



wwPDB EM Map/Model Validation Report ⓘ

Jun 2, 2016 – 03:47 PM EDT

PDB ID : 4UJE
EMDB ID : EMD-2620
Title : Regulation of the mammalian elongation cycle by 40S subunit rolling: a eukaryotic-specific ribosome rearrangement
Authors : Budkevich, T.V.; Giesebrecht, J.; Behrmann, E.; Loerke, J.; Ramrath, D.J.F.; Mielke, T.; Ismer, J.; Hildebrand, P.; Tung, C.-S.; Nierhaus, K.H.; Sanbonmatsu, K.Y.; Spahn, C.M.T.
Deposited on : 2014-04-05
Resolution : 6.90 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.

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

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

MolProbity : 4.02b-467
Mogul : 1.7.1 (RC1), CSD as537be (2016)
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20027674

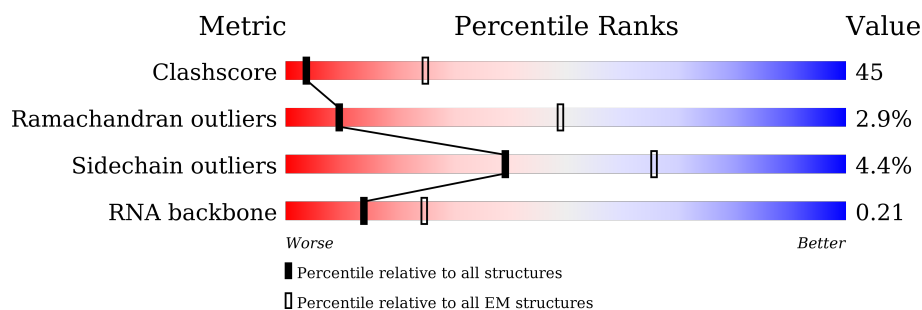
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 6.90 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.






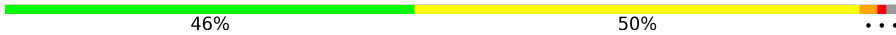


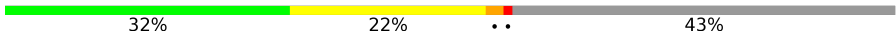




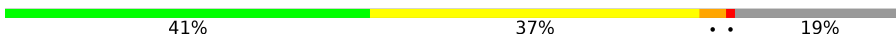

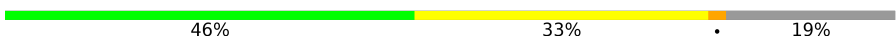











Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

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 ≥ 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	AV	76	30% 41% 29%
2	AW	76	16% 47% 37%
3	AX	28	46% 50% .
4	B1	1869	6% 38% 48% . 7%
5	BA	295	41% 31% . 26%
6	BB	264	32% 41% 6% . 19%
7	BC	293	49% 23% . 24%
8	BD	243	52% 34% . 13%











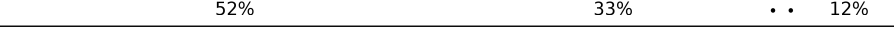
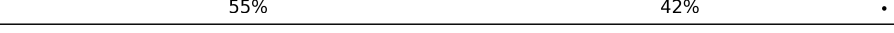
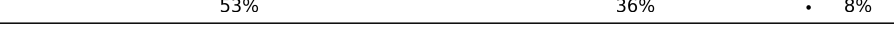


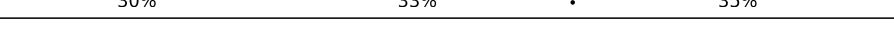









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Mol	Chain	Length	Quality of chain
9	BE	263	
10	BF	204	
11	BG	249	
12	BH	194	
13	BI	208	
14	BJ	194	
15	BK	165	
16	BL	158	
17	BM	132	
18	BN	151	
19	BO	151	
20	BP	145	
21	BQ	146	
22	BR	135	
23	BS	152	
24	BT	145	
25	BU	119	
26	BV	83	
27	BW	130	
28	BX	143	
29	BY	133	
30	BZ	125	
31	Ba	115	
32	Bb	84	
33	Bc	69	





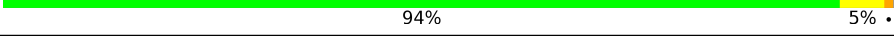



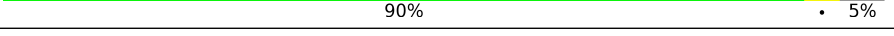

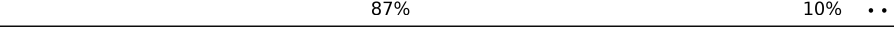
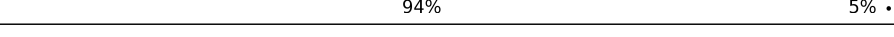

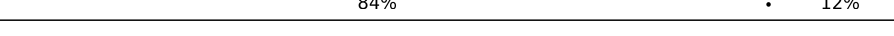
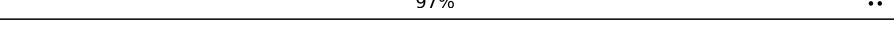
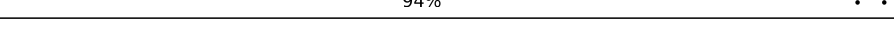
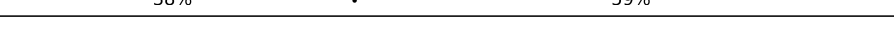
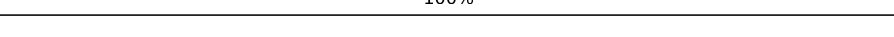
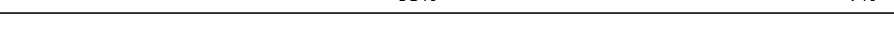






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Mol	Chain	Length	Quality of chain
34	Bd	56	 88% 7% 5%
35	Be	59	 81% 5% 14%
36	Bf	156	 37% 61%
37	Bg	317	 93% 5%
38	CA	257	 54% 40%
39	CB	403	 56% 37% 5%
40	CC	427	 47% 33% 15%
41	CD	297	 58% 36%
42	CE	288	 22% 29% 45%
43	CF	248	 51% 41% 6%
44	CG	266	 52% 33% 12%
45	CH	192	 55% 42%
46	CI	214	 53% 36% 8%
47	CJ	178	 47% 40% 8%
48	CL	211	 52% 36% 7%
49	CM	215	 30% 33% 35%
50	CN	204	 63% 36%
51	CO	203	 52% 42%
52	CP	184	 43% 36% 17%
53	CQ	188	 54% 39% 5%
54	CR	196	 52% 36% 6%
55	CS	176	 53% 39% 6%
56	CT	160	 55% 41%
57	CU	128	 53% 27% 20%
58	CV	140	 61% 29% 9%

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Mol	Chain	Length	Quality of chain
59	CW	157	
60	CX	156	
61	CY	145	
62	CZ	136	
63	Ca	148	
64	Cb	159	
65	Cc	115	
66	Cd	125	
67	Ce	135	
68	Cf	110	
69	Cg	117	
70	Ch	123	
71	Ci	105	
72	Cj	97	
73	Ck	70	
74	Cl	51	
75	Cm	128	
76	Cn	25	
77	Co	106	
78	Cp	92	
79	Ct	137	
80	Cu	210	
81	A2	5025	
82	A3	194	
83	A4	121	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	MIA	AW	37	-	-	X	-

2 Entry composition

There are 83 unique types of molecules in this entry. The entry contains 215620 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 TRNA-LYS.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AV	76	Total	C	N	O	P	0	0
			1619	723	290	531	75		

- Molecule 2 is a RNA chain called TRNA-PHE.

Mol	Chain	Residues	Atoms						AltConf	Trace
2	AW	76	Total	C	N	O	P	S	0	0
			1626	729	290	531	75	1		

- Molecule 3 is a RNA chain called MESSENGER RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AX	28	Total	C	N	O	P	0	0
			560	252	56	224	28		

- Molecule 4 is a RNA chain called 18S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	B1	1742	Total	C	N	O	P	0	0
			37159	16589	6665	12164	1741		

- Molecule 5 is a protein called 40S RIBOSOMAL PROTEIN SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	BA	218	Total	C	N	O	S	0	0
			1719	1091	301	319	8		

- Molecule 6 is a protein called 40S RIBOSOMAL PROTEIN S3A.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	BB	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		

- Molecule 7 is a protein called 40S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	BC	222	Total	C	N	O	S	0	0
			1724	1114	296	304	10		

- Molecule 8 is a protein called 40S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	BD	212	Total	C	N	O	S	0	0
			1646	1050	299	290	7		

- Molecule 9 is a protein called 40S RIBOSOMAL PROTEIN S4, Y ISOFORM 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	BE	257	Total	C	N	O	S	0	0
			2031	1298	381	344	8		

- Molecule 10 is a protein called 40S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	BF	188	Total	C	N	O	S	0	0
			1486	930	283	266	7		

- Molecule 11 is a protein called 40S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	BG	232	Total	C	N	O	S	0	0
			1884	1176	379	322	7		

- Molecule 12 is a protein called 40S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	BH	191	Total	C	N	O	S	0	0
			1535	978	282	274	1		

- Molecule 13 is a protein called 40S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	BI	207	Total	C	N	O	S	0	0
			1695	1064	334	292	5		

- Molecule 14 is a protein called 40S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	BJ	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 15 is a protein called 40S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	BK	94	Total	C	N	O	S	0	0
			791	519	138	129	5		

- Molecule 16 is a protein called 40S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	BL	146	Total	C	N	O	S	0	0
			1199	764	224	205	6		

- Molecule 17 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	BM	120	Total	C	N	O	S	0	0
			931	584	164	174	9		

- Molecule 18 is a protein called 40S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	BN	150	Total	C	N	O	S	0	0
			1207	773	229	204	1		

- Molecule 19 is a protein called 40S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	BO	137	Total	C	N	O	S	0	0
			1023	627	200	190	6		

- Molecule 20 is a protein called 40S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	BP	118	Total	C	N	O	S	0	0
			981	625	183	166	7		

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	BQ	139	Total	C	N	O	S	0	0
			1108	704	210	191	3		

- Molecule 22 is a protein called 40S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	BR	109	Total	C	N	O	S	0	0
			893	561	170	159	3		

- Molecule 23 is a protein called 40S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	BS	142	Total	C	N	O	S	0	0
			1172	736	236	199	1		

- Molecule 24 is a protein called 40S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	BT	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 25 is a protein called 40S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	BU	101	Total	C	N	O	S	0	0
			803	502	153	144	4		

- Molecule 26 is a protein called 40S RIBOSOMAL PROTEIN S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BV	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 27 is a protein called 40S RIBOSOMAL PROTEIN S15A.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	BW	129	Total	C	N	O	S	0	0
			1033	659	193	175	6		

- Molecule 28 is a protein called 40S RIBOSOMAL PROTEIN S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BX	134	Total	C	N	O	S	0	0
			1046	663	205	176	2		

- Molecule 29 is a protein called 40S RIBOSOMAL PROTEIN S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BY	122	Total	C	N	O	S	0	0
			1002	635	196	166	5		

- Molecule 30 is a protein called 40S RIBOSOMAL PROTEIN S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BZ	76	Total	C	N	O	S	0	0
			605	387	112	105	1		

- Molecule 31 is a protein called 40S RIBOSOMAL PROTEIN S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	Ba	96	Total	C	N	O	S	0	0
			767	476	159	127	5		

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Bb	80	Total	C	N	O	S	0	0
			625	391	116	111	7		

- Molecule 33 is a protein called 40S RIBOSOMAL PROTEIN S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Bc	62	Total	C	N	O	S	0	0
			490	298	99	91	2		

- Molecule 34 is a protein called 40S RIBOSOMAL PROTEIN S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Bd	53	Total	C	N	O	S	0	0
			444	278	90	71	5		

- Molecule 35 is a protein called 40S RIBOSOMAL PROTEIN S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	Be	51	Total	C	N	O	S	0	0
			412	258	90	63	1		

- Molecule 36 is a protein called UBIQUITIN-40S RIBOSOMAL PROTEIN S27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	Bf	61	Total	C	N	O	S	0	0
			497	312	94	84	7		

- Molecule 37 is a protein called GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	Bg	314	Total	C	N	O	S	0	0
			2440	1537	425	466	12		

- Molecule 38 is a protein called 60S RIBOSOMAL PROTEIN L8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	CA	247	Total	C	N	O	S	0	1
			1888	1183	388	311	6		

- Molecule 39 is a protein called 60S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	CB	396	Total	C	N	O	S	0	1
			3190	2030	601	545	14		

- Molecule 40 is a protein called 60S RIBOSOMAL PROTEIN L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	CC	364	Total	C	N	O	S	0	1
			2889	1817	578	480	14		

- Molecule 41 is a protein called 60S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	CD	290	Total	C	N	O	S	0	0
			2361	1489	431	427	14		

- Molecule 42 is a protein called 60S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms				AltConf	Trace
42	CE	158	Total	C	N	O	0	0
			1286	834	238	214		

- Molecule 43 is a protein called 60S RIBOSOMAL PROTEIN L7.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	CF	234	Total	C	N	O	S	0	0
			1949	1252	376	312	9		

- Molecule 44 is a protein called 60S RIBOSOMAL PROTEIN L7A.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	CG	235	Total	C	N	O	S	0	1
			1881	1197	363	317	4		

- Molecule 45 is a protein called 60S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	CH	192	Total	C	N	O	S	0	0
			1535	965	286	278	6		

- Molecule 46 is a protein called 60S RIBOSOMAL PROTEIN L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	CI	196	Total	C	N	O	S	0	0
			1604	1022	308	262	12		

- Molecule 47 is a protein called 60S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	CJ	170	Total	C	N	O	S	0	0
			1362	861	254	241	6		

- Molecule 48 is a protein called 60S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	CL	200	Total	C	N	O	S	0	1
			1617	1013	335	265	4		

- Molecule 49 is a protein called 60S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	CM	140	Total	C	N	O	S	0	1
			1139	730	219	183	7		

- Molecule 50 is a protein called 60S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	CN	204	Total	C	N	O	S	0	0
			1708	1077	360	266	5		

- Molecule 51 is a protein called 60S RIBOSOMAL PROTEIN L13A.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	CO	196	Total	C	N	O	S	0	1
			1607	1034	316	252	5		

- Molecule 52 is a protein called 60S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	CP	153	Total	C	N	O	S	0	1
			1234	771	241	213	9		

- Molecule 53 is a protein called 60S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	CQ	184	Total	C	N	O	S	0	0
			1493	933	311	244	5		

- Molecule 54 is a protein called 60S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	CR	183	Total	C	N	O	S	0	1
			1526	943	331	242	10		

- Molecule 55 is a protein called 60S RIBOSOMAL PROTEIN L18A.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CS	173	Total	C	N	O	S	0	0
			1438	916	280	232	10		

- Molecule 56 is a protein called 60S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	CT	159	Total	C	N	O	S	0	0
			1297	823	252	216	6		

- Molecule 57 is a protein called 60S RIBOSOMAL PROTEIN L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	CU	102	Total	C	N	O	S	0	1
			827	529	146	150	2		

- Molecule 58 is a protein called 60S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	CV	128	Total	C	N	O	S	0	0
			963	610	181	167	5		

- Molecule 59 is a protein called 60S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	CW	64	Total	C	N	O	S	0	1
			529	337	104	85	3		

- Molecule 60 is a protein called 60S RIBOSOMAL PROTEIN L23A.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	CX	119	Total	C	N	O	S	0	0
			975	624	183	167	1		

- Molecule 61 is a protein called 60S RIBOSOMAL PROTEIN L26.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	CY	128	Total	C	N	O	S	0	1
			1065	668	217	177	3		

- Molecule 62 is a protein called 60S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	CZ	136	Total	C	N	O	S	0	0
			1114	719	209	182	4		

- Molecule 63 is a protein called 60S RIBOSOMAL PROTEIN L27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	Ca	147	Total	C	N	O	S	0	0
			1161	736	237	185	3		

- Molecule 64 is a protein called 60S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	Cb	69	Total	C	N	O	S	0	1
			560	344	123	90	3		

- Molecule 65 is a protein called 60S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	Cc	104	Total	C	N	O	S	0	1
			802	508	142	145	7		

- Molecule 66 is a protein called 60S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	Cd	109	Total	C	N	O	S	0	0
			904	570	174	158	2		

- Molecule 67 is a protein called 60S RIBOSOMAL PROTEIN L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	Ce	128	Total	C	N	O	S	0	1
			1053	664	219	165	5		

- Molecule 68 is a protein called 60S RIBOSOMAL PROTEIN L35A.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	Cf	107	Total	C	N	O	S	0	0
			865	550	172	140	3		

- Molecule 69 is a protein called 60S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	Cg	115	Total	C	N	O	S	0	1
			907	566	188	147	6		

- Molecule 70 is a protein called 60S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Ch	122	Total	C	N	O	S	0	0
			1014	641	205	167	1		

- Molecule 71 is a protein called 60S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Ci	97	Total	C	N	O	S	0	1
			783	488	168	122	5		

- Molecule 72 is a protein called 60S RIBOSOMAL PROTEIN L37.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Cj	85	Total	C	N	O	S	0	1
			690	423	153	109	5		

- Molecule 73 is a protein called 60S RIBOSOMAL PROTEIN L38.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	Ck	69	Total	C	N	O	S	0	0
			568	366	103	98	1		

- Molecule 74 is a protein called 60S RIBOSOMAL PROTEIN L39.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	Cl	50	Total	C	N	O	S	0	0
			443	281	98	63	1		

- Molecule 75 is a protein called UBIQUITIN-60S RIBOSOMAL PROTEIN L40.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	Cm	52	Total	C	N	O	S	0	0
			428	266	90	66	6		

- Molecule 76 is a protein called 60S RIBOSOMAL PROTEIN L41.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	Cn	25	Total	C	N	O	S	0	0
			239	145	64	27	3		

- Molecule 77 is a protein called 60S RIBOSOMAL PROTEIN L36A.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	Co	106	Total	C	N	O	S	0	0
			870	547	176	140	7		

- Molecule 78 is a protein called 60S RIBOSOMAL PROTEIN L37A.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	Cp	91	Total	C	N	O	S	0	0
			707	445	136	119	7		

- Molecule 79 is a protein called 60S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	Ct	130	Total	C	N	O	S	0	1
			1043	646	220	172	5		

- Molecule 80 is a protein called 60S RIBOSOMAL PROTEIN L10A.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	Cu	210	Total	C	N	O	S	0	0
			1621	990	278	347	6		

- Molecule 81 is a RNA chain called 28S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	A2	3616	Total	C	N	O	P	0	0
			77488	34508	14153	25212	3615		

- Molecule 82 is a RNA chain called 5.8S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	A3	157	Total	C	N	O	P	0	0
			3334	1489	587	1102	156		

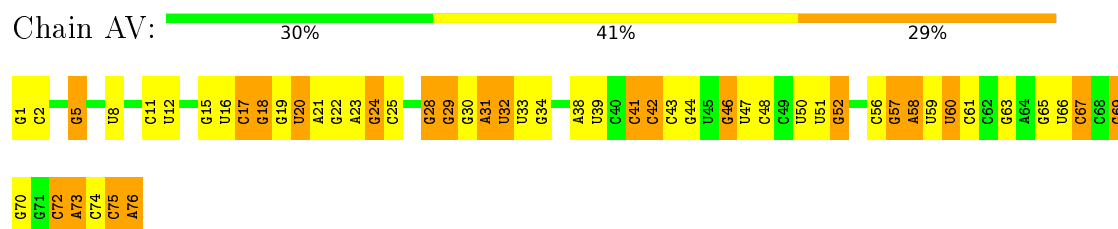
- Molecule 83 is a RNA chain called 5S Ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	A4	119	Total	C	N	O	P	0	0
			2538	1132	454	834	118		

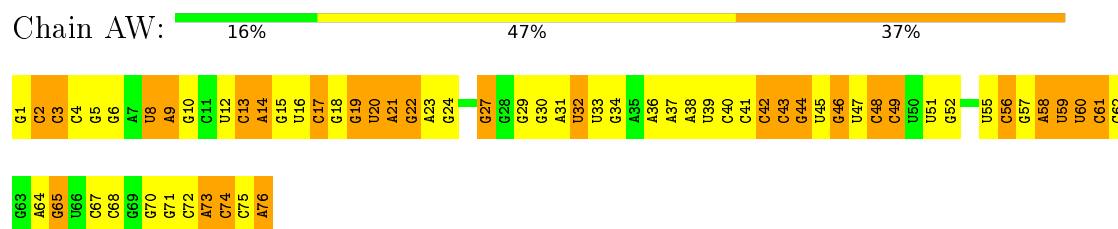
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors 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.

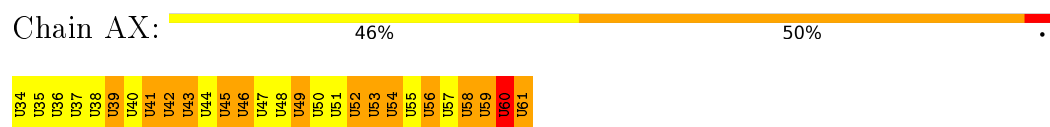
• Molecule 1: TRNA-LYS



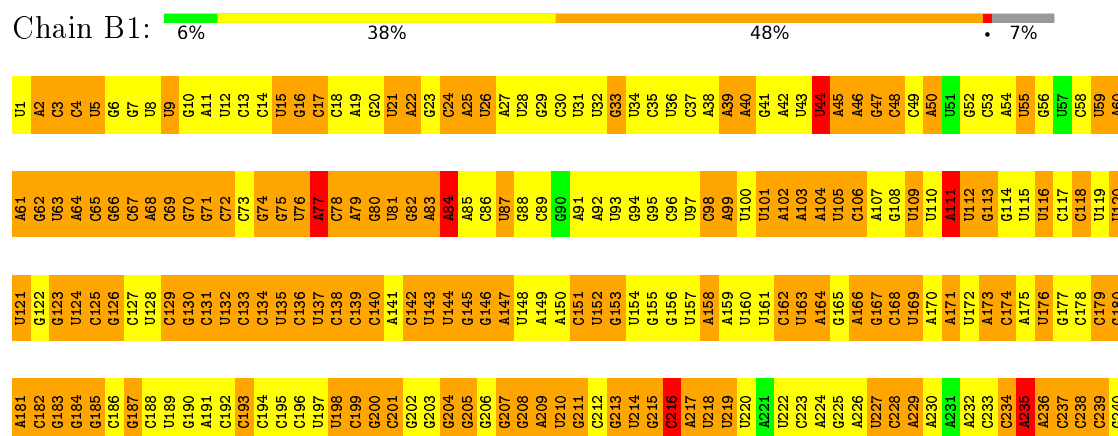
• Molecule 2: TRNA-PHE



• Molecule 3: MESSENGER RNA



• Molecule 4: 18S Ribosomal RNA



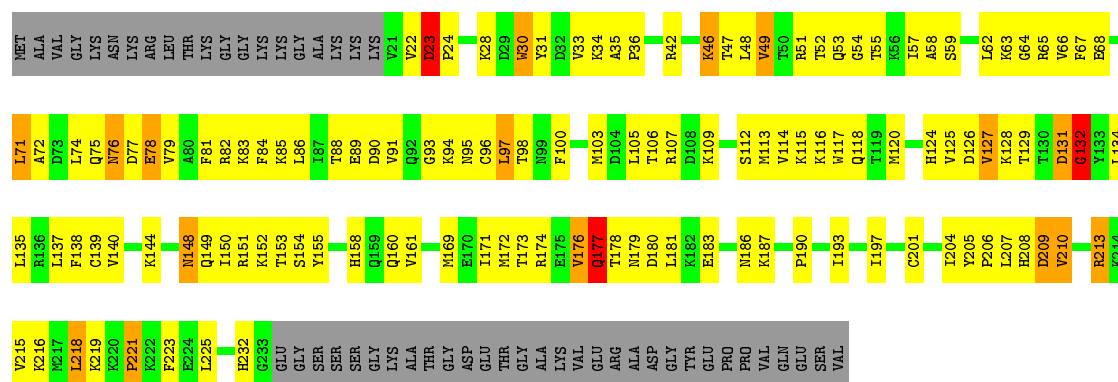
A1209	G1089	A1027	U965	C905	U944	G	A	A664	A604	G544	A484	C424	U361	A301	G
G1210	C1090	A1028	U966	U906	G845	C	C	G665	A605	A545	A485	G425	C362	A302	U
G1211	C1091	G1029	C967	G907	G846	G	C	U666	G606	G546	A486	A426	C363	C303	C
G1212	C1092	A1030	U968	A908	A847	G	G	U667	U607	G547	U487	U427	A364	C304	A
G1213	A1093	A1031	U969	G909	U948	G	C	A668	C608	C548	U488	U428	C365	U305	G
G1214	C1094	G1032	G970	G910	A849	C	C	A669	U609	C549	U489	C429	U366	C306	C
G1215	C1095	G1033	G971	C911	C850	C	C	A670	G610	C550	C490	G430	U367	G307	C
G1216	C1096	A1034	A972	C912	C851	G	G	A671	G611	U551	C491	G431	U368	G308	C
A1217	G1097	A1035	C973	C913	G852	C792	C	A672	U612	C492	C492	G432	C369	G309	C
G1218	C1098	A1036	C974	U914	C853	G793	C	G673	C613	U553	A493	A433	C370	C310	U
G1219	C1099	G1037	G975	G915	A854	A794	C	G674	C614	A554	C494	G434	A371	C311	U
G1220	A1100	U1038	G976	A916	G855	A795	C	U675	C615	A555	U495	A435	U372	G312	U
G1221	U101	C1039	C977	U917	C856	G796	C	G676	A616	U556	C496	G435	U373	G313	C
G1222	G1102	G1040	G978	U918	U857	C797	C736	G677	G617	U557	C497	G437	G374	U314	C
A1223	C1103	G1041	C979	A919	A858	C798	G737	U678	C618	G558	C498	G438	U375	C315	G
G1224	G1104	A1042	A980	A920	G859	U799	C738	A679	A619	G559	C499	A439	U376	G316	G
U1225	G1105	G1043	G981	G921	G860	U800	C740	G680	G620	A560	A500	G440	G377	C317	C
G1226	C1106	G1044	G982	A922	A861	U801	C741	U681	C621	A561	C501	C441	U378	A318	C
G1227	G1107	U1045	A983	G923	A862	A802	U742	U682	C622	U562	C502	U442	C379	C319	C
A1228	G1108	U1046	G984	G924	U863	C803	U743	G683	G623	G563	C503	U443	G380	G320	C
G1229	C1109	G1047	G985	G925	A864	U804	U744	G684	C624	A564	G504	G444	C381	C321	G
C1230	A1170	G1048	G986	A926	A865	U805	C745	U685	G625	G565	G505	A445	C382	C322	G
C1231	G1171	A1049	A987	C927	U866	U806	C746	U686	G626	U566	G506	G446	G383	C323	C
U1232	U1112	G1050	C988	G928	G867	G807	U747	G687	U627	C567	G507	A447	U384	C324	C
G1233	A1113	A1051	C989	G929	G868	A808	C748	U688	A628	C568	A508	A448	G385	C325	G
C1234	U1114	A1052	A990	C930	A869	A809	U749	U689	A629	A569	G509	A449	C386	C326	G
G1235	U1115	G1053	G991	C931	A870	A810	C750	G690	U630	C570	G510	C450	C387	G327	G
C1236	C1116	G1054	A992	G932	U871	A811	G751	G691	G631	U571	U511	G451	U388	U328	G
C1237	C1117	A1055	G993	G933	A872	A812	G752	G692	C632	U572	A512	G452	C389	G329	G
U1238	C1118	U1056	C994	G934	G873	A813	C753	G693	C633	U573	G513	C453	C390	G330	G
U1239	A1119	C1057	G995	G935	G874	U814	G754	G694	A634	A574	U514	U454	C391	C331	C
A1240	U1120	A1058	G999	G936	A875	U815	C755	C695	C635	A575	G515	A455	U393	G332	G
A1241	A1181	G1059	G1121	C937	C876	A816	C	G696	C636	A576	A516	C456	G394	G333	G
U1242	A1182	A1060	C1000	A938	C877	G817	C	G	U637	U577	C517	C457	G395	C334	G
U1243	C1123	A1061	A1001	U939	G878	A818	U	C	C638	C578	G518	A458	U396	G335	C
U1244	C1124	A1062	U1002	U940	C879	G819	C	C	C639	C579	A519	A459	G397	A336	G
G1245	C1125	G1063	U1003	C941	G880	U820	U	G	A640	U580	A520	A460	A398	C337	C
A1246	C1126	C1064	U1004	G942	G881	G821	C	G	A641	U581	A521	U461	C399	G338	C
C1247	C1127	G1065	G1005	U943	U883	U822	G	C	U642	U582	A522	C462	C400	A339	G
U1248	C1128	U1066	C1006	A944	C884	U823	A	C	A643	A583	A523	C463	A401	C340	G
C1249	G1129	C1067	C1007	U945	U885	C824	U	G	C644	A584	U524	A464	C402	C341	C
A1250	G1130	U1068	A1008	U946	A886	A825	G	C	G645	C585	A525	A465	C342	C342	G
C1251	G1131	U1069	A1009	G947	U887	A826	C	U	U646	G586	A526	G466	U406	A343	G
C1252	C1132	A1070	G1010	C948	U888	A827	U	C	U647	A587	C527	G467	G407	U344	C
A1253	A1133	G1071	A1011	G949	U889	G828	C	C	A648	G588	A528	A468	G407	U345	U
C1254	G1134	G1072	A1012	C950	U890	C829	U	C	U649	G589	A529	A469	C409	C346	U
G1255	C1135	C1074	U1013	C951	G891	A830	U	G	A650	A590	U530	G470	G410	G347	U
G1256	U1136	C1075	G1014	G952	U892	G831	A	C	U651	U591	A531	G471	G411	A348	G
G1257	U1137	G1076	U1015	G953	U893	G832	G	C	U652	C592	C532	C472	G412	A349	G
A1258	C1138	U1016	U1016	U954	G894	C833	C	C	A653	C593	A533	A473	G413	C350	U
A1259	C1139	A955	G895	A955	G895	C834	U	A	A654	A594	G534	A474	A414	G351	G
A1260	G1140	A1080	U996	G956	U896	C835	G	A	A655	U595	G535	C475	A415	U352	A
C1261	U1201	U1081	U897	A957	U897	G836	A	G	A656	U596	A536	A476	U416	C353	C
C1262	G1142	A1082	A1020	G958	U898	A837	G	C	U657	G597	C537	G477	C417	U354	U
G1263	A1143	C1083	U999	G959	U899	G838	U	C	U658	G598	U538	G478	A418	G355	G
C1264	U1022	U1022	C900	U960	C900	C839	G	C	G659	A599	C539	C479	G419	C356	C
A1265	C1205	C1085	G801	G961	G801	C840	U	A	C660	G600	U540	G480	G420	C357	G
C1266	G1206	G1086	A962	A962	G902	G841	C	G	U661	G601	U541	C481	G421	C358	G
C1267	C1147	A1087	A903	A963	G903	G842	C	C	U662	G602	U542	G482	U422	U359	G
C1268	U1088	U1088	C1026	A964	A904	C843	C	C	C663	C603	C543	C483	U423	A360	U300



Response	Percentage
Yes	41%
No	31%
Don't know	1%
No answer	26%

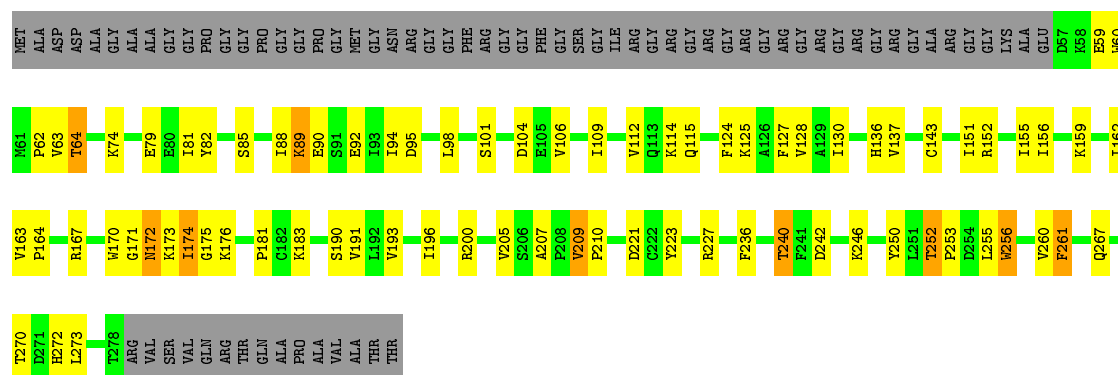


Frequency	Percentage
Daily	32%
Often	41%
Sometimes	6%
Rarely	19%
Never	2%



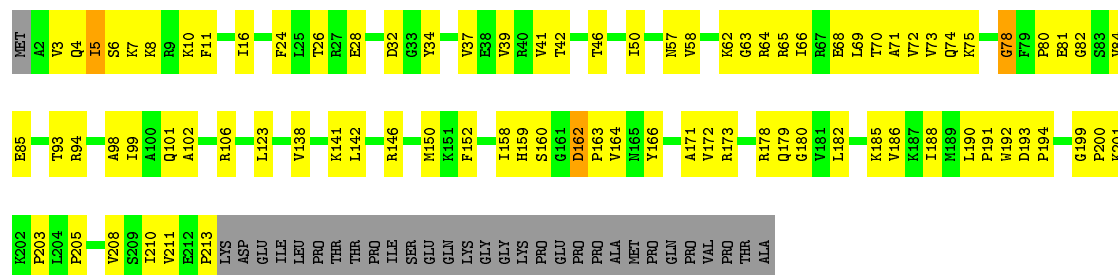
• Molecule 7: 40S RIBOSOMAL PROTEIN S2

Chain BC: 49% 23% 24%



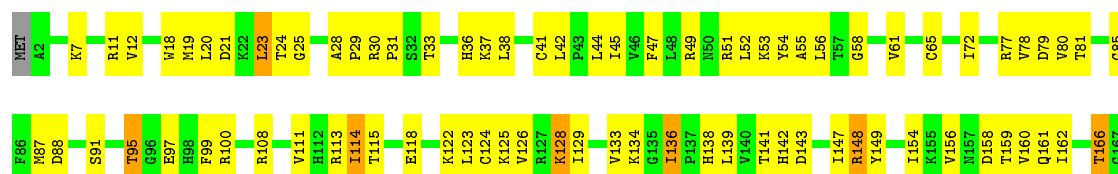
• Molecule 8: 40S RIBOSOMAL PROTEIN S3

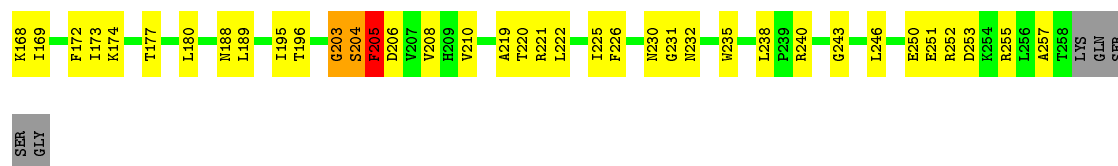
Chain BD: 52% 34% 13%



• Molecule 9: 40S RIBOSOMAL PROTEIN S4, Y ISOFORM 1

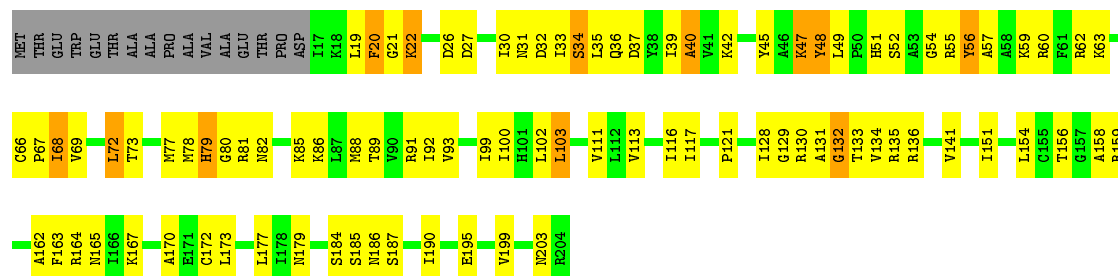
Chain BE: 54% 40%





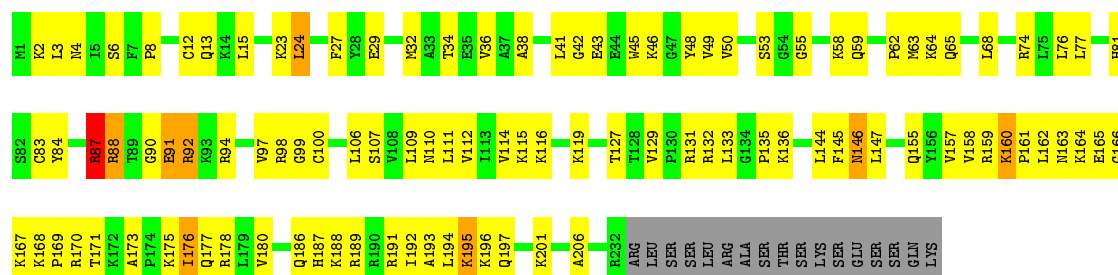
• Molecule 10: 40S RIBOSOMAL PROTEIN S5

Chain BF: 47% 39% 6% 8%



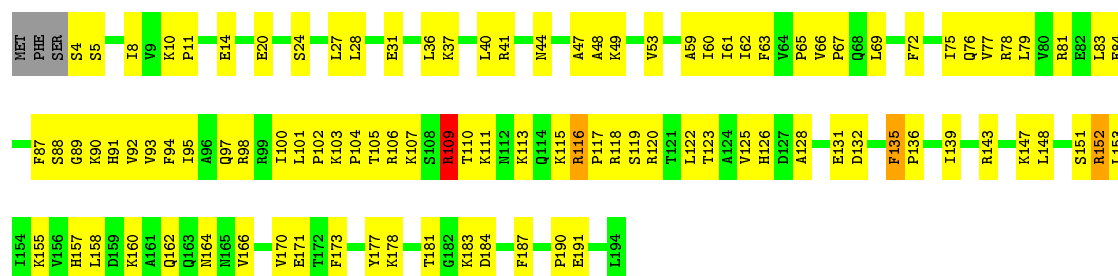
• Molecule 11: 40S RIBOSOMAL PROTEIN S6

Chain BG: 51% 39% 7%



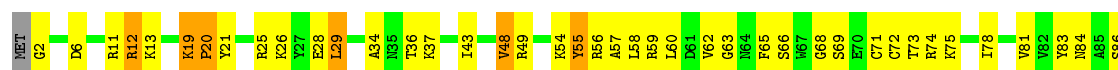
• Molecule 12: 40S RIBOSOMAL PROTEIN S7

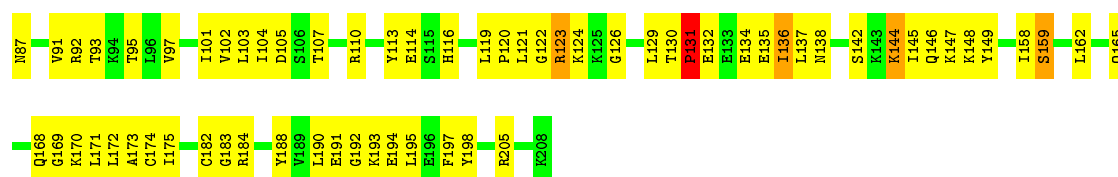
Chain BH: 46% 50% 3%



• Molecule 13: 40S RIBOSOMAL PROTEIN S8

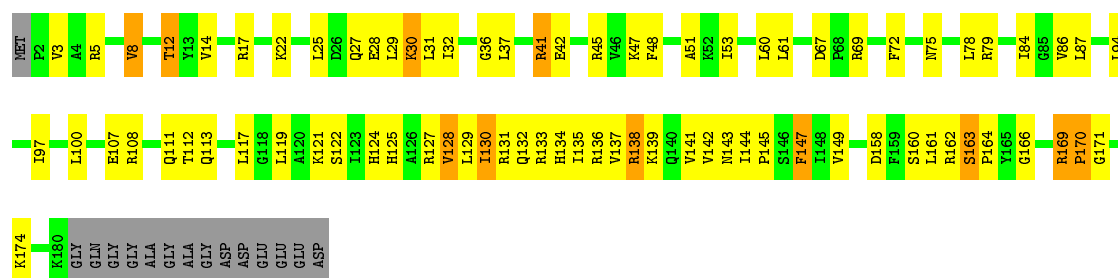
Chain BI: 49% 45% 5%





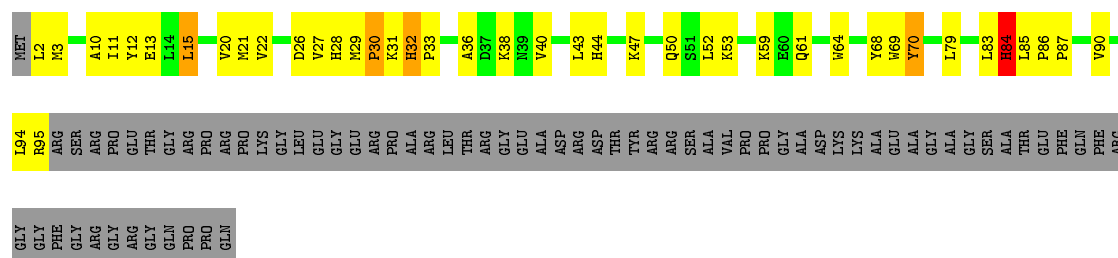
• Molecule 14: 40S RIBOSOMAL PROTEIN S9

Chain BJ: 52% 35% 6% 8%



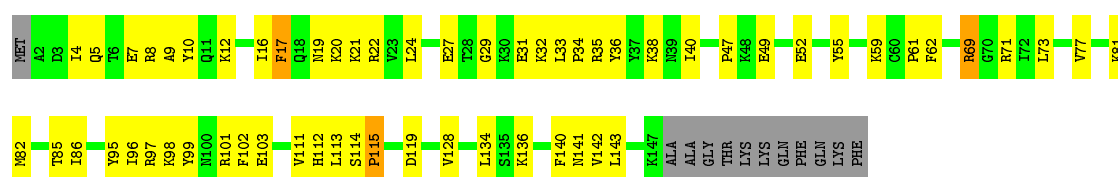
• Molecule 15: 40S RIBOSOMAL PROTEIN S10

Chain BK: 32% 22% 43%



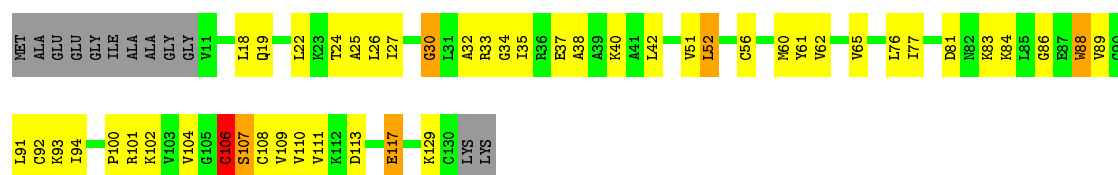
• Molecule 16: 40S RIBOSOMAL PROTEIN S11

Chain BL: 54% 36% 8%

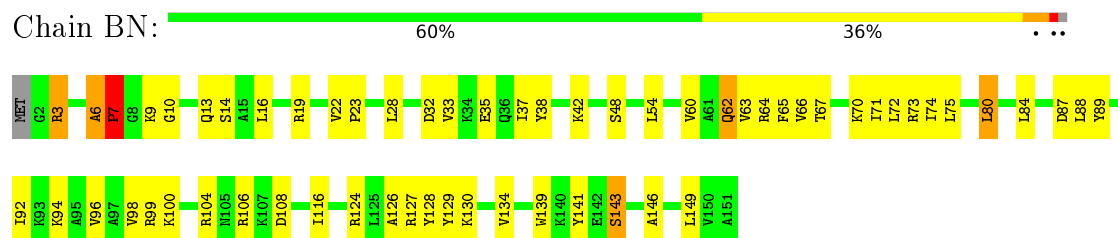


• Molecule 17: 40S RIBOSOMAL PROTEIN S12

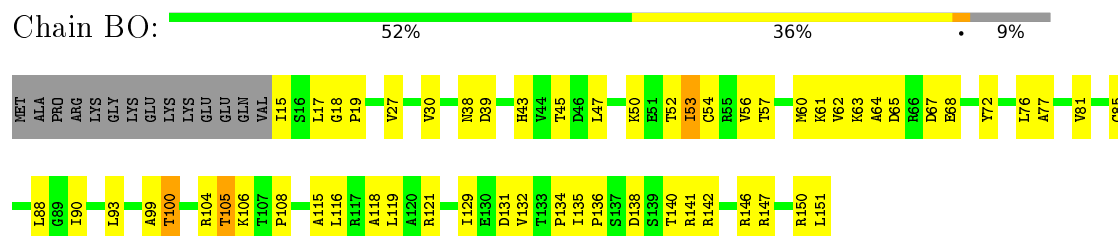
Chain BM: 55% 32% 9%



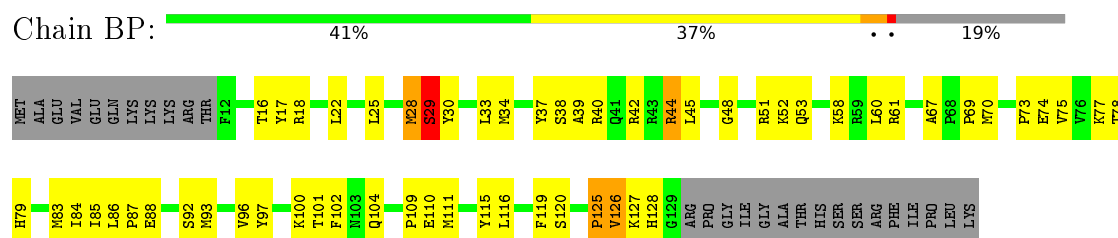
• Molecule 18: 40S RIBOSOMAL PROTEIN S13



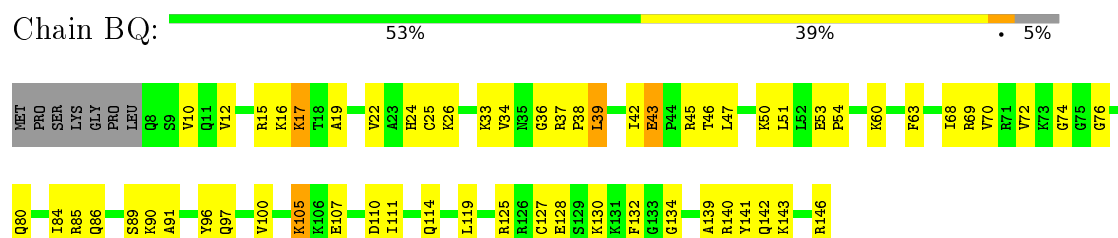
• Molecule 19: 40S RIBOSOMAL PROTEIN S14



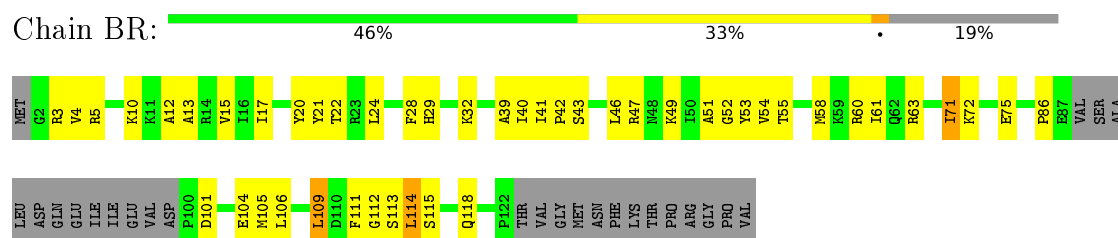
• Molecule 20: 40S RIBOSOMAL PROTEIN S15



• Molecule 21: 40S RIBOSOMAL PROTEIN S16

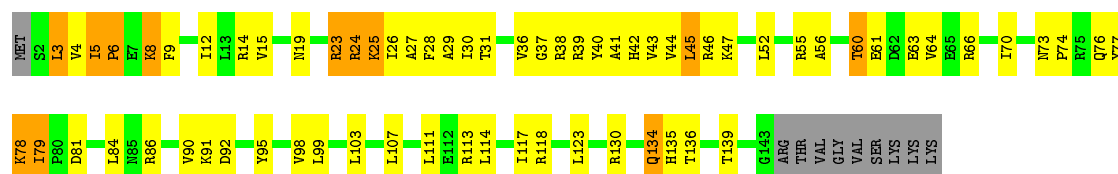


• Molecule 22: 40S RIBOSOMAL PROTEIN S17



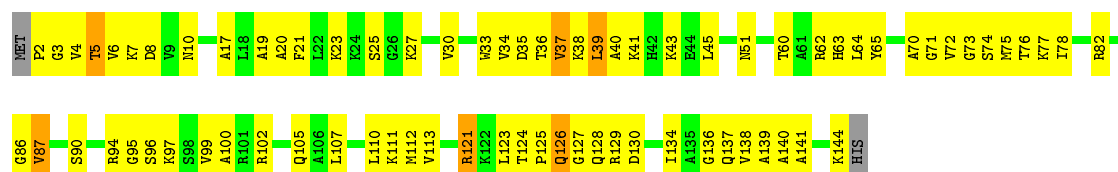
• Molecule 23: 40S RIBOSOMAL PROTEIN S18





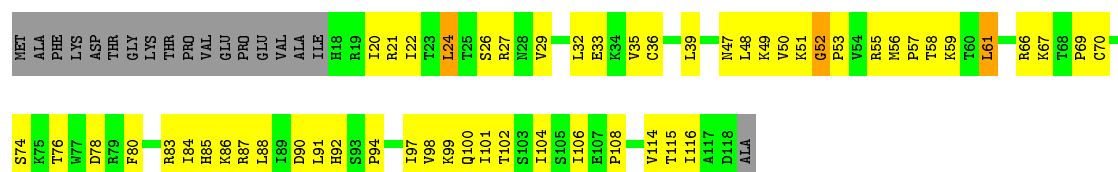
• Molecule 24: 40S RIBOSOMAL PROTEIN S19

Chain BT: 46% 48%



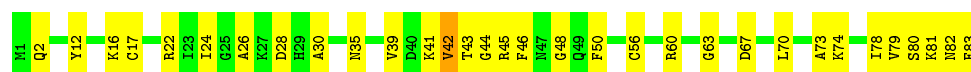
• Molecule 25: 40S RIBOSOMAL PROTEIN S20

Chain BU: 39% 44% 15%



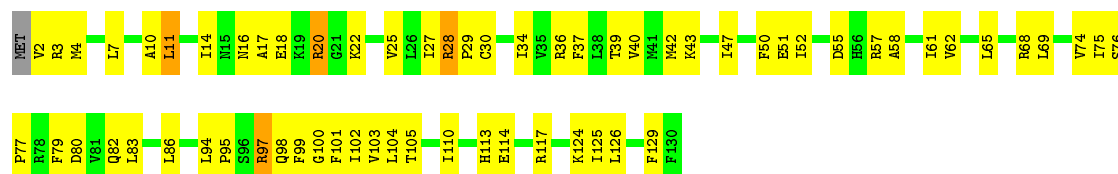
• Molecule 26: 40S RIBOSOMAL PROTEIN S21

Chain BV: 61% 37%



• Molecule 27: 40S RIBOSOMAL PROTEIN S15A

Chain BW: 50% 46%



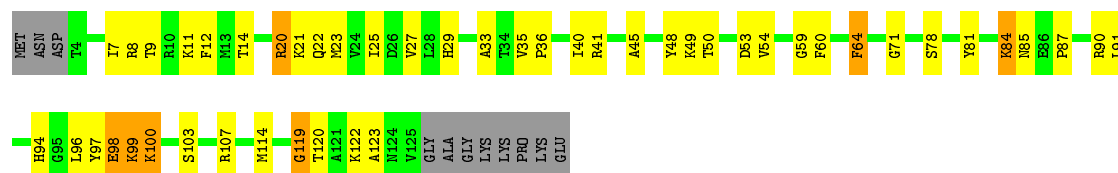
• Molecule 28: 40S RIBOSOMAL PROTEIN S23

Chain BX: 50% 40% 6%

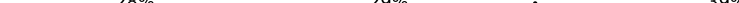


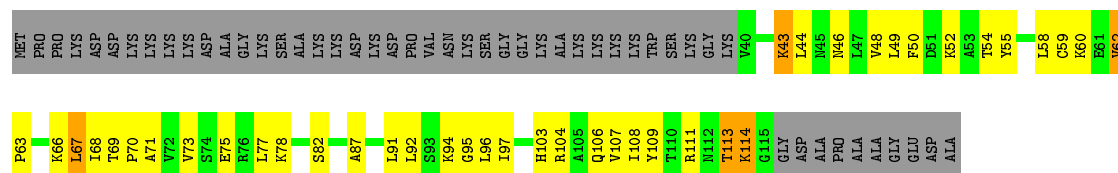
- Molecule 29: 40S RIBOSOMAL PROTEIN S24

Chain BY: 

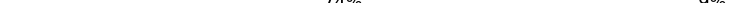


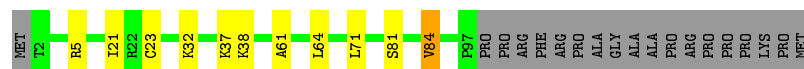
- Molecule 30: 40S RIBOSOMAL PROTEIN S25

Chain BZ:  28% 29% 1% 42%



- Molecule 31: 40S RIBOSOMAL PROTEIN S26

Chain Ba:  74% 9% 17%




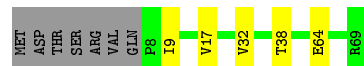
- Molecule 32: 40S RIBOSOMAL PROTEIN S27

Chain Bb:  90% 5% 5%



- Molecule 33: 40S RIBOSOMAL PROTEIN S28

Chain Bc: 



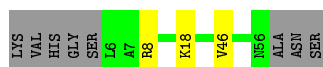
- Molecule 34: 40S RIBOSOMAL PROTEIN S29

Chain Bd:  88% 7% 5%



- Molecule 35: 40S RIBOSOMAL PROTEIN S30

Chain Be:



• Molecule 36: UBIQUITIN-40S RIBOSOMAL PROTEIN S27A



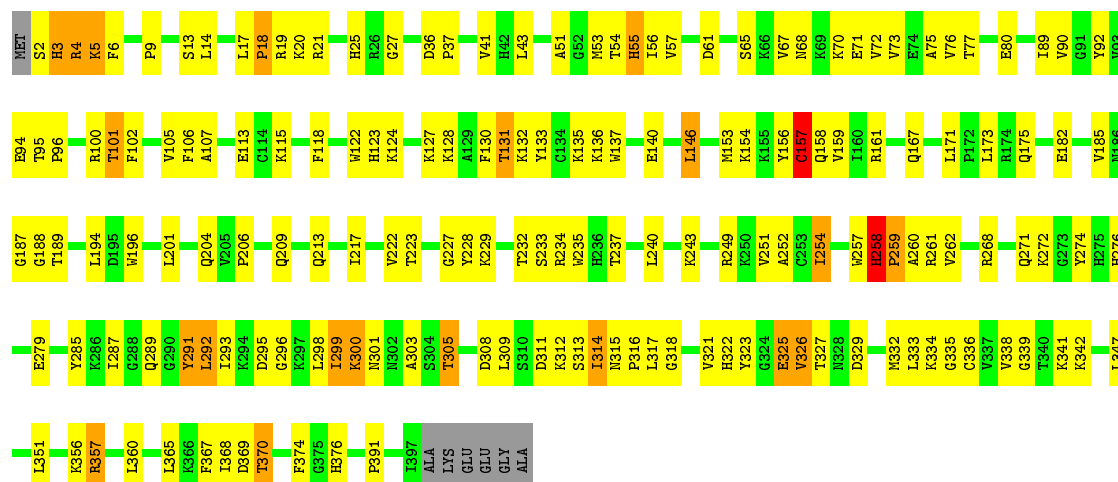
• Molecule 37: GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1



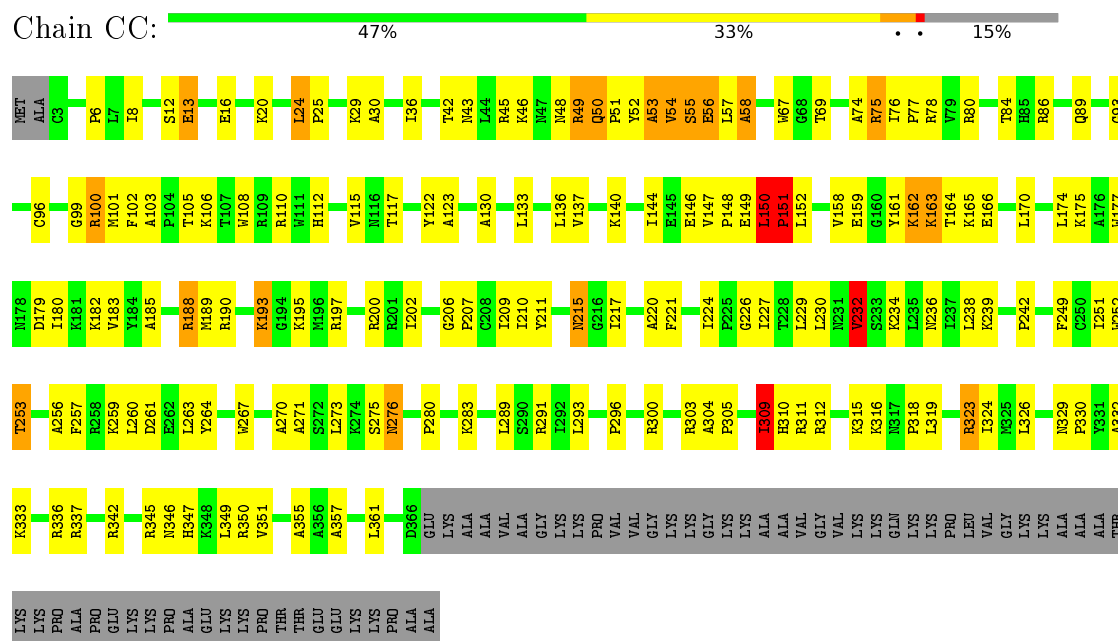
• Molecule 38: 60S RIBOSOMAL PROTEIN L8



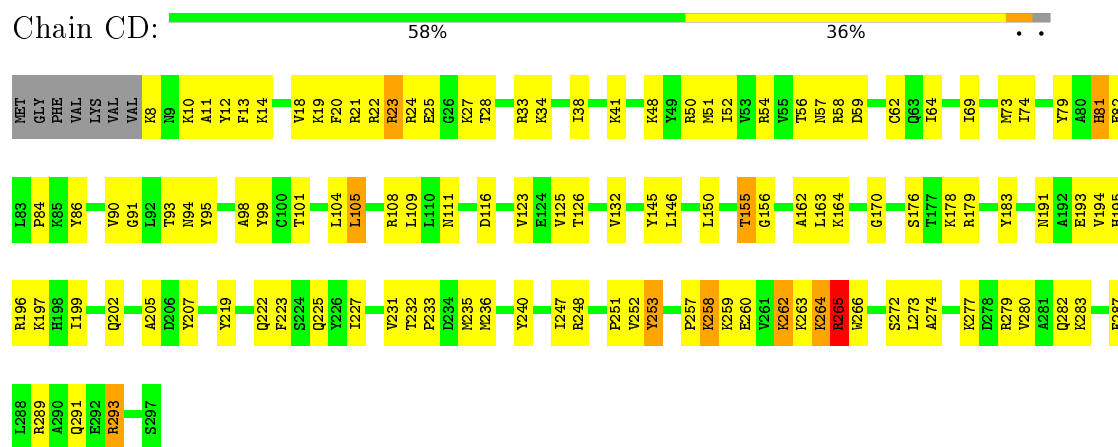
• Molecule 39: 60S RIBOSOMAL PROTEIN L3



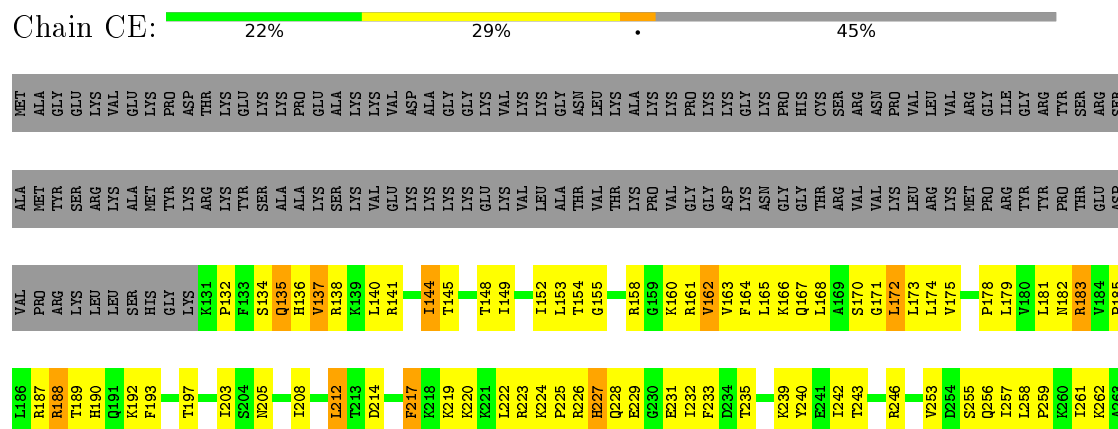
- Molecule 40: 60S RIBOSOMAL PROTEIN L4

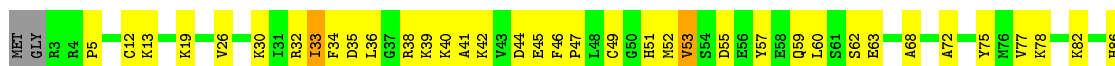


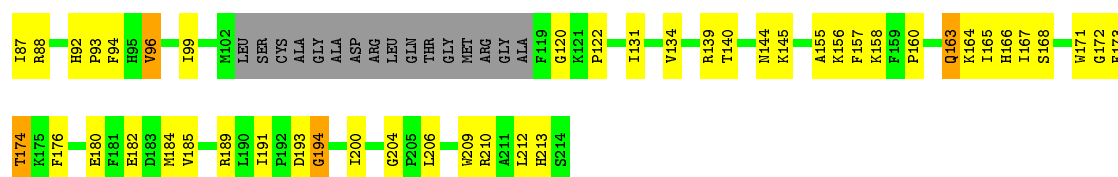
- Molecule 41: 60S RIBOSOMAL PROTEIN L5



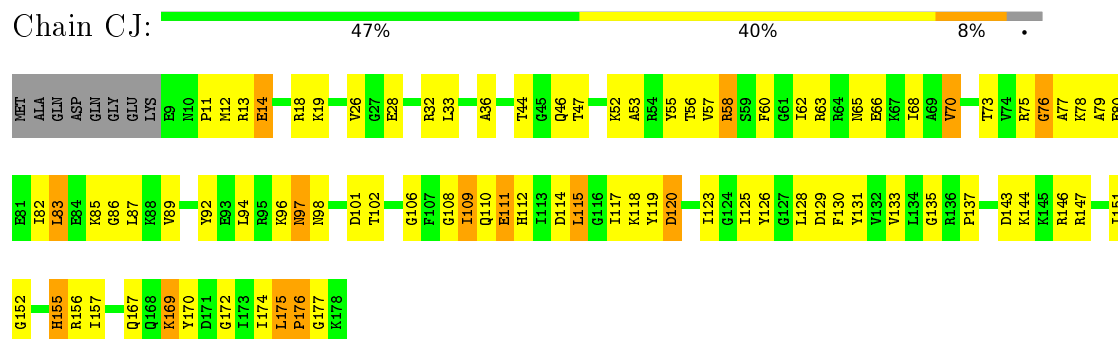
- Molecule 42: 60S RIBOSOMAL PROTEIN L6



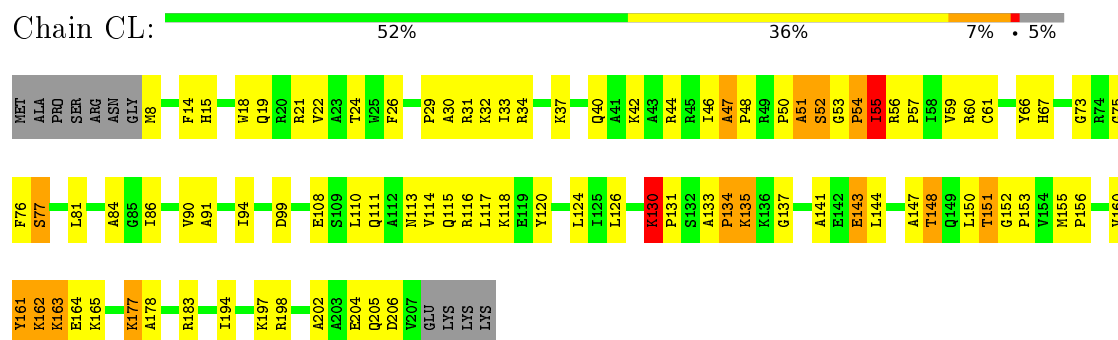




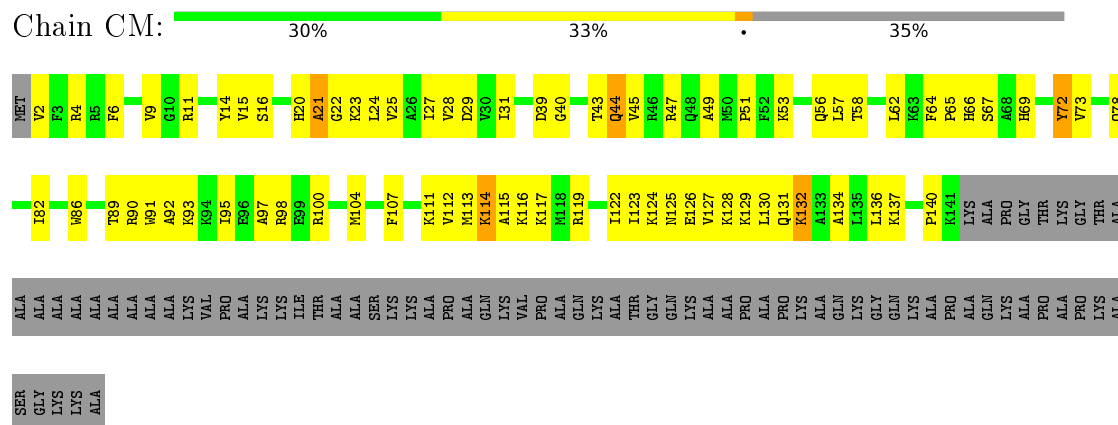
- Molecule 47: 60S RIBOSOMAL PROTEIN L11



- Molecule 48: 60S RIBOSOMAL PROTEIN L13

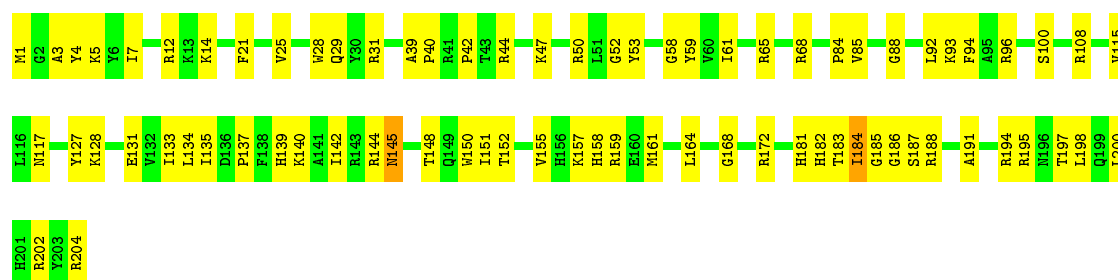


- Molecule 49: 60S RIBOSOMAL PROTEIN L14

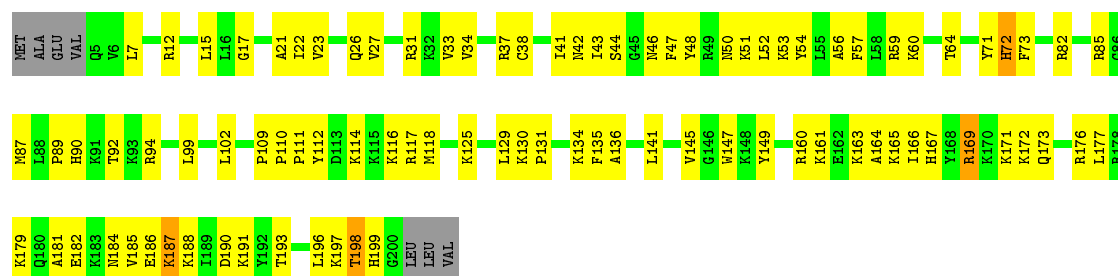


- Molecule 50: 60S RIBOSOMAL PROTEIN L15

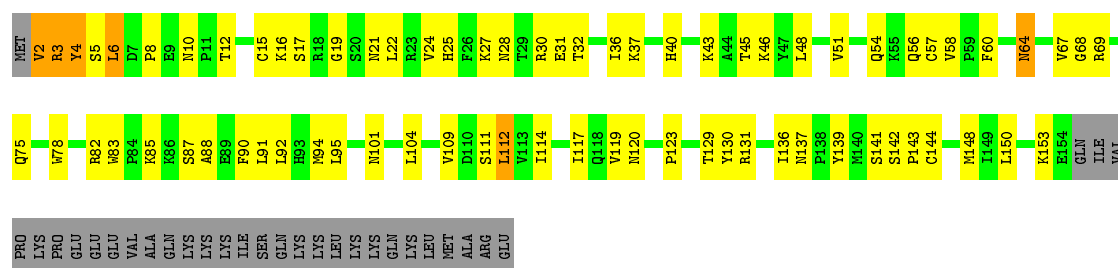




• Molecule 51: 60S RIBOSOMAL PROTEIN L13A



• Molecule 52: 60S RIBOSOMAL PROTEIN L17

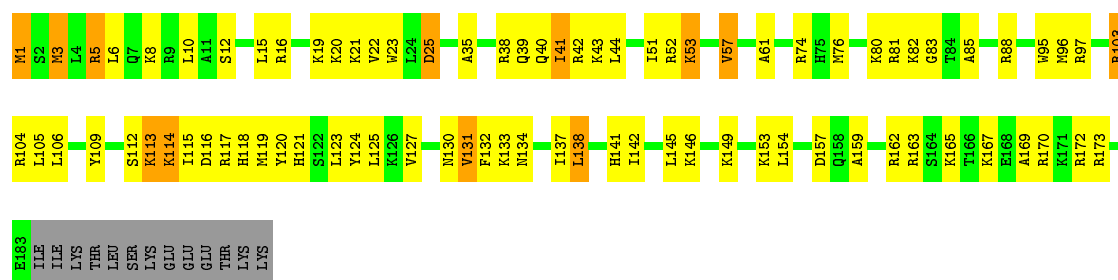


• Molecule 53: 60S RIBOSOMAL PROTEIN L18



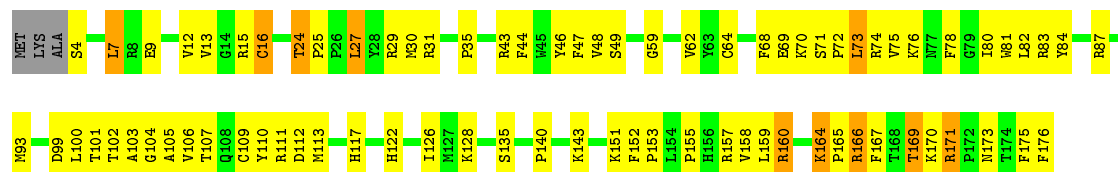
• Molecule 54: 60S RIBOSOMAL PROTEIN L19





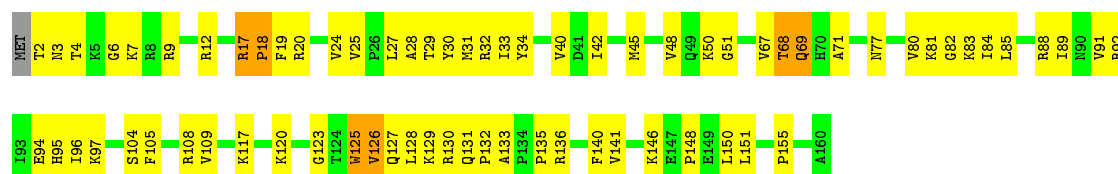
• Molecule 55: 60S RIBOSOMAL PROTEIN L18A

Chain CS: 53% 39% 6%



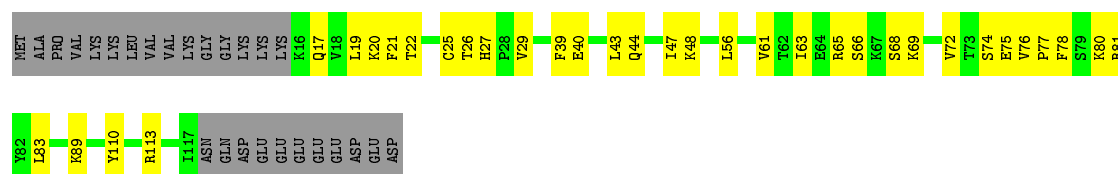
• Molecule 56: 60S RIBOSOMAL PROTEIN L21

Chain CT: 55% 41% 4%



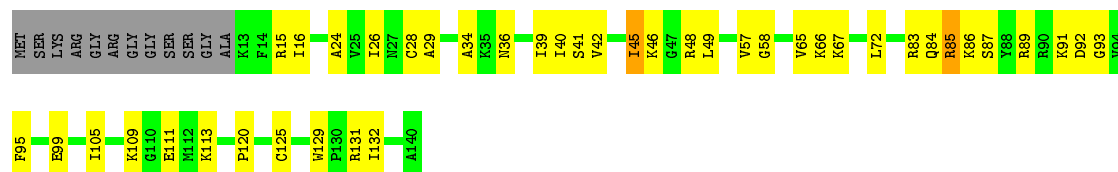
• Molecule 57: 60S RIBOSOMAL PROTEIN L22

Chain CU: 53% 27% 20%



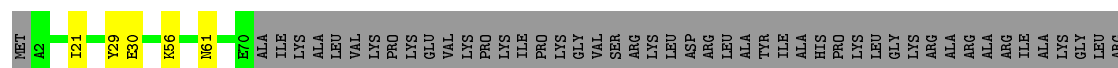
• Molecule 58: 60S RIBOSOMAL PROTEIN L23

Chain CV: 61% 29% 9%




• Molecule 59: 60S RIBOSOMAL PROTEIN L24

Chain CW: 27% 13% 59%




LEU CYS ARG PRO LYS LYS LYS LYS LYS LYS ASP GLN THR LYS ALA GLN ALA ALA PRO ALA SER VAL PRO ALA GLN ALA PRO LYS ARG THR GLN ALA PRO THR LYS ALA SER GLU

• Molecule 65: 60S RIBOSOMAL PROTEIN L30

Chain Cc:  88% 10%

MET VAL ALA ALA LYS LYS T7 R17 P63 S107 E110 GLN THR GLY GLU LYS

• Molecule 66: 60S RIBOSOMAL PROTEIN L31

Chain Cd:  83% 13%


MET ALA PRO ALA LYS LYS GLY GLU LYS LYS LYS LYS ARG SER ALA I17 V20 K39 R92 K115 T119 M128

• Molecule 67: 60S RIBOSOMAL PROTEIN L32

Chain Ce:  90% 5%


MET ALA ALA LEU LYS LYS V13 K19 P20 L70 L88 E132 GLU ASN GLU

• Molecule 68: 60S RIBOSOMAL PROTEIN L35A

Chain Cf:  86% 10%

MET SER SER GLY R4 K52 A53 K54 V58 T59 P60 P64 K73 R89 I101 R102 Y106 P107 I110

• Molecule 69: 60S RIBOSOMAL PROTEIN L34

Chain Cg:  87% 10%


MET V2 Q3 R4 L5 L22 K36 S44 A45 R54 R60 L67 S68 K69 G79 G80 S81 A84 A116 LYS

• Molecule 70: 60S RIBOSOMAL PROTEIN L35

Chain Ch:  94% 5%


MET A2 K3 A41 S42 K43 L113 K118 K122 A123

• Molecule 71: 60S RIBOSOMAL PROTEIN L36

Chain Ci:  83% 8% 8%

MET ALA LEU ARG TYR P6 V21 R28 L33 T34 K65 T79 L90 M97 R98 A101 A102 LYS LYS ASP

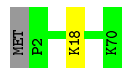
• Molecule 72: 60S RIBOSOMAL PROTEIN L37

Chain Cj:  84% 12%



- Molecule 73: 60S RIBOSOMAL PROTEIN L38

Chain Ck:  97%



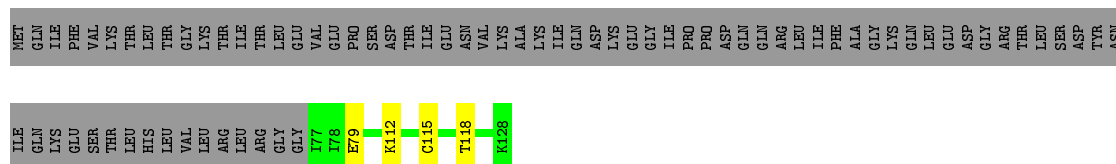
- Molecule 74: 60S RIBOSOMAL PROTEIN L39

Chain Cl:  94%



- Molecule 75: UBIQUITIN-60S RIBOSOMAL PROTEIN L40

Chain Cm:  38% 59%



- Molecule 76: 60S RIBOSOMAL PROTEIN L41

Chain Cn:  100%

There are no outlier residues recorded for this chain.

- Molecule 77: 60S RIBOSOMAL PROTEIN L36A

Chain Co:  93% 7%




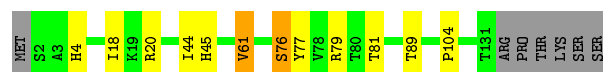
- Molecule 78: 60S RIBOSOMAL PROTEIN L37A

Chain Cp:  93% 5%



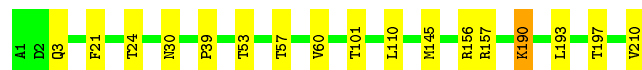
- Molecule 79: 60S RIBOSOMAL PROTEIN L28

Chain Ct:  86% 7% 5%



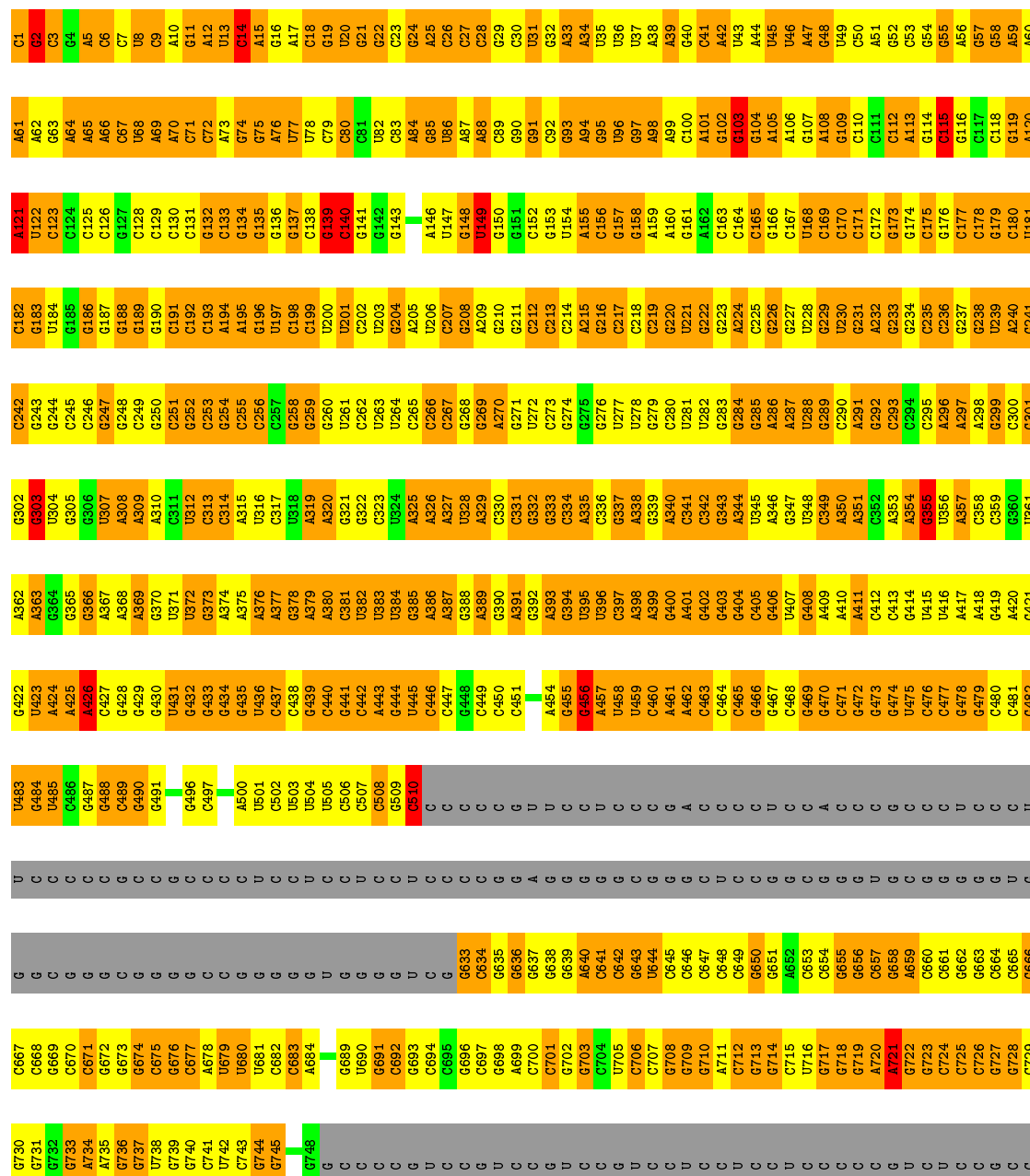
• Molecule 80: 60S RIBOSOMAL PROTEIN L10A

Chain Cu: 92% 8%



• Molecule 81: 28S Ribosomal RNA

Chain A2: 7% 28% 36% 28%



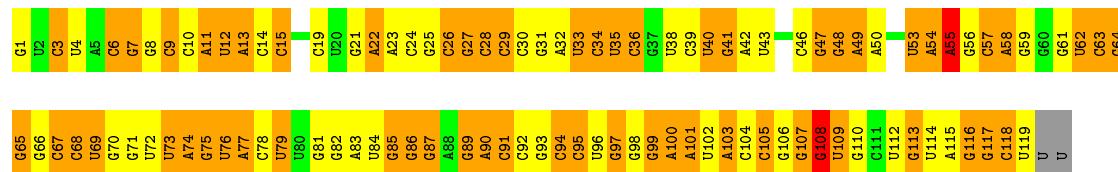
U1707	A1647	C1586	G1524	C1462	G1401	G1340	U1277	C1217	C1156	U1094	C	C	A913	U973	G	C
A1708	A1648	G1587	C1525	G1463	G1402	G1341	C1278	A1218	U1157	C1095	G	C	G914	C974	U	C
U1709	G1649	U1588	A1526	C1464	U1403	G1342	G1279	G1219	C1158	C1096	U	C	C915	C975	G	C
C1710	U1650	C1589	G	C1465	U1404	C1343	G1280	G1220	U1159	C1097	C	C	A916	C976	G	C
G1711	U1651	C1590	G1529	G1466	G1405	U1344	U1281	G1221	C1160	C	U	C	G917	G977	C	G
G1712	U1652	G1591	C1530	G1467	G1406	G	U1282	G1222	C1161	C	C	C	C918	G978	G	G
G1713	C1653	A1592	G1531	A1468	U1407	C1347	A1283	G1223	C1162	C	C	C	A919	C979	G	C
U1714	C1654	C1593	A1532	G1471	U1408	A1348	C1284	G1224	C1163	G	U	C	C920	G	C	C
A1715	C1655	A1533	A1533	G1472	U1409	C1349	C1285	G1225	A1164	C	C	C	U921	G	C	C
U1716	U1656	C1594	G1534	U1473	C1410	G1350	C1286	G1226	C1165	C	G	C	C922	C	C	C
A1717	C1657	C1595	U1473	U1473	C1411	A1351	A1287	U1227	U1166	C	U	C	G923	C	C	C
G1718	A1658	G1597	G1474	G1474	G1412	A1352	C1288	G1228	G1167	C	C	A	C924	C	C	C
G1719	G1659	A1537	A1537	G1475	C1422	A1353	C1289	C1229	C	C	C	G1044	C925	G	C	C
G1720	G1660	U1599	G1538	A1476	G1415	G1354	C1290	C1230	C1170	G	C	G1045	C926	G	C	C
A1721	A1661	A1600	A1539	G1477	C1416	G1355	G1291	C1231	C1171	C	C	G1046	C927	C	U	U
G	U1662	G1540	C1540	C1478	C1417	C1356	A1292	C1232	C1172	C	C	G1047	A927	G	C	C
G1724	G1663	G1603	G1541	A1479	U1418	C1357	C1293	G	C1173	C	C	G1048	A928	G	C	C
A1725	G1664	G1604	A1542	A1480	C1419	C1358	C1294	A	G1174	C	C	G1049	U929	G	U	U
U1726	C1665	G1605	A1543	C1481	U1420	C1359	C1295	A	C1175	C	C	G1050	C930	G	C	C
U1727	U1666	G1606	A1544	A1482	C1421	G1360	G1296	G	G1176	G	C	C1051	C931	G	C	C
A1728	C1667	C1607	C1545	A1483	C1422	U1361	U1297	A	G1177	C	C	C1052	C932	G	C	C
G1729	G1668	G1608	U1546	G1484	A1423	G1362	C1298	G1238	C1178	G	C	G1053	G933	G	C	C
A1730	C1669	A1609	C1547	G1485	G1424	G1363	U1299	G1239	G1179	A	C	G1054	G934	G	C	C
G1731	G1670	U1548	U1548	A1486	U1425	C1364	U1300	G1240	G1180	C	C	C1056	G935	C	C	C
G1732	C1671	A1611	G1549	C1487	U1426	G1365	G1301	G1241	U1181	G	C	C1057	G936	G	C	C
U1733	U1672	G1612	G1550	C1488	C1427	C1366	A1302	G1242	C1182	G	C	A1058	C937	G	C	C
G1734	C1673	A1613	U1551	C1489	G1428	A1367	A1303	G1243	G1183	G	C	C1059	C938	G	A	A
U1735	U	C1614	G1552	U1490	C1429	A1368	A1304	A1249	C1184	G	C	C1060	G939	A	C	C
U1736	C	U1615	G1553	G1491	C1430	U1369	C1305	G1245	G1185	G	C	C1061	G941	C	C	C
G1737	C	A1616	A1554	U1492	G1431	G1370	A1306	G1246	C1186	G	C	C1062	G942	C	C	C
G1738	C	A1617	G1555	U1493	A1432	A1371	C1307	C1247	C1187	G	C	C1063	G943	A	C	C
G1739	A	U1618	G1556	A1494	A1433	A1372	G1308	G1248	C1188	G	C	C1064	A944	A	C	C
G1740	G	C1619	U1557	A1495	G1434	G1373	G	G1249	U1189	U	C	C1065	G945	A	C	C
C1741	A	C1620	C1558	G1496	G1435	G1374	C1312	A1250	C1190	G	C	C1066	G946	C	C	C
C1742	C	A1621	C1559	C1497	A1436	U1375	A1313	G1251	G1191	C	C	C1067	G947	C	C	C
G1743	C	A1622	G1560	C1498	C1437	G1376	A1314	C1252	G1192	C	C	C1068	A948	C	C	C
A1744	C	G1623	U1561	C1499	A1438	A1377	G1315	G1253	G1193	G	C	G1069	G949	G	C	C
A1745	G	C1624	A1562	C1500	C1439	A1378	G1316	A1254	C1194	C	C	C1070	A950	G	C	C
A1746	A	A1625	G1563	G1501	C1440	G1379	A1317	G1255	C1195	G	C	C1071	C951	C	C	C
C1747	C	U1626	G1564	A1502	A1441	G1380	G1318	C1256	C1196	C	C	G	C952	C	C	C
G1748	G	C1627	G1565	A1503	C1442	C1381	U1319	G1257	G1197	C	C	C1074	C953	C	C	C
A1749	C	U1628	G1566	A1504	C1443	C1382	G	C1258	G1198	C	C	A1075	C954	G	C	C
U1750	A	A1629	U1567	G1505	G1444	G1383	A1322	A1259	G1199	C	C	C1076	G955	G	C	C
C1751	C	G1630	C1568	A1506	G1445	G1384	A1323	C1260	G1200	G1136	C	C1077	A893	G	C	C
U1752	C	U1631	C1569	U1507	C1446	C1385	C1324	G1261	G1201	G1137	C	C1078	G956	G	C	C
C1753	C	A1632	G1570	G1508	C1447	G1386	A1325	G1262	C1202	G1138	C	G1079	G957	G	C	C
A1754	C	G1633	U1571	G1509	C1448	C1387	C1326	G1263	G1203	C1139	C	C1080	C958	G	C	C
A1755	C	C1634	A1572	U1510	G1449	C1388	G1327	G1264	G1204	G1140	C	C1081	U897	C	C	C
G1756	G	U1635	C1573	G1509	U1450	G1389	U1328	U1265	G1205	G1141	C	C1082	G960	G	C	C
C1757	C	G1636	G1574	A1513	C1451	U1390	G1329	C1266	U1206	G1142	C	C1083	C961	G	C	C
U1758	C	C1637	U1575	C1514	U1452	C1391	C1330	G1267	G1207	G1143	C	C1084	G962	C	C	C
A1759	A	U1638	G1576	U1515	U1453	G1392	G1331	G1268	U1208	G1144	C	C1085	C963	C	C	C
U1760	C	U1639	C1577	A1516	G1454	C1393	C1332	C1269	G1209	G1145	C	A1086	U964	G	C	C
U1761	G	C1640	U1517	U1517	C1455	C1394	G1333	G1270	U1210	C1146	C	C1087	U897	C	C	C
G1762	C	C1641	A1580	G1518	C1456	G1395	A1334	G1271	C1211	C1147	C	C1088	G960	C	C	C
U1763	C	U1581	U1581	C1519	C1457	G1396	G1335	C1272	G1212	G1148	C	C1089	A899	C	C	C
A1766	C	C1582	U1581	C1520	G1458	C1397	U1336	G1273	G1213	G1150	C	C1090	C962	C	C	C
A1767	C	G1583	U1521	G1522	C1459	C1398	C1337	A1274	G1214	G	C	U1091	C968	C	C	C
U1705	C	G1584	G1522	C1522	C1460	C1399	C1338	C1275	G1215	G1154	C	U1092	C970	C	C	C
C1768	U1706	G1646	G1523	G1523	G1461	A1400	G1339	G1276	C1216	A1155	C	C1093	C972	C	C	C







G4817	C4697	G4636	C4575	A4513	G4451	U4391	G4330	G4269	G4209	G4144	C4081	C4020	A3897
G4818	C4698	U4637	A4576	G4514	U4452	C4392	G4331	A4270	G4210	G4145	G4082	A4021	G3898
U4819	C4699	G4638	A4577	U4515	G4453	G4393	G4332	A4271	A4211	G4146	C4083	U4022	G3899
C4820	C4700	G4639	G4578	U4516	G4454	G4394	G4333	U4272	G4212	G4147	U4084	U4023	C3900
G4821	C4701	U4579	U4579	U4517	G4455	U4395	G4334	A4273	C4213	U4148	U4085	A4024	G3903
G4822	G4702	G4641	U4580	U4518	G4456	U4396	C4335	G4276	A4214	U4149	C4086	C4025	G3904
G4823	C4703	U4642	C4581	A4519	U4457	U4397	A4336	G4277	G4215	U4150	U4087	U4026	C3906
U4824	C4704	U4643	A4582	C4520	U4458	U4398	G4337	A4278	A4216	G4151	G4088	C4027	A3905
G4825	C4705	A4644	G4583	C4521	U4459	U4399	A4338	C4278	G4217	G4152	G4089	U4028	C3908
C4826	C4706	U4645	A4584	C4522	U4460	A4401	A4339	C4279	A4217	C4153	G4090	G4029	G3907
G4827	C4707	G4646	C4585	U4523	U4461	A4402	A4340	G4280	G4218	U4154	G4091	A4030	G3908
G4828	G4708	A4647	A4586	A4524	U4462	U4403	A4341	U4281	U4219	G4155	C4092	U4031	U3909
A4829	C4709	U4648	U4587	C4525	U4463	G4403	G4342	G4282	U4220	G4156	C4093	C4032	G3910
G4830	C4710	U4649	U4588	U4526	C4465	C4404	U4343	A4283	C4221	G4157	A4094	G4033	A3911
U4831	U4711	G4650	U4589	G4527	C4466	U4405	U4344	A4284	C4222	G4158	A4095	G4034	A3912
G4832	U4712	G4651	G4590	G4528	U4467	U4406	A4345	A4285	C4223	C4159	G4096	U4035	A3913
C4833	G4713	U4591	U4592	U4529	U4468	C4407	G4346	G4286	G4224	G4160	C4098	U4036	A3914
C4834	G4714	U4592	G4593	G4530	A4470	G4408	C4347	C4287	U4225	G4161	C4099	U4037	G3915
C4835	C4715	G4653	G4593	A4531	A4471	G4409	A4348	G4288	G4226	U4162	C4100	U4038	G3916
U4836	U4716	C4656	U4594	U4532	U4472	U4410	C4349	G4289	G4227	A4163	C4101	U4039	U3919
U4837	C4717	U4657	A4595	G4533	U4473	U4411	A4350	G4290	A4228	C4164	G4102	C4040	G3920
G4838	C4718	C4658	U4596	U4534	G4474	U4412	G4351	G4291	G4229	A4165	A4041	C4042	A3921
G4839	G4719	U4659	G4597	G4535	G4475	C4413	G4352	C4292	C4230	C4166	C4104	G4043	G3922
U4840	G4720	A4660	U4598	U4536	G4476	G4414	G4353	C4293	A4231	C4167	U4043	U4043	A3923
C4841	A4721	A4661	G4599	U4537	A4477	G4415	A4354	U4294	G4232	U4168	G4106	G4044	G3924
C4842	U4722	G4662	C4600	G4538	A4478	C4416	U4355	C4295	A4233	G4169	G4107	A4045	G3925
U4843	A4723	U4663	U4601	U4539	C4479	U4417	A4356	A4296	A4234	U4170	C4108	C4046	U3926
G4844	G4724	C4664	U4602	U4540	U4480	C4418	A4357	C4297	G4235	G4171	C4109	C4047	G3927
G4845	C4725	A4665	G4603	G4541	U4481	U4419	C4358	G4298	G4236	G4172	G4111	U4051	U3928
G4846	G4726	G4666	G4604	C4542	G4482	U4420	A4359	A4299	G4237	C4175	A3929	G4052	G3930
A4847	G4727	C4667	C4605	A4543	A4483	C4421	G4360	U4300	C4238	G4176	G4112	U4051	A3931
U4848	G4728	U4668	U4606	A4544	G4484	C4422	C4362	C4301	A4239	A4173	G4050	G4052	G3932
A4849	U4729	U4669	U4607	U4545	C4485	U4423	A4363	C4302	A4240	G4177	A4053	A4053	A3933
G4850	C4730	C4670	G4608	G4546	U4486	A4424	G4364	U4303	A4241	U4178	A4117	G4054	U3934
G4851	C4731	U4671	G4609	G4547	G4487	U4425	U4365	U4304	A4242	C4179	C4118	G4055	G3935
G4852	C4732	C4672	G4610	U4548	G4488	C4426	G4366	C4305	G4243	A4180	C4119	C4056	G3936
G4853	G4733	G4673	A4611	A4549	G4489	A4427	G4367	U4306	U4245	C4181	C4120	G4057	G3937
G4854	C4734	C4674	G4612	A4550	U4490	U4428	G4368	G4307	C4246	G4182	G4121	G4058	U3938
G4855	G4735	C4675	C4613	U4551	U4491	U4429	C4369	A4308	G4247	C4183	C4122	G4059	G3939
G4856	C4736	C4676	C4614	C4552	U4492	G4430	G4370	C4309	C4248	A4184	U4123	G4060	G3940
G4857	C4737	C4677	A4615	G4556	A4493	U4431	G4371	C4310	U4249	G4185	C4124	G4061	A3941
G4858	U4738	G4678	A4616	U4557	G4494	C4432	C4372	U4311	G4250	G4186	C4125	G4062	G3942
C4859	U4739	G4679	A4617	C4558	U4495	A4433	C4373	U4312	G4251	U4187	G4126	G4063	G3943
C4860	U4740	G4680	G4618	A4559	C4496	A4434	A4374	U4313	A4252	G4188	G4127	C4064	G3944
G4861	C4741	G4681	G4621	A4560	C4497	G4435	A4375	U4314	U4253	U4189	G4128	G4065	C3945
G4862	C4742	A4682	C4622	G4561	G4498	C4436	G4376	G4315	C4254	C4190	A4135	A4066	C3946
G4863	C4743	A4683	C4623	U4562	U4499	A4437	C4377	G4316	U4255	C4191	A4130	G4067	C4006
A4864	C4744	G4684	A4624	A4562	C4500	A4438	G4378	G4317	U4256	U4192	A4131	C4068	G4007
A4865	G4745	G4685	A4625	A4563	G4501	A4439	U4379	U4318	G4257	A4193	A4132	C4069	C4008
G4866	C4746	A4686	G4626	G4564	U4502	A4440	U4380	U4319	A4258	A4194	C4133	C4070	C4009
C4867	U4747	U4687	A4627	A4565	G4503	U4441	C4381	U4320	U4259	G4195	U4134	G4071	G4010
G4868	G4748	A4688	C4628	G4566	A4504	U4442	A4382	U4321	U4260	G4196	A4135	A4072	C4011
C4869	G4749	G4689	U4628	G4567	U4498	C4443	A4383	A4322	U4261	C4197	C4136	G4073	U4012
G4870	C4750	G4690	A4629	A4568	A4506	G4444	A4384	A4323	U4262	G4198	C4137	G4074	C4013
G4871	G4751	G4691	C4630	G4569	C4445	G4445	G4385	C4263	C4263	A4199	A4138	G4075	A4014
G4872	G4752	C4692	C4631	A4570	U4508	C4446	G4386	C4325	A4264	G4200	G4139	G4076	C4015
C4873	G4753	A4693	U4632	A4571	G4509	U4447	G4387	A4326	G4265	C4201	G4140	C4077	C4016
G4874	C4754	C4694	C4633	C4572	U4510	A4448	A4388	G4327	U4266	U4202	U4141	C4078	C4017
G4875	C4755	G4695	U4634	C4573	U4511	G4449	A4389	G4328	A4267	G4203	G4142	U4079	C4018
G4876	U4635	G4696	U4635	G4574	U4512	C4450	G4390	A4329	C4268	A4204	G4143	U4080	C4019



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	DEFOCUS GROUP	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	39000	Depositor
Image detector	KODAK SO-163 FILM	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	AV	0.29	0/1809	0.75	0/2819
10	BF	0.43	0/1507	0.74	0/2026
11	BG	0.47	0/1907	0.74	0/2538
12	BH	0.46	0/1558	0.74	1/2087 (0.0%)
13	BI	0.47	0/1724	0.72	0/2298
14	BJ	0.45	0/1520	0.77	0/2030
15	BK	0.48	0/815	0.68	0/1101
16	BL	0.45	0/1220	0.72	0/1633
17	BM	0.48	0/941	0.72	0/1264
18	BN	0.43	0/1231	0.73	1/1656 (0.1%)
19	BO	0.46	0/1036	0.71	0/1391
2	AW	0.31	0/1783	0.76	0/2776
20	BP	0.43	0/1000	0.67	0/1335
21	BQ	0.43	0/1125	0.66	0/1506
22	BR	0.42	0/904	0.67	0/1208
23	BS	0.42	0/1190	0.68	0/1594
24	BT	0.44	0/1131	0.69	0/1515
25	BU	0.50	0/813	0.70	0/1092
26	BV	0.47	0/643	0.71	0/860
27	BW	0.44	0/1050	0.69	0/1406
28	BX	0.46	0/1063	0.70	0/1421
29	BY	0.45	0/1019	0.70	0/1354
3	AX	0.42	1/615 (0.2%)	1.25	11/948 (1.2%)
30	BZ	0.46	0/611	0.71	0/820
31	Ba	0.48	0/778	0.75	1/1041 (0.1%)
32	Bb	0.48	0/637	0.68	0/854
33	Bc	0.46	0/492	0.74	0/657
34	Bd	0.51	0/454	0.76	0/603
35	Be	0.45	0/417	0.69	0/548
36	Bf	0.53	0/507	0.84	1/673 (0.1%)
37	Bg	0.45	0/2497	0.67	0/3399
38	CA	0.44	0/1926	0.67	0/2583

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
39	CB	0.45	0/3258	0.73	2/4361 (0.0%)
4	B1	0.37	2/41550 (0.0%)	0.79	6/64763 (0.0%)
40	CC	0.47	0/2943	0.73	0/3953
41	CD	0.49	1/2406 (0.0%)	0.70	1/3221 (0.0%)
42	CE	0.52	0/1311	0.73	0/1763
43	CF	0.45	0/1985	0.68	0/2644
44	CG	0.46	0/1914	0.72	0/2578
45	CH	0.43	0/1554	0.69	0/2089
46	CI	0.42	0/1642	0.67	0/2194
47	CJ	0.49	0/1385	0.71	0/1852
48	CL	0.53	2/1647 (0.1%)	0.73	3/2205 (0.1%)
49	CM	0.49	0/1162	0.70	0/1556
5	BA	0.51	0/1756	0.68	0/2386
50	CN	0.43	0/1753	0.65	0/2348
51	CO	0.44	0/1639	0.69	0/2193
52	CP	0.44	0/1260	0.70	0/1691
53	CQ	0.45	0/1517	0.74	0/2026
54	CR	0.40	0/1542	0.64	0/2037
55	CS	0.44	0/1478	0.73	0/1985
56	CT	0.46	0/1325	0.71	0/1770
57	CU	0.47	0/841	0.71	0/1128
58	CV	0.43	0/977	0.63	0/1312
59	CW	0.43	0/542	0.59	0/722
6	BB	0.51	0/1756	0.75	1/2350 (0.0%)
60	CX	0.41	0/992	0.67	0/1334
61	CY	0.47	0/1082	0.72	1/1441 (0.1%)
62	CZ	0.47	0/1137	0.79	0/1517
63	Ca	0.44	0/1190	0.71	0/1591
64	Cb	0.45	0/570	0.72	0/752
65	Cc	0.46	0/813	0.70	0/1091
66	Cd	0.44	0/919	0.67	0/1238
67	Ce	0.45	0/1071	0.68	0/1428
68	Cf	0.50	0/884	0.81	0/1185
69	Cg	0.48	0/917	0.74	0/1222
7	BC	0.42	0/1761	0.65	0/2379
70	Ch	0.38	0/1022	0.64	0/1351
71	Ci	0.43	0/793	0.75	0/1048
72	Cj	0.49	0/704	0.76	0/931
73	Ck	0.43	0/574	0.73	0/761
74	Cl	0.41	0/453	0.61	0/599
75	Cm	0.42	0/434	0.70	0/575
76	Cn	0.39	0/240	0.50	0/305
77	Co	0.45	0/884	0.74	0/1166

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
78	Cp	0.40	0/717	0.61	0/953
79	Ct	0.48	0/1058	0.75	0/1416
8	BD	0.40	0/1672	0.66	0/2250
80	Cu	0.45	0/1638	0.69	1/2222 (0.0%)
81	A2	0.41	23/86672 (0.0%)	0.80	40/135198 (0.0%)
82	A3	0.35	0/3723	0.79	1/5800 (0.0%)
83	A4	0.37	0/2836	0.81	3/4421 (0.1%)
9	BE	0.47	0/2072	0.70	0/2793
All	All	0.42	29/231894 (0.0%)	0.77	74/341130 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
3	AX	1	0
4	B1	0	23
81	A2	0	35
82	A3	0	2
All	All	1	60

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	A2	1701	C	C5'-C4'	18.39	1.73	1.51
81	A2	1673	C	C3'-O3'	15.36	1.63	1.42
81	A2	1701	C	O5'-C5'	14.45	1.67	1.44
81	A2	1673	C	O3'-P	14.13	1.78	1.61
81	A2	1701	C	P-O5'	13.52	1.73	1.59
81	A2	1673	C	C5'-C4'	11.33	1.65	1.51
81	A2	1701	C	O3'-P	10.25	1.73	1.61
81	A2	1701	C	C4'-C3'	10.20	1.64	1.53
81	A2	1673	C	C4'-C3'	9.96	1.64	1.53
81	A2	1673	C	P-O5'	8.79	1.68	1.59
81	A2	1673	C	O5'-C5'	8.72	1.58	1.44
81	A2	943	G	C5-C6	-7.83	1.34	1.42
81	A2	1701	C	C3'-O3'	7.31	1.52	1.42
81	A2	2663	G	C6-O6	-6.79	1.18	1.24
81	A2	1673	C	C2-N3	-6.53	1.30	1.35
4	B1	992	A	C6-N6	-6.27	1.28	1.33
81	A2	1481	G	C2-N2	-5.95	1.28	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
41	CD	264	LYS	N-CA	5.89	1.58	1.46
81	A2	1673	C	N3-C4	-5.64	1.30	1.33
48	CL	131	PRO	N-CD	5.53	1.55	1.47
81	A2	1701	C	C4'-O4'	5.51	1.52	1.45
81	A2	3924	G	C2-N2	-5.37	1.29	1.34
4	B1	1286	G	C2-N2	-5.33	1.29	1.34
48	CL	134	PRO	N-CD	5.33	1.55	1.47
81	A2	1701	C	N1-C2	5.15	1.45	1.40
3	AX	60	U	O3'-P	5.07	1.67	1.61
81	A2	456	G	C2-N2	-5.06	1.29	1.34
81	A2	1701	C	O4'-C1'	5.04	1.48	1.41
81	A2	4593	G	C2-N2	-5.01	1.29	1.34

All (74) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	A2	1701	C	O4'-C4'-C3'	-15.19	88.81	104.00
39	CB	258	HIS	C-N-CD	-13.96	89.88	120.60
3	AX	58	U	P-O5'-C5'	12.68	141.18	120.90
81	A2	1701	C	O4'-C1'-N1	12.30	118.04	108.20
81	A2	1701	C	C4'-C3'-O3'	12.16	137.32	113.00
81	A2	1701	C	C2'-C3'-O3'	-10.65	86.07	109.50
3	AX	59	U	P-O5'-C5'	10.22	137.25	120.90
3	AX	58	U	C4'-C3'-O3'	9.33	131.65	113.00
3	AX	60	U	C5'-C4'-C3'	8.38	129.40	116.00
81	A2	1673	C	C5'-C4'-O4'	-8.00	99.50	109.10
81	A2	1701	C	C5'-C4'-C3'	7.93	128.68	116.00
81	A2	1673	C	O3'-P-O5'	7.15	117.58	104.00
81	A2	1673	C	C2-N1-C1'	-7.08	111.01	118.80
82	A3	34	U	C3'-C2'-C1'	-7.01	95.89	101.50
81	A2	1673	C	C5-C4-N4	6.52	124.77	120.20
3	AX	60	U	O5'-C5'-C4'	6.48	124.01	111.70
81	A2	139	G	C3'-C2'-C1'	-6.43	96.35	101.50
3	AX	59	U	O3'-P-O5'	-6.42	91.80	104.00
81	A2	103	G	C3'-C2'-C1'	-6.39	96.39	101.50
81	A2	1673	C	N3-C4-N4	-6.31	113.58	118.00
81	A2	4688	A	C3'-C2'-C1'	-6.25	96.50	101.50
3	AX	59	U	C4'-C3'-O3'	6.15	125.30	113.00
81	A2	1673	C	C4'-C3'-C2'	-6.14	96.46	102.60
3	AX	58	U	O3'-P-O5'	6.14	115.66	104.00
81	A2	4560	G	C3'-C2'-C1'	-6.13	96.59	101.50
81	A2	1673	C	C6-N1-C1'	6.11	128.13	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	A2	1673	C	C4'-C3'-O3'	6.10	125.21	113.00
4	B1	502	C	C3'-C2'-C1'	-6.09	96.63	101.50
81	A2	1673	C	C5'-C4'-C3'	6.06	125.69	116.00
81	A2	683	C	C3'-C2'-C1'	-5.90	96.78	101.50
81	A2	1673	C	N1-C1'-C2'	5.80	121.54	114.00
81	A2	3742	U	C3'-C2'-C1'	-5.79	96.87	101.50
81	A2	1942	A	N9-C1'-C2'	-5.76	105.66	112.00
3	AX	60	U	P-O5'-C5'	-5.75	111.70	120.90
81	A2	3677	C	C3'-C2'-C1'	-5.75	96.90	101.50
41	CD	265	ARG	N-CA-C	5.74	126.49	111.00
81	A2	943	G	C5-C6-O6	-5.62	125.23	128.60
4	B1	645	C	C3'-C2'-C1'	-5.61	97.01	101.50
4	B1	1441	U	C3'-C2'-C1'	-5.58	97.03	101.50
3	AX	58	U	C2'-C3'-O3'	5.53	122.54	113.70
81	A2	3868	G	C3'-C2'-C1'	-5.52	97.09	101.50
81	A2	2837	C	C3'-C2'-C1'	-5.47	97.12	101.50
48	CL	133	ALA	C-N-CD	5.46	139.87	128.40
81	A2	1703	G	O4'-C1'-C2'	-5.45	100.35	105.80
81	A2	1548	U	C3'-C2'-C1'	-5.45	97.14	101.50
48	CL	130	LYS	C-N-CD	5.39	139.72	128.40
18	BN	6	ALA	N-CA-C	-5.38	96.47	111.00
83	A4	108	G	O4'-C4'-C3'	-5.36	98.64	104.00
81	A2	4475	G	C3'-C2'-C1'	-5.34	97.23	101.50
81	A2	4987	C	C3'-C2'-C1'	-5.34	97.23	101.50
12	BH	109	ARG	N-CA-CB	5.30	120.15	110.60
81	A2	1672	U	C3'-C2'-C1'	-5.28	97.27	101.50
83	A4	108	G	C5'-C4'-O4'	5.28	115.44	109.10
81	A2	28	C	C3'-C2'-C1'	-5.28	97.28	101.50
6	BB	132	GLY	N-CA-C	5.26	126.26	113.10
3	AX	58	U	N1-C1'-C2'	5.26	120.83	114.00
4	B1	797	C	N1-C1'-C2'	-5.25	106.22	112.00
81	A2	355	G	C3'-C2'-C1'	-5.24	97.31	101.50
4	B1	1422	G	C3'-C2'-C1'	-5.23	97.32	101.50
81	A2	1432	A	C3'-C2'-C1'	-5.23	97.32	101.50
80	Cu	157	ARG	N-CA-CB	-5.15	101.34	110.60
36	Bf	124	ASP	N-CA-C	-5.13	97.16	111.00
81	A2	1595	U	C3'-C2'-C1'	-5.11	97.41	101.50
81	A2	303	G	C3'-C2'-C1'	-5.11	97.42	101.50
81	A2	4467	A	C3'-C2'-C1'	-5.09	97.42	101.50
4	B1	1147	C	C3'-C2'-C1'	-5.08	97.43	101.50
31	Ba	5	ARG	N-CA-CB	-5.07	101.47	110.60
48	CL	55	ILE	N-CA-C	-5.07	97.32	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	CB	325	GLU	N-CA-C	5.06	124.67	111.00
81	A2	14	C	OP2-P-O3'	5.05	116.31	105.20
61	CY	126	ARG	CB-CA-C	-5.04	100.31	110.40
83	A4	55	A	C3'-C2'-C1'	-5.03	97.48	101.50
81	A2	4547	G	C3'-C2'-C1'	-5.02	97.48	101.50
81	A2	1942	A	O4'-C1'-N9	5.01	112.21	108.20

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	AX	58	U	C3'

All (60) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
81	A2	1	C	Sidechain
81	A2	115	C	Sidechain
81	A2	121	A	Sidechain
81	A2	1218	A	Sidechain
81	A2	1248	G	Sidechain
81	A2	1349	C	Sidechain
81	A2	140	C	Sidechain
81	A2	1481	G	Sidechain
81	A2	149	U	Sidechain
81	A2	1618	U	Sidechain
81	A2	1673	C	Sidechain
81	A2	2	G	Sidechain
81	A2	2064	G	Sidechain
81	A2	2246	G	Sidechain
81	A2	2274	U	Sidechain
81	A2	2294	G	Sidechain
81	A2	2338	G	Sidechain
81	A2	2354	C	Sidechain
81	A2	2570	C	Sidechain
81	A2	2581	C	Sidechain
81	A2	2624	A	Sidechain
81	A2	2795	C	Sidechain
81	A2	426	A	Sidechain
81	A2	4533	G	Sidechain
81	A2	4637	U	Sidechain
81	A2	4655	C	Sidechain
81	A2	4681	G	Sidechain

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Mol	Chain	Res	Type	Group
81	A2	4710	G	Sidechain
81	A2	4712	U	Sidechain
81	A2	4740	U	Sidechain
81	A2	510	C	Sidechain
81	A2	721	A	Sidechain
81	A2	902	G	Sidechain
81	A2	965	C	Sidechain
81	A2	966	U	Sidechain
82	A3	130	C	Sidechain
82	A3	156	U	Sidechain
4	B1	111	A	Sidechain
4	B1	1120	U	Sidechain
4	B1	1288	U	Sidechain
4	B1	1308	U	Sidechain
4	B1	1414	A	Sidechain
4	B1	1548	G	Sidechain
4	B1	1578	U	Sidechain
4	B1	1624	U	Sidechain
4	B1	1686	G	Sidechain
4	B1	1823	A	Sidechain
4	B1	216	C	Sidechain
4	B1	235	A	Sidechain
4	B1	44	U	Sidechain
4	B1	570	C	Sidechain
4	B1	572	U	Sidechain
4	B1	643	A	Sidechain
4	B1	645	C	Sidechain
4	B1	747	U	Sidechain
4	B1	77	A	Sidechain
4	B1	799	U	Sidechain
4	B1	84	A	Sidechain
4	B1	867	G	Sidechain
4	B1	897	U	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AV	1619	0	820	128	0
2	AW	1626	0	826	188	0
3	AX	560	0	281	141	0
4	B1	37159	0	18778	3865	0
5	BA	1719	0	1717	132	0
6	BB	1729	0	1803	139	0
7	BC	1724	0	1808	73	0
8	BD	1646	0	1737	91	0
9	BE	2031	0	2138	118	0
10	BF	1486	0	1540	146	0
11	BG	1884	0	2044	152	0
12	BH	1535	0	1632	132	0
13	BI	1695	0	1785	163	0
14	BJ	1495	0	1615	90	0
15	BK	791	0	811	46	0
16	BL	1199	0	1269	68	0
17	BM	931	0	961	41	0
18	BN	1207	0	1292	66	0
19	BO	1023	0	1049	62	0
20	BP	981	0	1026	56	0
21	BQ	1108	0	1172	92	0
22	BR	893	0	946	57	0
23	BS	1172	0	1229	81	0
24	BT	1112	0	1146	114	0
25	BU	803	0	866	69	0
26	BV	636	0	637	44	0
27	BW	1033	0	1080	64	0
28	BX	1046	0	1110	67	0
29	BY	1002	0	1075	64	0
30	BZ	605	0	665	55	0
31	Ba	767	0	816	0	0
32	Bb	625	0	642	0	0
33	Bc	490	0	520	0	0
34	Bd	444	0	442	0	0
35	Be	412	0	463	0	0
36	Bf	497	0	497	0	0
37	Bg	2440	0	2396	0	0
38	CA	1888	0	1983	137	0
39	CB	3190	0	3327	185	0
40	CC	2889	0	3064	240	0
41	CD	2361	0	2385	137	0
42	CE	1286	0	1398	151	0
43	CF	1949	0	2093	140	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	CG	1881	0	2018	119	0
45	CH	1535	0	1611	104	0
46	CI	1604	0	1652	62	0
47	CJ	1362	0	1399	100	0
48	CL	1617	0	1725	98	0
49	CM	1139	0	1204	136	0
50	CN	1708	0	1761	86	0
51	CO	1607	0	1745	123	0
52	CP	1234	0	1263	73	0
53	CQ	1493	0	1612	93	0
54	CR	1526	0	1682	116	0
55	CS	1438	0	1472	87	0
56	CT	1297	0	1366	104	0
57	CU	827	0	852	26	0
58	CV	963	0	1026	40	0
59	CW	529	0	541	32	0
60	CX	975	0	1053	44	0
61	CY	1065	0	1145	86	0
62	CZ	1114	0	1194	74	0
63	Ca	1161	0	1213	0	0
64	Cb	560	0	590	0	0
65	Cc	802	0	844	0	0
66	Cd	904	0	947	0	0
67	Ce	1053	0	1144	0	0
68	Cf	865	0	904	0	0
69	Cg	907	0	1002	0	0
70	Ch	1014	0	1148	0	0
71	Ci	783	0	862	0	0
72	Cj	690	0	719	0	0
73	Ck	568	0	637	0	0
74	Cl	443	0	483	0	0
75	Cm	428	0	466	0	0
76	Cn	239	0	285	0	0
77	Co	870	0	943	0	0
78	Cp	707	0	760	0	0
79	Ct	1043	0	1120	0	0
80	Cu	1621	0	1563	0	0
81	A2	77488	0	39155	7537	0
82	A3	3334	0	1693	288	0
83	A4	2538	0	1286	248	0
All	All	215620	0	158969	15128	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 45.

