Full wwPDB EM Validation Report

Mar 29, 2026 – 06:41 PM UTC

PDB ID	:	4UJE / pdb_00004uje
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 Full wwPDB EM Validation Report for a publicly released PDB entry.

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

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

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

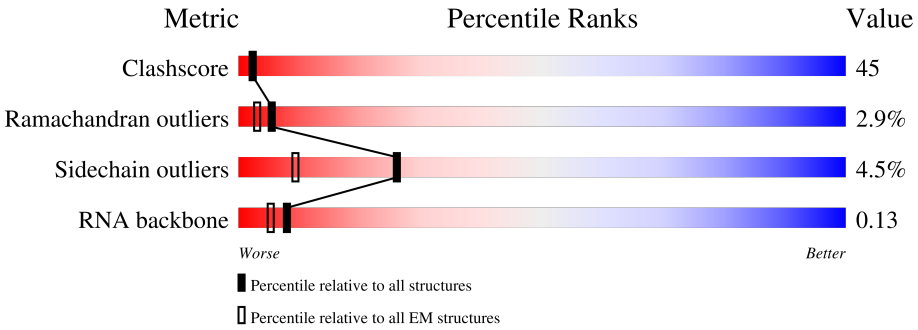
EMDB validation analysis	:	0.0.1.dev132
Mogul	:	2022.3.0, CSD as543be (2022)
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13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

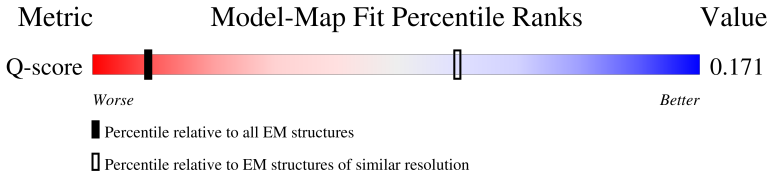
1 Overall quality at a glance

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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	479 (6.40 - 7.40)

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

Mol	Chain	Length	Quality of chain
1	AV	76	11% 32% 38% 30%
2	AW	76	13% 16% 46% 38%
3	AX	28	50% 39% 54% 7%

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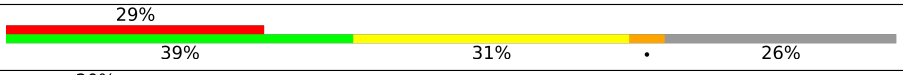
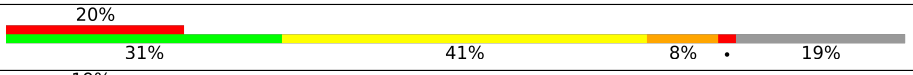
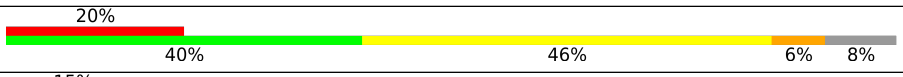
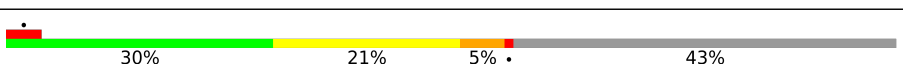
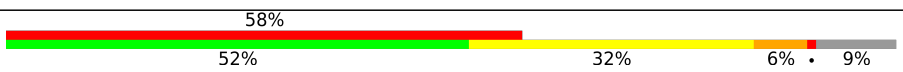
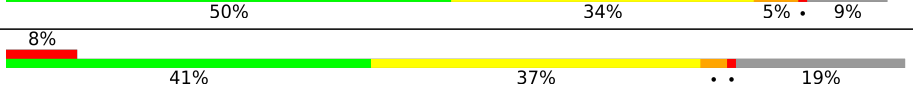
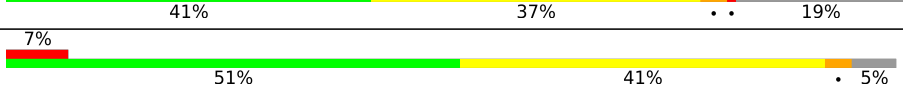
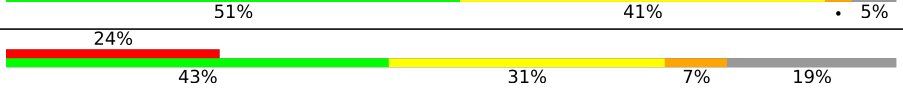
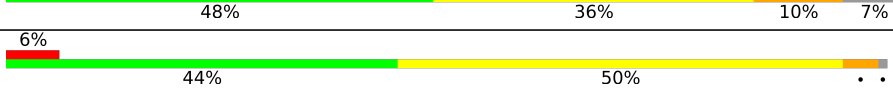
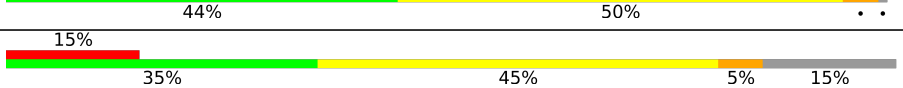
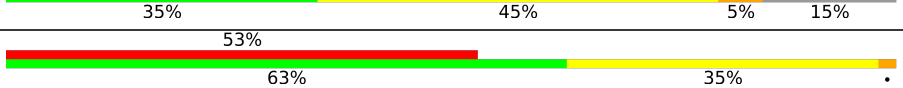
Mol	Chain	Length	Quality of chain
4	B1	1869	
5	BA	295	
6	BB	264	
7	BC	293	
8	BD	243	
9	BE	263	
10	BF	204	
11	BG	249	
12	BH	194	
13	BI	208	
14	BJ	194	
15	BK	165	
16	BL	158	
17	BM	132	
18	BN	151	
19	BO	151	
20	BP	145	
21	BQ	146	
22	BR	135	
23	BS	152	
24	BT	145	
25	BU	119	
26	BV	83	
27	BW	130	
28	BX	143	

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Mol	Chain	Length	Quality of chain
29	BY	133	9% 53% 32% 7% 8%
30	BZ	125	11% 26% 29% 6% 39%
31	Ba	115	30% 25% 49% 8% 17%
32	Bb	84	27% 54% 37% 5% 5%
33	Bc	69	29% 39% 43% 7% 10%
34	Bd	56	9% 36% 54% 5%
35	Be	59	20% 58% 27% 14%
36	Bf	156	19% 21% 17% 61%
37	Bg	317	28% 58% 38%
38	CA	257	48% 53% 39%
39	CB	403	16% 53% 39% 5%
40	CC	427	21% 43% 35% 6% 15%
41	CD	297	8% 55% 38%
42	CE	288	16% 20% 29% 6% 45%
43	CF	248	26% 50% 40% 6%
44	CG	266	24% 50% 32% 6% 12%
45	CH	192	13% 53% 43%
46	CI	214	28% 50% 37% 5% 8%
47	CJ	178	8% 46% 39% 11%
48	CL	211	30% 45% 40% 8% 5%
49	CM	215	9% 29% 33% 35%
50	CN	204	24% 57% 42%
51	CO	203	13% 49% 41% 6%
52	CP	184	11% 43% 34% 5% 17%
53	CQ	188	30% 52% 39% 7%

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Mol	Chain	Length	Quality of chain
54	CR	196	25% 48% 38% 6% 7%
55	CS	176	19% 50% 40% 7%
56	CT	160	26% 50% 44% 5%
57	CU	128	26% 52% 26% 20%
58	CV	140	36% 61% 29% 9%
59	CW	157	12% 27% 10% 59%
60	CX	156	19% 46% 29% 24%
61	CY	145	8% 39% 44% 6% 12%
62	CZ	136	24% 48% 48%
63	Ca	148	24% 54% 41%
64	Cb	159	17% 25% 16% 57%
65	Cc	115	32% 42% 45% 10%
66	Cd	125	16% 58% 29% 13%
67	Ce	135	33% 57% 33% 5% 5%
68	Cf	110	24% 40% 43% 10% 5%
69	Cg	117	31% 43% 47% 9%
70	Ch	123	15% 57% 38%
71	Ci	105	20% 50% 35% 5% 8%
72	Cj	97	20% 41% 39% 7% 12%
73	Ck	70	36% 50% 46%
74	Cl	51	35% 73% 24%
75	Cm	128	12% 21% 19% 59%
76	Cn	25	44% 52% 48%
77	Co	106	47% 58% 41%
78	Cp	92	41% 54% 40%

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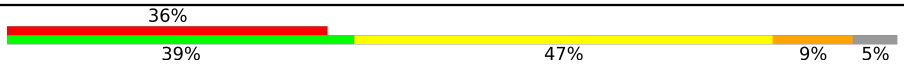
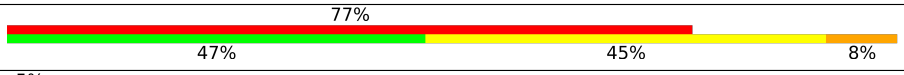
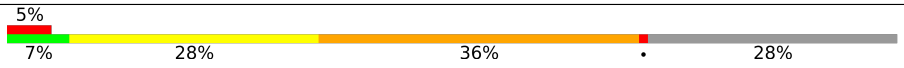
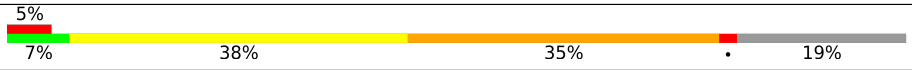
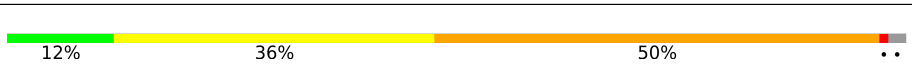
Mol	Chain	Length	Quality of chain
79	Ct	137	
80	Cu	210	
81	A2	5025	
82	A3	194	
83	A4	121	

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.

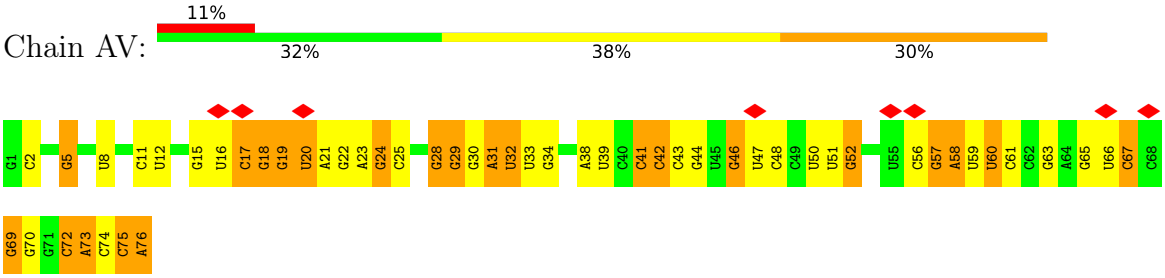
Mol	Chain	Residues	Atoms					AltConf	Trace
83	A4	119	Total	C	N	O	P	0	0
			2538	1132	454	834	118		

3 Residue-property plots (i)

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

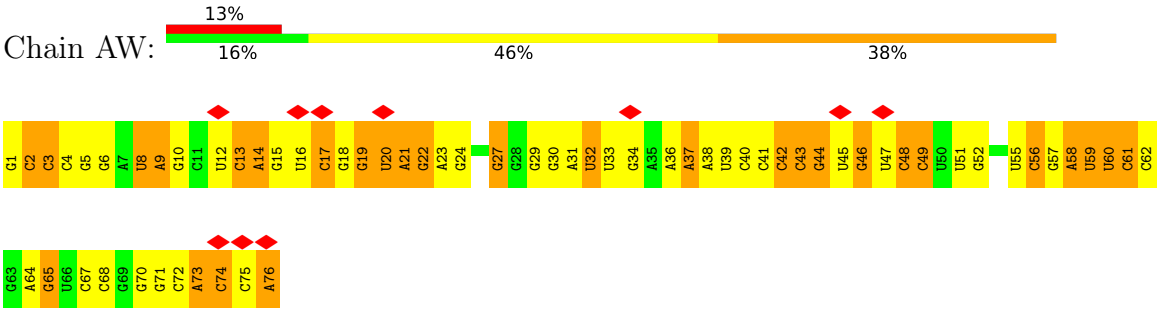
• Molecule 1: TRNA-LYS

Chain AV:



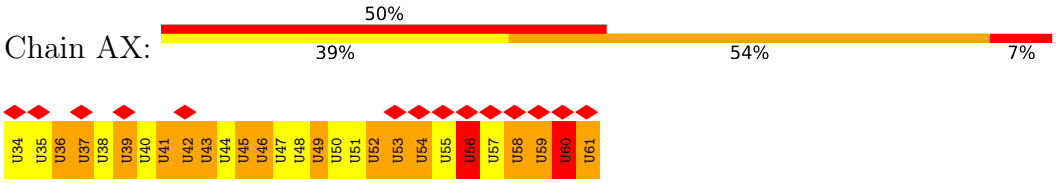
• Molecule 2: TRNA-PHE

Chain AW:



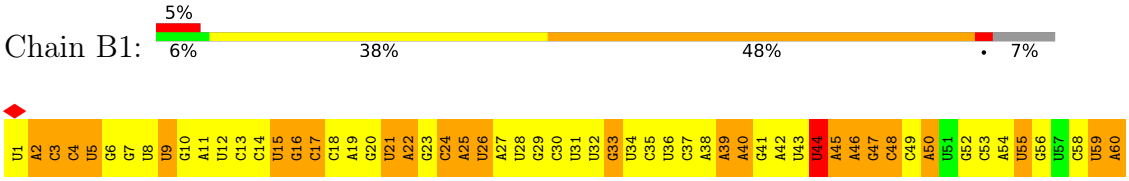
• Molecule 3: Messenger RNA

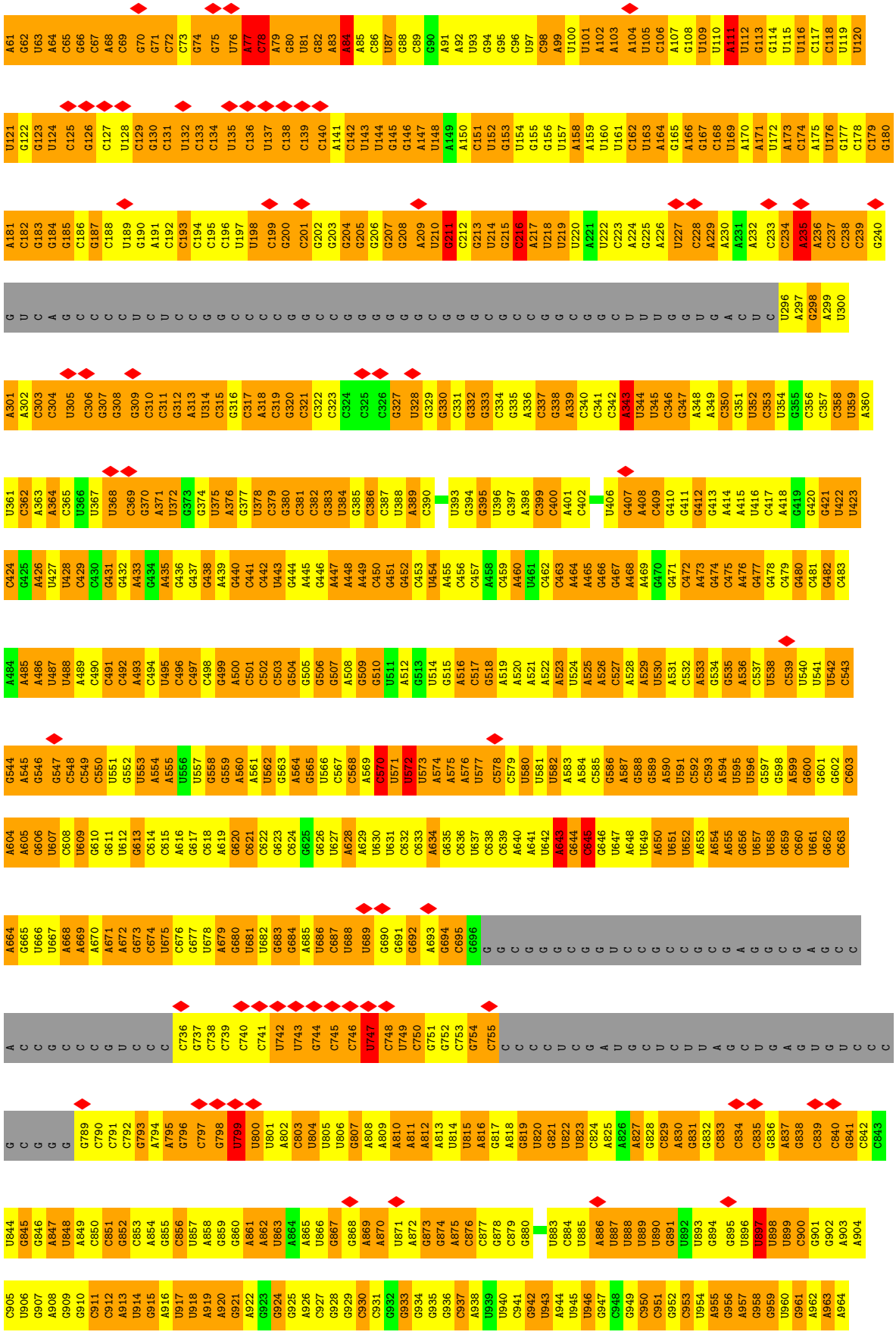
Chain AX:

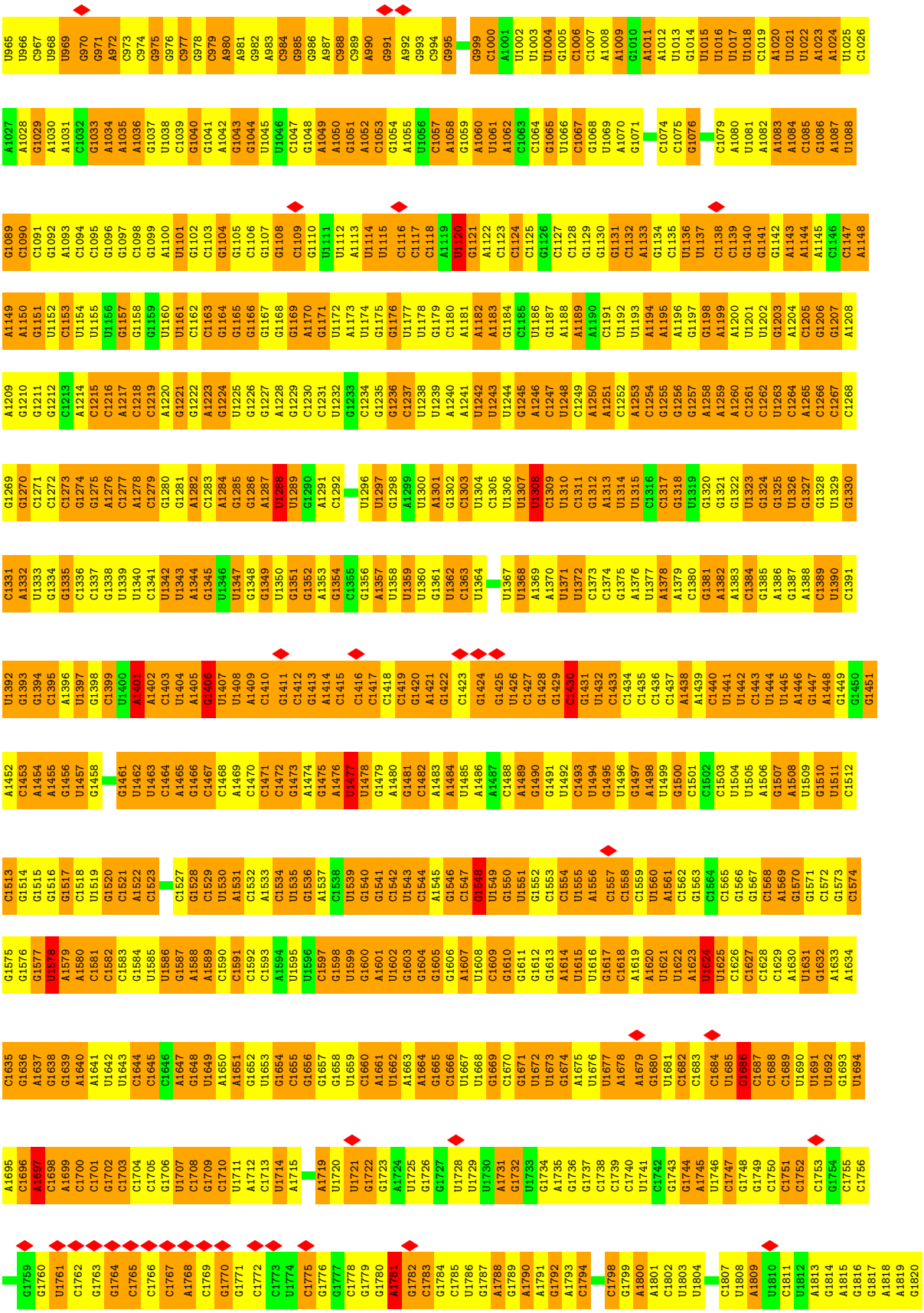


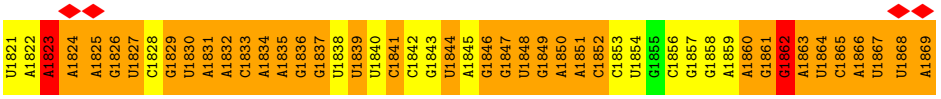
• Molecule 4: 18S Ribosomal RNA

Chain B1:



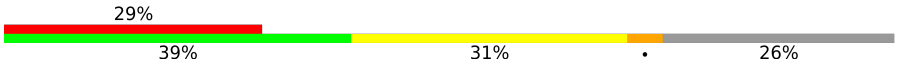


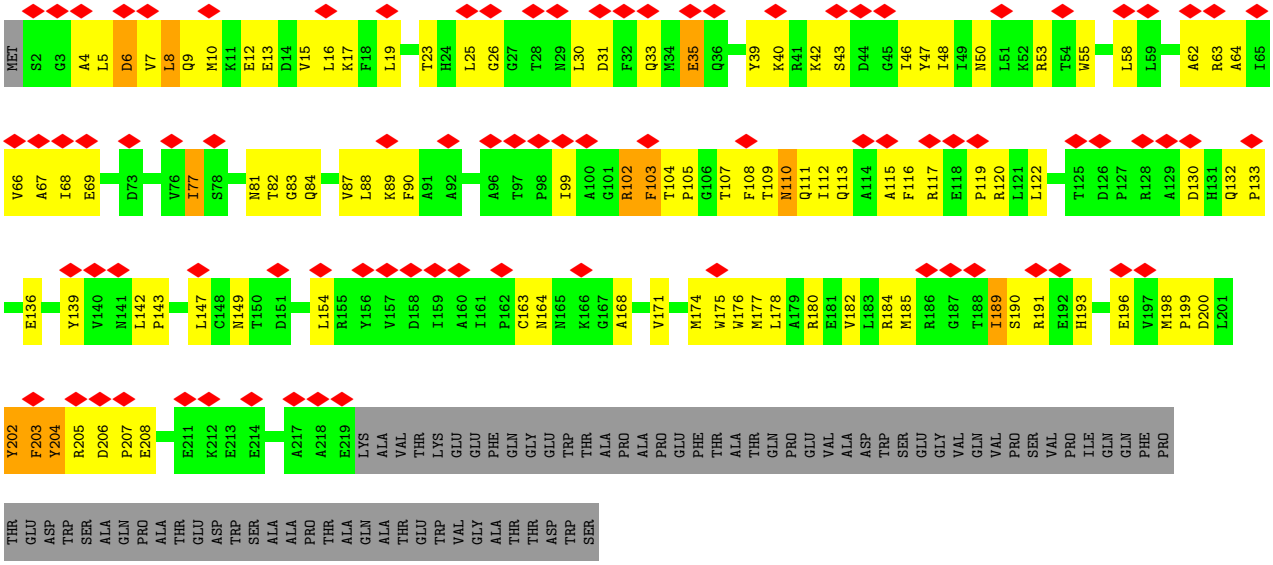




• Molecule 5: 40S RIBOSOMAL PROTEIN SA

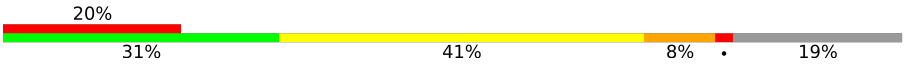
Chain BA:

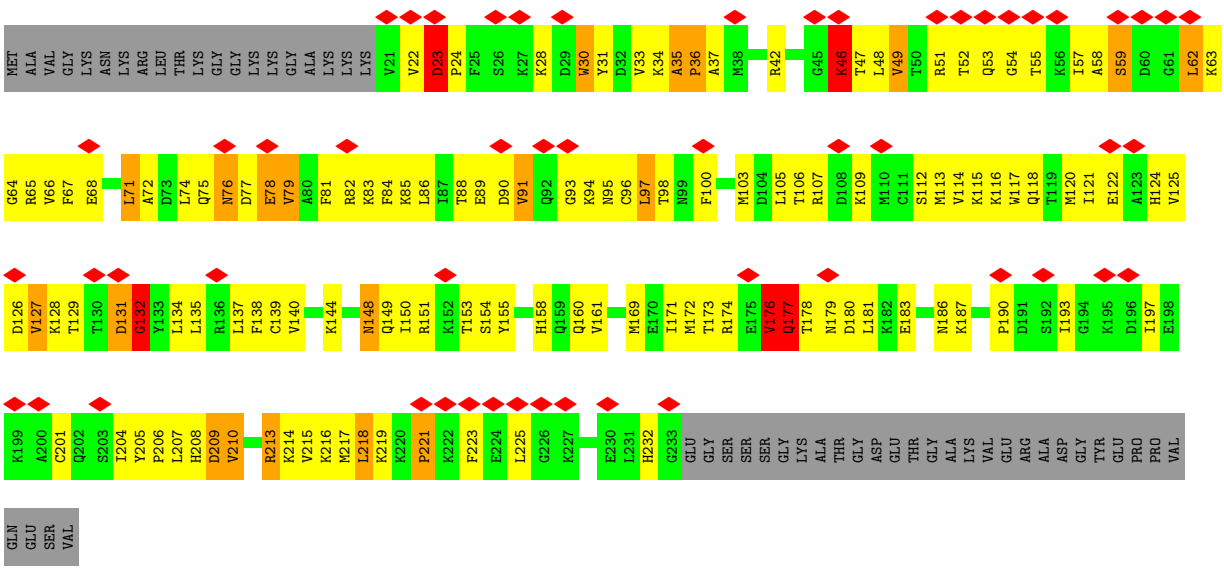




• Molecule 6: 40S RIBOSOMAL PROTEIN S3A

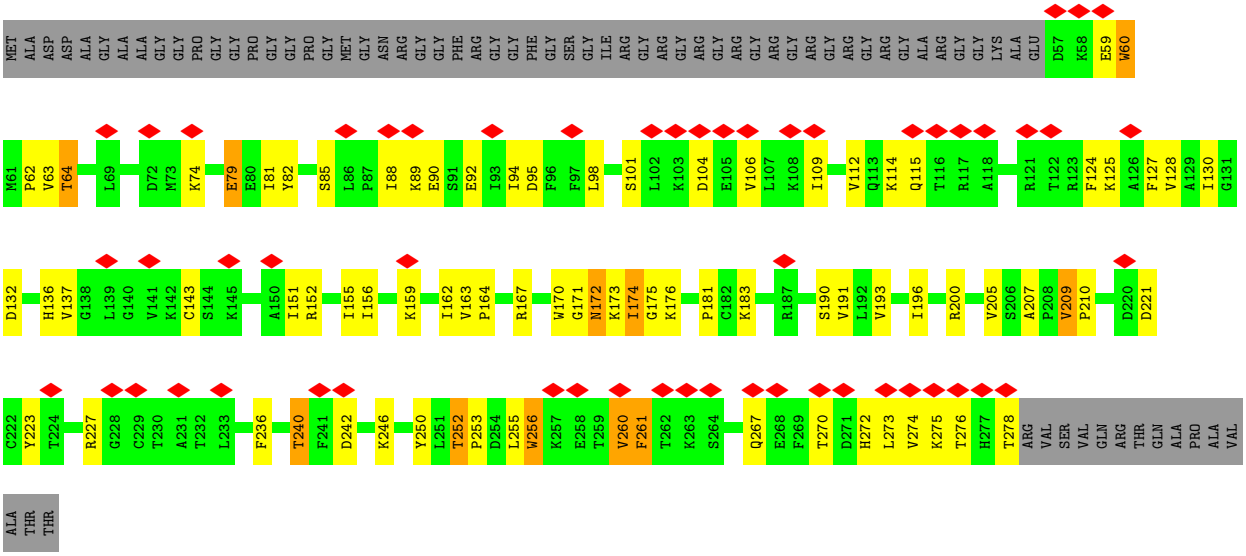
Chain BB:





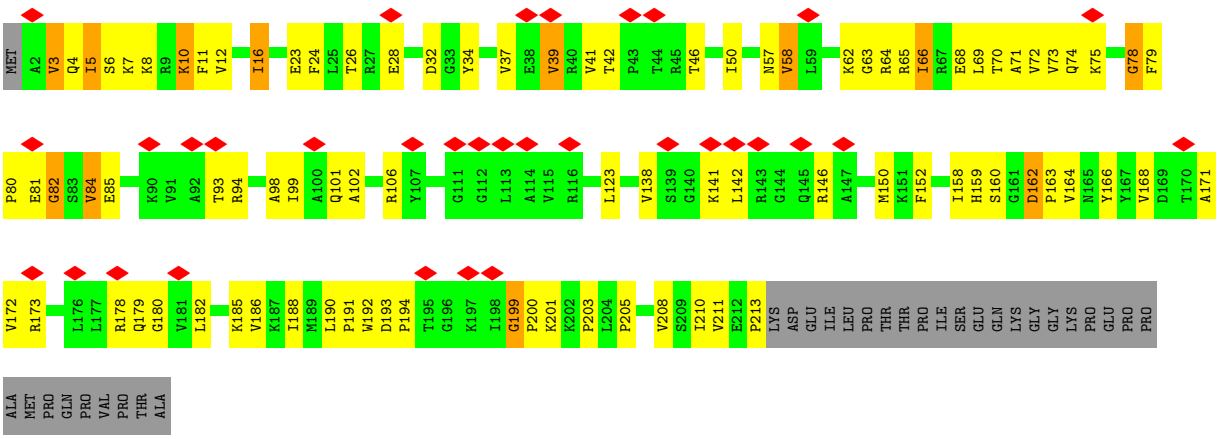
• Molecule 7: 40S RIBOSOMAL PROTEIN S2

Chain BC:



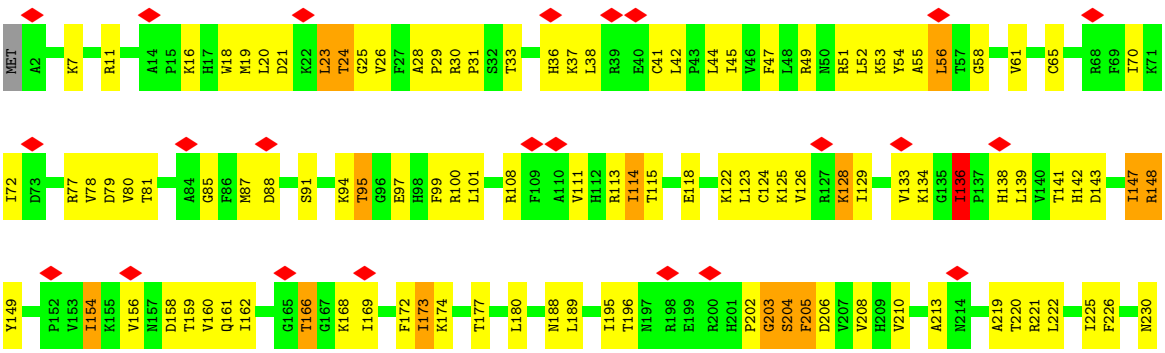
• Molecule 8: 40S RIBOSOMAL PROTEIN S3

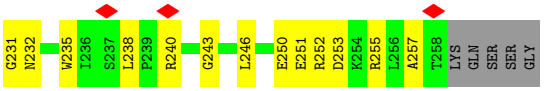
Chain BD:



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

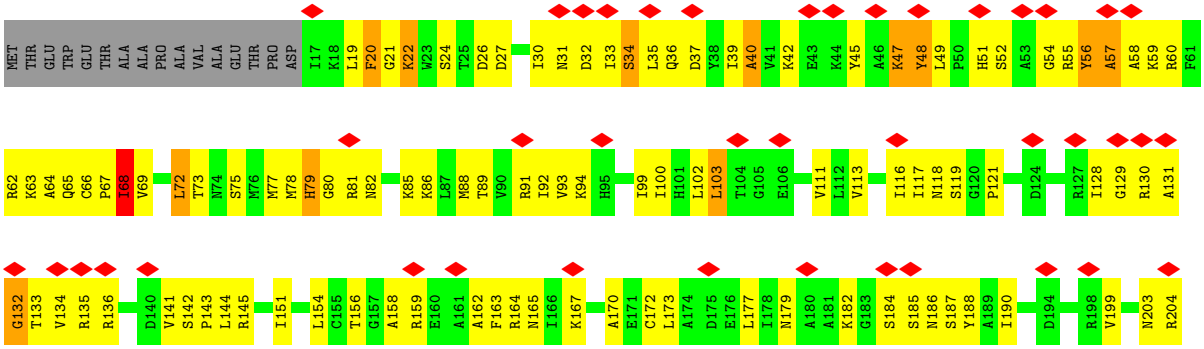
Chain BE:





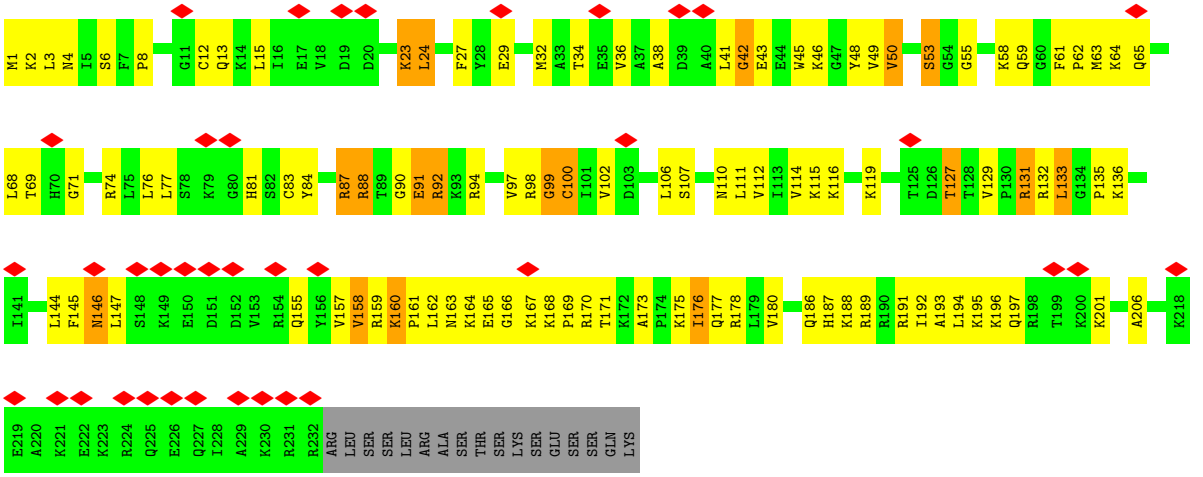
• Molecule 10: 40S RIBOSOMAL PROTEIN S5

Chain BF:



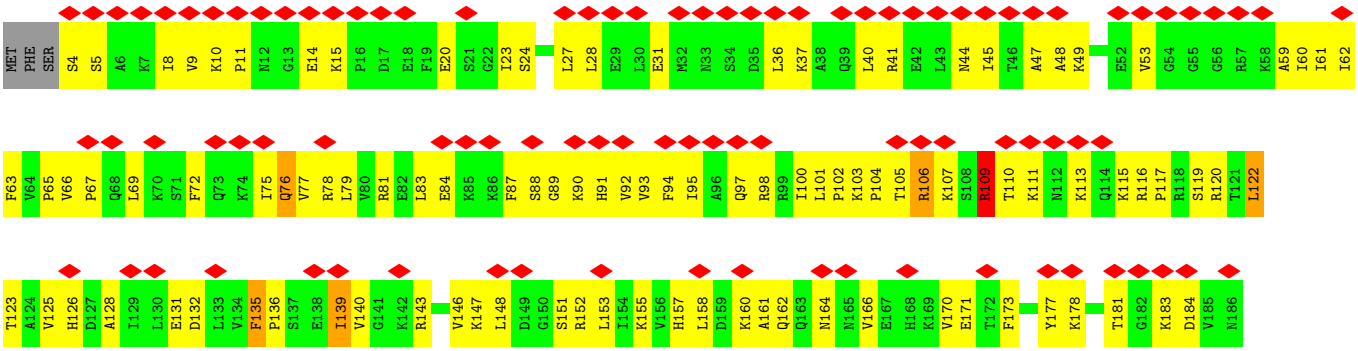
• Molecule 11: 40S RIBOSOMAL PROTEIN S6

Chain BG:



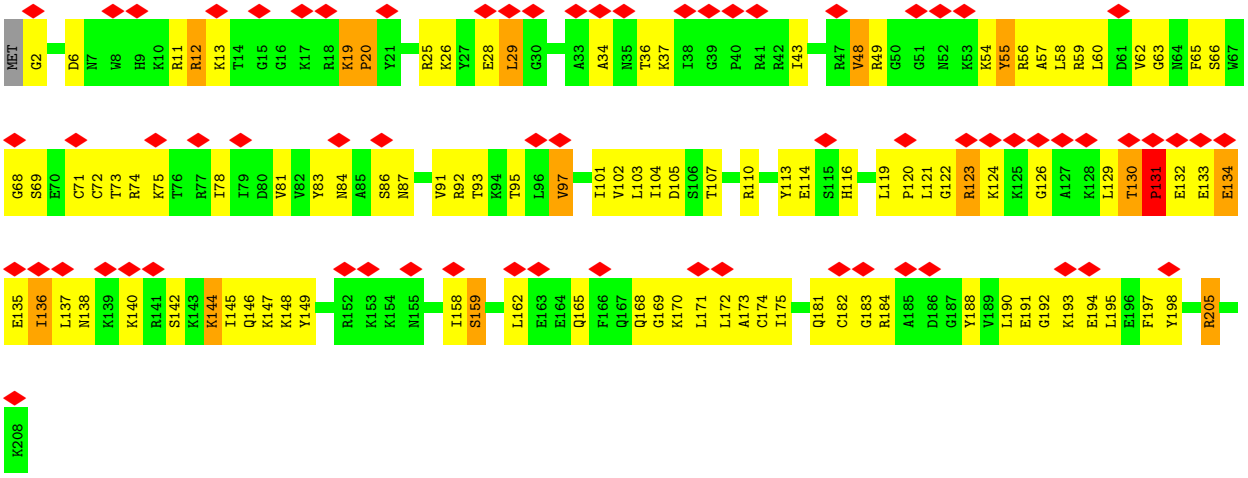
• Molecule 12: 40S RIBOSOMAL PROTEIN S7

Chain BH:



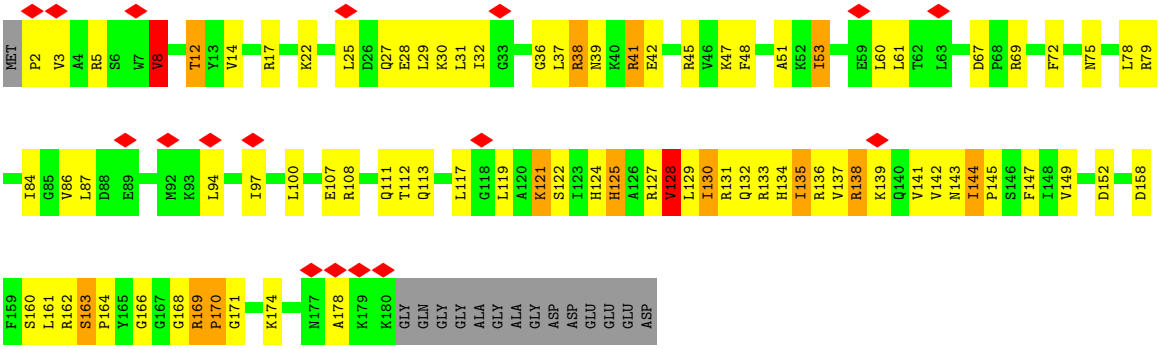
• Molecule 13: 40S RIBOSOMAL PROTEIN S8

Chain BI:



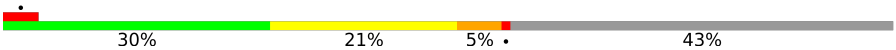
• Molecule 14: 40S RIBOSOMAL PROTEIN S9

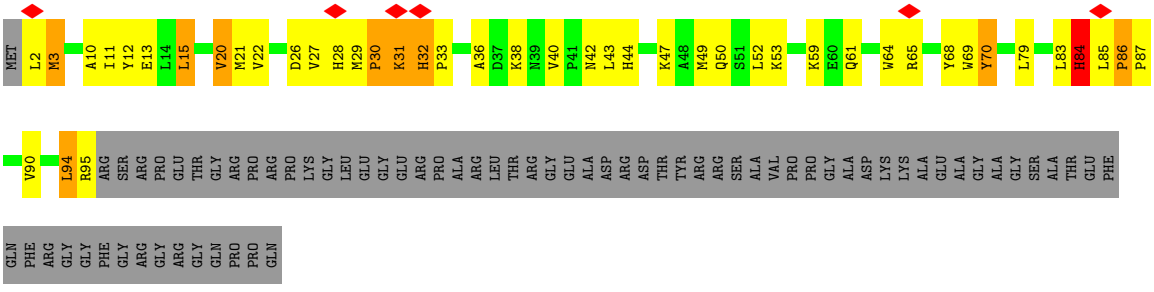
Chain BJ:



• Molecule 15: 40S RIBOSOMAL PROTEIN S10

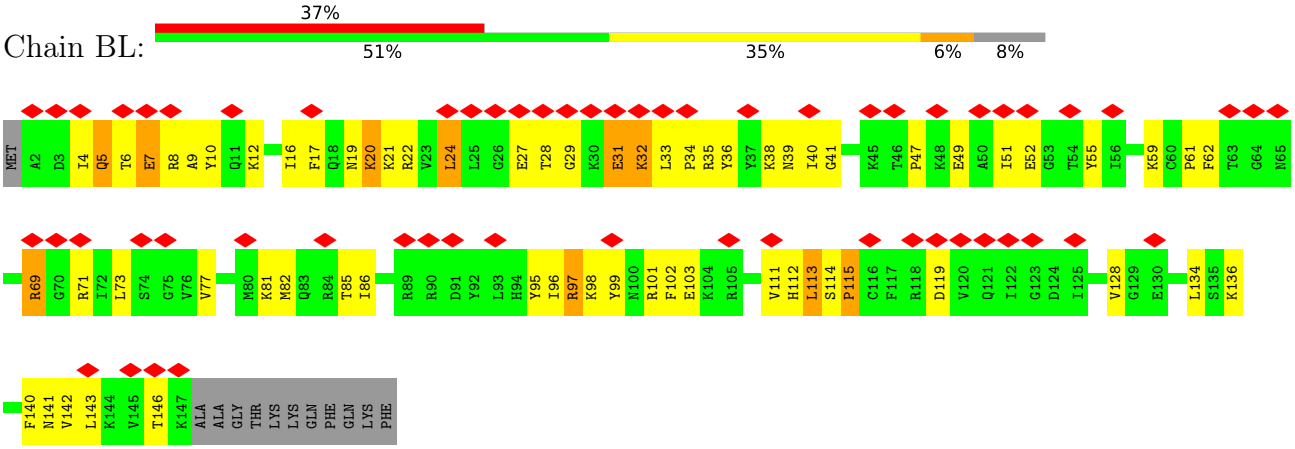
Chain BK:





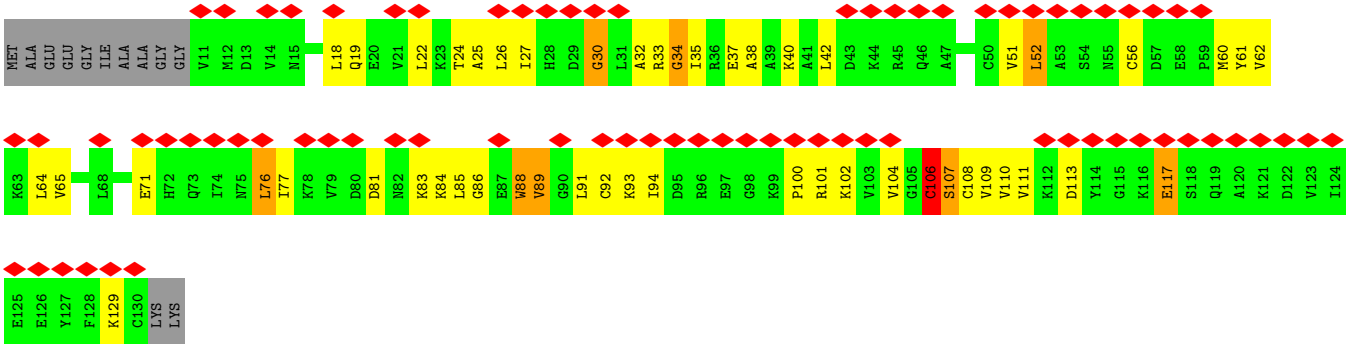
• Molecule 16: 40S RIBOSOMAL PROTEIN S11

Chain BL:



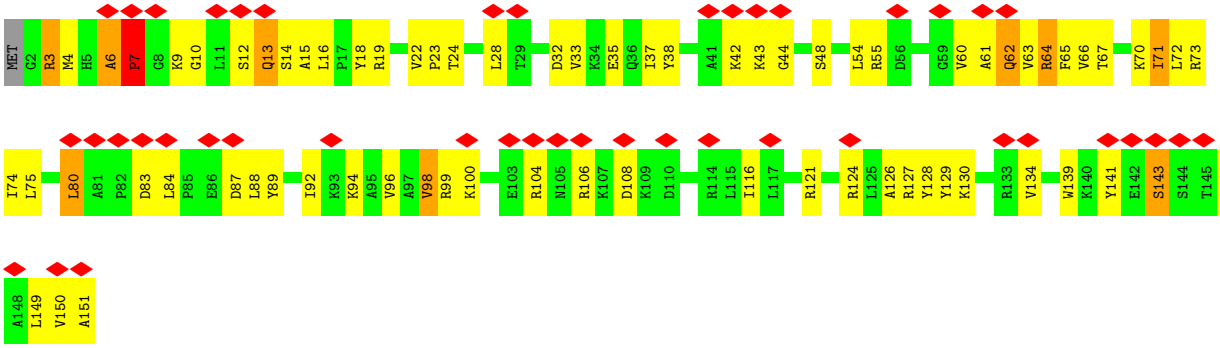
• Molecule 17: 40S RIBOSOMAL PROTEIN S12

Chain BM:



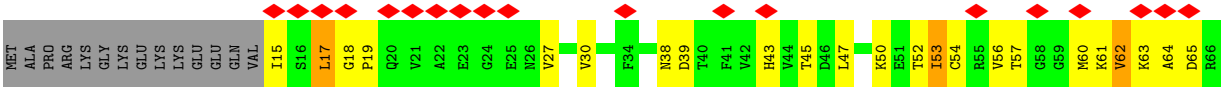
• Molecule 18: 40S RIBOSOMAL PROTEIN S13

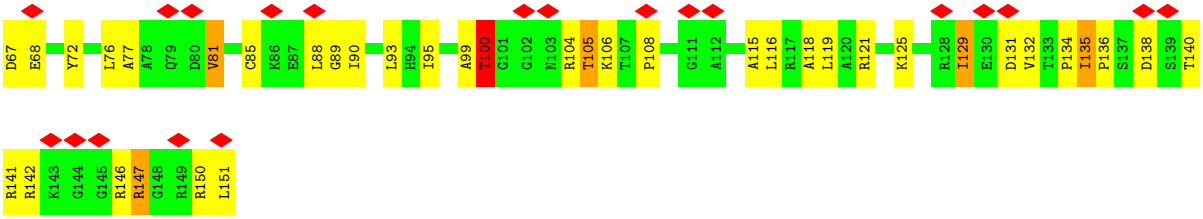
Chain BN:



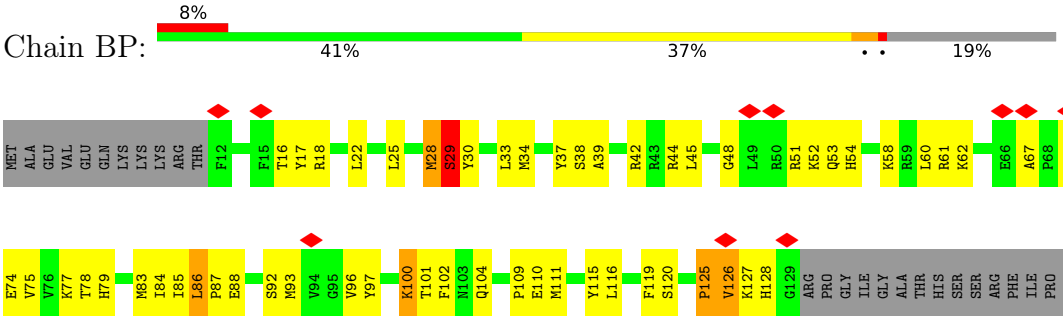
• Molecule 19: 40S RIBOSOMAL PROTEIN S14

Chain BO:

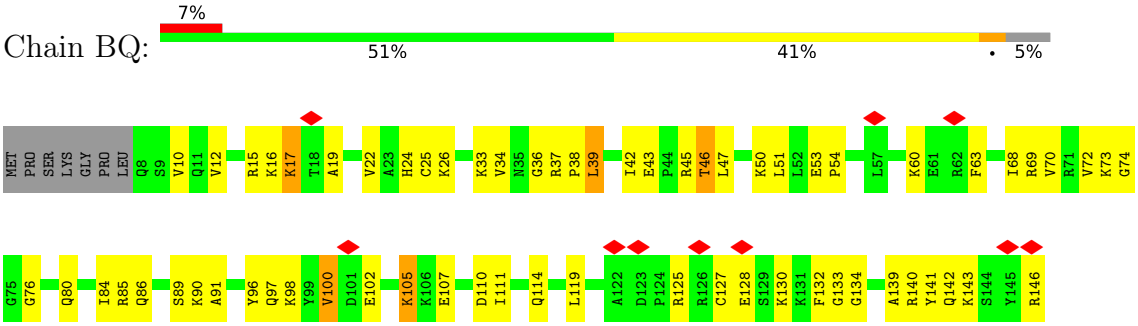




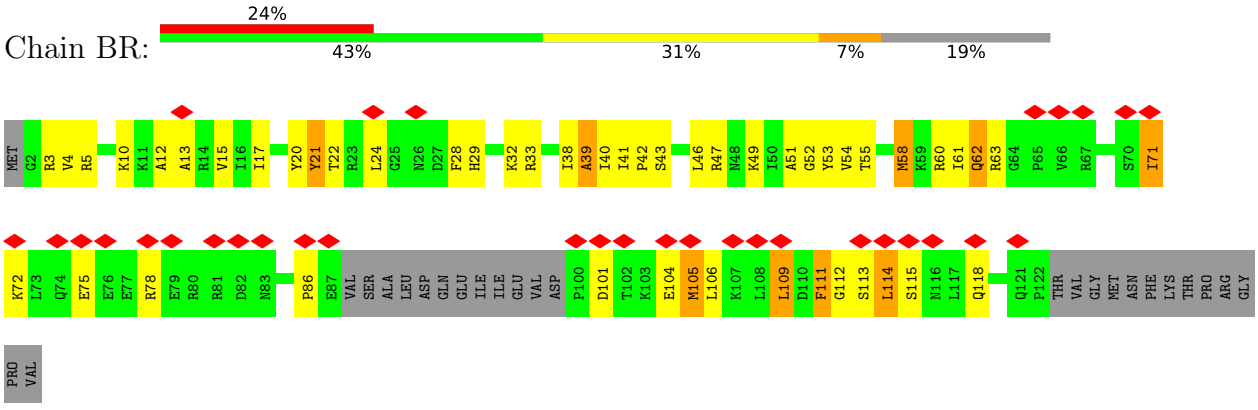
• Molecule 20: 40S RIBOSOMAL PROTEIN S15



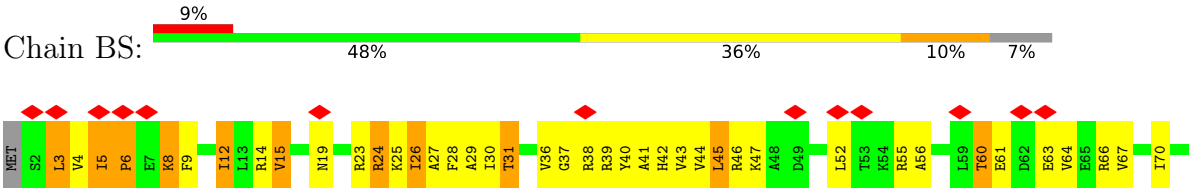
• Molecule 21: 40S RIBOSOMAL PROTEIN S16

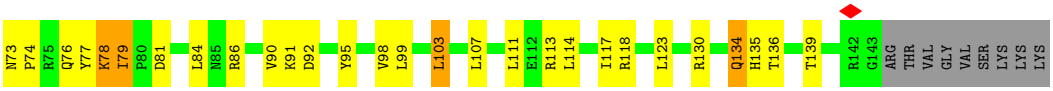


• Molecule 22: 40S RIBOSOMAL PROTEIN S17



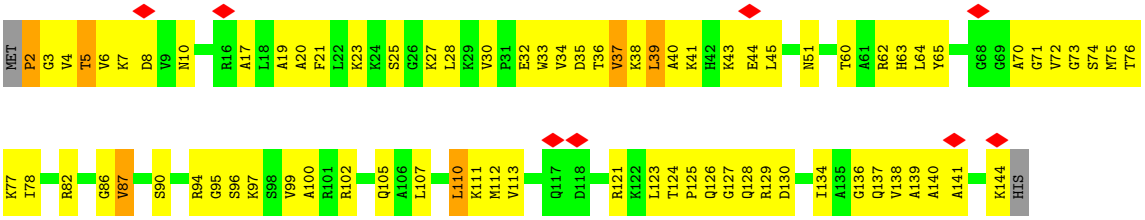
• Molecule 23: 40S RIBOSOMAL PROTEIN S18





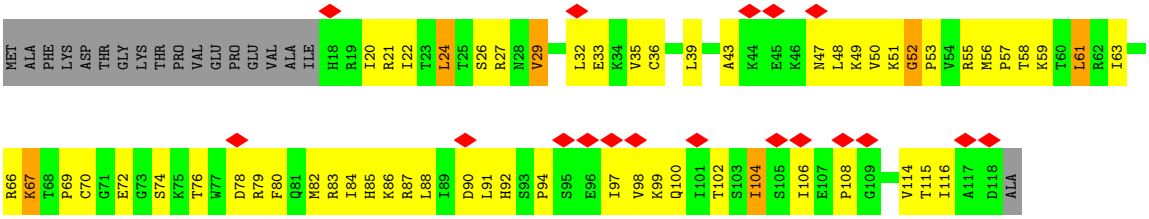
• Molecule 24: 40S RIBOSOMAL PROTEIN S19

Chain BT:



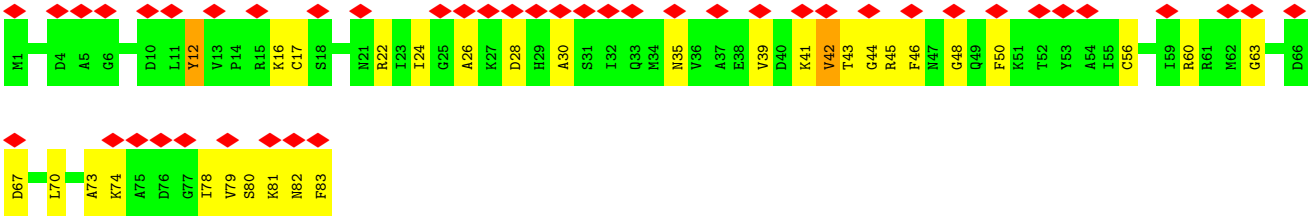
• Molecule 25: 40S RIBOSOMAL PROTEIN S20

Chain BU:



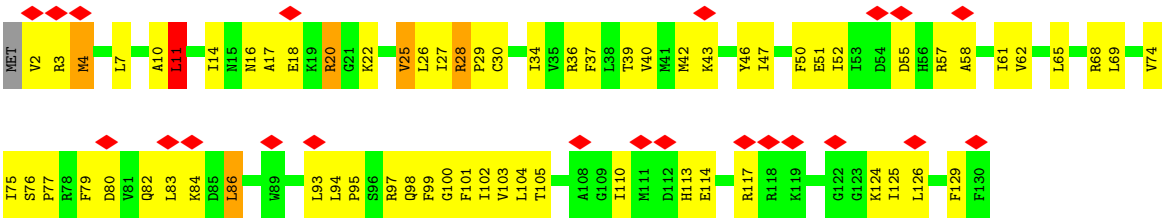
• Molecule 26: 40S RIBOSOMAL PROTEIN S21

Chain BV:



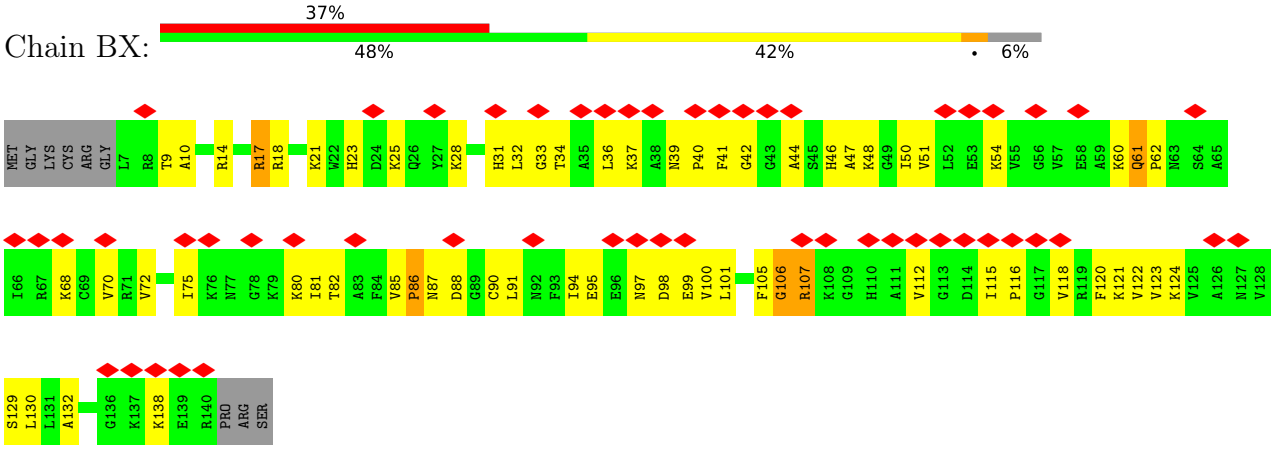
• Molecule 27: 40S RIBOSOMAL PROTEIN S15A

Chain BW:



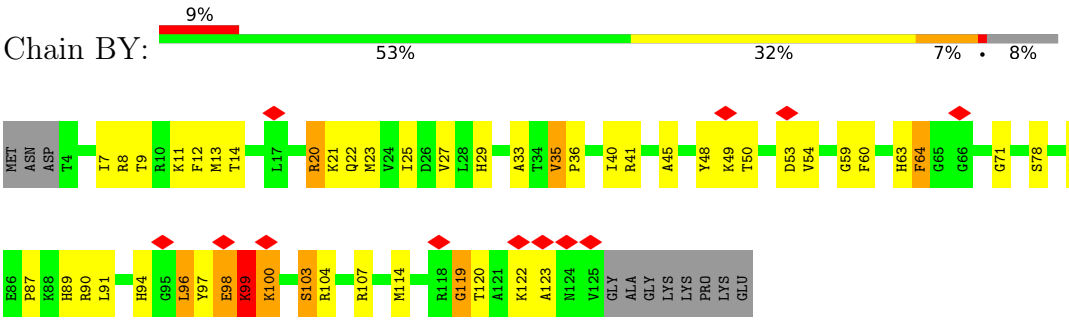
• Molecule 28: 40S RIBOSOMAL PROTEIN S23

Chain BX:



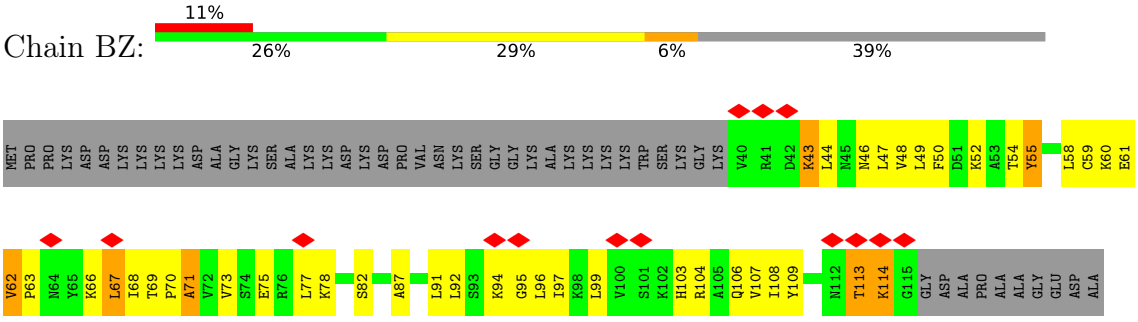
• Molecule 29: 40S RIBOSOMAL PROTEIN S24

Chain BY:



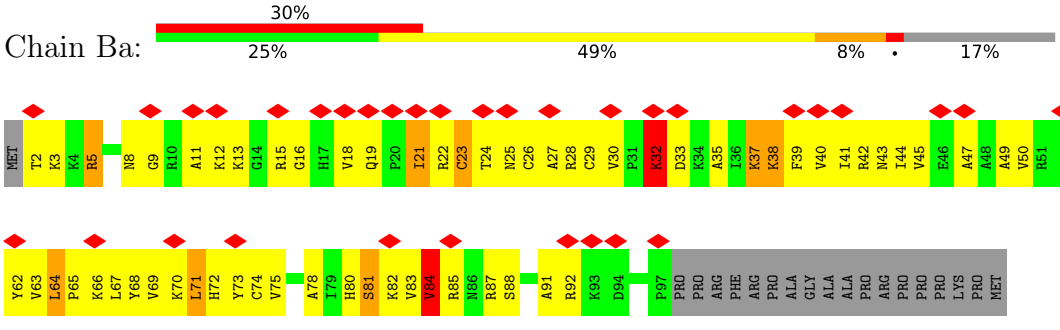
• Molecule 30: 40S RIBOSOMAL PROTEIN S25

Chain BZ:



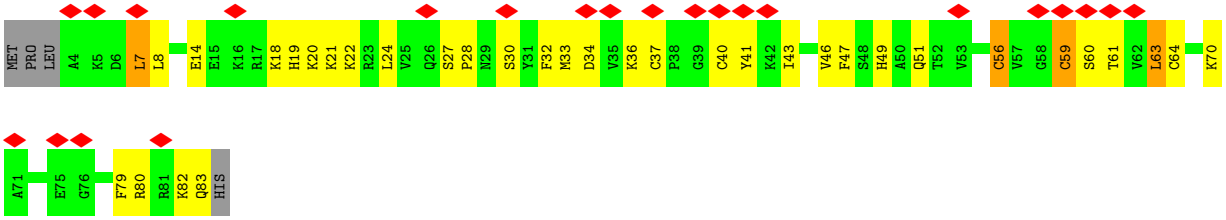
• Molecule 31: 40S RIBOSOMAL PROTEIN S26

Chain Ba:

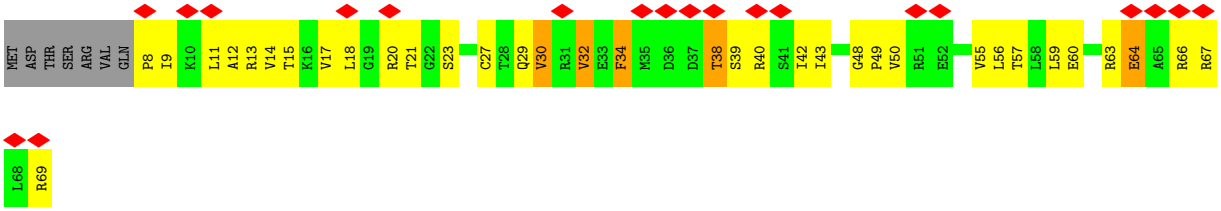


• Molecule 32: 40S RIBOSOMAL PROTEIN S27

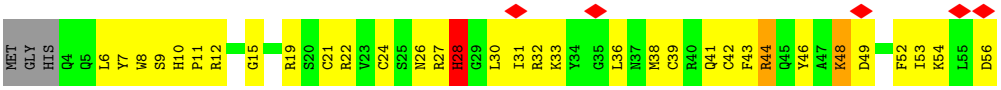
Chain Bb:



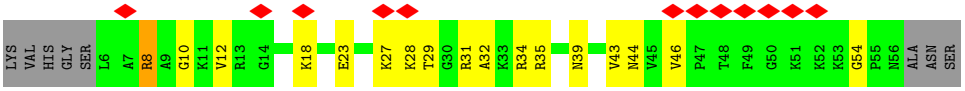
• Molecule 33: 40S RIBOSOMAL PROTEIN S28



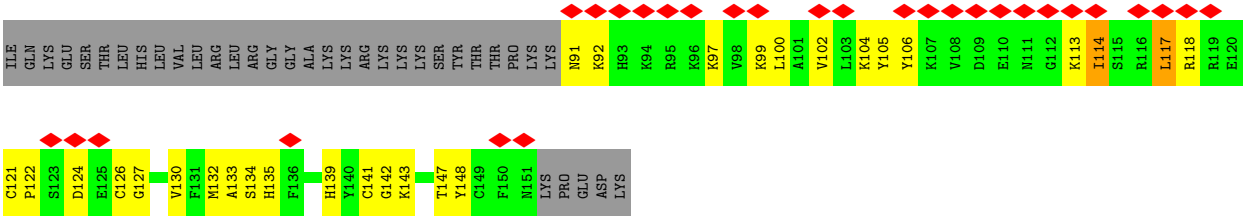
• Molecule 34: 40S RIBOSOMAL PROTEIN S29



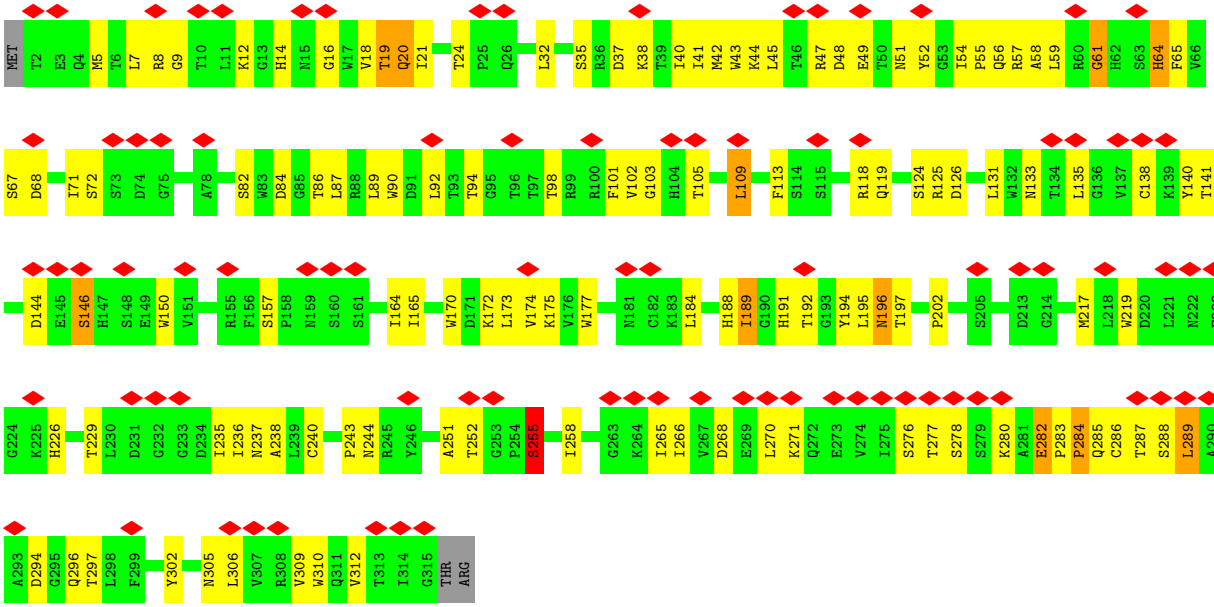
• Molecule 35: 40S RIBOSOMAL PROTEIN S30



• Molecule 36: UBIQUITIN-40S RIBOSOMAL PROTEIN S27A

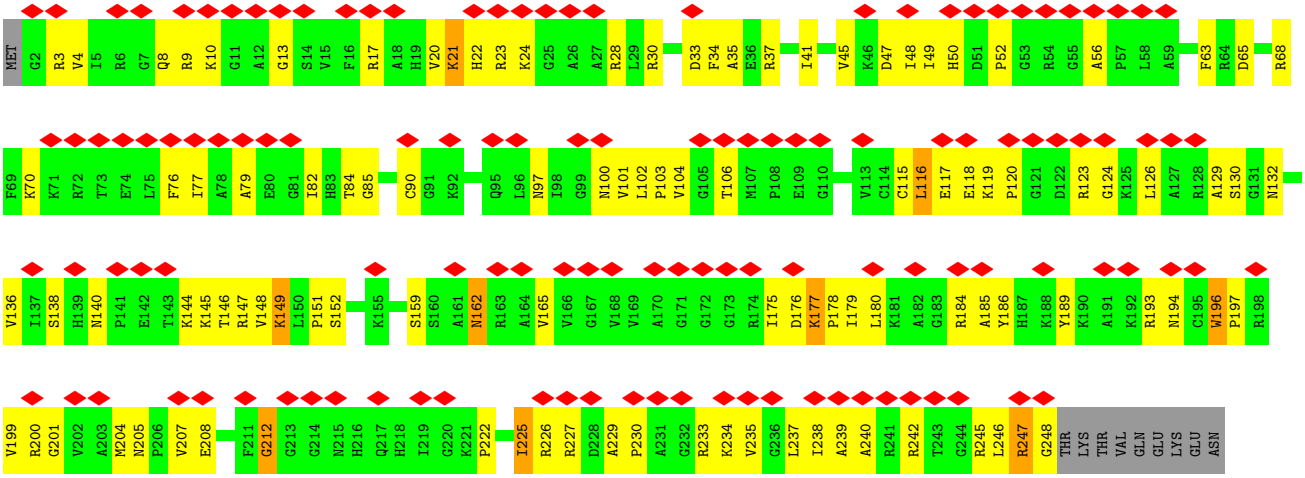


• Molecule 37: GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1



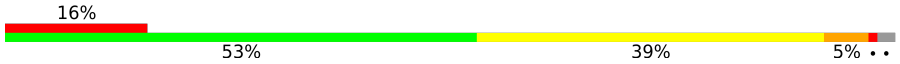
• Molecule 38: 60S RIBOSOMAL PROTEIN L8

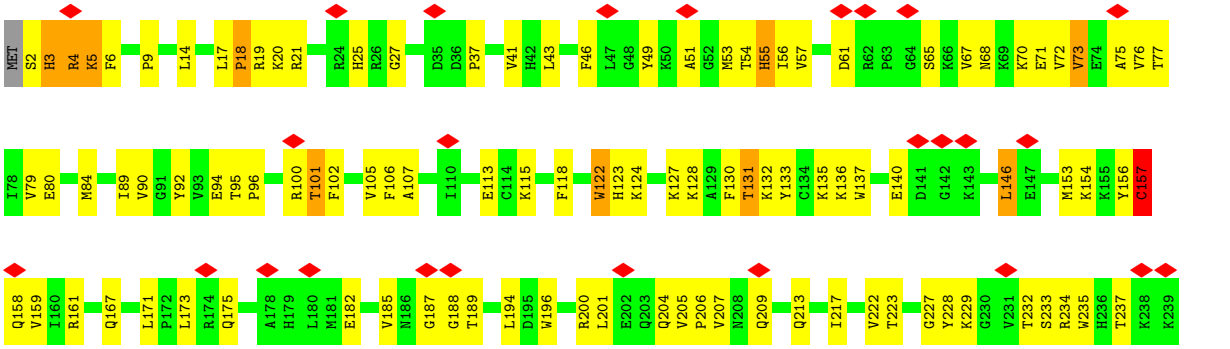
Chain CA:

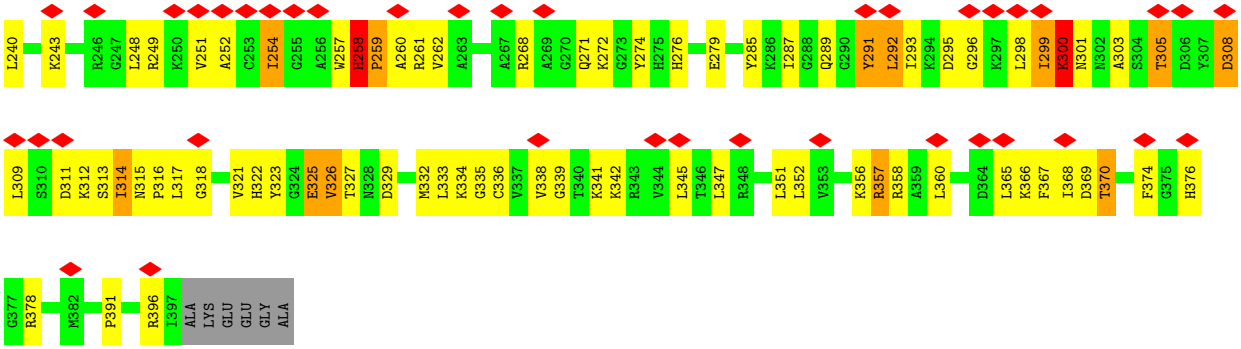


• Molecule 39: 60S RIBOSOMAL PROTEIN L3

Chain CB:

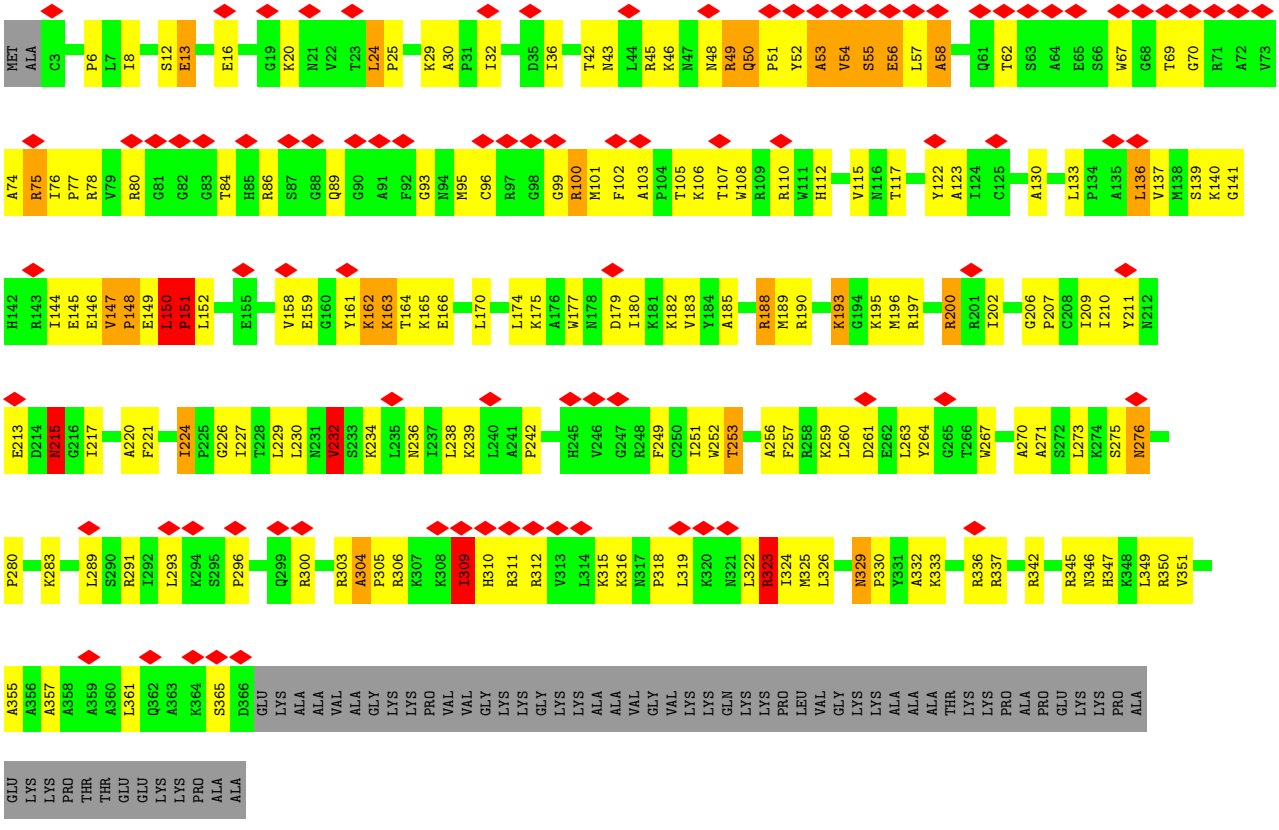






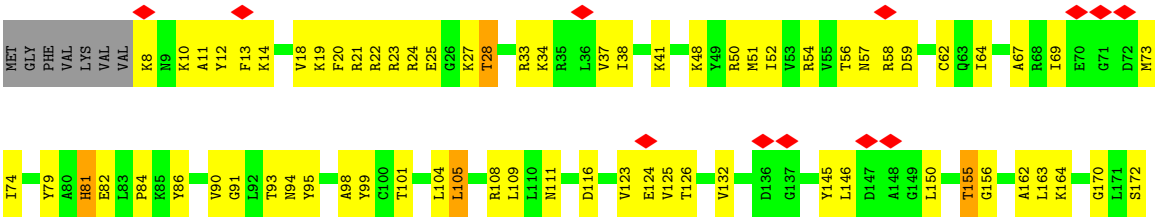
• Molecule 40: 60S RIBOSOMAL PROTEIN L4

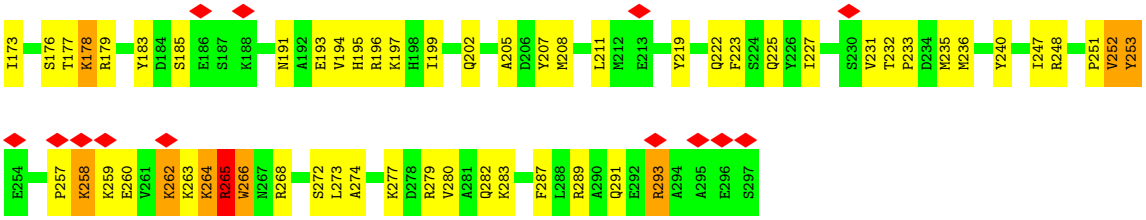
Chain CC:



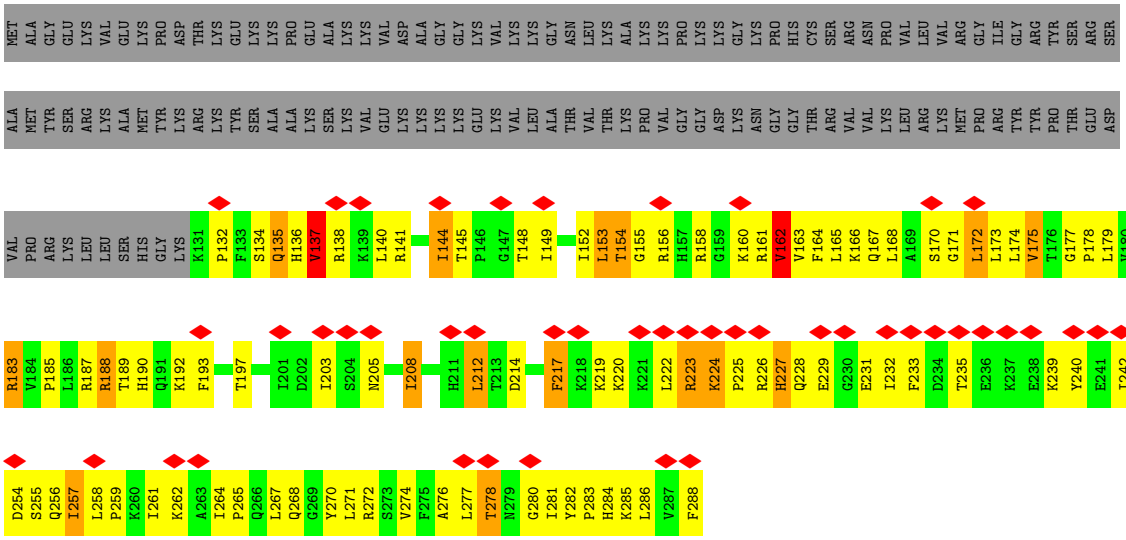
• Molecule 41: 60S RIBOSOMAL PROTEIN L5

Chain CD:

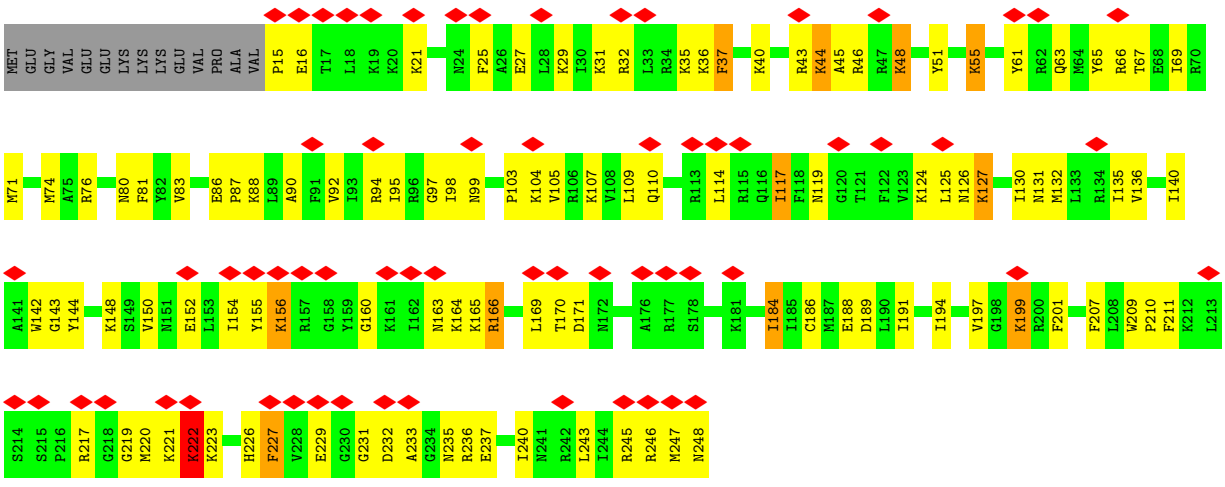




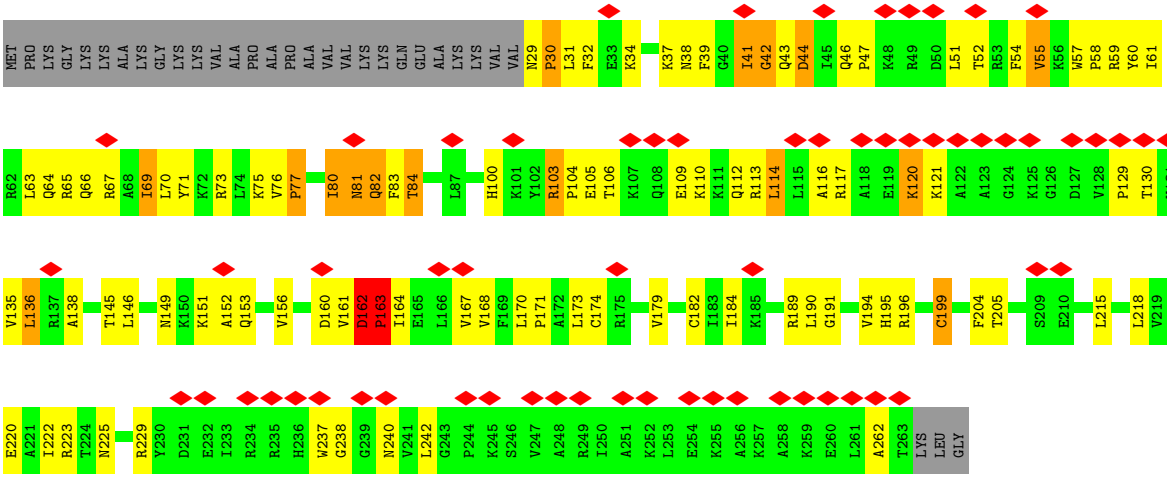
• Molecule 42: 60S RIBOSOMAL PROTEIN L6



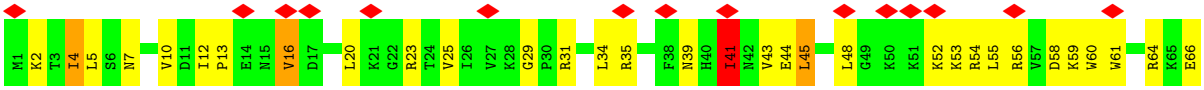
• Molecule 43: 60S RIBOSOMAL PROTEIN L7

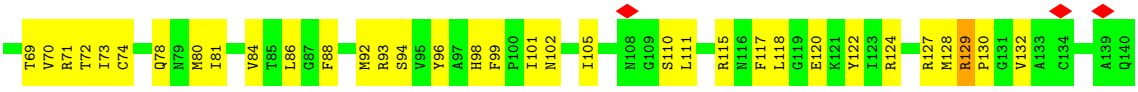


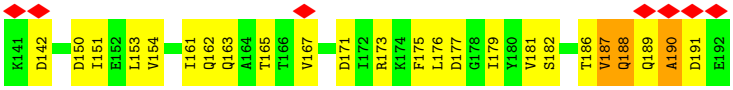
• Molecule 44: 60S RIBOSOMAL PROTEIN L7A



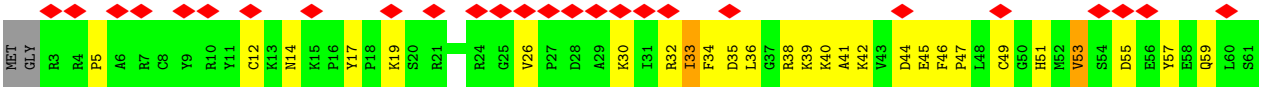
• Molecule 45: 60S RIBOSOMAL PROTEIN L9

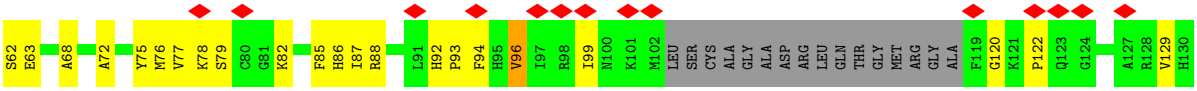


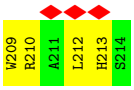




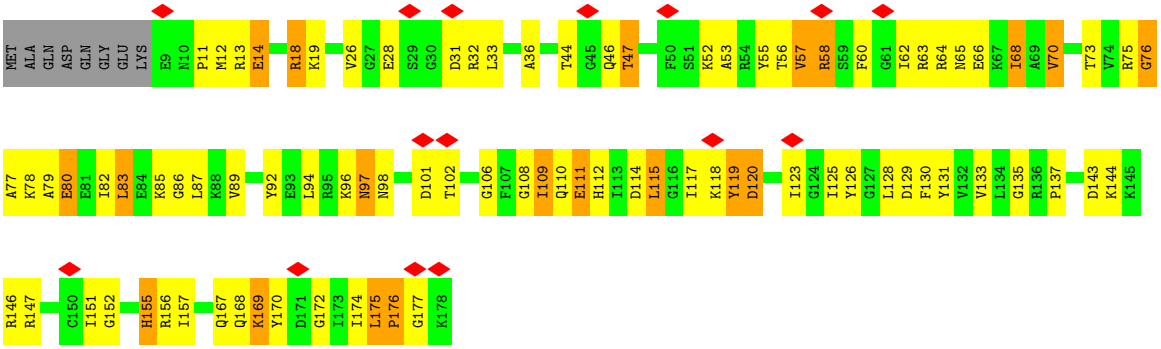
• Molecule 46: 60S RIBOSOMAL PROTEIN L10





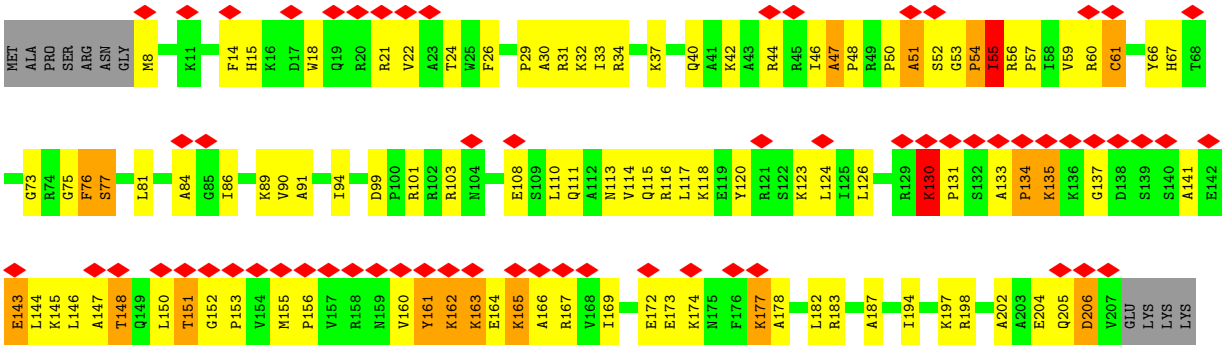


• Molecule 47: 60S RIBOSOMAL PROTEIN L11



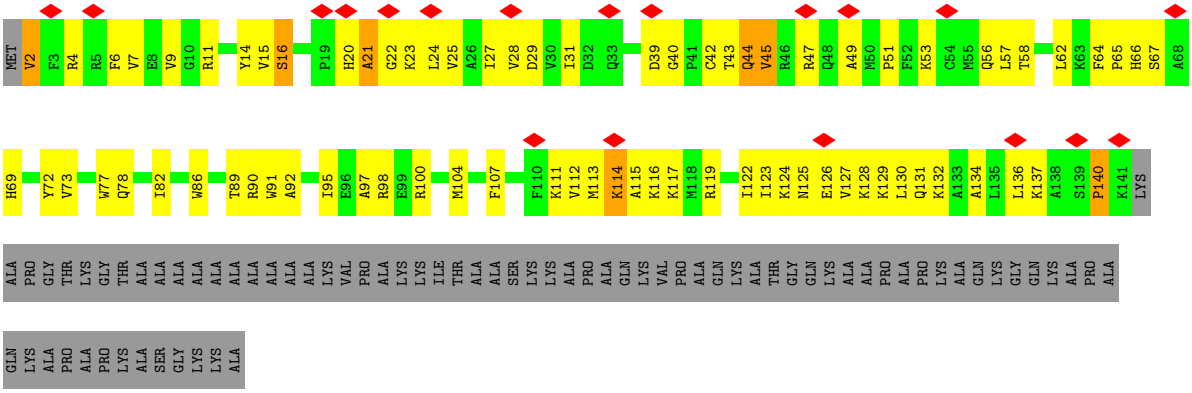
• Molecule 48: 60S RIBOSOMAL PROTEIN L13

Chain CL:



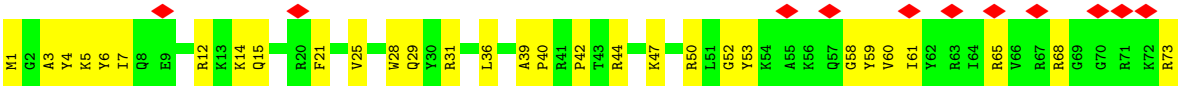
• Molecule 49: 60S RIBOSOMAL PROTEIN L14

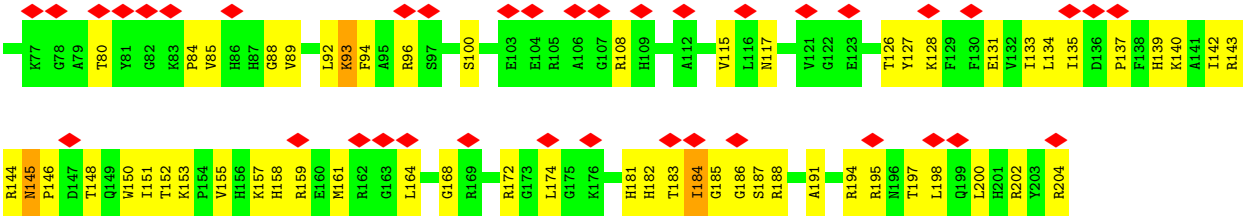
Chain CM:



• Molecule 50: 60S RIBOSOMAL PROTEIN L15

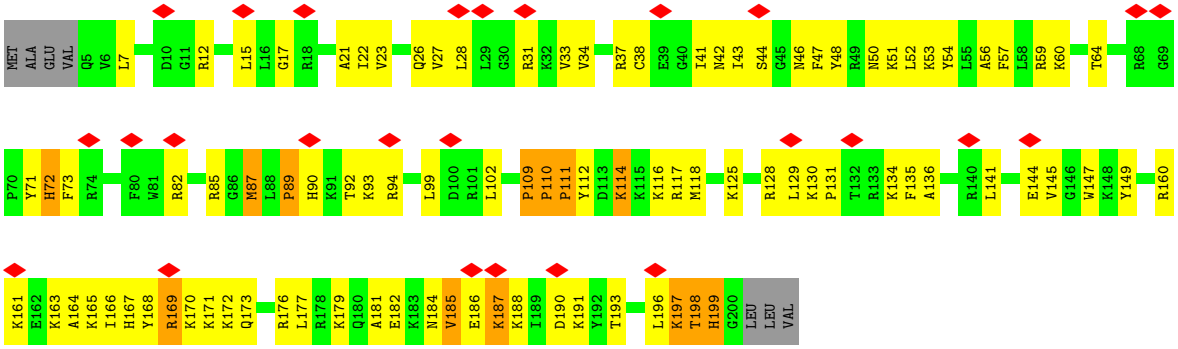
Chain CN:





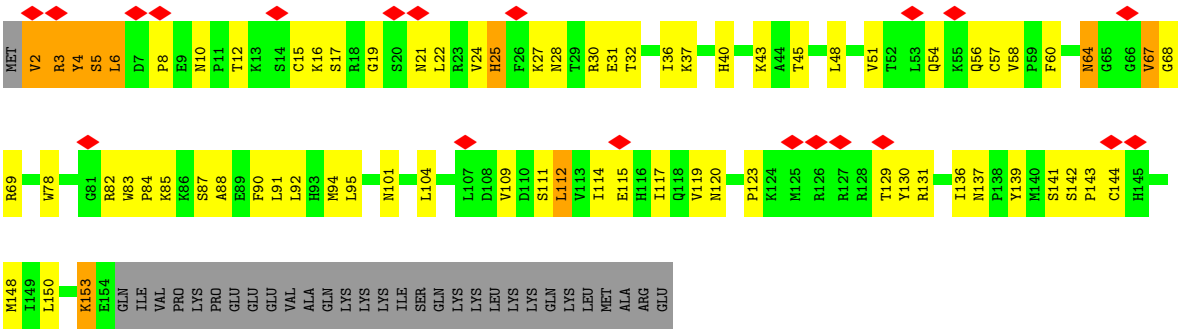
• Molecule 51: 60S RIBOSOMAL PROTEIN L13A

Chain CO:



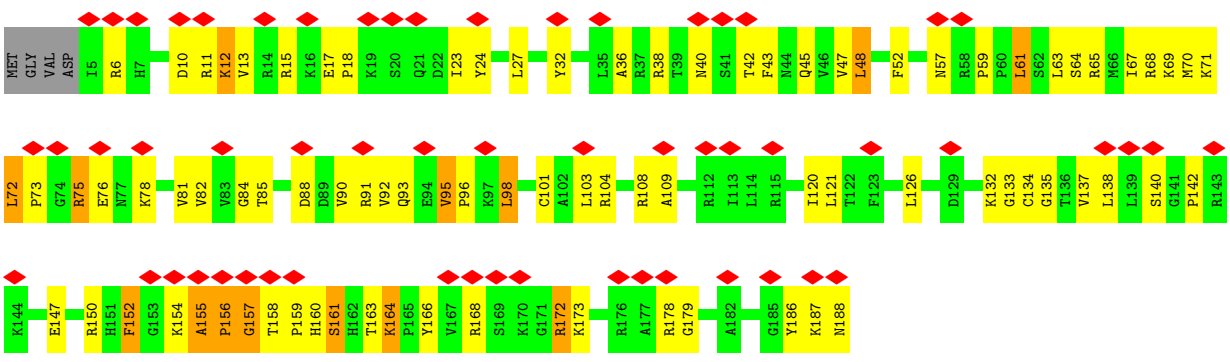
• Molecule 52: 60S RIBOSOMAL PROTEIN L17

Chain CP:



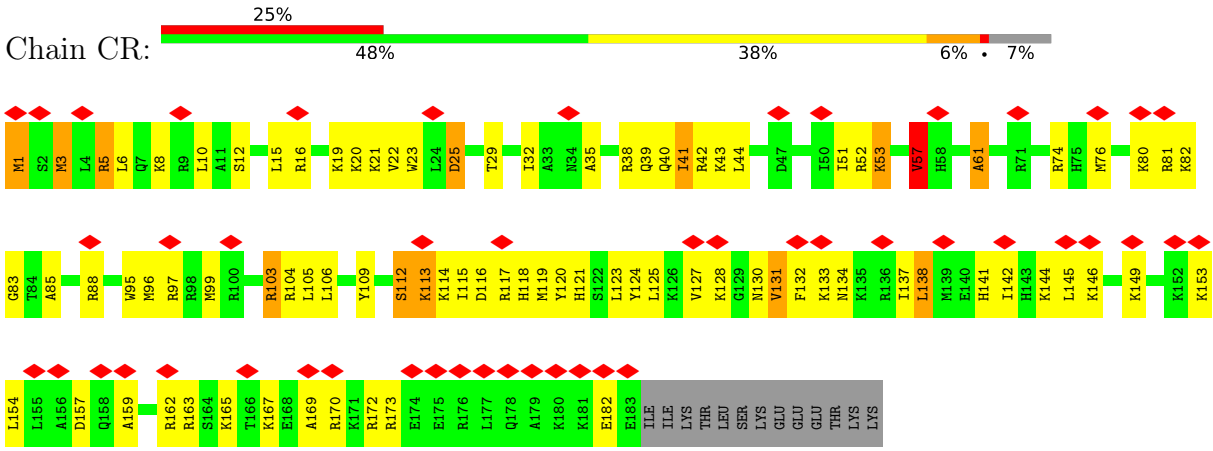
• Molecule 53: 60S RIBOSOMAL PROTEIN L18

Chain CQ:



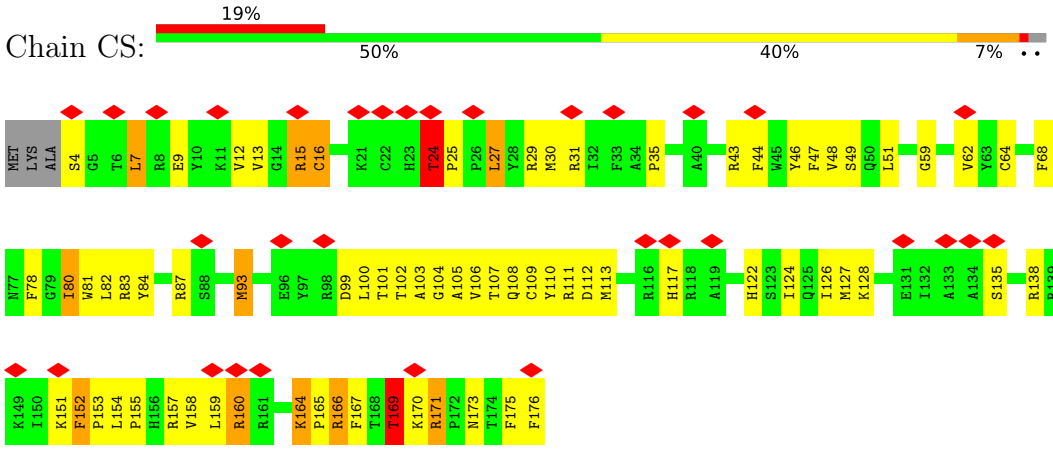
• Molecule 54: 60S RIBOSOMAL PROTEIN L19

Chain CR:



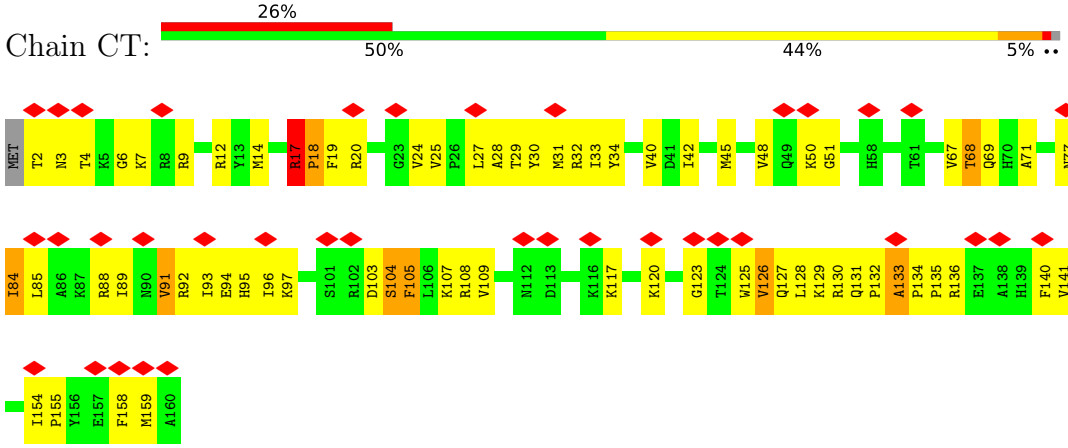
• Molecule 55: 60S RIBOSOMAL PROTEIN L18A

Chain CS:



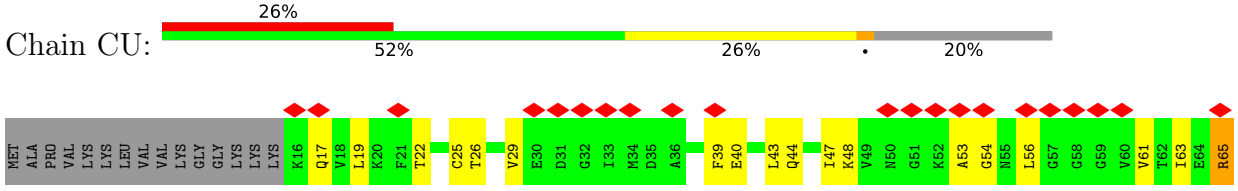
• Molecule 56: 60S RIBOSOMAL PROTEIN L21

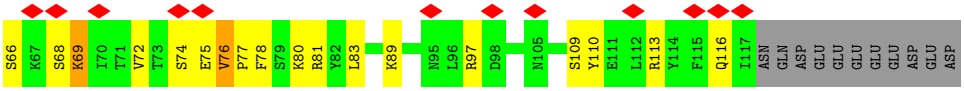
Chain CT:



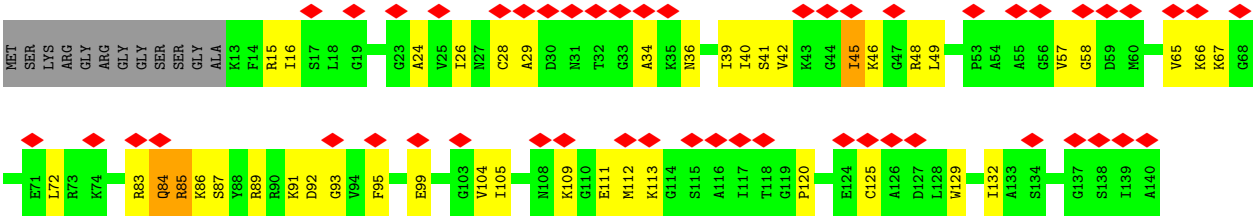
• Molecule 57: 60S RIBOSOMAL PROTEIN L22

Chain CU:

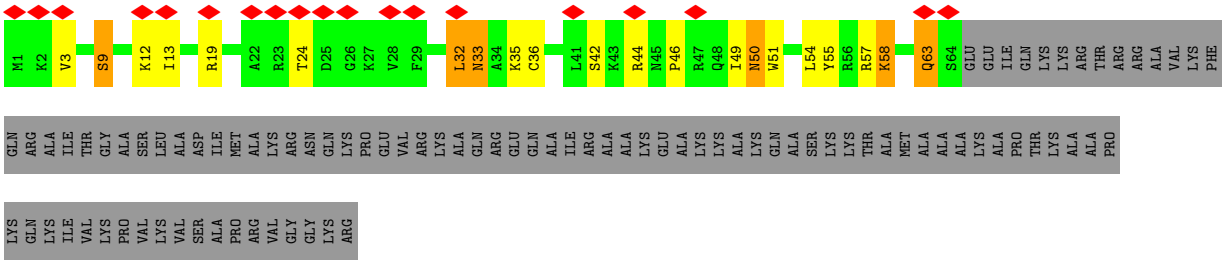




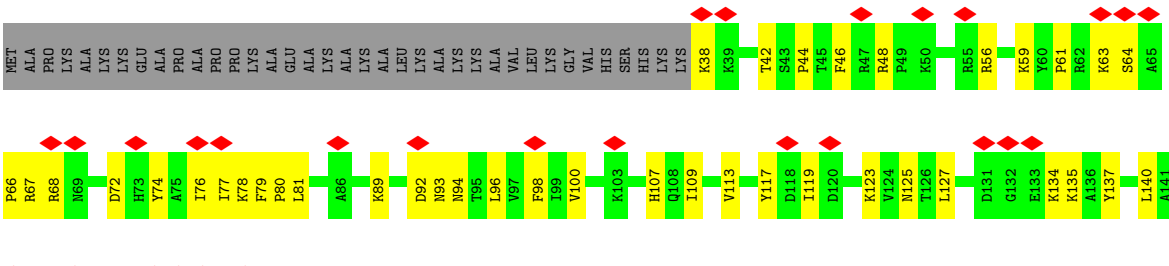
• Molecule 58: 60S RIBOSOMAL PROTEIN L23



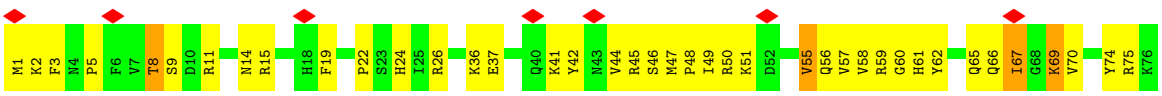
• Molecule 59: 60S RIBOSOMAL PROTEIN L24

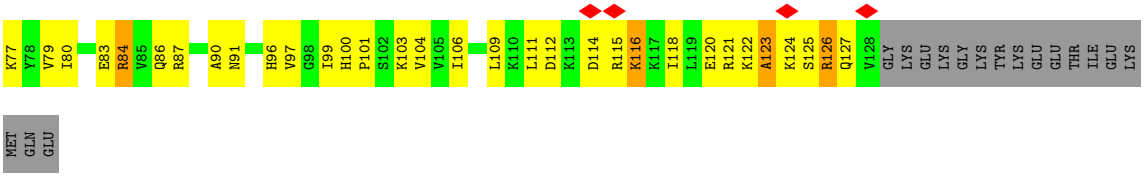


• Molecule 60: 60S RIBOSOMAL PROTEIN L23A



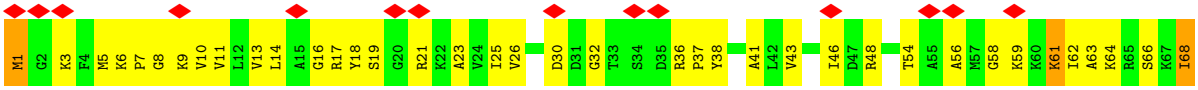
• Molecule 61: 60S RIBOSOMAL PROTEIN L26

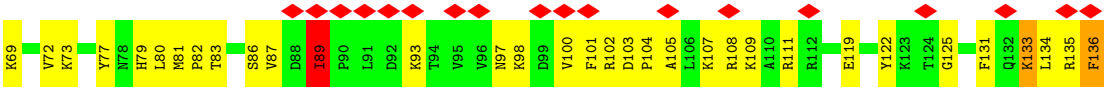




• Molecule 62: 60S RIBOSOMAL PROTEIN L27

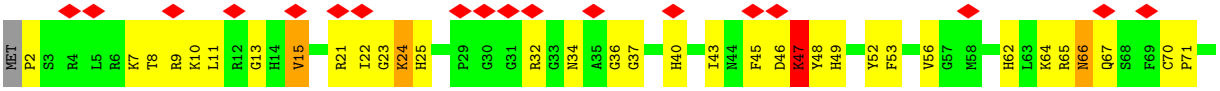
Chain CZ:

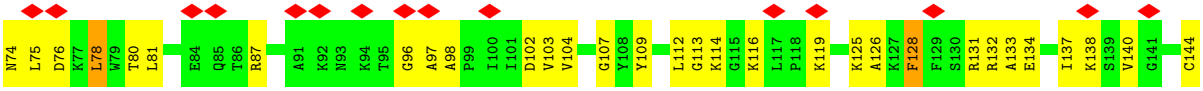




• Molecule 63: 60S RIBOSOMAL PROTEIN L27A

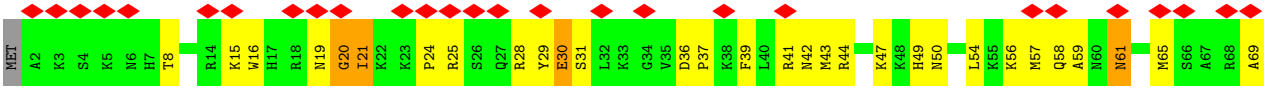
Chain Ca:





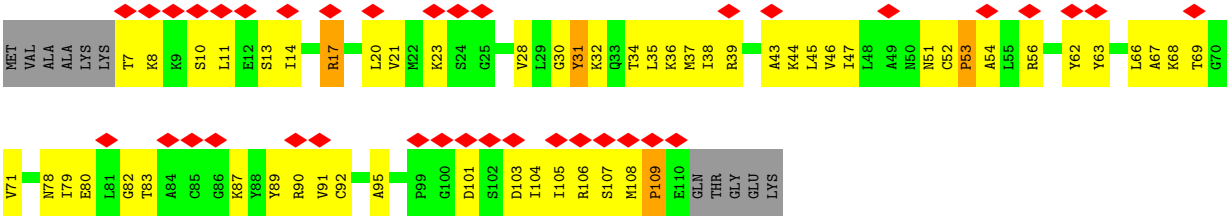
• Molecule 64: 60S RIBOSOMAL PROTEIN L29

Chain Cb:



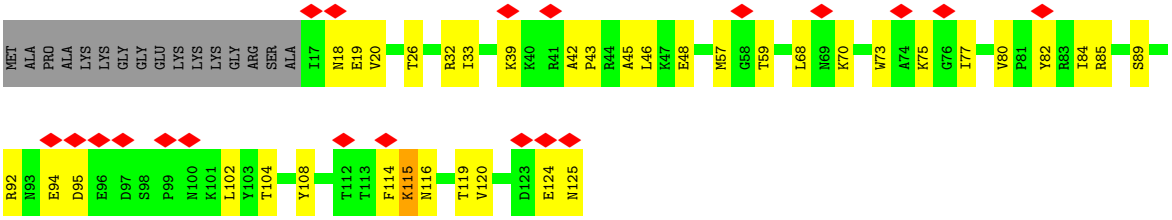
• Molecule 65: 60S RIBOSOMAL PROTEIN L30

Chain Cc:



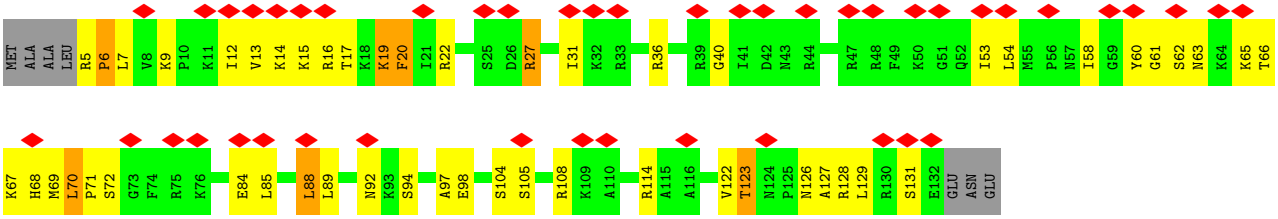
• Molecule 66: 60S RIBOSOMAL PROTEIN L31

Chain Cd:



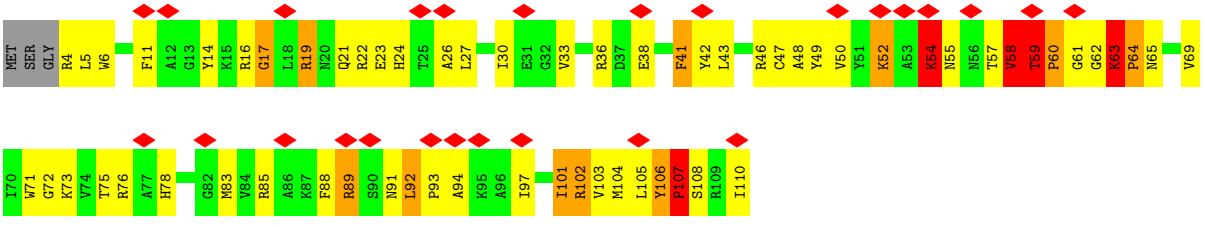
• Molecule 67: 60S RIBOSOMAL PROTEIN L32

Chain Ce:



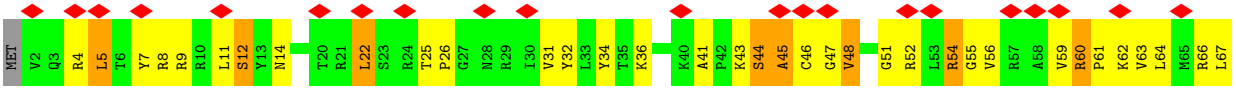
• Molecule 68: 60S RIBOSOMAL PROTEIN L35A

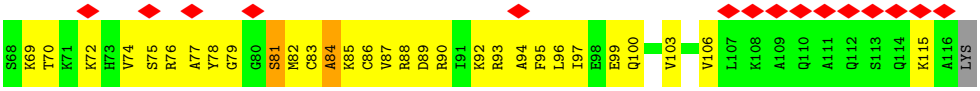
Chain Cf:



• Molecule 69: 60S RIBOSOMAL PROTEIN L34

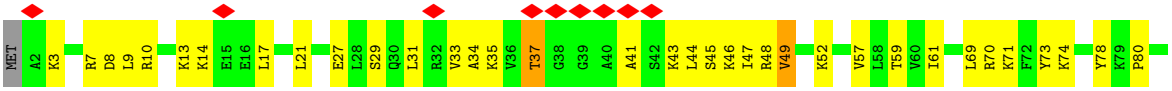
Chain Cg:





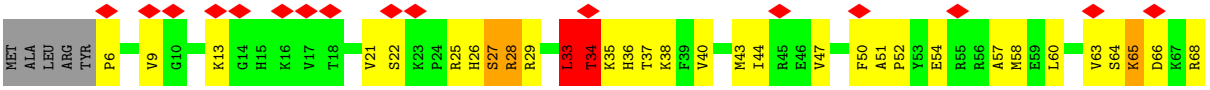
• Molecule 70: 60S RIBOSOMAL PROTEIN L35

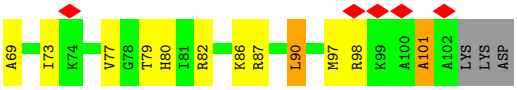
Chain Ch:



• Molecule 71: 60S RIBOSOMAL PROTEIN L36

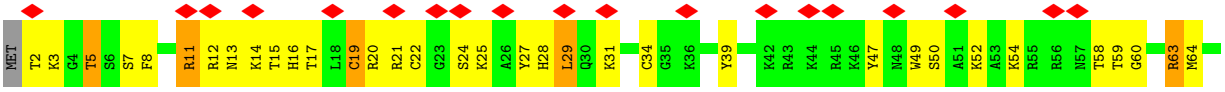
Chain Ci:

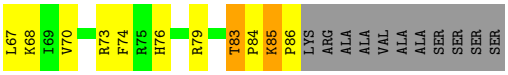




• Molecule 72: 60S RIBOSOMAL PROTEIN L37

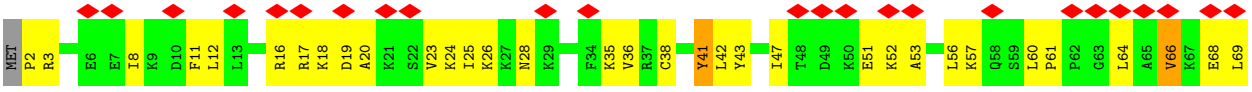
Chain Cj:





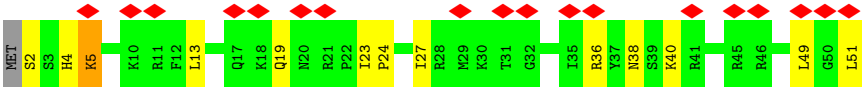
• Molecule 73: 60S RIBOSOMAL PROTEIN L38

Chain Ck:

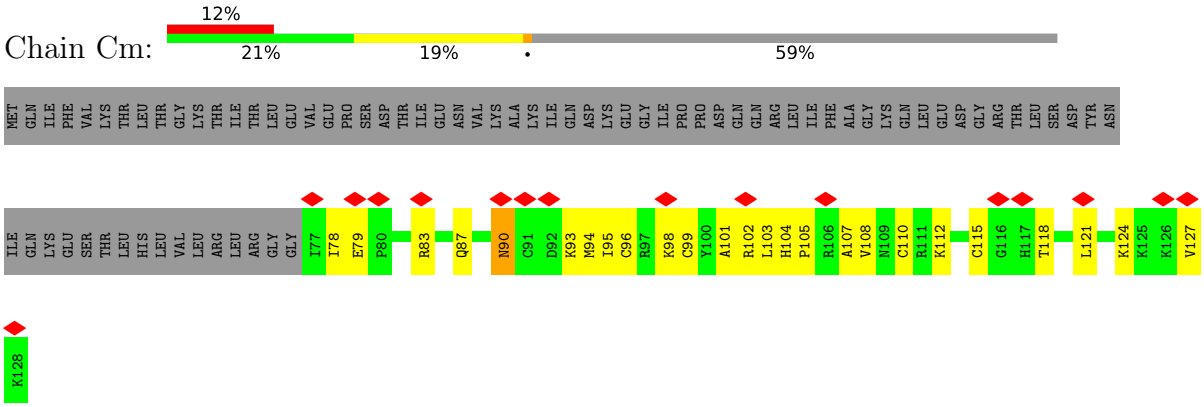


• Molecule 74: 60S RIBOSOMAL PROTEIN L39

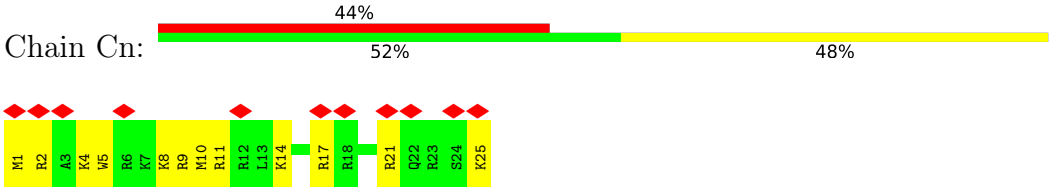
Chain Cl:



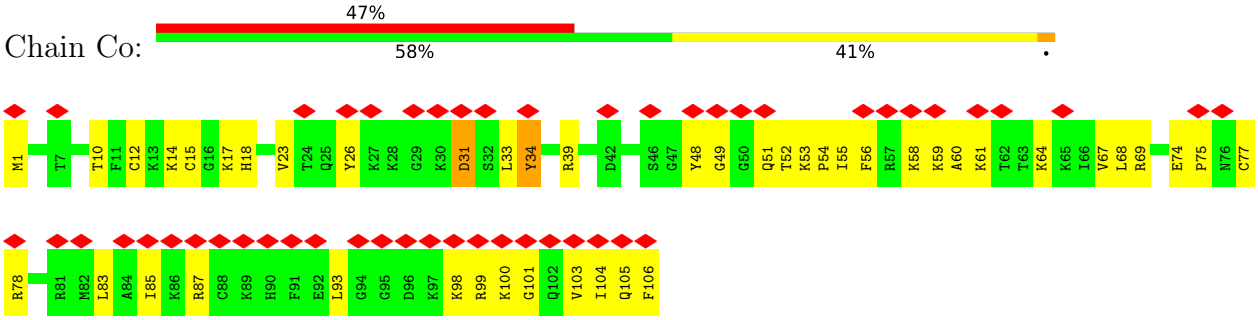
• Molecule 75: UBIQUITIN-60S RIBOSOMAL PROTEIN L40



