q:112:ARG:CZ	156.39	0.43
1:5:2315:G:C4	1:5:2316:G:C8	3.06	0.43
1:5:2353:U:C2	1:5:2354:G:C8	3.06	0.43
1:5:2509:C:N3	1:5:2510:G:C5	2.87	0.43
1:5:2606:G:C6	1:5:2607:C:C4	3.07	0.43
1:5:266:C:OP1	1:5:266:C:C2	2.71	0.43
1:5:2723:U:C2	1:5:2724:G:C8	3.07	0.43
1:5:2857:A:C6	1:5:2858:A:C6	3.07	0.43
1:5:298:G:C2	1:5:299:C:N1	2.86	0.43
1:5:30:C:O2'	1:5:31:U:C5'	2.67	0.43
1:5:3755:G:C6	1:5:3756:A:C8	3.06	0.43
1:5:3832:U:C2	1:5:3833:C:C5	3.06	0.43
1:5:3910:C:N3	1:5:3911:C:N4	2.66	0.43
1:5:4081:G:N1	1:5:4082:G:N7	2.66	0.43
1:5:4235:G:H2'	1:5:4236:G:C5'	2.49	0.43
1:5:4401:G:C8	1:5:4401:G:H5''	2.54	0.43
1:5:44:A:N3	1:5:45:U:C6	2.87	0.43
1:5:450:G:O2'	1:5:453:G:OP1	2.29	0.43
1:5:4653:C:N3	1:5:4654:C:N4	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:468:U:O2	1:5:468:U:H2'	2.18	0.43
1:5:4713:G:C4	1:5:4714:C:C6	3.07	0.43
1:5:4724:A:H4'	5:B:102:PHE:O	2.18	0.43
1:5:4731:G:N7	1:5:4733:C:C6	2.86	0.43
1:5:472:C:C4	1:5:473:C:C4	3.06	0.43
1:5:4967:A:C2	1:5:4968:A:C5	3.07	0.43
1:5:5004:C:N4	1:5:5005:G:C2	2.87	0.43
1:5:5006:U:O4'	1:5:5042:A:N6	2.51	0.43
1:5:5055:G:C2	1:5:5056:A:N7	2.86	0.43
1:5:505:G:N3	1:5:506:C:C6	2.86	0.43
1:5:691:C:N3	1:5:692:A:C5	2.87	0.43
1:5:933:G:C2	1:5:940:C:C5	3.06	0.43
1:5:957:G:OP1	1:5:1284:G:O2'	2.30	0.43
2:7:73:U:O2	2:7:102:U:C4	2.72	0.43
2:7:111:C:O2	2:7:111:C:C2'	2.67	0.43
3:8:115:G:C5	3:8:116:C:C5	3.07	0.43
3:8:131:G:N1	3:8:132:G:N9	2.66	0.43
3:8:144:U:N3	3:8:145:C:C5	2.87	0.43
3:8:27:U:C2	3:8:28:C:C6	3.06	0.43
5:B:60:VAL:HG12	5:B:62:ARG:HG2	1.99	0.43
6:C:336:ARG:O	6:C:340:ILE:CG1	2.66	0.43
8:E:104:LYS:HA	8:E:104:LYS:HE2	2.01	0.43
8:E:157:ARG:HH22	8:E:271:PHE:HB2	1.83	0.43
11:H:106:GLN:NE2	11:H:113:GLU:HG2	2.34	0.43
11:H:36:ARG:HD3	11:H:38:PHE:CE1	2.53	0.43
12:I:110:ARG:CZ	12:I:110:ARG:HA	2.49	0.43
7:D:284:LYS:HB2	12:I:209:TRP:CH2	2.53	0.43
14:K:102:GLY:O	14:K:140:GLY:HA2	2.17	0.43
14:K:77:ALA:HB2	14:K:80:LEU:HD12	1.97	0.43
14:K:88:PRO:HB2	14:K:89:PRO:CB	2.48	0.43
16:M:109:ARG:HH21	16:M:109:ARG:CB	2.32	0.43
49:S2:116:U:N3	49:S2:117:C:C5	2.86	0.43
49:S2:1241:A:C2'	49:S2:1242:U:O4'	2.66	0.43
49:S2:1246:A:N6	49:S2:1247:C:N4	2.59	0.43
49:S2:1246:A:H2	49:S2:1251:A:N3	2.16	0.43
49:S2:1261:C:C5	49:S2:1262:C:C4	3.06	0.43
49:S2:1268:C:C2	49:S2:1515:G:N2	2.86	0.43
49:S2:1292:C:N4	49:S2:1293:A:C8	2.86	0.43
49:S2:1356:G:O5'	49:S2:1356:G:H8	2.01	0.43
49:S2:1374:C:O2'	49:S2:1375:G:H5'	2.18	0.43
49:S2:1401:A:C6	49:S2:1402:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1417:C:O2	49:S2:1419:C:C5	2.72	0.43
49:S2:1230:C:H2'	49:S2:1665:G:H22	1.83	0.43
49:S2:185:G:C6	49:S2:186:C:N4	2.86	0.43
49:S2:336:A:C5	49:S2:337:C:C5	3.07	0.43
49:S2:379:C:O2	58:SI:5:ARG:NH1	2.51	0.43
49:S2:426:A:C4	49:S2:427:U:O4	2.71	0.43
49:S2:436:G:N2	49:S2:437:G:C5	2.85	0.43
49:S2:49:C:C2	49:S2:478:G:C2	3.06	0.43
49:S2:512:A:C2	49:S2:513:G:C8	3.07	0.43
49:S2:529:A:C4	49:S2:530:U:C6	3.06	0.43
49:S2:71:G:H2'	49:S2:72:C:N1	2.34	0.43
49:S2:805:U:N3	49:S2:806:U:H5	2.10	0.43
49:S2:832:G:C2	49:S2:833:C:C1'	3.01	0.43
49:S2:862:A:C2	49:S2:863:U:H1'	2.54	0.43
49:S2:883:U:C2	49:S2:884:C:C6	3.07	0.43
51:SB:139:CYS:HB2	51:SB:172:MET:CE	2.49	0.43
51:SB:79:VAL:HB	51:SB:81:PHE:CE2	2.53	0.43
54:SE:98:ASN:N	54:SE:98:ASN:OD1	2.52	0.43
55:SF:101:HIS:O	55:SF:105:GLY:HA2	2.18	0.43
59:SJ:59:GLU:OE2	59:SJ:59:GLU:CG	2.53	0.43
66:SQ:111:ILE:HA	66:SQ:114:GLN:NE2	2.33	0.43
66:SQ:32:ILE:HD11	66:SQ:63:PHE:CD2	2.53	0.43
72:SW:37:PHE:CE1	72:SW:103:VAL:HG11	2.53	0.43
27:X:72:ASP:OD1	27:X:72:ASP:N	2.50	0.43
29:Z:71:PHE:HA	29:Z:111:ARG:HG2	1.99	0.43
48:4:228:PHE:CG	48:4:293:ILE:HG12	2.53	0.43
48:4:58:ASP:C	48:4:63:GLU:CB	2.83	0.43
48:4:634:TYR:CZ	48:4:639:TYR:HE2	2.37	0.43
48:4:675:ILE:CG2	48:4:709:LEU:HD12	2.15	0.43
48:4:731:ALA:HA	48:4:854:PHE:CD1	2.54	0.43
48:4:763:LEU:HD13	48:4:786:ALA:HB2	2.01	0.43
1:5:1065:G:N1	1:5:1066:G:C6	2.87	0.43
1:5:1176:C:H4'	7:D:279:ARG:HG3	2.01	0.43
1:5:1189:G:N2	1:5:1190:C:H1'	2.33	0.43
1:5:1251:C:O2	1:5:1252:C:C6	2.71	0.43
1:5:1299:G:N1	1:5:1300:G:C5	2.87	0.43
1:5:141:C:H2'	1:5:142:G:O4'	2.19	0.43
1:5:1448:G:C2	1:5:1449:C:C2	3.06	0.43
1:5:1581:G:N7	1:5:1610:C:N4	2.67	0.43
1:5:1693:U:N3	1:5:1694:C:C6	2.85	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)
1:5:175:C:H2'	1:5:176:G:C8	2.54	0.43
1:5:1777:C:O2	1:5:1777:C:H2'	2.19	0.43
1:5:1755:C:N4	1:5:1778:C:H4'	2.33	0.43
1:5:1948:G:C4	1:5:1949:U:C5	3.06	0.43
1:5:1969:G:O6	1:5:2019:C:N4	2.51	0.43
1:5:2100:A:C5	1:5:2101:C:C6	3.06	0.43
1:5:216:C:OP1	1:5:216:C:O4'	2.36	0.43
1:5:2281:U:O2	1:5:2282:A:C8	2.72	0.43
1:5:2294:G:N2	1:5:2295:C:C6	2.86	0.43
1:5:2359:U:O5'	1:5:2360:A:H2'	2.19	0.43
1:5:2401:A:N1	1:5:2402:G:C5	2.87	0.43
1:5:2418:A:C6	1:5:2419:C:C4	3.06	0.43
1:5:2566:G:N2	1:5:2567:G:C8	2.86	0.43
1:5:2594:C:O2	1:5:2595:C:C6	2.72	0.43
1:5:2612:G:C6	1:5:2613:C:N3	2.87	0.43
1:5:2784:C:N3	1:5:2785:C:N4	2.66	0.43
1:5:2812:A:H2'	1:5:2813:A:H8	1.78	0.43
1:5:328:A:C6	1:5:329:A:C6	3.06	0.43
1:5:3628:G:C2	1:5:3629:A:C8	3.07	0.43
1:5:3644:U:O2	1:5:4554:G:O2'	2.29	0.43
1:5:3656:A:C6	1:5:3657:U:C5	3.06	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
1:5:3904:G:H3'	1:5:3905:A:O4'	2.18	0.43
1:5:4090:G:C5	1:5:4091:G:C8	3.07	0.43
1:5:4175:G:C2	1:5:4176:C:C6	3.07	0.43
1:5:4254:G:N3	1:5:4254:G:H2'	2.34	0.43
1:5:426:A:O2'	1:5:427:A:C5'	2.66	0.43
1:5:4413:C:H5	1:5:4429:C:H42	1.65	0.43
1:5:476:G:N2	1:5:679:C:C2	2.87	0.43
1:5:4898:G:C2	1:5:4899:G:C8	3.07	0.43
1:5:4906:C:H1'	1:5:4916:G:N2	2.34	0.43
1:5:4914:C:H2'	1:5:4915:G:C8	2.54	0.43
1:5:4974:C:H2'	1:5:4975:G:O4'	2.19	0.43
1:5:5034:A:C5	1:5:5035:U:H1'	2.54	0.43
1:5:5063:G:N3	1:5:5064:G:C8	2.86	0.43
1:5:53:C:O2	1:5:53:C:H2'	2.19	0.43
1:5:686:A:C2'	1:5:687:U:H5'	2.49	0.43
1:5:988:C:C2	1:5:989:U:C6	3.07	0.43
2:7:111:C:C4	2:7:112:U:C6	3.03	0.43
2:7:34:C:N3	2:7:35:U:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:7:G:N3	2:7:7:G:H2'	2.34	0.43
3:8:106:G:N3	3:8:107:C:C5	2.87	0.43
4:A:158:ILE:HG21	4:A:162:ASN:OD1	2.19	0.43
1:5:1539:G:H5'	4:A:194:ASN:ND2	2.33	0.43
5:B:231:VAL:HG11	5:B:251:VAL:HG23	2.01	0.43
1:5:4314:C:O2'	5:B:36:ASP:HB3	133.32	0.43
1:5:1236:C:H2'	8:E:56:SER:CB	2.49	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
9:F:41:GLN:CA	9:F:41:GLN:NE2	2.77	0.43
9:F:93:PHE:HE2	9:F:246:ILE:HG12	1.84	0.43
1:5:4125:C:H4'	10:G:45:ILE:HG21	2.00	0.43
11:H:113:GLU:OE2	11:H:125:ARG:HB3	2.19	0.43
12:I:76:MET:HE2	12:I:80:CYS:SG	2.59	0.43
14:K:46:ILE:O	14:K:46:ILE:HG22	2.17	0.43
49:S2:1032:C:C4	49:S2:1033:G:C5	3.06	0.43
49:S2:1036:A:N7	49:S2:1037:G:C8	2.87	0.43
49:S2:1099:G:C4	49:S2:1100:A:C8	3.06	0.43
49:S2:1238:U:H2'	49:S2:1239:U:O4'	2.18	0.43
49:S2:1310:U:O2	49:S2:1310:U:C2'	2.63	0.43
49:S2:1433:C:P	49:S2:1433:C:C3'	3.06	0.43
49:S2:145:G:H2'	49:S2:146:G:O4'	2.18	0.43
49:S2:1512:C:N3	49:S2:1513:C:N4	2.66	0.43
49:S2:1584:G:N1	49:S2:1586:U:C6	2.87	0.43
49:S2:1588:A:O2'	49:S2:1589:A:O5'	2.37	0.43
49:S2:1591:C:C2	49:S2:1592:C:C6	3.06	0.43
49:S2:1696:C:C2	49:S2:1697:A:N7	2.87	0.43
1:5:3807:A:O4'	49:S2:1815:A:C2	2.71	0.43
49:S2:1826:G:N3	49:S2:1826:G:H2'	2.34	0.43
49:S2:221:A:C2	49:S2:222:U:N1	2.87	0.43
49:S2:358:C:C4	49:S2:359:U:C5	3.07	0.43
49:S2:42:A:N3	49:S2:42:A:H2'	2.32	0.43
49:S2:449:A:N7	49:S2:452:G:O6	2.51	0.43
49:S2:495:U:O2'	49:S2:496:C:H5''	2.16	0.43
49:S2:599:A:H2'	49:S2:606:G:N2	2.33	0.43
49:S2:61:A:C2	49:S2:334:C:O2	2.72	0.43
49:S2:623:G:N2	49:S2:624:C:C1'	2.82	0.43
49:S2:676:C:O2	49:S2:676:C:H2'	2.17	0.43
49:S2:792:C:N3	49:S2:793:G:C5	2.87	0.43
49:S2:878:G:N2	49:S2:879:C:H1'	2.33	0.43
49:S2:899:U:C5	49:S2:900:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:919:A:C2	63:SN:64:ARG:NH2	2.87	0.43
53:SD:204:LEU:O	53:SD:207:HIS:HB3	2.19	0.43
53:SD:32:ASP:OD2	53:SD:54:ARG:O	2.37	0.43
54:SE:86:PHE:CE2	54:SE:226:PHE:HE2	2.37	0.43
57:SH:110:THR:O	57:SH:110:THR:CG2	2.66	0.43
57:SH:26:ALA:O	57:SH:30:LEU:HG	2.19	0.43
62:SM:17:ALA:HB1	62:SM:124:ILE:CG2	2.49	0.43
68:SS:83:PHE:O	68:SS:97:GLN:OE1	2.36	0.43
9:F:129:LYS:HB2	23:T:133:ALA:HB3	2.00	0.43
48:4:147:ILE:CD1	48:4:193:GLY:N	2.81	0.43
48:4:325:SER:O	48:4:327:ASP:CA	2.61	0.43
48:4:541:SER:CB	48:4:576:VAL:HG12	2.42	0.43
48:4:645:GLU:OE1	48:4:665:ILE:CD1	2.67	0.43
48:4:71:LYS:HB3	48:4:72:SER:H	1.80	0.43
1:5:1100:U:O2	1:5:1167:C:C5	2.72	0.43
1:5:119:G:H3'	1:5:120:A:H5'	2.00	0.43
1:5:1203:G:N3	1:5:1204:C:C6	2.87	0.43
1:5:1235:G:H2'	1:5:1236:C:H5'	2.01	0.43
1:5:1258:G:C2	1:5:1259:G:N9	2.87	0.43
1:5:1274:A:O2'	1:5:1275:G:O5'	2.31	0.43
1:5:1477:C:C4	1:5:1478:C:C6	3.06	0.43
1:5:1752:G:N1	1:5:1753:G:C4	2.86	0.43
1:5:1819:G:C8	7:D:142:PHE:HD2	2.37	0.43
1:5:1844:G:C5	1:5:1845:U:C5	3.07	0.43
1:5:1865:G:N2	1:5:1867:A:H2'	2.34	0.43
1:5:1942:A:H2'	1:5:1943:A:C8	2.53	0.43
1:5:1997:U:C3'	1:5:1998:A:H5''	2.47	0.43
1:5:1:C:C5	1:5:2:G:C8	3.07	0.43
1:5:202:C:C2	1:5:214:G:N2	2.87	0.43
1:5:2058:G:N2	1:5:2059:C:C1'	2.80	0.43
1:5:1689:G:H4'	1:5:2285:A:H4'	2.01	0.43
1:5:2307:A:N9	1:5:2332:A:C2	2.87	0.43
1:5:247:G:C2	1:5:248:C:C4	3.07	0.43
1:5:2576:G:N1	1:5:2577:C:C4	2.87	0.43
1:5:2635:U:H2'	1:5:2636:U:C6	2.54	0.43
1:5:2701:U:C2	1:5:2702:C:C6	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
1:5:3806:G:C4	1:5:3807:A:C8	3.07	0.43
1:5:4112:C:N3	1:5:4113:U:C6	2.87	0.43
1:5:4166:G:C2	1:5:4167:G:N9	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4360:U:C5	1:5:4361:U:C5	3.07	0.43
1:5:4415:A:C2	1:5:4416:G:H1'	2.54	0.43
1:5:4439:U:C2	1:5:4440:G:C8	3.06	0.43
1:5:2041:A:C2	1:5:4464:A:N6	2.87	0.43
1:5:4475:G:H8	1:5:4475:G:O5'	2.02	0.43
1:5:4660:G:H2'	1:5:4661:G:H5''	1.99	0.43
1:5:490:C:C2'	1:5:491:G:H8	2.31	0.43
1:5:4911:A:H62	18:O:109:PRO:HG3	1.84	0.43
1:5:4991:U:C2	1:5:4992:G:C8	3.07	0.43
1:5:512:U:C3'	1:5:513:U:H5''	2.48	0.43
1:5:680:G:N2	1:5:681:G:H1'	2.34	0.43
1:5:689:U:C3'	1:5:690:C:H5''	2.49	0.43
2:7:110:G:N2	2:7:111:C:N1	2.66	0.43
2:7:54:A:N7	13:J:12:MET:CG	2.82	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
6:C:331:TYR:O	6:C:335:MET:HG3	2.18	0.43
8:E:238:ILE:O	8:E:239:SER:HB3	2.18	0.43
9:F:198:THR:O	9:F:200:GLY:N	2.52	0.43
9:F:44:LEU:CD2	9:F:48:ARG:NE	2.81	0.43
17:N:195:ARG:H	17:N:195:ARG:HG3	1.72	0.43
49:S2:1080:A:N3	49:S2:1081:U:H5	2.17	0.43
49:S2:1082:A:C8	49:S2:1084:A:N9	2.86	0.43
49:S2:1105:G:N2	49:S2:1128:C:C2	2.87	0.43
49:S2:1202:U:O2'	52:SC:114:LYS:HD3	2.19	0.43
49:S2:1202:U:C2	49:S2:1203:G:C8	3.07	0.43
49:S2:1215:C:N4	49:S2:1221:G:H1	2.13	0.43
49:S2:1283:C:O2	62:SM:106:CYS:HB2	2.18	0.43
49:S2:1284:A:N1	62:SM:33:ARG:C	2.72	0.43
49:S2:1286:G:N1	49:S2:1312:G:C6	2.86	0.43
49:S2:1420:G:O2'	69:ST:4:VAL:C	2.57	0.43
49:S2:1513:C:O2'	49:S2:1514:G:C5'	2.67	0.43
49:S2:1545:A:C2	49:S2:1546:G:C6	3.06	0.43
49:S2:1546:G:O2'	49:S2:1547:C:H5'	2.19	0.43
49:S2:1630:A:N1	49:S2:1631:U:C5	2.87	0.43
49:S2:1793:A:N3	49:S2:1793:A:H2'	2.34	0.43
49:S2:885:U:O2	49:S2:886:A:C8	2.72	0.43
49:S2:997:A:H2'	49:S2:998:A:O5'	2.19	0.43
50:SA:120:ARG:HH12	52:SC:267:GLN:CG	2.32	0.43
51:SB:171:ILE:HD13	51:SB:197:ILE:HA	2.00	0.43
53:SD:98:ALA:HB2	53:SD:169:ASP:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:115:ALA:HA	55:SF:181:ALA:HA	2.00	0.43
56:SG:88:ARG:HB3	56:SG:91:GLU:HB2	2.00	0.43
57:SH:61:ILE:HD11	57:SH:95:ILE:CD1	2.49	0.43
23:T:11:THR:HB	23:T:15:PHE:HD1	1.82	0.43
28:Y:27:ARG:HB2	28:Y:75:ARG:HH12	1.83	0.43
48:4:154:VAL:C	48:4:205:ILE:CD1	2.87	0.43
48:4:589:VAL:CG1	48:4:590:LEU:N	2.82	0.43
48:4:753:GLU:N	48:4:782:PHE:CD1	2.81	0.43
1:5:1098:G:H2'	1:5:1099:C:O4'	2.19	0.43
1:5:1248:C:N4	1:5:1249:C:H41	2.17	0.43
1:5:12:A:N3	1:5:14:C:C5	2.86	0.43
1:5:1305:C:OP1	3:8:7:U:O2'	2.37	0.43
1:5:1380:G:N2	1:5:1382:G:N3	2.67	0.43
1:5:1684:A:N1	1:5:1685:G:C8	2.86	0.43
1:5:1697:G:H4'	1:5:1698:C:OP1	2.19	0.43
1:5:1743:A:C6	1:5:1744:U:C6	3.07	0.43
1:5:1775:A:C2	1:5:1776:A:C4	3.07	0.43
1:5:1776:A:C4	1:5:1777:C:C5	3.07	0.43
1:5:1872:G:N2	1:5:1873:A:C4	2.87	0.43
1:5:1919:G:N2	22:S:166:ARG:HB2	2.33	0.43
1:5:2015:U:C2	1:5:2016:C:C6	3.06	0.43
1:5:2027:U:HO2'	1:5:2028:C:C4'	2.31	0.43
1:5:2052:G:C2	1:5:2053:C:C2	3.06	0.43
1:5:2090:U:OP2	1:5:2090:U:O2	2.37	0.43
1:5:224:U:O2	6:C:219:LYS:HG2	2.19	0.43
1:5:2364:G:N3	1:5:2365:C:C5	2.86	0.43
1:5:2443:G:OP2	1:5:2516:G:N2	2.48	0.43
1:5:2613:C:H42	1:5:2614:C:N4	2.17	0.43
1:5:2658:G:H22	1:5:2675:G:C2'	2.25	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'	2.17	0.43
1:5:332:C:H2'	1:5:333:U:O5'	2.19	0.43
1:5:3640:U:H2'	1:5:3646:A:H62	1.83	0.43
1:5:3754:G:C2	1:5:3755:G:H1'	2.53	0.43
1:5:3757:G:C6	1:5:3758:U:C5	3.06	0.43
1:5:3871:A:N1	1:5:3885:G:C2	2.87	0.43
1:5:3879:G:O6	1:5:3882:C:C6	2.72	0.43
1:5:3921:U:H2'	1:5:3922:G:H3'	2.00	0.43
1:5:3943:A:C6	1:5:3944:G:C5	3.07	0.43
1:5:4216:G:C6	1:5:4217:G:C5	3.07	0.43
1:5:4222:G:H2'	1:5:4223:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4241:C:C4	1:5:4242:U:H5	2.37	0.43
1:5:4250:G:C2	1:5:4259:C:C2	3.07	0.43
1:5:4425:G:O6	1:5:4426:C:C5	2.72	0.43
1:5:4724:A:C2	1:5:4725:C:N1	2.87	0.43
1:5:4737:G:H2'	1:5:4738:C:H6	1.83	0.43
1:5:29:G:C5	1:5:54:G:C2	3.06	0.43
1:5:652:G:C5	1:5:653:U:C6	3.07	0.43
1:5:660:A:C2	1:5:661:C:C5	3.07	0.43
1:5:661:C:C2	1:5:662:C:C5	3.07	0.43
1:5:89:C:HO2'	1:5:90:G:C5'	2.32	0.43
5:B:146:LEU:HD13	5:B:146:LEU:N	2.34	0.43
7:D:275:GLN:HA	7:D:278:ASP:OD1	2.19	0.43
7:D:37:VAL:HG13	7:D:67:ALA:CB	2.48	0.43
9:F:181:LEU:HB3	9:F:186:ILE:HB	2.00	0.43
10:G:108:GLN:NE2	10:G:108:GLN:N	2.66	0.43
12:I:171:TRP:CE3	12:I:181:PHE:HB2	2.51	0.43
12:I:184:MET:HB2	12:I:190:LEU:HD12	2.00	0.43
12:I:30:LYS:HG2	12:I:63:GLU:HG2	2.01	0.43
13:J:107:PHE:CZ	13:J:130:PHE:CG	3.06	0.43
17:N:128:LYS:HB3	17:N:130:PHE:HE1	1.83	0.43
20:Q:24:TYR:HD1	20:Q:24:TYR:N	3.28	0.43
11:H:60:TRP:NE1	22:S:153:PRO:HG3	2.34	0.43
49:S2:1066:U:C2	49:S2:1067:C:C6	3.06	0.43
49:S2:106:C:C2	49:S2:107:A:C8	3.04	0.43
49:S2:1353:A:C6	49:S2:1354:G:C5	3.06	0.43
49:S2:1539:U:N3	49:S2:1540:G:C5	2.61	0.43
49:S2:160:U:O2'	49:S2:161:U:H3'	2.18	0.43
49:S2:1610:G:C4	49:S2:1611:G:C8	3.07	0.43
49:S2:1669:G:C6	49:S2:1670:C:C4	3.06	0.43
49:S2:30:C:H2'	49:S2:31:U:O5'	2.19	0.43
49:S2:310:C:C4	49:S2:311:C:N4	2.87	0.43
49:S2:331:C:H41	56:SG:189:ARG:HH21	1.66	0.43
49:S2:384:U:H3'	49:S2:384:U:C6	2.53	0.43
49:S2:452:G:N1	49:S2:453:C:C5	2.85	0.43
49:S2:474:G:H5'	49:S2:475:C:OP2	2.18	0.43
49:S2:552:G:H2'	49:S2:553:U:C6	2.54	0.43
49:S2:615:C:O2'	49:S2:616:A:O4'	2.32	0.43
49:S2:616:A:N1	49:S2:632:C:H1'	2.34	0.43
49:S2:656:G:C5'	49:S2:662:G:N2	2.82	0.43
49:S2:751:G:C2	49:S2:792:C:O2	2.71	0.43
49:S2:833:C:C4	49:S2:834:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:916:A:H3'	49:S2:917:U:H5'	2.01	0.43
49:S2:926:A:C2	49:S2:927:C:C2	3.07	0.43
52:SC:235:ASN:OD1	52:SC:235:ASN:N	2.52	0.43
53:SD:193:ASP:HB3	53:SD:194:PRO:HD3	2.01	0.43
56:SG:56:ASN:HA	56:SG:56:ASN:HD22	1.60	0.43
57:SH:57:ARG:NH2	57:SH:89:GLY:O	2.51	0.43
58:SI:194:GLU:HA	61:SL:10:TYR:CE2	2.54	0.43
66:SQ:49:TYR:HA	66:SQ:52:LEU:HD12	2.00	0.43
69:ST:62:ARG:CG	69:ST:62:ARG:HH21	2.31	0.43
49:S2:921:G:C5	72:SW:28:ARG:HD2	2.53	0.43
23:T:143:THR:OG1	23:T:146:LYS:O	2.18	0.43
25:V:48:ARG:HG2	25:V:51:ARG:HB2	2.00	0.43
26:W:20:ARG:HE	26:W:30:GLN:HG3	1.83	0.43
48:4:16:LYS:HG2	48:4:467:GLY:HA3	2.00	0.43
48:4:283:LYS:HA	48:4:284:LYS:HZ1	1.83	0.43
48:4:530:SER:OG	48:4:530:SER:O	2.31	0.43
48:4:713:ALA:HA	48:4:716:ARG:CZ	2.49	0.43
48:4:770:VAL:C	48:4:785:LYS:O	2.48	0.43
1:5:1079:C:N4	1:5:1080:C:C5	2.87	0.43
1:5:1176:C:O2'	7:D:279:ARG:CG	2.66	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
1:5:1320:U:C2	1:5:1321:G:C8	3.06	0.43
1:5:1398:A:H2'	1:5:1398:A:P	2.59	0.43
1:5:1581:G:C6	1:5:1610:C:C4	3.07	0.43
1:5:1617:G:C2	1:5:1618:G:C4	3.07	0.43
1:5:1806:G:N1	1:5:1807:C:C5	2.87	0.43
1:5:1811:G:C6	1:5:1812:C:C4	3.07	0.43
1:5:1899:G:C6	1:5:1900:C:C4	3.05	0.43
1:5:2012:A:H2'	1:5:2013:A:O4'	2.19	0.43
1:5:1956:A:C6	1:5:2027:U:O4	2.72	0.43
1:5:2261:G:O2'	1:5:2262:G:C8	2.72	0.43
1:5:2276:A:C4	1:5:2277:C:C6	3.07	0.43
1:5:2437:C:H5''	1:5:2782:U:C4	2.48	0.43
1:5:2464:C:O2'	1:5:2465:C:C5'	2.67	0.43
1:5:2452:G:C6	1:5:2467:U:C4	3.02	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
1:5:2650: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
1:5:2666:U:C4	1:5:2669:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:32:G:OP1	17:N:73:ARG:NH1	2.52	0.43
1:5:3694:U:H2'	1:5:3694:U:O2	2.17	0.43
1:5:3702:A:C6	1:5:3774:A:C6	3.07	0.43
1:5:3717:A:N1	1:5:3736:A:N1	2.66	0.43
1:5:371:A:H2'	1:5:372:A:C8	2.54	0.43
1:5:3861:A:C6	1:5:3862:A:C5	3.06	0.43
1:5:4099:G:C4	1:5:4100:C:C5	3.07	0.43
1:5:4140:C:O2	1:5:4140:C:H2'	2.18	0.43
1:5:4165:C:C2	1:5:4166:G:H8	2.30	0.43
1:5:3927:U:C4	1:5:4182:G:N2	2.87	0.43
1:5:4238:G:H2'	1:5:4239:A:O4'	2.19	0.43
1:5:4352:U:H2'	1:5:4353:U:H5'	2.00	0.43
1:5:4692:A:OP2	1:5:4693:C:O2'	2.36	0.43
1:5:4734:A:N3	1:5:4735:G:C8	2.87	0.43
1:5:4991:U:O2	1:5:4992:G:C8	2.72	0.43
1:5:2889:G:N2	1:5:5034:A:H8	2.17	0.43
1:5:55:G:N1	1:5:56:A:C5	2.87	0.43
1:5:687:U:C4	1:5:688:U:C4	3.07	0.43
1:5:6:C:O2	1:5:6:C:H2'	2.18	0.43
1:5:86:U:C2	1:5:87:A:N7	2.86	0.43
2:7:113:G:N2	2:7:114:U:C2	2.87	0.43
2:7:27:G:C2	2:7:28:C:C2	3.07	0.43
2:7:54:A:N3	2:7:55:A:H8	2.06	0.43
3:8:101:C:N3	3:8:102:G:C8	2.87	0.43
3:8:116:C:C2	3:8:117:C:C6	3.07	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
3:8:133:G:C2	3:8:134:G:C5	3.07	0.43
3:8:138:C:N3	3:8:139:G:N7	2.67	0.43
3:8:28:C:N3	3:8:29:G:C8	2.87	0.43
3:8:94:G:C4'	3:8:95:A:OP1	2.63	0.43
3:8:97:A:C6	3:8:98:C:N4	2.87	0.43
5:B:190:VAL:O	5:B:191:ALA:HB3	2.18	0.43
1:5:4625:C:O2'	5:B:53:MET:HE3	2.19	0.43
1:5:352:G:C6	6:C:196:MET:SD	3.12	0.43
6:C:266:THR:OG1	6:C:267:TRP:N	2.52	0.43
6:C:47:ASN:N	6:C:47:ASN:OD1	2.52	0.43
2:7:22:A:C6	7:D:266:TRP:CE2	3.07	0.43
7:D:43:LYS:HB3	7:D:46:THR:HG22	2.01	0.43
13:J:105:PHE:HE1	13:J:132:VAL:CB	2.25	0.43
13:J:147:ARG:HG2	13:J:147:ARG:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:128:PRO:HB2	15:L:133:ALA:HB3	1.99	0.43
21:R:131:VAL:CB	21:R:132:PHE:CE2	2.99	0.43
21:R:177:LEU:HB3	21:R:178:GLN:OE1	2.18	0.43
49:S2:1110:G:N3	49:S2:1111:U:C6	2.86	0.43
49:S2:1146:C:C2	49:S2:1147:C:C6	3.04	0.43
49:S2:1447:G:P	70:SU:87:ARG:HH12	2.42	0.43
49:S2:1466:G:C2	49:S2:1467:C:C6	3.06	0.43
49:S2:1524:G:C4	49:S2:1525:C:C6	3.07	0.43
49:S2:1608:U:N3	49:S2:1609:C:C5	2.86	0.43
49:S2:1850:A:H2'	49:S2:1851:A:H5''	2.00	0.43
49:S2:217:A:H1'	49:S2:309:G:H22	1.84	0.43
49:S2:312:G:O2'	49:S2:313:A:P	2.76	0.43
49:S2:350:C:O2'	49:S2:383:G:C2	2.72	0.43
49:S2:377:G:C5	49:S2:378:U:C5	3.06	0.43
49:S2:377:G:N2	49:S2:378:U:N1	2.67	0.43
49:S2:440:G:C2	49:S2:454:U:N3	2.87	0.43
49:S2:463:C:H2'	49:S2:465:A:N7	2.34	0.43
49:S2:474:G:C2	49:S2:475:C:N1	2.87	0.43
49:S2:638:C:C2'	49:S2:639:C:O5'	2.67	0.43
49:S2:31:U:O2	49:S2:644:G:C2	2.72	0.43
49:S2:836:G:C2'	49:S2:837:A:C5'	2.96	0.43
49:S2:837:A:H62	74:SY:47:MET:CB	2.31	0.43
22:S:13:VAL:HA	22:S:28:TYR:O	2.19	0.43
49:S2:916:A:C5	63:SN:73:ARG:HD3	2.54	0.43
49:S2:985:G:C2	49:S2:1002:U:C6	3.07	0.43
22:S:13:VAL:HG23	22:S:62:VAL:HB	2.00	0.43
53:SD:156:LEU:HD13	53:SD:157:MET:N	2.33	0.43
56:SG:145:PHE:CB	56:SG:147:LEU:HD13	2.48	0.43
55:SF:49:LEU:CD2	66:SQ:49:TYR:HB2	2.49	0.43
72:SW:41:MET:HG2	72:SW:129:PHE:CG	2.54	0.43
23:T:3:ASN:CB	23:T:9:ARG:NH1	2.81	0.43
25:V:42:VAL:HB	25:V:45:ILE:HD12	2.01	0.43
1:5:2580:U:H1'	29:Z:38:TYR:OH	2.19	0.43
29:Z:60:LYS:CE	29:Z:60:LYS:HA	2.49	0.43
48:4:311:GLU:H	48:4:311:GLU:HG2	1.49	0.42
48:4:126:LEU:HD12	48:4:353:MET:HE1	2.01	0.42
48:4:402:VAL:HG22	48:4:403:PRO:HG2	2.00	0.42
48:4:447:ILE:HG21	48:4:472:LEU:HD22	2.00	0.42
48:4:448:GLN:HG3	48:4:449:ARG:HB2	2.01	0.42
48:4:521:VAL:HG21	73:SX:50:ILE:HD13	1.99	0.42
48:4:742:GLU:OE2	48:4:789:PRO:CB	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:45:ILE:CD1	48:4:78:PHE:HD1	2.22	0.42
1:5:1086:C:C2'	1:5:1086:C:O2	2.67	0.42
1:5:1205:G:C5	1:5:1206:C:C5	3.07	0.42
1:5:1247:U:C4	1:5:1248:C:C4	3.07	0.42
1:5:1303:A:N3	1:5:1303:A:H2'	2.33	0.42
1:5:1349:G:C5	1:5:1350:C:C5	3.06	0.42
1:5:1355:G:C2'	1:5:1356:U:O5'	2.67	0.42
1:5:1355:G:N1	1:5:1385:G:N3	2.67	0.42
1:5:1421:G:C6	1:5:1465:G:C4	3.07	0.42
1:5:1422:G:C4	1:5:1423:U:C5	3.06	0.42
1:5:1438:U:O4	1:5:1444:G:O6	2.35	0.42
1:5:1483:C:H2'	1:5:1483:C:OP2	2.18	0.42
1:5:1384:C:O2'	1:5:1505:C:OP1	2.33	0.42
1:5:1554:A:N6	1:5:1573:G:H1'	2.34	0.42
1:5:1617:G:C6	1:5:1618:G:C6	3.07	0.42
1:5:1667:G:N3	1:5:2283:G:C6	2.87	0.42
1:5:1750:G:N3	1:5:1751:A:C8	2.87	0.42
1:5:1829:G:C2	1:5:1830:G:C5	3.07	0.42
1:5:1840:G:O2'	1:5:1842:G:O5'	2.37	0.42
1:5:1930:U:C4	18:O:48:TYR:CD2	3.07	0.42
1:5:1945:G:H2'	1:5:1946:G:C5'	2.45	0.42
1:5:2044:U:C2'	1:5:2044:U:O2	2.62	0.42
1:5:2124:G:N3	1:5:2124:G:H2'	2.34	0.42
1:5:2301:G:C5	1:5:2302:C:C5	3.06	0.42
1:5:2315:G:C2	1:5:2316:G:C4	3.07	0.42
1:5:2405:G:H3'	1:5:2405:G:C8	2.54	0.42
1:5:2505:C:H4'	1:5:2506:G:C5'	2.48	0.42
1:5:2538:U:C2	1:5:2539:C:C5	3.07	0.42
1:5:2645:G:C2	1:5:2646:C:C2	3.07	0.42
1:5:268:G:C2	1:5:269:G:C8	3.07	0.42
1:5:2820:C:C2'	1:5:2821:U:H5'	2.49	0.42
1:5:301:G:C4	1:5:302:C:C5	3.08	0.42
1:5:3621:A:C6	1:5:3622:C:C5	3.07	0.42
1:5:3630:A:N3	1:5:3631:U:C6	2.87	0.42
1:5:3663:A:C4	1:5:3663:A:H5'	2.54	0.42
1:5:3737:A:H2'	1:5:3738:G:C1'	2.48	0.42
1:5:3775:A:H2'	1:5:3776:G:O4'	2.19	0.42
1:5:3795:A:C4	1:5:3796:U:C6	3.07	0.42
1:5:3806:G:C2	1:5:3807:A:C8	3.07	0.42
1:5:3834:C:N3	1:5:3835:C:C5	2.87	0.42
1:5:3873:G:C2	1:5:3883:U:N3	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4085:A:N6	10:G:62:ARG:NH2	2.67	0.42
1:5:4101:C:N3	1:5:4102:C:C6	2.87	0.42
1:5:4193:C:H3'	1:5:4194:U:O2	2.19	0.42
1:5:4316:G:C6	1:5:4317:A:N7	2.86	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
1:5:4580:U:N3	1:5:4723:A:C2	2.87	0.42
1:5:4746:C:C4	1:5:4747:C:C4	3.07	0.42
1:5:4892:A:C2	1:5:4893:A:H1'	2.54	0.42
1:5:489:C:N4	1:5:490:C:C4	2.87	0.42
1:5:4910:G:N7	18:O:156:LEU:HD22	2.34	0.42
1:5:681:G:C2	1:5:682:G:H1'	2.54	0.42
1:5:719:C:O2	1:5:720:G:C8	2.72	0.42
1:5:727:C:C2'	1:5:728:U:OP1	2.67	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
2:7:31:G:C2	2:7:47:G:C2	3.07	0.42
2:7:50:A:H2'	2:7:50:A:N3	2.34	0.42
2:7:73:U:O2	2:7:102:U:C5	2.72	0.42
3:8:119:C:O2	3:8:119:C:H2'	2.19	0.42
3:8:121:G:H2'	3:8:122:G:C5'	2.49	0.42
3:8:149:G:C2	3:8:151:G:N7	2.87	0.42
7:D:82:GLU:OE2	7:D:108:ARG:NH1	2.48	0.42
7:D:109:LEU:HD21	7:D:142:PHE:CE1	2.54	0.42
7:D:250:ASN:ND2	7:D:252:VAL:HG12	2.20	0.42
14:K:40:LYS:HD2	14:K:41:LYS:HB2	2.01	0.42
16:M:81:ASP:OD1	16:M:81:ASP:C	2.57	0.42
17:N:120:TRP:CZ2	17:N:123:GLU:HB3	2.54	0.42
49:S2:115:U:H2'	49:S2:116:U:H6	1.84	0.42
49:S2:122:G:N1	49:S2:123:G:C4	2.87	0.42
49:S2:154:U:H2'	56:SG:4:ASN:HD21	1.84	0.42
49:S2:166:A:N1	49:S2:167:G:C5	2.86	0.42
49:S2:1777:G:H2'	49:S2:1778:C:O4'	2.19	0.42
49:S2:1718:G:C6	49:S2:1814:G:C6	3.07	0.42
49:S2:1693:G:N2	49:S2:1834:A:H8	2.16	0.42
49:S2:185:G:N3	49:S2:186:C:C5	2.87	0.42
49:S2:309:G:C6	49:S2:310:C:C4	3.07	0.42
49:S2:371:A:C4	49:S2:372:U:C5	3.07	0.42
49:S2:494:C:C2'	49:S2:495:U:O5'	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:688:U:O4'	49:S2:688:U:O2	2.36	0.42
49:S2:881:G:C6	49:S2:882:U:C5	3.07	0.42
51:SB:133:TYR:CZ	51:SB:181:LEU:HD12	2.51	0.42
51:SB:68:GLU:OE2	51:SB:68:GLU:HA	2.19	0.42
1:5:5025:C:P	58:SI:164:GLU:OE2	2.73	0.42
49:S2:428:U:C4	59:SJ:7:TRP:CZ2	3.05	0.42
63:SN:105:ASN:OD1	63:SN:105:ASN:N	2.52	0.42
23:T:141:VAL:HG12	23:T:142:ARG:N	2.34	0.42
3:8:73:U:OP1	28:Y:75:ARG:HD2	2.19	0.42
48:4:19:ILE:CG2	48:4:20:ARG:N	2.81	0.42
48:4:22:MET:O	48:4:103:ILE:HG13	2.18	0.42
48:4:713:ALA:O	48:4:716:ARG:CA	2.67	0.42
48:4:751:CYS:HB2	48:4:755:VAL:HB	0.47	0.42
48:4:76:SER:C	48:4:77:LEU:HD12	2.40	0.42
48:4:791:ASN:HA	48:4:794:PHE:HE1	1.84	0.42
48:4:505:VAL:HG22	48:4:797:THR:HG21	2.01	0.42
48:4:834:VAL:O	48:4:838:THR:HG23	2.18	0.42
1:5:1067:G:C5	1:5:1068:G:C8	3.07	0.42
1:5:1184:A:N1	1:5:1185:G:C5	2.87	0.42
1:5:1258:G:N3	1:5:1259:G:C8	2.87	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	2.55	0.42
1:5:1556:C:H2'	1:5:1557:C:C6	2.51	0.42
1:5:165:A:C4	1:5:166:C:C5	3.07	0.42
1:5:1751:A:C2	1:5:1752:G:C1'	3.02	0.42
1:5:2316:G:C2	1:5:2317:C:N3	2.87	0.42
1:5:2316:G:H2'	1:5:2317:C:H6	1.83	0.42
1:5:2290:C:H1'	1:5:2321:G:H1'	2.01	0.42
1:5:2322:G:C2	1:5:2323:C:C2	3.07	0.42
1:5:2546:G:H4'	1:5:2547:G:OP1	2.18	0.42
1:5:2560:C:N3	1:5:2561:C:C6	2.87	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
1:5:2606: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
1:5:269:G:C2'	1:5:269:G:N3	2.82	0.42
1:5:298:G:C4	1:5:299:C:C6	3.07	0.42
1:5:301:G:C2	1:5:302:C:C2	3.07	0.42
1:5:3593:C:H2'	1:5:3595:U:C5	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3605:C:C4	1:5:3606:U:C5	3.07	0.42
1:5:3673:C:HO2'	1:5:3674:G:P	2.43	0.42
1:5:3698:G:C4	1:5:3699:C:C5	3.08	0.42
1:5:3804:G:O2'	1:5:3832:U:H1'	2.19	0.42
1:5:3841:C:C2	1:5:3842:C:C5	3.08	0.42
1:5:38:A:C2	1:5:41:C:C4	3.07	0.42
1:5:4283:G:N3	1:5:4284:C:H6	2.04	0.42
1:5:4355:G:N2	1:5:4356:G:C8	2.87	0.42
1:5:1641:G:C6	1:5:4386:C:O4'	2.72	0.42
1:5:4502:C:C4	1:5:4503:A:N7	2.87	0.42
1:5:4629:U:H2'	1:5:4630:G:O5'	2.19	0.42
1:5:4487:A:O2'	1:5:4708:A:N1	2.49	0.42
1:5:4719:G:H4'	1:5:4720:C:OP1	2.18	0.42
1:5:4723:A:C2	1:5:4724:A:N7	2.88	0.42
1:5:4744:A:C2	1:5:4745:G:C8	3.07	0.42
1:5:4862:G:C2	1:5:4863:G:N9	2.87	0.42
1:5:4904:G:C2	1:5:4905:C:C6	3.06	0.42
1:5:4956:A:N6	1:5:4957:C:C5	2.87	0.42
1:5:497:G:N1	1:5:657:C:N4	2.67	0.42
1:5:4982:A:N6	1:5:4983:C:C4	2.87	0.42
1:5:500:G:H5''	1:5:501:C:C5	2.53	0.42
1:5:502:C:HO2'	1:5:503:C:H6	1.64	0.42
1:5:52:G:C8	1:5:52:G:C3'	3.02	0.42
1:5:685:C:H2'	1:5:685:C:O2	2.19	0.42
1:5:717:U:C4	1:5:718:C:C5	3.07	0.42
1:5:74:G:H5'	15:L:59:VAL:CG1	2.49	0.42
1:5:919:C:C5	1:5:920:C:C5	3.07	0.42
1:5:919:C:O2'	1:5:920:C:H5'	2.18	0.42
3:8:82:A:H3'	3:8:82:A:C4	2.54	0.42
1:5:218:A:C8	6:C:181:LYS:HG3	2.54	0.42
7:D:160:PHE:CE2	7:D:179:ARG:HB2	2.54	0.42
7:D:95:TYR:HE2	7:D:198:HIS:C	2.21	0.42
8:E:277:ILE:CD1	8:E:282:LEU:HD13	2.48	0.42
11:H:41:ILE:CD1	11:H:69:THR:HB	2.48	0.42
14:K:142:ASN:HB2	14:K:148:PRO:HA	1.92	0.42
14:K:52:ASP:C	14:K:53:TRP:CD1	2.92	0.42
17:N:156:HIS:O	17:N:159:ARG:HG3	2.19	0.42
1:5:1558:A:H1'	21:R:129:GLY:HA3	2.01	0.42
22:S:173:ASN:OD1	22:S:174:THR:N	2.53	0.42
49:S2:1107:G:C2	49:S2:1108:G:C8	3.07	0.42
49:S2:1123:C:C2	49:S2:1124:C:H6	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:113:G:N2	49:S2:292:A:H1'	2.33	0.42
49:S2:1231:C:C4'	49:S2:1665:G:C2	3.02	0.42
49:S2:1320:G:H2'	49:S2:1321:G:O4'	2.19	0.42
49:S2:1434:C:O4'	49:S2:1434:C:P	2.77	0.42
49:S2:1502:C:C4	49:S2:1503:C:C5	3.07	0.42
49:S2:1528:G:C2	49:S2:1529:C:C2	3.07	0.42
49:S2:1785:C:O2	49:S2:1786:U:C5	2.71	0.42
49:S2:1798:C:H2'	49:S2:1799:G:O4'	2.18	0.42
49:S2:315:C:C2	49:S2:316:G:C8	3.07	0.42
49:S2:862:A:C8	72:SW:107:SER:CA	3.00	0.42
22:S:28:TYR:CD2	23:T:151:LEU:HD11	2.53	0.42
53:SD:35:SER:HB3	53:SD:91:VAL:HG21	1.99	0.42
55:SF:103:LEU:HD23	55:SF:178:ILE:HD13	2.01	0.42
56:SG:191:ARG:HB3	56:SG:191:ARG:HH11	1.84	0.42
59:SJ:136:ARG:CD	59:SJ:160:SER:HA	2.43	0.42
61:SL:92:TYR:O	61:SL:104:LYS:HA	2.20	0.42
64:SO:103:ASN:N	64:SO:103:ASN:OD1	2.52	0.42
67:SR:104:GLU:OE1	67:SR:107:LYS:HD2	2.19	0.42
69:ST:118:ASP:N	69:ST:118:ASP:OD1	2.53	0.42
24:U:23:LEU:HA	24:U:110:TYR:O	2.18	0.42
28:Y:126:ARG:HG2	28:Y:126:ARG:HH11	1.84	0.42
48:4:306:ASN:O	48:4:307:PHE:HB2	2.19	0.42
48:4:340:MET:CA	48:4:340:MET:CE	2.95	0.42
48:4:451:ILE:HG22	48:4:460:PRO:HA	2.00	0.42
48:4:10:ARG:CZ	48:4:465:PRO:HD2	2.40	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
1:5:957:G:C5'	1:5:1284:G:C2	2.96	0.42
1:5:1404:G:C2	1:5:1405:C:C2	3.07	0.42
1:5:1421:G:C2	1:5:1422:G:C4	3.07	0.42
1:5:1540:C:N3	1:5:1541:C:C5	2.87	0.42
1:5:1646:A:C6	1:5:1647:U:C4	3.07	0.42
1:5:1750:G:N2	1:5:1751:A:N9	2.67	0.42
1:5:1808:C:C4	1:5:1809:C:C5	3.07	0.42
1:5:1829:G:N1	1:5:1830:G:C5	2.88	0.42
1:5:1721:G:N1	1:5:1840:G:C8	2.82	0.42
1:5:1886:G:N1	1:5:1894:C:C4	2.87	0.42
1:5:1918:U:O2	1:5:1920:C:C4	2.73	0.42
1:5:1971:C:N3	1:5:1972:G:C5	2.87	0.42
1:5:199:G:C2	1:5:201:C:C4	3.07	0.42
1:5:1274:A:H5'	1:5:2123:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:227:A:N6	1:5:241:G:H2'	2.34	0.42
1:5:2288:G:H5'	1:5:2289:C:OP1	2.19	0.42
1:5:2347:A:O2'	1:5:2348:G:C8	2.59	0.42
1:5:229:G:C2	1:5:240:G:C2	3.07	0.42
1:5:247:G:C6	1:5:248:C:C5	3.06	0.42
1:5:2657:G:C3'	1:5:2658:G:H8	2.31	0.42
1:5:2674:A:H4'	1:5:2675:G:OP2	2.18	0.42
1:5:2678:A:C2	1:5:2679:G:C8	3.07	0.42
1:5:2682:G:C4	1:5:2683:C:C5	3.07	0.42
1:5:2703:G:C2	1:5:2704:C:C2	3.07	0.42
1:5:2713:C:C2	1:5:2714:G:N7	2.87	0.42
1:5:2743:A:C4	1:5:2744:A:N7	2.85	0.42
1:5:3723:A:N1	1:5:3724:A:C5	2.87	0.42
1:5:3759:A:C8	1:5:3765:G:N2	2.87	0.42
1:5:3832:U:H2'	1:5:3833:C:C6	2.53	0.42
1:5:3871:A:C5	1:5:3885:G:N2	2.88	0.42
1:5:4154:G:C2	1:5:4155:C:C2	3.07	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
1:5:4578:G:C2	1:5:4579:U: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
1:5:4742:G:N1	1:5:4743:G:C5	2.88	0.42
1:5:680:G:C6	1:5:681:G:N7	2.88	0.42
1:5:686:A:H3'	1:5:687:U:H5'	2.00	0.42
1:5:731:G:O6	1:5:732:A:C4	2.72	0.42
1:5:736:C:O5'	1:5:737:C:OP2	2.37	0.42
1:5:744:G:N1	1:5:921:C:C2	2.87	0.42
2:7:119:U:O4	7:D:258:LYS:CE	2.68	0.42
2:7:60:G:C6	2:7:61:G:C8	3.07	0.42
1:5:3899:G:H5''	5:B:257:TRP:O	2.19	0.42
5:B:89:ILE:CG2	5:B:197:ALA:HB1	2.50	0.42
11:H:54:ARG:HG3	11:H:54:ARG:HH11	1.84	0.42
12:I:12:CYS:SG	12:I:59:GLN:HG2	2.59	0.42
12:I:9:TYR:CD1	12:I:9:TYR:N	2.88	0.42
15:L:103:ARG:CZ	15:L:103:ARG:HB3	2.49	0.42
16:M:3:PHE:HB2	16:M:6:PHE:CE1	2.54	0.42
17:N:113:LEU:CD2	17:N:136:ASP:OD1	2.66	0.42
18:O:15:LEU:HA	18:O:42:ASN:O	2.19	0.42
21:R:107:ARG:HH11	21:R:107:ARG:HB3	1.84	0.42
49:S2:1042:A:N6	49:S2:1043:G:C5	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1110:G:N3	49:S2:1110:G:H2'	2.34	0.42
49:S2:1315:U:C4	49:S2:1316:C:C5	2.90	0.42
49:S2:1323:U:H2'	49:S2:1324:G:C8	2.54	0.42
49:S2:1335:G:C2	49:S2:1336:C:C2	3.06	0.42
49:S2:1363:C:C2	49:S2:1376:A:C2	3.07	0.42
49:S2:1450:G:C2	49:S2:1451:G:H1'	2.54	0.42
49:S2:149:A:O2'	49:S2:150:A:O4'	2.36	0.42
49:S2:1545:A:C6	49:S2:1588:A:C2	3.00	0.42
49:S2:1606:G:C6	49:S2:1632:G:N1	2.87	0.42
49:S2:1610:G:N2	49:S2:1611:G:C4	2.88	0.42
49:S2:1668:U:O2	49:S2:1669:G:C8	2.72	0.42
49:S2:1728:U:H5'	49:S2:1729:U:OP2	2.20	0.42
49:S2:178:C:O2	49:S2:178:C:H2'	2.19	0.42
49:S2:1850:A:O2'	49:S2:1851:A:C4'	2.67	0.42
49:S2:30:C:O2'	49:S2:31:U:H5'	2.19	0.42
49:S2:429:C:C2'	49:S2:429:C:O2	2.64	0.42
49:S2:431:G:C5	49:S2:432:G:N7	2.86	0.42
49:S2:441:C:H6	49:S2:448:A:H2	1.65	0.42
49:S2:513:G:C6	49:S2:514:U:C4	3.08	0.42
49:S2:536:A:N6	49:S2:537:C:C6	2.87	0.42
49:S2:604:A:C6	49:S2:605:A:N6	2.87	0.42
49:S2:832:G:C4	49:S2:833:C:C6	3.07	0.42
53:SD:106:ARG:HG2	53:SD:175:VAL:HG23	2.00	0.42
49:S2:318:A:N6	56:SG:186:GLN:OE1	2.52	0.42
58:SI:197:PHE:HZ	61:SL:5:GLN:HG3	1.84	0.42
65:SP:13:ARG:O	65:SP:15:PHE:N	2.52	0.42
68:SS:138:THR:HA	68:SS:141:ARG:HH21	1.84	0.42
52:SC:252:THR:HB	72:SW:99:PHE:CE2	2.54	0.42
73:SX:93:PHE:CE1	73:SX:133:LEU:HD22	2.54	0.42
23:T:121:GLU:OE2	23:T:122:LYS:HG3	2.19	0.42
1:5:4301:U:C4'	23:T:54:HIS:HD2	2.27	0.42
25:V:85:ARG:NE	25:V:99:GLU:O	2.50	0.42
1:5:3615:G:H1'	26:W:44:ARG:HD3	2.00	0.42
48:4:147:ILE:HD11	48:4:193:GLY:CA	2.49	0.42
48:4:154:VAL:HG13	48:4:353:MET:HE3	2.02	0.42
48:4:433:ASN:O	48:4:435:THR:HG23	2.20	0.42
48:4:4:PHE:CA	48:4:46:ILE:HD11	2.49	0.42
48:4:517:LEU:O	48:4:521:VAL:HG23	2.19	0.42
48:4:568:ILE:HG22	48:4:569:PRO:N	2.34	0.42
48:4:641:TRP:CH2	48:4:701:ARG:NH1	2.87	0.42
48:4:742:GLU:N	48:4:820:LEU:HG	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:740:LEU:CD1	48:4:820:LEU:HD12	2.41	0.42
1:5:1260:G:C6	1:5:1261:G:C5	3.08	0.42
1:5:1272:C:O2'	1:5:1273:G:C1'	2.67	0.42
1:5:1330:A:C2	1:5:1331:C:C6	3.07	0.42
1:5:1358:G:H2'	1:5:1359:G:C1'	2.44	0.42
1:5:1396:G:C3'	1:5:1396:G:C8	3.02	0.42
1:5:1421:G:N1	1:5:1422:G:N7	2.68	0.42
1:5:1460:C:H5''	20:Q:144:LYS:HB2	2.02	0.42
1:5:1557:C:C2	1:5:1558:A:C8	3.08	0.42
1:5:1570:G:C2	1:5:1571:G:H1'	2.54	0.42
1:5:177:G:C2	1:5:178:C:C2	3.08	0.42
1:5:1866:U:C5	1:5:4405:G:H1'	2.54	0.42
1:5:1921:C:H2'	16:M:17:PHE:CE2	2.55	0.42
1:5:1967:A:N1	1:5:1968:G:C6	2.87	0.42
1:5:2081:C:O2'	1:5:2082:G:C5'	2.67	0.42
1:5:212:A:C2	1:5:213:G:C6	3.08	0.42
1:5:2336:G:C4	1:5:2337:C:C5	3.07	0.42
1:5:2393:C:H1'	1:5:2398:U:C2	2.55	0.42
1:5:2442:G:C2'	1:5:2443:G:H5''	2.49	0.42
1:5:2448:G:O2'	1:5:2449:A:C8	2.63	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
1:5:2529: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
1:5:2549:G:N2	1:5:2550:G:H1'	2.34	0.42
1:5:2752:G:H8	1:5:2752:G:C5'	2.32	0.42
1:5:2752:G:H3'	1:5:2753:G:H8	1.85	0.42
1:5:274:C:C2'	1:5:275:C:O5'	2.67	0.42
1:5:2574:G:O6	1:5:2762:G:O6	2.37	0.42
1:5:2791:C:N3	1:5:2792:C:C5	2.87	0.42
1:5:289:C:N3	1:5:290:U:C4	2.85	0.42
1:5:3755:G:N1	1:5:3756:A:C8	2.87	0.42
1:5:3812:C:P	1:5:3813:A:HO2'	2.39	0.42
1:5:3845:A:C6	1:5:3846:C:C4	3.07	0.42
1:5:3877:A:C2	1:5:4444:C:H1'	2.54	0.42
1:5:3946:G:N1	1:5:3947:A:C5	2.87	0.42
1:5:4172:A:C2	1:5:4173:G:C5	3.08	0.42
1:5:4176:C:H2'	1:5:4177:C:H6	1.84	0.42
1:5:4200:G:C6	1:5:4201:G:C5	3.07	0.42
1:5:4301:U:P	23:T:87:LYS:HZ3	2.43	0.42
1:5:4322:G:N2	1:5:4326:G:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4342:C:O2	1:5:4342:C:H2'	2.18	0.42
1:5:446:C:N3	1:5:447:C:C6	2.87	0.42
1:5:4583:C:C4	1:5:4718:G:C2	3.07	0.42
1:5:4593:C:C2	1:5:4594:U:C6	3.07	0.42
1:5:4693:C:H4'	1:5:4694:G:OP1	2.16	0.42
1:5:4730:C:H1'	1:5:4731:G:C3'	2.50	0.42
1:5:4898:G:C2	1:5:4899:G:N7	2.87	0.42
1:5:4898:G:N2	1:5:4899:G:C4	2.87	0.42
1:5:4898:G:N3	1:5:4899:G:C8	2.87	0.42
1:5:4986:G:C2'	1:5:4987:C:O5'	2.67	0.42
1:5:5035:U:N3	1:5:5036:C:C6	2.87	0.42
1:5:506:C:C2	1:5:507:G:N7	2.87	0.42
1:5:83:C:P	1:5:84:A:HO2'	2.38	0.42
1:5:910:G:C2	1:5:911:U:C6	3.07	0.42
1:5:975:C:C3'	1:5:976:G:O4'	2.67	0.42
1:5:98:A:H1'	1:5:292:G:C6	2.54	0.42
2:7:27:G:C5	2:7:28:C:C5	3.08	0.42
2:7:44:C:C2	2:7:45:U:C6	3.08	0.42
2:7:66:G:H2'	2:7:67:C:C6	2.54	0.42
1:5:418:A:N6	3:8:16:G:O2'	2.53	0.42
3:8:49:G:H2'	3:8:50:C:O4'	2.20	0.42
3:8:53:G:C4	3:8:54:C:C5	3.08	0.42
6:C:48:ASN:O	6:C:49:ARG:CB	2.66	0.42
14:K:54:LYS:HB2	14:K:54:LYS:HE3	1.86	0.42
14:K:73:VAL:HG12	14:K:74:VAL:N	2.35	0.42
15:L:125:ILE:HD12	15:L:125:ILE:N	2.35	0.42
49:S2:104:A:H5'	49:S2:105:U:OP2	2.18	0.42
49:S2:1093:A:C4	49:S2:1094:C:C6	3.07	0.42
49:S2:1110:G:N2	49:S2:1111:U:C2	2.88	0.42
49:S2:1204:A:C2	49:S2:1205:C:C2	3.07	0.42
49:S2:1295:A:N7	49:S2:1296:U:C6	2.88	0.42
49:S2:1410:C:C4	49:S2:1411:G:C6	3.07	0.42
49:S2:1495:G:N7	49:S2:1496:U:C5	2.87	0.42
49:S2:1327:G:C2	49:S2:1503:C:C2	3.07	0.42
49:S2:1545:A:N3	49:S2:1546:G:C5	2.86	0.42
49:S2:1576:G:C6	49:S2:1577:G:N7	2.87	0.42
49:S2:62:G:O2'	49:S2:172:U:O2	2.25	0.42
49:S2:1817:G:H2'	49:S2:1818:A:C8	2.54	0.42
49:S2:27:A:H2	49:S2:28:U:H1'	1.81	0.42
49:S2:298:G:N1	49:S2:299:A:N7	2.67	0.42
49:S2:358:C:C2	49:S2:405:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:443:U:N3	49:S2:444:G:N9	2.67	0.42
49:S2:507:G:H4'	49:S2:509:G:N7	2.33	0.42
49:S2:589:G:C5	49:S2:591:U:C6	3.08	0.42
49:S2:752:G:N2	49:S2:791:C:H1'	2.34	0.42
49:S2:885:U:H2'	49:S2:886:A:H8	1.83	0.42
49:S2:910:G:C2	49:S2:911:C:N1	2.88	0.42
49:S2:924:G:C2	49:S2:1019:C:C2	3.07	0.42
49:S2:941:C:H2'	49:S2:942:G:H8	1.84	0.42
22:S:34:ALA:HB1	22:S:35:PRO:CD	2.49	0.42
22:S:84:TYR:HD2	22:S:113:MET:HE3	1.85	0.42
52:SC:60:TRP:CZ2	52:SC:92:GLU:CB	3.02	0.42
53:SD:106:ARG:HH21	53:SD:110:LEU:HD13	1.84	0.42
64:SO:52:THR:OG1	64:SO:53:ILE:N	2.52	0.42
66:SQ:85:ARG:HD3	66:SQ:119:LEU:CD2	2.49	0.42
55:SF:15:PRO:HB3	66:SQ:59:GLY:HA2	2.02	0.42
69:ST:63:HIS:CE1	69:ST:78:ILE:HG12	2.54	0.42
73:SX:61:GLN:C	73:SX:61:GLN:NE2	2.73	0.42
75:SZ:91:LEU:HB2	75:SZ:97:ILE:HD11	2.01	0.42
9:F:88:GLU:CG	23:T:136:ARG:HG2	2.49	0.42
7:D:44:TYR:HA	23:T:33:ILE:HB	2.00	0.42
23:T:48:VAL:HG21	23:T:94:GLU:HG2	2.00	0.42
26:W:59:HIS:CD2	26:W:59:HIS:N	2.87	0.42
28:Y:5:PRO:O	28:Y:6:PHE:CB	2.67	0.42
29:Z:50:PRO:HB2	29:Z:122:TYR:HE2	1.85	0.42
48:4:24:VAL:CG2	48:4:32:LYS:CG	2.97	0.42
48:4:300:VAL:HG23	48:4:301:PHE:CD1	2.55	0.42
48:4:563:GLU:OE1	48:4:564:ASP:OD1	2.38	0.42
48:4:597:ASN:O	48:4:598:LYS:CB	2.59	0.42
48:4:580:ARG:H	48:4:741:MET:HG2	1.84	0.42
48:4:766:LYS:HD2	48:4:766:LYS:N	2.34	0.42
1:5:1194:G:N1	1:5:1195:G:C5	2.87	0.42
1:5:1211:G:N3	1:5:1212:G:C8	2.88	0.42
1:5:1346:C:N3	1:5:1347:G:N7	2.67	0.42
1:5:1376:C:H2'	1:5:1378:C:C6	2.55	0.42
1:5:1545:G:C4	1:5:1546:C:C5	3.07	0.42
1:5:1672:U:O2	1:5:1673:U:C4	2.71	0.42
1:5:1321:G:C1'	1:5:1891:A:N6	2.83	0.42
1:5:1968:G:N3	1:5:1969:G:C8	2.87	0.42
1:5:212:A:C4	1:5:213:G:N7	2.86	0.42
1:5:2325:C:C4	1:5:2326:G:N7	2.84	0.42
1:5:2486:G:C4	1:5:2487:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2566:G:C2	1:5:2567:G:C5	3.07	0.42
1:5:2630:U:O2	1:5:2632:U:H1'	2.19	0.42
1:5:273:U:H2'	1:5:274:C:O4'	2.20	0.42
1:5:2782:U:O2	1:5:2782:U:H2'	2.17	0.42
1:5:28:C:C2'	1:5:28:C:O2	2.60	0.42
1:5:3610:A:C2	1:5:3611:A:C5	3.08	0.42
1:5:3744:G:H2'	1:5:3745:U:C6	2.54	0.42
1:5:3753:G:C2	1:5:3754:G:N9	2.88	0.42
1:5:405:U:H5'	1:5:406:C:OP2	2.18	0.42
1:5:4139:G:C2	1:5:4140:C:C2	3.06	0.42
1:5:4139:G:N2	1:5:4140:C:C2	2.88	0.42
1:5:4189:U:C2	1:5:4190:U:C6	3.07	0.42
1:5:38:A:N1	1:5:41:C:C5	2.88	0.42
1:5:423:G:C2'	19:P:118:GLN:HE21	2.32	0.42
1:5:4352:U:C2'	1:5:4353:U:H5'	2.49	0.42
1:5:4489:G:C4	1:5:4490:C:C5	3.08	0.42
1:5:4503:A:C4	1:5:4504:C:C5	3.07	0.42
1:5:4453:C:O2	1:5:4529:G:C2	2.73	0.42
1:5:4725:C:H2'	1:5:4725:C:O2	2.19	0.42
1:5:4761:G:C2'	1:5:4762:A:O4'	2.60	0.42
1:5:4871:C:H3'	16:M:91:TRP:NE1	2.34	0.42
1:5:4898:G:N2	1:5:4923:C:C2	2.87	0.42
1:5:4998:G:C4	1:5:4999:G:C8	3.07	0.42
1:5:62:A:O2'	1:5:63:G:H5'	2.19	0.42
1:5:982:U:H2'	1:5:983:C:C5	2.46	0.42
2:7:19:C:C2	2:7:60:G:N2	2.87	0.42
3:8:49:G:C6	3:8:50:C:C4	3.08	0.42
1:5:1633:G:N1	4:A:207:VAL:HG11	2.35	0.42
4:A:227:ARG:CZ	4:A:227:ARG:HB2	2.50	0.42
5:B:285:TYR:CE2	5:B:334:LYS:HB2	2.54	0.42
5:B:6:PHE:HB3	25:V:49:LEU:HD11	2.01	0.42
16:M:29:ASP:C	16:M:29:ASP:OD1	2.58	0.42
18:O:178:ARG:HG3	18:O:178:ARG:HH11	1.83	0.42
1:5:2667:C:O4'	21:R:96:MET:HG2	2.20	0.42
49:S2:1110:G:C2	49:S2:1111:U:C6	3.07	0.42
49:S2:113:G:O2'	49:S2:114:G:OP1	2.29	0.42
49:S2:1371:U:C2'	49:S2:1371:U:O2	2.65	0.42
49:S2:1352:G:H1'	49:S2:1378:A:C2	2.54	0.42
49:S2:1457:U:H2'	49:S2:1458:G:C8	2.55	0.42
49:S2:1551:U:H5'	49:S2:1558:C:H1'	2.01	0.42
49:S2:158:A:N6	49:S2:466:G:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1753:C:N3	49:S2:1754:G:N7	2.68	0.42
49:S2:189:U:C5	49:S2:190:G:C8	3.08	0.42
49:S2:219:U:C4	49:S2:220:U:C5	3.08	0.42
49:S2:387:C:O2	49:S2:388:U:H6	1.94	0.42
49:S2:435:A:H8	49:S2:435:A:OP2	2.02	0.42
49:S2:449:A:N6	49:S2:452:G:C2	2.87	0.42
49:S2:511:U:H2'	49:S2:512:A:H8	1.84	0.42
49:S2:610:G:N2	49:S2:611:G:H1'	2.35	0.42
49:S2:25:A:N6	49:S2:648:A:H61	2.04	0.42
49:S2:694:G:N1	49:S2:695:C:C4	2.88	0.42
49:S2:841:G:N1	49:S2:842:C:C4	2.88	0.42
49:S2:860:G:H2'	49:S2:861:A:O4'	2.20	0.42
49:S2:912:C:H3'	49:S2:913:A:H5''	2.02	0.42
50:SA:108:PHE:HB3	50:SA:140:VAL:HG21	2.01	0.42
52:SC:108:LYS:HB3	52:SC:233:LEU:HD23	2.01	0.42
53:SD:53:THR:O	53:SD:55:THR:N	2.53	0.42
54:SE:95:THR:HB	54:SE:97:GLU:HG3	2.01	0.42
55:SF:38:TYR:CD2	55:SF:143:PRO:HB2	2.54	0.42
49:S2:925:G:OP1	63:SN:121:ARG:NH1	2.53	0.42
64:SO:137:SER:C	64:SO:138:ASP:CG	2.78	0.42
66:SQ:71:ARG:HG3	66:SQ:73:LYS:HE2	2.00	0.42
73:SX:34:THR:OG1	73:SX:35:ALA:N	2.51	0.42
49:S2:1160:U:P	73:SX:4:CYS:O	2.78	0.42
29:Z:4:PHE:N	29:Z:4:PHE:HD1	2.18	0.42
48:4:35:LEU:HD13	48:4:156:MET:CE	2.50	0.42
48:4:554:LEU:O	48:4:558:LEU:HG	2.19	0.42
48:4:744:ILE:CD1	48:4:815:ASP:CB	2.96	0.42
1:5:101:A:H2'	1:5:101:A:N3	2.33	0.42
1:5:1075:G:N2	1:5:1076:C:C2	2.88	0.42
1:5:1084:C:N3	1:5:1085:C:C6	2.87	0.42
1:5:1085:C:N4	1:5:1086:C:C5	2.88	0.42
1:5:1195:G:H2'	1:5:1196:G:H8	1.84	0.42
1:5:444:G:N2	1:5:1304:C:C2	2.87	0.42
1:5:1355:G:H2'	1:5:1356:U:C6	2.55	0.42
1:5:1358:G:O2'	1:5:1359:G:C4'	2.67	0.42
1:5:146:G:N2	1:5:147:A:C8	2.87	0.42
1:5:1487:G:C2	1:5:1488:G:C1'	3.02	0.42
1:5:1520:C:H2'	1:5:1521:C:O4'	2.19	0.42
1:5:1588:U:H2'	1:5:1589:C:C6	2.55	0.42
1:5:1603:C:H2'	1:5:1604:G:H8	1.85	0.42
1:5:1644:C:N3	1:5:1645:C:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1667:G:N1	1:5:2280:G:H2'	2.34	0.42
1:5:1760:G:C2	1:5:1761:G:C1'	3.01	0.42
1:5:1761:G:N2	1:5:1762:C:C2	2.88	0.42
1:5:1806:G:C6	1:5:1807:C:C4	3.08	0.42
1:5:1968:G:C2	1:5:1969:G:C8	3.07	0.42
1:5:1982:G:O2'	1:5:2010:A:C5'	2.65	0.42
1:5:2076:G:C2	1:5:2077:C:H1'	2.53	0.42
1:5:2102:G:C2	1:5:2103:G:C5	3.07	0.42
1:5:2453:A:N6	1:5:2454:U:C5	2.83	0.42
1:5:2471:G:H3'	1:5:2472:A:H5''	2.01	0.42
1:5:2481:G:C6	1:5:2482:C:C5	3.07	0.42
1:5:2533:C:O2'	1:5:2534:C:O5'	2.37	0.42
1:5:2598:A:C2	1:5:2748:C:O2	2.72	0.42
1:5:2670:C:O2'	1:5:2671:C:C5'	2.68	0.42
1:5:2830:G:N1	1:5:2831:G:N7	2.68	0.42
1:5:2867:C:H2'	1:5:2867:C:O2	2.20	0.42
1:5:298:G:C5	1:5:299:C:C6	3.07	0.42
1:5:3701:C:N4	1:5:3745:U:H2'	2.35	0.42
1:5:3801:U:O2'	1:5:3802:U:C5'	2.68	0.42
1:5:3879:G:P	1:5:3879:G:O4'	2.78	0.42
1:5:4092:G:C5	1:5:4093:G:C2	3.05	0.42
1:5:4336:A:C3'	1:5:4336:A:C8	3.02	0.42
1:5:4550:G:N2	1:5:4551:U:C1'	2.82	0.42
1:5:4682:U:H2'	1:5:4682:U:O2	2.19	0.42
1:5:473:C:O2	1:5:473:C:H2'	2.19	0.42
1:5:4745:G:N2	1:5:4746:C:H41	2.09	0.42
1:5:4977:A:C4	1:5:4978:G:N2	2.88	0.42
1:5:5042:A:H2'	1:5:5042:A:N3	2.33	0.42
1:5:681:G:C6	1:5:682:G:C5	3.07	0.42
2:7:19:C:C2'	2:7:19:C:O2	2.58	0.42
2:7:29:C:C2'	2:7:30:C:H5'	2.50	0.42
2:7:56:G:H2'	2:7:57:C:C5'	2.49	0.42
3:8:131:G:N3	3:8:131:G:H2'	2.34	0.42
3:8:154:G:C2	3:8:155:C:C2	3.08	0.42
4:A:174:ARG:HB3	4:A:174:ARG:CZ	2.49	0.42
4:A:186:TYR:HA	4:A:196:TRP:HE3	1.84	0.42
4:A:242:ARG:CG	4:A:243:THR:N	2.83	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
7:D:107:ARG:HD3	7:D:248:ARG:HD2	2.01	0.42
1:5:4280:A:C6	7:D:29:ASP:OD1	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:233:LYS:O	8:E:235:LYS:N	2.51	0.42
1:5:2123:C:H3'	9:F:39:PHE:CE1	2.54	0.42
10:G:102:TYR:OH	10:G:208:ASN:N	2.50	0.42
14:K:65:GLN:HA	14:K:69:ALA:O	2.19	0.42
16:M:86:TRP:O	16:M:87:ALA:CB	2.68	0.42
20:Q:32:TYR:N	20:Q:32:TYR:HD1	2.17	0.42
49:S2:104:A:C6	49:S2:105:U:C5	3.07	0.42
49:S2:1085:C:C4	49:S2:1087:A:C1'	3.03	0.42
49:S2:1099:G:C5	49:S2:1100:A:N7	2.88	0.42
49:S2:1529:C:C2	49:S2:1530:U:C5	3.07	0.42
49:S2:1645:C:O2'	49:S2:1646:C:O5'	2.35	0.42
49:S2:170:A:C6	49:S2:171:A:C6	3.08	0.42
49:S2:1738:C:H2'	49:S2:1738:C:O2	2.18	0.42
49:S2:1752:C:N3	49:S2:1753:C:C5	2.87	0.42
49:S2:1809:A:H2'	49:S2:1810:U:O4'	2.19	0.42
49:S2:1832:A:N1	49:S2:1833:C:C4	2.88	0.42
49:S2:1835:A:C5	49:S2:1863:A:N7	2.87	0.42
49:S2:27:A:N3	49:S2:27:A:H2'	2.35	0.42
49:S2:340:C:C4	49:S2:341:C:C5	3.07	0.42
49:S2:49:C:C2	49:S2:478:G:N1	2.87	0.42
49:S2:549:C:N3	49:S2:550:C:C6	2.88	0.42
49:S2:616:A:C4	49:S2:617:G:H1'	2.54	0.42
49:S2:795:A:H2	49:S2:796:G:C5	2.23	0.42
49:S2:807:G:C2	49:S2:808:A:C8	3.07	0.42
49:S2:830:A:H2'	49:S2:831:G:O4'	2.20	0.42
49:S2:908:A:H2'	49:S2:909:G:C8	2.55	0.42