All (15128) 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)
3:AX:45:U:C2	4:B1:1207:G:C2	1.88	1.61
2:AW:19:G:C8	81:A2:3927:G:H1'	1.13	1.59
3:AX:45:U:C2	4:B1:1207:G:N2	1.69	1.58
13:BI:123:ARG:CZ	81:A2:4979:C:H5''	1.25	1.58
3:AX:43:U:H5'	4:B1:961:G:C1'	1.21	1.56
2:AW:37:MIA:C12	10:BF:134:VAL:H	1.13	1.55
2:AW:19:G:C8	81:A2:3927:G:C1'	1.93	1.49
4:B1:970:G:C2	81:A2:3679:G:O2'	1.66	1.49
13:BI:169:GLY:HA3	81:A2:4980:C:P	1.53	1.46
13:BI:123:ARG:CZ	81:A2:4979:C:C5'	1.79	1.44
81:A2:1673:C:O3'	81:A2:1673:C:C3'	1.63	1.44
13:BI:123:ARG:NH2	81:A2:4979:C:C4'	1.78	1.43
81:A2:1701:C:O5'	81:A2:1701:C:C5'	1.67	1.41
2:AW:37:MIA:H162	10:BF:132:GLY:CA	1.42	1.41
4:B1:1849:G:C1'	81:A2:3735:A:O2'	1.65	1.41
13:BI:92:ARG:NH2	81:A2:2869:C:H1'	1.26	1.40
1:AV:32:U:OP2	21:BQ:146:ARG:CG	1.69	1.40
13:BI:123:ARG:HH22	81:A2:4979:C:C4'	1.35	1.39
1:AV:76:A:N1	81:A2:4156:G:N1	1.72	1.37
2:AW:37:MIA:C14	10:BF:134:VAL:HG13	1.54	1.37
1:AV:33:U:OP2	21:BQ:146:ARG:C	1.64	1.35
13:BI:168:GLN:O	81:A2:4979:C:C3'	1.76	1.33
2:AW:37:MIA:C12	10:BF:134:VAL:N	1.92	1.33
13:BI:169:GLY:CA	81:A2:4980:C:OP1	1.73	1.33
4:B1:1028:A:H2	81:A2:1543:A:C6	1.47	1.32
2:AW:37:MIA:N1	10:BF:133:THR:CA	1.81	1.31
1:AV:76:A:O2'	81:A2:4357:A:H1'	1.30	1.31
4:B1:970:G:C8	81:A2:3680:A:H5''	1.65	1.30
4:B1:1028:A:C2	81:A2:1543:A:C6	2.21	1.29
3:AX:45:U:O2	4:B1:1207:G:C2	1.81	1.28
4:B1:1827:U:H4'	81:A2:3728:A:O2'	1.31	1.28
2:AW:19:G:N7	81:A2:3927:G:O4'	1.66	1.27
3:AX:43:U:C5'	4:B1:961:G:C1'	2.11	1.27
2:AW:37:MIA:C15	10:BF:134:VAL:HG13	1.64	1.27
38:CA:196:TRP:HB3	38:CA:197:PRO:CD	1.62	1.26
4:B1:910:G:OP1	54:CR:173:ARG:CG	1.85	1.25
4:B1:1849:G:N9	81:A2:3735:A:O2'	1.67	1.24
18:BN:127:ARG:HD2	81:A2:1542:A:C2	1.58	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AV:76:A:O2'	81:A2:4357:A:O2'	1.52	1.24
13:BI:169:GLY:HA3	81:A2:4980:C:OP1	1.10	1.23
4:B1:910:G:OP1	54:CR:173:ARG:HG2	1.04	1.22
3:AX:45:U:N3	4:B1:1207:G:N3	1.86	1.22
4:B1:910:G:P	54:CR:173:ARG:HG2	1.79	1.22
4:B1:970:G:N7	81:A2:3680:A:H5''	1.54	1.21
2:AW:37:MIA:C13	10:BF:134:VAL:N	2.04	1.20
3:AX:45:U:N3	4:B1:1207:G:C2	2.09	1.20
2:AW:37:MIA:H162	10:BF:132:GLY:N	1.54	1.20
38:CA:186:TYR:HB2	38:CA:196:TRP:CZ2	1.76	1.20
4:B1:1070:A:OP1	38:CA:248:GLY:N	1.75	1.20
3:AX:43:U:O4'	4:B1:961:G:C4	1.95	1.20
3:AX:47:U:H5''	4:B1:1830:U:N3	1.54	1.19
2:AW:4:C:O2'	81:A2:3683:G:H4'	1.38	1.19
81:A2:1718:G:H5''	83:A4:102:U:H1'	1.22	1.19
1:AV:32:U:OP2	21:BQ:146:ARG:HG2	1.02	1.19
81:A2:1179:G:H2'	81:A2:1180:G:C8	1.77	1.19
81:A2:4709:G:H2'	81:A2:4710:G:H5''	1.21	1.18
3:AX:47:U:C5'	4:B1:1830:U:H3	1.56	1.18
4:B1:1431:G:H2'	4:B1:1432:U:C6	1.77	1.17
81:A2:2040:C:H3'	81:A2:2041:G:H5''	1.22	1.16
81:A2:719:G:H1'	81:A2:720:A:H5''	1.22	1.16
4:B1:377:G:H4'	13:BI:97:VAL:HG13	1.24	1.16
2:AW:71:G:H5''	81:A2:3708:C:O2'	1.43	1.16
4:B1:873:G:N7	54:CR:159:ALA:HA	1.61	1.16
51:CO:21:ALA:HA	51:CO:87:MET:HE1	1.21	1.16
2:AW:37:MIA:H121	10:BF:134:VAL:N	1.56	1.15
81:A2:104:G:H1'	81:A2:1340:G:H22	1.00	1.15
1:AV:76:A:O2'	81:A2:4357:A:C1'	1.93	1.15
4:B1:1330:G:H4'	4:B1:1331:C:H5'	1.29	1.15
4:B1:571:U:H3'	4:B1:572:U:C5'	1.77	1.14
2:AW:37:MIA:C16	10:BF:132:GLY:CA	2.25	1.14
81:A2:284:G:H4'	81:A2:285:G:C8	1.81	1.14
81:A2:41:C:H2'	81:A2:42:A:H5''	1.16	1.14
4:B1:1684:C:H2'	4:B1:1685:U:H5'	1.19	1.13
4:B1:1827:U:H4'	81:A2:3728:A:C2'	1.78	1.13
81:A2:641:C:H2'	81:A2:642:C:H5	1.10	1.13
81:A2:1648:A:H2'	81:A2:1649:G:H5''	1.26	1.13
81:A2:178:C:H3'	81:A2:179:G:H5''	1.21	1.13
81:A2:1258:C:H3'	81:A2:1259:A:H5''	1.29	1.13
81:A2:4700:C:H2'	81:A2:4701:G:H4'	1.28	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:181:A:H3'	4:B1:182:C:H5''	1.29	1.12
1:AV:57:G:O5'	47:CJ:55:TYR:OH	1.67	1.12
4:B1:1547:C:H3'	4:B1:1548:G:H5''	1.28	1.12
38:CA:196:TRP:CB	38:CA:197:PRO:HD3	1.79	1.12
81:A2:2637:A:H3'	81:A2:2638:U:H5''	1.32	1.12
81:A2:709:G:H2'	81:A2:710:G:H5'	1.29	1.12
18:BN:127:ARG:CD	81:A2:1542:A:C2	2.30	1.11
3:AX:50:U:H5'	4:B1:1825:A:H5'	1.21	1.11
4:B1:561:A:H3'	4:B1:562:U:H5''	1.22	1.11
4:B1:871:U:C4	54:CR:163:ARG:NH1	2.18	1.11
4:B1:179:C:H3'	4:B1:180:G:H5''	1.17	1.11
81:A2:656:G:H2'	81:A2:657:C:H5'	1.31	1.11
81:A2:1647:A:H2'	81:A2:1648:A:H5''	1.28	1.11
81:A2:4639:G:H2'	81:A2:4640:G:H5''	1.31	1.11
3:AX:47:U:C5'	4:B1:1830:U:N3	2.12	1.11
4:B1:569:A:H2'	4:B1:570:C:H5''	1.24	1.11
3:AX:60:U:C2	3:AX:61:U:C5	2.39	1.11
2:AW:37:MIA:H122	10:BF:134:VAL:H	1.15	1.11
2:AW:37:MIA:H152	10:BF:134:VAL:HG13	1.28	1.11
4:B1:180:G:H1'	4:B1:181:A:H5'	1.16	1.11
81:A2:1219:C:C2	81:A2:1249:G:H4'	1.86	1.10
4:B1:1416:C:H3'	4:B1:1417:C:H5''	1.29	1.10
3:AX:58:U:P	7:BC:151:ILE:HD13	1.90	1.10
1:AV:32:U:OP2	21:BQ:146:ARG:CB	2.00	1.10
4:B1:873:G:OP2	54:CR:163:ARG:HA	1.48	1.10
6:BB:54:GLY:HA3	81:A2:3913:G:H4'	1.17	1.10
81:A2:462:A:H4'	81:A2:463:C:H5''	1.23	1.10
2:AW:72:C:H2'	2:AW:73:A:H5''	1.32	1.10
4:B1:1732:G:H5'	81:A2:2862:A:H5''	1.34	1.10
2:AW:37:MIA:H162	10:BF:132:GLY:HA2	1.17	1.10
2:AW:37:MIA:C13	10:BF:134:VAL:H	1.61	1.10
13:BI:123:ARG:NH2	81:A2:4979:C:O5'	1.82	1.10
81:A2:510:C:H6	81:A2:510:C:H5'	1.09	1.10
81:A2:400:G:H22	81:A2:2305:U:H5''	1.08	1.09
81:A2:957:G:H8	81:A2:957:G:H5'	1.02	1.09
13:BI:92:ARG:CZ	81:A2:2869:C:H1'	1.82	1.09
4:B1:909:G:OP1	54:CR:169:ALA:HA	1.53	1.09
1:AV:76:A:O2'	81:A2:4357:A:C2'	2.00	1.09
2:AW:37:MIA:H152	10:BF:134:VAL:CG1	1.82	1.09
47:CJ:53:ALA:HB2	47:CJ:68:ILE:HD12	1.32	1.09
81:A2:1191:G:H2'	81:A2:1192:G:H8	1.10	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1058:A:H62	81:A2:1205:U:H1'	1.06	1.09
4:B1:970:G:H5''	81:A2:3681:A:OP1	1.52	1.09
4:B1:797:C:H2'	4:B1:798:G:H5''	1.28	1.09
81:A2:4655:C:H2'	81:A2:4656:C:H5'	1.29	1.09
4:B1:527:C:H4'	14:BJ:125:HIS:HB2	1.34	1.08
4:B1:618:C:H1'	4:B1:632:C:H5'	1.35	1.08
2:AW:56:C:C4	81:A2:3927:G:C6	2.39	1.08
39:CB:258:HIS:CG	39:CB:259:PRO:HD2	1.88	1.08
4:B1:302:A:H2'	4:B1:303:C:H5''	1.31	1.08
81:A2:1224:G:H3'	81:A2:1225:C:H5''	1.31	1.08
4:B1:970:G:N1	81:A2:3679:G:O2'	1.86	1.08
81:A2:3586:G:H2'	81:A2:3587:C:H5'	1.34	1.08
3:AX:53:U:N3	8:BD:146:ARG:CZ	2.15	1.08
81:A2:2370:C:H3'	81:A2:2371:G:H5''	1.32	1.07
4:B1:571:U:H3'	4:B1:572:U:C4'	1.84	1.07
4:B1:1101:U:H2'	4:B1:1102:G:C8	1.88	1.07
81:A2:1791:C:H2'	81:A2:1792:U:H6	1.17	1.07
39:CB:258:HIS:CB	39:CB:259:PRO:HD2	1.68	1.07
81:A2:893:A:H2'	81:A2:894:G:H5''	1.33	1.07
81:A2:4825:G:H4'	81:A2:4826:C:H4'	1.14	1.07
81:A2:457:A:H8	81:A2:676:G:H5''	1.07	1.07
81:A2:284:G:H21	81:A2:288:U:H4'	1.13	1.07
3:AX:48:U:C4	4:B1:1702:G:OP2	2.07	1.07
4:B1:527:C:H3'	4:B1:528:A:C8	1.89	1.07
81:A2:457:A:C8	81:A2:676:G:H5''	1.89	1.07
2:AW:76:A:N7	81:A2:4331:G:N3	2.01	1.07
81:A2:433:G:H2'	81:A2:434:G:C8	1.88	1.07
81:A2:4687:U:H3'	81:A2:4688:A:H5''	1.27	1.07
81:A2:4906:G:H2'	81:A2:4907:G:C8	1.89	1.07
4:B1:384:U:H2'	4:B1:385:G:H5''	1.35	1.07
4:B1:211:G:H8	4:B1:211:G:H5'	1.19	1.06
40:CC:346:ASN:CB	81:A2:713:G:H4'	1.83	1.06
40:CC:309:ILE:HD13	81:A2:2063:G:H1'	1.37	1.06
4:B1:1028:A:C2	81:A2:1543:A:N1	2.22	1.06
4:B1:751:G:H2'	4:B1:752:G:H8	1.17	1.06
81:A2:424:A:H1'	81:A2:425:A:H5''	1.35	1.06
81:A2:1276:G:H3'	81:A2:1277:U:H4'	1.35	1.06
3:AX:58:U:OP2	7:BC:151:ILE:CD1	2.03	1.06
4:B1:1441:U:H2'	4:B1:1442:U:H4'	1.06	1.05
81:A2:229:G:H1'	81:A2:374:A:H1'	1.35	1.05
3:AX:60:U:C2	3:AX:61:U:H5	1.72	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3588:G:H5'	81:A2:3589:G:H5''	1.39	1.05
4:B1:1258:A:H3'	4:B1:1258:A:N3	1.69	1.05
55:CS:169:THR:HG23	81:A2:4829:A:H1'	1.38	1.05
81:A2:4700:C:H3'	81:A2:4701:G:H5''	1.34	1.05
2:AW:37:MIA:C15	10:BF:134:VAL:CG1	2.34	1.05
81:A2:1166:U:H2'	81:A2:1167:G:C8	1.91	1.05
3:AX:43:U:C5'	4:B1:961:G:O4'	2.03	1.05
81:A2:1059:C:H3'	81:A2:1060:C:C5	1.92	1.05
81:A2:4695:C:H2'	81:A2:4696:G:C8	1.90	1.05
4:B1:1833:C:H5'	4:B1:1833:C:H6	1.18	1.05
43:CF:69:ILE:HB	81:A2:716:U:H4'	1.32	1.05
81:A2:2449:A:H3'	81:A2:2450:A:H5'	1.35	1.05
81:A2:709:G:C2'	81:A2:710:G:H5'	1.86	1.05
2:AW:37:MIA:C14	10:BF:134:VAL:CG1	2.35	1.05
81:A2:4712:U:H1'	81:A2:4713:G:H8	1.21	1.05
4:B1:1631:U:H5'	4:B1:1631:U:H6	1.16	1.05
81:A2:2348:U:H6	81:A2:2348:U:H5''	1.16	1.04
4:B1:112:U:H5''	4:B1:113:G:H5'	1.37	1.04
4:B1:500:A:H2'	4:B1:501:C:H5''	1.39	1.04
13:BI:168:GLN:O	81:A2:4979:C:H3'	1.56	1.04
81:A2:4687:U:H3'	81:A2:4688:A:C5'	1.87	1.04
4:B1:211:G:H2'	4:B1:212:C:C6	1.91	1.04
81:A2:1178:G:H3'	81:A2:1179:G:H5''	1.39	1.04
81:A2:2310:G:H4'	82:A3:20:A:H4'	1.34	1.04
81:A2:182:C:H3'	81:A2:183:G:C8	1.92	1.04
4:B1:970:G:C8	81:A2:3680:A:C5'	2.40	1.04
4:B1:594:A:H1'	4:B1:643:A:N6	1.72	1.04
4:B1:211:G:H2'	4:B1:212:C:H6	1.13	1.04
4:B1:1442:U:H5'	4:B1:1443:C:H6	1.22	1.04
4:B1:1768:A:H2'	4:B1:1769:C:H5'	1.37	1.04
81:A2:957:G:C8	81:A2:957:G:H5'	1.91	1.04
13:BI:69:SER:HB3	16:BL:24:LEU:HD11	1.37	1.04
1:AV:74:C:N3	81:A2:4157:G:N1	2.04	1.04
2:AW:37:MIA:N1	10:BF:133:THR:HA	1.14	1.04
3:AX:45:U:N3	4:B1:1207:G:N2	2.03	1.04
4:B1:1849:G:H1'	81:A2:3735:A:H1'	1.38	1.03
4:B1:43:U:H5'	4:B1:44:U:H5	1.20	1.03
4:B1:900:C:H2'	4:B1:901:G:C8	1.93	1.03
4:B1:970:G:OP1	81:A2:3681:A:C8	2.11	1.03
81:A2:712:C:H2'	81:A2:713:G:C8	1.93	1.03
3:AX:43:U:O4'	4:B1:961:G:N3	1.89	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:441:G:H8	81:A2:441:G:H5'	1.16	1.03
2:AW:37:MIA:C16	10:BF:132:GLY:N	2.22	1.03
2:AW:19:G:N7	81:A2:3927:G:C1'	2.13	1.03
13:BI:92:ARG:NH2	81:A2:2869:C:C1'	2.20	1.03
81:A2:4595:A:H5'	81:A2:4624:A:H61	1.19	1.03
4:B1:1069:U:O2'	38:CA:247:ARG:NH2	1.90	1.03
81:A2:2311:C:H6	81:A2:2311:C:H5'	1.19	1.03
81:A2:2532:G:H2'	81:A2:2533:G:C8	1.93	1.03
81:A2:2738:U:H1'	81:A2:2739:G:C8	1.92	1.03
4:B1:557:U:H3'	4:B1:558:G:C8	1.94	1.03
18:BN:127:ARG:HD2	81:A2:1542:A:H2	0.86	1.03
82:A3:127:U:H3'	82:A3:128:C:H5''	1.04	1.03
82:A3:8:U:H2'	82:A3:9:A:H8	1.23	1.03
81:A2:1248:G:H3'	81:A2:1249:G:C8	1.93	1.02
4:B1:1637:A:H4'	4:B1:1638:G:C5'	1.88	1.02
81:A2:178:C:H3'	81:A2:179:G:C5'	1.88	1.02
4:B1:970:G:C5	81:A2:3680:A:H5''	1.94	1.02
81:A2:380:A:H3'	81:A2:380:A:N3	1.71	1.02
81:A2:1409:C:H2'	81:A2:1410:C:C6	1.94	1.02
81:A2:1718:G:C5'	83:A4:102:U:H1'	1.90	1.02
2:AW:56:C:N3	81:A2:3927:G:C6	2.27	1.02
81:A2:459:U:H4'	81:A2:460:C:OP1	1.60	1.02
4:B1:475:C:H5'	4:B1:475:C:H6	1.20	1.02
81:A2:59:A:H2'	81:A2:60:A:H5'	1.42	1.02
81:A2:2305:U:H2'	81:A2:2306:G:C8	1.94	1.02
81:A2:393:A:H8	81:A2:393:A:H5''	1.23	1.02
3:AX:45:U:N1	4:B1:1207:G:N2	2.08	1.02
1:AV:76:A:C2	81:A2:4156:G:N2	2.27	1.02
2:AW:71:G:C5'	81:A2:3708:C:O2'	2.08	1.02
81:A2:1191:G:H2'	81:A2:1192:G:C8	1.93	1.01
81:A2:4291:G:H3'	81:A2:4292:C:H5'	1.05	1.01
40:CC:185:ALA:HB3	81:A2:2276:A:C8	1.95	1.01
81:A2:14:C:O4'	81:A2:15:A:H5'	1.60	1.01
1:AV:75:C:N4	81:A2:4157:G:O6	1.90	1.01
81:A2:165:C:H2'	81:A2:166:G:H8	1.26	1.01
81:A2:2354:C:H2'	81:A2:2355:G:H8	1.19	1.01
81:A2:462:A:H4'	81:A2:463:C:C5'	1.89	1.01
81:A2:4665:A:H3'	81:A2:4666:G:H8	1.17	1.01
4:B1:1684:C:C2'	4:B1:1685:U:H5'	1.90	1.01
49:CM:123:ILE:HA	51:CO:187:LYS:CE	1.91	1.01
81:A2:1659:G:H5'	81:A2:1659:G:H8	1.25	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3770:U:H4'	81:A2:4456:A:H2	1.25	1.01
81:A2:1466:G:H2'	81:A2:1467:G:H5''	1.43	1.01
81:A2:2311:C:C6	81:A2:2311:C:H5'	1.95	1.01
4:B1:302:A:C2'	4:B1:303:C:H5''	1.90	1.01
81:A2:2370:C:H3'	81:A2:2371:G:C5'	1.91	1.01
4:B1:307:G:H4'	4:B1:308:G:H5''	1.41	1.01
13:BI:168:GLN:O	81:A2:4979:C:C2'	2.08	1.00
81:A2:2750:G:H2'	81:A2:2751:C:C6	1.95	1.00
81:A2:978:G:H2'	81:A2:979:C:C6	1.94	1.00
4:B1:1589:A:H4'	24:BT:82:ARG:HD3	1.43	1.00
4:B1:1698:C:H4'	4:B1:1699:A:C8	1.97	1.00
81:A2:3877:A:H2'	81:A2:3878:C:H5'	1.44	1.00
81:A2:4236:G:C8	81:A2:4236:G:H5''	1.96	1.00
81:A2:3580:A:H2	81:A2:4971:A:H8	1.08	1.00
4:B1:1258:A:H2'	4:B1:1259:A:H4'	1.44	1.00
81:A2:1057:C:H2'	81:A2:1058:A:H5''	1.41	1.00
81:A2:943:G:H3'	81:A2:1262:G:C4'	1.92	1.00
4:B1:873:G:N7	54:CR:159:ALA:CA	2.25	1.00
3:AX:53:U:C2	8:BD:146:ARG:NH2	2.30	1.00
81:A2:104:G:C1'	81:A2:1340:G:H22	1.75	1.00
81:A2:4812:A:H2'	81:A2:4813:C:C6	1.97	1.00
4:B1:76:U:H2'	4:B1:77:A:H3'	1.41	1.00
40:CC:263:LEU:HD22	40:CC:273:LEU:HD22	1.44	1.00
81:A2:1355:C:H2'	81:A2:1356:C:H5'	1.43	1.00
4:B1:301:A:H2'	4:B1:302:A:C8	1.97	0.99
4:B1:1286:G:H1'	17:BM:34:GLY:CA	1.92	0.99
4:B1:1708:C:H1'	81:A2:3735:A:H62	1.24	0.99
4:B1:1520:G:H5'	4:B1:1521:C:C5	1.97	0.99
4:B1:873:G:C8	54:CR:159:ALA:HA	1.96	0.99
4:B1:689:U:H3'	4:B1:690:G:C8	1.96	0.99
5:BA:6:ASP:HB3	26:BV:42:VAL:HG13	1.43	0.99
81:A2:2310:G:C3'	81:A2:2311:C:H5''	1.92	0.99
81:A2:2416:G:H2'	81:A2:2495:G:N2	1.76	0.99
81:A2:3769:A:C2	81:A2:4456:A:H1'	1.96	0.99
4:B1:929:G:H21	4:B1:1104:G:H4'	1.23	0.99
81:A2:957:G:H2'	81:A2:958:C:H5''	1.44	0.99
81:A2:1791:C:H2'	81:A2:1792:U:C6	1.96	0.99
40:CC:346:ASN:HB2	81:A2:713:G:H4'	1.41	0.99
81:A2:2308:A:H4'	81:A2:2309:G:H5'	1.44	0.99
2:AW:19:G:H8	81:A2:3927:G:H1'	1.25	0.99
4:B1:1461:G:H21	4:B1:1465:A:H62	1.01	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1061:C:H2'	81:A2:1062:C:C6	1.97	0.99
81:A2:4830:G:H3'	81:A2:4831:U:H4'	1.42	0.99
4:B1:655:A:H4'	4:B1:656:G:H3'	1.45	0.99
81:A2:2416:G:H2'	81:A2:2495:G:H22	1.25	0.98
81:A2:700:C:C3'	81:A2:701:C:H5''	1.93	0.98
4:B1:572:U:H2'	4:B1:573:U:C4	1.97	0.98
81:A2:2526:G:H3'	81:A2:2527:G:C5'	1.92	0.98
81:A2:4825:G:C4'	81:A2:4826:C:H4'	1.93	0.98
81:A2:4900:G:H3'	81:A2:4901:U:H5'	1.45	0.98
4:B1:683:G:H1'	4:B1:1023:A:C2	1.99	0.98
81:A2:1870:A:H5'	81:A2:1871:C:H5	1.25	0.98
4:B1:1257:G:H4'	4:B1:1258:A:OP2	1.63	0.98
81:A2:1301:G:H4'	81:A2:1869:A:H2	1.24	0.98
4:B1:1827:U:C4'	81:A2:3728:A:O2'	2.12	0.98
81:A2:3943:G:H5'	81:A2:3943:G:H8	1.28	0.98
4:B1:1172:U:H5''	50:CN:14:LYS:HD3	103.66	0.98
81:A2:1873:G:H5'	81:A2:1873:G:H8	1.27	0.98
81:A2:3858:G:H3'	81:A2:4679:G:H22	1.23	0.98
81:A2:4291:G:H3'	81:A2:4292:C:C5'	1.94	0.98
4:B1:184:G:H8	4:B1:185:G:H4'	1.25	0.98
1:AV:32:U:P	21:BQ:146:ARG:HG2	2.02	0.98
44:CG:61:ILE:HD12	82:A3:149:G:H1'	1.46	0.98
13:BI:92:ARG:HH22	81:A2:2869:C:H1'	1.15	0.98
4:B1:1692:U:H2'	4:B1:1693:G:C8	1.99	0.98
40:CC:54:VAL:HG22	40:CC:55:SER:H	1.27	0.98
4:B1:909:G:OP2	54:CR:169:ALA:CB	2.13	0.97
4:B1:1286:G:H1'	17:BM:34:GLY:HA2	1.43	0.97
4:B1:1414:A:H2'	4:B1:1415:C:C1'	1.94	0.97
59:CW:49:ILE:HA	81:A2:3584:G:H21	1.29	0.97
4:B1:794:A:H2'	4:B1:795:A:H4'	1.47	0.97
1:AV:32:U:P	21:BQ:146:ARG:CG	2.53	0.97
81:A2:122:U:H2'	81:A2:123:C:C6	2.00	0.97
81:A2:386:A:H3'	81:A2:387:A:H8	1.29	0.97
81:A2:1:C:HO5'	81:A2:1:C:H6	0.97	0.97
4:B1:746:C:H1'	4:B1:747:U:N3	1.79	0.97
38:CA:186:TYR:HA	38:CA:196:TRP:CE2	1.99	0.97
81:A2:4661:A:H2'	81:A2:4662:G:H5'	1.47	0.96
81:A2:1465:C:C2'	81:A2:1466:G:H5'	1.96	0.96
6:BB:54:GLY:CA	81:A2:3913:G:H4'	1.95	0.96
81:A2:929:U:H2'	81:A2:930:C:H5'	1.46	0.96
4:B1:193:C:H4'	4:B1:209:A:N6	1.79	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1179:G:H2'	81:A2:1180:G:H8	1.17	0.96
81:A2:1351:A:H3'	81:A2:1352:A:H8	1.23	0.96
81:A2:41:C:C2'	81:A2:42:A:H5''	1.94	0.96
4:B1:1253:A:H4'	4:B1:1254:C:H5''	1.47	0.96
81:A2:4825:G:H4'	81:A2:4826:C:C4'	1.95	0.96
4:B1:1695:A:H2'	4:B1:1696:C:O4'	1.65	0.96
2:AW:37:MIA:H121	10:BF:134:VAL:H	1.09	0.96
41:CD:280:VAL:HG13	46:CI:206:LEU:HD11	1.48	0.96
81:A2:2508:C:HO2'	81:A2:2509:C:H6	0.98	0.96
21:BQ:12:VAL:HG21	21:BQ:91:ALA:HA	1.47	0.96
2:AW:19:G:C5	81:A2:3927:G:O4'	2.18	0.96
4:B1:1849:G:C8	81:A2:3735:A:O2'	2.19	0.96
81:A2:1081:C:OP1	81:A2:1081:C:H4'	1.65	0.96
81:A2:2526:G:H3'	81:A2:2527:G:H5''	1.45	0.96
81:A2:2701:G:H4'	81:A2:2702:A:C2	2.00	0.96
4:B1:873:G:N7	54:CR:159:ALA:CB	2.29	0.96
81:A2:2549:C:H4'	81:A2:2736:G:H2'	1.47	0.96
4:B1:561:A:H3'	4:B1:562:U:C5'	1.95	0.96
4:B1:571:U:H3'	4:B1:572:U:H5''	1.45	0.96
4:B1:559:G:H3'	4:B1:560:A:H5''	1.47	0.95
81:A2:1061:C:H2'	81:A2:1062:C:H6	1.27	0.95
81:A2:3781:C:H3'	81:A2:3782:A:H5''	1.45	0.95
4:B1:229:A:N1	4:B1:900:C:H1'	1.80	0.95
81:A2:286:A:C2	81:A2:308:A:H8	1.85	0.95
82:A3:37:A:H2	82:A3:105:C:H42	1.14	0.95
82:A3:127:U:C3'	82:A3:128:C:H5''	1.94	0.95
2:AW:31:A:C2	10:BF:136:ARG:NH2	2.33	0.95
1:AV:34:G:C6	4:B1:1701:C:O4'	2.19	0.95
4:B1:1750:C:H2'	4:B1:1751:C:H5'	1.48	0.95
2:AW:4:C:O4'	81:A2:3684:U:P	2.24	0.95
4:B1:990:A:H62	4:B1:992:A:H1'	1.31	0.95
1:AV:74:C:H5''	81:A2:4508:A:OP1	1.67	0.95
81:A2:641:C:H2'	81:A2:642:C:C5	2.02	0.95
3:AX:47:U:H5''	4:B1:1830:U:H3	0.80	0.95
4:B1:746:C:H1'	4:B1:747:U:C4	2.01	0.95
81:A2:1278:C:H2'	81:A2:1279:G:C8	2.02	0.95
4:B1:1402:A:H2'	4:B1:1403:C:C4	2.02	0.95
4:B1:1442:U:C5	4:B1:1443:C:H1'	2.01	0.95
4:B1:694:G:H2'	4:B1:695:C:C6	2.01	0.95
4:B1:1832:A:H2'	4:B1:1833:C:H5''	1.46	0.95
4:B1:475:C:H5'	4:B1:475:C:C6	2.02	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:476:C:H6	81:A2:476:C:H5''	1.30	0.95
4:B1:754:G:H2'	4:B1:755:C:C6	2.02	0.95
81:A2:1146:G:H5''	81:A2:1147:C:H5	1.32	0.94
81:A2:1258:C:H3'	81:A2:1259:A:C5'	1.95	0.94
53:CQ:155:ALA:HB1	53:CQ:156:PRO:HD2	1.48	0.94
81:A2:2750:G:H2'	81:A2:2751:C:H6	1.28	0.94
4:B1:1849:G:H1'	81:A2:3735:A:O2'	1.65	0.94
4:B1:1069:U:HO2'	38:CA:247:ARG:HH21	1.11	0.94
81:A2:1053:G:H2'	81:A2:1054:G:H8	1.31	0.94
81:A2:240:A:H2'	81:A2:241:G:C8	2.02	0.94
81:A2:4665:A:H3'	81:A2:4666:G:C8	2.01	0.94
4:B1:970:G:H5''	81:A2:3681:A:P	2.07	0.94
38:CA:185:ALA:C	38:CA:196:TRP:HE1	1.71	0.94
81:A2:2550:A:P	81:A2:2736:G:H8	1.91	0.94
81:A2:3834:A:H2'	81:A2:3835:C:C6	2.02	0.94
4:B1:1028:A:H2	81:A2:1543:A:N6	1.66	0.94
81:A2:510:C:C6	81:A2:510:C:H5'	2.02	0.94
4:B1:179:C:H3'	4:B1:180:G:C5'	1.96	0.94
4:B1:193:C:H2'	4:B1:194:C:C6	2.01	0.94
3:AX:53:U:C2	8:BD:146:ARG:CZ	2.50	0.94
43:CF:245:ARG:HG2	81:A2:927:A:H3'	1.49	0.94
18:BN:127:ARG:CD	81:A2:1542:A:H2	1.75	0.94
81:A2:326:A:H3'	81:A2:327:A:H8	1.30	0.94
81:A2:1218:A:C8	81:A2:1218:A:H5'	2.02	0.94
81:A2:4253:U:H3'	81:A2:4254:C:H5''	1.50	0.94
81:A2:937:C:H2'	81:A2:938:C:C6	2.03	0.94
4:B1:929:G:N2	4:B1:1104:G:H4'	1.81	0.94
81:A2:1894:G:H2'	81:A2:1895:A:H5'	1.50	0.94
81:A2:2661:C:H2'	81:A2:2662:C:C6	2.03	0.94
4:B1:1330:G:C4'	4:B1:1331:C:H5'	1.98	0.93
81:A2:1050:G:H2'	81:A2:1051:C:H5'	1.47	0.93
81:A2:700:C:H3'	81:A2:701:C:H5''	1.47	0.93
1:AV:32:U:P	21:BQ:146:ARG:HB3	2.08	0.93
4:B1:175:A:H3'	4:B1:176:U:H5''	1.47	0.93
81:A2:254:G:H3'	81:A2:254:G:N3	1.83	0.93
81:A2:4308:A:H3'	81:A2:4309:C:C5'	1.98	0.93
81:A2:4561:U:H2'	81:A2:4562:A:C8	2.03	0.93
4:B1:1766:C:H3'	4:B1:1767:C:C5	2.04	0.93
23:BS:45:LEU:HD23	23:BS:52:LEU:HG	1.47	0.93
81:A2:424:A:H1'	81:A2:425:A:C5'	1.99	0.93
4:B1:570:C:C2'	4:B1:571:U:H5''	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:104:G:H1'	81:A2:1340:G:N2	1.83	0.93
81:A2:218:C:H2'	81:A2:219:C:H6	1.33	0.93
81:A2:2549:C:H2'	81:A2:2550:A:H5''	1.50	0.93
3:AX:43:U:H5'	4:B1:961:G:H1'	0.96	0.93
4:B1:302:A:H1'	13:BI:73:THR:HB	1.49	0.93
4:B1:794:A:C2	4:B1:795:A:H1'	2.02	0.93
81:A2:441:G:H5'	81:A2:441:G:C8	2.03	0.93
81:A2:977:G:H2'	81:A2:978:G:O4'	1.69	0.93
81:A2:4308:A:H3'	81:A2:4309:C:H5''	1.48	0.93
4:B1:1731:A:O2'	81:A2:2862:A:H5'	1.67	0.93
4:B1:573:U:H2'	4:B1:576:A:C2	2.04	0.93
81:A2:1058:A:N6	81:A2:1205:U:H1'	1.84	0.93
81:A2:943:G:H3'	81:A2:1262:G:H4'	1.47	0.93
81:A2:3605:C:H5'	81:A2:3605:C:H6	1.32	0.93
1:AV:32:U:OP1	21:BQ:146:ARG:HB3	1.69	0.93
4:B1:1276:A:H5'	4:B1:1277:C:H5	1.34	0.93
4:B1:134:C:H3'	4:B1:135:U:H4'	1.49	0.93
81:A2:1942:A:C4	81:A2:4654:G:C8	2.57	0.93
81:A2:2309:G:H1'	81:A2:2310:G:C8	2.04	0.93
81:A2:3602:C:H2'	81:A2:3603:G:C8	2.04	0.93
81:A2:929:U:C2'	81:A2:930:C:H5'	1.98	0.93
2:AW:37:MIA:H121	10:BF:133:THR:CA	1.99	0.93
4:B1:210:U:H2'	4:B1:211:G:H5''	1.51	0.93
4:B1:168:C:H4'	11:BG:131:ARG:HD2	1.46	0.93
81:A2:1503:A:H3'	81:A2:1504:A:H5''	1.50	0.92
81:A2:288:U:H2'	81:A2:289:G:C8	2.02	0.92
2:AW:8:U:H4'	2:AW:9:A:OP1	1.68	0.92
4:B1:1546:G:H21	4:B1:1670:C:H1'	1.32	0.92
4:B1:1721:U:C2	81:A2:3598:A:O2'	2.22	0.92
4:B1:693:A:H3'	4:B1:694:G:C4'	1.98	0.92
81:A2:1515:U:H2'	81:A2:1516:A:H8	1.31	0.92
40:CC:56:GLU:HG2	82:A3:26:C:H1'	1.50	0.92
4:B1:609:U:H2'	4:B1:610:G:H8	1.34	0.92
4:B1:910:G:P	54:CR:173:ARG:CG	2.45	0.92
81:A2:2551:G:H4'	81:A2:2552:U:OP2	1.66	0.92
2:AW:56:C:C4	81:A2:3927:G:O6	2.23	0.92
81:A2:924:C:H3'	81:A2:925:C:H5''	1.49	0.92
4:B1:604:A:H2	4:B1:605:A:C2	1.88	0.92
4:B1:926:A:H2'	4:B1:927:C:O4'	1.69	0.92
14:BJ:86:VAL:HG12	14:BJ:87:LEU:HD12	1.51	0.92
81:A2:4593:G:H2'	81:A2:4623:G:H1	1.33	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1079:C:H2'	81:A2:1080:U:C4'	1.99	0.92
2:AW:4:C:HO2'	81:A2:3683:G:H4'	1.21	0.92
82:A3:127:U:H3'	82:A3:128:C:C5'	1.97	0.92
1:AV:72:C:H6	1:AV:72:C:H5''	1.32	0.92
4:B1:794:A:H2'	4:B1:795:A:C4'	1.99	0.92
81:A2:1313:A:H3'	81:A2:1314:A:C8	2.04	0.92
81:A2:1455:C:H2'	81:A2:1456:C:C6	2.05	0.92
2:AW:37:MIA:N1	10:BF:133:THR:N	2.17	0.92
38:CA:186:TYR:CB	38:CA:196:TRP:CZ2	2.52	0.92
81:A2:1199:G:H2'	81:A2:1200:G:C8	2.05	0.92
81:A2:2047:A:H2'	81:A2:2048:U:H3'	1.48	0.92
81:A2:2304:G:C2'	81:A2:2305:U:H5'	1.99	0.92
81:A2:2310:G:C2'	81:A2:2311:C:H5''	1.99	0.92
81:A2:2421:U:H5''	81:A2:2422:C:H5	1.31	0.92
3:AX:45:U:O2	4:B1:1207:G:N1	2.02	0.92
4:B1:574:A:H5'	4:B1:575:A:N7	1.85	0.92
4:B1:804:U:H2'	4:B1:805:U:C6	2.04	0.92
39:CB:317:LEU:HG	81:A2:4956:U:H4'	1.51	0.92
81:A2:4830:G:N7	81:A2:4831:U:H1'	1.85	0.92
9:BE:129:ILE:HG22	9:BE:156:VAL:HG22	1.50	0.92
81:A2:2656:G:H2'	81:A2:2657:G:H8	1.35	0.92
81:A2:2345:A:H5''	81:A2:2804:G:H22	1.34	0.92
4:B1:1491:G:H2'	4:B1:1492:U:C6	2.05	0.92
4:B1:570:C:H2'	4:B1:571:U:H5''	1.51	0.92
20:BP:34:MET:HG3	20:BP:45:LEU:HD22	1.52	0.92
81:A2:2532:G:H2'	81:A2:2533:G:H8	1.24	0.92
4:B1:1397:U:H4'	4:B1:1398:G:H21	1.34	0.92
43:CF:222:LYS:HB2	81:A2:1885:A:H4'	1.49	0.91
81:A2:4803:C:C4	81:A2:4804:G:H1'	2.05	0.91
3:AX:43:U:H5'	4:B1:961:G:N9	1.85	0.91
38:CA:196:TRP:HB3	38:CA:197:PRO:HD3	0.93	0.91
81:A2:1245:G:H2'	81:A2:1246:G:H5''	1.51	0.91
81:A2:2486:C:H6	81:A2:2486:C:H5''	1.35	0.91
4:B1:1849:G:H1'	81:A2:3735:A:C1'	2.00	0.91
13:BI:107:THR:HG21	81:A2:4981:U:H3	1.34	0.91
3:AX:58:U:OP2	7:BC:151:ILE:HD13	1.65	0.91
4:B1:1621:U:H2'	4:B1:1622:U:H5'	1.49	0.91
16:BL:40:ILE:HG21	16:BL:143:LEU:HD11	1.52	0.91
43:CF:51:TYR:OH	81:A2:1218:A:H3'	1.69	0.91
4:B1:942:G:H2'	4:B1:943:U:C6	2.04	0.91
81:A2:4806:G:H2'	81:A2:4807:C:H4'	1.53	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4909:G:H2'	81:A2:4910:A:H8	1.35	0.91
81:A2:719:G:H1'	81:A2:720:A:C5'	2.00	0.91
81:A2:4723:A:H1'	81:A2:4724:G:OP1	1.70	0.91
81:A2:725:C:H3'	81:A2:726:C:C5	2.05	0.91
4:B1:184:G:C8	4:B1:185:G:H4'	2.06	0.91
4:B1:222:U:H2'	4:B1:223:C:H6	1.36	0.91
81:A2:1352:A:C2	81:A2:1353:A:C5	2.59	0.91
1:AV:76:A:N1	81:A2:4156:G:C2	2.38	0.91
82:A3:26:C:H2'	82:A3:27:U:C6	2.05	0.91
4:B1:873:G:OP2	54:CR:163:ARG:CA	2.19	0.91
4:B1:1666:C:H3'	4:B1:1667:U:H6	1.36	0.91
4:B1:1849:G:O4'	81:A2:3735:A:O2'	1.86	0.91
81:A2:180:C:H4'	81:A2:182:C:C6	2.06	0.91
4:B1:1441:U:H2'	4:B1:1442:U:C4'	1.99	0.91
11:BG:53:SER:HB2	11:BG:112:VAL:HG23	1.51	0.91
81:A2:4837:U:HO2'	81:A2:4838:C:H6	0.93	0.91
4:B1:1631:U:H5'	4:B1:1631:U:C6	2.06	0.90
4:B1:806:U:H2'	4:B1:807:G:H5'	1.53	0.90
81:A2:4691:G:H5'	81:A2:4694:G:H4'	1.53	0.90
81:A2:700:C:H2'	81:A2:701:C:O4'	1.71	0.90
3:AX:60:U:N1	3:AX:61:U:H5	1.67	0.90
4:B1:744:G:H4'	12:BH:102:PRO:HG3	1.53	0.90
81:A2:1059:C:H3'	81:A2:1060:C:H5	1.36	0.90
81:A2:2564:A:H5'	81:A2:2746:U:O2'	1.72	0.90
81:A2:4098:G:H1	81:A2:4113:C:H42	1.16	0.90
81:A2:737:G:H22	81:A2:901:A:H2	1.16	0.90
3:AX:43:U:H5'	4:B1:961:G:O4'	1.63	0.90
4:B1:558:G:P	4:B1:558:G:H8	1.94	0.90
40:CC:13:GLU:HB2	40:CC:170:LEU:HD11	1.53	0.90
81:A2:1403:U:H2'	81:A2:1404:G:H8	1.36	0.90
4:B1:557:U:C3'	4:B1:558:G:C8	2.55	0.90
81:A2:1607:C:H2'	81:A2:1608:G:H5'	1.53	0.90
81:A2:2625:G:H1'	81:A2:2663:G:O6	1.71	0.90
4:B1:58:C:H5''	4:B1:499:G:H21	1.36	0.90
4:B1:525:A:H2	4:B1:561:A:H61	1.11	0.90
4:B1:798:G:H8	4:B1:867:G:N2	1.69	0.90
4:B1:958:G:H4'	4:B1:958:G:OP1	1.69	0.90
81:A2:2859:A:H2'	81:A2:2860:G:H5'	1.53	0.90
81:A2:4971:A:H2	81:A2:4988:G:H21	1.17	0.90
4:B1:751:G:H2'	4:B1:752:G:C8	2.05	0.90
81:A2:1716:A:H5'	83:A4:78:C:H4'	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:19:G:N9	81:A2:3927:G:H1'	1.87	0.90
81:A2:4637:U:H1'	81:A2:4638:G:OP1	1.71	0.90
81:A2:1711:C:H2'	81:A2:1712:G:H5''	1.53	0.90
4:B1:1330:G:H4'	4:B1:1331:C:C5'	2.01	0.90
81:A2:4204:A:H2	81:A2:4227:G:H2'	1.37	0.90
81:A2:4551:U:H3	81:A2:4579:U:H3	1.18	0.90
81:A2:4689:C:O5'	81:A2:4695:C:H4'	1.71	0.90
40:CC:336:ARG:HE	81:A2:930:C:H4'	1.36	0.90
1:AV:32:U:P	21:BQ:146:ARG:CB	2.60	0.90
3:AX:43:U:C5'	4:B1:961:G:H1'	1.88	0.90
38:CA:186:TYR:HA	38:CA:196:TRP:NE1	1.85	0.90
81:A2:2455:C:P	81:A2:2456:G:H5''	2.11	0.90
13:BI:168:GLN:O	81:A2:4979:C:O3'	1.88	0.90
4:B1:60:A:H3'	4:B1:501:C:H41	1.34	0.90
81:A2:1547:C:H2'	81:A2:1548:U:C6	2.07	0.89
81:A2:440:C:H2'	81:A2:441:G:H5''	1.54	0.89
81:A2:4823:G:H4'	81:A2:4824:U:OP2	1.69	0.89
4:B1:1431:G:H2'	4:B1:1432:U:C5	2.07	0.89
4:B1:1602:U:H2'	4:B1:1603:G:H2'	1.52	0.89
81:A2:1525:C:H4'	81:A2:1562:A:H2	1.38	0.89
81:A2:2702:A:H4'	81:A2:2703:G:H5''	1.54	0.89
82:A3:129:C:H2'	82:A3:130:C:C5	2.07	0.89
4:B1:1732:G:C5'	81:A2:2862:A:H5''	2.02	0.89
4:B1:871:U:N3	54:CR:163:ARG:NH1	2.19	0.89
81:A2:1020:G:H22	81:A2:1044:G:H22	1.14	0.89
81:A2:720:A:H4'	81:A2:721:A:OP1	1.71	0.89
81:A2:1193:G:H4'	81:A2:1194:C:OP2	1.70	0.89
81:A2:2355:G:N2	81:A2:2357:G:H3'	1.87	0.89
2:AW:2:C:H5''	2:AW:2:C:H6	1.37	0.89
18:BN:92:ILE:HG21	18:BN:149:LEU:HD13	1.55	0.89
81:A2:1203:G:H2'	81:A2:1204:G:H8	1.36	0.89
81:A2:1301:G:H4'	81:A2:1869:A:C2	2.06	0.89
81:A2:3580:A:H2	81:A2:4971:A:C8	1.89	0.89
81:A2:3686:A:H2'	81:A2:3687:A:C8	2.06	0.89
81:A2:381:C:C6	81:A2:381:C:H5''	2.08	0.89
4:B1:314:U:H4'	4:B1:314:U:OP1	1.70	0.89
4:B1:1441:U:C2'	4:B1:1442:U:H4'	1.98	0.89
4:B1:1531:A:H4'	4:B1:1605:G:H4'	1.54	0.89
81:A2:1554:A:C8	81:A2:1554:A:H5''	2.07	0.89
81:A2:1801:U:H2'	81:A2:1802:G:O4'	1.69	0.89
81:A2:4687:U:C3'	81:A2:4688:A:H5''	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:728:G:H2'	81:A2:729:C:H6	1.37	0.89
4:B1:1157:G:N3	4:B1:1157:G:H5''	1.87	0.89
4:B1:1280:G:H2'	4:B1:1281:G:H8	1.36	0.89
4:B1:184:G:H3'	4:B1:185:G:H4'	1.55	0.89
4:B1:75:G:H1'	4:B1:76:U:C5	2.06	0.89
81:A2:2547:U:H2'	81:A2:2548:C:H6	1.34	0.89
81:A2:2020:A:H2	81:A2:4424:A:C6	1.91	0.89
81:A2:471:C:H5''	81:A2:472:G:H5''	1.53	0.89
81:A2:4735:G:H2'	81:A2:4736:C:H4'	1.55	0.89
81:A2:957:G:H2'	81:A2:958:C:C5'	2.03	0.89
2:AW:8:U:H2'	2:AW:13:C:H41	1.37	0.89
4:B1:1692:U:H2'	4:B1:1693:G:H8	1.38	0.89
3:AX:42:U:H5	19:BO:151:LEU:O	1.56	0.89
81:A2:1064:C:H2'	81:A2:1065:C:C6	2.07	0.89
4:B1:383:G:H3'	4:B1:384:U:C6	2.07	0.89
81:A2:2354:C:H2'	81:A2:2355:G:C8	2.08	0.89
81:A2:4735:G:H3'	81:A2:4736:C:H5''	1.55	0.89
81:A2:2742:A:H2'	81:A2:2743:A:C8	2.07	0.88
81:A2:4563:C:H2'	81:A2:4564:G:H5'	1.55	0.88
81:A2:457:A:H2'	81:A2:458:U:C5'	2.02	0.88
42:CE:190:HIS:HB2	81:A2:4897:C:H2'	1.54	0.88
4:B1:529:A:H2'	4:B1:530:U:C6	2.08	0.88
4:B1:569:A:C2'	4:B1:570:C:H5''	2.03	0.88
81:A2:1196:C:C5	81:A2:1239:G:H5'	2.06	0.88
81:A2:1443:C:H2'	81:A2:1445:G:OP1	1.73	0.88
81:A2:2398:G:P	81:A2:2805:U:H1'	2.13	0.88
39:CB:254:ILE:HG22	81:A2:3867:G:H5'	1.55	0.88
1:AV:76:A:C2	81:A2:4156:G:C2	2.60	0.88
81:A2:481:C:H2'	81:A2:482:G:H5''	1.54	0.88
7:BC:174:ILE:HG22	7:BC:175:GLY:H	1.38	0.88
39:CB:237:THR:HG21	39:CB:251:VAL:HG22	1.56	0.88
81:A2:469:G:C2'	81:A2:470:G:H5'	2.03	0.88
13:BI:169:GLY:CA	81:A2:4980:C:P	2.49	0.88
4:B1:339:A:H2'	4:B1:340:C:C6	2.08	0.88
39:CB:252:ALA:HB1	81:A2:4484:G:C2	2.07	0.88
81:A2:1547:C:H2'	81:A2:1548:U:H6	1.38	0.88
81:A2:218:C:H2'	81:A2:219:C:C6	2.08	0.88
81:A2:4712:U:H1'	81:A2:4713:G:C8	2.07	0.88
82:A3:109:C:H4'	82:A3:110:U:C5	2.07	0.88
83:A4:66:G:H2'	83:A4:66:G:N3	1.86	0.88
39:CB:258:HIS:HB3	39:CB:259:PRO:HD2	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:909:G:OP2	54:CR:169:ALA:HB2	1.73	0.88
81:A2:2571:C:H1'	81:A2:4092:C:N4	1.89	0.88
81:A2:333:G:H2'	81:A2:334:C:H5''	1.56	0.88
4:B1:609:U:H2'	4:B1:610:G:C8	2.08	0.88
4:B1:851:C:H4'	4:B1:852:G:C2	2.08	0.88
81:A2:1465:C:H2'	81:A2:1466:G:H5'	1.54	0.88
81:A2:2345:A:H3'	81:A2:2804:G:H1	1.37	0.88
81:A2:3580:A:C2	81:A2:4971:A:H8	1.91	0.88
1:AV:57:G:P	47:CJ:55:TYR:OH	2.31	0.88
47:CJ:26:VAL:O	47:CJ:68:ILE:HG23	1.72	0.88
81:A2:2553:G:H5''	81:A2:2553:G:H8	1.38	0.88
81:A2:924:C:H2'	81:A2:925:C:O4'	1.73	0.88
4:B1:1308:U:H1'	4:B1:1309:C:C6	2.08	0.88
81:A2:1178:G:H2'	81:A2:1179:G:H4'	1.56	0.88
81:A2:2469:C:H2'	81:A2:2470:G:C8	2.08	0.88
81:A2:2689:G:H2'	81:A2:2690:C:H5'	1.55	0.88
1:AV:76:A:H2	81:A2:4156:G:N2	1.68	0.88
4:B1:1405:A:C2	4:B1:1442:U:H6	1.91	0.88
4:B1:172:U:H3'	4:B1:173:A:H5''	1.56	0.88
81:A2:4655:C:C2'	81:A2:4656:C:H5'	2.04	0.88
81:A2:4709:G:H2'	81:A2:4710:G:C5'	2.01	0.88
4:B1:1138:C:H5''	4:B1:1139:C:OP1	1.74	0.88
81:A2:4562:A:H2'	81:A2:4563:C:C6	2.09	0.87
81:A2:949:G:H3'	81:A2:950:A:H4'	1.56	0.87
81:A2:961:C:H4'	81:A2:961:C:OP2	1.73	0.87
81:A2:3696:A:HO2'	81:A2:3697:A:H8	1.21	0.87
81:A2:384:U:C3'	81:A2:385:G:H4'	2.05	0.87
4:B1:1556:A:H3'	4:B1:1556:A:P	2.14	0.87
6:BB:54:GLY:HA3	81:A2:3913:G:C4'	2.04	0.87
2:AW:56:C:H5''	81:A2:4014:A:H1'	1.56	0.87
42:CE:243:THR:HG23	81:A2:4893:A:N6	1.89	0.87
1:AV:30:G:H2'	1:AV:31:A:H5'	1.55	0.87
49:CM:97:ALA:C	81:A2:4826:C:H42	1.77	0.87
81:A2:711:A:H2'	81:A2:712:C:H1'	1.56	0.87
4:B1:1827:U:H4'	81:A2:3728:A:H2'	1.54	0.87
4:B1:1721:U:O2	81:A2:3598:A:O2'	1.92	0.87
4:B1:748:C:H42	4:B1:860:G:P	1.97	0.87
81:A2:1377:A:H2'	81:A2:1400:A:H61	1.39	0.87
81:A2:2372:A:O2'	81:A2:2783:A:H2'	1.75	0.87
81:A2:2624:A:C6	81:A2:2665:G:C6	2.62	0.87
81:A2:326:A:H3'	81:A2:327:A:C8	2.09	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4211:A:H2'	81:A2:4212:C:C6	2.09	0.87
81:A2:4236:G:H8	81:A2:4236:G:H5''	1.36	0.87
81:A2:4806:G:H2'	81:A2:4807:C:C4'	2.04	0.87
3:AX:40:U:H2'	3:AX:41:U:C1'	2.04	0.87
4:B1:222:U:H2'	4:B1:223:C:C6	2.09	0.87
13:BI:168:GLN:O	81:A2:4979:C:O2'	1.93	0.87
1:AV:57:G:C5'	47:CJ:55:TYR:HH	1.87	0.87
81:A2:1065:C:H2'	81:A2:1066:C:H5'	1.56	0.87
81:A2:1403:U:H2'	81:A2:1404:G:C8	2.09	0.87
81:A2:2333:U:H6	81:A2:2333:U:H5'	1.39	0.87
81:A2:2572:C:H2'	81:A2:2573:G:C8	2.10	0.87
81:A2:437:C:H3'	81:A2:438:C:C5	2.09	0.87
4:B1:1442:U:H3'	4:B1:1443:C:C5'	2.04	0.87
4:B1:1554:C:H3'	4:B1:1555:U:H5'	1.57	0.87
81:A2:1380:G:H2'	81:A2:1381:C:C6	2.09	0.87
81:A2:105:A:C2	81:A2:327:A:H2	1.91	0.87
81:A2:724:C:H3'	81:A2:725:C:H5''	1.56	0.87
4:B1:1214:A:H2'	4:B1:1215:C:H5'	1.57	0.87
81:A2:2348:U:H5''	81:A2:2348:U:C6	2.07	0.87
81:A2:4204:A:C2	81:A2:4227:G:H2'	2.10	0.87
81:A2:4645:U:H2'	81:A2:4646:G:H8	1.38	0.87
81:A2:1270:G:H4'	81:A2:4898:A:H2	1.40	0.87
4:B1:1276:A:H5'	4:B1:1277:C:C5	2.10	0.87
4:B1:1765:C:H2'	4:B1:1766:C:O4'	1.74	0.87
4:B1:1298:G:H4'	20:BP:78:THR:HA	1.57	0.87
45:CH:132:VAL:HG12	45:CH:154:VAL:HG22	1.55	0.87
81:A2:1083:C:H3'	81:A2:1084:C:H5''	1.57	0.86
83:A4:23:A:N3	83:A4:119:U:H1'	1.89	0.86
4:B1:229:A:C6	4:B1:900:C:H1'	2.09	0.86
24:BT:39:LEU:HD11	24:BT:43:LYS:HB2	1.55	0.86
62:CZ:104:PRO:O	62:CZ:108:ARG:HG2	1.75	0.86
81:A2:1224:G:H2'	81:A2:1225:C:H4'	1.56	0.86
81:A2:2394:A:H5''	81:A2:2394:A:C8	2.10	0.86
81:A2:2735:G:O2'	81:A2:2743:A:H1'	1.75	0.86
81:A2:4637:U:O4	81:A2:4674:C:H1'	1.74	0.86
3:AX:42:U:C5	19:BO:151:LEU:O	2.28	0.86
4:B1:1079:C:H4'	4:B1:1181:A:N6	1.90	0.86
4:B1:1768:A:C2'	4:B1:1769:C:H5'	2.05	0.86
4:B1:444:G:H22	4:B1:447:A:H5''	1.38	0.86
81:A2:1349:C:H4'	81:A2:1350:G:OP 2	1.75	0.86
81:A2:1397:C:H2'	81:A2:1398:C:C6	2.10	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1855:G:H5''	81:A2:1855:G:H8	1.39	0.86
81:A2:2304:G:H2'	81:A2:2305:U:H5'	1.58	0.86
81:A2:400:G:N2	81:A2:2305:U:H5''	1.89	0.86
81:A2:2752:C:H2'	81:A2:2753:G:C8	2.10	0.86
81:A2:4688:A:O2'	81:A2:4695:C:H1'	1.75	0.86
4:B1:1638:G:N3	4:B1:1638:G:H5'	1.89	0.86
4:B1:1690:U:H2'	4:B1:1691:U:H5'	1.56	0.86
4:B1:106:C:H5''	4:B1:431:G:H1'	1.56	0.86
4:B1:66:G:H2'	11:BG:132:ARG:O	1.74	0.86
81:A2:1717:A:H4'	83:A4:101:A:C2	2.08	0.86
81:A2:2705:U:H2'	81:A2:2706:C:O4'	1.75	0.86
81:A2:3750:C:C5'	81:A2:3790:A:H4'	2.04	0.86
4:B1:181:A:C3'	4:B1:182:C:H5''	2.05	0.86
81:A2:2310:G:H4'	82:A3:20:A:C4'	2.05	0.86
81:A2:1651:U:H1'	81:A2:4264:A:H62	1.40	0.86
81:A2:457:A:H2'	81:A2:458:U:H5'	1.58	0.86
8:BD:158:ILE:HG22	8:BD:164:VAL:HG22	1.54	0.86
40:CC:270:ALA:HB1	40:CC:276:ASN:HA	1.56	0.86
42:CE:175:VAL:HB	42:CE:187:ARG:O	1.75	0.86
81:A2:1203:G:H5'	81:A2:1210:U:C5	2.10	0.86
13:BI:123:ARG:CZ	81:A2:4979:C:H5'	1.67	0.86
4:B1:1284:A:C5	4:B1:1286:G:H5'	2.10	0.86
4:B1:1697:A:H1'	4:B1:1698:C:OP2	1.75	0.86
4:B1:377:G:H4'	13:BI:97:VAL:CG1	2.05	0.86
2:AW:37:MIA:H122	10:BF:134:VAL:HG22	1.55	0.86
42:CE:166:LYS:HD2	42:CE:208:ILE:HG21	1.57	0.86
81:A2:1053:G:H2'	81:A2:1054:G:C8	2.09	0.86
81:A2:1797:G:H22	81:A2:1799:C:H2'	1.37	0.86
81:A2:393:A:C8	81:A2:393:A:H5''	2.10	0.86
4:B1:1079:C:H4'	4:B1:1181:A:H61	1.40	0.86
81:A2:1274:A:H8	81:A2:1274:A:H5'	1.38	0.86
81:A2:1277:U:H2'	81:A2:1278:C:O4'	1.76	0.86
4:B1:1491:G:H2'	4:B1:1492:U:H6	1.40	0.86
81:A2:4598:U:H2'	81:A2:4599:G:C8	2.11	0.86
2:AW:2:C:H2'	2:AW:3:C:C6	2.11	0.86
40:CC:330:PRO:HB2	43:CF:51:TYR:CE1	2.09	0.86
81:A2:1894:G:C2'	81:A2:1895:A:H5'	2.06	0.86
81:A2:1918:G:C8	81:A2:1918:G:H5''	2.11	0.86
81:A2:180:C:H4'	81:A2:182:C:H6	1.38	0.85
81:A2:4737:C:H2'	81:A2:4738:U:C6	2.11	0.85
81:A2:682:C:H2'	81:A2:683:C:H6	1.40	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1016:U:H1'	4:B1:1017:U:H5''	1.58	0.85
4:B1:1049:A:H2	4:B1:1069:U:H3	1.24	0.85
4:B1:162:C:H2'	4:B1:163:U:O4'	1.76	0.85
4:B1:1781:A:H1'	4:B1:1782:G:OP2	1.76	0.85
61:CY:126:ARG:HD3	81:A2:194:A:H4'	1.56	0.85
81:A2:1219:C:N3	81:A2:1249:G:H4'	1.91	0.85
81:A2:1890:G:H1'	81:A2:1897:G:C6	2.10	0.85
81:A2:4837:U:H4'	81:A2:4838:C:C5'	2.05	0.85
2:AW:56:C:C5	81:A2:3927:G:O6	2.29	0.85
6:BB:28:LYS:HD3	6:BB:48:LEU:HD13	1.55	0.85
81:A2:976:C:H4'	81:A2:1222:G:H4'	1.58	0.85
81:A2:24:G:N1	81:A2:333:G:C8	2.43	0.85
2:AW:76:A:N7	81:A2:4331:G:C2	2.44	0.85
81:A2:642:C:H2'	81:A2:643:G:H4'	1.55	0.85
81:A2:972:C:H1'	81:A2:1218:A:OP2	1.76	0.85
4:B1:1424:G:H3'	4:B1:1425:G:O4'	1.76	0.85
4:B1:797:C:C2'	4:B1:798:G:H5''	2.06	0.85
1:AV:33:U:OP2	21:BQ:146:ARG:O	1.94	0.85
81:A2:1541:G:H2'	81:A2:1542:A:H5''	1.58	0.85
81:A2:2260:G:H8	81:A2:2260:G:H5''	1.41	0.85
4:B1:1518:C:H5''	4:B1:1519:U:H5'	1.56	0.85
22:BR:109:LEU:HD11	22:BR:111:PHE:HB2	1.57	0.85
42:CE:224:LYS:HA	42:CE:227:HIS:O	1.76	0.85
49:CM:31:ILE:HD13	55:CS:100:LEU:HD11	1.57	0.85
81:A2:2742:A:H2'	81:A2:2743:A:N7	1.92	0.85
81:A2:4086:C:H3'	81:A2:4086:C:OP2	1.76	0.85
81:A2:417:A:H2'	81:A2:418:A:H8	1.39	0.85
83:A4:23:A:H2'	83:A4:24:C:C6	2.12	0.85
4:B1:131:C:N4	4:B1:215:G:H5'	1.89	0.85
4:B1:576:A:OP1	4:B1:577:U:H3'	1.76	0.85
81:A2:1203:G:H2'	81:A2:1204:G:C8	2.11	0.85
81:A2:2310:G:H2'	81:A2:2311:C:H5''	1.57	0.85
81:A2:3669:C:H3'	81:A2:3715:A:H61	1.42	0.85
39:CB:257:TRP:CD1	81:A2:4478:A:N7	2.45	0.85
81:A2:4855:C:H2'	81:A2:4856:G:H4'	1.59	0.85
81:A2:712:C:H2'	81:A2:713:G:H8	1.35	0.85
81:A2:964:U:OP2	81:A2:967:C:H1'	1.76	0.85
2:AW:38:A:H1'	10:BF:133:THR:CG2	2.07	0.85
4:B1:1340:U:H5''	4:B1:1341:C:H2'	1.55	0.85
4:B1:310:C:H4'	4:B1:311:C:OP1	1.73	0.85
58:CV:120:PRO:HD3	59:CW:24:THR:O	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:381:C:H6	81:A2:381:C:H5''	1.39	0.85
39:CB:336:CYS:SG	81:A2:4584:A:H2	1.99	0.85
81:A2:4593:G:H22	81:A2:4623:G:H2'	1.39	0.85
4:B1:797:C:H4'	12:BH:109:ARG:CB	2.07	0.85
51:CO:109:PRO:HB2	51:CO:112:TYR:CD2	2.11	0.85
81:A2:1065:C:C2'	81:A2:1066:C:H5'	2.07	0.85
81:A2:1083:C:H3'	81:A2:1084:C:C5'	2.07	0.85
81:A2:1256:C:C2'	81:A2:1257:G:H5'	2.07	0.85
4:B1:1390:U:H2'	4:B1:1391:C:C6	2.11	0.85
4:B1:68:A:H4'	4:B1:69:C:O5'	1.74	0.85
81:A2:1020:G:N2	81:A2:1044:G:H22	1.73	0.85
51:CO:89:PRO:HD3	81:A2:1892:C:H4'	1.57	0.85
81:A2:456:G:N2	81:A2:679:U:H3	1.75	0.85
81:A2:696:G:H1'	81:A2:4900:G:O2'	1.76	0.85
81:A2:922:C:H2'	81:A2:923:G:C8	2.11	0.85
4:B1:211:G:H5'	4:B1:211:G:C8	2.10	0.85
4:B1:222:U:H5''	16:BL:17:PHE:O	1.77	0.85
4:B1:76:U:H3'	4:B1:77:A:H5''	1.57	0.85
81:A2:1066:C:C2'	81:A2:1067:A:H5'	2.07	0.84
81:A2:961:C:H1'	81:A2:1254:A:H61	1.41	0.84
81:A2:1662:U:H2'	81:A2:1663:A:C8	2.12	0.84
56:CT:105:PHE:CE1	81:A2:1781:A:H4'	2.11	0.84
4:B1:1825:A:H2'	4:B1:1826:G:H5''	1.59	0.84
4:B1:690:G:H2'	4:B1:691:G:C8	2.11	0.84
4:B1:969:U:C3'	81:A2:3681:A:O4'	2.25	0.84
22:BR:109:LEU:HD13	22:BR:111:PHE:H	1.38	0.84
81:A2:1748:G:H2'	81:A2:1749:A:H5''	1.58	0.84
81:A2:4616:A:H4'	81:A2:4617:U:C5'	2.06	0.84
4:B1:1579:A:N3	4:B1:1579:A:H3'	1.92	0.84
4:B1:1684:C:H2'	4:B1:1685:U:C5'	2.05	0.84
4:B1:20:G:H4'	4:B1:620:G:C2	2.12	0.84
81:A2:1177:C:H4'	81:A2:1178:G:OP2	1.75	0.84
81:A2:3653:G:H2'	81:A2:3654:C:C6	2.12	0.84
2:AW:56:C:N4	81:A2:3927:G:N7	2.25	0.84
4:B1:216:C:H2'	4:B1:217:A:C8	2.12	0.84
4:B1:1021:U:H5''	18:BN:128:TYR:CE1	2.12	0.84
81:A2:1701:C:H4'	81:A2:1821:A:O2'	1.77	0.84
81:A2:346:A:H2'	81:A2:347:G:H5'	1.59	0.84
81:A2:4593:G:H2'	81:A2:4623:G:N1	1.92	0.84
4:B1:573:U:H2'	4:B1:576:A:H2	1.42	0.84
4:B1:893:U:H2'	4:B1:894:G:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:346:ASN:HB3	81:A2:713:G:H4'	1.56	0.84
62:CZ:11:VAL:HG12	62:CZ:82:PRO:HA	1.58	0.84
81:A2:176:G:C2'	81:A2:177:C:H5'	2.07	0.84
81:A2:2004:A:OP1	81:A2:2004:A:H4'	1.77	0.84
2:AW:37:MIA:H121	10:BF:133:THR:C	1.98	0.84
4:B1:1832:A:C2'	4:B1:1833:C:H5''	2.06	0.84
4:B1:192:C:H42	4:B1:207:G:H1	1.23	0.84
4:B1:193:C:H2'	4:B1:194:C:H6	1.38	0.84
4:B1:526:A:H2'	4:B1:526:A:N3	1.90	0.84
4:B1:640:A:H5''	14:BJ:25:LEU:HD11	1.59	0.84
81:A2:1165:G:H2'	81:A2:1166:U:H6	1.42	0.84
81:A2:1378:A:H2'	81:A2:1379:G:C8	2.12	0.84
81:A2:1380:G:H2'	81:A2:1381:C:H6	1.40	0.84
4:B1:970:G:N3	81:A2:3679:G:O2'	2.10	0.84
81:A2:4060:G:H2'	81:A2:4061:G:H5'	1.59	0.84
81:A2:924:C:H3'	81:A2:925:C:C5'	2.06	0.84
4:B1:1402:A:H2'	4:B1:1403:C:C5	2.12	0.84
81:A2:3877:A:C2'	81:A2:3878:C:H5'	2.07	0.84
81:A2:4043:U:H1'	81:A2:4044:G:H2'	1.58	0.84
81:A2:700:C:C2'	81:A2:701:C:H5''	2.08	0.84
81:A2:1020:G:H1	81:A2:1044:G:H1	1.20	0.84
4:B1:1217:A:H2'	4:B1:1218:C:C6	2.11	0.84
4:B1:1476:A:H4'	4:B1:1477:U:C5'	2.07	0.84
4:B1:1483:A:H4'	8:BD:160:SER:CB	2.08	0.84
81:A2:1285:C:H5''	81:A2:2289:A:C5	2.13	0.84
81:A2:408:G:H1'	82:A3:16:G:N2	1.92	0.84
81:A2:937:C:H2'	81:A2:938:C:H6	1.39	0.84
4:B1:1093:A:H5'	27:BW:3:ARG:HE	1.39	0.84
4:B1:1261:C:H4'	4:B1:1261:C:OP1	1.75	0.84
4:B1:569:A:H2'	4:B1:570:C:C5'	2.08	0.84
4:B1:970:G:OP1	81:A2:3681:A:H8	1.57	0.84
11:BG:98:ARG:HD3	11:BG:106:LEU:HD11	1.60	0.84
81:A2:2369:C:H5''	81:A2:2369:C:H6	1.43	0.84
81:A2:482:G:H5'	81:A2:482:G:H8	1.41	0.84
81:A2:962:G:H2'	81:A2:963:C:H6	1.43	0.84
41:CD:56:THR:HB	83:A4:26:C:H5''	1.60	0.84
4:B1:95:G:H1	4:B1:435:A:H61	1.26	0.84
81:A2:2564:A:H2'	81:A2:2565:C:H5''	1.60	0.83
81:A2:3694:G:H8	81:A2:3694:G:H5''	1.42	0.83
81:A2:3781:C:H2'	81:A2:3782:A:C8	2.13	0.83
81:A2:641:C:C2'	81:A2:642:C:H5	1.89	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1416:C:N4	4:B1:1431:G:C2	2.44	0.83
13:BI:168:GLN:O	81:A2:4980:C:P	2.36	0.83
14:BJ:128:VAL:O	14:BJ:132:GLN:HG2	1.78	0.83
81:A2:1479:A:C3'	81:A2:1480:C:H5''	2.07	0.83
81:A2:4617:U:H2'	81:A2:4617:U:O2	1.76	0.83
81:A2:4955:G:H2'	81:A2:4956:U:H5'	1.58	0.83
4:B1:1082:A:H2'	4:B1:1084:A:H5''	1.57	0.83
4:B1:1418:C:H2'	4:B1:1419:C:C6	2.13	0.83
4:B1:1775:C:H2'	4:B1:1776:G:H8	1.42	0.83
4:B1:1834:A:H2	4:B1:1837:G:H22	1.26	0.83
4:B1:193:C:H4'	4:B1:209:A:C6	2.13	0.83
4:B1:210:U:C2'	4:B1:211:G:H5''	2.08	0.83
4:B1:84:A:HO2'	4:B1:85:A:H8	0.87	0.83
81:A2:286:A:C2	81:A2:308:A:C8	2.65	0.83
81:A2:284:G:N2	81:A2:288:U:H4'	1.92	0.83
81:A2:4691:G:C5'	81:A2:4694:G:H4'	2.08	0.83
81:A2:477:C:H5''	81:A2:479:G:OP1	1.77	0.83
4:B1:855:G:H2'	4:B1:856:C:H5'	1.60	0.83
41:CD:132:VAL:HG21	41:CD:170:GLY:HA2	1.60	0.83
52:CP:19:GLY:HA3	52:CP:22:LEU:HD11	1.58	0.83
81:A2:1332:C:H3'	81:A2:1333:G:C8	2.13	0.83
81:A2:4183:C:H2'	81:A2:4184:A:H5'	1.58	0.83
81:A2:4595:A:H5'	81:A2:4624:A:N6	1.92	0.83
81:A2:4645:U:H2'	81:A2:4646:G:C8	2.12	0.83
81:A2:4906:G:H2'	81:A2:4907:G:H8	1.41	0.83
11:BG:135:PRO:HG3	11:BG:144:LEU:HD13	1.61	0.83
81:A2:1165:G:H2'	81:A2:1166:U:C6	2.14	0.83
81:A2:1648:A:C8	81:A2:1648:A:H5'	2.14	0.83
81:A2:2827:A:H4'	81:A2:4455:G:H4'	1.61	0.83
81:A2:942:G:H1'	81:A2:2250:C:OP1	1.79	0.83
4:B1:1405:A:C2'	4:B1:1406:G:H5''	2.09	0.83
4:B1:1833:C:C6	4:B1:1833:C:H5'	2.11	0.83
4:B1:447:A:H5'	13:BI:26:LYS:HD2	1.60	0.83
42:CE:155:GLY:O	42:CE:158:ARG:HG3	1.79	0.83
54:CR:106:LEU:HG	54:CR:120:TYR:CE2	2.13	0.83
62:CZ:136:PHE:HA	81:A2:4089:G:H21	1.42	0.83
81:A2:1088:C:C6	81:A2:1088:C:H3'	2.14	0.83
81:A2:1221:C:H2'	81:A2:1222:G:H5'	1.57	0.83
81:A2:1649:G:H4'	81:A2:1650:U:C6	2.13	0.83
81:A2:2559:A:C2	81:A2:2657:G:N2	2.47	0.83
81:A2:2561:G:C5'	81:A2:2659:G:H4'	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:285:G:N7	81:A2:287:A:H2'	1.94	0.83
43:CF:69:ILE:CB	81:A2:716:U:H4'	2.07	0.83
83:A4:23:A:C2	83:A4:119:U:H1'	2.14	0.83
4:B1:1280:G:H2'	4:B1:1281:G:C8	2.13	0.83
4:B1:1417:C:H2'	4:B1:1418:C:C6	2.13	0.83
4:B1:302:A:H2'	4:B1:303:C:C5'	2.08	0.83
4:B1:1418:C:H5''	24:BT:129:ARG:CB	2.07	0.83
81:A2:2040:C:C3'	81:A2:2041:G:H5''	2.08	0.83
81:A2:2559:A:H2	81:A2:2657:G:N2	1.76	0.83
81:A2:336:C:H2'	81:A2:337:G:H8	1.44	0.83
81:A2:3586:G:C2'	81:A2:3587:C:H5'	2.08	0.83
81:A2:4414:G:H2'	81:A2:4415:G:O4'	1.77	0.83
81:A2:457:A:H62	81:A2:675:C:H5	1.27	0.83
81:A2:726:C:H2'	81:A2:727:G:H5''	1.60	0.83
82:A3:105:C:H4'	82:A3:106:G:O5'	1.79	0.83
82:A3:111:U:H1'	82:A3:112:G:OP2	1.78	0.83
4:B1:1766:C:H3'	4:B1:1767:C:C6	2.12	0.83
4:B1:979:C:O2'	4:B1:980:A:H5'	1.76	0.83
81:A2:1197:G:O2'	81:A2:1198:G:H5'	1.79	0.83
81:A2:1219:C:H42	81:A2:1250:A:P	2.02	0.83
81:A2:1351:A:H3'	81:A2:1352:A:C8	2.11	0.83
81:A2:216:G:H4'	81:A2:217:C:OP1	1.79	0.83
81:A2:2284:A:H1'	82:A3:19:C:O2'	1.79	0.83
1:AV:34:G:C2	4:B1:1701:C:C2	2.66	0.83
2:AW:37:MIA:H121	10:BF:133:THR:HA	1.52	0.83
28:BX:87:ASN:HB2	28:BX:90:CYS:SG	2.19	0.83
49:CM:136:LEU:O	49:CM:140:PRO:HD3	1.79	0.83
62:CZ:68:ILE:HD12	62:CZ:119:GLU:HG2	1.59	0.83
81:A2:1183:G:H2'	81:A2:1184:C:C6	2.14	0.83
81:A2:119:G:H4'	81:A2:120:A:O4'	1.78	0.83
81:A2:1423:A:H5''	81:A2:1423:A:H8	1.43	0.83
81:A2:1858:G:H3'	81:A2:1859:C:H5'	1.60	0.83
81:A2:2051:C:H3'	81:A2:2051:C:H6	1.42	0.83
81:A2:4005:C:H2'	81:A2:4006:C:H6	1.41	0.83
4:B1:1103:C:C2'	4:B1:1104:G:H5'	2.09	0.83
4:B1:871:U:O4	54:CR:163:ARG:NH1	2.06	0.83
48:CL:135:LYS:H	48:CL:135:LYS:CE	1.90	0.83
55:CS:165:PRO:HD3	81:A2:4828:G:H1'	1.60	0.83
39:CB:72:VAL:HA	58:CV:91:LYS:O	1.79	0.83
81:A2:1221:C:C2'	81:A2:1222:G:H5'	2.09	0.83
4:B1:1133:A:H2'	4:B1:1134:G:H8	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:398:A:H4'	4:B1:399:C:H3'	1.60	0.83
23:BS:14:ARG:NH2	47:CJ:114:ASP:OD1	2.12	0.83
81:A2:1647:A:C2'	81:A2:1648:A:H5''	2.06	0.82
81:A2:1659:G:H5'	81:A2:1659:G:C8	2.12	0.82
81:A2:2393:G:H22	81:A2:2397:A:H62	1.22	0.82
81:A2:719:G:H4'	81:A2:720:A:OP2	1.79	0.82
81:A2:893:A:C2'	81:A2:894:G:H5''	2.08	0.82
4:B1:1440:C:H2'	4:B1:1441:U:C5	2.14	0.82
4:B1:70:G:H2'	4:B1:71:G:H4'	1.61	0.82
4:B1:798:G:C8	4:B1:867:G:N2	2.47	0.82
3:AX:43:U:C5'	4:B1:961:G:N9	2.42	0.82
13:BI:158:ILE:O	13:BI:162:LEU:HB2	1.79	0.82
81:A2:1146:G:H5''	81:A2:1147:C:C5	2.14	0.82
9:BE:141:THR:HG22	9:BE:143:ASP:H	1.42	0.82
81:A2:64:A:H3'	81:A2:110:C:N4	1.94	0.82
81:A2:1157:U:H2'	81:A2:1158:G:C8	2.13	0.82
81:A2:1477:G:H2'	81:A2:1478:C:H5'	1.60	0.82
60:CX:56:ARG:HA	81:A2:14:C:H4'	1.61	0.82
81:A2:510:C:H6	81:A2:510:C:C5'	1.93	0.82
4:B1:1257:G:H8	4:B1:1257:G:H5''	1.44	0.82
40:CC:58:ALA:CB	81:A2:348:U:H4'	2.09	0.82
81:A2:1436:G:H2'	81:A2:1437:C:C6	2.14	0.82
81:A2:154:U:O3'	81:A2:157:G:H4'	1.79	0.82
81:A2:4712:U:H4'	81:A2:4713:G:OP2	1.79	0.82
83:A4:53:U:H2'	83:A4:53:U:O2	1.79	0.82
4:B1:1098:C:H2'	4:B1:1099:G:C8	2.13	0.82
4:B1:1442:U:H5'	4:B1:1443:C:C6	2.12	0.82
3:AX:43:U:H5''	4:B1:961:G:O4'	1.75	0.82
20:BP:60:LEU:HD21	20:BP:92:SER:HB3	1.61	0.82
44:CG:41:ILE:HG22	44:CG:42:GLY:H	1.42	0.82
45:CH:29:GLY:HA3	45:CH:84:VAL:CG1	2.08	0.82
81:A2:379:A:H2'	81:A2:393:A:H61	1.44	0.82
81:A2:719:G:C1'	81:A2:720:A:H5''	2.05	0.82
81:A2:916:A:H1'	81:A2:917:G:H5'	1.61	0.82
20:BP:126:VAL:HG13	20:BP:127:LYS:H	1.44	0.82
48:CL:42:LYS:O	48:CL:46:ILE:HG12	1.80	0.82
57:CU:21:PHE:HB3	81:A2:3942:G:H5'	199.39	0.82
81:A2:1248:G:H3'	81:A2:1249:G:H8	1.44	0.82
81:A2:4909:G:H2'	81:A2:4910:A:C8	2.14	0.82
82:A3:126:C:H5'	82:A3:128:C:H5	1.44	0.82
81:A2:958:C:H42	81:A2:1255:G:H1	1.28	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1410:C:H2'	81:A2:1411:C:C6	2.14	0.82
81:A2:217:C:OP2	81:A2:217:C:H4'	1.79	0.82
81:A2:2581:C:O2'	81:A2:2582:G:H5''	1.79	0.82
81:A2:5003:A:H5'	81:A2:5004:G:H5''	1.60	0.82
44:CG:189:ARG:NH2	82:A3:154:G:H5'	1.95	0.82
4:B1:1103:C:H2'	4:B1:1104:G:H5'	1.59	0.82
4:B1:1445:U:O2'	4:B1:1446:A:H5'	1.80	0.82
4:B1:691:G:C2'	4:B1:692:G:H5'	2.10	0.82
81:A2:2573:G:H2'	81:A2:2574:G:H8	1.45	0.82
81:A2:2856:A:H4'	81:A2:2857:U:OP1	1.80	0.82
81:A2:9:C:O2	81:A2:9:C:H2'	1.78	0.82
4:B1:1416:C:C3'	4:B1:1417:C:H5''	2.08	0.82
4:B1:1476:A:H4'	4:B1:1477:U:H5'	1.60	0.82
9:BE:45:ILE:HD12	9:BE:61:VAL:HG21	1.62	0.82
29:BY:35:VAL:HG23	29:BY:40:ILE:HD11	1.61	0.82
39:CB:336:CYS:HG	81:A2:4584:A:H2	1.27	0.82
81:A2:658:G:H5''	81:A2:658:G:C8	2.14	0.82
83:A4:84:U:H4'	83:A4:85:G:O5'	1.78	0.82
4:B1:1101:U:H2'	4:B1:1102:G:H8	1.39	0.82
4:B1:84:A:H5'	29:BY:123:ALA:HB2	1.62	0.82
56:CT:129:LYS:HB3	81:A2:1815:A:H4'	1.62	0.82
2:AW:56:C:C6	81:A2:4014:A:C6	2.68	0.82
81:A2:4017:U:H1'	81:A2:4018:A:OP1	1.79	0.82
81:A2:4697:C:H2'	81:A2:4698:C:H6	1.44	0.82
81:A2:50:C:H2'	81:A2:51:A:H5'	1.59	0.82
81:A2:735:A:H2'	81:A2:736:G:H8	1.45	0.82
4:B1:215:G:H2'	4:B1:216:C:C6	2.15	0.82
4:B1:59:U:C2'	4:B1:60:A:H5''	2.09	0.82
4:B1:1313:A:N1	17:BM:104:VAL:HG21	1.94	0.82
81:A2:1139:U:H2'	81:A2:1140:C:C6	2.15	0.81
81:A2:1270:G:C4'	81:A2:4898:A:H2	1.93	0.81
81:A2:2561:G:H5''	81:A2:2659:G:H4'	1.60	0.81
81:A2:2738:U:H1'	81:A2:2739:G:H8	1.37	0.81
81:A2:290:C:H2'	81:A2:291:A:C8	2.15	0.81
81:A2:4240:A:H5''	81:A2:4241:A:H5'	1.62	0.81
42:CE:188:ARG:HH21	81:A2:4897:C:H4'	1.44	0.81
82:A3:8:U:H2'	82:A3:9:A:C8	2.13	0.81
83:A4:63:C:H1'	83:A4:64:G:H5''	1.60	0.81
4:B1:1255:G:H5''	4:B1:1256:G:H8	1.41	0.81
81:A2:2421:U:H5''	81:A2:2422:C:C5	2.13	0.81
81:A2:939:G:H4'	81:A2:940:A:OP2	1.79	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1276:A:H4'	4:B1:1277:C:O5'	1.78	0.81
4:B1:1557:C:H3'	4:B1:1557:C:OP2	1.79	0.81
4:B1:199:C:H4'	4:B1:200:G:OP1	1.79	0.81
4:B1:364:A:OP1	4:B1:364:A:H4'	1.79	0.81
30:BZ:69:THR:HG22	30:BZ:70:PRO:HD2	1.63	0.81
81:A2:1276:G:H3'	81:A2:1277:U:C4'	2.09	0.81
81:A2:1357:G:N3	81:A2:1357:G:H5'	1.95	0.81
81:A2:1797:G:N2	81:A2:1799:C:H2'	1.96	0.81
81:A2:2609:U:H2'	81:A2:2610:U:C5	2.15	0.81
1:AV:76:A:N6	81:A2:4156:G:O6	2.12	0.81
46:CI:204:GLY:HA2	83:A4:64:G:H4'	1.62	0.81
4:B1:1133:A:H2'	4:B1:1134:G:C8	2.15	0.81
4:B1:1348:G:N2	4:B1:1381:G:H22	1.78	0.81
4:B1:1542:C:H5''	4:B1:1542:C:H6	1.43	0.81
4:B1:559:G:H3'	4:B1:560:A:C5'	2.10	0.81
14:BJ:130:ILE:HG22	14:BJ:135:ILE:HD12	1.63	0.81
81:A2:1205:U:OP2	81:A2:1212:G:H8	1.63	0.81
81:A2:210:G:N3	81:A2:211:G:H1'	1.95	0.81
81:A2:2536:G:H2'	81:A2:2537:C:C6	2.15	0.81
4:B1:1534:C:H4'	4:B1:1535:U:H5'	1.61	0.81
4:B1:1547:C:H3'	4:B1:1548:G:C5'	2.10	0.81
4:B1:890:U:H3'	4:B1:891:G:H5''	1.61	0.81
6:BB:103:MET:HB3	6:BB:215:VAL:HG12	1.61	0.81
81:A2:2260:G:C8	81:A2:2260:G:H5''	2.16	0.81
50:CN:12:ARG:HH22	81:A2:269:G:H5'	1.45	0.81
81:A2:3587:C:H5''	81:A2:3589:G:C8	2.15	0.81
81:A2:4093:C:H3'	81:A2:4094:A:C5'	2.10	0.81
48:CL:165:LYS:HG3	81:A2:502:C:H5''	1.61	0.81
81:A2:1254:A:H3'	81:A2:1255:G:H5''	1.62	0.81
81:A2:2637:A:C3'	81:A2:2638:U:H5''	2.09	0.81
81:A2:2802:A:H8	81:A2:2802:A:H5''	1.44	0.81
81:A2:4291:G:C3'	81:A2:4292:C:H5'	2.00	0.81
81:A2:953:C:H2'	81:A2:954:G:C8	2.16	0.81
83:A4:89:G:H2'	83:A4:90:A:H8	1.46	0.81
4:B1:175:A:C2	4:B1:176:U:H1'	2.16	0.81
4:B1:217:A:H4'	4:B1:341:C:H5'	1.61	0.81
4:B1:886:A:H3'	4:B1:886:A:P	2.21	0.81
4:B1:66:G:H1'	11:BG:160:LYS:HG2	1.61	0.81
81:A2:2588:A:H2'	81:A2:2589:G:C8	2.15	0.81
81:A2:4063:G:H8	81:A2:4063:G:H5'	1.44	0.81
81:A2:962:G:H2'	81:A2:963:C:C6	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AV:42:C:H6	1:AV:42:C:H5'	1.45	0.81
4:B1:1016:U:H1'	4:B1:1017:U:C5'	2.10	0.81
4:B1:1337:C:H2'	4:B1:1338:G:C8	2.15	0.81
4:B1:1442:U:O5'	4:B1:1443:C:H5''	1.81	0.81
4:B1:1666:C:H3'	4:B1:1667:U:C6	2.15	0.81
25:BU:94:PRO:HD2	25:BU:97:ILE:HD12	1.61	0.81
81:A2:1224:G:C3'	81:A2:1225:C:H5''	2.09	0.81
81:A2:4639:G:C2'	81:A2:4640:G:H5''	2.09	0.81
81:A2:978:G:H2'	81:A2:979:C:H6	1.44	0.81
3:AX:58:U:H6	3:AX:58:U:C5'	1.94	0.81
4:B1:1403:C:H3'	4:B1:1404:U:C6	2.16	0.81
81:A2:1166:U:H2'	81:A2:1167:G:H8	1.44	0.81
81:A2:1281:C:H3'	81:A2:1281:C:H6	1.45	0.81
4:B1:1253:A:H4'	4:B1:1254:C:C5'	2.11	0.81
4:B1:693:A:H3'	4:B1:694:G:H4'	1.61	0.81
4:B1:889:U:H3'	4:B1:890:U:H5''	1.63	0.81
2:AW:37:MIA:C6	10:BF:133:THR:HA	2.09	0.81
81:A2:2638:U:H3'	81:A2:2639:G:C5'	2.10	0.81
81:A2:329:A:C2	81:A2:330:C:C5	2.68	0.81
81:A2:4695:C:H2'	81:A2:4696:G:H8	1.42	0.81
4:B1:1069:U:H4'	38:CA:247:ARG:HB3	1.61	0.81
4:B1:747:U:H1'	4:B1:748:C:H2'	1.63	0.81
4:B1:795:A:H2'	4:B1:796:G:H8	1.45	0.81
2:AW:37:MIA:C16	10:BF:132:GLY:HA2	1.98	0.81
49:CM:112:VAL:HA	51:CO:197:LYS:NZ	1.95	0.81
81:A2:1157:U:H2'	81:A2:1158:G:H8	1.42	0.81
81:A2:2056:C:H2'	81:A2:2057:G:C8	2.15	0.81
81:A2:4848:A:H5''	81:A2:4849:A:OP2	1.81	0.81
81:A2:957:G:H5''	81:A2:1218:A:O4'	1.80	0.81
4:B1:1484:A:H5''	8:BD:159:HIS:HB3	1.61	0.81
4:B1:527:C:C3'	4:B1:528:A:C8	2.63	0.81
42:CE:190:HIS:CB	81:A2:4897:C:H2'	2.10	0.81
81:A2:2701:G:H4'	81:A2:2702:A:N1	1.96	0.80
81:A2:3745:G:H4'	81:A2:3746:G:OP1	1.81	0.80
81:A2:1919:A:C2	81:A2:4394:C:H5''	2.16	0.80
81:A2:1248:G:H5''	81:A2:1249:G:N7	1.96	0.80
81:A2:1813:G:H4'	81:A2:1814:G:OP1	1.80	0.80
81:A2:2308:A:C4'	81:A2:2309:G:H5'	2.11	0.80
81:A2:2348:U:H2'	81:A2:2349:U:C6	2.16	0.80
81:A2:2509:C:H2'	81:A2:2510:C:H5'	1.63	0.80
81:A2:3722:G:H22	81:A2:3741:U:H2'	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4527:G:H2'	81:A2:4528:A:H5'	1.63	0.80
81:A2:924:C:H2'	81:A2:925:C:C4'	2.10	0.80
4:B1:203:G:H2'	4:B1:204:G:C8	2.16	0.80
12:BH:79:LEU:HD22	12:BH:94:PHE:HZ	1.46	0.80
10:BF:49:LEU:HD21	21:BQ:46:THR:HG22	1.63	0.80
81:A2:1458:G:H4'	81:A2:1459:C:OP1	1.82	0.80
81:A2:2295:C:H2'	81:A2:2296:G:C8	2.15	0.80
81:A2:4192:U:H4'	81:A2:4193:A:C5'	2.10	0.80
2:AW:31:A:N3	10:BF:136:ARG:NH2	2.29	0.80
13:BI:130:THR:HG22	13:BI:136:ILE:HA	1.62	0.80
81:A2:1016:C:H2'	81:A2:1017:C:C6	2.16	0.80
81:A2:1200:G:H8	81:A2:1200:G:P	2.04	0.80
81:A2:1316:G:H2'	81:A2:1317:A:C8	2.16	0.80
81:A2:326:A:C3'	81:A2:327:A:H8	1.93	0.80
4:B1:1030:A:H2'	4:B1:1031:A:H8	1.46	0.80
4:B1:1214:A:C6	4:B1:1686:G:C2	2.69	0.80
4:B1:1647:A:O2'	4:B1:1648:G:H5'	1.82	0.80
4:B1:804:U:H2'	4:B1:805:U:H6	1.42	0.80
4:B1:822:U:H5'	4:B1:822:U:H6	1.46	0.80
81:A2:1163:C:C2'	81:A2:1164:A:H5'	2.12	0.80
81:A2:2278:C:H2'	81:A2:2279:C:C6	2.16	0.80
81:A2:4032:C:H2'	81:A2:4033:G:H4'	1.62	0.80
81:A2:4077:C:H2'	81:A2:4078:U:C6	2.16	0.80
81:A2:944:A:O4'	81:A2:2249:G:H5'	1.80	0.80
4:B1:952:G:H2'	4:B1:953:C:O4'	1.81	0.80
3:AX:53:U:N3	8:BD:146:ARG:NH2	2.29	0.80
81:A2:1079:C:H2'	81:A2:1080:U:O4'	1.81	0.80
81:A2:1213:G:C2'	81:A2:1214:G:H5'	2.12	0.80
81:A2:193:C:H4'	81:A2:194:A:OP2	1.80	0.80
81:A2:3779:C:H6	81:A2:3779:C:H3'	1.45	0.80
81:A2:4898:A:H2'	81:A2:4899:C:O4'	1.82	0.80
4:B1:180:G:C1'	4:B1:181:A:H5'	2.08	0.80
4:B1:795:A:C2'	4:B1:796:G:H5'	2.11	0.80
45:CH:4:ILE:HG23	45:CH:5:LEU:H	1.47	0.80
57:CU:63:ILE:HG12	57:CU:72:VAL:HG12	1.61	0.80
81:A2:3880:C:H2'	81:A2:3881:U:C6	2.16	0.80
1:AV:75:C:N4	81:A2:4157:G:C6	2.48	0.80
4:B1:1411:G:H4'	4:B1:1412:C:OP1	1.81	0.80
18:BN:42:LYS:HE3	18:BN:80:LEU:HD23	1.63	0.80
49:CM:112:VAL:HA	51:CO:197:LYS:HZ1	1.46	0.80
4:B1:909:G:OP1	54:CR:169:ALA:CA	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1155:A:H2'	81:A2:1156:C:C6	2.17	0.80
81:A2:2311:C:H6	81:A2:2311:C:C5'	1.94	0.80
81:A2:2549:C:H3'	81:A2:2549:C:H6	1.46	0.80
81:A2:2629:G:C3'	81:A2:2630:C:H4'	2.12	0.80
81:A2:482:G:H4'	81:A2:483:U:OP2	1.80	0.80
81:A2:8:U:H2'	81:A2:9:C:H5'	1.64	0.80
4:B1:1307:U:C2'	4:B1:1308:U:H5'	2.12	0.80
4:B1:1554:C:H3'	4:B1:1555:U:C5'	2.09	0.80
81:A2:1256:C:H2'	81:A2:1257:G:H5'	1.64	0.80
81:A2:1435:G:H2'	81:A2:1436:G:C8	2.17	0.80
81:A2:329:A:H2	81:A2:330:C:C4	2.00	0.80
81:A2:365:G:H2'	81:A2:366:G:H5''	1.64	0.80
81:A2:4044:G:H4'	81:A2:4045:A:OP1	1.82	0.80
81:A2:4800:C:H2'	81:A2:4801:C:C6	2.16	0.80
81:A2:4883:C:H2'	81:A2:4884:C:H6	1.47	0.80
81:A2:700:C:H2'	81:A2:701:C:H5''	1.64	0.80
1:AV:72:C:H2'	1:AV:73:A:H5'	1.63	0.80
4:B1:1743:G:H1'	4:B1:1792:G:N2	1.97	0.80
4:B1:306:C:H2'	13:BI:43:ILE:O	1.81	0.80
4:B1:309:G:H4'	4:B1:310:C:OP2	1.81	0.80
20:BP:22:LEU:HD21	20:BP:109:PRO:HB3	1.64	0.80
81:A2:1221:C:H42	81:A2:1248:G:N2	1.79	0.80
81:A2:1379:G:H2'	81:A2:1380:G:H8	1.47	0.80
81:A2:4193:A:H4'	81:A2:4194:A:OP1	1.81	0.80
81:A2:711:A:H2'	81:A2:712:C:C1'	2.12	0.80
4:B1:1413:G:O2'	4:B1:1414:A:H5'	1.81	0.80
4:B1:971:G:H4'	4:B1:972:A:O5'	1.82	0.80
15:BK:90:VAL:HG13	15:BK:94:LEU:HD23	1.64	0.80
42:CE:182:ASN:HA	81:A2:4837:U:H3	1.46	0.80
43:CF:245:ARG:CG	81:A2:927:A:H3'	2.12	0.80
48:CL:111:GLN:HG3	81:A2:510:C:H4'	1.63	0.80
81:A2:1082:U:C6	81:A2:1083:C:H5	1.98	0.79
81:A2:2656:G:H2'	81:A2:2657:G:C8	2.17	0.79
81:A2:4711:U:OP1	81:A2:4711:U:H4'	1.81	0.79
81:A2:481:C:C2'	81:A2:482:G:H5''	2.11	0.79
82:A3:129:C:H2'	82:A3:130:C:C6	2.18	0.79
1:AV:32:U:OP2	21:BQ:146:ARG:CA	2.30	0.79
1:AV:39:U:OP2	4:B1:1058:A:H5'	1.81	0.79
4:B1:1405:A:H2'	4:B1:1406:G:H5''	1.62	0.79
4:B1:1578:U:OP2	4:B1:1578:U:H4'	1.80	0.79
3:AX:50:U:OP1	4:B1:1825:A:OP1	1.99	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:376:A:H2'	4:B1:377:G:C8	2.18	0.79
81:A2:3769:A:O2'	81:A2:3770:U:H5'	1.81	0.79
81:A2:4673:G:H3'	81:A2:4674:C:C6	2.18	0.79
4:B1:317:C:H3'	4:B1:318:A:H5''	1.64	0.79
4:B1:798:G:H8	4:B1:867:G:H22	1.30	0.79
11:BG:12:CYS:SG	11:BG:127:THR:HB	2.21	0.79
81:A2:4690:G:H4'	81:A2:4691:G:OP2	1.83	0.79
81:A2:8:U:O2	81:A2:8:U:H3'	1.82	0.79
2:AW:37:MIA:C13	10:BF:134:VAL:HG13	2.12	0.79
4:B1:1634:A:H3'	4:B1:1635:C:H6	1.47	0.79
4:B1:1769:C:H2'	4:B1:1770:G:H8	1.47	0.79
4:B1:380:G:H2'	4:B1:382:C:H5	1.46	0.79
4:B1:745:C:H4'	4:B1:746:C:C6	2.17	0.79
81:A2:1204:G:OP1	81:A2:1210:U:H2'	1.82	0.79
81:A2:1415:G:H2'	81:A2:1416:C:H6	1.46	0.79
81:A2:2399:C:C2	81:A2:2806:U:H1'	2.18	0.79
82:A3:121:G:H3'	82:A3:122:G:H5''	1.64	0.79
4:B1:1016:U:H4'	4:B1:1017:U:OP1	1.81	0.79
5:BA:30:LEU:HD21	5:BA:35:GLU:HA	1.62	0.79
5:BA:6:ASP:HB2	26:BV:42:VAL:HG22	1.62	0.79
1:AV:57:G:C5'	47:CJ:55:TYR:OH	2.30	0.79
52:CP:67:VAL:HG11	52:CP:82:ARG:HD2	1.65	0.79
81:A2:135:G:H3'	81:A2:135:G:H8	1.45	0.79
81:A2:136:G:H8	81:A2:136:G:H5''	1.48	0.79
81:A2:2524:G:N2	81:A2:2526:G:H1'	1.97	0.79
81:A2:2624:A:C6	81:A2:2664:U:N3	2.51	0.79
81:A2:4163:A:N3	81:A2:4163:A:H3'	1.98	0.79
81:A2:4345:A:H4'	81:A2:4346:C:O5'	1.80	0.79
81:A2:4837:U:H4'	81:A2:4838:C:H5'	1.63	0.79
81:A2:953:C:H2'	81:A2:954:G:H8	1.47	0.79
82:A3:28:C:C6	82:A3:28:C:H5''	2.18	0.79
1:AV:34:G:N1	4:B1:1701:C:C1'	2.45	0.79
3:AX:47:U:H5'	4:B1:1830:U:N3	1.98	0.79
4:B1:1648:G:H4'	4:B1:1649:U:OP2	1.81	0.79
22:BR:21:TYR:CE1	22:BR:61:ILE:HG21	2.17	0.79
4:B1:1326:U:H4'	4:B1:1327:G:O5'	1.82	0.79
4:B1:67:C:H41	11:BG:163:ASN:HA	1.46	0.79
81:A2:1057:C:H2'	81:A2:1058:A:C5'	2.12	0.79
81:A2:1197:G:H4'	81:A2:1198:G:OP1	1.83	0.79
81:A2:1942:A:C4	81:A2:4654:G:H8	2.00	0.79
81:A2:2838:C:H3'	81:A2:2838:C:OP1	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4263:C:O2	81:A2:4263:C:H3'	1.83	0.79
4:B1:1070:A:P	38:CA:248:GLY:N	2.55	0.79
81:A2:1525:C:H2'	81:A2:1590:C:N4	1.98	0.79
81:A2:1720:G:H1'	81:A2:1760:U:H5'	1.64	0.79
81:A2:2423:C:H2'	81:A2:2424:U:C6	2.18	0.79
81:A2:2683:G:H21	81:A2:2686:C:H5'	1.47	0.79
4:B1:1769:C:H2'	4:B1:1770:G:C8	2.17	0.79
4:B1:406:U:H4'	4:B1:407:G:N2	1.97	0.79
4:B1:944:A:H1'	19:BO:136:PRO:HB3	1.65	0.79
9:BE:18:TRP:HE3	9:BE:20:LEU:HD11	1.47	0.79
56:CT:77:ASN:HB3	56:CT:84:ILE:HD13	1.64	0.79
81:A2:1399:G:H2'	81:A2:1400:A:H5''	1.65	0.79
81:A2:346:A:C2	81:A2:347:G:H1'	2.18	0.79
81:A2:3724:G:H1'	81:A2:3725:A:OP1	1.81	0.79
81:A2:3845:A:H4'	81:A2:3846:A:OP2	1.80	0.79
81:A2:4060:G:C2	81:A2:4118:C:N3	2.51	0.79
81:A2:4869:C:C6	81:A2:4869:C:H3'	2.18	0.79
81:A2:977:G:H2'	81:A2:978:G:C4'	2.12	0.79
3:AX:58:U:OP1	7:BC:151:ILE:HD13	1.83	0.79
4:B1:1654:G:H3'	4:B1:1655:C:H5	1.48	0.79
4:B1:1849:G:H1'	81:A2:3735:A:C2'	2.12	0.79
4:B1:740:C:H2'	4:B1:741:C:C6	2.18	0.79
41:CD:263:LYS:O	41:CD:264:LYS:HB2	1.81	0.79
61:CY:44:VAL:HG23	61:CY:123:ALA:HB3	1.62	0.79
81:A2:1918:G:H8	81:A2:1918:G:H5''	1.46	0.79
81:A2:2624:A:C6	81:A2:2665:G:C5	2.71	0.79
81:A2:3858:G:H3'	81:A2:4679:G:N2	1.98	0.79
81:A2:3944:C:H2'	81:A2:3945:C:C6	2.18	0.79
81:A2:959:C:H1'	81:A2:960:G:OP2	1.83	0.79
3:AX:60:U:C6	3:AX:61:U:H5	2.00	0.79
4:B1:1638:G:H5'	4:B1:1638:G:C4	2.18	0.79
7:BC:167:ARG:HA	7:BC:181:PRO:HD3	1.65	0.79
4:B1:125:C:H4'	9:BE:136:ILE:HA	1.63	0.79
81:A2:1220:G:C2	81:A2:1248:G:N1	2.49	0.78
81:A2:1855:G:C8	81:A2:1855:G:H5''	2.18	0.78
81:A2:2330:U:H2'	81:A2:2331:G:C8	2.17	0.78
81:A2:4253:U:C3'	81:A2:4254:C:H5''	2.13	0.78
81:A2:4483:A:H2'	81:A2:4519:A:H62	1.49	0.78
81:A2:4617:U:H3'	81:A2:4618:G:C5'	2.13	0.78
81:A2:482:G:H2'	81:A2:484:G:H8	1.48	0.78
81:A2:939:G:H1'	81:A2:940:A:H5''	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1630:A:H2'	4:B1:1631:U:H5''	1.64	0.78
4:B1:500:A:H2'	4:B1:501:C:C5'	2.12	0.78
4:B1:618:C:H1'	4:B1:632:C:C5'	2.12	0.78
4:B1:796:G:H22	4:B1:797:C:H5	1.29	0.78
23:BS:66:ARG:O	23:BS:70:ILE:HG12	1.82	0.78
54:CR:82:LYS:HD3	81:A2:2788:G:H4'	1.65	0.78
81:A2:1280:G:O5'	81:A2:1280:G:H8	1.66	0.78
81:A2:4530:G:H2'	81:A2:4530:G:N3	1.97	0.78
81:A2:462:A:C4'	81:A2:463:C:H5''	2.11	0.78
81:A2:4689:C:P	81:A2:4695:C:H4'	2.23	0.78
13:BI:123:ARG:NH1	81:A2:4979:C:H5''	1.96	0.78
81:A2:670:C:H2'	81:A2:671:C:C6	2.18	0.78
81:A2:716:U:C3'	81:A2:717:G:H5''	2.13	0.78
81:A2:87:A:C2	81:A2:88:A:H1'	2.18	0.78
4:B1:1442:U:C4	21:BQ:22:VAL:HG22	2.18	0.78
4:B1:1604:G:C2'	4:B1:1605:G:H5'	2.12	0.78
4:B1:179:C:H2'	4:B1:180:G:C2	2.18	0.78
4:B1:184:G:H2'	4:B1:185:G:O3'	1.82	0.78
39:CB:258:HIS:CD2	39:CB:259:PRO:CD	2.66	0.78
81:A2:1196:C:H5	81:A2:1239:G:H5'	1.45	0.78
81:A2:2020:A:C2	81:A2:4424:A:C6	2.71	0.78
81:A2:346:A:C2'	81:A2:347:G:H5'	2.14	0.78
4:B1:106:C:H2'	4:B1:107:A:C8	2.17	0.78
4:B1:1176:G:H2'	4:B1:1177:U:C6	2.18	0.78
4:B1:1203:G:C8	4:B1:1699:A:C2	2.70	0.78
4:B1:1427:C:H2'	4:B1:1428:G:O4'	1.83	0.78
4:B1:920:A:H2'	4:B1:922:A:H8	1.46	0.78
3:AX:57:U:H5'	7:BC:109:ILE:HD12	1.64	0.78
81:A2:1420:U:H3'	81:A2:1420:U:H6	1.46	0.78
81:A2:3725:A:H2'	81:A2:3726:G:H8	1.47	0.78
81:A2:4236:G:H3'	81:A2:4237:G:H8	1.47	0.78
45:CH:72:THR:HG21	81:A2:4660:A:N1	1.98	0.78
4:B1:1028:A:N1	81:A2:1543:A:C2	2.52	0.78
4:B1:1456:G:H5''	4:B1:1456:G:H8	1.45	0.78
4:B1:179:C:H5''	4:B1:180:G:N2	1.99	0.78
4:B1:186:C:H2'	4:B1:187:G:H8	1.46	0.78
4:B1:576:A:OP2	4:B1:577:U:H5'	1.82	0.78
4:B1:64:A:H2	4:B1:84:A:N6	1.81	0.78
4:B1:815:U:H2'	4:B1:816:A:C8	2.18	0.78
9:BE:21:ASP:HB2	9:BE:24:THR:OG1	1.83	0.78
58:CV:57:VAL:HG12	58:CV:125:CYS:HB2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1185:G:H2'	81:A2:1186:C:H6	1.49	0.78
81:A2:1185:G:H2'	81:A2:1186:C:C6	2.19	0.78
81:A2:188:G:H1'	81:A2:189:G:OP2	1.84	0.78
2:AW:56:C:N4	81:A2:3927:G:C5	2.52	0.78
81:A2:4032:C:H3'	81:A2:4033:G:H5''	1.65	0.78
4:B1:1405:A:O5'	4:B1:1405:A:H8	1.65	0.78
4:B1:1442:U:H2'	4:B1:1442:U:O2	1.83	0.78
4:B1:1699:A:H8	4:B1:1699:A:O5'	1.67	0.78
4:B1:315:C:N3	4:B1:336:A:H2	1.81	0.78
4:B1:690:G:H2'	4:B1:691:G:H8	1.46	0.78
81:A2:3727:U:H4'	81:A2:3728:A:OP1	1.84	0.78
81:A2:457:A:N7	81:A2:676:G:C8	2.52	0.78
81:A2:71:C:H2'	81:A2:72:C:H5'	1.66	0.78
55:CS:165:PRO:CD	81:A2:4828:G:H1'	2.14	0.78
81:A2:1046:G:H2'	81:A2:1047:G:H8	1.48	0.78
81:A2:14:C:H1'	81:A2:15:A:OP2	1.84	0.78
81:A2:399:A:H4'	81:A2:400:G:H5'	1.65	0.78
83:A4:34:C:N4	83:A4:47:G:H1'	1.98	0.78
3:AX:60:U:H1'	3:AX:61:U:O5'	1.83	0.78
4:B1:683:G:H1'	4:B1:1023:A:H2	1.48	0.78
4:B1:300:U:H2'	4:B1:301:A:C8	2.18	0.78
4:B1:301:A:H2'	4:B1:302:A:H8	1.47	0.78
4:B1:558:G:H2'	4:B1:559:G:H5''	1.64	0.78
43:CF:95:ILE:HD12	43:CF:221:LYS:HD2	1.64	0.78
81:A2:122:U:H2'	81:A2:123:C:C5	2.19	0.78
81:A2:1454:G:H2'	81:A2:1455:C:H4'	1.66	0.78
81:A2:1474:G:O2'	81:A2:1475:G:H5'	1.84	0.78
81:A2:2348:U:H6	81:A2:2348:U:C5'	1.96	0.78
81:A2:2632:C:H2'	81:A2:2633:U:C6	2.17	0.78
81:A2:3661:A:H62	81:A2:3792:G:N2	1.82	0.78
81:A2:4303:U:H2'	81:A2:4304:U:H6	1.48	0.78
81:A2:4305:C:H2'	81:A2:4306:U:C6	2.19	0.78
4:B1:1456:G:H5''	4:B1:1456:G:C8	2.18	0.78
4:B1:794:A:C2'	4:B1:795:A:H4'	2.14	0.78
25:BU:55:ARG:HD2	25:BU:87:ARG:CZ	2.13	0.78
53:CQ:85:THR:HG22	53:CQ:104:ARG:HB3	1.65	0.78
81:A2:2543:G:H2'	81:A2:2544:G:H8	1.48	0.78
81:A2:2747:C:H2'	81:A2:2748:G:H8	1.49	0.78
81:A2:3676:U:H2'	81:A2:3677:C:H5	1.49	0.78
81:A2:4806:G:C2'	81:A2:4807:C:H4'	2.14	0.78
82:A3:4:C:H2'	82:A3:5:U:H5'	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1307:U:H2'	4:B1:1308:U:H5'	1.64	0.78
4:B1:1203:G:C8	4:B1:1699:A:H2	2.02	0.78
4:B1:1827:U:C5'	81:A2:3728:A:O2'	2.32	0.78
4:B1:4:C:H2'	4:B1:5:U:C6	2.19	0.78
8:BD:8:LYS:HG2	25:BU:61:LEU:HD21	1.65	0.78
28:BX:61:GLN:HB3	28:BX:62:PRO:CD	2.13	0.78
81:A2:1554:A:H8	81:A2:1554:A:H5''	1.49	0.78
81:A2:1885:A:C8	81:A2:1885:A:H5'	2.18	0.78
81:A2:2310:G:C4'	82:A3:20:A:H4'	2.12	0.78
81:A2:3661:A:H62	81:A2:3792:G:H21	1.28	0.78
81:A2:4688:A:OP1	81:A2:4694:G:H1'	1.84	0.78
81:A2:4729:U:H2'	81:A2:4730:C:C6	2.18	0.78
81:A2:4837:U:H5'	81:A2:4838:C:OP2	1.81	0.78
81:A2:710:G:C2'	81:A2:711:A:H5'	2.13	0.78
81:A2:727:G:C8	81:A2:727:G:C5'	2.67	0.78
81:A2:951:C:H2'	81:A2:952:C:C6	2.19	0.78
82:A3:131:G:H2'	82:A3:132:G:C8	2.19	0.78
83:A4:62:U:H3'	83:A4:63:C:H5''	1.63	0.78
2:AW:9:A:H62	2:AW:23:A:H62	1.31	0.78
4:B1:1049:A:H2	4:B1:1069:U:N3	1.80	0.78
4:B1:1257:G:H5'	4:B1:1258:A:C8	2.18	0.78
4:B1:855:G:C2'	4:B1:856:C:H5'	2.14	0.78
4:B1:909:G:OP2	54:CR:169:ALA:HB1	1.82	0.78
1:AV:57:G:P	47:CJ:55:TYR:HH	2.04	0.78
49:CM:123:ILE:HA	51:CO:187:LYS:HE2	1.66	0.78
81:A2:182:C:H3'	81:A2:183:G:H8	1.48	0.77
81:A2:2332:G:H2'	81:A2:2333:U:H5''	1.67	0.77
81:A2:2449:A:C3'	81:A2:2450:A:H5'	2.14	0.77
81:A2:2588:A:H2'	81:A2:2589:G:H8	1.49	0.77
81:A2:2804:G:H5''	81:A2:2806:U:OP2	1.83	0.77
81:A2:334:C:C5'	81:A2:334:C:H6	1.98	0.77
81:A2:4671:C:H2'	81:A2:4672:C:O4'	1.84	0.77
4:B1:179:C:OP2	4:B1:179:C:H6	1.67	0.77
4:B1:900:C:H2'	4:B1:901:G:N7	1.99	0.77
2:AW:37:MIA:C12	10:BF:133:THR:HA	2.07	0.77
19:BO:72:TYR:CE2	19:BO:76:LEU:HD11	2.19	0.77
81:A2:1775:U:H2'	81:A2:1776:G:O4'	1.83	0.77
81:A2:2489:A:H4'	81:A2:2490:A:OP2	1.85	0.77
81:A2:2752:C:H2'	81:A2:2753:G:H8	1.45	0.77
81:A2:2840:G:H1'	81:A2:3588:G:C8	2.19	0.77
81:A2:4177:G:HO2'	81:A2:4263:C:H6	1.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4251:G:H4'	81:A2:4252:A:H5''	1.64	0.77
81:A2:4484:G:H2'	81:A2:4485:C:C5	2.19	0.77
81:A2:727:G:H8	81:A2:727:G:C5'	1.97	0.77
81:A2:913:A:H1'	81:A2:916:A:N6	1.98	0.77
2:AW:37:MIA:H162	10:BF:132:GLY:H	1.46	0.77
81:A2:1401:G:H2'	81:A2:1402:G:H5'	1.67	0.77
81:A2:172:C:C2'	81:A2:173:G:H5'	2.15	0.77
81:A2:2449:A:H3'	81:A2:2450:A:C5'	2.14	0.77
81:A2:71:C:C3'	81:A2:72:C:H5'	2.15	0.77
4:B1:746:C:H5''	12:BH:104:PRO:O	1.84	0.77
81:A2:1267:G:C5	81:A2:1268:G:H1'	2.18	0.77
81:A2:149:U:H1'	81:A2:150:G:N2	1.98	0.77
81:A2:1740:G:H2'	81:A2:1741:C:C6	2.20	0.77
81:A2:2683:G:N2	81:A2:2686:C:H5'	1.99	0.77
81:A2:2721:A:H2'	81:A2:2722:A:C8	2.19	0.77
81:A2:4287:C:H2'	81:A2:4288:G:H8	1.49	0.77
81:A2:4709:G:C2'	81:A2:4710:G:H5''	2.11	0.77
3:AX:60:U:N3	3:AX:61:U:C5	2.52	0.77
4:B1:304:C:H4'	4:B1:305:U:OP2	1.84	0.77
4:B1:331:C:H3'	4:B1:332:G:H5''	1.65	0.77
4:B1:797:C:H5''	12:BH:106:ARG:O	1.85	0.77
4:B1:91:A:H5''	4:B1:92:A:H5''	1.66	0.77
39:CB:156:TYR:O	39:CB:157:CYS:HB3	1.83	0.77
81:A2:2859:A:C2'	81:A2:2860:G:H5'	2.15	0.77
81:A2:4098:G:H2'	81:A2:4099:C:C6	2.18	0.77
81:A2:441:G:N3	81:A2:1274:A:H4'	1.98	0.77
81:A2:469:G:H2'	81:A2:470:G:H5'	1.66	0.77
82:A3:103:A:H5'	82:A3:104:A:H8	1.50	0.77
4:B1:1353:A:H2'	4:B1:1354:G:H5''	1.66	0.77
4:B1:42:A:H2'	4:B1:43:U:H5''	1.66	0.77
4:B1:934:G:H5'	4:B1:993:G:N2	1.99	0.77
13:BI:169:GLY:N	81:A2:4980:C:OP1	2.16	0.77
4:B1:1593:C:H5	30:BZ:104:ARG:HH21	1.30	0.77
50:CN:12:ARG:NH2	81:A2:269:G:H5'	1.98	0.77
81:A2:1218:A:H8	81:A2:1218:A:H5'	1.49	0.77
81:A2:1479:A:H3'	81:A2:1480:C:H5''	1.65	0.77
38:CA:222:PRO:HG2	81:A2:3674:G:H1'	1.65	0.77
81:A2:4440:A:H2'	81:A2:4441:U:O4'	1.83	0.77
81:A2:4803:C:H3'	81:A2:4804:G:C5'	2.14	0.77
81:A2:4880:U:O2'	81:A2:4881:C:H4'	1.85	0.77
4:B1:1406:G:HO2'	4:B1:1408:U:H5	1.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1413:G:C2'	4:B1:1414:A:H5'	2.14	0.77
4:B1:678:U:C4'	81:A2:1543:A:C8	2.67	0.77
41:CD:73:MET:SD	83:A4:114:U:H4'	2.23	0.77
81:A2:1020:G:H22	81:A2:1044:G:N2	1.83	0.77
81:A2:1264:G:C2'	81:A2:1265:U:H5'	2.14	0.77
81:A2:1278:C:H2'	81:A2:1279:G:H8	1.47	0.77
81:A2:1873:G:H5'	81:A2:1873:G:C8	2.17	0.77
81:A2:2430:A:H61	81:A2:2484:A:H2	1.29	0.77
81:A2:2667:C:H2'	81:A2:2668:U:C6	2.19	0.77
81:A2:41:C:H2'	81:A2:42:A:C5'	2.07	0.77
81:A2:457:A:N7	81:A2:676:G:H8	1.83	0.77
2:AW:59:U:H3'	2:AW:60:U:H6	1.48	0.77
4:B1:1574:C:H2'	4:B1:1575:G:H5'	1.67	0.77
4:B1:525:A:H2	4:B1:561:A:N6	1.81	0.77
4:B1:589:G:H1'	4:B1:590:A:OP1	1.85	0.77
39:CB:67:VAL:HG23	58:CV:91:LYS:HD2	1.67	0.77
81:A2:1885:A:H8	81:A2:1885:A:H5'	1.50	0.77
13:BI:92:ARG:CZ	81:A2:2869:C:C1'	2.62	0.77
42:CE:190:HIS:HA	81:A2:4897:C:C6	2.20	0.77
4:B1:1039:C:H2'	4:B1:1040:G:C8	2.20	0.77
4:B1:1536:G:H2'	4:B1:1537:A:C8	2.19	0.77
4:B1:1787:G:H2'	4:B1:1788:A:C8	2.19	0.77
4:B1:1833:C:H6	4:B1:1833:C:C5'	1.97	0.77
4:B1:384:U:C2'	4:B1:385:G:H5''	2.14	0.77
4:B1:1095:C:H5''	27:BW:22:LYS:NZ	2.00	0.77
38:CA:186:TYR:HB2	38:CA:196:TRP:HZ2	1.46	0.77
54:CR:10:LEU:HD11	54:CR:38:ARG:HG2	1.66	0.77
81:A2:1067:A:H2'	81:A2:1068:C:C6	2.20	0.77
81:A2:121:A:H4'	81:A2:122:U:O4'	1.85	0.77
81:A2:1316:G:H2'	81:A2:1317:A:N7	1.99	0.77
81:A2:1421:C:O5'	81:A2:1421:C:H6	1.66	0.77
81:A2:3750:C:H5''	81:A2:3790:A:H4'	1.66	0.77
81:A2:384:U:C2'	81:A2:385:G:H4'	2.14	0.77
81:A2:4313:U:H5'	81:A2:4314:U:H5''	1.65	0.77
4:B1:1476:A:C4'	4:B1:1477:U:H5'	2.14	0.77
4:B1:1625:U:H2'	4:B1:1626:C:C6	2.19	0.77
4:B1:59:U:H2'	4:B1:60:A:H5''	1.66	0.77
4:B1:911:C:H3'	4:B1:912:C:C6	2.20	0.77
81:A2:1259:A:H2'	81:A2:1260:C:C6	2.20	0.77
81:A2:1357:G:H2'	81:A2:1360:G:OP1	1.84	0.77
81:A2:1530:C:H6	81:A2:1530:C:H5''	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2523:G:H2'	81:A2:2524:G:C8	2.19	0.77
81:A2:2624:A:H3'	81:A2:2625:G:H8	1.50	0.77
4:B1:1473:G:H2'	4:B1:1475:G:N7	1.99	0.77
81:A2:1883:U:H5''	81:A2:1883:U:H6	1.49	0.76
81:A2:2737:G:H2'	81:A2:2738:U:H5''	1.68	0.76
81:A2:4640:G:H2'	81:A2:4641:A:O4'	1.83	0.76
44:CG:57:TRP:CZ3	82:A3:149:G:H5'	2.21	0.76
82:A3:71:A:H2'	82:A3:82:A:C2	2.20	0.76
4:B1:1276:A:H4'	4:B1:1277:C:C5'	2.14	0.76
4:B1:193:C:H4'	4:B1:209:A:H61	1.51	0.76
52:CP:141:SER:O	52:CP:143:PRO:HD3	1.85	0.76
81:A2:1046:G:H2'	81:A2:1047:G:C8	2.19	0.76
81:A2:1203:G:H5'	81:A2:1210:U:H5	1.47	0.76
81:A2:135:G:H3'	81:A2:135:G:C8	2.19	0.76
81:A2:180:C:C2'	81:A2:181:U:H5'	2.15	0.76
81:A2:2373:A:H4'	81:A2:2374:G:OP2	1.85	0.76
81:A2:2444:U:H4'	81:A2:2445:U:C5	2.19	0.76
81:A2:2549:C:H5'	81:A2:2737:G:H8	1.49	0.76
62:CZ:136:PHE:CA	81:A2:4089:G:H21	1.98	0.76
81:A2:4263:C:H5''	81:A2:4264:A:C5'	2.15	0.76
81:A2:4280:G:H3'	81:A2:4281:U:C6	2.20	0.76
81:A2:4903:C:H2'	81:A2:4904:G:H5'	1.68	0.76
81:A2:887:C:H2'	81:A2:888:C:C6	2.19	0.76
81:A2:89:C:H2'	81:A2:90:G:H5'	1.65	0.76
4:B1:1725:U:H2'	4:B1:1726:G:C8	2.19	0.76
4:B1:1848:U:O2'	4:B1:1849:G:H5'	1.84	0.76
4:B1:639:C:H2'	4:B1:640:A:H8	1.48	0.76
4:B1:81:U:H6	4:B1:81:U:H5''	1.50	0.76
42:CE:243:THR:HG23	81:A2:4893:A:H61	1.49	0.76
81:A2:1391:C:H2'	81:A2:1392:G:C8	2.20	0.76
81:A2:1441:A:H2'	81:A2:1442:C:C6	2.20	0.76
81:A2:1877:G:C8	81:A2:2254:G:C5	2.73	0.76
81:A2:2372:A:H1'	81:A2:2783:A:C2	2.20	0.76
81:A2:3770:U:H4'	81:A2:4456:A:C2	2.16	0.76
81:A2:4145:G:H2'	81:A2:4146:A:H8	1.50	0.76
81:A2:4689:C:H3'	81:A2:4690:G:N7	2.00	0.76
81:A2:724:C:H2'	81:A2:725:C:H4'	1.67	0.76
82:A3:17:A:H2'	82:A3:18:U:C6	2.21	0.76
81:A2:1716:A:N3	83:A4:100:A:H2	1.84	0.76
4:B1:1429:G:H5''	4:B1:1430:C:OP2	1.85	0.76
1:AV:34:G:N1	4:B1:1701:C:H1'	2.01	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:193:C:H5'	4:B1:193:C:H6	1.50	0.76
4:B1:590:A:H4'	4:B1:591:U:OP1	1.86	0.76
9:BE:220:THR:HG23	9:BE:225:ILE:HD11	1.66	0.76
54:CR:123:LEU:HD21	54:CR:141:HIS:CD2	2.21	0.76
43:CF:48:LYS:CD	81:A2:1220:G:H5'	2.16	0.76
81:A2:3566:G:N3	81:A2:3566:G:H3'	2.01	0.76
81:A2:3893:C:H2'	81:A2:3894:U:H5'	1.65	0.76
81:A2:4604:G:H1	81:A2:4613:C:H42	1.34	0.76
81:A2:4917:C:H2'	81:A2:4918:G:H8	1.50	0.76
3:AX:58:U:H6	3:AX:58:U:H5''	1.50	0.76
3:AX:59:U:O2'	3:AX:60:U:H5'	1.85	0.76
4:B1:1417:C:O2'	4:B1:1418:C:H5'	1.86	0.76
1:AV:41:C:O2'	4:B1:1640:A:O4'	2.03	0.76
4:B1:308:G:H4'	4:B1:309:G:O5'	1.85	0.76
6:BB:62:LEU:O	6:BB:65:ARG:HG3	1.86	0.76
3:AX:42:U:H5	19:BO:151:LEU:C	1.88	0.76
39:CB:261:ARG:HB3	51:CO:64:THR:HG21	1.67	0.76
44:CG:162:ASP:HB3	44:CG:163:PRO:CD	2.16	0.76
51:CO:90:HIS:HB2	51:CO:99:LEU:HD11	1.67	0.76
81:A2:1388:G:N2	81:A2:1389:C:H1'	2.01	0.76
81:A2:1870:A:H5'	81:A2:1871:C:C5	2.16	0.76
81:A2:4204:A:H1'	81:A2:4228:A:O5'	1.85	0.76
81:A2:433:G:H2'	81:A2:434:G:H8	1.44	0.76
81:A2:901:A:H2'	81:A2:902:G:C8	2.21	0.76
1:AV:32:U:OP2	21:BQ:146:ARG:HA	1.86	0.76
4:B1:1225:U:H2'	4:B1:1226:G:H5'	1.67	0.76
4:B1:142:C:H4'	4:B1:143:U:H4'	1.66	0.76
4:B1:655:A:C5	4:B1:657:U:H5	2.03	0.76
81:A2:1196:C:H4'	81:A2:1197:G:OP1	1.85	0.76
81:A2:386:A:H3'	81:A2:387:A:C8	2.18	0.76
81:A2:4251:G:H4'	81:A2:4252:A:H3'	1.67	0.76
81:A2:445:U:H3'	81:A2:446:C:C5	2.20	0.76
42:CE:188:ARG:NH2	81:A2:4897:C:H4'	2.00	0.76
81:A2:500:A:H2'	81:A2:501:U:H6	1.51	0.76
81:A2:727:G:C8	81:A2:727:G:H5'	2.20	0.76
81:A2:917:G:P	81:A2:917:G:H3'	2.25	0.76
3:AX:39:U:C2'	3:AX:40:U:H5'	2.16	0.76
4:B1:1416:C:H3'	4:B1:1417:C:C5'	2.13	0.76
4:B1:959:G:H1	19:BO:65:ASP:HB3	1.50	0.76
45:CH:118:LEU:HD11	45:CH:167:VAL:HG22	1.67	0.76
44:CG:76:VAL:HG12	50:CN:21:PHE:CZ	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CH:60:TRP:CH2	55:CS:152:PHE:HB2	2.20	0.76
81:A2:4640:G:H5'	81:A2:4640:G:H8	1.49	0.76
4:B1:1075:C:H2'	4:B1:1076:G:C8	2.21	0.76
4:B1:1518:C:H5''	4:B1:1519:U:C5'	2.15	0.76
4:B1:64:A:C2	4:B1:84:A:N6	2.54	0.76
48:CL:76:PHE:O	48:CL:77:SER:HB3	1.85	0.76
50:CN:39:ALA:HB3	50:CN:61:ILE:HG22	1.67	0.76
81:A2:1057:C:C2'	81:A2:1058:A:H5''	2.15	0.76
81:A2:1259:A:H2'	81:A2:1260:C:H6	1.50	0.76
81:A2:1460:C:H3'	81:A2:1460:C:H6	1.48	0.76
81:A2:1648:A:C2'	81:A2:1649:G:H5''	2.14	0.76
81:A2:1716:A:N3	83:A4:100:A:C2	2.54	0.76
81:A2:216:G:H1'	81:A2:217:C:O5'	1.86	0.76
81:A2:384:U:H2'	81:A2:385:G:H4'	1.66	0.76
57:CU:21:PHE:CG	81:A2:3942:G:H4'	196.53	0.76
3:AX:41:U:C2'	3:AX:42:U:H5''	2.15	0.76
4:B1:1461:G:H21	4:B1:1465:A:N6	1.82	0.76
12:BH:84:GLU:OE2	12:BH:91:HIS:HA	1.85	0.76
4:B1:1629:C:H5'	23:BS:39:ARG:HH21	1.49	0.76
81:A2:14:C:H1'	81:A2:15:A:C8	2.21	0.76
81:A2:2624:A:N1	81:A2:2665:G:C5	2.53	0.76
81:A2:437:C:H3'	81:A2:438:C:H5	1.47	0.76
4:B1:111:A:H4'	4:B1:112:U:OP1	1.86	0.76
4:B1:184:G:H8	4:B1:185:G:C4'	1.99	0.76
4:B1:745:C:C2	4:B1:750:C:H5''	2.21	0.76
40:CC:150:LEU:HB2	40:CC:151:PRO:HD2	1.68	0.76
81:A2:1804:A:H3'	81:A2:1805:G:H8	1.50	0.76
81:A2:2486:C:C6	81:A2:2486:C:H5''	2.20	0.76
18:BN:22:VAL:HG12	18:BN:66:VAL:HA	1.68	0.76
40:CC:326:LEU:CD2	40:CC:332:ALA:HB3	2.16	0.76
41:CD:22:ARG:HG2	41:CD:28:THR:OG1	1.85	0.76
81:A2:1066:C:H2'	81:A2:1067:A:H5'	1.68	0.75
81:A2:1219:C:N4	81:A2:1250:A:P	2.59	0.75
81:A2:1299:U:H6	81:A2:1299:U:H5''	1.50	0.75
81:A2:4140:G:H2'	81:A2:4141:U:O4'	1.86	0.75
81:A2:699:A:C2	81:A2:700:C:C5	2.74	0.75
82:A3:151:G:C2	82:A3:152:U:H1'	2.21	0.75
81:A2:2359:A:C2	81:A2:2807:G:H4'	2.21	0.75
58:CV:24:ALA:HA	81:A2:2825:G:H5'	1.68	0.75
81:A2:4485:C:H2'	81:A2:4486:U:C6	2.20	0.75
81:A2:4861:C:H2'	81:A2:4862:G:H8	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:6:C:O2	81:A2:6:C:H3'	1.86	0.75
60:CX:107:HIS:HD2	82:A3:131:G:H5'	1.50	0.75
4:B1:1079:C:C2'	4:B1:1080:A:H5'	2.16	0.75
4:B1:1287:A:H3'	4:B1:1312:G:H22	1.50	0.75
4:B1:1403:C:H3'	4:B1:1404:U:H6	1.51	0.75
4:B1:1637:A:H4'	4:B1:1638:G:H5''	1.68	0.75
4:B1:313:A:H2'	11:BG:191:ARG:NH2	2.00	0.75
4:B1:380:G:N1	4:B1:382:C:H3'	2.02	0.75
4:B1:44:U:H5'	4:B1:44:U:C6	2.20	0.75
9:BE:253:ASP:O	9:BE:257:ALA:HA	1.86	0.75
4:B1:560:A:H3'	14:BJ:171:GLY:HA3	1.68	0.75
52:CP:16:LYS:O	81:A2:391:A:H4'	1.86	0.75
81:A2:1421:C:H4'	81:A2:1422:C:OP1	1.86	0.75
81:A2:3623:G:C2'	81:A2:3624:C:H5'	2.16	0.75
81:A2:3686:A:H2'	81:A2:3687:A:H8	1.50	0.75
81:A2:4862:G:H4'	81:A2:4863:G:OP2	1.86	0.75
4:B1:120:U:H2'	4:B1:121:U:O4'	1.86	0.75
4:B1:1261:C:H5''	4:B1:1261:C:C6	2.21	0.75
4:B1:527:C:C4'	14:BJ:125:HIS:HB2	2.14	0.75
21:BQ:22:VAL:O	21:BQ:70:VAL:HA	1.86	0.75
41:CD:34:LYS:HE3	56:CT:30:TYR:OH	1.86	0.75
81:A2:1567:U:H2'	81:A2:1568:C:C6	2.20	0.75
81:A2:1804:A:H3'	81:A2:1805:G:C8	2.21	0.75
81:A2:2650:G:H4'	81:A2:2651:A:OP2	1.87	0.75
83:A4:32:A:C2	83:A4:41:G:C5	2.75	0.75
83:A4:34:C:H42	83:A4:47:G:H1'	1.51	0.75
4:B1:1040:G:H2'	4:B1:1041:G:C8	2.21	0.75
4:B1:1418:C:H2'	4:B1:1419:C:C5	2.20	0.75
4:B1:32:U:H1'	4:B1:516:A:C2	2.21	0.75
4:B1:557:U:H3'	4:B1:558:G:N7	2.00	0.75
39:CB:92:TYR:CE2	39:CB:101:THR:HB	2.20	0.75
40:CC:182:LYS:HA	81:A2:2276:A:C8	2.21	0.75
41:CD:69:ILE:HA	56:CT:31:MET:SD	2.27	0.75
51:CO:21:ALA:HA	51:CO:87:MET:CE	2.09	0.75
81:A2:1198:G:C2'	81:A2:1199:G:H5'	2.16	0.75
81:A2:2450:A:H5''	81:A2:2451:G:O5'	1.87	0.75
81:A2:4483:A:C4	81:A2:4519:A:N6	2.55	0.75
81:A2:4559:A:H4'	81:A2:4560:G:OP1	1.86	0.75
81:A2:916:A:H1'	81:A2:917:G:OP2	1.87	0.75
4:B1:1241:A:H1'	4:B1:1267:C:H1'	1.67	0.75
4:B1:1217:A:H1'	4:B1:1685:U:O2	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:84:A:H4'	29:BY:119:GLY:O	1.85	0.75
4:B1:884:C:O2'	4:B1:885:U:H5'	1.86	0.75
40:CC:8:ILE:HD11	40:CC:24:LEU:HD12	1.69	0.75
49:CM:114:LYS:HD3	49:CM:115:ALA:N	2.02	0.75
61:CY:58:VAL:HG13	61:CY:59:ARG:HG2	1.68	0.75
81:A2:2369:C:C5'	81:A2:2369:C:H6	1.98	0.75
81:A2:2395:A:H2'	81:A2:2396:C:H6	1.51	0.75
81:A2:2344:A:H61	81:A2:2765:U:H3	1.33	0.75
4:B1:969:U:H3'	81:A2:3681:A:O4'	1.87	0.75
81:A2:4806:G:C2	81:A2:4807:C:H1'	2.20	0.75
81:A2:4899:C:OP1	81:A2:4899:C:H4'	1.86	0.75
81:A2:944:A:H4'	81:A2:945:G:OP2	1.86	0.75
1:AV:39:U:OP2	4:B1:1058:A:C5'	2.34	0.75
4:B1:444:G:H21	4:B1:446:G:H3'	1.51	0.75
4:B1:987:A:H3'	4:B1:988:C:C5	2.22	0.75
4:B1:838:G:N7	29:BY:8:ARG:HA	2.02	0.75
49:CM:100:ARG:HB3	51:CO:198:THR:CG2	2.17	0.75
81:A2:1441:A:H2'	81:A2:1442:C:H6	1.50	0.75
81:A2:1812:U:H2'	81:A2:1813:G:H5'	1.68	0.75
81:A2:2547:U:H2'	81:A2:2548:C:C6	2.20	0.75
81:A2:374:A:H62	81:A2:397:C:H5	1.35	0.75
81:A2:4329:A:H8	81:A2:4329:A:O5'	1.69	0.75
42:CE:172:LEU:HD11	81:A2:4896:G:H5''	1.68	0.75
3:AX:50:U:H5'	4:B1:1825:A:C5'	2.10	0.75
4:B1:606:G:C3'	4:B1:607:U:H4'	2.16	0.75
4:B1:873:G:N7	54:CR:159:ALA:HB2	2.02	0.75
81:A2:1090:C:H2'	81:A2:1091:U:C6	2.21	0.75
81:A2:1673:C:H1'	81:A2:1821:A:C2	2.21	0.75
81:A2:186:G:O6	81:A2:221:U:H2'	1.86	0.75
81:A2:2386:U:H5''	81:A2:2387:C:H5	1.49	0.75
81:A2:2451:G:H2'	81:A2:2452:G:O4'	1.85	0.75
81:A2:2741:A:H4'	81:A2:2742:A:OP1	1.86	0.75
81:A2:308:A:H61	81:A2:4320:U:H3	1.34	0.75
81:A2:4827:G:O5'	81:A2:4830:G:H4'	1.87	0.75
4:B1:1016:U:C5	4:B1:1017:U:C5	2.75	0.75
4:B1:1039:C:H2'	4:B1:1040:G:H8	1.51	0.75
4:B1:1575:G:H2'	4:B1:1576:G:C8	2.22	0.75
4:B1:990:A:N6	4:B1:992:A:H1'	2.01	0.75
3:AX:53:U:C2	8:BD:146:ARG:NE	2.55	0.75
43:CF:69:ILE:HD12	81:A2:716:U:H5'	1.67	0.75
81:A2:1070:G:H2'	81:A2:1071:C:C6	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1252:C:H2'	81:A2:1253:G:C8	2.20	0.75
81:A2:1267:G:C4	81:A2:1268:G:H1'	2.22	0.75
81:A2:1284:C:H2'	81:A2:1284:C:O2	1.86	0.75
81:A2:1415:G:H2'	81:A2:1416:C:C6	2.21	0.75
81:A2:1635:U:H6	81:A2:1635:U:H5''	1.52	0.75
81:A2:2034:G:H5'	81:A2:2034:G:H8	1.50	0.75
81:A2:2549:C:C5'	81:A2:2737:G:H8	1.98	0.75
81:A2:3836:A:H2'	81:A2:3837:G:H5'	1.69	0.75
81:A2:3877:A:N7	81:A2:3878:C:H6	1.84	0.75
81:A2:385:G:H2'	81:A2:387:A:O5'	1.86	0.75
2:AW:56:C:C5	81:A2:4014:A:N6	2.54	0.75
4:B1:1439:A:H2'	4:B1:1440:C:C6	2.21	0.75
4:B1:43:U:H5'	4:B1:44:U:C5	2.13	0.75
39:CB:123:HIS:CE1	39:CB:124:LYS:HG2	2.22	0.75
40:CC:164:THR:HG23	81:A2:221:U:O2	1.86	0.75
53:CQ:70:MET:SD	53:CQ:96:PRO:HG3	2.27	0.75
81:A2:1332:C:H3'	81:A2:1333:G:H8	1.49	0.74
81:A2:1727:U:H6	81:A2:1727:U:H5''	1.51	0.74
81:A2:2453:G:H2'	81:A2:2454:A:O4'	1.87	0.74
81:A2:2551:G:OP1	81:A2:2551:G:H3'	1.86	0.74
81:A2:2568:A:H2'	81:A2:2569:U:H5'	1.69	0.74
81:A2:3676:U:H2'	81:A2:3677:C:C5	2.21	0.74
81:A2:3697:A:H2'	81:A2:3698:U:O4'	1.86	0.74
81:A2:481:C:C3'	81:A2:482:G:H5''	2.17	0.74
81:A2:4905:U:H5''	81:A2:4905:U:H6	1.50	0.74
4:B1:1166:G:H1	4:B1:1193:U:H3	1.33	0.74
4:B1:130:G:H3'	4:B1:131:C:H5''	1.69	0.74
4:B1:658:U:H5''	4:B1:659:G:C5	2.21	0.74
4:B1:91:A:H5''	4:B1:92:A:C5'	2.17	0.74
62:CZ:97:ASN:O	62:CZ:100:VAL:HG12	1.87	0.74
81:A2:2359:A:H2	81:A2:2807:G:H4'	1.51	0.74
81:A2:3942:G:H2'	81:A2:3943:G:H5'	1.67	0.74
4:B1:849:A:H2'	4:B1:850:C:H6	1.53	0.74
4:B1:933:G:O6	4:B1:992:A:H2	1.69	0.74
6:BB:49:VAL:HG11	6:BB:58:ALA:HB2	1.69	0.74
81:A2:1460:C:C6	81:A2:1460:C:H3'	2.23	0.74
81:A2:1930:G:C5'	81:A2:1930:G:H8	2.00	0.74
81:A2:2394:A:H3'	81:A2:2395:A:H5''	1.68	0.74
81:A2:2469:C:H2'	81:A2:2470:G:H8	1.53	0.74
81:A2:2638:U:O2	81:A2:2638:U:H2'	1.86	0.74
81:A2:351:A:C2	82:A3:24:G:C4	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4080:U:H2'	81:A2:4081:C:O4'	1.87	0.74
81:A2:419:G:H2'	81:A2:420:A:C8	2.21	0.74
81:A2:426:A:C8	81:A2:427:C:C5	2.75	0.74
51:CO:114:LYS:O	81:A2:4717:U:H5''	1.88	0.74
81:A2:960:G:H8	81:A2:960:G:H5'	1.53	0.74
83:A4:67:C:O2	83:A4:68:C:H1'	1.87	0.74
4:B1:1427:C:H3'	4:B1:1427:C:H6	1.52	0.74
4:B1:1755:C:H2'	4:B1:1756:C:C6	2.21	0.74
48:CL:111:GLN:CB	81:A2:510:C:H4'	2.17	0.74
54:CR:130:ASN:OD1	81:A2:1550:G:H1'	1.87	0.74
60:CX:56:ARG:CA	81:A2:14:C:H4'	2.18	0.74
81:A2:1462:C:H3'	81:A2:1463:G:C8	2.21	0.74
81:A2:336:C:H2'	81:A2:337:G:C8	2.20	0.74
81:A2:400:G:H22	81:A2:2305:U:C5'	1.93	0.74
81:A2:4534:U:H3	81:A2:4910:A:H4'	1.52	0.74
81:A2:4895:C:H6	81:A2:4895:C:H3'	1.50	0.74
2:AW:56:C:C4	81:A2:3927:G:C5	2.75	0.74
4:B1:1100:A:H2'	4:B1:1101:U:H5'	1.67	0.74
4:B1:112:U:C5'	4:B1:113:G:H5'	2.15	0.74
4:B1:1483:A:H4'	8:BD:160:SER:HB3	1.67	0.74
4:B1:1543:U:H1'	4:B1:1544:C:O5'	1.87	0.74
4:B1:338:G:H2'	4:B1:339:A:C8	2.23	0.74
4:B1:454:U:H2'	4:B1:455:A:C8	2.22	0.74
4:B1:834:C:H4'	4:B1:835:C:O5'	1.86	0.74
53:CQ:42:THR:CG2	81:A2:1409:C:H5''	2.18	0.74
81:A2:1590:C:H1'	81:A2:1591:G:N7	2.03	0.74
81:A2:4117:A:H1'	81:A2:4118:C:P	2.28	0.74
81:A2:4578:G:H2'	81:A2:4579:U:H5'	1.69	0.74
81:A2:4661:A:C2'	81:A2:4662:G:H5'	2.17	0.74
81:A2:958:C:OP2	81:A2:971:C:H1'	1.88	0.74
4:B1:1260:A:C2	4:B1:1620:A:H1'	2.21	0.74
4:B1:1412:C:H2'	4:B1:1414:A:OP1	1.88	0.74
4:B1:342:C:N4	4:B1:343:A:H62	1.85	0.74
3:AX:58:U:OP1	7:BC:151:ILE:HG21	1.87	0.74
7:BC:193:VAL:HG11	7:BC:240:THR:HG23	1.70	0.74
22:BR:71:ILE:HD13	22:BR:75:GLU:HB2	1.69	0.74
40:CC:336:ARG:NE	81:A2:930:C:H4'	2.02	0.74
81:A2:172:C:O2'	81:A2:173:G:H5'	1.88	0.74
81:A2:1742:C:H3'	81:A2:1743:G:H5''	1.70	0.74
81:A2:2543:G:H2'	81:A2:2544:G:C8	2.21	0.74
81:A2:4189:U:H5''	81:A2:4189:U:H6	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4374:A:H2'	81:A2:4382:A:C2	2.21	0.74
81:A2:4510:G:H2'	81:A2:4511:U:H5'	1.70	0.74
81:A2:4526:U:H6	81:A2:4526:U:H3'	1.52	0.74
81:A2:4697:C:H2'	81:A2:4698:C:C6	2.23	0.74
81:A2:4711:U:N3	81:A2:4903:C:H5	1.85	0.74
1:AV:24:G:O2'	81:A2:3739:U:OP1	2.04	0.74
4:B1:1516:G:H2'	4:B1:1517:G:H5'	1.68	0.74
81:A2:1299:U:H5''	81:A2:1299:U:C6	2.21	0.74
81:A2:1420:U:H3'	81:A2:1420:U:C6	2.22	0.74
81:A2:1811:G:H2'	81:A2:1812:U:O4'	1.88	0.74
81:A2:3574:C:H1'	81:A2:3575:U:H5'	1.69	0.74
1:AV:76:A:C2'	81:A2:4357:A:O2'	2.36	0.74
81:A2:1942:A:C5	81:A2:4654:G:C8	2.76	0.74
81:A2:64:A:H3'	81:A2:110:C:H41	1.50	0.74
4:B1:1070:A:H2'	4:B1:1071:G:O4'	1.88	0.74
4:B1:1296:U:H2'	4:B1:1297:U:H5'	1.69	0.74
4:B1:1787:G:H2'	4:B1:1788:A:H8	1.52	0.74
4:B1:1825:A:O5'	4:B1:1825:A:H8	1.70	0.74
4:B1:749:U:H2'	4:B1:750:C:C6	2.22	0.74
13:BI:169:GLY:HA3	81:A2:4980:C:OP2	1.88	0.74
81:A2:1349:C:H5''	81:A2:1350:G:C8	2.23	0.74
81:A2:705:U:H2'	81:A2:706:C:C6	2.21	0.74
4:B1:1117:C:H3'	4:B1:1118:C:H5''	1.69	0.74
4:B1:1331:C:H5''	4:B1:1331:C:O2	1.87	0.74
4:B1:1370:A:H2'	4:B1:1372:U:H5'	1.70	0.74
4:B1:1567:G:H2'	4:B1:1568:C:H5'	1.68	0.74
4:B1:899:U:H2'	4:B1:900:C:C6	2.22	0.74
81:A2:1091:U:H2'	81:A2:1092:C:C6	2.22	0.74
53:CQ:69:LYS:HB3	81:A2:1436:G:H4'	1.69	0.74
81:A2:1464:C:H2'	81:A2:1465:C:C1'	2.18	0.74
81:A2:3943:G:H5'	81:A2:3943:G:C8	2.17	0.74
81:A2:4287:C:H2'	81:A2:4288:G:C8	2.23	0.74
81:A2:4838:C:H2'	81:A2:4839:G:H5''	1.67	0.74
81:A2:887:C:H2'	81:A2:888:C:H6	1.53	0.74
81:A2:923:G:O2'	81:A2:924:C:H5'	1.87	0.74
2:AW:20:U:C2'	2:AW:21:A:H5'	2.18	0.74
4:B1:1116:C:H2'	4:B1:1116:C:O2	1.87	0.74
4:B1:186:C:H2'	4:B1:187:G:C8	2.23	0.74
4:B1:207:G:H1'	4:B1:208:G:N7	2.02	0.74
4:B1:487:U:H1'	4:B1:488:U:OP1	1.87	0.74
4:B1:574:A:H5'	4:B1:575:A:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BP:33:LEU:HD22	20:BP:87:PRO:HG2	1.70	0.74
81:A2:1229:C:H2'	81:A2:1230:C:C6	2.22	0.74
81:A2:1457:C:H2'	81:A2:1458:G:C8	2.22	0.74
81:A2:2604:C:H42	81:A2:4609:G:N2	1.86	0.74
81:A2:4659:U:H4'	81:A2:4660:A:OP1	1.88	0.74
81:A2:473:G:H4'	81:A2:474:G:OP2	1.87	0.74
42:CE:172:LEU:HA	81:A2:4897:C:C6	2.22	0.74
81:A2:977:G:H2'	81:A2:978:G:C5'	2.18	0.74
83:A4:67:C:H2'	83:A4:68:C:O4'	1.87	0.74
4:B1:10:G:C8	4:B1:1697:A:C2	2.76	0.74
4:B1:1643:U:H1'	21:BQ:142:GLN:OE1	1.88	0.74
4:B1:444:G:N2	4:B1:447:A:H5''	2.01	0.74
4:B1:442:C:H42	4:B1:449:A:H62	1.36	0.74
4:B1:743:U:H4'	4:B1:744:G:OP2	1.88	0.74
45:CH:23:ARG:HH11	81:A2:4724:G:H5'	1.53	0.74
81:A2:1163:C:H2'	81:A2:1164:A:H5'	1.70	0.73
81:A2:2658:G:H2'	81:A2:2659:G:H8	1.53	0.73
81:A2:264:U:H2'	81:A2:265:C:C6	2.22	0.73
81:A2:2689:G:C2'	81:A2:2690:C:H5'	2.18	0.73
81:A2:4703:A:N1	81:A2:4911:A:N1	2.35	0.73
4:B1:65:C:H4'	11:BG:133:LEU:HD22	1.70	0.73
4:B1:862:A:N3	27:BW:105:THR:HG22	2.03	0.73
20:BP:30:TYR:HA	20:BP:33:LEU:HD21	1.69	0.73
81:A2:1422:C:H2'	81:A2:1423:A:C8	2.23	0.73
81:A2:1461:G:N3	81:A2:1461:G:H3'	2.03	0.73
81:A2:3592:C:H6	81:A2:3592:C:H3'	1.52	0.73
81:A2:977:G:H2'	81:A2:978:G:H5''	1.70	0.73
82:A3:17:A:H2'	82:A3:18:U:H6	1.51	0.73
4:B1:1520:G:H5'	4:B1:1521:C:H5	1.53	0.73
4:B1:1771:G:H2'	4:B1:1772:C:C6	2.23	0.73
4:B1:96:C:H1'	4:B1:474:G:H5'	1.71	0.73
5:BA:6:ASP:O	26:BV:83:PHE:HB3	1.88	0.73
39:CB:258:HIS:CG	39:CB:259:PRO:CD	2.70	0.73
62:CZ:109:LYS:HB2	81:A2:2532:G:H5''	1.69	0.73
81:A2:1083:C:O2	81:A2:1083:C:H2'	1.88	0.73
81:A2:1388:G:H21	81:A2:1389:C:H1'	1.52	0.73
81:A2:3758:C:H5	81:A2:3759:U:C2	2.07	0.73
81:A2:4025:C:H3'	81:A2:4025:C:C6	2.23	0.73
81:A2:3770:U:C4'	81:A2:4456:A:H2	2.01	0.73
81:A2:4729:U:H2'	81:A2:4730:C:H6	1.52	0.73
4:B1:147:A:H61	4:B1:170:A:H8	1.33	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:812:A:H2'	4:B1:813:A:H8	1.53	0.73
4:B1:886:A:OP1	4:B1:886:A:H3'	1.87	0.73
5:BA:9:GLN:HB2	26:BV:83:PHE:CD2	2.23	0.73
11:BG:77:LEU:O	11:BG:92:ARG:HA	1.88	0.73
42:CE:227:HIS:ND1	81:A2:1273:G:H2'	2.03	0.73
81:A2:1515:U:H2'	81:A2:1516:A:C8	2.20	0.73
81:A2:2266:C:H1'	81:A2:2297:G:H2'	1.70	0.73
81:A2:2278:C:H2'	81:A2:2279:C:H6	1.51	0.73
81:A2:2591:C:O2'	81:A2:2785:G:H5''	1.88	0.73
81:A2:48:G:C6	81:A2:281:U:H4'	2.23	0.73
81:A2:4032:C:H3'	81:A2:4033:G:C5'	2.19	0.73
81:A2:4072:A:H2'	81:A2:4073:G:H8	1.54	0.73
47:CJ:13:ARG:HH21	83:A4:54:A:H4'	1.50	0.73
1:AV:75:C:O2'	81:A2:3879:C:H5''	1.88	0.73
4:B1:491:C:H5''	4:B1:574:A:N1	2.03	0.73
4:B1:84:A:O2'	4:B1:85:A:H8	1.67	0.73
4:B1:928:G:HO2'	4:B1:929:G:H8	1.34	0.73
6:BB:131:ASP:HB3	6:BB:180:ASP:OD2	1.87	0.73
40:CC:56:GLU:HG2	82:A3:26:C:C1'	2.18	0.73
61:CY:123:ALA:CA	61:CY:126:ARG:HB2	2.18	0.73
62:CZ:10:VAL:O	62:CZ:83:THR:HG22	1.87	0.73
81:A2:1454:G:C4	81:A2:1455:C:H1'	2.24	0.73
81:A2:15:A:H8	81:A2:15:A:OP2	1.71	0.73
81:A2:2608:U:OP1	81:A2:2608:U:H3'	1.88	0.73
81:A2:3613:U:H2'	81:A2:3614:U:H5'	1.69	0.73
81:A2:4803:C:N3	81:A2:4804:G:H1'	2.03	0.73
13:BI:92:ARG:HG2	81:A2:4972:G:OP1	1.89	0.73
81:A2:700:C:H2'	81:A2:701:C:C4'	2.18	0.73
81:A2:71:C:C2'	81:A2:72:C:H5'	2.18	0.73
4:B1:1120:U:H5''	4:B1:1120:U:H6	1.54	0.73
4:B1:1698:C:H4'	4:B1:1699:A:H8	1.49	0.73
4:B1:574:A:H3'	4:B1:575:A:H8	1.53	0.73
4:B1:582:U:H3'	4:B1:583:A:H8	1.54	0.73
4:B1:587:A:H2'	4:B1:592:C:N4	2.02	0.73
81:A2:1222:G:H2'	81:A2:1223:C:C6	2.23	0.73
81:A2:441:G:H1'	81:A2:1274:A:C5'	2.18	0.73
81:A2:19:G:H4'	81:A2:20:U:OP1	1.86	0.73
81:A2:219:C:H2'	81:A2:220:G:C5'	2.19	0.73
81:A2:2624:A:H3'	81:A2:2625:G:C8	2.24	0.73
81:A2:386:A:O5'	81:A2:386:A:H8	1.71	0.73
81:A2:4040:C:H2'	81:A2:4041:A:H8	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4183:C:C2'	81:A2:4184:A:H5'	2.19	0.73
81:A2:4807:C:O2'	81:A2:4808:C:H5'	1.87	0.73
81:A2:4899:C:H2'	81:A2:4900:G:O4'	1.87	0.73
81:A2:737:G:N2	81:A2:901:A:C2	2.54	0.73
81:A2:919:A:H2'	81:A2:920:C:H5''	1.70	0.73
81:A2:951:C:H2'	81:A2:952:C:H6	1.52	0.73
4:B1:1286:G:H1'	17:BM:34:GLY:HA3	1.68	0.73
4:B1:1851:A:H8	4:B1:1851:A:H5''	1.53	0.73
4:B1:70:G:H2'	4:B1:71:G:C4'	2.18	0.73
8:BD:72:VAL:HG13	15:BK:68:TYR:CD1	2.24	0.73
48:CL:59:VAL:CG1	81:A2:74:G:H5''	2.19	0.73
81:A2:1715:A:H1'	83:A4:78:C:O2'	1.88	0.73
81:A2:170:C:H2'	81:A2:171:C:C6	2.23	0.73
81:A2:2665:G:C6	81:A2:2666:C:C4	2.76	0.73
81:A2:2550:A:P	81:A2:2736:G:C8	2.80	0.73
81:A2:3733:U:H2'	81:A2:3734:G:N7	2.04	0.73
81:A2:3924:G:N2	81:A2:4025:C:H42	1.86	0.73
81:A2:4838:C:H3'	81:A2:4839:G:C5'	2.18	0.73
16:BL:71:ARG:HH12	16:BL:73:LEU:HD11	1.54	0.73
30:BZ:58:LEU:HD13	30:BZ:77:LEU:HD22	1.70	0.73
40:CC:326:LEU:HB3	81:A2:1218:A:H62	1.54	0.73
49:CM:132:LYS:NZ	81:A2:4849:A:H3'	2.04	0.73
81:A2:1355:C:C2'	81:A2:1356:C:H5'	2.19	0.73
81:A2:1942:A:H2'	81:A2:1943:G:C8	2.24	0.73
81:A2:2573:G:H2'	81:A2:2574:G:C8	2.24	0.73
81:A2:2595:G:C2'	81:A2:2596:G:H5'	2.18	0.73
81:A2:4303:U:H2'	81:A2:4304:U:C6	2.24	0.73
81:A2:4617:U:H3'	81:A2:4618:G:H5''	1.70	0.73
81:A2:918:C:OP2	81:A2:918:C:H6	1.70	0.73
81:A2:949:G:N7	81:A2:950:A:H1'	2.04	0.73
83:A4:26:C:H2'	83:A4:27:G:O4'	1.89	0.73
4:B1:1164:G:H3'	4:B1:1165:G:N2	2.02	0.73
4:B1:312:G:H4'	4:B1:313:A:OP2	1.88	0.73
8:BD:41:VAL:HG22	8:BD:46:THR:HG23	1.69	0.73
14:BJ:133:ARG:O	14:BJ:162:ARG:HD2	1.89	0.73
44:CG:58:PRO:HB3	81:A2:2448:G:H1'	1.71	0.73
81:A2:1821:A:O5'	81:A2:1821:A:H8	1.72	0.73
81:A2:2294:G:H2'	81:A2:2296:G:OP2	1.89	0.73
81:A2:2853:G:H3'	81:A2:2853:G:N3	2.04	0.73
81:A2:4717:U:H4'	81:A2:4718:C:OP2	1.87	0.73
81:A2:489:C:H2'	81:A2:490:G:C8	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:642:C:H6	81:A2:642:C:H5'	1.52	0.73
81:A2:475:U:O3'	81:A2:658:G:H4'	1.89	0.73
4:B1:1087:A:H3'	4:B1:1088:U:H5'	1.71	0.73
4:B1:169:U:H1'	11:BG:133:LEU:HD12	1.69	0.73
4:B1:1807:C:H2'	4:B1:1808:U:C6	2.24	0.73
4:B1:368:U:H4'	4:B1:369:C:OP1	1.87	0.73
4:B1:65:C:C2'	4:B1:66:G:H3'	2.19	0.73
38:CA:186:TYR:CA	38:CA:196:TRP:CE2	2.70	0.73
81:A2:1244:C:H2'	81:A2:1245:G:H8	1.54	0.73
81:A2:1281:C:H3'	81:A2:1281:C:C6	2.23	0.73
81:A2:1352:A:H2	81:A2:1353:A:C5	2.07	0.73
81:A2:1717:A:O2'	81:A2:1718:G:H5'	1.89	0.73
81:A2:2047:A:H5'	81:A2:2047:A:H8	1.52	0.73
81:A2:4374:A:H2'	81:A2:4382:A:N1	2.04	0.73
81:A2:4561:U:H2'	81:A2:4562:A:H8	1.49	0.73
81:A2:4616:A:H4'	81:A2:4617:U:H5'	1.71	0.73
81:A2:656:G:H2'	81:A2:657:C:C5'	2.14	0.73
4:B1:1079:C:H2'	4:B1:1080:A:H5'	1.69	0.73
4:B1:217:A:H4'	4:B1:341:C:C5'	2.19	0.73
4:B1:673:G:H1'	4:B1:1084:A:C4	2.23	0.73
4:B1:952:G:H1'	19:BO:52:THR:HB	1.70	0.73
13:BI:131:PRO:HG2	13:BI:138:ASN:CG	2.09	0.73
4:B1:1338:G:H4'	25:BU:74:SER:H	1.54	0.73
44:CG:156:VAL:HG13	44:CG:184:ILE:HD12	1.69	0.73
81:A2:1388:G:H22	81:A2:1390:U:H1'	1.52	0.72
81:A2:1420:U:H2'	81:A2:1421:C:C5	2.24	0.72
81:A2:382:U:H2'	81:A2:383:U:C6	2.24	0.72
81:A2:3944:C:H2'	81:A2:3945:C:H6	1.52	0.72
4:B1:1217:A:O2'	4:B1:1685:U:H1'	1.89	0.72
4:B1:1644:C:H4'	4:B1:1645:C:OP1	1.88	0.72
4:B1:216:C:H2'	4:B1:217:A:H8	1.54	0.72
4:B1:815:U:H2'	4:B1:816:A:H8	1.51	0.72
39:CB:305:THR:HG21	39:CB:365:LEU:O	1.89	0.72
81:A2:2763:C:H4'	81:A2:2764:A:C8	2.23	0.72
81:A2:269:G:H2'	81:A2:320:A:N6	2.04	0.72
81:A2:3696:A:O2'	81:A2:3697:A:H8	1.72	0.72
81:A2:4688:A:H2'	81:A2:4694:G:H21	1.52	0.72
4:B1:528:A:H2'	4:B1:529:A:O4'	1.89	0.72
4:B1:689:U:H3'	4:B1:690:G:H8	1.50	0.72
13:BI:36:THR:O	13:BI:95:THR:HA	1.89	0.72
46:CI:174:THR:HG23	46:CI:176:PHE:H	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:186:G:H8	81:A2:186:G:P	2.12	0.72
81:A2:2667:C:H2'	81:A2:2668:U:H6	1.53	0.72
81:A2:3725:A:C2'	81:A2:3726:G:H5'	2.20	0.72
81:A2:3836:A:C2'	81:A2:3837:G:H5'	2.18	0.72
81:A2:4173:A:H5''	81:A2:4174:A:H5'	1.71	0.72
81:A2:4527:G:C2'	81:A2:4528:A:H5'	2.19	0.72
81:A2:4700:C:C3'	81:A2:4701:G:H5''	2.18	0.72
81:A2:4883:C:O2'	81:A2:4884:C:H5'	1.89	0.72
4:B1:1542:C:H5''	4:B1:1542:C:C6	2.23	0.72
4:B1:738:C:H2'	4:B1:739:C:C6	2.24	0.72
4:B1:750:C:H2'	4:B1:751:G:H8	1.54	0.72
15:BK:32:HIS:H	15:BK:33:PRO:HD3	1.53	0.72
40:CC:146:GLU:HB3	40:CC:175:LYS:HB3	1.70	0.72
81:A2:2549:C:O4'	81:A2:2737:G:C8	2.43	0.72
4:B1:1606:G:OP2	4:B1:1606:G:H8	1.72	0.72
4:B1:1552:G:H2'	8:BD:3:VAL:HG21	1.72	0.72
61:CY:123:ALA:N	61:CY:126:ARG:HB2	2.05	0.72
81:A2:1710:C:C6	81:A2:1710:C:H5''	2.24	0.72
81:A2:1730:A:H61	81:A2:1758:U:H3	1.36	0.72
81:A2:2040:C:H3'	81:A2:2041:G:C5'	2.12	0.72
81:A2:1862:C:H4'	81:A2:2048:U:C5	2.25	0.72
81:A2:2527:G:H3'	81:A2:2528:A:C5'	2.19	0.72
81:A2:3604:A:H3'	81:A2:3605:C:H5''	1.71	0.72
81:A2:3735:A:N3	81:A2:3735:A:H2'	2.04	0.72
81:A2:3908:G:H8	81:A2:3908:G:OP2	1.72	0.72
81:A2:4005:C:H2'	81:A2:4006:C:C6	2.25	0.72
81:A2:4210:G:H5''	81:A2:4211:A:OP2	1.89	0.72
81:A2:4825:G:H3'	81:A2:4825:G:P	2.28	0.72
4:B1:1555:U:H4'	4:B1:1556:A:OP1	1.89	0.72
4:B1:890:U:H3'	4:B1:891:G:C5'	2.19	0.72
9:BE:95:THR:HB	9:BE:97:GLU:OE2	1.90	0.72
81:A2:2000:C:H3'	81:A2:2001:C:C5	2.24	0.72
81:A2:2029:C:H5''	81:A2:2030:G:C8	2.25	0.72
81:A2:2375:U:H1'	81:A2:2376:G:OP1	1.89	0.72
81:A2:2523:G:C4	81:A2:2524:G:C8	2.77	0.72
4:B1:1721:U:O4	81:A2:3599:A:OP1	2.08	0.72
81:A2:4004:G:H2'	81:A2:4005:C:C6	2.25	0.72
81:A2:4249:U:O2'	81:A2:4280:G:H4'	1.90	0.72
81:A2:924:C:C3'	81:A2:925:C:H5''	2.20	0.72
1:AV:76:A:N1	81:A2:4156:G:C6	2.58	0.72
4:B1:1576:G:C2'	4:B1:1577:G:H5'	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:15:U:C2'	4:B1:16:G:H5'	2.19	0.72
4:B1:798:G:H1'	4:B1:867:G:H21	1.53	0.72
47:CJ:175:LEU:HB3	47:CJ:176:PRO:HD2	1.71	0.72
47:CJ:33:LEU:HD22	47:CJ:70:VAL:HG22	1.71	0.72
49:CM:62:LEU:HD21	49:CM:82:ILE:HG13	1.72	0.72
81:A2:1178:G:C3'	81:A2:1179:G:H5''	2.19	0.72
81:A2:1798:G:H2'	81:A2:1799:C:C6	2.24	0.72
81:A2:2431:U:H2'	81:A2:2432:G:H5''	1.72	0.72
81:A2:2505:G:H8	81:A2:2506:A:H5''	1.54	0.72
81:A2:1569:C:H4'	81:A2:2833:C:O2'	1.90	0.72
81:A2:333:G:C2'	81:A2:334:C:H5''	2.18	0.72
81:A2:4410:U:O2'	81:A2:4411:G:H5'	1.88	0.72
81:A2:4565:A:H2'	81:A2:4566:G:C8	2.25	0.72
82:A3:24:G:H8	82:A3:24:G:H5''	1.55	0.72
4:B1:184:G:N7	4:B1:185:G:H1'	2.05	0.72
4:B1:571:U:H3'	4:B1:572:U:O4'	1.87	0.72
4:B1:58:C:N4	4:B1:88:G:C2	2.57	0.72
61:CY:3:PHE:O	81:A2:1347:C:H4'	1.89	0.72
81:A2:2663:G:H3'	81:A2:2664:U:C4'	2.19	0.72
81:A2:3640:G:H2'	81:A2:3641:G:C8	2.25	0.72
81:A2:967:C:H2'	81:A2:967:C:O2	1.90	0.72
2:AW:37:MIA:C13	10:BF:133:THR:C	2.51	0.72
2:AW:18:G:H1'	2:AW:58:A:C2	2.25	0.72
12:BH:79:LEU:HD22	12:BH:94:PHE:CZ	2.24	0.72
38:CA:186:TYR:CA	38:CA:196:TRP:CZ2	2.72	0.72
41:CD:57:ASN:ND2	83:A4:27:G:H5''	2.05	0.72
42:CE:168:LEU:HD21	42:CE:214:ASP:HA	1.72	0.72
81:A2:204:G:H1'	81:A2:397:C:OP1	1.90	0.72
81:A2:2442:C:H2'	81:A2:2443:G:C8	2.25	0.72
81:A2:3722:G:H2'	81:A2:3723:G:C1'	2.20	0.72
81:A2:4192:U:H4'	81:A2:4193:A:O5'	1.90	0.72
81:A2:4373:C:H3'	81:A2:4373:C:O2	1.90	0.72
81:A2:4399:U:C2'	81:A2:4400:G:H5'	2.20	0.72
41:CD:266:TRP:HB2	83:A4:22:A:C6	2.25	0.72
83:A4:89:G:H2'	83:A4:90:A:C8	2.24	0.72
4:B1:1082:A:H2'	4:B1:1084:A:C5'	2.19	0.72
4:B1:747:U:C2	4:B1:748:C:H2'	2.25	0.72
4:B1:77:A:N3	4:B1:77:A:H2'	2.04	0.72
38:CA:77:ILE:HD11	38:CA:115:CYS:HB2	1.72	0.72
42:CE:190:HIS:CD2	42:CE:192:LYS:HB3	2.25	0.72
48:CL:47:ALA:HB1	48:CL:48:PRO:HD2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:170:C:H2'	81:A2:171:C:H6	1.55	0.72
81:A2:3592:C:C6	81:A2:3592:C:H3'	2.24	0.72
81:A2:440:C:C2'	81:A2:441:G:H5''	2.19	0.72
81:A2:4616:A:H1'	81:A2:4617:U:OP2	1.90	0.72
83:A4:103:A:H2'	83:A4:104:C:H5'	1.70	0.72
4:B1:1203:G:H8	4:B1:1699:A:C2	2.08	0.72
4:B1:1503:C:H2'	4:B1:1504:U:C6	2.24	0.72
4:B1:1731:A:H2'	4:B1:1732:G:C8	2.24	0.72
4:B1:1815:A:H3'	4:B1:1816:G:H8	1.54	0.72
4:B1:1849:G:C1'	81:A2:3735:A:C2'	2.68	0.72
4:B1:1853:C:H2'	4:B1:1854:U:C6	2.25	0.72
4:B1:399:C:H4'	4:B1:400:C:OP2	1.89	0.72
4:B1:60:A:H5'	4:B1:501:C:H5	1.53	0.72
6:BB:63:LYS:O	6:BB:88:THR:HB	1.89	0.72
48:CL:130:LYS:HD2	48:CL:130:LYS:N	2.05	0.72
57:CU:80:LYS:HB3	57:CU:110:TYR:CE2	2.25	0.72
53:CQ:65:ARG:NH2	81:A2:1481:G:H2'	2.04	0.71
81:A2:1633:G:H22	81:A2:1656:U:H5''	1.54	0.71
81:A2:1797:G:H21	81:A2:1801:U:H5''	1.54	0.71
81:A2:4549:A:H1'	81:A2:4550:A:H1'	1.71	0.71
81:A2:4917:C:H2'	81:A2:4918:G:C8	2.24	0.71
83:A4:86:G:H2'	83:A4:87:G:H5'	1.72	0.71
3:AX:47:U:H5''	4:B1:1830:U:C4	2.24	0.71
3:AX:60:U:N1	3:AX:61:U:C5	2.55	0.71
4:B1:1378:A:C4	5:BA:105:PRO:HB3	2.24	0.71
4:B1:433:A:H5''	13:BI:25:ARG:HH21	1.53	0.71
4:B1:912:C:H2'	4:B1:912:C:OP2	1.90	0.71
81:A2:1229:C:H2'	81:A2:1230:C:H6	1.55	0.71
81:A2:1919:A:H2	81:A2:4394:C:H5''	1.56	0.71
81:A2:489:C:H2'	81:A2:490:G:H8	1.55	0.71
82:A3:80:A:H2'	82:A3:81:C:C5	2.25	0.71
4:B1:1129:G:H3'	4:B1:1130:G:C8	2.25	0.71
4:B1:414:A:H8	4:B1:414:A:O5'	1.73	0.71
14:BJ:29:LEU:HA	14:BJ:32:ILE:HD12	1.70	0.71
41:CD:25:GLU:O	47:CJ:147:ARG:HA	1.90	0.71
42:CE:149:ILE:HG21	42:CE:270:TYR:HE2	1.54	0.71
81:A2:1220:G:C8	81:A2:1221:C:C5	2.78	0.71
81:A2:1278:C:O2'	81:A2:1279:G:H5'	1.90	0.71
81:A2:2051:C:H2'	81:A2:2052:C:C6	2.25	0.71
40:CC:165:LYS:NZ	81:A2:219:C:OP2	2.19	0.71
81:A2:2494:A:H2'	81:A2:2495:G:C8	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2527:G:OP1	81:A2:2527:G:H4'	1.89	0.71
81:A2:3724:G:P	81:A2:3724:G:H2'	2.30	0.71
81:A2:4358:C:H6	81:A2:4358:C:H3'	1.55	0.71
81:A2:4668:A:H5'	81:A2:4669:U:H5	1.56	0.71
4:B1:1208:A:OP2	4:B1:1208:A:H4'	1.90	0.71
4:B1:1255:G:H3'	4:B1:1256:G:C5'	2.20	0.71
4:B1:1469:A:H2'	4:B1:1470:C:C6	2.26	0.71
4:B1:1579:A:H2'	4:B1:1580:A:O4'	1.90	0.71
4:B1:1732:G:H5'	81:A2:2862:A:C5'	2.15	0.71
4:B1:35:C:H2'	4:B1:36:U:C6	2.24	0.71
4:B1:465:A:H1'	4:B1:466:G:OP2	1.90	0.71
4:B1:672:A:H2	4:B1:1162:C:HO2'	1.36	0.71
15:BK:32:HIS:N	15:BK:33:PRO:HD3	2.04	0.71
27:BW:16:ASN:O	27:BW:20:ARG:HD2	1.90	0.71
47:CJ:167:GLN:NE2	47:CJ:174:ILE:HG13	2.05	0.71
81:A2:1274:A:C8	81:A2:1274:A:H5'	2.23	0.71
81:A2:1492:U:H2'	81:A2:1493:U:C6	2.25	0.71
81:A2:1858:G:H3'	81:A2:1859:C:C5'	2.20	0.71
81:A2:2553:G:C8	81:A2:2553:G:H5''	2.23	0.71
81:A2:3724:G:OP2	81:A2:3724:G:H2'	1.89	0.71
81:A2:4030:A:H2'	81:A2:4031:U:O4'	1.90	0.71
81:A2:4830:G:C8	81:A2:4831:U:H1'	2.26	0.71
81:A2:509:G:H2'	81:A2:510:C:H5'	1.71	0.71
81:A2:63:G:O2'	81:A2:76:A:H1'	1.91	0.71
81:A2:7:C:H2'	81:A2:8:U:C6	2.24	0.71
1:AV:30:G:C2'	1:AV:31:A:H5'	2.20	0.71
4:B1:1021:U:H1'	4:B1:1022:U:OP2	1.90	0.71
4:B1:1414:A:H2'	4:B1:1415:C:O4'	1.89	0.71
4:B1:1426:U:H3'	4:B1:1427:C:H5'	1.71	0.71
4:B1:1567:G:C2'	4:B1:1568:C:H5'	2.19	0.71
4:B1:1700:C:H4'	4:B1:1701:C:H5'	1.72	0.71
3:AX:47:U:C5'	4:B1:1830:U:C4	2.74	0.71
4:B1:1704:C:H1'	4:B1:1832:A:N1	2.05	0.71
4:B1:341:C:O5'	4:B1:341:C:H6	1.72	0.71
5:BA:82:THR:HA	5:BA:204:TYR:O	1.90	0.71
40:CC:12:SER:HB2	40:CC:16:GLU:O	1.90	0.71
81:A2:1407:A:H2'	81:A2:1408:U:C6	2.25	0.71
81:A2:2248:C:H2'	81:A2:2249:G:C8	2.26	0.71
81:A2:24:G:C2	81:A2:25:A:C4	2.78	0.71
1:AV:41:C:C3'	1:AV:42:C:H5''	2.21	0.71
4:B1:112:U:H5''	4:B1:113:G:C5'	2.17	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1144:A:H1'	4:B1:1199:A:O2'	1.89	0.71
4:B1:571:U:C3'	4:B1:572:U:C4'	2.65	0.71
4:B1:738:C:H2'	4:B1:739:C:H6	1.55	0.71
11:BG:64:LYS:HE2	11:BG:97:VAL:HG11	1.72	0.71
4:B1:29:G:H4'	28:BX:129:SER:CB	2.20	0.71
42:CE:188:ARG:HD3	42:CE:188:ARG:H	1.55	0.71
51:CO:21:ALA:CA	51:CO:87:MET:HE1	2.11	0.71
81:A2:1086:A:O5'	81:A2:1086:A:H8	1.73	0.71
81:A2:1199:G:C2'	81:A2:1200:G:C8	2.74	0.71
81:A2:1458:G:H2'	81:A2:1459:C:C5	2.26	0.71
81:A2:1460:C:H42	81:A2:1463:G:H22	1.37	0.71
60:CX:56:ARG:CB	81:A2:14:C:H4'	2.19	0.71
81:A2:2016:U:H2'	81:A2:2017:G:O4'	1.91	0.71
81:A2:327:A:H5''	81:A2:329:A:OP2	1.90	0.71
81:A2:4090:C:H3'	81:A2:4090:C:H6	1.56	0.71
81:A2:4325:C:H2'	81:A2:4326:A:C8	2.25	0.71
81:A2:4895:C:H3'	81:A2:4895:C:C6	2.25	0.71
81:A2:4977:U:H4'	81:A2:4978:C:OP1	1.90	0.71
81:A2:705:U:H2'	81:A2:706:C:H6	1.54	0.71
81:A2:929:U:O5'	81:A2:929:U:H6	1.74	0.71
81:A2:1771:U:O2	83:A4:101:A:H4'	1.91	0.71
4:B1:319:C:H4'	4:B1:320:G:OP2	1.90	0.71
4:B1:741:C:H3'	4:B1:742:U:O3'	1.89	0.71
4:B1:933:G:O6	4:B1:992:A:C2	2.43	0.71
4:B1:1123:C:H5''	6:BB:149:GLN:HE22	1.54	0.71
9:BE:38:LEU:HA	9:BE:41:CYS:SG	2.30	0.71
30:BZ:62:VAL:HG12	30:BZ:68:ILE:HG13	1.72	0.71
40:CC:36:ILE:HG22	40:CC:123:ALA:HB2	1.72	0.71
42:CE:217:PHE:HB3	42:CE:246:ARG:NH2	2.06	0.71
43:CF:227:PHE:HA	43:CF:231:GLY:O	1.90	0.71
81:A2:137:G:OP2	81:A2:137:G:H8	1.71	0.71
81:A2:1823:U:H2'	81:A2:1824:G:C8	2.25	0.71
81:A2:2309:G:H4'	81:A2:2310:G:O5'	1.91	0.71
81:A2:2355:G:H22	81:A2:2357:G:H3'	1.55	0.71
81:A2:2393:G:H1	81:A2:2397:A:H61	1.37	0.71
81:A2:3653:G:H2'	81:A2:3654:C:C5	2.24	0.71
56:CT:12:ARG:HH21	81:A2:4169:G:H4'	1.53	0.71
81:A2:4278:C:H2'	81:A2:4279:C:O4'	1.88	0.71
81:A2:4485:C:H2'	81:A2:4486:U:H6	1.53	0.71
82:A3:138:C:H2'	82:A3:139:G:C8	2.26	0.71
3:AX:53:U:H1'	3:AX:54:U:OP1	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:408:A:H2'	4:B1:409:C:H4'	1.72	0.71
9:BE:124:CYS:SG	9:BE:160:VAL:HG23	2.30	0.71
40:CC:54:VAL:HG21	81:A2:2320:G:N7	2.05	0.71
54:CR:132:PHE:CE1	54:CR:138:LEU:HD23	2.26	0.71
81:A2:1293:C:H5	81:A2:3851:C:O4'	1.73	0.71
81:A2:33:A:OP1	81:A2:33:A:H4'	1.89	0.71
59:CW:49:ILE:CA	81:A2:3584:G:H21	2.02	0.71
46:CI:158:LYS:HE2	81:A2:4389:C:H42	1.56	0.71
81:A2:4526:U:H2'	81:A2:4527:G:O4'	1.90	0.71
81:A2:4840:U:H2'	81:A2:4841:C:H6	1.55	0.71
81:A2:4948:G:N2	81:A2:5013:A:C2	2.58	0.71
4:B1:736:C:H2'	4:B1:737:G:C8	2.25	0.71
6:BB:125:VAL:HG11	6:BB:172:MET:HB3	1.73	0.71
20:BP:83:MET:HB3	20:BP:116:LEU:HD12	1.71	0.71
28:BX:51:VAL:HG13	28:BX:70:VAL:HG13	1.73	0.71
41:CD:10:LYS:O	41:CD:14:LYS:HG3	1.91	0.71
81:A2:121:A:H4'	81:A2:122:U:O5'	1.89	0.71
81:A2:1580:A:H5''	81:A2:1580:A:H8	1.55	0.71
81:A2:1659:G:H8	81:A2:1659:G:C5'	2.00	0.71
81:A2:1831:G:H3'	81:A2:1831:G:H8	1.55	0.71
81:A2:2624:A:N6	81:A2:2664:U:N3	2.39	0.71
81:A2:4971:A:H2	81:A2:4988:G:N2	1.85	0.71
81:A2:4980:C:H2'	81:A2:4983:G:H5'	1.71	0.71
81:A2:59:A:H2'	81:A2:60:A:C5'	2.20	0.71
47:CJ:143:ASP:O	83:A4:43:U:H4'	1.91	0.71
4:B1:1030:A:H2'	4:B1:1031:A:C8	2.25	0.71
4:B1:1036:A:H8	4:B1:1036:A:O5'	1.73	0.71
4:B1:412:G:H5'	4:B1:413:G:C8	2.26	0.71
16:BL:96:ILE:HD11	16:BL:103:GLU:OE1	1.91	0.71
43:CF:44:LYS:HG2	81:A2:1219:C:H3'	1.71	0.71
81:A2:1056:C:N4	81:A2:1204:G:H1	1.89	0.71
81:A2:1059:C:C3'	81:A2:1060:C:C5	2.73	0.71
81:A2:1217:C:H4'	81:A2:1218:A:OP1	1.91	0.71
81:A2:2455:C:OP2	81:A2:2456:G:H8	1.74	0.71
81:A2:4840:U:H2'	81:A2:4841:C:C6	2.25	0.71
4:B1:1408:U:H2'	4:B1:1409:A:O4'	1.91	0.71
4:B1:1431:G:H2'	4:B1:1432:U:H6	1.54	0.71
44:CG:106:THR:H	44:CG:109:GLU:HB2	1.56	0.71
44:CG:152:ALA:HA	44:CG:205:THR:HG22	1.72	0.71
81:A2:1454:G:C2'	81:A2:1455:C:H4'	2.21	0.70
81:A2:1805:G:H5''	81:A2:1805:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2282:G:H1'	81:A2:2307:G:H22	1.56	0.70
81:A2:2282:G:H1'	81:A2:2307:G:N2	2.06	0.70
81:A2:2305:U:C2'	81:A2:2306:G:C8	2.72	0.70
81:A2:2369:C:C6	81:A2:2369:C:C5'	2.73	0.70
81:A2:389:A:H2'	81:A2:390:G:O4'	1.90	0.70
81:A2:4056:C:H2'	81:A2:4057:G:C8	2.26	0.70
81:A2:4063:G:C8	81:A2:4063:G:H5'	2.26	0.70
81:A2:4367:G:H2'	81:A2:4368:G:H8	1.56	0.70
81:A2:4624:A:H2'	81:A2:4625:A:O4'	1.90	0.70
81:A2:4813:C:C2'	81:A2:4814:C:H5'	2.21	0.70
81:A2:927:A:H4'	81:A2:928:A:OP1	1.90	0.70
4:B1:1405:A:H3'	4:B1:1406:G:C5'	2.20	0.70
4:B1:1840:U:H2'	4:B1:1841:C:C6	2.26	0.70
4:B1:558:G:C2'	4:B1:559:G:H5''	2.21	0.70
4:B1:604:A:C2	4:B1:605:A:C2	2.76	0.70
4:B1:957:A:H4'	4:B1:973:C:H1'	1.72	0.70
4:B1:1522:A:C2	20:BP:128:HIS:HB2	2.25	0.70
5:BA:63:ARG:HG2	26:BV:46:PHE:CZ	2.25	0.70
39:CB:258:HIS:CD2	39:CB:259:PRO:HD2	2.26	0.70
81:A2:1016:C:H2'	81:A2:1017:C:H6	1.55	0.70
81:A2:1397:C:H2'	81:A2:1398:C:H6	1.56	0.70
81:A2:2589:G:H1	81:A2:2704:C:H42	1.38	0.70
81:A2:3743:A:H5''	81:A2:3743:A:C8	2.26	0.70
81:A2:3907:G:H1'	81:A2:3908:G:OP2	1.90	0.70
81:A2:4655:C:H2'	81:A2:4656:C:C5'	2.16	0.70
81:A2:50:C:C2'	81:A2:51:A:H5'	2.20	0.70
4:B1:131:C:C4	4:B1:215:G:H5'	2.27	0.70
4:B1:350:C:N4	4:B1:351:G:C2	2.58	0.70
29:BY:91:LEU:HD22	29:BY:96:LEU:HD11	1.72	0.70
40:CC:346:ASN:HA	40:CC:349:LEU:HB3	1.73	0.70
40:CC:58:ALA:HB1	81:A2:348:U:H4'	1.73	0.70
42:CE:141:ARG:O	42:CE:144:ILE:HG12	1.91	0.70
44:CG:116:ALA:O	44:CG:120:LYS:HB3	1.91	0.70
45:CH:23:ARG:NE	45:CH:39:ASN:HA	2.05	0.70
55:CS:164:LYS:CB	55:CS:165:PRO:HD3	2.21	0.70
81:A2:1054:G:C2'	81:A2:1055:G:H5'	2.22	0.70
81:A2:1:C:O5'	81:A2:1:C:H6	1.74	0.70
81:A2:204:G:H8	81:A2:204:G:OP1	1.73	0.70
54:CR:6:LEU:HD13	81:A2:2389:A:OP1	1.91	0.70
81:A2:329:A:C2	81:A2:330:C:C4	2.79	0.70
81:A2:3725:A:H2'	81:A2:3726:G:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4438:G:H2'	81:A2:4439:A:O4'	1.91	0.70
45:CH:69:THR:HA	81:A2:4660:A:H2	1.55	0.70
81:A2:4854:G:H1'	81:A2:4855:C:OP2	1.92	0.70
81:A2:69:A:N3	81:A2:70:A:H4'	2.07	0.70
82:A3:103:A:H5'	82:A3:104:A:C8	2.25	0.70
83:A4:9:C:O2	83:A4:9:C:H3'	1.92	0.70
2:AW:16:U:H2'	2:AW:17:C:H5'	1.71	0.70
4:B1:992:A:OP1	4:B1:1133:A:H1'	1.91	0.70
4:B1:1176:G:H2'	4:B1:1177:U:H6	1.54	0.70
4:B1:1440:C:H2'	4:B1:1441:U:C6	2.26	0.70
4:B1:808:A:H8	4:B1:808:A:O5'	1.74	0.70
7:BC:81:ILE:HG21	7:BC:88:ILE:HD11	1.72	0.70
16:BL:99:TYR:CE1	28:BX:14:ARG:HA	2.26	0.70
43:CF:66:ARG:HA	43:CF:69:ILE:HD11	1.73	0.70
47:CJ:174:ILE:O	47:CJ:175:LEU:HB2	1.90	0.70
81:A2:1457:C:H2'	81:A2:1458:G:H8	1.56	0.70
81:A2:1475:G:H4'	81:A2:1476:A:OP2	1.90	0.70
81:A2:2841:A:H2'	81:A2:2842:U:C6	2.25	0.70
81:A2:3699:U:O2'	81:A2:3700:C:H5''	1.91	0.70
81:A2:4309:C:H4'	81:A2:4309:C:OP1	1.92	0.70
3:AX:58:U:OP2	7:BC:151:ILE:HD12	1.90	0.70
41:CD:273:LEU:HD23	81:A2:1086:A:C1'	2.21	0.70
45:CH:171:ASP:OD2	81:A2:4437:A:H4'	1.91	0.70
81:A2:1474:G:C2'	81:A2:1475:G:H5'	2.21	0.70
60:CX:56:ARG:HA	81:A2:14:C:H5''	1.73	0.70
81:A2:1517:U:C2'	81:A2:1518:G:H5'	2.20	0.70
81:A2:176:G:O2'	81:A2:177:C:H5'	1.91	0.70
81:A2:3569:G:H2'	81:A2:3570:C:C6	2.25	0.70
2:AW:19:G:N7	81:A2:3927:G:C4'	2.54	0.70
81:A2:4026:U:H2'	81:A2:4027:C:C6	2.26	0.70
81:A2:4660:A:H2'	81:A2:4661:A:H5''	1.72	0.70
83:A4:36:C:O5'	83:A4:36:C:H6	1.73	0.70
2:AW:37:MIA:H152	10:BF:134:VAL:HG11	1.69	0.70
3:AX:58:U:OP1	7:BC:106:VAL:HG21	1.91	0.70
4:B1:1405:A:C3'	4:B1:1406:G:H5''	2.22	0.70
4:B1:321:C:H2'	4:B1:322:C:C6	2.25	0.70
4:B1:370:G:C8	4:B1:370:G:H5'	2.25	0.70
4:B1:797:C:H2'	4:B1:798:G:C5'	2.16	0.70
5:BA:67:ALA:HA	26:BV:50:PHE:CE1	2.26	0.70
39:CB:258:HIS:CD2	39:CB:259:PRO:HD3	2.26	0.70
59:CW:49:ILE:HA	81:A2:3584:G:N2	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1050:G:C2'	81:A2:1051:C:H5'	2.21	0.70
81:A2:1096:C:H2'	81:A2:1097:C:C6	2.27	0.70
81:A2:1462:C:O2	81:A2:1462:C:H2'	1.92	0.70
81:A2:1877:G:H1'	81:A2:2254:G:C2	2.26	0.70
81:A2:2450:A:H4'	81:A2:2451:G:OP 2	1.92	0.70
81:A2:3893:C:C2'	81:A2:3894:U:H5'	2.20	0.70
81:A2:4400:G:H2'	81:A2:4401:A:C8	2.26	0.70
81:A2:4801:C:C2'	81:A2:4802:G:H5'	2.22	0.70
81:A2:948:A:H2'	81:A2:949:G:N9	2.07	0.70
81:A2:948:A:H3'	81:A2:949:G:C8	2.25	0.70
3:AX:41:U:O2'	3:AX:42:U:H5''	1.92	0.70
4:B1:1599:U:OP 1	4:B1:1599:U:H4'	1.92	0.70
53:CQ:65:ARG:O	53:CQ:69:LYS:HG2	1.92	0.70
81:A2:165:C:H2'	81:A2:166:G:C8	2.18	0.70
81:A2:175:C:H2'	81:A2:176:G:C8	2.26	0.70
81:A2:2020:A:C8	81:A2:2021:A:C2	2.78	0.70
81:A2:2032:U:O2'	81:A2:2033:G:H5'	1.91	0.70
81:A2:2051:C:C6	81:A2:2051:C:H3'	2.26	0.70
81:A2:210:G:C2	81:A2:211:G:H1'	2.25	0.70
81:A2:2748:G:H2'	81:A2:2749:C:C6	2.26	0.70
81:A2:3769:A:H2	81:A2:4456:A:H1'	1.50	0.70
81:A2:4867:G:H4'	81:A2:4868:G:OP 1	1.89	0.70
81:A2:474:G:H5''	81:A2:659:A:H4'	1.73	0.70
82:A3:57:C:H4'	82:A3:63:U:C4	2.27	0.70
83:A4:68:C:H3'	83:A4:69:U:C6	2.27	0.70
4:B1:1276:A:N6	4:B1:1317:C:H42	1.90	0.70
4:B1:1493:C:C3'	4:B1:1494:U:H5'	2.21	0.70
4:B1:1634:A:H3'	4:B1:1635:C:C6	2.27	0.70
4:B1:1663:A:H2	4:B1:1664:A:C6	2.10	0.70
4:B1:380:G:H1	4:B1:383:G:P	2.15	0.70
4:B1:958:G:H3'	4:B1:959:G:C8	2.26	0.70
4:B1:845:G:H4'	9:BE:255:ARG:HH12	1.57	0.70
12:BH:102:PRO:HB2	12:BH:105:THR:CB	2.21	0.70
81:A2:1082:U:H6	81:A2:1083:C:H5	1.37	0.70
81:A2:1276:G:C3'	81:A2:1277:U:H4'	2.18	0.70
81:A2:2310:G:H8	81:A2:2310:G:P	2.15	0.70
81:A2:2313:G:H2'	81:A2:2314:C:C6	2.26	0.70
81:A2:2568:A:C2'	81:A2:2569:U:H5'	2.21	0.70
81:A2:3605:C:H5'	81:A2:3605:C:C6	2.22	0.70
81:A2:682:C:H2'	81:A2:683:C:C6	2.26	0.70
83:A4:68:C:H5'	83:A4:69:U:OP 2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:56:C:C5	81:A2:4014:A:C6	2.80	0.70
4:B1:1331:C:H6	4:B1:1489:A:N6	1.90	0.70
4:B1:1483:A:H4'	8:BD:160:SER:HB2	1.72	0.70
4:B1:1565:C:H2'	4:B1:1566:G:H5'	1.72	0.70
4:B1:176:U:H3'	4:B1:177:G:C8	2.27	0.70
4:B1:1784:G:H2'	4:B1:1785:C:C6	2.26	0.70
4:B1:334:C:H2'	4:B1:335:G:C8	2.27	0.70
4:B1:376:A:H2'	4:B1:377:G:H8	1.55	0.70
4:B1:890:U:H2'	4:B1:890:U:O2	1.90	0.70
25:BU:24:LEU:HD11	25:BU:36:CYS:SG	2.32	0.70
53:CQ:61:LEU:HD23	53:CQ:82:VAL:HG13	1.73	0.70
58:CV:16:ILE:HD11	58:CV:57:VAL:H	1.57	0.70
81:A2:1082:U:H1'	81:A2:1083:C:OP2	1.92	0.70
81:A2:1088:C:H2'	81:A2:1089:C:H5'	1.74	0.70
81:A2:1227:U:H2'	81:A2:1228:C:C6	2.26	0.70
38:CA:204:MET:SD	81:A2:1610:A:C2	2.85	0.70
40:CC:309:ILE:HG21	81:A2:2249:G:H1'	1.74	0.70
81:A2:4327:G:H2'	81:A2:4328:G:O4'	1.91	0.70
81:A2:2310:G:H4'	82:A3:20:A:H5''	1.72	0.70
82:A3:24:G:C2'	82:A3:25:G:H5'	2.22	0.70
4:B1:1284:A:N7	4:B1:1286:G:H5'	2.07	0.70
42:CE:173:LEU:O	42:CE:188:ARG:HA	1.92	0.70
45:CH:41:ILE:HG13	45:CH:73:ILE:HD11	1.74	0.70
51:CO:48:TYR:O	51:CO:51:LYS:HG2	1.92	0.70
54:CR:57:VAL:HB	81:A2:2611:C:H4'	1.72	0.70
81:A2:1214:G:O3'	81:A2:1215:G:H4'	1.90	0.70
81:A2:1409:C:H2'	81:A2:1410:C:H6	1.56	0.70
81:A2:180:C:H2'	81:A2:181:U:H5'	1.73	0.70
81:A2:219:C:H2'	81:A2:220:G:H5'	1.74	0.70
81:A2:2599:G:H2'	81:A2:2600:A:C8	2.26	0.70
81:A2:2844:C:H5''	81:A2:2844:C:C6	2.26	0.70
81:A2:4537:U:H2'	81:A2:4538:G:H8	1.57	0.70
81:A2:1942:A:C5	81:A2:4654:G:N7	2.60	0.70
81:A2:4833:C:H2'	81:A2:4834:C:C6	2.27	0.70
81:A2:65:A:H2	81:A2:76:A:O3'	1.75	0.70
81:A2:99:A:C3'	81:A2:100:C:H6	2.05	0.70
4:B1:331:C:H2'	4:B1:332:G:O4'	1.91	0.70
4:B1:528:A:P	14:BJ:122:SER:HB2	2.32	0.70
8:BD:11:PHE:CE1	25:BU:27:ARG:HB2	2.27	0.70
81:A2:1051:C:H2'	81:A2:1052:C:O4'	1.92	0.69
81:A2:1160:C:C6	81:A2:1160:C:H3'	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2670:G:OP2	81:A2:2671:G:H3'	1.92	0.69
81:A2:2771:C:H5'	81:A2:2774:C:H42	1.55	0.69
81:A2:4077:C:H2'	81:A2:4078:U:H6	1.56	0.69
81:A2:4549:A:H1'	81:A2:4550:A:C1'	2.21	0.69
81:A2:4616:A:H4'	81:A2:4617:U:O5'	1.92	0.69
81:A2:500:A:H2'	81:A2:501:U:C6	2.27	0.69
48:CL:111:GLN:CG	81:A2:510:C:H4'	2.21	0.69
81:A2:62:A:H2'	81:A2:63:G:C8	2.26	0.69
81:A2:923:G:C2'	81:A2:924:C:H5'	2.22	0.69
2:AW:4:C:O2'	81:A2:3683:G:C4'	2.29	0.69
4:B1:124:U:H6	4:B1:124:U:H3'	1.57	0.69
4:B1:1536:G:H2'	4:B1:1537:A:H8	1.57	0.69
4:B1:1606:G:N2	4:B1:1632:G:H2'	2.07	0.69
4:B1:1736:G:H2'	4:B1:1737:G:C8	2.27	0.69
4:B1:227:U:H1'	4:B1:228:C:OP2	1.92	0.69
4:B1:298:G:H2'	4:B1:299:A:H8	1.57	0.69
4:B1:374:G:H2'	4:B1:375:U:C6	2.27	0.69
4:B1:528:A:P	4:B1:528:A:H8	2.14	0.69
15:BK:84:HIS:CD2	15:BK:85:LEU:H	2.09	0.69
41:CD:111:ASN:HA	41:CD:116:ASP:HB2	1.72	0.69
44:CG:31:LEU:HD11	62:CZ:122:TYR:O	1.91	0.69
81:A2:15:A:H3'	81:A2:15:A:OP2	1.92	0.69
81:A2:2283:A:N3	81:A2:2283:A:H2'	2.07	0.69
4:B1:970:G:C5'	81:A2:3681:A:P	2.79	0.69
81:A2:398:A:H4'	81:A2:399:A:OP1	1.91	0.69
40:CC:264:TYR:O	40:CC:271:ALA:HB2	1.92	0.69
42:CE:272:ARG:HG2	81:A2:4837:U:H5''	1.73	0.69
44:CG:39:PHE:CE1	44:CG:47:PRO:HD3	2.27	0.69
59:CW:46:PRO:HB2	59:CW:54:LEU:HD23	1.74	0.69
81:A2:1630:G:H3'	81:A2:1631:U:C6	2.27	0.69
81:A2:179:G:H2'	81:A2:180:C:H6	1.57	0.69
81:A2:1910:A:H8	81:A2:1910:A:H5''	1.56	0.69
81:A2:1934:A:C2	81:A2:2006:C:C2	2.79	0.69
51:CO:129:LEU:HD21	81:A2:2032:U:H5''	1.73	0.69
81:A2:3689:G:H2'	81:A2:3690:U:C6	2.27	0.69
81:A2:3689:G:H2'	81:A2:3690:U:H6	1.56	0.69
81:A2:42:A:C6	81:A2:4339:A:H2	2.10	0.69
81:A2:4384:A:N3	81:A2:4384:A:H2'	2.08	0.69
81:A2:4883:C:H2'	81:A2:4884:C:C6	2.26	0.69
81:A2:707:C:H2'	81:A2:708:G:H8	1.58	0.69
2:AW:59:U:C2'	2:AW:60:U:H5'	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1348:G:H8	4:B1:1348:G:O5'	1.74	0.69
4:B1:1690:U:C2'	4:B1:1691:U:H5'	2.22	0.69
4:B1:203:G:H2'	4:B1:204:G:H8	1.55	0.69
4:B1:210:U:C3'	4:B1:211:G:H5''	2.22	0.69
4:B1:553:U:H3'	4:B1:554:A:H5''	1.71	0.69
4:B1:62:G:H2'	4:B1:63:U:O4'	1.92	0.69
4:B1:78:C:H1'	4:B1:79:A:OP1	1.93	0.69
10:BF:40:ALA:HB3	10:BF:68:ILE:HG13	1.73	0.69
4:B1:527:C:H5'	14:BJ:122:SER:CB	2.21	0.69
40:CC:50:GLN:CB	40:CC:51:PRO:HD3	2.22	0.69
81:A2:1276:G:H8	81:A2:1276:G:O5'	1.75	0.69
81:A2:1358:C:H5''	81:A2:1359:C:OP1	1.93	0.69
81:A2:1411:C:H2'	81:A2:1412:G:H8	1.56	0.69
4:B1:678:U:H5'	81:A2:1543:A:C8	2.28	0.69
81:A2:1861:G:H5''	81:A2:1861:G:H8	1.57	0.69
81:A2:1868:G:H8	81:A2:1868:G:O5'	1.74	0.69
81:A2:2442:C:OP1	81:A2:2442:C:H6	1.74	0.69
81:A2:2372:A:H1'	81:A2:2783:A:N3	2.07	0.69
81:A2:70:A:H5'	81:A2:72:C:H42	1.57	0.69
81:A2:942:G:N3	81:A2:942:G:H2'	2.07	0.69
81:A2:84:A:H61	81:A2:98:A:H3'	1.56	0.69
4:B1:1630:A:H2'	4:B1:1631:U:C5'	2.23	0.69
4:B1:77:A:H4'	4:B1:78:C:C5	2.26	0.69
4:B1:86:C:H3'	4:B1:87:U:H5''	1.73	0.69
4:B1:797:C:H4'	12:BH:109:ARG:HB2	1.75	0.69
16:BL:99:TYR:CZ	28:BX:14:ARG:HA	2.27	0.69
30:BZ:44:LEU:HD21	30:BZ:78:LYS:HG2	1.74	0.69
41:CD:13:PHE:CE1	83:A4:15:C:H1'	2.28	0.69
81:A2:1088:C:C6	81:A2:1088:C:C3'	2.75	0.69
81:A2:1277:U:H2'	81:A2:1278:C:C6	2.27	0.69
81:A2:2867:C:H42	81:A2:3580:A:H61	1.41	0.69
81:A2:34:A:H1'	81:A2:1506:A:O2'	1.93	0.69
81:A2:4149:U:H1'	81:A2:4340:A:C2	2.27	0.69
81:A2:426:A:H2'	81:A2:427:C:H6	1.58	0.69
81:A2:4632:A:H2'	81:A2:4633:U:C6	2.28	0.69
81:A2:4849:A:H1'	81:A2:4850:C:OP2	1.93	0.69
81:A2:4905:U:C2'	81:A2:4906:G:H5'	2.23	0.69
81:A2:897:U:O2'	81:A2:898:U:H3'	1.93	0.69
81:A2:916:A:C1'	81:A2:917:G:H5'	2.21	0.69
1:AV:20:U:C3'	1:AV:21:A:H5'	2.23	0.69
4:B1:332:G:H4'	4:B1:333:G:OP1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:745:C:H4'	4:B1:746:C:C5	2.27	0.69
4:B1:749:U:O2	4:B1:795:A:C2	2.46	0.69
3:AX:53:U:O2	8:BD:146:ARG:NE	2.25	0.69
4:B1:448:A:N7	13:BI:26:LYS:HA	2.06	0.69
40:CC:326:LEU:HD21	40:CC:332:ALA:HB3	1.74	0.69
48:CL:57:PRO:HG3	48:CL:75:GLY:O	1.92	0.69
52:CP:6:LEU:HD22	81:A2:416:U:H1'	1.73	0.69
81:A2:1162:C:H2'	81:A2:1163:C:C6	2.28	0.69
81:A2:1424:G:C2'	81:A2:1425:U:H5'	2.22	0.69
81:A2:1812:U:C5	81:A2:1813:G:C8	2.80	0.69
81:A2:2340:A:H2'	81:A2:2341:G:O4'	1.92	0.69
81:A2:2393:G:H22	81:A2:2397:A:N6	1.88	0.69
81:A2:2417:U:H5'	81:A2:2418:C:C5	2.27	0.69
81:A2:2605:U:H3'	81:A2:2605:U:H6	1.57	0.69
4:B1:1228:A:H2'	4:B1:1229:G:C8	2.28	0.69
4:B1:1468:C:H2'	4:B1:1469:A:H8	1.57	0.69
4:B1:1764:G:H3'	4:B1:1764:G:N3	2.06	0.69
3:AX:50:U:C5'	4:B1:1825:A:H5'	2.12	0.69
4:B1:351:G:H3'	4:B1:351:G:C8	2.27	0.69
4:B1:795:A:C4	4:B1:796:G:C8	2.81	0.69
44:CG:61:ILE:O	44:CG:64:GLN:HG2	1.92	0.69
54:CR:137:ILE:HD12	54:CR:138:LEU:H	1.58	0.69
81:A2:1351:A:C3'	81:A2:1352:A:H8	2.03	0.69
81:A2:1360:G:H1'	81:A2:1361:U:O5'	1.93	0.69
81:A2:1444:G:H4'	81:A2:1445:G:OP1	1.93	0.69
81:A2:2642:U:H2'	81:A2:2643:U:C6	2.28	0.69
47:CJ:98:ASN:CG	81:A2:4210:G:H5'	2.13	0.69
81:A2:635:G:H2'	81:A2:636:G:H8	1.56	0.69
4:B1:12:U:H2'	4:B1:13:C:C6	2.28	0.69
4:B1:1493:C:H5''	4:B1:1493:C:C6	2.27	0.69
4:B1:1814:G:O5'	4:B1:1814:G:H8	1.75	0.69
4:B1:794:A:N3	4:B1:795:A:H1'	2.08	0.69
43:CF:45:ALA:O	43:CF:48:LYS:HB3	1.93	0.69
52:CP:37:LYS:HD3	52:CP:117:ILE:HG22	1.73	0.69
61:CY:123:ALA:HA	61:CY:126:ARG:HB2	1.75	0.69
81:A2:1391:C:H2'	81:A2:1392:G:H8	1.56	0.69
81:A2:1717:A:O3'	83:A4:101:A:H2	1.74	0.69
81:A2:2294:G:H8	81:A2:2294:G:H5''	1.57	0.69
81:A2:400:G:H21	81:A2:2306:G:P	2.15	0.69
81:A2:2482:C:H2'	81:A2:2483:G:H5'	1.73	0.69
81:A2:2587:G:O2'	81:A2:2665:G:H5''	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4900:G:C3'	81:A2:4901:U:H5'	2.21	0.69
81:A2:707:C:O2'	81:A2:708:G:H5'	1.92	0.69
81:A2:965:C:C5'	81:A2:965:C:H6	2.06	0.69
4:B1:1287:A:H4'	4:B1:1312:G:N1	2.07	0.69
4:B1:144:U:C6	11:BG:180:VAL:HG22	2.27	0.69
4:B1:65:C:O2'	4:B1:66:G:H3'	1.93	0.69
4:B1:845:G:H5''	9:BE:108:ARG:HH12	1.58	0.69
11:BG:161:PRO:HA	11:BG:170:ARG:O	1.91	0.69
13:BI:123:ARG:CZ	81:A2:4979:C:OP2	2.39	0.69
55:CS:110:TYR:HE2	55:CS:126:ILE:HD11	1.56	0.69
81:A2:1252:C:H2'	81:A2:1253:G:H8	1.56	0.69
81:A2:1479:A:H3'	81:A2:1480:C:C5'	2.21	0.69
81:A2:194:A:C2	81:A2:222:G:N2	2.61	0.69
81:A2:2311:C:H2'	81:A2:2312:C:C6	2.28	0.69
81:A2:2588:A:P	81:A2:2665:G:H4'	2.32	0.69
81:A2:288:U:H2'	81:A2:289:G:H8	1.55	0.69
81:A2:1515:U:H4'	81:A2:3611:A:N1	2.08	0.69
81:A2:4156:G:H8	81:A2:4156:G:OP1	1.76	0.69
81:A2:439:G:H2'	81:A2:440:C:C6	2.26	0.69
58:CV:15:ARG:HB2	81:A2:4578:G:H5'	1.74	0.69
81:A2:4645:U:O5'	81:A2:4645:U:H6	1.76	0.69
81:A2:4888:C:H2'	81:A2:4889:A:H8	1.58	0.69
81:A2:677:C:O2	81:A2:677:C:H2'	1.90	0.69
81:A2:958:C:P	81:A2:971:C:H1'	2.33	0.69
2:AW:38:A:H1'	10:BF:133:THR:HG21	1.71	0.69
4:B1:1092:G:H2'	4:B1:1093:A:H8	1.58	0.69
4:B1:1780:G:P	4:B1:1781:A:H5''	2.32	0.69
4:B1:187:G:H2'	4:B1:188:C:C6	2.27	0.69
4:B1:215:G:OP2	4:B1:215:G:H3'	1.92	0.69
4:B1:310:C:H2'	4:B1:340:C:H5'	1.75	0.69
46:CI:204:GLY:CA	83:A4:64:G:H4'	2.23	0.69
81:A2:2401:G:H2'	81:A2:2403:U:C5	2.27	0.69
81:A2:356:U:H2'	81:A2:356:U:O2	1.91	0.69
81:A2:3920:G:H1	81:A2:4029:G:H1	1.40	0.69
81:A2:4093:C:H3'	81:A2:4094:A:H5''	1.75	0.69
42:CE:170:SER:HB3	81:A2:4896:G:H21	1.57	0.69
83:A4:62:U:H3'	83:A4:63:C:C5'	2.22	0.69
4:B1:105:U:H2'	4:B1:106:C:O4'	1.92	0.69
4:B1:1591:C:H5'	10:BF:85:LYS:HE3	1.75	0.69
4:B1:606:G:H3'	4:B1:607:U:H4'	1.74	0.69
16:BL:20:LYS:HE3	16:BL:21:LYS:NZ	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:240:ALA:HB2	81:A2:3627:C:H4'	1.74	0.69
81:A2:1259:A:H4'	81:A2:1259:A:OP2	1.91	0.69
60:CX:56:ARG:HA	81:A2:14:C:C5'	2.23	0.69
81:A2:1873:G:O2'	81:A2:1885:A:H1'	1.93	0.69
81:A2:2000:C:H4'	81:A2:2001:C:OP2	1.91	0.69
81:A2:2629:G:H3'	81:A2:2630:C:C4'	2.23	0.69
81:A2:2673:A:H5'	81:A2:2674:A:C8	2.27	0.69
81:A2:3695:A:HO2'	81:A2:3696:A:H8	1.36	0.69
81:A2:3821:A:H5''	81:A2:3822:U:H5	1.58	0.69
81:A2:4593:G:N2	81:A2:4623:G:H2'	2.06	0.69
81:A2:58:G:O3'	81:A2:59:A:H4'	1.93	0.69
81:A2:965:C:H5''	81:A2:965:C:H6	1.58	0.69
4:B1:1397:U:O3'	4:B1:1398:G:H2'	1.93	0.69
4:B1:1396:A:H2	4:B1:1449:G:H1	1.35	0.69
4:B1:1558:C:H2'	4:B1:1559:C:C6	2.27	0.69
4:B1:1630:A:C2'	4:B1:1631:U:H5''	2.23	0.69
4:B1:1721:U:H4'	4:B1:1722:G:O5'	1.93	0.69
4:B1:1750:C:C2'	4:B1:1751:C:H5'	2.23	0.69
4:B1:688:U:H1'	4:B1:689:U:H6	1.57	0.69
4:B1:747:U:H5''	4:B1:795:A:N6	2.06	0.69
47:CJ:26:VAL:HG13	47:CJ:32:ARG:HH11	1.58	0.69
81:A2:1582:C:H4'	81:A2:2775:A:C2	2.28	0.68
81:A2:212:C:OP2	81:A2:212:C:H3'	1.92	0.68
81:A2:2310:G:H4'	82:A3:20:A:C5'	2.23	0.68
81:A2:2342:C:H5''	81:A2:2342:C:H6	1.58	0.68
81:A2:2432:G:H4'	81:A2:2433:G:OP2	1.93	0.68
81:A2:2452:G:H2'	81:A2:2453:G:C8	2.28	0.68
59:CW:44:ARG:HD2	81:A2:3584:G:H2'	1.74	0.68
81:A2:4004:G:H2'	81:A2:4005:C:H6	1.58	0.68
81:A2:4399:U:H2'	81:A2:4400:G:H5'	1.75	0.68
81:A2:4411:G:H8	81:A2:4411:G:O5'	1.75	0.68
81:A2:4684:C:H2'	81:A2:4685:G:H8	1.57	0.68
4:B1:1389:C:OP2	4:B1:1389:C:H2'	1.92	0.68
4:B1:1453:C:H4'	22:BR:49:LYS:HA	1.75	0.68
4:B1:1512:C:H2'	4:B1:1513:C:C6	2.29	0.68
1:AV:34:G:N2	4:B1:1701:C:O2	2.25	0.68
4:B1:1833:C:OP1	4:B1:1840:U:H4'	1.92	0.68
4:B1:95:G:H1	4:B1:435:A:N6	1.89	0.68
81:A2:1399:G:C2'	81:A2:1400:A:H5''	2.22	0.68
81:A2:1437:C:H2'	81:A2:1438:A:C8	2.29	0.68
81:A2:4145:G:H2'	81:A2:4146:A:C8	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:443:A:H1'	81:A2:444:G:C5	2.26	0.68
81:A2:443:A:H4'	81:A2:444:G:OP2	1.93	0.68
81:A2:463:C:C6	81:A2:463:C:H5'	2.28	0.68
83:A4:22:A:H2'	83:A4:23:A:C8	2.28	0.68
2:AW:4:C:H4'	81:A2:3683:G:O3'	1.93	0.68
3:AX:42:U:H6	3:AX:42:U:H3'	1.58	0.68
4:B1:1405:A:H3'	4:B1:1405:A:C8	2.28	0.68
4:B1:907:G:H2'	4:B1:908:A:H8	1.58	0.68
8:BD:73:VAL:HG11	8:BD:84:VAL:HG21	1.73	0.68
20:BP:97:TYR:HB2	20:BP:102:PHE:CE2	2.28	0.68
10:BF:103:LEU:HD21	30:BZ:67:LEU:HD11	1.75	0.68
40:CC:252:TRP:CZ3	40:CC:260:LEU:HD11	2.28	0.68
50:CN:58:GLY:HA3	50:CN:142:ILE:HD11	1.74	0.68
61:CY:80:ILE:HG12	61:CY:99:ILE:O	1.93	0.68
81:A2:1159:U:H6	81:A2:1159:U:O5'	1.76	0.68
81:A2:1221:C:H2'	81:A2:1222:G:C5'	2.23	0.68
81:A2:1651:U:H2'	81:A2:1652:U:C6	2.29	0.68
81:A2:1652:U:O5'	81:A2:1652:U:H6	1.76	0.68
81:A2:2395:A:H2'	81:A2:2396:C:H5''	1.75	0.68
81:A2:2526:G:H3'	81:A2:2527:G:C4'	2.23	0.68
81:A2:3592:C:C4	81:A2:3593:A:N1	2.62	0.68
81:A2:3793:A:O5'	81:A2:3793:A:H8	1.76	0.68
81:A2:4586:A:H62	81:A2:4628:U:H3'	1.59	0.68
81:A2:4715:C:H2'	81:A2:4716:C:C6	2.27	0.68
81:A2:4955:G:C2'	81:A2:4956:U:H5'	2.22	0.68
82:A3:12:G:H2'	82:A3:13:G:H5'	1.72	0.68
4:B1:1240:A:H2'	4:B1:1267:C:O2'	1.94	0.68
4:B1:1477:U:H1'	4:B1:1478:U:OP2	1.92	0.68
4:B1:1708:C:H1'	81:A2:3735:A:N6	2.03	0.68
4:B1:444:G:N2	4:B1:446:G:H3'	2.07	0.68
6:BB:63:LYS:HE3	6:BB:91:VAL:CG2	2.23	0.68
23:BS:43:VAL:HG22	24:BT:37:VAL:HB	1.74	0.68
28:BX:100:VAL:CG1	28:BX:122:VAL:HG13	2.24	0.68
46:CI:36:LEU:HB2	46:CI:87:ILE:HG23	1.74	0.68
49:CM:29:ASP:OD2	55:CS:75:VAL:HG21	1.93	0.68
81:A2:1189:U:H5'	81:A2:1189:U:H6	1.57	0.68
81:A2:1367:A:H4'	81:A2:1368:A:OP1	1.94	0.68
81:A2:1410:C:H2'	81:A2:1411:C:H6	1.55	0.68
81:A2:1807:C:H2'	81:A2:1808:G:H8	1.57	0.68
81:A2:1874:A:O2'	81:A2:2047:A:H2	1.76	0.68
81:A2:2004:A:O2'	81:A2:2005:U:H5'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2445:U:H6	81:A2:2445:U:H3'	1.59	0.68
81:A2:2664:U:H2'	81:A2:2665:G:C8	2.28	0.68
81:A2:4308:A:H3'	81:A2:4309:C:C4'	2.22	0.68
81:A2:4745:G:H2'	81:A2:4746:C:C6	2.28	0.68
81:A2:482:G:H5'	81:A2:482:G:C8	2.28	0.68
42:CE:274:VAL:HG12	81:A2:4837:U:H6	1.57	0.68
81:A2:645:C:H2'	81:A2:646:C:C6	2.29	0.68
81:A2:734:A:H61	81:A2:904:C:H1'	1.56	0.68
81:A2:951:C:H42	81:A2:1263:G:H1	1.40	0.68
4:B1:124:U:H5'	9:BE:148:ARG:HB3	1.75	0.68
4:B1:1624:U:H2'	4:B1:1624:U:O2	1.93	0.68
62:CZ:13:VAL:O	62:CZ:19:SER:HA	1.93	0.68
81:A2:1479:A:C2'	81:A2:1480:C:H5''	2.24	0.68
40:CC:182:LYS:HA	81:A2:2276:A:N7	2.08	0.68
81:A2:2310:G:H3'	81:A2:2311:C:H5''	1.73	0.68
81:A2:2672:A:N3	81:A2:2672:A:H3'	2.09	0.68
54:CR:83:GLY:HA2	81:A2:2789:A:C8	2.28	0.68
81:A2:3678:U:H2'	81:A2:3679:G:H5'	1.74	0.68
81:A2:3782:A:OP1	81:A2:3782:A:H8	1.77	0.68
81:A2:389:A:C8	81:A2:389:A:H3'	2.29	0.68
81:A2:4062:G:O2'	81:A2:4063:G:H2'	1.92	0.68
81:A2:411:A:H61	82:A3:15:G:H1'	1.59	0.68
81:A2:4204:A:C1'	81:A2:4228:A:H4'	2.24	0.68
81:A2:458:U:H4'	81:A2:459:U:O5'	1.92	0.68
81:A2:4711:U:H3	81:A2:4903:C:H5	1.39	0.68
81:A2:4861:C:H2'	81:A2:4862:G:C8	2.29	0.68
81:A2:4900:G:H2'	81:A2:4900:G:N3	2.05	0.68
4:B1:1060:A:H1'	4:B1:1061:U:OP2	1.92	0.68
4:B1:1257:G:H5''	4:B1:1257:G:C8	2.27	0.68
4:B1:693:A:C5	4:B1:694:G:H1'	2.28	0.68
4:B1:795:A:N3	4:B1:796:G:C8	2.62	0.68
38:CA:186:TYR:CA	38:CA:196:TRP:NE1	2.57	0.68
81:A2:1388:G:N2	81:A2:1390:U:H1'	2.08	0.68
81:A2:2549:C:H2'	81:A2:2550:A:C5'	2.24	0.68
81:A2:4412:U:H2'	81:A2:4412:U:O2	1.94	0.68
81:A2:4703:A:H61	81:A2:4911:A:H61	1.40	0.68
81:A2:700:C:H2'	81:A2:701:C:C5'	2.23	0.68
4:B1:1285:G:H4'	4:B1:1286:G:O5'	1.93	0.68
4:B1:140:C:OP1	4:B1:140:C:H3'	1.94	0.68
4:B1:313:A:H2	4:B1:315:C:N4	1.91	0.68
4:B1:380:G:H2'	4:B1:382:C:C5	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:4:ARG:O	39:CB:5:LYS:HB2	1.94	0.68
40:CC:319:LEU:HD21	43:CF:152:GLU:HG3	1.76	0.68
43:CF:156:LYS:HD3	43:CF:248:ASN:OD1	1.93	0.68
44:CG:189:ARG:HH21	82:A3:154:G:H5'	1.58	0.68
45:CH:173:ARG:HH11	49:CM:127:VAL:HG13	89.32	0.68
62:CZ:10:VAL:CG2	62:CZ:87:VAL:HG23	2.24	0.68
81:A2:2523:G:H2'	81:A2:2524:G:H8	1.58	0.68
81:A2:2525:C:H3'	81:A2:2526:G:C4'	2.23	0.68
81:A2:2554:C:H6	81:A2:2554:C:H5''	1.57	0.68
81:A2:2629:G:H3'	81:A2:2630:C:H4'	1.76	0.68
38:CA:85:GLY:HA3	81:A2:4088:G:C5	2.28	0.68
81:A2:4567:A:H3'	81:A2:4568:G:H5''	1.75	0.68
81:A2:59:A:C2'	81:A2:60:A:H5'	2.21	0.68
81:A2:725:C:H3'	81:A2:726:C:C6	2.28	0.68
1:AV:41:C:H3'	1:AV:42:C:H5''	1.75	0.68
4:B1:1456:G:H2'	4:B1:1457:U:C6	2.28	0.68
4:B1:1519:U:H5''	4:B1:1519:U:C6	2.29	0.68
4:B1:1561:A:C4'	4:B1:1583:C:H4'	2.23	0.68
4:B1:1602:U:H2'	4:B1:1603:G:H8	1.58	0.68
10:BF:158:ALA:HB1	10:BF:173:LEU:HA	1.76	0.68
12:BH:102:PRO:HB2	12:BH:105:THR:HB	1.74	0.68
15:BK:15:LEU:HD23	15:BK:21:MET:HG2	1.75	0.68
40:CC:55:SER:O	81:A2:347:G:H5''	1.93	0.68
43:CF:95:ILE:HG23	43:CF:221:LYS:HG2	1.76	0.68
44:CG:163:PRO:HD2	81:A2:148:G:H1	1.58	0.68
48:CL:134:PRO:HA	48:CL:135:LYS:NZ	2.09	0.68
81:A2:1608:G:H2'	81:A2:1610:A:N7	2.09	0.68
81:A2:2396:C:H5''	81:A2:2396:C:H6	1.59	0.68
81:A2:2417:U:H5'	81:A2:2418:C:H5	1.56	0.68
81:A2:2624:A:C5	81:A2:2665:G:C6	2.82	0.68
81:A2:2673:A:H4'	81:A2:2674:A:H5''	1.76	0.68
81:A2:4046:C:H2'	81:A2:4047:C:O4'	1.92	0.68
81:A2:4128:G:C2	81:A2:4129:G:H1'	2.28	0.68
81:A2:4044:G:H21	81:A2:4130:A:H61	1.41	0.68
39:CB:95:THR:HG22	81:A2:4865:A:H4'	1.74	0.68
81:A2:85:G:N2	81:A2:97:G:H2'	2.09	0.68
4:B1:1100:A:C2'	4:B1:1101:U:H5'	2.22	0.68
4:B1:1109:C:H3'	4:B1:1109:C:O2	1.94	0.68
4:B1:1328:G:H2'	4:B1:1329:U:C6	2.29	0.68
4:B1:1425:G:H2'	4:B1:1426:U:C6	2.28	0.68
4:B1:1673:U:H6	4:B1:1673:U:C5'	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:381:C:H6	4:B1:381:C:O5'	1.77	0.68
4:B1:42:A:C2'	4:B1:43:U:H5''	2.24	0.68
4:B1:558:G:P	4:B1:558:G:C8	2.84	0.68
4:B1:636:C:H6	4:B1:636:C:O5'	1.77	0.68
21:BQ:34:VAL:HA	21:BQ:70:VAL:O	1.94	0.68
23:BS:25:LYS:HE3	23:BS:52:LEU:O	1.94	0.68
39:CB:77:THR:CG2	39:CB:336:CYS:HA	2.24	0.68
42:CE:270:TYR:CE1	49:CM:107:PHE:HA	2.28	0.68
45:CH:60:TRP:CZ3	55:CS:152:PHE:HB2	2.28	0.68
81:A2:1147:C:C6	81:A2:1147:C:H5''	2.29	0.68
81:A2:1161:C:H3'	81:A2:1161:C:C6	2.29	0.68
81:A2:1265:U:H2'	81:A2:1266:C:O4'	1.93	0.68
81:A2:1411:C:H2'	81:A2:1412:G:C8	2.29	0.68
81:A2:2838:C:O2'	81:A2:2839:G:C8	2.47	0.68
81:A2:3641:G:C2	81:A2:3643:G:H1'	2.27	0.68
81:A2:4071:G:H2'	81:A2:4072:A:O5'	1.94	0.68
81:A2:425:A:H2'	81:A2:426:A:O5'	1.94	0.68
81:A2:4260:U:H2'	81:A2:4261:U:H6	1.59	0.68
81:A2:4522:C:H2'	81:A2:4523:U:C6	2.28	0.68
13:BI:168:GLN:C	81:A2:4980:C:OP1	2.32	0.68
81:A2:728:G:H2'	81:A2:729:C:C6	2.26	0.68
4:B1:164:A:H3'	4:B1:165:G:C8	2.28	0.68
4:B1:59:U:H2'	4:B1:60:A:C5'	2.24	0.68
4:B1:66:G:H4'	4:B1:67:C:OP2	1.93	0.68
4:B1:67:C:H5	11:BG:163:ASN:N	1.91	0.68
38:CA:186:TYR:N	38:CA:196:TRP:HE1	1.92	0.68
54:CR:119:MET:HB3	54:CR:145:LEU:HD21	1.76	0.68
61:CY:90:ALA:HB1	81:A2:380:A:H62	1.57	0.68
81:A2:104:G:H2'	81:A2:105:A:H5'	1.75	0.68
81:A2:1070:G:H2'	81:A2:1071:C:H6	1.59	0.68
81:A2:1748:G:H8	81:A2:1748:G:O5'	1.76	0.68
81:A2:2020:A:H8	81:A2:2021:A:C4	2.12	0.68
81:A2:2549:C:C5'	81:A2:2737:G:C8	2.76	0.68
81:A2:1293:C:C5	81:A2:3851:C:O4'	2.46	0.68
81:A2:4305:C:H2'	81:A2:4306:U:H6	1.57	0.68
81:A2:4483:A:H2'	81:A2:4519:A:N6	2.09	0.68
82:A3:104:A:H4'	82:A3:105:C:C5	2.29	0.68
81:A2:1774:A:H4'	83:A4:98:G:N3	2.09	0.68
3:AX:34:U:C2'	3:AX:35:U:H5'	2.24	0.68
4:B1:1008:A:H2'	4:B1:1009:A:O4'	1.94	0.68
4:B1:1076:G:H5'	18:BN:106:ARG:NH1	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1230:C:C2'	4:B1:1231:C:H5'	2.24	0.68
4:B1:1281:G:N2	4:B1:1317:C:H1'	2.08	0.68
4:B1:1468:C:H2'	4:B1:1469:A:C8	2.29	0.68
4:B1:170:A:H2'	4:B1:171:A:C8	2.28	0.68
4:B1:448:A:H4'	4:B1:449:A:O5'	1.93	0.68
48:CL:53:GLY:C	48:CL:55:ILE:H	1.98	0.68
40:CC:333:LYS:HD2	81:A2:1217:C:H5'	1.76	0.67
81:A2:2034:G:C8	81:A2:2034:G:H5'	2.29	0.67
81:A2:2284:A:H2'	81:A2:2285:G:C8	2.28	0.67
81:A2:3618:A:C1'	81:A2:4495:A:H4'	2.23	0.67
81:A2:4133:G:C2'	81:A2:4134:U:H5'	2.24	0.67
81:A2:4692:C:H4'	81:A2:4693:A:H4'	1.76	0.67
81:A2:4891:G:O2'	81:A2:4892:C:H5'	1.93	0.67
81:A2:716:U:H3'	81:A2:717:G:H5''	1.74	0.67
81:A2:901:A:H2'	81:A2:902:G:H8	1.59	0.67
4:B1:1750:C:H2'	4:B1:1751:C:C5'	2.23	0.67
4:B1:377:G:H2'	4:B1:378:U:C6	2.29	0.67
4:B1:907:G:H2'	4:B1:908:A:C8	2.29	0.67
4:B1:911:C:H2'	4:B1:912:C:C2	2.29	0.67
7:BC:174:ILE:HG22	7:BC:175:GLY:N	2.09	0.67
16:BL:5:GLN:HE22	16:BL:12:LYS:H	1.42	0.67
39:CB:6:PHE:CE1	58:CV:49:LEU:HD22	2.29	0.67
81:A2:1059:C:C3'	81:A2:1060:C:H5	2.05	0.67
81:A2:1312:C:H2'	81:A2:1313:A:C8	2.29	0.67
81:A2:1453:C:H4'	81:A2:1454:G:OP2	1.94	0.67
81:A2:1454:G:H2'	81:A2:1455:C:C4'	2.24	0.67
81:A2:1466:G:H2'	81:A2:1467:G:C5'	2.23	0.67
81:A2:210:G:C4	81:A2:211:G:H1'	2.29	0.67
81:A2:3618:A:H1'	81:A2:4495:A:H4'	1.76	0.67
81:A2:1943:G:H5'	81:A2:4655:C:O2'	1.94	0.67
83:A4:105:C:H2'	83:A4:106:G:O4'	1.93	0.67
83:A4:32:A:C2	83:A4:41:G:C6	2.83	0.67
2:AW:4:C:C4'	81:A2:3683:G:O3'	2.43	0.67
2:AW:56:C:C2	81:A2:3927:G:C6	2.82	0.67
2:AW:71:G:H5''	81:A2:3708:C:HO2'	1.59	0.67
4:B1:1005:G:H2'	4:B1:1006:C:C6	2.29	0.67
4:B1:1204:A:H2'	4:B1:1205:C:O4'	1.93	0.67
4:B1:1284:A:N6	4:B1:1313:A:C2	2.63	0.67
4:B1:1442:U:C4	4:B1:1443:C:H1'	2.29	0.67
4:B1:1746:U:H2'	4:B1:1747:C:C6	2.30	0.67
4:B1:358:C:H5'	4:B1:358:C:H6	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:522:A:N1	4:B1:643:A:H5'	2.09	0.67
4:B1:908:A:H5''	54:CR:172:ARG:NH1	2.10	0.67
4:B1:912:C:O2'	4:B1:913:A:H4'	1.93	0.67
4:B1:1023:A:H5''	18:BN:124:ARG:NH2	2.10	0.67
81:A2:1390:U:H6	81:A2:1390:U:H5''	1.59	0.67
81:A2:1285:C:H5''	81:A2:2289:A:C6	2.29	0.67
81:A2:2527:G:H3'	81:A2:2528:A:H5''	1.75	0.67
81:A2:4253:U:H3'	81:A2:4254:C:C5'	2.24	0.67
81:A2:477:C:H5''	81:A2:479:G:P	2.34	0.67
81:A2:4807:C:H2'	81:A2:4808:C:C6	2.29	0.67
81:A2:708:G:O2'	81:A2:709:G:H5'	1.95	0.67
1:AV:38:A:O2'	4:B1:1058:A:OP1	2.13	0.67
4:B1:1287:A:H2'	4:B1:1287:A:N3	2.09	0.67
4:B1:130:G:H1'	4:B1:181:A:N1	2.09	0.67
4:B1:195:C:H2'	4:B1:196:C:C6	2.29	0.67
4:B1:371:A:H5''	13:BI:11:ARG:HB2	1.76	0.67
4:B1:428:U:H4'	4:B1:429:C:OP1	1.95	0.67
4:B1:808:A:H2'	4:B1:809:A:C8	2.29	0.67
3:AX:42:U:C5	19:BO:151:LEU:HD23	2.30	0.67
40:CC:221:PHE:O	40:CC:227:ILE:HG21	1.94	0.67
45:CH:173:ARG:HD2	49:CM:127:VAL:HG13	87.84	0.67
51:CO:129:LEU:CD2	81:A2:2032:U:H5''	2.24	0.67
81:A2:99:A:H2'	81:A2:100:C:C6	2.29	0.67
81:A2:1088:C:H6	81:A2:1088:C:H3'	1.57	0.67
81:A2:1257:G:N2	81:A2:1258:C:H41	1.93	0.67
81:A2:1284:C:H3'	81:A2:1285:C:C5	2.28	0.67
81:A2:181:U:H5''	81:A2:182:C:O4'	1.93	0.67
81:A2:1897:G:N2	81:A2:2035:A:C8	2.61	0.67
81:A2:2575:A:H2'	81:A2:2576:G:O4'	1.95	0.67
81:A2:2633:U:H5''	81:A2:2634:G:OP2	1.93	0.67
81:A2:2344:A:N6	81:A2:2765:U:H3	1.93	0.67
81:A2:4236:G:H3'	81:A2:4237:G:C8	2.29	0.67
81:A2:4586:A:N6	81:A2:4628:U:H3'	2.09	0.67
81:A2:717:G:C3'	81:A2:718:G:H5'	2.24	0.67
81:A2:916:A:H1'	81:A2:917:G:P	2.34	0.67
81:A2:932:C:H2'	81:A2:933:G:H8	1.59	0.67
82:A3:26:C:H2'	82:A3:27:U:C5	2.29	0.67
4:B1:1191:C:H2'	4:B1:1192:U:C6	2.29	0.67
4:B1:1361:G:H5'	4:B1:1379:A:OP2	1.95	0.67
4:B1:1663:A:C2	4:B1:1664:A:C6	2.83	0.67
4:B1:217:A:H4'	4:B1:341:C:C4'	2.25	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:348:A:H2'	4:B1:349:A:O4'	1.95	0.67
4:B1:399:C:H5''	4:B1:400:C:C5	2.30	0.67
4:B1:65:C:H2'	4:B1:66:G:H3'	1.75	0.67
4:B1:1408:U:H5'	21:BQ:69:ARG:NH2	2.10	0.67
22:BR:109:LEU:HD22	22:BR:109:LEU:O	1.94	0.67
24:BT:41:LYS:HG2	24:BT:95:GLY:HA2	1.76	0.67
23:BS:6:PRO:HD3	30:BZ:52:LYS:HD3	1.75	0.67
48:CL:135:LYS:H	48:CL:135:LYS:HE3	1.57	0.67
51:CO:167:HIS:HB3	81:A2:4718:C:H2'	1.75	0.67
81:A2:1393:C:O5'	81:A2:1393:C:H6	1.77	0.67
81:A2:174:G:N1	81:A2:253:C:N4	2.42	0.67
81:A2:2313:G:H2'	81:A2:2314:C:H6	1.59	0.67
81:A2:4060:G:C2'	81:A2:4061:G:H5'	2.23	0.67
81:A2:4373:C:H2'	81:A2:4374:A:O4'	1.95	0.67
81:A2:4536:U:H2'	81:A2:4537:U:C6	2.30	0.67
81:A2:467:G:H2'	81:A2:468:C:C6	2.29	0.67
81:A2:477:C:H5'	81:A2:477:C:O2	1.93	0.67
81:A2:947:G:H2'	81:A2:948:A:C5'	2.24	0.67
81:A2:961:C:O3'	81:A2:962:G:H8	1.78	0.67
4:B1:1247:C:H4'	4:B1:1248:U:OP1	1.93	0.67
6:BB:79:VAL:HG11	6:BB:82:ARG:HD3	1.74	0.67
8:BD:75:LYS:HB3	15:BK:22:VAL:HG11	1.75	0.67
11:BG:68:LEU:HD23	11:BG:100:CYS:HB3	1.75	0.67
4:B1:746:C:O5'	12:BH:105:THR:HA	1.94	0.67
40:CC:137:VAL:CG1	40:CC:144:ILE:HD11	2.24	0.67
81:A2:100:C:O2	81:A2:100:C:H2'	1.95	0.67
81:A2:1189:U:H6	81:A2:1189:U:C5'	2.08	0.67
81:A2:1191:G:C2'	81:A2:1192:G:H8	1.97	0.67
81:A2:1203:G:C2'	81:A2:1204:G:H8	2.07	0.67
81:A2:1580:A:H5''	81:A2:1580:A:C8	2.29	0.67
81:A2:2396:C:C6	81:A2:2396:C:H5''	2.30	0.67
81:A2:2510:C:H2'	81:A2:2510:C:OP2	1.94	0.67
81:A2:2686:C:H4'	81:A2:2686:C:OP1	1.93	0.67
81:A2:2692:G:H3'	81:A2:2693:C:C5	2.30	0.67
81:A2:2549:C:H5'	81:A2:2737:G:C8	2.29	0.67
81:A2:3937:U:H2'	81:A2:3938:G:C8	2.30	0.67
81:A2:4081:C:H4'	81:A2:4082:G:OP1	1.94	0.67
81:A2:425:A:H3'	81:A2:425:A:H8	1.58	0.67
81:A2:442:C:C2'	81:A2:443:A:H5'	2.24	0.67
3:AX:43:U:H1'	4:B1:961:G:C2	2.30	0.67
4:B1:1405:A:C2	4:B1:1442:U:C6	2.80	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:350:C:H2'	4:B1:351:G:H5'	1.77	0.67
4:B1:673:G:OP1	4:B1:673:G:H8	1.76	0.67
6:BB:66:VAL:HG22	6:BB:85:LYS:HE3	1.75	0.67
13:BI:34:ALA:HB2	13:BI:56:ARG:HD3	1.75	0.67
81:A2:103:G:H5''	81:A2:104:G:OP2	1.95	0.67
81:A2:1148:G:O5'	81:A2:1148:G:H8	1.78	0.67
81:A2:1622:A:C2'	81:A2:1623:C:H5'	2.25	0.67
81:A2:181:U:H6	81:A2:181:U:C5'	2.07	0.67
81:A2:1831:G:H3'	81:A2:1831:G:C8	2.29	0.67
81:A2:3887:G:H2'	81:A2:3888:C:O5'	1.95	0.67
81:A2:4252:A:H4'	81:A2:4253:U:OP2	1.94	0.67
81:A2:708:G:H2'	81:A2:709:G:H8	1.57	0.67
82:A3:109:C:H4'	82:A3:110:U:C6	2.30	0.67
83:A4:11:A:H2	83:A4:66:G:N3	1.92	0.67
83:A4:68:C:O2	83:A4:68:C:H2'	1.94	0.67
4:B1:1383:A:O5'	4:B1:1383:A:H8	1.76	0.67
4:B1:1688:C:H2'	4:B1:1688:C:O2	1.93	0.67
4:B1:181:A:H4'	4:B1:182:C:OP2	1.93	0.67
81:A2:1161:C:H3'	81:A2:1161:C:H6	1.58	0.67
81:A2:1264:G:H2'	81:A2:1265:U:H5'	1.77	0.67
81:A2:1343:C:H2'	81:A2:1344:U:O4'	1.94	0.67
81:A2:1377:A:H4'	81:A2:1378:A:OP1	1.94	0.67
81:A2:1479:A:H2'	81:A2:1480:C:H5''	1.77	0.67
81:A2:2632:C:H2'	81:A2:2633:U:H6	1.59	0.67
81:A2:3779:C:H3'	81:A2:3779:C:C6	2.28	0.67
81:A2:4085:U:H4'	81:A2:4086:C:OP1	1.94	0.67
81:A2:417:A:H2'	81:A2:418:A:C8	2.28	0.67
81:A2:3883:U:H3	81:A2:4338:A:H61	1.40	0.67
81:A2:4358:C:H3'	81:A2:4358:C:C6	2.29	0.67
81:A2:669:G:H5''	81:A2:669:G:C8	2.29	0.67
81:A2:961:C:H2'	81:A2:962:G:C8	2.30	0.67
83:A4:23:A:N3	83:A4:119:U:C1'	2.58	0.67
4:B1:746:C:C5	4:B1:749:U:H4'	2.29	0.67
4:B1:901:G:H8	4:B1:901:G:O5'	1.77	0.67
4:B1:943:U:H3'	4:B1:944:A:H8	1.59	0.67
4:B1:970:G:C4	81:A2:3679:G:O2'	2.48	0.67
10:BF:187:SER:OG	10:BF:190:ILE:HG12	1.94	0.67
51:CO:182:GLU:C	51:CO:187:LYS:HD3	2.14	0.67
51:CO:48:TYR:CD2	51:CO:51:LYS:HE2	2.29	0.67
81:A2:1870:A:H4'	81:A2:1871:C:OP2	1.93	0.67
81:A2:2009:C:H2'	81:A2:2010:U:H5'	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2056:C:H2'	81:A2:2057:G:H8	1.57	0.67
81:A2:2549:C:H2'	81:A2:2550:A:C8	2.30	0.67
81:A2:301:G:H2'	81:A2:302:G:O4'	1.95	0.67
81:A2:3887:G:H2'	81:A2:3888:C:H6	1.60	0.67
81:A2:4278:C:H6	81:A2:4278:C:H3'	1.60	0.67
81:A2:455:G:H3'	81:A2:456:G:H8	1.58	0.67
81:A2:4700:C:H3'	81:A2:4701:G:C5'	2.20	0.67
81:A2:957:G:C5'	81:A2:957:G:H8	1.94	0.67
3:AX:39:U:H2'	3:AX:40:U:H5'	1.77	0.67
4:B1:1016:U:C6	4:B1:1017:U:H5	2.12	0.67
4:B1:124:U:H3'	4:B1:124:U:C6	2.29	0.67
4:B1:1401:A:H1'	4:B1:1402:A:OP1	1.95	0.67
4:B1:1405:A:H2	4:B1:1442:U:H6	1.41	0.67
4:B1:384:U:O5'	4:B1:384:U:H6	1.77	0.67
4:B1:691:G:H2'	4:B1:692:G:H5'	1.76	0.67
2:AW:38:A:H1'	10:BF:133:THR:HG22	1.73	0.67
4:B1:1648:G:C8	21:BQ:125:ARG:HA	2.29	0.67
39:CB:14:LEU:O	39:CB:17:LEU:HB2	1.95	0.67
81:A2:1058:A:C2	81:A2:1206:U:H1'	2.30	0.67
81:A2:10:A:C2'	81:A2:11:G:H5'	2.24	0.67
40:CC:337:ARG:HE	81:A2:1213:G:H4'	1.58	0.67
40:CC:326:LEU:CB	81:A2:1218:A:H62	2.08	0.67
42:CE:132:PRO:HB3	81:A2:1265:U:H4'	1.75	0.67
81:A2:1420:U:C6	81:A2:1420:U:C3'	2.77	0.67
81:A2:1481:G:OP1	81:A2:1481:G:C4	2.48	0.67
81:A2:1610:A:H8	81:A2:1610:A:P	2.18	0.67
81:A2:211:G:H2'	81:A2:211:G:N3	2.09	0.67
81:A2:2516:C:H2'	81:A2:2517:C:C6	2.30	0.67
81:A2:2549:C:C4'	81:A2:2736:G:H2'	2.25	0.67
81:A2:2527:G:H22	81:A2:2744:U:H3	1.42	0.67
81:A2:4085:U:O2	81:A2:4085:U:H2'	1.95	0.67
81:A2:969:C:H2'	81:A2:970:C:C6	2.30	0.67
4:B1:1286:G:H2'	4:B1:1286:G:N3	2.09	0.67
4:B1:1649:U:N3	4:B1:1675:A:H2	1.93	0.67
4:B1:172:U:OP1	4:B1:314:U:H2'	1.94	0.67
4:B1:224:A:N1	4:B1:297:A:N1	2.43	0.67
4:B1:498:C:H5'	9:BE:7:LYS:HD3	1.77	0.67
4:B1:529:A:H2'	4:B1:530:U:C5	2.29	0.67
6:BB:97:LEU:HG	6:BB:232:HIS:NE2	2.10	0.67
10:BF:73:THR:HG22	10:BF:93:VAL:HG21	1.77	0.67
12:BH:109:ARG:CG	12:BH:113:LYS:HA	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:CZ:136:PHE:HA	81:A2:4089:G:N2	2.10	0.67
81:A2:1283:A:OP1	81:A2:1283:A:H4'	1.95	0.66
81:A2:3868:G:H2'	81:A2:3869:G:H5'	1.76	0.66
81:A2:1852:A:H5''	81:A2:4178:U:O2	1.95	0.66
81:A2:426:A:H2'	81:A2:427:C:H5'	1.77	0.66
81:A2:4383:U:H6	81:A2:4383:U:H3'	1.60	0.66
81:A2:4597:G:O2'	81:A2:5000:G:H1'	1.95	0.66
81:A2:4851:G:H2'	81:A2:4852:G:C8	2.30	0.66
81:A2:920:C:H2'	81:A2:921:U:H6	1.59	0.66
83:A4:63:C:H1'	83:A4:64:G:C5'	2.25	0.66
1:AV:72:C:C2'	1:AV:73:A:H5'	2.24	0.66
4:B1:1053:C:O2	4:B1:1053:C:H2'	1.94	0.66
4:B1:1410:C:P	4:B1:1413:G:H5''	2.35	0.66
4:B1:1622:U:OP2	4:B1:1623:A:H5'	1.94	0.66
4:B1:380:G:C2	4:B1:382:C:H3'	2.29	0.66
4:B1:575:A:H5''	4:B1:576:A:N6	2.10	0.66
4:B1:747:U:H5''	4:B1:795:A:H62	1.60	0.66
4:B1:805:U:N3	4:B1:858:A:C2	2.62	0.66
4:B1:877:C:H2'	4:B1:878:G:H8	1.59	0.66
12:BH:109:ARG:HA	12:BH:113:LYS:H	1.59	0.66
23:BS:24:ARG:HA	30:BZ:48:VAL:HG11	1.77	0.66
42:CE:160:LYS:NZ	42:CE:183:ARG:HD3	2.10	0.66
60:CX:150:ALA:O	60:CX:153:ILE:HG12	1.95	0.66
81:A2:1085:C:H4'	81:A2:1085:C:OP2	1.96	0.66
81:A2:128:C:H2'	81:A2:129:C:C6	2.30	0.66
81:A2:2349:U:H2'	81:A2:2350:C:C6	2.30	0.66
81:A2:2871:A:H2'	81:A2:2872:A:C8	2.30	0.66
81:A2:3587:C:H4'	81:A2:3589:G:C4	2.30	0.66
81:A2:382:U:H2'	81:A2:383:U:C5	2.29	0.66
81:A2:4397:U:C5	81:A2:4475:G:H4'	2.31	0.66
81:A2:4803:C:H3'	81:A2:4804:G:C4'	2.24	0.66
42:CE:262:LYS:HG3	81:A2:4887:U:H5''	1.77	0.66
81:A2:4895:C:H2'	81:A2:4896:G:OP1	1.95	0.66
4:B1:1427:C:C6	4:B1:1427:C:H3'	2.30	0.66
4:B1:797:C:C6	12:BH:106:ARG:HB3	2.30	0.66
4:B1:1648:G:H2'	21:BQ:127:CYS:CA	2.24	0.66
43:CF:117:ILE:HD11	43:CF:222:LYS:NZ	2.10	0.66
81:A2:1019:C:H2'	81:A2:1020:G:C8	2.31	0.66
81:A2:1171:C:H2'	81:A2:1172:C:C6	2.30	0.66
81:A2:196:G:H1'	81:A2:197:U:OP1	1.95	0.66
4:B1:970:G:C6	81:A2:3679:G:O2'	2.47	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:670:C:H2'	81:A2:671:C:H6	1.59	0.66
81:A2:98:A:H1'	81:A2:283:G:C6	2.31	0.66
4:B1:1167:G:H2'	4:B1:1168:G:O4'	1.96	0.66
4:B1:1516:G:C2'	4:B1:1517:G:H5'	2.24	0.66
4:B1:235:A:O2'	4:B1:236:A:H8	1.76	0.66
4:B1:799:U:H1'	4:B1:800:U:C6	2.30	0.66
4:B1:1389:C:H5'	8:BD:205:PRO:HB3	1.78	0.66
4:B1:305:U:H2'	13:BI:60:LEU:CD2	2.26	0.66
54:CR:134:ASN:CB	81:A2:2873:G:H5''	2.25	0.66
81:A2:957:G:OP1	81:A2:1219:C:H5''	1.95	0.66
81:A2:1301:G:H5''	81:A2:1302:A:OP2	1.95	0.66
81:A2:1664:G:H2'	81:A2:1665:C:C6	2.29	0.66
61:CY:45:ARG:HB2	81:A2:195:A:H5'	1.77	0.66
81:A2:2587:G:O3'	81:A2:2665:G:H4'	1.94	0.66
81:A2:2756:C:H2'	81:A2:2757:C:C6	2.31	0.66
81:A2:3630:G:H4'	81:A2:3631:A:H5''	1.77	0.66
81:A2:3722:G:H2'	81:A2:3723:G:H1'	1.77	0.66
39:CB:336:CYS:SG	81:A2:4584:A:C2	2.86	0.66
81:A2:488:G:N3	81:A2:488:G:H2'	2.08	0.66
13:BI:168:GLN:O	81:A2:4980:C:OP1	2.12	0.66
3:AX:43:U:C4'	4:B1:961:G:C4	2.79	0.66
4:B1:1016:U:C5	4:B1:1017:U:H5	2.13	0.66
4:B1:1556:A:H3'	4:B1:1556:A:OP2	1.96	0.66
4:B1:1676:U:O5'	4:B1:1676:U:H6	1.78	0.66
3:AX:48:U:O4	4:B1:1702:G:OP2	2.12	0.66
4:B1:576:A:P	4:B1:577:U:H3'	2.34	0.66
6:BB:30:TRP:CZ3	19:BO:19:PRO:HB3	2.30	0.66
10:BF:111:VAL:HG12	10:BF:177:LEU:HD21	1.78	0.66
27:BW:30:CYS:SG	27:BW:61:ILE:HD12	2.36	0.66
46:CI:55:ASP:HA	46:CI:131:ILE:HG23	1.78	0.66
54:CR:137:ILE:HD12	54:CR:138:LEU:N	2.10	0.66
81:A2:1076:C:H2'	81:A2:1077:C:C6	2.30	0.66
81:A2:1183:G:H2'	81:A2:1184:C:H6	1.60	0.66
81:A2:1267:G:C3'	81:A2:1268:G:H4'	2.26	0.66
81:A2:1391:C:O5'	81:A2:1391:C:H6	1.79	0.66
81:A2:1869:A:N7	81:A2:1870:A:C6	2.64	0.66
81:A2:2552:U:H3'	81:A2:2552:U:H6	1.60	0.66
4:B1:970:G:C4	81:A2:3680:A:H5''	2.31	0.66
81:A2:384:U:H3'	81:A2:385:G:H4'	1.78	0.66