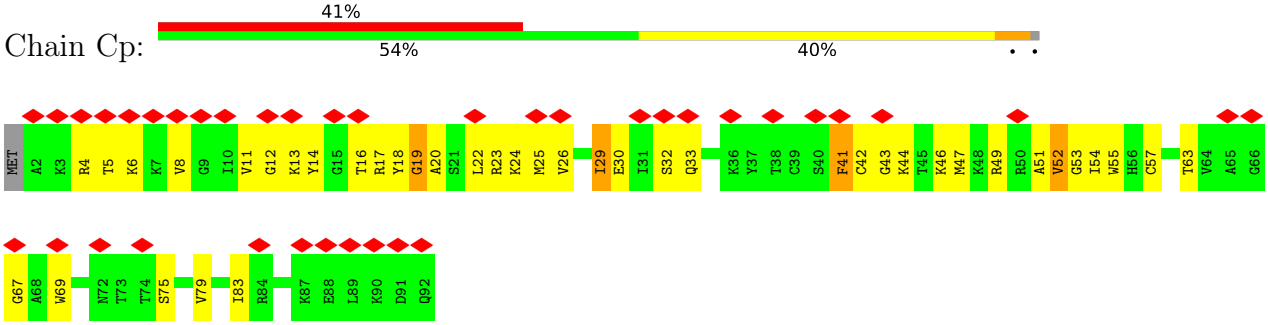
• Molecule 76: 60S RIBOSOMAL PROTEIN L41



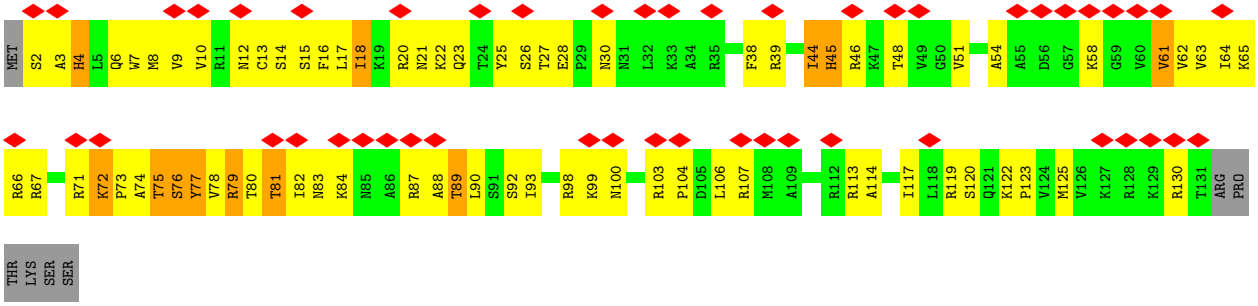
• Molecule 77: 60S RIBOSOMAL PROTEIN L36A



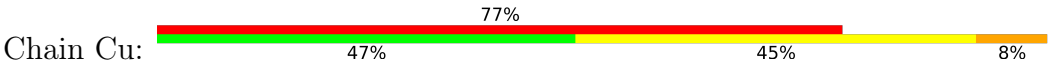
• Molecule 78: 60S RIBOSOMAL PROTEIN L37A

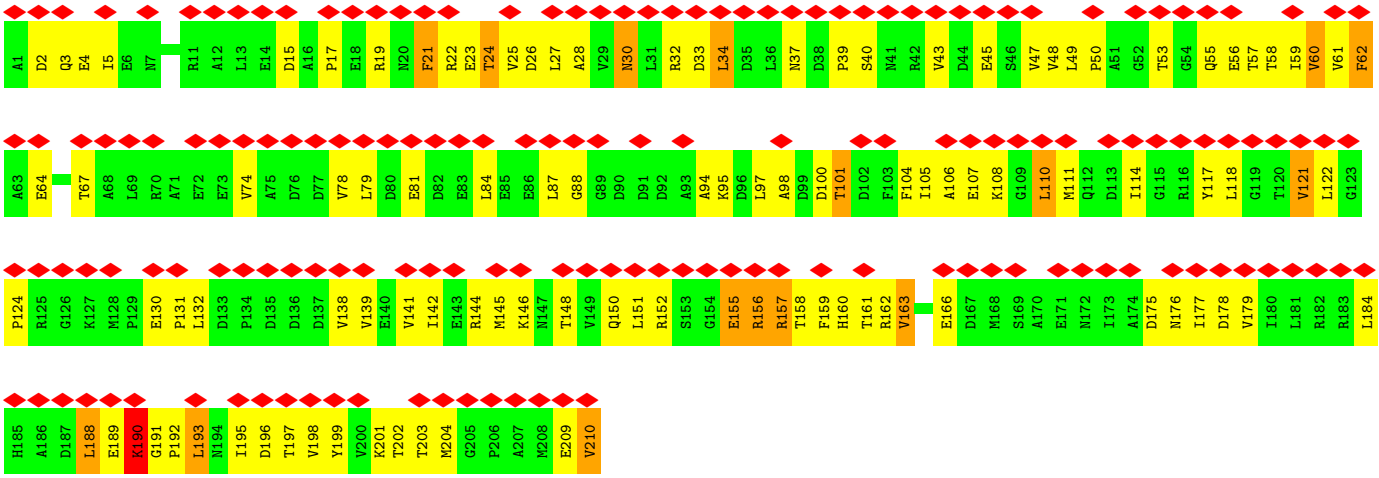


• Molecule 79: 60S RIBOSOMAL PROTEIN L28

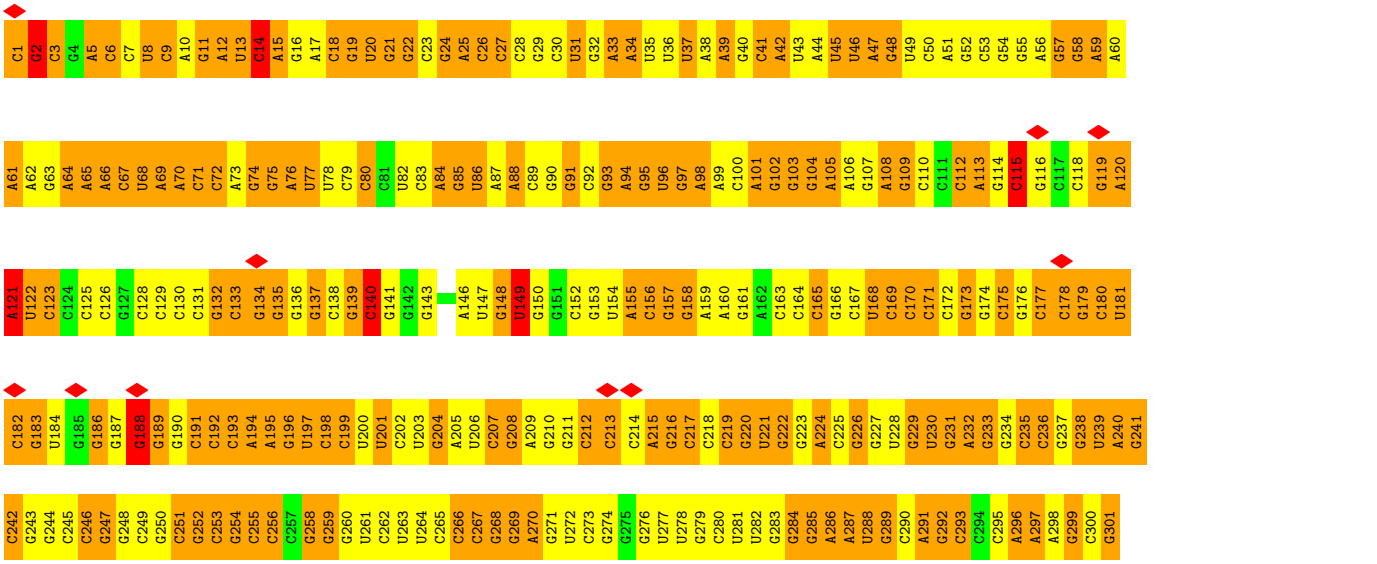


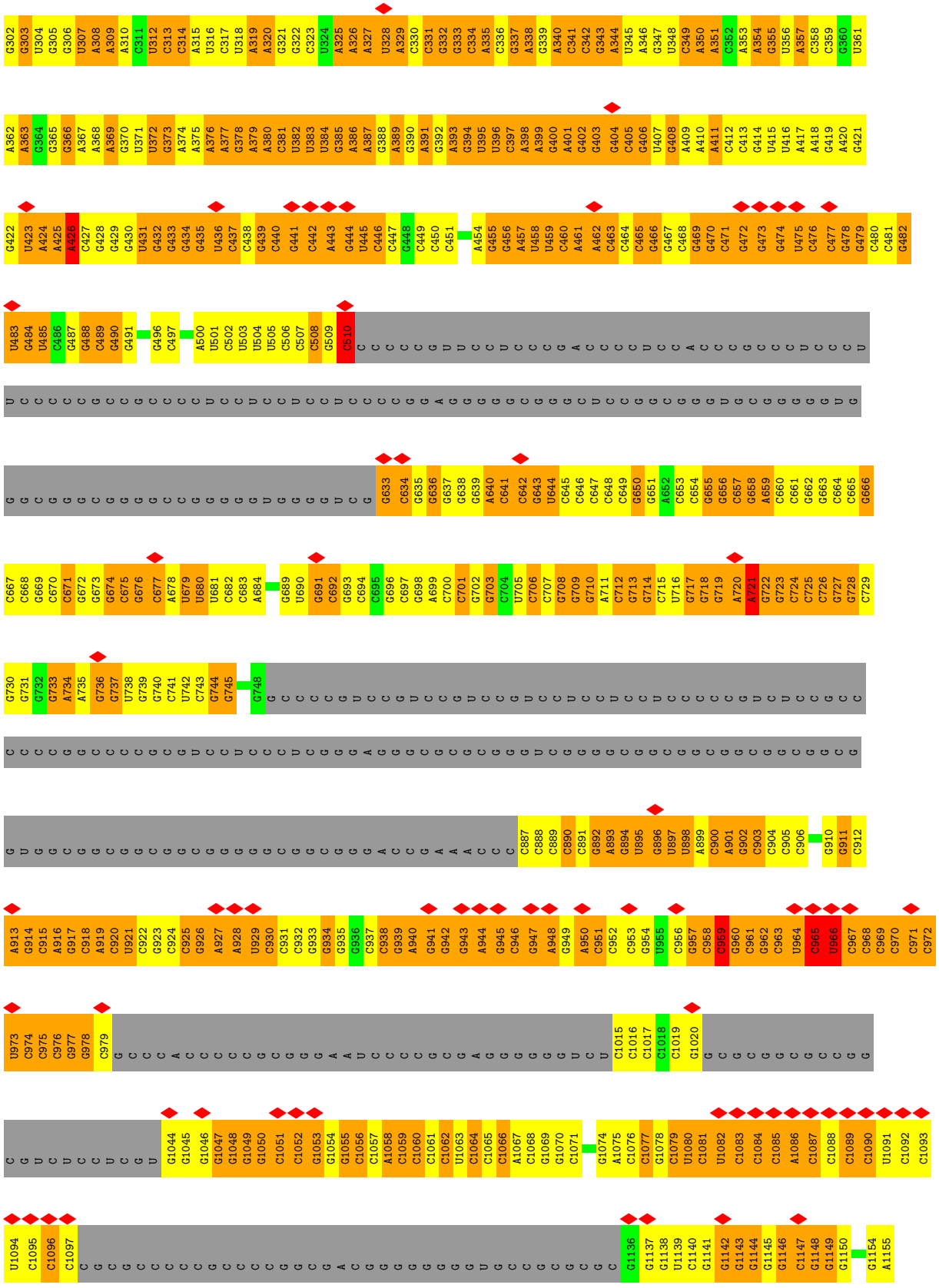
• Molecule 80: 60S RIBOSOMAL PROTEIN L10A

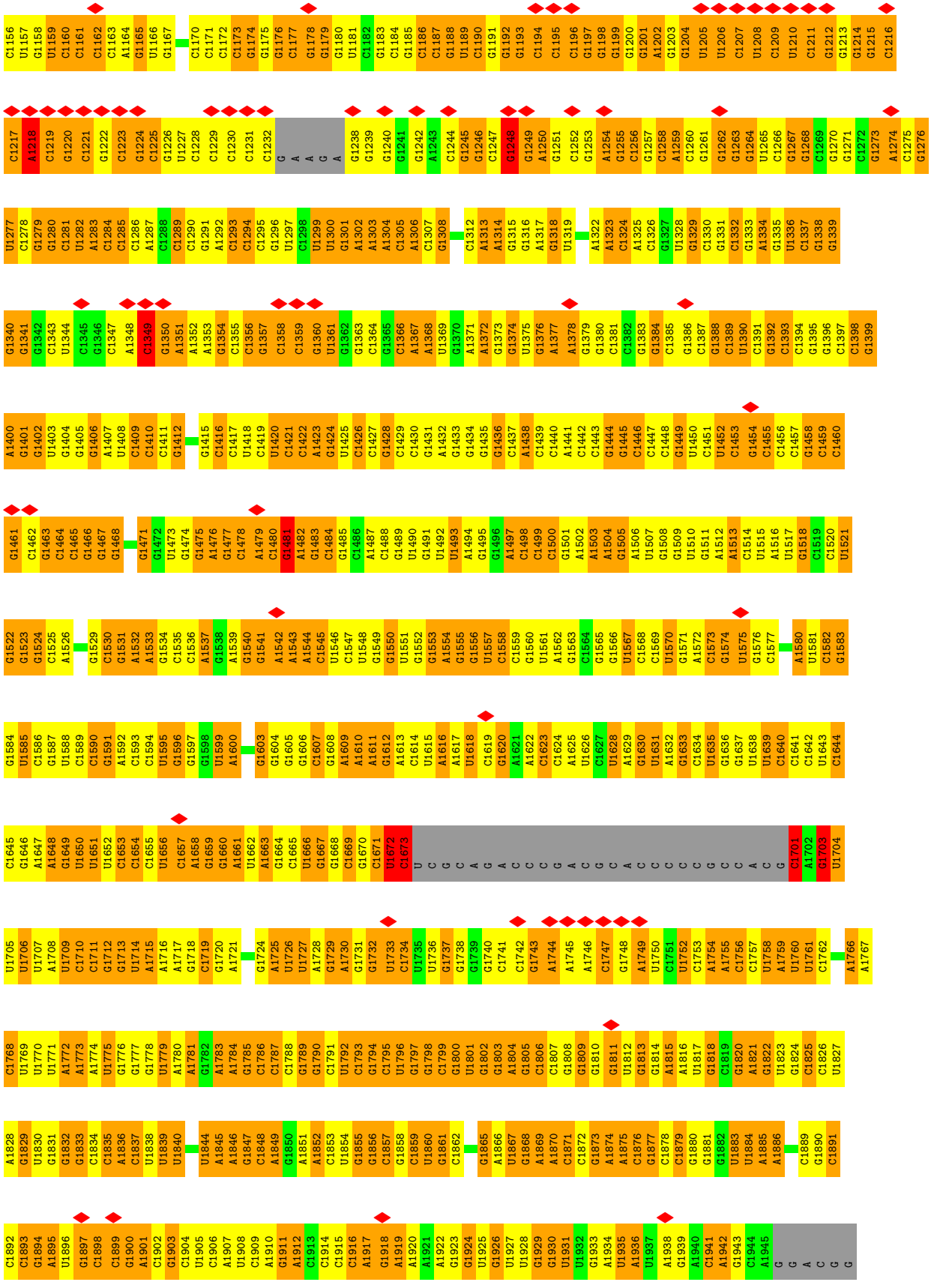


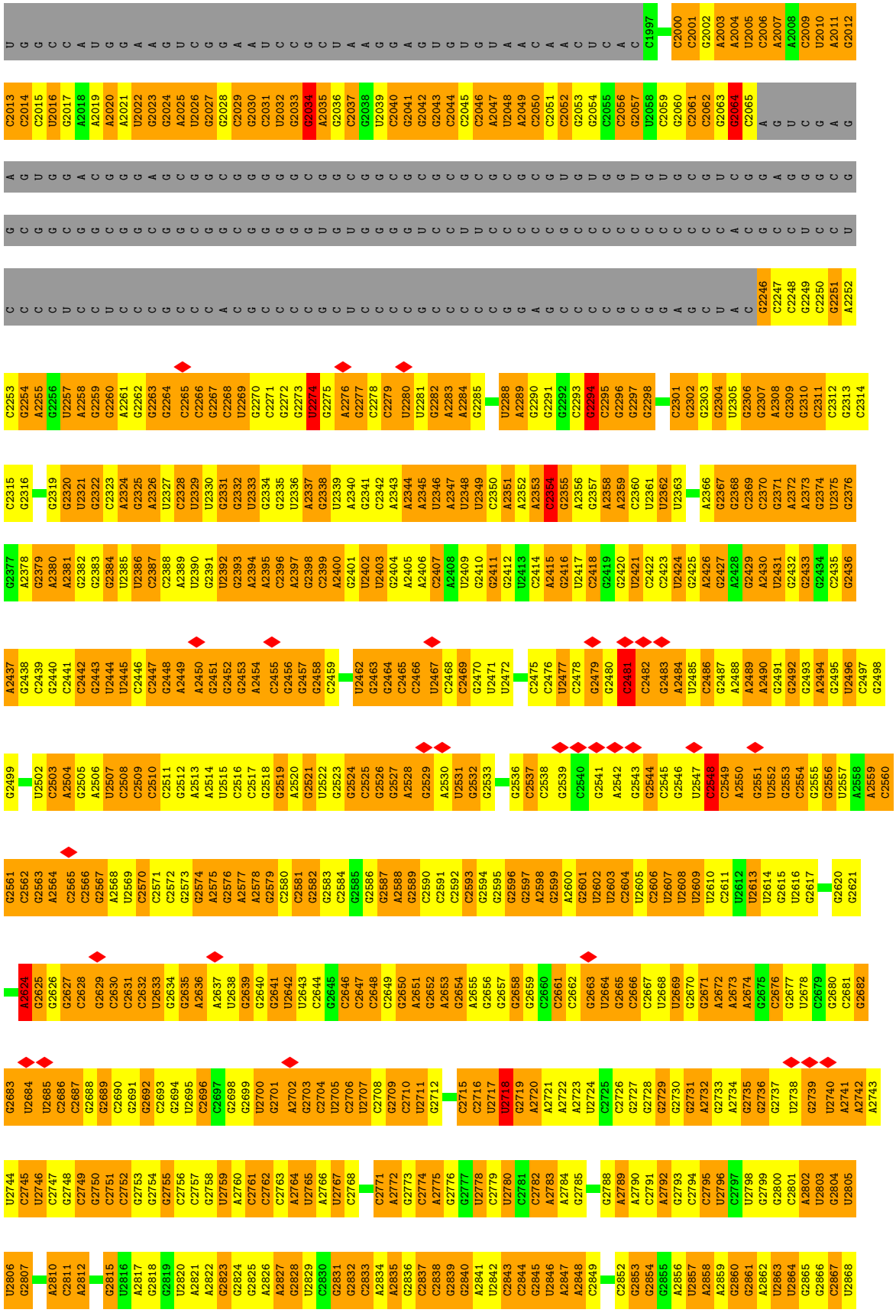


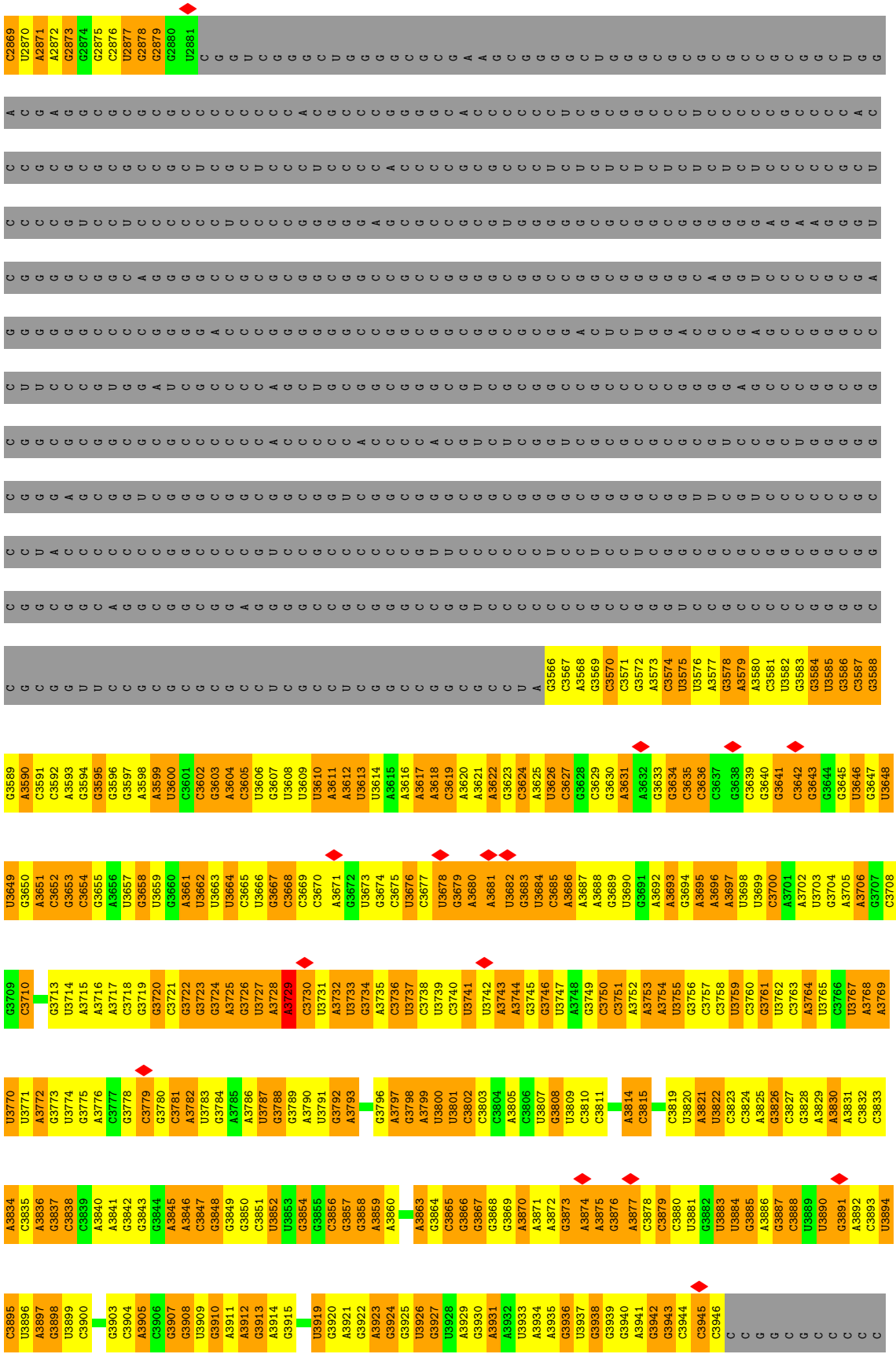
• Molecule 81: 28S Ribosomal RNA

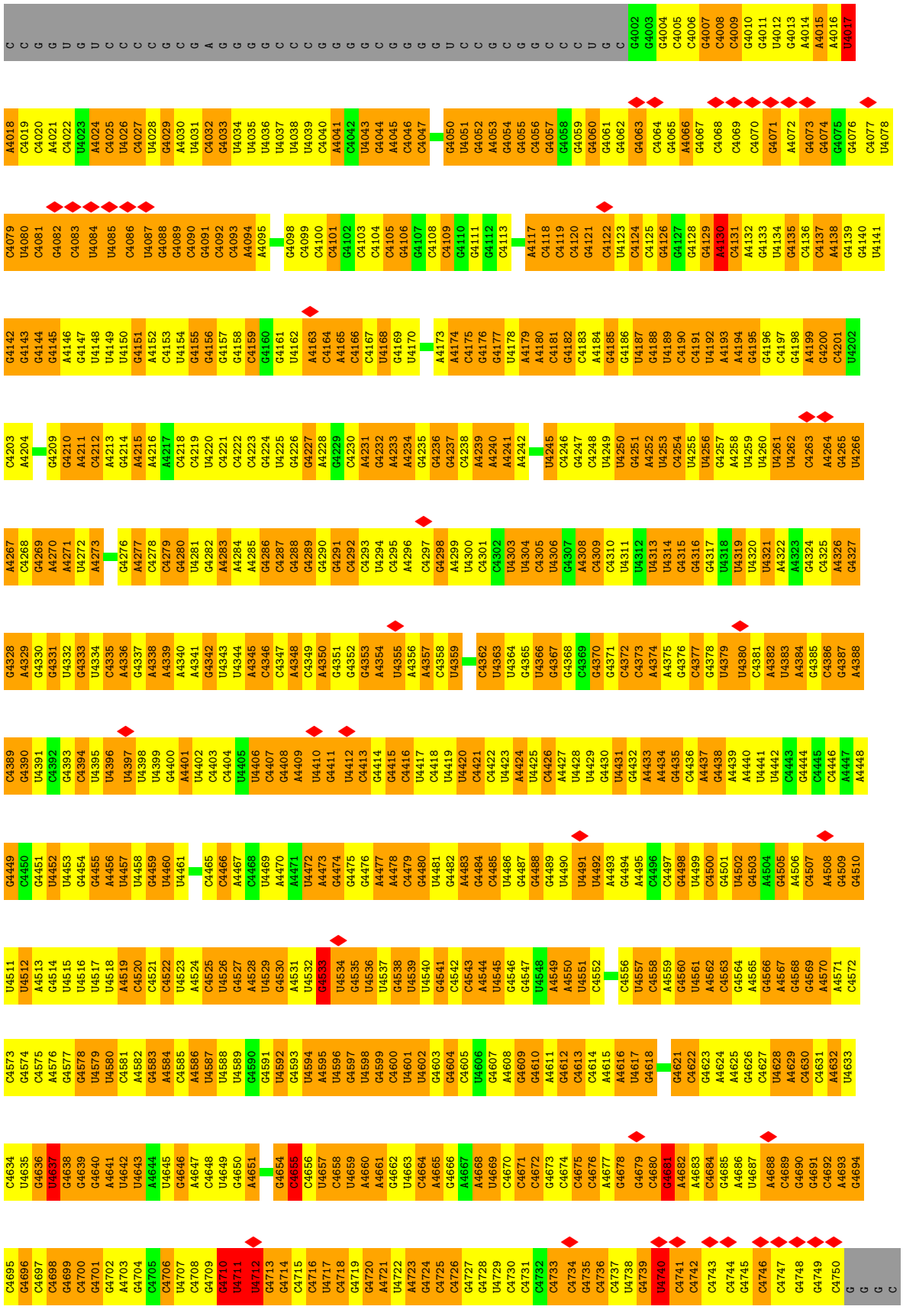


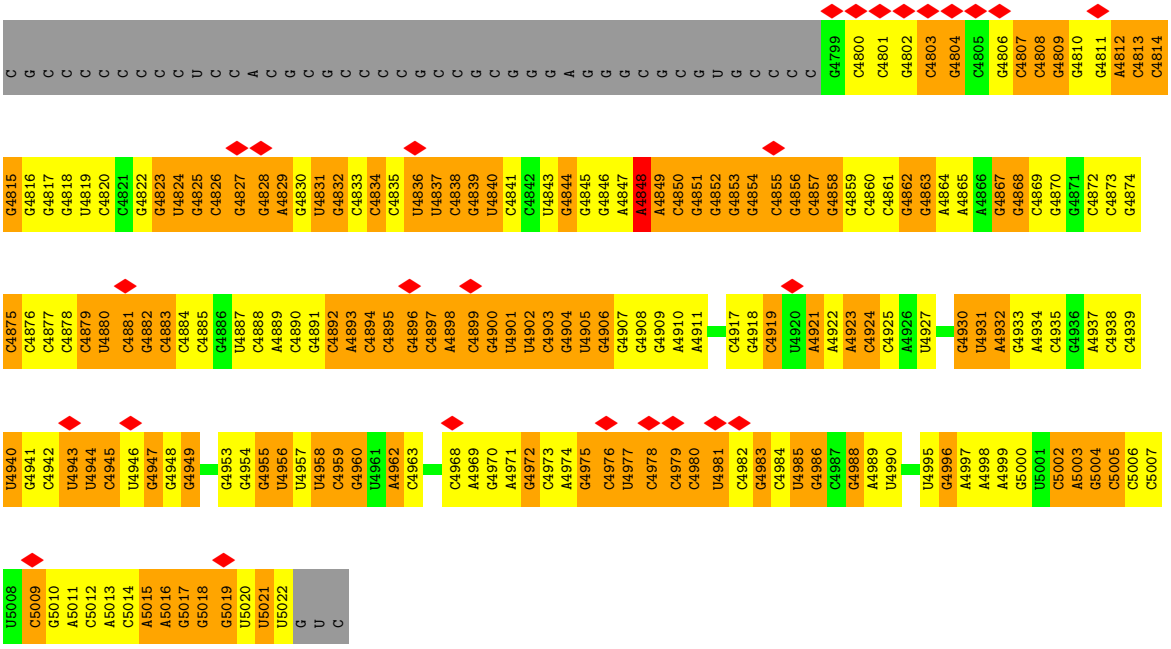






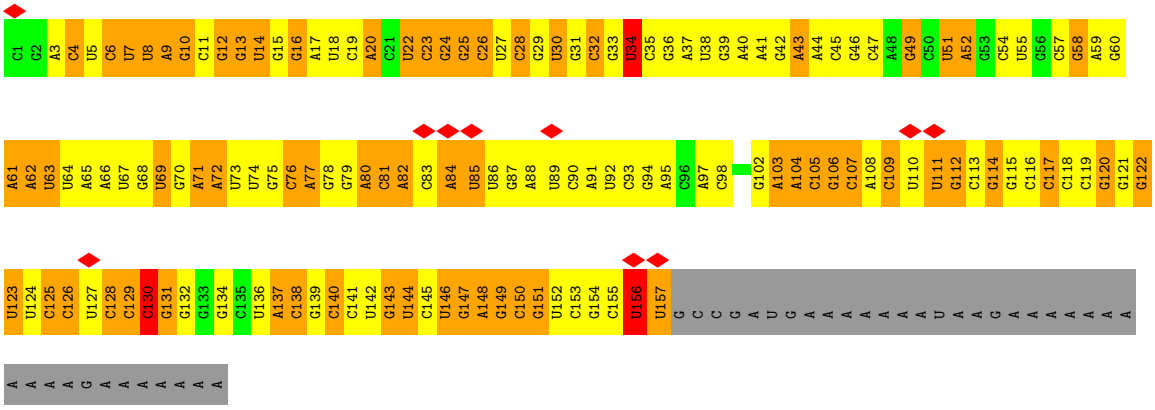






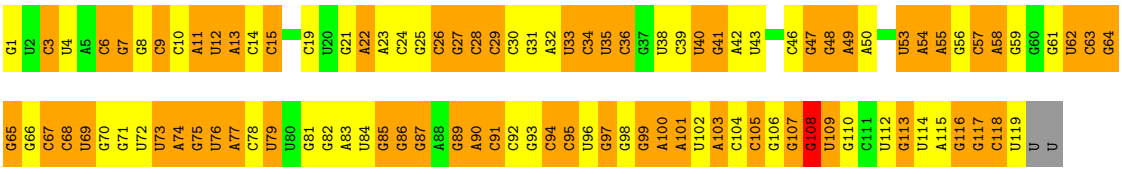
• Molecule 82: 5.8S Ribosomal RNA

Chain A3:



• Molecule 83: 5S Ribosomal RNA

Chain A4:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	236113	Depositor
Resolution determination method	Not provided	
CTF correction method	DEFOCUS GROUP	Depositor
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	65520	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	14.352	Depositor
Minimum map value	-4.787	Depositor
Average map value	0.195	Depositor
Map value standard deviation	0.958	Depositor
Recommended contour level	3.5	Depositor
Map size (Å)	453.6, 453.6, 453.6	wwPDB
Map dimensions	360, 360, 360	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.26, 1.26, 1.26	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	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AV	0.26	0/1809	0.57	0/2819
2	AW	0.29	0/1783	0.57	0/2776
3	AX	0.42	0/615	1.32	15/948 (1.6%)
4	B1	0.30	0/41550	0.66	11/64763 (0.0%)
5	BA	0.89	4/1756 (0.2%)	1.16	11/2386 (0.5%)
6	BB	0.83	0/1756	1.20	13/2350 (0.6%)
7	BC	0.69	0/1761	1.10	5/2379 (0.2%)
8	BD	0.63	0/1672	1.15	8/2250 (0.4%)
9	BE	0.72	0/2072	1.16	10/2793 (0.4%)
10	BF	0.68	0/1507	1.15	10/2026 (0.5%)
11	BG	0.77	1/1907 (0.1%)	1.22	11/2538 (0.4%)
12	BH	0.75	0/1558	1.26	12/2087 (0.6%)
13	BI	0.75	0/1724	1.12	6/2298 (0.3%)
14	BJ	0.74	0/1520	1.25	13/2030 (0.6%)
15	BK	0.76	0/815	1.10	5/1101 (0.5%)
16	BL	0.69	0/1220	1.16	8/1633 (0.5%)
17	BM	0.74	0/941	1.19	3/1264 (0.2%)
18	BN	0.68	0/1231	1.21	12/1656 (0.7%)
19	BO	0.73	0/1036	1.16	6/1391 (0.4%)
20	BP	0.66	0/1000	1.07	2/1335 (0.1%)
21	BQ	0.69	0/1125	1.10	3/1506 (0.2%)
22	BR	0.69	0/904	1.12	6/1208 (0.5%)
23	BS	0.69	0/1190	1.13	5/1594 (0.3%)
24	BT	0.68	0/1131	1.10	3/1515 (0.2%)
25	BU	0.75	0/813	1.17	3/1092 (0.3%)
26	BV	0.70	0/643	1.16	2/860 (0.2%)
27	BW	0.69	0/1050	1.12	6/1406 (0.4%)
28	BX	0.76	0/1063	1.11	1/1421 (0.1%)
29	BY	0.70	0/1019	1.12	5/1354 (0.4%)
30	BZ	0.68	0/611	1.14	3/820 (0.4%)
31	Ba	0.78	0/778	1.19	7/1041 (0.7%)
32	Bb	0.70	0/637	1.09	2/854 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Bc	0.71	0/492	1.15	5/657 (0.8%)
34	Bd	0.74	0/454	1.10	1/603 (0.2%)
35	Be	0.70	0/417	1.09	0/548
36	Bf	0.76	0/507	1.33	5/673 (0.7%)
37	Bg	0.69	0/2497	1.06	7/3399 (0.2%)
38	CA	0.68	1/1926 (0.1%)	1.09	3/2583 (0.1%)
39	CB	0.72	2/3258 (0.1%)	1.12	10/4361 (0.2%)
40	CC	0.76	1/2943 (0.0%)	1.16	18/3953 (0.5%)
41	CD	0.78	6/2406 (0.2%)	1.11	12/3221 (0.4%)
42	CE	0.81	1/1311 (0.1%)	1.17	9/1763 (0.5%)
43	CF	0.68	0/1985	1.12	10/2644 (0.4%)
44	CG	0.75	1/1914 (0.1%)	1.19	14/2578 (0.5%)
45	CH	0.64	0/1554	1.10	4/2089 (0.2%)
46	CI	0.68	0/1642	1.15	13/2194 (0.6%)
47	CJ	0.78	0/1385	1.18	9/1852 (0.5%)
48	CL	0.82	6/1647 (0.4%)	1.18	14/2205 (0.6%)
49	CM	0.79	1/1162 (0.1%)	1.12	1/1556 (0.1%)
50	CN	0.68	0/1753	1.07	10/2348 (0.4%)
51	CO	0.72	2/1639 (0.1%)	1.15	11/2193 (0.5%)
52	CP	0.67	1/1260 (0.1%)	1.09	2/1691 (0.1%)
53	CQ	0.70	0/1517	1.15	8/2026 (0.4%)
54	CR	0.66	1/1542 (0.1%)	1.08	6/2037 (0.3%)
55	CS	0.70	0/1478	1.19	15/1985 (0.8%)
56	CT	0.74	0/1325	1.21	14/1770 (0.8%)
57	CU	0.74	1/841 (0.1%)	1.16	8/1128 (0.7%)
58	CV	0.69	1/977 (0.1%)	1.03	0/1312
59	CW	0.64	1/542 (0.2%)	0.98	2/722 (0.3%)
60	CX	0.65	0/992	1.12	3/1334 (0.2%)
61	CY	0.74	1/1082 (0.1%)	1.17	5/1441 (0.3%)
62	CZ	0.74	0/1137	1.25	5/1517 (0.3%)
63	Ca	0.72	0/1190	1.11	4/1591 (0.3%)
64	Cb	0.72	1/570 (0.2%)	1.10	1/752 (0.1%)
65	Cc	0.71	1/813 (0.1%)	1.05	3/1091 (0.3%)
66	Cd	0.70	0/919	1.06	2/1238 (0.2%)
67	Ce	0.71	1/1071 (0.1%)	1.12	5/1428 (0.4%)
68	Cf	0.75	1/884 (0.1%)	1.22	10/1185 (0.8%)
69	Cg	0.74	1/917 (0.1%)	1.15	4/1222 (0.3%)
70	Ch	0.63	0/1022	1.03	1/1351 (0.1%)
71	Ci	0.70	1/793 (0.1%)	1.18	6/1048 (0.6%)
72	Cj	0.77	1/704 (0.1%)	1.16	4/931 (0.4%)
73	Ck	0.72	0/574	1.18	4/761 (0.5%)
74	Cl	0.66	0/453	1.04	2/599 (0.3%)
75	Cm	0.68	0/434	1.22	3/575 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	Cn	0.61	0/240	0.85	0/305
77	Co	0.70	0/884	1.14	4/1166 (0.3%)
78	Cp	0.63	0/717	0.97	1/953 (0.1%)
79	Ct	0.78	1/1058 (0.1%)	1.22	7/1416 (0.5%)
80	Cu	0.69	0/1638	1.12	6/2222 (0.3%)
81	A2	0.34	12/86672 (0.0%)	0.66	28/135198 (0.0%)
82	A3	0.30	0/3723	0.62	2/5800 (0.0%)
83	A4	0.31	0/2836	0.67	1/4421 (0.0%)
All	All	0.52	52/231894 (0.0%)	0.87	529/341130 (0.2%)

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 (52) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
81	A2	1701	C	O5'-C5'	16.74	1.67	1.42
81	A2	1701	C	C5'-C4'	14.78	1.73	1.51
81	A2	1673	C	C3'-O3'	13.66	1.63	1.43
81	A2	1673	C	O3'-P	11.31	1.78	1.61
81	A2	1673	C	O5'-C5'	10.37	1.58	1.42
41	CD	264	LYS	N-CA	9.25	1.58	1.46
81	A2	1673	C	C5'-C4'	9.07	1.65	1.51
81	A2	1701	C	P-O5'	9.01	1.73	1.59
81	A2	1701	C	O3'-P	8.20	1.73	1.61
41	CD	264	LYS	CA-C	8.19	1.63	1.52
81	A2	1701	C	C4'-C3'	7.88	1.64	1.52
41	CD	265	ARG	N-CA	7.87	1.56	1.46
81	A2	1673	C	C4'-C3'	7.30	1.64	1.53
5	BA	203	PHE	CA-C	6.87	1.60	1.52
81	A2	1701	C	C3'-O3'	6.82	1.52	1.42
41	CD	266	TRP	N-CA	6.70	1.53	1.46
41	CD	264	LYS	C-N	6.49	1.42	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
65	Cc	109	PRO	C-N	-6.02	1.25	1.33
48	CL	130	LYS	C-N	6.02	1.40	1.34
58	CV	84	GLN	CA-C	6.01	1.55	1.52
41	CD	265	ARG	CA-C	5.95	1.60	1.52
68	Cf	63	LYS	C-O	-5.93	1.19	1.24
61	CY	127	GLN	C-N	-5.92	1.25	1.33
40	CC	365	SER	C-N	-5.90	1.25	1.33
5	BA	203	PHE	C-N	5.87	1.40	1.33
81	A2	1673	C	P-O5'	5.86	1.68	1.59
67	Ce	131	SER	C-N	-5.78	1.25	1.33
48	CL	133	ALA	C-N	5.77	1.41	1.33
54	CR	182	GLU	C-N	-5.76	1.25	1.33
49	CM	140	PRO	C-N	-5.74	1.25	1.33
38	CA	247	ARG	C-N	-5.73	1.25	1.33
79	Ct	130	ARG	C-N	-5.72	1.25	1.33
72	Cj	85	LYS	C-N	-5.71	1.25	1.34
39	CB	396	ARG	C-N	-5.70	1.25	1.33
59	CW	63	GLN	C-N	-5.70	1.25	1.33
52	CP	153	LYS	C-N	-5.68	1.25	1.33
69	Cg	115	LYS	C-N	-5.67	1.25	1.33
48	CL	206	ASP	C-N	-5.65	1.25	1.33
64	Cb	69	ALA	C-N	-5.64	1.25	1.33
57	CU	116	GLN	C-N	-5.63	1.25	1.33
44	CG	262	ALA	C-N	-5.60	1.25	1.33
48	CL	131	PRO	N-CD	5.60	1.55	1.47
71	Ci	101	ALA	C-N	-5.58	1.25	1.33
5	BA	204	TYR	N-CA	5.57	1.53	1.46
51	CO	199	HIS	C-N	-5.56	1.25	1.33
39	CB	300	LYS	CA-C	5.43	1.57	1.52
48	CL	134	PRO	N-CD	5.40	1.55	1.47
51	CO	109	PRO	CA-C	5.28	1.57	1.52
11	BG	131	ARG	C-N	-5.27	1.27	1.33
42	CE	224	LYS	C-N	5.08	1.41	1.33
48	CL	173	GLU	N-CA	-5.06	1.40	1.46
5	BA	202	TYR	CA-C	5.05	1.59	1.53

All (529) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
81	A2	1701	C	C2'-C3'-O3'	-18.42	86.07	113.70
81	A2	1701	C	C4'-C3'-O3'	16.21	137.32	113.00
81	A2	1701	C	O4'-C4'-C3'	-15.19	88.81	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AX	58	U	P-O5'-C5'	13.52	141.18	120.90
3	AX	58	U	C4'-C3'-O3'	12.43	131.65	113.00
39	CB	325	GLU	N-CA-C	12.21	124.67	111.36
6	BB	37	ALA	N-CA-C	11.18	123.47	111.28
3	AX	59	U	P-O5'-C5'	10.90	137.25	120.90
81	A2	1673	C	C4'-C3'-O3'	10.54	125.21	109.40
36	Bf	124	ASP	N-CA-C	-10.44	97.16	111.56
47	CJ	68	ILE	N-CA-C	10.39	121.21	110.62
8	BD	58	VAL	N-CA-C	10.37	120.37	110.42
40	CC	213	GLU	N-CA-C	10.31	122.60	111.36
18	BN	24	THR	N-CA-C	9.79	121.72	111.14
7	BC	60	TRP	N-CA-C	9.69	121.44	111.07
9	BE	136	ILE	N-CA-C	9.65	118.41	107.89
12	BH	9	VAL	N-CA-C	9.54	120.35	110.62
3	AX	60	U	C5'-C4'-C3'	9.47	129.40	115.20
81	A2	1673	C	O3'-P-O5'	9.06	117.58	104.00
18	BN	6	ALA	N-CA-C	-9.04	96.47	110.58
14	BJ	53	ILE	N-CA-C	9.03	119.02	110.53
60	CX	78	LYS	N-CA-C	9.01	121.03	111.03
72	Cj	63	ARG	N-CA-C	8.98	121.07	111.28
45	CH	41	ILE	N-CA-C	8.85	119.65	110.72
10	BF	68	ILE	N-CA-C	8.65	118.72	110.42
7	BC	260	VAL	N-CA-C	8.62	119.42	110.62
39	CB	258	HIS	C-N-CD	-8.57	89.88	125.00
38	CA	21	LYS	N-CA-C	8.55	120.60	111.28
81	A2	1701	C	C5'-C4'-C3'	8.46	128.68	116.00
31	Ba	58	VAL	N-CA-C	8.44	119.68	111.67
61	CY	51	LYS	N-CA-C	8.38	120.41	111.28
43	CF	16	GLU	N-CA-C	8.36	120.02	111.07
54	CR	112	SER	N-CA-C	8.30	120.40	111.36
47	CJ	119	TYR	N-CA-C	8.28	119.93	111.07
3	AX	60	U	O5'-C5'-C4'	8.21	124.01	111.70
3	AX	59	U	C4'-C3'-O3'	8.20	125.30	113.00
3	AX	59	U	O3'-P-O5'	-8.13	91.80	104.00
17	BM	89	VAL	N-CA-C	8.11	118.91	110.72
43	CF	98	ILE	N-CA-C	8.07	118.85	110.62
16	BL	32	LYS	N-CA-C	8.06	120.15	111.36
16	BL	28	THR	N-CA-C	8.05	120.05	111.28
79	Ct	12	ASN	N-CA-C	8.02	120.10	111.36
72	Cj	84	PRO	N-CA-C	8.01	124.46	113.65
40	CC	147	VAL	N-CA-C	7.90	116.69	108.95
48	CL	172	GLU	N-CA-C	-7.87	102.70	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
71	Ci	97	MET	N-CA-C	7.87	119.94	111.36
24	BT	44	GLU	N-CA-C	7.87	119.85	111.28
38	CA	212	GLY	N-CA-C	7.86	120.97	111.93
50	CN	80	THR	N-CA-C	7.85	119.91	111.36
81	A2	4017	U	C2'-C3'-O3'	7.81	121.22	109.50
16	BL	31	GLU	N-CA-C	7.81	119.57	111.14
48	CL	174	LYS	N-CA-C	-7.78	97.94	109.62
3	AX	58	U	O3'-P-O5'	7.77	115.66	104.00
69	Cg	12	SER	N-CA-C	7.75	119.73	111.28
15	BK	94	LEU	N-CA-C	7.71	119.32	111.07
69	Cg	48	VAL	N-CA-C	7.59	117.71	110.42
55	CS	166	ARG	N-CA-C	7.57	119.53	111.28
48	CL	76	PHE	N-CA-C	7.52	119.56	111.36
70	Ch	37	THR	N-CA-C	7.43	119.02	111.07
41	CD	265	ARG	N-CA-C	7.37	126.49	110.80
75	Cm	108	VAL	N-CA-C	7.36	118.16	110.72
50	CN	126	THR	N-CA-C	7.33	119.35	111.36
68	Cf	58	VAL	N-CA-C	7.30	118.24	111.45
7	BC	275	LYS	N-CA-C	7.29	118.87	111.07
63	Ca	15	VAL	N-CA-C	7.28	117.41	110.42
13	BI	140	LYS	N-CA-C	7.25	120.23	111.82
21	BQ	98	LYS	N-CA-C	7.24	119.25	111.36
50	CN	89	VAL	N-CA-C	7.24	118.03	110.72
22	BR	38	ILE	N-CA-C	7.23	118.02	110.72
8	BD	82	GLY	N-CA-C	-7.21	105.27	115.30
51	CO	185	VAL	N-CA-C	7.21	117.98	110.62
29	BY	103	SER	N-CA-C	7.20	121.33	112.54
37	Bg	67	SER	N-CA-C	7.18	119.19	111.36
81	A2	4130	A	C2'-C3'-O3'	7.15	120.22	109.50
61	CY	126	ARG	N-CA-C	-7.13	103.50	111.28
44	CG	215	LEU	N-CA-C	7.12	118.69	111.07
14	BJ	135	ILE	N-CA-C	7.12	118.14	108.17
49	CM	16	SER	N-CA-C	7.07	119.06	111.36
37	Bg	196	ASN	N-CA-C	7.05	119.04	111.36
41	CD	124	GLU	N-CA-C	7.03	118.94	111.28
31	Ba	13	LYS	N-CA-C	7.03	119.02	111.36
81	A2	1673	C	C5'-C4'-C3'	6.99	125.69	115.20
6	BB	35	ALA	CA-C-N	6.94	126.90	120.03
6	BB	35	ALA	C-N-CA	6.94	126.90	120.03
20	BP	54	HIS	N-CA-C	6.94	118.50	111.07
39	CB	205	VAL	N-CA-C	6.93	115.01	107.60
55	CS	169	THR	N-CA-C	6.90	118.88	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	BF	57	ALA	N-CA-C	6.89	118.79	111.28
67	Ce	17	THR	N-CA-C	-6.89	104.35	112.89
39	CB	358	ARG	N-CA-C	-6.88	103.78	111.28
19	BO	147	ARG	N-CA-C	6.88	118.78	111.28
46	CI	200	ILE	N-CA-C	6.87	114.70	107.76
23	BS	26	ILE	N-CA-C	6.86	117.01	110.42
4	B1	1781	A	C2'-C3'-O3'	6.86	119.79	109.50
51	CO	110	PRO	N-CA-C	6.86	119.06	110.70
81	A2	4637	U	C2'-C3'-O3'	6.86	119.78	109.50
46	CI	159	PHE	N-CA-C	6.85	118.70	110.07
41	CD	37	VAL	N-CA-C	6.81	117.60	110.72
12	BH	15	LYS	CA-C-N	6.81	126.72	119.85
12	BH	15	LYS	C-N-CA	6.81	126.72	119.85
19	BO	17	LEU	N-CA-C	-6.80	103.87	111.28
74	Cl	49	LEU	N-CA-C	6.79	118.33	111.07
42	CE	156	ARG	N-CA-C	-6.76	103.91	111.28
43	CF	199	LYS	N-CA-C	6.76	118.64	111.28
55	CS	108	GLN	N-CA-C	6.75	118.71	111.36
18	BN	13	GLN	N-CA-C	6.74	119.92	109.07
40	CC	304	ALA	N-CA-C	6.72	119.36	110.08
6	BB	46	LYS	N-CA-C	6.72	119.28	109.07
27	BW	93	LEU	N-CA-C	6.72	118.68	111.36
56	CT	107	LYS	N-CA-C	-6.71	103.96	111.28
81	A2	2481	C	C2'-C3'-O3'	6.71	119.57	109.50
5	BA	77	ILE	N-CA-C	6.71	117.50	108.11
43	CF	233	ALA	N-CA-C	6.68	119.44	110.35
62	CZ	68	ILE	N-CA-C	6.65	117.42	108.11
55	CS	51	LEU	N-CA-C	6.64	118.60	111.36
28	BX	72	VAL	N-CA-C	6.64	117.41	108.11
52	CP	115	GLU	N-CA-C	6.63	118.58	111.36
46	CI	200	ILE	CA-C-O	6.60	123.05	119.15
24	BT	32	GLU	N-CA-C	6.60	118.13	111.07
66	Cd	80	VAL	N-CA-C	6.60	115.42	108.95
51	CO	128	ARG	N-CA-C	6.59	118.55	111.36
44	CG	160	ASP	N-CA-C	6.59	118.47	111.28
65	Cc	31	TYR	N-CA-C	6.58	118.11	111.07
15	BK	84	HIS	CA-CB-CG	6.58	120.38	113.80
39	CB	378	ARG	N-CA-CB	-6.58	101.84	110.59
79	Ct	114	ALA	N-CA-C	6.56	118.51	111.36
3	AX	56	U	C4'-C3'-O3'	-6.56	103.16	113.00
39	CB	308	ASP	N-CA-C	6.55	118.22	111.14
59	CW	50	ASN	N-CA-C	6.55	118.42	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	CT	17	ARG	CA-C-N	6.55	128.03	119.84
56	CT	17	ARG	C-N-CA	6.55	128.03	119.84
46	CI	186	ALA	N-CA-C	-6.54	105.17	113.01
81	A2	2718	U	C2'-C3'-O3'	6.52	119.28	109.50
55	CS	169	THR	CB-CA-C	-6.51	99.78	110.85
43	CF	48	LYS	CB-CA-C	-6.50	100.67	110.88
18	BN	71	ILE	N-CA-C	6.49	116.65	110.42
48	CL	133	ALA	CA-C-N	-6.48	113.28	119.76
48	CL	133	ALA	C-N-CA	-6.48	113.28	119.76
75	Cm	98	LYS	N-CA-C	6.44	118.38	111.36
77	Co	23	VAL	N-CA-C	6.44	117.12	108.11
71	Ci	29	ARG	N-CA-C	-6.43	105.19	113.16
9	BE	26	VAL	N-CA-C	6.42	117.21	110.72
9	BE	94	LYS	N-CA-C	6.41	118.27	111.28
13	BI	130	THR	CA-C-N	6.41	127.85	119.84
13	BI	130	THR	C-N-CA	6.41	127.85	119.84
46	CI	168	SER	N-CA-C	6.41	119.57	109.96
81	A2	1673	C	C5'-C4'-O4'	-6.40	99.50	109.10
55	CS	124	ILE	N-CA-C	6.38	117.11	108.17
29	BY	104	ARG	N-CA-C	6.38	117.89	111.07
74	Cl	36	ARG	N-CA-C	6.38	118.31	111.36
81	A2	1701	C	O4'-C1'-N1	6.36	118.04	108.50
80	Cu	121	VAL	N-CA-C	6.35	117.14	110.72
56	CT	134	PRO	N-CA-C	6.35	117.38	110.58
81	A2	14	C	O4'-C4'-C3'	-6.35	99.75	106.10
11	BG	61	PHE	CA-C-N	6.35	126.26	119.85
11	BG	61	PHE	C-N-CA	6.35	126.26	119.85
61	CY	126	ARG	CB-CA-C	-6.31	100.31	110.79
14	BJ	128	VAL	CB-CA-C	-6.31	103.52	112.22
12	BH	122	LEU	N-CA-C	6.29	117.80	111.07
56	CT	133	ALA	CA-C-N	6.28	124.18	119.66
56	CT	133	ALA	C-N-CA	6.28	124.18	119.66
12	BH	106	ARG	N-CA-C	6.28	118.82	109.59
16	BL	24	LEU	N-CA-C	6.28	118.12	111.28
9	BE	24	THR	N-CA-C	6.27	118.12	111.28
25	BU	67	LYS	N-CA-C	6.27	118.20	111.36
12	BH	23	ILE	N-CA-C	6.27	116.44	110.42
39	CB	200	ARG	N-CA-C	6.25	120.91	113.16
12	BH	76	GLN	N-CA-C	6.25	118.09	111.28
61	CY	55	VAL	N-CA-C	6.25	116.86	108.11
23	BS	67	VAL	N-CA-C	6.25	117.03	110.72
73	Ck	51	GLU	N-CA-C	6.25	118.09	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	BA	204	TYR	N-CA-C	6.22	118.01	108.42
81	A2	188	G	C2'-C3'-O3'	6.21	118.82	109.50
25	BU	29	VAL	N-CA-C	6.21	116.95	110.62
40	CC	322	LEU	N-CA-C	6.19	118.02	111.28
79	Ct	13	CYS	N-CA-C	6.17	120.08	111.56
34	Bd	28	HIS	N-CA-C	6.17	118.00	111.28
52	CP	25	HIS	CA-CB-CG	-6.15	107.65	113.80
16	BL	51	ILE	N-CA-C	6.15	116.33	110.42
79	Ct	72	LYS	CA-C-N	6.15	126.34	120.31
79	Ct	72	LYS	C-N-CA	6.15	126.34	120.31
81	A2	1673	C	C4'-C3'-C2'	-6.14	96.46	102.60
3	AX	60	U	P-O5'-C5'	-6.13	111.70	120.90
27	BW	46	TYR	N-CA-C	6.13	117.96	111.28
14	BJ	8	VAL	N-CA-C	6.12	116.68	107.80
11	BG	42	GLY	N-CA-C	6.11	120.59	112.77
40	CC	200	ARG	N-CA-C	6.11	117.94	111.28
54	CR	32	ILE	N-CA-C	6.11	116.85	110.62
48	CL	165	LYS	N-CA-C	6.09	117.92	111.28
79	Ct	100	ASN	N-CA-C	6.08	120.76	112.68
12	BH	45	ILE	N-CA-C	6.07	116.62	107.75
21	BQ	46	THR	N-CA-C	6.07	117.89	111.28
55	CS	138	ARG	N-CA-C	6.06	117.89	111.28
50	CN	73	ARG	CA-C-N	6.06	125.74	119.56
50	CN	73	ARG	C-N-CA	6.06	125.74	119.56
30	BZ	55	TYR	N-CA-C	6.05	117.55	111.07
77	Co	31	ASP	N-CA-C	6.05	117.54	111.07
51	CO	89	PRO	N-CA-C	-6.04	104.32	112.48
30	BZ	71	ALA	N-CA-C	6.04	117.54	111.07
36	Bf	117	LEU	N-CA-C	6.04	117.95	111.36
75	Cm	90	ASN	N-CA-C	6.04	117.94	111.36
10	BF	65	GLN	N-CA-C	6.04	117.86	111.28
51	CO	114	LYS	N-CA-C	6.04	117.94	111.36
45	CH	187	VAL	N-CA-C	6.04	116.81	110.72
57	CU	69	LYS	N-CA-C	6.03	118.34	109.24
48	CL	130	LYS	CA-C-N	-6.03	113.60	119.87
48	CL	130	LYS	C-N-CA	-6.03	113.60	119.87
44	CG	103	ARG	CA-C-N	6.02	125.93	119.85
44	CG	103	ARG	C-N-CA	6.02	125.93	119.85
4	B1	1697	A	C2'-C3'-O3'	6.02	118.53	109.50
81	A2	959	C	C2'-C3'-O3'	6.01	118.51	109.50
17	BM	85	LEU	N-CA-C	6.00	117.82	111.28
22	BR	21	TYR	N-CA-C	6.00	117.82	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	Bc	30	VAL	N-CA-C	6.00	117.40	108.46
39	CB	366	LYS	N-CA-C	5.99	117.89	111.36
41	CD	185	SER	N-CA-C	5.98	117.79	111.28
67	Ce	123	THR	N-CA-C	5.97	117.87	111.36
40	CC	70	GLY	N-CA-C	5.97	121.06	113.24
15	BK	42	ASN	N-CA-C	5.95	117.77	111.28
68	Cf	89	ARG	N-CA-C	-5.95	104.80	111.28
41	CD	252	VAL	N-CA-C	5.94	118.48	111.05
66	Cd	82	TYR	N-CA-C	5.94	117.75	111.28
27	BW	25	VAL	N-CA-C	5.94	116.42	108.11
80	Cu	78	VAL	N-CA-C	5.93	116.41	108.11
22	BR	111	PHE	N-CA-C	-5.93	105.36	112.59
23	BS	103	LEU	N-CA-C	5.91	117.39	111.07
54	CR	61	ALA	N-CA-C	5.90	117.38	111.07
3	AX	58	U	C2'-C3'-O3'	5.89	122.54	113.70
3	AX	58	U	N1-C1'-C2'	5.89	120.83	112.00
11	BG	23	LYS	N-CA-C	5.88	117.69	111.28
68	Cf	54	LYS	N-CA-CB	-5.88	101.75	110.10
71	Ci	22	SER	N-CA-C	5.87	118.28	110.53
12	BH	140	VAL	N-CA-C	5.87	116.05	110.42
68	Cf	41	PHE	N-CA-C	5.86	117.67	111.28
47	CJ	80	GLU	N-CA-C	5.85	117.74	111.36
4	B1	799	U	C2'-C3'-O3'	5.85	118.28	109.50
81	A2	3729	A	C2'-C3'-O3'	5.85	118.27	109.50
21	BQ	73	LYS	N-CA-C	-5.84	105.46	112.59
12	BH	161	ALA	N-CA-C	5.84	117.65	111.28
29	BY	89	HIS	N-CA-C	5.84	117.65	111.28
62	CZ	8	GLY	N-CA-C	5.84	119.74	112.73
41	CD	264	LYS	N-CA-C	5.84	123.23	110.80
5	BA	193	HIS	N-CA-C	5.83	117.04	109.64
19	BO	95	ILE	N-CA-C	5.83	116.26	107.75
68	Cf	17	GLY	N-CA-C	-5.83	105.80	112.79
5	BA	102	ARG	N-CA-CB	5.82	118.62	109.83
27	BW	86	LEU	N-CA-C	5.82	117.62	111.28
9	BE	56	LEU	N-CA-C	5.81	117.70	111.36
37	Bg	244	ASN	N-CA-C	5.81	117.70	111.36
44	CG	69	ILE	N-CA-C	5.81	116.59	110.72
40	CC	304	ALA	CA-C-N	5.81	127.10	119.84
40	CC	304	ALA	C-N-CA	5.81	127.10	119.84
14	BJ	125	HIS	CB-CA-C	-5.80	101.15	110.79
23	BS	12	ILE	N-CA-C	5.80	116.24	108.11
56	CT	105	PHE	N-CA-C	5.80	117.28	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
62	CZ	61	LYS	N-CA-C	5.80	117.61	111.28
33	Bc	34	PHE	N-CA-C	5.80	118.85	109.40
4	B1	1401	A	C2'-C3'-O3'	5.79	118.19	109.50
80	Cu	157	ARG	N-CA-CB	-5.79	101.34	110.49
41	CD	178	LYS	N-CA-C	5.79	118.54	111.82
3	AX	59	U	C2'-C3'-O3'	-5.79	105.02	113.70
57	CU	97	ARG	N-CA-C	5.79	117.59	111.28
18	BN	18	TYR	N-CA-C	5.78	117.58	111.28
48	CL	55	ILE	N-CA-C	-5.78	97.32	109.34
42	CE	153	LEU	N-CA-C	5.78	117.66	111.36
57	CU	53	ALA	N-CA-C	5.77	117.64	111.36
42	CE	223	ARG	N-CA-C	5.76	118.14	108.23
59	CW	9	SER	N-CA-C	5.76	117.56	111.28
10	BF	119	SER	N-CA-C	5.76	120.15	113.18
53	CQ	161	SER	N-CA-C	5.75	117.55	111.28
6	BB	35	ALA	N-CA-C	5.75	117.94	110.40
16	BL	5	GLN	N-CA-C	5.75	117.23	111.07
42	CE	257	ILE	N-CA-C	5.75	115.94	110.42
44	CG	114	LEU	N-CA-C	5.75	117.62	111.36
5	BA	198	MET	CA-C-N	5.74	125.84	119.87
5	BA	198	MET	C-N-CA	5.74	125.84	119.87
13	BI	205	ARG	N-CA-C	5.74	117.53	111.28
11	BG	53	SER	N-CA-C	5.73	117.61	111.36
8	BD	79	PHE	CA-C-N	5.73	125.40	119.56
8	BD	79	PHE	C-N-CA	5.73	125.40	119.56
11	BG	131	ARG	N-CA-C	-5.73	101.81	110.28
81	A2	14	C	C2'-C3'-O3'	5.72	118.08	109.50
12	BH	109	ARG	N-CA-CB	5.71	120.15	110.49
17	BM	34	GLY	N-CA-C	5.71	118.68	112.29
54	CR	57	VAL	N-CA-C	5.71	116.33	107.99
63	Ca	22	ILE	N-CA-C	5.71	115.89	110.53
72	Cj	29	LEU	N-CA-C	5.70	117.17	111.07
9	BE	136	ILE	N-CA-CB	-5.70	105.51	111.61
39	CB	122	TRP	N-CA-C	5.70	117.17	111.07
8	BD	168	VAL	N-CA-C	5.68	116.07	108.11
67	Ce	27	ARG	N-CA-C	5.68	117.55	111.36
46	CI	79	SER	N-CA-C	5.67	117.54	111.36
15	BK	20	VAL	N-CA-C	5.67	116.85	108.45
54	CR	144	LYS	N-CA-C	5.66	117.53	111.36
78	Cp	41	PHE	N-CA-C	5.66	117.13	111.07
81	A2	2548	C	O4'-C1'-C2'	-5.65	101.95	107.60
4	B1	1477	U	C2'-C3'-O3'	5.65	117.97	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
6	BB	121	ILE	N-CA-C	5.65	116.02	108.11
9	BE	70	ILE	N-CA-C	5.65	116.01	108.11
44	CG	80	ILE	N-CA-C	-5.64	101.67	109.46
69	Cg	56	VAL	N-CA-C	5.64	116.01	108.11
48	CL	101	ARG	N-CA-C	5.64	117.51	111.36
6	BB	91	VAL	N-CA-C	5.63	116.23	108.12
50	CN	153	LYS	CA-C-N	5.62	125.47	119.28
50	CN	153	LYS	C-N-CA	5.62	125.47	119.28
42	CE	162	VAL	N-CA-C	5.62	116.80	108.65
8	BD	10	LYS	N-CA-C	5.62	117.48	111.36
6	BB	62	LEU	N-CA-C	5.61	119.39	112.54
18	BN	55	ARG	CB-CA-C	-5.61	102.07	110.88
72	Cj	5	THR	N-CA-C	5.61	117.40	111.28
53	CQ	152	PHE	N-CA-C	5.59	118.38	110.50
37	Bg	282	GLU	N-CA-C	5.59	117.71	109.50
81	A2	1672	U	O4'-C1'-C2'	-5.59	102.01	107.60
67	Ce	94	SER	N-CA-C	5.58	118.56	111.69
22	BR	39	ALA	N-CA-C	5.56	117.43	109.14
51	CO	168	TYR	N-CA-C	-5.56	105.12	111.07
68	Cf	59	THR	N-CA-C	5.56	122.10	109.81
57	CU	54	GLY	N-CA-C	5.56	122.19	113.86
4	B1	78	C	C2'-C3'-O3'	5.55	117.83	109.50
11	BG	158	VAL	N-CA-C	5.55	116.73	108.46
53	CQ	93	GLN	N-CA-C	5.55	117.41	111.36
71	Ci	27	SER	N-CA-C	-5.54	100.95	109.76
6	BB	59	SER	N-CA-C	5.54	117.31	111.28
14	BJ	38	ARG	N-CA-C	5.53	117.39	111.36
18	BN	98	VAL	N-CA-C	5.53	116.26	110.62
26	BV	12	TYR	CA-C-N	-5.53	118.84	122.60
26	BV	12	TYR	C-N-CA	-5.53	118.84	122.60
32	Bb	64	CYS	N-CA-C	5.53	118.23	109.50
51	CO	93	LYS	N-CA-C	-5.53	105.26	111.28
6	BB	132	GLY	N-CA-C	5.52	126.26	113.18
43	CF	117	ILE	N-CA-C	5.52	117.26	108.87
12	BH	139	ILE	N-CA-C	5.51	115.89	108.17
23	BS	15	VAL	N-CA-C	5.51	116.05	108.12
14	BJ	121	LYS	CB-CA-C	5.51	119.93	110.79
47	CJ	18	ARG	N-CA-C	5.51	116.96	111.07
48	CL	146	LEU	N-CA-C	5.50	117.28	111.28
9	BE	147	ILE	N-CA-C	5.50	115.81	108.11
45	CH	16	VAL	N-CA-C	5.50	116.40	108.48
54	CR	29	THR	N-CA-C	5.50	117.27	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
51	CO	87	MET	N-CA-CB	-5.49	102.05	110.12
10	BF	64	ALA	N-CA-C	5.49	117.26	111.28
16	BL	20	LYS	N-CA-CB	-5.48	101.78	110.22
5	BA	23	THR	N-CA-C	5.47	117.25	111.28
55	CS	152	PHE	CA-CB-CG	5.47	119.27	113.80
61	CY	116	LYS	CB-CA-C	-5.47	102.30	110.88
13	BI	131	PRO	N-CA-C	5.46	123.73	112.47
56	CT	103	ASP	N-CA-C	5.46	117.24	111.28
10	BF	188	TYR	N-CA-C	-5.46	105.33	111.28
71	Ci	63	VAL	N-CA-C	5.46	116.32	111.90
81	A2	1703	G	O4'-C1'-C2'	-5.45	100.35	105.80
5	BA	35	GLU	N-CA-C	5.45	117.22	111.28
18	BN	7	PRO	N-CA-C	5.44	123.68	112.47
4	B1	1430	C	O4'-C1'-C2'	-5.44	102.16	107.60
19	BO	89	GLY	N-CA-C	-5.44	107.27	115.32
56	CT	91	VAL	N-CA-C	5.43	115.94	108.12
10	BF	24	SER	N-CA-C	5.43	118.10	109.96
73	Ck	2	PRO	N-CA-CB	5.43	108.97	103.00
18	BN	7	PRO	N-CA-CB	-5.41	97.57	103.25
29	BY	35	VAL	N-CA-C	5.41	114.25	108.95
44	CG	163	PRO	CA-C-N	5.41	127.87	120.46
44	CG	163	PRO	C-N-CA	5.41	127.87	120.46
48	CL	61	CYS	CA-C-N	5.41	125.35	119.78
48	CL	61	CYS	C-N-CA	5.41	125.35	119.78
82	A3	34	U	C3'-C2'-C1'	-5.41	95.89	101.30
9	BE	154	ILE	N-CA-C	5.41	115.74	108.17
31	Ba	5	ARG	N-CA-CB	-5.41	101.47	111.52
50	CN	153	LYS	N-CA-C	5.41	116.51	109.64
81	A2	1701	C	O5'-C5'-C4'	5.40	119.60	111.50
68	Cf	19	ARG	N-CA-C	5.39	119.99	113.41
6	BB	214	LYS	N-CA-C	5.39	118.22	109.06
81	A2	4711	U	C3'-C2'-O2'	-5.39	106.52	114.60
25	BU	43	ALA	N-CA-C	5.37	117.22	111.36
53	CQ	95	VAL	CA-C-N	5.37	125.27	119.85
53	CQ	95	VAL	C-N-CA	5.37	125.27	119.85
8	BD	39	VAL	N-CA-C	5.37	115.85	108.12
20	BP	100	LYS	N-CA-C	-5.37	100.56	108.99
53	CQ	76	GLU	N-CA-C	5.37	117.13	111.28
37	Bg	49	GLU	N-CA-C	5.36	117.12	111.28
83	A4	108	G	O4'-C4'-C3'	-5.36	98.64	104.00
43	CF	156	LYS	N-CA-C	5.35	117.20	111.36
44	CG	120	LYS	N-CA-C	5.35	117.20	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
80	Cu	62	PHE	CA-CB-CG	-5.35	108.45	113.80
41	CD	211	LEU	N-CA-C	5.34	117.11	111.28
39	CB	207	VAL	N-CA-C	5.34	117.77	111.09
29	BY	99	LYS	N-CA-C	5.34	118.18	110.28
14	BJ	178	ALA	N-CA-C	5.33	117.17	111.36
60	CX	149	VAL	N-CA-C	5.33	116.11	110.72
80	Cu	40	SER	N-CA-C	5.33	117.09	111.28
40	CC	151	PRO	CA-N-CD	-5.33	104.53	112.00
40	CC	323	ARG	N-CA-C	5.33	117.09	111.28
46	CI	14	ASN	N-CA-C	5.33	117.29	109.24
53	CQ	172	ARG	N-CA-C	-5.33	103.36	110.55
3	AX	59	U	O5'-C5'-C4'	-5.32	103.52	111.50
4	B1	1406	G	C2'-C3'-O3'	5.32	117.48	109.50
14	BJ	144	ILE	CA-C-N	5.32	125.13	119.28
14	BJ	144	ILE	C-N-CA	5.32	125.13	119.28
46	CI	189	ARG	N-CA-C	5.31	122.12	110.80
47	CJ	47	THR	CA-C-N	5.31	125.21	119.85
47	CJ	47	THR	C-N-CA	5.31	125.21	119.85
40	CC	136	LEU	N-CA-C	5.31	116.75	111.07
80	Cu	155	GLU	N-CA-C	5.31	117.14	111.36
19	BO	62	VAL	N-CA-C	5.30	115.76	108.12
38	CA	9	ARG	N-CA-C	5.30	117.05	111.28
46	CI	159	PHE	CA-C-N	5.29	125.19	119.85
46	CI	159	PHE	C-N-CA	5.29	125.19	119.85
22	BR	78	ARG	N-CA-C	5.29	117.04	111.28
57	CU	65	ARG	CB-CA-C	-5.29	101.03	109.75
60	CX	92	ASP	N-CA-C	5.28	117.12	111.36
31	Ba	54	SER	N-CA-C	5.28	117.04	111.28
47	CJ	57	VAL	N-CA-C	5.28	116.06	110.72
18	BN	12	SER	N-CA-C	-5.28	103.42	110.55
10	BF	58	ALA	N-CA-C	5.28	117.03	111.28
47	CJ	168	GLN	N-CA-C	5.27	117.03	111.28
14	BJ	2	PRO	N-CA-CB	5.27	108.80	103.00
27	BW	84	LYS	N-CA-C	5.27	117.02	111.28
33	Bc	8	PRO	N-CA-CB	5.26	108.78	103.00
51	CO	170	LYS	N-CA-C	5.26	116.70	111.07
56	CT	154	ILE	CA-C-N	5.26	125.19	119.78
56	CT	154	ILE	C-N-CA	5.26	125.19	119.78
65	Cc	101	ASP	N-CA-C	-5.25	105.56	111.28
32	Bb	8	LEU	N-CA-C	5.25	117.08	111.36
40	CC	215	ASN	N-CA-C	5.25	117.46	110.53
50	CN	14	LYS	N-CA-C	5.25	117.00	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	Bf	122	PRO	CA-C-N	-5.24	115.80	122.77
36	Bf	122	PRO	C-N-CA	-5.24	115.80	122.77
43	CF	99	ASN	N-CA-C	5.24	118.36	109.76
33	Bc	66	ARG	N-CA-C	5.24	117.61	108.76
81	A2	4848	A	C2'-C3'-O3'	-5.24	105.85	113.70
33	Bc	15	THR	N-CA-C	5.23	116.79	111.14
40	CC	224	ILE	N-CA-C	5.23	114.08	108.95
50	CN	93	LYS	N-CA-C	5.23	119.79	113.41
15	BK	31	LYS	N-CA-C	5.23	116.98	111.28
18	BN	64	ARG	CB-CA-C	-5.23	102.11	110.79
42	CE	175	VAL	N-CA-C	5.22	115.64	108.12
42	CE	254	ASP	N-CA-C	5.22	116.97	111.28
11	BG	50	VAL	N-CA-C	5.21	115.63	108.12
41	CD	268	ARG	CA-C-N	5.21	125.11	119.85
41	CD	268	ARG	C-N-CA	5.21	125.11	119.85
41	CD	67	ALA	N-CA-C	5.21	118.23	109.95
40	CC	151	PRO	CB-CA-C	5.21	120.15	111.56
55	CS	154	LEU	CA-C-N	5.20	125.18	120.03
55	CS	154	LEU	C-N-CA	5.20	125.18	120.03
67	Ce	92	ASN	N-CA-C	5.20	116.95	111.28
13	BI	181	GLN	N-CA-C	5.20	117.03	111.36
53	CQ	98	LEU	N-CA-C	5.20	121.88	110.80
69	Cg	106	VAL	N-CA-C	5.20	115.42	110.53
57	CU	76	VAL	N-CA-C	5.20	114.68	108.96
14	BJ	168	GLY	N-CA-C	5.19	118.60	111.54
44	CG	77	PRO	CA-C-N	5.19	125.24	119.32
44	CG	77	PRO	C-N-CA	5.19	125.24	119.32
22	BR	62	GLN	N-CA-C	-5.19	105.62	111.28
10	BF	182	LYS	N-CA-C	-5.18	101.75	109.11
40	CC	213	GLU	CB-CA-C	-5.18	102.05	110.85
55	CS	93	MET	N-CA-C	5.18	117.68	109.50
7	BC	79	GLU	N-CA-C	-5.17	105.64	111.28
71	Ci	6	PRO	N-CA-CB	5.17	108.68	103.00
46	CI	17	TYR	CA-C-N	5.16	125.14	120.03
46	CI	17	TYR	C-N-CA	5.16	125.14	120.03
4	B1	211	G	O4'-C1'-C2'	-5.16	102.44	107.60
19	BO	81	VAL	N-CA-C	5.16	115.88	110.62
73	Ck	66	VAL	N-CA-C	5.15	115.32	108.11
81	A2	2034	G	O4'-C4'-C3'	-5.15	100.95	106.10
43	CF	15	PRO	N-CA-CB	5.15	108.66	103.00
31	Ba	32	LYS	N-CA-C	5.14	116.89	111.28
48	CL	187	ALA	N-CA-C	5.14	116.97	111.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	Ca	2	PRO	N-CA-CB	5.14	108.66	103.00
14	BJ	152	ASP	N-CA-C	5.14	116.88	111.28
10	BF	118	ASN	N-CA-C	5.13	116.96	111.36
5	BA	196	GLU	N-CA-C	5.13	116.88	111.28
82	A3	34	U	O4'-C1'-C2'	-5.13	102.47	107.60
31	Ba	47	ALA	N-CA-C	5.13	116.56	111.07
42	CE	154	THR	N-CA-C	5.13	120.17	112.94
40	CC	306	ARG	N-CA-C	-5.13	105.69	111.28
79	Ct	75	THR	N-CA-C	5.13	115.30	108.38
55	CS	24	THR	CA-C-N	5.12	125.66	120.38
55	CS	24	THR	C-N-CA	5.12	125.66	120.38
4	B1	1862	G	C1'-C2'-O2'	-5.12	104.12	111.80
37	Bg	109	LEU	N-CA-C	5.12	116.94	111.36
68	Cf	92	LEU	CA-C-N	5.12	124.78	119.56
68	Cf	92	LEU	C-N-CA	5.12	124.78	119.56
3	AX	58	U	O4'-C4'-C3'	5.11	109.11	104.00
47	CJ	31	ASP	N-CA-C	5.11	116.85	111.28
73	Ck	41	TYR	N-CA-C	5.11	117.15	109.23
27	BW	11	LEU	N-CA-C	5.11	116.53	111.07
44	CG	82	GLN	N-CA-C	-5.11	105.71	111.28
18	BN	83	ASP	N-CA-C	5.11	116.85	111.28
41	CD	28	THR	N-CA-C	5.10	117.22	108.90
65	Cc	47	ILE	N-CA-C	5.10	115.31	108.17
62	CZ	26	VAL	N-CA-C	5.09	116.55	111.00
5	BA	189	ILE	N-CA-C	5.09	116.05	108.46
9	BE	213	ALA	N-CA-C	5.09	116.83	111.28
55	CS	15	ARG	N-CA-C	5.09	120.61	113.02
56	CT	104	SER	N-CA-C	-5.09	105.73	111.28
77	Co	74	GLU	CA-C-N	5.09	124.88	119.28
77	Co	74	GLU	C-N-CA	5.09	124.88	119.28
24	BT	2	PRO	N-CA-CB	5.08	108.59	103.00
43	CF	227	PHE	N-CA-C	-5.08	105.86	111.71
68	Cf	75	THR	N-CA-C	5.08	119.47	113.12
44	CG	153	GLN	N-CA-C	5.08	116.89	111.36
4	B1	343	A	C2'-C3'-O3'	5.07	117.11	109.50
56	CT	14	MET	N-CA-C	5.07	116.81	111.28
11	BG	100	CYS	N-CA-C	5.06	116.80	111.28
8	BD	199	GLY	N-CA-C	5.06	122.66	112.34
45	CH	182	SER	N-CA-C	5.06	117.57	111.40
40	CC	329	ASN	CA-C-N	5.05	124.71	119.56
40	CC	329	ASN	C-N-CA	5.05	124.71	119.56
63	Ca	128	PHE	N-CA-C	5.05	117.06	109.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	BL	97	ARG	N-CA-C	5.05	116.78	111.28
42	CE	248	ILE	N-CA-C	5.04	115.26	110.42
46	CI	134	VAL	N-CA-C	5.04	115.60	107.73
7	BC	60	TRP	N-CA-CB	-5.04	102.71	110.01
51	CO	111	PRO	CA-C-N	5.04	127.03	120.28
51	CO	111	PRO	C-N-CA	5.04	127.03	120.28
5	BA	103	PHE	N-CA-C	5.03	116.76	111.28
31	Ba	25	ASN	N-CA-C	5.03	116.61	111.03
55	CS	80	ILE	N-CA-C	5.03	115.15	108.11
11	BG	99	GLY	N-CA-C	5.03	117.71	111.93
56	CT	93	ILE	N-CA-C	5.03	115.75	110.62
57	CU	109	SER	N-CA-C	5.03	117.02	109.23
81	A2	1673	C	N1-C1'-C2'	5.03	121.54	114.00
57	CU	48	LYS	N-CA-C	5.02	117.15	109.07
11	BG	127	THR	N-CA-C	5.01	117.48	109.96
37	Bg	19	THR	N-CA-C	5.01	117.85	111.69
6	BB	36	PRO	CA-C-N	5.01	126.99	120.28
6	BB	36	PRO	C-N-CA	5.01	126.99	120.28
30	BZ	61	GLU	N-CA-C	5.01	117.13	109.62
62	CZ	89	ILE	N-CA-C	5.00	119.69	108.88
36	Bf	127	GLY	N-CA-C	5.00	118.73	112.73
64	Cb	20	GLY	N-CA-C	5.00	125.03	113.18