49:S2:936:G:C2	49:S2:937:C:C2	3.08	0.42
49:S2:961:G:C5	49:S2:962:A:N7	2.87	0.42
56:SG:132:ARG:HB3	56:SG:133:LEU:HD12	2.02	0.42
56:SG:21:GLU:O	56:SG:25:ARG:N	2.53	0.42
59:SJ:75:ASN:O	59:SJ:79:ARG:HD2	2.20	0.42
60:SK:27:VAL:CG1	60:SK:43:LEU:HD23	2.43	0.42
60:SK:48:ALA:O	60:SK:51:SER:OG	2.28	0.42
62:SM:96:ARG:HB3	62:SM:100:PRO:CD	2.50	0.42
49:S2:1283:C:O4'	62:SM:91:LEU:HD13	2.19	0.42
65:SP:82:ASP:OD1	65:SP:83:MET:N	2.53	0.42
72:SW:11:LEU:HD21	72:SW:37:PHE:CE2	2.54	0.42
73:SX:114:ASP:O	73:SX:115:ILE:C	2.58	0.42
74:SY:37:LYS:HA	74:SY:40:ILE:HG22	2.01	0.42
1:5:4301:U:C4'	23:T:54:HIS:CD2	2.95	0.42
25:V:128:LEU:HG	25:V:129:TRP:CD1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:13:LYS:HG2	25:V:128:LEU:HD13	2.02	0.42
26:W:33:ASN:OD1	26:W:33:ASN:N	2.53	0.42
27:X:76:ILE:CD1	27:X:108:GLN:HB3	2.50	0.42
1:5:194:C:C2'	28:Y:121:ARG:NH2	2.82	0.42
28:Y:72:GLN:HE21	28:Y:73:VAL:N	2.16	0.42
48:4:114:GLU:HG2	48:4:532:PRO:CD	2.18	0.42
48:4:650:TRP:HZ3	48:4:679:VAL:HG12	1.81	0.42
48:4:745:TYR:OH	48:4:790:VAL:HG13	2.20	0.42
1:5:1096:C:N3	1:5:1097:C:C5	2.87	0.42
1:5:113:A:C2	1:5:114:G:H1'	2.55	0.42
1:5:1167:C:C2	1:5:1195:G:N1	2.87	0.42
1:5:1398:A:N1	1:5:1420:A:C8	2.87	0.42
1:5:1424:G:C4	1:5:1425:G:C8	3.07	0.42
1:5:1555:G:H2'	1:5:1555:G:N3	2.34	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
1:5:1769:G:C2	1:5:1770:A:N7	2.87	0.42
1:5:1827:C:N3	1:5:1828:C:C5	2.87	0.42
1:5:2008:U:N3	1:5:2010:A:OP2	2.53	0.42
1:5:2039:G:H8	1:5:2039:G:O5'	2.02	0.42
1:5:2102:G:C2	1:5:2103:G:C8	3.08	0.42
1:5:2347:A:C2	1:5:2348:G:C6	3.07	0.42
1:5:2347:A:N3	1:5:2348:G:N1	2.66	0.42
1:5:2408:U:C6	1:5:2409:U:O4	2.73	0.42
1:5:2481:G:N1	1:5:2482:C:C4	2.88	0.42
1:5:2528:G:C6	1:5:2529:A:C5	3.08	0.42
1:5:275:C:H2'	1:5:276:C:H5''	2.00	0.42
1:5:288:G:N3	1:5:289:C:C5	2.88	0.42
1:5:302:C:C2	1:5:303:C:C6	3.08	0.42
1:5:109:G:N2	1:5:333:U:C2	2.87	0.42
1:5:342:G:C2	1:5:343:C:C2	3.08	0.42
1:5:347:A:N3	1:5:348:G:C8	2.88	0.42
1:5:3690:U:C4	1:5:3691:G:C5	3.08	0.42
1:5:3725:G:H2'	1:5:3726:A:H2'	2.01	0.42
1:5:3756:A:C4	1:5:3757:G:C8	3.08	0.42
1:5:3751:G:N2	1:5:3775:A:C8	2.83	0.42
1:5:3846:C:C4	1:5:3847:C:H5	2.37	0.42
1:5:3857:G:C2	1:5:3858:C:N1	2.88	0.42
1:5:3894:A:O4'	1:5:4979:A:C6	2.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4077:A:N7	1:5:4078:C:C5	2.88	0.42
1:5:4081:G:N2	1:5:4082:G:C4	2.87	0.42
1:5:4107:G:N1	1:5:4108:G:C5	2.88	0.42
1:5:4129:G:C2	1:5:4130:C:C2	3.07	0.42
1:5:4147:G:C2	1:5:4148:C:C2	3.08	0.42
1:5:4238:G:N2	1:5:4287:G:C5	2.87	0.42
1:5:4240:G:N1	1:5:4241:C:C2	2.87	0.42
1:5:4416:G:C6	1:5:4417:C:C4	3.07	0.42
1:5:4495:G:C2	1:5:4506:C:C2	3.07	0.42
1:5:4595:G:C4	1:5:4596:C:C5	3.07	0.42
1:5:4639:G:C5	1:5:4640:C:C5	3.07	0.42
1:5:4652:G:H2'	1:5:4653:C:C6	2.54	0.42
1:5:4666:G:C5	1:5:4667:C:C5	3.07	0.42
1:5:479:G:C5	1:5:480:C:C5	3.07	0.42
1:5:5007:A:C5	1:5:5040:U:O4	2.73	0.42
1:5:642:G:C6	1:5:643:C:N4	2.87	0.42
1:5:660:A:C2	1:5:661:C:N1	2.87	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
1:5:718:C:C2	1:5:719:C:C6	3.07	0.42
1:5:74:G:C5'	15:L:59:VAL:CG1	2.98	0.42
1:5:910:G:C4	1:5:911:U:C6	3.08	0.42
1:5:982:U:C2	1:5:983:C:C5	3.08	0.42
2:7:93:G:C2	2:7:94:C:C2	3.07	0.42
3:8:13:G:H2'	3:8:14:U:O5'	2.20	0.42
6:C:109:ARG:HD2	6:C:111:TRP:CZ3	2.55	0.42
9:F:155:LEU:HB3	9:F:213:PHE:CE2	2.54	0.42
1:5:1210:C:H5'	9:F:72:ARG:HH22	1.85	0.42
11:H:129:ARG:HG2	11:H:156:ASN:ND2	2.34	0.42
14:K:47:ALA:HA	14:K:72:GLU:CB	2.50	0.42
14:K:58:ILE:O	14:K:59:THR:CG2	2.68	0.42
15:L:103:ARG:HD2	15:L:105:LYS:HD2	2.02	0.42
15:L:34:ARG:HH11	15:L:34:ARG:CB	2.33	0.42
1:5:106:A:P	15:L:39:ARG:HH21	2.42	0.42
16:M:123:ILE:HD11	18:O:182:GLU:CG	2.49	0.42
6:C:112:HIS:HE1	17:N:202:ARG:HE	1.65	0.42
18:O:49:ARG:NH1	18:O:49:ARG:CG	2.83	0.42
19:P:23:ARG:HH11	19:P:23:ARG:HG2	1.84	0.42
49:S2:1065:G:C6	49:S2:1066:U:C5	3.08	0.42
49:S2:1137:U:H2'	49:S2:1138:C:H5''	2.01	0.42
49:S2:118:C:C1'	49:S2:445:A:N3	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1271:C:O2	49:S2:1271:C:H2'	2.20	0.42
49:S2:1276:A:H3'	49:S2:1277:C:H6	1.82	0.42
49:S2:1311:C:N3	49:S2:1314:U:C5	2.86	0.42
49:S2:1457:U:O2	49:S2:1458:G:C8	2.73	0.42
49:S2:1454:A:N9	49:S2:1476:A:H1'	2.34	0.42
49:S2:1495:G:C6	49:S2:1496:U:N1	2.87	0.42
49:S2:1551:U:O4	49:S2:1577:G:H2'	2.20	0.42
49:S2:1561:A:C5	49:S2:1562:C:C5	3.07	0.42
49:S2:1576:G:C2	49:S2:1577:G:C8	3.07	0.42
49:S2:1541:G:N1	49:S2:1593:C:C2	2.88	0.42
49:S2:1771:G:C2	49:S2:1772:C:C2	3.08	0.42
49:S2:351:G:N3	49:S2:351:G:H2'	2.34	0.42
49:S2:412:G:N2	49:S2:429:C:C2	2.88	0.42
49:S2:595:U:O2'	49:S2:596:U:O5'	2.37	0.42
49:S2:660:C:H2'	49:S2:661:U:O4'	2.19	0.42
49:S2:794:A:C2	49:S2:795:A:C1'	3.02	0.42
49:S2:862:A:H2	49:S2:863:U:H1'	1.84	0.42
49:S2:85:A:H2'	49:S2:86:C:H6	1.84	0.42
53:SD:113:LEU:HD23	53:SD:114:ALA:N	2.35	0.42
49:S2:1388:A:H61	53:SD:161:GLY:HA3	1.84	0.42
53:SD:32:ASP:OD1	53:SD:57:ASN:HB2	2.20	0.42
55:SF:140:ASP:N	55:SF:140:ASP:OD1	2.52	0.42
55:SF:195:GLU:HA	55:SF:198:ARG:HB3	2.01	0.42
56:SG:186:GLN:HG2	56:SG:187:HIS:N	2.33	0.42
57:SH:137:SER:OG	57:SH:158:LEU:HB3	2.20	0.42
61:SL:124:ASP:OD1	61:SL:147:LYS:HA	2.20	0.42
62:SM:46:GLN:OE1	62:SM:112:LYS:CD	2.68	0.42
62:SM:95:ASP:O	62:SM:96:ARG:HB2	2.19	0.42
63:SN:108:ASP:HB3	63:SN:111:ALA:HB3	2.01	0.42
67:SR:5:ARG:HG3	67:SR:49:LYS:CE	2.45	0.42
68:SS:10:GLN:NE2	68:SS:58:GLU:O	2.51	0.42
49:S2:1567:G:C8	68:SS:82:TRP:CZ3	3.07	0.42
73:SX:46:HIS:CD2	73:SX:46:HIS:N	2.87	0.42
23:T:52:MET:HG2	23:T:95:HIS:CE1	2.54	0.42
48:4:154:VAL:HA	48:4:205:ILE:CD1	2.44	0.42
48:4:123:ASP:OD2	48:4:361:PRO:HA	2.20	0.42
48:4:485:ILE:N	48:4:485:ILE:CD1	2.83	0.42
1:5:987:C:C2	1:5:1067:G:N2	2.88	0.42
1:5:107:G:H2'	1:5:107:G:N3	2.35	0.42
1:5:1258:G:N1	1:5:1259:G:C5	2.88	0.42
1:5:1260:G:C2	1:5:1261:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:12:A:H5''	1:5:12:A:H8	1.84	0.42
1:5:1358:G:C4	1:5:1359:G:C8	3.08	0.42
1:5:138:G:C3'	1:5:139:G:C5'	2.97	0.42
1:5:1522:G:N3	1:5:1522:G:H2'	2.34	0.42
1:5:1545:G:O2'	1:5:1546:C:O5'	2.37	0.42
1:5:153:G:N2	1:5:154:G:C4	2.87	0.42
1:5:1566:C:C2'	1:5:1567:U:C6	2.81	0.42
1:5:1599:A:C2'	1:5:1600:A:H5''	2.47	0.42
1:5:1780:A:N3	12:I:198:LYS:NZ	2.68	0.42
1:5:1823:G:C3'	1:5:1825:A:P	3.04	0.42
1:5:1844:G:C4	1:5:1845:U:C5	3.08	0.42
1:5:2036:C:C2	1:5:2037:C:C5	3.07	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
1:5:2370:A:H3'	1:5:2826:U:O2	2.20	0.42
1:5:2395:A:OP1	1:5:2395:A:H4'	2.20	0.42
1:5:2502:G:H4'	1:5:2503:G:OP1	2.20	0.42
1:5:2555:G:C6	1:5:2573:A:C6	3.08	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
1:5:2666:U:H3'	1:5:2666:U:C6	2.55	0.42
1:5:2751:G:N1	1:5:2752:G:C5	2.88	0.42
1:5:2771:G:C5	1:5:2772:C:C6	3.08	0.42
1:5:2783:A:C5	1:5:2784:C:C4	3.08	0.42
1:5:316:U:O4	1:5:4353:U:H1'	2.19	0.42
1:5:3608:A:C2	1:5:3609:G:C4	3.08	0.42
1:5:3656:A:H2'	1:5:3657:U:C6	2.54	0.42
1:5:3668:C:C4	1:5:3669:G:C5	3.08	0.42
1:5:3775:A:H2'	1:5:3776:G:C1'	2.49	0.42
1:5:3811:G:O2'	1:5:3814:U:OP2	2.27	0.42
1:5:3896:C:O2'	5:B:268:ARG:NH2	2.53	0.42
1:5:4107:G:C2	1:5:4108:G:C4	3.08	0.42
1:5:4283:G:H21	1:5:4284:C:H1'	1.85	0.42
1:5:4344:U:N3	1:5:4345:C:H5	2.15	0.42
1:5:4390:A:H2'	1:5:4391:G:O4'	2.20	0.42
1:5:4411:G:N1	1:5:4412:C:C4	2.88	0.42
1:5:445:U:H1'	1:5:2313:A:N3	2.33	0.42
1:5:4651:A:C2	1:5:4652:G:C1'	3.02	0.42
1:5:4693:C:O5'	1:5:4693:C:C6	2.73	0.42
1:5:4743:G:C6	1:5:4744:A:C6	3.08	0.42
1:5:4956:A:C2	1:5:4957:C:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4990:C:H2'	1:5:4992:G:OP1	2.19	0.42
1:5:5000:G:H2'	1:5:5001:U:C5'	2.49	0.42
1:5:69:A:N1	1:5:70:A:C6	2.88	0.42
1:5:753:C:O2	1:5:754:U:C6	2.71	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
1:5:96:U:C5	1:5:97:G:C8	3.08	0.42
2:7:43:U:C4	2:7:44:C:N4	2.88	0.42
2:7:30:C:C4	2:7:48:G:C2	3.07	0.42
2:7:9:C:C2'	2:7:9:C:O2	2.66	0.42
4:A:109:GLU:O	4:A:111:THR:N	2.53	0.42
6:C:270:ALA:HA	6:C:278:ASN:ND2	2.34	0.42
7:D:203:ASN:OD1	7:D:203:ASN:N	2.49	0.42
8:E:95:ASP:HB3	8:E:101:ARG:HB2	2.02	0.42
16:M:109:ARG:HB2	16:M:109:ARG:NH2	2.35	0.42
16:M:120:ASN:O	16:M:124:LYS:HB2	2.19	0.42
17:N:184:ILE:HG23	17:N:194:ARG:HH12	1.84	0.42
18:O:125:LYS:HD2	18:O:135:PHE:HZ	1.84	0.42
1:5:2794:C:C2	19:P:136:ILE:CD1	3.02	0.42
49:S2:1040:G:C2	49:S2:1041:G:H1'	2.55	0.42
49:S2:1040:G:H5'	49:S2:1041:G:OP2	2.20	0.42
49:S2:1110:G:C2	49:S2:1111:U:C2	3.08	0.42
49:S2:1134:G:N3	49:S2:1135:C:C5	2.82	0.42
49:S2:1160:U:O4	73:GX:2:GLY:N	2.52	0.42
49:S2:1194:A:O3'	49:S2:1195:A:H4'	2.19	0.42
49:S2:1276:A:C2	49:S2:1277:C:C1'	3.03	0.42
49:S2:1516:G:H2'	49:S2:1517:G:O4'	2.18	0.42
49:S2:1524:G:C2	49:S2:1525:C:N1	2.88	0.42
49:S2:1601:A:H61	49:S2:1635:C:H3'	1.85	0.42
49:S2:1648:G:H1'	49:S2:1649:U:H5	1.83	0.42
49:S2:1668:U:C2	49:S2:1669:G:N7	2.88	0.42
49:S2:1678:A:C2	49:S2:1679:A:N7	2.88	0.42
49:S2:1758:G:C6	49:S2:1759:G:N7	2.88	0.42
49:S2:1850:A:O2'	49:S2:1851:A:C5'	2.68	0.42
49:S2:201:C:C5	49:S2:202:G:C8	3.08	0.42
49:S2:379:C:H2'	49:S2:380:G:C8	2.55	0.42
49:S2:443:U:O2	49:S2:443:U:H2'	2.19	0.42
49:S2:474:G:C6	49:S2:475:C:C4	3.08	0.42
49:S2:80:G:C5	49:S2:81:U:C5	3.08	0.42
49:S2:918:U:H5'	63:SN:20:ARG:HH11	1.85	0.42
49:S2:977:C:C2'	49:S2:977:C:O2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:33:PHE:CE2	22:S:106:VAL:HG21	2.55	0.42
50:SA:145:ILE:HD13	50:SA:159:ILE:HG22	2.01	0.42
54:SE:179:ASN:O	54:SE:194:VAL:HA	2.20	0.42
54:SE:15:PRO:HD2	54:SE:18:TRP:HH2	1.83	0.42
49:S2:913:A:O2'	57:SH:67:PRO:HD3	2.19	0.42
58:SI:88:ASN:OD1	58:SI:205:ARG:NH2	2.53	0.42
72:SW:28:ARG:N	72:SW:29:PRO:CD	2.82	0.42
29:Z:5:MET:O	29:Z:28:ASN:HB3	2.20	0.42
48:4:126:LEU:CD1	48:4:353:MET:HE2	2.49	0.42
48:4:267:ASP:O	48:4:267:ASP:CA	2.55	0.42
48:4:46:ILE:HG23	48:4:454:MET:SD	2.60	0.42
48:4:390:PRO:HD3	48:4:466:CYS:SG	2.59	0.42
48:4:499:PHE:O	48:4:500:SER:O	2.38	0.42
48:4:60:ARG:HB3	48:4:63:GLU:HB2	2.02	0.42
48:4:755:VAL:HG12	48:4:755:VAL:O	2.20	0.42
1:5:1234:G:C2	1:5:1235:G:C5	3.07	0.42
1:5:1233:G:N3	1:5:1234:G:C8	2.88	0.42
1:5:1267:C:C2	1:5:1271:G:N1	2.88	0.42
1:5:127:G:C2	1:5:128:C:C2	3.08	0.42
1:5:1349:G:N1	1:5:1350:C:C4	2.88	0.42
1:5:1377:G:C3'	1:5:1377:G:C8	3.03	0.42
1:5:145:G:N1	1:5:146:G:N7	2.68	0.42
1:5:1466:G:C2	1:5:1467:C:C5	3.08	0.42
1:5:1617:G:C2	1:5:1618:G:N9	2.88	0.42
1:5:1667:G:N3	1:5:2283:G:N1	2.67	0.42
1:5:1685:G:C2	1:5:1686:C:N3	2.88	0.42
1:5:177:G:C5	1:5:178:C:C5	3.08	0.42
1:5:1687:U:N3	1:5:1850:A:N6	2.68	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
1:5:2054:U:H4'	1:5:2056:G:O4'	2.19	0.42
1:5:2106:G:N2	1:5:2107:C:C4	2.87	0.42
1:5:209:U:C6	1:5:211:G:C8	3.08	0.42
1:5:2401:A:N1	1:5:2402:G:N7	2.68	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
1:5:2453:A:H1'	1:5:2507:A:C5	2.55	0.42
1:5:2606:G:C5	1:5:2607:C:C5	3.07	0.42
1:5:2674:A:C3'	1:5:2675:G:H5'	2.49	0.42
1:5:2823:G:C6	1:5:2824:C:C4	3.08	0.42
1:5:2831:G:C2	1:5:2832:A:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2840:A:C6	1:5:2841:G:C8	3.08	0.42
1:5:287:U:H2'	1:5:287:U:O2	2.20	0.42
1:5:2890:C:O4'	1:5:5034:A:H1'	2.20	0.42
1:5:288:G:C2	1:5:289:C:C2	3.07	0.42
1:5:353:A:C4	1:5:379:G:N7	2.87	0.42
1:5:3617:G:H2'	1:5:3618:C:O4'	2.20	0.42
1:5:3733:A:C5	1:5:3734:U:C5	3.08	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
1:5:3851: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
1:5:4215:C:O2	1:5:4215:C:C2'	2.68	0.42
1:5:4277:G:N3	1:5:4282:A:H2	2.18	0.42
1:5:4237:C:H4'	1:5:4327:C:O2	2.19	0.42
1:5:4330:G:C5	1:5:4331:G:C8	3.07	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
1:5:4690:G:O2'	1:5:4691:A:O4'	2.30	0.42
1:5:480:C:H2'	1:5:481:G:C8	2.54	0.42
1:5:4978:G:HO2'	1:5:4979:A:P	2.40	0.42
1:5:4985:U:H2'	1:5:4986:G:O5'	2.20	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
1:5:647:G:N3	1:5:647:G:H2'	2.34	0.42
1:5:671:G:N3	1:5:672:C:C6	2.88	0.42
1:5:682:G:H2'	1:5:682:G:N3	2.35	0.42
1:5:684:G:HO2'	1:5:685:C:P	2.43	0.42
2:7:106:G:C6	2:7:107:G:C5	3.08	0.42
2:7:1:G:H2'	2:7:2:U:O4'	2.20	0.42
2:7:56:G:HO2'	2:7:57:C:P	2.43	0.42
2:7:72:U:H2'	2:7:73:U:C6	2.54	0.42
5:B:55:HIS:O	5:B:56:ILE:HD12	2.19	0.42
6:C:154:VAL:HG11	6:C:158:VAL:HG21	2.02	0.42
1:5:1819:G:C8	7:D:142:PHE:CD2	3.07	0.42
7:D:282:GLN:C	7:D:283:LYS:O	2.54	0.42
11:H:41:ILE:HD11	11:H:69:THR:HG21	2.01	0.42
12:I:112:GLN:HB2	12:I:116:ARG:NH1	2.34	0.42
13:J:19:LYS:HB3	13:J:75:ARG:HE	1.85	0.42
14:K:110:VAL:O	14:K:110:VAL:CG1	2.67	0.42
14:K:21:GLU:HG3	14:K:48:LYS:HE2	2.01	0.42
14:K:77:ALA:CB	14:K:80:LEU:CD1	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:113:A:O2'	17:N:50:ARG:HA	2.20	0.42
49:S2:1278:A:C2	49:S2:1279:C:N1	2.88	0.42
49:S2:1314:U:O2	49:S2:1315:U:C1'	2.67	0.42
49:S2:1381:G:N2	49:S2:1382:A:H1'	2.34	0.42
49:S2:1450:G:C5	49:S2:1451:G:C8	3.08	0.42
49:S2:1458:G:N1	49:S2:1459:G:C5	2.87	0.42
49:S2:1510:G:N1	49:S2:1511:U:N1	2.68	0.42
49:S2:1511:U:O4	49:S2:1512:C:C5	2.72	0.42
49:S2:1589:A:C2'	49:S2:1590:C:O5'	2.67	0.42
49:S2:1758:G:C2	49:S2:1759:G:C4	3.07	0.42
49:S2:1759:G:C6	49:S2:1760:G:N7	2.88	0.42
49:S2:293:C:O2'	49:S2:294:U:H3'	2.20	0.42
49:S2:295:C:H2'	49:S2:296:U:O4'	2.20	0.42
49:S2:443:U:C4	49:S2:444:G:C5	3.08	0.42
49:S2:454:U:H2'	49:S2:455:A:O5'	2.19	0.42
49:S2:547:G:C2'	49:S2:548:C:H5''	2.50	0.42
49:S2:550:C:C2	49:S2:551:U:C6	3.08	0.42
49:S2:600:G:N3	49:S2:601:G:C8	2.88	0.42
49:S2:678:U:N3	49:S2:679:A:N7	2.68	0.42
49:S2:867:G:C6	49:S2:868:G:C6	3.08	0.42
49:S2:953:C:C2	49:S2:954:U:C6	3.08	0.42
49:S2:968:U:H2'	49:S2:968:U:O2	2.16	0.42
49:S2:982:G:H1'	49:S2:1045:U:C6	2.55	0.42
54:SE:98:ASN:C	54:SE:99:PHE:CD1	2.92	0.42
55:SF:20:PHE:O	55:SF:23:TRP:HB2	2.20	0.42
57:SH:109:ARG:HG3	57:SH:110:THR:C	2.40	0.42
62:SM:47:ALA:O	62:SM:48:HIS:CD2	2.73	0.42
49:S2:1313:A:O2'	62:SM:91:LEU:N	2.52	0.42
69:ST:92:PHE:CD1	69:ST:92:PHE:C	2.93	0.42
24:U:27:HIS:N	24:U:28:PRO:HD2	2.34	0.42
48:4:106:PRO:HD2	48:4:115:VAL:CG2	2.13	0.42
48:4:243:GLN:O	48:4:249:ARG:CZ	2.66	0.42
48:4:421:VAL:O	48:4:421:VAL:HG13	2.20	0.42
48:4:559:LYS:HE3	48:4:559:LYS:HB2	1.46	0.42
48:4:650:TRP:CZ3	48:4:679:VAL:CB	3.00	0.42
48:4:829:SER:HG	48:4:833:GLN:N	2.08	0.42
48:4:845:LYS:NZ	48:4:846:GLU:N	2.29	0.42
1:5:986:C:N1	1:5:1068:G:N2	2.68	0.42
1:5:117:C:H5'	1:5:118:C:P	2.60	0.42
1:5:1215:C:C2'	1:5:1216:C:H5'	2.49	0.42
1:5:1241:C:C4	1:5:1242:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:128:C:C2	1:5:129:C:C6	3.08	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
1:5:1374:G:C2	1:5:1375:C:C6	3.07	0.42
1:5:1380:G:H4'	1:5:1381:U:OP1	2.20	0.42
1:5:1406:G:C2	1:5:1409:C:N4	2.88	0.42
1:5:1484:G:O4'	1:5:1485:C:P	2.78	0.42
1:5:1561:G:N2	1:5:1567:U:H1'	2.34	0.42
1:5:1866:U:O2'	1:5:1867:A:P	2.78	0.42
1:5:1938:C:O4'	1:5:1939:A:O4'	2.38	0.42
1:5:2295:C:O2	1:5:2296:G:N7	2.52	0.42
1:5:2401:A:N3	1:5:2402:G:C8	2.87	0.42
1:5:2450:G:O6	1:5:2451:A:C5	2.73	0.42
1:5:2470:C:C2	1:5:2470:C:C5'	3.02	0.42
1:5:2481:G:C2	1:5:2482:C:C6	3.07	0.42
1:5:2567:G:N2	1:5:2568:C:N1	2.68	0.42
1:5:2568:C:N3	1:5:2569:G:C5	2.87	0.42
1:5:258:G:C4	1:5:259:C:C5	3.07	0.42
1:5:2658:G:N1	1:5:2675:G:C6	2.88	0.42
1:5:2702:C:H2'	1:5:2702:C:O2	2.19	0.42
1:5:2743:A:H2	1:5:2744:A:C4	2.38	0.42
1:5:31:U:C2'	1:5:32:G:O5'	2.67	0.42
1:5:343:C:C4	1:5:344:A:N7	2.88	0.42
1:5:3604:A:C5	1:5:3605:C:C6	3.08	0.42
1:5:3623:C:C5	1:5:3624:A:C5	3.07	0.42
1:5:3625:G:N2	1:5:3626:G:O3'	2.43	0.42
1:5:3695:U:C4	1:5:3696:C:H5	2.32	0.42
1:5:3820:G:C5	1:5:3821:A:N7	2.87	0.42
1:5:3867:A:H3'	1:5:3868:G:C8	2.55	0.42
1:5:4215:C:C2	1:5:4216:G:N7	2.76	0.42
1:5:4344:U:C2	1:5:4345:C:C6	2.97	0.42
1:5:3907:G:C1'	1:5:4449:A:H1'	2.50	0.42
1:5:455:C:N3	1:5:456:C:C5	2.87	0.42
1:5:4565:C:C1'	5:B:262:VAL:CG2	2.97	0.42
1:5:4567:G:H2'	1:5:4568:A:C5'	2.50	0.42
1:5:4973:U:H1'	1:5:4986:G:N1	2.34	0.42
1:5:5047:C:H6	1:5:5050:C:C6	2.38	0.42
1:5:744:G:C2	1:5:921:C:O2	2.73	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:118:C:C4	3:8:119:C:C5	3.04	0.42
3:8:75:G:C4	3:8:76:C:C5	3.08	0.42
4:A:117:GLU:HB2	4:A:162:ASN:HB2	2.02	0.42
7:D:268:ARG:HH11	7:D:268:ARG:HG3	1.85	0.42
7:D:41:LYS:C	7:D:44:TYR:HE1	2.23	0.42
8:E:104:LYS:HG3	8:E:107:LYS:HB3	2.01	0.42
8:E:156:LYS:HB3	8:E:178:ASN:HD21	1.85	0.42
8:E:172:THR:OG1	8:E:182:LEU:HD23	2.19	0.42
1:5:945:U:C5	9:F:67:TYR:CZ	3.08	0.42
10:G:185:LYS:O	10:G:189:ARG:HD2	2.20	0.42
10:G:136:LEU:HD22	10:G:202:VAL:HG13	2.01	0.42
1:5:4086:G:N3	10:G:51:LEU:HD11	2.35	0.42
12:I:158:LYS:H	12:I:158:LYS:HD2	1.85	0.42
12:I:171:TRP:CG	12:I:181:PHE:CD2	3.08	0.42
17:N:30:TYR:CZ	17:N:63:ARG:HD3	2.54	0.42
19:P:122:ALA:HA	19:P:145:HIS:HE1	1.84	0.42
49:S2:1110:G:H5''	49:S2:1111:U:P	2.60	0.42
49:S2:1299:A:C2'	49:S2:1301:A:H5'	2.50	0.42
49:S2:1418:C:O2	49:S2:1420:G:H3'	2.20	0.42
49:S2:1430:C:N4	49:S2:1431:G:C5	2.88	0.42
49:S2:1431:G:N3	49:S2:1431:G:H2'	2.35	0.42
49:S2:1490:G:C2	49:S2:1491:G:C5	3.08	0.42
49:S2:1495:G:N7	49:S2:1496:U:C6	2.87	0.42
49:S2:14:C:H2'	49:S2:15:U:C6	2.55	0.42
49:S2:1575:G:N1	49:S2:1576:G:C6	2.88	0.42
49:S2:1586:U:H3'	49:S2:1587:G:H5'	2.00	0.42
49:S2:1781:A:N1	49:S2:1782:G:O6	2.52	0.42
49:S2:1792:G:N3	49:S2:1793:A:C8	2.88	0.42
49:S2:1826:G:C2	49:S2:1827:U:C6	3.07	0.42
49:S2:23:G:N1	49:S2:24:C:C2	2.88	0.42
49:S2:316:G:C6	49:S2:317:C:C4	3.08	0.42
49:S2:439:A:N1	49:S2:455:A:N1	2.67	0.42
49:S2:452:G:H2'	49:S2:453:C:H6	1.85	0.42
49:S2:460:A:C4	49:S2:461:U:C5	3.07	0.42
49:S2:550:C:C2'	49:S2:550:C:O2	2.67	0.42
49:S2:688:U:OP1	57:SH:116:ARG:NH2	2.46	0.42
49:S2:922:A:C2	49:S2:1021:U:C2	3.08	0.42
49:S2:947:G:C4	49:S2:948:C:C6	3.07	0.42
49:S2:956:G:O2'	49:S2:957:A:H5'	2.20	0.42
50:SA:176:TRP:CE3	50:SA:199:PRO:HG3	2.49	0.42
50:SA:24:HIS:CD2	50:SA:25:LEU:HD12	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:190:ILE:HA	55:SF:193:LYS:HB3	2.02	0.42
57:SH:152:ARG:NH1	57:SH:152:ARG:HB3	2.35	0.42
58:SI:141:ARG:HH12	58:SI:145:ILE:HG23	1.85	0.42
58:SI:117:TYR:HB3	58:SI:156:ALA:CB	2.50	0.42
59:SJ:149:VAL:HG12	59:SJ:150:ARG:O	2.20	0.42
49:S2:523:A:OP2	59:SJ:38:ARG:HD3	2.20	0.42
60:SK:16:PHE:CE1	60:SK:89:ILE:HD12	2.55	0.42
68:SS:113:ARG:HB3	68:SS:113:ARG:CZ	2.50	0.42
25:V:14:PHE:CE1	25:V:91:LYS:HD2	2.55	0.42
27:X:110:LYS:HD2	27:X:111:GLN:HE22	1.85	0.42
29:Z:52:LYS:O	29:Z:65:ARG:NH2	2.50	0.42
48:4:72:SER:CB	48:4:104:ASP:CB	2.95	0.41
48:4:129:VAL:HG11	48:4:181:ILE:HG23	2.00	0.41
48:4:543:GLU:OE2	48:4:576:VAL:CB	2.45	0.41
48:4:645:GLU:OE1	48:4:665:ILE:HD13	2.20	0.41
48:4:686:ALA:HB1	48:4:726:ARG:HA	1.94	0.41
48:4:830:ARG:N	48:4:830:ARG:HE	2.18	0.41
1:5:1075:G:H2'	1:5:1076:C:H6	1.84	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
1:5:1268:G:C5	1:5:2111:G:N3	2.88	0.41
1:5:12:A:C4	1:5:14:C:C5	3.07	0.41
1:5:1367:C:H3'	1:5:1368:A:H5''	2.01	0.41
1:5:1390:G:N2	1:5:1394:G:N7	2.64	0.41
1:5:142:G:N1	1:5:144:G:C5	2.88	0.41
1:5:1488:G:C4	1:5:1489:G:C8	3.08	0.41
1:5:1552:G:N2	1:5:1574:G:C2	2.88	0.41
1:5:1818:G:N7	1:5:1821:G:O6	2.51	0.41
1:5:1920:C:C4'	1:5:1921:C:OP2	2.66	0.41
1:5:1979:A:H2	1:5:1982:G:N7	2.18	0.41
1:5:206:U:O2	1:5:206:U:H2'	2.20	0.41
1:5:2271:C:C2	1:5:2272:C:C5	3.07	0.41
1:5:1667:G:H1	1:5:2280:G:H2'	1.84	0.41
1:5:2294:G:H2'	1:5:2295:C:H6	1.85	0.41
1:5:2311:C:N3	1:5:2312:U:C6	2.88	0.41
1:5:2336:G:C2	1:5:2337:C:C2	3.08	0.41
1:5:2485:U:H2'	1:5:2486:G:H8	1.85	0.41
1:5:2522:G:C2	1:5:2534:C:C2	3.08	0.41
1:5:2665:U:C4	21:R:124:TYR:OH	2.69	0.41
1:5:2673:G:H4'	1:5:2675:G:C1'	2.50	0.41
1:5:3590:G:C6	1:5:3591:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3605:C:N3	1:5:3606:U:C6	2.88	0.41
1:5:3611:A:H2	1:5:5016:A:N7	2.17	0.41
1:5:3616:U:C1'	1:5:3617:G:C6	3.03	0.41
1:5:3698:G:C2	1:5:3699:C:C4	3.07	0.41
1:5:3753:G:C8	1:5:3776:G:C5	3.08	0.41
1:5:4175:G:C4	1:5:4176:C:C6	3.08	0.41
1:5:419:A:N3	1:5:1332:C:O2'	2.49	0.41
1:5:4205:A:N3	1:5:4206:C:C6	2.88	0.41
1:5:4419:U:O5'	1:5:4419:U:H6	2.03	0.41
1:5:4455:G:H1	1:5:4524:G:H1	1.67	0.41
1:5:4551:U:H2'	1:5:4552:U:H6	1.86	0.41
1:5:4649:G:H2'	1:5:4650:G:O4'	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
1:5:4884:G:C6	1:5:4885:U:C5	3.07	0.41
1:5:4929:C:H6	1:5:4929:C:C5'	2.28	0.41
1:5:4944:C:H4'	1:5:4945:G:OP2	2.19	0.41
1:5:4752:U:O2	1:5:4948:C:N3	2.52	0.41
1:5:709:C:H4'	8:E:186:HIS:CE1	2.53	0.41
1:5:711:A:C4	1:5:712:C:C5	3.08	0.41
1:5:720:G:C2	1:5:721:G:C8	3.08	0.41
1:5:980:U:C2	1:5:981:C:C5	3.08	0.41
2:7:25:G:C2	2:7:26:C:C2	3.08	0.41
3:8:27:U:N3	3:8:28:C:C5	2.88	0.41
4:A:82:ILE:HD11	4:A:99:GLY:CA	2.49	0.41
1:5:218:A:C8	6:C:181:LYS:CG	3.02	0.41
7:D:177:THR:HB	7:D:190:PHE:CZ	2.55	0.41
8:E:84:VAL:HG13	8:E:87:THR:O	2.19	0.41
9:F:58:HIS:C	9:F:60:HIS:N	2.72	0.41
9:F:82:ASN:HD22	9:F:82:ASN:HA	1.49	0.41
10:G:82:GLN:HG3	10:G:83:PHE:CE1	2.55	0.41
20:Q:32:TYR:N	20:Q:32:TYR:CD1	2.88	0.41
20:Q:91:ARG:HH21	20:Q:91:ARG:CG	2.32	0.41
49:S2:1146:C:O2	49:S2:1146:C:H2'	2.20	0.41
49:S2:1211:G:H5'	49:S2:1212:G:OP2	2.19	0.41
49:S2:1265:A:H2'	49:S2:1266:C:H6	1.82	0.41
49:S2:1284:A:C2	62:SM:34:GLY:CA	3.03	0.41
49:S2:1299:A:O2'	49:S2:1301:A:C5'	2.68	0.41
49:S2:1323:U:C2'	49:S2:1324:G:O4'	2.68	0.41
49:S2:1325:G:N3	49:S2:1327:G:C8	2.88	0.41
49:S2:1406:G:C6	49:S2:1407:U:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1408:U:O4	49:S2:1439:A:C6	2.61	0.41
49:S2:1435:C:N4	49:S2:1436:C:C4	2.88	0.41
49:S2:1539:U:N3	49:S2:1540:G:C8	2.52	0.41
49:S2:1641:A:C6	49:S2:1642:U:C4	3.08	0.41
49:S2:1710:C:H2'	49:S2:1710:C:O2	2.20	0.41
49:S2:185:G:C2	49:S2:186:C:C2	3.08	0.41
49:S2:42:A:C6	49:S2:426:A:N6	2.70	0.41
49:S2:457:C:H2'	49:S2:457:C:O2	2.19	0.41
49:S2:52:G:C2	49:S2:53:C:C2	3.08	0.41
49:S2:559:G:C2	49:S2:560:A:C8	3.07	0.41
49:S2:601:G:O2'	49:S2:602:G:C8	2.59	0.41
49:S2:684:G:H2'	49:S2:685:A:O4'	2.20	0.41
49:S2:750:C:O2	49:S2:751:G:H8	1.96	0.41
49:S2:923:G:N2	49:S2:924:G:C4	2.88	0.41
49:S2:959:G:C8	49:S2:959:G:C3'	3.03	0.41
49:S2:1500:G:H4'	53:SD:179:GLN:O	2.20	0.41
53:SD:65:ARG:O	53:SD:69:LEU:HG	2.20	0.41
56:SG:55:GLY:N	56:SG:63:MET:SD	2.93	0.41
61:SL:76:VAL:HG12	61:SL:125:ILE:CD1	2.50	0.41
49:S2:1064:C:P	64:SO:150:ARG:NH2	2.93	0.41
49:S2:648:A:H1'	73:SX:46:HIS:NE2	2.35	0.41
29:Z:121:ARG:CG	29:Z:121:ARG:HH11	2.33	0.41
29:Z:41:ALA:HB2	29:Z:77:TYR:HE1	1.84	0.41
48:4:55:ARG:O	48:4:57:THR:N	2.52	0.41
48:4:592:LEU:CD2	48:4:603:TYR:HE2	2.24	0.41
48:4:662:LEU:N	48:4:683:PHE:CE2	2.87	0.41
48:4:667:LYS:HZ2	48:4:667:LYS:HB2	1.78	0.41
1:5:1065:G:H2'	1:5:1066:G:H8	1.84	0.41
1:5:1169:G:C2	1:5:1170:G:N9	2.88	0.41
1:5:1246:G:H2'	1:5:1247:U:O4'	2.20	0.41
1:5:1261:G:N1	1:5:1262:G:C8	2.88	0.41
1:5:1262:G:N3	1:5:1263:A:C8	2.87	0.41
1:5:138:G:H2'	1:5:139:G:H5'	2.00	0.41
1:5:1554:A:C6	1:5:1555:G:N9	2.88	0.41
1:5:1629:G:N2	1:5:1631:A:N3	2.68	0.41
1:5:1664:U:H2'	1:5:1665:C:H6	1.85	0.41
1:5:1727:U:H2'	1:5:1727:U:O2	2.20	0.41
1:5:1756:U:H2'	1:5:1757:U:O4'	2.21	0.41
1:5:1761:G:C4	1:5:1762:C:C6	3.08	0.41
1:5:1846:G:C2	1:5:1847:C:C2	3.08	0.41
1:5:1877:G:C5	1:5:1878:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1947:U:C6	1:5:1947:U:H5'	2.55	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
1:5:2001:G:C5	1:5:2017:A:C2	3.08	0.41
1:5:2083:C:H2'	1:5:2085:G:O4'	2.19	0.41
1:5:2107:C:O2'	1:5:2108:G:OP2	2.37	0.41
1:5:2243:C:O2	1:5:2243:C:H2'	2.20	0.41
1:5:2316:G:N1	1:5:2317:C:N4	2.68	0.41
1:5:2399:G:C6	1:5:2400:G:N7	2.88	0.41
1:5:2448:G:O6	1:5:2511:A:C5	2.73	0.41
1:5:2526:C:O2'	1:5:2527:A:O5'	2.37	0.41
1:5:2576:G:N3	1:5:2576:G:H2'	2.35	0.41
1:5:2577:C:N4	29: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	2.68	0.41
1:5:2800:G:C5	1:5:2801:U:C5	3.08	0.41
1:5:292:G:C4	1:5:293:G:C6	3.08	0.41
1:5:3585:G:N3	1:5:3586:G:C8	2.88	0.41
1:5:3587:C:H2'	1:5:3588:C:H6	1.84	0.41
1:5:3630:A:C6	1:5:3631:U:C5	3.08	0.41
1:5:3718:A:C2'	1:5:3719:A:O4'	2.59	0.41
1:5:3836:A:H2'	1:5:3837:C:O4'	2.20	0.41
1:5:3907:G:C8	1:5:4449:A:C1'	2.94	0.41
1:5:3924:C:H2'	1:5:3925:U:O5'	2.20	0.41
1:5:4167:G:N1	1:5:4168:G:C5	2.88	0.41
1:5:4229:U:H3'	1:5:4230:C:C6	2.52	0.41
1:5:4510:A:C4	1:5:4511:A:C6	3.08	0.41
1:5:4544:A:C8	1:5:4545:G:C1'	3.03	0.41
1:5:4737:G:C6	1:5:4963:G:N2	2.88	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
1:5:4966:A:C2	1:5:4967:A:C2	3.08	0.41
1:5:5055:G:H2'	1:5:5056:A:C8	2.55	0.41
1:5:693:C:H2'	1:5:694:C:H6	1.86	0.41
1:5:738:C:N3	1:5:739:G:C5	2.88	0.41
1:5:744:G:C2	1:5:745:G:C5	3.08	0.41
1:5:962:C:O2	1:5:2264:C:O5'	2.38	0.41
1:5:963:G:N3	1:5:963:G:C2'	2.82	0.41
1:5:961:G:C6	1:5:969:C:C5	3.08	0.41
1:5:98:A:H3'	1:5:98:A:C8	2.55	0.41
3:8:154:G:H4'	10:G:189:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:42:G:N3	3:8:43:A:C8	2.88	0.41
3:8:66:A:H2'	3:8:67:U:H6	1.82	0.41
7:D:8:LYS:HA	7:D:12:TYR:CB	2.50	0.41
1:5:4886:C:H41	8:E:268:ARG:HH22	1.68	0.41
12:I:12:CYS:HB3	12:I:128:ARG:HE	1.86	0.41
14:K:161:GLU:CA	14:K:163:PRO:HD3	2.49	0.41
18:O:125:LYS:HD2	18:O:135:PHE:CZ	2.55	0.41
21:R:110:ARG:CD	21:R:120:TYR:HE2	2.33	0.41
49:S2:1041:G:C6	49:S2:1042:A:C8	3.08	0.41
49:S2:1042:A:C2	49:S2:1043:G:C1'	3.03	0.41
49:S2:982:G:C2	49:S2:1045:U:H1'	2.55	0.41
49:S2:1126:G:C6	49:S2:1127:C:N4	2.88	0.41
49:S2:1175:G:C4	49:S2:1176:G:C8	3.08	0.41
49:S2:1168:G:C2	49:S2:1192:U:O2	2.72	0.41
49:S2:1280:G:C2	49:S2:1281:G:C8	3.08	0.41
49:S2:1283:C:C4'	62:SM:102:LYS:HE3	2.51	0.41
49:S2:1377:U:C4	50:SA:102:ARG:CZ	3.02	0.41
49:S2:1508:A:C6	49:S2:1510:G:H1'	2.54	0.41
49:S2:1551:U:C5'	49:S2:1558:C:H1'	2.50	0.41
49:S2:1757:G:N2	49:S2:1758:G:C4	2.88	0.41
49:S2:1785:C:HO2'	49:S2:1786:U:H6	1.63	0.41
49:S2:1715:A:C2	49:S2:1819:A:C2	3.08	0.41
49:S2:126:G:H22	49:S2:181:A:P	2.43	0.41
49:S2:187:G:C4	49:S2:188:C:C6	3.08	0.41
49:S2:23:G:C2	49:S2:24:C:C2	3.07	0.41
49:S2:552:G:C3'	49:S2:553:U:H6	2.33	0.41
53:SD:100:ALA:O	53:SD:104:SER:N	2.50	0.41
53:SD:28:GLU:HA	53:SD:28:GLU:OE1	2.20	0.41
54:SE:158:ASP:OD1	54:SE:158:ASP:N	2.52	0.41
56:SG:32:MET:CE	56:SG:63:MET:SD	3.08	0.41
59:SJ:115:PHE:HD1	59:SJ:116:LYS:N	2.17	0.41
70:SU:19:ARG:N	70:SU:19:ARG:HD2	2.35	0.41
23:T:136:ARG:O	23:T:137:GLU:HB2	2.19	0.41
48:4:275:LYS:CE	48:4:276:SER:CA	2.89	0.41
48:4:326:GLU:O	48:4:329:ASP:N	2.46	0.41
48:4:448:GLN:O	48:4:448:GLN:CD	2.59	0.41
48:4:56:PHE:CE1	48:4:456:ARG:N	2.69	0.41
48:4:543:GLU:CD	48:4:576:VAL:H	2.22	0.41
48:4:616:ASP:O	48:4:621:GLU:OE1	2.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1178:G:C5	1:5:1179:U:C5	3.08	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	2.74	0.41
1:5:128:C:H2'	1:5:129:C:C6	2.55	0.41
1:5:1329:G:C2'	1:5:1330:A:OP1	2.69	0.41
1:5:1380:G:O2'	1:5:1381:U:O5'	2.32	0.41
1:5:150:U:OP2	10:G:200:THR:OG1	2.39	0.41
1:5:1753:G:H2'	1:5:1755:C:C5'	2.50	0.41
1:5:1781:U:C4	1:5:1782:U:C4	3.09	0.41
1:5:1820:C:O2'	1:5:1821:G:O5'	2.26	0.41
1:5:1831:G:C2	1:5:1832:C:N1	2.88	0.41
1:5:1872:G:N1	1:5:1873:A:N7	2.68	0.41
1:5:1891:A:C2'	1:5:1892:A:C8	3.03	0.41
1:5:1912:G:C2	1:5:1913:C:C5	3.09	0.41
1:5:1922:G:C2	1:5:1923:A:C8	3.08	0.41
1:5:2055:G:C8	1:5:2055:G: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
1:5:2283:G:O2'	1:5:2284:G:H5'	2.20	0.41
1:5:2339:G:C2	1:5:2340:C:C2	3.09	0.41
1:5:2340:C:C4	1:5:2341:A:N7	2.88	0.41
1:5:238:C:O2	1:5:239:C:C6	2.73	0.41
1:5:2454:U:C2'	1:5:2454:U:O2	2.67	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
1:5:2562:G:C6	1:5:2564:G:OP2	2.73	0.41
1:5:29:G:O6	1:5:53:C:N3	2.53	0.41
1:5:324:A:C2	1:5:325:U:C2	3.08	0.41
1:5:3631:U:C2	1:5:3632:C:C6	3.08	0.41
1:5:370:U:C5	1:5:1637:A:C2	3.08	0.41
1:5:3739:C:C6	1:5:3739:C:H5'	2.50	0.41
1:5:3904:G:H5''	1:5:3905:A:OP2	2.20	0.41
1:5:4075:U:O2	1:5:4076:G:C8	2.73	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
1:5:4137:C:C2	1:5:4138:C:C6	3.07	0.41
1:5:4315:A:C6	1:5:4316:G:N7	2.88	0.41
1:5:4425:G:C2	1:5:4426:C:Cl'	3.04	0.41
1:5:4451:G:H3'	1:5:4522:G:H22	1.85	0.41
1:5:4489:G:C2	1:5:4490:C:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:483:G:N1	1:5:484:U:O4	2.54	0.41
1:5:4897:G:C2	1:5:4898:G:C4	3.08	0.41
1:5:496:G:N2	1:5:658:C:C2	2.87	0.41
1:5:684:G:O2'	1:5:685:C:O5'	2.37	0.41
1:5:689:U:H2'	1:5:689:U:O2	2.20	0.41
1:5:698:G:N1	1:5:699:C:C6	2.88	0.41
1:5:711:A:H1'	8:E:132:HIS:NE2	2.35	0.41
1:5:738:C:N4	1:5:739:G:O6	2.53	0.41
1:5:909:A:N3	1:5:910:G:C8	2.88	0.41
1:5:977:C:C3'	1:5:978:G:H5'	2.50	0.41
2:7:36:C:H2'	2:7:37:G:H8	1.85	0.41
3:8:111:U:O2	3:8:111:U:C3'	2.68	0.41
3:8:134:G:N2	3:8:135:C:C1'	2.82	0.41
4:A:226:ARG:CZ	4:A:226:ARG:HB2	2.50	0.41
7:D:202:GLN:HA	7:D:205:ALA:HB3	2.02	0.41
7:D:27:LYS:HE3	13:J:147:ARG:HH21	1.83	0.41
9:F:165:ASN:O	9:F:165:ASN:CG	2.58	0.41
10:G:29:ASN:HD22	10:G:29:ASN:HA	1.68	0.41
11:H:31:ARG:HE	11:H:87:GLY:HA3	1.86	0.41
12:I:181:PHE:CD1	12:I:190:LEU:HD13	2.55	0.41
14:K:29:ALA:N	14:K:30:PRO:HD2	2.35	0.41
15:L:21:ARG:CZ	15:L:21:ARG:HB2	3.56	0.41
17:N:44:ARG:HD2	17:N:120:TRP:O	2.21	0.41
49:S2:1157:G:C6	72:SW:75:ILE:HD12	2.55	0.41
49:S2:1181:A:O2'	49:S2:1182:A:C5'	2.68	0.41
49:S2:1223:A:H3'	49:S2:1223:A:C8	2.55	0.41
49:S2:1303:C:N4	49:S2:1304:U:C5	2.88	0.41
49:S2:1311:C:C6	49:S2:1312:G:C8	3.09	0.41
49:S2:1500:G:C3'	49:S2:1501:C:H6	2.31	0.41
49:S2:1541:G:C2	49:S2:1593:C:O2	2.74	0.41
49:S2:1563:G:C6	49:S2:1564:C:N4	2.88	0.41
49:S2:163:U:HO2'	49:S2:164:A:C5'	2.32	0.41
49:S2:165:G:C2'	49:S2:166:A:C8	2.86	0.41
49:S2:1709:G:N2	49:S2:1710:C:N1	2.67	0.41
49:S2:171:A:C5	49:S2:173:A:C8	3.08	0.41
49:S2:1744:G:C2	49:S2:1789:G:N1	2.88	0.41
49:S2:1774:C:C2	49:S2:1775:U:C6	3.08	0.41
49:S2:289:G:N2	49:S2:295:C:O2	2.53	0.41
49:S2:359:U:H2'	49:S2:359:U:O2	2.20	0.41
49:S2:370:G:H4'	49:S2:371:A:O5'	2.19	0.41
49:S2:403:G:C5	49:S2:404:G:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:436:G:O2'	49:S2:437:G:H5'	2.21	0.41
49:S2:445:A:N6	49:S2:446:G:C2	2.89	0.41
49:S2:440:G:N2	49:S2:454:U:N3	2.69	0.41
49:S2:462:C:N3	49:S2:463:C:C5	2.88	0.41
49:S2:501:C:C3'	49:S2:501:C:C2	3.04	0.41
49:S2:578:C:C4	49:S2:579:C:C5	3.08	0.41
49:S2:609:U:O2	49:S2:609:U:H2'	2.20	0.41
49:S2:75:G:H1	56:SG:159:ARG:NE	2.16	0.41
49:S2:827:A:N6	49:S2:828:G:C5	2.88	0.41
49:S2:931:C:H2'	49:S2:932:G:O4'	2.21	0.41
49:S2:997:A:O2'	49:S2:998:A:O5'	2.27	0.41
51:SB:139:CYS:SG	51:SB:140:VAL:N	2.93	0.41
10:G:264:LYS:HG3	51:SB:93:GLY:H	1.85	0.41
52:SC:209:VAL:HG11	52:SC:233:LEU:CD1	2.50	0.41
49:S2:688:U:P	57:SH:121:THR:HG1	2.43	0.41
64:SO:147:ARG:HH21	64:SO:150:ARG:HE	1.67	0.41
64:SO:147:ARG:HH21	64:SO:150:ARG:HH11	1.66	0.41
66:SQ:71:ARG:HG2	66:SQ:71:ARG:HH11	1.85	0.41
69:ST:92:PHE:C	69:ST:92:PHE:HD1	2.24	0.41
52:SC:84:PHE:HE1	71:SV:33:GLN:HE22	1.62	0.41
23:T:105:PHE:CE1	23:T:109:VAL:HG23	2.56	0.41
24:U:104:ALA:HA	24:U:110:TYR:HD1	1.86	0.41
26:W:57:ARG:NH1	26:W:57:ARG:HG2	2.35	0.41
28:Y:13:LYS:HB3	28:Y:17:ARG:HH21	1.86	0.41
48:4:259:LYS:HG3	48:4:264:ARG:HD3	2.03	0.41
48:4:79:TYR:HE2	48:4:351:LEU:HD12	1.75	0.41
48:4:532:PRO:CD	48:4:533:MET:N	2.82	0.41
48:4:581:GLU:OE2	48:4:695:GLU:CG	2.68	0.41
48:4:650:TRP:HZ3	48:4:679:VAL:HG11	1.84	0.41
48:4:745:TYR:OH	48:4:790:VAL:HG22	2.20	0.41
48:4:759:ILE:CG2	48:4:760:TYR:N	2.83	0.41
48:4:86:LEU:HD21	48:4:96:ALA:CA	2.49	0.41
1:5:986:C:C4	1:5:1068:G:C2	3.08	0.41
1:5:1288:G:O2'	1:5:1289:C:OP1	2.37	0.41
1:5:1334:A:C5	1:5:1335:G:N7	2.89	0.41
1:5:1371:A:C2	3:8:29:G:H1'	2.55	0.41
1:5:1545:G:HO2'	1:5:1546:C:C5'	2.33	0.41
1:5:168:C:N3	1:5:268:G:C2	2.89	0.41
1:5:1751:A:C6	1:5:1752:G:N9	2.89	0.41
1:5:1779:U:N3	1:5:1780:A:N7	2.68	0.41
1:5:1835:G:O2'	1:5:1836:G:OP2	2.22	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1895:G:C2'	1:5:1896:A:O5'	2.68	0.41
1:5:1899:G:C8	1:5:2278:G:N2	2.87	0.41
1:5:1945:G:C3'	1:5:1946:G:H5'	2.50	0.41
1:5:2342:G:N2	1:5:2344:U:O4'	2.53	0.41
1:5:2410:C:O2	1:5:2411:C:C5	2.73	0.41
1:5:268:G:C4	1:5:269:G:C8	3.08	0.41
1:5:2712:G:C2	1:5:2713:C:C5	3.08	0.41
1:5:2702:C:C2	1:5:2715:G:N1	2.88	0.41
1:5:2554:U:O4	1:5:2762:G:C2'	2.69	0.41
1:5:2788:U:O2	1:5:2798:A:H4'	2.21	0.41
1:5:2854:G:O6	1:5:2856:C:C1'	2.68	0.41
1:5:3901:A:OP1	1:5:3902:A:H5'	2.20	0.41
1:5:1676:C:O2'	1:5:3914:U:O4	2.34	0.41
1:5:4111:U:N3	1:5:4112:C:C6	2.88	0.41
1:5:4152:G:C6	1:5:4153:C:N4	2.88	0.41
1:5:4274:A:H2'	1:5:4275:G:O4'	2.20	0.41
1:5:4320:G:H2'	1:5:4321:U:O4'	2.20	0.41
1:5:442:G:H2'	1:5:443:G:C5'	2.50	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
1:5:4745:G:H2'	1:5:4746:C:H5	1.86	0.41
1:5:5005:G:H22	1:5:5041:G:H1'	1.85	0.41
1:5:5004:C:C2'	1:5:5005:G:O4'	2.67	0.41
1:5:5006:U:O4'	1:5:5042:A:C6	2.74	0.41
1:5:5047:C:N3	1:5:5048:A:N6	2.68	0.41
1:5:732:A:C5	1:5:733:A:N3	2.88	0.41
1:5:732:A:C8	1:5:732:A:H5''	2.55	0.41
1:5:742:G:H2'	1:5:742:G:N3	2.35	0.41
1:5:88:A:N1	1:5:97:G:H1'	2.35	0.41
2:7:113:G:C2	2:7:114:U:C5	3.08	0.41
2:7:51:G:C4	2:7:52:C:C5	3.08	0.41
2:7:98:G:C2	2:7:99:G:H1'	2.55	0.41
1:5:356:G:O2'	3:8:25:G:N3	2.51	0.41
4:A:10:LYS:HE2	4:A:16:PHE:CE2	2.55	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
8:E:236:TYR:CE2	8:E:238:ILE:HA	2.47	0.41
9:F:148:ASN:HD22	9:F:149:LEU:H	1.69	0.41
10:G:73:ARG:HH11	10:G:73:ARG:CB	2.32	0.41
11:H:159:ALA:O	11:H:163:GLN:HB2	2.20	0.41
11:H:38:PHE:HB3	11:H:41:ILE:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:148:PRO:HG2	14:K:149:HIS:H	1.85	0.41
14:K:41:LYS:O	14:K:44:ASP:HB3	2.20	0.41
15:L:45:ARG:HG2	15:L:46:ILE:HG23	2.03	0.41
16:M:86:TRP:CD1	16:M:92:ALA:HB2	2.55	0.41
17:N:182:HIS:O	17:N:183:THR:C	2.59	0.41
18:O:27:VAL:HG12	18:O:98:ALA:HB1	2.01	0.41
11:H:60:TRP:HE1	22:S:153:PRO:HG3	1.85	0.41
49:S2:1028:A:C6	49:S2:1029:G:H1'	2.56	0.41
49:S2:1029:G:C2	49:S2:1030:A:N9	2.88	0.41
49:S2:1136:U:C2'	49:S2:1137:U:O5'	2.68	0.41
49:S2:1252:C:H5''	49:S2:1254:C:C6	2.55	0.41
49:S2:1256:G:C8	53:SD:40:ARG:CD	36.77	0.41
49:S2:1368:U:O2	49:S2:1372:U:C4	2.73	0.41
49:S2:1457:U:C2	49:S2:1458:G:N7	2.89	0.41
49:S2:1573:G:C2	49:S2:1574:C:C1'	3.03	0.41
49:S2:1604:G:H2'	49:S2:1605:G:O4'	2.21	0.41
49:S2:1606:G:N3	49:S2:1632:G:N2	2.68	0.41
49:S2:1773:C:C2	49:S2:1774:C:C6	3.08	0.41
49:S2:189:U:C4	49:S2:190:G:C4	3.08	0.41
49:S2:302:A:O4'	58:SI:73:THR:HG23	2.19	0.41
49:S2:217:A:C4	49:S2:309:G:C6	3.05	0.41
49:S2:310:C:C2	49:S2:311:C:C4	3.09	0.41
49:S2:376:A:C4	49:S2:377:G:C8	3.08	0.41
49:S2:432:G:H2'	49:S2:432:G:N3	2.36	0.41
49:S2:563:G:C2'	49:S2:564:A:H5'	2.50	0.41
49:S2:601:G:O2'	49:S2:602:G:O5'	2.39	0.41
49:S2:642:U:C6	49:S2:642:U:C3'	3.04	0.41
49:S2:83:A:C6	49:S2:84:A:H1'	2.56	0.41
22:S:84:TYR:CE1	22:S:91:HIS:HB2	2.55	0.41
55:SF:138:ALA:HB2	55:SF:200:ALA:O	2.21	0.41
56:SG:223:LYS:O	56:SG:227:GLN:N	2.53	0.41
49:S2:443:U:C4'	56:SG:90:GLY:HA3	2.51	0.41
58:SI:142:SER:O	58:SI:144:LYS:N	2.54	0.41
58:SI:149:TYR:CD1	58:SI:149:TYR:N	2.89	0.41
49:S2:448:A:H8	58:SI:25:ARG:C	2.24	0.41
59:SJ:104:ASP:OD1	59:SJ:104:ASP:N	2.53	0.41
60:SK:11:ILE:CD1	60:SK:45:VAL:HG22	2.49	0.41
61:SL:35:ARG:NH1	61:SL:53:GLY:O	2.53	0.41
49:S2:1284:A:N1	62:SM:33:ARG:O	2.53	0.41
62:SM:34:GLY:O	62:SM:36:ARG:N	2.53	0.41
49:S2:996:A:N7	63:SN:113:PHE:CE2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:SQ:78:VAL:HA	66:SQ:81:ILE:HD12	2.02	0.41
68:SS:23:ARG:HD3	75:SZ:48:VAL:CB	2.50	0.41
68:SS:23:ARG:HD3	75:SZ:48:VAL:HB	2.02	0.41
49:S2:1402:A:O2'	70:SU:54:VAL:HG13	2.20	0.41
50:SA:63:ARG:NH2	71:SV:39:VAL:HG13	2.34	0.41
74:SY:57:VAL:HG11	74:SY:60:PHE:CE2	2.55	0.41
25:V:27:ASN:OD1	25:V:101:ASN:O	2.38	0.41
28:Y:11:ARG:HH22	28:Y:15:ARG:HD3	1.85	0.41
29:Z:114:ALA:HB1	29:Z:118:PHE:HE2	1.85	0.41
29:Z:123:LYS:O	29:Z:124:THR:CB	2.68	0.41
48:4:660:ASN:CG	48:4:697:MET:O	2.58	0.41
48:4:700:VAL:HG11	48:4:702:PHE:CZ	2.55	0.41
48:4:819:ILE:C	48:4:819:ILE:HD12	2.41	0.41
1:5:113:A:C5	1:5:114:G:C8	3.08	0.41
1:5:1233:G:N1	1:5:1234:G:C5	2.88	0.41
1:5:1265:G:C5	1:5:1266:G:C5	3.09	0.41
1:5:1341:U:H2'	1:5:1342:A:C8	2.56	0.41
1:5:1422:G:C2	1:5:1464:C:C2	3.09	0.41
1:5:1669:A:C2	1:5:1852:U:H4'	2.55	0.41
1:5:1696:C:H1'	1:5:1697:G:O5'	2.20	0.41
1:5:175:C:H2'	1:5:176:G:H8	1.86	0.41
1:5:1777:C:C2	1:5:1778:C:C5	3.09	0.41
1:5:2270:G:C6	1:5:2271:C:C4	3.09	0.41
1:5:2477:A:C2	1:5:2478:C:C5	3.09	0.41
1:5:2597:G:C2'	1:5:2598:A:O5'	2.68	0.41
1:5:2605:G:C2	1:5:2606:G:C4	3.09	0.41
1:5:2793:G:C6	1:5:2797:C:N4	2.88	0.41
1:5:2843:U:C2	1:5:2844:A:N7	2.72	0.41
1:5:2850:A:O2'	25:V:52:LEU:HD21	2.20	0.41
1:5:291:U:C2'	1:5:292:G:C2'	2.78	0.41
1:5:348:G:N2	1:5:350:C:N1	2.69	0.41
1:5:3727:A:C2'	1:5:3728:A:C8	3.03	0.41
1:5:4100:C:H42	1:5:4101:C:N4	2.18	0.41
1:5:4147:G:C5	1:5:4148:C:C5	3.09	0.41
1:5:4266:G:C6	1:5:4279:A:C5	3.08	0.41
1:5:426:A:C2'	1:5:427:A:O5'	2.68	0.41
1:5:4346:U:H2'	1:5:4347:G:O5'	2.20	0.41
1:5:4404:U:C4	1:5:4436:U:O4	2.74	0.41
1:5:465:G:N1	1:5:466:A:C5	2.88	0.41
1:5:4868:G:C3'	1:5:4869:U:H5''	2.50	0.41
1:5:4988:U:C2'	1:5:4988:U:O2	2.66	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5022:U:C4	1:5:5024:C:C5	3.08	0.41
1:5:5006:U:C2	1:5:5042:A:C8	3.08	0.41
1:5:505:G:N1	1:5:506:C:C4	2.89	0.41
1:5:671:G:C2	1:5:672:C:C5	3.09	0.41
1:5:708:G:N2	1:5:709:C:H1'	2.34	0.41
1:5:911:U:O2	1:5:911:U:H2'	2.21	0.41
1:5:919:C:N3	1:5:920:C:C4	2.88	0.41
2:7:59:G:C4	2:7:60:G:C8	3.08	0.41
1:5:417:G:H1'	3:8:17:A:N6	2.35	0.41
4:A:122:ASP:OD1	4:A:122:ASP:C	2.59	0.41
4:A:5:ILE:HB	4:A:208:GLU:O	2.19	0.41
6:C:33:ARG:HD3	6:C:122:TYR:OH	2.20	0.41
6:C:77:PRO:O	6:C:90:GLY:HA2	2.21	0.41
1:5:1281:G:O6	8:E:48:ARG:NH1	2.52	0.41
9:F:124:PHE:HD2	9:F:196:ILE:HG23	1.86	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:47:PRO:CB	12:I:171:TRP:NE1	2.82	0.41
6:C:284:MET:CE	20:Q:28:LEU:HB3	2.50	0.41
21:R:107:ARG:HH11	21:R:107:ARG:CG	2.98	0.41
49:S2:1040:G:C8	49:S2:1040:G:C5'	3.03	0.41
49:S2:1060:A:H4'	49:S2:1061:U:O5'	2.20	0.41
49:S2:1107:G:C6	49:S2:1108:G:N7	2.88	0.41
49:S2:1190:A:N3	49:S2:1714:U:O2'	2.40	0.41
49:S2:1412:C:O2'	49:S2:1413:G:C8	2.73	0.41
49:S2:1425:G:C6	49:S2:1426:U:H1'	2.56	0.41
49:S2:1528:G:C2	49:S2:1529:C:C6	3.09	0.41
49:S2:1537:A:C2	49:S2:1538:C:N1	2.89	0.41
49:S2:1562:C:C2	49:S2:1563:G:N7	2.87	0.41
49:S2:1669:G:N2	49:S2:1670:C:C2	2.88	0.41
49:S2:1788:A:H2'	49:S2:1789:G:O4'	2.20	0.41
49:S2:1806:A:C6	49:S2:1807:C:C5	3.08	0.41
49:S2:127:C:C6	49:S2:181:A:N6	2.88	0.41
49:S2:20:G:OP1	49:S2:620:G:C8	2.73	0.41
49:S2:27:A:C6	49:S2:28:U:C6	3.07	0.41
49:S2:344:U:N3	49:S2:345:U:C5	2.88	0.41
49:S2:369:C:O2	49:S2:369:C:C5'	2.69	0.41
49:S2:435:A:O4'	49:S2:435:A:OP2	2.39	0.41
49:S2:553:U:O4	49:S2:554:A:N6	2.53	0.41
49:S2:563:G:N2	49:S2:564:A:N9	2.68	0.41
49:S2:604:A:N1	49:S2:605:A:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:730:C:H2'	49:S2:731:G:O4'	2.20	0.41
49:S2:833:C:N3	49:S2:834:C:C6	2.89	0.41
49:S2:108:G:N3	49:S2:854:A:H2	2.18	0.41
49:S2:85:A:C4	49:S2:86:C:C5	3.08	0.41
21:R:172:ARG:CG	49:S2:909:G:OP1	2.68	0.41
54:SE:103:TYR:CE1	54:SE:189:LEU:HD11	2.54	0.41
55:SF:125:SER:CB	55:SF:199:VAL:HG12	2.50	0.41
55:SF:152:TRP:O	55:SF:156:THR:N	2.34	0.41
59:SJ:173:VAL:O	59:SJ:177:ASN:ND2	2.53	0.41
60:SK:15:LEU:HD21	60:SK:71:LEU:HD13	2.02	0.41
53:SD:71:ALA:HB1	60:SK:20:VAL:HG12	2.02	0.41
62:SM:69:LEU:HD22	62:SM:75:ASN:OD1	2.21	0.41
69:ST:127:GLY:O	69:ST:128:GLN:C	2.57	0.41
7:D:41:LYS:CG	23:T:93:ILE:HD11	2.45	0.41
27:X:89:LYS:HE3	27:X:93:ASN:HD22	1.84	0.41
27:X:96:LEU:HB3	27:X:98:PHE:HE1	1.86	0.41
48:4:224:THR:HG1	48:4:227:GLN:HG3	1.83	0.41
48:4:267:ASP:OD1	48:4:268:PRO:CD	2.68	0.41
48:4:410:PHE:CE2	48:4:530:SER:HB3	2.55	0.41
1:5:1076:C:C4	1:5:1077:C:C6	3.04	0.41
1:5:1187:G:N3	1:5:1188:C:H5	2.17	0.41
1:5:1212:G:C4	1:5:1213:G:C8	3.08	0.41
1:5:137:G:H2'	1:5:138:G:H8	1.86	0.41
1:5:1447:C:H2'	1:5:1448:G:H8	1.79	0.41
1:5:1511:U:H2'	1:5:1512:G:O4'	2.20	0.41
1:5:1556:C:H2'	1:5:1556:C:O2	2.19	0.41
1:5:1589:C:O2'	1:5:1590:C:O5'	2.27	0.41
1:5:1650:A:C3'	1:5:1651:G:H5''	2.50	0.41
1:5:167:C:C4	1:5:269:G:N1	2.89	0.41
1:5:1694:C:C2	1:5:1695:U:C6	3.09	0.41
1:5:187:U:H3'	1:5:245:C:O2	2.20	0.41
1:5:18:C:O2	1:5:19:G:C8	2.74	0.41
1:5:1971:C:C5	1:5:2000:G:C4	3.09	0.41
1:5:2021:G:C5	1:5:2022:C:N4	2.88	0.41
1:5:2027:U:O2'	1:5:2028:C:O4'	2.38	0.41
1:5:2068:C:C2'	1:5:2069:A:H5''	2.50	0.41
1:5:2108:G:N2	1:5:2125:C:C4	2.87	0.41
1:5:2392:C:O2	1:5:2392:C:C2'	2.68	0.41
1:5:258:G:C2	1:5:259:C:N1	2.89	0.41
1:5:2658:G:N2	1:5:2675:G:H2'	2.25	0.41
1:5:2682:G:C2	1:5:2683:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2688:G:N2	1:5:2689:C:N1	2.69	0.41
1:5:275:C:C2'	1:5:276:C:H5''	2.50	0.41
1:5:2782:U:H4'	1:5:2783:A:OP2	2.21	0.41
1:5:2851:G:N2	1:5:2856:C:N4	2.68	0.41
1:5:3590:G:N3	1:5:3591:C:H1'	2.35	0.41
1:5:3615:G:N3	1:5:3615:G:C2'	2.84	0.41
1:5:3692:A:C6	1:5:3693:U:C6	3.08	0.41
1:5:3733:A:C4	1:5:3734:U:C5	3.09	0.41
1:5:3756:A:N1	1:5:3757:G:C5	2.88	0.41
1:5:3869:C:N3	1:5:3870:C:C5	2.88	0.41
1:5:4068:U:N3	1:5:4069:U:H1'	2.36	0.41
1:5:4232:U:H1'	1:5:4233:A:OP2	2.21	0.41
1:5:4257:A:C8	13:J:60:PHE:HE2	2.39	0.41
1:5:4349:C:H3'	1:5:4350:C:H5''	2.03	0.41
1:5:4351:U:C2	1:5:4352:U:C6	3.08	0.41
1:5:4484:A:N1	1:5:4485:C:C4	2.89	0.41
1:5:4497:U:C4	1:5:4498:U:C6	3.08	0.41
1:5:4518:A:C3'	1:5:4519:C:H5'	2.50	0.41
1:5:4552:U:C2'	1:5:4553:A:O5'	2.68	0.41
1:5:4685:U:H2'	1:5:4686:G:O4'	2.20	0.41
1:5:4896:G:N3	1:5:4926:C:N4	2.66	0.41
1:5:4942:C:H4'	1:5:4944:C:P	2.61	0.41
1:5:5008:C:H2'	1:5:5009:G:O4'	2.20	0.41
1:5:5019:A:N1	1:5:5020:G:C5	2.88	0.41
1:5:718:C:H2'	1:5:718:C:O2	2.21	0.41
1:5:752:G:C2	1:5:753:C:H1'	2.55	0.41
2:7:29:C:O2'	2:7:30:C:H5'	2.21	0.41
3:8:30:U:C2	3:8:31:G:N7	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
1:5:3898:G:O3'	5:B:257:TRP:HA	2.21	0.41
5:B:219:VAL:HG21	5:B:333:LEU:HD21	2.02	0.41
6:C:100:ARG:HD3	6:C:100:ARG:C	2.41	0.41
6:C:110:ARG:O	6:C:113:ARG:NH1	2.53	0.41
6:C:183:VAL:HA	6:C:204:ARG:HB2	2.03	0.41
6:C:197:ARG:O	6:C:198:ASN:ND2	2.54	0.41
10:G:46:GLN:HG3	10:G:47:PRO:HD2	2.01	0.41
14:K:123:ARG:CB	14:K:129:ILE:HG13	2.20	0.41
14:K:141:CYS:O	14:K:148:PRO:CD	2.68	0.41
14:K:142:ASN:HB3	14:K:147:HIS:C	2.36	0.41
14:K:21:GLU:HB3	14:K:22:VAL:H	1.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:76:PHE:HD2	15:L:80:GLU:OE1	2.04	0.41
15:L:92:ARG:HB3	15:L:92:ARG:CZ	2.49	0.41
16:M:3:PHE:C	16:M:6:PHE:HZ	2.24	0.41
49:S2:1003:U:C2	49:S2:1004:U:C6	3.08	0.41
49:S2:1027:A:C6	49:S2:1028:A:H1'	2.56	0.41
49:S2:1052:A:C4	49:S2:1053:C:C5	3.09	0.41
49:S2:1129:G:H2'	49:S2:1130:G:C1'	2.51	0.41
49:S2:1130:G:C8	49:S2:1130:G:O5'	2.73	0.41
49:S2:1283:C:H4'	62:SM:102:LYS:CE	2.49	0.41
49:S2:1421:A:C2	49:S2:1422:G:H1'	2.56	0.41
49:S2:1449:G:N1	49:S2:1450:G:C5	2.88	0.41
49:S2:1452:A:C5	49:S2:1475:G:N1	2.89	0.41
49:S2:1552:G:C5	49:S2:1578:U:C4	3.07	0.41
49:S2:1631:U:C4	49:S2:1632:G:C5	3.08	0.41
49:S2:1826:G:C2	49:S2:1827:U:C4	3.09	0.41
49:S2:304:C:O3'	49:S2:306:C:H1'	2.20	0.41
49:S2:118:C:C1'	49:S2:445:A:C4	3.04	0.41
49:S2:449:A:O2'	54:SE:3:ARG:NH2	2.54	0.41
49:S2:632:C:C2	49:S2:633:C:C6	3.09	0.41
49:S2:84:A:C2	49:S2:85:A:C8	3.09	0.41
49:S2:871:U:C5'	49:S2:871:U:H6	2.33	0.41
49:S2:900:C:H2'	49:S2:901:G:H8	1.84	0.41
49:S2:55:U:N3	49:S2:91:A:O2'	2.49	0.41
49:S2:947:G:C2	49:S2:948:C:C6	3.09	0.41
57:SH:43:LEU:HD21	57:SH:71:SER:OG	2.20	0.41
60:SK:59:LYS:HB3	60:SK:70:TYR:HD2	1.85	0.41
63:SN:125:LEU:HD22	63:SN:129:TYR:HE2	1.83	0.41
53:SD:203:PRO:HG2	67:SR:42:PRO:HB3	2.01	0.41
69:ST:112:MET:HA	69:ST:127:GLY:CA	2.49	0.41
69:ST:10:ASN:HB2	69:ST:13:GLU:OE2	2.21	0.41
71:SV:53:TYR:OH	71:SV:73:ALA:HA	2.21	0.41