81:A2:3945:C:H2'	81:A2:3946:C:C6	2.30	0.66
1:AV:75:C:N3	81:A2:4157:G:C6	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4628:U:H4'	81:A2:4629:A:OP1	1.95	0.66
81:A2:471:C:C5'	81:A2:472:G:H5''	2.25	0.66
81:A2:4726:C:O5'	81:A2:4726:C:H6	1.78	0.66
81:A2:4736:C:H1'	81:A2:4815:G:C2	2.31	0.66
81:A2:4740:U:O2'	81:A2:4741:C:H4'	1.96	0.66
2:AW:23:A:H2'	2:AW:24:G:H8	1.60	0.66
4:B1:1135:C:H2'	4:B1:1136:U:C6	2.30	0.66
4:B1:1296:U:C2'	4:B1:1297:U:H5'	2.24	0.66
4:B1:1396:A:C2	4:B1:1449:G:N1	2.59	0.66
4:B1:1515:G:H5''	4:B1:1515:G:C8	2.30	0.66
4:B1:1214:A:N1	4:B1:1686:G:N3	2.44	0.66
4:B1:1778:C:H2'	4:B1:1779:G:C8	2.31	0.66
4:B1:346:C:H6	4:B1:346:C:H3'	1.61	0.66
4:B1:526:A:C2'	4:B1:526:A:N3	2.59	0.66
4:B1:915:G:H2'	4:B1:916:A:H5'	1.76	0.66
13:BI:123:ARG:NH2	81:A2:4979:C:C5'	0.52	0.66
23:BS:5:ILE:CG1	23:BS:6:PRO:HD2	2.25	0.66
81:A2:1165:G:O2'	81:A2:1166:U:H5'	1.95	0.66
81:A2:121:A:N1	81:A2:147:U:C5	2.64	0.66
81:A2:1633:G:H22	81:A2:1656:U:C5'	2.08	0.66
81:A2:2060:G:H2'	81:A2:2061:C:O2	1.94	0.66
54:CR:103:ARG:HH21	81:A2:2644:C:H5''	1.60	0.66
81:A2:3661:A:N6	81:A2:3792:G:H21	1.93	0.66
81:A2:3826:G:C5	81:A2:3827:C:C5	2.84	0.66
81:A2:4233:A:H5''	81:A2:4233:A:C8	2.30	0.66
81:A2:434:G:H8	81:A2:434:G:O5'	1.77	0.66
81:A2:477:C:H2'	81:A2:477:C:O2	1.95	0.66
81:A2:642:C:H3'	81:A2:643:G:H5''	1.78	0.66
82:A3:79:G:H8	82:A3:79:G:O5'	1.79	0.66
4:B1:1534:C:H2'	4:B1:1599:U:C4	2.30	0.66
4:B1:1639:G:H2'	4:B1:1639:G:N3	2.09	0.66
4:B1:465:A:H4'	4:B1:466:G:O5'	1.94	0.66
4:B1:817:G:H8	4:B1:817:G:O5'	1.77	0.66
39:CB:115:LYS:HA	39:CB:118:PHE:CD2	2.31	0.66
51:CO:60:LYS:NZ	81:A2:2024:G:H5'	2.11	0.66
4:B1:873:G:OP2	54:CR:163:ARG:CB	2.37	0.66
81:A2:1216:C:H1'	81:A2:1217:C:OP2	1.95	0.66
81:A2:2061:C:H41	81:A2:2249:G:H1	1.43	0.66
81:A2:2672:A:C3'	81:A2:2673:A:H5''	2.26	0.66
81:A2:2837:C:C6	81:A2:2837:C:H3'	2.31	0.66
4:B1:1849:G:Cl'	81:A2:3735:A:H1'	2.22	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3826:G:C5	81:A2:3827:C:H5	2.13	0.66
51:CO:48:TYR:CE1	81:A2:3895:C:H4'	100.14	0.66
81:A2:4518:U:H2'	81:A2:4519:A:H5'	1.78	0.66
81:A2:4743:C:H2'	81:A2:4744:C:C5	2.31	0.66
81:A2:99:A:H3'	81:A2:100:C:C6	2.31	0.66
1:AV:17:C:H3'	1:AV:18:G:H5''	1.78	0.66
4:B1:1684:C:C2'	4:B1:1685:U:C5'	2.70	0.66
4:B1:559:G:H5'	4:B1:560:A:H5''	1.76	0.66
4:B1:421:G:N2	4:B1:653:A:H5'	2.11	0.66
4:B1:795:A:C2'	4:B1:796:G:H8	2.09	0.66
11:BG:58:LYS:HA	11:BG:107:SER:HB2	1.78	0.66
13:BI:123:ARG:NH2	81:A2:4979:C:C3'	2.59	0.66
81:A2:1648:A:H8	81:A2:1648:A:H5'	1.60	0.66
81:A2:1727:U:H6	81:A2:1727:U:C5'	2.09	0.66
81:A2:2549:C:C6	81:A2:2549:C:H3'	2.30	0.66
81:A2:386:A:C8	81:A2:386:A:O5'	2.49	0.66
81:A2:476:C:OP2	81:A2:658:G:H5'	1.95	0.66
2:AW:37:MIA:N1	10:BF:132:GLY:C	2.49	0.66
4:B1:148:U:H6	4:B1:148:U:H5''	1.61	0.66
4:B1:1557:C:H3'	4:B1:1557:C:P	2.36	0.66
4:B1:540:U:N3	4:B1:542:U:H5''	2.10	0.66
4:B1:656:G:H5'	4:B1:662:G:N2	2.10	0.66
4:B1:1587:G:H21	24:BT:75:MET:HA	1.59	0.66
4:B1:1587:G:N2	24:BT:75:MET:HA	2.10	0.66
48:CL:37:LYS:O	48:CL:40:GLN:HG2	1.95	0.66
49:CM:93:LYS:HB2	49:CM:124:LYS:HE2	31.00	0.66
51:CO:164:ALA:HA	81:A2:4718:C:O2'	1.96	0.66
81:A2:1249:G:C5'	81:A2:1249:G:C8	2.79	0.66
81:A2:1387:C:H3'	81:A2:1388:G:N7	2.11	0.66
81:A2:1836:A:H5''	81:A2:1836:A:C8	2.30	0.66
81:A2:3743:A:H5''	81:A2:3743:A:H8	1.61	0.66
81:A2:3930:G:H2'	81:A2:3931:A:H5''	1.78	0.66
81:A2:438:C:H2'	81:A2:439:G:C8	2.31	0.66
83:A4:21:G:O5'	83:A4:21:G:H8	1.78	0.66
4:B1:1389:C:H2'	4:B1:1389:C:P	2.36	0.66
4:B1:1557:C:H2'	4:B1:1557:C:O2	1.95	0.66
4:B1:307:G:H4'	4:B1:308:G:C5'	2.21	0.66
4:B1:505:G:C2'	4:B1:506:G:H5'	2.26	0.66
6:BB:153:THR:HB	6:BB:155:TYR:CE2	2.31	0.66
6:BB:186:ASN:O	6:BB:190:PRO:HD2	1.95	0.66
10:BF:35:LEU:HD12	10:BF:39:ILE:HD11	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BV:70:LEU:HD12	26:BV:79:VAL:HG23	1.76	0.66
40:CC:209:ILE:HD12	40:CC:211:TYR:HE2	1.61	0.66
42:CE:179:LEU:HD12	81:A2:4892:C:H41	1.61	0.66
4:B1:1172:U:C5'	50:CN:14:LYS:HD3	104.39	0.66
81:A2:1389:C:O2	81:A2:1389:C:H3'	1.97	0.66
81:A2:1454:G:C3'	81:A2:1455:C:H4'	2.25	0.66
81:A2:2321:U:H5'	81:A2:2321:U:H6	1.61	0.66
81:A2:2661:C:H2'	81:A2:2662:C:H6	1.57	0.66
81:A2:2840:G:H5''	81:A2:2841:A:OP2	1.96	0.66
81:A2:3575:U:H2'	81:A2:3576:U:C6	2.30	0.66
81:A2:3604:A:C3'	81:A2:3605:C:H5''	2.26	0.66
38:CA:193:ARG:NH2	81:A2:3654:C:H5''	2.11	0.66
81:A2:4036:U:H2'	81:A2:4037:U:C6	2.30	0.66
2:AW:76:A:C8	81:A2:4331:G:N2	2.64	0.66
4:B1:1696:C:O2'	4:B1:1697:A:H5''	1.95	0.66
4:B1:988:C:O5'	4:B1:988:C:H6	1.79	0.66
6:BB:71:LEU:HD13	6:BB:72:ALA:N	2.10	0.66
41:CD:146:LEU:HB3	81:A2:4283:A:H2	1.60	0.66
42:CE:154:THR:HG22	81:A2:4902:U:H3	1.60	0.66
60:CX:76:ILE:O	60:CX:100:VAL:HG13	1.96	0.66
81:A2:1082:U:H6	81:A2:1083:C:C5	2.13	0.65
42:CE:227:HIS:CE1	81:A2:1273:G:H2'	2.31	0.65
81:A2:1445:G:H2'	81:A2:1446:C:C6	2.31	0.65
81:A2:2027:G:H8	81:A2:2027:G:H5'	1.62	0.65
81:A2:2357:G:N2	81:A2:2401:G:H5''	2.11	0.65
4:B1:970:G:OP1	81:A2:3681:A:O4'	1.99	0.65
81:A2:4245:U:H2'	81:A2:4246:C:C6	2.31	0.65
81:A2:4245:U:H2'	81:A2:4246:C:H6	1.60	0.65
81:A2:460:C:O2	81:A2:460:C:H2'	1.96	0.65
81:A2:4721:A:N3	81:A2:4721:A:H3'	2.10	0.65
83:A4:7:G:O2'	83:A4:8:G:H5'	1.97	0.65
1:AV:75:C:C4	81:A2:4157:G:C6	2.84	0.65
4:B1:107:A:H2'	4:B1:108:G:C8	2.31	0.65
4:B1:131:C:O3'	4:B1:132:U:H4'	1.96	0.65
4:B1:1413:G:H2'	4:B1:1414:A:O4'	1.96	0.65
4:B1:790:C:H2'	4:B1:791:C:C6	2.31	0.65
9:BE:154:ILE:HG23	9:BE:158:ASP:OD2	1.95	0.65
21:BQ:15:ARG:HA	21:BQ:19:ALA:O	1.95	0.65
81:A2:1019:C:H2'	81:A2:1020:G:H8	1.61	0.65
41:CD:273:LEU:HD23	81:A2:1086:A:O4'	1.97	0.65
81:A2:1399:G:C3'	81:A2:1400:A:H5''	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1758:U:H2'	81:A2:1759:A:C8	2.31	0.65
81:A2:1789:G:H1	81:A2:1807:C:H42	1.41	0.65
56:CT:130:ARG:O	81:A2:1815:A:H1'	1.96	0.65
53:CQ:11:ARG:O	81:A2:2060:G:H5''	1.95	0.65
81:A2:2764:A:N3	81:A2:2764:A:H2'	2.09	0.65
81:A2:38:A:H5'	81:A2:39:A:H4'	1.78	0.65
81:A2:4545:U:H2'	81:A2:4546:G:H8	1.60	0.65
81:A2:4817:G:H2'	81:A2:4818:G:H8	1.61	0.65
81:A2:4857:C:H2'	81:A2:4858:G:H8	1.61	0.65
81:A2:663:G:H2'	81:A2:664:C:H6	1.61	0.65
81:A2:723:G:H2'	81:A2:723:G:N3	2.10	0.65
81:A2:89:C:C2'	81:A2:90:G:H5'	2.26	0.65
82:A3:126:C:C5'	82:A3:128:C:H5	2.09	0.65
4:B1:1060:A:H4'	4:B1:1061:U:O5'	1.96	0.65
4:B1:1160:U:O2'	4:B1:1161:U:H5'	1.95	0.65
4:B1:1840:U:H2'	4:B1:1841:C:H6	1.61	0.65
4:B1:582:U:H3'	4:B1:583:A:C8	2.31	0.65
4:B1:869:A:C2	4:B1:915:G:H1'	2.30	0.65
39:CB:56:ILE:HG21	39:CB:365:LEU:HD22	1.78	0.65
45:CH:96:TYR:HA	45:CH:177:ASP:OD1	1.96	0.65
53:CQ:166:TYR:CZ	81:A2:1325:A:H5''	2.31	0.65
54:CR:1:MET:HA	81:A2:2354:C:H1'	1.78	0.65
81:A2:1088:C:C2'	81:A2:1089:C:H5'	2.25	0.65
81:A2:1388:G:H2'	81:A2:1388:G:N3	2.12	0.65
81:A2:1900:G:H4'	81:A2:1901:A:OP2	1.96	0.65
81:A2:1943:G:O4'	81:A2:4655:C:H4'	1.96	0.65
81:A2:224:A:C2	81:A2:225:C:H1'	2.31	0.65
81:A2:2711:U:H6	81:A2:2711:U:H5''	1.59	0.65
81:A2:4028:U:H2'	81:A2:4029:G:H8	1.62	0.65
81:A2:4737:C:H2'	81:A2:4738:U:H6	1.60	0.65
81:A2:4817:G:H2'	81:A2:4818:G:C8	2.30	0.65
81:A2:943:G:H1'	81:A2:944:A:O5'	1.96	0.65
82:A3:122:G:OP1	82:A3:122:G:H4'	1.95	0.65
1:AV:75:C:OP1	81:A2:4508:A:H8	1.78	0.65
4:B1:1217:A:H2'	4:B1:1218:C:C5	2.31	0.65
4:B1:1391:C:H2'	4:B1:1392:U:O4'	1.95	0.65
4:B1:197:U:N3	4:B1:198:U:C5	2.65	0.65
4:B1:464:A:H4'	4:B1:465:A:OP2	1.96	0.65
4:B1:658:U:H5''	4:B1:659:G:N7	2.11	0.65
10:BF:72:LEU:HD11	10:BF:116:ILE:HD11	1.77	0.65
14:BJ:27:GLN:OE1	14:BJ:30:LYS:HE2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1408:U:H5'	21:BQ:69:ARG:HH21	1.62	0.65
39:CB:285:TYR:CE1	39:CB:334:LYS:HB2	2.31	0.65
52:CP:85:LYS:HG2	81:A2:3825:A:H4'	1.79	0.65
53:CQ:75:ARG:NE	53:CQ:78:LYS:HG3	2.11	0.65
81:A2:1096:C:H2'	81:A2:1097:C:H6	1.60	0.65
81:A2:1200:G:C8	81:A2:1200:G:P	2.89	0.65
81:A2:1583:G:H2'	81:A2:1584:G:C8	2.31	0.65
81:A2:163:C:H2'	81:A2:164:C:H6	1.62	0.65
81:A2:1807:C:H2'	81:A2:1808:G:C8	2.30	0.65
43:CF:219:GLY:O	81:A2:1884:U:H4'	1.95	0.65
81:A2:194:A:H2	81:A2:222:G:N2	1.94	0.65
81:A2:2416:G:C2'	81:A2:2495:G:H22	2.07	0.65
81:A2:2704:C:C2'	81:A2:2705:U:H5'	2.24	0.65
81:A2:292:G:H3'	81:A2:293:C:C6	2.31	0.65
81:A2:3732:A:C2	81:A2:3733:U:H1'	2.31	0.65
81:A2:4260:U:H2'	81:A2:4261:U:C6	2.30	0.65
82:A3:40:A:H2'	82:A3:41:A:H8	1.61	0.65
2:AW:48:C:C5	2:AW:59:U:H1'	2.32	0.65
4:B1:370:G:H4'	4:B1:371:A:OP1	1.97	0.65
4:B1:639:C:H2'	4:B1:640:A:C8	2.31	0.65
4:B1:640:A:H2'	4:B1:641:A:C8	2.30	0.65
4:B1:795:A:H2'	4:B1:796:G:H5'	1.77	0.65
7:BC:210:PRO:HG3	7:BC:236:PHE:CE2	2.31	0.65
14:BJ:111:GLN:NE2	14:BJ:130:ILE:HD12	2.10	0.65
24:BT:34:VAL:HG22	24:BT:99:VAL:HG12	1.77	0.65
60:CX:66:PRO:HB3	82:A3:134:G:H5'	1.77	0.65
81:A2:1423:A:C8	81:A2:1423:A:H5''	2.30	0.65
81:A2:1460:C:C6	81:A2:1460:C:C3'	2.79	0.65
81:A2:1464:C:H2'	81:A2:1465:C:O4'	1.97	0.65
81:A2:183:G:C2'	81:A2:184:U:H5'	2.27	0.65
81:A2:2305:U:C3'	81:A2:2306:G:H8	2.10	0.65
81:A2:2510:C:H6	81:A2:2510:C:OP2	1.78	0.65
62:CZ:105:ALA:HA	81:A2:2531:U:H1'	1.79	0.65
81:A2:3703:U:H2'	81:A2:3704:G:H5'	1.77	0.65
81:A2:4736:C:H42	81:A2:4811:G:H1	1.45	0.65
81:A2:4838:C:C2'	81:A2:4839:G:H5''	2.27	0.65
81:A2:4896:G:H4'	81:A2:4897:C:O5'	1.97	0.65
4:B1:1034:A:C2'	4:B1:1035:A:H5'	2.27	0.65
4:B1:185:G:H2'	4:B1:186:C:H5	1.61	0.65
4:B1:312:G:H22	11:BG:195:LYS:HB2	1.61	0.65
4:B1:338:G:H5''	4:B1:338:G:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:448:A:C8	13:BI:26:LYS:N	2.65	0.65
4:B1:525:A:C8	4:B1:525:A:H3'	2.32	0.65
4:B1:527:C:H5'	14:BJ:122:SER:HB3	1.77	0.65
26:BV:35:ASN:OD1	26:BV:50:PHE:HB3	1.96	0.65
45:CH:132:VAL:HG11	45:CH:154:VAL:HA	1.78	0.65
4:B1:909:G:P	54:CR:169:ALA:CB	2.84	0.65
81:A2:1281:C:C3'	81:A2:1281:C:C6	2.80	0.65
81:A2:2295:C:H2'	81:A2:2296:G:H8	1.61	0.65
81:A2:2371:G:H4'	81:A2:2372:A:OP2	1.96	0.65
81:A2:2392:U:H2'	81:A2:2393:G:H8	1.61	0.65
81:A2:4343:U:H2'	81:A2:4344:U:C6	2.32	0.65
81:A2:4983:G:H2'	81:A2:4984:C:C6	2.31	0.65
81:A2:710:G:O2'	81:A2:711:A:H5'	1.96	0.65
81:A2:924:C:C3'	81:A2:925:C:C5'	2.73	0.65
43:CF:148:LYS:HG3	81:A2:926:G:H5''	1.77	0.65
81:A2:928:A:C2	81:A2:931:C:N4	2.65	0.65
82:A3:129:C:H2'	82:A3:130:C:H5	1.61	0.65
4:B1:1476:A:H4'	4:B1:1477:U:O5'	1.92	0.65
4:B1:796:G:N2	4:B1:797:C:C5	2.65	0.65
4:B1:879:C:H2'	4:B1:880:G:H8	1.61	0.65
4:B1:911:C:O2'	4:B1:912:C:H5'	1.97	0.65
6:BB:97:LEU:HG	6:BB:232:HIS:CE1	2.31	0.65
7:BC:167:ARG:CA	7:BC:181:PRO:HD3	2.27	0.65
43:CF:66:ARG:HA	43:CF:69:ILE:CD1	2.26	0.65
44:CG:117:ARG:O	44:CG:121:LYS:HG2	1.96	0.65
51:CO:172:LYS:HD2	81:A2:4728:G:H5''	1.78	0.65
52:CP:67:VAL:HG12	52:CP:68:GLY:H	1.62	0.65
81:A2:1086:A:C8	81:A2:1086:A:OP1	2.50	0.65
81:A2:1170:C:H2'	81:A2:1171:C:C6	2.32	0.65
81:A2:1213:G:O2'	81:A2:1214:G:H5'	1.95	0.65
81:A2:434:G:N1	81:A2:1284:C:N4	2.45	0.65
81:A2:1742:C:H3'	81:A2:1743:G:C5'	2.26	0.65
81:A2:2550:A:O5'	81:A2:2736:G:H8	1.78	0.65
81:A2:4268:C:C2'	81:A2:4269:G:H5'	2.26	0.65
81:A2:4507:C:H3'	81:A2:4508:A:H5''	1.78	0.65
81:A2:4673:G:H3'	81:A2:4674:C:H6	1.60	0.65
81:A2:4898:A:H3'	81:A2:4898:A:OP2	1.96	0.65
81:A2:640:A:O2'	81:A2:641:C:H5'	1.96	0.65
81:A2:918:C:H4'	81:A2:919:A:H5'	1.77	0.65
4:B1:1120:U:H2'	4:B1:1121:G:H5'	1.77	0.65
4:B1:1721:U:H1'	4:B1:1722:G:OP2	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1743:G:H1'	4:B1:1792:G:H22	1.61	0.65
4:B1:572:U:H3'	4:B1:573:U:N3	2.11	0.65
4:B1:736:C:H2'	4:B1:737:G:H8	1.61	0.65
4:B1:109:U:O2'	4:B1:855:G:H1'	1.97	0.65
5:BA:176:TRP:CD2	5:BA:199:PRO:HB3	2.31	0.65
5:BA:8:LEU:O	5:BA:55:TRP:HZ2	1.80	0.65
21:BQ:37:ARG:HB3	24:BT:7:LYS:HG3	1.77	0.65
38:CA:186:TYR:HB2	38:CA:196:TRP:CH2	2.32	0.65
51:CO:109:PRO:O	51:CO:112:TYR:HB2	1.96	0.65
51:CO:167:HIS:HB3	81:A2:4718:C:C2'	2.26	0.65
52:CP:48:LEU:HD23	52:CP:88:ALA:O	1.97	0.65
58:CV:129:TRP:HB2	58:CV:132:ILE:HD12	1.79	0.65
61:CY:121:ARG:HA	61:CY:125:SER:CB	2.27	0.65
61:CY:44:VAL:HG23	61:CY:123:ALA:CB	2.26	0.65
81:A2:135:G:C8	81:A2:135:G:C3'	2.77	0.65
81:A2:1357:G:N7	81:A2:1360:G:H2'	2.12	0.65
81:A2:1422:C:H3'	81:A2:1422:C:O2	1.97	0.65
81:A2:1743:G:C2'	81:A2:1744:A:H5'	2.27	0.65
81:A2:2028:G:H8	81:A2:2028:G:O5'	1.80	0.65
81:A2:1877:G:C5	81:A2:2254:G:C6	2.85	0.65
81:A2:2348:U:P	81:A2:2348:U:O4'	2.54	0.65
81:A2:2380:A:H3'	81:A2:2381:A:H8	1.62	0.65
81:A2:2514:A:H2'	81:A2:2515:U:C6	2.32	0.65
81:A2:2526:G:H5''	81:A2:2527:G:H5''	1.78	0.65
81:A2:2743:A:H2'	81:A2:2744:U:C4	2.32	0.65
81:A2:4695:C:C2'	81:A2:4696:G:H8	2.09	0.65
81:A2:4869:C:C3'	81:A2:4869:C:C6	2.80	0.65
81:A2:4893:A:P	81:A2:4893:A:H3'	2.37	0.65
81:A2:69:A:N3	81:A2:69:A:H3'	2.12	0.65
81:A2:717:G:H3'	81:A2:718:G:H5'	1.79	0.65
4:B1:1287:A:C3'	4:B1:1312:G:H22	2.10	0.65
4:B1:1439:A:H2'	4:B1:1440:C:N1	2.11	0.65
4:B1:1673:U:C5'	4:B1:1673:U:C6	2.80	0.65
4:B1:298:G:H2'	4:B1:299:A:C8	2.31	0.65
4:B1:549:C:H2'	4:B1:550:C:C6	2.31	0.65
4:B1:1446:A:N3	25:BU:55:ARG:HG3	2.12	0.65
50:CN:93:LYS:HD2	81:A2:292:G:H1'	1.76	0.65
4:B1:908:A:H5''	54:CR:172:ARG:HH12	1.60	0.65
61:CY:49:ILE:HD13	61:CY:80:ILE:HG21	1.79	0.65
81:A2:133:C:H2'	81:A2:135:G:N1	2.12	0.65
81:A2:147:U:H4'	81:A2:149:U:C6	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:155:A:OP1	81:A2:157:G:H5'	1.97	0.65
38:CA:196:TRP:CH2	81:A2:1592:A:C2	2.85	0.65
81:A2:2416:G:H1'	81:A2:2754:G:C2	2.31	0.65
81:A2:4084:U:H1'	81:A2:4085:U:OP1	1.97	0.65
81:A2:4131:C:H3'	81:A2:4132:A:H8	1.61	0.65
47:CJ:129:ASP:OD1	81:A2:4211:A:H8	1.79	0.65
81:A2:425:A:H3'	81:A2:425:A:C8	2.32	0.65
2:AW:4:C:H5'	81:A2:3684:U:OP2	1.97	0.65
4:B1:1034:A:H2'	4:B1:1035:A:H5'	1.78	0.65
4:B1:1642:U:O2'	4:B1:1643:U:H5'	1.97	0.65
4:B1:526:A:C8	14:BJ:128:VAL:HG13	2.32	0.65
4:B1:577:U:H4'	4:B1:578:C:O5'	1.96	0.65
4:B1:872:A:C2	54:CR:170:ARG:NH2	2.65	0.65
28:BX:46:HIS:HB3	28:BX:101:LEU:HD11	1.77	0.65
28:BX:112:VAL:HB	28:BX:115:ILE:HD13	1.78	0.65
40:CC:165:LYS:HZ1	81:A2:219:C:P	2.20	0.65
42:CE:136:HIS:O	42:CE:137:VAL:HB	1.96	0.65
48:CL:56:ARG:HB3	48:CL:73:GLY:O	1.97	0.65
49:CM:112:VAL:HA	51:CO:197:LYS:CE	2.27	0.65
56:CT:4:THR:HG21	81:A2:4168:U:H5	1.61	0.65
81:A2:1221:C:H3'	81:A2:1221:C:H6	1.61	0.65
81:A2:139:G:H8	81:A2:139:G:OP2	1.80	0.65
81:A2:1740:G:H2'	81:A2:1741:C:H6	1.61	0.65
81:A2:1918:G:H8	81:A2:1918:G:OP2	1.80	0.65
81:A2:2531:U:H2'	81:A2:2532:G:H5'	1.79	0.65
81:A2:3842:G:H2'	81:A2:3843:G:C8	2.31	0.65
2:AW:76:A:N7	81:A2:4331:G:N2	2.44	0.65
81:A2:4685:G:H2'	81:A2:4686:A:H8	1.61	0.65
81:A2:640:A:C2'	81:A2:641:C:H5'	2.27	0.65
81:A2:1717:A:O3'	83:A4:101:A:C2	2.50	0.65
3:AX:43:U:C1'	4:B1:961:G:C2	2.79	0.65
4:B1:1048:G:H8	4:B1:1048:G:O5'	1.79	0.65
4:B1:1201:U:H6	4:B1:1201:U:O5'	1.79	0.65
4:B1:1303:C:H2'	4:B1:1304:U:C6	2.32	0.65
4:B1:1330:G:H4'	4:B1:1331:C:C4'	2.27	0.65
4:B1:1864:U:O2'	4:B1:1866:A:H2	1.81	0.65
4:B1:234:C:H2'	4:B1:235:A:H8	1.61	0.65
4:B1:370:G:H8	4:B1:370:G:H5'	1.60	0.65
24:BT:72:VAL:HG12	24:BT:97:LYS:HE3	1.78	0.65
40:CC:164:THR:HG22	40:CC:220:ALA:O	1.97	0.65
47:CJ:18:ARG:NE	47:CJ:135:GLY:HA3	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CQ:140:SER:H	81:A2:1437:C:H4'	1.62	0.65
81:A2:1249:G:C6	81:A2:1250:A:C5	2.86	0.64
81:A2:1374:G:H2'	81:A2:1375:U:C6	2.32	0.64
81:A2:192:C:H6	81:A2:192:C:O5'	1.79	0.64
81:A2:2045:C:H2'	81:A2:2046:C:C5	2.33	0.64
81:A2:3725:A:C2	81:A2:3726:G:C5	2.85	0.64
81:A2:3750:C:H5'	81:A2:3790:A:H4'	1.78	0.64
81:A2:3877:A:C3'	81:A2:3878:C:H5'	2.27	0.64
81:A2:4426:C:H2'	81:A2:4427:A:H5'	1.79	0.64
81:A2:4524:A:H2'	81:A2:4525:C:C6	2.32	0.64
81:A2:4526:U:C6	81:A2:4526:U:H3'	2.32	0.64
81:A2:4656:C:H2'	81:A2:4657:U:C6	2.31	0.64
81:A2:64:A:H4'	81:A2:65:A:O5'	1.94	0.64
81:A2:707:C:H2'	81:A2:708:G:C8	2.31	0.64
82:A3:37:A:H5''	82:A3:39:G:O4'	1.97	0.64
3:AX:43:U:C1'	4:B1:961:G:N3	2.59	0.64
4:B1:1028:A:C2	81:A2:1543:A:N6	2.52	0.64
4:B1:1565:C:C2'	4:B1:1566:G:H5'	2.27	0.64
4:B1:383:G:H3'	4:B1:384:U:C5	2.32	0.64
4:B1:385:G:H4'	4:B1:386:C:H5''	1.79	0.64
4:B1:431:G:H2'	4:B1:432:G:H8	1.63	0.64
4:B1:76:U:H3'	4:B1:77:A:C5'	2.27	0.64
4:B1:77:A:N6	11:BG:155:GLN:HB3	2.12	0.64
4:B1:305:U:O2	13:BI:43:ILE:HD11	1.97	0.64
39:CB:322:HIS:O	39:CB:342:LYS:HE3	1.97	0.64
45:CH:71:ARG:HD2	81:A2:4651:A:H4'	1.79	0.64
48:CL:47:ALA:HB1	48:CL:48:PRO:CD	2.26	0.64
61:CY:120:GLU:C	61:CY:125:SER:HB3	2.17	0.64
81:A2:82:U:H3	81:A2:101:A:H62	1.45	0.64
81:A2:1160:C:C6	81:A2:1160:C:C3'	2.81	0.64
81:A2:1198:G:O2'	81:A2:1199:G:H5'	1.97	0.64
81:A2:1336:U:H2'	81:A2:1337:C:C6	2.32	0.64
81:A2:1738:G:H1	81:A2:1752:U:H3	1.45	0.64
81:A2:2253:C:H2'	81:A2:2254:G:H5'	1.79	0.64
81:A2:2305:U:C2'	81:A2:2306:G:H8	2.10	0.64
81:A2:194:A:C2	81:A2:240:A:C2	2.85	0.64
81:A2:2695:U:H5''	81:A2:2696:C:O4'	1.96	0.64
81:A2:2709:G:H2'	81:A2:2710:C:C6	2.32	0.64
58:CV:86:LYS:HD3	81:A2:2823:G:H1'	1.79	0.64
81:A2:4025:C:C3'	81:A2:4025:C:C6	2.81	0.64
81:A2:4483:A:C2'	81:A2:4519:A:H62	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4851:G:H21	81:A2:4882:G:H1'	1.60	0.64
81:A2:4855:C:H2'	81:A2:4856:G:C4'	2.27	0.64
81:A2:642:C:H3'	81:A2:643:G:C5'	2.27	0.64
81:A2:928:A:H2	81:A2:931:C:N4	1.95	0.64
81:A2:957:G:H4'	81:A2:1218:A:H4'	1.78	0.64
82:A3:107:C:H5'	82:A3:107:C:H6	1.61	0.64
83:A4:14:C:H6	83:A4:14:C:O5'	1.78	0.64
2:AW:43:C:H5'	2:AW:44:G:OP2	1.97	0.64
3:AX:45:U:O2	3:AX:45:U:H2'	1.97	0.64
24:BT:4:VAL:HG21	24:BT:139:ALA:CB	2.27	0.64
5:BA:9:GLN:HB2	26:BV:83:PHE:HA	1.78	0.64
55:CS:173:ASN:O	81:A2:4723:A:C8	2.51	0.64
61:CY:62:TYR:HB3	61:CY:65:GLN:CG	2.27	0.64
81:A2:1193:G:H3'	81:A2:1193:G:P	2.38	0.64
81:A2:1238:G:H2'	81:A2:1239:G:H8	1.61	0.64
81:A2:13:U:H4'	81:A2:14:C:OP2	1.97	0.64
81:A2:1797:G:N2	81:A2:1801:U:H5''	2.11	0.64
81:A2:1648:A:N3	81:A2:1830:U:H4'	2.11	0.64
81:A2:214:C:H6	81:A2:214:C:H3'	1.63	0.64
81:A2:277:U:O5'	81:A2:277:U:H6	1.79	0.64
81:A2:79:C:C1'	81:A2:329:A:H5'	2.26	0.64
81:A2:441:G:H1'	81:A2:1274:A:H4'	1.79	0.64
81:A2:676:G:HO2'	81:A2:677:C:H5	1.43	0.64
81:A2:913:A:H1'	81:A2:916:A:H62	1.62	0.64
81:A2:941:G:H2'	81:A2:941:G:N3	2.10	0.64
81:A2:418:A:N6	82:A3:7:U:H3	1.96	0.64
4:B1:1203:G:H2'	4:B1:1699:A:C2	2.33	0.64
4:B1:62:G:H5'	4:B1:172:U:C4	2.32	0.64
4:B1:1767:C:C2'	4:B1:1768:A:H5'	2.27	0.64
4:B1:838:G:C8	29:BY:9:THR:N	2.63	0.64
40:CC:312:ARG:N	81:A2:943:G:O6	2.31	0.64
40:CC:86:ARG:HG3	40:CC:89:GLN:OE1	1.97	0.64
44:CG:29:ASN:N	44:CG:30:PRO:HD2	2.11	0.64
51:CO:182:GLU:CA	51:CO:187:LYS:HD3	2.27	0.64
81:A2:1352:A:C2	81:A2:1353:A:C6	2.84	0.64
81:A2:1408:U:C2'	81:A2:1409:C:H5'	2.28	0.64
81:A2:179:G:H2'	81:A2:180:C:C6	2.31	0.64
81:A2:182:C:C3'	81:A2:183:G:C8	2.75	0.64
81:A2:3605:C:C5'	81:A2:3605:C:H6	2.09	0.64
81:A2:3729:A:H1'	81:A2:3730:C:OP2	1.97	0.64
81:A2:3866:G:C2	81:A2:4519:A:H2	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3873:G:H2'	81:A2:3873:G:P	2.36	0.64
81:A2:4568:G:H2'	81:A2:4569:G:O4'	1.98	0.64
81:A2:4711:U:N3	81:A2:4903:C:C5	2.60	0.64
81:A2:4803:C:H3'	81:A2:4804:G:H5''	1.78	0.64
48:CL:111:GLN:HB3	81:A2:510:C:H5''	1.78	0.64
40:CC:342:ARG:NH2	81:A2:714:G:H4'	2.12	0.64
82:A3:126:C:C5'	82:A3:128:C:C5	2.80	0.64
4:B1:1377:U:O2'	4:B1:1378:A:H4'	1.96	0.64
4:B1:1454:A:N6	4:B1:1467:C:H5	1.96	0.64
4:B1:1597:C:H5''	4:B1:1598:G:OP2	1.98	0.64
4:B1:331:C:H3'	4:B1:332:G:C5'	2.27	0.64
4:B1:796:G:N2	4:B1:797:C:H5	1.96	0.64
4:B1:343:A:H4'	9:BE:128:LYS:NZ	2.13	0.64
11:BG:193:ALA:O	11:BG:197:GLN:HG2	1.98	0.64
4:B1:562:U:H4'	14:BJ:132:GLN:OE1	1.97	0.64
21:BQ:89:SER:CB	21:BQ:119:LEU:HB3	2.28	0.64
4:B1:1587:G:C6	24:BT:74:SER:HB3	2.31	0.64
81:A2:1078:G:H2'	81:A2:1079:C:H5'	1.79	0.64
81:A2:1845:A:H2'	81:A2:1846:A:H5'	1.80	0.64
81:A2:2451:G:H2'	81:A2:2452:G:C1'	2.26	0.64
81:A2:2839:G:H4'	81:A2:2840:G:OP2	1.96	0.64
81:A2:346:A:C2	81:A2:347:G:C1'	2.79	0.64
81:A2:3744:A:C3'	81:A2:3745:G:H5''	2.26	0.64
81:A2:4033:G:H2'	81:A2:4034:U:C6	2.32	0.64
81:A2:4561:U:H4'	81:A2:4562:A:OP1	1.95	0.64
81:A2:4895:C:C3'	81:A2:4895:C:C6	2.81	0.64
81:A2:32:G:H21	81:A2:50:C:H41	1.45	0.64
81:A2:77:U:H3	81:A2:327:A:H61	1.45	0.64
81:A2:943:G:H4'	81:A2:943:G:OP1	1.97	0.64
52:CP:6:LEU:HB2	82:A3:10:G:N2	2.10	0.64
4:B1:1162:C:H2'	4:B1:1163:C:C6	2.33	0.64
4:B1:1340:U:C5'	4:B1:1341:C:H2'	2.27	0.64
4:B1:1778:C:H2'	4:B1:1779:G:H8	1.62	0.64
4:B1:571:U:C3'	4:B1:572:U:O4'	2.45	0.64
4:B1:413:G:H5'	4:B1:814:U:O2	1.96	0.64
9:BE:129:ILE:CG2	9:BE:156:VAL:HG22	2.26	0.64
4:B1:1298:G:H1'	20:BP:79:HIS:HB2	1.77	0.64
38:CA:136:VAL:HG22	38:CA:148:VAL:HG12	1.80	0.64
40:CC:330:PRO:HB2	43:CF:51:TYR:CZ	2.31	0.64
47:CJ:36:ALA:HB3	47:CJ:70:VAL:HG21	1.79	0.64
57:CU:61:VAL:HG12	57:CU:74:SER:CB	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:CZ:58:GLY:HA3	81:A2:4109:C:P	2.38	0.64
81:A2:1388:G:C2	81:A2:1389:C:H1'	2.32	0.64
81:A2:2608:U:C2'	81:A2:2609:U:H4'	2.28	0.64
81:A2:2673:A:H4'	81:A2:2674:A:C5'	2.28	0.64
81:A2:2836:G:H2'	81:A2:2837:C:C6	2.32	0.64
41:CD:260:GLU:HG2	83:A4:119:U:H3'	1.78	0.64
2:AW:16:U:H1'	2:AW:60:U:O2	1.98	0.64
4:B1:1372:U:H5''	4:B1:1386:A:N3	2.12	0.64
4:B1:1603:G:H3'	4:B1:1603:G:OP2	1.97	0.64
4:B1:167:G:H5'	11:BG:8:PRO:O	1.97	0.64
4:B1:207:G:H4'	4:B1:208:G:OP1	1.97	0.64
4:B1:36:U:H2'	4:B1:36:U:O2	1.97	0.64
4:B1:576:A:H3'	4:B1:576:A:OP2	1.98	0.64
4:B1:615:C:H2'	4:B1:616:A:H5'	1.79	0.64
4:B1:745:C:C5'	12:BH:105:THR:HG23	2.28	0.64
4:B1:1484:A:H4'	8:BD:159:HIS:CB	2.28	0.64
4:B1:821:G:H1	14:BJ:147:PHE:HE1	1.44	0.64
39:CB:17:LEU:HB3	39:CB:18:PRO:HD3	1.80	0.64
39:CB:25:HIS:HD2	81:A2:4939:C:H5''	1.61	0.64
49:CM:129:LYS:O	49:CM:132:LYS:HB3	1.97	0.64
49:CM:23:LYS:HE3	49:CM:43:THR:O	1.97	0.64
81:A2:1049:G:H2'	81:A2:1050:G:OP1	1.97	0.64
81:A2:1503:A:H3'	81:A2:1504:A:C5'	2.26	0.64
81:A2:175:C:H2'	81:A2:176:G:H8	1.62	0.64
81:A2:176:G:H2'	81:A2:177:C:H5'	1.80	0.64
81:A2:1801:U:C6	81:A2:1801:U:H3'	2.33	0.64
52:CP:82:ARG:HH12	81:A2:2338:G:H2'	1.63	0.64
81:A2:2848:A:H3'	81:A2:2849:C:C6	2.32	0.64
81:A2:33:A:H8	81:A2:33:A:H5''	1.62	0.64
81:A2:3797:A:H5''	81:A2:3798:G:OP2	1.97	0.64
81:A2:3859:A:H2'	81:A2:3860:A:H5'	1.79	0.64
81:A2:4161:G:H8	81:A2:4161:G:O5'	1.81	0.64
81:A2:4285:A:C5	81:A2:4286:G:H1'	2.33	0.64
81:A2:4740:U:H4'	81:A2:4741:C:OP2	1.98	0.64
81:A2:730:G:O5'	81:A2:730:G:H8	1.81	0.64
82:A3:19:C:O2'	82:A3:20:A:H5'	1.98	0.64
4:B1:1493:C:C4'	4:B1:1494:U:H5'	2.28	0.64
4:B1:1643:U:H2'	4:B1:1644:C:C6	2.32	0.64
4:B1:1861:G:H5'	4:B1:1861:G:N3	2.12	0.64
4:B1:39:A:H1'	4:B1:518:G:H22	1.62	0.64
4:B1:539:C:H2'	4:B1:540:U:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:229:A:N6	4:B1:900:C:H1'	2.12	0.64
16:BL:61:PRO:HD3	16:BL:141:ASN:ND2	2.13	0.64
16:BL:5:GLN:NE2	16:BL:12:LYS:H	1.95	0.64
38:CA:20:VAL:HG13	81:A2:3648:U:C5	2.32	0.64
42:CE:183:ARG:HA	81:A2:4892:C:H42	1.62	0.64
42:CE:182:ASN:HD21	42:CE:271:LEU:HB3	1.63	0.64
56:CT:88:ARG:O	81:A2:4260:U:H5'	1.98	0.64
57:CU:61:VAL:HG12	57:CU:74:SER:HB2	1.79	0.64
81:A2:1366:C:H6	81:A2:1366:C:O5'	1.81	0.64
81:A2:154:U:H4'	81:A2:157:G:O3'	1.97	0.64
81:A2:2274:U:H6	81:A2:2274:U:OP2	1.81	0.64
81:A2:2301:C:C2'	81:A2:2302:G:H5'	2.27	0.64
81:A2:2308:A:H4'	81:A2:2309:G:C5'	2.23	0.64
81:A2:2556:G:OP2	81:A2:2556:G:H2'	1.97	0.64
38:CA:20:VAL:HG13	81:A2:3648:U:C4	2.33	0.64
81:A2:3733:U:H3'	81:A2:3734:G:C8	2.33	0.64
81:A2:4066:A:H2'	81:A2:4067:G:C8	2.33	0.64
81:A2:735:A:H2'	81:A2:736:G:C8	2.31	0.64
81:A2:965:C:N4	81:A2:1249:G:C6	2.65	0.64
4:B1:1016:U:C6	4:B1:1017:U:C5	2.85	0.64
4:B1:1493:C:H3'	4:B1:1494:U:C5'	2.27	0.64
4:B1:1556:A:H2	4:B1:1557:C:H5	1.46	0.64
4:B1:215:G:O2'	4:B1:216:C:H5'	1.98	0.64
4:B1:215:G:H2'	4:B1:216:C:H6	1.62	0.64
4:B1:473:A:H8	4:B1:473:A:H5''	1.62	0.64
4:B1:519:A:H2	4:B1:520:A:C2	2.16	0.64
4:B1:693:A:C3'	4:B1:694:G:H4'	2.28	0.64
4:B1:886:A:H1'	4:B1:887:U:H5'	1.80	0.64
5:BA:63:ARG:HG2	26:BV:46:PHE:CE2	2.32	0.64
3:AX:53:U:C4	8:BD:146:ARG:NH2	2.66	0.64
13:BI:123:ARG:HH21	81:A2:4979:C:C5'	0.52	0.64
14:BJ:107:GLU:HA	14:BJ:112:THR:HG21	1.80	0.64
17:BM:52:LEU:HD13	17:BM:62:VAL:HG13	1.79	0.64
24:BT:70:ALA:HB3	24:BT:121:ARG:HE	1.62	0.64
40:CC:69:THR:HB	81:A2:3875:A:H8	1.61	0.64
41:CD:145:TYR:CE1	81:A2:4285:A:H5'	2.33	0.64
46:CI:12:CYS:SG	46:CI:59:GLN:HG3	2.38	0.64
49:CM:62:LEU:CD2	49:CM:82:ILE:HG13	2.27	0.64
52:CP:45:THR:HG23	52:CP:92:LEU:HD11	1.79	0.64
81:A2:83:C:H2'	81:A2:100:C:H42	1.61	0.64
81:A2:1377:A:H2'	81:A2:1400:A:N6	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1456:C:O5'	81:A2:1456:C:H6	1.81	0.64
81:A2:1480:C:OP2	81:A2:1480:C:H3'	1.97	0.64
81:A2:2003:A:N3	81:A2:2004:A:H1'	2.12	0.64
81:A2:2028:G:O2'	81:A2:3854:G:H4'	1.97	0.64
81:A2:4189:U:H5''	81:A2:4189:U:C6	2.33	0.64
81:A2:424:A:H4'	81:A2:425:A:OP2	1.96	0.64
81:A2:4507:C:C3'	81:A2:4508:A:H5''	2.28	0.64
81:A2:4687:U:C5'	81:A2:4688:A:H5''	2.27	0.64
81:A2:727:G:H8	81:A2:727:G:H5''	1.62	0.64
81:A2:917:G:H4'	81:A2:918:C:O5'	1.98	0.64
81:A2:98:A:H1'	81:A2:283:G:O6	1.97	0.64
4:B1:1654:G:H2'	4:B1:1655:C:C5	2.33	0.64
1:AV:34:G:N2	4:B1:1701:C:C2	2.66	0.64
4:B1:172:U:C3'	4:B1:173:A:H5''	2.26	0.64
4:B1:342:C:H42	4:B1:343:A:N6	1.96	0.64
4:B1:983:A:C2'	4:B1:984:C:H5'	2.28	0.64
44:CG:38:ASN:O	44:CG:44:ASP:HB2	1.98	0.64
81:A2:1056:C:H42	81:A2:1204:G:N2	1.95	0.64
43:CF:63:GLN:OE1	81:A2:1191:G:H4'	1.98	0.64
81:A2:1539:A:C2'	81:A2:1540:G:H5'	2.27	0.64
81:A2:2625:G:C1'	81:A2:2663:G:O6	2.46	0.64
81:A2:2638:U:H3'	81:A2:2639:G:H4'	1.78	0.64
81:A2:2021:A:C4	81:A2:4476:G:H1'	2.32	0.64
81:A2:4537:U:H2'	81:A2:4538:G:C8	2.32	0.64
81:A2:470:G:C2'	81:A2:471:C:H5'	2.27	0.64
39:CB:228:TYR:HE1	81:A2:4934:A:C8	2.15	0.64
81:A2:698:G:H2'	81:A2:699:A:C8	2.33	0.64
81:A2:976:C:H4'	81:A2:1222:G:C4'	2.26	0.64
4:B1:1292:C:O5'	4:B1:1292:C:H6	1.80	0.64
4:B1:1375:G:H2'	4:B1:1376:A:H5'	1.80	0.64
4:B1:1443:C:H2'	4:B1:1444:U:H5'	1.79	0.64
4:B1:1798:C:H4'	13:BI:2:GLY:O	1.98	0.64
4:B1:496:C:H2'	4:B1:497:C:C6	2.33	0.64
8:BD:74:GLN:O	8:BD:78:GLY:HA2	1.98	0.64
18:BN:129:TYR:O	18:BN:134:VAL:HG12	1.98	0.64
24:BT:34:VAL:CG2	24:BT:99:VAL:HG12	2.27	0.64
28:BX:51:VAL:HG22	28:BX:70:VAL:HG11	1.79	0.64
40:CC:183:VAL:HG11	40:CC:206:GLY:HA2	1.78	0.64
43:CF:69:ILE:HD12	81:A2:716:U:C4'	2.28	0.64
53:CQ:23:ILE:O	53:CQ:27:LEU:HG	1.97	0.64
56:CT:7:LYS:HB2	81:A2:4294:U:H4'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:11:ARG:HG3	81:A2:226:G:H5'	1.80	0.64
81:A2:1274:A:H2'	81:A2:1275:C:H6	1.63	0.63
81:A2:1710:C:H42	81:A2:1777:G:H1	1.45	0.63
81:A2:1873:G:H2'	81:A2:1874:A:O4'	1.98	0.63
81:A2:2624:A:C2	81:A2:2665:G:C4	2.86	0.63
81:A2:4723:A:H1'	81:A2:4724:G:P	2.38	0.63
81:A2:4738:U:C2'	81:A2:4739:G:H5'	2.28	0.63
81:A2:976:C:O2'	81:A2:977:G:H5'	1.98	0.63
82:A3:144:U:H2'	82:A3:145:C:O4'	1.98	0.63
4:B1:181:A:H3'	4:B1:182:C:C5'	2.19	0.63
4:B1:602:G:H3'	4:B1:603:C:H5''	1.80	0.63
4:B1:60:A:H2'	4:B1:60:A:N3	2.13	0.63
4:B1:1648:G:H8	21:BQ:125:ARG:HA	1.62	0.63
23:BS:98:VAL:HG21	23:BS:103:LEU:HD13	1.80	0.63
49:CM:57:LEU:HD12	55:CS:176:PHE:HZ	1.63	0.63
81:A2:1369:U:H5''	81:A2:1475:G:O2'	1.97	0.63
81:A2:2310:G:O5'	81:A2:2310:G:H8	1.81	0.63
81:A2:2330:U:H2'	81:A2:2331:G:H8	1.60	0.63
81:A2:2374:G:O2'	81:A2:2375:U:H3'	1.98	0.63
81:A2:2620:G:C2'	81:A2:2621:G:H5'	2.28	0.63
81:A2:4539:U:H2'	81:A2:4540:U:C6	2.33	0.63
55:CS:167:PHE:O	81:A2:4829:A:H5''	1.98	0.63
81:A2:4861:C:C2'	81:A2:4862:G:H5'	2.28	0.63
81:A2:708:G:H2'	81:A2:709:G:C8	2.33	0.63
81:A2:948:A:C3'	81:A2:949:G:C8	2.81	0.63
81:A2:1717:A:H1'	83:A4:101:A:H1'	1.78	0.63
4:B1:1093:A:H5'	27:BW:3:ARG:NE	2.13	0.63
4:B1:1204:A:O5'	4:B1:1204:A:H8	1.81	0.63
4:B1:1298:G:H4'	20:BP:78:THR:CA	2.28	0.63
4:B1:1399:C:H6	4:B1:1399:C:H5'	1.63	0.63
4:B1:1673:U:H6	4:B1:1673:U:H5''	1.64	0.63
4:B1:1767:C:O2'	4:B1:1768:A:H5'	1.98	0.63
7:BC:128:VAL:HG11	7:BC:155:ILE:HG12	1.79	0.63
4:B1:313:A:H5''	11:BG:191:ARG:NH1	2.13	0.63
20:BP:34:MET:CG	20:BP:45:LEU:HD22	2.26	0.63
5:BA:48:ILE:HG21	22:BR:105:MET:SD	2.38	0.63
29:BY:91:LEU:HB3	29:BY:97:TYR:HB2	1.79	0.63
81:A2:1377:A:O4'	81:A2:1447:C:H4'	1.98	0.63
81:A2:1517:U:H2'	81:A2:1518:G:H5'	1.78	0.63
4:B1:678:U:H4'	81:A2:1543:A:C8	2.34	0.63
81:A2:1663:A:H5'	81:A2:1664:G:OP2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1890:G:H1'	81:A2:1897:G:N1	2.14	0.63
81:A2:2693:C:H2'	81:A2:2694:G:H8	1.64	0.63
81:A2:3586:G:OP2	81:A2:3586:G:C4	2.51	0.63
81:A2:4624:A:H5'	81:A2:4958:U:H5''	1.80	0.63
81:A2:4746:C:H2'	81:A2:4747:C:C6	2.33	0.63
49:CM:132:LYS:HG3	81:A2:4849:A:C3'	2.29	0.63
81:A2:69:A:C2	81:A2:70:A:H4'	2.33	0.63
4:B1:1326:U:H4'	4:B1:1327:G:C5'	2.28	0.63
4:B1:1484:A:H2'	4:B1:1485:U:O4'	1.98	0.63
4:B1:1734:G:H8	4:B1:1734:G:O5'	1.81	0.63
4:B1:305:U:H2'	13:BI:60:LEU:HD23	1.80	0.63
4:B1:572:U:H3'	4:B1:572:U:H6	1.62	0.63
4:B1:885:U:O2'	4:B1:886:A:H2'	1.99	0.63
3:AX:53:U:H3	8:BD:146:ARG:CZ	2.11	0.63
38:CA:229:ALA:O	38:CA:234:LYS:HE3	1.97	0.63
47:CJ:57:VAL:HG11	47:CJ:60:PHE:CD2	2.33	0.63
81:A2:1284:C:H3'	81:A2:1285:C:H5	1.63	0.63
81:A2:1667:G:O2'	81:A2:1668:G:H5'	1.97	0.63
81:A2:2319:G:O2'	81:A2:2320:G:H5'	1.98	0.63
81:A2:2524:G:H21	81:A2:2526:G:H1'	1.63	0.63
81:A2:2549:C:C1'	81:A2:2550:A:H8	2.11	0.63
81:A2:2666:C:H2'	81:A2:2667:C:C6	2.34	0.63
81:A2:3585:U:H1'	81:A2:3586:G:P	2.39	0.63
81:A2:3623:G:H2'	81:A2:3624:C:H5'	1.79	0.63
81:A2:4625:A:H2'	81:A2:4626:G:C8	2.32	0.63
81:A2:476:C:H6	81:A2:476:C:C5'	2.09	0.63
81:A2:2869:C:H4'	81:A2:4973:C:H5'	1.79	0.63
81:A2:5015:A:H5''	81:A2:5016:A:OP1	1.97	0.63
81:A2:700:C:C3'	81:A2:701:C:C5'	2.73	0.63
81:A2:718:G:C8	81:A2:719:G:C2	2.85	0.63
82:A3:84:A:H4'	82:A3:85:U:OP1	1.97	0.63
83:A4:32:A:H2	83:A4:41:G:C6	2.16	0.63
1:AV:72:C:H6	1:AV:72:C:C5'	2.08	0.63
3:AX:60:U:C2	3:AX:61:U:C6	2.86	0.63
4:B1:1214:A:C2'	4:B1:1215:C:H5'	2.28	0.63
4:B1:1332:A:H8	4:B1:1332:A:H5'	1.63	0.63
4:B1:455:A:H2'	4:B1:456:C:C6	2.34	0.63
4:B1:928:G:O2'	4:B1:929:G:H8	1.81	0.63
4:B1:746:C:C5'	12:BH:105:THR:HA	2.27	0.63
4:B1:1562:C:H5'	24:BT:71:GLY:HA3	1.81	0.63
25:BU:32:LEU:CD2	25:BU:85:HIS:HB2	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CQ:13:VAL:HG13	81:A2:1670:G:N7	2.13	0.63
81:A2:1331:G:H2'	81:A2:1332:C:O4'	1.97	0.63
81:A2:1387:C:C5'	81:A2:1387:C:H6	2.11	0.63
81:A2:1483:G:H2'	81:A2:1484:C:C6	2.33	0.63
81:A2:1754:A:C5	81:A2:1755:A:C8	2.86	0.63
81:A2:1783:A:H5''	81:A2:1785:G:C8	2.34	0.63
81:A2:2059:C:O2'	81:A2:2060:G:H5'	1.98	0.63
81:A2:2587:G:H1'	81:A2:2663:G:H2'	1.79	0.63
81:A2:2627:G:H5''	81:A2:2627:G:H8	1.63	0.63
81:A2:3725:A:O2'	81:A2:3726:G:H5'	1.98	0.63
81:A2:4120:C:H5''	81:A2:4120:C:H6	1.63	0.63
81:A2:4237:G:H5''	81:A2:4238:C:OP2	1.96	0.63
81:A2:4280:G:H3'	81:A2:4281:U:H6	1.63	0.63
81:A2:446:C:H2'	81:A2:447:C:C6	2.34	0.63
81:A2:4588:U:H2'	81:A2:4589:U:C6	2.34	0.63
81:A2:4819:U:H2'	81:A2:4820:C:C6	2.34	0.63
81:A2:4863:G:H2'	81:A2:4864:A:H5''	1.81	0.63
39:CB:156:TYR:CE1	81:A2:4864:A:H5'	2.33	0.63
4:B1:1677:U:O2	4:B1:1677:U:H2'	1.98	0.63
4:B1:1721:U:O4	81:A2:3599:A:P	2.56	0.63
4:B1:190:G:H4'	13:BI:116:HIS:O	1.99	0.63
5:BA:180:ARG:HG2	5:BA:184:ARG:NH1	2.13	0.63
15:BK:38:LYS:HG2	15:BK:40:VAL:HG23	1.78	0.63
28:BX:132:ALA:O	28:BX:138:LYS:HB2	1.99	0.63
42:CE:188:ARG:CD	42:CE:188:ARG:H	2.08	0.63
44:CG:106:THR:HB	44:CG:195:HIS:CG	2.33	0.63
52:CP:3:ARG:O	82:A3:12:G:H4'	1.98	0.63
49:CM:31:ILE:CD1	55:CS:100:LEU:HD11	2.28	0.63
81:A2:1161:C:H5''	81:A2:1161:C:C6	2.32	0.63
81:A2:134:G:H5''	81:A2:135:G:N1	2.14	0.63
81:A2:1743:G:H2'	81:A2:1744:A:H5'	1.79	0.63
81:A2:1856:G:H2'	81:A2:1857:C:C6	2.33	0.63
81:A2:220:G:H4'	81:A2:222:G:N7	2.14	0.63
81:A2:2803:U:H2'	81:A2:2803:U:O2	1.99	0.63
81:A2:380:A:N3	81:A2:380:A:C3'	2.55	0.63
81:A2:381:C:C6	81:A2:381:C:OP1	2.52	0.63
81:A2:3936:G:H3'	81:A2:3937:U:C5	2.33	0.63
81:A2:4668:A:H5'	81:A2:4669:U:C5	2.33	0.63
83:A4:74:A:H4'	83:A4:75:G:O5'	1.98	0.63
4:B1:1057:C:H2'	4:B1:1059:G:N7	2.14	0.63
4:B1:1397:U:H4'	4:B1:1398:G:N2	2.08	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:565:G:N3	4:B1:565:G:H2'	2.14	0.63
4:B1:587:A:H2'	4:B1:592:C:H41	1.63	0.63
4:B1:685:A:H2'	4:B1:686:U:H5'	1.81	0.63
4:B1:789:G:H2'	4:B1:790:C:C6	2.33	0.63
4:B1:812:A:H2'	4:B1:813:A:C8	2.33	0.63
4:B1:849:A:H2'	4:B1:850:C:C6	2.31	0.63
13:BI:123:ARG:NH2	81:A2:4979:C:H5'	0.96	0.63
13:BI:92:ARG:CZ	81:A2:2869:C:O2'	2.46	0.63
29:BY:35:VAL:CG2	29:BY:40:ILE:HD11	2.28	0.63
42:CE:162:VAL:HG11	42:CE:175:VAL:HG13	1.81	0.63
53:CQ:157:GLY:O	53:CQ:161:SER:HB2	1.98	0.63
53:CQ:172:ARG:O	53:CQ:173:LYS:HB3	1.98	0.63
55:CS:101:THR:HG23	55:CS:104:GLY:H	1.63	0.63
81:A2:1139:U:H2'	81:A2:1140:C:H6	1.63	0.63
81:A2:1162:C:H2'	81:A2:1163:C:C5	2.34	0.63
81:A2:1048:G:H5''	81:A2:1215:G:C8	2.34	0.63
81:A2:1402:G:H2'	81:A2:1403:U:C6	2.34	0.63
81:A2:1569:C:H3'	81:A2:1570:U:H4'	1.80	0.63
81:A2:2498:G:H5'	81:A2:2617:G:H1'	1.81	0.63
81:A2:269:G:H5''	81:A2:269:G:H8	1.63	0.63
81:A2:3592:C:C3'	81:A2:3592:C:C6	2.81	0.63
81:A2:4233:A:H8	81:A2:4233:A:H5''	1.64	0.63
81:A2:4565:A:H2'	81:A2:4566:G:H8	1.62	0.63
81:A2:4688:A:C3'	81:A2:4695:C:H1'	2.28	0.63
49:CM:132:LYS:HG3	81:A2:4849:A:H3'	1.81	0.63
81:A2:4927:U:H3	81:A2:4941:G:H1	1.44	0.63
81:A2:96:U:C6	81:A2:96:U:H5''	2.33	0.63
4:B1:1130:G:N2	4:B1:1131:G:C8	2.66	0.63
4:B1:1414:A:C2'	4:B1:1415:C:O4'	2.47	0.63
4:B1:185:G:H2'	4:B1:186:C:C5	2.33	0.63
4:B1:5:U:O2'	4:B1:602:G:H4'	1.99	0.63
4:B1:806:U:C2'	4:B1:807:G:H5'	2.26	0.63
6:BB:31:TYR:CE2	6:BB:94:LYS:HA	2.33	0.63
4:B1:744:G:H4'	12:BH:102:PRO:CG	2.26	0.63
16:BL:96:ILE:HD13	28:BX:14:ARG:HD2	1.79	0.63
54:CR:119:MET:HB3	54:CR:145:LEU:CD2	2.29	0.63
58:CV:42:VAL:O	58:CV:45:ILE:HG23	1.97	0.63
81:A2:1161:C:H5''	81:A2:1161:C:H6	1.62	0.63
81:A2:1244:C:H2'	81:A2:1245:G:C8	2.34	0.63
81:A2:1256:C:H2'	81:A2:1257:G:C5'	2.28	0.63
81:A2:1524:G:H5''	81:A2:1525:C:OP2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1732:G:H3'	81:A2:1733:U:H4'	1.80	0.63
52:CP:85:LYS:CG	81:A2:3825:A:H4'	2.29	0.63
81:A2:4570:A:OP1	81:A2:4570:A:H4'	1.96	0.63
81:A2:4684:C:H2'	81:A2:4685:G:C8	2.33	0.63
81:A2:644:U:H2'	81:A2:645:C:C6	2.33	0.63
81:A2:725:C:H3'	81:A2:726:C:H5	1.59	0.63
1:AV:72:C:H5''	1:AV:72:C:C6	2.24	0.63
4:B1:1028:A:N1	81:A2:1543:A:N1	2.45	0.63
4:B1:103:A:H2'	4:B1:105:U:OP1	1.98	0.63
4:B1:1103:C:O5'	4:B1:1103:C:H6	1.81	0.63
4:B1:670:A:H1'	4:B1:1164:G:O4'	1.98	0.63
4:B1:1402:A:C2'	4:B1:1403:C:C5	2.82	0.63
4:B1:1454:A:N6	4:B1:1467:C:C5	2.67	0.63
4:B1:1500:G:H2'	4:B1:1501:C:O4'	1.97	0.63
4:B1:1775:C:H2'	4:B1:1776:G:C8	2.30	0.63
4:B1:520:A:C8	4:B1:521:A:C8	2.86	0.63
7:BC:210:PRO:HG3	7:BC:236:PHE:CZ	2.34	0.63
11:BG:188:LYS:HA	11:BG:191:ARG:NH2	2.14	0.63
26:BV:73:ALA:HB1	26:BV:78:ILE:HG13	1.79	0.63
38:CA:207:VAL:HG12	81:A2:3888:C:H4'	1.79	0.63
45:CH:117:PHE:HB3	45:CH:124:ARG:HH21	1.63	0.63
48:CL:18:TRP:O	48:CL:22:VAL:HG23	1.98	0.63
51:CO:172:LYS:HG2	51:CO:176:ARG:NH1	2.14	0.63
81:A2:1079:C:H3'	81:A2:1080:U:H5''	1.80	0.63
81:A2:1203:G:C5'	81:A2:1210:U:H5	2.11	0.63
81:A2:1367:A:C4'	81:A2:1368:A:H5'	2.29	0.63
81:A2:1930:G:C8	81:A2:1930:G:C5'	2.81	0.63
81:A2:2061:C:H41	81:A2:2249:G:H22	1.47	0.63
81:A2:218:C:H6	81:A2:218:C:O5'	1.81	0.63
81:A2:4051:U:H2'	81:A2:4052:G:H5''	1.81	0.63
81:A2:717:G:C8	81:A2:717:G:H5'	2.34	0.63
81:A2:948:A:H2'	81:A2:949:G:C4	2.33	0.63
82:A3:126:C:H5	82:A3:127:U:C2	2.17	0.63
83:A4:22:A:OP2	83:A4:22:A:H3'	1.98	0.63
4:B1:1384:C:C2'	4:B1:1385:G:H5'	2.29	0.63
4:B1:1414:A:H2'	4:B1:1415:C:H1'	1.79	0.63
4:B1:1768:A:H2'	4:B1:1769:C:C5'	2.23	0.63
4:B1:1825:A:C8	4:B1:1825:A:O5'	2.52	0.63
4:B1:438:G:H2'	4:B1:439:A:C8	2.33	0.63
14:BJ:136:ARG:HB3	14:BJ:158:ASP:O	1.97	0.63
46:CI:32:ARG:HG3	46:CI:33:ILE:HD13	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:22:LEU:HD13	52:CP:90:PHE:CZ	2.34	0.63
61:CY:14:ASN:OD1	81:A2:226:G:H1'	1.98	0.63
81:A2:1197:G:O3'	81:A2:1198:G:H8	1.81	0.62
81:A2:957:G:H4'	81:A2:1218:A:C4'	2.29	0.62
81:A2:1218:A:C5'	81:A2:1218:A:C8	2.79	0.62
81:A2:1454:G:C2	81:A2:1455:C:H1'	2.34	0.62
81:A2:240:A:C2'	81:A2:241:G:C8	2.81	0.62
81:A2:244:G:H2'	81:A2:245:C:C6	2.34	0.62
81:A2:2579:G:H2'	81:A2:2580:C:C6	2.34	0.62
54:CR:124:TYR:CE1	81:A2:2642:U:C5	2.87	0.62
4:B1:1827:U:C4'	81:A2:3728:A:H2'	2.29	0.62
81:A2:3779:C:C3'	81:A2:3779:C:C6	2.81	0.62
81:A2:456:G:N2	81:A2:679:U:N3	2.47	0.62
81:A2:457:A:H2'	81:A2:457:A:N3	2.13	0.62
81:A2:4682:A:H2'	81:A2:4683:A:C8	2.34	0.62
81:A2:4813:C:H2'	81:A2:4814:C:H5'	1.80	0.62
81:A2:4905:U:H2'	81:A2:4906:G:H5'	1.80	0.62
81:A2:4975:G:H2'	81:A2:4976:C:C6	2.33	0.62
82:A3:58:G:H8	82:A3:58:G:OP2	1.80	0.62
83:A4:28:C:H3'	83:A4:29:C:O4'	1.99	0.62
4:B1:1258:A:C3'	4:B1:1258:A:N3	2.55	0.62
4:B1:1291:A:O5'	4:B1:1291:A:H8	1.82	0.62
4:B1:1340:U:H3'	4:B1:1341:C:C6	2.33	0.62
4:B1:1604:G:H2'	4:B1:1605:G:H5'	1.81	0.62
4:B1:1700:C:H4'	4:B1:1701:C:OP2	1.98	0.62
4:B1:35:C:C3'	4:B1:36:U:H6	2.12	0.62
4:B1:412:G:N7	4:B1:413:G:H1'	2.14	0.62
4:B1:77:A:H1'	4:B1:78:C:OP2	1.99	0.62
7:BC:242:ASP:OD1	7:BC:246:LYS:HE3	1.98	0.62
4:B1:1648:G:H8	21:BQ:125:ARG:CA	2.12	0.62
39:CB:41:VAL:HA	39:CB:187:GLY:HA3	1.80	0.62
41:CD:94:ASN:CB	83:A4:47:G:H5'	2.29	0.62
42:CE:135:GLN:HA	81:A2:700:C:O2'	1.99	0.62
42:CE:168:LEU:HD21	42:CE:214:ASP:CA	2.29	0.62
39:CB:73:VAL:HG22	58:CV:93:GLY:CA	2.29	0.62
81:A2:1718:G:C5'	83:A4:102:U:C1'	2.74	0.62
81:A2:1828:A:H3'	81:A2:1829:G:C8	2.35	0.62
81:A2:2703:G:H1'	81:A2:2704:C:OP2	1.99	0.62
81:A2:354:A:H4'	81:A2:355:G:OP1	2.00	0.62
81:A2:4204:A:H1'	81:A2:4228:A:H4'	1.81	0.62
4:B1:1284:A:C5	4:B1:1286:G:C5'	2.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1351:G:H5''	4:B1:1351:G:H8	1.63	0.62
4:B1:1404:U:H2'	4:B1:1406:G:N7	2.14	0.62
4:B1:222:U:H4'	16:BL:21:LYS:HE2	1.80	0.62
4:B1:60:A:H4'	4:B1:61:A:O5'	1.99	0.62
4:B1:657:U:H6	4:B1:657:U:H3'	1.64	0.62
4:B1:682:U:H3	4:B1:1023:A:H61	1.47	0.62
11:BG:2:LYS:HE3	11:BG:15:LEU:HD11	1.81	0.62
39:CB:262:VAL:HG11	39:CB:268:ARG:HH11	1.64	0.62
40:CC:29:LYS:HD3	40:CC:267:TRP:CH2	2.34	0.62
57:CU:22:THR:CG2	57:CU:69:LYS:HE3	2.29	0.62
81:A2:1377:A:H8	81:A2:1377:A:O5'	1.82	0.62
81:A2:179:G:H2'	81:A2:180:C:O4'	1.99	0.62
81:A2:215:A:H4'	81:A2:216:G:OP2	1.98	0.62
81:A2:4510:G:C2'	81:A2:4511:U:H5'	2.28	0.62
81:A2:5018:G:OP2	81:A2:5018:G:H8	1.82	0.62
81:A2:739:G:H22	81:A2:898:U:H3	1.46	0.62
81:A2:947:G:H2'	81:A2:948:A:H5'	1.80	0.62
82:A3:105:C:H1'	82:A3:106:G:OP2	1.99	0.62
3:AX:40:U:H2'	3:AX:41:U:H1'	1.81	0.62
4:B1:1402:A:OP2	25:BU:51:LYS:HB3	1.99	0.62
4:B1:1672:U:H2'	4:B1:1673:U:H5''	1.80	0.62
4:B1:1832:A:C3'	4:B1:1833:C:H5''	2.29	0.62
4:B1:209:A:H4'	4:B1:210:U:OP1	1.97	0.62
4:B1:324:C:HO2'	4:B1:326:C:H5	1.46	0.62
4:B1:574:A:H3'	4:B1:575:A:C8	2.34	0.62
4:B1:879:C:H2'	4:B1:880:G:C8	2.35	0.62
28:BX:61:GLN:HB3	28:BX:62:PRO:HD3	1.80	0.62
43:CF:87:PRO:HG2	43:CF:144:TYR:CZ	2.34	0.62
44:CG:41:ILE:HG22	44:CG:42:GLY:N	2.14	0.62
44:CG:64:GLN:O	44:CG:67:ARG:HG2	2.00	0.62
81:A2:1161:C:C3'	81:A2:1161:C:C6	2.82	0.62
81:A2:1217:C:O2'	81:A2:1218:A:H5''	1.98	0.62
81:A2:1930:G:H5'	81:A2:1930:G:H8	1.64	0.62
81:A2:2250:C:H6	81:A2:2250:C:O5'	1.83	0.62
81:A2:2333:U:C6	81:A2:2333:U:H5'	2.29	0.62
81:A2:2588:A:H5'	81:A2:2665:G:H5''	1.82	0.62
81:A2:2595:G:H2'	81:A2:2596:G:H5'	1.81	0.62
81:A2:2747:C:H2'	81:A2:2748:G:C8	2.32	0.62
81:A2:3888:C:H6	81:A2:3888:C:O5'	1.82	0.62
81:A2:4825:G:H4'	81:A2:4826:C:C5'	2.29	0.62
81:A2:4828:G:H3'	81:A2:4830:G:OP1	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4833:C:H2'	81:A2:4834:C:H6	1.63	0.62
81:A2:502:C:H2'	81:A2:503:U:C6	2.34	0.62
81:A2:957:G:C5'	81:A2:957:G:C8	2.76	0.62
82:A3:131:G:H2'	82:A3:132:G:H8	1.64	0.62
2:AW:23:A:H2'	2:AW:24:G:C8	2.34	0.62
4:B1:1404:U:H4'	4:B1:1405:A:OP2	1.99	0.62
4:B1:1714:U:H3'	4:B1:1715:A:C8	2.34	0.62
4:B1:351:G:H8	4:B1:351:G:H3'	1.62	0.62
4:B1:380:G:C6	4:B1:382:C:H5''	2.33	0.62
5:BA:205:ARG:HG3	5:BA:207:PRO:HD2	1.81	0.62
13:BI:174:CYS:HB2	13:BI:190:LEU:HD21	1.80	0.62
16:BL:20:LYS:HE3	16:BL:21:LYS:HZ2	1.62	0.62
40:CC:188:ARG:HH12	40:CC:202:ILE:HD12	1.64	0.62
48:CL:32:LYS:NZ	81:A2:1343:C:H41	1.98	0.62
60:CX:125:ASN:ND2	81:A2:2509:C:H5''	2.14	0.62
81:A2:1059:C:C6	81:A2:1202:A:N6	2.68	0.62
81:A2:166:G:H21	81:A2:167:C:C1'	2.13	0.62
81:A2:1748:G:C8	81:A2:1748:G:P	2.93	0.62
40:CC:54:VAL:HG11	81:A2:2320:G:N7	2.14	0.62
81:A2:4657:U:H2'	81:A2:4658:C:H5'	1.80	0.62
4:B1:1287:A:H4'	4:B1:1312:G:C2	2.35	0.62
4:B1:1463:U:H2'	4:B1:1464:C:C6	2.35	0.62
4:B1:1700:C:H4'	4:B1:1701:C:C5'	2.29	0.62
4:B1:869:A:N3	4:B1:915:G:H1'	2.14	0.62
4:B1:920:A:C8	4:B1:922:A:C8	2.87	0.62
23:BS:5:ILE:HG13	23:BS:6:PRO:HD2	1.81	0.62
43:CF:148:LYS:CG	81:A2:926:G:H5''	2.29	0.62
81:A2:1748:G:H2'	81:A2:1749:A:C5'	2.30	0.62
81:A2:2401:G:C8	81:A2:2401:G:H3'	2.35	0.62
81:A2:2441:C:O2'	81:A2:2442:C:H5'	2.00	0.62
81:A2:2531:U:C2'	81:A2:2532:G:H5'	2.29	0.62
62:CZ:111:ARG:HB2	81:A2:2551:G:N2	2.14	0.62
81:A2:4015:A:H5''	81:A2:4016:A:OP2	1.99	0.62
81:A2:4384:A:H5'	81:A2:4385:G:OP2	1.99	0.62
81:A2:4426:C:C2'	81:A2:4427:A:H5'	2.29	0.62
81:A2:445:U:H3'	81:A2:446:C:C6	2.34	0.62
1:AV:74:C:C5'	81:A2:4508:A:OP1	2.45	0.62
81:A2:457:A:N3	81:A2:458:U:H5'	2.14	0.62
81:A2:4734:C:H2'	81:A2:4735:G:H5'	1.80	0.62
81:A2:482:G:C5'	81:A2:482:G:H8	2.09	0.62
4:B1:1260:A:H2	4:B1:1620:A:H1'	1.62	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:168:C:H4'	11:BG:131:ARG:CD	2.26	0.62
1:AV:34:G:C2	4:B1:1701:C:N1	2.67	0.62
4:B1:367:U:H5'	4:B1:367:U:H6	1.64	0.62
4:B1:753:C:H3'	4:B1:754:G:C4'	2.29	0.62
7:BC:98:LEU:CD2	7:BC:101:SER:HB2	2.28	0.62
13:BI:123:ARG:HH21	81:A2:4979:C:C4'	1.76	0.62
12:BH:148:LEU:HA	27:BW:42:MET:HG2	1.82	0.62
4:B1:681:U:H4'	28:BX:9:THR:HB	1.81	0.62
40:CC:357:ALA:O	40:CC:361:LEU:HG	1.99	0.62
42:CE:274:VAL:CG1	81:A2:4837:U:H6	2.12	0.62
53:CQ:163:THR:O	53:CQ:164:LYS:HB3	1.99	0.62
59:CW:3:VAL:HG11	59:CW:12:LYS:HE2	1.80	0.62
41:CD:273:LEU:HD23	81:A2:1086:A:H1'	1.80	0.62
81:A2:1197:G:H2'	81:A2:1198:G:C8	2.34	0.62
81:A2:1:C:C2	82:A3:157:U:C2	2.86	0.62
81:A2:2431:U:O2	81:A2:2431:U:H2'	1.99	0.62
81:A2:2479:G:P	81:A2:4052:G:H22	2.23	0.62
81:A2:2496:U:HO2'	81:A2:2497:C:H6	1.48	0.62
81:A2:2610:U:H2'	81:A2:2611:C:O4'	2.00	0.62
81:A2:280:C:H2'	81:A2:281:U:H6	1.65	0.62
81:A2:2865:G:O4'	81:A2:3587:C:H1'	2.00	0.62
81:A2:4232:G:N2	81:A2:4296:A:C2	2.66	0.62
81:A2:4349:C:H2'	81:A2:4350:A:C8	2.35	0.62
81:A2:4358:C:C2'	81:A2:4359:U:H5'	2.30	0.62
81:A2:4701:G:H8	81:A2:4701:G:H5'	1.65	0.62
81:A2:482:G:H2'	81:A2:484:G:C8	2.33	0.62
81:A2:4838:C:OP1	81:A2:4839:G:H5'	2.00	0.62
81:A2:3580:A:C2	81:A2:4971:A:C8	2.76	0.62
81:A2:476:C:P	81:A2:658:G:H5'	2.40	0.62
83:A4:63:C:H4'	83:A4:64:G:O5'	1.99	0.62
4:B1:1013:U:H1'	4:B1:1104:G:H1'	1.80	0.62
4:B1:1135:C:H2'	4:B1:1136:U:H6	1.65	0.62
4:B1:1835:A:H2'	4:B1:1835:A:N3	2.14	0.62
4:B1:535:G:HO2'	4:B1:536:A:H8	1.47	0.62
4:B1:693:A:C4	4:B1:694:G:H1'	2.35	0.62
6:BB:134:LEU:HD12	6:BB:219:LYS:HB2	1.82	0.62
4:B1:39:A:OP2	14:BJ:3:VAL:HG13	2.00	0.62
16:BL:47:PRO:HD2	16:BL:62:PHE:CE1	2.34	0.62
44:CG:100:HIS:O	44:CG:103:ARG:HG3	2.00	0.62
53:CQ:88:ASP:OD2	53:CQ:108:ARG:HB3	1.99	0.62
81:A2:1903:G:H2'	81:A2:1904:C:H5'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2352:A:H3'	81:A2:2353:A:H8	1.64	0.62
81:A2:2580:C:C4	81:A2:2581:C:N4	2.68	0.62
81:A2:3694:G:C2	81:A2:3696:A:H2'	2.35	0.62
81:A2:4156:G:H8	81:A2:4156:G:P	2.23	0.62
81:A2:4522:C:H2'	81:A2:4523:U:H6	1.63	0.62
81:A2:479:G:H2'	81:A2:480:C:C6	2.35	0.62
81:A2:4813:C:H4'	81:A2:4814:C:OP1	1.98	0.62
81:A2:4814:C:H2'	81:A2:4815:G:H5''	1.82	0.62
81:A2:4944:U:H4'	81:A2:4945:C:O5'	1.98	0.62
81:A2:4970:G:H21	81:A2:4989:A:H2	1.45	0.62
81:A2:663:G:H2'	81:A2:664:C:C6	2.34	0.62
83:A4:63:C:C1'	83:A4:64:G:H5''	2.28	0.62
4:B1:1337:C:H2'	4:B1:1338:G:H8	1.60	0.62
4:B1:132:U:H5'	4:B1:133:C:C5	2.34	0.62
4:B1:1566:G:O6	24:BT:97:LYS:HB2	2.00	0.62
4:B1:1687:C:H3'	4:B1:1688:C:H6	1.65	0.62
4:B1:1863:A:N3	4:B1:1863:A:H2'	2.15	0.62
4:B1:313:A:C2	4:B1:315:C:N4	2.67	0.62
4:B1:367:U:H5'	4:B1:367:U:C6	2.35	0.62
6:BB:63:LYS:HE3	6:BB:91:VAL:HG23	1.81	0.62
9:BE:173:ILE:HD13	9:BE:230:ASN:HB2	1.82	0.62
12:BH:87:PHE:CD1	12:BH:90:LYS:HE2	2.35	0.62
24:BT:112:MET:HG2	24:BT:127:GLY:HA2	1.81	0.62
40:CC:13:GLU:HA	40:CC:174:LEU:HD11	1.82	0.62
45:CH:41:ILE:HG13	45:CH:73:ILE:CD1	2.30	0.62
52:CP:139:TYR:CE1	81:A2:3828:G:H4'	2.34	0.62
55:CS:110:TYR:CE2	55:CS:126:ILE:HD11	2.34	0.62
60:CX:80:PRO:HG2	60:CX:155:ILE:HD11	1.81	0.62
81:A2:1090:C:H2'	81:A2:1091:U:H6	1.65	0.62
81:A2:1179:G:H8	81:A2:1179:G:H5'	1.65	0.62
81:A2:1505:G:H2'	81:A2:1506:A:H8	1.65	0.62
81:A2:1533:A:H2'	81:A2:1533:A:N3	2.14	0.62
81:A2:2051:C:C6	81:A2:2051:C:C3'	2.83	0.62
81:A2:2310:G:C8	81:A2:2310:G:C5'	2.82	0.62
81:A2:2345:A:H3'	81:A2:2804:G:N1	2.13	0.62
81:A2:2483:G:H2'	81:A2:2483:G:OP2	2.00	0.62
81:A2:3647:G:OP1	81:A2:3647:G:H8	1.83	0.62
81:A2:4030:A:C2'	81:A2:4031:U:H5'	2.30	0.62
81:A2:4051:U:O2'	81:A2:4053:A:H4'	2.00	0.62
81:A2:441:G:H1'	81:A2:1274:A:H5''	1.81	0.62
81:A2:4545:U:H2'	81:A2:4546:G:C8	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4656:C:H2'	81:A2:4657:U:H6	1.63	0.62
81:A2:4695:C:C2'	81:A2:4696:G:C8	2.77	0.62
81:A2:4978:C:H4'	81:A2:4979:C:OP1	1.99	0.62
82:A3:105:C:H4'	82:A3:106:G:C5'	2.29	0.62
81:A2:15:A:C2	82:A3:143:G:C2	2.87	0.62
3:AX:58:U:H5''	3:AX:58:U:C6	2.33	0.62
4:B1:1284:A:C8	4:B1:1286:G:C5'	2.82	0.62
4:B1:350:C:H42	4:B1:351:G:N2	1.98	0.62
4:B1:398:A:C4'	4:B1:399:C:H3'	2.29	0.62
4:B1:71:G:N2	4:B1:72:C:H1'	2.15	0.62
4:B1:71:G:H22	4:B1:80:G:H22	1.47	0.62
5:BA:81:ASN:OD1	5:BA:205:ARG:HD2	1.99	0.62
51:CO:163:LYS:O	51:CO:166:ILE:HG12	1.99	0.62
51:CO:182:GLU:HA	51:CO:187:LYS:HD3	1.80	0.62
81:A2:1256:C:O2'	81:A2:1257:G:H5'	1.99	0.62
81:A2:2326:A:H5'	81:A2:2327:U:H5''	1.81	0.62
81:A2:3648:U:H4'	81:A2:3649:U:OP2	1.98	0.62
4:B1:970:G:O4'	81:A2:3680:A:O5'	2.17	0.62
81:A2:3821:A:H5''	81:A2:3822:U:C5	2.35	0.62
81:A2:4254:C:C5'	81:A2:4254:C:H6	2.13	0.62
81:A2:4560:G:H4'	81:A2:4560:G:OP1	2.00	0.62
81:A2:477:C:H1'	81:A2:478:G:OP2	1.99	0.62
81:A2:509:G:H2'	81:A2:510:C:C6	2.35	0.62
81:A2:897:U:O2'	81:A2:898:U:H5'	2.00	0.62
2:AW:41:C:H2'	2:AW:42:C:H5''	1.81	0.62
4:B1:145:G:N3	4:B1:145:G:H2'	2.14	0.62
4:B1:1493:C:H5''	4:B1:1493:C:H6	1.65	0.62
4:B1:38:A:H4'	14:BJ:5:ARG:HE	1.64	0.62
4:B1:571:U:H2'	4:B1:572:U:O4'	1.99	0.62
5:BA:205:ARG:H	5:BA:208:GLU:HB3	1.64	0.62
6:BB:205:TYR:CG	6:BB:206:PRO:HD2	2.34	0.62
9:BE:36:HIS:CD2	9:BE:85:GLY:HA3	2.33	0.62
4:B1:1023:A:H5'	18:BN:3:ARG:NH2	2.15	0.62
23:BS:6:PRO:HD3	30:BZ:52:LYS:CE	2.30	0.62
27:BW:86:LEU:HD22	27:BW:113:HIS:HE1	1.63	0.62
40:CC:209:ILE:HD12	40:CC:211:TYR:CE2	2.34	0.62
47:CJ:52:LYS:HB3	47:CJ:65:ASN:HA	1.82	0.62
50:CN:139:HIS:HB3	50:CN:142:ILE:HD13	1.81	0.62
51:CO:167:HIS:CD2	51:CO:171:LYS:HB2	2.34	0.62
81:A2:1161:C:OP2	81:A2:1161:C:C6	2.54	0.61
40:CC:234:LYS:HD3	81:A2:1353:A:C2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1374:G:H22	81:A2:1449:G:H4'	1.63	0.61
81:A2:1823:U:H2'	81:A2:1824:G:H8	1.63	0.61
81:A2:1912:A:H4'	81:A2:2037:C:OP1	2.00	0.61
81:A2:2331:G:H2'	81:A2:2332:G:H8	1.65	0.61
81:A2:2561:G:H1'	81:A2:2562:C:O5'	2.00	0.61
81:A2:2624:A:C6	81:A2:2664:U:C2	2.89	0.61
81:A2:2690:C:H2'	81:A2:2691:G:H8	1.66	0.61
81:A2:2706:C:H2'	81:A2:2707:U:C6	2.35	0.61
81:A2:2549:C:O3'	81:A2:2736:G:C8	2.53	0.61
81:A2:292:G:H3'	81:A2:293:C:H6	1.65	0.61
81:A2:3685:C:H2'	81:A2:3704:G:C6	2.35	0.61
81:A2:4745:G:H2'	81:A2:4746:C:H6	1.63	0.61
81:A2:961:C:C3'	81:A2:962:G:C8	2.83	0.61
81:A2:409:A:C2	82:A3:17:A:H1'	2.35	0.61
4:B1:1202:U:C3'	4:B1:1203:G:H5''	2.30	0.61
4:B1:1540:G:H2'	4:B1:1541:G:O4'	2.00	0.61
4:B1:321:C:H2'	4:B1:322:C:H6	1.63	0.61
4:B1:435:A:N3	4:B1:450:C:H5	1.98	0.61
4:B1:746:C:C6	4:B1:749:U:H4'	2.35	0.61
6:BB:171:ILE:HD13	6:BB:197:ILE:HD13	1.82	0.61
15:BK:32:HIS:H	15:BK:33:PRO:CD	2.14	0.61
25:BU:21:ARG:HE	25:BU:88:LEU:HB3	1.65	0.61
27:BW:10:ALA:O	27:BW:14:ILE:HG12	1.99	0.61
27:BW:77:PRO:HG2	27:BW:79:PHE:CE1	2.35	0.61
39:CB:289:GLN:HA	39:CB:329:ASP:OD1	2.00	0.61
40:CC:217:ILE:HD11	40:CC:221:PHE:CE2	2.34	0.61
41:CD:86:TYR:CE1	41:CD:247:ILE:HA	2.34	0.61
48:CL:86:ILE:HD11	48:CL:90:VAL:HG11	1.81	0.61
49:CM:123:ILE:HA	51:CO:187:LYS:HE3	1.80	0.61
62:CZ:10:VAL:HG21	62:CZ:87:VAL:HG23	1.82	0.61
81:A2:1245:G:C2'	81:A2:1246:G:H5''	2.27	0.61
81:A2:1249:G:O5'	81:A2:1249:G:H8	1.81	0.61
53:CQ:42:THR:HG22	81:A2:1409:C:H5''	1.80	0.61
81:A2:158:G:H2'	81:A2:159:A:H8	1.65	0.61
81:A2:212:C:H1'	81:A2:213:C:P	2.40	0.61
81:A2:219:C:C4	81:A2:220:G:N7	2.68	0.61
81:A2:2625:G:N3	81:A2:2663:G:O6	2.33	0.61
81:A2:2771:C:H5'	81:A2:2774:C:N4	2.15	0.61
47:CJ:131:TYR:CE1	81:A2:4220:U:H1'	2.35	0.61
81:A2:4507:C:H3'	81:A2:4508:A:C5'	2.30	0.61
81:A2:4837:U:C4'	81:A2:4838:C:H5'	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4869:C:H6	81:A2:4869:C:H3'	1.63	0.61
81:A2:673:G:H2'	81:A2:674:G:O4'	2.01	0.61
82:A3:62:A:H4'	82:A3:63:U:O5'	1.99	0.61
4:B1:1397:U:H3'	4:B1:1397:U:H6	1.65	0.61
4:B1:1416:C:C4	4:B1:1431:G:N2	2.68	0.61
4:B1:1515:G:H8	4:B1:1515:G:H5''	1.65	0.61
4:B1:1540:G:H8	4:B1:1540:G:H5'	1.65	0.61
4:B1:1587:G:N3	24:BT:78:ILE:HB	2.15	0.61
4:B1:1699:A:C8	4:B1:1699:A:O5'	2.52	0.61
4:B1:1808:U:H2'	4:B1:1809:A:C8	2.35	0.61
4:B1:312:G:C4	11:BG:191:ARG:HD3	2.34	0.61
14:BJ:117:LEU:HB3	14:BJ:119:LEU:HD13	1.82	0.61
4:B1:526:A:C2'	14:BJ:128:VAL:HG22	2.29	0.61
23:BS:25:LYS:HE2	23:BS:27:ALA:HB3	1.82	0.61
43:CF:97:GLY:HA3	81:A2:1874:A:H5'	1.81	0.61
41:CD:41:LYS:CE	56:CT:34:TYR:HB2	2.30	0.61
81:A2:1390:U:H2'	81:A2:1391:C:C6	2.35	0.61
81:A2:1440:C:H2'	81:A2:1441:A:C8	2.35	0.61
81:A2:1907:A:C8	81:A2:1910:A:H1'	2.36	0.61
81:A2:2310:G:C3'	81:A2:2311:C:C5'	2.75	0.61
81:A2:2523:G:H2'	81:A2:2524:G:O4'	2.00	0.61
59:CW:44:ARG:HH12	81:A2:3585:U:H3'	1.65	0.61
39:CB:254:ILE:HD13	81:A2:3866:G:H5'	1.81	0.61
81:A2:4903:C:C2'	81:A2:4904:G:H5'	2.29	0.61
48:CL:115:GLN:OE1	81:A2:509:G:H4'	2.01	0.61
81:A2:64:A:O5'	81:A2:64:A:H8	1.83	0.61
4:B1:1016:U:H1'	4:B1:1017:U:O5'	1.99	0.61
3:AX:45:U:C6	4:B1:1207:G:N2	2.68	0.61
1:AV:34:G:H5'	4:B1:1248:U:O2	1.99	0.61
4:B1:1445:U:C2'	4:B1:1446:A:H5'	2.29	0.61
4:B1:1549:U:C2'	4:B1:1550:G:H5'	2.30	0.61
4:B1:1561:A:O4'	4:B1:1583:C:H4'	2.01	0.61
4:B1:300:U:H2'	4:B1:301:A:H8	1.63	0.61
4:B1:360:A:H2'	4:B1:360:A:OP1	2.00	0.61
4:B1:649:U:H2'	4:B1:650:A:C8	2.34	0.61
4:B1:909:G:P	54:CR:169:ALA:HB1	2.40	0.61
12:BH:132:ASP:O	12:BH:135:PHE:HB2	2.00	0.61
13:BI:120:PRO:HG2	13:BI:126:GLY:O	2.00	0.61
40:CC:209:ILE:HG22	40:CC:251:ILE:HB	1.81	0.61
44:CG:164:ILE:HG22	44:CG:168:VAL:CG1	2.30	0.61
47:CJ:19:LYS:HB3	47:CJ:133:VAL:CG1	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1732:G:H4'	81:A2:1733:U:OP1	1.99	0.61
81:A2:1912:A:C2	81:A2:2026:U:N3	2.68	0.61
81:A2:2687:C:H2'	81:A2:2688:G:O4'	2.01	0.61
40:CC:58:ALA:HB3	81:A2:348:U:P	2.40	0.61
81:A2:3686:A:H1'	81:A2:4139:G:H5'	1.81	0.61
81:A2:4230:C:H5'	81:A2:4231:A:H5'	1.81	0.61
81:A2:4383:U:C6	81:A2:4383:U:H3'	2.34	0.61
81:A2:4435:G:OP2	81:A2:4436:C:H6	1.84	0.61
81:A2:4589:U:H3	81:A2:4629:A:H61	1.47	0.61
81:A2:633:G:H2'	81:A2:634:C:C6	2.35	0.61
82:A3:26:C:H2'	82:A3:27:U:H6	1.64	0.61
82:A3:79:G:H2'	82:A3:80:A:O4'	2.00	0.61
4:B1:1085:C:H1'	4:B1:1086:G:H3'	1.81	0.61
4:B1:1255:G:C5'	4:B1:1256:G:H8	2.11	0.61
4:B1:1307:U:C2'	4:B1:1308:U:C5'	2.77	0.61
4:B1:131:C:H4'	4:B1:132:U:O5'	2.01	0.61
4:B1:1375:G:C2'	4:B1:1376:A:H5'	2.30	0.61
4:B1:1389:C:O2'	4:B1:1390:U:H6	1.83	0.61
4:B1:591:U:H2'	4:B1:591:U:O2	1.99	0.61
4:B1:69:C:H5''	4:B1:69:C:H6	1.64	0.61
4:B1:797:C:H4'	12:BH:109:ARG:HB3	1.83	0.61
5:BA:180:ARG:HG2	5:BA:184:ARG:HH12	1.65	0.61
4:B1:1587:G:C5	24:BT:74:SER:HB3	2.35	0.61
81:A2:1074:G:H2'	81:A2:1075:A:H8	1.66	0.61
81:A2:1140:C:H2'	81:A2:1141:G:C8	2.35	0.61
81:A2:1420:U:H6	81:A2:1420:U:C3'	2.13	0.61
81:A2:1460:C:H42	81:A2:1463:G:N2	1.97	0.61
81:A2:1622:A:H8	81:A2:1622:A:O5'	1.84	0.61
81:A2:2340:A:H3'	81:A2:2341:G:C8	2.35	0.61
81:A2:33:A:H5'	81:A2:34:A:OP2	2.01	0.61
81:A2:4313:U:C5'	81:A2:4314:U:H5''	2.30	0.61
81:A2:4551:U:C6	81:A2:4551:U:H5''	2.35	0.61
81:A2:681:U:H2'	81:A2:682:C:C6	2.35	0.61
81:A2:904:C:H2'	81:A2:905:C:C6	2.35	0.61
81:A2:959:C:H3'	81:A2:1215:G:N2	2.14	0.61
2:AW:4:C:H1'	81:A2:3683:G:O2'	2.01	0.61
4:B1:1148:A:N3	4:B1:1148:A:H5'	2.15	0.61
4:B1:1253:A:N3	4:B1:1253:A:H5''	2.15	0.61
4:B1:1331:C:H2'	4:B1:1331:C:O2	2.00	0.61
4:B1:1529:C:H2'	4:B1:1530:U:H5'	1.81	0.61
4:B1:184:G:H3'	4:B1:185:G:C4'	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:25:A:H2'	4:B1:26:U:C6	2.35	0.61
4:B1:310:C:H2'	4:B1:340:C:C5'	2.30	0.61
4:B1:332:G:C8	11:BG:186:GLN:HB2	2.36	0.61
4:B1:659:G:H2'	4:B1:659:G:N3	2.14	0.61
5:BA:62:ALA:O	5:BA:66:VAL:HG23	2.01	0.61
12:BH:162:GLN:O	12:BH:166:VAL:HB	2.00	0.61
27:BW:14:ILE:HD13	27:BW:25:VAL:HG11	1.82	0.61
40:CC:147:VAL:HG11	40:CC:249:PHE:HE2	1.65	0.61
44:CG:191:GLY:HA2	44:CG:199:CYS:SG	2.40	0.61
46:CI:182:GLU:HA	46:CI:185:VAL:HG12	1.81	0.61
49:CM:6:PHE:O	49:CM:11:ARG:HD2	2.00	0.61
56:CT:2:THR:HG22	81:A2:4166:C:H41	1.65	0.61
41:CD:293:ARG:NH2	81:A2:1159:U:O2'	2.33	0.61
43:CF:44:LYS:HD3	81:A2:1219:C:C4	2.35	0.61
81:A2:1396:G:H2'	81:A2:1397:C:C6	2.36	0.61
81:A2:35:U:H4'	81:A2:1504:A:C2	2.35	0.61
81:A2:182:C:H3'	81:A2:183:G:N7	2.16	0.61
81:A2:2252:A:H2'	81:A2:2253:C:C6	2.36	0.61
81:A2:24:G:N2	81:A2:25:A:C4	2.69	0.61
81:A2:2549:C:C2'	81:A2:2550:A:H8	2.12	0.61
81:A2:2744:U:O5'	81:A2:2744:U:H6	1.84	0.61
81:A2:2802:A:C8	81:A2:2802:A:H5''	2.31	0.61
81:A2:350:A:H5''	81:A2:351:A:OP2	1.99	0.61
81:A2:4557:U:H2'	81:A2:4558:C:H5'	1.83	0.61
81:A2:4622:C:H2'	81:A2:4623:G:H5'	1.83	0.61
4:B1:10:G:N7	4:B1:1697:A:C2	2.69	0.61
4:B1:1418:C:H5''	24:BT:129:ARG:HB3	1.83	0.61
4:B1:1561:A:H4'	4:B1:1583:C:H4'	1.83	0.61
4:B1:1741:U:O4	4:B1:1793:A:C2	2.54	0.61
4:B1:1820:G:H2'	4:B1:1821:U:C6	2.36	0.61
4:B1:211:G:H8	4:B1:211:G:C5'	2.05	0.61
4:B1:582:U:H2'	4:B1:583:A:O4'	2.00	0.61
4:B1:902:G:H2'	4:B1:903:A:H8	1.64	0.61
5:BA:6:ASP:CB	26:BV:42:VAL:HG22	2.30	0.61
11:BG:48:TYR:CD2	11:BG:116:LYS:HA	2.35	0.61
17:BM:61:TYR:HE1	17:BM:107:SER:CB	2.13	0.61
24:BT:39:LEU:CD1	24:BT:43:LYS:HB2	2.30	0.61
42:CE:162:VAL:CG1	42:CE:175:VAL:HG13	2.31	0.61
43:CF:69:ILE:HD12	81:A2:716:U:C5'	2.30	0.61
45:CH:175:PHE:HE2	81:A2:4438:G:H5'	1.64	0.61
47:CJ:110:GLN:O	47:CJ:111:GLU:HB2	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CJ:169:LYS:HD3	47:CJ:170:TYR:CD2	2.35	0.61
49:CM:9:VAL:HG21	49:CM:66:HIS:ND1	2.16	0.61
51:CO:125:LYS:HE2	51:CO:135:PHE:CG	2.35	0.61
49:CM:119:ARG:HA	51:CO:190:ASP:HB3	1.81	0.61
51:CO:87:MET:O	81:A2:1892:C:H1'	2.01	0.61
61:CY:2:LYS:HD3	61:CY:9:SER:OG	2.00	0.61
81:A2:1078:G:C2'	81:A2:1079:C:H5'	2.29	0.61
81:A2:1146:G:N3	81:A2:1146:G:H2'	2.16	0.61
81:A2:131:C:H2'	81:A2:138:C:H41	1.65	0.61
81:A2:1492:U:H6	81:A2:1492:U:O5'	1.83	0.61
81:A2:1649:G:C8	81:A2:1649:G:H3'	2.36	0.61
56:CT:81:LYS:HE3	81:A2:1664:G:H5'	1.81	0.61
81:A2:2847:A:O2'	81:A2:2848:A:H5'	2.00	0.61
81:A2:381:C:N3	81:A2:392:G:N2	2.48	0.61
81:A2:4118:C:H6	81:A2:4118:C:P	2.24	0.61
81:A2:4813:C:H3'	81:A2:4814:C:C5	2.36	0.61
81:A2:891:C:H2'	81:A2:892:G:H8	1.65	0.61
4:B1:1254:C:H4'	4:B1:1254:C:OP1	2.00	0.61
4:B1:1277:C:H3'	4:B1:1278:A:H8	1.66	0.61
4:B1:54:A:H3'	4:B1:55:U:C5'	2.30	0.61
4:B1:569:A:C5	4:B1:570:C:C5	2.88	0.61
4:B1:593:C:H1'	4:B1:594:A:O5'	2.01	0.61
4:B1:684:G:C5	4:B1:920:A:C8	2.88	0.61
4:B1:746:C:P	4:B1:746:C:H2'	2.41	0.61
4:B1:751:G:C4	4:B1:752:G:C8	2.88	0.61
8:BD:190:LEU:HB3	8:BD:200:PRO:HD3	1.83	0.61
41:CD:56:THR:OG1	41:CD:59:ASP:HB3	2.00	0.61
42:CE:222:LEU:HB3	42:CE:229:GLU:O	1.99	0.61
44:CG:162:ASP:HB3	44:CG:163:PRO:HD2	1.81	0.61
47:CJ:94:LEU:O	47:CJ:175:LEU:HB2	2.01	0.61
81:A2:2064:G:C2	81:A2:2246:G:N1	2.69	0.61
81:A2:2333:U:H6	81:A2:2333:U:C5'	2.11	0.61
81:A2:2638:U:H3'	81:A2:2639:G:H5'	1.80	0.61
81:A2:2873:G:H8	81:A2:2873:G:O5'	1.83	0.61
81:A2:314:C:H2'	81:A2:315:A:C8	2.36	0.61
81:A2:3741:U:H2'	81:A2:3742:U:H5	1.66	0.61
81:A2:3887:G:H2'	81:A2:3888:C:C6	2.35	0.61
81:A2:4040:C:H2'	81:A2:4041:A:C8	2.34	0.61
81:A2:4192:U:H4'	81:A2:4193:A:H5'	1.83	0.61
81:A2:4377:C:H3'	81:A2:4378:G:H8	1.66	0.61
81:A2:4437:A:C2	81:A2:4438:G:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4487:G:H2'	81:A2:4487:G:N3	2.15	0.61
81:A2:4743:C:H2'	81:A2:4744:C:C6	2.36	0.61
81:A2:4888:C:H2'	81:A2:4889:A:C8	2.36	0.61
81:A2:943:G:H1'	81:A2:944:A:C5'	2.30	0.61
4:B1:1113:A:C2	4:B1:1120:U:O4	2.53	0.61
4:B1:1147:C:H3'	4:B1:1147:C:C6	2.36	0.61
4:B1:1415:C:H42	4:B1:1431:G:H1	1.49	0.61
4:B1:192:C:H2'	4:B1:193:C:H5'	1.82	0.61
4:B1:43:U:H3'	4:B1:44:U:C5'	2.31	0.61
4:B1:567:C:H2'	4:B1:568:C:H5''	1.82	0.61
4:B1:822:U:H5'	4:B1:822:U:C6	2.33	0.61
4:B1:900:C:C2'	4:B1:901:G:C8	2.78	0.61
5:BA:6:ASP:C	26:BV:83:PHE:HB3	2.20	0.61
13:BI:165:GLN:HE21	13:BI:172:LEU:HD23	1.65	0.61
14:BJ:53:ILE:HG23	14:BJ:97:ILE:HD11	1.83	0.61
4:B1:1587:G:H1	24:BT:70:ALA:HB1	1.63	0.61
38:CA:196:TRP:CE3	38:CA:197:PRO:HG3	2.36	0.61
40:CC:163:LYS:O	40:CC:166:GLU:HG2	2.00	0.61
41:CD:8:LYS:HB3	41:CD:13:PHE:CZ	2.35	0.61
42:CE:214:ASP:OD2	81:A2:4896:G:H5''	2.01	0.61
48:CL:47:ALA:CB	48:CL:48:PRO:HD2	2.30	0.61
81:A2:106:A:H8	81:A2:106:A:O5'	1.82	0.61
81:A2:1274:A:H2'	81:A2:1275:C:C6	2.35	0.61
81:A2:1424:G:O2'	81:A2:1425:U:H5'	1.99	0.61
81:A2:1440:C:H2'	81:A2:1441:A:H8	1.65	0.61
81:A2:1477:G:C2'	81:A2:1478:C:H5'	2.30	0.61
81:A2:1565:G:H3'	81:A2:1566:G:C8	2.35	0.61
81:A2:1828:A:H3'	81:A2:1829:G:H8	1.66	0.61
81:A2:1833:G:H2'	81:A2:1834:C:C6	2.35	0.61
81:A2:2305:U:H2'	81:A2:2306:G:H8	1.58	0.61
81:A2:2335:G:O5'	81:A2:2335:G:H8	1.84	0.61
81:A2:2587:G:H1'	81:A2:2663:G:C2'	2.31	0.61
81:A2:2663:G:C6	81:A2:2664:U:O2	2.53	0.61
81:A2:269:G:H2'	81:A2:320:A:C6	2.36	0.61
81:A2:2839:G:H2'	81:A2:3588:G:O6	2.00	0.61
81:A2:4256:U:H4'	81:A2:4256:U:OP1	2.00	0.61
81:A2:4497:C:H2'	81:A2:4498:G:C8	2.36	0.61
81:A2:4700:C:C2'	81:A2:4701:G:H4'	2.19	0.61
81:A2:71:C:H5''	81:A2:72:C:C5	2.35	0.61
82:A3:60:G:H21	82:A3:64:U:H1'	1.66	0.61
4:B1:683:G:C2	4:B1:1023:A:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1214:A:N1	4:B1:1217:A:C4	2.68	0.61
4:B1:1307:U:H2'	4:B1:1308:U:C5'	2.30	0.61
4:B1:1442:U:H3'	4:B1:1443:C:H5''	1.82	0.61
4:B1:1529:C:C2'	4:B1:1530:U:H5'	2.31	0.61
4:B1:1576:G:O2'	4:B1:1577:G:H5'	2.01	0.61
4:B1:1663:A:H2	4:B1:1664:A:N6	1.99	0.61
4:B1:320:G:C8	4:B1:320:G:OP1	2.53	0.61
14:BJ:169:ARG:N	14:BJ:170:PRO:HD3	2.15	0.61
21:BQ:134:GLY:HA3	21:BQ:140:ARG:HA	1.82	0.61
39:CB:56:ILE:HD12	39:CB:368:ILE:HG12	1.83	0.61
47:CJ:83:LEU:O	47:CJ:87:LEU:HG	2.01	0.61
54:CR:83:GLY:CA	81:A2:2789:A:C8	2.84	0.61
81:A2:1143:G:H2'	81:A2:1144:G:C8	2.35	0.61
81:A2:1250:A:O5'	81:A2:1250:A:C8	2.54	0.61
81:A2:1436:G:H2'	81:A2:1437:C:H6	1.65	0.61
81:A2:1710:C:H6	81:A2:1710:C:H5''	1.63	0.61
81:A2:254:G:N2	81:A2:255:C:H5	1.98	0.61
38:CA:240:ALA:CB	81:A2:3627:C:H4'	2.30	0.61
81:A2:916:A:H1'	81:A2:917:G:C5'	2.30	0.61
82:A3:126:C:H5'	82:A3:128:C:C5	2.32	0.61
82:A3:13:G:H2'	82:A3:14:U:H6	1.66	0.61
3:AX:39:U:C5	3:AX:40:U:C5	2.89	0.61
4:B1:1065:G:C2	4:B1:1066:U:H1'	2.36	0.61
4:B1:1101:U:H2'	4:B1:1102:G:N7	2.15	0.61
4:B1:1230:C:H2'	4:B1:1231:C:H5'	1.83	0.61
4:B1:753:C:N4	4:B1:754:G:C2	2.69	0.61
4:B1:863:U:H6	4:B1:863:U:O5'	1.84	0.61
4:B1:991:G:N3	4:B1:991:G:H2'	2.16	0.61
13:BI:131:PRO:HG2	13:BI:138:ASN:OD1	2.00	0.61
5:BA:4:ALA:HB1	26:BV:82:ASN:HB3	1.82	0.61
30:BZ:62:VAL:N	30:BZ:63:PRO:CD	2.64	0.61
39:CB:77:THR:HG23	39:CB:335:GLY:O	2.00	0.61
41:CD:74:ILE:HD12	83:A4:115:A:H1'	1.83	0.61
47:CJ:85:LYS:HG2	47:CJ:115:LEU:HB2	1.83	0.61
48:CL:19:GLN:HA	82:A3:52:A:H4'	50.78	0.61
49:CM:119:ARG:HA	51:CO:190:ASP:CB	2.30	0.61
50:CN:161:MET:SD	81:A2:54:G:H1'	2.41	0.61
81:A2:1154:G:H1	81:A2:1167:G:H1	1.48	0.60
81:A2:1462:C:H5''	81:A2:1463:G:N7	2.15	0.60
81:A2:1610:A:H8	81:A2:1610:A:O5'	1.83	0.60
81:A2:2005:U:C2	81:A2:2006:C:C5	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2062:C:C5	81:A2:2249:G:N1	2.69	0.60
81:A2:2311:C:C5'	81:A2:2311:C:C6	2.76	0.60
81:A2:286:A:H2	81:A2:308:A:H8	1.42	0.60
81:A2:326:A:H2'	81:A2:327:A:C8	2.36	0.60
81:A2:379:A:C2'	81:A2:393:A:H61	2.11	0.60
81:A2:4033:G:H4'	81:A2:4033:G:OP1	2.00	0.60
81:A2:4287:C:O2'	81:A2:4288:G:H5'	2.01	0.60
81:A2:4675:C:H3'	81:A2:4676:C:C6	2.35	0.60
81:A2:4734:C:C2'	81:A2:4735:G:H5'	2.31	0.60
4:B1:1378:A:C2	5:BA:105:PRO:HB3	2.36	0.60
4:B1:1393:G:H5''	4:B1:1394:G:OP2	2.01	0.60
4:B1:1620:A:H2'	4:B1:1624:U:C4	2.35	0.60
4:B1:1714:U:H3'	4:B1:1715:A:H8	1.66	0.60
4:B1:353:C:H5'	16:BL:71:ARG:NH2	2.14	0.60
4:B1:428:U:H2'	4:B1:429:C:C6	2.36	0.60
4:B1:547:G:H4'	4:B1:548:C:OP2	2.00	0.60
4:B1:671:A:H5''	4:B1:671:A:C8	2.36	0.60
4:B1:741:C:C4	4:B1:744:G:N1	2.69	0.60
27:BW:50:PHE:HB2	27:BW:62:VAL:O	2.01	0.60
49:CM:65:PRO:HG2	49:CM:72:TYR:CE2	2.36	0.60
55:CS:9:GLU:OE2	55:CS:31:ARG:HD2	2.01	0.60
57:CU:17:GLN:HG3	57:CU:19:LEU:CD1	2.31	0.60
81:A2:12:A:O3'	81:A2:13:U:H3'	2.00	0.60
81:A2:2020:A:H8	81:A2:2021:A:N3	1.99	0.60
81:A2:2253:C:C2'	81:A2:2254:G:H5'	2.31	0.60
81:A2:2272:G:C6	81:A2:2316:G:C2	2.89	0.60
81:A2:2549:C:H2'	81:A2:2550:A:H8	1.66	0.60
81:A2:3754:A:H1'	81:A2:3755:U:OP1	2.01	0.60
51:CO:48:TYR:HE1	81:A2:3895:C:H4'	99.24	0.60
41:CD:176:SER:OG	81:A2:4283:A:H5''	2.02	0.60
81:A2:441:G:H8	81:A2:441:G:C5'	2.02	0.60
81:A2:462:A:N3	81:A2:462:A:H2'	2.15	0.60
81:A2:949:G:P	81:A2:949:G:H8	2.23	0.60
81:A2:96:U:C6	81:A2:96:U:C5'	2.84	0.60
1:AV:74:C:C4	81:A2:4158:G:C2	2.89	0.60
4:B1:1320:G:C2	4:B1:1321:G:H1'	2.36	0.60
4:B1:1398:G:H2'	4:B1:1398:G:N3	2.14	0.60
4:B1:1567:G:OP1	4:B1:1567:G:H8	1.83	0.60
4:B1:15:U:H2'	4:B1:16:G:H5'	1.83	0.60
4:B1:316:G:H2'	4:B1:317:C:C6	2.37	0.60
4:B1:508:A:H2'	4:B1:508:A:N3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BF:30:ILE:CD1	10:BF:39:ILE:HD12	2.30	0.60
17:BM:35:ILE:HD11	17:BM:61:TYR:CZ	2.36	0.60
4:B1:1023:A:H5'	18:BN:3:ARG:HH21	1.64	0.60
39:CB:77:THR:HG21	39:CB:336:CYS:HA	1.81	0.60
40:CC:158:VAL:O	40:CC:217:ILE:HD13	2.01	0.60
44:CG:39:PHE:CD1	44:CG:47:PRO:HD3	2.35	0.60
48:CL:135:LYS:CD	48:CL:135:LYS:H	2.11	0.60
49:CM:28:VAL:HG11	49:CM:47:ARG:HH21	1.66	0.60
57:CU:56:LEU:HD12	57:CU:61:VAL:HG21	1.82	0.60
81:A2:965:C:N4	81:A2:1249:G:N1	2.49	0.60
60:CX:56:ARG:CA	81:A2:14:C:H5''	2.31	0.60
81:A2:1:C:O2'	81:A2:2:G:H5'	2.01	0.60
81:A2:21:G:C4	81:A2:22:G:C8	2.89	0.60
81:A2:2763:C:O5'	81:A2:2763:C:H6	1.84	0.60
81:A2:348:U:H5''	81:A2:348:U:H6	1.66	0.60
81:A2:4084:U:H1'	81:A2:4085:U:P	2.41	0.60
81:A2:4562:A:H2'	81:A2:4563:C:C5	2.35	0.60
81:A2:4947:G:H2'	81:A2:4948:G:C8	2.36	0.60
82:A3:13:G:H2'	82:A3:14:U:C6	2.36	0.60
83:A4:26:C:H6	83:A4:26:C:O5'	1.84	0.60
4:B1:1335:G:C2'	4:B1:1336:C:H5'	2.31	0.60
4:B1:1351:G:H5''	4:B1:1351:G:C8	2.36	0.60
4:B1:1416:C:N4	4:B1:1417:C:C2	2.70	0.60
4:B1:175:A:C2	4:B1:176:U:C1'	2.83	0.60
5:BA:58:LEU:HD21	5:BA:177:MET:HG2	1.83	0.60
6:BB:114:VAL:HG22	6:BB:120:MET:SD	2.41	0.60
10:BF:48:TYR:CE1	21:BQ:50:LYS:HG3	2.35	0.60
13:BI:104:ILE:HB	13:BI:171:LEU:HB3	1.83	0.60
14:BJ:117:LEU:CB	14:BJ:119:LEU:HD13	2.31	0.60
21:BQ:134:GLY:HA3	21:BQ:139:ALA:O	2.02	0.60
21:BQ:36:GLY:O	24:BT:7:LYS:HG2	2.01	0.60
10:BF:102:LEU:HB3	30:BZ:67:LEU:HD22	1.84	0.60
41:CD:263:LYS:O	41:CD:264:LYS:CB	2.48	0.60
49:CM:9:VAL:HG11	49:CM:66:HIS:HA	1.82	0.60
60:CX:56:ARG:HA	81:A2:14:C:C4'	2.29	0.60
81:A2:1082:U:H1'	81:A2:1083:C:P	2.41	0.60
81:A2:1270:G:H4'	81:A2:4898:A:C2	2.28	0.60
81:A2:1747:C:H2'	81:A2:1748:G:C5	2.36	0.60
81:A2:2382:G:H8	81:A2:2382:G:O5'	1.84	0.60
81:A2:2396:C:C6	81:A2:2396:C:C5'	2.84	0.60
81:A2:2637:A:H3'	81:A2:2638:U:C5'	2.21	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2763:C:C4'	81:A2:2764:A:C8	2.84	0.60
81:A2:3639:C:H2'	81:A2:3640:G:C8	2.36	0.60
39:CB:268:ARG:HH21	81:A2:3865:C:H1'	1.66	0.60
81:A2:3908:G:OP2	81:A2:3908:G:C8	2.52	0.60
2:AW:56:C:C2	81:A2:3927:G:N1	2.70	0.60
81:A2:400:G:H4'	81:A2:401:A:C5'	2.32	0.60
56:CT:12:ARG:NH2	81:A2:4169:G:H4'	2.15	0.60
81:A2:4387:G:OP1	81:A2:4387:G:H4'	2.00	0.60
81:A2:4394:C:H2'	81:A2:4395:U:O4'	2.02	0.60
81:A2:4400:G:H2'	81:A2:4401:A:H8	1.64	0.60
81:A2:4735:G:C3'	81:A2:4736:C:H5''	2.31	0.60
81:A2:4824:U:H4'	81:A2:4825:G:OP1	2.00	0.60
81:A2:4869:C:H2'	81:A2:4870:G:H8	1.65	0.60
81:A2:659:A:H2'	81:A2:660:C:H6	1.67	0.60
81:A2:956:C:H2'	81:A2:957:G:H5'	1.82	0.60
82:A3:151:G:H2'	82:A3:152:U:O4'	2.01	0.60
83:A4:31:G:H2'	83:A4:32:A:H8	1.65	0.60
83:A4:63:C:C4'	83:A4:64:G:O5'	2.49	0.60
1:AV:30:G:H5''	1:AV:30:G:H8	1.66	0.60
4:B1:1021:U:H5''	18:BN:128:TYR:HE1	1.63	0.60
4:B1:1462:U:O2'	4:B1:1463:U:H3'	1.99	0.60
4:B1:1534:C:H1'	4:B1:1535:U:OP2	2.01	0.60
4:B1:1037:G:H4'	4:B1:1845:A:H4'	1.82	0.60
4:B1:532:C:H2'	4:B1:533:A:O4'	2.01	0.60
4:B1:572:U:P	29:BY:59:GLY:N	2.74	0.60
4:B1:806:U:O5'	4:B1:806:U:H6	1.84	0.60
4:B1:869:A:C2	4:B1:915:G:C1'	2.84	0.60
4:B1:987:A:H3'	4:B1:988:C:C6	2.36	0.60
24:BT:27:LYS:HD3	24:BT:110:LEU:HD11	1.82	0.60
30:BZ:94:LYS:O	30:BZ:96:LEU:N	2.33	0.60
39:CB:107:ALA:HB2	39:CB:201:LEU:HB3	1.84	0.60
39:CB:217:ILE:HD11	39:CB:333:LEU:HD21	1.82	0.60
39:CB:21:ARG:HH12	81:A2:4933:G:H5'	1.65	0.60
53:CQ:10:ASP:CG	81:A2:2060:G:H4'	2.22	0.60
81:A2:1143:G:H2'	81:A2:1144:G:H8	1.65	0.60
81:A2:1484:C:H2'	81:A2:1485:G:C8	2.35	0.60
81:A2:1648:A:C8	81:A2:1648:A:H3'	2.36	0.60
81:A2:1748:G:H8	81:A2:1748:G:P	2.24	0.60
81:A2:1861:G:H5''	81:A2:1861:G:C8	2.37	0.60
81:A2:2064:G:N2	81:A2:2246:G:N1	2.48	0.60
81:A2:2310:G:H3'	81:A2:2311:C:C5'	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2668:U:H2'	81:A2:2669:U:C6	2.37	0.60
81:A2:3618:A:H2'	81:A2:3618:A:N3	2.17	0.60
81:A2:379:A:H1'	81:A2:394:G:N2	2.17	0.60
81:A2:4051:U:O2'	81:A2:4052:G:H3'	2.00	0.60
81:A2:4600:C:C2'	81:A2:4601:U:H5'	2.32	0.60
81:A2:4812:A:C2'	81:A2:4813:C:C6	2.80	0.60
82:A3:138:C:H2'	82:A3:139:G:H8	1.67	0.60
41:CD:264:LYS:HG2	83:A4:1:G:N7	2.17	0.60
4:B1:1225:U:C2'	4:B1:1226:G:H5'	2.29	0.60
4:B1:1348:G:H2'	4:B1:1349:G:C8	2.36	0.60
4:B1:1473:G:H8	4:B1:1475:G:OP2	1.85	0.60
4:B1:1678:A:H2'	4:B1:1679:A:H5'	1.82	0.60
4:B1:223:C:H2'	4:B1:224:A:H8	1.66	0.60
4:B1:486:A:O5'	4:B1:486:A:H8	1.85	0.60
4:B1:525:A:H8	4:B1:525:A:H3'	1.65	0.60
4:B1:69:C:C6	4:B1:69:C:H5''	2.36	0.60
13:BI:130:THR:OG1	13:BI:131:PRO:HD2	2.02	0.60
4:B1:1311:C:H5''	17:BM:40:LYS:HZ1	1.66	0.60
38:CA:129:ALA:HB3	38:CA:132:ASN:HD22	1.66	0.60
38:CA:41:ILE:HG23	38:CA:90:CYS:SG	2.41	0.60
40:CC:137:VAL:HG11	40:CC:144:ILE:HD11	1.84	0.60
40:CC:326:LEU:HD23	40:CC:332:ALA:HB3	1.84	0.60
41:CD:41:LYS:HB3	56:CT:68:THR:O	2.01	0.60
45:CH:94:SER:HB3	45:CH:142:ASP:HB3	1.83	0.60
52:CP:17:SER:HA	81:A2:391:A:H5''	1.81	0.60
61:CY:57:VAL:HG22	61:CY:104:VAL:HG12	1.84	0.60
81:A2:1318:G:H8	81:A2:1318:G:O5'	1.85	0.60
81:A2:1481:G:H4'	81:A2:1482:A:OP1	2.02	0.60
81:A2:1610:A:H4'	81:A2:1611:A:H5'	1.83	0.60
81:A2:193:C:O3'	81:A2:194:A:H8	1.84	0.60
54:CR:103:ARG:NH2	81:A2:2644:C:H5''	2.16	0.60
81:A2:299:G:H4'	81:A2:301:G:H4'	1.82	0.60
81:A2:3908:G:N7	81:A2:4130:A:H2'	2.17	0.60
81:A2:426:A:C2'	81:A2:427:C:H5'	2.32	0.60
81:A2:4900:G:H5'	81:A2:4901:U:O3'	2.02	0.60
81:A2:4938:C:C2'	81:A2:4939:C:H5'	2.32	0.60
81:A2:657:C:O5'	81:A2:657:C:H6	1.85	0.60
49:CM:66:HIS:HB3	81:A2:736:G:O4'	2.02	0.60
82:A3:137:A:N3	82:A3:137:A:H2'	2.16	0.60
3:AX:48:U:C5	4:B1:1702:G:OP2	2.54	0.60
4:B1:925:G:H1	4:B1:1017:U:H3	1.48	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1325:G:C2'	4:B1:1326:U:H5''	2.32	0.60
4:B1:1348:G:P	4:B1:1348:G:H8	2.25	0.60
4:B1:1683:C:O5'	4:B1:1683:C:H6	1.85	0.60
4:B1:522:A:O5'	4:B1:522:A:H8	1.85	0.60
4:B1:746:C:H3'	4:B1:746:C:OP1	2.01	0.60
4:B1:867:G:H8	4:B1:867:G:P	2.24	0.60
4:B1:688:U:H5''	12:BH:103:LYS:HD2	1.84	0.60
13:BI:92:ARG:HH22	81:A2:2869:C:C1'	2.03	0.60
24:BT:25:SER:HB3	24:BT:27:LYS:HG3	1.84	0.60
24:BT:39:LEU:HD11	24:BT:43:LYS:CB	2.28	0.60
25:BU:56:MET:HG3	25:BU:57:PRO:HD2	1.84	0.60
44:CG:73:ARG:HG3	44:CG:73:ARG:HH11	1.67	0.60
45:CH:41:ILE:HG13	45:CH:73:ILE:CG1	2.32	0.60
81:A2:99:A:C2'	81:A2:100:C:H6	2.15	0.60
81:A2:1191:G:O2'	81:A2:1192:G:H5'	2.01	0.60
81:A2:1056:C:N4	81:A2:1204:G:N1	2.49	0.60
81:A2:1423:A:O2'	81:A2:1424:G:H8	1.84	0.60
81:A2:1884:U:H2'	81:A2:1885:A:H5'	1.84	0.60
53:CQ:11:ARG:HB2	81:A2:2061:C:P	2.41	0.60
81:A2:2279:C:O2'	81:A2:2282:G:H4'	2.01	0.60
81:A2:2497:C:H2'	81:A2:2498:G:C8	2.37	0.60
81:A2:2531:U:O2'	81:A2:2532:G:H5'	2.01	0.60
81:A2:2744:U:C5	81:A2:2745:C:N4	2.69	0.60
81:A2:2416:G:H1'	81:A2:2754:G:N3	2.17	0.60
81:A2:457:A:C2'	81:A2:458:U:C5'	2.78	0.60
81:A2:976:C:H2'	81:A2:977:G:C8	2.36	0.60
2:AW:2:C:C5'	2:AW:2:C:H6	2.11	0.60
4:B1:1614:A:H2'	4:B1:1615:U:H6	1.66	0.60
4:B1:184:G:C8	4:B1:185:G:C4'	2.78	0.60
4:B1:605:A:H3'	4:B1:607:U:OP2	2.02	0.60
4:B1:945:U:H3'	4:B1:946:U:C6	2.36	0.60
4:B1:1445:U:H4'	25:BU:57:PRO:HB3	1.82	0.60
27:BW:11:LEU:HD11	27:BW:37:PHE:CE2	2.36	0.60
28:BX:105:PHE:CZ	28:BX:121:LYS:HD2	2.37	0.60
29:BY:84:LYS:HE2	29:BY:85:ASN:OD1	2.01	0.60
38:CA:189:TYR:HB2	38:CA:196:TRP:CD1	2.37	0.60
42:CE:168:LEU:HD23	42:CE:172:LEU:CD1	2.31	0.60
48:CL:8:MET:SD	53:CQ:168:ARG:HB2	2.41	0.60
81:A2:1221:C:H3'	81:A2:1221:C:C6	2.37	0.60
81:A2:1410:C:H6	81:A2:1410:C:O5'	1.84	0.60
81:A2:1907:A:H61	81:A2:2032:U:H3	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CX:125:ASN:HD22	81:A2:2509:C:H5''	1.66	0.60
81:A2:2736:G:N3	81:A2:2736:G:H5''	2.17	0.60
81:A2:3703:U:H6	81:A2:3703:U:O5'	1.85	0.60
1:AV:74:C:C2	81:A2:4157:G:N1	2.67	0.60
81:A2:4283:A:H2'	81:A2:4284:A:O4'	2.02	0.60
81:A2:4479:C:H3'	81:A2:4479:C:H6	1.66	0.60
81:A2:4700:C:H2'	81:A2:4701:G:C4'	2.19	0.60
81:A2:481:C:H2'	81:A2:482:G:C5'	2.31	0.60
81:A2:5018:G:C8	81:A2:5018:G:OP2	2.54	0.60
81:A2:84:A:H4'	81:A2:85:G:OP1	2.01	0.60
81:A2:89:C:H2'	81:A2:90:G:C5'	2.31	0.60
81:A2:2310:G:H5'	82:A3:20:A:O3'	2.01	0.60
2:AW:72:C:C2'	2:AW:73:A:H5''	2.20	0.60
3:AX:34:U:H2'	3:AX:35:U:H5'	1.82	0.60
4:B1:1389:C:O2'	4:B1:1390:U:C6	2.52	0.60
4:B1:1489:A:H5'	4:B1:1490:G:H5'	1.84	0.60
4:B1:1684:C:C3'	4:B1:1685:U:H5'	2.32	0.60
4:B1:1751:C:C2'	4:B1:1752:C:H5'	2.32	0.60
4:B1:184:G:C3'	4:B1:185:G:H4'	2.29	0.60
4:B1:315:C:H5''	4:B1:315:C:H6	1.66	0.60
4:B1:77:A:N7	11:BG:155:GLN:HA	2.16	0.60
12:BH:4:SER:N	12:BH:24:SER:HG	1.98	0.60
13:BI:194:GLU:OE1	16:BL:20:LYS:HD3	2.01	0.60
4:B1:1389:C:H5''	22:BR:43:SER:HB2	1.84	0.60
23:BS:70:ILE:HD13	23:BS:77:TYR:CD1	2.37	0.60
41:CD:289:ARG:HG2	41:CD:293:ARG:HG3	1.83	0.60
52:CP:30:ARG:HA	52:CP:119:VAL:HG11	1.82	0.60
59:CW:36:CYS:HG	59:CW:51:TRP:HH2	1.50	0.60
81:A2:1207:C:H6	81:A2:1207:C:O5'	1.84	0.60
81:A2:1264:G:O2'	81:A2:1265:U:H5'	2.02	0.60
81:A2:1285:C:H6	81:A2:1285:C:C5'	2.14	0.60
81:A2:1452:U:H2'	81:A2:1453:C:O4'	2.01	0.60
81:A2:1885:A:H8	81:A2:1885:A:C5'	2.15	0.60
81:A2:2430:A:H2'	81:A2:2431:U:H5'	1.84	0.60
81:A2:2464:G:C6	81:A2:2466:C:H1'	2.37	0.60
81:A2:2512:G:H2'	81:A2:2513:A:O4'	2.02	0.60
81:A2:254:G:N3	81:A2:254:G:C3'	2.63	0.60
81:A2:2858:A:H2'	81:A2:2859:A:H5'	1.83	0.60
81:A2:3742:U:O2	81:A2:3742:U:H2'	2.00	0.60
81:A2:3908:G:O6	81:A2:4130:A:H5''	2.02	0.60
81:A2:377:A:H2	81:A2:395:U:O2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4051:U:C2'	81:A2:4052:G:H5''	2.31	0.60
81:A2:437:C:H2'	81:A2:438:C:C6	2.37	0.60
81:A2:4435:G:OP2	81:A2:4436:C:C6	2.55	0.60
81:A2:4636:G:H4'	81:A2:4637:U:OP1	2.01	0.60
81:A2:4739:G:OP2	81:A2:4740:U:H5''	2.00	0.60
49:CM:97:ALA:C	81:A2:4826:C:N4	2.54	0.60
81:A2:506:C:H2'	81:A2:507:C:C6	2.37	0.60
81:A2:64:A:C3'	81:A2:110:C:H41	2.13	0.60
48:CL:59:VAL:HG13	81:A2:74:G:OP1	2.02	0.60
81:A2:914:G:N2	81:A2:915:C:C6	2.70	0.60
4:B1:1079:C:C4'	4:B1:1181:A:H61	2.14	0.60
4:B1:1196:A:H2'	4:B1:1197:G:O4'	2.02	0.60
4:B1:1214:A:C2	4:B1:1217:A:C8	2.89	0.60
4:B1:1223:A:C2	4:B1:1224:G:H1'	2.37	0.60
4:B1:1301:A:N3	4:B1:1301:A:H3'	2.17	0.60
4:B1:1387:G:H2'	4:B1:1388:A:O4'	2.00	0.60
4:B1:1443:C:C2'	4:B1:1444:U:H5'	2.31	0.60
4:B1:1654:G:H3'	4:B1:1655:C:C5	2.36	0.60
4:B1:407:G:C5	28:BX:36:LEU:HD13	2.36	0.60
4:B1:571:U:C1'	29:BY:60:PHE:H	2.15	0.60
4:B1:66:G:C8	11:BG:160:LYS:HD2	2.37	0.60
7:BC:167:ARG:HA	7:BC:181:PRO:CD	2.30	0.60
4:B1:144:U:C5	11:BG:180:VAL:HG22	2.37	0.60
39:CB:232:THR:HG23	39:CB:237:THR:O	2.02	0.60
39:CB:27:GLY:HA3	39:CB:276:HIS:CD2	2.37	0.60
40:CC:211:TYR:HD1	40:CC:253:THR:HG1	1.50	0.60
40:CC:296:PRO:O	40:CC:300:ARG:HG3	2.01	0.60
40:CC:50:GLN:HB3	40:CC:51:PRO:HD3	1.84	0.60
40:CC:54:VAL:HG22	40:CC:55:SER:N	2.09	0.60
47:CJ:175:LEU:CB	47:CJ:176:PRO:HD2	2.31	0.60
51:CO:26:GLN:HG3	51:CO:31:ARG:CZ	2.32	0.60
54:CR:104:ARG:NH2	81:A2:2875:G:H5''	2.17	0.60
62:CZ:54:THR:HG23	62:CZ:56:ALA:HB3	1.84	0.60
81:A2:1221:C:C5	81:A2:1222:G:C8	2.90	0.60
81:A2:1284:C:O2'	81:A2:2289:A:H1'	2.02	0.60
81:A2:12:A:C2	81:A2:14:C:N4	2.70	0.60
81:A2:1352:A:C2	81:A2:1353:A:N7	2.69	0.60
81:A2:1388:G:N3	81:A2:1389:C:H1'	2.16	0.60
81:A2:1400:A:H2	81:A2:1446:C:H1'	1.67	0.60
81:A2:1930:G:C8	81:A2:1930:G:H5'	2.37	0.60
81:A2:289:G:O2'	81:A2:290:C:H5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:308:A:N3	81:A2:308:A:H2'	2.17	0.60
81:A2:3770:U:O2	81:A2:4457:U:H5''	2.02	0.60
81:A2:381:C:C5'	81:A2:381:C:H6	2.12	0.60
81:A2:4147:G:H2'	81:A2:4148:U:C6	2.37	0.60
81:A2:4614:C:O5'	81:A2:4614:C:H6	1.85	0.60
81:A2:4971:A:C2	81:A2:4988:G:N2	2.64	0.60
81:A2:715:C:H2'	81:A2:716:U:H6	1.65	0.60
82:A3:40:A:H2'	82:A3:41:A:C8	2.36	0.60
82:A3:40:A:O2'	82:A3:41:A:H5'	2.01	0.60
4:B1:1127:C:O2'	4:B1:1128:C:H5'	2.02	0.60
4:B1:1348:G:H2'	4:B1:1349:G:H8	1.67	0.60
4:B1:1439:A:H8	4:B1:1439:A:P	2.25	0.60
4:B1:1542:C:C5'	4:B1:1542:C:C6	2.85	0.60
4:B1:1577:G:H1'	4:B1:1582:C:O2	2.01	0.60
4:B1:1849:G:C2'	4:B1:1850:A:H5'	2.31	0.60
4:B1:600:G:H5''	4:B1:601:G:OP2	2.02	0.60
8:BD:94:ARG:HG2	8:BD:101:GLN:NE2	2.16	0.60
4:B1:130:G:H5'	11:BG:195:LYS:NZ	2.17	0.60
11:BG:8:PRO:CG	11:BG:112:VAL:HG13	2.31	0.60
19:BO:118:ALA:O	19:BO:121:ARG:HG2	2.02	0.60
42:CE:262:LYS:HE3	81:A2:4887:U:H4'	1.84	0.60
45:CH:41:ILE:CG2	45:CH:43:VAL:HG22	2.32	0.60
48:CL:153:PRO:O	48:CL:156:PRO:HD2	2.02	0.60
49:CM:14:TYR:CZ	49:CM:22:GLY:HA2	2.37	0.60
49:CM:93:LYS:HB2	49:CM:124:LYS:CE	30.41	0.60
49:CM:97:ALA:O	49:CM:100:ARG:HB2	2.02	0.60
51:CO:87:MET:HA	81:A2:2028:G:N2	2.17	0.60
81:A2:1254:A:H3'	81:A2:1255:G:C5'	2.29	0.59
81:A2:1394:C:H2'	81:A2:1395:G:C8	2.37	0.59
81:A2:166:G:C2'	81:A2:167:C:H4'	2.32	0.59
81:A2:1708:A:C2'	81:A2:1709:U:H5'	2.32	0.59
81:A2:2006:C:H2'	81:A2:2007:A:O4'	2.02	0.59
81:A2:2369:C:H2'	81:A2:2370:C:C6	2.37	0.59
81:A2:2569:U:H2'	81:A2:2570:C:O4'	2.02	0.59
81:A2:328:U:H4'	81:A2:329:A:OP2	2.01	0.59
81:A2:400:G:H4'	81:A2:401:A:H5'	1.84	0.59
81:A2:4272:U:H2'	81:A2:4273:A:C8	2.37	0.59
40:CC:6:PRO:HB2	81:A2:475:U:P	2.42	0.59
81:A2:4825:G:H4'	81:A2:4826:C:OP2	2.02	0.59
81:A2:4977:U:H2'	81:A2:4978:C:H3'	1.83	0.59
81:A2:937:C:O2'	81:A2:938:C:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:A3:121:G:H3'	82:A3:122:G:C5'	2.31	0.59
82:A3:22:U:H4'	82:A3:23:C:OP1	2.01	0.59
83:A4:31:G:H2'	83:A4:32:A:C8	2.37	0.59
2:AW:56:C:OP1	81:A2:4014:A:H1'	2.02	0.59
2:AW:58:A:H2'	2:AW:60:U:OP2	2.02	0.59
4:B1:1124:C:H6	4:B1:1124:C:O5'	1.84	0.59
4:B1:1141:G:O4'	4:B1:1151:G:H4'	2.02	0.59
4:B1:1411:G:N3	4:B1:1411:G:H2'	2.17	0.59
4:B1:1461:G:N2	4:B1:1466:G:C4	2.70	0.59
4:B1:1549:U:H2'	4:B1:1550:G:H8	1.67	0.59
4:B1:1208:A:H61	4:B1:1691:U:H3	1.49	0.59
4:B1:169:U:H6	4:B1:169:U:H5''	1.67	0.59
4:B1:380:G:C2	4:B1:382:C:C6	2.89	0.59
4:B1:468:A:H2'	4:B1:469:A:O4'	2.02	0.59
4:B1:562:U:H2'	4:B1:563:G:C8	2.36	0.59
4:B1:747:U:C1'	4:B1:748:C:H2'	2.30	0.59
4:B1:940:U:H2'	4:B1:940:U:O2	2.02	0.59
21:BQ:24:HIS:O	21:BQ:68:ILE:HA	2.01	0.59
4:B1:1587:G:O2'	24:BT:77:LYS:HB3	2.01	0.59
39:CB:206:PRO:HG2	39:CB:209:GLN:OE1	2.02	0.59
42:CE:188:ARG:HD3	42:CE:188:ARG:N	2.13	0.59
53:CQ:186:TYR:CG	81:A2:4267:A:H4'	2.37	0.59
81:A2:133:C:H2'	81:A2:135:G:C2	2.36	0.59
81:A2:1595:U:C2'	81:A2:1596:G:H5'	2.32	0.59
81:A2:1874:A:H3'	81:A2:1875:A:H5''	1.84	0.59
81:A2:236:C:H2'	81:A2:237:G:C8	2.36	0.59
81:A2:24:G:N1	81:A2:25:A:C5	2.70	0.59
81:A2:261:U:H2'	81:A2:262:C:C6	2.36	0.59
81:A2:4089:G:N3	81:A2:4089:G:H2'	2.18	0.59
81:A2:4139:G:H2'	81:A2:4140:G:H8	1.66	0.59
81:A2:4441:U:O2	81:A2:4441:U:H2'	2.01	0.59
81:A2:4533:G:H4'	81:A2:4534:U:O5'	2.00	0.59
81:A2:4869:C:H2'	81:A2:4870:G:C8	2.37	0.59
82:A3:80:A:H2'	82:A3:81:C:H5	1.65	0.59
1:AV:57:G:H5''	1:AV:57:G:H8	1.67	0.59
3:AX:39:U:O2'	3:AX:40:U:H5'	2.02	0.59
4:B1:1002:U:H2'	4:B1:1003:U:H5'	1.84	0.59
4:B1:1014:G:H2'	4:B1:1015:U:C6	2.38	0.59
4:B1:1121:G:H2'	4:B1:1122:A:C8	2.37	0.59
4:B1:1102:G:H1	4:B1:1130:G:H22	1.50	0.59
4:B1:1215:C:H4'	4:B1:1216:C:OP1	1.96	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1322:G:O5'	4:B1:1322:G:H8	1.85	0.59
4:B1:1771:G:H2'	4:B1:1772:C:H6	1.66	0.59
4:B1:193:C:H1'	4:B1:208:G:C2	2.37	0.59
4:B1:479:C:C2'	4:B1:480:G:H5'	2.32	0.59
4:B1:858:A:C2	4:B1:859:G:C5	2.90	0.59
4:B1:957:A:C4'	4:B1:973:C:H1'	2.32	0.59
15:BK:38:LYS:HE3	15:BK:40:VAL:HG21	1.84	0.59
50:CN:144:ARG:HH21	81:A2:137:G:H5'	1.67	0.59
61:CY:111:LEU:HB3	61:CY:116:LYS:HE2	1.84	0.59
40:CC:330:PRO:HB3	81:A2:1218:A:C8	2.37	0.59
81:A2:1445:G:H2'	81:A2:1446:C:H6	1.65	0.59
81:A2:121:A:N6	81:A2:147:U:C2	2.70	0.59
81:A2:155:A:N3	81:A2:155:A:H2'	2.17	0.59
81:A2:2006:C:H6	81:A2:2006:C:H5'	1.66	0.59
81:A2:21:G:N2	81:A2:22:G:H1'	2.17	0.59
81:A2:2279:C:H2'	81:A2:2279:C:O2	2.01	0.59
81:A2:2549:C:O4'	81:A2:2737:G:N7	2.34	0.59
81:A2:2650:G:H3'	81:A2:2650:G:OP1	2.01	0.59
81:A2:2664:U:H4'	81:A2:2664:U:OP2	2.01	0.59
81:A2:2:G:C6	81:A2:3:C:C4	2.91	0.59
2:AW:4:C:O4'	81:A2:3684:U:OP1	2.20	0.59
81:A2:372:U:H5'	81:A2:405:C:C5	2.38	0.59
81:A2:3877:A:N7	81:A2:3878:C:C6	2.69	0.59
81:A2:4257:G:H2'	81:A2:4258:A:H8	1.67	0.59
81:A2:426:A:C8	81:A2:427:C:H5	2.19	0.59
81:A2:4278:C:C6	81:A2:4278:C:H3'	2.37	0.59
81:A2:4897:C:O2	81:A2:4897:C:H3'	2.02	0.59
81:A2:333:G:N1	82:A3:33:G:N1	2.50	0.59
4:B1:101:U:H6	4:B1:101:U:O5'	1.85	0.59
4:B1:134:C:H3'	4:B1:135:U:C4'	2.28	0.59
4:B1:1513:C:H6	4:B1:1513:C:O5'	1.84	0.59
4:B1:1601:A:O2'	4:B1:1602:U:H5''	2.02	0.59
4:B1:1859:A:H2'	4:B1:1860:A:O4'	2.01	0.59
4:B1:213:G:H2'	4:B1:214:U:H6	1.66	0.59
4:B1:43:U:H3'	4:B1:44:U:H5'	1.84	0.59
4:B1:559:G:C3'	4:B1:560:A:H5''	2.26	0.59
4:B1:577:U:H4'	4:B1:578:C:C4'	2.32	0.59
4:B1:655:A:C8	4:B1:657:U:H5	2.20	0.59
4:B1:743:U:H5'	4:B1:744:G:N7	2.16	0.59
4:B1:999:G:OP1	4:B1:1034:A:H1'	2.02	0.59
3:AX:57:U:H5'	7:BC:109:ILE:CD1	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:2:LYS:CE	11:BG:15:LEU:HD11	2.32	0.59
20:BP:28:MET:O	20:BP:29:SER:HB3	2.00	0.59
22:BR:51:ALA:HA	22:BR:54:VAL:HG12	1.83	0.59
27:BW:102:ILE:HB	27:BW:113:HIS:HB2	1.84	0.59
40:CC:190:ARG:HG3	40:CC:202:ILE:HD11	1.83	0.59
23:BS:14:ARG:NH2	47:CJ:111:GLU:OE1	2.30	0.59
61:CY:87:ARG:NH2	81:A2:377:A:H5''	2.17	0.59
81:A2:1217:C:C2'	81:A2:1217:C:O2	2.50	0.59
81:A2:1280:G:O5'	81:A2:1280:G:C8	2.54	0.59
81:A2:1302:A:H1'	81:A2:1304:A:OP2	2.02	0.59
81:A2:1872:C:H2'	81:A2:1873:G:H5''	1.84	0.59
81:A2:249:C:H2'	81:A2:250:G:C8	2.38	0.59
81:A2:2560:C:H2'	81:A2:2560:C:O2	2.02	0.59
81:A2:2665:G:C2'	81:A2:2666:C:H5'	2.33	0.59
81:A2:266:C:H4'	81:A2:267:C:OP1	2.02	0.59
81:A2:2789:A:H3'	81:A2:2790:A:H8	1.67	0.59
81:A2:4094:A:H2'	81:A2:4095:A:C8	2.37	0.59
81:A2:4487:G:H8	81:A2:4488:G:O6	1.86	0.59
81:A2:4838:C:C3'	81:A2:4839:G:C5'	2.80	0.59
81:A2:4851:G:H2'	81:A2:4852:G:H8	1.65	0.59
81:A2:9:C:C2'	81:A2:9:C:O2	2.50	0.59
81:A2:10:A:C2	82:A3:147:G:C6	2.89	0.59
3:AX:39:U:H2'	3:AX:40:U:C5'	2.33	0.59
4:B1:18:C:H5'	4:B1:1194:A:N6	2.17	0.59
4:B1:1466:G:C6	4:B1:1467:C:C4	2.90	0.59
4:B1:1488:C:O2'	4:B1:1489:A:H4'	2.03	0.59
4:B1:1782:G:N3	4:B1:1783:C:N4	2.49	0.59
4:B1:1036:A:C2	4:B1:1844:U:H4'	2.36	0.59
4:B1:1848:U:H4'	4:B1:1849:G:OP1	2.02	0.59
4:B1:884:C:H2'	4:B1:885:U:H6	1.66	0.59
5:BA:40:LYS:NZ	22:BR:101:ASP:HA	2.16	0.59
6:BB:47:THR:HB	6:BB:65:ARG:NH1	2.18	0.59
9:BE:148:ARG:HD3	9:BE:148:ARG:H	1.66	0.59
10:BF:36:GLN:O	10:BF:37:ASP:HB2	2.02	0.59
40:CC:48:ASN:HB2	40:CC:49:ARG:NH2	2.17	0.59
52:CP:60:PHE:HB3	52:CP:64:ASN:HB3	1.83	0.59
81:A2:972:C:OP1	81:A2:1219:C:H4'	2.03	0.59
81:A2:1367:A:C5	81:A2:1377:A:N6	2.70	0.59
81:A2:224:A:H61	81:A2:238:G:H2'	1.66	0.59
81:A2:2284:A:H2'	81:A2:2285:G:H8	1.66	0.59
81:A2:2455:C:O5'	81:A2:2456:G:H5''	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2510:C:OP2	81:A2:2510:C:C6	2.55	0.59
81:A2:2635:G:C4	81:A2:2652:G:N2	2.71	0.59
81:A2:2742:A:C2'	81:A2:2743:A:C8	2.82	0.59
81:A2:357:A:C2	81:A2:367:A:C5	2.91	0.59
81:A2:3682:U:H3'	81:A2:3682:U:H6	1.67	0.59
81:A2:4593:G:O2'	81:A2:4594:U:H3'	2.03	0.59
81:A2:477:C:H4'	81:A2:478:G:H5'	1.85	0.59
81:A2:644:U:H2'	81:A2:645:C:H6	1.68	0.59
81:A2:699:A:C2	81:A2:700:C:H5	2.21	0.59
82:A3:155:C:H5'	82:A3:156:U:OP2	2.03	0.59
82:A3:4:C:C2'	82:A3:5:U:H5'	2.32	0.59
83:A4:23:A:C2'	83:A4:24:C:C6	2.85	0.59
41:CD:33:ARG:NE	83:A4:7:G:H4'	2.17	0.59
1:AV:42:C:C5'	1:AV:42:C:H6	2.13	0.59
4:B1:1049:A:H2'	4:B1:1050:A:C5'	2.33	0.59
4:B1:1038:U:H1'	4:B1:1181:A:C2	2.37	0.59
4:B1:1431:G:C2	4:B1:1432:U:N3	2.71	0.59
4:B1:1506:A:H5'	4:B1:1508:A:N7	2.18	0.59
4:B1:1520:G:C4	4:B1:1520:G:H5''	2.38	0.59
4:B1:96:C:O4'	4:B1:474:G:H4'	2.02	0.59
4:B1:587:A:H8	4:B1:587:A:OP2	1.85	0.59
4:B1:897:U:O2'	4:B1:898:U:H5''	2.03	0.59
15:BK:27:VAL:O	15:BK:28:HIS:HB3	2.01	0.59
15:BK:47:LYS:O	15:BK:50:GLN:HG2	2.03	0.59
23:BS:26:ILE:HA	23:BS:56:ALA:HB2	1.85	0.59
4:B1:84:A:O3'	29:BY:119:GLY:HA3	2.03	0.59
45:CH:129:ARG:O	45:CH:132:VAL:HG22	2.02	0.59
48:CL:53:GLY:O	48:CL:55:ILE:HG22	2.02	0.59
49:CM:62:LEU:HD22	49:CM:64:PHE:CZ	2.38	0.59
51:CO:184:ASN:O	51:CO:187:LYS:HG3	2.02	0.59
59:CW:13:ILE:HG12	59:CW:32:LEU:CB	2.33	0.59
81:A2:134:G:H2'	81:A2:134:G:N3	2.17	0.59
81:A2:1507:U:H2'	81:A2:1508:G:C8	2.36	0.59
81:A2:1760:U:C2'	81:A2:1761:U:H5'	2.32	0.59
81:A2:1299:U:H4'	81:A2:1832:G:O6	2.02	0.59
81:A2:2654:G:C8	81:A2:2654:G:OP2	2.55	0.59
81:A2:2687:C:H3'	81:A2:2688:G:C8	2.38	0.59
52:CP:6:LEU:CD2	81:A2:416:U:H1'	2.30	0.59
81:A2:4204:A:O4'	81:A2:4228:A:H4'	2.03	0.59
81:A2:4254:C:C6	81:A2:4254:C:H5'	2.38	0.59
81:A2:4544:A:H2	81:A2:4680:C:OP2	1.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:CM:132:LYS:HZ2	81:A2:4849:A:H3'	1.66	0.59
81:A2:5002:C:C6	81:A2:5002:C:H5''	2.38	0.59
81:A2:502:C:H2'	81:A2:503:U:H6	1.68	0.59
81:A2:673:G:H8	81:A2:673:G:O5'	1.85	0.59
82:A3:34:U:O2	82:A3:34:U:H2'	2.02	0.59
1:AV:39:U:P	4:B1:1058:A:H5'	2.43	0.59
4:B1:1420:G:OP2	4:B1:1420:G:H8	1.84	0.59
4:B1:1494:U:H1'	4:B1:1495:G:OP2	2.01	0.59
4:B1:167:G:H5''	4:B1:168:C:OP2	2.03	0.59
4:B1:179:C:H5''	4:B1:180:G:H21	1.66	0.59
4:B1:216:C:H5''	9:BE:134:LYS:CE	2.33	0.59
4:B1:970:G:N7	81:A2:3680:A:C5'	2.48	0.59
10:BF:111:VAL:HG12	10:BF:177:LEU:CD2	2.32	0.59
11:BG:164:LYS:HG2	11:BG:166:GLY:H	1.66	0.59
24:BT:41:LYS:CG	24:BT:95:GLY:HA2	2.31	0.59
38:CA:22:HIS:HB3	38:CA:52:PRO:HG2	1.84	0.59
40:CC:150:LEU:H	40:CC:150:LEU:HD23	1.67	0.59
43:CF:160:GLY:HA3	43:CF:207:PHE:CE2	2.38	0.59
45:CH:31:ARG:HH21	45:CH:188:GLN:HB3	1.67	0.59
51:CO:167:HIS:NE2	51:CO:171:LYS:HB2	2.17	0.59
81:A2:1213:G:H8	81:A2:1213:G:O5'	1.86	0.59
81:A2:1221:C:N4	81:A2:1248:G:N2	2.50	0.59
81:A2:1338:G:H8	81:A2:1338:G:O5'	1.84	0.59
81:A2:1874:A:C3'	81:A2:1875:A:H5''	2.33	0.59
81:A2:1877:G:C8	81:A2:2254:G:C4	2.91	0.59
81:A2:2479:G:H2'	81:A2:2481:C:OP1	2.02	0.59
81:A2:2615:G:H22	81:A2:2674:A:H2	1.50	0.59
81:A2:357:A:C2	81:A2:367:A:C4	2.91	0.59
81:A2:4179:A:C2	81:A2:4180:A:C6	2.90	0.59
81:A2:4342:G:H2'	81:A2:4343:U:C6	2.37	0.59
81:A2:4420:U:H2'	81:A2:4421:C:H6	1.67	0.59
81:A2:445:U:C3'	81:A2:446:C:C6	2.86	0.59
81:A2:45:U:H2'	81:A2:46:U:H5'	1.83	0.59
49:CM:91:TRP:HB2	81:A2:4825:G:C2	2.37	0.59
81:A2:925:C:H4'	81:A2:925:C:OP1	2.01	0.59
2:AW:56:C:H6	81:A2:4014:A:C6	2.18	0.59
3:AX:50:U:H2'	3:AX:51:U:H5'	1.83	0.59
3:AX:60:U:C6	3:AX:61:U:C5	2.87	0.59
4:B1:124:U:C6	4:B1:124:U:C3'	2.84	0.59
4:B1:1344:A:N3	4:B1:1345:G:H1'	2.18	0.59
4:B1:1522:A:C2	20:BP:128:HIS:CB	2.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1551:U:H3'	4:B1:1551:U:O2	2.03	0.59
4:B1:158:A:H2'	4:B1:159:A:O4'	2.02	0.59
4:B1:1598:G:H4'	4:B1:1600:G:O6	2.02	0.59
4:B1:1617:G:H2'	4:B1:1619:A:OP2	2.03	0.59
4:B1:1654:G:C3'	4:B1:1655:C:H5	2.14	0.59
4:B1:1698:C:H3'	4:B1:1699:A:H5'	1.85	0.59
4:B1:16:G:H2'	4:B1:17:C:C6	2.37	0.59
4:B1:593:C:OP2	4:B1:593:C:C6	2.56	0.59
41:CD:21:ARG:HG3	41:CD:24:ARG:NH2	2.18	0.59
45:CH:71:ARG:HB3	81:A2:4651:A:H4'	1.84	0.59
23:BS:12:ILE:HB	47:CJ:119:TYR:HB2	1.85	0.59
49:CM:2:VAL:HB	81:A2:4724:G:H1'	1.85	0.59
57:CU:22:THR:HG23	57:CU:69:LYS:HE3	1.84	0.59
81:A2:1227:U:H2'	81:A2:1228:C:H6	1.66	0.59
81:A2:1293:C:H5	81:A2:3851:C:C1'	2.16	0.59
81:A2:1624:C:H6	81:A2:1624:C:O5'	1.86	0.59
81:A2:166:G:H2'	81:A2:167:C:O4'	2.03	0.59
81:A2:1706:U:H6	81:A2:1706:U:O5'	1.86	0.59
81:A2:180:C:O2'	81:A2:181:U:H5'	2.02	0.59
43:CF:103:PRO:HD3	81:A2:1854:U:O3'	2.03	0.59
81:A2:2310:G:C5'	81:A2:2310:G:H8	2.16	0.59
81:A2:2386:U:H5''	81:A2:2387:C:C5	2.36	0.59
81:A2:244:G:H2'	81:A2:245:C:H6	1.67	0.59
81:A2:2597:G:H1	81:A2:2613:U:H3	1.50	0.59
81:A2:284:G:C4'	81:A2:285:G:C8	2.72	0.59
2:AW:19:G:C5	81:A2:3927:G:C1'	2.84	0.59
81:A2:4196:G:H4'	81:A2:4288:G:O2'	2.03	0.59
81:A2:4321:U:O5'	81:A2:4321:U:H6	1.85	0.59
81:A2:4456:A:N3	81:A2:4456:A:H2'	2.15	0.59
55:CS:169:THR:CG2	81:A2:4829:A:H1'	2.24	0.59
81:A2:71:C:H3'	81:A2:72:C:H5'	1.84	0.59
83:A4:34:C:O2	83:A4:34:C:H2'	2.01	0.59
83:A4:58:A:H2'	83:A4:59:G:C8	2.37	0.59
2:AW:13:C:H2'	2:AW:14:A:H5'	1.84	0.59
2:AW:2:C:H5''	2:AW:2:C:C6	2.29	0.59
3:AX:60:U:C4	3:AX:61:U:C5	2.90	0.59
4:B1:1206:G:C2	4:B1:1208:A:C8	2.90	0.59
4:B1:1607:A:C2'	4:B1:1608:U:H5'	2.33	0.59
4:B1:1649:U:H3'	4:B1:1649:U:H6	1.68	0.59
4:B1:206:G:H2'	4:B1:207:G:H8	1.67	0.59
4:B1:573:U:H3'	4:B1:573:U:O2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:602:G:O5'	4:B1:602:G:H8	1.86	0.59
4:B1:655:A:C5	4:B1:657:U:C5	2.89	0.59
4:B1:862:A:H2'	4:B1:863:U:C6	2.36	0.59
22:BR:105:MET:HG2	22:BR:106:LEU:N	2.18	0.59
27:BW:55:ASP:HB3	27:BW:58:ALA:O	2.03	0.59
43:CF:48:LYS:CB	81:A2:1220:G:H5'	2.32	0.59
50:CN:117:ASN:O	50:CN:133:ILE:HG22	2.02	0.59
51:CO:34:VAL:HG11	51:CO:112:TYR:HE1	1.67	0.59
81:A2:1079:C:H2'	81:A2:1080:U:H4'	1.82	0.59
61:CY:1:MET:HG2	81:A2:1347:C:C5	2.38	0.59
81:A2:2034:G:O2'	81:A2:2035:A:H3'	2.03	0.59
81:A2:2062:C:C6	81:A2:2063:G:C8	2.91	0.59
81:A2:2602:U:O2	81:A2:2602:U:H2'	2.01	0.59
81:A2:3831:A:H2'	81:A2:3832:C:O4'	2.03	0.59
81:A2:3904:C:H2'	81:A2:3905:A:H8	1.66	0.59
81:A2:4052:G:OP1	81:A2:4052:G:H8	1.85	0.59
81:A2:4314:U:H4'	81:A2:4315:G:H5'	1.84	0.59
81:A2:4370:G:H2'	81:A2:4371:G:H5'	1.83	0.59
81:A2:4545:U:O5'	81:A2:4545:U:H6	1.86	0.59
81:A2:454:A:H2'	81:A2:455:G:C8	2.38	0.59
1:AV:51:U:H2'	1:AV:52:G:C8	2.38	0.59
4:B1:1021:U:H2'	4:B1:1021:U:OP2	2.03	0.59
4:B1:1380:C:H2'	4:B1:1381:G:C1'	2.33	0.59
4:B1:1636:G:H1'	10:BF:164:ARG:HH22	1.67	0.59
4:B1:170:A:H3'	4:B1:171:A:C8	2.38	0.59
4:B1:311:C:H2'	4:B1:311:C:OP2	2.02	0.59
5:BA:6:ASP:HB3	26:BV:42:VAL:CG1	2.27	0.59
8:BD:68:GLU:O	8:BD:72:VAL:HG23	2.02	0.59
38:CA:20:VAL:O	81:A2:3648:U:H5	1.85	0.59
47:CJ:152:GLY:O	47:CJ:156:ARG:HG3	2.03	0.59
49:CM:2:VAL:HG22	81:A2:4723:A:H2	1.68	0.59
81:A2:1164:A:C2'	81:A2:1165:G:H5'	2.33	0.59
81:A2:1204:G:H4'	81:A2:1205:U:OP1	2.02	0.59
81:A2:957:G:H4'	81:A2:1218:A:C5'	2.33	0.59
81:A2:1378:A:C2'	81:A2:1379:G:C8	2.85	0.59
81:A2:1541:G:C2'	81:A2:1542:A:H5''	2.31	0.59
81:A2:2306:G:N3	81:A2:2306:G:H2'	2.17	0.59
81:A2:2397:A:H3'	81:A2:2398:G:C4'	2.33	0.59
81:A2:2487:G:O5'	81:A2:2487:G:H8	1.85	0.59
81:A2:3589:G:C2	81:A2:4602:U:H5''	2.38	0.59
81:A2:3592:C:OP2	81:A2:3592:C:C5	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3836:A:C2	81:A2:3849:G:C6	2.91	0.59
81:A2:4098:G:H2'	81:A2:4099:C:H6	1.64	0.59
81:A2:4182:G:OP2	81:A2:4182:G:H4'	2.02	0.59
48:CL:160:VAL:HA	81:A2:635:G:H5'	1.84	0.59
2:AW:65:G:N3	2:AW:65:G:H2'	2.16	0.59
4:B1:672:A:H2	4:B1:1162:C:O2'	1.85	0.59
4:B1:1641:A:H8	4:B1:1641:A:H5''	1.68	0.59
4:B1:1648:G:H2'	21:BQ:127:CYS:C	2.23	0.59
4:B1:195:C:H2'	4:B1:196:C:H6	1.67	0.59
4:B1:307:G:H4'	4:B1:308:G:OP2	2.02	0.59
4:B1:450:C:H2'	4:B1:451:G:H4'	1.84	0.59
4:B1:965:U:O5'	4:B1:965:U:H6	1.85	0.59
6:BB:31:TYR:OH	6:BB:91:VAL:HG13	2.03	0.59
4:B1:312:G:H22	11:BG:195:LYS:CB	2.15	0.59
4:B1:959:G:N1	19:BO:65:ASP:HB3	2.17	0.59
19:BO:77:ALA:O	19:BO:81:VAL:HG23	2.03	0.59
22:BR:17:ILE:HG21	22:BR:61:ILE:HD11	1.85	0.59
25:BU:49:LYS:HB3	25:BU:92:HIS:HB3	1.83	0.59
25:BU:51:LYS:HB2	25:BU:90:ASP:HB2	1.85	0.59
39:CB:4:ARG:HA	81:A2:4480:G:O6	2.02	0.59
40:CC:69:THR:HG22	40:CC:75:ARG:HE	1.68	0.59
45:CH:98:HIS:CG	81:A2:4562:A:H5''	2.38	0.59
81:A2:121:A:H2'	81:A2:121:A:OP1	2.03	0.58
81:A2:1352:A:H2	81:A2:1353:A:C6	2.21	0.58
81:A2:152:C:H2'	81:A2:153:G:C8	2.38	0.58
81:A2:170:C:O5'	81:A2:170:C:H6	1.85	0.58
81:A2:1911:G:N2	81:A2:2034:G:N2	2.51	0.58
81:A2:2395:A:C2'	81:A2:2396:C:H5''	2.33	0.58
81:A2:2443:G:H8	81:A2:2443:G:OP2	1.85	0.58
81:A2:2462:U:H6	81:A2:2462:U:O5'	1.86	0.58
81:A2:4203:C:O2	81:A2:4228:A:H1'	2.03	0.58
81:A2:4647:A:H61	81:A2:4663:U:H3	1.51	0.58
81:A2:4739:G:H21	81:A2:4744:C:H1'	1.68	0.58
81:A2:4893:A:O2'	81:A2:4894:C:H4'	2.03	0.58
81:A2:4962:A:H5''	81:A2:4997:A:H2	1.67	0.58
82:A3:137:A:C2	82:A3:138:C:C2	2.91	0.58
83:A4:23:A:O5'	83:A4:23:A:H8	1.84	0.58
4:B1:130:G:H8	4:B1:130:G:P	2.25	0.58
4:B1:130:G:N7	4:B1:131:C:C2	2.71	0.58
4:B1:133:C:H3'	4:B1:134:C:H4'	1.85	0.58
4:B1:1655:C:H2'	4:B1:1656:G:C8	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1784:G:H2'	4:B1:1785:C:H6	1.67	0.58
4:B1:237:C:H1'	4:B1:238:C:H5'	1.83	0.58
4:B1:39:A:O5'	4:B1:39:A:H8	1.86	0.58
4:B1:684:G:H2'	4:B1:685:A:C8	2.38	0.58
4:B1:941:C:H2'	4:B1:942:G:O4'	2.03	0.58
12:BH:102:PRO:HB2	12:BH:105:THR:OG1	2.03	0.58
4:B1:1544:C:H4'	21:BQ:80:GLN:HE22	1.68	0.58
23:BS:24:ARG:O	23:BS:55:ARG:HD3	2.02	0.58
38:CA:196:TRP:CG	38:CA:197:PRO:HD3	2.36	0.58
40:CC:102:PHE:CG	81:A2:1317:A:H4'	2.37	0.58
41:CD:225:GLN:HG3	83:A4:49:A:OP1	2.03	0.58
46:CI:92:HIS:HB2	46:CI:94:PHE:CE2	2.37	0.58
54:CR:39:GLN:O	54:CR:43:LYS:HG2	2.02	0.58
81:A2:1387:C:H3'	81:A2:1388:G:C8	2.38	0.58
81:A2:154:U:H2'	81:A2:154:U:O2	2.02	0.58
81:A2:1630:G:N3	81:A2:1630:G:H2'	2.18	0.58
81:A2:1726:U:H5''	81:A2:1726:U:C6	2.38	0.58
81:A2:1783:A:H1'	81:A2:1784:A:OP2	2.03	0.58
81:A2:2655:A:H2'	81:A2:2656:G:C8	2.38	0.58
81:A2:439:G:H2'	81:A2:440:C:H6	1.68	0.58
81:A2:708:G:C2'	81:A2:709:G:H5'	2.33	0.58
81:A2:929:U:C3'	81:A2:930:C:H5'	2.33	0.58
81:A2:965:C:C5'	81:A2:965:C:C6	2.86	0.58
4:B1:1251:A:H2'	4:B1:1252:C:H5'	1.83	0.58
4:B1:1405:A:N3	4:B1:1442:U:C6	2.71	0.58
4:B1:1442:U:C6	4:B1:1443:C:H1'	2.38	0.58
4:B1:1604:G:H2'	4:B1:1605:G:O4'	2.03	0.58
4:B1:1685:U:C5	4:B1:1686:G:N7	2.71	0.58
4:B1:10:G:OP1	4:B1:1697:A:H5'	2.04	0.58
4:B1:60:A:C5'	4:B1:501:C:H5	2.16	0.58
4:B1:747:U:C2	4:B1:748:C:C2'	2.86	0.58
4:B1:871:U:H3	54:CR:163:ARG:NH1	2.01	0.58
20:BP:17:TYR:O	23:BS:91:LYS:HB3	2.03	0.58
28:BX:41:PHE:HE1	28:BX:120:PHE:CE1	2.21	0.58
53:CQ:95:VAL:HG23	53:CQ:96:PRO:HD2	1.85	0.58
39:CB:73:VAL:HG22	58:CV:93:GLY:HA2	1.83	0.58
81:A2:1054:G:O2'	81:A2:1055:G:H5'	2.02	0.58
81:A2:1340:G:H3'	81:A2:1341:G:C8	2.36	0.58
81:A2:1577:C:H1'	81:A2:2775:A:C8	2.37	0.58
81:A2:1833:G:H2'	81:A2:1834:C:H6	1.68	0.58
81:A2:221:U:H4'	81:A2:222:G:O5'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2248:C:H2'	81:A2:2249:G:H8	1.65	0.58
81:A2:2309:G:P	81:A2:2309:G:H3'	2.43	0.58
81:A2:2646:C:H2'	81:A2:2647:C:O4'	2.03	0.58
81:A2:2657:G:H2'	81:A2:2658:G:C8	2.38	0.58
81:A2:2665:G:H8	81:A2:2665:G:H5'	1.67	0.58
81:A2:2820:U:H2'	81:A2:2821:A:O4'	2.03	0.58
81:A2:4358:C:C3'	81:A2:4358:C:C6	2.85	0.58
81:A2:4372:C:H42	81:A2:4390:G:H1	1.49	0.58
81:A2:457:A:H8	81:A2:676:G:C5'	1.99	0.58
81:A2:460:C:O2	81:A2:460:C:C2'	2.51	0.58
81:A2:468:C:C2'	81:A2:469:G:H5'	2.34	0.58
81:A2:722:G:C3'	81:A2:723:G:H4'	2.33	0.58
81:A2:932:C:H2'	81:A2:933:G:C8	2.38	0.58
81:A2:947:G:H2'	81:A2:948:A:O5'	2.04	0.58
81:A2:974:C:OP2	81:A2:974:C:H4'	2.01	0.58
82:A3:148:A:H3'	82:A3:148:A:H8	1.68	0.58
1:AV:30:G:H5''	1:AV:30:G:C8	2.39	0.58
4:B1:1095:C:H5''	27:BW:22:LYS:HZ1	1.67	0.58
4:B1:1180:C:H3'	4:B1:1180:C:H6	1.68	0.58
4:B1:1493:C:H3'	4:B1:1494:U:H5'	1.86	0.58
4:B1:1864:U:O2'	4:B1:1866:A:C2	2.56	0.58
4:B1:24:C:H42	4:B1:650:A:H61	1.49	0.58
4:B1:688:U:H1'	4:B1:689:U:C6	2.39	0.58
10:BF:32:ASP:HB2	10:BF:117:ILE:CG2	2.32	0.58
46:CI:5:PRO:HG2	81:A2:4365:G:H5''	1.84	0.58
49:CM:113:MET:O	49:CM:117:LYS:HG2	2.03	0.58
52:CP:60:PHE:CE1	52:CP:82:ARG:HB2	2.38	0.58
81:A2:99:A:H3'	81:A2:100:C:H6	1.64	0.58
81:A2:1174:G:O5'	81:A2:1174:G:H8	1.87	0.58
81:A2:2549:C:OP1	81:A2:2741:A:C8	2.56	0.58
39:CB:228:TYR:CD1	81:A2:2812:A:N3	2.71	0.58
38:CA:237:LEU:HD22	81:A2:3627:C:O4'	2.03	0.58
81:A2:1305:C:H5	81:A2:3847:C:O3'	1.87	0.58
81:A2:3899:U:H2'	81:A2:3900:C:C6	2.38	0.58
81:A2:42:A:N6	81:A2:4339:A:H2	2.02	0.58
81:A2:4363:U:O2'	81:A2:4364:U:H5'	2.04	0.58
81:A2:4850:C:O2'	81:A2:4851:G:H5'	2.03	0.58
13:BI:123:ARG:NE	81:A2:4979:C:H5'	2.15	0.58
81:A2:32:G:N2	81:A2:50:C:H5	2.01	0.58
81:A2:28:C:H4'	81:A2:61:A:H4'	1.83	0.58
81:A2:95:G:N2	81:A2:96:U:H1'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:974:C:H2'	81:A2:974:C:O2	2.02	0.58
82:A3:54:C:H6	82:A3:54:C:O5'	1.86	0.58
4:B1:1089:G:H2'	4:B1:1090:C:C6	2.38	0.58
4:B1:158:A:O4'	4:B1:464:A:C8	2.56	0.58
4:B1:1686:G:C6	4:B1:1687:C:C4	2.92	0.58
4:B1:46:A:O5'	4:B1:47:G:H5''	2.03	0.58
9:BE:45:ILE:HD12	9:BE:61:VAL:CG2	2.33	0.58
12:BH:109:ARG:CA	12:BH:113:LYS:H	2.16	0.58
14:BJ:138:ARG:HG2	14:BJ:139:LYS:H	1.67	0.58
14:BJ:36:GLY:HA2	14:BJ:124:HIS:CE1	2.39	0.58
42:CE:172:LEU:CD1	81:A2:4896:G:H5''	2.33	0.58
40:CC:333:LYS:CD	81:A2:1217:C:H5'	2.33	0.58
81:A2:1254:A:H2'	81:A2:1255:G:H4'	1.86	0.58
81:A2:1648:A:C8	81:A2:1648:A:C3'	2.87	0.58
81:A2:1801:U:H6	81:A2:1801:U:H3'	1.67	0.58
81:A2:1870:A:C5'	81:A2:1871:C:H5	2.08	0.58
81:A2:942:G:H1'	81:A2:2250:C:P	2.43	0.58
81:A2:2485:U:H5''	81:A2:2486:C:OP2	2.03	0.58
81:A2:2516:C:H2'	81:A2:2517:C:H6	1.69	0.58
81:A2:2583:G:H21	81:A2:2644:C:H42	1.50	0.58
81:A2:2593:C:O2	81:A2:2593:C:H2'	2.03	0.58
81:A2:2650:G:H21	81:A2:2652:G:N2	2.01	0.58
81:A2:3752:A:H5'	81:A2:3752:A:H8	1.69	0.58
81:A2:4060:G:N2	81:A2:4118:C:N3	2.51	0.58
81:A2:4625:A:H2'	81:A2:4626:G:H8	1.69	0.58
81:A2:467:G:H2'	81:A2:468:C:H6	1.67	0.58
81:A2:4832:G:H5'	81:A2:4832:G:H8	1.69	0.58
81:A2:677:C:H3'	81:A2:677:C:OP1	2.03	0.58
83:A4:98:G:H3'	83:A4:99:G:H8	1.69	0.58
2:AW:59:U:H2'	2:AW:60:U:H5'	1.84	0.58
2:AW:71:G:H2'	2:AW:72:C:C6	2.38	0.58
3:AX:53:U:H4'	3:AX:54:U:OP2	2.03	0.58
4:B1:111:A:N6	4:B1:351:G:N3	2.50	0.58
4:B1:1242:U:O2'	4:B1:1518:C:H4'	2.03	0.58
4:B1:1242:U:H4'	4:B1:1243:U:O5'	2.04	0.58
4:B1:1334:G:H2'	4:B1:1335:G:O4'	2.04	0.58
4:B1:1600:G:H2'	4:B1:1600:G:N3	2.19	0.58
4:B1:1868:U:H4'	4:B1:1868:U:OP2	2.02	0.58
4:B1:577:U:H4'	4:B1:578:C:O4'	2.04	0.58
4:B1:77:A:H4'	4:B1:78:C:C4	2.39	0.58
5:BA:12:GLU:HA	5:BA:15:VAL:HG22	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BE:173:ILE:HG21	9:BE:230:ASN:HB2	1.83	0.58
10:BF:163:PHE:CD2	10:BF:164:ARG:HG3	2.39	0.58
18:BN:42:LYS:HE3	18:BN:80:LEU:CD2	2.32	0.58
23:BS:6:PRO:HD3	30:BZ:52:LYS:CD	2.34	0.58
50:CN:191:ALA:HA	50:CN:194:ARG:HE	1.68	0.58
61:CY:121:ARG:HA	61:CY:125:SER:HB3	1.84	0.58
81:A2:1061:C:O2'	81:A2:1062:C:H5'	2.03	0.58
81:A2:1185:G:O2'	81:A2:1186:C:H5'	2.04	0.58
81:A2:1423:A:HO2'	81:A2:1424:G:H8	1.52	0.58
81:A2:173:G:H2'	81:A2:174:G:C8	2.39	0.58
81:A2:1898:C:O2'	81:A2:1900:G:H5''	2.04	0.58
81:A2:2284:A:C8	81:A2:2285:G:N7	2.72	0.58
81:A2:2526:G:C3'	81:A2:2527:G:C5'	2.76	0.58
81:A2:2624:A:N6	81:A2:2664:U:C2	2.72	0.58
81:A2:344:A:H4'	81:A2:346:A:N7	2.18	0.58
81:A2:3592:C:O5'	81:A2:3592:C:H6	1.86	0.58
61:CY:90:ALA:HB1	81:A2:380:A:N6	2.19	0.58
81:A2:3876:G:C8	81:A2:4407:C:O2'	2.55	0.58
81:A2:4153:C:H2'	81:A2:4154:U:H5'	1.86	0.58
81:A2:79:C:C2'	81:A2:80:C:H5'	2.34	0.58
81:A2:890:C:H2'	81:A2:891:C:C6	2.37	0.58
82:A3:19:C:C2'	82:A3:20:A:H5'	2.32	0.58
4:B1:1311:C:H6	4:B1:1311:C:H5''	1.68	0.58
4:B1:133:C:C5	4:B1:134:C:H1'	2.38	0.58
4:B1:1658:G:H2'	4:B1:1659:U:H5'	1.84	0.58
4:B1:439:A:H4'	4:B1:1799:G:H4'	1.84	0.58
4:B1:1834:A:C2	4:B1:1837:G:N2	2.70	0.58
4:B1:360:A:H4'	4:B1:361:U:O5'	2.04	0.58
4:B1:475:C:H6	4:B1:475:C:C5'	2.07	0.58
4:B1:656:G:H4'	4:B1:657:U:OP2	2.03	0.58
4:B1:67:C:C5	11:BG:162:LEU:C	2.77	0.58
4:B1:229:A:H2'	4:B1:888:U:O2	2.04	0.58
6:BB:103:MET:CB	6:BB:215:VAL:HG12	2.31	0.58
6:BB:24:PRO:O	6:BB:28:LYS:HG3	2.04	0.58
13:BI:55:TYR:N	13:BI:55:TYR:CD1	2.70	0.58
29:BY:59:GLY:O	29:BY:71:GLY:HA2	2.04	0.58
38:CA:30:ARG:HD2	38:CA:63:PHE:CD1	2.38	0.58
40:CC:180:ILE:O	40:CC:183:VAL:HG22	2.04	0.58
44:CG:168:VAL:O	44:CG:171:PRO:HD2	2.03	0.58
45:CH:122:TYR:CD1	81:A2:4573:C:H4'	2.39	0.58
45:CH:12:ILE:HD11	45:CH:55:LEU:HB2	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CH:23:ARG:HH11	45:CH:23:ARG:HG3	1.69	0.58
81:A2:1064:C:H2'	81:A2:1065:C:H6	1.65	0.58
81:A2:1186:C:H2'	81:A2:1187:C:H6	1.68	0.58
81:A2:976:C:C4'	81:A2:1222:G:H4'	2.33	0.58
81:A2:1737:G:H2'	81:A2:1738:G:C8	2.37	0.58
81:A2:1811:G:H3'	81:A2:1811:G:H8	1.68	0.58
81:A2:2417:U:O4'	81:A2:2495:G:C2	2.56	0.58
81:A2:2848:A:H2'	81:A2:2849:C:O4'	2.04	0.58
81:A2:3876:G:H4'	81:A2:3877:A:OP1	2.03	0.58
81:A2:4030:A:O2'	81:A2:4031:U:H5'	2.04	0.58
81:A2:4179:A:C2	81:A2:4180:A:C5	2.92	0.58
81:A2:4265:G:H2'	81:A2:4265:G:N3	2.18	0.58
81:A2:4358:C:H2'	81:A2:4359:U:H5'	1.86	0.58
81:A2:2019:A:C2'	81:A2:4424:A:H2	2.17	0.58
81:A2:4490:U:O5'	81:A2:4490:U:H6	1.86	0.58
81:A2:4563:C:C2'	81:A2:4564:G:H5'	2.30	0.58
81:A2:4638:G:HO2'	81:A2:4639:G:H8	1.52	0.58
81:A2:642:C:C2'	81:A2:643:G:H4'	2.30	0.58
81:A2:658:G:C5'	81:A2:658:G:C8	2.85	0.58
81:A2:673:G:H3'	81:A2:674:G:H5''	1.85	0.58
81:A2:690:U:O5'	81:A2:690:U:H6	1.87	0.58
43:CF:148:LYS:CD	81:A2:926:G:H5''	2.33	0.58
82:A3:139:G:C6	82:A3:140:C:C4	2.91	0.58
83:A4:11:A:C2	83:A4:66:G:N3	2.71	0.58
4:B1:1002:U:C2'	4:B1:1003:U:H5'	2.34	0.58
4:B1:102:A:H4'	4:B1:103:A:O5'	2.02	0.58
4:B1:1354:G:H2'	4:B1:1356:G:N7	2.19	0.58
4:B1:1701:C:H4'	4:B1:1701:C:OP2	2.02	0.58
4:B1:184:G:H3'	4:B1:185:G:H5''	1.84	0.58
4:B1:58:C:H5''	4:B1:499:G:N2	2.13	0.58
4:B1:636:C:H2'	4:B1:637:U:O4'	2.04	0.58
6:BB:127:VAL:HG22	6:BB:128:LYS:H	1.68	0.58
8:BD:191:PRO:O	8:BD:200:PRO:HD2	2.03	0.58
11:BG:160:LYS:HD3	11:BG:161:PRO:O	2.04	0.58
4:B1:743:U:H5	12:BH:97:GLN:HE22	1.51	0.58
14:BJ:122:SER:HB3	14:BJ:125:HIS:H	1.68	0.58
19:BO:57:THR:OG1	19:BO:60:MET:HG3	2.04	0.58
22:BR:12:ALA:O	22:BR:15:VAL:HG12	2.04	0.58
23:BS:86:ARG:NH2	23:BS:107:LEU:HD21	2.17	0.58
25:BU:49:LYS:HB3	25:BU:92:HIS:CB	2.34	0.58
4:B1:1157:G:H1'	27:BW:76:SER:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CE:152:ILE:O	42:CE:158:ARG:HA	2.03	0.58
42:CE:168:LEU:HD23	42:CE:172:LEU:HD12	1.86	0.58
81:A2:1281:C:H2'	81:A2:1282:U:OP1	2.04	0.58
81:A2:1386:G:H21	81:A2:1387:C:H41	1.52	0.58
81:A2:1669:C:H2'	81:A2:1670:G:O4'	2.03	0.58
81:A2:1783:A:H4'	81:A2:1784:A:O5'	2.03	0.58
81:A2:2368:G:H2'	81:A2:2369:C:H5''	1.85	0.58
81:A2:2608:U:O3'	81:A2:2609:U:H4'	2.04	0.58
81:A2:2683:G:H1'	81:A2:2685:U:OP2	2.03	0.58
81:A2:3695:A:O2'	81:A2:3696:A:H8	1.85	0.58
81:A2:38:A:C5'	81:A2:39:A:H4'	2.33	0.58
81:A2:4381:C:C2'	81:A2:4382:A:H5'	2.33	0.58
81:A2:4384:A:H3'	81:A2:4385:G:H8	1.68	0.58
81:A2:4704:G:N2	81:A2:4910:A:C2	2.70	0.58
2:AW:20:U:H2'	2:AW:21:A:H5'	1.84	0.58
4:B1:1160:U:C2'	4:B1:1161:U:H5'	2.33	0.58
4:B1:1401:A:H1'	4:B1:1402:A:P	2.43	0.58
4:B1:1438:A:H3'	4:B1:1439:A:C8	2.39	0.58
4:B1:1656:G:H2'	4:B1:1657:G:C8	2.38	0.58
4:B1:1828:C:H3'	4:B1:1829:G:H8	1.68	0.58
4:B1:319:C:H1'	4:B1:320:G:OP1	2.04	0.58
4:B1:96:C:H1'	4:B1:474:G:C5'	2.33	0.58
4:B1:740:C:H2'	4:B1:741:C:H6	1.69	0.58
4:B1:871:U:H2'	4:B1:871:U:O2	2.03	0.58
7:BC:82:TYR:CE1	7:BC:164:PRO:HD3	2.38	0.58
12:BH:63:PHE:CE2	12:BH:95:ILE:HD11	2.39	0.58
14:BJ:94:LEU:O	14:BJ:97:ILE:HG22	2.04	0.58
21:BQ:50:LYS:HG2	21:BQ:85:ARG:HD2	1.85	0.58
4:B1:838:G:H8	29:BY:9:THR:HG1	1.51	0.58
38:CA:227:ARG:HG2	38:CA:239:ALA:HB2	1.85	0.58
40:CC:159:GLU:O	40:CC:215:ASN:HB2	2.04	0.58
81:A2:1074:G:H2'	81:A2:1075:A:C8	2.39	0.58
81:A2:1562:A:C8	81:A2:1563:G:C8	2.92	0.58
81:A2:156:C:H2'	81:A2:156:C:O2	2.04	0.58
81:A2:1649:G:H3'	81:A2:1649:G:H8	1.67	0.58
81:A2:183:G:H2'	81:A2:184:U:H5'	1.86	0.58
81:A2:2031:C:H5''	81:A2:2032:U:OP2	2.04	0.58
81:A2:335:A:H2'	81:A2:336:C:C6	2.39	0.58
81:A2:349:C:H6	81:A2:349:C:O5'	1.87	0.58
81:A2:4032:C:C2'	81:A2:4033:G:H4'	2.31	0.58
81:A2:402:G:H5''	81:A2:405:C:O2'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4072:A:O2'	81:A2:4073:G:H5'	2.04	0.58
81:A2:4688:A:C2'	81:A2:4695:C:H1'	2.33	0.58
81:A2:85:G:H22	81:A2:97:G:H3'	1.69	0.58
82:A3:154:G:O5'	82:A3:154:G:H8	1.86	0.58
83:A4:47:G:O5'	83:A4:47:G:C8	2.57	0.58
4:B1:1307:U:C3'	4:B1:1308:U:H5'	2.33	0.58
4:B1:382:C:H2'	4:B1:383:G:N2	2.18	0.58
4:B1:483:C:H5''	28:BX:48:LYS:HG3	1.84	0.58
4:B1:604:A:H1'	4:B1:605:A:OP1	2.04	0.58
4:B1:66:G:C1'	11:BG:160:LYS:HG2	2.33	0.58
5:BA:111:GLN:OE1	7:BC:89:LYS:HG2	2.04	0.58
12:BH:109:ARG:HG3	12:BH:113:LYS:HA	1.84	0.58
13:BI:68:GLY:C	16:BL:21:LYS:HE3	2.23	0.58
15:BK:50:GLN:HA	15:BK:53:LYS:HE2	1.86	0.58
27:BW:39:THR:HG22	27:BW:43:LYS:HE3	1.86	0.58
7:BC:253:PRO:HD3	27:BW:68:ARG:NH2	2.18	0.58
39:CB:92:TYR:CE1	39:CB:161:ARG:HD2	2.39	0.58
41:CD:81:HIS:O	41:CD:84:PRO:HD2	2.04	0.58
43:CF:184:ILE:HA	43:CF:189:ASP:OD2	2.03	0.58
44:CG:110:LYS:HE2	44:CG:114:LEU:HD12	1.85	0.58
46:CI:51:HIS:HB2	46:CI:134:VAL:HG13	1.86	0.58
61:CY:62:TYR:HB3	61:CY:65:GLN:HG2	1.86	0.58
81:A2:1161:C:H2'	81:A2:1162:C:C1'	2.33	0.58
81:A2:1641:C:H1'	81:A2:2297:G:H1'	1.85	0.58
81:A2:2046:C:H6	81:A2:2046:C:O5'	1.87	0.58
81:A2:2624:A:N6	81:A2:2664:U:C4	2.71	0.58
81:A2:2737:G:H2'	81:A2:2737:G:N3	2.19	0.58
81:A2:2839:G:C4	81:A2:3593:A:C8	2.92	0.58
81:A2:427:C:O5'	81:A2:427:C:C6	2.57	0.58
41:CD:146:LEU:CB	81:A2:4283:A:H2	2.15	0.58
81:A2:3876:G:H2'	81:A2:4407:C:O2'	2.04	0.58
81:A2:445:U:H2'	81:A2:446:C:C6	2.38	0.58
81:A2:713:G:H1	81:A2:925:C:H42	1.51	0.58
81:A2:2:G:N2	82:A3:156:U:N3	2.51	0.58
41:CD:273:LEU:HD22	83:A4:108:G:OP2	2.04	0.58
83:A4:23:A:H2	83:A4:119:U:O2	1.87	0.58
4:B1:667:U:H5''	4:B1:1087:A:C2	2.38	0.58
4:B1:1092:G:H2'	4:B1:1093:A:C8	2.36	0.58
4:B1:1104:G:H2'	4:B1:1105:G:O4'	2.04	0.58
4:B1:1800:A:H5''	4:B1:1801:A:OP2	2.04	0.58
4:B1:209:A:O2'	4:B1:210:U:H5''	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:215:G:OP2	4:B1:216:C:H5	1.86	0.58
4:B1:435:A:C2	4:B1:450:C:H5	2.22	0.58
4:B1:590:A:H2'	4:B1:590:A:N3	2.19	0.58
4:B1:67:C:H6	11:BG:162:LEU:HD23	1.69	0.58
4:B1:795:A:H2'	4:B1:796:G:C8	2.33	0.58
4:B1:876:C:H2'	4:B1:877:C:C6	2.39	0.58
6:BB:107:ARG:HG3	19:BO:131:ASP:O	2.04	0.58
4:B1:1385:G:H5''	8:BD:160:SER:OG	2.04	0.58
4:B1:454:U:H5''	11:BG:76:LEU:HD22	1.85	0.58
13:BI:103:LEU:HA	13:BI:171:LEU:O	2.04	0.58
18:BN:75:LEU:HA	18:BN:80:LEU:HD12	1.86	0.58
6:BB:46:LYS:NZ	19:BO:27:VAL:HA	2.19	0.58
44:CG:194:VAL:HG13	44:CG:196:ARG:HG3	1.86	0.58
45:CH:98:HIS:NE2	81:A2:172:C:H5''	181.15	0.58
52:CP:32:THR:HG22	52:CP:58:VAL:HG21	1.86	0.58
61:CY:42:TYR:HB2	61:CY:44:VAL:HG12	1.85	0.58
81:A2:1079:C:C3'	81:A2:1080:U:H5''	2.34	0.57
41:CD:277:LYS:HZ2	81:A2:1087:C:H5'	1.69	0.57
81:A2:1305:C:C5	81:A2:3848:G:O5'	2.57	0.57
81:A2:1338:G:N2	81:A2:1339:G:C5	2.71	0.57
81:A2:1505:G:H2'	81:A2:1506:A:C8	2.39	0.57
4:B1:1028:A:N1	81:A2:1543:A:C6	2.69	0.57
81:A2:1894:G:C3'	81:A2:1895:A:H5'	2.34	0.57
81:A2:2471:U:H6	81:A2:2471:U:O5'	1.86	0.57
81:A2:2549:C:C6	81:A2:2549:C:C3'	2.86	0.57
81:A2:286:A:H5'	81:A2:287:A:H8	1.68	0.57
81:A2:3838:C:OP1	81:A2:3838:C:C6	2.57	0.57
81:A2:4437:A:H2'	81:A2:4437:A:N3	2.19	0.57
81:A2:4456:A:H3'	81:A2:4457:U:H5'	1.86	0.57
39:CB:100:ARG:NH2	81:A2:4682:A:H4'	2.19	0.57
81:A2:4874:G:H2'	81:A2:4875:C:H6	1.69	0.57
81:A2:4599:G:H1'	81:A2:4960:G:H5'	1.86	0.57
4:B1:1216:C:H3'	4:B1:1217:A:C5'	2.34	0.57
4:B1:1311:C:C4	4:B1:1312:G:O6	2.57	0.57
4:B1:1405:A:C3'	4:B1:1405:A:C8	2.86	0.57
4:B1:1440:C:H2'	4:B1:1441:U:H5	1.69	0.57
4:B1:1471:C:H3'	4:B1:1472:C:C6	2.39	0.57
4:B1:1637:A:H4'	4:B1:1638:G:O5'	1.94	0.57
4:B1:164:A:H2'	4:B1:165:G:C8	2.39	0.57
4:B1:1696:C:O5'	4:B1:1696:C:H6	1.87	0.57
4:B1:1828:C:H3'	4:B1:1829:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1860:A:C2	4:B1:1862:G:O4'	2.57	0.57
4:B1:543:C:H6	4:B1:543:C:H3'	1.69	0.57
4:B1:606:G:H3'	4:B1:607:U:C4'	2.33	0.57
4:B1:910:G:OP1	54:CR:173:ARG:CD	2.49	0.57
4:B1:911:C:H3'	4:B1:912:C:C5	2.39	0.57
4:B1:981:A:H8	4:B1:981:A:O5'	1.85	0.57
5:BA:81:ASN:OD1	5:BA:205:ARG:HA	2.04	0.57
3:AX:53:U:C4	8:BD:146:ARG:CZ	2.86	0.57
4:B1:528:A:O4'	14:BJ:121:LYS:HB3	2.04	0.57
10:BF:102:LEU:O	30:BZ:66:LYS:HE2	2.04	0.57
44:CG:66:GLN:HB3	50:CN:28:TRP:CH2	2.39	0.57
49:CM:126:GLU:HB2	51:CO:187:LYS:CE	2.34	0.57
53:CQ:12:LYS:O	53:CQ:13:VAL:HB	2.03	0.57
81:A2:1199:G:O3'	81:A2:1200:G:H8	1.88	0.57
81:A2:1219:C:O2	81:A2:1219:C:H2'	2.03	0.57
81:A2:1229:C:O5'	81:A2:1229:C:H6	1.87	0.57
81:A2:1284:C:O2	81:A2:1284:C:C2'	2.52	0.57
81:A2:1421:C:H2'	81:A2:1422:C:O4'	2.04	0.57
81:A2:1539:A:H2'	81:A2:1540:G:H5'	1.86	0.57
81:A2:166:G:O2'	81:A2:167:C:H4'	2.04	0.57
81:A2:1720:G:C8	81:A2:1760:U:H5'	2.39	0.57
55:CS:93:MET:HE2	81:A2:1929:G:H21	1.70	0.57
81:A2:2309:G:OP1	81:A2:2309:G:H3'	2.04	0.57
81:A2:233:G:H2'	81:A2:233:G:N3	2.19	0.57
81:A2:2524:G:H2'	81:A2:2524:G:N3	2.20	0.57
81:A2:254:G:H2'	81:A2:255:C:OP1	2.04	0.57
81:A2:2634:G:O5'	81:A2:2634:G:H8	1.86	0.57
81:A2:2751:C:H6	81:A2:2751:C:O5'	1.87	0.57
81:A2:2839:G:N3	81:A2:3593:A:C8	2.72	0.57
81:A2:3578:G:H8	81:A2:3578:G:C5'	2.18	0.57
81:A2:3767:U:H3	81:A2:3769:A:H3'	1.69	0.57
81:A2:4133:G:H2'	81:A2:4134:U:H5'	1.86	0.57
81:A2:422:G:N3	81:A2:3857:G:H2'	2.19	0.57
81:A2:701:C:H3'	81:A2:702:G:C8	2.39	0.57
4:B1:1263:U:H3'	4:B1:1264:C:H6	1.69	0.57
4:B1:1576:G:H2'	4:B1:1577:G:O4'	2.04	0.57
4:B1:1800:A:H3'	4:B1:1801:A:H8	1.66	0.57
4:B1:307:G:C4'	4:B1:308:G:H5''	2.27	0.57
4:B1:67:C:H2'	11:BG:162:LEU:HD23	1.86	0.57
4:B1:999:G:H2'	4:B1:1000:C:C6	2.39	0.57
6:BB:134:LEU:HB2	6:BB:219:LYS:HB2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:797:C:C4'	12:BH:109:ARG:HB2	2.35	0.57
14:BJ:141:VAL:HG13	14:BJ:162:ARG:NH2	2.18	0.57
30:BZ:62:VAL:N	30:BZ:63:PRO:HD2	2.19	0.57
41:CD:79:TYR:O	41:CD:82:GLU:HB2	2.04	0.57
45:CH:173:ARG:CD	49:CM:127:VAL:HG22	87.53	0.57
45:CH:7:ASN:HB3	45:CH:58:ASP:OD2	2.04	0.57
49:CM:67:SER:HB3	81:A2:735:A:H2	1.68	0.57
52:CP:51:VAL:HA	52:CP:56:GLN:O	2.04	0.57
81:A2:1408:U:H2'	81:A2:1409:C:H5'	1.86	0.57
81:A2:193:C:O3'	81:A2:194:A:C8	2.57	0.57
81:A2:1942:A:H2'	81:A2:1943:G:H8	1.67	0.57
81:A2:2727:G:H2'	81:A2:2728:G:C8	2.39	0.57
81:A2:2344:A:C2	81:A2:2775:A:N3	2.73	0.57
81:A2:4314:U:O2	81:A2:4314:U:H5'	2.04	0.57
81:A2:4420:U:O5'	81:A2:4420:U:H6	1.87	0.57
81:A2:442:C:O2'	81:A2:443:A:H5'	2.03	0.57
81:A2:4691:G:H5''	81:A2:4694:G:H4'	1.86	0.57
81:A2:4699:G:H4'	81:A2:4700:C:OP2	2.02	0.57
81:A2:4806:G:H2'	81:A2:4807:C:O4'	2.04	0.57
81:A2:724:C:H2'	81:A2:725:C:C4'	2.32	0.57
4:B1:1244:U:H2'	4:B1:1245:G:C8	2.39	0.57
4:B1:184:G:H3'	4:B1:185:G:C5'	2.33	0.57
4:B1:97:U:H5'	4:B1:98:C:OP2	2.04	0.57
12:BH:158:LEU:HD11	12:BH:187:PHE:CD2	2.40	0.57
24:BT:121:ARG:O	24:BT:121:ARG:HD2	2.04	0.57
4:B1:1579:A:C8	25:BU:86:LYS:HD3	2.40	0.57
53:CQ:67:ILE:O	53:CQ:70:MET:HG2	2.04	0.57
56:CT:129:LYS:N	81:A2:1814:G:H5''	2.19	0.57
56:CT:28:ALA:O	56:CT:32:ARG:HG3	2.04	0.57
61:CY:46:SER:O	61:CY:122:LYS:HE3	2.04	0.57
81:A2:1066:C:O2'	81:A2:1067:A:H5'	2.04	0.57
81:A2:1539:A:O5'	81:A2:1539:A:H8	1.88	0.57
81:A2:1673:C:O2	81:A2:1820:G:C2	2.57	0.57
81:A2:1883:U:H5''	81:A2:1883:U:C6	2.34	0.57
81:A2:2702:A:H4'	81:A2:2703:G:C5'	2.29	0.57
81:A2:445:U:H3'	81:A2:446:C:H5	1.68	0.57
81:A2:4533:G:H5''	81:A2:4533:G:N3	2.19	0.57
2:AW:37:MIA:C11	2:AW:38:A:H1'	2.34	0.57
4:B1:1017:U:H5''	4:B1:1017:U:H6	1.70	0.57
4:B1:1161:U:H6	4:B1:1161:U:H3'	1.69	0.57
4:B1:1286:G:N2	4:B1:1312:G:O6	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:130:G:H1'	4:B1:181:A:C2	2.39	0.57
4:B1:1311:C:C5'	4:B1:1311:C:H6	2.17	0.57
4:B1:1839:U:H3	4:B1:1860:A:H61	1.51	0.57
4:B1:44:U:H5'	4:B1:44:U:H6	1.69	0.57
10:BF:19:LEU:HD11	10:BF:22:LYS:HD3	1.86	0.57
11:BG:38:ALA:HB1	11:BG:41:LEU:HD12	1.87	0.57
12:BH:109:ARG:HA	12:BH:113:LYS:N	2.18	0.57
20:BP:33:LEU:O	20:BP:37:TYR:HD1	1.88	0.57
22:BR:13:ALA:HB1	22:BR:54:VAL:HB	1.87	0.57
42:CE:145:THR:HB	42:CE:148:THR:CG2	2.34	0.57
42:CE:276:ALA:HB1	81:A2:4712:U:C4	2.39	0.57
62:CZ:109:LYS:HD3	81:A2:2532:G:H4'	1.85	0.57
81:A2:1205:U:O2	81:A2:1205:U:H2'	2.03	0.57
81:A2:1407:A:H2'	81:A2:1408:U:H6	1.66	0.57
81:A2:1718:G:H2'	81:A2:1719:C:C6	2.40	0.57
81:A2:2378:A:C3'	81:A2:2379:G:H5''	2.35	0.57
2:AW:56:C:H5''	81:A2:4014:A:C1'	2.30	0.57
81:A2:1712:G:N3	81:A2:4174:A:H2'	2.20	0.57
81:A2:4268:C:H2'	81:A2:4269:G:H5'	1.86	0.57
81:A2:426:A:H2'	81:A2:427:C:C5'	2.35	0.57
81:A2:4379:U:H2'	81:A2:4379:U:O2	2.04	0.57
81:A2:4434:A:H2'	81:A2:4436:C:H5''	1.85	0.57
39:CB:20:LYS:HD3	81:A2:4677:A:H4'	1.87	0.57
81:A2:469:G:O2'	81:A2:470:G:H5'	2.04	0.57
81:A2:891:C:H2'	81:A2:892:G:C8	2.40	0.57
83:A4:118:C:O2'	83:A4:119:U:H5''	2.05	0.57
83:A4:3:C:H3'	83:A4:3:C:O2	2.03	0.57
83:A4:47:G:O5'	83:A4:47:G:H8	1.85	0.57
4:B1:1276:A:H4'	4:B1:1277:C:H5''	1.85	0.57
4:B1:1384:C:H2'	4:B1:1385:G:H5'	1.87	0.57
4:B1:1401:A:C1'	4:B1:1402:A:OP1	2.53	0.57
4:B1:1414:A:C2	4:B1:1415:C:N3	2.72	0.57
4:B1:1497:G:H4'	4:B1:1498:A:OP2	2.03	0.57
4:B1:1579:A:H2'	4:B1:1580:A:C4'	2.35	0.57
4:B1:1534:C:H2'	4:B1:1599:U:O4	2.03	0.57
4:B1:172:U:H3'	4:B1:173:A:C5'	2.29	0.57
4:B1:1208:A:OP2	4:B1:1835:A:C2	2.57	0.57
4:B1:337:C:C2'	4:B1:337:C:O2	2.53	0.57
4:B1:514:U:H3'	4:B1:515:G:C8	2.38	0.57
4:B1:528:A:H8	4:B1:528:A:O5'	1.87	0.57
4:B1:535:G:O2'	4:B1:536:A:H8	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:636:C:H2'	4:B1:637:U:C6	2.39	0.57
4:B1:894:G:H2'	4:B1:895:G:H8	1.69	0.57
4:B1:77:A:C6	11:BG:155:GLN:HB3	2.40	0.57
15:BK:84:HIS:CG	15:BK:85:LEU:H	2.22	0.57
17:BM:26:LEU:HG	17:BM:89:VAL:O	2.05	0.57
30:BZ:69:THR:CG2	30:BZ:70:PRO:HD2	2.34	0.57
40:CC:103:ALA:CB	81:A2:1319:U:H1'	2.35	0.57
40:CC:263:LEU:HD22	40:CC:273:LEU:CD2	2.29	0.57
47:CJ:33:LEU:CD2	47:CJ:70:VAL:HG22	2.35	0.57
49:CM:123:ILE:HA	51:CO:187:LYS:NZ	2.20	0.57
55:CS:72:PRO:O	55:CS:100:LEU:HD23	2.05	0.57
58:CV:58:GLY:HA2	58:CV:125:CYS:SG	2.43	0.57
81:A2:1666:U:O2	81:A2:1666:U:H2'	2.02	0.57
81:A2:2309:G:H1'	81:A2:2310:G:N9	2.18	0.57
81:A2:3772:A:C5	81:A2:3773:G:C8	2.92	0.57
81:A2:4980:C:H4'	81:A2:4981:U:OP2	2.03	0.57
81:A2:647:C:H2'	81:A2:648:C:C6	2.39	0.57
82:A3:60:G:N2	82:A3:64:U:C2	2.72	0.57
2:AW:37:MIA:H122	10:BF:134:VAL:CG2	2.32	0.57
4:B1:1016:U:C1'	4:B1:1017:U:H5''	2.32	0.57
3:AX:45:U:C4	4:B1:1207:G:N2	2.71	0.57
4:B1:1271:C:OP1	4:B1:1303:C:H1'	2.03	0.57
4:B1:1325:G:H2'	4:B1:1326:U:H5''	1.86	0.57
4:B1:1340:U:H3'	4:B1:1341:C:C5	2.39	0.57
4:B1:1405:A:N3	4:B1:1442:U:C5	2.73	0.57
4:B1:1535:U:H6	10:BF:82:ASN:OD1	1.88	0.57
4:B1:1616:U:H2'	4:B1:1616:U:O2	2.02	0.57
4:B1:1618:C:H6	4:B1:1618:C:H5''	1.69	0.57
4:B1:1606:G:H21	4:B1:1632:G:H2'	1.70	0.57
4:B1:374:G:H2'	4:B1:375:U:H6	1.67	0.57
6:BB:63:LYS:HE3	6:BB:91:VAL:HB	1.86	0.57
9:BE:125:LYS:HB2	9:BE:226:PHE:CE1	2.39	0.57
4:B1:745:C:H5'	12:BH:105:THR:HG23	1.86	0.57
1:AV:32:U:OP1	21:BQ:146:ARG:HD3	2.05	0.57
4:B1:839:C:H42	29:BY:49:LYS:HB2	1.69	0.57
39:CB:80:GLU:OE1	39:CB:326:VAL:HG13	2.04	0.57
48:CL:61:CYS:SG	81:A2:102:G:H5''	2.44	0.57
81:A2:1082:U:O4	81:A2:1147:C:H5'	2.04	0.57
81:A2:1174:G:H2'	81:A2:1175:G:H8	1.70	0.57
81:A2:1214:G:H1'	81:A2:1216:C:H3'	1.87	0.57
81:A2:432:G:O6	81:A2:1286:C:N3	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1672:U:H2'	81:A2:1672:U:O2	2.05	0.57
81:A2:173:G:H2'	81:A2:174:G:H8	1.69	0.57
81:A2:186:G:O5'	81:A2:186:G:C8	2.58	0.57
81:A2:2257:U:C2'	81:A2:2258:A:H5'	2.34	0.57
81:A2:2453:G:O2'	81:A2:2454:A:H5'	2.05	0.57
81:A2:2629:G:C2'	81:A2:2630:C:H4'	2.34	0.57
81:A2:280:C:H2'	81:A2:281:U:C6	2.40	0.57
59:CW:49:ILE:HG23	81:A2:3584:G:N2	2.19	0.57
81:A2:3910:G:O2'	81:A2:3911:A:H5'	2.03	0.57
81:A2:4261:U:O2	81:A2:4261:U:H2'	2.05	0.57
81:A2:4869:C:H6	81:A2:4869:C:O5'	1.86	0.57
81:A2:4534:U:N3	81:A2:4910:A:H4'	2.20	0.57
81:A2:650:G:O2'	81:A2:651:G:H5'	2.04	0.57
43:CF:44:LYS:HE3	81:A2:956:C:H5''	1.87	0.57
82:A3:156:U:H6	82:A3:156:U:O5'	1.88	0.57
4:B1:1125:C:H4'	5:BA:43:SER:O	2.05	0.57
4:B1:1375:G:O5'	4:B1:1375:G:H8	1.87	0.57
4:B1:1607:A:H2'	4:B1:1608:U:H5'	1.86	0.57
4:B1:1686:G:C2	4:B1:1687:C:C2	2.92	0.57
4:B1:27:A:H2'	4:B1:28:U:C6	2.40	0.57
4:B1:306:C:O2'	4:B1:307:G:H5'	2.05	0.57
4:B1:429:C:O2	4:B1:429:C:H2'	2.05	0.57
4:B1:420:G:H1'	4:B1:661:U:H3	1.69	0.57
15:BK:90:VAL:HG11	15:BK:95:ARG:HG2	1.87	0.57
43:CF:110:GLN:HG2	53:CQ:6:ARG:NE	2.19	0.57
44:CG:162:ASP:O	44:CG:164:ILE:HG13	2.04	0.57
44:CG:41:ILE:CG2	44:CG:42:GLY:H	2.16	0.57
47:CJ:83:LEU:HD22	47:CJ:87:LEU:HG	1.87	0.57
59:CW:9:SER:HB3	59:CW:36:CYS:SG	2.45	0.57
81:A2:1359:C:H5'	81:A2:1360:G:OP1	2.04	0.57
81:A2:1509:G:H2'	81:A2:1510:U:C6	2.39	0.57
81:A2:166:G:H2'	81:A2:167:C:C4'	2.35	0.57
81:A2:1934:A:N1	81:A2:2006:C:C4	2.73	0.57
81:A2:2685:U:H6	81:A2:2685:U:H3'	1.69	0.57
81:A2:337:G:C4	82:A3:29:G:N2	2.73	0.57
81:A2:3923:A:H8	81:A2:3923:A:O5'	1.88	0.57
81:A2:4314:U:H2'	81:A2:4314:U:O2	2.04	0.57
81:A2:4612:G:C2'	81:A2:4613:C:H5'	2.35	0.57
55:CS:173:ASN:O	81:A2:4723:A:H8	1.87	0.57
81:A2:476:C:C6	81:A2:476:C:H5''	2.23	0.57
81:A2:4824:U:O2	81:A2:4824:U:H3'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:917:G:OP2	81:A2:917:G:H3'	2.04	0.57
43:CF:55:LYS:NZ	81:A2:973:U:H2'	2.19	0.57
81:A2:976:C:H2'	81:A2:977:G:H8	1.69	0.57
82:A3:49:G:OP1	82:A3:49:G:H8	1.88	0.57
1:AV:5:G:H1'	1:AV:69:G:N2	2.19	0.57
3:AX:43:U:C4'	4:B1:961:G:N9	2.68	0.57
3:AX:58:U:C5'	3:AX:58:U:C6	2.83	0.57
4:B1:1231:C:H2'	4:B1:1232:U:C6	2.40	0.57
4:B1:1335:G:H2'	4:B1:1336:C:H5'	1.85	0.57
4:B1:1396:A:H2	4:B1:1449:G:H22	1.53	0.57
4:B1:1418:C:O2'	4:B1:1419:C:H5'	2.05	0.57
4:B1:1653:U:H2'	4:B1:1654:G:C8	2.39	0.57
4:B1:186:C:H6	4:B1:186:C:O5'	1.88	0.57
4:B1:189:U:H6	4:B1:189:U:O5'	1.87	0.57
4:B1:455:A:H2'	4:B1:456:C:H6	1.68	0.57
4:B1:745:C:O2	4:B1:750:C:H5"	2.04	0.57
4:B1:830:A:N3	4:B1:830:A:H3'	2.19	0.57
8:BD:64:ARG:O	8:BD:68:GLU:HG3	2.05	0.57
17:BM:32:ALA:HB3	17:BM:110:VAL:HG22	1.86	0.57
22:BR:60:ARG:O	22:BR:63:ARG:HB2	2.05	0.57
23:BS:23:ARG:HD3	23:BS:23:ARG:H	1.68	0.57
25:BU:50:VAL:HG22	25:BU:91:LEU:HD22	1.86	0.57
40:CC:53:ALA:HB1	40:CC:105:THR:OG1	2.05	0.57
48:CL:143:GLU:HG2	48:CL:144:LEU:N	2.20	0.57
51:CO:172:LYS:HE3	51:CO:176:ARG:HH12	1.69	0.57
81:A2:102:G:N2	81:A2:103:G:C4	2.73	0.57
81:A2:1159:U:C4	81:A2:1160:C:N4	2.73	0.57
81:A2:1465:C:C4	81:A2:1466:G:N7	2.72	0.57
81:A2:1607:C:C2'	81:A2:1608:G:H5'	2.31	0.57
81:A2:1724:G:H2'	81:A2:1725:A:O4'	2.05	0.57
81:A2:2276:A:H3'	81:A2:2277:G:H5'	1.86	0.57
81:A2:2702:A:H4'	81:A2:2703:G:OP1	2.05	0.57
54:CR:83:GLY:CA	81:A2:2789:A:H8	2.18	0.57
81:A2:303:G:H2'	81:A2:304:U:O4'	2.04	0.57
81:A2:326:A:C3'	81:A2:327:A:C8	2.80	0.57
81:A2:3787:U:H4'	81:A2:3787:U:OP2	2.05	0.57
81:A2:4043:U:C1'	81:A2:4044:G:H2'	2.32	0.57
81:A2:4157:G:O2'	81:A2:4158:G:H5'	2.05	0.57
81:A2:4417:U:H2'	81:A2:4418:C:H5'	1.87	0.57
81:A2:4852:G:H2'	81:A2:4853:G:H8	1.70	0.57
81:A2:645:C:H2'	81:A2:646:C:H6	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:714:G:H2'	81:A2:715:C:C6	2.40	0.57
81:A2:717:G:C8	81:A2:717:G:C5'	2.88	0.57
81:A2:893:A:C2	81:A2:894:G:C8	2.93	0.57
4:B1:20:G:H2'	4:B1:21:U:H5'	1.85	0.57
4:B1:379:C:H2'	4:B1:379:C:O2	2.04	0.57
4:B1:691:G:O2'	4:B1:692:G:H5'	2.05	0.57
4:B1:750:C:H2'	4:B1:751:G:C8	2.37	0.57
4:B1:913:A:N3	4:B1:913:A:H2'	2.19	0.57
4:B1:931:C:H6	4:B1:931:C:O5'	1.87	0.57
4:B1:983:A:H2'	4:B1:984:C:H5'	1.87	0.57
13:BI:194:GLU:HG2	13:BI:195:LEU:N	2.19	0.57
23:BS:42:HIS:HA	23:BS:45:LEU:HD22	1.87	0.57
4:B1:838:G:H8	29:BY:9:THR:H	1.45	0.57
39:CB:303:ALA:HB2	39:CB:314:ILE:HA	1.86	0.57
43:CF:124:LYS:NZ	43:CF:197:VAL:HG11	2.19	0.57
43:CF:69:ILE:HB	81:A2:716:U:C4'	2.22	0.57
51:CO:182:GLU:HG2	51:CO:191:LYS:CE	2.34	0.57
52:CP:139:TYR:CZ	81:A2:3828:G:H4'	2.40	0.57
52:CP:95:LEU:HG	52:CP:148:MET:CE	2.34	0.57
81:A2:1299:U:H3'	81:A2:1301:G:OP2	2.04	0.57
81:A2:1523:G:H5'	81:A2:1524:G:OP2	2.05	0.57
81:A2:176:G:H2'	81:A2:177:C:H6	1.69	0.57
81:A2:1777:G:H4'	81:A2:4175:C:N4	2.20	0.57
81:A2:1901:A:C6	81:A2:1902:C:N4	2.73	0.57
81:A2:2313:G:C4	81:A2:2314:C:C5	2.93	0.57
81:A2:2603:U:O5'	81:A2:2603:U:H6	1.88	0.57
81:A2:2672:A:H3'	81:A2:2673:A:H5''	1.87	0.57
81:A2:2547:U:H4'	81:A2:2739:G:C2	2.40	0.57
81:A2:3924:G:N2	81:A2:4025:C:N4	2.53	0.57
81:A2:403:G:H5'	81:A2:403:G:N3	2.20	0.57
81:A2:4053:A:C2	81:A2:4124:C:N4	2.73	0.57
81:A2:4268:C:H2'	81:A2:4269:G:C8	2.39	0.57
81:A2:42:A:C6	81:A2:4339:A:C2	2.92	0.57
81:A2:431:U:H2'	81:A2:432:G:C8	2.40	0.57
81:A2:3858:G:C3'	81:A2:4679:G:H22	2.08	0.57
81:A2:4680:C:H4'	81:A2:4681:G:OP1	2.04	0.57
81:A2:4704:G:H22	81:A2:4910:A:H2	1.53	0.57
81:A2:4742:C:H6	81:A2:4742:C:H3'	1.69	0.57
81:A2:4800:C:H2'	81:A2:4801:C:H6	1.67	0.57
81:A2:4801:C:O2'	81:A2:4802:G:H5'	2.05	0.57
81:A2:4801:C:H2'	81:A2:4802:G:H5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:CM:97:ALA:CB	81:A2:4826:C:H42	2.18	0.57
81:A2:488:G:O6	81:A2:658:G:N3	2.37	0.57
81:A2:700:C:C2'	81:A2:701:C:C5'	2.80	0.57
60:CX:46:PHE:HZ	82:A3:148:A:H4'	1.70	0.57
82:A3:71:A:H2'	82:A3:82:A:N1	2.19	0.57
41:CD:266:TRP:HB2	83:A4:22:A:N1	2.19	0.57
4:B1:1255:G:H3'	4:B1:1256:G:H5'	1.86	0.57
4:B1:1351:G:C5'	4:B1:1351:G:C8	2.88	0.57
4:B1:1426:U:C4	4:B1:1427:C:C5	2.93	0.57
4:B1:1586:U:H2'	4:B1:1587:G:O5'	2.05	0.57
4:B1:1790:A:C2'	4:B1:1791:A:H5'	2.35	0.57
4:B1:346:C:C6	4:B1:346:C:H3'	2.40	0.57
4:B1:492:C:H42	4:B1:508:A:H62	1.52	0.57
4:B1:539:C:C6	4:B1:539:C:H3'	2.40	0.57
4:B1:1378:A:C5	5:BA:105:PRO:HB3	2.40	0.57
5:BA:110:ASN:HD21	5:BA:113:GLN:HB2	1.70	0.57
10:BF:32:ASP:CB	10:BF:117:ILE:HG23	2.34	0.57
15:BK:32:HIS:N	15:BK:33:PRO:CD	2.68	0.57
41:CD:252:VAL:O	41:CD:253:TYR:HB3	2.04	0.57
47:CJ:109:ILE:HD13	47:CJ:109:ILE:H	1.69	0.57
48:CL:156:PRO:HB3	81:A2:1359:C:C5	2.40	0.57
53:CQ:75:ARG:HE	53:CQ:78:LYS:HG3	1.69	0.57
81:A2:1197:G:C3'	81:A2:1198:G:C8	2.88	0.56
81:A2:959:C:C3'	81:A2:1215:G:N2	2.68	0.56
81:A2:1249:G:H5''	81:A2:1249:G:C8	2.40	0.56
81:A2:1267:G:H3'	81:A2:1268:G:H4'	1.87	0.56
81:A2:1517:U:O5'	81:A2:1517:U:H6	1.87	0.56
81:A2:1640:C:H2'	81:A2:1641:C:H6	1.69	0.56
81:A2:1774:A:H5''	83:A4:98:G:O2'	2.05	0.56
81:A2:186:G:P	81:A2:186:G:C8	2.98	0.56
81:A2:2537:C:H6	81:A2:2537:C:O5'	1.86	0.56
81:A2:309:A:C2'	81:A2:310:A:H5'	2.35	0.56
81:A2:4013:G:N2	81:A2:4015:A:H3'	2.20	0.56
81:A2:4036:U:H2'	81:A2:4037:U:H6	1.66	0.56
50:CN:85:VAL:HG11	81:A2:44:A:OP1	2.05	0.56
81:A2:4830:G:C3'	81:A2:4831:U:H4'	2.26	0.56
81:A2:4837:U:O2'	81:A2:4838:C:H5'	2.04	0.56
81:A2:4867:G:H8	81:A2:4867:G:H5''	1.69	0.56
42:CE:217:PHE:HB2	81:A2:4895:C:O2'	2.04	0.56
81:A2:726:C:C2'	81:A2:727:G:H5''	2.31	0.56
82:A3:127:U:OP2	82:A3:128:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1016:U:C4'	4:B1:1017:U:OP1	2.53	0.56
4:B1:1113:A:C2	4:B1:1120:U:C4	2.93	0.56
4:B1:1284:A:N7	4:B1:1286:G:C5'	2.68	0.56
4:B1:1426:U:C4	4:B1:1427:C:C4	2.93	0.56
4:B1:1520:G:H4'	4:B1:1521:C:OP2	2.05	0.56
4:B1:1631:U:C4	4:B1:1632:G:C2	2.93	0.56
4:B1:176:U:H2'	4:B1:177:G:O4'	2.05	0.56
4:B1:435:A:C2	4:B1:474:G:OP2	2.58	0.56
4:B1:510:G:OP2	4:B1:510:G:H8	1.87	0.56
4:B1:547:G:O5'	4:B1:548:C:H5''	2.05	0.56
4:B1:576:A:OP2	4:B1:576:A:C8	2.58	0.56
4:B1:59:U:H3'	4:B1:59:U:H6	1.70	0.56
4:B1:694:G:H2'	4:B1:695:C:C5	2.40	0.56
4:B1:76:U:C2'	4:B1:77:A:H3'	2.27	0.56
4:B1:902:G:O2'	4:B1:903:A:H5'	2.05	0.56
4:B1:988:C:O5'	4:B1:988:C:C6	2.57	0.56
5:BA:39:TYR:CE2	5:BA:50:ASN:HB2	2.40	0.56
8:BD:210:ILE:HG12	22:BR:39:ALA:CB	2.34	0.56
4:B1:604:A:H5'	14:BJ:22:LYS:HB2	1.85	0.56
4:B1:1667:U:H5''	21:BQ:141:TYR:OH	2.05	0.56
24:BT:63:HIS:CE1	24:BT:78:ILE:HD13	2.40	0.56
38:CA:242:ARG:O	81:A2:3627:C:H5''	2.05	0.56
81:A2:1086:A:H2'	81:A2:1087:C:H4'	1.87	0.56
40:CC:333:LYS:CE	81:A2:1217:C:H5'	2.35	0.56
81:A2:1424:G:H2'	81:A2:1425:U:H5'	1.85	0.56
81:A2:1546:U:H2'	81:A2:1547:C:C6	2.40	0.56
81:A2:1936:A:H1'	81:A2:2003:A:N1	2.20	0.56
81:A2:2000:C:H2'	81:A2:2001:C:N1	2.20	0.56
81:A2:2343:A:C2'	81:A2:2344:A:H5''	2.34	0.56
81:A2:2491:G:C2	81:A2:2492:G:C8	2.92	0.56
81:A2:2682:G:N2	81:A2:2688:G:H1	2.02	0.56
81:A2:3825:A:H2'	81:A2:3826:G:O4'	2.06	0.56
81:A2:3834:A:H2'	81:A2:3835:C:H6	1.66	0.56
81:A2:3938:G:H2'	81:A2:3939:G:H8	1.70	0.56
81:A2:4420:U:H2'	81:A2:4421:C:C6	2.41	0.56
81:A2:4505:G:H2'	81:A2:4506:A:O5'	2.04	0.56
81:A2:4617:U:O2	81:A2:4617:U:C2'	2.48	0.56
42:CE:182:ASN:CA	81:A2:4837:U:H3	2.17	0.56
81:A2:4937:A:H2'	81:A2:4938:C:H5'	1.85	0.56
83:A4:50:A:N3	83:A4:50:A:H2'	2.18	0.56
4:B1:125:C:H3'	9:BE:149:TYR:OH	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1432:U:C5	4:B1:1432:U:OP2	2.57	0.56
4:B1:15:U:O5'	4:B1:15:U:H6	1.88	0.56
4:B1:1644:C:H2'	4:B1:1645:C:C6	2.40	0.56
4:B1:327:G:H4'	4:B1:328:U:OP1	2.05	0.56
4:B1:84:A:O2'	4:B1:85:A:C8	2.49	0.56
4:B1:980:A:H2'	4:B1:981:A:C8	2.40	0.56
5:BA:33:GLN:HB2	5:BA:154:LEU:HD12	1.86	0.56
12:BH:100:ILE:HD13	12:BH:122:LEU:HA	1.87	0.56
12:BH:44:ASN:O	12:BH:65:PRO:HD2	2.05	0.56
13:BI:158:ILE:HG13	13:BI:158:ILE:O	2.05	0.56
14:BJ:87:LEU:HD11	14:BJ:100:LEU:HD11	1.87	0.56
24:BT:77:LYS:NZ	24:BT:94:ARG:HE	2.02	0.56
25:BU:29:VAL:O	25:BU:33:GLU:HG2	2.05	0.56
27:BW:22:LYS:O	27:BW:65:LEU:HD12	2.05	0.56
28:BX:123:VAL:O	28:BX:130:LEU:HG	2.05	0.56
4:B1:29:G:H4'	28:BX:129:SER:HB3	1.86	0.56
30:BZ:58:LEU:CD1	30:BZ:77:LEU:HD22	2.35	0.56
57:CU:66:SER:OG	57:CU:69:LYS:HB2	2.06	0.56
59:CW:33:ASN:OD1	59:CW:35:LYS:HB3	2.04	0.56
81:A2:1435:G:H2'	81:A2:1436:G:H8	1.67	0.56
81:A2:1648:A:H8	81:A2:1648:A:H3'	1.70	0.56
81:A2:1730:A:H2'	81:A2:1730:A:N3	2.20	0.56
81:A2:1804:A:C3'	81:A2:1805:G:H8	2.17	0.56
81:A2:1831:G:C3'	81:A2:1831:G:C8	2.88	0.56
81:A2:1918:G:C8	81:A2:1918:G:OP2	2.58	0.56
81:A2:2395:A:H2'	81:A2:2396:C:C6	2.35	0.56
81:A2:2579:G:C5	81:A2:2580:C:C4	2.94	0.56
81:A2:2608:U:H6	81:A2:2608:U:P	2.28	0.56
81:A2:2663:G:H3'	81:A2:2664:U:H4'	1.87	0.56
81:A2:2447:C:N3	81:A2:3642:C:C5	2.73	0.56
4:B1:969:U:H3'	81:A2:3681:A:C1'	2.34	0.56
81:A2:4303:U:C2'	81:A2:4304:U:H5'	2.35	0.56
81:A2:4437:A:C2	81:A2:4438:G:C8	2.93	0.56
81:A2:4531:A:H8	81:A2:4531:A:O5'	1.88	0.56
81:A2:4689:C:H3'	81:A2:4690:G:C8	2.39	0.56
81:A2:4811:G:HO2'	81:A2:4812:A:H8	1.48	0.56
81:A2:4872:C:H2'	81:A2:4873:C:C6	2.40	0.56
82:A3:60:G:N2	82:A3:64:U:H1'	2.20	0.56
83:A4:12:U:H4'	83:A4:108:G:N2	2.21	0.56
4:B1:1026:C:O2'	4:B1:1161:U:H4'	2.04	0.56
4:B1:1394:G:H2'	4:B1:1395:C:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:143:U:O4	4:B1:328:U:H4'	2.04	0.56
4:B1:1499:U:O2'	4:B1:1500:G:H5'	2.06	0.56
4:B1:129:C:H1'	4:B1:182:C:N4	2.20	0.56
4:B1:340:C:O5'	4:B1:340:C:H6	1.87	0.56
4:B1:365:C:H2'	4:B1:365:C:O2	2.04	0.56
4:B1:482:G:H22	4:B1:485:A:H2	1.53	0.56
4:B1:549:C:H2'	4:B1:550:C:H6	1.71	0.56
9:BE:173:ILE:HD13	9:BE:230:ASN:CB	2.35	0.56
10:BF:103:LEU:CD2	30:BZ:67:LEU:HD11	2.34	0.56
12:BH:177:TYR:CZ	12:BH:181:THR:HG21	2.40	0.56
14:BJ:141:VAL:HG22	14:BJ:162:ARG:HH22	1.71	0.56
4:B1:827:A:C5'	14:BJ:8:VAL:HG13	2.34	0.56
48:CL:59:VAL:HG11	81:A2:74:G:H5''	1.86	0.56
81:A2:1742:C:C3'	81:A2:1743:G:H5''	2.35	0.56
81:A2:1846:A:H2'	81:A2:1848:C:C6	2.41	0.56
81:A2:2331:G:H2'	81:A2:2332:G:C8	2.40	0.56
81:A2:2524:G:O2'	81:A2:2525:C:H5'	2.05	0.56
81:A2:4094:A:H2'	81:A2:4095:A:H8	1.71	0.56
81:A2:4117:A:C1'	81:A2:4118:C:P	2.94	0.56
45:CH:120:GLU:HB3	81:A2:4572:C:O2	2.05	0.56
81:A2:482:G:O2'	81:A2:484:G:H5''	2.05	0.56
81:A2:4908:G:H2'	81:A2:4909:G:H8	1.71	0.56
81:A2:900:C:O2	81:A2:901:A:C2	2.59	0.56
81:A2:966:U:H3'	81:A2:967:C:C5'	2.35	0.56
1:AV:15:G:H8	1:AV:15:G:O5'	1.88	0.56
2:AW:37:MIA:C2	10:BF:133:THR:N	2.63	0.56
4:B1:1130:G:H4'	18:BN:10:GLY:CA	2.36	0.56
4:B1:1289:U:H3'	4:B1:1289:U:O2	2.05	0.56
4:B1:1404:U:H2'	4:B1:1406:G:C5	2.39	0.56
4:B1:1405:A:C8	4:B1:1406:G:H5'	2.40	0.56
4:B1:153:G:H1	4:B1:165:G:H22	1.52	0.56
4:B1:351:G:C8	4:B1:351:G:C3'	2.87	0.56
4:B1:386:C:O2	4:B1:386:C:H2'	2.05	0.56
4:B1:572:U:H5	4:B1:576:A:H62	1.52	0.56
4:B1:67:C:H5'	11:BG:162:LEU:HD23	1.87	0.56
40:CC:183:VAL:HG11	40:CC:206:GLY:CA	2.35	0.56
43:CF:94:ARG:CZ	43:CF:109:LEU:HD13	2.35	0.56
45:CH:150:ASP:O	45:CH:154:VAL:HG23	2.04	0.56
81:A2:99:A:C2'	81:A2:100:C:C6	2.88	0.56
81:A2:1316:G:C2'	81:A2:1317:A:C8	2.86	0.56
53:CQ:15:ARG:NH2	81:A2:1328:U:H5''	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1462:C:O2	81:A2:1462:C:C2'	2.52	0.56
81:A2:1484:C:H6	81:A2:1484:C:O5'	1.88	0.56
81:A2:218:C:O2'	81:A2:219:C:H5'	2.04	0.56
81:A2:2346:U:C5	81:A2:4616:A:C8	2.93	0.56
81:A2:2620:G:H2'	81:A2:2621:G:H5'	1.86	0.56
81:A2:2762:C:H3'	81:A2:2763:C:C5	2.40	0.56
81:A2:284:G:H4'	81:A2:285:G:N9	2.20	0.56
81:A2:314:C:H2'	81:A2:315:A:H8	1.69	0.56
81:A2:3670:C:H4'	81:A2:3671:A:N7	2.20	0.56
81:A2:4149:U:H2'	81:A2:4150:U:O2	2.05	0.56
81:A2:4354:A:H4'	81:A2:4355:U:OP2	2.05	0.56
81:A2:4406:U:O2	81:A2:4406:U:H2'	2.05	0.56
81:A2:4809:G:H2'	81:A2:4810:G:C8	2.41	0.56
13:BI:105:ASP:OD2	81:A2:4981:U:O2	2.23	0.56
81:A2:635:G:O2'	81:A2:636:G:H5'	2.05	0.56
81:A2:692:C:H2'	81:A2:693:G:O4'	2.05	0.56
4:B1:125:C:H6	4:B1:125:C:P	2.28	0.56
4:B1:1410:C:OP1	4:B1:1413:G:H5''	2.05	0.56
4:B1:1495:G:O6	25:BU:69:PRO:HB3	2.05	0.56
4:B1:1602:U:H6	4:B1:1602:U:H3'	1.70	0.56
4:B1:1802:C:H2'	4:B1:1803:U:O4'	2.05	0.56
4:B1:358:C:H5'	4:B1:358:C:C6	2.40	0.56
4:B1:684:G:C5	4:B1:920:A:N7	2.74	0.56
4:B1:951:C:N3	4:B1:975:G:O6	2.38	0.56
8:BD:74:GLN:NE2	8:BD:80:PRO:HA	2.20	0.56
14:BJ:48:PHE:O	14:BJ:51:ALA:HB3	2.06	0.56
18:BN:87:ASP:HB2	18:BN:129:TYR:OH	2.04	0.56
20:BP:75:VAL:HG21	20:BP:104:GLN:HG2	1.86	0.56
38:CA:196:TRP:HH2	81:A2:1592:A:N3	2.04	0.56
38:CA:205:ASN:O	38:CA:208:GLU:HG2	2.05	0.56
38:CA:47:ASP:HA	38:CA:84:THR:HG22	1.87	0.56
39:CB:75:ALA:HB2	81:A2:4587:U:N3	2.20	0.56
42:CE:224:LYS:N	42:CE:225:PRO:CD	2.67	0.56
49:CM:137:LYS:O	49:CM:140:PRO:HD2	2.05	0.56
51:CO:182:GLU:HG2	51:CO:191:LYS:HE2	1.86	0.56
61:CY:101:PRO:HA	61:CY:104:VAL:HG22	1.86	0.56
4:B1:678:U:C5'	81:A2:1543:A:C8	2.88	0.56
81:A2:2310:G:C8	81:A2:2310:G:P	2.99	0.56
81:A2:235:C:H5'	81:A2:235:C:H6	1.71	0.56
81:A2:2378:A:H3'	81:A2:2379:G:H5''	1.87	0.56
81:A2:2848:A:H3'	81:A2:2849:C:H6	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3825:A:H8	81:A2:3825:A:O5'	1.88	0.56
81:A2:4264:A:H1'	81:A2:4265:G:C8	2.41	0.56
81:A2:4334:U:H3'	81:A2:4335:C:H5'	1.87	0.56
81:A2:437:C:H2'	81:A2:437:C:O2	2.04	0.56
40:CC:316:LYS:HD3	81:A2:703:G:H4'	1.88	0.56
81:A2:914:G:H2'	81:A2:914:G:N3	2.20	0.56
81:A2:2284:A:C2	82:A3:19:C:O2	2.59	0.56
4:B1:1043:G:H8	4:B1:1043:G:O5'	1.88	0.56
4:B1:1101:U:H5''	6:BB:151:ARG:HD2	1.87	0.56
4:B1:1403:C:C5	4:B1:1404:U:C2	2.93	0.56
4:B1:155:G:H2'	4:B1:156:G:C8	2.40	0.56
4:B1:1631:U:C5'	4:B1:1631:U:H6	2.05	0.56
4:B1:1214:A:N1	4:B1:1686:G:C2	2.74	0.56
4:B1:1698:C:H5'	4:B1:1699:A:C8	2.41	0.56
4:B1:217:A:H4'	4:B1:341:C:H4'	1.88	0.56
4:B1:385:G:H4'	4:B1:386:C:C5'	2.34	0.56
4:B1:396:U:H2'	4:B1:397:G:O4'	2.05	0.56
4:B1:693:A:H3'	4:B1:694:G:O4'	2.05	0.56
6:BB:153:THR:HB	6:BB:155:TYR:CD2	2.41	0.56
10:BF:39:ILE:HG23	10:BF:68:ILE:HG21	1.88	0.56
4:B1:1016:U:C5	18:BN:14:SER:HB2	2.41	0.56
25:BU:67:LYS:HD3	25:BU:76:THR:HG21	1.87	0.56
27:BW:36:ARG:HG2	27:BW:110:ILE:HD12	1.87	0.56
39:CB:90:VAL:HG11	39:CB:182:GLU:OE2	2.05	0.56
50:CN:144:ARG:O	50:CN:145:ASN:HB3	2.06	0.56
52:CP:43:LYS:HB3	81:A2:5019:G:C8	2.41	0.56
62:CZ:58:GLY:O	62:CZ:61:LYS:HB2	2.05	0.56
81:A2:1400:A:C2	81:A2:1446:C:H1'	2.41	0.56
81:A2:239:U:H6	81:A2:239:U:O5'	1.88	0.56
81:A2:2505:G:C8	81:A2:2506:A:H5''	2.38	0.56
81:A2:2576:G:H5'	81:A2:2577:A:O5'	2.04	0.56
81:A2:346:A:H2'	81:A2:347:G:C5'	2.35	0.56
81:A2:4140:G:C2	81:A2:4141:U:H1'	2.40	0.56
81:A2:4303:U:O2'	81:A2:4304:U:H5'	2.05	0.56
81:A2:4526:U:C6	81:A2:4526:U:C3'	2.88	0.56
81:A2:4811:G:O2'	81:A2:4812:A:C8	2.57	0.56
82:A3:73:U:H2'	82:A3:74:U:H5'	1.87	0.56
82:A3:91:A:H2'	82:A3:92:U:O4'	2.06	0.56
4:B1:1116:C:C2'	4:B1:1116:C:O2	2.52	0.56
4:B1:1413:G:N2	4:B1:1414:A:H1'	2.20	0.56
4:B1:1649:U:C6	4:B1:1649:U:H3'	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:197:U:H6	4:B1:197:U:O5'	1.89	0.56
4:B1:428:U:H2'	4:B1:429:C:H6	1.71	0.56
4:B1:567:C:H3'	4:B1:568:C:H5'	1.87	0.56
4:B1:81:U:H5'	4:B1:82:G:OP2	2.05	0.56
5:BA:130:ASP:O	5:BA:133:PRO:HD2	2.05	0.56
5:BA:205:ARG:HG3	5:BA:206:ASP:N	2.21	0.56
5:BA:77:ILE:HG12	5:BA:99:ILE:CG2	2.36	0.56
2:AW:37:MIA:H122	10:BF:134:VAL:HG13	1.87	0.56
4:B1:1599:U:N3	10:BF:165:ASN:N	2.54	0.56
4:B1:913:A:H61	12:BH:119:SER:C	2.09	0.56
12:BH:83:LEU:CB	12:BH:92:VAL:HG21	2.36	0.56
14:BJ:60:LEU:HB2	14:BJ:94:LEU:HD11	1.88	0.56
4:B1:1648:G:H8	21:BQ:125:ARG:CB	2.18	0.56
22:BR:113:SER:O	22:BR:114:LEU:HG	2.05	0.56
23:BS:134:GLN:HG2	23:BS:135:HIS:N	2.20	0.56
23:BS:77:TYR:O	23:BS:78:LYS:HB2	2.05	0.56
25:BU:78:ASP:HB3	25:BU:80:PHE:CZ	2.41	0.56
38:CA:117:GLU:HG2	38:CA:124:GLY:H	1.70	0.56
50:CN:40:PRO:HG3	81:A2:8:U:H5'	1.88	0.56
81:A2:1203:G:C2'	81:A2:1204:G:C8	2.84	0.56
81:A2:1211:C:H1'	81:A2:1212:G:O5'	2.05	0.56
81:A2:1285:C:C6	81:A2:1285:C:O5'	2.59	0.56
81:A2:174:G:H1	81:A2:253:C:N4	2.03	0.56
81:A2:1756:C:C6	81:A2:1756:C:H5''	2.40	0.56
81:A2:1926:G:H2'	81:A2:1927:U:O4'	2.05	0.56
81:A2:213:C:OP2	81:A2:217:C:H5''	2.05	0.56
81:A2:2283:A:H2	81:A2:2284:A:O4'	1.89	0.56
81:A2:2327:U:H3'	81:A2:2328:C:C5'	2.36	0.56
81:A2:2421:U:H5'	81:A2:2422:C:OP2	2.06	0.56
81:A2:2469:C:C2'	81:A2:2470:G:H8	2.18	0.56
81:A2:2526:G:N2	81:A2:2746:U:C5	2.74	0.56
81:A2:2587:G:H8	81:A2:2587:G:O5'	1.89	0.56
81:A2:2761:C:C6	81:A2:2761:C:H3'	2.41	0.56
81:A2:2761:C:H2'	81:A2:2762:C:O4'	2.05	0.56
81:A2:3661:A:C2	81:A2:3662:U:H1'	2.40	0.56
81:A2:3887:G:C2'	81:A2:3888:C:O5'	2.54	0.56
2:AW:56:C:C6	81:A2:3927:G:O6	2.58	0.56
81:A2:4187:U:H5''	81:A2:4188:G:OP2	2.06	0.56
81:A2:4254:C:C5'	81:A2:4254:C:C6	2.89	0.56
81:A2:4352:G:O5'	81:A2:4352:G:H8	1.88	0.56
81:A2:4962:A:H5''	81:A2:4997:A:C2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1011:A:O5'	4:B1:1011:A:H8	1.89	0.56
4:B1:1624:U:O5'	4:B1:1624:U:C6	2.59	0.56
4:B1:167:G:H3'	4:B1:168:C:H5''	1.86	0.56
4:B1:1686:G:H3'	4:B1:1687:C:H6	1.71	0.56
4:B1:343:A:H8	4:B1:343:A:O5'	1.89	0.56
4:B1:370:G:C4'	4:B1:371:A:OP1	2.53	0.56
4:B1:372:U:C6	4:B1:372:U:H3'	2.41	0.56
4:B1:423:U:H5''	4:B1:424:C:OP2	2.05	0.56
4:B1:636:C:C6	4:B1:636:C:O5'	2.59	0.56
4:B1:893:U:H6	4:B1:893:U:O5'	1.88	0.56
4:B1:628:A:N6	8:BD:179:GLN:HE22	2.04	0.56
4:B1:77:A:N7	11:BG:155:GLN:CA	2.69	0.56
24:BT:76:THR:HG22	24:BT:95:GLY:H	1.70	0.56
38:CA:196:TRP:CE3	38:CA:197:PRO:HD3	2.40	0.56
40:CC:46:LYS:O	40:CC:49:ARG:HG2	2.05	0.56
42:CE:278:THR:HB	42:CE:281:ILE:HG12	1.88	0.56
44:CG:170:LEU:HD23	44:CG:173:LEU:HD12	1.86	0.56
44:CG:182:CYS:HB3	44:CG:222:ILE:CG2	2.35	0.56
47:CJ:89:VAL:HG22	47:CJ:114:ASP:HB3	1.87	0.56
47:CJ:26:VAL:HG13	47:CJ:32:ARG:HD3	1.87	0.56
44:CG:71:TYR:CE1	50:CN:25:VAL:HG13	2.40	0.56
54:CR:133:LYS:N	54:CR:137:ILE:HD11	2.21	0.56
56:CT:83:LYS:HE2	56:CT:85:LEU:HD21	1.88	0.56
81:A2:1193:G:C3'	81:A2:1193:G:P	2.94	0.56
81:A2:1248:G:C3'	81:A2:1249:G:C8	2.82	0.56
81:A2:1506:A:N3	81:A2:1506:A:H2'	2.19	0.56
81:A2:156:C:C2'	81:A2:156:C:O2	2.54	0.56
81:A2:1844:U:O2	81:A2:1844:U:H2'	2.05	0.56
81:A2:2048:U:H4'	81:A2:2049:A:OP2	2.03	0.56
81:A2:2444:U:H4'	81:A2:2445:U:H5	1.67	0.56
81:A2:252:G:H8	81:A2:252:G:O5'	1.87	0.56
81:A2:2631:C:H2'	81:A2:2632:C:C6	2.41	0.56
81:A2:2665:G:O6	81:A2:2666:C:N4	2.39	0.56
54:CR:97:ARG:HH21	81:A2:2702:A:H1'	1.71	0.56
81:A2:3878:C:O2	81:A2:3878:C:C2'	2.53	0.56
81:A2:3878:C:H2'	81:A2:3878:C:O2	2.05	0.56
81:A2:438:C:C2'	81:A2:439:G:H5'	2.36	0.56
81:A2:4637:U:C4	81:A2:4674:C:H1'	2.40	0.56
81:A2:5017:G:C2'	81:A2:5018:G:H5'	2.35	0.56
81:A2:674:G:C5'	81:A2:674:G:H8	2.19	0.56
1:AV:58:A:H1'	1:AV:60:U:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:125:C:H3'	9:BE:149:TYR:CZ	2.41	0.56
4:B1:1405:A:C3'	4:B1:1406:G:C5'	2.82	0.56
4:B1:170:A:C3'	4:B1:171:A:H8	2.19	0.56
4:B1:65:C:H4'	11:BG:133:LEU:CD2	2.36	0.56
4:B1:869:A:C4	4:B1:915:G:H1'	2.41	0.56
10:BF:42:LYS:HB2	10:BF:45:TYR:CD1	2.41	0.56
12:BH:87:PHE:CE1	12:BH:90:LYS:HE2	2.41	0.56
40:CC:161:TYR:CE2	40:CC:170:LEU:HD22	2.40	0.56
40:CC:54:VAL:C	40:CC:56:GLU:H	2.09	0.56
48:CL:130:LYS:HD2	48:CL:130:LYS:H	1.69	0.56
81:A2:1048:G:H5''	81:A2:1215:G:N7	2.21	0.56
81:A2:1083:C:C2'	81:A2:1083:C:O2	2.53	0.56
81:A2:108:A:H4'	81:A2:109:G:OP1	2.06	0.56
81:A2:1213:G:H2'	81:A2:1214:G:H5'	1.88	0.56
48:CL:30:ALA:HA	81:A2:1350:G:OP1	2.06	0.56
81:A2:1480:C:H2'	81:A2:1481:G:C5	2.41	0.56
81:A2:1931:U:H6	81:A2:1931:U:O5'	1.89	0.56
81:A2:2020:A:N7	81:A2:2021:A:C2	2.74	0.56
81:A2:2029:C:H3'	81:A2:2030:G:O4'	2.05	0.56
81:A2:2394:A:H8	81:A2:2394:A:H5''	1.69	0.56
81:A2:2469:C:C2	81:A2:2470:G:N7	2.74	0.56
81:A2:2741:A:O3'	81:A2:2742:A:C8	2.59	0.56
81:A2:334:C:H6	81:A2:334:C:H5'	1.70	0.56
81:A2:411:A:OP2	81:A2:411:A:H8	1.89	0.56
81:A2:4352:G:O2'	81:A2:4354:A:H2'	2.05	0.56
81:A2:438:C:H2'	81:A2:439:G:H8	1.70	0.56
81:A2:4479:C:H5''	81:A2:4480:G:H5''	1.88	0.56
81:A2:3618:A:O4'	81:A2:4495:A:H4'	2.06	0.56
81:A2:4608:A:C5	81:A2:4609:G:N7	2.74	0.56
81:A2:4657:U:H2'	81:A2:4658:C:C5'	2.36	0.56
81:A2:4985:U:H2'	81:A2:4986:G:O4'	2.06	0.56
81:A2:5002:C:H6	81:A2:5002:C:H5''	1.71	0.56
81:A2:6:C:O2	81:A2:6:C:C3'	2.54	0.56
4:B1:1143:A:H2'	4:B1:1144:A:C8	2.40	0.56
4:B1:124:U:H5'	9:BE:148:ARG:CB	2.35	0.56
4:B1:1276:A:N6	4:B1:1317:C:N4	2.54	0.56
4:B1:1361:G:H1'	4:B1:1380:C:H41	1.70	0.56
4:B1:1575:G:H2'	4:B1:1576:G:H8	1.70	0.56
4:B1:1746:U:H2'	4:B1:1747:C:H6	1.70	0.56
4:B1:359:U:H6	4:B1:359:U:O5'	1.88	0.56
4:B1:471:G:H4'	4:B1:472:C:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:558:G:O5'	4:B1:558:G:H8	1.89	0.56
4:B1:876:C:C6	4:B1:877:C:C5	2.93	0.56
15:BK:12:TYR:CE1	15:BK:52:LEU:HD11	2.41	0.56
38:CA:179:ILE:O	38:CA:184:ARG:HD2	2.05	0.56
40:CC:163:LYS:HA	81:A2:221:U:N3	2.21	0.56
46:CI:63:GLU:OE1	81:A2:4390:G:H5'	2.06	0.56
54:CR:105:LEU:HD12	54:CR:138:LEU:CD1	2.36	0.56
44:CG:145:THR:HG21	81:A2:116:G:C8	2.40	0.56
81:A2:1191:G:C2'	81:A2:1192:G:H5'	2.36	0.56
81:A2:1056:C:H42	81:A2:1204:G:H22	1.52	0.56
81:A2:1214:G:O2'	81:A2:1216:C:H3'	2.06	0.56
81:A2:1220:G:H2'	81:A2:1221:C:C6	2.40	0.56
81:A2:1567:U:H2'	81:A2:1568:C:H6	1.69	0.56
81:A2:1606:G:H3'	81:A2:1607:C:H6	1.70	0.56
81:A2:204:G:H2'	81:A2:205:A:C8	2.41	0.56
81:A2:2542:A:O5'	81:A2:2542:A:H8	1.89	0.56
81:A2:2572:C:H2'	81:A2:2573:G:H8	1.70	0.56
81:A2:2729:G:H2'	81:A2:2730:G:O4'	2.06	0.56
81:A2:389:A:C8	81:A2:389:A:C3'	2.89	0.56
81:A2:4263:C:O2	81:A2:4263:C:C3'	2.52	0.56
81:A2:4484:G:H2'	81:A2:4485:C:H5	1.69	0.56
81:A2:451:C:H42	81:A2:684:A:H61	1.54	0.56
81:A2:959:C:C3'	81:A2:1215:G:H21	2.18	0.56
82:A3:118:C:H2'	82:A3:119:C:O4'	2.06	0.56
4:B1:1431:G:N2	4:B1:1432:U:C2	2.74	0.56
4:B1:1472:C:C2'	4:B1:1472:C:O2	2.54	0.56
4:B1:1476:A:C3'	4:B1:1477:U:H5'	2.35	0.56
4:B1:1669:G:H5'	21:BQ:130:LYS:HB3	1.88	0.56
4:B1:130:G:C1'	4:B1:181:A:N1	2.68	0.56
4:B1:192:C:N4	4:B1:207:G:H1	1.99	0.56
4:B1:59:U:H5'	4:B1:502:C:H5'	1.88	0.56
4:B1:528:A:OP1	14:BJ:122:SER:HB2	2.06	0.56
4:B1:584:A:H8	4:B1:584:A:P	2.29	0.56
4:B1:686:U:O2'	4:B1:687:C:H5'	2.06	0.56
4:B1:927:C:H2'	4:B1:928:G:H5'	1.88	0.56
11:BG:8:PRO:HG2	11:BG:112:VAL:HG13	1.86	0.56
4:B1:797:C:O2'	12:BH:109:ARG:HD2	2.05	0.56
14:BJ:41:ARG:HD3	14:BJ:42:GLU:N	2.21	0.56
18:BN:139:TRP:HH2	18:BN:149:LEU:HD21	1.70	0.56
4:B1:952:G:H1'	19:BO:52:THR:CB	2.36	0.56
27:BW:28:ARG:HB3	27:BW:29:PRO:CD	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:CD:28:THR:HG23	83:A4:7:G:OP1	2.06	0.56
43:CF:48:LYS:HD2	81:A2:1220:G:H5'	1.86	0.56
81:A2:112:C:C2'	81:A2:113:A:H5'	2.36	0.55
81:A2:1282:U:H1'	81:A2:1283:A:O5'	2.06	0.55
81:A2:1390:U:H2'	81:A2:1391:C:C5	2.40	0.55
81:A2:1649:G:C3'	81:A2:1649:G:C8	2.88	0.55
81:A2:192:C:H2'	81:A2:193:C:OP2	2.07	0.55
81:A2:2509:C:C2'	81:A2:2510:C:H5'	2.36	0.55
81:A2:284:G:H5'	81:A2:285:G:O4'	2.06	0.55
81:A2:3613:U:H2'	81:A2:3614:U:C5'	2.36	0.55
81:A2:3722:G:H5''	81:A2:3722:G:H8	1.71	0.55
81:A2:4262:U:H3'	81:A2:4262:U:H6	1.71	0.55
81:A2:428:G:H8	81:A2:428:G:O5'	1.88	0.55
81:A2:4688:A:HO2'	81:A2:4695:C:H1'	1.67	0.55
39:CB:95:THR:CG2	81:A2:4865:A:H4'	2.36	0.55
81:A2:944:A:H2'	81:A2:944:A:N3	2.20	0.55
83:A4:25:G:H2'	83:A4:26:C:C6	2.41	0.55
83:A4:11:A:H2	83:A4:66:G:H2'	1.71	0.55
4:B1:1443:C:C3'	4:B1:1444:U:H5'	2.36	0.55
4:B1:1549:U:O2'	4:B1:1550:G:H5'	2.06	0.55
4:B1:1783:C:H2'	4:B1:1783:C:O2	2.05	0.55
4:B1:1821:U:H2'	4:B1:1822:A:C8	2.41	0.55
4:B1:583:A:H2'	4:B1:584:A:C8	2.40	0.55
4:B1:905:C:H2'	4:B1:906:U:C6	2.41	0.55
4:B1:924:G:H2'	4:B1:925:G:H8	1.71	0.55
9:BE:205:PHE:CE1	9:BE:221:ARG:HD3	2.40	0.55
13:BI:192:GLY:HA3	16:BL:20:LYS:CB	2.36	0.55
19:BO:18:GLY:H	19:BO:19:PRO:HD2	1.70	0.55
38:CA:56:ALA:HB2	38:CA:130:SER:HB3	1.87	0.55
44:CG:163:PRO:HD2	81:A2:148:G:H22	1.71	0.55
45:CH:86:LEU:HD21	45:CH:191:ASP:HB2	1.87	0.55
48:CL:147:ALA:O	48:CL:151:THR:HB	2.06	0.55
49:CM:20:HIS:CA	49:CM:23:LYS:HD3	2.37	0.55
61:CY:66:GLN:O	61:CY:67:ILE:HB	2.05	0.55