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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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 (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AV	1619	0	820	143	0
2	AW	1626	0	826	194	0
3	AX	560	0	281	168	0
4	B1	37159	0	18778	4029	0
5	BA	1719	0	1717	135	0
6	BB	1729	0	1803	146	0
7	BC	1724	0	1808	74	0
8	BD	1646	0	1737	96	0
9	BE	2031	0	2138	119	0
10	BF	1486	0	1540	159	0
11	BG	1884	0	2044	155	0
12	BH	1535	0	1632	134	0
13	BI	1695	0	1785	168	0
14	BJ	1495	0	1615	95	0
15	BK	791	0	811	54	0
16	BL	1199	0	1269	73	0
17	BM	931	0	961	45	0
18	BN	1207	0	1292	87	0
19	BO	1023	0	1049	73	0
20	BP	981	0	1026	56	0
21	BQ	1108	0	1172	97	0
22	BR	893	0	946	65	0
23	BS	1172	0	1229	81	0
24	BT	1112	0	1146	114	0
25	BU	803	0	866	80	0
26	BV	636	0	637	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	BW	1033	0	1080	68	0
28	BX	1046	0	1110	69	0
29	BY	1002	0	1075	65	0
30	BZ	605	0	665	54	0
31	Ba	767	0	816	125	0
32	Bb	625	0	642	39	0
33	Bc	490	0	520	36	0
34	Bd	444	0	442	54	0
35	Be	412	0	463	34	0
36	Bf	497	0	497	33	0
37	Bg	2440	0	2396	118	0
38	CA	1888	0	1983	143	0
39	CB	3190	0	3327	189	0
40	CC	2889	0	3064	272	0
41	CD	2361	0	2385	141	0
42	CE	1286	0	1398	159	0
43	CF	1949	0	2093	140	0
44	CG	1881	0	2018	123	0
45	CH	1535	0	1611	105	0
46	CI	1604	0	1652	65	0
47	CJ	1362	0	1399	101	0
48	CL	1617	0	1725	117	0
49	CM	1139	0	1204	127	0
50	CN	1708	0	1761	89	0
51	CO	1607	0	1745	127	0
52	CP	1234	0	1263	72	0
53	CQ	1493	0	1612	100	0
54	CR	1526	0	1682	119	0
55	CS	1438	0	1472	88	0
56	CT	1297	0	1366	115	0
57	CU	827	0	852	22	0
58	CV	963	0	1026	42	0
59	CW	529	0	541	32	0
60	CX	975	0	1053	47	0
61	CY	1065	0	1145	87	0
62	CZ	1114	0	1194	102	0
63	Ca	1161	0	1213	82	0
64	Cb	560	0	590	42	0
65	Cc	802	0	844	77	0
66	Cd	904	0	947	28	0
67	Ce	1053	0	1144	50	0
68	Cf	865	0	904	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
69	Cg	907	0	1002	101	0
70	Ch	1014	0	1148	47	0
71	Ci	783	0	862	53	0
72	Cj	690	0	719	56	0
73	Ck	568	0	637	31	0
74	Cl	443	0	483	14	0
75	Cm	428	0	466	25	0
76	Cn	239	0	285	62	0
77	Co	870	0	943	62	0
78	Cp	707	0	760	44	0
79	Ct	1043	0	1120	124	0
80	Cu	1621	0	1563	158	0
81	A2	77488	0	39155	7802	0
82	A3	3334	0	1693	298	0
83	A4	2538	0	1286	250	0
All	All	215620	0	158969	16755	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 (16755) 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)
4:B1:1183:A:H5'	76:Cn:11:ARG:CZ	1.29	1.62
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
4:B1:1183:A:C4'	76:Cn:11:ARG:NH2	1.68	1.54
4:B1:1172:U:H5'	76:Cn:10:MET:CE	1.38	1.53
68:Cf:106:TYR:CD2	68:Cf:107:PRO:HD2	1.42	1.52
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
4:B1:1183:A:C5'	76:Cn:11:ARG:NH2	1.78	1.46
13:BI:123:ARG:CZ	81:A2:4979:C:C5'	1.79	1.44
81:A2:1673:C:C3'	81:A2:1673:C:O3'	1.63	1.44
13:BI:123:ARG:NH2	81:A2:4979:C:C4'	1.78	1.43
4:B1:1183:A:H4'	76:Cn:11:ARG:NH2	1.20	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1172:U:C5'	76:Cn:10:MET:HE2	1.44	1.42
2:AW:37:MIA:H162	10:BF:132:GLY:CA	1.42	1.41
81:A2:1701:C:C5'	81:A2:1701:C:O5'	1.67	1.41
4:B1:1849:G:C1'	81:A2:3735:A:O2'	1.65	1.41
1:AV:33:U:OP2	21:BQ:146:ARG:C	1.64	1.40
1:AV:32:U:OP1	21:BQ:146:ARG:CG	1.69	1.40
13:BI:92:ARG:NH2	81:A2:2869:C:H1'	1.26	1.40
13:BI:123:ARG:HH22	81:A2:4979:C:C4'	1.35	1.39
1:AV:56:C:N4	77:Co:104:ILE:CD1	1.85	1.38
4:B1:1172:U:C5'	76:Cn:10:MET:CE	1.99	1.38
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
4:B1:1183:A:H5'	76:Cn:11:ARG:NE	1.40	1.35
4:B1:1183:A:C5'	76:Cn:11:ARG:CZ	2.05	1.34
2:AW:37:MIA:C12	10:BF:134:VAL:N	1.92	1.33
13:BI:168:GLN:O	81:A2:4979:C:C3'	1.76	1.33
13:BI:169:GLY:CA	81:A2:4980:C:OP1	1.73	1.33
18:BN:151:ALA:CA	65:Cc:83:THR:HA	1.58	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
3:AX:37:U:O5'	31:Ba:42:ARG:NE	1.63	1.30
18:BN:151:ALA:HA	65:Cc:83:THR:CA	1.59	1.29
4:B1:1028:A:C2	81:A2:1543:A:C6	2.21	1.29
4:B1:1172:U:C4'	76:Cn:10:MET:CE	2.11	1.29
3:AX:45:U:O2	4:B1:1207:G:C2	1.81	1.28
4:B1:1172:U:C4'	76:Cn:10:MET:HE3	1.61	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
2:AW:37:MIA:C15	10:BF:134:VAL:HG13	1.64	1.27
3:AX:43:U:C5'	4:B1:961:G:C1'	2.11	1.27
3:AX:37:U:C5'	31:Ba:42:ARG:NE	1.99	1.26
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
1:AV:76:A:O2'	81:A2:4357:A:O2'	1.52	1.24
18:BN:127:ARG:HD2	81:A2:1542:A:C2	1.58	1.24
13:BI:169:GLY:HA3	81:A2:4980:C:OP1	1.10	1.23
3:AX:45:U:N3	4:B1:1207:G:N3	1.86	1.22
4:B1:910:G:OP1	54:CR:173:ARG:HG2	1.04	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AV:56:C:C4	77:Co:104:ILE:HD12	1.75	1.20
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
4:B1:1183:A:OP1	76:Cn:11:ARG:NE	1.73	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:OP1	21:BQ:146:ARG:HG2	1.02	1.19
81:A2:1179:G:H2'	81:A2:1180:G:C8	1.77	1.19
18:BN:43:LYS:O	65:Cc:20:LEU:CD1	1.91	1.18
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:B1:1174:U:OP1	76:Cn:21:ARG:CZ	1.92	1.18
68:Cf:106:TYR:HD2	68:Cf:107:PRO:CD	1.55	1.17
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
4:B1:377:G:H4'	13:BI:97:VAL:HG13	1.24	1.16
81:A2:719:G:H1'	81:A2:720:A:H5"	1.22	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
1:AV:56:C:N4	77:Co:104:ILE:HD12	1.52	1.15
2:AW:37:MIA:H121	10:BF:134:VAL:N	1.56	1.15
1:AV:56:C:N4	77:Co:104:ILE:HD13	1.51	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
3:AX:37:U:C5'	31:Ba:42:ARG:CD	2.25	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
51:CO:21:ALA:HA	51:CO:87:MET:HE1	1.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:181:A:H3'	4:B1:182:C:H5"	1.29	1.12
81:A2:4700:C:H2'	81:A2:4701:G:H4'	1.28	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:A2:709:G:H2'	81:A2:710:G:H5'	1.29	1.12
81:A2:2637:A:H3'	81:A2:2638:U:H5"	1.32	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:B1:179:C:H3'	4:B1:180:G:H5"	1.17	1.11
4:B1:871:U:C4	54:CR:163:ARG:NH1	2.18	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
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
2:AW:37:MIA:H152	10:BF:134:VAL:HG13	1.28	1.11
2:AW:37:MIA:H122	10:BF:134:VAL:H	1.15	1.11
3:AX:60:U:C2	3:AX:61:U:C5	2.39	1.11
4:B1:180:G:H1'	4:B1:181:A:H5'	1.16	1.11
2:AW:62:C:O2'	80:Cu:37:ASN:ND2	1.82	1.10
81:A2:1219:C:C2	81:A2:1249:G:H4'	1.86	1.10
1:AV:32:U:OP1	21:BQ:146:ARG:CB	2.00	1.10
3:AX:58:U:P	7:BC:151:ILE:HD13	1.90	1.10
4:B1:1174:U:C5'	76:Cn:21:ARG:HH22	1.63	1.10
4:B1:1416:C:H3'	4:B1:1417:C:H5"	1.29	1.10
2:AW:72:C:H2'	2:AW:73:A:H5"	1.32	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: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
4:B1:1732:G:H5'	81:A2:2862:A:H5"	1.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:909:G:OP1	54:CR:169:ALA:HA	1.53	1.09
13:BI:92:ARG:CZ	81:A2:2869:C:H1'	1.82	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
4:B1:797:C:H2'	4:B1:798:G:H5"	1.28	1.09
4:B1:970:G:H5"	81:A2:3681:A:OP1	1.52	1.09
47:CJ:53:ALA:HB2	47:CJ:68:ILE:HD12	1.32	1.09
81:A2:1058:A:H62	81:A2:1205:U:H1'	1.06	1.09
81:A2:1191:G:H2'	81:A2:1192:G:H8	1.10	1.09
81:A2:4655:C:H2'	81:A2:4656:C:H5'	1.29	1.09
1:AV:56:C:H41	77:Co:104:ILE:HD13	0.99	1.08
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
4:B1:970:G:N1	81:A2:3679:G:O2'	1.86	1.08
81:A2:1224:G:H3'	81:A2:1225:C:H5"	1.31	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
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
74:Cl:13:LEU:HD11	81:A2:2384:G:H2'	1.36	1.07
81:A2:2370:C:H3'	81:A2:2371:G:H5"	1.32	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:A2:1791:C:H2'	81:A2:1792:U:H6	1.17	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:A2:284:G:H21	81:A2:288:U:H4'	1.13	1.07
81:A2:457:A:H8	81:A2:676:G:H5"	1.07	1.07
81:A2:4825:G:H4'	81:A2:4826:C:H4'	1.14	1.07
2:AW:76:A:N7	81:A2:4331:G:N3	2.01	1.07
81:A2:457:A:C8	81:A2:676:G:H5"	1.89	1.07
4:B1:384:U:H2'	4:B1:385:G:H5"	1.35	1.07
68:Cf:106:TYR:CD2	68:Cf:107:PRO:CD	2.32	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:B1:211:G:H8	4:B1:211:G:H5'	1.19	1.06
4:B1:1028:A:C2	81:A2:1543:A:N1	2.22	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:309:ILE:HD13	81:A2:2063:G:H1'	1.37	1.06
40:CC:346:ASN:CB	81:A2:713:G:H4'	1.83	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
3:AX:60:U:C2	3:AX:61:U:H5	1.72	1.05
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
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:A2:3588:G:H5'	81:A2:3589:G:H5"	1.39	1.05
2:AW:37:MIA:C15	10:BF:134:VAL:CG1	2.34	1.05
81:A2:4700:C:H3'	81:A2:4701:G:H5"	1.34	1.05
3:AX:43:U:C5'	4:B1:961:G:O4'	2.03	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:A2:1059:C:H3'	81:A2:1060:C:C5	1.92	1.05
81:A2:1166:U:H2'	81:A2:1167:G:C8	1.91	1.05
81:A2:4695:C:H2'	81:A2:4696:G:C8	1.90	1.05
2:AW:37:MIA:C14	10:BF:134:VAL:CG1	2.35	1.05
4:B1:1631:U:H5'	4:B1:1631:U:H6	1.16	1.05
81:A2:709:G:C2'	81:A2:710:G:H5'	1.86	1.05
81:A2:2449:A:H3'	81:A2:2450:A:H5'	1.35	1.05
81:A2:4712:U:H1'	81:A2:4713:G:H8	1.21	1.05
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
80:Cu:160:HIS:HB2	81:A2:3938:G:H1'	1.37	1.04
81:A2:2348:U:H6	81:A2:2348:U:H5"	1.16	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:A2:4687:U:H3'	81:A2:4688:A:C5'	1.87	1.04
4:B1:211:G:H2'	4:B1:212:C:H6	1.13	1.04
4:B1:594:A:H1'	4:B1:643:A:N6	1.72	1.04
4:B1:970:G:C8	81:A2:3680:A:C5'	2.40	1.04
81:A2:182:C:H3'	81:A2:183:G:C8	1.92	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
1:AV:74:C:N3	81:A2:4157:G:N1	2.04	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:BI:69:SER:HB3	16:BL:24:LEU:HD11	1.37	1.04
81:A2:957:G:H5'	81:A2:957:G:C8	1.91	1.04
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:B1:1183:A:H4'	76:Cn:11:ARG:CZ	1.88	1.03
4:B1:1849:G:H1'	81:A2:3735:A:H1'	1.38	1.03
3:AX:43:U:O4'	4:B1:961:G:N3	1.89	1.03
4:B1:970:G:OP1	81:A2:3681:A:C8	2.11	1.03
4:B1:1172:U:H4'	76:Cn:10:MET:HE3	1.32	1.03
81:A2:712:C:H2'	81:A2:713:G:C8	1.93	1.03
2:AW:19:G:N7	81:A2:3927:G:C1'	2.13	1.03
2:AW:37:MIA:C16	10:BF:132:GLY:N	2.22	1.03
13:BI:92:ARG:NH2	81:A2:2869:C:C1'	2.20	1.03
81:A2:441:G:H8	81:A2:441:G:H5'	1.16	1.03
4:B1:1069:U:O2'	38:CA:247:ARG:NH2	1.90	1.03
4:B1:1659:U:H5"	34:Bd:30:LEU:HD11	1.39	1.03
81:A2:4595:A:H5'	81:A2:4624:A:H61	1.19	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
81:A2:2311:C:H5'	81:A2:2311:C:H6	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
82:A3:8:U:H2'	82:A3:9:A:H8	1.23	1.03
82:A3:127:U:H3'	82:A3:128:C:H5"	1.04	1.03
4:B1:970:G:C5	81:A2:3680:A:H5"	1.94	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
81:A2:380:A:H3'	81:A2:380:A:N3	1.71	1.02
81:A2:1248:G:H3'	81:A2:1249:G:C8	1.93	1.02
81:A2:1409:C:H2'	81:A2:1410:C:C6	1.94	1.02
2:AW:56:C:N3	81:A2:3927:G:C6	2.27	1.02
4:B1:475:C:H5'	4:B1:475:C:H6	1.20	1.02
81:A2:459:U:H4'	81:A2:460:C:OP1	1.60	1.02
81:A2:1718:G:C5'	83:A4:102:U:H1'	1.90	1.02
4:B1:1174:U:OP1	76:Cn:21:ARG:NH2	1.91	1.02
81:A2:59:A:H2'	81:A2:60:A:H5'	1.42	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
3:AX:45:U:N1	4:B1:1207:G:N2	2.08	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1008:A:OP1	65:Cc:8:LYS:HD2	1.59	1.02
79:Ct:73:PRO:HG3	79:Ct:78:VAL:HG21	1.39	1.02
81:A2:393:A:H8	81:A2:393:A:H5"	1.23	1.02
81:A2:2305:U:H2'	81:A2:2306:G:C8	1.94	1.02
18:BN:43:LYS:O	65:Cc:20:LEU:HD13	1.57	1.01
40:CC:185:ALA:HB3	81:A2:2276:A:C8	1.95	1.01
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
1:AV:75:C:N4	81:A2:4157:G:O6	1.90	1.01
81:A2:14:C:O4'	81:A2:15:A:H5'	1.60	1.01
4:B1:1682:C:H1'	33:Bc:23:SER:HA	1.43	1.01
81:A2:165:C:H2'	81:A2:166:G:H8	1.26	1.01
81:A2:462:A:H4'	81:A2:463:C:C5'	1.89	1.01
81:A2:2354:C:H2'	81:A2:2355:G:H8	1.19	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:H8	81:A2:1659:G:H5'	1.25	1.01
81:A2:3770:U:H4'	81:A2:4456:A:H2	1.25	1.01
4:B1:302:A:C2'	4:B1:303:C:H5"	1.90	1.01
4:B1:307:G:H4'	4:B1:308:G:H5"	1.41	1.01
81:A2:1466:G:H2'	81:A2:1467:G:H5"	1.43	1.01
81:A2:2311:C:H5'	81:A2:2311:C:C6	1.95	1.01
81:A2:2370:C:H3'	81:A2:2371:G:C5'	1.91	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
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:A2:978:G:H2'	81:A2:979:C:C6	1.94	1.00
4:B1:1258:A:H2'	4:B1:1259:A:H4'	1.44	1.00
81:A2:3580:A:H2	81:A2:4971:A:H8	1.08	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:A2:943:G:H3'	81:A2:1262:G:C4'	1.92	1.00
81:A2:1057:C:H2'	81:A2:1058:A:H5"	1.41	1.00
3:AX:53:U:C2	8:BD:146:ARG:NH2	2.30	1.00
4:B1:873:G:N7	54:CR:159:ALA:CA	2.25	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:A2:104: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:873:G:C8	54:CR:159:ALA:HA	1.96	0.99
4:B1:1520:G:H5'	4:B1:1521:C:C5	1.97	0.99
4:B1:1708:C:H1'	81:A2:3735:A:H62	1.24	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
4:B1:929:G:H21	4:B1:1104:G:H4'	1.23	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
81:A2:957:G:H2'	81:A2:958:C:H5"	1.44	0.99
40:CC:346:ASN:HB2	81:A2:713:G:H4'	1.41	0.99
81:A2:1791:C:H2'	81:A2:1792:U:C6	1.96	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
81:A2:2308:A:H4'	81:A2:2309:G:H5'	1.44	0.99
38:CA:185:ALA:C	38:CA:196:TRP:HE1	1.71	0.99
81:A2:1061:C:H2'	81:A2:1062:C:C6	1.97	0.99
4:B1:655:A:H4'	4:B1:656:G:H3'	1.45	0.99
81:A2:4830:G:H3'	81:A2:4831:U:H4'	1.42	0.99
71:Ci:34:THR:HG21	81:A2:267:C:H3'	1.45	0.98
81:A2:2416:G:H2'	81:A2:2495:G:H22	1.25	0.98
4:B1:572:U:H2'	4:B1:573:U:C4	1.97	0.98
81:A2:700:C:C3'	81:A2:701:C:H5"	1.93	0.98
2:AW:75:C:H3'	77:Co:55:ILE:HG23	1.45	0.98
4:B1:683:G:H1'	4:B1:1023:A:C2	1.99	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:B1:1257:G:H4'	4:B1:1258:A:OP2	1.63	0.98
81:A2:1870:A:H5'	81:A2:1871:C:H5	1.25	0.98
81:A2:1301:G:H4'	81:A2:1869:A:H2	1.24	0.98
4:B1:1172:U:H5"	76:Cn:14:LYS:HD3	1.40	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
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
1:AV:32:U:P	21:BQ:146:ARG:HG2	2.02	0.98
4:B1:184:G:H8	4:B1:185:G:H4'	1.25	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:61:ILE:HD12	82:A3:149:G:H1'	1.46	0.98
81:A2:4291:G:H3'	81:A2:4292:C:C5'	1.94	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
1:AV:32:U:P	21:BQ:146:ARG:CG	2.53	0.97
4:B1:794:A:H2'	4:B1:795:A:H4'	1.47	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
4:B1:1852:C:N4	76:Cn:5:TRP:CE3	2.32	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
4:B1:1174:U:H5"	76:Cn:21:ARG:HH22	1.29	0.97
38:CA:186:TYR:HA	38:CA:196:TRP:CE2	1.99	0.97
3:AX:37:U:H5'	31:Ba:42:ARG:CD	1.92	0.96
81:A2:4661:A:H2'	81:A2:4662:G:H5'	1.47	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
81:A2:1465:C:C2'	81:A2:1466:G:H5'	1.96	0.96
4:B1:193:C:H4'	4:B1:209:A:N6	1.79	0.96
4:B1:1253:A:H4'	4:B1:1254:C:H5"	1.47	0.96
81:A2:41:C:C2'	81:A2:42:A:H5"	1.94	0.96
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
2:AW:37:MIA:H121	10:BF:134:VAL:H	1.09	0.96
4:B1:1695:A:H2'	4:B1:1696:C:O4'	1.65	0.96
81:A2:4825:G:H4'	81:A2:4826:C:C4'	1.95	0.96
41:CD:280:VAL:HG13	46:CI:206:LEU:HD11	1.48	0.96
2:AW:76:A:C2	77:Co:56:PHE:HB3	1.99	0.96
21:BQ:12:VAL:HG21	21:BQ:91:ALA:HA	1.47	0.96
81:A2:2508:C:HO2'	81:A2:2509:C:H6	0.98	0.96
2:AW:19:G:C5	81:A2:3927:G:O4'	2.18	0.96
4:B1:235:A:HO2'	4:B1:236:A:H8	1.04	0.96
4:B1:1849:G:C8	81:A2:3735:A:O2'	2.19	0.96
4:B1:873:G:N7	54:CR:159:ALA:CB	2.29	0.96
48:CL:169:ILE:HG12	63:Ca:98:ALA:HB2	1.47	0.96
81:A2:1081:C:H4'	81:A2:1081:C:OP1	1.65	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:561: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:B1:1183:A:C5'	76:Cn:11:ARG:HH21	1.69	0.96
81:A2:2549:C:H4'	81:A2:2736:G:H2'	1.47	0.96
4:B1:559:G:H3'	4:B1:560:A:H5"	1.47	0.95
4:B1:229:A:N1	4:B1:900:C:H1'	1.80	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
81:A2:286:A:C2	81:A2:308:A:H8	1.85	0.95
1:AV:34:G:C6	4:B1:1701:C:O4'	2.19	0.95
2:AW:31:A:C2	10:BF:136:ARG:NH2	2.33	0.95
4:B1:1750:C:H2'	4:B1:1751:C:H5'	1.48	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: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
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:A2:641:C:H2'	81:A2:642:C:C5	2.02	0.95
4:B1:694:G:H2'	4:B1:695:C:C6	2.01	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
81:A2:1278:C:H2'	81:A2:1279:G:C8	2.02	0.95
4:B1:475:C:H5'	4:B1:475:C:C6	2.02	0.95
4:B1:1832:A:H2'	4:B1:1833:C:H5"	1.46	0.95
4:B1:754:G:H2'	4:B1:755:C:C6	2.02	0.95
81:A2:476:C:H6	81:A2:476:C:H5"	1.30	0.95
53:CQ:155:ALA:HB1	53:CQ:156:PRO:HD2	1.48	0.94
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
4:B1:1069:U:HO2'	38:CA:247:ARG:HH21	1.11	0.94
4:B1:1849:G:H1'	81:A2:3735:A:O2'	1.65	0.94
77:Co:54:PRO:HA	81:A2:4339:A:N7	1.81	0.94
81:A2:2750:G:H2'	81:A2:2751:C:H6	1.28	0.94
4:B1:970:G:H5"	81:A2:3681:A:P	2.07	0.94
81:A2:240:A:H2'	81:A2:241:G:C8	2.02	0.94
81:A2:1053:G:H2'	81:A2:1054:G:H8	1.31	0.94
81:A2:4665:A:H3'	81:A2:4666:G:C8	2.01	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Cd:39:LYS:HA	66:Cd:77:ILE:HD12	1.49	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
3:AX:37:U:H5"	31:Ba:42:ARG:NE	1.79	0.94
4:B1:1028:A:H2	81:A2:1543:A:N6	1.66	0.94
3:AX:53:U:C2	8:BD:146:ARG:CZ	2.50	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
18:BN:127:ARG:CD	81:A2:1542:A:H2	1.75	0.94
43:CF:245:ARG:HG2	81:A2:927:A:H3'	1.49	0.94
81:A2:326:A:H3'	81:A2:327:A:H8	1.30	0.94
81:A2:510:C:H5'	81:A2:510:C:C6	2.02	0.94
4:B1:929:G:N2	4:B1:1104:G:H4'	1.81	0.94
75:Cm:103:LEU:HD21	75:Cm:110:CYS:HA	1.49	0.94
81:A2:937:C:H2'	81:A2:938:C:C6	2.03	0.94
81:A2:1218:A:H5'	81:A2:1218:A:C8	2.02	0.94
81:A2:4253:U:H3'	81:A2:4254:C:H5"	1.50	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
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:A2:700:C:H3'	81:A2:701:C:H5"	1.47	0.93
81:A2:1050:G:H2'	81:A2:1051:C:H5'	1.47	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:A2:254: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:B1:570:C:C2'	4:B1:571:U:H5"	1.98	0.93
4:B1:1852:C:N4	76:Cn:5:TRP:CZ3	2.36	0.93
81:A2:424:A:H1'	81:A2:425:A:C5'	1.99	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:B1:551:U:H5"	35:Be:39:ASN:HB3	1.51	0.93
4:B1:794:A:C2	4:B1:795:A:H1'	2.02	0.93
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:573:U:H2'	4:B1:576:A:C2	2.04	0.93
4:B1:1731:A:O2'	81:A2:2862:A:H5'	1.67	0.93
81:A2:4308:A:H3'	81:A2:4309:C:H5"	1.48	0.93
1:AV:32:U:OP2	21:BQ:146:ARG:HB3	1.69	0.93
4:B1:134:C:H3'	4:B1:135:U:H4'	1.49	0.93
4:B1:1276:A:H5'	4:B1:1277:C:H5	1.34	0.93
4:B1:1309:C:H1'	36:Bf:133:ALA:CB	1.98	0.93
81:A2:943:G:H3'	81:A2:1262:G:H4'	1.47	0.93
81:A2:1058:A:N6	81:A2:1205:U:H1'	1.84	0.93
81:A2:3605:C:H6	81:A2:3605:C:H5'	1.32	0.93
2:AW:37:MIA:H121	10:BF:133:THR:CA	1.99	0.93
4:B1:168:C:H4'	11:BG:131:ARG:HD2	1.46	0.93
4:B1:210:U:H2'	4:B1:211:G:H5"	1.51	0.93
81:A2:929:U:C2'	81:A2:930:C:H5'	1.98	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
2:AW:8:U:H4'	2:AW:9:A:OP1	1.68	0.92
4:B1:693:A:H3'	4:B1:694:G:C4'	1.98	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
67:Ce:12:ILE:HD11	67:Ce:69:MET:HB3	1.48	0.92
81:A2:288:U:H2'	81:A2:289:G:C8	2.02	0.92
81:A2:1503:A:H3'	81:A2:1504:A:H5"	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
4:B1:1841:C:C5'	76:Cn:2:ARG:NH1	2.30	0.92
40:CC:56:GLU:HG2	82:A3:26:C:H1'	1.50	0.92
62:CZ:83:THR:HG1	69:Cg:95:PHE:HZ	1.07	0.92
81:A2:1515:U:H2'	81:A2:1516:A:H8	1.31	0.92
2:AW:56:C:C4	81:A2:3927:G:O6	2.23	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
9:BE:19:MET:HE3	9:BE:108:ARG:HG2	1.50	0.92
14:BJ:86:VAL:HG12	14:BJ:87:LEU:HD12	1.51	0.92
81:A2:924:C:H3'	81:A2:925:C:H5"	1.49	0.92
81:A2:2551:G:H4'	81:A2:2552:U:OP2	1.66	0.92
81:A2:4593:G:H2'	81:A2:4623:G:H1	1.33	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:A2:1079:C:H2'	81:A2:1080:U:C4'	1.99	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:A3:127:U:H3'	82:A3:128:C:C5'	1.97	0.92
1:AV:56:C:H41	77:Co:104:ILE:CD1	1.63	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
49:CM:97:ALA:C	81:A2:4826:C:H42	1.77	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
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:A2:1199: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
81:A2:4177:G:HO2'	81:A2:4263:C:H6	1.15	0.92
9:BE:129:ILE:HG22	9:BE:156:VAL:HG22	1.50	0.92
36:Bf:121:CYS:SG	36:Bf:141:CYS:HB2	2.09	0.92
81:A2:4830:G:N7	81:A2:4831:U:H1'	1.85	0.92
4:B1:570:C:H2'	4:B1:571:U:H5"	1.51	0.92
4:B1:1491:G:H2'	4:B1:1492:U:C6	2.05	0.92
20:BP:34:MET:HG3	20:BP:45:LEU:HD22	1.52	0.92
81:A2:2345:A:H5"	81:A2:2804:G:H22	1.34	0.92
81:A2:2656:G:H2'	81:A2:2657:G:H8	1.35	0.92
4:B1:1397:U:H4'	4:B1:1398:G:H21	1.34	0.92
81:A2:2532:G:H2'	81:A2:2533:G:H8	1.24	0.92
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
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: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
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
19:BO:125:LYS:HG2	31:Ba:58:VAL:HG11	1.52	0.91
81:A2:1245:G:H2'	81:A2:1246:G:H5"	1.51	0.91
81:A2:2486:C:H5"	81:A2:2486:C:H6	1.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:719:G:H1'	81:A2:720:A:C5'	2.00	0.91
81:A2:4806:G:H2'	81:A2:4807:C:H4'	1.53	0.91
81:A2:4909:G:H2'	81:A2:4910:A:H8	1.35	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:A2:725:C:H3'	81:A2:726:C:C5	2.05	0.91
81:A2:4723:A:H1'	81:A2:4724:G:OP1	1.70	0.91
1:AV:76:A:N1	81:A2:4156:G:C2	2.38	0.91
4:B1:873:G:OP2	54:CR:163:ARG:CA	2.19	0.91
81:A2:1352:A:C2	81:A2:1353:A:C5	2.59	0.91
82:A3:26:C:H2'	82:A3:27:U:C6	2.05	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
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
79:Ct:119:ARG:O	79:Ct:123:PRO:HD3	1.71	0.91
81:A2:180:C:H4'	81:A2:182:C:C6	2.06	0.91
81:A2:4837:U:HO2'	81:A2:4838:C:H6	0.93	0.91
4:B1:806:U:H2'	4:B1:807:G:H5'	1.53	0.90
4:B1:1631:U:H5'	4:B1:1631:U:C6	2.06	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:A2:700:C:H2'	81:A2:701:C:O4'	1.71	0.90
81:A2:4691:G:H5'	81:A2:4694:G:H4'	1.53	0.90
3:AX:43:U:H5'	4:B1:961:G:O4'	1.63	0.90
4:B1:558:G:H8	4:B1:558:G:P	1.94	0.90
40:CC:13:GLU:HB2	40:CC:170:LEU:HD11	1.53	0.90
81:A2:737:G:H22	81:A2:901:A:H2	1.16	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
4:B1:557:U:C3'	4:B1:558:G:C8	2.55	0.90
73:Ck:42:LEU:HD22	81:A2:2513:A:H5"	1.51	0.90
81:A2:1403:U:H2'	81:A2:1404:G:H8	1.36	0.90
3:AX:35:U:OP2	31:Ba:41:ILE:HD12	1.72	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:OP1	4:B1:958:G:H4'	1.69	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:751:G:H2'	4:B1:752:G:C8	2.05	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
2:AW:19:G:N9	81:A2:3927:G:H1'	1.87	0.90
81:A2:1716:A:H5'	83:A4:78:C:H4'	1.54	0.90
81:A2:4637:U:H1'	81:A2:4638:G:OP1	1.71	0.90
4:B1:1330:G:H4'	4:B1:1331:C:C5'	2.01	0.90
37:Bg:175:LYS:HB3	37:Bg:184:LEU:HD21	1.54	0.90
81:A2:1711:C:H2'	81:A2:1712:G:H5"	1.53	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
40:CC:336:ARG:HE	81:A2:930:C:H4'	1.36	0.90
64:Cb:57:MET:HB3	81:A2:1791:C:H4'	1.53	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
4:B1:60:A:H3'	4:B1:501:C:H41	1.34	0.90
13:BI:168:GLN:O	81:A2:4979:C:O3'	1.88	0.90
81:A2:2455:C:P	81:A2:2456:G:H5"	2.11	0.90
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:A2:440:C:H2'	81:A2:441:G:H5"	1.54	0.89
81:A2:1547:C:H2'	81:A2:1548:U:C6	2.07	0.89
81:A2:4823:G:H4'	81:A2:4824:U:OP1	1.69	0.89
4:B1:871:U:N3	54:CR:163:ARG:NH1	2.19	0.89
4:B1:1732:G:C5'	81:A2:2862:A:H5"	2.02	0.89
79:Ct:84:LYS:HD2	81:A2:668:C:H1'	1.53	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
81:A2:720:A:H4'	81:A2:721:A:OP2	1.71	0.89
81:A2:1020:G:H22	81:A2:1044:G:H22	1.14	0.89
2:AW:2:C:H6	2:AW:2:C:H5"	1.37	0.89
18:BN:92:ILE:HG21	18:BN:149:LEU:HD13	1.55	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:4:C:HO2'	81:A2:3683:G:H4'	1.24	0.89
4:B1:314:U:H4'	4:B1:314:U:OP1	1.70	0.89
81:A2:381:C:C6	81:A2:381:C:H5"	2.08	0.89
81:A2:1203:G:H2'	81:A2:1204:G:H8	1.36	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:AW:37:MIA:H121	10:BF:133:THR:C	1.98	0.89
4:B1:75:G:H1'	4:B1:76:U:C5	2.06	0.89
4:B1:184:G:H3'	4:B1:185:G:H4'	1.55	0.89
4:B1:1157:G:H5"	4:B1:1157:G:N3	1.87	0.89
4:B1:1280:G:H2'	4:B1:1281:G:H8	1.36	0.89
81:A2:728:G:H2'	81:A2:729:C:H6	1.37	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
2:AW:8:U:H2'	2:AW:13:C:H41	1.37	0.89
3:AX:42:U:H5	19:BO:151:LEU:O	1.56	0.89
4:B1:1692:U:H2'	4:B1:1693:G:H8	1.38	0.89
81:A2:471:C:H5"	81:A2:472:G:H5"	1.53	0.89
81:A2:957:G:H2'	81:A2:958:C:C5'	2.03	0.89
81:A2:2020:A:H2	81:A2:4424:A:C6	1.91	0.89
81:A2:2547:U:H2'	81:A2:2548:C:H6	1.34	0.89
81:A2:4735:G:H2'	81:A2:4736:C:H4'	1.55	0.89
4:B1:383:G:H3'	4:B1:384:U:C6	2.07	0.89
69:Cg:43:LYS:HB2	69:Cg:51:GLY:O	1.73	0.89
81:A2:1064:C:H2'	81:A2:1065:C: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
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
42:CE:190:HIS:HB2	81:A2:4897:C:H2'	1.54	0.88
81:A2:457:A:H2'	81:A2:458:U:C5'	2.02	0.88
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
1:AV:76:A:C2	81:A2:4156:G:C2	2.60	0.88
39:CB:254:ILE:HG22	81:A2:3867:G:H5'	1.55	0.88
68:Cf:59:THR:HA	68:Cf:63:LYS:HA	1.55	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:OP2	1.73	0.88
81:A2:2398:G:P	81:A2:2805:U:H1'	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:481:C:H2'	81:A2:482:G:H5"	1.54	0.88
4:B1:339:A:H2'	4:B1:340:C:C6	2.08	0.88
13:BI:169:GLY:CA	81:A2:4980:C:P	2.49	0.88
39:CB:252:ALA:HB1	81:A2:4484:G:C2	2.07	0.88
81:A2:469:G:C2'	81:A2:470:G:H5'	2.03	0.88
4:B1:909:G:OP2	54:CR:169:ALA:HB2	1.73	0.88
39:CB:258:HIS:HB3	39:CB:259:PRO:HD2	1.54	0.88
40:CC:139:SER:O	79:Ct:14:SER:HA	1.72	0.88
81:A2:218:C:H2'	81:A2:219:C:C6	2.08	0.88
81:A2:1547:C:H2'	81:A2:1548:U:H6	1.38	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
4:B1:590:A:H1'	35:Be:27:LYS:HG2	1.53	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
4:B1:1183:A:P	76:Cn:11:ARG:HE	1.96	0.88
81:A2:333:G:H2'	81:A2:334:C:H5"	1.56	0.88
81:A2:2571:C:H1'	81:A2:4092:C:N4	1.89	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:A2:1465: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
4:B1:1308:U:H1'	4:B1:1309:C:C6	2.08	0.88
81:A2:924:C:H2'	81:A2:925:C:O4'	1.73	0.88
81:A2:2553:G:H8	81:A2:2553:G:H5"	1.38	0.88
1:AV:76:A:H2	81:A2:4156:G:N2	1.68	0.88
4:B1:172:U:H3'	4:B1:173:A:H5"	1.56	0.88
4:B1:1405:A:C2	4:B1:1442:U:H6	1.91	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
4:B1:1138:C:H5"	4:B1:1139:C:OP1	1.74	0.88
4:B1:1174:U:P	76:Cn:21:ARG:NH2	2.47	0.88
78:Cp:16:THR:HG22	81:A2:2853:G:C8	2.08	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
80:Cu:204:MET:SD	81:A2:3943:G:H4'	2.13	0.87
81:A2:949:G:H3'	81:A2:950:A:H4'	1.56	0.87
81:A2:961:C:OP1	81:A2:961:C:H4'	1.73	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4562:A:H2'	81:A2:4563:C:C6	2.09	0.87
4:B1:1556:A:P	4:B1:1556:A:H3'	2.14	0.87
6:BB:54:GLY:HA3	81:A2:3913:G:C4'	2.04	0.87
81:A2:384:U:C3'	81:A2:385:G:H4'	2.05	0.87
81:A2:3696:A:HO2'	81:A2:3697:A:H8	1.21	0.87
1:AV:30:G:H2'	1:AV:31:A:H5'	1.55	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
80:Cu:79:LEU:HD21	80:Cu:84:LEU:HB2	1.56	0.87
81:A2:711:A:H2'	81:A2:712:C:H1'	1.56	0.87
4:B1:748:C:H42	4:B1:860:G:P	1.97	0.87
4:B1:1721:U:O2	81:A2:3598:A:O2'	1.92	0.87
4:B1:1827:U:H4'	81:A2:3728:A:H2'	1.54	0.87
1:AV:19:G:N7	77:Co:106:PHE:HB2	1.89	0.87
1:AV:57:G:C5'	47:CJ:55:TYR:HH	1.87	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
10:BF:144:LEU:HD23	33:Bc:49:PRO:HB2	1.57	0.87
13:BI:168:GLN:O	81:A2:4979:C:O2'	1.93	0.87
81:A2:326:A:H3'	81:A2:327:A:C8	2.09	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:A2:4211:A:H2'	81:A2:4212:C:C6	2.09	0.87
81:A2:4236:G:H5"	81:A2:4236:G:H8	1.36	0.87
81:A2:4806:G:H2'	81:A2:4807:C:C4'	2.04	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:A2:437:C:H3'	81:A2:438:C:C5	2.09	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:H5'	81:A2:2333:U:H6	1.39	0.87
81:A2:2572:C:H2'	81:A2:2573:G:C8	2.10	0.87
4:B1:1214:A:H2'	4:B1:1215:C:H5'	1.57	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
81:A2:1380:G:H2'	81:A2:1381:C:C6	2.09	0.87
4:B1:1276:A:H5'	4:B1:1277:C:C5	2.10	0.87
4:B1:1298:G:H4'	20:BP:78:THR:HA	1.57	0.87
4:B1:1765:C:H2'	4:B1:1766:C:O4'	1.74	0.87
45:CH:132:VAL:HG12	45:CH:154:VAL:HG22	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1270:G:H4'	81:A2:4898:A:H2	1.40	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
1:AV:19:G:C8	77:Co:106:PHE:HB3	2.10	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:A2:1083: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
3:AX:39:U:O2	33:Bc:67:ARG:NH1	2.08	0.86
3:AX:42:U:C5	19:BO:151:LEU:O	2.28	0.86
4:B1:444:G:H22	4:B1:447:A:H5"	1.38	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
81:A2:1224:G:H2'	81:A2:1225:C:H4'	1.56	0.86
81:A2:2394:A:C8	81:A2:2394:A:H5"	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
4:B1:66:G:H2'	11:BG:132:ARG:O	1.74	0.86
4:B1:106:C:H5"	4:B1:431:G:H1'	1.56	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
81:A2:400:G:N2	81:A2:2305:U:H5"	1.89	0.86
81:A2:1349:C:H4'	81:A2:1350:G:OP2	1.75	0.86
81:A2:1397:C:H2'	81:A2:1398:C:C6	2.10	0.86
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:A2:2752: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:B1:181:A:C3'	4:B1:182:C:H5"	2.05	0.86
64:Cb:16:TRP:HB3	64:Cb:21:ILE:HD11	1.58	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
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:A2:457:A:H2'	81:A2:458:U:H5'	1.58	0.86
81:A2:1651:U:H1'	81:A2:4264:A:H62	1.40	0.86
81:A2:2310:G:H4'	82:A3:20:A:C4'	2.05	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:37:MIA:H122	10:BF:134:VAL:HG22	1.55	0.86
4:B1:377:G:H4'	13:BI:97:VAL:CG1	2.05	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
13:BI:123:ARG:CZ	81:A2:4979:C:H5'	1.67	0.86
42:CE:166:LYS:HD2	42:CE:208:ILE:HG21	1.57	0.86
81:A2:1203:G:H5'	81:A2:1210:U:C5	2.10	0.86
4:B1:1079:C:H4'	4:B1:1181:A:H61	1.40	0.86
68:Cf:106:TYR:CG	68:Cf:107:PRO:HD2	2.09	0.86
81:A2:393:A:H5"	81:A2:393:A:C8	2.10	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
4:B1:1491:G:H2'	4:B1:1492:U:H6	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
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
79:Ct:73:PRO:CG	79:Ct:78:VAL:HG21	2.05	0.86
81:A2:4598:U:H2'	81:A2:4599:G:C8	2.11	0.86
81:A2:1894:G:C2'	81:A2:1895:A:H5'	2.06	0.86
81:A2:1918:G:H5"	81:A2:1918:G:C8	2.11	0.86
4:B1:162:C:H2'	4:B1:163:U:O4'	1.76	0.85
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:B1:1781: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:A2:180:C:H4'	81:A2:182:C:H6	1.38	0.85
81:A2:682:C:H2'	81:A2:683:C:H6	1.40	0.85
81:A2:4737:C:H2'	81:A2:4738:U:C6	2.11	0.85
2:AW:56:C:C5	81:A2:3927:G:O6	2.29	0.85
4:B1:606:G:C8	35:Be:54:GLY:HA3	2.11	0.85
6:BB:28:LYS:HD3	6:BB:48:LEU:HD13	1.55	0.85
52:CP:95:LEU:HG	52:CP:148:MET:HE1	1.59	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
1:AV:33:U:OP2	21:BQ:146:ARG:O	1.94	0.85
2:AW:76:A:N7	81:A2:4331:G:C2	2.44	0.85
4:B1:797:C:C2'	4:B1:798:G:H5"	2.06	0.85
4:B1:1424:G:H3'	4:B1:1425:G:O4'	1.76	0.85
81:A2:24:G:N1	81:A2:333:G:C8	2.43	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:976:C:H4'	81:A2:1222:G:H4'	1.58	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:A2:1541: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:B1:131: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
4:B1:1308:U:H5"	36:Bf:135:HIS:HA	1.59	0.85
81:A2:417:A:H2'	81:A2:418:A:H8	1.39	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
83:A4:23:A:H2'	83:A4:24:C:C6	2.12	0.85
2:AW:38:A:H1'	10:BF:133:THR:CG2	2.07	0.85
39:CB:257:TRP:CD1	81:A2:4478:A:N7	2.45	0.85
69:Cg:48:VAL:HG21	69:Cg:86:CYS:HB3	1.58	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
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
81:A2:4855:C:H2'	81:A2:4856:G:H4'	1.59	0.85
4:B1:310:C:H4'	4:B1:311:C:OP2	1.73	0.85
4:B1:1340:U:H5"	4:B1:1341:C:H2'	1.55	0.85
58:CV:120:PRO:HD3	59:CW:24:THR:O	1.76	0.85
4:B1:797:C:H4'	12:BH:109:ARG:CB	2.07	0.85
39:CB:336:CYS:SG	81:A2:4584:A:H2	1.99	0.85
51:CO:109:PRO:HB2	51:CO:112:TYR:CD2	2.11	0.85
81:A2:381:C:H5"	81:A2:381:C:H6	1.39	0.85
81:A2:4593:G:H22	81:A2:4623:G:H2'	1.39	0.85
4:B1:68:A:H4'	4:B1:69:C:O5'	1.74	0.85
4:B1:1390:U:H2'	4:B1:1391:C:C6	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:B1:76:U:H3'	4:B1:77:A:H5"	1.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1020:G:N2	81:A2:1044:G:H22	1.73	0.85
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
4:B1:1825:A:H2'	4:B1:1826:G:H5"	1.59	0.84
22:BR:109:LEU:HD13	22:BR:111:PHE:H	1.38	0.84
56:CT:105:PHE:CE1	81:A2:1781:A:H4'	2.11	0.84
81:A2:961:C:H1'	81:A2:1254:A:H61	1.41	0.84
81:A2:1066:C:C2'	81:A2:1067:A:H5'	2.07	0.84
81:A2:1662:U:H2'	81:A2:1663:A:C8	2.12	0.84
4:B1:20:G:H4'	4:B1:620:G:C2	2.12	0.84
4:B1:1579:A:H3'	4:B1:1579:A:N3	1.92	0.84
4:B1:1684:C:H2'	4:B1:1685:U:C5'	2.05	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
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:A2:1177:C:H4'	81:A2:1178:G:OP1	1.75	0.84
81:A2:3653:G:H2'	81:A2:3654:C:C6	2.12	0.84
3:AX:37:U:C5'	31:Ba:42:ARG:HD3	2.06	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
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:A2:346:A:H2'	81:A2:347:G:H5'	1.59	0.84
81:A2:1701:C:H4'	81:A2:1821:A:O2'	1.77	0.84
81:A2:4593:G:H2'	81:A2:4623:G:N1	1.92	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
4:B1:1832:A:C2'	4:B1:1833:C:H5"	2.06	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
4:B1:970:G:N3	81:A2:3679:G:O2'	2.10	0.84
4:B1:1402:A:H2'	4:B1:1403:C:C5	2.12	0.84
81:A2:924:C:H3'	81:A2:925:C:C5'	2.06	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:4060:G:H2'	81:A2:4061:G:H5'	1.59	0.84
81:A2:700:C:C2'	81:A2:701:C:H5"	2.08	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
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
72:Cj:17:THR:HG23	72:Cj:29:LEU:HD11	1.59	0.84
81:A2:1020:G:H1	81:A2:1044:G:H1	1.20	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
4:B1:1093:A:H5'	27:BW:3:ARG:HE	1.39	0.84
4:B1:1261:C:OP1	4:B1:1261:C:H4'	1.75	0.84
11:BG:98:ARG:HD3	11:BG:106:LEU:HD11	1.60	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
81:A2:1285:C:H5"	81:A2:2289:A:C5	2.13	0.84
4:B1:95:G:H1	4:B1:435:A:H61	1.26	0.84
41:CD:56:THR:HB	83:A4:26:C:H5"	1.60	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
81:A2:2369:C:H6	81:A2:2369:C:H5"	1.43	0.84
4:B1:1172:U:O4'	76:Cn:10:MET:CE	2.25	0.83
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:A2:641:C:C2'	81:A2:642:C:H5	1.89	0.83
81:A2:2564:A:H2'	81:A2:2565:C:H5"	1.60	0.83
81:A2:3694:G:H5"	81:A2:3694:G:H8	1.42	0.83
81:A2:3781:C:H2'	81:A2:3782:A:C8	2.13	0.83
4:B1:84:A:HO2'	4:B1:85:A:H8	0.87	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:B1:1082: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
81:A2:1479:A:C3'	81:A2:1480:C:H5"	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4617:U:O2	81:A2:4617:U:H2'	1.76	0.83
81:A2:4955:G:H2'	81:A2:4956:U:H5'	1.58	0.83
3:AX:37:U:H5'	31:Ba:42:ARG:CG	2.08	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:A2:284:G:N2	81:A2:288:U:H4'	1.92	0.83
81:A2:286:A:C2	81:A2:308:A:C8	2.65	0.83
81:A2:477:C:H5"	81:A2:479:G:OP1	1.77	0.83
81:A2:4691:G:C5'	81:A2:4694:G:H4'	2.08	0.83
11:BG:135:PRO:HG3	11:BG:144:LEU:HD13	1.61	0.83
64:Cb:50:ASN:OD1	81:A2:1792:U:H1'	1.78	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
4:B1:447:A:H5'	13:BI:26:LYS:HD2	1.60	0.83
4:B1:1405:A:C2'	4:B1:1406:G:H5"	2.09	0.83
4:B1:1833:C:H5'	4:B1:1833:C:C6	2.11	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:A2:942:G:H1'	81:A2:2250:C:OP1	1.79	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
4:B1:302:A:H2'	4:B1:303:C:C5'	2.08	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:B1:1418:C:H5"	24:BT:129:ARG:CB	2.07	0.83
4:B1:1832:A:H4'	76:Cn:2:ARG:HH21	1.43	0.83
43:CF:69:ILE:CB	81:A2:716:U:H4'	2.07	0.83
81:A2:285:G:N7	81:A2:287:A:H2'	1.94	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
83:A4:23:A:C2	83:A4:119:U:H1'	2.14	0.83
4:B1:979:C:O2'	4:B1:980:A:H5'	1.76	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1766:C:H3’	4:B1:1767:C:C6	2.12	0.83
81:A2:336:C:H2’	81:A2:337:G:H8	1.44	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
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:A2:3586: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
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
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:A2:216:G:H4’	81:A2:217:C:OP1	1.79	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:A2:2284:A:H1’	82:A3:19:C:O2’	1.79	0.83
4:B1:871:U:O4	54:CR:163:ARG:NH1	2.06	0.83
4:B1:1103:C:C2’	4:B1:1104:G:H5’	2.09	0.83
36:Bf:121:CYS:SG	36:Bf:132:MET:HG2	2.18	0.83
39:CB:72:VAL:HA	58:CV:91:LYS:O	1.79	0.83
48:CL:135:LYS:CE	48:CL:135:LYS:H	1.90	0.83
55:CS:165:PRO:HD3	81:A2:4828:G:H1’	1.60	0.83
69:Cg:22:LEU:HD21	81:A2:2589:G:H1’	1.59	0.83
71:Ci:26:HIS:HB2	81:A2:156:C:H4’	1.60	0.83
81:A2:119:G:H4’	81:A2:120:A:O4’	1.78	0.83
81:A2:1183:G:H2’	81:A2:1184:C:C6	2.14	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:H6	81:A2:2051:C:H3’	1.42	0.83
81:A2:4005:C:H2’	81:A2:4006:C:H6	1.41	0.83
4:B1:398:A:H4’	4:B1:399:C:H3’	1.60	0.83
4:B1:1133:A:H2’	4:B1:1134:G:H8	1.43	0.83
23:BS:14:ARG:NH2	47:CJ:114:ASP:OD1	2.12	0.83
81:A2:1221:C:C2’	81:A2:1222:G:H5’	2.09	0.83
3:AX:43:U:C5’	4:B1:961:G:N9	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1440:C:H2'	4:B1:1441:U:C5	2.14	0.82
13:BI:158:ILE:O	13:BI:162:LEU:HB2	1.79	0.82
18:BN:44:GLY:HA2	65:Cc:23:LYS:HZ1	1.41	0.82
81:A2:719:G:H4'	81:A2:720:A:OP1	1.79	0.82
81:A2:893:A:C2'	81:A2:894:G:H5"	2.08	0.82
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
9:BE:141:THR:HG22	9:BE:143:ASP:H	1.42	0.82
37:Bg:236:ILE:HG12	37:Bg:252:THR:HG22	1.59	0.82
68:Cf:48:ALA:O	68:Cf:102:ARG:HG2	1.79	0.82
81:A2:1146:G:H5"	81:A2:1147:C:C5	2.14	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
60:CX:56:ARG:HA	81:A2:14:C:H4'	1.61	0.82
81:A2:64:A:H3'	81:A2:110:C:N4	1.94	0.82
81:A2:510:C:H6	81:A2:510:C:C5'	1.93	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
3:AX:43:U:H5"	4:B1:961:G:O4'	1.75	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
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:A2:154:U:O3'	81:A2:157:G:H4'	1.79	0.82
81:A2:1436:G:H2'	81:A2:1437:C:C6	2.14	0.82
81:A2:4712:U:H4'	81:A2:4713:G:OP1	1.79	0.82
83:A4:53:U:H2'	83:A4:53:U:O2	1.79	0.82
4:B1:992:A:N6	31:Ba:12:LYS:HA	1.94	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
80:Cu:21:PHE:HB3	81:A2:3942:G:H5'	1.60	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
80:Cu:30:ASN:ND2	81:A2:4022:C:H4'	1.94	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
4:B1:691:G:C2'	4:B1:692:G:H5'	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1103:C:H2'	4:B1:1104:G:H5'	1.59	0.82
4:B1:1172:U:O4'	76:Cn:10:MET:HE3	1.80	0.82
4:B1:1445:U:O2'	4:B1:1446:A:H5'	1.80	0.82
44:CG:189:ARG:NH2	82:A3:154:G:H5'	1.95	0.82
81:A2:217:C:OP2	81:A2:217:C:H4'	1.79	0.82
81:A2:958:C:H42	81:A2:1255:G:H1	1.28	0.82
81:A2:1410:C:H2'	81:A2:1411:C:C6	2.14	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
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
68:Cf:104:MET:CG	68:Cf:106:TYR:HD1	1.93	0.82
81:A2:9:C:O2	81:A2:9:C:H2'	1.78	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
4:B1:84:A:H5'	29:BY:123:ALA:HB2	1.62	0.82
4:B1:1101:U:H2'	4:B1:1102:G:H8	1.39	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
2:AW:56:C:C6	81:A2:4014:A:C6	2.68	0.82
4:B1:59:U:C2'	4:B1:60:A:H5"	2.09	0.82
4:B1:215:G:H2'	4:B1:216:C:C6	2.15	0.82
4:B1:1313:A:N1	17:BM:104:VAL:HG21	1.94	0.82
56:CT:129:LYS:HB3	81:A2:1815:A:H4'	1.62	0.82
80:Cu:45:GLU:HB2	80:Cu:151:LEU:HD23	1.61	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
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
4:B1:1255:G:H5"	4:B1:1256:G:H8	1.41	0.81
42:CE:188:ARG:HH21	81:A2:4897:C:H4'	1.44	0.81
81:A2:290:C:H2'	81:A2:291:A:C8	2.15	0.81
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:A2:4240:A:H5"	81:A2:4241:A:H5'	1.62	0.81
82:A3:8:U:H2'	82:A3:9:A:C8	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:A4:63:C:H1'	83:A4:64:G:H5"	1.60	0.81
4:B1:199:C:H4'	4:B1:200:G:OP2	1.79	0.81
4:B1:364:A:H4'	4:B1:364:A:OP1	1.79	0.81
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
30:BZ:69:THR:HG22	30:BZ:70:PRO:HD2	1.63	0.81
81:A2:939:G:H4'	81:A2:940:A:OP1	1.79	0.81
81:A2:2421:U:H5"	81:A2:2422:C:C5	2.13	0.81
1:AV:76:A:N6	81:A2:4156:G:O6	2.12	0.81
4:B1:559:G:H3'	4:B1:560:A:C5'	2.10	0.81
4:B1:890:U:H3'	4:B1:891:G:H5"	1.61	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:B1:1534:C:H4'	4:B1:1535:U:H5'	1.61	0.81
4:B1:1542:C:H5"	4:B1:1542:C:H6	1.43	0.81
4:B1:1547:C:H3'	4:B1:1548:G:C5'	2.10	0.81
6:BB:103:MET:HB3	6:BB:215:VAL:HG12	1.61	0.81
14:BJ:130:ILE:HG22	14:BJ:135:ILE:HD12	1.63	0.81
40:CC:101:MET:HE1	40:CC:105:THR:HG23	1.62	0.81
46:CI:204:GLY:HA2	83:A4:64:G:H4'	1.62	0.81
68:Cf:104:MET:HG2	68:Cf:106:TYR:HD1	1.43	0.81
79:Ct:58:LYS:H	81:A2:670:C:H5"	1.45	0.81
81:A2:210:G:N3	81:A2:211:G:H1'	1.95	0.81
81:A2:1205:U:OP2	81:A2:1212:G:H8	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:A2:2536:G:H2'	81:A2:2537:C:C6	2.15	0.81
81:A2:2609:U:H2'	81:A2:2610:U:C5	2.15	0.81
48:CL:165:LYS:HG3	81:A2:502:C:H5"	1.61	0.81
50:CN:12:ARG:HH22	81:A2:269:G:H5'	1.45	0.81
81:A2:2260:G:H5"	81:A2:2260:G:C8	2.16	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
4:B1:66:G:H1'	11:BG:160:LYS:HG2	1.61	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
15:BK:30:PRO:O	34:Bd:8:TRP:HB2	1.80	0.81
81:A2:953:C:H2'	81:A2:954:G:C8	2.16	0.81
81:A2:1254:A:H3'	81:A2:1255:G:H5"	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2637:A:C3’	81:A2:2638:U:H5”	2.09	0.81
81:A2:2802:A:H5”	81:A2:2802:A:H8	1.44	0.81
81:A2:4291:G:C3’	81:A2:4292:C:H5’	2.00	0.81
83:A4:89:G:H2’	83:A4:90:A:H8	1.46	0.81
1:AV:42:C:H5’	1:AV:42:C:H6	1.45	0.81
4:B1:1016:U:H1’	4:B1:1017:U:C5’	2.10	0.81
4:B1:1172:U:C5’	76:Cn:10:MET:HE1	2.11	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
80:Cu:5:ILE:HD13	80:Cu:177:ILE:HG21	1.62	0.81
81:A2:962:G:H2’	81:A2:963:C:C6	2.15	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
3:AX:42:U:H5	19:BO:151:LEU:C	1.88	0.81
3:AX:58:U:H6	3:AX:58:U:C5’	1.94	0.81
4:B1:1015:U:H5’	32:Bb:20:LYS:HE3	1.60	0.81
4:B1:1403:C:H3’	4:B1:1404:U:C6	2.16	0.81
81:A2:978:G:H2’	81:A2:979:C:H6	1.44	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
2:AW:37:MIA:C6	10:BF:133:THR:HA	2.09	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
4:B1:1253:A:H4’	4:B1:1254:C:C5’	2.11	0.81
81:A2:1166:U:H2’	81:A2:1167:G:H8	1.44	0.81
81:A2:1281:C:H6	81:A2:1281:C:H3’	1.45	0.81
2:AW:37:MIA:C16	10:BF:132:GLY:HA2	1.98	0.81
2:AW:62:C:HO2’	80:Cu:37:ASN:ND2	1.78	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
4:B1:1069:U:H4’	38:CA:247:ARG:HB3	1.61	0.81
49:CM:112:VAL:HA	51:CO:197:LYS:NZ	1.95	0.81
58:CV:104:VAL:HG21	58:CV:112:MET:HE1	1.62	0.81
81:A2:329:A:C2	81:A2:330:C:C5	2.68	0.81
81:A2:2638:U:H3’	81:A2:2639:G:C5’	2.10	0.81
81:A2:4695:C:H2’	81:A2:4696:G:H8	1.42	0.81
4:B1:527:C:C3’	4:B1:528:A:C8	2.63	0.81
4:B1:1484:A:H5”	8:BD:159:HIS:HB3	1.61	0.81
42:CE:190:HIS:CB	81:A2:4897:C:H2’	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cu:60:VAL:HG13	80:Cu:101:THR:HG21	1.63	0.81
81:A2:957:G:H5"	81:A2:1218:A:O4'	1.80	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:OP1	1.81	0.81
81:A2:1919:A:C2	81:A2:4394:C:H5"	2.16	0.80
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
4:B1:203:G:H2'	4:B1:204:G:C8	2.16	0.80
4:B1:1309:C:H1'	36:Bf:133:ALA:HB2	1.62	0.80
10:BF:49:LEU:HD21	21:BQ:46:THR:HG22	1.63	0.80
12:BH:79:LEU:HD22	12:BH:94:PHE:HZ	1.46	0.80
50:CN:85:VAL:HG12	77:Co:49:GLY:HA3	1.62	0.80
81:A2:924:C:H2'	81:A2:925:C:C4'	2.10	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
81:A2:4527:G:H2'	81:A2:4528:A:H5'	1.63	0.80
2:AW:31:A:N3	10:BF:136:ARG:NH2	2.29	0.80
4:B1:1180:C:OP1	78:Cp:24:LYS:NZ	2.14	0.80
13:BI:130:THR:HG22	13:BI:136:ILE:HA	1.62	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
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
4:B1:1030:A:H2'	4:B1:1031:A:H8	1.46	0.80
4:B1:1183:A:C5'	76:Cn:11:ARG:NE	2.33	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
81:A2:326:A:C3'	81:A2:327:A:H8	1.93	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
3:AX:53:U:N3	8:BD:146:ARG:NH2	2.29	0.80
4:B1:952:G:H2'	4:B1:953:C:O4'	1.81	0.80
81:A2:944:A:O4'	81:A2:2249:G:H5'	1.80	0.80
81:A2:1163:C:C2'	81:A2:1164:A:H5'	2.12	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
73:Ck:20:ALA:HB2	73:Ck:36:VAL:HG23	1.64	0.80
81:A2:193:C:H4'	81:A2:194:A:OP2	1.80	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:A2:3779: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
1:AV:75:C:N4	81:A2:4157:G:C6	2.48	0.80
4:B1:909:G:OP1	54:CR:169:ALA:CA	2.30	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
56:CT:17:ARG:HH22	56:CT:45:MET:HE3	1.46	0.80
81:A2:3880:C:H2'	81:A2:3881:U:C6	2.16	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:A2:8:U:H2'	81:A2:9:C:H5'	1.64	0.80
81:A2:482:G:H4'	81:A2:483:U:OP1	1.80	0.80
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
1:AV:72:C:H2'	1:AV:73:A:H5'	1.63	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:OP1	1.81	0.80
4:B1:1743:G:H1'	4:B1:1792:G:N2	1.97	0.80
10:BF:143:PRO:HD3	33:Bc:56:LEU:HD13	1.63	0.80
20:BP:22:LEU:HD21	20:BP:109:PRO:HB3	1.64	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:A2:700:C:H2'	81:A2:701:C:H5"	1.64	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:A2:4044: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4883:C:H2'	81:A2:4884:C:H6	1.47	0.80
4:B1:971:G:H4'	4:B1:972:A:O5'	1.82	0.80
4:B1:1413:G:O2'	4:B1:1414:A:H5'	1.81	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
45:CH:92:MET:HE2	45:CH:179:ILE:HG22	1.63	0.80
48:CL:111:GLN:HG3	81:A2:510:C:H4'	1.63	0.80
81:A2:711:A:H2'	81:A2:712:C:C1'	2.12	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
1:AV:32:U:OP1	21:BQ:146:ARG:CA	2.30	0.79
1:AV:39:U:OP1	4:B1:1058:A:H5'	1.81	0.79
3:AX:50:U:OP1	4:B1:1825:A:OP1	1.99	0.79
4:B1:376:A:H2'	4:B1:377:G:C8	2.18	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
81:A2:481:C:C2'	81:A2:482:G:H5"	2.11	0.79
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:H4'	81:A2:4711:U:OP1	1.81	0.79
82:A3:129:C:H2'	82:A3:130: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
79:Ct:62:VAL:O	79:Ct:89:THR:HG21	1.81	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
2:AW:37:MIA:C13	10:BF:134:VAL:HG13	2.12	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
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
81:A2:8:U:O2	81:A2:8:U:H3'	1.82	0.79
81:A2:4690:G:H4'	81:A2:4691:G:OP2	1.83	0.79
1:AV:57:G:C5'	47:CJ:55:TYR:OH	2.30	0.79
4:B1:1016:U:H4'	4:B1:1017:U:OP1	1.81	0.79
5:BA:6:ASP:HB2	26:BV:42:VAL:HG22	1.62	0.79
5:BA:30:LEU:HD21	5:BA:35:GLU:HA	1.62	0.79
52:CP:67:VAL:HG11	52:CP:82:ARG:HD2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:A2:953:C:H2'	81:A2:954:G:H8	1.47	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:H3'	81:A2:4163:A:N3	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
82:A3:28:C:H5"	82:A3:28:C:C6	2.18	0.79
3:AX:37:U:H5'	31:Ba:42:ARG:HD3	1.60	0.79
4:B1:67:C:H41	11:BG:163:ASN:HA	1.46	0.79
4:B1:1326:U:H4'	4:B1:1327:G:O5'	1.82	0.79
80:Cu:74:VAL:HG11	80:Cu:142:ILE:CG2	2.13	0.79
4:B1:1070:A:P	38:CA:248:GLY:N	2.55	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:OP1	81:A2:2838:C:H3'	1.83	0.79
81:A2:4263:C:O2	81:A2:4263:C:H3'	1.83	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
4:B1:1769:C:H2'	4:B1:1770:G:C8	2.17	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
80:Cu:159:PHE:CZ	80:Cu:161:THR:HB	2.17	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
3:AX:58:U:OP1	7:BC:151:ILE:HD13	1.83	0.79
4:B1:740:C:H2'	4:B1:741:C:C6	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:346:A:C2	81:A2:347:G:H1'	2.18	0.79
81:A2:977:G:H2'	81:A2:978:G:C4'	2.12	0.79
81:A2:1399:G:H2'	81:A2:1400:A:H5"	1.65	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:H3'	81:A2:4869:C:C6	2.18	0.79
3:AX:60:U:C6	3:AX:61:U:H5	2.00	0.79
4:B1:125:C:H4'	9:BE:136:ILE:HA	1.63	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
40:CC:148:PRO:HA	79:Ct:76:SER:HB2	1.62	0.79
77:Co:98:LYS:HZ2	81:A2:4191:C:H4'	1.47	0.79
81:A2:959:C:H1'	81:A2:960:G:OP2	1.83	0.79
81:A2:1918:G:H5"	81:A2:1918:G:H8	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
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
4:B1:1630:A:H2'	4:B1:1631:U:H5"	1.64	0.78
23:BS:66:ARG:O	23:BS:70:ILE:HG12	1.82	0.78
36:Bf:132:MET:HE2	36:Bf:139:HIS:HB3	1.62	0.78
54:CR:82:LYS:HD3	81:A2:2788:G:H4'	1.65	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
81:A2:1220:G:C2	81:A2:1248:G:N1	2.49	0.78
81:A2:1855:G:H5"	81:A2:1855:G:C8	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
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
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
13:BI:123:ARG:NH1	81:A2:4979:C:H5"	1.96	0.78
39:CB:258:HIS:CD2	39:CB:259:PRO:CD	2.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:Ce:12:ILE:HG23	67:Ce:66:THR:HB	1.65	0.78
81:A2:87:A:C2	81:A2:88:A:H1'	2.18	0.78
81:A2:462:A:C4'	81:A2:463:C:H5"	2.11	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:A2:1280:G:H8	81:A2:1280:G:O5'	1.66	0.78
81:A2:4530:G:N3	81:A2:4530:G:H2'	1.97	0.78
81:A2:4689:C:P	81:A2:4695:C:H4'	2.23	0.78
3:AX:57:U:H5'	7:BC:109:ILE:HD12	1.64	0.78
4:B1:106:C:H2'	4:B1:107:A:C8	2.17	0.78
4:B1:920:A:H2'	4:B1:922:A:H8	1.46	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
81:A2:346:A:C2'	81:A2:347:G:H5'	2.14	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
4:B1:64:A:H2	4:B1:84:A:N6	1.81	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:B1:815:U:H2'	4:B1:816:A:C8	2.18	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
9:BE:21:ASP:HB2	9:BE:24:THR:OG1	1.83	0.78
45:CH:72:THR:HG21	81:A2:4660:A:N1	1.98	0.78
58:CV:57:VAL:HG12	58:CV:125:CYS:HB2	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
2:AW:56:C:N4	81:A2:3927:G:C5	2.52	0.78
4:B1:315:C:N3	4:B1:336:A:H2	1.81	0.78
4:B1:550:C:H4'	35:Be:43:VAL:CG2	2.13	0.78
4:B1:690:G:H2'	4:B1:691:G:H8	1.46	0.78
4:B1:1174:U:H5"	76:Cn:21:ARG:NH2	1.98	0.78
4:B1:1405:A:H8	4:B1:1405:A:O5'	1.65	0.78
4:B1:1442:U:O2	4:B1:1442:U:H2'	1.83	0.78
4:B1:1699:A:H8	4:B1:1699:A:O5'	1.67	0.78
81:A2:188:G:H1'	81:A2:189:G:OP2	1.84	0.78
81:A2:1185:G:H2'	81:A2:1186:C:C6	2.19	0.78
81:A2:1185:G:H2'	81:A2:1186:C:H6	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4032:C:H3'	81:A2:4033:G:H5"	1.65	0.78
55:CS:165:PRO:CD	81:A2:4828:G:H1'	2.14	0.78
81:A2:71:C:H2'	81:A2:72:C:H5'	1.66	0.78
81:A2:457:A:N7	81:A2:676:G:C8	2.52	0.78
81:A2:3727:U:H4'	81:A2:3728:A:OP1	1.84	0.78
3:AX:60:U:H1'	3:AX:61:U:O5'	1.83	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
4:B1:683:G:H1'	4:B1:1023:A:H2	1.48	0.78
43:CF:95:ILE:HD12	43:CF:221:LYS:HD2	1.64	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
81:A2:1046:G:H2'	81:A2:1047:G:H8	1.48	0.78
83:A4:34:C:N4	83:A4:47:G:H1'	1.98	0.78
4:B1:794:A:C2'	4:B1:795:A:H4'	2.14	0.78
4:B1:1310:U:H4'	36:Bf:142:GLY:HA3	1.64	0.78
4:B1:1456:G:H5"	4:B1:1456:G:C8	2.18	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
70:Ch:78:TYR:CE1	81:A2:16:G:H4'	2.19	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:B1:4:C:H2'	4:B1:5:U:C6	2.19	0.78
4:B1:1203:G:C8	4:B1:1699:A:H2	2.02	0.78
4:B1:1307:U:H2'	4:B1:1308:U:H5'	1.64	0.78
4:B1:1827:U:C5'	81:A2:3728:A:O2'	2.32	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:A2:2543: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
1:AV:57:G:P	47:CJ:55:TYR:HH	2.04	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:9:A:H62	2:AW:23:A:H62	1.31	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
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
40:CC:141:GLY:HA2	79:Ct:15:SER:HB3	1.65	0.78
49:CM:123:ILE:HA	51:CO:187:LYS:HE2	1.66	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
81:A2:1554:A:H5"	81:A2:1554:A:H8	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:OP1	1.81	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:37:MIA:C12	10:BF:133:THR:HA	2.07	0.77
4:B1:179:C:H6	4:B1:179:C:OP2	1.67	0.77
4:B1:900:C:H2'	4:B1:901:G:N7	1.99	0.77
4:B1:1659:U:H5"	34:Bd:30:LEU:CD1	2.13	0.77
19:BO:72:TYR:CE2	19:BO:76:LEU:HD11	2.19	0.77
81:A2:182:C:H3'	81:A2:183:G:H8	1.48	0.77
81:A2:334:C:H6	81:A2:334:C:C5'	1.98	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:A2:4671:C:H2'	81:A2:4672:C:O4'	1.84	0.77
2:AW:37:MIA:H162	10:BF:132:GLY:H	1.46	0.77
80:Cu:199:TYR:CD1	81:A2:4022:C:H5'	2.19	0.77
81:A2:727:G:C5'	81:A2:727:G:H8	1.97	0.77
81:A2:913:A:H1'	81:A2:916:A:N6	1.98	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:A2:4251: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:746:C:H5”	12:BH:104:PRO:O	1.84	0.77
80:Cu:84:LEU:HD11	80:Cu:118:LEU:HD21	1.66	0.77
81:A2:71:C:C3’	81:A2:72:C:H5’	2.15	0.77
81:A2:172:C:C2’	81:A2:173:G:H5’	2.15	0.77
81:A2:1401:G:H2’	81:A2:1402:G:H5’	1.67	0.77
81:A2:2449:A:H3’	81:A2:2450:A:C5’	2.14	0.77
3:AX:60:U:N3	3:AX:61:U:C5	2.52	0.77
4:B1:91:A:H5”	4:B1:92:A:H5”	1.66	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
6:BB:82:ARG:HG2	6:BB:103:MET:HE1	1.67	0.77
37:Bg:197:THR:HG21	37:Bg:238:ALA:HA	1.64	0.77
39:CB:156:TYR:O	39:CB:157:CYS:HB3	1.83	0.77
77:Co:31:ASP:OD2	81:A2:4303:U:H4’	1.83	0.77
81:A2:149:U:H1’	81:A2:150:G:N2	1.98	0.77
81:A2:1267:G:C5	81:A2:1268:G:H1’	2.18	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
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
4:B1:1353:A:H2’	4:B1:1354:G:H5”	1.66	0.77
4:B1:1593:C:H5	30:BZ:104:ARG:HH21	1.30	0.77
13:BI:131:PRO:HG2	13:BI:138:ASN:CG	2.09	0.77
13:BI:169:GLY:N	81:A2:4980:C:OP1	2.16	0.77
50:CN:12:ARG:NH2	81:A2:269:G:H5’	1.98	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
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
82:A3:103:A:H5’	82:A3:104:A:H8	1.50	0.77
4:B1:678:U:C4’	81:A2:1543:A:C8	2.67	0.77
4:B1:1406:G:HO2’	4:B1:1408:U:H5	1.32	0.77
4:B1:1413:G:C2’	4:B1:1414:A:H5’	2.14	0.77
38:CA:222:PRO:HG2	81:A2:3674:G:H1’	1.65	0.77
41:CD:73:MET:SD	83:A4:114:U:H4’	2.23	0.77
81:A2:1218:A:H5’	81:A2:1218:A:H8	1.49	0.77
81:A2:1479:A:H3’	81:A2:1480:C:H5”	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:AW:59:U:H3'	2:AW:60:U:H6	1.48	0.77
3:AX:37:U:H5"	31:Ba:42:ARG:CZ	2.13	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
4:B1:1574:C:H2'	4:B1:1575:G:H5'	1.67	0.77
39:CB:67:VAL:HG23	58:CV:91:LYS:HD2	1.67	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
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
4:B1:384:U:C2'	4:B1:385:G:H5"	2.14	0.77
4:B1:1039:C:H2'	4:B1:1040:G:C8	2.20	0.77
4:B1:1095:C:H5"	27:BW:22:LYS:NZ	2.00	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
13:BI:92:ARG:CZ	81:A2:2869:C:C1'	2.62	0.77
38:CA:186:TYR:HB2	38:CA:196:TRP:HZ2	1.46	0.77
42:CE:190:HIS:HA	81:A2:4897:C:C6	2.20	0.77
54:CR:10:LEU:HD11	54:CR:38:ARG:HG2	1.66	0.77
69:Cg:7:TYR:CE2	81:A2:2378:A:H2	2.02	0.77
81:A2:1885:A:H5'	81:A2:1885:A:H8	1.50	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
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
68:Cf:47:CYS:SG	68:Cf:103:VAL:HG22	2.25	0.77
81:A2:121:A:H4'	81:A2:122:U:O4'	1.85	0.77
81:A2:384:U:C2'	81:A2:385:G:H4'	2.14	0.77
81:A2:1067:A:H2'	81:A2:1068:C:C6	2.20	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:A2:4313:U:H5'	81:A2:4314:U:H5"	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1473:G:H2'	4:B1:1475:G:N7	1.99	0.77
31:Ba:5:ARG:CD	31:Ba:8:ASN:HA	2.15	0.77
70:Ch:99:GLU:HA	70:Ch:102:LEU:HD13	1.67	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:OP2	1.84	0.77
81:A2:1530:C:H6	81:A2:1530:C:H5"	1.49	0.77
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:B1:193:C:H4'	4:B1:209:A:H61	1.51	0.76
4:B1:1276:A:H4'	4:B1:1277:C:C5'	2.14	0.76
44:CG:57:TRP:CZ3	82:A3:149:G:H5'	2.21	0.76
52:CP:141:SER:O	52:CP:143:PRO:HD3	1.85	0.76
81:A2:1883:U:H6	81:A2:1883:U:H5"	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
82:A3:71:A:H2'	82:A3:82:A:C2	2.20	0.76
4:B1:81:U:H6	4:B1:81:U:H5"	1.50	0.76
4:B1:639:C:H2'	4:B1:640:A:H8	1.48	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
42:CE:243:THR:HG23	81:A2:4893:A:H61	1.49	0.76
62:CZ:136:PHE:CA	81:A2:4089:G:H21	1.98	0.76
64:Cb:15:LYS:HE3	81:A2:1665:C:H1'	1.66	0.76
81:A2:89:C:H2'	81:A2:90:G:H5'	1.65	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:A2:887:C:H2'	81:A2:888:C:C6	2.19	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:A2:2373: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
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
1:AV:34:G:N1	4:B1:1701:C:H1'	2.01	0.76
3:AX:39:U:O2	33:Bc:67:ARG:CZ	2.33	0.76
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
4:B1:1429:G:H5"	4:B1:1430:C:OP2	1.85	0.76
9:BE:220:THR:HG23	9:BE:225:ILE:HD11	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Bd:38:MET:SD	34:Bd:43:PHE:HA	2.25	0.76
54:CR:123:LEU:HD21	54:CR:141:HIS:CD2	2.21	0.76
69:Cg:26:PRO:HD2	81:A2:2498:G:H4'	1.66	0.76
81:A2:724:C:H2'	81:A2:725:C:H4'	1.67	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:A2:1716:A:N3	83:A4:100:A:H2	1.84	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
82:A3:17:A:H2'	82:A3:18:U:C6	2.21	0.76
1:AV:41:C:O2'	4:B1:1640:A:O4'	2.03	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:B1:308:G:H4'	4:B1:309:G:O5'	1.85	0.76
4:B1:1417:C:O2'	4:B1:1418:C:H5'	1.86	0.76
6:BB:62:LEU:O	6:BB:65:ARG:HG3	1.86	0.76
39:CB:261:ARG:HB3	51:CO:64:THR:HG21	1.67	0.76
43:CF:48:LYS:CD	81:A2:1220:G:H5'	2.16	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:A2:3566:G:H3'	81:A2:3566:G:N3	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
1:AV:32:U:OP1	21:BQ:146:ARG:HA	1.86	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
4:B1:1225:U:H2'	4:B1:1226:G:H5'	1.67	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
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
3:AX:39:U:C2'	3:AX:40:U:H5'	2.16	0.76
4:B1:959:G:H1	19:BO:65:ASP:HB3	1.50	0.76
4:B1:1416:C:H3'	4:B1:1417:C:C5'	2.13	0.76
42:CE:188:ARG:NH2	81:A2:4897:C:H4'	2.00	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
45:CH:118:LEU:HD11	45:CH:167:VAL:HG22	1.67	0.76
79:Ct:64:ILE:HD12	79:Ct:89:THR:HB	1.67	0.76
80:Cu:30:ASN:O	80:Cu:195:ILE:HA	1.86	0.76
81:A2:386:A:H3'	81:A2:387:A:C8	2.18	0.76
81:A2:445:U:H3'	81:A2:446:C:C5	2.20	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
81:A2:1196:C:H4'	81:A2:1197:G:OP2	1.85	0.76
81:A2:4251:G:H4'	81:A2:4252:A:H3'	1.67	0.76
4:B1:64:A:C2	4:B1:84:A:N6	2.54	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
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:A2:4640:G:H8	81:A2:4640:G:H5'	1.49	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
4:B1:1629:C:H5'	23:BS:39:ARG:HH21	1.49	0.76
12:BH:84:GLU:OE2	12:BH:91:HIS:HA	1.85	0.76
80:Cu:21:PHE:CG	81:A2:3942:G:H4'	2.21	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
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
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
62:CZ:14:LEU:HD11	69:Cg:88:ARG:HG3	1.67	0.76
81:A2:14:C:H1'	81:A2:15:A:C8	2.21	0.76
81:A2:437:C:H3'	81:A2:438:C:H5	1.47	0.76
81:A2:2624:A:N1	81:A2:2665:G:C5	2.53	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:A2:1804:A:H3'	81:A2:1805:G:H8	1.50	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2486:C:H5”	81:A2:2486:C:C6	2.20	0.76
81:A2:699:A:C2	81:A2:700:C:C5	2.74	0.75
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
82:A3:151:G:C2	82:A3:152:U:H1’	2.21	0.75
4:B1:44:U:H5’	4:B1:44:U:C6	2.20	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:B1:560:A:H3’	14:BJ:171:GLY:HA3	1.68	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
9:BE:253:ASP:O	9:BE:257:ALA:HA	1.86	0.75
52:CP:16:LYS:O	81:A2:391:A:H4’	1.86	0.75
58:CV:24:ALA:HA	81:A2:2825:G:H5’	1.68	0.75
60:CX:107:HIS:HD2	82:A3:131:G:H5’	1.50	0.75
81:A2:6:C:H3’	81:A2:6:C:O2	1.86	0.75
81:A2:2359:A:C2	81:A2:2807:G:H4’	2.21	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
4:B1:120:U:H2’	4:B1:121:U:O4’	1.86	0.75
4:B1:527:C:C4’	14:BJ:125:HIS:HB2	2.14	0.75
4:B1:1261:C:C6	4:B1:1261:C:H5”	2.21	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:A2:1421: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:OP1	1.86	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
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
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:A2:1567:U:H2’	81:A2:1568:C:C6	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:84: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
4:B1:1217:A:H1'	4:B1:1685:U:O2	1.85	0.75
4:B1:1241:A:H1'	4:B1:1267:C:H1'	1.67	0.75
40:CC:8:ILE:HD11	40:CC:24:LEU:HD12	1.69	0.75
40:CC:148:PRO:HA	79:Ct:76:SER:CB	2.17	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:A2:916:A:H1'	81:A2:917:G:OP2	1.87	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
1:AV:39:U:OP1	4:B1:1058:A:C5'	2.34	0.75
4:B1:444:G:H21	4:B1:446:G:H3'	1.51	0.75
4:B1:838:G:N7	29:BY:8:ARG:HA	2.02	0.75
4:B1:969:U:H3'	81:A2:3681:A:O4'	1.87	0.75
4:B1:987:A:H3'	4:B1:988:C:C5	2.22	0.75
49:CM:100:ARG:HB3	51:CO:198:THR:CG2	2.17	0.75
81:A2:944:A:H4'	81:A2:945:G:OP2	1.86	0.75
81:A2:2344:A:H61	81:A2:2765:U:H3	1.33	0.75
81:A2:2369:C:H6	81:A2:2369:C:C5'	1.98	0.75
81:A2:2395:A:H2'	81:A2:2396:C:H6	1.51	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
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
11:BG:32:MET:HE2	11:BG:65:GLN:HB2	1.68	0.75
42:CE:172:LEU:HD11	81:A2:4896:G:H5"	1.68	0.75
68:Cf:27:LEU:HB3	68:Cf:83:MET:HE2	1.67	0.75
81:A2:374:A:H62	81:A2:397:C:H5	1.35	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:A2:4329:A:H8	81:A2:4329:A:O5'	1.69	0.75
3:AX:53:U:C2	8:BD:146:ARG:NE	2.55	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:990:A:N6	4:B1:992:A:H1'	2.01	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
43:CF:69:ILE:HD12	81:A2:716:U:H5'	1.67	0.75
81:A2:186:G:O6	81:A2:221:U:H2'	1.86	0.75
81:A2:308:A:H61	81:A2:4320:U:H3	1.34	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:A2:2386: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:A2:4827:G:O5'	81:A2:4830:G:H4'	1.87	0.75
2:AW:56:C:C5	81:A2:4014:A:N6	2.54	0.75
4:B1:43:U:H5'	4:B1:44:U:C5	2.13	0.75
4:B1:1439:A:H2'	4:B1:1440:C:C6	2.21	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
70:Ch:101:ASN:ND2	81:A2:171:C:H5"	2.02	0.75
81:A2:385:G:H2'	81:A2:387:A:O5'	1.86	0.75
81:A2:1070:G:H2'	81:A2:1071:C:C6	2.22	0.75
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:O2	81:A2:1284:C:H2'	1.86	0.75
81:A2:1415:G:H2'	81:A2:1416:C:C6	2.21	0.75
81:A2:1635:U:H5"	81:A2:1635:U:H6	1.52	0.75
81:A2:2034:G:H8	81:A2:2034:G:H5'	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
4:B1:91:A:H5"	4:B1:92:A:C5'	2.17	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:B1:989:C:H1'	31:Ba:32:LYS:HD3	1.67	0.74
4:B1:1166:G:H1	4:B1:1193:U:H3	1.33	0.74
62:CZ:97:ASN:O	62:CZ:100:VAL:HG12	1.87	0.74
77:Co:52:THR:HG22	81:A2:43:U:H4'	1.69	0.74
79:Ct:78:VAL:HA	81:A2:473:G:N2	2.02	0.74
81:A2:481:C:C3'	81:A2:482:G:H5"	2.17	0.74
81:A2:1332:C:H3'	81:A2:1333:G:H8	1.49	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:4905:U:H6	81:A2:4905:U:H5”	1.50	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
4:B1:1841:C:H5”	76:Cn:2:ARG:HH11	1.51	0.74
6:BB:49:VAL:HG11	6:BB:58:ALA:HB2	1.69	0.74
25:BU:80:PHE:CG	34:Bd:52:PHE:HB3	2.22	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:B1:1427:C:H3’	4:B1:1427:C:H6	1.52	0.74
4:B1:1680:G:H4’	33:Bc:20:ARG:NH1	2.01	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
51:CO:114:LYS:O	81:A2:4717:U:H5”	1.88	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:A2:351:A:C2	82:A3:24:G:C4	2.75	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
81:A2:960:G:H8	81:A2:960:G:H5’	1.53	0.74
81:A2:1460:C:H3’	81:A2:1460:C:C6	2.23	0.74
81:A2:1930:G:H8	81:A2:1930:G:C5’	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:A2:4080:U:H2’	81:A2:4081:C:O4’	1.87	0.74
83:A4:67:C:O2	83:A4:68:C:H1’	1.87	0.74
2:AW:56:C:C4	81:A2:3927:G:C5	2.75	0.74
4:B1:112:U:C5’	4:B1:113:G:H5’	2.15	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
4:B1:1100:A:H2’	4:B1:1101:U:H5’	1.67	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
65:Cc:13:SER:O	65:Cc:17:ARG:HD2	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:1462:C:H3'	81:A2:1463:G:C8	2.21	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
1:AV:56:C:C4	77:Co:104:ILE:CD1	2.50	0.74
3:AX:58:U:OP1	7:BC:151:ILE:HG21	1.87	0.74
4:B1:342:C:N4	4:B1:343:A:H62	1.85	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
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
53:CQ:42:THR:CG2	81:A2:1409:C:H5"	2.18	0.74
81:A2:958:C:OP2	81:A2:971:C:H1'	1.88	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
1:AV:24:G:O2'	81:A2:3739:U:OP1	2.04	0.74
4:B1:1285:G:OP2	36:Bf:102:VAL:HG22	1.87	0.74
4:B1:1516:G:H2'	4:B1:1517:G:H5'	1.68	0.74
18:BN:44:GLY:HA2	65:Cc:23:LYS:NZ	2.02	0.74
65:Cc:46:VAL:HB	65:Cc:71:VAL:HG22	1.68	0.74
68:Cf:33:VAL:HG13	68:Cf:38:GLU:HB2	1.70	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:H6	81:A2:4189:U:H5"	1.53	0.74
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:H3'	81:A2:4526:U:H6	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:76:A:C2'	81:A2:4357:A:O2'	2.36	0.74
4:B1:749:U:H2'	4:B1:750:C:C6	2.22	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:H8	4:B1:1825:A:O5'	1.70	0.74
13:BI:169:GLY:HA3	81:A2:4980:C:OP2	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:64:A:H3'	81:A2:110:C:H41	1.50	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:A2:1942:A:C5	81:A2:4654:G:C8	2.76	0.74
81:A2:3574:C:H1'	81:A2:3575:U:H5'	1.69	0.74
4:B1:899:U:H2'	4:B1:900:C:C6	2.22	0.74
4:B1:1117:C:H3'	4:B1:1118:C:H5"	1.69	0.74
4:B1:1272:C:H1'	34:Bd:7:TYR:OH	1.88	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
63:Ca:62:HIS:HB2	81:A2:306:G:H8	1.52	0.74
63:Ca:74:ASN:HB3	63:Ca:114:LYS:HB2	1.67	0.74
81:A2:705:U:H2'	81:A2:706:C:C6	2.21	0.74
81:A2:1349:C:H5"	81:A2:1350:G:C8	2.23	0.74
2:AW:20:U:C2'	2:AW:21:A:H5'	2.18	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
4:B1:1116:C:H2'	4:B1:1116:C:O2	1.87	0.74
20:BP:33:LEU:HD22	20:BP:87:PRO:HG2	1.70	0.74
37:Bg:251:ALA:HB2	37:Bg:289:LEU:HD22	1.70	0.74
53:CQ:69:LYS:HB3	81:A2:1436:G:H4'	1.69	0.74
68:Cf:4:ARG:HB3	81:A2:4712:U:H5"	1.69	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
81:A2:1091:U:H2'	81:A2:1092:C:C6	2.22	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
4:B1:10:G:C8	4:B1:1697:A:C2	2.76	0.74
4:B1:442:C:H42	4:B1:449:A:H62	1.36	0.74
4:B1:444:G:N2	4:B1:447:A:H5"	2.01	0.74
4:B1:743:U:H4'	4:B1:744:G:OP2	1.88	0.74
4:B1:1643:U:H1'	21:BQ:142:GLN:OE1	1.88	0.74
42:CE:172:LEU:HA	81:A2:4897:C:C6	2.22	0.74
45:CH:23:ARG:HH11	81:A2:4724:G:H5'	1.53	0.74
47:CJ:98:ASN:CG	81:A2:4210:G:H5'	2.13	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:CL:169:ILE:CG1	63:Ca:98:ALA:HB2	2.18	0.74
81:A2:473:G:H4'	81:A2:474:G:OP1	1.87	0.74
81:A2:977:G:H2'	81:A2:978:G:C5'	2.18	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
83:A4:67:C:H2'	83:A4:68:C:O4'	1.87	0.74
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
4:B1:1172:U:H5'	76:Cn:10:MET:HE1	1.65	0.73
20:BP:30:TYR:HA	20:BP:33:LEU:HD21	1.69	0.73
25:BU:63:ILE:HD12	34:Bd:52:PHE:CE2	2.22	0.73
40:CC:149:GLU:HA	79:Ct:75:THR:HA	1.70	0.73
81:A2:264:U:H2'	81:A2:265:C:C6	2.22	0.73
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:A2:2689: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:B1:96:C:H1'	4:B1:474:G:H5'	1.71	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
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:A2:977:G:H2'	81:A2:978:G:H5"	1.70	0.73
81:A2:1422:C:H2'	81:A2:1423:A:C8	2.23	0.73
81:A2:1461:G:H3'	81:A2:1461:G:N3	2.03	0.73
81:A2:3592:C:H3'	81:A2:3592:C:H6	1.52	0.73
82:A3:17:A:H2'	82:A3:18:U:H6	1.51	0.73
4:B1:147:A:H61	4:B1:170:A:H8	1.33	0.73
4:B1:812:A:H2'	4:B1:813:A:H8	1.53	0.73
4:B1:886:A:H3'	4:B1:886:A:OP2	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:A2:1083:C:H2'	81:A2:1083:C:O2	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:A2:3770:U:C4'	81:A2:4456:A:H2	2.01	0.73
81:A2:4025:C:H3'	81:A2:4025:C:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4729:U:H2'	81:A2:4730:C:H6	1.52	0.73
1:AV:75:C:O2'	81:A2:3879:C:H5"	1.88	0.73
4:B1:84:A:O2'	4:B1:85:A:H8	1.67	0.73
4:B1:491:C:H5"	4:B1:574:A:N1	2.03	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
47:CJ:13:ARG:HH21	83:A4:54:A:H4'	1.50	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
69:Cg:59:VAL:HG21	69:Cg:64:LEU:HD21	1.68	0.73
81:A2:48:G:C6	81:A2:281:U:H4'	2.23	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:A2:4032: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
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
4:B1:1120:U:H6	4:B1:1120:U:H5"	1.54	0.73
4:B1:1481:G:H4'	34:Bd:56:ASP:HB2	1.70	0.73
4:B1:1698:C:H4'	4:B1:1699:A:H8	1.49	0.73
13:BI:92:ARG:HG2	81:A2:4972:G:OP1	1.89	0.73
68:Cf:11:PHE:HE1	68:Cf:26:ALA:HB1	1.54	0.73
81:A2:15:A:OP2	81:A2:15:A:H8	1.71	0.73
81:A2:71:C:C2'	81:A2:72:C:H5'	2.18	0.73
81:A2:700:C:H2'	81:A2:701:C:C4'	2.18	0.73
81:A2:1454:G:C4	81:A2:1455:C:H1'	2.24	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
4:B1:70:G:H2'	4:B1:71:G:C4'	2.18	0.73
4:B1:1286:G:H1'	17:BM:34:GLY:HA3	1.68	0.73
4:B1:1851:A:H5"	4:B1:1851:A:H8	1.53	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:A2:19: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:A2:386:A:H8	81:A2:386:A:O5'	1.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:441:G:H1'	81:A2:1274:A:C5'	2.18	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
81:A2:1222:G:H2'	81:A2:1223:C:C6	2.23	0.73
81:A2:2624:A:H3'	81:A2:2625:G:C8	2.24	0.73
81:A2:4040:C:H2'	81:A2:4041:A:H8	1.52	0.73
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
3:AX:37:U:H5'	31:Ba:42:ARG:HG3	1.70	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
70:Ch:17:LEU:HD13	70:Ch:61:ILE:HG12	1.71	0.73
79:Ct:92:SER:HB2	81:A2:668:C:H5"	1.71	0.73
81:A2:170:C:H2'	81:A2:171:C:C6	2.23	0.73
81:A2:1715:A:H1'	83:A4:78:C:O2'	1.88	0.73
81:A2:2550:A:P	81:A2:2736:G:C8	2.80	0.73
81:A2:2665:G:C6	81:A2:2666:C:C4	2.76	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
4:B1:312:G:H4'	4:B1:313:A:OP1	1.88	0.73
4:B1:1164:G:H3'	4:B1:1165:G:N2	2.02	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:A2:918: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
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
83:A4:26:C:H2'	83:A4:27:G:O4'	1.89	0.73
4:B1:65:C:C2'	4:B1:66:G:H3'	2.19	0.73
4:B1:169:U:H1'	11:BG:133:LEU:HD12	1.69	0.73
4:B1:368:U:H4'	4:B1:369:C:OP1	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:606:G:H8	35:Be:54:GLY:CA	2.01	0.73
4:B1:1087:A:H3'	4:B1:1088:U:H5'	1.71	0.73
4:B1:1807:C:H2'	4:B1:1808:U:C6	2.24	0.73
38:CA:186:TYR:CA	38:CA:196:TRP:CE2	2.70	0.73
79:Ct:113:ARG:O	79:Ct:117:ILE:HG12	1.88	0.73
81:A2:475:U:O3'	81:A2:658:G:H4'	1.89	0.73
81:A2:489:C:H2'	81:A2:490:G:C8	2.23	0.73
81:A2:642:C:H5'	81:A2:642:C:H6	1.52	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:OP1	1.87	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
4:B1:1079:C:H2'	4:B1:1080:A:H5'	1.69	0.73
4:B1:1308:U:H4'	36:Bf:134:SER:O	1.89	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:A2:656:G:H2'	81:A2:657:C:C5'	2.14	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
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
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
39:CB:305:THR:HG21	39:CB:365:LEU:O	1.89	0.72
81:A2:382:U:H2'	81:A2:383:U:C6	2.24	0.72
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:A2:3944:C:H2'	81:A2:3945:C:H6	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)
51:CO:182:GLU:C	51:CO:187:LYS:HD3	2.14	0.72
81:A2:269:G:H2'	81:A2:320:A:N6	2.04	0.72
81:A2:2763:C:H4'	81:A2:2764:A:C8	2.23	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:B1:738: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
4:B1:1542:C:H5"	4:B1:1542:C:C6	2.23	0.72
13:BI:168:GLN:C	81:A2:4980:C:OP1	2.32	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
64:Cb:54:LEU:O	64:Cb:59:ALA:HB2	1.89	0.72
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:B1:1552:G:H2'	8:BD:3:VAL:HG21	1.72	0.72
4:B1:1606:G:OP2	4:B1:1606:G:H8	1.72	0.72
61:CY:123:ALA:N	61:CY:126:ARG:HB2	2.05	0.72
80:Cu:74:VAL:HG21	80:Cu:142:ILE:HB	1.70	0.72
81:A2:2549:C:O4'	81:A2:2737:G:C8	2.43	0.72
4:B1:890:U:H3'	4:B1:891:G:C5'	2.19	0.72
4:B1:1555:U:H4'	4:B1:1556:A:OP1	1.89	0.72
9:BE:95:THR:HB	9:BE:97:GLU:OE2	1.90	0.72
68:Cf:43:LEU:HD22	68:Cf:76:ARG:HA	1.70	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:A2:1862:C:H4'	81:A2:2048:U:C5	2.25	0.72
81:A2:2040:C:H3'	81:A2:2041:G:C5'	2.12	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:H2'	81:A2:3735:A:N3	2.04	0.72
81:A2:3908:G:OP2	81:A2:3908:G:H8	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
1:AV:76:A:N1	81:A2:4156:G:C6	2.58	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
4:B1:1576:G:C2'	4:B1:1577:G:H5'	2.19	0.72
4:B1:1721:U:O4	81:A2:3599:A:OP1	2.08	0.72
47:CJ:33:LEU:HD22	47:CJ:70:VAL:HG22	1.71	0.72
47:CJ:175:LEU:HB3	47:CJ:176:PRO:HD2	1.71	0.72
49:CM:62:LEU:HD21	49:CM:82:ILE:HG13	1.72	0.72
81:A2:924:C:C3'	81:A2:925:C:H5"	2.20	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
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
4:B1:58:C:N4	4:B1:88:G:C2	2.57	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:B1:1217:A:HO2'	4:B1:1685:U:H1'	1.54	0.72
31:Ba:38:LYS:O	31:Ba:71:LEU:HB2	1.89	0.72
49:CM:42:CYS:HG	49:CM:77:TRP:CD1	2.07	0.72
81:A2:333:G:C2'	81:A2:334:C:H5"	2.18	0.72
81:A2:1178:G:C3'	81:A2:1179:G:H5"	2.19	0.72
81:A2:1569:C:H4'	81:A2:2833:C:O2'	1.90	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:A2:4410: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
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
61:CY:3:PHE:O	81:A2:1347:C:H4'	1.89	0.72
69:Cg:41:ALA:HB3	69:Cg:52:ARG:HD2	1.72	0.72
81:A2:967:C:H2'	81:A2:967:C:O2	1.90	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
4:B1:77:A:H2'	4:B1:77:A:N3	2.04	0.72
4:B1:747:U:C2	4:B1:748:C:H2'	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1082:A:H2'	4:B1:1084:A:C5'	2.19	0.72
4:B1:1172:U:H4'	76:Cn:10:MET:CE	2.02	0.72
4:B1:1827:U:H4'	81:A2:3728:A:HO2'	1.55	0.72
38:CA:77:ILE:HD11	38:CA:115:CYS:HB2	1.72	0.72
41:CD:266:TRP:HB2	83:A4:22:A:C6	2.25	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
72:Cj:22:CYS:O	82:A3:43:A:H4'	1.90	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
83:A4:89:G:H2'	83:A4:90:A:C8	2.24	0.72
4:B1:60:A:H5'	4:B1:501:C:H5	1.53	0.72
4:B1:399:C:H4'	4:B1:400:C:OP2	1.89	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
6:BB:63:LYS:O	6:BB:88:THR:HB	1.89	0.72
18:BN:43:LYS:O	65:Cc:20:LEU:HD12	1.90	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
81:A2:170:C:H2'	81:A2:171:C:H6	1.55	0.72
81:A2:440:C:C2'	81:A2:441:G:H5"	2.19	0.72
81:A2:3592:C:H3'	81:A2:3592:C:C6	2.24	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
1:AV:19:G:N7	77:Co:106:PHE:CB	2.52	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:B1:433: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
4:B1:1378:A:C4	5:BA:105:PRO:HB3	2.24	0.71
25:BU:79:ARG:HB3	34:Bd:56:ASP:OD1	1.90	0.71
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:414:A:H8	4:B1:414:A:O5'	1.73	0.71
4:B1:1129:G:H3'	4:B1:1130:G:C8	2.25	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
71:Ci:34:THR:HG23	81:A2:267:C:H5'	1.72	0.71
72:Cj:15:THR:HG23	81:A2:1513:A:C2	2.24	0.71
81:A2:489:C:H2'	81:A2:490:G:H8	1.55	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
82:A3:80:A:H2'	82:A3:81:C:C5	2.25	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
4:B1:1183:A:C4'	76:Cn:11:ARG:CZ	2.40	0.71
4:B1:1208:A:H4'	4:B1:1208:A:OP2	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
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
40:CC:165:LYS:NZ	81:A2:219:C:OP2	2.19	0.71
47:CJ:167:GLN:NE2	47:CJ:174:ILE:HG13	2.05	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
81:A2:2494:A:H2'	81:A2:2495:G:C8	2.25	0.71
81:A2:2527:G:H4'	81:A2:2527:G:OP1	1.89	0.71
81:A2:3724:G:P	81:A2:3724:G:H2'	2.30	0.71
81:A2:4358:C:H3'	81:A2:4358:C:H6	1.55	0.71
81:A2:4668:A:H5'	81:A2:4669:U:H5	1.56	0.71
1:AV:30:G:C2'	1:AV:31:A:H5'	2.20	0.71
3:AX:47:U:C5'	4:B1:1830:U:C4	2.74	0.71
4:B1:341:C:O5'	4:B1:341:C:H6	1.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1704:C:H1’	4:B1:1832:A:N1	2.05	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
48:CL:53:GLY:C	48:CL:55:ILE:H	1.98	0.71
81:A2:7:C:H2’	81:A2:8:U:C6	2.24	0.71
81:A2:63:G:O2’	81:A2:76:A:H1’	1.91	0.71
81:A2:509:G:H2’	81:A2:510:C:H5’	1.71	0.71
81:A2:1274:A:H5’	81:A2:1274:A:C8	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:H5”	81:A2:2553:G:C8	2.23	0.71
81:A2:3724:G:H2’	81:A2:3724:G:OP2	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
1:AV:41:C:C3’	1:AV:42:C:H5”	2.21	0.71
3:AX:37:U:C5’	31:Ba:42:ARG:CG	2.68	0.71
4:B1:29:G:H4’	28:BX:129:SER:CB	2.20	0.71
4:B1:112:U:H5”	4:B1:113:G:C5’	2.17	0.71
4:B1:550:C:H1’	35:Be:44:ASN:HB3	1.73	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
4:B1:1144:A:H1’	4:B1:1199:A:O2’	1.89	0.71
4:B1:1308:U:H4’	36:Bf:134:SER:C	2.15	0.71
4:B1:1659:U:C5’	34:Bd:30:LEU:HD11	2.18	0.71
11:BG:64:LYS:HE2	11:BG:97:VAL:HG11	1.72	0.71
38:CA:48:ILE:HD11	78:Cp:63:THR:HG22	1.73	0.71
42:CE:188:ARG:HD3	42:CE:188:ARG:H	1.55	0.71
81:A2:24:G:C2	81:A2:25:A:C4	2.78	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:CF:227:PHE:HA	43:CF:231:GLY:O	1.90	0.71
60:CX:56:ARG:CB	81:A2:14:C:H4'	2.19	0.71
80:Cu:59:ILE:HD11	80:Cu:146:LYS:N	2.06	0.71
81:A2:327:A:H5"	81:A2:329:A: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:A2:1086:A:H8	81:A2:1086:A:O5'	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
81:A2:1771:U:O2	83:A4:101:A:H4'	1.91	0.71
81:A2:2016:U:H2'	81:A2:2017:G:O4'	1.91	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
3:AX:53:U:H1'	3:AX:54:U:OP1	1.90	0.71
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
48:CL:167:ARG:O	63:Ca:97:ALA:HA	1.90	0.71
54:CR:132:PHE:CE1	54:CR:138:LEU:HD23	2.26	0.71
56:CT:12:ARG:HH21	81:A2:4169:G:H4'	1.53	0.71
81:A2:137:G:H8	81:A2:137:G:OP2	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
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
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
46:CI:158:LYS:HE2	81:A2:4389:C:H42	1.56	0.71
59:CW:49:ILE:CA	81:A2:3584:G:H21	2.02	0.71
81:A2:33:A:OP1	81:A2:33:A:H4'	1.89	0.71
81:A2:1293:C:H5	81:A2:3851:C:O4'	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:412:G:H5'	4:B1:413:G:C8	2.26	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
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
47:CJ:143:ASP:O	83:A4:43:U:H4'	1.91	0.71
81:A2:59:A:H2'	81:A2:60:A:C5'	2.20	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
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:A2:1056: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:B1:558: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:B1:1405:A:H3'	4:B1:1406:G:C5'	2.20	0.70
4:B1:1522:A:C2	20:BP:128:HIS:HB2	2.25	0.70
4:B1:1840:U:H2'	4:B1:1841:C:C6	2.26	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
68:Cf:46:ARG:HD2	68:Cf:106:TYR:CE2	2.26	0.70
81:A2:389:A:H2'	81:A2:390:G:O4'	1.90	0.70
81:A2:927:A:H4'	81:A2:928:A:OP2	1.90	0.70
81:A2:1454:G:C2'	81:A2:1455:C:H4'	2.21	0.70
81:A2:1805:G:C8	81:A2:1805:G:H5"	2.26	0.70
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2305:U:C2'	81:A2:2306:G:C8	2.72	0.70
81:A2:2369:C:C5'	81:A2:2369:C:C6	2.73	0.70
81:A2:4056:C:H2'	81:A2:4057:G:C8	2.26	0.70
81:A2:4063:G:H5'	81:A2:4063:G:C8	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
2:AW:37:MIA:N1	10:BF:132:GLY:C	2.49	0.70
3:AX:37:U:H5"	31:Ba:42:ARG:CD	2.18	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:58:ALA:HB1	81:A2:348:U:H4'	1.73	0.70
40:CC:346:ASN:HA	40:CC:349:LEU:HB3	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
64:Cb:42:ASN:ND2	81:A2:1795:C:H1'	2.06	0.70
81:A2:50:C:C2'	81:A2:51:A:H5'	2.20	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
2:AW:16:U:H2'	2:AW:17:C:H5'	1.71	0.70
4:B1:808:A:H8	4:B1:808:A:O5'	1.74	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
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
45:CH:69:THR:HA	81:A2:4660:A:H2	1.55	0.70
47:CJ:174:ILE:O	47:CJ:175:LEU:HB2	1.90	0.70
54:CR:6:LEU:HD13	81:A2:2389:A:OP1	1.91	0.70
79:Ct:84:LYS:CD	81:A2:668:C:H1'	2.21	0.70
81:A2:1:C:H6	81:A2:1:C:O5'	1.74	0.70
81:A2:69:A:N3	81:A2:70:A:H4'	2.07	0.70
81:A2:204:G:OP1	81:A2:204:G:H8	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:329:A:C2	81:A2:330:C:C4	2.79	0.70
81:A2:1054:G:C2'	81:A2:1055:G:H5'	2.22	0.70
81:A2:3725:A:H2'	81:A2:3726:G:C8	2.26	0.70
81:A2:4438:G:H2'	81:A2:4439:A:O4'	1.91	0.70
81:A2:4854:G:H1'	81:A2:4855:C:OP1	1.92	0.70
82:A3:103:A:H5'	82:A3:104:A:C8	2.25	0.70
83:A4:9:C:H3'	83:A4:9:C:O2	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
80:Cu:190:LYS:C	80:Cu:192:PRO:HD3	2.17	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:OP1	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
2:AW:19:G:N7	81:A2:3927:G:C4'	2.54	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:B1:321:C:H2'	4:B1:322:C:C6	2.25	0.70
4:B1:370:G:H5'	4:B1:370:G:C8	2.25	0.70
4:B1:797:C:H2'	4:B1:798:G:C5'	2.16	0.70
4:B1:1405:A:C3'	4:B1:1406:G:H5"	2.22	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
60:CX:56:ARG:HA	81:A2:14:C:H5"	1.73	0.70
68:Cf:6:TRP:HB2	81:A2:4711:U:H3'	1.73	0.70
81:A2:176:G:O2'	81:A2:177:C:H5'	1.91	0.70
81:A2:1474:G:C2'	81:A2:1475:G:H5'	2.21	0.70
81:A2:1517:U:C2'	81:A2:1518:G:H5'	2.20	0.70
81:A2:3569:G:H2'	81:A2:3570:C:C6	2.25	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:H6	83:A4:36:C:O5'	1.73	0.70
3:AX:41:U:O2'	3:AX:42:U:H5"	1.92	0.70
4:B1:1599:U:OP1	4:B1:1599:U:H4'	1.92	0.70
53:CQ:65:ARG:O	53:CQ:69:LYS:HG2	1.92	0.70
81:A2:948: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
81:A2:1050:G:C2'	81:A2:1051:C:H5'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:OP2	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
4:B1:380:G:H1	4:B1:383:G:P	2.15	0.70
4:B1:845:G:H4'	9:BE:255:ARG:HH12	1.57	0.70
4:B1:958:G:H3'	4:B1:959:G:C8	2.26	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
12:BH:102:PRO:HB2	12:BH:105:THR:CB	2.21	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:A2:210:G:C2	81:A2:211:G:H1'	2.25	0.70
81:A2:474:G:H5"	81:A2:659:A:H4'	1.73	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:H3'	81:A2:2051:C:C6	2.26	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:OP1	1.89	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
2:AW:56:C:C5	81:A2:4014:A:C6	2.80	0.70
4:B1:176:U:H3'	4:B1:177:G:C8	2.27	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
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:B1:1784:G:H2'	4:B1:1785:C:C6	2.26	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
73:Ck:61:PRO:HG2	73:Ck:64:LEU:HD12	1.74	0.70
81:A2:682:C:H2'	81:A2:683:C:C6	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:P	81:A2:2310:G:H8	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
83:A4:68:C:H5'	83:A4:69:U:OP2	1.92	0.70
4:B1:1284:A:N7	4:B1:1286:G:H5'	2.07	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
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
69:Cg:94:ALA:HA	81:A2:4089:G:C6	2.27	0.70
81:A2:1082:U:H1'	81:A2:1083:C:OP1	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
81:A2:2310:G:H4'	82:A3:20:A:H5"	1.72	0.70
81:A2:4327:G:H2'	81:A2:4328:G:O4'	1.91	0.70
82:A3:24:G:C2'	82:A3:25:G:H5'	2.22	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
37:Bg:45:LEU:HD22	37:Bg:52:TYR:CE2	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
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:A2:1214: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:A2:1942:A:C5	81:A2:4654:G:N7	2.60	0.70
81:A2:2599:G:H2'	81:A2:2600:A:C8	2.26	0.70
81:A2:2844:C:C6	81:A2:2844:C:H5"	2.26	0.70
81:A2:4537:U:H2'	81:A2:4538:G:H8	1.57	0.70
81:A2:4833:C:H2'	81:A2:4834:C:C6	2.27	0.70
2:AW:4:C:O2'	81:A2:3683:G:C4'	2.29	0.69
4:B1:124:U:H3'	4:B1:124:U:H6	1.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:528:A:P	4:B1:528:A:H8	2.14	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
15:BK:84:HIS:CD2	15:BK:85:LEU:H	2.09	0.69
32:Bb:56:CYS:SG	32:Bb:59:CYS:N	2.65	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
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:A2:500:A:H2'	81:A2:501:U:C6	2.27	0.69
81:A2:923:G:C2'	81:A2:924:C:H5'	2.22	0.69
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
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
4:B1:970:G:C5'	81:A2:3681:A:P	2.79	0.69
18:BN:44:GLY:CA	65:Cc:23:LYS:NZ	2.55	0.69
37:Bg:45:LEU:HD22	37:Bg:52:TYR:HE2	1.56	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
65:Cc:53:PRO:HD2	81:A2:2651:A:N1	2.07	0.69
72:Cj:12:ARG:NH2	81:A2:2778:U:H1'	2.07	0.69
80:Cu:62:PHE:CZ	80:Cu:110:LEU:HG	2.27	0.69
81:A2:15:A:OP2	81:A2:15:A:H3'	1.92	0.69
81:A2:398:A:H4'	81:A2:399:A:OP1	1.91	0.69
81:A2:2283:A:N3	81:A2:2283:A:H2'	2.07	0.69
2:AW:59:U:C2'	2:AW:60:U:H5'	2.23	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:OP2	1.93	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:B1:527:C:H5'	14:BJ:122:SER:CB	2.21	0.69
4:B1:553:U:H3'	4:B1:554:A:H5"	1.71	0.69
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BF:40:ALA:HB3	10:BF:68:ILE:HG13	1.73	0.69
40:CC:50:GLN:CB	40:CC:51:PRO:HD3	2.22	0.69
51:CO:129:LEU:HD21	81:A2:2032:U:H5"	1.73	0.69
66:Cd:59:THR:HG21	66:Cd:104:THR:OG1	1.92	0.69
81:A2:42:A:C6	81:A2:4339:A:H2	2.10	0.69
81:A2:179:G:H2'	81:A2:180:C:H6	1.57	0.69
81:A2:707:C:H2'	81:A2:708:G:H8	1.58	0.69
81:A2:1630:G:H3'	81:A2:1631:U:C6	2.27	0.69
81:A2:1910:A:H5"	81:A2:1910:A:H8	1.56	0.69
81:A2:1934:A:C2	81:A2:2006:C:C2	2.79	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:A2:4384:A:H2'	81:A2:4384:A:N3	2.08	0.69
81:A2:4883:C:H2'	81:A2:4884:C:C6	2.26	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:B1:678:U:H5'	81:A2:1543:A:C8	2.28	0.69
4:B1:797:C:H4'	12:BH:109:ARG:HB2	1.75	0.69
4:B1:1630:A:H2'	4:B1:1631:U:C5'	2.23	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
40:CC:136:LEU:HD22	79:Ct:9:VAL:CG1	2.21	0.69
41:CD:13:PHE:CE1	83:A4:15:C:H1'	2.28	0.69
64:Cb:30:GLU:HG2	64:Cb:31:SER:H	1.57	0.69
81:A2:70:A:H5'	81:A2:72:C:H42	1.57	0.69
81:A2:84:A:H61	81:A2:98:A:H3'	1.56	0.69
81:A2:942:G:H2'	81:A2:942:G:N3	2.07	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:OP2	1.93	0.69
81:A2:1411:C:H2'	81:A2:1412:G:H8	1.56	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:A2:2372:A:H1'	81:A2:2783:A:N3	2.07	0.69
81:A2:2442:C:H6	81:A2:2442:C:OP2	1.74	0.69
1:AV:20:U:C3'	1:AV:21:A:H5'	2.23	0.69
3:AX:53:U:O2	8:BD:146:ARG:NE	2.25	0.69
4:B1:332:G:H4'	4:B1:333:G:OP1	1.92	0.69
4:B1:448:A:N7	13:BI:26:LYS:HA	2.06	0.69
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
40:CC:326:LEU:HD21	40:CC:332:ALA:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
61:CY:120:GLU:C	61:CY:125:SER:HB3	2.17	0.69
79:Ct:39:ARG:HH21	81:A2:2064:G:H22	1.38	0.69
81:A2:34:A:H1'	81:A2:1506:A:O2'	1.93	0.69
81:A2:426:A:H2'	81:A2:427:C:H6	1.58	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
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:A2:4149:U:H1'	81:A2:4340:A:C2	2.27	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
3:AX:50:U:C5'	4:B1:1825:A:H5'	2.12	0.69
4:B1:351:G:C8	4:B1:351:G:H3'	2.27	0.69
4:B1:795:A:C4	4:B1:796:G:C8	2.81	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
44:CG:61:ILE:O	44:CG:64:GLN:HG2	1.92	0.69
49:CM:132:LYS:HZ3	81:A2:4849:A:H3'	1.58	0.69
54:CR:137:ILE:HD12	54:CR:138:LEU:H	1.58	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:H6	81:A2:2605:U:H3'	1.57	0.69
4:B1:12:U:H2'	4:B1:13:C:C6	2.28	0.69
4:B1:794:A:N3	4:B1:795:A:H1'	2.08	0.69
4:B1:1493:C:C6	4:B1:1493:C:H5"	2.27	0.69
4:B1:1814:G:O5'	4:B1:1814:G:H8	1.75	0.69
31:Ba:38:LYS:H	31:Ba:71:LEU:HB3	1.57	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
68:Cf:101:ILE:C	68:Cf:102:ARG:HD3	2.17	0.69
70:Ch:46:LYS:O	70:Ch:49:VAL:HG22	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:635:G:H2'	81:A2:636:G:H8	1.56	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:OP2	1.93	0.69
81:A2:2642:U:H2'	81:A2:2643:U:C6	2.28	0.69
2:AW:38:A:H1'	10:BF:133:THR:HG21	1.71	0.69
4:B1:65:C:O2'	4:B1:66:G:H3'	1.93	0.69
4:B1:144:U:C6	11:BG:180:VAL:HG22	2.27	0.69
4:B1:187:G:H2'	4:B1:188:C:C6	2.27	0.69
4:B1:215:G:H3'	4:B1:215:G:OP2	1.92	0.69
4:B1:310:C:H2'	4:B1:340:C:H5'	1.75	0.69
4:B1:845:G:H5"	9:BE:108:ARG:HH12	1.58	0.69
4:B1:1092:G:H2'	4:B1:1093:A:H8	1.58	0.69
4:B1:1287:A:H4'	4:B1:1312:G:N1	2.07	0.69
4:B1:1780:G:P	4:B1:1781:A:H5"	2.32	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
46:CI:204:GLY:CA	83:A4:64:G:H4'	2.23	0.69
51:CO:21:ALA:CA	51:CO:87:MET:HE1	2.12	0.69
55:CS:110:TYR:HE2	55:CS:126:ILE:HD11	1.56	0.69
58:CV:15:ARG:HB2	81:A2:4578:G:H5'	1.74	0.69
68:Cf:104:MET:HG2	68:Cf:106:TYR:CD1	2.27	0.69
79:Ct:80:THR:O	79:Ct:83:ASN:HA	1.93	0.69
81:A2:194:A:C2	81:A2:222:G:N2	2.61	0.69
81:A2:288:U:H2'	81:A2:289:G:H8	1.55	0.69
81:A2:400:G:H21	81:A2:2306:G:P	2.15	0.69
81:A2:439:G:H2'	81:A2:440:C:C6	2.26	0.69
81:A2:677:C:H2'	81:A2:677:C:O2	1.90	0.69
81:A2:707:C:O2'	81:A2:708:G:H5'	1.92	0.69
81:A2:958:C:P	81:A2:971:C:H1'	2.33	0.69
81:A2:965:C:H6	81:A2:965:C:C5'	2.06	0.69
81:A2:1252:C:H2'	81:A2:1253:G:H8	1.56	0.69
81:A2:1391:C:H2'	81:A2:1392:G:H8	1.56	0.69
81:A2:1479:A:H3'	81:A2:1480:C:C5'	2.21	0.69
81:A2:1515:U:H4'	81:A2:3611:A:N1	2.08	0.69
81:A2:1717:A:O3'	83:A4:101:A:H2	1.74	0.69
81:A2:2294:G:H5"	81:A2:2294:G:H8	1.57	0.69
81:A2:2311:C:H2'	81:A2:2312:C:C6	2.28	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
81:A2:2588:A:P	81:A2:2665:G:H4'	2.32	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4156:G:OP1	81:A2:4156:G:H8	1.76	0.69
81:A2:4645:U:H6	81:A2:4645:U:O5'	1.76	0.69
81:A2:4888:C:H2'	81:A2:4889:A:H8	1.58	0.69
81:A2:4900:G:C3'	81:A2:4901:U:H5'	2.21	0.69
4:B1:105:U:H2'	4:B1:106:C:O4'	1.92	0.69
4:B1:606:G:H3'	4:B1:607:U:H4'	1.74	0.69
4:B1:1591:C:H5'	10:BF:85:LYS:HE3	1.75	0.69
16:BL:20:LYS:HE3	16:BL:21:LYS:NZ	2.08	0.69
38:CA:240:ALA:HB2	81:A2:3627:C:H4'	1.74	0.69
42:CE:170:SER:HB3	81:A2:4896:G:H21	1.57	0.69
72:Cj:11:ARG:NH1	72:Cj:11:ARG:HB3	2.08	0.69
81:A2:356:U:H2'	81:A2:356:U:O2	1.91	0.69
81:A2:2401:G:H2'	81:A2:2403:U:C5	2.27	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
83:A4:62:U:H3'	83:A4:63:C:C5'	2.22	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
4:B1:1396:A:H2	4:B1:1449:G:H1	1.35	0.69
4:B1:1397:U:O3'	4:B1:1398:G:H2'	1.93	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
47:CJ:26:VAL:HG13	47:CJ:32:ARG:HH11	1.58	0.69
60:CX:56:ARG:HA	81:A2:14:C:C5'	2.23	0.69
64:Cb:43:MET:O	64:Cb:47:LYS:HG2	1.93	0.69
73:Ck:26:LYS:HG3	81:A2:2672:A:H4'	1.75	0.69
81:A2:58:G:O3'	81:A2:59:A:H4'	1.93	0.69
81:A2:965:C:H6	81:A2:965:C:H5"	1.58	0.69
81:A2:1259:A:OP1	81:A2:1259:A:H4'	1.91	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:OP1	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:A2:3821: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
1:AV:34:G:N2	4:B1:1701:C:O2	2.25	0.68
4:B1:95:G:H1	4:B1:435:A:N6	1.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1512:C:H2'	4:B1:1513:C:C6	2.29	0.68
4:B1:1833:C:OP1	4:B1:1840:U:H4'	1.92	0.68
59:CW:44:ARG:HD2	81:A2:3584:G:H2'	1.74	0.68
80:Cu:107:GLU:HB2	80:Cu:132:LEU:HD12	1.74	0.68
81:A2:212:C:H3'	81:A2:212:C:OP2	1.92	0.68
81:A2:1582:C:H4'	81:A2:2775:A:C2	2.28	0.68
81:A2:2310:G:H4'	82:A3:20:A:C5'	2.23	0.68
81:A2:2342:C:H6	81:A2:2342:C:H5"	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
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
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:B1:907:G:H2'	4:B1:908:A:H8	1.58	0.68
4:B1:1405:A:H3'	4:B1:1405:A:C8	2.28	0.68
8:BD:73:VAL:HG11	8:BD:84:VAL:HG21	1.73	0.68
10:BF:103:LEU:HD21	30:BZ:67:LEU:HD11	1.75	0.68
20:BP:97:TYR:HB2	20:BP:102:PHE:CE2	2.28	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:A2:443:A:H1'	81:A2:444:G:C5	2.26	0.68
81:A2:443:A:H4'	81:A2:444:G:OP1	1.93	0.68
81:A2:463:C:H5'	81:A2:463:C:C6	2.28	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
83:A4:22:A:H2'	83:A4:23:A:C8	2.28	0.68
4:B1:444:G:N2	4:B1:446:G:H3'	2.07	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
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
40:CC:149:GLU:CA	79:Ct:75:THR:HA	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Cj:17:THR:CG2	72:Cj:29:LEU:HD11	2.22	0.68
81:A2:1159:U:O5'	81:A2:1159:U:H6	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:H8	81:A2:3793:A:O5'	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:B1:124: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
42:CE:274:VAL:HG12	81:A2:4837:U:H6	1.57	0.68
62:CZ:13:VAL:O	62:CZ:19:SER:HA	1.93	0.68
69:Cg:7:TYR:HB2	69:Cg:34:TYR:OH	1.94	0.68
81:A2:482:G:H5'	81:A2:482:G:C8	2.28	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
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
81:A2:2445:U:H3'	81:A2:2445:U:H6	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
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
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
38:CA:186:TYR:CA	38:CA:196:TRP:NE1	2.57	0.68
40:CC:182:LYS:HA	81:A2:2276:A:N7	2.08	0.68
54:CR:83:GLY:HA2	81:A2:2789:A:C8	2.28	0.68
72:Cj:60:GLY:N	72:Cj:64:MET:HE3	2.09	0.68
81:A2:389:A:H3'	81:A2:389:A:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:411:A:H61	82:A3:15:G:H1'	1.59	0.68
81:A2:458:U:H4'	81:A2:459:U:O5'	1.92	0.68
81:A2:1479:A:C2'	81:A2:1480:C:H5"	2.24	0.68
81:A2:2310:G:H3'	81:A2:2311:C:H5"	1.73	0.68
81:A2:2672:A:H3'	81:A2:2672:A:N3	2.09	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:A2:4062:G:O2'	81:A2:4063:G:H2'	1.92	0.68
81:A2:4204:A:C1'	81:A2:4228:A:H4'	2.24	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:B1:140: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
4:B1:1285:G:H4'	4:B1:1286:G:O5'	1.93	0.68
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	75:Cm:127:VAL:HG13	1.58	0.68
62:CZ:10:VAL:CG2	62:CZ:87:VAL:HG23	2.24	0.68
70:Ch:34:ALA:HA	70:Ch:37:THR:OG1	1.94	0.68
81:A2:700:C:H2'	81:A2:701:C:C5'	2.23	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
1:AV:41:C:H3'	1:AV:42:C:H5"	1.75	0.68
4:B1:606:G:C8	35:Be:54:GLY:CA	2.75	0.68
4:B1:1456:G:H2'	4:B1:1457:U:C6	2.28	0.68
4:B1:1519:U:C6	4:B1:1519:U:H5"	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
38:CA:85:GLY:HA3	81:A2:4088:G:C5	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:CL:134:PRO:HA	48:CL:135:LYS:NZ	2.09	0.68
72:Cj:25:LYS:HE3	74:Cl:51:LEU:HD12	1.76	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
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
81:A2:4567:A:H3'	81:A2:4568:G:H5"	1.75	0.68
4:B1:42:A:C2'	4:B1:43:U:H5"	2.24	0.68
4:B1:381:C:O5'	4:B1:381:C:H6	1.77	0.68
4:B1:558:G:C8	4:B1:558:G:P	2.84	0.68
4:B1:636:C:O5'	4:B1:636:C:H6	1.77	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
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
39:CB:95:THR:HG22	81:A2:4865:A:H4'	1.74	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
56:CT:84:ILE:CG1	64:Cb:24:PRO:HA	2.24	0.68
63:Ca:46:ASP:O	63:Ca:47:LYS:HB3	1.93	0.68
69:Cg:45:ALA:CB	69:Cg:82:MET:HA	2.24	0.68
69:Cg:70:THR:HG22	81:A2:2564:A:H5"	1.74	0.68
73:Ck:20:ALA:CB	73:Ck:36:VAL:HG23	2.24	0.68
77:Co:54:PRO:HA	81:A2:4339:A:C8	2.29	0.68
81:A2:85:G:N2	81:A2:97:G:H2'	2.09	0.68
81:A2:1608:G:H2'	81:A2:1610:A:N7	2.09	0.68
81:A2:2396:C:H6	81:A2:2396:C:H5"	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:A2:4044:G:H21	81:A2:4130:A:H61	1.41	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:67:C:H5	11:BG:163:ASN:N	1.91	0.68
4:B1:164:A:H3'	4:B1:165:G:C8	2.28	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:A2:425:A:H2'	81:A2:426:A:O5'	1.94	0.68
81:A2:728:G:H2'	81:A2:729:C:C6	2.26	0.68
81:A2:1147:C:C6	81:A2:1147:C:H5"	2.29	0.68
81:A2:1161:C:C6	81:A2:1161:C:H3'	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:A2:4260: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
3:AX:34:U:C2'	3:AX:35:U:H5'	2.24	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
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
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
68:Cf:57:THR:O	68:Cf:64:PRO:HA	1.92	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:A2:1293:C:C5	81:A2:3851:C:O4'	2.46	0.68
81:A2:1748:G:H8	81:A2:1748:G:O5'	1.76	0.68
81:A2:1774:A:H4'	83:A4:98:G:N3	2.09	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:A2:4305: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
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
4:B1:1750:C:H2'	4:B1:1751:C:C5'	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:6:PHE:CE1	58:CV:49:LEU:HD22	2.29	0.67
40:CC:333:LYS:HD2	81:A2:1217:C:H5'	1.76	0.67
63:Ca:62:HIS:CB	81:A2:306:G:H8	2.06	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
81:A2:2034:G:H5'	81:A2:2034:G:C8	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
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:B1:358:C:H5'	4:B1:358:C:H6	1.59	0.67
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:B1:1005:G:H2'	4:B1:1006:C:C6	2.29	0.67
4:B1:1023:A:H5"	18:BN:124:ARG:NH2	2.10	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
31:Ba:15:ARG:HD2	31:Ba:18:VAL:HG22	1.74	0.67
63:Ca:65:ARG:O	63:Ca:66:ASN:HB3	1.93	0.67
67:Ce:58:ILE:HD11	81:A2:2057:G:H4'	1.76	0.67
81:A2:210:G:C4	81:A2:211:G:H1'	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:OP1	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:A2:1943:G:H5'	81:A2:4655:C:O2'	1.94	0.67
81:A2:3618:A:H1'	81:A2:4495:A:H4'	1.76	0.67
83:A4:32:A:C2	83:A4:41:G:C6	2.83	0.67
83:A4:105:C:H2'	83:A4:106:G:O4'	1.93	0.67
1:AV:38:A:O2'	4:B1:1058:A:OP1	2.13	0.67
3:AX:42:U:C5	19:BO:151:LEU:HD23	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1287:A:H2’	4:B1:1287:A:N3	2.09	0.67
40:CC:221:PHE:O	40:CC:227:ILE:HG21	1.94	0.67
45:CH:173:ARG:HD2	75:Cm:127:VAL:HG13	1.75	0.67
51:CO:129:LEU:CD2	81:A2:2032:U:H5”	2.24	0.67
68:Cf:4:ARG:HG2	81:A2:4711:U:H1’	1.76	0.67
77:Co:98:LYS:NZ	81:A2:4191:C:H4’	2.08	0.67
78:Cp:47:MET:SD	78:Cp:57:CYS:HB2	2.35	0.67
81:A2:477:C:H5”	81:A2:479:G:P	2.34	0.67
81:A2:708:G:O2’	81:A2:709:G:H5’	1.95	0.67
81:A2:1285:C:H5”	81:A2:2289:A:C6	2.29	0.67
81:A2:1390:U:H6	81:A2:1390:U:H5”	1.59	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:A2:4807:C:H2’	81:A2:4808:C:C6	2.29	0.67
4:B1:65:C:H2’	4:B1:66:G:H3’	1.75	0.67
4:B1:217:A:H4’	4:B1:341:C:C4’	2.25	0.67
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:B1:1191: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:B1:1408:U:H5’	21:BQ:69:ARG:NH2	2.10	0.67
4:B1:1663:A:C2	4:B1:1664:A:C6	2.83	0.67
22:BR:109:LEU:HD22	22:BR:109:LEU:O	1.94	0.67
23:BS:6:PRO:HD3	30:BZ:52:LYS:HD3	1.75	0.67
24:BT:41:LYS:HG2	24:BT:95:GLY:HA2	1.76	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
65:Cc:79:ILE:HA	65:Cc:90:ARG:HB3	1.77	0.67
81:A2:99:A:H2’	81:A2:100:C:C6	2.29	0.67
81:A2:181:U:H5”	81:A2:182:C:O4’	1.93	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
81:A2:1088:C:H3’	81:A2:1088:C:H6	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:A2:1897:G:N2	81:A2:2035:A:C8	2.61	0.67
81:A2:2344:A:N6	81:A2:2765:U:H3	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:4236: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
82:A3:26:C:H2'	82:A3:27:U:C5	2.29	0.67
1:AV:19:G:C8	77:Co:106:PHE:CB	2.76	0.67
4:B1:746:C:O5'	12:BH:105:THR:HA	1.94	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
40:CC:137:VAL:CG1	40:CC:144:ILE:HD11	2.24	0.67
62:CZ:17:ARG:CD	69:Cg:75:SER:HB3	2.25	0.67
81:A2:174:G:N1	81:A2:253:C:N4	2.42	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
81:A2:1393:C:H6	81:A2:1393:C:O5'	1.77	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
3:AX:43:U:H1'	4:B1:961:G:C2	2.30	0.67
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
4:B1:955:A:H4'	19:BO:60:MET:HE3	1.77	0.67
4:B1:1405:A:C2	4:B1:1442:U:C6	2.80	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
68:Cf:104:MET:CG	68:Cf:106:TYR:CD1	2.78	0.67
72:Cj:20:ARG:NH2	82:A3:109:C:H3'	2.10	0.67
81:A2:100:C:H2'	81:A2:100:C:O2	1.95	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
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:H5"	81:A2:2396:C:C6	2.30	0.67
81:A2:2510:C:OP2	81:A2:2510:C:H2'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2549:C:H5'	81:A2:2737:G:C8	2.29	0.67
81:A2:2686:C:OP1	81:A2:2686:C:H4'	1.93	0.67
81:A2:2692:G:H3'	81:A2:2693:C:C5	2.30	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:OP2	1.94	0.67
4:B1:181:A:H4'	4:B1:182:C:OP2	1.93	0.67
4:B1:1383:A:H8	4:B1:1383:A:O5'	1.76	0.67
4:B1:1688:C:H2'	4:B1:1688:C:O2	1.93	0.67
80:Cu:74:VAL:HG11	80:Cu:142:ILE:HG22	1.76	0.67
81:A2:103:G:H5"	81:A2:104:G:OP2	1.95	0.67
81:A2:181:U:H6	81:A2:181:U:C5'	2.07	0.67
81:A2:708:G:H2'	81:A2:709:G:H8	1.57	0.67
81:A2:1148:G:H8	81:A2:1148:G:O5'	1.78	0.67
81:A2:1622:A:C2'	81:A2:1623:C:H5'	2.25	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
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:H2'	83:A4:68:C:O2	1.94	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
6:BB:120:MET:HE2	6:BB:122:GLU:OE2	1.95	0.67
10:BF:187:SER:OG	10:BF:190:ILE:HG12	1.94	0.67
51:CO:48:TYR:CD2	51:CO:51:LYS:HE2	2.29	0.67
81:A2:417:A:H2'	81:A2:418:A:C8	2.28	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
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:OP2	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:A2:3883:U:H3	81:A2:4338:A:H61	1.40	0.67
81:A2:4085:U:H4'	81:A2:4086:C:OP1	1.94	0.67
81:A2:4358:C:H3'	81:A2:4358:C:C6	2.29	0.67
83:A4:23:A:N3	83:A4:119:U:C1'	2.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:38:A:H1'	10:BF:133:THR:HG22	1.73	0.67
3:AX:35:U:OP2	31:Ba:41:ILE:CD1	2.43	0.67
3:AX:39:U:H2'	3:AX:40:U:H5'	1.77	0.67
4:B1:124:U:H3'	4:B1:124:U:C6	2.29	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
4:B1:1016:U:C6	4:B1:1017:U:H5	2.12	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:B1:1648: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:A2:301:G:H2'	81:A2:302:G:O4'	1.95	0.67
81:A2:455:G:H3'	81:A2:456:G:H8	1.58	0.67
81:A2:957:G:H8	81:A2:957:G:C5'	1.94	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
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:A2:3887:G:H2'	81:A2:3888:C:H6	1.60	0.67
81:A2:4278:C:H3'	81:A2:4278:C:H6	1.60	0.67
81:A2:4700:C:H3'	81:A2:4701:G:C5'	2.20	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
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
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
37:Bg:44:LYS:HG3	37:Bg:56:GLN:CG	2.24	0.67
40:CC:326:LEU:CB	81:A2:1218:A:H62	2.08	0.67
40:CC:337:ARG:HE	81:A2:1213:G:H4'	1.58	0.67
42:CE:132:PRO:HB3	81:A2:1265:U:H4'	1.75	0.67
62:CZ:136:PHE:HA	81:A2:4089:G:N2	2.10	0.67
77:Co:60:ALA:HB3	81:A2:4333:G:C8	2.30	0.67
81:A2:10:A:C2'	81:A2:11:G:H5'	2.24	0.67
81:A2:211:G:N3	81:A2:211:G:H2'	2.09	0.67
81:A2:969:C:H2'	81:A2:970:C:C6	2.30	0.67
81:A2:1058:A:C2	81:A2:1206:U:H1'	2.30	0.67
81:A2:1420:U:C6	81:A2:1420:U:C3'	2.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1481:G:C4	81:A2:1481:G:OP1	2.48	0.67
81:A2:1610:A:P	81:A2:1610:A:H8	2.18	0.67
81:A2:2516:C:H2'	81:A2:2517:C:C6	2.30	0.67
81:A2:2527:G:H22	81:A2:2744:U:H3	1.42	0.67
81:A2:2549:C:C4'	81:A2:2736:G:H2'	2.25	0.67
81:A2:4085:U:H2'	81:A2:4085:U:O2	1.95	0.67
1:AV:72:C:C2'	1:AV:73:A:H5'	2.24	0.66
4:B1:380:G:C2	4:B1:382:C:H3'	2.29	0.66
4:B1:550:C:H4'	35:Be:43:VAL:HG21	1.75	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
4:B1:1053:C:H2'	4:B1:1053:C:O2	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:B1:1866:A:N1	31:Ba:84:VAL:HG13	2.10	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
80:Cu:114:ILE:HG13	80:Cu:118:LEU:HD23	1.78	0.66
81:A2:426:A:H2'	81:A2:427:C:H5'	1.77	0.66
81:A2:920:C:H2'	81:A2:921:U:H6	1.59	0.66
81:A2:1283:A:OP2	81:A2:1283:A:H4'	1.95	0.66
81:A2:1852:A:H5"	81:A2:4178:U:O2	1.95	0.66
81:A2:3868:G:H2'	81:A2:3869:G:H5'	1.76	0.66
81:A2:4383:U:H3'	81:A2:4383:U:H6	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
83:A4:63:C:H1'	83:A4:64:G:C5'	2.25	0.66
4:B1:797:C:C6	12:BH:106:ARG:HB3	2.30	0.66
4:B1:1427:C:H3'	4:B1:1427:C:C6	2.30	0.66
4:B1:1648:G:H2'	21:BQ:127:CYS:CA	2.24	0.66
42:CE:262:LYS:HG3	81:A2:4887:U:H5"	1.77	0.66
43:CF:117:ILE:HD11	43:CF:222:LYS:NZ	2.10	0.66
81:A2:128:C:H2'	81:A2:129:C:C6	2.30	0.66
81:A2:382:U:H2'	81:A2:383:U:C5	2.29	0.66
81:A2:1085:C:OP2	81:A2:1085:C:H4'	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3587:C:H4'	81:A2:3589:G:C4	2.30	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
81:A2:4895:C:H2'	81:A2:4896:G:OP1	1.95	0.66
4:B1:305:U:H2'	13:BI:60:LEU:CD2	2.26	0.66
4:B1:799:U:H1'	4:B1:800:U:C6	2.30	0.66
4:B1:970:G:C6	81:A2:3679:G:O2'	2.47	0.66
4:B1:1167:G:H2'	4:B1:1168:G:O4'	1.96	0.66
4:B1:1389:C:H5'	8:BD:205:PRO:HB3	1.78	0.66
4:B1:1516:G:C2'	4:B1:1517:G:H5'	2.24	0.66
54:CR:134:ASN:CB	81:A2:2873:G:H5"	2.25	0.66
80:Cu:204:MET:SD	81:A2:3943:G:C4'	2.83	0.66
81:A2:98:A:H1'	81:A2:283:G:C6	2.31	0.66
81:A2:196:G:H1'	81:A2:197:U:OP1	1.95	0.66
81:A2:670:C:H2'	81:A2:671:C:H6	1.59	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
3:AX:43:U:C4'	4:B1:961:G:C4	2.79	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
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
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
13:BI:168:GLN:O	81:A2:4980:C:OP1	2.12	0.66
27:BW:30:CYS:SG	27:BW:61:ILE:HD12	2.36	0.66
39:CB:336:CYS:SG	81:A2:4584:A:C2	2.86	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
61:CY:45:ARG:HB2	81:A2:195:A:H5'	1.77	0.66
72:Cj:76:HIS:O	72:Cj:79:ARG:HG2	1.95	0.66
81:A2:488:G:N3	81:A2:488:G:H2'	2.08	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
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
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)
2:AW:23:A:H2'	2:AW:24:G:H8	1.60	0.66
4:B1:346:C:H6	4:B1:346:C:H3'	1.61	0.66
4:B1:526:A:N3	4:B1:526:A:C2'	2.59	0.66
4:B1:915:G:H2'	4:B1:916:A:H5'	1.76	0.66
4:B1:970:G:C4	81:A2:3680:A:H5"	2.31	0.66
4:B1:1135:C:H2'	4:B1:1136:U:C6	2.30	0.66
4:B1:1214:A:N1	4:B1:1686:G:N3	2.44	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:C8	4:B1:1515:G:H5"	2.30	0.66
4:B1:1778:C:H2'	4:B1:1779:G:C8	2.31	0.66
4:B1:1841:C:C5'	76:Cn:2:ARG:HH11	2.03	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
37:Bg:14:HIS:O	37:Bg:305:ASN:HB3	1.95	0.66
81:A2:384:U:H3'	81:A2:385:G:H4'	1.78	0.66
81:A2:471:C:C5'	81:A2:472:G:H5"	2.25	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:H6	81:A2:1391:C:O5'	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
81:A2:3945:C:H2'	81:A2:3946:C:C6	2.30	0.66
81:A2:4628:U:H4'	81:A2:4629:A:OP1	1.95	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
4:B1:235:A:O2'	4:B1:236:A:H8	1.76	0.66
4:B1:465:A:H4'	4:B1:466:G:O5'	1.94	0.66
4:B1:817:G:O5'	4:B1:817:G:H8	1.77	0.66
4:B1:873:G:OP2	54:CR:163:ARG:CB	2.37	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
38:CA:177:LYS:HD3	78:Cp:29:ILE:HD11	1.78	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
54:CR:103:ARG:HH21	81:A2:2644:C:H5"	1.60	0.66
68:Cf:46:ARG:HD2	68:Cf:106:TYR:HE2	1.60	0.66
72:Cj:70:VAL:HG22	72:Cj:73:ARG:HH21	1.60	0.66
79:Ct:44:ILE:HG13	79:Ct:45:HIS:H	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:121:A:N1	81:A2:147:U:C5	2.64	0.66
81:A2:434:G:H8	81:A2:434:G:O5'	1.77	0.66
81:A2:477:C:O2	81:A2:477:C:H2'	1.95	0.66
81:A2:642:C:H3'	81:A2:643:G:H5"	1.78	0.66
81:A2:1165:G:O2'	81:A2:1166:U:H5'	1.95	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
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
82:A3:79:G:H8	82:A3:79:G:O5'	1.79	0.66
1:AV:17:C:H3'	1:AV:18:G:H5"	1.78	0.66
4:B1:421:G:N2	4:B1:653:A:H5'	2.11	0.66
4:B1:559:G:H5'	4:B1:560:A:H5"	1.76	0.66
4:B1:795:A:C2'	4:B1:796:G:H8	2.09	0.66
4:B1:1684:C:C2'	4:B1:1685:U:C5'	2.70	0.66
4:B1:1842:C:OP2	76:Cn:4:LYS:HD3	1.96	0.66
4:B1:1849:G:C1'	81:A2:3735:A:H1'	2.22	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
69:Cg:93:ARG:HD3	81:A2:4088:G:H5'	1.77	0.66
77:Co:48:TYR:CE1	81:A2:3895:C:H4'	2.30	0.66
81:A2:99:A:H3'	81:A2:100:C:C6	2.31	0.66
81:A2:1216:C:H1'	81:A2:1217:C:OP1	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
81:A2:3826:G:C5	81:A2:3827:C:H5	2.13	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
4:B1:148:U:H5"	4:B1:148:U:H6	1.61	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:B1:1557:C:H3'	4:B1:1557:C:P	2.36	0.66
4:B1:1587:G:N2	24:BT:75:MET:HA	2.10	0.66
4:B1:1587:G:H21	24:BT:75:MET:HA	1.59	0.66
48:CL:37:LYS:O	48:CL:40:GLN:HG2	1.95	0.66
51:CO:164:ALA:HA	81:A2:4718:C:O2'	1.96	0.66
75:Cm:93:LYS:HB2	75:Cm:124:LYS:HE2	1.78	0.66
81:A2:386:A:O5'	81:A2:386:A:C8	2.49	0.66
81:A2:476:C:OP2	81:A2:658:G:H5'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1648:A:H5'	81:A2:1648:A:H8	1.60	0.66
81:A2:1727:U:H6	81:A2:1727:U:C5'	2.09	0.66
81:A2:2549:C:H3'	81:A2:2549:C:C6	2.30	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
4:B1:1172:U:C5'	76:Cn:14:LYS:HD3	2.20	0.66
4:B1:1389:C:H2'	4:B1:1389:C:P	2.36	0.66
4:B1:1557:C:O2	4:B1:1557:C:H2'	1.95	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
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
80:Cu:198:VAL:HG13	80:Cu:210:VAL:HG22	1.78	0.66
81:A2:438:C:H2'	81:A2:439:G:C8	2.31	0.66
81:A2:1249:G:C8	81:A2:1249:G:C5'	2.79	0.66
81:A2:1387:C:H3'	81:A2:1388:G:N7	2.11	0.66
81:A2:1836:A:C8	81:A2:1836:A:H5"	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
83:A4:21:G:H8	83:A4:21:G:O5'	1.78	0.66
2:AW:76:A:C8	81:A2:4331:G:N2	2.64	0.66
4:B1:988:C:O5'	4:B1:988:C:H6	1.79	0.66
4:B1:1174:U:C5'	76:Cn:21:ARG:NH2	2.48	0.66
4:B1:1696:C:O2'	4:B1:1697:A:H5"	1.95	0.66
5:BA:6:ASP:C	26:BV:83:PHE:HB3	2.20	0.66
6:BB:71:LEU:HD13	6:BB:72:ALA:N	2.10	0.66
38:CA:180:LEU:HD11	78:Cp:26:VAL:HG21	1.78	0.66
38:CA:193:ARG:NH2	81:A2:3654:C:H5"	2.11	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:A2:1389:C:H3'	81:A2:1389:C:O2	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
81:A2:4036:U:H2'	81:A2:4037:U:C6	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:790:C:H2'	4:B1:791:C:C6	2.31	0.65
4:B1:970:G:OP1	81:A2:3681:A:O4'	1.99	0.65
4:B1:1413:G:H2'	4:B1:1414:A:O4'	1.96	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
42:CE:227:HIS:CE1	81:A2:1273:G:H2'	2.31	0.65
45:CH:92:MET:HE1	45:CH:161:ILE:HB	1.77	0.65
53:CQ:10:ASP:CG	81:A2:2060:G:H4'	2.22	0.65
81:A2:460:C:O2	81:A2:460:C:H2'	1.96	0.65
81:A2:1082:U:H6	81:A2:1083:C:C5	2.13	0.65
81:A2:1445:G:H2'	81:A2:1446:C:C6	2.31	0.65
81:A2:2027:G:H5'	81:A2:2027:G:H8	1.62	0.65
81:A2:2357:G:N2	81:A2:2401:G:H5"	2.11	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:A2:4721:A:H3'	81:A2:4721:A:N3	2.10	0.65
83:A4:7:G:O2'	83:A4:8:G:H5'	1.97	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
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
39:CB:56:ILE:HG21	39:CB:365:LEU:HD22	1.78	0.65
41:CD:273:LEU:HD23	81:A2:1086:A:O4'	1.97	0.65
45:CH:96:TYR:HA	45:CH:177:ASP:OD1	1.96	0.65
53:CQ:11:ARG:O	81:A2:2060:G:H5"	1.95	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
56:CT:130:ARG:O	81:A2:1815:A:H1'	1.96	0.65
81:A2:38:A:H5'	81:A2:39:A:H4'	1.78	0.65
81:A2:89:C:C2'	81:A2:90:G:H5'	2.26	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:A2:1019:C:H2'	81:A2:1020:G:H8	1.61	0.65
81:A2:1399:G:C3'	81:A2:1400:A:H5"	2.27	0.65
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
81:A2:2764:A:H2'	81:A2:2764:A:N3	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
82:A3:126:C:C5'	82:A3:128:C:H5	2.09	0.65
1:AV:75:C:OP1	81:A2:4508:A:H8	1.78	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
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:B1:1408:U:H5'	21:BQ:69:ARG:HH21	1.62	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
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
63:Ca:62:HIS:HB2	81:A2:306:G:C8	2.32	0.65
65:Cc:52:CYS:HB3	65:Cc:92:CYS:SG	2.35	0.65
81:A2:224:A:C2	81:A2:225:C:H1'	2.31	0.65
81:A2:943:G:H1'	81:A2:944:A:O5'	1.96	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:OP1	1.96	0.65
81:A2:1943:G:O4'	81:A2:4655:C:H4'	1.96	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
82:A3:122:G:OP1	82:A3:122:G:H4'	1.95	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
12:BH:194:LEU:HD11	32:Bb:83:GLN:HB3	1.77	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
43:CF:219:GLY:O	81:A2:1884:U:H4'	1.95	0.65
52:CP:148:MET:HE2	52:CP:150:LEU:HD11	1.77	0.65
60:CX:66:PRO:HB3	82:A3:134:G:H5'	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:CZ:83:THR:HA	65:Cc:62:TYR:OH	1.95	0.65
65:Cc:62:TYR:CE2	65:Cc:66:LEU:HD11	2.31	0.65
68:Cf:106:TYR:HD2	68:Cf:107:PRO:HD2	0.90	0.65
79:Ct:44:ILE:HA	79:Ct:48:THR:HG21	1.78	0.65
81:A2:163:C:H2'	81:A2:164:C:H6	1.62	0.65
81:A2:194:A:H2	81:A2:222:G:N2	1.94	0.65
81:A2:292:G:H3'	81:A2:293:C:C6	2.31	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:A2:1807:C:H2'	81:A2:1808:G:C8	2.30	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:A2:3732: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
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
4:B1:448:A:C8	13:BI:26:LYS:N	2.65	0.65
4:B1:525:A:H3'	4:B1:525:A:C8	2.32	0.65
4:B1:527:C:H5'	14:BJ:122:SER:HB3	1.77	0.65
4:B1:909:G:P	54:CR:169:ALA:CB	2.84	0.65
4:B1:1034:A:C2'	4:B1:1035:A:H5'	2.27	0.65
4:B1:1841:C:H5"	76:Cn:2:ARG:NH1	2.07	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
62:CZ:105:ALA:HA	81:A2:2531:U:H1'	1.79	0.65
73:Ck:25:ILE:HD12	73:Ck:66:VAL:HG13	1.79	0.65
74:Cl:13:LEU:HD11	81:A2:2384:G:C2'	2.20	0.65
81:A2:183:G:C2'	81:A2:184:U:H5'	2.27	0.65
81:A2:1423:A:H5"	81:A2:1423:A:C8	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:A2:2305:U:C3'	81:A2:2306:G:H8	2.10	0.65
81:A2:2510:C:OP2	81:A2:2510:C:H6	1.78	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:B1:796:G:N2	4:B1:797:C:C5	2.65	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1476:A:H4'	4:B1:1477:U:O5'	1.92	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
43:CF:148:LYS:HG3	81:A2:926:G:H5"	1.77	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:A2:710: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
81:A2:928:A:C2	81:A2:931:C:N4	2.65	0.65
81:A2:1281:C:C6	81:A2:1281:C:C3'	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:OP1	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
82:A3:129:C:H2'	82:A3:130:C:H5	1.61	0.65
4:B1:109:U:O2'	4:B1:855:G:H1'	1.97	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:B1:1120: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
4:B1:1743:G:H1'	4:B1:1792:G:H22	1.61	0.65
5:BA:8:LEU:O	5:BA:55:TRP:HZ2	1.80	0.65
5:BA:176:TRP:CD2	5:BA:199:PRO:HB3	2.31	0.65
21:BQ:37:ARG:HB3	24:BT:7:LYS:HG3	1.77	0.65
21:BQ:102:GLU:HB2	37:Bg:57:ARG:HA	1.79	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:44:VAL:HG23	61:CY:123:ALA:CB	2.26	0.65
61:CY:121:ARG:HA	61:CY:125:SER:CB	2.27	0.65
80:Cu:5:ILE:CD1	80:Cu:177:ILE:HG21	2.27	0.65
81:A2:434:G:N1	81:A2:1284:C:N4	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1086:A:OP1	81:A2:1086:A:C8	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:A2:1742: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
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:B1:908:A:H5"	54:CR:172:ARG:HH12	1.60	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:B1:1446:A:N3	25:BU:55:ARG:HG3	2.12	0.65
4:B1:1673:U:C5'	4:B1:1673:U:C6	2.80	0.65
31:Ba:23:CYS:SG	31:Ba:26:CYS:N	2.69	0.65
50:CN:93:LYS:HD2	81:A2:292:G:H1'	1.76	0.65
61:CY:49:ILE:HD13	61:CY:80:ILE:HG21	1.79	0.65
70:Ch:45:SER:O	70:Ch:48:ARG:HG2	1.97	0.65
80:Cu:199:TYR:CE2	80:Cu:209:GLU:HB3	2.32	0.65
81:A2:69:A:N3	81:A2:69:A:H3'	2.12	0.65
81:A2:135:G:C8	81:A2:135:G:C3'	2.77	0.65
81:A2:717:G:H3'	81:A2:718:G:H5'	1.79	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:A2:1877:G:C5	81:A2:2254:G:C6	2.85	0.65
81:A2:2028:G:H8	81:A2:2028:G:O5'	1.80	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:C6	81:A2:4869:C:C3'	2.80	0.65
81:A2:4893:A:P	81:A2:4893:A:H3'	2.37	0.65
2:AW:4:C:H5'	81:A2:3684:U:OP2	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1008:A:OP1	65:Cc:8:LYS:CD	2.39	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
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
38:CA:196:TRP:CH2	81:A2:1592:A:C2	2.85	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
47:CJ:129:ASP:OD1	81:A2:4211:A:H8	1.79	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
67:Ce:62:SER:O	81:A2:2056:C:H5"	1.97	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
81:A2:155:A:OP1	81:A2:157:G:H5'	1.97	0.65
81:A2:425:A:H3'	81:A2:425:A:C8	2.32	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
3:AX:43:U:C1'	4:B1:961:G:C2	2.79	0.65
4:B1:234:C:H2'	4:B1:235:A:H8	1.61	0.65
4:B1:370:G:H5'	4:B1:370:G:H8	1.60	0.65
4:B1:1048:G:H8	4:B1:1048:G:O5'	1.79	0.65
4:B1:1201:U:O5'	4:B1:1201:U:H6	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
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
53:CQ:140:SER:H	81:A2:1437:C:H4'	1.62	0.65
73:Ck:36:VAL:CG1	73:Ck:43:TYR:HB2	2.27	0.65
81:A2:139:G:H8	81:A2:139:G:OP2	1.80	0.65
81:A2:640:A:C2'	81:A2:641:C:H5'	2.27	0.65
81:A2:1221:C:H6	81:A2:1221:C:H3'	1.61	0.65
81:A2:1717:A:O3'	83:A4:101:A:C2	2.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4685:G:H2'	81:A2:4686:A:H8	1.61	0.65
3:AX:43:U:C1'	4:B1:961:G:N3	2.59	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
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:B1:1028: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
37:Bg:173:LEU:CD2	37:Bg:189:ILE:HG23	2.26	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
70:Ch:101:ASN:HD21	81:A2:171:C:H5"	1.61	0.64
80:Cu:160:HIS:CD2	81:A2:4021:A:H2	2.15	0.64
81:A2:64:A:H4'	81:A2:65:A:O5'	1.94	0.64
81:A2:192:C:O5'	81:A2:192:C:H6	1.79	0.64
81:A2:707:C:H2'	81:A2:708:G:C8	2.31	0.64
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:A2:2045: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:H3'	81:A2:4526:U:C6	2.32	0.64
81:A2:4656:C:H2'	81:A2:4657:U:C6	2.31	0.64
82:A3:37:A:H5"	82:A3:39:G:O4'	1.97	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
5:BA:9:GLN:HB2	26:BV:83:PHE:HA	1.78	0.64
24:BT:4:VAL:HG21	24:BT:139:ALA:CB	2.27	0.64
55:CS:173:ASN:O	81:A2:4723:A:C8	2.51	0.64
58:CV:86:LYS:HD3	81:A2:2823:G:H1'	1.79	0.64
61:CY:62:TYR:HB3	61:CY:65:GLN:CG	2.27	0.64
81:A2:82:U:H3	81:A2:101:A:H62	1.45	0.64
81:A2:194:A:C2	81:A2:240:A:C2	2.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:957:G:H4'	81:A2:1218:A:H4'	1.78	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:A2:2695: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
81:A2:4025:C:C6	81:A2:4025:C:C3'	2.81	0.64
81:A2:4483:A:C2'	81:A2:4519:A:H62	2.09	0.64
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
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
4:B1:62:G:H5'	4:B1:172:U:C4	2.32	0.64
4:B1:838:G:C8	29:BY:9:THR:N	2.63	0.64
4:B1:1000:C:H41	31:Ba:16:GLY:H	1.44	0.64
4:B1:1203:G:H2'	4:B1:1699:A:C2	2.33	0.64
4:B1:1767:C:C2'	4:B1:1768:A:H5'	2.27	0.64
40:CC:86:ARG:HG3	40:CC:89:GLN:OE1	1.97	0.64
40:CC:147:VAL:O	79:Ct:76:SER:HA	1.96	0.64
40:CC:312:ARG:N	81:A2:943:G:O6	2.31	0.64
44:CG:29:ASN:N	44:CG:30:PRO:HD2	2.11	0.64
49:CM:97:ALA:C	81:A2:4826:C:N4	2.54	0.64
51:CO:182:GLU:CA	51:CO:187:LYS:HD3	2.27	0.64
66:Cd:57:MET:HB2	66:Cd:59:THR:HG22	1.78	0.64
81:A2:13:U:H4'	81:A2:14:C:OP2	1.97	0.64
81:A2:79:C:C1'	81:A2:329:A:H5'	2.26	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:A2:418:A:N6	82:A3:7:U:H3	1.96	0.64
81:A2:441:G:H1'	81:A2:1274:A:H4'	1.79	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:A2:1193: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:A2:1648:A:N3	81:A2:1830:U:H4'	2.11	0.64
81:A2:1797:G:N2	81:A2:1801:U:H5"	2.11	0.64
4:B1:331:C:H3'	4:B1:332:G:C5'	2.27	0.64
4:B1:343:A:H4'	9:BE:128:LYS:NZ	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:562:U:H4'	14:BJ:132:GLN:OE1	1.97	0.64
4:B1:796:G:N2	4:B1:797:C:H5	1.96	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:B1:1587:G:C6	24:BT:74:SER:HB3	2.31	0.64
4:B1:1597:C:H5"	4:B1:1598:G:OP2	1.98	0.64
11:BG:193:ALA:O	11:BG:197:GLN:HG2	1.98	0.64
21:BQ:89:SER:CB	21:BQ:119:LEU:HB3	2.28	0.64
36:Bf:105:TYR:HA	36:Bf:117:LEU:HD12	1.80	0.64
40:CC:342:ARG:NH2	81:A2:714:G:H4'	2.12	0.64
48:CL:111:GLN:HB3	81:A2:510:C:H5"	1.78	0.64
80:Cu:87:LEU:HB3	80:Cu:117:TYR:CZ	2.33	0.64
80:Cu:104:PHE:CE1	80:Cu:122:LEU:HD21	2.32	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:A2:1352: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:A2:3605:C:H6	81:A2:3605:C:C5'	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
81:A2:3873:G:P	81:A2:3873:G:H2'	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
82:A3:126:C:C5'	82:A3:128:C:C5	2.80	0.64
4:B1:413:G:H5'	4:B1:814:U:O2	1.96	0.64
4:B1:571:U:C3'	4:B1:572:U:O4'	2.45	0.64
4:B1:1162:C:H2'	4:B1:1163:C:C6	2.33	0.64
4:B1:1298:G:H1'	20:BP:79:HIS:HB2	1.77	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
9:BE:129:ILE:CG2	9:BE:156:VAL:HG22	2.26	0.64
36:Bf:100:LEU:HD23	36:Bf:100:LEU:H	1.63	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
52:CP:6:LEU:HB2	82:A3:10:G:N2	2.10	0.64
57:CU:61:VAL:HG12	57:CU:74:SER:CB	2.28	0.64
62:CZ:58:GLY:HA3	81:A2:4109:C:P	2.38	0.64
79:Ct:103:ARG:HB3	79:Ct:107:ARG:HB2	1.79	0.64
81:A2:32:G:H21	81:A2:50:C:H41	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:77:U:H3	81:A2:327:A:H61	1.45	0.64
81:A2:346:A:C2	81:A2:347:G:C1'	2.79	0.64
81:A2:943:G:OP1	81:A2:943:G:H4'	1.97	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:A2:3744: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:C6	81:A2:4895:C:C3'	2.81	0.64
2:AW:16:U:H1'	2:AW:60:U:O2	1.98	0.64
4:B1:36:U:H2'	4:B1:36:U:O2	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:B1:576:A:OP2	4:B1:576:A:H3'	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:B1:821:G:H1	14:BJ:147:PHE:HE1	1.44	0.64
4:B1:1372:U:H5"	4:B1:1386:A:N3	2.12	0.64
4:B1:1484:A:H4'	8:BD:159:HIS:CB	2.28	0.64
4:B1:1603:G:H3'	4:B1:1603:G:OP2	1.97	0.64
17:BM:71:GLU:OE2	36:Bf:113:LYS:HA	1.98	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
41:CD:260:GLU:HG2	83:A4:119:U:H3'	1.78	0.64
48:CL:167:ARG:C	63:Ca:97:ALA:HA	2.23	0.64
49:CM:23:LYS:HE3	49:CM:43:THR:O	1.97	0.64
49:CM:129:LYS:O	49:CM:132:LYS:HB3	1.97	0.64
69:Cg:45:ALA:HB2	69:Cg:82:MET:HA	1.78	0.64
78:Cp:29:ILE:HG13	78:Cp:30:GLU:N	2.12	0.64
80:Cu:43:VAL:HG11	80:Cu:151:LEU:HG	1.80	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
4:B1:39:A:H1'	4:B1:518:G:H22	1.62	0.64
4:B1:229:A:N6	4:B1:900:C:H1'	2.12	0.64
4:B1:539:C:H2'	4:B1:540:U:C6	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1861:G:H5'	4:B1:1861:G:N3	2.12	0.64
16:BL:5:GLN:NE2	16:BL:12:LYS:H	1.95	0.64
16:BL:61:PRO:HD3	16:BL:141:ASN:ND2	2.13	0.64
38:CA:20:VAL:HG13	81:A2:3648:U:C5	2.32	0.64
42:CE:182:ASN:HD21	42:CE:271:LEU:HB3	1.63	0.64
42:CE:183:ARG:HA	81:A2:4892:C:H42	1.62	0.64
52:CP:82:ARG:HH12	81:A2:2338:G:H2'	1.63	0.64
53:CQ:23:ILE:HG23	79:Ct:8:MET:HG3	1.79	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:A2:33:A:H8	81:A2:33:A:H5"	1.62	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:A2:730:G:H8	81:A2:730:G:O5'	1.81	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:A2:1801:U:C6	81:A2:1801:U:H3'	2.33	0.64
81:A2:2848:A:H3'	81:A2:2849:C:C6	2.32	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:OP1	1.98	0.64
82:A3:19:C:O2'	82:A3:20:A:H5'	1.98	0.64
3:AX:37:U:P	31:Ba:42:ARG:HE	2.19	0.64
3:AX:53:U:C4	8:BD:146:ARG:NH2	2.66	0.64
4:B1:215:G:H2'	4:B1:216:C:H6	1.62	0.64
4:B1:215:G:O2'	4:B1:216:C:H5'	1.98	0.64
4:B1:473:A:H5"	4:B1:473:A:H8	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
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
5:BA:63:ARG:HG2	26:BV:46:PHE:CE2	2.32	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
31:Ba:38:LYS:O	31:Ba:40:VAL:HG23	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:20:VAL:HG13	81:A2:3648:U:C4	2.33	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
80:Cu:62:PHE:CE1	80:Cu:110:LEU:HG	2.32	0.64
81:A2:154:U:H4'	81:A2:157:G:O3'	1.97	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
81:A2:1366:C:H6	81:A2:1366:C:O5'	1.81	0.64
81:A2:2274:U:OP2	81:A2:2274:U:H6	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
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
1:AV:34:G:N2	4:B1:1701:C:C2	2.66	0.64
2:AW:76:A:C2	77:Co:56:PHE:CB	2.77	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
4:B1:1654:G:H2'	4:B1:1655:C:C5	2.33	0.64
40:CC:211:TYR:HD1	40:CC:253:THR:HG1	1.46	0.64
44:CG:38:ASN:O	44:CG:44:ASP:HB2	1.98	0.64
64:Cb:54:LEU:HA	64:Cb:58:GLN:HB2	1.79	0.64
81:A2:83:C:H2'	81:A2:100:C:H42	1.61	0.64
81:A2:98:A:H1'	81:A2:283:G:O6	1.97	0.64
81:A2:424:A:H4'	81:A2:425:A:OP1	1.96	0.64
81:A2:727:G:H5"	81:A2:727:G:H8	1.62	0.64
81:A2:917:G:H4'	81:A2:918:C:O5'	1.98	0.64
81:A2:1377:A:H2'	81:A2:1400:A:N6	2.10	0.64
81:A2:1456:C:O5'	81:A2:1456:C:H6	1.81	0.64
81:A2:1480:C:OP1	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:A2:4507: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
4:B1:496:C:H2'	4:B1:497:C:C6	2.33	0.64
4:B1:1292:C:H6	4:B1:1292:C:O5'	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:BD:74:GLN:O	8:BD:78:GLY:HA2	1.98	0.64
12:BH:4:SER:N	12:BH:24:SER:HG	1.95	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
39:CB:228:TYR:HE1	81:A2:4934:A:C8	2.15	0.64
40:CC:183:VAL:HG11	40:CC:206:GLY:HA2	1.78	0.64
43:CF:63:GLN:OE1	81:A2:1191:G:H4'	1.98	0.64
43:CF:69:ILE:HD12	81:A2:716:U:C4'	2.28	0.64
48:CL:169:ILE:HG12	63:Ca:98:ALA:CB	2.26	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
61:CY:11:ARG:HG3	81:A2:226:G:H5'	1.80	0.64
81:A2:470:G:C2'	81:A2:471:C:H5'	2.27	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
81:A2:1056:C:H42	81:A2:1204:G:N2	1.95	0.64
81:A2:1539:A:C2'	81:A2:1540:G:H5'	2.27	0.64
81:A2:2021:A:C4	81:A2:4476:G:H1'	2.32	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:A2:4537:U:H2'	81:A2:4538:G:C8	2.32	0.64
4:B1:60:A:N3	4:B1:60:A:H2'	2.13	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:B1:1648: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
37:Bg:109:LEU:CD2	37:Bg:125:ARG:HG3	2.28	0.63
49:CM:57:LEU:HD12	55:CS:176:PHE:HZ	1.63	0.63
67:Ce:19:LYS:O	67:Ce:20:PHE:CG	2.51	0.63
71:Ci:33:LEU:O	71:Ci:34:THR:HB	1.98	0.63
81:A2:976:C:O2'	81:A2:977:G:H5'	1.98	0.63
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:A3:144:U:H2'	82:A3:145:C:O4'	1.98	0.63
4:B1:313:A:H5"	11:BG:191:ARG:NH1	2.13	0.63
4:B1:1093:A:H5'	27:BW:3:ARG:NE	2.13	0.63
4:B1:1204:A:H8	4:B1:1204:A:O5'	1.81	0.63
4:B1:1298:G:H4'	20:BP:78:THR:CA	2.28	0.63
4:B1:1399:C:H5'	4:B1:1399:C:H6	1.63	0.63
4:B1:1648:G:H2'	21:BQ:127:CYS:C	2.23	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
5:BA:48:ILE:HG21	22:BR:105:MET:SD	2.38	0.63
7:BC:128:VAL:HG11	7:BC:155:ILE:HG12	1.79	0.63
20:BP:34:MET:CG	20:BP:45:LEU:HD22	2.26	0.63
29:BY:91:LEU:HB3	29:BY:97:TYR:HB2	1.79	0.63
37:Bg:283:PRO:N	37:Bg:284:PRO:HD2	2.13	0.63
55:CS:167:PHE:O	81:A2:4829:A:H5"	1.98	0.63
63:Ca:62:HIS:CB	81:A2:306:G:C8	2.81	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:A2:1369:U:H5"	81:A2:1475:G:O2'	1.97	0.63
81:A2:1717:A:H1'	83:A4:101:A:H1'	1.78	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
81:A2:4861:C:C2'	81:A2:4862:G:H5'	2.28	0.63
3:AX:36:U:OP2	31:Ba:41:ILE:HG13	1.98	0.63
3:AX:53:U:H3	8:BD:146:ARG:CZ	2.11	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:B1:678:U:H4'	81:A2:1543:A:C8	2.34	0.63
4:B1:885:U:O2'	4:B1:886:A:H2'	1.99	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
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
49:CM:132:LYS:HG3	81:A2:4849:A:C3'	2.29	0.63
71:Ci:26:HIS:CB	81:A2:156:C:H4'	2.28	0.63
79:Ct:54:ALA:O	79:Ct:63:VAL:HB	1.98	0.63
81:A2:69:A:C2	81:A2:70:A:H4'	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1663:A:H5'	81:A2:1664:G:OP2	1.98	0.63
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:C4	81:A2:3586:G:OP2	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
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:B1:455:A:H2'	4:B1:456:C:C6	2.34	0.63
4:B1:746:C:C5'	12:BH:105:THR:HA	2.27	0.63
4:B1:928:G:O2'	4:B1:929:G:H8	1.81	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:B1:1562:C:H5'	24:BT:71:GLY:HA3	1.81	0.63
4:B1:1861:G:H4'	31:Ba:2:THR:O	1.99	0.63
25:BU:32:LEU:CD2	25:BU:85:HIS:HB2	2.28	0.63
39:CB:46:PHE:CD2	39:CB:84:MET:HE3	2.33	0.63
40:CC:139:SER:C	79:Ct:14:SER:HA	2.23	0.63
53:CQ:13:VAL:HG13	81:A2:1670:G:N7	2.13	0.63
63:Ca:74:ASN:HA	63:Ca:112:LEU:O	1.98	0.63
80:Cu:151:LEU:HA	80:Cu:159:PHE:CE1	2.34	0.63
81:A2:476:C:H6	81:A2:476:C:C5'	2.09	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
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:A2:2869:C:H4'	81:A2:4973:C:H5'	1.79	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:A2:5015:A:H5"	81:A2:5016:A:OP1	1.97	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
4:B1:190:G:H4'	13:BI:116:HIS:O	1.99	0.63
4:B1:1677:U:O2	4:B1:1677:U:H2'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1721:U:O4	81:A2:3599:A:P	2.56	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
39:CB:156:TYR:CE1	81:A2:4864:A:H5'	2.33	0.63
42:CE:188:ARG:H	42:CE:188:ARG:CD	2.08	0.63
44:CG:106:THR:HB	44:CG:195:HIS:CG	2.33	0.63
49:CM:31:ILE:CD1	55:CS:100:LEU:HD11	2.28	0.63
52:CP:3:ARG:O	82:A3:12:G:H4'	1.98	0.63
62:CZ:17:ARG:HD3	69:Cg:75:SER:HB3	1.79	0.63
69:Cg:63:VAL:HG22	69:Cg:66:ARG:HH21	1.63	0.63
79:Ct:90:LEU:HA	79:Ct:93:ILE:HG22	1.80	0.63
81:A2:446:C:H2'	81:A2:447:C:C6	2.34	0.63
81:A2:1331:G:H2'	81:A2:1332:C:O4'	1.97	0.63
81:A2:1387:C:H6	81:A2:1387:C:C5'	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:H6	81:A2:4120:C:H5"	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:A2:4588: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
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
4:B1:1057:C:H2'	4:B1:1059:G:N7	2.14	0.63
4:B1:1172:U:O4'	76:Cn:10:MET:HE1	1.97	0.63
4:B1:1397:U:H4'	4:B1:1398:G:N2	2.08	0.63
4:B1:1865:C:C6	31:Ba:92:ARG:HB3	2.34	0.63
13:BI:92:ARG:CZ	81:A2:2869:C:O2'	2.46	0.63
13:BI:123:ARG:NH2	81:A2:4979:C:H5'	0.96	0.63
29:BY:35:VAL:CG2	29:BY:40:ILE:HD11	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
79:Ct:79:ARG:HD2	81:A2:471:C:H4'	1.80	0.63
81:A2:134:G:H5"	81:A2:135:G:N1	2.14	0.63
81:A2:220:G:H4'	81:A2:222:G:N7	2.14	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:A2:1161:C:C6	81:A2:1161:C:H5"	2.32	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:A2:2803:U:O2	81:A2:2803:U:H2'	1.99	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
2:AW:37:MIA:C13	10:BF:133:THR:C	2.51	0.63
4:B1:5:U:O2'	4:B1:602:G:H4'	1.99	0.63
4:B1:67:C:C5	11:BG:162:LEU:C	2.77	0.63
4:B1:185:G:H2'	4:B1:186:C:C5	2.33	0.63
4:B1:744:G:H4'	12:BH:102:PRO:CG	2.26	0.63
4:B1:806:U:C2'	4:B1:807:G:H5'	2.26	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
6:BB:31:TYR:CE2	6:BB:94:LYS:HA	2.33	0.63
16:BL:96:ILE:HD13	28:BX:14:ARG:HD2	1.79	0.63
49:CM:132:LYS:HG3	81:A2:4849:A:H3'	1.81	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
69:Cg:66:ARG:HH11	81:A2:2516:C:H4'	1.63	0.63
71:Ci:33:LEU:HD13	71:Ci:33:LEU:H	1.63	0.63
81:A2:96:U:C6	81:A2:96:U:H5"	2.33	0.63
81:A2:269:G:H8	81:A2:269:G:H5"	1.63	0.63
81:A2:1048:G:H5"	81:A2:1215:G:C8	2.34	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:A2:1402: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:A2:3592:C:C6	81:A2:3592:C:C3'	2.81	0.63
81:A2:4233:A:H5"	81:A2:4233:A:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:4927:U:H3	81:A2:4941:G:H1	1.44	0.63
1:AV:72:C:H5"	1:AV:72:C:C6	2.24	0.63
4:B1:103:A:H2'	4:B1:105:U:OP1	1.98	0.63
4:B1:520:A:C8	4:B1:521:A:C8	2.86	0.63
4:B1:670:A:H1'	4:B1:1164:G:O4'	1.98	0.63
4:B1:1028:A:N1	81:A2:1543:A:N1	2.45	0.63
4:B1:1103:C:O5'	4:B1:1103:C:H6	1.81	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
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
13:BI:68:GLY:C	16:BL:21:LYS:HE3	2.23	0.63
26:BV:73:ALA:HB1	26:BV:78:ILE:HG13	1.79	0.63
37:Bg:191:HIS:CB	37:Bg:195:LEU:HD21	2.28	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
52:CP:85:LYS:CG	81:A2:3825:A:H4'	2.29	0.63
60:CX:64:SER:HB3	70:Ch:69:LEU:HD13	1.81	0.63
63:Ca:70:CYS:HA	63:Ca:109:TYR:CB	2.28	0.63
69:Cg:66:ARG:HD2	81:A2:2516:C:H5"	1.80	0.63
80:Cu:203:THR:HG22	80:Cu:204:MET:HE2	1.81	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
81:A2:1161:C:H6	81:A2:1161:C:H5"	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
81:A2:1732:G:H3'	81:A2:1733:U:H4'	1.80	0.63
81:A2:4570:A:H4'	81:A2:4570:A:OP1	1.96	0.63
81:A2:4684:C:H2'	81:A2:4685:G:C8	2.33	0.63
4:B1:438:G:H2'	4:B1:439:A:C8	2.33	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:O5'	4:B1:1825:A:C8	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BJ:136:ARG:HB3	14:BJ:158:ASP:O	1.97	0.63
31:Ba:21:ILE:HD11	31:Ba:32:LYS:HB3	1.80	0.63
37:Bg:44:LYS:HG3	37:Bg:56:GLN:HG3	1.80	0.63
46:CI:32:ARG:HG3	46:CI:33:ILE:HD13	1.81	0.63
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
79:Ct:30:ASN:O	79:Ct:48:THR:HB	1.99	0.63
81:A2:218:C:O5'	81:A2:218:C:H6	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
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:C5'	81:A2:1930:G:C8	2.81	0.63
81:A2:2061:C:H41	81:A2:2249:G:H22	1.47	0.63
81:A2:4051:U:H2'	81:A2:4052:G:H5"	1.81	0.63
82:A3:126:C:H5	82:A3:127:U:C2	2.17	0.63
83:A4:22:A:H3'	83:A4:22:A:OP2	1.98	0.63
4:B1:35:C:C3'	4:B1:36:U:H6	2.12	0.62
4:B1:77:A:H1'	4:B1:78:C:OP1	1.99	0.62
4:B1:412:G:N7	4:B1:413:G:H1'	2.14	0.62
4:B1:1258:A:N3	4:B1:1258:A:C3'	2.55	0.62
4:B1:1291:A:H8	4:B1:1291:A:O5'	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:B1:1648:G:H8	21:BQ:125:ARG:CA	2.12	0.62
4:B1:1700:C:H4'	4:B1:1701:C:OP2	1.98	0.62
4:B1:1827:U:C4'	81:A2:3728:A:H2'	2.29	0.62
7:BC:242:ASP:OD1	7:BC:246:LYS:HE3	1.98	0.62
39:CB:41:VAL:HA	39:CB:187:GLY:HA3	1.80	0.62
39:CB:73:VAL:HG22	58:CV:93:GLY:CA	2.29	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
54:CR:124:TYR:CE1	81:A2:2642:U:C5	2.87	0.62
65:Cc:17:ARG:O	65:Cc:21:VAL:HG23	1.99	0.62
67:Ce:97:ALA:O	67:Ce:122:VAL:HA	1.99	0.62
79:Ct:30:ASN:HB3	79:Ct:48:THR:HB	1.80	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:A2:456:G:N2	81:A2:679:U:N3	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:457:A:H2'	81:A2:457:A:N3	2.13	0.62
81:A2:957:G:H4'	81:A2:1218:A:C4'	2.29	0.62
81:A2:1197:G:O3'	81:A2:1198:G:H8	1.81	0.62
81:A2:1218:A:C8	81:A2:1218:A:C5'	2.79	0.62
81:A2:1454:G:C2	81:A2:1455:C:H1'	2.34	0.62
81:A2:2579:G:H2'	81:A2:2580:C:C6	2.34	0.62
81:A2:3779:C:C6	81:A2:3779:C:C3'	2.81	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:B1:60:A:H4'	4:B1:61:A:O5'	1.99	0.62
4:B1:222:U:H4'	16:BL:21:LYS:HE2	1.80	0.62
4:B1:551:U:H5"	35:Be:39:ASN:CB	2.25	0.62
4:B1:657:U:H3'	4:B1:657:U:H6	1.64	0.62
4:B1:682:U:H3	4:B1:1023:A:H61	1.47	0.62
4:B1:1284:A:C5	4:B1:1286:G:C5'	2.81	0.62
4:B1:1351:G:H8	4:B1:1351:G:H5"	1.63	0.62
4:B1:1404:U:H2'	4:B1:1406:G:N7	2.14	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:A2:354:A:H4'	81:A2:355:G:OP1	2.00	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:OP1	1.99	0.62
81:A2:4204:A:H1'	81:A2:4228:A:H4'	1.81	0.62
1:AV:19:G:O6	77:Co:104:ILE:HG22	1.97	0.62
3:AX:40:U:H2'	3:AX:41:U:H1'	1.81	0.62
4:B1:209:A:H4'	4:B1:210:U:OP1	1.97	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:64:GLN:O	44:CG:67:ARG:HG2	2.00	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:OP1	1.98	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
81:A2:1377:A:H8	81:A2:1377:A:O5'	1.82	0.62
81:A2:4510:G:C2'	81:A2:4511:U:H5'	2.28	0.62
81:A2:5018:G:H8	81:A2:5018:G:OP2	1.82	0.62
82:A3:105:C:H1'	82:A3:106:G:OP2	1.99	0.62
2:AW:23:A:H2'	2:AW:24:G:C8	2.34	0.62
4:B1:351:G:H3'	4:B1:351:G:H8	1.62	0.62
4:B1:380:G:C6	4:B1:382:C:H5"	2.33	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
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
31:Ba:44:ILE:HG13	31:Ba:45:VAL:HG23	1.81	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
80:Cu:105:ILE:HD11	80:Cu:145:MET:HG2	1.82	0.62
81:A2:502:C:H2'	81:A2:503:U:C6	2.34	0.62
81:A2:957:G:C8	81:A2:957:G:C5'	2.76	0.62
81:A2:1161:C:C6	81:A2:1161:C:C3'	2.82	0.62
81:A2:1217:C:O2'	81:A2:1218:A:H5"	1.98	0.62
81:A2:1930:G:H8	81:A2:1930:G:H5'	1.64	0.62
81:A2:2250:C:O5'	81:A2:2250:C:H6	1.83	0.62
81:A2:2333:U:H5'	81:A2:2333:U:C6	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:O5'	81:A2:3888:C:H6	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
81:A2:4833:C:H2'	81:A2:4834:C:H6	1.63	0.62
82:A3:131:G:H2'	82:A3:132:G:H8	1.64	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1700:C:H4'	4:B1:1701:C:C5'	2.29	0.62
23:BS:5:ILE:HG13	23:BS:6:PRO:HD2	1.81	0.62
25:BU:63:ILE:HD12	34:Bd:52:PHE:HE2	1.65	0.62
40:CC:54:VAL:HG11	81:A2:2320:G:N7	2.14	0.62
43:CF:148:LYS:CG	81:A2:926:G:H5"	2.29	0.62
68:Cf:102:ARG:HD2	81:A2:4711:U:P	2.40	0.62
70:Ch:35:LYS:HA	70:Ch:44:LEU:HD22	1.82	0.62
81:A2:166:G:H21	81:A2:167:C:C1'	2.13	0.62
81:A2:1059:C:C6	81:A2:1202:A:N6	2.68	0.62
81:A2:1748:G:P	81:A2:1748:G:C8	2.93	0.62
81:A2:4657:U:H2'	81:A2:4658:C:H5'	1.80	0.62
1:AV:34:G:C2	4:B1:1701:C:N1	2.67	0.62
1:AV:74:C:C5'	81:A2:4508:A:OP1	2.45	0.62
4:B1:168:C:H4'	11:BG:131:ARG:CD	2.26	0.62
4:B1:367:U:H5'	4:B1:367:U:H6	1.64	0.62
4:B1:681:U:H4'	28:BX:9:THR:HB	1.81	0.62
4:B1:753:C:H3'	4:B1:754:G:C4'	2.29	0.62
4:B1:1260:A:H2	4:B1:1620:A:H1'	1.62	0.62
7:BC:98:LEU:CD2	7:BC:101:SER:HB2	2.28	0.62
12:BH:148:LEU:HA	27:BW:42:MET:HG2	1.82	0.62
13:BI:123:ARG:HH21	81:A2:4979:C:C4'	1.76	0.62
18:BN:44:GLY:CA	65:Cc:23:LYS:HZ1	2.10	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
62:CZ:111:ARG:HB2	81:A2:2551:G:N2	2.14	0.62
63:Ca:70:CYS:HA	63:Ca:109:TYR:HB3	1.80	0.62
69:Cg:46:CYS:HA	81:A2:2573:G:C4'	2.30	0.62
69:Cg:64:LEU:HD13	81:A2:2726:C:H1'	1.80	0.62
81:A2:445:U:H3'	81:A2:446:C:C6	2.34	0.62
81:A2:457:A:N3	81:A2:458:U:H5'	2.14	0.62
81:A2:482:G:H8	81:A2:482:G:C5'	2.09	0.62
81:A2:1748:G:H2'	81:A2:1749:A:C5'	2.30	0.62
81:A2:2401:G:H3'	81:A2:2401:G:C8	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
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:A2:4734:C:H2'	81:A2:4735:G:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:39:A:OP2	14:BJ:3:VAL:HG13	2.00	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
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
6:BB:134:LEU:HD12	6:BB:219:LYS:HB2	1.82	0.62
16:BL:47:PRO:HD2	16:BL:62:PHE:CE1	2.34	0.62
41:CD:273:LEU:HD23	81:A2:1086:A:H1'	1.80	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
79:Ct:120:SER:O	79:Ct:123:PRO:HD2	2.00	0.62
81:A2:1:C:C2	82:A3:157:U:C2	2.86	0.62
81:A2:280:C:H2'	81:A2:281:U:H6	1.65	0.62
81:A2:476:C:P	81:A2:658:G:H5'	2.40	0.62
81:A2:482:G:H2'	81:A2:484:G:C8	2.33	0.62
81:A2:1197:G:H2'	81:A2:1198:G:C8	2.34	0.62
81:A2:2431:U:H2'	81:A2:2431:U:O2	1.99	0.62
81:A2:2479:G:P	81:A2:4052:G:H22	2.23	0.62
81:A2:2610:U:H2'	81:A2:2611:C:O4'	2.00	0.62
81:A2:2865:G:O4'	81:A2:3587:C:H1'	2.00	0.62
81:A2:3580:A:C2	81:A2:4971:A:C8	2.76	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:A2:4838:C:OP2	81:A2:4839:G:H5'	2.00	0.62
83:A4:63:C:H4'	83:A4:64:G:O5'	1.99	0.62
4:B1:132:U:H5'	4:B1:133:C:C5	2.34	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
4:B1:1287:A:C8	36:Bf:99:LYS:HB3	2.34	0.62
4:B1:1337:C:H2'	4:B1:1338:G:H8	1.60	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:H2'	4:B1:1863:A:N3	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:479:G:H2'	81:A2:480:C:C6	2.35	0.62
81:A2:663:G:H2'	81:A2:664:C:C6	2.34	0.62
81:A2:1903:G:H2'	81:A2:1904:C:H5'	1.82	0.62
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:A2:4813: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
83:A4:63:C:C1'	83:A4:64:G:H5"	2.28	0.62
3:AX:58:U:H5"	3:AX:58:U:C6	2.33	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
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:B1:1284:A:C8	4:B1:1286:G:C5'	2.82	0.62
5:BA:81:ASN:OD1	5:BA:205:ARG:HD2	1.99	0.62
14:BJ:39:ASN:HA	35:Be:34:ARG:CZ	2.29	0.62
37:Bg:144:ASP:HB3	37:Bg:177:TRP:CZ3	2.34	0.62
40:CC:136:LEU:HA	79:Ct:10:VAL:HG12	1.82	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
65:Cc:38:ILE:HD13	65:Cc:43:ALA:HB2	1.81	0.62
69:Cg:43:LYS:O	69:Cg:44:SER:HB2	2.00	0.62
71:Ci:26:HIS:HB3	81:A2:156:C:H5'	1.81	0.62
72:Cj:20:ARG:HH21	82:A3:109:C:H3'	1.63	0.62
81:A2:15:A:C2	82:A3:143:G:C2	2.87	0.62
81:A2:441:G:H1'	81:A2:1274:A:H5"	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:4545:U:H2'	81:A2:4546:G:C8	2.35	0.62
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
2:AW:41:C:H2'	2:AW:42:C:H5"	1.81	0.62
4:B1:38:A:H4'	14:BJ:5:ARG:HE	1.64	0.62
4:B1:145:G:H2'	4:B1:145:G:N3	2.14	0.62
4:B1:571:U:H2'	4:B1:572:U:O4'	1.99	0.62
4:B1:970:G:O4'	81:A2:3680:A:O5'	2.17	0.62
4:B1:990:A:H5'	31:Ba:33:ASP:HA	1.82	0.62
4:B1:1023:A:H5'	18:BN:3:ARG:NH2	2.15	0.62
4:B1:1493:C:H5"	4:B1:1493:C:H6	1.65	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
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
69:Cg:54:ARG:HG2	81:A2:2629:G:H1	1.64	0.62
71:Ci:40:VAL:O	71:Ci:44:ILE:HG12	1.99	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
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
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:OP1	81:A2:4560:G:H4'	2.00	0.62
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1202:U:C3’	4:B1:1203:G:H5”	2.30	0.61
4:B1:1309:C:H1’	36:Bf:133:ALA:HB1	1.82	0.61
4:B1:1540:G:H2’	4:B1:1541:G:O4’	2.00	0.61
4:B1:1679:A:H3’	33:Bc:20:ARG:HH12	1.64	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
40:CC:234:LYS:HD3	81:A2:1353:A:C2	2.35	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
72:Cj:54:LYS:O	72:Cj:58:THR:HG23	1.99	0.61
80:Cu:111:MET:HA	80:Cu:114:ILE:HG22	1.81	0.61
81:A2:292:G:H3’	81:A2:293:C:H6	1.65	0.61
81:A2:409:A:C2	82:A3:17:A:H1’	2.35	0.61
81:A2:961:C:C3’	81:A2:962:G:C8	2.83	0.61
81:A2:1161:C:C6	81:A2:1161:C:OP2	2.54	0.61
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:A2:2549:C:O3’	81:A2:2736:G:C8	2.53	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:A2:3685: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
4:B1:312:G:C4	11:BG:191:ARG:HD3	2.34	0.61
4:B1:526:A:C2’	14:BJ:128:VAL:HG22	2.29	0.61
4:B1:1397:U:H6	4:B1:1397:U:H3’	1.65	0.61
4:B1:1416:C:C4	4:B1:1431:G:N2	2.68	0.61
4:B1:1515:G:H5”	4:B1:1515:G:H8	1.65	0.61
4:B1:1540:G:H5’	4:B1:1540:G:H8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1808:U:H2'	4:B1:1809:A:C8	2.35	0.61
14:BJ:117:LEU:HB3	14:BJ:119:LEU:HD13	1.82	0.61
23:BS:25:LYS:HE2	23:BS:27:ALA:HB3	1.82	0.61
41:CD:41:LYS:CE	56:CT:34:TYR:HB2	2.30	0.61
43:CF:97:GLY:HA3	81:A2:1874:A:H5'	1.81	0.61
47:CJ:131:TYR:CE1	81:A2:4220:U:H1'	2.35	0.61
53:CQ:42:THR:HG22	81:A2:1409:C:H5"	1.80	0.61
78:Cp:18:TYR:H	81:A2:3604:A:H61	1.48	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:A2:673:G:H2'	81:A2:674:G:O4'	2.01	0.61
81:A2:1245:G:C2'	81:A2:1246:G:H5"	2.27	0.61
81:A2:1249:G:H8	81:A2:1249:G:O5'	1.81	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
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
81:A2:4869:C:H3'	81:A2:4869:C:H6	1.63	0.61
82:A3:62:A:H4'	82:A3:63:U:O5'	1.99	0.61
1:AV:34:G:H5'	4:B1:1248:U:O2	1.99	0.61
3:AX:45:U:C6	4:B1:1207:G:N2	2.68	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
4:B1:1016:U:H1'	4:B1:1017:U:O5'	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
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
37:Bg:292:SER:HB2	37:Bg:297:THR:O	1.99	0.61
39:CB:254:ILE:HD13	81:A2:3866:G:H5'	1.81	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
48:CL:115:GLN:OE1	81:A2:509:G:H4'	2.01	0.61
59:CW:44:ARG:HH12	81:A2:3585:U:H3'	1.65	0.61
68:Cf:6:TRP:CD1	81:A2:4711:U:H2'	2.35	0.61
68:Cf:23:GLU:OE1	81:A2:430:G:H1'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cu:60:VAL:HG22	80:Cu:101:THR:HB	1.81	0.61
81:A2:64:A:H8	81:A2:64:A:O5'	1.83	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
81:A2:4903:C:C2'	81:A2:4904:G:H5'	2.29	0.61
4:B1:69:C:H6	4:B1:69:C:H5"	1.64	0.61
4:B1:131:C:H4'	4:B1:132:U:O5'	2.01	0.61
4:B1:591:U:H2'	4:B1:591:U:O2	1.99	0.61
4:B1:797:C:H4'	12:BH:109:ARG:HB3	1.83	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:B1:1375: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:B1:1587:G:C5	24:BT:74:SER:HB3	2.35	0.61
5:BA:180:ARG:HG2	5:BA:184:ARG:HH12	1.65	0.61
31:Ba:22:ARG:NH1	31:Ba:29:CYS:HB3	2.16	0.61
40:CC:58:ALA:HB3	81:A2:348:U:P	2.40	0.61
65:Cc:28:VAL:HG23	65:Cc:95:ALA:HB3	1.83	0.61
68:Cf:41:PHE:HE1	68:Cf:110:ILE:HD11	1.66	0.61
81:A2:633:G:H2'	81:A2:634:C:C6	2.35	0.61
81:A2:1732:G:H4'	81:A2:1733:U:OP2	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
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:H3'	81:A2:4383:U:C6	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
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
2:AW:4:C:H1'	81:A2:3683:G:O2'	2.01	0.61
4:B1:25:A:H2'	4:B1:26:U:C6	2.35	0.61
4:B1:184:G:H3'	4:B1:185:G:C4'	2.30	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
4:B1:1148:A:H5'	4:B1:1148:A:N3	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1253:A:H5”	4:B1:1253:A:N3	2.15	0.61
4:B1:1331:C:O2	4:B1:1331:C:H2’	2.00	0.61
4:B1:1529:C:H2’	4:B1:1530:U:H5’	1.81	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
31:Ba:87:ARG:HG2	31:Ba:91:ALA:HB3	1.81	0.61
40:CC:141:GLY:CA	79:Ct:15:SER:HB3	2.30	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
81:A2:33:A:H5’	81:A2:34:A:OP2	2.01	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
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:A2:4313: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
4:B1:10:G:N7	4:B1:1697:A:C2	2.69	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
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
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
33:Bc:12:ALA:HB1	33:Bc:32:VAL:HG13	1.83	0.61
41:CD:293:ARG:NH2	81:A2:1159:U:O2’	2.33	0.61
42:CE:162:VAL:CG1	42:CE:175:VAL:HG13	2.31	0.61
43:CF:44:LYS:HD3	81:A2:1219:C:C4	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
51:CO:125:LYS:HE2	51:CO:135:PHE:CG	2.35	0.61
61:CY:2:LYS:HD3	61:CY:9:SER:OG	2.00	0.61
65:Cc:103:ASP:HB2	65:Cc:106:ARG:HB3	1.83	0.61
72:Cj:79:ARG:NH2	81:A2:246:C:H4'	2.15	0.61
81:A2:24:G:N2	81:A2:25:A:C4	2.69	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:A2:350:A:H5"	81:A2:351:A:OP2	1.99	0.61
81:A2:1396:G:H2'	81:A2:1397:C:C6	2.36	0.61
81:A2:2252:A:H2'	81:A2:2253:C:C6	2.36	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:H5"	81:A2:2802:A:C8	2.31	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:B1:54: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
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
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
56:CT:81:LYS:HE3	81:A2:1664:G:H5'	1.81	0.61
81:A2:131:C:H2'	81:A2:138:C:H41	1.65	0.61
81:A2:891:C:H2'	81:A2:892:G:H8	1.65	0.61
81:A2:1078:G:C2'	81:A2:1079:C:H5'	2.29	0.61
81:A2:1146:G:H2'	81:A2:1146:G:N3	2.16	0.61
81:A2:1492:U:H6	81:A2:1492:U:O5'	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1649:G:H3'	81:A2:1649:G:C8	2.36	0.61
81:A2:2847:A:O2'	81:A2:2848:A:H5'	2.00	0.61
81:A2:4118:C:P	81:A2:4118:C:H6	2.24	0.61
81:A2:4813:C:H3'	81:A2:4814:C:C5	2.36	0.61
4:B1:43:U:H3'	4:B1:44:U:C5'	2.31	0.61
4:B1:192:C:H2'	4:B1:193:C:H5'	1.82	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
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:B1:1587:G:H1	24:BT:70:ALA:HB1	1.63	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
34:Bd:24:CYS:HB3	34:Bd:42:CYS:SG	2.41	0.61
36:Bf:126:CYS:O	36:Bf:130:VAL:HB	2.01	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
67:Ce:22:ARG:HD2	67:Ce:31:ILE:HG23	1.82	0.61
68:Cf:102:ARG:HD3	68:Cf:102:ARG:N	2.15	0.61
80:Cu:27:LEU:HB2	80:Cu:163:VAL:HG21	1.82	0.61
81:A2:314:C:H2'	81:A2:315:A:C8	2.36	0.61
81:A2:943:G:H1'	81:A2:944:A:C5'	2.30	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:O5'	81:A2:2873:G:H8	1.83	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
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
4:B1:320:G:C8	4:B1:320:G:OP1	2.53	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:683:G:C2	4:B1:1023:A:C5	2.89	0.61
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
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
62:CZ:83:THR:HA	65:Cc:62:TYR:HH	1.64	0.61
65:Cc:51:ASN:O	78:Cp:42:CYS:HA	2.00	0.61
69:Cg:85:LYS:O	69:Cg:88:ARG:HB3	2.01	0.61
81:A2:71:C:H5"	81:A2:72:C:C5	2.35	0.61
81:A2:106:A:H8	81:A2:106:A:O5'	1.82	0.61
81:A2:269:G:H2'	81:A2:320:A:C6	2.36	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:H8	81:A2:2335:G:O5'	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:A2:2839: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
82:A3:60:G:H21	82:A3:64:U:H1'	1.66	0.61
3:AX:39:U:C5	3:AX:40:U:C5	2.89	0.61
4:B1:753:C:N4	4:B1:754:G:C2	2.69	0.61
4:B1:863:U:O5'	4:B1:863:U:H6	1.84	0.61
4:B1:913:A:H61	12:BH:119:SER:C	2.09	0.61
4:B1:991:G:N3	4:B1:991:G:H2'	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1230:C:H2'	4:B1:1231:C:H5'	1.83	0.61
5:BA:4:ALA:HB1	26:BV:82:ASN:HB3	1.82	0.61
9:BE:87:MET:HE2	9:BE:123:LEU:HB2	1.83	0.61
13:BI:131:PRO:HG2	13:BI:138:ASN:OD1	2.00	0.61
30:BZ:62:VAL:N	30:BZ:63:PRO:CD	2.64	0.61
38:CA:240:ALA:CB	81:A2:3627:C:H4'	2.30	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
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
69:Cg:66:ARG:CD	81:A2:2516:C:H5"	2.31	0.61
74:Cl:19:GLN:HA	82:A3:52:A:H4'	1.83	0.61
80:Cu:151:LEU:HD21	80:Cu:184:LEU:CD2	2.31	0.61
81:A2:254:G:N2	81:A2:255:C:H5	1.98	0.61
81:A2:916:A:H1'	81:A2:917:G:C5'	2.30	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:H5"	81:A2:1710:C:H6	1.63	0.61
82:A3:13:G:H2'	82:A3:14:U:H6	1.66	0.61
82:A3:126:C:H5'	82:A3:128:C:C5	2.32	0.61
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:C8	4:B1:671:A:H5"	2.36	0.60
4:B1:741:C:C4	4:B1:744:G:N1	2.69	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
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
63:Ca:7:LYS:O	63:Ca:10:LYS:HB3	1.99	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:A2:1154: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:2062:C:C5	81:A2:2249:G:N1	2.69	0.60
81:A2:2311:C:C6	81:A2:2311:C:C5'	2.76	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
1:AV:74:C:C4	81:A2:4158:G:C2	2.89	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
4:B1:1023:A:H5'	18:BN:3:ARG:HH21	1.64	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:H8	4:B1:1567:G:OP1	1.83	0.60
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
39:CB:77:THR:HG21	39:CB:336:CYS:HA	1.81	0.60
40:CC:54:VAL:C	40:CC:56:GLU:H	2.09	0.60
40:CC:158:VAL:O	40:CC:217:ILE:HD13	2.01	0.60
41:CD:176:SER:OG	81:A2:4283:A:H5"	2.02	0.60
44:CG:39:PHE:CD1	44:CG:47:PRO:HD3	2.35	0.60
48:CL:135:LYS:H	48:CL:135:LYS:CD	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
77:Co:48:TYR:HE1	81:A2:3895:C:H4'	1.66	0.60
78:Cp:79:VAL:O	78:Cp:83:ILE:HG12	2.01	0.60
80:Cu:55:GLN:HB3	80:Cu:162:ARG:HH22	1.65	0.60
81:A2:12:A:O3'	81:A2:13:U:H3'	2.00	0.60
81:A2:96:U:C6	81:A2:96:U:C5'	2.84	0.60
81:A2:441:G:H8	81:A2:441:G:C5'	2.02	0.60
81:A2:462:A:H2'	81:A2:462:A:N3	2.15	0.60
81:A2:949:G:H8	81:A2:949:G:P	2.23	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
4:B1:175:A:C2	4:B1:176:U:C1'	2.83	0.60
4:B1:1335:G:C2'	4:B1:1336:C:H5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
10:BF:102:LEU:HB3	30:BZ:67:LEU:HD22	1.84	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:36:GLY:O	24:BT:7:LYS:HG2	2.01	0.60
21:BQ:134:GLY:HA3	21:BQ:139:ALA:O	2.02	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
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:A2:348:U:H5”	81:A2:348:U:H6	1.66	0.60
81:A2:926:G:O2’	81:A2:929:U:C6	2.51	0.60
81:A2:965:C:N4	81:A2:1249:G:N1	2.49	0.60
81:A2:2763:C:O5’	81:A2:2763:C:H6	1.84	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:O5’	83:A4:26:C:H6	1.84	0.60
1:AV:30:G:H5”	1:AV:30:G:H8	1.66	0.60
2:AW:56:C:C2	81:A2:3927:G:N1	2.70	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
4:B1:1021:U:H5”	18:BN:128:TYR:HE1	1.63	0.60
4:B1:1037:G:H4’	4:B1:1845:A:H4’	1.82	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
10:BF:75:SER:O	10:BF:78:MET:HE3	2.01	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
38:CA:180:LEU:HD21	78:Cp:26:VAL:HG21	1.84	0.60
39:CB:21:ARG:HH12	81:A2:4933:G:H5’	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:268:ARG:HH21	81:A2:3865:C:H1'	1.66	0.60
56:CT:12:ARG:NH2	81:A2:4169:G:H4'	2.15	0.60
81:A2:400:G:H4'	81:A2:401:A:C5'	2.32	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
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
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
81:A2:3908:G:OP2	81:A2:3908:G:C8	2.52	0.60
81:A2:4387:G:H4'	81:A2:4387:G:OP1	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
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
4:B1:69:C:H5"	4:B1:69:C:C6	2.36	0.60
4:B1:223:C:H2'	4:B1:224:A:H8	1.66	0.60
4:B1:486:A:H8	4:B1:486:A:O5'	1.85	0.60
4:B1:525:A:H3'	4:B1:525:A:H8	1.65	0.60
4:B1:1225:U:C2'	4:B1:1226:G:H5'	2.29	0.60
4:B1:1311:C:H5"	17:BM:40:LYS:HZ1	1.66	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
13:BI:130:THR:OG1	13:BI:131:PRO:HD2	2.02	0.60
25:BU:79:ARG:O	34:Bd:54:LYS:HA	2.01	0.60
25:BU:80:PHE:HA	34:Bd:53:ILE:O	2.01	0.60
37:Bg:109:LEU:HD21	37:Bg:125:ARG:HG3	1.82	0.60
38:CA:41:ILE:HG23	38:CA:90:CYS:SG	2.41	0.60
38:CA:129:ALA:HB3	38:CA:132:ASN:HD22	1.66	0.60
40:CC:137:VAL:HG11	40:CC:144:ILE:HD11	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
41:CD:264:LYS:HG2	83:A4:1:G:N7	2.17	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
68:Cf:63:LYS:HB2	68:Cf:64:PRO:HD3	1.82	0.60
81:A2:379:A:H1'	81:A2:394:G:N2	2.17	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
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:A2:3695:A:HO2'	81:A2:3696:A:H8	1.48	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
2:AW:62:C:C2'	80:Cu:37:ASN:HD21	2.11	0.60
3:AX:48:U:C5	4:B1:1702:G:OP2	2.54	0.60
4:B1:522:A:H8	4:B1:522:A:O5'	1.85	0.60
4:B1:688:U:H5"	12:BH:103:LYS:HD2	1.84	0.60
4:B1:746:C:H3'	4:B1:746:C:OP2	2.01	0.60
4:B1:867:G:H8	4:B1:867:G:P	2.24	0.60
4:B1:925:G:H1	4:B1:1017:U:H3	1.48	0.60
4:B1:1325:G:C2'	4:B1:1326:U:H5"	2.32	0.60
4:B1:1348:G:H8	4:B1:1348:G:P	2.25	0.60
4:B1:1683:C:H6	4:B1:1683:C:O5'	1.85	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
37:Bg:283:PRO:C	37:Bg:285:GLN:H	2.10	0.60
44:CG:73:ARG:HH11	44:CG:73:ARG:HG3	1.67	0.60
45:CH:41:ILE:HG13	45:CH:73:ILE:CG1	2.32	0.60
49:CM:66:HIS:HB3	81:A2:736:G:O4'	2.02	0.60
54:CR:103:ARG:NH2	81:A2:2644:C:H5"	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:193:C:O3'	81:A2:194:A:H8	1.84	0.60
81:A2:299:G:H4'	81:A2:301:G:H4'	1.82	0.60
81:A2:426:A:C2'	81:A2:427:C:H5'	2.32	0.60
81:A2:657:C:H6	81:A2:657:C:O5'	1.85	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:A2:3908:G:N7	81:A2:4130:A:H2'	2.17	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
82:A3:137:A:N3	82:A3:137:A:H2'	2.16	0.60
2:AW:2:C:H6	2:AW:2:C:C5'	2.11	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
4:B1:1614:A:H2'	4:B1:1615:U:H6	1.66	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
40:CC:74:ALA:C	40:CC:76:ILE:H	2.08	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
53:CQ:11:ARG:HB2	81:A2:2061:C:P	2.41	0.60
79:Ct:78:VAL:HA	81:A2:473:G:H21	1.65	0.60
80:Cu:87:LEU:HD13	80:Cu:97:LEU:HD11	1.84	0.60
80:Cu:203:THR:CG2	80:Cu:204:MET:HE2	2.31	0.60
81:A2:99:A:C2'	81:A2:100:C:H6	2.15	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
81:A2:1056:C:N4	81:A2:1204:G:N1	2.49	0.60
81:A2:1191:G:O2'	81:A2:1192:G:H5'	2.01	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
81:A2:2279:C:O2'	81:A2:2282:G:H4'	2.01	0.60
81:A2:2416:G:H1'	81:A2:2754:G:N3	2.17	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
1:AV:74:C:C2	81:A2:4157:G:N1	2.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:77:A:N7	11:BG:155:GLN:HA	2.16	0.60
4:B1:184:G:C3’	4:B1:185:G:H4’	2.29	0.60
4:B1:315:C:H6	4:B1:315:C:H5”	1.66	0.60
4:B1:1389:C:O2’	4:B1:1390:U:C6	2.52	0.60
4:B1:1389:C:H5”	22:BR:43:SER:HB2	1.84	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
13:BI:194:GLU:OE1	16:BL:20:LYS:HD3	2.01	0.60
23:BS:70:ILE:HD13	23:BS:77:TYR:CD1	2.37	0.60
37:Bg:219:TRP:CZ3	37:Bg:226:HIS:HB2	2.37	0.60
41:CD:289:ARG:HG2	41:CD:293:ARG:HG3	1.83	0.60
44:CG:76:VAL:HG22	44:CG:238:GLY:C	2.27	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
60:CX:125:ASN:HD22	81:A2:2509:C:H5”	1.66	0.60
79:Ct:99:LYS:CB	79:Ct:103:ARG:HH22	2.14	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:A2:481:C:H2’	81:A2:482:G:C5’	2.31	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
81:A2:2310:G:H5’	82:A3:20:A:O3’	2.01	0.60
81:A2:2736:G:H5”	81:A2:2736:G:N3	2.17	0.60
81:A2:3703:U:O5’	81:A2:3703:U:H6	1.85	0.60
81:A2:4283:A:H2’	81:A2:4284:A:O4’	2.02	0.60
81:A2:4479:C:H6	81:A2:4479:C:H3’	1.66	0.60
81:A2:4700:C:H2’	81:A2:4701:G:C4’	2.19	0.60
81:A2:5018:G:OP2	81:A2:5018:G:C8	2.54	0.60
4:B1:66:G:C8	11:BG:160:LYS:HD2	2.37	0.60
4:B1:144:U:C5	11:BG:180:VAL:HG22	2.37	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:B1:606:G:N7	35:Be:54:GLY:HA3	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1301:A:H3'	4:B1:1301:A:N3	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
7:BC:167:ARG:HA	7:BC:181:PRO:CD	2.30	0.60
13:BI:168:GLN:C	81:A2:4979:C:H3'	2.27	0.60
31:Ba:5:ARG:HG3	31:Ba:8:ASN:HA	1.84	0.60
39:CB:27:GLY:HA3	39:CB:276:HIS:CD2	2.37	0.60
39:CB:232:THR:HG23	39:CB:237:THR:O	2.02	0.60
40:CC:50:GLN:HB3	40:CC:51:PRO:HD3	1.84	0.60
40:CC:296:PRO:O	40:CC:300:ARG:HG3	2.01	0.60
47:CJ:175:LEU:CB	47:CJ:176:PRO:HD2	2.31	0.60
48:CL:59:VAL:HG13	81:A2:74:G:OP1	2.02	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
65:Cc:51:ASN:HD22	78:Cp:43:GLY:HA3	1.66	0.60
69:Cg:46:CYS:C	81:A2:2573:G:H4'	2.27	0.60
71:Ci:64:SER:O	71:Ci:65:LYS:HB3	2.02	0.60
81:A2:64:A:C3'	81:A2:110:C:H41	2.13	0.60
81:A2:254:G:N3	81:A2:254:G:C3'	2.63	0.60
81:A2:377:A:H2	81:A2:395:U:O2	1.84	0.60
81:A2:437:C:H2'	81:A2:438:C:C6	2.37	0.60
81:A2:506:C:H2'	81:A2:507:C:C6	2.37	0.60
81:A2:914:G:N2	81:A2:915:C:C6	2.70	0.60
81:A2:1207:C:O5'	81:A2:1207:C:H6	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:A2:2858: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:A2:4051:U:C2'	81:A2:4052:G:H5"	2.31	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
4:B1:130:G:H5'	11:BG:195:LYS:NZ	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:600:G:H5”	4:B1:601:G:OP2	2.02	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:P	4:B1:1439:A:H8	2.25	0.60
4:B1:1542:C:C6	4:B1:1542:C:C5’	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
8:BD:94:ARG:HG2	8:BD:101:GLN:NE2	2.16	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:97:ALA:O	49:CM:100:ARG:HB2	2.02	0.60
49:CM:104:MET:HE2	51:CO:198:THR:HB	1.83	0.60
51:CO:87:MET:HA	81:A2:2028:G:N2	2.17	0.60
72:Cj:11:ARG:HB3	72:Cj:11:ARG:HH11	1.67	0.60
75:Cm:93:LYS:HB2	75:Cm:124:LYS:CE	2.32	0.60
77:Co:69:ARG:NH1	81:A2:4306:U:H5”	2.17	0.60
79:Ct:75:THR:HB	81:A2:474:G:N7	2.17	0.60
81:A2:12:A:C2	81:A2:14:C:N4	2.70	0.60
81:A2:289:G:O2’	81:A2:290:C:H5’	2.02	0.60
81:A2:308:A:H2’	81:A2:308:A:N3	2.17	0.60
81:A2:381:C:H6	81:A2:381:C:C5’	2.12	0.60
81:A2:715:C:H2’	81:A2:716:U:H6	1.65	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:A2:1352: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:A2:3770:U:O2	81:A2:4457:U:H5”	2.02	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
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
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:B1:169:U:H6	4:B1:169:U:H5”	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O2	4:B1:940:U:H2'	2.02	0.59
4:B1:1124:C:O5'	4:B1:1124:C:H6	1.84	0.59
4:B1:1141:G:O4'	4:B1:1151:G:H4'	2.02	0.59
4:B1:1208:A:H61	4:B1:1691:U:H3	1.49	0.59
4:B1:1411:G:H2'	4:B1:1411:G:N3	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:B1:1587:G:O2'	24:BT:77:LYS:HB3	2.01	0.59
21:BQ:24:HIS:O	21:BQ:68:ILE:HA	2.01	0.59
37:Bg:82:SER:HB3	37:Bg:84:ASP:OD1	2.02	0.59
39:CB:206:PRO:HG2	39:CB:209:GLN:OE1	2.02	0.59
40:CC:6:PRO:HB2	81:A2:475:U:P	2.42	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:A2:166:G:C2'	81:A2:167:C:H4'	2.32	0.59
81:A2:328:U:H4'	81:A2:329:A:OP1	2.01	0.59
81:A2:400:G:H4'	81:A2:401:A:H5'	1.84	0.59
81:A2:937:C:O2'	81:A2:938:C:H5'	2.02	0.59
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:A2:1708: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:A2:4272:U:H2'	81:A2:4273:A:C8	2.37	0.59
81:A2:4825:G:H4'	81:A2:4826:C:OP1	2.02	0.59
81:A2:4977:U:H2'	81:A2:4978:C:H3'	1.83	0.59
82:A3:22:U:H4'	82:A3:23:C:OP1	2.01	0.59
82:A3:121:G:H3'	82:A3:122:G:C5'	2.31	0.59
83:A4:31:G:H2'	83:A4:32:A:C8	2.37	0.59
1:AV:57:G:H8	1:AV:57:G:H5"	1.67	0.59
3:AX:34:U:H5"	31:Ba:66:LYS:NZ	2.16	0.59
3:AX:39:U:O2'	3:AX:40:U:H5'	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1102:G:H1	4:B1:1130:G:H22	1.50	0.59
4:B1:1121:G:H2'	4:B1:1122:A:C8	2.37	0.59
4:B1:1215:C:H4'	4:B1:1216:C:OP1	1.96	0.59
4:B1:1322:G:H8	4:B1:1322:G:O5'	1.85	0.59
4:B1:1771:G:H2'	4:B1:1772:C:H6	1.66	0.59
15:BK:38:LYS:HE3	15:BK:40:VAL:HG21	1.84	0.59
40:CC:141:GLY:HA2	79:Ct:15:SER:CB	2.31	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
67:Ce:104:SER:HB3	81:A2:2279:C:H4'	1.84	0.59
69:Cg:54:ARG:HA	69:Cg:54:ARG:CZ	2.32	0.59
74:Cl:13:LEU:CD1	81:A2:2384:G:H2'	2.22	0.59
81:A2:24:G:N1	81:A2:25:A:C5	2.70	0.59
81:A2:133:C:H2'	81:A2:135:G:C2	2.36	0.59
81:A2:236:C:H2'	81:A2:237:G:C8	2.36	0.59
81:A2:261:U:H2'	81:A2:262:C:C6	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:A2:4089:G:H2'	81:A2:4089:G:N3	2.18	0.59
81:A2:4139:G:H2'	81:A2:4140:G:H8	1.66	0.59
81:A2:4441:U:H2'	81:A2:4441:U:O2	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
2:AW:4:C:O4'	81:A2:3684:U:OP1	2.20	0.59
3:AX:57:U:H5'	7:BC:109:ILE:CD1	2.32	0.59
4:B1:43:U:H3'	4:B1:44:U:H5'	1.84	0.59
4:B1:101:U:O5'	4:B1:101:U:H6	1.85	0.59
4:B1:134:C:H3'	4:B1:135:U:C4'	2.28	0.59
4:B1:213:G:H2'	4:B1:214:U:H6	1.66	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:B1:606:G:H8	35:Be:54:GLY:HA2	1.65	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
4:B1:1513:C:O5'	4:B1:1513:C:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BA:163:CYS:SG	5:BA:174:MET:HE1	2.42	0.59
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
23:BS:14:ARG:NH2	47:CJ:111:GLU:OE1	2.30	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
40:CC:330:PRO:HB3	81:A2:1218:A:C8	2.37	0.59
61:CY:87:ARG:NH2	81:A2:377:A:H5"	2.17	0.59
79:Ct:75:THR:HG23	79:Ct:78:VAL:HG22	1.84	0.59
81:A2:2:G:C6	81:A2:3:C:C4	2.91	0.59
81:A2:21:G:N2	81:A2:22:G:H1'	2.17	0.59
81:A2:121:A:N6	81:A2:147:U:C2	2.70	0.59
81:A2:155:A:H2'	81:A2:155:A:N3	2.17	0.59
81:A2:333:G:N1	82:A3:33:G:N1	2.50	0.59
81:A2:372:U:H5'	81:A2:405:C:C5	2.38	0.59
81:A2:426:A:C8	81:A2:427:C:H5	2.19	0.59
81:A2:1445:G:H2'	81:A2:1446:C:H6	1.65	0.59
81:A2:2006:C:H5'	81:A2:2006:C:H6	1.66	0.59
81:A2:2279:C:O2	81:A2:2279:C:H2'	2.01	0.59
81:A2:2549:C:O4'	81:A2:2737:G:N7	2.34	0.59
81:A2:2650:G:OP1	81:A2:2650:G:H3'	2.01	0.59
81:A2:2664:U:OP1	81:A2:2664:U:H4'	2.01	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:A2:4278:C:H3'	81:A2:4278:C:C6	2.37	0.59
81:A2:4897:C:O2	81:A2:4897:C:H3'	2.02	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:B1:884:C:H2'	4:B1:885:U:H6	1.66	0.59
4:B1:1036:A:C2	4:B1:1844:U:H4'	2.36	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:B1:1848:U:H4'	4:B1:1849:G:OP1	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Cb:57:MET:CB	81:A2:1791:C:H4'	2.29	0.59
69:Cg:46:CYS:HA	81:A2:2573:G:H4'	1.82	0.59
69:Cg:63:VAL:HG22	69:Cg:66:ARG:NH2	2.16	0.59
81:A2:9:C:O2	81:A2:9:C:C2'	2.50	0.59
81:A2:10:A:C2	82:A3:147:G:C6	2.89	0.59
81:A2:249:C:H2'	81:A2:250:G:C8	2.38	0.59
81:A2:266:C:H4'	81:A2:267:C:OP1	2.02	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:A2:2560: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:A2:2789: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
1:AV:42:C:H6	1:AV:42:C:C5'	2.13	0.59
4:B1:84:A:O3'	29:BY:119:GLY:HA3	2.03	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
4:B1:1038:U:H1'	4:B1:1181:A:C2	2.37	0.59
4:B1:1049:A:H2'	4:B1:1050:A:C5'	2.33	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:H5"	4:B1:1520:G:C4	2.38	0.59
5:BA:110:ASN:C	5:BA:110:ASN:HD22	2.11	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
31:Ba:38:LYS:C	31:Ba:71:LEU:HB2	2.27	0.59
37:Bg:59:LEU:HD22	37:Bg:90:TRP:CE3	2.37	0.59
41:CD:33:ARG:NE	83:A4:7:G:H4'	2.17	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
63:Ca:134:GLU:HG2	63:Ca:144:CYS:SG	2.42	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Cc:53:PRO:HG2	81:A2:2651:A:C2	2.38	0.59
67:Ce:12:ILE:HG23	67:Ce:66:THR:CB	2.32	0.59
72:Cj:63:ARG:O	72:Cj:68:LYS:HE2	2.03	0.59
73:Ck:24:LYS:NZ	73:Ck:69:LEU:HD11	2.17	0.59
79:Ct:30:ASN:HB3	79:Ct:48:THR:CB	2.33	0.59
81:A2:224:A:H61	81:A2:238:G:H2'	1.66	0.59
81:A2:357:A:C2	81:A2:367:A:C5	2.91	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
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:A2:2284: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
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:A2:3682: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
82:A3:4:C:C2'	82:A3:5:U:H5'	2.32	0.59
82:A3:155:C:H5'	82:A3:156:U:OP2	2.03	0.59
83:A4:23:A:C2'	83:A4:24:C:C6	2.85	0.59
1:AV:39:U:P	4:B1:1058:A:H5'	2.43	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
4:B1:1420:G:H8	4:B1:1420:G:OP2	1.84	0.59
4:B1:1494:U:H1'	4:B1:1495:G:OP2	2.01	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
34:Bd:26:ASN:O	34:Bd:39:CYS:SG	2.60	0.59
38:CA:22:HIS:HB3	38:CA:52:PRO:HG2	1.84	0.59
40:CC:150:LEU:HD23	40:CC:150:LEU:H	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
52:CP:6:LEU:CD2	81:A2:416:U:H1'	2.30	0.59
66:Cd:42:ALA:HB3	66:Cd:43:PRO:HD3	1.83	0.59
81:A2:134:G:N3	81:A2:134:G:H2'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1299:U:H4'	81:A2:1832:G:O6	2.02	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:A2:2654: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
81:A2:4204:A:O4'	81:A2:4228:A:H4'	2.03	0.59
81:A2:4254:C:H5'	81:A2:4254:C:C6	2.38	0.59
81:A2:4544:A:H2	81:A2:4680:C:OP2	1.86	0.59
81:A2:5002:C:C6	81:A2:5002:C:H5"	2.38	0.59
82:A3:34:U:H2'	82:A3:34:U:O2	2.02	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:B1:16:G:H2'	4:B1:17:C:C6	2.37	0.59
4:B1:124:U:C6	4:B1:124:U:C3'	2.84	0.59
4:B1:158:A:H2'	4:B1:159:A:O4'	2.02	0.59
4:B1:593:C:C6	4:B1:593:C:OP2	2.56	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
4:B1:1551:U:H3'	4:B1:1551:U:O2	2.03	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:B1:1861:G:P	31:Ba:3:LYS:HA	2.43	0.59
23:BS:12:ILE:HB	47:CJ:119:TYR:HB2	1.85	0.59
32:Bb:37:CYS:SG	32:Bb:41:TYR:N	2.75	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
49:CM:2:VAL:HB	81:A2:4724:G:H1'	1.85	0.59
49:CM:91:TRP:HB2	81:A2:4825:G:C2	2.37	0.59
57:CU:22:THR:HG23	57:CU:69:LYS:HE3	1.84	0.59
62:CZ:1:MET:HA	65:Cc:67:ALA:O	2.03	0.59
68:Cf:22:ARG:HB3	68:Cf:24:HIS:CD2	2.37	0.59
68:Cf:46:ARG:HB2	68:Cf:106:TYR:CZ	2.38	0.59
70:Ch:70:ARG:CG	70:Ch:83:LEU:HD22	2.33	0.59
81:A2:45:U:H2'	81:A2:46:U:H5'	1.83	0.59
81:A2:357:A:C2	81:A2:367:A:C4	2.91	0.59
81:A2:445:U:C3'	81:A2:446:C:C6	2.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:925:C:H4'	81:A2:925:C:OP1	2.01	0.59
81:A2:1213:G:O5'	81:A2:1213:G:H8	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:A2:4179: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
2:AW:2:C:H5"	2:AW:2:C:C6	2.29	0.59
2:AW:13:C:H2'	2:AW:14:A:H5'	1.84	0.59
2:AW:19:G:C5	81:A2:3927:G:C1'	2.84	0.59
3:AX:60:U:C4	3:AX:61:U:C5	2.90	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
4:B1:602:G:H8	4:B1:602:G:O5'	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
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:H6	4:B1:1649:U:H3'	1.68	0.59
4:B1:1705:C:H4'	76:Cn:1:MET:H2	1.68	0.59
27:BW:55:ASP:HB3	27:BW:58:ALA:O	2.03	0.59
31:Ba:30:VAL:HG11	31:Ba:35:ALA:HB2	1.84	0.59
37:Bg:24:THR:HB	37:Bg:71:ILE:CG2	2.32	0.59
43:CF:48:LYS:CB	81:A2:1220:G:H5'	2.32	0.59
43:CF:103:PRO:HD3	81:A2:1854:U:O3'	2.03	0.59
47:CJ:63:ARG:NH1	77:Co:103:VAL:HB	2.17	0.59
48:CL:103:ARG:HH21	71:Ci:25:ARG:HG2	1.68	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
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
81:A2:166:G:H2'	81:A2:167:C:O4'	2.03	0.59
81:A2:180:C:O2'	81:A2:181:U:H5'	2.02	0.59
81:A2:244:G:H2'	81:A2:245:C:H6	1.67	0.59
81:A2:284:G:C4'	81:A2:285:G:C8	2.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1624:C:H6	81:A2:1624:C:O5'	1.86	0.59
81:A2:1706:U:H6	81:A2:1706:U:O5'	1.86	0.59
81:A2:2310:G:H8	81:A2:2310:G:C5'	2.16	0.59
81:A2:2386:U:H5"	81:A2:2387:C:C5	2.36	0.59
81:A2:2597:G:H1	81:A2:2613:U:H3	1.50	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
83:A4:34:C:H2'	83:A4:34:C:O2	2.01	0.59
83:A4:58:A:H2'	83:A4:59:G:C8	2.37	0.59
1:AV:51:U:H2'	1:AV:52:G:C8	2.38	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:OP1	2.02	0.59
4:B1:1021:U:OP2	4:B1:1021:U:H2'	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
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
32:Bb:59:CYS:HB2	32:Bb:61:THR:HG23	1.84	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
61:CY:1:MET:HG2	81:A2:1347:C:C5	2.38	0.59
63:Ca:32:ARG:HD2	81:A2:37:U:H4'	1.85	0.59
68:Cf:69:VAL:HB	81:A2:4901:U:H1'	1.84	0.59
69:Cg:64:LEU:HD13	81:A2:2726:C:C1'	2.32	0.59
69:Cg:94:ALA:HA	81:A2:4089:G:C5	2.37	0.59
71:Ci:43:MET:O	71:Ci:47:VAL:HG23	2.03	0.59
79:Ct:99:LYS:HB3	79:Ct:103:ARG:HH22	1.65	0.59
81:A2:454:A:H2'	81:A2:455:G:C8	2.38	0.59
81:A2:1079:C:H2'	81:A2:1080:U:H4'	1.82	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:H2'	81:A2:2602:U:O2	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
2:AW:65:G:H2'	2:AW:65:G:N3	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:195:C:H2'	4:B1:196:C:H6	1.67	0.59
4:B1:307:G:H4'	4:B1:308:G:OP1	2.02	0.59
4:B1:312:G:H22	11:BG:195:LYS:CB	2.15	0.59
4:B1:450:C:H2'	4:B1:451:G:H4'	1.84	0.59
4:B1:672:A:H2	4:B1:1162:C:O2'	1.85	0.59
4:B1:959:G:N1	19:BO:65:ASP:HB3	2.17	0.59
4:B1:965:U:H6	4:B1:965:U:O5'	1.85	0.59
4:B1:1641:A:H5"	4:B1:1641:A:H8	1.68	0.59
4:B1:1852:C:H41	76:Cn:5:TRP:HE3	1.48	0.59
6:BB:31:TYR:OH	6:BB:91:VAL:HG13	2.03	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
31:Ba:21:ILE:HD11	31:Ba:32:LYS:CB	2.33	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
40:CC:145:GLU:O	79:Ct:77:TYR:HB2	2.03	0.59
45:CH:98:HIS:CG	81:A2:4562:A:H5"	2.38	0.59
48:CL:160:VAL:HA	81:A2:635:G:H5'	1.84	0.59
69:Cg:70:THR:HB	81:A2:2564:A:N7	2.18	0.59
72:Cj:25:LYS:O	72:Cj:25:LYS:HG2	2.01	0.59
81:A2:957:G:H4'	81:A2:1218:A:C5'	2.33	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:A2:1378: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:H2'	81:A2:2306:G:N3	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:C5	81:A2:3592:C:OP2	2.55	0.59
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
4:B1:39:A:H8	4:B1:39:A:O5'	1.86	0.58
4:B1:130:G:N7	4:B1:131:C:C2	2.71	0.58
4:B1:130:G:P	4:B1:130:G:H8	2.25	0.58
4:B1:133:C:H3'	4:B1:134:C:H4'	1.85	0.58
4:B1:237:C:H1'	4:B1:238:C:H5'	1.83	0.58
4:B1:684:G:H2'	4:B1:685:A:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:933:G:H22	31:Ba:15:ARG:HD3	1.68	0.58
4:B1:941:C:H2'	4:B1:942:G:O4'	2.03	0.58
4:B1:1513:C:H5"	34:Bd:10:HIS:CD2	2.37	0.58
4:B1:1544:C:H4'	21:BQ:80:GLN:HE22	1.68	0.58
4:B1:1655:C:H2'	4:B1:1656:G:C8	2.37	0.58
4:B1:1784:G:H2'	4:B1:1785:C:H6	1.67	0.58
6:BB:112:SER:HB2	31:Ba:68:TYR:CD2	2.37	0.58
12:BH:102:PRO:HB2	12:BH:105:THR:OG1	2.03	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:A2:121:A:H2'	81:A2:121:A:OP1	2.03	0.58
81:A2:152:C:H2'	81:A2:153:G:C8	2.38	0.58
81:A2:170:C:H6	81:A2:170:C:O5'	1.85	0.58
81:A2:1352:A:H2	81:A2:1353:A:C6	2.21	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:O5'	81:A2:2462:U:H6	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:H8	83:A4:23:A:O5'	1.84	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:B1:746:C:C5'	12:BH:104:PRO:C	2.77	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:73:VAL:HG22	58:CV:93:GLY:HA2	1.83	0.58
53:CQ:95:VAL:HG23	53:CQ:96:PRO:HD2	1.85	0.58
67:Ce:85:LEU:C	67:Ce:85:LEU:HD13	2.28	0.58
69:Cg:5:LEU:HB2	69:Cg:32:TYR:CE2	2.38	0.58
80:Cu:64:GLU:HB2	80:Cu:107:GLU:HG2	1.85	0.58
81:A2:154:U:H2'	81:A2:154:U:O2	2.02	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
81:A2:1387:C:H3'	81:A2:1388:G:C8	2.38	0.58
81:A2:1630:G:H2'	81:A2:1630:G:N3	2.18	0.58
81:A2:1726:U:C6	81:A2:1726:U:H5"	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
1:AV:30:G:H5"	1:AV:30:G:C8	2.39	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
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:B1:1310:U:C4'	36:Bf:142:GLY:HA3	2.31	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
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
60:CX:61:PRO:HG2	70:Ch:80:PRO:HG3	1.84	0.58
71:Ci:82:ARG:CZ	81:A2:297:A:H2	2.16	0.58
79:Ct:14:SER:HB3	79:Ct:17:LEU:HB2	1.85	0.58
81:A2:221:U:H4'	81:A2:222:G:O5'	2.02	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:H4'	81:A2:974:C:OP1	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1833:G:H2'	81:A2:1834:C:H6	1.68	0.58
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:C6	81:A2:4358:C:C3'	2.85	0.58
81:A2:4372:C:H42	81:A2:4390:G:H1	1.49	0.58
82:A3:148:A:H3'	82:A3:148:A:H8	1.68	0.58
4:B1:46:A:O5'	4:B1:47:G:H5"	2.03	0.58
4:B1:158:A:O4'	4:B1:464:A:C8	2.56	0.58
4:B1:1089:G:H2'	4:B1:1090:C:C6	2.38	0.58
4:B1:1686:G:C6	4:B1:1687:C:C4	2.92	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
13:BI:123:ARG:NE	81:A2:4979:C:H5'	2.15	0.58
14:BJ:36:GLY:HA2	14:BJ:124:HIS:CE1	2.39	0.58
14:BJ:138:ARG:HG2	14:BJ:139:LYS:H	1.67	0.58
38:CA:237:LEU:HD22	81:A2:3627:C:O4'	2.03	0.58
39:CB:228:TYR:CD1	81:A2:2812:A:N3	2.71	0.58
40:CC:101:MET:HE2	40:CC:103:ALA:O	2.03	0.58
42:CE:172:LEU:CD1	81:A2:4896:G:H5"	2.33	0.58
81:A2:28:C:H4'	81:A2:61:A:H4'	1.83	0.58
81:A2:32:G:N2	81:A2:50:C:H5	2.01	0.58
81:A2:42:A:N6	81:A2:4339:A:H2	2.02	0.58
81:A2:95:G:N2	81:A2:96:U:H1'	2.18	0.58
81:A2:99:A:H3'	81:A2:100:C:H6	1.64	0.58
81:A2:974:C:H2'	81:A2:974:C:O2	2.02	0.58
81:A2:1174:G:H8	81:A2:1174:G:O5'	1.87	0.58
81:A2:1305:C:H5	81:A2:3847:C:O3'	1.87	0.58
81:A2:2549:C:OP1	81:A2:2741:A:C8	2.56	0.58
81:A2:3899:U:H2'	81:A2:3900:C:C6	2.38	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
82:A3:54:C:O5'	82:A3:54:C:H6	1.86	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:B1:77:A:H4'	4:B1:78:C:C4	2.39	0.58
4:B1:111:A:N6	4:B1:351:G:N3	2.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:577:U:H4'	4:B1:578:C:O4'	2.04	0.58
4:B1:1242:U:H4'	4:B1:1243:U:O5'	2.04	0.58
4:B1:1242:U:O2'	4:B1:1518:C:H4'	2.03	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:OP1	4:B1:1868:U:H4'	2.02	0.58
5:BA:12:GLU:HA	5:BA:15:VAL:HG22	1.84	0.58
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
22:BR:105:MET:HG2	22:BR:106:LEU:N	2.18	0.58
23:BS:6:PRO:HD3	30:BZ:52:LYS:CD	2.34	0.58
31:Ba:88:SER:O	31:Ba:92:ARG:HG3	2.03	0.58
40:CC:333:LYS:CD	81:A2:1217:C:H5'	2.33	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:A2:467:G:H2'	81:A2:468:C:H6	1.67	0.58
81:A2:677:C:H3'	81:A2:677:C:OP2	2.03	0.58
81:A2:942:G:H1'	81:A2:2250:C:P	2.43	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:H3'	81:A2:1801:U:H6	1.67	0.58
81:A2:1870:A:C5'	81:A2:1871:C:H5	2.08	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:H2'	81:A2:2593:C:O2	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:A2:4832:G:H8	81:A2:4832:G:H5'	1.69	0.58
83:A4:98:G:H3'	83:A4:99:G:H8	1.69	0.58
4:B1:133:C:C5	4:B1:134:C:H1'	2.38	0.58
4:B1:229:A:H2'	4:B1:888:U:O2	2.04	0.58
4:B1:360:A:H4'	4:B1:361:U:O5'	2.04	0.58
4:B1:439:A:H4'	4:B1:1799:G:H4'	1.84	0.58
4:B1:475:C:H6	4:B1:475:C:C5'	2.07	0.58
4:B1:525:A:H4'	35:Be:31:ARG:HB3	1.85	0.58
4:B1:656:G:H4'	4:B1:657:U:OP2	2.03	0.58
4:B1:1311:C:H5"	4:B1:1311:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1658:G:H2'	4:B1:1659:U:H5'	1.84	0.58
4:B1:1834:A:C2	4:B1:1837:G:N2	2.70	0.58
6:BB:24:PRO:O	6:BB:28:LYS:HG3	2.04	0.58
6:BB:103:MET:CB	6:BB:215:VAL:HG12	2.31	0.58
13:BI:55:TYR:N	13:BI:55:TYR:CD1	2.70	0.58
28:BX:86:PRO:HB3	28:BX:121:LYS:HZ2	1.69	0.58
29:BY:59:GLY:O	29:BY:71:GLY:HA2	2.04	0.58
33:Bc:21:THR:O	33:Bc:27:CYS:HB2	2.03	0.58
36:Bf:118:ARG:HD2	36:Bf:134:SER:OG	2.03	0.58
37:Bg:172:LYS:HE2	37:Bg:192:THR:O	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:12:ILE:HD11	45:CH:55:LEU:HB2	1.84	0.58
45:CH:23:ARG:HH11	45:CH:23:ARG:HG3	1.69	0.58
45:CH:122:TYR:CD1	81:A2:4573:C:H4'	2.39	0.58
61:CY:90:ALA:HB1	81:A2:380:A:N6	2.19	0.58
67:Ce:58:ILE:HB	81:A2:1643:U:H5"	1.86	0.58
81:A2:79:C:C2'	81:A2:80:C:H5'	2.34	0.58
81:A2:173:G:H2'	81:A2:174:G:C8	2.39	0.58
81:A2:344:A:H4'	81:A2:346:A:N7	2.18	0.58
81:A2:890:C:H2'	81:A2:891:C:C6	2.37	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:A2:1898: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:A2:3592:C:H6	81:A2:3592:C:O5'	1.86	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
82:A3:19:C:C2'	82:A3:20:A:H5'	2.32	0.58
4:B1:58:C:H5"	4:B1:499:G:N2	2.13	0.58
4:B1:102:A:H4'	4:B1:103:A:O5'	2.02	0.58
4:B1:184:G:H3'	4:B1:185:G:H5"	1.84	0.58
4:B1:636:C:H2'	4:B1:637:U:O4'	2.04	0.58
4:B1:743:U:H5	12:BH:97:GLN:HE22	1.51	0.58
4:B1:1002:U:C2'	4:B1:1003:U:H5'	2.34	0.58
4:B1:1157:G:H1'	27:BW:76:SER:HB2	1.85	0.58
4:B1:1354:G:H2'	4:B1:1356:G:N7	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1701:C:OP2	4:B1:1701:C:H4'	2.02	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
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
40:CC:139:SER:OG	79:Ct:10:VAL:HB	2.04	0.58
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
43:CF:148:LYS:CD	81:A2:926:G:H5"	2.33	0.58
77:Co:75:PRO:HA	77:Co:78:ARG:HE	1.69	0.58
81:A2:642:C:C2'	81:A2:643:G:H4'	2.30	0.58
81:A2:658:G:C8	81:A2:658:G:C5'	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
81:A2:976:C:C4'	81:A2:1222:G:H4'	2.33	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:A2:1737: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:A2:2019:A:C2'	81:A2:4424:A:H2	2.17	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:A2:3695:A:O2'	81:A2:3696:A:H8	1.85	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:A2:4490: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
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
2:AW:20:U:H2'	2:AW:21:A:H5'	1.84	0.58
4:B1:96:C:H1'	4:B1:474:G:C5'	2.33	0.58
4:B1:319:C:H1'	4:B1:320:G:OP1	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
56:CT:84:ILE:HD11	64:Cb:24:PRO:HB3	1.85	0.58
79:Ct:103:ARG:HG2	79:Ct:107:ARG:H	1.69	0.58
80:Cu:105:ILE:HG21	80:Cu:132:LEU:HD23	1.86	0.58
81:A2:38:A:C5'	81:A2:39:A:H4'	2.33	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:A2:4381: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
4:B1:66:G:C1'	11:BG:160:LYS:HG2	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:B1:1307:U:C3'	4:B1:1308:U:H5'	2.33	0.58
5:BA:111:GLN:OE1	7:BC:89:LYS:HG2	2.04	0.58
7:BC:253:PRO:HD3	27:BW:68:ARG:NH2	2.18	0.58
12:BH:109:ARG:HG3	12:BH:113:LYS:HA	1.84	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
32:Bb:82:LYS:O	32:Bb:83:GLN:HG3	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:62:TYR:HB3	61:CY:65:GLN:HG2	1.86	0.58
75:Cm:95:ILE:HD11	75:Cm:124:LYS:HZ3	1.68	0.58
81:A2:85:G:H22	81:A2:97:G:H3'	1.69	0.58
81:A2:156:C:O2	81:A2:156:C:H2'	2.04	0.58
81:A2:183:G:H2'	81:A2:184:U:H5'	1.86	0.58
81:A2:335:A:H2'	81:A2:336:C:C6	2.39	0.58
81:A2:349:C:O5'	81:A2:349:C:H6	1.87	0.58
81:A2:402:G:H5"	81:A2:405:C:O2'	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:A2:1649:G:H3'	81:A2:1649:G:H8	1.67	0.58
81:A2:2031:C:H5"	81:A2:2032:U:OP2	2.04	0.58
81:A2:4032:C:C2'	81:A2:4033:G:H4'	2.31	0.58
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
82:A3:154:G:H8	82:A3:154:G:O5'	1.86	0.58
83:A4:47:G:O5'	83:A4:47:G:C8	2.57	0.58
4:B1:67:C:H6	11:BG:162:LEU:HD23	1.69	0.58
4:B1:209:A:O2'	4:B1:210:U:H5"	2.04	0.58
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:B1:454:U:H5"	11:BG:76:LEU:HD22	1.85	0.58
4:B1:590:A:N3	4:B1:590:A:H2'	2.19	0.58
4:B1:667:U:H5"	4:B1:1087:A:C2	2.38	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
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:B1:1385:G:H5"	8:BD:160:SER:OG	2.04	0.58
4:B1:1800:A:H5"	4:B1:1801:A:OP2	2.04	0.58
6:BB:46:LYS:NZ	19:BO:27:VAL:HA	2.19	0.58
6:BB:107:ARG:HG3	19:BO:131:ASP:O	2.04	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
19:BO:116:LEU:HD22	31:Ba:53:ILE:CD1	2.34	0.58
37:Bg:24:THR:HB	37:Bg:71:ILE:HG21	1.85	0.58
41:CD:146:LEU:CB	81:A2:4283:A:H2	2.15	0.58
41:CD:273:LEU:HD22	83:A4:108:G:OP2	2.04	0.58
44:CG:194:VAL:HG13	44:CG:196:ARG:HG3	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Ch:98:HIS:NE2	81:A2:172:C:H5"	2.19	0.58
72:Cj:3:LYS:HG2	81:A2:3612:A:N7	2.18	0.58
72:Cj:31:LYS:NZ	81:A2:1511:G:H5"	2.19	0.58
73:Ck:47:ILE:HG12	73:Ck:52:LYS:HB2	1.86	0.58
75:Cm:104:HIS:HB3	75:Cm:107:ALA:HB2	1.84	0.58
81:A2:2:G:N2	82:A3:156:U:N3	2.51	0.58
81:A2:427:C:C6	81:A2:427:C:O5'	2.57	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:A2:1161: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:O5'	81:A2:2046:C:H6	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:A2:3876:G:H2'	81:A2:4407:C:O2'	2.04	0.58
83:A4:23:A:H2	83:A4:119:U:O2	1.87	0.58
3:AX:53:U:C4	8:BD:146:ARG:CZ	2.86	0.57
4:B1:164:A:H2'	4:B1:165:G:C8	2.39	0.57
4:B1:528:A:O4'	14:BJ:121:LYS:HB3	2.04	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
4:B1:1028:A:N1	81:A2:1543:A:C6	2.69	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:B1:1398:G:C6	37:Bg:61:GLY:HA2	2.38	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:B1:1696:C:H6	4:B1:1696:C:O5'	1.87	0.57
4:B1:1828:C:H3'	4:B1:1829:G:C8	2.39	0.57
4:B1:1860:A:C2	4:B1:1862:G:O4'	2.57	0.57
5:BA:81:ASN:OD1	5:BA:205:ARG:HA	2.04	0.57
10:BF:102:LEU:O	30:BZ:66:LYS:HE2	2.04	0.57
37:Bg:240:CYS:HB3	37:Bg:291:TRP:CD1	2.39	0.57
39:CB:100:ARG:NH2	81:A2:4682:A:H4'	2.19	0.57
44:CG:66:GLN:HB3	50:CN:28:TRP:CH2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
79:Ct:67:ARG:HA	79:Ct:83:ASN:CB	2.33	0.57
80:Cu:56:GLU:OE1	80:Cu:146:LYS:HD3	2.04	0.57
80:Cu:74:VAL:HG11	80:Cu:142:ILE:HG21	1.86	0.57
81:A2:286:A:H5'	81:A2:287:A:H8	1.68	0.57
81:A2:1079:C:C3'	81:A2:1080:U:H5"	2.34	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
81:A2:1894:G:C3'	81:A2:1895:A:H5'	2.34	0.57
81:A2:2471:U:O5'	81:A2:2471:U:H6	1.86	0.57
81:A2:2549:C:C6	81:A2:2549:C:C3'	2.86	0.57
81:A2:3838:C:C6	81:A2:3838:C:OP1	2.57	0.57
81:A2:4437:A:N3	81:A2:4437:A:H2'	2.19	0.57
81:A2:4456:A:H3'	81:A2:4457:U:H5'	1.86	0.57
81:A2:4599:G:H1'	81:A2:4960:G:H5'	1.86	0.57
81:A2:4874:G:H2'	81:A2:4875:C:H6	1.69	0.57
4:B1:67:C:H2'	11:BG:162:LEU:HD23	1.86	0.57
4:B1:307:G:C4'	4:B1:308:G:H5"	2.27	0.57
4:B1:797:C:C4'	12:BH:109:ARG:HB2	2.35	0.57
4:B1:999:G:H2'	4:B1:1000:C:C6	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
6:BB:134:LEU:HB2	6:BB:219:LYS:HB2	1.86	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
31:Ba:19:GLN:HB3	31:Ba:32:LYS:NZ	2.18	0.57
41:CD:79:TYR:O	41:CD:82:GLU:HB2	2.04	0.57
45:CH:7:ASN:HB3	45:CH:58:ASP:OD2	2.04	0.57
45:CH:173:ARG:CD	75:Cm:127:VAL:HG22	2.35	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
55:CS:93:MET:HE1	55:CS:117:HIS:CE1	2.39	0.57
62:CZ:5:MET:HE2	62:CZ:77:TYR:CD2	2.38	0.57
68:Cf:59:THR:OG1	81:A2:1278:C:H4'	2.04	0.57
69:Cg:46:CYS:CA	81:A2:2573:G:H4'	2.34	0.57
71:Ci:34:THR:CG2	81:A2:267:C:H3'	2.28	0.57
81:A2:166:G:O2'	81:A2:167:C:H4'	2.04	0.57
81:A2:233:G:H2'	81:A2:233:G:N3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:254:G:H2'	81:A2:255:C:OP1	2.04	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
81:A2:1199:G:O3'	81:A2:1200:G:H8	1.88	0.57
81:A2:1219:C:H2'	81:A2:1219:C:O2	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:A2:1720:G:C8	81:A2:1760:U:H5'	2.39	0.57
81:A2:2309:G:H3'	81:A2:2309:G:OP2	2.04	0.57
81:A2:2524:G:H2'	81:A2:2524:G:N3	2.20	0.57
81:A2:2634:G:H8	81:A2:2634:G:O5'	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:C5'	81:A2:3578:G:H8	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
4:B1:97:U:H5'	4:B1:98:C:OP2	2.04	0.57
4:B1:184:G:H3'	4:B1:185:G:C5'	2.33	0.57
4:B1:1244:U:H2'	4:B1:1245:G:C8	2.39	0.57
4:B1:1579:A:C8	25:BU:86:LYS:HD3	2.40	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
37:Bg:19:THR:O	37:Bg:288:SER:HB2	2.03	0.57
48:CL:134:PRO:HA	48:CL:135:LYS:HZ1	1.68	0.57
53:CQ:67:ILE:O	53:CQ:70:MET:HG2	2.04	0.57
56:CT:28:ALA:O	56:CT:32:ARG:HG3	2.04	0.57
56:CT:129:LYS:N	81:A2:1814:G:H5"	2.19	0.57
61:CY:46:SER:O	61:CY:122:LYS:HE3	2.04	0.57
70:Ch:80:PRO:HG2	70:Ch:83:LEU:HD12	1.86	0.57
81:A2:193:C:O3'	81:A2:194:A:C8	2.57	0.57
81:A2:442:C:O2'	81:A2:443:A:H5'	2.03	0.57
81:A2:724:C:H2'	81:A2:725:C:C4'	2.32	0.57
81:A2:1408:U:H2'	81:A2:1409:C:H5'	1.86	0.57
81:A2:1942:A:H2'	81:A2:1943:G:H8	1.67	0.57
81:A2:2344:A:C2	81:A2:2775:A:N3	2.73	0.57
81:A2:2727:G:H2'	81:A2:2728:G:C8	2.39	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:A2:4691:G:H5"	81:A2:4694:G:H4'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4699:G:H4'	81:A2:4700:C:OP1	2.02	0.57
81:A2:4806:G:H2'	81:A2:4807:C:O4'	2.04	0.57
2:AW:37:MIA:C11	2:AW:38:A:H1'	2.34	0.57
4:B1:44:U:H5'	4:B1:44:U:H6	1.69	0.57
4:B1:130:G:H1'	4:B1:181:A:C2	2.39	0.57
4:B1:1017:U:H5"	4:B1:1017:U:H6	1.70	0.57
4:B1:1161:U:H3'	4:B1:1161:U:H6	1.69	0.57
4:B1:1286:G:N2	4:B1:1312:G:O6	2.37	0.57
4:B1:1311:C:H6	4:B1:1311:C:C5'	2.17	0.57
4:B1:1839:U:H3	4:B1:1860:A:H61	1.51	0.57
10:BF:19:LEU:HD11	10:BF:22:LYS:HD3	1.86	0.57
10:BF:60:ARG:HH21	33:Bc:49:PRO:HA	1.69	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
63:Ca:119:LYS:O	63:Ca:140:VAL:HB	2.03	0.57
65:Cc:56:ARG:NH1	65:Cc:56:ARG:HB2	2.20	0.57
71:Ci:26:HIS:CB	81:A2:156:C:H5'	2.34	0.57
80:Cu:160:HIS:CB	81:A2:3938:G:H1'	2.23	0.57
81:A2:445:U:H3'	81:A2:446:C:H5	1.68	0.57
81:A2:1066:C:O2'	81:A2:1067:A:H5'	2.04	0.57
81:A2:1539:A:H8	81:A2:1539:A:O5'	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:A2:4533:G:H5"	81:A2:4533:G:N3	2.19	0.57
2:AW:56:C:H5"	81:A2:4014:A:C1'	2.30	0.57
4:B1:77:A:C6	11:BG:155:GLN:HB3	2.40	0.57
4:B1:172:U:H3'	4:B1:173:A:C5'	2.29	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
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:B1:928:G:H4'	32:Bb:51:GLN:O	2.05	0.57
4:B1:1208:A:OP2	4:B1:1835:A:C2	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1534:C:H2'	4:B1:1599:U:O4	2.03	0.57
4:B1:1579:A:H2'	4:B1:1580:A:C4'	2.35	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
37:Bg:133:ASN:HB2	37:Bg:138:CYS:HB2	1.86	0.57
37:Bg:255:SER:OG	37:Bg:271:LYS:HA	2.04	0.57
39:CB:20:LYS:HD3	81:A2:4677:A:H4'	1.87	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
79:Ct:67:ARG:HA	79:Ct:83:ASN:HB2	1.87	0.57
80:Cu:62:PHE:CE2	80:Cu:110:LEU:HB2	2.39	0.57
81:A2:426:A:H2'	81:A2:427:C:C5'	2.35	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
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:A2:1712:G:N3	81:A2:4174:A:H2'	2.20	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
81:A2:4268:C:H2'	81:A2:4269:G:H5'	1.86	0.57
81:A2:4379:U:O2	81:A2:4379:U:H2'	2.04	0.57
81:A2:4434:A:H2'	81:A2:4436:C:H5"	1.85	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
83:A4:118:C:O2'	83:A4:119:U:H5"	2.05	0.57
1:AV:32:U:OP2	21:BQ:146:ARG:HD3	2.05	0.57
2:AW:37:MIA:H122	10:BF:134:VAL:CG2	2.32	0.57
3:AX:45:U:C4	4:B1:1207:G:N2	2.71	0.57
4:B1:67:C:C5	11:BG:163:ASN:C	2.82	0.57
4:B1:374:G:H2'	4:B1:375:U:H6	1.67	0.57
4:B1:745:C:H5'	12:BH:105:THR:HG23	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:839:C:H42	29:BY:49:LYS:HB2	1.69	0.57
4:B1:1016:U:C1'	4:B1:1017:U:H5"	2.32	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:B1:1336:C:H4'	34:Bd:44:ARG:HH22	1.69	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:B1:1606:G:H21	4:B1:1632:G:H2'	1.70	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
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
31:Ba:44:ILE:HG22	31:Ba:67:LEU:HG	1.86	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
67:Ce:61:GLY:HA2	81:A2:2295:C:H5'	1.87	0.57
80:Cu:62:PHE:HE1	80:Cu:81:GLU:CA	2.18	0.57
80:Cu:145:MET:O	80:Cu:148:THR:HG22	2.04	0.57
81:A2:647:C:H2'	81:A2:648:C:C6	2.39	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
82:A3:60:G:N2	82:A3:64:U:C2	2.72	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:B1:420:G:H1'	4:B1:661:U:H3	1.69	0.57
4:B1:429:C:O2	4:B1:429:C:H2'	2.05	0.57
4:B1:1125:C:H4'	5:BA:43:SER:O	2.05	0.57
4:B1:1375:G:H8	4:B1:1375:G:O5'	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
11:BG:63:MET:HE1	11:BG:102:VAL:HG22	1.87	0.57
15:BK:90:VAL:HG11	15:BK:95:ARG:HG2	1.87	0.57
43:CF:44:LYS:HE3	81:A2:956:C:H5"	1.87	0.57
43:CF:110:GLN:HG2	53:CQ:6:ARG:NE	2.19	0.57
44:CG:41:ILE:CG2	44:CG:42:GLY:H	2.16	0.57
44:CG:162:ASP:O	44:CG:164:ILE:HG13	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:CW:49:ILE:HG23	81:A2:3584:G:N2	2.19	0.57
65:Cc:79:ILE:HA	65:Cc:90:ARG:CB	2.34	0.57
71:Ci:60:LEU:HD22	71:Ci:64:SER:HB3	1.85	0.57
73:Ck:36:VAL:O	73:Ck:42:LEU:HD12	2.04	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:A2:280:C:H2'	81:A2:281:U:C6	2.40	0.57
81:A2:432:G:O6	81:A2:1286:C:N3	2.38	0.57
81:A2:650:G:O2'	81:A2:651:G:H5'	2.04	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:A2:1672:U:O2	81:A2:1672:U:H2'	2.05	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:A2:3910:G:O2'	81:A2:3911:A:H5'	2.03	0.57
81:A2:4261:U:H2'	81:A2:4261:U:O2	2.05	0.57
81:A2:4534:U:N3	81:A2:4910:A:H4'	2.20	0.57
81:A2:4869:C:H6	81:A2:4869:C:O5'	1.86	0.57
82:A3:156:U:H6	82:A3:156:U:O5'	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:B1:186:C:O5'	4:B1:186:C:H6	1.88	0.57
4:B1:189:U:O5'	4:B1:189:U:H6	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:H3'	4:B1:830:A:N3	2.19	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
8:BD:64:ARG:O	8:BD:68:GLU:HG3	2.05	0.57
16:BL:82:MET:HE3	16:BL:85:THR:CG2	2.34	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
31:Ba:38:LYS:N	31:Ba:71:LEU:HB3	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:53:ALA:HB1	40:CC:105:THR:OG1	2.05	0.57
40:CC:95:MET:HE2	81:A2:2328:C:O2'	2.05	0.57
43:CF:55:LYS:NZ	81:A2:973:U:H2'	2.19	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
55:CS:173:ASN:O	81:A2:4723:A:H8	1.87	0.57
63:Ca:43:ILE:HG21	81:A2:1662:U:H4'	1.85	0.57
69:Cg:8:ARG:HB3	81:A2:2507:U:H5	1.69	0.57
69:Cg:70:THR:CG2	81:A2:2564:A:H5"	2.35	0.57
81:A2:166:G:H2'	81:A2:167:C:C4'	2.35	0.57
81:A2:337:G:C4	82:A3:29:G:N2	2.73	0.57
81:A2:476:C:H5"	81:A2:476:C:C6	2.23	0.57
81:A2:917:G:H3'	81:A2:917:G:OP2	2.04	0.57
81:A2:976:C:H2'	81:A2:977:G:H8	1.69	0.57
81:A2:1359:C:H5'	81:A2:1360:G:OP2	2.04	0.57
81:A2:1509:G:H2'	81:A2:1510:U:C6	2.39	0.57
81:A2:1934:A:N1	81:A2:2006:C:C4	2.73	0.57
81:A2:2685:U:H3'	81:A2:2685:U:H6	1.69	0.57
81:A2:3923:A:O5'	81:A2:3923:A:H8	1.88	0.57
81:A2:4314:U:O2	81:A2:4314:U:H2'	2.04	0.57
81:A2:4612:G:C2'	81:A2:4613:C:H5'	2.35	0.57
81:A2:4824:U:O2	81:A2:4824:U:H3'	2.05	0.57
82:A3:49:G:OP1	82:A3:49:G:H8	1.88	0.57
3:AX:37:U:C5'	31:Ba:42:ARG:HG3	2.24	0.57
4:B1:20:G:H2'	4:B1:21:U:H5'	1.85	0.57
4:B1:379:C:O2	4:B1:379:C:H2'	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:B1:838:G:H8	29:BY:9:THR:H	1.45	0.57
4:B1:913:A:H2'	4:B1:913:A:N3	2.19	0.57
4:B1:931:C:O5'	4:B1:931:C:H6	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
38:CA:50:HIS:HB2	78:Cp:54:ILE:CD1	2.34	0.57
39:CB:303:ALA:HB2	39:CB:314:ILE:HA	1.86	0.57
43:CF:69:ILE:HB	81:A2:716:U:C4'	2.22	0.57
43:CF:124:LYS:NZ	43:CF:197:VAL:HG11	2.19	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
54:CR:83:GLY:CA	81:A2:2789:A:H8	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:Ca:47:LYS:HG2	63:Ca:47:LYS:O	2.04	0.57
67:Ce:22:ARG:HD2	67:Ce:31:ILE:CG2	2.34	0.57
68:Cf:59:THR:HB	81:A2:1279:G:C5'	2.35	0.57
73:Ck:52:LYS:O	73:Ck:56:LEU:HD13	2.05	0.57
81:A2:102:G:N2	81:A2:103:G:C4	2.73	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:A2:645:C:H2'	81:A2:646:C:H6	1.70	0.57
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
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:OP2	2.05	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
4:B1:346:C:H3'	4:B1:346:C:C6	2.40	0.57
4:B1:492:C:H42	4:B1:508:A:H62	1.52	0.57
4:B1:539:C:H3'	4:B1:539:C:C6	2.40	0.57
4:B1:1255:G:H3'	4:B1:1256:G:H5'	1.86	0.57
4:B1:1351:G:C8	4:B1:1351:G:C5'	2.88	0.57
4:B1:1378:A:C5	5:BA:105:PRO:HB3	2.40	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:B1:1864:U:H2'	31:Ba:5:ARG:HH12	1.68	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
41:CD:266:TRP:HB2	83:A4:22:A:N1	2.19	0.57
47:CJ:109:ILE:H	47:CJ:109:ILE:HD13	1.69	0.57
48:CL:156:PRO:HB3	81:A2:1359:C:C5	2.40	0.57
49:CM:97:ALA:CB	81:A2:4826:C:H42	2.18	0.57
53:CQ:75:ARG:HE	53:CQ:78:LYS:HG3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CX:46:PHE:HZ	82:A3:148:A:H4'	1.70	0.57
74:Cl:24:PRO:O	74:Cl:27:ILE:HG22	2.04	0.57
81:A2:42:A:C6	81:A2:4339:A:C2	2.92	0.57
81:A2:176:G:H2'	81:A2:177:C:H6	1.69	0.57
81:A2:403:G:N3	81:A2:403:G:H5'	2.20	0.57
81:A2:431:U:H2'	81:A2:432:G:C8	2.40	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
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:A2:1777: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:A2:2547:U:H4'	81:A2:2739:G:C2	2.40	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:A2:3858:G:C3'	81:A2:4679:G:H22	2.08	0.57
81:A2:3924:G:N2	81:A2:4025:C:N4	2.53	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:A2:4680:C:H4'	81:A2:4681:G:OP2	2.04	0.57
81:A2:4704:G:H22	81:A2:4910:A:H2	1.53	0.57
81:A2:4742:C:H3'	81:A2:4742:C:H6	1.69	0.57
81:A2:4800:C:H2'	81:A2:4801:C:H6	1.67	0.57
81:A2:4801:C:H2'	81:A2:4802:G:H5'	1.87	0.57
81:A2:4801:C:O2'	81:A2:4802:G:H5'	2.05	0.57
82:A3:71:A:H2'	82:A3:82:A:N1	2.19	0.57
4:B1:59:U:H6	4:B1:59:U:H3'	1.70	0.56
4:B1:76:U:C2'	4:B1:77:A:H3'	2.27	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:H8	4:B1:510:G:OP2	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:B1:604:A:H5'	14:BJ:22:LYS:HB2	1.85	0.56
4:B1:694:G:H2'	4:B1:695:C:C5	2.40	0.56
4:B1:902:G:O2'	4:B1:903:A:H5'	2.05	0.56
4:B1:986:G:H5"	31:Ba:19:GLN:HG2	1.86	0.56
4:B1:988:C:O5'	4:B1:988:C:C6	2.57	0.56
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1667:U:H5"	21:BQ:141:TYR:OH	2.05	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
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
42:CE:217:PHE:HB2	81:A2:4895:C:O2'	2.04	0.56
50:CN:85:VAL:HG11	81:A2:44:A:OP1	2.05	0.56
79:Ct:73:PRO:CB	79:Ct:78:VAL:HG21	2.35	0.56
79:Ct:103:ARG:HD3	79:Ct:106:LEU:CB	2.35	0.56
81:A2:186:G:P	81:A2:186:G:C8	2.98	0.56
81:A2:309:A:C2'	81:A2:310:A:H5'	2.35	0.56
81:A2:726:C:C2'	81:A2:727:G:H5"	2.31	0.56
81:A2:959:C:C3'	81:A2:1215:G:N2	2.68	0.56
81:A2:1197:G:C3'	81:A2:1198:G:C8	2.88	0.56
81:A2:1249:G:C8	81:A2:1249:G:H5"	2.40	0.56
81:A2:1267:G:H3'	81:A2:1268:G:H4'	1.87	0.56
81:A2:1517:U:H6	81:A2:1517:U:O5'	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:A2:2537:C:O5'	81:A2:2537:C:H6	1.86	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
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
82:A3:127:U:OP2	82:A3:128:C:H5'	2.05	0.56
4:B1:15:U:O5'	4:B1:15:U:H6	1.88	0.56
4:B1:29:G:H4'	28:BX:129:SER:HB3	1.86	0.56
4:B1:84:A:O2'	4:B1:85:A:C8	2.49	0.56
4:B1:125:C:H3'	9:BE:149:TYR:OH	2.05	0.56
4:B1:327:G:H4'	4:B1:328:U:OP1	2.05	0.56
4:B1:980:A:H2'	4:B1:981:A:C8	2.40	0.56
4:B1:1432:U:C5	4:B1:1432:U:OP2	2.57	0.56
4:B1:1644:C:H2'	4:B1:1645:C:C6	2.40	0.56
5:BA:33:GLN:HB2	5:BA:154:LEU:HD12	1.86	0.56
12:BH:44:ASN:O	12:BH:65:PRO:HD2	2.05	0.56
12:BH:100:ILE:HD13	12:BH:122:LEU:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
30:BZ:58:LEU:CD1	30:BZ:77:LEU:HD22	2.35	0.56
37:Bg:72:SER:HA	37:Bg:113:PHE:CZ	2.41	0.56
40:CC:101:MET:HE3	81:A2:2320:G:C8	2.41	0.56
40:CC:333:LYS:CE	81:A2:1217:C:H5'	2.35	0.56
42:CE:182:ASN:CA	81:A2:4837:U:H3	2.17	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
73:Ck:53:ALA:O	73:Ck:57:LYS:HG2	2.05	0.56
79:Ct:18:ILE:H	79:Ct:18:ILE:HD13	1.70	0.56
80:Cu:84:LEU:HD23	80:Cu:110:LEU:CD1	2.34	0.56
81:A2:1086:A:H2'	81:A2:1087:C:H4'	1.87	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
81:A2:4937:A:H2'	81:A2:4938:C:H5'	1.85	0.56
83:A4:50:A:H2'	83:A4:50:A:N3	2.18	0.56
1:AV:15:G:O5'	1:AV:15:G:H8	1.88	0.56
2:AW:37:MIA:C2	10:BF:133:THR:N	2.63	0.56
4:B1:67:C:H5'	11:BG:162:LEU:HD23	1.87	0.56
4:B1:129:C:H1'	4:B1:182:C:N4	2.20	0.56
4:B1:143:U:O4	4:B1:328:U:H4'	2.04	0.56
4:B1:153:G:H1	4:B1:165:G:H22	1.52	0.56
4:B1:340:C:O5'	4:B1:340:C:H6	1.87	0.56
4:B1:351:G:C8	4:B1:351:G:C3'	2.87	0.56
4:B1:365:C:H2'	4:B1:365:C:O2	2.04	0.56
4:B1:386:C:H2'	4:B1:386:C:O2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:572:U:H5	4:B1:576:A:H62	1.52	0.56
4:B1:827:A:C5'	14:BJ:8:VAL:HG13	2.34	0.56
4:B1:969:U:H3'	81:A2:3681:A:C1'	2.34	0.56
4:B1:1026:C:O2'	4:B1:1161:U:H4'	2.04	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:B1:1394:G:H2'	4:B1:1395:C:H5'	1.87	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:B1:1499:U:O2'	4:B1:1500:G:H5'	2.06	0.56
4:B1:1513:C:C5'	34:Bd:9:SER:HB2	2.34	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
31:Ba:50:VAL:O	31:Ba:53:ILE:HB	2.04	0.56
37:Bg:173:LEU:HD21	37:Bg:189:ILE:HG23	1.87	0.56
39:CB:94:GLU:HB3	39:CB:158:GLN:CD	2.31	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
44:CG:173:LEU:HD23	71:Ci:43:MET:SD	2.46	0.56
45:CH:120:GLU:HB3	81:A2:4572:C:O2	2.05	0.56
45:CH:150:ASP:O	45:CH:154:VAL:HG23	2.04	0.56
48:CL:59:VAL:HG11	81:A2:74:G:H5"	1.86	0.56
52:CP:95:LEU:HG	52:CP:148:MET:CE	2.34	0.56
67:Ce:58:ILE:HG23	81:A2:2254:G:H21	1.70	0.56
68:Cf:52:LYS:HA	68:Cf:52:LYS:HE3	1.86	0.56
70:Ch:78:TYR:CZ	81:A2:16:G:H4'	2.41	0.56
81:A2:482:G:O2'	81:A2:484:G:H5"	2.05	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
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:A2:1742:C:C3'	81:A2:1743:G:H5"	2.35	0.56
81:A2:1804:A:C3'	81:A2:1805:G:H8	2.17	0.56
81:A2:1831:G:C8	81:A2:1831:G:C3'	2.88	0.56
81:A2:1846:A:H2'	81:A2:1848:C:C6	2.41	0.56
81:A2:1918:G:C8	81:A2:1918:G:OP2	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2331:G:H2'	81:A2:2332:G:C8	2.40	0.56
81:A2:2395:A:H2'	81:A2:2396:C:C6	2.35	0.56
81:A2:2447:C:N3	81:A2:3642:C:C5	2.73	0.56
81:A2:2524:G:O2'	81:A2:2525:C:H5'	2.05	0.56
81:A2:2579:G:C5	81:A2:2580:C:C4	2.94	0.56
81:A2:2608:U:P	81:A2:2608:U:H6	2.28	0.56
81:A2:2663:G:H3'	81:A2:2664:U:H4'	1.87	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
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
81:A2:4908:G:H2'	81:A2:4909:G:H8	1.71	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:B1:125:C:H6	4:B1:125:C:P	2.28	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
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:H3'	4:B1:1602:U:H6	1.70	0.56
4:B1:1802:C:H2'	4:B1:1803:U:O4'	2.05	0.56
6:BB:71:LEU:HD13	6:BB:71:LEU:C	2.31	0.56
8:BD:74:GLN:NE2	8:BD:80:PRO:HA	2.20	0.56
13:BI:105:ASP:OD2	81:A2:4981:U:O2	2.23	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
26:BV:41:LYS:C	26:BV:43:THR:H	2.13	0.56
38:CA:47:ASP:HA	38:CA:84:THR:HG22	1.87	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
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
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)
61:CY:101:PRO:HA	61:CY:104:VAL:HG22	1.86	0.56
62:CZ:136:PHE:C	81:A2:4090:C:H5'	2.29	0.56
63:Ca:62:HIS:CG	81:A2:306:G:N7	2.73	0.56
63:Ca:103:VAL:HG22	63:Ca:126:ALA:HB2	1.87	0.56
81:A2:99:A:C2'	81:A2:100:C:C6	2.88	0.56
81:A2:218:C:O2'	81:A2:219:C:H5'	2.04	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:A2:635: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
81:A2:1316:G:C2'	81:A2:1317:A:C8	2.86	0.56
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:A2:2346: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:A2:3670: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:H2'	81:A2:4406:U:O2	2.05	0.56
81:A2:4809:G:H2'	81:A2:4810:G:C8	2.41	0.56
3:AX:40:U:H3	31:Ba:80:HIS:CD2	2.24	0.56
4:B1:155:G:H2'	4:B1:156:G:C8	2.40	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:B1:678:U:C5'	81:A2:1543:A:C8	2.88	0.56
4:B1:693:A:H3'	4:B1:694:G:O4'	2.05	0.56
4:B1:1016:U:C5	18:BN:14:SER:HB2	2.41	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:B1:1214:A:N1	4:B1:1686:G:C2	2.74	0.56
4:B1:1403:C:C5	4:B1:1404:U:C2	2.93	0.56
4:B1:1631:U:H6	4:B1:1631:U:C5'	2.05	0.56
4:B1:1698:C:H5'	4:B1:1699:A:C8	2.41	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
13:BI:158:ILE:O	13:BI:158:ILE:HG13	2.05	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
28:BX:32:LEU:C	28:BX:34:THR:H	2.14	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:90:VAL:HG11	39:CB:182:GLU:OE2	2.05	0.56
40:CC:316:LYS:HD3	81:A2:703:G:H4'	1.88	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
65:Cc:87:LYS:HD2	65:Cc:89:TYR:CE2	2.41	0.56
81:A2:235:C:H5'	81:A2:235:C:H6	1.71	0.56
81:A2:437:C:H2'	81:A2:437:C:O2	2.04	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
81:A2:2310:G:C8	81:A2:2310:G:P	2.99	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
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
2:AW:37:MIA:H122	10:BF:134:VAL:HG13	1.87	0.56
4:B1:81:U:H5'	4:B1:82:G:OP2	2.05	0.56
4:B1:197:U:O5'	4:B1:197:U:H6	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:B1:1116:C:O2	4:B1:1116:C:C2'	2.52	0.56
4:B1:1413:G:N2	4:B1:1414:A:H1'	2.20	0.56
4:B1:1599:U:N3	10:BF:165:ASN:N	2.54	0.56
4:B1:1648:G:H8	21:BQ:125:ARG:CB	2.18	0.56
4:B1:1649:U:H3'	4:B1:1649:U:C6	2.41	0.56
5:BA:77:ILE:HG12	5:BA:99:ILE:CG2	2.36	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
12:BH:83:LEU:CB	12:BH:92:VAL:HG21	2.36	0.56
14:BJ:37:LEU:O	35:Be:34:ARG:HD3	2.06	0.56
14:BJ:60:LEU:HB2	14:BJ:94:LEU:HD11	1.88	0.56
22:BR:63:ARG:HA	37:Bg:280:LYS:HE2	1.88	0.56
22:BR:113:SER:O	22:BR:114:LEU:HG	2.05	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
31:Ba:87:ARG:HG2	31:Ba:91:ALA:CB	2.35	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
69:Cg:44:SER:HB2	81:A2:2574:G:H4'	1.87	0.56
71:Ci:34:THR:CG2	81:A2:267:C:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Ct:6:GLN:O	79:Ct:10:VAL:HG22	2.05	0.56
81:A2:239:U:O5'	81:A2:239:U:H6	1.88	0.56
81:A2:346:A:H2'	81:A2:347:G:C5'	2.35	0.56
81:A2:676:G:HO2'	81:A2:677:C:H5	1.52	0.56
81:A2:1400:A:C2	81:A2:1446:C:H1'	2.41	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:A2:4140: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
2:AW:56:C:C6	81:A2:3927:G:O6	2.58	0.56
4:B1:77:A:N7	11:BG:155:GLN:CA	2.69	0.56
4:B1:167:G:H3'	4:B1:168:C:H5"	1.86	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:H3'	4:B1:372:U:C6	2.41	0.56
4:B1:423:U:H5"	4:B1:424:C:OP2	2.05	0.56
4:B1:628:A:N6	8:BD:179:GLN:HE22	2.04	0.56
4:B1:636:C:O5'	4:B1:636:C:C6	2.59	0.56
4:B1:893:U:O5'	4:B1:893:U:H6	1.88	0.56
4:B1:1011:A:H8	4:B1:1011:A:O5'	1.89	0.56
4:B1:1624:U:O5'	4:B1:1624:U:C6	2.59	0.56
4:B1:1686:G:H3'	4:B1:1687:C:H6	1.71	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:71:TYR:CE1	50:CN:25:VAL:HG13	2.40	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:26:VAL:HG13	47:CJ:32:ARG:HD3	1.87	0.56
47:CJ:89:VAL:HG22	47:CJ:114:ASP:HB3	1.87	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
72:Cj:83:THR:O	82:A3:67:U:H5'	2.05	0.56
80:Cu:151:LEU:HD21	80:Cu:184:LEU:HD21	1.87	0.56
81:A2:174:G:H1	81:A2:253:C:N4	2.03	0.56
81:A2:213:C:OP1	81:A2:217:C:H5"	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	81:A2:1285:C:C6	2.59	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:A2:2283: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
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:H8	81:A2:4352:G:O5'	1.88	0.56
81:A2:4962:A:H5"	81:A2:4997:A:C2	2.39	0.56
1:AV:58:A:H1'	1:AV:60:U:OP2	2.06	0.56
4:B1:65:C:H4'	11:BG:133:LEU:CD2	2.36	0.56
4:B1:125:C:H3'	9:BE:149:TYR:CZ	2.41	0.56
4:B1:170:A:C3'	4:B1:171:A:H8	2.19	0.56
4:B1:869:A:C4	4:B1:915:G:H1'	2.41	0.56
4:B1:1405:A:C3'	4:B1:1406:G:C5'	2.82	0.56
4:B1:1866:A:P	31:Ba:9:GLY:HA2	2.45	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
19:BO:142:ARG:HG3	31:Ba:22:ARG:CZ	2.36	0.56
25:BU:82:MET:HE3	25:BU:84:ILE:HD11	1.88	0.56
37:Bg:202:PRO:HG2	37:Bg:243:PRO:HA	1.88	0.56
38:CA:180:LEU:HD11	78:Cp:26:VAL:HG11	1.88	0.56
40:CC:161:TYR:CE2	40:CC:170:LEU:HD22	2.40	0.56
48:CL:130:LYS:HD2	48:CL:130:LYS:H	1.69	0.56
54:CR:97:ARG:HH21	81:A2:2702:A:H1'	1.71	0.56
65:Cc:108:MET:N	65:Cc:109:PRO:HD2	2.21	0.56
67:Ce:58:ILE:HD11	81:A2:2057:G:C4'	2.35	0.56
75:Cm:78:ILE:HG21	75:Cm:83:ARG:HE	1.70	0.56
76:Cn:1:MET:HE1	76:Cn:9:ARG:HE	1.71	0.56
81:A2:156:C:O2	81:A2:156:C:C2'	2.54	0.56
81:A2:252:G:H8	81:A2:252:G:O5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:438:C:C2'	81:A2:439:G:H5'	2.36	0.56
81:A2:674:G:C5'	81:A2:674:G:H8	2.19	0.56
81:A2:1193:G:P	81:A2:1193:G:C3'	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:A2:1844:U:H2'	81:A2:1844:U:O2	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:A2:2631: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
81:A2:3878:C:C2'	81:A2:3878:C:O2	2.53	0.56
81:A2:3878:C:O2	81:A2:3878:C:H2'	2.05	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
4:B1:124:U:H5'	9:BE:148:ARG:CB	2.35	0.56
4:B1:359:U:O5'	4:B1:359:U:H6	1.88	0.56
4:B1:471:G:H4'	4:B1:472:C:OP1	2.05	0.56
4:B1:558:G:H8	4:B1:558:G:O5'	1.89	0.56
4:B1:876:C:C6	4:B1:877:C:C5	2.93	0.56
4:B1:1143:A:H2'	4:B1:1144:A:C8	2.40	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
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
48:CL:30:ALA:HA	81:A2:1350:G:OP1	2.06	0.56
54:CR:105:LEU:HD12	54:CR:138:LEU:CD1	2.36	0.56
63:Ca:137:ILE:O	63:Ca:140:VAL:HG22	2.05	0.56
79:Ct:75:THR:HB	81:A2:474:G:C5	2.41	0.56
81:A2:6:C:O2	81:A2:6:C:C3'	2.54	0.56
81:A2:108:A:H4'	81:A2:109:G:OP1	2.06	0.56
81:A2:334:C:H6	81:A2:334:C:H5'	1.70	0.56
81:A2:411:A:H8	81:A2:411:A:OP2	1.89	0.56
81:A2:438:C:H2'	81:A2:439:G:H8	1.70	0.56
81:A2:1048:G:H5"	81:A2:1215:G:N7	2.21	0.56
81:A2:1083:C:O2	81:A2:1083:C:C2'	2.53	0.56
81:A2:1213:G:H2'	81:A2:1214:G:H5'	1.88	0.56
81:A2:1480:C:H2'	81:A2:1481:G:C5	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1931:U:O5’	81:A2:1931:U:H6	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:A2:2284:A:H1’	82:A3:19:C:HO2’	1.70	0.56
81:A2:2394:A:H5”	81:A2:2394:A:H8	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:A2:3618:A:O4’	81:A2:4495:A:H4’	2.06	0.56
81:A2:4352:G:O2’	81:A2:4354:A:H2’	2.05	0.56
81:A2:4479:C:H5”	81:A2:4480:G:H5”	1.88	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:H5”	81:A2:5002:C:H6	1.71	0.56
4:B1:59:U:H5”	4:B1:502:C:H5’	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:B1:528:A:OP1	14:BJ:122:SER:HB2	2.06	0.56
4:B1:584:A:P	4:B1:584:A:H8	2.29	0.56
4:B1:686:U:O2’	4:B1:687:C:H5’	2.06	0.56
4:B1:797:C:O2’	12:BH:109:ARG:HD2	2.05	0.56
4:B1:927:C:H2’	4:B1:928:G:H5’	1.88	0.56
4:B1:952:G:H1’	19:BO:52:THR:CB	2.36	0.56
4:B1:1431:G:N2	4:B1:1432:U:C2	2.74	0.56
4:B1:1472:C:O2	4:B1:1472:C:C2’	2.54	0.56
4:B1:1476:A:C3’	4:B1:1477:U:H5’	2.35	0.56
4:B1:1599:U:H3	10:BF:165:ASN:C	2.13	0.56
4:B1:1669:G:H5’	21:BQ:130:LYS:HB3	1.88	0.56
11:BG:8:PRO:HG2	11:BG:112:VAL:HG13	1.86	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
27:BW:28:ARG:HB3	27:BW:29:PRO:CD	2.36	0.56
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
44:CG:145:THR:HG21	81:A2:116:G:C8	2.40	0.56
67:Ce:58:ILE:HG12	81:A2:2057:G:H1’	1.86	0.56
72:Cj:83:THR:HG23	82:A3:67:U:H4’	1.88	0.56
73:Ck:24:LYS:HB3	73:Ck:35:LYS:HB2	1.88	0.56
81:A2:204:G:H2’	81:A2:205:A:C8	2.41	0.56
81:A2:389:A:C8	81:A2:389:A:C3’	2.89	0.56
81:A2:451:C:H42	81:A2:684:A:H61	1.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:959:C:C3’	81:A2:1215:G:H21	2.18	0.56
81:A2:1056:C:H42	81:A2:1204:G:H22	1.52	0.56
81:A2:1191:G:C2’	81:A2:1192:G:H5’	2.36	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:A2:2542:A:H8	81:A2:2542:A:O5’	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:A2:4263: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
82:A3:118:C:H2’	82:A3:119:C:O4’	2.06	0.56
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
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:O2	4:B1:1783:C:H2’	2.05	0.55
4:B1:1821:U:H2’	4:B1:1822:A:C8	2.41	0.55
4:B1:1852:C:C4	76:Cn:5:TRP:CE3	2.94	0.55
9:BE:95:THR:HB	9:BE:97:GLU:CD	2.30	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
23:BS:5:ILE:O	23:BS:6:PRO:C	2.49	0.55
31:Ba:40:VAL:O	31:Ba:69:VAL:HG12	2.06	0.55
38:CA:56:ALA:HB2	38:CA:130:SER:HB3	1.87	0.55
39:CB:95:THR:CG2	81:A2:4865:A:H4’	2.36	0.55
40:CC:188:ARG:HD3	40:CC:188:ARG:C	2.32	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
67:Ce:6:PRO:HG3	67:Ce:72:SER:O	2.06	0.55
72:Cj:76:HIS:CD2	82:A3:93:C:H5”	2.41	0.55
81:A2:112:C:C2’	81:A2:113:A:H5’	2.36	0.55
81:A2:192:C:H2’	81:A2:193:C:OP1	2.07	0.55
81:A2:284:G:H5’	81:A2:285:G:O4’	2.06	0.55
81:A2:428:G:H8	81:A2:428:G:O5’	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:944:A:N3	81:A2:944:A:H2'	2.20	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:C8	81:A2:1649:G:C3'	2.88	0.55
81:A2:2509:C:C2'	81:A2:2510:C:H5'	2.36	0.55
81:A2:3613:U:H2'	81:A2:3614:U:C5'	2.36	0.55
81:A2:3722:G:H8	81:A2:3722:G:H5"	1.71	0.55
81:A2:4262:U:H6	81:A2:4262:U:H3'	1.71	0.55
81:A2:4688:A:HO2'	81:A2:4695:C:H1'	1.67	0.55
83:A4:11:A:H2	83:A4:66:G:H2'	1.71	0.55
83:A4:25:G:H2'	83:A4:26:C:C6	2.41	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:B1:39:A:P	14:BJ:3:VAL:HG13	2.46	0.55
4:B1:99:A:H2'	4:B1:100:U:O4'	2.06	0.55
4:B1:169:U:H1'	11:BG:133:LEU:CD1	2.36	0.55
4:B1:215:G:H8	4:B1:215:G:O5'	1.89	0.55
4:B1:426:A:H2'	4:B1:426:A:N3	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:B1:808:A:H4'	9:BE:219:ALA:O	2.06	0.55
4:B1:1130:G:H4'	18:BN:10:GLY:HA2	1.88	0.55
4:B1:1230:C:O2'	4:B1:1231:C:H5'	2.05	0.55
4:B1:1383:A:O5'	4:B1:1383:A:C8	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
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
10:BF:56:TYR:O	10:BF:62:ARG:HG3	2.06	0.55
13:BI:123:ARG:HH21	81:A2:4979:C:H5'	0.69	0.55
15:BK:29:MET:N	15:BK:30:PRO:HD3	2.21	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
49:CM:4:ARG:CZ	55:CS:155:PRO:HB3	2.36	0.55
55:CS:70:LYS:HA	81:A2:721:A:O2'	2.06	0.55
55:CS:103:ALA:O	55:CS:106:VAL:HG12	2.05	0.55
81:A2:13:U:H1'	81:A2:14:C:OP1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:379:A:H2'	81:A2:393:A:N6	2.19	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
81:A2:1178:G:H3'	81:A2:1179:G:C5'	2.25	0.55
81:A2:1900:G:H8	81:A2:1900:G:H5'	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:A2:4167:C:H1'	81:A2:4295:C:H1'	1.87	0.55
81:A2:4234:A:H2'	81:A2:4235:G:C8	2.41	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:OP2	2.06	0.55
82:A3:148:A:H3'	82:A3:148:A:C8	2.41	0.55
3:AX:37:U:H5"	31:Ba:42:ARG:HD3	1.84	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:O5'	4:B1:808:A:C8	2.59	0.55
4:B1:1214:A:C6	4:B1:1217:A:C4	2.94	0.55
12:BH:160:LYS:HE3	12:BH:191:GLU:N	2.21	0.55
23:BS:8:LYS:HD3	23:BS:8:LYS:O	2.06	0.55
23:BS:134:GLN:HG2	23:BS:135:HIS:N	2.20	0.55
38:CA:225:ILE:HD11	38:CA:235:VAL:O	2.06	0.55
41:CD:18:VAL:HG22	83:A4:11:A:OP2	2.06	0.55
48:CL:53:GLY:C	48:CL:55:ILE:N	2.61	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
53:CQ:27:LEU:HD22	79:Ct:4:HIS:CD2	2.41	0.55
56:CT:77:ASN:CB	56:CT:84:ILE:HD13	2.34	0.55
63:Ca:70:CYS:CA	63:Ca:109:TYR:HB3	2.36	0.55
71:Ci:73:ILE:O	71:Ci:77:VAL:HG22	2.05	0.55
80:Cu:2:ASP:C	80:Cu:4:GLU:H	2.14	0.55
81:A2:286:A:H5'	81:A2:287:A:C8	2.42	0.55
81:A2:976:C:H6	81:A2:976:C:O5'	1.88	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
81:A2:1620:G:N7	81:A2:4346:C:H1'	2.21	0.55
81:A2:1727:U:C5'	81:A2:1727:U:C6	2.90	0.55
81:A2:2012:G:H2'	81:A2:2013:C:C6	2.41	0.55
81:A2:2586:G:O2'	81:A2:2663:G:C2	2.58	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2862:A:H8	81:A2:2862:A:O5'	1.90	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:A2:4838:C:H3'	81:A2:4839:G:H5'	1.87	0.55
82:A3:143:G:C2'	82:A3:144:U:H5'	2.36	0.55
83:A4:7:G:H5"	83:A4:7:G:H8	1.70	0.55
2:AW:71:G:H2'	2:AW:72:C:H6	1.71	0.55
2:AW:71:G:C4'	81:A2:3708:C:O2'	2.54	0.55
4:B1:93:U:H2'	4:B1:94:G:O4'	2.06	0.55
4:B1:1137:U:OP2	4:B1:1137:U:H6	1.90	0.55
4:B1:1202:U:H3'	4:B1:1203:G:H5"	1.88	0.55
4:B1:1513:C:H4'	34:Bd:9:SER:OG	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
31:Ba:5:ARG:CG	31:Ba:8:ASN:HA	2.36	0.55
39:CB:37:PRO:O	39:CB:188:GLY:HA3	2.06	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
64:Cb:39:PHE:HA	64:Cb:42:ASN:HD21	1.72	0.55
65:Cc:32:LYS:HA	65:Cc:35:LEU:HD12	1.88	0.55
68:Cf:16:ARG:HB3	68:Cf:21:GLN:HG2	1.89	0.55
73:Ck:16:ARG:NH1	73:Ck:61:PRO:HG3	2.22	0.55
81:A2:193:C:H3'	81:A2:193:C:O2	2.06	0.55
81:A2:381:C:H6	81:A2:381:C:OP1	1.89	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:A2:2062:C:C5	81:A2:2249:G:C2	2.93	0.55
81:A2:2310:G:C8	81:A2:2310:G:H5"	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:H5"	81:A2:3694:G:C8	2.33	0.55
81:A2:4027:C:H6	81:A2:4027:C:O5'	1.90	0.55
81:A2:4438:G:H8	81:A2:4438:G:O5'	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)
4:B1:46:A:H4'	4:B1:47:G:H5'	1.89	0.55
4:B1:144:U:H6	11:BG:180:VAL:HG22	1.69	0.55
4:B1:476:A:H3'	4:B1:477:G:H8	1.72	0.55
4:B1:635:G:H2'	4:B1:636:C:H6	1.71	0.55
4:B1:743:U:O2	12:BH:100:ILE:HB	2.07	0.55
4:B1:804:U:H2'	4:B1:805:U:C5	2.40	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:B1:1865:C:C5	31:Ba:92:ARG:HB3	2.41	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
45:CH:175:PHE:CE2	81:A2:4438:G:H5'	2.41	0.55
47:CJ:96:LYS:HD3	47:CJ:177:GLY:C	2.31	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
62:CZ:14:LEU:CD1	69:Cg:88:ARG:HG3	2.37	0.55
79:Ct:71:ARG:HB2	81:A2:477:C:O2'	2.05	0.55
80:Cu:188:LEU:O	80:Cu:189:GLU:HG2	2.07	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
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
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:A2:1317:A:C2	81:A2:2326:A:C2	2.95	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:A2:2520: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4579:U:H5'	81:A2:4579:U:H6	1.71	0.55
81:A2:4579:U:H2'	81:A2:4580:U:C6	2.42	0.55
81:A2:4908:G:H2'	81:A2:4909:G:C8	2.41	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
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:B1:235: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
4:B1:893:U:H2'	4:B1:894:G:H8	1.68	0.55
4:B1:970:G:N9	81:A2:3680:A:H5"	2.15	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
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
17:BM:71:GLU:HG3	36:Bf:114:ILE:HG12	1.88	0.55
37:Bg:173:LEU:HD23	37:Bg:189:ILE:HG23	1.89	0.55
40:CC:49:ARG:CZ	81:A2:340:A:N7	2.69	0.55
40:CC:207:PRO:HB3	40:CC:249:PHE:CD1	2.41	0.55
42:CE:153:LEU:C	42:CE:158:ARG:HG2	2.31	0.55
43:CF:55:LYS:HB3	81:A2:973:U:N3	2.21	0.55
43:CF:88:LYS:HB3	43:CF:124:LYS:HZ1	1.71	0.55
47:CJ:120:ASP:HB3	47:CJ:123:ILE:HD12	1.88	0.55
48:CL:153:PRO:C	48:CL:156:PRO:HD2	2.32	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
80:Cu:26:ASP:OD2	80:Cu:201:LYS:HE3	2.06	0.55
80:Cu:84:LEU:HD12	80:Cu:87:LEU:HD12	1.87	0.55
81:A2:224:A:N6	81:A2:238:G:H2'	2.20	0.55
81:A2:256:C:H3'	81:A2:256:C:O2	2.07	0.55
81:A2:359:C:O5'	81:A2:359:C:H6	1.90	0.55
81:A2:468:C:H2'	81:A2:469:G:C8	2.41	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:H6	81:A2:1626:U:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:2525:C:H3'	81:A2:2526:G:H4'	1.88	0.55
81:A2:2716:C:H1'	81:A2:2717:U:OP1	2.06	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:A2:4803: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
4:B1:72:C:H2'	4:B1:73:C:O4'	2.06	0.55
4:B1:136:C:H1'	4:B1:137:U:OP1	2.07	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:C8	4:B1:646:G:H5"	2.42	0.55
4:B1:970:G:H1'	4:B1:971:G:OP1	2.06	0.55
4:B1:1168:G:C2'	4:B1:1169:G:H5'	2.37	0.55
4:B1:1534:C:H5'	4:B1:1536:G:C1'	2.37	0.55
19:BO:129:ILE:HD13	31:Ba:65:PRO:HG3	1.88	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
46:CI:76:MET:HE1	46:CI:138:ILE:HG21	1.89	0.55
48:CL:156:PRO:HA	81:A2:1359:C:C5	2.42	0.55
53:CQ:64:SER:C	81:A2:1481:G:N2	2.65	0.55
68:Cf:106:TYR:HD2	68:Cf:107:PRO:HD3	1.63	0.55
69:Cg:82:MET:HB2	69:Cg:87:VAL:CG2	2.37	0.55
81:A2:105:A:H5"	81:A2:1341:G:O2'	2.07	0.55
81:A2:215:A:O4'	81:A2:216:G:H5'	2.05	0.55
81:A2:372:U:H2'	81:A2:373:G:O4'	2.07	0.55
81:A2:439:G:C2'	81:A2:440:C:H5'	2.37	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:A2:1742:C:O5'	81:A2:1743:G:H5"	2.06	0.55
81:A2:2247:C:O5'	81:A2:2247:C:H6	1.89	0.55
81:A2:2304:G:O2'	81:A2:2305:U:H5'	2.07	0.55
81:A2:2331:G:H8	81:A2:2331:G:O5'	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:A2:3757:C:H2'	81:A2:3758:C:O2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:5009:C:O2	81:A2:5009:C:C2'	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:B1:61:A:H1'	4:B1:62:G:P	2.46	0.55
4:B1:544:G:H4'	4:B1:545:A:OP1	2.05	0.55
4:B1:986:G:H5"	31:Ba:19:GLN:CG	2.37	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
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
40:CC:55:SER:HB2	81:A2:347:G:C5'	2.36	0.55
54:CR:117:ARG:HH12	81:A2:2654:G:H21	1.54	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
67:Ce:85:LEU:CD1	67:Ce:114:ARG:HG3	2.37	0.55
81:A2:14:C:C1'	81:A2:15:A:OP2	2.54	0.55
81:A2:38:A:C8	81:A2:40:G:OP2	2.59	0.55
81:A2:904:C:H2'	81:A2:905:C:H6	1.71	0.55
81:A2:1587:G:H2'	81:A2:1588:U:O4'	2.05	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:H3'	81:A2:1894:G:H8	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
81:A2:2746:U:C5	81:A2:2746:U:OP1	2.60	0.55
81:A2:4437:A:C2	81:A2:4438:G:N7	2.74	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:B1:36:U:C2	4:B1:520:A:C2	2.95	0.55
4:B1:193:C:H1'	4:B1:208:G:N1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
12:BH:135:PHE:HB3	12:BH:136:PRO:HD3	1.89	0.55
23:BS:14:ARG:CZ	47:CJ:114:ASP:OD1	2.55	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
41:CD:41:LYS:HE2	56:CT:34:TYR:HB2	1.87	0.55
43:CF:229:GLU:OE1	55:CS:122:HIS:HE1	1.90	0.55
49:CM:69:HIS:CE1	49:CM:72:TYR:HB2	2.42	0.55
49:CM:122:ILE:HG21	51:CO:187:LYS:N	2.22	0.55
66:Cd:46:LEU:HD11	66:Cd:73:TRP:HE1	1.70	0.55
68:Cf:5:LEU:N	81:A2:4711:U:O2'	2.40	0.55
70:Ch:14:LYS:HA	70:Ch:17:LEU:HD12	1.89	0.55
77:Co:75:PRO:HA	77:Co:78:ARG:NE	2.22	0.55
81:A2:8:U:O2	81:A2:8:U:C3'	2.53	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:A2:1061: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:C6	81:A2:2837:C:C3'	2.89	0.55
81:A2:3695:A:O2'	81:A2:3696:A:C8	2.58	0.55
81:A2:3720:G:N3	81:A2:3720:G:H2'	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:A2:4506:A:O5'	81:A2:4506:A:H8	1.90	0.55
81:A2:4624:A:H2'	81:A2:4625:A:C8	2.42	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:H5'	4:B1:798:G:N3	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1405:A:H3'	4:B1:1406:G:H5"	1.87	0.55
6:BB:65:ARG:HG2	19:BO:50:LYS:HD2	1.88	0.55
6:BB:81:PHE:O	6:BB:82:ARG:HB2	2.07	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
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
48:CL:182:LEU:HD21	63:Ca:146:LEU:HD13	1.89	0.55
63:Ca:74:ASN:CB	63:Ca:114:LYS:HD3	2.37	0.55