73:SX:87:ASN:ND2	73:SX:134:TYR:CE2	2.89	0.41
23:T:14:MET:HE2	23:T:15:PHE:CE1	2.56	0.41
23:T:43:LYS:HA	23:T:58:HIS:CE1	2.56	0.41
24:U:60:VAL:HG11	24:U:76:VAL:HG22	2.02	0.41
48:4:45:ILE:HG21	48:4:77:LEU:HA	2.00	0.41
48:4:503:PRO:HA	48:4:549:ALA:CA	2.48	0.41
48:4:543:GLU:CD	48:4:576:VAL:N	2.74	0.41
48:4:730:TYR:HB2	48:4:854:PHE:CZ	2.52	0.41
48:4:771:PHE:CB	48:4:785:LYS:O	2.69	0.41
48:4:797:THR:CG2	48:4:798:ALA:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1173:G:C4	1:5:1174:G:C8	3.08	0.41
1:5:1199:G:C6	1:5:1200:G:C5	3.08	0.41
1:5:1086:C:C2	1:5:1212:G:N1	2.89	0.41
1:5:1085:C:N3	1:5:1213:G:C6	2.88	0.41
1:5:1258:G:C4	1:5:1259:G:C8	3.09	0.41
1:5:1249:C:H1'	1:5:1262:G:N2	2.36	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
1:5:1437:C:H1'	1:5:2097:U:H5'	2.03	0.41
1:5:1629:G:N3	1:5:1631:A:C5	2.88	0.41
1:5:163:A:C6	1:5:164:G:C8	3.08	0.41
1:5:1757:U:O2	1:5:1758:G:C8	2.71	0.41
1:5:1760:G:C6	1:5:1761:G:N7	2.89	0.41
1:5:1912:G:C6	1:5:1913:C:C4	3.09	0.41
1:5:1943:A:H2'	1:5:1944:A:O4'	2.21	0.41
1:5:2000:G:C3'	1:5:2000:G:N3	2.84	0.41
1:5:2092:G:C8	1:5:2093:A:N1	2.89	0.41
1:5:2245:G:C4	1:5:2246:C:C6	3.08	0.41
1:5:2259:G:OP2	1:5:2262:G:O6	2.38	0.41
1:5:2263:A:O2'	1:5:2264:C:H2'	2.21	0.41
1:5:2409:U:H5	1:5:2410:C:C5	2.38	0.41
1:5:244:G:N1	1:5:246:G:N9	2.69	0.41
1:5:2529:A:C4	1:5:2532:C:C5	3.09	0.41
1:5:2715:G:C6	1:5:2716:C:N4	2.88	0.41
1:5:2439:G:H1'	1:5:2777:G:C2	2.54	0.41
1:5:3672:G:N7	1:5:3674:G:H1'	2.35	0.41
1:5:3698:G:C6	1:5:3699:C:N4	2.89	0.41
1:5:3702:A:C8	1:5:3774:A:C4	3.09	0.41
1:5:3779:A:C2	1:5:3816:A:C6	3.08	0.41
1:5:3800:A:C2	1:5:4496:A:H1'	2.55	0.41
1:5:3928:A:H5'	17:N:89:VAL:HG11	2.03	0.41
1:5:4113:U:C4	1:5:4114:C:C4	3.09	0.41
1:5:4162:C:O4'	1:5:4162:C:O2	2.38	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
1:5:4361:U:N3	1:5:4362:A:C8	2.88	0.41
1:5:4483:C:C2'	1:5:4484:A:O5'	2.68	0.41
1:5:4502:C:N4	1:5:4503:A:N7	2.68	0.41
1:5:4656:A:N3	1:5:4656:A:O4'	2.53	0.41
1:5:4683:U:H2'	1:5:4684:A:O5'	2.21	0.41
1:5:4914:C:C2	1:5:4915:G:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4946:U:C2'	1:5:4946:U:O2	2.69	0.41
1:5:4996:C:C4	1:5:4997:G:N7	2.88	0.41
1:5:68:U:O4	1:5:69:A:C4	2.74	0.41
1:5:723:A:C2'	1:5:724:C:O5'	2.68	0.41
1:5:924:C:N3	1:5:925:C:C5	2.89	0.41
2:7:55:A:C2	2:7:56:G:N7	2.89	0.41
2:7:8:G:N2	2:7:9:C:H1'	2.35	0.41
3:8:31:G:C4	3:8:32:C:C6	3.09	0.41
1:5:1281:G:H2'	6:C:323:ARG:HG2	2.03	0.41
8:E:250:ASP:C	8:E:250:ASP:OD1	2.58	0.41
1:5:979:C:H4'	8:E:39:HIS:CB	2.50	0.41
14:K:134:GLY:O	14:K:136:ALA:N	2.53	0.41
14:K:56:LEU:C	14:K:57:ARG:HG3	2.41	0.41
1:5:4586:G:OP1	18:O:72:HIS:CD2	2.74	0.41
1:5:4981:G:O2'	19:P:69:ARG:HB3	2.20	0.41
21:R:102:LEU:HD13	21:R:132:PHE:O	2.21	0.41
49:S2:1078:C:H2'	49:S2:1078:C:O2	2.20	0.41
49:S2:1122:A:C6	49:S2:1123:C:C4	3.06	0.41
49:S2:1175:G:C6	49:S2:1176:G:N7	2.89	0.41
49:S2:1203:G:C5	49:S2:1204:A:N7	2.88	0.41
49:S2:1257:G:H4'	49:S2:1258:A:C5'	2.51	0.41
49:S2:1270:G:O2'	49:S2:1299:A:N6	2.54	0.41
49:S2:1336:C:C2	49:S2:1337:C:C6	3.08	0.41
49:S2:1350:U:C2	49:S2:1351:G:C8	3.09	0.41
49:S2:1393:G:C2	49:S2:1394:G:N9	2.89	0.41
49:S2:1523:C:O2	49:S2:1523:C:H2'	2.21	0.41
49:S2:1587:G:N3	49:S2:1587:G:C2'	2.83	0.41
49:S2:165:G:H2'	49:S2:166:A:C8	2.50	0.41
49:S2:1771:G:N2	49:S2:1772:C:H1'	2.36	0.41
49:S2:1841:C:O2	49:S2:1841:C:C2'	2.67	0.41
49:S2:29:G:C2	49:S2:30:C:C5	3.09	0.41
49:S2:344:U:C2	49:S2:345:U:C6	3.08	0.41
49:S2:37:C:H2'	49:S2:37:C:O2	2.21	0.41
49:S2:408:A:C2'	49:S2:409:C:O5'	2.68	0.41
49:S2:426:A:N3	49:S2:426:A:C2'	2.82	0.41
49:S2:412:G:C2	49:S2:429:C:C2	3.09	0.41
49:S2:447:A:N6	49:S2:449:A:C4	2.89	0.41
49:S2:475:C:N4	49:S2:476:A:N7	2.69	0.41
49:S2:499:G:C6	49:S2:501:C:C1'	3.04	0.41
49:S2:511:U:H2'	49:S2:512:A:C8	2.56	0.41
49:S2:529:A:C2	49:S2:530:U:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:563:G:N1	49:S2:564:A:N7	2.69	0.41
49:S2:60:A:C2'	49:S2:61:A:C5'	2.99	0.41
49:S2:697:G:N1	49:S2:734:C:C2	2.89	0.41
49:S2:818:A:N6	49:S2:819:G:C5	2.89	0.41
49:S2:84:A:C5	49:S2:85:A:N7	2.89	0.41
50:SA:66:VAL:HG22	50:SA:186:ARG:NH2	2.36	0.41
54:SE:36:HIS:HD2	54:SE:84:ALA:C	2.24	0.41
49:S2:126:G:O6	56:SG:196:LYS:HA	2.20	0.41
58:SI:82:VAL:CG2	58:SI:103:LEU:HG	2.51	0.41
60:SK:82:TYR:C	60:SK:82:TYR:CD2	2.94	0.41
49:S2:1855:G:P	64:SO:147:ARG:HH22	2.43	0.41
64:SO:54:CYS:SG	64:SO:84:ARG:HB3	2.61	0.41
67:SR:41:ILE:HG21	67:SR:47:ARG:N	2.36	0.41
68:SS:42:HIS:HE1	69:ST:45:LEU:HD11	1.84	0.41
49:S2:574:A:H4'	74:SY:89:HIS:CB	2.51	0.41
48:4:283:LYS:HA	48:4:284:LYS:HZ3	1.85	0.41
48:4:371:LEU:O	48:4:495:ARG:HD3	2.21	0.41
48:4:398:ILE:HG23	48:4:485:ILE:CD1	2.51	0.41
48:4:660:ASN:CG	48:4:697:MET:C	2.74	0.41
48:4:766:LYS:HG2	48:4:796:PHE:CD1	2.56	0.41
48:4:815:ASP:CG	48:4:816:HIS:N	2.74	0.41
48:4:93:LYS:O	48:4:93:LYS:CE	2.69	0.41
1:5:1095:A:C5	1:5:1096:C:C5	3.09	0.41
1:5:1095:A:C6	1:5:1096:C:C4	3.08	0.41
1:5:1219:G:N2	1:5:1220:G:C4	2.88	0.41
1:5:1221:G:O2'	1:5:1222:A:P	2.78	0.41
1:5:1261:G:C2	1:5:1262:G:C4	3.09	0.41
1:5:1367:C:H5''	1:5:1367:C:C6	2.55	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	1.85	0.41
1:5:1697:G:C8	9:F:165:ASN:HA	2.55	0.41
1:5:186:G:H1'	1:5:187:U:C1'	2.51	0.41
1:5:1895:G:C6	1:5:1896:A:N3	2.88	0.41
1:5:1925:G:C2	1:5:1926:C:C6	3.09	0.41
1:5:2005:G:C2	1:5:2006:U:C6	3.08	0.41
1:5:2056:G:C2	1:5:2058:G:C6	3.09	0.41
1:5:2294:G:C6	1:5:2295:C:C4	3.09	0.41
1:5:2304:U:C4	1:5:2332:A:N7	2.88	0.41
1:5:2394:G:H1'	1:5:2397:G:N2	2.36	0.41
1:5:2479:G:O6	1:5:2480:G:O6	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2623:A:N1	1:5:2624:G:C5	2.89	0.41
1:5:2765:A:H5''	1:5:2766:A:H2	1.84	0.41
1:5:2767:U:H3'	1:5:2769:U:H6	1.86	0.41
1:5:2821:U:OP1	21:R:21:LYS:NZ	2.44	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
1:5:4095:G:N3	1:5:4096:C:C6	2.87	0.41
1:5:4097:G:C2	1:5:4098:A:C4	3.09	0.41
1:5:4101:C:N3	1:5:4102:C:C5	2.88	0.41
1:5:423:G:H2'	1:5:424:U:C6	2.55	0.41
1:5:4286:C:H2'	1:5:4287:G:C8	2.56	0.41
1:5:4413:C:H5	1:5:4429:C:N4	2.18	0.41
1:5:4608:G:C5	1:5:4609:G:C5	3.09	0.41
1:5:4906:C:O2	1:5:4916:G:C2	2.73	0.41
1:5:4981:G:C6	1:5:4982:A:C5	3.08	0.41
1:5:961:G:C4'	1:5:962:C:OP1	2.69	0.41
1:5:96:U:C4	1:5:97:G:C4	3.09	0.41
2:7:13:A:P	2:7:109:U:O2'	2.78	0.41
2:7:54:A:N7	13:J:12:MET:HG2	2.36	0.41
2:7:57:C:H2'	2:7:58:A:O4'	2.21	0.41
3:8:120:G:C2	3:8:121:G:N9	2.87	0.41
3:8:52:A:H2'	3:8:52:A:N3	2.36	0.41
4:A:211:PHE:HE1	4:A:219:ILE:HG23	1.81	0.41
14:K:118:HIS:O	14:K:120:SER:N	2.53	0.41
14:K:83:LYS:H	14:K:83:LYS:HG3	1.74	0.41
22:S:106:VAL:O	22:S:107:THR:C	2.59	0.41
49:S2:1185:C:C2'	49:S2:1185:C:O2	2.69	0.41
49:S2:1231:C:H2'	49:S2:1232:U:C6	2.56	0.41
49:S2:1281:G:N7	62:SM:95:ASP:OD2	2.54	0.41
49:S2:1307:U:H3'	49:S2:1308:U:H5''	2.03	0.41
49:S2:1344:A:N6	49:S2:1386:A:C4'	2.84	0.41
49:S2:1454:A:C5	49:S2:1476:A:N3	2.89	0.41
49:S2:1539:U:O4	49:S2:1540:G:O6	2.39	0.41
49:S2:1727:G:N2	49:S2:1728:U:H1'	2.36	0.41
49:S2:301:A:C6	49:S2:302:A:N7	2.89	0.41
49:S2:379:C:N4	49:S2:380:G:C6	2.88	0.41
49:S2:403:G:C6	49:S2:404:G:C8	3.08	0.41
49:S2:454:U:OP1	56:SG:94:ARG:N	2.49	0.41
49:S2:468:A:C6	49:S2:469:A:C5	3.08	0.41
49:S2:493:A:O4'	49:S2:574:A:H5'	2.20	0.41
49:S2:496:C:O2'	49:S2:497:C:C5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:558:G:H2'	49:S2:559:G:N9	2.36	0.41
49:S2:584:G:C2	49:S2:585:C:C2	3.09	0.41
49:S2:658:U:O2	73:SX:17:ARG:NH2	2.54	0.41
49:S2:996:A:O2'	49:S2:997:A:H5'	2.21	0.41
50:SA:125:THR:O	50:SA:147:LEU:HB2	2.21	0.41
51:SB:33:VAL:HG21	51:SB:67:PHE:CZ	2.53	0.41
61:SL:125:ILE:HB	61:SL:146:THR:CG2	2.51	0.41
62:SM:24:THR:HA	62:SM:27:ILE:HG22	2.02	0.41
62:SM:31:LEU:HD12	62:SM:33:ARG:CB	2.51	0.41
66:SQ:30:GLY:HA2	66:SQ:67:ASP:HA	2.02	0.41
72:SW:70:ASN:N	72:SW:70:ASN:OD1	2.54	0.41
48:4:533:MET:O	48:4:533:MET:SD	2.79	0.41
48:4:634:TYR:HH	48:4:639:TYR:HE2	1.68	0.41
48:4:762:VAL:CB	48:4:800:LEU:HD13	2.50	0.41
48:4:825:PHE:CZ	48:4:849:PRO:CG	2.96	0.41
1:5:101:A:N1	1:5:102:G:C4	2.88	0.41
1:5:1070:G:N1	1:5:1071:C:C6	2.89	0.41
1:5:1173:G:C5	1:5:1174:G:C8	3.09	0.41
1:5:1195:G:C2	1:5:1196:G:C5	3.09	0.41
1:5:1218:G:O5'	1:5:1219:G:OP2	2.39	0.41
1:5:1302:U:C4	1:5:1303:A:N7	2.89	0.41
1:5:1410:U:O2'	1:5:1411:C:OP2	2.33	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
1:5:1719:A:H5''	1:5:1719:A:N3	2.36	0.41
1:5:1760:G:O6	1:5:1772:C:N3	2.52	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
1:5:1887:G:C6	1:5:1890:G:N7	2.87	0.41
1:5:1989:G:N2	1:5:1990:A:C5	2.89	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
1:5:1667:G:H2'	1:5:2280:G:H22	1.86	0.41
1:5:2301:G:C4	1:5:2302:C:C6	3.08	0.41
1:5:2320:G:O2'	1:5:2321:G:OP2	2.39	0.41
1:5:2463:G:C2	1:5:2464:C:C2	3.09	0.41
1:5:2509:C:HO2'	1:5:2510:G:H5'	1.83	0.41
1:5:2591:A:H62	1:5:2753:G:N2	2.19	0.41
1:5:2605:G:C4	1:5:2606:G:C8	3.09	0.41
1:5:2727:C:C2	1:5:2728:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2823:G:H2'	1:5:2824:C:O4'	2.20	0.41
1:5:330:G:N2	1:5:331:G:C8	2.86	0.41
1:5:3653:A:H8	1:5:3653:A:P	2.43	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
1:5:3841:C:C2'	1:5:3841:C:O2	2.69	0.41
1:5:3882:C:C2	1:5:3883:U:C5	3.08	0.41
1:5:4100:C:N4	1:5:4101:C:H41	2.19	0.41
1:5:4171:C:H2'	1:5:4172:A:O4'	2.21	0.41
1:5:4258:C:N3	1:5:4259:C:C4	2.88	0.41
1:5:70:A:C6	1:5:4355:G:O4'	2.72	0.41
1:5:435:A:H61	1:5:1312:A:H2	1.66	0.41
1:5:4399:U:N3	1:5:4400:G:C8	2.89	0.41
1:5:4425:G:C5	1:5:4426:C:C6	3.08	0.41
1:5:4433:G:C2	1:5:4434:C:C2	3.09	0.41
1:5:4455:G:N2	1:5:4456:C:N1	2.69	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'	2.55	0.41
1:5:4735:G:N1	1:5:4736:C:C5	2.88	0.41
1:5:4737:G:C6	1:5:4738:C:C4	3.08	0.41
1:5:4865:C:C2	1:5:4866:C:C6	3.09	0.41
1:5:4754:G:N1	1:5:4880:C:C4	2.89	0.41
1:5:4896:G:C2	1:5:4897:G:N9	2.88	0.41
1:5:5036:C:C2	1:5:5037:U:C5	3.09	0.41
1:5:5006:U:N1	1:5:5042:A:N7	2.69	0.41
1:5:5047:C:N1	1:5:5048:A:C6	2.89	0.41
1:5:916:C:H2'	1:5:916:C:O2	2.20	0.41
1:5:957:G:H3'	1:5:2077:C:OP1	2.21	0.41
2:7:8:G:P	7:D:33:ARG:NH2	2.94	0.41
3:8:120:G:N1	3:8:121:G:N7	2.69	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
1:5:4990:C:N3	5:B:113:GLU:OE2	2.54	0.41
5:B:235:TRP:HE3	5:B:235:TRP:HA	1.85	0.41
8:E:153:HIS:CD2	8:E:183:ARG:NH1	2.88	0.41
10:G:108:GLN:NE2	10:G:108:GLN:CA	2.83	0.41
10:G:102:TYR:HH	10:G:208:ASN:H	1.69	0.41
10:G:53:ARG:HB3	10:G:54:PHE:CE2	2.55	0.41
14:K:142:ASN:CB	14:K:148:PRO:HA	2.51	0.41
14:K:62:LEU:HD21	14:K:73:VAL:HG11	2.02	0.41
14:K:80:LEU:HD23	14:K:83:LYS:HD2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:88:PRO:CB	14:K:89:PRO:HB3	2.49	0.41
16:M:86:TRP:NE1	16:M:92:ALA:HB2	2.35	0.41
17:N:150:TRP:C	17:N:150:TRP:HE3	2.23	0.41
18:O:191:ARG:HA	18:O:194:GLU:HB3	2.03	0.41
18:O:47:PHE:C	18:O:47:PHE:CD2	2.94	0.41
19:P:31:GLU:OE2	19:P:60:PHE:HA	2.21	0.41
21:R:38:ARG:O	21:R:39:GLN:HB3	2.21	0.41
49:S2:989:C:C2	49:S2:1001:A:N6	2.88	0.41
49:S2:1092:G:N1	49:S2:1093:A:N7	2.69	0.41
49:S2:1109:C:C2	49:S2:1110:G:C1'	2.98	0.41
49:S2:1231:C:C4	49:S2:1232:U:C4	3.09	0.41
49:S2:1265:A:O4'	49:S2:1326:U:O2'	2.38	0.41
49:S2:1278:A:C2'	49:S2:1279:C:H5'	2.51	0.41
49:S2:1332:A:C2	49:S2:1333:U:H1'	2.56	0.41
49:S2:1352:G:O4'	49:S2:1378:A:H2	2.04	0.41
49:S2:1395:C:C6	49:S2:1395:C:H5'	2.55	0.41
49:S2:1531:A:H2'	49:S2:1532:C:O4'	2.20	0.41
49:S2:1551:U:O5'	49:S2:1552:G:OP2	2.38	0.41
49:S2:1686:G:C4	49:S2:1687:C:C5	3.09	0.41
49:S2:1723:G:C2	49:S2:1724:A:C8	3.08	0.41
49:S2:1838:U:H6	49:S2:1838:U:O5'	2.04	0.41
49:S2:1840:U:H2'	49:S2:1840:U:O2	2.21	0.41
49:S2:1846:G:C6	49:S2:1847:G:C5	3.09	0.41
49:S2:184:G:N1	49:S2:185:G:C5	2.89	0.41
49:S2:18:C:O2	49:S2:18:C:H2'	2.19	0.41
49:S2:200:G:C4	49:S2:201:C:C6	3.09	0.41
49:S2:343:A:C6	49:S2:344:U:C6	3.09	0.41
49:S2:386:C:N4	49:S2:387:C:N4	2.69	0.41
49:S2:478:G:H2'	49:S2:479:C:H6	1.86	0.41
49:S2:61:A:H5'	49:S2:61:A:C8	2.56	0.41
49:S2:597:G:N1	49:S2:640:A:C6	2.89	0.41
49:S2:665:G:C1'	49:S2:670:A:N3	2.84	0.41
49:S2:901:G:C2	49:S2:902:G:C4	3.09	0.41
22:S:29:ARG:HH12	23:T:150:LEU:CA	2.34	0.41
50:SA:111:GLN:HA	50:SA:116:PHE:CD2	2.55	0.41
56:SG:5:ILE:O	56:SG:13:GLN:HA	2.21	0.41
49:S2:441:C:OP2	58:SI:2:GLY:HA3	2.20	0.41
59:SJ:149:VAL:HG11	59:SJ:157:ILE:HD11	2.03	0.41
59:SJ:63:LEU:O	59:SJ:70:ARG:NH1	2.53	0.41
59:SJ:94:LEU:HD12	59:SJ:97:ILE:HD12	2.03	0.41
61:SL:117:PHE:CE2	61:SL:144:LYS:HA	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SN:114:ARG:O	63:SN:118:ILE:CG1	2.68	0.41
49:S2:1649:U:H4'	66:SQ:138:ARG:CG	2.51	0.41
67:SR:59:LYS:O	67:SR:63:ARG:HB2	2.21	0.41
68:SS:61:GLU:HA	68:SS:64:VAL:HG22	2.02	0.41
69:ST:56:ARG:HD3	69:ST:79:TYR:CD2	2.54	0.41
71:SV:24:ILE:HD11	71:SV:56:CYS:HA	2.02	0.41
48:4:194:GLU:CD	48:4:195:GLY:N	2.75	0.41
48:4:265:TYR:HD1	48:4:265:TYR:N	2.17	0.41
48:4:324:ASP:N	48:4:324:ASP:OD1	2.54	0.41
48:4:434:TYR:CD1	48:4:434:TYR:C	2.95	0.41
48:4:748:GLU:CD	48:4:811:GLN:HE21	2.24	0.41
1:5:120:A:O4'	1:5:121:A:N1	2.54	0.41
1:5:1234:G:C4	1:5:1235:G:N7	2.89	0.41
1:5:1351:G:C6	1:5:1352:C:C4	3.09	0.41
1:5:1379:C:H4'	1:5:1380:G:C1'	2.51	0.41
1:5:1446:C:N3	1:5:1447:C:C5	2.88	0.41
1:5:1478:C:O2	1:5:1478:C:H2'	2.20	0.41
1:5:1571:G:H2'	1:5:1571:G:N3	2.36	0.41
1:5:1620:U:H2'	1:5:1621:A:H8	1.85	0.41
1:5:1734:G:H2'	23:T:13:TYR:CZ	2.56	0.41
1:5:1780:A:N6	1:5:1781:U:C6	2.88	0.41
1:5:1795:A:N3	2:7:79:U:O2'	2.50	0.41
1:5:1869:G:C8	1:5:3877:A:C6	3.09	0.41
1:5:183:C:C2	1:5:189:G:O6	2.74	0.41
1:5:1992:U:O2	1:5:1992:U:C2'	2.68	0.41
1:5:2059:C:O2	1:5:2060:G:C8	2.74	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
1:5:2399:G:C2	1:5:2400:G:C5	3.09	0.41
1:5:250:C:H2'	1:5:251:C:O4'	2.20	0.41
1:5:2606:G:C4	1:5:2607:C:C6	3.08	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
1:5:2732: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
1:5:2752:G:H8	1:5:2752:G:H5''	1.85	0.41
1:5:3641:U:C5	1:5:3646:A:N7	2.89	0.41
1:5:3705:G:C5	1:5:3706:C:C4	3.08	0.41
1:5:3786:U:C5'	1:5:3786:U:H6	2.33	0.41
1:5:3804:G:N2	1:5:3805:U:H1'	2.35	0.41
1:5:381:U:C4'	1:5:414:C:H2'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4369:A:C2	1:5:4370:G:N9	2.87	0.41
1:5:4459:U:H4'	5:B:265:SER:O	2.21	0.41
1:5:450:G:H22	1:5:1294:A:C2'	2.34	0.41
1:5:4550:G:C5	1:5:4551:U:C5	3.07	0.41
1:5:4661:G:C2	1:5:4662:C:C2	3.09	0.41
1:5:466:A:N3	1:5:467:U:C5	2.86	0.41
1:5:4745:G:C2'	1:5:4746:C:H5	2.32	0.41
1:5:4748:U:H2'	1:5:4749:C:O4'	2.21	0.41
1:5:4913:G:HO2'	1:5:4914:C:C1'	2.34	0.41
1:5:4914:C:H2'	1:5:4915:G:O4'	2.21	0.41
1:5:5061:A:O4'	1:5:5062:G:H5''	2.20	0.41
1:5:82:U:H2'	1:5:82:U:O2	2.19	0.41
1:5:86:U:C4	1:5:97:G:N1	2.89	0.41
1:5:911:U:C4	1:5:912:G:N7	2.89	0.41
2:7:16:A:C4	2:7:17:C:C6	3.09	0.41
3:8:117:C:C4	3:8:118:C:H5	2.36	0.41
3:8:31:G:C2	3:8:32:C:C2	3.09	0.41
4:A:104:VAL:HG12	4:A:146:THR:HG21	2.03	0.41
4:A:218:HIS:ND1	4:A:218:HIS:C	2.74	0.41
6:C:172:LYS:CE	6:C:177:TRP:HE1	2.34	0.41
6:C:156:ASP:OD1	6:C:254:GLU:HB3	2.20	0.41
2:7:119:U:C4	7:D:261:VAL:HG21	2.56	0.41
8:E:42:ARG:O	8:E:43:ASN:C	2.59	0.41
9:F:58:HIS:O	9:F:60:HIS:N	2.53	0.41
10:G:108:GLN:O	10:G:112:GLN:NE2	2.54	0.41
14:K:111:ASN:C	14:K:114:ARG:HG2	2.40	0.41
14:K:39:PRO:HB2	14:K:40:LYS:H	1.44	0.41
14:K:59:THR:O	14:K:80:LEU:HD11	2.21	0.41
14:K:82:ILE:HA	14:K:85:LEU:HD12	2.03	0.41
16:M:9:VAL:HG11	16:M:66:HIS:HA	2.02	0.41
21:R:30:ASN:N	21:R:30:ASN:OD1	3.07	0.41
1:5:4871:C:C5	22:S:176:PHE:CD2	3.08	0.41
49:S2:99:A:N3	49:S2:100:U:C6	2.89	0.41
49:S2:1040:G:C8	49:S2:1040:G:H5''	2.55	0.41
49:S2:1124:C:N3	49:S2:1125:C:C6	2.81	0.41
49:S2:1278:A:C4	49:S2:1279:C:C5	3.09	0.41
49:S2:1281:G:C5	49:S2:1282:A:C8	3.08	0.41
49:S2:1302:G:N1	49:S2:1305:C:N4	2.69	0.41
49:S2:1474:A:C2'	49:S2:1475:G:O5'	2.69	0.41
49:S2:1541:G:N2	49:S2:1593:C:H1'	2.35	0.41
49:S2:164:A:H2'	49:S2:165:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:292:A:C2	61:SL:69:ARG:HB3	2.56	0.41
49:S2:381:C:N1	49:S2:382:C:N4	2.69	0.41
49:S2:456:C:H2'	49:S2:457:C:O4'	2.21	0.41
49:S2:531:A:C2	49:S2:532:C:H1'	2.56	0.41
49:S2:534:G:C2	49:S2:535:G:C5	3.09	0.41
49:S2:610:G:N1	49:S2:611:G:C5	2.89	0.41
49:S2:746:C:C4	49:S2:747:U:C5	3.08	0.41
49:S2:942:G:OP1	51:SB:216:LYS:NZ	2.44	0.41
49:S2:959:G:C8	64:SO:38:ASN:ND2	2.89	0.41
51:SB:171:ILE:O	51:SB:175:GLU:OE2	2.38	0.41
53:SD:106:ARG:HG2	53:SD:175:VAL:HB	2.02	0.41
53:SD:225:GLU:OE2	53:SD:226:GLN:N	2.53	0.41
53:SD:51:LEU:HG	53:SD:91:VAL:HG22	2.03	0.41
57:SH:144:ILE:CG2	57:SH:152:ARG:HH12	2.34	0.41
57:SH:144:ILE:HG21	57:SH:152:ARG:HH12	1.85	0.41
59:SJ:63:LEU:HD11	59:SJ:69:ARG:NH2	2.35	0.41
63:SN:132:LYS:HE2	63:SN:132:LYS:HA	2.03	0.41
49:S2:975:G:C5'	64:SO:32:HIS:CD2	3.04	0.41
66:SQ:102:GLU:N	66:SQ:102:GLU:OE2	2.53	0.41
66:SQ:47:LEU:HD22	66:SQ:81:ILE:HD13	2.02	0.41
49:S2:1447:G:O2'	70:SU:33:GLU:OE2	2.30	0.41
52:SC:170:TRP:CH2	72:SW:97:ARG:CD	3.03	0.41
23:T:9:ARG:HG3	23:T:10:GLY:N	2.28	0.41
48:4:73:THR:HG22	48:4:104:ASP:OD2	2.20	0.41
48:4:105:SER:HA	48:4:106:PRO:HD3	1.83	0.41
48:4:150:ARG:CA	48:4:200:MET:CE	2.99	0.41
48:4:507:VAL:CG1	48:4:554:LEU:CD2	2.99	0.41
1:5:1253:G:N2	1:5:1256:G:C8	2.89	0.41
1:5:1257:A:C5	1:5:1258:G:C8	3.09	0.41
1:5:1275:G:C5	1:5:1276:C:C5	3.09	0.41
1:5:1308:C:C2	1:5:1309:C:C6	3.10	0.41
1:5:1384:C:O2	1:5:1505:C:H4'	2.21	0.41
1:5:1570:G:C4	1:5:1571:G:C8	3.09	0.41
1:5:1675:C:C2	1:5:1681:G:N2	2.89	0.41
1:5:1782:U:C2	1:5:1783:C:C5	3.09	0.41
1:5:1949:U:N3	1:5:1950:U:H5	2.15	0.41
1:5:1979:A:C2	1:5:1982:G:N7	2.89	0.41
1:5:209:U:O2	1:5:233:U:N3	2.54	0.41
1:5:2314:G:N1	1:5:2326:G:C8	2.89	0.41
1:5:2330:G:C2'	1:5:2331:G:O4'	2.69	0.41
1:5:2477:A:N1	1:5:2478:C:C4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2560:C:H2'	1:5:2560:C:O2	2.20	0.41
1:5:2614:C:H1'	1:5:2726:G:N2	2.36	0.41
1:5:2714:G:N2	1:5:2715:G:C5	2.89	0.41
1:5:2724:G:N1	1:5:2726:G:C6	2.89	0.41
1:5:272:U:O2	1:5:272:U:H2'	2.21	0.41
1:5:289:C:O2	1:5:290:U:C6	2.73	0.41
1:5:324:A:C2'	1:5:325:U:H5'	2.51	0.41
1:5:3656:A:C2	1:5:3657:U:C4	3.08	0.41
1:5:3683:C:H4'	1:5:3684:G:OP2	2.21	0.41
1:5:3703:G:C4	1:5:3704:U:C6	3.09	0.41
1:5:3724:A:C6	1:5:3725:G:C6	3.09	0.41
1:5:3747:A:O4'	1:5:3817:A:H2'	2.21	0.41
1:5:3774:A:O2'	1:5:3775:A:N3	2.44	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
1:5:4097:G:C2	1:5:4098:A:N9	2.86	0.41
1:5:4100:C:N4	1:5:4101:C:N4	2.69	0.41
1:5:4123:C:H3'	1:5:4124:G:H8	1.84	0.41
1:5:4184:G:N2	1:5:4185:G:H1'	2.36	0.41
1:5:4313:A:C2	1:5:4314:C:N1	2.89	0.41
1:5:431:G:C1'	1:5:3889:G:C2	3.03	0.41
1:5:4372:U:O2	1:5:4377:G:H1'	2.20	0.41
1:5:4524:G:N3	1:5:4525:C:C6	2.89	0.41
1:5:454:U:H4'	1:5:455:C:C5'	2.51	0.41
1:5:4741:C:H2'	1:5:4741:C:O2	2.19	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
1:5:511:C:H2'	1:5:512:U:H6	1.86	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
1:5:993:G:N3	1:5:994:G:C8	2.89	0.41
2:7:34:C:H2'	2:7:34:C:O2	2.21	0.41
2:7:45:U:O3'	7:D:157:ASN:HB2	2.20	0.41
2:7:56:G:C2'	2:7:57:C:O4'	2.64	0.41
2:7:82:G:C2	2:7:95:C:N3	2.89	0.41
3:8:147:G:C2	3:8:148:A:C8	3.09	0.41
3:8:63:U:O2	3:8:63:U:C3'	2.69	0.41
1:5:4615:C:H5''	5:B:357:ARG:HD2	2.03	0.41
6:C:142:HIS:HD2	6:C:249:PHE:HB3	1.85	0.41
6:C:71:ARG:CZ	6:C:71:ARG:HB3	2.51	0.41
9:F:100:ILE:N	9:F:101:ASN:OD1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:194:HIS:C	9:F:196:ILE:N	2.74	0.41
10:G:136:LEU:HD21	10:G:204:PHE:HE1	1.82	0.41
11:H:34:LEU:HD21	11:H:150:ASP:OD1	2.21	0.41
11:H:59:LYS:O	11:H:59:LYS:HE3	2.21	0.41
11:H:55:LEU:HD22	11:H:77:VAL:HG11	2.03	0.41
11:H:96:TYR:CE2	11:H:100:PRO:CA	2.99	0.41
14:K:97:ASN:OD1	14:K:98:ILE:HG13	2.21	0.41
15:L:145:LYS:HG3	15:L:146:LEU:N	2.36	0.41
15:L:179:PHE:CE1	15:L:183:ARG:HD3	2.56	0.41
17:N:61:ILE:HD12	17:N:131:GLU:OE2	2.20	0.41
17:N:135:ILE:CG2	17:N:142:ILE:HD13	2.50	0.41
49:S2:1053:C:H2'	49:S2:1054:G:H5'	2.03	0.41
49:S2:1313:A:H2	62:SM:102:LYS:HZ1	1.69	0.41
49:S2:1449:G:C2	49:S2:1450:G:N9	2.89	0.41
49:S2:1466:G:C2	49:S2:1467:C:C2	3.09	0.41
49:S2:1524:G:N2	49:S2:1525:C:C2	2.89	0.41
49:S2:1545:A:C6	49:S2:1588:A:C5	3.08	0.41
49:S2:155:G:C6	49:S2:156:G:C8	3.09	0.41
49:S2:1571:G:H2'	49:S2:1572:C:O4'	2.21	0.41
49:S2:1578:U:H6	53:SD:6:SER:HA	1.79	0.41
49:S2:1628:C:H2'	49:S2:1629:C:O4'	2.21	0.41
49:S2:1709:G:C4	49:S2:1710:C:C6	3.09	0.41
49:S2:217:A:H1'	49:S2:309:G:N2	2.36	0.41
49:S2:316:G:C2	49:S2:317:C:N3	2.89	0.41
49:S2:338:G:N1	49:S2:339:A:C5	2.89	0.41
49:S2:431:G:C6	49:S2:432:G:C5	3.09	0.41
49:S2:448:A:C8	58:SI:26:LYS:HA	2.56	0.41
49:S2:476:A:C5	49:S2:477:G:C8	3.08	0.41
49:S2:533:A:N1	49:S2:534:G:C5	2.89	0.41
49:S2:569:A:C2	49:S2:570:C:C6	3.09	0.41
49:S2:592:C:O4'	49:S2:592:C:O2	2.39	0.41
49:S2:834:C:H3'	49:S2:835:C:C4'	2.51	0.41
49:S2:85:A:O2'	49:S2:149:A:H1'	2.21	0.41
22:S:28:TYR:CE2	22:S:52:LYS:HG3	2.56	0.41
49:S2:9:U:C6	49:S2:9:U:H3'	2.56	0.41
50:SA:157:VAL:O	50:SA:158:ASP:C	2.59	0.41
53:SD:157:MET:CG	53:SD:159:HIS:CE1	3.01	0.41
53:SD:162:ASP:O	53:SD:163:PRO:C	2.60	0.41
57:SH:83:LEU:HD12	57:SH:84:GLU:N	2.36	0.41
64:SO:150:ARG:CG	64:SO:150:ARG:HH21	2.30	0.41
64:SO:64:ALA:HB3	64:SO:67:ASP:OD1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SP:21:ASP:OD1	65:SP:21:ASP:N	2.54	0.41
68:SS:27:ALA:HA	68:SS:41:ALA:HB1	2.02	0.41
73:SX:103:ALA:HB2	73:SX:123:VAL:HG21	2.02	0.41
73:SX:61:GLN:C	73:SX:61:GLN:CD	2.80	0.41
26:W:21:TYR:HB2	26:W:31:PHE:CE2	2.56	0.41
28:Y:18:HIS:C	28:Y:20:ASN:H	2.24	0.41
48:4:402:VAL:O	48:4:403:PRO:C	2.60	0.40
48:4:470:VAL:CG2	48:4:471:GLY:N	2.82	0.40
48:4:578:SER:O	48:4:579:TYR:CG	2.74	0.40
48:4:605:LYS:HD2	48:4:705:HIS:NE2	2.36	0.40
48:4:745:TYR:CB	48:4:813:VAL:O	2.66	0.40
1:5:1212:G:N2	1:5:1213:G:C4	2.89	0.40
1:5:1388:A:C6	1:5:1389:U:C2	3.09	0.40
1:5:147:A:H2'	1:5:148:C:C5'	2.51	0.40
1:5:1634:A:N1	1:5:1635:C:C5	2.88	0.40
1:5:1697:G:H8	9:F:165:ASN:HA	1.86	0.40
1:5:1817:U:C2'	1:5:1818:G:O5'	2.69	0.40
1:5:189:G:N2	1:5:190:G:C8	2.90	0.40
1:5:2027:U:H2'	1:5:2028:C:O4'	2.20	0.40
1:5:2046:G:N9	18:O:60:LYS:HD3	2.36	0.40
1:5:2264:C:HO2'	1:5:2265:G:H2'	1.82	0.40
1:5:231:U:O2'	28:Y:100:HIS:HD2	2.04	0.40
1:5:225:G:N3	1:5:243:A:C2	2.89	0.40
1:5:2470:C:C6	1:5:2470:C:C3'	3.04	0.40
1:5:2498:C:N3	1:5:2499:C:C6	2.83	0.40
1:5:190:G:N2	1:5:252:C:H1'	2.36	0.40
1:5:2549:G:C6	1:5:2550:G:C5	3.09	0.40
1:5:2618:G:C6	1:5:2619:G:N7	2.88	0.40
1:5:2664:G:C6	1:5:2665:U:C2	3.09	0.40
1:5:2688:G:C2	1:5:2689:C:C4	3.08	0.40
1:5:2791:C:O2	1:5:2792:C:C6	2.74	0.40
1:5:2830:G:C2	1:5:2831:G:C5	3.09	0.40
1:5:2838:G:C8	1:5:2838:G:H5''	2.56	0.40
1:5:2907:G:C2	1:5:3588:C:C2	3.10	0.40
1:5:349:A:H2'	1:5:349:A:O5'	2.21	0.40
1:5:3740:G:C2	1:5:3741:C:O4'	2.74	0.40
1:5:3883:U:O2'	1:5:3884:U:C5'	2.70	0.40
1:5:4125:C:C5	4:A:69:PHE:CD2	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
1:5:4546:A:N7	4:A:215:ASN:ND2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4552:U:O2	1:5:4553:A:C8	2.74	0.40
1:5:4665:A:C6	1:5:4666:G:C5	3.09	0.40
1:5:4742:G:H2'	1:5:4742:G:N3	2.35	0.40
1:5:4747:C:HO2'	1:5:4748:U:H5'	1.84	0.40
1:5:4897:G:C2	1:5:4924:C:C2	3.09	0.40
1:5:4905:C:C4	1:5:4906:C:C5	3.09	0.40
1:5:4997:G:N1	1:5:4998:G:C4	2.89	0.40
1:5:5021:C:C4	1:5:5022:U:C5	3.09	0.40
1:5:496:G:N1	1:5:658:C:N3	2.69	0.40
1:5:715:G:N2	1:5:954:C:C2	2.89	0.40
2:7:69:U:O2	2:7:70:G:C8	2.74	0.40
3:8:42:G:N2	3:8:43:A:H1'	2.36	0.40
3:8:75:G:C2	3:8:76:C:C2	3.09	0.40
3:8:70:G:C2	3:8:87:G:N2	2.89	0.40
3:8:94:G:C4'	3:8:94:G:C8	3.03	0.40
3:8:97:A:C6	3:8:98:C:C4	3.09	0.40
4:A:225:ILE:HD12	4:A:233:ARG:CZ	2.50	0.40
5:B:136:LYS:C	5:B:138:GLN:H	2.24	0.40
5:B:195:ASP:O	5:B:196:TRP:HB2	2.21	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
10:G:32:PHE:CD2	29:Z:55:ALA:HB2	2.56	0.40
10:G:32:PHE:CD1	10:G:32:PHE:N	2.89	0.40
1:5:1995:G:H4'	14:K:128:THR:HB	2.02	0.40
14:K:56:LEU:O	14:K:91:ASP:OD1	2.39	0.40
14:K:92:ARG:CG	14:K:95:GLN:OE1	2.68	0.40
15:L:27:ASN:O	15:L:28:GLN:C	2.59	0.40
19:P:128:ARG:NH1	19:P:136:ILE:HG21	2.36	0.40
21:R:74:ARG:O	21:R:75:HIS:HB2	2.21	0.40
21:R:8:LYS:HG3	21:R:22:VAL:CG1	2.50	0.40
49:S2:1085:C:N4	49:S2:1087:A:H1'	2.34	0.40
49:S2:14:C:C2	49:S2:1198:G:C2	3.09	0.40
49:S2:1333:U:O2	49:S2:1333:U:H2'	2.20	0.40
49:S2:1373:C:H4'	67:SR:10:LYS:CE	2.51	0.40
49:S2:1544:C:O2	66:SQ:76:GLY:HA2	2.21	0.40
49:S2:1545:A:C2	49:S2:1546:G:N1	2.89	0.40
49:S2:1563:G:C2	49:S2:1564:C:C6	3.10	0.40
49:S2:1621:U:O2'	49:S2:1622:U:H2'	2.21	0.40
49:S2:1700:C:C2	49:S2:1834:A:N6	2.89	0.40
49:S2:62:G:C1'	49:S2:172:U:O2	2.66	0.40
49:S2:1757:G:N3	49:S2:1757:G:H2'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1839:U:H2'	49:S2:1840:U:H6	1.85	0.40
49:S2:113:G:N2	49:S2:293:C:C2	2.89	0.40
49:S2:381:C:O2'	49:S2:382:C:C6	2.67	0.40
49:S2:390:C:C2	49:S2:391:C:C6	3.09	0.40
49:S2:92:A:C2	49:S2:447:A:C2	3.09	0.40
49:S2:536:A:N6	49:S2:547:G:H21	2.19	0.40
49:S2:598:G:N1	49:S2:639:C:C4	2.89	0.40
49:S2:673:G:C2	49:S2:674:C:C2	3.08	0.40
49:S2:689:U:H2'	49:S2:690:G:O4'	2.21	0.40
49:S2:832:G:C2	49:S2:833:C:C2	3.08	0.40
49:S2:855:G:C5	49:S2:856:C:C5	3.09	0.40
49:S2:949:G:H2'	49:S2:950:C:O4'	2.20	0.40
49:S2:975:G:C6	49:S2:976:G:C5	3.09	0.40
9:F:83:PHE:CD2	22:S:62:VAL:HG11	2.56	0.40
49:S2:1378:A:N6	50:SA:106:GLY:N	2.69	0.40
51:SB:137:LEU:HD11	51:SB:176:VAL:HG21	2.02	0.40
52:SC:65:LYS:HB2	52:SC:273:LEU:HD22	2.02	0.40
56:SG:156:TYR:CD1	56:SG:156:TYR:N	2.89	0.40
57:SH:122:LEU:HD13	57:SH:126:HIS:CD2	2.56	0.40
57:SH:148:LEU:HD23	57:SH:148:LEU:O	2.21	0.40
59:SJ:39:ASN:CG	59:SJ:40:LYS:N	2.74	0.40
63:SN:87:ASP:OD2	63:SN:125:LEU:HD11	2.22	0.40
65:SP:53:GLN:N	65:SP:53:GLN:CD	2.74	0.40
65:SP:60:LEU:HD13	65:SP:89:MET:HG2	2.04	0.40
68:SS:117:ILE:O	68:SS:119:ALA:N	2.55	0.40
49:S2:1668:U:H4'	70:SU:77:TRP:CZ3	2.56	0.40
75:SZ:63:PRO:HA	75:SZ:112:ASN:OD1	2.21	0.40
28:Y:8:THR:O	28:Y:9:SER:CB	2.69	0.40
48:4:112:SER:C	48:4:115:VAL:H	2.20	0.40
48:4:568:ILE:HG23	48:4:569:PRO:HD2	2.04	0.40
48:4:650:TRP:CZ3	48:4:679:VAL:HG11	2.57	0.40
48:4:692:LEU:N	48:4:692:LEU:CD2	2.84	0.40
1:5:1072:C:H2'	1:5:1072:C:O2	2.21	0.40
1:5:1074:G:C2'	1:5:1075:G:O4'	2.64	0.40
1:5:1098:G:C4	1:5:1099:C:C6	3.09	0.40
1:5:1219:G:C2	1:5:1220:G:C4	3.09	0.40
1:5:1377:G:C8	1:5:1378:C:C5'	3.04	0.40
1:5:1380:G:H1'	1:5:1381:U:H3	1.87	0.40
1:5:138:G:H3'	1:5:139:G:H5'	2.02	0.40
1:5:1475:G:N2	1:5:1489:G:N1	2.59	0.40
1:5:1494:U:O2	1:5:1495:G:C8	2.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1601:A:C5	1:5:3643:A:O4'	2.74	0.40
1:5:1619:G:C2'	1:5:1620:U:O5'	2.69	0.40
1:5:1886:G:C6	1:5:1887:G:C8	3.09	0.40
1:5:1899:G:C4	1:5:1900:C:H5	2.34	0.40
1:5:1995:G:C6	1:5:1996:C:N4	2.89	0.40
1:5:2008:U:H1'	1:5:2011:C:H5	1.86	0.40
1:5:2088:A:N1	1:5:2268:A:O2'	2.40	0.40
1:5:2290:C:C4	1:5:2291:G:N7	2.90	0.40
1:5:2326:G:C2	1:5:2327:G:C4	3.10	0.40
1:5:2327:G:N2	1:5:2328:G:C8	2.88	0.40
1:5:2559:G:C4	1:5:2560:C:C6	3.09	0.40
1:5:2843:U:N3	1:5:2844:A:C5	2.89	0.40
1:5:3636:C:N4	1:5:3637:U:C5	2.88	0.40
1:5:3738:G:C3'	1:5:3738:G:C8	3.04	0.40
1:5:3772:U:C2	1:5:3773:U:C5	3.10	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	2.69	0.40
1:5:4096:C:N4	1:5:4097:G:N9	2.70	0.40
1:5:4101:C:C2	1:5:4102:C:C6	3.09	0.40
1:5:4333:C:N3	1:5:4334:U:O4	2.54	0.40
1:5:4381:A:C6	1:5:4382:G:N7	2.89	0.40
1:5:4534:G:C2	1:5:4535:A:H1'	2.57	0.40
1:5:4628:U:C2	1:5:4629:U:H5	2.36	0.40
1:5:4683:U:C2'	1:5:4684:A:O5'	2.70	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
1:5:4737:G:C8	1:5:4737:G:H5'	2.55	0.40
1:5:4933:C:OP1	1:5:4933:C:H4'	2.21	0.40
1:5:4752:U:C2	1:5:4948:C:N3	2.90	0.40
1:5:3894:A:C4'	1:5:4979:A:N1	2.84	0.40
1:5:4997:G:C6	1:5:4998:G:C8	3.10	0.40
1:5:5043:A:H2'	1:5:5044:A:O5'	2.21	0.40
1:5:938:C:C2	1:5:939:G:C8	3.10	0.40
1:5:98:A:N7	1:5:99:A:C8	2.90	0.40
2:7:110:G:C5	2:7:111:C:C5	3.09	0.40
3:8:123:U:O2	3:8:125:C:O2	2.38	0.40
4:A:209:HIS:CD2	4:A:210:PRO:HD2	2.57	0.40
4:A:9:ARG:NE	4:A:9:ARG:HA	5.12	0.40
1:5:4518:A:OP2	5:B:258:HIS:HB2	2.21	0.40
5:B:393:LYS:O	5:B:395:ASP:N	2.53	0.40
6:C:130:ALA:HB3	6:C:246:VAL:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4164:C:H4'	10:G:53:ARG:O	2.21	0.40
11:H:31:ARG:NE	11:H:87:GLY:HA3	2.35	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
1:5:4981:G:H1'	19:P:69:ARG:HH11	1.85	0.40
1:5:963:G:O3'	21:R:107:ARG:NH2	174.06	0.40
1:5:2034:G:H1'	22:S:116:ARG:O	2.21	0.40
49:S2:1063:C:C2'	49:S2:1838:U:C4	3.04	0.40
49:S2:1285:G:H3'	49:S2:1286:G:H5'	2.03	0.40
49:S2:1304:U:C2'	49:S2:1304:U:O2	2.69	0.40
49:S2:1383:A:N1	49:S2:1384:C:C4	2.89	0.40
49:S2:143:U:H1'	49:S2:144:U:C5	2.56	0.40
49:S2:143:U:H1'	49:S2:144:U:H5	1.86	0.40
49:S2:1324:G:C2'	49:S2:1510:G:HO2'	2.20	0.40
49:S2:1745:A:C4	49:S2:1790:A:C2	3.10	0.40
49:S2:1757:G:C2	49:S2:1758:G:N7	2.89	0.40
49:S2:1840:U:C4	49:S2:1841:C:H5	2.36	0.40
49:S2:188:C:C4	49:S2:189:U:C5	3.09	0.40
49:S2:309:G:N2	49:S2:310:C:N1	2.69	0.40
49:S2:39:A:N3	49:S2:39:A:H2'	2.36	0.40
49:S2:849:A:C2'	49:S2:850:C:O5'	2.69	0.40
49:S2:855:G:C6	49:S2:856:C:C5	3.10	0.40
49:S2:878:G:O6	49:S2:908:A:N1	2.54	0.40
49:S2:936:G:C5	49:S2:937:C:C5	3.10	0.40
49:S2:954:U:N3	49:S2:971:G:N2	2.69	0.40
49:S2:957:A:C2	49:S2:967:C:C2	3.08	0.40
49:S2:999:G:N2	49:S2:1000:C:C1'	2.85	0.40
51:SB:136:ARG:NH2	51:SB:218:LEU:HD11	2.35	0.40
52:SC:233:LEU:O	52:SC:234:GLY:C	2.60	0.40
53:SD:213:PRO:O	53:SD:215:ASP:N	2.54	0.40
53:SD:22:ASN:C	53:SD:22:ASN:ND2	2.74	0.40
54:SE:67:GLN:HG2	54:SE:69:PHE:CE2	2.56	0.40
55:SF:98:GLU:O	55:SF:102:LEU:HG	2.22	0.40
59:SJ:108:ARG:HE	59:SJ:108:ARG:HA	1.85	0.40
49:S2:161:U:C6	74:SY:116:LYS:HA	2.56	0.40
74:SY:56:PHE:HE1	74:SY:94:HIS:CE1	2.39	0.40
23:T:19:PHE:O	23:T:21:LYS:HG3	2.20	0.40
23:T:43:LYS:CG	23:T:58:HIS:HE1	2.35	0.40
25:V:48:ARG:HD2	25:V:51:ARG:HH22	1.86	0.40
48:4:267:ASP:OD1	48:4:268:PRO:HD2	2.22	0.40
48:4:279:SER:OG	48:4:280:PRO:HD2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:409:ARG:C	48:4:410:PHE:CD1	2.94	0.40
48:4:42:LYS:HA	48:4:42:LYS:HD2	1.79	0.40
48:4:431:GLY:H	48:4:441:ASP:HB3	1.86	0.40
48:4:752:PRO:HB3	48:4:780:PRO:CA	2.48	0.40
48:4:745:TYR:CD2	48:4:813:VAL:O	2.70	0.40
1:5:12:A:C6	1:5:14:C:N4	2.89	0.40
1:5:1408:G:C2'	1:5:1411:C:H41	2.35	0.40
1:5:1617:G:N3	1:5:1618:G:C8	2.90	0.40
1:5:1627:G:C2	1:5:1628:C:H1'	2.56	0.40
1:5:1337:A:C2	1:5:1658:G:N3	2.87	0.40
1:5:167:C:N1	1:5:269:G:N2	2.69	0.40
1:5:1742:A:H2	1:5:1743:A:N7	2.18	0.40
1:5:1764:G:C5	1:5:1766:A:OP2	2.73	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
1:5:1949:U:O2	1:5:1949:U:C2'	2.69	0.40
1:5:1994:C:C4	1:5:1995:G:N7	2.89	0.40
1:5:2076:G:C4	1:5:2077:C:C6	3.10	0.40
1:5:209:U:N3	1:5:211:G:C8	2.88	0.40
1:5:2101:C:N3	1:5:2102:G:N7	2.70	0.40
1:5:226:G:C4	1:5:236:G:C8	3.09	0.40
1:5:2384:U:H2'	1:5:2385:U:C6	2.57	0.40
1:5:2408:U:O4'	1:5:2409:U:C4	2.74	0.40
1:5:248:C:N3	1:5:249:C:C5	2.89	0.40
1:5:2515:G:C5	1:5:2516:G:N7	2.89	0.40
1:5:2590:G:H2'	1:5:2755:A:N6	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
1:5:3751:G:N2	1:5:3775:A:H8	2.17	0.40
1:5:3930:U:N3	1:5:3931:C:C5	2.90	0.40
1:5:4074:C:O2'	1:5:4075:U:C5'	2.69	0.40
1:5:4079:C:O2	1:5:4080:C:C6	2.75	0.40
1:5:410:A:N3	1:5:410:A:H2'	2.36	0.40
1:5:4166:G:C6	1:5:4167:G:C5	3.09	0.40
1:5:4278:C:H2'	1:5:4278:C:O2	2.21	0.40
1:5:4489:G:N3	1:5:4490:C:C6	2.89	0.40
1:5:4586:G:H5''	1:5:4586:G:H8	1.87	0.40
1:5:4608:G:C4	1:5:4609:G:C8	3.09	0.40
1:5:4901:G:N1	1:5:4921:C:C4	2.90	0.40
1:5:4959:U:O2	1:5:4959:U:H2'	2.21	0.40
1:5:731:G:N1	1:5:732:A:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:925:C:C4	1:5:926:G:N7	2.89	0.40
1:5:931:C:C5	1:5:932:A:N7	2.89	0.40
1:5:979:C:C6	1:5:979:C:OP2	2.74	0.40
1:5:988:C:C4	1:5:989:U:C4	3.09	0.40
2:7:18:C:H42	2:7:19:C:H41	1.69	0.40
3:8:106:G:C4	3:8:107:C:C5	3.09	0.40
3:8:70:G:C6	3:8:87:G:C6	3.09	0.40
5:B:175:GLN:NE2	5:B:179:HIS:HE1	2.14	0.40
6:C:85:HIS:N	6:C:85:HIS:CD2	2.89	0.40
2:7:11:A:N6	7:D:16:TYR:O	2.49	0.40
7:D:278:ASP:O	7:D:280:VAL:C	2.60	0.40
10:G:164:ILE:O	10:G:168:VAL:HG23	2.21	0.40
49:S2:1004:U:C2	49:S2:1005:G:N7	2.90	0.40
49:S2:1032:C:N4	49:S2:1033:G:C6	2.89	0.40
49:S2:1231:C:C3'	49:S2:1232:U:H6	2.35	0.40
49:S2:1234:C:N3	49:S2:1235:G:C8	2.89	0.40
49:S2:1310:U:OP1	62:SM:40:LYS:HG2	2.20	0.40
49:S2:1323:U:O2'	49:S2:1324:G:O4'	2.25	0.40
49:S2:1431:G:C2	49:S2:1432:U:C6	3.09	0.40
49:S2:1435:C:C4	49:S2:1436:C:C4	3.10	0.40
49:S2:1447:G:C6	49:S2:1448:A:C5	3.09	0.40
49:S2:1526:G:H2'	49:S2:1527:C:O4'	2.21	0.40
49:S2:1553:C:H5'	49:S2:1556:A:N6	2.37	0.40
49:S2:1584:G:C4	49:S2:1586:U:O4'	2.74	0.40
49:S2:1588:A:C2	49:S2:1589:A:N1	2.90	0.40
17:N:3:ALA:HB3	49:S2:1842:C:OP1	117.51	0.40
49:S2:217:A:H1'	49:S2:309:G:N1	2.36	0.40
49:S2:223:C:C2	49:S2:224:A:N7	2.89	0.40
49:S2:299:A:C5	49:S2:300:U:C5	3.09	0.40
49:S2:29:G:N3	49:S2:30:C:C6	2.90	0.40
49:S2:377:G:C4	49:S2:378:U:C5	3.09	0.40
49:S2:421:G:H2'	49:S2:422:U:C6	2.57	0.40
49:S2:427:U:O2	49:S2:427:U:H2'	2.21	0.40
49:S2:429:C:C2	49:S2:430:C:C6	3.09	0.40
49:S2:461:U:H2'	49:S2:462:C:H6	1.87	0.40
49:S2:534:G:N3	49:S2:535:G:C8	2.89	0.40
49:S2:555:A:C2	49:S2:557:U:C4	3.10	0.40
49:S2:598:G:C2	49:S2:639:C:C2	3.07	0.40
49:S2:793:G:C2	49:S2:794:A:C1'	3.05	0.40
49:S2:827:A:C4	49:S2:828:G:C8	3.10	0.40
49:S2:81:U:C5	49:S2:82:G:C8	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:62:VAL:HG13	23:T:141:VAL:HG21	2.03	0.40
49:S2:1123:C:C2'	51:SB:148:ASN:ND2	2.81	0.40
56:SG:110:ASN:HD22	56:SG:110:ASN:N	2.19	0.40
58:SI:74:ARG:HB3	58:SI:108:PRO:HB2	2.02	0.40
60:SK:39:ASN:N	60:SK:39:ASN:HD22	2.19	0.40
61:SL:2:ALA:O	61:SL:3:ASP:CB	2.70	0.40
66:SQ:109:LYS:CG	66:SQ:113:ILE:HD12	2.52	0.40
74:SY:86:GLU:OE2	74:SY:86:GLU:CG	2.68	0.40
25:V:38:TYR:CB	25:V:66:LYS:HD3	2.51	0.40
48:4:150:ARG:HA	48:4:200:MET:CE	2.47	0.40
48:4:254:GLU:HA	48:4:257:MET:HE3	2.04	0.40
48:4:297:ILE:HG23	48:4:301:PHE:HE1	1.85	0.40
48:4:126:LEU:CD1	48:4:353:MET:HE1	2.52	0.40
48:4:672:LEU:O	48:4:676:LYS:HB2	2.22	0.40
1:5:101:A:N1	1:5:102:G:C8	2.90	0.40
1:5:1205:G:N3	1:5:1206:C:C6	2.89	0.40
1:5:1243:C:O2'	1:5:1244:G:C8	2.66	0.40
1:5:1258:G:N2	1:5:1259:G:C4	2.90	0.40
1:5:1310:C:C2'	1:5:1310:C:O2	2.69	0.40
1:5:1327:C:H2'	1:5:1328:G:C8	2.56	0.40
1:5:133:C:C2'	1:5:133:C:O2	2.69	0.40
1:5:1349:G:N3	1:5:1350:C:C6	2.90	0.40
1:5:1358:G:C8	1:5:1358:G:H3'	2.57	0.40
1:5:1397:A:H2	1:5:1498:G:N3	2.18	0.40
1:5:1400:G:C2	1:5:1418:C:O2	2.74	0.40
1:5:1453:G:N1	1:5:1454:G:C5	2.89	0.40
1:5:1645:C:H2'	1:5:1646:A:H8	1.85	0.40
1:5:1811:G:N3	1:5:1812:C:C5	2.89	0.40
1:5:1320:U:H1'	1:5:1856:C:O4'	2.22	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
1:5:1941:A:C2'	1:5:1942:A:O5'	2.70	0.40
1:5:1983:A:H62	1:5:1987:C:H5'	1.86	0.40
1:5:2045:G:O6	1:5:3870:C:O2'	2.39	0.40
1:5:2108:G:H2'	1:5:2109:G:C4'	2.49	0.40
1:5:2244:C:N3	1:5:2245:G:N7	2.70	0.40
1:5:2396:A:O4'	1:5:2396:A:N3	2.54	0.40
1:5:2483:G:N1	1:5:2484:A:C5	2.89	0.40
1:5:2453:A:C5	1:5:2507:A:C8	3.09	0.40
1:5:2634:C:O2	1:5:2635:U:C6	2.74	0.40
1:5:2677:G:N3	1:5:2677:G:H2'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2830:G:N1	1:5:2831:G:C5	2.89	0.40
1:5:297:U:H2'	1:5:298:G:O4'	2.21	0.40
1:5:3639:U:H2'	1:5:3640:U:O4'	2.22	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
1:5:3699:C:H2'	1:5:3699:C:O2	2.20	0.40
1:5:3801:U:O2'	1:5:3802:U:O5'	2.38	0.40
1:5:3879:G:N1	1:5:3882:C:C5	2.86	0.40
1:5:3945:A:C2	1:5:3946:G:N7	2.90	0.40
1:5:4099:G:N3	1:5:4100:C:C6	2.89	0.40
1:5:4139:G:C5	1:5:4140:C:C5	3.09	0.40
1:5:4198:G:N3	1:5:4198:G:H2'	2.37	0.40
1:5:4212:A:N6	1:5:4218:U:H2'	2.36	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
1:5:4344:U:C2	1:5:4345:C:H5	2.30	0.40
1:5:4476:C:C6	11:H:171:ASP:OD2	2.75	0.40
1:5:4501:U:C4	1:5:4502:C:C1'	3.04	0.40
1:5:4540:C:C2	1:5:4541:G:C8	3.10	0.40
1:5:4562:C:O2	1:5:4562:C:C2'	2.69	0.40
1:5:4645:C:H2'	1:5:4645:C:O2	2.21	0.40
1:5:4697:U:C5'	1:5:4698:C:OP2	2.70	0.40
1:5:487:G:C2	1:5:488:G:C4	3.09	0.40
1:5:4900:C:H4'	1:5:4901:G:OP2	2.22	0.40
1:5:4739:C:C2	1:5:4961:G:C2	3.09	0.40
1:5:4966:A:H2'	1:5:4967:A:C8	2.56	0.40
1:5:4975:G:C6	1:5:4977:A:C6	3.08	0.40
1:5:4978:G:HO2'	1:5:4979:A:H3'	1.86	0.40
1:5:5028:G:N1	1:5:5029:C:C4	2.90	0.40
1:5:5042:A:C6	1:5:5043:A:C6	3.10	0.40
1:5:504:G:N3	1:5:505:G:C8	2.90	0.40
1:5:5063:G:N2	1:5:5064:G:C4	2.89	0.40
1:5:642:G:C2	1:5:643:C:C2	3.09	0.40
1:5:753:C:C4	1:5:754:U:H5	2.33	0.40
1:5:986:C:N3	1:5:987:C:C5	2.90	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
1:5:3682:A:C2	4:A:152:SER:HB3	2.57	0.40
5:B:213:GLN:C	5:B:214:ASP:OD1	2.60	0.40
2:7:48:G:O2'	7:D:222:GLN:O	2.36	0.40
2:7:62:U:C5'	7:D:279:ARG:HH12	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:277:ILE:HD11	8:E:282:LEU:HD22	2.04	0.40
9:F:100:ILE:HG21	20:Q:4:ASP:CG	2.41	0.40
9:F:202:ARG:N	9:F:202:ARG:CD	2.85	0.40
9:F:203:PHE:O	9:F:204:LYS:C	2.59	0.40
10:G:231:ASN:HD22	10:G:231:ASN:H	1.64	0.40
16:M:34:ASN:N	16:M:34:ASN:ND2	2.69	0.40
17:N:180:PHE:N	17:N:180:PHE:CD2	2.89	0.40
18:O:36:VAL:CG1	18:O:108:ILE:HB	2.52	0.40
49:S2:1018:U:C2	49:S2:1019:C:C6	2.98	0.40
49:S2:1034:A:C2	49:S2:1082:A:C2	3.09	0.40
49:S2:1121:G:N2	49:S2:1122:A:H1'	2.37	0.40
49:S2:1228:A:C6	49:S2:1531:A:N1	2.89	0.40
49:S2:1246:A:C2	49:S2:1251:A:N3	2.89	0.40
49:S2:1259:A:N1	49:S2:1519:U:C5	2.90	0.40
49:S2:1280:G:H5'	62:SM:96:ARG:CG	2.51	0.40
49:S2:1407:U:C3'	49:S2:1408:U:C6	3.04	0.40
49:S2:1410:C:C4	49:S2:1411:G:N7	2.90	0.40
49:S2:1508:A:C6	49:S2:1510:G:C1'	3.04	0.40
49:S2:1545:A:N6	49:S2:1588:A:N3	2.70	0.40
49:S2:1559:C:C2	49:S2:1577:G:C2	3.09	0.40
49:S2:1654:G:N2	49:S2:1671:G:C2	2.89	0.40
49:S2:1795:G:C2	49:S2:1796:G:C5	3.10	0.40
49:S2:1835:A:C8	49:S2:1835:A:H5'	2.57	0.40
49:S2:1839:U:O2	49:S2:1840:U:N1	2.54	0.40
49:S2:1860:A:C6	49:S2:1862:G:C6	3.10	0.40
49:S2:61:A:H2	49:S2:334:C:H2'	1.87	0.40
49:S2:403:G:N1	49:S2:404:G:C5	2.89	0.40
49:S2:410:G:C2	49:S2:411:G:C4	3.09	0.40
49:S2:54:A:C2	49:S2:451:G:C4	3.09	0.40
49:S2:522:A:N1	49:S2:643:A:C5'	2.84	0.40
49:S2:554:A:C2	49:S2:555:A:C8	3.09	0.40
49:S2:563:G:O2'	49:S2:564:A:C5'	2.69	0.40
49:S2:675:U:O2	49:S2:676:C:C6	2.75	0.40
49:S2:690:G:C2	49:S2:691:G:C8	3.10	0.40
49:S2:827:A:N7	49:S2:828:G:N7	2.69	0.40
49:S2:834:C:C2	49:S2:841:G:N2	2.89	0.40
49:S2:848:U:C2'	49:S2:849:A:C8	2.98	0.40
49:S2:939:U:C2	49:S2:940:U:C5	3.09	0.40
51:SB:201:CYS:HB2	51:SB:207:LEU:HD12	2.03	0.40
52:SC:170:TRP:HZ3	72:SW:97:ARG:HH11	1.69	0.40
53:SD:21:LEU:HD13	53:SD:48:ILE:HD12	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SG:153:VAL:O	56:SG:154:ARG:C	2.60	0.40
59:SJ:158:ASP:OD1	59:SJ:159:PHE:N	2.55	0.40
59:SJ:48:PHE:C	59:SJ:48:PHE:CD2	2.94	0.40
49:S2:1603:G:C8	68:SS:28:PHE:CE2	3.00	0.40
73:SX:115:ILE:HG22	73:SX:118:VAL:CB	2.47	0.40
23:T:144:ASN:N	23:T:144:ASN:OD1	2.54	0.40
29:Z:76:ASN:HB3	29:Z:78:ASN:H	1.86	0.40
48:4:228:PHE:CD1	48:4:232:TYR:CZ	3.09	0.40
48:4:597:ASN:HD22	48:4:597:ASN:HA	1.66	0.40
1:5:1065:G:N1	1:5:1066:G:C5	2.90	0.40
1:5:1098:G:H2'	1:5:1099:C:H6	1.86	0.40
1:5:1169:G:C4	1:5:1170:G:C8	3.10	0.40
1:5:1234:G:C3'	1:5:1235:G:H8	2.33	0.40
1:5:1280:C:C4	1:5:1282:G:C6	3.05	0.40
1:5:1334:A:C2	1:5:1335:G:C8	3.09	0.40
1:5:1337:A:H4'	6:C:102:PHE:CE2	2.56	0.40
1:5:1571:G:C4	1:5:1572:U:C6	3.10	0.40
1:5:1634:A:N1	1:5:1635:C:N3	2.69	0.40
1:5:183:C:O2	1:5:189:G:C6	2.74	0.40
1:5:1927:U:H5'	1:5:2034:G:N2	2.36	0.40
1:5:1965:G:C5	1:5:1966:C:C5	3.10	0.40
1:5:1970:A:C2	1:5:2016:C:C4	3.10	0.40
1:5:2089:G:HO2'	1:5:2090:U:P	2.45	0.40
1:5:1447:C:N3	1:5:2098:G:C6	2.89	0.40
1:5:2107:C:O2	1:5:2107:C:C2'	2.66	0.40
1:5:2263:A:H5''	1:5:2263:A:C8	2.56	0.40
1:5:2294:G:C5	1:5:2295:C:C5	3.10	0.40
1:5:2312:U:O2	1:5:2312:U:C2'	2.65	0.40
1:5:2326:G:H2'	1:5:2326:G:N3	2.36	0.40
1:5:238:C:O2'	1:5:239:C:H5'	2.22	0.40
1:5:2467:U:H5''	1:5:2468:U:OP1	2.22	0.40
1:5:2480:G:C2	1:5:2481:G:C4	3.09	0.40
1:5:2821:U:H2'	1:5:2822:G:O4'	2.22	0.40
1:5:3759:A:O2'	49:S2:1826:G:C2'	2.68	0.40
1:5:4143:G:N7	1:5:4145:C:C4	2.89	0.40
1:5:4287:G:C5	1:5:4288:C:C4	3.09	0.40
1:5:440:U:H2'	1:5:440:U:O2	2.22	0.40
1:5:4456:C:O2	1:5:4456:C:C2'	2.69	0.40
1:5:447:C:O2	1:5:448:G:C8	2.74	0.40
1:5:44:A:C4	1:5:45:U:C6	3.10	0.40
1:5:4498:U:N3	1:5:4500:U:O5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4582:C:OP2	5:B:28:LYS:NZ	2.36	0.40
1:5:4680:G:C2	1:5:4681:A:C5	3.09	0.40
1:5:497:G:N2	1:5:657:C:N3	2.65	0.40
1:5:5022:U:C5	1:5:5024:C:C4	3.10	0.40
1:5:509:A:H3'	1:5:510:U:C5'	2.52	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	2.90	0.40
1:5:932:A:N3	1:5:932:A:C2'	2.85	0.40
1:5:993:G:C6	1:5:994:G:N7	2.89	0.40
2:7:117:G:C4	2:7:118:C:C5	3.09	0.40
2:7:11:A:C8	7:D:18:VAL:CG1	3.03	0.40
2:7:27:G:C4	2:7:28:C:C6	3.10	0.40
3:8:13:G:N2	3:8:14:U:C2	2.90	0.40
4:A:189:TYR:HA	4:A:192:LYS:HG3	2.03	0.40
4:A:5:ILE:HG23	4:A:8:GLN:HG2	2.02	0.40
5:B:379:PHE:HE2	5:B:385:LYS:HG3	1.87	0.40
6:C:102:PHE:HD1	6:C:103:ALA:N	2.19	0.40
6:C:11:TYR:HE2	6:C:148:PRO:HG2	1.86	0.40
1:5:2090:U:C1'	6:C:305:PRO:HG2	2.51	0.40
7:D:111:ASN:HD22	7:D:111:ASN:C	2.24	0.40
7:D:31:TYR:CD1	7:D:35:ARG:NH2	2.90	0.40
1:5:1724:G:N2	9:F:105:PRO:CB	2.76	0.40
9:F:219:ARG:NH1	9:F:219:ARG:HB3	2.34	0.40
9:F:32:ILE:HD12	9:F:32:ILE:N	2.36	0.40
9:F:71:ILE:O	9:F:73:MET:N	2.54	0.40
1:5:151:G:O6	10:G:141:ASN:ND2	2.54	0.40
10:G:166:LEU:HD23	17:N:7:ILE:HD13	2.02	0.40
11:H:16:VAL:HG21	11:H:81:ILE:HG23	2.04	0.40
14:K:147:HIS:HB2	14:K:149:HIS:HB2	1.39	0.40
18:O:46:ASN:O	18:O:47:PHE:C	2.58	0.40
20:Q:33:ARG:O	20:Q:34:PHE:C	2.59	0.40
49:S2:999:G:H21	49:S2:1000:C:H1'	1.85	0.40
49:S2:1002:U:N3	49:S2:1003:U:C5	2.90	0.40
49:S2:1015:U:O2'	63:SN:55:ARG:NH2	2.55	0.40
49:S2:1100:A:C4	49:S2:1101:U:C5	3.10	0.40
49:S2:1134:G:C6	49:S2:1135:C:N4	2.90	0.40
49:S2:1330:G:C2	49:S2:1333:U:O4	2.75	0.40
49:S2:1335:G:H2'	49:S2:1336:C:O4'	2.22	0.40
49:S2:1406:G:C4	49:S2:1407:U:C6	3.09	0.40
49:S2:1427:C:H2'	49:S2:1428:G:C8	2.55	0.40
49:S2:1459:G:C2	49:S2:1460:C:N1	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1501:C:O2	49:S2:1502:C:C6	2.75	0.40
49:S2:1541:G:N3	49:S2:1542:C:C5	2.89	0.40
49:S2:1588:A:C6	49:S2:1589:A:N6	2.90	0.40
49:S2:1648:G:C2	49:S2:1674:G:N7	2.90	0.40
49:S2:1757:G:C2	49:S2:1758:G:C5	3.09	0.40
49:S2:1847:G:N2	49:S2:1853:C:C2	2.89	0.40
49:S2:289:G:C2	49:S2:295:C:O2	2.75	0.40
49:S2:376:A:C2	49:S2:377:G:C1'	3.05	0.40
49:S2:380:G:N2	49:S2:382:C:C2'	2.85	0.40
49:S2:384:U:C3'	49:S2:384:U:C6	3.05	0.40
49:S2:552:G:C2	49:S2:553:U:N3	2.90	0.40
49:S2:582:C:C2'	49:S2:582:C:O2	2.69	0.40
49:S2:656:G:H5'	49:S2:662:G:H22	1.85	0.40
49:S2:878:G:O6	49:S2:908:A:C2	2.75	0.40
49:S2:926:A:N1	49:S2:927:C:C4	2.89	0.40
49:S2:947:G:C2	49:S2:948:C:N1	2.89	0.40
49:S2:979:C:C2'	49:S2:979:C:O2	2.69	0.40
22:S:94:TYR:CZ	22:S:96:GLU:HG3	2.56	0.40
50:SA:55:TRP:HE1	50:SA:59:LEU:HG	1.86	0.40
57:SH:158:LEU:HB2	57:SH:189:PHE:CE1	2.56	0.40
58:SI:129:LEU:O	58:SI:133:GLU:HB2	2.22	0.40
59:SJ:159:PHE:CZ	59:SJ:165:TYR:CD2	3.10	0.40
49:S2:1277:C:H5''	60:SK:51:SER:HB2	2.03	0.40
62:SM:51:VAL:CG1	62:SM:85:LEU:HD21	2.51	0.40
64:SO:114:SER:HA	64:SO:117:ARG:HB3	2.04	0.40
49:S2:984:C:O2	64:SO:138:ASP:OD2	2.40	0.40
69:ST:51:ASN:N	69:ST:51:ASN:OD1	2.55	0.40
74:SY:12:PHE:CZ	74:SY:21:LYS:HB3	2.56	0.40
25:V:57:VAL:HG23	25:V:84:GLN:CG	2.45	0.40
25:V:77:HIS:ND1	25:V:77:HIS:C	2.75	0.40
1:5:229:G:H5''	28:Y:11:ARG:NH1	2.37	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles ⓘ