81:A2:1178:G:H3'	81:A2:1179:G:C5'	2.25	0.55
81:A2:13:U:H1'	81:A2:14:C:OP1	2.06	0.55
81:A2:1900:G:H5'	81:A2:1900:G:H8	1.71	0.55
81:A2:2325:G:P	81:A2:2328:C:H41	2.29	0.55
81:A2:2398:G:H2'	81:A2:2805:U:O2	2.06	0.55
81:A2:2743:A:H2'	81:A2:2744:U:C2	2.41	0.55
81:A2:379:A:H2'	81:A2:393:A:N6	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4234:A:H2'	81:A2:4235:G:C8	2.41	0.55
81:A2:4167:C:H1'	81:A2:4295:C:H1'	1.87	0.55
81:A2:4452:U:H2'	81:A2:4452:U:O2	2.06	0.55
81:A2:4854:G:H4'	81:A2:4855:C:OP1	2.06	0.55
55:CS:70:LYS:HA	81:A2:721:A:O2'	2.06	0.55
81:A2:722:G:H3'	81:A2:723:G:C5'	2.36	0.55
81:A2:920:C:H2'	81:A2:921:U:C6	2.40	0.55
81:A2:974:C:H4'	81:A2:975:C:OP1	2.06	0.55
82:A3:148:A:H3'	82:A3:148:A:C8	2.41	0.55
4:B1:1230:C:O2'	4:B1:1231:C:H5'	2.05	0.55
4:B1:1383:A:C8	4:B1:1383:A:O5'	2.59	0.55
4:B1:1440:C:H6	4:B1:1440:C:O5'	1.89	0.55
4:B1:1461:G:N2	4:B1:1466:G:C5	2.74	0.55
4:B1:1520:G:C5'	4:B1:1521:C:C5	2.83	0.55
4:B1:1739:C:O5'	4:B1:1739:C:H6	1.89	0.55
4:B1:1791:A:H2'	4:B1:1792:G:O4'	2.06	0.55
4:B1:1830:U:H1'	4:B1:1831:A:OP2	2.06	0.55
4:B1:215:G:H8	4:B1:215:G:O5'	1.89	0.55
4:B1:23:G:H2'	4:B1:24:C:C6	2.40	0.55
4:B1:35:C:O5'	4:B1:35:C:H6	1.88	0.55
4:B1:426:A:N3	4:B1:426:A:H2'	2.20	0.55
4:B1:504:G:C2'	4:B1:505:G:H5'	2.36	0.55
4:B1:694:G:C2'	4:B1:695:C:C6	2.83	0.55
4:B1:99:A:H2'	4:B1:100:U:O4'	2.06	0.55
5:BA:120:ARG:O	5:BA:143:PRO:HD2	2.06	0.55
5:BA:185:MET:HG2	26:BV:46:PHE:CE1	2.42	0.55
6:BB:81:PHE:O	6:BB:82:ARG:HB2	2.07	0.55
4:B1:808:A:H4'	9:BE:219:ALA:O	2.06	0.55
10:BF:56:TYR:O	10:BF:62:ARG:HG3	2.06	0.55
4:B1:169:U:H1'	11:BG:133:LEU:CD1	2.36	0.55
13:BI:123:ARG:HH21	81:A2:4979:C:H5'	0.69	0.55
4:B1:39:A:P	14:BJ:3:VAL:HG13	2.46	0.55
15:BK:29:MET:N	15:BK:30:PRO:HD3	2.21	0.55
4:B1:1130:G:H4'	18:BN:10:GLY:HA2	1.88	0.55
20:BP:30:TYR:HA	20:BP:33:LEU:CD2	2.33	0.55
45:CH:72:THR:HG22	81:A2:4650:G:O2'	2.05	0.55
55:CS:103:ALA:O	55:CS:106:VAL:HG12	2.05	0.55
49:CM:4:ARG:CZ	55:CS:155:PRO:HB3	2.36	0.55
81:A2:1210:U:H3'	81:A2:1210:U:O2	2.05	0.55
81:A2:1389:C:H2'	81:A2:1390:U:C6	2.42	0.55
81:A2:1480:C:H2'	81:A2:1481:G:N7	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1727:U:C6	81:A2:1727:U:C5'	2.90	0.55
81:A2:2012:G:H2'	81:A2:2013:C:C6	2.41	0.55
81:A2:2862:A:O5'	81:A2:2862:A:H8	1.90	0.55
81:A2:286:A:H5'	81:A2:287:A:C8	2.42	0.55
81:A2:3772:A:H5'	81:A2:4457:U:O2'	2.06	0.55
81:A2:4231:A:H5''	81:A2:4232:G:OP2	2.06	0.55
81:A2:1620:G:N7	81:A2:4346:C:H1'	2.21	0.55
81:A2:4838:C:H3'	81:A2:4839:G:H5'	1.87	0.55
81:A2:976:C:H6	81:A2:976:C:O5'	1.88	0.55
82:A3:143:G:C2'	82:A3:144:U:H5'	2.36	0.55
41:CD:18:VAL:HG22	83:A4:11:A:OP2	2.06	0.55
83:A4:7:G:H8	83:A4:7:G:H5''	1.70	0.55
4:B1:1214:A:C6	4:B1:1217:A:C4	2.94	0.55
4:B1:640:A:H5''	14:BJ:25:LEU:CD1	2.33	0.55
4:B1:753:C:H3'	4:B1:754:G:O4'	2.07	0.55
4:B1:808:A:C8	4:B1:808:A:O5'	2.59	0.55
12:BH:160:LYS:HE3	12:BH:191:GLU:N	2.21	0.55
23:BS:8:LYS:O	23:BS:8:LYS:HD3	2.06	0.55
38:CA:225:ILE:HD11	38:CA:235:VAL:O	2.06	0.55
48:CL:111:GLN:HB2	81:A2:510:C:H4'	1.89	0.55
51:CO:34:VAL:HG11	51:CO:112:TYR:CE1	2.41	0.55
56:CT:77:ASN:CB	56:CT:84:ILE:HD13	2.34	0.55
81:A2:958:C:N4	81:A2:1255:G:H1	2.00	0.55
81:A2:1337:C:H5''	81:A2:1338:G:OP2	2.05	0.55
81:A2:1464:C:C2'	81:A2:1465:C:O4'	2.54	0.55
81:A2:1555:G:N2	81:A2:1557:U:H1'	2.21	0.55
81:A2:193:C:O2	81:A2:193:C:H3'	2.06	0.55
81:A2:2062:C:C5	81:A2:2249:G:C2	2.93	0.55
81:A2:2310:G:H5''	81:A2:2310:G:C8	2.42	0.55
81:A2:2390:U:O2'	81:A2:2391:G:H5'	2.06	0.55
81:A2:2415:A:H1'	81:A2:2416:G:OP1	2.07	0.55
81:A2:2627:G:H5''	81:A2:2627:G:C8	2.41	0.55
81:A2:3609:U:H3	81:A2:3616:A:H62	1.54	0.55
81:A2:3694:G:C8	81:A2:3694:G:H5''	2.33	0.55
2:AW:71:G:C4'	81:A2:3708:C:O2'	2.54	0.55
81:A2:381:C:H6	81:A2:381:C:OP1	1.89	0.55
81:A2:4027:C:H6	81:A2:4027:C:O5'	1.90	0.55
81:A2:4438:G:O5'	81:A2:4438:G:H8	1.90	0.55
81:A2:4484:G:H2'	81:A2:4485:C:C6	2.42	0.55
81:A2:4839:G:H2'	81:A2:4840:U:C6	2.42	0.55
82:A3:111:U:C1'	82:A3:112:G:OP2	2.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:71:G:H2'	2:AW:72:C:H6	1.71	0.55
4:B1:1137:U:H6	4:B1:1137:U:OP2	1.90	0.55
4:B1:1202:U:H3'	4:B1:1203:G:H5''	1.88	0.55
4:B1:93:U:H2'	4:B1:94:G:O4'	2.06	0.55
13:BI:168:GLN:HA	81:A2:4979:C:H2'	1.87	0.55
28:BX:68:LYS:HB2	28:BX:85:VAL:HB	1.87	0.55
39:CB:37:PRO:O	39:CB:188:GLY:HA3	2.06	0.55
40:CC:74:ALA:C	40:CC:76:ILE:H	2.08	0.55
44:CG:76:VAL:HG22	44:CG:238:GLY:C	2.27	0.55
45:CH:80:MET:O	45:CH:84:VAL:HG23	2.06	0.55
54:CR:106:LEU:HG	54:CR:120:TYR:CD2	2.41	0.55
62:CZ:6:LYS:HB3	62:CZ:7:PRO:HD2	1.88	0.55
81:A2:1163:C:O2'	81:A2:1164:A:H5'	2.05	0.55
81:A2:1270:G:C4'	81:A2:4898:A:C2	2.84	0.55
81:A2:1340:G:H3'	81:A2:1341:G:H8	1.70	0.55
81:A2:1523:G:H3'	81:A2:1524:G:H8	1.71	0.55
81:A2:1933:G:C2	81:A2:2007:A:C4	2.95	0.55
81:A2:1317:A:C2	81:A2:2326:A:C2	2.95	0.55
81:A2:2520:A:H2	81:A2:2750:G:N2	2.04	0.55
81:A2:2866:G:H21	81:A2:4989:A:H8	1.55	0.55
81:A2:229:G:C1'	81:A2:374:A:H1'	2.25	0.55
81:A2:400:G:N2	81:A2:2305:U:C5'	2.61	0.55
45:CH:175:PHE:CE2	81:A2:4438:G:H5'	2.41	0.55
81:A2:4579:U:H2'	81:A2:4580:U:C6	2.42	0.55
81:A2:4579:U:H5'	81:A2:4579:U:H6	1.71	0.55
81:A2:4908:G:H2'	81:A2:4909:G:C8	2.41	0.55
13:BI:168:GLN:C	81:A2:4979:C:H3'	2.27	0.55
81:A2:929:U:C4	81:A2:930:C:C4	2.95	0.55
81:A2:961:C:C2'	81:A2:962:G:C8	2.90	0.55
83:A4:28:C:H2'	83:A4:28:C:O2	2.07	0.55
83:A4:54:A:H3'	83:A4:54:A:OP2	2.07	0.55
4:B1:1086:G:H2'	4:B1:1086:G:N3	2.22	0.55
4:B1:1164:G:H3'	4:B1:1165:G:C2	2.41	0.55
4:B1:1266:C:H2'	4:B1:1267:C:C6	2.42	0.55
4:B1:1277:C:H3'	4:B1:1278:A:C8	2.42	0.55
4:B1:1557:C:H42	4:B1:1661:A:C4'	2.19	0.55
4:B1:476:A:H3'	4:B1:477:G:H8	1.72	0.55
4:B1:46:A:H4'	4:B1:47:G:H5'	1.89	0.55
4:B1:635:G:H2'	4:B1:636:C:H6	1.71	0.55
4:B1:804:U:H2'	4:B1:805:U:C5	2.40	0.55
4:B1:144:U:H6	11:BG:180:VAL:HG22	1.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:743:U:O2	12:BH:100:ILE:HB	2.07	0.55
12:BH:148:LEU:HA	27:BW:42:MET:SD	2.47	0.55
13:BI:107:THR:HG21	81:A2:4981:U:N3	2.15	0.55
14:BJ:137:VAL:HB	14:BJ:142:VAL:HG23	1.88	0.55
41:CD:13:PHE:HE1	83:A4:15:C:H1'	1.71	0.55
42:CE:170:SER:OG	42:CE:172:LEU:HG	2.06	0.55
42:CE:258:LEU:HB2	42:CE:259:PRO:HD3	1.88	0.55
44:CG:138:ALA:HB3	44:CG:196:ARG:NH2	2.22	0.55
47:CJ:97:ASN:O	47:CJ:98:ASN:HB2	2.07	0.55
48:CL:53:GLY:O	48:CL:55:ILE:N	2.40	0.55
53:CQ:65:ARG:N	81:A2:1481:G:N2	2.55	0.55
57:CU:26:THR:OG1	57:CU:68:SER:HB2	2.07	0.55
61:CY:123:ALA:HA	61:CY:126:ARG:CB	2.36	0.55
81:A2:1220:G:C4	81:A2:1221:C:N4	2.73	0.55
81:A2:1587:G:H5'	81:A2:3797:A:O4'	2.07	0.55
81:A2:1626:U:O5'	81:A2:1626:U:H6	1.89	0.55
81:A2:1760:U:H2'	81:A2:1761:U:H5'	1.88	0.55
81:A2:1808:G:C2'	81:A2:1809:G:H5'	2.37	0.55
81:A2:2014:C:H2'	81:A2:2015:C:H5'	1.89	0.55
81:A2:2280:U:C5	81:A2:2308:A:C2	2.95	0.55
81:A2:2284:A:H1'	82:A3:19:C:HO2'	1.72	0.55
81:A2:224:A:N6	81:A2:238:G:H2'	2.20	0.55
81:A2:2525:C:H3'	81:A2:2526:G:H4'	1.88	0.55
81:A2:256:C:H3'	81:A2:256:C:O2	2.07	0.55
81:A2:2716:C:H1'	81:A2:2717:U:OP1	2.06	0.55
81:A2:359:C:O5'	81:A2:359:C:H6	1.90	0.55
4:B1:970:G:N9	81:A2:3680:A:H5''	2.15	0.55
81:A2:3704:G:H8	81:A2:3704:G:O5'	1.90	0.55
81:A2:3824:C:O2'	81:A2:3825:A:H5'	2.07	0.55
81:A2:468:C:H2'	81:A2:469:G:C8	2.41	0.55
81:A2:4803:C:H2'	81:A2:4804:G:H4'	1.89	0.55
81:A2:4843:U:H2'	81:A2:4844:G:H5'	1.87	0.55
81:A2:4863:G:H2'	81:A2:4864:A:C4'	2.37	0.55
83:A4:53:U:O2	83:A4:53:U:C2'	2.53	0.55
2:AW:71:G:H4'	81:A2:3708:C:O2'	2.07	0.55
3:AX:42:U:C5	19:BO:151:LEU:CD2	2.90	0.55
4:B1:1272:C:H2'	4:B1:1273:C:C6	2.42	0.55
4:B1:1418:C:H5''	24:BT:129:ARG:HB2	1.85	0.55
4:B1:1603:G:H4'	4:B1:1604:G:OP2	2.04	0.55
4:B1:235:A:N6	4:B1:894:G:C2	2.75	0.55
4:B1:380:G:H1	4:B1:382:C:H3'	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:893:U:H2'	4:B1:894:G:H8	1.68	0.55
6:BB:197:ILE:O	6:BB:201:CYS:HB2	2.07	0.55
9:BE:149:TYR:CZ	11:BG:206:ALA:HA	2.42	0.55
13:BI:122:GLY:O	13:BI:124:LYS:N	2.40	0.55
13:BI:123:ARG:NH2	81:A2:4979:C:P	2.79	0.55
14:BJ:113:GLN:O	14:BJ:117:LEU:HG	2.06	0.55
40:CC:207:PRO:HB3	40:CC:249:PHE:CD1	2.41	0.55
40:CC:49:ARG:CZ	81:A2:340:A:N7	2.69	0.55
43:CF:88:LYS:HB3	43:CF:124:LYS:HZ1	1.71	0.55
43:CF:55:LYS:HB3	81:A2:973:U:N3	2.21	0.55
47:CJ:120:ASP:HB3	47:CJ:123:ILE:HD12	1.88	0.55
55:CS:80:ILE:HG22	55:CS:82:LEU:CD2	2.37	0.55
61:CY:42:TYR:CG	61:CY:124:LYS:HE3	2.41	0.55
81:A2:1197:G:C3'	81:A2:1198:G:H8	2.20	0.55
81:A2:1199:G:C3'	81:A2:1200:G:C8	2.89	0.55
81:A2:1267:G:H2'	81:A2:1268:G:H4'	1.88	0.55
81:A2:1325:A:H8	81:A2:1325:A:O5'	1.90	0.55
81:A2:105:A:H5''	81:A2:1341:G:O2'	2.07	0.55
81:A2:1742:C:O5'	81:A2:1743:G:H5''	2.06	0.55
81:A2:215:A:O4'	81:A2:216:G:H5'	2.05	0.55
81:A2:2247:C:H6	81:A2:2247:C:O5'	1.89	0.55
81:A2:2304:G:O2'	81:A2:2305:U:H5'	2.07	0.55
81:A2:2331:G:O5'	81:A2:2331:G:H8	1.90	0.55
81:A2:2420:G:O4'	81:A2:2489:A:C2	2.59	0.55
81:A2:2867:C:H42	81:A2:3580:A:N6	2.05	0.55
81:A2:372:U:H2'	81:A2:373:G:O4'	2.07	0.55
81:A2:3757:C:H2'	81:A2:3758:C:O2	2.07	0.55
81:A2:3943:G:H8	81:A2:3943:G:C5'	2.13	0.55
81:A2:4044:G:N2	81:A2:4130:A:H61	2.05	0.55
81:A2:4396:U:H4'	81:A2:4397:U:OP1	2.05	0.55
81:A2:439:G:C2'	81:A2:440:C:H5'	2.37	0.55
81:A2:5009:C:C2'	81:A2:5009:C:O2	2.55	0.55
82:A3:16:G:OP2	82:A3:16:G:C8	2.59	0.55
82:A3:24:G:H5''	82:A3:24:G:C8	2.38	0.55
4:B1:1168:G:C2'	4:B1:1169:G:H5'	2.37	0.55
4:B1:136:C:H1'	4:B1:137:U:OP1	2.07	0.55
4:B1:1534:C:H5'	4:B1:1536:G:C1'	2.37	0.55
4:B1:301:A:C2'	4:B1:302:A:H8	2.17	0.55
4:B1:350:C:N4	4:B1:351:G:N2	2.55	0.55
4:B1:646:G:H5''	4:B1:646:G:C8	2.42	0.55
4:B1:72:C:H2'	4:B1:73:C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:970:G:H1'	4:B1:971:G:OP1	2.06	0.55
27:BW:77:PRO:HG2	27:BW:79:PHE:CZ	2.41	0.55
39:CB:222:VAL:O	39:CB:339:GLY:HA2	2.07	0.55
48:CL:156:PRO:HA	81:A2:1359:C:C5	2.42	0.55
81:A2:1587:G:H2'	81:A2:1588:U:O4'	2.05	0.55
81:A2:14:C:C1'	81:A2:15:A:OP2	2.54	0.55
81:A2:1622:A:H2'	81:A2:1623:C:H5'	1.88	0.55
81:A2:1811:G:H3'	81:A2:1811:G:C8	2.42	0.55
81:A2:1894:G:H8	81:A2:1894:G:H3'	1.70	0.55
81:A2:2045:C:H2'	81:A2:2046:C:C6	2.41	0.55
81:A2:2518:G:C3'	81:A2:2519:G:H5''	2.37	0.55
54:CR:117:ARG:HH12	81:A2:2654:G:H21	1.54	0.55
81:A2:2746:U:C5	81:A2:2746:U:OP2	2.60	0.55
40:CC:55:SER:HB2	81:A2:347:G:C5'	2.36	0.55
81:A2:38:A:C8	81:A2:40:G:OP2	2.59	0.55
81:A2:4437:A:C2	81:A2:4438:G:N7	2.74	0.55
81:A2:904:C:H2'	81:A2:905:C:H6	1.71	0.55
4:B1:1035:A:OP2	4:B1:1035:A:C8	2.60	0.55
4:B1:1180:C:H2'	4:B1:1181:A:H5'	1.87	0.55
4:B1:1280:G:C2	4:B1:1281:G:C5	2.95	0.55
4:B1:1396:A:H2	4:B1:1449:G:N1	2.00	0.55
4:B1:1473:G:C8	4:B1:1475:G:OP2	2.59	0.55
4:B1:1539:U:H2'	4:B1:1540:G:H5'	1.89	0.55
4:B1:1579:A:C8	25:BU:56:MET:HG2	2.40	0.55
4:B1:1681:U:O5'	4:B1:1681:U:H6	1.89	0.55
4:B1:544:G:H4'	4:B1:545:A:OP1	2.05	0.55
4:B1:61:A:H1'	4:B1:62:G:P	2.46	0.55
5:BA:81:ASN:HA	5:BA:84:GLN:HB2	1.88	0.55
7:BC:200:ARG:HA	7:BC:221:ASP:OD2	2.06	0.55
21:BQ:33:LYS:HD3	21:BQ:69:ARG:HD3	1.89	0.55
25:BU:22:ILE:HD11	25:BU:91:LEU:HD11	1.88	0.55
56:CT:68:THR:HG22	56:CT:71:ALA:H	1.70	0.55
62:CZ:48:ARG:NH1	62:CZ:69:LYS:HB2	2.22	0.55
81:A2:1061:C:H2'	81:A2:1062:C:C5	2.42	0.55
81:A2:1322:A:H2'	81:A2:1323:A:O4'	2.07	0.55
81:A2:1332:C:O2	81:A2:1336:U:H5'	2.06	0.55
81:A2:2395:A:H3'	81:A2:2396:C:C5'	2.37	0.55
81:A2:2520:A:C2	81:A2:2750:G:N2	2.74	0.55
81:A2:2523:G:H2'	81:A2:2524:G:C1'	2.36	0.55
81:A2:2789:A:H3'	81:A2:2790:A:C8	2.42	0.55
81:A2:2837:C:C3'	81:A2:2837:C:C6	2.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3720:G:H2'	81:A2:3720:G:N3	2.22	0.55
81:A2:3752:A:H2	81:A2:3758:C:H41	1.55	0.55
81:A2:4232:G:N2	81:A2:4296:A:H2	2.05	0.55
81:A2:441:G:H4'	81:A2:442:C:OP1	2.06	0.55
81:A2:443:A:O2'	81:A2:444:G:H2'	2.07	0.55
81:A2:4506:A:H8	81:A2:4506:A:O5'	1.90	0.55
81:A2:4624:A:H2'	81:A2:4625:A:C8	2.42	0.55
81:A2:8:U:O2	81:A2:8:U:C3'	2.53	0.55
1:AV:16:U:O3'	1:AV:17:C:H6	1.89	0.55
1:AV:34:G:C5'	4:B1:1248:U:O2	2.55	0.55
4:B1:1012:A:H4'	4:B1:1130:G:O2'	2.07	0.55
4:B1:1261:C:H3'	4:B1:1262:C:H5''	1.88	0.55
4:B1:1282:A:H2'	4:B1:1283:C:H5'	1.88	0.55
4:B1:1417:C:HO2'	4:B1:1418:C:H5'	1.70	0.55
4:B1:193:C:H1'	4:B1:208:G:N1	2.21	0.55
4:B1:36:U:C2	4:B1:520:A:C2	2.95	0.55
4:B1:572:U:H3'	4:B1:572:U:C6	2.42	0.55
4:B1:743:U:H3'	4:B1:744:G:H8	1.71	0.55
4:B1:888:U:H3'	4:B1:888:U:C6	2.42	0.55
4:B1:889:U:H3'	4:B1:890:U:C5'	2.36	0.55
4:B1:915:G:C2'	4:B1:916:A:H5'	2.36	0.55
12:BH:135:PHE:HB3	12:BH:136:PRO:HD3	1.89	0.55
25:BU:99:LYS:HA	25:BU:102:THR:OG1	2.07	0.55
41:CD:22:ARG:HD2	41:CD:27:LYS:HB2	1.88	0.55
43:CF:229:GLU:OE1	55:CS:122:HIS:HE1	1.90	0.55
23:BS:14:ARG:CZ	47:CJ:114:ASP:OD1	2.55	0.55
49:CM:122:ILE:HG21	51:CO:187:LYS:N	2.22	0.55
49:CM:69:HIS:CE1	49:CM:72:TYR:HB2	2.42	0.55
41:CD:41:LYS:HE2	56:CT:34:TYR:HB2	1.87	0.55
81:A2:1231:C:H2'	81:A2:1232:C:C6	2.41	0.55
81:A2:125:C:H6	81:A2:125:C:O5'	1.90	0.55
81:A2:18:C:H2'	81:A2:19:G:C8	2.42	0.55
81:A2:201:U:H3	81:A2:208:G:H1	1.53	0.55
81:A2:2524:G:N2	81:A2:2525:C:C5	2.75	0.55
81:A2:2526:G:N2	81:A2:2746:U:C4	2.74	0.55
81:A2:2568:A:C6	81:A2:2732:A:C1'	2.90	0.55
81:A2:282:U:O2	81:A2:284:G:H2'	2.07	0.55
81:A2:309:A:C8	81:A2:309:A:H3'	2.41	0.55
81:A2:3684:U:C2'	81:A2:3685:C:H5'	2.37	0.55
81:A2:4163:A:C3'	81:A2:4163:A:N3	2.69	0.55
81:A2:4266:U:H4'	81:A2:4267:A:OP2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4269:G:H8	81:A2:4269:G:C5'	2.20	0.55
81:A2:455:G:H3'	81:A2:456:G:C8	2.41	0.55
81:A2:4743:C:C6	81:A2:4743:C:O5'	2.60	0.55
81:A2:977:G:C2'	81:A2:978:G:O4'	2.50	0.55
81:A2:99:A:C8	81:A2:100:C:C5	2.95	0.55
83:A4:54:A:H2	83:A4:55:A:C4	2.25	0.55
4:B1:1405:A:H3'	4:B1:1406:G:H5''	1.87	0.55
4:B1:569:A:C6	4:B1:570:C:C4	2.95	0.55
4:B1:611:G:N2	4:B1:633:C:H1'	2.22	0.55
4:B1:672:A:O2'	4:B1:673:G:H5''	2.06	0.55
4:B1:798:G:N3	4:B1:798:G:H5'	2.22	0.55
4:B1:798:G:N1	4:B1:799:U:C4	2.75	0.55
4:B1:987:A:H3'	4:B1:988:C:H5	1.69	0.55
8:BD:99:ILE:HG12	8:BD:171:ALA:HB2	1.89	0.55
10:BF:162:ALA:HB2	10:BF:172:CYS:HB2	1.89	0.55
6:BB:65:ARG:HG2	19:BO:50:LYS:HD2	1.88	0.55
38:CA:4:VAL:HG13	38:CA:8:GLN:OE1	2.07	0.55
39:CB:113:GLU:OE2	39:CB:167:GLN:HA	2.07	0.55
43:CF:119:ASN:HA	43:CF:211:PHE:O	2.07	0.55
45:CH:12:ILE:O	45:CH:53:LYS:HA	2.07	0.55
81:A2:1142:G:H8	81:A2:1142:G:O5'	1.90	0.54
81:A2:1238:G:H2'	81:A2:1239:G:C8	2.42	0.54
81:A2:1525:C:H4'	81:A2:1562:A:C2	2.29	0.54
81:A2:1872:C:C2'	81:A2:1873:G:H5''	2.37	0.54
81:A2:1877:G:H5'	81:A2:2254:G:O2'	2.07	0.54
81:A2:2456:G:H2'	81:A2:2457:G:C8	2.41	0.54
81:A2:1596:G:N2	81:A2:2490:A:C8	2.75	0.54
81:A2:2567:G:H2'	81:A2:2567:G:OP2	2.07	0.54
81:A2:2635:G:C8	81:A2:2636:A:H2	2.25	0.54
81:A2:2652:G:H8	81:A2:2652:G:OP2	1.90	0.54
81:A2:2665:G:C6	81:A2:2666:C:N4	2.75	0.54
54:CR:43:LYS:HG3	81:A2:2687:C:OP1	2.07	0.54
81:A2:2707:U:O2'	81:A2:2708:C:H5'	2.07	0.54
81:A2:2738:U:H1'	81:A2:2739:G:N7	2.20	0.54
81:A2:2760:A:H3'	81:A2:2761:C:C5	2.42	0.54
81:A2:3801:U:H2'	81:A2:3802:C:H5''	1.89	0.54
38:CA:207:VAL:CG1	81:A2:3888:C:H4'	2.36	0.54
81:A2:4157:G:C2'	81:A2:4158:G:H5'	2.37	0.54
81:A2:423:U:H3'	81:A2:423:U:H6	1.72	0.54
51:CO:114:LYS:HA	81:A2:4717:U:H6	1.72	0.54
82:A3:129:C:C2	82:A3:130:C:H5	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CX:46:PHE:CZ	82:A3:148:A:H4'	2.43	0.54
4:B1:1403:C:C5	4:B1:1404:U:N1	2.75	0.54
4:B1:1490:G:N3	4:B1:1490:G:H2'	2.22	0.54
4:B1:1556:A:C2	4:B1:1557:C:C5	2.95	0.54
4:B1:1578:U:C5	8:BD:5:ILE:HA	2.42	0.54
4:B1:457:C:O4'	4:B1:1801:A:H4'	2.06	0.54
4:B1:4:C:H5	4:B1:655:A:OP1	1.91	0.54
4:B1:589:G:C1'	4:B1:590:A:OP1	2.54	0.54
4:B1:805:U:N3	4:B1:858:A:H2	2.05	0.54
4:B1:83:A:O2'	29:BY:123:ALA:HB1	2.07	0.54
4:B1:86:C:C3'	4:B1:87:U:H5''	2.37	0.54
6:BB:116:LYS:HE2	6:BB:117:TRP:CZ3	2.41	0.54
10:BF:100:ILE:HA	10:BF:103:LEU:HD12	1.90	0.54
4:B1:381:C:H5''	13:BI:48:VAL:HG22	1.89	0.54
4:B1:1579:A:N6	25:BU:88:LEU:HD22	2.22	0.54
30:BZ:43:LYS:HG3	30:BZ:44:LEU:O	2.07	0.54
39:CB:167:GLN:HE22	39:CB:204:GLN:HE21	1.53	0.54
42:CE:162:VAL:HG11	42:CE:175:VAL:CG1	2.37	0.54
43:CF:223:LYS:HB2	43:CF:232:ASP:H	1.71	0.54
53:CQ:158:THR:HB	53:CQ:159:PRO:HD3	1.89	0.54
62:CZ:105:ALA:HB1	81:A2:2531:U:C4'	2.38	0.54
81:A2:1204:G:H5''	81:A2:1211:C:C4	2.42	0.54
81:A2:1585:U:H2'	81:A2:1586:C:O4'	2.07	0.54
81:A2:20:U:O2	81:A2:20:U:H2'	2.07	0.54
81:A2:2310:G:O3'	82:A3:20:A:H5''	2.07	0.54
81:A2:2395:A:C3'	81:A2:2396:C:H5''	2.37	0.54
81:A2:240:A:O5'	81:A2:240:A:H8	1.90	0.54
81:A2:79:C:H4'	81:A2:329:A:H4'	1.90	0.54
81:A2:381:C:C5'	81:A2:381:C:C6	2.88	0.54
81:A2:2337:A:N1	81:A2:3829:A:H5''	2.22	0.54
81:A2:458:U:H5''	81:A2:459:U:OP1	2.08	0.54
49:CM:116:LYS:HD3	81:A2:4835:C:H41	1.72	0.54
43:CF:69:ILE:HD12	81:A2:716:U:H4'	1.89	0.54
83:A4:94:C:H2'	83:A4:95:C:C6	2.41	0.54
2:AW:9:A:H4'	2:AW:46:G:C4'	2.37	0.54
3:AX:47:U:H5'	4:B1:1830:U:C4	2.39	0.54
4:B1:1165:G:H4'	4:B1:1166:G:C5'	2.38	0.54
4:B1:1472:C:O2	4:B1:1472:C:H2'	2.06	0.54
4:B1:1508:A:OP2	4:B1:1508:A:H8	1.91	0.54
4:B1:1552:G:C8	4:B1:1578:U:O4	2.60	0.54
4:B1:1557:C:C2'	4:B1:1557:C:O2	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1598:G:H4'	4:B1:1600:G:N7	2.23	0.54
4:B1:1686:G:H5'	4:B1:1687:C:OP2	2.07	0.54
4:B1:1755:C:H2'	4:B1:1756:C:H6	1.67	0.54
4:B1:1835:A:N3	4:B1:1835:A:C2'	2.69	0.54
4:B1:213:G:H2'	4:B1:214:U:O4'	2.08	0.54
4:B1:223:C:H2'	4:B1:224:A:C8	2.42	0.54
4:B1:525:A:C8	4:B1:525:A:C3'	2.90	0.54
4:B1:581:U:H5''	29:BY:64:PHE:CE1	2.42	0.54
4:B1:799:U:C6	4:B1:800:U:C2	2.96	0.54
5:BA:110:ASN:C	5:BA:110:ASN:HD22	2.11	0.54
4:B1:302:A:H4'	13:BI:73:THR:O	2.06	0.54
27:BW:36:ARG:CG	27:BW:110:ILE:HD12	2.37	0.54
30:BZ:43:LYS:HZ1	30:BZ:44:LEU:H	1.54	0.54
52:CP:114:ILE:HD13	52:CP:148:MET:HE3	1.89	0.54
60:CX:96:LEU:HB3	60:CX:98:PHE:CE2	2.42	0.54
61:CY:120:GLU:O	61:CY:125:SER:N	2.35	0.54
53:CQ:15:ARG:HH22	81:A2:1328:U:H5''	1.72	0.54
81:A2:1394:C:H2'	81:A2:1395:G:H8	1.72	0.54
81:A2:1654:C:P	81:A2:4336:A:H2'	2.48	0.54
81:A2:1659:G:C8	81:A2:1659:G:C5'	2.84	0.54
81:A2:2343:A:H2'	81:A2:2344:A:H5''	1.88	0.54
81:A2:2380:A:H3'	81:A2:2381:A:C8	2.42	0.54
81:A2:2395:A:C4	81:A2:2396:C:C5	2.95	0.54
81:A2:2395:A:H3'	81:A2:2396:C:H5''	1.88	0.54
81:A2:2658:G:H2'	81:A2:2659:G:C8	2.40	0.54
81:A2:2663:G:H3'	81:A2:2664:U:O4'	2.07	0.54
81:A2:2842:U:H2'	81:A2:2843:C:C6	2.42	0.54
81:A2:32:G:H21	81:A2:50:C:H5	1.51	0.54
81:A2:24:G:C2	81:A2:333:G:C8	2.95	0.54
81:A2:3592:C:C6	81:A2:3592:C:O5'	2.61	0.54
81:A2:3779:C:H6	81:A2:3779:C:C3'	2.14	0.54
81:A2:4032:C:H3'	81:A2:4033:G:C4'	2.37	0.54
81:A2:4621:G:H2'	81:A2:4622:C:O4'	2.07	0.54
81:A2:476:C:P	81:A2:658:G:H4'	2.47	0.54
81:A2:4917:C:O2'	81:A2:4918:G:H5'	2.07	0.54
81:A2:957:G:O2'	81:A2:1217:C:H4'	2.08	0.54
81:A2:973:U:H4'	81:A2:974:C:OP1	2.07	0.54
83:A4:95:C:O5'	83:A4:95:C:H6	1.90	0.54
4:B1:1422:G:H2'	4:B1:1422:G:N3	2.21	0.54
4:B1:1454:A:H5'	22:BR:5:ARG:NH2	2.23	0.54
4:B1:1534:C:OP2	4:B1:1599:U:H5	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1689:C:H2'	4:B1:1690:U:C6	2.42	0.54
4:B1:408:A:C2'	4:B1:409:C:H4'	2.36	0.54
4:B1:586:G:C2	4:B1:587:A:H1'	2.42	0.54
4:B1:811:A:H1'	4:B1:812:A:C8	2.42	0.54
4:B1:798:G:H1'	4:B1:867:G:N2	2.20	0.54
6:BB:63:LYS:HE3	6:BB:91:VAL:CB	2.37	0.54
8:BD:32:ASP:HB3	8:BD:57:ASN:HB2	1.88	0.54
11:BG:23:LYS:HD3	11:BG:41:LEU:HD23	1.90	0.54
12:BH:102:PRO:HG2	12:BH:105:THR:HB	1.89	0.54
23:BS:38:ARG:O	23:BS:42:HIS:HD2	1.90	0.54
39:CB:356:LYS:O	39:CB:357:ARG:HB3	2.08	0.54
42:CE:205:ASN:HB2	42:CE:256:GLN:CB	2.38	0.54
45:CH:41:ILE:HG13	45:CH:73:ILE:HG13	1.88	0.54
49:CM:58:THR:HG22	49:CM:91:TRP:HZ3	1.72	0.54
58:CV:105:ILE:HG23	58:CV:113:LYS:HB3	1.88	0.54
81:A2:1054:G:H2'	81:A2:1055:G:H5'	1.90	0.54
81:A2:1147:C:H2'	81:A2:1147:C:O2	2.06	0.54
81:A2:1160:C:H6	81:A2:1160:C:H3'	1.71	0.54
81:A2:1480:C:H3'	81:A2:1481:G:H5''	1.89	0.54
81:A2:1535:C:H2'	81:A2:1536:C:C6	2.43	0.54
81:A2:1715:A:O2'	81:A2:1716:A:H5'	2.08	0.54
81:A2:1892:C:H5''	81:A2:1893:C:H5''	1.89	0.54
81:A2:198:C:O2'	81:A2:199:C:H5	1.91	0.54
81:A2:1:C:O2	82:A3:157:U:C2	2.60	0.54
81:A2:2690:C:H2'	81:A2:2691:G:C8	2.42	0.54
81:A2:2749:C:H2'	81:A2:2750:G:O5'	2.06	0.54
81:A2:2860:G:H2'	81:A2:2861:G:O4'	2.07	0.54
81:A2:334:C:C5'	81:A2:334:C:C6	2.87	0.54
81:A2:4218:C:O5'	81:A2:4218:C:H6	1.90	0.54
81:A2:4367:G:H2'	81:A2:4368:G:C8	2.40	0.54
81:A2:4507:C:H5''	81:A2:4507:C:H6	1.72	0.54
81:A2:4598:U:H2'	81:A2:4599:G:H8	1.68	0.54
81:A2:4738:U:H2'	81:A2:4739:G:H5'	1.88	0.54
81:A2:4851:G:O2'	81:A2:4852:G:H5'	2.06	0.54
81:A2:4874:G:C4	81:A2:4875:C:C5	2.96	0.54
55:CS:87:ARG:NE	83:A4:87:G:H5''	2.22	0.54
4:B1:1419:C:H2'	4:B1:1420:G:C8	2.43	0.54
4:B1:1452:A:C5	4:B1:1475:G:C6	2.96	0.54
4:B1:37:C:H3'	4:B1:38:A:H5''	1.90	0.54
4:B1:523:A:O5'	4:B1:523:A:H8	1.91	0.54
4:B1:553:U:H3'	4:B1:554:A:C5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:951:C:H1'	4:B1:976:G:C2	2.43	0.54
5:BA:177:MET:HG3	5:BA:180:ARG:HH12	1.72	0.54
6:BB:35:ALA:HB1	6:BB:36:PRO:HD2	1.88	0.54
13:BI:66:SER:HA	13:BI:73:THR:HA	1.89	0.54
20:BP:17:TYR:HB3	20:BP:25:LEU:HD11	1.88	0.54
40:CC:54:VAL:HG13	40:CC:55:SER:N	2.22	0.54
41:CD:283:LYS:O	41:CD:287:PHE:HD2	1.90	0.54
43:CF:243:LEU:O	43:CF:247:MET:HG3	2.08	0.54
46:CI:38:ARG:HE	46:CI:40:LYS:HB2	1.71	0.54
50:CN:39:ALA:HB3	50:CN:61:ILE:CG2	2.36	0.54
81:A2:978:G:H1	81:A2:1051:C:H42	1.56	0.54
81:A2:1300:U:H2'	81:A2:1301:G:O4'	2.07	0.54
81:A2:1398:C:O5'	81:A2:1398:C:H6	1.90	0.54
81:A2:1437:C:C3'	81:A2:1438:A:H8	2.20	0.54
81:A2:1761:U:H2'	81:A2:1762:C:H6	1.72	0.54
81:A2:2027:G:H2'	81:A2:2028:G:O5'	2.07	0.54
81:A2:2062:C:O2'	81:A2:2063:G:H5'	2.08	0.54
81:A2:2258:A:H2'	81:A2:2259:G:O4'	2.08	0.54
81:A2:2478:C:C6	81:A2:2478:C:O5'	2.60	0.54
81:A2:2810:A:C5	81:A2:2811:C:N3	2.75	0.54
81:A2:3669:C:H3'	81:A2:3715:A:N6	2.18	0.54
81:A2:3718:C:H2'	81:A2:3719:G:O4'	2.07	0.54
81:A2:1633:G:H2'	81:A2:3883:U:OP1	2.08	0.54
1:AV:76:A:C6	81:A2:4156:G:N1	2.65	0.54
81:A2:4223:C:H2'	81:A2:4224:G:O4'	2.08	0.54
81:A2:4546:G:H2'	81:A2:4547:G:C8	2.43	0.54
81:A2:4709:G:O5'	81:A2:4709:G:H8	1.91	0.54
81:A2:4812:A:H2'	81:A2:4813:C:H6	1.68	0.54
81:A2:4903:C:C3'	81:A2:4904:G:H5'	2.38	0.54
81:A2:921:U:H2'	81:A2:922:C:C6	2.42	0.54
1:AV:34:G:C2	4:B1:1701:C:C1'	2.91	0.54
4:B1:10:G:H1'	7:BC:115:GLN:OE1	2.08	0.54
4:B1:1387:G:H8	4:B1:1387:G:O5'	1.89	0.54
4:B1:1578:U:H4'	4:B1:1579:A:OP2	2.06	0.54
4:B1:1622:U:H6	4:B1:1622:U:H3'	1.73	0.54
4:B1:1677:U:O2	4:B1:1678:A:H8	1.89	0.54
4:B1:201:C:O2	4:B1:201:C:H3'	2.08	0.54
4:B1:369:C:C2'	4:B1:370:G:H5''	2.38	0.54
4:B1:573:U:C2'	4:B1:576:A:C2	2.86	0.54
5:BA:110:ASN:OD1	5:BA:113:GLN:HG2	2.08	0.54
11:BG:91:GLU:HG2	11:BG:91:GLU:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BI:101:ILE:HD11	13:BI:198:TYR:CD1	2.42	0.54
17:BM:65:VAL:HG21	17:BM:108:CYS:SG	2.46	0.54
19:BO:27:VAL:HG12	19:BO:90:ILE:HG12	1.88	0.54
4:B1:29:G:H4'	28:BX:129:SER:HB2	1.89	0.54
28:BX:32:LEU:HD22	28:BX:34:THR:HB	1.89	0.54
29:BY:87:PRO:HD2	29:BY:90:ARG:HD2	1.90	0.54
42:CE:162:VAL:HG13	42:CE:163:VAL:N	2.23	0.54
43:CF:194:ILE:HA	43:CF:201:PHE:CE2	2.42	0.54
44:CG:51:LEU:HD12	60:CX:42:THR:O	2.07	0.54
45:CH:69:THR:HA	81:A2:4660:A:C2	2.39	0.54
49:CM:128:LYS:O	49:CM:132:LYS:N	2.41	0.54
51:CO:23:VAL:O	51:CO:27:VAL:HG23	2.07	0.54
81:A2:1045:G:H2'	81:A2:1046:G:C8	2.43	0.54
4:B1:678:U:H5'	81:A2:1543:A:C1'	2.36	0.54
81:A2:1544:A:C2	81:A2:1545:C:H1'	2.43	0.54
81:A2:1872:C:H2'	81:A2:1873:G:C5'	2.37	0.54
81:A2:2006:C:H4'	81:A2:2007:A:OP1	2.08	0.54
81:A2:2702:A:O5'	81:A2:2703:G:H8	1.91	0.54
81:A2:270:A:O4'	81:A2:272:U:H1'	2.08	0.54
81:A2:2828:G:C2	81:A2:2829:U:H1'	2.42	0.54
81:A2:3936:G:H3'	81:A2:3937:U:C6	2.43	0.54
81:A2:4812:A:H2'	81:A2:4813:C:C1'	2.38	0.54
81:A2:667:C:O2'	81:A2:668:C:H5'	2.08	0.54
3:AX:45:U:H6	3:AX:45:U:OP1	1.90	0.54
4:B1:1204:A:O5'	4:B1:1204:A:C8	2.60	0.54
4:B1:1332:A:H1'	8:BD:141:LYS:NZ	2.23	0.54
4:B1:1413:G:H2'	4:B1:1414:A:C8	2.42	0.54
4:B1:1414:A:H2'	4:B1:1415:C:N1	2.22	0.54
4:B1:1416:C:N4	4:B1:1431:G:N2	2.55	0.54
4:B1:170:A:C3'	4:B1:171:A:C8	2.90	0.54
4:B1:172:U:O2	4:B1:172:U:H2'	2.07	0.54
4:B1:211:G:C4	4:B1:212:C:C5	2.96	0.54
4:B1:314:U:H2'	4:B1:314:U:O2	2.08	0.54
4:B1:562:U:H6	4:B1:562:U:H3'	1.72	0.54
4:B1:635:G:H2'	4:B1:636:C:C6	2.43	0.54
4:B1:819:G:H2'	4:B1:820:U:C6	2.42	0.54
4:B1:854:A:H8	4:B1:854:A:O5'	1.91	0.54
5:BA:205:ARG:HG3	5:BA:206:ASP:H	1.71	0.54
6:BB:68:GLU:OE2	6:BB:83:LYS:HE2	2.06	0.54
8:BD:98:ALA:CA	8:BD:188:ILE:HD12	2.38	0.54
9:BE:195:ILE:HA	9:BE:210:VAL:HG12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:124:THR:HB	24:BT:125:PRO:HD2	1.89	0.54
40:CC:50:GLN:CB	40:CC:51:PRO:CD	2.86	0.54
81:A2:1280:G:P	81:A2:1280:G:H8	2.30	0.54
81:A2:1423:A:C2'	81:A2:1424:G:H8	2.21	0.54
81:A2:1431:G:H2'	81:A2:1432:A:H8	1.73	0.54
81:A2:3590:A:H3'	81:A2:3591:C:C5	2.42	0.54
81:A2:384:U:H2'	81:A2:385:G:C4'	2.36	0.54
81:A2:383:U:H1'	81:A2:390:G:N2	2.22	0.54
81:A2:3937:U:O5'	81:A2:3937:U:H6	1.90	0.54
81:A2:4379:U:O2	81:A2:4379:U:C2'	2.55	0.54
81:A2:4388:A:H3'	81:A2:4389:C:O4'	2.07	0.54
81:A2:4439:A:C2'	81:A2:4440:A:H5'	2.37	0.54
81:A2:4481:U:H2'	81:A2:4484:G:O6	2.07	0.54
81:A2:1942:A:H2	81:A2:4654:G:HO2'	1.56	0.54
81:A2:1943:G:C4'	81:A2:4655:C:H4'	2.37	0.54
81:A2:475:U:H3'	81:A2:475:U:H6	1.72	0.54
81:A2:673:G:C3'	81:A2:674:G:H5''	2.38	0.54
81:A2:916:A:C1'	81:A2:917:G:P	2.96	0.54
4:B1:1131:G:H2'	4:B1:1132:C:C6	2.43	0.54
4:B1:1284:A:C8	4:B1:1284:A:P	3.01	0.54
4:B1:1410:C:H3'	4:B1:1411:G:H3'	1.88	0.54
4:B1:1415:C:C2'	4:B1:1416:C:H5'	2.37	0.54
4:B1:148:U:C6	4:B1:148:U:H5''	2.43	0.54
4:B1:1494:U:H1'	4:B1:1495:G:P	2.47	0.54
4:B1:1533:A:N3	4:B1:1533:A:H2'	2.22	0.54
4:B1:1653:U:H3	4:B1:1671:G:H1	1.54	0.54
4:B1:187:G:H2'	4:B1:188:C:H6	1.70	0.54
4:B1:743:U:H2'	12:BH:100:ILE:O	2.07	0.54
4:B1:78:C:N3	11:BG:173:ALA:HB3	2.22	0.54
4:B1:823:U:H3'	4:B1:823:U:OP1	2.07	0.54
4:B1:871:U:C4	54:CR:163:ARG:CZ	2.89	0.54
4:B1:873:G:C5	54:CR:159:ALA:HB2	2.41	0.54
4:B1:900:C:H2'	4:B1:901:G:C5	2.41	0.54
4:B1:684:G:C6	4:B1:920:A:C8	2.95	0.54
5:BA:89:LYS:HB2	5:BA:202:TYR:CE2	2.42	0.54
6:BB:81:PHE:CD2	6:BB:82:ARG:HG3	2.42	0.54
9:BE:49:ARG:HA	9:BE:55:ALA:O	2.07	0.54
10:BF:128:ILE:HG22	10:BF:130:ARG:HG2	1.90	0.54
4:B1:67:C:H41	11:BG:163:ASN:CA	2.16	0.54
38:CA:97:ASN:HB2	38:CA:100:ASN:ND2	2.22	0.54
38:CA:129:ALA:HB3	38:CA:132:ASN:ND2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CE:174:LEU:HD12	42:CE:212:LEU:HD23	1.90	0.54
44:CG:58:PRO:HB3	81:A2:2448:G:C1'	2.37	0.54
47:CJ:13:ARG:O	47:CJ:137:PRO:HD2	2.07	0.54
58:CV:40:ILE:HG13	58:CV:41:SER:N	2.23	0.54
59:CW:57:ARG:HH11	59:CW:63:GLN:HE22	1.56	0.54
61:CY:87:ARG:HG3	61:CY:97:VAL:HG22	1.89	0.54
62:CZ:109:LYS:CD	81:A2:2532:G:H4'	2.38	0.54
62:CZ:89:ILE:O	62:CZ:89:ILE:HG12	2.05	0.54
81:A2:1141:G:H8	81:A2:1141:G:O5'	1.90	0.54
81:A2:1386:G:N2	81:A2:1387:C:H41	2.05	0.54
81:A2:1868:G:H4'	81:A2:1869:A:OP1	2.08	0.54
81:A2:210:G:C5	81:A2:211:G:C8	2.96	0.54
81:A2:2345:A:H5''	81:A2:2804:G:N2	2.14	0.54
81:A2:2398:G:OP1	81:A2:2805:U:H1'	2.07	0.54
81:A2:2401:G:H8	81:A2:2401:G:H3'	1.72	0.54
81:A2:2624:A:N1	81:A2:2664:U:O2	2.41	0.54
81:A2:2688:G:N2	81:A2:2689:G:H1'	2.22	0.54
81:A2:2740:U:H4'	81:A2:2741:A:O5'	2.08	0.54
52:CP:130:TYR:HB3	81:A2:2772:A:N6	2.23	0.54
81:A2:2823:G:C2'	81:A2:2824:G:H5'	2.38	0.54
13:BI:92:ARG:CZ	81:A2:2869:C:C2'	2.86	0.54
81:A2:3585:U:H1'	81:A2:3586:G:OP2	2.08	0.54
81:A2:3873:G:C8	81:A2:3873:G:OP2	2.61	0.54
81:A2:4131:C:H3'	81:A2:4132:A:C8	2.42	0.54
81:A2:4829:A:H2'	81:A2:4830:G:N7	2.22	0.54
81:A2:4855:C:C2'	81:A2:4856:G:H4'	2.33	0.54
81:A2:5021:U:H2'	81:A2:5022:U:H6	1.73	0.54
81:A2:99:A:H2'	81:A2:100:C:H6	1.70	0.54
83:A4:83:A:H61	83:A4:93:G:H1	1.55	0.54
2:AW:61:C:H2'	2:AW:62:C:C6	2.42	0.54
4:B1:1005:G:H2'	4:B1:1006:C:H6	1.73	0.54
4:B1:1425:G:H2'	4:B1:1426:U:C1'	2.38	0.54
4:B1:1621:U:O2	4:B1:1621:U:H3'	2.08	0.54
2:AW:34:G:C6	4:B1:1684:C:H1'	2.42	0.54
4:B1:345:U:C6	4:B1:345:U:H3'	2.42	0.54
4:B1:399:C:H5''	4:B1:400:C:H5	1.71	0.54
4:B1:746:C:C5'	12:BH:104:PRO:C	2.77	0.54
4:B1:748:C:N4	4:B1:860:G:P	2.76	0.54
4:B1:890:U:C2'	4:B1:890:U:O2	2.55	0.54
4:B1:902:G:H2'	4:B1:903:A:C8	2.42	0.54
4:B1:125:C:O4'	9:BE:136:ILE:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BE:23:LEU:HG	9:BE:23:LEU:O	2.08	0.54
10:BF:33:ILE:O	10:BF:34:SER:HB3	2.08	0.54
12:BH:102:PRO:CB	12:BH:105:THR:HB	2.38	0.54
17:BM:33:ARG:HH21	17:BM:91:LEU:HD23	1.73	0.54
18:BN:28:LEU:HD11	18:BN:32:ASP:CB	2.38	0.54
30:BZ:103:HIS:CG	30:BZ:104:ARG:H	2.26	0.54
46:CI:160:PRO:HD3	81:A2:4391:U:H4'	1.90	0.54
81:A2:1276:G:H5''	81:A2:1277:U:OP2	2.08	0.54
81:A2:1282:U:C2'	81:A2:1284:C:H6	2.20	0.54
81:A2:1282:U:H3'	81:A2:1284:C:H6	1.73	0.54
81:A2:1665:C:C5	81:A2:1665:C:OP2	2.60	0.54
81:A2:2020:A:C8	81:A2:2021:A:C4	2.95	0.54
81:A2:2370:C:C3'	81:A2:2371:G:H5''	2.22	0.54
81:A2:2475:C:H6	81:A2:2475:C:O5'	1.91	0.54
81:A2:2672:A:H5''	81:A2:2672:A:N3	2.22	0.54
81:A2:2743:A:H2'	81:A2:2744:U:N3	2.23	0.54
81:A2:3578:G:C8	81:A2:3578:G:C5'	2.91	0.54
81:A2:3758:C:H5	81:A2:3759:U:N1	2.05	0.54
81:A2:3759:U:C4	81:A2:3761:G:H1'	2.43	0.54
81:A2:4037:U:H2'	81:A2:4038:U:H6	1.73	0.54
81:A2:4156:G:O5'	81:A2:4156:G:C8	2.61	0.54
81:A2:4319:U:H5''	81:A2:4319:U:H6	1.71	0.54
81:A2:4383:U:C3'	81:A2:4383:U:C6	2.89	0.54
52:CP:69:ARG:NH1	81:A2:4529:U:H1'	2.22	0.54
81:A2:4537:U:H4'	81:A2:4923:A:O2'	2.08	0.54
81:A2:4537:U:O2'	81:A2:4923:A:H4'	2.07	0.54
81:A2:4651:A:C2	81:A2:4660:A:C5	2.96	0.54
81:A2:641:C:C2'	81:A2:642:C:C5	2.78	0.54
81:A2:690:U:H3'	81:A2:691:G:H5''	1.89	0.54
81:A2:707:C:C2'	81:A2:708:G:H5'	2.38	0.54
43:CF:51:TYR:CE2	81:A2:972:C:H4'	2.42	0.54
82:A3:126:C:C5	82:A3:127:U:C2	2.96	0.54
4:B1:1214:A:N6	4:B1:1217:A:C2	2.75	0.54
4:B1:1644:C:H6	4:B1:1644:C:O5'	1.90	0.54
4:B1:153:G:H1	4:B1:165:G:N2	2.06	0.54
4:B1:1815:A:H3'	4:B1:1816:G:C8	2.40	0.54
4:B1:465:A:C4'	4:B1:466:G:O5'	2.56	0.54
4:B1:571:U:C2'	4:B1:572:U:O4'	2.56	0.54
4:B1:656:G:C4'	4:B1:657:U:OP2	2.55	0.54
4:B1:689:U:H5'	4:B1:690:G:OP2	2.08	0.54
4:B1:833:C:H4'	4:B1:834:C:OP2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:851:C:H4'	4:B1:852:G:N2	2.22	0.54
5:BA:5:LEU:O	5:BA:6:ASP:HB2	2.07	0.54
7:BC:98:LEU:HD23	7:BC:101:SER:HB2	1.90	0.54
4:B1:448:A:N7	13:BI:26:LYS:CA	2.70	0.54
19:BO:43:HIS:CE1	19:BO:52:THR:HG23	2.43	0.54
20:BP:53:GLN:OE1	20:BP:83:MET:HG3	2.08	0.54
4:B1:572:U:P	29:BY:59:GLY:H	2.29	0.54
38:CA:13:GLY:O	38:CA:17:ARG:HG3	2.08	0.54
40:CC:55:SER:HB2	81:A2:347:G:H5'	1.90	0.54
42:CE:170:SER:HB3	81:A2:4896:G:N2	2.23	0.54
45:CH:93:ARG:O	45:CH:179:ILE:HA	2.07	0.54
54:CR:132:PHE:HA	54:CR:137:ILE:HD13	1.89	0.54
61:CY:112:ASP:O	61:CY:116:LYS:HB2	2.07	0.54
81:A2:1209:C:O2	81:A2:1209:C:C2'	2.55	0.54
81:A2:121:A:N1	81:A2:147:U:C4	2.76	0.54
81:A2:1774:A:H5''	83:A4:98:G:H2'	1.89	0.54
81:A2:193:C:C4'	81:A2:194:A:OP2	2.54	0.54
81:A2:2409:U:O5'	81:A2:2409:U:H6	1.91	0.54
81:A2:2455:C:OP2	81:A2:2456:G:H5''	2.08	0.54
81:A2:24:G:N1	81:A2:333:G:N7	2.55	0.54
54:CR:96:MET:SD	81:A2:2584:C:H5''	2.47	0.54
81:A2:2629:G:H2'	81:A2:2630:C:H4'	1.89	0.54
81:A2:2638:U:H3'	81:A2:2639:G:C4'	2.38	0.54
81:A2:2639:G:H1	81:A2:2649:C:H42	1.55	0.54
81:A2:2711:U:H2'	81:A2:2712:G:O4'	2.08	0.54
81:A2:27:C:O2'	81:A2:60:A:H1'	2.08	0.54
81:A2:4098:G:H1	81:A2:4113:C:N4	1.96	0.54
81:A2:4272:U:O5'	81:A2:4272:U:H6	1.90	0.54
81:A2:4551:U:C6	81:A2:4551:U:C5'	2.91	0.54
81:A2:4583:G:H2'	81:A2:4584:A:O4'	2.07	0.54
81:A2:4648:C:C6	81:A2:4648:C:O5'	2.61	0.54
81:A2:4689:C:H3'	81:A2:4690:G:C5	2.42	0.54
81:A2:473:G:C4'	81:A2:474:G:OP2	2.56	0.54
81:A2:655:G:N3	81:A2:655:G:H2'	2.22	0.54
81:A2:65:A:C2	81:A2:76:A:O3'	2.59	0.54
82:A3:115:G:H2'	82:A3:116:C:H6	1.73	0.54
83:A4:36:C:O5'	83:A4:36:C:C6	2.59	0.54
1:AV:75:C:O2'	81:A2:3879:C:C5'	2.56	0.54
4:B1:1054:G:H8	4:B1:1054:G:O5'	1.89	0.54
4:B1:106:C:H2'	4:B1:107:A:H8	1.72	0.54
4:B1:1504:U:H6	4:B1:1504:U:O5'	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1556:A:C2	4:B1:1557:C:H5	2.26	0.54
4:B1:1592:C:H2'	4:B1:1593:C:C6	2.43	0.54
4:B1:1654:G:H4'	24:BT:82:ARG:NH2	2.22	0.54
4:B1:35:C:H2'	4:B1:36:U:H6	1.72	0.54
4:B1:412:G:H5'	4:B1:413:G:H8	1.72	0.54
4:B1:655:A:C4	4:B1:657:U:H5	2.25	0.54
4:B1:684:G:C8	4:B1:920:A:C6	2.96	0.54
6:BB:33:VAL:HG11	6:BB:67:PHE:CZ	2.43	0.54
8:BD:24:PHE:HE1	8:BD:72:VAL:HG11	1.73	0.54
10:BF:51:HIS:CD2	10:BF:86:LYS:HD3	2.42	0.54
11:BG:136:LYS:O	11:BG:176:ILE:HG22	2.08	0.54
14:BJ:28:GLU:O	14:BJ:32:ILE:HG13	2.07	0.54
24:BT:111:LYS:O	24:BT:126:GLN:HB2	2.08	0.54
28:BX:90:CYS:O	28:BX:94:ILE:HG13	2.08	0.54
40:CC:326:LEU:CB	81:A2:1218:A:N6	2.70	0.54
40:CC:50:GLN:HB2	40:CC:51:PRO:HD3	1.90	0.54
41:CD:195:HIS:O	41:CD:199:ILE:HG12	2.08	0.54
41:CD:232:THR:HB	41:CD:233:PRO:CD	2.38	0.54
49:CM:126:GLU:HB2	51:CO:187:LYS:NZ	2.23	0.54
49:CM:57:LEU:HD12	55:CS:176:PHE:CZ	2.43	0.54
81:A2:132:G:H3'	81:A2:133:C:O2	2.08	0.53
81:A2:1462:C:H3'	81:A2:1463:G:N7	2.22	0.53
38:CA:196:TRP:CH2	81:A2:1592:A:N3	2.76	0.53
81:A2:160:A:H2'	81:A2:161:G:C8	2.42	0.53
81:A2:1756:C:C5'	81:A2:1756:C:C6	2.91	0.53
81:A2:1803:G:C6	81:A2:1804:A:C6	2.97	0.53
81:A2:2006:C:C6	81:A2:2006:C:H5'	2.42	0.53
61:CY:100:HIS:CD2	81:A2:228:U:H4'	2.43	0.53
81:A2:2383:G:O2'	81:A2:2768:C:H5''	2.08	0.53
81:A2:2426:A:H3'	81:A2:2427:G:O4'	2.09	0.53
81:A2:2840:G:H3'	81:A2:2841:A:H8	1.73	0.53
81:A2:284:G:H21	81:A2:288:U:C4'	2.03	0.53
81:A2:2875:G:H2'	81:A2:2876:C:H6	1.72	0.53
81:A2:344:A:C2	81:A2:351:A:C8	2.96	0.53
81:A2:3865:C:H2'	81:A2:3866:G:C4	2.43	0.53
81:A2:4180:A:N6	81:A2:4182:G:H1'	2.23	0.53
1:AV:74:C:H5''	81:A2:4508:A:P	2.48	0.53
81:A2:4544:A:C2	81:A2:4680:C:OP2	2.61	0.53
81:A2:4567:A:H3'	81:A2:4568:G:C5'	2.36	0.53
82:A3:12:G:C2'	82:A3:13:G:H5'	2.37	0.53
4:B1:1619:A:H2'	4:B1:1619:A:N3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1649:U:C6	4:B1:1649:U:O5'	2.61	0.53
4:B1:530:U:H2'	4:B1:531:A:O4'	2.09	0.53
4:B1:563:G:C4	4:B1:564:A:C8	2.97	0.53
4:B1:577:U:C4'	4:B1:578:C:O4'	2.57	0.53
4:B1:618:C:O4'	4:B1:632:C:H4'	2.08	0.53
4:B1:664:A:H61	4:B1:1163:C:H42	1.55	0.53
4:B1:886:A:O2'	4:B1:887:U:H5'	2.08	0.53
4:B1:904:A:H2'	4:B1:905:C:H6	1.73	0.53
4:B1:919:A:N1	18:BN:64:ARG:HD3	2.23	0.53
19:BO:93:LEU:HD12	19:BO:119:LEU:HD23	1.90	0.53
21:BQ:51:LEU:HD11	21:BQ:84:ILE:HG22	1.90	0.53
8:BD:208:VAL:HG13	22:BR:40:ILE:O	2.08	0.53
8:BD:39:VAL:O	25:BU:108:PRO:HB3	2.07	0.53
27:BW:37:PHE:CD1	27:BW:103:VAL:HG21	2.43	0.53
27:BW:76:SER:HB3	27:BW:77:PRO:HD3	1.90	0.53
4:B1:571:U:H1'	29:BY:60:PHE:H	1.72	0.53
4:B1:571:U:H1'	29:BY:60:PHE:N	2.23	0.53
41:CD:99:TYR:CD1	41:CD:199:ILE:HD12	2.43	0.53
46:CI:13:LYS:HE3	81:A2:70:A:N1	93.91	0.53
49:CM:20:HIS:HA	49:CM:23:LYS:HD3	1.89	0.53
81:A2:1313:A:H5'	81:A2:1314:A:OP2	2.08	0.53
81:A2:1390:U:H6	81:A2:1390:U:C5'	2.19	0.53
81:A2:1553:G:H8	81:A2:1553:G:O5'	1.90	0.53
81:A2:15:A:H3'	81:A2:15:A:P	2.48	0.53
81:A2:1652:U:H4'	81:A2:4262:U:O2	2.08	0.53
81:A2:171:C:H2'	81:A2:172:C:C6	2.43	0.53
62:CZ:104:PRO:HD2	81:A2:2530:A:C2	2.43	0.53
81:A2:2700:U:H2'	81:A2:2701:G:C8	2.43	0.53
81:A2:3907:G:C1'	81:A2:3908:G:OP2	2.55	0.53
81:A2:4007:G:H2'	81:A2:4008:C:C6	2.43	0.53
81:A2:4052:G:P	81:A2:4052:G:H8	2.31	0.53
81:A2:405:C:H5'	81:A2:406:G:OP2	2.07	0.53
81:A2:4179:A:H2'	81:A2:4179:A:N3	2.23	0.53
81:A2:427:C:H42	81:A2:1291:G:H1	1.56	0.53
81:A2:4609:G:C6	81:A2:4610:G:C2	2.96	0.53
81:A2:4837:U:O2'	81:A2:4838:C:H6	1.75	0.53
81:A2:735:A:C4	81:A2:736:G:C8	2.95	0.53
81:A2:966:U:H3'	81:A2:967:C:H5'	1.90	0.53
81:A2:969:C:H5'	81:A2:979:C:N4	2.22	0.53
82:A3:122:G:C3'	82:A3:123:U:H5'	2.37	0.53
81:A2:351:A:N3	82:A3:24:G:H1'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:A4:13:A:OP1	83:A4:109:U:H1'	2.07	0.53
83:A4:58:A:H2'	83:A4:59:G:H8	1.73	0.53
1:AV:18:G:H21	1:AV:58:A:H5'	1.72	0.53
3:AX:40:U:H2'	3:AX:41:U:N1	2.24	0.53
4:B1:1004:U:H6	4:B1:1004:U:O5'	1.92	0.53
4:B1:1102:G:H22	4:B1:1130:G:N2	2.06	0.53
4:B1:1286:G:N2	4:B1:1312:G:C6	2.76	0.53
4:B1:1288:U:P	4:B1:1311:C:N3	2.81	0.53
4:B1:1561:A:N6	4:B1:1574:C:N3	2.56	0.53
4:B1:26:U:H6	4:B1:26:U:O5'	1.90	0.53
4:B1:305:U:O2	4:B1:305:U:C2'	2.56	0.53
4:B1:37:C:O5'	4:B1:37:C:H6	1.91	0.53
4:B1:684:G:C8	4:B1:920:A:C5	2.96	0.53
4:B1:866:U:H6	4:B1:866:U:O5'	1.91	0.53
4:B1:96:C:H2'	4:B1:97:U:O4'	2.08	0.53
6:BB:59:SER:O	6:BB:63:LYS:HD3	2.08	0.53
4:B1:448:A:C5	13:BI:26:LYS:HA	2.43	0.53
21:BQ:33:LYS:HE3	21:BQ:36:GLY:HA2	1.88	0.53
28:BX:61:GLN:HB3	28:BX:62:PRO:HD2	1.90	0.53
38:CA:186:TYR:N	38:CA:196:TRP:NE1	2.56	0.53
39:CB:122:TRP:CZ2	39:CB:127:LYS:HE3	2.43	0.53
45:CH:23:ARG:HB2	45:CH:39:ASN:OD1	2.08	0.53
47:CJ:19:LYS:HE3	47:CJ:73:THR:HB	1.90	0.53
59:CW:36:CYS:SG	59:CW:51:TRP:HH2	2.31	0.53
81:A2:82:U:H3	81:A2:101:A:N6	2.06	0.53
81:A2:1138:G:H2'	81:A2:1139:U:C6	2.43	0.53
81:A2:1217:C:C4'	81:A2:1218:A:OP1	2.55	0.53
81:A2:1260:C:O5'	81:A2:1260:C:H6	1.92	0.53
81:A2:1783:A:H4'	81:A2:1784:A:H3'	1.91	0.53
81:A2:2296:G:N2	81:A2:2297:G:C2	2.76	0.53
81:A2:2347:A:C4'	81:A2:2348:U:OP2	2.57	0.53
81:A2:2838:C:H6	81:A2:2838:C:O5'	1.91	0.53
81:A2:3620:A:H2'	81:A2:3621:A:C8	2.44	0.53
81:A2:4005:C:O2'	81:A2:4006:C:H5'	2.07	0.53
81:A2:42:A:N6	81:A2:4339:A:C2	2.75	0.53
81:A2:4529:U:O4	81:A2:4530:G:H8	1.91	0.53
81:A2:4635:U:O5'	81:A2:4635:U:H6	1.90	0.53
81:A2:914:G:H21	81:A2:915:C:C5'	2.22	0.53
82:A3:24:G:H2'	82:A3:25:G:H5'	1.90	0.53
83:A4:107:G:H5''	83:A4:108:G:OP2	2.07	0.53
4:B1:1033:G:H5''	4:B1:1034:A:OP1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1035:A:C8	4:B1:1035:A:H3'	2.43	0.53
4:B1:1165:G:H4'	4:B1:1166:G:H5''	1.90	0.53
4:B1:1274:G:N2	4:B1:1510:G:H21	2.06	0.53
4:B1:133:C:C4	4:B1:134:C:H1'	2.43	0.53
4:B1:1426:U:O4	4:B1:1427:C:C4	2.61	0.53
4:B1:1493:C:C3'	4:B1:1494:U:C5'	2.87	0.53
4:B1:1635:C:O5'	4:B1:1635:C:H6	1.92	0.53
4:B1:1672:U:C2'	4:B1:1673:U:H5''	2.37	0.53
4:B1:344:U:H2'	4:B1:345:U:N1	2.23	0.53
4:B1:460:A:H2	4:B1:469:A:H61	1.56	0.53
4:B1:919:A:N3	4:B1:919:A:H2'	2.23	0.53
4:B1:963:A:H2'	4:B1:964:A:O4'	2.08	0.53
8:BD:166:TYR:CD1	8:BD:200:PRO:HB3	2.44	0.53
4:B1:808:A:H5''	9:BE:188:ASN:HD21	1.72	0.53
4:B1:130:G:H5'	11:BG:195:LYS:HZ3	1.74	0.53
23:BS:81:ASP:HB2	23:BS:95:TYR:CD1	2.43	0.53
27:BW:86:LEU:HD22	27:BW:113:HIS:CE1	2.43	0.53
40:CC:161:TYR:HE2	40:CC:170:LEU:HD22	1.72	0.53
43:CF:142:TRP:CZ2	43:CF:235:ASN:HB2	2.43	0.53
50:CN:200:LEU:HD13	50:CN:204:ARG:CZ	2.39	0.53
51:CO:182:GLU:O	51:CO:187:LYS:HD3	2.08	0.53
54:CR:112:SER:O	54:CR:113:LYS:HB2	2.08	0.53
56:CT:68:THR:HG23	56:CT:69:GLN:N	2.23	0.53
61:CY:123:ALA:H	61:CY:126:ARG:HB2	1.72	0.53
81:A2:1220:G:OP1	81:A2:1220:G:O4'	2.25	0.53
81:A2:1387:C:H2'	81:A2:1388:G:H8	1.72	0.53
44:CG:163:PRO:HG2	81:A2:148:G:N2	2.23	0.53
81:A2:2378:A:H61	81:A2:2780:U:H3	1.57	0.53
81:A2:2745:C:H1'	81:A2:2746:U:P	2.47	0.53
81:A2:282:U:C2	81:A2:284:G:H2'	2.43	0.53
81:A2:289:G:C2'	81:A2:290:C:H5'	2.38	0.53
81:A2:337:G:N2	81:A2:338:A:H1'	2.23	0.53
81:A2:357:A:C8	81:A2:358:C:C6	2.97	0.53
81:A2:3763:C:O5'	81:A2:3763:C:H6	1.91	0.53
81:A2:3775:G:H8	81:A2:3775:G:O5'	1.91	0.53
81:A2:3903:G:O2'	81:A2:3904:C:H5'	2.08	0.53
81:A2:4167:C:C1'	81:A2:4295:C:H1'	2.38	0.53
81:A2:4675:C:H3'	81:A2:4676:C:H6	1.72	0.53
81:A2:4683:A:H2'	81:A2:4684:C:C6	2.43	0.53
81:A2:973:U:H1'	81:A2:974:C:OP2	2.07	0.53
82:A3:3:A:H3'	82:A3:3:A:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AX:59:U:C2'	3:AX:60:U:H5'	2.38	0.53
4:B1:1016:U:C6	18:BN:14:SER:OG	2.60	0.53
4:B1:1402:A:C8	4:B1:1403:C:H5	2.26	0.53
4:B1:1427:C:C3'	4:B1:1427:C:C6	2.89	0.53
4:B1:1648:G:N3	4:B1:1648:G:H3'	2.23	0.53
4:B1:1700:C:C2	4:B1:1834:A:N6	2.77	0.53
4:B1:91:A:P	4:B1:446:G:H22	2.32	0.53
4:B1:39:A:H1'	4:B1:518:G:N2	2.23	0.53
4:B1:526:A:N9	14:BJ:128:VAL:HG13	2.23	0.53
4:B1:693:A:C8	4:B1:694:G:H1'	2.44	0.53
6:BB:91:VAL:HG22	6:BB:96:CYS:HB2	1.89	0.53
12:BH:147:LYS:HE3	12:BH:153:LEU:HD11	1.91	0.53
12:BH:75:ILE:O	12:BH:75:ILE:HG22	2.08	0.53
15:BK:3:MET:SD	15:BK:47:LYS:HD3	2.48	0.53
21:BQ:33:LYS:CE	21:BQ:36:GLY:HA2	2.38	0.53
26:BV:24:ILE:HG23	26:BV:28:ASP:HB2	1.90	0.53
44:CG:156:VAL:HG11	44:CG:190:LEU:HD21	1.90	0.53
44:CG:77:PRO:HA	44:CG:237:TRP:CE3	2.44	0.53
49:CM:40:GLY:HA3	49:CM:45:VAL:CG1	2.38	0.53
58:CV:86:LYS:HD3	81:A2:2823:G:C1'	2.38	0.53
81:A2:101:A:N3	81:A2:101:A:H2'	2.23	0.53
81:A2:1089:C:H2'	81:A2:1090:C:C6	2.43	0.53
81:A2:1221:C:C6	81:A2:1221:C:C3'	2.91	0.53
44:CG:196:ARG:NE	81:A2:147:U:C5	2.76	0.53
81:A2:1575:U:H6	81:A2:1575:U:H3'	1.72	0.53
81:A2:1560:G:O6	81:A2:1589:C:H3'	2.08	0.53
81:A2:1812:U:C6	81:A2:1813:G:C8	2.96	0.53
81:A2:2429:G:H2'	81:A2:2429:G:N3	2.24	0.53
81:A2:2496:U:H4'	81:A2:2496:U:OP1	2.09	0.53
81:A2:24:G:N2	81:A2:25:A:N3	2.57	0.53
81:A2:2692:G:H3'	81:A2:2693:C:H5	1.73	0.53
81:A2:2823:G:H2'	81:A2:2824:G:H5'	1.90	0.53
81:A2:2866:G:H2'	81:A2:2867:C:O4'	2.09	0.53
81:A2:340:A:H3'	81:A2:341:C:C5'	2.38	0.53
81:A2:3607:G:H2'	81:A2:3608:U:H5'	1.90	0.53
81:A2:407:U:C2'	81:A2:408:G:H5'	2.38	0.53
81:A2:4431:U:H3	81:A2:4444:G:H22	1.54	0.53
81:A2:4480:G:H2'	81:A2:4481:U:O4'	2.09	0.53
81:A2:4642:U:H2'	81:A2:4643:U:H5''	1.91	0.53
81:A2:4685:G:H2'	81:A2:4686:A:C8	2.41	0.53
81:A2:4828:G:N3	81:A2:4828:G:C2'	2.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:487:G:N2	81:A2:489:C:C5	2.77	0.53
81:A2:509:G:C2'	81:A2:510:C:H5'	2.38	0.53
81:A2:968:C:O2	81:A2:968:C:H2'	2.08	0.53
3:AX:49:U:O2'	4:B1:1825:A:H5''	2.09	0.53
4:B1:1556:A:H2	4:B1:1557:C:C5	2.26	0.53
4:B1:35:C:C2'	4:B1:36:U:H6	2.21	0.53
4:B1:48:C:H2'	4:B1:49:C:O4'	2.09	0.53
4:B1:678:U:O4'	81:A2:1543:A:C8	2.61	0.53
14:BJ:37:LEU:HD23	14:BJ:127:ARG:NH2	2.23	0.53
21:BQ:86:GLN:HE21	21:BQ:90:LYS:NZ	2.07	0.53
21:BQ:97:GLN:HB2	21:BQ:105:LYS:HE3	1.90	0.53
23:BS:47:LYS:HE2	23:BS:79:ILE:CG1	2.38	0.53
46:CI:145:LYS:CE	46:CI:167:ILE:HD13	2.39	0.53
47:CJ:144:LYS:HG3	47:CJ:146:ARG:O	2.09	0.53
47:CJ:175:LEU:HB3	47:CJ:176:PRO:CD	2.38	0.53
47:CJ:85:LYS:HE2	47:CJ:115:LEU:O	2.08	0.53
50:CN:58:GLY:HA3	50:CN:142:ILE:CD1	2.38	0.53
50:CN:93:LYS:O	50:CN:94:PHE:HB3	2.09	0.53
51:CO:22:ILE:HG23	55:CS:166:ARG:HE	1.73	0.53
81:A2:101:A:C8	81:A2:102:G:N7	2.76	0.53
81:A2:1186:C:H2'	81:A2:1187:C:C6	2.43	0.53
81:A2:1048:G:OP1	81:A2:1215:G:H2'	2.09	0.53
81:A2:1304:A:H4'	81:A2:1305:C:OP1	2.06	0.53
81:A2:1379:G:C4	81:A2:1380:G:N7	2.77	0.53
81:A2:1639:U:H1'	81:A2:1640:C:OP1	2.08	0.53
81:A2:163:C:H2'	81:A2:164:C:C6	2.41	0.53
81:A2:2059:C:C2'	81:A2:2060:G:H5'	2.39	0.53
81:A2:2843:C:C6	81:A2:2843:C:H3'	2.43	0.53
81:A2:30:C:C2'	81:A2:31:U:H5'	2.39	0.53
81:A2:3604:A:H3'	81:A2:3605:C:C5'	2.36	0.53
38:CA:132:ASN:ND2	81:A2:3651:A:H5'	2.23	0.53
81:A2:3821:A:C8	81:A2:3822:U:C5	2.96	0.53
81:A2:3884:U:H2'	81:A2:3885:G:O4'	2.08	0.53
81:A2:4084:U:C1'	81:A2:4085:U:P	2.97	0.53
81:A2:4209:G:H2'	81:A2:4210:G:H8	1.73	0.53
81:A2:4280:G:H5''	81:A2:4281:U:OP2	2.09	0.53
81:A2:4168:U:H5'	81:A2:4294:U:O2	2.08	0.53
81:A2:4749:G:H2'	81:A2:4750:C:H6	1.74	0.53
81:A2:474:G:P	81:A2:659:A:H5''	2.48	0.53
81:A2:4837:U:C2'	81:A2:4837:U:O2	2.57	0.53
81:A2:4942:C:H6	81:A2:4942:C:O5'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:638:G:H2'	81:A2:639:G:H8	1.73	0.53
82:A3:26:C:O2'	82:A3:27:U:H5'	2.09	0.53
82:A3:27:U:H2'	82:A3:28:C:O4'	2.09	0.53
2:AW:67:C:H2'	2:AW:68:C:C6	2.44	0.53
4:B1:1152:U:H6	4:B1:1152:U:O5'	1.92	0.53
4:B1:1406:G:O4'	4:B1:1407:U:H5'	2.08	0.53
4:B1:1512:C:H2'	4:B1:1513:C:C5	2.44	0.53
4:B1:1752:C:C2'	4:B1:1753:C:H5'	2.38	0.53
4:B1:214:U:H2'	4:B1:214:U:O2	2.07	0.53
4:B1:316:G:C2	4:B1:335:G:C2	2.97	0.53
4:B1:564:A:N6	4:B1:586:G:H1	2.07	0.53
4:B1:747:U:O2	4:B1:748:C:H3'	2.09	0.53
4:B1:751:G:C2'	4:B1:752:G:H8	2.04	0.53
4:B1:803:C:H4'	27:BW:80:ASP:OD2	2.09	0.53
4:B1:835:C:C2'	4:B1:835:C:O2	2.57	0.53
10:BF:60:ARG:HH11	10:BF:60:ARG:HG2	1.72	0.53
12:BH:83:LEU:HB2	12:BH:92:VAL:HG21	1.90	0.53
8:BD:28:GLU:HG2	15:BK:61:GLN:HG3	1.90	0.53
25:BU:53:PRO:HB2	25:BU:55:ARG:HH12	1.73	0.53
28:BX:39:ASN:OD1	28:BX:41:PHE:HB2	2.08	0.53
39:CB:317:LEU:HD11	81:A2:4956:U:H5''	1.91	0.53
42:CE:138:ARG:HD2	81:A2:699:A:H4'	1.90	0.53
43:CF:148:LYS:HD2	81:A2:926:G:H5''	1.91	0.53
81:A2:118:C:H4'	81:A2:119:G:H3'	1.89	0.53
81:A2:1371:A:OP1	81:A2:1371:A:H8	1.92	0.53
81:A2:1873:G:C2	81:A2:1874:A:H1'	2.43	0.53
81:A2:2358:A:C2	81:A2:2402:U:C5	2.97	0.53
81:A2:2630:C:H5''	81:A2:2630:C:H6	1.73	0.53
81:A2:2831:G:H3'	81:A2:2832:G:H5'	1.91	0.53
81:A2:3591:C:H6	81:A2:3591:C:O5'	1.91	0.53
38:CA:23:ARG:HB2	81:A2:3648:U:C5	2.43	0.53
81:A2:393:A:H4'	81:A2:393:A:OP1	2.08	0.53
81:A2:443:A:C4'	81:A2:444:G:OP2	2.57	0.53
81:A2:4533:G:C6	81:A2:4681:G:C6	2.96	0.53
81:A2:4578:G:C2'	81:A2:4579:U:H5'	2.39	0.53
81:A2:45:U:C2'	81:A2:46:U:H5'	2.38	0.53
81:A2:4602:U:O2'	81:A2:4603:G:H5'	2.09	0.53
81:A2:4640:G:H5'	81:A2:4640:G:C8	2.39	0.53
81:A2:4701:G:H2'	81:A2:4702:G:H8	1.73	0.53
81:A2:4717:U:C4'	81:A2:4718:C:OP2	2.56	0.53
81:A2:15:A:H2	82:A3:143:G:C2	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:A4:75:G:H4'	83:A4:76:U:H5'	1.91	0.53
4:B1:1023:A:O5'	4:B1:1023:A:H8	1.91	0.53
4:B1:1042:A:H2'	4:B1:1043:G:O5'	2.09	0.53
4:B1:1120:U:C2'	4:B1:1121:G:H5'	2.38	0.53
4:B1:1191:C:H2'	4:B1:1192:U:H6	1.74	0.53
4:B1:1655:C:O5'	4:B1:1655:C:H6	1.92	0.53
4:B1:314:U:C2'	4:B1:314:U:O2	2.57	0.53
4:B1:36:U:C2	4:B1:520:A:N1	2.77	0.53
4:B1:386:C:P	16:BL:136:LYS:HD3	2.48	0.53
4:B1:39:A:C2	4:B1:517:C:H1'	2.43	0.53
4:B1:465:A:H4'	4:B1:466:G:O4'	2.08	0.53
4:B1:527:C:H5"	4:B1:528:A:OP2	2.09	0.53
4:B1:1350:U:O2'	5:BA:110:ASN:HB2	2.09	0.53
11:BG:46:LYS:HB2	11:BG:119:LYS:HG2	1.91	0.53
13:BI:123:ARG:HH22	81:A2:4979:C:C3'	2.15	0.53
13:BI:192:GLY:HA3	16:BL:20:LYS:HA	1.91	0.53
15:BK:29:MET:N	15:BK:30:PRO:CD	2.71	0.53
24:BT:4:VAL:CG2	24:BT:136:GLY:HA2	2.39	0.53
25:BU:32:LEU:HD23	25:BU:85:HIS:HB2	1.90	0.53
25:BU:78:ASP:HB3	25:BU:80:PHE:CE2	2.43	0.53
25:BU:50:VAL:HG22	25:BU:91:LEU:CD2	2.39	0.53
4:B1:28:U:H4'	28:BX:124:LYS:NZ	2.23	0.53
4:B1:151:C:OP1	29:BY:120:THR:HA	2.09	0.53
38:CA:117:GLU:HB3	38:CA:119:LYS:O	2.08	0.53
40:CC:8:ILE:HD11	40:CC:24:LEU:CD1	2.38	0.53
41:CD:64:ILE:HG13	41:CD:109:LEU:HD22	1.91	0.53
42:CE:161:ARG:HD3	42:CE:270:TYR:CE2	2.44	0.53
42:CE:240:TYR:O	42:CE:243:THR:HB	2.08	0.53
43:CF:61:TYR:O	43:CF:65:TYR:HD2	1.92	0.53
52:CP:87:SER:O	52:CP:91:LEU:HD13	2.09	0.53
53:CQ:155:ALA:HB1	53:CQ:156:PRO:CD	2.31	0.53
55:CS:164:LYS:HB3	55:CS:165:PRO:HD3	1.91	0.53
60:CX:117:TYR:HB2	60:CX:119:ILE:HG12	1.91	0.53
81:A2:1156:C:H2'	81:A2:1157:U:C6	2.44	0.53
81:A2:1203:G:C5'	81:A2:1210:U:C5	2.88	0.53
81:A2:1458:G:H2'	81:A2:1459:C:C6	2.44	0.53
81:A2:166:G:H21	81:A2:167:C:H1'	1.73	0.53
81:A2:1915:C:O5'	81:A2:1915:C:H6	1.92	0.53
81:A2:2061:C:H5	81:A2:2249:G:H22	1.56	0.53
81:A2:2546:G:O2'	81:A2:2547:U:H5'	2.09	0.53
81:A2:24:G:C2	81:A2:25:A:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2751:C:C6	81:A2:2751:C:O5'	2.62	0.53
62:CZ:58:GLY:HA3	81:A2:4109:C:C5'	2.39	0.53
81:A2:4155:G:H1'	81:A2:4156:G:OP2	2.09	0.53
81:A2:4236:G:C8	81:A2:4236:G:C5'	2.82	0.53
81:A2:425:A:C3'	81:A2:425:A:C8	2.90	0.53
81:A2:441:G:H1'	81:A2:1274:A:C4'	2.39	0.53
81:A2:2019:A:C2'	81:A2:4424:A:C2	2.92	0.53
81:A2:4604:G:H1	81:A2:4613:C:N4	2.06	0.53
81:A2:2604:C:N4	81:A2:4609:G:N2	2.55	0.53
81:A2:725:C:C3'	81:A2:726:C:C6	2.91	0.53
81:A2:937:C:C2'	81:A2:938:C:H5'	2.39	0.53
81:A2:946:C:O2	81:A2:946:C:H2'	2.07	0.53
81:A2:85:G:H21	81:A2:97:G:H2'	1.72	0.53
82:A3:58:G:H5''	82:A3:97:A:C2	2.43	0.53
1:AV:20:U:H3'	1:AV:21:A:H5'	1.90	0.53
4:B1:1221:G:O2'	4:B1:1222:G:H5'	2.09	0.53
4:B1:1324:G:H2'	4:B1:1325:G:C8	2.44	0.53
4:B1:1362:U:H4'	4:B1:1363:C:OP2	2.06	0.53
4:B1:1492:U:H4'	25:BU:70:CYS:SG	2.48	0.53
4:B1:164:A:C3'	4:B1:165:G:C8	2.91	0.53
4:B1:1664:A:OP1	4:B1:1664:A:H4'	2.09	0.53
4:B1:505:G:H2'	4:B1:506:G:H5'	1.89	0.53
4:B1:674:C:H2'	4:B1:675:U:C6	2.43	0.53
6:BB:193:ILE:O	6:BB:197:ILE:HG12	2.08	0.53
11:BG:45:TRP:HA	11:BG:48:TYR:CE1	2.44	0.53
11:BG:55:GLY:O	11:BG:62:PRO:HA	2.08	0.53
12:BH:170:VAL:HG13	12:BH:187:PHE:CD1	2.44	0.53
4:B1:448:A:N7	13:BI:26:LYS:N	2.56	0.53
15:BK:11:ILE:CG1	15:BK:38:LYS:HE2	2.39	0.53
21:BQ:96:TYR:HA	21:BQ:100:VAL:HG23	1.90	0.53
5:BA:40:LYS:HD2	22:BR:104:GLU:HB2	1.90	0.53
43:CF:132:MET:CE	81:A2:1705:U:H1'	2.39	0.53
47:CJ:44:THR:O	47:CJ:78:LYS:HD3	2.08	0.53
48:CL:135:LYS:N	48:CL:135:LYS:HE3	2.23	0.53
81:A2:10:A:O2'	81:A2:11:G:H5'	2.09	0.53
81:A2:1785:G:H2'	81:A2:1786:C:C1'	2.39	0.53
81:A2:2523:G:C2'	81:A2:2524:G:H8	2.22	0.53
81:A2:2564:A:H5''	81:A2:2564:A:C8	2.43	0.53
81:A2:2588:A:H5'	81:A2:2665:G:C5'	2.37	0.53
81:A2:2686:C:H6	81:A2:2686:C:H5''	1.74	0.53
2:AW:4:C:C4'	81:A2:3684:U:P	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3736:C:H3'	81:A2:3737:U:C5	2.44	0.53
81:A2:3837:G:H8	81:A2:3837:G:OP2	1.92	0.53
81:A2:4278:C:C6	81:A2:4278:C:C3'	2.92	0.53
81:A2:4364:U:H2'	81:A2:4364:U:O2	2.08	0.53
81:A2:4645:U:O2'	81:A2:4646:G:H5'	2.08	0.53
81:A2:4881:C:H2'	81:A2:4882:G:N7	2.24	0.53
42:CE:214:ASP:OD1	81:A2:4896:G:H5'	2.09	0.53
81:A2:709:G:O6	81:A2:928:A:N1	2.42	0.53
81:A2:893:A:C4	81:A2:894:G:C8	2.97	0.53
81:A2:947:G:C2'	81:A2:948:A:H5'	2.39	0.53
4:B1:1129:G:C3'	4:B1:1130:G:C8	2.92	0.53
4:B1:1380:C:H2'	4:B1:1381:G:C8	2.43	0.53
4:B1:1413:G:C2	4:B1:1414:A:C4	2.97	0.53
4:B1:19:A:O2'	4:B1:621:C:H1'	2.09	0.53
4:B1:649:U:H2'	4:B1:650:A:H8	1.74	0.53
4:B1:795:A:C2	4:B1:796:G:N9	2.77	0.53
4:B1:800:U:C5'	4:B1:800:U:H6	2.21	0.53
4:B1:803:C:H2'	4:B1:804:U:C6	2.44	0.53
4:B1:829:C:H4'	4:B1:830:A:OP1	2.08	0.53
4:B1:970:G:H4'	4:B1:971:G:OP2	2.08	0.53
6:BB:82:ARG:HG2	6:BB:103:MET:HE1	1.89	0.53
8:BD:3:VAL:HG13	8:BD:5:ILE:HG13	1.91	0.53
11:BG:164:LYS:HG2	11:BG:165:GLU:N	2.24	0.53
18:BN:67:THR:HG21	18:BN:74:ILE:HD11	1.89	0.53
40:CC:230:LEU:HD11	40:CC:239:LYS:CB	2.39	0.53
41:CD:193:GLU:O	41:CD:197:LYS:HG2	2.08	0.53
41:CD:272:SER:HB3	81:A2:1167:G:H4'	1.90	0.53
42:CE:223:ARG:CA	42:CE:225:PRO:HD2	2.39	0.53
43:CF:37:PHE:CE1	81:A2:1250:A:H4'	2.43	0.53
44:CG:71:TYR:CE1	50:CN:25:VAL:CG1	2.92	0.53
53:CQ:75:ARG:HD3	81:A2:1435:G:H1'	1.90	0.53
62:CZ:48:ARG:H	62:CZ:69:LYS:HB3	1.73	0.53
81:A2:121:A:H2'	81:A2:121:A:P	2.49	0.53
81:A2:1405:G:H2'	81:A2:1406:G:H8	1.74	0.53
81:A2:1428:G:H2'	81:A2:1429:C:H6	1.73	0.53
81:A2:361:U:H1'	81:A2:1513:A:N1	2.23	0.53
81:A2:1632:A:H5''	81:A2:1633:G:OP1	2.08	0.53
81:A2:1635:U:H6	81:A2:1635:U:C5'	2.20	0.53
81:A2:1899:C:C3'	81:A2:1900:G:H5''	2.39	0.53
81:A2:195:A:H5''	81:A2:195:A:C8	2.44	0.53
81:A2:2281:U:H3'	81:A2:2282:G:C5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2336:U:O5'	81:A2:2336:U:H6	1.91	0.53
81:A2:2373:A:C4'	81:A2:2374:G:OP2	2.56	0.53
81:A2:2701:G:C4'	81:A2:2702:A:C2	2.85	0.53
81:A2:2857:U:H6	81:A2:2857:U:C5'	2.22	0.53
81:A2:372:U:H3'	81:A2:372:U:H6	1.73	0.53
81:A2:3827:C:O2	81:A2:3827:C:H2'	2.08	0.53
81:A2:4025:C:C5	81:A2:4025:C:OP2	2.62	0.53
81:A2:4090:C:H3'	81:A2:4090:C:C6	2.38	0.53
81:A2:4851:G:C2	81:A2:4882:G:C8	2.97	0.53
81:A2:957:G:C2'	81:A2:958:C:O5'	2.57	0.53
81:A2:335:A:C6	82:A3:31:G:C6	2.97	0.53
83:A4:69:U:H2'	83:A4:70:G:C8	2.44	0.53
4:B1:1043:G:H4'	4:B1:1044:G:OP1	2.09	0.53
4:B1:1676:U:O5'	4:B1:1676:U:C6	2.61	0.53
4:B1:1825:A:H2'	4:B1:1826:G:C5'	2.34	0.53
4:B1:188:C:H2'	4:B1:189:U:C6	2.44	0.53
4:B1:478:G:O5'	4:B1:478:G:H8	1.91	0.53
4:B1:490:C:O5'	4:B1:490:C:H6	1.91	0.53
4:B1:557:U:C2'	4:B1:558:G:C8	2.91	0.53
4:B1:794:A:N3	4:B1:795:A:C1'	2.72	0.53
4:B1:797:C:C2'	4:B1:798:G:C5'	2.82	0.53
4:B1:918:U:C5	4:B1:919:A:C8	2.97	0.53
12:BH:102:PRO:HG3	12:BH:105:THR:HG21	1.90	0.53
18:BN:84:LEU:HD23	18:BN:89:TYR:HD2	1.74	0.53
27:BW:104:LEU:CD2	27:BW:125:ILE:HG12	2.39	0.53
27:BW:14:ILE:HD11	27:BW:27:ILE:HD11	1.91	0.53
28:BX:95:GLU:HB2	28:BX:98:ASP:OD2	2.09	0.53
42:CE:155:GLY:N	42:CE:158:ARG:HG3	2.23	0.53
45:CH:44:GLU:HB2	81:A2:4724:G:N7	2.24	0.53
48:CL:48:PRO:HD3	48:CL:137:GLY:HA2	1.91	0.53
49:CM:23:LYS:HE3	49:CM:43:THR:HB	1.90	0.53
49:CM:25:VAL:HG12	49:CM:45:VAL:HG11	1.91	0.53
51:CO:181:ALA:O	51:CO:187:LYS:HD2	2.09	0.53
4:B1:873:G:C8	54:CR:162:ARG:HD2	2.43	0.53
56:CT:126:VAL:HB	56:CT:128:LEU:CD1	2.38	0.53
60:CX:149:VAL:O	60:CX:152:LYS:HB3	2.08	0.53
62:CZ:104:PRO:HD2	81:A2:2530:A:H2	1.73	0.53
81:A2:1095:C:H2'	81:A2:1096:C:C6	2.44	0.52
81:A2:1226:G:H2'	81:A2:1227:U:C6	2.44	0.52
81:A2:1293:C:C2'	81:A2:1293:C:O2	2.56	0.52
81:A2:1313:A:H3'	81:A2:1314:A:H8	1.66	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1786:C:H6	81:A2:1786:C:O5'	1.92	0.52
81:A2:1800:G:O5'	81:A2:1800:G:C8	2.61	0.52
81:A2:204:G:C8	81:A2:397:C:H1'	2.44	0.52
81:A2:21:G:C2	81:A2:22:G:H1'	2.44	0.52
81:A2:2378:A:H2'	81:A2:2379:G:H5''	1.90	0.52
81:A2:2526:G:C3'	81:A2:2527:G:H5''	2.28	0.52
81:A2:2529:G:C2	81:A2:2530:A:C8	2.97	0.52
81:A2:2686:C:H2'	81:A2:2687:C:O5'	2.09	0.52
81:A2:2593:C:H1'	81:A2:2699:G:N2	2.24	0.52
81:A2:24:G:C6	81:A2:333:G:C8	2.96	0.52
81:A2:3592:C:C5	81:A2:3593:A:C2	2.97	0.52
81:A2:3600:U:O4'	81:A2:3774:U:H5''	2.08	0.52
4:B1:1827:U:C4'	81:A2:3728:A:C2'	2.71	0.52
81:A2:372:U:H3'	81:A2:372:U:C6	2.44	0.52
81:A2:3836:A:C2	81:A2:3849:G:C5	2.97	0.52
81:A2:3880:C:H2'	81:A2:3881:U:H6	1.73	0.52
81:A2:426:A:H2'	81:A2:427:C:C6	2.41	0.52
81:A2:4551:U:H2'	81:A2:4551:U:O2	2.08	0.52
81:A2:4738:U:C5	81:A2:4740:U:O4	2.62	0.52
81:A2:4850:C:H2'	81:A2:4851:G:C8	2.44	0.52
81:A2:4857:C:H2'	81:A2:4858:G:C8	2.41	0.52
81:A2:504:U:H2'	81:A2:505:U:C6	2.44	0.52
81:A2:700:C:H3'	81:A2:701:C:C5'	2.30	0.52
81:A2:79:C:O4'	81:A2:329:A:H5'	2.08	0.52
82:A3:79:G:H2'	82:A3:80:A:C1'	2.39	0.52
82:A3:92:U:H6	82:A3:92:U:O5'	1.91	0.52
2:AW:64:A:C2	2:AW:65:G:H1'	2.43	0.52
3:AX:42:U:C6	3:AX:42:U:H3'	2.42	0.52
4:B1:1068:G:H2'	4:B1:1069:U:C5	2.43	0.52
4:B1:111:A:C4'	4:B1:112:U:OP1	2.56	0.52
4:B1:1170:A:O3'	4:B1:1171:G:H4'	2.08	0.52
4:B1:1178:U:H1'	4:B1:1184:G:N2	2.22	0.52
4:B1:1221:G:H2'	4:B1:1222:G:C8	2.43	0.52
4:B1:1420:G:H1'	24:BT:3:GLY:N	2.24	0.52
4:B1:1559:C:O5'	4:B1:1559:C:H6	1.93	0.52
4:B1:1853:C:H2'	4:B1:1854:U:H6	1.71	0.52
4:B1:315:C:O2'	4:B1:316:G:H5'	2.10	0.52
4:B1:562:U:OP1	4:B1:562:U:H4'	2.08	0.52
4:B1:655:A:N7	4:B1:657:U:H5	2.06	0.52
4:B1:743:U:O2	4:B1:743:U:H5''	2.08	0.52
4:B1:847:A:H2'	4:B1:847:A:N3	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:901:G:C5	4:B1:902:G:N7	2.78	0.52
4:B1:958:G:H5'	4:B1:959:G:N7	2.24	0.52
6:BB:144:LYS:HB2	6:BB:208:HIS:HB2	1.92	0.52
9:BE:97:GLU:HB3	9:BE:99:PHE:CE2	2.44	0.52
2:AW:37:MIA:H163	10:BF:132:GLY:N	2.15	0.52
4:B1:67:C:C5	11:BG:163:ASN:C	2.82	0.52
24:BT:129:ARG:HG3	24:BT:130:ASP:N	2.24	0.52
30:BZ:97:ILE:HD12	30:BZ:109:TYR:CG	2.45	0.52
38:CA:34:PHE:HB3	81:A2:4055:G:H2'	1.91	0.52
39:CB:317:LEU:HG	81:A2:4956:U:C4'	2.31	0.52
52:CP:22:LEU:HD13	52:CP:90:PHE:HZ	1.73	0.52
4:B1:909:G:P	54:CR:169:ALA:HA	2.49	0.52
62:CZ:14:LEU:HB3	62:CZ:79:HIS:O	2.08	0.52
81:A2:1160:C:C2	81:A2:1161:C:O2	2.62	0.52
81:A2:1392:G:H2'	81:A2:1393:C:C6	2.43	0.52
81:A2:1401:G:H2'	81:A2:1402:G:C5'	2.38	0.52
81:A2:1514:C:C2'	81:A2:1515:U:H5'	2.39	0.52
81:A2:1539:A:O5'	81:A2:1539:A:C8	2.62	0.52
81:A2:15:A:O2'	81:A2:16:G:H5'	2.09	0.52
81:A2:1797:G:N2	81:A2:1801:U:C5'	2.72	0.52
81:A2:1801:U:C3'	81:A2:1801:U:C6	2.92	0.52
81:A2:1868:G:P	81:A2:1868:G:C8	3.03	0.52
81:A2:2453:G:H2'	81:A2:2454:A:C8	2.44	0.52
81:A2:2605:U:H3'	81:A2:2605:U:C6	2.40	0.52
81:A2:3684:U:C6	81:A2:3684:U:C5'	2.93	0.52
81:A2:388:G:O5'	81:A2:388:G:H8	1.93	0.52
81:A2:4025:C:H3'	81:A2:4025:C:H6	1.72	0.52
81:A2:4536:U:H2'	81:A2:4537:U:H6	1.73	0.52
81:A2:459:U:H3'	81:A2:459:U:O2	2.10	0.52
81:A2:468:C:H2'	81:A2:469:G:H8	1.75	0.52
81:A2:4698:C:C2'	81:A2:4699:G:H5'	2.39	0.52
81:A2:501:U:H3	81:A2:643:G:H1	1.56	0.52
83:A4:25:G:H3'	83:A4:26:C:H5	1.75	0.52
3:AX:41:U:H6	3:AX:41:U:O5'	1.92	0.52
3:AX:41:U:H2'	3:AX:42:U:H5''	1.92	0.52
4:B1:1101:U:H3'	4:B1:1101:U:C6	2.44	0.52
9:BE:158:ASP:OD1	9:BE:174:LYS:HG2	2.09	0.52
12:BH:148:LEU:HA	27:BW:42:MET:CG	2.39	0.52
13:BI:113:TYR:HE2	13:BI:119:LEU:HD23	1.74	0.52
28:BX:36:LEU:O	28:BX:42:GLY:HA2	2.09	0.52
38:CA:33:ASP:O	38:CA:37:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:150:LEU:HB2	40:CC:151:PRO:CD	2.39	0.52
42:CE:227:HIS:NE2	81:A2:442:C:O4'	2.42	0.52
44:CG:55:VAL:HA	60:CX:44:PRO:O	2.09	0.52
46:CI:53:VAL:HG23	46:CI:164:LYS:O	2.09	0.52
47:CJ:135:GLY:HA2	47:CJ:157:ILE:HD11	1.91	0.52
54:CR:95:TRP:CE2	81:A2:1551:U:H4'	2.44	0.52
81:A2:1281:C:C3'	81:A2:1281:C:H6	2.15	0.52
81:A2:1622:A:C8	81:A2:1622:A:O5'	2.62	0.52
81:A2:181:U:H6	81:A2:181:U:H5'	1.73	0.52
81:A2:1894:G:C8	81:A2:1894:G:H3'	2.43	0.52
81:A2:219:C:H2'	81:A2:220:G:H5''	1.91	0.52
4:B1:969:U:H3'	81:A2:3681:A:N9	2.24	0.52
81:A2:3835:C:H2'	81:A2:3836:A:O4'	2.09	0.52
81:A2:4292:C:O2	81:A2:4292:C:H2'	2.09	0.52
81:A2:4374:A:C8	81:A2:4382:A:C2	2.97	0.52
81:A2:4417:U:C2'	81:A2:4418:C:H5'	2.40	0.52
81:A2:441:G:C5'	81:A2:441:G:C8	2.84	0.52
81:A2:4549:A:H1'	81:A2:4550:A:O4'	2.09	0.52
81:A2:4807:C:C2'	81:A2:4808:C:H5'	2.39	0.52
81:A2:5017:G:H2'	81:A2:5018:G:H5'	1.91	0.52
81:A2:52:G:H8	81:A2:52:G:O5'	1.92	0.52
81:A2:670:C:O2'	81:A2:671:C:H5'	2.09	0.52
43:CF:76:ARG:HD3	81:A2:719:G:H5''	1.90	0.52
81:A2:719:G:C2	81:A2:720:A:C4	2.97	0.52
81:A2:943:G:N3	81:A2:943:G:H2'	2.25	0.52
41:CD:33:ARG:CZ	83:A4:7:G:H4'	2.39	0.52
4:B1:1217:A:H2'	4:B1:1218:C:H6	1.71	0.52
4:B1:1414:A:H2'	4:B1:1415:C:C6	2.44	0.52
4:B1:1461:G:N2	4:B1:1465:A:H62	1.86	0.52
4:B1:148:U:H6	4:B1:148:U:C5'	2.21	0.52
4:B1:1714:U:H6	4:B1:1714:U:O5'	1.91	0.52
4:B1:546:G:H1'	4:B1:548:C:H5	1.74	0.52
4:B1:604:A:H4'	4:B1:605:A:OP2	2.09	0.52
4:B1:862:A:H2'	4:B1:863:U:H6	1.74	0.52
4:B1:745:C:C5	12:BH:107:LYS:HD3	2.44	0.52
12:BH:158:LEU:HD11	12:BH:187:PHE:HD2	1.73	0.52
4:B1:222:U:C4'	16:BL:21:LYS:HE2	2.40	0.52
23:BS:15:VAL:O	23:BS:19:ASN:HB2	2.09	0.52
39:CB:76:VAL:HG21	39:CB:332:MET:SD	2.50	0.52
42:CE:153:LEU:HB2	42:CE:193:PHE:O	2.08	0.52
45:CH:132:VAL:CG1	45:CH:154:VAL:HG22	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:CN:85:VAL:HG11	81:A2:44:A:P	2.49	0.52
53:CQ:178:ARG:HD2	81:A2:4300:U:H4'	1.91	0.52
39:CB:70:LYS:HD3	58:CV:91:LYS:HE3	1.90	0.52
81:A2:1194:C:H2'	81:A2:1194:C:O2	2.10	0.52
81:A2:1349:C:H5''	81:A2:1350:G:H8	1.74	0.52
81:A2:1715:A:H2'	81:A2:1716:A:C5'	2.40	0.52
81:A2:1797:G:C2	81:A2:1801:U:C6	2.97	0.52
81:A2:1:C:C4	82:A3:157:U:C4	2.97	0.52
81:A2:2001:C:H6	81:A2:2001:C:H5''	1.74	0.52
81:A2:2453:G:C2'	81:A2:2454:A:O4'	2.57	0.52
81:A2:269:G:H5''	81:A2:269:G:C8	2.43	0.52
81:A2:2703:G:O2'	81:A2:2704:C:C6	2.63	0.52
81:A2:2727:G:H2'	81:A2:2728:G:H8	1.74	0.52
81:A2:2869:C:H5''	81:A2:2869:C:H6	1.73	0.52
61:CY:8:THR:HB	81:A2:337:G:H5''	1.91	0.52
81:A2:42:A:H2	81:A2:3894:U:O4'	1.92	0.52
81:A2:3895:C:H2'	81:A2:3896:U:C6	2.44	0.52
81:A2:4133:G:O2'	81:A2:4134:U:H5'	2.09	0.52
81:A2:4349:C:H2'	81:A2:4350:A:H8	1.72	0.52
81:A2:4502:U:O5'	81:A2:4502:U:H6	1.92	0.52
81:A2:4538:G:H2'	81:A2:4539:U:C6	2.45	0.52
81:A2:4688:A:O3'	81:A2:4695:C:H1'	2.09	0.52
81:A2:4706:C:O2'	81:A2:4707:U:H5'	2.09	0.52
81:A2:477:C:C5'	81:A2:479:G:OP1	2.55	0.52
81:A2:4837:U:H2'	81:A2:4837:U:O2	2.08	0.52
81:A2:4838:C:C3'	81:A2:4839:G:H5''	2.40	0.52
81:A2:4861:C:O2'	81:A2:4862:G:H5'	2.09	0.52
83:A4:82:G:O5'	83:A4:82:G:H8	1.92	0.52
4:B1:1215:C:H5'	4:B1:1217:A:H62	1.74	0.52
4:B1:1313:A:C5'	4:B1:1314:U:H5	2.22	0.52
4:B1:1368:U:H2'	4:B1:1370:A:OP2	2.09	0.52
4:B1:1413:G:H2'	4:B1:1414:A:H8	1.73	0.52
4:B1:1457:U:H2'	4:B1:1458:G:C8	2.44	0.52
4:B1:1682:C:H2'	4:B1:1683:C:C6	2.44	0.52
4:B1:307:G:O6	4:B1:1788:A:H4'	2.07	0.52
4:B1:301:A:H1'	13:BI:71:CYS:O	2.09	0.52
4:B1:551:U:O5'	4:B1:551:U:H6	1.93	0.52
4:B1:587:A:C8	4:B1:587:A:OP2	2.62	0.52
4:B1:591:U:C2'	4:B1:591:U:O2	2.57	0.52
4:B1:59:U:C3'	4:B1:60:A:H5''	2.40	0.52
4:B1:613:G:O2'	4:B1:626:G:H4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:850:C:H2'	4:B1:851:C:H5''	1.90	0.52
7:BC:82:TYR:CZ	7:BC:164:PRO:HD3	2.44	0.52
7:BC:94:ILE:HD13	7:BC:159:LYS:O	2.10	0.52
17:BM:24:THR:O	17:BM:27:ILE:HG12	2.10	0.52
4:B1:1047:C:H1'	19:BO:141:ARG:HG2	1.91	0.52
4:B1:1430:C:O2'	24:BT:5:THR:HB	2.09	0.52
24:BT:96:SER:O	24:BT:99:VAL:HG22	2.10	0.52
43:CF:88:LYS:HB3	43:CF:124:LYS:NZ	2.24	0.52
45:CH:45:LEU:HA	45:CH:56:ARG:O	2.09	0.52
81:A2:1171:C:H2'	81:A2:1172:C:H6	1.74	0.52
81:A2:1353:A:H2'	81:A2:1354:G:C8	2.44	0.52
81:A2:1357:G:C8	81:A2:1360:G:H2'	2.44	0.52
81:A2:1652:U:H1'	81:A2:4266:U:O4	2.09	0.52
81:A2:1715:A:O2'	83:A4:78:C:H4'	2.10	0.52
81:A2:1491:G:O2'	81:A2:1827:U:H5''	2.09	0.52
81:A2:1912:A:N1	81:A2:2026:U:N3	2.57	0.52
81:A2:2431:U:C2'	81:A2:2431:U:O2	2.58	0.52
81:A2:2762:C:H3'	81:A2:2763:C:C6	2.44	0.52
81:A2:2775:A:O2'	81:A2:2776:G:H5'	2.09	0.52
81:A2:2864:U:H2'	81:A2:3587:C:C6	2.45	0.52
81:A2:339:G:O5'	81:A2:339:G:H8	1.93	0.52
81:A2:3783:U:H2'	81:A2:3784:G:O5'	2.09	0.52
81:A2:388:G:H2'	81:A2:389:A:O4'	2.09	0.52
81:A2:4240:A:H3'	81:A2:4241:A:C5'	2.40	0.52
81:A2:4308:A:H5'	81:A2:4309:C:C6	2.44	0.52
81:A2:4441:U:C2'	81:A2:4441:U:O2	2.57	0.52
81:A2:460:C:OP1	81:A2:679:U:O4'	2.28	0.52
81:A2:679:U:O5'	81:A2:679:U:C6	2.63	0.52
81:A2:721:A:O2'	81:A2:722:G:H5''	2.10	0.52
81:A2:735:A:C8	81:A2:736:G:N7	2.78	0.52
81:A2:901:A:C8	81:A2:901:A:H3'	2.45	0.52
81:A2:946:C:O2	81:A2:946:C:C2'	2.57	0.52
82:A3:112:G:OP2	82:A3:112:G:H8	1.93	0.52
82:A3:126:C:H5''	82:A3:128:C:C5	2.43	0.52
82:A3:80:A:H2'	82:A3:81:C:C6	2.44	0.52
83:A4:64:G:N3	83:A4:64:G:H2'	2.24	0.52
1:AV:34:G:C6	4:B1:1701:C:C1'	2.92	0.52
4:B1:1174:U:O5'	4:B1:1174:U:H6	1.93	0.52
4:B1:1389:C:O5'	4:B1:1389:C:H6	1.92	0.52
4:B1:138:C:H4'	4:B1:138:C:OP1	2.09	0.52
4:B1:1419:C:O2'	24:BT:3:GLY:HA2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1426:U:C3'	4:B1:1427:C:H5'	2.39	0.52
4:B1:1497:G:H4'	4:B1:1498:A:H5'	1.91	0.52
4:B1:1662:U:H2'	4:B1:1663:A:H5'	1.90	0.52
4:B1:1747:C:H2'	4:B1:1748:G:C8	2.44	0.52
4:B1:1822:A:C6	4:B1:1823:A:C6	2.97	0.52
4:B1:438:G:N2	4:B1:439:A:C6	2.78	0.52
4:B1:525:A:C2	4:B1:561:A:N6	2.71	0.52
4:B1:609:U:H6	4:B1:609:U:O5'	1.91	0.52
6:BB:177:GLN:HG2	6:BB:177:GLN:O	2.09	0.52
6:BB:179:ASN:O	6:BB:180:ASP:HB2	2.10	0.52
11:BG:133:LEU:N	11:BG:133:LEU:HD23	2.24	0.52
13:BI:81:VAL:O	13:BI:91:VAL:HG13	2.10	0.52
19:BO:30:VAL:HG21	19:BO:47:LEU:HA	1.92	0.52
38:CA:79:ALA:O	38:CA:82:ILE:HG12	2.09	0.52
47:CJ:92:TYR:HB3	47:CJ:172:GLY:HA2	1.92	0.52
48:CL:59:VAL:HG12	81:A2:74:G:H5''	1.90	0.52
53:CQ:152:PHE:CE1	81:A2:1825:C:H4'	2.44	0.52
55:CS:80:ILE:HG22	55:CS:82:LEU:HD21	1.90	0.52
62:CZ:136:PHE:C	81:A2:4090:C:H5'	2.29	0.52
81:A2:1048:G:OP1	81:A2:1215:G:C8	2.63	0.52
81:A2:1164:A:O2'	81:A2:1165:G:H5'	2.10	0.52
81:A2:1209:C:O2	81:A2:1209:C:H3'	2.10	0.52
81:A2:136:G:C8	81:A2:136:G:H5''	2.38	0.52
81:A2:1726:U:C6	81:A2:1726:U:C5'	2.93	0.52
81:A2:2294:G:C5'	81:A2:2294:G:H8	2.22	0.52
81:A2:2302:G:H2'	81:A2:2303:G:H8	1.74	0.52
81:A2:2305:U:H3'	81:A2:2306:G:H8	1.74	0.52
81:A2:2417:U:H4'	81:A2:2418:C:OP2	2.09	0.52
81:A2:2718:U:H1'	81:A2:2719:G:OP2	2.10	0.52
81:A2:3620:A:H2'	81:A2:3621:A:O4'	2.10	0.52
81:A2:3913:G:H2'	81:A2:3914:A:H8	1.75	0.52
81:A2:4179:A:H5''	81:A2:4180:A:OP2	2.10	0.52
81:A2:4502:U:H2'	81:A2:4503:G:H5'	1.92	0.52
81:A2:4893:A:H2'	81:A2:4894:C:O4'	2.10	0.52
81:A2:70:A:H5'	81:A2:72:C:N4	2.24	0.52
81:A2:712:C:C2'	81:A2:713:G:H5'	2.39	0.52
81:A2:926:G:O2'	81:A2:929:U:C6	2.51	0.52
81:A2:963:C:O2	81:A2:963:C:H2'	2.08	0.52
81:A2:1774:A:H5''	83:A4:98:G:C2'	2.39	0.52
4:B1:1017:U:H2'	4:B1:1018:U:O4'	2.10	0.52
4:B1:1049:A:H2'	4:B1:1050:A:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1403:C:C4	4:B1:1404:U:H1'	2.44	0.52
4:B1:1428:G:H8	4:B1:1428:G:H5''	1.74	0.52
4:B1:1446:A:O2'	4:B1:1447:G:H5''	2.10	0.52
4:B1:1493:C:H4'	4:B1:1494:U:H5'	1.90	0.52
4:B1:1588:A:H2'	4:B1:1589:A:C8	2.44	0.52
4:B1:1630:A:H5''	23:BS:37:GLY:N	2.24	0.52
4:B1:178:C:H3'	4:B1:179:C:C6	2.44	0.52
4:B1:1834:A:H2	4:B1:1837:G:N2	2.00	0.52
4:B1:499:G:N2	4:B1:502:C:C4	2.78	0.52
4:B1:65:C:H2'	4:B1:66:G:C3'	2.39	0.52
4:B1:746:C:H1'	4:B1:747:U:C2	2.42	0.52
4:B1:76:U:H2'	4:B1:77:A:C3'	2.25	0.52
12:BH:123:THR:HA	12:BH:126:HIS:CE1	2.44	0.52
12:BH:28:LEU:O	12:BH:31:GLU:HG2	2.10	0.52
13:BI:57:ALA:HB2	13:BI:183:GLY:HA2	1.91	0.52
24:BT:39:LEU:HD21	24:BT:43:LYS:H	1.74	0.52
38:CA:233:ARG:HB2	81:A2:4144:G:H5'	1.90	0.52
39:CB:258:HIS:ND1	81:A2:4477:A:H4'	2.25	0.52
40:CC:232:VAL:HG21	40:CC:256:ALA:HA	1.91	0.52
41:CD:191:ASN:ND2	41:CD:194:VAL:HG23	2.25	0.52
41:CD:19:LYS:HG3	41:CD:23:ARG:CZ	2.39	0.52
58:CV:66:LYS:HG3	58:CV:67:LYS:HD2	1.91	0.52
43:CF:37:PHE:CD1	81:A2:1250:A:H4'	2.44	0.52
81:A2:1547:C:H2'	81:A2:1548:U:C5	2.44	0.52
81:A2:1570:U:H3'	81:A2:1570:U:H6	1.74	0.52
53:CQ:10:ASP:OD2	81:A2:2060:G:H4'	2.10	0.52
81:A2:2285:G:H8	81:A2:2285:G:O5'	1.93	0.52
81:A2:2465:C:H4'	81:A2:2466:C:OP2	2.09	0.52
81:A2:3595:G:C6	81:A2:3805:A:C2	2.98	0.52
81:A2:393:A:H8	81:A2:393:A:C5'	2.09	0.52
81:A2:4439:A:H2'	81:A2:4440:A:H5'	1.92	0.52
81:A2:446:C:OP2	81:A2:446:C:C5	2.63	0.52
81:A2:4677:A:H2'	81:A2:4678:G:O4'	2.10	0.52
81:A2:4682:A:H2'	81:A2:4683:A:H8	1.73	0.52
81:A2:4983:G:H2'	81:A2:4984:C:H6	1.73	0.52
81:A2:636:G:O2'	81:A2:637:G:H5'	2.10	0.52
81:A2:642:C:C6	81:A2:642:C:H5'	2.38	0.52
81:A2:71:C:H5''	81:A2:72:C:H5	1.73	0.52
82:A3:6:C:H2'	82:A3:7:U:H5'	1.92	0.52
3:AX:42:U:C5	19:BO:151:LEU:HG	2.45	0.52
1:AV:39:U:H5'	4:B1:1058:A:OP1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1138:C:H5''	4:B1:1139:C:P	2.49	0.52
4:B1:1265:A:H2'	4:B1:1265:A:N3	2.24	0.52
4:B1:1415:C:H2'	4:B1:1416:C:H5'	1.91	0.52
4:B1:1622:U:H3'	4:B1:1623:A:C5'	2.40	0.52
1:AV:41:C:O2'	4:B1:1640:A:C4'	2.56	0.52
4:B1:1673:U:C6	4:B1:1673:U:H5'	2.44	0.52
4:B1:193:C:H1'	4:B1:208:G:N2	2.24	0.52
4:B1:197:U:N3	4:B1:198:U:H5	2.07	0.52
4:B1:587:A:C2'	4:B1:592:C:N4	2.71	0.52
4:B1:675:U:O5'	4:B1:675:U:H6	1.92	0.52
4:B1:747:U:N1	4:B1:748:C:H2'	2.24	0.52
4:B1:791:C:H2'	4:B1:792:C:C6	2.45	0.52
4:B1:904:A:H2'	4:B1:905:C:C6	2.45	0.52
5:BA:9:GLN:CB	26:BV:83:PHE:HA	2.38	0.52
6:BB:31:TYR:CZ	6:BB:91:VAL:HG13	2.44	0.52
10:BF:51:HIS:HA	10:BF:86:LYS:NZ	2.25	0.52
11:BG:32:MET:HE1	11:BG:65:GLN:HB2	1.92	0.52
38:CA:117:GLU:HB2	38:CA:162:ASN:HD22	1.74	0.52
39:CB:262:VAL:HG11	39:CB:268:ARG:NH1	2.25	0.52
40:CC:76:ILE:HG23	40:CC:77:PRO:HD2	1.91	0.52
45:CH:173:ARG:HD2	49:CM:127:VAL:HA	89.73	0.52
54:CR:12:SER:HA	54:CR:22:VAL:HG11	1.92	0.52
81:A2:1176:G:H2'	81:A2:1177:C:O5'	2.10	0.52
81:A2:1318:G:OP2	81:A2:1318:G:C8	2.63	0.52
81:A2:1322:A:C2'	81:A2:1323:A:H5'	2.40	0.52
81:A2:1350:G:C8	81:A2:1350:G:O5'	2.63	0.52
81:A2:1476:A:H5''	81:A2:1477:G:OP2	2.10	0.52
81:A2:1770:U:H3'	81:A2:1771:U:H6	1.75	0.52
81:A2:1885:A:C8	81:A2:1885:A:C5'	2.92	0.52
81:A2:198:C:HO2'	81:A2:199:C:H5	1.57	0.52
81:A2:249:C:O5'	81:A2:249:C:H6	1.93	0.52
81:A2:2693:C:H2'	81:A2:2694:G:C8	2.44	0.52
81:A2:2737:G:C2'	81:A2:2738:U:H5''	2.39	0.52
81:A2:402:G:H1'	81:A2:403:G:OP2	2.10	0.52
38:CA:85:GLY:HA3	81:A2:4088:G:N7	2.25	0.52
81:A2:4204:A:H1'	81:A2:4228:A:C4'	2.40	0.52
56:CT:80:VAL:HG12	81:A2:4264:A:OP2	2.10	0.52
81:A2:462:A:N7	81:A2:681:U:H5'	2.25	0.52
81:A2:4671:C:O5'	81:A2:4671:C:H6	1.92	0.52
81:A2:4879:C:O5'	81:A2:4879:C:H6	1.93	0.52
81:A2:672:G:H2'	81:A2:673:G:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:697:C:H2'	81:A2:698:G:H8	1.75	0.52
81:A2:710:G:H2'	81:A2:711:A:H5'	1.90	0.52
81:A2:722:G:H3'	81:A2:723:G:C4'	2.39	0.52
3:AX:44:U:H2'	3:AX:45:U:OP1	2.10	0.52
3:AX:51:U:H2'	3:AX:52:U:O4'	2.10	0.52
4:B1:1161:U:C6	4:B1:1161:U:H3'	2.44	0.52
4:B1:1359:U:H6	4:B1:1359:U:OP2	1.93	0.52
4:B1:138:C:OP2	4:B1:139:C:H5''	2.10	0.52
4:B1:1417:C:H2'	4:B1:1418:C:O4'	2.09	0.52
4:B1:1569:A:H5''	4:B1:1570:G:OP2	2.10	0.52
4:B1:1607:A:H1'	4:B1:1633:A:C2	2.45	0.52
4:B1:1663:A:C2	4:B1:1664:A:N1	2.77	0.52
4:B1:1678:A:C2'	4:B1:1679:A:H5'	2.40	0.52
4:B1:336:A:C2	4:B1:337:C:H5	2.27	0.52
4:B1:369:C:H2'	4:B1:370:G:H8	1.75	0.52
4:B1:557:U:H2'	4:B1:558:G:C8	2.45	0.52
4:B1:643:A:H4'	4:B1:644:G:H5'	1.92	0.52
4:B1:920:A:C8	4:B1:922:A:N7	2.78	0.52
6:BB:129:THR:HG22	6:BB:176:VAL:HG12	1.91	0.52
9:BE:72:ILE:HB	9:BE:77:ARG:HG3	1.91	0.52
9:BE:87:MET:HE1	9:BE:123:LEU:HD12	1.92	0.52
10:BF:89:THR:O	10:BF:93:VAL:HG23	2.10	0.52
21:BQ:24:HIS:HB3	21:BQ:69:ARG:H	1.74	0.52
5:BA:200:ASP:HB3	22:BR:86:PRO:HB2	1.92	0.52
25:BU:58:THR:HG23	25:BU:84:ILE:O	2.10	0.52
28:BX:82:THR:OG1	28:BX:118:VAL:HG22	2.09	0.52
30:BZ:70:PRO:HD3	30:BZ:107:VAL:HB	1.92	0.52
38:CA:116:LEU:HG	38:CA:126:LEU:HB2	1.91	0.52
38:CA:185:ALA:O	38:CA:189:TYR:HD1	1.92	0.52
39:CB:318:GLY:HA2	81:A2:4955:G:H21	1.74	0.52
40:CC:13:GLU:HB2	40:CC:170:LEU:CD1	2.35	0.52
41:CD:264:LYS:HA	83:A4:1:G:C5	2.45	0.52
42:CE:144:ILE:HG13	42:CE:144:ILE:O	2.10	0.52
44:CG:121:LYS:HB3	44:CG:129:PRO:HG2	1.92	0.52
49:CM:126:GLU:HB2	51:CO:187:LYS:HE3	1.91	0.52
53:CQ:64:SER:HB3	53:CQ:92:VAL:CG2	2.40	0.52
56:CT:81:LYS:HG2	56:CT:82:GLY:N	2.25	0.52
81:A2:1063:U:H2'	81:A2:1064:C:H6	1.74	0.52
81:A2:1715:A:C2'	81:A2:1716:A:H5'	2.40	0.52
81:A2:1846:A:H8	81:A2:1846:A:O5'	1.92	0.52
81:A2:2278:C:H2'	81:A2:2279:C:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:101:MET:HE3	81:A2:2320:G:C8	2.45	0.52
81:A2:241:G:H8	81:A2:241:G:O5'	1.93	0.52
81:A2:2447:C:C2'	81:A2:2447:C:O2	2.57	0.52
81:A2:2478:C:H6	81:A2:2478:C:O5'	1.93	0.52
81:A2:2551:G:P	81:A2:2551:G:H3'	2.50	0.52
81:A2:2650:G:C4'	81:A2:2651:A:OP2	2.57	0.52
81:A2:3767:U:H5''	81:A2:3767:U:H6	1.75	0.52
81:A2:4215:A:C2'	81:A2:4216:A:H5'	2.40	0.52
81:A2:4413:C:C2'	81:A2:4414:G:H5'	2.40	0.52
81:A2:5002:C:O2'	81:A2:5003:A:H5''	2.10	0.52
81:A2:978:G:C2'	81:A2:979:C:C6	2.83	0.52
82:A3:35:C:H2'	82:A3:36:G:C8	2.44	0.52
82:A3:60:G:H21	82:A3:64:U:C1'	2.22	0.52
4:B1:1534:C:H3'	4:B1:1534:C:OP1	2.10	0.52
4:B1:1705:C:H2'	4:B1:1706:G:C8	2.45	0.52
4:B1:35:C:C2'	4:B1:36:U:C6	2.92	0.52
5:BA:77:ILE:HD12	5:BA:122:LEU:HD11	1.90	0.52
8:BD:106:ARG:HH12	8:BD:173:ARG:CB	2.23	0.52
2:AW:37:MIA:C16	10:BF:132:GLY:H	2.08	0.52
4:B1:797:C:P	12:BH:109:ARG:H	2.33	0.52
22:BR:55:THR:O	22:BR:58:MET:HB2	2.09	0.52
42:CE:277:LEU:O	81:A2:4712:U:H2'	2.10	0.52
61:CY:26:ARG:HD3	61:CY:75:ARG:O	2.09	0.52
81:A2:1313:A:C3'	81:A2:1314:A:C8	2.88	0.52
81:A2:1460:C:H6	81:A2:1460:C:C3'	2.18	0.52
81:A2:166:G:C2	81:A2:258:G:N1	2.75	0.52
81:A2:199:C:H2'	81:A2:200:U:O4'	2.09	0.52
81:A2:2309:G:O3'	81:A2:2310:G:C8	2.63	0.52
81:A2:3888:C:C5'	81:A2:3888:C:C6	2.92	0.52
81:A2:4144:G:OP1	81:A2:4144:G:H8	1.93	0.52
81:A2:4358:C:H6	81:A2:4358:C:O5'	1.92	0.52
81:A2:4742:C:H3'	81:A2:4742:C:C6	2.45	0.52
81:A2:4895:C:C2'	81:A2:4896:G:OP1	2.58	0.52
81:A2:916:A:C1'	81:A2:917:G:C5'	2.87	0.52
83:A4:12:U:H5'	83:A4:67:C:O2	2.10	0.52
4:B1:1089:G:H2'	4:B1:1090:C:H6	1.75	0.52
4:B1:1135:C:O2'	4:B1:1136:U:H5'	2.10	0.52
4:B1:1272:C:O2'	4:B1:1273:C:H5'	2.10	0.52
4:B1:1479:G:N3	4:B1:1479:G:H2'	2.25	0.52
4:B1:1649:U:C6	4:B1:1649:U:C3'	2.93	0.52
4:B1:1673:U:H3'	4:B1:1674:G:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1691:U:O2'	4:B1:1692:U:C6	2.59	0.52
4:B1:170:A:C2'	4:B1:171:A:C8	2.93	0.52
4:B1:172:U:C2'	4:B1:172:U:O2	2.57	0.52
4:B1:452:G:H2'	4:B1:453:C:H6	1.74	0.52
4:B1:547:G:OP2	4:B1:548:C:C6	2.63	0.52
4:B1:601:G:H5''	4:B1:602:G:OP2	2.10	0.52
4:B1:682:U:H3	4:B1:1023:A:N6	2.08	0.52
4:B1:840:C:O2	29:BY:14:THR:HG23	2.10	0.52
4:B1:914:U:H6	4:B1:914:U:H5''	1.74	0.52
5:BA:110:ASN:HD21	5:BA:113:GLN:CG	2.23	0.52
3:AX:53:U:N1	8:BD:146:ARG:NH2	2.58	0.52
12:BH:102:PRO:CG	12:BH:105:THR:HB	2.40	0.52
4:B1:913:A:C6	12:BH:120:ARG:HB3	2.45	0.52
4:B1:743:U:C4	12:BH:98:ARG:O	2.63	0.52
4:B1:956:G:O5'	19:BO:60:MET:HA	2.10	0.52
23:BS:4:VAL:HG12	23:BS:5:ILE:O	2.11	0.52
4:B1:1530:U:H4'	24:BT:86:GLY:O	2.10	0.52
41:CD:62:CYS:SG	41:CD:101:THR:HG22	2.50	0.52
41:CD:178:LYS:HA	41:CD:183:TYR:CD1	2.44	0.52
43:CF:222:LYS:HB2	81:A2:1885:A:C4'	2.32	0.52
43:CF:21:LYS:O	43:CF:25:PHE:HD1	1.93	0.52
49:CM:65:PRO:HG2	49:CM:72:TYR:CZ	2.44	0.52
51:CO:110:PRO:HG2	51:CO:111:PRO:HD3	1.92	0.52
81:A2:1063:U:O2'	81:A2:1064:C:H5'	2.10	0.51
81:A2:1155:A:H2'	81:A2:1156:C:H6	1.70	0.51
81:A2:1267:G:C2'	81:A2:1268:G:H4'	2.39	0.51
81:A2:1454:G:N3	81:A2:1455:C:H1'	2.24	0.51
81:A2:1529:G:H1	81:A2:1557:U:H3	1.58	0.51
81:A2:14:C:C1'	81:A2:15:A:H5'	2.40	0.51
81:A2:1630:G:N2	81:A2:1631:U:H1'	2.25	0.51
81:A2:1715:A:C2	83:A4:77:A:H2	2.27	0.51
81:A2:1860:U:H4'	81:A2:1861:G:O5'	2.10	0.51
81:A2:2027:G:O2'	81:A2:2028:G:H5'	2.10	0.51
81:A2:2262:G:H2'	81:A2:2263:G:C8	2.45	0.51
81:A2:2417:U:H3'	81:A2:2418:C:H5'	1.91	0.51
81:A2:2505:G:C8	81:A2:2505:G:H3'	2.45	0.51
81:A2:2580:C:O5'	81:A2:2580:C:H6	1.93	0.51
81:A2:2626:G:C2	81:A2:2662:C:C2	2.99	0.51
81:A2:2587:G:H1'	81:A2:2663:G:O2'	2.09	0.51
81:A2:2673:A:H5'	81:A2:2674:A:H8	1.75	0.51
81:A2:327:A:H3'	81:A2:328:U:H4'	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3667:G:O5'	81:A2:3667:G:H8	1.93	0.51
81:A2:3732:A:C6	81:A2:3733:U:C2	2.99	0.51
81:A2:3736:C:H2'	81:A2:3737:U:C6	2.45	0.51
81:A2:3767:U:H5'	81:A2:3768:A:OP2	2.10	0.51
81:A2:3929:A:H1'	81:A2:4013:G:H5'	1.92	0.51
81:A2:4033:G:H2'	81:A2:4034:U:H6	1.71	0.51
81:A2:4090:C:C3'	81:A2:4090:C:C6	2.93	0.51
81:A2:4233:A:H3'	81:A2:4233:A:C8	2.46	0.51
81:A2:4234:A:H2'	81:A2:4235:G:H8	1.73	0.51
81:A2:286:A:H62	81:A2:4322:A:H4'	1.76	0.51
81:A2:4533:G:H3'	81:A2:4535:G:OP1	2.11	0.51
81:A2:4608:A:H2'	81:A2:4609:G:O4'	2.10	0.51
81:A2:507:C:H2'	81:A2:508:C:H6	1.74	0.51
81:A2:692:C:O2'	81:A2:693:G:H5'	2.10	0.51
81:A2:941:G:C5	81:A2:2053:G:OP1	2.63	0.51
83:A4:57:C:C2'	83:A4:58:A:H5'	2.39	0.51
83:A4:9:C:O2	83:A4:9:C:C3'	2.58	0.51
4:B1:1050:A:OP1	4:B1:1846:G:N2	2.40	0.51
4:B1:1239:U:H2'	4:B1:1241:A:OP2	2.10	0.51
4:B1:1461:G:H5''	4:B1:1462:U:OP2	2.09	0.51
4:B1:1574:C:C2'	4:B1:1575:G:H5'	2.39	0.51
4:B1:53:C:H2'	4:B1:54:A:H5'	1.92	0.51
4:B1:657:U:H3'	4:B1:657:U:C6	2.43	0.51
4:B1:748:C:H5''	4:B1:749:U:C5	2.44	0.51
5:BA:33:GLN:NE2	26:BV:63:GLY:HA3	2.25	0.51
5:BA:30:LEU:HD22	5:BA:35:GLU:OE1	2.10	0.51
7:BC:104:ASP:HB3	7:BC:130:ILE:HG22	1.92	0.51
7:BC:252:THR:OG1	7:BC:253:PRO:HD2	2.10	0.51
7:BC:74:LYS:HG3	7:BC:272:HIS:CD2	2.45	0.51
2:AW:37:MIA:C12	10:BF:134:VAL:HG13	2.39	0.51
10:BF:79:HIS:O	10:BF:81:ARG:N	2.44	0.51
15:BK:15:LEU:O	15:BK:15:LEU:HD22	2.09	0.51
15:BK:26:ASP:OD2	15:BK:33:PRO:HG2	2.09	0.51
26:BV:41:LYS:C	26:BV:43:THR:H	2.13	0.51
28:BX:32:LEU:C	28:BX:34:THR:H	2.14	0.51
4:B1:83:A:H2'	29:BY:123:ALA:CB	2.40	0.51
30:BZ:92:LEU:HD13	30:BZ:109:TYR:HE1	1.75	0.51
38:CA:90:CYS:HB3	38:CA:101:VAL:HG13	1.92	0.51
41:CD:232:THR:HB	41:CD:233:PRO:HD2	1.90	0.51
55:CS:15:ARG:O	55:CS:16:CYS:HB3	2.10	0.51
62:CZ:23:ALA:HB1	62:CZ:43:VAL:HB	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1060:C:H2'	81:A2:1061:C:C6	2.44	0.51
81:A2:1161:C:H2'	81:A2:1162:C:O4'	2.10	0.51
81:A2:1367:A:O4'	81:A2:1368:A:H5'	2.10	0.51
81:A2:1425:U:O5'	81:A2:1425:U:C6	2.63	0.51
81:A2:1478:C:H4'	81:A2:1479:A:OP1	2.11	0.51
81:A2:1480:C:OP2	81:A2:1480:C:C6	2.63	0.51
81:A2:1906:C:N4	81:A2:2033:G:OP2	2.42	0.51
81:A2:2063:G:H2'	81:A2:2064:G:H8	1.75	0.51
81:A2:2294:G:C8	81:A2:2294:G:H5''	2.43	0.51
81:A2:2586:G:O2'	81:A2:2663:G:C2	2.58	0.51
81:A2:266:C:O2	81:A2:266:C:H2'	2.10	0.51
81:A2:2759:U:H4'	81:A2:2760:A:OP2	2.10	0.51
81:A2:2836:G:C2'	81:A2:2837:C:H5'	2.41	0.51
81:A2:3592:C:C4	81:A2:3593:A:C2	2.98	0.51
81:A2:3769:A:N3	81:A2:4456:A:H1'	2.25	0.51
81:A2:4574:G:H2'	81:A2:4575:C:C6	2.44	0.51
81:A2:4687:U:H5''	81:A2:4688:A:H5''	1.90	0.51
81:A2:4749:G:H2'	81:A2:4750:C:C6	2.45	0.51
81:A2:4869:C:C6	81:A2:4869:C:P	3.03	0.51
42:CE:158:ARG:HH21	81:A2:4903:C:H1'	1.75	0.51
81:A2:4962:A:H5'	81:A2:4962:A:H8	1.75	0.51
83:A4:68:C:O2	83:A4:68:C:C2'	2.56	0.51
1:AV:34:G:C2	4:B1:1701:C:H1'	2.44	0.51
1:AV:41:C:C6	1:AV:41:C:H5''	2.44	0.51
4:B1:1148:A:N3	4:B1:1148:A:C5'	2.72	0.51
4:B1:10:G:H2'	4:B1:11:A:C8	2.44	0.51
4:B1:1549:U:O5'	4:B1:1549:U:H6	1.92	0.51
4:B1:1743:G:H21	4:B1:1791:A:H62	1.56	0.51
4:B1:60:A:H5'	4:B1:501:C:C5	2.42	0.51
4:B1:934:G:H5'	4:B1:993:G:H21	1.75	0.51
5:BA:8:LEU:HG	5:BA:191:ARG:NE	2.25	0.51
6:BB:120:MET:HE2	6:BB:140:VAL:HG21	1.92	0.51
7:BC:209:VAL:HB	7:BC:210:PRO:HD3	1.93	0.51
12:BH:103:LYS:HB2	12:BH:104:PRO:HD3	1.91	0.51
26:BV:22:ARG:HH21	26:BV:56:CYS:HB2	1.76	0.51
41:CD:52:ILE:O	41:CD:62:CYS:HA	2.10	0.51
42:CE:154:THR:HG22	81:A2:4902:U:N3	2.23	0.51
44:CG:106:THR:N	44:CG:109:GLU:HB2	2.23	0.51
44:CG:162:ASP:O	44:CG:164:ILE:N	2.44	0.51
48:CL:50:PRO:O	48:CL:51:ALA:HB3	2.10	0.51
56:CT:81:LYS:HG2	56:CT:82:GLY:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1076:C:H2'	81:A2:1077:C:H6	1.71	0.51
81:A2:1224:G:C3'	81:A2:1225:C:C5'	2.87	0.51
81:A2:1367:A:H2	81:A2:1376:G:N3	2.09	0.51
81:A2:1536:C:C2'	81:A2:1537:A:H5'	2.40	0.51
81:A2:15:A:C8	81:A2:15:A:OP2	2.59	0.51
81:A2:172:C:H2'	81:A2:173:G:H5'	1.90	0.51
81:A2:1942:A:C2	81:A2:1943:G:C4	2.98	0.51
81:A2:198:C:O2'	81:A2:199:C:C5	2.63	0.51
81:A2:2587:G:C5'	81:A2:2663:G:H21	2.23	0.51
81:A2:2650:G:N2	81:A2:2652:G:N2	2.59	0.51
81:A2:2672:A:H3'	81:A2:2673:A:C5'	2.40	0.51
81:A2:3578:G:H5''	81:A2:3578:G:H8	1.75	0.51
81:A2:35:U:H4'	81:A2:1504:A:N1	2.24	0.51
81:A2:4298:G:H22	81:A2:4332:U:H2'	1.74	0.51
81:A2:4298:G:H1	81:A2:4332:U:H3'	1.74	0.51
81:A2:4402:U:H6	81:A2:4402:U:O5'	1.92	0.51
81:A2:4456:A:C3'	81:A2:4457:U:H5'	2.41	0.51
81:A2:4597:G:OP1	81:A2:4597:G:H4'	2.09	0.51
81:A2:677:C:O2	81:A2:677:C:C2'	2.57	0.51
81:A2:896:G:H4'	81:A2:897:U:O5'	2.09	0.51
81:A2:1:C:N3	82:A3:157:U:C4	2.78	0.51
1:AV:74:C:C4	81:A2:4158:G:N2	2.78	0.51
3:AX:43:U:H6	4:B1:961:G:H1'	1.75	0.51
4:B1:1133:A:C2	4:B1:1134:G:C5	2.98	0.51
4:B1:1571:G:C2	4:B1:1572:C:H1'	2.44	0.51
4:B1:1586:U:C2'	4:B1:1587:G:O5'	2.59	0.51
4:B1:1624:U:C2'	4:B1:1624:U:O2	2.58	0.51
3:AX:52:U:H5	4:B1:1698:C:O2	1.93	0.51
7:BC:104:ASP:CB	7:BC:130:ILE:HG22	2.41	0.51
8:BD:94:ARG:HG2	8:BD:101:GLN:HE22	1.75	0.51
4:B1:343:A:H4'	9:BE:128:LYS:HZ1	1.75	0.51
10:BF:116:ILE:HD13	10:BF:154:LEU:HD12	1.90	0.51
13:BI:119:LEU:HG	13:BI:121:LEU:HD12	1.91	0.51
4:B1:1130:G:H5'	18:BN:10:GLY:HA2	1.91	0.51
19:BO:99:ALA:CB	19:BO:108:PRO:HA	2.41	0.51
24:BT:4:VAL:HG21	24:BT:139:ALA:HB3	1.92	0.51
25:BU:32:LEU:O	25:BU:35:VAL:HG12	2.10	0.51
39:CB:285:TYR:OH	39:CB:334:LYS:HD2	2.09	0.51
41:CD:48:LYS:HE3	41:CD:145:TYR:CE2	2.45	0.51
44:CG:136:LEU:HB3	44:CG:204:PHE:CE2	2.46	0.51
44:CG:80:ILE:O	44:CG:81:ASN:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:87:ARG:HG3	61:CY:97:VAL:CG2	2.41	0.51
81:A2:1080:U:H3'	81:A2:1081:C:C5'	2.40	0.51
81:A2:1204:G:H2'	81:A2:1204:G:N3	2.23	0.51
81:A2:1466:G:C2'	81:A2:1467:G:H5''	2.28	0.51
53:CQ:57:ASN:ND2	81:A2:1671:C:H4'	2.25	0.51
81:A2:2552:U:H3'	81:A2:2552:U:C6	2.43	0.51
81:A2:2652:G:H8	81:A2:2652:G:P	2.33	0.51
81:A2:283:G:C2	81:A2:284:G:N7	2.79	0.51
40:CC:58:ALA:HB3	81:A2:348:U:H4'	1.91	0.51
81:A2:3761:G:H3'	81:A2:3762:U:H5	1.75	0.51
81:A2:3911:A:H2'	81:A2:3912:A:C8	2.46	0.51
81:A2:3942:G:C2'	81:A2:3943:G:H5'	2.37	0.51
81:A2:4215:A:H2'	81:A2:4216:A:H5'	1.92	0.51
81:A2:1849:A:H5'	81:A2:4403:C:OP1	2.10	0.51
49:CM:98:ARG:HB3	81:A2:4826:C:C2	2.45	0.51
81:A2:4837:U:C3'	81:A2:4838:C:H5'	2.39	0.51
81:A2:710:G:H2'	81:A2:711:A:O4'	2.10	0.51
81:A2:739:G:H2'	81:A2:740:G:H8	1.74	0.51
81:A2:947:G:C6	81:A2:948:A:C5	2.98	0.51
81:A2:8:U:C2'	81:A2:9:C:H5'	2.38	0.51
81:A2:3:C:H42	82:A3:154:G:H1	1.59	0.51
83:A4:71:G:H2'	83:A4:72:U:H6	1.75	0.51
3:AX:42:U:C6	3:AX:42:U:C3'	2.93	0.51
3:AX:48:U:C4	4:B1:1702:G:P	3.02	0.51
4:B1:1370:A:H62	22:BR:4:VAL:HB	1.76	0.51
4:B1:1567:G:H1'	24:BT:38:LYS:HG3	1.91	0.51
4:B1:1548:G:O6	4:B1:1584:G:C2	2.64	0.51
4:B1:1621:U:H2'	4:B1:1622:U:C5'	2.32	0.51
4:B1:1654:G:H8	4:B1:1654:G:O5'	1.94	0.51
4:B1:1782:G:O4'	4:B1:1782:G:P	2.68	0.51
4:B1:452:G:H2'	4:B1:453:C:C6	2.46	0.51
4:B1:455:A:C8	4:B1:455:A:H3'	2.46	0.51
4:B1:572:U:C6	4:B1:572:U:C3'	2.93	0.51
4:B1:789:G:H2'	4:B1:790:C:H6	1.73	0.51
6:BB:58:ALA:O	6:BB:63:LYS:HG3	2.10	0.51
4:B1:1500:G:O4'	8:BD:180:GLY:HA2	2.11	0.51
8:BD:3:VAL:HG13	8:BD:5:ILE:CG1	2.41	0.51
9:BE:180:LEU:HD13	9:BE:232:ASN:H	1.75	0.51
11:BG:160:LYS:O	11:BG:160:LYS:HG3	2.06	0.51
4:B1:67:C:C2	11:BG:164:LYS:HB2	2.46	0.51
12:BH:109:ARG:HG3	12:BH:113:LYS:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AV:32:U:P	21:BQ:146:ARG:CD	2.98	0.51
23:BS:30:ILE:HG22	23:BS:36:VAL:HG11	1.92	0.51
39:CB:106:PHE:HD1	39:CB:133:TYR:HH	1.58	0.51
40:CC:318:PRO:HG2	43:CF:155:TYR:HB3	1.93	0.51
1:AV:56:C:H4'	47:CJ:55:TYR:CD1	2.38	0.51
48:CL:143:GLU:HG2	48:CL:144:LEU:H	1.74	0.51
51:CO:193:THR:O	51:CO:197:LYS:HG3	2.10	0.51
61:CY:61:HIS:CE1	81:A2:229:G:H1	2.28	0.51
81:A2:1357:G:N7	81:A2:1360:G:C2'	2.73	0.51
81:A2:1404:G:H2'	81:A2:1405:G:H8	1.74	0.51
81:A2:2266:C:H6	81:A2:2266:C:C5'	2.24	0.51
81:A2:2638:U:O2	81:A2:2638:U:C2'	2.57	0.51
81:A2:2665:G:C5'	81:A2:2665:G:H8	2.23	0.51
81:A2:2711:U:H5''	81:A2:2711:U:C6	2.44	0.51
81:A2:2877:U:H5''	81:A2:2877:U:H6	1.75	0.51
81:A2:365:G:H2'	81:A2:366:G:C5'	2.38	0.51
81:A2:4105:C:H4'	81:A2:4106:G:OP1	2.11	0.51
81:A2:411:A:H3'	81:A2:412:C:C6	2.46	0.51
81:A2:4164:C:OP2	81:A2:4164:C:H4'	2.11	0.51
81:A2:4348:A:H2'	81:A2:4349:C:C6	2.45	0.51
81:A2:4387:G:C8	81:A2:4387:G:H5''	2.45	0.51
81:A2:438:C:O5'	81:A2:438:C:C6	2.62	0.51
81:A2:4512:U:H2'	81:A2:4513:A:C8	2.46	0.51
81:A2:4563:C:H2'	81:A2:4564:G:C5'	2.34	0.51
81:A2:4640:G:H2'	81:A2:4641:A:O5'	2.11	0.51
81:A2:4850:C:H2'	81:A2:4851:G:H8	1.76	0.51
81:A2:4863:G:H3'	81:A2:4863:G:H8	1.75	0.51
81:A2:4976:C:H6	81:A2:4976:C:O5'	1.92	0.51
81:A2:638:G:H2'	81:A2:639:G:C8	2.45	0.51
81:A2:715:C:H2'	81:A2:716:U:C6	2.44	0.51
81:A2:915:C:H6	81:A2:915:C:H5'	1.76	0.51
81:A2:4122:C:C5	82:A3:150:C:C6	2.98	0.51
82:A3:58:G:OP1	82:A3:97:A:N1	2.44	0.51
83:A4:21:G:O5'	83:A4:21:G:C8	2.63	0.51
83:A4:7:G:C2'	83:A4:8:G:H5'	2.41	0.51
3:AX:45:U:C2	4:B1:1207:G:N3	2.40	0.51
4:B1:1049:A:C2	4:B1:1069:U:N3	2.71	0.51
4:B1:1099:G:C2	4:B1:1134:G:N2	2.79	0.51
4:B1:1117:C:H5''	4:B1:1118:C:OP2	2.11	0.51
4:B1:1597:C:H3'	4:B1:1598:G:C8	2.46	0.51
4:B1:1767:C:H3'	4:B1:1767:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:368:U:OP1	4:B1:369:C:H4'	2.10	0.51
4:B1:39:A:H2'	4:B1:40:A:O4'	2.10	0.51
4:B1:495:U:H2'	4:B1:496:C:O4'	2.10	0.51
4:B1:499:G:N3	4:B1:499:G:H2'	2.25	0.51
4:B1:798:G:C2	4:B1:799:U:C4	2.99	0.51
4:B1:847:A:H3'	4:B1:848:U:H6	1.74	0.51
4:B1:910:G:OP1	54:CR:173:ARG:CB	2.56	0.51
4:B1:985:G:OP2	4:B1:985:G:H8	1.93	0.51
4:B1:994:C:H2'	4:B1:995:G:O4'	2.11	0.51
7:BC:124:PHE:O	7:BC:143:CYS:HA	2.10	0.51
8:BD:213:PRO:HD3	22:BR:20:TYR:CZ	2.46	0.51
8:BD:7:LYS:HD3	8:BD:10:LYS:HE2	1.91	0.51
9:BE:238:LEU:HD23	9:BE:238:LEU:H	1.75	0.51
4:B1:67:C:C6	11:BG:164:LYS:HB2	2.45	0.51
12:BH:72:PHE:CZ	12:BH:94:PHE:HB2	2.45	0.51
13:BI:57:ALA:HB1	13:BI:60:LEU:HD21	1.92	0.51
20:BP:18:ARG:NH2	20:BP:38:SER:HB2	2.25	0.51
4:B1:1579:A:H62	25:BU:88:LEU:HD22	1.75	0.51
44:CG:72:LYS:O	81:A2:2727:G:H4'	65.35	0.51
47:CJ:118:LYS:HB2	47:CJ:118:LYS:NZ	2.26	0.51
48:CL:91:ALA:HA	48:CL:94:ILE:HG22	1.92	0.51
50:CN:21:PHE:O	50:CN:25:VAL:HG23	2.10	0.51
55:CS:109:CYS:O	55:CS:113:MET:HG2	2.11	0.51
81:A2:1379:G:H2'	81:A2:1380:G:C8	2.38	0.51
81:A2:1423:A:C8	81:A2:1423:A:OP2	2.63	0.51
81:A2:1474:G:H2'	81:A2:1475:G:C5'	2.40	0.51
44:CG:163:PRO:HG2	81:A2:148:G:H22	1.76	0.51
81:A2:1499:C:C2'	81:A2:1500:C:H5'	2.41	0.51
81:A2:1569:C:C3'	81:A2:1570:U:H4'	2.39	0.51
81:A2:1705:U:H2'	81:A2:1706:U:C6	2.45	0.51
81:A2:1707:U:H2'	81:A2:1708:A:C8	2.46	0.51
81:A2:173:G:O2'	81:A2:174:G:H5'	2.10	0.51
81:A2:174:G:H2'	81:A2:175:C:C6	2.46	0.51
81:A2:2550:A:O5'	81:A2:2736:G:C8	2.62	0.51
81:A2:2664:U:O2'	81:A2:2665:G:H5'	2.10	0.51
81:A2:25:A:H2'	81:A2:26:C:C6	2.45	0.51
81:A2:334:C:H6	81:A2:334:C:H5''	1.76	0.51
81:A2:3743:A:H2'	81:A2:3744:A:C8	2.46	0.51
81:A2:3810:C:O2'	81:A2:3811:C:H5'	2.11	0.51
81:A2:4536:U:O5'	81:A2:4536:U:H6	1.93	0.51
81:A2:459:U:C2'	81:A2:459:U:O2	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4602:U:H2'	81:A2:4603:G:H8	1.76	0.51
81:A2:4838:C:H2'	81:A2:4838:C:O2	2.09	0.51
81:A2:500:A:O5'	81:A2:500:A:H8	1.94	0.51
81:A2:722:G:H3'	81:A2:723:G:H5''	1.92	0.51
81:A2:905:C:H2'	81:A2:906:C:C6	2.45	0.51
81:A2:918:C:OP2	81:A2:918:C:H2'	2.10	0.51
81:A2:943:G:H3'	81:A2:1262:G:C5'	2.40	0.51
83:A4:24:C:H2'	83:A4:25:G:C8	2.46	0.51
1:AV:57:G:H5''	1:AV:57:G:C8	2.45	0.51
4:B1:1038:U:H1'	4:B1:1181:A:H2	1.75	0.51
4:B1:142:C:H2'	4:B1:142:C:O2	2.11	0.51
4:B1:1599:U:H3	10:BF:165:ASN:C	2.13	0.51
4:B1:1602:U:H2'	4:B1:1603:G:C8	2.43	0.51
4:B1:1761:U:H3	4:B1:1771:G:H1	1.58	0.51
4:B1:1790:A:O2'	4:B1:1791:A:H5'	2.11	0.51
4:B1:20:G:H4'	4:B1:620:G:N1	2.25	0.51
4:B1:302:A:C4'	13:BI:73:THR:O	2.58	0.51
4:B1:547:G:OP2	4:B1:548:C:C5	2.64	0.51
4:B1:595:U:H2'	4:B1:596:U:C6	2.45	0.51
4:B1:91:A:H5''	4:B1:92:A:H5'	1.90	0.51
5:BA:189:ILE:HG22	5:BA:190:SER:O	2.10	0.51
12:BH:105:THR:O	12:BH:105:THR:HG22	2.09	0.51
13:BI:191:GLU:HG3	16:BL:20:LYS:HD2	1.92	0.51
19:BO:136:PRO:HB2	19:BO:138:ASP:O	2.09	0.51
23:BS:37:GLY:H	23:BS:40:TYR:HB3	1.76	0.51
7:BC:267:GLN:HE22	26:BV:35:ASN:HB2	1.75	0.51
28:BX:18:ARG:O	28:BX:21:LYS:HB3	2.10	0.51
28:BX:50:ILE:HG23	28:BX:97:ASN:HA	1.93	0.51
38:CA:201:GLY:HA2	38:CA:204:MET:HG3	1.93	0.51
39:CB:252:ALA:HB1	81:A2:4484:G:N3	2.24	0.51
42:CE:242:ILE:O	42:CE:246:ARG:HG2	2.10	0.51
50:CN:183:THR:HB	50:CN:188:ARG:HB3	1.91	0.51
50:CN:184:ILE:HG23	50:CN:185:GLY:N	2.26	0.51
52:CP:111:SER:O	52:CP:153:LYS:HB2	2.10	0.51
53:CQ:61:LEU:HD23	53:CQ:82:VAL:CG1	2.40	0.51
54:CR:21:LYS:O	54:CR:53:LYS:HB2	2.10	0.51
57:CU:76:VAL:HG13	57:CU:77:PRO:HD2	1.93	0.51
58:CV:85:ARG:HD3	58:CV:99:GLU:O	2.10	0.51
81:A2:104:G:C1'	81:A2:1340:G:N2	2.57	0.51
81:A2:1050:G:H2'	81:A2:1051:C:C5'	2.31	0.51
81:A2:1086:A:C8	81:A2:1086:A:O5'	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:131:C:C2	81:A2:139:G:C2	2.99	0.51
81:A2:1349:C:H2'	82:A3:30:U:H4'	1.91	0.51
81:A2:1351:A:H5''	81:A2:1352:A:OP2	2.10	0.51
81:A2:1427:C:H2'	81:A2:1427:C:O2	2.10	0.51
81:A2:1479:A:C3'	81:A2:1480:C:C5'	2.82	0.51
81:A2:1873:G:N3	81:A2:1874:A:H1'	2.25	0.51
40:CC:293:LEU:HD22	81:A2:2065:C:H2'	1.91	0.51
81:A2:210:G:C6	81:A2:211:G:C8	2.99	0.51
81:A2:2369:C:H2'	81:A2:2370:C:H6	1.74	0.51
81:A2:2479:G:H8	81:A2:2479:G:H3'	1.76	0.51
81:A2:2672:A:N3	81:A2:2672:A:C5'	2.74	0.51
81:A2:2755:G:N2	82:A3:113:C:P	2.84	0.51
81:A2:2398:G:O5'	81:A2:2805:U:H1'	2.10	0.51
81:A2:3651:A:H1'	81:A2:3653:G:C4	2.45	0.51
81:A2:3679:G:N3	81:A2:3679:G:H2'	2.26	0.51
81:A2:378:G:C4	81:A2:403:G:N1	2.79	0.51
81:A2:3821:A:H8	81:A2:3821:A:H5''	1.76	0.51
81:A2:4100:C:H2'	81:A2:4101:C:H6	1.76	0.51
81:A2:4362:C:H5'	81:A2:4363:U:OP2	2.11	0.51
81:A2:4467:A:H5''	81:A2:4467:A:C8	2.46	0.51
81:A2:3866:G:N1	81:A2:4519:A:H2	2.09	0.51
81:A2:457:A:C5	81:A2:676:G:C8	2.99	0.51
81:A2:4600:C:H2'	81:A2:4601:U:H5'	1.91	0.51
81:A2:4637:U:C1'	81:A2:4638:G:OP1	2.54	0.51
81:A2:4659:U:H4'	81:A2:4660:A:C5'	2.41	0.51
81:A2:4669:U:H2'	81:A2:4670:C:C6	2.46	0.51
81:A2:468:C:O2'	81:A2:469:G:H5'	2.10	0.51
81:A2:4739:G:N2	81:A2:4744:C:H1'	2.25	0.51
81:A2:4806:G:N3	81:A2:4807:C:H1'	2.25	0.51
81:A2:952:C:H2'	81:A2:953:C:C6	2.44	0.51
81:A2:957:G:C2'	81:A2:958:C:C5'	2.84	0.51
83:A4:34:C:O2'	83:A4:35:U:H5'	2.09	0.51
3:AX:50:U:C2'	3:AX:51:U:H5'	2.40	0.51
4:B1:1109:C:C3'	4:B1:1109:C:O2	2.59	0.51
4:B1:1362:U:H3'	4:B1:1363:C:C2	2.46	0.51
4:B1:1410:C:OP2	4:B1:1413:G:H5''	2.10	0.51
4:B1:1461:G:C2	4:B1:1466:G:C6	2.99	0.51
4:B1:1549:U:H3	4:B1:1584:G:N2	2.08	0.51
4:B1:1696:C:O2'	4:B1:1697:A:C8	2.58	0.51
4:B1:181:A:H2'	4:B1:181:A:N3	2.24	0.51
4:B1:45:A:OP1	4:B1:45:A:H8	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:876:C:C6	4:B1:876:C:P	3.04	0.51
14:BJ:12:THR:O	14:BJ:45:ARG:HA	2.11	0.51
6:BB:30:TRP:HE1	19:BO:17:LEU:CD2	2.24	0.51
4:B1:1648:G:O2'	21:BQ:127:CYS:HA	2.10	0.51
24:BT:102:ARG:HA	24:BT:105:GLN:OE1	2.10	0.51
4:B1:1562:C:C5'	24:BT:71:GLY:HA3	2.40	0.51
25:BU:94:PRO:CD	25:BU:97:ILE:HD12	2.38	0.51
40:CC:174:LEU:O	40:CC:175:LYS:HB2	2.10	0.51
40:CC:67:TRP:HE1	40:CC:80:ARG:HG2	1.76	0.51
42:CE:182:ASN:O	42:CE:183:ARG:HB3	2.10	0.51
42:CE:274:VAL:HG12	81:A2:4837:U:C6	2.44	0.51
45:CH:23:ARG:NH1	81:A2:4724:G:H5'	2.24	0.51
53:CQ:160:HIS:H	53:CQ:188:ASN:HB3	1.75	0.51
81:A2:1315:G:H8	81:A2:1315:G:O5'	1.94	0.51
81:A2:2020:A:H2	81:A2:4424:A:N6	2.08	0.51
81:A2:942:G:C1'	81:A2:2250:C:OP1	2.57	0.51
81:A2:2277:G:O5'	81:A2:2277:G:C8	2.64	0.51
81:A2:2288:U:O5'	81:A2:2288:U:H6	1.94	0.51
81:A2:2347:A:H1'	81:A2:2348:U:P	2.51	0.51
81:A2:2503:C:O5'	81:A2:2503:C:H6	1.94	0.51
81:A2:2607:U:H4'	81:A2:2608:U:OP2	2.06	0.51
81:A2:2665:G:H2'	81:A2:2666:C:H5'	1.92	0.51
81:A2:2782:C:H6	81:A2:2782:C:OP2	1.94	0.51
81:A2:2831:G:C3'	81:A2:2832:G:H5'	2.41	0.51
81:A2:2839:G:C2	81:A2:3593:A:C8	2.99	0.51
81:A2:3753:A:C5	81:A2:3755:U:C5	2.98	0.51
81:A2:4029:G:C2	81:A2:4030:A:C5	2.99	0.51
81:A2:4136:C:H2'	81:A2:4137:C:C6	2.46	0.51
81:A2:4373:C:O2	81:A2:4373:C:C3'	2.58	0.51
81:A2:4630:C:O3'	81:A2:4631:C:H3'	2.11	0.51
81:A2:4664:C:H2'	81:A2:4665:A:O4'	2.11	0.51
81:A2:4828:G:H2'	81:A2:4828:G:N3	2.25	0.51
41:CD:207:TYR:CE1	83:A4:33:U:H1'	2.46	0.51
1:AV:20:U:H2'	1:AV:21:A:H5'	1.93	0.51
2:AW:4:C:C1'	81:A2:3684:U:OP1	2.58	0.51
4:B1:1132:C:C5	4:B1:1132:C:OP2	2.64	0.51
4:B1:1180:C:C2'	4:B1:1181:A:H5'	2.40	0.51
4:B1:1373:C:H2'	4:B1:1374:C:H6	1.76	0.51
4:B1:1442:U:H3'	4:B1:1443:C:C4'	2.39	0.51
4:B1:1523:C:H6	4:B1:1523:C:O5'	1.94	0.51
4:B1:1557:C:N3	4:B1:1661:A:H4'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1694:U:O2'	4:B1:1834:A:H5''	2.10	0.51
4:B1:210:U:C3'	4:B1:211:G:C5'	2.89	0.51
4:B1:345:U:H2'	4:B1:346:C:C5'	2.40	0.51
4:B1:380:G:H3'	4:B1:382:C:OP2	2.11	0.51
4:B1:872:A:H2'	4:B1:874:G:N2	2.26	0.51
4:B1:924:G:H2'	4:B1:925:G:C8	2.45	0.51
9:BE:95:THR:HB	9:BE:97:GLU:CD	2.30	0.51
14:BJ:147:PHE:CE2	14:BJ:149:VAL:HG22	2.46	0.51
15:BK:27:VAL:HG23	15:BK:30:PRO:HD3	1.92	0.51
4:B1:1018:U:H1'	18:BN:48:SER:OG	2.11	0.51
4:B1:1648:G:H2'	21:BQ:127:CYS:HA	1.93	0.51
8:BD:213:PRO:HD3	22:BR:20:TYR:CE1	2.46	0.51
23:BS:5:ILE:O	23:BS:6:PRO:C	2.49	0.51
25:BU:104:ILE:HD13	25:BU:106:ILE:HG22	1.93	0.51
28:BX:122:VAL:O	28:BX:130:LEU:HD11	2.11	0.51
39:CB:56:ILE:CD1	39:CB:368:ILE:HG12	2.41	0.51
40:CC:188:ARG:C	40:CC:188:ARG:HD3	2.32	0.51
40:CC:36:ILE:HG22	40:CC:123:ALA:CB	2.40	0.51
42:CE:145:THR:O	42:CE:148:THR:HG23	2.10	0.51
45:CH:117:PHE:HB3	45:CH:124:ARG:NH2	2.26	0.51
45:CH:48:LEU:HD22	45:CH:54:ARG:HH11	1.75	0.51
47:CJ:96:LYS:HD3	47:CJ:177:GLY:C	2.31	0.51
49:CM:98:ARG:N	81:A2:4826:C:N3	2.59	0.51
51:CO:48:TYR:CE1	81:A2:1908:U:C2	2.99	0.51
81:A2:116:G:N2	81:A2:118:C:H2'	2.25	0.51
81:A2:1249:G:H3'	81:A2:1250:A:C8	2.46	0.51
81:A2:180:C:C4'	81:A2:182:C:C6	2.88	0.51
81:A2:1837:C:H2'	81:A2:1838:U:H6	1.76	0.51
81:A2:2034:G:C8	81:A2:2036:G:N7	2.79	0.51
40:CC:163:LYS:HA	81:A2:221:U:H3	1.75	0.51
81:A2:2351:A:H2'	81:A2:2352:A:C8	2.45	0.51
81:A2:3685:C:H3'	81:A2:3704:G:O6	2.11	0.51
56:CT:2:THR:OG1	81:A2:4163:A:H4'	2.11	0.51
56:CT:80:VAL:HA	81:A2:4264:A:OP2	2.10	0.51
81:A2:3770:U:C4'	81:A2:4456:A:C2	2.87	0.51
81:A2:4649:U:H2'	81:A2:4650:G:H5'	1.93	0.51
81:A2:68:U:O5'	81:A2:68:U:H6	1.93	0.51
81:A2:957:G:C2'	81:A2:958:C:H5''	2.30	0.51
83:A4:25:G:H2'	83:A4:26:C:C5	2.46	0.51
1:AV:76:A:N1	81:A2:4356:A:O2'	2.39	0.51
4:B1:1130:G:C5'	18:BN:10:GLY:HA2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1283:C:O5'	4:B1:1283:C:H6	1.94	0.51
4:B1:1454:A:O2'	4:B1:1455:A:C8	2.64	0.51
4:B1:1506:A:C5'	4:B1:1508:A:N7	2.74	0.51
4:B1:1635:C:O5'	4:B1:1635:C:C6	2.64	0.51
4:B1:191:A:C2	4:B1:192:C:N1	2.79	0.51
4:B1:313:A:H2'	11:BG:191:ARG:HH21	1.74	0.51
4:B1:552:G:O5'	4:B1:552:G:H8	1.93	0.51
4:B1:571:U:H2'	4:B1:572:U:C4'	2.41	0.51
4:B1:572:U:C3'	4:B1:573:U:N3	2.73	0.51
4:B1:599:A:H5''	4:B1:600:G:OP1	2.09	0.51
4:B1:978:G:C6	4:B1:979:C:N4	2.79	0.51
5:BA:58:LEU:HD11	5:BA:178:LEU:HB2	1.93	0.51
7:BC:63:VAL:O	7:BC:64:THR:CB	2.59	0.51
8:BD:70:THR:O	8:BD:74:GLN:HG3	2.11	0.51
19:BO:104:ARG:HA	19:BO:142:ARG:NH1	2.26	0.51
22:BR:109:LEU:HD13	22:BR:111:PHE:N	2.16	0.51
23:BS:24:ARG:HG3	23:BS:25:LYS:H	1.75	0.51
27:BW:52:ILE:HG12	27:BW:61:ILE:HG12	1.92	0.51
40:CC:25:PRO:HB3	40:CC:261:ASP:HB2	1.92	0.51
48:CL:111:GLN:CB	81:A2:510:C:C4'	2.88	0.51
48:CL:120:TYR:O	48:CL:124:LEU:HD13	2.11	0.51
49:CM:47:ARG:HH11	55:CS:73:LEU:HB2	1.76	0.51
50:CN:65:ARG:HG2	50:CN:127:TYR:CD1	2.45	0.51
52:CP:64:ASN:H	52:CP:64:ASN:HD22	1.59	0.51
61:CY:59:ARG:HB2	61:CY:103:LYS:HD2	1.93	0.51
81:A2:1222:G:H2'	81:A2:1223:C:C5	2.45	0.51
81:A2:1318:G:O5'	81:A2:1318:G:C8	2.62	0.51
81:A2:1378:A:H3'	81:A2:1378:A:N3	2.26	0.51
81:A2:1846:A:H2'	81:A2:1848:C:H6	1.76	0.51
81:A2:1890:G:H2'	81:A2:1891:C:H5'	1.93	0.51
81:A2:2047:A:O2'	81:A2:2048:U:H2'	2.11	0.51
81:A2:231:G:H3'	81:A2:232:A:H5''	1.93	0.51
81:A2:2608:U:O2'	81:A2:2609:U:H4'	2.11	0.51
81:A2:263:U:H2'	81:A2:264:U:C6	2.46	0.51
81:A2:2795:C:H3'	81:A2:2795:C:C6	2.46	0.51
81:A2:27:C:H2'	81:A2:27:C:O2	2.11	0.51
81:A2:303:G:H3'	81:A2:303:G:C8	2.45	0.51
81:A2:26:C:H4'	81:A2:331:C:O2	2.11	0.51
81:A2:3585:U:C1'	81:A2:3586:G:P	2.99	0.51
81:A2:384:U:H3'	81:A2:385:G:C4'	2.40	0.51
81:A2:393:A:C8	81:A2:393:A:C5'	2.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4061:G:C6	81:A2:4081:C:N4	2.79	0.51
81:A2:425:A:O5'	81:A2:425:A:C8	2.64	0.51
81:A2:438:C:O2'	81:A2:439:G:H5'	2.10	0.51
81:A2:4810:G:H2'	81:A2:4811:G:H8	1.76	0.51
51:CO:165:LYS:HB3	81:A2:4814:C:H5''	1.93	0.51
81:A2:635:G:C2'	81:A2:636:G:H5'	2.41	0.51
81:A2:949:G:C8	81:A2:949:G:P	3.02	0.51
83:A4:39:C:H6	83:A4:39:C:OP1	1.93	0.51
83:A4:97:G:H5'	83:A4:97:G:H8	1.76	0.51
2:AW:36:A:H61	10:BF:132:GLY:CA	2.24	0.51
4:B1:1147:C:C6	4:B1:1147:C:C3'	2.94	0.51
4:B1:1415:C:C3'	4:B1:1416:C:H5'	2.40	0.51
4:B1:1418:C:C2'	4:B1:1419:C:C6	2.92	0.51
4:B1:1203:G:H2'	4:B1:1699:A:H2	1.74	0.51
4:B1:671:A:H5''	4:B1:671:A:H8	1.76	0.51
4:B1:75:G:N2	4:B1:78:C:H4'	2.26	0.51
4:B1:813:A:H2'	4:B1:814:U:H5'	1.93	0.51
4:B1:888:U:C3'	4:B1:888:U:C6	2.94	0.51
4:B1:894:G:H2'	4:B1:895:G:C8	2.46	0.51
8:BD:172:VAL:HG22	8:BD:185:LYS:HG2	1.93	0.51
8:BD:194:PRO:HA	8:BD:201:LYS:HA	1.92	0.51
10:BF:26:ASP:O	10:BF:27:ASP:HB2	2.11	0.51
39:CB:94:GLU:HB3	39:CB:158:GLN:CD	2.31	0.51
42:CE:153:LEU:C	42:CE:158:ARG:HG2	2.31	0.51
42:CE:232:ILE:HG22	42:CE:233:PHE:N	2.26	0.51
44:CG:174:CYS:HB3	44:CG:179:VAL:O	2.11	0.51
44:CG:106:THR:HB	44:CG:195:HIS:CD2	2.45	0.51
44:CG:66:GLN:CB	50:CN:28:TRP:HH2	2.24	0.51
45:CH:111:LEU:HD23	45:CH:127:ARG:HA	1.93	0.51
45:CH:13:PRO:HG2	45:CH:16:VAL:HG22	1.92	0.51
51:CO:38:CYS:O	51:CO:41:ILE:HG13	2.10	0.51
53:CQ:64:SER:HB3	53:CQ:92:VAL:HG21	1.93	0.51
49:CM:49:ALA:HB2	55:CS:100:LEU:CD2	2.41	0.51
56:CT:105:PHE:O	56:CT:108:ARG:HB3	2.11	0.51
81:A2:1374:G:N2	81:A2:1449:G:H5''	2.26	0.50
81:A2:1645:C:C2'	81:A2:1646:G:H5'	2.41	0.50
81:A2:1754:A:C4	81:A2:1755:A:C8	2.99	0.50
81:A2:1874:A:HO2'	81:A2:2047:A:H2	1.51	0.50
38:CA:9:ARG:NH2	81:A2:2321:U:H2'	64.67	0.50
81:A2:2420:G:H4'	81:A2:2489:A:C4	2.46	0.50
81:A2:2547:U:H4'	81:A2:2739:G:N2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:286:A:N1	81:A2:308:A:C8	2.79	0.50
81:A2:3727:U:H3'	81:A2:3727:U:C6	2.46	0.50
81:A2:422:G:H21	81:A2:3857:G:H3'	1.76	0.50
81:A2:4233:A:N7	81:A2:4234:A:C5	2.79	0.50
81:A2:4177:G:O2'	81:A2:4263:C:C6	2.63	0.50
81:A2:44:A:H2'	81:A2:45:U:H6	1.77	0.50
39:CB:13:SER:HG	81:A2:4549:A:H2	1.54	0.50
81:A2:4668:A:C5'	81:A2:4669:U:H5	2.23	0.50
81:A2:634:C:H2'	81:A2:635:G:H8	1.75	0.50
82:A3:29:G:H2'	82:A3:30:U:C6	2.46	0.50
4:B1:1016:U:C4	4:B1:1017:U:C5	2.99	0.50
4:B1:1672:U:C3'	4:B1:1673:U:H5''	2.40	0.50
1:AV:34:G:O6	4:B1:1701:C:O4'	2.29	0.50
4:B1:214:U:C6	4:B1:214:U:O5'	2.64	0.50
4:B1:475:C:C6	4:B1:475:C:C5'	2.86	0.50
4:B1:525:A:H2'	4:B1:526:A:OP2	2.11	0.50
4:B1:867:G:O5'	4:B1:867:G:H8	1.94	0.50
4:B1:684:G:C2	4:B1:920:A:O4'	2.65	0.50
14:BJ:111:GLN:HE22	14:BJ:130:ILE:HD12	1.74	0.50
23:BS:41:ALA:O	23:BS:45:LEU:HD13	2.11	0.50
4:B1:1562:C:H5'	24:BT:71:GLY:CA	2.40	0.50
4:B1:83:A:C2'	29:BY:123:ALA:HB1	2.41	0.50
38:CA:140:ASN:HB2	38:CA:145:LYS:O	2.11	0.50
40:CC:101:MET:HE1	40:CC:103:ALA:O	2.11	0.50
42:CE:253:VAL:O	42:CE:257:ILE:HG12	2.11	0.50
51:CO:82:ARG:HA	51:CO:85:ARG:NH2	2.25	0.50
54:CR:131:VAL:HG12	54:CR:131:VAL:O	2.11	0.50
60:CX:72:ASP:OD2	60:CX:74:TYR:HB2	2.11	0.50
61:CY:74:TYR:HB3	61:CY:77:LYS:HB2	1.93	0.50
43:CF:67:THR:HA	81:A2:1190:C:H1'	1.94	0.50
81:A2:1209:C:H4'	81:A2:1210:U:C1'	2.41	0.50
81:A2:1217:C:H2'	81:A2:1217:C:O2	2.10	0.50
81:A2:1406:G:N2	81:A2:1438:A:C2	2.80	0.50
81:A2:1603:G:OP1	81:A2:1605:G:H1'	2.12	0.50
81:A2:1804:A:C3'	81:A2:1805:G:C8	2.94	0.50
81:A2:2052:C:H6	81:A2:2052:C:O5'	1.94	0.50
81:A2:2426:A:C8	81:A2:2427:G:C8	2.99	0.50
81:A2:2533:G:O5'	81:A2:2533:G:C8	2.64	0.50
81:A2:274:G:O6	81:A2:296:A:H2	1.95	0.50
81:A2:28:C:O5'	81:A2:28:C:H6	1.94	0.50
81:A2:3695:A:O2'	81:A2:3696:A:C8	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2:G:H2'	81:A2:3:C:O5'	2.12	0.50
81:A2:4043:U:H1'	81:A2:4044:G:O5'	2.11	0.50
81:A2:4052:G:C8	81:A2:4052:G:O5'	2.64	0.50
81:A2:4119:C:C5	81:A2:4120:C:N4	2.79	0.50
81:A2:4580:U:C5	81:A2:4581:C:C5	2.98	0.50
81:A2:702:G:H2'	81:A2:703:G:H8	1.76	0.50
83:A4:67:C:C6	83:A4:67:C:OP2	2.65	0.50
83:A4:69:U:H2'	83:A4:70:G:H8	1.76	0.50
1:AV:20:U:C2'	1:AV:21:A:H5'	2.41	0.50
2:AW:37:MIA:N1	10:BF:132:GLY:O	2.43	0.50
4:B1:1161:U:H2'	4:B1:1162:C:O5'	2.10	0.50
4:B1:1255:G:OP2	4:B1:1256:G:N7	2.44	0.50
4:B1:1311:C:C5	4:B1:1311:C:OP2	2.64	0.50
4:B1:1356:G:H2'	4:B1:1357:A:C8	2.46	0.50
4:B1:1446:A:H5''	25:BU:58:THR:OG1	2.11	0.50
4:B1:1547:C:OP1	4:B1:1547:C:H4'	2.12	0.50
4:B1:1214:A:C2	4:B1:1686:G:N3	2.79	0.50
4:B1:1203:G:C2'	4:B1:1699:A:C2	2.95	0.50
4:B1:337:C:H2'	4:B1:337:C:O2	2.10	0.50
4:B1:571:U:C2'	4:B1:572:U:C4'	2.89	0.50
4:B1:752:G:N2	4:B1:753:C:C5	2.79	0.50
4:B1:877:C:H2'	4:B1:878:G:C8	2.42	0.50
4:B1:88:G:C2	4:B1:89:C:C2	2.99	0.50
4:B1:944:A:N3	4:B1:944:A:H2'	2.25	0.50
5:BA:33:GLN:CB	5:BA:154:LEU:HD12	2.41	0.50
4:B1:1101:U:H5''	6:BB:151:ARG:CD	2.41	0.50
16:BL:22:ARG:HG3	16:BL:27:GLU:O	2.11	0.50
23:BS:43:VAL:HG22	24:BT:37:VAL:CB	2.41	0.50
40:CC:130:ALA:O	40:CC:136:LEU:HD12	2.10	0.50
41:CD:264:LYS:HB3	83:A4:1:G:C8	2.46	0.50
42:CE:227:HIS:CG	81:A2:1273:G:H2'	2.46	0.50
44:CG:152:ALA:CA	44:CG:205:THR:HG22	2.40	0.50
44:CG:73:ARG:NH1	81:A2:4044:G:OP2	2.44	0.50
48:CL:56:ARG:HB3	48:CL:57:PRO:HD2	1.94	0.50
50:CN:94:PHE:CE2	50:CN:96:ARG:HB2	2.47	0.50
58:CV:28:CYS:HB3	58:CV:34:ALA:O	2.11	0.50
59:CW:33:ASN:HD22	59:CW:33:ASN:N	2.09	0.50
81:A2:99:A:C3'	81:A2:100:C:C6	2.89	0.50
81:A2:105:A:H2'	81:A2:106:A:C8	2.46	0.50
81:A2:1869:A:N7	81:A2:1870:A:C5	2.80	0.50
81:A2:1911:G:H8	81:A2:1911:G:O5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2294:G:C5'	81:A2:2294:G:C8	2.95	0.50
81:A2:2552:U:C3'	81:A2:2552:U:C6	2.94	0.50
81:A2:2704:C:O2'	81:A2:2705:U:H5'	2.11	0.50
81:A2:3604:A:H5''	81:A2:3604:A:H8	1.75	0.50
81:A2:3610:U:H2'	81:A2:3610:U:O2	2.11	0.50
81:A2:3821:A:OP2	81:A2:3821:A:H8	1.94	0.50
81:A2:4201:C:O2	81:A2:4201:C:H2'	2.10	0.50
81:A2:426:A:C4	81:A2:427:C:C6	3.00	0.50
81:A2:4449:G:C6	81:A2:4668:A:C5	2.99	0.50
81:A2:4608:A:C4	81:A2:4609:G:C8	2.99	0.50
81:A2:4649:U:C2'	81:A2:4650:G:H5'	2.41	0.50
81:A2:4658:C:HO2'	81:A2:4659:U:H6	1.57	0.50
81:A2:465:C:H2'	81:A2:466:G:C8	2.46	0.50
81:A2:4704:G:N2	81:A2:4910:A:H2	2.08	0.50
81:A2:4887:U:O5'	81:A2:4887:U:H6	1.93	0.50
81:A2:736:G:H2'	81:A2:736:G:N3	2.26	0.50
4:B1:1234:C:H4'	4:B1:1246:A:N1	2.27	0.50
4:B1:1484:A:O2'	4:B1:1485:U:H5'	2.11	0.50
4:B1:1818:A:O5'	4:B1:1818:A:H8	1.94	0.50
4:B1:428:U:C2'	4:B1:429:C:H6	2.24	0.50
4:B1:77:A:H5''	4:B1:78:C:H41	1.77	0.50
4:B1:973:C:C5	4:B1:974:C:C4	2.99	0.50
6:BB:208:HIS:O	6:BB:209:ASP:HB2	2.10	0.50
8:BD:98:ALA:HA	8:BD:188:ILE:HD12	1.93	0.50
9:BE:133:VAL:O	9:BE:136:ILE:HG23	2.12	0.50
4:B1:312:G:H22	11:BG:195:LYS:HG3	1.76	0.50
12:BH:170:VAL:HA	12:BH:173:PHE:CD2	2.47	0.50
15:BK:84:HIS:CG	15:BK:85:LEU:N	2.79	0.50
20:BP:85:ILE:HD13	20:BP:111:MET:HB3	1.93	0.50
23:BS:118:ARG:HA	23:BS:123:LEU:HD11	1.92	0.50
24:BT:138:VAL:O	24:BT:141:ALA:HB3	2.11	0.50
48:CL:153:PRO:C	48:CL:156:PRO:HD2	2.32	0.50
50:CN:96:ARG:NH2	50:CN:100:SER:HB3	2.26	0.50
53:CQ:187:LYS:NZ	81:A2:1474:G:H5''	2.25	0.50
56:CT:6:GLY:H	56:CT:9:ARG:HB2	1.77	0.50
61:CY:126:ARG:HD3	81:A2:194:A:C4'	2.35	0.50
62:CZ:135:ARG:O	81:A2:4089:G:N2	2.44	0.50
81:A2:977:G:H1	81:A2:1052:C:H42	1.60	0.50
81:A2:1313:A:H3'	81:A2:1314:A:N7	2.24	0.50
81:A2:2260:G:C8	81:A2:2260:G:C5'	2.91	0.50
81:A2:2650:G:P	81:A2:2650:G:H2'	2.52	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2782:C:H2'	81:A2:2783:A:C8	2.47	0.50
54:CR:134:ASN:HB2	81:A2:2873:G:H5''	1.92	0.50
81:A2:32:G:H21	81:A2:50:C:N4	2.08	0.50
81:A2:3570:C:O2'	81:A2:3571:C:H5'	2.12	0.50
81:A2:3801:U:H2'	81:A2:3802:C:O4'	2.12	0.50
81:A2:1294:C:C2	81:A2:3834:A:C2	2.99	0.50
81:A2:3856:C:H3'	81:A2:3857:G:C8	2.47	0.50
81:A2:3873:G:H1'	81:A2:3874:A:O5'	2.12	0.50
81:A2:4025:C:O5'	81:A2:4025:C:C6	2.65	0.50
81:A2:425:A:C2'	81:A2:426:A:O5'	2.59	0.50
81:A2:450:C:H2'	81:A2:451:C:H6	1.76	0.50
81:A2:4673:G:C8	81:A2:4674:C:C5	3.00	0.50
81:A2:4843:U:C2'	81:A2:4844:G:H5'	2.41	0.50
40:CC:311:ARG:HA	81:A2:943:G:C6	2.47	0.50
83:A4:92:C:H2'	83:A4:93:G:H8	1.75	0.50
4:B1:100:U:H2'	4:B1:101:U:O5'	2.11	0.50
4:B1:1231:C:H1'	4:B1:1528:G:N2	2.27	0.50
4:B1:1279:C:O2'	4:B1:1280:G:H5'	2.10	0.50
4:B1:1284:A:C8	4:B1:1284:A:OP2	2.64	0.50
4:B1:1344:A:O2'	4:B1:1345:G:C8	2.62	0.50
4:B1:1427:C:C4	4:B1:1428:G:C8	2.99	0.50
4:B1:1567:G:C8	4:B1:1567:G:OP1	2.62	0.50
4:B1:1685:U:C4	4:B1:1686:G:N7	2.80	0.50
4:B1:1823:A:H4'	4:B1:1824:A:O5'	2.11	0.50
4:B1:1860:A:C4	4:B1:1862:G:C8	2.99	0.50
4:B1:1869:A:O5'	4:B1:1869:A:H8	1.93	0.50
4:B1:219:U:C6	4:B1:219:U:C5'	2.95	0.50
4:B1:37:C:C3'	4:B1:38:A:H5''	2.42	0.50
4:B1:584:A:O2'	4:B1:585:C:H5'	2.11	0.50
4:B1:65:C:O3'	11:BG:133:LEU:HD22	2.11	0.50
4:B1:84:A:H5'	29:BY:123:ALA:CB	2.37	0.50
4:B1:1484:A:C5'	8:BD:159:HIS:HB3	2.38	0.50
9:BE:252:ARG:NH1	9:BE:252:ARG:HB3	2.26	0.50
10:BF:91:ARG:HA	10:BF:91:ARG:HE	1.76	0.50
23:BS:36:VAL:HG13	23:BS:40:TYR:HD1	1.76	0.50
38:CA:159:SER:O	38:CA:162:ASN:HB3	2.12	0.50
38:CA:52:PRO:HB3	81:A2:2718:U:H5'	1.93	0.50
39:CB:293:ILE:HG12	39:CB:295:ASP:H	1.77	0.50
41:CD:123:VAL:HG12	41:CD:248:ARG:NH2	2.27	0.50
42:CE:172:LEU:HA	81:A2:4897:C:N1	2.27	0.50
42:CE:278:THR:H	42:CE:281:ILE:HG13	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:31:LEU:HD22	62:CZ:122:TYR:CZ	2.47	0.50
49:CM:43:THR:O	49:CM:44:GLN:HB3	2.11	0.50
53:CQ:64:SER:C	81:A2:1481:G:N2	2.65	0.50
59:CW:44:ARG:HD2	81:A2:3584:G:C2'	2.39	0.50
81:A2:104:G:C2'	81:A2:105:A:H5'	2.41	0.50
81:A2:1473:U:H4'	81:A2:4257:G:H4'	1.93	0.50
81:A2:1498:C:H2'	81:A2:1499:C:C6	2.47	0.50
81:A2:163:C:O2'	81:A2:164:C:H5'	2.11	0.50
81:A2:176:G:H2'	81:A2:177:C:C6	2.47	0.50
81:A2:1836:A:H5'	81:A2:1837:C:OP2	2.11	0.50
81:A2:1933:G:C6	81:A2:2007:A:C6	2.99	0.50
81:A2:218:C:O2	81:A2:219:C:C5	2.65	0.50
81:A2:239:U:O5'	81:A2:239:U:C6	2.64	0.50
81:A2:2549:C:C4'	81:A2:2737:G:H8	2.24	0.50
81:A2:2763:C:H5''	81:A2:2764:A:O4'	2.11	0.50
81:A2:326:A:C2'	81:A2:327:A:C8	2.95	0.50
81:A2:3623:G:C8	81:A2:3623:G:H3'	2.46	0.50
81:A2:3744:A:C2'	81:A2:3745:G:H5''	2.41	0.50
81:A2:3938:G:H8	81:A2:3938:G:OP2	1.93	0.50
81:A2:4119:C:H5'	81:A2:4120:C:OP2	2.11	0.50
81:A2:4607:G:C8	81:A2:4607:G:P	3.05	0.50
81:A2:470:G:O2'	81:A2:471:C:H5'	2.10	0.50
81:A2:4851:G:C2	81:A2:4882:G:H8	2.30	0.50
81:A2:947:G:C4	81:A2:948:A:C8	2.99	0.50
81:A2:975:C:H2'	81:A2:976:C:O4'	2.12	0.50
81:A2:351:A:C2	82:A3:24:G:N9	2.79	0.50
4:B1:1397:U:C6	4:B1:1397:U:C3'	2.95	0.50
4:B1:1431:G:C2	4:B1:1432:U:C2	3.00	0.50
4:B1:1648:G:C2'	21:BQ:127:CYS:HA	2.42	0.50
4:B1:1814:G:C8	4:B1:1814:G:O5'	2.62	0.50
4:B1:1851:A:H5''	4:B1:1851:A:C8	2.41	0.50
4:B1:211:G:C5'	4:B1:211:G:C8	2.88	0.50
4:B1:22:A:C2	4:B1:653:A:C2	3.00	0.50
4:B1:317:C:H3'	4:B1:318:A:C5'	2.37	0.50
4:B1:334:C:H2'	4:B1:335:G:H8	1.76	0.50
4:B1:343:A:C2	4:B1:344:U:C2	3.00	0.50
4:B1:678:U:C6	4:B1:678:U:O5'	2.64	0.50
6:BB:140:VAL:O	6:BB:210:VAL:HA	2.11	0.50
7:BC:260:VAL:O	7:BC:261:PHE:HB2	2.10	0.50
11:BG:109:LEU:HD22	11:BG:109:LEU:N	4.50	0.50
12:BH:37:LYS:HE2	12:BH:41:ARG:NH2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BJ:163:SER:N	14:BJ:164:PRO:HD2	2.26	0.50
21:BQ:37:ARG:CB	24:BT:7:LYS:HG3	2.41	0.50
22:BR:5:ARG:HH11	22:BR:53:TYR:HB2	1.75	0.50
5:BA:63:ARG:HA	26:BV:46:PHE:CE2	2.47	0.50
27:BW:114:GLU:O	27:BW:117:ARG:HG2	2.12	0.50
40:CC:13:GLU:CB	40:CC:170:LEU:HD11	2.35	0.50
43:CF:104:LYS:HG3	43:CF:135:ILE:HG21	1.93	0.50
43:CF:88:LYS:NZ	56:CT:135:PRO:HG2	2.26	0.50
44:CG:60:TYR:CE1	81:A2:9:C:H1'	2.47	0.50
44:CG:66:GLN:HB3	50:CN:28:TRP:HH2	1.75	0.50
45:CH:102:ASN:HB3	45:CH:115:ARG:HB2	1.94	0.50
54:CR:15:LEU:O	54:CR:16:ARG:HB2	2.12	0.50
60:CX:119:ILE:HD12	60:CX:140:LEU:HD21	1.93	0.50
61:CY:120:GLU:HG3	61:CY:124:LYS:HD2	1.93	0.50
61:CY:62:TYR:HB3	61:CY:65:GLN:HG3	1.92	0.50
81:A2:1282:U:O2'	81:A2:1283:A:H5'	2.12	0.50
40:CC:48:ASN:OD1	81:A2:1352:A:H5'	2.12	0.50
4:B1:678:U:H5'	81:A2:1543:A:O4'	2.12	0.50
81:A2:1761:U:H2'	81:A2:1762:C:C6	2.46	0.50
81:A2:1803:G:H3'	81:A2:1804:A:H8	1.77	0.50
81:A2:2051:C:O5'	81:A2:2051:C:C6	2.64	0.50
81:A2:2352:A:C3'	81:A2:2353:A:H8	2.24	0.50
81:A2:236:C:H2'	81:A2:237:G:H8	1.75	0.50
81:A2:2486:C:P	82:A3:108:A:H4'	2.51	0.50
81:A2:2531:U:H2'	81:A2:2532:G:C5'	2.40	0.50
81:A2:264:U:H2'	81:A2:265:C:H6	1.71	0.50
81:A2:2533:G:N2	81:A2:2737:G:O6	2.45	0.50
81:A2:3578:G:H2'	81:A2:3579:A:O4'	2.11	0.50
81:A2:3621:A:H2'	81:A2:3622:A:C5	2.46	0.50
81:A2:4142:G:C8	81:A2:4142:G:H3'	2.47	0.50
81:A2:4198:G:H2'	81:A2:4199:A:O4'	2.12	0.50
81:A2:4278:C:H2'	81:A2:4279:C:O5'	2.11	0.50
81:A2:4418:C:H2'	81:A2:4419:U:C6	2.47	0.50
81:A2:4840:U:O2'	81:A2:4841:C:H5'	2.12	0.50
81:A2:4922:A:H5''	81:A2:4922:A:H8	1.76	0.50
81:A2:694:C:H6	81:A2:694:C:O5'	1.95	0.50
81:A2:2469:C:H4'	82:A3:126:C:N3	2.27	0.50
3:AX:34:U:O2'	3:AX:35:U:H5'	2.10	0.50
4:B1:1113:A:H2	4:B1:1120:U:C4	2.30	0.50
4:B1:1132:C:H6	4:B1:1132:C:O5'	1.93	0.50
4:B1:11:A:O5'	4:B1:11:A:H8	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:132:U:OP2	4:B1:133:C:H5	1.94	0.50
4:B1:1531:A:H2'	4:B1:1532:C:C6	2.46	0.50
4:B1:1534:C:C1'	4:B1:1535:U:OP2	2.59	0.50
4:B1:1579:A:N3	4:B1:1579:A:C3'	2.71	0.50
4:B1:369:C:H2'	4:B1:370:G:H5'	1.93	0.50
4:B1:372:U:C6	4:B1:372:U:C3'	2.95	0.50
4:B1:387:C:H2'	4:B1:388:U:C6	2.47	0.50
4:B1:519:A:C2	4:B1:520:A:C2	2.98	0.50
4:B1:15:U:O4'	4:B1:668:A:C2	2.64	0.50
4:B1:867:G:N2	4:B1:868:G:C2	2.79	0.50
4:B1:973:C:H6	4:B1:973:C:H3'	1.75	0.50
5:BA:168:ALA:HB3	5:BA:203:PHE:CE1	2.46	0.50
7:BC:256:TRP:NE1	27:BW:68:ARG:HD3	2.27	0.50
18:BN:33:VAL:HG12	18:BN:37:ILE:CD1	2.41	0.50
19:BO:15:ILE:O	19:BO:15:ILE:HG13	2.10	0.50
4:B1:1157:G:H1'	27:BW:76:SER:CB	2.41	0.50
30:BZ:50:PHE:CE2	30:BZ:55:TYR:CD1	2.99	0.50
48:CL:47:ALA:CB	48:CL:48:PRO:CD	2.89	0.50
60:CX:77:ILE:HD11	60:CX:98:PHE:CG	2.46	0.50
81:A2:1055:G:H2'	81:A2:1056:C:C6	2.46	0.50
81:A2:1186:C:C2'	81:A2:1187:C:H5'	2.42	0.50
81:A2:1474:G:H2'	81:A2:1475:G:H5'	1.93	0.50
81:A2:1653:C:H4'	81:A2:4336:A:C5	2.47	0.50
81:A2:1737:G:H2'	81:A2:1738:G:H8	1.76	0.50
81:A2:224:A:H2'	81:A2:225:C:O4'	2.12	0.50
81:A2:2265:C:N4	81:A2:2294:G:O2'	2.44	0.50
81:A2:2325:G:H5'	81:A2:2328:C:N4	2.27	0.50
81:A2:2469:C:C2'	81:A2:2470:G:C8	2.89	0.50
81:A2:178:C:N4	81:A2:250:G:H21	2.10	0.50
81:A2:30:C:O2	81:A2:2437:A:H2	1.95	0.50
81:A2:3705:A:H8	81:A2:3705:A:O5'	1.95	0.50
81:A2:3724:G:C1'	81:A2:3725:A:OP1	2.57	0.50
81:A2:3729:A:O2'	81:A2:3730:C:P	2.69	0.50
81:A2:3744:A:H3'	81:A2:3745:G:H5''	1.94	0.50
81:A2:384:U:H6	81:A2:384:U:OP2	1.95	0.50
81:A2:3865:C:H2'	81:A2:3866:G:C5	2.47	0.50
81:A2:3896:U:O5'	81:A2:3896:U:H6	1.94	0.50
81:A2:3935:A:H8	81:A2:3935:A:O5'	1.95	0.50
62:CZ:136:PHE:CB	81:A2:4089:G:H21	2.24	0.50
81:A2:407:U:H2'	81:A2:408:G:H5'	1.93	0.50
81:A2:4137:C:H2'	81:A2:4138:A:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4289:G:H3'	81:A2:4289:G:N3	2.26	0.50
81:A2:4397:U:H2'	81:A2:4398:U:H5'	1.93	0.50
58:CV:46:LYS:HD2	81:A2:4579:U:O3'	2.12	0.50
81:A2:4607:G:P	81:A2:4607:G:H8	2.35	0.50
81:A2:4745:G:C2'	81:A2:4746:C:H5'	2.41	0.50
81:A2:4811:G:O2'	81:A2:4812:A:H8	1.93	0.50
81:A2:4889:A:H2'	81:A2:4890:C:H6	1.77	0.50
81:A2:726:C:C5	81:A2:726:C:OP2	2.64	0.50
4:B1:1349:G:H2'	4:B1:1350:U:C6	2.46	0.50
4:B1:1415:C:N3	4:B1:1416:C:C5	2.80	0.50
4:B1:1452:A:H4'	4:B1:1453:C:O5'	2.11	0.50
4:B1:1618:C:H5'	4:B1:1619:A:OP2	2.10	0.50
4:B1:1656:G:H2'	4:B1:1657:G:H8	1.76	0.50
4:B1:204:G:C2'	4:B1:205:G:H5'	2.42	0.50
4:B1:369:C:H2'	4:B1:370:G:C5'	2.42	0.50
4:B1:411:G:N2	4:B1:412:G:H1'	2.27	0.50
4:B1:498:C:H5''	4:B1:499:G:OP2	2.12	0.50
4:B1:660:C:C2	16:BL:98:LYS:O	2.64	0.50
8:BD:24:PHE:CE1	8:BD:72:VAL:HG11	2.46	0.50
5:BA:39:TYR:CE2	22:BR:109:LEU:HG	2.46	0.50
26:BV:74:LYS:HA	26:BV:79:VAL:HG12	1.94	0.50
5:BA:9:GLN:CA	26:BV:83:PHE:HA	2.41	0.50
28:BX:100:VAL:HG11	28:BX:122:VAL:HG13	1.94	0.50
29:BY:91:LEU:CB	29:BY:97:TYR:HB2	2.41	0.50
39:CB:223:THR:O	39:CB:274:TYR:HA	2.12	0.50
40:CC:144:ILE:O	40:CC:144:ILE:HG22	2.11	0.50
40:CC:256:ALA:O	40:CC:260:LEU:HG	2.12	0.50
54:CR:10:LEU:CD2	54:CR:41:ILE:HG12	2.40	0.50
81:A2:1161:C:C3'	81:A2:1161:C:H6	2.21	0.50
81:A2:1450:U:H2'	81:A2:1451:C:H6	1.76	0.50
81:A2:1640:C:H2'	81:A2:1641:C:C6	2.46	0.50
81:A2:1822:G:H5''	81:A2:1822:G:C8	2.47	0.50
81:A2:19:G:N2	81:A2:20:U:C5	2.80	0.50
81:A2:2033:G:C8	81:A2:2033:G:OP1	2.65	0.50
81:A2:2064:G:OP2	81:A2:2064:G:C8	2.65	0.50
62:CZ:105:ALA:HB1	81:A2:2531:U:H4'	1.94	0.50
81:A2:2553:G:C5'	81:A2:2553:G:H8	2.17	0.50
81:A2:298:A:C8	81:A2:298:A:H3'	2.46	0.50
81:A2:3630:G:H4'	81:A2:3631:A:C5'	2.41	0.50
81:A2:3732:A:H3'	81:A2:3733:U:C6	2.46	0.50
81:A2:1777:G:H4'	81:A2:4175:C:C4	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4374:A:C8	81:A2:4382:A:N1	2.79	0.50
81:A2:4688:A:O3'	81:A2:4695:C:C1'	2.59	0.50
81:A2:4819:U:C4	81:A2:4820:C:N4	2.79	0.50
81:A2:4845:G:H8	81:A2:4845:G:O5'	1.95	0.50
81:A2:4880:U:C2'	81:A2:4881:C:H4'	2.41	0.50
81:A2:4935:C:O5'	81:A2:4935:C:H6	1.93	0.50
81:A2:64:A:C8	81:A2:64:A:O5'	2.64	0.50
40:CC:342:ARG:HH21	81:A2:714:G:H4'	1.74	0.50
81:A2:738:U:H2'	81:A2:739:G:H8	1.76	0.50
81:A2:739:G:H2'	81:A2:740:G:C8	2.47	0.50
81:A2:921:U:H2'	81:A2:922:C:H6	1.77	0.50
81:A2:962:G:P	81:A2:962:G:C8	3.05	0.50
83:A4:86:G:C2'	83:A4:87:G:H5'	2.40	0.50
1:AV:42:C:C6	1:AV:42:C:H5'	2.36	0.50
4:B1:1191:C:O2'	4:B1:1192:U:H5'	2.12	0.50
4:B1:1348:G:N2	4:B1:1381:G:N2	2.55	0.50
4:B1:1447:G:P	25:BU:87:ARG:HH22	2.35	0.50
4:B1:1452:A:C6	4:B1:1475:G:C5	3.00	0.50
4:B1:193:C:H4'	4:B1:209:A:N1	2.27	0.50
4:B1:111:A:N6	4:B1:351:G:H21	2.09	0.50
4:B1:564:A:H61	4:B1:586:G:H1	1.60	0.50
4:B1:751:G:N3	4:B1:752:G:C8	2.80	0.50
4:B1:89:C:H5''	4:B1:89:C:H6	1.77	0.50
6:BB:71:LEU:HD22	6:BB:75:GLN:HB2	1.93	0.50
9:BE:125:LYS:HB3	9:BE:142:HIS:ND1	2.26	0.50
13:BI:83:TYR:HD1	13:BI:205:ARG:HD2	1.76	0.50
17:BM:32:ALA:HB3	17:BM:110:VAL:CG2	2.42	0.50
17:BM:38:ALA:O	17:BM:42:LEU:HG	2.12	0.50
19:BO:56:VAL:HG21	19:BO:81:VAL:HG22	1.93	0.50
21:BQ:37:ARG:HB3	24:BT:7:LYS:HE2	1.94	0.50
28:BX:54:LYS:HD2	28:BX:91:LEU:HD11	1.94	0.50
38:CA:200:ARG:O	38:CA:204:MET:HG2	2.12	0.50
40:CC:179:ASP:O	40:CC:182:LYS:HB3	2.12	0.50
42:CE:170:SER:HB3	81:A2:4896:G:N3	2.27	0.50
42:CE:190:HIS:CA	81:A2:4897:C:H2'	2.42	0.50
55:CS:167:PHE:O	81:A2:4829:A:C5'	2.59	0.50
81:A2:103:G:O3'	81:A2:1360:G:N2	2.45	0.50
81:A2:1063:U:H2'	81:A2:1064:C:C6	2.46	0.50
81:A2:1067:A:H2'	81:A2:1068:C:H6	1.71	0.50
81:A2:1367:A:H4'	81:A2:1368:A:H5'	1.94	0.50
81:A2:1742:C:H3'	81:A2:1743:G:H4'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1867:U:H5''	81:A2:1868:G:OP2	2.12	0.50
81:A2:189:G:C8	81:A2:189:G:O5'	2.65	0.50
81:A2:1900:G:H2'	81:A2:1901:A:O4'	2.11	0.50
81:A2:1905:U:OP1	81:A2:1928:U:H5'	2.12	0.50
81:A2:2020:A:H2	81:A2:4424:A:N1	2.09	0.50
81:A2:2482:C:C2'	81:A2:2483:G:H5'	2.41	0.50
81:A2:2526:G:H3'	81:A2:2527:G:O4'	2.11	0.50
81:A2:2605:U:C3'	81:A2:2605:U:C6	2.95	0.50
81:A2:2750:G:H2'	81:A2:2751:C:C5	2.44	0.50
81:A2:2833:C:H5	81:A2:2834:A:C5	2.29	0.50
81:A2:2859:A:C3'	81:A2:2860:G:H5'	2.42	0.50
81:A2:33:A:H3'	81:A2:34:A:H8	1.77	0.50
81:A2:3609:U:H5'	81:A2:3610:U:OP2	2.12	0.50
81:A2:366:G:H8	81:A2:366:G:H5''	1.77	0.50
81:A2:3742:U:C2'	81:A2:3742:U:O2	2.60	0.50
81:A2:3873:G:H1'	81:A2:3874:A:P	2.51	0.50
81:A2:3896:U:H2'	81:A2:3897:A:C8	2.47	0.50
81:A2:4371:G:H2'	81:A2:4372:C:C6	2.47	0.50
81:A2:444:G:C4'	81:A2:445:U:OP2	2.60	0.50
81:A2:4473:A:H2'	81:A2:4474:G:O4'	2.12	0.50
81:A2:4612:G:H2'	81:A2:4613:C:H5'	1.91	0.50
81:A2:465:C:H2'	81:A2:466:G:H8	1.76	0.50
81:A2:4863:G:H2'	81:A2:4864:A:C5'	2.40	0.50
81:A2:928:A:OP1	81:A2:928:A:H4'	2.11	0.50
82:A3:16:G:H8	82:A3:16:G:OP2	1.95	0.50
82:A3:28:C:H6	82:A3:28:C:H5''	1.73	0.50
82:A3:35:C:H2'	82:A3:36:G:H8	1.75	0.50
82:A3:44:A:H2'	82:A3:45:C:C6	2.47	0.50
83:A4:107:G:H8	83:A4:107:G:O5'	1.95	0.50
4:B1:1195:A:C2	4:B1:1196:A:C5	3.00	0.50
4:B1:1406:G:C4'	4:B1:1407:U:C5'	2.90	0.50
4:B1:1593:C:H5	30:BZ:104:ARG:NH2	2.06	0.50
4:B1:1635:C:O2	4:B1:1635:C:H2'	2.11	0.50
1:AV:31:A:O2'	4:B1:1641:A:O2'	2.11	0.50
4:B1:1649:U:O2'	4:B1:1650:A:H5'	2.11	0.50
4:B1:1649:U:H5	4:B1:1674:G:N2	2.10	0.50
4:B1:1721:U:N3	81:A2:3598:A:O3'	2.44	0.50
4:B1:1788:A:H2'	4:B1:1788:A:N3	2.26	0.50
4:B1:1704:C:C1'	4:B1:1832:A:N1	2.75	0.50
4:B1:332:G:C4'	4:B1:333:G:OP1	2.60	0.50
4:B1:331:C:C3'	4:B1:332:G:H5''	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:421:G:H21	4:B1:653:A:H5'	1.76	0.50
4:B1:657:U:C3'	4:B1:657:U:C6	2.95	0.50
4:B1:850:C:O2	4:B1:850:C:H2'	2.10	0.50
3:AX:43:U:OP2	4:B1:961:G:O4'	2.30	0.50
12:BH:20:GLU:HG2	12:BH:48:ALA:HB3	1.94	0.50
12:BH:5:SER:HA	12:BH:8:ILE:HD12	1.93	0.50
15:BK:31:LYS:O	15:BK:32:HIS:HB2	2.11	0.50
15:BK:12:TYR:HB3	15:BK:79:LEU:HD22	1.94	0.50
21:BQ:24:HIS:NE2	21:BQ:26:LYS:HD3	2.27	0.50
22:BR:5:ARG:O	22:BR:10:LYS:HE2	2.11	0.50
4:B1:1606:G:H5'	24:BT:86:GLY:CA	2.42	0.50
4:B1:83:A:H2'	29:BY:123:ALA:HB1	1.93	0.50
40:CC:252:TRP:CE3	40:CC:260:LEU:HD11	2.47	0.50
42:CE:160:LYS:HA	81:A2:4837:U:H5	1.77	0.50
42:CE:178:PRO:HB2	42:CE:181:LEU:HB2	1.94	0.50
45:CH:122:TYR:HD1	81:A2:4573:C:H4'	1.76	0.50
46:CI:171:TRP:HB3	46:CI:174:THR:HG22	1.94	0.50
50:CN:181:HIS:CG	50:CN:182:HIS:N	2.79	0.50
51:CO:172:LYS:HG2	51:CO:176:ARG:HH12	1.75	0.50
60:CX:77:ILE:HG23	60:CX:77:ILE:O	2.12	0.50
62:CZ:3:LYS:HE2	62:CZ:30:ASP:OD2	2.12	0.50
81:A2:1093:C:H6	81:A2:1093:C:O5'	1.95	0.49
81:A2:115:C:H41	81:A2:154:U:H1'	1.76	0.49
81:A2:1217:C:C5	81:A2:1258:C:C2	3.00	0.49
81:A2:1542:A:P	81:A2:1542:A:C8	3.04	0.49
81:A2:2312:C:H2'	81:A2:2313:G:H8	1.77	0.49
81:A2:2479:G:H5'	81:A2:4052:G:N2	2.27	0.49
81:A2:2503:C:C5	81:A2:2504:A:C6	3.00	0.49
81:A2:2519:G:C6	81:A2:2520:A:C6	3.00	0.49
81:A2:2599:G:H2'	81:A2:2600:A:H8	1.73	0.49
81:A2:2685:U:C6	81:A2:2685:U:H3'	2.47	0.49
81:A2:3587:C:H5''	81:A2:3589:G:N7	2.27	0.49
81:A2:3682:U:H3'	81:A2:3682:U:C6	2.46	0.49
81:A2:4154:U:O2'	81:A2:4155:G:H5'	2.12	0.49
81:A2:4714:G:O5'	81:A2:4714:G:H8	1.95	0.49
81:A2:4932:A:H2'	81:A2:4933:G:O4'	2.12	0.49
81:A2:697:C:H6	81:A2:697:C:O5'	1.94	0.49
81:A2:700:C:C2'	81:A2:701:C:C4'	2.89	0.49
81:A2:738:U:O5'	81:A2:738:U:H6	1.95	0.49
81:A2:967:C:C2'	81:A2:967:C:O2	2.58	0.49
82:A3:24:G:O2'	82:A3:25:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:A3:90:C:H2'	82:A3:91:A:C8	2.47	0.49
83:A4:67:C:H6	83:A4:67:C:OP2	1.95	0.49
4:B1:1709:G:OP2	4:B1:1709:G:H8	1.94	0.49
4:B1:1836:G:OP1	4:B1:1839:U:H4'	2.12	0.49
4:B1:482:G:N2	4:B1:485:A:H2	2.09	0.49
4:B1:695:C:C5	4:B1:695:C:OP2	2.65	0.49
4:B1:751:G:O2'	4:B1:752:G:H5'	2.12	0.49
4:B1:992:A:O5'	4:B1:992:A:H8	1.94	0.49
6:BB:71:LEU:C	6:BB:71:LEU:HD13	2.31	0.49
16:BL:35:ARG:HG2	16:BL:36:TYR:N	2.27	0.49
18:BN:92:ILE:O	18:BN:96:VAL:HG23	2.10	0.49
39:CB:171:LEU:HD11	39:CB:323:TYR:OH	2.12	0.49
40:CC:55:SER:O	40:CC:56:GLU:HB2	2.11	0.49
44:CG:163:PRO:HD2	81:A2:148:G:N1	2.27	0.49
49:CM:132:LYS:HZ3	81:A2:4849:A:H3'	1.73	0.49
62:CZ:10:VAL:HG22	62:CZ:87:VAL:HG23	1.93	0.49
62:CZ:111:ARG:CB	81:A2:2551:G:N2	2.74	0.49
81:A2:1282:U:C3'	81:A2:1284:C:H6	2.26	0.49
81:A2:1465:C:C3'	81:A2:1466:G:H5'	2.42	0.49
53:CQ:142:PRO:HG3	81:A2:1481:G:O3'	2.12	0.49
81:A2:1529:G:O5'	81:A2:1529:G:H8	1.95	0.49
81:A2:193:C:O2	81:A2:193:C:C2'	2.59	0.49
81:A2:2000:C:C3'	81:A2:2001:C:C6	2.95	0.49
81:A2:2401:G:C3'	81:A2:2401:G:C8	2.94	0.49
81:A2:2445:U:H3'	81:A2:2445:U:C6	2.42	0.49
81:A2:2564:A:C8	81:A2:2564:A:C5'	2.95	0.49
81:A2:2686:C:H3'	81:A2:2687:C:C6	2.47	0.49
81:A2:2549:C:O3'	81:A2:2736:G:H8	1.93	0.49
81:A2:2795:C:H6	81:A2:2795:C:O5'	1.95	0.49
59:CW:44:ARG:NH1	81:A2:3585:U:H3'	2.25	0.49
81:A2:3658:G:H5''	81:A2:3659:U:OP2	2.11	0.49
81:A2:372:U:C6	81:A2:372:U:C3'	2.95	0.49
81:A2:3730:C:H5'	81:A2:3730:C:O2	2.12	0.49
81:A2:391:A:H2'	81:A2:392:G:O4'	2.11	0.49
81:A2:4490:U:H2'	81:A2:4491:U:H6	1.76	0.49
81:A2:3858:G:C3'	81:A2:4679:G:N2	2.71	0.49
81:A2:4803:C:H3'	81:A2:4804:G:H4'	1.92	0.49
81:A2:480:C:H6	81:A2:480:C:O5'	1.95	0.49
81:A2:488:G:N1	81:A2:658:G:H1'	2.27	0.49
81:A2:4989:A:H2'	81:A2:4990:U:O4'	2.12	0.49
81:A2:62:A:C6	81:A2:63:G:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:903:C:H2'	81:A2:904:C:C6	2.48	0.49
81:A2:93:G:C6	81:A2:94:A:C6	3.00	0.49
82:A3:57:C:O2'	82:A3:58:G:H5'	2.13	0.49
2:AW:70:G:H2'	2:AW:71:G:C8	2.46	0.49
4:B1:1132:C:C6	4:B1:1132:C:O5'	2.65	0.49
4:B1:1196:A:C2'	4:B1:1197:G:H5'	2.42	0.49
4:B1:1348:G:C8	4:B1:1348:G:O5'	2.62	0.49
4:B1:1350:U:O2'	5:BA:112:ILE:HB	2.12	0.49
4:B1:1687:C:O2	4:B1:1687:C:H2'	2.11	0.49
4:B1:1688:C:C2'	4:B1:1688:C:O2	2.60	0.49
4:B1:1698:C:H4'	4:B1:1699:A:OP2	2.12	0.49
4:B1:36:U:O2	4:B1:520:A:H2	1.93	0.49
4:B1:540:U:C2	4:B1:542:U:H5''	2.48	0.49
4:B1:550:C:H2'	4:B1:551:U:C6	2.48	0.49
4:B1:562:U:C4'	14:BJ:132:GLN:OE1	2.60	0.49
4:B1:672:A:H3'	4:B1:672:A:OP2	2.11	0.49
4:B1:75:G:H22	4:B1:78:C:H4'	1.78	0.49
4:B1:860:G:C6	4:B1:861:A:N1	2.80	0.49
4:B1:934:G:H5'	4:B1:993:G:H22	1.75	0.49
14:BJ:161:LEU:HA	14:BJ:166:GLY:HA3	1.94	0.49
19:BO:18:GLY:H	19:BO:19:PRO:CD	2.26	0.49
27:BW:101:PHE:HB3	27:BW:129:PHE:CZ	2.47	0.49
27:BW:18:GLU:OE2	27:BW:65:LEU:HD22	2.12	0.49
28:BX:123:VAL:HA	28:BX:130:LEU:CD1	2.42	0.49
40:CC:263:LEU:O	40:CC:271:ALA:HB1	2.13	0.49
42:CE:178:PRO:HD2	42:CE:182:ASN:OD1	2.12	0.49
44:CG:104:PRO:HG3	44:CG:194:VAL:HG23	1.95	0.49
44:CG:76:VAL:CG2	44:CG:81:ASN:HB2	2.41	0.49
45:CH:92:MET:HG2	45:CH:181:VAL:HA	1.93	0.49
46:CI:30:LYS:HG2	46:CI:63:GLU:HB3	1.94	0.49
49:CM:124:LYS:O	49:CM:128:LYS:N	2.39	0.49
51:CO:7:LEU:O	51:CO:33:VAL:HA	2.12	0.49
61:CY:120:GLU:O	61:CY:125:SER:HB3	2.12	0.49
81:A2:1149:G:H2'	81:A2:1150:G:C8	2.47	0.49
81:A2:1056:C:H41	81:A2:1204:G:H1	1.56	0.49
81:A2:1221:C:H2'	81:A2:1222:G:O4'	2.13	0.49
81:A2:1835:C:H1'	81:A2:1870:A:N3	2.27	0.49
40:CC:163:LYS:HA	81:A2:221:U:C4	2.48	0.49
81:A2:2301:C:O2'	81:A2:2302:G:H5'	2.12	0.49
81:A2:2525:C:H3'	81:A2:2526:G:O4'	2.11	0.49
81:A2:2574:G:H2'	81:A2:2574:G:N3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2833:C:H6	81:A2:2833:C:H3'	1.76	0.49
81:A2:1580:A:N7	81:A2:3612:A:C4	2.81	0.49
81:A2:3761:G:H3'	81:A2:3762:U:C5	2.47	0.49
81:A2:4047:C:O2	81:A2:4047:C:H2'	2.12	0.49
81:A2:4156:G:OP1	81:A2:4156:G:C8	2.61	0.49
1:AV:76:A:C2	81:A2:4156:G:N1	2.62	0.49
81:A2:4455:G:H5''	81:A2:4455:G:C8	2.47	0.49
81:A2:4456:A:H3'	81:A2:4457:U:C5'	2.42	0.49
81:A2:4469:U:H1'	81:A2:4472:U:C4	2.47	0.49
81:A2:449:C:H2'	81:A2:450:C:C6	2.45	0.49
81:A2:4954:G:H8	81:A2:4954:G:O5'	1.96	0.49
81:A2:5007:C:O5'	81:A2:5007:C:H6	1.94	0.49
82:A3:127:U:H5''	82:A3:128:C:OP2	2.13	0.49
81:A2:409:A:N1	82:A3:17:A:H1'	2.27	0.49
2:AW:4:C:O4'	81:A2:3683:G:O3'	2.31	0.49
2:AW:56:C:N3	81:A2:3927:G:N1	2.60	0.49
4:B1:1196:A:H2'	4:B1:1197:G:C5'	2.43	0.49
4:B1:1243:U:H2'	4:B1:1244:U:O4'	2.12	0.49
4:B1:1453:C:H3'	4:B1:1453:C:O2	2.12	0.49
4:B1:1555:U:O2'	4:B1:1556:A:H5'	2.11	0.49
4:B1:443:U:H5'	4:B1:443:U:C6	2.47	0.49
4:B1:448:A:H4'	4:B1:449:A:C5'	2.41	0.49
4:B1:508:A:H3'	4:B1:509:G:H8	1.77	0.49
4:B1:67:C:H1'	11:BG:164:LYS:HD2	1.94	0.49
4:B1:752:G:O2'	4:B1:753:C:H5'	2.12	0.49
10:BF:156:THR:HA	10:BF:159:ARG:NH1	2.28	0.49
11:BG:186:GLN:HA	11:BG:189:ARG:NH2	2.27	0.49
11:BG:38:ALA:HB3	11:BG:48:TYR:HB2	1.94	0.49
7:BC:85:SER:HA	26:BV:26:ALA:O	2.11	0.49
39:CB:262:VAL:HG21	39:CB:268:ARG:HH12	1.77	0.49
40:CC:189:MET:HB3	40:CC:195:LYS:HE3	1.95	0.49
40:CC:180:ILE:HD11	40:CC:207:PRO:HG2	1.93	0.49
40:CC:252:TRP:HB3	40:CC:257:PHE:HB2	1.95	0.49
40:CC:54:VAL:HG21	81:A2:2320:G:C5	2.47	0.49
42:CE:223:ARG:HA	42:CE:225:PRO:HD2	1.95	0.49
48:CL:152:GLY:O	48:CL:156:PRO:HD3	2.13	0.49
48:CL:47:ALA:O	48:CL:144:LEU:HD13	2.12	0.49
81:A2:1205:U:OP2	81:A2:1212:G:C8	2.54	0.49
81:A2:1230:C:H2'	81:A2:1231:C:C6	2.47	0.49
81:A2:1316:G:H8	81:A2:1316:G:O5'	1.95	0.49
81:A2:1570:U:H3'	81:A2:1570:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1847:G:C4	81:A2:3846:A:C2	3.01	0.49
81:A2:1911:G:H21	81:A2:2036:G:H5'	1.77	0.49
81:A2:2525:C:C3'	81:A2:2526:G:H4'	2.41	0.49
81:A2:2604:C:H42	81:A2:4609:G:H22	1.60	0.49
81:A2:308:A:C2'	81:A2:309:A:H5'	2.42	0.49
81:A2:33:A:H3'	81:A2:34:A:C8	2.47	0.49
81:A2:3592:C:C5	81:A2:3593:A:N1	2.80	0.49
81:A2:3829:A:H2'	81:A2:3829:A:N3	2.28	0.49
81:A2:4043:U:H1'	81:A2:4044:G:P	2.52	0.49
81:A2:407:U:C3'	81:A2:408:G:H5'	2.42	0.49
81:A2:4277:A:OP1	81:A2:4277:A:H4'	2.12	0.49
81:A2:4329:A:O2'	81:A2:4330:G:H5'	2.11	0.49
81:A2:445:U:C3'	81:A2:446:C:H6	2.23	0.49
45:CH:122:TYR:HB2	81:A2:4573:C:O4'	2.13	0.49
81:A2:4709:G:C2'	81:A2:4710:G:C5'	2.81	0.49
81:A2:646:C:H2'	81:A2:647:C:H6	1.76	0.49
81:A2:978:G:C4	81:A2:979:C:C5	3.01	0.49
83:A4:89:G:C4	83:A4:90:A:C8	3.00	0.49
2:AW:12:U:H2'	2:AW:13:C:O4'	2.13	0.49
4:B1:1132:C:OP2	4:B1:1132:C:H5	1.95	0.49
4:B1:1402:A:H3'	4:B1:1403:C:C5	2.47	0.49
4:B1:1416:C:C5	4:B1:1417:C:C6	3.00	0.49
4:B1:1576:G:H2'	4:B1:1577:G:H5'	1.94	0.49
4:B1:345:U:H2'	4:B1:346:C:O5'	2.13	0.49
4:B1:59:U:C6	4:B1:59:U:H3'	2.48	0.49
4:B1:661:U:H5'	4:B1:662:G:H3'	1.94	0.49
4:B1:71:G:H1	4:B1:80:G:H1	1.60	0.49
4:B1:933:G:H2'	4:B1:993:G:N2	2.28	0.49
6:BB:218:LEU:HD22	6:BB:219:LYS:H	1.77	0.49
4:B1:1202:U:H4'	7:BC:114:LYS:HE3	1.93	0.49
4:B1:4:C:H4'	7:BC:207:ALA:HB2	1.94	0.49
10:BF:116:ILE:HD13	10:BF:154:LEU:CD1	2.42	0.49
4:B1:181:A:C8	11:BG:196:LYS:HB2	2.48	0.49
11:BG:23:LYS:HE2	11:BG:42:GLY:H	1.77	0.49
11:BG:6:SER:O	11:BG:8:PRO:HD3	2.12	0.49
13:BI:146:GLN:O	13:BI:149:TYR:HB2	2.12	0.49
14:BJ:129:LEU:O	14:BJ:134:HIS:HB2	2.12	0.49
15:BK:50:GLN:HA	15:BK:53:LYS:HG2	1.94	0.49
17:BM:93:LYS:HE2	17:BM:101:ARG:HH21	1.77	0.49
5:BA:67:ALA:HA	26:BV:50:PHE:CZ	2.47	0.49
30:BZ:73:VAL:HG13	30:BZ:77:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:205:ASN:OD1	81:A2:1612:G:H5''	2.12	0.49
40:CC:283:LYS:HB2	53:CQ:24:TYR:HB3	1.95	0.49
40:CC:319:LEU:HD22	81:A2:929:U:H5'	1.93	0.49
40:CC:52:TYR:O	40:CC:53:ALA:HB2	2.11	0.49
42:CE:161:ARG:HD3	42:CE:270:TYR:CZ	2.48	0.49
43:CF:117:ILE:HD11	43:CF:222:LYS:HZ3	1.76	0.49
48:CL:40:GLN:O	48:CL:44:ARG:HD3	2.12	0.49
49:CM:44:GLN:O	49:CM:44:GLN:HG2	2.12	0.49
49:CM:100:ARG:HB3	51:CO:198:THR:HG22	1.93	0.49
51:CO:46:ASN:HB2	51:CO:134:LYS:HD2	1.94	0.49
52:CP:4:TYR:N	52:CP:4:TYR:HD1	2.10	0.49
61:CY:122:LYS:NZ	81:A2:194:A:H5''	2.27	0.49
81:A2:1082:U:C6	81:A2:1083:C:C5	2.87	0.49
81:A2:1193:G:O4'	81:A2:1195:C:C4	2.66	0.49
81:A2:1217:C:H3'	81:A2:1217:C:O2	2.12	0.49
81:A2:1361:U:C6	81:A2:1361:U:P	3.06	0.49
81:A2:1389:C:O2	81:A2:1389:C:C3'	2.60	0.49
81:A2:1652:U:H2'	81:A2:1653:C:C6	2.47	0.49
81:A2:179:G:H4'	81:A2:179:G:OP1	2.11	0.49
81:A2:1868:G:O5'	81:A2:1868:G:C8	2.60	0.49
81:A2:1894:G:C3'	81:A2:1894:G:C8	2.96	0.49
81:A2:2397:A:C3'	81:A2:2398:G:H5'	2.41	0.49
81:A2:2576:G:H5''	81:A2:2577:A:H2'	1.94	0.49
81:A2:2587:G:C8	81:A2:2587:G:O5'	2.66	0.49
81:A2:3746:G:H1'	81:A2:3747:U:H5	1.78	0.49
81:A2:376:A:O2'	81:A2:378:G:H5''	2.12	0.49
81:A2:3911:A:H2'	81:A2:3912:A:H8	1.76	0.49
81:A2:4156:G:H8	81:A2:4156:G:O5'	1.96	0.49
81:A2:4428:U:H2'	81:A2:4429:U:H5'	1.93	0.49
81:A2:4508:A:H4'	81:A2:4509:G:O5'	2.13	0.49
39:CB:118:PHE:HA	81:A2:4538:G:O2'	2.13	0.49
81:A2:4580:U:H2'	81:A2:4581:C:H5'	1.93	0.49
81:A2:4582:A:H2'	81:A2:4583:G:C8	2.48	0.49
81:A2:4715:C:H2'	81:A2:4716:C:H6	1.76	0.49
49:CM:90:ARG:HB2	81:A2:4825:G:H21	1.77	0.49
81:A2:4851:G:N2	81:A2:4882:G:C8	2.81	0.49
81:A2:733:G:H2'	81:A2:733:G:N3	2.28	0.49
82:A3:85:U:H6	82:A3:85:U:H5''	1.77	0.49
83:A4:102:U:C2'	83:A4:103:A:H5'	2.42	0.49
83:A4:69:U:H3'	83:A4:69:U:H6	1.76	0.49
4:B1:1198:G:N3	4:B1:1198:G:H2'	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1432:U:H6	4:B1:1432:U:O5'	1.95	0.49
4:B1:1477:U:H1'	4:B1:1478:U:P	2.52	0.49
4:B1:1623:A:HO2'	4:B1:1624:U:H6	1.61	0.49
4:B1:130:G:H4'	4:B1:181:A:H61	1.77	0.49
4:B1:198:U:H5''	4:B1:198:U:H6	1.76	0.49
4:B1:219:U:H5''	4:B1:219:U:H6	1.78	0.49
4:B1:346:C:C6	4:B1:346:C:C3'	2.94	0.49
4:B1:440:G:H2'	4:B1:441:C:O4'	2.13	0.49
4:B1:683:G:C4	4:B1:1023:A:N1	2.80	0.49
4:B1:973:C:H5	4:B1:974:C:C4	2.30	0.49
5:BA:110:ASN:O	5:BA:116:PHE:HD1	1.95	0.49
5:BA:25:LEU:O	5:BA:164:ASN:HB2	2.13	0.49
4:B1:746:C:H5''	12:BH:104:PRO:C	2.32	0.49
4:B1:527:C:O2'	14:BJ:121:LYS:HB2	2.13	0.49
13:BI:69:SER:CB	16:BL:24:LEU:HD11	2.25	0.49
20:BP:22:LEU:HA	20:BP:25:LEU:HD12	1.95	0.49
40:CC:50:GLN:HB2	40:CC:51:PRO:CD	2.43	0.49
38:CA:41:ILE:HD13	44:CG:42:GLY:HA2	1.93	0.49
48:CL:84:ALA:HB2	48:CL:117:LEU:HD13	1.95	0.49
52:CP:25:HIS:CD2	52:CP:142:SER:HB2	2.47	0.49
53:CQ:64:SER:OG	81:A2:1481:G:N2	2.45	0.49
40:CC:326:LEU:HD13	81:A2:1217:C:O2	2.12	0.49
81:A2:1491:G:H4'	81:A2:1827:U:O3'	2.12	0.49
81:A2:1890:G:C2'	81:A2:1891:C:H5'	2.42	0.49
81:A2:1907:A:H2'	81:A2:1907:A:N3	2.27	0.49
81:A2:2257:U:O2'	81:A2:2258:A:H5'	2.13	0.49
81:A2:2796:U:O2'	81:A2:4605:C:H4'	2.13	0.49
81:A2:2:G:C5	81:A2:3:C:C5	3.01	0.49
81:A2:314:C:H1'	81:A2:4315:G:N2	2.27	0.49
81:A2:3580:A:H2'	81:A2:3581:C:C6	2.48	0.49
81:A2:3732:A:H3'	81:A2:3733:U:H6	1.77	0.49
81:A2:3796:G:H4'	81:A2:3797:A:OP2	2.12	0.49
81:A2:4101:C:H2'	81:A2:4101:C:O2	2.12	0.49
81:A2:4158:G:C6	81:A2:4159:C:N4	2.81	0.49
56:CT:2:THR:HA	81:A2:4163:A:O4'	2.12	0.49
81:A2:4218:C:O5'	81:A2:4218:C:C6	2.66	0.49
81:A2:4702:G:H2'	81:A2:4703:A:H8	1.76	0.49
81:A2:4809:G:H2'	81:A2:4810:G:H8	1.77	0.49
81:A2:4863:G:H3'	81:A2:4863:G:C8	2.47	0.49
81:A2:4851:G:N2	81:A2:4882:G:H1'	2.25	0.49
81:A2:726:C:H2'	81:A2:727:G:C5'	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:903:C:H6	81:A2:903:C:O5'	1.95	0.49
81:A2:917:G:H1'	81:A2:918:C:C4	2.48	0.49
81:A2:941:G:C2'	81:A2:941:G:N3	2.76	0.49
81:A2:1716:A:O2'	83:A4:77:A:H1'	2.12	0.49
3:AX:46:U:O3'	4:B1:1830:U:C2	2.65	0.49
4:B1:1583:C:N4	4:B1:1584:G:C6	2.80	0.49
4:B1:1625:U:H4'	4:B1:1663:A:H4'	1.94	0.49
4:B1:175:A:H3'	4:B1:176:U:C5'	2.31	0.49
4:B1:438:G:H2'	4:B1:439:A:H8	1.78	0.49
4:B1:741:C:N4	4:B1:744:G:H22	2.11	0.49
4:B1:809:A:C6	4:B1:810:A:N6	2.80	0.49
4:B1:858:A:C2	4:B1:859:G:C6	3.01	0.49
4:B1:925:G:H1'	18:BN:87:ASP:OD1	2.12	0.49
6:BB:35:ALA:HB3	6:BB:42:ARG:HA	1.95	0.49
9:BE:11:ARG:HD3	9:BE:28:ALA:HB2	1.95	0.49
13:BI:68:GLY:HA3	16:BL:21:LYS:HE3	1.93	0.49
20:BP:111:MET:HG2	20:BP:119:PHE:CE1	2.47	0.49
21:BQ:89:SER:HB2	21:BQ:119:LEU:HB3	1.93	0.49
24:BT:34:VAL:HG22	24:BT:99:VAL:CG1	2.42	0.49
25:BU:20:ILE:CD1	25:BU:116:ILE:HG12	2.43	0.49
40:CC:316:LYS:HB2	40:CC:324:ILE:CD1	2.43	0.49
42:CE:165:LEU:HD23	42:CE:203:ILE:HD13	1.93	0.49
44:CG:104:PRO:HB3	44:CG:135:VAL:HG21	1.95	0.49
44:CG:145:THR:HG21	81:A2:116:G:H8	1.77	0.49
81:A2:100:C:H2'	81:A2:101:A:OP1	2.13	0.49
81:A2:1066:C:H2'	81:A2:1067:A:C5'	2.40	0.49
81:A2:1092:C:H2'	81:A2:1093:C:C6	2.48	0.49
81:A2:1196:C:H5	81:A2:1239:G:C5'	2.22	0.49
81:A2:1424:G:N2	81:A2:1425:U:H1'	2.28	0.49
81:A2:1374:G:N2	81:A2:1449:G:H4'	2.27	0.49
81:A2:14:C:O2	81:A2:14:C:O4'	2.31	0.49
81:A2:115:C:C5	81:A2:153:G:N2	2.80	0.49
81:A2:1611:A:H3'	81:A2:1611:A:C8	2.47	0.49
56:CT:105:PHE:CD1	81:A2:1781:A:H4'	2.47	0.49
81:A2:1792:U:O2	81:A2:1792:U:H2'	2.12	0.49
81:A2:17:A:C2'	81:A2:18:C:H5'	2.43	0.49
81:A2:1929:G:C6	81:A2:2011:A:N1	2.81	0.49
81:A2:2034:G:C4	81:A2:2036:G:N7	2.81	0.49
81:A2:212:C:O2	81:A2:217:C:C6	2.65	0.49
81:A2:2397:A:H3'	81:A2:2398:G:C5'	2.42	0.49
81:A2:2549:C:H5''	81:A2:2736:G:O2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2549:C:N1	81:A2:2550:A:C8	2.81	0.49
81:A2:24:G:H2'	81:A2:25:A:O4'	2.13	0.49
81:A2:2565:C:N4	81:A2:2728:G:OP1	2.46	0.49
81:A2:3714:U:O5'	81:A2:3714:U:H6	1.95	0.49
81:A2:379:A:P	81:A2:379:A:C8	3.05	0.49
81:A2:383:U:H1'	81:A2:390:G:H22	1.78	0.49
39:CB:262:VAL:HG23	81:A2:3867:G:C5	2.47	0.49
2:AW:56:C:C6	81:A2:4014:A:C5	3.00	0.49
1:AV:76:A:N6	81:A2:4156:G:C6	2.78	0.49
81:A2:4200:G:N3	81:A2:4200:G:H2'	2.28	0.49
81:A2:4399:U:O2'	81:A2:4400:G:H5'	2.13	0.49
81:A2:4417:U:H2'	81:A2:4418:C:C5'	2.43	0.49
81:A2:4541:G:H2'	81:A2:4542:C:H5'	1.95	0.49
81:A2:4831:U:O2'	81:A2:4832:G:C8	2.62	0.49
81:A2:4838:C:H3'	81:A2:4839:G:H5''	1.95	0.49
81:A2:484:G:H2'	81:A2:485:U:C6	2.47	0.49
81:A2:4889:A:H2'	81:A2:4890:C:C6	2.47	0.49
81:A2:510:C:C5'	81:A2:510:C:C6	2.81	0.49
81:A2:646:C:H2'	81:A2:647:C:C6	2.47	0.49
81:A2:661:C:H2'	81:A2:662:G:H8	1.77	0.49
81:A2:949:G:OP2	81:A2:949:G:C8	2.65	0.49
81:A2:1086:A:P	83:A4:107:G:H4'	2.52	0.49
83:A4:54:A:P	83:A4:54:A:H3'	2.53	0.49
4:B1:1208:A:N6	4:B1:1691:U:H3	2.11	0.49
4:B1:125:C:H5'	9:BE:136:ILE:HB	1.95	0.49
4:B1:1261:C:H3'	4:B1:1262:C:C5'	2.42	0.49
4:B1:1284:A:C8	4:B1:1286:G:H5''	2.47	0.49
4:B1:1482:C:C5	4:B1:1483:A:H8	2.30	0.49
4:B1:1546:G:N2	4:B1:1670:C:H1'	2.14	0.49
1:AV:34:G:C4	4:B1:1701:C:C6	3.00	0.49
4:B1:1704:C:H1'	4:B1:1832:A:C6	2.48	0.49
4:B1:1781:A:C4	4:B1:1782:G:N2	2.80	0.49
4:B1:1206:G:H1'	4:B1:1834:A:N3	2.28	0.49
4:B1:131:C:N3	4:B1:215:G:O4'	2.45	0.49
4:B1:345:U:H2'	4:B1:346:C:H5'	1.94	0.49
4:B1:539:C:C3'	4:B1:539:C:C6	2.95	0.49
4:B1:571:U:C3'	4:B1:572:U:C5'	2.70	0.49
4:B1:572:U:C2'	4:B1:573:U:C4	2.85	0.49
4:B1:586:G:N2	4:B1:587:A:H1'	2.27	0.49
4:B1:61:A:H4'	4:B1:62:G:OP2	2.12	0.49
4:B1:73:C:O2'	4:B1:74:G:H5'	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:743:U:H2'	12:BH:100:ILE:H	1.77	0.49
4:B1:794:A:H2'	4:B1:795:A:O4'	2.12	0.49
9:BE:136:ILE:O	9:BE:136:ILE:HG12	2.12	0.49
9:BE:42:LEU:CD1	9:BE:47:PHE:HB2	2.42	0.49
11:BG:4:ASN:HB3	11:BG:110:ASN:OD1	2.13	0.49
11:BG:194:LEU:HA	11:BG:197:GLN:HB2	1.94	0.49
12:BH:109:ARG:CG	12:BH:110:THR:N	2.74	0.49
16:BL:59:LYS:HD3	16:BL:134:LEU:HD23	1.94	0.49
18:BN:63:VAL:HB	18:BN:71:ILE:HD11	1.94	0.49
21:BQ:60:LYS:NZ	21:BQ:60:LYS:HB2	2.27	0.49
27:BW:83:LEU:O	27:BW:86:LEU:HG	2.13	0.49
40:CC:117:THR:HG23	81:A2:1338:G:OP1	2.13	0.49
42:CE:158:ARG:HB2	81:A2:4903:C:O2	2.12	0.49
42:CE:172:LEU:HD13	42:CE:188:ARG:HG2	1.94	0.49
45:CH:31:ARG:HH21	45:CH:188:GLN:CB	2.25	0.49
54:CR:154:LEU:HA	54:CR:157:ASP:HB2	1.95	0.49
55:CS:24:THR:N	55:CS:25:PRO:HD3	2.28	0.49
62:CZ:6:LYS:HB3	62:CZ:7:PRO:CD	2.43	0.49
81:A2:123:C:O5'	81:A2:123:C:H6	1.96	0.49
81:A2:1643:U:H2'	81:A2:1644:C:C6	2.48	0.49
43:CF:107:LYS:HE3	81:A2:1703:G:H2'	1.95	0.49
81:A2:1769:U:O5'	81:A2:1769:U:H6	1.96	0.49
81:A2:1795:C:H2'	81:A2:1795:C:O2	2.12	0.49
81:A2:1851:A:H2'	81:A2:1852:A:H5'	1.95	0.49
81:A2:2281:U:H3'	81:A2:2282:G:H5'	1.94	0.49
81:A2:2366:A:C2'	81:A2:2367:G:H5'	2.42	0.49
81:A2:2457:G:H2'	81:A2:2458:G:C8	2.48	0.49
81:A2:2495:G:H1'	81:A2:2516:C:H1'	1.94	0.49
81:A2:2624:A:N1	81:A2:2664:U:C2	2.81	0.49
81:A2:2671:G:H4'	81:A2:2672:A:O4'	2.13	0.49
81:A2:3752:A:H2	81:A2:3758:C:N4	2.11	0.49
81:A2:3752:A:H5'	81:A2:3752:A:C8	2.48	0.49
81:A2:4233:A:C3'	81:A2:4233:A:C8	2.95	0.49
81:A2:4269:G:H2'	81:A2:4270:A:O4'	2.12	0.49
81:A2:4386:C:O2	81:A2:4386:C:H2'	2.12	0.49
81:A2:4413:C:H2'	81:A2:4414:G:H5'	1.93	0.49
81:A2:4418:C:H2'	81:A2:4419:U:H6	1.78	0.49
81:A2:4449:G:N3	81:A2:4668:A:H2'	2.27	0.49
81:A2:4874:G:H2'	81:A2:4875:C:C6	2.46	0.49
81:A2:4938:C:H2'	81:A2:4939:C:H5'	1.95	0.49
82:A3:87:G:C6	82:A3:88:A:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1717:A:C4'	83:A4:101:A:C2	2.90	0.49
41:CD:222:GLN:HB2	83:A4:48:G:C8	2.48	0.49
1:AV:12:U:C5'	81:A2:3725:A:O4'	2.61	0.49
4:B1:1260:A:H8	4:B1:1260:A:O5'	1.95	0.49
4:B1:1266:C:H2'	4:B1:1267:C:H6	1.75	0.49
4:B1:1404:U:OP2	4:B1:1404:U:C6	2.66	0.49
4:B1:1442:U:O2	4:B1:1442:U:C2'	2.57	0.49
4:B1:1560:U:H2'	4:B1:1561:A:H8	1.78	0.49
4:B1:1607:A:N6	4:B1:1632:G:H1'	2.28	0.49
4:B1:1643:U:C4	4:B1:1644:C:N4	2.81	0.49
4:B1:380:G:N3	4:B1:382:C:C5	2.81	0.49
4:B1:382:C:C6	4:B1:382:C:OP2	2.65	0.49
4:B1:442:C:C3'	4:B1:443:U:H5''	2.43	0.49
4:B1:500:A:H2	4:B1:502:C:O5'	1.96	0.49
4:B1:684:G:O4'	4:B1:920:A:C2	2.65	0.49
4:B1:834:C:H5'	4:B1:836:G:OP2	2.12	0.49
5:BA:83:GLY:O	5:BA:87:VAL:HG23	2.12	0.49
6:BB:83:LYS:HD2	6:BB:106:THR:HG22	1.95	0.49
9:BE:49:ARG:HH21	9:BE:58:GLY:CA	2.26	0.49
23:BS:61:GLU:O	23:BS:64:VAL:HB	2.13	0.49
30:BZ:69:THR:HG22	30:BZ:70:PRO:CD	2.39	0.49
38:CA:90:CYS:HB3	38:CA:101:VAL:CG1	2.42	0.49
38:CA:189:TYR:HB2	38:CA:196:TRP:HD1	1.76	0.49
40:CC:162:LYS:H	40:CC:162:LYS:HD3	1.77	0.49
40:CC:53:ALA:O	40:CC:54:VAL:HB	2.12	0.49
42:CE:223:ARG:HD2	42:CE:229:GLU:OE2	2.13	0.49
49:CM:20:HIS:CE1	49:CM:45:VAL:HG23	2.47	0.49
51:CO:130:LYS:HG3	51:CO:131:PRO:HD2	1.95	0.49
52:CP:101:ASN:O	52:CP:104:LEU:HB2	2.13	0.49
52:CP:25:HIS:CE1	52:CP:27:LYS:H	2.31	0.49
52:CP:31:GLU:HG3	52:CP:60:PHE:CD2	2.48	0.49
81:A2:1058:A:O2'	81:A2:1059:C:H5''	2.12	0.49
81:A2:1075:A:H2'	81:A2:1076:C:C6	2.47	0.49
81:A2:1204:G:OP1	81:A2:1211:C:H5	1.95	0.49
81:A2:1216:C:H1'	81:A2:1217:C:P	2.53	0.49
81:A2:1514:C:H2'	81:A2:1515:U:O4'	2.13	0.49
81:A2:15:A:C2'	81:A2:16:G:H5'	2.43	0.49
81:A2:19:G:C4'	81:A2:20:U:OP1	2.60	0.49
81:A2:2348:U:O4'	81:A2:2348:U:OP2	2.31	0.49
81:A2:2369:C:C6	81:A2:2369:C:H5''	2.33	0.49
81:A2:2491:G:N3	81:A2:2491:G:H2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:248:G:H2'	81:A2:249:C:C6	2.48	0.49
81:A2:2536:G:H2'	81:A2:2537:C:C5	2.47	0.49
81:A2:2572:C:H6	81:A2:2572:C:O5'	1.96	0.49
81:A2:2579:G:C6	81:A2:2580:C:C4	3.01	0.49
81:A2:2647:C:H2'	81:A2:2648:C:C6	2.48	0.49
81:A2:2662:C:O2'	81:A2:2663:G:H5'	2.13	0.49
81:A2:2688:G:O5'	81:A2:2688:G:H8	1.96	0.49
81:A2:2749:C:O5'	81:A2:2749:C:H6	1.96	0.49
81:A2:2842:U:O2'	81:A2:2843:C:H5'	2.13	0.49
13:BI:92:ARG:NH1	81:A2:2869:C:C2'	2.76	0.49
81:A2:2:G:N2	82:A3:156:U:H3	2.09	0.49
81:A2:3606:U:H2'	81:A2:3607:G:O4'	2.13	0.49
81:A2:3759:U:H4'	81:A2:3760:C:OP1	2.13	0.49
81:A2:404:G:OP1	81:A2:404:G:H4'	2.13	0.49
81:A2:4130:A:H1'	81:A2:4131:C:OP2	2.13	0.49
81:A2:4367:G:C4	81:A2:4368:G:C8	3.01	0.49
81:A2:4432:G:C2	81:A2:4433:A:N7	2.81	0.49
81:A2:4643:U:H5'	81:A2:4643:U:H6	1.77	0.49
45:CH:44:GLU:HB2	81:A2:4724:G:C8	2.48	0.49
81:A2:4723:A:C1'	81:A2:4724:G:P	3.01	0.49
81:A2:4736:C:H6	81:A2:4736:C:H5'	1.77	0.49
81:A2:716:U:C2'	81:A2:717:G:H5''	2.43	0.49
81:A2:76:A:C2	81:A2:77:U:C1'	2.96	0.49
61:CY:114:ASP:H	82:A3:84:A:H62	1.61	0.49
2:AW:18:G:H2'	2:AW:57:G:N2	2.27	0.49
4:B1:125:C:H6	4:B1:125:C:OP1	1.96	0.49
4:B1:1241:A:C1'	4:B1:1267:C:H1'	2.40	0.49
4:B1:1308:U:H1'	4:B1:1309:C:N1	2.27	0.49
4:B1:1373:C:H2'	4:B1:1374:C:C6	2.48	0.49
4:B1:1388:A:H2'	4:B1:1389:C:O5'	2.13	0.49
4:B1:1452:A:C6	4:B1:1476:A:C6	3.00	0.49
4:B1:1700:C:H5''	4:B1:1701:C:H5'	1.93	0.49
4:B1:1707:U:C2'	4:B1:1708:C:H5'	2.42	0.49
4:B1:1083:A:C2'	4:B1:1858:G:H21	2.26	0.49
4:B1:102:A:C5	4:B1:408:A:C2	3.01	0.49
4:B1:543:C:C6	4:B1:543:C:H3'	2.46	0.49
4:B1:232:A:OP2	4:B1:890:U:C6	2.66	0.49
4:B1:313:A:C8	11:BG:191:ARG:NE	2.81	0.49
12:BH:143:ARG:HD3	27:BW:51:GLU:OE2	2.13	0.49
16:BL:71:ARG:NH2	16:BL:140:PHE:HZ	2.11	0.49
21:BQ:107:GLU:O	21:BQ:111:ILE:HG12	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BR:24:LEU:HB3	22:BR:58:MET:SD	2.53	0.49
24:BT:107:LEU:HB3	24:BT:113:VAL:CG2	2.42	0.49
24:BT:25:SER:HB3	24:BT:27:LYS:HE3	1.94	0.49
39:CB:217:ILE:HD12	39:CB:347:LEU:HD12	1.93	0.49
39:CB:252:ALA:HB3	81:A2:4417:U:O2	2.13	0.49
44:CG:83:PHE:O	44:CG:84:THR:HB	2.13	0.49
47:CJ:151:ILE:CD1	47:CJ:156:ARG:HA	2.43	0.49
50:CN:151:ILE:HG13	50:CN:159:ARG:NH2	2.27	0.49
51:CO:147:TRP:NE1	51:CO:149:TYR:HB2	2.27	0.49
56:CT:45:MET:HG3	56:CT:94:GLU:HB3	1.93	0.49
81:A2:103:G:N2	81:A2:1340:G:C2	2.81	0.49
81:A2:116:G:H21	81:A2:118:C:H2'	1.78	0.49
81:A2:1249:G:H3'	81:A2:1250:A:H8	1.77	0.49
81:A2:1267:G:H3'	81:A2:1268:G:C4'	2.43	0.49
81:A2:1368:A:C5	81:A2:1376:G:N2	2.80	0.49
81:A2:1390:U:C6	81:A2:1390:U:OP2	2.66	0.49
81:A2:1590:C:H1'	81:A2:1591:G:C8	2.47	0.49
81:A2:1595:U:O2'	81:A2:1596:G:H5'	2.13	0.49
81:A2:172:C:H2'	81:A2:173:G:H8	1.76	0.49
81:A2:1773:A:H2	83:A4:98:G:N2	2.11	0.49
81:A2:192:C:C6	81:A2:192:C:O5'	2.63	0.49
81:A2:1877:G:N7	81:A2:2254:G:C5	2.81	0.49
81:A2:2296:G:C8	81:A2:2296:G:OP2	2.66	0.49
81:A2:2445:U:C3'	81:A2:2445:U:C6	2.95	0.49
81:A2:2518:G:H2'	81:A2:2519:G:H5''	1.94	0.49
81:A2:2541:G:H2'	81:A2:2542:A:C8	2.48	0.49
81:A2:2559:A:H2	81:A2:2657:G:H21	1.32	0.49
81:A2:2625:G:N2	81:A2:2662:C:C2	2.79	0.49
81:A2:284:G:O2'	81:A2:288:U:H5'	2.13	0.49
81:A2:325:A:H3'	81:A2:326:A:H8	1.78	0.49
81:A2:3830:A:O5'	81:A2:3830:A:H8	1.96	0.49
81:A2:3927:G:N3	81:A2:3927:G:H2'	2.28	0.49
41:CD:146:LEU:CB	81:A2:4283:A:C2	2.96	0.49
81:A2:432:G:H2'	81:A2:433:G:H5'	1.95	0.49
81:A2:4408:G:H5''	81:A2:4408:G:H8	1.78	0.49