63:Ca:80:THR:HA	63:Ca:87:ARG:NH2	2.22	0.55
64:Cb:28:ARG:C	64:Cb:30:GLU:H	2.15	0.55
69:Cg:83:CYS:HB3	69:Cg:86:CYS:SG	2.46	0.55
73:Ck:25:ILE:HG21	73:Ck:57:LYS:NZ	2.22	0.55
79:Ct:90:LEU:O	79:Ct:93:ILE:HG22	2.06	0.55
81:A2:18:C:H2'	81:A2:19:G:C8	2.42	0.55
81:A2:99:A:C8	81:A2:100:C:C5	2.95	0.55
81:A2:125:C:O5'	81:A2:125:C:H6	1.90	0.55
81:A2:201:U:H3	81:A2:208:G:H1	1.53	0.55
81:A2:282:U:O2	81:A2:284:G:H2'	2.07	0.55
81:A2:309:A:H3'	81:A2:309:A:C8	2.41	0.55
81:A2:455:G:H3'	81:A2:456:G:C8	2.41	0.55
81:A2:977:G:C2'	81:A2:978:G:O4'	2.50	0.55
81:A2:1231:C:H2'	81:A2:1232:C:C6	2.41	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:A2:3684:U:C2'	81:A2:3685:C:H5'	2.37	0.55
81:A2:4163:A:N3	81:A2:4163:A:C3'	2.69	0.55
81:A2:4266:U:H4'	81:A2:4267:A:OP2	2.07	0.55
81:A2:4269:G:H8	81:A2:4269:G:C5'	2.20	0.55
81:A2:4743:C:C6	81:A2:4743:C:O5'	2.60	0.55
83:A4:54:A:H2	83:A4:55:A:C4	2.25	0.55
4:B1:4:C:H5	4:B1:655:A:OP1	1.91	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
4:B1:381:C:H5"	13:BI:48:VAL:HG22	1.89	0.54
4:B1:457:C:O4'	4:B1:1801:A:H4'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1403:C:C5	4:B1:1404:U:N1	2.75	0.54
4:B1:1490:G:H2'	4:B1:1490:G:N3	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:B1:1579:A:N6	25:BU:88:LEU:HD22	2.22	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
30:BZ:43:LYS:HG3	30:BZ:44:LEU:O	2.07	0.54
32:Bb:18:LYS:HB3	32:Bb:22:LYS:HB2	1.89	0.54
38:CA:207:VAL:CG1	81:A2:3888:C:H4'	2.36	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
51:CO:114:LYS:HA	81:A2:4717:U:H6	1.72	0.54
53:CQ:158:THR:HB	53:CQ:159:PRO:HD3	1.89	0.54
54:CR:43:LYS:HG3	81:A2:2687:C:OP1	2.07	0.54
60:CX:46:PHE:CZ	82:A3:148:A:H4'	2.43	0.54
62:CZ:105:ALA:HB1	81:A2:2531:U:C4'	2.38	0.54
69:Cg:82:MET:HB2	69:Cg:87:VAL:HG22	1.89	0.54
72:Cj:83:THR:HG23	82:A3:67:U:C4'	2.37	0.54
80:Cu:43:VAL:CG1	80:Cu:151:LEU:HG	2.36	0.54
81:A2:423:U:H3'	81:A2:423:U:H6	1.72	0.54
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:A2:1596:G:N2	81:A2:2490:A:C8	2.75	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:A2:2567:G:OP2	81:A2:2567:G:H2'	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
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
81:A2:4157:G:C2'	81:A2:4158:G:H5'	2.37	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)
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:B1:213: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:B1:302:A:H4'	13:BI:73:THR:O	2.06	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
4:B1:1000:C:H42	31:Ba:15:ARG:HB2	1.71	0.54
4:B1:1165:G:H4'	4:B1:1166:G:C5'	2.38	0.54
4:B1:1172:U:H5'	76:Cn:10:MET:HE2	0.62	0.54
4:B1:1472:C:O2	4:B1:1472:C:H2'	2.06	0.54
4:B1:1508:A:H8	4:B1:1508:A:OP2	1.91	0.54
4:B1:1552:G:C8	4:B1:1578:U:O4	2.60	0.54
4:B1:1557:C:O2	4:B1:1557:C:C2'	2.56	0.54
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
8:BD:12:VAL:HG13	34:Bd:36:LEU:HD11	1.89	0.54
18:BN:61:ALA:HB2	32:Bb:32:PHE:HZ	1.72	0.54
27:BW:36:ARG:CG	27:BW:110:ILE:HD12	2.37	0.54
40:CC:139:SER:CA	79:Ct:14:SER:HA	2.36	0.54
43:CF:69:ILE:HD12	81:A2:716:U:H4'	1.89	0.54
49:CM:116:LYS:HD3	81:A2:4835:C:H41	1.72	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
69:Cg:7:TYR:OH	81:A2:2379:G:H1'	2.08	0.54
81:A2:20:U:O2	81:A2:20:U:H2'	2.07	0.54
81:A2:79:C:H4'	81:A2:329:A:H4'	1.90	0.54
81:A2:240:A:H8	81:A2:240:A:O5'	1.90	0.54
81:A2:381:C:C6	81:A2:381:C:C5'	2.88	0.54
81:A2:458:U:H5"	81:A2:459:U:OP1	2.08	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:A2:2310:G:O3'	82:A3:20:A:H5"	2.07	0.54
81:A2:2337:A:N1	81:A2:3829:A:H5"	2.22	0.54
81:A2:2395:A:C3'	81:A2:2396:C:H5"	2.37	0.54
83:A4:94:C:H2'	83:A4:95:C:C6	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:798:G:H1'	4:B1:867:G:N2	2.20	0.54
4:B1:811:A:H1'	4:B1:812:A:C8	2.42	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
4:B1:1689:C:H2'	4:B1:1690:U:C6	2.42	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
31:Ba:44:ILE:HA	31:Ba:67:LEU:CD1	2.37	0.54
39:CB:356:LYS:O	39:CB:357:ARG:HB3	2.08	0.54
41:CD:277:LYS:HZ2	81:A2:1087:C:H5'	1.72	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
53:CQ:15:ARG:HH22	81:A2:1328:U:H5"	1.72	0.54
58:CV:105:ILE:HG23	58:CV:113:LYS:HB3	1.88	0.54
63:Ca:78:LEU:HD22	63:Ca:81:LEU:HD12	1.88	0.54
69:Cg:97:ILE:HD12	81:A2:4089:G:N7	2.23	0.54
69:Cg:100:GLN:HE22	81:A2:4085:U:H3'	1.72	0.54
81:A2:24:G:C2	81:A2:333:G:C8	2.95	0.54
81:A2:32:G:H21	81:A2:50:C:H5	1.51	0.54
81:A2:476:C:P	81:A2:658:G:H4'	2.47	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:OP2	2.07	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:H3'	81:A2:2396:C:H5"	1.88	0.54
81:A2:2395:A:C4	81:A2:2396:C:C5	2.95	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:A2:3592: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4917:C:O2'	81:A2:4918:G:H5'	2.07	0.54
83:A4:95:C:H6	83:A4:95:C:O5'	1.90	0.54
4:B1:37:C:H3'	4:B1:38:A:H5"	1.90	0.54
4:B1:523:A:H8	4:B1:523:A:O5'	1.91	0.54
4:B1:553:U:H3'	4:B1:554:A:C5'	2.38	0.54
4:B1:951:C:H1'	4:B1:976:G:C2	2.43	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
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
16:BL:82:MET:HE3	16:BL:85:THR:HG21	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
55:CS:87:ARG:NE	83:A4:87:G:H5"	2.22	0.54
67:Ce:127:ALA:HB2	81:A2:2302:G:H5"	1.88	0.54
77:Co:56:PHE:CZ	81:A2:4332:U:H4'	2.43	0.54
81:A2:1:C:O2	82:A3:157:U:C2	2.60	0.54
81:A2:198:C:O2'	81:A2:199:C:H5	1.91	0.54
81:A2:334:C:C5'	81:A2:334:C:C6	2.87	0.54
81:A2:1054:G:H2'	81:A2:1055:G:H5'	1.90	0.54
81:A2:1147:C:O2	81:A2:1147:C:H2'	2.06	0.54
81:A2:1160:C:H3'	81:A2:1160:C:H6	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:A2:2690: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:A2:4218: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:H6	81:A2:4507:C:H5"	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AV:34:G:C2	4:B1:1701:C:C1'	2.91	0.54
1:AV:76:A:C6	81:A2:4156:G:N1	2.65	0.54
4:B1:10:G:H1'	7:BC:115:GLN:OE1	2.08	0.54
4:B1:29:G:H4'	28:BX:129:SER:HB2	1.89	0.54
4:B1:201:C:H3'	4:B1:201:C:O2	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
4:B1:1308:U:C5'	36:Bf:135:HIS:HA	2.36	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
5:BA:110:ASN:OD1	5:BA:113:GLN:HG2	2.08	0.54
9:BE:87:MET:HE1	9:BE:123:LEU:HD12	1.88	0.54
11:BG:91:GLU:HG2	11:BG:91:GLU:O	2.08	0.54
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
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
37:Bg:283:PRO:O	37:Bg:285:GLN:N	2.41	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
63:Ca:113:GLY:O	81:A2:1377:A:H3'	2.08	0.54
67:Ce:19:LYS:O	67:Ce:20:PHE:CD2	2.61	0.54
71:Ci:82:ARG:NH1	81:A2:297:A:H2	2.05	0.54
80:Cu:108:LYS:O	80:Cu:108:LYS:HG3	2.07	0.54
81:A2:921:U:H2'	81:A2:922:C:C6	2.42	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:H6	81:A2:1398:C:O5'	1.90	0.54
81:A2:1437:C:C3'	81:A2:1438:A:H8	2.20	0.54
81:A2:1633:G:H2'	81:A2:3883:U:OP1	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2478:C:O5'	81:A2:2478:C:C6	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:A2:4223: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:H8	81:A2:4709:G:O5'	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
3:AX:45:U:H6	3:AX:45:U:OP1	1.90	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:B1:678:U:H5'	81:A2:1543:A:C1'	2.36	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
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
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
24:BT:124:THR:HB	24:BT:125:PRO:HD2	1.89	0.54
33:Bc:59:LEU:HD23	33:Bc:60:GLU:HG3	1.90	0.54
40:CC:50:GLN:CB	40:CC:51:PRO:CD	2.86	0.54
47:CJ:63:ARG:HH12	77:Co:103:VAL:HB	1.72	0.54
71:Ci:25:ARG:HH22	81:A2:318:U:H5	1.55	0.54
77:Co:14:LYS:HG2	77:Co:77:CYS:SG	2.47	0.54
79:Ct:30:ASN:HB2	79:Ct:44:ILE:HG22	1.89	0.54
81:A2:270:A:O4'	81:A2:272:U:H1'	2.08	0.54
81:A2:667:C:O2'	81:A2:668:C:H5'	2.08	0.54
81:A2:1045:G:H2'	81:A2:1046:G:C8	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2702:A:O5'	81:A2:2703:G:H8	1.91	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
4:B1:67:C:H41	11:BG:163:ASN:CA	2.16	0.54
4:B1:78:C:N3	11:BG:173:ALA:HB3	2.22	0.54
4:B1:148:U:H5"	4:B1:148:U:C6	2.43	0.54
4:B1:187:G:H2'	4:B1:188:C:H6	1.70	0.54
4:B1:684:G:C6	4:B1:920:A:C8	2.95	0.54
4:B1:743:U:H2'	12:BH:100:ILE:O	2.07	0.54
4:B1:746:C:H5"	12:BH:104:PRO:C	2.32	0.54
4:B1:823:U:OP1	4:B1:823:U:H3'	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:B1:1131: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:B1:1287:A:C8	36:Bf:99:LYS:CB	2.91	0.54
4:B1:1310:U:H4'	36:Bf:142:GLY:CA	2.34	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:B1:1494: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
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
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
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:89:ILE:O	62:CZ:89:ILE:HG12	2.05	0.54
62:CZ:109:LYS:CD	81:A2:2532:G:H4'	2.38	0.54
70:Ch:70:ARG:HG3	70:Ch:83:LEU:HD22	1.90	0.54
79:Ct:44:ILE:HG13	79:Ct:45:HIS:N	2.23	0.54
81:A2:383:U:H1'	81:A2:390:G:N2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:384:U:H2'	81:A2:385:G:C4'	2.36	0.54
81:A2:475:U:H6	81:A2:475:U:H3'	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
81:A2:1280:G:H8	81:A2:1280:G:P	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:A2:1942: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:A2:3590:A:H3'	81:A2:3591:C:C5	2.42	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
1:AV:41:C:HO2'	4:B1:1640:A:C4'	2.20	0.54
2:AW:34:G:C6	4:B1:1684:C:H1'	2.42	0.54
2:AW:61:C:H2'	2:AW:62:C:C6	2.42	0.54
4:B1:125:C:O4'	9:BE:136:ILE:HG22	2.07	0.54
4:B1:345:U:H3'	4:B1:345:U:C6	2.42	0.54
4:B1:399:C:H5"	4:B1:400:C:H5	1.71	0.54
4:B1:748:C:N4	4:B1:860:G:P	2.76	0.54
4:B1:890:U:O2	4:B1:890:U:C2'	2.55	0.54
4:B1:902:G:H2'	4:B1:903:A:C8	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:H3'	4:B1:1621:U:O2	2.08	0.54
4:B1:1866:A:C6	31:Ba:84:VAL:HG22	2.42	0.54
9:BE:23:LEU:O	9:BE:23:LEU:HG	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
13:BI:92:ARG:CZ	81:A2:2869:C:C2'	2.86	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
52:CP:130:TYR:HB3	81:A2:2772:A:N6	2.23	0.54
65:Cc:89:TYR:CD1	81:A2:2650:G:N7	2.75	0.54
79:Ct:62:VAL:O	79:Ct:64:ILE:HG13	2.07	0.54
80:Cu:30:ASN:ND2	80:Cu:30:ASN:N	2.56	0.54
80:Cu:204:MET:CG	81:A2:3943:G:H4'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:99:A:H2'	81:A2:100:C:H6	1.70	0.54
81:A2:210:G:C5	81:A2:211:G:C8	2.96	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:A2:2345: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:H3'	81:A2:2401:G:H8	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
81:A2:2823:G:C2'	81:A2:2824:G:H5'	2.38	0.54
81:A2:3585:U:H1'	81:A2:3586:G:OP2	2.08	0.54
81:A2:3873:G:OP2	81:A2:3873:G:C8	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
83:A4:83:A:H61	83:A4:93:G:H1	1.55	0.54
4:B1:153:G:H1	4:B1:165:G:N2	2.06	0.54
4:B1:448:A:N7	13:BI:26:LYS:CA	2.70	0.54
4:B1:465:A:C4'	4:B1:466:G:O5'	2.56	0.54
4:B1:550:C:O2'	35:Be:43:VAL:HG13	2.08	0.54
4:B1:571:U:C2'	4:B1:572:U:O4'	2.56	0.54
4:B1:572:U:P	29:BY:59:GLY:H	2.29	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
4:B1:851:C:H4'	4:B1:852:G:N2	2.22	0.54
4:B1:1214:A:N6	4:B1:1217:A:C2	2.75	0.54
4:B1:1644:C:O5'	4:B1:1644:C:H6	1.90	0.54
4:B1:1815:A:H3'	4:B1:1816:G:C8	2.40	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
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
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
43:CF:51:TYR:CE2	81:A2:972:C:H4'	2.42	0.54
45:CH:93:ARG:O	45:CH:179:ILE:HA	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:69:ARG:NH1	81:A2:4529:U:H1'	2.22	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
67:Ce:53:ILE:HG22	81:A2:428:G:H5'	1.89	0.54
68:Cf:59:THR:HB	81:A2:1279:G:H5"	1.90	0.54
78:Cp:33:GLN:HG3	78:Cp:49:ARG:HD3	1.88	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
81:A2:1276:G:H5"	81:A2:1277:U:OP2	2.08	0.54
81:A2:1282:U:H3'	81:A2:1284:C:H6	1.73	0.54
81:A2:1282:U:C2'	81:A2:1284:C:H6	2.20	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:O5'	81:A2:2475:C:H6	1.91	0.54
81:A2:2672:A:N3	81:A2:2672:A:H5"	2.22	0.54
81:A2:2743:A:H2'	81:A2:2744:U:N3	2.23	0.54
81:A2:3578:G:C5'	81:A2:3578:G:C8	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:H6	81:A2:4319:U:H5"	1.71	0.54
81:A2:4383:U:C6	81:A2:4383:U:C3'	2.89	0.54
81:A2:4537:U:O2'	81:A2:4923:A:H4'	2.07	0.54
81:A2:4537:U:H4'	81:A2:4923:A:O2'	2.08	0.54
81:A2:4651:A:C2	81:A2:4660:A:C5	2.96	0.54
82:A3:126:C:C5	82:A3:127:U:C2	2.96	0.54
1:AV:75:C:O2'	81:A2:3879:C:C5'	2.56	0.54
4:B1:35:C:H2'	4:B1:36:U:H6	1.72	0.54
4:B1:106:C:H2'	4:B1:107:A:H8	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
4:B1:1054:G:H8	4:B1:1054:G:O5'	1.89	0.54
4:B1:1504:U:O5'	4:B1:1504:U:H6	1.91	0.54
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
6:BB:33:VAL:HG11	6:BB:67:PHE:CZ	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:BW:26:LEU:HD22	32:Bb:7:LEU:HD12	1.89	0.54
28:BX:90:CYS:O	28:BX:94:ILE:HG13	2.08	0.54
40:CC:50:GLN:HB2	40:CC:51:PRO:HD3	1.90	0.54
40:CC:326:LEU:CB	81:A2:1218:A:N6	2.70	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:57:LEU:HD12	55:CS:176:PHE:CZ	2.43	0.54
49:CM:126:GLU:HB2	51:CO:187:LYS:NZ	2.23	0.54
54:CR:96:MET:SD	81:A2:2584:C:H5”	2.47	0.54
81:A2:24:G:N1	81:A2:333:G:N7	2.55	0.54
81:A2:27:C:O2’	81:A2:60:A:H1’	2.08	0.54
81:A2:65:A:C2	81:A2:76:A:O3’	2.59	0.54
81:A2:121:A:N1	81:A2:147:U:C4	2.76	0.54
81:A2:193:C:C4’	81:A2:194:A:OP2	2.54	0.54
81:A2:473:G:C4’	81:A2:474:G:OP1	2.56	0.54
81:A2:655:G:H2’	81:A2:655:G:N3	2.22	0.54
81:A2:1209:C:C2’	81:A2:1209:C:O2	2.55	0.54
81:A2:1774:A:H5”	83:A4:98:G:H2’	1.89	0.54
81:A2:2409:U:H6	81:A2:2409:U:O5’	1.91	0.54
81:A2:2455:C:OP2	81:A2:2456:G:H5”	2.08	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:A2:4098: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
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:74:C:H5”	81:A2:4508:A:P	2.48	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:B1:571:U:H1’	29:BY:60:PHE:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:571:U:H1'	29:BY:60:PHE:H	1.72	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
4:B1:1619:A:H2'	4:B1:1619:A:N3	2.23	0.53
4:B1:1649:U:C6	4:B1:1649:U:O5'	2.61	0.53
8:BD:39:VAL:O	25:BU:108:PRO:HB3	2.07	0.53
8:BD:208:VAL:HG13	22:BR:40:ILE:O	2.08	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
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
38:CA:196:TRP:CH2	81:A2:1592:A:N3	2.76	0.53
41:CD:99:TYR:CD1	41:CD:199:ILE:HD12	2.43	0.53
49:CM:20:HIS:HA	49:CM:23:LYS:HD3	1.89	0.53
60:CX:74:TYR:HD2	70:Ch:29:SER:OG	1.92	0.53
61:CY:100:HIS:CD2	81:A2:228:U:H4'	2.43	0.53
64:Cb:20:GLY:O	64:Cb:21:ILE:HB	2.07	0.53
71:Ci:13:LYS:HE3	81:A2:70:A:N1	2.22	0.53
74:Cl:13:LEU:HD21	81:A2:2384:G:C8	2.43	0.53
80:Cu:105:ILE:HA	80:Cu:130:GLU:O	2.08	0.53
81:A2:132:G:H3'	81:A2:133:C:O2	2.08	0.53
81:A2:160:A:H2'	81:A2:161:G:C8	2.42	0.53
81:A2:284:G:H21	81:A2:288:U:C4'	2.03	0.53
81:A2:344:A:C2	81:A2:351:A:C8	2.96	0.53
81:A2:1462:C:H3'	81:A2:1463:G:N7	2.22	0.53
81:A2:1756:C:C6	81:A2:1756:C:C5'	2.91	0.53
81:A2:1803:G:C6	81:A2:1804:A:C6	2.97	0.53
81:A2:2006:C:H5'	81:A2:2006:C:C6	2.42	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:A2:2875:G:H2'	81:A2:2876:C:H6	1.72	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:26:U:O5'	4:B1:26:U:H6	1.90	0.53
4:B1:37:C:O5'	4:B1:37:C:H6	1.91	0.53
4:B1:96:C:H2'	4:B1:97:U:O4'	2.08	0.53
4:B1:305:U:O2	4:B1:305:U:C2'	2.56	0.53
4:B1:448:A:C5	13:BI:26:LYS:HA	2.43	0.53
4:B1:684:G:C8	4:B1:920:A:C5	2.96	0.53
4:B1:866:U:O5'	4:B1:866:U:H6	1.91	0.53
4:B1:1004:U:O5'	4:B1:1004:U:H6	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
6:BB:59:SER:O	6:BB:63:LYS:HD3	2.08	0.53
10:BF:142:SER:OG	33:Bc:50:VAL:HB	2.08	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
37:Bg:89:LEU:HD23	37:Bg:98:THR:HB	1.89	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
62:CZ:104:PRO:HD2	81:A2:2530:A:C2	2.43	0.53
79:Ct:64:ILE:H	79:Ct:89:THR:HG22	1.72	0.53
80:Cu:105:ILE:HG22	80:Cu:132:LEU:HG	1.90	0.53
81:A2:15:A:H3'	81:A2:15:A:P	2.48	0.53
81:A2:171:C:H2'	81:A2:172:C:C6	2.43	0.53
81:A2:351:A:N3	82:A3:24:G:H1'	2.23	0.53
81:A2:405:C:H5'	81:A2:406:G:OP2	2.07	0.53
81:A2:427:C:H42	81:A2:1291:G:H1	1.56	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
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:A2:1652:U:H4'	81:A2:4262:U:O2	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4052:G:H8	81:A2:4052:G:P	2.31	0.53
81:A2:4179:A:H2'	81:A2:4179:A:N3	2.23	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
82:A3:122:G:C3'	82:A3:123:U:H5'	2.37	0.53
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
4:B1:133:C:C4	4:B1:134:C:H1'	2.43	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:B1:808:A:H5"	9:BE:188:ASN:HD21	1.72	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
4:B1:1033:G:H5"	4:B1:1034:A:OP1	2.08	0.53
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:B1:1426: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:H6	4:B1:1635:C:O5'	1.92	0.53
4:B1:1672:U:C2'	4:B1:1673:U:H5"	2.37	0.53
8:BD:166:TYR:CD1	8:BD:200:PRO:HB3	2.44	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
31:Ba:30:VAL:CG1	31:Ba:35:ALA:HB2	2.38	0.53
31:Ba:75:VAL:HA	31:Ba:78:ALA:HB3	1.89	0.53
37:Bg:197:THR:HG21	37:Bg:238:ALA:CA	2.38	0.53
40:CC:32:ILE:HG21	79:Ct:9:VAL:HG21	1.90	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
48:CL:89:LYS:HZ2	70:Ch:114:TYR:HD2	1.56	0.53
49:CM:122:ILE:HG21	51:CO:186:GLU:C	2.33	0.53
50:CN:200:LEU:HD13	50:CN:204:ARG:CZ	2.39	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
68:Cf:106:TYR:O	68:Cf:107:PRO:C	2.51	0.53
81:A2:42:A:N6	81:A2:4339:A:C2	2.75	0.53
81:A2:82:U:H3	81:A2:101:A:N6	2.06	0.53
81:A2:914:G:H21	81:A2:915:C:C5'	2.22	0.53
81:A2:1138:G:H2'	81:A2:1139:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1217:C:C4'	81:A2:1218:A:OP1	2.55	0.53
81:A2:1260:C:H6	81:A2:1260:C:O5'	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:O5'	81:A2:2838:C:H6	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:A2:4529: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
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
3:AX:59:U:C2'	3:AX:60:U:H5'	2.38	0.53
4:B1:39:A:H1'	4:B1:518:G:N2	2.23	0.53
4:B1:91:A:P	4:B1:446:G:H22	2.32	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
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:C6	4:B1:1427:C:C3'	2.89	0.53
4:B1:1648:G:H3'	4:B1:1648:G:N3	2.23	0.53
4:B1:1700:C:C2	4:B1:1834:A:N6	2.77	0.53
6:BB:91:VAL:HG22	6:BB:96:CYS:HB2	1.89	0.53
12:BH:75:ILE:HG22	12:BH:75:ILE:O	2.08	0.53
12:BH:147:LYS:HE3	12:BH:153:LEU:HD11	1.91	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:77:PRO:HA	44:CG:237:TRP:CE3	2.44	0.53
44:CG:156:VAL:HG11	44:CG:190:LEU:HD21	1.90	0.53
44:CG:163:PRO:HG2	81:A2:148:G:N2	2.23	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:A2:282: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:A2:973:U:H1'	81:A2:974:C:OP1	2.07	0.53
81:A2:1220:G:OP2	81:A2:1220:G:O4'	2.25	0.53
81:A2:1387:C:H2'	81:A2:1388:G:H8	1.72	0.53
81:A2:2378:A:H61	81:A2:2780:U:H3	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2745:C:H1'	81:A2:2746:U:P	2.47	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
82:A3:3:A:C8	82:A3:3:A:H3'	2.43	0.53
3:AX:49:U:O2'	4:B1:1825:A:H5"	2.09	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
4:B1:1556:A:H2	4:B1:1557:C:C5	2.26	0.53
14:BJ:37:LEU:HD23	14:BJ:127:ARG:NH2	2.23	0.53
18:BN:44:GLY:HA3	65:Cc:23:LYS:NZ	2.24	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
44:CG:196:ARG:NE	81:A2:147:U:C5	2.76	0.53
46:CI:145:LYS:CE	46:CI:167:ILE:HD13	2.39	0.53
47:CJ:85:LYS:HE2	47:CJ:115:LEU:O	2.08	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
50:CN:58:GLY:HA3	50:CN:142:ILE:CD1	2.38	0.53
51:CO:22:ILE:HG23	55:CS:166:ARG:HE	1.73	0.53
69:Cg:7:TYR:HD1	69:Cg:9:ARG:O	1.91	0.53
81:A2:24:G:N2	81:A2:25:A:N3	2.57	0.53
81:A2:101:A:H2'	81:A2:101:A:N3	2.23	0.53
81:A2:340:A:H3'	81:A2:341:C:C5'	2.38	0.53
81:A2:407:U:C2'	81:A2:408:G:H5'	2.38	0.53
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
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
81:A2:1560:G:O6	81:A2:1589:C:H3'	2.08	0.53
81:A2:1575:U:H6	81:A2:1575:U:H3'	1.72	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:A2:2692:G:H3'	81:A2:2693:C:H5	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:3607:G:H2'	81:A2:3608:U:H5'	1.90	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:C2'	81:A2:4828:G:N3	2.70	0.53
2:AW:67:C:H2'	2:AW:68:C:C6	2.44	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:B1:448:A:N7	13:BI:25:ARG:C	2.66	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
4:B1:1152:U:O5'	4:B1:1152:U:H6	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
8:BD:28:GLU:HG2	15:BK:61:GLN:HG3	1.90	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
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
31:Ba:63:VAL:C	31:Ba:64:LEU:HG	2.33	0.53
34:Bd:30:LEU:O	34:Bd:39:CYS:HA	2.08	0.53
37:Bg:44:LYS:HE3	37:Bg:56:GLN:CD	2.34	0.53
38:CA:132:ASN:ND2	81:A2:3651:A:H5'	2.23	0.53
39:CB:53:MET:HE2	39:CB:77:THR:HG22	1.89	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
69:Cg:11:LEU:O	69:Cg:11:LEU:HG	2.07	0.53
81:A2:30:C:C2'	81:A2:31:U:H5'	2.39	0.53
81:A2:101:A:C8	81:A2:102:G:N7	2.76	0.53
81:A2:163:C:H2'	81:A2:164:C:C6	2.41	0.53
81:A2:474:G:P	81:A2:659:A:H5"	2.48	0.53
81:A2:638:G:H2'	81:A2:639:G:H8	1.73	0.53
81:A2:1048:G:OP1	81:A2:1215:G:H2'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1186:C:H2'	81:A2:1187:C:C6	2.43	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:A2:2059: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:A2:3604:A:H3'	81:A2:3605:C:C5'	2.36	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:A2:4168:U:H5'	81:A2:4294:U:O2	2.08	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:A2:4749:G:H2'	81:A2:4750:C:H6	1.74	0.53
81:A2:4837:U:C2'	81:A2:4837:U:O2	2.57	0.53
81:A2:4942:C:O5'	81:A2:4942:C:H6	1.91	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
4:B1:28:U:H4'	28:BX:124:LYS:NZ	2.23	0.53
4:B1:36:U:C2	4:B1:520:A:N1	2.77	0.53
4:B1:39:A:C2	4:B1:517:C:H1'	2.43	0.53
4:B1:67:C:H5	11:BG:162:LEU:C	2.13	0.53
4:B1:151:C:OP1	29:BY:120:THR:HA	2.09	0.53
4:B1:314:U:O2	4:B1:314:U:C2'	2.57	0.53
4:B1:386:C:P	16:BL:136:LYS:HD3	2.48	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:B1:992:A:N6	31:Ba:12:LYS:CA	2.68	0.53
4:B1:1023:A:H8	4:B1:1023:A:O5'	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:B1:1350:U:O2'	5:BA:110:ASN:HB2	2.09	0.53
4:B1:1655:C:O5'	4:B1:1655:C:H6	1.92	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
18:BN:150:VAL:HG11	65:Cc:80:GLU:OE1	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:50:VAL:HG22	25:BU:91:LEU:CD2	2.39	0.53
25:BU:78:ASP:HB3	25:BU:80:PHE:CE2	2.43	0.53
31:Ba:5:ARG:HD2	31:Ba:8:ASN:HA	1.89	0.53
37:Bg:16:GLY:H	37:Bg:37:ASP:HB3	1.74	0.53
38:CA:23:ARG:HB2	81:A2:3648:U:C5	2.43	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:160:LYS:HZ2	42:CE:183:ARG:HD3	1.73	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
79:Ct:17:LEU:HD12	79:Ct:25:TYR:O	2.09	0.53
79:Ct:119:ARG:O	79:Ct:122:LYS:HG2	2.09	0.53
80:Cu:151:LEU:HD11	80:Cu:184:LEU:HD21	1.90	0.53
81:A2:15:A:H2	82:A3:143:G:C2	2.25	0.53
81:A2:45:U:C2'	81:A2:46:U:H5'	2.38	0.53
81:A2:118:C:H4'	81:A2:119:G:H3'	1.89	0.53
81:A2:393:A:OP1	81:A2:393:A:H4'	2.08	0.53
81:A2:443:A:C4'	81:A2:444:G:OP1	2.57	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:H6	81:A2:2630:C:H5"	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
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:A2:4602: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:OP1	2.56	0.53
83:A4:75:G:H4'	83:A4:76:U:H5'	1.91	0.53
1:AV:20:U:H3'	1:AV:21:A:H5'	1.90	0.53
4:B1:164:A:C3'	4:B1:165:G:C8	2.91	0.53
4:B1:448:A:N7	13:BI:26:LYS:N	2.56	0.53
4:B1:505:G:H2'	4:B1:506:G:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:674:C:H2'	4:B1:675:U:C6	2.43	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:B1:1664:A:OP1	4:B1:1664:A:H4'	2.09	0.53
5:BA:40:LYS:HD2	22:BR:104:GLU:HB2	1.90	0.53
6:BB:193:ILE:O	6:BB:197:ILE:HG12	2.08	0.53
10:BF:34:SER:C	10:BF:36:GLN:H	2.16	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
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
37:Bg:268:ASP:OD1	37:Bg:270:LEU:HG	2.09	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:HE3	48:CL:135:LYS:N	2.23	0.53
62:CZ:58:GLY:HA3	81:A2:4109:C:C5'	2.39	0.53
63:Ca:112:LEU:HD13	81:A2:1367:A:C2	2.44	0.53
81:A2:24:G:C2	81:A2:25:A:C5	2.97	0.53
81:A2:85:G:H21	81:A2:97:G:H2'	1.72	0.53
81:A2:166:G:H21	81:A2:167:C:H1'	1.73	0.53
81:A2:425:A:C8	81:A2:425:A:C3'	2.90	0.53
81:A2:441:G:H1'	81:A2:1274:A:C4'	2.39	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:A2:1156: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:A2:1915:C:O5'	81:A2:1915:C:H6	1.92	0.53
81:A2:2019:A:C2'	81:A2:4424:A:C2	2.92	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:A2:2604:C:N4	81:A2:4609:G:N2	2.55	0.53
81:A2:2751:C:C6	81:A2:2751:C:O5'	2.62	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:A2:4604:G:H1	81:A2:4613:C:N4	2.06	0.53
82:A3:58:G:H5"	82:A3:97:A:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:4:C:C4'	81:A2:3684:U:P	2.96	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:H6	4:B1:800:U:C5'	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
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
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
31:Ba:19:GLN:HB3	31:Ba:32:LYS:HZ3	1.73	0.53
37:Bg:9:GLY:O	37:Bg:309:VAL:HG22	2.09	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:214:ASP:OD1	81:A2:4896:G:H5'	2.09	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
65:Cc:62:TYR:O	65:Cc:66:LEU:HG	2.09	0.53
80:Cu:156:ARG:HG2	81:A2:3936:G:H21	1.73	0.53
81:A2:10:A:O2'	81:A2:11: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4881:C:H2'	81:A2:4882:G:N7	2.24	0.53
4:B1:188:C:H2'	4:B1:189:U:C6	2.44	0.53
4:B1:478:G:H8	4:B1:478:G:O5'	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:B1:873:G:C8	54:CR:162:ARG:HD2	2.43	0.53
4:B1:918:U:C5	4:B1:919:A:C8	2.97	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
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:14:ILE:HD11	27:BW:27:ILE:HD11	1.91	0.53
27:BW:104:LEU:CD2	27:BW:125:ILE:HG12	2.39	0.53
28:BX:95:GLU:HB2	28:BX:98:ASP:OD2	2.09	0.53
33:Bc:14:VAL:HG13	33:Bc:30:VAL:HB	1.91	0.53
33:Bc:34:PHE:CZ	33:Bc:42:ILE:HD12	2.44	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
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
65:Cc:10:SER:O	65:Cc:14:ILE:HG13	2.09	0.53
69:Cg:14:ASN:O	81:A2:1523:G:H4'	2.09	0.53
81:A2:121:A:H2'	81:A2:121:A:P	2.49	0.53
81:A2:195:A:C8	81:A2:195:A:H5"	2.44	0.53
81:A2:335:A:C6	82:A3:31:G:C6	2.97	0.53
81:A2:361:U:H1'	81:A2:1513:A:N1	2.23	0.53
81:A2:372:U:H6	81:A2:372:U:H3'	1.73	0.53
81:A2:957:G:C2'	81:A2:958:C:O5'	2.57	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:A2:1632: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2281:U:H3'	81:A2:2282:G:C5'	2.39	0.53
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:A2:3827:C:H2'	81:A2:3827:C:O2	2.08	0.53
81:A2:4025:C:OP2	81:A2:4025:C:C5	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
83:A4:69:U:H2'	83:A4:70:G:C8	2.44	0.53
2:AW:37:MIA:H163	10:BF:132:GLY:N	2.15	0.52
2:AW:64:A:C2	2:AW:65:G:H1'	2.43	0.52
3:AX:42:U:H3'	3:AX:42:U:C6	2.42	0.52
4:B1:111:A:C4'	4:B1:112:U:OP1	2.56	0.52
4:B1:315:C:O2'	4:B1:316:G:H5'	2.10	0.52
4:B1:562:U:H4'	4:B1:562:U:OP1	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
4:B1:901:G:C5	4:B1:902:G:N7	2.78	0.52
4:B1:909:G:P	54:CR:169:ALA:HA	2.49	0.52
4:B1:958:G:H5'	4:B1:959:G:N7	2.24	0.52
4:B1:989:C:H1'	31:Ba:32:LYS:CD	2.37	0.52
4:B1:1068:G:H2'	4:B1:1069:U:C5	2.43	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:B1:1827:U:C4'	81:A2:3728:A:C2'	2.71	0.52
4:B1:1853:C:H2'	4:B1:1854:U:H6	1.71	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
11:BG:53:SER:HB3	11:BG:110:ASN:C	2.34	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
40:CC:54:VAL:HG22	40:CC:55:SER:N	2.09	0.52
44:CG:57:TRP:NE1	44:CG:65:ARG:HH12	2.07	0.52
52:CP:22:LEU:HD13	52:CP:90:PHE:HZ	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CT:82:GLY:O	64:Cb:21:ILE:HA	2.10	0.52
62:CZ:14:LEU:HB3	62:CZ:79:HIS:O	2.08	0.52
68:Cf:36:ARG:NH2	81:A2:2044:C:H5'	2.24	0.52
80:Cu:155:GLU:OE1	81:A2:3936:G:H4'	2.08	0.52
81:A2:21:G:C2	81:A2:22:G:H1'	2.44	0.52
81:A2:24:G:C6	81:A2:333:G:C8	2.96	0.52
81:A2:79:C:O4'	81:A2:329:A:H5'	2.08	0.52
81:A2:204:G:C8	81:A2:397:C:H1'	2.44	0.52
81:A2:372:U:H3'	81:A2:372:U:C6	2.44	0.52
81:A2:426:A:H2'	81:A2:427:C:C6	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:A2:1095: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
81:A2:1786:C:O5'	81:A2:1786:C:H6	1.92	0.52
81:A2:1800:G:O5'	81:A2:1800:G:C8	2.61	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:A2:2593:C:H1'	81:A2:2699:G:N2	2.24	0.52
81:A2:2686:C:H2'	81:A2:2687:C:O5'	2.09	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
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:A2:4551: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
82:A3:79:G:H2'	82:A3:80:A:C1'	2.39	0.52
82:A3:92:U:O5'	82:A3:92:U:H6	1.91	0.52
3:AX:41:U:H2'	3:AX:42:U:H5"	1.92	0.52
3:AX:41:U:O5'	3:AX:41:U:H6	1.92	0.52
4:B1:921:G:C2	32:Bb:21:LYS:O	2.61	0.52
4:B1:1101:U:C6	4:B1:1101:U:H3'	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
14:BJ:32:ILE:HD13	35:Be:34:ARG:NH1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BX:36:LEU:O	28:BX:42:GLY:HA2	2.09	0.52
32:Bb:14:GLU:OE1	32:Bb:18:LYS:HE2	2.09	0.52
38:CA:33:ASP:O	38:CA:37:ARG:HG2	2.10	0.52
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
51:CO:182:GLU:O	51:CO:187:LYS:HD3	2.08	0.52
54:CR:95:TRP:CE2	81:A2:1551:U:H4'	2.44	0.52
63:Ca:62:HIS:CG	81:A2:306:G:C8	2.98	0.52
63:Ca:76:ASP:CB	63:Ca:114:LYS:HG2	2.39	0.52
66:Cd:84:ILE:HD11	66:Cd:108:TYR:CE1	2.45	0.52
68:Cf:62:GLY:HA3	68:Cf:65:ASN:HD22	1.74	0.52
69:Cg:94:ALA:CB	81:A2:4089:G:C2	2.92	0.52
71:Ci:26:HIS:CG	81:A2:156:C:H5'	2.44	0.52
71:Ci:33:LEU:HG	71:Ci:38:LYS:CE	2.39	0.52
81:A2:15:A:O2'	81:A2:16:G:H5'	2.09	0.52
81:A2:388:G:H8	81:A2:388:G:O5'	1.93	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:A2:501:U:H3	81:A2:643:G:H1	1.56	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:A2:1797:G:N2	81:A2:1801:U:C5'	2.72	0.52
81:A2:1801:U:C6	81:A2:1801:U:C3'	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:C5'	81:A2:3684:U:C6	2.93	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:A2:4698:C:C2'	81:A2:4699:G:H5'	2.39	0.52
83:A4:25:G:H3'	83:A4:26:C:H5	1.75	0.52
4:B1:148:U:H6	4:B1:148:U:C5'	2.21	0.52
4:B1:222:U:C4'	16:BL:21:LYS:HE2	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:745:C:C5	12:BH:107:LYS:HD3	2.44	0.52
4:B1:746:C:H5'	12:BH:104:PRO:C	2.34	0.52
4:B1:862:A:H2'	4:B1:863:U:H6	1.74	0.52
4:B1:969:U:H3'	81:A2:3681:A:N9	2.24	0.52
4:B1:1173:A:H5"	76:Cn:17:ARG:NH1	2.23	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:B1:1714:U:H6	4:B1:1714:U:O5'	1.91	0.52
12:BH:158:LEU:HD11	12:BH:187:PHE:HD2	1.73	0.52
23:BS:15:VAL:O	23:BS:19:ASN:HB2	2.09	0.52
39:CB:70:LYS:HD3	58:CV:91:LYS:HE3	1.90	0.52
39:CB:76:VAL:HG21	39:CB:332:MET:SD	2.50	0.52
41:CD:33:ARG:CZ	83:A4:7:G:H4'	2.39	0.52
42:CE:153:LEU:HB2	42:CE:193:PHE:O	2.08	0.52
42:CE:284:HIS:HA	68:Cf:41:PHE:CG	2.45	0.52
43:CF:76:ARG:HD3	81:A2:719:G:H5"	1.90	0.52
45:CH:132:VAL:CG1	45:CH:154:VAL:HG22	2.33	0.52
48:CL:169:ILE:HG13	63:Ca:96:GLY:O	2.09	0.52
50:CN:6:TYR:CE1	71:Ci:40:VAL:HG22	2.44	0.52
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
63:Ca:34:ASN:OD1	81:A2:94:A:H5"	2.10	0.52
81:A2:52:G:H8	81:A2:52:G:O5'	1.92	0.52
81:A2:181:U:H5'	81:A2:181:U:H6	1.73	0.52
81:A2:219:C:H2'	81:A2:220:G:H5"	1.91	0.52
81:A2:441:G:C8	81:A2:441:G:C5'	2.84	0.52
81:A2:670:C:O2'	81:A2:671:C:H5'	2.09	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
81:A2:1281:C:H6	81:A2:1281:C:C3'	2.15	0.52
81:A2:1622:A:O5'	81:A2:1622:A:C8	2.62	0.52
81:A2:1894:G:H3'	81:A2:1894:G:C8	2.43	0.52
81:A2:3835:C:H2'	81:A2:3836:A:O4'	2.09	0.52
81:A2:4292:C:H2'	81:A2:4292:C:O2	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:A2:4549: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
4:B1:59:U:C3'	4:B1:60:A:H5"	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:301:A:H1'	13:BI:71:CYS:O	2.09	0.52
4:B1:307:G:O6	4:B1:1788:A:H4'	2.07	0.52
4:B1:551:U:O5'	4:B1:551:U:H6	1.93	0.52
4:B1:587:A:OP2	4:B1:587:A:C8	2.62	0.52
4:B1:591:U:O2	4:B1:591:U:C2'	2.57	0.52
4:B1:613:G:O2'	4:B1:626:G:H4'	2.09	0.52
4:B1:850:C:H2'	4:B1:851:C:H5"	1.90	0.52
4:B1:1047:C:H1'	19:BO:141:ARG:HG2	1.91	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:B1:1430:C:O2'	24:BT:5:THR:HB	2.09	0.52
4:B1:1457:U:H2'	4:B1:1458:G:C8	2.44	0.52
4:B1:1495:G:C5	34:Bd:41:GLN:HB3	2.44	0.52
4:B1:1682:C:H2'	4:B1:1683:C:C6	2.44	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
8:BD:16:ILE:HG13	34:Bd:36:LEU:HD23	1.91	0.52
13:BI:191:GLU:C	16:BL:20:LYS:HB2	2.35	0.52
17:BM:24:THR:O	17:BM:27:ILE:HG12	2.10	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
54:CR:105:LEU:HD13	54:CR:105:LEU:C	2.35	0.52
61:CY:8:THR:HB	81:A2:337:G:H5"	1.91	0.52
63:Ca:23:GLY:O	63:Ca:24:LYS:HB2	2.08	0.52
67:Ce:7:LEU:O	67:Ce:9:LYS:HG2	2.09	0.52
81:A2:1:C:C4	82:A3:157:U:C4	2.97	0.52
81:A2:42:A:H2	81:A2:3894:U:O4'	1.92	0.52
81:A2:269:G:H5"	81:A2:269:G:C8	2.43	0.52
81:A2:477:C:C5'	81:A2:479:G:OP1	2.55	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:A2:2001: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:A2:2703: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:4837:U:O2	81:A2:4837:U:H2'	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:H8	83:A4:82:G:O5'	1.92	0.52
1:AV:34:G:C6	4:B1:1701:C:C1'	2.92	0.52
4:B1:138:C:OP1	4:B1:138:C:H4'	2.09	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:O5'	4:B1:609:U:H6	1.91	0.52
4:B1:1174:U:H6	4:B1:1174:U:O5'	1.93	0.52
4:B1:1389:C:O5'	4:B1:1389:C:H6	1.92	0.52
4:B1:1419:C:O2'	24:BT:3:GLY:HA2	2.09	0.52
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
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
69:Cg:43:LYS:HB2	69:Cg:51:GLY:C	2.32	0.52
80:Cu:60:VAL:HG21	80:Cu:104:PHE:CE2	2.43	0.52
81:A2:339:G:H8	81:A2:339:G:O5'	1.93	0.52
81:A2:388:G:H2'	81:A2:389:A:O4'	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:735:A:C8	81:A2:736:G:N7	2.78	0.52
81:A2:901:A:H3'	81:A2:901:A:C8	2.45	0.52
81:A2:946:C:O2	81:A2:946:C:C2'	2.57	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:A2:1491:G:O2'	81:A2:1827:U:H5"	2.09	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:A2:1912:A:N1	81:A2:2026:U:N3	2.57	0.52
81:A2:2431:U:O2	81:A2:2431:U:C2'	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:A2:3783:U:H2'	81:A2:3784:G:O5'	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:O2	81:A2:4441:U:C2'	2.57	0.52
82:A3:80:A:H2'	82:A3:81:C:C6	2.44	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
83:A4:64:G:H2'	83:A4:64:G:N3	2.24	0.52
4:B1:65:C:H2'	4:B1:66:G:C3'	2.39	0.52
4:B1:76:U:H2'	4:B1:77:A:C3'	2.25	0.52
4:B1:178:C:H3'	4:B1:179:C:C6	2.44	0.52
4:B1:499:G:N2	4:B1:502:C:C4	2.78	0.52
4:B1:746:C:H1'	4:B1:747:U:C2	2.42	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
4:B1:1174:U:P	76:Cn:21:ARG:HH22	2.22	0.52
4:B1:1403:C:C4	4:B1:1404:U:H1'	2.44	0.52
4:B1:1428:G:H5"	4:B1:1428:G:H8	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:B1:1834:A:H2	4:B1:1837:G:N2	2.00	0.52
12:BH:28:LEU:O	12:BH:31:GLU:HG2	2.10	0.52
12:BH:123:THR:HA	12:BH:126:HIS:CE1	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Bg:191:HIS:CG	37:Bg:195:LEU:HD21	2.44	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:19:LYS:HG3	41:CD:23:ARG:CZ	2.39	0.52
41:CD:191:ASN:ND2	41:CD:194:VAL:HG23	2.25	0.52
50:CN:93:LYS:O	50:CN:94:PHE:HB3	2.09	0.52
58:CV:66:LYS:HG3	58:CV:67:LYS:HD2	1.91	0.52
81:A2:70:A:H5'	81:A2:72:C:N4	2.24	0.52
81:A2:136:G:H5"	81:A2:136:G:C8	2.38	0.52
81:A2:712:C:C2'	81:A2:713:G:H5'	2.39	0.52
81:A2:963:C:O2	81:A2:963:C:H2'	2.08	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:A2:1726:U:C6	81:A2:1726:U:C5'	2.93	0.52
81:A2:1774:A:H5"	83:A4:98:G:C2'	2.39	0.52
81:A2:2294:G:H8	81:A2:2294:G:C5'	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
1:AV:39:U:H5'	4:B1:1058:A:OP1	2.09	0.52
1:AV:41:C:O2'	4:B1:1640:A:C4'	2.56	0.52
3:AX:42:U:C5	19:BO:151:LEU:HG	2.45	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:H6	4:B1:675:U:O5'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1673:U:C6	4:B1:1673:U:H5'	2.44	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
18:BN:61:ALA:HB2	32:Bb:32:PHE:CZ	2.45	0.52
21:BQ:102:GLU:HB3	37:Bg:56:GLN:C	2.35	0.52
28:BX:88:ASP:OD1	35:Be:10:GLY:HA2	2.10	0.52
32:Bb:7:LEU:O	32:Bb:24:LEU:HD11	2.09	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
43:CF:37:PHE:CD1	81:A2:1250:A:H4'	2.44	0.52
45:CH:173:ARG:HD2	75:Cm:127:VAL:HA	1.91	0.52
53:CQ:10:ASP:OD2	81:A2:2060:G:H4'	2.10	0.52
54:CR:12:SER:HA	54:CR:22:VAL:HG11	1.92	0.52
63:Ca:37:GLY:HA2	63:Ca:45:PHE:CE2	2.44	0.52
68:Cf:17:GLY:HA2	81:A2:1894:G:C2	2.44	0.52
69:Cg:54:ARG:HD2	81:A2:2659:G:H21	1.75	0.52
69:Cg:59:VAL:HG21	69:Cg:64:LEU:CD2	2.38	0.52
69:Cg:94:ALA:HA	81:A2:4089:G:N1	2.25	0.52
79:Ct:75:THR:CG2	79:Ct:78:VAL:HG22	2.40	0.52
81:A2:71:C:H5"	81:A2:72:C:H5	1.73	0.52
81:A2:393:A:H8	81:A2:393:A:C5'	2.09	0.52
81:A2:446:C:C5	81:A2:446:C:OP2	2.63	0.52
81:A2:636:G:O2'	81:A2:637:G:H5'	2.10	0.52
81:A2:642:C:H5'	81:A2:642:C:C6	2.38	0.52
81:A2:1547:C:H2'	81:A2:1548:U:C5	2.44	0.52
81:A2:1570:U:H6	81:A2:1570:U:H3'	1.74	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:A2:4439:A:H2'	81:A2:4440:A:H5'	1.92	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
82:A3:6:C:H2'	82:A3:7:U:H5'	1.92	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:B1:138:C:OP2	4:B1:139:C:H5"	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1161:U:H3'	4:B1:1161:U:C6	2.44	0.52
4:B1:1359:U:OP2	4:B1:1359:U:H6	1.93	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
5:BA:200:ASP:HB3	22:BR:86:PRO:HB2	1.92	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
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
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
37:Bg:174:VAL:HG13	37:Bg:188:HIS:HB2	1.91	0.52
38:CA:85:GLY:HA3	81:A2:4088:G:N7	2.25	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
40:CC:149:GLU:HA	79:Ct:75:THR:CA	2.40	0.52
41:CD:264:LYS:HA	83:A4:1:G:C5	2.45	0.52
42:CE:144:ILE:O	42:CE:144:ILE:HG13	2.10	0.52
44:CG:121:LYS:HB3	44:CG:129:PRO:HG2	1.92	0.52
49:CM:20:HIS:C	49:CM:23:LYS:HD3	2.35	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:80:VAL:HG12	81:A2:4264:A:OP2	2.10	0.52
56:CT:81:LYS:HG2	56:CT:82:GLY:N	2.25	0.52
69:Cg:43:LYS:HB3	69:Cg:52:ARG:HA	1.92	0.52
71:Ci:86:LYS:O	71:Ci:90:LEU:HD23	2.10	0.52
80:Cu:121:VAL:O	80:Cu:124:PRO:HD2	2.10	0.52
81:A2:249:C:H6	81:A2:249:C:O5'	1.93	0.52
81:A2:402:G:H1'	81:A2:403:G:OP2	2.10	0.52
81:A2:462:A:N7	81:A2:681:U:H5'	2.25	0.52
81:A2:672:G:H2'	81:A2:673:G:C8	2.45	0.52
81:A2:697:C:H2'	81:A2:698:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:A2:2693: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:A2:4204:A:H1'	81:A2:4228:A:C4'	2.40	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
2:AW:37:MIA:C16	10:BF:132:GLY:H	2.08	0.52
4:B1:35:C:C2'	4:B1:36:U:C6	2.92	0.52
4:B1:797:C:P	12:BH:109:ARG:H	2.33	0.52
4:B1:1000:C:N4	31:Ba:15:ARG:HB2	2.25	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
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
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
72:Cj:64:MET:HB3	72:Cj:67:LEU:HB3	1.90	0.52
77:Co:31:ASP:HA	81:A2:4304:U:H5"	1.91	0.52
81:A2:241:G:H8	81:A2:241:G:O5'	1.93	0.52
81:A2:978:G:C2'	81:A2:979:C:C6	2.83	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
81:A2:2447:C:C2'	81:A2:2447:C:O2	2.57	0.52
81:A2:2478:C:O5'	81:A2:2478:C:H6	1.93	0.52
81:A2:2551:G:H3'	81:A2:2551:G:P	2.50	0.52
81:A2:2650:G:C4'	81:A2:2651:A:OP2	2.57	0.52
81:A2:3767:U:H6	81:A2:3767:U:H5"	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:AX:53:U:N1	8:BD:146:ARG:NH2	2.58	0.52
4:B1:170:A:C2'	4:B1:171:A:C8	2.93	0.52
4:B1:172:U:O2	4:B1:172:U:C2'	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:B1:743:U:C4	12:BH:98:ARG:O	2.63	0.52
4:B1:840:C:O2	29:BY:14:THR:HG23	2.10	0.52
4:B1:913:A:C6	12:BH:120:ARG:HB3	2.45	0.52
4:B1:914:U:H6	4:B1:914:U:H5"	1.74	0.52
4:B1:956:G:O5'	19:BO:60:MET:HA	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:B1:1530:U:H4'	24:BT:86:GLY:O	2.10	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
4:B1:1691:U:O2'	4:B1:1692:U:C6	2.59	0.52
5:BA:110:ASN:HD21	5:BA:113:GLN:CG	2.23	0.52
12:BH:102:PRO:CG	12:BH:105:THR:HB	2.40	0.52
23:BS:4:VAL:HG12	23:BS:5:ILE:O	2.11	0.52
34:Bd:26:ASN:HD21	34:Bd:28:HIS:CD2	2.27	0.52
37:Bg:217:MET:HG3	37:Bg:229:THR:HG22	1.92	0.52
37:Bg:294:ASP:OD2	37:Bg:296:GLN:HB3	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:21:LYS:O	43:CF:25:PHE:HD1	1.93	0.52
43:CF:222:LYS:HB2	81:A2:1885:A:C4'	2.32	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
71:Ci:69:ALA:O	71:Ci:73:ILE:HG12	2.09	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:A2:916:A:C1'	81:A2:917:G:C5'	2.87	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:A2:2309:G:O3'	81:A2:2310:G:C8	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3888:C:C6	81:A2:3888:C:C5'	2.92	0.52
81:A2:4144:G:H8	81:A2:4144:G:OP1	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
83:A4:12:U:H5'	83:A4:67:C:O2	2.10	0.52
2:AW:37:MIA:C12	10:BF:134:VAL:HG13	2.39	0.51
4:B1:53:C:H2'	4:B1:54:A:H5'	1.92	0.51
4:B1:83:A:H2'	29:BY:123:ALA:CB	2.40	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
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
5:BA:30:LEU:HD22	5:BA:35:GLU:OE1	2.10	0.51
5:BA:33:GLN:NE2	26:BV:63:GLY:HA3	2.25	0.51
7:BC:74:LYS:HG3	7:BC:272:HIS:CD2	2.45	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
10:BF:79:HIS:O	10:BF:81:ARG:N	2.44	0.51
15:BK:15:LEU:HD22	15:BK:15:LEU:O	2.09	0.51
15:BK:26:ASP:OD2	15:BK:33:PRO:HG2	2.09	0.51
30:BZ:92:LEU:HD13	30:BZ:109:TYR:HE1	1.75	0.51
31:Ba:41:ILE:HG13	31:Ba:41:ILE:O	2.10	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
63:Ca:21:ARG:HD3	81:A2:2258:A:H5"	1.91	0.51
67:Ce:105:SER:HA	67:Ce:108:ARG:HH11	1.75	0.51
69:Cg:78:TYR:HA	81:A2:2728:G:H4'	1.91	0.51
71:Ci:27:SER:O	71:Ci:28:ARG:HB2	2.09	0.51
72:Cj:15:THR:CG2	81:A2:1513:A:C2	2.92	0.51
81:A2:14:C:C1'	81:A2:15:A:H5'	2.40	0.51
81:A2:286:A:H62	81:A2:4322:A:H4'	1.76	0.51
81:A2:327:A:H3'	81:A2:328:U:H4'	1.91	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
81:A2:1063:U:O2'	81:A2:1064:C:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:1630: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:A2:2587:G:H1'	81:A2:2663:G:O2'	2.09	0.51
81:A2:2626:G:C2	81:A2:2662:C:C2	2.99	0.51
81:A2:2673:A:H5'	81:A2:2674:A:H8	1.75	0.51
81:A2:3667:G:H8	81:A2:3667:G:O5'	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:C6	81:A2:4090:C:C3'	2.93	0.51
81:A2:4233:A:C8	81:A2:4233:A:H3'	2.46	0.51
81:A2:4234:A:H2'	81:A2:4235:G:H8	1.73	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
83:A4:9:C:O2	83:A4:9:C:C3'	2.58	0.51
83:A4:57:C:C2'	83:A4:58:A:H5'	2.39	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:B1:10:G:H2'	4:B1:11:A:C8	2.44	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
4:B1:1148:A:N3	4:B1:1148:A:C5'	2.72	0.51
4:B1:1549:U:H6	4:B1:1549:U:O5'	1.92	0.51
4:B1:1743:G:H21	4:B1:1791:A:H62	1.56	0.51
5:BA:8:LEU:HG	5:BA:191:ARG:NE	2.25	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
31:Ba:44:ILE:HG13	31:Ba:45:VAL:N	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Bg:119:GLN:HB3	37:Bg:131:LEU:HD21	1.91	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
42:CE:158:ARG:HH21	81:A2:4903:C:H1'	1.75	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
64:Cb:61:ASN:HB2	81:A2:1790:G:O2'	2.10	0.51
71:Ci:43:MET:HG2	71:Ci:47:VAL:HG23	1.93	0.51
79:Ct:3:ALA:HA	79:Ct:45:HIS:ND1	2.24	0.51
81:A2:266:C:H2'	81:A2:266:C:O2	2.10	0.51
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:A2:1198:G:HO2'	81:A2:1199:G:H5'	1.74	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:OP1	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:H5"	81:A2:2294:G:C8	2.43	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
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: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
3:AX:52:U:H5	4:B1:1698:C:O2	1.93	0.51
4:B1:550:C:H4'	35:Be:43:VAL:HG22	1.91	0.51
4:B1:1130:G:H5'	18:BN:10:GLY:HA2	1.91	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:O2	4:B1:1624:U:C2'	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
37:Bg:41:ILE:HD13	37:Bg:58:ALA:HA	1.93	0.51
37:Bg:146:SER:HB3	37:Bg:177:TRP:CH2	2.46	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:80:ILE:O	44:CG:81:ASN:HB3	2.11	0.51
44:CG:136:LEU:HB3	44:CG:204:PHE:CE2	2.46	0.51
61:CY:87:ARG:HG3	61:CY:97:VAL:CG2	2.41	0.51
62:CZ:1:MET:HG2	65:Cc:68:LYS:HD3	1.92	0.51
62:CZ:134:LEU:HD21	69:Cg:94:ALA:HB1	1.91	0.51
79:Ct:21:ASN:HB2	79:Ct:23:GLN:HE22	1.74	0.51
81:A2:1:C:N3	82:A3:157:U:C4	2.78	0.51
81:A2:15:A:OP2	81:A2:15:A:C8	2.59	0.51
81:A2:35:U:H4'	81:A2:1504:A:N1	2.24	0.51
81:A2:172:C:H2'	81:A2:173:G:H5'	1.90	0.51
81:A2:198:C:O2'	81:A2:199:C:C5	2.63	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:A2:1076: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:A2:1942:A:C2	81:A2:1943:G:C4	2.98	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:H8	81:A2:3578:G:H5"	1.75	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:O5'	81:A2:4402:U:H6	1.92	0.51
81:A2:4456:A:C3'	81:A2:4457:U:H5'	2.41	0.51
81:A2:4597:G:OP2	81:A2:4597:G:H4'	2.09	0.51
1:AV:32:U:P	21:BQ:146:ARG:CD	2.98	0.51
1:AV:56:C:H4'	47:CJ:55:TYR:CD1	2.38	0.51
3:AX:42:U:C6	3:AX:42:U:C3'	2.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AX:48:U:C4	4:B1:1702:G:P	3.02	0.51
4:B1:67:C:C2	11:BG:164:LYS:HB2	2.46	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:B1:525:A:O2'	4:B1:526:A:C8	2.61	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
4:B1:1370:A:H62	22:BR:4:VAL:HB	1.76	0.51
4:B1:1500:G:O4'	8:BD:180:GLY:HA2	2.11	0.51
4:B1:1548:G:O6	4:B1:1584:G:C2	2.64	0.51
4:B1:1567:G:H1'	24:BT:38:LYS:HG3	1.91	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:P	4:B1:1782:G:O4'	2.68	0.51
6:BB:58:ALA:O	6:BB:63:LYS:HG3	2.10	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
12:BH:109:ARG:HG3	12:BH:113:LYS:HD2	1.92	0.51
23:BS:30:ILE:HG22	23:BS:36:VAL:HG11	1.92	0.51
33:Bc:38:THR:HG23	33:Bc:39:SER:N	2.26	0.51
37:Bg:196:ASN:HD21	37:Bg:235:ILE:HD11	1.75	0.51
40:CC:58:ALA:HB3	81:A2:348:U:H4'	1.91	0.51
40:CC:139:SER:O	79:Ct:14:SER:CA	2.53	0.51
40:CC:318:PRO:HG2	43:CF:155:TYR:HB3	1.93	0.51
40:CC:325:MET:HE1	81:A2:929:U:H4'	1.92	0.51
48:CL:143:GLU:HG2	48:CL:144:LEU:H	1.74	0.51
49:CM:98:ARG:HB3	81:A2:4826:C:C2	2.45	0.51
51:CO:193:THR:O	51:CO:197:LYS:HG3	2.10	0.51
53:CQ:57:ASN:ND2	81:A2:1671:C:H4'	2.25	0.51
61:CY:61:HIS:CE1	81:A2:229:G:H1	2.28	0.51
63:Ca:131:ARG:NH1	81:A2:1467:G:H4'	2.24	0.51
65:Cc:53:PRO:HD3	78:Cp:41:PHE:O	2.11	0.51
69:Cg:45:ALA:O	81:A2:2573:G:H1'	2.10	0.51
69:Cg:93:ARG:CD	81:A2:4088:G:H5'	2.40	0.51
70:Ch:7:ARG:HA	70:Ch:10:ARG:NH2	2.25	0.51
72:Cj:67:LEU:HD13	72:Cj:67:LEU:C	2.35	0.51
81:A2:3:C:H42	82:A3:154:G:H1	1.59	0.51
81:A2:8:U:C2'	81:A2:9:C:H5'	2.38	0.51
81:A2:283:G:C2	81:A2:284:G:N7	2.79	0.51
81:A2:710:G:H2'	81:A2:711:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:1080: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
81:A2:1849:A:H5'	81:A2:4403:C:OP1	2.10	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:A2:3761: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:A2:4837:U:C3'	81:A2:4838:C:H5'	2.39	0.51
83:A4:71:G:H2'	83:A4:72:U:H6	1.75	0.51
3:AX:45:U:C2	4:B1:1207:G:N3	2.40	0.51
4:B1:39:A:H2'	4:B1:40:A:O4'	2.10	0.51
4:B1:67:C:C6	11:BG:164:LYS:HB2	2.45	0.51
4:B1:368:U:OP1	4:B1:369:C:H4'	2.10	0.51
4:B1:495:U:H2'	4:B1:496:C:O4'	2.10	0.51
4:B1:499:G:H2'	4:B1:499:G:N3	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:H8	4:B1:985:G:OP2	1.93	0.51
4:B1:994:C:H2'	4:B1:995:G:O4'	2.11	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:B1:1579:A:H62	25:BU:88:LEU:HD22	1.75	0.51
4:B1:1597:C:H3'	4:B1:1598:G:C8	2.46	0.51
4:B1:1767:C:C6	4:B1:1767:C:H3'	2.46	0.51
7:BC:124:PHE:O	7:BC:143:CYS:HA	2.10	0.51
8:BD:7:LYS:HD3	8:BD:10:LYS:HE2	1.91	0.51
8:BD:213:PRO:HD3	22:BR:20:TYR:CZ	2.46	0.51
9:BE:238:LEU:HD23	9:BE:238:LEU:H	1.75	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
17:BM:64:LEU:HD22	36:Bf:106:TYR:HB2	1.93	0.51
20:BP:18:ARG:NH2	20:BP:38:SER:HB2	2.25	0.51
25:BU:80:PHE:CD1	34:Bd:52:PHE:HB3	2.44	0.51
32:Bb:14:GLU:O	32:Bb:18:LYS:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
64:Cb:19:ASN:ND2	81:A2:1665:C:H5"	2.26	0.51
69:Cg:72:LYS:O	81:A2:2727:G:H4'	2.10	0.51
69:Cg:94:ALA:HA	81:A2:4089:G:C2	2.45	0.51
72:Cj:13:ASN:O	81:A2:1513:A:C5	2.64	0.51
72:Cj:19:CYS:SG	72:Cj:22:CYS:N	2.80	0.51
80:Cu:27:LEU:HB2	80:Cu:163:VAL:CG2	2.40	0.51
81:A2:365:G:H2'	81:A2:366:G:C5'	2.38	0.51
81:A2:411:A:H3'	81:A2:412:C:C6	2.46	0.51
81:A2:438:C:C6	81:A2:438:C:O5'	2.62	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:H5'	81:A2:915:C:H6	1.76	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:H8	81:A2:2665:G:C5'	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:A2:4105:C:H4'	81:A2:4106:G:OP1	2.11	0.51
81:A2:4122:C:C5	82:A3:150:C:C6	2.98	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:H5"	81:A2:4387:G:C8	2.45	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
82:A3:58:G:OP1	82:A3:97:A:N1	2.44	0.51
83:A4:7:G:C2'	83:A4:8:G:H5'	2.41	0.51
83:A4:21:G:O5'	83:A4:21:G:C8	2.63	0.51
1:AV:57:G:H5"	1:AV:57:G:C8	2.45	0.51
4:B1:20:G:H4'	4:B1:620:G:N1	2.25	0.51
4:B1:91:A:H5"	4:B1:92:A:H5'	1.90	0.51
4:B1:142:C:O2	4:B1:142:C:H2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1000:C:N4	31:Ba:16:GLY:H	2.07	0.51
4:B1:1038:U:H1'	4:B1:1181:A:H2	1.75	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
5:BA:189:ILE:HG22	5:BA:190:SER:O	2.10	0.51
7:BC:267:GLN:HE22	26:BV:35:ASN:HB2	1.75	0.51
12:BH:105:THR:HG22	12:BH:105:THR:O	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
20:BP:44:ARG:HD3	20:BP:44:ARG:C	2.36	0.51
23:BS:37:GLY:H	23:BS:40:TYR:HB3	1.76	0.51
27:BW:26:LEU:HD22	32:Bb:7:LEU:CD1	2.41	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
44:CG:163:PRO:HG2	81:A2:148:G:H22	1.76	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
68:Cf:4:ARG:CZ	81:A2:4904:G:H1	2.23	0.51
81:A2:25:A:H2'	81:A2:26:C:C6	2.45	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:A2:334:C:H5"	81:A2:334:C:H6	1.76	0.51
81:A2:459:U:O2	81:A2:459:U:C2'	2.59	0.51
81:A2:500:A:H8	81:A2:500:A:O5'	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
81:A2:1379:G:H2'	81:A2:1380:G:C8	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:A2:2550: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:A2:3743: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:H6	81:A2:4536:U:O5'	1.93	0.51
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
83:A4:24:C:H2'	83:A4:25:G:C8	2.46	0.51
3:AX:50:U:C2'	3:AX:51:U:H5'	2.40	0.51
4:B1:45:A:OP1	4:B1:45:A:H8	1.93	0.51
4:B1:181:A:H2'	4:B1:181:A:N3	2.24	0.51
4:B1:876:C:C6	4:B1:876:C:P	3.04	0.51
4:B1:1109:C:O2	4:B1:1109:C:C3'	2.59	0.51
4:B1:1178:U:OP1	78:Cp:6:LYS:NZ	2.43	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:B1:1562:C:C5'	24:BT:71:GLY:HA3	2.40	0.51
4:B1:1648:G:O2'	21:BQ:127:CYS:HA	2.10	0.51
4:B1:1696:C:O2'	4:B1:1697:A:C8	2.58	0.51
4:B1:1865:C:C6	31:Ba:5:ARG:HB3	2.46	0.51
6:BB:30:TRP:HE1	19:BO:17:LEU:CD2	2.24	0.51
14:BJ:12:THR:O	14:BJ:45:ARG:HA	2.11	0.51
24:BT:102:ARG:HA	24:BT:105:GLN:OE1	2.10	0.51
25:BU:94:PRO:CD	25:BU:97:ILE:HD12	2.38	0.51
37:Bg:40:ILE:HB	37:Bg:59:LEU:HB2	1.92	0.51
40:CC:67:TRP:HE1	40:CC:80:ARG:HG2	1.76	0.51
40:CC:174:LEU:O	40:CC:175:LYS:HB2	2.10	0.51
40:CC:293:LEU:HD22	81:A2:2065:C:H2'	1.91	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
48:CL:124:LEU:HD11	70:Ch:121:VAL:HG22	1.91	0.51
53:CQ:160:HIS:H	53:CQ:188:ASN:HB3	1.75	0.51
63:Ca:40:HIS:CA	81:A2:1660:G:H21	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:Cb:65:MET:HG3	81:A2:1789:G:H21	1.74	0.51
68:Cf:50:VAL:HG22	68:Cf:69:VAL:HG22	1.92	0.51
77:Co:1:MET:N	81:A2:4190:C:H5"	2.26	0.51
81:A2:104:G:C1'	81:A2:1340:G:N2	2.57	0.51
81:A2:131:C:C2	81:A2:139:G:C2	2.99	0.51
81:A2:210:G:C6	81:A2:211:G:C8	2.99	0.51
81:A2:378:G:C4	81:A2:403:G:N1	2.79	0.51
81:A2:457:A:C5	81:A2:676:G:C8	2.99	0.51
81:A2:468:C:O2'	81:A2:469:G:H5'	2.10	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
81:A2:1050:G:H2'	81:A2:1051:C:C5'	2.31	0.51
81:A2:1086:A:O5'	81:A2:1086:A:C8	2.59	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
81:A2:2369:C:H2'	81:A2:2370:C:H6	1.74	0.51
81:A2:2398:G:O5'	81:A2:2805:U:H1'	2.10	0.51
81:A2:2479:G:H3'	81:A2:2479:G:H8	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:A2:3651:A:H1'	81:A2:3653:G:C4	2.45	0.51
81:A2:3679:G:H2'	81:A2:3679:G:N3	2.26	0.51
81:A2:3821:A:H5"	81:A2:3821:A:H8	1.76	0.51
81:A2:3866:G:N1	81:A2:4519:A:H2	2.09	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:A2:4600: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:A2:4739: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
83:A4:34:C:O2'	83:A4:35:U:H5'	2.09	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:B1:210: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:B1:1018:U:H1'	18:BN:48:SER:OG	2.11	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:O5'	4:B1:1523:C:H6	1.94	0.51
4:B1:1557:C:N3	4:B1:1661:A:H4'	2.26	0.51
4:B1:1648:G:H2'	21:BQ:127:CYS:HA	1.93	0.51
4:B1:1694:U:O2'	4:B1:1834:A:H5"	2.10	0.51
8:BD:213:PRO:HD3	22:BR:20:TYR:CE1	2.46	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
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
37:Bg:197:THR:HB	37:Bg:237:ASN:O	2.11	0.51
39:CB:56:ILE:CD1	39:CB:368:ILE:HG12	2.41	0.51
40:CC:36:ILE:HG22	40:CC:123:ALA:CB	2.40	0.51
41:CD:207:TYR:CE1	83:A4:33:U:H1'	2.46	0.51
42:CE:145:THR:O	42:CE:148:THR:HG23	2.10	0.51
43:CF:63:GLN:CD	81:A2:1191:G:H4'	2.36	0.51
45:CH:48:LEU:HD22	45:CH:54:ARG:HH11	1.75	0.51
45:CH:117:PHE:HB3	45:CH:124:ARG:NH2	2.26	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
53:CQ:90:VAL:HG21	63:Ca:80:THR:CG2	2.41	0.51
69:Cg:7:TYR:CZ	81:A2:2378:A:H2	2.29	0.51
70:Ch:103:LYS:HB3	70:Ch:107:GLN:OE1	2.11	0.51
72:Cj:34:CYS:HB3	72:Cj:39:TYR:H	1.75	0.51
78:Cp:4:ARG:NH2	81:A2:1533:A:H5"	2.26	0.51
80:Cu:156:ARG:HG2	81:A2:3936:G:N2	2.26	0.51
81:A2:942:G:C1'	81:A2:2250:C:OP1	2.57	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:A2:2277:G:O5'	81:A2:2277:G:C8	2.64	0.51
81:A2:2288:U:H6	81:A2:2288:U:O5'	1.94	0.51
81:A2:2347:A:H1'	81:A2:2348:U:P	2.51	0.51
81:A2:2503:C:H6	81:A2:2503:C:O5'	1.94	0.51
81:A2:2607:U:H4'	81:A2:2608:U:OP2	2.06	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2665:G:H2'	81:A2:2666:C:H5'	1.92	0.51
81:A2:2782:C:OP2	81:A2:2782:C:H6	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:N3	81:A2:4828:G:H2'	2.25	0.51
1:AV:19:G:O6	77:Co:104:ILE:CG2	2.59	0.51
1:AV:76:A:N1	81:A2:4356:A:O2'	2.39	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:H8	4:B1:552:G:O5'	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
4:B1:1130:G:C5'	18:BN:10:GLY:HA2	2.41	0.51
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:C6	4:B1:1635:C:O5'	2.64	0.51
4:B1:1861:G:H4'	31:Ba:2:THR:C	2.36	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
7:BC:167:ARG:C	7:BC:181:PRO:HD3	2.35	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
40:CC:163:LYS:HA	81:A2:221:U:H3	1.75	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
48:CL:182:LEU:HD11	63:Ca:146:LEU:CD2	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:64:ASN:H	52:CP:64:ASN:HD22	1.59	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
61:CY:59:ARG:HB2	61:CY:103:LYS:HD2	1.93	0.51
67:Ce:126:ASN:O	67:Ce:129:LEU:HB2	2.10	0.51
68:Cf:102:ARG:HB3	81:A2:4711:U:H5'	1.93	0.51
71:Ci:33:LEU:HG	71:Ci:38:LYS:HE3	1.91	0.51
71:Ci:33:LEU:HD23	71:Ci:34:THR:H	1.76	0.51
74:Cl:40:LYS:NZ	81:A2:357:A:H5"	2.26	0.51
78:Cp:13:LYS:HE3	78:Cp:14:TYR:CZ	2.45	0.51
79:Ct:46:ARG:HH22	79:Ct:106:LEU:HD11	1.76	0.51
80:Cu:124:PRO:HG3	81:A2:4014:A:O2'	2.10	0.51
80:Cu:160:HIS:CE1	81:A2:4022:C:H1'	2.46	0.51
81:A2:68:U:H6	81:A2:68:U:O5'	1.93	0.51
81:A2:116:G:N2	81:A2:118:C:H2'	2.25	0.51
81:A2:180:C:C4'	81:A2:182:C:C6	2.88	0.51
81:A2:957:G:C2'	81:A2:958:C:H5"	2.30	0.51
81:A2:1249:G:H3'	81:A2:1250:A:C8	2.46	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
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
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
83:A4:25:G:H2'	83:A4:26:C:C5	2.46	0.51
2:AW:36:A:H61	10:BF:132:GLY:CA	2.24	0.51
4:B1:75:G:N2	4:B1:78:C:H4'	2.26	0.51
4:B1:671:A:H5"	4:B1:671:A:H8	1.76	0.51
4:B1:813:A:H2'	4:B1:814:U:H5'	1.93	0.51
4:B1:888:U:C6	4:B1:888:U:C3'	2.94	0.51
4:B1:894:G:H2'	4:B1:895:G:C8	2.46	0.51
4:B1:1147:C:C6	4:B1:1147:C:C3'	2.94	0.51
4:B1:1203:G:H2'	4:B1:1699:A:H2	1.74	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
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
15:BK:65:ARG:NE	34:Bd:22:ARG:HA	2.26	0.51
42:CE:232:ILE:HG22	42:CE:233:PHE:N	2.26	0.51
44:CG:66:GLN:CB	50:CN:28:TRP:HH2	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:106:THR:HB	44:CG:195:HIS:CD2	2.45	0.51
44:CG:174:CYS:HB3	44:CG:179:VAL:O	2.11	0.51
45:CH:13:PRO:HG2	45:CH:16:VAL:HG22	1.92	0.51
45:CH:111:LEU:HD23	45:CH:127:ARG:HA	1.93	0.51
49:CM:49:ALA:HB2	55:CS:100:LEU:CD2	2.41	0.51
51:CO:38:CYS:O	51:CO:41:ILE:HG13	2.10	0.51
51:CO:165:LYS:HB3	81:A2:4814:C:H5"	1.93	0.51
53:CQ:64:SER:HB3	53:CQ:92:VAL:HG21	1.93	0.51
56:CT:105:PHE:O	56:CT:108:ARG:HB3	2.11	0.51
70:Ch:13:LYS:O	70:Ch:17:LEU:HG	2.10	0.51
81:A2:26:C:H4'	81:A2:331:C:O2	2.11	0.51
81:A2:27:C:O2	81:A2:27:C:H2'	2.11	0.51
81:A2:231:G:H3'	81:A2:232:A:H5"	1.93	0.51
81:A2:263:U:H2'	81:A2:264:U:C6	2.46	0.51
81:A2:303:G:H3'	81:A2:303:G:C8	2.45	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
81:A2:425:A:C8	81:A2:425:A:O5'	2.64	0.51
81:A2:438:C:O2'	81:A2:439:G:H5'	2.10	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
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:A2:2608:U:O2'	81:A2:2609:U:H4'	2.11	0.51
81:A2:2795:C:C6	81:A2:2795:C:H3'	2.46	0.51
81:A2:3585:U:C1'	81:A2:3586:G:P	2.99	0.51
81:A2:4061:G:C6	81:A2:4081:C:N4	2.79	0.51
81:A2:4810:G:H2'	81:A2:4811:G:H8	1.76	0.51
83:A4:39:C:H6	83:A4:39:C:OP1	1.93	0.51
83:A4:97:G:H8	83:A4:97:G:H5'	1.76	0.51
1:AV:34:G:O6	4:B1:1701:C:O4'	2.29	0.50
3:AX:37:U:OP2	31:Ba:40:VAL:CG1	2.59	0.50
4:B1:83:A:C2'	29:BY:123:ALA:HB1	2.41	0.50
4:B1:214:U:O5'	4:B1:214:U:C6	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:B1:590:A:N7	35:Be:28:LYS:HB2	2.25	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:684:G:C2	4:B1:920:A:O4'	2.65	0.50
4:B1:867:G:H8	4:B1:867:G:O5'	1.94	0.50
4:B1:1016:U:C4	4:B1:1017:U:C5	2.99	0.50
4:B1:1562:C:H5'	24:BT:71:GLY:CA	2.40	0.50
4:B1:1672:U:C3'	4:B1:1673:U:H5"	2.40	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
32:Bb:30:SER:HB2	32:Bb:47:PHE:CZ	2.45	0.50
37:Bg:35:SER:HB3	37:Bg:37:ASP:OD1	2.11	0.50
38:CA:140:ASN:HB2	38:CA:145:LYS: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
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
63:Ca:9:ARG:NH2	81:A2:2321:U:H2'	2.25	0.50
81:A2:44:A:H2'	81:A2:45:U:H6	1.77	0.50
81:A2:286:A:N1	81:A2:308:A:C8	2.79	0.50
81:A2:422:G:H21	81:A2:3857:G:H3'	1.76	0.50
81:A2:634:C:H2'	81:A2:635:G:H8	1.75	0.50
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:A2:2420: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
81:A2:3727:U:C6	81:A2:3727:U:H3'	2.46	0.50
81:A2:4233:A:N7	81:A2:4234:A:C5	2.79	0.50
81:A2:4668:A:C5'	81:A2:4669:U:H5	2.23	0.50
82:A3:29:G:H2'	82:A3:30:U:C6	2.46	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:B1:88:G:C2	4:B1:89:C:C2	2.99	0.50
4:B1:337:C:O2	4:B1:337:C:H2'	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:B1:944:A:H2'	4:B1:944:A:N3	2.25	0.50
4:B1:1101:U:H5"	6:BB:151:ARG:CD	2.41	0.50
4:B1:1161:U:H2'	4:B1:1162:C:O5'	2.10	0.50
4:B1:1203:G:C2'	4:B1:1699:A:C2	2.95	0.50
4:B1:1214:A:C2	4:B1:1686:G:N3	2.79	0.50
4:B1:1255:G:OP2	4:B1:1256:G:N7	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1311:C:OP2	4:B1:1311:C:C5	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
5:BA:33:GLN:CB	5:BA:154:LEU:HD12	2.41	0.50
6:BB:112:SER:HB2	31:Ba:68:TYR:CE2	2.46	0.50
15:BK:65:ARG:HE	34:Bd:22:ARG:HA	1.76	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
43:CF:67:THR:HA	81:A2:1190:C:H1'	1.94	0.50
44:CG:73:ARG:NH1	81:A2:4044:G:OP2	2.44	0.50
44:CG:152:ALA:CA	44:CG:205:THR:HG22	2.40	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
52:CP:30:ARG:HD3	52:CP:30:ARG:C	2.36	0.50
58:CV:28:CYS:HB3	58:CV:34:ALA:O	2.11	0.50
59:CW:33:ASN:N	59:CW:33:ASN:HD22	2.09	0.50
80:Cu:30:ASN:N	80:Cu:30:ASN:HD22	2.09	0.50
80:Cu:32:ARG:HG3	80:Cu:33:ASP:OD1	2.11	0.50
81:A2:2:G:H2'	81:A2:3:C:O5'	2.12	0.50
81:A2:28:C:H6	81:A2:28:C:O5'	1.94	0.50
81:A2:274:G:O6	81:A2:296:A:H2	1.95	0.50
81:A2:702:G:H2'	81:A2:703:G:H8	1.76	0.50
81:A2:1209:C:H4'	81:A2:1210:U:C1'	2.41	0.50
81:A2:1217:C:O2	81:A2:1217:C:H2'	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:O5'	81:A2:2052:C:H6	1.94	0.50
81:A2:2426:A:C8	81:A2:2427:G:C8	2.99	0.50
81:A2:2533:G:C8	81:A2:2533:G:O5'	2.64	0.50
81:A2:4043:U:H1'	81:A2:4044:G:O5'	2.11	0.50
81:A2:4052:G:O5'	81:A2:4052:G:C8	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
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
4:B1:77:A:H5"	4:B1:78:C:H41	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:312:G:H22	11:BG:195:LYS:HG3	1.76	0.50
4:B1:428:U:C2'	4:B1:429:C:H6	2.24	0.50
4:B1:973:C:C5	4:B1:974:C:C4	2.99	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:H8	4:B1:1818:A:O5'	1.94	0.50
4:B1:1852:C:C4	76:Cn:5:TRP:CZ3	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
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
44:CG:30:PRO:C	44:CG:31:LEU:HD12	2.36	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
69:Cg:92:LYS:O	69:Cg:96:LEU:HG	2.11	0.50
73:Ck:38:CYS:HB2	73:Ck:41:TYR:O	2.11	0.50
79:Ct:92:SER:HB2	81:A2:668:C:C5'	2.39	0.50
80:Cu:192:PRO:O	80:Cu:195:ILE:HG22	2.10	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:A2:426:A:C4	81:A2:427:C:C6	3.00	0.50
81:A2:465:C:H2'	81:A2:466:G:C8	2.46	0.50
81:A2:736:G:H2'	81:A2:736:G:N3	2.26	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
81:A2:2294:G:C5'	81:A2:2294:G:C8	2.95	0.50
81:A2:2552:U:C6	81:A2:2552:U:C3'	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:H8	81:A2:3821:A:OP2	1.94	0.50
81:A2:4201:C:H2'	81:A2:4201:C:O2	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:4704: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
83:A4:31:G:N2	83:A4:48:G:O6	2.43	0.50
2:AW:62:C:H4’	80:Cu:37:ASN:HD22	1.76	0.50
4:B1:37:C:C3’	4:B1:38:A:H5”	2.42	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:B1:100:U:H2’	4:B1:101:U:O5’	2.11	0.50
4:B1:219:U:C5’	4:B1:219:U:C6	2.95	0.50
4:B1:584:A:O2’	4:B1:585:C:H5’	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:B1:1484:A:C5’	8:BD:159:HIS:HB3	2.38	0.50
4:B1:1567:G:OP1	4:B1:1567:G:C8	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:H8	4:B1:1869:A:O5’	1.93	0.50
9:BE:252:ARG:HB3	9:BE:252:ARG:NH1	2.26	0.50
10:BF:91:ARG:HA	10:BF:91:ARG:HE	1.76	0.50
10:BF:144:LEU:HD23	33:Bc:49:PRO:CB	2.36	0.50
23:BS:36:VAL:HG13	23:BS:40:TYR:HD1	1.76	0.50
27:BW:26:LEU:HB2	32:Bb:7:LEU:HD12	1.92	0.50
38:CA:52:PRO:HB3	81:A2:2718:U:H5’	1.93	0.50
38:CA:159:SER:O	38:CA:162:ASN:HB3	2.12	0.50
39:CB:293:ILE:HG12	39:CB:295:ASP:H	1.77	0.50
40:CC:311:ARG:HA	81:A2:943:G:C6	2.47	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:182:ASN:O	42:CE:183:ARG:HB3	2.10	0.50
42:CE:278:THR:H	42:CE:281:ILE:HG13	1.77	0.50
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
54:CR:134:ASN:HB2	81:A2:2873:G:H5”	1.92	0.50
59:CW:44:ARG:HD2	81:A2:3584:G:C2’	2.39	0.50
65:Cc:34:THR:O	65:Cc:38:ILE:HG12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:Cj:59:THR:HG22	82:A3:41:A:O2'	2.10	0.50
77:Co:12:CYS:O	77:Co:15:CYS:SG	2.70	0.50
81:A2:32:G:H21	81:A2:50:C:N4	2.08	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:A2:977:G:H1	81:A2:1052:C:H42	1.60	0.50
81:A2:1294:C:C2	81:A2:3834:A:C2	2.99	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
81:A2:2782:C:H2'	81:A2:2783:A:C8	2.47	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:A2:3856: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:C6	81:A2:4025:C:O5'	2.65	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
83:A4:92:C:H2'	83:A4:93:G:H8	1.75	0.50
4:B1:22:A:C2	4:B1:653:A:C2	3.00	0.50
4:B1:211:G:C8	4:B1:211:G:C5'	2.88	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:O5'	4:B1:678:U:C6	2.64	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:O5'	4:B1:1814:G:C8	2.62	0.50
4:B1:1851:A:H5"	4:B1:1851:A:C8	2.41	0.50
5:BA:63:ARG:HA	26:BV:46:PHE:CE2	2.47	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:90:GLY:C	11:BG:92:ARG:H	2.20	0.50
12:BH:37:LYS:HE2	12:BH:41:ARG:NH2	2.26	0.50
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
27:BW:114:GLU:O	27:BW:117:ARG:HG2	2.12	0.50
32:Bb:37:CYS:SG	32:Bb:40:CYS:N	2.85	0.50
37:Bg:109:LEU:N	37:Bg:109:LEU:HD22	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:13:GLU:CB	40:CC:170:LEU:HD11	2.35	0.50
42:CE:214:ASP:CG	81:A2:4896:G:C4	2.89	0.50
43:CF:88:LYS:NZ	56:CT:135:PRO:HG2	2.26	0.50
43:CF:104:LYS:HG3	43:CF:135:ILE:HG21	1.93	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:62:TYR:HB3	61:CY:65:GLN:HG3	1.92	0.50
61:CY:120:GLU:HG3	61:CY:124:LYS:HD2	1.93	0.50
62:CZ:17:ARG:HD2	69:Cg:75:SER:HB3	1.91	0.50
65:Cc:28:VAL:HG21	65:Cc:37:MET:HG3	1.93	0.50
67:Ce:27:ARG:HH12	81:A2:425:A:H2	1.58	0.50
77:Co:48:TYR:CG	77:Co:49:GLY:N	2.79	0.50
80:Cu:150:GLN:OE1	80:Cu:152:ARG:HD2	2.10	0.50
81:A2:104:G:C2'	81:A2:105:A:H5'	2.41	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:A2:218: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:A2:326:A:C2'	81:A2:327:A:C8	2.95	0.50
81:A2:351:A:C2	82:A3:24:G:N9	2.79	0.50
81:A2:470:G:O2'	81:A2:471:C:H5'	2.10	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:A2:1473: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:A2:1836: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:A2:2549: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:A2:3623:G:H3'	81:A2:3623:G:C8	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:A2:4851:G:C2	81:A2:4882:G:H8	2.30	0.50
3:AX:34:U:O2'	3:AX:35:U:H5'	2.10	0.50
4:B1:11:A:H8	4:B1:11:A:O5'	1.94	0.50
4:B1:15:U:O4'	4:B1:668:A:C2	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:132:U:OP1	4:B1:133:C:H5	1.94	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:B1:678:U:H5'	81:A2:1543:A:O4'	2.12	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
4:B1:1113:A:H2	4:B1:1120:U:C4	2.30	0.50
4:B1:1132:C:O5'	4:B1:1132:C:H6	1.93	0.50
4:B1:1157:G:H1'	27:BW:76:SER:CB	2.41	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
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
30:BZ:50:PHE:CE2	30:BZ:55:TYR:CD1	2.99	0.50
40:CC:48:ASN:OD1	81:A2:1352:A:H5'	2.12	0.50
48:CL:47:ALA:CB	48:CL:48:PRO:CD	2.89	0.50
56:CT:84:ILE:HG13	64:Cb:24:PRO:HA	1.93	0.50
60:CX:77:ILE:HD11	60:CX:98:PHE:CG	2.46	0.50
67:Ce:5:ARG:N	67:Ce:6:PRO:HD3	2.27	0.50
78:Cp:20:ALA:HA	78:Cp:23:ARG:HE	1.77	0.50
79:Ct:2:SER:O	79:Ct:6:GLN:HG2	2.11	0.50
79:Ct:46:ARG:HB2	79:Ct:71:ARG:NH2	2.26	0.50
80:Cu:50:PRO:HG3	80:Cu:179:VAL:HG21	1.94	0.50
80:Cu:59:ILE:HD11	80:Cu:146:LYS:CA	2.42	0.50
81:A2:236:C:H2'	81:A2:237:G:H8	1.75	0.50
81:A2:264:U:H2'	81:A2:265:C:H6	1.71	0.50
81:A2:694:C:O5'	81:A2:694:C:H6	1.95	0.50
81:A2:1282:U:O2'	81:A2:1283:A:H5'	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:C6	81:A2:2051:C:O5'	2.64	0.50
81:A2:2352:A:C3'	81:A2:2353:A:H8	2.24	0.50
81:A2:2469:C:H4'	82:A3:126:C:N3	2.27	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:A2:2533:G:N2	81:A2:2737:G:O6	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H3'	81:A2:4142:G:C8	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
4:B1:204:G:C2'	4:B1:205:G:H5'	2.42	0.50
4:B1:343:A:H4'	9:BE:128:LYS:HZ1	1.76	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
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
5:BA:9:GLN:CA	26:BV:83:PHE:HA	2.41	0.50
5:BA:39:TYR:CE2	22:BR:109:LEU:HG	2.46	0.50
8:BD:24:PHE:CE1	8:BD:72:VAL:HG11	2.46	0.50
26:BV:74:LYS:HA	26:BV:79:VAL:HG12	1.94	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
32:Bb:34:ASP:OD2	32:Bb:82:LYS:HE3	2.11	0.50
37:Bg:44:LYS:HE3	37:Bg:56:GLN:NE2	2.26	0.50
39:CB:223:THR:O	39:CB:274:TYR:HA	2.12	0.50
40:CC:144:ILE:HG22	40:CC:144:ILE:O	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
58:CV:46:LYS:HD2	81:A2:4579:U:O3'	2.12	0.50
62:CZ:136:PHE:CB	81:A2:4089:G:H21	2.24	0.50
64:Cb:24:PRO:O	64:Cb:25:ARG:HB3	2.11	0.50
81:A2:30:C:O2	81:A2:2437:A:H2	1.95	0.50
81:A2:178:C:N4	81:A2:250:G:H21	2.10	0.50
81:A2:224:A:H2'	81:A2:225:C:O4'	2.12	0.50
81:A2:384:U:OP2	81:A2:384:U:H6	1.95	0.50
81:A2:407:U:H2'	81:A2:408:G:H5'	1.93	0.50
81:A2:726:C:C5	81:A2:726:C:OP2	2.64	0.50
81:A2:1055:G:H2'	81:A2:1056:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:2265: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:A2:3705: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:A2:3865: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
81:A2:4137:C:H2’	81:A2:4138:A:H5’	1.94	0.50
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
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
1:AV:42:C:H5’	1:AV:42:C:C6	2.36	0.50
4:B1:89:C:H6	4:B1:89:C:H5”	1.77	0.50
4:B1:111:A:N6	4:B1:351:G:H21	2.09	0.50
4:B1:193:C:H4’	4:B1:209:A:N1	2.27	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:B1:1191: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
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
39:CB:3:HIS:O	39:CB:4:ARG:C	2.55	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:179:ASP:O	40:CC:182:LYS:HB3	2.12	0.50
40:CC:342:ARG:HH21	81:A2:714:G:H4'	1.74	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
62:CZ:105:ALA:HB1	81:A2:2531:U:H4'	1.94	0.50
65:Cc:82:GLY:CA	65:Cc:91:VAL:HG12	2.42	0.50
67:Ce:84:GLU:HG2	79:Ct:20:ARG:CZ	2.41	0.50
70:Ch:118:LYS:HD3	70:Ch:118:LYS:N	2.27	0.50
78:Cp:75:SER:O	78:Cp:79:VAL:HG23	2.12	0.50
80:Cu:106:ALA:O	80:Cu:131:PRO:HA	2.12	0.50
81:A2:19:G:N2	81:A2:20:U:C5	2.80	0.50
81:A2:64:A:O5'	81:A2:64:A:C8	2.64	0.50
81:A2:298:A:H3'	81:A2:298:A:C8	2.46	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:C8	81:A2:962:G:P	3.05	0.50
81:A2:1161:C:H6	81:A2:1161:C:C3'	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:A2:1777:G:H4'	81:A2:4175:C:C4	2.47	0.50
81:A2:1822:G:C8	81:A2:1822:G:H5"	2.47	0.50
81:A2:2033:G:OP1	81:A2:2033:G:C8	2.65	0.50
81:A2:2064:G:OP2	81:A2:2064:G:C8	2.65	0.50
81:A2:2553:G:H8	81:A2:2553:G:C5'	2.17	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:A2:4374: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:H6	81:A2:4935:C:O5'	1.93	0.50
83:A4:86:G:C2'	83:A4:87:G:H5'	2.40	0.50
1:AV:31:A:O2'	4:B1:1641:A:O2'	2.11	0.50
3:AX:43:U:OP2	4:B1:961:G:O4'	2.30	0.50
4:B1:83:A:H2'	29:BY:123:ALA:HB1	1.93	0.50
4:B1:331:C:C3'	4:B1:332:G:H5"	2.40	0.50
4:B1:332:G:C4'	4:B1:333:G:OP1	2.60	0.50
4:B1:421:G:H21	4:B1:653:A:H5'	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:657:U:C6	4:B1:657:U:C3'	2.95	0.50
4:B1:850:C:H2'	4:B1:850:C:O2	2.10	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:B1:1606:G:H5'	24:BT:86:GLY:CA	2.42	0.50
4:B1:1635:C:H2'	4:B1:1635:C:O2	2.11	0.50
4:B1:1649:U:H5	4:B1:1674:G:N2	2.10	0.50
4:B1:1649:U:O2'	4:B1:1650:A:H5'	2.11	0.50
4:B1:1704:C:C1'	4:B1:1832:A:N1	2.75	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
12:BH:5:SER:HA	12:BH:8:ILE:HD12	1.93	0.50
12:BH:20:GLU:HG2	12:BH:48:ALA:HB3	1.94	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
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
54:CR:131:VAL:HG12	54:CR:131:VAL:O	2.11	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
63:Ca:71:PRO:HG2	63:Ca:107:GLY:O	2.12	0.50
64:Cb:44:ARG:NH1	81:A2:1471:G:H5"	2.27	0.50
65:Cc:30:GLY:O	65:Cc:34:THR:HG23	2.12	0.50
68:Cf:54:LYS:HB2	81:A2:4706:C:P	2.51	0.50
68:Cf:72:GLY:HA3	68:Cf:88:PHE:CD2	2.46	0.50
81:A2:33:A:H3'	81:A2:34:A:H8	1.77	0.50
81:A2:103:G:O3'	81:A2:1360:G:N2	2.45	0.50
81:A2:189:G:O5'	81:A2:189:G:C8	2.65	0.50
81:A2:366:G:H5"	81:A2:366:G:H8	1.77	0.50
81:A2:444:G:C4'	81:A2:445:U:OP2	2.60	0.50
81:A2:465:C:H2'	81:A2:466:G:H8	1.76	0.50
81:A2:928:A:OP2	81:A2:928:A:H4'	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1867:U:H5"	81:A2:1868:G:OP2	2.12	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:C6	81:A2:2605:U:C3'	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:A2:3609:U:H5'	81:A2:3610:U:OP2	2.12	0.50
81:A2:3742:U:O2	81:A2:3742:U:C2'	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:A2:4473: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:A2:4863:G:H2'	81:A2:4864:A:C5'	2.40	0.50
82:A3:16:G:OP2	82:A3:16:G:H8	1.95	0.50
82:A3:28:C:H5"	82:A3:28:C:H6	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:B1:482: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:H8	4:B1:992:A:O5'	1.94	0.49
4:B1:1709:G:H8	4:B1:1709:G:OP2	1.94	0.49
4:B1:1836:G:OP1	4:B1:1839:U:H4'	2.12	0.49
6:BB:46:LYS:HZ1	19:BO:27:VAL:HA	1.76	0.49
18:BN:92:ILE:O	18:BN:96:VAL:HG23	2.10	0.49
38:CA:176:ASP:O	78:Cp:25:MET:HE2	2.12	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
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
72:Cj:21:ARG:HB2	72:Cj:39:TYR:CD1	2.47	0.49
77:Co:15:CYS:SG	77:Co:17:LYS:O	2.70	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:115:C:H41	81:A2:154:U:H1'	1.76	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:O2	81:A2:967:C:C2'	2.58	0.49
81:A2:1093:C:O5'	81:A2:1093:C:H6	1.95	0.49
81:A2:1217:C:C5	81:A2:1258:C:C2	3.00	0.49
81:A2:1542:A:C8	81:A2:1542:A:P	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:H3'	81:A2:2685:U:C6	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:H8	81:A2:4714:G:O5'	1.95	0.49
81:A2:4932:A:H2'	81:A2:4933:G:O4'	2.12	0.49
82:A3:24:G:O2'	82:A3:25:G:H5'	2.12	0.49
82:A3:90:C:H2'	82:A3:91:A:C8	2.47	0.49
83:A4:67:C:OP2	83:A4:67:C:H6	1.95	0.49
2:AW:70:G:H2'	2:AW:71:G:C8	2.46	0.49
4:B1:36:U:O2	4:B1:520:A:H2	1.93	0.49
4:B1:75:G:H22	4:B1:78:C:H4'	1.78	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:B1:860: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
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:O5'	4:B1:1348:G:C8	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:O2	4:B1:1688:C:C2'	2.60	0.49
4:B1:1698:C:H4'	4:B1:1699:A:OP2	2.12	0.49
14:BJ:161:LEU:HA	14:BJ:166:GLY:HA3	1.94	0.49
15:BK:31:LYS:O	15:BK:32:HIS:HB2	2.11	0.49
19:BO:18:GLY:H	19:BO:19:PRO:CD	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BW:18:GLU:OE2	27:BW:65:LEU:HD22	2.12	0.49
27:BW:101:PHE:HB3	27:BW:129:PHE:CZ	2.47	0.49
28:BX:123:VAL:HA	28:BX:130:LEU:CD1	2.42	0.49
32:Bb:20:LYS:HE2	32:Bb:28:PRO:HA	1.94	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:76:VAL:CG2	44:CG:81:ASN:HB2	2.41	0.49
44:CG:104:PRO:HG3	44:CG:194:VAL:HG23	1.95	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
46:CI:193:ASP:O	46:CI:194:GLY:C	2.55	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
51:CO:94:ARG:NE	68:Cf:97:ILE:HD12	2.27	0.49
53:CQ:142:PRO:HG3	81:A2:1481:G:O3'	2.12	0.49
59:CW:44:ARG:NH1	81:A2:3585:U:H3'	2.25	0.49
61:CY:120:GLU:O	61:CY:125:SER:HB3	2.12	0.49
63:Ca:125:LYS:HG2	63:Ca:145:VAL:HB	1.94	0.49
66:Cd:85:ARG:NH2	66:Cd:120:VAL:HG22	2.27	0.49
66:Cd:89:SER:O	66:Cd:104:THR:HA	2.11	0.49
67:Ce:36:ARG:HH12	81:A2:2323:C:H4'	1.76	0.49
81:A2:62:A:C6	81:A2:63:G:C6	3.00	0.49
81:A2:93:G:C6	81:A2:94:A:C6	3.00	0.49
81:A2:193:C:O2	81:A2:193:C:C2'	2.59	0.49
81:A2:372:U:C6	81:A2:372:U:C3'	2.95	0.49
81:A2:391:A:H2'	81:A2:392:G:O4'	2.11	0.49
81:A2:480:C:O5'	81:A2:480:C:H6	1.95	0.49
81:A2:488:G:N1	81:A2:658:G:H1'	2.27	0.49
81:A2:903:C:H2'	81:A2:904:C:C6	2.48	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
81:A2:1529:G:H8	81:A2:1529:G:O5'	1.95	0.49
81:A2:2000:C:C3'	81:A2:2001:C:C6	2.95	0.49
81:A2:2401:G:C8	81:A2:2401:G:C3'	2.94	0.49
81:A2:2445:U:H3'	81:A2:2445:U:C6	2.42	0.49
81:A2:2549:C:O3'	81:A2:2736:G:H8	1.93	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:A2:2795:C:O5'	81:A2:2795:C:H6	1.95	0.49
81:A2:3658:G:H5"	81:A2:3659:U:OP2	2.11	0.49
81:A2:3730:C:H5'	81:A2:3730:C:O2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3858:G:C3'	81:A2:4679:G:N2	2.71	0.49
81:A2:4490:U:H2'	81:A2:4491:U:H6	1.76	0.49
81:A2:4803:C:H3'	81:A2:4804:G:H4'	1.92	0.49
81:A2:4989:A:H2'	81:A2:4990:U:O4'	2.12	0.49
82:A3:57:C:O2'	82:A3:58:G:H5'	2.13	0.49
1:AV:76:A:C2	81:A2:4156:G:N1	2.62	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:B1:67:C:H1'	11:BG:164:LYS:HD2	1.94	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:B1:752:G:O2'	4:B1:753:C:H5'	2.12	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
7:BC:85:SER:HA	26:BV:26:ALA:O	2.11	0.49
10:BF:156:THR:HA	10:BF:159:ARG:NH1	2.28	0.49
11:BG:38:ALA:HB3	11:BG:48:TYR:HB2	1.94	0.49
11:BG:186:GLN:HA	11:BG:189:ARG:NH2	2.27	0.49
37:Bg:87:LEU:HB2	37:Bg:101:PHE:HB2	1.94	0.49
39:CB:262:VAL:HG21	39:CB:268:ARG:HH12	1.77	0.49
40:CC:54:VAL:HG21	81:A2:2320:G:C5	2.47	0.49
40:CC:163:LYS:HA	81:A2:221:U:C4	2.48	0.49
40:CC:180:ILE:HD11	40:CC:207:PRO:HG2	1.93	0.49
40:CC:189:MET:HB3	40:CC:195:LYS:HE3	1.95	0.49
40:CC:252:TRP:HB3	40:CC:257:PHE:HB2	1.95	0.49
42:CE:223:ARG:HA	42:CE:225:PRO:HD2	1.95	0.49
48:CL:47:ALA:O	48:CL:144:LEU:HD13	2.12	0.49
48:CL:152:GLY:O	48:CL:156:PRO:HD3	2.13	0.49
68:Cf:19:ARG:O	81:A2:1291:G:H5'	2.13	0.49
69:Cg:60:ARG:HG3	69:Cg:61:PRO:HD2	1.95	0.49
70:Ch:69:LEU:O	70:Ch:73:TYR:HD1	1.95	0.49
81:A2:409:A:N1	82:A3:17:A:H1'	2.27	0.49
81:A2:449:C:H2'	81:A2:450:C:C6	2.45	0.49
81:A2:1056:C:H41	81:A2:1204:G:H1	1.56	0.49
81:A2:1149:G:H2'	81:A2:1150:G:C8	2.47	0.49
81:A2:1221:C:H2'	81:A2:1222:G:O4'	2.13	0.49
81:A2:1580:A:N7	81:A2:3612:A:C4	2.81	0.49
81:A2:1835:C:H1'	81:A2:1870:A:N3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:2833:C:H6	81:A2:2833:C:H3'	1.76	0.49
81:A2:3761:G:H3'	81:A2:3762:U:C5	2.47	0.49
81:A2:4047:C:H2'	81:A2:4047:C:O2	2.12	0.49
81:A2:4156:G:OP1	81:A2:4156:G:C8	2.61	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:A2:4954:G:H8	81:A2:4954:G:O5'	1.96	0.49
81:A2:5007:C:H6	81:A2:5007:C:O5'	1.94	0.49
82:A3:127:U:H5"	82:A3:128:C:OP2	2.13	0.49
2:AW:12:U:H2'	2:AW:13:C:O4'	2.13	0.49
4:B1:4:C:H4'	7:BC:207:ALA:HB2	1.94	0.49
4:B1:59:U:H3'	4:B1:59:U:C6	2.48	0.49
4:B1:71:G:H1	4:B1:80:G:H1	1.60	0.49
4:B1:181:A:C8	11:BG:196:LYS:HB2	2.48	0.49
4:B1:345:U:H2'	4:B1:346:C:O5'	2.13	0.49
4:B1:661:U:H5'	4:B1:662:G:H3'	1.94	0.49
4:B1:933:G:H2'	4:B1:993:G:N2	2.28	0.49
4:B1:1132:C:OP2	4:B1:1132:C:H5	1.95	0.49
4:B1:1202:U:H4'	7:BC:114:LYS:HE3	1.93	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
5:BA:67:ALA:HA	26:BV:50:PHE:CZ	2.47	0.49
6:BB:218:LEU:HD22	6:BB:219:LYS:H	1.77	0.49
10:BF:116:ILE:HD13	10:BF:154:LEU:CD1	2.42	0.49
11:BG:6:SER:O	11:BG:8:PRO:HD3	2.12	0.49
11:BG:23:LYS:HE2	11:BG:42:GLY:H	1.77	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
22:BR:29:HIS:CG	37:Bg:65:PHE:HE2	2.30	0.49
30:BZ:73:VAL:HG13	30:BZ:77:LEU:HD12	1.93	0.49
37:Bg:258:ILE:HD12	37:Bg:268:ASP:HB3	1.93	0.49
38:CA:205:ASN:OD1	81:A2:1612:G:H5"	2.12	0.49
40:CC:52:TYR:O	40:CC:53:ALA:HB2	2.11	0.49
40:CC:283:LYS:HB2	53:CQ:24:TYR:HB3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:319:LEU:HD22	81:A2:929:U:H5'	1.93	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
45:CH:122:TYR:HB2	81:A2:4573:C:O4'	2.13	0.49
48:CL:40:GLN:O	48:CL:44:ARG:HD3	2.12	0.49
49:CM:44:GLN:HG2	49:CM:44:GLN:O	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
62:CZ:14:LEU:HD21	69:Cg:88:ARG:NE	2.27	0.49
63:Ca:52:TYR:HD1	63:Ca:53:PHE:CD1	2.31	0.49
63:Ca:76:ASP:HB3	63:Ca:114:LYS:HG2	1.94	0.49
69:Cg:25:THR:CG2	81:A2:2498:G:H5"	2.42	0.49
78:Cp:49:ARG:HH22	81:A2:2716:C:H5'	1.78	0.49
80:Cu:105:ILE:HD11	80:Cu:145:MET:CG	2.43	0.49
81:A2:33:A:H3'	81:A2:34:A:C8	2.47	0.49
81:A2:308:A:C2'	81:A2:309:A:H5'	2.42	0.49
81:A2:407:U:C3'	81:A2:408:G:H5'	2.42	0.49
81:A2:445:U:C3'	81:A2:446:C:H6	2.23	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
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
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:A2:3592:C:C5	81:A2:3593:A:N1	2.80	0.49
81:A2:3829:A:N3	81:A2:3829:A:H2'	2.28	0.49
81:A2:4043:U:H1'	81:A2:4044:G:P	2.52	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:A2:4709:G:C2'	81:A2:4710:G:C5'	2.81	0.49
83:A4:89:G:C4	83:A4:90:A:C8	3.00	0.49
4:B1:130:G:H4'	4:B1:181:A:H61	1.77	0.49
4:B1:198:U:H6	4:B1:198:U:H5"	1.76	0.49
4:B1:219:U:H6	4:B1:219:U:H5"	1.78	0.49
4:B1:346:C:C6	4:B1:346:C:C3'	2.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:440:G:H2'	4:B1:441:C:O4'	2.13	0.49
4:B1:527:C:O2'	14:BJ:121:LYS:HB2	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
4:B1:1198:G:H2'	4:B1:1198:G:N3	2.26	0.49
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
5:BA:25:LEU:O	5:BA:164:ASN:HB2	2.13	0.49
5:BA:110:ASN:O	5:BA:116:PHE:HD1	1.95	0.49
13:BI:69:SER:CB	16:BL:24:LEU:HD11	2.25	0.49
18:BN:44:GLY:HA3	65:Cc:23:LYS:HZ3	1.77	0.49
20:BP:22:LEU:HA	20:BP:25:LEU:HD12	1.95	0.49
38:CA:41:ILE:HD13	44:CG:42:GLY:HA2	1.93	0.49
39:CB:118:PHE:HA	81:A2:4538:G:O2'	2.13	0.49
40:CC:50:GLN:HB2	40:CC:51:PRO:CD	2.43	0.49
48:CL:84:ALA:HB2	48:CL:117:LEU:HD13	1.95	0.49
49:CM:90:ARG:HB2	81:A2:4825:G:H21	1.77	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
71:Ci:51:ALA:O	71:Ci:54:GLU:HB2	2.13	0.49
72:Cj:29:LEU:H	72:Cj:29:LEU:HD12	1.78	0.49
80:Cu:32:ARG:HD3	80:Cu:196:ASP:OD1	2.12	0.49
81:A2:179:G:OP1	81:A2:179:G:H4'	2.11	0.49
81:A2:376:A:O2'	81:A2:378:G:H5"	2.12	0.49
81:A2:733:G:N3	81:A2:733:G:H2'	2.28	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:O2	81:A2:1217:C:H3'	2.12	0.49
81:A2:1361:U:P	81:A2:1361:U:C6	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:A2:1868:G:O5'	81:A2:1868:G:C8	2.60	0.49
81:A2:1874:A:HO2'	81:A2:2047:A:H2	1.52	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:O5'	81:A2:2587:G:C8	2.66	0.49
81:A2:3746:G:H1'	81:A2:3747:U:H5	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4508:A:H4'	81:A2:4509:G:O5'	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
81:A2:4851:G:N2	81:A2:4882:G:C8	2.81	0.49
82:A3:85:U:H5"	82:A3:85:U:H6	1.77	0.49
83:A4:69:U:H6	83:A4:69:U:H3'	1.76	0.49
83:A4:102:U:C2'	83:A4:103:A:H5'	2.42	0.49
3:AX:46:U:O3'	4:B1:1830:U:C2	2.65	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
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
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
16:BL:35:ARG:HG2	16:BL:36:TYR:N	2.27	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
31:Ba:23:CYS:O	31:Ba:27:ALA:HA	2.12	0.49
40:CC:316:LYS:HB2	40:CC:324:ILE:CD1	2.43	0.49
40:CC:326:LEU:HD13	81:A2:1217:C:O2	2.12	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
48:CL:124:LEU:HA	70:Ch:120:ALA:O	2.13	0.49
56:CT:2:THR:HA	81:A2:4163:A:O4'	2.12	0.49
63:Ca:65:ARG:O	63:Ca:66:ASN:CB	2.60	0.49
68:Cf:54:LYS:CB	81:A2:4706:C:P	3.01	0.49
68:Cf:58:VAL:CG1	81:A2:1278:C:H5"	2.43	0.49
69:Cg:62:LYS:HE3	81:A2:2724:U:O2'	2.12	0.49
71:Ci:58:MET:HE1	71:Ci:98:ARG:HH22	1.77	0.49
77:Co:10:THR:HA	77:Co:18:HIS:CD2	2.47	0.49
77:Co:33:LEU:O	77:Co:34:TYR:HB2	2.13	0.49
81:A2:2:G:C5	81:A2:3:C:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:314:C:H1'	81:A2:4315:G:N2	2.27	0.49
81:A2:726:C:H2'	81:A2:727:G:C5'	2.37	0.49
81:A2:903:C:O5'	81:A2:903:C:H6	1.95	0.49
81:A2:917:G:H1'	81:A2:918:C:C4	2.48	0.49
81:A2:941:G:N3	81:A2:941:G:C2'	2.76	0.49
81:A2:1491:G:H4'	81:A2:1827:U:O3'	2.12	0.49
81:A2:1716:A:O2'	83:A4:77:A:H1'	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:A2:3580: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:O2	81:A2:4101:C:H2'	2.12	0.49
81:A2:4158:G:C6	81:A2:4159:C:N4	2.81	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:A2:4851:G:N2	81:A2:4882:G:H1'	2.25	0.49
81:A2:4863:G:H3'	81:A2:4863:G:C8	2.47	0.49
1:AV:34:G:C4	4:B1:1701:C:C6	3.00	0.49
1:AV:76:A:N6	81:A2:4156:G:C6	2.78	0.49
2:AW:56:C:C6	81:A2:4014:A:C5	3.00	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
4:B1:125:C:H5'	9:BE:136:ILE:HB	1.95	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:C6	4:B1:539:C:C3'	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:B1:743: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
4:B1:1206:G:H1'	4:B1:1834:A:N3	2.28	0.49
4:B1:1208:A:N6	4:B1:1691:U:H3	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:BE:42:LEU:CD1	9:BE:47:PHE:HB2	2.42	0.49
9:BE:136:ILE:O	9:BE:136:ILE:HG12	2.12	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
13:BI:6:ASP:HB3	13:BI:28:GLU:CD	2.38	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:HB2	21:BQ:60:LYS:NZ	2.27	0.49
27:BW:83:LEU:O	27:BW:86:LEU:HG	2.13	0.49
39:CB:262:VAL:HG23	81:A2:3867:G:C5	2.47	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
44:CG:80:ILE:C	44:CG:82:GLN:H	2.19	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
56:CT:105:PHE:CD1	81:A2:1781:A:H4'	2.47	0.49
62:CZ:6:LYS:HB3	62:CZ:7:PRO:CD	2.43	0.49
68:Cf:11:PHE:CD1	68:Cf:92:LEU:HD12	2.48	0.49
81:A2:14:C:O4'	81:A2:14:C:O2	2.31	0.49
81:A2:17:A:C2'	81:A2:18:C:H5'	2.43	0.49
81:A2:24:G:H2'	81:A2:25:A:O4'	2.13	0.49
81:A2:100:C:H2'	81:A2:101:A:OP1	2.13	0.49
81:A2:115:C:C5	81:A2:153:G:N2	2.80	0.49
81:A2:212:C:O2	81:A2:217:C:C6	2.65	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
81:A2:484:G:H2'	81:A2:485:U:C6	2.47	0.49
81:A2:510:C:C6	81:A2:510:C:C5'	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:C8	81:A2:949:G:OP2	2.65	0.49
81:A2:1066:C:H2'	81:A2:1067:A:C5'	2.40	0.49
81:A2:1086:A:P	83:A4:107:G:H4'	2.52	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:A2:1374:G:N2	81:A2:1449:G:H4'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1424:G:N2	81:A2:1425:U:H1'	2.28	0.49
81:A2:1611:A:H3'	81:A2:1611:A:C8	2.47	0.49
81:A2:1792:U:O2	81:A2:1792:U:H2'	2.12	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:A2:2397:A:H3'	81:A2:2398:G:C5'	2.42	0.49
81:A2:2549:C:N1	81:A2:2550:A:C8	2.81	0.49
81:A2:2549:C:H5"	81:A2:2736:G:O2'	2.12	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:A2:4200:G:H2'	81:A2:4200:G:N3	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:A2:4889:A:H2'	81:A2:4890:C:C6	2.47	0.49
83:A4:54:A:H3'	83:A4:54:A:P	2.53	0.49
1:AV:12:U:C5'	81:A2:3725:A:O4'	2.61	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
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:C6	4:B1:1404:U:OP2	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
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
11:BG:15:LEU:HD13	11:BG:15:LEU:C	2.37	0.49
18:BN:44:GLY:CA	65:Cc:23:LYS:HZ3	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
32:Bb:59:CYS:O	32:Bb:60:SER:HB3	2.13	0.49
36:Bf:92:LYS:HB2	36:Bf:92:LYS:NZ	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:53:ALA:O	40:CC:54:VAL:HB	2.12	0.49
40:CC:56:GLU:CD	82:A3:25:G:H21	2.21	0.49
40:CC:162:LYS:HD3	40:CC:162:LYS:H	1.77	0.49
41:CD:222:GLN:HB2	83:A4:48:G:C8	2.48	0.49
42:CE:223:ARG:HD2	42:CE:229:GLU:OE2	2.13	0.49
43:CF:107:LYS:HE3	81:A2:1703:G:H2'	1.95	0.49
45:CH:59:LYS:HZ2	45:CH:66:GLU:HB3	1.78	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: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
52:CP:101:ASN:O	52:CP:104:LEU:HB2	2.13	0.49
64:Cb:39:PHE:HA	64:Cb:42:ASN:ND2	2.28	0.49
69:Cg:54:ARG:HD3	69:Cg:55:GLY:H	1.78	0.49
72:Cj:14:LYS:HB2	72:Cj:14:LYS:NZ	2.27	0.49
81:A2:123:C:O5'	81:A2:123:C:H6	1.96	0.49
81:A2:1474:G:HO2'	81:A2:1475:G:H5'	1.76	0.49
81:A2:1643:U:H2'	81:A2:1644:C:C6	2.48	0.49
81:A2:1717:A:C4'	83:A4:101:A:C2	2.90	0.49
81:A2:1769:U:O5'	81:A2:1769:U:H6	1.96	0.49
81:A2:1795:C:O2	81:A2:1795:C:H2'	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:H5'	81:A2:3752:A:C8	2.48	0.49
81:A2:3752:A:H2	81:A2:3758:C:N4	2.11	0.49
81:A2:4233:A:C8	81:A2:4233:A:C3'	2.95	0.49
81:A2:4269:G:H2'	81:A2:4270:A:O4'	2.12	0.49
81:A2:4386:C:H2'	81:A2:4386:C:O2	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)
2:AW:18:G:H2'	2:AW:57:G:N2	2.27	0.49
4:B1:102:A:C5	4:B1:408:A:C2	3.01	0.49
4:B1:125:C:H6	4:B1:125:C:OP2	1.96	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
4:B1:543:C:H3'	4:B1:543:C:C6	2.46	0.49
4:B1:1083:A:C2'	4:B1:1858:G:H21	2.26	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
8:BD:80:PRO:C	8:BD:82:GLY:H	2.21	0.49
12:BH:143:ARG:HD3	27:BW:51:GLU:OE2	2.13	0.49
13:BI:92:ARG:NH1	81:A2:2869:C:C2'	2.76	0.49
16:BL:71:ARG:NH2	16:BL:140:PHE:HZ	2.11	0.49
21:BQ:102:GLU:CB	37:Bg:57:ARG:HA	2.43	0.49
21:BQ:107:GLU:O	21:BQ:111:ILE:HG12	2.13	0.49
22:BR:24:LEU:HB3	22:BR:58:MET:SD	2.53	0.49
24:BT:25:SER:HB3	24:BT:27:LYS:HE3	1.94	0.49
24:BT:107:LEU:HB3	24:BT:113:VAL:CG2	2.42	0.49
25:BU:67:LYS:O	34:Bd:44:ARG:HG3	2.13	0.49
37:Bg:105:THR:HB	37:Bg:126:ASP:CB	2.42	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
45:CH:44:GLU:HB2	81:A2:4724:G:C8	2.48	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
61:CY:114:ASP:H	82:A3:84:A:H62	1.61	0.49
65:Cc:53:PRO:HG2	81:A2:2651:A:H2	1.75	0.49
73:Ck:3:ARG:O	73:Ck:43:TYR:HA	2.13	0.49
80:Cu:55:GLN:HB3	80:Cu:162:ARG:NH2	2.26	0.49
80:Cu:62:PHE:CE1	80:Cu:81:GLU:HB3	2.48	0.49
81:A2:2:G:N2	82:A3:156:U:H3	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:76:A:C2	81:A2:77:U:C1’	2.96	0.49
81:A2:248:G:H2’	81:A2:249:C:C6	2.48	0.49
81:A2:404:G:OP2	81:A2:404:G:H4’	2.13	0.49
81:A2:716:U:C2’	81:A2:717:G:H5”	2.43	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:A2:2348:U:O4’	81:A2:2348:U:OP2	2.31	0.49
81:A2:2369:C:H5”	81:A2:2369:C:C6	2.33	0.49
81:A2:2491:G:H2’	81:A2:2491:G:N3	2.28	0.49
81:A2:2536:G:H2’	81:A2:2537:C:C5	2.47	0.49
81:A2:2572:C:O5’	81:A2:2572:C:H6	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:H8	81:A2:2688:G:O5’	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
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:A2:4130: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
81:A2:4723:A:C1’	81:A2:4724:G:P	3.01	0.49
81:A2:4736:C:H5’	81:A2:4736:C:H6	1.77	0.49
2:AW:40:C:H2’	2:AW:41:C:C6	2.48	0.49
4:B1:24:C:O5’	4:B1:24:C:H6	1.96	0.49
4:B1:92:A:N7	4:B1:446:G:H2’	2.28	0.49
4:B1:216:C:H5”	9:BE:134:LYS:HE3	1.95	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:B1:969:U:O3’	81:A2:3681:A:O4’	2.23	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:B1:1338:G:H4’	25:BU:74:SER:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:HG3	12:BH:113:LYS:CD	2.43	0.49
12:BH:109:ARG:NE	12:BH:113:LYS:HD3	2.28	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
22:BR:58:MET:HE2	22:BR:58:MET:HA	1.94	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:146:LEU:CB	81:A2:4283:A:C2	2.96	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
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
52:CP:120:ASN:ND2	82:A3:13:G:H4'	2.27	0.49
62:CZ:36:ARG:HH12	62:CZ:98:LYS:HD3	1.77	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:A2:172:C:H2'	81:A2:173:G:H8	1.76	0.49
81:A2:192:C:O5'	81:A2:192:C:C6	2.63	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:A2:432:G:H2'	81:A2:433:G:H5'	1.95	0.49
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
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:A2:1773:A:H2	83:A4:98:G:N2	2.11	0.49
81:A2:1877:G:N7	81:A2:2254:G:C5	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2296:G:C8	81:A2:2296:G:OP2	2.66	0.49
81:A2:2445:U:C6	81:A2:2445:U:C3'	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:A2:3830: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
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:O5'	81:A2:4556:C:H6	1.96	0.49
81:A2:4696:G:H2'	81:A2:4697:C:C6	2.48	0.49
81:A2:4743:C:H6	81:A2:4743:C:H3'	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
3:AX:46:U:H4'	4:B1:1830:U:H2'	1.95	0.48
4:B1:20:G:H4'	4:B1:620:G:N2	2.28	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:B1:359: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:B1:483:C:OP1	28:BX:47:ALA:HA	2.13	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
4:B1:911:C:H5"	4:B1:912:C:C4	2.48	0.48
4:B1:1217:A:C1'	4:B1:1685:U:O2	2.58	0.48
4:B1:1225:U:O5'	4:B1:1225:U:H6	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:P	4:B1:1439:A:C8	3.05	0.48
4:B1:1448:A:H2'	4:B1:1449:G:H8	1.77	0.48
4:B1:1483:A:N3	4:B1:1483:A:H2'	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:B1:1731:A:O3'	81:A2:2862:A:H4'	2.13	0.48
4:B1:1853:C:C5	76:Cn:5:TRP:CZ2	3.00	0.48
5:BA:5:LEU:HD21	26:BV:39:VAL:HG11	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:BU:80:PHE:HB3	34:Bd:52:PHE:HB3	1.95	0.48
31:Ba:44:ILE:HA	31:Ba:67:LEU:HD12	1.94	0.48
37:Bg:118:ARG:NH2	37:Bg:133:ASN:HD21	2.11	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
45:CH:99:PHE:CE2	81:A2:4562:A:H1’	2.48	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
67:Ce:12:ILE:CG2	67:Ce:66:THR:HB	2.41	0.48
70:Ch:48:ARG:O	70:Ch:52:LYS:HD3	2.13	0.48
73:Ck:69:LEU:O	73:Ck:70:LYS:HB3	2.13	0.48
81:A2:77:U:H2’	81:A2:78:U:H5’	1.95	0.48
81:A2:146:A:H8	81:A2:146:A:O5’	1.96	0.48
81:A2:277:U:O2’	81:A2:278:U:H5’	2.13	0.48
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
81:A2:1302:A:H4’	81:A2:1303:A:OP1	2.13	0.48
81:A2:1628:U:O5’	81:A2:1628:U:H6	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:A2:3682:U:C6	81:A2:3682:U:C3’	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:O5’	81:A2:4417:U:H6	1.95	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
83:A4:57:C:H2’	83:A4:58:A:H5’	1.94	0.48
83:A4:112:U:O2’	83:A4:113:G:H5’	2.13	0.48
1:AV:56:C:C5	77:Co:104:ILE:HD12	2.42	0.48
2:AW:37:MIA:C6	10:BF:132:GLY:O	2.46	0.48
4:B1:62:G:H5’	4:B1:172:U:N3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:77:A:N3	4:B1:77:A:C2'	2.74	0.48
4:B1:154:U:C4'	11:BG:13:GLN:HB3	2.44	0.48
4:B1:232:A:OP2	4:B1:890:U:H1'	2.12	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:H8	4:B1:616:A:O5'	1.96	0.48
4:B1:746:C:C1'	4:B1:747:U:C4	2.88	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
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:N3	4:B1:1483:A:C2'	2.76	0.48
4:B1:1590:C:O4'	4:B1:1653:U:H4'	2.13	0.48
4:B1:1647:A:C5	10:BF:57:ALA:HB1	2.48	0.48
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
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
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
32:Bb:36:LYS:HG2	32:Bb:43:ILE:HG12	1.94	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
40:CC:312:ARG:H	81:A2:943:G:H1	1.60	0.48
43:CF:63:GLN:OE1	81:A2:1191:G:H5'	2.14	0.48
47:CJ:79:ALA:O	47:CJ:83:LEU:HB2	2.13	0.48
48:CL:166:ALA:HB1	63:Ca:97:ALA:HB1	1.94	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
73:Ck:60:LEU:HD22	73:Ck:61:PRO:HD2	1.95	0.48
79:Ct:18:ILE:HD13	79:Ct:18:ILE:N	2.27	0.48
80:Cu:60:VAL:HG22	80:Cu:101:THR:CB	2.41	0.48
81:A2:131:C:H5"	81:A2:132:G:OP2	2.13	0.48
81:A2:240:A:OP2	81:A2:240:A:C8	2.66	0.48
81:A2:252:G:O5'	81:A2:252:G:C8	2.66	0.48
81:A2:274:G:C6	81:A2:296:A:H2	2.31	0.48
81:A2:1057:C:C6	81:A2:1057:C:O5'	2.65	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1250:A:O5'	81:A2:1250:A:H8	1.96	0.48
81:A2:1398:C:C6	81:A2:1398:C:O5'	2.66	0.48
81:A2:1715:A:H2	83:A4:77:A:H2	1.61	0.48
81:A2:1848:C:H2'	81:A2:1849:A:C8	2.48	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:A2:3623: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:C6	81:A2:4742:C:C3'	2.96	0.48
83:A4:66:G:H3'	83:A4:67:C:C5	2.48	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:B1:109:U:HO2'	4:B1:855:G:H1'	1.77	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
4:B1:986:G:H5"	31:Ba:19:GLN:CD	2.38	0.48
4:B1:1392:U:O2	4:B1:1392:U:H2'	2.13	0.48
4:B1:1559:C:C6	4:B1:1559:C:O5'	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
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
11:BG:195:LYS:HD3	11:BG:195:LYS:C	2.38	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
32:Bb:40:CYS:HB3	32:Bb:59:CYS:N	2.29	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
40:CC:333:LYS:NZ	81:A2:1217:C:H5'	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:CJ:80:GLU:HA	47:CJ:83:LEU:HB3	1.95	0.48
47:CJ:112:HIS:CD2	47:CJ:126:TYR:H	2.31	0.48
50:CN:84:PRO:O	77:Co:48:TYR:CE2	2.66	0.48
53:CQ:152:PHE:O	53:CQ:154:LYS:HD2	2.13	0.48
54:CR:99:MET:HE1	54:CR:128:LYS:HA	1.94	0.48
56:CT:2:THR:HG22	81:A2:4166:C:N4	2.27	0.48
62:CZ:62:ILE:HG13	62:CZ:63:ALA:N	2.27	0.48
66:Cd:124:GLU:O	66:Cd:125:ASN:HB2	2.12	0.48
79:Ct:79:ARG:HG3	81:A2:472:G:H8	1.78	0.48
80:Cu:84:LEU:HD11	80:Cu:118:LEU:CD2	2.41	0.48
81:A2:251:C:O5'	81:A2:251:C:H6	1.95	0.48
81:A2:718:G:N2	81:A2:721:A:N6	2.61	0.48
81:A2:1058:A:N1	81:A2:1206:U:H1'	2.28	0.48
81:A2:1216:C:C1'	81:A2:1217:C:P	3.01	0.48
81:A2:1465:C:H6	81:A2:1465:C:O5'	1.95	0.48
81:A2:1465:C:C2	81:A2:1466:G:C8	3.01	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:A2:2624: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
81:A2:3684:U:H6	81:A2:3684:U:O5'	1.96	0.48
81:A2:3930:G:H8	81:A2:3930:G:O5'	1.96	0.48
81:A2:4358:C:C6	81:A2:4358:C:O5'	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
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
2:AW:20:U:OP1	2:AW:20:U:H6	1.97	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
4:B1:1016:U:C5	18:BN:14:SER:CB	2.97	0.48
4:B1:1052:A:H5"	4:B1:1053:C:OP2	2.13	0.48
4:B1:1286:G:N3	4:B1:1286:G:C2'	2.76	0.48
4:B1:1419:C:H2'	4:B1:1420:G:H8	1.78	0.48
5:BA:185:MET:HG2	26:BV:46:PHE:CD1	2.48	0.48
6:BB:31:TYR:CZ	6:BB:94:LYS:HA	2.47	0.48
6:BB:57:ILE:HG22	6:BB:59:SER:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:BB:132:GLY:HA3	6:BB:221:PRO:HB3	1.94	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
13:BI:191:GLU:CG	16:BL:20:LYS:HD2	2.43	0.48
16:BL:101:ARG:C	28:BX:10:ALA:HB2	2.38	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
32:Bb:33:MET:HA	32:Bb:80:ARG:O	2.13	0.48
39:CB:257:TRP:CG	81:A2:4478:A:C8	3.01	0.48
40:CC:165:LYS:NZ	81:A2:219:C:P	2.85	0.48
41:CD:14:LYS:HA	83:A4:66:G:O3'	2.13	0.48
47:CJ:19:LYS:CE	47:CJ:73:THR:HB	2.44	0.48
47:CJ:56:THR:HG23	47:CJ:62:ILE:O	2.12	0.48
61:CY:60:GLY:HA2	81:A2:205:A:H4'	1.96	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
63:Ca:74:ASN:CB	63:Ca:114:LYS:HB2	2.40	0.48
74:Cl:13:LEU:CD2	81:A2:2384:G:C8	2.96	0.48
81:A2:29:G:C6	81:A2:54:G:O6	2.67	0.48
81:A2:51:A:H1'	81:A2:1507:U:O2'	2.14	0.48
81:A2:83:C:C2'	81:A2:100:C:H42	2.24	0.48
81:A2:160:A:H2'	81:A2:161:G:H8	1.77	0.48
81:A2:509:G:H2'	81:A2:510:C:H6	1.78	0.48
81:A2:674:G:C5'	81:A2:674:G:C8	2.95	0.48
81:A2:929:U:OP1	81:A2:930:C:H5	1.95	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
81:A2:2042:G:C6	81:A2:2043:G:C6	3.01	0.48
81:A2:2057:G:H8	81:A2:2057:G:O5'	1.97	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
83:A4:47:G:C5	83:A4:48:G:O6	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:46:A:H4'	4:B1:47:G:C5'	2.43	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:B1:525: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:B1:590:A:H1'	35:Be:27:LYS:CG	2.36	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
4:B1:1074:C:H2'	4:B1:1075:C:C6	2.49	0.48
4:B1:1172:U:O3'	76:Cn:17:ARG:NH2	2.44	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:B1:1419:C:H1'	24:BT:3:GLY:HA3	1.94	0.48
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
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
37:Bg:18:VAL:HG11	37:Bg:21:ILE:HD11	1.95	0.48
37:Bg:289:LEU:HD23	37:Bg:289:LEU:N	2.28	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
40:CC:149:GLU:HG3	79:Ct:74:ALA:C	2.37	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:96:LYS:C	47:CJ:97:ASN:O	2.55	0.48
47:CJ:109:ILE:HD13	47:CJ:109:ILE:N	2.28	0.48
49:CM:49:ALA:HB2	55:CS:100:LEU:HD21	1.95	0.48
51:CO:56:ALA:O	51:CO:59:ARG:HB3	2.14	0.48
51:CO:167:HIS:CG	81:A2:4718:C:C6	3.02	0.48
53:CQ:11:ARG:HH22	81:A2:1820:G:H5'	1.79	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
61:CY:45:ARG:HD2	81:A2:195:A:H5'	1.95	0.48
61:CY:115:ARG:HD3	61:CY:115:ARG:C	2.39	0.48
65:Cc:82:GLY:HA2	65:Cc:91:VAL:HG12	1.94	0.48
69:Cg:45:ALA:HB2	69:Cg:81:SER:C	2.38	0.48
79:Ct:18:ILE:HD12	79:Ct:27:THR:HG23	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Ct:103:ARG:HD3	79:Ct:106:LEU:HB2	1.94	0.48
80:Cu:151:LEU:HD12	80:Cu:159:PHE:CE1	2.48	0.48
81:A2:434:G:C8	81:A2:434:G:O5'	2.63	0.48
81:A2:438:C:O5'	81:A2:438:C:H6	1.96	0.48
81:A2:462:A:C8	81:A2:680:U:O2'	2.63	0.48
81:A2:481:C:H2'	81:A2:482:G:O4'	2.13	0.48
81:A2:690:U:C3'	81:A2:691:G:H5"	2.42	0.48
81:A2:1378:A:H8	81:A2:1399:G:N1	2.11	0.48
81:A2:1592:A:H62	81:A2:3606:U:H3	1.61	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:C6	81:A2:2333:U:C5'	2.93	0.48
81:A2:2464:G:H21	82:A3:125:C:N4	2.11	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:A2:3616:A:H2'	81:A2:3617:A:H5"	1.95	0.48
81:A2:3684:U:C5'	81:A2:3684:U:H6	2.27	0.48
81:A2:4057:G:N1	81:A2:4121:G:N1	2.61	0.48
81:A2:4067:G:C8	81:A2:4067:G:O5'	2.66	0.48
81:A2:4199:A:H3'	81:A2:4200:G:H8	1.79	0.48
81:A2:4329:A:OP2	81:A2:4329:A:C8	2.67	0.48
81:A2:4544:A:C2	81:A2:4680:C:P	3.07	0.48
81:A2:4609:G:C6	81:A2:4610:G:N2	2.81	0.48
81:A2:4616:A:OP2	81:A2:4616:A:H2'	2.14	0.48
81:A2:4990:U:O5'	81:A2:4990:U:H6	1.96	0.48
2:AW:61:C:H2'	2:AW:62:C:H6	1.79	0.48
4:B1:69:C:N4	4:B1:82:G:N3	2.62	0.48
4:B1:129:C:C3'	4:B1:130:G:C8	2.96	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:B1:668:A:H1'	4:B1:1198:G:H1'	1.95	0.48
4:B1:684:G:H2'	4:B1:685:A:H8	1.79	0.48
4:B1:743:U:H5	12:BH:97:GLN:NE2	2.12	0.48
4:B1:746:C:O2'	4:B1:747:U:C2	2.65	0.48
4:B1:836:G:O6	29:BY:9:THR:O	2.32	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:H8	4:B1:1142:G:O5'	1.96	0.48
4:B1:1187:G:H8	4:B1:1187:G:O5'	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5’	4:B1:1769:C:C6	2.67	0.48
10:BF:32:ASP:HB3	10:BF:117:ILE:HG23	1.95	0.48
10:BF:52:SER:C	10:BF:54:GLY:H	2.21	0.48
13:BI:84:ASN:OD1	13:BI:86:SER:HB2	2.13	0.48
14:BJ:131:ARG:HB3	14:BJ:131:ARG:NH1	2.29	0.48
20:BP:75:VAL:HG23	20:BP:93:MET:HG3	1.94	0.48
23:BS:6:PRO:HD3	30:BZ:52:LYS:HE2	1.95	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
31:Ba:21:ILE:HB	31:Ba:72:HIS:CE1	2.48	0.48
35:Be:28:LYS:HG2	35:Be:28:LYS:O	2.14	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
42:CE:288:PHE:CE2	68:Cf:110:ILE:HD13	2.49	0.48
43:CF:48:LYS:HD2	81:A2:1220:G:C3’	2.44	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:17:GLY:HA3	81:A2:2031:C:H5’	1.95	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
68:Cf:58:VAL:HG23	81:A2:1279:G:OP1	2.13	0.48
68:Cf:60:PRO:C	81:A2:4900:G:N1	2.71	0.48
68:Cf:78:HIS:HB2	68:Cf:85:ARG:HG3	1.96	0.48
81:A2:25:A:O2’	81:A2:331:C:H1’	2.14	0.48
81:A2:63:G:H1’	81:A2:76:A:N3	2.29	0.48
81:A2:67:C:H2’	81:A2:67:C:O2	2.12	0.48
81:A2:316:U:O5’	81:A2:316:U:H6	1.97	0.48
81:A2:738:U:H2’	81:A2:739:G:C8	2.48	0.48
81:A2:904:C:O2’	81:A2:905:C:H5’	2.14	0.48
81:A2:1648:A:H1’	81:A2:1830:U:O2’	2.13	0.48
81:A2:2262:G:H8	81:A2:2262:G:O5’	1.97	0.48
81:A2:2283:A:N3	81:A2:2283:A:C2’	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:A2:2346:U:OP1	81:A2:2804:G:N1	2.46	0.48
81:A2:2457:G:O2’	81:A2:2458:G:H5’	2.14	0.48
81:A2:2759:U:H3’	81:A2:2760:A:H5’	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2771:C:O2	81:A2:2771:C:H2'	2.12	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:H8	81:A2:4988:G:O5'	1.96	0.48
2:AW:21:A:H3'	2:AW:21:A:N3	2.29	0.48
4:B1:4:C:H2'	4:B1:5:U:H6	1.71	0.48
4:B1:70:G:H3'	4:B1:71:G:H5"	1.94	0.48
4:B1:71:G:C2	4:B1:72:C:H1'	2.48	0.48
4:B1:79:A:H2'	4:B1:79:A:N3	2.27	0.48
4:B1:125:C:H4'	9:BE:136:ILE:CA	2.40	0.48
4:B1:331:C:C3'	4:B1:332:G:C5'	2.92	0.48
4:B1:740:C:O5'	4:B1:740:C:H6	1.97	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:B1:1183:A:H4'	76:Cn:11:ARG:NH1	2.25	0.48
4:B1:1351:G:C5'	5:BA:110:ASN:HB3	2.44	0.48
4:B1:1535:U:C6	10:BF:82:ASN:OD1	2.67	0.48
4:B1:1589:A:H2'	4:B1:1653:U:O2'	2.13	0.48
4:B1:1648:G:H21	21:BQ:128:GLU:HG3	1.78	0.48
4:B1:1654:G:H4'	24:BT:82:ARG:CZ	2.43	0.48
4:B1:1678:A:H2	4:B1:1679:A:O3'	1.96	0.48
4:B1:1681:U:H5"	33:Bc:20:ARG:HG3	1.96	0.48
5:BA:5:LEU:CD2	26:BV:44:GLY:HA2	2.44	0.48
5:BA:40:LYS:HB2	22:BR:105:MET:HA	1.96	0.48
9:BE:114:ILE:HG23	9:BE:118:GLU:HB2	1.94	0.48
10:BF:66:CYS:SG	10:BF:67:PRO:HD2	2.54	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
11:BG:36:VAL:HB	11:BG:50:VAL:O	2.14	0.48
18:BN:33:VAL:HG12	18:BN:37:ILE:HD11	1.95	0.48
18:BN:100:LYS:HG2	18:BN:104:ARG:NH1	2.29	0.48
28:BX:100:VAL:HG13	28:BX:122:VAL:HG13	1.94	0.48
38:CA:37:ARG:HH21	81:A2:4055:G:H3'	1.78	0.48
39:CB:67:VAL:CG2	58:CV:91:LYS:HD2	2.38	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
62:CZ:25:ILE:HA	62:CZ:43:VAL:HG12	1.95	0.48
64:Cb:58:GLN:CG	81:A2:1791:C:H1'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:Cd:18:ASN:O	66:Cd:19:GLU:HB2	2.13	0.48
68:Cf:27:LEU:CD2	68:Cf:85:ARG:HG2	2.43	0.48
68:Cf:91:ASN:HB2	81:A2:430:G:O2'	2.14	0.48
72:Cj:15:THR:O	72:Cj:28:HIS:HA	2.13	0.48
79:Ct:103:ARG:HD3	79:Ct:106:LEU:HB3	1.95	0.48
81:A2:705:U:O2'	81:A2:706:C:H5'	2.14	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:OP1	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
81:A2:2280:U:O2	81:A2:2280:U:H2'	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
81:A2:4120:C:H4'	81:A2:4120:C:OP1	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
1:AV:34:G:H1	4:B1:1701:C:H1'	1.78	0.48
2:AW:2:C:C5'	2:AW:2:C:C6	2.94	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:P	4:B1:886:A:C3'	3.00	0.48
4:B1:990:A:H1'	4:B1:991:G:N2	2.28	0.48
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:B1:1454:A:H5"	22:BR:3:ARG:HD2	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1698:C:O2	4:B1:1698:C:C2'	2.61	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
34:Bd:24:CYS:SG	34:Bd:26:ASN:HB3	2.54	0.48
37:Bg:48:ASP:HB2	37:Bg:51:ASN:O	2.13	0.48
37:Bg:165:ILE:HG13	37:Bg:177:TRP:HB2	1.96	0.48
38:CA:194:ASN:HD22	81:A2:1518:G:H4'	1.78	0.48
38:CA:226:ARG:HA	81:A2:3676:U:OP1	2.13	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
52:CP:136:ILE:HD11	81:A2:2771:C:C2	2.48	0.48
53:CQ:147:GLU:HG2	53:CQ:150:ARG:HH21	1.79	0.48
57:CU:113:ARG:NH1	81:A2:2680:G:H5'	2.28	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
67:Ce:89:LEU:HD21	79:Ct:117:ILE:CD1	2.44	0.48
68:Cf:43:LEU:HD22	68:Cf:76:ARG:CA	2.42	0.48
69:Cg:64:LEU:HB3	81:A2:2726:C:C4'	2.43	0.48
75:Cm:102:ARG:C	75:Cm:103:LEU:HD12	2.39	0.48
79:Ct:16:PHE:O	79:Ct:26:SER:HA	2.13	0.48
79:Ct:73:PRO:HB2	79:Ct:75:THR:HG22	1.96	0.48
81:A2:194:A:N3	81:A2:194:A:H2'	2.28	0.48
81:A2:298:A:H3'	81:A2:298:A:H8	1.79	0.48
81:A2:361:U:H4'	81:A2:1513:A:N6	2.29	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
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:A2:1369:U:OP1	81:A2:1476:A:H2'	2.13	0.48
81:A2:1387:C:H6	81:A2:1387:C:H5"	1.76	0.48
81:A2:1650:U:H6	81:A2:1650:U:H5"	1.78	0.48
81:A2:1792:U:C6	81:A2:1792:U:OP2	2.66	0.48
81:A2:1805:G:H5'	81:A2:1806:C:OP2	2.13	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:O5'	81:A2:2362:U:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2652:G:OP2	81:A2:2652:G:C8	2.66	0.48
81:A2:2672:A:N3	81:A2:2672:A:C3'	2.77	0.48
81:A2:3604:A:C2'	81:A2:3605:C:H5"	2.43	0.48
81:A2:3704:G:O5'	81:A2:3704:G:C8	2.67	0.48
81:A2:3945:C:C5	81:A2:3945:C:OP2	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:A2:4638:G:HO2'	81:A2:4639:G:H8	1.61	0.48
81:A2:4957:U:H3	81:A2:5000:G:H1	1.60	0.48
83:A4:116:G:H5'	83:A4:117:G:OP2	2.14	0.48
2:AW:37:MIA:H3'	2:AW:38:A:H8	1.78	0.48
4:B1:305:U:O2	4:B1:305:U:H3'	2.13	0.48
4:B1:426:A:OP1	4:B1:426:A:C8	2.67	0.48
4:B1:455:A:H2'	4:B1:456:C:O4'	2.13	0.48
4:B1:526:A:O2'	14:BJ:124:HIS:O	2.25	0.48
4:B1:593:C:OP2	4:B1:593:C:H6	1.96	0.48
4:B1:659:G:N3	4:B1:659:G:C2'	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
4:B1:1000:C:H41	31:Ba:16:GLY:N	2.10	0.48
4:B1:1214:A:C4	4:B1:1686:G:N2	2.81	0.48
4:B1:1624:U:C5	4:B1:1624:U:OP2	2.67	0.48
4:B1:1866:A:OP1	4:B1:1866:A:C4'	2.61	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:24:LEU:HA	11:BG:27:PHE:CD2	2.49	0.48
12:BH:31:GLU:CD	12:BH:40:LEU:HD22	2.39	0.48
13:BI:197:PHE:HE1	16:BL:10:TYR:O	1.96	0.48
14:BJ:60:LEU:CB	14:BJ:94:LEU:HD11	2.43	0.48
14:BJ:122:SER:O	14:BJ:125:HIS:HB3	2.14	0.48
15:BK:49:MET:HE2	15:BK:69:TRP:CE3	2.49	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
24:BT:62:ARG:O	24:BT:65:TYR:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:Bb:40:CYS:SG	32:Bb:59:CYS:SG	3.12	0.48
39:CB:73:VAL:HG22	58:CV:93:GLY:HA3	1.95	0.48
39:CB:128:LYS:O	39:CB:131:THR:HG22	2.14	0.48
39:CB:261:ARG:HA	81:A2:3867:G:N3	2.28	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
40:CC:164:THR:HG21	81:A2:220:G:N3	2.28	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
42:CE:284:HIS:HD2	68:Cf:38:GLU:OE1	1.97	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
48:CL:8:MET:HA	63:Ca:49:HIS:CE1	2.49	0.48
48:CL:32:LYS:HZ3	81:A2:1343:C:H41	1.59	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
53:CQ:65:ARG:HH21	81:A2:1481:G:H2'	1.76	0.48
55:CS:170:LYS:O	55:CS:171:ARG:HB2	2.13	0.48
67:Ce:62:SER:C	81:A2:2056:C:H5"	2.39	0.48
68:Cf:30:ILE:HG23	68:Cf:33:VAL:HB	1.96	0.48
70:Ch:21:LEU:C	70:Ch:21:LEU:HD13	2.38	0.48
72:Cj:12:ARG:O	81:A2:2382:G:H5'	2.14	0.48
77:Co:56:PHE:CE2	81:A2:4332:U:H4'	2.49	0.48
80:Cu:21:PHE:CD1	81:A2:3942:G:H4'	2.48	0.48
81:A2:95:G:H4'	81:A2:95:G:OP1	2.13	0.48
81:A2:178:C:OP2	81:A2:179:G:H5'	2.13	0.48
81:A2:267:C:C6	81:A2:267:C:H5"	2.49	0.48
81:A2:297:A:H8	81:A2:297:A:H3'	1.78	0.48
81:A2:308:A:H2'	81:A2:309:A:H5'	1.96	0.48
81:A2:432:G:C2'	81:A2:433:G:H5'	2.43	0.48
81:A2:916:A:P	81:A2:916:A:O4'	2.71	0.48
81:A2:1198:G:H2'	81:A2:1199:G:H8	1.78	0.48
81:A2:1213:G:HO2'	81:A2:1214:G:H5'	1.78	0.48
81:A2:1649:G:C1'	81:A2:1831:G:H4'	2.43	0.48
81:A2:1856:G:H2'	81:A2:1857:C:C5	2.49	0.48
81:A2:2020:A:C2	81:A2:4424:A:N1	2.82	0.48
81:A2:2323:C:O2'	81:A2:2324:A:H3'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2481:C:OP2	81:A2:2481:C:C6	2.67	0.48
81:A2:2653:A:N6	81:A2:2654:G:H1	2.12	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:A2:3684: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
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:A2:4196:G:O2'	81:A2:4288:G:H1'	2.14	0.48
81:A2:4200:G:H5'	81:A2:4201:C:OP2	2.13	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
83:A4:69:U:C6	83:A4:69:U:H3'	2.49	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
4:B1:1417:C:C4	4:B1:1418:C:C4	3.01	0.48
11:BG:131:ARG:NH1	11:BG:131:ARG:HB2	2.29	0.48
25:BU:39:LEU:HD13	25:BU:39:LEU:C	2.38	0.48
28:BX:86:PRO:HB3	28:BX:121:LYS:NZ	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
43:CF:165:LYS:O	43:CF:166:ARG:C	2.56	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
50:CN:15:GLN:HG2	71:Ci:52:PRO:HD2	1.96	0.48
50:CN:195:ARG:HD2	81:A2:98:A:C5'	2.44	0.48
55:CS:167:PHE:C	81:A2:4829:A:H5"	2.37	0.48
61:CY:86:GLN:HA	61:CY:97:VAL:HG23	1.95	0.48
72:Cj:13:ASN:O	81:A2:1513:A:C4	2.67	0.48
75:Cm:96:CYS:HA	75:Cm:121:LEU:HD23	1.96	0.48
81:A2:214:C:H3'	81:A2:214:C:C6	2.44	0.48
81:A2:327:A:H2'	81:A2:329:A:OP2	2.14	0.48
81:A2:365:G:C2'	81:A2:366:G:H5"	2.42	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H2'	81:A2:1607:C:O2	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:A2:2382:G:H2'	81:A2:2383:G:H5'	1.96	0.48
81:A2:2436:G:H8	81:A2:2436:G:O5'	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:A2:3741: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
82:A3:73:U:C2'	82:A3:74:U:H5'	2.44	0.48
82:A3:154:G:O5'	82:A3:154:G:C8	2.66	0.48
83:A4:11:A:C2	83:A4:66:G:N2	2.80	0.48
83:A4:107:G:H8	83:A4:107:G:P	2.37	0.48
2:AW:19:G:N9	81:A2:3927:G:C1'	2.62	0.47
4:B1:14:C:H5'	7:BC:190:SER:OG	2.14	0.47
4:B1:120:U:H5'	4:B1:120:U:H6	1.77	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
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:B1:1547:C:H5"	4:B1:1547:C:H6	1.79	0.47
4:B1:1557:C:P	4:B1:1557:C:C3'	3.02	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
6:BB:22:VAL:O	6:BB:23:ASP:C	2.57	0.47
19:BO:125:LYS:HG2	31:Ba:58:VAL:CG1	2.36	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
38:CA:237:LEU:HD22	81:A2:3627:C:C1'	2.44	0.47
40:CC:20:LYS:HB2	40:CC:20:LYS:NZ	2.29	0.47
41:CD:94:ASN:HB3	83:A4:47:G:H5'	1.96	0.47
41:CD:219:TYR:HE1	41:CD:227:ILE:HD11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:23:ARG:HE	45:CH:39:ASN:HA	1.76	0.47
45:CH:29:GLY:HA3	45:CH:84:VAL:HG13	1.94	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:HD22	54:CR:138:LEU:O	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
67:Ce:65:LYS:HZ2	67:Ce:65:LYS:HB2	1.78	0.47
72:Cj:2:THR:O	72:Cj:7:SER:HB3	2.14	0.47
75:Cm:99:CYS:HB2	75:Cm:101:ALA:H	1.79	0.47
79:Ct:22:LYS:HG2	79:Ct:22:LYS:O	2.14	0.47
80:Cu:34:LEU:HB3	80:Cu:157:ARG:HD3	1.95	0.47
81:A2:12:A:H5"	81:A2:12:A:H8	1.78	0.47
81:A2:105:A:C2	81:A2:327:A:C2	2.84	0.47
81:A2:180:C:C4'	81:A2:182:C:H6	2.20	0.47
81:A2:191:C:O5'	81:A2:191:C:H6	1.97	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:H6	81:A2:929:U:P	2.36	0.47
81:A2:1049:G:C2'	81:A2:1050:G:OP1	2.62	0.47
81:A2:1276:G:O5'	81:A2:1276:G:C8	2.62	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:A2:1926:G:C8	81:A2:1926:G:OP1	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
81:A2:3727:U:O2'	81:A2:3728:A:H8	1.96	0.47
81:A2:3745:G:H5'	81:A2:3745:G:N3	2.29	0.47
81:A2:3876:G:H8	81:A2:4408:G:OP2	1.97	0.47
81:A2:4052:G:OP1	81:A2:4052:G:C8	2.66	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
83:A4:94:C:H2'	83:A4:95:C:H6	1.79	0.47
1:AV:56:C:C5	77:Co:104:ILE:CD1	2.97	0.47
2:AW:56:C:H5"	81:A2:4014:A:C4	2.48	0.47
2:AW:59:U:C6	2:AW:60:U:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AX:40:U:H2'	3:AX:41:U:O4'	2.12	0.47
4:B1:23:G:C5	4:B1:24:C:C4	3.02	0.47
4:B1:59:U:H4'	4:B1:59:U:OP2	2.13	0.47
4:B1:157:U:H5'	11:BG:58:LYS:O	2.14	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:B1:520:A:H2'	4:B1:521:A:O4'	2.14	0.47
4:B1:841:G:C8	29:BY:12:PHE:CZ	3.02	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:B1:1357:A:O2'	7:BC:112:VAL:HB	2.14	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:C8	4:B1:1829:G:O5'	2.68	0.47
5:BA:48:ILE:CG2	22:BR:105:MET:SD	3.02	0.47
8:BD:37:VAL:HG12	8:BD:50:ILE:HG12	1.95	0.47
10:BF:40:ALA:O	10:BF:42:LYS:HG3	2.14	0.47
10:BF:163:PHE:CE2	10:BF:164:ARG:HG3	2.49	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
36:Bf:139:HIS:O	36:Bf:147:THR:HA	2.13	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
42:CE:179:LEU:CD1	81:A2:4892:C:H41	2.25	0.47
47:CJ:64:ARG:O	77:Co:103:VAL:HG12	2.13	0.47
49:CM:122:ILE:HG22	51:CO:187:LYS:HB3	1.96	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
78:Cp:19:GLY:HA2	81:A2:3661:A:H2	1.79	0.47
81:A2:19:G:HO2'	81:A2:20:U:P	2.38	0.47
81:A2:40:G:C8	81:A2:41:C:C5	3.02	0.47
81:A2:85:G:H22	81:A2:97:G:C3'	2.27	0.47
81:A2:400:G:H4'	81:A2:401:A:O5'	2.14	0.47
81:A2:430:G:H2'	81:A2:431:U:O5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:471:C:H6	81:A2:471:C:O5'	1.97	0.47
81:A2:496:G:H8	81:A2:496:G:O5'	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:A2:929: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
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:A2:1377:A:C1'	81:A2:1447:C:H4'	2.44	0.47
81:A2:1422:C:O2	81:A2:1422:C:C3'	2.61	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:A2:1639:U:O2	81:A2:2322:G:H2'	2.13	0.47
81:A2:2009:C:C5'	81:A2:2009:C:C6	2.96	0.47
81:A2:2246:G:P	81:A2:2246:G:C8	3.07	0.47
81:A2:2283:A:N1	81:A2:2284:A:C4	2.81	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
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
81:A2:3722:G:H5"	81:A2:3722:G:C8	2.49	0.47
81:A2:4018:A:H3'	81:A2:4019:C:C6	2.49	0.47
81:A2:4104:C:H6	81:A2:4104:C:O5'	1.97	0.47
81:A2:4315:G:H2'	81:A2:4315:G:N3	2.29	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:A2:4876:C:H2'	81:A2:4877:C:C6	2.49	0.47
83:A4:67:C:H2'	83:A4:68:C:C4'	2.43	0.47
1:AV:32:U:P	21:BQ:146:ARG:HD3	2.54	0.47
4:B1:1:U:H3'	4:B1:1:U:O2	2.14	0.47
4:B1:96:C:C1'	4:B1:474:G:H4'	2.43	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:OP1	2.68	0.47
4:B1:159:A:H8	4:B1:159:A:P	2.38	0.47
4:B1:667:U:H2'	4:B1:668:A:H5"	1.97	0.47
4:B1:1649:U:C2'	4:B1:1650:A:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1859:A:H8	4:B1:1859:A:O5'	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
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:HG22	30:BZ:113:THR:O	2.14	0.47
31:Ba:81:SER:O	31:Ba:82:LYS:HB2	2.14	0.47
32:Bb:40:CYS:O	32:Bb:41:TYR:HB3	2.13	0.47
33:Bc:43:ILE:O	33:Bc:64:GLU:HA	2.14	0.47
37:Bg:32:LEU:CB	37:Bg:71:ILE:HD11	2.45	0.47
37:Bg:47:ARG:HG2	37:Bg:47:ARG:O	2.15	0.47
39:CB:106:PHE:HD1	39:CB:133:TYR:OH	1.96	0.47
40:CC:139:SER:HA	79:Ct:14:SER:HA	1.96	0.47
41:CD:12:TYR:OH	81:A2:4224:G:H5"	2.14	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
50:CN:40:PRO:CB	81:A2:8:U:H5'	2.44	0.47
56:CT:89:ILE:HG22	56:CT:91:VAL:HG23	1.96	0.47
67:Ce:67:LYS:HG2	67:Ce:68:HIS:CD2	2.50	0.47
70:Ch:109:ARG:O	70:Ch:113:LEU:HG	2.15	0.47
71:Ci:60:LEU:HD13	71:Ci:60:LEU:C	2.39	0.47
79:Ct:81:THR:C	79:Ct:83:ASN:N	2.67	0.47
79:Ct:88:ALA:HB3	79:Ct:92:SER:HB3	1.96	0.47
80:Cu:114:ILE:O	80:Cu:118:LEU:HB2	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:A2:403:G:H3'	81:A2:404:G:C5'	2.43	0.47
81:A2:411:A:OP2	81:A2:411:A:C8	2.66	0.47
81:A2:434:G:H1	81:A2:1284:C:N4	2.09	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:C6	81:A2:2348:U:C5'	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:A2:4020:C:H2'	81:A2:4021:A:H8	1.79	0.47
81:A2:4109:C:C6	81:A2:4109:C:O5'	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4154:U:H4'	81:A2:4181:C:H5	1.80	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
81:A2:4824:U:OP1	81:A2:4825:G:C2	2.67	0.47
81:A2:4980:C:H6	81:A2:4980:C:H3'	1.79	0.47
82:A3:6:C:C6	82:A3:6:C:H3'	2.49	0.47
82:A3:27:U:H2'	82:A3:28:C:H6	1.80	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:B1:159:A:H8	4:B1:159:A:O5'	1.97	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:C6	4:B1:543:C:C3'	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:B1:944:A:H4'	19:BO:134:PRO:HB2	1.95	0.47
4:B1:953:C:H2'	4:B1:954:U:O4'	2.14	0.47
4:B1:1114:U:H1'	4:B1:1115:U:H2'	1.95	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
6:BB:51:ARG:C	6:BB:53:GLN:H	2.22	0.47
13:BI:107:THR:CG2	81:A2:4981:U:H3	2.18	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
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
66:Cd:59:THR:HG23	66:Cd:59:THR:O	2.15	0.47
66:Cd:84:ILE:HD12	66:Cd:114:PHE:HE1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Cg:63:VAL:HA	69:Cg:66:ARG:HE	1.79	0.47
72:Cj:31:LYS:HZ1	81:A2:1511:G:H5"	1.77	0.47
79:Ct:7:TRP:CD2	79:Ct:38:PHE:HB2	2.49	0.47
80:Cu:43:VAL:O	80:Cu:152:ARG:HA	2.15	0.47
81:A2:40:G:H3'	81:A2:41:C:C6	2.50	0.47
81:A2:276:G:H2'	81:A2:277:U:O4'	2.15	0.47
81:A2:312:U:H3	81:A2:4316:G:H1	1.61	0.47
81:A2:418:A:H61	82:A3:7:U:H3	1.62	0.47
81:A2:510:C:C6	81:A2:510:C:C4'	2.97	0.47
81:A2:957:G:P	81:A2:1219:C:OP1	2.72	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:A2:3670: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:A2:4155: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
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:A2:4412: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
82:A3:148:A:C8	82:A3:148:A:C3'	2.98	0.47
2:AW:9:A:H4'	2:AW:46:G:O4'	2.14	0.47
2:AW:27:G:H8	2:AW:27:G:O5'	1.97	0.47
4:B1:35:C:N3	4:B1:520:A:N6	2.62	0.47
4:B1:78:C:C1'	4:B1:79:A:OP2	2.61	0.47
4:B1:178:C:H2'	4:B1:179:C:C1'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:370: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:B1:1091: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
4:B1:1411:G:N3	4:B1:1411:G:C2'	2.77	0.47
4:B1:1622:U:H3'	4:B1:1622:U:C6	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
6:BB:71:LEU:HD22	6:BB:71:LEU:O	2.15	0.47
6:BB:160:GLN:NE2	6:BB:204:ILE:HG23	2.29	0.47
12:BH:78:ARG:O	12:BH:81:ARG:HB3	2.15	0.47
13:BI:48:VAL:HG21	13:BI:54:LYS:CD	2.44	0.47
13:BI:123:ARG:NE	81:A2:4979:C:C5'	2.60	0.47
13:BI:193:LYS:HE2	16:BL:5:GLN:OE1	2.14	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:229:LEU:C	40:CC:229:LEU:HD13	2.39	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:47:MET:HE3	61:CY:109:LEU:HD22	1.95	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
62:CZ:108:ARG:HD2	81:A2:2551:G:O6	2.15	0.47
75:Cm:104:HIS:CG	75:Cm:105:PRO:HD2	2.48	0.47
81:A2:79:C:H1'	81:A2:329:A:H5'	1.96	0.47
81:A2:215:A:H4'	81:A2:216:G:C5'	2.44	0.47
81:A2:299:G:H4'	81:A2:301:G:C4'	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O2	81:A2:974:C:C2'	2.61	0.47
81:A2:1148:G:O5'	81:A2:1148:G:C8	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:H8	81:A2:1874:A:O5'	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:A2:2327: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
81:A2:2579:G:C8	81:A2:2719:G:N7	2.83	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:H8	81:A2:4401:A:OP2	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
82:A3:112:G:OP2	82:A3:112:G:C8	2.66	0.47
4:B1:79:A:H3'	4:B1:80:G:C8	2.49	0.47
4:B1:181:A:O5'	4:B1:182:C:C5'	2.63	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:B1:743:U:C2'	12:BH:100:ILE:O	2.61	0.47
4:B1:985:G:H3'	31:Ba:19:GLN:NE2	2.30	0.47
4:B1:1061:U:O4	4:B1:1849:G:H5"	2.14	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:B1:1420:G:H1'	24:BT:3:GLY:H	1.78	0.47
4:B1:1439:A:H8	4:B1:1439:A:O5'	1.97	0.47
4:B1:1447:G:H1'	25:BU:55:ARG:HE	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1548:G:O6	4:B1:1584:G:N3	2.47	0.47
4:B1:1580:A:H3'	4:B1:1581:C:C5'	2.45	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:B1:1822:A:N1	4:B1:1823:A:C6	2.82	0.47
4:B1:1862:G:H4'	4:B1:1863:A:OP1	2.15	0.47
7:BC:109:ILE:HD11	7:BC:151:ILE:HD11	1.96	0.47
31:Ba:32:LYS:HB3	31:Ba:32:LYS:NZ	2.29	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
43:CF:126:ASN:CG	56:CT:132:PRO:HB2	2.40	0.47
44:CG:73:ARG:HE	44:CG:242:LEU:HA	1.79	0.47
47:CJ:13:ARG:C	47:CJ:137:PRO:HD2	2.40	0.47
47:CJ:135:GLY:HA2	47:CJ:157:ILE:CD1	2.45	0.47
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:18:PRO:HD3	53:CQ:52:PHE:CD1	2.49	0.47
53:CQ:132:LYS:HE3	53:CQ:134:CYS:HB3	1.96	0.47
61:CY:5:PRO:HA	81:A2:1348:A:OP1	2.15	0.47
62:CZ:101:PHE:CD2	62:CZ:107:LYS:HE2	2.49	0.47
68:Cf:47:CYS:HG	68:Cf:103:VAL:HG22	1.78	0.47
76:Cn:25:LYS:O	76:Cn:25:LYS:HG3	2.15	0.47
79:Ct:72:LYS:HA	79:Ct:73:PRO:HD2	1.81	0.47
81:A2:10:A:H2'	81:A2:11:G:H5'	1.95	0.47
81:A2:74:G:H2'	81:A2:75:G:O5'	2.14	0.47
81:A2:297:A:N6	81:A2:298:A:C2	2.82	0.47
81:A2:436:U:H3'	81:A2:436:U:O2	2.15	0.47
81:A2:635:G:H2'	81:A2:636:G:C8	2.44	0.47
81:A2:1207:C:H2'	81:A2:1208:U:OP2	2.15	0.47
81:A2:1250:A:H2'	81:A2:1250:A:N3	2.30	0.47
81:A2:1357:G:N3	81:A2:1357:G:C5'	2.72	0.47
81:A2:1717:A:O4'	83:A4:100:A:C2	2.68	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:A2:3866:G:C6	81:A2:4519:A:C2	3.02	0.47
81:A2:3907:G:C2	81:A2:4131:C:OP1	2.67	0.47
81:A2:3919:U:H2'	81:A2:3920:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4429:U:H2'	81:A2:4430:G:H8	1.79	0.47
81:A2:4904:G:H2'	81:A2:4905:U:O4'	2.15	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
2:AW:37:MIA:H3'	2:AW:38:A:C8	2.50	0.47
2:AW:74:C:H6	2:AW:74:C:H5"	1.80	0.47
4:B1:18:C:O5'	4:B1:18:C:H6	1.97	0.47
4:B1:63:U:H6	4:B1:63:U:H5"	1.79	0.47
4:B1:67:C:N4	11:BG:168:LYS:O	2.46	0.47
4:B1:77:A:H5"	4:B1:78:C:N4	2.30	0.47
4:B1:215:G:O5'	4:B1:215:G:C8	2.68	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:B1:462: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:B1:560:A:O3'	4:B1:561:A:H8	1.97	0.47
4:B1:567:C:H2'	4:B1:568:C:C5'	2.44	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:B1:684:G:C4	4:B1:920:A:C8	3.03	0.47
4:B1:693:A:C8	4:B1:694:G:C1'	2.97	0.47
4:B1:856:C:C2'	4:B1:857:U:H5'	2.45	0.47
4:B1:901:G:O2'	4:B1:902:G:H5'	2.15	0.47
4:B1:985:G:C3'	4:B1:986:G:H5'	2.45	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
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:B1:1398:G:N1	37:Bg:61:GLY:HA2	2.29	0.47
4:B1:1428:G:H5"	4:B1:1428:G:C8	2.49	0.47
4:B1:1473:G:H5'	4:B1:1474:A:OP2	2.15	0.47
4:B1:1607:A:C2	4:B1:1608:U:H1'	2.50	0.47
4:B1:1638:G:C5	4:B1:1638:G:OP2	2.68	0.47
4:B1:1751:C:H2'	4:B1:1752:C:H5'	1.96	0.47
4:B1:1824:A:H5"	4:B1:1824:A:N3	2.29	0.47
4:B1:1867:U:H1'	4:B1:1868:U:O5'	2.14	0.47
11:BG:63:MET:HE3	11:BG:99:GLY:O	2.14	0.47
12:BH:109:ARG:CG	12:BH:110:THR:H	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:BJ:161:LEU:O	14:BJ:161:LEU:HG	2.14	0.47
15:BK:65:ARG:HG3	34:Bd:22:ARG:O	2.13	0.47
17:BM:35:ILE:HD11	17:BM:61:TYR:OH	2.15	0.47
18:BN:15:ALA:N	32:Bb:20:LYS:HZ1	2.13	0.47
21:BQ:96:TYR:HA	21:BQ:100:VAL:CG2	2.45	0.47
22:BR:5:ARG:HB2	22:BR:10:LYS:HE2	1.96	0.47
22:BR:106:LEU:HA	22:BR:109:LEU:HD12	1.96	0.47
23:BS:46:ARG:CZ	24:BT:37:VAL:HG22	2.44	0.47
30:BZ:94:LYS:C	30:BZ:96:LEU:H	2.23	0.47
37:Bg:188:HIS:HB3	37:Bg:219:TRP:CZ2	2.49	0.47
37:Bg:282:GLU:HB3	37:Bg:284:PRO:HD2	1.96	0.47
39:CB:56:ILE:CG2	39:CB:365:LEU:HD22	2.45	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
42:CE:158:ARG:HD3	81:A2:4902:U:O2	2.14	0.47
42:CE:192:LYS:CG	68:Cf:107:PRO:HD3	2.45	0.47
42:CE:226:ARG:HA	42:CE:226:ARG:NE	2.29	0.47
43:CF:209:TRP:CD1	43:CF:210:PRO:HD2	2.49	0.47
44:CG:64:GLN:HE21	82:A3:151:G:H5'	1.79	0.47
44:CG:109:GLU:O	44:CG:112:GLN:HB3	2.14	0.47
45:CH:10:VAL:HG22	45:CH:74:CYS:SG	2.54	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:49:ALA:HB2	55:CS:100:LEU:CD1	2.45	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:2:VAL:O	52:CP:3:ARG:HB3	2.15	0.47
52:CP:129:THR:HG23	52:CP:139:TYR:CG	2.49	0.47
53:CQ:17:GLU:HG3	53:CQ:18:PRO:HD2	1.95	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
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
55:CS:93:MET:HE2	81:A2:1929:G:H21	1.80	0.47
56:CT:81:LYS:HD2	81:A2:4264:A:C2	2.50	0.47
64:Cb:8:THR:HG22	81:A2:1650:U:OP1	2.15	0.47
66:Cd:68:LEU:HD13	66:Cd:68:LEU:C	2.40	0.47
68:Cf:59:THR:HB	81:A2:1279:G:H5'	1.97	0.47
68:Cf:106:TYR:C	68:Cf:108:SER:N	2.73	0.47
75:Cm:95:ILE:HD11	75:Cm:124:LYS:NZ	2.30	0.47
77:Co:64:LYS:HA	77:Co:87:ARG:HH11	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cu:105:ILE:CG2	80:Cu:132:LEU:HD23	2.45	0.47
80:Cu:114:ILE:HA	80:Cu:118:LEU:HD23	1.96	0.47
81:A2:19:G:C6	82:A3:139:G:N1	2.83	0.47
81:A2:76:A:C2	81:A2:77:U:H1'	2.49	0.47
81:A2:148:G:OP1	81:A2:148:G:H8	1.97	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:A2:218:C:O5'	81:A2:218:C:C6	2.65	0.47
81:A2:259:G:H2'	81:A2:260:G:H8	1.79	0.47
81:A2:270:A:H2'	81:A2:270:A:OP1	2.13	0.47
81:A2:373:G:H2'	81:A2:375:A:N7	2.29	0.47
81:A2:402:G:H4'	81:A2:403:G:O5'	2.15	0.47
81:A2:403:G:H4'	81:A2:405:C:C2	2.50	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:A2:437:C:C3'	81:A2:438:C:C5	2.89	0.47
81:A2:469:G:N3	81:A2:470:G:C8	2.83	0.47
81:A2:941:G:H4'	81:A2:2054:G:OP1	2.15	0.47
81:A2:1141:G:H2'	81:A2:1142:G:C8	2.50	0.47
81:A2:1148:G:H2'	81:A2:1149:G:H5"	1.96	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:A2:1490: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:A2:1672:U:O2	81:A2:1672:U:C2'	2.62	0.47
81:A2:1715:A:H2	83:A4:77:A:C2	2.33	0.47
81:A2:1796:U:H3	81:A2:1802:G:N2	2.13	0.47
81:A2:1811:G:C8	81:A2:1811:G:C3'	2.98	0.47
81:A2:1835:C:H2'	81:A2:1836:A:C8	2.49	0.47
81:A2:1930:G:H8	81:A2:1930:G:H5"	1.77	0.47
81:A2:2005:U:O2'	81:A2:2006:C:H5'	2.14	0.47
81:A2:2020:A:H4'	81:A2:2020:A:OP1	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:A2:2251: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:2831:G:H22	81:A2:2833:C:H5'	1.79	0.47
81:A2:2870:U:O2'	81:A2:2871:A:H5'	2.14	0.47
81:A2:3614:U:C4	81:A2:4493:A:C2	3.02	0.47
81:A2:3692:A:C2'	81:A2:3693:A:H5'	2.44	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:A2:4044:G:H21	81:A2:4130:A:N6	2.10	0.47
81:A2:4296:A:H3'	81:A2:4296:A:C8	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:A2:4398:U:H6	81:A2:4398:U:OP2	1.98	0.47
81:A2:4446:C:H1'	81:A2:4643:U:O2	2.14	0.47
81:A2:4539:U:H2'	81:A2:4540:U:H6	1.78	0.47
81:A2:4549:A:N3	81:A2:4549:A:H2'	2.29	0.47
81:A2:4704:G:O5'	81:A2:4704:G:C8	2.68	0.47
81:A2:4830:G:H8	81:A2:4830:G:O5'	1.96	0.47
81:A2:4897:C:O2	81:A2:4897:C:C3'	2.62	0.47
82:A3:90:C:H2'	82:A3:91:A:H8	1.80	0.47
83:A4:25:G:C5	83:A4:26:C:N4	2.82	0.47
83:A4:102:U:H2'	83:A4:103:A:H5'	1.96	0.47
1:AV:25:C:O5'	1:AV:25:C:H6	1.98	0.47
2:AW:40:C:H6	2:AW:40:C:OP2	1.98	0.47
4:B1:36:U:N3	4:B1:520:A:N1	2.63	0.47
4:B1:93:U:H3'	4:B1:94:G:H8	1.80	0.47
4:B1:105:U:C4	4:B1:106:C:C4	3.03	0.47
4:B1:305:U:H2'	4:B1:305:U:O2	2.15	0.47
4:B1:641:A:H2'	4:B1:642:U:H5'	1.97	0.47
4:B1:664:A:N3	4:B1:664:A:H2'	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:B1:872:A:H2	54:CR:170:ARG:NH2	2.12	0.47
4:B1:993:G:C2'	4:B1:994:C:H5'	2.45	0.47
4:B1:1120:U:H6	4:B1:1120:U:C5'	2.23	0.47
4:B1:1169:G:OP2	4:B1:1170:A:H2'	2.14	0.47
4:B1:1481:G:H8	4:B1:1481:G:O5'	1.97	0.47
4:B1:1771:G:O2'	4:B1:1772:C:H5'	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:Bg:174:VAL:CG1	37:Bg:188:HIS:HB2	2.45	0.47
39:CB:303:ALA:O	39:CB:368:ILE:HD12	2.14	0.47
39:CB:325:GLU:O	39:CB:326:VAL:HB	2.14	0.47
41:CD:155:THR:OG1	83:A4:36:C:H5'	2.15	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
49:CM:16:SER:HB3	55:CS:160:ARG:HH21	1.80	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
53:CQ:72:LEU:HB3	81:A2:1435:G:H4'	1.97	0.47
55:CS:100:LEU:H	55:CS:100:LEU:HD12	1.79	0.47
56:CT:84:ILE:HD11	64:Cb:24:PRO:HA	1.95	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
62:CZ:136:PHE:HB3	81:A2:4089:G:H21	1.79	0.47
66:Cd:26:THR:HG23	66:Cd:85:ARG:HH11	1.80	0.47
69:Cg:89:ASP:O	69:Cg:93:ARG:HG3	2.15	0.47
72:Cj:64:MET:SD	72:Cj:67:LEU:HD12	2.55	0.47
80:Cu:30:ASN:HD21	81:A2:4022:C:H4'	1.78	0.47
81:A2:85:G:OP1	81:A2:85:G:H4'	2.15	0.47
81:A2:378:G:C2	81:A2:403:G:C2	3.03	0.47
81:A2:397:C:OP1	81:A2:397:C:H6	1.98	0.47
81:A2:397:C:N4	81:A2:398:A:N6	2.62	0.47
81:A2:431:U:O2'	81:A2:432:G:H5'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H2'	81:A2:1838:U:O2	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:H3'	81:A2:2479:G:C8	2.49	0.47
81:A2:2761:C:C6	81:A2:2761:C:C3'	2.98	0.47
81:A2:2869:C:H5"	81:A2:2869:C:C6	2.50	0.47
81:A2:3907:G:N2	81:A2:4131:C:OP1	2.47	0.47
81:A2:4064:C:H2'	81:A2:4065:G:H5'	1.96	0.47
81:A2:4125:C:H5'	81:A2:4126:G:OP2	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
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:B1:61:A:H3'	4:B1:61:A:P	2.55	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:H6	4:B1:193:C:C5'	2.24	0.47
4:B1:369:C:O2'	4:B1:370:G:H5"	2.15	0.47
4:B1:522:A:C6	4:B1:643:A:H5'	2.50	0.47
4:B1:571:U:C3'	4:B1:572:U:H5"	2.31	0.47
4:B1:633:C:H2'	4:B1:634:A:C8	2.49	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
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:B1:1216:C:H1'	21:BQ:143:LYS:HZ2	1.80	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:BA:58:LEU:HD11	5:BA:178:LEU:CA	2.44	0.47
6:BB:63:LYS:C	6:BB:65:ARG:H	2.23	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
18:BN:151:ALA:HB1	65:Cc:87:LYS:N	2.16	0.47
20:BP:60:LEU:HD13	20:BP:60:LEU:C	2.40	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
35:Be:27:LYS:HG3	35:Be:28:LYS:H	1.78	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:83:GLU:O	61:CY:84:ARG:CB	2.63	0.47
61:CY:121:ARG:O	61:CY:126:ARG:HA	2.14	0.47
64:Cb:47:LYS:HE2	81:A2:1805:G:H1'	1.96	0.47
65:Cc:31:TYR:O	65:Cc:35:LEU:HG	2.15	0.47
68:Cf:54:LYS:CB	81:A2:4706:C:OP1	2.63	0.47
71:Ci:34:THR:HG22	71:Ci:36:HIS:N	2.30	0.47
79:Ct:99:LYS:CB	79:Ct:103:ARG:NH2	2.78	0.47
81:A2:8:U:N3	81:A2:9:C:C5	2.83	0.47
81:A2:121:A:C6	81:A2:147:U:N3	2.83	0.47
81:A2:230:U:C2	81:A2:2280:U:C5	3.02	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
81:A2:1198:G:H2'	81:A2:1199:G:H5'	1.95	0.47
81:A2:1217:C:O2	81:A2:1217:C:C3'	2.62	0.47
81:A2:1359:C:H3'	81:A2:1359:C:O2	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1524:G:N3	81:A2:1524:G:H2'	2.29	0.47
81:A2:1610:A:O5'	81:A2:1610:A:C8	2.65	0.47
81:A2:2246:G:P	81:A2:2246:G:H8	2.37	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
1:AV:32:U:H5"	21:BQ:146:ARG:C	2.40	0.47
2:AW:12:U:O5'	2:AW:12:U:H6	1.97	0.47
2:AW:34:G:C5	4:B1:1684:C:H1'	2.49	0.47
4:B1:63:U:OP1	4:B1:315:C:H4'	2.14	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:B1:691: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
4:B1:1015:U:C5	18:BN:13:GLN:O	2.68	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
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
16:BL:22:ARG:HD2	16:BL:27:GLU:CD	2.40	0.47
23:BS:4:VAL:HG21	30:BZ:49:LEU:HD11	1.97	0.47
25:BU:20:ILE:HG21	25:BU:98:VAL:CG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:47:ASN:C	25:BU:48:LEU:HD12	2.40	0.47
29:BY:41:ARG:HH12	29:BY:94:HIS:CD2	2.32	0.47
38:CA:104:VAL:HB	38:CA:146:THR:HG21	1.97	0.47
38:CA:118:GLU:OE2	81:A2:3631:A:H2'	2.15	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
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
50:CN:143:ARG:HB3	70:Ch:99:GLU:OE1	2.14	0.47
53:CQ:75:ARG:HE	53:CQ:78:LYS:HZ2	1.61	0.47
56:CT:129:LYS:HA	81:A2:1814:G:O3'	2.15	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
63:Ca:40:HIS:HB2	81:A2:1660:G:H21	1.80	0.47
63:Ca:70:CYS:CB	63:Ca:109:TYR:HB3	2.45	0.47
67:Ce:58:ILE:CG2	81:A2:2254:G:H21	2.28	0.47
71:Ci:37:THR:HG23	81:A2:268:G:OP2	2.15	0.47
81:A2:20:U:O2	81:A2:20:U:C2'	2.62	0.47
81:A2:59:A:C8	81:A2:329:A:C2	3.03	0.47
81:A2:174:G:C6	81:A2:175:C:N4	2.83	0.47
81:A2:307:U:O2	81:A2:307:U:H2'	2.15	0.47
81:A2:457:A:OP1	81:A2:463:C:N4	2.48	0.47
81:A2:897:U:C5'	81:A2:898:U:OP1	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:A2:1812:U:H6	81:A2:1812:U:H5"	1.80	0.47
81:A2:1822:G:H5"	81:A2:1822:G:H8	1.80	0.47
81:A2:2042:G:OP1	81:A2:2042:G:H4'	2.14	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:H2'	81:A2:2840:G:N3	2.28	0.47
81:A2:2853:G:N3	81:A2:2853:G:C3'	2.75	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:N3	81:A2:4088:G:H2'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4698:C:O2'	81:A2:4699:G:H5'	2.15	0.47
83:A4:25:G:H3'	83:A4:26:C:C5	2.49	0.47
1:AV:17:C:C3'	1:AV:18:G:H5"	2.43	0.46
4:B1:440:G:H5"	4:B1:1798:C:O2'	2.15	0.46
4:B1:467:G:OP2	4:B1:467:G:C8	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
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
4:B1:1304:U:H6	4:B1:1304:U:O5'	1.99	0.46
4:B1:1375:G:H3'	4:B1:1375:G:C8	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:B1:1495:G:C6	34:Bd:41:GLN:HB3	2.50	0.46
4:B1:1555:U:C2'	4:B1:1556:A:H5'	2.45	0.46
4:B1:1602:U:H3'	4:B1:1602:U:C6	2.50	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
13:BI:169:GLY:CA	81:A2:4980:C:OP2	2.60	0.46
18:BN:94:LYS:O	18:BN:98:VAL:HG23	2.14	0.46
19:BO:125:LYS:HB3	31:Ba:58:VAL:HG21	1.96	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
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
63:Ca:15:VAL:HA	81:A2:1639:U:OP1	2.16	0.46
68:Cf:93:PRO:O	68:Cf:94:ALA:HB3	2.16	0.46
77:Co:51:GLN:HE21	77:Co:53:LYS:H	1.63	0.46
78:Cp:44:LYS:HE2	78:Cp:46:LYS:HE2	1.96	0.46
79:Ct:44:ILE:HA	79:Ct:48:THR:CG2	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cu:28:ALA:HB1	80:Cu:160:HIS:CE1	2.50	0.46
81:A2:207:C:H41	81:A2:228:U:H2'	1.79	0.46
81:A2:304:U:OP2	81:A2:304:U:C5	2.68	0.46
81:A2:965:C:N4	81:A2:1249:G:H1	2.11	0.46
81:A2:975:C:O2'	81:A2:976:C:H5'	2.14	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:H2'	81:A2:1354:G:N3	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:A2:2449: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:H8	81:A2:2555:G:OP2	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:A2:3588:G:H5"	81:A2:3588:G:N3	2.29	0.46
81:A2:3592:C:H6	81:A2:3592:C:C3'	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:H5'	81:A2:4143:G:N3	2.30	0.46
81:A2:4176:G:N3	81:A2:4176:G:H2'	2.30	0.46
4:B1:78:C:O3'	11:BG:175:LYS:HG2	2.15	0.46
4:B1:172:U:C5	4:B1:337:C:H1'	2.50	0.46
4:B1:438:G:H8	4:B1:438:G:O5'	1.98	0.46
4:B1:521:A:N6	4:B1:522:A:C2	2.83	0.46
4:B1:745:C:H3'	12:BH:105:THR:HG23	1.98	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:B1:1752:C:O2'	4:B1:1753:C:H5'	2.15	0.46
4:B1:1841:C:H5'	76:Cn:2:ARG:HD2	1.97	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
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:HG2	29:BY:100:LYS:O	2.14	0.46
39:CB:335:GLY:HA3	81:A2:4634:C:H4'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:CD:14:LYS:HG2	83:A4:66:G:O3'	2.15	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
48:CL:84:ALA:HA	48:CL:118:LYS:HZ1	1.79	0.46
48:CL:156:PRO:HA	81:A2:1359:C:H5	1.78	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
67:Ce:58:ILE:HG23	81:A2:2254:G:N2	2.30	0.46
70:Ch:34:ALA:HA	70:Ch:37:THR:CB	2.46	0.46
72:Cj:25:LYS:HE3	74:Cl:51:LEU:CD1	2.44	0.46
80:Cu:62:PHE:HE1	80:Cu:81:GLU:CB	2.28	0.46
80:Cu:198:VAL:CG1	80:Cu:210:VAL:HG22	2.42	0.46
81:A2:197:U:N3	81:A2:235:C:O4'	2.49	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:A2:241:G:H8	81:A2:241:G:P	2.38	0.46
81:A2:454:A:H2'	81:A2:455:G:H8	1.79	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
81:A2:1293:C:O2	81:A2:1293:C:H2'	2.16	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:N3	81:A2:1461:G:C3'	2.75	0.46
81:A2:1581:U:H2'	81:A2:1582:C:C6	2.50	0.46
81:A2:1653:C:O5'	81:A2:1653:C:H6	1.97	0.46
81:A2:1821:A:OP2	81:A2:1821:A:C8	2.68	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:A2:2478:C:H6	81:A2:2478:C:H3'	1.80	0.46
81:A2:2730:G:C6	81:A2:2731:G:N1	2.83	0.46
81:A2:2743:A:P	81:A2:2743:A:H8	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4500:C:H2'	81:A2:4501:G:O4'	2.14	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
82:A3:106:G:H1'	82:A3:136:U:O2	2.16	0.46
83:A4:11:A:O5'	83:A4:11:A:C8	2.69	0.46
83:A4:92:C:H2'	83:A4:93:G:C8	2.51	0.46
1:AV:28:G:C2'	1:AV:29:G:H5'	2.45	0.46
3:AX:42:U:C6	19:BO:151:LEU:HD23	2.51	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:OP1	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
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:H5"	4:B1:1641:A:C8	2.50	0.46
4:B1:1767:C:H3'	4:B1:1767:C:H6	1.80	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:131:PRO:HG3	13:BI:147:LYS:HZ1	1.80	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
33:Bc:42:ILE:HG22	33:Bc:43:ILE:N	2.29	0.46
42:CE:284:HIS:HB3	68:Cf:42:TYR:CE1	2.51	0.46
43:CF:43:ARG:HD3	43:CF:46:ARG:HH21	1.80	0.46
43:CF:131:ASN:HD22	81:A2:1706:U:H5'	1.81	0.46
44:CG:55:VAL:HA	60:CX:44:PRO:HA	1.96	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
50:CN:85:VAL:CG1	77:Co:49:GLY:HA3	2.40	0.46
50:CN:195:ARG:HD2	81:A2:98:A:H5"	1.96	0.46
54:CR:109:TYR:HB2	54:CR:115:ILE:HD12	1.98	0.46
54:CR:112:SER:O	54:CR:113:LYS:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CT:12:ARG:NH2	81:A2:4235:G:H4'	2.31	0.46
56:CT:105:PHE:O	56:CT:109:VAL:HG23	2.15	0.46
66:Cd:85:ARG:HH22	66:Cd:120:VAL:HG22	1.81	0.46
67:Ce:40:GLY:HA3	81:A2:1296:G:OP1	2.15	0.46
69:Cg:72:LYS:HD2	81:A2:2726:C:O3'	2.15	0.46
80:Cu:62:PHE:HE1	80:Cu:81:GLU:HB3	1.80	0.46
81:A2:40:G:H3'	81:A2:41:C:H6	1.79	0.46
81:A2:119:G:C4'	81:A2:120:A:C8	2.98	0.46
81:A2:297:A:H3'	81:A2:297:A:C8	2.50	0.46
81:A2:476:C:OP2	81:A2:476:C:H4'	2.14	0.46
81:A2:1082:U:C1'	81:A2:1083:C:P	3.03	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:C8	81:A2:1868:G:H3'	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:H8	81:A2:2773:G:O5'	1.99	0.46
81:A2:3577:A:H5"	81:A2:3577:A:C8	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:A2:4338: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
82:A3:24:G:H2'	82:A3:25:G:O4'	2.15	0.46
4:B1:167:G:H4'	11:BG:8:PRO:O	2.15	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:B1:524:U:H5	35:Be:31:ARG:HD3	1.79	0.46
4:B1:593:C:C6	4:B1:593:C:P	3.09	0.46
4:B1:621:C:O2	4:B1:621:C:H2'	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
4:B1:1006:C:H6	4:B1:1006:C:O5'	1.98	0.46
4:B1:1214:A:H61	4:B1:1685:U:H3	1.64	0.46
4:B1:1284:A:C4	4:B1:1286:G:H5"	2.50	0.46
4:B1:1284:A:H3'	4:B1:1285:G:C4'	2.46	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:B1:1697:A:O2'	4:B1:1698:C:P	2.73	0.46
4:B1:1767:C:C6	4:B1:1767:C:C3'	2.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:60:TRP:CD1	7:BC:60:TRP:C	2.93	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:53:VAL:HG11	12:BH:171:GLU:HG3	1.97	0.46
12:BH:146:VAL:O	27:BW:42:MET:HE1	2.15	0.46
12:BH:181:THR:HG22	12:BH:183:LYS:HD3	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
31:Ba:39:PHE:CD2	31:Ba:70:LYS:HA	2.51	0.46
31:Ba:44:ILE:CG2	31:Ba:67:LEU:HG	2.45	0.46
31:Ba:84:VAL:HG12	31:Ba:84:VAL:O	2.14	0.46
39:CB:41:VAL:HG13	39:CB:185:VAL:CG2	2.45	0.46
39:CB:301:ASN:OD1	39:CB:311:ASP:HA	2.16	0.46
40:CC:48:ASN:HA	81:A2:1352:A:H5'	1.96	0.46
40:CC:51:PRO:HB3	82:A3:27:U:O2	2.15	0.46
40:CC:303:ARG:NH2	81:A2:1428:G:H5"	2.30	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:153:PRO:C	55:CS:155:PRO:HD3	2.41	0.46
55:CS:173:ASN:HB3	81:A2:4722:U:C4	2.50	0.46
56:CT:81:LYS:CD	81:A2:4264:A:H2	2.29	0.46
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
63:Ca:70:CYS:HA	63:Ca:109:TYR:HB2	1.98	0.46
70:Ch:44:LEU:O	70:Ch:47:ILE:HG22	2.16	0.46
73:Ck:70:LYS:HA	81:A2:2673:A:H2'	1.97	0.46
80:Cu:22:ARG:HA	80:Cu:166:GLU:OE2	2.14	0.46
80:Cu:84:LEU:CD1	80:Cu:118:LEU:HD21	2.42	0.46
81:A2:133:C:O2'	81:A2:173:G:H5"	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:214:C:C6	81:A2:214:C:C3'	2.97	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:A2:728:G:O2'	81:A2:729:C:H5'	2.15	0.46
81:A2:969:C:OP1	81:A2:979:C:C5	2.69	0.46
81:A2:1086:A:C8	81:A2:1086:A:P	3.09	0.46
81:A2:1209:C:H4'	81:A2:1210:U:O4'	2.16	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:A2:2526: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:A2:3890:U:C5	81:A2:4143:G:N7	2.84	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:O5'	81:A2:4572:C:H6	1.98	0.46
81:A2:4820:C:O5'	81:A2:4820:C:H6	1.99	0.46
82:A3:19:C:H2'	82:A3:20:A:H8	1.81	0.46
82:A3:128:C:H2'	82:A3:129:C:C6	2.50	0.46
2:AW:56:C:H5"	81:A2:4014:A:N3	2.30	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
4:B1:798:G:N3	4:B1:798:G:H3'	2.31	0.46
4:B1:831:G:H2'	4:B1:832:G:C8	2.51	0.46
4:B1:831:G:H2'	4:B1:832:G:H8	1.81	0.46
4:B1:884:C:C2'	4:B1:885:U:H5'	2.45	0.46
4:B1:891:G:H8	4:B1:891:G:O5'	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
4:B1:1085:C:H1'	4:B1:1086:G:H5"	1.96	0.46
4:B1:1137:U:OP2	4:B1:1137:U:C6	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1600:G:P	30:BZ:43:LYS:HD2	2.56	0.46
6:BB:105:LEU:HD11	6:BB:109:LYS:HG2	1.97	0.46
8:BD:62:LYS:HB3	15:BK:94:LEU:O	2.16	0.46
13:BI:65:PHE:O	13:BI:73:THR:HA	2.15	0.46
13:BI:144:LYS:O	13:BI:147:LYS:HG2	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
33:Bc:18:LEU:HD12	33:Bc:29:GLN:HG2	1.97	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
41:CD:260:GLU:CG	83:A4:119:U:H3’	2.46	0.46
43:CF:131:ASN:HD22	81:A2:1706:U:C5’	2.28	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
46:CI:99:ILE:O	46:CI:120:GLY:HA3	2.15	0.46
48:CL:156:PRO:CA	81:A2:1359:C:C5	2.99	0.46
49:CM:119:ARG:CA	51:CO:190:ASP:HB3	2.45	0.46
50:CN:146:PRO:HG3	70:Ch:104:THR:HA	1.98	0.46
50:CN:183:THR:CB	50:CN:188:ARG:HB3	2.45	0.46
53:CQ:72:LEU:HG	81:A2:1436:G:OP1	2.16	0.46
53:CQ:101:CYS:HA	53:CQ:121:LEU:O	2.15	0.46
55:CS:83:ARG:HH21	56:CT:155:PRO:C	2.23	0.46
61:CY:56:GLN:HA	61:CY:65:GLN:O	2.16	0.46
62:CZ:104:PRO:HG2	81:A2:2530:A:N1	2.31	0.46
65:Cc:38:ILE:HG21	65:Cc:63:TYR:HB3	1.98	0.46
68:Cf:4:ARG:HA	81:A2:4711:U:O2	2.16	0.46
79:Ct:14:SER:C	79:Ct:17:LEU:H	2.24	0.46
81:A2:8:U:O4	81:A2:9:C:H5	1.98	0.46
81:A2:255:C:H2’	81:A2:255:C:O2	2.15	0.46
81:A2:351:A:N3	82:A3:24:G:C1’	2.79	0.46
81:A2:409:A:C6	82:A3:17:A:C1’	2.99	0.46
81:A2:472:G:OP1	81:A2:472:G:H4’	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:A2:1086: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
81:A2:1565:G:H3’	81:A2:1566:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:2548:C:O2	81:A2:2548:C:H2’	2.16	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:A2:3664:U:H6	81:A2:3664:U:H5”	1.80	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:H3’	81:A2:4479:C:C6	2.48	0.46
81:A2:4623:G:H4’	81:A2:4958:U:O3’	2.16	0.46
81:A2:4675:C:H6	81:A2:4675:C:O5’	1.99	0.46
82:A3:76:C:H2’	82:A3:77:A:C8	2.51	0.46
4:B1:21:U:H3	4:B1:654:A:H2	1.64	0.46
4:B1:36:U:O2	4:B1:36:U:C2’	2.63	0.46
4:B1:350:C:C2’	4:B1:351:G:H5’	2.43	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:C8	4:B1:558:G:OP2	2.68	0.46
4:B1:563:G:C5	4:B1:564:A:N7	2.83	0.46
4:B1:841:G:H8	29:BY:12:PHE:CE2	2.33	0.46
4:B1:1013:U:C1’	4:B1:1104:G:H1’	2.44	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:B1:1142: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:B1:1204:A:O2’	4:B1:1699:A:H2’	2.16	0.46
4:B1:1208:A:C6	4:B1:1692:U:O2	2.68	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:B1:1665:G:C2	24:BT:87:VAL:HB	2.51	0.46
5:BA:8:LEU:HG	5:BA:191:ARG:CZ	2.46	0.46
5:BA:12:GLU:HB3	22:BR:115:SER:HB2	1.98	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
25:BU:24:LEU:N	25:BU:24:LEU:HD23	2.30	0.46
25:BU:66:ARG:HD2	25:BU:66:ARG:H	1.80	0.46
25:BU:80:PHE:CB	34:Bd:52:PHE:HB3	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Bg:5:MET:HG2	37:Bg:312:VAL:HA	1.96	0.46
39:CB:25:HIS:CD2	81:A2:4939:C:H5"	2.47	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
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
53:CQ:187:LYS:HZ1	81:A2:1474:G:H5"	1.80	0.46
61:CY:123:ALA:CA	61:CY:126:ARG:CB	2.93	0.46
66:Cd:33:ILE:HG22	66:Cd:33:ILE:O	2.15	0.46
71:Ci:43:MET:HG2	71:Ci:47:VAL:CG2	2.46	0.46
74:Cl:23:ILE:HG12	74:Cl:38:ASN:HB2	1.97	0.46
80:Cu:160:HIS:CD2	81:A2:4021:A:C2	3.00	0.46
81:A2:83:C:C2	81:A2:100:C:N4	2.83	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:A2:230:U:O2	81:A2:2280:U:C5	2.69	0.46
81:A2:385:G:H3'	81:A2:387:A:OP2	2.16	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:A2:1198:G:C4	81:A2:1199:G:C8	3.04	0.46
81:A2:1587:G:H8	81:A2:1587:G:O5'	1.99	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:C6	81:A2:2685:U:C3'	2.99	0.46
81:A2:3613:U:H2'	81:A2:4514:G:O2'	2.15	0.46
81:A2:4177:G:H2'	81:A2:4178:U:C6	2.50	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
82:A3:14:U:H3'	82:A3:15:G:H8	1.81	0.46
4:B1:125:C:P	4:B1:125:C:C6	3.08	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
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:O5'	4:B1:395:G:C8	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	4:B1:598:G:C8	2.69	0.46
4:B1:644:G:H2'	4:B1:645:C:C6	2.51	0.46
4:B1:836:G:H8	4:B1:836:G:OP1	1.96	0.46
4:B1:876:C:H6	4:B1:876:C:H3'	1.81	0.46
4:B1:991:G:H5'	31:Ba:11:ALA:CB	2.46	0.46
4:B1:1352:G:H5"	5:BA:139:TYR:CZ	2.50	0.46
4:B1:1398:G:C2	37:Bg:61:GLY:O	2.69	0.46
4:B1:1403:C:C6	4:B1:1404:U:C6	3.04	0.46
4:B1:1404:U:H6	4:B1:1404:U:OP2	1.99	0.46
4:B1:1778:C:H6	4:B1:1778:C:O5'	1.99	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:HA	10:BF:91:ARG:NE	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
15:BK:10:ALA:C	15:BK:38:LYS:HZ3	2.23	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
34:Bd:15:GLY:O	34:Bd:19:ARG:HG2	2.16	0.46
37:Bg:283:PRO:N	37:Bg:284:PRO:CD	2.79	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
40:CC:150:LEU:O	40:CC:151:PRO:C	2.56	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
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
63:Ca:103:VAL:CG2	63:Ca:126:ALA:HB2	2.46	0.46
80:Cu:156:ARG:CZ	81:A2:4024:A:H1'	2.45	0.46
81:A2:24:G:N2	81:A2:332:G:O4'	2.43	0.46
81:A2:183:G:O2'	81:A2:184:U:H5'	2.15	0.46
81:A2:301:G:H3'	81:A2:301:G:C8	2.51	0.46
81:A2:309:A:H2'	81:A2:310:A:O4'	2.16	0.46
81:A2:356:U:O2	81:A2:356:U:C2'	2.62	0.46
81:A2:470:G:H2'	81:A2:471:C:H5'	1.96	0.46
81:A2:951:C:C6	81:A2:952:C:C5	3.04	0.46
81:A2:962:G:H8	81:A2:962:G:P	2.39	0.46
81:A2:1056:C:C6	81:A2:1056:C:H5"	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1092:C:O5'	81:A2:1092:C:H6	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:A2:1858: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:A2:3574: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:A2:4882:G:N2	81:A2:4883:C:C6	2.84	0.46
82:A3:72:A:C4'	82:A3:87:G:H21	2.27	0.46
4:B1:311:C:C2'	4:B1:311:C:O2	2.63	0.46
4:B1:656:G:H4'	4:B1:657:U:H5'	1.98	0.46
4:B1:1017:U:C5	4:B1:1018:U:C5	3.03	0.46
4:B1:1101:U:C6	4:B1:1101:U:C3'	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:B1:1507:G:C2	36:Bf:91:ASN:HA	2.51	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
6:BB:140:VAL:HB	6:BB:213:ARG:HH12	1.80	0.46
7:BC:255:LEU:O	7:BC:255:LEU:HG	2.15	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
10:BF:145:ARG:HB2	33:Bc:48:GLY:HA3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
44:CG:57:TRP:HZ3	82:A3:149:G:H5'	1.72	0.46
47:CJ:46:GLN:HB3	83:A4:39:C:O2'	2.15	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
60:CX:119:ILE:HD12	60:CX:140:LEU:CD2	2.46	0.46
61:CY:122:LYS:HZ2	81:A2:194:A:H5"	1.81	0.46
62:CZ:9:LYS:HE2	62:CZ:82:PRO:HB2	1.97	0.46
64:Cb:15:LYS:HE3	81:A2:1665:C:C1'	2.42	0.46
73:Ck:25:ILE:HG21	73:Ck:57:LYS:HZ1	1.80	0.46
81:A2:21:G:H1'	82:A3:103:A:N3	2.30	0.46
81:A2:219:C:C2'	81:A2:220:G:C5'	2.93	0.46
81:A2:382:U:O2	81:A2:391:A:H2	1.99	0.46
81:A2:476:C:P	81:A2:658:G:C5'	3.04	0.46
81:A2:943:G:H1'	81:A2:944:A:P	2.56	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
81:A2:2005:U:H2'	81:A2:2005:U:OP2	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:A2:2310:G:C6	81:A2:2311:C:C5	3.04	0.46
81:A2:2400:A:OP2	81:A2:2400:A:C8	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
81:A2:3667:G:H1'	81:A2:3747:U:O2	2.16	0.46
81:A2:3688:A:H2'	81:A2:3688:A:N3	2.30	0.46
81:A2:3722:G:O4'	81:A2:3745:G:C8	2.69	0.46
81:A2:3744:A:H2'	81:A2:3745:G:H5"	1.97	0.46
81:A2:3750:C:H5"	81:A2:3790:A:O3'	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4883:C:C2'	81:A2:4884:C:H5'	2.45	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
2:AW:14:A:H2'	2:AW:15:G:O4'	2.16	0.46
3:AX:60:U:C5	3:AX:61:U:H5	2.33	0.46
4:B1:494:C:O2'	4:B1:495:U:H5'	2.16	0.46
4:B1:1225:U:O5'	4:B1:1225:U:C6	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
5:BA:62:ALA:HB1	5:BA:185:MET:SD	2.56	0.46
6:BB:131:ASP:H	6:BB:180:ASP:CG	2.24	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
37:Bg:72:SER:HA	37:Bg:113:PHE:CE1	2.50	0.46
37:Bg:109:LEU:HD23	37:Bg:125:ARG:HG3	1.97	0.46
37:Bg:251:ALA:HB1	37:Bg:286:CYS:HB2	1.98	0.46
37:Bg:294:ASP:C	37:Bg:296:GLN:H	2.24	0.46
38:CA:194:ASN:ND2	81:A2:1518:G:H4'	2.30	0.46
40:CC:206:GLY:HA3	40:CC:226:GLY:O	2.15	0.46
41:CD:277:LYS:NZ	81:A2:1087:C:H5'	2.31	0.46
42:CE:217:PHE:HB2	81:A2:4895:C:HO2'	1.79	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
47:CJ:98:ASN:OD1	81:A2:4210:G:H5'	2.16	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
80:Cu:191:GLY:N	80:Cu:192:PRO:HD3	2.31	0.46
81:A2:12:A:H5"	81:A2:12:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:69:A:N3	81:A2:69:A:C3'	2.78	0.46
81:A2:288:U:O5'	81:A2:288:U:H6	1.98	0.46
81:A2:416:U:C2'	81:A2:417:A:H5'	2.45	0.46
81:A2:473:G:N3	81:A2:473:G:C2'	2.78	0.46
81:A2:653:C:O5'	81:A2:653:C:H6	1.98	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
81:A2:1281:C:C2'	81:A2:1282:U:OP1	2.64	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
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:C6	81:A2:2009:C:H5"	2.51	0.46
81:A2:2011:A:H5"	81:A2:2011:A:H8	1.79	0.46
81:A2:2054:G:H8	81:A2:2054:G:O5'	1.98	0.46
81:A2:2061:C:C5	81:A2:2062:C:C2	3.04	0.46
81:A2:2589:G:C8	81:A2:2589:G:OP2	2.69	0.46
81:A2:2609:U:C2'	81:A2:2610:U:C5	2.95	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:A2:4428:U:O5'	81:A2:4428:U:H6	1.99	0.46
81:A2:4449:G:C2	81:A2:4668:A:H2'	2.51	0.46
81:A2:4580:U:C6	81:A2:4580:U:H3'	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:OP1	2.64	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
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
4:B1:74:G:H2'	4:B1:74:G:N3	2.31	0.46
4:B1:154:U:O4'	11:BG:13:GLN:HB3	2.16	0.46
4:B1:906:U:O3'	54:CR:165:LYS:NZ	2.43	0.46
4:B1:1494:U:C1'	4:B1:1495:G:OP2	2.64	0.46
4:B1:1521:C:H2'	23:BS:136:THR:OG1	2.16	0.46
4:B1:1688:C:C2	4:B1:1689:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1847:G:O6	76:Cn:8:LYS:NZ	2.47	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
28:BX:61:GLN:CB	28:BX:62:PRO:CD	2.89	0.46
31:Ba:26:CYS:SG	31:Ba:28:ARG:HB3	2.55	0.46
39:CB:18:PRO:HA	81:A2:4527:G:OP2	2.15	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
46:CI:34:PHE:O	46:CI:88:ARG:HA	2.16	0.46
46:CI:35:ASP:C	46:CI:36:LEU:HD12	2.41	0.46
47:CJ:86:GLY:O	47:CJ:89:VAL:HB	2.16	0.46
47:CJ:111:GLU:HG2	47:CJ:125:ILE:HG21	1.98	0.46
48:CL:204:GLU:O	48:CL:206:ASP:N	2.49	0.46
63:Ca:132:ARG:HD3	63:Ca:132:ARG:N	2.31	0.46
66:Cd:33:ILE:HD11	66:Cd:45:ALA:HB2	1.98	0.46
68:Cf:27:LEU:CB	68:Cf:83:MET:HE2	2.43	0.46
70:Ch:33:VAL:HG12	70:Ch:37:THR:OG1	2.16	0.46
77:Co:69:ARG:HH12	81:A2:4306:U:H5"	1.81	0.46
79:Ct:44:ILE:CG1	79:Ct:45:HIS:H	2.25	0.46
81:A2:62:A:H2'	81:A2:63:G:H8	1.78	0.46
81:A2:85:G:N2	81:A2:97:G:C2'	2.78	0.46
81:A2:100:C:O2	81:A2:100:C:C2'	2.62	0.46
81:A2:212:C:C1'	81:A2:213:C:P	3.03	0.46
81:A2:424:A:H1'	81:A2:425:A:O5'	2.16	0.46
81:A2:642:C:H6	81:A2:642:C:C5'	2.23	0.46
81:A2:929:U:C6	81:A2:929:U:P	3.09	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:H6	81:A2:1336:U:OP2	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:OP1	2.60	0.46
81:A2:1492:U:H2'	81:A2:1493:U:H6	1.76	0.46
81:A2:1657:C:C5	81:A2:4153:C:H5'	2.51	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:A2:2289:A:OP2	81:A2:2289:A:H4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:2746:U:OP1	81:A2:2746:U:C6	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:P	81:A2:4067:G:H8	2.39	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
81:A2:4818:G:C6	81:A2:4819:U:C4	3.04	0.46
81:A2:4848:A:C5’	81:A2:4849:A:OP1	2.59	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:B1:69:C:C6	4:B1:69:C:C3’	2.99	0.45
4:B1:133:C:C6	4:B1:134:C:H4’	2.51	0.45
4:B1:215:G:H3’	4:B1:215:G:P	2.55	0.45
4:B1:316:G:C6	4:B1:317:C:N4	2.84	0.45
4:B1:346:C:H5”	9:BE:38:LEU:CD1	2.46	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:B1:742:U:H6	12:BH:49:LYS:HZ2	1.64	0.45
4:B1:946:U:H2’	4:B1:947:G:O4’	2.17	0.45
4:B1:1280:G:O2’	4:B1:1281:G:H5’	2.17	0.45
4:B1:1332:A:H1’	8:BD:141:LYS:HZ1	1.81	0.45
4:B1:1338:G:H2’	4:B1:1339:U:C6	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
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
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
31:Ba:82:LYS:HE2	33:Bc:69:ARG:HD2	1.97	0.45
39:CB:234:ARG:NH2	39:CB:235:TRP:HE1	2.13	0.45
40:CC:329:ASN:ND2	43:CF:188:GLU:HG2	2.32	0.45
41:CD:146:LEU:HB2	81:A2:4283:A:C2	2.50	0.45
43:CF:66:ARG:HA	43:CF:69:ILE:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:194:VAL:HG22	44:CG:194:VAL:O	2.16	0.45
46:CI:156:LYS:HG3	46:CI:163:GLN:OE1	2.17	0.45
46:CI:204:GLY:H	83:A4:64:G:P	2.39	0.45
47:CJ:151:ILE:HD12	47:CJ:155:HIS:O	2.16	0.45
49:CM:49:ALA:HB2	55:CS:100:LEU:HD11	1.98	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
55:CS:159:LEU:O	55:CS:159:LEU:HG	2.17	0.45
59:CW:35:LYS:NZ	81:A2:4960:G:N7	2.64	0.45
62:CZ:46:ILE:HG13	62:CZ:69:LYS:O	2.16	0.45
62:CZ:105:ALA:CA	81:A2:2531:U:H1'	2.46	0.45
63:Ca:128:PHE:HZ	71:Ci:9:VAL:HG13	1.81	0.45
73:Ck:26:LYS:HE3	73:Ck:28:ASN:ND2	2.31	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:A2:399:A:C4'	81:A2:400:G:H5'	2.40	0.45
81:A2:422:G:H5'	81:A2:3858:G:C8	2.52	0.45
81:A2:1253:G:H2'	81:A2:1254:A:H5"	1.98	0.45
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:A2:2021:A:N3	81:A2:4476:G:H1'	2.31	0.45
81:A2:2047:A:C8	81:A2:2047:A:H3'	2.51	0.45
81:A2:2369:C:C6	81:A2:2369:C:H5'	2.51	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:A2:3590:A:C8	81:A2:4602:U:H1'	2.50	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:A2:4249: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:A2:4845: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
82:A3:65:A:C2'	82:A3:66:A:H5'	2.46	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:B1:428: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
4:B1:1512:C:H1'	34:Bd:7:TYR:CE2	2.51	0.45
4:B1:1529:C:H5'	4:B1:1666:C:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1532:C:H3'	4:B1:1637:A:H62	1.81	0.45
4:B1:1601:A:N1	4:B1:1635:C:C4	2.84	0.45
4:B1:1695:A:C6	4:B1:1696:C:O2	2.69	0.45
4:B1:1740:C:H5"	13:BI:58:LEU:HD11	1.97	0.45
4:B1:1808:U:O5'	4:B1:1808:U:H6	1.99	0.45
5:BA:40:LYS:HZ2	22:BR:101:ASP:HA	1.82	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
12:BH:63:PHE:CD2	12:BH:95:ILE:HD11	2.51	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
24:BT:76:THR:CG2	24:BT:95:GLY:H	2.28	0.45
31:Ba:26:CYS:SG	31:Ba:28:ARG:CB	3.04	0.45
39:CB:41:VAL:HG22	39:CB:187:GLY:HA3	1.97	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
41:CD:98:ALA:O	41:CD:162:ALA:HA	2.16	0.45
43:CF:37:PHE:CE1	81:A2:1250:A:C4'	3.00	0.45
43:CF:51:TYR:CZ	81:A2:1218:A:H3'	2.51	0.45
44:CG:194:VAL:CG1	44:CG:199:CYS:SG	3.05	0.45
48:CL:182:LEU:HD11	63:Ca:146:LEU:HD22	1.98	0.45
51:CO:33:VAL:O	51:CO:102:LEU:HD22	2.16	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
65:Cc:43:ALA:O	65:Cc:69:THR:HG21	2.16	0.45
72:Cj:12:ARG:HH22	81:A2:2778:U:H1'	1.79	0.45
72:Cj:63:ARG:NH2	82:A3:57:C:N4	2.64	0.45
81:A2:12:A:H2	81:A2:14:C:N4	2.14	0.45
81:A2:181:U:H4'	81:A2:182:C:O5'	2.16	0.45
81:A2:254:G:C2'	81:A2:255:C:OP1	2.65	0.45
81:A2:409:A:C6	82:A3:17:A:H1'	2.51	0.45
81:A2:488:G:H1	81:A2:658:G:H1'	1.81	0.45
81:A2:1085:C:O2	81:A2:1085:C:C2'	2.63	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:A2:1878: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:3725: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:H8	81:A2:3940:G:O5'	1.99	0.45
81:A2:4072:A:C2'	81:A2:4073:G:H5'	2.46	0.45
81:A2:4511:U:H2'	81:A2:4512:U:C6	2.50	0.45
82:A3:115:G:H2'	82:A3:116:C:C6	2.51	0.45
1:AV:74:C:N3	81:A2:4158:G:C2	2.84	0.45
2:AW:15:G:H2'	2:AW:16:U:H5'	1.98	0.45
4:B1:67:C:C5	11:BG:162:LEU:HG	2.51	0.45
4:B1:100:U:H2'	4:B1:101:U:H5'	1.99	0.45
4:B1:175:A:C6	4:B1:176:U:C6	3.04	0.45
4:B1:577:U:O2	4:B1:577:U:O4'	2.33	0.45
4:B1:673:G:H1'	4:B1:1084:A:N3	2.30	0.45
4:B1:749:U:O2	4:B1:795:A:N1	2.50	0.45
4:B1:873:G:C5	54:CR:159:ALA:CB	2.97	0.45
4:B1:949:G:H8	4:B1:949:G:O5'	1.98	0.45
4:B1:1101:U:C2'	4:B1:1102:G:H8	2.21	0.45
4:B1:1188:A:H4'	4:B1:1188:A:OP1	2.16	0.45
4:B1:1214:A:C5	4:B1:1686:G:C2	3.04	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:O5'	4:B1:1529:C:H6	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
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:8:PRO:HG3	11:BG:112:VAL:HG13	1.97	0.45
11:BG:106:LEU:H	11:BG:106:LEU:HD22	1.82	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
34:Bd:33:LYS:HG2	34:Bd:33:LYS:O	2.17	0.45
37:Bg:86:THR:HG22	37:Bg:102:VAL:HG22	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:Bg:283:PRO:C	37:Bg:285:GLN:N	2.74	0.45
40:CC:150:LEU:HD23	40:CC:150:LEU:N	2.30	0.45
43:CF:81:PHE:HB2	56:CT:141:VAL:CG2	2.46	0.45
45:CH:64:ARG:HB3	81:A2:1927:U:H5"	1.97	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
51:CO:164:ALA:HA	81:A2:4718:C:HO2'	1.80	0.45
56:CT:20:ARG:NH1	83:A4:67:C:H4'	2.31	0.45
73:Ck:25:ILE:O	73:Ck:68:GLU:HA	2.17	0.45
80:Cu:155:GLU:HB2	81:A2:3936:G:O2'	2.16	0.45
81:A2:63:G:H8	81:A2:63:G:O5'	1.98	0.45
81:A2:87:A:H2'	81:A2:88:A:O4'	2.16	0.45
81:A2:134:G:H3'	81:A2:135:G:C4	2.52	0.45
81:A2:286:A:C5'	81:A2:287:A:C8	2.99	0.45
81:A2:671:C:H2'	81:A2:672:G:C8	2.52	0.45
81:A2:914:G:N3	81:A2:914:G:C2'	2.79	0.45
81:A2:1049:G:H2'	81:A2:1049:G:N3	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:A2:1772:A:H2'	81:A2:1772:A:N3	2.31	0.45
81:A2:1789:G:H1	81:A2:1807:C:N4	2.12	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:H2'	81:A2:2276:A:N3	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
81:A2:2427:G:H2'	81:A2:2427:G:N3	2.31	0.45
81:A2:2549:C:C6	81:A2:2549:C:O5'	2.70	0.45
81:A2:2552:U:H6	81:A2:2552:U:C3'	2.28	0.45
81:A2:2653:A:N6	81:A2:2654:G:N1	2.64	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
81:A2:4388:A:H5"	81:A2:4388:A:C8	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
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:B1:178:C:H2'	4:B1:179:C:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:184:G:C8	4:B1:185:G:H1'	2.51	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
4:B1:1083:A:C2	4:B1:1861:G:C4	3.04	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:B1:1512:C:H5'	15:BK:29:MET:SD	2.55	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
5:BA:142:LEU:O	5:BA:142:LEU:HD12	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
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:96:CYS:SG	81:A2:2329:U:H4'	2.56	0.45
40:CC:101:MET:HG2	81:A2:2320:G:C2	2.51	0.45
40:CC:188:ARG:HD3	40:CC:188:ARG:O	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:103:ARG:HH21	71:Ci:25:ARG:CG	2.28	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
51:CO:92:THR:HG22	51:CO:94:ARG:H	1.80	0.45
51:CO:196:LEU:C	51:CO:198:THR:H	2.25	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
56:CT:80:VAL:CG1	81:A2:4264:A:H4'	2.45	0.45
60:CX:59:LYS:HB3	81:A2:16:G:OP1	2.16	0.45
61:CY:121:ARG:CA	61:CY:125:SER:HB3	2.45	0.45
63:Ca:114:LYS:HE3	81:A2:1479:A:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Co:10:THR:O	77:Co:18:HIS:HA	2.15	0.45
77:Co:26:TYR:HB3	77:Co:67:VAL:HB	1.97	0.45
79:Ct:103:ARG:HB2	79:Ct:103:ARG:CZ	2.46	0.45
81:A2:121:A:C6	81:A2:147:U:C4	3.04	0.45
81:A2:188:G:O2'	81:A2:189:G:P	2.75	0.45
81:A2:240:A:H8	81:A2:240:A:P	2.40	0.45
81:A2:248:G:H8	81:A2:248:G:O5'	2.00	0.45
81:A2:254:G:N2	81:A2:255:C:C5	2.83	0.45
81:A2:444:G:H4'	81:A2:445:U:C5'	2.47	0.45
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
81:A2:1285:C:H4'	81:A2:2289:A:C2	2.51	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:H8	81:A2:1423:A:C5'	2.23	0.45
81:A2:1442:C:H2'	81:A2:1443:C:C6	2.51	0.45
81:A2:1611:A:C8	81:A2:1611:A:C3'	3.00	0.45
81:A2:1635:U:C2'	81:A2:1636:G:H5'	2.47	0.45
81:A2:1641:C:C1'	81:A2:2297:G:H1'	2.47	0.45
81:A2:1653:C:O3'	81:A2:4336:A:C8	2.70	0.45
81:A2:1712:G:C5	81:A2:4174:A:C2	3.04	0.45
81:A2:1797:G:N2	81:A2:1801:U:O4'	2.50	0.45
81:A2:2024:G:H4'	81:A2:2025:A:O5'	2.16	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:A2:4282:G:H2'	81:A2:4283:A:H3'	1.98	0.45
81:A2:4414:G:H1	81:A2:4486:U:H3	1.64	0.45
81:A2:4550:A:H2'	81:A2:4551:U:H6	1.80	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
82:A3:149:G:H2'	82:A3:151:G:OP1	2.16	0.45
83:A4:69:U:H3	83:A4:106:G:H1	1.65	0.45
3:AX:57:U:OP2	7:BC:109:ILE:HD12	2.17	0.45
4:B1:371:A:C5'	13:BI:11:ARG:HB2	2.44	0.45
4:B1:386:C:OP2	16:BL:136:LYS:HD3	2.16	0.45
4:B1:685:A:C8	4:B1:685:A:O5'	2.69	0.45
4:B1:1082:A:H2'	4:B1:1084:A:O5'	2.16	0.45
4:B1:1099:G:H8	4:B1:1099:G:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O4'	4:B1:1363:C:O2	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
4:B1:1790:A:H4'	11:BG:81:HIS:CE1	2.52	0.45
4:B1:1854:U:H5"	19:BO:150:ARG:HH22	1.81	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
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
18:BN:151:ALA:HA	65:Cc:83:THR:HA	0.66	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
31:Ba:24:THR:HB	31:Ba:73:TYR:CE1	2.52	0.45
34:Bd:28:HIS:ND1	34:Bd:28:HIS:N	2.64	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
40:CC:62:THR:HG22	72:Cj:52:LYS:HZ2	1.81	0.45
40:CC:136:LEU:HD23	79:Ct:10:VAL:CG1	2.47	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:48:LEU:HD22	45:CH:54:ARG:NH1	2.30	0.45
45:CH:173:ARG:HD2	75:Cm:127:VAL:CG1	2.43	0.45
46:CI:5:PRO:CG	81:A2:4365:G:H5"	2.47	0.45
47:CJ:96:LYS:HG2	47:CJ:174:ILE:CG2	2.46	0.45
48:CL:103:ARG:NH2	71:Ci:25:ARG:HG2	2.31	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
53:CQ:11:ARG:NH2	81:A2:1820:G:C8	2.84	0.45
54:CR:43:LYS:HE2	81:A2:2687:C:P	2.57	0.45
62:CZ:14:LEU:HD11	69:Cg:88:ARG:CG	2.40	0.45
62:CZ:108:ARG:HA	81:A2:2551:G:H1	1.82	0.45
64:Cb:49:HIS:ND1	81:A2:1793:C:H5'	2.31	0.45
70:Ch:33:VAL:C	70:Ch:37:THR:HG1	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:Ck:8:ILE:O	73:Ck:11:PHE:HB3	2.17	0.45
73:Ck:17:ARG:O	73:Ck:19:ASP:N	2.49	0.45
79:Ct:99:LYS:HB2	79:Ct:103:ARG:NH2	2.32	0.45
80:Cu:138:VAL:O	80:Cu:141:VAL:HG22	2.17	0.45
80:Cu:160:HIS:O	81:A2:3938:G:H4'	2.16	0.45
80:Cu:162:ARG:HD2	81:A2:3940:G:OP1	2.16	0.45
81:A2:24:G:N1	81:A2:25:A:C6	2.84	0.45
81:A2:181:U:H3	81:A2:247:G:H1	1.64	0.45
81:A2:196:G:H3'	81:A2:235:C:OP2	2.17	0.45
81:A2:434:G:H3'	81:A2:435:G:C8	2.52	0.45
81:A2:475:U:C2'	81:A2:476:C:OP1	2.64	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
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:A2:2010:U:C6	81:A2:2010:U:H3'	2.51	0.45
81:A2:2274:U:OP2	81:A2:2274:U:C6	2.66	0.45
81:A2:2417:U:C6	81:A2:2495:G:N2	2.85	0.45
81:A2:2575:A:C6	81:A2:2576:G:C4	3.04	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:N3	81:A2:3885:G:H2'	2.31	0.45
81:A2:4212:C:H2'	81:A2:4213:A:C8	2.51	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:A2:4850:C:HO2'	81:A2:4851:G:H8	1.61	0.45
82:A3:102:G:C2	82:A3:104:A:N6	2.84	0.45
1:AV:24:G:H1'	81:A2:3739:U:H5'	1.99	0.45
2:AW:1:G:C2'	2:AW:2:C:OP1	2.65	0.45
4:B1:28:U:H2'	4:B1:29:G:H8	1.82	0.45
4:B1:36:U:H5'	4:B1:580:U:O2'	2.17	0.45
4:B1:39:A:N6	4:B1:515:G:H21	2.14	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:B1:336:A:N3	4:B1:337:C:H5	2.14	0.45
4:B1:794:A:H8	4:B1:794:A:O5'	2.00	0.45
4:B1:876:C:H2'	4:B1:877:C:H6	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1866:A:C5	31:Ba:84:VAL:HG22	2.51	0.45
6:BB:129:THR:HB	6:BB:180:ASP:HA	1.99	0.45
9:BE:16:LYS:O	9:BE:19:MET:HE2	2.16	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
37:Bg:5:MET:CG	37:Bg:312:VAL:HG22	2.47	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:376:HIS:CD2	59:CW:33:ASN:HB3	2.52	0.45
40:CC:51:PRO:HG3	82:A3:28:C:H1'	1.99	0.45
40:CC:101:MET:HE3	81:A2:2320:G:C5	2.51	0.45
41:CD:176:SER:HG	81:A2:4283:A:H5"	1.80	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
43:CF:117:ILE:HG23	81:A2:2050:C:H5'	1.99	0.45
45:CH:88:PHE:CD2	45:CH:151:ILE:HB	2.51	0.45
45:CH:98:HIS:HB3	81:A2:4562:A:H4'	1.97	0.45
47:CJ:128:LEU:HD23	47:CJ:130:PHE:CZ	2.51	0.45
48:CL:108:GLU:OE1	81:A2:510:C:H1'	2.17	0.45
50:CN:148:THR:O	50:CN:151:ILE:HG22	2.16	0.45
51:CO:72:HIS:HB2	81:A2:4546:G:OP1	2.16	0.45
53:CQ:159:PRO:HG2	81:A2:4267:A:OP2	2.16	0.45
54:CR:3:MET:SD	81:A2:2362:U:H5'	2.56	0.45
54:CR:5:ARG:HD3	54:CR:5:ARG:C	2.41	0.45
56:CT:81:LYS:HG3	81:A2:4264:A:C2	2.51	0.45
56:CT:129:LYS:HG3	81:A2:1814:G:H5"	1.98	0.45
58:CV:87:SER:HB3	59:CW:19:ARG:NH2	2.32	0.45
66:Cd:84:ILE:HD12	66:Cd:114:PHE:CE1	2.51	0.45
69:Cg:7:TYR:CZ	69:Cg:12:SER:HA	2.52	0.45
69:Cg:22:LEU:O	69:Cg:22:LEU:HG	2.15	0.45
71:Ci:34:THR:HG21	81:A2:268:G:OP2	2.16	0.45
72:Cj:5:THR:HA	72:Cj:8:PHE:CD2	2.51	0.45
75:Cm:104:HIS:CD2	75:Cm:105:PRO:HD2	2.51	0.45
80:Cu:47:VAL:HG21	80:Cu:179:VAL:HG12	1.98	0.45
81:A2:122:U:OP2	81:A2:122:U:C6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:355:G:OP1	81:A2:355:G:H4'	2.16	0.45
81:A2:356:U:C2'	81:A2:357:A:H5'	2.46	0.45
81:A2:408:G:N3	82:A3:16:G:C2	2.85	0.45
81:A2:444:G:H4'	81:A2:445:U:OP2	2.14	0.45
81:A2:456:G:N2	81:A2:679:U:C4	2.84	0.45
81:A2:634:C:H2'	81:A2:635:G:C8	2.51	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
81:A2:1180:G:C2	81:A2:1181:U:C2	3.05	0.45
81:A2:1466:G:C5	81:A2:1467:G:C8	3.05	0.45
81:A2:1868:G:N2	81:A2:1917:A:H61	2.14	0.45
81:A2:1900:G:H1	81:A2:2040:C:H42	1.63	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
81:A2:2370:C:O2	81:A2:2370:C:H2'	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:OP1	2.15	0.45
81:A2:3722:G:C8	81:A2:3723:G:C8	3.04	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:N3	81:A2:4088:G:C2'	2.79	0.45
81:A2:4088:G:C4'	81:A2:4089:G:OP2	2.65	0.45
81:A2:4187:U:O5'	81:A2:4187:U:H6	1.98	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:A2:4701:G:H5'	81:A2:4701:G:C8	2.48	0.45
81:A2:4831:U:O2	81:A2:4831:U:H2'	2.15	0.45
81:A2:4833:C:O5'	81:A2:4833:C:H6	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
83:A4:32:A:N1	83:A4:41:G:C5	2.85	0.45
4:B1:43:U:C5'	4:B1:44:U:H5	2.08	0.45
4:B1:93:U:H3'	4:B1:94:G:C8	2.52	0.45
4:B1:790:C:H2'	4:B1:791:C:H6	1.80	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:C8	4:B1:1257:G:C5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1579:A:N7	25:BU:56:MET:HG2	2.32	0.45
4:B1:1750:C:O5'	4:B1:1750:C:C6	2.70	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
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
39:CB:71:GLU:O	58:CV:92:ASP:HA	2.16	0.45
40:CC:323:ARG:HB3	81:A2:1258:C:O2	2.17	0.45
41:CD:50:ARG:HH22	83:A4:6:C:H4'	1.82	0.45
43:CF:127:LYS:CB	56:CT:133:ALA:HB3	2.47	0.45
43:CF:132:MET:HE2	81:A2:1705:U:H1'	1.99	0.45
43:CF:217:ARG:HG3	43:CF:217:ARG:HH11	1.81	0.45
47:CJ:19:LYS:HD2	47:CJ:75:ARG:HH21	1.82	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
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
60:CX:147:LEU:HD13	60:CX:147:LEU:C	2.42	0.45
62:CZ:109:LYS:HB2	81:A2:2532:G:C5'	2.43	0.45
64:Cb:44:ARG:O	64:Cb:47:LYS:HB2	2.17	0.45
67:Ce:88:LEU:HD22	67:Ce:88:LEU:HA	1.83	0.45
67:Ce:98:GLU:HG3	67:Ce:123:THR:OG1	2.15	0.45
71:Ci:9:VAL:HA	71:Ci:13:LYS:HD3	1.98	0.45
78:Cp:17:ARG:HH12	81:A2:1557:U:H4'	1.82	0.45
80:Cu:26:ASP:HA	80:Cu:163:VAL:HG23	1.98	0.45
80:Cu:45:GLU:O	80:Cu:151:LEU:HB3	2.17	0.45
81:A2:122:U:C6	81:A2:122:U:P	3.10	0.45
81:A2:396:U:H2'	81:A2:397:C:O5'	2.17	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:H3'	81:A2:901:A:H8	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
81:A2:1203:G:C4	81:A2:1204:G:C8	3.04	0.45
81:A2:1212:G:H2'	81:A2:1212:G:N3	2.32	0.45
81:A2:1218:A:H4'	81:A2:1219:C:OP2	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2016:U:C2’	81:A2:2017:G:H5’	2.46	0.45
81:A2:2407:C:H6	81:A2:2407:C:O5’	1.99	0.45
81:A2:2450:A:H8	81:A2:2450:A:O5’	2.00	0.45
81:A2:2548:C:H2’	81:A2:2737:G:C4	2.51	0.45
81:A2:2690:C:O2’	81:A2:2691:G:H5’	2.17	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
81:A2:3791:U:C2’	81:A2:3792:G:H5’	2.47	0.45
81:A2:4130:A:H8	81:A2:4130:A:O5’	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:O5’	81:A2:4352:G:C8	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
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
1:AV:46:G:OP2	1:AV:46:G:C8	2.70	0.45
3:AX:60:U:C5	3:AX:61:U:C5	3.04	0.45
4:B1:54:A:O2’	4:B1:451:G:N1	2.48	0.45
4:B1:84:A:H3’	29:BY:122:LYS:HD2	1.98	0.45
4:B1:190:G:C4’	13:BI:116:HIS:O	2.64	0.45
4:B1:528:A:C8	4:B1:528:A:P	3.04	0.45
4:B1:538:U:H5”	4:B1:539:C:OP2	2.16	0.45
4:B1:604:A:OP2	4:B1:604:A:H3’	2.16	0.45
4:B1:685:A:H8	4:B1:685:A:O5’	1.99	0.45
4:B1:797:C:H41	12:BH:104:PRO:HA	1.81	0.45
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
4:B1:1196:A:O2’	4:B1:1197:G:H5’	2.16	0.45
4:B1:1210:G:H4’	31:Ba:85:ARG:CZ	2.47	0.45
4:B1:1315:U:O5’	4:B1:1315:U:H6	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:B1:1643:U:H1’	21:BQ:142:GLN:CD	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1668:U:H3'	4:B1:1669:G:H5"	1.99	0.45
10:BF:40:ALA:C	10:BF:42:LYS:N	2.75	0.45
12:BH:117:PRO:HD2	12:BH:120:ARG:HD3	1.99	0.45
13:BI:68:GLY:HA3	16:BL:21:LYS:CE	2.46	0.45
16:BL:95:TYR:HB2	16:BL:102:PHE:CE2	2.52	0.45
18:BN:28:LEU:HD11	18:BN:32:ASP:HB3	1.99	0.45
18:BN:141:TYR:CE1	18:BN:146:ALA:HB2	2.51	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
29:BY:20:ARG:HD2	29:BY:20:ARG:C	2.41	0.45
35:Be:31:ARG:HG3	35:Be:32:ALA:N	2.31	0.45
37:Bg:197:THR:CG2	37:Bg:238:ALA:HA	2.39	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
42:CE:170:SER:CB	81:A2:4896:G:H21	2.28	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
51:CO:165:LYS:HB3	81:A2:4814:C:C5'	2.46	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
64:Cb:49:HIS:CG	81:A2:1793:C:H5'	2.52	0.45
69:Cg:70:THR:HG22	81:A2:2564:A:C8	2.52	0.45
71:Ci:57:ALA:O	71:Ci:60:LEU:HB3	2.17	0.45
80:Cu:32:ARG:HB3	80:Cu:196:ASP:OD1	2.17	0.45
80:Cu:64:GLU:H	80:Cu:67:THR:HB	1.81	0.45
80:Cu:158:THR:HG21	81:A2:3936:G:N2	2.32	0.45
81:A2:14:C:O4'	81:A2:15:A:C5'	2.48	0.45
81:A2:64:A:C2'	81:A2:110:C:H41	2.30	0.45
81:A2:79:C:H2'	81:A2:80:C:H5'	1.98	0.45
81:A2:230:U:O2	81:A2:2280:U:C6	2.70	0.45
81:A2:378:G:C4	81:A2:403:G:C2	3.05	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
81:A2:675:C:H2'	81:A2:676:G:O4'	2.17	0.45
81:A2:961:C:C3'	81:A2:962:G:H8	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1209:C:O2	81:A2:1209:C:H2'	2.15	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:A2:2588:A:H5'	81:A2:2665:G:H4'	1.99	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:A2:2685: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:OP2	81:A2:2847:A:C8	2.69	0.45
81:A2:3758:C:H3'	81:A2:3758:C:C6	2.52	0.45
81:A2:4063:G:O2'	81:A2:4064:C:H5'	2.17	0.45
82:A3:109:C:O2'	82:A3:110:U:H2'	2.16	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:B1:181:A:P	4:B1:182:C:H5'	2.57	0.45
4:B1:358:C:H6	4:B1:358:C:C5'	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:B1:989:C:O2	31:Ba:32:LYS:HE2	2.16	0.45
4:B1:1035:A:C8	4:B1:1035:A:C3'	2.99	0.45
4:B1:1106:C:OP1	32:Bb:70:LYS:HG2	2.17	0.45
4:B1:1201:U:O5'	4:B1:1201:U:C6	2.67	0.45
4:B1:1277:C:H5"	4:B1:1277:C:C6	2.52	0.45
4:B1:1314:U:H3	15:BK:2:LEU:HD11	1.82	0.45
4:B1:1352:G:OP1	5:BA:109:THR:HB	2.16	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:B1:1847:G:O6	76:Cn:8:LYS:HE3	2.17	0.45
5:BA:120:ARG:NE	5:BA:120:ARG:HA	2.32	0.45
12:BH:69:LEU:HD13	12:BH:69:LEU:C	2.42	0.45
16:BL:101:ARG:CB	28:BX:10:ALA:HB2	2.47	0.45
17:BM:26:LEU:C	17:BM:26:LEU:HD13	2.42	0.45
18:BN:43:LYS:O	65:Cc:20:LEU:HD11	2.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BU:20:ILE:HG21	25:BU:98:VAL:HG22	1.99	0.45
29:BY:29:HIS:CG	29:BY:35:VAL:HG13	2.51	0.45
37:Bg:20:GLN:HG3	37:Bg:68:ASP:CG	2.42	0.45
37:Bg:124:SER:HB3	37:Bg:126:ASP:OD1	2.17	0.45
37:Bg:238:ALA:HB3	37:Bg:289:LEU:HD21	1.99	0.45
38:CA:204:MET:O	38:CA:212:GLY:CA	2.65	0.45
39:CB:49:TYR:C	39:CB:79:VAL:HG23	2.41	0.45
40:CC:45:ARG:CZ	40:CC:238:LEU:HD22	2.47	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
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
44:CG:163:PRO:CG	81:A2:148:G:H22	2.30	0.45
45:CH:173:ARG:HD2	75:Cm:127:VAL:CB	2.46	0.45
45:CH:173:ARG:HG3	75:Cm:127:VAL:HG22	1.99	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
48:CL:145:LYS:HE2	70:Ch:122:LYS:HD3	1.99	0.45
49:CM:137:LYS:C	49:CM:140:PRO:CD	2.90	0.45
50:CN:39:ALA:O	50:CN:61:ILE:HB	2.17	0.45
51:CO:116:LYS:HD3	81:A2:4717:U:OP1	2.17	0.45
51:CO:118:MET:HE1	81:A2:4829:A:N1	2.32	0.45
53:CQ:72:LEU:CB	81:A2:1435:G:O3'	2.65	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
61:CY:118:ILE:HD13	82:A3:70:G:OP1	2.17	0.45
66:Cd:18:ASN:ND2	66:Cd:102:LEU:HD11	2.32	0.45
68:Cf:11:PHE:HB2	68:Cf:101:ILE:HD13	1.99	0.45
72:Cj:60:GLY:CA	72:Cj:64:MET:HE3	2.46	0.45
80:Cu:156:ARG:NH1	81:A2:4024:A:H1'	2.32	0.45
81:A2:21:G:C5	81:A2:22:G:C8	3.05	0.45
81:A2:108:A:N6	81:A2:325:A:H1'	2.31	0.45
81:A2:168:U:O5'	81:A2:168:U:H6	2.00	0.45
81:A2:424:A:C2	81:A2:426:A:OP2	2.70	0.45
81:A2:482:G:C8	81:A2:482:G:C5'	2.93	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
81:A2:1057:C:O5'	81:A2:1057:C:H6	2.00	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1531:G:C2	81:A2:1553:G:N3	2.85	0.45
81:A2:1638:U:OP1	81:A2:2325:G:N7	2.50	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:C8	81:A2:1868:G:C3'	3.00	0.45
81:A2:2000:C:H2'	81:A2:2001:C:C6	2.51	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:O2	81:A2:2803:U:C2'	2.65	0.45
81:A2:2873:G:H8	81:A2:2873:G:P	2.39	0.45
81:A2:3604:A:H2	81:A2:3793:A:N1	2.14	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
81:A2:3769:A:H8	81:A2:3769:A:H5'	1.82	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:A2:4294:U:C6	81:A2:4294:U:H3'	2.52	0.45
81:A2:4428:U:C2'	81:A2:4429:U:H5'	2.47	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
82:A3:125:C:H2'	82:A3:125:C:O2	2.17	0.45
83:A4:26:C:H4'	83:A4:27:G:OP1	2.17	0.45
4:B1:2:A:H3'	4:B1:3:C:H5'	1.98	0.45
4:B1:9:U:O2	4:B1:12:U:H5	2.00	0.45
4:B1:29:G:C5'	28:BX:129:SER:HB3	2.47	0.45
4:B1:77:A:C4'	4:B1:78:C:C5	2.99	0.45
4:B1:104:A:H62	4:B1:352:U:H5	1.63	0.45
4:B1:136:C:H4'	4:B1:137:U:OP2	2.17	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:B1:872: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:B1:1016:U:O2'	4:B1:1017:U:H5"	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
37:Bg:236:ILE:HG23	37:Bg:251:ALA:O	2.17	0.45
38:CA:65:ASP:HB3	38:CA:68:ARG:O	2.17	0.45
38:CA:177:LYS:HD3	78:Cp:29:ILE:CD1	2.45	0.45
39:CB:96:PRO:O	51:CO:149:TYR:CD1	2.70	0.45
39:CB:102:PHE:CE1	39:CB:157:CYS:HB2	2.52	0.45
40:CC:149:GLU:HG2	40:CC:150:LEU:O	2.16	0.45
40:CC:211:TYR:HD1	40:CC:253:THR:OG1	1.98	0.45
45:CH:173:ARG:HD2	75:Cm:127:VAL:CA	2.47	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
53:CQ:61:LEU:HD13	53:CQ:61:LEU:HA	1.76	0.45
53:CQ:142:PRO:HD3	81:A2:1481:G:H2'	1.99	0.45
55:CS:13:VAL:HG12	55:CS:29:ARG:CB	2.47	0.45
62:CZ:82:PRO:HG2	65:Cc:66:LEU:CD1	2.47	0.45
66:Cd:18:ASN:CG	66:Cd:102:LEU:HD11	2.42	0.45
66:Cd:75:LYS:O	81:A2:4613:C:H4'	2.17	0.45
68:Cf:11:PHE:HZ	68:Cf:14:TYR:CE1	2.35	0.45
68:Cf:33:VAL:HG13	68:Cf:38:GLU:CB	2.44	0.45
68:Cf:61:GLY:HA3	81:A2:4901:U:H5"	1.99	0.45
70:Ch:121:VAL:O	70:Ch:122:LYS:HB2	2.17	0.45
77:Co:64:LYS:HA	77:Co:87:ARG:NH1	2.31	0.45
80:Cu:107:GLU:OE1	80:Cu:132:LEU:HB2	2.17	0.45
81:A2:113:A:H2	81:A2:269:G:C4	2.35	0.45
81:A2:180:C:H4'	81:A2:182:C:H1'	1.98	0.45
81:A2:245:C:C6	81:A2:245:C:O5'	2.70	0.45
81:A2:446:C:O2'	81:A2:447:C:H5'	2.17	0.45
81:A2:457:A:N3	81:A2:457:A:C2'	2.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1059:C:H3'	81:A2:1060:C:C6	2.45	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:OP2	81:A2:1283:A:C4'	2.65	0.45
81:A2:1332:C:C5'	81:A2:1332:C:C6	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:H6	81:A2:1459:C:O5'	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:A2:1830: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:H5'	81:A2:2027:G:C8	2.49	0.45
81:A2:2279:C:O2	81:A2:2279:C:C2'	2.63	0.45
81:A2:2442:C:OP2	81:A2:2442:C:C6	2.63	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:A2:3686:A:N7	81:A2:3705:A:N6	2.65	0.45
81:A2:3694:G:H5'	81:A2:3695:A:OP2	2.17	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:H8	81:A2:3897:A:OP2	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:A2:4598: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:9:A:H4'	2:AW:46:G:H4'	1.98	0.44
2:AW:59:U:H2'	2:AW:60:U:O4'	2.17	0.44
4:B1:59:U:C3'	4:B1:59:U:C6	3.00	0.44
4:B1:143:U:C2	11:BG:180:VAL:HG11	2.52	0.44
4:B1:174:C:H6	4:B1:174:C:H5"	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1378:A:N3	5:BA:105:PRO:HB3	2.32	0.44
4:B1:1401:A:H4'	25:BU:52:GLY:HA3	1.99	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
5:BA:9:GLN:CB	26:BV:83:PHE:CD2	2.99	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
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
37:Bg:43:TRP:CZ3	37:Bg:55:PRO:HD3	2.52	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:136:LEU:HD22	79:Ct:9:VAL:HG11	1.98	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
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
52:CP:25:HIS:CD2	81:A2:2338:G:C6	3.05	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
68:Cf:6:TRP:CE3	68:Cf:102:ARG:HB2	2.52	0.44
73:Ck:61:PRO:CG	73:Ck:64:LEU:HD12	2.44	0.44
77:Co:68:LEU:HD11	77:Co:85:ILE:HD11	1.99	0.44
80:Cu:34:LEU:C	80:Cu:34:LEU:HD13	2.42	0.44
81:A2:21:G:H2'	81:A2:22:G:O4'	2.17	0.44
81:A2:33:A:H5"	81:A2:33:A:C8	2.46	0.44
81:A2:43:U:H2'	81:A2:44:A:O4'	2.18	0.44
81:A2:112:C:H2'	81:A2:113:A:H5'	2.00	0.44
81:A2:169:C:H6	81:A2:169:C:O5'	2.00	0.44
81:A2:241:G:C8	81:A2:241:G:O5'	2.70	0.44
81:A2:303:G:C2'	81:A2:304:U:H5'	2.47	0.44
81:A2:362:A:H2'	81:A2:363:A:C8	2.52	0.44
81:A2:386:A:H2'	81:A2:387:A:C1'	2.47	0.44
81:A2:469:G:C4	81:A2:470:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:1305:C:O2	81:A2:3870:A:H5"	2.18	0.44
81:A2:1361:U:P	81:A2:1361:U:H6	2.40	0.44
81:A2:1648:A:C2	81:A2:1830:U:H4'	2.52	0.44
81:A2:1874:A:C5'	81:A2:1874:A:C8	3.00	0.44
81:A2:2310:G:C5'	82:A3:20:A:O3'	2.65	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:A2:3595:G:H2'	81:A2:3596:G:O4'	2.17	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:A2:4086: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:A2:4637: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:A2:4718:C:H2'	81:A2:4718:C:H6	1.61	0.44
82:A3:27:U:H6	82:A3:27:U:O5'	2.00	0.44
82:A3:109:C:H4'	82:A3:110:U:H5	1.73	0.44
83:A4:71:G:H2'	83:A4:72:U:C6	2.51	0.44
1:AV:34:G:N1	4:B1:1701:C:O4'	2.46	0.44
2:AW:56:C:H6	81:A2:4014:A:C5	2.35	0.44
4:B1:67:C:C4	11:BG:164:LYS:N	2.85	0.44
4:B1:133:C:C2	4:B1:179:C:OP1	2.69	0.44
4:B1:311:C:H2'	4:B1:311:C:O2	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:B1:940:U:O2	4:B1:940:U:C2'	2.66	0.44
4:B1:1206:G:N3	4:B1:1834:A:H1'	2.32	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:B1:1420:G:O2'	24:BT:2:PRO:HA	2.16	0.44
4:B1:1620:A:H5'	20:BP:115:TYR:OH	2.17	0.44
4:B1:1695:A:C5	4:B1:1696:C:C2	3.05	0.44
6:BB:62:LEU:HD23	6:BB:65:ARG:HH21	1.81	0.44
6:BB:116:LYS:HZ2	31:Ba:37:LYS:HE2	1.82	0.44
7:BC:60:TRP:CD1	7:BC:92:GLU:OE1	2.71	0.44
11:BG:1:MET:HE1	11:BG:106:LEU:O	2.17	0.44
11:BG:114:VAL:HG12	11:BG:115:LYS:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:BL:39:ASN:C	16:BL:41:GLY:N	2.75	0.44
17:BM:18:LEU:O	17:BM:22:LEU:HD13	2.17	0.44
22:BR:33:ARG:HG3	37:Bg:150:TRP:CH2	2.52	0.44
29:BY:13:MET:HE3	29:BY:22:GLN:OE1	2.17	0.44
37:Bg:140:TYR:O	37:Bg:141:THR:C	2.60	0.44
38:CA:22:HIS:CB	38:CA:52:PRO:HG2	2.45	0.44
38:CA:23:ARG:HB2	81:A2:3648:U:C6	2.52	0.44
38:CA:196:TRP:HH2	81:A2:1592:A:C2	2.32	0.44
39:CB:314:ILE:H	39:CB:314:ILE:HG13	1.61	0.44
41:CD:13:PHE:C	83:A4:66:G:O2'	2.60	0.44
41:CD:289:ARG:O	41:CD:293:ARG:CG	2.65	0.44
43:CF:37:PHE:CD1	43:CF:37:PHE:C	2.94	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
43:CF:154:ILE:HG13	43:CF:191:ILE:HD11	1.99	0.44
51:CO:116:LYS:HG2	81:A2:4829:A:C2	2.52	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:1:MET:CB	65:Cc:68:LYS:HB3	2.47	0.44
62:CZ:36:ARG:HH22	62:CZ:98:LYS:HD3	1.83	0.44
65:Cc:7:THR:O	65:Cc:11:LEU:HG	2.17	0.44
66:Cd:94:GLU:O	66:Cd:95:ASP:HB2	2.17	0.44
68:Cf:4:ARG:HB2	81:A2:4712:U:C2	2.52	0.44
69:Cg:83:CYS:O	69:Cg:84:ALA:HB3	2.17	0.44
70:Ch:44:LEU:O	70:Ch:44:LEU:HG	2.17	0.44
71:Ci:33:LEU:O	71:Ci:34:THR:CB	2.66	0.44
81:A2:72:C:OP2	81:A2:72:C:H6	1.99	0.44
81:A2:133:C:OP1	81:A2:173:G:H4'	2.17	0.44
81:A2:210:G:H8	81:A2:210:G:O5'	2.00	0.44
81:A2:390:G:C6	81:A2:391:A:C6	3.06	0.44
81:A2:717:G:C2'	81:A2:718:G:H5'	2.47	0.44
81:A2:887:C:H2'	81:A2:888:C:C5	2.52	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:C8	81:A2:1649:G:H5'	2.51	0.44
81:A2:1672:U:C6	81:A2:1672:U:O5'	2.70	0.44
81:A2:1715:A:H2'	81:A2:1716:A:H5'	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1756:C:C5'	81:A2:1756:C:H6	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:A2:2291: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
81:A2:3837:G:OP2	81:A2:3837:G:C8	2.71	0.44
81:A2:3894:U:C4	81:A2:3895:C:C5	3.05	0.44
81:A2:4080:U:H6	81:A2:4080:U:H3'	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:H5"	81:A2:4527:G:H8	1.81	0.44
81:A2:4575:C:O5'	81:A2:4575:C:H6	2.00	0.44
81:A2:4587:U:H3'	81:A2:4588:U:H6	1.83	0.44
83:A4:23:A:C3'	83:A4:24:C:C6	3.00	0.44
2:AW:59:U:C3'	2:AW:60:U:H5'	2.47	0.44
4:B1:312:G:H22	11:BG:195:LYS:CG	2.31	0.44
4:B1:342:C:C6	4:B1:342:C:H5"	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
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:B1:1317:C:O5'	4:B1:1506:A:N6	2.51	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:B1:1721:U:C4'	4:B1:1722:G:O5'	2.64	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
8:BD:205:PRO:O	22:BR:42:PRO:HG2	2.18	0.44
10:BF:55:ARG:C	10:BF:57:ALA:H	2.25	0.44
10:BF:99:ILE:HD11	30:BZ:106:GLN:OE1	2.18	0.44
10:BF:162:ALA:HB2	10:BF:172:CYS:CB	2.47	0.44
12:BH:105:THR:O	12:BH:105:THR:CG2	2.64	0.44
13:BI:92:ARG:CG	81:A2:4972:G:OP1	2.61	0.44
13:BI:173:ALA:HB1	13:BI:188:TYR:O	2.17	0.44
13:BI:191:GLU:HG3	16:BL:20:LYS:HB2	1.98	0.44
14:BJ:117:LEU:HB2	14:BJ:119:LEU:HD13	2.00	0.44
17:BM:19:GLN:HB3	17:BM:88:TRP:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:BN:4:MET:HE1	18:BN:121:ARG:HG3	1.99	0.44
21:BQ:60:LYS:HA	21:BQ:63:PHE:CE1	2.52	0.44
24:BT:113:VAL:HG13	24:BT:121:ARG:HB2	1.99	0.44
37:Bg:32:LEU:HD11	37:Bg:40:ILE:CG2	2.47	0.44
38:CA:204:MET:HG2	38:CA:204:MET:H	1.62	0.44
39:CB:285:TYR:HD2	39:CB:365:LEU:HD21	1.82	0.44
39:CB:300:LYS:HG3	39:CB:313:SER:HB2	1.99	0.44
41:CD:20:PHE:HZ	56:CT:24:VAL:O	2.01	0.44
41:CD:257:PRO:O	41:CD:258:LYS:CB	2.66	0.44
44:CG:163:PRO:CD	81:A2:148:G:H22	2.30	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
48:CL:57:PRO:HG3	48:CL:75:GLY:C	2.41	0.44
49:CM:28:VAL:CG1	49:CM:67:SER:HA	2.48	0.44
49:CM:114:LYS:HE3	81:A2:4885:C:H5"	1.99	0.44
51:CO:71:TYR:HB2	51:CO:73:PHE:CE2	2.52	0.44
51:CO:141:LEU:O	51:CO:145:VAL:HG23	2.17	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
55:CS:165:PRO:CG	81:A2:4828:G:H1'	2.48	0.44
56:CT:71:ALA:CB	81:A2:4273:A:H4'	2.47	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
64:Cb:44:ARG:CZ	81:A2:1471:G:H5"	2.47	0.44
79:Ct:16:PHE:CD1	79:Ct:28:GLU:HA	2.51	0.44
80:Cu:74:VAL:CG2	80:Cu:139:VAL:HA	2.48	0.44
81:A2:21:G:C2'	81:A2:22:G:H5'	2.47	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:A2:103:G:H4'	81:A2:1360:G:N2	2.32	0.44
81:A2:141:G:H8	81:A2:141:G:H5"	1.83	0.44
81:A2:224:A:H61	81:A2:238:G:C2'	2.30	0.44
81:A2:918:C:OP2	81:A2:918:C:C6	2.60	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:A2:1773:A:OP1	81:A2:1773:A:H4'	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3667:G:O5'	81:A2:3667:G:C8	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
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:H6	81:A2:4725:C:C5'	2.30	0.44
81:A2:4742:C:H2'	81:A2:4743:C:C6	2.52	0.44
81:A2:4862:G:O3'	81:A2:4863:G:C8	2.70	0.44
82:A3:18:U:H6	82:A3:18:U:O5'	2.01	0.44
82:A3:37:A:H2	82:A3:105:C:N4	1.96	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
83:A4:106:G:H2'	83:A4:107:G:C8	2.52	0.44
83:A4:109:U:O5'	83:A4:109:U:H6	2.00	0.44
3:AX:37:U:OP2	31:Ba:40:VAL:HG12	2.18	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:OP2	4:B1:746:C:C3'	2.65	0.44
4:B1:753:C:N4	4:B1:754:G:N3	2.65	0.44
4:B1:753:C:C4	4:B1:754:G:C4	3.04	0.44
4:B1:873:G:C6	54:CR:159:ALA:HB2	2.53	0.44
4:B1:1203:G:C2'	4:B1:1699:A:H2	2.29	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:B1:1547:C:H42	4:B1:1656:G:H4'	1.83	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:O2	4:B1:1616:U:C2'	2.64	0.44
4:B1:1643:U:H2'	4:B1:1644:C:H6	1.81	0.44
4:B1:1745:A:H3'	4:B1:1745:A:N3	2.32	0.44
5:BA:42:LYS:HB3	5:BA:46:ILE:H	1.82	0.44
5:BA:203:PHE:HE2	5:BA:208:GLU:OE1	2.00	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:CA:199:VAL:CG2	81:A2:1609:A:H5"	2.48	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
63:Ca:102:ASP:OD1	63:Ca:104:VAL:HB	2.16	0.44
69:Cg:61:PRO:HA	69:Cg:64:LEU:HD12	2.00	0.44
78:Cp:33:GLN:HG3	78:Cp:49:ARG:CD	2.48	0.44
81:A2:61:A:C2'	81:A2:62:A:H5'	2.47	0.44
81:A2:99:A:H8	81:A2:99:A:O5'	2.00	0.44
81:A2:304:U:O5'	81:A2:304:U:H6	2.00	0.44
81:A2:403:G:N3	81:A2:403:G:C5'	2.80	0.44
81:A2:901:A:C8	81:A2:901:A:C3'	3.00	0.44
81:A2:959:C:H5'	81:A2:1214:G:N2	2.32	0.44
81:A2:968:C:O3'	81:A2:969:C:H4'	2.17	0.44
81:A2:1079:C:H2'	81:A2:1080:U:C5'	2.48	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:C5'	81:A2:1285:C:C6	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
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:OP2	2.17	0.44
81:A2:2726:C:H2'	81:A2:2727:G:O4'	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3943:G:H2'	81:A2:3944:C:H6	1.83	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
82:A3:14:U:H5"	82:A3:15:G:OP2	2.18	0.44
82:A3:64:U:O2	82:A3:64:U:H2'	2.17	0.44
83:A4:104:C:C2	83:A4:105:C:C5	3.05	0.44
3:AX:43:U:O4'	4:B1:961:G:C2	2.61	0.44
4:B1:130:G:O6	4:B1:131:C:C5	2.71	0.44
4:B1:558:G:C8	4:B1:558:G:O5'	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
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:B1:1348:G:H22	4:B1:1381:G:H1	1.65	0.44
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:H2'	4:B1:1591:C:O2	2.18	0.44
4:B1:1604:G:O2'	4:B1:1605:G:H5'	2.17	0.44
4:B1:1794:C:O5'	4:B1:1794:C:H6	2.00	0.44
6:BB:135:LEU:HD13	6:BB:217:MET:HE1	1.99	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
22:BR:63:ARG:HA	37:Bg:280:LYS:CE	2.46	0.44
27:BW:4:MET:HE3	27:BW:4:MET:HB3	1.82	0.44
29:BY:7:ILE:HG23	29:BY:25:ILE:HG23	1.99	0.44
37:Bg:86:THR:CG2	37:Bg:102:VAL:HG22	2.47	0.44
37:Bg:170:TRP:HB3	37:Bg:194:TYR:CD2	2.53	0.44
40:CC:54:VAL:C	40:CC:56:GLU:N	2.75	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
46:CI:204:GLY:C	83:A4:64:G:H4'	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:2:VAL:O	52:CP:3:ARG:CB	2.66	0.44
53:CQ:166:TYR:OH	81:A2:1325:A:H5"	2.17	0.44
54:CR:95:TRP:CD2	81:A2:1551:U:H4'	2.52	0.44
61:CY:15:ARG:O	61:CY:19:PHE:HD2	1.99	0.44
72:Cj:24:SER:O	72:Cj:25:LYS:HB3	2.18	0.44
78:Cp:52:VAL:HG13	81:A2:2716:C:H5'	1.98	0.44
79:Ct:58:LYS:HB3	81:A2:670:C:O5'	2.18	0.44
79:Ct:79:ARG:HG3	81:A2:472:G:C8	2.52	0.44
81:A2:2:G:C2	82:A3:156:U:N3	2.85	0.44
81:A2:19:G:C2	81:A2:20:U:C4	3.05	0.44
81:A2:126:C:H6	81:A2:126:C:O5'	2.01	0.44
81:A2:384:U:OP2	81:A2:384:U:C6	2.70	0.44
81:A2:441:G:C4	81:A2:1274:A:H4'	2.53	0.44
81:A2:444:G:C3'	81:A2:445:U:H5"	2.47	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
81:A2:1082:U:O2	81:A2:1082:U:H2'	2.18	0.44
81:A2:1189:U:HO2'	81:A2:1190:C:H5	1.63	0.44
81:A2:1282:U:C2'	81:A2:1284:C:C6	3.01	0.44
81:A2:1307:C:O2	81:A2:1307:C:H2'	2.17	0.44
81:A2:1378:A:H8	81:A2:1399:G:H1	1.66	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:C6	81:A2:3605:C:C3'	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:A2:3873: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:H6	81:A2:4418:C:O5'	1.99	0.44
81:A2:4485:C:C6	81:A2:4485:C:C5'	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
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
83:A4:47:G:C8	83:A4:48:G:O6	2.70	0.44
4:B1:28:U:H4'	28:BX:124:LYS:HZ1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:67:C:C5	11:BG:163:ASN:N	2.79	0.44
4:B1:189:U:C6	4:B1:189:U:P	3.10	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:OP1	2.18	0.44
4:B1:970:G:C5	81:A2:3679:G:O2'	2.70	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:H8	4:B1:1195:A:H5"	1.81	0.44
4:B1:1216:C:H1'	21:BQ:143:LYS:NZ	2.33	0.44
4:B1:1260:A:O5'	4:B1:1260:A:C8	2.70	0.44
4:B1:1415:C:C6	4:B1:1415:C:H5"	2.52	0.44
4:B1:1471:C:O5'	4:B1:1471:C:H6	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:B1:1827:U:H5'	81:A2:3728:A:O2'	2.15	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
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
13:BI:26:LYS:O	13:BI:29:LEU:HD23	2.17	0.44
13:BI:104:ILE:HG22	13:BI:105:ASP:N	2.33	0.44
20:BP:62:LYS:HD3	20:BP:62:LYS:C	2.43	0.44
24:BT:41:LYS:HG2	24:BT:94:ARG:C	2.42	0.44
26:BV:74:LYS:HD3	26:BV:74:LYS:C	2.43	0.44
31:Ba:71:LEU:HD21	31:Ba:73:TYR:HE2	1.82	0.44
37:Bg:12:LYS:HB3	37:Bg:306:LEU:HG	2.00	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
46:CI:176:PHE:CD2	46:CI:184:MET:HE1	2.52	0.44
49:CM:132:LYS:HZ2	81:A2:4849:A:H3'	1.81	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
56:CT:80:VAL:HG12	81:A2:4264:A:H4'	2.00	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
63:Ca:13:GLY:H	81:A2:1639:U:H3'	1.83	0.44
63:Ca:74:ASN:ND2	63:Ca:112:LEU:HB2	2.31	0.44
65:Cc:44:LYS:HG2	65:Cc:105:ILE:HD11	1.98	0.44
65:Cc:51:ASN:HB2	78:Cp:43:GLY:HA3	1.98	0.44
68:Cf:69:VAL:HB	81:A2:4901:U:C1'	2.48	0.44
70:Ch:9:LEU:HD22	70:Ch:57:VAL:HG22	1.99	0.44
74:Cl:2:SER:CB	81:A2:2383:G:N7	2.80	0.44
80:Cu:98:ALA:HB2	80:Cu:121:VAL:HG12	1.99	0.44
81:A2:665:C:H6	81:A2:665:C:O5'	2.00	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:A2:1653:C:O3'	81:A2:4336:A:H2'	2.17	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
81:A2:3714:U:O5'	81:A2:3714:U:C6	2.70	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
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
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
82:A3:11:C:H2'	82:A3:12:G:O4'	2.17	0.44
82:A3:72:A:H4'	82:A3:87:G:H21	1.81	0.44
82:A3:152:U:H2'	82:A3:153:C:H6	1.83	0.44
83:A4:48:G:C2'	83:A4:48:G:N3	2.80	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:B1:746:C:H2'	4:B1:746:C:OP2	2.17	0.44
4:B1:984:C:H2'	4:B1:985:G:C8	2.51	0.44
4:B1:1028:A:H3'	4:B1:1029:G:C8	2.52	0.44
4:B1:1183:A:P	76:Cn:11:ARG:HH21	2.41	0.44
4:B1:1237:C:H2'	4:B1:1238:U:O4'	2.18	0.44
4:B1:1277:C:O2	4:B1:1277:C:H2'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H8	4:B1:1829:G:O5'	2.01	0.44
5:BA:88:LEU:C	5:BA:88:LEU:HD13	2.43	0.44
6:BB:66:VAL:HA	6:BB:86:LEU:O	2.17	0.44
9:BE:30:ARG:O	9:BE:30:ARG:HG3	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
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:HG2	47:CJ:66:GLU:O	2.17	0.44
49:CM:91:TRP:NE1	49:CM:95:ILE:HD11	2.33	0.44
49:CM:124:LYS:O	49:CM:128:LYS:HB2	2.17	0.44
62:CZ:108:ARG:HG3	81:A2:2531:U:O2	2.18	0.44
66:Cd:46:LEU:HD12	81:A2:2349:U:H4'	2.00	0.44
69:Cg:64:LEU:HD13	81:A2:2726:C:O4'	2.18	0.44
70:Ch:71:LYS:HA	70:Ch:74:LYS:HG3	1.99	0.44
78:Cp:18:TYR:O	78:Cp:22:LEU:HD12	2.18	0.44
80:Cu:49:LEU:HD22	80:Cu:176:ASN:OD1	2.17	0.44
81:A2:99:A:H2'	81:A2:100:C:O4'	2.18	0.44
81:A2:103:G:H4'	81:A2:1360:G:C2	2.52	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:A2:743:C:H2'	81:A2:744:G:H8	1.82	0.44
81:A2:744:G:H2'	81:A2:745:G:O4'	2.18	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:H2'	81:A2:1360:G:N3	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:C6	81:A2:1459:C:H3'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1667:G:H2'	81:A2:1668:G:O4'	2.17	0.44
81:A2:1714:U:N3	81:A2:4174:A:C8	2.86	0.44
81:A2:1728:A:H2'	81:A2:1729:G:O4'	2.17	0.44
81:A2:1773:A:C2	83:A4:98:G:N2	2.85	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:A2:2289:A:C2	82:A3:8:U:O4'	2.70	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:A2:4195: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:N3	81:A2:4498:G:H2'	2.33	0.44
81:A2:4731:C:O5'	81:A2:4731:C:H6	2.01	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
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:B1:33:G:H2'	4:B1:34:U:C6	2.53	0.44
4:B1:95:G:O2'	4:B1:96:C:H5'	2.17	0.44
4:B1:133:C:H3'	4:B1:134:C:C5'	2.47	0.44
4:B1:313:A:H5"	11:BG:191:ARG:HH12	1.81	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:B1:448:A:C8	13:BI:25:ARG:C	2.95	0.44
4:B1:548:C:H2'	4:B1:548:C:O2	2.17	0.44
4:B1:571:U:O2'	29:BY:59:GLY:HA2	2.18	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:B1:824:C:O2	14:BJ:144:ILE:HG21	2.17	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:C6	4:B1:1120:U:H3'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1188:A:H3'	4:B1:1189:A:C8	2.53	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
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:43:VAL:HA	24:BT:37:VAL:HG21	2.00	0.44
23:BS:70:ILE:HD13	23:BS:77:TYR:CE1	2.52	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
31:Ba:74:CYS:O	31:Ba:78:ALA:HB2	2.18	0.44
34:Bd:27:ARG:HA	34:Bd:31:ILE:HD11	1.99	0.44
37:Bg:68:ASP:HB2	37:Bg:109:LEU:O	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
53:CQ:75:ARG:HH21	53:CQ:78:LYS:HZ3	1.66	0.44
54:CR:61:ALA:HB2	81:A2:2610:U:H5"	1.99	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
56:CT:84:ILE:CD1	64:Cb:24:PRO:HA	2.48	0.44
62:CZ:81:MET:HE1	69:Cg:92:LYS:HG2	2.00	0.44
65:Cc:36:LYS:HG3	65:Cc:39:ARG:NH2	2.32	0.44
65:Cc:92:CYS:HB3	81:A2:2651:A:OP1	2.18	0.44
68:Cf:57:THR:HB	68:Cf:65:ASN:H	1.82	0.44
71:Ci:60:LEU:HD12	71:Ci:69:ALA:HB2	2.00	0.44
77:Co:59:LYS:CD	81:A2:4331:G:H4'	2.48	0.44
79:Ct:98:ARG:HG3	79:Ct:107:ARG:NH2	2.32	0.44
80:Cu:88:GLY:HA2	80:Cu:117:TYR:CD1	2.53	0.44
81:A2:121:A:C2	81:A2:147:U:C4	3.06	0.44
81:A2:475:U:H3'	81:A2:475:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:A2:1548: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:H6	81:A2:1719:C:C5'	2.30	0.44
81:A2:1942:A:N3	81:A2:4654:G:H8	2.13	0.44
81:A2:2031:C:O5'	81:A2:2031:C:H6	2.01	0.44
81:A2:2312:C:H2'	81:A2:2313:G:C8	2.52	0.44
81:A2:2411:G:C8	81:A2:2411:G:H5"	2.53	0.44
81:A2:2464:G:OP2	81:A2:2464:G:C8	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
81:A2:2629:G:C5	81:A2:2630:C:H1'	2.53	0.44
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:C6	81:A2:3758:C:C3'	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:C5'	81:A2:4377:C:C6	3.01	0.44
81:A2:4574:G:H2'	81:A2:4575:C:H6	1.83	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:A2:4891:G:H2'	81:A2:4892:C:C6	2.53	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:B1:59:U:C2'	4:B1:60:A:C5'	2.87	0.44
4:B1:67:C:C5	11:BG:164:LYS:HB2	2.53	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:B1:525:A:C5'	35:Be:31:ARG:HB3	2.48	0.44
4:B1:797:C:C5	12:BH:106:ARG:HB3	2.53	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:B1:1286:G:C1'	17:BM:34:GLY:HA3	2.43	0.44
4:B1:1311:C:OP2	4:B1:1311:C:C6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:BA:9:GLN:HG3	5:BA:10:MET:N	2.32	0.44
6:BB:68:GLU:CD	6:BB:83:LYS:HE2	2.43	0.44
8:BD:210:ILE:HG12	22:BR:39:ALA:HB1	2.00	0.44
11:BG:64:LYS:O	11:BG:100:CYS:HB2	2.17	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
15:BK:27:VAL:HG21	15:BK:29:MET:HE3	1.99	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
38:CA:3:ARG:HG2	38:CA:4:VAL:N	2.33	0.44
38:CA:196:TRP:CD2	38:CA:197:PRO:HD3	2.53	0.44
39:CB:2:SER:O	39:CB:3:HIS:HB3	2.18	0.44
39:CB:54:THR:HA	81:A2:4587:U:O2'	2.17	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
56:CT:17:ARG:O	56:CT:18:PRO:O	2.36	0.44
56:CT:51:GLY:HA2	81:A2:4272:U:H4'	2.00	0.44
62:CZ:36:ARG:C	62:CZ:38:TYR:H	2.25	0.44
64:Cb:41:ARG:HB3	81:A2:1794:G:O6	2.18	0.44
81:A2:178:C:OP2	81:A2:179:G:C5'	2.66	0.44
81:A2:193:C:O2	81:A2:193:C:C3'	2.66	0.44
81:A2:451:C:C6	81:A2:451:C:O5'	2.71	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
81:A2:1161:C:C6	81:A2:1161:C:C5'	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:A2:1803:G:H3'	81:A2:1804:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1814:G:H3'	81:A2:1814:G:N3	2.32	0.44
81:A2:2441:C:C2'	81:A2:2442:C:H5'	2.47	0.44
81:A2:2873:G:O5'	81:A2:2873:G:C8	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:C6	81:A2:3945:C:O5'	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:H6	81:A2:4222:C:O5'	2.00	0.44
81:A2:4233:A:N7	81:A2:4234:A:C6	2.86	0.44
81:A2:4309:C:H5"	81:A2:4309:C:H6	1.82	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
83:A4:39:C:OP1	83:A4:39:C:C6	2.70	0.44
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:B1:35:C:C3'	4:B1:36:U:C6	2.97	0.43
4:B1:65:C:C4'	11:BG:133:LEU:HD22	2.46	0.43
4:B1:92:A:C8	4:B1:446:G:H2'	2.53	0.43
4:B1:381:C:H6	4:B1:381:C:C5'	2.30	0.43
4:B1:389:A:N3	4:B1:389:A:H2'	2.33	0.43
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:B1:746:C:OP1	12:BH:105:THR:C	2.61	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:B1:985:G:H4'	4:B1:986:G:H5'	2.00	0.43
4:B1:1122:A:H4'	6:BB:205:TYR:CD1	2.53	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
6:BB:84:PHE:CE1	6:BB:100:PHE:HE2	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BT:123:LEU:HD23	24:BT:123:LEU:H	1.83	0.43
31:Ba:60:ASP:O	31:Ba:62:TYR:N	2.45	0.43
31:Ba:82:LYS:HE2	33:Bc:69:ARG:NH1	2.33	0.43
32:Bb:34:ASP:HB3	32:Bb:43:ILE:CG2	2.48	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
53:CQ:133:GLY:O	81:A2:1410:C:H4'	2.18	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
63:Ca:112:LEU:HD13	81:A2:1367:A:N1	2.33	0.43
63:Ca:114:LYS:HG3	81:A2:1479:A:N1	2.33	0.43
66:Cd:70:LYS:NZ	81:A2:2366:A:H5'	2.34	0.43
79:Ct:122:LYS:HA	79:Ct:125:MET:CE	2.48	0.43
80:Cu:56:GLU:HB2	80:Cu:146:LYS:CG	2.48	0.43
81:A2:52:G:O5'	81:A2:52:G:C8	2.71	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:A2:457:A:C2'	81:A2:458:U:H5"	2.48	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
81:A2:1197:G:O3'	81:A2:1198:G:C8	2.67	0.43
81:A2:1270:G:P	81:A2:4895:C:H41	2.40	0.43
81:A2:1360:G:C2'	81:A2:1360:G:N3	2.81	0.43
81:A2:1360:G:C1'	81:A2:1361:U:P	3.06	0.43
81:A2:1670:G:H1	81:A2:1823:U:H3	1.66	0.43
81:A2:1716:A:C5'	83:A4:78:C:H4'	2.35	0.43
81:A2:2479:G:C8	81:A2:2479:G:C3'	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:A2:2821:A:C5	81:A2:3808:G:N7	2.87	0.43
81:A2:2841:A:H2'	81:A2:2842:U:H6	1.74	0.43
81:A2:2849:C:OP2	81:A2:2849:C:C5	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:A2:4602:U:H2'	81:A2:4603:G:C8	2.52	0.43
81:A2:4648:C:O5'	81:A2:4648:C:H6	2.00	0.43
81:A2:4702:G:H2'	81:A2:4703:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:AW:75:C:H6	2:AW:75:C:O5'	2.02	0.43
4:B1:23:G:H2'	4:B1:24:C:O4'	2.16	0.43
4:B1:25:A:H3'	4:B1:25:A:C8	2.53	0.43
4:B1:66:G:H1'	4:B1:67:C:OP1	2.18	0.43
4:B1:67:C:C4	11:BG:164:LYS:HB2	2.53	0.43
4:B1:148:U:C4	4:B1:169:U:C4	3.06	0.43
4:B1:164:A:C2'	4:B1:165:G:C8	3.01	0.43
4:B1:313:A:C6	11:BG:187:HIS:NE2	2.87	0.43
4:B1:360:A:N3	4:B1:362:C:H3'	2.33	0.43
4:B1:969:U:C2'	81:A2:3681:A:O4'	2.65	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:B1:1311:C:OP1	36:Bf:143:LYS:HE3	2.17	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:B1:1765:C:H2'	4:B1:1766:C:C1'	2.46	0.43
6:BB:66:VAL:HG22	6:BB:85:LYS:HG3	2.00	0.43
6:BB:180:ASP:HB3	6:BB:181:LEU:H	1.57	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
19:BO:18:GLY:N	19:BO:19:PRO:CD	2.81	0.43
22:BR:5:ARG:HG3	22:BR:53:TYR:CD1	2.53	0.43
22:BR:105:MET:HG2	22:BR:106:LEU:H	1.82	0.43
30:BZ:87:ALA:O	30:BZ:91:LEU:HD13	2.18	0.43
34:Bd:6:LEU:O	34:Bd:6:LEU:HG	2.18	0.43
37:Bg:282:GLU:C	37:Bg:284:PRO:HD2	2.43	0.43
38:CA:196:TRP:CZ3	81:A2:1592:A:C2	3.06	0.43
39:CB:54:THR:C	81:A2:4587:U:H1'	2.43	0.43
40:CC:122:TYR:CE2	40:CC:280:PRO:HG3	2.53	0.43
41:CD:33:ARG:HD2	83:A4:7:G:O5'	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:CG:32:PHE:HE1	62:CZ:54:THR:C	2.27	0.43
45:CH:173:ARG:HD2	75:Cm:127:VAL:HG22	2.00	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
53:CQ:91:ARG:HG3	63:Ca:76:ASP:OD2	2.18	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: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
69:Cg:84:ALA:O	69:Cg:87:VAL:HB	2.18	0.43
80:Cu:48:VAL:HG21	80:Cu:144:ARG:HG3	1.99	0.43
81:A2:69:A:N3	81:A2:69:A:C2'	2.80	0.43
81:A2:413:C:O2'	81:A2:414:G: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:A2:923:G:H2'	81:A2:924:C:C5'	2.49	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
81:A2:1599:U:H5'	81:A2:1600:A:OP2	2.18	0.43
81:A2:1642:C:H42	81:A2:2262:G:H1	1.66	0.43
81:A2:1717:A:H8	81:A2:1717:A:O5'	2.01	0.43
81:A2:1753:C:O2	81:A2:1753:C:O4'	2.36	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
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:A2:4292:C:C6	81:A2:4292:C:O5'	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
83:A4:68:C:H3'	83:A4:69:U:C5	2.53	0.43
4:B1:16:G:H5"	4:B1:669:A:N1	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:54:A:HO2'	4:B1:451:G:H1	1.62	0.43
4:B1:169:U:C1'	11:BG:133:LEU:HD12	2.44	0.43
4:B1:313:A:OP1	4:B1:313:A:H4'	2.18	0.43
4:B1:338:G:H5"	4:B1:338:G:C8	2.46	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:B1:823:U:H5'	29:BY:64:PHE:HD2	1.84	0.43
4:B1:827:A:C2'	4:B1:828:G:H5'	2.48	0.43
4:B1:838:G:H8	29:BY:9:THR:OG1	2.01	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:B1:1292:C:H1'	36:Bf:147:THR:OG1	2.18	0.43
4:B1:1341:C:C6	4:B1:1341:C:O5'	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:B1:1766: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
7:BC:173:LYS:N	7:BC:173:LYS:HD2	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
10:BF:69:VAL:O	10:BF:72:LEU:HB2	2.18	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
33:Bc:42:ILE:HG23	33:Bc:64:GLU:HB2	2.00	0.43
34:Bd:21:CYS:SG	34:Bd:38:MET:HA	2.58	0.43
34:Bd:36:LEU:HD12	34:Bd:36:LEU:N	2.33	0.43
34:Bd:38:MET:SD	34:Bd:43:PHE:CA	3.03	0.43
37:Bg:255:SER:HB3	37:Bg:270:LEU:O	2.18	0.43
38:CA:21:LYS:CE	81:A2:2426:A:H4'	2.49	0.43
39:CB:17:LEU:HB3	39:CB:18:PRO:CD	2.48	0.43
39:CB:136:LYS:HB3	39:CB:146:LEU:HD21	2.00	0.43
50:CN:92:LEU:H	50:CN:92:LEU:HD12	1.82	0.43
51:CO:48:TYR:CG	51:CO:51:LYS:HE2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:CV:95:PHE:CE1	81:A2:4589:U:H1'	2.53	0.43
68:Cf:4:ARG:CB	81:A2:4712:U:H5"	2.42	0.43
69:Cg:46:CYS:HA	81:A2:2573:G:O4'	2.18	0.43
80:Cu:30:ASN:CG	81:A2:4022:C:O3'	2.61	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:A2:384:U:C2	81:A2:385:G:H1'	2.53	0.43
81:A2:650:G:C2'	81:A2:651:G:H5'	2.48	0.43
81:A2:692:C:H6	81:A2:692:C:O5'	2.01	0.43
81:A2:944:A:OP2	81:A2:945:G:H5"	2.18	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:H8	81:A2:1423:A:OP2	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:O5'	81:A2:1791:C:H6	2.01	0.43
81:A2:2355:G:H21	81:A2:2357:G:H8	1.63	0.43
81:A2:2521:G:O5'	81:A2:2521:G:H8	2.00	0.43
81:A2:2548:C:C6	81:A2:2548:C:C5'	3.01	0.43
81:A2:3757:C:H1'	81:A2:3781:C:C2	2.53	0.43
81:A2:4118:C:H2'	81:A2:4119:C:O4'	2.18	0.43
81:A2:4120:C:H6	81:A2:4120:C:C5'	2.28	0.43
81:A2:4130:A:C1'	81:A2:4131:C:OP2	2.66	0.43
81:A2:4377:C:H5"	81:A2:4377:C:H6	1.83	0.43
81:A2:4508:A:OP1	81:A2:4508:A:H3'	2.17	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
83:A4:75:G:H4'	83:A4:76:U:OP2	2.17	0.43
4:B1:10:G:H2'	4:B1:11:A:H8	1.83	0.43
4:B1:398:A:H4'	4:B1:399:C:C3'	2.41	0.43
4:B1:493:A:H1'	4:B1:573:U:O3'	2.18	0.43
4:B1:502:C:H1'	4:B1:503:C:O5'	2.18	0.43
4:B1:746:C:OP2	4:B1:746:C:C2'	2.67	0.43
4:B1:805:U:OP1	27:BW:82:GLN:HG3	2.18	0.43
4:B1:899:U:C2'	4:B1:900:C:C6	2.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1043:G:O5'	4:B1:1043:G:C8	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
4:B1:1217:A:N3	4:B1:1685:U:O2	2.51	0.43
4:B1:1326:U:O2	4:B1:1326:U:O4'	2.35	0.43
4:B1:1512:C:H1'	34:Bd:7:TYR:CD2	2.53	0.43
4:B1:1739:C:O5'	4:B1:1739:C:C6	2.70	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
9:BE:36:HIS:CG	9:BE:85:GLY:HA3	2.53	0.43
9:BE:203:GLY:O	9:BE:204:SER:HB2	2.17	0.43
10:BF:48:TYR:CD1	10:BF:49:LEU:N	2.86	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
32:Bb:19:HIS:HB3	32:Bb:22:LYS:HG2	2.00	0.43
33:Bc:13:ARG:HA	33:Bc:55:VAL:HA	1.99	0.43
37:Bg:177:TRP:CE2	37:Bg:184:LEU:HD23	2.53	0.43
42:CE:217:PHE:HB3	42:CE:246:ARG:HH22	1.81	0.43
43:CF:44:LYS:CG	81:A2:1219:C:H3'	2.45	0.43
43:CF:126:ASN:O	43:CF:130:ILE:HG13	2.17	0.43
44:CG:69:ILE:CG2	44:CG:73:ARG:NH1	2.81	0.43
44:CG:182:CYS:HB3	44:CG:222:ILE:HG23	2.00	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
52:CP:5:SER:O	52:CP:6:LEU:C	2.61	0.43
52:CP:85:LYS:HG3	81:A2:3825:A:H4'	1.98	0.43
53:CQ:48:LEU:HD22	53:CQ:48:LEU:O	2.19	0.43
56:CT:84:ILE:HD11	64:Cb:24:PRO:CA	2.48	0.43
56:CT:104:SER:O	56:CT:108:ARG:HB2	2.17	0.43
58:CV:66:LYS:C	58:CV:67:LYS:HD2	2.43	0.43
59:CW:3:VAL:HG11	59:CW:12:LYS:CE	2.48	0.43
64:Cb:30:GLU:CG	64:Cb:31:SER:H	2.26	0.43
79:Ct:79:ARG:H	81:A2:473:G:N2	2.17	0.43
79:Ct:103:ARG:HB2	79:Ct:103:ARG:NH1	2.34	0.43
80:Cu:114:ILE:HG13	80:Cu:118:LEU:CD2	2.47	0.43
81:A2:241:G:C8	81:A2:241:G:P	3.12	0.43
81:A2:304:U:OP2	81:A2:304:U:H5	2.02	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:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H6	81:A2:971:C:H3'	1.82	0.43
81:A2:1176:G:C2'	81:A2:1177:C:O5'	2.65	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:A2:2476: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:C8	81:A2:2553:G:C5'	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:A2:3604: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
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:A2:4673: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
82:A3:29:G:O2'	82:A3:30:U:H5'	2.18	0.43
82:A3:137:A:C2	82:A3:138:C:N1	2.86	0.43
83:A4:23:A:O2'	83:A4:119:U:P	2.75	0.43
83:A4:65:G:H8	83:A4:65:G:OP2	2.02	0.43
4:B1:153:G:H21	11:BG:13:GLN:CD	2.27	0.43
4:B1:164:A:H3'	4:B1:165:G:H8	1.81	0.43
4:B1:190:G:H8	4:B1:190:G:O5'	2.01	0.43
4:B1:308:G:OP1	4:B1:308:G:N3	2.51	0.43
4:B1:435:A:H2'	4:B1:450:C:C6	2.54	0.43
4:B1:441:C:H41	4:B1:448:A:H1'	1.82	0.43
4:B1:465:A:OP2	4:B1:465:A:H8	2.02	0.43
4:B1:485:A:H5"	4:B1:486:A:OP1	2.19	0.43
4:B1:527:C:C1'	14:BJ:125:HIS:ND1	2.82	0.43
4:B1:546:G:H4'	4:B1:547:G:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:557:U:H2'	4:B1:558:G:N9	2.34	0.43
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
4:B1:1050:A:H2'	4:B1:1051:G:C5'	2.48	0.43
4:B1:1265:A:N3	4:B1:1265:A:C2'	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
5:BA:200:ASP:O	22:BR:86:PRO:HG2	2.19	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
21:BQ:110:ASP:O	21:BQ:114:GLN:HG2	2.18	0.43
24:BT:134:ILE:O	24:BT:137:GLN:HG2	2.19	0.43
32:Bb:40:CYS:HB3	32:Bb:59:CYS:CB	2.49	0.43
37:Bg:302:TYR:HH	37:Bg:310:TRP:HH2	1.64	0.43
43:CF:150:VAL:O	43:CF:154:ILE:HG12	2.18	0.43
44:CG:52:THR:HG21	60:CX:38:LYS:HD2	1.99	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
50:CN:28:TRP:NE1	81:A2:4045:A:H5"	2.33	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
55:CS:165:PRO:HD2	81:A2:4828:G:O3'	2.18	0.43
57:CU:43:LEU:O	57:CU:47:ILE:HG13	2.17	0.43
63:Ca:64:LYS:HE3	63:Ca:67:GLN:NE2	2.33	0.43
67:Ce:70:LEU:HB3	67:Ce:71:PRO:HD2	2.00	0.43
68:Cf:60:PRO:HD2	68:Cf:62:GLY:O	2.19	0.43
81:A2:1:C:N3	82:A3:157:U:N3	2.67	0.43
81:A2:15:A:H2'	81:A2:16:G:H5'	2.01	0.43
81:A2:22:G:H3'	81:A2:23:C:C6	2.54	0.43
81:A2:32:G:N2	81:A2:50:C:H41	2.14	0.43
81:A2:192:C:C2'	81:A2:193:C:OP1	2.67	0.43
81:A2:285:G:H8	81:A2:285:G:P	2.42	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:A2:1742: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:A2:2296: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
81:A2:2505:G:C8	81:A2:2505:G:C3'	2.99	0.43
81:A2:3729:A:N3	81:A2:3729:A:C2'	2.82	0.43
81:A2:3753:A:H4'	81:A2:3754:A:OP1	2.19	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:O5'	81:A2:4225:U:H6	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:H5"	81:A2:4622:C:H6	1.82	0.43
81:A2:4824:U:O2	81:A2:4824:U:C3'	2.67	0.43
81:A2:4882:G:H3'	81:A2:4882:G:N3	2.34	0.43
81:A2:4930:G:H4'	81:A2:4931:U:OP1	2.18	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:O2	83:A4:3:C:C3'	2.66	0.43
4:B1:69:C:C6	4:B1:69:C:H3'	2.53	0.43
4:B1:77:A:C5	11:BG:155:GLN:HB3	2.53	0.43
4:B1:125:C:O2'	4:B1:126:G:H5"	2.18	0.43
4:B1:317:C:H4'	4:B1:317:C:OP1	2.19	0.43
4:B1:320:G:HO2'	4:B1:321:C:H6	1.65	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:B1:746:C:C6	4:B1:749:U:C4'	3.02	0.43
4:B1:952:G:C2	4:B1:975:G:N1	2.86	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:B1:1261: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:OP1	4:B1:1438:A:C4'	2.67	0.43
4:B1:1520:G:H5"	4:B1:1520:G:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1579:A:C3'	4:B1:1580:A:H5"	2.47	0.43
4:B1:1620:A:C2	4:B1:1624:U:H1'	2.54	0.43
4:B1:1622:U:C6	4:B1:1622:U:C3'	3.01	0.43
4:B1:1623:A:HO2'	4:B1:1624:U:H6	1.67	0.43
4:B1:1647:A:C6	10:BF:57:ALA:CB	3.02	0.43
4:B1:1654:G:C3'	4:B1:1655:C:C5	2.98	0.43
4:B1:1830:U:O5'	4:B1:1830:U:C6	2.72	0.43
5:BA:180:ARG:NH1	5:BA:180:ARG:HB3	2.33	0.43
5:BA:204:TYR:HA	5:BA:208:GLU:HG2	2.00	0.43
6:BB:65:ARG:HA	19:BO:50:LYS:NZ	2.32	0.43
6:BB:128:LYS:HB2	6:BB:134:LEU:HD23	2.00	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
10:BF:72:LEU:HD22	10:BF:151:ILE:HG12	2.00	0.43
10:BF:143:PRO:HD3	33:Bc:56:LEU:CD1	2.42	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
18:BN:16:LEU:H	27:BW:57:ARG:HH21	1.67	0.43
18:BN:151:ALA:CA	65:Cc:83:THR:CA	2.47	0.43
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
29:BY:27:VAL:HG11	29:BY:35:VAL:HG21	2.01	0.43
29:BY:63:HIS:O	29:BY:64:PHE:C	2.62	0.43
30:BZ:43:LYS:NZ	30:BZ:44:LEU:H	2.17	0.43
37:Bg:7:LEU:HD12	37:Bg:309:VAL:O	2.19	0.43
37:Bg:170:TRP:HB3	37:Bg:194:TYR:HD2	1.83	0.43
38:CA:34:PHE:CD2	38:CA:35:ALA:N	2.86	0.43
38:CA:116:LEU:HD23	38:CA:116:LEU:H	1.83	0.43
38:CA:242:ARG:NH1	38:CA:246:LEU:HD23	2.33	0.43
40:CC:48:ASN:HB2	40:CC:49:ARG:CZ	2.48	0.43
40:CC:159:GLU:OE2	40:CC:253:THR:HG21	2.19	0.43
41:CD:73:MET:SD	83:A4:114:U:C4'	3.02	0.43
41:CD:145:TYR:CD1	81:A2:4285:A:H5'	2.54	0.43
41:CD:264:LYS:O	41:CD:265:ARG:HB3	2.18	0.43
42:CE:224:LYS:HA	42:CE:227:HIS:C	2.41	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
49:CM:113:MET:SD	81:A2:4836:U:C4	3.11	0.43
56:CT:12:ARG:NE	81:A2:4235:G:H4'	2.33	0.43
58:CV:84:GLN:HG3	58:CV:86:LYS:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:CX:100:VAL:O	60:CX:134:LYS:HB3	2.18	0.43
67:Ce:14:LYS:O	67:Ce:15:LYS:HB2	2.19	0.43
69:Cg:69:LYS:HA	69:Cg:72:LYS:HE2	2.01	0.43
74:Cl:5:LYS:O	81:A2:2758:G:H5'	2.19	0.43
75:Cm:94:MET:HG2	75:Cm:105:PRO:HA	1.99	0.43
78:Cp:46:LYS:HB2	78:Cp:57:CYS:SG	2.58	0.43
80:Cu:2:ASP:C	80:Cu:4:GLU:N	2.77	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:A2:384:U:H2'	81:A2:385:G:O3'	2.19	0.43
81:A2:463:C:H5'	81:A2:463:C:H6	1.79	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:C6	81:A2:965:C:C4'	3.02	0.43
81:A2:1202:A:H2'	81:A2:1202:A:N3	2.33	0.43
81:A2:1249:G:H8	81:A2:1249:G:C5'	2.26	0.43
81:A2:1314:A:H8	81:A2:1314:A:P	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:A2:1912:A:C5	81:A2:2026:U:C2	3.06	0.43
81:A2:2000:C:H2'	81:A2:2001:C:O4'	2.19	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:A2:3814:A:H4'	81:A2:4628:U:O2'	2.17	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
81:A2:4575:C:C6	81:A2:4575:C:O5'	2.72	0.43
81:A2:4648:C:H2'	81:A2:4649:U:H6	1.83	0.43
81:A2:4900:G:N3	81:A2:4900:G:C2'	2.79	0.43
81:A2:5006:C:H2'	81:A2:5007:C:O4'	2.19	0.43
82:A3:42:G:O6	82:A3:102:G:C2	2.71	0.43
1:AV:72:C:C5'	1:AV:72:C:C6	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:B1:77:A:H62	11:BG:155:GLN:HB3	1.84	0.43
4:B1:346:C:O4'	9:BE:33:THR:HG22	2.19	0.43
4:B1:670:A:N3	4:B1:1164:G:H1'	2.34	0.43
4:B1:678:U:H3'	4:B1:678:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:905:C:H6	4:B1:905:C:O5'	2.02	0.43
4:B1:1051:G:H4'	81:A2:3668:C:H5"	2.01	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:B1:1705:C:H4'	76:Cn:1:MET:N	2.32	0.43
4:B1:1781:A:O2'	4:B1:1782:G:P	2.76	0.43
6:BB:49:VAL:HG22	6:BB:65:ARG:NH2	2.33	0.43
7:BC:94:ILE:HG13	7:BC:95:ASP:N	2.31	0.43
8:BD:65:ARG:O	8:BD:69:LEU:HG	2.19	0.43
8:BD:123:LEU:HD11	8:BD:152:PHE:HB3	2.01	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
10:BF:94:LYS:HD3	10:BF:94:LYS:C	2.43	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:33:ARG:HE	17:BM:91:LEU:HD21	1.84	0.43
17:BM:81:ASP:OD1	17:BM:84:LYS:HB2	2.19	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:3:ARG:NH1	81:A2:1607:C:H41	2.17	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
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
42:CE:274:VAL:HG22	81:A2:4836:U:H1'	2.01	0.43
43:CF:105:VAL:CB	43:CF:136:VAL:HG12	2.49	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
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
62:CZ:9:LYS:NZ	65:Cc:66:LEU:HD22	2.34	0.43
62:CZ:66:SER:O	62:CZ:68:ILE:HG13	2.19	0.43
70:Ch:99:GLU:HA	70:Ch:102:LEU:CD1	2.44	0.43
80:Cu:27:LEU:HD21	80:Cu:198:VAL:CG2	2.48	0.43
80:Cu:59:ILE:CD1	80:Cu:145:MET:HB3	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:Cu:62:PHE:HE1	80:Cu:81:GLU:HA	1.81	0.43
80:Cu:151:LEU:HD12	80:Cu:159:PHE:CD1	2.54	0.43
81:A2:21:G:O4'	82:A3:103:A:H1'	2.19	0.43
81:A2:287:A:C2	81:A2:307:U:C4'	3.01	0.43
81:A2:694:C:O5'	81:A2:694:C:C6	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
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:C6	81:A2:1299:U:C5'	2.99	0.43
81:A2:1336:U:H2'	81:A2:1337:C:H6	1.81	0.43
81:A2:1646:G:H8	81:A2:1646:G:O5'	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:A2:2263: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:H2'	81:A2:2371:G:N3	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:C8	81:A2:2665:G:C5'	3.01	0.43
81:A2:2741:A:H3'	81:A2:2741:A:N3	2.34	0.43
81:A2:2742:A:H8	81:A2:2742:A:O5'	2.01	0.43
81:A2:3770:U:C5'	81:A2:4456:A:C2	3.01	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
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:C8	81:A2:4401:A:OP2	2.71	0.43
81:A2:4533:G:C6	81:A2:4681:G:O6	2.71	0.43
81:A2:4642:U:C2'	81:A2:4643:U:H5"	2.48	0.43
81:A2:4802:G:H21	81:A2:4803:C:H41	1.67	0.43
2:AW:16:U:H2'	2:AW:17:C:C5'	2.46	0.43
4:B1:49:C:O2	4:B1:49:C:H2'	2.19	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:B1:525:A:H5'	35:Be:31:ARG:H	1.83	0.43
4:B1:593:C:C4'	4:B1:594:A:OP1	2.66	0.43
4:B1:684:G:C4	4:B1:920:A:C4	3.07	0.43
4:B1:911:C:H5"	4:B1:912:C:N4	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:951:C:O2	4:B1:975:G:N1	2.51	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:B1:1102:G:N2	4:B1:1130:G:N2	2.66	0.43
4:B1:1115:U:O3'	4:B1:1116:C:H3'	2.18	0.43
4:B1:1139:C:O2	4:B1:1139:C:O4'	2.37	0.43
4:B1:1418:C:C5'	24:BT:129:ARG:HA	2.48	0.43
4:B1:1533:A:C5	4:B1:1604:G:O4'	2.71	0.43
4:B1:1589:A:H2'	4:B1:1590:C:C6	2.54	0.43
4:B1:1657:G:H1	4:B1:1667:U:H3	1.66	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
10:BF:204:ARG:HH11	33:Bc:63:ARG:HG3	1.83	0.43
11:BG:197:GLN:O	11:BG:201:LYS:HG3	2.18	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:H	17:BM:117:GLU:HG3	1.58	0.43
18:BN:38:TYR:HB2	18:BN:80:LEU:HD22	2.00	0.43
22:BR:33:ARG:HG2	37:Bg:125:ARG:HH11	1.83	0.43
39:CB:249:ARG:HG2	81:A2:2815:G:P	2.58	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
41:CD:273:LEU:CD2	81:A2:1086:A:H1'	2.47	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
44:CG:163:PRO:CG	81:A2:148:G:N2	2.81	0.43
45:CH:176:LEU:HD22	75:Cm:90:ASN:HD22	1.84	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
51:CO:167:HIS:CD2	81:A2:4718:C:C6	3.07	0.43
52:CP:57:CYS:HB2	52:CP:82:ARG:O	2.18	0.43
52:CP:139:TYR:CE2	81:A2:3828:G:H5'	2.53	0.43
54:CR:104:ARG:HH21	81:A2:2875:G:H5"	1.83	0.43
54:CR:115:ILE:HG22	54:CR:116:ASP:O	2.18	0.43
54:CR:119:MET:HE1	54:CR:146:LYS:HA	2.01	0.43
60:CX:93:ASN:O	60:CX:94:ASN:HB3	2.19	0.43
69:Cg:45:ALA:CB	69:Cg:81:SER:C	2.92	0.43
81:A2:190:G:O5'	81:A2:190:G:C8	2.72	0.43
81:A2:202:C:O5'	81:A2:202:C:H6	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:209:A:H8	81:A2:209:A:O5'	2.01	0.43
81:A2:282:U:O2	81:A2:288:U:C2	2.72	0.43
81:A2:408:G:N2	82:A3:16:G:C4	2.87	0.43
81:A2:409:A:H2	81:A2:1313:A:O2'	2.02	0.43
81:A2:1193:G:O4'	81:A2:1195:C:N4	2.52	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
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:H3'	81:A2:1575:U:C6	2.52	0.43
81:A2:2009:C:H2'	81:A2:2009:C:O2	2.19	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:A2:2591:C:H4'	81:A2:2784:A:O3'	2.18	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:A2:3613: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
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:A2:4345: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
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
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: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:B1:118:C:H2'	4:B1:119:U:O4'	2.18	0.43
4:B1:165:G:O2'	4:B1:166:A:H5'	2.18	0.43
4:B1:180:G:H2'	4:B1:180:G:N3	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:B1:683:G:C1'	4:B1:1023:A:C2	2.86	0.43
4:B1:810:A:H3'	4:B1:810:A:C8	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