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	A	242/257 (94%)	203 (84%)	30 (12%)	9 (4%)	4	32
5	B	392/394 (100%)	319 (81%)	40 (10%)	33 (8%)	1	11
6	C	365/367 (100%)	304 (83%)	46 (13%)	15 (4%)	3	29
7	D	290/297 (98%)	235 (81%)	33 (11%)	22 (8%)	1	13
8	E	232/236 (98%)	150 (65%)	51 (22%)	31 (13%)	0	4
9	F	223/225 (99%)	190 (85%)	23 (10%)	10 (4%)	3	27
10	G	239/266 (90%)	200 (84%)	32 (13%)	7 (3%)	5	38
11	H	188/192 (98%)	164 (87%)	20 (11%)	4 (2%)	8	45
12	I	211/213 (99%)	166 (79%)	31 (15%)	14 (7%)	1	17
13	J	168/178 (94%)	137 (82%)	23 (14%)	8 (5%)	2	25
14	K	147/163 (90%)	83 (56%)	31 (21%)	33 (22%)	0	1
15	L	208/211 (99%)	172 (83%)	25 (12%)	11 (5%)	2	22
16	M	136/213 (64%)	118 (87%)	16 (12%)	2 (2%)	12	52
17	N	201/204 (98%)	172 (86%)	23 (11%)	6 (3%)	5	37
18	O	199/204 (98%)	182 (92%)	14 (7%)	3 (2%)	12	52
19	P	151/153 (99%)	140 (93%)	9 (6%)	2 (1%)	14	55
20	Q	185/188 (98%)	160 (86%)	20 (11%)	5 (3%)	6	40
21	R	178/196 (91%)	153 (86%)	21 (12%)	4 (2%)	8	44
22	S	173/224 (77%)	146 (84%)	24 (14%)	3 (2%)	11	49
23	T	157/160 (98%)	128 (82%)	26 (17%)	3 (2%)	9	47
24	U	97/128 (76%)	74 (76%)	21 (22%)	2 (2%)	8	45
25	V	129/140 (92%)	112 (87%)	14 (11%)	3 (2%)	7	43
26	W	61/157 (39%)	57 (93%)	3 (5%)	1 (2%)	11	50
27	X	117/156 (75%)	108 (92%)	7 (6%)	2 (2%)	11	49
28	Y	132/145 (91%)	112 (85%)	14 (11%)	6 (4%)	3	27
29	Z	133/136 (98%)	113 (85%)	15 (11%)	5 (4%)	4	31
30	a	145/148 (98%)	111 (77%)	26 (18%)	8 (6%)	2	22
31	b	73/160 (46%)	58 (80%)	11 (15%)	4 (6%)	2	22
32	c	92/115 (80%)	78 (85%)	10 (11%)	4 (4%)	3	28
33	d	105/125 (84%)	85 (81%)	16 (15%)	4 (4%)	4	31