81:A2:4529:U:H2'	81:A2:4530:G:H5'	1.95	0.49
81:A2:4556:C:H6	81:A2:4556:C:O5'	1.96	0.49
81:A2:4696:G:H2'	81:A2:4697:C:C6	2.48	0.49
81:A2:4743:C:H3'	81:A2:4743:C:H6	1.78	0.49
81:A2:4747:C:H2'	81:A2:4748:G:H8	1.77	0.49
81:A2:4977:U:C2'	81:A2:4978:C:H3'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:902:G:H2'	81:A2:902:G:N3	2.27	0.49
81:A2:910:G:H2'	81:A2:911:G:H5'	1.95	0.49
81:A2:930:C:H2'	81:A2:931:C:C6	2.48	0.49
52:CP:120:ASN:ND2	82:A3:13:G:H4'	2.27	0.49
2:AW:40:C:H2'	2:AW:41:C:C6	2.48	0.49
4:B1:1013:U:O5'	4:B1:1013:U:H6	1.95	0.49
4:B1:1087:A:H3'	4:B1:1088:U:C5'	2.42	0.49
4:B1:1298:G:H1'	20:BP:79:HIS:CB	2.43	0.49
4:B1:1301:A:HO2'	4:B1:1302:G:P	2.36	0.49
4:B1:1338:G:H4'	25:BU:74:SER:N	2.27	0.49
4:B1:1613:G:H2'	4:B1:1614:A:O5'	2.13	0.49
4:B1:1617:G:H2'	4:B1:1618:C:H5'	1.95	0.49
4:B1:216:C:H5''	9:BE:134:LYS:HE3	1.95	0.49
4:B1:24:C:H6	4:B1:24:C:O5'	1.96	0.49
4:B1:332:G:N7	11:BG:186:GLN:HB2	2.27	0.49
4:B1:571:U:O3'	29:BY:59:GLY:HA2	2.13	0.49
4:B1:691:G:H2'	4:B1:692:G:H8	1.78	0.49
4:B1:794:A:C2	4:B1:795:A:C1'	2.88	0.49
4:B1:92:A:N7	4:B1:446:G:H2'	2.28	0.49
4:B1:969:U:O3'	81:A2:3681:A:O4'	2.23	0.49
5:BA:103:PHE:CD2	5:BA:132:GLN:HB2	2.47	0.49
7:BC:270:THR:HA	7:BC:273:LEU:HD12	1.95	0.49
9:BE:52:LEU:O	9:BE:53:LYS:HB2	2.13	0.49
11:BG:167:LYS:HG2	11:BG:167:LYS:O	2.13	0.49
12:BH:109:ARG:NE	12:BH:113:LYS:HD3	2.28	0.49
12:BH:109:ARG:HG3	12:BH:113:LYS:CD	2.43	0.49
17:BM:86:GLY:HA2	17:BM:91:LEU:HB2	1.95	0.49
20:BP:119:PHE:CE1	23:BS:117:ILE:HG23	2.48	0.49
24:BT:73:GLY:O	24:BT:76:THR:HB	2.13	0.49
29:BY:94:HIS:HB3	29:BY:96:LEU:HD23	1.95	0.49
39:CB:173:LEU:HD11	39:CB:342:LYS:CD	2.43	0.49
40:CC:333:LYS:HD2	81:A2:1217:C:C5'	2.42	0.49
41:CD:155:THR:HG22	41:CD:179:ARG:NH1	2.28	0.49
41:CD:164:LYS:HG3	41:CD:195:HIS:CE1	2.48	0.49
42:CE:134:SER:O	42:CE:135:GLN:HB2	2.13	0.49
48:CL:84:ALA:HA	48:CL:118:LYS:HZ1	1.77	0.49
49:CM:2:VAL:HG11	49:CM:4:ARG:CZ	2.43	0.49
52:CP:15:CYS:SG	52:CP:150:LEU:HB2	2.53	0.49
62:CZ:36:ARG:HH12	62:CZ:98:LYS:HD3	1.77	0.49
81:A2:1093:C:H2'	81:A2:1094:U:C6	2.48	0.48
81:A2:1200:G:H2'	81:A2:1201:G:C8	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1302:A:H4'	81:A2:1303:A:OP1	2.13	0.48
81:A2:146:A:O5'	81:A2:146:A:H8	1.96	0.48
81:A2:1628:U:H6	81:A2:1628:U:O5'	1.95	0.48
81:A2:2266:C:H2'	81:A2:2267:G:C8	2.47	0.48
81:A2:2276:A:H3'	81:A2:2277:G:C5'	2.42	0.48
81:A2:2629:G:C4	81:A2:2630:C:H1'	2.48	0.48
81:A2:2704:C:H2'	81:A2:2705:U:O4'	2.13	0.48
81:A2:277:U:O2'	81:A2:278:U:H5'	2.13	0.48
81:A2:3682:U:C3'	81:A2:3682:U:C6	2.96	0.48
81:A2:3821:A:H5''	81:A2:3821:A:C8	2.48	0.48
81:A2:4021:A:H3'	81:A2:4022:C:C6	2.47	0.48
81:A2:4028:U:C2'	81:A2:4029:G:H5'	2.42	0.48
81:A2:4071:G:C2'	81:A2:4072:A:O5'	2.61	0.48
81:A2:4137:C:C2'	81:A2:4138:A:H5'	2.43	0.48
81:A2:4417:U:H6	81:A2:4417:U:O5'	1.95	0.48
45:CH:99:PHE:CE2	81:A2:4562:A:H1'	2.48	0.48
81:A2:4648:C:O2'	81:A2:4649:U:H5'	2.13	0.48
81:A2:4747:C:H2'	81:A2:4748:G:C8	2.48	0.48
81:A2:4937:A:H2'	81:A2:4938:C:C5'	2.43	0.48
81:A2:77:U:H2'	81:A2:78:U:H5'	1.95	0.48
83:A4:112:U:O2'	83:A4:113:G:H5'	2.13	0.48
83:A4:57:C:H2'	83:A4:58:A:H5'	1.94	0.48
3:AX:46:U:H4'	4:B1:1830:U:H2'	1.95	0.48
4:B1:1225:U:H6	4:B1:1225:U:O5'	1.96	0.48
4:B1:1280:G:N2	4:B1:1318:G:C4	2.81	0.48
4:B1:1356:G:H8	4:B1:1356:G:O5'	1.96	0.48
4:B1:1397:U:H3'	4:B1:1397:U:C6	2.47	0.48
4:B1:1439:A:C8	4:B1:1439:A:P	3.05	0.48
4:B1:1448:A:H2'	4:B1:1449:G:H8	1.77	0.48
4:B1:1483:A:H2'	4:B1:1483:A:N3	2.27	0.48
4:B1:1597:C:H4'	4:B1:1603:G:O6	2.12	0.48
4:B1:1658:G:C6	4:B1:1659:U:N3	2.80	0.48
4:B1:1217:A:C1'	4:B1:1685:U:O2	2.58	0.48
4:B1:1731:A:O3'	81:A2:2862:A:H4'	2.13	0.48
4:B1:20:G:H4'	4:B1:620:G:N2	2.28	0.48
4:B1:359:U:H2'	4:B1:362:C:H5	1.78	0.48
4:B1:380:G:N2	4:B1:382:C:C6	2.81	0.48
4:B1:76:U:O2'	4:B1:77:A:H2'	2.13	0.48
4:B1:78:C:H1'	4:B1:79:A:P	2.53	0.48
4:B1:890:U:C3'	4:B1:891:G:H5''	2.38	0.48
4:B1:905:C:H2'	4:B1:906:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:911:C:H5''	4:B1:912:C:C4	2.48	0.48
6:BB:30:TRP:NE1	6:BB:48:LEU:HB3	2.28	0.48
12:BH:178:LYS:HE2	12:BH:184:ASP:OD1	2.13	0.48
15:BK:31:LYS:O	15:BK:32:HIS:CB	2.61	0.48
24:BT:123:LEU:HD12	24:BT:128:GLN:OE1	2.13	0.48
25:BU:26:SER:HB2	25:BU:32:LEU:HB2	1.94	0.48
5:BA:5:LEU:HD21	26:BV:39:VAL:HG11	1.95	0.48
4:B1:483:C:OP1	28:BX:47:ALA:HA	2.13	0.48
40:CC:45:ARG:NE	40:CC:238:LEU:HD22	2.28	0.48
40:CC:56:GLU:OE1	82:A3:26:C:O4'	2.30	0.48
41:CD:108:ARG:HG3	41:CD:251:PRO:O	2.13	0.48
44:CG:121:LYS:CB	44:CG:129:PRO:HG2	2.43	0.48
49:CM:122:ILE:HG21	51:CO:186:GLU:C	2.33	0.48
49:CM:130:LEU:HD12	51:CO:181:ALA:CB	2.43	0.48
50:CN:68:ARG:HG2	50:CN:128:LYS:HG3	1.95	0.48
81:A2:1057:C:C6	81:A2:1057:C:O5'	2.65	0.48
43:CF:63:GLN:OE1	81:A2:1191:G:H5'	2.14	0.48
81:A2:1250:A:H8	81:A2:1250:A:O5'	1.96	0.48
81:A2:131:C:H5''	81:A2:132:G:OP2	2.13	0.48
81:A2:1398:C:C6	81:A2:1398:C:O5'	2.66	0.48
81:A2:1848:C:H2'	81:A2:1849:A:C8	2.48	0.48
81:A2:240:A:OP1	81:A2:240:A:C8	2.66	0.48
81:A2:252:G:O5'	81:A2:252:G:C8	2.66	0.48
81:A2:2663:G:C5	81:A2:2664:U:O2	2.66	0.48
81:A2:2702:A:OP2	81:A2:2703:G:C8	2.66	0.48
81:A2:2743:A:H2'	81:A2:2744:U:C5	2.48	0.48
81:A2:274:G:C6	81:A2:296:A:H2	2.31	0.48
81:A2:3623:G:O2'	81:A2:3624:C:H5'	2.12	0.48
81:A2:4121:G:O2'	81:A2:4122:C:H4'	2.13	0.48
81:A2:4296:A:H3'	81:A2:4296:A:H8	1.77	0.48
81:A2:4661:A:C3'	81:A2:4662:G:H5'	2.43	0.48
81:A2:4742:C:C3'	81:A2:4742:C:C6	2.96	0.48
40:CC:312:ARG:H	81:A2:943:G:H1	1.60	0.48
83:A4:66:G:H3'	83:A4:67:C:C5	2.48	0.48
81:A2:1715:A:H2	83:A4:77:A:H2	1.61	0.48
4:B1:1351:G:C4'	5:BA:110:ASN:HB3	2.43	0.48
4:B1:1425:G:C5	4:B1:1426:U:C4	3.01	0.48
4:B1:1483:A:C2'	4:B1:1483:A:N3	2.76	0.48
4:B1:154:U:C4'	11:BG:13:GLN:HB3	2.44	0.48
4:B1:1647:A:C5	10:BF:57:ALA:HB1	2.48	0.48
4:B1:1590:C:O4'	4:B1:1653:U:H4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1698:C:C4'	4:B1:1699:A:C8	2.83	0.48
4:B1:1714:U:C3'	4:B1:1715:A:H8	2.27	0.48
4:B1:1731:A:H2'	4:B1:1732:G:H8	1.75	0.48
4:B1:319:C:H4'	4:B1:319:C:OP1	2.14	0.48
4:B1:467:G:C2'	4:B1:468:A:H5'	2.43	0.48
4:B1:504:G:H2'	4:B1:505:G:H5'	1.94	0.48
4:B1:616:A:O5'	4:B1:616:A:H8	1.96	0.48
4:B1:62:G:H5'	4:B1:172:U:N3	2.29	0.48
4:B1:746:C:O2'	4:B1:747:U:C2	2.65	0.48
4:B1:746:C:C1'	4:B1:747:U:C4	2.88	0.48
4:B1:77:A:C2'	4:B1:77:A:N3	2.74	0.48
4:B1:232:A:OP2	4:B1:890:U:H1'	2.12	0.48
4:B1:928:G:O2'	4:B1:929:G:H5''	2.12	0.48
4:B1:990:A:H2'	4:B1:991:G:O5'	2.12	0.48
7:BC:98:LEU:HG	7:BC:101:SER:HB2	1.95	0.48
9:BE:91:SER:HA	9:BE:97:GLU:O	2.14	0.48
2:AW:37:MIA:C6	10:BF:132:GLY:O	2.46	0.48
15:BK:12:TYR:CD1	15:BK:52:LEU:HD11	2.47	0.48
16:BL:4:ILE:HG21	16:BL:55:TYR:HA	1.95	0.48
22:BR:111:PHE:CD1	22:BR:114:LEU:HD11	2.48	0.48
39:CB:51:ALA:HA	39:CB:323:TYR:CD1	2.48	0.48
40:CC:197:ARG:HH12	81:A2:341:C:H3'	1.78	0.48
47:CJ:79:ALA:O	47:CJ:83:LEU:HB2	2.13	0.48
48:CL:134:PRO:HA	48:CL:135:LYS:HZ1	1.78	0.48
50:CN:14:LYS:HZ1	81:A2:270:A:H1'	1.78	0.48
52:CP:4:TYR:N	52:CP:4:TYR:CD1	2.79	0.48
53:CQ:73:PRO:HD2	81:A2:1435:G:H5''	1.96	0.48
57:CU:81:ARG:HD2	81:A2:2598:A:N7	2.28	0.48
81:A2:1058:A:N1	81:A2:1206:U:H1'	2.28	0.48
40:CC:333:LYS:NZ	81:A2:1217:C:H5'	2.28	0.48
81:A2:1216:C:C1'	81:A2:1217:C:P	3.01	0.48
81:A2:1465:C:C2	81:A2:1466:G:C8	3.01	0.48
81:A2:1465:C:H6	81:A2:1465:C:O5'	1.95	0.48
81:A2:1515:U:C4'	81:A2:3611:A:N1	2.75	0.48
81:A2:1582:C:O2'	81:A2:1583:G:H5'	2.13	0.48
81:A2:1817:U:H2'	81:A2:1818:G:C8	2.49	0.48
81:A2:2062:C:C5	81:A2:2063:G:C8	3.01	0.48
81:A2:251:C:H6	81:A2:251:C:O5'	1.95	0.48
81:A2:2624:A:C2	81:A2:2665:G:C5	3.01	0.48
81:A2:2877:U:H5''	81:A2:2877:U:C6	2.48	0.48
81:A2:3606:U:C2'	81:A2:3607:G:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3684:U:H6	81:A2:3684:U:O5'	1.96	0.48
81:A2:3930:G:O5'	81:A2:3930:G:H8	1.96	0.48
56:CT:2:THR:HG22	81:A2:4166:C:N4	2.27	0.48
81:A2:4358:C:O5'	81:A2:4358:C:C6	2.66	0.48
81:A2:4675:C:C5'	81:A2:4675:C:C6	2.96	0.48
81:A2:4704:G:H8	81:A2:4704:G:O5'	1.95	0.48
81:A2:4867:G:C2	81:A2:4868:G:O6	2.66	0.48
81:A2:718:G:N2	81:A2:721:A:N6	2.61	0.48
82:A3:34:U:O2	82:A3:34:U:C2'	2.62	0.48
83:A4:66:G:N3	83:A4:66:G:C2'	2.66	0.48
1:AV:41:C:H3'	1:AV:42:C:C5'	2.43	0.48
3:AX:52:U:C5	4:B1:1698:C:O2	2.66	0.48
4:B1:1392:U:O2	4:B1:1392:U:H2'	2.13	0.48
4:B1:1559:C:O5'	4:B1:1559:C:C6	2.66	0.48
4:B1:1587:G:H4'	4:B1:1588:A:OP2	2.14	0.48
4:B1:1762:C:H2'	4:B1:1763:G:C8	2.47	0.48
4:B1:192:C:C2'	4:B1:193:C:H5'	2.44	0.48
4:B1:572:U:H3'	4:B1:573:U:H3	1.77	0.48
4:B1:574:A:C5'	4:B1:575:A:N7	2.69	0.48
4:B1:838:G:P	4:B1:838:G:H21	2.36	0.48
5:BA:7:VAL:HG23	5:BA:191:ARG:HG2	1.94	0.48
5:BA:63:ARG:HG2	26:BV:46:PHE:HZ	1.74	0.48
6:BB:128:LYS:HB2	6:BB:134:LEU:CD2	2.43	0.48
6:BB:135:LEU:HD12	6:BB:215:VAL:HG21	1.95	0.48
13:BI:138:ASN:OD1	13:BI:144:LYS:HE3	2.13	0.48
19:BO:27:VAL:CG1	19:BO:90:ILE:HG12	2.43	0.48
22:BR:106:LEU:HB3	22:BR:112:GLY:HA2	1.95	0.48
39:CB:53:MET:HG2	39:CB:77:THR:HG22	1.94	0.48
40:CC:54:VAL:CG2	40:CC:55:SER:H	2.05	0.48
41:CD:51:MET:HG3	41:CD:64:ILE:HD13	1.94	0.48
41:CD:95:TYR:HE1	41:CD:156:GLY:O	1.96	0.48
43:CF:143:GLY:HA3	43:CF:240:ILE:HG21	1.95	0.48
43:CF:194:ILE:HA	43:CF:201:PHE:CD2	2.49	0.48
47:CJ:112:HIS:CD2	47:CJ:126:TYR:H	2.31	0.48
47:CJ:80:GLU:HA	47:CJ:83:LEU:HB3	1.95	0.48
50:CN:84:PRO:O	51:CO:48:TYR:CE2	101.44	0.48
53:CQ:152:PHE:O	53:CQ:154:LYS:HD2	2.13	0.48
62:CZ:62:ILE:HG13	62:CZ:63:ALA:N	2.27	0.48
81:A2:1086:A:OP1	83:A4:107:G:H5'	2.14	0.48
81:A2:1208:U:O2	81:A2:1208:U:H2'	2.12	0.48
81:A2:1220:G:H1'	81:A2:1221:C:C4	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:51:A:H1'	81:A2:1507:U:O2'	2.14	0.48
81:A2:160:A:H2'	81:A2:161:G:H8	1.77	0.48
81:A2:2042:G:C6	81:A2:2043:G:C6	3.01	0.48
81:A2:2057:G:O5'	81:A2:2057:G:H8	1.97	0.48
61:CY:60:GLY:HA2	81:A2:205:A:H4'	1.96	0.48
40:CC:165:LYS:NZ	81:A2:219:C:P	2.85	0.48
81:A2:2345:A:N6	81:A2:2765:U:C2	2.82	0.48
81:A2:3646:U:OP2	81:A2:3647:G:H2'	2.13	0.48
81:A2:3739:U:H2'	81:A2:3740:C:C6	2.47	0.48
81:A2:3743:A:C2	81:A2:3744:A:C4	3.02	0.48
81:A2:3913:G:H2'	81:A2:3914:A:C8	2.48	0.48
81:A2:4173:A:H5''	81:A2:4174:A:C5'	2.40	0.48
81:A2:4195:G:O2'	81:A2:4196:G:H5'	2.13	0.48
81:A2:4378:G:H2'	81:A2:4435:G:H22	1.78	0.48
81:A2:4544:A:H2'	81:A2:4545:U:O4'	2.13	0.48
81:A2:4578:G:H2'	81:A2:4579:U:C5'	2.42	0.48
81:A2:509:G:H2'	81:A2:510:C:H6	1.78	0.48
81:A2:29:G:C6	81:A2:54:G:O6	2.67	0.48
81:A2:674:G:C5'	81:A2:674:G:C8	2.95	0.48
81:A2:83:C:C2'	81:A2:100:C:H42	2.24	0.48
81:A2:929:U:OP2	81:A2:930:C:H5	1.95	0.48
83:A4:47:G:C5	83:A4:48:G:O6	2.66	0.48
2:AW:20:U:H6	2:AW:20:U:OP1	1.97	0.48
4:B1:1052:A:H5''	4:B1:1053:C:OP2	2.13	0.48
4:B1:1286:G:C2'	4:B1:1286:G:N3	2.76	0.48
4:B1:1419:C:H2'	4:B1:1420:G:H8	1.78	0.48
4:B1:396:U:O2'	4:B1:397:G:H5'	2.14	0.48
4:B1:795:A:H3'	4:B1:796:G:C8	2.48	0.48
5:BA:185:MET:HG2	26:BV:46:PHE:CD1	2.48	0.48
6:BB:132:GLY:HA3	6:BB:221:PRO:HB3	1.94	0.48
6:BB:57:ILE:HG22	6:BB:59:SER:H	1.79	0.48
6:BB:31:TYR:CZ	6:BB:94:LYS:HA	2.47	0.48
8:BD:106:ARG:HH12	8:BD:173:ARG:HB2	1.78	0.48
10:BF:20:PHE:HD2	10:BF:21:GLY:H	1.58	0.48
4:B1:448:A:N7	13:BI:25:ARG:C	2.66	0.48
13:BI:191:GLU:CG	16:BL:20:LYS:HD2	2.43	0.48
4:B1:1016:U:C5	18:BN:14:SER:CB	2.97	0.48
23:BS:42:HIS:NE2	24:BT:45:LEU:HD11	2.28	0.48
30:BZ:92:LEU:HD13	30:BZ:109:TYR:CE1	2.48	0.48
39:CB:257:TRP:CG	81:A2:4478:A:C8	3.01	0.48
41:CD:14:LYS:HA	83:A4:66:G:O3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CJ:56:THR:HG23	47:CJ:62:ILE:O	2.12	0.48
47:CJ:19:LYS:CE	47:CJ:73:THR:HB	2.44	0.48
62:CZ:48:ARG:HB3	62:CZ:69:LYS:HB3	1.95	0.48
62:CZ:89:ILE:CG1	62:CZ:93:LYS:HE2	2.43	0.48
81:A2:1305:C:C5	81:A2:3847:C:O2'	2.60	0.48
81:A2:1378:A:H8	81:A2:1399:G:N1	2.11	0.48
53:CQ:11:ARG:HH22	81:A2:1820:G:H5'	1.79	0.48
61:CY:45:ARG:HD2	81:A2:195:A:H5'	1.95	0.48
81:A2:2034:G:C4	81:A2:2036:G:C8	3.02	0.48
81:A2:2266:C:H2'	81:A2:2267:G:H8	1.79	0.48
81:A2:2333:U:C5'	81:A2:2333:U:C6	2.93	0.48
81:A2:2485:U:H3'	81:A2:2486:C:H5''	1.95	0.48
81:A2:2601:G:O2'	81:A2:2602:U:H6	1.97	0.48
81:A2:2605:U:H2'	81:A2:2606:C:O2	2.13	0.48
81:A2:1592:A:H62	81:A2:3606:U:H3	1.61	0.48
81:A2:3616:A:H2'	81:A2:3617:A:H5''	1.95	0.48
81:A2:3684:U:H6	81:A2:3684:U:C5'	2.27	0.48
81:A2:4067:G:O5'	81:A2:4067:G:C8	2.66	0.48
81:A2:4057:G:N1	81:A2:4121:G:N1	2.61	0.48
81:A2:4199:A:H3'	81:A2:4200:G:H8	1.79	0.48
81:A2:4329:A:C8	81:A2:4329:A:OP2	2.67	0.48
81:A2:434:G:O5'	81:A2:434:G:C8	2.63	0.48
81:A2:438:C:O5'	81:A2:438:C:H6	1.96	0.48
81:A2:4609:G:C6	81:A2:4610:G:N2	2.81	0.48
81:A2:4616:A:H2'	81:A2:4616:A:OP2	2.14	0.48
81:A2:462:A:C8	81:A2:680:U:O2'	2.63	0.48
81:A2:4544:A:C2	81:A2:4680:C:P	3.07	0.48
81:A2:481:C:H2'	81:A2:482:G:O4'	2.13	0.48
81:A2:4990:U:H6	81:A2:4990:U:O5'	1.96	0.48
81:A2:690:U:C3'	81:A2:691:G:H5''	2.42	0.48
81:A2:2464:G:H21	82:A3:125:C:N4	2.11	0.48
4:B1:1074:C:H2'	4:B1:1075:C:C6	2.49	0.48
4:B1:1336:C:H2'	4:B1:1337:C:O4'	2.13	0.48
4:B1:1407:U:OP2	4:B1:1408:U:C6	2.66	0.48
4:B1:310:C:C2'	4:B1:340:C:H5'	2.40	0.48
4:B1:385:G:H5'	4:B1:386:C:C5	2.48	0.48
4:B1:46:A:H4'	4:B1:47:G:C5'	2.43	0.48
4:B1:525:A:C4	4:B1:588:G:O6	2.66	0.48
4:B1:527:C:H3'	4:B1:528:A:N7	2.25	0.48
4:B1:798:G:N2	4:B1:799:U:C2	2.82	0.48
4:B1:893:U:H2'	4:B1:894:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BA:77:ILE:HG12	5:BA:99:ILE:HG22	1.95	0.48
6:BB:65:ARG:HG2	19:BO:50:LYS:CE	2.44	0.48
6:BB:77:ASP:O	6:BB:78:GLU:HB2	2.13	0.48
7:BC:79:GLU:OE1	26:BV:12:TYR:HD1	1.97	0.48
9:BE:19:MET:CE	9:BE:108:ARG:HG2	2.43	0.48
11:BG:53:SER:CB	11:BG:112:VAL:HG23	2.34	0.48
15:BK:84:HIS:HD2	17:BM:27:ILE:HD12	1.77	0.48
4:B1:1419:C:H1'	24:BT:3:GLY:HA3	1.94	0.48
39:CB:43:LEU:HD11	39:CB:196:TRP:HH2	1.78	0.48
40:CC:49:ARG:NE	81:A2:340:A:N7	2.62	0.48
41:CD:64:ILE:HG21	41:CD:109:LEU:CD2	2.43	0.48
42:CE:261:ILE:HG22	42:CE:268:GLN:HG3	1.95	0.48
44:CG:117:ARG:CG	44:CG:121:LYS:HD3	2.43	0.48
46:CI:42:LYS:HB2	46:CI:45:GLU:HB2	1.95	0.48
47:CJ:109:ILE:N	47:CJ:109:ILE:HD13	2.28	0.48
49:CM:49:ALA:HB2	55:CS:100:LEU:HD21	1.95	0.48
51:CO:167:HIS:CG	81:A2:4718:C:C6	3.02	0.48
51:CO:56:ALA:O	51:CO:59:ARG:HB3	2.14	0.48
53:CQ:68:ARG:HH11	53:CQ:68:ARG:HG3	1.78	0.48
58:CV:89:ARG:HB2	58:CV:95:PHE:CE2	2.48	0.48
43:CF:48:LYS:HD2	81:A2:1220:G:C3'	2.44	0.48
81:A2:1648:A:H1'	81:A2:1830:U:O2'	2.13	0.48
51:CO:17:GLY:HA3	81:A2:2031:C:H5'	1.95	0.48
81:A2:2262:G:O5'	81:A2:2262:G:H8	1.97	0.48
81:A2:2283:A:C2'	81:A2:2283:A:N3	2.74	0.48
81:A2:2329:U:H2'	81:A2:2330:U:C6	2.49	0.48
81:A2:2332:G:C2'	81:A2:2333:U:H5''	2.39	0.48
81:A2:2457:G:O2'	81:A2:2458:G:H5'	2.14	0.48
81:A2:25:A:O2'	81:A2:331:C:H1'	2.14	0.48
81:A2:2759:U:H3'	81:A2:2760:A:H5'	1.96	0.48
81:A2:2771:C:O2	81:A2:2771:C:H2'	2.12	0.48
81:A2:2346:U:OP1	81:A2:2804:G:N1	2.46	0.48
81:A2:316:U:O5'	81:A2:316:U:H6	1.97	0.48
81:A2:3659:U:H5''	81:A2:3788:G:OP2	2.13	0.48
81:A2:4357:A:H5'	81:A2:4358:C:OP2	2.14	0.48
81:A2:4595:A:O3'	81:A2:4596:U:H4'	2.13	0.48
81:A2:4988:G:O5'	81:A2:4988:G:H8	1.96	0.48
81:A2:67:C:H2'	81:A2:67:C:O2	2.12	0.48
81:A2:738:U:H2'	81:A2:739:G:C8	2.48	0.48
81:A2:63:G:H1'	81:A2:76:A:N3	2.29	0.48
81:A2:904:C:O2'	81:A2:905:C:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:61:C:H2'	2:AW:62:C:H6	1.79	0.48
4:B1:1036:A:H2'	4:B1:1037:G:H5'	1.94	0.48
4:B1:1095:C:H5''	27:BW:22:LYS:HZ3	1.76	0.48
4:B1:1142:G:O5'	4:B1:1142:G:H8	1.96	0.48
4:B1:1187:G:O5'	4:B1:1187:G:H8	1.97	0.48
4:B1:668:A:H1'	4:B1:1198:G:H1'	1.95	0.48
4:B1:129:C:C3'	4:B1:130:G:C8	2.96	0.48
4:B1:1418:C:H5''	24:BT:129:ARG:CA	2.43	0.48
4:B1:1469:A:C2	4:B1:1470:C:C2	3.01	0.48
4:B1:1769:C:C6	4:B1:1769:C:O5'	2.67	0.48
4:B1:158:A:O4'	4:B1:464:A:H8	1.95	0.48
4:B1:559:G:H2'	4:B1:561:A:H1'	1.95	0.48
4:B1:655:A:C8	4:B1:657:U:C5	3.00	0.48
4:B1:67:C:H5	11:BG:162:LEU:C	2.13	0.48
4:B1:684:G:H2'	4:B1:685:A:H8	1.79	0.48
4:B1:69:C:N4	4:B1:82:G:N3	2.62	0.48
4:B1:836:G:O6	29:BY:9:THR:O	2.32	0.48
10:BF:32:ASP:HB3	10:BF:117:ILE:HG23	1.95	0.48
10:BF:34:SER:C	10:BF:36:GLN:H	2.16	0.48
4:B1:743:U:H5	12:BH:97:GLN:NE2	2.12	0.48
13:BI:84:ASN:OD1	13:BI:86:SER:HB2	2.13	0.48
14:BJ:131:ARG:NH1	14:BJ:131:ARG:HB3	2.29	0.48
20:BP:75:VAL:HG23	20:BP:93:MET:HG3	1.94	0.48
23:BS:74:PRO:CG	23:BS:84:LEU:HD21	2.43	0.48
29:BY:98:GLU:HG2	29:BY:99:LYS:N	2.29	0.48
23:BS:6:PRO:HD3	30:BZ:52:LYS:HE2	1.95	0.48
42:CE:153:LEU:O	42:CE:158:ARG:HG2	2.14	0.48
42:CE:282:TYR:HB2	42:CE:285:LYS:HG2	1.96	0.48
44:CG:83:PHE:O	44:CG:84:THR:CB	2.62	0.48
46:CI:72:ALA:HB2	46:CI:155:ALA:HB2	1.94	0.48
49:CM:132:LYS:HE3	49:CM:136:LEU:CD1	2.44	0.48
51:CO:169:ARG:CZ	81:A2:4812:A:H4'	2.43	0.48
55:CS:46:TYR:O	55:CS:49:SER:HB2	2.14	0.48
56:CT:19:PHE:CD1	56:CT:20:ARG:HG3	2.48	0.48
81:A2:1188:G:H2'	81:A2:1189:U:C4'	2.44	0.48
81:A2:1282:U:C4'	81:A2:1283:A:OP2	2.62	0.48
81:A2:1302:A:C6	81:A2:1306:A:C8	3.02	0.48
81:A2:1801:U:H2'	81:A2:1802:G:C1'	2.42	0.48
81:A2:1889:C:O4'	81:A2:1895:A:C5	2.66	0.48
81:A2:2003:A:H4'	81:A2:2004:A:OP2	2.13	0.48
81:A2:2047:A:H5'	81:A2:2047:A:C8	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2280:U:H2'	81:A2:2280:U:O2	2.13	0.48
81:A2:2393:G:H1	81:A2:2397:A:N6	2.08	0.48
81:A2:2397:A:O2'	81:A2:2398:G:H5'	2.14	0.48
81:A2:2497:C:H2'	81:A2:2498:G:H8	1.75	0.48
81:A2:2829:U:C2	81:A2:2831:G:H5''	2.49	0.48
81:A2:3606:U:H2'	81:A2:3607:G:H5'	1.96	0.48
81:A2:3684:U:H2'	81:A2:3685:C:H5'	1.95	0.48
81:A2:3753:A:C6	81:A2:3755:U:C5	3.02	0.48
81:A2:3822:U:C4	81:A2:3823:C:N4	2.82	0.48
81:A2:3908:G:H8	81:A2:3908:G:P	2.37	0.48
38:CA:37:ARG:HH21	81:A2:4055:G:H3'	1.78	0.48
81:A2:4120:C:OP1	81:A2:4120:C:H4'	2.14	0.48
81:A2:4872:C:H2'	81:A2:4873:C:H6	1.77	0.48
81:A2:4938:C:O2'	81:A2:4939:C:H5'	2.13	0.48
81:A2:705:U:O2'	81:A2:706:C:H5'	2.14	0.48
2:AW:21:A:H3'	2:AW:21:A:N3	2.29	0.48
4:B1:1020:A:H8	4:B1:1020:A:O5'	1.96	0.48
4:B1:1129:G:C3'	4:B1:1130:G:H8	2.26	0.48
4:B1:125:C:H4'	9:BE:136:ILE:CA	2.40	0.48
4:B1:1648:G:H21	21:BQ:128:GLU:HG3	1.78	0.48
4:B1:1589:A:H2'	4:B1:1653:U:O2'	2.13	0.48
4:B1:1678:A:H2	4:B1:1679:A:O3'	1.96	0.48
4:B1:331:C:C3'	4:B1:332:G:C5'	2.92	0.48
4:B1:4:C:H2'	4:B1:5:U:H6	1.71	0.48
4:B1:71:G:C2	4:B1:72:C:H1'	2.48	0.48
4:B1:70:G:H3'	4:B1:71:G:H5''	1.94	0.48
4:B1:740:C:O5'	4:B1:740:C:H6	1.97	0.48
4:B1:79:A:N3	4:B1:79:A:H2'	2.27	0.48
4:B1:1351:G:C5'	5:BA:110:ASN:HB3	2.44	0.48
5:BA:5:LEU:CD2	26:BV:44:GLY:HA2	2.44	0.48
9:BE:114:ILE:HG23	9:BE:118:GLU:HB2	1.94	0.48
10:BF:113:VAL:O	10:BF:117:ILE:HD13	2.14	0.48
10:BF:179:ASN:CB	10:BF:187:SER:HB3	2.43	0.48
10:BF:66:CYS:SG	10:BF:67:PRO:HD2	2.54	0.48
4:B1:1535:U:C6	10:BF:82:ASN:OD1	2.67	0.48
11:BG:36:VAL:HB	11:BG:50:VAL:O	2.14	0.48
18:BN:100:LYS:HG2	18:BN:104:ARG:NH1	2.29	0.48
18:BN:33:VAL:HG12	18:BN:37:ILE:HD11	1.95	0.48
5:BA:40:LYS:HB2	22:BR:105:MET:HA	1.96	0.48
4:B1:1654:G:H4'	24:BT:82:ARG:CZ	2.43	0.48
28:BX:100:VAL:HG13	28:BX:122:VAL:HG13	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BX:86:PRO:HB3	28:BX:121:LYS:NZ	2.29	0.48
42:CE:282:TYR:O	42:CE:286:LEU:HG	2.13	0.48
44:CG:225:ASN:O	44:CG:229:ARG:HD2	2.13	0.48
49:CM:56:GLN:HG3	55:CS:157:ARG:NH1	2.29	0.48
51:CO:167:HIS:HB3	81:A2:4718:C:O2'	2.12	0.48
39:CB:67:VAL:CG2	58:CV:91:LYS:HD2	2.38	0.48
62:CZ:25:ILE:HA	62:CZ:43:VAL:HG12	1.95	0.48
81:A2:1142:G:H2'	81:A2:1143:G:H8	1.79	0.48
81:A2:1253:G:C2'	81:A2:1254:A:H5''	2.44	0.48
81:A2:1387:C:H5''	81:A2:1387:C:H6	1.76	0.48
81:A2:1369:U:OP1	81:A2:1476:A:H2'	2.13	0.48
81:A2:361:U:H4'	81:A2:1513:A:N6	2.29	0.48
38:CA:194:ASN:HD22	81:A2:1518:G:H4'	1.78	0.48
81:A2:1650:U:H6	81:A2:1650:U:H5''	1.78	0.48
81:A2:1792:U:OP2	81:A2:1792:U:C6	2.66	0.48
81:A2:1805:G:H5'	81:A2:1806:C:OP2	2.13	0.48
81:A2:194:A:N3	81:A2:194:A:H2'	2.28	0.48
81:A2:2023:G:O2'	81:A2:2024:G:H2'	2.14	0.48
81:A2:2355:G:H21	81:A2:2357:G:H3'	1.77	0.48
81:A2:2362:U:H6	81:A2:2362:U:O5'	1.96	0.48
81:A2:2587:G:H2'	81:A2:2588:A:C8	2.49	0.48
81:A2:2629:G:H5'	81:A2:2629:G:H8	1.78	0.48
81:A2:2652:G:C8	81:A2:2652:G:OP2	2.66	0.48
81:A2:2672:A:C3'	81:A2:2672:A:N3	2.77	0.48
57:CU:113:ARG:NH1	81:A2:2680:G:H5'	2.28	0.48
52:CP:136:ILE:HD11	81:A2:2771:C:C2	2.48	0.48
81:A2:298:A:H8	81:A2:298:A:H3'	1.79	0.48
81:A2:3604:A:C2'	81:A2:3605:C:H5''	2.43	0.48
38:CA:226:ARG:HA	81:A2:3676:U:OP1	2.13	0.48
81:A2:3704:G:O5'	81:A2:3704:G:C8	2.67	0.48
81:A2:3945:C:OP2	81:A2:3945:C:C5	2.66	0.48
81:A2:4072:A:H2'	81:A2:4073:G:C8	2.41	0.48
81:A2:4580:U:C2'	81:A2:4581:C:H5'	2.44	0.48
81:A2:4582:A:H2'	81:A2:4583:G:H8	1.79	0.48
81:A2:4591:G:H2'	81:A2:4592:U:C6	2.49	0.48
81:A2:4957:U:H3	81:A2:5000:G:H1	1.60	0.48
81:A2:636:G:C2'	81:A2:637:G:H5'	2.43	0.48
81:A2:661:C:H2'	81:A2:662:G:C8	2.49	0.48
81:A2:921:U:C2	81:A2:922:C:C5	3.02	0.48
83:A4:116:G:H5'	83:A4:117:G:OP2	2.14	0.48
2:AW:2:C:C5'	2:AW:2:C:C6	2.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1060:A:C8	4:B1:1062:A:C5	3.02	0.48
4:B1:1166:G:C2	4:B1:1167:G:C8	3.01	0.48
4:B1:1261:C:C5	4:B1:1619:A:N6	2.81	0.48
4:B1:1401:A:C1'	4:B1:1402:A:P	3.01	0.48
4:B1:1417:C:C2'	4:B1:1418:C:H5'	2.44	0.48
4:B1:1663:A:O2'	4:B1:1664:A:H5''	2.14	0.48
4:B1:1678:A:H2	4:B1:1680:G:P	2.36	0.48
4:B1:1698:C:O2	4:B1:1698:C:C2'	2.61	0.48
1:AV:34:G:H1	4:B1:1701:C:H1'	1.78	0.48
4:B1:186:C:O5'	4:B1:186:C:C6	2.66	0.48
4:B1:563:G:O6	4:B1:592:C:N3	2.46	0.48
4:B1:884:C:H2'	4:B1:885:U:C6	2.47	0.48
4:B1:886:A:C3'	4:B1:886:A:P	3.00	0.48
4:B1:990:A:H1'	4:B1:991:G:N2	2.28	0.48
6:BB:49:VAL:HG21	6:BB:58:ALA:HB2	1.96	0.48
9:BE:122:LYS:O	9:BE:162:ILE:HG22	2.14	0.48
10:BF:48:TYR:HD1	10:BF:49:LEU:H	1.61	0.48
11:BG:189:ARG:O	11:BG:192:ILE:HG22	2.14	0.48
4:B1:1454:A:H5''	22:BR:3:ARG:HD2	1.96	0.48
41:CD:91:GLY:CA	83:A4:48:G:H5''	2.44	0.48
46:CI:75:TYR:O	46:CI:78:LYS:HG2	2.14	0.48
53:CQ:147:GLU:HG2	53:CQ:150:ARG:HH21	1.79	0.48
59:CW:13:ILE:HG12	59:CW:32:LEU:HB3	1.93	0.48
61:CY:55:VAL:CG1	61:CY:104:VAL:HB	2.44	0.48
81:A2:1198:G:H2'	81:A2:1199:G:H8	1.78	0.48
53:CQ:65:ARG:HH21	81:A2:1481:G:H2'	1.76	0.48
81:A2:1649:G:C1'	81:A2:1831:G:H4'	2.43	0.48
81:A2:178:C:OP2	81:A2:179:G:H5'	2.13	0.48
81:A2:1856:G:H2'	81:A2:1857:C:C5	2.49	0.48
40:CC:164:THR:HG21	81:A2:220:G:N3	2.28	0.48
81:A2:2323:C:O2'	81:A2:2324:A:H3'	2.14	0.48
81:A2:2481:C:C6	81:A2:2481:C:OP2	2.67	0.48
81:A2:2653:A:N6	81:A2:2654:G:H1	2.12	0.48
81:A2:267:C:C6	81:A2:267:C:H5''	2.49	0.48
81:A2:2688:G:C2	81:A2:2689:G:H1'	2.49	0.48
81:A2:2704:C:H2'	81:A2:2705:U:H5'	1.95	0.48
81:A2:2745:C:C1'	81:A2:2746:U:P	3.02	0.48
81:A2:297:A:H3'	81:A2:297:A:H8	1.78	0.48
81:A2:308:A:H2'	81:A2:309:A:H5'	1.96	0.48
81:A2:3684:U:C6	81:A2:3684:U:H5''	2.48	0.48
81:A2:3727:U:HO2'	81:A2:3728:A:H8	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:261:ARG:HA	81:A2:3867:G:N3	2.28	0.48
57:CU:21:PHE:CD1	81:A2:3942:G:H4'	195.42	0.48
81:A2:4032:C:H2'	81:A2:4033:G:C4'	2.38	0.48
81:A2:4045:A:H2'	81:A2:4046:C:C6	2.49	0.48
81:A2:4051:U:C3'	81:A2:4052:G:H5''	2.44	0.48
81:A2:4200:G:H5'	81:A2:4201:C:OP2	2.13	0.48
81:A2:4196:G:O2'	81:A2:4288:G:H1'	2.14	0.48
81:A2:432:G:C2'	81:A2:433:G:H5'	2.43	0.48
81:A2:2020:A:C2	81:A2:4424:A:N1	2.82	0.48
81:A2:4535:G:N3	81:A2:4535:G:H2'	2.28	0.48
81:A2:4645:U:O5'	81:A2:4645:U:C6	2.61	0.48
81:A2:4877:C:H2'	81:A2:4878:C:H6	1.79	0.48
81:A2:916:A:O4'	81:A2:916:A:P	2.71	0.48
81:A2:95:G:H4'	81:A2:95:G:OP1	2.13	0.48
83:A4:69:U:C6	83:A4:69:U:H3'	2.49	0.48
2:AW:37:MIA:H3'	2:AW:38:A:H8	1.78	0.48
4:B1:1624:U:OP2	4:B1:1624:U:C5	2.67	0.48
4:B1:1214:A:C4	4:B1:1686:G:N2	2.81	0.48
4:B1:1866:A:OP1	4:B1:1866:A:C4'	2.61	0.48
4:B1:305:U:O2	4:B1:305:U:H3'	2.13	0.48
4:B1:426:A:C8	4:B1:426:A:OP1	2.67	0.48
4:B1:455:A:H2'	4:B1:456:C:O4'	2.13	0.48
4:B1:593:C:OP2	4:B1:593:C:H6	1.96	0.48
4:B1:659:G:C2'	4:B1:659:G:N3	2.77	0.48
4:B1:976:G:H2'	4:B1:977:C:C6	2.49	0.48
4:B1:978:G:H2'	4:B1:979:C:C6	2.49	0.48
5:BA:108:PHE:HD2	5:BA:136:GLU:OE1	1.97	0.48
7:BC:62:PRO:HA	7:BC:90:GLU:OE2	2.13	0.48
8:BD:138:VAL:CG1	8:BD:182:LEU:HD11	2.44	0.48
10:BF:167:LYS:HA	30:BZ:71:ALA:CB	2.44	0.48
11:BG:53:SER:HB3	11:BG:110:ASN:C	2.34	0.48
11:BG:24:LEU:HA	11:BG:27:PHE:CD2	2.49	0.48
4:B1:526:A:O2'	14:BJ:124:HIS:O	2.25	0.48
14:BJ:122:SER:O	14:BJ:125:HIS:HB3	2.14	0.48
14:BJ:60:LEU:CB	14:BJ:94:LEU:HD11	2.43	0.48
13:BI:197:PHE:HE1	16:BL:10:TYR:O	1.96	0.48
18:BN:70:LYS:HE3	18:BN:73:ARG:NH1	2.29	0.48
18:BN:70:LYS:HG3	18:BN:73:ARG:HB2	1.96	0.48
19:BO:115:ALA:O	19:BO:119:LEU:HD13	2.14	0.48
20:BP:48:GLY:O	20:BP:52:LYS:HE2	2.14	0.48
21:BQ:12:VAL:HG11	21:BQ:91:ALA:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:62:ARG:O	24:BT:65:TYR:HB3	2.14	0.48
25:BU:83:ARG:HB3	25:BU:85:HIS:CE1	2.49	0.48
27:BW:28:ARG:HB3	27:BW:29:PRO:HD3	1.96	0.48
39:CB:128:LYS:O	39:CB:131:THR:HG22	2.14	0.48
39:CB:279:GLU:CG	39:CB:338:VAL:HG23	2.44	0.48
39:CB:391:PRO:O	81:A2:4996:G:N2	2.47	0.48
39:CB:73:VAL:HG22	58:CV:93:GLY:HA3	1.95	0.48
40:CC:345:ARG:NH1	40:CC:349:LEU:HD12	2.29	0.48
41:CD:91:GLY:HA2	83:A4:48:G:H5''	1.96	0.48
43:CF:105:VAL:HB	43:CF:136:VAL:HG12	1.96	0.48
44:CG:182:CYS:HB3	44:CG:222:ILE:HG21	1.95	0.48
49:CM:51:PRO:HB2	49:CM:53:LYS:HG2	1.95	0.48
50:CN:140:LYS:HB3	50:CN:144:ARG:NH1	2.29	0.48
51:CO:34:VAL:CG1	51:CO:112:TYR:HE1	2.27	0.48
52:CP:137:ASN:ND2	81:A2:3830:A:H4'	2.29	0.48
55:CS:170:LYS:O	55:CS:171:ARG:HB2	2.13	0.48
81:A2:1260:C:C6	81:A2:1260:C:O5'	2.67	0.48
81:A2:1262:G:H8	81:A2:1262:G:P	2.37	0.48
81:A2:1280:G:C8	81:A2:1280:G:OP2	2.67	0.48
81:A2:1483:G:H8	81:A2:1483:G:OP2	1.96	0.48
81:A2:1607:C:O2	81:A2:1607:C:H2'	2.13	0.48
81:A2:1649:G:O4'	81:A2:1831:G:H4'	2.14	0.48
81:A2:1868:G:N2	81:A2:1916:C:N4	2.62	0.48
81:A2:214:C:H3'	81:A2:214:C:C6	2.44	0.48
81:A2:2382:G:H2'	81:A2:2383:G:H5'	1.96	0.48
81:A2:2436:G:O5'	81:A2:2436:G:H8	1.96	0.48
81:A2:2614:U:O2'	81:A2:2695:U:H4'	2.14	0.48
81:A2:2692:G:N3	81:A2:2692:G:H2'	2.29	0.48
81:A2:2749:C:C2'	81:A2:2750:G:O5'	2.62	0.48
81:A2:327:A:H2'	81:A2:329:A:OP1	2.14	0.48
81:A2:365:G:C2'	81:A2:366:G:H5''	2.42	0.48
81:A2:3741:U:H2'	81:A2:3742:U:C5	2.49	0.48
81:A2:3870:A:H61	81:A2:4406:U:H1'	1.79	0.48
81:A2:4037:U:H2'	81:A2:4038:U:C6	2.49	0.48
81:A2:4133:G:H2'	81:A2:4134:U:C5'	2.43	0.48
81:A2:4371:G:H2'	81:A2:4372:C:H6	1.79	0.48
81:A2:473:G:H2'	81:A2:473:G:N3	2.29	0.48
81:A2:724:C:H3'	81:A2:725:C:C5'	2.38	0.48
50:CN:195:ARG:HD2	81:A2:98:A:C5'	2.44	0.48
82:A3:154:G:O5'	82:A3:154:G:C8	2.66	0.48
82:A3:73:U:C2'	82:A3:74:U:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:A4:107:G:H8	83:A4:107:G:P	2.37	0.48
83:A4:11:A:C2	83:A4:66:G:N2	2.80	0.48
4:B1:1417:C:C4	4:B1:1418:C:C4	3.01	0.48
4:B1:33:G:H2'	4:B1:34:U:H6	1.79	0.48
4:B1:435:A:H2	4:B1:474:G:OP2	1.96	0.48
4:B1:529:A:C2'	4:B1:530:U:C6	2.88	0.48
11:BG:131:ARG:HB2	11:BG:131:ARG:NH1	2.29	0.48
28:BX:100:VAL:HA	28:BX:124:LYS:O	2.12	0.48
30:BZ:103:HIS:CG	30:BZ:104:ARG:N	2.82	0.48
45:CH:41:ILE:HD11	45:CH:69:THR:HG22	1.96	0.48
48:CL:143:GLU:CG	48:CL:144:LEU:H	2.27	0.48
61:CY:86:GLN:HA	61:CY:97:VAL:HG23	1.95	0.48
81:A2:1049:G:C2'	81:A2:1050:G:OP1	2.62	0.47
81:A2:105:A:C2	81:A2:327:A:C2	2.84	0.47
81:A2:1276:G:C8	81:A2:1276:G:O5'	2.62	0.47
81:A2:12:A:H5''	81:A2:12:A:H8	1.78	0.47
81:A2:1352:A:H2'	81:A2:1353:A:C8	2.49	0.47
81:A2:1802:G:H5''	81:A2:1802:G:H8	1.79	0.47
81:A2:180:C:C4'	81:A2:182:C:H6	2.20	0.47
81:A2:1873:G:HO2'	81:A2:1885:A:H1'	1.79	0.47
81:A2:191:C:H6	81:A2:191:C:O5'	1.97	0.47
81:A2:1926:G:OP1	81:A2:1926:G:C8	2.67	0.47
81:A2:2061:C:N4	81:A2:2249:G:H22	2.09	0.47
81:A2:2763:C:H4'	81:A2:2764:A:N9	2.29	0.47
38:CA:237:LEU:HD22	81:A2:3627:C:C1'	2.44	0.47
81:A2:3727:U:O2'	81:A2:3728:A:H8	1.96	0.47
81:A2:3745:G:N3	81:A2:3745:G:H5'	2.29	0.47
2:AW:19:G:N9	81:A2:3927:G:C1'	2.62	0.47
81:A2:4052:G:OP1	81:A2:4052:G:C8	2.66	0.47
81:A2:3876:G:H8	81:A2:4408:G:OP2	1.97	0.47
81:A2:4487:G:H4'	81:A2:4488:G:O5'	2.14	0.47
81:A2:4549:A:C8	81:A2:4550:A:H1'	2.49	0.47
81:A2:724:C:C3'	81:A2:725:C:H5''	2.35	0.47
81:A2:736:G:H22	81:A2:902:G:H22	1.61	0.47
81:A2:917:G:O3'	81:A2:918:C:C6	2.67	0.47
81:A2:929:U:P	81:A2:929:U:H6	2.36	0.47
83:A4:94:C:H2'	83:A4:95:C:H6	1.79	0.47
4:B1:1051:G:OP1	4:B1:1847:G:H4'	2.14	0.47
4:B1:1135:C:C2'	4:B1:1136:U:H5'	2.43	0.47
4:B1:1206:G:C6	4:B1:1208:A:N7	2.82	0.47
4:B1:120:U:H6	4:B1:120:U:H5'	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1547:C:H6	4:B1:1547:C:H5''	1.79	0.47
4:B1:1557:C:C3'	4:B1:1557:C:P	3.02	0.47
4:B1:504:G:O2'	4:B1:505:G:H5'	2.14	0.47
4:B1:558:G:C2	4:B1:559:G:N7	2.82	0.47
4:B1:929:G:H5'	4:B1:930:C:OP2	2.14	0.47
5:BA:107:THR:HG23	5:BA:115:ALA:O	2.14	0.47
5:BA:171:VAL:O	5:BA:175:TRP:HD1	1.97	0.47
4:B1:14:C:H5'	7:BC:190:SER:OG	2.14	0.47
4:B1:746:C:H5'	12:BH:104:PRO:C	2.34	0.47
24:BT:60:THR:HG23	24:BT:121:ARG:HH12	1.79	0.47
24:BT:70:ALA:HB3	24:BT:121:ARG:NE	2.28	0.47
28:BX:51:VAL:HG13	28:BX:70:VAL:CG1	2.43	0.47
40:CC:20:LYS:NZ	40:CC:20:LYS:HB2	2.29	0.47
41:CD:219:TYR:HE1	41:CD:227:ILE:HD11	1.79	0.47
41:CD:94:ASN:HB3	83:A4:47:G:H5'	1.96	0.47
42:CE:183:ARG:O	81:A2:4892:C:N3	2.46	0.47
42:CE:226:ARG:HA	42:CE:226:ARG:HE	1.78	0.47
45:CH:29:GLY:HA3	45:CH:84:VAL:HG13	1.94	0.47
45:CH:23:ARG:HE	45:CH:39:ASN:HA	1.76	0.47
49:CM:31:ILE:HD13	55:CS:100:LEU:CD1	2.39	0.47
54:CR:123:LEU:O	54:CR:127:VAL:HG23	2.13	0.47
54:CR:138:LEU:O	54:CR:138:LEU:HD22	2.14	0.47
56:CT:4:THR:CG2	81:A2:4167:C:H3'	2.44	0.47
59:CW:42:SER:HB2	59:CW:44:ARG:HG2	1.96	0.47
61:CY:112:ASP:O	61:CY:116:LYS:HE3	2.14	0.47
62:CZ:72:VAL:HG22	62:CZ:111:ARG:HE	1.79	0.47
81:A2:1093:C:H2'	81:A2:1094:U:H6	1.78	0.47
81:A2:1189:U:H5'	81:A2:1189:U:C6	2.45	0.47
81:A2:1277:U:C2'	81:A2:1278:C:C6	2.95	0.47
81:A2:1422:C:C3'	81:A2:1422:C:O2	2.61	0.47
81:A2:1377:A:C1'	81:A2:1447:C:H4'	2.44	0.47
81:A2:1478:C:C6	81:A2:1478:C:OP2	2.66	0.47
81:A2:1624:C:H2'	81:A2:1625:A:O4'	2.14	0.47
81:A2:2009:C:C5'	81:A2:2009:C:C6	2.96	0.47
81:A2:2246:G:C8	81:A2:2246:G:P	3.07	0.47
81:A2:2283:A:N1	81:A2:2284:A:C4	2.81	0.47
81:A2:1639:U:O2	81:A2:2322:G:H2'	2.13	0.47
81:A2:2527:G:H5'	81:A2:2528:A:O5'	2.14	0.47
81:A2:2630:C:H5''	81:A2:2630:C:C6	2.49	0.47
81:A2:2640:G:H2'	81:A2:2641:G:H5'	1.96	0.47
81:A2:2682:G:N2	81:A2:2688:G:N1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2795:C:H1'	81:A2:4604:G:O2'	2.14	0.47
81:A2:2843:C:C6	81:A2:2843:C:C3'	2.97	0.47
52:CP:19:GLY:HA2	81:A2:3661:A:H2	94.10	0.47
81:A2:3722:G:H5''	81:A2:3722:G:C8	2.49	0.47
2:AW:56:C:H5''	81:A2:4014:A:C4	2.48	0.47
81:A2:4018:A:H3'	81:A2:4019:C:C6	2.49	0.47
81:A2:400:G:H4'	81:A2:401:A:O5'	2.14	0.47
81:A2:40:G:C8	81:A2:41:C:C5	3.02	0.47
81:A2:4104:C:O5'	81:A2:4104:C:H6	1.97	0.47
81:A2:4315:G:N3	81:A2:4315:G:H2'	2.29	0.47
81:A2:430:G:H2'	81:A2:431:U:O5'	2.14	0.47
81:A2:4565:A:C8	81:A2:4566:G:N7	2.82	0.47
81:A2:4640:G:N3	81:A2:4641:A:H1'	2.29	0.47
81:A2:471:C:O5'	81:A2:471:C:H6	1.97	0.47
81:A2:4876:C:H2'	81:A2:4877:C:C6	2.49	0.47
42:CE:179:LEU:CD1	81:A2:4892:C:H41	2.25	0.47
81:A2:496:G:O5'	81:A2:496:G:H8	1.96	0.47
81:A2:507:C:H2'	81:A2:508:C:C6	2.48	0.47
81:A2:659:A:H2'	81:A2:660:C:C6	2.49	0.47
81:A2:680:U:H2'	81:A2:681:U:C5	2.49	0.47
81:A2:699:A:P	81:A2:699:A:H8	2.38	0.47
81:A2:85:G:H22	81:A2:97:G:C3'	2.27	0.47
81:A2:929:U:C5	81:A2:930:C:C5	3.02	0.47
81:A2:957:G:H2'	81:A2:958:C:O5'	2.14	0.47
83:A4:67:C:H2'	83:A4:68:C:C4'	2.43	0.47
2:AW:59:U:C6	2:AW:60:U:C5	3.02	0.47
3:AX:40:U:H2'	3:AX:41:U:O4'	2.12	0.47
4:B1:1085:C:H4'	4:B1:1086:G:H21	1.79	0.47
4:B1:1168:G:H2'	4:B1:1169:G:H5'	1.94	0.47
4:B1:1245:G:H2'	4:B1:1246:A:C8	2.49	0.47
4:B1:1307:U:H4'	4:B1:1308:U:OP1	2.15	0.47
4:B1:1396:A:H2'	4:B1:1397:U:H5'	1.96	0.47
4:B1:1426:U:C5	4:B1:1427:C:C5	3.02	0.47
4:B1:1454:A:H61	4:B1:1467:C:H41	1.61	0.47
4:B1:1677:U:O2	4:B1:1677:U:C2'	2.62	0.47
4:B1:1825:A:C8	4:B1:1825:A:H3'	2.49	0.47
4:B1:1829:G:O5'	4:B1:1829:G:C8	2.68	0.47
4:B1:189:U:H6	4:B1:189:U:P	2.37	0.47
4:B1:218:U:H2'	4:B1:219:U:O4'	2.14	0.47
4:B1:23:G:C5	4:B1:24:C:C4	3.02	0.47
4:B1:520:A:H2'	4:B1:521:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:59:U:OP2	4:B1:59:U:H4'	2.13	0.47
4:B1:841:G:C8	29:BY:12:PHE:CZ	3.02	0.47
4:B1:1357:A:O2'	7:BC:112:VAL:HB	2.14	0.47
8:BD:37:VAL:HG12	8:BD:50:ILE:HG12	1.95	0.47
10:BF:163:PHE:CE2	10:BF:164:ARG:HG3	2.49	0.47
10:BF:40:ALA:O	10:BF:42:LYS:HG3	2.14	0.47
4:B1:157:U:H5'	11:BG:58:LYS:O	2.14	0.47
13:BI:191:GLU:C	16:BL:20:LYS:HB2	2.35	0.47
5:BA:48:ILE:CG2	22:BR:105:MET:SD	3.02	0.47
23:BS:24:ARG:HA	30:BZ:48:VAL:CG1	2.44	0.47
25:BU:22:ILE:HG12	25:BU:114:VAL:HG12	1.96	0.47
28:BX:48:LYS:HD3	28:BX:99:GLU:OE2	2.14	0.47
39:CB:17:LEU:O	39:CB:19:ARG:N	2.46	0.47
40:CC:42:THR:HG22	40:CC:46:LYS:HE3	1.95	0.47
41:CD:41:LYS:HG3	56:CT:67:VAL:HG13	1.96	0.47
49:CM:122:ILE:HG22	51:CO:187:LYS:HB3	1.96	0.47
53:CQ:75:ARG:HH21	53:CQ:78:LYS:HZ3	1.63	0.47
54:CR:105:LEU:HD13	54:CR:105:LEU:C	2.35	0.47
60:CX:89:LYS:HE2	60:CX:137:TYR:CE1	2.48	0.47
62:CZ:21:ARG:HH11	62:CZ:21:ARG:HG2	1.79	0.47
81:A2:1430:C:H2'	81:A2:1431:G:H8	1.79	0.47
81:A2:1730:A:H3'	81:A2:1731:G:H8	1.78	0.47
81:A2:1825:C:H3'	81:A2:1826:C:H6	1.79	0.47
81:A2:2033:G:H8	81:A2:2033:G:H5''	1.79	0.47
81:A2:2336:U:H5''	81:A2:2337:A:OP2	2.13	0.47
81:A2:2348:U:C5'	81:A2:2348:U:C6	2.83	0.47
81:A2:2423:C:C2'	81:A2:2424:U:C6	2.95	0.47
81:A2:2595:G:O2'	81:A2:2596:G:H5'	2.14	0.47
81:A2:2844:C:H5'	81:A2:2845:G:OP2	2.14	0.47
81:A2:59:A:N7	81:A2:329:A:C2	2.82	0.47
81:A2:368:A:N6	81:A2:369:A:C2	2.82	0.47
81:A2:4020:C:H2'	81:A2:4021:A:H8	1.79	0.47
81:A2:403:G:H3'	81:A2:404:G:C5'	2.43	0.47
81:A2:4109:C:C6	81:A2:4109:C:O5'	2.67	0.47
81:A2:411:A:C8	81:A2:411:A:OP2	2.66	0.47
81:A2:4154:U:H4'	81:A2:4181:C:H5	1.80	0.47
41:CD:12:TYR:OH	81:A2:4224:G:H5''	2.14	0.47
81:A2:434:G:H1	81:A2:1284:C:N4	2.09	0.47
81:A2:4393:G:O2'	81:A2:4394:C:H5'	2.15	0.47
81:A2:4803:C:C3'	81:A2:4804:G:H4'	2.44	0.47
81:A2:4812:A:H2'	81:A2:4813:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4824:U:OP2	81:A2:4825:G:C2	2.67	0.47
81:A2:4980:C:H3'	81:A2:4980:C:H6	1.79	0.47
50:CN:40:PRO:CB	81:A2:8:U:H5'	2.44	0.47
82:A3:27:U:H2'	82:A3:28:C:H6	1.80	0.47
82:A3:6:C:H3'	82:A3:6:C:C6	2.49	0.47
4:B1:100:U:H2'	4:B1:101:U:C5'	2.45	0.47
4:B1:125:C:C6	4:B1:125:C:OP2	2.68	0.47
4:B1:159:A:P	4:B1:159:A:H8	2.38	0.47
4:B1:1649:U:C2'	4:B1:1650:A:H5'	2.44	0.47
4:B1:1859:A:H8	4:B1:1859:A:O5'	1.97	0.47
4:B1:1:U:O2	4:B1:1:U:H3'	2.14	0.47
4:B1:96:C:C1'	4:B1:474:G:H4'	2.43	0.47
4:B1:667:U:H2'	4:B1:668:A:H5''	1.97	0.47
12:BH:109:ARG:HG2	12:BH:113:LYS:HA	1.96	0.47
16:BL:36:TYR:CE2	16:BL:38:LYS:HB2	2.49	0.47
1:AV:32:U:P	21:BQ:146:ARG:HD3	2.54	0.47
21:BQ:39:LEU:O	21:BQ:42:ILE:HG13	2.14	0.47
23:BS:74:PRO:HG2	23:BS:84:LEU:HD21	1.96	0.47
29:BY:59:GLY:O	29:BY:71:GLY:CA	2.62	0.47
30:BZ:113:THR:O	30:BZ:113:THR:HG22	2.14	0.47
39:CB:106:PHE:HD1	39:CB:133:TYR:OH	1.96	0.47
43:CF:48:LYS:HB2	81:A2:1220:G:C5'	2.44	0.47
47:CJ:47:THR:CG2	83:A4:39:C:H4'	2.44	0.47
56:CT:89:ILE:HG22	56:CT:91:VAL:HG23	1.96	0.47
81:A2:1086:A:P	83:A4:107:G:H5'	2.54	0.47
81:A2:1162:C:C2'	81:A2:1163:C:C6	2.96	0.47
81:A2:1197:G:C2'	81:A2:1198:G:C8	2.97	0.47
81:A2:1270:G:O4'	81:A2:4898:A:C2	2.68	0.47
81:A2:1630:G:H3'	81:A2:1631:U:H6	1.75	0.47
81:A2:1730:A:H3'	81:A2:1731:G:C8	2.50	0.47
81:A2:1923:G:H2'	81:A2:1924:G:C5'	2.44	0.47
81:A2:2328:C:H2'	81:A2:2329:U:C5	2.49	0.47
81:A2:2504:A:H2'	81:A2:2505:G:H5'	1.97	0.47
81:A2:2663:G:C4	81:A2:2664:U:H1'	2.50	0.47
81:A2:276:G:H2'	81:A2:277:U:O4'	2.15	0.47
81:A2:3670:C:H4'	81:A2:3671:A:C8	2.50	0.47
81:A2:3679:G:H2'	81:A2:3680:A:H5'	1.96	0.47
81:A2:3842:G:H2'	81:A2:3843:G:O4'	2.13	0.47
81:A2:40:G:H3'	81:A2:41:C:C6	2.50	0.47
81:A2:4155:G:C1'	81:A2:4156:G:OP2	2.63	0.47
81:A2:4189:U:H2'	81:A2:4190:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4203:C:H42	81:A2:4227:G:H1	1.62	0.47
81:A2:4251:G:H4'	81:A2:4252:A:C3'	2.41	0.47
81:A2:4259:U:H2'	81:A2:4260:U:C6	2.49	0.47
81:A2:312:U:H3	81:A2:4316:G:H1	1.61	0.47
81:A2:4412:U:O2	81:A2:4412:U:C2'	2.61	0.47
81:A2:4493:A:H8	81:A2:4493:A:O5'	1.96	0.47
81:A2:4502:U:C2'	81:A2:4503:G:H5'	2.44	0.47
81:A2:4659:U:O4'	81:A2:4660:A:H5'	2.15	0.47
81:A2:4700:C:C3'	81:A2:4701:G:C5'	2.87	0.47
81:A2:4803:C:O5'	81:A2:4804:G:H5''	2.14	0.47
81:A2:4812:A:C2	81:A2:4813:C:C2	3.02	0.47
13:BI:107:THR:CG2	81:A2:4981:U:H3	2.18	0.47
81:A2:510:C:C4'	81:A2:510:C:C6	2.97	0.47
81:A2:957:G:P	81:A2:1219:C:OP1	2.72	0.47
82:A3:148:A:C8	82:A3:148:A:C3'	2.98	0.47
81:A2:418:A:H61	82:A3:7:U:H3	1.62	0.47
2:AW:41:C:C2'	2:AW:42:C:H5''	2.44	0.47
2:AW:64:A:N3	2:AW:65:G:H1'	2.29	0.47
4:B1:1114:U:H1'	4:B1:1115:U:H2'	1.95	0.47
4:B1:159:A:H8	4:B1:159:A:O5'	1.97	0.47
4:B1:1678:A:C2	4:B1:1679:A:O3'	2.67	0.47
4:B1:1689:C:H2'	4:B1:1690:U:H6	1.79	0.47
4:B1:1712:A:H2'	4:B1:1713:C:C6	2.50	0.47
4:B1:345:U:C6	4:B1:345:U:C3'	2.96	0.47
4:B1:369:C:C2'	4:B1:370:G:C5'	2.92	0.47
4:B1:543:C:C3'	4:B1:543:C:C6	2.97	0.47
4:B1:563:G:H2'	4:B1:564:A:H8	1.78	0.47
4:B1:572:U:H2'	4:B1:573:U:N3	2.26	0.47
4:B1:572:U:H3'	4:B1:573:U:C2	2.48	0.47
4:B1:583:A:C3'	4:B1:584:A:C8	2.97	0.47
4:B1:852:G:N3	4:B1:852:G:H2'	2.29	0.47
4:B1:953:C:H2'	4:B1:954:U:O4'	2.14	0.47
11:BG:32:MET:CE	11:BG:65:GLN:HB2	2.43	0.47
4:B1:944:A:H4'	19:BO:134:PRO:HB2	1.95	0.47
19:BO:56:VAL:HG12	19:BO:77:ALA:HB1	1.97	0.47
23:BS:60:THR:O	23:BS:63:GLU:HB2	2.14	0.47
26:BV:41:LYS:O	26:BV:43:THR:N	2.46	0.47
30:BZ:44:LEU:HD22	30:BZ:46:ASN:OD1	2.14	0.47
39:CB:128:LYS:HD2	81:A2:4921:A:H3'	1.96	0.47
42:CE:154:THR:HA	42:CE:158:ARG:HD3	1.96	0.47
42:CE:172:LEU:HB2	42:CE:188:ARG:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CI:47:PRO:HB3	46:CI:171:TRP:CZ2	2.50	0.47
47:CJ:112:HIS:HD2	47:CJ:126:TYR:H	1.63	0.47
51:CO:15:LEU:HA	51:CO:42:ASN:O	2.15	0.47
55:CS:43:ARG:O	55:CS:47:PHE:HD2	1.97	0.47
56:CT:42:ILE:HG12	56:CT:96:ILE:CD1	2.45	0.47
81:A2:1148:G:C8	81:A2:1148:G:O5'	2.64	0.47
81:A2:1162:C:OP2	81:A2:1162:C:C6	2.68	0.47
81:A2:1322:A:O2'	81:A2:1323:A:H5'	2.14	0.47
81:A2:1387:C:H2'	81:A2:1388:G:C8	2.49	0.47
81:A2:1421:C:H3'	81:A2:1422:C:C6	2.49	0.47
81:A2:1570:U:H5''	81:A2:4487:G:OP1	2.13	0.47
81:A2:1797:G:H21	81:A2:1801:U:C5'	2.23	0.47
81:A2:1874:A:O5'	81:A2:1874:A:H8	1.98	0.47
81:A2:1934:A:C2	81:A2:2006:C:N3	2.83	0.47
81:A2:2061:C:H41	81:A2:2249:G:N2	2.11	0.47
81:A2:215:A:H4'	81:A2:216:G:C5'	2.44	0.47
81:A2:2327:U:H3'	81:A2:2328:C:H5''	1.96	0.47
81:A2:2455:C:OP2	81:A2:2456:G:C8	2.61	0.47
81:A2:2457:G:H2'	81:A2:2458:G:H8	1.79	0.47
62:CZ:108:ARG:HD2	81:A2:2551:G:O6	2.15	0.47
81:A2:2579:G:C8	81:A2:2719:G:N7	2.83	0.47
81:A2:299:G:H4'	81:A2:301:G:C4'	2.43	0.47
81:A2:79:C:H1'	81:A2:329:A:H5'	1.96	0.47
81:A2:337:G:C8	81:A2:337:G:O5'	2.66	0.47
81:A2:385:G:H5'	81:A2:387:A:OP2	2.15	0.47
81:A2:4169:G:H2'	81:A2:4170:U:O4'	2.14	0.47
81:A2:4251:G:C4'	81:A2:4252:A:H5''	2.39	0.47
81:A2:4401:A:OP2	81:A2:4401:A:H8	1.96	0.47
81:A2:4518:U:C2'	81:A2:4519:A:H5'	2.42	0.47
81:A2:4525:C:O2	81:A2:4525:C:H2'	2.13	0.47
81:A2:4598:U:H4'	81:A2:4999:A:N3	2.30	0.47
13:BI:123:ARG:NE	81:A2:4979:C:C5'	2.60	0.47
81:A2:649:C:H2'	81:A2:650:G:H8	1.79	0.47
81:A2:702:G:C2'	81:A2:703:G:H5'	2.44	0.47
81:A2:974:C:C2'	81:A2:974:C:O2	2.61	0.47
82:A3:112:G:OP2	82:A3:112:G:C8	2.66	0.47
2:AW:27:G:H8	2:AW:27:G:O5'	1.97	0.47
2:AW:9:A:H4'	2:AW:46:G:O4'	2.14	0.47
4:B1:1091:C:O2'	4:B1:1092:G:H5'	2.15	0.47
4:B1:1161:U:H2'	4:B1:1162:C:C5'	2.44	0.47
4:B1:1282:A:C2'	4:B1:1283:C:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1411:G:C2'	4:B1:1411:G:N3	2.77	0.47
4:B1:1622:U:C6	4:B1:1622:U:H3'	2.50	0.47
4:B1:1655:C:H2'	4:B1:1656:G:H8	1.78	0.47
4:B1:1743:G:O2'	4:B1:1744:G:H5'	2.14	0.47
4:B1:178:C:H2'	4:B1:179:C:C1'	2.44	0.47
4:B1:197:U:C4	4:B1:198:U:H5	2.33	0.47
4:B1:224:A:H61	4:B1:297:A:H61	1.61	0.47
4:B1:298:G:O2'	4:B1:299:A:H5'	2.14	0.47
4:B1:35:C:N3	4:B1:520:A:N6	2.62	0.47
4:B1:370:G:O4'	4:B1:371:A:C8	2.66	0.47
4:B1:382:C:H2'	4:B1:383:G:C2	2.49	0.47
4:B1:618:C:C1'	4:B1:632:C:H5'	2.25	0.47
4:B1:793:G:H2'	4:B1:794:A:O4'	2.14	0.47
4:B1:78:C:C1'	4:B1:79:A:OP1	2.61	0.47
6:BB:160:GLN:NE2	6:BB:204:ILE:HG23	2.29	0.47
6:BB:71:LEU:O	6:BB:71:LEU:HD22	2.15	0.47
12:BH:78:ARG:O	12:BH:81:ARG:HB3	2.15	0.47
13:BI:193:LYS:HE2	16:BL:5:GLN:OE1	2.14	0.47
13:BI:48:VAL:HG21	13:BI:54:LYS:CD	2.44	0.47
20:BP:125:PRO:O	20:BP:126:VAL:HB	2.13	0.47
22:BR:28:PHE:HE1	22:BR:52:GLY:N	2.12	0.47
27:BW:94:LEU:HD12	27:BW:97:ARG:HH22	1.80	0.47
28:BX:25:LYS:O	28:BX:28:LYS:HB3	2.14	0.47
39:CB:341:LYS:O	39:CB:342:LYS:HB2	2.15	0.47
40:CC:305:PRO:HB2	81:A2:2064:G:H5''	1.97	0.47
41:CD:282:GLN:CG	81:A2:1158:G:H1'	2.44	0.47
53:CQ:95:VAL:CG2	53:CQ:96:PRO:HD2	2.43	0.47
58:CV:36:ASN:HD21	58:CV:67:LYS:HB2	1.80	0.47
60:CX:81:LEU:CD2	60:CX:135:LYS:HE2	2.44	0.47
61:CY:66:GLN:O	61:CY:67:ILE:CB	2.63	0.47
62:CZ:10:VAL:HG23	62:CZ:86:SER:HA	1.95	0.47
81:A2:10:A:H2'	81:A2:11:G:H5'	1.95	0.47
81:A2:1207:C:H2'	81:A2:1208:U:OP1	2.15	0.47
81:A2:1250:A:N3	81:A2:1250:A:H2'	2.30	0.47
61:CY:5:PRO:HA	81:A2:1348:A:OP1	2.15	0.47
81:A2:1357:G:N3	81:A2:1357:G:C5'	2.72	0.47
81:A2:1849:A:H8	81:A2:1849:A:O5'	1.97	0.47
81:A2:2561:G:H1'	81:A2:2562:C:P	2.54	0.47
81:A2:2567:G:O4'	81:A2:2732:A:N6	2.48	0.47
81:A2:2746:U:H2'	81:A2:2747:C:O5'	2.15	0.47
81:A2:297:A:N6	81:A2:298:A:C2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3919:U:H2'	81:A2:3920:G:H8	1.79	0.47
81:A2:3907:G:C2	81:A2:4131:C:OP1	2.67	0.47
81:A2:436:U:H3'	81:A2:436:U:O2	2.15	0.47
81:A2:4429:U:H2'	81:A2:4430:G:H8	1.79	0.47
81:A2:3866:G:C6	81:A2:4519:A:C2	3.02	0.47
81:A2:4904:G:H2'	81:A2:4905:U:O4'	2.15	0.47
81:A2:635:G:H2'	81:A2:636:G:C8	2.44	0.47
81:A2:74:G:H2'	81:A2:75:G:O5'	2.14	0.47
82:A3:105:C:H4'	82:A3:106:G:H5''	1.97	0.47
82:A3:145:C:H2'	82:A3:146:U:C6	2.49	0.47
81:A2:1717:A:O4'	83:A4:100:A:C2	2.68	0.47
4:B1:1179:G:H8	4:B1:1179:G:O5'	1.98	0.47
4:B1:1195:A:C2	4:B1:1196:A:N7	2.83	0.47
4:B1:1258:A:N7	4:B1:1259:A:N3	2.62	0.47
4:B1:1281:G:N1	4:B1:1282:A:C6	2.82	0.47
4:B1:1292:C:O5'	4:B1:1292:C:C6	2.65	0.47
4:B1:1439:A:H8	4:B1:1439:A:O5'	1.97	0.47
4:B1:1580:A:H3'	4:B1:1581:C:C5'	2.45	0.47
4:B1:1548:G:O6	4:B1:1584:G:N3	2.47	0.47
4:B1:1649:U:C5	4:B1:1674:G:N2	2.82	0.47
4:B1:1803:U:H2'	4:B1:1804:U:C6	2.50	0.47
4:B1:181:A:O5'	4:B1:182:C:C5'	2.63	0.47
4:B1:1822:A:N1	4:B1:1823:A:C6	2.82	0.47
4:B1:1061:U:O4	4:B1:1849:G:H5''	2.14	0.47
4:B1:1862:G:H4'	4:B1:1863:A:OP2	2.15	0.47
4:B1:191:A:OP1	13:BI:147:LYS:N	2.47	0.47
4:B1:526:A:O3'	14:BJ:124:HIS:HB3	2.14	0.47
4:B1:545:A:H3'	4:B1:545:A:C8	2.50	0.47
4:B1:602:G:H3'	4:B1:603:C:C5'	2.39	0.47
4:B1:79:A:H3'	4:B1:80:G:C8	2.49	0.47
7:BC:109:ILE:HD11	7:BC:151:ILE:HD11	1.96	0.47
4:B1:743:U:C2'	12:BH:100:ILE:O	2.61	0.47
4:B1:1420:G:H1'	24:BT:3:GLY:H	1.78	0.47
4:B1:1447:G:H1'	25:BU:55:ARG:HE	1.80	0.47
39:CB:325:GLU:O	39:CB:326:VAL:HB	2.14	0.47
39:CB:65:SER:OG	81:A2:4576:A:H4'	2.14	0.47
41:CD:257:PRO:O	41:CD:258:LYS:HB3	2.14	0.47
43:CF:90:ALA:HB2	43:CF:125:LEU:HD11	1.96	0.47
44:CG:73:ARG:HE	44:CG:242:LEU:HA	1.79	0.47
47:CJ:135:GLY:HA2	47:CJ:157:ILE:CD1	2.45	0.47
49:CM:20:HIS:C	49:CM:23:LYS:HD3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:CN:61:ILE:HD13	50:CN:133:ILE:CD1	2.45	0.47
51:CO:110:PRO:CB	51:CO:111:PRO:HD3	2.45	0.47
53:CQ:11:ARG:NH2	81:A2:1820:G:H8	2.13	0.47
53:CQ:132:LYS:HE3	53:CQ:134:CYS:HB3	1.96	0.47
53:CQ:18:PRO:HD3	53:CQ:52:PHE:CD1	2.49	0.47
62:CZ:101:PHE:CD2	62:CZ:107:LYS:HE2	2.49	0.47
81:A2:1148:G:H2'	81:A2:1149:G:H5''	1.96	0.47
81:A2:1672:U:C2'	81:A2:1672:U:O2	2.62	0.47
81:A2:170:C:O2'	81:A2:171:C:H5'	2.14	0.47
81:A2:179:G:O2'	81:A2:180:C:H5'	2.15	0.47
81:A2:1930:G:H5''	81:A2:1930:G:H8	1.77	0.47
81:A2:19:G:C6	82:A3:139:G:N1	2.83	0.47
81:A2:2020:A:OP1	81:A2:2020:A:H4'	2.14	0.47
81:A2:2251:G:H2'	81:A2:2252:A:O4'	2.14	0.47
81:A2:2415:A:C1'	81:A2:2416:G:OP1	2.63	0.47
81:A2:2424:U:O2'	81:A2:2425:G:H5'	2.14	0.47
81:A2:2481:C:H1'	81:A2:2482:C:OP1	2.14	0.47
81:A2:259:G:H2'	81:A2:260:G:H8	1.79	0.47
81:A2:2870:U:O2'	81:A2:2871:A:H5'	2.14	0.47
81:A2:3692:A:C2'	81:A2:3693:A:H5'	2.44	0.47
81:A2:373:G:H2'	81:A2:375:A:N7	2.29	0.47
81:A2:4044:G:H21	81:A2:4130:A:N6	2.10	0.47
81:A2:409:A:C2'	81:A2:410:A:H5'	2.44	0.47
81:A2:409:A:O2'	81:A2:410:A:H5'	2.15	0.47
81:A2:415:U:O5'	81:A2:415:U:H6	1.97	0.47
81:A2:4296:A:H3'	81:A2:4296:A:C8	2.50	0.47
81:A2:4446:C:H1'	81:A2:4643:U:O2	2.14	0.47
81:A2:3614:U:C4	81:A2:4493:A:C2	3.02	0.47
81:A2:4539:U:H2'	81:A2:4540:U:H6	1.78	0.47
81:A2:469:G:N3	81:A2:470:G:C8	2.83	0.47
81:A2:4830:G:O5'	81:A2:4830:G:H8	1.96	0.47
81:A2:4897:C:C3'	81:A2:4897:C:O2	2.62	0.47
81:A2:76:A:C2	81:A2:77:U:H1'	2.49	0.47
81:A2:941:G:H4'	81:A2:2054:G:OP1	2.15	0.47
82:A3:90:C:H2'	82:A3:91:A:H8	1.80	0.47
83:A4:102:U:H2'	83:A4:103:A:H5'	1.96	0.47
83:A4:25:G:C5	83:A4:26:C:N4	2.82	0.47
81:A2:1715:A:H2	83:A4:77:A:C2	2.33	0.47
2:AW:74:C:H5''	2:AW:74:C:H6	1.80	0.47
4:B1:1161:U:C6	4:B1:1161:U:C3'	2.98	0.47
4:B1:1208:A:P	4:B1:1835:A:C2	3.08	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1288:U:C2	4:B1:1315:U:H1'	2.50	0.47
4:B1:1341:C:O5'	4:B1:1341:C:H6	1.98	0.47
4:B1:1428:G:C8	4:B1:1428:G:H5''	2.49	0.47
4:B1:1607:A:C2	4:B1:1608:U:H1'	2.50	0.47
4:B1:1638:G:OP2	4:B1:1638:G:C5	2.68	0.47
4:B1:1824:A:N3	4:B1:1824:A:H5''	2.29	0.47
4:B1:215:G:O5'	4:B1:215:G:C8	2.68	0.47
4:B1:462:C:H2'	4:B1:463:C:O5'	2.15	0.47
4:B1:474:G:OP1	4:B1:474:G:H8	1.97	0.47
4:B1:515:G:H8	4:B1:515:G:O5'	1.98	0.47
4:B1:567:C:H2'	4:B1:568:C:C5'	2.44	0.47
4:B1:693:A:C8	4:B1:694:G:C1'	2.97	0.47
4:B1:77:A:H5''	4:B1:78:C:N4	2.30	0.47
4:B1:901:G:O2'	4:B1:902:G:H5'	2.15	0.47
4:B1:684:G:C4	4:B1:920:A:C8	3.03	0.47
13:BI:48:VAL:HG21	13:BI:54:LYS:HD3	1.97	0.47
14:BJ:67:ASP:OD1	14:BJ:69:ARG:HB3	2.14	0.47
21:BQ:96:TYR:HA	21:BQ:100:VAL:CG2	2.45	0.47
22:BR:106:LEU:HA	22:BR:109:LEU:HD12	1.96	0.47
22:BR:5:ARG:HB2	22:BR:10:LYS:HE2	1.96	0.47
23:BS:46:ARG:CZ	24:BT:37:VAL:HG22	2.44	0.47
30:BZ:43:LYS:HZ1	30:BZ:44:LEU:N	2.12	0.47
42:CE:226:ARG:HA	42:CE:226:ARG:NE	2.29	0.47
44:CG:109:GLU:O	44:CG:112:GLN:HB3	2.14	0.47
46:CI:35:ASP:OD2	81:A2:1728:A:H4'	2.14	0.47
47:CJ:169:LYS:O	47:CJ:170:TYR:HB2	2.14	0.47
49:CM:95:ILE:HD11	49:CM:124:LYS:NZ	36.05	0.47
49:CM:49:ALA:HB2	55:CS:100:LEU:CD1	2.45	0.47
52:CP:2:VAL:O	52:CP:3:ARG:HB3	2.15	0.47
53:CQ:172:ARG:O	53:CQ:173:LYS:CB	2.62	0.47
53:CQ:179:GLY:O	53:CQ:188:ASN:N	2.46	0.47
53:CQ:17:GLU:HG3	53:CQ:18:PRO:HD2	1.95	0.47
81:A2:1141:G:H2'	81:A2:1142:G:C8	2.50	0.47
81:A2:1205:U:O2	81:A2:1205:U:C2'	2.63	0.47
81:A2:1276:G:C8	81:A2:1277:U:H1'	2.48	0.47
81:A2:1336:U:H2'	81:A2:1337:C:C5	2.50	0.47
81:A2:1396:G:H2'	81:A2:1397:C:H6	1.78	0.47
81:A2:148:G:H8	81:A2:148:G:OP1	1.97	0.47
81:A2:1490:U:C5	81:A2:1490:U:OP2	2.68	0.47
81:A2:1506:A:H5''	81:A2:1507:U:OP2	2.14	0.47
81:A2:1796:U:H3	81:A2:1802:G:N2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1811:G:C3'	81:A2:1811:G:C8	2.98	0.47
81:A2:1835:C:H2'	81:A2:1836:A:C8	2.49	0.47
81:A2:2005:U:O2'	81:A2:2006:C:H5'	2.14	0.47
81:A2:2022:U:O2'	81:A2:2023:G:C8	2.67	0.47
81:A2:2032:U:O2'	81:A2:2033:G:C5'	2.62	0.47
81:A2:218:C:C6	81:A2:218:C:O5'	2.65	0.47
81:A2:2668:U:C2	81:A2:2669:U:C5	3.03	0.47
81:A2:2693:C:H6	81:A2:2693:C:O5'	1.98	0.47
81:A2:270:A:H2'	81:A2:270:A:OP1	2.13	0.47
81:A2:2831:G:H22	81:A2:2833:C:H5'	1.79	0.47
81:A2:3746:G:O3'	81:A2:3747:U:H6	1.98	0.47
81:A2:3820:U:H2'	81:A2:3821:A:O4'	2.15	0.47
81:A2:4028:U:H2'	81:A2:4029:G:C8	2.46	0.47
81:A2:403:G:H4'	81:A2:405:C:C2	2.50	0.47
81:A2:402:G:H4'	81:A2:403:G:O5'	2.15	0.47
81:A2:4177:G:O2'	81:A2:4263:C:H6	1.94	0.47
56:CT:81:LYS:HD2	81:A2:4264:A:C2	2.50	0.47
81:A2:4329:A:H8	81:A2:4329:A:P	2.38	0.47
81:A2:4348:A:H2'	81:A2:4349:C:H6	1.79	0.47
81:A2:437:C:C3'	81:A2:438:C:C5	2.89	0.47
81:A2:4398:U:H6	81:A2:4398:U:OP2	1.98	0.47
81:A2:4549:A:H2'	81:A2:4549:A:N3	2.29	0.47
81:A2:4704:G:O5'	81:A2:4704:G:C8	2.68	0.47
42:CE:158:ARG:HD3	81:A2:4902:U:O2	2.14	0.47
44:CG:64:GLN:HE21	82:A3:151:G:H5'	1.79	0.47
2:AW:37:MIA:H3'	2:AW:38:A:C8	2.50	0.47
4:B1:1473:G:H5'	4:B1:1474:A:OP2	2.15	0.47
4:B1:1751:C:H2'	4:B1:1752:C:H5'	1.96	0.47
4:B1:1867:U:H1'	4:B1:1868:U:O5'	2.14	0.47
4:B1:18:C:H6	4:B1:18:C:O5'	1.97	0.47
4:B1:238:C:O2'	4:B1:239:C:C6	2.63	0.47
4:B1:380:G:N2	4:B1:382:C:H3'	2.30	0.47
4:B1:560:A:O3'	4:B1:561:A:H8	1.97	0.47
4:B1:567:C:C3'	4:B1:568:C:H5'	2.44	0.47
4:B1:615:C:C2'	4:B1:616:A:H5'	2.45	0.47
4:B1:63:U:H5''	4:B1:63:U:H6	1.79	0.47
4:B1:67:C:N4	11:BG:168:LYS:O	2.46	0.47
4:B1:856:C:C2'	4:B1:857:U:H5'	2.45	0.47
4:B1:985:G:C3'	4:B1:986:G:H5'	2.45	0.47
12:BH:109:ARG:CG	12:BH:110:THR:H	2.23	0.47
14:BJ:161:LEU:O	14:BJ:161:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BM:35:ILE:HD11	17:BM:61:TYR:OH	2.15	0.47
39:CB:132:LYS:O	39:CB:135:LYS:HB3	2.14	0.47
39:CB:261:ARG:HA	81:A2:3867:G:C2	2.50	0.47
39:CB:56:ILE:CG2	39:CB:365:LEU:HD22	2.45	0.47
43:CF:209:TRP:CD1	43:CF:210:PRO:HD2	2.49	0.47
45:CH:10:VAL:HG22	45:CH:74:CYS:SG	2.54	0.47
50:CN:137:PRO:HB3	50:CN:152:THR:HA	1.96	0.47
50:CN:150:TRP:CZ3	81:A2:323:C:H5'	2.50	0.47
52:CP:129:THR:HG23	52:CP:139:TYR:CG	2.49	0.47
55:CS:7:LEU:HD12	55:CS:35:PRO:HD3	1.97	0.47
55:CS:30:MET:HG2	56:CT:151:LEU:O	2.15	0.47
81:A2:1191:G:N3	81:A2:1192:G:C8	2.82	0.47
81:A2:1381:C:C6	81:A2:1381:C:O5'	2.68	0.47
53:CQ:72:LEU:HB3	81:A2:1435:G:H4'	1.97	0.47
81:A2:1545:C:O5'	81:A2:1545:C:H6	1.98	0.47
81:A2:1548:U:C2'	81:A2:1549:G:H5'	2.45	0.47
81:A2:1556:G:O2'	81:A2:1591:G:H5''	2.15	0.47
81:A2:1595:U:H2'	81:A2:1596:G:H5'	1.97	0.47
81:A2:1711:C:C2'	81:A2:1712:G:H5''	2.35	0.47
81:A2:1737:G:H22	81:A2:1753:C:H41	1.62	0.47
81:A2:1838:U:O2	81:A2:1838:U:H2'	2.15	0.47
81:A2:2347:A:H4'	81:A2:2348:U:OP2	2.14	0.47
81:A2:2350:C:O2'	81:A2:2351:A:H5'	2.15	0.47
81:A2:2356:A:C2'	81:A2:2357:G:H5'	2.45	0.47
81:A2:2409:U:H2'	81:A2:2410:G:O4'	2.14	0.47
81:A2:2479:G:C8	81:A2:2479:G:H3'	2.49	0.47
81:A2:2761:C:C3'	81:A2:2761:C:C6	2.98	0.47
81:A2:2869:C:H5''	81:A2:2869:C:C6	2.50	0.47
81:A2:378:G:C2	81:A2:403:G:C2	3.03	0.47
81:A2:3907:G:N2	81:A2:4131:C:OP1	2.47	0.47
81:A2:397:C:H6	81:A2:397:C:OP1	1.98	0.47
81:A2:397:C:N4	81:A2:398:A:N6	2.62	0.47
81:A2:4064:C:H2'	81:A2:4065:G:H5'	1.96	0.47
62:CZ:136:PHE:HB3	81:A2:4089:G:H21	1.79	0.47
81:A2:4125:C:H5'	81:A2:4126:G:OP2	2.15	0.47
81:A2:431:U:O2'	81:A2:432:G:H5'	2.15	0.47
81:A2:4487:G:C8	81:A2:4488:G:O6	2.66	0.47
81:A2:4699:G:O2'	81:A2:4700:C:C6	2.66	0.47
81:A2:4925:C:O5'	81:A2:4925:C:C6	2.68	0.47
81:A2:85:G:OP1	81:A2:85:G:H4'	2.15	0.47
41:CD:155:THR:OG1	83:A4:36:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AV:25:C:O5'	1:AV:25:C:H6	1.98	0.47
2:AW:40:C:OP2	2:AW:40:C:H6	1.98	0.47
4:B1:105:U:C4	4:B1:106:C:C4	3.03	0.47
4:B1:1120:U:C5'	4:B1:1120:U:H6	2.23	0.47
4:B1:1169:G:OP2	4:B1:1170:A:H2'	2.14	0.47
4:B1:1481:G:O5'	4:B1:1481:G:H8	1.97	0.47
4:B1:1771:G:O2'	4:B1:1772:C:H5'	2.14	0.47
4:B1:305:U:O2	4:B1:305:U:H2'	2.15	0.47
4:B1:36:U:N3	4:B1:520:A:N1	2.63	0.47
4:B1:641:A:H2'	4:B1:642:U:H5'	1.97	0.47
4:B1:664:A:H2'	4:B1:664:A:N3	2.29	0.47
4:B1:684:G:H2'	4:B1:685:A:O4'	2.15	0.47
4:B1:746:C:H5'	12:BH:105:THR:N	2.30	0.47
4:B1:93:U:H3'	4:B1:94:G:H8	1.80	0.47
4:B1:993:G:C2'	4:B1:994:C:H5'	2.45	0.47
5:BA:5:LEU:HD22	5:BA:8:LEU:HD12	1.97	0.47
7:BC:63:VAL:O	7:BC:64:THR:HB	2.15	0.47
10:BF:162:ALA:HB2	10:BF:172:CYS:SG	2.54	0.47
13:BI:131:PRO:HG3	13:BI:147:LYS:HE3	1.96	0.47
13:BI:158:ILE:O	13:BI:159:SER:O	2.33	0.47
17:BM:76:LEU:HB3	17:BM:129:LYS:O	2.14	0.47
19:BO:85:CYS:HA	19:BO:88:LEU:HD12	1.96	0.47
21:BQ:16:LYS:HD3	21:BQ:17:LYS:HG2	1.97	0.47
25:BU:97:ILE:O	25:BU:100:GLN:HB3	2.13	0.47
28:BX:106:GLY:O	28:BX:107:ARG:O	2.33	0.47
29:BY:11:LYS:O	29:BY:23:MET:HA	2.14	0.47
39:CB:303:ALA:O	39:CB:368:ILE:HD12	2.14	0.47
41:CD:289:ARG:O	41:CD:293:ARG:HG3	2.14	0.47
42:CE:171:GLY:O	81:A2:4897:C:C5	2.67	0.47
43:CF:243:LEU:HD23	43:CF:246:ARG:HH21	1.80	0.47
46:CI:68:ALA:HA	46:CI:158:LYS:HG3	1.97	0.47
48:CL:29:PRO:O	48:CL:33:ILE:HD13	2.15	0.47
50:CN:186:GLY:O	50:CN:187:SER:HB3	2.15	0.47
51:CO:109:PRO:HB3	51:CO:110:PRO:HD2	1.97	0.47
52:CP:24:VAL:HG23	52:CP:144:CYS:SG	2.55	0.47
4:B1:872:A:H2	54:CR:170:ARG:NH2	2.12	0.47
55:CS:100:LEU:H	55:CS:100:LEU:HD12	1.79	0.47
49:CM:16:SER:HB3	55:CS:160:ARG:HH21	1.80	0.47
59:CW:58:LYS:NZ	59:CW:58:LYS:HB3	2.29	0.47
61:CY:22:PRO:HG2	61:CY:24:HIS:CE1	2.49	0.47
81:A2:1198:G:H2'	81:A2:1199:G:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1217:C:C3'	81:A2:1217:C:O2	2.62	0.47
81:A2:1359:C:O2	81:A2:1359:C:H3'	2.15	0.47
81:A2:1368:A:H2'	81:A2:1369:U:O4'	2.14	0.47
81:A2:1437:C:C2'	81:A2:1438:A:C8	2.97	0.47
81:A2:1450:U:H2'	81:A2:1451:C:C6	2.49	0.47
81:A2:1465:C:O2'	81:A2:1466:G:H5'	2.15	0.47
81:A2:121:A:C6	81:A2:147:U:N3	2.83	0.47
81:A2:1524:G:H2'	81:A2:1524:G:N3	2.29	0.47
81:A2:1610:A:C8	81:A2:1610:A:O5'	2.65	0.47
81:A2:2246:G:H8	81:A2:2246:G:P	2.37	0.47
81:A2:230:U:C2	81:A2:2280:U:C5	3.02	0.47
81:A2:2302:G:H2'	81:A2:2303:G:C8	2.49	0.47
81:A2:2362:U:H2'	81:A2:2363:U:C6	2.50	0.47
81:A2:2378:A:C2'	81:A2:2379:G:H5''	2.45	0.47
81:A2:2458:G:H2'	81:A2:2459:C:C6	2.50	0.47
81:A2:2508:C:H1'	81:A2:2509:C:OP1	2.15	0.47
81:A2:2531:U:C2'	81:A2:2532:G:C5'	2.93	0.47
81:A2:2600:A:C2	81:A2:2601:G:N7	2.83	0.47
81:A2:2839:G:C2	81:A2:3593:A:H8	2.33	0.47
81:A2:3680:A:H8	81:A2:3710:C:O2	1.96	0.47
81:A2:3695:A:H8	81:A2:3695:A:O5'	1.98	0.47
81:A2:3758:C:C5	81:A2:3759:U:C6	3.03	0.47
81:A2:4299:A:H2'	81:A2:4300:U:C6	2.50	0.47
81:A2:4313:U:H5'	81:A2:4314:U:C5'	2.42	0.47
81:A2:4407:C:O2'	81:A2:4408:G:P	2.73	0.47
81:A2:4419:U:H2'	81:A2:4420:U:O5'	2.15	0.47
81:A2:4850:C:C2'	81:A2:4851:G:H8	2.27	0.47
81:A2:4910:A:H2'	81:A2:4911:A:C8	2.50	0.47
81:A2:456:G:N2	81:A2:679:U:O4	2.48	0.47
81:A2:8:U:N3	81:A2:9:C:C5	2.83	0.47
81:A2:947:G:C2'	81:A2:948:A:O5'	2.63	0.47
81:A2:956:C:O2'	81:A2:957:G:H5''	2.15	0.47
1:AV:1:G:HO5'	1:AV:1:G:H8	1.61	0.47
2:AW:20:U:O2'	2:AW:21:A:H5'	2.14	0.47
3:AX:45:U:O2	3:AX:45:U:C2'	2.60	0.47
4:B1:1069:U:O2'	38:CA:247:ARG:CZ	2.60	0.47
4:B1:1153:C:H2'	4:B1:1153:C:O2	2.14	0.47
4:B1:1180:C:H3'	4:B1:1180:C:C6	2.49	0.47
4:B1:1214:A:C5	4:B1:1217:A:C6	3.03	0.47
4:B1:1348:G:C2	4:B1:1382:A:C2	3.03	0.47
4:B1:1361:G:N7	4:B1:1362:U:C5	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1432:U:N3	4:B1:1433:C:N4	2.62	0.47
4:B1:1598:G:H4'	4:B1:1600:G:C6	2.50	0.47
4:B1:1602:U:C2'	4:B1:1603:G:H2'	2.34	0.47
4:B1:1693:G:H2'	4:B1:1694:U:O4'	2.15	0.47
4:B1:170:A:H3'	4:B1:171:A:H8	1.79	0.47
4:B1:173:A:H2'	4:B1:174:C:C6	2.50	0.47
4:B1:193:C:C5'	4:B1:193:C:H6	2.24	0.47
4:B1:369:C:O2'	4:B1:370:G:H5''	2.15	0.47
4:B1:571:U:C3'	4:B1:572:U:H5''	2.31	0.47
4:B1:61:A:P	4:B1:61:A:H3'	2.55	0.47
4:B1:633:C:H2'	4:B1:634:A:C8	2.49	0.47
4:B1:522:A:C6	4:B1:643:A:H5'	2.50	0.47
4:B1:850:C:H2'	4:B1:851:C:C5'	2.45	0.47
4:B1:912:C:O2'	4:B1:913:A:C4'	2.61	0.47
5:BA:58:LEU:HD11	5:BA:178:LEU:CA	2.44	0.47
7:BC:125:LYS:HE2	7:BC:127:PHE:CZ	2.50	0.47
9:BE:173:ILE:HG21	9:BE:230:ASN:HD22	1.78	0.47
9:BE:246:LEU:HD23	9:BE:250:GLU:HB3	1.97	0.47
12:BH:131:GLU:OE2	12:BH:139:ILE:HD11	2.15	0.47
20:BP:111:MET:HG2	20:BP:119:PHE:CZ	2.50	0.47
24:BT:40:ALA:O	24:BT:41:LYS:HB2	2.15	0.47
27:BW:99:PHE:O	27:BW:101:PHE:N	2.48	0.47
30:BZ:50:PHE:HE2	30:BZ:55:TYR:CD1	2.32	0.47
39:CB:123:HIS:ND1	81:A2:4942:C:C4	2.83	0.47
40:CC:309:ILE:H	40:CC:309:ILE:HG12	1.47	0.47
41:CD:146:LEU:HD11	41:CD:163:LEU:HD22	1.97	0.47
41:CD:207:TYR:CD1	83:A4:33:U:H1'	2.49	0.47
42:CE:179:LEU:HD12	81:A2:4892:C:N4	2.29	0.47
45:CH:34:LEU:HD12	45:CH:80:MET:O	2.15	0.47
47:CJ:89:VAL:HG11	47:CJ:109:ILE:HG13	1.96	0.47
48:CL:15:HIS:ND1	81:A2:46:U:H5''	2.30	0.47
50:CN:187:SER:HB2	81:A2:29:G:P	2.55	0.47
61:CY:121:ARG:O	61:CY:126:ARG:HA	2.14	0.47
61:CY:83:GLU:O	61:CY:84:ARG:CB	2.63	0.47
81:A2:1208:U:H4'	81:A2:1209:C:O5'	2.15	0.47
81:A2:1221:C:H2'	81:A2:1222:G:C4'	2.44	0.47
81:A2:1661:A:C6	81:A2:1662:U:N3	2.83	0.47
81:A2:174:G:C6	81:A2:175:C:N4	2.83	0.47
81:A2:1812:U:H6	81:A2:1812:U:H5''	1.80	0.47
56:CT:129:LYS:HA	81:A2:1814:G:O3'	2.15	0.47
81:A2:1822:G:H5''	81:A2:1822:G:H8	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2042:G:OP1	81:A2:2042:G:H4'	2.14	0.47
81:A2:20:U:O2	81:A2:20:U:C2'	2.62	0.47
81:A2:2444:U:OP1	81:A2:2445:U:H5	1.97	0.47
81:A2:2464:G:H8	81:A2:2464:G:OP2	1.98	0.47
81:A2:2840:G:N3	81:A2:2840:G:H2'	2.28	0.47
81:A2:2853:G:C3'	81:A2:2853:G:N3	2.75	0.47
81:A2:307:U:O2	81:A2:307:U:H2'	2.15	0.47
38:CA:118:GLU:OE2	81:A2:3631:A:H2'	2.15	0.47
81:A2:3640:G:C2'	81:A2:3641:G:C8	2.98	0.47
81:A2:3697:A:H2'	81:A2:3698:U:C4'	2.45	0.47
81:A2:3725:A:H2'	81:A2:3726:G:H5'	1.95	0.47
81:A2:3851:C:H2'	81:A2:3852:U:C6	2.50	0.47
81:A2:3920:G:N1	81:A2:4029:G:N1	2.49	0.47
81:A2:4088:G:H2'	81:A2:4088:G:N3	2.29	0.47
81:A2:4231:A:H2'	81:A2:4232:G:H1'	1.96	0.47
81:A2:4523:U:H6	81:A2:4523:U:O5'	1.98	0.47
81:A2:457:A:OP1	81:A2:463:C:N4	2.48	0.47
81:A2:4698:C:O2'	81:A2:4699:G:H5'	2.15	0.47
81:A2:59:A:C8	81:A2:329:A:C2	3.03	0.47
81:A2:897:U:C5'	81:A2:898:U:OP2	2.63	0.47
83:A4:25:G:H3'	83:A4:26:C:C5	2.49	0.47
2:AW:12:U:H6	2:AW:12:U:O5'	1.97	0.47
2:AW:34:G:C5	4:B1:1684:C:H1'	2.49	0.47
4:B1:1076:G:H5'	18:BN:106:ARG:HH11	1.78	0.47
4:B1:1087:A:N7	4:B1:1861:G:C6	2.83	0.47
4:B1:1129:G:H3'	4:B1:1130:G:H8	1.78	0.47
4:B1:1177:U:H2'	4:B1:1178:U:H6	1.80	0.47
4:B1:234:C:H2'	4:B1:235:A:C8	2.45	0.47
4:B1:305:U:C6	4:B1:305:U:OP1	2.68	0.47
4:B1:63:U:OP1	4:B1:315:C:H4'	2.14	0.47
4:B1:691:G:C4	4:B1:692:G:C8	3.02	0.47
4:B1:743:U:H5''	4:B1:743:U:C2	2.50	0.47
4:B1:745:C:O5'	12:BH:105:THR:HG23	2.15	0.47
4:B1:805:U:C6	4:B1:805:U:O5'	2.68	0.47
4:B1:888:U:H5'	4:B1:889:U:OP2	2.14	0.47
6:BB:134:LEU:HD12	6:BB:219:LYS:CB	2.44	0.47
11:BG:62:PRO:HG2	11:BG:83:CYS:SG	2.55	0.47
4:B1:1015:U:C5	18:BN:13:GLN:O	2.68	0.47
25:BU:20:ILE:HG21	25:BU:98:VAL:CG2	2.44	0.47
29:BY:41:ARG:HH12	29:BY:94:HIS:CD2	2.32	0.47
23:BS:4:VAL:HG21	30:BZ:49:LEU:HD11	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:104:VAL:HB	38:CA:146:THR:HG21	1.97	0.47
40:CC:112:HIS:HB2	50:CN:202:ARG:O	2.15	0.47
40:CC:122:TYR:CD2	40:CC:280:PRO:HG3	2.50	0.47
40:CC:211:TYR:HD1	40:CC:253:THR:OG1	1.98	0.47
43:CF:127:LYS:HE2	43:CF:131:ASN:HD21	1.80	0.47
50:CN:142:ILE:HD12	50:CN:142:ILE:N	2.30	0.47
60:CX:127:LEU:CD2	60:CX:135:LYS:HB3	2.46	0.47
61:CY:112:ASP:O	61:CY:116:LYS:CB	2.63	0.47
81:A2:965:C:N4	81:A2:1249:G:H1	2.11	0.46
81:A2:1323:A:C6	81:A2:1324:C:C5	3.04	0.46
81:A2:1330:C:O2'	81:A2:1331:G:H5'	2.15	0.46
81:A2:1354:G:N3	81:A2:1354:G:H2'	2.30	0.46
81:A2:1912:A:N1	81:A2:2026:U:C4	2.83	0.46
81:A2:2062:C:C4	81:A2:2249:G:N1	2.84	0.46
81:A2:207:C:H41	81:A2:228:U:H2'	1.79	0.46
81:A2:2449:A:H5''	81:A2:2450:A:OP2	2.15	0.46
81:A2:2517:C:H2'	81:A2:2518:G:C8	2.50	0.46
81:A2:2555:G:OP2	81:A2:2555:G:H8	1.97	0.46
81:A2:2657:G:H2'	81:A2:2658:G:H8	1.78	0.46
81:A2:2663:G:C8	81:A2:2664:U:H1'	2.50	0.46
81:A2:304:U:C5	81:A2:304:U:OP2	2.68	0.46
81:A2:3588:G:N3	81:A2:3588:G:H5''	2.29	0.46
81:A2:3592:C:C3'	81:A2:3592:C:H6	2.21	0.46
81:A2:3920:G:N2	81:A2:4029:G:N2	2.62	0.46
81:A2:4052:G:H8	81:A2:4052:G:O5'	1.98	0.46
81:A2:4143:G:N3	81:A2:4143:G:H5'	2.30	0.46
81:A2:4176:G:H2'	81:A2:4176:G:N3	2.30	0.46
13:BI:169:GLY:CA	81:A2:4980:C:OP2	2.60	0.46
81:A2:975:C:O2'	81:A2:976:C:H5'	2.14	0.46
1:AV:17:C:C3'	1:AV:18:G:H5''	2.43	0.46
4:B1:1304:U:H6	4:B1:1304:U:O5'	1.99	0.46
4:B1:1375:G:C8	4:B1:1375:G:H3'	2.50	0.46
4:B1:1432:U:C4	4:B1:1433:C:N4	2.83	0.46
4:B1:1465:A:C5	4:B1:1466:G:H1'	2.50	0.46
4:B1:1555:U:C2'	4:B1:1556:A:H5'	2.45	0.46
4:B1:1602:U:C6	4:B1:1602:U:H3'	2.50	0.46
4:B1:440:G:H5''	4:B1:1798:C:O2'	2.15	0.46
4:B1:467:G:C8	4:B1:467:G:OP2	2.68	0.46
4:B1:827:A:H2'	4:B1:828:G:H5'	1.96	0.46
4:B1:845:G:H5''	9:BE:108:ARG:NH1	2.28	0.46
4:B1:911:C:H2'	4:B1:912:C:N3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:935:G:C2	4:B1:1008:A:C2	3.03	0.46
4:B1:970:G:O4'	81:A2:3680:A:OP1	2.33	0.46
4:B1:970:G:O4'	81:A2:3680:A:P	2.73	0.46
5:BA:110:ASN:HD21	5:BA:113:GLN:CB	2.28	0.46
6:BB:197:ILE:HG13	6:BB:210:VAL:HG11	1.97	0.46
9:BE:88:ASP:HA	9:BE:122:LYS:HE3	1.97	0.46
18:BN:94:LYS:O	18:BN:98:VAL:HG23	2.14	0.46
20:BP:17:TYR:CB	20:BP:25:LEU:HD11	2.46	0.46
23:BS:9:PHE:CD2	30:BZ:49:LEU:HD22	2.50	0.46
25:BU:32:LEU:HD21	25:BU:87:ARG:HG2	1.97	0.46
27:BW:25:VAL:O	27:BW:62:VAL:HA	2.15	0.46
38:CA:15:VAL:HA	81:A2:1639:U:OP1	67.07	0.46
39:CB:173:LEU:HD11	39:CB:342:LYS:HD3	1.96	0.46
42:CE:149:ILE:HA	42:CE:162:VAL:O	2.15	0.46
43:CF:163:ASN:O	43:CF:164:LYS:HB2	2.15	0.46
44:CG:54:PHE:CZ	81:A2:4055:G:H5''	2.50	0.46
44:CG:59:ARG:O	44:CG:63:LEU:HG	2.15	0.46
48:CL:113:ASN:O	48:CL:116:ARG:HB3	2.15	0.46
51:CO:182:GLU:O	51:CO:191:LYS:HE3	2.15	0.46
62:CZ:61:LYS:HA	62:CZ:64:LYS:HB3	1.98	0.46
81:A2:1293:C:H2'	81:A2:1293:C:O2	2.16	0.46
48:CL:156:PRO:HA	81:A2:1359:C:H5	1.78	0.46
81:A2:1360:G:H1'	81:A2:1361:U:P	2.54	0.46
81:A2:1453:C:H2'	81:A2:1454:G:N7	2.29	0.46
81:A2:1461:G:C3'	81:A2:1461:G:N3	2.75	0.46
81:A2:1581:U:H2'	81:A2:1582:C:C6	2.50	0.46
81:A2:1653:C:H6	81:A2:1653:C:O5'	1.97	0.46
81:A2:1821:A:C8	81:A2:1821:A:OP2	2.68	0.46
81:A2:215:A:H1'	81:A2:216:G:O5'	2.15	0.46
81:A2:218:C:C2	81:A2:219:C:C5	3.03	0.46
81:A2:2283:A:C2	81:A2:2284:A:O4'	2.69	0.46
81:A2:2302:G:C4	81:A2:2303:G:C8	3.03	0.46
81:A2:197:U:N3	81:A2:235:C:O4'	2.49	0.46
81:A2:241:G:P	81:A2:241:G:H8	2.38	0.46
81:A2:2478:C:H3'	81:A2:2478:C:H6	1.80	0.46
81:A2:2730:G:C6	81:A2:2731:G:N1	2.83	0.46
81:A2:2743:A:H8	81:A2:2743:A:P	2.39	0.46
81:A2:2831:G:H3'	81:A2:2832:G:C5'	2.46	0.46
81:A2:3727:U:H2'	81:A2:3728:A:C8	2.50	0.46
81:A2:3754:A:H4'	81:A2:3755:U:OP2	2.15	0.46
81:A2:3877:A:C8	81:A2:3878:C:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3945:C:H2'	81:A2:3946:C:H6	1.77	0.46
81:A2:4374:A:H2'	81:A2:4382:A:C6	2.49	0.46
81:A2:4393:G:H2'	81:A2:4394:C:C6	2.50	0.46
81:A2:4500:C:H2'	81:A2:4501:G:O4'	2.14	0.46
81:A2:454:A:H2'	81:A2:455:G:H8	1.79	0.46
81:A2:4835:C:H2'	81:A2:4835:C:O2	2.15	0.46
81:A2:4970:G:N2	81:A2:4989:A:H2	2.13	0.46
81:A2:718:G:H4'	81:A2:719:G:OP1	2.13	0.46
81:A2:943:G:H3'	81:A2:1262:G:O4'	2.16	0.46
82:A3:106:G:H1'	82:A3:136:U:O2	2.16	0.46
83:A4:11:A:C8	83:A4:11:A:O5'	2.69	0.46
41:CD:14:LYS:HG2	83:A4:66:G:O3'	2.15	0.46
83:A4:92:C:H2'	83:A4:93:G:C8	2.51	0.46
4:B1:1043:G:H1'	4:B1:1044:G:O5'	2.15	0.46
4:B1:1220:A:N6	4:B1:1221:G:C6	2.83	0.46
4:B1:1253:A:N7	4:B1:1666:C:H4'	2.30	0.46
4:B1:172:U:C5	4:B1:337:C:H1'	2.50	0.46
4:B1:1752:C:O2'	4:B1:1753:C:H5'	2.15	0.46
4:B1:1827:U:H4'	81:A2:3728:A:HO2'	1.64	0.46
4:B1:438:G:O5'	4:B1:438:G:H8	1.98	0.46
4:B1:521:A:N6	4:B1:522:A:C2	2.83	0.46
4:B1:78:C:O3'	11:BG:175:LYS:HG2	2.15	0.46
5:BA:5:LEU:HD22	5:BA:8:LEU:CD1	2.44	0.46
6:BB:186:ASN:O	6:BB:190:PRO:CD	2.63	0.46
9:BE:124:CYS:HB2	9:BE:141:THR:CG2	2.45	0.46
9:BE:133:VAL:O	9:BE:136:ILE:CG2	2.63	0.46
11:BG:87:ARG:O	11:BG:88:ARG:HB3	2.15	0.46
4:B1:745:C:H3'	12:BH:105:THR:HG23	1.98	0.46
12:BH:125:VAL:O	12:BH:128:ALA:HB3	2.15	0.46
20:BP:84:ILE:HD11	20:BP:115:TYR:CE2	2.50	0.46
21:BQ:34:VAL:O	21:BQ:37:ARG:HG2	2.15	0.46
29:BY:100:LYS:O	29:BY:100:LYS:HG2	2.14	0.46
39:CB:335:GLY:HA3	81:A2:4634:C:H4'	1.97	0.46
43:CF:63:GLN:OE1	81:A2:1191:G:C5'	2.64	0.46
45:CH:74:CYS:O	45:CH:78:GLN:HG2	2.16	0.46
50:CN:28:TRP:CD1	81:A2:4045:A:H5''	2.49	0.46
56:CT:27:LEU:HA	56:CT:30:TYR:CD2	2.50	0.46
58:CV:36:ASN:ND2	58:CV:67:LYS:HB2	2.31	0.46
60:CX:48:ARG:HA	81:A2:2449:A:O2'	2.15	0.46
62:CZ:11:VAL:HG21	62:CZ:80:LEU:HD13	1.96	0.46
81:A2:1082:U:C1'	81:A2:1083:C:P	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:119:G:C4'	81:A2:120:A:C8	2.98	0.46
81:A2:1285:C:H6	81:A2:1285:C:O5'	1.96	0.46
81:A2:1481:G:H3'	81:A2:1481:G:C8	2.50	0.46
81:A2:1868:G:H3'	81:A2:1868:G:C8	2.50	0.46
81:A2:2260:G:H5'	81:A2:2261:A:OP2	2.16	0.46
81:A2:2571:C:H1'	81:A2:4092:C:H42	1.73	0.46
81:A2:2668:U:H2'	81:A2:2669:U:H6	1.81	0.46
81:A2:2773:G:O5'	81:A2:2773:G:H8	1.99	0.46
81:A2:297:A:H3'	81:A2:297:A:C8	2.50	0.46
81:A2:3577:A:C8	81:A2:3577:A:H5''	2.51	0.46
81:A2:3640:G:C3'	81:A2:3641:G:H8	2.28	0.46
81:A2:3742:U:H2'	81:A2:3743:A:H5'	1.96	0.46
81:A2:3904:C:H2'	81:A2:3905:A:C8	2.48	0.46
81:A2:40:G:H3'	81:A2:41:C:H6	1.79	0.46
81:A2:4338:A:O2'	81:A2:4339:A:H2'	2.16	0.46
81:A2:4675:C:H5'	81:A2:4676:C:OP2	2.15	0.46
81:A2:476:C:OP2	81:A2:476:C:H4'	2.14	0.46
50:CN:195:ARG:HD2	81:A2:98:A:H5''	1.96	0.46
82:A3:24:G:H2'	82:A3:25:G:O4'	2.15	0.46
1:AV:28:G:C2'	1:AV:29:G:H5'	2.45	0.46
4:B1:1060:A:N3	4:B1:1060:A:H2'	2.29	0.46
4:B1:1288:U:OP2	4:B1:1311:C:C2	2.68	0.46
4:B1:1395:C:H2'	4:B1:1396:A:O4'	2.15	0.46
4:B1:1406:G:H4'	4:B1:1407:U:C5'	2.46	0.46
4:B1:1610:G:H2'	4:B1:1611:G:O4'	2.15	0.46
4:B1:1641:A:C8	4:B1:1641:A:H5''	2.50	0.46
4:B1:1767:C:H6	4:B1:1767:C:H3'	1.80	0.46
4:B1:213:G:H2'	4:B1:214:U:C6	2.48	0.46
4:B1:417:C:H5'	4:B1:418:A:OP2	2.15	0.46
4:B1:668:A:C1'	4:B1:1198:G:H1'	2.45	0.46
4:B1:681:U:H6	4:B1:681:U:O5'	1.99	0.46
4:B1:694:G:H4'	4:B1:694:G:OP2	2.16	0.46
4:B1:794:A:O2'	4:B1:795:A:H4'	2.16	0.46
4:B1:795:A:O2'	4:B1:796:G:H5'	2.14	0.46
4:B1:899:U:H2'	4:B1:900:C:N1	2.29	0.46
4:B1:919:A:H2	18:BN:64:ARG:NH1	2.12	0.46
8:BD:74:GLN:O	8:BD:78:GLY:CA	2.64	0.46
9:BE:44:LEU:HD12	9:BE:79:ASP:O	2.16	0.46
13:BI:192:GLY:HA3	16:BL:20:LYS:CA	2.45	0.46
19:BO:106:LYS:HE3	19:BO:135:ILE:HG22	1.97	0.46
3:AX:42:U:C6	19:BO:151:LEU:HD23	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BP:44:ARG:HD3	20:BP:44:ARG:C	2.36	0.46
43:CF:131:ASN:HD22	81:A2:1706:U:H5'	1.81	0.46
43:CF:43:ARG:HD3	43:CF:46:ARG:HH21	1.80	0.46
44:CG:55:VAL:HA	60:CX:44:PRO:HA	1.96	0.46
44:CG:72:LYS:HD2	81:A2:2726:C:O3'	59.92	0.46
45:CH:52:LYS:HG2	45:CH:52:LYS:O	2.15	0.46
47:CJ:56:THR:OG1	47:CJ:63:ARG:HA	2.15	0.46
48:CL:150:LEU:HB2	81:A2:1359:C:H42	1.79	0.46
54:CR:112:SER:O	54:CR:113:LYS:CB	2.63	0.46
54:CR:109:TYR:HB2	54:CR:115:ILE:HD12	1.98	0.46
56:CT:105:PHE:O	56:CT:109:VAL:HG23	2.15	0.46
56:CT:12:ARG:NH2	81:A2:4235:G:H4'	2.31	0.46
81:A2:1086:A:P	81:A2:1086:A:C8	3.09	0.46
81:A2:1209:C:H4'	81:A2:1210:U:O4'	2.16	0.46
81:A2:133:C:O2'	81:A2:173:G:H5''	2.15	0.46
81:A2:1846:A:O2'	81:A2:1847:G:H3'	2.15	0.46
81:A2:1861:G:H8	81:A2:1861:G:C5'	2.26	0.46
81:A2:1910:A:H5''	81:A2:1910:A:C8	2.45	0.46
81:A2:2010:U:H2'	81:A2:2011:A:O5'	2.15	0.46
81:A2:214:C:C3'	81:A2:214:C:C6	2.97	0.46
81:A2:2526:G:C5'	81:A2:2527:G:H5''	2.45	0.46
81:A2:2568:A:C6	81:A2:2732:A:H1'	2.50	0.46
81:A2:2640:G:H21	81:A2:2653:A:H1'	1.81	0.46
81:A2:2831:G:H2'	81:A2:2832:G:H5'	1.97	0.46
81:A2:293:C:H4'	81:A2:4136:C:O4'	2.15	0.46
81:A2:337:G:H8	81:A2:337:G:O5'	1.99	0.46
81:A2:344:A:N1	81:A2:351:A:C8	2.83	0.46
81:A2:3890:U:C5	81:A2:4143:G:N7	2.84	0.46
56:CT:81:LYS:CD	81:A2:4264:A:H2	2.29	0.46
81:A2:4383:U:H6	81:A2:4383:U:C3'	2.27	0.46
81:A2:4388:A:H3'	81:A2:4389:C:C5'	2.46	0.46
81:A2:4428:U:C6	81:A2:4428:U:H3'	2.50	0.46
81:A2:4434:A:C2	81:A2:4442:U:C2	3.04	0.46
81:A2:4541:G:C2'	81:A2:4542:C:H5'	2.46	0.46
81:A2:4572:C:H6	81:A2:4572:C:O5'	1.98	0.46
81:A2:4820:C:H6	81:A2:4820:C:O5'	1.99	0.46
81:A2:728:G:O2'	81:A2:729:C:H5'	2.15	0.46
81:A2:969:C:OP2	81:A2:979:C:C5	2.69	0.46
82:A3:128:C:H2'	82:A3:129:C:C6	2.50	0.46
82:A3:19:C:H2'	82:A3:20:A:H8	1.81	0.46
40:CC:51:PRO:HB3	82:A3:27:U:O2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1006:C:O5'	4:B1:1006:C:H6	1.98	0.46
4:B1:1284:A:H3'	4:B1:1285:G:C4'	2.46	0.46
4:B1:1284:A:C4	4:B1:1286:G:H5''	2.50	0.46
4:B1:1614:A:H2'	4:B1:1615:U:C6	2.47	0.46
4:B1:1676:U:H3'	4:B1:1677:U:H5''	1.98	0.46
4:B1:167:G:H4'	11:BG:8:PRO:O	2.15	0.46
4:B1:1214:A:H61	4:B1:1685:U:H3	1.64	0.46
4:B1:1697:A:O2'	4:B1:1698:C:P	2.73	0.46
4:B1:1767:C:C3'	4:B1:1767:C:C6	2.99	0.46
4:B1:217:A:C2'	4:B1:218:U:H5'	2.46	0.46
4:B1:301:A:C2'	4:B1:302:A:C8	2.84	0.46
4:B1:593:C:P	4:B1:593:C:C6	3.09	0.46
4:B1:621:C:H2'	4:B1:621:C:O2	2.15	0.46
4:B1:901:G:H8	4:B1:901:G:P	2.38	0.46
4:B1:970:G:C5	81:A2:3680:A:C5'	2.83	0.46
5:BA:178:LEU:O	5:BA:182:VAL:HG23	2.15	0.46
6:BB:30:TRP:CD1	6:BB:48:LEU:HB3	2.50	0.46
7:BC:255:LEU:HG	7:BC:255:LEU:O	2.15	0.46
7:BC:82:TYR:CD1	26:BV:26:ALA:HB1	2.51	0.46
8:BD:37:VAL:CG1	8:BD:50:ILE:HG12	2.45	0.46
10:BF:78:MET:O	10:BF:79:HIS:HB3	2.15	0.46
12:BH:181:THR:HG22	12:BH:183:LYS:HD3	1.97	0.46
12:BH:53:VAL:HG11	12:BH:171:GLU:HG3	1.97	0.46
13:BI:83:TYR:N	13:BI:91:VAL:HG21	2.31	0.46
14:BJ:169:ARG:H	14:BJ:170:PRO:HD3	1.77	0.46
20:BP:85:ILE:CD1	20:BP:111:MET:HB3	2.45	0.46
23:BS:27:ALA:HB2	23:BS:45:LEU:HD21	1.97	0.46
39:CB:301:ASN:OD1	39:CB:311:ASP:HA	2.16	0.46
39:CB:41:VAL:HG13	39:CB:185:VAL:CG2	2.45	0.46
40:CC:303:ARG:NH2	81:A2:1428:G:H5''	2.30	0.46
40:CC:48:ASN:HA	81:A2:1352:A:H5'	1.96	0.46
40:CC:329:ASN:HB2	43:CF:188:GLU:OE2	2.15	0.46
44:CG:105:GLU:OE2	44:CG:113:ARG:HB2	2.16	0.46
45:CH:96:TYR:HB3	45:CH:101:ILE:CD1	2.45	0.46
48:CL:24:THR:HB	48:CL:26:PHE:CE2	2.51	0.46
48:CL:46:ILE:O	48:CL:47:ALA:HB3	2.16	0.46
50:CN:168:GLY:O	50:CN:172:ARG:HG3	2.15	0.46
51:CO:110:PRO:HB2	51:CO:111:PRO:HD3	1.96	0.46
51:CO:181:ALA:O	51:CO:187:LYS:CD	2.63	0.46
54:CR:41:ILE:HD12	54:CR:44:LEU:HD12	1.97	0.46
55:CS:173:ASN:HB3	81:A2:4722:U:C4	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CV:29:ALA:HB2	58:CV:83:ARG:NH2	2.31	0.46
59:CW:57:ARG:NH1	59:CW:63:GLN:HE22	2.12	0.46
81:A2:1086:A:OP1	83:A4:107:G:C5'	2.64	0.46
81:A2:1224:G:H3'	81:A2:1225:C:C5'	2.22	0.46
48:CL:156:PRO:CA	81:A2:1359:C:C5	2.99	0.46
53:CQ:72:LEU:HG	81:A2:1436:G:OP1	2.16	0.46
81:A2:1565:G:H3'	81:A2:1566:G:H8	1.80	0.46
43:CF:131:ASN:HD22	81:A2:1706:U:C5'	2.28	0.46
81:A2:1886:A:H8	81:A2:1886:A:O5'	1.98	0.46
81:A2:2342:C:H5''	81:A2:2342:C:C6	2.46	0.46
81:A2:2386:U:H3'	81:A2:2386:U:O2	2.15	0.46
62:CZ:104:PRO:HG2	81:A2:2530:A:N1	2.31	0.46
81:A2:2548:C:H2'	81:A2:2548:C:O2	2.16	0.46
81:A2:255:C:O2	81:A2:255:C:H2'	2.15	0.46
81:A2:2566:C:O2	81:A2:2566:C:H2'	2.16	0.46
81:A2:2587:G:O3'	81:A2:2665:G:H5''	2.15	0.46
81:A2:2640:G:C2'	81:A2:2641:G:H5'	2.46	0.46
81:A2:351:A:N3	82:A3:24:G:C1'	2.79	0.46
81:A2:3664:U:H6	81:A2:3664:U:H5''	1.80	0.46
2:AW:56:C:H5''	81:A2:4014:A:N3	2.30	0.46
81:A2:4177:G:H4'	81:A2:4263:C:H1'	1.97	0.46
81:A2:4325:C:H2'	81:A2:4326:A:H8	1.75	0.46
81:A2:4479:C:C6	81:A2:4479:C:H3'	2.48	0.46
81:A2:4675:C:H6	81:A2:4675:C:O5'	1.99	0.46
81:A2:472:G:H4'	81:A2:472:G:OP1	2.16	0.46
81:A2:4623:G:H4'	81:A2:4958:U:O3'	2.16	0.46
81:A2:718:G:H21	81:A2:721:A:N6	2.13	0.46
81:A2:931:C:H2'	81:A2:932:C:H6	1.81	0.46
81:A2:8:U:O4	81:A2:9:C:H5	1.98	0.46
81:A2:409:A:C6	82:A3:17:A:C1'	2.99	0.46
82:A3:76:C:H2'	82:A3:77:A:C8	2.51	0.46
41:CD:260:GLU:CG	83:A4:119:U:H3'	2.46	0.46
4:B1:1085:C:H1'	4:B1:1086:G:H5''	1.96	0.46
4:B1:1137:U:C6	4:B1:1137:U:OP2	2.68	0.46
4:B1:1344:A:H5''	4:B1:1370:A:H4'	1.96	0.46
4:B1:1396:A:H2	4:B1:1449:G:N2	2.12	0.46
4:B1:193:C:C4'	4:B1:209:A:C6	2.93	0.46
4:B1:229:A:N1	4:B1:900:C:C1'	2.68	0.46
4:B1:527:C:H6	4:B1:527:C:C5'	2.28	0.46
4:B1:600:G:C2	4:B1:601:G:C5	3.03	0.46
4:B1:743:U:O2	4:B1:743:U:H2'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:798:G:N3	4:B1:798:G:H3'	2.31	0.46
4:B1:831:G:H2'	4:B1:832:G:H8	1.81	0.46
4:B1:831:G:H2'	4:B1:832:G:C8	2.51	0.46
4:B1:884:C:C2'	4:B1:885:U:H5'	2.45	0.46
4:B1:891:G:O5'	4:B1:891:G:H8	1.98	0.46
4:B1:906:U:H2'	4:B1:907:G:C8	2.49	0.46
4:B1:927:C:C2'	4:B1:928:G:H5'	2.46	0.46
6:BB:105:LEU:HD11	6:BB:109:LYS:HG2	1.97	0.46
7:BC:167:ARG:C	7:BC:181:PRO:HD3	2.35	0.46
4:B1:64:A:P	11:BG:136:LYS:HZ1	2.38	0.46
13:BI:144:LYS:O	13:BI:147:LYS:HG2	2.16	0.46
13:BI:65:PHE:O	13:BI:73:THR:HA	2.15	0.46
8:BD:62:LYS:HB3	15:BK:94:LEU:O	2.16	0.46
23:BS:39:ARG:HH11	24:BT:39:LEU:H	1.63	0.46
26:BV:67:ASP:O	26:BV:70:LEU:HB3	2.16	0.46
27:BW:18:GLU:HG3	27:BW:69:LEU:HB2	1.96	0.46
4:B1:1600:G:P	30:BZ:43:LYS:HD2	2.56	0.46
39:CB:254:ILE:HB	81:A2:3866:G:H4'	1.97	0.46
40:CC:149:GLU:O	40:CC:152:LEU:HD23	2.15	0.46
40:CC:54:VAL:CG2	40:CC:55:SER:N	2.76	0.46
43:CF:232:ASP:HA	43:CF:236:ARG:NH2	2.31	0.46
44:CG:55:VAL:HG13	44:CG:57:TRP:CZ2	2.51	0.46
45:CH:86:LEU:HD13	45:CH:186:THR:HG21	1.96	0.46
45:CH:59:LYS:HZ2	45:CH:66:GLU:HB3	1.80	0.46
46:CI:99:ILE:O	46:CI:120:GLY:HA3	2.15	0.46
50:CN:183:THR:CB	50:CN:188:ARG:HB3	2.45	0.46
49:CM:119:ARG:CA	51:CO:190:ASP:HB3	2.45	0.46
53:CQ:101:CYS:HA	53:CQ:121:LEU:O	2.15	0.46
61:CY:56:GLN:HA	61:CY:65:GLN:O	2.16	0.46
43:CF:63:GLN:CD	81:A2:1191:G:H4'	2.36	0.46
81:A2:1198:G:C4	81:A2:1199:G:C8	3.04	0.46
81:A2:122:U:C4	81:A2:123:C:N4	2.83	0.46
81:A2:153:G:H8	81:A2:153:G:O5'	1.98	0.46
81:A2:1587:G:O5'	81:A2:1587:G:H8	1.99	0.46
81:A2:230:U:O2	81:A2:2280:U:C5	2.69	0.46
81:A2:2283:A:C2	81:A2:2284:A:N9	2.84	0.46
81:A2:2397:A:C3'	81:A2:2398:G:C5'	2.94	0.46
81:A2:2469:C:H2'	81:A2:2470:G:N7	2.31	0.46
81:A2:2503:C:O5'	81:A2:2503:C:C6	2.68	0.46
81:A2:2518:G:C2'	81:A2:2519:G:H5''	2.46	0.46
81:A2:2685:U:C3'	81:A2:2685:U:C6	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3613:U:H2'	81:A2:4514:G:O2'	2.15	0.46
81:A2:385:G:H3'	81:A2:387:A:OP2	2.16	0.46
81:A2:4177:G:H2'	81:A2:4178:U:C6	2.50	0.46
41:CD:176:SER:HG	81:A2:4283:A:H5''	1.79	0.46
81:A2:431:U:H2'	81:A2:432:G:H8	1.80	0.46
81:A2:434:G:C6	81:A2:1284:C:N4	2.84	0.46
81:A2:4527:G:H5''	81:A2:4527:G:C8	2.51	0.46
81:A2:4645:U:C2'	81:A2:4646:G:H5'	2.46	0.46
39:CB:25:HIS:CD2	81:A2:4939:C:H5''	2.47	0.46
81:A2:83:C:C2	81:A2:100:C:N4	2.83	0.46
82:A3:14:U:H3'	82:A3:15:G:H8	1.81	0.46
4:B1:1036:A:O5'	4:B1:1036:A:C8	2.62	0.46
4:B1:1058:A:C2'	4:B1:1059:G:H5'	2.46	0.46
4:B1:1013:U:C1'	4:B1:1104:G:H1'	2.44	0.46
4:B1:1142:G:N2	4:B1:1145:A:OP2	2.48	0.46
4:B1:1202:U:H3	4:B1:1697:A:H61	1.62	0.46
4:B1:1330:G:C5'	4:B1:1331:C:H5'	2.45	0.46
4:B1:1414:A:C6	4:B1:1415:C:N4	2.84	0.46
4:B1:1208:A:C6	4:B1:1692:U:O2	2.68	0.46
4:B1:1204:A:O2'	4:B1:1699:A:H2'	2.16	0.46
4:B1:350:C:C2'	4:B1:351:G:H5'	2.43	0.46
4:B1:36:U:C2'	4:B1:36:U:O2	2.63	0.46
4:B1:388:U:H3'	4:B1:389:A:H8	1.81	0.46
4:B1:450:C:H6	4:B1:450:C:H5''	1.80	0.46
4:B1:532:C:C5	4:B1:533:A:C8	3.04	0.46
4:B1:558:G:OP2	4:B1:558:G:C8	2.68	0.46
4:B1:563:G:C5	4:B1:564:A:N7	2.83	0.46
4:B1:21:U:H3	4:B1:654:A:H2	1.64	0.46
4:B1:841:G:H8	29:BY:12:PHE:CE2	2.33	0.46
5:BA:8:LEU:HG	5:BA:191:ARG:CZ	2.46	0.46
9:BE:87:MET:CE	9:BE:123:LEU:HD12	2.45	0.46
10:BF:92:ILE:HG23	10:BF:170:ALA:HB2	1.97	0.46
12:BH:31:GLU:HB3	12:BH:40:LEU:HD13	1.97	0.46
5:BA:12:GLU:HB3	22:BR:115:SER:HB2	1.98	0.46
4:B1:1665:G:C2	24:BT:87:VAL:HB	2.51	0.46
25:BU:24:LEU:N	25:BU:24:LEU:HD23	2.30	0.46
25:BU:66:ARG:H	25:BU:66:ARG:HD2	1.80	0.46
39:CB:261:ARG:HA	81:A2:3867:G:N2	2.31	0.46
40:CC:224:ILE:O	40:CC:227:ILE:HG22	2.16	0.46
40:CC:304:ALA:HA	40:CC:305:PRO:HD3	1.82	0.46
41:CD:191:ASN:HD22	41:CD:194:VAL:HG23	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:CI:209:TRP:O	46:CI:212:LEU:O	2.33	0.46
48:CL:156:PRO:HB3	81:A2:1359:C:C4	2.49	0.46
61:CY:123:ALA:CA	61:CY:126:ARG:CB	2.93	0.46
81:A2:1056:C:C6	81:A2:1056:C:H5'	2.51	0.46
81:A2:1092:C:H6	81:A2:1092:C:O5'	1.97	0.46
81:A2:1137:G:H2'	81:A2:1138:G:H8	1.79	0.46
81:A2:1278:C:H6	81:A2:1278:C:O5'	1.98	0.46
81:A2:1294:C:C2	81:A2:1295:C:C4	3.04	0.46
81:A2:1299:U:H2'	81:A2:1301:G:C8	2.51	0.46
81:A2:1412:G:N2	81:A2:1432:A:C2	2.83	0.46
81:A2:1437:C:C3'	81:A2:1438:A:C8	2.98	0.46
81:A2:1493:U:H2'	81:A2:1494:A:O4'	2.15	0.46
81:A2:1531:G:C4	81:A2:1553:G:N2	2.84	0.46
81:A2:183:G:O2'	81:A2:184:U:H5'	2.15	0.46
81:A2:1858:G:C3'	81:A2:1859:C:C5'	2.93	0.46
81:A2:2464:G:O6	81:A2:2466:C:H1'	2.16	0.46
81:A2:2579:G:C6	81:A2:2719:G:O6	2.69	0.46
81:A2:2831:G:C3'	81:A2:2832:G:C5'	2.93	0.46
81:A2:301:G:C8	81:A2:301:G:H3'	2.51	0.46
81:A2:309:A:H2'	81:A2:310:A:O4'	2.16	0.46
81:A2:24:G:N2	81:A2:332:G:O4'	2.43	0.46
81:A2:356:U:C2'	81:A2:356:U:O2	2.62	0.46
81:A2:3574:C:HO2'	81:A2:3575:U:H6	1.55	0.46
81:A2:3667:G:H2'	81:A2:3668:C:C6	2.51	0.46
81:A2:3758:C:H5	81:A2:3759:U:C6	2.34	0.46
81:A2:4072:A:O5'	81:A2:4072:A:C8	2.69	0.46
81:A2:4083:C:H1'	81:A2:4084:U:OP1	2.16	0.46
81:A2:4135:G:H2'	81:A2:4136:C:C6	2.50	0.46
81:A2:4314:U:O2	81:A2:4314:U:C2'	2.63	0.46
81:A2:4433:A:H4'	81:A2:4434:A:OP1	2.16	0.46
81:A2:4549:A:O3'	81:A2:4550:A:H4'	2.16	0.46
81:A2:470:G:H2'	81:A2:471:C:H5'	1.96	0.46
81:A2:4882:G:N2	81:A2:4883:C:C6	2.84	0.46
81:A2:951:C:C6	81:A2:952:C:C5	3.04	0.46
81:A2:962:G:P	81:A2:962:G:H8	2.39	0.46
82:A3:72:A:C4'	82:A3:87:G:H21	2.27	0.46
4:B1:125:C:C6	4:B1:125:C:P	3.08	0.46
4:B1:1403:C:C6	4:B1:1404:U:C6	3.04	0.46
4:B1:1404:U:OP2	4:B1:1404:U:H6	1.99	0.46
4:B1:157:U:O5'	4:B1:157:U:H6	1.99	0.46
4:B1:158:A:H62	11:BG:59:GLN:HE21	1.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1778:C:H6	4:B1:1778:C:O5'	1.99	0.46
4:B1:212:C:H2'	4:B1:212:C:O2	2.15	0.46
4:B1:235:A:C4	4:B1:236:A:C8	3.04	0.46
4:B1:377:G:H2'	4:B1:378:U:H6	1.75	0.46
4:B1:395:G:C8	4:B1:395:G:O5'	2.69	0.46
4:B1:423:U:C4	4:B1:424:C:C5	3.04	0.46
4:B1:441:C:C5	4:B1:448:A:N3	2.84	0.46
4:B1:598:G:C8	4:B1:598:G:O5'	2.69	0.46
4:B1:644:G:H2'	4:B1:645:C:C6	2.51	0.46
4:B1:836:G:OP1	4:B1:836:G:H8	1.96	0.46
4:B1:876:C:H6	4:B1:876:C:H3'	1.81	0.46
4:B1:1352:G:H5''	5:BA:139:TYR:CZ	2.50	0.46
6:BB:124:HIS:HB3	6:BB:138:PHE:CE2	2.50	0.46
6:BB:171:ILE:HG12	6:BB:174:ARG:HH22	1.80	0.46
10:BF:91:ARG:NE	10:BF:91:ARG:HA	2.31	0.46
11:BG:84:TYR:OH	11:BG:91:GLU:HB3	2.16	0.46
14:BJ:75:ASN:O	14:BJ:79:ARG:HB2	2.16	0.46
20:BP:22:LEU:HD11	20:BP:109:PRO:CG	2.45	0.46
24:BT:41:LYS:HG2	24:BT:94:ARG:O	2.15	0.46
30:BZ:54:THR:HB	30:BZ:58:LEU:HD11	1.97	0.46
38:CA:47:ASP:HA	38:CA:84:THR:CG2	2.45	0.46
39:CB:279:GLU:HG3	39:CB:338:VAL:HG23	1.98	0.46
43:CF:66:ARG:HA	43:CF:69:ILE:HG12	1.98	0.46
44:CG:38:ASN:HB2	81:A2:4082:G:N2	2.31	0.46
46:CI:180:GLU:O	46:CI:184:MET:HE2	2.15	0.46
47:CJ:13:ARG:O	47:CJ:14:GLU:O	2.33	0.46
55:CS:164:LYS:HB2	55:CS:165:PRO:HD3	1.94	0.46
81:A2:1312:C:H2'	81:A2:1313:A:H8	1.79	0.46
81:A2:1349:C:C2'	82:A3:30:U:H4'	2.46	0.46
81:A2:1424:G:H2'	81:A2:1425:U:C5'	2.46	0.46
81:A2:1839:U:H2'	81:A2:1840:U:O4'	2.16	0.46
81:A2:1872:C:C3'	81:A2:1873:G:C5'	2.94	0.46
61:CY:122:LYS:HZ2	81:A2:194:A:H5''	1.81	0.46
81:A2:2005:U:OP2	81:A2:2005:U:H2'	2.15	0.46
81:A2:2015:C:O5'	81:A2:2015:C:H6	1.98	0.46
81:A2:2034:G:C5	81:A2:2036:G:N7	2.84	0.46
81:A2:219:C:C2'	81:A2:220:G:C5'	2.93	0.46
81:A2:2310:G:C6	81:A2:2311:C:C5	3.04	0.46
81:A2:2400:A:C8	81:A2:2400:A:OP2	2.69	0.46
81:A2:2587:G:O3'	81:A2:2665:G:C4'	2.63	0.46
81:A2:2717:U:H4'	81:A2:2718:U:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3688:A:H2'	81:A2:3688:A:N3	2.30	0.46
81:A2:3744:A:H2'	81:A2:3745:G:H5''	1.97	0.46
81:A2:3722:G:O4'	81:A2:3745:G:C8	2.69	0.46
81:A2:3667:G:H1'	81:A2:3747:U:O2	2.16	0.46
81:A2:3750:C:H5''	81:A2:3790:A:O3'	2.16	0.46
81:A2:382:U:O2	81:A2:391:A:H2	1.99	0.46
81:A2:4109:C:O5'	81:A2:4109:C:H6	1.97	0.46
81:A2:4157:G:H2'	81:A2:4158:G:O4'	2.16	0.46
81:A2:4733:C:H1'	81:A2:4734:C:H5	1.81	0.46
81:A2:4735:G:H2'	81:A2:4736:C:C4'	2.34	0.46
81:A2:4738:U:OP2	81:A2:4740:U:C5	2.69	0.46
81:A2:476:C:P	81:A2:658:G:C5'	3.04	0.46
81:A2:4883:C:C2'	81:A2:4884:C:H5'	2.45	0.46
81:A2:943:G:H1'	81:A2:944:A:P	2.56	0.46
81:A2:21:G:H1'	82:A3:103:A:N3	2.30	0.46
44:CG:57:TRP:HZ3	82:A3:149:G:H5'	1.72	0.46
82:A3:58:G:C5'	82:A3:97:A:C2	2.98	0.46
83:A4:22:A:C6	83:A4:23:A:C6	3.04	0.46
47:CJ:46:GLN:HB3	83:A4:39:C:O2'	2.15	0.46
4:B1:1017:U:C5	4:B1:1018:U:C5	3.03	0.46
4:B1:1101:U:C3'	4:B1:1101:U:C6	2.98	0.46
4:B1:1175:G:H2'	4:B1:1176:G:C8	2.50	0.46
4:B1:1285:G:C4'	4:B1:1286:G:O5'	2.61	0.46
4:B1:1618:C:H5''	4:B1:1618:C:C6	2.49	0.46
4:B1:1648:G:H21	21:BQ:128:GLU:CB	2.29	0.46
4:B1:1649:U:N3	4:B1:1675:A:C2	2.80	0.46
4:B1:1766:C:H2'	4:B1:1766:C:O2	2.15	0.46
4:B1:311:C:O2	4:B1:311:C:C2'	2.63	0.46
4:B1:656:G:H4'	4:B1:657:U:H5'	1.98	0.46
6:BB:140:VAL:HB	6:BB:213:ARG:HH12	1.80	0.46
8:BD:58:VAL:HA	8:BD:65:ARG:HD3	1.97	0.46
9:BE:108:ARG:NH2	9:BE:240:ARG:HH12	2.14	0.46
10:BF:100:ILE:CD1	10:BF:177:LEU:HD22	2.46	0.46
13:BI:131:PRO:HG3	13:BI:147:LYS:HZ1	1.81	0.46
20:BP:34:MET:O	20:BP:42:ARG:HG2	2.16	0.46
39:CB:105:VAL:HG13	39:CB:153:MET:HE3	1.96	0.46
41:CD:104:LEU:HD13	41:CD:247:ILE:HG23	1.97	0.46
50:CN:50:ARG:HG3	81:A2:113:A:H1'	1.98	0.46
53:CQ:81:VAL:O	53:CQ:138:LEU:HD12	2.16	0.46
55:CS:7:LEU:CD1	55:CS:35:PRO:HD3	2.46	0.46
56:CT:2:THR:HG23	56:CT:3:ASN:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CX:119:ILE:HD12	60:CX:140:LEU:CD2	2.46	0.46
62:CZ:9:LYS:HE2	62:CZ:82:PRO:HB2	1.97	0.46
41:CD:277:LYS:NZ	81:A2:1087:C:H5'	2.31	0.46
81:A2:1281:C:C2'	81:A2:1282:U:OP1	2.64	0.46
81:A2:12:A:C8	81:A2:12:A:H5''	2.51	0.46
81:A2:1305:C:H4'	81:A2:1306:A:O5'	2.16	0.46
81:A2:1318:G:H8	81:A2:1318:G:P	2.38	0.46
81:A2:1363:G:H2'	81:A2:1364:C:C6	2.51	0.46
38:CA:194:ASN:ND2	81:A2:1518:G:H4'	2.30	0.46
81:A2:1773:A:H2'	81:A2:1774:A:H5'	1.97	0.46
81:A2:1867:U:H3'	81:A2:1868:G:N7	2.31	0.46
81:A2:1942:A:N3	81:A2:4654:G:C8	2.83	0.46
81:A2:2009:C:H5''	81:A2:2009:C:C6	2.51	0.46
81:A2:2011:A:H5''	81:A2:2011:A:H8	1.79	0.46
81:A2:2054:G:O5'	81:A2:2054:G:H8	1.98	0.46
81:A2:2061:C:C5	81:A2:2062:C:C2	3.04	0.46
81:A2:2589:G:OP2	81:A2:2589:G:C8	2.69	0.46
81:A2:2609:U:C2'	81:A2:2610:U:C5	2.95	0.46
81:A2:288:U:O5'	81:A2:288:U:H6	1.98	0.46
81:A2:3662:U:H2'	81:A2:3663:U:H5'	1.98	0.46
81:A2:3898:G:H2'	81:A2:3899:U:O4'	2.15	0.46
81:A2:3911:A:C2'	81:A2:3912:A:H5'	2.45	0.46
81:A2:4151:G:H2'	81:A2:4152:A:O4'	2.16	0.46
81:A2:4165:A:C8	81:A2:4335:C:N4	2.84	0.46
81:A2:416:U:C2'	81:A2:417:A:H5'	2.45	0.46
47:CJ:98:ASN:OD1	81:A2:4210:G:H5'	2.16	0.46
81:A2:4428:U:H6	81:A2:4428:U:O5'	1.99	0.46
81:A2:4449:G:C2	81:A2:4668:A:H2'	2.51	0.46
81:A2:4580:U:H3'	81:A2:4580:U:C6	2.51	0.46
81:A2:4599:G:N1	81:A2:4621:G:C2	2.84	0.46
81:A2:4699:G:C4'	81:A2:4700:C:OP2	2.64	0.46
81:A2:473:G:C2'	81:A2:473:G:N3	2.78	0.46
42:CE:217:PHE:HB2	81:A2:4895:C:HO2'	1.79	0.46
81:A2:653:C:H6	81:A2:653:C:O5'	1.98	0.46
81:A2:69:A:N3	81:A2:69:A:C3'	2.78	0.46
81:A2:934:G:H2'	81:A2:935:G:H8	1.80	0.46
81:A2:943:G:C4'	81:A2:944:A:OP1	2.64	0.46
81:A2:948:A:C5	81:A2:949:G:N1	2.84	0.46
82:A3:90:C:H6	82:A3:90:C:O5'	1.99	0.46
83:A4:66:G:N2	83:A4:67:C:C1'	2.79	0.46
2:AW:14:A:H2'	2:AW:15:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AX:60:U:C5	3:AX:61:U:H5	2.33	0.46
4:B1:1225:U:C6	4:B1:1225:U:O5'	2.69	0.46
4:B1:1387:G:H2'	4:B1:1388:A:H8	1.80	0.46
4:B1:1606:G:OP2	4:B1:1606:G:C8	2.61	0.46
4:B1:1704:C:O5'	4:B1:1704:C:H6	1.98	0.46
4:B1:1709:G:H2'	4:B1:1710:C:H5''	1.97	0.46
4:B1:1780:G:OP2	4:B1:1781:A:C8	2.69	0.46
4:B1:1850:A:H8	4:B1:1850:A:O5'	1.99	0.46
4:B1:494:C:O2'	4:B1:495:U:H5'	2.16	0.46
5:BA:62:ALA:HB1	5:BA:185:MET:SD	2.56	0.46
6:BB:160:GLN:HE21	6:BB:204:ILE:CG2	2.28	0.46
12:BH:147:LYS:HD2	12:BH:151:SER:HB2	1.97	0.46
21:BQ:33:LYS:HD3	21:BQ:69:ARG:CD	2.45	0.46
24:BT:75:MET:HA	24:BT:78:ILE:HG22	1.98	0.46
28:BX:68:LYS:CB	28:BX:85:VAL:HB	2.45	0.46
28:BX:98:ASP:O	28:BX:100:VAL:HG23	2.16	0.46
29:BY:97:TYR:O	29:BY:98:GLU:CB	2.63	0.46
40:CC:206:GLY:HA3	40:CC:226:GLY:O	2.15	0.46
43:CF:221:LYS:O	43:CF:222:LYS:HD2	2.16	0.46
44:CG:104:PRO:CG	44:CG:194:VAL:HG23	2.46	0.46
48:CL:194:ILE:O	48:CL:197:LYS:HB3	2.16	0.46
51:CO:173:GLN:HE21	51:CO:177:LEU:HG	1.81	0.46
51:CO:182:GLU:HA	51:CO:187:LYS:CE	2.46	0.46
54:CR:35:ALA:HB3	54:CR:44:LEU:HD11	1.98	0.46
55:CS:69:GLU:OE2	55:CS:76:LYS:HE3	2.15	0.46
61:CY:121:ARG:O	61:CY:126:ARG:N	2.48	0.46
81:A2:100:C:O2	81:A2:100:C:C2'	2.62	0.46
81:A2:978:G:H1	81:A2:1051:C:N4	2.13	0.46
81:A2:1334:A:H4'	81:A2:1335:G:O5'	2.15	0.46
81:A2:1336:U:OP2	81:A2:1336:U:H6	1.99	0.46
81:A2:1401:G:C2'	81:A2:1402:G:H5'	2.44	0.46
81:A2:1401:G:N1	81:A2:1445:G:O4'	2.49	0.46
81:A2:1474:G:C2'	81:A2:1475:G:C5'	2.93	0.46
81:A2:1475:G:C4'	81:A2:1476:A:OP2	2.60	0.46
81:A2:1492:U:H2'	81:A2:1493:U:H6	1.76	0.46
81:A2:1846:A:O2'	81:A2:1848:C:H5'	2.15	0.46
81:A2:1898:C:O2'	81:A2:1899:C:H3'	2.16	0.46
81:A2:212:C:C1'	81:A2:213:C:P	3.03	0.46
81:A2:2289:A:H4'	81:A2:2289:A:OP2	2.16	0.46
81:A2:2524:G:C2'	81:A2:2525:C:H5'	2.46	0.46
81:A2:2525:C:H2'	81:A2:2525:C:O2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2746:U:C6	81:A2:2746:U:OP2	2.69	0.46
81:A2:3746:G:O3'	81:A2:3747:U:C6	2.69	0.46
81:A2:3822:U:H2'	81:A2:3823:C:C6	2.51	0.46
81:A2:4028:U:O2'	81:A2:4029:G:H5'	2.15	0.46
81:A2:4051:U:H6	81:A2:4053:A:H1'	1.80	0.46
81:A2:4067:G:H8	81:A2:4067:G:P	2.39	0.46
81:A2:1657:C:C5	81:A2:4153:C:H5'	2.51	0.46
81:A2:424:A:H1'	81:A2:425:A:O5'	2.16	0.46
81:A2:4287:C:C2'	81:A2:4288:G:H5'	2.46	0.46
81:A2:4345:A:N7	81:A2:4492:U:H4'	2.31	0.46
39:CB:18:PRO:HA	81:A2:4527:G:OP2	2.15	0.46
81:A2:4818:G:C6	81:A2:4819:U:C4	3.04	0.46
81:A2:4848:A:C5'	81:A2:4849:A:OP2	2.59	0.46
81:A2:62:A:H2'	81:A2:63:G:H8	1.78	0.46
81:A2:642:C:H6	81:A2:642:C:C5'	2.23	0.46
81:A2:85:G:N2	81:A2:97:G:C2'	2.78	0.46
81:A2:929:U:P	81:A2:929:U:C6	3.09	0.46
82:A3:32:C:H2'	82:A3:33:G:C8	2.50	0.46
82:A3:58:G:H5''	82:A3:97:A:H2	1.79	0.46
4:B1:1494:U:C1'	4:B1:1495:G:OP2	2.64	0.46
4:B1:154:U:O4'	11:BG:13:GLN:HB3	2.16	0.46
4:B1:1688:C:C2	4:B1:1689:C:C5	3.04	0.46
4:B1:74:G:N3	4:B1:74:G:H2'	2.31	0.46
4:B1:906:U:O3'	54:CR:165:LYS:NZ	2.43	0.46
3:AX:43:U:OP2	4:B1:961:G:C4'	2.64	0.46
4:B1:42:A:H4'	4:B1:98:C:OP2	2.16	0.46
5:BA:12:GLU:O	5:BA:15:VAL:HG22	2.16	0.46
6:BB:71:LEU:HA	6:BB:74:LEU:HB3	1.97	0.46
9:BE:52:LEU:HB3	9:BE:54:TYR:CD2	2.51	0.46
14:BJ:136:ARG:HD2	14:BJ:160:SER:HB2	1.97	0.46
17:BM:25:ALA:HB1	17:BM:111:VAL:HG13	1.97	0.46
4:B1:1521:C:H2'	23:BS:136:THR:OG1	2.16	0.46
28:BX:61:GLN:CB	28:BX:62:PRO:CD	2.89	0.46
41:CD:34:LYS:O	41:CD:38:ILE:HG13	2.16	0.46
44:CG:149:ASN:HB2	44:CG:151:LYS:HD3	1.98	0.46
44:CG:30:PRO:C	44:CG:31:LEU:HD12	2.36	0.46
46:CI:34:PHE:O	46:CI:88:ARG:HA	2.16	0.46
47:CJ:111:GLU:HG2	47:CJ:125:ILE:HG21	1.98	0.46
47:CJ:86:GLY:O	47:CJ:89:VAL:HB	2.16	0.46
48:CL:204:GLU:O	48:CL:206:ASP:N	2.49	0.46
81:A2:1253:G:H2'	81:A2:1254:A:H5''	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1464:C:H2'	81:A2:1465:C:H1'	1.98	0.45
81:A2:1884:U:H2'	81:A2:1885:A:C5'	2.46	0.45
81:A2:2009:C:H2'	81:A2:2010:U:C5'	2.44	0.45
81:A2:2047:A:H3'	81:A2:2047:A:C8	2.51	0.45
81:A2:2369:C:C6	81:A2:2369:C:H5'	2.51	0.45
62:CZ:105:ALA:CA	81:A2:2531:U:H1'	2.46	0.45
81:A2:2608:U:OP1	81:A2:2608:U:C6	2.69	0.45
81:A2:2718:U:O2'	81:A2:2719:G:P	2.75	0.45
81:A2:2723:A:H2'	81:A2:2724:U:O4'	2.16	0.45
81:A2:286:A:H61	81:A2:4322:A:C1'	2.30	0.45
81:A2:309:A:O2'	81:A2:310:A:H5'	2.17	0.45
81:A2:3590:A:C8	81:A2:4602:U:H1'	2.50	0.45
81:A2:399:A:C4'	81:A2:400:G:H5'	2.40	0.45
81:A2:4026:U:H2'	81:A2:4027:C:H6	1.78	0.45
81:A2:4073:G:H2'	81:A2:4073:G:N3	2.31	0.45
81:A2:422:G:H5'	81:A2:3858:G:C8	2.52	0.45
81:A2:4249:U:H2'	81:A2:4250:U:H6	1.79	0.45
81:A2:4285:A:N7	81:A2:4286:G:H1'	2.31	0.45
81:A2:2021:A:N3	81:A2:4476:G:H1'	2.31	0.45
81:A2:4845:G:H2'	81:A2:4846:G:O4'	2.14	0.45
81:A2:4869:C:H2'	81:A2:4870:G:O4'	2.16	0.45
59:CW:35:LYS:NZ	81:A2:4960:G:N7	2.64	0.45
82:A3:65:A:C2'	82:A3:66:A:H5'	2.46	0.45
46:CI:204:GLY:H	83:A4:64:G:P	2.39	0.45
83:A4:67:C:O2'	83:A4:68:C:H4'	2.16	0.45
83:A4:75:G:H1'	83:A4:76:U:OP2	2.16	0.45
4:B1:1280:G:O2'	4:B1:1281:G:H5'	2.17	0.45
4:B1:1338:G:H2'	4:B1:1339:U:C6	2.51	0.45
4:B1:133:C:C6	4:B1:134:C:H4'	2.51	0.45
4:B1:1695:A:H3'	4:B1:1696:C:C6	2.51	0.45
4:B1:1738:C:H6	4:B1:1738:C:O5'	1.99	0.45
4:B1:215:G:P	4:B1:215:G:H3'	2.55	0.45
4:B1:316:G:C6	4:B1:317:C:N4	2.84	0.45
4:B1:446:G:OP1	13:BI:49:ARG:O	2.34	0.45
4:B1:564:A:H2'	4:B1:565:G:OP1	2.15	0.45
4:B1:587:A:C2'	4:B1:592:C:H41	2.27	0.45
4:B1:69:C:C6	4:B1:69:C:C3'	2.99	0.45
4:B1:946:U:H2'	4:B1:947:G:O4'	2.17	0.45
4:B1:346:C:H5''	9:BE:38:LEU:CD1	2.46	0.45
11:BG:127:THR:CG2	11:BG:129:VAL:HG23	2.46	0.45
13:BI:37:LYS:HB2	13:BI:59:ARG:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:BM:19:GLN:HA	17:BM:88:TRP:CD1	2.51	0.45
17:BM:51:VAL:HG22	17:BM:109:VAL:O	2.16	0.45
22:BR:109:LEU:CD1	22:BR:111:PHE:HB2	2.36	0.45
23:BS:27:ALA:HB1	23:BS:41:ALA:HB1	1.97	0.45
29:BY:103:SER:HB2	29:BY:107:ARG:CG	2.46	0.45
39:CB:234:ARG:NH2	39:CB:235:TRP:HE1	2.13	0.45
41:CD:146:LEU:HB2	81:A2:4283:A:C2	2.50	0.45
40:CC:329:ASN:ND2	43:CF:188:GLU:HG2	2.32	0.45
43:CF:66:ARG:HA	43:CF:69:ILE:CG1	2.46	0.45
44:CG:194:VAL:O	44:CG:194:VAL:HG22	2.16	0.45
46:CI:156:LYS:HG3	46:CI:163:GLN:OE1	2.17	0.45
47:CJ:151:ILE:HD12	47:CJ:155:HIS:O	2.16	0.45
49:CM:123:ILE:O	49:CM:127:VAL:HG23	2.16	0.45
52:CP:91:LEU:O	52:CP:95:LEU:HD13	2.16	0.45
49:CM:49:ALA:HB2	55:CS:100:LEU:HD11	1.98	0.45
55:CS:159:LEU:O	55:CS:159:LEU:HG	2.17	0.45
62:CZ:46:ILE:HG13	62:CZ:69:LYS:O	2.16	0.45
81:A2:1085:C:C2'	81:A2:1085:C:O2	2.63	0.45
43:CF:51:TYR:CZ	81:A2:1218:A:H3'	2.51	0.45
43:CF:37:PHE:CE1	81:A2:1250:A:C4'	3.00	0.45
81:A2:12:A:H2	81:A2:14:C:N4	2.14	0.45
81:A2:1499:C:O2'	81:A2:1500:C:H5'	2.16	0.45
81:A2:1569:C:C2'	81:A2:1570:U:H4'	2.47	0.45
81:A2:181:U:H4'	81:A2:182:C:O5'	2.16	0.45
81:A2:1878:C:H2'	81:A2:1879:C:O4'	2.16	0.45
81:A2:2053:G:H2'	81:A2:2054:G:O5'	2.16	0.45
81:A2:2339:U:C5	81:A2:3828:G:C2	3.04	0.45
81:A2:2471:U:H2'	81:A2:2472:U:C6	2.51	0.45
81:A2:254:G:C2'	81:A2:255:C:OP1	2.65	0.45
81:A2:3725:A:N1	81:A2:3726:G:C6	2.85	0.45
81:A2:3840:A:H2'	81:A2:3841:A:C8	2.51	0.45
81:A2:3940:G:O5'	81:A2:3940:G:H8	1.99	0.45
81:A2:4072:A:C2'	81:A2:4073:G:H5'	2.46	0.45
81:A2:409:A:C6	82:A3:17:A:H1'	2.51	0.45
81:A2:4511:U:H2'	81:A2:4512:U:C6	2.50	0.45
42:CE:214:ASP:CG	81:A2:4896:G:C4	2.89	0.45
81:A2:488:G:H1	81:A2:658:G:H1'	1.81	0.45
82:A3:115:G:H2'	82:A3:116:C:C6	2.51	0.45
4:B1:1529:C:H5'	4:B1:1666:C:OP1	2.16	0.45
4:B1:1601:A:N1	4:B1:1635:C:C4	2.84	0.45
4:B1:1532:C:H3'	4:B1:1637:A:H62	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1695:A:C6	4:B1:1696:C:O2	2.69	0.45
4:B1:1808:U:H6	4:B1:1808:U:O5'	1.99	0.45
4:B1:428:U:C3'	4:B1:429:C:H6	2.28	0.45
4:B1:958:G:C6	4:B1:959:G:C2	3.03	0.45
6:BB:158:HIS:O	6:BB:161:VAL:HB	2.17	0.45
9:BE:29:PRO:HB3	9:BE:45:ILE:HG21	1.99	0.45
10:BF:184:SER:O	10:BF:186:ASN:N	2.49	0.45
11:BG:90:GLY:C	11:BG:92:ARG:H	2.20	0.45
12:BH:63:PHE:CD2	12:BH:95:ILE:HD11	2.51	0.45
4:B1:1740:C:H5''	13:BI:58:LEU:HD11	1.97	0.45
16:BL:128:VAL:HG12	16:BL:142:VAL:HA	1.97	0.45
17:BM:61:TYR:CE1	17:BM:107:SER:CB	2.98	0.45
17:BM:89:VAL:CG1	17:BM:91:LEU:HG	2.46	0.45
5:BA:40:LYS:HZ2	22:BR:101:ASP:HA	1.82	0.45
24:BT:76:THR:CG2	24:BT:95:GLY:H	2.28	0.45
39:CB:158:GLN:HG3	39:CB:159:VAL:HG13	1.99	0.45
39:CB:317:LEU:CD1	81:A2:4956:U:H5''	2.46	0.45
39:CB:41:VAL:HG22	39:CB:187:GLY:HA3	1.97	0.45
41:CD:98:ALA:O	41:CD:162:ALA:HA	2.16	0.45
44:CG:194:VAL:CG1	44:CG:199:CYS:SG	3.05	0.45
46:CI:193:ASP:O	46:CI:194:GLY:C	2.55	0.45
47:CJ:63:ARG:NH2	82:A3:57:C:N4	128.97	0.45
51:CO:33:VAL:O	51:CO:102:LEU:HD22	2.16	0.45
52:CP:30:ARG:HD3	52:CP:30:ARG:C	2.36	0.45
52:CP:54:GLN:HA	52:CP:83:TRP:CD1	2.51	0.45
57:CU:89:LYS:NZ	81:A2:2603:U:H2'	2.31	0.45
58:CV:89:ARG:HD3	58:CV:95:PHE:CE1	2.51	0.45
61:CY:45:ARG:HD2	81:A2:195:A:C5'	2.47	0.45
81:A2:1049:G:N3	81:A2:1049:G:H2'	2.32	0.45
81:A2:1075:A:H2'	81:A2:1076:C:H6	1.80	0.45
81:A2:1163:C:H2'	81:A2:1164:A:C5'	2.42	0.45
81:A2:1178:G:C3'	81:A2:1179:G:C5'	2.92	0.45
81:A2:134:G:H3'	81:A2:135:G:C4	2.52	0.45
81:A2:1772:A:N3	81:A2:1772:A:H2'	2.31	0.45
81:A2:1789:G:H1	81:A2:1807:C:N4	2.12	0.45
45:CH:64:ARG:HB3	81:A2:1927:U:H5''	1.97	0.45
81:A2:2019:A:C1'	81:A2:4424:A:C2	2.99	0.45
81:A2:2260:G:H3'	81:A2:2261:A:C8	2.51	0.45
81:A2:2276:A:N3	81:A2:2276:A:H2'	2.30	0.45
81:A2:2308:A:H1'	81:A2:2309:G:H2'	1.99	0.45
81:A2:2309:G:C1'	81:A2:2310:G:C8	2.89	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2427:G:N3	81:A2:2427:G:H2'	2.31	0.45
81:A2:2549:C:C6	81:A2:2549:C:O5'	2.70	0.45
81:A2:2552:U:C3'	81:A2:2552:U:H6	2.28	0.45
81:A2:2653:A:N6	81:A2:2654:G:N1	2.64	0.45
81:A2:286:A:C5'	81:A2:287:A:C8	2.99	0.45
81:A2:3909:U:H6	81:A2:3909:U:O5'	1.98	0.45
81:A2:4025:C:H2'	81:A2:4026:U:H5'	1.98	0.45
1:AV:74:C:N3	81:A2:4158:G:C2	2.84	0.45
81:A2:4388:A:C8	81:A2:4388:A:H5''	2.51	0.45
81:A2:4409:A:H1'	81:A2:4410:U:OP1	2.17	0.45
81:A2:4611:A:H2'	81:A2:4612:G:O4'	2.15	0.45
81:A2:4947:G:H8	81:A2:4947:G:OP2	2.00	0.45
81:A2:63:G:H8	81:A2:63:G:O5'	1.98	0.45
81:A2:671:C:H2'	81:A2:672:G:C8	2.52	0.45
81:A2:87:A:H2'	81:A2:88:A:O4'	2.16	0.45
81:A2:914:G:N3	81:A2:914:G:C2'	2.79	0.45
2:AW:15:G:H2'	2:AW:16:U:H5'	1.98	0.45
4:B1:100:U:H2'	4:B1:101:U:H5'	1.99	0.45
4:B1:673:G:H1'	4:B1:1084:A:N3	2.30	0.45
4:B1:1101:U:C2'	4:B1:1102:G:H8	2.21	0.45
4:B1:1188:A:OP1	4:B1:1188:A:H4'	2.16	0.45
4:B1:1284:A:N7	4:B1:1286:G:OP2	2.49	0.45
4:B1:1322:G:H3'	4:B1:1322:G:C8	2.51	0.45
4:B1:1431:G:C4	4:B1:1432:U:C4	3.04	0.45
4:B1:1529:C:H6	4:B1:1529:C:O5'	1.99	0.45
4:B1:1534:C:H5'	4:B1:1536:G:H1'	1.97	0.45
4:B1:1539:U:H2'	4:B1:1540:G:C5'	2.46	0.45
4:B1:1554:C:C3'	4:B1:1555:U:C5'	2.90	0.45
4:B1:1586:U:O2	4:B1:1587:G:C8	2.69	0.45
4:B1:1654:G:C2'	4:B1:1655:C:C5	2.99	0.45
4:B1:1214:A:C5	4:B1:1686:G:C2	3.04	0.45
4:B1:175:A:C6	4:B1:176:U:C6	3.04	0.45
4:B1:577:U:O4'	4:B1:577:U:O2	2.33	0.45
4:B1:67:C:C5	11:BG:162:LEU:HG	2.51	0.45
4:B1:749:U:O2	4:B1:795:A:N1	2.50	0.45
4:B1:949:G:O5'	4:B1:949:G:H8	1.98	0.45
6:BB:176:VAL:O	6:BB:178:THR:N	2.50	0.45
9:BE:49:ARG:HH21	9:BE:58:GLY:HA2	1.82	0.45
9:BE:99:PHE:CD1	9:BE:111:VAL:HB	2.51	0.45
11:BG:106:LEU:HD22	11:BG:106:LEU:H	1.82	0.45
11:BG:8:PRO:HG3	11:BG:112:VAL:HG13	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:15:LEU:HD13	11:BG:15:LEU:C	2.37	0.45
12:BH:27:LEU:O	12:BH:40:LEU:HD11	2.17	0.45
13:BI:130:THR:O	13:BI:132:GLU:N	2.50	0.45
20:BP:29:SER:O	20:BP:33:LEU:HD23	2.17	0.45
24:BT:110:LEU:HB3	24:BT:112:MET:HG3	1.98	0.45
39:CB:53:MET:HE2	39:CB:77:THR:HG22	1.98	0.45
40:CC:150:LEU:N	40:CC:150:LEU:HD23	2.30	0.45
43:CF:81:PHE:HB2	56:CT:141:VAL:CG2	2.46	0.45
46:CI:44:ASP:HA	46:CI:171:TRP:HE1	1.80	0.45
46:CI:96:VAL:HG22	46:CI:122:PRO:HB3	1.98	0.45
47:CJ:57:VAL:O	47:CJ:58:ARG:HB3	2.16	0.45
4:B1:873:G:C5	54:CR:159:ALA:CB	2.97	0.45
56:CT:20:ARG:NH1	83:A4:67:C:H4'	2.31	0.45
81:A2:1361:U:C6	81:A2:1361:U:OP2	2.70	0.45
81:A2:1397:C:H2'	81:A2:1398:C:C5	2.51	0.45
81:A2:1423:A:C5'	81:A2:1423:A:H8	2.23	0.45
81:A2:1442:C:H2'	81:A2:1443:C:C6	2.51	0.45
81:A2:121:A:C6	81:A2:147:U:C4	3.04	0.45
81:A2:1611:A:C3'	81:A2:1611:A:C8	3.00	0.45
81:A2:1635:U:C2'	81:A2:1636:G:H5'	2.47	0.45
60:CX:59:LYS:HB3	81:A2:16:G:OP1	2.16	0.45
81:A2:1797:G:N2	81:A2:1801:U:O4'	2.50	0.45
81:A2:188:G:O2'	81:A2:189:G:P	2.75	0.45
81:A2:2024:G:H4'	81:A2:2025:A:O5'	2.16	0.45
81:A2:1285:C:H4'	81:A2:2289:A:C2	2.51	0.45
81:A2:1641:C:C1'	81:A2:2297:G:H1'	2.47	0.45
40:CC:101:MET:HG2	81:A2:2320:G:C2	2.51	0.45
40:CC:96:CYS:SG	81:A2:2329:U:H4'	2.56	0.45
81:A2:240:A:H8	81:A2:240:A:P	2.40	0.45
81:A2:248:G:O5'	81:A2:248:G:H8	2.00	0.45
81:A2:254:G:N2	81:A2:255:C:C5	2.83	0.45
81:A2:2683:G:O2'	81:A2:2684:U:H5''	2.16	0.45
81:A2:3573:A:OP2	81:A2:3573:A:H2	1.99	0.45
81:A2:4009:C:C5	81:A2:4010:G:N7	2.84	0.45
81:A2:1712:G:C5	81:A2:4174:A:C2	3.04	0.45
56:CT:80:VAL:CG1	81:A2:4264:A:H4'	2.45	0.45
81:A2:4282:G:H2'	81:A2:4283:A:H3'	1.98	0.45
81:A2:1653:C:O3'	81:A2:4336:A:C8	2.70	0.45
81:A2:4414:G:H1	81:A2:4486:U:H3	1.64	0.45
81:A2:444:G:H4'	81:A2:445:U:C5'	2.47	0.45
81:A2:4550:A:H2'	81:A2:4551:U:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:455:G:C3'	81:A2:456:G:H8	2.28	0.45
81:A2:649:C:H2'	81:A2:650:G:C8	2.52	0.45
81:A2:924:C:C2'	81:A2:925:C:C4'	2.90	0.45
81:A2:965:C:N4	81:A2:1248:G:OP1	2.49	0.45
82:A3:149:G:H2'	82:A3:151:G:OP2	2.16	0.45
82:A3:55:U:H6	82:A3:55:U:O5'	1.98	0.45
82:A3:68:G:H2'	82:A3:69:U:O4'	2.16	0.45
83:A4:69:U:H3	83:A4:106:G:H1	1.65	0.45
2:AW:4:C:H2'	2:AW:5:G:C8	2.51	0.45
3:AX:60:U:C4	3:AX:61:U:O4	2.70	0.45
4:B1:1257:G:H5'	4:B1:1258:A:H8	1.78	0.45
4:B1:1289:U:C5	4:B1:1311:C:O2	2.70	0.45
4:B1:1350:U:H4'	5:BA:112:ILE:HD13	1.98	0.45
4:B1:1534:C:H3'	4:B1:1534:C:P	2.56	0.45
4:B1:1632:G:H4'	4:B1:1632:G:OP1	2.17	0.45
4:B1:1648:G:H8	21:BQ:125:ARG:HB2	1.82	0.45
4:B1:1782:G:C2	4:B1:1783:C:N4	2.84	0.45
4:B1:178:C:H2'	4:B1:179:C:O4'	2.15	0.45
4:B1:184:G:C8	4:B1:185:G:H1'	2.51	0.45
4:B1:1083:A:C2	4:B1:1861:G:C4	3.04	0.45
4:B1:302:A:O2'	13:BI:74:ARG:HA	2.16	0.45
4:B1:569:A:C3'	4:B1:570:C:H5''	2.46	0.45
4:B1:681:U:H2'	4:B1:682:U:H5'	1.98	0.45
4:B1:869:A:N7	12:BH:115:LYS:HB3	2.30	0.45
5:BA:142:LEU:HD12	5:BA:142:LEU:O	2.16	0.45
6:BB:47:THR:HB	6:BB:65:ARG:HH11	1.81	0.45
6:BB:84:PHE:CD1	6:BB:100:PHE:CE2	3.04	0.45
9:BE:252:ARG:HH11	14:BJ:72:PHE:HD1	1.64	0.45
13:BI:29:LEU:HD21	13:BI:49:ARG:HD3	1.98	0.45
4:B1:1512:C:H5'	15:BK:29:MET:SD	2.55	0.45
15:BK:13:GLU:OE1	15:BK:83:LEU:HD13	2.17	0.45
21:BQ:45:ARG:HH21	24:BT:10:ASN:HD21	1.64	0.45
27:BW:80:ASP:OD1	27:BW:124:LYS:HG2	2.16	0.45
29:BY:41:ARG:NH2	29:BY:53:ASP:HA	2.31	0.45
30:BZ:54:THR:O	30:BZ:58:LEU:HG	2.16	0.45
40:CC:188:ARG:O	40:CC:188:ARG:HD3	2.16	0.45
42:CE:154:THR:HA	81:A2:4902:U:O2	2.17	0.45
43:CF:69:ILE:CD1	81:A2:716:U:H4'	2.47	0.45
44:CG:174:CYS:HA	44:CG:179:VAL:CG2	2.47	0.45
48:CL:134:PRO:HA	48:CL:135:LYS:CE	2.46	0.45
51:CO:50:ASN:O	51:CO:53:LYS:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CO:92:THR:HG22	51:CO:94:ARG:H	1.80	0.45
54:CR:118:HIS:CE1	81:A2:2638:U:H3	2.34	0.45
56:CT:68:THR:CG2	56:CT:69:GLN:N	2.80	0.45
61:CY:121:ARG:CA	61:CY:125:SER:HB3	2.45	0.45
53:CQ:11:ARG:NH2	81:A2:1820:G:C8	2.84	0.45
81:A2:1865:G:H3'	81:A2:1866:A:H5''	1.99	0.45
81:A2:1911:G:C2	81:A2:2034:G:N2	2.85	0.45
81:A2:196:G:H3'	81:A2:235:C:OP2	2.17	0.45
81:A2:2010:U:C6	81:A2:2010:U:H3'	2.51	0.45
81:A2:2274:U:C6	81:A2:2274:U:OP2	2.66	0.45
81:A2:2417:U:C6	81:A2:2495:G:N2	2.85	0.45
81:A2:181:U:H3	81:A2:247:G:H1	1.64	0.45
62:CZ:108:ARG:HA	81:A2:2551:G:H1	1.82	0.45
81:A2:2575:A:C6	81:A2:2576:G:C4	3.04	0.45
81:A2:24:G:N1	81:A2:25:A:C6	2.84	0.45
54:CR:43:LYS:HE2	81:A2:2687:C:P	2.57	0.45
81:A2:2719:G:H5''	81:A2:2720:A:OP1	2.16	0.45
81:A2:2789:A:H5''	81:A2:2790:A:OP2	2.16	0.45
81:A2:3885:G:H2'	81:A2:3885:G:N3	2.31	0.45
81:A2:4212:C:H2'	81:A2:4213:A:C8	2.51	0.45
81:A2:434:G:H3'	81:A2:435:G:C8	2.52	0.45
46:CI:5:PRO:CG	81:A2:4365:G:H5''	2.47	0.45
81:A2:4388:A:H3'	81:A2:4389:C:C4'	2.47	0.45
81:A2:4483:A:N9	81:A2:4519:A:N6	2.64	0.45
81:A2:475:U:C2'	81:A2:476:C:OP1	2.64	0.45
81:A2:4850:C:HO2'	81:A2:4851:G:H8	1.61	0.45
81:A2:693:G:H2'	81:A2:694:C:C6	2.52	0.45
81:A2:717:G:C3'	81:A2:718:G:C5'	2.93	0.45
81:A2:893:A:N3	81:A2:894:G:C8	2.85	0.45
81:A2:903:C:O5'	81:A2:903:C:C6	2.69	0.45
81:A2:961:C:H1'	81:A2:1254:A:N6	2.20	0.45
81:A2:961:C:O3'	81:A2:962:G:C8	2.64	0.45
82:A3:102:G:C2	82:A3:104:A:N6	2.84	0.45
3:AX:57:U:OP2	7:BC:109:ILE:HD12	2.17	0.45
4:B1:1082:A:H2'	4:B1:1084:A:O5'	2.16	0.45
4:B1:1099:G:O5'	4:B1:1099:G:H8	2.00	0.45
4:B1:1120:U:O4	4:B1:1121:G:C5	2.69	0.45
4:B1:1258:A:H2'	4:B1:1259:A:C4'	2.32	0.45
4:B1:1363:C:O2	4:B1:1363:C:O4'	2.34	0.45
4:B1:1387:G:H2'	4:B1:1388:A:C8	2.51	0.45
4:B1:1668:U:H5''	21:BQ:132:PHE:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:386:C:OP2	16:BL:136:LYS:HD3	2.16	0.45
4:B1:685:A:O5'	4:B1:685:A:C8	2.69	0.45
5:BA:40:LYS:HB2	22:BR:105:MET:CA	2.46	0.45
5:BA:77:ILE:HG12	5:BA:99:ILE:HG21	1.99	0.45
6:BB:172:MET:O	6:BB:176:VAL:HG23	2.16	0.45
9:BE:18:TRP:HB3	9:BE:20:LEU:HG	1.98	0.45
11:BG:195:LYS:HD3	11:BG:195:LYS:O	2.17	0.45
4:B1:1790:A:H4'	11:BG:81:HIS:CE1	2.52	0.45
4:B1:371:A:C5'	13:BI:11:ARG:HB2	2.44	0.45
13:BI:68:GLY:CA	16:BL:21:LYS:HE3	2.47	0.45
17:BM:30:GLY:HA3	17:BM:113:ASP:OD1	2.15	0.45
17:BM:56:CYS:SG	17:BM:61:TYR:CD1	3.09	0.45
18:BN:99:ARG:HH12	18:BN:143:SER:HA	1.82	0.45
4:B1:1854:U:H5''	19:BO:150:ARG:HH22	1.81	0.45
24:BT:30:VAL:HG11	24:BT:35:ASP:OD1	2.17	0.45
24:BT:82:ARG:HG3	24:BT:90:SER:OG	2.15	0.45
27:BW:17:ALA:CB	27:BW:25:VAL:HG22	2.46	0.45
39:CB:156:TYR:O	39:CB:157:CYS:CB	2.57	0.45
39:CB:229:LYS:HD2	39:CB:233:SER:HB2	1.99	0.45
41:CD:52:ILE:HG22	41:CD:54:ARG:HG2	1.99	0.45
43:CF:25:PHE:O	43:CF:29:LYS:HG3	2.16	0.45
45:CH:173:ARG:HD2	49:CM:127:VAL:CG1	88.44	0.45
45:CH:48:LEU:HD22	45:CH:54:ARG:NH1	2.30	0.45
47:CJ:96:LYS:HG2	47:CJ:174:ILE:CG2	2.46	0.45
49:CM:20:HIS:O	49:CM:23:LYS:HD3	2.17	0.45
49:CM:64:PHE:CE2	49:CM:73:VAL:HG13	2.52	0.45
81:A2:1180:G:C2	81:A2:1181:U:C2	3.05	0.45
81:A2:122:U:OP2	81:A2:122:U:C6	2.70	0.45
81:A2:1466:G:C5	81:A2:1467:G:C8	3.05	0.45
56:CT:129:LYS:HG3	81:A2:1814:G:H5''	1.98	0.45
81:A2:1900:G:H1	81:A2:2040:C:H42	1.63	0.45
81:A2:1868:G:N2	81:A2:1917:A:H61	2.14	0.45
43:CF:117:ILE:HG23	81:A2:2050:C:H5'	1.99	0.45
81:A2:2335:G:H2'	81:A2:2336:U:H5'	1.99	0.45
81:A2:2346:U:O2'	81:A2:2347:A:H8	1.99	0.45
54:CR:3:MET:SD	81:A2:2362:U:H5'	2.56	0.45
81:A2:2370:C:H2'	81:A2:2370:C:O2	2.16	0.45
81:A2:2438:G:H2'	81:A2:2439:C:C6	2.52	0.45
81:A2:2740:U:H4'	81:A2:2741:A:OP2	2.15	0.45
81:A2:355:G:H4'	81:A2:355:G:OP1	2.16	0.45
81:A2:356:U:C2'	81:A2:357:A:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3722:G:C8	81:A2:3723:G:C8	3.04	0.45
1:AV:24:G:H1'	81:A2:3739:U:H5'	1.99	0.45
81:A2:3790:A:H2'	81:A2:3791:U:O4'	2.17	0.45
81:A2:3825:A:C6	81:A2:3826:G:C6	3.04	0.45
81:A2:4088:G:C2'	81:A2:4088:G:N3	2.79	0.45
81:A2:4088:G:C4'	81:A2:4089:G:OP2	2.65	0.45
81:A2:408:G:N3	82:A3:16:G:C2	2.85	0.45
81:A2:4187:U:H6	81:A2:4187:U:O5'	1.98	0.45
56:CT:81:LYS:HG3	81:A2:4264:A:C2	2.51	0.45
53:CQ:159:PRO:HG2	81:A2:4267:A:OP2	2.16	0.45
81:A2:4334:U:C3'	81:A2:4335:C:H5'	2.46	0.45
81:A2:4381:C:C3'	81:A2:4382:A:H5'	2.47	0.45
81:A2:444:G:H4'	81:A2:445:U:OP2	2.14	0.45
51:CO:72:HIS:HB2	81:A2:4546:G:OP1	2.16	0.45
45:CH:98:HIS:HB3	81:A2:4562:A:H4'	1.97	0.45
81:A2:4701:G:C8	81:A2:4701:G:H5'	2.48	0.45
81:A2:4831:U:O2	81:A2:4831:U:H2'	2.15	0.45
81:A2:4833:C:H6	81:A2:4833:C:O5'	1.99	0.45
81:A2:4884:C:H2'	81:A2:4885:C:H6	1.82	0.45
81:A2:4924:C:O5'	81:A2:4924:C:H6	1.99	0.45
48:CL:108:GLU:OE1	81:A2:510:C:H1'	2.17	0.45
81:A2:634:C:H2'	81:A2:635:G:C8	2.51	0.45
81:A2:456:G:N2	81:A2:679:U:C4	2.84	0.45
81:A2:679:U:O5'	81:A2:679:U:H6	1.99	0.45
81:A2:718:G:C8	81:A2:719:G:N2	2.84	0.45
40:CC:51:PRO:HG3	82:A3:28:C:H1'	1.99	0.45
83:A4:32:A:N1	83:A4:41:G:C5	2.85	0.45
2:AW:1:G:C2'	2:AW:2:C:OP1	2.65	0.45
4:B1:1013:U:C4'	4:B1:1129:G:H21	2.29	0.45
4:B1:1417:C:C5	4:B1:1418:C:N4	2.85	0.45
4:B1:1549:U:H2'	4:B1:1550:G:C8	2.51	0.45
4:B1:1561:A:C6	4:B1:1575:G:N3	2.85	0.45
4:B1:1639:G:H4'	4:B1:1639:G:OP1	2.17	0.45
4:B1:1846:G:H3'	4:B1:1847:G:H8	1.81	0.45
4:B1:191:A:OP1	13:BI:147:LYS:HB3	2.17	0.45
4:B1:203:G:H8	4:B1:203:G:O5'	2.00	0.45
4:B1:28:U:H2'	4:B1:29:G:H8	1.82	0.45
4:B1:336:A:N3	4:B1:337:C:H5	2.14	0.45
4:B1:39:A:N6	4:B1:515:G:H21	2.14	0.45
4:B1:36:U:H5'	4:B1:580:U:O2'	2.17	0.45
4:B1:794:A:O5'	4:B1:794:A:H8	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:876:C:H2'	4:B1:877:C:H6	1.79	0.45
6:BB:129:THR:HB	6:BB:180:ASP:HA	1.99	0.45
18:BN:35:GLU:HA	18:BN:38:TYR:CE2	2.52	0.45
23:BS:91:LYS:HE3	23:BS:113:ARG:HH12	1.81	0.45
39:CB:137:TRP:O	39:CB:140:GLU:HG2	2.17	0.45
39:CB:259:PRO:O	39:CB:261:ARG:N	2.44	0.45
39:CB:3:HIS:O	39:CB:4:ARG:C	2.55	0.45
41:CD:279:ARG:O	41:CD:283:LYS:HG3	2.16	0.45
43:CF:114:LEU:HA	43:CF:119:ASN:HD21	1.81	0.45
45:CH:88:PHE:CD2	45:CH:151:ILE:HB	2.51	0.45
47:CJ:128:LEU:HD23	47:CJ:130:PHE:CZ	2.51	0.45
50:CN:148:THR:O	50:CN:151:ILE:HG22	2.16	0.45
58:CV:87:SER:HB3	59:CW:19:ARG:NH2	2.32	0.45
39:CB:376:HIS:CD2	59:CW:33:ASN:HB3	2.52	0.45
81:A2:1203:G:C4	81:A2:1204:G:C8	3.04	0.45
81:A2:1212:G:N3	81:A2:1212:G:H2'	2.32	0.45
81:A2:1218:A:H4'	81:A2:1219:C:OP2	2.10	0.45
81:A2:122:U:P	81:A2:122:U:C6	3.10	0.45
40:CC:323:ARG:HB3	81:A2:1258:C:O2	2.17	0.45
81:A2:1577:C:H1'	81:A2:2775:A:H8	1.79	0.45
81:A2:1766:A:O2'	81:A2:1767:A:H5'	2.17	0.45
81:A2:2016:U:C2'	81:A2:2017:G:H5'	2.46	0.45
81:A2:2407:C:O5'	81:A2:2407:C:H6	1.99	0.45
81:A2:2450:A:O5'	81:A2:2450:A:H8	2.00	0.45
81:A2:2690:C:O2'	81:A2:2691:G:H5'	2.17	0.45
81:A2:2548:C:H2'	81:A2:2737:G:C4	2.51	0.45
81:A2:2745:C:C6	81:A2:2745:C:OP2	2.69	0.45
81:A2:2866:G:H8	81:A2:2866:G:O5'	2.00	0.45
59:CW:50:ASN:H	81:A2:3584:G:H21	1.65	0.45
59:CW:50:ASN:N	81:A2:3584:G:H21	2.14	0.45
81:A2:3791:U:C2'	81:A2:3792:G:H5'	2.47	0.45
81:A2:396:U:H2'	81:A2:397:C:O5'	2.17	0.45
81:A2:4130:A:O5'	81:A2:4130:A:H8	1.98	0.45
81:A2:4157:G:H2'	81:A2:4158:G:C5'	2.47	0.45
81:A2:4209:G:H2'	81:A2:4210:G:C8	2.52	0.45
81:A2:4308:A:C2	81:A2:4310:C:C2	3.05	0.45
81:A2:4352:G:C8	81:A2:4352:G:O5'	2.70	0.45
81:A2:4353:G:N7	81:A2:4406:U:H3'	2.32	0.45
81:A2:4561:U:C2'	81:A2:4562:A:C8	2.90	0.45
81:A2:4593:G:H1	81:A2:4623:G:H2'	1.80	0.45
81:A2:4624:A:H2'	81:A2:4625:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4727:G:O2'	81:A2:4728:G:H5'	2.17	0.45
81:A2:4814:C:H2'	81:A2:4815:G:C5'	2.44	0.45
81:A2:4859:G:H2'	81:A2:4860:C:H6	1.81	0.45
81:A2:5004:G:H4'	81:A2:5005:C:OP2	2.16	0.45
81:A2:722:G:C3'	81:A2:723:G:C4'	2.93	0.45
81:A2:730:G:O5'	81:A2:730:G:C8	2.65	0.45
81:A2:901:A:H8	81:A2:901:A:H3'	1.79	0.45
81:A2:943:G:H4'	81:A2:944:A:OP1	2.17	0.45
81:A2:943:G:N2	81:A2:1261:G:O2'	2.50	0.45
41:CD:50:ARG:HH22	83:A4:6:C:H4'	1.82	0.45
4:B1:999:G:H2'	4:B1:1000:C:H6	1.81	0.45
4:B1:1087:A:H4'	4:B1:1088:U:OP2	2.16	0.45
4:B1:1132:C:H6	4:B1:1132:C:C5'	2.29	0.45
4:B1:1214:A:C6	4:B1:1217:A:C2	3.04	0.45
4:B1:1257:G:C5'	4:B1:1257:G:C8	2.99	0.45
4:B1:1332:A:OP1	4:B1:1332:A:H3'	2.16	0.45
4:B1:1394:G:C6	4:B1:1474:A:C2	3.05	0.45
4:B1:1750:C:C6	4:B1:1750:C:O5'	2.70	0.45
4:B1:43:U:C5'	4:B1:44:U:H5	2.08	0.45
4:B1:790:C:H2'	4:B1:791:C:H6	1.80	0.45
4:B1:93:U:H3'	4:B1:94:G:C8	2.52	0.45
6:BB:77:ASP:O	6:BB:78:GLU:CB	2.63	0.45
8:BD:162:ASP:N	8:BD:163:PRO:HD2	2.32	0.45
11:BG:177:GLN:O	11:BG:178:ARG:HB2	2.17	0.45
15:BK:59:LYS:HB2	15:BK:70:TYR:CD2	2.51	0.45
21:BQ:53:GLU:HB3	21:BQ:54:PRO:HD3	1.99	0.45
4:B1:1579:A:N7	25:BU:56:MET:HG2	2.32	0.45
28:BX:41:PHE:HB3	28:BX:44:ALA:HB3	1.99	0.45
38:CA:179:ILE:O	38:CA:180:LEU:HB2	2.17	0.45
43:CF:217:ARG:HH11	43:CF:217:ARG:HG3	1.81	0.45
47:CJ:19:LYS:HD2	47:CJ:75:ARG:HH21	1.82	0.45
52:CP:95:LEU:HG	52:CP:148:MET:HE1	1.97	0.45
53:CQ:32:TYR:CE2	53:CQ:47:VAL:HG11	2.52	0.45
55:CS:81:TRP:HA	55:CS:93:MET:O	2.17	0.45
43:CF:127:LYS:CB	56:CT:133:ALA:HB3	2.47	0.45
39:CB:71:GLU:O	58:CV:92:ASP:HA	2.16	0.45
62:CZ:109:LYS:HB2	81:A2:2532:G:C5'	2.43	0.45
81:A2:1075:A:C4	81:A2:1076:C:C5	3.05	0.45
81:A2:1177:C:O2'	81:A2:1178:G:H5'	2.17	0.45
81:A2:1191:G:C4	81:A2:1192:G:C8	3.04	0.45
81:A2:1209:C:O2	81:A2:1209:C:H2'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:14:C:O4'	81:A2:15:A:C5'	2.48	0.45
81:A2:1573:C:H2'	81:A2:1574:G:O5'	2.15	0.45
81:A2:1845:A:C2'	81:A2:1846:A:H5'	2.44	0.45
81:A2:230:U:O2	81:A2:2280:U:C6	2.70	0.45
81:A2:2625:G:C2	81:A2:2664:U:C4	3.05	0.45
81:A2:2663:G:C3'	81:A2:2664:U:H4'	2.47	0.45
81:A2:2588:A:H5'	81:A2:2665:G:H4'	1.99	0.45
81:A2:2685:U:H2'	81:A2:2686:C:O4'	2.17	0.45
81:A2:2715:C:O3'	81:A2:2716:C:H3'	2.16	0.45
81:A2:2847:A:C8	81:A2:2847:A:OP2	2.69	0.45
81:A2:3758:C:H3'	81:A2:3758:C:C6	2.52	0.45
81:A2:378:G:C4	81:A2:403:G:C2	3.05	0.45
81:A2:4063:G:O2'	81:A2:4064:C:H5'	2.17	0.45
81:A2:445:U:C2'	81:A2:446:C:C6	2.99	0.45
81:A2:457:A:C8	81:A2:676:G:C5'	2.81	0.45
81:A2:460:C:H4'	81:A2:461:A:OP1	2.17	0.45
81:A2:469:G:C2	81:A2:470:G:C8	3.04	0.45
51:CO:165:LYS:HB3	81:A2:4814:C:C5'	2.46	0.45
42:CE:170:SER:CB	81:A2:4896:G:H21	2.28	0.45
81:A2:64:A:C2'	81:A2:110:C:H41	2.30	0.45
81:A2:675:C:H2'	81:A2:676:G:O4'	2.17	0.45
81:A2:79:C:H2'	81:A2:80:C:H5'	1.98	0.45
81:A2:961:C:C3'	81:A2:962:G:H8	2.28	0.45
82:A3:109:C:O2'	82:A3:110:U:H2'	2.16	0.45
1:AV:46:G:C8	1:AV:46:G:OP1	2.70	0.45
3:AX:60:U:C5	3:AX:61:U:C5	3.04	0.45
4:B1:1196:A:O2'	4:B1:1197:G:H5'	2.16	0.45
4:B1:1210:G:H4'	5:BA:85:ARG:CZ	47.66	0.45
4:B1:1315:U:H6	4:B1:1315:U:O5'	2.00	0.45
4:B1:1340:U:H3'	4:B1:1341:C:H6	1.77	0.45
4:B1:1370:A:C5	4:B1:1372:U:O4'	2.70	0.45
4:B1:1628:C:H2'	4:B1:1629:C:C6	2.51	0.45
4:B1:1630:A:C6	4:B1:1631:U:C4	3.04	0.45
4:B1:1668:U:H3'	4:B1:1669:G:H5''	1.99	0.45
4:B1:528:A:P	4:B1:528:A:C8	3.04	0.45
4:B1:538:U:H5''	4:B1:539:C:OP2	2.16	0.45
4:B1:54:A:O2'	4:B1:451:G:N1	2.48	0.45
4:B1:604:A:OP2	4:B1:604:A:H3'	2.16	0.45
4:B1:685:A:O5'	4:B1:685:A:H8	1.99	0.45
4:B1:797:C:H41	12:BH:104:PRO:HA	1.81	0.45
4:B1:84:A:H3'	29:BY:122:LYS:HD2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:863:U:O5'	4:B1:863:U:C6	2.69	0.45
4:B1:906:U:H2'	4:B1:907:G:H8	1.82	0.45
12:BH:117:PRO:HD2	12:BH:120:ARG:HD3	1.99	0.45
4:B1:190:G:C4'	13:BI:116:HIS:O	2.64	0.45
16:BL:95:TYR:HB2	16:BL:102:PHE:CE2	2.52	0.45
13:BI:68:GLY:HA3	16:BL:21:LYS:CE	2.46	0.45
18:BN:141:TYR:CE1	18:BN:146:ALA:HB2	2.51	0.45
18:BN:28:LEU:HD11	18:BN:32:ASP:HB3	1.99	0.45
21:BQ:10:VAL:HB	21:BQ:25:CYS:HB3	1.98	0.45
24:BT:6:VAL:HG22	24:BT:65:TYR:HE2	1.82	0.45
39:CB:257:TRP:CD1	81:A2:4478:A:C8	3.04	0.45
41:CD:94:ASN:HA	83:A4:47:G:H5'	1.98	0.45
49:CM:127:VAL:O	49:CM:131:GLN:N	2.41	0.45
50:CN:42:PRO:HA	50:CN:131:GLU:OE2	2.17	0.45
53:CQ:88:ASP:HB2	53:CQ:109:ALA:N	2.32	0.45
54:CR:23:TRP:CZ3	54:CR:51:ILE:HD12	2.52	0.45
61:CY:123:ALA:O	61:CY:126:ARG:HB3	2.16	0.45
81:A2:1057:C:O5'	81:A2:1057:C:H6	2.00	0.45
81:A2:108:A:N6	81:A2:325:A:H1'	2.31	0.45
81:A2:1193:G:O4'	81:A2:1195:C:C5	2.70	0.45
81:A2:1200:G:C8	81:A2:1200:G:OP2	2.70	0.45
81:A2:1220:G:H2'	81:A2:1221:C:O5'	2.16	0.45
81:A2:1259:A:C4	81:A2:1260:C:C5	3.05	0.45
81:A2:1277:U:H2'	81:A2:1278:C:H6	1.79	0.45
53:CQ:72:LEU:CB	81:A2:1435:G:O3'	2.65	0.45
44:CG:163:PRO:CG	81:A2:148:G:H22	2.30	0.45
81:A2:1531:G:C2	81:A2:1553:G:N3	2.85	0.45
81:A2:168:U:H6	81:A2:168:U:O5'	2.00	0.45
81:A2:1705:U:H2'	81:A2:1706:U:H6	1.82	0.45
81:A2:1720:G:H1'	81:A2:1760:U:C5'	2.43	0.45
81:A2:1868:G:C3'	81:A2:1868:G:C8	3.00	0.45
81:A2:2000:C:H2'	81:A2:2001:C:C6	2.51	0.45
81:A2:21:G:C5	81:A2:22:G:C8	3.05	0.45
81:A2:1638:U:OP1	81:A2:2325:G:N7	2.50	0.45
81:A2:2424:U:H2'	81:A2:2424:U:O2	2.17	0.45
81:A2:2457:G:C2'	81:A2:2458:G:H5'	2.47	0.45
81:A2:2683:G:H2'	81:A2:2683:G:OP2	2.17	0.45
81:A2:2803:U:C2'	81:A2:2803:U:O2	2.65	0.45
81:A2:2873:G:H8	81:A2:2873:G:P	2.39	0.45
81:A2:3606:U:H2'	81:A2:3607:G:C5'	2.46	0.45
81:A2:3722:G:H22	81:A2:3741:U:C2'	2.23	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3769:A:H8	81:A2:3769:A:H5'	1.82	0.45
81:A2:3604:A:H2	81:A2:3793:A:N1	2.14	0.45
81:A2:3943:G:C8	81:A2:3943:G:C5'	2.94	0.45
81:A2:4061:G:O2'	81:A2:4062:G:H5'	2.17	0.45
81:A2:4091:G:H4'	81:A2:4092:C:OP2	2.15	0.45
81:A2:424:A:C2	81:A2:426:A:OP2	2.70	0.45
81:A2:4294:U:H3'	81:A2:4294:U:C6	2.52	0.45
81:A2:4428:U:C2'	81:A2:4429:U:H5'	2.47	0.45
51:CO:116:LYS:HD3	81:A2:4717:U:OP1	2.17	0.45
81:A2:482:G:C5'	81:A2:482:G:C8	2.93	0.45
81:A2:4850:C:O2'	81:A2:4851:G:H8	1.99	0.45
81:A2:4851:G:N2	81:A2:4882:G:H8	2.15	0.45
81:A2:722:G:H2'	81:A2:723:G:H4'	1.97	0.45
81:A2:934:G:H2'	81:A2:935:G:C8	2.52	0.45
82:A3:125:C:O2	82:A3:125:C:H2'	2.17	0.45
61:CY:118:ILE:HD13	82:A3:70:G:OP1	2.17	0.45
83:A4:26:C:H4'	83:A4:27:G:OP1	2.17	0.45
2:AW:31:A:H2'	2:AW:32:U:H5'	1.99	0.45
3:AX:51:U:H2'	3:AX:52:U:C4'	2.46	0.45
3:AX:60:U:C4	3:AX:61:U:C4	3.05	0.45
4:B1:1035:A:C8	4:B1:1035:A:C3'	2.99	0.45
4:B1:1201:U:O5'	4:B1:1201:U:C6	2.67	0.45
4:B1:1277:C:C6	4:B1:1277:C:H5''	2.52	0.45
4:B1:1394:G:C2'	4:B1:1395:C:H5'	2.46	0.45
4:B1:1406:G:O4'	4:B1:1407:U:C5'	2.64	0.45
4:B1:1576:G:H2'	4:B1:1577:G:C8	2.52	0.45
4:B1:1608:U:H5''	23:BS:130:ARG:NH1	2.32	0.45
4:B1:1684:C:C3'	4:B1:1685:U:C5'	2.95	0.45
4:B1:1747:C:H2'	4:B1:1748:G:H8	1.82	0.45
4:B1:181:A:P	4:B1:182:C:H5'	2.57	0.45
4:B1:358:C:C5'	4:B1:358:C:H6	2.27	0.45
4:B1:422:U:O2	4:B1:652:U:H5''	2.17	0.45
4:B1:751:G:C4	4:B1:752:G:N7	2.84	0.45
4:B1:899:U:H3'	4:B1:900:C:C6	2.52	0.45
4:B1:1352:G:OP1	5:BA:109:THR:HB	2.16	0.45
5:BA:120:ARG:HA	5:BA:120:ARG:NE	2.32	0.45
4:B1:1314:U:H3	15:BK:2:LEU:HD11	1.82	0.45
16:BL:101:ARG:CB	28:BX:10:ALA:HB2	2.47	0.45
23:BS:25:LYS:HD2	23:BS:28:PHE:H	1.82	0.45
24:BT:107:LEU:HB3	24:BT:113:VAL:HG23	1.98	0.45
25:BU:20:ILE:HG21	25:BU:98:VAL:HG22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BY:29:HIS:CG	29:BY:35:VAL:HG13	2.51	0.45
38:CA:204:MET:O	38:CA:212:GLY:CA	2.65	0.45
40:CC:110:ARG:HB2	50:CN:204:ARG:NH1	2.32	0.45
40:CC:234:LYS:HE2	81:A2:1354:G:C2	2.51	0.45
40:CC:45:ARG:CZ	40:CC:238:LEU:HD22	2.47	0.45
41:CD:155:THR:HG22	41:CD:179:ARG:HH11	1.81	0.45
41:CD:222:GLN:O	41:CD:223:PHE:HB2	2.17	0.45
45:CH:173:ARG:HD2	49:CM:127:VAL:CB	89.45	0.45
47:CJ:101:ASP:OD1	47:CJ:102:THR:HG23	2.17	0.45
48:CL:143:GLU:CG	48:CL:144:LEU:N	2.80	0.45
45:CH:173:ARG:HG3	49:CM:127:VAL:HG22	86.33	0.45
50:CN:39:ALA:O	50:CN:61:ILE:HB	2.17	0.45
54:CR:114:LYS:O	54:CR:146:LYS:HD3	2.17	0.45
59:CW:13:ILE:HG12	59:CW:32:LEU:HB2	1.99	0.45
81:A2:1059:C:H3'	81:A2:1060:C:C6	2.45	0.45
81:A2:113:A:H2	81:A2:269:G:C4	2.35	0.45
81:A2:1180:G:H8	81:A2:1180:G:O5'	2.00	0.45
81:A2:1249:G:O6	81:A2:1250:A:C6	2.70	0.45
81:A2:1283:A:OP1	81:A2:1283:A:C4'	2.65	0.45
81:A2:1332:C:C6	81:A2:1332:C:C5'	3.00	0.45
81:A2:1338:G:H1'	81:A2:1339:G:H5'	1.99	0.45
81:A2:1389:C:O2	81:A2:1389:C:C2'	2.65	0.45
81:A2:1459:C:O5'	81:A2:1459:C:H6	2.00	0.45
81:A2:1466:G:C4	81:A2:1467:G:C8	3.05	0.45
81:A2:1645:C:O2	81:A2:1667:G:H5''	2.17	0.45
81:A2:1741:C:H41	81:A2:1743:G:N2	2.15	0.45
81:A2:1821:A:H2'	81:A2:1822:G:H8	1.82	0.45
81:A2:180:C:H4'	81:A2:182:C:H1'	1.98	0.45
81:A2:1830:U:C4	81:A2:1831:G:N2	2.85	0.45
81:A2:1866:A:N7	81:A2:2027:G:H5''	2.31	0.45
81:A2:2027:G:C8	81:A2:2027:G:H5'	2.49	0.45
81:A2:2279:C:C2'	81:A2:2279:C:O2	2.63	0.45
81:A2:2442:C:OP1	81:A2:2442:C:C6	2.63	0.45
81:A2:245:C:C6	81:A2:245:C:O5'	2.70	0.45
81:A2:2466:C:H5''	81:A2:2467:U:OP1	2.17	0.45
81:A2:2764:A:H1'	81:A2:2767:U:OP2	2.17	0.45
81:A2:2835:A:H2'	81:A2:2836:G:O4'	2.17	0.45
81:A2:2878:G:C3'	81:A2:2879:G:H5''	2.47	0.45
81:A2:3658:G:H2'	81:A2:3658:G:N3	2.30	0.45
81:A2:3686:A:C5	81:A2:3705:A:C6	3.05	0.45
81:A2:3694:G:H5'	81:A2:3695:A:OP1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3686:A:N7	81:A2:3705:A:N6	2.65	0.45
81:A2:3724:G:N3	81:A2:3725:A:C8	2.85	0.45
81:A2:3728:A:N7	81:A2:3734:G:C6	2.85	0.45
81:A2:3892:A:O5'	81:A2:3892:A:H8	1.99	0.45
81:A2:3897:A:OP2	81:A2:3897:A:H8	2.00	0.45
81:A2:4250:U:H4'	81:A2:4251:G:OP1	2.17	0.45
81:A2:4397:U:OP2	81:A2:4397:U:H4'	2.17	0.45
81:A2:446:C:O2'	81:A2:447:C:H5'	2.17	0.45
81:A2:457:A:C2'	81:A2:457:A:N3	2.78	0.45
81:A2:4598:U:H3	81:A2:4621:G:H1	1.65	0.45
81:A2:4829:A:H2'	81:A2:4830:G:C5	2.51	0.45
2:AW:4:C:H1'	81:A2:3683:G:HO2'	1.81	0.45
4:B1:1016:U:O2'	4:B1:1017:U:H5''	2.17	0.45
4:B1:136:C:H4'	4:B1:137:U:OP2	2.17	0.45
4:B1:1417:C:C4	4:B1:1418:C:N4	2.85	0.45
4:B1:1442:U:C5'	4:B1:1443:C:H5''	2.47	0.45
4:B1:1495:G:N7	25:BU:69:PRO:HB2	2.32	0.45
4:B1:1606:G:H5'	24:BT:86:GLY:HA3	1.99	0.45
4:B1:1635:C:H3'	4:B1:1636:G:C5'	2.47	0.45
4:B1:1661:A:C5	4:B1:1662:U:N3	2.85	0.45
4:B1:1679:A:OP2	4:B1:1679:A:C4'	2.65	0.45
4:B1:1815:A:O5'	4:B1:1815:A:H8	2.00	0.45
4:B1:29:G:C5'	28:BX:129:SER:HB3	2.47	0.45
4:B1:2:A:H3'	4:B1:3:C:H5'	1.98	0.45
4:B1:104:A:H62	4:B1:352:U:H5	1.63	0.45
4:B1:479:C:O2'	4:B1:480:G:H5'	2.17	0.45
4:B1:571:U:C2'	4:B1:572:U:H4'	2.47	0.45
4:B1:77:A:C4'	4:B1:78:C:C5	2.99	0.45
4:B1:872:A:OP1	54:CR:167:LYS:HE2	2.16	0.45
4:B1:969:U:H1'	4:B1:971:G:O6	2.17	0.45
4:B1:9:U:O2	4:B1:12:U:H5	2.00	0.45
7:BC:191:VAL:HA	7:BC:227:ARG:O	2.17	0.45
8:BD:190:LEU:CB	8:BD:200:PRO:HD3	2.47	0.45
9:BE:125:LYS:H	9:BE:142:HIS:CE1	2.34	0.45
10:BF:129:GLY:HA2	10:BF:134:VAL:HG12	1.99	0.45
11:BG:50:VAL:HG11	11:BG:111:LEU:HB3	1.99	0.45
11:BG:64:LYS:HE2	11:BG:97:VAL:CG1	2.43	0.45
18:BN:62:GLN:CG	18:BN:65:PHE:HD1	2.29	0.45
23:BS:73:ASN:HD22	23:BS:76:GLN:HB2	1.81	0.45
24:BT:6:VAL:HG22	24:BT:65:TYR:CE2	2.52	0.45
25:BU:53:PRO:HB2	25:BU:55:ARG:NH1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:65:ASP:HB3	38:CA:68:ARG:O	2.17	0.45
39:CB:102:PHE:CE1	39:CB:157:CYS:HB2	2.52	0.45
39:CB:96:PRO:O	51:CO:149:TYR:CD1	2.70	0.45
40:CC:149:GLU:HG2	40:CC:150:LEU:O	2.16	0.45
45:CH:173:ARG:HD2	49:CM:127:VAL:CA	90.31	0.45
47:CJ:26:VAL:HG22	47:CJ:32:ARG:NH1	2.32	0.45
47:CJ:76:GLY:O	47:CJ:78:LYS:N	2.46	0.45
48:CL:53:GLY:C	48:CL:55:ILE:N	2.61	0.45
53:CQ:142:PRO:HD3	81:A2:1481:G:H2'	1.99	0.45
53:CQ:61:LEU:HD13	53:CQ:61:LEU:HA	1.76	0.45
55:CS:13:VAL:HG12	55:CS:29:ARG:CB	2.47	0.45
81:A2:112:C:H2'	81:A2:113:A:H5'	2.00	0.44
81:A2:1305:C:O2	81:A2:3870:A:H5''	2.18	0.44
81:A2:1361:U:H6	81:A2:1361:U:P	2.40	0.44
81:A2:169:C:H6	81:A2:169:C:O5'	2.00	0.44
81:A2:1648:A:C2	81:A2:1830:U:H4'	2.52	0.44
81:A2:1874:A:C8	81:A2:1874:A:C5'	3.00	0.44
81:A2:21:G:H2'	81:A2:22:G:O4'	2.17	0.44
52:CP:25:HIS:CD2	81:A2:2338:G:C6	3.05	0.44
81:A2:241:G:O5'	81:A2:241:G:C8	2.70	0.44
81:A2:2567:G:H1'	81:A2:2731:G:N2	2.32	0.44
81:A2:2821:A:O3'	81:A2:2822:A:C8	2.70	0.44
81:A2:303:G:C2'	81:A2:304:U:H5'	2.47	0.44
81:A2:33:A:H5''	81:A2:33:A:C8	2.46	0.44
81:A2:3595:G:H2'	81:A2:3596:G:O4'	2.17	0.44
81:A2:362:A:H2'	81:A2:363:A:C8	2.52	0.44
81:A2:3720:G:H5''	81:A2:3721:C:OP2	2.17	0.44
81:A2:3733:U:C3'	81:A2:3734:G:C8	3.00	0.44
81:A2:386:A:H2'	81:A2:387:A:C1'	2.47	0.44
81:A2:4086:C:H3'	81:A2:4086:C:P	2.57	0.44
81:A2:4177:G:O3'	81:A2:4263:C:H6	2.00	0.44
81:A2:43:U:H2'	81:A2:44:A:O4'	2.18	0.44
81:A2:4637:U:O2'	81:A2:4638:G:C8	2.68	0.44
81:A2:4640:G:C2'	81:A2:4641:A:O5'	2.66	0.44
81:A2:469:G:C4	81:A2:470:G:C8	3.05	0.44
81:A2:4718:C:H2'	81:A2:4718:C:H6	1.61	0.44
81:A2:506:C:C6	81:A2:506:C:H3'	2.51	0.44
81:A2:689:G:OP2	81:A2:690:U:C5	2.70	0.44
81:A2:721:A:C2'	81:A2:722:G:H5''	2.47	0.44
81:A2:918:C:C6	81:A2:918:C:P	3.10	0.44
82:A3:109:C:H4'	82:A3:110:U:H5	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2310:G:C5'	82:A3:20:A:O3'	2.65	0.44
82:A3:27:U:O5'	82:A3:27:U:H6	2.00	0.44
83:A4:71:G:H2'	83:A4:72:U:C6	2.51	0.44
2:AW:59:U:H2'	2:AW:60:U:O4'	2.17	0.44
2:AW:9:A:H4'	2:AW:46:G:H4'	1.98	0.44
4:B1:1071:G:H8	4:B1:1071:G:O5'	2.00	0.44
4:B1:1321:G:N2	4:B1:1322:G:C4	2.85	0.44
4:B1:1413:G:C4	4:B1:1414:A:C8	3.04	0.44
4:B1:1532:C:OP1	4:B1:1533:A:H1'	2.16	0.44
4:B1:1558:C:H2'	4:B1:1559:C:H6	1.76	0.44
4:B1:1602:U:C6	4:B1:1602:U:C3'	3.00	0.44
4:B1:174:C:H5''	4:B1:174:C:H6	1.83	0.44
4:B1:332:G:H1'	4:B1:333:G:N7	2.31	0.44
4:B1:493:A:O2'	4:B1:494:C:H5'	2.18	0.44
4:B1:574:A:N7	4:B1:575:A:H1'	2.33	0.44
4:B1:59:U:C6	4:B1:59:U:C3'	3.00	0.44
4:B1:1378:A:N3	5:BA:105:PRO:HB3	2.32	0.44
5:BA:39:TYR:CZ	5:BA:50:ASN:HB2	2.51	0.44
11:BG:159:ARG:HB3	11:BG:171:THR:CG2	2.47	0.44
4:B1:143:U:C2	11:BG:180:VAL:HG11	2.52	0.44
12:BH:47:ALA:O	12:BH:63:PHE:HD1	2.00	0.44
13:BI:68:GLY:HA3	16:BL:21:LYS:NZ	2.32	0.44
4:B1:1401:A:H4'	25:BU:52:GLY:HA3	1.99	0.44
5:BA:9:GLN:CB	26:BV:83:PHE:CD2	2.99	0.44
38:CA:151:PRO:CB	81:A2:3651:A:H5''	2.46	0.44
39:CB:229:LYS:HD2	39:CB:233:SER:CB	2.47	0.44
40:CC:147:VAL:HG11	40:CC:249:PHE:CE2	2.49	0.44
41:CD:231:VAL:HG13	41:CD:235:MET:HB2	1.98	0.44
42:CE:239:LYS:HG3	81:A2:4894:C:C5	2.51	0.44
43:CF:80:ASN:HB3	56:CT:141:VAL:O	2.17	0.44
44:CG:80:ILE:C	44:CG:82:GLN:H	2.19	0.44
45:CH:12:ILE:HB	45:CH:52:LYS:O	2.16	0.44
48:CL:55:ILE:HB	48:CL:148:THR:HB	1.98	0.44
51:CO:176:ARG:HA	51:CO:179:LYS:HG2	1.99	0.44
54:CR:39:GLN:O	54:CR:42:ARG:HB3	2.18	0.44
55:CS:29:ARG:O	56:CT:150:LEU:HA	2.17	0.44
81:A2:1094:U:H2'	81:A2:1095:C:C6	2.52	0.44
81:A2:1388:G:H21	81:A2:1389:C:C1'	2.25	0.44
81:A2:1431:G:H2'	81:A2:1432:A:C8	2.50	0.44
81:A2:1634:C:H2'	81:A2:1635:U:H5''	1.99	0.44
81:A2:1649:G:H5'	81:A2:1649:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1672:U:O5'	81:A2:1672:U:C6	2.70	0.44
81:A2:1715:A:H2'	81:A2:1716:A:H5'	1.98	0.44
81:A2:133:C:OP1	81:A2:173:G:H4'	2.17	0.44
81:A2:1756:C:H6	81:A2:1756:C:C5'	2.29	0.44
81:A2:1798:G:OP1	81:A2:1798:G:C8	2.71	0.44
81:A2:1933:G:N1	81:A2:2007:A:C5	2.85	0.44
81:A2:210:G:O5'	81:A2:210:G:H8	2.00	0.44
81:A2:2291:G:H8	81:A2:2291:G:O5'	1.99	0.44
81:A2:2687:C:H3'	81:A2:2688:G:H8	1.81	0.44
81:A2:2736:G:H4'	81:A2:2742:A:H1'	1.99	0.44
81:A2:3617:A:C2	81:A2:3754:A:C5	3.06	0.44
38:CA:23:ARG:HB2	81:A2:3648:U:C6	2.52	0.44
81:A2:3837:G:C8	81:A2:3837:G:OP2	2.71	0.44
81:A2:3894:U:C4	81:A2:3895:C:C5	3.05	0.44
81:A2:390:G:C6	81:A2:391:A:C6	3.06	0.44
81:A2:4080:U:H3'	81:A2:4080:U:H6	1.82	0.44
81:A2:4143:G:H4'	81:A2:4144:G:N7	2.32	0.44
81:A2:4366:U:C2'	81:A2:4367:G:H5'	2.47	0.44
81:A2:4479:C:C6	81:A2:4479:C:C3'	3.00	0.44
81:A2:4527:G:H8	81:A2:4527:G:H5''	1.81	0.44
81:A2:4575:C:H6	81:A2:4575:C:O5'	2.00	0.44
81:A2:4587:U:H3'	81:A2:4588:U:H6	1.83	0.44
51:CO:116:LYS:HG2	81:A2:4829:A:C2	2.52	0.44
81:A2:717:G:C2'	81:A2:718:G:H5'	2.47	0.44
81:A2:72:C:H6	81:A2:72:C:OP2	1.99	0.44
81:A2:887:C:H2'	81:A2:888:C:C5	2.52	0.44
83:A4:23:A:C3'	83:A4:24:C:C6	3.00	0.44
2:AW:56:C:H6	81:A2:4014:A:C5	2.35	0.44
4:B1:133:C:C2	4:B1:179:C:OP1	2.69	0.44
4:B1:1377:U:O2	4:B1:1379:A:H5'	2.17	0.44
4:B1:1402:A:C8	4:B1:1403:C:C5	3.04	0.44
4:B1:1695:A:C5	4:B1:1696:C:C2	3.05	0.44
1:AV:34:G:N1	4:B1:1701:C:O4'	2.46	0.44
4:B1:1206:G:N3	4:B1:1834:A:H1'	2.32	0.44
4:B1:311:C:O2	4:B1:311:C:H2'	2.18	0.44
4:B1:381:C:H5''	13:BI:48:VAL:CG2	2.46	0.44
4:B1:659:G:H3'	28:BX:17:ARG:HH21	1.82	0.44
4:B1:67:C:C4	11:BG:164:LYS:N	2.85	0.44
4:B1:940:U:O2	4:B1:940:U:C2'	2.66	0.44
6:BB:62:LEU:HD23	6:BB:65:ARG:HH21	1.81	0.44
7:BC:60:TRP:CD1	7:BC:92:GLU:OE1	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:114:VAL:HG12	11:BG:115:LYS:HG3	1.99	0.44
17:BM:18:LEU:O	17:BM:22:LEU:HD13	2.17	0.44
4:B1:1620:A:H5'	20:BP:115:TYR:OH	2.17	0.44
4:B1:1420:G:O2'	24:BT:2:PRO:HA	2.16	0.44
38:CA:196:TRP:HH2	81:A2:1592:A:C2	2.32	0.44
38:CA:22:HIS:CB	38:CA:52:PRO:HG2	2.45	0.44
39:CB:314:ILE:HG13	39:CB:314:ILE:H	1.61	0.44
41:CD:289:ARG:O	41:CD:293:ARG:CG	2.65	0.44
43:CF:154:ILE:HG13	43:CF:191:ILE:HD11	1.99	0.44
43:CF:43:ARG:HD3	43:CF:46:ARG:NH2	2.31	0.44
43:CF:76:ARG:NH2	43:CF:81:PHE:HE1	2.15	0.44
51:CO:172:LYS:CE	51:CO:176:ARG:HH12	2.30	0.44
54:CR:132:PHE:HA	54:CR:137:ILE:CD1	2.47	0.44
56:CT:126:VAL:O	56:CT:127:GLN:HB2	2.17	0.44
60:CX:109:ILE:O	60:CX:113:VAL:HG23	2.18	0.44
62:CZ:36:ARG:HH22	62:CZ:98:LYS:HD3	1.83	0.44
81:A2:103:G:H4'	81:A2:1360:G:N2	2.32	0.44
81:A2:1044:G:H2'	81:A2:1045:G:C8	2.52	0.44
81:A2:1052:C:H5'	81:A2:1053:G:OP2	2.17	0.44
81:A2:1173:C:H2'	81:A2:1174:G:C8	2.52	0.44
81:A2:1193:G:OP1	81:A2:1194:C:H5'	2.17	0.44
81:A2:141:G:H8	81:A2:141:G:H5''	1.83	0.44
44:CG:163:PRO:CD	81:A2:148:G:H22	2.30	0.44
81:A2:1773:A:H4'	81:A2:1773:A:OP1	2.18	0.44
81:A2:224:A:H61	81:A2:238:G:C2'	2.30	0.44
81:A2:21:G:C2'	81:A2:22:G:H5'	2.47	0.44
81:A2:2313:G:C5	81:A2:2314:C:C4	3.05	0.44
81:A2:2348:U:C2'	81:A2:2349:U:C6	2.96	0.44
81:A2:2400:A:OP2	81:A2:2400:A:H8	1.99	0.44
81:A2:3667:G:C8	81:A2:3667:G:O5'	2.70	0.44
81:A2:3878:C:O2	81:A2:3879:C:C6	2.70	0.44
81:A2:3919:U:O5'	81:A2:3919:U:H6	1.99	0.44
81:A2:4191:C:H5'	81:A2:4194:A:N6	2.33	0.44
56:CT:71:ALA:CB	81:A2:4273:A:H4'	2.47	0.44
81:A2:4520:C:O4'	81:A2:4520:C:O2	2.34	0.44
81:A2:4601:U:H2'	81:A2:4602:U:C6	2.52	0.44
81:A2:4643:U:H5	81:A2:4666:G:H21	1.66	0.44
81:A2:4725:C:C5'	81:A2:4725:C:H6	2.30	0.44
81:A2:4742:C:H2'	81:A2:4743:C:C6	2.52	0.44
55:CS:165:PRO:CG	81:A2:4828:G:H1'	2.48	0.44
81:A2:4862:G:O3'	81:A2:4863:G:C8	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:BI:92:ARG:CG	81:A2:4972:G:OP1	2.61	0.44
81:A2:86:U:H3	81:A2:98:A:H62	1.66	0.44
81:A2:90:G:H2'	81:A2:91:G:OP2	2.17	0.44
81:A2:918:C:OP2	81:A2:918:C:C6	2.60	0.44
82:A3:18:U:O5'	82:A3:18:U:H6	2.01	0.44
82:A3:37:A:H2	82:A3:105:C:N4	1.96	0.44
83:A4:106:G:H2'	83:A4:107:G:C8	2.52	0.44
83:A4:109:U:H6	83:A4:109:U:O5'	2.00	0.44
83:A4:6:C:O2	83:A4:6:C:O4'	2.34	0.44
83:A4:75:G:O4'	83:A4:75:G:P	2.75	0.44
2:AW:59:U:C3'	2:AW:60:U:H5'	2.47	0.44
4:B1:1223:A:O2'	4:B1:1651:A:H4'	2.18	0.44
4:B1:1280:G:C2	4:B1:1281:G:C6	3.06	0.44
4:B1:1403:C:H2'	4:B1:1404:U:O5'	2.17	0.44
4:B1:1452:A:C6	4:B1:1475:G:C6	3.05	0.44
4:B1:1317:C:O5'	4:B1:1506:A:N6	2.51	0.44
4:B1:1705:C:H4'	50:CN:1:MET:N	129.36	0.44
4:B1:1721:U:C4'	4:B1:1722:G:O5'	2.64	0.44
4:B1:342:C:H5''	4:B1:342:C:C6	2.51	0.44
4:B1:431:G:H2'	4:B1:432:G:C8	2.47	0.44
4:B1:519:A:N1	4:B1:520:A:C6	2.85	0.44
4:B1:528:A:C2'	4:B1:529:A:H5'	2.47	0.44
5:BA:82:THR:HG22	5:BA:205:ARG:HB2	1.99	0.44
8:BD:192:TRP:CD1	8:BD:203:PRO:HA	2.53	0.44
10:BF:162:ALA:HB2	10:BF:172:CYS:CB	2.47	0.44
10:BF:99:ILE:HD11	30:BZ:106:GLN:OE1	2.18	0.44
4:B1:312:G:H22	11:BG:195:LYS:CG	2.31	0.44
12:BH:105:THR:O	12:BH:105:THR:CG2	2.64	0.44
13:BI:173:ALA:HB1	13:BI:188:TYR:O	2.17	0.44
14:BJ:117:LEU:HB2	14:BJ:119:LEU:HD13	2.00	0.44
13:BI:191:GLU:HG3	16:BL:20:LYS:HB2	1.98	0.44
17:BM:19:GLN:HB3	17:BM:88:TRP:CE2	2.53	0.44
21:BQ:60:LYS:HA	21:BQ:63:PHE:CE1	2.52	0.44
8:BD:205:PRO:O	22:BR:42:PRO:HG2	2.18	0.44
24:BT:113:VAL:HG13	24:BT:121:ARG:HB2	1.99	0.44
38:CA:204:MET:H	38:CA:204:MET:HG2	1.62	0.44
39:CB:300:LYS:HG3	39:CB:313:SER:HB2	1.99	0.44
39:CB:285:TYR:HD2	39:CB:365:LEU:HD21	1.82	0.44
41:CD:257:PRO:O	41:CD:258:LYS:CB	2.66	0.44
44:CG:167:VAL:HG23	44:CG:170:LEU:HD12	2.00	0.44
46:CI:62:SER:CB	46:CI:93:PRO:HG3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:CM:114:LYS:HE3	81:A2:4885:C:H5''	1.99	0.44
49:CM:28:VAL:CG1	49:CM:67:SER:HA	2.48	0.44
51:CO:141:LEU:O	51:CO:145:VAL:HG23	2.17	0.44
51:CO:71:TYR:HB2	51:CO:73:PHE:CE2	2.52	0.44
52:CP:6:LEU:HG	52:CP:8:PRO:HD3	1.99	0.44
55:CS:29:ARG:HD3	56:CT:148:PRO:HB2	1.99	0.44
41:CD:20:PHE:HZ	56:CT:24:VAL:O	2.01	0.44
56:CT:92:ARG:HB3	56:CT:95:HIS:CD2	2.52	0.44
58:CV:109:LYS:HB2	58:CV:111:GLU:OE1	2.18	0.44
81:A2:1079:C:H2'	81:A2:1080:U:C5'	2.48	0.44
81:A2:959:C:H5'	81:A2:1214:G:N2	2.32	0.44
81:A2:1219:C:N3	81:A2:1249:G:O3'	2.50	0.44
81:A2:1270:G:H3'	81:A2:1271:G:H8	1.83	0.44
81:A2:1285:C:C6	81:A2:1285:C:C5'	2.99	0.44
81:A2:1377:A:C2'	81:A2:1400:A:N6	2.78	0.44
81:A2:1568:C:C2'	81:A2:1569:C:H5'	2.48	0.44
38:CA:199:VAL:CG2	81:A2:1609:A:H5''	2.48	0.44
81:A2:1649:G:H2'	81:A2:1833:G:OP2	2.17	0.44
81:A2:1911:G:N1	81:A2:1912:A:C6	2.86	0.44
81:A2:1914:C:H6	81:A2:1914:C:O5'	2.00	0.44
81:A2:2062:C:O2	81:A2:2062:C:O4'	2.35	0.44
81:A2:2397:A:H3'	81:A2:2398:G:O4'	2.18	0.44
81:A2:2625:G:H3'	81:A2:2625:G:OP2	2.18	0.44
81:A2:2672:A:H5'	81:A2:2673:A:OP1	2.17	0.44
81:A2:2726:C:H2'	81:A2:2727:G:O4'	2.17	0.44
81:A2:304:U:O5'	81:A2:304:U:H6	2.00	0.44
81:A2:3585:U:C1'	81:A2:3586:G:OP2	2.65	0.44
81:A2:3590:A:C8	81:A2:3590:A:OP2	2.70	0.44
81:A2:3751:C:H2'	81:A2:3752:A:H5''	1.99	0.44
81:A2:3943:G:H2'	81:A2:3944:C:H6	1.83	0.44
81:A2:403:G:C5'	81:A2:403:G:N3	2.80	0.44
81:A2:4151:G:H8	81:A2:4151:G:H5''	1.83	0.44
81:A2:4523:U:C6	81:A2:4523:U:O5'	2.69	0.44
81:A2:4621:G:H2'	81:A2:4622:C:H5''	2.00	0.44
81:A2:4637:U:C4	81:A2:4673:G:C2	3.06	0.44
81:A2:4812:A:H2'	81:A2:4813:C:N1	2.28	0.44
81:A2:4906:G:C2'	81:A2:4907:G:H8	2.23	0.44
81:A2:61:A:C2'	81:A2:62:A:H5'	2.47	0.44
81:A2:901:A:C3'	81:A2:901:A:C8	3.00	0.44
81:A2:968:C:O3'	81:A2:969:C:H4'	2.17	0.44
81:A2:99:A:O5'	81:A2:99:A:H8	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:A3:14:U:H5''	82:A3:15:G:OP2	2.18	0.44
40:CC:56:GLU:CD	82:A3:25:G:H21	2.21	0.44
82:A3:64:U:H2'	82:A3:64:U:O2	2.17	0.44
83:A4:104:C:C2	83:A4:105:C:C5	3.05	0.44
4:B1:1395:C:O2'	4:B1:1396:A:H5'	2.16	0.44
4:B1:1407:U:OP2	4:B1:1408:U:C5	2.71	0.44
4:B1:1412:C:C4	4:B1:1414:A:H5''	2.53	0.44
4:B1:1425:G:C6	4:B1:1426:U:O4	2.71	0.44
4:B1:1438:A:H4'	4:B1:1438:A:OP1	2.18	0.44
4:B1:1561:A:N6	4:B1:1575:G:C4	2.85	0.44
4:B1:1609:C:C5'	4:B1:1609:C:C6	3.00	0.44
4:B1:1616:U:C2'	4:B1:1616:U:O2	2.64	0.44
4:B1:1643:U:H2'	4:B1:1644:C:H6	1.81	0.44
4:B1:1547:C:H42	4:B1:1656:G:H4'	1.83	0.44
4:B1:1203:G:C2'	4:B1:1699:A:H2	2.29	0.44
4:B1:1745:A:N3	4:B1:1745:A:H3'	2.32	0.44
4:B1:505:G:O2'	4:B1:506:G:H5'	2.18	0.44
4:B1:562:U:C6	4:B1:562:U:C3'	3.01	0.44
4:B1:746:C:C3'	4:B1:746:C:OP1	2.65	0.44
4:B1:753:C:C4	4:B1:754:G:C4	3.04	0.44
4:B1:753:C:N4	4:B1:754:G:N3	2.65	0.44
4:B1:873:G:C6	54:CR:159:ALA:HB2	2.53	0.44
5:BA:203:PHE:HE2	5:BA:208:GLU:OE1	2.00	0.44
5:BA:42:LYS:HB3	5:BA:46:ILE:H	1.82	0.44
6:BB:112:SER:O	6:BB:115:LYS:HE2	2.18	0.44
9:BE:160:VAL:HG12	9:BE:172:PHE:HB3	1.99	0.44
10:BF:20:PHE:CD2	10:BF:21:GLY:N	2.81	0.44
11:BG:38:ALA:O	11:BG:41:LEU:HB2	2.17	0.44
13:BI:165:GLN:NE2	13:BI:172:LEU:HD23	2.32	0.44
19:BO:61:LYS:HD3	19:BO:76:LEU:HD13	1.98	0.44
22:BR:105:MET:CG	22:BR:106:LEU:N	2.79	0.44
23:BS:41:ALA:O	23:BS:44:VAL:HB	2.17	0.44
24:BT:36:THR:O	24:BT:37:VAL:HB	2.17	0.44
39:CB:227:GLY:H	39:CB:271:GLN:HE22	1.65	0.44
40:CC:42:THR:O	40:CC:46:LYS:HG3	2.18	0.44
43:CF:51:TYR:CD1	81:A2:973:U:P	3.10	0.44
44:CG:41:ILE:O	44:CG:43:GLN:N	2.43	0.44
45:CH:117:PHE:CZ	45:CH:165:THR:HB	2.52	0.44
47:CJ:26:VAL:HG12	47:CJ:28:GLU:H	1.81	0.44
52:CP:40:HIS:H	52:CP:43:LYS:HD3	1.82	0.44
53:CQ:36:ALA:HB1	53:CQ:45:GLN:NE2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1082:U:H2'	81:A2:1082:U:O2	2.18	0.44
81:A2:1189:U:HO2'	81:A2:1190:C:H5	1.63	0.44
81:A2:126:C:H6	81:A2:126:C:O5'	2.01	0.44
81:A2:441:G:C4	81:A2:1274:A:H4'	2.53	0.44
81:A2:1282:U:C2'	81:A2:1284:C:C6	3.01	0.44
81:A2:1307:C:H2'	81:A2:1307:C:O2	2.17	0.44
53:CQ:166:TYR:OH	81:A2:1325:A:H5''	2.17	0.44
81:A2:1378:A:H8	81:A2:1399:G:H1	1.66	0.44
54:CR:95:TRP:CD2	81:A2:1551:U:H4'	2.52	0.44
81:A2:19:G:C2	81:A2:20:U:C4	3.05	0.44
81:A2:2382:G:O5'	81:A2:2382:G:C8	2.69	0.44
81:A2:2421:U:C5'	81:A2:2422:C:C5	2.93	0.44
81:A2:2568:A:H2'	81:A2:2569:U:C5'	2.44	0.44
81:A2:2721:A:C2	81:A2:2722:A:C4	3.06	0.44
81:A2:2754:G:H8	81:A2:2754:G:O5'	2.01	0.44
81:A2:3566:G:N3	81:A2:3566:G:C3'	2.76	0.44
81:A2:3605:C:C3'	81:A2:3605:C:C6	3.00	0.44
81:A2:3625:A:O4'	81:A2:3716:A:C2	2.70	0.44
81:A2:3799:A:H5''	81:A2:3800:U:OP2	2.18	0.44
81:A2:384:U:OP2	81:A2:384:U:C6	2.70	0.44
81:A2:3873:G:C1'	81:A2:3874:A:P	3.05	0.44
81:A2:4117:A:H1'	81:A2:4118:C:OP2	2.16	0.44
81:A2:4239:A:H4'	81:A2:4240:A:C5'	2.48	0.44
81:A2:4418:C:O5'	81:A2:4418:C:H6	1.99	0.44
81:A2:444:G:C3'	81:A2:445:U:H5''	2.47	0.44
81:A2:4485:C:C5'	81:A2:4485:C:C6	3.00	0.44
81:A2:4595:A:C5'	81:A2:4624:A:H61	2.08	0.44
81:A2:4949:G:C2	81:A2:5013:A:C2	3.06	0.44
81:A2:508:C:C2'	81:A2:509:G:H5'	2.48	0.44
81:A2:656:G:C2'	81:A2:657:C:H5'	2.23	0.44
82:A3:112:G:O2'	82:A3:113:C:H5'	2.16	0.44
82:A3:114:G:C2	82:A3:115:G:C8	3.05	0.44
81:A2:2:G:C2	82:A3:156:U:N3	2.85	0.44
83:A4:47:G:C8	83:A4:48:G:O6	2.70	0.44
3:AX:43:U:O4'	4:B1:961:G:C2	2.61	0.44
4:B1:1034:A:C6	4:B1:1082:A:C4	3.06	0.44
4:B1:1081:U:C2'	4:B1:1082:A:H5'	2.47	0.44
4:B1:1103:C:H2'	4:B1:1104:G:H8	1.82	0.44
4:B1:1242:U:H4'	4:B1:1243:U:C5'	2.48	0.44
4:B1:130:G:O6	4:B1:131:C:C5	2.71	0.44
4:B1:1348:G:H22	4:B1:1381:G:H1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1406:G:C1'	4:B1:1407:U:O5'	2.65	0.44
4:B1:1418:C:H5''	24:BT:129:ARG:HA	1.99	0.44
4:B1:1591:C:O2	4:B1:1591:C:H2'	2.18	0.44
4:B1:1604:G:O2'	4:B1:1605:G:H5'	2.17	0.44
4:B1:1794:C:H6	4:B1:1794:C:O5'	2.00	0.44
4:B1:558:G:O5'	4:B1:558:G:C8	2.70	0.44
4:B1:663:C:C2	4:B1:664:A:C8	3.05	0.44
4:B1:743:U:C5	12:BH:98:ARG:O	2.70	0.44
4:B1:870:A:C6	4:B1:916:A:C5	3.05	0.44
8:BD:80:PRO:C	8:BD:82:GLY:H	2.21	0.44
11:BG:135:PRO:HG3	11:BG:144:LEU:CD1	2.39	0.44
12:BH:83:LEU:HB3	12:BH:92:VAL:HG21	1.99	0.44
13:BI:6:ASP:HB3	13:BI:28:GLU:CD	2.38	0.44
29:BY:7:ILE:HG23	29:BY:25:ILE:HG23	1.99	0.44
40:CC:93:GLY:HA2	40:CC:100:ARG:NH1	2.32	0.44
40:CC:210:ILE:HG22	40:CC:232:VAL:HG22	1.99	0.44
42:CE:168:LEU:HD23	42:CE:172:LEU:HD11	1.99	0.44
47:CJ:151:ILE:HD12	47:CJ:156:ARG:HA	1.98	0.44
51:CO:182:GLU:HA	51:CO:187:LYS:CD	2.47	0.44
52:CP:2:VAL:O	52:CP:3:ARG:CB	2.66	0.44
61:CY:15:ARG:O	61:CY:19:PHE:HD2	1.99	0.44
81:A2:1209:C:H2'	81:A2:1210:U:OP2	2.18	0.44
81:A2:1277:U:H3'	81:A2:1278:C:C6	2.52	0.44
81:A2:1279:G:H8	81:A2:1279:G:O5'	2.00	0.44
81:A2:1454:G:C3'	81:A2:1455:C:C4'	2.95	0.44
81:A2:1648:A:C8	81:A2:1648:A:C5'	2.93	0.44
81:A2:1773:A:H5''	81:A2:4174:A:N6	2.33	0.44
81:A2:1926:G:OP1	81:A2:1926:G:H8	2.01	0.44
81:A2:2019:A:C4	81:A2:4424:A:C2	3.06	0.44
4:B1:970:G:C5	81:A2:3679:G:O2'	2.70	0.44
81:A2:3714:U:O5'	81:A2:3714:U:C6	2.70	0.44
4:B1:1827:U:H5'	81:A2:3728:A:O2'	2.15	0.44
81:A2:3876:G:C4'	81:A2:3877:A:OP1	2.64	0.44
81:A2:4100:C:H2'	81:A2:4101:C:C6	2.52	0.44
81:A2:4262:U:C3'	81:A2:4262:U:C6	3.01	0.44
56:CT:80:VAL:HG12	81:A2:4264:A:H4'	2.00	0.44
81:A2:1653:C:O3'	81:A2:4336:A:H2'	2.17	0.44
81:A2:4456:A:C3'	81:A2:4457:U:C5'	2.96	0.44
81:A2:4529:U:H3'	81:A2:4530:G:C5'	2.47	0.44
81:A2:4658:C:O2'	81:A2:4659:U:C6	2.69	0.44
81:A2:4660:A:H2'	81:A2:4661:A:C5'	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4673:G:N7	81:A2:4674:C:C4	2.86	0.44
81:A2:4681:G:N3	81:A2:4681:G:C2'	2.80	0.44
81:A2:665:C:O5'	81:A2:665:C:H6	2.00	0.44
82:A3:11:C:H2'	82:A3:12:G:O4'	2.17	0.44
82:A3:152:U:H2'	82:A3:153:C:H6	1.83	0.44
82:A3:72:A:H4'	82:A3:87:G:H21	1.81	0.44
83:A4:48:G:N3	83:A4:48:G:C2'	2.80	0.44
4:B1:1127:C:C2'	4:B1:1128:C:H5'	2.47	0.44
4:B1:1129:G:H3'	4:B1:1130:G:N7	2.33	0.44
4:B1:1195:A:H5''	4:B1:1195:A:H8	1.81	0.44
4:B1:1260:A:C8	4:B1:1260:A:O5'	2.70	0.44
4:B1:1415:C:H5''	4:B1:1415:C:C6	2.52	0.44
4:B1:1471:C:H6	4:B1:1471:C:O5'	2.01	0.44
4:B1:1605:G:H21	4:B1:1634:A:H62	1.65	0.44
4:B1:1696:C:O2	4:B1:1697:A:C8	2.71	0.44
4:B1:1831:A:C2'	4:B1:1832:A:H5'	2.48	0.44
4:B1:1833:C:C6	4:B1:1833:C:C5'	2.85	0.44
4:B1:189:U:C6	4:B1:189:U:P	3.10	0.44
4:B1:28:U:H4'	28:BX:124:LYS:HZ1	1.82	0.44
4:B1:338:G:H2'	4:B1:339:A:N7	2.32	0.44
4:B1:428:U:H3'	4:B1:429:C:C5	2.53	0.44
4:B1:746:C:H4'	4:B1:747:U:OP2	2.18	0.44
5:BA:90:PHE:CZ	5:BA:178:LEU:HD22	2.53	0.44
9:BE:251:GLU:O	9:BE:255:ARG:HG3	2.17	0.44
10:BF:32:ASP:CB	10:BF:117:ILE:CG2	2.94	0.44
10:BF:158:ALA:CB	10:BF:173:LEU:HA	2.47	0.44
4:B1:67:C:C5	11:BG:163:ASN:N	2.79	0.44
13:BI:104:ILE:HG22	13:BI:105:ASP:N	2.33	0.44
13:BI:26:LYS:O	13:BI:29:LEU:HD23	2.17	0.44
4:B1:1216:C:H1'	21:BQ:143:LYS:NZ	2.33	0.44
38:CA:13:GLY:H	81:A2:1639:U:H3'	69.17	0.44
40:CC:89:GLN:HA	81:A2:2330:U:OP1	2.17	0.44
42:CE:223:ARG:H	42:CE:229:GLU:HG2	1.81	0.44
44:CG:130:THR:HB	81:A2:120:A:H61	1.82	0.44
46:CI:49:CYS:HB3	46:CI:168:SER:HB3	2.00	0.44
49:CM:95:ILE:HD11	49:CM:124:LYS:HZ3	36.28	0.44
51:CO:52:LEU:HD21	81:A2:1909:C:H5''	1.99	0.44
55:CS:78:PHE:CE1	55:CS:102:THR:HG22	2.53	0.44
55:CS:107:THR:O	55:CS:111:ARG:HG2	2.18	0.44
60:CX:77:ILE:HA	60:CX:100:VAL:HG22	1.99	0.44
61:CY:42:TYR:HB2	61:CY:44:VAL:CG1	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:47:MET:SD	61:CY:48:PRO:O	2.76	0.44
81:A2:103:G:H4'	81:A2:1360:G:C2	2.52	0.44
81:A2:1191:G:C4	81:A2:1192:G:N7	2.86	0.44
81:A2:1249:G:C4	81:A2:1250:A:C8	3.06	0.44
81:A2:1360:G:N3	81:A2:1360:G:H2'	2.32	0.44
81:A2:1421:C:C2'	81:A2:1422:C:O4'	2.65	0.44
81:A2:1454:G:C5	81:A2:1455:C:H1'	2.52	0.44
81:A2:1457:C:H2'	81:A2:1458:G:O4'	2.18	0.44
81:A2:1459:C:H3'	81:A2:1459:C:C6	2.52	0.44
81:A2:1667:G:H2'	81:A2:1668:G:O4'	2.17	0.44
81:A2:1728:A:H2'	81:A2:1729:G:O4'	2.17	0.44
81:A2:1889:C:H5'	81:A2:1895:A:N6	2.33	0.44
81:A2:2032:U:H1'	81:A2:2034:G:C5	2.53	0.44
81:A2:2452:G:H2'	81:A2:2453:G:H8	1.79	0.44
81:A2:2539:G:H21	81:A2:2541:G:H3'	1.82	0.44
81:A2:2836:G:O2'	81:A2:2837:C:H5'	2.18	0.44
81:A2:3580:A:H2'	81:A2:3581:C:H6	1.82	0.44
81:A2:3686:A:C6	81:A2:3705:A:C6	3.06	0.44
81:A2:4076:G:H2'	81:A2:4077:C:C6	2.53	0.44
81:A2:4093:C:C3'	81:A2:4094:A:H5''	2.45	0.44
81:A2:1714:U:N3	81:A2:4174:A:C8	2.86	0.44
81:A2:4195:G:C4	81:A2:4196:G:C8	3.06	0.44
81:A2:4263:C:H5''	81:A2:4264:A:H5'	1.95	0.44
81:A2:4498:G:H2'	81:A2:4498:G:N3	2.33	0.44
81:A2:4731:C:O5'	81:A2:4731:C:H6	2.01	0.44
81:A2:479:G:H2'	81:A2:480:C:H6	1.80	0.44
81:A2:722:G:C2'	81:A2:723:G:H4'	2.47	0.44
81:A2:744:G:H2'	81:A2:745:G:O4'	2.18	0.44
81:A2:743:C:H2'	81:A2:744:G:H8	1.82	0.44
81:A2:99:A:H2'	81:A2:100:C:O4'	2.18	0.44
81:A2:406:G:O6	82:A3:19:C:N4	2.51	0.44
81:A2:2289:A:C2	82:A3:8:U:O4'	2.70	0.44
83:A4:26:C:O5'	83:A4:26:C:C6	2.68	0.44
83:A4:66:G:N1	83:A4:67:C:C2	2.86	0.44
83:A4:73:U:H5''	83:A4:74:A:H2'	1.99	0.44
83:A4:87:G:H1'	83:A4:90:A:H62	1.83	0.44
81:A2:1773:A:C2	83:A4:98:G:N2	2.85	0.44
2:AW:33:U:O5'	2:AW:33:U:H6	2.01	0.44
4:B1:99:A:H2'	4:B1:100:U:C6	2.53	0.44
4:B1:1028:A:H3'	4:B1:1029:G:C8	2.52	0.44
4:B1:1237:C:H2'	4:B1:1238:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1277:C:H2'	4:B1:1277:C:O2	2.16	0.44
4:B1:1347:U:H2'	4:B1:1347:U:O2	2.17	0.44
4:B1:1398:G:C2	4:B1:1398:G:OP1	2.71	0.44
4:B1:1598:G:C4'	4:B1:1600:G:O6	2.66	0.44
4:B1:1829:G:O5'	4:B1:1829:G:H8	2.01	0.44
4:B1:746:C:H2'	4:B1:746:C:OP1	2.17	0.44
4:B1:984:C:H2'	4:B1:985:G:C8	2.51	0.44
6:BB:66:VAL:HA	6:BB:86:LEU:O	2.17	0.44
9:BE:30:ARG:HG3	9:BE:30:ARG:O	2.17	0.44
10:BF:179:ASN:HB2	10:BF:187:SER:HB3	2.00	0.44
11:BG:59:GLN:HG2	11:BG:59:GLN:O	2.18	0.44
11:BG:74:ARG:HB3	11:BG:94:ARG:HE	1.83	0.44
12:BH:115:LYS:O	12:BH:117:PRO:HD3	2.18	0.44
20:BP:28:MET:HE1	20:BP:33:LEU:HA	1.99	0.44
22:BR:41:ILE:HG21	22:BR:47:ARG:HB2	2.00	0.44
38:CA:175:ILE:HD13	81:A2:3652:C:O4'	2.17	0.44
38:CA:204:MET:O	38:CA:212:GLY:HA3	2.18	0.44
38:CA:227:ARG:HE	38:CA:239:ALA:CB	2.31	0.44
40:CC:270:ALA:CB	40:CC:276:ASN:HA	2.39	0.44
42:CE:220:LYS:HE3	42:CE:235:THR:OG1	2.18	0.44
43:CF:154:ILE:HG13	43:CF:191:ILE:CD1	2.48	0.44
45:CH:43:VAL:HG11	45:CH:70:VAL:HG22	1.98	0.44
47:CJ:66:GLU:O	47:CJ:66:GLU:HG2	2.17	0.44
49:CM:124:LYS:O	49:CM:128:LYS:HB2	2.17	0.44
49:CM:91:TRP:NE1	49:CM:95:ILE:HD11	2.33	0.44
62:CZ:108:ARG:HG3	81:A2:2531:U:O2	2.18	0.44
81:A2:1089:C:H2'	81:A2:1090:C:H6	1.82	0.44
81:A2:1191:G:C2'	81:A2:1192:G:C8	2.83	0.44