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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:B1:1227:G:N7	4:B1:1638:G:C8	2.87	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:B1:1643:U:H4’	21:BQ:143:LYS:O	2.19	0.43
4:B1:1703:C:C4	4:B1:1704:C:C4	3.06	0.43
4:B1:1719:A:H8	4:B1:1719:A:O5’	2.02	0.43
4:B1:1748:G:H1	4:B1:1786:U:H3	1.67	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
15:BK:31:LYS:HE3	34:Bd:12:ARG:HE	1.83	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
34:Bd:10:HIS:O	34:Bd:11:PRO:C	2.60	0.43
36:Bf:104:LYS:O	36:Bf:104:LYS:HD2	2.19	0.43
39:CB:154:LYS:HG3	39:CB:194:LEU:HD22	1.99	0.43
39:CB:301:ASN:CG	39:CB:311:ASP:HA	2.43	0.43
39:CB:370:THR:O	39:CB:370:THR:HG23	2.18	0.43
40:CC:43:ASN:HD22	40:CC:115:VAL:HG22	1.83	0.43
40:CC:196:MET:HE2	81:A2:343:G:H1	1.84	0.43
40:CC:303:ARG:NH1	53:CQ:40:ASN:HD22	2.16	0.43
41:CD:193:GLU:O	41:CD:196:ARG:HB3	2.19	0.43
42:CE:270:TYR:CD1	49:CM:107:PHE:HA	2.53	0.43
43:CF:44:LYS:HB3	81:A2:1220:G:OP1	2.18	0.43
43:CF:48:LYS:HB2	81:A2:1220:G:H5’	1.99	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:47:PRO:HB3	46:CI:171:TRP:CE2	2.54	0.43
46:CI:139:ARG:HG3	46:CI:173:PHE:CZ	2.53	0.43
50:CN:40:PRO:CG	81:A2:8:U:H5’	2.49	0.43
52:CP:28:ASN:O	52:CP:32:THR:HG23	2.19	0.43
53:CQ:72:LEU:HB2	81:A2:1435:G:O3’	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
63:Ca:78:LEU:CD2	63:Ca:81:LEU:HD12	2.49	0.43
65:Cc:45:LEU:HG	65:Cc:104:ILE:HG21	2.00	0.43
67:Ce:16:ARG:HD2	67:Ce:60:TYR:CE2	2.54	0.43
68:Cf:11:PHE:CE1	68:Cf:26:ALA:HB1	2.44	0.43
72:Cj:47:TYR:HB3	72:Cj:49:TRP:CD1	2.53	0.43
80:Cu:175:ASP:O	80:Cu:178:ASP:HB3	2.18	0.43
81:A2:158:G:H2'	81:A2:159:A:C8	2.51	0.43
81:A2:283:G:C6	81:A2:284:G:O6	2.72	0.43
81:A2:309:A:C8	81:A2:309:A:C3'	3.01	0.43
81:A2:411:A:H2'	81:A2:412:C:O4'	2.18	0.43
81:A2:947:G:O2'	81:A2:948:A:H5'	2.18	0.43
81:A2:1198:G:H2'	81:A2:1199:G:C8	2.54	0.43
81:A2:1377:A:H1'	81:A2:1447:C:C4'	2.49	0.43
81:A2:1384:G:C4	81:A2:1385:C:C5	3.07	0.43
81:A2:1481:G:C4'	81:A2:1482:A:OP1	2.66	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:A2:3909: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:A2:4224: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:H6	81:A2:4978:C:H2'	1.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:52:G:H8	4:B1:52:G:O5'	2.02	0.43
4:B1:181:A:C3'	4:B1:182:C:C5'	2.87	0.43
4:B1:433:A:H5"	13:BI: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:B1:534: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:B1:907:G:H5"	54:CR:165:LYS:HE2	2.00	0.43
4:B1:1043:G:N3	4:B1:1044:G:C8	2.86	0.43
4:B1:1174:U:H5'	76:Cn:21:ARG:HH22	1.68	0.43
4:B1:1378:A:C6	5:BA:105:PRO:HB3	2.54	0.43
4:B1:1387:G:C4	4:B1:1388:A:C8	3.07	0.43
4:B1:1451:G:H5'	37:Bg:64:HIS:CE1	2.54	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
4:B1:1588:A:C6	4:B1:1589:A:C6	3.06	0.43
4:B1:1665:G:N2	24:BT:87:VAL:HB	2.33	0.43
4:B1:1703:C:H3'	4:B1:1704:C:C5	2.54	0.43
7:BC:261:PHE:HE1	26:BV:16:LYS:O	2.02	0.43
9:BE:56:LEU:HB2	29:BY:22:GLN:HE22	1.84	0.43
9:BE:126:VAL:HG13	9:BE:139:LEU:HG	2.00	0.43
12:BH:47:ALA:H	12:BH:63:PHE:HB2	1.84	0.43
22:BR:62:GLN:C	37:Bg:280:LYS:HE2	2.44	0.43
23:BS:4:VAL:HG21	30:BZ:49:LEU:CD1	2.49	0.43
23:BS:24:ARG:HE	23:BS:29:ALA:HA	1.84	0.43
25:BU:63:ILE:HD11	34:Bd:32:ARG:NH2	2.34	0.43
37:Bg:44:LYS:HB2	37:Bg:44:LYS:NZ	2.34	0.43
39:CB:4:ARG:O	39:CB:5:LYS:CB	2.66	0.43
40:CC:56:GLU:OE2	81:A2:347:G:H4'	2.18	0.43
40:CC:275:SER:O	40:CC:276:ASN:CB	2.66	0.43
40:CC:347:HIS:O	40:CC:351:VAL:HG23	2.19	0.43
41:CD:274:ALA:HB2	81:A2:1087:C:OP1	2.18	0.43
48:CL:14:PHE:CZ	81:A2:1322:A:H1'	2.53	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
60:CX:48:ARG:CA	81:A2:2449:A:O2'	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:126:ARG:HD2	81:A2:194:A:O2'	2.19	0.43
63:Ca:43:ILE:HG21	81:A2:1662:U:C4'	2.49	0.43
67:Ce:85:LEU:HD13	67:Ce:85:LEU:O	2.19	0.43
69:Cg:8:ARG:HB3	81:A2:2507:U:C5	2.52	0.43
77:Co:61:LYS:HG2	81:A2:4332:U:OP1	2.19	0.43
81:A2:5:A:N1	82:A3:153:C:C2	2.87	0.43
81:A2:113:A:C2	81:A2:269:G:C4	3.07	0.43
81:A2:121:A:C6	81:A2:147:U:C2	3.07	0.43
81:A2:413:C:O5'	81:A2:413:C:H6	2.02	0.43
81:A2:430:G:C2'	81:A2:431:U:O5'	2.66	0.43
81:A2:488:G:N3	81:A2:488:G:C2'	2.79	0.43
81:A2:666:G:H2'	81:A2:667:C:C6	2.53	0.43
81:A2:959:C:C4'	81:A2:1215:G:H21	2.32	0.43
81:A2:1180:G:C6	81:A2:1181:U:C4	3.07	0.43
81:A2:1358:C:H3'	81:A2:1358:C:O2	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
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
81:A2:2666:C:H2'	81:A2:2667:C:H6	1.81	0.43
81:A2:2717:U:O2'	81:A2:2719:G:N2	2.52	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:A2:4435: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:A2:5009:C:O2	81:A2:5009:C:H2'	2.17	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
2:AW:67:C:H2'	2:AW:68:C:H6	1.83	0.42
2:AW:76:A:C3'	77:Co:54:PRO:C	2.85	0.42
4:B1:133:C:O5'	4:B1:133:C:H6	2.01	0.42
4:B1:386:C:O2	4:B1:386:C:C2'	2.67	0.42
4:B1:426:A:N3	4:B1:426:A:C2'	2.82	0.42
4:B1:450:C:H2'	4:B1:451:G:C4'	2.48	0.42
4:B1:527:C:O2'	14:BJ:121:LYS:HE3	2.18	0.42
4:B1:659:G:H3'	28:BX:17:ARG:NH2	2.34	0.42
4:B1:745:C:O2'	12:BH:107:LYS:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:992:A:N6	31:Ba:12:LYS:C	2.77	0.42
4:B1:1130:G:C2	4:B1:1131:G:C8	3.07	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:N3	4:B1:1639:G:C2'	2.79	0.42
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
13:BI:12:ARG:HG3	13:BI:13:LYS:N	2.34	0.42
13:BI:133:GLU:O	13:BI:134:GLU:C	2.62	0.42
13:BI:191:GLU:HG3	16:BL:20:LYS:CG	2.50	0.42
14:BJ:171:GLY:O	14:BJ:174:LYS:HB2	2.19	0.42
16:BL:96:ILE:HD12	28:BX:10:ALA:HB1	2.02	0.42
18:BN:92:ILE:CG2	18:BN:149:LEU:HD13	2.39	0.42
21:BQ:17:LYS:O	21:BQ:17:LYS:HG3	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
30:BZ:68:ILE:HG23	30:BZ:73:VAL:HG23	2.01	0.42
31:Ba:42:ARG:O	31:Ba:67:LEU:HB2	2.19	0.42
31:Ba:83:VAL:O	31:Ba:84:VAL:HB	2.18	0.42
37:Bg:105:THR:HB	37:Bg:126:ASP:HB2	2.01	0.42
37:Bg:105:THR:HB	37:Bg:126:ASP:HB3	2.01	0.42
38:CA:178:PRO:HG2	78:Cp:26:VAL:CG2	2.49	0.42
38:CA:185:ALA:C	38:CA:196:TRP:NE1	2.56	0.42
40:CC:74:ALA:C	40:CC:76:ILE:N	2.76	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
41:CD:291:GLN:NE2	46:CI:210:ARG:NH2	2.66	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
48:CL:162:LYS:HE2	63:Ca:102:ASP:CG	2.44	0.42
50:CN:44:ARG:NH1	50:CN:47:LYS:HG2	2.34	0.42
50:CN:144:ARG:NH2	81:A2:137:G:H5'	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:27:LEU:HD12	56:CT:146:LYS:HE2	2.00	0.42
55:CS:81:TRP:CE3	55:CS:128:LYS:HB2	2.54	0.42
56:CT:4:THR:OG1	81:A2:4167:C:C4	2.64	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
62:CZ:82:PRO:O	65:Cc:62:TYR:HE2	2.01	0.42
64:Cb:47:LYS:HA	64:Cb:50:ASN:HD22	1.83	0.42
65:Cc:51:ASN:HB2	78:Cp:43:GLY:N	2.34	0.42
67:Ce:16:ARG:HD2	67:Ce:19:LYS:HD3	2.00	0.42
68:Cf:6:TRP:HB2	81:A2:4711:U:C3'	2.46	0.42
69:Cg:11:LEU:HD23	69:Cg:11:LEU:H	1.83	0.42
69:Cg:94:ALA:HA	81:A2:4089:G:C4	2.54	0.42
72:Cj:16:HIS:HA	72:Cj:27:TYR:O	2.19	0.42
73:Ck:12:LEU:O	73:Ck:16:ARG:HG2	2.19	0.42
73:Ck:20:ALA:HB2	73:Ck:36:VAL:CG2	2.43	0.42
79:Ct:16:PHE:HB3	79:Ct:28:GLU:HG2	2.01	0.42
81:A2:87:A:N3	81:A2:88:A:H1'	2.32	0.42
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:A2:165:C:C2	81:A2:166:G:C8	3.06	0.42
81:A2:196:G:H2'	81:A2:235:C:P	2.59	0.42
81:A2:202:C:H42	81:A2:206:U:H5	1.66	0.42
81:A2:315:A:H2'	81:A2:316:U:C6	2.54	0.42
81:A2:339:G:N2	82:A3:27:U:C2	2.87	0.42
81:A2:397:C:C4	81:A2:398:A:N6	2.87	0.42
81:A2:438:C:H5	81:A2:438:C:OP2	2.02	0.42
81:A2:481:C:H3'	81:A2:482:G:H5"	1.97	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:A2:1220: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:A2:1284:C:O2'	81:A2:2289:A:C1'	2.65	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
81:A2:1425:U:H2'	81:A2:1426:C:C5	2.53	0.42
81:A2:1438:A:C6	81:A2:1439:C:C4	3.06	0.42
81:A2:1575:U:C6	81:A2:1575:U:C3'	3.01	0.42
81:A2:1798:G:OP1	81:A2:1798:G:H8	2.01	0.42
81:A2:1885:A:C8	81:A2:1885:A:OP2	2.72	0.42
81:A2:1926:G:H8	81:A2:1926:G:P	2.42	0.42
81:A2:2027:G:H8	81:A2:2027:G:C5'	2.30	0.42
81:A2:2062:C:C6	81:A2:2249:G:C2	3.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2853:G:N2	81:A2:2854:G:C8	2.87	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:A2:4298:G:O6	81:A2:4335:C:H1'	2.19	0.42
81:A2:4740:U:H6	81:A2:4740:U:H3'	1.84	0.42
83:A4:38:U:H2'	83:A4:40:U:OP2	2.19	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:B1:20:G:C2'	4:B1:21:U:H5'	2.48	0.42
4:B1:95:G:C2'	4:B1:96:C:H5'	2.49	0.42
4:B1:116:U:H3	4:B1:347:G:H1	1.67	0.42
4:B1:302:A:H1'	13:BI:73:THR:CB	2.35	0.42
4:B1:315:C:H6	4:B1:315:C:C5'	2.31	0.42
4:B1:353:C:C5'	16:BL:71:ARG:NH2	2.82	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:C5'	4:B1:798:G:N3	2.81	0.42
4:B1:839:C:C4	29:BY:48:TYR:O	2.72	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
4:B1:970:G:N9	81:A2:3680:A:C5'	2.76	0.42
4:B1:973:C:H3'	4:B1:973:C:C6	2.53	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:B1:1442:U:N3	21:BQ:22:VAL:HG22	2.35	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:H6	4:B1:1670:C:O5'	2.01	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
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
18:BN:84:LEU:HD23	18:BN:89:TYR:CD2	2.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BY:119:GLY:HA2	29:BY:122:LYS:HB3	2.01	0.42
31:Ba:71:LEU:HD22	31:Ba:71:LEU:HA	1.83	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:139:SER:CB	79:Ct:10:VAL:HB	2.49	0.42
40:CC:311:ARG:HA	81:A2:943:G:O6	2.18	0.42
43:CF:27:GLU:O	43:CF:31:LYS:HB3	2.19	0.42
43:CF:186:CYS:O	43:CF:189:ASP:HB3	2.19	0.42
43:CF:245:ARG:HH21	81:A2:928:A:H5'	1.83	0.42
45:CH:98:HIS:ND1	81:A2:4562:A:H5"	2.34	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
46:CI:157:PHE:CE2	81:A2:4373:C:H5'	2.53	0.42
54:CR:119:MET:HE3	54:CR:149:LYS:HD2	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
61:CY:46:SER:OG	81:A2:236:C:H5"	2.19	0.42
65:Cc:32:LYS:O	65:Cc:35:LEU:HB2	2.19	0.42
68:Cf:54:LYS:HB3	81:A2:4706:C:P	2.59	0.42
72:Cj:74:PHE:CZ	82:A3:33:G:H4'	2.54	0.42
79:Ct:58:LYS:HB3	81:A2:670:C:P	2.59	0.42
81:A2:366:G:C5'	81:A2:366:G:C8	3.02	0.42
81:A2:446:C:C6	81:A2:446:C:OP2	2.72	0.42
81:A2:449:C:H2'	81:A2:450:C:H6	1.82	0.42
81:A2:947:G:C2'	81:A2:948:A:C5'	2.95	0.42
81:A2:961:C:H2'	81:A2:961:C:O2	2.18	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
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
81:A2:2864:U:H2'	81:A2:3587:C:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	81:A2:4329:A:C8	2.61	0.42
81:A2:4544:A:H2	81:A2:4680:C:P	2.42	0.42
82:A3:129:C:C2	82:A3:130:C:C5	3.06	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
83:A4:104:C:HO2'	83:A4:105:C:H5	1.58	0.42
1:AV:43:C:O2	1:AV:43:C:H2'	2.19	0.42
4:B1:22:A:H1'	14:BJ:17:ARG:HH11	1.83	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:B1:571:U:O3'	29:BY:59:GLY:N	2.53	0.42
4:B1:813:A:H2'	4:B1:814:U:C5'	2.49	0.42
4:B1:827:A:O5'	14:BJ:8:VAL:HG13	2.19	0.42
4:B1:835:C:O2	4:B1:835:C:H2'	2.18	0.42
4:B1:970:G:C8	81:A2:3680:A:O5'	2.71	0.42
4:B1:1031:A:H1'	18:BN:116:ILE:CD1	2.48	0.42
4:B1:1092:G:H1'	27:BW:2:VAL:O	2.18	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:C6	4:B1:1180:C:C3'	3.02	0.42
4:B1:1222:G:H8	4:B1:1222:G:O5'	2.02	0.42
4:B1:1270:G:O2'	4:B1:1301:A:N7	2.52	0.42
4:B1:1439:A:C8	4:B1:1439:A:OP2	2.73	0.42
4:B1:1447:G:OP1	25:BU:85:HIS:ND1	2.51	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:B1:1679:A:C8	33:Bc:20:ARG:NH1	2.87	0.42
4:B1:1682:C:H6	4:B1:1682:C:H3'	1.84	0.42
6:BB:54:GLY:HA3	81:A2:3913:G:O2'	2.19	0.42
8:BD:71:ALA:HB3	15:BK:20:VAL:HG21	2.01	0.42
14:BJ:38:ARG:O	35:Be:34:ARG:HD2	2.18	0.42
24:BT:75:MET:HB2	24:BT:121:ARG:NH2	2.33	0.42
24:BT:144:LYS:HG2	24:BT:144:LYS:O	2.20	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
39:CB:19:ARG:N	81:A2:4527:G:OP1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
48:CL:163:LYS:O	48:CL:163:LYS:HD2	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
64:Cb:58:GLN:HG2	81:A2:1791:C:H1'	2.01	0.42
67:Ce:58:ILE:CG1	81:A2:2057:G:H1'	2.49	0.42
69:Cg:9:ARG:HG3	69:Cg:34:TYR:CE1	2.55	0.42
69:Cg:82:MET:HE3	69:Cg:90:ARG:CZ	2.49	0.42
70:Ch:59:THR:OG1	82:A3:60:G:C2	2.71	0.42
72:Cj:63:ARG:NH2	82:A3:58:G:O6	2.52	0.42
81:A2:380:A:H3'	81:A2:380:A:C4	2.48	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:C8	81:A2:1542:A:OP2	2.72	0.42
81:A2:1570:U:C6	81:A2:1570:U:C3'	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:OP2	81:A2:1734:C:C6	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:C8	81:A2:2047:A:C3'	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
81:A2:2479:G:C5'	81:A2:4052:G:H22	2.33	0.42
81:A2:2542:A:O5'	81:A2:2542:A:C8	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:OP1	2.67	0.42
81:A2:2746:U:P	81:A2:2746:U:C6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
83:A4:75:G:C4'	83:A4:76:U:OP2	2.66	0.42
3:AX:56:U:H3'	3:AX:56:U:O2	2.19	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:B1:838:G:H8	29:BY:9:THR:N	2.11	0.42
4:B1:845:G:H4'	9:BE:255:ARG:NH1	2.31	0.42
4:B1:853:C:O2	4:B1:853:C:O4'	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
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:N3	4:B1:1276:A:O5'	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:B1:1597:C:OP2	30:BZ:82:SER:HB3	2.19	0.42
4:B1:1663:A:O2'	4:B1:1664:A:N3	2.51	0.42
4:B1:1675:A:H2'	4:B1:1676:U:O4'	2.20	0.42
5:BA:30:LEU:HD23	5:BA:31:ASP:O	2.20	0.42
5:BA:103:PHE:CD1	5:BA:133:PRO:HG3	2.55	0.42
6:BB:137:LEU:HB3	6:BB:215:VAL:HG23	2.01	0.42
6:BB:151:ARG:CZ	6:BB:153:THR:OG1	2.68	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:BG:132:ARG:C	11:BG:133:LEU:HD23	2.44	0.42
15:BK:11:ILE:HA	15:BK:38:LYS:HE2	2.02	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
31:Ba:44:ILE:HG22	31:Ba:67:LEU:CG	2.49	0.42
32:Bb:27:SER:HB2	32:Bb:28:PRO:HD2	2.01	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
40:CC:337:ARG:NE	81:A2:1213:G:H4'	2.30	0.42
41:CD:90:VAL:HG11	41:CD:225:GLN:HB3	2.00	0.42
41:CD:197:LYS:HD2	41:CD:202:GLN:HG3	2.02	0.42
42:CE:192:LYS:NZ	81:A2:698:G:H5'	2.35	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
50:CN:108:ARG:NH1	81:A2:54:G:H4'	2.34	0.42
51:CO:31:ARG:HE	51:CO:33:VAL:CG2	2.31	0.42
51:CO:51:LYS:HD2	51:CO:144:GLU:CD	2.44	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:59:ARG:HD2	81:A2:206:U:H5"	1.99	0.42
61:CY:121:ARG:O	61:CY:126:ARG:CA	2.67	0.42
62:CZ:16:GLY:O	69:Cg:76:ARG:HG3	2.19	0.42
62:CZ:89:ILE:HG12	62:CZ:93:LYS:HE2	2.00	0.42
63:Ca:36:GLY:HA3	63:Ca:40:HIS:CE1	2.54	0.42
63:Ca:43:ILE:CG2	81:A2:1662:U:H4'	2.50	0.42
69:Cg:66:ARG:HD3	81:A2:2516:C:H5"	2.00	0.42
72:Cj:20:ARG:HB2	72:Cj:39:TYR:CZ	2.55	0.42
77:Co:52:THR:CG2	81:A2:43:U:H4'	2.44	0.42
79:Ct:39:ARG:NH2	81:A2:2064:G:H22	2.13	0.42
80:Cu:193:LEU:HD22	80:Cu:193:LEU:H	1.84	0.42
81:A2:42:A:OP1	81:A2:42:A:H4'	2.19	0.42
81:A2:99:A:H3'	81:A2:100:C:C5	2.54	0.42
81:A2:386:A:O4'	81:A2:2356:A:C8	2.73	0.42
81:A2:420:A:H8	81:A2:420:A:O5'	2.03	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:970:C:O5'	81:A2:970:C:H6	2.02	0.42
81:A2:1219:C:C2'	81:A2:1220:G:OP2	2.68	0.42
81:A2:1372:A:O2'	81:A2:1373:G:H5'	2.19	0.42
81:A2:1532:A:OP2	81:A2:1532:A:C8	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
81:A2:2282:G:N3	81:A2:2307:G:C2	2.88	0.42
81:A2:2373:A:OP2	81:A2:2783:A:C5	2.72	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:A2:3586:G:C2'	81:A2:3587:C:C5'	2.90	0.42
81:A2:3670:C:N4	81:A2:3714:U:H3'	2.35	0.42
81:A2:3689:G:C4	81:A2:3690:U:C5	3.07	0.42
81:A2:3724:G:N2	81:A2:3725:A:C4	2.87	0.42
81:A2:4240:A:C3'	81:A2:4241:A:H5'	2.49	0.42
81:A2:4399:U:H2'	81:A2:4400:G:C5'	2.45	0.42
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
83:A4:71:G:N2	83:A4:105:C:C2	2.87	0.42
1:AV:41:C:H5'	1:AV:42:C:OP2	2.19	0.42
3:AX:35:U:P	31:Ba:41:ILE:HD12	2.57	0.42
3:AX:52:U:OP1	3:AX:52:U:H4'	2.18	0.42
4:B1:15:U:O2'	4:B1:16:G:H5'	2.20	0.42
4:B1:129:C:H3'	4:B1:130:G:C8	2.55	0.42
4:B1:166:A:H2'	4:B1:167:G:C8	2.55	0.42
4:B1:527:C:H5'	14:BJ:122:SER:HB2	2.00	0.42
4:B1:867:G:OP2	4:B1:867:G:C8	2.72	0.42
4:B1:876:C:OP2	4:B1:876:C:C5	2.73	0.42
4:B1:992:A:C2	31:Ba:15:ARG:HB3	2.54	0.42
4:B1:1122:A:H2'	4:B1:1123:C:H5'	2.01	0.42
4:B1:1130:G:C4'	18:BN:10:GLY:HA2	2.49	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:B1:1829:G:C4	4:B1:1830:U:H5	2.37	0.42
6:BB:90:ASP:OD1	6:BB:97:LEU:HB2	2.19	0.42
6:BB:116:LYS:NZ	31:Ba:37:LYS:HE2	2.34	0.42
9:BE:80:VAL:HG13	9:BE:81:THR:HG23	2.02	0.42
9:BE:124:CYS:HB2	9:BE:141:THR:HG23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:BE:208:VAL:HG11	9:BE:225:ILE:CD1	2.49	0.42
10:BF:130:ARG:O	10:BF:131:ALA:HB3	2.20	0.42
13:BI:135:GLU:HG2	13:BI:135:GLU:O	2.19	0.42
14:BJ:131:ARG:C	14:BJ:133:ARG:H	2.27	0.42
15:BK:85:LEU:O	15:BK:86:PRO:C	2.62	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
31:Ba:43:ASN:HD21	31:Ba:50:VAL:HG21	1.84	0.42
37:Bg:277:THR:HB	37:Bg:278:SER:H	1.63	0.42
38:CA:76:PHE:HZ	38:CA:165:VAL:HG21	1.84	0.42
38:CA:102:LEU:HB3	38:CA:106:THR:OG1	2.19	0.42
39:CB:291:TYR:O	39:CB:292:LEU:HB2	2.18	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
41:CD:33:ARG:HE	56:CT:27:LEU:HD12	1.84	0.42
41:CD:94:ASN:CA	83:A4:47:G:H5'	2.50	0.42
42:CE:219:LYS:HB2	81:A2:4895:C:O2	2.19	0.42
42:CE:227:HIS:CE1	81:A2:1273:G:C2'	3.01	0.42
43:CF:88:LYS:HZ2	56:CT:135:PRO:HG2	1.82	0.42
44:CG:57:TRP:HB3	44:CG:61:ILE:HB	2.00	0.42
44:CG:138:ALA:HB3	44:CG:196:ARG:HH22	1.82	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:90:HIS:CB	51:CO:99:LEU:HD11	2.41	0.42
51:CO:117:ARG:NH1	51:CO:160:ARG:HH12	2.18	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
56:CT:158:PHE:C	56:CT:159:MET:HG2	2.45	0.42
60:CX:156:ILE:O	60:CX:156:ILE:HG23	2.20	0.42
62:CZ:134:LEU:CD2	69:Cg:94:ALA:HB1	2.50	0.42
67:Ce:12:ILE:HG12	67:Ce:66:THR:HB	2.01	0.42
69:Cg:99:GLU:O	69:Cg:103:VAL:HG23	2.19	0.42
71:Ci:80:HIS:CD2	81:A2:310:A:H5"	2.54	0.42
79:Ct:80:THR:O	79:Ct:83:ASN:CA	2.63	0.42
80:Cu:161:THR:HA	81:A2:3939:G:H5'	2.00	0.42
81:A2:10:A:C2	82:A3:147:G:N1	2.88	0.42
81:A2:32:G:N2	81:A2:50:C:C5	2.79	0.42
81:A2:86:U:H2'	81:A2:86:U:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:439:G:H8	81:A2:439:G:C5'	2.32	0.42
81:A2:1249:G:N2	81:A2:1250:A:H1'	2.34	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:A2:2060:G:C4	81:A2:2251:G:C2	3.08	0.42
81:A2:2061:C:N4	81:A2:2249:G:H1	2.13	0.42
81:A2:2353:A:C8	81:A2:2353:A:OP2	2.73	0.42
81:A2:2376:G:H5"	81:A2:2800:G:O2'	2.19	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:A2:2837:C:H2'	81:A2:2838:C:O5'	2.18	0.42
81:A2:3595:G:H2'	81:A2:3596:G:C8	2.54	0.42
81:A2:3890:U:O5'	81:A2:3890:U:H6	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
81:A2:4177:G:O2'	81:A2:4263:C:C6	2.63	0.42
81:A2:4251:G:H8	81:A2:4251:G:O5'	2.03	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:C6	81:A2:4743:C:C3'	3.02	0.42
81:A2:4824:U:OP1	81:A2:4825:G:C4	2.72	0.42
82:A3:103:A:OP2	82:A3:104:A:H2'	2.20	0.42
83:A4:33:U:O2	83:A4:33:U:C2'	2.67	0.42
4:B1:60:A:N3	4:B1:60:A:C2'	2.83	0.42
4:B1:142:C:H4'	4:B1:143:U:O5'	2.20	0.42
4:B1:152:U:C6	4:B1:152:U:OP2	2.72	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:O2	4:B1:441:C:H2'	2.20	0.42
4:B1:494:C:C2'	4:B1:495:U:H5'	2.50	0.42
4:B1:743:U:H3'	4:B1:744:G:C8	2.53	0.42
4:B1:746:C:O5'	4:B1:746:C:C2'	2.68	0.42
4:B1:876:C:O2'	4:B1:877:C:H5'	2.19	0.42
4:B1:973:C:C6	4:B1:973:C:C3'	3.03	0.42
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O2	4:B1:1205:C:H2'	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:B1:1431:G:C2'	4:B1:1432:U:C5	2.92	0.42
4:B1:1507:G:N1	36:Bf:91:ASN:HA	2.34	0.42
4:B1:1578:U:C2	8:BD:4:GLN:O	2.73	0.42
4:B1:1599:U:C5	10:BF:164:ARG:HA	2.55	0.42
4:B1:1782:G:O2'	4:B1:1783:C:C6	2.68	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
7:BC:98:LEU:HD21	7:BC:132:ASP:CG	2.44	0.42
9:BE:173:ILE:CD1	9:BE:235:TRP:HZ2	2.33	0.42
13:BI:114:GLU:OE2	13:BI:129:LEU:HD13	2.19	0.42
14:BJ:86:VAL:HG12	14:BJ:87:LEU:CD1	2.34	0.42
14:BJ:137:VAL:O	14:BJ:138:ARG:HB3	2.19	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
19:BO:116:LEU:HD22	31:Ba:53:ILE:HD13	2.00	0.42
20:BP:77:LYS:HD3	20:BP:102:PHE:CD1	2.54	0.42
22:BR:63:ARG:HA	37:Bg:280:LYS:NZ	2.35	0.42
24:BT:36:THR:O	24:BT:37:VAL:CB	2.67	0.42
32:Bb:40:CYS:HB3	32:Bb:59:CYS:CA	2.49	0.42
33:Bc:40:ARG:HD3	33:Bc:42:ILE:HD11	2.01	0.42
34:Bd:48:LYS:HD2	34:Bd:49:ASP:N	2.34	0.42
38:CA:177:LYS:HE2	81:A2:2716:C:C5	2.54	0.42
39:CB:73:VAL:CG2	58:CV:93:GLY:HA3	2.49	0.42
42:CE:283:PRO:HB3	68:Cf:105:LEU:HD21	2.00	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:60:ARG:HD3	48:CL:67:HIS:CE1	2.55	0.42
48:CL:161:TYR:O	48:CL:162:LYS:HB2	2.18	0.42
49:CM:104:MET:CE	51:CO:198:THR:HB	2.49	0.42
50:CN:146:PRO:CG	70:Ch:104:THR:HA	2.50	0.42
53:CQ:84:GLY:O	53:CQ:103:LEU:HB2	2.19	0.42
53:CQ:91:ARG:NH1	53:CQ:91:ARG:HB2	2.35	0.42
55:CS:164:LYS:CB	55:CS:165:PRO:CD	2.95	0.42
56:CT:84:ILE:HD11	64:Cb:24:PRO:CB	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:CY:50:ARG:HH11	61:CY:115:ARG:HH11	1.66	0.42
65:Cc:52:CYS:HA	81:A2:2651:A:H61	1.84	0.42
68:Cf:54:LYS:CG	68:Cf:55:ASN:H	2.32	0.42
68:Cf:60:PRO:O	81:A2:4900:G:C6	2.72	0.42
69:Cg:66:ARG:HD3	81:A2:2516:C:H4'	2.02	0.42
77:Co:58:LYS:HB3	77:Co:58:LYS:NZ	2.35	0.42
80:Cu:199:TYR:CE1	81:A2:4022:C:C5'	3.02	0.42
81:A2:10:A:N1	82:A3:147:G:C6	2.87	0.42
81:A2:94:A:H2'	81:A2:95:G:O4'	2.19	0.42
81:A2:319:A:N3	81:A2:319:A:H2'	2.35	0.42
81:A2:374:A:C6	81:A2:375:A:C6	3.07	0.42
81:A2:437:C:C3'	81:A2:438:C:C6	3.03	0.42
81:A2:456:G:N3	81:A2:456:G:H2'	2.34	0.42
81:A2:924:C:C2'	81:A2:925:C:H5"	2.48	0.42
81:A2:971:C:H3'	81:A2:971:C:C6	2.55	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:N3	81:A2:1778:G:H2'	2.35	0.42
81:A2:1877:G:C1'	81:A2:2254:G:C2	3.00	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:A2:2344:A:C2	81:A2:2775:A:C4	3.07	0.42
81:A2:2638:U:O5'	81:A2:2639:G:H4'	2.19	0.42
81:A2:2836:G:H2'	81:A2:2837:C:H6	1.83	0.42
81:A2:3595:G:H2'	81:A2:3596:G:H8	1.84	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:A2:4310:C:H2'	81:A2:4311:U:H6	1.84	0.42
81:A2:4517:U:H2'	81:A2:4518:U:H5'	2.02	0.42
81:A2:4863:G:H2'	81:A2:4864:A:H4'	2.02	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
2:AW:61:C:O2'	2:AW:62:C:H5'	2.20	0.42
4:B1:179:C:OP2	4:B1:179:C:C6	2.58	0.42
4:B1:211:G:C8	4:B1:211:G:H3'	2.55	0.42
4:B1:343:A:H4'	9:BE:128:LYS:HZ3	1.81	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:616:A:H4'	35:Be:8:ARG:O	2.20	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:B1:885:U:O3'	4:B1:886:A:H2'	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:B1:1860:A:C2	4:B1:1862:G:C8	3.08	0.42
4:B1:1861:G:H5"	31:Ba:2:THR:C	2.44	0.42
5:BA:30:LEU:HB2	5:BA:47:TYR:CE2	2.55	0.42
6:BB:89:GLU:HG3	6:BB:223:PHE:CE2	2.55	0.42
6:BB:135:LEU:HD23	6:BB:135:LEU:N	2.34	0.42
6:BB:223:PHE:HE1	6:BB:225:LEU:HD13	1.85	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
33:Bc:11:LEU:HD23	33:Bc:57:THR:HA	2.01	0.42
34:Bd:24:CYS:CB	34:Bd:42:CYS:SG	3.07	0.42
37:Bg:42:MET:HG3	37:Bg:92:LEU:HG	2.01	0.42
37:Bg:177:TRP:CD2	37:Bg:184:LEU:HD23	2.54	0.42
39:CB:332:MET:HE1	39:CB:365:LEU:HD13	2.02	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
45:CH:31:ARG:NH2	45:CH:188:GLN:HB3	2.34	0.42
46:CI:76:MET:HE2	46:CI:85:PHE:CG	2.55	0.42
46:CI:191:ILE:HG21	46:CI:213:HIS:CE1	2.54	0.42
47:CJ:75:ARG:CZ	83:A4:42:A:H1'	2.49	0.42
47:CJ:106:GLY:O	81:A2:4210:G:H4'	2.19	0.42
48:CL:33:ILE:HB	81:A2:1350:G:OP1	2.19	0.42
48:CL:111:GLN:HB2	81:A2:510:C:C4'	2.48	0.42
49:CM:2:VAL:CG2	81:A2:4723:A:H2	2.33	0.42
49:CM:2:VAL:CB	81:A2:4724:G:H1'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
62:CZ:1:MET:HA	65:Cc:67:ALA:C	2.44	0.42
77:Co:60:ALA:HB3	81:A2:4333:G:N7	2.34	0.42
79:Ct:66:ARG:O	79:Ct:83:ASN:HB2	2.20	0.42
81:A2:25:A:C8	81:A2:26:C:C5	3.08	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:A2:221:U:OP2	81:A2:221:U:C6	2.73	0.42
81:A2:259:G:H2'	81:A2:260:G:C8	2.55	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:A2:310:A:H2	81:A2:4319:U:C2	2.37	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
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:A2:1429: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:A2:1934:A:N1	81:A2:2006:C:N3	2.68	0.42
81:A2:2268:C:H5"	81:A2:2269:U:OP2	2.19	0.42
81:A2:2379:G:H5'	81:A2:2763:C:H42	1.84	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:A2:2707:U:C4	81:A2:2708:C:C5	3.08	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:O2'	81:A2:3738:C:H5'	2.19	0.42
81:A2:3737:U:C2'	81:A2:3738:C:H5'	2.50	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:C6	2.55	0.42
81:A2:4039:U:H2'	81:A2:4040:C:H6	1.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4077:C:H2'	81:A2:4078:U:O4'	2.19	0.42
81:A2:4100:C:O5'	81:A2:4100:C:H6	2.02	0.42
81:A2:4249:U:C2'	81:A2:4250:U:O5'	2.68	0.42
81:A2:4285:A:H8	81:A2:4285:A:O5'	2.02	0.42
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
82:A3:25:G:H8	82:A3:25:G:O5'	2.03	0.42
2:AW:49:C:O5'	2:AW:49:C:H6	2.02	0.42
2:AW:59:U:H3'	2:AW:60:U:C6	2.39	0.42
3:AX:42:U:C5	19:BO:151:LEU:CG	3.03	0.42
4:B1:37:C:H2'	4:B1:38:A:H5"	2.01	0.42
4:B1:123:G:H4'	4:B1:123:G:OP1	2.19	0.42
4:B1:213:G:O5'	4:B1:213:G:C8	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:N3	4:B1:330:G:H2'	2.35	0.42
4:B1:500:A:C2'	4:B1:501:C:C5'	2.91	0.42
4:B1:526:A:O2'	14:BJ:128:VAL:HG22	2.19	0.42
4:B1:526:A:H1'	14:BJ:128:VAL:HG13	2.02	0.42
4:B1:1083:A:H2'	4:B1:1858:G:H21	1.84	0.42
4:B1:1212:G:N1	4:B1:1688:C:C2	2.88	0.42
4:B1:1214:A:C6	4:B1:1686:G:N1	2.87	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:B1:1578:U:C6	8:BD:6:SER:N	2.88	0.42
4:B1:1628:C:O5'	4:B1:1628:C:H6	2.02	0.42
4:B1:1664:A:HO2'	4:B1:1666:C:H5	1.65	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
5:BA:69:GLU:HB2	7:BC:270:THR:HG21	2.02	0.42
8:BD:23:GLU:CG	34:Bd:46:TYR:HE1	2.32	0.42
8:BD:66:ILE:C	8:BD:66:ILE:HD13	2.45	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
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
33:Bc:34:PHE:CE2	33:Bc:42:ILE:HD12	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:Bf:100:LEU:O	36:Bf:100:LEU:HG	2.19	0.42
36:Bf:121:CYS:HA	36:Bf:132:MET:SD	2.60	0.42
38:CA:103:PRO:HA	38:CA:162:ASN:O	2.20	0.42
39:CB:53:MET:HE2	39:CB:77:THR:CG2	2.50	0.42
39:CB:72:VAL:HG13	58:CV:91:LYS:O	2.19	0.42
39:CB:175:GLN:HG3	81:A2:4940:U:H4'	2.02	0.42
40:CC:86:ARG:HH21	81:A2:368:A:H5'	1.85	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:29:THR:O	56:CT:32:ARG:HB2	2.19	0.42
56:CT:129:LYS:HB2	56:CT:131:GLN:HE22	1.84	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
71:Ci:50:PHE:HB3	71:Ci:54:GLU:CB	2.49	0.42
73:Ck:17:ARG:C	73:Ck:19:ASP:H	2.28	0.42
74:Cl:23:ILE:CD1	74:Cl:38:ASN:HB2	2.50	0.42
79:Ct:39:ARG:HH21	81:A2:2064:G:N2	2.11	0.42
79:Ct:82:ILE:HG22	79:Ct:82:ILE:O	2.19	0.42
80:Cu:19:ARG:HB3	81:A2:3943:G:OP1	2.20	0.42
80:Cu:30:ASN:HB3	81:A2:4022:C:O2'	2.19	0.42
80:Cu:160:HIS:CE1	81:A2:4021:A:N3	2.88	0.42
80:Cu:199:TYR:CE1	81:A2:4022:C:H5'	2.52	0.42
81:A2:46:U:OP2	81:A2:47:A:H2'	2.20	0.42
81:A2:140:C:OP2	81:A2:140:C:C5	2.73	0.42
81:A2:229:G:H1'	81:A2:374:A:C1'	2.26	0.42
81:A2:309:A:H1'	81:A2:3696:A:C2	2.55	0.42
81:A2:723:G:N3	81:A2:723:G:C2'	2.81	0.42
81:A2:1082:U:H4'	81:A2:1083:C:OP2	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:A2:1479:A:O3'	81:A2:1481:G:H5'	2.19	0.42
81:A2:1649:G:H8	81:A2:1649:G:H5'	1.84	0.42
81:A2:1837:C:H2'	81:A2:1838:U:C6	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:3570:C:H6	81:A2:3570:C:O5'	2.03	0.42
81:A2:3609:U:H2'	81:A2:3610:U:C6	2.54	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:O2	81:A2:4085:U:C2'	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:C6	81:A2:4743:C:H3'	2.55	0.42
81:A2:4874:G:C2'	81:A2:4875:C:H5'	2.50	0.42
83:A4:13:A:H5"	83:A4:14:C:H5	1.84	0.42
1:AV:34:G:N3	4:B1:1701:C:C2	2.87	0.42
2:AW:41:C:C3'	2:AW:42:C:H5"	2.50	0.42
3:AX:37:U:OP2	31:Ba:40:VAL:HG11	2.19	0.42
4:B1:79:A:H3'	4:B1:80:G:H8	1.85	0.42
4:B1:206:G:H8	4:B1:206:G:O5'	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:B1:1402:A:H3'	4:B1:1403:C:C6	2.55	0.42
4:B1:1402:A:C3'	4:B1:1403:C:C5	3.03	0.42
4:B1:1475:G:OP2	4:B1:1475:G:H8	2.03	0.42
4:B1:1766:C:C5	4:B1:1767:C:N4	2.88	0.42
6:BB:72:ALA:HB1	6:BB:79:VAL:O	2.20	0.42
9:BE:202:PRO:C	9:BE:204:SER:N	2.77	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
16:BL:111:VAL:HG23	16:BL:140:PHE:C	2.45	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
28:BX:60:LYS:O	28:BX:61:GLN:HB2	2.19	0.42
38:CA:196:TRP:CE3	38:CA:197:PRO:CG	3.03	0.42
39:CB:61:ASP:HA	39:CB:68:ASN:OD1	2.20	0.42
39:CB:252:ALA:HB1	81:A2:4484:G:N2	2.33	0.42
40:CC:54:VAL:CG2	81:A2:2320:G:N7	2.79	0.42
40:CC:303:ARG:O	53:CQ:38:ARG:HD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CE:158:ARG:HE	81:A2:4903:C:H1'	1.85	0.42
42:CE:280:GLY:HA2	81:A2:4831:U:C5	2.55	0.42
43:CF:32:ARG:HA	43:CF:35:LYS:HE3	2.01	0.42
44:CG:37:LYS:HE2	44:CG:44:ASP:HB3	2.02	0.42
44:CG:117:ARG:HG3	44:CG:121:LYS:HD3	2.01	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
49:CM:91:TRP:HB2	81:A2:4825:G:C4	2.55	0.42
54:CR:76:MET:O	54:CR:76:MET:HG3	2.20	0.42
62:CZ:108:ARG:CD	81:A2:2551:G:O6	2.67	0.42
65:Cc:32:LYS:O	65:Cc:36:LYS:HD2	2.20	0.42
68:Cf:17:GLY:HA2	81:A2:1894:G:N2	2.35	0.42
70:Ch:87:LYS:HE2	70:Ch:91:MET:HB3	2.02	0.42
80:Cu:24:THR:HG23	80:Cu:25:VAL:N	2.34	0.42
81:A2:202:C:N3	81:A2:206:U:C5	2.88	0.42
81:A2:286:A:N6	81:A2:4322:A:H4'	2.34	0.42
81:A2:459:U:O2	81:A2:459:U:C3'	2.67	0.42
81:A2:725:C:C5'	81:A2:725:C:H6	2.33	0.42
81:A2:736:G:C8	81:A2:736:G:H5"	2.55	0.42
81:A2:917:G:H21	81:A2:918:C:H42	1.68	0.42
81:A2:960:G:H5'	81:A2:960:G:C8	2.43	0.42
81:A2:1174:G:C2	81:A2:1175:G:N7	2.88	0.42
81:A2:1187:C:OP2	81:A2:1187:C:C5	2.72	0.42
81:A2:1285:C:H2'	81:A2:1286:C:O4'	2.19	0.42
81:A2:1305:C:C5	81:A2:3847:C:O3'	2.70	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:A2:2280: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
81:A2:2421:U:C5'	81:A2:2422:C:H5	2.16	0.42
81:A2:2430:A:N6	81:A2:2484:A:H2	2.06	0.42
81:A2:2431:U:H2'	81:A2:2432:G:C5'	2.47	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:A2:2549:C:P	81:A2:2741:A:C8	3.13	0.42
81:A2:2615:G:O2'	81:A2:2616:U:H5'	2.20	0.42
81:A2:3694:G:N2	81:A2:3696:A:H2'	2.34	0.42
81:A2:3870:A:N3	81:A2:3870:A:H2'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:4221:C:H2'	81:A2:4222:C:C6	2.55	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:A2:4722:U:H3'	81:A2:4722:U:O2	2.20	0.42
82:A3:12:G:C5	82:A3:13:G:C8	3.07	0.42
82:A3:140:C:O5'	82:A3:140:C:H6	2.03	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:B1:29:G:H5"	28:BX:129:SER:HB3	2.02	0.42
4:B1:190:G:C2	4:B1:191:A:N7	2.88	0.42
4:B1:191:A:H4'	13:BI:147:LYS:NZ	2.35	0.42
4:B1:237:C:H1'	4:B1:238:C:C5'	2.49	0.42
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:B1:683:G:C4	4:B1:1023:A:C6	3.08	0.42
4:B1:795:A:C3'	4:B1:796:G:H8	2.32	0.42
4:B1:942:G:H8	4:B1:942:G:OP2	2.03	0.42
4:B1:1053:C:O2	4:B1:1053:C:C2'	2.61	0.42
4:B1:1122:A:C2'	4:B1:1123:C:H5'	2.49	0.42
4:B1:1173:A:H5"	76:Cn:17:ARG:CZ	2.50	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:N3	4:B1:1483:A:H3'	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
6:BB:131:ASP:HB3	6:BB:180:ASP:CG	2.45	0.42
9:BE:252:ARG:HB3	9:BE:252:ARG:HH11	1.84	0.42
10:BF:69:VAL:O	10:BF:73:THR:HG23	2.19	0.42
11:BG:69:THR:C	11:BG:71:GLY:H	2.28	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
16:BL:6:THR:O	16:BL:7:GLU:C	2.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:CB:173:LEU:HD11	39:CB:342:LYS:HG2	2.01	0.42
39:CB:213:GLN:NE2	39:CB:287:ILE:HB	2.34	0.42
40:CC:102:PHE:HB2	81:A2:1317:A:H5'	2.02	0.42
42:CE:136:HIS:O	42:CE:137:VAL:CB	2.65	0.42
42:CE:177:GLY:O	42:CE:178:PRO:C	2.59	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:36:LEU:HB2	46:CI:87:ILE:CG2	2.47	0.42
46:CI:139:ARG:HG2	46:CI:172:GLY:CA	2.50	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:1:MET:N	71:Ci:36:HIS:CE1	2.88	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
51:CO:28:LEU:C	51:CO:28:LEU:HD13	2.45	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:HB2	61:CY:69:LYS:NZ	2.34	0.42
62:CZ:18:TYR:CE2	62:CZ:73:LYS:HE3	2.55	0.42
62:CZ:122:TYR:HD1	62:CZ:131:PHE:CD2	2.38	0.42
65:Cc:52:CYS:CB	65:Cc:92:CYS:SG	3.06	0.42
66:Cd:124:GLU:O	66:Cd:125:ASN:CB	2.67	0.42
68:Cf:46:ARG:HB2	68:Cf:106:TYR:OH	2.20	0.42
68:Cf:58:VAL:C	68:Cf:63:LYS:O	2.63	0.42
77:Co:33:LEU:O	77:Co:34:TYR:CB	2.67	0.42
79:Ct:14:SER:O	79:Ct:17:LEU:HB3	2.20	0.42
80:Cu:59:ILE:HG22	80:Cu:61:VAL:HG23	2.02	0.42
80:Cu:95:LYS:HD3	81:A2:4013:G:O6	2.20	0.42
81:A2:14:C:C1'	81:A2:15:A:P	3.08	0.42
81:A2:44:A:C2'	81:A2:45:U:H5'	2.50	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:A2:458:U:OP2	81:A2:463:C:N3	2.52	0.42
81:A2:691:G:H2'	81:A2:692:C:OP2	2.19	0.42
81:A2:693:G:H2'	81:A2:694:C:H6	1.85	0.42
81:A2:897:U:H3'	81:A2:897:U:H6	1.85	0.42
81:A2:1328:U:H2'	81:A2:1329:G:H8	1.84	0.42
81:A2:1708:A:H2'	81:A2:1709:U:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:2604:C:N4	81:A2:4609:G:H22	2.17	0.42
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:A2:3648: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:P	81:A2:4118:C:C6	3.10	0.42
81:A2:4258:A:C2'	81:A2:4259:U:H5'	2.50	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
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
2:AW:62:C:H4'	80:Cu:37:ASN:ND2	2.35	0.41
4:B1:382:C:C2'	4:B1:383:G:N2	2.83	0.41
4:B1:527:C:OP1	14:BJ:124:HIS:HB2	2.20	0.41
4:B1:572:U:C2'	4:B1:573:U:N3	2.83	0.41
4:B1:616:A:N1	4:B1:632:C:H1'	2.35	0.41
4:B1:616:A:N3	35:Be:12:VAL:HG21	2.34	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
4:B1:986:G:H22	19:BO:135:ILE:HD12	1.85	0.41
4:B1:1120:U:C6	4:B1:1120:U:C4'	3.03	0.41
4:B1:1245:G:H2'	4:B1:1246:A:H8	1.84	0.41
4:B1:1350:U:O3'	5:BA:110:ASN:HB2	2.20	0.41
4:B1:1458:G:N1	4:B1:1469:A:C6	2.88	0.41
4:B1:1543:U:C2	21:BQ:43:GLU:HG2	2.55	0.41
4:B1:1643:U:C2	4:B1:1644:C:C5	3.08	0.41
4:B1:1829:G:H2'	4:B1:1829:G:N3	2.35	0.41
4:B1:1839:U:H1'	4:B1:1863:A:N7	2.35	0.41
4:B1:1848:U:C6	4:B1:1848:U:H3'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:BC:196:ILE:HB	7:BC:223:TYR:HB2	2.01	0.41
9:BE:31:PRO:HG2	9:BE:38:LEU:HG	2.02	0.41
9:BE:133:VAL:O	9:BE:134:LYS:HB2	2.20	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
12:BH:59:ALA:CB	12:BH:91:HIS:HB2	2.49	0.41
12:BH:65:PRO:C	12:BH:67:PRO:HD2	2.45	0.41
18:BN:64:ARG:HB3	18:BN:64:ARG:HH11	1.85	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
34:Bd:12:ARG:O	34:Bd:12:ARG:HG2	2.20	0.41
40:CC:162:LYS:N	40:CC:166:GLU:OE2	2.52	0.41
40:CC:188:ARG:NH2	81:A2:2312:C:H42	2.17	0.41
43:CF:55:LYS:HZ3	81:A2:973:U:H2'	1.84	0.41
43:CF:90:ALA:HB1	43:CF:142:TRP:HE3	1.84	0.41
44:CG:63:LEU:HB3	50:CN:29:GLN:HE22	1.85	0.41
44:CG:76:VAL:HG22	44:CG:238:GLY:CA	2.50	0.41
46:CI:185:VAL:C	46:CI:187:GLU:N	2.76	0.41
48:CL:34:ARG:HH21	82:A3:30:U:P	2.42	0.41
48:CL:111:GLN:HB3	81:A2:510:C:C5'	2.48	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:16:CYS:HA	55:CS:59:GLY:HA2	2.02	0.41
55:CS:73:LEU:H	55:CS:73:LEU:HG	1.69	0.41
55:CS:82:LEU:C	55:CS:127:MET:HE2	2.45	0.41
55:CS:140:PRO:HA	55:CS:143:LYS:HB3	2.01	0.41
55:CS:169:THR:N	81:A2:4829:A:O4'	2.53	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
63:Ca:9:ARG:HH22	81:A2:2321:U:H2'	1.85	0.41
63:Ca:25:HIS:CD2	81:A2:1318:G:H22	2.38	0.41
63:Ca:114:LYS:HE3	81:A2:1479:A:C4	2.55	0.41
65:Cc:51:ASN:HB2	78:Cp:42:CYS:C	2.45	0.41
68:Cf:41:PHE:CE1	68:Cf:110:ILE:HD11	2.50	0.41
78:Cp:44:LYS:HE2	78:Cp:46:LYS:CE	2.50	0.41
80:Cu:94:ALA:HB1	80:Cu:121:VAL:HG21	2.02	0.41
81:A2:15:A:C2	82:A3:143:G:N2	2.89	0.41
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:A2:256:C:O2	81:A2:256:C:C3'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:331:C:O2	81:A2:331:C:O4'	2.38	0.41
81:A2:426:A:H3'	81:A2:427:C:H5	1.85	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:O2	81:A2:970:C:H2'	2.20	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:O2	81:A2:2280:U:H5"	2.19	0.41
81:A2:2395:A:C5	81:A2:2396:C:C5	3.08	0.41
81:A2:2862:A:H2'	81:A2:2863:U:C6	2.55	0.41
81:A2:3705:A:H2'	81:A2:3706:A:C8	2.55	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:A2:4455: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:A2:4651:A:C2	81:A2:4660:A:C4	3.07	0.41
81:A2:4659:U:H4'	81:A2:4660:A:H5"	2.02	0.41
81:A2:4825:G:N3	81:A2:4825:G:H2'	2.34	0.41
82:A3:3:A:C8	82:A3:3:A:C3'	3.03	0.41
82:A3:28:C:O2	82:A3:28:C:H2'	2.20	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
83:A4:24:C:P	83:A4:24:C:H6	2.43	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:B1:33:G:O6	4:B1:522:A:H2	2.03	0.41
4:B1:71:G:C2	4:B1:72:C:C1'	3.03	0.41
4:B1:145:G:N2	4:B1:146:G:N7	2.68	0.41
4:B1:168:C:H2'	4:B1:169:U:C6	2.54	0.41
4:B1:313:A:OP1	4:B1:313:A:C4'	2.68	0.41
4:B1:467:G:H8	4:B1:467:G:H5"	1.85	0.41
4:B1:528:A:C8	4:B1:528:A:O5'	2.72	0.41
4:B1:790:C:C6	4:B1:790:C:O5'	2.74	0.41
4:B1:846:G:H2'	9:BE:19:MET:SD	2.60	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1398:G:C2	37:Bg:61:GLY:HA2	2.55	0.41
4:B1:1420:G:OP2	4:B1:1420:G:C8	2.68	0.41
4:B1:1540:G:H5'	4:B1:1540:G:C8	2.51	0.41
4:B1:1649:U:H6	4:B1:1649:U:C3'	2.33	0.41
4:B1:1685:U:C6	4:B1:1686:G:C8	3.08	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
5:BA:40:LYS:HZ3	22:BR:101:ASP:HA	1.83	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:183:LYS:CE	27:BW:95:PRO:HA	2.50	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
11:BG:165:GLU:C	11:BG:167:LYS:N	2.79	0.41
13:BI:84:ASN:HB3	13:BI:87:ASN:O	2.20	0.41
13:BI:145:ILE:HA	13:BI:148:LYS:CE	2.50	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
24:BT:123:LEU:HD23	24:BT:123:LEU:N	2.35	0.41
31:Ba:23:CYS:HB2	31:Ba:74:CYS:HB3	2.01	0.41
33:Bc:43:ILE:H	33:Bc:64:GLU:HG3	1.85	0.41
37:Bg:240:CYS:HB3	37:Bg:291:TRP:NE1	2.34	0.41
37:Bg:283:PRO:CD	37:Bg:284:PRO:HD2	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
50:CN:195:ARG:CZ	81:A2:98:A:H4'	2.49	0.41
51:CO:129:LEU:HD23	81:A2:2032:U:H3'	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
62:CZ:9:LYS:CE	62:CZ:82:PRO:HB2	2.50	0.41
63:Ca:40:HIS:HA	81:A2:1660:G:H21	1.85	0.41
65:Cc:78:ASN:HB2	65:Cc:91:VAL:C	2.45	0.41
68:Cf:48:ALA:HB1	68:Cf:69:VAL:CG1	2.50	0.41
68:Cf:71:TRP:HE1	81:A2:4901:U:H4'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:Ct:122:LYS:HA	79:Ct:125:MET:HE3	2.02	0.41
80:Cu:121:VAL:C	80:Cu:124:PRO:HD2	2.45	0.41
81:A2:74:G:C2'	81:A2:75:G:O5'	2.69	0.41
81:A2:213:C:O2	81:A2:213:C:C2'	2.68	0.41
81:A2:230:U:H4'	81:A2:230:U:OP2	2.20	0.41
81:A2:333:G:C2	82:A3:33:G:N2	2.89	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:A2:736:G:N2	81:A2:902:G:H22	2.18	0.41
81:A2:743:C:H2'	81:A2:744:G:C8	2.55	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
81:A2:1068:C:H2'	81:A2:1069:G:C8	2.55	0.41
81:A2:1087:C:H6	81:A2:1087:C:H5"	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:A2:1658:A:H4'	81:A2:4354:A:N1	2.35	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
81:A2:2559:A:O2'	81:A2:2631:C:H1'	2.19	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:A2:2655: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:O5'	81:A2:4162:U:H6	2.03	0.41
81:A2:4320:U:H2'	81:A2:4321:U:C6	2.55	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
82:A3:58:G:OP2	82:A3:58:G:C8	2.69	0.41
83:A4:68:C:H3'	83:A4:69:U:H6	1.82	0.41
2:AW:32:U:O4'	10:BF:136:ARG:NH2	2.46	0.41
4:B1:59:U:C5	4:B1:501:C:H2'	2.55	0.41
4:B1:93:U:O2	4:B1:93:U:O4'	2.38	0.41
4:B1:130:G:H3'	4:B1:131:C:C5'	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:594: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:B1:1161:U:C5	4:B1:1162:C:C5	3.08	0.41
4:B1:1206:G:C6	4:B1:1693:G:C2	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:OP2	4:B1:1258:A:C4	2.73	0.41
4:B1:1283:C:O3'	4:B1:1284:A:C8	2.74	0.41
4:B1:1325:G:H8	4:B1:1325:G:OP2	2.02	0.41
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:B1:1513:C:H5'	34:Bd:9:SER:HB2	2.01	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:B1:1868:U:O2'	4:B1:1869:A:P	2.79	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:HG2	20:BP:51:ARG:O	2.21	0.41
21:BQ:38:PRO:HG2	24:BT:8:ASP:HA	2.01	0.41
23:BS:12:ILE:CB	47:CJ:119:TYR:HB2	2.50	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:36:ARG:O	27:BW:40:VAL:HG23	2.20	0.41
27:BW:104:LEU:HD23	27:BW:125:ILE:HA	2.03	0.41
28:BX:39:ASN:HB2	28:BX:40:PRO:HD2	2.02	0.41
32:Bb:34:ASP:O	32:Bb:79:PHE:HA	2.21	0.41
39:CB:9:PRO:CD	58:CV:48:ARG:HH12	2.32	0.41
39:CB:105:VAL:HG22	39:CB:153:MET:HE1	2.03	0.41
40:CC:55:SER:CB	81:A2:347:G:C5'	2.97	0.41
40:CC:77:PRO:HD3	81:A2:1501:G:OP1	2.20	0.41
40:CC:93:GLY:O	40:CC:99:GLY:HA3	2.20	0.41
40:CC:252:TRP:CH2	40:CC:260:LEU:HD11	2.55	0.41
41:CD:172:SER:C	41:CD:173:ILE:HG13	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:CD:262:LYS:H	41:CD:262:LYS:HG3	1.72	0.41
42:CE:160:LYS:CE	42:CE:183:ARG:HD3	2.51	0.41
47:CJ:19:LYS:HB3	47:CJ:133:VAL:HG11	2.03	0.41
47:CJ:110:GLN:O	47:CJ:111:GLU:CB	2.67	0.41
49:CM:43:THR:OG1	49:CM:45:VAL:HG12	2.20	0.41
49:CM:125:ASN:HA	49:CM:128:LYS:HB3	2.02	0.41
50:CN:3:ALA:O	50:CN:7:ILE:HG13	2.20	0.41
50:CN:157:LYS:HG3	50:CN:158:HIS:CD2	2.55	0.41
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
56:CT:81:LYS:CG	81:A2:4264:A:C2	3.04	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
63:Ca:40:HIS:CB	81:A2:1660:G:H21	2.34	0.41
68:Cf:4:ARG:C	81:A2:4711:U:O2'	2.62	0.41
69:Cg:77:ALA:O	69:Cg:78:TYR:HB2	2.20	0.41
71:Ci:33:LEU:CD2	71:Ci:34:THR:H	2.33	0.41
71:Ci:35:LYS:HB2	81:A2:267:C:OP2	2.20	0.41
77:Co:39:ARG:HD3	81:A2:286:A:C8	2.55	0.41
78:Cp:8:VAL:O	78:Cp:11:VAL:HB	2.20	0.41
80:Cu:21:PHE:CD1	81:A2:3942:G:O3'	2.73	0.41
81:A2:89:C:H5"	81:A2:285:G:H1'	2.03	0.41
81:A2:113:A:N1	81:A2:269:G:C6	2.88	0.41
81:A2:215:A:C4'	81:A2:216:G:C5'	2.97	0.41
81:A2:303:G:C8	81:A2:303:G:C3'	3.03	0.41
81:A2:367:A:C2	81:A2:368:A:C4	3.08	0.41
81:A2:402:G:C1'	81:A2:403:G:OP2	2.67	0.41
81:A2:457:A:C6	81:A2:676:G:N7	2.89	0.41
81:A2:959:C:OP1	81:A2:970:C:O2	2.38	0.41
81:A2:1046:G:C8	81:A2:1046:G:O5'	2.73	0.41
81:A2:1054:G:HO2'	81:A2:1055:G:H5'	1.84	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:A2:1294: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1922:A:O5'	81:A2:1922:A:C8	2.73	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:H6	81:A2:2633:U:O5'	2.03	0.41
81:A2:2839:G:C4	81:A2:3593:A:N7	2.87	0.41
81:A2:3686:A:N6	81:A2:3705:A:C5	2.89	0.41
81:A2:3733:U:H6	81:A2:3733:U:O5'	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:A2:4233:A:H8	81:A2:4233:A:H3'	1.84	0.41
81:A2:4237:G:N3	81:A2:4237:G:H2'	2.36	0.41
81:A2:4248:C:O2	81:A2:4281:U:H5'	2.20	0.41
81:A2:4253:U:O2	81:A2:4253:U:H2'	2.20	0.41
81:A2:4298:G:C6	81:A2:4335:C:H1'	2.54	0.41
81:A2:4328:G:H2'	81:A2:4328:G:N3	2.34	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:H5"	81:A2:4867:G:C8	2.53	0.41
82:A3:154:G:C2	82:A3:155:C:C2	3.08	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:P	4:B1:743:U:O4'	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:B1:924:G:H5"	18:BN:3:ARG:HD2	2.01	0.41
4:B1:958:G:C5'	4:B1:959:G:N7	2.84	0.41
4:B1:991:G:H5'	31:Ba:11:ALA:HB3	2.02	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:B1:1672: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
5:BA:30:LEU:HD23	5:BA:30:LEU:C	2.45	0.41
7:BC:250:TYR:HE2	27:BW:99:PHE:CZ	2.37	0.41
8:BD:70:THR:HG23	8:BD:84:VAL:O	2.21	0.41
9:BE:65:CYS:O	9:BE:78:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
27:BW:39:THR:O	27:BW:43:LYS:HG3	2.21	0.41
27:BW:104:LEU:O	27:BW:110:ILE:HG23	2.20	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
39:CB:325:GLU:OE2	81:A2:5007:C:H4'	2.20	0.41
40:CC:48:ASN:HA	81:A2:1352:A:C5'	2.51	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
45:CH:120:GLU:HG2	81:A2:4571:A:C2	2.55	0.41
48:CL:164:GLU:CD	48:CL:164:GLU:H	2.28	0.41
49:CM:23:LYS:CE	49:CM:43:THR:HB	2.50	0.41
49:CM:39:ASP:HB2	49:CM:47:ARG:HG3	2.01	0.41
51:CO:47:PHE:HA	51:CO:136:ALA:HB2	2.02	0.41
53:CQ:91:ARG:HA	63:Ca:76:ASP:OD1	2.20	0.41
55:CS:71:SER:HB3	55:CS:74:ARG:HB2	2.02	0.41
55:CS:99:ASP:OD2	55:CS:105:ALA:HA	2.21	0.41
57:CU:39:PHE:CE1	57:CU:43:LEU:HD11	2.56	0.41
80:Cu:59:ILE:HD13	80:Cu:145:MET:HB3	2.01	0.41
80:Cu:62:PHE:CD2	80:Cu:62:PHE:C	2.97	0.41
80:Cu:156:ARG:HG3	80:Cu:157:ARG:H	1.86	0.41
80:Cu:190:LYS:HD3	80:Cu:190:LYS:H	1.85	0.41
81:A2:153:G:H3'	81:A2:154:U:C5	2.56	0.41
81:A2:170:C:OP2	81:A2:170:C:H5	2.03	0.41
81:A2:174:G:C2	81:A2:253:C:N4	2.82	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:OP2	2.21	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
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
81:A2:1387:C:C5'	81:A2:1387:C:C6	2.99	0.41
81:A2:1558:C:O2'	81:A2:1559:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1631:U:H6	81:A2:1631:U:O5'	2.04	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:C8	81:A2:2307:G:OP2	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:N3	81:A2:2524:G:C2'	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:A2:3573: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:H8	81:A2:3843:G:P	2.44	0.41
81:A2:3926:U:H4'	81:A2:3927:G:OP1	2.18	0.41
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:C8	81:A2:4269:G:O5'	2.73	0.41
81:A2:4269:G:H8	81:A2:4269:G:O5'	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:N3	81:A2:4530:G:C2'	2.74	0.41
81:A2:4533:G:N1	81:A2:4681:G:O6	2.54	0.41
81:A2:4709:G:N2	81:A2:4905:U:C4	2.88	0.41
81:A2:4894:C:H5"	81:A2:4894:C:H6	1.85	0.41
82:A3:126:C:C5	82:A3:127:U:N3	2.88	0.41
1:AV:46:G:OP2	1:AV:46:G:H8	2.01	0.41
4:B1:211:G:C8	4:B1:211:G:C3'	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:B1:958:G:OP2	19:BO:39:ASP:HB3	2.21	0.41
4:B1:969:U:OP1	4:B1:969:U:H4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	4:B1:1239:U:H6	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:N3	4:B1:1764:G:C3'	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:B1:1864:U:HO2'	4:B1:1866:A:H2	1.54	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:HG2	10:BF:60:ARG:NH1	2.36	0.41
11:BG:145:PHE:O	11:BG:146:ASN:CB	2.68	0.41
11:BG:165:GLU:C	11:BG:167:LYS:H	2.27	0.41
12:BH:152:ARG:N	12:BH:152:ARG:HD3	2.35	0.41
13:BI:92:ARG:NH1	81:A2:2869:C:H1'	2.28	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
24:BT:19:ALA:O	24:BT:23:LYS:HG3	2.21	0.41
24:BT:102:ARG:HD3	24:BT:102:ARG:O	2.20	0.41
29:BY:114:MET:HG3	29:BY:122:LYS:HG3	2.02	0.41
38:CA:24:LYS:HE3	38:CA:49:ILE:HD13	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
39:CB:123:HIS:NE2	39:CB:124:LYS:HG2	2.36	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
44:CG:57:TRP:CD1	44:CG:65:ARG:HH12	2.39	0.41
46:CI:165:ILE:O	46:CI:165:ILE:HG13	2.21	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:43:PHE:CE1	53:CQ:47:VAL:HG21	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CQ:159:PRO:HB3	53:CQ:188:ASN:O	2.21	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
67:Ce:12:ILE:CD1	67:Ce:69:MET:HB3	2.36	0.41
67:Ce:85:LEU:HD11	67:Ce:114:ARG:HG3	2.02	0.41
68:Cf:106:TYR:CB	68:Cf:107:PRO:HD2	2.48	0.41
72:Cj:3:LYS:HD3	81:A2:3611:A:C8	2.56	0.41
78:Cp:53:GLY:HA2	78:Cp:67:GLY:O	2.21	0.41
79:Ct:80:THR:C	79:Ct:83:ASN:H	2.29	0.41
81:A2:154:U:O5'	81:A2:154:U:C6	2.74	0.41
81:A2:179:G:H5'	81:A2:179:G:H8	1.86	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
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:A2:1059: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:A2:1409: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:A2:1704:U:H2'	81:A2:1705:U:C6	2.54	0.41
81:A2:1821:A:O5'	81:A2:1821:A:C8	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:H2'	81:A2:2355:G:N3	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:N3	81:A2:2764:A:C2'	2.81	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:C6	81:A2:3727:U:C3'	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:C8	81:A2:3938:G:OP2	2.73	0.41
81:A2:3943:G:C4	81:A2:3944:C:C5	3.09	0.41
81:A2:4219:C:H6	81:A2:4219:C:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
82:A3:114:G:H2'	82:A3:114:G:N3	2.35	0.41
83:A4:90:A:C4	83:A4:91:C:H1'	2.54	0.41
83:A4:107:G:C8	83:A4:107:G:OP2	2.73	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:OP1	2.69	0.41
4:B1:59:U:H5	4:B1:501:C:H2'	1.86	0.41
4:B1:78:C:O2	4:B1:78:C:C2'	2.69	0.41
4:B1:342:C:H5"	4:B1:342:C:H6	1.85	0.41
4:B1:381:C:O5'	4:B1:381:C:C6	2.66	0.41
4:B1:569:A:O2'	29:BY:36:PRO:HA	2.20	0.41
4:B1:616:A:H1'	35:Be:12:VAL:HG23	2.03	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
4:B1:1036:A:C2'	4:B1:1037:G:H5'	2.51	0.41
4:B1:1057:C:O2	4:B1:1057:C:O4'	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
5:BA:62:ALA:CB	5:BA:185:MET:HE1	2.50	0.41
8:BD:205:PRO:HA	22:BR:42:PRO:HG2	2.03	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
21:BQ:133:GLY:C	21:BQ:140:ARG:HG2	2.45	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
30:BZ:71:ALA:O	30:BZ:75:GLU:HG2	2.20	0.41
32:Bb:33:MET:HG2	32:Bb:46:VAL:O	2.21	0.41
37:Bg:37:ASP:O	37:Bg:38:LYS:HB2	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
41:CD:23:ARG:HG2	81:A2:4240:A:C2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:CE:277:LEU:O	81:A2:4712:U:C2	2.73	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:9:VAL:HA	49:CM:27:ILE:O	2.21	0.41
49:CM:130:LEU:O	49:CM:134:ALA:N	2.43	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
65:Cc:54:ALA:HB2	81:A2:4087:U:C5	2.56	0.41
78:Cp:55:TRP:O	78:Cp:63:THR:HA	2.20	0.41
79:Ct:79:ARG:CD	81:A2:471:C:H4'	2.47	0.41
80:Cu:23:GLU:CD	80:Cu:202:THR:HB	2.46	0.41
81:A2:216:G:C4'	81:A2:217:C:OP1	2.59	0.41
81:A2:405:C:H4'	81:A2:405:C:OP1	2.20	0.41
81:A2:409:A:N1	82:A3:17:A:C1'	2.84	0.41
81:A2:438:C:C5	81:A2:438:C:OP2	2.73	0.41
81:A2:450:C:H2'	81:A2:451:C:C6	2.54	0.41
81:A2:642:C:C6	81:A2:643:G:O4'	2.73	0.41
81:A2:1279:G:C8	81:A2:1279:G:O5'	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:OP2	81:A2:1483:G:C8	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:A2:2262: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:H3'	81:A2:3604:A:C8	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
81:A2:4167:C:O4'	81:A2:4295:C:H1'	2.20	0.41
81:A2:4411:G:O5'	81:A2:4411:G:C8	2.64	0.41
81:A2:4529:U:C3'	81:A2:4530:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
81:A2:4825:G:C4'	81:A2:4826:C:OP1	2.67	0.41
81:A2:4953:G:H2'	81:A2:4954:G:C8	2.56	0.41
82:A3:25:G:O5'	82:A3:25:G:C8	2.73	0.41
83:A4:85:G:N2	83:A4:93:G:C4	2.88	0.41
3:AX:43:U:H3	10:BF:132:GLY:HA3	1.54	0.41
4:B1:9:U:O2	4:B1:12:U:C5	2.73	0.41
4:B1:66:G:N2	11:BG:158:VAL:HG21	2.35	0.41
4:B1:124:U:H2'	4:B1:125:C:OP1	2.21	0.41
4:B1:153:G:N1	4:B1:165:G:N2	2.65	0.41
4:B1:164:A:C3'	4:B1:165:G:H8	2.33	0.41
4:B1:378:U:H6	4:B1:378:U:O5'	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:H3'	4:B1:562:U:C6	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:B1:925:G:H2'	4:B1:925:G:N3	2.36	0.41
4:B1:979:C:OP2	4:B1:979:C:H6	2.04	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:B1:1320: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:B1:1568:C:N4	4:B1:1569:A:C6	2.89	0.41
4:B1:1745:A:C2	4:B1:1746:U:C5	3.09	0.41
5:BA:205:ARG:HD2	5:BA:205:ARG:HA	1.88	0.41
8:BD:106:ARG:HH22	8:BD:173:ARG:HG3	1.84	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
32:Bb:63:LEU:HD13	32:Bb:63:LEU:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:Be:23:GLU:OE2	35:Be:27:LYS:HE2	2.20	0.41
37:Bg:144:ASP:HB3	37:Bg:177:TRP:CE3	2.55	0.41
38:CA:186:TYR:HD1	38:CA:196:TRP:CH2	2.38	0.41
39:CB:20:LYS:HB2	81:A2:4528:A:P	2.61	0.41
39:CB:102:PHE:HZ	39:CB:156:TYR:O	2.02	0.41
39:CB:140:GLU:HG3	39:CB:140:GLU:O	2.20	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
42:CE:183:ARG:HB2	81:A2:4892:C:N3	2.36	0.41
43:CF:110:GLN:HG2	53:CQ:6:ARG:HE	1.84	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
53:CQ:126:LEU:C	53:CQ:126:LEU:HD13	2.46	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
64:Cb:41:ARG:HB3	81:A2:1794:G:C6	2.55	0.41
67:Ce:63:ASN:HB3	67:Ce:66:THR:OG1	2.21	0.41
68:Cf:49:TYR:O	68:Cf:69:VAL:HA	2.20	0.41
69:Cg:8:ARG:HH11	69:Cg:31:VAL:HG21	1.86	0.41
70:Ch:113:LEU:HG	70:Ch:113:LEU:H	1.75	0.41
73:Ck:19:ASP:HB3	73:Ck:38:CYS:SG	2.61	0.41
79:Ct:90:LEU:HA	79:Ct:93:ILE:CG2	2.48	0.41
80:Cu:15:ASP:O	80:Cu:17:PRO:HD3	2.21	0.41
80:Cu:32:ARG:HB3	80:Cu:196:ASP:CG	2.45	0.41
81:A2:14:C:O5'	81:A2:14:C:H2'	2.20	0.41
81:A2:69:A:H2	81:A2:70:A:HO2'	1.61	0.41
81:A2:98:A:O5'	81:A2:98:A:H8	2.02	0.41
81:A2:194:A:H8	81:A2:194:A:P	2.44	0.41
81:A2:240:A:H2'	81:A2:241:G:H8	1.72	0.41
81:A2:284:G:O2'	81:A2:288:U:C6	2.74	0.41
81:A2:463:C:H2'	81:A2:463:C:O2	2.20	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
81:A2:949:G:C3'	81:A2:950:A:H4'	2.40	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:A2:1648:A:H8	81:A2:1648:A:C5'	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1808:G:H2'	81:A2:1809:G:H5'	2.03	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:A2:3611: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:C8	81:A2:4296:A:C3'	3.04	0.41
81:A2:4332:U:OP2	81:A2:4332:U:H6	2.03	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:36:U:OP2	31:Ba:41:ILE:CD1	2.68	0.41
4:B1:93:U:C5	4:B1:94:G:H1'	2.56	0.41
4:B1:193:C:H5'	4:B1:193:C:C6	2.41	0.41
4:B1:219:U:C5'	4:B1:219:U:H6	2.33	0.41
4:B1:300:U:C2'	4:B1:301:A:C8	2.98	0.41
4:B1:301:A:O2'	13:BI:72:CYS:HA	2.21	0.41
4:B1:343:A:O5'	4:B1:343:A:C8	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:B1:840:C:H1'	29:BY:14:THR:OG1	2.21	0.41
4:B1:912:C:C6	4:B1:912:C:OP2	2.73	0.41
4:B1:955:A:N6	4:B1:971:G:N2	2.69	0.41
4:B1:1016:U:P	32:Bb:28:PRO:HB3	2.61	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:H6	4:B1:1403:C:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1481:G:H4'	34:Bd:56:ASP:CB	2.46	0.41
4:B1:1492:U:C4'	25:BU:70:CYS:SG	3.09	0.41
4:B1:1621:U:O2	4:B1:1621:U:C3'	2.68	0.41
4:B1:1731:A:C6	4:B1:1732:G:C6	3.09	0.41
6:BB:93:GLY:O	6:BB:94:LYS:HB2	2.20	0.41
6:BB:135:LEU:HD23	6:BB:135:LEU:H	1.85	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
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
19:BO:151:LEU:C	19:BO:151:LEU:HD23	2.46	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
35:Be:27:LYS:HG3	35:Be:28:LYS:N	2.34	0.41
38:CA:138:SER:HB2	38:CA:147:ARG:HB3	2.02	0.41
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:36:LYS:HD2	81:A2:954:G:H5"	2.03	0.41
43:CF:237:GLU:O	43:CF:240:ILE:HG22	2.21	0.41
44:CG:64:GLN:HG3	82:A3:151:G:H5'	2.02	0.41
44:CG:220:GLU:HA	44:CG:223:ARG:HE	1.86	0.41
46:CI:185:VAL:C	46:CI:187:GLU:H	2.27	0.41
49:CM:100:ARG:O	49:CM:104:MET:HG3	2.21	0.41
49:CM:114:LYS:HD3	49:CM:114:LYS:C	2.45	0.41
54:CR:124:TYR:OH	81:A2:2642:U:H3'	2.21	0.41
56:CT:33:ILE:O	56:CT:33:ILE:HG13	2.21	0.41
65:Cc:52:CYS:HA	65:Cc:53:PRO:HD2	1.90	0.41
70:Ch:7:ARG:HG3	70:Ch:8:ASP:N	2.36	0.41
78:Cp:5:THR:HB	78:Cp:8:VAL:HG22	2.03	0.41
78:Cp:11:VAL:O	78:Cp:13:LYS:N	2.53	0.41
78:Cp:49:ARG:HH22	81:A2:2716:C:C5'	2.33	0.41
80:Cu:203:THR:HG22	80:Cu:204:MET:CE	2.50	0.41
81:A2:116:G:N2	81:A2:118:C:H3'	2.36	0.41
81:A2:241:G:N2	81:A2:242:C:C4	2.88	0.41
81:A2:375:A:N6	81:A2:398:A:H61	2.19	0.41
81:A2:379:A:C8	81:A2:379:A:OP2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:423:U:C6	81:A2:423:U:C3'	3.03	0.41
81:A2:461:A:H5'	81:A2:462:A:OP2	2.21	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
81:A2:1079:C:H6	81:A2:1079:C:OP2	2.04	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:A2:1580:A:N7	81:A2:3612:A:N3	2.68	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:A2:2498:G:O4'	81:A2:2617:G:H1'	2.20	0.41
81:A2:2550:A:H2'	81:A2:2550:A:N3	2.36	0.41
81:A2:2586:G:O3'	81:A2:2663:G:N2	2.54	0.41
81:A2:2849:C:C6	81:A2:2849:C:O5'	2.74	0.41
81:A2:3580:A:H1'	81:A2:4971:A:O2'	2.20	0.41
81:A2:4175:C:OP1	81:A2:4175:C:H3'	2.21	0.41
81:A2:4198:G:C4	81:A2:4199:A:C8	3.09	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:A2:4627:C:O5'	81:A2:4627:C:H6	2.03	0.41
81:A2:4678:G:OP2	81:A2:4678:G:H8	2.04	0.41
81:A2:4714:G:O5'	81:A2:4714:G:C8	2.73	0.41
1:AV:12:U:H5"	81:A2:3725:A:O4'	2.20	0.41
1:AV:69:G:H5"	1:AV:69:G:H8	1.84	0.41
2:AW:31:A:C3'	2:AW:32:U:H5'	2.51	0.41
4:B1:15:U:O5'	4:B1:15:U:C6	2.72	0.41
4:B1:25:A:C2	4:B1:649:U:O2	2.74	0.41
4:B1:67:C:N4	11:BG:162:LEU:O	2.54	0.41
4:B1:85:A:OP1	29:BY:119:GLY:N	2.52	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:B1:172:U:P	4:B1:314:U:H2'	2.61	0.41
4:B1:190:G:C6	4:B1:191:A:N7	2.89	0.41
4:B1:337:C:O2	4:B1:337:C:H3'	2.21	0.41
4:B1:343:A:O2'	4:B1:344:U:P	2.79	0.41
4:B1:394:G:H5'	16:BL:81:LYS:NZ	2.36	0.41
4:B1:439:A:O2'	4:B1:440:G:H5'	2.21	0.41
4:B1:495:U:OP2	4:B1:495:U:H6	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:545:A:C8	4:B1:545:A:C3'	3.03	0.41
4:B1:555:A:O5'	4:B1:555:A:C8	2.74	0.41
4:B1:559:G:H5'	4:B1:560:A:OP2	2.21	0.41
4:B1:569:A:C4	4:B1:570:C:C6	3.09	0.41
4:B1:591:U:N3	35:Be:28:LYS:HA	2.36	0.41
4:B1:593:C:H4'	4:B1:594:A:OP1	2.21	0.41
4:B1:655:A:N7	4:B1:657:U:C5	2.89	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:B1:847:A:H5'	4:B1:848:U:OP2	2.21	0.41
4:B1:870:A:C5	4:B1:916:A:C6	3.09	0.41
4:B1:924:G:H2'	4:B1:925:G:O4'	2.21	0.41
4:B1:1035:A:OP2	4:B1:1035:A:H8	2.02	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:H8	4:B1:1142:G:P	2.44	0.41
4:B1:1173:A:OP1	76:Cn:17:ARG:NH2	2.54	0.41
4:B1:1208:A:C2	4:B1:1209:A:C5	3.09	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:B1:1448:A:H2'	4:B1:1449:G:C8	2.56	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:B1:1639:G:OP1	4:B1:1639:G:C4'	2.68	0.41
4:B1:1659:U:H6	4:B1:1660:C:O2	2.03	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:B1:1865:C:H2'	31:Ba:92:ARG:O	2.21	0.41
5:BA:13:GLU:O	5:BA:17:LYS:HG3	2.21	0.41
5:BA:16:LEU:HD13	5:BA:16:LEU:C	2.46	0.41
5:BA:108:PHE:HB2	5:BA:136:GLU:HB3	2.03	0.41
5:BA:120:ARG:HA	5:BA:120:ARG:HE	1.86	0.41
6:BB:115:LYS:H	6:BB:118:GLN:HE21	1.68	0.41
7:BC:59:GLU:HG2	7:BC:60:TRP:N	2.35	0.41
7:BC:171:GLY:O	7:BC:172:ASN:CB	2.69	0.41
8:BD:102:ALA:HB2	8:BD:186:VAL:HG21	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:BF:51:HIS:HA	10:BF:86:LYS:HZ3	1.85	0.41
10:BF:121:PRO:O	10:BF:141:VAL:HG21	2.21	0.41
14:BJ:28:GLU:O	14:BJ:31:LEU:HB3	2.20	0.41
24:BT:65:TYR:CE1	24:BT:128:GLN:OE1	2.73	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
33:Bc:42:ILE:CG2	33:Bc:43:ILE:N	2.83	0.41
35:Be:35:ARG:HG2	35:Be:39:ASN:ND2	2.36	0.41
37:Bg:8:ARG:HA	37:Bg:8:ARG:NE	2.36	0.41
38:CA:34:PHE:CB	81:A2:4055:G:H2'	2.51	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
39:CB:257:TRP:NE1	81:A2:4478:A:N7	2.67	0.41
40:CC:84:THR:HG22	40:CC:86:ARG:H	1.86	0.41
40:CC:193:LYS:HE2	81:A2:343:G:N7	2.36	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
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
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
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
46:CI:176:PHE:CE2	46:CI:184:MET:HE1	2.56	0.41
48:CL:110:LEU:O	48:CL:114:VAL:HG23	2.20	0.41
52:CP:45:THR:HG23	52:CP:92:LEU:CD1	2.49	0.41
53:CQ:17:GLU:CG	53:CQ:18:PRO:HD2	2.51	0.41
53:CQ:57:ASN:C	53:CQ:59:PRO:HD3	2.46	0.41
55:CS:68:PHE:HB3	81:A2:721:A:C4	2.56	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
56:CT:17:ARG:HA	56:CT:18:PRO:HD2	1.82	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
61:CY:112:ASP:HB3	82:A3:84:A:H61	1.85	0.41
62:CZ:25:ILE:HG23	62:CZ:41:ALA:HB1	2.02	0.41
62:CZ:89:ILE:HD11	62:CZ:93:LYS:HE2	2.02	0.41
63:Ca:7:LYS:O	63:Ca:11:LEU:HD23	2.20	0.41
64:Cb:36:ASP:HA	64:Cb:37:PRO:HD3	1.92	0.41
64:Cb:54:LEU:O	64:Cb:59:ALA:CB	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:Cc:54:ALA:HB1	81:A2:4087:U:OP1	2.21	0.41
66:Cd:32:ARG:HD3	66:Cd:48:GLU:CG	2.50	0.41
66:Cd:46:LEU:CD1	81:A2:2349:U:H4'	2.51	0.41
67:Ce:36:ARG:NH1	81:A2:2323:C:H4'	2.35	0.41
67:Ce:127:ALA:O	67:Ce:128:ARG:HB2	2.21	0.41
70:Ch:27:GLU:O	70:Ch:31:LEU:HD13	2.21	0.41
71:Ci:66:ASP:HA	71:Ci:69:ALA:HB3	2.02	0.41
79:Ct:87:ARG:HB2	81:A2:670:C:P	2.60	0.41
80:Cu:191:GLY:N	80:Cu:192:PRO:CD	2.84	0.41
81:A2:16:G:H2'	81:A2:17:A:O4'	2.21	0.41
81:A2:21:G:C1'	82:A3:103:A:H1'	2.51	0.41
81:A2:28:C:H3'	81:A2:28:C:C6	2.56	0.41
81:A2:119:G:H4'	81:A2:120:A:C1'	2.51	0.41
81:A2:270:A:OP2	81:A2:270:A:C8	2.74	0.41
81:A2:383:U:H6	81:A2:383:U:O5'	2.04	0.41
81:A2:402:G:H5"	81:A2:405:C:H1'	2.02	0.41
81:A2:423:U:H3'	81:A2:423:U:C6	2.54	0.41
81:A2:444:G:H4'	81:A2:445:U:H5'	2.03	0.41
81:A2:676:G:H5'	81:A2:677:C:OP1	2.20	0.41
81:A2:719:G:N2	81:A2:720:A:C4	2.88	0.41
81:A2:928:A:C1'	81:A2:929:U:P	3.09	0.41
81:A2:944:A:N3	81:A2:944:A:C2'	2.84	0.41
81:A2:1142:G:H2'	81:A2:1143:G:C8	2.56	0.41
81:A2:1154:G:H22	81:A2:1167:G:N2	2.19	0.41
81:A2:1161:C:C6	81:A2:1161:C:C4'	3.04	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:A2:1438:A:C8	81:A2:1438:A:OP2	2.73	0.41
81:A2:1475:G:H5"	81:A2:1476:A:P	2.61	0.41
81:A2:1652:U:H4'	81:A2:4262:U:C2	2.56	0.41
81:A2:1720:G:H3'	81:A2:1720:G:N3	2.36	0.41
81:A2:1743:G:C3'	81:A2:1744:A:H5'	2.50	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:A2:2328:C:H2'	81:A2:2329:U:C6	2.56	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:A2:2493:G:H5'	81:A2:2723:A:H2	1.86	0.41
81:A2:2497:C:O2	81:A2:2617:G:N2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:2554:C:H6	81:A2:2554:C:C5'	2.31	0.41
81:A2:2570:C:H6	81:A2:2570:C:O5'	2.04	0.41
81:A2:2587:G:C5'	81:A2:2663:G:N2	2.83	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:A2:3903:G:H2'	81:A2:3904:C:C6	2.55	0.41
81:A2:3942:G:H8	81:A2:3942:G:O5'	2.04	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:A2:4052:G:H3'	81:A2:4053:A:H4'	2.03	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:A2:4151:G:H8	81:A2:4151:G:C5'	2.34	0.41
81:A2:4184:A:H2'	81:A2:4185:G:O4'	2.21	0.41
81:A2:4262:U:H3'	81:A2:4262:U:C6	2.54	0.41
81:A2:4294:U:C6	81:A2:4294:U:C3'	3.04	0.41
81:A2:4310:C:H2'	81:A2:4311:U:C6	2.55	0.41
81:A2:4397:U:C6	81:A2:4397:U:H5'	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:C6	81:A2:4580:U:C3'	3.03	0.41
81:A2:4688:A:H4'	81:A2:4689:C:OP1	2.21	0.41
81:A2:4725:C:H5"	81:A2:4725:C:C6	2.56	0.41
81:A2:4818:G:C4	81:A2:4819:U:C5	3.09	0.41
81:A2:4824:U:OP2	81:A2:4825:G:C5	2.74	0.41
81:A2:4853:G:H2'	81:A2:4854:G:O4'	2.21	0.41
81:A2:4943:U:C2'	81:A2:4944:U:OP2	2.68	0.41
81:A2:4984:C:C6	81:A2:4984:C:H3'	2.56	0.41
82:A3:45:C:H2'	82:A3:46:G:O4'	2.21	0.41
83:A4:11:A:H2'	83:A4:66:G:N2	2.36	0.41
83:A4:12:U:C4'	83:A4:108:G:N2	2.84	0.41
83:A4:27:G:H2'	83:A4:27:G:N3	2.36	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
4:B1:18:C:O5'	4:B1:18:C:C6	2.74	0.41
4:B1:31:U:H2'	4:B1:32:U:O5'	2.21	0.41
4:B1:98:C:H4'	4:B1:99:A:OP1	2.21	0.41
4:B1:132:U:OP1	4:B1:133:C:C5	2.73	0.41
4:B1:157:U:O5'	4:B1:157:U:C6	2.73	0.41
4:B1:168:C:C4	4:B1:169:U:O4	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:1013: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
4:B1:1284:A:H4’	4:B1:1287:A:C6	2.56	0.41
4:B1:1325:G:C8	4:B1:1325:G:OP2	2.74	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:B1:1527:C:H5”	21:BQ:142:GLN:HB2	2.03	0.41
4:B1:1666:C:H5’	4:B1:1667:U:OP2	2.21	0.41
4:B1:1721:U:H4’	4:B1:1721:U:OP1	2.21	0.41
4:B1:1839:U:H6	4:B1:1839:U:H5”	1.86	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:38:ASN:O	19:BO:68:GLU:HG3	2.21	0.41
19:BO:150:ARG:O	19:BO:151:LEU:HB3	2.21	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
31:Ba:82:LYS:HE2	33:Bc:69:ARG:HH11	1.86	0.41
38:CA:233:ARG:HG3	38:CA:233:ARG:O	2.21	0.41
39:CB:57:VAL:CG1	39:CB:367:PHE:HB3	2.51	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
40:CC:136:LEU:HD23	79:Ct:10:VAL:HG13	2.03	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:54:ARG:NH1	45:CH:56:ARG:HD3	2.36	0.41
45:CH:105:ILE:O	45:CH:105:ILE:HG13	2.21	0.41
45:CH:162:GLN:HG3	45:CH:163:GLN:N	2.34	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:57:PRO:HG3	48:CL:76:PHE:HA	2.02	0.41
48:CL:134:PRO:HA	48:CL:135:LYS:HE3	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
53:CQ:11:ARG:HH21	81:A2:1820:G:H8	1.67	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
68:Cf:4:ARG:HD2	81:A2:4712:U:O4'	2.21	0.41
71:Ci:27:SER:O	71:Ci:28:ARG:CB	2.68	0.41
72:Cj:86:PRO:N	82:A3:67:U:H5"	2.36	0.41
80:Cu:58:THR:HG21	80:Cu:100:ASP:O	2.21	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:A2:741: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
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
81:A2:1825:C:H2'	81:A2:1825:C:O2	2.21	0.41
81:A2:2014:C:C5'	81:A2:2014:C:C6	3.03	0.41
81:A2:2281:U:C6	81:A2:2281:U:OP1	2.73	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:A2:4738:U:OP2	81:A2:4740:U:H5	2.03	0.41
81:A2:4740:U:H3'	81:A2:4740:U:C6	2.56	0.41
81:A2:4854:G:O2'	81:A2:4856:G:H5"	2.21	0.41
81:A2:4943:U:H3'	81:A2:4943:U:C6	2.56	0.41
83:A4:85:G:H2'	83:A4:85:G:N3	2.36	0.41
83:A4:101:A:H2'	83:A4:102:U:C6	2.56	0.41
83:A4:103:A:H2'	83:A4:103:A:N3	2.36	0.41
1:AV:29:G:H3'	1:AV:29:G:C8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:24:C:O2'	4:B1:415:A:H4'	2.21	0.40
4:B1:176:U:C4	4:B1:177:G:C2	3.09	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:B1:343: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
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:O5'	4:B1:1350:U:H6	2.04	0.40
4:B1:1367:U:H6	4:B1:1367:U:H3'	1.87	0.40
4:B1:1397:U:H6	4:B1:1397:U:C3'	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:H3'	4:B1:1662:U:H6	1.87	0.40
4:B1:1787:G:C2'	4:B1:1788:A:H8	2.27	0.40
5:BA:9:GLN:HB2	26:BV:83:PHE:CG	2.56	0.40
5:BA:26:GLY:HA2	5:BA:149:ASN:HD21	1.86	0.40
9:BE:169:ILE:O	9:BE:169:ILE:HG13	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
16:BL:99:TYR:OH	28:BX:17:ARG:HB2	2.20	0.40
19:BO:30:VAL:CG2	19:BO:47:LEU:HA	2.51	0.40
19:BO:99:ALA:O	19:BO:100:THR:C	2.63	0.40
19:BO:147:ARG:HH12	19:BO:150:ARG:HH11	1.69	0.40
20:BP:34:MET:O	20:BP:37:TYR:HB2	2.20	0.40
20:BP:34:MET:HA	20:BP:37:TYR:CD1	2.57	0.40
23:BS:52:LEU:N	23:BS:52:LEU:HD12	2.36	0.40
31:Ba:43:ASN:ND2	31:Ba:50:VAL:HG21	2.36	0.40
31:Ba:45:VAL:HG12	31:Ba:49:ALA:HB3	2.03	0.40
33:Bc:59:LEU:O	33:Bc:60:GLU:HB2	2.20	0.40
39:CB:128:LYS:HD2	81:A2:4922:A:OP2	2.21	0.40
39:CB:374:PHE:O	81:A2:4624:A:O3'	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:CC:55:SER:O	40:CC:56:GLU:CB	2.69	0.40
40:CC:75:ARG:HH22	81:A2:4351:G:P	2.44	0.40
40:CC:96:CYS:HA	81:A2:2329:U:H1'	2.03	0.40
40:CC:101:MET:HE3	81:A2:2320:G:C4	2.56	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
41:CD:41:LYS:CG	56:CT:67:VAL:HG13	2.51	0.40
42:CE:158:ARG:HE	81:A2:4903:C:C1'	2.34	0.40
42:CE:160:LYS:HA	81:A2:4837:U:C5	2.56	0.40
42:CE:172:LEU:CD2	81:A2:4897:C:H5"	2.51	0.40
42:CE:228:GLN:O	81:A2:1274:A:N7	2.53	0.40
45:CH:118:LEU:HD21	45:CH:177:ASP:HB2	2.03	0.40
48:CL:31:ARG:HD2	81:A2:328:U:H2'	2.02	0.40
49:CM:132:LYS:HE3	49:CM:136:LEU:HD11	2.03	0.40
51:CO:60:LYS:HZ2	81:A2:2024:G:H5'	1.83	0.40
53:CQ:63:LEU:HD11	53:CQ:109:ALA:HA	2.03	0.40
55:CS:175:PHE:CD1	81:A2:4824:U:N3	2.89	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
56:CT:129:LYS:HA	81:A2:1815:A:P	2.61	0.40
61:CY:1:MET:HG2	81:A2:1347:C:H5	1.85	0.40
62:CZ:133:LYS:NZ	62:CZ:133:LYS:HB3	2.36	0.40
72:Cj:15:THR:HG21	81:A2:1512:A:OP1	2.20	0.40
78:Cp:19:GLY:HA2	81:A2:3661:A:C2	2.56	0.40
79:Ct:51:VAL:HA	79:Ct:65:LYS:O	2.21	0.40
81:A2:87:A:O5'	81:A2:87:A:H8	2.04	0.40
81:A2:147:U:H5"	81:A2:149:U:O4'	2.21	0.40
81:A2:165:C:C2	81:A2:166:G:N7	2.89	0.40
81:A2:373:G:N1	81:A2:375:A:H3'	2.37	0.40
81:A2:460:C:O5'	81:A2:679:U:H4'	2.21	0.40
81:A2:656:G:C2'	81:A2:657:C:C5'	2.94	0.40
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:A2:895:U:H6	81:A2:895:U:H3'	1.86	0.40
81:A2:1081:C:C6	81:A2:1081:C:H5"	2.57	0.40
81:A2:1199:G:H2'	81:A2:1200:G:N7	2.34	0.40
81:A2:1231:C:H6	81:A2:1231:C:O5'	2.04	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:C6	81:A2:1459:C:C3'	3.04	0.40
81:A2:1606:G:H8	81:A2:1606:G:OP2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1706:U:H2'	81:A2:1707:U:C6	2.56	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:H8	81:A2:2793:G:O5'	2.03	0.40
81:A2:2828:G:H2'	81:A2:2829:U:O4'	2.21	0.40
81:A2:4067:G:O5'	81:A2:4067:G:H8	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:H6	81:A2:4189:U:C5'	2.28	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:A2:4616:A:C4'	81:A2:4617:U:O5'	2.66	0.40
81:A2:4638:G:O2'	81:A2:4639:G:H8	2.03	0.40
81:A2:4720:G:H3'	81:A2:4720:G:H8	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: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:B1:50:A:OP2	4:B1:472:C:N4	2.54	0.40
4:B1:67:C:H5	11:BG:162:LEU:HG	1.86	0.40
4:B1:212:C:C5	4:B1:212:C:OP2	2.74	0.40
4:B1:422:U:C6	4:B1:422:U:C5'	3.04	0.40
4:B1:479:C:H2'	4:B1:480:G:H5'	2.03	0.40
4:B1:600:G:H2'	4:B1:601:G:C8	2.55	0.40
4:B1:741:C:N4	4:B1:744:G:H1	2.19	0.40
4:B1:745:C:C6	12:BH:107:LYS:HD3	2.56	0.40
4:B1:872:A:H5"	4:B1:872:A:N3	2.35	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:B1:1336:C:H4'	34:Bd:44:ARG:NH2	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1680:G:H4'	33:Bc:20:ARG:HH12	1.80	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
15:BK:83:LEU:O	15:BK:84:HIS:HB3	2.21	0.40
25:BU:48:LEU:HD21	25:BU:97:ILE:CG2	2.52	0.40
36:Bf:130:VAL:HG11	36:Bf:141:CYS:SG	2.61	0.40
39:CB:90:VAL:HG11	39:CB:182:GLU:CD	2.45	0.40
39:CB:118:PHE:CE2	39:CB:130:PHE:CE1	3.10	0.40
40:CC:55:SER:C	40:CC:56:GLU:CG	2.88	0.40
40:CC:259:LYS:O	40:CC:263:LEU:HG	2.21	0.40
41:CD:33:ARG:HG2	56:CT:27:LEU:HD11	2.03	0.40
41:CD:191:ASN:HD22	41:CD:194:VAL:CG2	2.34	0.40
43:CF:48:LYS:HE3	81:A2:1221:C:OP2	2.20	0.40
46:CI:46:PHE:CB	46:CI:139:ARG:HB3	2.51	0.40
47:CJ:96:LYS:HD3	47:CJ:177:GLY:CA	2.51	0.40
47:CJ:109:ILE:HD11	47:CJ:130:PHE:HE2	1.87	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
62:CZ:1:MET:HA	65:Cc:68:LYS:HB3	2.03	0.40
62:CZ:14:LEU:CG	69:Cg:88:ARG:HG3	2.52	0.40
62:CZ:82:PRO:O	65:Cc:62:TYR:CE2	2.75	0.40
63:Ca:74:ASN:HD22	63:Ca:112:LEU:HB2	1.86	0.40
68:Cf:59:THR:HA	68:Cf:63:LYS:CA	2.36	0.40
69:Cg:5:LEU:HD13	69:Cg:32:TYR:CZ	2.56	0.40
69:Cg:54:ARG:HA	69:Cg:54:ARG:NH1	2.36	0.40
73:Ck:23:VAL:HG21	73:Ck:64:LEU:HD13	2.02	0.40
77:Co:105:GLN:O	77:Co:106:PHE:HB2	2.20	0.40
78:Cp:32:SER:HB2	78:Cp:69:TRP:HD1	1.87	0.40
79:Ct:79:ARG:HG2	79:Ct:80:THR:N	2.36	0.40
79:Ct:99:LYS:HA	79:Ct:99:LYS:HD2	1.79	0.40
79:Ct:120:SER:C	79:Ct:123:PRO:HD2	2.46	0.40
80:Cu:94:ALA:HB2	80:Cu:117:TYR:OH	2.20	0.40
81:A2:205:A:O4'	81:A2:229:G:C2	2.74	0.40
81:A2:210:G:H2'	81:A2:211:G:O4'	2.21	0.40
81:A2:237:G:C2	81:A2:238:G:H1'	2.56	0.40
81:A2:342:C:O2'	81:A2:346:A:N3	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:380:A:H2'	81:A2:381:C:OP2	2.21	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:O2	81:A2:1209:C:C3'	2.69	0.40
81:A2:1302:A:C8	81:A2:1306:A:N6	2.89	0.40
81:A2:1397:C:H6	81:A2:1397:C:O5'	2.04	0.40
81:A2:1401:G:C5	81:A2:1445:G:H1'	2.57	0.40
81:A2:1428:G:H2'	81:A2:1429:C:C6	2.53	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:A2:2522: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
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:A2:3866: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:72:C:C3'	1:AV:73:A:H5'	2.52	0.40
2:AW:56:C:H5	81:A2:4014:A:N6	2.12	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:B1:358:C:H2'	4:B1:359:U:O5'	2.21	0.40
4:B1:402:C:C6	4:B1:402:C:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B1:983:A:C5	4:B1:984:C:C6	3.09	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:C5'	4:B1:1609:C:H6	2.33	0.40
4:B1:1636:G:H1'	10:BF:164:ARG:NH2	2.34	0.40
4:B1:1673:U:OP1	21:BQ:76:GLY:HA3	2.22	0.40
7:BC:170:TRP:HZ3	14:BJ:61:LEU:CD2	2.34	0.40
8:BD:78:GLY:C	8:BD:80:PRO:HD3	2.47	0.40
11:BG:3:LEU:O	11:BG:15:LEU:HD22	2.21	0.40
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: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
16:BL:113:LEU:HD22	16:BL:114:SER:N	2.37	0.40
19:BO:56:VAL:HG21	19:BO:81:VAL:CG2	2.50	0.40
19:BO:116:LEU:HD23	19:BO:116:LEU:O	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: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
34:Bd:24:CYS:SG	34:Bd:42:CYS:SG	3.15	0.40
38:CA:152:SER:CB	81:A2:3630:G:N7	2.85	0.40
40:CC:190:ARG:HB2	40:CC:202:ILE:HG13	2.02	0.40
40:CC:291:ARG:NH2	81:A2:476:C:H42	2.20	0.40
41:CD:33:ARG:HE	56:CT:27:LEU:CD1	2.34	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
44:CG:173:LEU:CD2	71:Ci:43:MET:SD	3.09	0.40
45:CH:189:GLN:O	45:CH:190:ALA:HB2	2.22	0.40
47:CJ:19:LYS:HD2	47:CJ:75:ARG:NH2	2.37	0.40
47:CJ:144:LYS:HE2	47:CJ:146:ARG:O	2.22	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:21:ASN:OD1	52:CP:123:PRO:HD2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:131:ARG:HH21	81:A2:1575:U:H2'	1.86	0.40
54:CR:10:LEU:HG	54:CR:41:ILE:HG12	2.03	0.40
56:CT:7:LYS:HZ3	81:A2:4271:A:H1'	1.87	0.40
62:CZ:58:GLY:O	62:CZ:59:LYS:C	2.63	0.40
63:Ca:62:HIS:CG	63:Ca:62:HIS:O	2.70	0.40
66:Cd:115:LYS:HG3	66:Cd:116:ASN:N	2.35	0.40
72:Cj:11:ARG:NH1	81:A2:1513:A:C8	2.89	0.40
80:Cu:43:VAL:HG22	80:Cu:188:LEU:HG	2.03	0.40
81:A2:10:A:C1'	81:A2:2448:G:O6	2.70	0.40
81:A2:13:U:C4'	81:A2:14:C:OP2	2.68	0.40
81:A2:88:A:C2	81:A2:89:C:C6	3.09	0.40
81:A2:95:G:C8	81:A2:95:G:H5"	2.56	0.40
81:A2:220:G:H4'	81:A2:221:U:OP1	2.20	0.40
81:A2:340:A:H4'	81:A2:341:C:OP2	2.22	0.40
81:A2:347:G:N1	81:A2:351:A:OP2	2.55	0.40
81:A2:425:A:OP2	81:A2:3836:A:H4'	2.21	0.40
81:A2:426:A:O2'	81:A2:427:C:H5'	2.21	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:A2:956:C:O2'	81:A2:1218:A:O4'	2.38	0.40
81:A2:971:C:C6	81:A2:971:C:C3'	3.04	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:A2:1367:A:N6	81:A2:1377:A:N7	2.70	0.40
81:A2:1377:A:C1'	81:A2:1447:C:C4'	2.99	0.40
81:A2:1463:G:C8	81:A2:1463:G:O5'	2.75	0.40
81:A2:1517:U:O5'	81:A2:1517:U:C6	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:H5"	81:A2:1815:A:C8	2.57	0.40
81:A2:1873:G:HO2'	81:A2:1885:A:H1'	1.84	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:A2:2478:C:C6	81:A2:2478:C:C3'	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:A2:3885: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