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	e	126/135 (93%)	110 (87%)	15 (12%)	1 (1%)	22	65
35	f	107/110 (97%)	95 (89%)	7 (6%)	5 (5%)	3	26
36	g	112/117 (96%)	103 (92%)	7 (6%)	2 (2%)	10	48
37	h	120/123 (98%)	102 (85%)	15 (12%)	3 (2%)	6	41
38	i	100/105 (95%)	91 (91%)	7 (7%)	2 (2%)	9	46
39	j	84/86 (98%)	67 (80%)	13 (16%)	4 (5%)	2	25
40	k	67/70 (96%)	55 (82%)	7 (10%)	5 (8%)	1	13
41	l	48/51 (94%)	42 (88%)	4 (8%)	2 (4%)	3	28
42	m	50/128 (39%)	44 (88%)	6 (12%)	0	100	100
43	n	21/25 (84%)	21 (100%)	0	0	100	100
44	o	102/106 (96%)	85 (83%)	11 (11%)	6 (6%)	2	20
45	p	89/91 (98%)	79 (89%)	9 (10%)	1 (1%)	17	59
46	q	200/202 (99%)	133 (66%)	27 (14%)	40 (20%)	0	1
47	r	123/125 (98%)	97 (79%)	20 (16%)	6 (5%)	2	24
48	4	854/856 (100%)	754 (88%)	58 (7%)	42 (5%)	2	24
50	SA	206/295 (70%)	176 (85%)	24 (12%)	6 (3%)	5	38
51	SB	211/264 (80%)	170 (81%)	27 (13%)	14 (7%)	1	17
52	SC	216/218 (99%)	189 (88%)	19 (9%)	8 (4%)	4	32
53	SD	225/243 (93%)	170 (76%)	44 (20%)	11 (5%)	2	24
54	SE	260/263 (99%)	202 (78%)	41 (16%)	17 (6%)	1	18
55	SF	189/204 (93%)	160 (85%)	19 (10%)	10 (5%)	2	22
56	SG	235/249 (94%)	194 (83%)	35 (15%)	6 (3%)	6	40
57	SH	187/194 (96%)	143 (76%)	29 (16%)	15 (8%)	1	12
58	SI	204/208 (98%)	176 (86%)	21 (10%)	7 (3%)	4	35
59	SJ	183/194 (94%)	145 (79%)	24 (13%)	14 (8%)	1	13
60	SK	96/165 (58%)	60 (62%)	26 (27%)	10 (10%)	0	7
61	SL	150/158 (95%)	122 (81%)	21 (14%)	7 (5%)	3	26
62	SM	122/124 (98%)	77 (63%)	25 (20%)	20 (16%)	0	2
63	SN	148/151 (98%)	115 (78%)	28 (19%)	5 (3%)	4	35
64	SO	134/151 (89%)	102 (76%)	18 (13%)	14 (10%)	0	7
65	SP	94/145 (65%)	65 (69%)	18 (19%)	11 (12%)	0	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
66	SQ	139/146 (95%)	112 (81%)	21 (15%)	6 (4%)	3	28
67	SR	127/135 (94%)	95 (75%)	24 (19%)	8 (6%)	1	18
68	SS	135/152 (89%)	104 (77%)	23 (17%)	8 (6%)	2	20
69	ST	139/145 (96%)	116 (84%)	17 (12%)	6 (4%)	3	28
70	SU	102/119 (86%)	80 (78%)	18 (18%)	4 (4%)	3	31
71	SV	80/83 (96%)	63 (79%)	10 (12%)	7 (9%)	1	10
72	SW	127/130 (98%)	112 (88%)	11 (9%)	4 (3%)	5	37
73	SX	139/143 (97%)	116 (84%)	18 (13%)	5 (4%)	4	33
74	SY	124/132 (94%)	92 (74%)	23 (18%)	9 (7%)	1	14
75	SZ	73/125 (58%)	54 (74%)	13 (18%)	6 (8%)	1	11
76	Sa	96/115 (84%)	74 (77%)	15 (16%)	7 (7%)	1	14
77	Sb	81/84 (96%)	61 (75%)	15 (18%)	5 (6%)	2	19
78	Sc	62/69 (90%)	46 (74%)	16 (26%)	0	100	100
79	Sd	50/56 (89%)	38 (76%)	9 (18%)	3 (6%)	2	19
80	Se	55/133 (41%)	40 (73%)	14 (26%)	1 (2%)	10	48
81	Sf	69/156 (44%)	39 (56%)	21 (30%)	9 (13%)	0	5
82	Sg	311/317 (98%)	250 (80%)	45 (14%)	16 (5%)	2	23
All	All	12341/13747 (90%)	10066 (82%)	1613 (13%)	662 (5%)	4	22