81:A2:121:A:C2	81:A2:147:U:C4	3.06	0.44
81:A2:1548:U:H2'	81:A2:1549:G:H5'	2.00	0.44
81:A2:1582:C:C2'	81:A2:1583:G:H5'	2.47	0.44
81:A2:1666:U:O2	81:A2:1666:U:C2'	2.66	0.44
81:A2:1719:C:C5'	81:A2:1719:C:H6	2.30	0.44
81:A2:2031:C:H6	81:A2:2031:C:O5'	2.01	0.44
81:A2:2312:C:H2'	81:A2:2313:G:C8	2.52	0.44
81:A2:2411:G:H5''	81:A2:2411:G:C8	2.53	0.44
81:A2:2464:G:C8	81:A2:2464:G:OP2	2.71	0.44
81:A2:2488:A:C2	81:A2:2491:G:C4	3.05	0.44
81:A2:2530:A:HO2'	81:A2:2531:U:C1'	2.30	0.44
54:CR:61:ALA:HB2	81:A2:2610:U:H5''	1.99	0.44
81:A2:2629:G:C5	81:A2:2630:C:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3698:U:O5'	81:A2:3698:U:H6	2.01	0.44
81:A2:3702:A:H2'	81:A2:3703:U:C6	2.53	0.44
81:A2:3758:C:C3'	81:A2:3758:C:C6	3.01	0.44
81:A2:3873:G:O2'	81:A2:3874:A:H5''	2.17	0.44
81:A2:4154:U:C5	81:A2:4157:G:OP1	2.71	0.44
81:A2:4377:C:C6	81:A2:4377:C:C5'	3.01	0.44
81:A2:4574:G:H2'	81:A2:4575:C:H6	1.83	0.44
81:A2:1942:A:N3	81:A2:4654:G:H8	2.13	0.44
81:A2:4689:C:C5'	81:A2:4690:G:C8	3.00	0.44
81:A2:4699:G:O2'	81:A2:4700:C:H6	2.01	0.44
81:A2:475:U:H3'	81:A2:475:U:C6	2.53	0.44
81:A2:4891:G:H2'	81:A2:4892:C:C6	2.53	0.44
81:A2:501:U:O2'	81:A2:502:C:H5'	2.18	0.44
81:A2:903:C:OP2	81:A2:903:C:C5	2.70	0.44
81:A2:942:G:N2	81:A2:1262:G:OP1	2.51	0.44
81:A2:1086:A:OP2	83:A4:107:G:H4'	2.18	0.44
1:AV:12:U:O5'	1:AV:12:U:H6	2.01	0.44
2:AW:29:G:C2'	2:AW:30:G:H5'	2.47	0.44
4:B1:1079:C:C3'	4:B1:1080:A:H5'	2.46	0.44
4:B1:1109:C:O2	4:B1:1109:C:C2'	2.66	0.44
4:B1:1120:U:C3'	4:B1:1120:U:C6	3.00	0.44
4:B1:1120:U:H3'	4:B1:1120:U:C6	2.53	0.44
4:B1:1188:A:H3'	4:B1:1189:A:C8	2.53	0.44
4:B1:133:C:H3'	4:B1:134:C:C5'	2.47	0.44
4:B1:1406:G:C4'	4:B1:1407:U:H5'	2.48	0.44
4:B1:1561:A:H1'	4:B1:1583:C:H5'	1.99	0.44
4:B1:1603:G:H5'	23:BS:38:ARG:NE	2.32	0.44
4:B1:1627:C:H2'	4:B1:1628:C:C6	2.53	0.44
4:B1:1631:U:H2'	4:B1:1632:G:O4'	2.17	0.44
4:B1:1700:C:N3	4:B1:1834:A:N6	2.66	0.44
4:B1:1762:C:H2'	4:B1:1763:G:H8	1.82	0.44
4:B1:1849:G:H2'	4:B1:1850:A:H5'	1.99	0.44
4:B1:313:A:H5''	11:BG:191:ARG:HH12	1.81	0.44
4:B1:33:G:H2'	4:B1:34:U:C6	2.53	0.44
4:B1:374:G:O6	4:B1:385:G:O6	2.35	0.44
4:B1:411:G:C2	4:B1:412:G:H1'	2.52	0.44
4:B1:548:C:O2	4:B1:548:C:H2'	2.17	0.44
4:B1:573:U:N3	4:B1:576:A:C5	2.86	0.44
4:B1:578:C:C6	4:B1:578:C:OP2	2.71	0.44
4:B1:611:G:H8	4:B1:611:G:O5'	2.01	0.44
4:B1:95:G:O2'	4:B1:96:C:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:195:LYS:HD3	11:BG:195:LYS:C	2.38	0.44
4:B1:824:C:O2	14:BJ:144:ILE:HG21	2.17	0.44
15:BK:11:ILE:HG12	15:BK:38:LYS:HE2	1.99	0.44
16:BL:95:TYR:CE2	16:BL:97:ARG:HA	2.53	0.44
17:BM:51:VAL:HG12	17:BM:77:ILE:CG1	2.48	0.44
23:BS:70:ILE:HD13	23:BS:77:TYR:CE1	2.52	0.44
23:BS:43:VAL:HA	24:BT:37:VAL:HG21	2.00	0.44
26:BV:17:CYS:SG	26:BV:56:CYS:N	2.91	0.44
28:BX:32:LEU:O	28:BX:34:THR:N	2.51	0.44
4:B1:571:U:O2'	29:BY:59:GLY:HA2	2.18	0.44
39:CB:301:ASN:HA	39:CB:312:LYS:O	2.18	0.44
40:CC:133:LEU:HB2	40:CC:136:LEU:CD1	2.48	0.44
43:CF:142:TRP:O	43:CF:235:ASN:HA	2.18	0.44
44:CG:194:VAL:HG11	44:CG:199:CYS:SG	2.57	0.44
46:CI:96:VAL:CG2	46:CI:122:PRO:HB3	2.47	0.44
48:CL:21:ARG:O	50:CN:197:THR:HG23	2.17	0.44
51:CO:42:ASN:HA	51:CO:136:ALA:O	2.18	0.44
54:CR:119:MET:SD	54:CR:145:LEU:HG	2.57	0.44
56:CT:80:VAL:O	56:CT:81:LYS:HB3	2.18	0.44
81:A2:1161:C:C5'	81:A2:1161:C:C6	3.01	0.44
81:A2:1180:G:C8	81:A2:1180:G:O5'	2.71	0.44
81:A2:1204:G:OP1	81:A2:1211:C:C5	2.71	0.44
81:A2:1412:G:H22	81:A2:1432:A:H2	1.64	0.44
81:A2:1514:C:H2'	81:A2:1515:U:H5'	2.00	0.44
81:A2:1588:U:H2'	81:A2:1589:C:O4'	2.16	0.44
81:A2:1773:A:C2'	81:A2:1774:A:H5'	2.46	0.44
81:A2:178:C:OP2	81:A2:179:G:C5'	2.66	0.44
81:A2:1803:G:H3'	81:A2:1804:A:C8	2.52	0.44
81:A2:1814:G:N3	81:A2:1814:G:H3'	2.32	0.44
81:A2:193:C:O2	81:A2:193:C:C3'	2.66	0.44
81:A2:2441:C:C2'	81:A2:2442:C:H5'	2.47	0.44
81:A2:2873:G:C8	81:A2:2873:G:O5'	2.67	0.44
81:A2:3645:G:H2'	81:A2:3646:U:H5'	2.00	0.44
81:A2:3730:C:H3'	81:A2:3731:U:C6	2.53	0.44
81:A2:3945:C:O5'	81:A2:3945:C:C6	2.71	0.44
81:A2:4195:G:H2'	81:A2:4196:G:C5'	2.48	0.44
81:A2:4195:G:H2'	81:A2:4196:G:O5'	2.17	0.44
81:A2:4222:C:O5'	81:A2:4222:C:H6	2.00	0.44
81:A2:4233:A:N7	81:A2:4234:A:C6	2.86	0.44
56:CT:51:GLY:HA2	81:A2:4272:U:H4'	2.00	0.44
81:A2:4309:C:H5''	81:A2:4309:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:451:C:C6	81:A2:451:C:O5'	2.71	0.44
39:CB:54:THR:HA	81:A2:4587:U:O2'	2.17	0.44
81:A2:4636:G:C4'	81:A2:4637:U:OP1	2.65	0.44
81:A2:4638:G:C2	81:A2:4673:G:H1'	2.53	0.44
81:A2:4697:C:C2	81:A2:4698:C:C5	3.06	0.44
81:A2:692:C:H42	81:A2:1273:G:H1	1.63	0.44
81:A2:709:G:C3'	81:A2:710:G:H5'	2.44	0.44
81:A2:718:G:N2	81:A2:721:A:H61	2.16	0.44
83:A4:39:C:C6	83:A4:39:C:OP1	2.70	0.44
1:AV:76:A:H4'	1:AV:76:A:OP1	2.17	0.44
2:AW:56:C:N3	81:A2:3927:G:C5	2.82	0.44
4:B1:1149:A:O2'	4:B1:1150:A:H3'	2.18	0.44
4:B1:1196:A:C2	4:B1:1197:G:H1'	2.53	0.44
4:B1:1275:G:O6	4:B1:1506:A:H8	2.01	0.44
4:B1:1311:C:C6	4:B1:1311:C:OP2	2.71	0.44
4:B1:1406:G:O2'	4:B1:1408:U:H5	1.95	0.44
4:B1:1849:G:O2'	4:B1:1850:A:H5'	2.18	0.44
4:B1:331:C:H41	11:BG:189:ARG:HH12	1.66	0.44
4:B1:474:G:N2	4:B1:507:G:O2'	2.51	0.44
4:B1:59:U:C2'	4:B1:60:A:C5'	2.87	0.44
5:BA:9:GLN:HG3	5:BA:10:MET:N	2.32	0.44
8:BD:210:ILE:HG12	22:BR:39:ALA:HB1	2.00	0.44
4:B1:67:C:C5	11:BG:164:LYS:HB2	2.53	0.44
11:BG:64:LYS:O	11:BG:100:CYS:HB2	2.17	0.44
4:B1:797:C:C5	12:BH:106:ARG:HB3	2.53	0.44
12:BH:76:GLN:HG3	12:BH:77:VAL:N	2.33	0.44
13:BI:83:TYR:CD1	13:BI:205:ARG:HD2	2.53	0.44
16:BL:55:TYR:CD2	16:BL:115:PRO:HG2	2.53	0.44
16:BL:82:MET:HG2	16:BL:85:THR:CG2	2.48	0.44
4:B1:1286:G:C1'	17:BM:34:GLY:HA3	2.43	0.44
38:CA:196:TRP:CD2	38:CA:197:PRO:HD3	2.53	0.44
38:CA:3:ARG:HG2	38:CA:4:VAL:N	2.33	0.44
39:CB:2:SER:O	39:CB:3:HIS:HB3	2.18	0.44
39:CB:55:HIS:ND1	39:CB:369:ASP:HB3	2.33	0.44
40:CC:29:LYS:HD3	40:CC:267:TRP:CZ2	2.53	0.44
41:CD:105:LEU:HD22	41:CD:105:LEU:O	2.17	0.44
43:CF:92:VAL:HG13	43:CF:140:ILE:HD12	2.00	0.44
45:CH:25:VAL:O	45:CH:35:ARG:HA	2.18	0.44
48:CL:94:ILE:HG13	48:CL:126:LEU:HD21	1.99	0.44
49:CM:66:HIS:HB3	81:A2:736:G:C4'	2.47	0.44
54:CR:19:LYS:O	54:CR:22:VAL:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CT:17:ARG:O	56:CT:18:PRO:O	2.36	0.44
81:A2:1197:G:O3'	81:A2:1198:G:C8	2.67	0.43
81:A2:119:G:O4'	81:A2:120:A:C8	2.71	0.43
81:A2:134:G:P	81:A2:135:G:H1	2.41	0.43
81:A2:1360:G:C1'	81:A2:1361:U:P	3.06	0.43
81:A2:1360:G:N3	81:A2:1360:G:C2'	2.81	0.43
53:CQ:133:GLY:O	81:A2:1410:C:H4'	2.18	0.43
81:A2:1670:G:H1	81:A2:1823:U:H3	1.66	0.43
81:A2:2479:G:C3'	81:A2:2479:G:C8	3.01	0.43
81:A2:2749:C:C6	81:A2:2749:C:O5'	2.71	0.43
81:A2:2789:A:C3'	81:A2:2790:A:H8	2.29	0.43
81:A2:2841:A:H2'	81:A2:2842:U:H6	1.74	0.43
81:A2:2849:C:C5	81:A2:2849:C:OP2	2.70	0.43
81:A2:3635:C:H5''	81:A2:3636:C:OP2	2.18	0.43
81:A2:3640:G:H3'	81:A2:3641:G:H8	1.83	0.43
81:A2:3698:U:O2'	81:A2:3699:U:H5'	2.18	0.43
81:A2:2821:A:C5	81:A2:3808:G:N7	2.87	0.43
81:A2:457:A:C2'	81:A2:458:U:H5''	2.48	0.43
81:A2:4602:U:H2'	81:A2:4603:G:C8	2.52	0.43
81:A2:4648:C:H6	81:A2:4648:C:O5'	2.00	0.43
81:A2:4702:G:H2'	81:A2:4703:A:C8	2.53	0.43
81:A2:4736:C:H1'	81:A2:4815:G:N2	2.33	0.43
81:A2:4738:U:O2'	81:A2:4739:G:H5'	2.16	0.43
81:A2:1270:G:P	81:A2:4895:C:H41	2.40	0.43
81:A2:52:G:O5'	81:A2:52:G:C8	2.71	0.43
81:A2:710:G:H2'	81:A2:711:A:C5'	2.48	0.43
81:A2:928:A:H2	81:A2:931:C:H42	1.62	0.43
81:A2:973:U:H1'	81:A2:974:C:P	2.58	0.43
82:A3:111:U:H4'	82:A3:112:G:H5'	1.99	0.43
83:A4:78:C:H2'	83:A4:79:U:H6	1.83	0.43
81:A2:1716:A:C5'	83:A4:78:C:H4'	2.35	0.43
2:AW:1:G:H2'	2:AW:2:C:OP1	2.18	0.43
2:AW:38:A:H2'	2:AW:39:U:H6	1.83	0.43
4:B1:1164:G:C3'	4:B1:1165:G:N2	2.78	0.43
4:B1:1256:G:C5	4:B1:1257:G:H1'	2.53	0.43
4:B1:1353:A:H2'	4:B1:1354:G:C5'	2.43	0.43
4:B1:1416:C:C6	4:B1:1417:C:H5''	2.53	0.43
4:B1:1455:A:H5''	4:B1:1456:G:OP2	2.19	0.43
4:B1:35:C:C3'	4:B1:36:U:C6	2.97	0.43
4:B1:381:C:C5'	4:B1:381:C:H6	2.30	0.43
4:B1:389:A:N3	4:B1:389:A:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:401:A:N7	4:B1:402:C:C5	2.85	0.43
4:B1:414:A:O5'	4:B1:414:A:C8	2.63	0.43
4:B1:754:G:H2'	4:B1:755:C:H6	1.72	0.43
4:B1:900:C:C4	4:B1:901:G:O6	2.71	0.43
4:B1:92:A:C8	4:B1:446:G:H2'	2.53	0.43
4:B1:985:G:H4'	4:B1:986:G:H5'	2.00	0.43
6:BB:84:PHE:CE1	6:BB:100:PHE:HE2	2.35	0.43
4:B1:1122:A:H4'	6:BB:205:TYR:CD1	2.53	0.43
4:B1:65:C:C4'	11:BG:133:LEU:HD22	2.46	0.43
11:BG:194:LEU:O	11:BG:197:GLN:HB2	2.17	0.43
13:BI:102:VAL:HG12	13:BI:103:LEU:N	2.33	0.43
14:BJ:125:HIS:NE2	14:BJ:129:LEU:HD11	2.33	0.43
20:BP:126:VAL:HG13	20:BP:127:LYS:N	2.23	0.43
21:BQ:12:VAL:CG1	21:BQ:90:LYS:HB2	2.48	0.43
23:BS:77:TYR:O	23:BS:78:LYS:CB	2.66	0.43
24:BT:123:LEU:H	24:BT:123:LEU:HD23	1.83	0.43
25:BU:39:LEU:HD13	25:BU:39:LEU:C	2.38	0.43
38:CA:234:LYS:HB3	38:CA:238:ILE:HD11	2.00	0.43
44:CG:164:ILE:HG22	44:CG:168:VAL:HG13	2.00	0.43
50:CN:155:VAL:HG12	81:A2:57:G:H4'	1.99	0.43
55:CS:62:VAL:HG11	56:CT:141:VAL:HG21	2.00	0.43
57:CU:44:GLN:NE2	57:CU:56:LEU:HB3	2.33	0.43
61:CY:86:GLN:HG2	61:CY:96:HIS:HA	2.00	0.43
81:A2:1205:U:O2'	81:A2:1206:U:P	2.75	0.43
81:A2:1318:G:C4	81:A2:1498:C:O4'	2.70	0.43
81:A2:1462:C:H3'	81:A2:1463:G:H8	1.76	0.43
81:A2:1559:C:H2'	81:A2:1560:G:O4'	2.18	0.43
38:CA:196:TRP:CZ3	81:A2:1592:A:C2	3.06	0.43
81:A2:1599:U:H5'	81:A2:1600:A:OP2	2.18	0.43
81:A2:1717:A:H8	81:A2:1717:A:O5'	2.01	0.43
81:A2:1753:C:O4'	81:A2:1753:C:O2	2.36	0.43
81:A2:1642:C:H42	81:A2:2262:G:H1	1.66	0.43
81:A2:2296:G:H22	81:A2:2297:G:N2	2.16	0.43
81:A2:2297:G:H5'	81:A2:2298:G:O5'	2.18	0.43
81:A2:2325:G:P	81:A2:2328:C:N4	2.90	0.43
81:A2:2458:G:H2'	81:A2:2459:C:H6	1.81	0.43
81:A2:2624:A:C6	81:A2:2665:G:O6	2.69	0.43
81:A2:2870:U:H2'	81:A2:2871:A:C8	2.53	0.43
81:A2:3571:C:H2'	81:A2:3572:G:O4'	2.18	0.43
81:A2:3618:A:C2	81:A2:3619:C:C6	3.07	0.43
4:B1:969:U:C2'	81:A2:3681:A:O4'	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3787:U:H3'	81:A2:3788:G:H4'	1.99	0.43
81:A2:4128:G:C2'	81:A2:4129:G:H5'	2.48	0.43
81:A2:4129:G:H4'	81:A2:4131:C:C2	2.53	0.43
81:A2:413:C:O2'	81:A2:414:G:H5'	2.18	0.43
81:A2:4292:C:O5'	81:A2:4292:C:C6	2.71	0.43
81:A2:4689:C:C5	81:A2:4690:G:O6	2.72	0.43
81:A2:4717:U:O2	81:A2:4718:C:C5	2.71	0.43
81:A2:4737:C:O2'	81:A2:4738:U:H5'	2.18	0.43
81:A2:477:C:H4'	81:A2:478:G:C5'	2.47	0.43
81:A2:676:G:O3'	81:A2:677:C:C5	2.72	0.43
81:A2:69:A:N3	81:A2:69:A:C2'	2.80	0.43
81:A2:923:G:H2'	81:A2:924:C:C5'	2.49	0.43
83:A4:68:C:H3'	83:A4:69:U:C5	2.53	0.43
41:CD:33:ARG:HD2	83:A4:7:G:O5'	2.18	0.43
2:AW:75:C:H6	2:AW:75:C:O5'	2.02	0.43
4:B1:1130:G:C8	4:B1:1130:G:O5'	2.71	0.43
4:B1:1255:G:C5'	4:B1:1256:G:C8	2.98	0.43
4:B1:148:U:C4	4:B1:169:U:C4	3.06	0.43
4:B1:1518:C:H5''	4:B1:1519:U:H5''	1.97	0.43
4:B1:1544:C:H4'	21:BQ:80:GLN:NE2	2.32	0.43
4:B1:1548:G:C6	4:B1:1584:G:N2	2.86	0.43
4:B1:163:U:HO2'	4:B1:164:A:H8	1.61	0.43
4:B1:164:A:C2'	4:B1:165:G:C8	3.01	0.43
4:B1:1765:C:H2'	4:B1:1766:C:C1'	2.46	0.43
4:B1:23:G:H2'	4:B1:24:C:O4'	2.16	0.43
4:B1:25:A:C8	4:B1:25:A:H3'	2.53	0.43
4:B1:360:A:N3	4:B1:362:C:H3'	2.33	0.43
4:B1:66:G:H1'	4:B1:67:C:OP1	2.18	0.43
6:BB:180:ASP:HB3	6:BB:181:LEU:H	1.57	0.43
6:BB:66:VAL:HG22	6:BB:85:LYS:HG3	2.00	0.43
7:BC:98:LEU:CG	7:BC:101:SER:HB2	2.47	0.43
8:BD:82:GLY:O	8:BD:85:GLU:HB2	2.18	0.43
9:BE:177:THR:HG23	9:BE:196:THR:O	2.18	0.43
10:BF:165:ASN:ND2	10:BF:167:LYS:HB2	2.33	0.43
4:B1:67:C:C4	11:BG:164:LYS:HB2	2.53	0.43
4:B1:313:A:C6	11:BG:187:HIS:NE2	2.87	0.43
16:BL:101:ARG:C	28:BX:10:ALA:HB2	2.38	0.43
19:BO:18:GLY:N	19:BO:19:PRO:CD	2.81	0.43
22:BR:105:MET:HG2	22:BR:106:LEU:H	1.82	0.43
22:BR:5:ARG:HG3	22:BR:53:TYR:CD1	2.53	0.43
30:BZ:87:ALA:O	30:BZ:91:LEU:HD13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:122:TYR:CE2	40:CC:280:PRO:HG3	2.53	0.43
41:CD:205:ALA:O	41:CD:233:PRO:HB3	2.18	0.43
42:CE:164:PHE:HE1	42:CE:173:LEU:HD22	1.83	0.43
42:CE:217:PHE:CD1	42:CE:217:PHE:N	2.85	0.43
42:CE:255:SER:O	42:CE:259:PRO:HD2	2.18	0.43
45:CH:173:ARG:HD2	49:CM:127:VAL:HG22	88.16	0.43
46:CI:145:LYS:HE3	46:CI:167:ILE:HG21	1.99	0.43
49:CM:11:ARG:HD3	49:CM:57:LEU:HB3	2.01	0.43
54:CR:134:ASN:HB3	81:A2:2873:G:H5''	1.99	0.43
57:CU:81:ARG:HB3	57:CU:81:ARG:NH1	2.33	0.43
61:CY:115:ARG:HD3	61:CY:115:ARG:C	2.39	0.43
61:CY:37:GLU:O	61:CY:41:LYS:HG3	2.18	0.43
62:CZ:58:GLY:O	62:CZ:61:LYS:N	2.50	0.43
81:A2:1147:C:N4	81:A2:1176:G:O2'	2.51	0.43
81:A2:1220:G:C2'	81:A2:1221:C:O5'	2.66	0.43
81:A2:1282:U:H2'	81:A2:1284:C:C6	2.54	0.43
81:A2:1305:C:O2	81:A2:1305:C:O4'	2.33	0.43
81:A2:1340:G:H2'	81:A2:1341:G:H5'	1.99	0.43
81:A2:1423:A:OP2	81:A2:1423:A:H8	2.00	0.43
81:A2:1430:C:H2'	81:A2:1431:G:C8	2.52	0.43
81:A2:1530:C:H5''	81:A2:1530:C:C6	2.39	0.43
81:A2:1732:G:H2'	81:A2:1734:C:OP2	2.18	0.43
81:A2:1791:C:H6	81:A2:1791:C:O5'	2.01	0.43
81:A2:2355:G:H21	81:A2:2357:G:H8	1.63	0.43
81:A2:2521:G:H8	81:A2:2521:G:O5'	2.00	0.43
81:A2:2548:C:C6	81:A2:2548:C:C5'	3.01	0.43
81:A2:272:U:O2	81:A2:273:C:C5	2.72	0.43
81:A2:298:A:C8	81:A2:298:A:C3'	3.02	0.43
81:A2:304:U:O5'	81:A2:304:U:C6	2.71	0.43
81:A2:3757:C:H1'	81:A2:3781:C:C2	2.53	0.43
81:A2:384:U:C2	81:A2:385:G:H1'	2.53	0.43
81:A2:4118:C:H2'	81:A2:4119:C:O4'	2.18	0.43
81:A2:4120:C:C5'	81:A2:4120:C:H6	2.28	0.43
81:A2:4130:A:C1'	81:A2:4131:C:OP2	2.66	0.43
81:A2:4377:C:H6	81:A2:4377:C:H5''	1.83	0.43
81:A2:4508:A:H3'	81:A2:4508:A:OP1	2.17	0.43
58:CV:95:PHE:CE1	81:A2:4589:U:H1'	2.53	0.43
81:A2:4737:C:H1'	81:A2:4813:C:H42	1.83	0.43
81:A2:4746:C:H2'	81:A2:4747:C:H6	1.80	0.43
81:A2:4882:G:N2	81:A2:4883:C:N1	2.66	0.43
81:A2:650:G:C2'	81:A2:651:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:692:C:O5'	81:A2:692:C:H6	2.01	0.43
81:A2:944:A:OP2	81:A2:945:G:H5''	2.18	0.43
83:A4:75:G:H4'	83:A4:76:U:OP2	2.17	0.43
2:AW:75:C:HO2'	2:AW:76:A:H2	1.67	0.43
4:B1:1173:A:C6	4:B1:1188:A:C8	3.06	0.43
4:B1:1221:G:H2'	4:B1:1222:G:O4'	2.17	0.43
4:B1:1341:C:O5'	4:B1:1341:C:C6	2.71	0.43
4:B1:1510:G:OP2	4:B1:1510:G:C8	2.71	0.43
4:B1:1511:U:H2'	4:B1:1512:C:O4'	2.18	0.43
4:B1:1552:G:H2'	8:BD:3:VAL:CG2	2.44	0.43
4:B1:1654:G:H5'	24:BT:82:ARG:NH2	2.33	0.43
4:B1:1689:C:H2'	4:B1:1690:U:O4'	2.19	0.43
4:B1:16:G:H5''	4:B1:669:A:N1	2.34	0.43
4:B1:1766:C:H5'	4:B1:1767:C:OP2	2.18	0.43
4:B1:1769:C:O5'	4:B1:1769:C:H6	2.00	0.43
4:B1:313:A:OP2	4:B1:313:A:H4'	2.18	0.43
4:B1:338:G:C8	4:B1:338:G:H5''	2.46	0.43
4:B1:54:A:HO2'	4:B1:451:G:H1	1.62	0.43
4:B1:570:C:C3'	4:B1:571:U:H5''	2.41	0.43
4:B1:571:U:O5'	4:B1:572:U:H5''	2.19	0.43
4:B1:688:U:O2	4:B1:688:U:O4'	2.37	0.43
4:B1:745:C:P	12:BH:105:THR:HG1	2.41	0.43
4:B1:827:A:C2'	4:B1:828:G:H5'	2.48	0.43
7:BC:173:LYS:HD2	7:BC:173:LYS:N	2.33	0.43
8:BD:26:THR:HB	8:BD:34:TYR:OH	2.18	0.43
9:BE:123:LEU:HD23	9:BE:161:GLN:HA	2.00	0.43
9:BE:203:GLY:O	9:BE:204:SER:HB2	2.17	0.43
10:BF:69:VAL:O	10:BF:72:LEU:HB2	2.18	0.43
4:B1:169:U:C1'	11:BG:133:LEU:HD12	2.44	0.43
13:BI:97:VAL:O	13:BI:175:ILE:HD11	2.18	0.43
20:BP:58:LYS:HG2	20:BP:61:ARG:HH21	1.83	0.43
21:BQ:12:VAL:HG21	21:BQ:91:ALA:CA	2.35	0.43
26:BV:79:VAL:HG13	26:BV:80:SER:N	2.33	0.43
27:BW:7:LEU:HA	27:BW:34:ILE:HG12	2.00	0.43
29:BY:45:ALA:HB1	29:BY:50:THR:O	2.18	0.43
4:B1:823:U:H5'	29:BY:64:PHE:HD2	1.84	0.43
38:CA:21:LYS:CE	81:A2:2426:A:H4'	2.49	0.43
39:CB:136:LYS:HB3	39:CB:146:LEU:HD21	2.00	0.43
39:CB:17:LEU:HB3	39:CB:18:PRO:CD	2.48	0.43
47:CJ:96:LYS:C	47:CJ:97:ASN:O	2.55	0.43
50:CN:92:LEU:H	50:CN:92:LEU:HD12	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CO:48:TYR:CG	51:CO:51:LYS:HE2	2.52	0.43
81:A2:1176:G:C2'	81:A2:1177:C:O5'	2.65	0.43
43:CF:44:LYS:CG	81:A2:1219:C:H3'	2.45	0.43
81:A2:1313:A:C3'	81:A2:1314:A:H8	2.30	0.43
81:A2:1412:G:N2	81:A2:1432:A:H2	2.17	0.43
81:A2:1460:C:N4	81:A2:1463:G:H22	2.08	0.43
81:A2:1740:G:H1	81:A2:1750:U:H3	1.67	0.43
81:A2:1867:U:H3	81:A2:1917:A:N6	2.16	0.43
81:A2:2352:A:H3'	81:A2:2353:A:C8	2.49	0.43
81:A2:241:G:P	81:A2:241:G:C8	3.12	0.43
81:A2:2476:C:H2'	81:A2:2477:U:H6	1.83	0.43
81:A2:2549:C:N1	81:A2:2550:A:H8	2.15	0.43
81:A2:2553:G:C5'	81:A2:2553:G:C8	2.99	0.43
81:A2:2567:G:C1'	81:A2:2732:A:N6	2.81	0.43
81:A2:2681:C:C4	81:A2:2682:G:N7	2.86	0.43
81:A2:2778:U:H2'	81:A2:2779:C:C5	2.53	0.43
81:A2:2795:C:C6	81:A2:2795:C:C3'	3.02	0.43
81:A2:304:U:H5	81:A2:304:U:OP2	2.02	0.43
81:A2:3604:A:H2'	81:A2:3605:C:H5''	2.00	0.43
81:A2:3678:U:C2'	81:A2:3679:G:H5'	2.45	0.43
52:CP:85:LYS:HG3	81:A2:3825:A:H4'	1.98	0.43
81:A2:3841:A:H2'	81:A2:3842:G:H5'	2.00	0.43
81:A2:4005:C:C2'	81:A2:4006:C:H5'	2.48	0.43
81:A2:4032:C:C3'	81:A2:4033:G:H4'	2.49	0.43
81:A2:4060:G:N1	81:A2:4118:C:N4	2.64	0.43
81:A2:416:U:O2'	81:A2:417:A:H5'	2.18	0.43
81:A2:443:A:H5''	81:A2:444:G:OP2	2.18	0.43
81:A2:4673:G:C8	81:A2:4674:C:C4	3.07	0.43
81:A2:4700:C:C6	81:A2:4701:G:O4'	2.71	0.43
81:A2:4823:G:H5'	81:A2:4825:G:N1	2.33	0.43
81:A2:4849:A:H1'	81:A2:4850:C:C6	2.53	0.43
81:A2:457:A:O2'	81:A2:679:U:C5	2.71	0.43
81:A2:959:C:O2'	81:A2:960:G:P	2.76	0.43
81:A2:971:C:H3'	81:A2:971:C:H6	1.82	0.43
82:A3:137:A:C2	82:A3:138:C:N1	2.86	0.43
82:A3:29:G:O2'	82:A3:30:U:H5'	2.18	0.43
83:A4:23:A:O2'	83:A4:119:U:P	2.75	0.43
83:A4:65:G:OP2	83:A4:65:G:H8	2.02	0.43
4:B1:1043:G:C8	4:B1:1043:G:O5'	2.71	0.43
4:B1:1043:G:O2'	4:B1:1044:G:H8	2.01	0.43
4:B1:1086:G:OP1	4:B1:1086:G:C2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:10:G:H2'	4:B1:11:A:H8	1.83	0.43
4:B1:1326:U:O4'	4:B1:1326:U:O2	2.35	0.43
4:B1:1217:A:N3	4:B1:1685:U:O2	2.51	0.43
4:B1:1739:C:O5'	4:B1:1739:C:C6	2.70	0.43
4:B1:398:A:H4'	4:B1:399:C:C3'	2.41	0.43
4:B1:502:C:H1'	4:B1:503:C:O5'	2.18	0.43
4:B1:493:A:H1'	4:B1:573:U:O3'	2.18	0.43
4:B1:746:C:C2'	4:B1:746:C:OP1	2.67	0.43
4:B1:805:U:OP1	27:BW:82:GLN:HG3	2.18	0.43
4:B1:838:G:H8	29:BY:9:THR:OG1	2.01	0.43
4:B1:899:U:C2'	4:B1:900:C:C6	2.98	0.43
5:BA:147:LEU:HB3	5:BA:163:CYS:SG	2.59	0.43
6:BB:75:GLN:O	6:BB:76:ASN:CB	2.66	0.43
6:BB:82:ARG:HG2	6:BB:103:MET:CE	2.48	0.43
7:BC:94:ILE:HG13	7:BC:95:ASP:N	2.31	0.43
9:BE:36:HIS:CG	9:BE:85:GLY:HA3	2.53	0.43
10:BF:48:TYR:CD1	10:BF:49:LEU:N	2.86	0.43
10:BF:52:SER:C	10:BF:54:GLY:H	2.21	0.43
11:BG:50:VAL:HG13	11:BG:112:VAL:O	2.19	0.43
11:BG:162:LEU:HG	11:BG:163:ASN:N	2.32	0.43
19:BO:53:ILE:HG22	19:BO:54:CYS:N	2.34	0.43
29:BY:12:PHE:HA	29:BY:22:GLN:O	2.18	0.43
39:CB:291:TYR:O	39:CB:292:LEU:HB2	2.18	0.43
42:CE:217:PHE:HB3	42:CE:246:ARG:HH22	1.81	0.43
43:CF:126:ASN:O	43:CF:130:ILE:HG13	2.17	0.43
44:CG:182:CYS:HB3	44:CG:222:ILE:HG23	2.00	0.43
44:CG:69:ILE:CG2	44:CG:73:ARG:NH1	2.81	0.43
46:CI:19:LYS:HE2	46:CI:26:VAL:HG21	2.00	0.43
48:CL:198:ARG:O	48:CL:202:ALA:HB3	2.17	0.43
53:CQ:48:LEU:HD22	53:CQ:48:LEU:O	2.19	0.43
56:CT:104:SER:O	56:CT:108:ARG:HB2	2.17	0.43
59:CW:3:VAL:HG11	59:CW:12:LYS:CE	2.48	0.43
81:A2:1079:C:O3'	81:A2:1083:C:H1'	2.18	0.43
81:A2:1164:A:C2	81:A2:1165:G:C5	3.06	0.43
81:A2:1587:G:C6	81:A2:1588:U:C4	3.07	0.43
81:A2:15:A:H2'	81:A2:16:G:H5'	2.01	0.43
81:A2:1742:C:H3'	81:A2:1743:G:C4'	2.47	0.43
81:A2:1899:C:H3'	81:A2:1900:G:H5''	1.99	0.43
81:A2:192:C:C2'	81:A2:193:C:OP2	2.67	0.43
81:A2:2296:G:OP2	81:A2:2296:G:H8	2.02	0.43
81:A2:2304:G:H2'	81:A2:2305:U:C5'	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:22:G:H3'	81:A2:23:C:C6	2.54	0.43
81:A2:2505:G:C3'	81:A2:2505:G:C8	2.99	0.43
81:A2:285:G:P	81:A2:285:G:H8	2.42	0.43
81:A2:3729:A:C2'	81:A2:3729:A:N3	2.82	0.43
81:A2:3753:A:H4'	81:A2:3754:A:OP1	2.19	0.43
81:A2:378:G:N3	81:A2:403:G:C2	2.86	0.43
81:A2:398:A:O2'	81:A2:400:G:H3'	2.19	0.43
50:CN:28:TRP:NE1	81:A2:4045:A:H5''	2.33	0.43
81:A2:4078:U:H5''	81:A2:4079:C:OP2	2.19	0.43
81:A2:4130:A:O2'	81:A2:4131:C:P	2.77	0.43
81:A2:4225:U:H6	81:A2:4225:U:O5'	2.01	0.43
81:A2:4299:A:H3'	81:A2:4300:U:H5	1.84	0.43
81:A2:4432:G:H2'	81:A2:4433:A:H5'	2.00	0.43
81:A2:4432:G:C4	81:A2:4433:A:N7	2.86	0.43
81:A2:4622:C:H6	81:A2:4622:C:H5''	1.82	0.43
81:A2:4824:U:C3'	81:A2:4824:U:O2	2.67	0.43
55:CS:165:PRO:HD2	81:A2:4828:G:O3'	2.18	0.43
81:A2:4882:G:N3	81:A2:4882:G:H3'	2.34	0.43
81:A2:4930:G:H4'	81:A2:4931:U:OP1	2.18	0.43
81:A2:32:G:N2	81:A2:50:C:H41	2.14	0.43
81:A2:910:G:C2'	81:A2:911:G:H5'	2.48	0.43
81:A2:946:C:O2'	81:A2:947:G:H5'	2.18	0.43
81:A2:1:C:N3	82:A3:157:U:N3	2.67	0.43
82:A3:58:G:O5'	82:A3:97:A:C2	2.72	0.43
82:A3:67:U:H2'	82:A3:68:G:H8	1.83	0.43
82:A3:81:C:H2'	82:A3:81:C:O2	2.17	0.43
83:A4:3:C:C3'	83:A4:3:C:O2	2.66	0.43
4:B1:1050:A:H2'	4:B1:1051:G:C5'	2.48	0.43
4:B1:1265:A:C2'	4:B1:1265:A:N3	2.81	0.43
4:B1:1371:U:O2'	4:B1:1372:U:P	2.76	0.43
4:B1:1535:U:H1'	10:BF:88:MET:SD	2.59	0.43
4:B1:1587:G:H1'	24:BT:78:ILE:HB	2.01	0.43
4:B1:164:A:H3'	4:B1:165:G:H8	1.81	0.43
4:B1:190:G:O5'	4:B1:190:G:H8	2.01	0.43
4:B1:308:G:OP2	4:B1:308:G:N3	2.51	0.43
4:B1:441:C:H41	4:B1:448:A:H1'	1.82	0.43
4:B1:435:A:H2'	4:B1:450:C:C6	2.54	0.43
4:B1:465:A:H8	4:B1:465:A:OP2	2.02	0.43
4:B1:485:A:H5''	4:B1:486:A:OP1	2.19	0.43
4:B1:546:G:H4'	4:B1:547:G:OP2	2.18	0.43
4:B1:557:U:H2'	4:B1:558:G:N9	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:692:G:O2'	4:B1:693:A:H5'	2.19	0.43
4:B1:876:C:C6	4:B1:877:C:H5	2.35	0.43
6:BB:173:THR:O	6:BB:177:GLN:NE2	2.51	0.43
6:BB:179:ASN:HB2	6:BB:183:GLU:HB2	1.99	0.43
13:BI:19:LYS:HA	13:BI:20:PRO:HD3	1.85	0.43
14:BJ:84:ILE:CG2	14:BJ:108:ARG:HG3	2.48	0.43
4:B1:527:C:C1'	14:BJ:125:HIS:ND1	2.82	0.43
21:BQ:110:ASP:O	21:BQ:114:GLN:HG2	2.18	0.43
5:BA:200:ASP:O	22:BR:86:PRO:HG2	2.19	0.43
24:BT:134:ILE:O	24:BT:137:GLN:HG2	2.19	0.43
43:CF:150:VAL:O	43:CF:154:ILE:HG12	2.18	0.43
45:CH:122:TYR:HB3	81:A2:4572:C:O2	2.18	0.43
48:CL:77:SER:HA	48:CL:99:ASP:O	2.19	0.43
49:CM:86:TRP:O	49:CM:89:THR:HG22	2.18	0.43
50:CN:4:TYR:HD1	50:CN:7:ILE:HD12	1.82	0.43
53:CQ:68:ARG:O	53:CQ:71:LYS:HB2	2.18	0.43
55:CS:25:PRO:O	56:CT:146:LYS:HE3	2.17	0.43
57:CU:43:LEU:O	57:CU:47:ILE:HG13	2.17	0.43
44:CG:52:THR:HG21	60:CX:38:LYS:HD2	1.99	0.43
81:A2:1202:A:H2'	81:A2:1202:A:N3	2.33	0.43
81:A2:1222:G:N2	81:A2:1247:C:N3	2.58	0.43
81:A2:1249:G:C5'	81:A2:1249:G:H8	2.26	0.43
81:A2:1314:A:P	81:A2:1314:A:H8	2.41	0.43
81:A2:1423:A:N3	81:A2:1424:G:N7	2.67	0.43
81:A2:1454:G:C4	81:A2:1455:C:C1'	2.98	0.43
81:A2:1608:G:H21	81:A2:1611:A:H62	1.66	0.43
81:A2:2000:C:H2'	81:A2:2001:C:O4'	2.19	0.43
81:A2:1912:A:C5	81:A2:2026:U:C2	3.06	0.43
81:A2:2247:C:H2'	81:A2:2248:C:C6	2.53	0.43
81:A2:2306:G:N3	81:A2:2306:G:C2'	2.80	0.43
81:A2:2517:C:C6	81:A2:2517:C:O5'	2.71	0.43
81:A2:2578:A:N1	81:A2:2720:A:C8	2.87	0.43
81:A2:286:A:N6	81:A2:4322:A:C4'	2.82	0.43
81:A2:335:A:H2'	81:A2:336:C:H6	1.84	0.43
81:A2:3677:C:HO2'	81:A2:3678:U:H6	1.65	0.43
81:A2:384:U:H2'	81:A2:385:G:O3'	2.19	0.43
81:A2:3877:A:C3'	81:A2:3878:C:C5'	2.95	0.43
81:A2:3907:G:H1'	81:A2:3908:G:P	2.59	0.43
56:CT:12:ARG:NE	81:A2:4235:G:H4'	2.33	0.43
41:CD:145:TYR:CD1	81:A2:4285:A:H5'	2.54	0.43
81:A2:4575:C:C6	81:A2:4575:C:O5'	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3814:A:H4'	81:A2:4628:U:O2'	2.17	0.43
81:A2:463:C:H6	81:A2:463:C:H5'	1.79	0.43
81:A2:4648:C:H2'	81:A2:4649:U:H6	1.83	0.43
49:CM:113:MET:SD	81:A2:4836:U:C4	3.11	0.43
81:A2:4900:G:C2'	81:A2:4900:G:N3	2.79	0.43
81:A2:5006:C:H2'	81:A2:5007:C:O4'	2.19	0.43
81:A2:724:C:C2	81:A2:725:C:O4'	2.72	0.43
81:A2:922:C:H2'	81:A2:923:G:H8	1.72	0.43
81:A2:965:C:C4'	81:A2:965:C:C6	3.02	0.43
82:A3:42:G:O6	82:A3:102:G:C2	2.71	0.43
4:B1:1066:U:H2'	4:B1:1067:C:C6	2.54	0.43
4:B1:1181:A:H2'	4:B1:1182:A:O4'	2.19	0.43
4:B1:1218:C:C2'	4:B1:1219:C:H5'	2.48	0.43
4:B1:125:C:O2'	4:B1:126:G:H5''	2.18	0.43
4:B1:1261:C:O2	4:B1:1261:C:H2'	2.18	0.43
4:B1:1330:G:H4'	4:B1:1331:C:H4'	2.00	0.43
4:B1:1416:C:C4	4:B1:1417:C:O4'	2.71	0.43
4:B1:1438:A:C4'	4:B1:1438:A:OP1	2.67	0.43
4:B1:1520:G:N3	4:B1:1520:G:H5''	2.33	0.43
4:B1:1579:A:C3'	4:B1:1580:A:H5''	2.47	0.43
4:B1:1622:U:C6	4:B1:1622:U:C3'	3.01	0.43
4:B1:1620:A:C2	4:B1:1624:U:H1'	2.54	0.43
4:B1:1654:G:C3'	4:B1:1655:C:C5	2.98	0.43
4:B1:1830:U:C6	4:B1:1830:U:O5'	2.72	0.43
4:B1:317:C:OP1	4:B1:317:C:H4'	2.19	0.43
4:B1:428:U:C3'	4:B1:429:C:C6	3.02	0.43
4:B1:553:U:C3'	4:B1:554:A:H5''	2.46	0.43
4:B1:69:C:C6	4:B1:69:C:H3'	2.53	0.43
4:B1:746:C:C6	4:B1:749:U:C4'	3.02	0.43
4:B1:77:A:C5	11:BG:155:GLN:HB3	2.53	0.43
4:B1:952:G:C2	4:B1:975:G:N1	2.86	0.43
5:BA:180:ARG:HB3	5:BA:180:ARG:NH1	2.33	0.43
5:BA:204:TYR:HA	5:BA:208:GLU:HG2	2.00	0.43
6:BB:128:LYS:HB2	6:BB:134:LEU:HD23	2.00	0.43
6:BB:65:ARG:HA	19:BO:50:LYS:NZ	2.32	0.43
7:BC:163:VAL:HB	7:BC:164:PRO:HD2	1.99	0.43
9:BE:97:GLU:HG3	9:BE:113:ARG:CZ	2.49	0.43
4:B1:1647:A:C6	10:BF:57:ALA:CB	3.02	0.43
10:BF:72:LEU:HD22	10:BF:151:ILE:HG12	2.00	0.43
13:BI:103:LEU:HD23	13:BI:170:LYS:HB2	1.99	0.43
14:BJ:133:ARG:HA	14:BJ:143:ASN:HD22	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:BQ:89:SER:OG	21:BQ:119:LEU:HD13	2.18	0.43
22:BR:13:ALA:HB1	22:BR:54:VAL:CB	2.48	0.43
25:BU:51:LYS:HE3	25:BU:90:ASP:CB	2.48	0.43
18:BN:16:LEU:H	27:BW:57:ARG:HH21	1.67	0.43
29:BY:27:VAL:HG11	29:BY:35:VAL:HG21	2.01	0.43
30:BZ:43:LYS:NZ	30:BZ:44:LEU:H	2.17	0.43
38:CA:116:LEU:H	38:CA:116:LEU:HD23	1.83	0.43
38:CA:242:ARG:NH1	38:CA:246:LEU:HD23	2.33	0.43
38:CA:34:PHE:CD2	38:CA:35:ALA:N	2.86	0.43
40:CC:159:GLU:OE2	40:CC:253:THR:HG21	2.19	0.43
40:CC:48:ASN:HB2	40:CC:49:ARG:CZ	2.48	0.43
41:CD:264:LYS:O	41:CD:265:ARG:HB3	2.18	0.43
41:CD:73:MET:SD	83:A4:114:U:C4'	3.02	0.43
45:CH:86:LEU:HB3	45:CH:186:THR:HB	2.01	0.43
48:CL:120:TYR:CE2	48:CL:124:LEU:HD22	2.53	0.43
52:CP:46:LYS:HB2	52:CP:57:CYS:SG	14.60	0.43
58:CV:84:GLN:HG3	58:CV:86:LYS:H	1.83	0.43
60:CX:100:VAL:O	60:CX:134:LYS:HB3	2.18	0.43
81:A2:1015:C:O2'	81:A2:1016:C:H5'	2.19	0.43
81:A2:1179:G:C2'	81:A2:1180:G:H8	2.07	0.43
81:A2:1219:C:O2	81:A2:1219:C:C2'	2.64	0.43
81:A2:1280:G:H8	81:A2:1280:G:C5'	2.31	0.43
81:A2:1299:U:C5'	81:A2:1299:U:C6	2.99	0.43
81:A2:1336:U:H2'	81:A2:1337:C:H6	1.81	0.43
38:CA:3:ARG:NH1	81:A2:1607:C:H41	2.17	0.43
81:A2:1646:G:O5'	81:A2:1646:G:H8	2.01	0.43
81:A2:1926:G:H8	81:A2:1926:G:O5'	2.01	0.43
81:A2:2019:A:H2'	81:A2:4424:A:C2	2.54	0.43
81:A2:21:G:O4'	82:A3:103:A:H1'	2.19	0.43
81:A2:2263:G:H2'	81:A2:2264:G:O4'	2.19	0.43
81:A2:2324:A:OP1	81:A2:2324:A:C8	2.71	0.43
81:A2:2371:G:N3	81:A2:2371:G:H2'	2.33	0.43
81:A2:2485:U:H2'	81:A2:2486:C:C5	2.54	0.43
81:A2:2544:G:H2'	81:A2:2545:C:C6	2.54	0.43
81:A2:2665:G:C5'	81:A2:2665:G:C8	3.01	0.43
81:A2:2741:A:H3'	81:A2:2741:A:N3	2.34	0.43
81:A2:2742:A:O5'	81:A2:2742:A:H8	2.01	0.43
81:A2:287:A:C2	81:A2:307:U:C4'	3.01	0.43
4:B1:1051:G:H4'	81:A2:3668:C:H5''	2.01	0.43
81:A2:3783:U:H2'	81:A2:3784:G:C5'	2.49	0.43
81:A2:3930:G:O5'	81:A2:3930:G:C8	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4151:G:C5'	81:A2:4151:G:C8	3.01	0.43
81:A2:4378:G:H2'	81:A2:4435:G:N2	2.33	0.43
81:A2:4401:A:OP2	81:A2:4401:A:C8	2.71	0.43
81:A2:3770:U:C5'	81:A2:4456:A:C2	3.01	0.43
81:A2:4642:U:C2'	81:A2:4643:U:H5''	2.48	0.43
81:A2:4533:G:C6	81:A2:4681:G:O6	2.71	0.43
81:A2:4802:G:H21	81:A2:4803:C:H41	1.67	0.43
42:CE:274:VAL:HG22	81:A2:4836:U:H1'	2.01	0.43
81:A2:694:C:C6	81:A2:694:C:O5'	2.72	0.43
81:A2:702:G:H2'	81:A2:703:G:C8	2.54	0.43
81:A2:917:G:N3	81:A2:918:C:N4	2.67	0.43
60:CX:107:HIS:CD2	82:A3:131:G:H5'	2.41	0.43
61:CY:114:ASP:N	82:A3:84:A:H62	2.16	0.43
1:AV:72:C:C6	1:AV:72:C:C5'	2.94	0.43
2:AW:56:C:C5'	81:A2:4014:A:N3	2.81	0.43
2:AW:58:A:N6	2:AW:61:C:C6	2.87	0.43
4:B1:670:A:N3	4:B1:1164:G:H1'	2.34	0.43
4:B1:1416:C:N4	4:B1:1417:C:N1	2.67	0.43
4:B1:1421:A:H3'	4:B1:1422:G:C8	2.54	0.43
4:B1:1781:A:O2'	4:B1:1782:G:P	2.76	0.43
4:B1:678:U:H3'	4:B1:678:U:H6	1.83	0.43
4:B1:905:C:O5'	4:B1:905:C:H6	2.02	0.43
6:BB:49:VAL:HG22	6:BB:65:ARG:NH2	2.33	0.43
8:BD:123:LEU:HD11	8:BD:152:PHE:HB3	2.01	0.43
8:BD:65:ARG:O	8:BD:69:LEU:HG	2.19	0.43
4:B1:346:C:O4'	9:BE:33:THR:HG22	2.19	0.43
10:BF:31:ASN:OD1	10:BF:117:ILE:HG21	2.18	0.43
10:BF:39:ILE:HG23	10:BF:68:ILE:HG12	2.00	0.43
4:B1:77:A:H62	11:BG:155:GLN:HB3	1.84	0.43
11:BG:36:VAL:O	11:BG:49:VAL:HA	2.18	0.43
13:BI:190:LEU:HD22	13:BI:194:GLU:HG3	2.01	0.43
17:BM:81:ASP:OD1	17:BM:84:LYS:HB2	2.19	0.43
17:BM:33:ARG:HE	17:BM:91:LEU:HD21	1.84	0.43
20:BP:100:LYS:O	20:BP:101:THR:HB	2.18	0.43
23:BS:98:VAL:CG2	23:BS:103:LEU:HD13	2.48	0.43
23:BS:118:ARG:HA	23:BS:123:LEU:CD1	2.49	0.43
25:BU:55:ARG:HD2	25:BU:87:ARG:NH1	2.34	0.43
28:BX:123:VAL:HA	28:BX:130:LEU:HD12	2.00	0.43
29:BY:78:SER:HB3	29:BY:81:TYR:CD2	2.54	0.43
38:CA:34:PHE:CG	38:CA:35:ALA:N	2.86	0.43
39:CB:43:LEU:HD11	39:CB:196:TRP:CH2	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:140:LYS:NZ	40:CC:242:PRO:HD2	2.34	0.43
41:CD:41:LYS:NZ	56:CT:34:TYR:HB2	2.33	0.43
43:CF:105:VAL:CB	43:CF:136:VAL:HG12	2.49	0.43
43:CF:165:LYS:O	43:CF:166:ARG:C	2.56	0.43
47:CJ:47:THR:HG23	83:A4:39:C:H4'	1.99	0.43
49:CM:95:ILE:HG12	49:CM:98:ARG:HH12	1.83	0.43
50:CN:198:LEU:HD23	50:CN:200:LEU:HG	2.00	0.43
54:CR:23:TRP:CH2	54:CR:25:ASP:HB3	2.53	0.43
55:CS:167:PHE:C	81:A2:4829:A:H5''	2.37	0.43
62:CZ:66:SER:O	62:CZ:68:ILE:HG13	2.19	0.43
41:CD:273:LEU:CD2	81:A2:1086:A:H1'	2.47	0.43
81:A2:1193:G:O4'	81:A2:1195:C:N4	2.52	0.43
48:CL:32:LYS:HZ1	81:A2:1343:C:H41	1.67	0.43
81:A2:1464:C:O5'	81:A2:1464:C:H6	2.02	0.43
81:A2:1489:G:H8	81:A2:1489:G:P	2.42	0.43
44:CG:163:PRO:CG	81:A2:148:G:N2	2.81	0.43
81:A2:1490:U:OP2	81:A2:1490:U:H5	2.01	0.43
81:A2:1525:C:C4'	81:A2:1562:A:H2	2.21	0.43
81:A2:1575:U:C6	81:A2:1575:U:H3'	2.52	0.43
81:A2:190:G:C8	81:A2:190:G:O5'	2.72	0.43
81:A2:2009:C:O2	81:A2:2009:C:H2'	2.19	0.43
81:A2:202:C:O5'	81:A2:202:C:H6	2.01	0.43
81:A2:209:A:H8	81:A2:209:A:O5'	2.01	0.43
81:A2:2304:G:N2	81:A2:2305:U:H1'	2.33	0.43
81:A2:2452:G:O2'	81:A2:2453:G:H5'	2.19	0.43
81:A2:2630:C:H3'	81:A2:2631:C:C5	2.54	0.43
81:A2:2652:G:H8	81:A2:2652:G:O5'	2.01	0.43
81:A2:2591:C:H4'	81:A2:2784:A:O3'	2.18	0.43
39:CB:249:ARG:HG2	81:A2:2815:G:P	2.58	0.43
54:CR:104:ARG:HH21	81:A2:2875:G:H5''	1.83	0.43
81:A2:282:U:O2	81:A2:288:U:C2	2.72	0.43
81:A2:3613:U:C2'	81:A2:3614:U:C5'	2.97	0.43
81:A2:3758:C:C5	81:A2:3759:U:C2	2.97	0.43
81:A2:3792:G:H21	81:A2:3793:A:N6	2.17	0.43
52:CP:139:TYR:CE2	81:A2:3828:G:H5'	2.53	0.43
81:A2:4038:U:H2'	81:A2:4039:U:C6	2.53	0.43
81:A2:4073:G:C2	81:A2:4074:G:H4'	2.54	0.43
81:A2:409:A:H2	81:A2:1313:A:O2'	2.02	0.43
81:A2:4345:A:H4'	81:A2:4346:C:C5'	2.48	0.43
81:A2:4384:A:H3'	81:A2:4385:G:C8	2.53	0.43
81:A2:4621:G:C5	81:A2:4622:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CO:167:HIS:CD2	81:A2:4718:C:C6	3.07	0.43
81:A2:4803:C:C2'	81:A2:4804:G:H4'	2.48	0.43
81:A2:4958:U:H2'	81:A2:4959:C:O4'	2.18	0.43
81:A2:408:G:N2	82:A3:16:G:C4	2.87	0.43
82:A3:17:A:C4	82:A3:18:U:C5	3.07	0.43
83:A4:54:A:C2	83:A4:55:A:C4	3.04	0.43
2:AW:16:U:H2'	2:AW:17:C:C5'	2.46	0.43
4:B1:1023:A:H5''	18:BN:124:ARG:HH21	1.84	0.43
4:B1:1065:G:H2'	4:B1:1065:G:N3	2.34	0.43
4:B1:1115:U:O3'	4:B1:1116:C:H3'	2.18	0.43
4:B1:1102:G:N2	4:B1:1130:G:N2	2.66	0.43
4:B1:1139:C:O4'	4:B1:1139:C:O2	2.37	0.43
4:B1:1418:C:C5'	24:BT:129:ARG:HA	2.48	0.43
4:B1:1589:A:H2'	4:B1:1590:C:C6	2.54	0.43
4:B1:1533:A:C5	4:B1:1604:G:O4'	2.71	0.43
4:B1:1657:G:H1	4:B1:1667:U:H3	1.66	0.43
4:B1:181:A:C8	11:BG:192:ILE:HG13	2.53	0.43
4:B1:316:G:H2'	4:B1:317:C:H6	1.83	0.43
4:B1:49:C:O2	4:B1:49:C:H2'	2.19	0.43
4:B1:593:C:C4'	4:B1:594:A:OP2	2.66	0.43
4:B1:911:C:H5''	4:B1:912:C:N4	2.34	0.43
4:B1:684:G:C4	4:B1:920:A:C4	3.07	0.43
4:B1:951:C:O2	4:B1:975:G:N1	2.51	0.43
5:BA:50:ASN:HD21	5:BA:53:ARG:CG	2.32	0.43
6:BB:109:LYS:O	6:BB:113:MET:HG2	2.18	0.43
6:BB:22:VAL:O	6:BB:23:ASP:C	2.57	0.43
11:BG:197:GLN:O	11:BG:201:LYS:HG3	2.18	0.43
12:BH:31:GLU:CD	12:BH:40:LEU:HD22	2.39	0.43
13:BI:63:GLY:O	13:BI:75:LYS:HD2	2.19	0.43
14:BJ:136:ARG:HB2	14:BJ:162:ARG:NH2	2.33	0.43
16:BL:86:ILE:HG13	16:BL:111:VAL:HG13	2.00	0.43
17:BM:65:VAL:CG2	17:BM:108:CYS:SG	3.07	0.43
17:BM:117:GLU:HG3	17:BM:117:GLU:H	1.58	0.43
18:BN:38:TYR:HB2	18:BN:80:LEU:HD22	2.00	0.43
40:CC:161:TYR:HB3	40:CC:166:GLU:OE2	2.18	0.43
40:CC:207:PRO:HB3	40:CC:249:PHE:HD1	1.82	0.43
40:CC:275:SER:O	40:CC:276:ASN:CB	2.66	0.43
43:CF:45:ALA:HA	81:A2:1220:G:O5'	2.19	0.43
44:CG:163:PRO:HD2	81:A2:148:G:N2	2.33	0.43
48:CL:91:ALA:O	48:CL:94:ILE:HG22	2.19	0.43
49:CM:6:PHE:H	49:CM:11:ARG:NH1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:57:CYS:HB2	52:CP:82:ARG:O	2.18	0.43
54:CR:115:ILE:HG22	54:CR:116:ASP:O	2.18	0.43
60:CX:93:ASN:O	60:CX:94:ASN:HB3	2.19	0.43
81:A2:1198:G:H2'	81:A2:1199:G:C8	2.54	0.43
43:CF:48:LYS:HB2	81:A2:1220:G:H5'	1.99	0.43
81:A2:1384:G:C4	81:A2:1385:C:C5	3.07	0.43
81:A2:1377:A:H1'	81:A2:1447:C:C4'	2.49	0.43
81:A2:1481:G:C4'	81:A2:1482:A:OP1	2.66	0.43
81:A2:158:G:H2'	81:A2:159:A:C8	2.51	0.43
81:A2:1729:G:C5	81:A2:1730:A:C8	3.07	0.43
81:A2:1860:U:C4'	81:A2:1861:G:O5'	2.66	0.43
81:A2:1862:C:C4'	81:A2:2048:U:C5	3.00	0.43
81:A2:2064:G:N1	81:A2:2246:G:N1	2.67	0.43
81:A2:2525:C:N4	81:A2:2747:C:C2	2.87	0.43
81:A2:2634:G:H8	81:A2:2634:G:P	2.41	0.43
81:A2:2676:C:O2	81:A2:2676:C:H2'	2.19	0.43
81:A2:283:G:C6	81:A2:284:G:O6	2.72	0.43
81:A2:309:A:C3'	81:A2:309:A:C8	3.01	0.43
81:A2:3909:U:H2'	81:A2:3910:G:H8	1.83	0.43
81:A2:4053:A:H3'	81:A2:4054:G:C5'	2.48	0.43
81:A2:411:A:H2'	81:A2:412:C:O4'	2.18	0.43
81:A2:4224:G:C2'	81:A2:4227:G:O6	2.67	0.43
81:A2:4294:U:H3'	81:A2:4294:U:H6	1.83	0.43
81:A2:4429:U:H2'	81:A2:4430:G:C8	2.54	0.43
81:A2:4469:U:H1'	81:A2:4472:U:C5	2.54	0.43
81:A2:4567:A:C8	81:A2:4568:G:O4'	2.71	0.43
81:A2:4673:G:C3'	81:A2:4674:C:C6	2.98	0.43
81:A2:4709:G:C6	81:A2:4710:G:N7	2.87	0.43
81:A2:4832:G:H2'	81:A2:4833:C:C6	2.53	0.43
81:A2:4898:A:C2'	81:A2:4899:C:O4'	2.62	0.43
81:A2:4919:C:H6	81:A2:4919:C:O5'	2.01	0.43
81:A2:4978:C:H2'	81:A2:4978:C:H6	1.64	0.43
50:CN:40:PRO:CG	81:A2:8:U:H5'	2.49	0.43
81:A2:947:G:O2'	81:A2:948:A:H5'	2.18	0.43
82:A3:3:A:H3'	82:A3:3:A:H8	1.83	0.43
82:A3:6:C:C6	82:A3:6:C:C3'	3.02	0.43
2:AW:29:G:O2'	2:AW:30:G:H5'	2.19	0.43
3:AX:39:U:H2'	3:AX:40:U:O4'	2.18	0.43
3:AX:53:U:C6	8:BD:146:ARG:NH2	2.87	0.43
4:B1:683:G:C1'	4:B1:1023:A:C2	2.86	0.43
4:B1:118:C:H2'	4:B1:119:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1215:C:C5'	4:B1:1217:A:H62	2.32	0.43
4:B1:1519:U:C6	4:B1:1623:A:N6	2.87	0.43
4:B1:1575:G:C2	4:B1:1576:G:C6	3.06	0.43
4:B1:1227:G:N7	4:B1:1638:G:C8	2.87	0.43
4:B1:165:G:O2'	4:B1:166:A:H5'	2.18	0.43
4:B1:1703:C:C4	4:B1:1704:C:C4	3.06	0.43
4:B1:1719:A:O5'	4:B1:1719:A:H8	2.02	0.43
4:B1:1748:G:H1	4:B1:1786:U:H3	1.67	0.43
4:B1:180:G:N3	4:B1:180:G:H2'	2.34	0.43
4:B1:217:A:O2'	4:B1:218:U:H5'	2.18	0.43
4:B1:522:A:N1	4:B1:643:A:C5'	2.82	0.43
4:B1:810:A:C8	4:B1:810:A:H3'	2.54	0.43
4:B1:878:G:N2	4:B1:908:A:C2	2.87	0.43
4:B1:883:U:H6	4:B1:883:U:O5'	2.02	0.43
4:B1:977:C:C6	4:B1:977:C:OP2	2.71	0.43
5:BA:117:ARG:HG2	5:BA:119:PRO:HD3	2.01	0.43
6:BB:84:PHE:CZ	6:BB:103:MET:SD	3.12	0.43
8:BD:166:TYR:CE1	8:BD:200:PRO:HB3	2.54	0.43
9:BE:133:VAL:O	9:BE:136:ILE:HD13	2.19	0.43
10:BF:49:LEU:HD22	21:BQ:47:LEU:HD23	2.00	0.43
10:BF:59:LYS:HB3	10:BF:62:ARG:HG2	2.00	0.43
12:BH:10:LYS:N	12:BH:11:PRO:HD3	2.34	0.43
12:BH:31:GLU:HB3	12:BH:40:LEU:HD22	2.00	0.43
4:B1:1643:U:H4'	21:BQ:143:LYS:O	2.19	0.43
22:BR:51:ALA:HA	22:BR:54:VAL:CG1	2.48	0.43
22:BR:51:ALA:O	22:BR:54:VAL:HG12	2.19	0.43
25:BU:51:LYS:HE3	25:BU:90:ASP:HB3	2.01	0.43
26:BV:78:ILE:HB	26:BV:81:LYS:NZ	2.34	0.43
27:BW:74:VAL:HG13	27:BW:126:LEU:O	2.18	0.43
39:CB:154:LYS:HG3	39:CB:194:LEU:HD22	1.99	0.43
39:CB:370:THR:HG23	39:CB:370:THR:O	2.18	0.43
40:CC:303:ARG:NH1	53:CQ:40:ASN:HD22	2.16	0.43
40:CC:43:ASN:HD22	40:CC:115:VAL:HG22	1.83	0.43
41:CD:193:GLU:O	41:CD:196:ARG:HB3	2.19	0.43
43:CF:44:LYS:HB3	81:A2:1220:G:OP2	2.18	0.43
44:CG:75:LYS:HD2	44:CG:240:ASN:HB2	2.00	0.43
45:CH:81:ILE:O	45:CH:84:VAL:HB	2.19	0.43
46:CI:139:ARG:HG3	46:CI:173:PHE:CZ	2.53	0.43
46:CI:47:PRO:HB3	46:CI:171:TRP:CE2	2.54	0.43
42:CE:270:TYR:CD1	49:CM:107:PHE:HA	2.53	0.43
52:CP:28:ASN:O	52:CP:32:THR:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CQ:72:LEU:HB2	81:A2:1435:G:O3'	2.19	0.43
56:CT:19:PHE:CE1	56:CT:20:ARG:HG3	2.54	0.43
56:CT:68:THR:HG23	56:CT:69:GLN:H	1.83	0.43
56:CT:81:LYS:HD2	81:A2:4264:A:H2	1.83	0.43
58:CV:26:ILE:HD13	58:CV:39:ILE:HD11	2.00	0.43
81:A2:1180:G:C6	81:A2:1181:U:C4	3.07	0.43
81:A2:959:C:C4'	81:A2:1215:G:H21	2.32	0.43
81:A2:121:A:C6	81:A2:147:U:C2	3.07	0.43
81:A2:1358:C:O2	81:A2:1358:C:H3'	2.18	0.43
81:A2:1583:G:H2'	81:A2:1584:G:H8	1.80	0.43
81:A2:1671:C:H2'	81:A2:1672:U:C6	2.54	0.43
81:A2:1673:C:C3'	81:A2:1701:C:P	3.02	0.43
43:CF:132:MET:HE3	81:A2:1705:U:H1'	2.01	0.43
81:A2:1942:A:C2	81:A2:4654:G:O2'	2.70	0.43
81:A2:2301:C:H2'	81:A2:2302:G:H5'	2.01	0.43
81:A2:2420:G:P	81:A2:2493:G:H22	2.42	0.43
60:CX:48:ARG:CA	81:A2:2449:A:O2'	2.67	0.43
81:A2:2666:C:H2'	81:A2:2667:C:H6	1.81	0.43
81:A2:113:A:C2	81:A2:269:G:C4	3.07	0.43
81:A2:2717:U:O2'	81:A2:2719:G:N2	2.52	0.43
4:B1:1815:A:H2	81:A2:3775:G:HO2'	1.63	0.43
81:A2:3814:A:H2'	81:A2:3815:C:C6	2.54	0.43
81:A2:3915:G:H1	81:A2:4035:U:H3	1.67	0.43
81:A2:413:C:H6	81:A2:413:C:O5'	2.02	0.43
81:A2:430:G:C2'	81:A2:431:U:O5'	2.66	0.43
81:A2:4435:G:OP2	81:A2:4436:C:H5'	2.19	0.43
81:A2:4600:C:H2'	81:A2:4600:C:O2	2.19	0.43
81:A2:4824:U:O2	81:A2:4824:U:C2'	2.65	0.43
81:A2:488:G:C2'	81:A2:488:G:N3	2.79	0.43
81:A2:5009:C:H2'	81:A2:5009:C:O2	2.17	0.43
81:A2:5:A:N1	82:A3:153:C:C2	2.87	0.43
81:A2:666:G:H2'	81:A2:667:C:C6	2.53	0.43
82:A3:156:U:H3'	82:A3:156:U:C6	2.54	0.43
83:A4:65:G:OP2	83:A4:65:G:C8	2.72	0.43
83:A4:89:G:C4	83:A4:90:A:N7	2.87	0.43
3:AX:59:U:H2'	3:AX:60:U:O5'	2.19	0.43
3:AX:60:U:C1'	3:AX:61:U:P	3.07	0.43
4:B1:1043:G:N3	4:B1:1044:G:C8	2.86	0.43
4:B1:1387:G:C4	4:B1:1388:A:C8	3.07	0.43
4:B1:1453:C:H2'	4:B1:1454:A:O3'	2.18	0.43
4:B1:1547:C:H42	4:B1:1656:G:C4'	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1588:A:C6	4:B1:1589:A:C6	3.06	0.43
4:B1:1703:C:H3'	4:B1:1704:C:C5	2.54	0.43
4:B1:181:A:C3'	4:B1:182:C:C5'	2.87	0.43
4:B1:433:A:H5''	13:B1:25:ARG:NH2	2.27	0.43
4:B1:497:C:H2'	4:B1:498:C:C6	2.53	0.43
4:B1:502:C:O2'	4:B1:503:C:C6	2.71	0.43
4:B1:514:U:H3'	4:B1:515:G:H8	1.82	0.43
4:B1:52:G:H8	4:B1:52:G:O5'	2.02	0.43
4:B1:534:G:H2'	4:B1:535:G:C4'	2.49	0.43
4:B1:792:C:H2'	4:B1:793:G:C8	2.54	0.43
4:B1:795:A:C2	4:B1:796:G:H1'	2.53	0.43
4:B1:1378:A:C6	5:BA:105:PRO:HB3	2.54	0.43
4:B1:1332:A:H1'	8:BD:141:LYS:HZ1	1.84	0.43
9:BE:126:VAL:HG13	9:BE:139:LEU:HG	2.00	0.43
9:BE:56:LEU:HB2	29:BY:22:GLN:HE22	1.84	0.43
12:BH:47:ALA:H	12:BH:63:PHE:HB2	1.84	0.43
23:BS:24:ARG:HE	23:BS:29:ALA:HA	1.84	0.43
23:BS:4:VAL:HG21	30:BZ:49:LEU:CD1	2.49	0.43
4:B1:1665:G:N2	24:BT:87:VAL:HB	2.33	0.43
7:BC:261:PHE:HE1	26:BV:16:LYS:O	2.02	0.43
28:BX:60:LYS:O	28:BX:61:GLN:HB2	2.19	0.43
39:CB:4:ARG:O	39:CB:5:LYS:CB	2.66	0.43
40:CC:347:HIS:O	40:CC:351:VAL:HG23	2.19	0.43
40:CC:56:GLU:OE2	81:A2:347:G:H4'	2.18	0.43
41:CD:274:ALA:HB2	81:A2:1087:C:OP2	2.18	0.43
46:CI:60:LEU:C	46:CI:60:LEU:HD13	5.07	0.43
48:CL:14:PHE:CZ	81:A2:1322:A:H1'	2.53	0.43
49:CM:104:MET:CE	51:CO:198:THR:HB	2.49	0.43
49:CM:28:VAL:HG11	49:CM:47:ARG:NH2	2.31	0.43
52:CP:25:HIS:CE1	52:CP:27:LYS:HB2	2.53	0.43
54:CR:115:ILE:HD11	54:CR:142:ILE:HG23	2.01	0.43
4:B1:907:G:H5''	54:CR:165:LYS:HE2	2.00	0.43
61:CY:126:ARG:HD2	81:A2:194:A:O2'	2.19	0.43
81:A2:106:A:O5'	81:A2:106:A:C8	2.69	0.42
81:A2:119:G:H4'	81:A2:120:A:C8	2.54	0.42
81:A2:1220:G:N9	81:A2:1221:C:C4	2.86	0.42
81:A2:1278:C:OP2	81:A2:1278:C:C5	2.72	0.42
81:A2:1308:G:H5'	81:A2:1308:G:H8	1.84	0.42
81:A2:1378:A:H2'	81:A2:1379:G:N7	2.32	0.42
50:CN:144:ARG:NH2	81:A2:137:G:H5'	2.34	0.42
81:A2:1425:U:H2'	81:A2:1426:C:C5	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1438:A:C6	81:A2:1439:C:C4	3.06	0.42
81:A2:1575:U:C3'	81:A2:1575:U:C6	3.01	0.42
81:A2:165:C:C2	81:A2:166:G:C8	3.06	0.42
81:A2:1798:G:OP1	81:A2:1798:G:H8	2.01	0.42
81:A2:1885:A:OP2	81:A2:1885:A:C8	2.72	0.42
81:A2:1926:G:P	81:A2:1926:G:H8	2.42	0.42
81:A2:2027:G:H8	81:A2:2027:G:C5'	2.30	0.42
81:A2:202:C:H42	81:A2:206:U:H5	1.66	0.42
81:A2:2062:C:C6	81:A2:2249:G:C2	3.07	0.42
81:A2:1284:C:O2'	81:A2:2289:A:C1'	2.65	0.42
81:A2:196:G:H2'	81:A2:235:C:P	2.59	0.42
81:A2:2549:C:C2	81:A2:2550:A:C8	3.07	0.42
81:A2:2706:C:C4	81:A2:2707:U:O4	2.72	0.42
81:A2:2853:G:N2	81:A2:2854:G:C8	2.87	0.42
81:A2:315:A:H2'	81:A2:316:U:C6	2.54	0.42
81:A2:3677:C:O2	81:A2:3677:C:H2'	2.18	0.42
81:A2:3703:U:C2'	81:A2:3704:G:H5'	2.45	0.42
81:A2:3750:C:H5''	81:A2:3790:A:C4'	2.45	0.42
81:A2:397:C:C4	81:A2:398:A:N6	2.87	0.42
56:CT:4:THR:OG1	81:A2:4167:C:C4	2.64	0.42
81:A2:4298:G:O6	81:A2:4335:C:H1'	2.19	0.42
81:A2:438:C:OP2	81:A2:438:C:H5	2.02	0.42
81:A2:4740:U:H3'	81:A2:4740:U:H6	1.84	0.42
81:A2:481:C:H3'	81:A2:482:G:H5''	1.97	0.42
81:A2:87:A:N3	81:A2:88:A:H1'	2.32	0.42
81:A2:924:C:N3	81:A2:925:C:C6	2.87	0.42
81:A2:946:C:H2'	81:A2:947:G:H8	1.84	0.42
81:A2:339:G:N2	82:A3:27:U:C2	2.87	0.42
83:A4:38:U:H2'	83:A4:40:U:OP2	2.19	0.42
2:AW:67:C:H2'	2:AW:68:C:H6	1.83	0.42
4:B1:1130:G:C2	4:B1:1131:G:C8	3.07	0.42
4:B1:133:C:O5'	4:B1:133:C:H6	2.01	0.42
4:B1:1405:A:N3	4:B1:1442:U:H5	2.17	0.42
4:B1:1484:A:H4'	8:BD:159:HIS:HB3	1.99	0.42
4:B1:1543:U:C4'	4:B1:1544:C:OP1	2.66	0.42
4:B1:1639:G:C2'	4:B1:1639:G:N3	2.79	0.42
4:B1:386:C:O2	4:B1:386:C:C2'	2.67	0.42
4:B1:426:A:C2'	4:B1:426:A:N3	2.82	0.42
4:B1:450:C:H2'	4:B1:451:G:C4'	2.48	0.42
4:B1:659:G:H3'	28:BX:17:ARG:NH2	2.34	0.42
6:BB:51:ARG:C	6:BB:53:GLN:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:86:LEU:HB3	6:BB:98:THR:OG1	2.18	0.42
11:BG:160:LYS:HE2	11:BG:161:PRO:HD2	2.01	0.42
4:B1:745:C:O2'	12:BH:107:LYS:HB3	2.19	0.42
13:BI:12:ARG:HG3	13:BI:13:LYS:N	2.34	0.42
4:B1:527:C:O2'	14:BJ:121:LYS:HE3	2.18	0.42
14:BJ:171:GLY:O	14:BJ:174:LYS:HB2	2.19	0.42
13:BI:191:GLU:HG3	16:BL:20:LYS:CG	2.50	0.42
18:BN:92:ILE:CG2	18:BN:149:LEU:HD13	2.39	0.42
21:BQ:17:LYS:HG3	21:BQ:17:LYS:O	2.18	0.42
21:BQ:38:PRO:HD2	24:BT:7:LYS:O	2.19	0.42
23:BS:39:ARG:NH1	24:BT:39:LEU:H	2.17	0.42
25:BU:55:ARG:HD2	25:BU:87:ARG:NE	2.34	0.42
27:BW:28:ARG:CB	27:BW:29:PRO:CD	2.96	0.42
16:BL:96:ILE:HD12	28:BX:10:ALA:HB1	2.02	0.42
30:BZ:68:ILE:HG23	30:BZ:73:VAL:HG23	2.01	0.42
40:CC:211:TYR:HA	40:CC:253:THR:OG1	2.19	0.42
41:CD:272:SER:CB	81:A2:1167:G:H4'	2.49	0.42
44:CG:110:LYS:HE2	44:CG:114:LEU:CD1	2.48	0.42
45:CH:29:GLY:HA3	45:CH:84:VAL:HG12	1.98	0.42
41:CD:291:GLN:NE2	46:CI:210:ARG:NH2	2.66	0.42
50:CN:44:ARG:NH1	50:CN:47:LYS:HG2	2.34	0.42
52:CP:10:ASN:ND2	52:CP:12:THR:HB	2.34	0.42
52:CP:22:LEU:HD13	52:CP:90:PHE:CE1	2.53	0.42
54:CR:52:ARG:O	54:CR:53:LYS:HB2	2.19	0.42
55:CS:81:TRP:CE3	55:CS:128:LYS:HB2	2.54	0.42
55:CS:27:LEU:HD12	56:CT:146:LYS:HE2	2.00	0.42
57:CU:25:CYS:O	57:CU:29:VAL:HG23	2.19	0.42
62:CZ:9:LYS:HE3	62:CZ:83:THR:N	2.34	0.42
81:A2:1055:G:H2'	81:A2:1056:C:H6	1.84	0.42
81:A2:1059:C:C2'	81:A2:1060:C:H5	2.31	0.42
81:A2:1249:G:C6	81:A2:1250:A:C6	3.07	0.42
81:A2:1387:C:C3'	81:A2:1388:G:C8	3.02	0.42
81:A2:1611:A:C8	81:A2:1612:G:H4'	2.55	0.42
81:A2:1648:A:H2'	81:A2:1649:G:C5'	2.20	0.42
81:A2:1656:U:H2'	81:A2:1657:C:O4'	2.19	0.42
81:A2:1779:U:OP1	81:A2:1779:U:H4'	2.18	0.42
81:A2:1934:A:N1	81:A2:1935:U:C2	2.87	0.42
61:CY:46:SER:OG	81:A2:236:C:H5''	2.19	0.42
81:A2:2471:U:H2'	81:A2:2472:U:H6	1.84	0.42
81:A2:2547:U:H1'	81:A2:2739:G:C6	2.54	0.42
81:A2:2746:U:C2'	81:A2:2747:C:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2864:U:H2'	81:A2:3587:C:C5	2.55	0.42
81:A2:366:G:C5'	81:A2:366:G:C8	3.02	0.42
4:B1:970:G:N9	81:A2:3680:A:C5'	2.76	0.42
81:A2:3830:A:H2'	81:A2:3831:A:H8	1.84	0.42
81:A2:3900:C:O5'	81:A2:3900:C:H6	2.01	0.42
81:A2:4081:C:H2'	81:A2:4117:A:N6	2.34	0.42
81:A2:4148:U:H2'	81:A2:4149:U:C6	2.54	0.42
81:A2:4329:A:C8	81:A2:4329:A:O5'	2.61	0.42
81:A2:446:C:OP2	81:A2:446:C:C6	2.72	0.42
81:A2:449:C:H2'	81:A2:450:C:H6	1.82	0.42
81:A2:4544:A:H2	81:A2:4680:C:P	2.42	0.42
43:CF:245:ARG:HH21	81:A2:928:A:H5'	1.83	0.42
40:CC:311:ARG:HA	81:A2:943:G:O6	2.18	0.42
81:A2:947:G:C2'	81:A2:948:A:C5'	2.95	0.42
81:A2:961:C:O2	81:A2:961:C:H2'	2.18	0.42
82:A3:129:C:C2	82:A3:130:C:C5	3.06	0.42
83:A4:104:C:HO2'	83:A4:105:C:H5	1.58	0.42
83:A4:3:C:H2'	83:A4:4:U:C6	2.55	0.42
83:A4:11:A:C2	83:A4:66:G:H2'	2.53	0.42
2:AW:31:A:C2'	2:AW:32:U:H5'	2.49	0.42
3:AX:42:U:H4'	3:AX:43:U:OP1	2.18	0.42
4:B1:1025:U:H2'	4:B1:1026:C:O5'	2.19	0.42
4:B1:1094:C:C2'	4:B1:1095:C:H5'	2.49	0.42
4:B1:1456:G:C8	4:B1:1456:G:C5'	2.96	0.42
4:B1:1565:C:H2'	4:B1:1566:G:C5'	2.45	0.42
4:B1:1670:C:O5'	4:B1:1670:C:H6	2.01	0.42
4:B1:1705:C:H4'	50:CN:1:MET:H2	129.50	0.42
4:B1:1739:C:H2'	4:B1:1740:C:O4'	2.19	0.42
4:B1:1829:G:H1'	4:B1:1850:A:H2	1.84	0.42
4:B1:20:G:C2'	4:B1:21:U:H5'	2.48	0.42
4:B1:302:A:H1'	13:BI:73:THR:CB	2.35	0.42
4:B1:315:C:C5'	4:B1:315:C:H6	2.31	0.42
4:B1:116:U:H3	4:B1:347:G:H1	1.67	0.42
4:B1:360:A:H4'	4:B1:361:U:C5'	2.49	0.42
4:B1:409:C:H5	4:B1:426:A:H5'	1.84	0.42
4:B1:500:A:N1	4:B1:502:C:OP2	2.52	0.42
4:B1:650:A:H3'	4:B1:651:U:H6	1.84	0.42
4:B1:798:G:N3	4:B1:798:G:C5'	2.81	0.42
4:B1:875:A:O3'	4:B1:876:C:C6	2.71	0.42
4:B1:929:G:N2	4:B1:1104:G:C4'	2.69	0.42
4:B1:941:C:H2'	4:B1:942:G:C8	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:95:G:C2'	4:B1:96:C:H5'	2.49	0.42
4:B1:973:C:C6	4:B1:973:C:H3'	2.53	0.42
6:BB:54:GLY:O	6:BB:55:THR:HB	2.19	0.42
6:BB:66:VAL:CG2	6:BB:85:LYS:HG3	2.48	0.42
10:BF:47:LYS:CE	10:BF:67:PRO:HG2	2.49	0.42
4:B1:353:C:C5'	16:BL:71:ARG:NH2	2.82	0.42
18:BN:84:LEU:HD23	18:BN:89:TYR:CD2	2.53	0.42
4:B1:1442:U:N3	21:BQ:22:VAL:HG22	2.35	0.42
22:BR:51:ALA:CA	22:BR:54:VAL:HG12	2.46	0.42
28:BX:32:LEU:CD2	28:BX:34:THR:HB	2.49	0.42
28:BX:80:LYS:H	28:BX:80:LYS:HG3	1.71	0.42
29:BY:119:GLY:HA2	29:BY:122:LYS:HB3	2.01	0.42
4:B1:839:C:C4	29:BY:48:TYR:O	2.72	0.42
39:CB:19:ARG:HB2	39:CB:234:ARG:NH1	2.33	0.42
39:CB:298:LEU:O	39:CB:299:ILE:HB	2.19	0.42
39:CB:356:LYS:O	39:CB:357:ARG:CB	2.67	0.42
40:CC:229:LEU:HD13	40:CC:229:LEU:C	2.39	0.42
43:CF:186:CYS:O	43:CF:189:ASP:HB3	2.19	0.42
43:CF:27:GLU:O	43:CF:31:LYS:HB3	2.19	0.42
45:CH:98:HIS:ND1	81:A2:4562:A:H5''	2.34	0.42
46:CI:157:PHE:CE2	81:A2:4373:C:H5'	2.53	0.42
46:CI:12:CYS:HB2	46:CI:57:TYR:CE2	2.53	0.42
46:CI:77:VAL:HG23	46:CI:82:LYS:HA	2.01	0.42
57:CU:17:GLN:O	57:CU:75:GLU:HA	2.18	0.42
60:CX:63:LYS:HD2	60:CX:66:PRO:HA	2.01	0.42
60:CX:67:ARG:HG3	60:CX:68:ARG:O	2.19	0.42
81:A2:1158:G:H2'	81:A2:1159:U:C5	2.53	0.42
81:A2:1178:G:H2'	81:A2:1179:G:C4'	2.40	0.42
81:A2:1542:A:OP2	81:A2:1542:A:C8	2.72	0.42
81:A2:1570:U:C3'	81:A2:1570:U:C6	3.02	0.42
81:A2:1630:G:H3'	81:A2:1631:U:C5	2.53	0.42
81:A2:1708:A:O2'	81:A2:1709:U:H5'	2.18	0.42
81:A2:1734:C:C6	81:A2:1734:C:OP2	2.72	0.42
81:A2:1749:A:H2'	81:A2:1750:U:O4'	2.19	0.42
81:A2:2040:C:H5'	81:A2:2041:G:OP2	2.18	0.42
81:A2:2047:A:C3'	81:A2:2047:A:C8	3.03	0.42
81:A2:2282:G:H1'	81:A2:2307:G:C2	2.54	0.42
81:A2:2302:G:C5	81:A2:2303:G:N7	2.87	0.42
81:A2:2403:U:O2'	81:A2:2404:G:H5'	2.19	0.42
81:A2:2432:G:H1'	81:A2:2448:G:OP1	2.18	0.42
81:A2:2463:G:H3'	81:A2:2464:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2479:G:C5'	81:A2:4052:G:H22	2.33	0.42
81:A2:2542:A:C8	81:A2:2542:A:O5'	2.72	0.42
81:A2:2546:G:C2'	81:A2:2547:U:H5'	2.48	0.42
81:A2:2702:A:P	81:A2:2703:G:H8	2.42	0.42
81:A2:2703:G:C1'	81:A2:2704:C:OP2	2.67	0.42
81:A2:2746:U:C6	81:A2:2746:U:P	3.12	0.42
81:A2:2845:G:H2'	81:A2:2846:U:O4'	2.20	0.42
81:A2:3753:A:H2'	81:A2:3754:A:H3'	2.01	0.42
81:A2:3800:U:H6	81:A2:3800:U:O5'	2.02	0.42
81:A2:380:A:H3'	81:A2:380:A:C4	2.48	0.42
6:BB:54:GLY:HA3	81:A2:3913:G:O2'	2.19	0.42
81:A2:4018:A:H3'	81:A2:4019:C:H6	1.82	0.42
81:A2:4142:G:C8	81:A2:4142:G:C3'	3.02	0.42
81:A2:4396:U:P	81:A2:4396:U:H6	2.43	0.42
81:A2:4415:G:C2'	81:A2:4416:C:H5'	2.49	0.42
81:A2:4483:A:C1'	81:A2:4519:A:H62	2.31	0.42
39:CB:19:ARG:N	81:A2:4527:G:OP1	2.52	0.42
81:A2:4573:C:C2	81:A2:4574:G:C8	3.08	0.42
81:A2:4691:G:O6	81:A2:5022:U:H3'	2.19	0.42
47:CJ:63:ARG:NH2	82:A3:58:G:O6	128.50	0.42
83:A4:75:G:C4'	83:A4:76:U:OP2	2.66	0.42
1:AV:43:C:H2'	1:AV:43:C:O2	2.19	0.42
4:B1:1031:A:H1'	18:BN:116:ILE:CD1	2.48	0.42
4:B1:1106:C:H2'	4:B1:1107:G:C8	2.54	0.42
4:B1:1177:U:H2'	4:B1:1178:U:C6	2.53	0.42
4:B1:1180:C:C3'	4:B1:1180:C:C6	3.02	0.42
4:B1:1222:G:O5'	4:B1:1222:G:H8	2.02	0.42
4:B1:1270:G:O2'	4:B1:1301:A:N7	2.52	0.42
4:B1:1439:A:OP2	4:B1:1439:A:C8	2.73	0.42
4:B1:1494:U:C1'	4:B1:1495:G:P	3.06	0.42
4:B1:1647:A:O2'	4:B1:1648:G:C5'	2.61	0.42
4:B1:1682:C:H6	4:B1:1682:C:H3'	1.84	0.42
4:B1:35:C:H3'	4:B1:36:U:C6	2.54	0.42
4:B1:45:A:N6	4:B1:481:C:H4'	2.35	0.42
4:B1:560:A:O3'	4:B1:561:A:C8	2.72	0.42
4:B1:813:A:H2'	4:B1:814:U:C5'	2.49	0.42
4:B1:835:C:H2'	4:B1:835:C:O2	2.18	0.42
4:B1:970:G:C8	81:A2:3680:A:O5'	2.71	0.42
8:BD:71:ALA:HB3	15:BK:20:VAL:HG21	2.01	0.42
4:B1:22:A:H1'	14:BJ:17:ARG:HH11	1.83	0.42
4:B1:827:A:O5'	14:BJ:8:VAL:HG13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:75:MET:HB2	24:BT:121:ARG:NH2	2.33	0.42
24:BT:144:LYS:O	24:BT:144:LYS:HG2	2.20	0.42
4:B1:1447:G:OP1	25:BU:85:HIS:ND1	2.51	0.42
4:B1:1092:G:H1'	27:BW:2:VAL:O	2.18	0.42
12:BH:148:LEU:N	27:BW:42:MET:HE2	2.34	0.42
4:B1:571:U:O3'	29:BY:59:GLY:N	2.53	0.42
30:BZ:113:THR:O	30:BZ:114:LYS:HB3	2.19	0.42
38:CA:28:ARG:HH11	38:CA:123:ARG:CZ	2.32	0.42
40:CC:106:LYS:HD2	40:CC:108:TRP:CH2	2.54	0.42
42:CE:228:GLN:HG3	81:A2:1274:A:H62	1.84	0.42
42:CE:231:GLU:HG2	42:CE:235:THR:HG21	2.00	0.42
43:CF:142:TRP:CE2	43:CF:235:ASN:HB2	2.54	0.42
44:CG:146:LEU:HD13	44:CG:205:THR:HG21	2.01	0.42
46:CI:62:SER:HB3	46:CI:93:PRO:HG3	2.01	0.42
47:CJ:13:ARG:C	47:CJ:137:PRO:HD2	2.40	0.42
48:CL:163:LYS:HD2	48:CL:163:LYS:O	2.19	0.42
50:CN:140:LYS:HB3	50:CN:144:ARG:HH12	1.84	0.42
50:CN:198:LEU:CD2	50:CN:200:LEU:HG	2.50	0.42
54:CR:119:MET:CE	54:CR:149:LYS:HB2	2.50	0.42
55:CS:93:MET:HE1	55:CS:117:HIS:CE1	2.55	0.42
40:CC:337:ARG:NE	81:A2:1213:G:H4'	2.30	0.42
81:A2:1219:C:C2'	81:A2:1220:G:OP1	2.68	0.42
81:A2:1372:A:O2'	81:A2:1373:G:H5'	2.19	0.42
81:A2:1532:A:C8	81:A2:1532:A:OP2	2.71	0.42
81:A2:1630:G:H5''	81:A2:1631:U:H5	1.84	0.42
81:A2:1916:C:H4'	81:A2:1917:A:O5'	2.18	0.42
81:A2:2012:G:C5	81:A2:2013:C:N4	2.88	0.42
61:CY:59:ARG:HD2	81:A2:206:U:H5''	1.99	0.42
81:A2:2282:G:N3	81:A2:2307:G:C2	2.88	0.42
81:A2:386:A:O4'	81:A2:2356:A:C8	2.73	0.42
81:A2:2432:G:N2	81:A2:2451:G:OP2	2.52	0.42
81:A2:2625:G:C2	81:A2:2664:U:N3	2.88	0.42
81:A2:2373:A:OP2	81:A2:2783:A:C5	2.72	0.42
81:A2:3586:G:C2'	81:A2:3587:C:C5'	2.90	0.42
81:A2:3689:G:C4	81:A2:3690:U:C5	3.07	0.42
81:A2:3670:C:N4	81:A2:3714:U:H3'	2.35	0.42
81:A2:3724:G:N2	81:A2:3725:A:C4	2.87	0.42
81:A2:420:A:H8	81:A2:420:A:O5'	2.03	0.42
81:A2:4240:A:C3'	81:A2:4241:A:H5'	2.49	0.42
81:A2:42:A:H4'	81:A2:42:A:OP1	2.19	0.42
81:A2:4399:U:H2'	81:A2:4400:G:C5'	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4828:G:C3'	81:A2:4830:G:OP1	2.65	0.42
81:A2:5011:A:H2'	81:A2:5012:C:C6	2.54	0.42
50:CN:108:ARG:NH1	81:A2:54:G:H4'	2.34	0.42
81:A2:639:G:H2'	81:A2:640:A:H8	1.84	0.42
81:A2:675:C:H3'	81:A2:675:C:OP2	2.19	0.42
42:CE:192:LYS:NZ	81:A2:698:G:H5'	2.35	0.42
81:A2:713:G:H1	81:A2:925:C:N4	2.17	0.42
81:A2:889:C:O5'	81:A2:889:C:C6	2.73	0.42
81:A2:949:G:H3'	81:A2:950:A:C4'	2.38	0.42
81:A2:961:C:H2'	81:A2:962:G:N7	2.35	0.42
81:A2:970:C:O5'	81:A2:970:C:H6	2.02	0.42
81:A2:99:A:H3'	81:A2:100:C:C5	2.54	0.42
83:A4:71:G:N2	83:A4:105:C:C2	2.87	0.42
3:AX:56:U:H3'	3:AX:56:U:O2	2.19	0.42
4:B1:982:G:H5'	4:B1:1044:G:OP1	2.19	0.42
4:B1:1230:C:H2'	4:B1:1231:C:C5'	2.46	0.42
4:B1:1276:A:O5'	4:B1:1276:A:N3	2.52	0.42
4:B1:1284:A:H4'	4:B1:1287:A:N6	2.35	0.42
4:B1:1377:U:C5	5:BA:102:ARG:HD3	2.54	0.42
4:B1:1406:G:H1'	4:B1:1407:U:O5'	2.20	0.42
4:B1:1543:U:H4'	4:B1:1544:C:OP1	2.19	0.42
4:B1:1675:A:H2'	4:B1:1676:U:O4'	2.20	0.42
4:B1:439:A:C2'	4:B1:440:G:H5'	2.48	0.42
4:B1:573:U:O2	4:B1:573:U:C3'	2.65	0.42
4:B1:583:A:O3'	4:B1:584:A:H8	2.01	0.42
4:B1:621:C:H5''	4:B1:622:C:OP2	2.19	0.42
4:B1:662:G:H4'	4:B1:663:C:O5'	2.20	0.42
4:B1:672:A:OP2	4:B1:673:G:H5'	2.19	0.42
4:B1:682:U:C2	4:B1:1024:A:N1	2.87	0.42
4:B1:845:G:H4'	9:BE:255:ARG:NH1	2.31	0.42
4:B1:853:C:O4'	4:B1:853:C:O2	2.36	0.42
4:B1:901:G:C4	4:B1:902:G:C8	3.07	0.42
4:B1:913:A:N6	12:BH:120:ARG:HA	2.35	0.42
4:B1:936:G:H2'	4:B1:937:C:C6	2.53	0.42
5:BA:103:PHE:CD1	5:BA:133:PRO:HG3	2.55	0.42
5:BA:30:LEU:HD23	5:BA:31:ASP:O	2.20	0.42
6:BB:151:ARG:CZ	6:BB:153:THR:OG1	2.68	0.42
6:BB:137:LEU:HB3	6:BB:215:VAL:HG23	2.01	0.42
8:BD:24:PHE:HE1	8:BD:72:VAL:CG1	2.32	0.42
9:BE:139:LEU:HD22	9:BE:147:ILE:HD12	2.01	0.42
9:BE:173:ILE:HD12	9:BE:235:TRP:HZ2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BF:59:LYS:HB3	10:BF:62:ARG:CG	2.49	0.42
11:BG:45:TRP:HA	11:BG:48:TYR:CD1	2.54	0.42
15:BK:11:ILE:HA	15:BK:38:LYS:HE2	2.02	0.42
20:BP:60:LEU:HD13	20:BP:60:LEU:C	2.40	0.42
23:BS:113:ARG:O	23:BS:117:ILE:HG13	2.20	0.42
25:BU:20:ILE:HG13	25:BU:98:VAL:CG2	2.50	0.42
4:B1:838:G:H8	29:BY:9:THR:N	2.11	0.42
4:B1:1597:C:OP2	30:BZ:82:SER:HB3	2.19	0.42
38:CA:227:ARG:HE	38:CA:239:ALA:HB3	1.84	0.42
40:CC:195:LYS:HB3	40:CC:200:ARG:CZ	2.48	0.42
41:CD:197:LYS:HD2	41:CD:202:GLN:HG3	2.02	0.42
41:CD:90:VAL:HG11	41:CD:225:GLN:HB3	2.00	0.42
46:CI:139:ARG:HG3	46:CI:173:PHE:CE2	2.55	0.42
49:CM:28:VAL:HG12	49:CM:67:SER:HA	2.00	0.42
51:CO:31:ARG:HE	51:CO:33:VAL:CG2	2.31	0.42
54:CR:121:HIS:NE2	54:CR:125:LEU:HD11	2.35	0.42
56:CT:126:VAL:HB	56:CT:128:LEU:HD12	2.01	0.42
58:CV:29:ALA:HB2	58:CV:83:ARG:HH22	1.83	0.42
61:CY:121:ARG:O	61:CY:126:ARG:CA	2.67	0.42
62:CZ:89:ILE:HG12	62:CZ:93:LYS:HE2	2.00	0.42
81:A2:10:A:C2	82:A3:147:G:N1	2.88	0.42
81:A2:1249:G:N2	81:A2:1250:A:H1'	2.34	0.42
48:CL:32:LYS:HZ3	81:A2:1343:C:H41	1.64	0.42
81:A2:1383:G:H2'	81:A2:1384:G:H8	1.83	0.42
81:A2:1547:C:C2	81:A2:1548:U:C5	3.08	0.42
81:A2:1734:C:OP2	81:A2:1734:C:C5	2.72	0.42
81:A2:1870:A:H3'	81:A2:1870:A:C8	2.55	0.42
81:A2:2061:C:N4	81:A2:2249:G:H1	2.13	0.42
81:A2:2060:G:C4	81:A2:2251:G:C2	3.08	0.42
81:A2:2353:A:OP2	81:A2:2353:A:C8	2.73	0.42
81:A2:2549:C:C4'	81:A2:2737:G:C8	3.03	0.42
81:A2:2568:A:C2	81:A2:2732:A:H1'	2.55	0.42
81:A2:2376:G:H5''	81:A2:2800:G:O2'	2.19	0.42
81:A2:2837:C:H2'	81:A2:2838:C:O5'	2.18	0.42
81:A2:32:G:N2	81:A2:50:C:C5	2.79	0.42
81:A2:3595:G:H2'	81:A2:3596:G:C8	2.54	0.42
81:A2:3890:U:H6	81:A2:3890:U:O5'	2.02	0.42
81:A2:3911:A:O2'	81:A2:3912:A:H5'	2.19	0.42
81:A2:4053:A:C6	81:A2:4124:C:C5	3.08	0.42
81:A2:4080:U:H2'	81:A2:4081:C:C4'	2.49	0.42
81:A2:4153:C:C2'	81:A2:4154:U:H5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4251:G:H8	81:A2:4251:G:O5'	2.03	0.42
81:A2:439:G:H8	81:A2:439:G:C5'	2.32	0.42
81:A2:4584:A:H2'	81:A2:4585:C:C6	2.55	0.42
81:A2:4593:G:H22	81:A2:4623:G:C2'	2.22	0.42
81:A2:4720:G:H3'	81:A2:4720:G:C8	2.55	0.42
81:A2:4743:C:C3'	81:A2:4743:C:C6	3.02	0.42
81:A2:4824:U:OP2	81:A2:4825:G:C4	2.72	0.42
42:CE:219:LYS:HB2	81:A2:4895:C:O2	2.19	0.42
81:A2:86:U:H2'	81:A2:86:U:O2	2.19	0.42
82:A3:103:A:OP2	82:A3:104:A:H2'	2.20	0.42
83:A4:33:U:C2'	83:A4:33:U:O2	2.67	0.42
41:CD:94:ASN:CA	83:A4:47:G:H5'	2.50	0.42
1:AV:41:C:H5'	1:AV:42:C:OP2	2.19	0.42
3:AX:52:U:OP1	3:AX:52:U:H4'	2.18	0.42
4:B1:1122:A:H2'	4:B1:1123:C:H5'	2.01	0.42
4:B1:129:C:H3'	4:B1:130:G:C8	2.55	0.42
4:B1:1288:U:OP2	4:B1:1311:C:N3	2.52	0.42
4:B1:1442:U:C6	4:B1:1443:C:C1'	3.02	0.42
4:B1:1631:U:N3	4:B1:1632:G:N2	2.67	0.42
4:B1:1636:G:OP1	4:B1:1638:G:N2	2.53	0.42
4:B1:166:A:H2'	4:B1:167:G:C8	2.55	0.42
4:B1:15:U:O2'	4:B1:16:G:H5'	2.20	0.42
4:B1:1829:G:C4	4:B1:1830:U:H5	2.37	0.42
4:B1:527:C:H5'	14:BJ:122:SER:HB2	2.00	0.42
4:B1:867:G:C8	4:B1:867:G:OP2	2.72	0.42
4:B1:876:C:C5	4:B1:876:C:OP2	2.73	0.42
6:BB:90:ASP:OD1	6:BB:97:LEU:HB2	2.19	0.42
9:BE:124:CYS:HB2	9:BE:141:THR:HG23	2.02	0.42
9:BE:208:VAL:HG11	9:BE:225:ILE:CD1	2.49	0.42
9:BE:80:VAL:HG13	9:BE:81:THR:HG23	2.02	0.42
10:BF:130:ARG:O	10:BF:131:ALA:HB3	2.20	0.42
13:BI:135:GLU:O	13:BI:135:GLU:HG2	2.19	0.42
4:B1:1130:G:C4'	18:BN:10:GLY:HA2	2.49	0.42
20:BP:96:VAL:HB	20:BP:120:SER:HB2	2.01	0.42
20:BP:97:TYR:HB2	20:BP:102:PHE:CD2	2.55	0.42
21:BQ:80:GLN:O	21:BQ:84:ILE:HG13	2.20	0.42
30:BZ:43:LYS:HE3	30:BZ:44:LEU:O	2.19	0.42
38:CA:102:LEU:HB3	38:CA:106:THR:OG1	2.19	0.42
38:CA:76:PHE:HZ	38:CA:165:VAL:HG21	1.84	0.42
40:CC:323:ARG:HG3	40:CC:324:ILE:N	2.34	0.42
40:CC:346:ASN:HA	40:CC:349:LEU:CB	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CE:227:HIS:CE1	81:A2:1273:G:C2'	3.01	0.42
44:CG:138:ALA:HB3	44:CG:196:ARG:HH22	1.82	0.42
44:CG:57:TRP:HB3	44:CG:61:ILE:HB	2.00	0.42
50:CN:85:VAL:HG13	81:A2:43:U:OP1	2.20	0.42
50:CN:88:GLY:O	50:CN:92:LEU:HD11	2.20	0.42
51:CO:117:ARG:NH1	51:CO:160:ARG:HH12	2.18	0.42
51:CO:90:HIS:CB	51:CO:99:LEU:HD11	2.41	0.42
52:CP:109:VAL:HA	52:CP:112:LEU:HD22	2.01	0.42
53:CQ:78:LYS:HD2	53:CQ:135:GLY:HA2	2.01	0.42
56:CT:117:LYS:O	56:CT:120:LYS:HG2	2.20	0.42
41:CD:33:ARG:HE	56:CT:27:LEU:HD12	1.84	0.42
60:CX:156:ILE:O	60:CX:156:ILE:HG23	2.20	0.42
81:A2:1185:G:C2'	81:A2:1186:C:H5'	2.49	0.42
81:A2:1209:C:C2'	81:A2:1210:U:OP2	2.67	0.42
81:A2:1277:U:H3'	81:A2:1278:C:C5	2.55	0.42
81:A2:1280:G:N2	81:A2:1281:C:H41	2.17	0.42
81:A2:1778:G:H2'	81:A2:1778:G:N3	2.35	0.42
81:A2:1927:U:H6	81:A2:1927:U:O5'	2.03	0.42
81:A2:2020:A:O2'	81:A2:2021:A:C8	2.72	0.42
81:A2:1877:G:C1'	81:A2:2254:G:C2	3.00	0.42
81:A2:2638:U:O5'	81:A2:2639:G:H4'	2.19	0.42
81:A2:2344:A:C2	81:A2:2775:A:C4	3.07	0.42
81:A2:2836:G:H2'	81:A2:2837:C:H6	1.83	0.42
81:A2:319:A:N3	81:A2:319:A:H2'	2.35	0.42
81:A2:3595:G:H2'	81:A2:3596:G:H8	1.84	0.42
81:A2:374:A:C6	81:A2:375:A:C6	3.07	0.42
81:A2:3942:G:C5'	81:A2:3942:G:H8	2.32	0.42
81:A2:4025:C:H6	81:A2:4025:C:O5'	2.02	0.42
81:A2:4043:U:C1'	81:A2:4044:G:P	3.08	0.42
81:A2:4065:G:N2	81:A2:4079:C:O2	2.51	0.42
81:A2:4310:C:H2'	81:A2:4311:U:H6	1.84	0.42
81:A2:437:C:C3'	81:A2:438:C:C6	3.03	0.42
81:A2:4517:U:H2'	81:A2:4518:U:H5'	2.02	0.42
81:A2:456:G:N3	81:A2:456:G:H2'	2.34	0.42
81:A2:4863:G:H2'	81:A2:4864:A:H4'	2.02	0.42
81:A2:924:C:C2'	81:A2:925:C:H5''	2.48	0.42
81:A2:94:A:H2'	81:A2:95:G:O4'	2.19	0.42
81:A2:971:C:C6	81:A2:971:C:H3'	2.55	0.42
81:A2:10:A:N1	82:A3:147:G:C6	2.87	0.42
83:A4:77:A:O2'	83:A4:78:C:H5'	2.20	0.42
83:A4:87:G:H21	83:A4:89:G:H3'	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1081:U:O2'	4:B1:1082:A:H5'	2.20	0.42
4:B1:1124:C:C5'	6:BB:150:ILE:HG12	2.50	0.42
4:B1:1130:G:H2'	4:B1:1131:G:H5''	2.01	0.42
4:B1:1139:C:H2'	4:B1:1140:G:C5'	2.49	0.42
4:B1:1205:C:H2'	4:B1:1205:C:O2	2.19	0.42
4:B1:1263:U:C6	4:B1:1264:C:C6	3.08	0.42
4:B1:1375:G:H2'	4:B1:1376:A:C5'	2.46	0.42
4:B1:142:C:H4'	4:B1:143:U:O5'	2.20	0.42
4:B1:1431:G:C2'	4:B1:1432:U:C5	2.92	0.42
4:B1:152:U:OP2	4:B1:152:U:C6	2.72	0.42
4:B1:1578:U:C2	8:BD:4:GLN:O	2.73	0.42
4:B1:1782:G:O2'	4:B1:1783:C:C6	2.68	0.42
4:B1:179:C:H2'	4:B1:180:G:N3	2.34	0.42
4:B1:359:U:H2'	4:B1:362:C:C5	2.55	0.42
4:B1:441:C:H2'	4:B1:441:C:O2	2.20	0.42
4:B1:494:C:C2'	4:B1:495:U:H5'	2.50	0.42
4:B1:60:A:C2'	4:B1:60:A:N3	2.83	0.42
4:B1:743:U:H3'	4:B1:744:G:C8	2.53	0.42
4:B1:746:C:C2'	4:B1:746:C:O5'	2.68	0.42
4:B1:876:C:O2'	4:B1:877:C:H5'	2.19	0.42
4:B1:973:C:C3'	4:B1:973:C:C6	3.03	0.42
6:BB:158:HIS:HA	6:BB:161:VAL:HB	2.01	0.42
6:BB:183:GLU:HG3	6:BB:187:LYS:HE3	2.01	0.42
9:BE:173:ILE:CD1	9:BE:235:TRP:HZ2	2.33	0.42
4:B1:1599:U:C5	10:BF:164:ARG:HA	2.55	0.42
13:BI:114:GLU:OE2	13:BI:129:LEU:HD13	2.19	0.42
14:BJ:137:VAL:O	14:BJ:138:ARG:HB3	2.19	0.42
14:BJ:86:VAL:HG12	14:BJ:87:LEU:CD1	2.34	0.42
16:BL:31:GLU:HG2	16:BL:32:LYS:N	2.35	0.42
18:BN:22:VAL:HB	18:BN:23:PRO:HD2	2.02	0.42
20:BP:77:LYS:HD3	20:BP:102:PHE:CD1	2.54	0.42
24:BT:36:THR:O	24:BT:37:VAL:CB	2.67	0.42
38:CA:177:LYS:HE2	81:A2:2716:C:C5	2.54	0.42
43:CF:86:GLU:HG3	56:CT:136:ARG:HG2	2.01	0.42
45:CH:31:ARG:NH2	45:CH:187:VAL:HG12	2.35	0.42
45:CH:41:ILE:HG23	45:CH:43:VAL:HG22	2.02	0.42
47:CJ:97:ASN:O	47:CJ:98:ASN:CB	2.68	0.42
48:CL:161:TYR:O	48:CL:162:LYS:HB2	2.18	0.42
48:CL:60:ARG:HD3	48:CL:67:HIS:CE1	2.55	0.42
53:CQ:75:ARG:HE	53:CQ:78:LYS:HZ2	1.66	0.42
53:CQ:84:GLY:O	53:CQ:103:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CQ:91:ARG:HB2	53:CQ:91:ARG:NH1	2.35	0.42
55:CS:164:LYS:CB	55:CS:165:PRO:CD	2.95	0.42
39:CB:73:VAL:CG2	58:CV:93:GLY:HA3	2.49	0.42
61:CY:50:ARG:HH11	61:CY:115:ARG:HH11	1.66	0.42
81:A2:1198:G:C5	81:A2:1199:G:N7	2.87	0.42
81:A2:1211:C:C4'	81:A2:1212:G:OP1	2.67	0.42
81:A2:122:U:H2'	81:A2:123:C:H6	1.74	0.42
81:A2:135:G:H2'	81:A2:136:G:C8	2.54	0.42
81:A2:1429:C:OP2	81:A2:1429:C:C5	2.71	0.42
81:A2:1467:G:H2'	81:A2:1468:G:O4'	2.18	0.42
81:A2:1607:C:H4'	81:A2:1607:C:OP1	2.20	0.42
81:A2:1715:A:H1'	83:A4:78:C:HO2'	1.85	0.42
81:A2:1934:A:N1	81:A2:2006:C:N3	2.68	0.42
81:A2:221:U:OP2	81:A2:221:U:C6	2.73	0.42
81:A2:2268:C:H5''	81:A2:2269:U:OP2	2.19	0.42
81:A2:2430:A:C2'	81:A2:2431:U:H5'	2.49	0.42
81:A2:2564:A:H2'	81:A2:2565:C:C5'	2.41	0.42
81:A2:259:G:H2'	81:A2:260:G:C8	2.55	0.42
81:A2:25:A:C8	81:A2:26:C:C5	3.08	0.42
81:A2:265:C:H2'	81:A2:266:C:C6	2.54	0.42
81:A2:266:C:O2	81:A2:266:C:C2'	2.68	0.42
81:A2:2707:U:C4	81:A2:2708:C:C5	3.08	0.42
81:A2:2379:G:H5'	81:A2:2763:C:H42	1.84	0.42
81:A2:2878:G:H3'	81:A2:2879:G:H5''	2.02	0.42
81:A2:3581:C:H2'	81:A2:3582:U:O4'	2.19	0.42
81:A2:3684:U:H5''	81:A2:3685:C:C5	2.54	0.42
81:A2:3737:U:C2'	81:A2:3738:C:H5'	2.50	0.42
81:A2:3737:U:O2'	81:A2:3738:C:H5'	2.19	0.42
81:A2:3891:G:N3	81:A2:3891:G:H2'	2.35	0.42
81:A2:3894:U:H2'	81:A2:3895:C:O4'	2.19	0.42
81:A2:3920:G:C2	81:A2:4029:G:N2	2.88	0.42
81:A2:3938:G:O2'	81:A2:3939:G:H5'	2.19	0.42
81:A2:4039:U:H2'	81:A2:4040:C:H6	1.84	0.42
81:A2:4039:U:H2'	81:A2:4040:C:C6	2.55	0.42
81:A2:4050:G:O6	81:A2:4053:A:C2	2.73	0.42
81:A2:4066:A:H2'	81:A2:4067:G:H8	1.83	0.42
81:A2:4077:C:H2'	81:A2:4078:U:O4'	2.19	0.42
81:A2:4100:C:H6	81:A2:4100:C:O5'	2.02	0.42
81:A2:4249:U:C2'	81:A2:4250:U:O5'	2.68	0.42
81:A2:4285:A:O5'	81:A2:4285:A:H8	2.02	0.42
81:A2:310:A:H2	81:A2:4319:U:C2	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4530:G:H2'	81:A2:4531:A:OP2	2.19	0.42
81:A2:4621:G:C6	81:A2:4622:C:C4	3.08	0.42
81:A2:4642:U:O4	81:A2:4666:G:H2'	2.19	0.42
49:CM:2:VAL:CG2	81:A2:4723:A:H2	2.33	0.42
48:CL:111:GLN:HB2	81:A2:510:C:C4'	2.48	0.42
81:A2:737:G:N2	81:A2:738:U:C2	2.87	0.42
81:A2:741:C:H2'	81:A2:742:U:H6	1.84	0.42
82:A3:25:G:H8	82:A3:25:G:O5'	2.03	0.42
2:AW:61:C:O2'	2:AW:62:C:H5'	2.20	0.42
4:B1:1040:G:H2'	4:B1:1041:G:H8	1.81	0.42
4:B1:1165:G:N2	28:BX:23:HIS:CG	2.87	0.42
4:B1:1214:A:N6	4:B1:1686:G:C6	2.88	0.42
4:B1:1571:G:H2'	4:B1:1572:C:O4'	2.18	0.42
4:B1:1686:G:C5	4:B1:1687:C:C5	3.08	0.42
4:B1:1698:C:C3'	4:B1:1699:A:H5'	2.50	0.42
4:B1:179:C:OP2	4:B1:179:C:C6	2.58	0.42
4:B1:1860:A:C2	4:B1:1862:G:C8	3.08	0.42
4:B1:211:G:H3'	4:B1:211:G:C8	2.55	0.42
4:B1:401:A:H2'	4:B1:402:C:H5'	2.01	0.42
4:B1:520:A:H8	4:B1:521:A:C8	2.33	0.42
4:B1:641:A:C2'	4:B1:642:U:H5'	2.50	0.42
4:B1:820:U:H3	4:B1:828:G:H1	1.67	0.42
4:B1:884:C:HO2'	4:B1:885:U:H5'	1.79	0.42
4:B1:885:U:O3'	4:B1:886:A:H2'	2.20	0.42
5:BA:30:LEU:HB2	5:BA:47:TYR:CE2	2.55	0.42
6:BB:135:LEU:HD23	6:BB:135:LEU:N	2.34	0.42
6:BB:89:GLU:HG3	6:BB:223:PHE:CE2	2.55	0.42
6:BB:223:PHE:HE1	6:BB:225:LEU:HD13	1.85	0.42
6:BB:63:LYS:C	6:BB:65:ARG:H	2.23	0.42
7:BC:152:ARG:O	7:BC:156:ILE:HG12	2.20	0.42
12:BH:143:ARG:HB2	12:BH:155:LYS:O	2.20	0.42
15:BK:3:MET:CG	15:BK:47:LYS:HD3	2.50	0.42
16:BL:40:ILE:HD13	16:BL:143:LEU:HD11	2.02	0.42
18:BN:6:ALA:HB1	18:BN:7:PRO:HD2	2.01	0.42
23:BS:27:ALA:HB1	23:BS:41:ALA:CB	2.49	0.42
24:BT:124:THR:HB	24:BT:125:PRO:CD	2.50	0.42
25:BU:47:ASN:C	25:BU:48:LEU:HD12	2.40	0.42
40:CC:236:ASN:HB3	40:CC:239:LYS:HD3	2.01	0.42
42:CE:174:LEU:HD23	42:CE:188:ARG:HB3	2.02	0.42
42:CE:282:TYR:CB	42:CE:285:LYS:HG2	2.50	0.42
43:CF:220:MET:HB3	81:A2:1885:A:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:CH:31:ARG:NH2	45:CH:188:GLN:HB3	2.34	0.42
46:CI:191:ILE:HG21	46:CI:213:HIS:CE1	2.54	0.42
47:CJ:106:GLY:O	81:A2:4210:G:H4'	2.19	0.42
47:CJ:75:ARG:CZ	83:A4:42:A:H1'	2.49	0.42
48:CL:33:ILE:HB	81:A2:1350:G:OP1	2.19	0.42
49:CM:2:VAL:CB	81:A2:4724:G:H1'	2.48	0.42
51:CO:114:LYS:HA	81:A2:4717:U:C6	2.52	0.42
54:CR:149:LYS:O	54:CR:153:LYS:HG3	2.20	0.42
55:CS:157:ARG:HD3	55:CS:176:PHE:CD1	2.55	0.42
61:CY:121:ARG:HA	61:CY:125:SER:OG	2.19	0.42
81:A2:1082:U:H4'	81:A2:1083:C:OP1	2.20	0.42
81:A2:1199:G:O3'	81:A2:1200:G:C8	2.72	0.42
81:A2:1220:G:C1'	81:A2:1221:C:C4	3.02	0.42
81:A2:140:C:OP2	81:A2:140:C:C5	2.73	0.42
81:A2:1479:A:O3'	81:A2:1481:G:H5'	2.19	0.42
81:A2:1649:G:H5'	81:A2:1649:G:H8	1.84	0.42
81:A2:1837:C:H2'	81:A2:1838:U:C6	2.55	0.42
81:A2:229:G:H1'	81:A2:374:A:C1'	2.26	0.42
81:A2:2351:A:H2'	81:A2:2352:A:H8	1.84	0.42
81:A2:2470:G:H5'	82:A3:126:C:O2'	2.19	0.42
81:A2:2508:C:H2'	81:A2:2509:C:H5	1.85	0.42
81:A2:2575:A:N6	81:A2:2576:G:C6	2.87	0.42
81:A2:2620:G:O2'	81:A2:2621:G:H5'	2.20	0.42
81:A2:2643:U:C2	81:A2:2646:C:C5	3.07	0.42
81:A2:341:C:HO2'	81:A2:342:C:H6	1.66	0.42
81:A2:3570:C:O5'	81:A2:3570:C:H6	2.03	0.42
81:A2:3609:U:H2'	81:A2:3610:U:C6	2.54	0.42
40:CC:86:ARG:HH21	81:A2:368:A:H5'	1.85	0.42
81:A2:309:A:H1'	81:A2:3696:A:C2	2.55	0.42
81:A2:4004:G:C4	81:A2:4005:C:C5	3.08	0.42
81:A2:4032:C:C4	81:A2:4033:G:H1'	2.55	0.42
81:A2:4085:U:C2'	81:A2:4085:U:O2	2.61	0.42
81:A2:4289:G:N3	81:A2:4289:G:C2'	2.83	0.42
81:A2:4490:U:H2'	81:A2:4491:U:H2'	2.01	0.42
81:A2:4743:C:H3'	81:A2:4743:C:C6	2.55	0.42
81:A2:46:U:OP2	81:A2:47:A:H2'	2.20	0.42
51:CO:118:MET:HE1	81:A2:4829:A:N1	2.35	0.42
81:A2:4874:G:C2'	81:A2:4875:C:H5'	2.50	0.42
39:CB:175:GLN:HG3	81:A2:4940:U:H4'	2.02	0.42
81:A2:54:G:HO2'	81:A2:55:G:P	2.43	0.42
81:A2:723:G:C2'	81:A2:723:G:N3	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:A4:13:A:H5''	83:A4:14:C:H5	1.84	0.42
2:AW:49:C:H6	2:AW:49:C:O5'	2.02	0.42
2:AW:59:U:H3'	2:AW:60:U:C6	2.39	0.42
4:B1:1214:A:C6	4:B1:1686:G:N1	2.87	0.42
4:B1:123:G:OP1	4:B1:123:G:H4'	2.19	0.42
4:B1:1244:U:H2'	4:B1:1245:G:H8	1.85	0.42
4:B1:1478:U:H2'	4:B1:1479:G:O4'	2.20	0.42
4:B1:1628:C:H6	4:B1:1628:C:O5'	2.02	0.42
4:B1:1212:G:N1	4:B1:1688:C:C2	2.88	0.42
4:B1:1746:U:H6	4:B1:1746:U:O5'	2.02	0.42
4:B1:1782:G:H1'	4:B1:1783:C:C5	2.54	0.42
4:B1:1083:A:H2'	4:B1:1858:G:H21	1.84	0.42
4:B1:213:G:C8	4:B1:213:G:O5'	2.73	0.42
4:B1:296:U:C2	4:B1:297:A:C8	3.08	0.42
4:B1:317:C:C6	4:B1:317:C:H5''	2.55	0.42
4:B1:323:C:H6	4:B1:323:C:O5'	2.03	0.42
4:B1:330:G:H2'	4:B1:330:G:N3	2.35	0.42
4:B1:37:C:H2'	4:B1:38:A:H5''	2.01	0.42
4:B1:500:A:C2'	4:B1:501:C:C5'	2.91	0.42
4:B1:526:A:H1'	14:BJ:128:VAL:HG13	2.02	0.42
5:BA:69:GLU:HB2	7:BC:270:THR:HG21	2.02	0.42
4:B1:1578:U:C6	8:BD:6:SER:N	2.88	0.42
9:BE:124:CYS:SG	9:BE:162:ILE:HB	2.59	0.42
10:BF:100:ILE:HD11	10:BF:177:LEU:HD22	2.00	0.42
12:BH:101:LEU:HB2	12:BH:116:ARG:HG3	2.01	0.42
4:B1:526:A:O2'	14:BJ:128:VAL:HG22	2.19	0.42
16:BL:22:ARG:HD2	16:BL:27:GLU:CD	2.40	0.42
3:AX:42:U:C5	19:BO:151:LEU:CG	3.03	0.42
19:BO:64:ALA:HB3	19:BO:67:ASP:HB2	2.02	0.42
20:BP:86:LEU:CD1	20:BP:88:GLU:HB3	2.50	0.42
23:BS:46:ARG:NH1	24:BT:37:VAL:HG22	2.35	0.42
38:CA:103:PRO:HA	38:CA:162:ASN:O	2.20	0.42
39:CB:72:VAL:HG13	58:CV:91:LYS:O	2.19	0.42
42:CE:205:ASN:HB2	42:CE:256:GLN:HB2	2.00	0.42
45:CH:60:TRP:CD1	55:CS:155:PRO:CD	3.02	0.42
51:CO:193:THR:HG22	51:CO:197:LYS:HD2	2.01	0.42
54:CR:8:LYS:HE3	54:CR:19:LYS:HB3	2.00	0.42
56:CT:129:LYS:HB2	56:CT:131:GLN:HE22	1.84	0.42
56:CT:29:THR:O	56:CT:32:ARG:HB2	2.19	0.42
58:CV:65:VAL:HG21	58:CV:72:LEU:HG	2.01	0.42
59:CW:50:ASN:H	81:A2:3584:G:N2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1174:G:C2	81:A2:1175:G:N7	2.88	0.42
81:A2:1187:C:C5	81:A2:1187:C:OP2	2.72	0.42
81:A2:1285:C:H2'	81:A2:1286:C:O4'	2.19	0.42
81:A2:1357:G:N7	81:A2:1360:G:H3'	2.35	0.42
81:A2:1643:U:H2'	81:A2:1644:C:H6	1.83	0.42
81:A2:1866:A:N7	81:A2:2027:G:C5'	2.83	0.42
81:A2:202:C:N3	81:A2:206:U:C5	2.88	0.42
81:A2:2280:U:OP1	81:A2:2281:U:H2'	2.20	0.42
81:A2:2305:U:H2'	81:A2:2306:G:C1'	2.50	0.42
40:CC:54:VAL:CG2	81:A2:2320:G:N7	2.79	0.42
81:A2:2421:U:C5'	81:A2:2422:C:H5	2.16	0.42
81:A2:2431:U:H2'	81:A2:2432:G:C5'	2.47	0.42
81:A2:2430:A:N6	81:A2:2484:A:H2	2.06	0.42
81:A2:2494:A:C2'	81:A2:2495:G:C8	3.00	0.42
81:A2:2497:C:H1'	81:A2:2617:G:H21	1.84	0.42
81:A2:2615:G:O2'	81:A2:2616:U:H5'	2.20	0.42
81:A2:2549:C:P	81:A2:2741:A:C8	3.13	0.42
81:A2:3694:G:N2	81:A2:3696:A:H2'	2.34	0.42
81:A2:1305:C:C5	81:A2:3847:C:O3'	2.70	0.42
81:A2:3870:A:H2'	81:A2:3870:A:N3	2.34	0.42
81:A2:4030:A:H2'	81:A2:4031:U:C5'	2.50	0.42
81:A2:4212:C:H5''	81:A2:4213:A:OP2	2.20	0.42
81:A2:4221:C:H2'	81:A2:4222:C:C6	2.55	0.42
81:A2:286:A:N6	81:A2:4322:A:H4'	2.34	0.42
81:A2:4421:C:O2	81:A2:4421:C:H2'	2.20	0.42
81:A2:4578:G:C2'	81:A2:4579:U:C5'	2.98	0.42
81:A2:459:U:O2	81:A2:459:U:C3'	2.67	0.42
81:A2:4722:U:O2	81:A2:4722:U:H3'	2.20	0.42
49:CM:91:TRP:HB2	81:A2:4825:G:C4	2.55	0.42
42:CE:280:GLY:HA2	81:A2:4831:U:C5	2.55	0.42
81:A2:725:C:C5'	81:A2:725:C:H6	2.33	0.42
81:A2:736:G:H5''	81:A2:736:G:C8	2.55	0.42
81:A2:917:G:H21	81:A2:918:C:H42	1.68	0.42
81:A2:960:G:C8	81:A2:960:G:H5'	2.43	0.42
82:A3:12:G:C5	82:A3:13:G:C8	3.07	0.42
82:A3:140:C:H6	82:A3:140:C:O5'	2.03	0.42
2:AW:41:C:C3'	2:AW:42:C:H5''	2.50	0.42
4:B1:1402:A:C3'	4:B1:1403:C:C5	3.03	0.42
4:B1:1402:A:H3'	4:B1:1403:C:C6	2.55	0.42
4:B1:1475:G:OP2	4:B1:1475:G:H8	2.03	0.42
1:AV:34:G:N3	4:B1:1701:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1766:C:C5	4:B1:1767:C:N4	2.88	0.42
4:B1:206:G:O5'	4:B1:206:G:H8	2.02	0.42
4:B1:222:U:H6	4:B1:222:U:O5'	2.03	0.42
4:B1:239:C:C4	4:B1:240:G:N7	2.88	0.42
4:B1:365:C:O2	4:B1:365:C:C2'	2.68	0.42
4:B1:474:G:C6	4:B1:475:C:N4	2.88	0.42
4:B1:491:C:H2'	4:B1:492:C:O4'	2.20	0.42
4:B1:559:G:C5'	4:B1:560:A:H5''	2.47	0.42
4:B1:79:A:H3'	4:B1:80:G:H8	1.85	0.42
6:BB:72:ALA:HB1	6:BB:79:VAL:O	2.20	0.42
12:BH:49:LYS:O	12:BH:60:ILE:HD12	2.19	0.42
14:BJ:137:VAL:HB	14:BJ:142:VAL:CG2	2.48	0.42
15:BK:2:LEU:O	15:BK:44:HIS:HE1	2.03	0.42
16:BL:9:ALA:CB	16:BL:12:LYS:HE2	2.49	0.42
18:BN:126:ALA:O	18:BN:130:LYS:HG3	2.20	0.42
23:BS:47:LYS:HE2	23:BS:79:ILE:HG13	2.01	0.42
27:BW:47:ILE:HG22	27:BW:69:LEU:HD11	2.01	0.42
38:CA:196:TRP:CE3	38:CA:197:PRO:CG	3.03	0.42
39:CB:252:ALA:HB1	81:A2:4484:G:N2	2.33	0.42
39:CB:61:ASP:HA	39:CB:68:ASN:OD1	2.20	0.42
40:CC:303:ARG:O	53:CQ:38:ARG:HD2	2.19	0.42
42:CE:158:ARG:HE	81:A2:4903:C:H1'	1.85	0.42
43:CF:32:ARG:HA	43:CF:35:LYS:HE3	2.01	0.42
43:CF:88:LYS:HZ3	56:CT:135:PRO:HG2	1.85	0.42
44:CG:117:ARG:HG3	44:CG:121:LYS:HD3	2.01	0.42
44:CG:37:LYS:HE2	44:CG:44:ASP:HB3	2.02	0.42
45:CH:110:SER:HB2	45:CH:128:MET:HB2	2.00	0.42
49:CM:56:GLN:HG3	55:CS:157:ARG:HH12	1.84	0.42
54:CR:76:MET:O	54:CR:76:MET:HG3	2.20	0.42
43:CF:126:ASN:CG	56:CT:132:PRO:HB2	2.40	0.42
62:CZ:108:ARG:CD	81:A2:2551:G:O6	2.67	0.42
40:CC:102:PHE:HB2	81:A2:1317:A:H5'	2.02	0.42
81:A2:1328:U:H2'	81:A2:1329:G:H8	1.84	0.42
53:CQ:187:LYS:HZ2	81:A2:1474:G:H5''	1.84	0.42
81:A2:14:C:C1'	81:A2:15:A:P	3.08	0.42
81:A2:1708:A:H2'	81:A2:1709:U:H5'	2.00	0.42
81:A2:1737:G:N2	81:A2:1753:C:H41	2.18	0.42
81:A2:1770:U:H3'	81:A2:1771:U:C6	2.52	0.42
81:A2:1832:G:OP2	81:A2:1832:G:H4'	2.19	0.42
81:A2:1851:A:C2'	81:A2:1852:A:H5'	2.49	0.42
81:A2:2061:C:H5	81:A2:2249:G:N2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2792:A:H2'	81:A2:2793:G:C8	2.55	0.42
81:A2:2856:A:C8	81:A2:2858:A:O4'	2.73	0.42
81:A2:286:A:N3	81:A2:286:A:C2'	2.83	0.42
81:A2:287:A:C2	81:A2:307:U:O4'	2.73	0.42
81:A2:3648:U:O2	81:A2:3648:U:O4'	2.37	0.42
81:A2:3722:G:H2'	81:A2:3723:G:O4'	2.20	0.42
81:A2:3727:U:C2'	81:A2:3728:A:H8	2.33	0.42
81:A2:3832:C:O5'	81:A2:3832:C:H6	2.03	0.42
81:A2:3903:G:C2'	81:A2:3904:C:H5'	2.50	0.42
81:A2:4093:C:O5'	81:A2:4093:C:C6	2.73	0.42
81:A2:4118:C:C6	81:A2:4118:C:P	3.10	0.42
81:A2:4258:A:C2'	81:A2:4259:U:H5'	2.50	0.42
81:A2:44:A:C2'	81:A2:45:U:H5'	2.50	0.42
81:A2:2604:C:N4	81:A2:4609:G:H22	2.17	0.42
81:A2:458:U:OP1	81:A2:463:C:N3	2.52	0.42
81:A2:4803:C:C4	81:A2:4804:G:C1'	2.90	0.42
81:A2:4861:C:H2'	81:A2:4862:G:H5'	2.01	0.42
81:A2:4922:A:H5''	81:A2:4922:A:C8	2.54	0.42
81:A2:691:G:H2'	81:A2:692:C:OP1	2.19	0.42
81:A2:693:G:H2'	81:A2:694:C:H6	1.85	0.42
81:A2:897:U:H6	81:A2:897:U:H3'	1.85	0.42
82:A3:10:G:H2'	82:A3:11:C:C6	2.55	0.42
82:A3:49:G:OP1	82:A3:49:G:C8	2.69	0.42
82:A3:61:A:O3'	82:A3:63:U:H1'	2.20	0.42
1:AV:75:C:OP1	81:A2:4508:A:C8	2.65	0.42
2:AW:14:A:N6	2:AW:22:G:C5	2.88	0.42
4:B1:683:G:C4	4:B1:1023:A:C6	3.08	0.42
4:B1:1053:C:C2'	4:B1:1053:C:O2	2.61	0.42
4:B1:1122:A:C2'	4:B1:1123:C:H5'	2.49	0.42
4:B1:1195:A:H2'	4:B1:1196:A:H8	1.85	0.42
4:B1:1204:A:O4'	4:B1:1699:A:C2	2.73	0.42
4:B1:1265:A:C2	4:B1:1266:C:C6	3.08	0.42
4:B1:1311:C:H5''	17:BM:40:LYS:NZ	2.34	0.42
4:B1:1404:U:H3	4:B1:1440:C:N4	2.18	0.42
4:B1:1483:A:H3'	4:B1:1483:A:N3	2.35	0.42
4:B1:1561:A:N1	4:B1:1575:G:H1'	2.35	0.42
4:B1:1686:G:H5'	4:B1:1687:C:P	2.60	0.42
4:B1:1822:A:C3'	4:B1:1823:A:H5''	2.50	0.42
4:B1:1835:A:H5''	4:B1:1863:A:H1'	2.02	0.42
4:B1:190:G:C2	4:B1:191:A:N7	2.88	0.42
4:B1:237:C:H1'	4:B1:238:C:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:361:U:H4'	4:B1:362:C:H5'	2.01	0.42
4:B1:380:G:C2	4:B1:382:C:H6	2.34	0.42
4:B1:534:G:H2'	4:B1:535:G:H4'	2.02	0.42
4:B1:573:U:C4	4:B1:576:A:C5	3.08	0.42
4:B1:795:A:C3'	4:B1:796:G:H8	2.32	0.42
4:B1:942:G:OP2	4:B1:942:G:H8	2.03	0.42
9:BE:252:ARG:HH11	9:BE:252:ARG:HB3	1.84	0.42
10:BF:69:VAL:O	10:BF:73:THR:HG23	2.19	0.42
12:BH:157:HIS:HD1	12:BH:190:PRO:HG3	1.85	0.42
12:BH:177:TYR:HE2	12:BH:183:LYS:HB2	1.84	0.42
4:B1:191:A:H4'	13:BI:147:LYS:NZ	2.35	0.42
15:BK:10:ALA:C	15:BK:38:LYS:HZ3	2.24	0.42
16:BL:33:LEU:HB2	16:BL:34:PRO:HD3	2.02	0.42
17:BM:111:VAL:HG12	17:BM:113:ASP:O	2.20	0.42
4:B1:29:G:H5''	28:BX:129:SER:HB3	2.02	0.42
39:CB:213:GLN:NE2	39:CB:287:ILE:HB	2.34	0.42
39:CB:173:LEU:HD11	39:CB:342:LYS:HG2	2.01	0.42
42:CE:136:HIS:O	42:CE:137:VAL:CB	2.65	0.42
43:CF:88:LYS:HG2	56:CT:135:PRO:CG	2.49	0.42
45:CH:34:LEU:HD12	45:CH:84:VAL:HG23	2.01	0.42
46:CI:139:ARG:HG2	46:CI:172:GLY:CA	2.50	0.42
46:CI:36:LEU:HB2	46:CI:87:ILE:CG2	2.47	0.42
47:CJ:108:GLY:HA3	81:A2:4211:A:C4'	2.50	0.42
48:CL:177:LYS:O	48:CL:178:ALA:HB3	2.19	0.42
49:CM:130:LEU:HD12	51:CO:181:ALA:HB2	2.02	0.42
50:CN:44:ARG:CZ	50:CN:47:LYS:HG2	2.50	0.42
50:CN:53:TYR:HD1	50:CN:133:ILE:HD11	1.85	0.42
52:CP:40:HIS:O	52:CP:43:LYS:HG2	2.20	0.42
53:CQ:67:ILE:HG12	53:CQ:96:PRO:HD2	2.02	0.42
56:CT:25:VAL:HG21	56:CT:94:GLU:OE2	2.20	0.42
56:CT:34:TYR:OH	56:CT:97:LYS:HA	2.20	0.42
61:CY:69:LYS:NZ	61:CY:69:LYS:HB2	2.34	0.42
62:CZ:122:TYR:HD1	62:CZ:131:PHE:CD2	2.38	0.42
62:CZ:18:TYR:CE2	62:CZ:73:LYS:HE3	2.55	0.42
81:A2:116:G:H21	81:A2:118:C:H3'	1.85	0.41
81:A2:154:U:O2	81:A2:154:U:C2'	2.67	0.41
81:A2:15:A:C2	82:A3:143:G:N2	2.89	0.41
81:A2:1857:C:O5'	81:A2:1857:C:H6	2.02	0.41
81:A2:2000:C:H3'	81:A2:2001:C:C6	2.55	0.41
81:A2:2280:U:H5''	81:A2:2280:U:O2	2.19	0.41
40:CC:188:ARG:NH2	81:A2:2312:C:H42	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2395:A:C5	81:A2:2396:C:C5	3.08	0.41
81:A2:256:C:O2	81:A2:256:C:C3'	2.68	0.41
81:A2:2862:A:H2'	81:A2:2863:U:C6	2.55	0.41
81:A2:331:C:O4'	81:A2:331:C:O2	2.38	0.41
81:A2:3705:A:H2'	81:A2:3706:A:C8	2.55	0.41
81:A2:376:A:HO2'	81:A2:378:G:H8	1.66	0.41
81:A2:3840:A:C2	81:A2:3854:G:C2	3.08	0.41
81:A2:3920:G:C2	81:A2:3921:A:C8	3.07	0.41
81:A2:3942:G:H2'	81:A2:3943:G:H8	1.85	0.41
81:A2:4007:G:H5'	81:A2:4018:A:O4'	2.20	0.41
81:A2:4032:C:N3	81:A2:4033:G:H1'	2.35	0.41
81:A2:426:A:H3'	81:A2:427:C:H5	1.85	0.41
81:A2:4455:G:H5''	81:A2:4455:G:H8	1.83	0.41
81:A2:4467:A:H5''	81:A2:4467:A:H8	1.83	0.41
81:A2:4659:U:H4'	81:A2:4660:A:H5''	2.02	0.41
81:A2:4651:A:C2	81:A2:4660:A:C4	3.07	0.41
81:A2:4825:G:H2'	81:A2:4825:G:N3	2.34	0.41
55:CS:169:THR:N	81:A2:4829:A:O4'	2.53	0.41
81:A2:663:G:C4	81:A2:664:C:C5	3.08	0.41
81:A2:680:U:H2'	81:A2:681:U:C6	2.55	0.41
81:A2:970:C:H2'	81:A2:970:C:O2	2.20	0.41
43:CF:55:LYS:HZ3	81:A2:973:U:H2'	1.84	0.41
82:A3:117:C:O2'	82:A3:118:C:H5'	2.20	0.41
82:A3:151:G:H3'	82:A3:152:U:H6	1.85	0.41
82:A3:28:C:H2'	82:A3:28:C:O2	2.20	0.41
82:A3:3:A:C8	82:A3:3:A:C3'	3.03	0.41
83:A4:24:C:P	83:A4:24:C:H6	2.43	0.41
4:B1:1120:U:C4'	4:B1:1120:U:C6	3.03	0.41
4:B1:1245:G:H2'	4:B1:1246:A:H8	1.84	0.41
4:B1:1458:G:N1	4:B1:1469:A:C6	2.88	0.41
4:B1:1643:U:C2	4:B1:1644:C:C5	3.08	0.41
4:B1:1829:G:N3	4:B1:1829:G:H2'	2.35	0.41
4:B1:1848:U:C6	4:B1:1848:U:H3'	2.55	0.41
4:B1:1839:U:H1'	4:B1:1863:A:N7	2.35	0.41
4:B1:382:C:C2'	4:B1:383:G:N2	2.83	0.41
4:B1:572:U:C2'	4:B1:573:U:N3	2.83	0.41
4:B1:616:A:N3	9:BE:12:VAL:HG21	61.27	0.41
4:B1:616:A:N1	4:B1:632:C:H1'	2.35	0.41
4:B1:746:C:O5'	4:B1:746:C:H2'	2.20	0.41
4:B1:813:A:C5	4:B1:814:U:C5	3.08	0.41
4:B1:950:C:O2	4:B1:950:C:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:986:G:H22	19:BO:135:ILE:HD12	1.85	0.41
4:B1:1350:U:O3'	5:BA:110:ASN:HB2	2.20	0.41
7:BC:196:ILE:HB	7:BC:223:TYR:HB2	2.01	0.41
9:BE:133:VAL:O	9:BE:134:LYS:HB2	2.20	0.41
9:BE:31:PRO:HG2	9:BE:38:LEU:HG	2.02	0.41
10:BF:36:GLN:O	10:BF:37:ASP:CB	2.68	0.41
10:BF:55:ARG:O	10:BF:57:ALA:N	2.53	0.41
4:B1:742:U:H6	12:BH:49:LYS:HZ2	1.66	0.41
12:BH:59:ALA:CB	12:BH:91:HIS:HB2	2.49	0.41
4:B1:527:C:OP1	14:BJ:124:HIS:HB2	2.20	0.41
18:BN:64:ARG:HB3	18:BN:64:ARG:HH11	1.85	0.41
4:B1:1543:U:C2	21:BQ:43:GLU:HG2	2.55	0.41
22:BR:29:HIS:O	22:BR:32:LYS:HG2	2.20	0.41
24:BT:20:ALA:O	24:BT:23:LYS:HB2	2.20	0.41
30:BZ:106:GLN:OE1	30:BZ:108:ILE:HD11	2.20	0.41
38:CA:9:ARG:HH22	81:A2:2321:U:H2'	64.59	0.41
40:CC:162:LYS:N	40:CC:166:GLU:OE2	2.52	0.41
43:CF:90:ALA:HB1	43:CF:142:TRP:HE3	1.84	0.41
44:CG:76:VAL:HG22	44:CG:238:GLY:CA	2.50	0.41
44:CG:63:LEU:HB3	50:CN:29:GLN:HE22	1.85	0.41
46:CI:94:PHE:HE2	81:A2:1763:U:HO2'	1.67	0.41
48:CL:111:GLN:HB3	81:A2:510:C:C5'	2.48	0.41
48:CL:34:ARG:HH21	82:A3:30:U:P	2.42	0.41
50:CN:184:ILE:HG23	50:CN:185:GLY:H	1.83	0.41
54:CR:81:ARG:HH21	54:CR:85:ALA:HA	1.85	0.41
55:CS:140:PRO:HA	55:CS:143:LYS:HB3	2.01	0.41
55:CS:16:CYS:HA	55:CS:59:GLY:HA2	2.02	0.41
55:CS:73:LEU:HG	55:CS:73:LEU:H	1.69	0.41
56:CT:4:THR:HG23	81:A2:4167:C:C6	2.54	0.41
56:CT:48:VAL:HG12	56:CT:50:LYS:H	1.85	0.41
81:A2:1068:C:H2'	81:A2:1069:G:C8	2.55	0.41
81:A2:1087:C:H5''	81:A2:1087:C:H6	1.85	0.41
81:A2:1463:G:H2'	81:A2:1464:C:C1'	2.51	0.41
81:A2:1532:A:H4'	81:A2:1533:A:OP2	2.20	0.41
81:A2:1671:C:C2	81:A2:1672:U:C5	3.09	0.41
81:A2:1732:G:C3'	81:A2:1733:U:H4'	2.49	0.41
81:A2:1792:U:H3'	81:A2:1793:C:C5	2.55	0.41
81:A2:1815:A:H8	81:A2:1815:A:H5''	1.84	0.41
81:A2:1830:U:O5'	81:A2:1830:U:H6	2.03	0.41
81:A2:1904:C:O5'	81:A2:1904:C:H6	2.03	0.41
81:A2:1942:A:O2'	81:A2:4655:C:C1'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CO:129:LEU:HD23	81:A2:2032:U:H3'	2.02	0.41
81:A2:213:C:O2	81:A2:213:C:C2'	2.68	0.41
81:A2:230:U:OP2	81:A2:230:U:H4'	2.20	0.41
81:A2:2588:A:C5'	81:A2:2665:G:H4'	2.50	0.41
81:A2:2628:C:O2'	81:A2:2629:G:C8	2.72	0.41
81:A2:2559:A:O2'	81:A2:2631:C:H1'	2.19	0.41
81:A2:2655:A:H2'	81:A2:2656:G:H8	1.83	0.41
81:A2:2839:G:C5	81:A2:3593:A:N7	2.88	0.41
81:A2:3713:G:H2'	81:A2:3714:U:H5'	2.01	0.41
81:A2:4162:U:H6	81:A2:4162:U:O5'	2.03	0.41
81:A2:4320:U:H2'	81:A2:4321:U:C6	2.55	0.41
81:A2:1658:A:H4'	81:A2:4354:A:N1	2.35	0.41
81:A2:4395:U:H3'	81:A2:4396:U:C5	2.55	0.41
81:A2:4428:U:C6	81:A2:4428:U:C3'	3.04	0.41
81:A2:716:U:H2'	81:A2:717:G:H5''	2.02	0.41
81:A2:736:G:N2	81:A2:737:G:H1'	2.35	0.41
81:A2:743:C:H2'	81:A2:744:G:C8	2.55	0.41
81:A2:74:G:C2'	81:A2:75:G:O5'	2.69	0.41
81:A2:736:G:N2	81:A2:902:G:H22	2.18	0.41
81:A2:923:G:H2'	81:A2:924:C:H5'	1.97	0.41
81:A2:941:G:O2'	81:A2:942:G:C8	2.68	0.41
81:A2:961:C:H3'	81:A2:962:G:N7	2.34	0.41
50:CN:195:ARG:CZ	81:A2:98:A:H4'	2.49	0.41
81:A2:333:G:C2	82:A3:33:G:N2	2.89	0.41
82:A3:58:G:C8	82:A3:58:G:OP2	2.69	0.41
83:A4:68:C:H3'	83:A4:69:U:H6	1.82	0.41
1:AV:34:G:H4'	4:B1:1248:U:C2	2.54	0.41
2:AW:58:A:H2	2:AW:60:U:C2	2.38	0.41
4:B1:1057:C:C6	4:B1:1059:G:OP2	2.73	0.41
4:B1:1204:A:C2	4:B1:1205:C:C2	3.08	0.41
4:B1:1236:G:H3'	4:B1:1237:C:H6	1.85	0.41
4:B1:1350:U:C6	4:B1:1350:U:O5'	2.73	0.41
4:B1:1420:G:OP2	4:B1:1420:G:C8	2.68	0.41
4:B1:145:G:N2	4:B1:146:G:N7	2.68	0.41
4:B1:1540:G:C8	4:B1:1540:G:H5'	2.51	0.41
4:B1:1649:U:C3'	4:B1:1649:U:H6	2.33	0.41
4:B1:1685:U:C6	4:B1:1686:G:C8	3.08	0.41
4:B1:168:C:H2'	4:B1:169:U:C6	2.54	0.41
4:B1:1690:U:N3	4:B1:1691:U:C5	2.89	0.41
4:B1:1698:C:C5'	4:B1:1699:A:C8	3.03	0.41
4:B1:1711:U:H2'	4:B1:1712:A:C8	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:313:A:OP2	4:B1:313:A:C4'	2.68	0.41
4:B1:467:G:H5''	4:B1:467:G:H8	1.85	0.41
4:B1:33:G:O6	4:B1:522:A:H2	2.03	0.41
4:B1:528:A:O5'	4:B1:528:A:C8	2.72	0.41
4:B1:71:G:C2	4:B1:72:C:C1'	3.03	0.41
4:B1:790:C:C6	4:B1:790:C:O5'	2.74	0.41
6:BB:34:LYS:HD2	6:BB:95:ASN:OD1	2.20	0.41
7:BC:136:HIS:HB3	7:BC:162:ILE:HD11	2.01	0.41
7:BC:60:TRP:CD1	7:BC:60:TRP:C	2.93	0.41
4:B1:846:G:H2'	9:BE:19:MET:SD	2.60	0.41
9:BE:203:GLY:O	9:BE:204:SER:CB	2.67	0.41
10:BF:77:MET:HB3	10:BF:89:THR:OG1	2.19	0.41
13:BI:145:ILE:HA	13:BI:148:LYS:CE	2.50	0.41
13:BI:84:ASN:HB3	13:BI:87:ASN:O	2.20	0.41
16:BL:16:ILE:CG1	16:BL:36:TYR:HD1	2.33	0.41
17:BM:92:CYS:SG	17:BM:94:ILE:HG23	2.60	0.41
18:BN:84:LEU:HD11	18:BN:88:LEU:HD23	2.00	0.41
20:BP:67:ALA:HB2	20:BP:73:PRO:HB3	2.02	0.41
5:BA:40:LYS:HZ3	22:BR:101:ASP:HA	1.83	0.41
24:BT:123:LEU:N	24:BT:123:LEU:HD23	2.35	0.41
7:BC:183:LYS:CE	27:BW:95:PRO:HA	2.50	0.41
38:CA:117:GLU:OE1	38:CA:120:PRO:HA	2.19	0.41
39:CB:54:THR:O	39:CB:76:VAL:HG22	2.20	0.41
40:CC:346:ASN:O	40:CC:350:ARG:N	2.46	0.41
48:CL:61:CYS:SG	48:CL:66:TYR:HB3	2.60	0.41
50:CN:115:VAL:HA	50:CN:134:LEU:HD23	2.02	0.41
52:CP:4:TYR:CE2	52:CP:16:LYS:HD3	2.55	0.41
54:CR:81:ARG:HG3	54:CR:88:ARG:HD2	2.02	0.41
55:CS:109:CYS:O	55:CS:112:ASP:HB3	2.20	0.41
55:CS:153:PRO:C	55:CS:155:PRO:HD3	2.41	0.41
62:CZ:9:LYS:CE	62:CZ:82:PRO:HB2	2.50	0.41
81:A2:1046:G:O5'	81:A2:1046:G:C8	2.73	0.41
81:A2:1068:C:H2'	81:A2:1069:G:H8	1.86	0.41
81:A2:1079:C:P	81:A2:1080:U:OP2	2.78	0.41
81:A2:1085:C:OP2	81:A2:1085:C:C4'	2.64	0.41
81:A2:113:A:N1	81:A2:269:G:C6	2.88	0.41
81:A2:1294:C:C4	81:A2:1295:C:N4	2.88	0.41
81:A2:1441:A:C4	81:A2:1442:C:C5	3.07	0.41
40:CC:77:PRO:HD3	81:A2:1501:G:OP1	2.20	0.41
81:A2:1535:C:H1'	81:A2:2646:C:OP1	2.20	0.41
81:A2:1649:G:N2	81:A2:1832:G:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1800:G:H2'	81:A2:1801:U:OP1	2.19	0.41
81:A2:1825:C:H3'	81:A2:1826:C:C6	2.54	0.41
81:A2:1922:A:C8	81:A2:1922:A:O5'	2.73	0.41
81:A2:215:A:C4'	81:A2:216:G:C5'	2.97	0.41
81:A2:2313:G:C6	81:A2:2314:C:C4	3.09	0.41
81:A2:2390:U:H2'	81:A2:2391:G:H8	1.84	0.41
81:A2:2426:A:H8	81:A2:2426:A:O5'	2.04	0.41
81:A2:2454:A:H2'	81:A2:2455:C:OP2	2.21	0.41
81:A2:2633:U:O5'	81:A2:2633:U:H6	2.03	0.41
81:A2:2839:G:C4	81:A2:3593:A:N7	2.87	0.41
81:A2:89:C:H5''	81:A2:285:G:H1'	2.03	0.41
81:A2:303:G:C3'	81:A2:303:G:C8	3.03	0.41
81:A2:367:A:C2	81:A2:368:A:C4	3.08	0.41
81:A2:3686:A:N6	81:A2:3705:A:C5	2.89	0.41
81:A2:3733:U:O5'	81:A2:3733:U:H6	2.02	0.41
81:A2:3769:A:H2	81:A2:4456:A:C1'	2.25	0.41
81:A2:3788:G:C2	81:A2:3789:G:N7	2.88	0.41
81:A2:3881:U:H6	81:A2:3881:U:O5'	2.04	0.41
81:A2:402:G:C1'	81:A2:403:G:OP2	2.67	0.41
81:A2:4233:A:H8	81:A2:4233:A:H3'	1.84	0.41
81:A2:4237:G:H2'	81:A2:4237:G:N3	2.36	0.41
81:A2:4248:C:O2	81:A2:4281:U:H5'	2.20	0.41
81:A2:4253:U:H2'	81:A2:4253:U:O2	2.20	0.41
56:CT:81:LYS:CG	81:A2:4264:A:C2	3.04	0.41
81:A2:4328:G:H2'	81:A2:4328:G:N3	2.34	0.41
81:A2:4298:G:C6	81:A2:4335:C:H1'	2.54	0.41
81:A2:457:A:C6	81:A2:676:G:N7	2.89	0.41
81:A2:4674:C:C2	81:A2:4675:C:C6	3.08	0.41
81:A2:4736:C:N4	81:A2:4811:G:H1	2.15	0.41
81:A2:4852:G:H2'	81:A2:4853:G:C8	2.51	0.41
81:A2:4867:G:C8	81:A2:4867:G:H5''	2.53	0.41
81:A2:959:C:OP1	81:A2:970:C:O2	2.38	0.41
82:A3:154:G:C2	82:A3:155:C:C2	3.08	0.41
2:AW:32:U:O4'	10:BF:136:ARG:NH2	2.46	0.41
4:B1:1161:U:C5	4:B1:1162:C:C5	3.08	0.41
4:B1:1221:G:H2'	4:B1:1222:G:H8	1.85	0.41
4:B1:1227:G:H2'	4:B1:1227:G:N3	2.35	0.41
4:B1:1258:A:C4	4:B1:1258:A:OP2	2.73	0.41
4:B1:1283:C:O3'	4:B1:1284:A:C8	2.74	0.41
4:B1:130:G:H3'	4:B1:131:C:C5'	2.46	0.41
4:B1:1325:G:OP2	4:B1:1325:G:H8	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1342:U:H4'	4:B1:1343:U:OP1	2.20	0.41
4:B1:1405:A:C8	4:B1:1406:G:C5'	3.03	0.41
4:B1:1442:U:C3'	4:B1:1443:C:H5''	2.48	0.41
4:B1:1547:C:H1'	4:B1:1670:C:H4'	2.02	0.41
4:B1:1647:A:H1'	4:B1:1649:U:O4'	2.19	0.41
4:B1:1206:G:C6	4:B1:1693:G:C2	3.08	0.41
4:B1:1868:U:O2'	4:B1:1869:A:P	2.79	0.41
4:B1:190:G:C2	4:B1:191:A:C8	3.08	0.41
4:B1:379:C:O2	4:B1:379:C:C2'	2.69	0.41
4:B1:586:G:C2	4:B1:587:A:C1'	3.03	0.41
4:B1:59:U:C5	4:B1:501:C:H2'	2.55	0.41
4:B1:594:A:C1'	4:B1:643:A:N6	2.62	0.41
4:B1:659:G:C2	4:B1:663:C:C4	3.08	0.41
4:B1:840:C:H4'	4:B1:841:G:O5'	2.19	0.41
4:B1:870:A:C6	4:B1:916:A:C6	3.08	0.41
4:B1:93:U:O4'	4:B1:93:U:O2	2.38	0.41
6:BB:65:ARG:HG2	19:BO:50:LYS:CD	2.49	0.41
9:BE:166:THR:OG1	9:BE:168:LYS:HG3	2.20	0.41
10:BF:21:GLY:O	10:BF:22:LYS:HB2	2.20	0.41
17:BM:61:TYR:HE1	17:BM:107:SER:HB3	1.85	0.41
20:BP:51:ARG:O	20:BP:51:ARG:HG2	2.21	0.41
21:BQ:38:PRO:HG2	24:BT:8:ASP:HA	2.01	0.41
25:BU:48:LEU:HD21	25:BU:97:ILE:HG21	2.02	0.41
26:BV:30:ALA:HB1	26:BV:60:ARG:HD3	2.01	0.41
27:BW:104:LEU:HD23	27:BW:125:ILE:HA	2.03	0.41
27:BW:36:ARG:O	27:BW:40:VAL:HG23	2.20	0.41
28:BX:39:ASN:HB2	28:BX:40:PRO:HD2	2.02	0.41
39:CB:105:VAL:HG22	39:CB:153:MET:HE1	2.03	0.41
39:CB:9:PRO:CD	58:CV:48:ARG:HH12	2.32	0.41
40:CC:252:TRP:CH2	40:CC:260:LEU:HD11	2.55	0.41
40:CC:55:SER:CB	81:A2:347:G:C5'	2.97	0.41
40:CC:93:GLY:O	40:CC:99:GLY:HA3	2.20	0.41
41:CD:262:LYS:HG3	41:CD:262:LYS:H	1.72	0.41
42:CE:160:LYS:CE	42:CE:183:ARG:HD3	2.51	0.41
47:CJ:110:GLN:O	47:CJ:111:GLU:CB	2.67	0.41
23:BS:12:ILE:CB	47:CJ:119:TYR:HB2	2.50	0.41
47:CJ:19:LYS:HB3	47:CJ:133:VAL:HG11	2.03	0.41
49:CM:125:ASN:HA	49:CM:128:LYS:HB3	2.02	0.41
49:CM:43:THR:OG1	49:CM:45:VAL:HG12	2.20	0.41
50:CN:157:LYS:HG3	50:CN:158:HIS:CD2	2.55	0.41
50:CN:3:ALA:O	50:CN:7:ILE:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:CO:185:VAL:O	51:CO:188:LYS:HB3	2.21	0.41
54:CR:12:SER:HB3	54:CR:19:LYS:HG2	2.01	0.41
55:CS:44:PHE:O	55:CS:48:VAL:HG23	2.20	0.41
55:CS:83:ARG:HH21	56:CT:155:PRO:C	2.23	0.41
57:CU:21:PHE:CD1	81:A2:3942:G:O3'	194.44	0.41
59:CW:42:SER:HB3	59:CW:44:ARG:NH1	2.35	0.41
61:CY:42:TYR:HB3	61:CY:124:LYS:HE3	2.03	0.41
81:A2:1160:C:C4	81:A2:1161:C:N3	2.89	0.41
81:A2:1179:G:H5'	81:A2:1179:G:C8	2.50	0.41
81:A2:1307:C:H1'	81:A2:4408:G:H21	1.85	0.41
81:A2:1341:G:H8	81:A2:1341:G:O5'	2.02	0.41
40:CC:48:ASN:HA	81:A2:1352:A:C5'	2.51	0.41
81:A2:1387:C:C5'	81:A2:1387:C:C6	2.99	0.41
81:A2:153:G:H3'	81:A2:154:U:C5	2.56	0.41
81:A2:1558:C:O2'	81:A2:1559:C:H5'	2.21	0.41
81:A2:1631:U:H6	81:A2:1631:U:O5'	2.04	0.41
81:A2:170:C:H5	81:A2:170:C:OP2	2.03	0.41
81:A2:174:G:C2	81:A2:253:C:N4	2.82	0.41
81:A2:1720:G:C1'	81:A2:1760:U:H5'	2.45	0.41
81:A2:1941:C:C2'	81:A2:1942:A:H5'	2.51	0.41
81:A2:2040:C:C3'	81:A2:2041:G:C5'	2.86	0.41
81:A2:2285:G:H4'	82:A3:19:C:H5'	2.03	0.41
81:A2:2307:G:OP2	81:A2:2307:G:C8	2.73	0.41
81:A2:2347:A:C1'	81:A2:2348:U:P	3.07	0.41
81:A2:2362:U:H2'	81:A2:2363:U:H6	1.85	0.41
81:A2:2444:U:OP1	81:A2:2445:U:C5	2.72	0.41
81:A2:2491:G:C2'	81:A2:2492:G:H5'	2.49	0.41
81:A2:2508:C:H2'	81:A2:2509:C:C5	2.55	0.41
81:A2:2524:G:C2'	81:A2:2524:G:N3	2.83	0.41
81:A2:2568:A:O2'	81:A2:2569:U:H5'	2.20	0.41
81:A2:2576:G:H3'	81:A2:2577:A:H8	1.85	0.41
81:A2:2657:G:O2'	81:A2:2658:G:H5'	2.20	0.41
81:A2:2746:U:H2'	81:A2:2746:U:O2	2.20	0.41
81:A2:273:C:O2'	81:A2:274:G:C8	2.68	0.41
81:A2:327:A:H4'	81:A2:328:U:OP1	2.21	0.41
81:A2:3573:A:H5'	81:A2:3574:C:OP1	2.21	0.41
81:A2:3702:A:H2'	81:A2:3703:U:N1	2.35	0.41
81:A2:3830:A:O2'	81:A2:3831:A:H5'	2.20	0.41
81:A2:3842:G:C6	81:A2:3843:G:C6	3.08	0.41
81:A2:3843:G:P	81:A2:3843:G:H8	2.44	0.41
81:A2:3926:U:H4'	81:A2:3927:G:OP1	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3930:G:H3'	81:A2:3931:A:C5'	2.51	0.41
81:A2:4128:G:C2	81:A2:4129:G:C1'	2.99	0.41
81:A2:4257:G:H2'	81:A2:4258:A:C8	2.51	0.41
81:A2:4269:G:O5'	81:A2:4269:G:C8	2.73	0.41
81:A2:4269:G:O5'	81:A2:4269:G:H8	2.04	0.41
81:A2:4343:U:O5'	81:A2:4343:U:H6	2.03	0.41
81:A2:4505:G:C2'	81:A2:4506:A:O5'	2.67	0.41
81:A2:4529:U:H3'	81:A2:4530:G:H5'	2.02	0.41
81:A2:4530:G:C2'	81:A2:4530:G:N3	2.74	0.41
45:CH:120:GLU:HG2	81:A2:4571:A:C2	2.55	0.41
81:A2:4690:G:HO2'	81:A2:4691:G:P	2.43	0.41
81:A2:4709:G:N2	81:A2:4905:U:C4	2.88	0.41
81:A2:4894:C:H6	81:A2:4894:C:H5''	1.85	0.41
39:CB:325:GLU:OE2	81:A2:5007:C:H4'	2.20	0.41
81:A2:887:C:O5'	81:A2:887:C:H6	2.02	0.41
81:A2:893:A:C6	81:A2:894:G:N7	2.88	0.41
82:A3:126:C:C5	82:A3:127:U:N3	2.88	0.41
1:AV:32:U:H5''	21:BQ:146:ARG:C	2.40	0.41
4:B1:1043:G:C4	4:B1:1044:G:C8	3.08	0.41
4:B1:1313:A:O5'	4:B1:1314:U:H5	2.02	0.41
4:B1:1403:C:C5	4:B1:1404:U:C1'	3.03	0.41
4:B1:85:A:O2'	4:B1:149:A:N3	2.52	0.41
4:B1:1672:U:H2'	4:B1:1673:U:H6	1.85	0.41
4:B1:1673:U:H3'	4:B1:1674:G:C8	2.54	0.41
4:B1:302:A:C3'	4:B1:303:C:H5''	2.49	0.41
4:B1:389:A:H2'	4:B1:390:C:C6	2.55	0.41
4:B1:442:C:H3'	4:B1:443:U:H5''	2.02	0.41
4:B1:743:U:O4'	4:B1:743:U:P	2.78	0.41
4:B1:753:C:OP2	4:B1:754:G:H8	2.04	0.41
4:B1:837:A:N3	4:B1:837:A:H5'	2.34	0.41
4:B1:958:G:C5'	4:B1:959:G:N7	2.84	0.41
8:BD:70:THR:HG23	8:BD:84:VAL:O	2.21	0.41
9:BE:136:ILE:HD11	9:BE:138:HIS:CE1	2.55	0.41
9:BE:149:TYR:CE2	11:BG:206:ALA:HA	2.55	0.41
9:BE:65:CYS:O	9:BE:78:VAL:HG12	2.21	0.41
11:BG:63:MET:HE2	11:BG:99:GLY:O	2.20	0.41
14:BJ:14:VAL:CG2	14:BJ:48:PHE:HD1	2.33	0.41
18:BN:33:VAL:O	18:BN:37:ILE:HG13	2.20	0.41
4:B1:924:G:H5''	18:BN:3:ARG:HD2	2.01	0.41
27:BW:104:LEU:O	27:BW:110:ILE:HG23	2.20	0.41
27:BW:39:THR:O	27:BW:43:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:250:TYR:HE2	27:BW:99:PHE:CZ	2.37	0.41
28:BX:41:PHE:HE1	28:BX:120:PHE:CD1	2.38	0.41
30:BZ:58:LEU:HD22	30:BZ:77:LEU:HD22	2.01	0.41
38:CA:85:GLY:HA3	81:A2:4088:G:C6	2.55	0.41
39:CB:228:TYR:HE1	81:A2:4934:A:N7	2.19	0.41
42:CE:140:LEU:HD12	42:CE:167:GLN:OE1	2.20	0.41
43:CF:37:PHE:O	43:CF:40:LYS:HG2	2.19	0.41
43:CF:80:ASN:HB2	56:CT:140:PHE:CZ	2.55	0.41
49:CM:39:ASP:HB2	49:CM:47:ARG:HG3	2.01	0.41
49:CM:23:LYS:CE	49:CM:43:THR:HB	2.50	0.41
51:CO:47:PHE:HA	51:CO:136:ALA:HB2	2.02	0.41
55:CS:99:ASP:OD2	55:CS:105:ALA:HA	2.21	0.41
55:CS:71:SER:HB3	55:CS:74:ARG:HB2	2.02	0.41
57:CU:39:PHE:CE1	57:CU:43:LEU:HD11	2.56	0.41
81:A2:1059:C:C2'	81:A2:1060:C:C5	3.02	0.41
81:A2:1239:G:O2'	81:A2:1240:G:H5'	2.20	0.41
81:A2:943:G:H5'	81:A2:1262:G:H5'	2.01	0.41
81:A2:951:C:N4	81:A2:1263:G:H1	2.13	0.41
81:A2:1409:C:H2'	81:A2:1410:C:C5	2.50	0.41
81:A2:1423:A:O2'	81:A2:1424:G:C8	2.63	0.41
81:A2:154:U:C6	81:A2:154:U:O5'	2.74	0.41
81:A2:1704:U:H2'	81:A2:1705:U:C6	2.54	0.41
81:A2:179:G:H5'	81:A2:179:G:H8	1.86	0.41
81:A2:1821:A:C8	81:A2:1821:A:O5'	2.62	0.41
81:A2:1890:G:C6	81:A2:2035:A:C2	3.08	0.41
81:A2:2010:U:C6	81:A2:2010:U:C3'	3.03	0.41
81:A2:2020:A:N7	81:A2:2021:A:N1	2.68	0.41
81:A2:2052:C:C6	81:A2:2052:C:H3'	2.56	0.41
81:A2:2284:A:H2'	81:A2:2285:G:O4'	2.21	0.41
81:A2:2355:G:N3	81:A2:2355:G:H2'	2.36	0.41
81:A2:2563:G:H1'	81:A2:2747:C:H4'	2.03	0.41
81:A2:2615:G:C2'	81:A2:2616:U:H5'	2.51	0.41
81:A2:2764:A:C2'	81:A2:2764:A:N3	2.81	0.41
13:BI:92:ARG:NH1	81:A2:2869:C:H1'	2.28	0.41
81:A2:3616:A:C2'	81:A2:3617:A:H5''	2.51	0.41
81:A2:3633:G:H2'	81:A2:3634:G:H8	1.85	0.41
81:A2:3727:U:C3'	81:A2:3727:U:C6	3.03	0.41
81:A2:3859:A:C2'	81:A2:3860:A:H5'	2.48	0.41
81:A2:3877:A:H5'	81:A2:3877:A:H8	1.84	0.41
81:A2:3923:A:O5'	81:A2:3923:A:C8	2.71	0.41
81:A2:3938:G:OP2	81:A2:3938:G:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3943:G:C4	81:A2:3944:C:C5	3.09	0.41
81:A2:4219:C:O5'	81:A2:4219:C:H6	2.03	0.41
81:A2:4251:G:H4'	81:A2:4252:A:C5'	2.44	0.41
81:A2:4409:A:C4'	81:A2:4410:U:OP1	2.68	0.41
81:A2:4735:G:C3'	81:A2:4736:C:C5'	2.99	0.41
81:A2:4838:C:N4	81:A2:4891:G:N2	2.68	0.41
81:A2:462:A:H8	81:A2:680:U:HO2'	1.59	0.41
81:A2:714:G:H2'	81:A2:715:C:H6	1.81	0.41
81:A2:929:U:C4	81:A2:930:C:C5	3.08	0.41
82:A3:114:G:H2'	82:A3:114:G:N3	2.35	0.41
83:A4:107:G:OP2	83:A4:107:G:C8	2.73	0.41
83:A4:90:A:C4	83:A4:91:C:H1'	2.54	0.41
1:AV:46:G:H8	1:AV:46:G:OP1	2.01	0.41
4:B1:1020:A:O2'	4:B1:1021:U:P	2.79	0.41
4:B1:1075:C:H2'	4:B1:1076:G:H8	1.75	0.41
4:B1:1180:C:C5	4:B1:1181:A:C5	3.09	0.41
4:B1:1239:U:H6	4:B1:1239:U:O5'	2.04	0.41
4:B1:1260:A:C5	4:B1:1619:A:N1	2.89	0.41
4:B1:1334:G:C2'	4:B1:1335:G:H5'	2.49	0.41
4:B1:1411:G:C2'	4:B1:1412:C:H5''	2.50	0.41
4:B1:1413:G:H2'	4:B1:1414:A:H5'	2.00	0.41
4:B1:1439:A:C2'	4:B1:1440:C:C6	3.00	0.41
4:B1:1614:A:O2'	4:B1:1615:U:H5'	2.21	0.41
4:B1:1630:A:C2'	4:B1:1631:U:C5'	2.92	0.41
4:B1:1764:G:C3'	4:B1:1764:G:N3	2.80	0.41
4:B1:1790:A:H2'	4:B1:1791:A:H5'	2.03	0.41
4:B1:1862:G:O2'	4:B1:1863:A:P	2.78	0.41
4:B1:1864:U:O2'	4:B1:1865:C:H4'	2.21	0.41
4:B1:211:G:C3'	4:B1:211:G:C8	3.04	0.41
4:B1:567:C:C3'	4:B1:568:C:C5'	2.99	0.41
4:B1:790:C:H6	4:B1:790:C:O5'	2.04	0.41
4:B1:969:U:OP1	4:B1:969:U:H4'	2.21	0.41
5:BA:205:ARG:O	5:BA:208:GLU:HB3	2.20	0.41
9:BE:100:ARG:NH2	9:BE:118:GLU:HB3	2.36	0.41
10:BF:60:ARG:NH1	10:BF:60:ARG:HG2	2.36	0.41
11:BG:145:PHE:O	11:BG:146:ASN:CB	2.68	0.41
12:BH:152:ARG:N	12:BH:152:ARG:HD3	2.35	0.41
4:B1:958:G:OP2	19:BO:39:ASP:HB3	2.21	0.41
20:BP:86:LEU:HB2	20:BP:87:PRO:HD2	2.03	0.41
20:BP:110:GLU:OE1	23:BS:113:ARG:HG3	2.20	0.41
23:BS:86:ARG:NH1	23:BS:98:VAL:HG11	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:102:ARG:O	24:BT:102:ARG:HD3	2.20	0.41
24:BT:19:ALA:O	24:BT:23:LYS:HG3	2.21	0.41
29:BY:114:MET:HG3	29:BY:122:LYS:HG3	2.02	0.41
38:CA:149:LYS:NZ	38:CA:149:LYS:HB2	2.35	0.41
38:CA:230:PRO:HG3	81:A2:4142:G:O2'	2.20	0.41
38:CA:24:LYS:HE3	38:CA:49:ILE:HD13	2.02	0.41
39:CB:123:HIS:NE2	39:CB:124:LYS:HG2	2.36	0.41
40:CC:150:LEU:O	40:CC:151:PRO:C	2.56	0.41
40:CC:177:TRP:O	40:CC:180:ILE:HB	2.21	0.41
41:CD:23:ARG:CG	81:A2:4240:A:C2	3.04	0.41
46:CI:165:ILE:O	46:CI:165:ILE:HG13	2.21	0.41
46:CI:35:ASP:C	46:CI:36:LEU:HD12	2.41	0.41
50:CN:59:TYR:CE2	50:CN:135:ILE:HD12	2.56	0.41
50:CN:144:ARG:O	50:CN:145:ASN:CB	2.67	0.41
52:CP:109:VAL:O	52:CP:112:LEU:HD22	2.21	0.41
53:CQ:159:PRO:HB3	53:CQ:188:ASN:O	2.21	0.41
53:CQ:43:PHE:CE1	53:CQ:47:VAL:HG21	2.55	0.41
57:CU:40:GLU:OE1	57:CU:65:ARG:HB2	2.21	0.41
57:CU:78:PHE:CZ	57:CU:83:LEU:HG	2.55	0.41
59:CW:50:ASN:HA	59:CW:55:TYR:CD1	2.55	0.41
62:CZ:105:ALA:HB1	81:A2:2531:U:O4'	2.21	0.41
81:A2:1279:G:O5'	81:A2:1279:G:C8	2.74	0.41
81:A2:1317:A:C2	81:A2:1638:U:O4'	2.74	0.41
81:A2:1446:C:H2'	81:A2:1447:C:C6	2.56	0.41
81:A2:1483:G:C8	81:A2:1483:G:OP2	2.74	0.41
81:A2:1497:A:H4'	81:A2:1498:C:OP1	2.19	0.41
81:A2:1552:G:C6	81:A2:1553:G:C2	3.08	0.41
81:A2:1673:C:C1'	81:A2:1821:A:C2	2.98	0.41
81:A2:1835:C:C2	81:A2:1836:A:C8	3.08	0.41
81:A2:1876:C:H2'	81:A2:2255:A:H4'	2.03	0.41
81:A2:216:G:C4'	81:A2:217:C:OP1	2.59	0.41
81:A2:2262:G:O2'	81:A2:2263:G:H5'	2.21	0.41
81:A2:2316:G:H8	81:A2:2316:G:OP2	2.02	0.41
81:A2:2486:C:H6	81:A2:2486:C:C5'	2.19	0.41
81:A2:2509:C:C2	81:A2:2510:C:C5	3.09	0.41
81:A2:2616:U:C2	81:A2:2671:G:C2	3.08	0.41
81:A2:3604:A:C8	81:A2:3604:A:H3'	2.56	0.41
81:A2:3738:C:C4	81:A2:3739:U:C4	3.09	0.41
81:A2:3753:A:C5	81:A2:3755:U:H5	2.36	0.41
81:A2:3830:A:H2'	81:A2:3831:A:C8	2.56	0.41
81:A2:3895:C:O2'	81:A2:3896:U:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:405:C:OP1	81:A2:405:C:H4'	2.20	0.41
81:A2:409:A:N1	82:A3:17:A:C1'	2.84	0.41
41:CD:23:ARG:HG2	81:A2:4240:A:C2	2.56	0.41
81:A2:4167:C:O4'	81:A2:4295:C:H1'	2.20	0.41
81:A2:438:C:OP2	81:A2:438:C:C5	2.73	0.41
81:A2:4411:G:C8	81:A2:4411:G:O5'	2.64	0.41
81:A2:450:C:H2'	81:A2:451:C:C6	2.54	0.41
81:A2:4529:U:C3'	81:A2:4530:G:H5'	2.51	0.41
81:A2:4542:C:C5	81:A2:4543:C:C4	3.08	0.41
81:A2:4649:U:H2'	81:A2:4650:G:C5'	2.51	0.41
42:CE:277:LEU:O	81:A2:4712:U:C2	2.73	0.41
81:A2:4825:G:C4'	81:A2:4826:C:OP2	2.67	0.41
81:A2:4953:G:H2'	81:A2:4954:G:C8	2.56	0.41
81:A2:642:C:C6	81:A2:643:G:O4'	2.73	0.41
82:A3:25:G:C8	82:A3:25:G:O5'	2.73	0.41
83:A4:85:G:N2	83:A4:93:G:C4	2.88	0.41
2:AW:70:G:H2'	2:AW:71:G:H8	1.84	0.41
2:AW:75:C:H6	2:AW:75:C:P	2.44	0.41
3:AX:60:U:C4'	3:AX:61:U:OP2	2.69	0.41
4:B1:1036:A:C2'	4:B1:1037:G:H5'	2.51	0.41
4:B1:1057:C:O4'	4:B1:1057:C:O2	2.38	0.41
4:B1:1430:C:O2	4:B1:1430:C:H2'	2.19	0.41
4:B1:1469:A:C5	4:B1:1470:C:C4	3.09	0.41
4:B1:1528:G:OP2	21:BQ:142:GLN:HG2	2.21	0.41
4:B1:1621:U:C2'	4:B1:1622:U:H5'	2.35	0.41
4:B1:342:C:H6	4:B1:342:C:H5''	1.85	0.41
4:B1:381:C:C6	4:B1:381:C:O5'	2.66	0.41
4:B1:59:U:H5	4:B1:501:C:H2'	1.86	0.41
4:B1:616:A:H1'	9:BE:12:VAL:HG23	63.53	0.41
4:B1:78:C:O2	4:B1:78:C:C2'	2.69	0.41
4:B1:795:A:C2	4:B1:796:G:C8	3.09	0.41
4:B1:928:G:H2'	4:B1:928:G:O5'	2.21	0.41
5:BA:147:LEU:HD13	5:BA:174:MET:HE3	2.02	0.41
10:BF:40:ALA:CB	10:BF:67:PRO:HA	2.50	0.41
16:BL:22:ARG:HD2	16:BL:27:GLU:HB3	2.03	0.41
16:BL:61:PRO:HD3	16:BL:141:ASN:HD21	1.83	0.41
8:BD:205:PRO:HA	22:BR:42:PRO:HG2	2.03	0.41
24:BT:126:GLN:HA	24:BT:129:ARG:HG2	2.02	0.41
25:BU:35:VAL:HG21	25:BU:106:ILE:HD13	2.02	0.41
28:BX:132:ALA:HA	28:BX:138:LYS:HG3	2.03	0.41
4:B1:569:A:O2'	29:BY:36:PRO:HA	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BZ:71:ALA:O	30:BZ:75:GLU:HG2	2.20	0.41
38:CA:177:LYS:O	81:A2:2716:C:N4	2.54	0.41
38:CA:185:ALA:O	38:CA:196:TRP:NE1	2.52	0.41
39:CB:234:ARG:HG3	39:CB:272:LYS:HD3	2.03	0.41
41:CD:22:ARG:CD	41:CD:27:LYS:HB2	2.51	0.41
43:CF:66:ARG:HG2	43:CF:69:ILE:HD11	2.03	0.41
46:CI:86:HIS:ND1	46:CI:173:PHE:HE2	2.17	0.41
49:CM:130:LEU:O	49:CM:134:ALA:N	2.43	0.41
49:CM:9:VAL:HA	49:CM:27:ILE:O	2.21	0.41
51:CO:7:LEU:HD23	51:CO:31:ARG:HG3	2.02	0.41
53:CQ:75:ARG:NH1	53:CQ:137:VAL:HG22	2.35	0.41
56:CT:40:VAL:HB	56:CT:96:ILE:CG2	2.51	0.41
62:CZ:10:VAL:HB	62:CZ:83:THR:CG2	2.51	0.41
81:A2:1149:G:H2'	81:A2:1150:G:H8	1.86	0.41
81:A2:1481:G:H3'	81:A2:1481:G:H8	1.86	0.41
81:A2:14:C:O5'	81:A2:14:C:H2'	2.20	0.41
81:A2:1648:A:H8	81:A2:1648:A:C5'	2.32	0.41
81:A2:1808:G:H2'	81:A2:1809:G:H5'	2.03	0.41
81:A2:1900:G:HO2'	81:A2:1901:A:P	2.43	0.41
81:A2:194:A:P	81:A2:194:A:H8	2.44	0.41
81:A2:240:A:H2'	81:A2:241:G:H8	1.72	0.41
81:A2:2479:G:H1'	81:A2:2481:C:H5	1.85	0.41
81:A2:2484:A:O2'	81:A2:2485:U:H5'	2.20	0.41
81:A2:2524:G:N2	81:A2:2526:G:C1'	2.77	0.41
81:A2:2741:A:N3	81:A2:2741:A:C2'	2.83	0.41
81:A2:2742:A:C2'	81:A2:2743:A:N7	2.75	0.41
81:A2:2824:G:H3'	81:A2:2825:G:H8	1.86	0.41
81:A2:2840:G:H3'	81:A2:2841:A:C8	2.52	0.41
81:A2:284:G:O2'	81:A2:288:U:C6	2.74	0.41
81:A2:3611:A:H3'	81:A2:3612:A:H2'	2.02	0.41
81:A2:3826:G:C6	81:A2:3827:C:C5	3.08	0.41
81:A2:3863:A:H2'	81:A2:3864:G:O4'	2.20	0.41
81:A2:3886:A:H2'	81:A2:3887:G:H5'	2.03	0.41
81:A2:4225:U:H5'	81:A2:4227:G:O6	2.20	0.41
81:A2:4258:A:O2'	81:A2:4259:U:H5'	2.20	0.41
81:A2:4296:A:C3'	81:A2:4296:A:C8	3.04	0.41
81:A2:4332:U:OP2	81:A2:4332:U:H6	2.03	0.41
81:A2:463:C:O2	81:A2:463:C:H2'	2.20	0.41
42:CE:183:ARG:HB2	81:A2:4892:C:N3	2.36	0.41
81:A2:711:A:H2'	81:A2:712:C:O4'	2.20	0.41
81:A2:717:G:H2'	81:A2:718:G:H5'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:949:G:C3'	81:A2:950:A:H4'	2.40	0.41
81:A2:98:A:H8	81:A2:98:A:O5'	2.02	0.41
82:A3:120:G:N2	82:A3:131:G:C8	2.88	0.41
83:A4:90:A:H2'	83:A4:91:C:O4'	2.21	0.41
3:AX:43:U:H3	10:BF:132:GLY:HA3	1.54	0.41
4:B1:1024:A:H2'	4:B1:1025:U:C6	2.56	0.41
4:B1:1089:G:C2'	4:B1:1090:C:H5'	2.50	0.41
4:B1:1204:A:C6	4:B1:1205:C:C4	3.09	0.41
4:B1:124:U:H2'	4:B1:125:C:OP2	2.21	0.41
4:B1:1320:G:H2'	4:B1:1321:G:O4'	2.21	0.41
4:B1:1426:U:O2	4:B1:1426:U:H2'	2.21	0.41
4:B1:1454:A:H61	4:B1:1467:C:N4	2.19	0.41
4:B1:1530:U:O2'	4:B1:1531:A:H8	2.03	0.41
4:B1:153:G:N1	4:B1:165:G:N2	2.65	0.41
4:B1:1568:C:N4	4:B1:1569:A:C6	2.89	0.41
4:B1:164:A:C3'	4:B1:165:G:H8	2.33	0.41
4:B1:1745:A:C2	4:B1:1746:U:C5	3.09	0.41
4:B1:378:U:O5'	4:B1:378:U:H6	2.03	0.41
4:B1:454:U:H5''	11:BG:76:LEU:CD2	2.50	0.41
4:B1:499:G:N2	4:B1:502:C:C5	2.75	0.41
4:B1:527:C:H1'	14:BJ:125:HIS:ND1	2.36	0.41
4:B1:562:U:C6	4:B1:562:U:H3'	2.55	0.41
4:B1:679:A:C3'	4:B1:680:G:H5'	2.51	0.41
4:B1:795:A:C2	4:B1:796:G:C1'	3.04	0.41
4:B1:830:A:C6	4:B1:845:G:C2	3.09	0.41
4:B1:109:U:HO2'	4:B1:855:G:H1'	1.84	0.41
4:B1:925:G:N3	4:B1:925:G:H2'	2.36	0.41
4:B1:979:C:OP2	4:B1:979:C:H6	2.04	0.41
4:B1:9:U:O2	4:B1:12:U:C5	2.73	0.41
5:BA:205:ARG:HA	5:BA:205:ARG:HD2	1.88	0.41
6:BB:131:ASP:H	6:BB:180:ASP:CG	2.24	0.41
8:BD:106:ARG:HH22	8:BD:173:ARG:HG3	1.84	0.41
4:B1:66:G:N2	11:BG:158:VAL:HG21	2.35	0.41
11:BG:2:LYS:HE2	11:BG:15:LEU:HD11	2.02	0.41
12:BH:61:ILE:HG22	12:BH:93:VAL:CG2	2.50	0.41
12:BH:66:VAL:N	12:BH:67:PRO:CD	2.83	0.41
16:BL:59:LYS:HB2	16:BL:112:HIS:CE1	2.56	0.41
18:BN:54:LEU:HB3	18:BN:60:VAL:HB	2.03	0.41
19:BO:61:LYS:HD3	19:BO:76:LEU:HB3	2.02	0.41
24:BT:27:LYS:HD3	24:BT:110:LEU:CD1	2.49	0.41
38:CA:186:TYR:HD1	38:CA:196:TRP:CH2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:102:PHE:HZ	39:CB:156:TYR:O	2.02	0.41
39:CB:140:GLU:O	39:CB:140:GLU:HG3	2.20	0.41
39:CB:20:LYS:HB2	81:A2:4528:A:P	2.61	0.41
39:CB:315:ASN:HA	39:CB:316:PRO:HD3	1.83	0.41
40:CC:180:ILE:CD1	40:CC:207:PRO:HG2	2.50	0.41
41:CD:58:ARG:HA	41:CD:93:THR:CG2	2.51	0.41
42:CE:172:LEU:CB	42:CE:188:ARG:HB2	2.50	0.41
43:CF:110:GLN:HG2	53:CQ:6:ARG:HE	1.84	0.41
45:CH:69:THR:HG1	81:A2:4660:A:H2	1.68	0.41
47:CJ:82:ILE:O	47:CJ:85:LYS:HB3	2.21	0.41
48:CL:84:ALA:HA	48:CL:118:LYS:NZ	2.36	0.41
51:CO:54:TYR:O	51:CO:57:PHE:HB3	2.20	0.41
52:CP:36:ILE:CG2	52:CP:114:ILE:HD12	2.51	0.41
56:CT:81:LYS:CG	81:A2:4264:A:H2	2.33	0.41
61:CY:106:ILE:HG21	61:CY:109:LEU:HD23	2.02	0.41
81:A2:1079:C:H6	81:A2:1079:C:OP2	2.04	0.41
81:A2:116:G:N2	81:A2:118:C:H3'	2.36	0.41
81:A2:1179:G:C2	81:A2:1180:G:C5	3.09	0.41
81:A2:1423:A:C2'	81:A2:1424:G:C8	3.03	0.41
81:A2:1503:A:H5'	81:A2:1504:A:OP2	2.21	0.41
81:A2:1755:A:N3	81:A2:1755:A:H2'	2.36	0.41
81:A2:1768:C:O2	81:A2:1768:C:H2'	2.21	0.41
81:A2:1892:C:H5''	81:A2:1893:C:H3'	2.02	0.41
81:A2:2032:U:O2'	81:A2:2034:G:C8	2.64	0.41
81:A2:241:G:N2	81:A2:242:C:C4	2.88	0.41
81:A2:2498:G:O4'	81:A2:2617:G:H1'	2.20	0.41
81:A2:2550:A:N3	81:A2:2550:A:H2'	2.36	0.41
54:CR:124:TYR:OH	81:A2:2642:U:H3'	2.21	0.41
81:A2:2586:G:O3'	81:A2:2663:G:N2	2.54	0.41
81:A2:2849:C:O5'	81:A2:2849:C:C6	2.74	0.41
81:A2:3580:A:H1'	81:A2:4971:A:O2'	2.20	0.41
81:A2:1580:A:N7	81:A2:3612:A:N3	2.68	0.41
81:A2:379:A:OP2	81:A2:379:A:C8	2.73	0.41
81:A2:375:A:N6	81:A2:398:A:H61	2.19	0.41
81:A2:4175:C:H3'	81:A2:4175:C:OP1	2.21	0.41
81:A2:4198:G:C4	81:A2:4199:A:C8	3.09	0.41
81:A2:423:U:C6	81:A2:423:U:C3'	3.03	0.41
81:A2:4542:C:C5	81:A2:4543:C:N4	2.88	0.41
81:A2:4578:G:O5'	81:A2:4578:G:H8	2.03	0.41
81:A2:461:A:H5'	81:A2:462:A:OP1	2.21	0.41
81:A2:4627:C:H6	81:A2:4627:C:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4678:G:H8	81:A2:4678:G:OP2	2.04	0.41
81:A2:4714:G:C8	81:A2:4714:G:O5'	2.73	0.41
81:A2:693:G:C4	81:A2:694:C:C5	3.08	0.41
81:A2:956:C:C2'	81:A2:957:G:C5'	2.98	0.41
4:B1:1130:G:H4'	18:BN:9:LYS:O	2.20	0.41
4:B1:1250:A:H4'	4:B1:1251:A:OP2	2.20	0.41
4:B1:1403:C:O5'	4:B1:1403:C:H6	2.04	0.41
4:B1:1427:C:C5	4:B1:1428:G:C8	3.09	0.41
4:B1:1466:G:C6	4:B1:1467:C:N4	2.89	0.41
4:B1:1621:U:C3'	4:B1:1621:U:O2	2.68	0.41
4:B1:1731:A:C6	4:B1:1732:G:C6	3.09	0.41
4:B1:193:C:H5'	4:B1:193:C:C6	2.41	0.41
4:B1:219:U:H6	4:B1:219:U:C5'	2.33	0.41
4:B1:300:U:C2'	4:B1:301:A:C8	2.98	0.41
4:B1:343:A:C8	4:B1:343:A:O5'	2.71	0.41
4:B1:498:C:H2'	4:B1:499:G:C8	2.56	0.41
4:B1:559:G:H3'	4:B1:560:A:C4'	2.49	0.41
4:B1:583:A:C2'	4:B1:584:A:C8	3.04	0.41
4:B1:679:A:H3'	4:B1:680:G:H8	1.86	0.41
4:B1:690:G:C2	4:B1:691:G:C5	3.09	0.41
4:B1:750:C:H6	4:B1:750:C:C5'	2.34	0.41
4:B1:750:C:H6	4:B1:750:C:O5'	2.03	0.41
4:B1:912:C:C6	4:B1:912:C:OP2	2.73	0.41
4:B1:93:U:C5	4:B1:94:G:H1'	2.56	0.41
4:B1:955:A:N6	4:B1:971:G:N2	2.69	0.41
6:BB:135:LEU:HD23	6:BB:135:LEU:H	1.85	0.41
6:BB:93:GLY:O	6:BB:94:LYS:HB2	2.20	0.41
10:BF:47:LYS:HE3	10:BF:67:PRO:HG2	2.02	0.41
11:BG:127:THR:HG23	11:BG:129:VAL:HG23	2.01	0.41
4:B1:301:A:O2'	13:BI:72:CYS:HA	2.21	0.41
15:BK:43:LEU:HD23	15:BK:44:HIS:H	1.85	0.41
15:BK:59:LYS:O	15:BK:69:TRP:HA	2.21	0.41
18:BN:19:ARG:NH2	18:BN:23:PRO:HA	2.36	0.41
19:BO:62:VAL:HG12	19:BO:64:ALA:H	1.85	0.41
21:BQ:60:LYS:HB2	21:BQ:60:LYS:HZ2	1.86	0.41
23:BS:86:ARG:HH22	23:BS:107:LEU:HD21	1.84	0.41
24:BT:72:VAL:HG13	24:BT:100:ALA:HB1	2.02	0.41
25:BU:22:ILE:HD11	25:BU:91:LEU:CD1	2.50	0.41
4:B1:1492:U:C4'	25:BU:70:CYS:SG	3.09	0.41
4:B1:840:C:H1'	29:BY:14:THR:OG1	2.21	0.41
38:CA:138:SER:HB2	38:CA:147:ARG:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:106:LYS:HD2	40:CC:108:TRP:CZ2	2.56	0.41
40:CC:330:PRO:CB	43:CF:51:TYR:OH	2.69	0.41
42:CE:224:LYS:N	42:CE:225:PRO:HD2	2.36	0.41
42:CE:264:ILE:CG2	42:CE:267:LEU:HB2	2.51	0.41
43:CF:237:GLU:O	43:CF:240:ILE:HG22	2.21	0.41
43:CF:36:LYS:HD2	81:A2:954:G:H5''	2.03	0.41
44:CG:220:GLU:HA	44:CG:223:ARG:HE	1.86	0.41
44:CG:64:GLN:HG3	82:A3:151:G:H5'	2.02	0.41
49:CM:100:ARG:O	49:CM:104:MET:HG3	2.21	0.41
54:CR:119:MET:HE1	54:CR:145:LEU:O	2.20	0.41
56:CT:33:ILE:O	56:CT:33:ILE:HG13	2.21	0.41
81:A2:1154:G:H22	81:A2:1167:G:N2	2.19	0.41
81:A2:1438:A:OP2	81:A2:1438:A:C8	2.73	0.41
81:A2:1652:U:H4'	81:A2:4262:U:C2	2.56	0.41
81:A2:2328:C:H2'	81:A2:2329:U:C6	2.56	0.41
81:A2:2554:C:C5'	81:A2:2554:C:H6	2.31	0.41
81:A2:2570:C:O5'	81:A2:2570:C:H6	2.04	0.41
81:A2:2587:G:C5'	81:A2:2663:G:N2	2.83	0.41
81:A2:2497:C:O2	81:A2:2617:G:N2	2.54	0.41
81:A2:2493:G:H5'	81:A2:2723:A:H2	1.86	0.41
81:A2:28:C:H3'	81:A2:28:C:C6	2.56	0.41
40:CC:193:LYS:HE2	81:A2:343:G:N7	2.36	0.41
1:AV:12:U:H5''	81:A2:3725:A:O4'	2.20	0.41
81:A2:383:U:H6	81:A2:383:U:O5'	2.04	0.41
81:A2:3903:G:H2'	81:A2:3904:C:C6	2.55	0.41
81:A2:3942:G:O5'	81:A2:3942:G:H8	2.04	0.41
81:A2:402:G:H5''	81:A2:405:C:H1'	2.02	0.41
81:A2:4052:G:H3'	81:A2:4053:A:H4'	2.03	0.41
81:A2:4151:G:C5'	81:A2:4151:G:H8	2.34	0.41
81:A2:4184:A:H2'	81:A2:4185:G:O4'	2.21	0.41
81:A2:4294:U:C3'	81:A2:4294:U:C6	3.04	0.41
81:A2:4397:U:H5'	81:A2:4397:U:C6	2.56	0.41
81:A2:4459:G:H2'	81:A2:4460:U:O4'	2.21	0.41
81:A2:4529:U:C2'	81:A2:4530:G:H5'	2.51	0.41
81:A2:4580:U:C3'	81:A2:4580:U:C6	3.03	0.41
81:A2:4725:C:H5''	81:A2:4725:C:C6	2.56	0.41
81:A2:4943:U:C2'	81:A2:4944:U:OP2	2.68	0.41
81:A2:719:G:N2	81:A2:720:A:C4	2.88	0.41
83:A4:11:A:H2'	83:A4:66:G:N2	2.36	0.41
83:A4:27:G:H2'	83:A4:27:G:N3	2.36	0.41
1:AV:69:G:H5''	1:AV:69:G:H8	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1035:A:OP2	4:B1:1035:A:H8	2.02	0.41
4:B1:1344:A:N6	4:B1:1386:A:H5'	2.36	0.41
4:B1:1413:G:H21	4:B1:1414:A:H1'	1.86	0.41
4:B1:1447:G:H1'	25:BU:55:ARG:HH21	1.85	0.41
4:B1:1484:A:C2'	4:B1:1485:U:H5'	2.51	0.41
4:B1:1599:U:O2'	4:B1:1600:G:H5''	2.21	0.41
4:B1:15:U:O5'	4:B1:15:U:C6	2.72	0.41
4:B1:1659:U:H6	4:B1:1660:C:O2	2.03	0.41
4:B1:190:G:C6	4:B1:191:A:N7	2.89	0.41
4:B1:25:A:C2	4:B1:649:U:O2	2.74	0.41
4:B1:394:G:H5'	16:BL:81:LYS:NZ	2.36	0.41
4:B1:495:U:H6	4:B1:495:U:OP2	2.03	0.41
4:B1:559:G:H5'	4:B1:560:A:OP1	2.21	0.41
4:B1:569:A:C4	4:B1:570:C:C6	3.09	0.41
4:B1:655:A:N7	4:B1:657:U:C5	2.89	0.41
4:B1:847:A:H5'	4:B1:848:U:OP2	2.21	0.41
4:B1:85:A:OP1	29:BY:119:GLY:N	2.52	0.41
4:B1:924:G:H2'	4:B1:925:G:O4'	2.21	0.41
5:BA:120:ARG:HA	5:BA:120:ARG:HE	1.86	0.41
5:BA:108:PHE:HB2	5:BA:136:GLU:HB3	2.03	0.41
7:BC:171:GLY:O	7:BC:172:ASN:CB	2.69	0.41
7:BC:59:GLU:HG2	7:BC:60:TRP:N	2.35	0.41
8:BD:158:ILE:O	8:BD:164:VAL:HG13	2.21	0.41
10:BF:33:ILE:O	10:BF:34:SER:CB	2.68	0.41
4:B1:67:C:N4	11:BG:162:LEU:O	2.54	0.41
14:BJ:28:GLU:O	14:BJ:31:LEU:HB3	2.20	0.41
24:BT:137:GLN:O	24:BT:140:ALA:HB3	2.21	0.41
27:BW:75:ILE:HG22	27:BW:77:PRO:HD2	2.03	0.41
30:BZ:97:ILE:HD12	30:BZ:109:TYR:CD1	2.55	0.41
38:CA:90:CYS:CB	38:CA:101:VAL:HG13	2.50	0.41
38:CA:245:ARG:HA	81:A2:3626:U:H5'	2.03	0.41
41:CD:236:MET:SD	41:CD:240:TYR:HE2	2.44	0.41
42:CE:170:SER:OG	42:CE:172:LEU:CG	2.69	0.41
42:CE:160:LYS:HZ1	42:CE:183:ARG:HD3	1.83	0.41
45:CH:130:PRO:O	45:CH:153:LEU:HD13	2.20	0.41
46:CI:145:LYS:HE2	46:CI:167:ILE:HD13	2.03	0.41
48:CL:110:LEU:O	48:CL:114:VAL:HG23	2.20	0.41
53:CQ:17:GLU:CG	53:CQ:18:PRO:HD2	2.51	0.41
54:CR:5:ARG:C	54:CR:5:ARG:HD3	2.41	0.41
55:CS:70:LYS:O	81:A2:722:G:H4'	2.21	0.41
55:CS:84:TYR:HE1	55:CS:93:MET:SD	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CT:17:ARG:HA	56:CT:18:PRO:HD2	1.82	0.41
62:CZ:89:ILE:HD11	62:CZ:93:LYS:HE2	2.02	0.41
81:A2:1142:G:H2'	81:A2:1143:G:C8	2.56	0.41
81:A2:1161:C:C4'	81:A2:1161:C:C6	3.04	0.41
81:A2:119:G:H4'	81:A2:120:A:C1'	2.51	0.41
81:A2:1282:U:H3'	81:A2:1284:C:C6	2.53	0.41
81:A2:1348:A:C4'	81:A2:1349:C:H5'	2.50	0.41
81:A2:1401:G:C6	81:A2:1445:G:O4'	2.73	0.41
81:A2:1475:G:H5''	81:A2:1476:A:P	2.61	0.41
81:A2:1720:G:N3	81:A2:1720:G:H3'	2.36	0.41
81:A2:1743:G:C3'	81:A2:1744:A:H5'	2.50	0.41
81:A2:16:G:H2'	81:A2:17:A:O4'	2.21	0.41
81:A2:1898:C:H3'	81:A2:1900:G:OP2	2.21	0.41
81:A2:1907:A:N3	81:A2:1907:A:C2'	2.84	0.41
81:A2:2247:C:H2'	81:A2:2248:C:H6	1.86	0.41
81:A2:2331:G:O2'	81:A2:2332:G:H5'	2.21	0.41
81:A2:2436:G:H5''	81:A2:2437:A:OP2	2.21	0.41
81:A2:270:A:OP2	81:A2:270:A:C8	2.74	0.41
81:A2:2842:U:C2'	81:A2:2843:C:H5'	2.51	0.41
81:A2:3834:A:H2'	81:A2:3835:C:C5	2.50	0.41
81:A2:4032:C:C3'	81:A2:4033:G:C4'	2.98	0.41
81:A2:4043:U:C4'	81:A2:4044:G:OP1	2.68	0.41
81:A2:4050:G:O6	81:A2:4053:A:H2	2.04	0.41
81:A2:4057:G:C2	81:A2:4121:G:N2	2.89	0.41
81:A2:4120:C:C6	81:A2:4121:G:N7	2.89	0.41
81:A2:423:U:H3'	81:A2:423:U:C6	2.54	0.41
81:A2:4262:U:H3'	81:A2:4262:U:C6	2.54	0.41
81:A2:4310:C:H2'	81:A2:4311:U:C6	2.55	0.41
81:A2:444:G:H4'	81:A2:445:U:H5'	2.03	0.41
39:CB:257:TRP:NE1	81:A2:4478:A:N7	2.67	0.41
81:A2:4688:A:H4'	81:A2:4689:C:OP2	2.21	0.41
81:A2:4818:G:C4	81:A2:4819:U:C5	3.09	0.41
81:A2:4824:U:OP1	81:A2:4825:G:C5	2.74	0.41
81:A2:4853:G:H2'	81:A2:4854:G:O4'	2.21	0.41
81:A2:4984:C:H3'	81:A2:4984:C:C6	2.56	0.41
81:A2:676:G:H5'	81:A2:677:C:OP2	2.20	0.41
55:CS:68:PHE:HB3	81:A2:721:A:C4	2.56	0.41
81:A2:928:A:C1'	81:A2:929:U:P	3.09	0.41
81:A2:944:A:C2'	81:A2:944:A:N3	2.84	0.41
81:A2:21:G:C1'	82:A3:103:A:H1'	2.51	0.41
82:A3:45:C:H2'	82:A3:46:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:112:ASP:HB3	82:A3:84:A:H61	1.85	0.41
83:A4:12:U:C4'	83:A4:108:G:N2	2.84	0.41
83:A4:69:U:C6	83:A4:69:U:C3'	3.03	0.41
83:A4:70:G:C2	83:A4:106:G:C2	3.09	0.41
2:AW:31:A:C3'	2:AW:32:U:H5'	2.51	0.41
4:B1:1102:G:C2'	4:B1:1103:C:H5'	2.51	0.41
4:B1:1139:C:H42	4:B1:1148:A:H62	1.69	0.41
4:B1:1142:G:P	4:B1:1142:G:H8	2.44	0.41
4:B1:1208:A:C2	4:B1:1209:A:C5	3.09	0.41
4:B1:1448:A:H2'	4:B1:1449:G:C8	2.56	0.41
4:B1:156:G:H3'	4:B1:157:U:C5	2.55	0.41
4:B1:158:A:H8	4:B1:158:A:O5'	2.04	0.41
4:B1:1639:G:C4'	4:B1:1639:G:OP1	2.68	0.41
4:B1:1673:U:P	21:BQ:76:GLY:HA3	2.61	0.41
4:B1:1686:G:H3'	4:B1:1687:C:C6	2.53	0.41
4:B1:1725:U:H2'	4:B1:1726:G:H8	1.83	0.41
4:B1:1743:G:C2'	4:B1:1744:G:H5'	2.51	0.41
4:B1:172:U:P	4:B1:314:U:H2'	2.61	0.41
4:B1:337:C:H3'	4:B1:337:C:O2	2.21	0.41
4:B1:343:A:O2'	4:B1:344:U:P	2.79	0.41
4:B1:439:A:O2'	4:B1:440:G:H5'	2.21	0.41
4:B1:545:A:C3'	4:B1:545:A:C8	3.03	0.41
4:B1:555:A:O5'	4:B1:555:A:C8	2.74	0.41
4:B1:593:C:H4'	4:B1:594:A:OP2	2.21	0.41
4:B1:694:G:H3'	4:B1:695:C:C5	2.56	0.41
4:B1:745:C:C4'	4:B1:746:C:C5	3.02	0.41
4:B1:870:A:C5	4:B1:916:A:C6	3.09	0.41
5:BA:13:GLU:O	5:BA:17:LYS:HG3	2.21	0.41
6:BB:115:LYS:H	6:BB:118:GLN:HE21	1.68	0.41
8:BD:102:ALA:HB2	8:BD:186:VAL:HG21	2.02	0.41
10:BF:121:PRO:O	10:BF:141:VAL:HG21	2.21	0.41
24:BT:65:TYR:CE1	24:BT:128:GLN:OE1	2.73	0.41
29:BY:20:ARG:HD2	29:BY:20:ARG:C	2.41	0.41
38:CA:34:PHE:CB	81:A2:4055:G:H2'	2.51	0.41
39:CB:36:ASP:HA	39:CB:37:PRO:HD3	2.45	0.41
40:CC:101:MET:HE3	81:A2:2320:G:N7	2.36	0.41
40:CC:84:THR:HG22	40:CC:86:ARG:H	1.86	0.41
41:CD:11:ALA:HA	41:CD:14:LYS:HD2	2.03	0.41
41:CD:197:LYS:HD2	41:CD:202:GLN:CG	2.51	0.41
43:CF:71:MET:HA	43:CF:74:MET:HG2	2.03	0.41
44:CG:80:ILE:HG22	44:CG:81:ASN:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:45:THR:HG23	52:CP:92:LEU:CD1	2.49	0.41
56:CT:42:ILE:HG12	56:CT:96:ILE:HD12	2.02	0.41
60:CX:81:LEU:HD22	60:CX:135:LYS:HE2	2.02	0.41
62:CZ:25:ILE:HG23	62:CZ:41:ALA:HB1	2.02	0.41
81:A2:1257:G:H21	81:A2:1258:C:H41	1.69	0.41
81:A2:1282:U:H1'	81:A2:1283:A:P	2.60	0.41
81:A2:1393:C:H2'	81:A2:1394:C:C6	2.55	0.41
81:A2:1533:A:H3'	81:A2:1534:G:H8	1.85	0.41
81:A2:1599:U:O2	81:A2:1599:U:H2'	2.20	0.41
81:A2:1756:C:H6	81:A2:1756:C:O5'	2.05	0.41
81:A2:1770:U:C6	81:A2:1771:U:C5	3.08	0.41
81:A2:1770:U:H5''	81:A2:1771:U:H5	1.85	0.41
81:A2:1814:G:N3	81:A2:1814:G:C2'	2.83	0.41
53:CQ:11:ARG:HH21	81:A2:1820:G:H8	1.67	0.41
81:A2:1825:C:O2	81:A2:1825:C:H2'	2.21	0.41
81:A2:2014:C:C6	81:A2:2014:C:C5'	3.03	0.41
81:A2:2281:U:C6	81:A2:2281:U:OP1	2.73	0.41
81:A2:261:U:H2'	81:A2:262:C:H6	1.85	0.41
81:A2:312:U:C5	81:A2:313:C:C5	3.09	0.41
81:A2:329:A:C2	81:A2:330:C:C6	3.09	0.41
81:A2:3651:A:H1'	81:A2:3653:G:C5	2.56	0.41
81:A2:3713:G:C2'	81:A2:3714:U:H5'	2.50	0.41
81:A2:3763:C:H2'	81:A2:3764:A:O4'	2.21	0.41
81:A2:4144:G:H2'	81:A2:4145:G:O5'	2.21	0.41
81:A2:4177:G:H3'	81:A2:4178:U:H6	1.86	0.41
81:A2:4251:G:OP2	81:A2:4253:U:H1'	2.21	0.41
81:A2:4381:C:H2'	81:A2:4382:A:H5'	2.03	0.41
81:A2:4576:A:H8	81:A2:4576:A:O5'	2.04	0.41
81:A2:4706:C:C2'	81:A2:4707:U:H5'	2.51	0.41
81:A2:4740:U:C6	81:A2:4740:U:H3'	2.56	0.41
81:A2:4738:U:OP2	81:A2:4740:U:H5	2.03	0.41
81:A2:4854:G:O2'	81:A2:4856:G:H5''	2.21	0.41
81:A2:4943:U:C6	81:A2:4943:U:H3'	2.56	0.41
81:A2:741:C:C2	81:A2:742:U:C5	3.08	0.41
81:A2:949:G:N7	81:A2:950:A:C1'	2.78	0.41
83:A4:101:A:H2'	83:A4:102:U:C6	2.56	0.41
83:A4:103:A:N3	83:A4:103:A:H2'	2.36	0.41
83:A4:85:G:H2'	83:A4:85:G:N3	2.36	0.41
4:B1:1013:U:O5'	4:B1:1013:U:C6	2.74	0.41
4:B1:1214:A:C2	4:B1:1217:A:C5	3.08	0.41
4:B1:1282:A:H2'	4:B1:1283:C:C5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1284:A:H4'	4:B1:1287:A:C6	2.56	0.41
4:B1:1325:G:OP2	4:B1:1325:G:C8	2.74	0.41
4:B1:132:U:OP2	4:B1:133:C:C5	2.73	0.41
4:B1:1428:G:H3'	4:B1:1429:G:H8	1.86	0.41
4:B1:1519:U:H5''	4:B1:1519:U:H6	1.80	0.41
4:B1:157:U:O5'	4:B1:157:U:C6	2.73	0.41
4:B1:1666:C:H5'	4:B1:1667:U:OP2	2.21	0.41
4:B1:168:C:C4	4:B1:169:U:O4	2.74	0.41
4:B1:1721:U:OP1	4:B1:1721:U:H4'	2.21	0.41
4:B1:1839:U:H6	4:B1:1839:U:H5''	1.86	0.41
4:B1:18:C:C6	4:B1:18:C:O5'	2.74	0.41
4:B1:31:U:H2'	4:B1:32:U:O5'	2.21	0.41
4:B1:496:C:OP1	9:BE:28:ALA:HA	2.21	0.41
4:B1:571:U:O3'	29:BY:59:GLY:CA	2.69	0.41
4:B1:586:G:N3	4:B1:586:G:H2'	2.35	0.41
4:B1:754:G:C5	4:B1:755:C:C4	3.10	0.41
4:B1:98:C:H4'	4:B1:99:A:OP1	2.21	0.41
6:BB:223:PHE:HE1	6:BB:225:LEU:HB2	1.86	0.41
7:BC:253:PRO:O	7:BC:256:TRP:HB2	2.21	0.41
12:BH:31:GLU:HA	12:BH:36:LEU:HB2	2.03	0.41
12:BH:62:ILE:HG22	12:BH:93:VAL:O	2.21	0.41
19:BO:150:ARG:O	19:BO:151:LEU:HB3	2.21	0.41
19:BO:38:ASN:O	19:BO:68:GLU:HG3	2.21	0.41
4:B1:1527:C:H5''	21:BQ:142:GLN:HB2	2.03	0.41
26:BV:46:PHE:CD1	26:BV:46:PHE:N	2.89	0.41
27:BW:99:PHE:O	27:BW:101:PHE:CD2	2.74	0.41
38:CA:233:ARG:O	38:CA:233:ARG:HG3	2.21	0.41
39:CB:232:THR:OG1	39:CB:249:ARG:HB2	2.21	0.41
39:CB:305:THR:H	39:CB:308:ASP:HB3	1.86	0.41
39:CB:57:VAL:CG1	39:CB:367:PHE:HB3	2.51	0.41
40:CC:144:ILE:HG23	40:CC:147:VAL:HB	2.03	0.41
42:CE:264:ILE:HG21	42:CE:267:LEU:HB2	2.02	0.41
45:CH:105:ILE:HG13	45:CH:105:ILE:O	2.21	0.41
45:CH:162:GLN:HG3	45:CH:163:GLN:N	2.34	0.41
45:CH:54:ARG:NH1	45:CH:56:ARG:HD3	2.36	0.41
46:CI:46:PHE:HB3	46:CI:140:THR:N	2.36	0.41
46:CI:140:THR:HG21	46:CI:144:ASN:HD22	1.86	0.41
48:CL:134:PRO:HA	48:CL:135:LYS:HE3	2.02	0.41
48:CL:57:PRO:HG3	48:CL:76:PHE:HA	2.02	0.41
49:CM:24:LEU:H	49:CM:43:THR:HG21	1.85	0.41
51:CO:161:LYS:O	51:CO:164:ALA:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CS:151:LYS:O	55:CS:152:PHE:HB3	2.21	0.41
81:A2:1081:C:H5''	81:A2:1081:C:C6	2.57	0.40
81:A2:1199:G:H2'	81:A2:1200:G:N7	2.34	0.40
81:A2:1231:C:O5'	81:A2:1231:C:H6	2.04	0.40
42:CE:228:GLN:O	81:A2:1274:A:N7	2.53	0.40
81:A2:1289:C:O5'	81:A2:1289:C:H6	2.04	0.40
81:A2:1374:G:H2'	81:A2:1375:U:H6	1.81	0.40
81:A2:1459:C:C3'	81:A2:1459:C:C6	3.04	0.40
81:A2:147:U:H5''	81:A2:149:U:O4'	2.21	0.40
81:A2:1606:G:H8	81:A2:1606:G:OP2	2.04	0.40
81:A2:165:C:C2	81:A2:166:G:N7	2.89	0.40
81:A2:1706:U:H2'	81:A2:1707:U:C6	2.56	0.40
56:CT:129:LYS:HA	81:A2:1815:A:P	2.61	0.40
81:A2:1821:A:C4	81:A2:1822:G:C8	3.08	0.40
81:A2:2040:C:O2	81:A2:2040:C:H2'	2.20	0.40
81:A2:2311:C:C6	81:A2:2311:C:C4'	3.04	0.40
81:A2:2350:C:C2'	81:A2:2351:A:H5'	2.51	0.40
81:A2:2550:A:OP1	81:A2:2736:G:H1'	2.20	0.40
81:A2:2629:G:H2'	81:A2:2630:C:C4'	2.50	0.40
81:A2:2788:G:N2	81:A2:2790:A:H3'	2.36	0.40
81:A2:2793:G:O5'	81:A2:2793:G:H8	2.03	0.40
81:A2:2828:G:H2'	81:A2:2829:U:O4'	2.21	0.40
48:CL:31:ARG:HD2	81:A2:328:U:H2'	2.02	0.40
81:A2:373:G:N1	81:A2:375:A:H3'	2.37	0.40
81:A2:4067:G:H8	81:A2:4067:G:O5'	2.04	0.40
81:A2:4130:A:O5'	81:A2:4130:A:C8	2.74	0.40
81:A2:4166:C:C2	81:A2:4167:C:C5	3.10	0.40
81:A2:4177:G:H3'	81:A2:4178:U:C6	2.56	0.40
81:A2:4189:U:C5'	81:A2:4189:U:H6	2.28	0.40
40:CC:75:ARG:HH22	81:A2:4351:G:P	2.44	0.40
81:A2:4380:U:OP2	81:A2:4381:C:C5	2.74	0.40
81:A2:4502:U:C3'	81:A2:4503:G:H5'	2.51	0.40
81:A2:4595:A:O2'	81:A2:4597:G:H8	2.04	0.40
81:A2:460:C:O5'	81:A2:679:U:H4'	2.21	0.40
81:A2:4616:A:C4'	81:A2:4617:U:O5'	2.66	0.40
39:CB:374:PHE:O	81:A2:4624:A:O3'	2.40	0.40
81:A2:4720:G:H3'	81:A2:4720:G:H8	1.86	0.40
55:CS:175:PHE:CD1	81:A2:4824:U:N3	2.89	0.40
42:CE:172:LEU:CD2	81:A2:4897:C:H5''	2.51	0.40
42:CE:158:ARG:HE	81:A2:4903:C:C1'	2.34	0.40
81:A2:656:G:C2'	81:A2:657:C:C5'	2.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:724:C:C3'	81:A2:725:C:C5'	2.99	0.40
81:A2:726:C:H2'	81:A2:727:G:O4'	2.21	0.40
81:A2:87:A:O5'	81:A2:87:A:H8	2.04	0.40
81:A2:895:U:H6	81:A2:895:U:H3'	1.86	0.40
82:A3:104:A:C4'	82:A3:105:C:C5	3.00	0.40
83:A4:82:G:H3'	83:A4:82:G:C8	2.57	0.40
1:AV:29:G:C8	1:AV:29:G:H3'	2.56	0.40
2:AW:9:A:H5''	2:AW:10:G:OP2	2.20	0.40
3:AX:58:U:H6	3:AX:58:U:O5'	2.04	0.40
4:B1:1305:C:H2'	4:B1:1306:U:C6	2.56	0.40
4:B1:1312:G:C8	17:BM:37:GLU:CG	3.04	0.40
4:B1:1350:U:H6	4:B1:1350:U:O5'	2.04	0.40
4:B1:1367:U:H6	4:B1:1367:U:H3'	1.87	0.40
4:B1:1397:U:C3'	4:B1:1397:U:H6	2.30	0.40
4:B1:1491:G:C4	4:B1:1492:U:C5	3.09	0.40
4:B1:1500:G:H4'	8:BD:178:ARG:O	2.20	0.40
4:B1:1580:A:H3'	4:B1:1581:C:H5'	2.03	0.40
4:B1:1662:U:H6	4:B1:1662:U:H3'	1.87	0.40
4:B1:176:U:C4	4:B1:177:G:C2	3.09	0.40
4:B1:1787:G:C2'	4:B1:1788:A:H8	2.27	0.40
4:B1:183:G:O2'	4:B1:184:G:H5'	2.21	0.40
4:B1:227:U:H1'	4:B1:228:C:P	2.61	0.40
4:B1:24:C:O2'	4:B1:415:A:H4'	2.21	0.40
4:B1:343:A:H8	4:B1:343:A:P	2.43	0.40
4:B1:393:U:H4'	4:B1:394:G:OP1	2.21	0.40
4:B1:618:C:C1'	4:B1:632:C:C5'	2.91	0.40
4:B1:654:A:C5	4:B1:655:A:N1	2.90	0.40
4:B1:693:A:P	4:B1:694:G:H5''	2.61	0.40
4:B1:740:C:C4	4:B1:741:C:N4	2.88	0.40
4:B1:970:G:C4	81:A2:3680:A:C5'	3.02	0.40
5:BA:26:GLY:HA2	5:BA:149:ASN:HD21	1.86	0.40
5:BA:9:GLN:HB2	26:BV:83:PHE:CG	2.56	0.40
9:BE:169:ILE:HG13	9:BE:169:ILE:O	2.21	0.40
10:BF:199:VAL:HG13	10:BF:203:ASN:ND2	2.35	0.40
12:BH:102:PRO:CG	12:BH:105:THR:HG21	2.51	0.40
12:BH:109:ARG:HD3	12:BH:110:THR:H	1.85	0.40
13:BI:182:CYS:O	13:BI:184:ARG:HG3	2.22	0.40
14:BJ:130:ILE:HD11	14:BJ:145:PRO:HB3	2.03	0.40
19:BO:147:ARG:HH12	19:BO:150:ARG:HH11	1.69	0.40
19:BO:30:VAL:CG2	19:BO:47:LEU:HA	2.51	0.40
20:BP:34:MET:HA	20:BP:37:TYR:CD1	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:BP:34:MET:O	20:BP:37:TYR:HB2	2.20	0.40
23:BS:52:LEU:N	23:BS:52:LEU:HD12	2.36	0.40
16:BL:99:TYR:OH	28:BX:17:ARG:HB2	2.20	0.40
39:CB:128:LYS:HD2	81:A2:4922:A:OP2	2.21	0.40
40:CC:102:PHE:CB	81:A2:1317:A:H5'	2.51	0.40
40:CC:346:ASN:HB2	81:A2:713:G:C4'	2.31	0.40
40:CC:55:SER:O	40:CC:56:GLU:CB	2.69	0.40
40:CC:96:CYS:HA	81:A2:2329:U:H1'	2.03	0.40
42:CE:160:LYS:HA	81:A2:4837:U:C5	2.56	0.40
45:CH:118:LEU:HD21	45:CH:177:ASP:HB2	2.03	0.40
49:CM:132:LYS:HE3	49:CM:136:LEU:HD11	2.03	0.40
51:CO:196:LEU:C	51:CO:198:THR:H	2.25	0.40
52:CP:19:GLY:HA2	81:A2:3661:A:C2	93.51	0.40
53:CQ:63:LEU:HD11	53:CQ:109:ALA:HA	2.03	0.40
41:CD:41:LYS:CG	56:CT:67:VAL:HG13	2.51	0.40
56:CT:81:LYS:HG3	81:A2:4264:A:H2	1.85	0.40
56:CT:81:LYS:CG	56:CT:82:GLY:H	2.32	0.40
61:CY:1:MET:HG2	81:A2:1347:C:H5	1.85	0.40
62:CZ:133:LYS:HB3	62:CZ:133:LYS:NZ	2.36	0.40
81:A2:1067:A:O2'	81:A2:1068:C:H5'	2.20	0.40
81:A2:1076:C:H6	81:A2:1076:C:O5'	2.05	0.40
81:A2:1209:C:C3'	81:A2:1209:C:O2	2.69	0.40
43:CF:48:LYS:HE3	81:A2:1221:C:OP2	2.20	0.40
81:A2:1302:A:C8	81:A2:1306:A:N6	2.89	0.40
81:A2:1397:C:O5'	81:A2:1397:C:H6	2.04	0.40
81:A2:1428:G:H2'	81:A2:1429:C:C6	2.53	0.40
81:A2:1401:G:C5	81:A2:1445:G:H1'	2.57	0.40
81:A2:1465:C:N3	81:A2:1466:G:C8	2.89	0.40
81:A2:1552:G:C6	81:A2:1553:G:N2	2.90	0.40
81:A2:1616:A:H5''	81:A2:1618:U:C4	2.57	0.40
81:A2:1785:G:C5'	81:A2:1785:G:H8	2.34	0.40
81:A2:1938:A:H8	81:A2:1938:A:OP1	2.04	0.40
81:A2:1942:A:O2'	81:A2:4655:C:H1'	2.21	0.40
81:A2:210:G:H2'	81:A2:211:G:O4'	2.21	0.40
81:A2:205:A:O4'	81:A2:229:G:C2	2.74	0.40
81:A2:237:G:C2	81:A2:238:G:H1'	2.56	0.40
81:A2:2522:U:H2'	81:A2:2523:G:H8	1.86	0.40
81:A2:2579:G:H8	81:A2:2579:G:O5'	2.05	0.40
81:A2:2596:G:H2'	81:A2:2597:G:O5'	2.21	0.40
81:A2:2686:C:C2'	81:A2:2687:C:O5'	2.70	0.40
81:A2:2831:G:C2'	81:A2:2832:G:H5'	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3577:A:H5''	81:A2:3577:A:H8	1.86	0.40
81:A2:3733:U:C2'	81:A2:3734:G:N7	2.80	0.40
81:A2:3767:U:O2	81:A2:3769:A:H2'	2.21	0.40
81:A2:3791:U:H2'	81:A2:3792:G:H5'	2.03	0.40
81:A2:380:A:H2'	81:A2:381:C:OP2	2.21	0.40
81:A2:3866:G:N1	81:A2:4519:A:C2	2.89	0.40
81:A2:3897:A:H5''	81:A2:3898:G:OP2	2.22	0.40
81:A2:4044:G:N2	81:A2:4130:A:N6	2.69	0.40
81:A2:4120:C:H2'	81:A2:4121:G:C8	2.56	0.40
81:A2:4200:G:H3'	81:A2:4201:C:O4'	2.21	0.40
81:A2:4409:A:C1'	81:A2:4410:U:OP1	2.70	0.40
81:A2:4526:U:H2'	81:A2:4527:G:O5'	2.20	0.40
81:A2:4840:U:O5'	81:A2:4840:U:H6	2.05	0.40
81:A2:4862:G:N1	81:A2:4868:G:N2	2.63	0.40
82:A3:97:A:C2'	82:A3:98:C:H5'	2.51	0.40
1:AV:66:U:H2'	1:AV:67:C:O5'	2.21	0.40
2:AW:4:C:H1'	81:A2:3684:U:OP1	2.20	0.40
3:AX:44:U:C2'	3:AX:45:U:OP1	2.69	0.40
4:B1:1096:G:HO2'	4:B1:1097:G:P	2.45	0.40
4:B1:1013:U:O2'	4:B1:1104:G:H1'	2.21	0.40
4:B1:1289:U:H5	4:B1:1311:C:O2	2.04	0.40
4:B1:1411:G:C2	4:B1:1412:C:H5	2.39	0.40
4:B1:1489:A:C3'	4:B1:1490:G:H5'	2.52	0.40
4:B1:1562:C:P	24:BT:71:GLY:HA3	2.61	0.40
4:B1:212:C:OP2	4:B1:212:C:C5	2.74	0.40
4:B1:422:U:C5'	4:B1:422:U:C6	3.04	0.40
4:B1:479:C:H2'	4:B1:480:G:H5'	2.03	0.40
4:B1:50:A:OP2	4:B1:472:C:N4	2.54	0.40
4:B1:600:G:H2'	4:B1:601:G:C8	2.55	0.40
4:B1:741:C:HO2'	4:B1:742:U:P	2.44	0.40
4:B1:741:C:N4	4:B1:744:G:H1	2.19	0.40
4:B1:872:A:N3	4:B1:872:A:H5''	2.35	0.40
6:BB:140:VAL:HB	6:BB:213:ARG:NH1	2.36	0.40
6:BB:169:MET:O	6:BB:172:MET:HB2	2.21	0.40
8:BD:210:ILE:HG12	22:BR:39:ALA:HB2	2.01	0.40
9:BE:159:THR:HG23	9:BE:226:PHE:CE1	2.56	0.40
4:B1:67:C:H5	11:BG:162:LEU:HG	1.86	0.40
4:B1:745:C:C6	12:BH:107:LYS:HD3	2.56	0.40
12:BH:69:LEU:HD13	12:BH:69:LEU:C	2.42	0.40
15:BK:83:LEU:O	15:BK:84:HIS:HB3	2.21	0.40
25:BU:101:ILE:HG22	25:BU:101:ILE:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:48:LEU:HD21	25:BU:97:ILE:CG2	2.52	0.40
39:CB:118:PHE:CE2	39:CB:130:PHE:CE1	3.10	0.40
40:CC:259:LYS:O	40:CC:263:LEU:HG	2.21	0.40
41:CD:191:ASN:HD22	41:CD:194:VAL:CG2	2.34	0.40
41:CD:33:ARG:HG2	56:CT:27:LEU:HD11	2.03	0.40
46:CI:46:PHE:CB	46:CI:139:ARG:HB3	2.51	0.40
47:CJ:109:ILE:HD11	47:CJ:130:PHE:HE2	1.87	0.40
47:CJ:96:LYS:HD3	47:CJ:177:GLY:CA	2.51	0.40
49:CM:89:THR:HG23	49:CM:92:ALA:H	1.86	0.40
51:CO:164:ALA:HA	81:A2:4718:C:O3'	2.22	0.40
54:CR:35:ALA:HB1	54:CR:41:ILE:HD13	2.04	0.40
54:CR:80:LYS:HE2	81:A2:2865:G:H4'	2.02	0.40
56:CT:2:THR:HB	81:A2:4163:A:O5'	2.21	0.40
81:A2:1076:C:C6	81:A2:1076:C:O5'	2.75	0.40
81:A2:1276:G:OP2	81:A2:1277:U:C1'	2.69	0.40
81:A2:1377:A:C1'	81:A2:1447:C:C4'	2.99	0.40
81:A2:1367:A:N6	81:A2:1377:A:N7	2.70	0.40
81:A2:1463:G:O5'	81:A2:1463:G:C8	2.75	0.40
81:A2:13:U:C4'	81:A2:14:C:OP2	2.68	0.40
81:A2:1517:U:C6	81:A2:1517:U:O5'	2.71	0.40
81:A2:1566:G:C8	81:A2:1566:G:O5'	2.75	0.40
81:A2:1787:C:O2'	81:A2:1788:C:H5'	2.21	0.40
81:A2:1815:A:C8	81:A2:1815:A:H5''	2.57	0.40
81:A2:220:G:H4'	81:A2:221:U:OP1	2.20	0.40
81:A2:2283:A:H2	81:A2:2284:A:C1'	2.34	0.40
81:A2:2284:A:C8	81:A2:2285:G:C8	3.10	0.40
81:A2:2325:G:OP1	81:A2:2325:G:H4'	2.21	0.40
81:A2:10:A:C1'	81:A2:2448:G:O6	2.70	0.40
81:A2:2478:C:C3'	81:A2:2478:C:C6	3.04	0.40
81:A2:2691:G:H2'	81:A2:2692:G:O4'	2.22	0.40
81:A2:2723:A:C8	81:A2:2723:A:H3'	2.56	0.40
81:A2:2798:U:H2'	81:A2:2799:G:O5'	2.22	0.40
81:A2:2838:C:C4	81:A2:2839:G:C2	3.09	0.40
81:A2:340:A:H4'	81:A2:341:C:OP1	2.22	0.40
81:A2:347:G:N1	81:A2:351:A:OP2	2.55	0.40
38:CA:152:SER:CB	81:A2:3630:G:N7	2.85	0.40
81:A2:3885:G:C2	81:A2:3886:A:C4	3.09	0.40
81:A2:3888:C:H6	81:A2:3888:C:C5'	2.33	0.40
2:AW:56:C:H5	81:A2:4014:A:N6	2.12	0.40
81:A2:425:A:OP1	81:A2:3836:A:H4'	2.21	0.40
81:A2:426:A:O2'	81:A2:427:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4308:A:H3'	81:A2:4309:C:O4'	2.21	0.40
81:A2:4377:C:H3'	81:A2:4378:G:C8	2.51	0.40
81:A2:4406:U:O2	81:A2:4406:U:C2'	2.70	0.40
81:A2:4527:G:H8	81:A2:4527:G:C5'	2.35	0.40
81:A2:4535:G:N2	81:A2:4689:C:O2'	2.54	0.40
81:A2:4595:A:H2'	81:A2:4595:A:N3	2.35	0.40
81:A2:4707:U:H2'	81:A2:4708:C:C6	2.56	0.40
81:A2:4725:C:C5'	81:A2:4725:C:C6	3.05	0.40
40:CC:291:ARG:NH2	81:A2:476:C:H42	2.20	0.40
81:A2:4924:C:H2'	81:A2:4924:C:O2	2.21	0.40
81:A2:4980:C:C2'	81:A2:4983:G:H5'	2.45	0.40
81:A2:501:U:H2'	81:A2:502:C:C6	2.56	0.40
81:A2:642:C:OP2	81:A2:643:G:H5''	2.21	0.40
81:A2:88:A:C2	81:A2:89:C:C6	3.09	0.40
81:A2:956:C:O2'	81:A2:1218:A:O4'	2.38	0.40
81:A2:95:G:C8	81:A2:95:G:H5''	2.56	0.40
81:A2:971:C:C3'	81:A2:971:C:C6	3.04	0.40
82:A3:103:A:C8	82:A3:104:A:C8	3.08	0.40
82:A3:107:C:C3'	82:A3:107:C:C6	3.05	0.40
82:A3:142:U:O5'	82:A3:142:U:H6	2.04	0.40
82:A3:156:U:C3'	82:A3:156:U:C6	3.04	0.40
83:A4:34:C:C2'	83:A4:34:C:O2	2.66	0.40
83:A4:63:C:C1'	83:A4:64:G:C5'	2.94	0.40
1:AV:72:C:C3'	1:AV:73:A:H5'	2.52	0.40
4:B1:1108:G:H1'	4:B1:1109:C:OP1	2.22	0.40
4:B1:1177:U:C2	4:B1:1178:U:C5	3.10	0.40
4:B1:1348:G:H22	4:B1:1381:G:H22	1.62	0.40
4:B1:1609:C:H6	4:B1:1609:C:C5'	2.33	0.40
4:B1:1636:G:H1'	10:BF:164:ARG:NH2	2.34	0.40
4:B1:343:A:H4'	9:BE:128:LYS:HZ3	1.82	0.40
4:B1:358:C:H2'	4:B1:359:U:O5'	2.21	0.40
4:B1:402:C:O5'	4:B1:402:C:C6	2.74	0.40
4:B1:437:G:C5	4:B1:438:G:C5	3.10	0.40
4:B1:572:U:C3'	4:B1:573:U:C2	3.05	0.40
4:B1:601:G:H1	4:B1:621:C:H42	1.69	0.40
4:B1:673:G:C8	4:B1:1084:A:C6	3.10	0.40
4:B1:88:G:C6	4:B1:89:C:C4	3.09	0.40
4:B1:229:A:H61	4:B1:900:C:H1'	1.85	0.40
4:B1:983:A:C5	4:B1:984:C:C6	3.09	0.40
7:BC:170:TRP:HZ3	14:BJ:61:LEU:CD2	2.34	0.40
11:BG:3:LEU:O	11:BG:15:LEU:HD22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:BH:11:PRO:HA	12:BH:14:GLU:O	2.21	0.40
13:BI:110:ARG:HG3	13:BI:120:PRO:O	2.22	0.40
16:BL:113:LEU:HD22	16:BL:114:SER:N	2.37	0.40
16:BL:49:GLU:HA	16:BL:52:GLU:OE2	2.21	0.40
16:BL:69:ARG:HD3	16:BL:69:ARG:H	1.86	0.40
16:BL:77:VAL:HG22	16:BL:86:ILE:HD12	2.02	0.40
19:BO:116:LEU:O	19:BO:116:LEU:HD23	2.22	0.40
19:BO:56:VAL:HG21	19:BO:81:VAL:CG2	2.50	0.40
4:B1:1673:U:OP1	21:BQ:76:GLY:HA3	2.22	0.40
23:BS:111:LEU:HD23	23:BS:114:LEU:HD12	2.03	0.40
24:BT:17:ALA:HB1	24:BT:21:PHE:HE2	1.85	0.40
24:BT:37:VAL:HG12	24:BT:37:VAL:O	2.21	0.40
24:BT:82:ARG:NH2	24:BT:90:SER:O	2.55	0.40
29:BY:7:ILE:HG12	29:BY:27:VAL:HG22	2.02	0.40
30:BZ:59:CYS:SG	30:BZ:60:LYS:HD2	2.61	0.40
40:CC:190:ARG:HB2	40:CC:202:ILE:HG13	2.02	0.40
42:CE:140:LEU:HB3	42:CE:144:ILE:HD13	2.04	0.40
42:CE:190:HIS:CD2	81:A2:4898:A:OP1	2.74	0.40
43:CF:143:GLY:HA2	43:CF:235:ASN:OD1	2.22	0.40
43:CF:169:LEU:O	43:CF:171:ASP:N	2.53	0.40
45:CH:189:GLN:O	45:CH:190:ALA:HB2	2.22	0.40
47:CJ:144:LYS:HE2	47:CJ:146:ARG:O	2.22	0.40
47:CJ:19:LYS:HD2	47:CJ:75:ARG:NH2	2.37	0.40
49:CM:97:ALA:CB	81:A2:4826:C:N4	2.83	0.40
50:CN:135:ILE:O	50:CN:137:PRO:HD3	2.22	0.40
52:CP:131:ARG:HH21	81:A2:1575:U:H2'	1.86	0.40
52:CP:21:ASN:OD1	52:CP:123:PRO:HD2	2.22	0.40
54:CR:10:LEU:HG	54:CR:41:ILE:HG12	2.03	0.40
41:CD:33:ARG:HE	56:CT:27:LEU:CD1	2.34	0.40
81:A2:1184:C:O5'	81:A2:1184:C:H6	2.05	0.40
81:A2:1278:C:C2'	81:A2:1279:G:H5'	2.51	0.40
81:A2:1428:G:C8	81:A2:1428:G:C5'	3.04	0.40
81:A2:1448:C:C2'	81:A2:1449:G:H5'	2.52	0.40
81:A2:1481:G:C3'	81:A2:1481:G:C8	3.05	0.40
81:A2:1505:G:N3	81:A2:1506:A:C8	2.89	0.40
81:A2:1555:G:C2	81:A2:1557:U:H1'	2.56	0.40
38:CA:199:VAL:HG21	81:A2:1609:A:H5"	2.03	0.40
43:CF:132:MET:HE2	81:A2:1705:U:H1'	2.03	0.40
81:A2:1713:G:OP2	81:A2:1713:G:H8	2.03	0.40
81:A2:1729:G:C6	81:A2:1730:A:C8	3.10	0.40
81:A2:1754:A:C4	81:A2:1755:A:H8	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1811:G:H2'	81:A2:1812:U:C5'	2.52	0.40
81:A2:1824:G:O5'	81:A2:1824:G:H8	2.04	0.40
81:A2:1890:G:C1'	81:A2:1897:G:N1	2.81	0.40
81:A2:2003:A:C2	81:A2:2004:A:H1'	2.56	0.40
81:A2:205:A:O5'	81:A2:205:A:H8	2.04	0.40
81:A2:202:C:N3	81:A2:206:U:H5	2.19	0.40
81:A2:1877:G:C4	81:A2:2254:G:C6	3.09	0.40
81:A2:2382:G:C2'	81:A2:2383:G:H5'	2.51	0.40
81:A2:2561:G:C1'	81:A2:2562:C:P	3.10	0.40
81:A2:2720:A:H3'	81:A2:2721:A:H8	1.87	0.40
81:A2:3664:U:H5''	81:A2:3664:U:C6	2.56	0.40
81:A2:3690:U:O5'	81:A2:3690:U:C6	2.73	0.40
81:A2:3757:C:C4	81:A2:3781:C:OP2	2.75	0.40
81:A2:3758:C:H6	81:A2:3758:C:H3'	1.87	0.40
81:A2:3876:G:H1'	81:A2:3877:A:OP1	2.21	0.40
81:A2:4200:G:H3'	81:A2:4201:C:H6	1.85	0.40
81:A2:4197:C:H4'	81:A2:4287:C:O2	2.21	0.40
81:A2:429:G:H2'	81:A2:430:G:H5'	2.02	0.40
81:A2:4150:U:C5	81:A2:4342:G:C8	3.09	0.40
81:A2:436:U:H2'	81:A2:437:C:OP1	2.21	0.40
81:A2:1307:C:H1'	81:A2:4408:G:N3	2.36	0.40
81:A2:4417:U:O2'	81:A2:4418:C:H5'	2.21	0.40
81:A2:443:A:C5'	81:A2:444:G:OP2	2.70	0.40
81:A2:4466:C:C5	81:A2:4467:A:N7	2.89	0.40
81:A2:4502:U:O5'	81:A2:4502:U:C6	2.73	0.40
81:A2:462:A:C4'	81:A2:463:C:C5'	2.79	0.40
81:A2:4737:C:C2	81:A2:4738:U:C5	3.09	0.40
81:A2:477:C:H5''	81:A2:478:G:O3'	2.22	0.40
49:CM:98:ARG:N	81:A2:4826:C:N4	2.69	0.40
81:A2:673:G:H5''	81:A2:674:G:OP2	2.21	0.40
81:A2:696:G:N2	81:A2:4898:A:O2'	2.54	0.40
81:A2:69:A:C2	81:A2:70:A:C4'	3.03	0.40
81:A2:948:A:C5	81:A2:949:G:C6	3.10	0.40
81:A2:959:C:OP2	81:A2:959:C:C6	2.74	0.40
82:A3:150:C:H6	82:A3:150:C:O5'	2.04	0.40
82:A3:18:U:N3	82:A3:19:C:C4	2.90	0.40
41:CD:207:TYR:CE2	83:A4:34:C:C6	3.10	0.40
4:B1:1210:G:H2'	4:B1:1211:G:O4'	2.21	0.40
4:B1:1284:A:H3'	4:B1:1285:G:O4'	2.22	0.40
4:B1:1567:G:C3'	4:B1:1568:C:H5'	2.50	0.40
4:B1:1570:G:O5'	4:B1:1570:G:H8	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1647:A:H1'	4:B1:1649:U:C1'	2.51	0.40
4:B1:1686:G:N3	4:B1:1686:G:H2'	2.36	0.40
4:B1:1781:A:C2	4:B1:1782:G:N2	2.89	0.40
4:B1:204:G:H2'	4:B1:205:G:H5'	2.03	0.40
4:B1:467:G:H8	4:B1:467:G:OP2	2.05	0.40
4:B1:828:G:H2'	4:B1:829:C:O5'	2.22	0.40
4:B1:917:U:O2	4:B1:917:U:H2'	2.21	0.40
4:B1:944:A:H5'	19:BO:134:PRO:CB	2.51	0.40
4:B1:954:U:N3	4:B1:971:G:N2	2.69	0.40
6:BB:126:ASP:O	6:BB:127:VAL:HB	2.20	0.40
6:BB:183:GLU:O	6:BB:186:ASN:HB3	2.21	0.40
9:BE:206:ASP:HB2	9:BE:222:LEU:CD1	2.51	0.40
9:BE:11:ARG:HG3	9:BE:25:GLY:O	2.21	0.40
10:BF:22:LYS:HG3	10:BF:22:LYS:O	2.21	0.40
12:BH:87:PHE:O	12:BH:89:GLY:N	2.55	0.40
4:B1:301:A:C1'	13:BI:71:CYS:O	2.70	0.40
13:BI:84:ASN:HD21	13:BI:97:VAL:CG2	2.34	0.40
18:BN:129:TYR:HD1	18:BN:134:VAL:HG11	1.86	0.40
19:BO:104:ARG:HG2	19:BO:105:THR:N	2.37	0.40
39:CB:94:GLU:HB3	39:CB:158:GLN:OE1	2.22	0.40
40:CC:224:ILE:CG1	81:A2:220:G:H22	2.34	0.40
41:CD:22:ARG:CG	41:CD:28:THR:OG1	2.63	0.40
40:CC:315:LYS:HE2	43:CF:155:TYR:O	2.22	0.40
45:CH:86:LEU:HA	45:CH:188:GLN:CG	2.52	0.40
48:CL:76:PHE:HB2	48:CL:81:LEU:HD21	2.02	0.40
49:CM:136:LEU:O	49:CM:140:PRO:CD	2.61	0.40
50:CN:159:ARG:HB2	50:CN:164:LEU:HB2	2.03	0.40
50:CN:186:GLY:O	50:CN:187:SER:CB	2.69	0.40
51:CO:12:ARG:HB2	51:CO:37:ARG:CD	2.51	0.40
51:CO:43:ILE:HG22	51:CO:44:SER:N	2.37	0.40
54:CR:40:GLN:O	54:CR:44:LEU:HG	2.21	0.40
60:CX:147:LEU:C	60:CX:147:LEU:HD13	2.42	0.40
61:CY:91:ASN:HA	81:A2:380:A:C8	2.57	0.40
81:A2:1088:C:H6	81:A2:1088:C:C3'	2.23	0.40
81:A2:113:A:H2'	81:A2:114:G:O4'	2.22	0.40
43:CF:48:LYS:HD3	81:A2:1220:G:H5'	1.98	0.40
81:A2:1307:C:O5'	81:A2:1307:C:C6	2.75	0.40
81:A2:1325:A:H61	81:A2:1490:U:H3	1.69	0.40
81:A2:1521:U:H2'	81:A2:1522:G:O4'	2.22	0.40
81:A2:1594:C:H2'	81:A2:1595:U:O5'	2.22	0.40
81:A2:1628:U:C4	81:A2:1630:G:H1'	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1645:C:H2'	81:A2:1646:G:H5'	2.04	0.40
81:A2:1633:G:N2	81:A2:1656:U:C5'	2.82	0.40
81:A2:1942:A:C2'	81:A2:1943:G:C8	3.00	0.40
81:A2:1897:G:C2	81:A2:2035:A:C8	3.10	0.40
81:A2:1876:C:OP1	81:A2:2049:A:H5''	2.22	0.40
52:CP:25:HIS:CD2	81:A2:2338:G:O6	2.74	0.40
81:A2:2344:A:N1	81:A2:2765:U:O4	2.55	0.40
81:A2:10:A:H1'	81:A2:2448:G:O6	2.21	0.40
81:A2:2575:A:H8	81:A2:2575:A:O5'	2.04	0.40
81:A2:2559:A:C6	81:A2:2658:G:H1'	2.56	0.40
81:A2:2672:A:C3'	81:A2:2673:A:C5'	2.98	0.40
81:A2:2707:U:C2'	81:A2:2708:C:H5'	2.51	0.40
81:A2:2740:U:O2'	81:A2:2741:A:H5''	2.22	0.40
81:A2:2760:A:H3'	81:A2:2761:C:C6	2.57	0.40
50:CN:181:HIS:CE1	81:A2:284:G:C6	3.10	0.40
38:CA:227:ARG:HH22	81:A2:3629:C:H5'	1.87	0.40
81:A2:3647:G:OP1	81:A2:3647:G:C8	2.68	0.40
81:A2:3673:U:H2'	81:A2:3674:G:H8	1.86	0.40
81:A2:3792:G:N2	81:A2:3793:A:N6	2.70	0.40
81:A2:1305:C:C5	81:A2:3848:G:P	3.14	0.40
81:A2:4072:A:C8	81:A2:4072:A:H3'	2.56	0.40
81:A2:4117:A:H1'	81:A2:4118:C:OP1	2.21	0.40
81:A2:4128:G:H2'	81:A2:4129:G:H5'	2.03	0.40
81:A2:4344:U:O2'	81:A2:4345:A:H5''	2.22	0.40
81:A2:4438:G:C8	81:A2:4438:G:OP2	2.74	0.40
81:A2:4587:U:H3'	81:A2:4588:U:C6	2.56	0.40
81:A2:4724:G:OP1	81:A2:4724:G:O4'	2.39	0.40
81:A2:4730:C:H2'	81:A2:4731:C:C6	2.56	0.40
39:CB:156:TYR:CD1	81:A2:4864:A:H5'	2.56	0.40
81:A2:4873:C:H2'	81:A2:4874:G:H8	1.86	0.40
81:A2:4948:G:N2	81:A2:5014:C:C2	2.89	0.40
81:A2:496:G:H2'	81:A2:497:C:C6	2.57	0.40
81:A2:5:A:C6	81:A2:6:C:C5	3.09	0.40
81:A2:66:A:C8	81:A2:319:A:H1'	2.57	0.40
81:A2:949:G:OP2	81:A2:949:G:H8	2.04	0.40
81:A2:407:U:C2	82:A3:17:A:N6	2.89	0.40
82:A3:18:U:H2'	82:A3:19:C:O5'	2.21	0.40
82:A3:51:U:H6	82:A3:52:A:N7	2.20	0.40
3:AX:42:U:C4	19:BO:151:LEU:HG	2.57	0.40
4:B1:1094:C:O2'	4:B1:1095:C:H5'	2.21	0.40
4:B1:1298:G:H5'	20:BP:77:LYS:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:125:C:H42	4:B1:129:C:P	2.43	0.40
4:B1:1322:G:H2'	4:B1:1323:U:O4'	2.21	0.40
4:B1:1456:G:H2'	4:B1:1457:U:H6	1.82	0.40
4:B1:1579:A:H3'	4:B1:1580:A:H5''	2.03	0.40
4:B1:1599:U:C2'	4:B1:1600:G:OP2	2.69	0.40
4:B1:1216:C:C5	4:B1:1645:C:OP2	2.75	0.40
4:B1:1762:C:O5'	4:B1:1762:C:H6	2.04	0.40
4:B1:175:A:C3'	4:B1:176:U:H5''	2.34	0.40
4:B1:1825:A:C8	4:B1:1825:A:C3'	3.04	0.40
4:B1:189:U:C5	4:B1:189:U:OP2	2.74	0.40
4:B1:211:G:C4'	4:B1:211:G:C8	3.04	0.40
4:B1:4:C:H2'	4:B1:5:U:C5	2.53	0.40
4:B1:576:A:H3'	4:B1:576:A:P	2.61	0.40
4:B1:840:C:H4'	4:B1:841:G:OP2	2.17	0.40
4:B1:847:A:H3'	4:B1:848:U:C6	2.55	0.40
4:B1:977:C:H6	4:B1:977:C:OP2	2.03	0.40
5:BA:39:TYR:CD2	5:BA:50:ASN:HA	2.56	0.40
5:BA:64:ALA:O	5:BA:67:ALA:HB3	2.20	0.40
6:BB:139:CYS:HB3	6:BB:172:MET:CE	2.52	0.40
9:BE:125:LYS:O	9:BE:141:THR:HA	2.21	0.40
9:BE:173:ILE:HD12	9:BE:235:TRP:CZ2	2.57	0.40
9:BE:180:LEU:HD13	9:BE:232:ASN:N	2.37	0.40
10:BF:40:ALA:C	10:BF:42:LYS:N	2.75	0.40
4:B1:746:C:H5'	12:BH:105:THR:HA	2.03	0.40
12:BH:10:LYS:N	12:BH:11:PRO:CD	2.85	0.40
13:BI:119:LEU:HA	13:BI:120:PRO:HD2	1.98	0.40
14:BJ:124:HIS:O	14:BJ:127:ARG:HB2	2.22	0.40
17:BM:106:CYS:O	17:BM:107:SER:CB	2.69	0.40
18:BN:72:LEU:HD13	18:BN:72:LEU:O	2.21	0.40
20:BP:69:PRO:O	20:BP:70:MET:HB2	2.20	0.40
23:BS:3:LEU:H	23:BS:3:LEU:HG	1.67	0.40
26:BV:43:THR:HG22	26:BV:45:ARG:CB	2.51	0.40
39:CB:321:VAL:HG23	39:CB:341:LYS:NZ	2.36	0.40
40:CC:351:VAL:O	40:CC:355:ALA:N	2.47	0.40
44:CG:104:PRO:HG2	44:CG:194:VAL:HA	2.03	0.40
45:CH:4:ILE:HG23	45:CH:5:LEU:N	2.25	0.40
41:CD:150:LEU:HD12	47:CJ:146:ARG:HG3	2.02	0.40
47:CJ:89:VAL:HG22	47:CJ:114:ASP:CB	2.52	0.40
49:CM:15:VAL:O	49:CM:21:ALA:HA	2.22	0.40
49:CM:2:VAL:CG1	49:CM:4:ARG:HG3	2.52	0.40
49:CM:111:LYS:O	51:CO:197:LYS:HE3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CS:12:VAL:HG22	55:CS:64:CYS:SG	2.61	0.40
62:CZ:101:PHE:O	62:CZ:102:ARG:HB2	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	BA	216/295 (73%)	209 (97%)	5 (2%)	2 (1%)	21	67
6	BB	211/264 (80%)	176 (83%)	18 (8%)	17 (8%)	1	19
7	BC	220/293 (75%)	213 (97%)	2 (1%)	5 (2%)	8	48
8	BD	210/243 (86%)	201 (96%)	4 (2%)	5 (2%)	7	47
9	BE	255/263 (97%)	237 (93%)	13 (5%)	5 (2%)	9	51
10	BF	186/204 (91%)	163 (88%)	13 (7%)	10 (5%)	2	29
11	BG	230/249 (92%)	216 (94%)	5 (2%)	9 (4%)	4	36
12	BH	189/194 (97%)	178 (94%)	7 (4%)	4 (2%)	9	50
13	BI	205/208 (99%)	184 (90%)	14 (7%)	7 (3%)	5	40
14	BJ	177/194 (91%)	169 (96%)	5 (3%)	3 (2%)	11	55
15	BK	92/165 (56%)	84 (91%)	1 (1%)	7 (8%)	1	20
16	BL	144/158 (91%)	133 (92%)	5 (4%)	6 (4%)	3	34
17	BM	118/132 (89%)	111 (94%)	1 (1%)	6 (5%)	2	30
18	BN	148/151 (98%)	138 (93%)	5 (3%)	5 (3%)	5	40
19	BO	135/151 (89%)	129 (96%)	3 (2%)	3 (2%)	8	49
20	BP	116/145 (80%)	106 (91%)	5 (4%)	5 (4%)	3	34
21	BQ	137/146 (94%)	129 (94%)	6 (4%)	2 (2%)	13	57
22	BR	105/135 (78%)	99 (94%)	4 (4%)	2 (2%)	10	52