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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:N3	81:A2:4595:A:H2'	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
81:A2:4924:C:O2	81:A2:4924:C:H2'	2.21	0.40
81:A2:4980:C:C2'	81:A2:4983:G:H5'	2.45	0.40
82:A3:103:A:C8	82:A3:104:A:C8	3.08	0.40
82:A3:107:C:C6	82:A3:107:C:C3'	3.05	0.40
82:A3:142:U:H6	82:A3:142:U:O5'	2.04	0.40
82:A3:156:U:C6	82:A3:156:U:C3'	3.04	0.40
83:A4:34:C:O2	83:A4:34:C:C2'	2.66	0.40
83:A4:63:C:C1'	83:A4:64:G:C5'	2.94	0.40
4:B1:204:G:H2'	4:B1:205:G:H5'	2.03	0.40
4:B1:301:A:C1'	13:BI:71:CYS:O	2.70	0.40
4:B1:467:G:OP2	4:B1:467:G:H8	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
4:B1:1015:U:H1'	32:Bb:49:HIS:ND1	2.37	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:H8	4:B1:1570:G:O5'	2.03	0.40
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
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:11:ARG:HG3	9:BE:25:GLY:O	2.21	0.40
9:BE:206:ASP:HB2	9:BE:222:LEU:CD1	2.51	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
13:BI:84:ASN:HD21	13:BI:97:VAL:CG2	2.34	0.40
13:BI:168:GLN:C	81:A2:4979:C:O2'	2.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:CA:199:VAL:HG21	81:A2:1609:A:H5"	2.03	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
40:CC:315:LYS:HE2	43:CF:155:TYR:O	2.22	0.40
41:CD:22:ARG:CG	41:CD:28:THR:OG1	2.63	0.40
41:CD:51:MET:HE2	41:CD:146:LEU:HD23	2.03	0.40
41:CD:207:TYR:CE2	83:A4:34:C:C6	3.10	0.40
44:CG:70:LEU:C	44:CG:70:LEU:HD13	2.47	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:98:ARG:N	81:A2:4826:C:N4	2.69	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
61:CY:91:ASN:HA	81:A2:380:A:C8	2.57	0.40
63:Ca:75:LEU:HD11	63:Ca:133:ALA:HA	2.02	0.40
72:Cj:49:TRP:CZ3	72:Cj:50:SER:HB3	2.56	0.40
75:Cm:93:LYS:HB3	75:Cm:103:LEU:O	2.22	0.40
76:Cn:21:ARG:O	76:Cn:25:LYS:N	2.55	0.40
79:Ct:75:THR:OG1	79:Ct:76:SER:N	2.54	0.40
80:Cu:58:THR:OG1	80:Cu:101:THR:HG23	2.22	0.40
81:A2:69:A:C2	81:A2:70:A:C4'	3.03	0.40
81:A2:202:C:N3	81:A2:206:U:H5	2.19	0.40
81:A2:205:A:O5'	81:A2:205:A:H8	2.04	0.40
81:A2:429:G:H2'	81:A2:430:G:H5'	2.02	0.40
81:A2:436:U:H2'	81:A2:437:C:OP1	2.21	0.40
81:A2:443:A:C5'	81:A2:444:G:OP1	2.70	0.40
81:A2:462:A:C4'	81:A2:463:C:C5'	2.79	0.40
81:A2:477:C:H5"	81:A2:478:G:O3'	2.22	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:A2:948: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
81:A2:1184:C:H6	81:A2:1184:C:O5'	2.05	0.40
81:A2:1278:C:C2'	81:A2:1279:G:H5'	2.51	0.40
81:A2:1307:C:H1'	81:A2:4408:G:N3	2.36	0.40
81:A2:1428:G:C5'	81:A2:1428:G:C8	3.04	0.40
81:A2:1448:C:C2'	81:A2:1449:G:H5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
81:A2:1481:G:C8	81:A2:1481:G:C3'	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
81:A2:1713:G:H8	81:A2:1713:G:OP2	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
81:A2:1811:G:H2'	81:A2:1812:U:C5'	2.52	0.40
81:A2:1824:G:H8	81:A2:1824:G:O5'	2.04	0.40
81:A2:1877:G:C4	81:A2:2254:G:C6	3.09	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:A2:2382: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:C6	81:A2:3690:U:O5'	2.73	0.40
81:A2:3757:C:C4	81:A2:3781:C:OP2	2.75	0.40
81:A2:3758:C:H3'	81:A2:3758:C:H6	1.87	0.40
81:A2:3876:G:H1'	81:A2:3877:A:OP1	2.21	0.40
81:A2:4150:U:C5	81:A2:4342:G:C8	3.09	0.40
81:A2:4197:C:H4'	81:A2:4287:C:O2	2.21	0.40
81:A2:4200:G:H3'	81:A2:4201:C:H6	1.85	0.40
81:A2:4417:U:O2'	81:A2:4418:C:H5'	2.21	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:A2:4737:C:C2	81:A2:4738:U:C5	3.09	0.40
82:A3:18:U:N3	82:A3:19:C:C4	2.90	0.40
82:A3:150:C:H6	82:A3:150:C:O5'	2.04	0.40
3:AX:42:U:C4	19:BO:151:LEU:HG	2.57	0.40
4:B1:4:C:H2'	4:B1:5:U:C5	2.53	0.40
4:B1:125:C:H42	4:B1:129:C:P	2.43	0.40
4:B1:175:A:C3'	4:B1:176:U:H5"	2.34	0.40
4:B1:189:U:OP2	4:B1:189:U:C5	2.74	0.40
4:B1:211:G:C8	4:B1:211:G:C4'	3.04	0.40
4:B1:576:A:P	4:B1:576:A:H3'	2.61	0.40
4:B1:746:C:H5'	12:BH:105:THR:HA	2.03	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:OP2	4:B1:977:C:H6	2.03	0.40
4:B1:1094:C:O2'	4:B1:1095:C:H5'	2.21	0.40
4:B1:1216:C:C5	4:B1:1645:C:OP2	2.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B1:1298:G:H5'	20:BP:77:LYS:HB3	2.04	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:B1:1691:U:O2'	4:B1:1692:U:C5	2.70	0.40
4:B1:1762:C:O5'	4:B1:1762:C:H6	2.04	0.40
4:B1:1825:A:C8	4:B1:1825:A:C3'	3.04	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:34:SER:C	10:BF:36:GLN:N	2.79	0.40
12:BH:10:LYS:N	12:BH:11:PRO:CD	2.85	0.40
13:BI:65:PHE:C	13:BI:73:THR:HG23	2.47	0.40
13:BI:119:LEU:HA	13:BI:120:PRO:HD2	1.98	0.40
13:BI:126:GLY:HA2	13:BI:135:GLU:CD	2.46	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
37:Bg:32:LEU:HB3	37:Bg:71:ILE:HD11	2.03	0.40
38:CA:227:ARG:HH22	81:A2:3629:C:H5'	1.87	0.40
39:CB:156:TYR:CD1	81:A2:4864:A:H5'	2.56	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
41:CD:150:LEU:HD12	47:CJ:146:ARG:HG3	2.02	0.40
41:CD:208:MET:HE3	41:CD:233:PRO:HG3	2.03	0.40
43:CF:48:LYS:HD3	81:A2:1220:G:H5'	1.98	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
47:CJ:89:VAL:HG22	47:CJ:114:ASP:CB	2.52	0.40
49:CM:2:VAL:CG1	49:CM:4:ARG:HG3	2.52	0.40
49:CM:15:VAL:O	49:CM:21:ALA:HA	2.22	0.40
49:CM:111:LYS:O	51:CO:197:LYS:HE3	2.22	0.40
50:CN:181:HIS:CE1	81:A2:284:G:C6	3.10	0.40
51:CO:181:ALA:C	51:CO:187:LYS:HZ2	2.30	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:CP:25:HIS:CD2	81:A2:2338:G:O6	2.74	0.40
52:CP:82:ARG:C	52:CP:84:PRO:HD3	2.46	0.40
54:CR:106:LEU:C	54:CR:120:TYR:HE2	2.28	0.40
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
69:Cg:47:GLY:N	81:A2:2573:G:H4'	2.37	0.40
75:Cm:83:ARG:O	75:Cm:87:GLN:HG3	2.22	0.40
79:Ct:14:SER:HB3	79:Ct:17:LEU:CB	2.50	0.40
80:Cu:195:ILE:HG23	80:Cu:195:ILE:O	2.22	0.40
81:A2:5:A:C6	81:A2:6:C:C5	3.09	0.40
81:A2:10:A:H1'	81:A2:2448:G:O6	2.21	0.40
81:A2:66:A:C8	81:A2:319:A:H1'	2.57	0.40
81:A2:113:A:H2'	81:A2:114:G:O4'	2.22	0.40
81:A2:407:U:C2	82:A3:17:A:N6	2.89	0.40
81:A2:496:G:H2'	81:A2:497:C:C6	2.57	0.40
81:A2:949:G:H8	81:A2:949:G:OP2	2.04	0.40
81:A2:1088:C:C3'	81:A2:1088:C:H6	2.23	0.40
81:A2:1305:C:C5	81:A2:3848:G:P	3.14	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
81:A2:1633:G:N2	81:A2:1656:U:C5'	2.82	0.40
81:A2:1645:C:H2'	81:A2:1646:G:H5'	2.04	0.40
81:A2:1876:C:OP1	81:A2:2049:A:H5"	2.22	0.40
81:A2:1897:G:C2	81:A2:2035:A:C8	3.10	0.40
81:A2:1942:A:C2'	81:A2:1943:G:C8	3.00	0.40
81:A2:2344:A:N1	81:A2:2765:U:O4	2.55	0.40
81:A2:2559:A:C6	81:A2:2658:G:H1'	2.56	0.40
81:A2:2575:A:H8	81:A2:2575:A:O5'	2.04	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
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:A2:4072: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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