All (662) 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

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Mol	Chain	Res	Type
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
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	K	28	LEU
14	K	30	PRO
14	K	38	SER
14	K	39	PRO
14	K	58	ILE
14	K	86	LYS
14	K	89	PRO
14	K	92	ARG
14	K	98	ILE
14	K	105	THR
14	K	117	ARG
14	K	120	SER
14	K	126	SER

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Mol	Chain	Res	Type
14	K	135	THR
14	K	141	CYS
14	K	142	ASN
14	K	144	ASP
14	K	149	HIS
14	K	159	ALA
15	L	62	PRO
15	L	64	VAL
15	L	67	HIS
15	L	82	ARG
15	L	83	VAL
15	L	134	PRO
16	M	7	VAL
17	N	30	TYR
17	N	89	VAL
18	O	5	GLN
18	O	111	PRO
19	P	41	ILE
20	Q	177	ALA
21	R	36	ASN
22	S	146	HIS
22	S	165	PRO
25	V	14	PHE
25	V	99	GLU
27	X	131	ASP
30	a	76	ASP
30	a	92	LYS
30	a	96	GLY
31	b	7	HIS
31	b	12	GLN
35	f	4	ARG
36	g	7	TYR
37	h	119	PHE
38	i	64	SER
40	k	23	VAL
40	k	59	SER
41	l	22	PRO
44	o	90	HIS
44	o	94	GLY
46	q	51	ALA
46	q	60	MET
46	q	69	LEU

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Mol	Chain	Res	Type
46	q	70	GLU
46	q	73	PRO
46	q	74	ALA
46	q	98	ILE
46	q	100	ASP
46	q	104	ALA
46	q	118	PRO
46	q	136	SER
46	q	149	ARG
46	q	150	GLY
46	q	182	PRO
46	q	183	PHE
46	q	184	SER
46	q	185	PHE
47	r	34	ALA
47	r	45	HIS
47	r	107	ARG
48	4	4	PHE
48	4	43	ALA
48	4	44	GLY
48	4	45	ILE
48	4	47	ALA
48	4	61	LYS
48	4	71	LYS
48	4	206	ASP
48	4	207	PRO
48	4	240	GLY
48	4	241	GLU
48	4	481	LYS
48	4	498	LYS
48	4	499	PHE
48	4	500	SER
48	4	504	VAL
48	4	576	VAL
48	4	577	VAL
48	4	716	ARG
48	4	743	PRO
48	4	744	ILE
48	4	753	GLU
48	4	776	VAL
48	4	812	CYS
48	4	813	VAL

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Mol	Chain	Res	Type
48	4	849	PRO
50	SA	3	GLY
51	SB	57	ILE
51	SB	179	ASN
51	SB	191	ASP
51	SB	223	PHE
52	SC	253	PRO
52	SC	254	ASP
53	SD	54	ARG
53	SD	202	LYS
53	SD	223	ILE
54	SE	12	VAL
54	SE	95	THR
54	SE	101	LEU
54	SE	196	THR
55	SF	34	SER
55	SF	37	ASP
57	SH	16	PRO
57	SH	17	ASP
57	SH	18	GLU
57	SH	66	VAL
57	SH	116	ARG
57	SH	170	VAL
57	SH	190	PRO
58	SI	155	ASN
59	SJ	3	VAL
59	SJ	69	ARG
59	SJ	70	ARG
59	SJ	119	LEU
59	SJ	121	LYS
59	SJ	159	PHE
60	SK	30	PRO
60	SK	58	VAL
61	SL	19	ASN
61	SL	100	ASN
62	SM	15	ASN
62	SM	77	ILE
62	SM	91	LEU
62	SM	96	ARG
62	SM	102	LYS
62	SM	114	TYR
63	SN	143	SER

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Mol	Chain	Res	Type
64	SO	56	VAL
64	SO	65	ASP
64	SO	140	THR
65	SP	14	LYS
65	SP	38	SER
66	SQ	48	GLN
66	SQ	77	HIS
67	SR	88	VAL
68	SS	12	ILE
68	SS	90	VAL
68	SS	118	ARG
69	ST	29	LYS
70	SU	50	VAL
70	SU	107	GLU
71	SV	41	LYS
71	SV	65	SER
72	SW	77	PRO
72	SW	107	SER
73	SX	34	THR
73	SX	129	SER
75	SZ	113	THR
81	Sf	89	LYS
81	Sf	98	VAL
81	Sf	137	ASP
82	Sg	96	THR
82	Sg	142	VAL
82	Sg	161	SER
82	Sg	182	CYS
82	Sg	282	GLU
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

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Mol	Chain	Res	Type
7	D	260	GLU
7	D	279	ARG
7	D	281	ALA
7	D	293	ARG
8	E	43	ASN
8	E	91	PRO
8	E	181	PRO
8	E	220	LYS
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	158	LYS
12	I	210	ARG
13	J	26	VAL
13	J	88	LYS
13	J	169	LYS
14	K	24	ALA
14	K	34	PRO
14	K	60	VAL
14	K	94	LYS
14	K	140	GLY
15	L	143	GLU
16	M	87	ALA
17	N	79	ALA
20	Q	178	ARG
21	R	39	GLN
23	T	18	PRO
23	T	44	GLY
23	T	55	LYS
27	X	86	ALA
28	Y	6	PHE
29	Z	91	LEU
30	a	60	HIS
30	a	62	HIS
30	a	97	ALA
32	c	32	LYS
32	c	80	GLU
32	c	81	LEU
33	d	93	ASN

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Mol	Chain	Res	Type
34	e	34	ASN
37	h	122	LYS
40	k	61	PRO
44	o	33	LEU
44	o	98	LYS
46	q	46	SER
46	q	84	GLY
46	q	128	THR
46	q	158	VAL
46	q	179	ASN
46	q	180	ILE
46	q	202	GLU
46	q	203	VAL
47	r	123	PRO
48	4	48	SER
48	4	53	GLU
48	4	54	THR
48	4	62	ASP
48	4	532	PRO
50	SA	110	ASN
50	SA	187	GLY
51	SB	83	LYS
51	SB	108	ASP
51	SB	152	LYS
51	SB	204	ILE
52	SC	134	ASN
52	SC	255	LEU
53	SD	219	PRO
54	SE	76	VAL
54	SE	98	ASN
54	SE	109	PHE
55	SF	21	GLY
55	SF	121	PRO
56	SG	99	GLY
57	SH	160	LYS
58	SI	126	GLY
58	SI	137	LEU
58	SI	138	ASN
59	SJ	5	ARG
59	SJ	118	GLY
61	SL	3	ASP
62	SM	35	ILE

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Mol	Chain	Res	Type
62	SM	48	HIS
62	SM	79	VAL
63	SN	38	TYR
64	SO	32	HIS
64	SO	33	ILE
64	SO	64	ALA
64	SO	105	THR
64	SO	129	ILE
64	SO	146	ARG
65	SP	12	PHE
66	SQ	32	ILE
66	SQ	35	ASN
67	SR	93	GLN
67	SR	95	ILE
67	SR	110	ASP
67	SR	123	THR
68	SS	7	GLU
68	SS	133	GLY
69	ST	28	LEU
69	ST	34	VAL
69	ST	39	LEU
69	ST	49	ASP
72	SW	45	GLY
73	SX	99	GLU
74	SY	60	PHE
74	SY	84	LYS
74	SY	118	ARG
74	SY	120	THR
75	SZ	42	ASP
75	SZ	102	LYS
75	SZ	104	ARG
75	SZ	108	ILE
76	Sa	8	ASN
76	Sa	25	ASN
77	Sb	6	ASP
77	Sb	59	CYS
81	Sf	112	GLY
82	Sg	97	THR
82	Sg	139	LYS
82	Sg	141	THR
4	A	180	LEU
4	A	196	TRP

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Mol	Chain	Res	Type
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	61	ARG
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	K	56	LEU
14	K	67	ARG
14	K	90	ARG
14	K	139	VAL
15	L	172	GLU
19	P	54	GLN
20	Q	52	PHE
20	Q	146	ARG
21	R	130	ASN
22	S	153	PRO
24	U	38	ASN
28	Y	11	ARG
28	Y	18	HIS
29	Z	8	GLY
29	Z	33	THR
30	a	93	ASN
33	d	38	PHE
35	f	80	ASN
35	f	107	PRO
41	l	47	THR
44	o	49	GLY

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Mol	Chain	Res	Type
46	q	115	ALA
48	4	269	ALA
48	4	434	TYR
48	4	810	PRO
50	SA	105	PRO
51	SB	43	ASN
52	SC	264	SER
53	SD	178	ARG
53	SD	179	GLN
54	SE	24	THR
54	SE	163	ASP
54	SE	171	ASP
55	SF	163	PHE
57	SH	107	LYS
57	SH	110	THR
58	SI	143	LYS
60	SK	63	ALA
60	SK	92	ALA
61	SL	28	THR
62	SM	36	ARG
62	SM	65	VAL
62	SM	95	ASP
62	SM	103	VAL
62	SM	116	LYS
62	SM	117	GLU
64	SO	128	ARG
65	SP	50	ARG
65	SP	73	PRO
65	SP	74	GLU
65	SP	87	PRO
67	SR	127	ASN
68	SS	92	ASP
69	ST	128	GLN
71	SV	3	ASN
72	SW	30	CYS
73	SX	114	ASP
74	SY	104	ARG
75	SZ	80	ARG
76	Sa	61	ALA
76	Sa	62	TYR
76	Sa	97	PRO
79	Sd	7	TYR

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Mol	Chain	Res	Type
81	Sf	83	LYS
81	Sf	99	LYS
81	Sf	100	LEU
82	Sg	65	PHE
82	Sg	144	ASP
82	Sg	283	PRO
4	A	35	ALA
4	A	109	GLU
4	A	193	ARG
5	B	117	ARG
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
14	K	40	LYS
14	K	54	LYS
17	N	182	HIS
20	Q	55	ARG
21	R	131	VAL
24	U	98	ASP
25	V	110	GLY
26	W	43	LYS
30	a	98	ALA
31	b	10	HIS
32	c	77	ASN
33	d	58	GLY
33	d	102	LEU
35	f	5	LEU

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Mol	Chain	Res	Type
40	k	29	LYS
44	o	8	ARG
46	q	61	MET
46	q	130	LEU
46	q	134	LYS
46	q	156	SER
46	q	191	GLN
46	q	199	TYR
46	q	201	PRO
48	4	502	SER
50	SA	188	THR
51	SB	77	ASP
53	SD	218	LEU
54	SE	132	GLY
55	SF	131	ALA
55	SF	132	GLY
55	SF	143	PRO
56	SG	146	ASN
56	SG	152	ASP
57	SH	35	ASP
57	SH	57	ARG
57	SH	111	LYS
59	SJ	39	ASN
59	SJ	92	MET
59	SJ	120	ALA
59	SJ	125	HIS
60	SK	3	MET
60	SK	65	ARG
61	SL	8	ARG
62	SM	76	LEU
62	SM	119	GLN
65	SP	8	LYS
65	SP	75	VAL
66	SQ	116	ASP
71	SV	10	ASP
74	SY	30	PRO
74	SY	34	THR
76	Sa	35	ALA
77	Sb	75	GLU
79	Sd	8	TRP
81	Sf	87	THR
82	Sg	37	ASP

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Mol	Chain	Res	Type
82	Sg	160	SER
82	Sg	286	CYS
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
10	G	123	ALA
10	G	125	LYS
11	H	110	SER
13	J	11	PRO
13	J	32	ARG
14	K	36	GLY
14	K	96	LYS
17	N	40	PRO
17	N	55	ALA
28	Y	85	VAL
29	Z	124	THR
31	b	21	ILE
35	f	106	TYR
36	g	84	ALA
39	j	5	THR
39	j	38	GLY
45	p	4	ARG
46	q	82	ILE
48	4	246	PRO
48	4	574	ASP
51	SB	76	ASN
51	SB	93	GLY
52	SC	181	PRO
52	SC	189	GLY
53	SD	199	GLY
53	SD	214	LYS
54	SE	38	LEU
55	SF	68	ILE
56	SG	20	ASP
57	SH	100	ILE

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Mol	Chain	Res	Type
57	SH	159	ASP
60	SK	39	ASN
60	SK	67	PHE
60	SK	69	TRP
61	SL	147	LYS
62	SM	81	ASP
63	SN	58	HIS
63	SN	138	ASN
64	SO	39	ASP
64	SO	149	ARG
66	SQ	43	GLU
68	SS	82	TRP
70	SU	118	ASP
71	SV	42	VAL
71	SV	45	ARG
76	Sa	72	HIS
79	Sd	10	HIS
81	Sf	138	ARG
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	K	138	SER
15	L	169	ILE
18	O	110	PRO
28	Y	63	LYS
28	Y	79	VAL
29	Z	4	PHE
39	j	9	GLY
39	j	75	ARG
46	q	85	ASN
46	q	198	ILE
47	r	103	ARG
48	4	7	ASP
48	4	503	PRO
50	SA	43	SER
51	SB	22	VAL
53	SD	222	PRO

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Mol	Chain	Res	Type
54	SE	30	ARG
54	SE	35	PRO
56	SG	59	GLN
58	SI	131	PRO
60	SK	41	PRO
61	SL	69	ARG
65	SP	27	ASP
65	SP	49	LEU
67	SR	121	GLN
68	SS	117	ILE
71	SV	81	LYS
73	SX	104	GLY
77	Sb	48	SER
5	B	110	ILE
5	B	259	PRO
7	D	114	GLY
40	k	63	GLY
46	q	196	GLY
48	4	517	LEU
48	4	699	GLY
52	SC	171	GLY
55	SF	166	ILE
74	SY	95	GLY
82	Sg	190	GLY
15	L	100	PRO
46	q	80	PRO
46	q	116	ILE
48	4	109	VAL
54	SE	15	PRO
56	SG	161	PRO
63	SN	37	ILE
80	Se	54	GLY
7	D	261	VAL
12	I	47	PRO
37	h	38	GLY
53	SD	194	PRO
54	SE	131	VAL
59	SJ	8	VAL
59	SJ	169	ARG
62	SM	94	ILE
67	SR	86	PRO
70	SU	52	GLY

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Mol	Chain	Res	Type
74	SY	67	GLY
77	Sb	58	GLY
82	Sg	163	PRO
5	B	321	VAL
8	E	90	LYS
9	F	100	ILE
10	G	58	PRO
15	L	28	GLN
38	i	63	VAL
47	r	44	ILE
51	SB	114	VAL
54	SE	90	ILE
62	SM	104	VAL
64	SO	24	GLY
64	SO	53	ILE
9	F	199	VAL
46	q	117	ALA
58	SI	20	PRO