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
23	BS	140/152 (92%)	125 (89%)	7 (5%)	8 (6%)	2	27
24	BT	141/145 (97%)	135 (96%)	4 (3%)	2 (1%)	14	58
25	BU	99/119 (83%)	95 (96%)	3 (3%)	1 (1%)	19	65
26	BV	81/83 (98%)	78 (96%)	1 (1%)	2 (2%)	7	46
27	BW	127/130 (98%)	118 (93%)	7 (6%)	2 (2%)	12	56
28	BX	132/143 (92%)	120 (91%)	5 (4%)	7 (5%)	2	29
29	BY	120/133 (90%)	114 (95%)	2 (2%)	4 (3%)	5	40
30	BZ	74/125 (59%)	71 (96%)	0	3 (4%)	3	35
31	Ba	94/115 (82%)	85 (90%)	5 (5%)	4 (4%)	3	34
32	Bb	78/84 (93%)	70 (90%)	8 (10%)	0	100	100
33	Bc	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	5	40
34	Bd	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
35	Be	49/59 (83%)	43 (88%)	5 (10%)	1 (2%)	9	51
36	Bf	59/156 (38%)	53 (90%)	6 (10%)	0	100	100
37	Bg	312/317 (98%)	291 (93%)	14 (4%)	7 (2%)	8	49
38	CA	245/257 (95%)	236 (96%)	6 (2%)	3 (1%)	16	61
39	CB	394/403 (98%)	369 (94%)	11 (3%)	14 (4%)	4	38
40	CC	362/427 (85%)	338 (93%)	9 (2%)	15 (4%)	3	35
41	CD	288/297 (97%)	279 (97%)	4 (1%)	5 (2%)	11	55
42	CE	156/288 (54%)	141 (90%)	8 (5%)	7 (4%)	3	33
43	CF	232/248 (94%)	225 (97%)	3 (1%)	4 (2%)	11	55
44	CG	233/266 (88%)	217 (93%)	7 (3%)	9 (4%)	4	36
45	CH	190/192 (99%)	184 (97%)	3 (2%)	3 (2%)	12	56
46	CI	192/214 (90%)	187 (97%)	2 (1%)	3 (2%)	12	56
47	CJ	168/178 (94%)	153 (91%)	3 (2%)	12 (7%)	1	22
48	CL	198/211 (94%)	178 (90%)	9 (4%)	11 (6%)	2	28
49	CM	138/215 (64%)	132 (96%)	4 (3%)	2 (1%)	14	58
50	CN	202/204 (99%)	193 (96%)	6 (3%)	3 (2%)	13	57
51	CO	194/203 (96%)	187 (96%)	4 (2%)	3 (2%)	13	57
52	CP	151/184 (82%)	141 (93%)	7 (5%)	3 (2%)	9	51
53	CQ	182/188 (97%)	169 (93%)	7 (4%)	6 (3%)	5	40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
54	CR	181/196 (92%)	175 (97%)	3 (2%)	3 (2%)	11	55
55	CS	171/176 (97%)	158 (92%)	7 (4%)	6 (4%)	4	39
56	CT	157/160 (98%)	150 (96%)	4 (2%)	3 (2%)	10	52
57	CU	100/128 (78%)	97 (97%)	3 (3%)	0	100	100
58	CV	126/140 (90%)	119 (94%)	5 (4%)	2 (2%)	12	56
59	CW	62/157 (40%)	61 (98%)	1 (2%)	0	100	100
60	CX	117/156 (75%)	113 (97%)	4 (3%)	0	100	100
61	CY	126/145 (87%)	119 (94%)	4 (3%)	3 (2%)	7	47
62	CZ	134/136 (98%)	125 (93%)	5 (4%)	4 (3%)	5	42
63	Ca	145/148 (98%)	134 (92%)	6 (4%)	5 (3%)	5	40
64	Cb	67/159 (42%)	60 (90%)	3 (4%)	4 (6%)	2	26
65	Cc	102/115 (89%)	99 (97%)	1 (1%)	2 (2%)	9	51
66	Cd	107/125 (86%)	103 (96%)	3 (3%)	1 (1%)	21	67
67	Ce	126/135 (93%)	117 (93%)	6 (5%)	3 (2%)	7	47
68	Cf	105/110 (96%)	96 (91%)	4 (4%)	5 (5%)	3	32
69	Cg	113/117 (97%)	103 (91%)	6 (5%)	4 (4%)	4	39
70	Ch	120/123 (98%)	112 (93%)	5 (4%)	3 (2%)	7	46
71	Ci	95/105 (90%)	85 (90%)	4 (4%)	6 (6%)	2	25
72	Cj	83/97 (86%)	75 (90%)	6 (7%)	2 (2%)	7	47
73	Ck	67/70 (96%)	64 (96%)	2 (3%)	1 (2%)	13	57
74	Cl	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	9	50
75	Cm	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	9	51
76	Cn	23/25 (92%)	23 (100%)	0	0	100	100
77	Co	104/106 (98%)	98 (94%)	4 (4%)	2 (2%)	10	52
78	Cp	89/92 (97%)	83 (93%)	3 (3%)	3 (3%)	5	40
79	Ct	128/137 (93%)	112 (88%)	9 (7%)	7 (6%)	2	29
80	Cu	208/210 (99%)	199 (96%)	6 (3%)	3 (1%)	14	58
All	All	11190/12898 (87%)	10477 (94%)	390 (4%)	323 (3%)	9	43