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%)	14 51
6	BB	211/264 (80%)	176 (83%)	18 (8%)	17 (8%)	1 9
7	BC	220/293 (75%)	213 (97%)	2 (1%)	5 (2%)	5 28
8	BD	210/243 (86%)	201 (96%)	4 (2%)	5 (2%)	4 27
9	BE	255/263 (97%)	237 (93%)	13 (5%)	5 (2%)	6 31
10	BF	186/204 (91%)	163 (88%)	13 (7%)	10 (5%)	1 15
11	BG	230/249 (92%)	216 (94%)	5 (2%)	9 (4%)	2 19
12	BH	189/194 (97%)	178 (94%)	7 (4%)	4 (2%)	5 30
13	BI	205/208 (99%)	184 (90%)	14 (7%)	7 (3%)	3 21
14	BJ	177/194 (91%)	169 (96%)	5 (3%)	3 (2%)	7 36
15	BK	92/165 (56%)	84 (91%)	1 (1%)	7 (8%)	1 10
16	BL	144/158 (91%)	133 (92%)	5 (4%)	6 (4%)	2 17
17	BM	118/132 (89%)	111 (94%)	1 (1%)	6 (5%)	1 15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	BN	148/151 (98%)	138 (93%)	5 (3%)	5 (3%)	3 21
19	BO	135/151 (89%)	129 (96%)	3 (2%)	3 (2%)	5 29
20	BP	116/145 (80%)	106 (91%)	5 (4%)	5 (4%)	2 17
21	BQ	137/146 (94%)	129 (94%)	6 (4%)	2 (2%)	8 40
22	BR	105/135 (78%)	99 (94%)	4 (4%)	2 (2%)	6 32
23	BS	140/152 (92%)	125 (89%)	7 (5%)	8 (6%)	1 14
24	BT	141/145 (97%)	135 (96%)	4 (3%)	2 (1%)	9 40
25	BU	99/119 (83%)	95 (96%)	3 (3%)	1 (1%)	12 48
26	BV	81/83 (98%)	78 (96%)	1 (1%)	2 (2%)	4 26
27	BW	127/130 (98%)	118 (93%)	7 (6%)	2 (2%)	7 38
28	BX	132/143 (92%)	120 (91%)	5 (4%)	7 (5%)	1 15
29	BY	120/133 (90%)	114 (95%)	2 (2%)	4 (3%)	3 21
30	BZ	74/125 (59%)	71 (96%)	0	3 (4%)	2 18
31	Ba	94/115 (82%)	85 (90%)	5 (5%)	4 (4%)	2 17
32	Bb	78/84 (93%)	70 (90%)	8 (10%)	0	100 100
33	Bc	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	3 21
34	Bd	51/56 (91%)	44 (86%)	7 (14%)	0	100 100
35	Be	49/59 (83%)	43 (88%)	5 (10%)	1 (2%)	6 31
36	Bf	59/156 (38%)	53 (90%)	6 (10%)	0	100 100
37	Bg	312/317 (98%)	291 (93%)	14 (4%)	7 (2%)	5 29
38	CA	245/257 (95%)	236 (96%)	6 (2%)	3 (1%)	10 44
39	CB	394/403 (98%)	369 (94%)	11 (3%)	14 (4%)	2 20
40	CC	362/427 (85%)	338 (93%)	9 (2%)	15 (4%)	2 18
41	CD	288/297 (97%)	279 (97%)	4 (1%)	5 (2%)	7 36
42	CE	156/288 (54%)	141 (90%)	8 (5%)	7 (4%)	2 17
43	CF	232/248 (94%)	225 (97%)	3 (1%)	4 (2%)	7 36
44	CG	233/266 (88%)	217 (93%)	7 (3%)	9 (4%)	2 19
45	CH	190/192 (99%)	184 (97%)	3 (2%)	3 (2%)	7 38
46	CI	192/214 (90%)	187 (97%)	2 (1%)	3 (2%)	7 38
47	CJ	168/178 (94%)	153 (91%)	3 (2%)	12 (7%)	1 11
48	CL	198/211 (94%)	178 (90%)	9 (4%)	11 (6%)	1 14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
49	CM	138/215 (64%)	132 (96%)	4 (3%)	2 (1%)	9	40
50	CN	202/204 (99%)	193 (96%)	6 (3%)	3 (2%)	8	40
51	CO	194/203 (96%)	187 (96%)	4 (2%)	3 (2%)	8	40
52	CP	151/184 (82%)	141 (93%)	7 (5%)	3 (2%)	6	31
53	CQ	182/188 (97%)	169 (93%)	7 (4%)	6 (3%)	3	21
54	CR	181/196 (92%)	175 (97%)	3 (2%)	3 (2%)	7	36
55	CS	171/176 (97%)	158 (92%)	7 (4%)	6 (4%)	3	20
56	CT	157/160 (98%)	150 (96%)	4 (2%)	3 (2%)	6	32
57	CU	100/128 (78%)	97 (97%)	3 (3%)	0	100	100
58	CV	126/140 (90%)	119 (94%)	5 (4%)	2 (2%)	7	38
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%)	4	27
62	CZ	134/136 (98%)	125 (93%)	5 (4%)	4 (3%)	3	23
63	Ca	145/148 (98%)	134 (92%)	6 (4%)	5 (3%)	3	21
64	Cb	67/159 (42%)	60 (90%)	3 (4%)	4 (6%)	1	13
65	Cc	102/115 (89%)	99 (97%)	1 (1%)	2 (2%)	6	31
66	Cd	107/125 (86%)	103 (96%)	3 (3%)	1 (1%)	14	51
67	Ce	126/135 (93%)	117 (93%)	6 (5%)	3 (2%)	4	27
68	Cf	105/110 (96%)	96 (91%)	4 (4%)	5 (5%)	2	16
69	Cg	113/117 (97%)	103 (91%)	6 (5%)	4 (4%)	3	20
70	Ch	120/123 (98%)	112 (93%)	5 (4%)	3 (2%)	4	26
71	Ci	95/105 (90%)	85 (90%)	4 (4%)	6 (6%)	1	13
72	Cj	83/97 (86%)	75 (90%)	6 (7%)	2 (2%)	4	27
73	Ck	67/70 (96%)	64 (96%)	2 (3%)	1 (2%)	8	40
74	Cl	48/51 (94%)	46 (96%)	1 (2%)	1 (2%)	5	30
75	Cm	50/128 (39%)	48 (96%)	1 (2%)	1 (2%)	6	31
76	Cn	23/25 (92%)	23 (100%)	0	0	100	100
77	Co	104/106 (98%)	98 (94%)	4 (4%)	2 (2%)	6	32
78	Cp	89/92 (97%)	83 (93%)	3 (3%)	3 (3%)	3	21
79	Ct	128/137 (93%)	112 (88%)	9 (7%)	7 (6%)	1	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
80	Cu	208/210 (99%)	199 (96%)	6 (3%)	3 (1%)	9 40
All	All	11190/12898 (87%)	10477 (94%)	390 (4%)	323 (3%)	5 23