### 5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	A	187/199 (94%)	139 (74%)	48 (26%)	0	4
5	B	335/335 (100%)	265 (79%)	70 (21%)	1	7
6	C	305/305 (100%)	239 (78%)	66 (22%)	1	6
7	D	246/250 (98%)	178 (72%)	68 (28%)	0	3
8	E	209/209 (100%)	158 (76%)	51 (24%)	1	4
9	F	194/194 (100%)	145 (75%)	49 (25%)	0	4
10	G	206/226 (91%)	158 (77%)	48 (23%)	1	4
11	H	169/171 (99%)	125 (74%)	44 (26%)	0	3
12	I	180/180 (100%)	135 (75%)	45 (25%)	1	4
13	J	143/149 (96%)	115 (80%)	28 (20%)	1	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	K	124/136 (91%)	98 (79%)	26 (21%)	1	7
15	L	176/177 (99%)	135 (77%)	41 (23%)	1	4
16	M	116/160 (72%)	95 (82%)	21 (18%)	2	11
17	N	171/172 (99%)	129 (75%)	42 (25%)	1	4
18	O	172/174 (99%)	146 (85%)	26 (15%)	3	19
19	P	134/134 (100%)	112 (84%)	22 (16%)	2	15
20	Q	163/164 (99%)	132 (81%)	31 (19%)	2	9
21	R	159/175 (91%)	120 (76%)	39 (24%)	1	4
22	S	156/192 (81%)	121 (78%)	35 (22%)	1	5
23	T	139/140 (99%)	112 (81%)	27 (19%)	1	8
24	U	89/114 (78%)	67 (75%)	22 (25%)	1	4
25	V	101/107 (94%)	77 (76%)	24 (24%)	1	4
26	W	55/126 (44%)	42 (76%)	13 (24%)	1	4
27	X	107/133 (80%)	89 (83%)	18 (17%)	2	14
28	Y	124/135 (92%)	96 (77%)	28 (23%)	1	5
29	Z	117/118 (99%)	94 (80%)	23 (20%)	1	8
30	a	119/120 (99%)	102 (86%)	17 (14%)	4	22
31	b	63/123 (51%)	45 (71%)	18 (29%)	0	3
32	c	79/97 (81%)	60 (76%)	19 (24%)	1	4
33	d	98/110 (89%)	66 (67%)	32 (33%)	0	2
34	e	114/121 (94%)	89 (78%)	25 (22%)	1	6
35	f	88/89 (99%)	73 (83%)	15 (17%)	2	14
36	g	98/100 (98%)	79 (81%)	19 (19%)	1	8
37	h	109/110 (99%)	92 (84%)	17 (16%)	3	18
38	i	86/89 (97%)	71 (83%)	15 (17%)	2	13
39	j	73/73 (100%)	60 (82%)	13 (18%)	2	12
40	k	64/65 (98%)	52 (81%)	12 (19%)	2	9
41	l	47/48 (98%)	39 (83%)	8 (17%)	2	14
42	m	48/116 (41%)	34 (71%)	14 (29%)	0	3
43	n	22/24 (92%)	17 (77%)	5 (23%)	1	5
44	o	92/94 (98%)	70 (76%)	22 (24%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
45	p	74/74 (100%)	61 (82%)	13 (18%)	2	12
46	q	170/170 (100%)	133 (78%)	37 (22%)	1	6
47	r	109/109 (100%)	86 (79%)	23 (21%)	1	7
48	4	728/728 (100%)	586 (80%)	142 (20%)	1	8
50	SA	174/245 (71%)	141 (81%)	33 (19%)	2	9
51	SB	194/231 (84%)	164 (84%)	30 (16%)	3	18
52	SC	184/184 (100%)	148 (80%)	36 (20%)	1	8
53	SD	190/202 (94%)	163 (86%)	27 (14%)	4	22
54	SE	224/225 (100%)	180 (80%)	44 (20%)	1	8
55	SF	161/170 (95%)	128 (80%)	33 (20%)	1	7
56	SG	207/218 (95%)	171 (83%)	36 (17%)	2	13
57	SH	169/174 (97%)	149 (88%)	20 (12%)	6	29
58	SI	178/180 (99%)	148 (83%)	30 (17%)	2	14
59	SJ	161/168 (96%)	128 (80%)	33 (20%)	1	7
60	SK	89/136 (65%)	68 (76%)	21 (24%)	1	4
61	SL	136/142 (96%)	116 (85%)	20 (15%)	3	20
62	SM	104/104 (100%)	76 (73%)	28 (27%)	0	3
63	SN	130/131 (99%)	101 (78%)	29 (22%)	1	5
64	SO	106/119 (89%)	83 (78%)	23 (22%)	1	6
65	SP	88/130 (68%)	73 (83%)	15 (17%)	2	14
66	SQ	117/121 (97%)	100 (86%)	17 (14%)	4	21
67	SR	117/121 (97%)	102 (87%)	15 (13%)	5	25
68	SS	119/132 (90%)	97 (82%)	22 (18%)	2	10
69	ST	112/115 (97%)	89 (80%)	23 (20%)	1	7
70	SU	94/107 (88%)	84 (89%)	10 (11%)	8	35
71	SV	66/67 (98%)	53 (80%)	13 (20%)	1	8
72	SW	112/113 (99%)	93 (83%)	19 (17%)	2	14
73	SX	113/115 (98%)	97 (86%)	16 (14%)	4	22
74	SY	108/114 (95%)	86 (80%)	22 (20%)	1	7
75	SZ	66/103 (64%)	55 (83%)	11 (17%)	2	14
76	Sa	85/98 (87%)	76 (89%)	9 (11%)	8	35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
77	Sb	75/76 (99%)	64 (85%)	11 (15%)	3	20
78	Sc	57/62 (92%)	43 (75%)	14 (25%)	1	4
79	Sd	45/48 (94%)	35 (78%)	10 (22%)	1	6
80	Se	46/105 (44%)	35 (76%)	11 (24%)	1	4
81	Sf	64/140 (46%)	45 (70%)	19 (30%)	0	3
82	Sg	272/275 (99%)	242 (89%)	30 (11%)	7	33
All	All	10721/11706 (92%)	8570 (80%)	2151 (20%)	4	8

All (2151) 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	64	ARG
4	A	70	LYS
4	A	73	THR
4	A	74	GLU
4	A	95	GLN
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	125	LYS
4	A	126	LEU
4	A	128	ARG
4	A	139	HIS
4	A	144	LYS
4	A	147	ARG
4	A	162	ASN
4	A	163	ARG
4	A	176	ASP
4	A	181	LYS

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Mol	Chain	Res	Type
4	A	186	TYR
4	A	187	HIS
4	A	189	TYR
4	A	190	LYS
4	A	193	ARG
4	A	194	ASN
4	A	195	CYS
4	A	196	TRP
4	A	205	ASN
4	A	208	GLU
4	A	215	ASN
4	A	216	HIS
4	A	218	HIS
4	A	221	LYS
4	A	226	ARG
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	46	PHE
5	B	55	HIS
5	B	56	ILE
5	B	58	ARG
5	B	61	ASP
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

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Mol	Chain	Res	Type
5	B	106	PHE
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	174	ARG
5	B	189	THR
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	245	HIS
5	B	249	ARG
5	B	257	TRP
5	B	258	HIS
5	B	261	ARG
5	B	264	PHE
5	B	289	GLN
5	B	291	TYR
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

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Mol	Chain	Res	Type
5	B	357	ARG
5	B	366	LYS
5	B	369	ASP
5	B	378	ARG
5	B	388	PHE
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	71	ARG
6	C	75	ARG
6	C	76	ILE
6	C	78	ARG
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	100	ARG
6	C	102	PHE
6	C	107	THR
6	C	112	HIS
6	C	113	ARG
6	C	122	TYR
6	C	126	SER
6	C	131	SER
6	C	142	HIS
6	C	150	LEU
6	C	156	ASP
6	C	160	SER
6	C	173	LYS
6	C	175	LYS
6	C	177	TRP
6	C	178	ASN
6	C	182	LYS
6	C	184	TYR
6	C	188	ARG

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Mol	Chain	Res	Type
6	C	193	LYS
6	C	196	MET
6	C	198	ASN
6	C	201	ARG
6	C	212	ASN
6	C	215	ASN
6	C	219	LYS
6	C	222	ARG
6	C	262	GLU
6	C	264	TYR
6	C	267	TRP
6	C	281	MET
6	C	288	ASP
6	C	291	ARG
6	C	300	ARG
6	C	303	ARG
6	C	307	LYS
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	342	ARG
6	C	343	GLN
6	C	345	ARG
6	C	350	ARG
6	C	352	ASP
7	D	15	ARG
7	D	22	ARG
7	D	23	ARG
7	D	30	TYR
7	D	31	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	59	ASP

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Mol	Chain	Res	Type
7	D	63	GLN
7	D	66	TYR
7	D	79	TYR
7	D	81	HIS
7	D	90	VAL
7	D	92	LEU
7	D	94	ASN
7	D	95	TYR
7	D	99	TYR
7	D	104	LEU
7	D	107	ARG
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
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

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Mol	Chain	Res	Type
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	61	ARG
8	E	64	MET
8	E	67	ARG
8	E	68	LYS
8	E	95	ASP
8	E	101	ARG
8	E	104	LYS
8	E	111	TYR
8	E	112	TYR
8	E	114	THR
8	E	115	GLU
8	E	124	HIS
8	E	126	LYS
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	178	ASN
8	E	179	ARG
8	E	186	HIS
8	E	187	GLN

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Mol	Chain	Res	Type
8	E	203	LYS
8	E	206	LYS
8	E	212	TYR
8	E	217	LYS
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	256	ARG
8	E	262	GLN
8	E	266	TYR
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	33	LYS
9	F	34	ARG
9	F	41	GLN
9	F	43	MET
9	F	44	LEU
9	F	49	ARG
9	F	64	ARG
9	F	65	GLN
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	93	PHE
9	F	96	ARG
9	F	100	ILE
9	F	101	ASN

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Mol	Chain	Res	Type
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	197	TYR
9	F	201	LYS
9	F	202	ARG
9	F	204	LYS
9	F	209	PHE
9	F	213	PHE
9	F	214	LYS
9	F	224	LYS
9	F	226	THR
9	F	227	THR
9	F	228	HIS
9	F	234	ASP
9	F	239	GLU
9	F	245	LEU
9	F	247	ARG
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	49	ARG
10	G	50	ASP
10	G	56	LYS
10	G	60	TYR
10	G	62	ARG

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Mol	Chain	Res	Type
10	G	67	ARG
10	G	71	TYR
10	G	73	ARG
10	G	85	GLN
10	G	88	ASP
10	G	89	ARG
10	G	90	GLN
10	G	100	HIS
10	G	101	LYS
10	G	102	TYR
10	G	103	ARG
10	G	108	GLN
10	G	112	GLN
10	G	125	LYS
10	G	131	LYS
10	G	141	ASN
10	G	150	LYS
10	G	162	ASP
10	G	169	PHE
10	G	170	LEU
10	G	175	ARG
10	G	177	MET
10	G	189	ARG
10	G	202	VAL
10	G	210	GLU
10	G	217	LYS
10	G	220	GLU
10	G	223	ARG
10	G	227	ASN
10	G	230	TYR
10	G	231	ASN
10	G	235	ARG
10	G	240	ASN
10	G	254	GLU
10	G	259	LYS
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	42	ASN

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Mol	Chain	Res	Type
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	63	ASN
11	H	66	GLU
11	H	71	ARG
11	H	79	ASN
11	H	84	VAL
11	H	88	PHE
11	H	92	MET
11	H	96	TYR
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
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	162	GLN
11	H	168	LYS
11	H	171	ASP
11	H	173	ARG
11	H	177	ASP
11	H	180	TYR
12	I	3	ARG
12	I	4	ARG
12	I	8	CYS
12	I	9	TYR
12	I	13	LYS

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Mol	Chain	Res	Type
12	I	17	TYR
12	I	21	ARG
12	I	24	ARG
12	I	28	ASP
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	58	GLU
12	I	71	CYS
12	I	74	LYS
12	I	78	LYS
12	I	83	ASP
12	I	86	HIS
12	I	88	ARG
12	I	92	HIS
12	I	94	PHE
12	I	95	HIS
12	I	100	ASN
12	I	101	LYS
12	I	102	MET
12	I	110	ARG
12	I	111	LEU
12	I	119	PHE
12	I	126	VAL
12	I	128	ARG
12	I	143	GLN
12	I	146	GLU
12	I	158	LYS
12	I	159	PHE
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
13	J	15	LEU
13	J	23	ASN

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Mol	Chain	Res	Type
13	J	32	ARG
13	J	33	LEU
13	J	35	ARG
13	J	54	ARG
13	J	55	TYR
13	J	58	ARG
13	J	81	GLU
13	J	83	LEU
13	J	85	LYS
13	J	87	LEU
13	J	90	ARG
13	J	96	LYS
13	J	97	ASN
13	J	98	ASN
13	J	101	ASP
13	J	113	ILE
13	J	128	LEU
13	J	129	ASP
13	J	139	PHE
13	J	146	ARG
13	J	150	CYS
13	J	154	LYS
13	J	155	HIS
13	J	164	ARG
13	J	171	ASP
13	J	178	ASN
14	K	14	TYR
14	K	16	ARG
14	K	21	GLU
14	K	30	PRO
14	K	40	LYS
14	K	44	ASP
14	K	54	LYS
14	K	56	LEU
14	K	61	LYS
14	K	90	ARG
14	K	91	ASP
14	K	92	ARG
14	K	96	LYS
14	K	99	LYS
14	K	104	ILE
14	K	107	ASP

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Mol	Chain	Res	Type
14	K	108	GLU
14	K	114	ARG
14	K	116	MET
14	K	117	ARG
14	K	120	SER
14	K	121	LEU
14	K	123	ARG
14	K	125	LEU
14	K	130	LYS
14	K	147	HIS
15	L	5	ARG
15	L	10	LEU
15	L	13	HIS
15	L	19	GLN
15	L	28	GLN
15	L	31	ARG
15	L	34	ARG
15	L	36	ARG
15	L	39	ARG
15	L	45	ARG
15	L	49	ARG
15	L	56	ARG
15	L	65	ARG
15	L	66	TYR
15	L	67	HIS
15	L	74	ARG
15	L	79	GLU
15	L	82	ARG
15	L	92	ARG
15	L	99	ASP
15	L	101	ARG
15	L	103	ARG
15	L	111	GLN
15	L	113	ASN
15	L	115	GLN
15	L	119	GLU
15	L	123	LYS
15	L	127	PHE
15	L	129	ARG
15	L	130	LYS
15	L	146	LEU
15	L	158	ARG

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Mol	Chain	Res	Type
15	L	162	LYS
15	L	163	ARG
15	L	165	LYS
15	L	172	GLU
15	L	176	PHE
15	L	186	ARG
15	L	195	ARG
15	L	201	GLU
15	L	205	GLN
16	M	8	GLU
16	M	11	ARG
16	M	17	PHE
16	M	29	ASP
16	M	32	ASP
16	M	33	GLN
16	M	34	ASN
16	M	38	VAL
16	M	47	ARG
16	M	56	GLN
16	M	57	LEU
16	M	59	ASP
16	M	61	ILE
16	M	66	HIS
16	M	70	GLN
16	M	79	LYS
16	M	89	THR
16	M	90	ARG
16	M	91	TRP
16	M	98	ARG
16	M	119	ARG
17	N	4	TYR
17	N	9	GLU
17	N	11	TRP
17	N	26	ARG
17	N	29	GLN
17	N	49	ARG
17	N	50	ARG
17	N	53	TYR
17	N	54	LYS
17	N	59	TYR
17	N	63	ARG
17	N	67	ARG

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Mol	Chain	Res	Type
17	N	71	ARG
17	N	72	LYS
17	N	80	THR
17	N	86	HIS
17	N	87	HIS
17	N	91	GLN
17	N	92	LEU
17	N	104	GLU
17	N	108	ARG
17	N	119	TYR
17	N	123	GLU
17	N	126	THR
17	N	127	TYR
17	N	131	GLU
17	N	136	ASP
17	N	138	PHE
17	N	139	HIS
17	N	147	ASP
17	N	150	TRP
17	N	162	ARG
17	N	169	ARG
17	N	174	LEU
17	N	178	HIS
17	N	182	HIS
17	N	189	ARG
17	N	192	TRP
17	N	195	ARG
17	N	196	ASN
17	N	199	GLN
17	N	203	TYR
18	O	5	GLN
18	O	42	ASN
18	O	46	ASN
18	O	49	ARG
18	O	57	PHE
18	O	59	ARG
18	O	60	LYS
18	O	61	ARG
18	O	62	MET
18	O	74	ARG
18	O	78	ARG
18	O	82	ARG

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Mol	Chain	Res	Type
18	O	85	ARG
18	O	110	PRO
18	O	113	ASP
18	O	140	ARG
18	O	160	ARG
18	O	167	HIS
18	O	173	GLN
18	O	178	ARG
18	O	184	ASN
18	O	187	LYS
18	O	188	LYS
18	O	191	ARG
18	O	192	PHE
18	O	194	GLU
19	P	3	ARG
19	P	9	GLU
19	P	10	ASN
19	P	13	LYS
19	P	18	ARG
19	P	23	ARG
19	P	24	VAL
19	P	28	ASN
19	P	30	ARG
19	P	40	HIS
19	P	42	ARG
19	P	61	ARG
19	P	69	ARG
19	P	70	CYS
19	P	78	TRP
19	P	90	PHE
19	P	91	LEU
19	P	110	ASP
19	P	128	ARG
19	P	133	HIS
19	P	135	ARG
19	P	154	GLU
20	Q	5	ILE
20	Q	9	LYS
20	Q	14	ARG
20	Q	15	ARG
20	Q	16	LYS
20	Q	32	TYR

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Mol	Chain	Res	Type
20	Q	37	ARG
20	Q	44	ASN
20	Q	54	SER
20	Q	58	ARG
20	Q	61	LEU
20	Q	65	ARG
20	Q	68	ARG
20	Q	72	LEU
20	Q	75	ARG
20	Q	79	THR
20	Q	85	THR
20	Q	89	ASP
20	Q	91	ARG
20	Q	93	GLN
20	Q	97	LYS
20	Q	108	ARG
20	Q	110	ARG
20	Q	112	ARG
20	Q	119	LYS
20	Q	146	ARG
20	Q	150	ARG
20	Q	166	TYR
20	Q	173	LYS
20	Q	180	ARG
20	Q	181	ARG
21	R	5	ARG
21	R	6	LEU
21	R	9	ARG
21	R	23	TRP
21	R	30	ASN
21	R	39	GLN
21	R	40	GLN
21	R	47	ASP
21	R	50	ILE
21	R	58	HIS
21	R	60	ARG
21	R	74	ARG
21	R	81	ARG
21	R	86	ASN
21	R	89	MET
21	R	99	MET
21	R	104	ARG

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Mol	Chain	Res	Type
21	R	105	LEU
21	R	107	ARG
21	R	108	ARG
21	R	109	TYR
21	R	113	LYS
21	R	114	LYS
21	R	117	ARG
21	R	118	HIS
21	R	120	TYR
21	R	124	TYR
21	R	131	VAL
21	R	133	LYS
21	R	136	ARG
21	R	138	LEU
21	R	141	HIS
21	R	163	ARG
21	R	168	GLU
21	R	172	ARG
21	R	175	GLU
21	R	177	LEU
21	R	178	GLN
21	R	180	LYS
22	S	2	LYS
22	S	15	ARG
22	S	28	TYR
22	S	29	ARG
22	S	37	HIS
22	S	44	PHE
22	S	47	PHE
22	S	48	VAL
22	S	53	LYS
22	S	57	SER
22	S	64	CYS
22	S	68	PHE
22	S	70	LYS
22	S	82	LEU
22	S	83	ARG
22	S	84	TYR
22	S	86	SER
22	S	90	THR
22	S	95	ARG
22	S	99	ASP

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Mol	Chain	Res	Type
22	S	100	LEU
22	S	101	THR
22	S	127	MET
22	S	128	LYS
22	S	138	ARG
22	S	146	HIS
22	S	147	ASP
22	S	150	ILE
22	S	151	LYS
22	S	156	HIS
22	S	157	ARG
22	S	159	LEU
22	S	162	GLN
22	S	168	THR
22	S	171	ARG
23	T	5	LYS
23	T	7	LYS
23	T	9	ARG
23	T	13	TYR
23	T	19	PHE
23	T	30	TYR
23	T	32	ARG
23	T	33	ILE
23	T	35	LYS
23	T	36	LYS
23	T	38	ASP
23	T	41	ASP
23	T	54	HIS
23	T	60	LYS
23	T	70	HIS
23	T	76	VAL
23	T	88	ARG
23	T	102	ARG
23	T	103	ASP
23	T	107	LYS
23	T	113	ASP
23	T	118	GLU
23	T	121	GLU
23	T	139	HIS
23	T	142	ARG
23	T	144	ASN
23	T	152	GLU

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Mol	Chain	Res	Type
24	U	21	PHE
24	U	23	LEU
24	U	27	HIS
24	U	33	ILE
24	U	38	ASN
24	U	39	PHE
24	U	40	GLU
24	U	42	PHE
24	U	46	ARG
24	U	50	ASN
24	U	52	LYS
24	U	62	THR
24	U	64	GLU
24	U	65	ARG
24	U	67	LYS
24	U	69	LYS
24	U	82	TYR
24	U	89	LYS
24	U	90	TYR
24	U	98	ASP
24	U	101	ARG
24	U	113	ARG
25	V	13	LYS
25	V	14	PHE
25	V	15	ARG
25	V	18	LEU
25	V	27	ASN
25	V	30	ASP
25	V	36	ASN
25	V	46	LYS
25	V	48	ARG
25	V	50	ASN
25	V	51	ARG
25	V	59	ASP
25	V	60	MET
25	V	73	ARG
25	V	77	HIS
25	V	84	GLN
25	V	91	LYS
25	V	98	PHE
25	V	100	ASP
25	V	107	ASN

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Mol	Chain	Res	Type
25	V	109	LYS
25	V	111	GLU
25	V	123	LYS
25	V	128	LEU
26	W	3	VAL
26	W	4	GLU
26	W	8	PHE
26	W	12	LYS
26	W	17	HIS
26	W	25	ASP
26	W	33	ASN
26	W	44	ARG
26	W	50	ASN
26	W	55	TYR
26	W	56	ARG
26	W	57	ARG
26	W	59	HIS
27	X	39	LYS
27	X	45	THR
27	X	48	ARG
27	X	60	TYR
27	X	62	ARG
27	X	72	ASP
27	X	79	PHE
27	X	84	GLU
27	X	94	ASN
27	X	117	TYR
27	X	120	ASP
27	X	129	ARG
27	X	133	GLU
27	X	137	TYR
27	X	139	ARG
27	X	144	TYR
27	X	148	ASP
27	X	151	ASN
28	Y	2	LYS
28	Y	4	ASN
28	Y	11	ARG
28	Y	15	ARG
28	Y	17	ARG
28	Y	18	HIS
28	Y	19	PHE

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Mol	Chain	Res	Type
28	Y	27	ARG
28	Y	36	LYS
28	Y	45	ARG
28	Y	49	ILE
28	Y	50	ARG
28	Y	53	ASP
28	Y	56	GLN
28	Y	59	ARG
28	Y	62	TYR
28	Y	65	GLN
28	Y	72	GLN
28	Y	82	ILE
28	Y	83	GLU
28	Y	84	ARG
28	Y	87	ARG
28	Y	91	ASN
28	Y	112	ASP
28	Y	114	ASP
28	Y	115	ARG
28	Y	126	ARG
28	Y	127	GLN
29	Z	4	PHE
29	Z	17	ARG
29	Z	21	ARG
29	Z	27	LYS
29	Z	30	ASP
29	Z	36	ARG
29	Z	38	TYR
29	Z	54	THR
29	Z	57	MET
29	Z	60	LYS
29	Z	64	LYS
29	Z	78	ASN
29	Z	88	ASP
29	Z	92	ASP
29	Z	93	LYS
29	Z	98	LYS
29	Z	102	ARG
29	Z	108	ARG
29	Z	109	LYS
29	Z	112	ARG
29	Z	121	ARG

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Mol	Chain	Res	Type
29	Z	122	TYR
29	Z	136	PHE
30	a	7	LYS
30	a	10	LYS
30	a	14	HIS
30	a	19	HIS
30	a	21	ARG
30	a	40	HIS
30	a	41	HIS
30	a	46	ASP
30	a	49	HIS
30	a	52	TYR
30	a	59	ARG
30	a	61	TYR
30	a	63	LEU
30	a	77	LYS
30	a	84	GLU
30	a	105	ARG
30	a	132	ARG
31	b	6	ASN
31	b	7	HIS
31	b	12	GLN
31	b	16	TRP
31	b	18	ARG
31	b	19	ASN
31	b	22	LYS
31	b	23	LYS
31	b	25	ARG
31	b	27	GLN
31	b	28	ARG
31	b	30	GLU
31	b	39	PHE
31	b	43	MET
31	b	44	ARG
31	b	51	LYS
31	b	55	LYS
31	b	65	MET
32	c	18	LEU
32	c	27	TYR
32	c	31	TYR
32	c	37	MET
32	c	39	ARG

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Mol	Chain	Res	Type
32	c	42	LYS
32	c	44	LYS
32	c	52	CYS
32	c	55	LEU
32	c	56	ARG
32	c	59	GLU
32	c	66	LEU
32	c	72	HIS
32	c	73	HIS
32	c	74	TYR
32	c	77	ASN
32	c	78	ASN
32	c	81	LEU
32	c	88	TYR
33	d	18	ASN
33	d	19	GLU
33	d	23	ARG
33	d	26	THR
33	d	28	ASN
33	d	31	LYS
33	d	32	ARG
33	d	38	PHE
33	d	39	LYS
33	d	44	ARG
33	d	67	ARG
33	d	73	TRP
33	d	78	ARG
33	d	79	ASN
33	d	83	ARG
33	d	85	ARG
33	d	86	VAL
33	d	87	ARG
33	d	91	LYS
33	d	93	ASN
33	d	94	GLU
33	d	95	ASP
33	d	101	LYS
33	d	103	TYR
33	d	108	TYR
33	d	109	VAL
33	d	116	ASN
33	d	117	LEU

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Mol	Chain	Res	Type
33	d	118	GLN
33	d	119	THR
33	d	121	ASN
33	d	123	ASP
34	e	11	LYS
34	e	16	ARG
34	e	21	ILE
34	e	26	ASP
34	e	36	ARG
34	e	42	ASP
34	e	43	ASN
34	e	46	ARG
34	e	49	PHE
34	e	52	GLN
34	e	57	ASN
34	e	64	LYS
34	e	68	HIS
34	e	77	PHE
34	e	78	LEU
34	e	85	LEU
34	e	92	ASN
34	e	95	TYR
34	e	106	LYS
34	e	107	ASN
34	e	108	ARG
34	e	113	GLU
34	e	124	ASN
34	e	126	ASN
34	e	128	ARG
35	f	4	ARG
35	f	5	LEU
35	f	7	SER
35	f	14	TYR
35	f	16	ARG
35	f	19	ARG
35	f	22	ARG
35	f	24	HIS
35	f	36	ARG
35	f	49	TYR
35	f	51	TYR
35	f	52	LYS
35	f	71	TRP

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Mol	Chain	Res	Type
35	f	101	ILE
35	f	109	ARG
36	g	3	GLN
36	g	4	ARG
36	g	5	LEU
36	g	12	SER
36	g	14	ASN
36	g	29	ARG
36	g	32	TYR
36	g	52	ARG
36	g	54	ARG
36	g	57	ARG
36	g	60	ARG
36	g	66	ARG
36	g	75	SER
36	g	81	SER
36	g	88	ARG
36	g	93	ARG
36	g	95	PHE
36	g	114	GLN
36	g	115	LYS
37	h	8	ASP
37	h	10	ARG
37	h	15	GLU
37	h	23	ASP
37	h	28	LEU
37	h	48	ARG
37	h	51	ARG
37	h	67	GLU
37	h	68	ASN
37	h	72	PHE
37	h	73	TYR
37	h	89	ARG
37	h	93	ARG
37	h	97	LYS
37	h	100	GLU
37	h	119	PHE
37	h	122	LYS
38	i	3	LEU
38	i	4	ARG
38	i	12	ASN
38	i	20	ASN

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Mol	Chain	Res	Type
38	i	27	SER
38	i	30	ARG
38	i	33	LEU
38	i	42	ASP
38	i	46	GLU
38	i	50	PHE
38	i	54	GLU
38	i	68	ARG
38	i	85	ARG
38	i	88	GLU
38	i	103	LYS
39	j	10	LYS
39	j	25	LYS
39	j	27	TYR
39	j	39	TYR
39	j	45	ARG
39	j	47	TYR
39	j	48	ASN
39	j	55	ARG
39	j	56	ARG
39	j	57	ASN
39	j	71	TYR
39	j	79	ARG
39	j	80	GLU
40	k	14	THR
40	k	19	ASP
40	k	21	LYS
40	k	27	LYS
40	k	30	ASP
40	k	35	LYS
40	k	37	ARG
40	k	51	GLU
40	k	54	GLU
40	k	56	LEU
40	k	60	LEU
40	k	70	LYS
41	l	11	ARG
41	l	12	PHE
41	l	16	LYS
41	l	17	GLN
41	l	21	ARG
41	l	36	ARG

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Mol	Chain	Res	Type
41	l	46	ARG
41	l	49	LEU
42	m	79	GLU
42	m	84	GLN
42	m	87	GLN
42	m	89	TYR
42	m	90	ASN
42	m	96	CYS
42	m	97	ARG
42	m	98	LYS
42	m	99	CYS
42	m	104	HIS
42	m	106	ARG
42	m	109	ASN
42	m	111	ARG
42	m	119	ASN
43	n	8	LYS
43	n	9	ARG
43	n	18	ARG
43	n	20	MET
43	n	21	ARG
44	o	6	LYS
44	o	11	PHE
44	o	24	THR
44	o	26	TYR
44	o	33	LEU
44	o	36	GLN
44	o	42	ASP
44	o	45	GLN
44	o	48	TYR
44	o	57	ARG
44	o	58	LYS
44	o	59	LYS
44	o	61	LYS
44	o	64	LYS
44	o	69	ARG
44	o	76	ASN
44	o	78	ARG
44	o	79	SER
44	o	81	ARG
44	o	82	MET
44	o	99	ARG

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Mol	Chain	Res	Type
44	o	102	GLN
45	p	3	LYS
45	p	4	ARG
45	p	16	THR
45	p	30	GLU
45	p	34	HIS
45	p	48	LYS
45	p	49	ARG
45	p	69	TRP
45	p	71	TYR
45	p	84	ARG
45	p	85	ARG
45	p	87	LYS
45	p	92	GLN
46	q	5	ASP
46	q	6	ARG
46	q	14	PHE
46	q	16	LYS
46	q	26	LYS
46	q	33	ASP
46	q	42	GLN
46	q	44	ARG
46	q	45	MET
46	q	48	ARG
46	q	57	LYS
46	q	59	THR
46	q	62	ARG
46	q	69	LEU
46	q	77	LYS
46	q	81	HIS
46	q	83	ARG
46	q	98	ILE
46	q	100	ASP
46	q	102	LEU
46	q	103	ARG
46	q	116	ILE
46	q	127	ASN
46	q	141	LEU
46	q	143	ILE
46	q	149	ARG
46	q	155	LEU
46	q	158	VAL

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Mol	Chain	Res	Type
46	q	162	LYS
46	q	183	PHE
46	q	185	PHE
46	q	191	GLN
46	q	194	ASP
46	q	197	SER
46	q	202	GLU
46	q	203	VAL
46	q	206	ILE
47	r	7	TRP
47	r	11	ARG
47	r	13	CYS
47	r	15	SER
47	r	16	PHE
47	r	18	ILE
47	r	26	SER
47	r	28	GLU
47	r	30	ASN
47	r	33	LYS
47	r	35	ARG
47	r	39	ARG
47	r	46	HIS
47	r	64	ILE
47	r	66	ARG
47	r	67	ARG
47	r	71	ARG
47	r	83	ASN
47	r	102	TYR
47	r	106	LEU
47	r	107	ARG
47	r	112	ARG
47	r	115	SER
48	4	3	ASN
48	4	4	PHE
48	4	5	THR
48	4	6	VAL
48	4	12	ILE
48	4	15	LYS
48	4	16	LYS
48	4	27	HIS
48	4	45	ILE
48	4	48	SER

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Mol	Chain	Res	Type
48	4	50	ARG
48	4	53	GLU
48	4	55	ARG
48	4	56	PHE
48	4	60	ARG
48	4	61	LYS
48	4	64	GLN
48	4	71	LYS
48	4	75	ILE
48	4	79	TYR
48	4	91	GLN
48	4	92	SER
48	4	93	LYS
48	4	109	VAL
48	4	110	ASP
48	4	113	SER
48	4	114	GLU
48	4	122	THR
48	4	141	THR
48	4	144	ARG
48	4	159	LYS
48	4	160	MET
48	4	162	ARG
48	4	166	GLU
48	4	167	LEU
48	4	168	GLN
48	4	169	LEU
48	4	183	GLU
48	4	192	TYR
48	4	194	GLU
48	4	196	GLU
48	4	200	MET
48	4	209	LEU
48	4	216	SER
48	4	225	LEU
48	4	226	LYS
48	4	228	PHE
48	4	236	PHE
48	4	239	LYS
48	4	244	LEU
48	4	248	GLU
48	4	252	LYS

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Mol	Chain	Res	Type
48	4	256	MET
48	4	258	LYS
48	4	264	ARG
48	4	265	TYR
48	4	267	ASP
48	4	275	LYS
48	4	281	GLU
48	4	284	LYS
48	4	311	GLU
48	4	314	LYS
48	4	317	GLU
48	4	322	LYS
48	4	330	LYS
48	4	333	LYS
48	4	343	TRP
48	4	359	PRO
48	4	366	LYS
48	4	368	ARG
48	4	370	GLU
48	4	371	LEU
48	4	393	PRO
48	4	409	ARG
48	4	411	TYR
48	4	420	LEU
48	4	439	LYS
48	4	448	GLN
48	4	461	ILE
48	4	462	GLU
48	4	476	ASP
48	4	477	GLN
48	4	481	LYS
48	4	488	PHE
48	4	492	HIS
48	4	493	ASN
48	4	495	ARG
48	4	497	MET
48	4	498	LYS
48	4	499	PHE
48	4	502	SER
48	4	512	LYS
48	4	519	LYS
48	4	524	LEU

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Mol	Chain	Res	Type
48	4	525	LYS
48	4	526	ARG
48	4	540	GLU
48	4	541	SER
48	4	559	LYS
48	4	560	ASP
48	4	563	GLU
48	4	570	ILE
48	4	571	LYS
48	4	572	LYS
48	4	579	TYR
48	4	592	LEU
48	4	607	ARG
48	4	609	PHE
48	4	613	LEU
48	4	615	GLU
48	4	619	LYS
48	4	625	ARG
48	4	630	GLN
48	4	641	TRP
48	4	647	ARG
48	4	667	LYS
48	4	669	VAL
48	4	672	LEU
48	4	673	ASN
48	4	689	GLU
48	4	726	ARG
48	4	727	ARG
48	4	745	TYR
48	4	746	LEU
48	4	748	GLU
48	4	754	GLN
48	4	775	GLN
48	4	794	PHE
48	4	801	ARG
48	4	807	GLN
48	4	809	PHE
48	4	817	TRP
48	4	823	ASP
48	4	827	ASN
48	4	830	ARG
48	4	842	LYS

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Mol	Chain	Res	Type
48	4	845	LYS
48	4	846	GLU
48	4	848	ILE
48	4	849	PRO
48	4	855	LEU
48	4	858	LEU
50	SA	8	LEU
50	SA	32	PHE
50	SA	39	TYR
50	SA	44	ASP
50	SA	53	ARG
50	SA	58	LEU
50	SA	60	LEU
50	SA	73	ASP
50	SA	79	SER
50	SA	81	ASN
50	SA	89	LYS
50	SA	90	PHE
50	SA	99	ILE
50	SA	102	ARG
50	SA	105	PRO
50	SA	111	GLN
50	SA	116	PHE
50	SA	128	ARG
50	SA	130	ASP
50	SA	140	VAL
50	SA	141	ASN
50	SA	151	ASP
50	SA	158	ASP
50	SA	169	HIS
50	SA	177	MET
50	SA	178	LEU
50	SA	180	ARG
50	SA	181	GLU
50	SA	186	ARG
50	SA	195	TRP
50	SA	198	MET
50	SA	203	PHE
50	SA	206	ASP
51	SB	27	LYS
51	SB	31	TYR
51	SB	48	LEU

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Mol	Chain	Res	Type
51	SB	51	ARG
51	SB	52	THR
51	SB	56	LYS
51	SB	60	ASP
51	SB	67	PHE
51	SB	76	ASN
51	SB	77	ASP
51	SB	81	PHE
51	SB	99	ASN
51	SB	105	LEU
51	SB	107	ARG
51	SB	119	THR
51	SB	133	TYR
51	SB	136	ARG
51	SB	142	PHE
51	SB	146	ARG
51	SB	148	ASN
51	SB	150	ILE
51	SB	155	TYR
51	SB	158	HIS
51	SB	162	ARG
51	SB	180	ASP
51	SB	181	LEU
51	SB	191	ASP
51	SB	196	ASP
51	SB	205	TYR
51	SB	208	HIS
52	SC	60	TRP
52	SC	61	MET
52	SC	65	LYS
52	SC	71	LYS
52	SC	72	ASP
52	SC	78	LEU
52	SC	79	GLU
52	SC	92	GLU
52	SC	97	PHE
52	SC	101	SER
52	SC	104	ASP
52	SC	110	MET
52	SC	114	LYS
52	SC	115	GLN
52	SC	120	GLN

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Mol	Chain	Res	Type
52	SC	121	ARG
52	SC	134	ASN
52	SC	137	VAL
52	SC	142	LYS
52	SC	152	ARG
52	SC	167	ARG
52	SC	169	TYR
52	SC	200	ARG
52	SC	215	MET
52	SC	221	ASP
52	SC	227	ARG
52	SC	235	ASN
52	SC	236	PHE
52	SC	242	ASP
52	SC	245	SER
52	SC	250	TYR
52	SC	253	PRO
52	SC	255	LEU
52	SC	262	THR
52	SC	272	HIS
52	SC	275	LYS
53	SD	6	SER
53	SD	9	ARG
53	SD	22	ASN
53	SD	23	GLU
53	SD	24	PHE
53	SD	32	ASP
53	SD	53	THR
53	SD	67	ARG
53	SD	76	ARG
53	SD	87	TYR
53	SD	94	ARG
53	SD	103	GLU
53	SD	107	TYR
53	SD	129	SER
53	SD	135	GLU
53	SD	152	PHE
53	SD	154	ASP
53	SD	158	ILE
53	SD	167	TYR
53	SD	169	ASP
53	SD	177	LEU

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Mol	Chain	Res	Type
53	SD	178	ARG
53	SD	206	ASP
53	SD	212	GLU
53	SD	216	GLU
53	SD	218	LEU
53	SD	225	GLU
54	SE	3	ARG
54	SE	8	HIS
54	SE	9	LEU
54	SE	11	ARG
54	SE	15	PRO
54	SE	18	TRP
54	SE	21	ASP
54	SE	30	ARG
54	SE	39	ARG
54	SE	49	ARG
54	SE	51	ARG
54	SE	54	TYR
54	SE	66	MET
54	SE	67	GLN
54	SE	73	ASP
54	SE	93	ASP
54	SE	95	THR
54	SE	98	ASN
54	SE	99	PHE
54	SE	106	LYS
54	SE	117	GLU
54	SE	118	GLU
54	SE	121	TYR
54	SE	127	ARG
54	SE	130	PHE
54	SE	155	LYS
54	SE	158	ASP
54	SE	164	LEU
54	SE	165	GLU
54	SE	179	ASN
54	SE	180	LEU
54	SE	191	ARG
54	SE	198	ARG
54	SE	205	PHE
54	SE	206	ASP
54	SE	220	THR

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Mol	Chain	Res	Type
54	SE	224	ASN
54	SE	226	PHE
54	SE	240	ARG
54	SE	242	LYS
54	SE	253	ASP
54	SE	255	ARG
54	SE	259	LYS
54	SE	260	GLN
55	SF	23	TRP
55	SF	29	GLN
55	SF	38	TYR
55	SF	42	LYS
55	SF	49	LEU
55	SF	63	LYS
55	SF	65	GLN
55	SF	79	HIS
55	SF	82	ASN
55	SF	83	ASN
55	SF	88	MET
55	SF	95	HIS
55	SF	106	GLU
55	SF	109	LEU
55	SF	110	GLN
55	SF	118	ASN
55	SF	122	ARG
55	SF	123	GLU
55	SF	124	ASP
55	SF	130	ARG
55	SF	136	ARG
55	SF	137	GLN
55	SF	140	ASP
55	SF	145	ARG
55	SF	168	THR
55	SF	171	GLU
55	SF	172	CYS
55	SF	176	GLU
55	SF	186	ASN
55	SF	190	ILE
55	SF	194	ASP
55	SF	195	GLU
55	SF	198	ARG
56	SG	12	CYS

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Mol	Chain	Res	Type
56	SG	20	ASP
56	SG	21	GLU
56	SG	30	LYS
56	SG	31	ARG
56	SG	32	MET
56	SG	56	ASN
56	SG	58	LYS
56	SG	59	GLN
56	SG	64	LYS
56	SG	70	HIS
56	SG	74	ARG
56	SG	76	LEU
56	SG	87	ARG
56	SG	88	ARG
56	SG	110	ASN
56	SG	120	ASP
56	SG	121	ILE
56	SG	126	ASP
56	SG	132	ARG
56	SG	136	LYS
56	SG	140	ARG
56	SG	143	LYS
56	SG	152	ASP
56	SG	159	ARG
56	SG	162	LEU
56	SG	164	LYS
56	SG	165	GLU
56	SG	170	ARG
56	SG	191	ARG
56	SG	196	LYS
56	SG	198	ARG
56	SG	213	LEU
56	SG	225	GLN
56	SG	227	GLN
56	SG	236	SER
57	SH	16	PRO
57	SH	23	ILE
57	SH	33	ASN
57	SH	35	ASP
57	SH	36	LEU
57	SH	40	LEU
57	SH	57	ARG