All (323) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	BB	76	ASN

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Mol	Chain	Res	Type
6	BB	132	GLY
6	BB	148	ASN
6	BB	154	SER
6	BB	176	VAL
6	BB	177	GLN
6	BB	207	LEU
6	BB	221	PRO
7	BC	64	THR
7	BC	172	ASN
7	BC	176	LYS
8	BD	78	GLY
8	BD	199	GLY
9	BE	204	SER
9	BE	205	PHE
10	BF	20	PHE
10	BF	22	LYS
10	BF	40	ALA
10	BF	48	TYR
10	BF	80	GLY
10	BF	132	GLY
10	BF	185	SER
11	BG	43	GLU
11	BG	146	ASN
11	BG	147	LEU
11	BG	169	PRO
12	BH	88	SER
12	BH	135	PHE
13	BI	123	ARG
13	BI	131	PRO
13	BI	134	GLU
13	BI	142	SER
13	BI	159	SER
15	BK	30	PRO
15	BK	32	HIS
15	BK	36	ALA
15	BK	84	HIS
15	BK	87	PRO
16	BL	8	ARG
16	BL	19	ASN
18	BN	7	PRO
18	BN	108	ASP
19	BO	100	THR

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Mol	Chain	Res	Type
19	BO	146	ARG
20	BP	29	SER
20	BP	126	VAL
22	BR	72	LYS
23	BS	78	LYS
23	BS	79	ILE
23	BS	134	GLN
24	BT	37	VAL
25	BU	52	GLY
26	BV	42	VAL
27	BW	100	GLY
28	BX	61	GLN
28	BX	106	GLY
28	BX	107	ARG
28	BX	116	PRO
29	BY	33	ALA
29	BY	98	GLU
30	BZ	95	GLY
37	Bg	255	SER
37	Bg	284	PRO
38	CA	144	LYS
38	CA	196	TRP
39	CB	4	ARG
39	CB	5	LYS
39	CB	157	CYS
39	CB	259	PRO
39	CB	260	ALA
39	CB	360	LEU
40	CC	50	GLN
40	CC	53	ALA
40	CC	54	VAL
40	CC	151	PRO
40	CC	309	ILE
41	CD	258	LYS
42	CE	137	VAL
42	CE	183	ARG
42	CE	185	PRO
43	CF	222	LYS
44	CG	41	ILE
44	CG	42	GLY
44	CG	162	ASP
45	CH	4	ILE

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Mol	Chain	Res	Type
45	CH	61	TRP
46	CI	189	ARG
47	CJ	11	PRO
47	CJ	14	GLU
47	CJ	77	ALA
47	CJ	155	HIS
47	CJ	175	LEU
48	CL	47	ALA
48	CL	52	SER
48	CL	54	PRO
48	CL	77	SER
48	CL	205	GLN
49	CM	21	ALA
50	CN	184	ILE
52	CP	3	ARG
52	CP	6	LEU
53	CQ	98	LEU
53	CQ	155	ALA
54	CR	131	VAL
55	CS	171	ARG
56	CT	18	PRO
61	CY	67	ILE
62	CZ	32	GLY
62	CZ	103	ASP
62	CZ	125	GLY
63	Ca	48	TYR
64	Cb	30	GLU
64	Cb	56	LYS
65	Cc	107	SER
67	Ce	19	LYS
67	Ce	20	PHE
68	Cf	60	PRO
68	Cf	64	PRO
68	Cf	106	TYR
68	Cf	107	PRO
69	Cg	84	ALA
70	Ch	122	LYS
71	Ci	28	ARG
71	Ci	33	LEU
71	Ci	34	THR
72	Cj	11	ARG
72	Cj	85	LYS

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Mol	Chain	Res	Type
73	Ck	18	LYS
74	Cl	4	HIS
79	Ct	44	ILE
79	Ct	61	VAL
79	Ct	76	SER
79	Ct	104	PRO
80	Cu	190	LYS
5	BA	6	ASP
6	BB	52	THR
6	BB	78	GLU
6	BB	127	VAL
6	BB	209	ASP
7	BC	174	ILE
8	BD	81	GLU
9	BE	231	GLY
9	BE	243	GLY
10	BF	34	SER
10	BF	56	TYR
11	BG	87	ARG
11	BG	157	VAL
12	BH	164	ASN
15	BK	64	TRP
16	BL	119	ASP
17	BM	30	GLY
17	BM	60	MET
17	BM	106	CYS
17	BM	107	SER
18	BN	143	SER
22	BR	114	LEU
23	BS	24	ARG
23	BS	31	THR
23	BS	90	VAL
23	BS	92	ASP
26	BV	48	GLY
31	Ba	61	ALA
37	Bg	276	SER
39	CB	299	ILE
39	CB	309	LEU
39	CB	357	ARG
40	CC	55	SER
40	CC	58	ALA
40	CC	148	PRO

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Mol	Chain	Res	Type
40	CC	276	ASN
43	CF	166	ARG
43	CF	170	THR
44	CG	84	THR
45	CH	190	ALA
46	CI	41	ALA
46	CI	194	GLY
47	CJ	97	ASN
47	CJ	117	ILE
48	CL	51	ALA
48	CL	143	GLU
48	CL	162	LYS
53	CQ	157	GLY
54	CR	113	LYS
58	CV	85	ARG
61	CY	84	ARG
63	Ca	47	LYS
63	Ca	66	ASN
63	Ca	116	LYS
69	Cg	44	SER
69	Cg	45	ALA
77	Co	34	TYR
78	Cp	12	GLY
6	BB	49	VAL
6	BB	213	ARG
8	BD	142	LEU
9	BE	203	GLY
10	BF	79	HIS
11	BG	91	GLU
11	BG	92	ARG
12	BH	109	ARG
16	BL	7	GLU
17	BM	102	LYS
18	BN	3	ARG
21	BQ	17	LYS
21	BQ	74	GLY
28	BX	33	GLY
28	BX	86	PRO
29	BY	64	PHE
30	BZ	113	THR
31	Ba	81	SER
33	Bc	38	THR

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Mol	Chain	Res	Type
39	CB	292	LEU
39	CB	296	GLY
40	CC	57	LEU
40	CC	75	ARG
40	CC	150	LEU
41	CD	265	ARG
42	CE	135	GLN
42	CE	265	PRO
44	CG	161	VAL
44	CG	163	PRO
47	CJ	111	GLU
48	CL	141	ALA
48	CL	161	TYR
48	CL	177	LYS
51	CO	72	HIS
51	CO	198	THR
51	CO	199	HIS
52	CP	5	SER
53	CQ	12	LYS
55	CS	135	SER
61	CY	123	ALA
62	CZ	37	PRO
64	Cb	29	TYR
70	Ch	41	ALA
71	Ci	101	ALA
75	Cm	79	GLU
78	Cp	51	ALA
80	Cu	3	GLN
18	BN	62	GLN
20	BP	39	ALA
27	BW	28	ARG
28	BX	75	ILE
29	BY	119	GLY
33	Bc	64	GLU
37	Bg	146	SER
38	CA	70	LYS
41	CD	253	TYR
42	CE	227	HIS
44	CG	44	ASP
47	CJ	120	ASP
47	CJ	176	PRO
49	CM	44	GLN

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Mol	Chain	Res	Type
50	CN	145	ASN
53	CQ	164	LYS
55	CS	16	CYS
55	CS	158	VAL
55	CS	160	ARG
56	CT	125	TRP
65	Cc	53	PRO
70	Ch	3	LYS
79	Ct	79	ARG
79	Ct	89	THR
7	BC	261	PHE
11	BG	88	ARG
14	BJ	138	ARG
14	BJ	169	ARG
16	BL	115	PRO
20	BP	28	MET
20	BP	125	PRO
24	BT	51	ASN
30	BZ	114	LYS
31	Ba	38	LYS
35	Be	8	ARG
39	CB	189	THR
40	CC	30	ALA
40	CC	56	GLU
44	CG	134	PRO
53	CQ	156	PRO
55	CS	164	LYS
79	Ct	45	HIS
80	Cu	39	PRO
5	BA	104	THR
6	BB	23	ASP
6	BB	210	VAL
13	BI	12	ARG
23	BS	6	PRO
31	Ba	84	VAL
39	CB	326	VAL
41	CD	125	VAL
41	CD	259	LYS
43	CF	184	ILE
47	CJ	58	ARG
47	CJ	76	GLY
54	CR	53	LYS

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Mol	Chain	Res	Type
56	CT	123	GLY
63	Ca	24	LYS
64	Cb	21	ILE
68	Cf	59	THR
71	Ci	21	VAL
71	Ci	65	LYS
6	BB	64	GLY
14	BJ	170	PRO
15	BK	86	PRO
44	CG	30	PRO
69	Cg	79	GLY
78	Cp	19	GLY
13	BI	20	PRO
16	BL	29	GLY
17	BM	100	PRO
37	Bg	103	GLY
19	BO	53	ILE
37	Bg	61	GLY
39	CB	18	PRO
40	CC	232	VAL
42	CE	144	ILE
66	Cd	20	VAL
37	Bg	265	ILE
50	CN	52	GLY
77	Co	101	GLY
8	BD	63	GLY
58	CV	45	ILE
67	Ce	6	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	
5	BA	181/243 (74%)	176 (97%)	5 (3%)	51	78
6	BB	194/231 (84%)	183 (94%)	11 (6%)	25	62
7	BC	188/225 (84%)	181 (96%)	7 (4%)	41	73

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	BD	175/202 (87%)	166 (95%)	9 (5%)	29	66
9	BE	220/225 (98%)	208 (94%)	12 (6%)	27	63
10	BF	158/170 (93%)	151 (96%)	7 (4%)	35	69
11	BG	202/218 (93%)	195 (96%)	7 (4%)	43	74
12	BH	171/174 (98%)	167 (98%)	4 (2%)	58	82
13	BI	179/180 (99%)	167 (93%)	12 (7%)	20	57
14	BJ	160/168 (95%)	150 (94%)	10 (6%)	22	59
15	BK	85/136 (62%)	82 (96%)	3 (4%)	43	74
16	BL	133/142 (94%)	131 (98%)	2 (2%)	72	88
17	BM	102/108 (94%)	97 (95%)	5 (5%)	31	66
18	BN	130/131 (99%)	128 (98%)	2 (2%)	72	88
19	BO	107/119 (90%)	100 (94%)	7 (6%)	21	58
20	BP	107/130 (82%)	102 (95%)	5 (5%)	32	68
21	BQ	115/121 (95%)	111 (96%)	4 (4%)	43	74
22	BR	99/122 (81%)	94 (95%)	5 (5%)	29	66
23	BS	123/132 (93%)	114 (93%)	9 (7%)	17	54
24	BT	113/115 (98%)	106 (94%)	7 (6%)	23	60
25	BU	93/107 (87%)	89 (96%)	4 (4%)	35	70
26	BV	67/67 (100%)	66 (98%)	1 (2%)	72	88
27	BW	112/113 (99%)	107 (96%)	5 (4%)	34	69
28	BX	108/115 (94%)	103 (95%)	5 (5%)	33	68
29	BY	107/115 (93%)	101 (94%)	6 (6%)	26	62
30	BZ	67/103 (65%)	63 (94%)	4 (6%)	24	60
31	Ba	83/98 (85%)	76 (92%)	7 (8%)	14	48
32	Bb	72/76 (95%)	68 (94%)	4 (6%)	26	62
33	Bc	55/62 (89%)	52 (94%)	3 (6%)	27	63
34	Bd	47/49 (96%)	43 (92%)	4 (8%)	13	48
35	Be	42/48 (88%)	40 (95%)	2 (5%)	31	67
36	Bf	54/140 (39%)	51 (94%)	3 (6%)	26	62
37	Bg	272/275 (99%)	260 (96%)	12 (4%)	35	69
38	CA	189/199 (95%)	185 (98%)	4 (2%)	61	84

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	CB	344/349 (99%)	326 (95%)	18 (5%)	29	65
40	CC	302/348 (87%)	284 (94%)	18 (6%)	24	60
41	CD	244/250 (98%)	237 (97%)	7 (3%)	50	78
42	CE	143/252 (57%)	135 (94%)	8 (6%)	26	62
43	CF	203/215 (94%)	196 (97%)	7 (3%)	44	75
44	CG	199/223 (89%)	192 (96%)	7 (4%)	43	74
45	CH	171/171 (100%)	164 (96%)	7 (4%)	37	71
46	CI	170/181 (94%)	161 (95%)	9 (5%)	28	64
47	CJ	143/149 (96%)	137 (96%)	6 (4%)	36	70
48	CL	167/177 (94%)	156 (93%)	11 (7%)	21	57
49	CM	118/161 (73%)	114 (97%)	4 (3%)	44	75
50	CN	172/172 (100%)	170 (99%)	2 (1%)	78	90
51	CO	168/174 (97%)	166 (99%)	2 (1%)	78	90
52	CP	133/163 (82%)	126 (95%)	7 (5%)	28	64
53	CQ	162/165 (98%)	157 (97%)	5 (3%)	47	77
54	CR	161/175 (92%)	150 (93%)	11 (7%)	20	57
55	CS	155/157 (99%)	148 (96%)	7 (4%)	34	69
56	CT	139/140 (99%)	134 (96%)	5 (4%)	42	74
57	CU	91/115 (79%)	88 (97%)	3 (3%)	45	76
58	CV	100/107 (94%)	99 (99%)	1 (1%)	82	92
59	CW	55/126 (44%)	52 (94%)	3 (6%)	27	63
60	CX	107/133 (80%)	105 (98%)	2 (2%)	65	86
61	CY	119/135 (88%)	115 (97%)	4 (3%)	44	75
62	CZ	118/118 (100%)	112 (95%)	6 (5%)	29	66
63	Ca	120/121 (99%)	116 (97%)	4 (3%)	45	76
64	Cb	58/126 (46%)	57 (98%)	1 (2%)	68	87
65	Cc	88/97 (91%)	87 (99%)	1 (1%)	80	91
66	Cd	100/110 (91%)	96 (96%)	4 (4%)	38	71
67	Ce	115/121 (95%)	112 (97%)	3 (3%)	54	80
68	Cf	87/89 (98%)	79 (91%)	8 (9%)	11	43
69	Cg	98/100 (98%)	88 (90%)	10 (10%)	9	37

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
70	Ch	109/110 (99%)	106 (97%)	3 (3%)	51	78
71	Ci	82/89 (92%)	76 (93%)	6 (7%)	17	54
72	Cj	71/80 (89%)	69 (97%)	2 (3%)	51	78
73	Ck	64/65 (98%)	64 (100%)	0	100	100
74	Cl	47/48 (98%)	46 (98%)	1 (2%)	61	84
75	Cm	48/116 (41%)	45 (94%)	3 (6%)	22	59
76	Cn	24/24 (100%)	24 (100%)	0	100	100
77	Co	94/94 (100%)	89 (95%)	5 (5%)	28	64
78	Cp	74/75 (99%)	72 (97%)	2 (3%)	52	79
79	Ct	113/121 (93%)	106 (94%)	7 (6%)	23	60
80	Cu	177/177 (100%)	163 (92%)	14 (8%)	15	51
All	All	9763/10978 (89%)	9332 (96%)	431 (4%)	39	69

All (431) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	BA	8	LEU
5	BA	10	MET
5	BA	19	LEU
5	BA	110	ASN
5	BA	204	TYR
6	BB	23	ASP
6	BB	30	TRP
6	BB	46	LYS
6	BB	71	LEU
6	BB	97	LEU
6	BB	131	ASP
6	BB	148	ASN
6	BB	152	LYS
6	BB	177	GLN
6	BB	216	LYS
6	BB	218	LEU
7	BC	89	LYS
7	BC	137	VAL
7	BC	205	VAL
7	BC	209	VAL
7	BC	240	THR
7	BC	252	THR

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Mol	Chain	Res	Type
7	BC	256	TRP
8	BD	5	ILE
8	BD	16	ILE
8	BD	42	THR
8	BD	66	ILE
8	BD	93	THR
8	BD	150	MET
8	BD	162	ASP
8	BD	193	ASP
8	BD	211	VAL
9	BE	23	LEU
9	BE	37	LYS
9	BE	51	ARG
9	BE	95	THR
9	BE	114	ILE
9	BE	115	THR
9	BE	128	LYS
9	BE	136	ILE
9	BE	148	ARG
9	BE	166	THR
9	BE	189	LEU
9	BE	205	PHE
10	BF	47	LYS
10	BF	63	LYS
10	BF	68	ILE
10	BF	72	LEU
10	BF	103	LEU
10	BF	135	ARG
10	BF	195	GLU
11	BG	24	LEU
11	BG	29	GLU
11	BG	34	THR
11	BG	87	ARG
11	BG	160	LYS
11	BG	176	ILE
11	BG	195	LYS
12	BH	111	LYS
12	BH	116	ARG
12	BH	118	ARG
12	BH	152	ARG
13	BI	19	LYS
13	BI	21	TYR

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Mol	Chain	Res	Type
13	BI	29	LEU
13	BI	48	VAL
13	BI	55	TYR
13	BI	62	VAL
13	BI	78	ILE
13	BI	93	THR
13	BI	131	PRO
13	BI	136	ILE
13	BI	137	LEU
13	BI	144	LYS
14	BJ	8	VAL
14	BJ	12	THR
14	BJ	30	LYS
14	BJ	41	ARG
14	BJ	47	LYS
14	BJ	78	LEU
14	BJ	128	VAL
14	BJ	130	ILE
14	BJ	147	PHE
14	BJ	163	SER
15	BK	15	LEU
15	BK	70	TYR
15	BK	84	HIS
16	BL	17	PHE
16	BL	69	ARG
17	BM	52	LEU
17	BM	83	LYS
17	BM	88	TRP
17	BM	106	CYS
17	BM	117	GLU
18	BN	7	PRO
18	BN	80	LEU
19	BO	45	THR
19	BO	63	LYS
19	BO	100	THR
19	BO	105	THR
19	BO	129	ILE
19	BO	132	VAL
19	BO	140	THR
20	BP	16	THR
20	BP	29	SER
20	BP	40	ARG

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Mol	Chain	Res	Type
20	BP	44	ARG
20	BP	74	GLU
21	BQ	39	LEU
21	BQ	43	GLU
21	BQ	72	VAL
21	BQ	105	LYS
22	BR	22	THR
22	BR	46	LEU
22	BR	71	ILE
22	BR	109	LEU
22	BR	118	GLN
23	BS	3	LEU
23	BS	5	ILE
23	BS	8	LYS
23	BS	23	ARG
23	BS	25	LYS
23	BS	45	LEU
23	BS	60	THR
23	BS	99	LEU
23	BS	139	THR
24	BT	5	THR
24	BT	33	TRP
24	BT	39	LEU
24	BT	64	LEU
24	BT	87	VAL
24	BT	121	ARG
24	BT	126	GLN
25	BU	24	LEU
25	BU	59	LYS
25	BU	61	LEU
25	BU	115	THR
26	BV	2	GLN
27	BW	4	MET
27	BW	11	LEU
27	BW	20	ARG
27	BW	97	ARG
27	BW	98	GLN
28	BX	17	ARG
28	BX	31	HIS
28	BX	37	LYS
28	BX	80	LYS
28	BX	81	ILE

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Mol	Chain	Res	Type
29	BY	20	ARG
29	BY	21	LYS
29	BY	54	VAL
29	BY	84	LYS
29	BY	99	LYS
29	BY	100	LYS
30	BZ	43	LYS
30	BZ	62	VAL
30	BZ	67	LEU
30	BZ	111	ARG
31	Ba	21	ILE
31	Ba	23	CYS
31	Ba	32	LYS
31	Ba	37	LYS
31	Ba	64	LEU
31	Ba	71	LEU
31	Ba	84	VAL
32	Bb	7	LEU
32	Bb	56	CYS
32	Bb	59	CYS
32	Bb	63	LEU
33	Bc	9	ILE
33	Bc	17	VAL
33	Bc	32	VAL
34	Bd	28	HIS
34	Bd	40	ARG
34	Bd	44	ARG
34	Bd	48	LYS
35	Be	18	LYS
35	Be	46	VAL
36	Bf	97	LYS
36	Bf	104	LYS
36	Bf	148	TYR
37	Bg	20	GLN
37	Bg	26	GLN
37	Bg	54	ILE
37	Bg	94	THR
37	Bg	99	ARG
37	Bg	157	SER
37	Bg	164	ILE
37	Bg	189	ILE
37	Bg	255	SER

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Mol	Chain	Res	Type
37	Bg	266	ILE
37	Bg	287	THR
37	Bg	289	LEU
38	CA	10	LYS
38	CA	116	LEU
38	CA	162	ASN
38	CA	218	HIS
39	CB	3	HIS
39	CB	55	HIS
39	CB	89	ILE
39	CB	101	THR
39	CB	131	THR
39	CB	146	LEU
39	CB	157	CYS
39	CB	240	LEU
39	CB	243	LYS
39	CB	254	ILE
39	CB	258	HIS
39	CB	291	TYR
39	CB	300	LYS
39	CB	305	THR
39	CB	314	ILE
39	CB	327	THR
39	CB	351	LEU
39	CB	370	THR
40	CC	13	GLU
40	CC	24	LEU
40	CC	49	ARG
40	CC	78	ARG
40	CC	100	ARG
40	CC	150	LEU
40	CC	151	PRO
40	CC	162	LYS
40	CC	163	LYS
40	CC	188	ARG
40	CC	193	LYS
40	CC	215	ASN
40	CC	232	VAL
40	CC	253	THR
40	CC	289	LEU
40	CC	309	ILE
40	CC	310	HIS

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Mol	Chain	Res	Type
40	CC	323	ARG
41	CD	23	ARG
41	CD	81	HIS
41	CD	105	LEU
41	CD	126	THR
41	CD	155	THR
41	CD	262	LYS
41	CD	293	ARG
42	CE	162	VAL
42	CE	172	LEU
42	CE	188	ARG
42	CE	189	THR
42	CE	197	THR
42	CE	212	LEU
42	CE	217	PHE
42	CE	278	THR
43	CF	15	PRO
43	CF	32	ARG
43	CF	34	ARG
43	CF	37	PHE
43	CF	44	LYS
43	CF	199	LYS
43	CF	226	HIS
44	CG	34	LYS
44	CG	46	GLN
44	CG	55	VAL
44	CG	81	ASN
44	CG	162	ASP
44	CG	163	PRO
44	CG	218	LEU
45	CH	2	LYS
45	CH	20	LEU
45	CH	41	ILE
45	CH	45	LEU
45	CH	71	ARG
45	CH	129	ARG
45	CH	188	GLN
46	CI	33	ILE
46	CI	39	LYS
46	CI	52	MET
46	CI	53	VAL
46	CI	96	VAL

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Mol	Chain	Res	Type
46	CI	163	GLN
46	CI	166	HIS
46	CI	174	THR
46	CI	200	ILE
47	CJ	12	MET
47	CJ	70	VAL
47	CJ	83	LEU
47	CJ	109	ILE
47	CJ	115	LEU
47	CJ	169	LYS
48	CL	52	SER
48	CL	54	PRO
48	CL	55	ILE
48	CL	130	LYS
48	CL	135	LYS
48	CL	148	THR
48	CL	151	THR
48	CL	155	MET
48	CL	163	LYS
48	CL	164	GLU
48	CL	183	ARG
49	CM	72	TYR
49	CM	78	GLN
49	CM	114	LYS
49	CM	132	LYS
50	CN	5	LYS
50	CN	31	ARG
51	CO	169	ARG
51	CO	187	LYS
52	CP	2	VAL
52	CP	4	TYR
52	CP	64	ASN
52	CP	75	GLN
52	CP	78	TRP
52	CP	94	MET
52	CP	112	LEU
53	CQ	48	LEU
53	CQ	61	LEU
53	CQ	72	LEU
53	CQ	75	ARG
53	CQ	120	ILE
54	CR	1	MET

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Mol	Chain	Res	Type
54	CR	3	MET
54	CR	5	ARG
54	CR	20	LYS
54	CR	25	ASP
54	CR	41	ILE
54	CR	57	VAL
54	CR	74	ARG
54	CR	103	ARG
54	CR	114	LYS
54	CR	138	LEU
55	CS	4	SER
55	CS	7	LEU
55	CS	24	THR
55	CS	27	LEU
55	CS	73	LEU
55	CS	166	ARG
55	CS	169	THR
56	CT	17	ARG
56	CT	68	THR
56	CT	69	GLN
56	CT	125	TRP
56	CT	126	VAL
57	CU	20	LYS
57	CU	27	HIS
57	CU	48	LYS
58	CV	131	ARG
59	CW	2	LYS
59	CW	32	LEU
59	CW	33	ASN
60	CX	79	PHE
60	CX	123	LYS
61	CY	8	THR
61	CY	36	LYS
61	CY	70	VAL
61	CY	115	ARG
62	CZ	1	MET
62	CZ	75	TYR
62	CZ	89	ILE
62	CZ	112	ARG
62	CZ	121	ARG
62	CZ	136	PHE
63	Ca	8	THR

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Mol	Chain	Res	Type
63	Ca	47	LYS
63	Ca	56	VAL
63	Ca	132	ARG
64	Cb	61	ASN
65	Cc	17	ARG
66	Cd	39	LYS
66	Cd	92	ARG
66	Cd	115	LYS
66	Cd	119	THR
67	Ce	13	VAL
67	Ce	70	LEU
67	Ce	88	LEU
68	Cf	52	LYS
68	Cf	54	LYS
68	Cf	58	VAL
68	Cf	59	THR
68	Cf	73	LYS
68	Cf	89	ARG
68	Cf	101	ILE
68	Cf	102	ARG
69	Cg	4	ARG
69	Cg	5	LEU
69	Cg	22	LEU
69	Cg	36	LYS
69	Cg	44	SER
69	Cg	54	ARG
69	Cg	60	ARG
69	Cg	67	LEU
69	Cg	69	LYS
69	Cg	81	SER
70	Ch	43	LYS
70	Ch	113	LEU
70	Ch	118	LYS
71	Ci	33	LEU
71	Ci	34	THR
71	Ci	79	THR
71	Ci	90	LEU
71	Ci	97	MET
71	Ci	98	ARG
72	Cj	19	CYS
72	Cj	83	THR
74	Cl	5	LYS

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Mol	Chain	Res	Type
75	Cm	112	LYS
75	Cm	115	CYS
75	Cm	118	THR
77	Co	32	SER
77	Co	83	LEU
77	Co	93	LEU
77	Co	99	ARG
77	Co	100	LYS
78	Cp	29	ILE
78	Cp	52	VAL
79	Ct	4	HIS
79	Ct	18	ILE
79	Ct	20	ARG
79	Ct	61	VAL
79	Ct	76	SER
79	Ct	77	TYR
79	Ct	81	THR
80	Cu	21	PHE
80	Cu	24	THR
80	Cu	30	ASN
80	Cu	53	THR
80	Cu	57	THR
80	Cu	60	VAL
80	Cu	101	THR
80	Cu	110	LEU
80	Cu	145	MET
80	Cu	156	ARG
80	Cu	190	LYS
80	Cu	193	LEU
80	Cu	197	THR
80	Cu	210	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (210) such sidechains are listed below:

Mol	Chain	Res	Type
5	BA	50	ASN
5	BA	110	ASN
5	BA	215	GLN
6	BB	40	ASN
6	BB	53	GLN
6	BB	149	GLN
6	BB	157	GLN

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Mol	Chain	Res	Type
6	BB	160	GLN
6	BB	177	GLN
7	BC	267	GLN
8	BD	4	GLN
8	BD	56	GLN
8	BD	57	ASN
8	BD	101	GLN
8	BD	179	GLN
9	BE	36	HIS
9	BE	138	HIS
9	BE	188	ASN
9	BE	216	ASN
9	BE	230	ASN
10	BF	29	GLN
10	BF	82	ASN
10	BF	95	HIS
10	BF	107	ASN
10	BF	110	GLN
10	BF	114	ASN
10	BF	165	ASN
10	BF	203	ASN
11	BG	65	GLN
11	BG	81	HIS
11	BG	105	ASN
12	BH	25	GLN
12	BH	76	GLN
12	BH	97	GLN
12	BH	112	ASN
13	BI	22	HIS
14	BJ	124	HIS
14	BJ	143	ASN
15	BK	44	HIS
15	BK	84	HIS
16	BL	5	GLN
16	BL	112	HIS
17	BM	19	GLN
19	BO	32	HIS
19	BO	43	HIS
20	BP	35	GLN
20	BP	104	GLN
21	BQ	48	GLN
21	BQ	80	GLN

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Mol	Chain	Res	Type
21	BQ	86	GLN
22	BR	62	GLN
23	BS	19	ASN
23	BS	42	HIS
23	BS	73	ASN
23	BS	85	ASN
23	BS	87	GLN
24	BT	63	HIS
24	BT	126	GLN
25	BU	100	GLN
26	BV	2	GLN
27	BW	24	GLN
27	BW	82	GLN
27	BW	113	HIS
28	BX	61	GLN
28	BX	73	GLN
28	BX	77	ASN
29	BY	19	GLN
29	BY	22	GLN
29	BY	29	HIS
30	BZ	103	HIS
31	Ba	19	GLN
31	Ba	43	ASN
32	Bb	49	HIS
33	Bc	45	ASN
34	Bd	5	GLN
34	Bd	16	GLN
34	Bd	26	ASN
34	Bd	41	GLN
35	Be	22	GLN
35	Be	44	ASN
37	Bg	20	GLN
37	Bg	26	GLN
37	Bg	64	HIS
37	Bg	117	ASN
37	Bg	196	ASN
38	CA	50	HIS
38	CA	97	ASN
38	CA	132	ASN
38	CA	209	HIS
39	CB	25	HIS
39	CB	167	GLN

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Mol	Chain	Res	Type
39	CB	175	GLN
39	CB	208	ASN
39	CB	213	GLN
39	CB	271	GLN
39	CB	328	ASN
39	CB	354	GLN
40	CC	43	ASN
40	CC	50	GLN
40	CC	187	GLN
40	CC	329	ASN
40	CC	347	HIS
40	CC	362	GLN
41	CD	57	ASN
41	CD	191	ASN
41	CD	244	HIS
41	CD	291	GLN
42	CE	135	GLN
42	CE	182	ASN
42	CE	205	ASN
42	CE	211	HIS
42	CE	228	GLN
42	CE	256	GLN
42	CE	279	ASN
43	CF	80	ASN
43	CF	116	GLN
43	CF	131	ASN
43	CF	151	ASN
44	CG	66	GLN
44	CG	108	GLN
44	CG	195	HIS
45	CH	15	ASN
45	CH	162	GLN
46	CI	14	ASN
46	CI	51	HIS
46	CI	59	GLN
46	CI	144	ASN
47	CJ	97	ASN
47	CJ	112	HIS
47	CJ	167	GLN
47	CJ	168	GLN
48	CL	19	GLN
48	CL	27	ASN

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Mol	Chain	Res	Type
48	CL	149	GLN
49	CM	20	HIS
49	CM	33	GLN
49	CM	131	GLN
50	CN	139	HIS
50	CN	158	HIS
50	CN	181	HIS
50	CN	201	HIS
51	CO	180	GLN
52	CP	25	HIS
52	CP	54	GLN
52	CP	64	ASN
52	CP	120	ASN
53	CQ	40	ASN
53	CQ	45	GLN
54	CR	39	GLN
54	CR	40	GLN
54	CR	118	HIS
54	CR	141	HIS
55	CS	91	HIS
55	CS	117	HIS
55	CS	122	HIS
55	CS	125	GLN
55	CS	156	HIS
55	CS	173	ASN
56	CT	69	GLN
56	CT	127	GLN
56	CT	131	GLN
56	CT	139	HIS
56	CT	144	ASN
57	CU	17	GLN
57	CU	44	GLN
57	CU	116	GLN
58	CV	84	GLN
58	CV	135	ASN
59	CW	48	GLN
59	CW	63	GLN
60	CX	93	ASN
60	CX	107	HIS
60	CX	111	GLN
60	CX	125	ASN
61	CY	66	GLN

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Mol	Chain	Res	Type
61	CY	72	GLN
61	CY	91	ASN
62	CZ	132	GLN
63	Ca	17	HIS
63	Ca	40	HIS
63	Ca	67	GLN
63	Ca	74	ASN
63	Ca	93	ASN
64	Cb	12	GLN
64	Cb	42	ASN
64	Cb	60	ASN
65	Cc	15	ASN
66	Cd	125	ASN
68	Cf	21	GLN
68	Cf	65	ASN
69	Cg	3	GLN
69	Cg	100	GLN
69	Cg	112	GLN
70	Ch	62	ASN
70	Ch	101	ASN
71	Ci	36	HIS
71	Ci	80	HIS
72	Cj	30	GLN
73	Ck	28	ASN
75	Cm	87	GLN
75	Cm	90	ASN
76	Cn	22	GLN
77	Co	45	GLN
77	Co	51	GLN
77	Co	102	GLN
79	Ct	23	GLN
80	Cu	3	GLN
80	Cu	37	ASN
80	Cu	55	GLN
80	Cu	194	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AV	75/76 (98%)	37 (49%)	2 (2%)
2	AW	74/76 (97%)	33 (44%)	5 (6%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	AX	27/28 (96%)	15 (55%)	4 (14%)
4	B1	1738/1869 (92%)	1038 (59%)	152 (8%)
81	A2	3605/5025 (71%)	2042 (56%)	325 (9%)
82	A3	156/194 (80%)	81 (51%)	6 (3%)
83	A4	118/121 (97%)	68 (57%)	9 (7%)
All	All	5793/7389 (78%)	3314 (57%)	503 (8%)

All (3314) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AV	2	C
1	AV	5	G
1	AV	8	U
1	AV	11	C
1	AV	17	C
1	AV	18	G
1	AV	19	G
1	AV	20	U
1	AV	22	G
1	AV	23	A
1	AV	24	G
1	AV	28	G
1	AV	29	G
1	AV	31	A
1	AV	32	U
1	AV	41	C
1	AV	42	C
1	AV	44	G
1	AV	46	G
1	AV	47	U
1	AV	48	C
1	AV	50	U
1	AV	52	G
1	AV	57	G
1	AV	58	A
1	AV	59	U
1	AV	60	U
1	AV	61	C
1	AV	63	G
1	AV	65	G
1	AV	67	C
1	AV	69	G

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Mol	Chain	Res	Type
1	AV	70	G
1	AV	72	C
1	AV	73	A
1	AV	75	C
1	AV	76	A
2	AW	2	C
2	AW	3	C
2	AW	6	G
2	AW	9	A
2	AW	13	C
2	AW	14	A
2	AW	17	C
2	AW	19	G
2	AW	20	U
2	AW	21	A
2	AW	22	G
2	AW	27	G
2	AW	32	U
2	AW	42	C
2	AW	43	C
2	AW	44	G
2	AW	45	U
2	AW	46	G
2	AW	47	U
2	AW	48	C
2	AW	49	C
2	AW	51	U
2	AW	52	G
2	AW	55	U
2	AW	56	C
2	AW	58	A
2	AW	59	U
2	AW	60	U
2	AW	61	C
2	AW	65	G
2	AW	73	A
2	AW	74	C
2	AW	76	A
3	AX	36	U
3	AX	37	U
3	AX	38	U
3	AX	39	U

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Mol	Chain	Res	Type
3	AX	41	U
3	AX	42	U
3	AX	43	U
3	AX	45	U
3	AX	46	U
3	AX	49	U
3	AX	52	U
3	AX	54	U
3	AX	55	U
3	AX	56	U
3	AX	61	U
4	B1	2	A
4	B1	3	C
4	B1	4	C
4	B1	5	U
4	B1	6	G
4	B1	7	G
4	B1	8	U
4	B1	9	U
4	B1	15	U
4	B1	16	G
4	B1	17	C
4	B1	21	U
4	B1	22	A
4	B1	24	C
4	B1	25	A
4	B1	26	U
4	B1	30	C
4	B1	33	G
4	B1	39	A
4	B1	40	A
4	B1	41	G
4	B1	44	U
4	B1	45	A
4	B1	46	A
4	B1	47	G
4	B1	48	C
4	B1	50	A
4	B1	55	U
4	B1	56	G
4	B1	59	U
4	B1	60	A

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Mol	Chain	Res	Type
4	B1	61	A
4	B1	62	G
4	B1	63	U
4	B1	64	A
4	B1	65	C
4	B1	66	G
4	B1	67	C
4	B1	68	A
4	B1	69	C
4	B1	70	G
4	B1	71	G
4	B1	72	C
4	B1	74	G
4	B1	75	G
4	B1	76	U
4	B1	77	A
4	B1	78	C
4	B1	79	A
4	B1	80	G
4	B1	81	U
4	B1	82	G
4	B1	83	A
4	B1	84	A
4	B1	87	U
4	B1	98	C
4	B1	99	A
4	B1	101	U
4	B1	103	A
4	B1	104	A
4	B1	105	U
4	B1	106	C
4	B1	109	U
4	B1	110	U
4	B1	111	A
4	B1	112	U
4	B1	113	G
4	B1	114	G
4	B1	115	U
4	B1	116	U
4	B1	117	C
4	B1	118	C
4	B1	120	U

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Mol	Chain	Res	Type
4	B1	121	U
4	B1	122	G
4	B1	123	G
4	B1	124	U
4	B1	125	C
4	B1	126	G
4	B1	127	C
4	B1	128	U
4	B1	129	C
4	B1	130	G
4	B1	131	C
4	B1	132	U
4	B1	133	C
4	B1	134	C
4	B1	135	U
4	B1	136	C
4	B1	137	U
4	B1	138	C
4	B1	139	C
4	B1	140	C
4	B1	141	A
4	B1	142	C
4	B1	143	U
4	B1	144	U
4	B1	145	G
4	B1	146	G
4	B1	147	A
4	B1	150	A
4	B1	151	C
4	B1	152	U
4	B1	153	G
4	B1	158	A
4	B1	160	U
4	B1	161	U
4	B1	162	C
4	B1	163	U
4	B1	164	A
4	B1	166	A
4	B1	167	G
4	B1	168	C
4	B1	169	U
4	B1	171	A

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Mol	Chain	Res	Type
4	B1	173	A
4	B1	174	C
4	B1	176	U
4	B1	179	C
4	B1	180	G
4	B1	181	A
4	B1	182	C
4	B1	183	G
4	B1	184	G
4	B1	185	G
4	B1	187	G
4	B1	193	C
4	B1	198	U
4	B1	199	C
4	B1	200	G
4	B1	201	C
4	B1	202	G
4	B1	204	G
4	B1	205	G
4	B1	207	G
4	B1	208	G
4	B1	209	A
4	B1	210	U
4	B1	211	G
4	B1	213	G
4	B1	214	U
4	B1	215	G
4	B1	216	C
4	B1	217	A
4	B1	218	U
4	B1	219	U
4	B1	220	U
4	B1	225	G
4	B1	226	A
4	B1	227	U
4	B1	228	C
4	B1	229	A
4	B1	230	A
4	B1	233	C
4	B1	234	C
4	B1	235	A
4	B1	236	A

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Mol	Chain	Res	Type
4	B1	237	C
4	B1	238	C
4	B1	239	C
4	B1	298	G
4	B1	301	A
4	B1	303	C
4	B1	304	C
4	B1	305	U
4	B1	306	C
4	B1	307	G
4	B1	308	G
4	B1	309	G
4	B1	310	C
4	B1	311	C
4	B1	312	G
4	B1	313	A
4	B1	314	U
4	B1	315	C
4	B1	317	C
4	B1	318	A
4	B1	319	C
4	B1	320	G
4	B1	321	C
4	B1	327	G
4	B1	328	U
4	B1	329	G
4	B1	330	G
4	B1	332	G
4	B1	333	G
4	B1	337	C
4	B1	338	G
4	B1	339	A
4	B1	343	A
4	B1	344	U
4	B1	345	U
4	B1	346	C
4	B1	347	G
4	B1	350	C
4	B1	352	U
4	B1	353	C
4	B1	354	U
4	B1	356	C

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Mol	Chain	Res	Type
4	B1	357	C
4	B1	358	C
4	B1	359	U
4	B1	362	C
4	B1	363	A
4	B1	364	A
4	B1	368	U
4	B1	369	C
4	B1	371	A
4	B1	372	U
4	B1	375	U
4	B1	376	A
4	B1	378	U
4	B1	379	C
4	B1	380	G
4	B1	381	C
4	B1	382	C
4	B1	383	G
4	B1	384	U
4	B1	386	C
4	B1	389	A
4	B1	395	G
4	B1	399	C
4	B1	400	C
4	B1	407	G
4	B1	408	A
4	B1	409	C
4	B1	410	G
4	B1	412	G
4	B1	416	U
4	B1	421	G
4	B1	422	U
4	B1	423	U
4	B1	424	C
4	B1	426	A
4	B1	427	U
4	B1	429	C
4	B1	431	G
4	B1	433	A
4	B1	435	A
4	B1	436	G
4	B1	438	G

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Mol	Chain	Res	Type
4	B1	440	G
4	B1	441	C
4	B1	442	C
4	B1	443	U
4	B1	445	A
4	B1	447	A
4	B1	448	A
4	B1	449	A
4	B1	450	C
4	B1	451	G
4	B1	452	G
4	B1	454	U
4	B1	459	C
4	B1	460	A
4	B1	463	C
4	B1	464	A
4	B1	465	A
4	B1	466	G
4	B1	467	G
4	B1	468	A
4	B1	472	C
4	B1	473	A
4	B1	474	G
4	B1	475	C
4	B1	476	A
4	B1	477	G
4	B1	480	G
4	B1	482	G
4	B1	485	A
4	B1	487	U
4	B1	488	U
4	B1	489	A
4	B1	491	C
4	B1	492	C
4	B1	493	A
4	B1	495	U
4	B1	496	C
4	B1	497	C
4	B1	499	G
4	B1	500	A
4	B1	501	C
4	B1	502	C

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Mol	Chain	Res	Type
4	B1	503	C
4	B1	504	G
4	B1	506	G
4	B1	507	G
4	B1	509	G
4	B1	510	G
4	B1	512	A
4	B1	516	A
4	B1	517	C
4	B1	518	G
4	B1	523	A
4	B1	525	A
4	B1	526	A
4	B1	527	C
4	B1	529	A
4	B1	530	U
4	B1	533	A
4	B1	535	G
4	B1	536	A
4	B1	537	C
4	B1	538	U
4	B1	539	C
4	B1	541	U
4	B1	542	U
4	B1	543	C
4	B1	544	G
4	B1	545	A
4	B1	546	G
4	B1	547	G
4	B1	548	C
4	B1	549	C
4	B1	550	C
4	B1	553	U
4	B1	554	A
4	B1	555	A
4	B1	559	G
4	B1	560	A
4	B1	562	U
4	B1	564	A
4	B1	565	G
4	B1	566	U
4	B1	568	C

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Mol	Chain	Res	Type
4	B1	570	C
4	B1	571	U
4	B1	572	U
4	B1	573	U
4	B1	574	A
4	B1	575	A
4	B1	576	A
4	B1	577	U
4	B1	578	C
4	B1	579	C
4	B1	580	U
4	B1	582	U
4	B1	586	G
4	B1	587	A
4	B1	588	G
4	B1	589	G
4	B1	590	A
4	B1	591	U
4	B1	592	C
4	B1	593	C
4	B1	594	A
4	B1	595	U
4	B1	596	U
4	B1	597	G
4	B1	599	A
4	B1	600	G
4	B1	603	C
4	B1	604	A
4	B1	605	A
4	B1	606	G
4	B1	607	U
4	B1	608	C
4	B1	609	U
4	B1	612	U
4	B1	613	G
4	B1	614	C
4	B1	617	G
4	B1	619	A
4	B1	620	G
4	B1	621	C
4	B1	623	G
4	B1	624	C

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Mol	Chain	Res	Type
4	B1	627	U
4	B1	628	A
4	B1	629	A
4	B1	630	U
4	B1	631	U
4	B1	634	A
4	B1	638	C
4	B1	643	A
4	B1	644	G
4	B1	645	C
4	B1	647	U
4	B1	648	A
4	B1	650	A
4	B1	651	U
4	B1	652	U
4	B1	654	A
4	B1	655	A
4	B1	656	G
4	B1	657	U
4	B1	658	U
4	B1	659	G
4	B1	660	C
4	B1	661	U
4	B1	663	C
4	B1	664	A
4	B1	665	G
4	B1	666	U
4	B1	668	A
4	B1	669	A
4	B1	671	A
4	B1	672	A
4	B1	673	G
4	B1	674	C
4	B1	675	U
4	B1	676	C
4	B1	677	G
4	B1	679	A
4	B1	680	G
4	B1	681	U
4	B1	683	G
4	B1	684	G
4	B1	686	U

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Mol	Chain	Res	Type
4	B1	688	U
4	B1	689	U
4	B1	692	G
4	B1	694	G
4	B1	695	C
4	B1	742	U
4	B1	743	U
4	B1	744	G
4	B1	745	C
4	B1	746	C
4	B1	747	U
4	B1	748	C
4	B1	749	U
4	B1	750	C
4	B1	754	G
4	B1	755	C
4	B1	793	G
4	B1	795	A
4	B1	796	G
4	B1	797	C
4	B1	798	G
4	B1	799	U
4	B1	800	U
4	B1	801	U
4	B1	802	A
4	B1	803	C
4	B1	804	U
4	B1	807	G
4	B1	810	A
4	B1	812	A
4	B1	815	U
4	B1	816	A
4	B1	818	A
4	B1	819	G
4	B1	820	U
4	B1	821	G
4	B1	822	U
4	B1	823	U
4	B1	825	A
4	B1	827	A
4	B1	829	C
4	B1	830	A

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Mol	Chain	Res	Type
4	B1	831	G
4	B1	834	C
4	B1	835	C
4	B1	837	A
4	B1	838	G
4	B1	839	C
4	B1	840	C
4	B1	841	G
4	B1	842	C
4	B1	844	U
4	B1	845	G
4	B1	847	A
4	B1	848	U
4	B1	851	C
4	B1	852	G
4	B1	856	C
4	B1	861	A
4	B1	862	A
4	B1	863	U
4	B1	865	A
4	B1	869	A
4	B1	870	A
4	B1	873	G
4	B1	874	G
4	B1	875	A
4	B1	876	C
4	B1	886	A
4	B1	887	U
4	B1	888	U
4	B1	889	U
4	B1	890	U
4	B1	891	G
4	B1	896	U
4	B1	897	U
4	B1	898	U
4	B1	899	U
4	B1	900	C
4	B1	911	C
4	B1	912	C
4	B1	913	A
4	B1	914	U
4	B1	915	G

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Mol	Chain	Res	Type
4	B1	917	U
4	B1	918	U
4	B1	919	A
4	B1	920	A
4	B1	921	G
4	B1	924	G
4	B1	930	C
4	B1	933	G
4	B1	937	C
4	B1	938	A
4	B1	942	G
4	B1	943	U
4	B1	946	U
4	B1	950	C
4	B1	951	C
4	B1	953	C
4	B1	955	A
4	B1	956	G
4	B1	957	A
4	B1	958	G
4	B1	959	G
4	B1	960	U
4	B1	961	G
4	B1	962	A
4	B1	963	A
4	B1	966	U
4	B1	967	C
4	B1	968	U
4	B1	969	U
4	B1	970	G
4	B1	971	G
4	B1	972	A
4	B1	975	G
4	B1	977	C
4	B1	979	C
4	B1	980	A
4	B1	984	C
4	B1	985	G
4	B1	988	C
4	B1	990	A
4	B1	991	G
4	B1	995	G

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Mol	Chain	Res	Type
4	B1	999	G
4	B1	1000	C
4	B1	1004	U
4	B1	1006	C
4	B1	1007	C
4	B1	1009	A
4	B1	1011	A
4	B1	1015	U
4	B1	1016	U
4	B1	1017	U
4	B1	1018	U
4	B1	1019	C
4	B1	1020	A
4	B1	1021	U
4	B1	1022	U
4	B1	1023	A
4	B1	1024	A
4	B1	1029	G
4	B1	1033	G
4	B1	1034	A
4	B1	1035	A
4	B1	1036	A
4	B1	1040	G
4	B1	1044	G
4	B1	1045	U
4	B1	1049	A
4	B1	1050	A
4	B1	1051	G
4	B1	1052	A
4	B1	1053	C
4	B1	1055	A
4	B1	1057	C
4	B1	1058	A
4	B1	1060	A
4	B1	1061	U
4	B1	1062	A
4	B1	1064	C
4	B1	1065	G
4	B1	1067	C
4	B1	1076	G
4	B1	1083	A
4	B1	1084	A

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Mol	Chain	Res	Type
4	B1	1085	C
4	B1	1086	G
4	B1	1087	A
4	B1	1088	U
4	B1	1089	G
4	B1	1090	C
4	B1	1096	G
4	B1	1097	G
4	B1	1101	U
4	B1	1104	G
4	B1	1108	G
4	B1	1109	C
4	B1	1110	G
4	B1	1112	U
4	B1	1115	U
4	B1	1116	C
4	B1	1117	C
4	B1	1118	C
4	B1	1120	U
4	B1	1121	G
4	B1	1124	C
4	B1	1131	G
4	B1	1132	C
4	B1	1133	A
4	B1	1136	U
4	B1	1137	U
4	B1	1139	C
4	B1	1140	G
4	B1	1141	G
4	B1	1143	A
4	B1	1144	A
4	B1	1147	C
4	B1	1148	A
4	B1	1149	A
4	B1	1150	A
4	B1	1151	G
4	B1	1153	C
4	B1	1154	U
4	B1	1155	U
4	B1	1157	G
4	B1	1158	G
4	B1	1161	U

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Mol	Chain	Res	Type
4	B1	1163	C
4	B1	1164	G
4	B1	1165	G
4	B1	1166	G
4	B1	1169	G
4	B1	1170	A
4	B1	1171	G
4	B1	1176	G
4	B1	1182	A
4	B1	1183	A
4	B1	1186	U
4	B1	1189	A
4	B1	1194	A
4	B1	1195	A
4	B1	1198	G
4	B1	1199	A
4	B1	1200	A
4	B1	1203	G
4	B1	1205	C
4	B1	1206	G
4	B1	1207	G
4	B1	1215	C
4	B1	1216	C
4	B1	1217	A
4	B1	1218	C
4	B1	1219	C
4	B1	1221	G
4	B1	1223	A
4	B1	1224	G
4	B1	1235	G
4	B1	1236	G
4	B1	1237	C
4	B1	1242	U
4	B1	1243	U
4	B1	1245	G
4	B1	1246	A
4	B1	1247	C
4	B1	1248	U
4	B1	1249	C
4	B1	1251	A
4	B1	1253	A
4	B1	1254	C

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Mol	Chain	Res	Type
4	B1	1255	G
4	B1	1256	G
4	B1	1257	G
4	B1	1258	A
4	B1	1259	A
4	B1	1260	A
4	B1	1261	C
4	B1	1262	C
4	B1	1263	U
4	B1	1264	C
4	B1	1265	A
4	B1	1266	C
4	B1	1267	C
4	B1	1268	C
4	B1	1269	G
4	B1	1270	G
4	B1	1273	C
4	B1	1274	G
4	B1	1275	G
4	B1	1276	A
4	B1	1277	C
4	B1	1278	A
4	B1	1279	C
4	B1	1282	A
4	B1	1284	A
4	B1	1285	G
4	B1	1286	G
4	B1	1287	A
4	B1	1288	U
4	B1	1289	U
4	B1	1297	U
4	B1	1300	U
4	B1	1301	A
4	B1	1302	G
4	B1	1303	C
4	B1	1307	U
4	B1	1308	U
4	B1	1310	U
4	B1	1311	C
4	B1	1312	G
4	B1	1313	A
4	B1	1314	U

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Mol	Chain	Res	Type
4	B1	1315	U
4	B1	1317	C
4	B1	1318	G
4	B1	1323	U
4	B1	1324	G
4	B1	1325	G
4	B1	1326	U
4	B1	1327	G
4	B1	1330	G
4	B1	1331	C
4	B1	1332	A
4	B1	1333	U
4	B1	1335	G
4	B1	1343	U
4	B1	1344	A
4	B1	1345	G
4	B1	1347	U
4	B1	1349	G
4	B1	1351	G
4	B1	1352	G
4	B1	1354	G
4	B1	1357	A
4	B1	1358	U
4	B1	1359	U
4	B1	1360	U
4	B1	1363	C
4	B1	1364	U
4	B1	1368	U
4	B1	1369	A
4	B1	1371	U
4	B1	1372	U
4	B1	1378	A
4	B1	1381	G
4	B1	1382	A
4	B1	1384	C
4	B1	1389	C
4	B1	1390	U
4	B1	1392	U
4	B1	1393	G
4	B1	1394	G
4	B1	1395	C
4	B1	1397	U

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Mol	Chain	Res	Type
4	B1	1399	C
4	B1	1401	A
4	B1	1402	A
4	B1	1403	C
4	B1	1404	U
4	B1	1405	A
4	B1	1406	G
4	B1	1407	U
4	B1	1408	U
4	B1	1409	A
4	B1	1410	C
4	B1	1411	G
4	B1	1412	C
4	B1	1413	G
4	B1	1415	C
4	B1	1416	C
4	B1	1417	C
4	B1	1419	C
4	B1	1420	G
4	B1	1421	A
4	B1	1422	G
4	B1	1423	C
4	B1	1424	G
4	B1	1425	G
4	B1	1426	U
4	B1	1427	C
4	B1	1428	G
4	B1	1429	G
4	B1	1430	C
4	B1	1431	G
4	B1	1432	U
4	B1	1433	C
4	B1	1434	C
4	B1	1435	C
4	B1	1436	C
4	B1	1437	C
4	B1	1438	A
4	B1	1440	C
4	B1	1441	U
4	B1	1442	U
4	B1	1443	C
4	B1	1444	U

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Mol	Chain	Res	Type
4	B1	1445	U
4	B1	1446	A
4	B1	1447	G
4	B1	1448	A
4	B1	1451	G
4	B1	1453	C
4	B1	1454	A
4	B1	1455	A
4	B1	1456	G
4	B1	1457	U
4	B1	1461	G
4	B1	1462	U
4	B1	1463	U
4	B1	1464	C
4	B1	1465	A
4	B1	1466	G
4	B1	1467	C
4	B1	1471	C
4	B1	1472	C
4	B1	1473	G
4	B1	1475	G
4	B1	1476	A
4	B1	1477	U
4	B1	1478	U
4	B1	1480	A
4	B1	1481	G
4	B1	1482	C
4	B1	1484	A
4	B1	1486	A
4	B1	1489	A
4	B1	1490	G
4	B1	1493	C
4	B1	1494	U
4	B1	1495	G
4	B1	1496	U
4	B1	1498	A
4	B1	1500	G
4	B1	1505	U
4	B1	1507	G
4	B1	1508	A
4	B1	1509	U
4	B1	1510	G

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Mol	Chain	Res	Type
4	B1	1511	U
4	B1	1513	C
4	B1	1514	G
4	B1	1517	G
4	B1	1520	G
4	B1	1521	C
4	B1	1522	A
4	B1	1523	C
4	B1	1528	G
4	B1	1529	C
4	B1	1530	U
4	B1	1531	A
4	B1	1535	U
4	B1	1536	G
4	B1	1539	U
4	B1	1540	G
4	B1	1541	G
4	B1	1542	C
4	B1	1543	U
4	B1	1544	C
4	B1	1545	A
4	B1	1546	G
4	B1	1547	C
4	B1	1548	G
4	B1	1549	U
4	B1	1550	G
4	B1	1551	U
4	B1	1553	C
4	B1	1554	C
4	B1	1555	U
4	B1	1556	A
4	B1	1557	C
4	B1	1558	C
4	B1	1560	U
4	B1	1561	A
4	B1	1563	G
4	B1	1568	C
4	B1	1569	A
4	B1	1570	G
4	B1	1573	G
4	B1	1574	C
4	B1	1577	G

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Mol	Chain	Res	Type
4	B1	1578	U
4	B1	1579	A
4	B1	1580	A
4	B1	1581	C
4	B1	1582	C
4	B1	1585	U
4	B1	1586	U
4	B1	1587	G
4	B1	1588	A
4	B1	1589	A
4	B1	1591	C
4	B1	1595	U
4	B1	1597	C
4	B1	1598	G
4	B1	1599	U
4	B1	1600	G
4	B1	1601	A
4	B1	1602	U
4	B1	1603	G
4	B1	1604	G
4	B1	1605	G
4	B1	1607	A
4	B1	1609	C
4	B1	1610	G
4	B1	1612	G
4	B1	1614	A
4	B1	1615	U
4	B1	1617	G
4	B1	1618	C
4	B1	1620	A
4	B1	1621	U
4	B1	1622	U
4	B1	1623	A
4	B1	1624	U
4	B1	1625	U
4	B1	1627	C
4	B1	1631	U
4	B1	1632	G
4	B1	1635	C
4	B1	1636	G
4	B1	1637	A
4	B1	1638	G

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Mol	Chain	Res	Type
4	B1	1639	G
4	B1	1640	A
4	B1	1644	C
4	B1	1645	C
4	B1	1647	A
4	B1	1648	G
4	B1	1649	U
4	B1	1651	A
4	B1	1652	G
4	B1	1654	G
4	B1	1655	C
4	B1	1656	G
4	B1	1660	C
4	B1	1661	A
4	B1	1662	U
4	B1	1664	A
4	B1	1665	G
4	B1	1666	C
4	B1	1669	G
4	B1	1671	G
4	B1	1672	U
4	B1	1673	U
4	B1	1674	G
4	B1	1677	U
4	B1	1678	A
4	B1	1679	A
4	B1	1680	G
4	B1	1682	C
4	B1	1684	C
4	B1	1685	U
4	B1	1686	G
4	B1	1687	C
4	B1	1688	C
4	B1	1689	C
4	B1	1691	U
4	B1	1692	U
4	B1	1694	U
4	B1	1696	C
4	B1	1697	A
4	B1	1698	C
4	B1	1699	A
4	B1	1700	C

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Mol	Chain	Res	Type
4	B1	1701	C
4	B1	1702	G
4	B1	1703	C
4	B1	1707	U
4	B1	1708	C
4	B1	1709	G
4	B1	1710	C
4	B1	1714	U
4	B1	1719	A
4	B1	1720	U
4	B1	1721	U
4	B1	1722	G
4	B1	1723	G
4	B1	1728	U
4	B1	1729	U
4	B1	1731	A
4	B1	1732	G
4	B1	1735	A
4	B1	1744	G
4	B1	1745	A
4	B1	1747	C
4	B1	1749	G
4	B1	1751	C
4	B1	1752	C
4	B1	1760	G
4	B1	1761	U
4	B1	1764	G
4	B1	1765	C
4	B1	1767	C
4	B1	1768	A
4	B1	1770	G
4	B1	1775	C
4	B1	1781	A
4	B1	1782	G
4	B1	1783	C
4	B1	1788	A
4	B1	1789	G
4	B1	1790	A
4	B1	1792	G
4	B1	1794	C
4	B1	1798	C
4	B1	1800	A

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Mol	Chain	Res	Type
4	B1	1809	A
4	B1	1811	C
4	B1	1813	A
4	B1	1817	G
4	B1	1819	A
4	B1	1823	A
4	B1	1824	A
4	B1	1825	A
4	B1	1826	G
4	B1	1827	U
4	B1	1829	G
4	B1	1831	A
4	B1	1832	A
4	B1	1833	C
4	B1	1834	A
4	B1	1835	A
4	B1	1836	G
4	B1	1837	G
4	B1	1838	U
4	B1	1839	U
4	B1	1841	C
4	B1	1843	G
4	B1	1844	U
4	B1	1846	G
4	B1	1847	G
4	B1	1849	G
4	B1	1850	A
4	B1	1851	A
4	B1	1852	C
4	B1	1856	C
4	B1	1857	G
4	B1	1860	A
4	B1	1861	G
4	B1	1862	G
4	B1	1863	A
4	B1	1864	U
4	B1	1865	C
4	B1	1866	A
4	B1	1867	U
4	B1	1868	U
4	B1	1869	A
81	A2	2	G

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Mol	Chain	Res	Type
81	A2	3	C
81	A2	5	A
81	A2	6	C
81	A2	8	U
81	A2	9	C
81	A2	11	G
81	A2	12	A
81	A2	13	U
81	A2	14	C
81	A2	15	A
81	A2	18	C
81	A2	19	G
81	A2	20	U
81	A2	21	G
81	A2	22	G
81	A2	24	G
81	A2	25	A
81	A2	26	C
81	A2	27	C
81	A2	31	U
81	A2	33	A
81	A2	34	A
81	A2	36	U
81	A2	37	U
81	A2	39	A
81	A2	41	C
81	A2	42	A
81	A2	45	U
81	A2	46	U
81	A2	47	A
81	A2	48	G
81	A2	49	U
81	A2	53	C
81	A2	55	G
81	A2	56	A
81	A2	57	G
81	A2	58	G
81	A2	59	A
81	A2	61	A
81	A2	64	A
81	A2	65	A
81	A2	66	A

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Mol	Chain	Res	Type
81	A2	67	C
81	A2	68	U
81	A2	69	A
81	A2	70	A
81	A2	71	C
81	A2	72	C
81	A2	73	A
81	A2	74	G
81	A2	75	G
81	A2	76	A
81	A2	77	U
81	A2	80	C
81	A2	84	A
81	A2	85	G
81	A2	86	U
81	A2	88	A
81	A2	91	G
81	A2	92	C
81	A2	93	G
81	A2	94	A
81	A2	95	G
81	A2	96	U
81	A2	97	G
81	A2	98	A
81	A2	101	A
81	A2	102	G
81	A2	103	G
81	A2	104	G
81	A2	105	A
81	A2	107	G
81	A2	108	A
81	A2	109	G
81	A2	112	C
81	A2	113	A
81	A2	115	C
81	A2	119	G
81	A2	120	A
81	A2	121	A
81	A2	122	U
81	A2	123	C
81	A2	130	C
81	A2	132	G

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Mol	Chain	Res	Type
81	A2	133	C
81	A2	134	G
81	A2	135	G
81	A2	137	G
81	A2	139	G
81	A2	140	C
81	A2	143	G
81	A2	148	G
81	A2	149	U
81	A2	155	A
81	A2	156	C
81	A2	157	G
81	A2	158	G
81	A2	165	C
81	A2	168	U
81	A2	169	C
81	A2	170	C
81	A2	171	C
81	A2	173	G
81	A2	175	C
81	A2	177	C
81	A2	178	C
81	A2	179	G
81	A2	180	C
81	A2	181	U
81	A2	182	C
81	A2	183	G
81	A2	186	G
81	A2	187	G
81	A2	188	G
81	A2	189	G
81	A2	191	C
81	A2	193	C
81	A2	194	A
81	A2	195	A
81	A2	196	G
81	A2	197	U
81	A2	198	C
81	A2	199	C
81	A2	201	U
81	A2	203	U
81	A2	204	G

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Mol	Chain	Res	Type
81	A2	207	C
81	A2	208	G
81	A2	212	C
81	A2	213	C
81	A2	215	A
81	A2	216	G
81	A2	217	C
81	A2	219	C
81	A2	220	G
81	A2	221	U
81	A2	222	G
81	A2	223	G
81	A2	224	A
81	A2	226	G
81	A2	227	G
81	A2	229	G
81	A2	230	U
81	A2	231	G
81	A2	232	A
81	A2	233	G
81	A2	234	G
81	A2	235	C
81	A2	236	C
81	A2	238	G
81	A2	239	U
81	A2	240	A
81	A2	241	G
81	A2	242	C
81	A2	243	G
81	A2	246	C
81	A2	247	G
81	A2	251	C
81	A2	252	G
81	A2	253	C
81	A2	254	G
81	A2	255	C
81	A2	256	C
81	A2	258	G
81	A2	259	G
81	A2	266	C
81	A2	267	C
81	A2	268	G

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Mol	Chain	Res	Type
81	A2	269	G
81	A2	270	A
81	A2	271	G
81	A2	279	G
81	A2	284	G
81	A2	285	G
81	A2	286	A
81	A2	287	A
81	A2	288	U
81	A2	289	G
81	A2	291	A
81	A2	292	G
81	A2	293	C
81	A2	295	C
81	A2	296	A
81	A2	297	A
81	A2	299	G
81	A2	300	C
81	A2	301	G
81	A2	303	G
81	A2	305	G
81	A2	307	U
81	A2	308	A
81	A2	309	A
81	A2	312	U
81	A2	313	C
81	A2	314	C
81	A2	317	C
81	A2	319	A
81	A2	320	A
81	A2	321	G
81	A2	322	G
81	A2	325	A
81	A2	326	A
81	A2	327	A
81	A2	328	U
81	A2	329	A
81	A2	331	C
81	A2	332	G
81	A2	333	G
81	A2	334	C
81	A2	335	A

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Mol	Chain	Res	Type
81	A2	337	G
81	A2	338	A
81	A2	340	A
81	A2	341	C
81	A2	342	C
81	A2	343	G
81	A2	344	A
81	A2	345	U
81	A2	349	C
81	A2	350	A
81	A2	351	A
81	A2	353	A
81	A2	354	A
81	A2	355	G
81	A2	357	A
81	A2	363	A
81	A2	366	G
81	A2	369	A
81	A2	370	G
81	A2	372	U
81	A2	373	G
81	A2	376	A
81	A2	377	A
81	A2	378	G
81	A2	379	A
81	A2	380	A
81	A2	381	C
81	A2	382	U
81	A2	383	U
81	A2	384	U
81	A2	385	G
81	A2	386	A
81	A2	387	A
81	A2	389	A
81	A2	391	A
81	A2	393	A
81	A2	394	G
81	A2	395	U
81	A2	396	U
81	A2	397	C
81	A2	398	A
81	A2	399	A

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Mol	Chain	Res	Type
81	A2	400	G
81	A2	401	A
81	A2	402	G
81	A2	403	G
81	A2	404	G
81	A2	405	C
81	A2	406	G
81	A2	408	G
81	A2	411	A
81	A2	421	G
81	A2	423	U
81	A2	424	A
81	A2	425	A
81	A2	426	A
81	A2	431	U
81	A2	432	G
81	A2	433	G
81	A2	434	G
81	A2	435	G
81	A2	436	U
81	A2	437	C
81	A2	439	G
81	A2	440	C
81	A2	441	G
81	A2	442	C
81	A2	443	A
81	A2	444	G
81	A2	445	U
81	A2	446	C
81	A2	455	G
81	A2	456	G
81	A2	457	A
81	A2	458	U
81	A2	459	U
81	A2	460	C
81	A2	461	A
81	A2	462	A
81	A2	463	C
81	A2	464	C
81	A2	465	C
81	A2	466	G
81	A2	469	G

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Mol	Chain	Res	Type
81	A2	470	G
81	A2	471	C
81	A2	472	G
81	A2	473	G
81	A2	474	G
81	A2	475	U
81	A2	476	C
81	A2	477	C
81	A2	478	G
81	A2	479	G
81	A2	482	G
81	A2	483	U
81	A2	484	G
81	A2	485	U
81	A2	488	G
81	A2	489	C
81	A2	490	G
81	A2	491	G
81	A2	508	C
81	A2	510	C
81	A2	634	C
81	A2	636	G
81	A2	640	A
81	A2	641	C
81	A2	642	C
81	A2	643	G
81	A2	644	U
81	A2	650	G
81	A2	654	C
81	A2	655	G
81	A2	656	G
81	A2	657	C
81	A2	658	G
81	A2	659	A
81	A2	666	G
81	A2	671	C
81	A2	674	G
81	A2	675	C
81	A2	676	G
81	A2	677	C
81	A2	678	A
81	A2	679	U

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Mol	Chain	Res	Type
81	A2	680	U
81	A2	691	G
81	A2	692	C
81	A2	701	C
81	A2	703	G
81	A2	706	C
81	A2	708	G
81	A2	709	G
81	A2	710	G
81	A2	712	C
81	A2	713	G
81	A2	714	G
81	A2	717	G
81	A2	718	G
81	A2	719	G
81	A2	720	A
81	A2	721	A
81	A2	722	G
81	A2	723	G
81	A2	724	C
81	A2	725	C
81	A2	726	C
81	A2	727	G
81	A2	728	G
81	A2	731	G
81	A2	733	G
81	A2	734	A
81	A2	736	G
81	A2	737	G
81	A2	744	G
81	A2	745	G
81	A2	890	C
81	A2	892	G
81	A2	893	A
81	A2	894	G
81	A2	895	U
81	A2	896	G
81	A2	897	U
81	A2	898	U
81	A2	899	A
81	A2	900	C
81	A2	901	A

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Mol	Chain	Res	Type
81	A2	903	C
81	A2	911	G
81	A2	912	C
81	A2	913	A
81	A2	914	G
81	A2	915	C
81	A2	916	A
81	A2	917	G
81	A2	918	C
81	A2	919	A
81	A2	920	C
81	A2	921	U
81	A2	925	C
81	A2	926	G
81	A2	927	A
81	A2	928	A
81	A2	929	U
81	A2	930	C
81	A2	934	G
81	A2	938	C
81	A2	939	G
81	A2	940	A
81	A2	941	G
81	A2	942	G
81	A2	943	G
81	A2	944	A
81	A2	945	G
81	A2	946	C
81	A2	947	G
81	A2	948	A
81	A2	950	A
81	A2	951	C
81	A2	957	G
81	A2	958	C
81	A2	959	C
81	A2	960	G
81	A2	961	C
81	A2	962	G
81	A2	963	C
81	A2	964	U
81	A2	965	C
81	A2	966	U

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Mol	Chain	Res	Type
81	A2	967	C
81	A2	968	C
81	A2	969	C
81	A2	970	C
81	A2	971	C
81	A2	972	C
81	A2	973	U
81	A2	974	C
81	A2	975	C
81	A2	976	C
81	A2	977	G
81	A2	978	G
81	A2	1047	G
81	A2	1048	G
81	A2	1049	G
81	A2	1050	G
81	A2	1051	C
81	A2	1052	C
81	A2	1053	G
81	A2	1055	G
81	A2	1056	C
81	A2	1058	A
81	A2	1059	C
81	A2	1060	C
81	A2	1062	C
81	A2	1064	C
81	A2	1066	C
81	A2	1077	C
81	A2	1079	C
81	A2	1080	U
81	A2	1081	C
81	A2	1082	U
81	A2	1083	C
81	A2	1084	C
81	A2	1085	C
81	A2	1086	A
81	A2	1087	C
81	A2	1089	C
81	A2	1090	C
81	A2	1096	C
81	A2	1142	G
81	A2	1143	G

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Mol	Chain	Res	Type
81	A2	1144	G
81	A2	1145	G
81	A2	1146	G
81	A2	1147	C
81	A2	1148	G
81	A2	1149	G
81	A2	1159	U
81	A2	1160	C
81	A2	1161	C
81	A2	1162	C
81	A2	1165	G
81	A2	1173	C
81	A2	1174	G
81	A2	1176	G
81	A2	1177	C
81	A2	1178	G
81	A2	1179	G
81	A2	1186	C
81	A2	1187	C
81	A2	1188	G
81	A2	1189	U
81	A2	1190	C
81	A2	1192	G
81	A2	1193	G
81	A2	1194	C
81	A2	1195	C
81	A2	1196	C
81	A2	1197	G
81	A2	1198	G
81	A2	1199	G
81	A2	1201	G
81	A2	1202	A
81	A2	1204	G
81	A2	1205	U
81	A2	1206	U
81	A2	1207	C
81	A2	1208	U
81	A2	1209	C
81	A2	1210	U
81	A2	1212	G
81	A2	1214	G
81	A2	1215	G

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Mol	Chain	Res	Type
81	A2	1216	C
81	A2	1217	C
81	A2	1218	A
81	A2	1219	C
81	A2	1220	G
81	A2	1221	C
81	A2	1223	C
81	A2	1224	G
81	A2	1225	C
81	A2	1242	G
81	A2	1245	G
81	A2	1246	G
81	A2	1247	C
81	A2	1248	G
81	A2	1249	G
81	A2	1250	A
81	A2	1251	G
81	A2	1254	A
81	A2	1255	G
81	A2	1256	C
81	A2	1258	C
81	A2	1259	A
81	A2	1262	G
81	A2	1263	G
81	A2	1264	G
81	A2	1267	G
81	A2	1268	G
81	A2	1273	G
81	A2	1274	A
81	A2	1276	G
81	A2	1277	U
81	A2	1279	G
81	A2	1280	G
81	A2	1281	C
81	A2	1282	U
81	A2	1283	A
81	A2	1284	C
81	A2	1285	C
81	A2	1287	A
81	A2	1289	C
81	A2	1290	C
81	A2	1292	A

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Mol	Chain	Res	Type
81	A2	1293	C
81	A2	1294	C
81	A2	1297	U
81	A2	1299	U
81	A2	1300	U
81	A2	1301	G
81	A2	1302	A
81	A2	1303	A
81	A2	1305	C
81	A2	1306	A
81	A2	1308	G
81	A2	1313	A
81	A2	1314	A
81	A2	1318	G
81	A2	1323	A
81	A2	1324	C
81	A2	1326	C
81	A2	1329	G
81	A2	1332	C
81	A2	1334	A
81	A2	1336	U
81	A2	1337	C
81	A2	1338	G
81	A2	1339	G
81	A2	1340	G
81	A2	1341	G
81	A2	1349	C
81	A2	1350	G
81	A2	1351	A
81	A2	1354	G
81	A2	1356	C
81	A2	1357	G
81	A2	1358	C
81	A2	1359	C
81	A2	1360	G
81	A2	1361	U
81	A2	1366	C
81	A2	1367	A
81	A2	1368	A
81	A2	1372	A
81	A2	1374	G
81	A2	1376	G

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Mol	Chain	Res	Type
81	A2	1377	A
81	A2	1378	A
81	A2	1384	G
81	A2	1388	G
81	A2	1389	C
81	A2	1390	U
81	A2	1392	G
81	A2	1393	C
81	A2	1398	C
81	A2	1399	G
81	A2	1400	A
81	A2	1401	G
81	A2	1402	G
81	A2	1406	G
81	A2	1409	C
81	A2	1410	C
81	A2	1412	G
81	A2	1416	C
81	A2	1417	C
81	A2	1418	U
81	A2	1419	C
81	A2	1420	U
81	A2	1421	C
81	A2	1422	C
81	A2	1423	A
81	A2	1424	G
81	A2	1426	C
81	A2	1428	G
81	A2	1433	G
81	A2	1434	G
81	A2	1436	G
81	A2	1438	A
81	A2	1444	G
81	A2	1445	G
81	A2	1446	C
81	A2	1449	G
81	A2	1452	U
81	A2	1454	G
81	A2	1455	C
81	A2	1459	C
81	A2	1460	C
81	A2	1461	G

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Mol	Chain	Res	Type
81	A2	1463	G
81	A2	1464	C
81	A2	1465	C
81	A2	1466	G
81	A2	1467	G
81	A2	1468	G
81	A2	1471	G
81	A2	1476	A
81	A2	1477	G
81	A2	1478	C
81	A2	1479	A
81	A2	1480	C
81	A2	1481	G
81	A2	1482	A
81	A2	1483	G
81	A2	1484	C
81	A2	1487	A
81	A2	1488	C
81	A2	1493	U
81	A2	1495	G
81	A2	1498	C
81	A2	1499	C
81	A2	1500	C
81	A2	1502	A
81	A2	1503	A
81	A2	1504	A
81	A2	1505	G
81	A2	1513	A
81	A2	1518	G
81	A2	1520	C
81	A2	1521	U
81	A2	1522	G
81	A2	1523	G
81	A2	1524	G
81	A2	1526	A
81	A2	1530	C
81	A2	1531	G
81	A2	1532	A
81	A2	1533	A
81	A2	1537	A
81	A2	1540	G
81	A2	1541	G

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Mol	Chain	Res	Type
81	A2	1542	A
81	A2	1543	A
81	A2	1544	A
81	A2	1545	C
81	A2	1550	G
81	A2	1553	G
81	A2	1554	A
81	A2	1555	G
81	A2	1556	G
81	A2	1557	U
81	A2	1558	C
81	A2	1561	U
81	A2	1567	U
81	A2	1570	U
81	A2	1571	G
81	A2	1572	A
81	A2	1573	C
81	A2	1574	G
81	A2	1575	U
81	A2	1576	G
81	A2	1580	A
81	A2	1582	C
81	A2	1583	G
81	A2	1585	U
81	A2	1590	C
81	A2	1591	G
81	A2	1593	C
81	A2	1595	U
81	A2	1596	G
81	A2	1597	G
81	A2	1599	U
81	A2	1600	A
81	A2	1603	G
81	A2	1604	G
81	A2	1607	C
81	A2	1609	A
81	A2	1610	A
81	A2	1611	A
81	A2	1612	G
81	A2	1613	A
81	A2	1614	C
81	A2	1615	U

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Mol	Chain	Res	Type
81	A2	1616	A
81	A2	1617	A
81	A2	1620	G
81	A2	1623	C
81	A2	1629	A
81	A2	1630	G
81	A2	1631	U
81	A2	1633	G
81	A2	1635	U
81	A2	1637	G
81	A2	1639	U
81	A2	1640	C
81	A2	1644	C
81	A2	1648	A
81	A2	1649	G
81	A2	1650	U
81	A2	1651	U
81	A2	1653	C
81	A2	1654	C
81	A2	1655	C
81	A2	1656	U
81	A2	1657	C
81	A2	1658	A
81	A2	1659	G
81	A2	1660	G
81	A2	1661	A
81	A2	1663	A
81	A2	1666	U
81	A2	1667	G
81	A2	1669	C
81	A2	1671	C
81	A2	1672	U
81	A2	1673	C
81	A2	1701	C
81	A2	1703	G
81	A2	1704	U
81	A2	1706	U
81	A2	1709	U
81	A2	1710	C
81	A2	1711	C
81	A2	1712	G
81	A2	1713	G

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Mol	Chain	Res	Type
81	A2	1714	U
81	A2	1715	A
81	A2	1719	C
81	A2	1721	A
81	A2	1725	A
81	A2	1726	U
81	A2	1727	U
81	A2	1729	G
81	A2	1730	A
81	A2	1732	G
81	A2	1733	U
81	A2	1734	C
81	A2	1736	U
81	A2	1737	G
81	A2	1743	G
81	A2	1744	A
81	A2	1745	A
81	A2	1746	A
81	A2	1747	C
81	A2	1749	A
81	A2	1752	U
81	A2	1754	A
81	A2	1755	A
81	A2	1757	C
81	A2	1758	U
81	A2	1759	A
81	A2	1760	U
81	A2	1761	U
81	A2	1766	A
81	A2	1768	C
81	A2	1772	A
81	A2	1773	A
81	A2	1775	U
81	A2	1779	U
81	A2	1780	A
81	A2	1781	A
81	A2	1783	A
81	A2	1784	A
81	A2	1785	G
81	A2	1786	C
81	A2	1787	C
81	A2	1789	G

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Mol	Chain	Res	Type
81	A2	1790	G
81	A2	1792	U
81	A2	1793	C
81	A2	1794	G
81	A2	1795	C
81	A2	1796	U
81	A2	1797	G
81	A2	1798	G
81	A2	1799	C
81	A2	1800	G
81	A2	1801	U
81	A2	1802	G
81	A2	1804	A
81	A2	1805	G
81	A2	1806	C
81	A2	1809	G
81	A2	1810	G
81	A2	1811	G
81	A2	1813	G
81	A2	1815	A
81	A2	1816	A
81	A2	1818	G
81	A2	1820	G
81	A2	1821	A
81	A2	1822	G
81	A2	1825	C
81	A2	1829	G
81	A2	1832	G
81	A2	1833	G
81	A2	1835	C
81	A2	1836	A
81	A2	1839	U
81	A2	1840	U
81	A2	1844	U
81	A2	1845	A
81	A2	1846	A
81	A2	1847	G
81	A2	1848	C
81	A2	1849	A
81	A2	1852	A
81	A2	1853	C
81	A2	1855	G

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Mol	Chain	Res	Type
81	A2	1856	G
81	A2	1857	C
81	A2	1859	C
81	A2	1860	U
81	A2	1861	G
81	A2	1865	G
81	A2	1867	U
81	A2	1868	G
81	A2	1869	A
81	A2	1870	A
81	A2	1871	C
81	A2	1873	G
81	A2	1874	A
81	A2	1875	A
81	A2	1876	C
81	A2	1877	G
81	A2	1879	C
81	A2	1880	G
81	A2	1881	G
81	A2	1883	U
81	A2	1884	U
81	A2	1885	A
81	A2	1886	A
81	A2	1891	C
81	A2	1893	C
81	A2	1894	G
81	A2	1895	A
81	A2	1896	U
81	A2	1897	G
81	A2	1898	C
81	A2	1899	C
81	A2	1900	G
81	A2	1901	A
81	A2	1903	G
81	A2	1911	G
81	A2	1912	A
81	A2	1917	A
81	A2	1918	G
81	A2	1919	A
81	A2	1920	A
81	A2	1924	G
81	A2	1925	U

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Mol	Chain	Res	Type
81	A2	1926	G
81	A2	1929	G
81	A2	1930	G
81	A2	1931	U
81	A2	1935	U
81	A2	1936	A
81	A2	1939	G
81	A2	1941	C
81	A2	1942	A
81	A2	2000	C
81	A2	2001	C
81	A2	2002	G
81	A2	2004	A
81	A2	2005	U
81	A2	2006	C
81	A2	2007	A
81	A2	2009	C
81	A2	2010	U
81	A2	2011	A
81	A2	2012	G
81	A2	2013	C
81	A2	2014	C
81	A2	2016	U
81	A2	2020	A
81	A2	2022	U
81	A2	2023	G
81	A2	2024	G
81	A2	2025	A
81	A2	2026	U
81	A2	2027	G
81	A2	2029	C
81	A2	2030	G
81	A2	2031	C
81	A2	2032	U
81	A2	2033	G
81	A2	2035	A
81	A2	2037	C
81	A2	2039	U
81	A2	2040	C
81	A2	2041	G
81	A2	2042	G
81	A2	2043	G

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Mol	Chain	Res	Type
81	A2	2044	C
81	A2	2046	C
81	A2	2047	A
81	A2	2048	U
81	A2	2049	A
81	A2	2050	C
81	A2	2052	C
81	A2	2056	C
81	A2	2057	G
81	A2	2061	C
81	A2	2062	C
81	A2	2064	G
81	A2	2251	G
81	A2	2254	G
81	A2	2255	A
81	A2	2257	U
81	A2	2258	A
81	A2	2259	G
81	A2	2260	G
81	A2	2263	G
81	A2	2264	G
81	A2	2265	C
81	A2	2266	C
81	A2	2267	G
81	A2	2268	C
81	A2	2269	U
81	A2	2270	G
81	A2	2271	C
81	A2	2273	G
81	A2	2274	U
81	A2	2275	G
81	A2	2276	A
81	A2	2277	G
81	A2	2279	C
81	A2	2280	U
81	A2	2282	G
81	A2	2283	A
81	A2	2284	A
81	A2	2288	U
81	A2	2289	A
81	A2	2290	G
81	A2	2293	C

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Mol	Chain	Res	Type
81	A2	2294	G
81	A2	2295	C
81	A2	2296	G
81	A2	2297	G
81	A2	2298	G
81	A2	2301	C
81	A2	2302	G
81	A2	2304	G
81	A2	2306	G
81	A2	2307	G
81	A2	2308	A
81	A2	2309	G
81	A2	2310	G
81	A2	2311	C
81	A2	2315	C
81	A2	2320	G
81	A2	2321	U
81	A2	2322	G
81	A2	2325	G
81	A2	2326	A
81	A2	2328	C
81	A2	2329	U
81	A2	2331	G
81	A2	2332	G
81	A2	2333	U
81	A2	2334	G
81	A2	2337	A
81	A2	2344	A
81	A2	2345	A
81	A2	2346	U
81	A2	2347	A
81	A2	2348	U
81	A2	2351	A
81	A2	2353	A
81	A2	2354	C
81	A2	2355	G
81	A2	2358	A
81	A2	2359	A
81	A2	2360	C
81	A2	2361	U
81	A2	2362	U
81	A2	2367	G

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Mol	Chain	Res	Type
81	A2	2368	G
81	A2	2369	C
81	A2	2370	C
81	A2	2371	G
81	A2	2372	A
81	A2	2373	A
81	A2	2374	G
81	A2	2376	G
81	A2	2379	G
81	A2	2380	A
81	A2	2381	A
81	A2	2384	G
81	A2	2385	U
81	A2	2386	U
81	A2	2387	C
81	A2	2388	C
81	A2	2392	U
81	A2	2393	G
81	A2	2394	A
81	A2	2395	A
81	A2	2396	C
81	A2	2397	A
81	A2	2398	G
81	A2	2399	C
81	A2	2400	A
81	A2	2402	U
81	A2	2403	U
81	A2	2405	A
81	A2	2407	C
81	A2	2411	G
81	A2	2412	G
81	A2	2414	C
81	A2	2415	A
81	A2	2416	G
81	A2	2418	C
81	A2	2421	U
81	A2	2424	U
81	A2	2426	A
81	A2	2427	G
81	A2	2429	G
81	A2	2430	A
81	A2	2431	U

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Mol	Chain	Res	Type
81	A2	2433	G
81	A2	2435	C
81	A2	2436	G
81	A2	2437	A
81	A2	2440	G
81	A2	2442	C
81	A2	2443	G
81	A2	2444	U
81	A2	2445	U
81	A2	2446	C
81	A2	2447	C
81	A2	2448	G
81	A2	2449	A
81	A2	2450	A
81	A2	2451	G
81	A2	2452	G
81	A2	2453	G
81	A2	2455	C
81	A2	2456	G
81	A2	2457	G
81	A2	2458	G
81	A2	2462	U
81	A2	2463	G
81	A2	2464	G
81	A2	2465	C
81	A2	2466	C
81	A2	2467	U
81	A2	2468	C
81	A2	2469	C
81	A2	2477	U
81	A2	2479	G
81	A2	2480	G
81	A2	2481	C
81	A2	2482	C
81	A2	2483	G
81	A2	2484	A
81	A2	2486	C
81	A2	2490	A
81	A2	2492	G
81	A2	2494	A
81	A2	2496	U
81	A2	2499	G

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Mol	Chain	Res	Type
81	A2	2502	U
81	A2	2503	C
81	A2	2504	A
81	A2	2507	U
81	A2	2508	C
81	A2	2509	C
81	A2	2510	C
81	A2	2511	C
81	A2	2519	G
81	A2	2521	G
81	A2	2524	G
81	A2	2525	C
81	A2	2526	G
81	A2	2527	G
81	A2	2528	A
81	A2	2529	G
81	A2	2531	U
81	A2	2532	G
81	A2	2537	C
81	A2	2538	C
81	A2	2544	G
81	A2	2548	C
81	A2	2549	C
81	A2	2550	A
81	A2	2552	U
81	A2	2553	G
81	A2	2554	C
81	A2	2556	G
81	A2	2557	U
81	A2	2559	A
81	A2	2560	C
81	A2	2561	G
81	A2	2562	C
81	A2	2563	G
81	A2	2564	A
81	A2	2565	C
81	A2	2566	C
81	A2	2567	G
81	A2	2574	G
81	A2	2575	A
81	A2	2576	G
81	A2	2577	A

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Mol	Chain	Res	Type
81	A2	2578	A
81	A2	2579	G
81	A2	2582	G
81	A2	2587	G
81	A2	2588	A
81	A2	2589	G
81	A2	2590	C
81	A2	2592	C
81	A2	2593	C
81	A2	2594	G
81	A2	2596	G
81	A2	2597	G
81	A2	2598	A
81	A2	2599	G
81	A2	2601	G
81	A2	2602	U
81	A2	2603	U
81	A2	2604	C
81	A2	2607	U
81	A2	2608	U
81	A2	2609	U
81	A2	2613	U
81	A2	2624	A
81	A2	2625	G
81	A2	2627	G
81	A2	2628	C
81	A2	2629	G
81	A2	2630	C
81	A2	2631	C
81	A2	2632	C
81	A2	2633	U
81	A2	2635	G
81	A2	2636	A
81	A2	2639	G
81	A2	2641	G
81	A2	2642	U
81	A2	2646	C
81	A2	2647	C
81	A2	2648	C
81	A2	2651	A
81	A2	2652	G
81	A2	2653	A

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Mol	Chain	Res	Type
81	A2	2654	G
81	A2	2658	G
81	A2	2661	C
81	A2	2663	G
81	A2	2664	U
81	A2	2665	G
81	A2	2666	C
81	A2	2669	U
81	A2	2671	G
81	A2	2672	A
81	A2	2673	A
81	A2	2674	A
81	A2	2676	C
81	A2	2677	G
81	A2	2678	U
81	A2	2682	G
81	A2	2683	G
81	A2	2684	U
81	A2	2685	U
81	A2	2686	C
81	A2	2687	C
81	A2	2689	G
81	A2	2692	G
81	A2	2696	C
81	A2	2698	G
81	A2	2700	U
81	A2	2701	G
81	A2	2702	A
81	A2	2703	G
81	A2	2704	C
81	A2	2705	U
81	A2	2706	C
81	A2	2707	U
81	A2	2709	G
81	A2	2710	C
81	A2	2711	U
81	A2	2715	C
81	A2	2716	C
81	A2	2717	U
81	A2	2718	U
81	A2	2719	G
81	A2	2720	A

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Mol	Chain	Res	Type
81	A2	2729	G
81	A2	2731	G
81	A2	2732	A
81	A2	2733	G
81	A2	2734	A
81	A2	2735	G
81	A2	2736	G
81	A2	2739	G
81	A2	2740	U
81	A2	2741	A
81	A2	2742	A
81	A2	2745	C
81	A2	2746	U
81	A2	2750	G
81	A2	2751	C
81	A2	2752	C
81	A2	2755	G
81	A2	2759	U
81	A2	2761	C
81	A2	2762	C
81	A2	2764	A
81	A2	2765	U
81	A2	2766	A
81	A2	2767	U
81	A2	2771	C
81	A2	2772	A
81	A2	2774	C
81	A2	2775	A
81	A2	2778	U
81	A2	2780	U
81	A2	2782	C
81	A2	2783	A
81	A2	2789	A
81	A2	2791	C
81	A2	2792	A
81	A2	2794	C
81	A2	2796	U
81	A2	2801	C
81	A2	2802	A
81	A2	2803	U
81	A2	2804	G
81	A2	2805	U

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Mol	Chain	Res	Type
81	A2	2806	U
81	A2	2807	G
81	A2	2810	A
81	A2	2811	C
81	A2	2812	A
81	A2	2815	G
81	A2	2817	A
81	A2	2818	G
81	A2	2823	G
81	A2	2826	A
81	A2	2827	A
81	A2	2828	G
81	A2	2831	G
81	A2	2832	G
81	A2	2833	C
81	A2	2835	A
81	A2	2837	C
81	A2	2839	G
81	A2	2840	G
81	A2	2843	C
81	A2	2844	C
81	A2	2845	G
81	A2	2846	U
81	A2	2847	A
81	A2	2848	A
81	A2	2852	C
81	A2	2853	G
81	A2	2854	G
81	A2	2857	U
81	A2	2858	A
81	A2	2860	G
81	A2	2861	G
81	A2	2863	U
81	A2	2864	U
81	A2	2867	C
81	A2	2868	U
81	A2	2869	C
81	A2	2871	A
81	A2	2873	G
81	A2	2877	U
81	A2	2878	G
81	A2	2879	G

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Mol	Chain	Res	Type
81	A2	3567	C
81	A2	3568	A
81	A2	3570	C
81	A2	3574	C
81	A2	3575	U
81	A2	3578	G
81	A2	3579	A
81	A2	3583	G
81	A2	3584	G
81	A2	3585	U
81	A2	3586	G
81	A2	3587	C
81	A2	3588	G
81	A2	3590	A
81	A2	3594	G
81	A2	3595	G
81	A2	3597	G
81	A2	3599	A
81	A2	3600	U
81	A2	3602	C
81	A2	3603	G
81	A2	3604	A
81	A2	3605	C
81	A2	3610	U
81	A2	3611	A
81	A2	3612	A
81	A2	3613	U
81	A2	3617	A
81	A2	3618	A
81	A2	3619	C
81	A2	3622	A
81	A2	3624	C
81	A2	3626	U
81	A2	3627	C
81	A2	3631	A
81	A2	3634	G
81	A2	3635	C
81	A2	3636	C
81	A2	3641	G
81	A2	3642	C
81	A2	3643	G
81	A2	3646	U

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Mol	Chain	Res	Type
81	A2	3649	U
81	A2	3650	G
81	A2	3651	A
81	A2	3652	C
81	A2	3653	G
81	A2	3654	C
81	A2	3655	G
81	A2	3657	U
81	A2	3658	G
81	A2	3661	A
81	A2	3662	U
81	A2	3664	U
81	A2	3665	C
81	A2	3666	U
81	A2	3667	G
81	A2	3668	C
81	A2	3675	C
81	A2	3676	U
81	A2	3678	U
81	A2	3679	G
81	A2	3680	A
81	A2	3681	A
81	A2	3682	U
81	A2	3683	G
81	A2	3684	U
81	A2	3685	C
81	A2	3686	A
81	A2	3693	A
81	A2	3695	A
81	A2	3696	A
81	A2	3697	A
81	A2	3700	C
81	A2	3706	A
81	A2	3710	C
81	A2	3717	A
81	A2	3720	G
81	A2	3722	G
81	A2	3723	G
81	A2	3724	G
81	A2	3725	A
81	A2	3726	G
81	A2	3727	U

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Mol	Chain	Res	Type
81	A2	3728	A
81	A2	3729	A
81	A2	3730	C
81	A2	3732	A
81	A2	3733	U
81	A2	3734	G
81	A2	3736	C
81	A2	3737	U
81	A2	3741	U
81	A2	3743	A
81	A2	3744	A
81	A2	3746	G
81	A2	3749	G
81	A2	3750	C
81	A2	3751	C
81	A2	3753	A
81	A2	3754	A
81	A2	3755	U
81	A2	3756	G
81	A2	3759	U
81	A2	3761	G
81	A2	3764	A
81	A2	3765	U
81	A2	3767	U
81	A2	3768	A
81	A2	3769	A
81	A2	3770	U
81	A2	3771	U
81	A2	3772	A
81	A2	3776	A
81	A2	3778	G
81	A2	3779	C
81	A2	3780	G
81	A2	3781	C
81	A2	3782	A
81	A2	3786	A
81	A2	3787	U
81	A2	3788	G
81	A2	3792	G
81	A2	3793	A
81	A2	3797	A
81	A2	3798	G

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Mol	Chain	Res	Type
81	A2	3799	A
81	A2	3800	U
81	A2	3801	U
81	A2	3802	C
81	A2	3803	C
81	A2	3807	U
81	A2	3808	G
81	A2	3809	U
81	A2	3814	A
81	A2	3815	C
81	A2	3819	C
81	A2	3826	G
81	A2	3830	A
81	A2	3833	C
81	A2	3834	A
81	A2	3836	A
81	A2	3837	G
81	A2	3838	C
81	A2	3845	A
81	A2	3846	A
81	A2	3847	C
81	A2	3848	G
81	A2	3850	G
81	A2	3852	U
81	A2	3854	G
81	A2	3856	C
81	A2	3857	G
81	A2	3858	G
81	A2	3859	A
81	A2	3863	A
81	A2	3866	G
81	A2	3867	G
81	A2	3870	A
81	A2	3871	A
81	A2	3872	A
81	A2	3873	G
81	A2	3874	A
81	A2	3875	A
81	A2	3876	G
81	A2	3877	A
81	A2	3879	C
81	A2	3883	U

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Mol	Chain	Res	Type
81	A2	3884	U
81	A2	3885	G
81	A2	3887	G
81	A2	3888	C
81	A2	3890	U
81	A2	3891	G
81	A2	3894	U
81	A2	3895	C
81	A2	3897	A
81	A2	3898	G
81	A2	3905	A
81	A2	3907	G
81	A2	3908	G
81	A2	3910	G
81	A2	3912	A
81	A2	3913	G
81	A2	3919	U
81	A2	3922	G
81	A2	3923	A
81	A2	3924	G
81	A2	3925	G
81	A2	3926	U
81	A2	3927	G
81	A2	3931	A
81	A2	3933	U
81	A2	3934	A
81	A2	3936	G
81	A2	3938	G
81	A2	3941	A
81	A2	3942	G
81	A2	3943	G
81	A2	3945	C
81	A2	4007	G
81	A2	4008	C
81	A2	4009	C
81	A2	4011	G
81	A2	4012	U
81	A2	4015	A
81	A2	4018	A
81	A2	4024	A
81	A2	4025	C
81	A2	4026	U

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Mol	Chain	Res	Type
81	A2	4027	C
81	A2	4029	G
81	A2	4032	C
81	A2	4033	G
81	A2	4041	A
81	A2	4044	G
81	A2	4045	A
81	A2	4046	C
81	A2	4047	C
81	A2	4050	G
81	A2	4051	U
81	A2	4052	G
81	A2	4053	A
81	A2	4054	G
81	A2	4055	G
81	A2	4056	C
81	A2	4057	G
81	A2	4059	G
81	A2	4060	G
81	A2	4063	G
81	A2	4066	A
81	A2	4068	C
81	A2	4069	C
81	A2	4070	C
81	A2	4071	G
81	A2	4073	G
81	A2	4074	G
81	A2	4079	C
81	A2	4080	U
81	A2	4081	C
81	A2	4082	G
81	A2	4083	C
81	A2	4084	U
81	A2	4085	U
81	A2	4086	C
81	A2	4087	U
81	A2	4089	G
81	A2	4090	C
81	A2	4092	C
81	A2	4093	C
81	A2	4094	A
81	A2	4101	C

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Mol	Chain	Res	Type
81	A2	4103	C
81	A2	4105	C
81	A2	4106	G
81	A2	4108	C
81	A2	4109	C
81	A2	4111	G
81	A2	4117	A
81	A2	4118	C
81	A2	4119	C
81	A2	4120	C
81	A2	4121	G
81	A2	4122	C
81	A2	4123	U
81	A2	4124	C
81	A2	4126	G
81	A2	4129	G
81	A2	4130	A
81	A2	4131	C
81	A2	4135	G
81	A2	4137	C
81	A2	4138	A
81	A2	4142	G
81	A2	4143	G
81	A2	4144	G
81	A2	4145	G
81	A2	4151	G
81	A2	4155	G
81	A2	4156	G
81	A2	4159	C
81	A2	4163	A
81	A2	4164	C
81	A2	4165	A
81	A2	4166	C
81	A2	4168	U
81	A2	4174	A
81	A2	4175	C
81	A2	4176	G
81	A2	4177	G
81	A2	4179	A
81	A2	4180	A
81	A2	4181	C
81	A2	4182	G

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Mol	Chain	Res	Type
81	A2	4185	G
81	A2	4186	G
81	A2	4187	U
81	A2	4188	G
81	A2	4189	U
81	A2	4190	C
81	A2	4191	C
81	A2	4192	U
81	A2	4193	A
81	A2	4194	A
81	A2	4195	G
81	A2	4199	A
81	A2	4200	G
81	A2	4201	C
81	A2	4210	G
81	A2	4211	A
81	A2	4212	C
81	A2	4214	G
81	A2	4215	A
81	A2	4226	G
81	A2	4227	G
81	A2	4231	A
81	A2	4232	G
81	A2	4233	A
81	A2	4234	A
81	A2	4236	G
81	A2	4237	G
81	A2	4239	A
81	A2	4240	A
81	A2	4241	A
81	A2	4242	A
81	A2	4245	U
81	A2	4247	G
81	A2	4250	U
81	A2	4251	G
81	A2	4252	A
81	A2	4253	U
81	A2	4254	C
81	A2	4255	U
81	A2	4256	U
81	A2	4261	U
81	A2	4262	U

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Mol	Chain	Res	Type
81	A2	4263	C
81	A2	4264	A
81	A2	4265	G
81	A2	4266	U
81	A2	4267	A
81	A2	4269	G
81	A2	4270	A
81	A2	4271	A
81	A2	4273	A
81	A2	4276	G
81	A2	4277	A
81	A2	4279	C
81	A2	4280	G
81	A2	4283	A
81	A2	4286	G
81	A2	4287	C
81	A2	4288	G
81	A2	4289	G
81	A2	4290	G
81	A2	4291	G
81	A2	4292	C
81	A2	4293	C
81	A2	4297	C
81	A2	4298	G
81	A2	4301	C
81	A2	4303	U
81	A2	4304	U
81	A2	4305	C
81	A2	4306	U
81	A2	4308	A
81	A2	4309	C
81	A2	4313	U
81	A2	4314	U
81	A2	4315	G
81	A2	4316	G
81	A2	4317	G
81	A2	4319	U
81	A2	4321	U
81	A2	4324	G
81	A2	4326	A
81	A2	4327	G
81	A2	4328	G

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Mol	Chain	Res	Type
81	A2	4329	A
81	A2	4331	G
81	A2	4333	G
81	A2	4335	C
81	A2	4336	A
81	A2	4337	G
81	A2	4338	A
81	A2	4339	A
81	A2	4341	A
81	A2	4342	G
81	A2	4345	A
81	A2	4346	C
81	A2	4347	C
81	A2	4348	A
81	A2	4350	A
81	A2	4353	G
81	A2	4354	A
81	A2	4355	U
81	A2	4357	A
81	A2	4359	U
81	A2	4362	C
81	A2	4363	U
81	A2	4366	U
81	A2	4367	G
81	A2	4370	G
81	A2	4372	C
81	A2	4373	C
81	A2	4375	A
81	A2	4376	G
81	A2	4377	C
81	A2	4379	U
81	A2	4380	U
81	A2	4382	A
81	A2	4383	U
81	A2	4384	A
81	A2	4386	C
81	A2	4387	G
81	A2	4388	A
81	A2	4389	C
81	A2	4390	G
81	A2	4394	C
81	A2	4396	U

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Mol	Chain	Res	Type
81	A2	4397	U
81	A2	4401	A
81	A2	4404	C
81	A2	4406	U
81	A2	4407	C
81	A2	4408	G
81	A2	4409	A
81	A2	4410	U
81	A2	4411	G
81	A2	4412	U
81	A2	4413	C
81	A2	4415	G
81	A2	4416	C
81	A2	4420	U
81	A2	4421	C
81	A2	4422	C
81	A2	4423	U
81	A2	4424	A
81	A2	4425	U
81	A2	4426	C
81	A2	4431	U
81	A2	4433	A
81	A2	4434	A
81	A2	4435	G
81	A2	4437	A
81	A2	4438	G
81	A2	4448	A
81	A2	4449	G
81	A2	4451	G
81	A2	4452	U
81	A2	4453	U
81	A2	4454	G
81	A2	4455	G
81	A2	4456	A
81	A2	4457	U
81	A2	4458	U
81	A2	4459	G
81	A2	4460	U
81	A2	4461	U
81	A2	4465	C
81	A2	4466	C
81	A2	4470	A

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Mol	Chain	Res	Type
81	A2	4472	U
81	A2	4473	A
81	A2	4474	G
81	A2	4477	A
81	A2	4478	A
81	A2	4479	C
81	A2	4480	G
81	A2	4482	G
81	A2	4483	A
81	A2	4484	G
81	A2	4488	G
81	A2	4489	G
81	A2	4491	U
81	A2	4492	U
81	A2	4494	G
81	A2	4498	G
81	A2	4499	U
81	A2	4500	C
81	A2	4502	U
81	A2	4503	G
81	A2	4505	G
81	A2	4507	C
81	A2	4508	A
81	A2	4509	G
81	A2	4510	G
81	A2	4512	U
81	A2	4515	U
81	A2	4516	U
81	A2	4519	A
81	A2	4520	C
81	A2	4521	C
81	A2	4522	C
81	A2	4525	C
81	A2	4526	U
81	A2	4527	G
81	A2	4528	A
81	A2	4529	U
81	A2	4530	G
81	A2	4532	U
81	A2	4533	G
81	A2	4534	U
81	A2	4535	G

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Mol	Chain	Res	Type
81	A2	4536	U
81	A2	4538	G
81	A2	4539	U
81	A2	4541	G
81	A2	4543	C
81	A2	4544	A
81	A2	4545	U
81	A2	4549	A
81	A2	4550	A
81	A2	4551	U
81	A2	4552	C
81	A2	4557	U
81	A2	4558	C
81	A2	4560	G
81	A2	4561	U
81	A2	4562	A
81	A2	4563	C
81	A2	4566	G
81	A2	4567	A
81	A2	4568	G
81	A2	4569	G
81	A2	4570	A
81	A2	4577	G
81	A2	4578	G
81	A2	4579	U
81	A2	4580	U
81	A2	4583	G
81	A2	4584	A
81	A2	4586	A
81	A2	4587	U
81	A2	4592	U
81	A2	4594	U
81	A2	4595	A
81	A2	4596	U
81	A2	4597	G
81	A2	4598	U
81	A2	4599	G
81	A2	4600	C
81	A2	4601	U
81	A2	4602	U
81	A2	4604	G
81	A2	4609	G

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Mol	Chain	Res	Type
81	A2	4610	G
81	A2	4612	G
81	A2	4613	C
81	A2	4615	A
81	A2	4616	A
81	A2	4617	U
81	A2	4618	G
81	A2	4621	G
81	A2	4622	C
81	A2	4628	U
81	A2	4629	A
81	A2	4630	C
81	A2	4632	A
81	A2	4636	G
81	A2	4637	U
81	A2	4638	G
81	A2	4639	G
81	A2	4640	G
81	A2	4641	A
81	A2	4642	U
81	A2	4643	U
81	A2	4646	G
81	A2	4651	A
81	A2	4654	G
81	A2	4655	C
81	A2	4657	U
81	A2	4658	C
81	A2	4659	U
81	A2	4660	A
81	A2	4661	A
81	A2	4664	C
81	A2	4665	A
81	A2	4668	A
81	A2	4669	U
81	A2	4671	C
81	A2	4672	C
81	A2	4675	C
81	A2	4676	C
81	A2	4678	G
81	A2	4679	G
81	A2	4680	C
81	A2	4681	G

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Mol	Chain	Res	Type
81	A2	4682	A
81	A2	4684	C
81	A2	4688	A
81	A2	4689	C
81	A2	4690	G
81	A2	4691	G
81	A2	4692	C
81	A2	4693	A
81	A2	4694	G
81	A2	4696	G
81	A2	4698	C
81	A2	4699	G
81	A2	4700	C
81	A2	4701	G
81	A2	4706	C
81	A2	4710	G
81	A2	4711	U
81	A2	4712	U
81	A2	4713	G
81	A2	4714	G
81	A2	4716	C
81	A2	4718	C
81	A2	4719	G
81	A2	4720	G
81	A2	4721	A
81	A2	4723	A
81	A2	4724	G
81	A2	4725	C
81	A2	4726	C
81	A2	4733	C
81	A2	4734	C
81	A2	4735	G
81	A2	4736	C
81	A2	4739	G
81	A2	4740	U
81	A2	4741	C
81	A2	4742	C
81	A2	4746	C
81	A2	4803	C
81	A2	4804	G
81	A2	4807	C
81	A2	4808	C

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Mol	Chain	Res	Type
81	A2	4809	G
81	A2	4812	A
81	A2	4813	C
81	A2	4814	C
81	A2	4815	G
81	A2	4816	G
81	A2	4822	G
81	A2	4824	U
81	A2	4825	G
81	A2	4826	C
81	A2	4827	G
81	A2	4828	G
81	A2	4829	A
81	A2	4831	U
81	A2	4832	G
81	A2	4834	C
81	A2	4836	U
81	A2	4838	C
81	A2	4839	G
81	A2	4840	U
81	A2	4844	G
81	A2	4847	A
81	A2	4848	A
81	A2	4849	A
81	A2	4850	C
81	A2	4851	G
81	A2	4852	G
81	A2	4853	G
81	A2	4854	G
81	A2	4855	C
81	A2	4856	G
81	A2	4857	C
81	A2	4858	G
81	A2	4862	G
81	A2	4863	G
81	A2	4867	G
81	A2	4868	G
81	A2	4875	C
81	A2	4879	C
81	A2	4880	U
81	A2	4881	C
81	A2	4882	G

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Mol	Chain	Res	Type
81	A2	4883	C
81	A2	4892	C
81	A2	4893	A
81	A2	4894	C
81	A2	4895	C
81	A2	4896	G
81	A2	4897	C
81	A2	4898	A
81	A2	4899	C
81	A2	4900	G
81	A2	4901	U
81	A2	4902	U
81	A2	4903	C
81	A2	4904	G
81	A2	4905	U
81	A2	4906	G
81	A2	4919	C
81	A2	4921	A
81	A2	4923	A
81	A2	4924	C
81	A2	4930	G
81	A2	4931	U
81	A2	4932	A
81	A2	4940	U
81	A2	4943	U
81	A2	4944	U
81	A2	4945	C
81	A2	4946	U
81	A2	4947	G
81	A2	4949	G
81	A2	4955	G
81	A2	4956	U
81	A2	4958	U
81	A2	4959	C
81	A2	4960	G
81	A2	4962	A
81	A2	4963	C
81	A2	4968	C
81	A2	4969	A
81	A2	4972	G
81	A2	4974	A
81	A2	4975	G

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Mol	Chain	Res	Type
81	A2	4976	C
81	A2	4978	C
81	A2	4979	C
81	A2	4980	C
81	A2	4981	U
81	A2	4982	C
81	A2	4983	G
81	A2	4985	U
81	A2	4986	G
81	A2	4988	G
81	A2	4995	U
81	A2	4996	G
81	A2	4998	A
81	A2	5002	C
81	A2	5003	A
81	A2	5005	C
81	A2	5009	C
81	A2	5010	G
81	A2	5015	A
81	A2	5016	A
81	A2	5017	G
81	A2	5018	G
81	A2	5019	G
81	A2	5020	U
81	A2	5021	U
82	A3	4	C
82	A3	6	C
82	A3	7	U
82	A3	8	U
82	A3	9	A
82	A3	10	G
82	A3	12	G
82	A3	13	G
82	A3	14	U
82	A3	16	G
82	A3	20	A
82	A3	23	C
82	A3	24	G
82	A3	25	G
82	A3	26	C
82	A3	28	C
82	A3	30	U

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Mol	Chain	Res	Type
82	A3	32	C
82	A3	34	U
82	A3	38	U
82	A3	43	A
82	A3	47	C
82	A3	49	G
82	A3	51	U
82	A3	52	A
82	A3	58	G
82	A3	59	A
82	A3	61	A
82	A3	62	A
82	A3	63	U
82	A3	69	U
82	A3	71	A
82	A3	72	A
82	A3	75	G
82	A3	76	C
82	A3	77	A
82	A3	78	G
82	A3	80	A
82	A3	81	C
82	A3	82	A
82	A3	83	C
82	A3	84	A
82	A3	85	U
82	A3	86	U
82	A3	89	U
82	A3	94	G
82	A3	95	A
82	A3	103	A
82	A3	104	A
82	A3	105	C
82	A3	106	G
82	A3	107	C
82	A3	109	C
82	A3	111	U
82	A3	112	G
82	A3	114	G
82	A3	117	C
82	A3	120	G
82	A3	122	G

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Mol	Chain	Res	Type
82	A3	123	U
82	A3	124	U
82	A3	125	C
82	A3	126	C
82	A3	128	C
82	A3	129	C
82	A3	130	C
82	A3	131	G
82	A3	137	A
82	A3	138	C
82	A3	140	C
82	A3	141	C
82	A3	143	G
82	A3	144	U
82	A3	146	U
82	A3	147	G
82	A3	148	A
82	A3	149	G
82	A3	150	C
82	A3	151	G
82	A3	156	U
82	A3	157	U
83	A4	3	C
83	A4	6	C
83	A4	7	G
83	A4	9	C
83	A4	10	C
83	A4	11	A
83	A4	12	U
83	A4	13	A
83	A4	15	C
83	A4	19	C
83	A4	22	A
83	A4	27	G
83	A4	28	C
83	A4	29	C
83	A4	30	C
83	A4	33	U
83	A4	34	C
83	A4	35	U
83	A4	36	C
83	A4	40	U

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Mol	Chain	Res	Type
83	A4	41	G
83	A4	46	C
83	A4	47	G
83	A4	48	G
83	A4	49	A
83	A4	53	U
83	A4	54	A
83	A4	55	A
83	A4	56	G
83	A4	57	C
83	A4	58	A
83	A4	61	G
83	A4	62	U
83	A4	63	C
83	A4	64	G
83	A4	65	G
83	A4	67	C
83	A4	68	C
83	A4	69	U
83	A4	73	U
83	A4	74	A
83	A4	75	G
83	A4	76	U
83	A4	77	A
83	A4	79	U
83	A4	81	G
83	A4	85	G
83	A4	86	G
83	A4	87	G
83	A4	89	G
83	A4	91	C
83	A4	94	C
83	A4	95	C
83	A4	96	U
83	A4	97	G
83	A4	99	G
83	A4	100	A
83	A4	101	A
83	A4	103	A
83	A4	105	C
83	A4	107	G
83	A4	108	G

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Mol	Chain	Res	Type
83	A4	109	U
83	A4	110	G
83	A4	113	G
83	A4	116	G
83	A4	117	G
83	A4	118	C

All (503) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AV	19	G
1	AV	57	G
2	AW	2	C
2	AW	8	U
2	AW	19	G
2	AW	42	C
2	AW	46	G
3	AX	42	U
3	AX	45	U
3	AX	53	U
3	AX	60	U
4	B1	24	C
4	B1	44	U
4	B1	61	A
4	B1	64	A
4	B1	66	G
4	B1	68	A
4	B1	77	A
4	B1	78	C
4	B1	102	A
4	B1	111	A
4	B1	113	G
4	B1	124	U
4	B1	131	C
4	B1	136	C
4	B1	139	C
4	B1	140	C
4	B1	147	A
4	B1	162	C
4	B1	181	A
4	B1	183	G
4	B1	199	C

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Mol	Chain	Res	Type
4	B1	200	G
4	B1	207	G
4	B1	209	A
4	B1	227	U
4	B1	304	C
4	B1	307	G
4	B1	308	G
4	B1	310	C
4	B1	312	G
4	B1	317	C
4	B1	319	C
4	B1	332	G
4	B1	338	G
4	B1	356	C
4	B1	363	A
4	B1	368	U
4	B1	370	G
4	B1	383	G
4	B1	399	C
4	B1	428	U
4	B1	448	A
4	B1	465	A
4	B1	475	C
4	B1	486	A
4	B1	487	U
4	B1	501	C
4	B1	517	C
4	B1	544	G
4	B1	546	G
4	B1	547	G
4	B1	558	G
4	B1	577	U
4	B1	578	C
4	B1	589	G
4	B1	590	A
4	B1	593	C
4	B1	604	A
4	B1	656	G
4	B1	662	G
4	B1	671	A
4	B1	687	C
4	B1	743	U

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Mol	Chain	Res	Type
4	B1	799	U
4	B1	811	A
4	B1	821	G
4	B1	822	U
4	B1	833	C
4	B1	834	C
4	B1	840	C
4	B1	899	U
4	B1	913	A
4	B1	970	G
4	B1	971	G
4	B1	1015	U
4	B1	1016	U
4	B1	1020	A
4	B1	1021	U
4	B1	1043	G
4	B1	1060	A
4	B1	1088	U
4	B1	1108	G
4	B1	1114	U
4	B1	1115	U
4	B1	1138	C
4	B1	1150	A
4	B1	1164	G
4	B1	1198	G
4	B1	1215	C
4	B1	1242	U
4	B1	1247	C
4	B1	1250	A
4	B1	1253	A
4	B1	1257	G
4	B1	1259	A
4	B1	1261	C
4	B1	1264	C
4	B1	1277	C
4	B1	1285	G
4	B1	1301	A
4	B1	1307	U
4	B1	1308	U
4	B1	1311	C
4	B1	1313	A
4	B1	1326	U

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Mol	Chain	Res	Type
4	B1	1342	U
4	B1	1351	G
4	B1	1362	U
4	B1	1401	A
4	B1	1404	U
4	B1	1406	G
4	B1	1411	G
4	B1	1456	G
4	B1	1476	A
4	B1	1477	U
4	B1	1494	U
4	B1	1497	G
4	B1	1508	A
4	B1	1520	G
4	B1	1534	C
4	B1	1542	C
4	B1	1543	U
4	B1	1555	U
4	B1	1556	A
4	B1	1578	U
4	B1	1586	U
4	B1	1603	G
4	B1	1624	U
4	B1	1631	U
4	B1	1635	C
4	B1	1637	A
4	B1	1638	G
4	B1	1644	C
4	B1	1648	G
4	B1	1654	G
4	B1	1655	C
4	B1	1673	U
4	B1	1697	A
4	B1	1698	C
4	B1	1700	C
4	B1	1721	U
4	B1	1781	A
4	B1	1823	A
4	B1	1824	A
4	B1	1830	U
4	B1	1833	C
4	B1	1834	A

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Mol	Chain	Res	Type
4	B1	1836	G
4	B1	1848	U
4	B1	1860	A
4	B1	1862	G
4	B1	1867	U
81	A2	13	U
81	A2	14	C
81	A2	19	G
81	A2	48	G
81	A2	64	A
81	A2	69	A
81	A2	70	A
81	A2	96	U
81	A2	156	C
81	A2	181	U
81	A2	188	G
81	A2	192	C
81	A2	193	C
81	A2	196	G
81	A2	207	C
81	A2	212	C
81	A2	215	A
81	A2	216	G
81	A2	221	U
81	A2	229	G
81	A2	266	C
81	A2	287	A
81	A2	292	G
81	A2	300	C
81	A2	328	U
81	A2	331	C
81	A2	333	G
81	A2	334	C
81	A2	342	C
81	A2	366	G
81	A2	371	U
81	A2	379	A
81	A2	381	C
81	A2	386	A
81	A2	398	A
81	A2	402	G
81	A2	424	A

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Mol	Chain	Res	Type
81	A2	433	G
81	A2	441	G
81	A2	443	A
81	A2	444	G
81	A2	458	U
81	A2	459	U
81	A2	460	C
81	A2	461	A
81	A2	462	A
81	A2	473	G
81	A2	474	G
81	A2	477	C
81	A2	482	G
81	A2	633	G
81	A2	658	G
81	A2	717	G
81	A2	718	G
81	A2	719	G
81	A2	720	A
81	A2	721	A
81	A2	727	G
81	A2	736	G
81	A2	897	U
81	A2	914	G
81	A2	916	A
81	A2	927	A
81	A2	928	A
81	A2	939	G
81	A2	941	G
81	A2	943	G
81	A2	944	A
81	A2	947	G
81	A2	957	G
81	A2	959	C
81	A2	967	C
81	A2	973	U
81	A2	974	C
81	A2	1082	U
81	A2	1147	C
81	A2	1177	C
81	A2	1193	G
81	A2	1196	C

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Mol	Chain	Res	Type
81	A2	1197	G
81	A2	1204	G
81	A2	1205	U
81	A2	1207	C
81	A2	1208	U
81	A2	1209	C
81	A2	1211	C
81	A2	1216	C
81	A2	1217	C
81	A2	1218	A
81	A2	1219	C
81	A2	1249	G
81	A2	1280	G
81	A2	1282	U
81	A2	1293	C
81	A2	1299	U
81	A2	1304	A
81	A2	1340	G
81	A2	1349	C
81	A2	1357	G
81	A2	1358	C
81	A2	1360	G
81	A2	1367	A
81	A2	1377	A
81	A2	1388	G
81	A2	1400	A
81	A2	1421	C
81	A2	1423	A
81	A2	1444	G
81	A2	1453	C
81	A2	1458	G
81	A2	1475	G
81	A2	1476	A
81	A2	1478	C
81	A2	1481	G
81	A2	1497	A
81	A2	1502	A
81	A2	1523	G
81	A2	1530	C
81	A2	1532	A
81	A2	1553	G
81	A2	1554	A

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Mol	Chain	Res	Type
81	A2	1604	G
81	A2	1612	G
81	A2	1619	C
81	A2	1628	U
81	A2	1639	U
81	A2	1659	G
81	A2	1673	C
81	A2	1703	G
81	A2	1732	G
81	A2	1744	A
81	A2	1745	A
81	A2	1756	C
81	A2	1783	A
81	A2	1786	C
81	A2	1802	G
81	A2	1805	G
81	A2	1836	A
81	A2	1846	A
81	A2	1855	G
81	A2	1859	C
81	A2	1860	U
81	A2	1868	G
81	A2	1870	A
81	A2	1874	A
81	A2	1883	U
81	A2	1885	A
81	A2	1900	G
81	A2	1916	C
81	A2	1918	G
81	A2	1924	G
81	A2	1930	G
81	A2	2000	C
81	A2	2003	A
81	A2	2006	C
81	A2	2009	C
81	A2	2011	A
81	A2	2023	G
81	A2	2024	G
81	A2	2034	G
81	A2	2046	C
81	A2	2048	U
81	A2	2270	G

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Mol	Chain	Res	Type
81	A2	2294	G
81	A2	2309	G
81	A2	2310	G
81	A2	2324	A
81	A2	2333	U
81	A2	2347	A
81	A2	2348	U
81	A2	2358	A
81	A2	2360	C
81	A2	2369	C
81	A2	2371	G
81	A2	2373	A
81	A2	2375	U
81	A2	2394	A
81	A2	2395	A
81	A2	2396	C
81	A2	2405	A
81	A2	2411	G
81	A2	2415	A
81	A2	2450	A
81	A2	2454	A
81	A2	2465	C
81	A2	2481	C
81	A2	2489	A
81	A2	2502	U
81	A2	2508	C
81	A2	2548	C
81	A2	2551	G
81	A2	2561	G
81	A2	2564	A
81	A2	2606	C
81	A2	2607	U
81	A2	2650	G
81	A2	2673	A
81	A2	2684	U
81	A2	2702	A
81	A2	2703	G
81	A2	2716	C
81	A2	2718	U
81	A2	2735	G
81	A2	2740	U
81	A2	2741	A

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Mol	Chain	Res	Type
81	A2	2745	C
81	A2	2749	C
81	A2	2802	A
81	A2	2803	U
81	A2	2838	C
81	A2	3578	G
81	A2	3583	G
81	A2	3584	G
81	A2	3585	U
81	A2	3648	U
81	A2	3666	U
81	A2	3684	U
81	A2	3696	A
81	A2	3724	G
81	A2	3727	U
81	A2	3729	A
81	A2	3733	U
81	A2	3743	A
81	A2	3753	A
81	A2	3754	A
81	A2	3769	A
81	A2	3770	U
81	A2	3802	C
81	A2	3821	A
81	A2	3845	A
81	A2	3865	C
81	A2	3866	G
81	A2	3873	G
81	A2	3876	G
81	A2	3887	G
81	A2	3907	G
81	A2	3926	U
81	A2	3933	U
81	A2	4017	U
81	A2	4033	G
81	A2	4043	U
81	A2	4044	G
81	A2	4081	C
81	A2	4083	C
81	A2	4084	U
81	A2	4085	U
81	A2	4088	G

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Mol	Chain	Res	Type
81	A2	4091	G
81	A2	4105	C
81	A2	4117	A
81	A2	4122	C
81	A2	4130	A
81	A2	4155	G
81	A2	4181	C
81	A2	4211	A
81	A2	4226	G
81	A2	4236	G
81	A2	4252	A
81	A2	4254	C
81	A2	4292	C
81	A2	4336	A
81	A2	4338	A
81	A2	4354	A
81	A2	4374	A
81	A2	4387	G
81	A2	4388	A
81	A2	4396	U
81	A2	4408	G
81	A2	4409	A
81	A2	4433	A
81	A2	4437	A
81	A2	4454	G
81	A2	4455	G
81	A2	4485	C
81	A2	4515	U
81	A2	4533	G
81	A2	4551	U
81	A2	4561	U
81	A2	4562	A
81	A2	4566	G
81	A2	4596	U
81	A2	4597	G
81	A2	4609	G
81	A2	4616	A
81	A2	4628	U
81	A2	4636	G
81	A2	4637	U
81	A2	4659	U
81	A2	4660	A

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Mol	Chain	Res	Type
81	A2	4675	C
81	A2	4680	C
81	A2	4688	A
81	A2	4690	G
81	A2	4692	C
81	A2	4693	A
81	A2	4699	G
81	A2	4711	U
81	A2	4712	U
81	A2	4717	U
81	A2	4723	A
81	A2	4733	C
81	A2	4740	U
81	A2	4807	C
81	A2	4813	C
81	A2	4823	G
81	A2	4824	U
81	A2	4825	G
81	A2	4827	G
81	A2	4837	U
81	A2	4847	A
81	A2	4848	A
81	A2	4849	A
81	A2	4854	G
81	A2	4862	G
81	A2	4867	G
81	A2	4895	C
81	A2	4930	G
81	A2	4943	U
81	A2	4944	U
81	A2	4977	U
81	A2	4978	C
81	A2	4980	C
81	A2	5002	C
81	A2	5004	G
81	A2	5019	G
82	A3	22	U
82	A3	71	A
82	A3	84	A
82	A3	105	C
82	A3	111	U
82	A3	125	C

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Mol	Chain	Res	Type
83	A4	12	U
83	A4	26	C
83	A4	54	A
83	A4	63	C
83	A4	74	A
83	A4	75	G
83	A4	90	A
83	A4	108	G
83	A4	109	U

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	MIA	AW	37	2	22,31,32	1.74	4 (18%)	26,44,47	3.43	7 (26%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	MIA	AW	37	2	-	0/11/33/34	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AW	37	MIA	C13-C12	-4.41	1.33	1.52
2	AW	37	MIA	C4-N3	-2.52	1.31	1.35
2	AW	37	MIA	C6-N1	2.59	1.36	1.33
2	AW	37	MIA	C2-S10	4.24	1.79	1.75

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AW	37	MIA	C12-N6-C6	-8.49	113.64	123.46
2	AW	37	MIA	C5-C6-N1	-4.67	115.84	120.58
2	AW	37	MIA	N6-C6-N1	-2.84	115.16	118.55
2	AW	37	MIA	C1'-N9-C4	2.23	129.29	126.81
2	AW	37	MIA	C2-N1-C6	2.75	120.69	113.13
2	AW	37	MIA	C5-C6-N6	5.27	128.89	120.61
2	AW	37	MIA	C11-S10-C2	12.01	110.78	102.31

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 44 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	AW	37	MIA	44	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.