All (323) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
6	BB	76	ASN
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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 (i)

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

The Analysed column shows the number of residues for which the sidechain conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	BA	181/243 (74%)	177 (98%)	4 (2%)	45	64
6	BB	194/231 (84%)	182 (94%)	12 (6%)	16	38
7	BC	188/225 (84%)	179 (95%)	9 (5%)	23	44
8	BD	175/202 (87%)	164 (94%)	11 (6%)	16	37
9	BE	220/225 (98%)	207 (94%)	13 (6%)	18	39
10	BF	158/170 (93%)	152 (96%)	6 (4%)	29	50
11	BG	202/218 (93%)	196 (97%)	6 (3%)	36	57
12	BH	171/174 (98%)	170 (99%)	1 (1%)	78	83
13	BI	179/180 (99%)	167 (93%)	12 (7%)	15	36
14	BJ	160/168 (95%)	152 (95%)	8 (5%)	22	43
15	BK	85/136 (62%)	81 (95%)	4 (5%)	23	45
16	BL	133/142 (94%)	130 (98%)	3 (2%)	44	64
17	BM	102/108 (94%)	96 (94%)	6 (6%)	18	39
18	BN	130/131 (99%)	128 (98%)	2 (2%)	57	72
19	BO	107/119 (90%)	99 (92%)	8 (8%)	12	33
20	BP	107/130 (82%)	103 (96%)	4 (4%)	30	51
21	BQ	115/121 (95%)	111 (96%)	4 (4%)	32	53
22	BR	99/122 (81%)	92 (93%)	7 (7%)	13	35
23	BS	123/132 (93%)	115 (94%)	8 (6%)	15	37
24	BT	113/115 (98%)	106 (94%)	7 (6%)	16	38
25	BU	93/107 (87%)	87 (94%)	6 (6%)	15	37
26	BV	67/67 (100%)	67 (100%)	0	100	100
27	BW	112/113 (99%)	108 (96%)	4 (4%)	31	52
28	BX	108/115 (94%)	104 (96%)	4 (4%)	30	51
29	BY	107/115 (93%)	100 (94%)	7 (6%)	15	37
30	BZ	67/103 (65%)	62 (92%)	5 (8%)	12	33
31	Ba	83/98 (85%)	76 (92%)	7 (8%)	10	30
32	Bb	72/76 (95%)	68 (94%)	4 (6%)	19	40
33	Bc	55/62 (89%)	52 (94%)	3 (6%)	19	41
34	Bd	47/49 (96%)	44 (94%)	3 (6%)	16	37
35	Be	42/48 (88%)	39 (93%)	3 (7%)	13	35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
36	Bf	54/140 (39%)	51 (94%)	3 (6%)	19	40
37	Bg	272/275 (99%)	260 (96%)	12 (4%)	25	47
38	CA	189/199 (95%)	182 (96%)	7 (4%)	30	51
39	CB	344/349 (99%)	322 (94%)	22 (6%)	16	37
40	CC	302/348 (87%)	283 (94%)	19 (6%)	16	37
41	CD	244/250 (98%)	237 (97%)	7 (3%)	37	58
42	CE	143/252 (57%)	133 (93%)	10 (7%)	14	35
43	CF	203/215 (94%)	195 (96%)	8 (4%)	28	49
44	CG	199/223 (89%)	190 (96%)	9 (4%)	24	46
45	CH	171/171 (100%)	165 (96%)	6 (4%)	32	53
46	CI	170/181 (94%)	161 (95%)	9 (5%)	20	41
47	CJ	143/149 (96%)	137 (96%)	6 (4%)	26	48
48	CL	167/177 (94%)	157 (94%)	10 (6%)	17	39
49	CM	118/161 (73%)	113 (96%)	5 (4%)	26	48
50	CN	172/172 (100%)	167 (97%)	5 (3%)	37	58
51	CO	168/174 (97%)	165 (98%)	3 (2%)	51	68
52	CP	133/163 (82%)	126 (95%)	7 (5%)	20	41
53	CQ	162/165 (98%)	157 (97%)	5 (3%)	35	56
54	CR	161/175 (92%)	151 (94%)	10 (6%)	16	38
55	CS	155/157 (99%)	149 (96%)	6 (4%)	28	49
56	CT	139/140 (99%)	135 (97%)	4 (3%)	37	58
57	CU	91/115 (79%)	91 (100%)	0	100	100
58	CV	100/107 (94%)	100 (100%)	0	100	100
59	CW	55/126 (44%)	52 (94%)	3 (6%)	19	41
60	CX	107/133 (80%)	105 (98%)	2 (2%)	50	67
61	CY	119/135 (88%)	114 (96%)	5 (4%)	26	48
62	CZ	118/118 (100%)	114 (97%)	4 (3%)	32	54
63	Ca	120/121 (99%)	115 (96%)	5 (4%)	26	48
64	Cb	58/126 (46%)	57 (98%)	1 (2%)	53	69
65	Cc	88/97 (91%)	87 (99%)	1 (1%)	65	76
66	Cd	100/110 (91%)	97 (97%)	3 (3%)	36	57

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
67	Ce	115/121 (95%)	111 (96%)	4 (4%)	32 53
68	Cf	87/89 (98%)	77 (88%)	10 (12%)	5 18
69	Cg	98/100 (98%)	89 (91%)	9 (9%)	8 26
70	Ch	109/110 (99%)	105 (96%)	4 (4%)	30 51
71	Ci	82/89 (92%)	76 (93%)	6 (7%)	13 34
72	Cj	71/80 (89%)	69 (97%)	2 (3%)	38 60
73	Ck	64/65 (98%)	64 (100%)	0	100 100
74	Cl	47/48 (98%)	46 (98%)	1 (2%)	47 65
75	Cm	48/116 (41%)	45 (94%)	3 (6%)	16 37
76	Cn	24/24 (100%)	24 (100%)	0	100 100
77	Co	94/94 (100%)	90 (96%)	4 (4%)	26 47
78	Cp	74/75 (99%)	72 (97%)	2 (3%)	39 61
79	Ct	113/121 (93%)	108 (96%)	5 (4%)	25 47
80	Cu	177/177 (100%)	161 (91%)	16 (9%)	9 27
All	All	9763/10978 (89%)	9319 (96%)	444 (4%)	26 46

All (444) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	BA	8	LEU
5	BA	19	LEU
5	BA	68	ILE
5	BA	110	ASN
6	BB	23	ASP
6	BB	30	TRP
6	BB	46	LYS
6	BB	71	LEU
6	BB	79	VAL
6	BB	97	LEU
6	BB	131	ASP
6	BB	148	ASN
6	BB	176	VAL
6	BB	177	GLN
6	BB	216	LYS
6	BB	218	LEU
7	BC	137	VAL
7	BC	205	VAL

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Mol	Chain	Res	Type
7	BC	209	VAL
7	BC	240	THR
7	BC	252	THR
7	BC	256	TRP
7	BC	274	VAL
7	BC	276	THR
7	BC	278	THR
8	BD	3	VAL
8	BD	5	ILE
8	BD	16	ILE
8	BD	42	THR
8	BD	66	ILE
8	BD	84	VAL
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	101	LEU
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	173	ILE
9	BE	189	LEU
10	BF	47	LYS
10	BF	63	LYS
10	BF	68	ILE
10	BF	72	LEU
10	BF	103	LEU
10	BF	135	ARG
11	BG	24	LEU
11	BG	29	GLU
11	BG	34	THR
11	BG	133	LEU
11	BG	160	LYS

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Mol	Chain	Res	Type
11	BG	176	ILE
12	BH	111	LYS
13	BI	19	LYS
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	97	VAL
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	41	ARG
14	BJ	47	LYS
14	BJ	78	LEU
14	BJ	128	VAL
14	BJ	130	ILE
14	BJ	163	SER
15	BK	3	MET
15	BK	15	LEU
15	BK	70	TYR
15	BK	84	HIS
16	BL	69	ARG
16	BL	113	LEU
16	BL	146	THR
17	BM	52	LEU
17	BM	76	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

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Mol	Chain	Res	Type
19	BO	132	VAL
19	BO	135	ILE
19	BO	140	THR
20	BP	16	THR
20	BP	29	SER
20	BP	74	GLU
20	BP	86	LEU
21	BQ	39	LEU
21	BQ	72	VAL
21	BQ	100	VAL
21	BQ	105	LYS
22	BR	22	THR
22	BR	46	LEU
22	BR	58	MET
22	BR	71	ILE
22	BR	105	MET
22	BR	109	LEU
22	BR	118	GLN
23	BS	3	LEU
23	BS	5	ILE
23	BS	8	LYS
23	BS	31	THR
23	BS	45	LEU
23	BS	60	THR
23	BS	99	LEU
23	BS	139	THR
24	BT	5	THR
24	BT	28	LEU
24	BT	33	TRP
24	BT	39	LEU
24	BT	64	LEU
24	BT	87	VAL
24	BT	110	LEU
25	BU	24	LEU
25	BU	59	LYS
25	BU	61	LEU
25	BU	72	GLU
25	BU	104	ILE
25	BU	115	THR
27	BW	4	MET
27	BW	11	LEU
27	BW	20	ARG

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Mol	Chain	Res	Type
27	BW	98	GLN
28	BX	17	ARG
28	BX	31	HIS
28	BX	37	LYS
28	BX	81	ILE
29	BY	20	ARG
29	BY	21	LYS
29	BY	54	VAL
29	BY	84	LYS
29	BY	96	LEU
29	BY	99	LYS
29	BY	100	LYS
30	BZ	43	LYS
30	BZ	47	LEU
30	BZ	62	VAL
30	BZ	67	LEU
30	BZ	99	LEU
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	44	ARG
34	Bd	48	LYS
35	Be	18	LYS
35	Be	29	THR
35	Be	46	VAL
36	Bf	97	LYS
36	Bf	114	ILE
36	Bf	148	TYR
37	Bg	20	GLN
37	Bg	54	ILE

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Mol	Chain	Res	Type
37	Bg	64	HIS
37	Bg	94	THR
37	Bg	135	LEU
37	Bg	157	SER
37	Bg	164	ILE
37	Bg	189	ILE
37	Bg	255	SER
37	Bg	266	ILE
37	Bg	287	THR
37	Bg	289	LEU
38	CA	10	LYS
38	CA	45	VAL
38	CA	116	LEU
38	CA	149	LYS
38	CA	162	ASN
38	CA	177	LYS
38	CA	225	ILE
39	CB	3	HIS
39	CB	55	HIS
39	CB	73	VAL
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	248	LEU
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	345	LEU
39	CB	351	LEU
39	CB	352	LEU
39	CB	370	THR
40	CC	13	GLU
40	CC	24	LEU
40	CC	49	ARG

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Mol	Chain	Res	Type
40	CC	78	ARG
40	CC	100	ARG
40	CC	107	THR
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
40	CC	323	ARG
41	CD	81	HIS
41	CD	105	LEU
41	CD	126	THR
41	CD	155	THR
41	CD	177	THR
41	CD	262	LYS
41	CD	293	ARG
42	CE	137	VAL
42	CE	162	VAL
42	CE	172	LEU
42	CE	188	ARG
42	CE	189	THR
42	CE	197	THR
42	CE	208	ILE
42	CE	212	LEU
42	CE	217	PHE
42	CE	278	THR
43	CF	37	PHE
43	CF	44	LYS
43	CF	55	LYS
43	CF	83	VAL
43	CF	127	LYS
43	CF	199	LYS
43	CF	222	LYS
43	CF	226	HIS
44	CG	34	LYS

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Mol	Chain	Res	Type
44	CG	46	GLN
44	CG	55	VAL
44	CG	81	ASN
44	CG	136	LEU
44	CG	162	ASP
44	CG	163	PRO
44	CG	199	CYS
44	CG	218	LEU
45	CH	2	LYS
45	CH	20	LEU
45	CH	41	ILE
45	CH	45	LEU
45	CH	129	ARG
45	CH	188	GLN
46	CI	33	ILE
46	CI	39	LYS
46	CI	53	VAL
46	CI	96	VAL
46	CI	129	VAL
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	54	PRO
48	CL	55	ILE
48	CL	123	LYS
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	183	ARG
49	CM	2	VAL
49	CM	7	VAL
49	CM	45	VAL

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Mol	Chain	Res	Type
49	CM	78	GLN
49	CM	114	LYS
50	CN	5	LYS
50	CN	31	ARG
50	CN	36	LEU
50	CN	60	VAL
50	CN	174	LEU
51	CO	169	ARG
51	CO	187	LYS
51	CO	197	LYS
52	CP	2	VAL
52	CP	4	TYR
52	CP	64	ASN
52	CP	67	VAL
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
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	138	LEU
55	CS	4	SER
55	CS	7	LEU
55	CS	24	THR
55	CS	27	LEU
55	CS	73	LEU
55	CS	169	THR
56	CT	17	ARG
56	CT	68	THR
56	CT	84	ILE
56	CT	126	VAL

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Mol	Chain	Res	Type
59	CW	32	LEU
59	CW	33	ASN
59	CW	58	LYS
60	CX	79	PHE
60	CX	123	LYS
61	CY	8	THR
61	CY	36	LYS
61	CY	69	LYS
61	CY	70	VAL
61	CY	79	VAL
62	CZ	1	MET
62	CZ	89	ILE
62	CZ	133	LYS
62	CZ	136	PHE
63	Ca	8	THR
63	Ca	47	LYS
63	Ca	56	VAL
63	Ca	78	LEU
63	Ca	138	LYS
64	Cb	61	ASN
65	Cc	17	ARG
66	Cd	92	ARG
66	Cd	115	LYS
66	Cd	119	THR
67	Ce	13	VAL
67	Ce	54	LEU
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	63	LYS
68	Cf	73	LYS
68	Cf	89	ARG
68	Cf	101	ILE
68	Cf	102	ARG
68	Cf	107	PRO
69	Cg	4	ARG
69	Cg	5	LEU
69	Cg	22	LEU
69	Cg	36	LYS

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Mol	Chain	Res	Type
69	Cg	54	ARG
69	Cg	60	ARG
69	Cg	67	LEU
69	Cg	74	VAL
69	Cg	81	SER
70	Ch	43	LYS
70	Ch	49	VAL
70	Ch	113	LEU
70	Ch	118	LYS
71	Ci	33	LEU
71	Ci	34	THR
71	Ci	68	ARG
71	Ci	79	THR
71	Ci	87	ARG
71	Ci	90	LEU
72	Cj	19	CYS
72	Cj	83	THR
74	Cl	5	LYS
75	Cm	112	LYS
75	Cm	115	CYS
75	Cm	118	THR
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	61	VAL
79	Ct	77	TYR
79	Ct	81	THR
80	Cu	21	PHE
80	Cu	24	THR
80	Cu	30	ASN
80	Cu	34	LEU
80	Cu	53	THR
80	Cu	57	THR
80	Cu	60	VAL
80	Cu	101	THR
80	Cu	110	LEU
80	Cu	156	ARG

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Mol	Chain	Res	Type
80	Cu	163	VAL
80	Cu	188	LEU
80	Cu	190	LYS
80	Cu	193	LEU
80	Cu	197	THR
80	Cu	210	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (246) such sidechains are listed below:

Mol	Chain	Res	Type
5	BA	50	ASN
5	BA	70	ASN
5	BA	110	ASN
5	BA	193	HIS
5	BA	215	GLN
6	BB	40	ASN
6	BB	53	GLN
6	BB	148	ASN
6	BB	149	GLN
6	BB	157	GLN
6	BB	160	GLN
6	BB	177	GLN
7	BC	136	HIS
7	BC	267	GLN
7	BC	277	HIS
8	BD	4	GLN
8	BD	56	GLN
8	BD	57	ASN
8	BD	101	GLN
8	BD	174	HIS
8	BD	179	GLN
9	BE	36	HIS
9	BE	138	HIS
9	BE	188	ASN
9	BE	197	ASN
9	BE	230	ASN
10	BF	29	GLN
10	BF	95	HIS
10	BF	107	ASN
10	BF	137	GLN
10	BF	203	ASN
11	BG	65	GLN

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Mol	Chain	Res	Type
11	BG	81	HIS
11	BG	105	ASN
11	BG	186	GLN
12	BH	25	GLN
12	BH	97	GLN
12	BH	112	ASN
12	BH	168	HIS
12	BH	193	GLN
13	BI	22	HIS
13	BI	87	ASN
13	BI	168	GLN
14	BJ	124	HIS
15	BK	44	HIS
15	BK	84	HIS
16	BL	5	GLN
16	BL	19	ASN
16	BL	94	HIS
16	BL	112	HIS
17	BM	19	GLN
18	BN	62	GLN
19	BO	32	HIS
19	BO	43	HIS
19	BO	103	ASN
20	BP	35	GLN
21	BQ	48	GLN
21	BQ	86	GLN
22	BR	26	ASN
22	BR	62	GLN
23	BS	73	ASN
23	BS	85	ASN
23	BS	87	GLN
24	BT	11	GLN
24	BT	51	ASN
24	BT	63	HIS
24	BT	91	HIS
24	BT	126	GLN
24	BT	137	GLN
25	BU	100	GLN
26	BV	2	GLN
27	BW	82	GLN
27	BW	90	GLN
27	BW	113	HIS

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Mol	Chain	Res	Type
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	89	GLN
31	Ba	19	GLN
31	Ba	43	ASN
31	Ba	86	ASN
33	Bc	24	GLN
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	140	ASN
38	CA	209	HIS
38	CA	215	ASN
39	CB	25	HIS
39	CB	167	GLN
39	CB	208	ASN
39	CB	213	GLN
39	CB	328	ASN
39	CB	354	GLN
40	CC	43	ASN
40	CC	50	GLN
40	CC	112	HIS
40	CC	187	GLN
40	CC	203	GLN
40	CC	278	ASN
40	CC	317	ASN

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Mol	Chain	Res	Type
40	CC	329	ASN
40	CC	347	HIS
40	CC	362	GLN
41	CD	131	ASN
41	CD	191	ASN
41	CD	244	HIS
41	CD	291	GLN
42	CE	135	GLN
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	131	ASN
43	CF	151	ASN
43	CF	192	HIS
43	CF	239	GLN
44	CG	81	ASN
44	CG	108	GLN
44	CG	195	HIS
45	CH	15	ASN
46	CI	14	ASN
46	CI	51	HIS
46	CI	59	GLN
46	CI	130	HIS
46	CI	144	ASN
46	CI	177	ASN
46	CI	213	HIS
47	CJ	97	ASN
47	CJ	112	HIS
47	CJ	167	GLN
47	CJ	168	GLN
48	CL	19	GLN
48	CL	111	GLN
48	CL	149	GLN
48	CL	159	ASN
48	CL	188	ASN
49	CM	33	GLN
49	CM	34	ASN
49	CM	69	HIS
49	CM	78	GLN

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Mol	Chain	Res	Type
49	CM	131	GLN
50	CN	29	GLN
50	CN	109	HIS
50	CN	158	HIS
50	CN	181	HIS
50	CN	201	HIS
51	CO	42	ASN
51	CO	180	GLN
51	CO	184	ASN
51	CO	199	HIS
52	CP	25	HIS
52	CP	54	GLN
52	CP	64	ASN
52	CP	80	GLN
52	CP	93	HIS
52	CP	120	ASN
53	CQ	40	ASN
54	CR	39	GLN
54	CR	40	GLN
54	CR	118	HIS
54	CR	141	HIS
55	CS	50	GLN
55	CS	66	GLN
55	CS	91	HIS
55	CS	108	GLN
55	CS	117	HIS
55	CS	122	HIS
55	CS	125	GLN
55	CS	146	HIS
55	CS	156	HIS
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	36	ASN
58	CV	84	GLN
59	CW	48	GLN
59	CW	63	GLN

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Mol	Chain	Res	Type
60	CX	93	ASN
60	CX	107	HIS
60	CX	111	GLN
60	CX	125	ASN
61	CY	66	GLN
61	CY	72	GLN
62	CZ	132	GLN
63	Ca	17	HIS
63	Ca	40	HIS
63	Ca	67	GLN
64	Cb	42	ASN
64	Cb	50	ASN
64	Cb	60	ASN
65	Cc	15	ASN
66	Cd	125	ASN
67	Ce	43	ASN
67	Ce	126	ASN
68	Cf	21	GLN
68	Cf	65	ASN
69	Cg	3	GLN
69	Cg	100	GLN
70	Ch	20	GLN
70	Ch	62	ASN
70	Ch	68	ASN
70	Ch	101	ASN
71	Ci	20	ASN
71	Ci	26	HIS
71	Ci	36	HIS
71	Ci	80	HIS
72	Cj	13	ASN
72	Cj	30	GLN
73	Ck	28	ASN
75	Cm	84	GLN
75	Cm	87	GLN
75	Cm	90	ASN
76	Cn	22	GLN
77	Co	45	GLN
77	Co	51	GLN
77	Co	102	GLN
78	Cp	56	HIS
79	Ct	21	ASN
79	Ct	23	GLN

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Mol	Chain	Res	Type
80	Cu	3	GLN
80	Cu	37	ASN
80	Cu	55	GLN
80	Cu	194	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AV	75/76 (98%)	37 (49%)	2 (2%)
2	AW	75/76 (98%)	33 (44%)	5 (6%)
3	AX	27/28 (96%)	15 (55%)	4 (14%)
4	B1	1738/1869 (92%)	1042 (59%)	152 (8%)
81	A2	3605/5025 (71%)	2052 (56%)	325 (9%)
82	A3	156/194 (80%)	81 (51%)	6 (3%)
83	A4	118/121 (97%)	69 (58%)	9 (7%)
All	All	5794/7389 (78%)	3329 (57%)	503 (8%)

All (3329) 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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	148	U
4	B1	150	A
4	B1	151	C
4	B1	152	U

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	370	G
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	1114	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1309	C
4	B1	1310	U
4	B1	1311	C
4	B1	1312	G
4	B1	1313	A
4	B1	1314	U
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	371	U
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
81	A2	1616	A
81	A2	1617	A
81	A2	1619	C
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	1803	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

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Mol	Chain	Res	Type
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	1837	C
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	2034	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	2349	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
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

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Mol	Chain	Res	Type
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	2406	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	3821	A
81	A2	3822	U
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

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Mol	Chain	Res	Type
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	3865	C
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	90	A
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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 (i)

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	28,31,32	1.86	4 (14%)	38,44,47	2.41	8 (21%)

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	-	6/15/33/34	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-C14	5.90	1.50	1.32
2	AW	37	MIA	C2-S10	4.42	1.79	1.75
2	AW	37	MIA	C12-C13	-2.87	1.33	1.47
2	AW	37	MIA	C5-C4	2.45	1.43	1.39

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	AW	37	MIA	C11-S10-C2	11.37	110.78	102.25
2	AW	37	MIA	C12-C13-C14	-3.61	120.54	127.01
2	AW	37	MIA	C5-C6-N6	3.56	128.89	122.03
2	AW	37	MIA	C5-C4-N3	3.28	130.63	127.18
2	AW	37	MIA	C5-C4-N9	-2.87	102.69	105.81
2	AW	37	MIA	N6-C6-N1	-2.37	115.16	118.33
2	AW	37	MIA	C2-N3-C4	-2.10	106.80	112.29
2	AW	37	MIA	S10-C2-N3	-2.00	109.13	116.04

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
2	AW	37	MIA	N1-C2-S10-C11
2	AW	37	MIA	N3-C2-S10-C11

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Mol	Chain	Res	Type	Atoms
2	AW	37	MIA	O4'-C4'-C5'-O5'
2	AW	37	MIA	C3'-C4'-C5'-O5'
2	AW	37	MIA	N6-C12-C13-C14
2	AW	37	MIA	C12-C13-C14-C15

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 oligosaccharides in this entry.

5.6 Ligand geometry (i)

There are no ligands in this entry.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

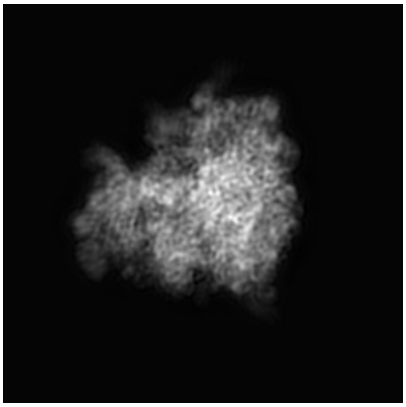
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-2620. These allow visual inspection of the internal detail of the map and identification of artifacts.

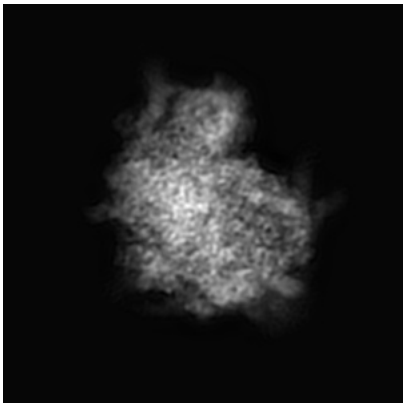
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

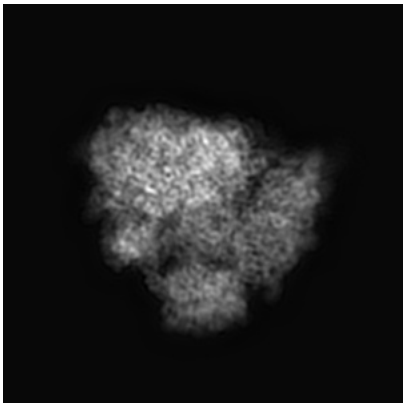
6.1.1 Primary map



X



Y

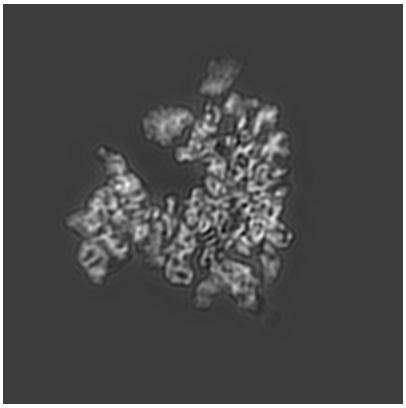


Z

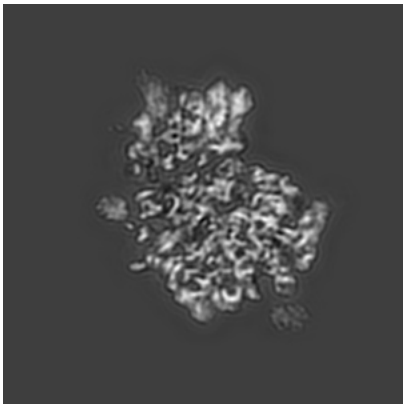
The images above show the map projected in three orthogonal directions.

6.2 Central slices

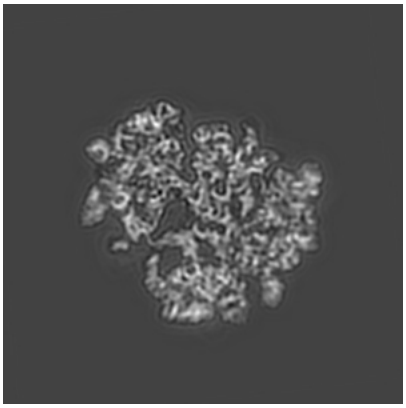
6.2.1 Primary map



X Index: 180



Y Index: 180

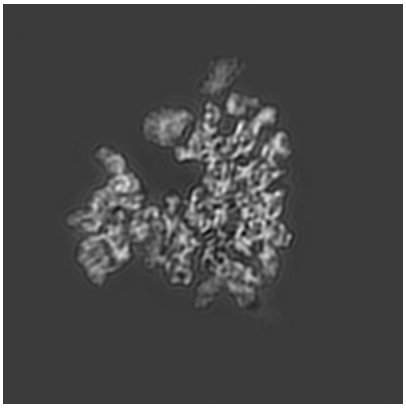


Z Index: 180

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

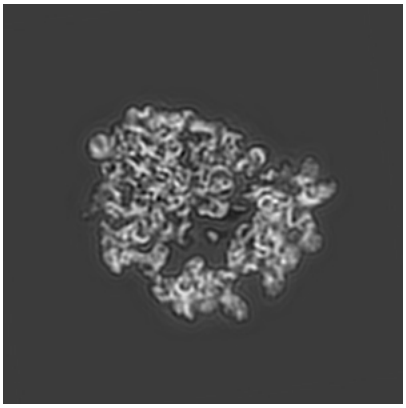
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 182

Y Index: 217

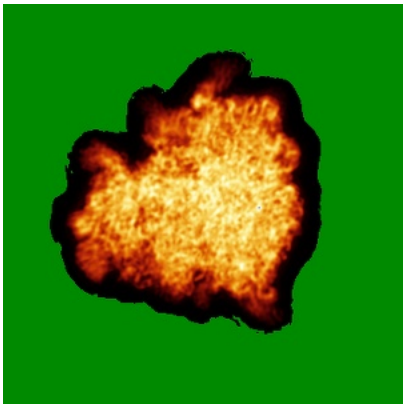


Z Index: 190

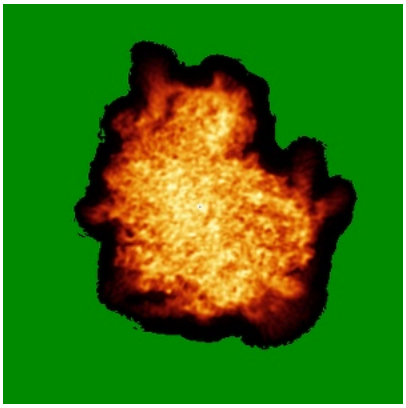
The images above show the largest variance slices of the map in three orthogonal directions.

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

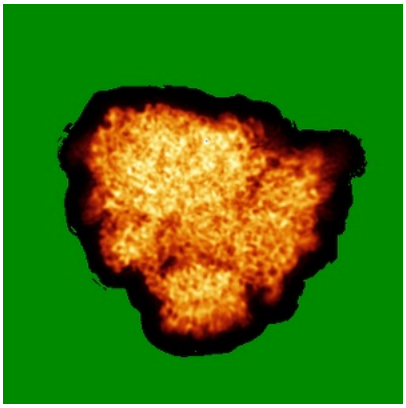
6.4.1 Primary map



X



Y

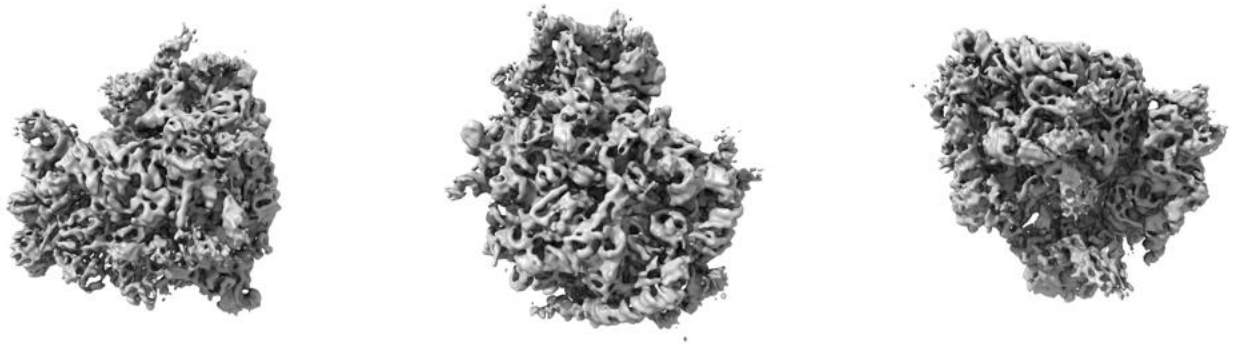


Z

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

6.5 Orthogonal surface views (i)

6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 3.5. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

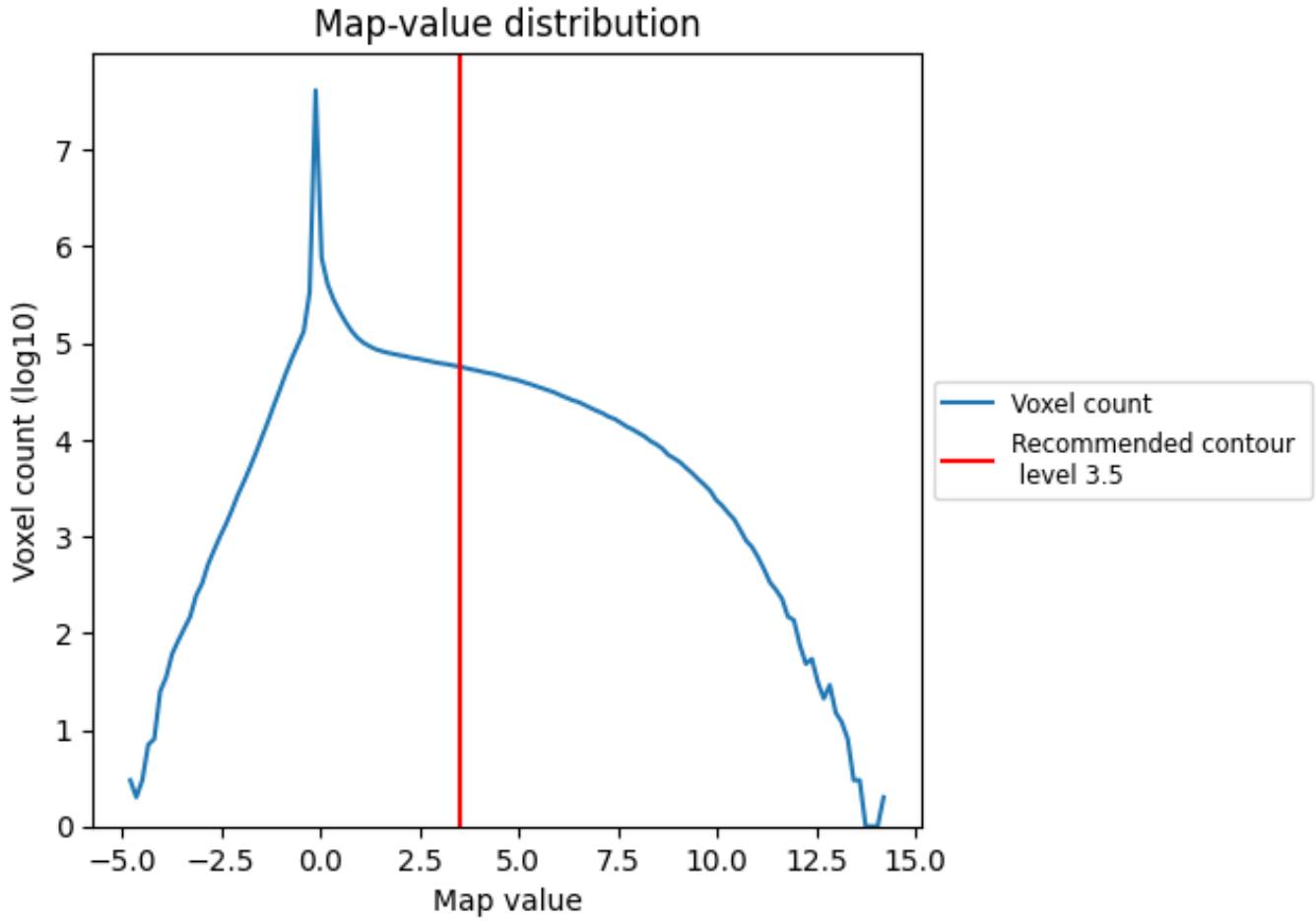
6.6 Mask visualisation (i)

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

7 Map analysis

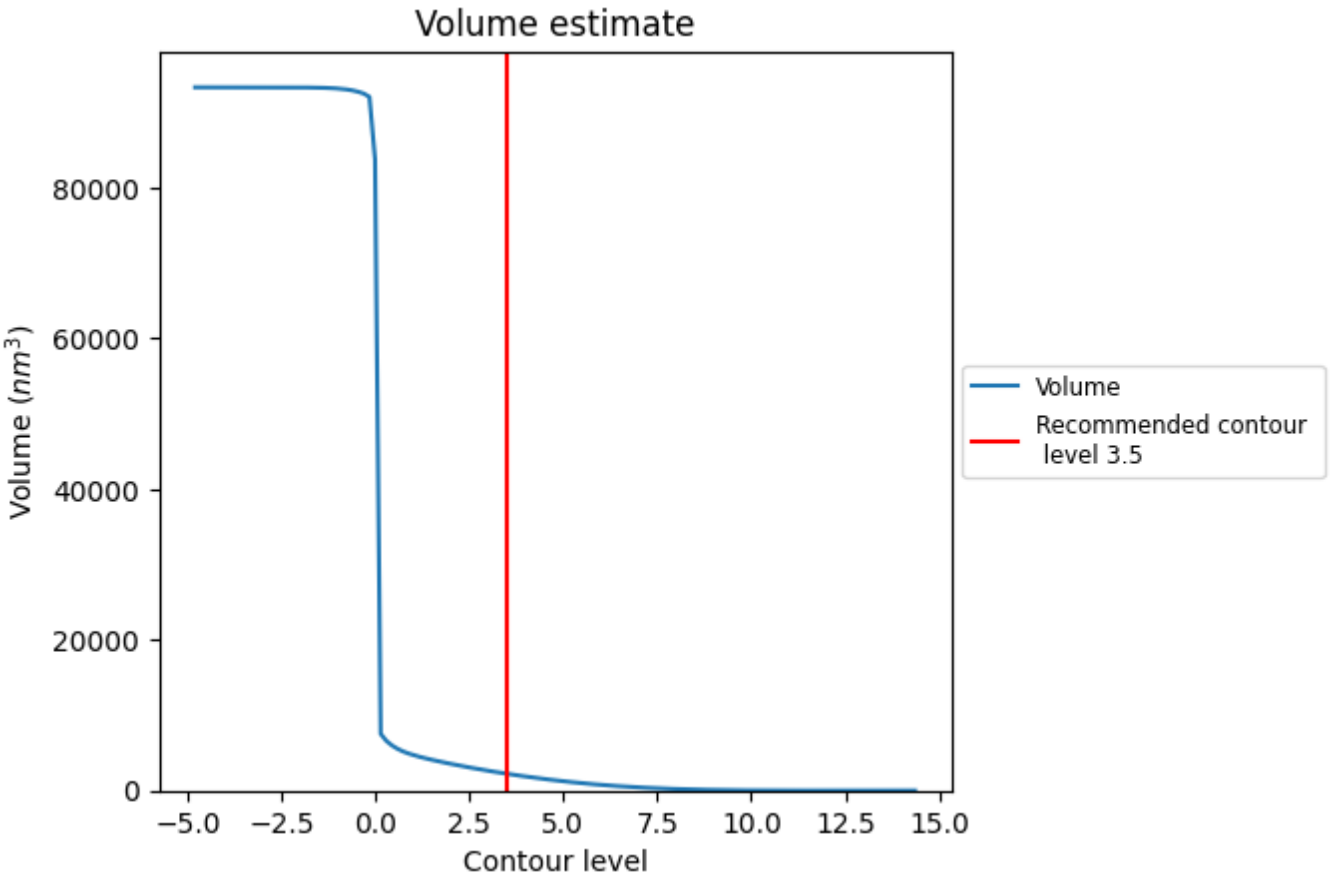
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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

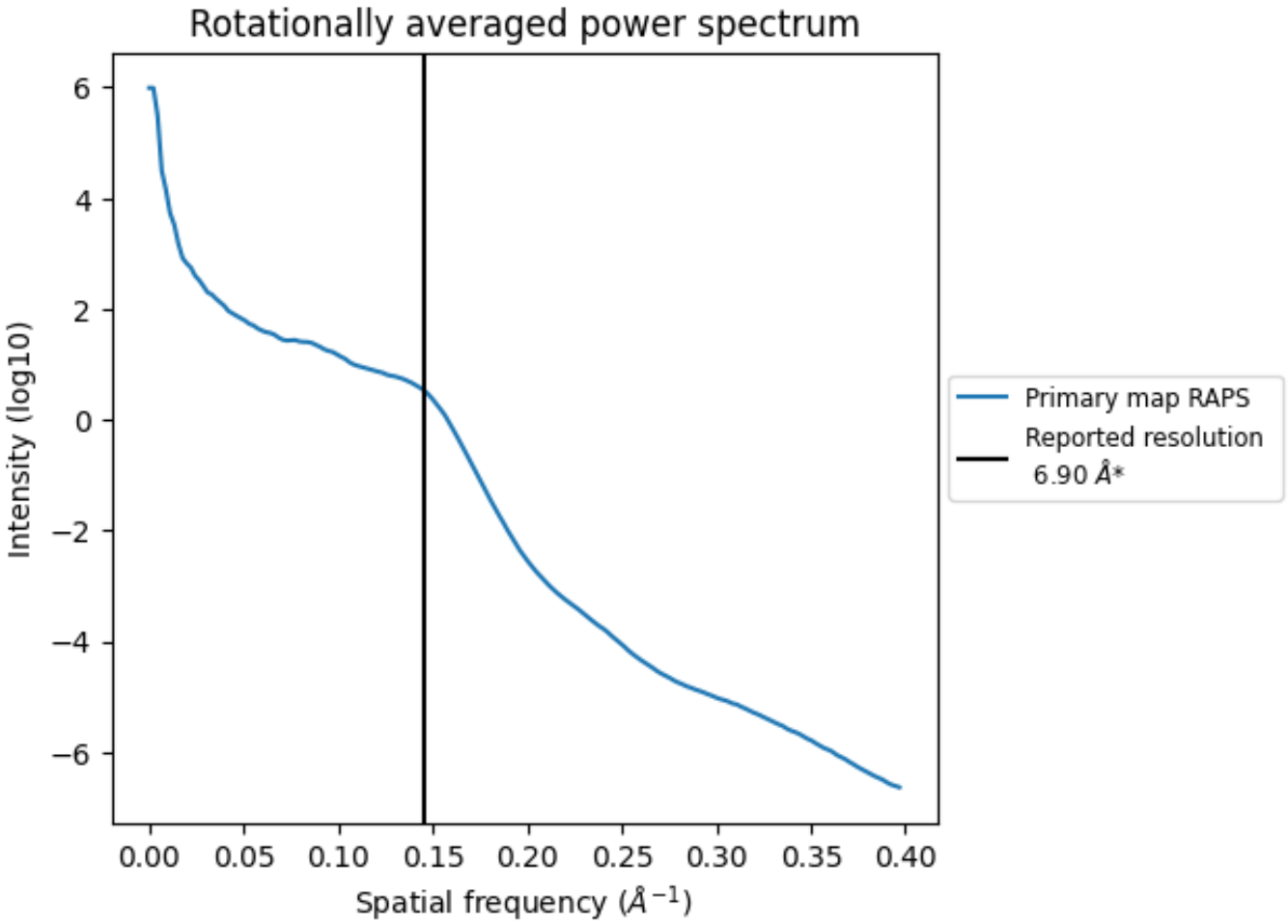
7.2 Volume estimate



The volume at the recommended contour level is 2230 nm^3; this corresponds to an approximate mass of 2014 kDa.

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

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.145 Å^{-1}

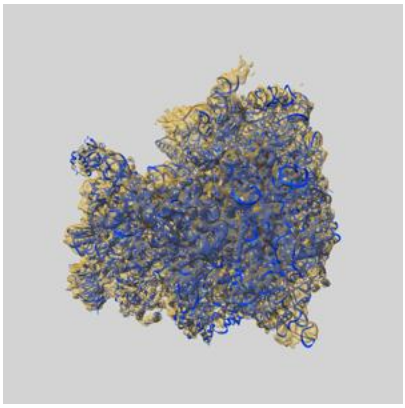
8 Fourier-Shell correlation

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

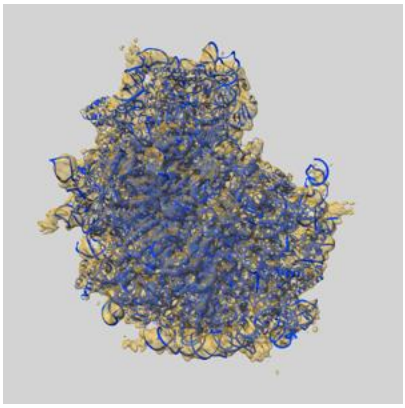
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-2620 and PDB model 4UJE. Per-residue inclusion information can be found in section 3 on page 19.

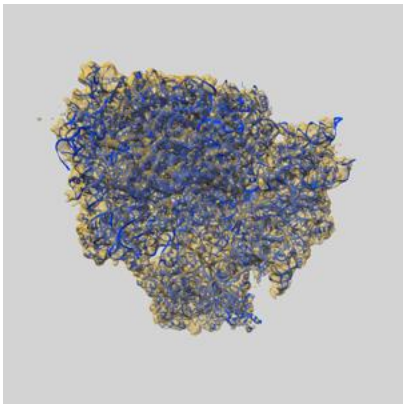
9.1 Map-model overlay



X



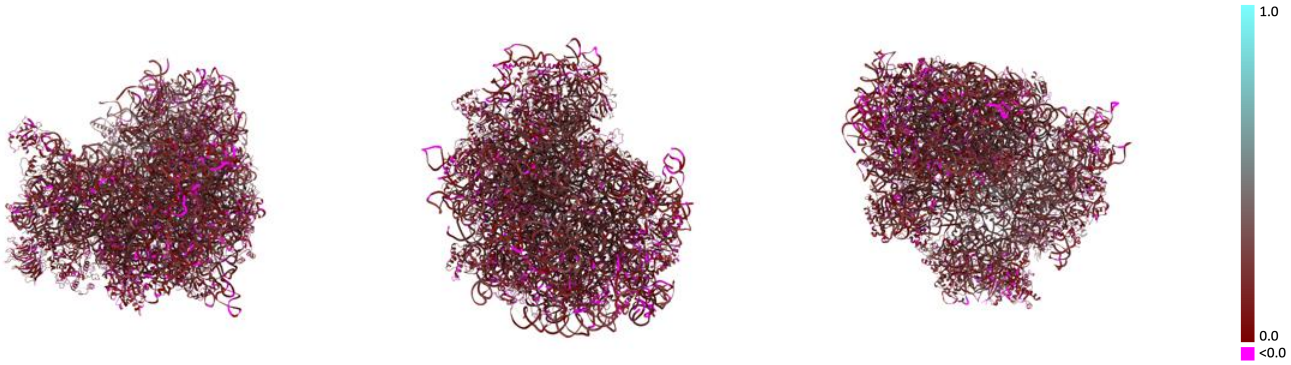
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3.5 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

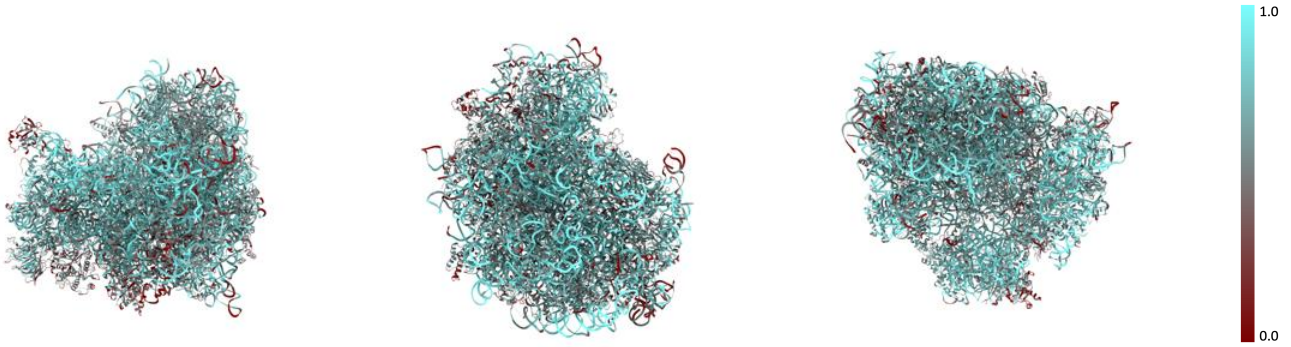
9.2 Q-score mapped to coordinate model



X Y Z

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

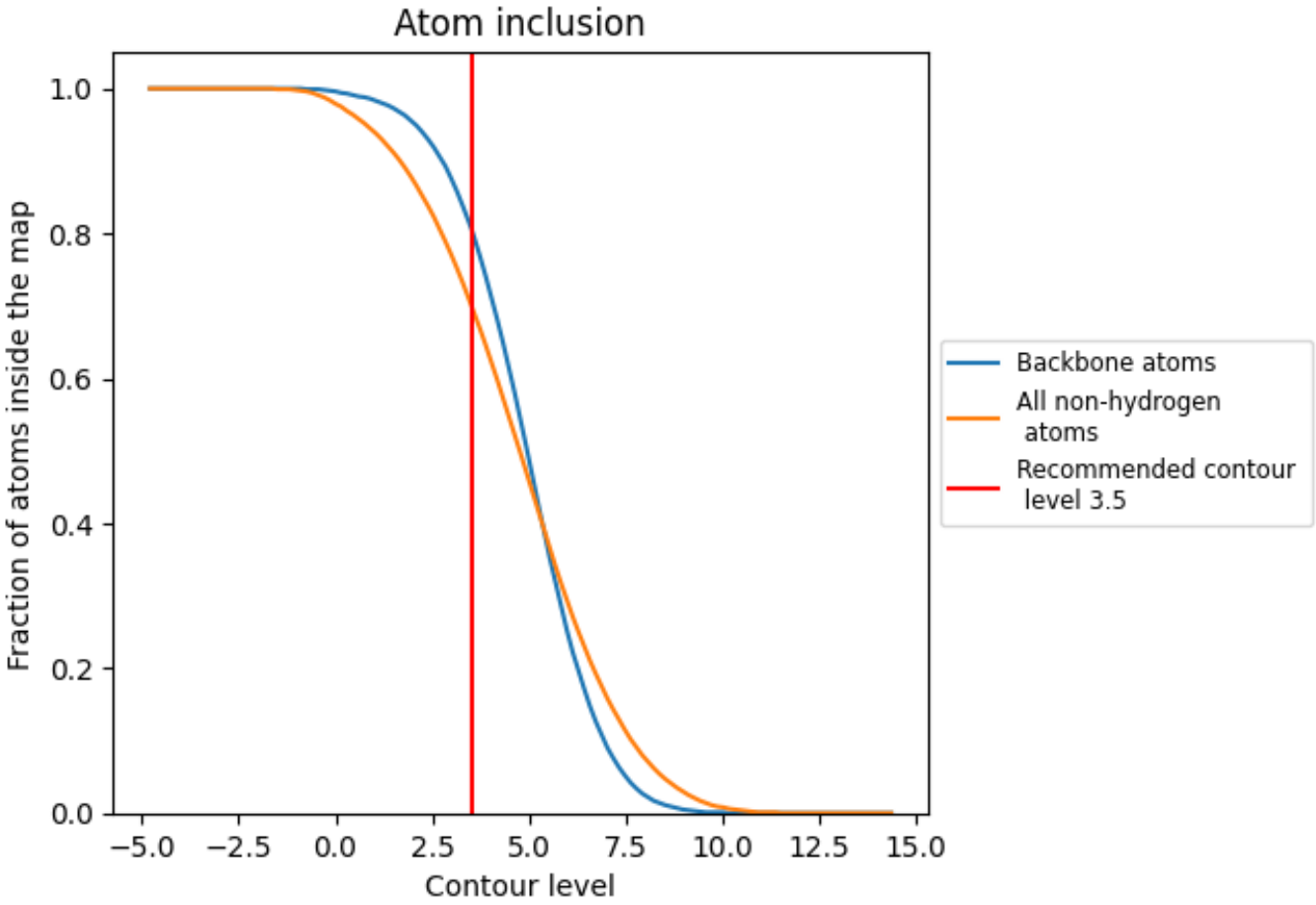
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (3.5).

9.4 Atom inclusion (i)



At the recommended contour level, 81% of all backbone atoms, 70% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (3.5) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7020	0.1710
A2	0.8020	0.1990
A3	0.8340	0.2060
A4	0.9340	0.2240
AV	0.6980	0.1980
AW	0.6540	0.1800
AX	0.4390	0.1920
B1	0.8420	0.1980
BA	0.4630	0.1340
BB	0.5470	0.1440
BC	0.5270	0.1500
BD	0.6230	0.1450
BE	0.6500	0.1470
BF	0.5930	0.1430
BG	0.6190	0.1270
BH	0.3620	0.1240
BI	0.4990	0.1140
BJ	0.6910	0.1330
BK	0.7040	0.1420
BL	0.4550	0.1310
BM	0.2750	0.0910
BN	0.5080	0.1320
BO	0.5350	0.1440
BP	0.6620	0.1470
BQ	0.6730	0.1220
BR	0.5190	0.1350
BS	0.6770	0.1460
BT	0.7490	0.1450
BU	0.6320	0.1180
BV	0.3920	0.1150
BW	0.5800	0.1400
BX	0.4420	0.1450
BY	0.6820	0.1330
BZ	0.5780	0.1520
Ba	0.4950	0.0950

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Chain	Atom inclusion	Q-score
Bb	0.5020	0.1420
Bc	0.4600	0.1380
Bd	0.7040	0.1140
Be	0.5570	0.1360
Bf	0.4330	0.1020
Bg	0.5610	0.1360
CA	0.4330	0.1330
CB	0.5870	0.1480
CC	0.5340	0.1210
CD	0.6800	0.1550
CE	0.5330	0.1100
CF	0.5170	0.1280
CG	0.5350	0.1330
CH	0.6210	0.1420
CI	0.5100	0.1400
CJ	0.6530	0.1430
CL	0.5210	0.1100
CM	0.6590	0.1560
CN	0.5560	0.1340
CO	0.5860	0.1330
CP	0.5710	0.1350
CQ	0.5110	0.1140
CR	0.5350	0.1250
CS	0.5890	0.1320
CT	0.5360	0.1400
CU	0.4760	0.1410
CV	0.4430	0.1460
CW	0.5120	0.1220
CX	0.5420	0.1390
CY	0.6350	0.1300
CZ	0.5900	0.1460
Ca	0.5490	0.1380
Cb	0.4760	0.1260
Cc	0.4840	0.1410
Cd	0.5750	0.1500
Ce	0.5050	0.1580
Cf	0.5560	0.1140
Cg	0.5160	0.1320
Ch	0.5660	0.1230
Ci	0.5600	0.1380
Cj	0.5560	0.1160
Ck	0.4860	0.1230

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Chain	Atom inclusion	Q-score
Cl	0.4980	0.1130
Cm	0.5360	0.1320
Cn	0.4360	0.1070
Co	0.4360	0.1130
Cp	0.4440	0.1140
Ct	0.5290	0.0840
Cu	0.2250	0.0560