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Mol	Chain	Res	Type
57	SH	74	LYS
57	SH	81	ARG
57	SH	83	LEU
57	SH	87	PHE
57	SH	99	ARG
57	SH	135	PHE
57	SH	151	SER
57	SH	159	ASP
57	SH	162	GLN
57	SH	165	ASN
57	SH	166	VAL
57	SH	184	ASP
57	SH	186	ASN
58	SI	6	ASP
58	SI	8	TRP
58	SI	12	ARG
58	SI	21	TYR
58	SI	22	HIS
58	SI	27	TYR
58	SI	47	ARG
58	SI	49	ARG
58	SI	52	ASN
58	SI	58	LEU
58	SI	67	TRP
58	SI	70	GLU
58	SI	73	THR
58	SI	74	ARG
58	SI	83	TYR
58	SI	87	ASN
58	SI	105	ASP
58	SI	106	SER
58	SI	110	ARG
58	SI	112	TRP
58	SI	123	ARG
58	SI	140	LYS
58	SI	149	TYR
58	SI	155	ASN
58	SI	178	ARG
58	SI	191	GLU
58	SI	196	GLU
58	SI	197	PHE
58	SI	203	LYS

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Mol	Chain	Res	Type
58	SI	206	LYS
59	SJ	5	ARG
59	SJ	9	CYS
59	SJ	10	ARG
59	SJ	17	ARG
59	SJ	18	ARG
59	SJ	20	PHE
59	SJ	26	ASP
59	SJ	29	LEU
59	SJ	39	ASN
59	SJ	67	ASP
59	SJ	69	ARG
59	SJ	79	ARG
59	SJ	93	LYS
59	SJ	101	LYS
59	SJ	104	ASP
59	SJ	108	ARG
59	SJ	109	ARG
59	SJ	110	LEU
59	SJ	115	PHE
59	SJ	116	LYS
59	SJ	123	ILE
59	SJ	124	HIS
59	SJ	127	ARG
59	SJ	131	ARG
59	SJ	138	ARG
59	SJ	139	LYS
59	SJ	147	PHE
59	SJ	150	ARG
59	SJ	152	ASP
59	SJ	159	PHE
59	SJ	162	ARG
59	SJ	165	TYR
59	SJ	169	ARG
60	SK	1	MET
60	SK	2	LEU
60	SK	5	LYS
60	SK	8	ARG
60	SK	13	GLU
60	SK	16	PHE
60	SK	32	HIS
60	SK	37	ASP

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Mol	Chain	Res	Type
60	SK	39	ASN
60	SK	40	VAL
60	SK	43	LEU
60	SK	46	MET
60	SK	61	GLN
60	SK	65	ARG
60	SK	66	HIS
60	SK	74	GLU
60	SK	80	ARG
60	SK	81	ASP
60	SK	84	HIS
60	SK	89	ILE
60	SK	95	ARG
61	SL	8	ARG
61	SL	16	ILE
61	SL	20	LYS
61	SL	22	ARG
61	SL	27	GLU
61	SL	35	ARG
61	SL	39	ASN
61	SL	40	ILE
61	SL	65	ASN
61	SL	69	ARG
61	SL	92	TYR
61	SL	97	ARG
61	SL	103	GLU
61	SL	108	ASN
61	SL	113	LEU
61	SL	116	CYS
61	SL	117	PHE
61	SL	121	GLN
61	SL	124	ASP
61	SL	147	LYS
62	SM	12	MET
62	SM	13	ASP
62	SM	18	LEU
62	SM	26	LEU
62	SM	29	ASP
62	SM	31	LEU
62	SM	33	ARG
62	SM	36	ARG
62	SM	45	ARG

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Mol	Chain	Res	Type
62	SM	48	HIS
62	SM	52	GLN
62	SM	57	ASP
62	SM	73	GLN
62	SM	75	ASN
62	SM	76	LEU
62	SM	77	ILE
62	SM	83	LYS
62	SM	88	TRP
62	SM	91	LEU
62	SM	95	ASP
62	SM	96	ARG
62	SM	99	ASN
62	SM	101	ARG
62	SM	102	LYS
62	SM	104	VAL
62	SM	113	ASP
62	SM	114	TYR
62	SM	127	TYR
63	SN	3	ARG
63	SN	25	TRP
63	SN	27	LYS
63	SN	31	ASP
63	SN	38	TYR
63	SN	55	ARG
63	SN	56	ASP
63	SN	58	HIS
63	SN	62	GLN
63	SN	64	ARG
63	SN	69	ASN
63	SN	76	LYS
63	SN	83	ASP
63	SN	84	LEU
63	SN	86	GLU
63	SN	87	ASP
63	SN	89	TYR
63	SN	99	ARG
63	SN	101	HIS
63	SN	104	ARG
63	SN	105	ASN
63	SN	113	PHE
63	SN	121	ARG

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Mol	Chain	Res	Type
63	SN	125	LEU
63	SN	127	ARG
63	SN	128	TYR
63	SN	132	LYS
63	SN	133	ARG
63	SN	144	SER
64	SO	17	LEU
64	SO	34	PHE
64	SO	39	ASP
64	SO	41	PHE
64	SO	43	HIS
64	SO	51	GLU
64	SO	52	THR
64	SO	63	LYS
64	SO	65	ASP
64	SO	80	ASP
64	SO	84	ARG
64	SO	86	LYS
64	SO	94	HIS
64	SO	103	ASN
64	SO	106	LYS
64	SO	116	LEU
64	SO	117	ARG
64	SO	121	ARG
64	SO	128	ARG
64	SO	130	GLU
64	SO	146	ARG
64	SO	147	ARG
64	SO	150	ARG
65	SP	5	GLU
65	SP	7	LYS
65	SP	10	ARG
65	SP	12	PHE
65	SP	15	PHE
65	SP	40	ARG
65	SP	41	GLN
65	SP	42	ARG
65	SP	43	ARG
65	SP	44	ARG
65	SP	50	ARG
65	SP	51	ARG
65	SP	52	LYS

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Mol	Chain	Res	Type
65	SP	79	HIS
65	SP	86	LEU
66	SQ	15	ARG
66	SQ	26	LYS
66	SQ	35	ASN
66	SQ	41	MET
66	SQ	45	ARG
66	SQ	62	ARG
66	SQ	73	LYS
66	SQ	85	ARG
66	SQ	90	LYS
66	SQ	99	TYR
66	SQ	114	GLN
66	SQ	123	ASP
66	SQ	126	ARG
66	SQ	128	GLU
66	SQ	138	ARG
66	SQ	140	ARG
66	SQ	145	TYR
67	SR	3	ARG
67	SR	18	GLU
67	SR	31	ASN
67	SR	37	GLU
67	SR	56	HIS
67	SR	78	ARG
67	SR	79	GLU
67	SR	83	ASN
67	SR	87	GLU
67	SR	91	LEU
67	SR	93	GLN
67	SR	109	LEU
67	SR	118	GLN
67	SR	120	THR
67	SR	121	GLN
68	SS	8	LYS
68	SS	10	GLN
68	SS	14	ARG
68	SS	23	ARG
68	SS	28	PHE
68	SS	34	LYS
68	SS	39	ARG
68	SS	63	GLU

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Mol	Chain	Res	Type
68	SS	78	LYS
68	SS	82	TRP
68	SS	85	ASN
68	SS	86	ARG
68	SS	87	GLN
68	SS	92	ASP
68	SS	95	TYR
68	SS	108	ARG
68	SS	118	ARG
68	SS	124	ARG
68	SS	125	HIS
68	SS	134	GLN
68	SS	135	HIS
68	SS	142	ARG
69	ST	11	GLN
69	ST	13	GLU
69	ST	16	ARG
69	ST	21	PHE
69	ST	28	LEU
69	ST	33	TRP
69	ST	35	ASP
69	ST	42	HIS
69	ST	53	PHE
69	ST	62	ARG
69	ST	63	HIS
69	ST	74	SER
69	ST	79	TYR
69	ST	82	ARG
69	ST	83	GLN
69	ST	84	ARG
69	ST	92	PHE
69	ST	94	ARG
69	ST	97	LYS
69	ST	118	ASP
69	ST	121	ARG
69	ST	128	GLN
69	ST	129	ARG
70	SU	19	ARG
70	SU	47	ASN
70	SU	48	LEU
70	SU	49	LYS
70	SU	51	LYS

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Mol	Chain	Res	Type
70	SU	55	ARG
70	SU	56	MET
70	SU	77	TRP
70	SU	87	ARG
70	SU	111	GLU
71	SV	1	MET
71	SV	2	GLN
71	SV	4	ASP
71	SV	11	LEU
71	SV	18	SER
71	SV	21	ASN
71	SV	39	VAL
71	SV	45	ARG
71	SV	47	ASN
71	SV	49	GLN
71	SV	50	PHE
71	SV	81	LYS
71	SV	82	ASN
72	SW	2	VAL
72	SW	3	ARG
72	SW	12	LYS
72	SW	24	GLN
72	SW	28	ARG
72	SW	36	ARG
72	SW	37	PHE
72	SW	52	ILE
72	SW	56	HIS
72	SW	57	ARG
72	SW	70	ASN
72	SW	78	ARG
72	SW	80	ASP
72	SW	85	ASP
72	SW	90	GLN
72	SW	91	ASN
72	SW	98	GLN
72	SW	104	LEU
72	SW	105	THR
73	SX	5	ARG
73	SX	9	THR
73	SX	17	ARG
73	SX	19	ASP
73	SX	32	LEU

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Mol	Chain	Res	Type
73	SX	45	SER
73	SX	46	HIS
73	SX	61	GLN
73	SX	67	ARG
73	SX	87	ASN
73	SX	88	ASP
73	SX	105	PHE
73	SX	107	ARG
73	SX	114	ASP
73	SX	131	LEU
73	SX	135	LYS
74	SY	3	ASP
74	SY	16	ARG
74	SY	17	LEU
74	SY	19	GLN
74	SY	20	ARG
74	SY	23	MET
74	SY	29	HIS
74	SY	47	MET
74	SY	54	VAL
74	SY	61	ARG
74	SY	63	HIS
74	SY	64	PHE
74	SY	69	THR
74	SY	80	ASP
74	SY	93	ARG
74	SY	96	LEU
74	SY	98	GLU
74	SY	99	LYS
74	SY	101	LYS
74	SY	107	ARG
74	SY	111	LYS
74	SY	118	ARG
75	SZ	44	LEU
75	SZ	45	ASN
75	SZ	49	LEU
75	SZ	64	ASN
75	SZ	69	THR
75	SZ	85	ARG
75	SZ	94	LYS
75	SZ	97	ILE
75	SZ	109	TYR

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Mol	Chain	Res	Type
75	SZ	110	THR
75	SZ	114	LYS
76	Sa	28	ARG
76	Sa	41	ILE
76	Sa	43	ASN
76	Sa	51	ARG
76	Sa	52	ASP
76	Sa	62	TYR
76	Sa	72	HIS
76	Sa	94	ASP
76	Sa	95	ARG
77	Sb	14	GLU
77	Sb	17	ARG
77	Sb	26	GLN
77	Sb	34	ASP
77	Sb	37	CYS
77	Sb	47	PHE
77	Sb	59	CYS
77	Sb	72	ARG
77	Sb	78	SER
77	Sb	83	GLN
77	Sb	84	HIS
78	Sc	5	ARG
78	Sc	7	GLN
78	Sc	13	ARG
78	Sc	21	THR
78	Sc	26	GLN
78	Sc	31	ARG
78	Sc	33	GLU
78	Sc	34	PHE
78	Sc	40	ARG
78	Sc	44	ARG
78	Sc	51	ARG
78	Sc	54	ASP
78	Sc	60	GLU
78	Sc	67	ARG
79	Sd	6	PHE
79	Sd	8	TRP
79	Sd	10	HIS
79	Sd	12	ARG
79	Sd	19	ARG
79	Sd	26	ASN

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Mol	Chain	Res	Type
79	Sd	30	LEU
79	Sd	32	ARG
79	Sd	43	PHE
79	Sd	56	ASP
80	Se	13	ARG
80	Se	15	GLN
80	Se	18	LYS
80	Se	26	LYS
80	Se	28	LYS
80	Se	31	ARG
80	Se	34	ARG
80	Se	35	ARG
80	Se	40	ARG
80	Se	41	ARG
80	Se	52	LYS
81	Sf	87	THR
81	Sf	89	LYS
81	Sf	95	ARG
81	Sf	98	VAL
81	Sf	106	TYR
81	Sf	116	ARG
81	Sf	119	ARG
81	Sf	126	CYS
81	Sf	131	PHE
81	Sf	136	PHE
81	Sf	138	ARG
81	Sf	139	HIS
81	Sf	140	TYR
81	Sf	141	CYS
81	Sf	146	LEU
81	Sf	148	TYR
81	Sf	149	CYS
81	Sf	150	PHE
81	Sf	152	LYS
82	Sg	8	ARG
82	Sg	15	ASN
82	Sg	17	TRP
82	Sg	20	GLN
82	Sg	24	THR
82	Sg	44	LYS
82	Sg	47	ARG
82	Sg	49	GLU

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Mol	Chain	Res	Type
82	Sg	60	ARG
82	Sg	65	PHE
82	Sg	74	ASP
82	Sg	84	ASP
82	Sg	99	ARG
82	Sg	100	ARG
82	Sg	107	ASP
82	Sg	118	ARG
82	Sg	133	ASN
82	Sg	140	TYR
82	Sg	143	GLN
82	Sg	167	SER
82	Sg	194	TYR
82	Sg	226	HIS
82	Sg	229	THR
82	Sg	234	ASP
82	Sg	249	CYS
82	Sg	268	ASP
82	Sg	282	GLU
82	Sg	294	ASP
82	Sg	297	THR
82	Sg	306	LEU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (296) 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	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	301	ASN
5	B	302	ASN
5	B	322	HIS

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Mol	Chain	Res	Type
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	286	ASN
6	C	338	ASN
6	C	343	GLN
7	D	45	ASN
7	D	94	ASN
7	D	111	ASN
7	D	122	GLN
7	D	131	ASN
7	D	157	ASN
7	D	191	ASN
7	D	195	HIS
7	D	198	HIS
7	D	202	GLN
7	D	244	HIS
7	D	250	ASN
7	D	282	GLN
8	E	124	HIS
8	E	153	HIS
8	E	178	ASN
8	E	186	HIS
8	E	224	GLN
8	E	246	GLN
9	F	58	HIS
9	F	82	ASN
9	F	153	ASN
9	F	165	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

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Mol	Chain	Res	Type
10	G	81	ASN
10	G	108	GLN
10	G	112	GLN
10	G	153	GLN
10	G	227	ASN
10	G	231	ASN
11	H	40	HIS
11	H	63	ASN
11	H	106	GLN
12	I	59	GLN
12	I	100	ASN
12	I	144	ASN
12	I	163	GLN
12	I	213	HIS
13	J	155	HIS
14	K	149	HIS
15	L	6	ASN
15	L	28	GLN
15	L	104	ASN
15	L	113	ASN
15	L	159	ASN
16	M	33	GLN
16	M	34	ASN
16	M	48	GLN
16	M	66	HIS
17	N	8	GLN
17	N	90	ASN
17	N	178	HIS
17	N	181	HIS
17	N	182	HIS
17	N	196	ASN
17	N	201	HIS
18	O	65	ASN
18	O	96	GLN
18	O	173	GLN
19	P	25	HIS
19	P	28	ASN
19	P	54	GLN
19	P	64	ASN
19	P	72	GLN
19	P	80	GLN
19	P	97	ASN

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Mol	Chain	Res	Type
19	P	133	HIS
19	P	145	HIS
20	Q	7	HIS
20	Q	40	ASN
20	Q	57	ASN
21	R	66	ASN
21	R	75	HIS
21	R	118	HIS
21	R	143	HIS
22	S	37	HIS
22	S	91	HIS
22	S	92	ASN
22	S	122	HIS
22	S	125	GLN
22	S	163	HIS
23	T	58	HIS
23	T	70	HIS
23	T	139	HIS
24	U	55	ASN
25	V	36	ASN
26	W	17	HIS
26	W	59	HIS
27	X	93	ASN
27	X	111	GLN
28	Y	24	HIS
28	Y	56	GLN
28	Y	72	GLN
28	Y	86	GLN
28	Y	100	HIS
28	Y	127	GLN
29	Z	79	HIS
30	a	41	HIS
30	a	62	HIS
30	a	66	ASN
30	a	67	GLN
31	b	6	ASN
31	b	7	HIS
31	b	12	GLN
31	b	19	ASN
31	b	27	GLN
31	b	42	ASN
32	c	19	GLN

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Mol	Chain	Res	Type
32	c	40	GLN
32	c	73	HIS
32	c	77	ASN
33	d	30	HIS
33	d	93	ASN
33	d	100	ASN
34	e	24	GLN
34	e	43	ASN
34	e	126	ASN
35	f	21	GLN
35	f	24	HIS
35	f	55	ASN
35	f	80	ASN
36	g	18	ASN
36	g	110	GLN
36	g	112	GLN
37	h	68	ASN
37	h	98	HIS
39	j	16	HIS
39	j	48	ASN
41	l	19	GLN
42	m	84	GLN
42	m	87	GLN
42	m	109	ASN
44	o	21	HIS
44	o	25	GLN
44	o	45	GLN
44	o	76	ASN
44	o	90	HIS
46	q	41	GLN
46	q	58	ASN
46	q	68	HIS
46	q	126	GLN
46	q	139	GLN
46	q	191	GLN
46	q	200	ASN
47	r	6	GLN
47	r	12	ASN
47	r	21	ASN
47	r	31	ASN
47	r	36	ASN
47	r	41	ASN

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Mol	Chain	Res	Type
47	r	70	GLN
47	r	83	ASN
48	4	3	ASN
48	4	21	ASN
48	4	27	HIS
48	4	64	GLN
48	4	158	ASN
48	4	168	GLN
48	4	179	GLN
48	4	448	GLN
48	4	477	GLN
48	4	493	ASN
48	4	684	GLN
48	4	705	HIS
48	4	710	HIS
48	4	715	HIS
48	4	737	GLN
48	4	803	ASN
48	4	807	GLN
48	4	811	GLN
48	4	816	HIS
48	4	827	ASN
50	SA	24	HIS
50	SA	33	GLN
50	SA	84	GLN
50	SA	141	ASN
50	SA	169	HIS
51	SB	40	ASN
51	SB	99	ASN
51	SB	118	GLN
51	SB	124	HIS
51	SB	148	ASN
52	SC	113	GLN
52	SC	115	GLN
52	SC	120	GLN
52	SC	134	ASN
52	SC	272	HIS
53	SD	4	GLN
53	SD	22	ASN
53	SD	159	HIS
54	SE	36	HIS
54	SE	138	HIS

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Mol	Chain	Res	Type
54	SE	161	GLN
55	SF	29	GLN
55	SF	65	GLN
55	SF	82	ASN
55	SF	95	HIS
55	SF	137	GLN
55	SF	186	ASN
55	SF	203	ASN
56	SG	59	GLN
56	SG	65	GLN
56	SG	110	ASN
58	SI	9	HIS
58	SI	44	HIS
58	SI	155	ASN
58	SI	165	GLN
59	SJ	111	GLN
59	SJ	177	ASN
60	SK	28	HIS
60	SK	39	ASN
61	SL	19	ASN
61	SL	106	HIS
61	SL	141	ASN
62	SM	19	GLN
62	SM	48	HIS
62	SM	99	ASN
63	SN	5	HIS
63	SN	69	ASN
65	SP	41	GLN
65	SP	46	ASN
65	SP	79	HIS
66	SQ	48	GLN
66	SQ	114	GLN
66	SQ	142	GLN
67	SR	83	ASN
68	SS	10	GLN
68	SS	17	ASN
68	SS	42	HIS
68	SS	120	HIS
68	SS	125	HIS
68	SS	135	HIS
69	ST	51	ASN
69	ST	63	HIS

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Mol	Chain	Res	Type
70	SU	47	ASN
71	SV	29	HIS
71	SV	47	ASN
71	SV	49	GLN
72	SW	64	ASN
72	SW	82	GLN
72	SW	98	GLN
73	SX	20	HIS
73	SX	23	HIS
73	SX	61	GLN
73	SX	87	ASN
73	SX	97	ASN
74	SY	85	ASN
74	SY	94	HIS
75	SZ	103	HIS
76	Sa	17	HIS
76	Sa	72	HIS
77	Sb	19	HIS
78	Sc	7	GLN
78	Sc	24	GLN
78	Sc	26	GLN
79	Sd	10	HIS
79	Sd	26	ASN
79	Sd	28	HIS
81	Sf	111	ASN
82	Sg	119	GLN
82	Sg	181	ASN
82	Sg	215	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	5	3645/3664 (99%)	1616 (44%)	0
2	7	119/120 (99%)	31 (26%)	0
3	8	155/156 (99%)	61 (39%)	0
49	S2	1716/1742 (98%)	745 (43%)	0
All	All	5635/5682 (99%)	2453 (43%)	0

All (2453) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	5	2	G
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	54	G
1	5	55	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	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
1	5	178	C

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Mol	Chain	Res	Type
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	238	C
1	5	239	C
1	5	245	C
1	5	246	G
1	5	255	C
1	5	257	C
1	5	262	G

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Mol	Chain	Res	Type
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
1	5	347	A
1	5	349	A

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Mol	Chain	Res	Type
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	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	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
1	5	440	U
1	5	444	G
1	5	445	U
1	5	449	C
1	5	450	G

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Mol	Chain	Res	Type
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
1	5	650	C
1	5	653	U
1	5	654	C
1	5	656	C
1	5	658	C

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Mol	Chain	Res	Type
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
1	5	732	A
1	5	737	C
1	5	739	G
1	5	742	G
1	5	743	G

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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	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	1168	G
1	5	1177	U
1	5	1181	C
1	5	1193	C
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	5	1313	C
1	5	1314	C
1	5	1319	U
1	5	1325	C
1	5	1326	A
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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	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	1562	G
1	5	1563	A
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
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

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Mol	Chain	Res	Type
1	5	1642	A
1	5	1643	A
1	5	1650	A
1	5	1654	G
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	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
1	5	1696	C
1	5	1697	G
1	5	1698	C
1	5	1699	A
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

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Mol	Chain	Res	Type
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	1762	C
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
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

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Mol	Chain	Res	Type
1	5	1833	G
1	5	1834	U
1	5	1835	G
1	5	1836	G
1	5	1840	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	1878	G
1	5	1881	C
1	5	1882	U
1	5	1886	G
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

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Mol	Chain	Res	Type
1	5	1932	A
1	5	1935	C
1	5	1936	C
1	5	1938	C
1	5	1940	G
1	5	1941	A
1	5	1944	A
1	5	1945	G
1	5	1946	G
1	5	1947	U
1	5	1948	G
1	5	1951	G
1	5	1952	G
1	5	1956	A
1	5	1958	A
1	5	1959	U
1	5	1960	A
1	5	1961	G
1	5	1962	A
1	5	1963	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	1991	A
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

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Mol	Chain	Res	Type
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	2015	U
1	5	2018	C
1	5	2019	C
1	5	2020	U
1	5	2022	C
1	5	2024	G
1	5	2025	A
1	5	2026	A
1	5	2027	U
1	5	2033	A
1	5	2034	G
1	5	2038	U
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	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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
1	5	2369	U
1	5	2370	A
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

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Mol	Chain	Res	Type
1	5	2440	U
1	5	2441	C
1	5	2443	G
1	5	2447	U
1	5	2448	G
1	5	2450	G
1	5	2454	U
1	5	2464	C
1	5	2465	C
1	5	2468	U
1	5	2469	C
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	2537	A
1	5	2544	G

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Mol	Chain	Res	Type
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
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	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	2653	C
1	5	2658	G
1	5	2659	A
1	5	2660	A
1	5	2661	U

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Mol	Chain	Res	Type
1	5	2662	G
1	5	2664	G
1	5	2666	U
1	5	2667	C
1	5	2670	C
1	5	2673	G
1	5	2674	A
1	5	2675	G
1	5	2678	A
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

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Mol	Chain	Res	Type
1	5	2767	U
1	5	2768	C
1	5	2769	U
1	5	2770	C
1	5	2783	A
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

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Mol	Chain	Res	Type
1	5	2858	A
1	5	2859	G
1	5	2860	C
1	5	2866	C
1	5	2867	C
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	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	3649	A
1	5	3650	C

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Mol	Chain	Res	Type
1	5	3658	C
1	5	3660	C
1	5	3662	A
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	3677	U
1	5	3678	G
1	5	3679	U
1	5	3680	U
1	5	3681	G
1	5	3682	A
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	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
1	5	3876	A

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Mol	Chain	Res	Type
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	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
1	5	4087	G
1	5	4088	C

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Mol	Chain	Res	Type
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	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
1	5	4191	G
1	5	4195	G
1	5	4196	G

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Mol	Chain	Res	Type
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	4271	A
1	5	4274	A
1	5	4276	G
1	5	4279	A

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Mol	Chain	Res	Type
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	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
1	5	4374	U
1	5	4375	C
1	5	4376	A
1	5	4377	G
1	5	4378	A

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Mol	Chain	Res	Type
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	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
1	5	4469	U
1	5	4471	U
1	5	4472	G
1	5	4473	A
1	5	4475	G
1	5	4476	C

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Mol	Chain	Res	Type
1	5	4484	A
1	5	4488	A
1	5	4489	G
1	5	4491	G
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
1	5	4937	C
1	5	4938	A
1	5	4939	C
1	5	4942	C
1	5	4945	G
1	5	4946	U
1	5	4947	U

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
49	S2	3	C
49	S2	4	C
49	S2	9	U
49	S2	10	G
49	S2	17	C
49	S2	18	C
49	S2	20	G
49	S2	23	G
49	S2	24	C
49	S2	25	A
49	S2	27	A
49	S2	33	G
49	S2	39	A
49	S2	44	U
49	S2	45	A

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Mol	Chain	Res	Type
49	S2	46	A
49	S2	49	C
49	S2	51	U
49	S2	53	C
49	S2	56	G
49	S2	57	U
49	S2	58	C
49	S2	59	U
49	S2	60	A
49	S2	61	A
49	S2	62	G
49	S2	63	U
49	S2	64	A
49	S2	65	C
49	S2	66	G
49	S2	67	C
49	S2	68	A
49	S2	71	G
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	75	G
49	S2	76	U
49	S2	77	A
49	S2	78	C
49	S2	79	A
49	S2	80	G
49	S2	84	A
49	S2	88	G
49	S2	89	C
49	S2	92	A
49	S2	98	C
49	S2	99	A
49	S2	101	U
49	S2	103	A
49	S2	105	U
49	S2	111	A
49	S2	113	G
49	S2	114	G
49	S2	115	U
49	S2	116	U
49	S2	117	C

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Mol	Chain	Res	Type
49	S2	123	G
49	S2	125	C
49	S2	127	C
49	S2	139	C
49	S2	140	C
49	S2	141	A
49	S2	142	C
49	S2	143	U
49	S2	144	U
49	S2	146	G
49	S2	147	A
49	S2	148	U
49	S2	150	A
49	S2	153	G
49	S2	154	U
49	S2	155	G
49	S2	156	G
49	S2	159	A
49	S2	160	U
49	S2	161	U
49	S2	162	C
49	S2	163	U
49	S2	164	A
49	S2	165	G
49	S2	167	G
49	S2	169	U
49	S2	170	A
49	S2	173	A
49	S2	176	U
49	S2	180	G
49	S2	181	A
49	S2	182	C
49	S2	183	G
49	S2	184	G
49	S2	188	C
49	S2	189	U
49	S2	191	A
49	S2	192	C
49	S2	200	G
49	S2	202	G
49	S2	206	G
49	S2	209	A

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Mol	Chain	Res	Type
49	S2	210	U
49	S2	211	G
49	S2	213	G
49	S2	215	G
49	S2	216	C
49	S2	217	A
49	S2	290	U
49	S2	291	G
49	S2	292	A
49	S2	293	C
49	S2	295	C
49	S2	302	A
49	S2	305	U
49	S2	306	C
49	S2	307	G
49	S2	308	G
49	S2	309	G
49	S2	310	C
49	S2	311	C
49	S2	312	G
49	S2	313	A
49	S2	314	U
49	S2	316	G
49	S2	317	C
49	S2	318	A
49	S2	319	C
49	S2	321	C
49	S2	324	C
49	S2	325	C
49	S2	326	C
49	S2	328	U
49	S2	338	G
49	S2	340	C
49	S2	341	C
49	S2	342	C
49	S2	343	A
49	S2	346	C
49	S2	347	G
49	S2	350	C
49	S2	355	G
49	S2	356	C
49	S2	357	C

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Mol	Chain	Res	Type
49	S2	360	A
49	S2	362	C
49	S2	364	A
49	S2	365	C
49	S2	367	U
49	S2	368	U
49	S2	369	C
49	S2	370	G
49	S2	373	G
49	S2	377	G
49	S2	380	G
49	S2	381	C
49	S2	382	C
49	S2	384	U
49	S2	385	G
49	S2	386	C
49	S2	394	G
49	S2	398	A
49	S2	400	C
49	S2	407	G
49	S2	408	A
49	S2	409	C
49	S2	411	G
49	S2	414	A
49	S2	416	U
49	S2	417	C
49	S2	418	A
49	S2	419	G
49	S2	425	G
49	S2	426	A
49	S2	427	U
49	S2	428	U
49	S2	429	C
49	S2	435	A
49	S2	436	G
49	S2	438	G
49	S2	441	C
49	S2	444	G
49	S2	445	A
49	S2	447	A
49	S2	448	A
49	S2	449	A

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Mol	Chain	Res	Type
49	S2	450	C
49	S2	453	C
49	S2	454	U
49	S2	455	A
49	S2	459	C
49	S2	460	A
49	S2	464	A
49	S2	465	A
49	S2	466	G
49	S2	467	G
49	S2	468	A
49	S2	469	A
49	S2	471	G
49	S2	472	C
49	S2	473	A
49	S2	474	G
49	S2	476	A
49	S2	482	G
49	S2	487	U
49	S2	488	U
49	S2	489	A
49	S2	492	C
49	S2	493	A
49	S2	496	C
49	S2	500	A
49	S2	501	C
49	S2	507	G
49	S2	508	A
49	S2	516	A
49	S2	518	G
49	S2	523	A
49	S2	525	A
49	S2	528	A
49	S2	530	U
49	S2	532	C
49	S2	533	A
49	S2	534	G
49	S2	542	U
49	S2	544	G
49	S2	548	C
49	S2	549	C
49	S2	550	C

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Mol	Chain	Res	Type
49	S2	551	U
49	S2	552	G
49	S2	554	A
49	S2	555	A
49	S2	556	U
49	S2	557	U
49	S2	559	G
49	S2	560	A
49	S2	562	U
49	S2	563	G
49	S2	564	A
49	S2	568	C
49	S2	575	A
49	S2	576	A
49	S2	579	C
49	S2	580	U
49	S2	583	C
49	S2	588	G
49	S2	589	G
49	S2	590	A
49	S2	591	U
49	S2	592	C
49	S2	593	C
49	S2	595	U
49	S2	596	U
49	S2	598	G
49	S2	600	G
49	S2	601	G
49	S2	602	G
49	S2	604	A
49	S2	605	A
49	S2	607	U
49	S2	608	C
49	S2	612	U
49	S2	614	C
49	S2	616	A
49	S2	617	G
49	S2	621	C
49	S2	623	G
49	S2	626	G
49	S2	627	U
49	S2	628	A

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Mol	Chain	Res	Type
49	S2	629	A
49	S2	630	U
49	S2	631	U
49	S2	632	C
49	S2	643	A
49	S2	644	G
49	S2	646	G
49	S2	649	U
49	S2	655	A
49	S2	657	U
49	S2	660	C
49	S2	662	G
49	S2	666	U
49	S2	667	U
49	S2	668	A
49	S2	669	A
49	S2	671	A
49	S2	672	A
49	S2	673	G
49	S2	679	A
49	S2	683	G
49	S2	684	G
49	S2	687	C
49	S2	688	U
49	S2	689	U
49	S2	690	G
49	S2	693	A
49	S2	694	G
49	S2	695	C
49	S2	698	G
49	S2	731	G
49	S2	733	C
49	S2	734	C
49	S2	735	C
49	S2	736	C
49	S2	738	C
49	S2	739	C
49	S2	745	C
49	S2	747	U
49	S2	748	C
49	S2	749	U
49	S2	751	G

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Mol	Chain	Res	Type
49	S2	752	G
49	S2	753	C
49	S2	788	G
49	S2	791	C
49	S2	797	C
49	S2	798	A
49	S2	799	U
49	S2	800	U
49	S2	809	A
49	S2	810	A
49	S2	811	A
49	S2	812	A
49	S2	820	U
49	S2	821	G
49	S2	822	U
49	S2	827	A
49	S2	830	A
49	S2	833	C
49	S2	834	C
49	S2	835	C
49	S2	836	G
49	S2	837	A
49	S2	838	G
49	S2	840	C
49	S2	841	G
49	S2	842	C
49	S2	843	C
49	S2	845	G
49	S2	847	A
49	S2	848	U
49	S2	856	C
49	S2	861	A
49	S2	867	G
49	S2	868	G
49	S2	869	A
49	S2	870	A
49	S2	871	U
49	S2	872	A
49	S2	873	G
49	S2	875	A
49	S2	877	C
49	S2	878	G

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Mol	Chain	Res	Type
49	S2	879	C
49	S2	880	G
49	S2	881	G
49	S2	887	U
49	S2	888	U
49	S2	890	U
49	S2	891	G
49	S2	892	U
49	S2	897	U
49	S2	898	U
49	S2	903	A
49	S2	910	G
49	S2	913	A
49	S2	914	U
49	S2	915	G
49	S2	917	U
49	S2	918	U
49	S2	919	A
49	S2	920	A
49	S2	921	G
49	S2	930	C
49	S2	933	G
49	S2	934	G
49	S2	938	A
49	S2	943	U
49	S2	954	U
49	S2	955	A
49	S2	956	G
49	S2	957	A
49	S2	958	G
49	S2	959	G
49	S2	960	U
49	S2	961	G
49	S2	962	A
49	S2	964	A
49	S2	965	U
49	S2	966	U
49	S2	968	U
49	S2	969	U
49	S2	970	G
49	S2	971	G
49	S2	979	C

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Mol	Chain	Res	Type
49	S2	980	A
49	S2	981	A
49	S2	990	A
49	S2	991	G
49	S2	992	A
49	S2	996	A
49	S2	997	A
49	S2	999	G
49	S2	1001	A
49	S2	1002	U
49	S2	1008	A
49	S2	1017	U
49	S2	1023	A
49	S2	1033	G
49	S2	1034	A
49	S2	1035	A
49	S2	1040	G
49	S2	1041	G
49	S2	1044	G
49	S2	1045	U
49	S2	1049	A
49	S2	1050	A
49	S2	1060	A
49	S2	1062	A
49	S2	1067	C
49	S2	1070	A
49	S2	1072	U
49	S2	1073	U
49	S2	1077	A
49	S2	1078	C
49	S2	1083	A
49	S2	1084	A
49	S2	1085	C
49	S2	1087	A
49	S2	1088	U
49	S2	1089	G
49	S2	1091	C
49	S2	1096	G
49	S2	1099	G
49	S2	1100	A
49	S2	1102	G
49	S2	1109	C

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Mol	Chain	Res	Type
49	S2	1110	G
49	S2	1111	U
49	S2	1114	U
49	S2	1115	U
49	S2	1116	C
49	S2	1117	C
49	S2	1118	C
49	S2	1120	U
49	S2	1123	C
49	S2	1126	G
49	S2	1130	G
49	S2	1131	G
49	S2	1133	A
49	S2	1138	C
49	S2	1139	C
49	S2	1143	A
49	S2	1144	A
49	S2	1146	C
49	S2	1148	A
49	S2	1149	A
49	S2	1150	A
49	S2	1151	G
49	S2	1153	C
49	S2	1154	U
49	S2	1157	G
49	S2	1165	G
49	S2	1166	G
49	S2	1171	G
49	S2	1172	U
49	S2	1181	A
49	S2	1182	A
49	S2	1186	U
49	S2	1187	G
49	S2	1192	U
49	S2	1194	A
49	S2	1195	A
49	S2	1199	A
49	S2	1200	A
49	S2	1207	G
49	S2	1208	A
49	S2	1211	G
49	S2	1212	G

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Mol	Chain	Res	Type
49	S2	1214	A
49	S2	1215	C
49	S2	1216	C
49	S2	1217	A
49	S2	1221	G
49	S2	1224	G
49	S2	1234	C
49	S2	1242	U
49	S2	1243	U
49	S2	1244	U
49	S2	1247	C
49	S2	1248	U
49	S2	1250	A
49	S2	1251	A
49	S2	1253	A
49	S2	1254	C
49	S2	1256	G
49	S2	1257	G
49	S2	1258	A
49	S2	1259	A
49	S2	1264	C
49	S2	1265	A
49	S2	1266	C
49	S2	1267	C
49	S2	1268	C
49	S2	1269	G
49	S2	1271	C
49	S2	1273	C
49	S2	1274	G
49	S2	1275	G
49	S2	1276	A
49	S2	1280	G
49	S2	1282	A
49	S2	1283	C
49	S2	1284	A
49	S2	1285	G
49	S2	1286	G
49	S2	1288	U
49	S2	1289	U
49	S2	1292	C
49	S2	1293	A
49	S2	1296	U

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Mol	Chain	Res	Type
49	S2	1298	G
49	S2	1299	A
49	S2	1301	A
49	S2	1302	G
49	S2	1303	C
49	S2	1304	U
49	S2	1305	C
49	S2	1306	U
49	S2	1308	U
49	S2	1309	C
49	S2	1312	G
49	S2	1313	A
49	S2	1314	U
49	S2	1315	U
49	S2	1316	C
49	S2	1322	G
49	S2	1324	G
49	S2	1326	U
49	S2	1330	G
49	S2	1332	A
49	S2	1333	U
49	S2	1337	C
49	S2	1342	U
49	S2	1343	U
49	S2	1345	G
49	S2	1348	G
49	S2	1352	G
49	S2	1367	U
49	S2	1370	A
49	S2	1371	U
49	S2	1372	U
49	S2	1373	C
49	S2	1378	A
49	S2	1379	A
49	S2	1380	C
49	S2	1385	G
49	S2	1394	G
49	S2	1395	C
49	S2	1396	A
49	S2	1397	U
49	S2	1401	A
49	S2	1402	A

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Mol	Chain	Res	Type
49	S2	1403	C
49	S2	1404	U
49	S2	1405	A
49	S2	1407	U
49	S2	1410	C
49	S2	1411	G
49	S2	1412	C
49	S2	1414	A
49	S2	1417	C
49	S2	1418	C
49	S2	1419	C
49	S2	1420	G
49	S2	1424	G
49	S2	1426	U
49	S2	1430	C
49	S2	1431	G
49	S2	1432	U
49	S2	1433	C
49	S2	1434	C
49	S2	1435	C
49	S2	1437	C
49	S2	1438	A
49	S2	1441	U
49	S2	1442	U
49	S2	1449	G
49	S2	1450	G
49	S2	1452	A
49	S2	1454	A
49	S2	1455	A
49	S2	1456	G
49	S2	1462	U
49	S2	1463	U
49	S2	1464	C
49	S2	1466	G
49	S2	1467	C
49	S2	1474	A
49	S2	1475	G
49	S2	1476	A
49	S2	1477	U
49	S2	1478	U
49	S2	1489	A
49	S2	1490	G

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Mol	Chain	Res	Type
49	S2	1493	C
49	S2	1494	U
49	S2	1495	G
49	S2	1496	U
49	S2	1506	A
49	S2	1507	G
49	S2	1508	A
49	S2	1509	U
49	S2	1510	G
49	S2	1512	C
49	S2	1513	C
49	S2	1514	G
49	S2	1515	G
49	S2	1520	G
49	S2	1521	C
49	S2	1522	A
49	S2	1525	C
49	S2	1527	C
49	S2	1531	A
49	S2	1534	C
49	S2	1535	U
49	S2	1536	G
49	S2	1537	A
49	S2	1541	G
49	S2	1542	C
49	S2	1543	U
49	S2	1544	C
49	S2	1545	A
49	S2	1546	G
49	S2	1548	G
49	S2	1550	G
49	S2	1551	U
49	S2	1552	G
49	S2	1553	C
49	S2	1554	C
49	S2	1555	U
49	S2	1556	A
49	S2	1557	C
49	S2	1558	C
49	S2	1560	U
49	S2	1567	G
49	S2	1568	C

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Mol	Chain	Res	Type
49	S2	1570	G
49	S2	1574	C
49	S2	1578	U
49	S2	1579	A
49	S2	1580	A
49	S2	1581	C
49	S2	1585	U
49	S2	1586	U
49	S2	1587	G
49	S2	1588	A
49	S2	1589	A
49	S2	1590	C
49	S2	1593	C
49	S2	1595	U
49	S2	1596	U
49	S2	1598	G
49	S2	1599	U
49	S2	1600	G
49	S2	1601	A
49	S2	1602	U
49	S2	1604	G
49	S2	1606	G
49	S2	1609	C
49	S2	1610	G
49	S2	1621	U
49	S2	1622	U
49	S2	1623	A
49	S2	1625	U
49	S2	1633	A
49	S2	1637	A
49	S2	1638	G
49	S2	1644	C
49	S2	1648	G
49	S2	1649	U
49	S2	1656	G
49	S2	1660	C
49	S2	1663	A
49	S2	1664	A
49	S2	1665	G
49	S2	1666	C
49	S2	1674	G
49	S2	1679	A

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Mol	Chain	Res	Type
49	S2	1680	G
49	S2	1682	C
49	S2	1683	C
49	S2	1684	C
49	S2	1689	C
49	S2	1695	A
49	S2	1696	C
49	S2	1699	A
49	S2	1700	C
49	S2	1701	C
49	S2	1702	G
49	S2	1707	U
49	S2	1720	U
49	S2	1721	U
49	S2	1722	G
49	S2	1729	U
49	S2	1730	U
49	S2	1734	G
49	S2	1742	C
49	S2	1745	A
49	S2	1746	U
49	S2	1751	C
49	S2	1753	C
49	S2	1783	C
49	S2	1785	C
49	S2	1786	U
49	S2	1792	G
49	S2	1793	A
49	S2	1795	G
49	S2	1797	U
49	S2	1798	C
49	S2	1804	U
49	S2	1805	G
49	S2	1816	G
49	S2	1823	A
49	S2	1824	A
49	S2	1825	A
49	S2	1826	G
49	S2	1827	U
49	S2	1831	A
49	S2	1835	A
49	S2	1836	G

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Mol	Chain	Res	Type
49	S2	1837	G
49	S2	1838	U
49	S2	1839	U
49	S2	1841	C
49	S2	1849	G
49	S2	1850	A
49	S2	1851	A
49	S2	1852	C
49	S2	1860	A
49	S2	1861	G
49	S2	1862	G
49	S2	1863	A
49	S2	1864	U
49	S2	1865	C
49	S2	1868	U
49	S2	1869	A

There are no RNA pucker outliers to report.

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 170 ligands modelled in this entry, 170 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.